

Prüfbericht-Nr.: Test report no.:	IN23VER9 001	Auftrags-Nr.: Order no.:	146742971 0010	Seite 1 von 207 Page 1 of 207
Kunden-Referenz-Nr.: Client reference no.:	NA	Auftragsdatum: Order date:	2022-12-06	
Auftraggeber: Client:	HONEYWELL INTERNATIONAL INC, Honeywell Safety and Productivity Solutions 9680 OLD BAILES RD, FORT MILL, SC 29707, USA			
Prüfgegenstand: Test item:	HWBPC11AX-PRTM	Product Type	Wi-Fi BT Module	
Bezeichnung: Identification.:	HWBPC11AX-PRT			
Auftrags-Inhalt: Order content:	Testing and issue of Test Report and Grant Certificate			
Prüfgrundlage: Test specification:	FCC Part 15 Subpart C & E, 15.247, 15.407, 15.207, 15.209 & 15.205 RSS 247 Issue 2 and RSS GEN Issue 5			
Wareneingangsdatum: Date of sample receipt:	2022-12-07			
Prüfmuster-Nr & Serien-Nr.: Test sample no & serial no.:	A003385546-022 & A003385546-04 2022120701 & 2022120702			
Prüfzeitraum: Testing period:	2022-12-07 - 2023-01-06			
Ort der Prüfung: Place of testing:	Wireless laboratory, Bangalore			
Prüflaboratorium: Testing laboratory:	TÜV Rheinland (India) Pvt.Ltd., 27/B, 2nd Cross, Electronic City Phase1 Bangalore -560 100, India FCC Test site registration number: 496599 ISED Test site registration number: 3466E-1			
Prüfergebnis*: Test result*:	Pass			
geprüft von: tested by:		genehmigt von: authorized by:		
Datum: Date:	2023-01-07	Ausstellatum: Issue date:	2023-02-14	
Stellung / Position:	Likhithesh M D Senior Engineer	Stellung / Position:	Madhu K N Senior Engineer	
Sonstiges / Other:	FCC ID: HD5-PC11AX IC: 1693B-PC11AX			
Zustand des Prüfgegenstandes bei Anlieferung: Condition of the test item at delivery:	Prüfmuster vollständig und unbeschädigt Test item complete and undamaged			
* Legende:	1 = sehr gut P(ass) = entspricht o.g. Prüfgrundlage(n)	2 = gut F(ail) = entspricht nicht o.g. Prüfgrundlage(n)	3 = befriedigend 3 = satisfactory	4 = ausreichend N/A = nicht anwendbar 4 = sufficient N/A = not applicable
* Legend:	1 = very good P(ass) = passed a.m. test specification(s)	2 = good F(ail) = failed a.m. test specification(s)	3 = satisfactory	5 = mangelhaft N/T = nicht getestet 5 = poor N/T = not tested
Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens. <i>This test report only relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark.</i>				

TEST SUMMARY

Test Item	Applicable Standard		Result
	FCC	ISED	
Emission Bandwidth	15.247 (a) (2), 15.407 (a) & (e)	RSS Gen Issue 5 Section 6.7 RSS 247 Issue 2 Section 6.2.1.1; 6.2.2.1; 6.2.3.1; 6.2.4.1	Pass
Frequency Stability	15.407 (g)	RSS Gen Issue 5 Section 8.11	Pass
Maximum conducted output power	15.247 (b) & 15.407 (a)	RSS 247 Issue 2 Section 6.2.1; 6.2.2; 6.2.3; & Section 6.2.4	Pass
Maximum Power spectral density	15.247 (e) & 15.407 (a)	RSS 247 Issue 2 Section 6.2.1; 6.2.2; 6.2.3; & Section 6.2.4	Pass
Dynamic Frequency Selection	15.407 (h) FCC KDB Publication 905462 D02 & 905462 D03	RSS 247 Issue 2 Section 6.3	Pass
Spurious Radiated Emissions & Restricted Bands of Operation	15.407 (b) / (15.205 & 15.209)	RSS 247 Issue 2 Section 6.2.1; 6.2.2; 6.2.3; & Section 6.2.4 RSS Gen Issue 5 Section 8.9 & 8.10	Pass
Conducted AC Power Lines	15.207	RSS Gen Issue 5 Section 8.8	Pass

Product Category: Electronics Testing
Test Discipline : EMC Test Facility

Compliance statement for Part 15.203:

"THE ANTENNA WITH A STANDARD CONNECTOR (U.FL) USED, WITH NO POSSIBILITY OF REPLACEMENT WITH A NON-APPROVED ANTENNA BY THE END-USER. THEREFORE, THE EUT IS CONSIDERED TO COMPLY WITH THIS PROVISION."

Prüfbericht - Nr.:
Test Report No.:

IN23VER9 001

Seite 3 von 207
Page 3 of 207

REVISION HISTORY OF THIS REPORT

Report Number	Version	Description	Issue date
IN23VER9 001	01	Initial issue of report	14-02-2023

Table of Contents

1	GENERAL REMARKS.....	5
1.1	Attachments	5
2	TEST SITES.....	6
2.1	Testing Facilities	6
2.2	List of Test and Measurement Instruments	6
3	GENERAL PRODUCT INFORMATION	7
3.1	Product Function and Intended Use	7
3.2	Ratings and System Details of Equipment under Test	7
3.3	Measurement Uncertainty:.....	8
4	TEST SET-UP AND OPERATION MODE.....	9
4.1	Principle of Configuration Selection.....	9
4.2	UUT Operation and Software	9
4.3	Special Accessories and Auxiliary Equipment.....	9
4.4	Simultaneous Transmission.....	9
4.5	Countermeasures to achieve EMC Compliance	9
4.6	List of frequencies	10
4.7	Report Reference.....	11
5	Operational Description	12
6	TEST METHODOLOGY.....	13
6.1	Conducted Spurious Emission AC Power line Test.....	13
6.1.1	Test Setup Configuration.....	13
6.2	Radiated Emission Test.....	14
6.2.1	Test Setup Configuration.....	14
7	TEST RESULTS.....	18
7.1	Emission Bandwidth	18
7.2	Maximum Conducted Output Power.....	37
7.3	Maximum Power Spectral Density.....	49
7.4	Dynamic Frequency Selection (DFS).....	69
7.5	Spurious Radiated Emissions & Restricted Bands of Operation	79
8	Frequency Stability.....	197
9	Conducted Spurious Emission test on AC Power Line	200
10	LIST OF TABLES	203
11	LIST OF Figures	203
12	Power level used for testing.....	204

1 GENERAL REMARKS

1.1 Attachments

All attachments are part of this test report and are issued in separate document

1. TEST SETUP PHOTOS
- 2: EUT EXTERNAL PHOTOS
- 3: EUT INTERNAL PHOTOS
- 4: FCC LABEL AND LABEL LOCATION
- 5: BLOCK DIAGRAM
- 6: SPECIFICATION OF EUT
- 7: SCHEMATIC DIAGRAM
- 8: BILL OF MATERIAL
- 9: USER MANUAL
- 10: MAXIMUM PERMISSIBLE EXPOSURE INFORMATION

2 TEST SITES

2.1 Testing Facilities

1. TÜV Rheinland (India) Pvt.Ltd.,
27/B, 2nd Cross,
ElectronicCityPhase1
Bangalore – 560 100,
India

2. TÜV Rheinland (India) Pvt.Ltd.,
108 , Beside ISBR Business School,
Electronic city Phase I
Bangalore - 560 100.
India

Radiated Measurement site type :
Fully anechoic chamber (used for above 1 GHz
measurements)

Radiated Measurement site type :
Semi anechoic chamber (used for below 1 GHz
measurements)

2.2 List of Test and Measurement Instruments

Table 1: List of test and measurement instruments

Equipment	Manufacturer	Model Name	Serial Number	Firmware Versions	Calibration Due Date	Periodicity	Test Facility
EMI Receiver	Rohde & Schwarz	ESW 44	101732	4.73 SP5	04.08.2023	Yearly	Radiated Spurious Emission
Active loop antenna	Frankonia	LAX-10	LAX-10-800	-	31.01.2023	Yearly	
Baloon and Biconical Antenna	Schwarzbeck mess-elektronik	VHBB-9124 / BBA-9106	01028	-	03.02.2023	Yearly	
Log-Periodic Antenna	Schwarzbeck mess-elektronik	VUSLP-9111B	9111B-111	-	26.01.2023	Yearly	
Horn Antenna	Schwarzbeck	BBHA 9120 D	9120D-01944	-	11.10.2023	Yearly	
EMI Test Receiver	Rohde & Schwarz	ESW44	101773	1.72.SP1	12.02.2023	Yearly	
Semi Anechoic Chamber	Frankonia	-	-	-	-	-	
Fully Anechoic Chamber	Albatross	-	-	-	-	-	Conducted Test Parameters
Spectrum Analyzer	Agilent	E4407B	US41192772	A.14.07	21-12-2023	Yearly	
10dB Attenuator	H+S Electronics Pvt. Ltd	6810.17.A	770041	-	19-03-2023	Yearly	
Signal Analyser	Rohde & Schwarz	FSV7	101644	FW 3.40	25-01-2023	Yearly	
Signal Analyser	Anritsu Corporation	MS2830A	6261983953	-	18-10-2023	Yearly	Conducted AC Power line Test
EMI Receiver	Rohde & Schwarz	ESR7	101133	3.48 SP3	22.07.2023	Yearly	
Line Impedance Stabilization Network	Rohde & Schwarz	ENV 216	101434	-	11.04.2023	Yearly	
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100811	-	12.07.2023	Yearly	

Table 2: Instrument application Software versions

SL. No.	Test Type	Application software	Version
1	Radiated spurious emission measurement in SAC	EMC 32	10.60.00
2	Radiated spurious emission measurement in FAC	EMC 32	10.60.00
3	Conducted Antenna Port Measurement	WMS32	11.10.00

3 GENERAL PRODUCT INFORMATION

3.1 Product Function and Intended Use

HWBPC11AX-PRTM is a carrier board with System on Module. The module to be used inside the Honeywell Products. The Module has Dual Band WIFI (2.4GHz & 5GHz) and BLUETOOTH radio interface. This module communicates with external host using SDIO interface for WIFI and UART for BLUETOOTH.

This Module supports 802.11a/b/g/n/ac/ax for WIFI and Supports BT (Basic , EDR & BLE) The module will act as Access Point / Master only in NON - DFS bands. In the DFS band, the Module acts as Slave /Station device which do not have Radar detection functionality.

Powered with BCM43752, **HWBPC11AX-PRTM** achieve the best possible connectivity and performance in RF Environment. This Module will be used to provide the WIFI & BLUETOOTH wireless connectivity for Honeywell Products

3.2 Ratings and System Details of Equipment under Test

Table 3: Ratings and System Details as declared by the Client*

Radio Protocol	WI-FI 5GHz	
Operating Frequency Range	UNII-1 _ 5150MHz to 5250MHz UNII-2a _ 5250MHz to 5350MHz UNII-2c _ 5470MHz to 5725MHz* UNII-3 _ 5725MHz to 5825MHz	
No. of Channels	(Refer Table 5)	
Channel Spacing	5 MHz	
Modulation	802.11b: DSSS ; 802.11g: OFDM; 802.11n: OFDM 802.11b: 1, 2, 5.5 , 11Mbps; 802.11g: 6 to 54Mbps 802.11n: MCS0 to MCS7; 802.11a: 6Mbps & 54Mbps 802.11ac : MCS0 to MCS9 802.11ax : MCS0 to MCS11	
Power level setting used	Refer Clause 12	
Maximum Measured Power (e.i.r.p)	30.63 dBm (5320MHz ac_VHT40) 1001932PT(Flex/PCB Antenna) 27.10 dBm (5240MHz a_54Mbps) FPA3020-10A(Flex/PCB Antenna) 26.55 dBm (5795MHz ac_VHT40) 1001932PT(Flex/PCB Antenna)	
Number of antennas	2	
	1001932PT(Flex/PCB Antenna)	4.40dBi
	FPA3020-10A (Flex/PCB Antenna)	5.58dBi
Supply Voltage to Product	3.3 VDC through AC/DC Adapter , < 2.0A	
Environmental Conditions	Storage	-20degC to +70degC Relative Humidity <95%
	Operating	-20degC to +60degC Relative Humidity <95%
EUT Dimension	2.5 x 2.5 x 0. CM (L x W x H)	

*Band 5600 MHz to 5650 MHz is not supported for Canada

***Disclaimer:** The information/data is supplied by the client and the same is considered to arrive at the final value. Any changes made apart from the specified specification, can directly impact on the tests results. Refer the products user manual for more details.

Note: Product **HWBPC11AX-PRTM** has multiple protocols. All the supported wireless protocols and their respective test results are issued in separate test reports, refer clause 4.7 Report references

3.3 Measurement Uncertainty:

Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of $k = 2$

Table 4: Measurement Uncertainty

Parameter	Uncertainty
Occupied Channel Bandwidth	±5 %
RF output power, conducted	±1.5 dB
Power Spectral Density, conducted	±3 dB
Unwanted Emissions, conducted	±3 dB
SAC, radiated measurement	±6 dB
FAC, radiated measurement	±6 dB
Temperature	±3 °C
Supply Voltages	±3 %
Time	±5 %

Note: The listed uncertainties are the worst case uncertainty for the entire range of measurements and are for the reporting purpose only and are not used in determining the PASS/FAIL of the results.

4 TEST SET-UP AND OPERATION MODE

4.1 Principle of Configuration Selection

Transmission was enabled with highest possible duty cycle on low, mid and high channels.

4.2 UUT Operation and Software

Hardware Version Identification number (HVIN) : 3008-8482-001
Software version : 18.35.387.23.1301.62

4.3 Special Accessories and Auxiliary Equipment

Test laptop (TeraTerm VT Ver 4.105),
LAN cable &
Master device (Router) : FCC ID : MSQ-RTAXHP00

4.4 Simultaneous Transmission

This product supports Simultaneous transmission

4.5 Countermeasures to achieve EMC Compliance

None

4.6 List of frequencies

Frequency Band	Channel No.	Frequency (MHz)
5150–5250 MHz	36	5180
	38	5190
	46	5230
	48	5240
UNII 2A (5250-5350)	52	5260
	54	5270
	56	5280
	58	5290
	60	5300
	62	5310
	64	5320
UNII 2C (5470-5725)	100	5500
	102	5510
	106	5530
	108	5540
	112	5560
	116	5580
	120	5600
	124	5620
	128	5640
	132	5660
	134	5670
	136	5680
	138	5690
	140	5700
	142	5710
	144	5720
5725-5825 MHz	149	5745
	151	5755
	159	5795
	165	5825

Table 5: List of Wi-Fi center Frequencies

Channel used for Wi-Fi Testing

Channel Bandwidth (20MHz)	Channel Bandwidth (40MHz)	Channel Bandwidth (80MHz)
5180	5190	5210
5240	5230	5290
5260	5270	5530
5320	5310	5690
5500	5510	5755
5700	5590	-
5720	5670	-
5745	5710	-
5825	5755	-
-	5795	-

Prüfbericht - Nr.:
Test Report No.:

IN23VER9 001

Seite 11 von 207
Page 11 of 207

Note:

TUV Sample Identification number : A003385546-022– Radiated test Sample
A003385546-04– Conducted test Sample

4.7 Report Reference

Note: Product **HWBPC11AX-PRTM** has multiple protocols. All the supported wireless protocols and their respective test results are issued in separate test reports, following table lists the report numbers.

Radio Protocol	Report Number
RF test report for Wi-Fi (2.4GHz) & BLE (2.4GHz)	IN2391GP 001
RF test report for Bluetooth (2.4GHz)	IN23ZC8W 001
RF test report for Wi-Fi (5GHz) – (This report)	IN23VER9 001

5 Operational Description

This **HWBPC11AX-PRTM** module is a Wi-Fi, BT system on module which will be placed inside the Honeywell products like printers, barcode scanners, RFID readers etc. to enable wireless connectivity.

This module includes MAC & physical layer of 802.11a/b/g/n/ac/ax and the Bluetooth modem.

This module operates on 3.3VDC Power supply with internal on-board regulation for 3.3vdc for powering ON all the circuits.

The module uses internal power amplifier and LNA for 2.4GHz frequency band and an external front end chip for 5GHz frequency band.

All filters and diplexers are included in the module to ensure maximum power flatness and optimum VSWR.

The module has one antenna chain for 2X2 output for Wi-Fi.

The module shall use WM-BAX-BM-57 USI SiP module with Broadcom BCM43752 chipset which includes LNA, switch, and internal power amplifier (iPA) for small form factor and optimum performance. All filters and diplexers will be included in the module to ensure maximum power flatness and optimum VSWR. The module will perform with all legacy hardware having data rates as low as 1Mbps. When running 802.11 ac in 2 x 2 MIMO mode, data rates are expected to reach 1200 Mbps or more.

This chipset also supports concurrent operation of Bluetooth (Version 5.1) for wireless connectivity during browsing or other device applications. Along with both standard and high speed (HS) Bluetooth data rates, Bluetooth low energy modes are also supported.

Hardware WAPI acceleration engine, AES, TKIP, WPA and WPA2 are supported to provide the latest security requirement on your network

The Device communicates with HOST using SDIO interface for WIFI and UART interface for BLUETOOTH.

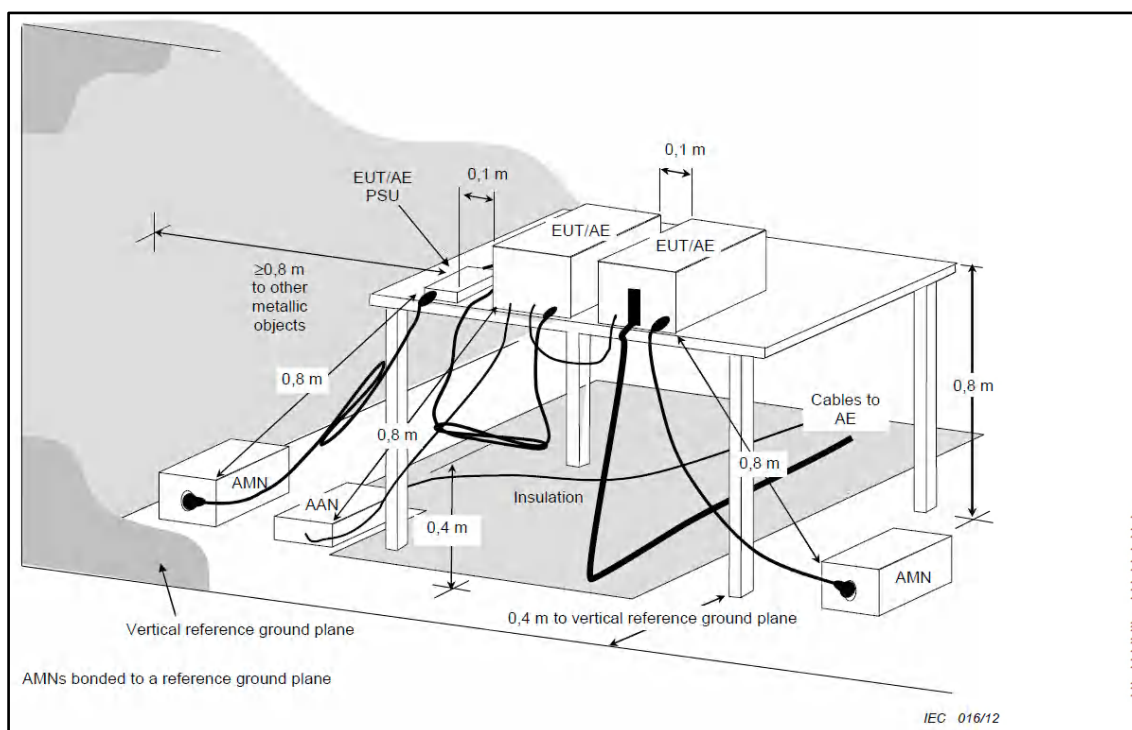
6 TEST METHODOLOGY

6.1 Conducted Spurious Emission AC Power line Test

Measured levels of ac power-line conducted emission across the 50Ω LISN port (to which the EUT is connected). All emission voltage and current measurements shall be made on each current-carrying conductor at the plug end of the EUT power cord by the use of mating plugs and receptacles on the LISN, if used. Equipment shall be tested with power cords that are normally supplied or recommended by the manufacturer and that have electrical and shielding characteristics that are the same as those cords normally supplied or recommended by the manufacturer.

The device is placed on the test table, raised 80cm above the reference ground plane. The vertical conducting plane is located 40cm to the rear of the device. AC Conducted emission measurement is made over frequency range from 150kHz to 30MHz, this measurement was performed with EUT powered by 2 methods and both method are tested individually, one with an AC adaptor with 110V AC 60Hz supply and second with Wireless charger with supply 110V AC 60Hz.

6.1.1 Test Setup Configuration



6.2 Radiated Emission Test

The radiated emission measurement was performed according to the procedures in ANSI C63.10-2013. The equipment under test (EUT) was placed at the middle of the 80 cm high turntable for below 1 GHz & 1.5 m height for above 1 GHz measurement, and the EUT is 3 meters far from the measuring antenna. The turntable was rotated 360° for obtaining the maximum emission. The height of the measuring antennas was scanned between 1 m and 4 m, and the antenna rotated to repeat the measurements for both the horizontal and vertical antenna polarizations. Repeat the measurement steps until the maximum emissions were obtained. The measurement above 1000 MHz was performed by horn antenna, The measurement below 30 MHz was performed by loop antenna, Measurement from 30 MHz to 200 MHz was performed by Baloon and Biconical Antenna, and measurement from 200 MHz to 1 GHz was performed by Log-Periodic Antenna.

The EUT was rotated around the X-, Y-, and Z-Axis and the results from worst case axis are recorded

6.2.1 Test Setup Configuration

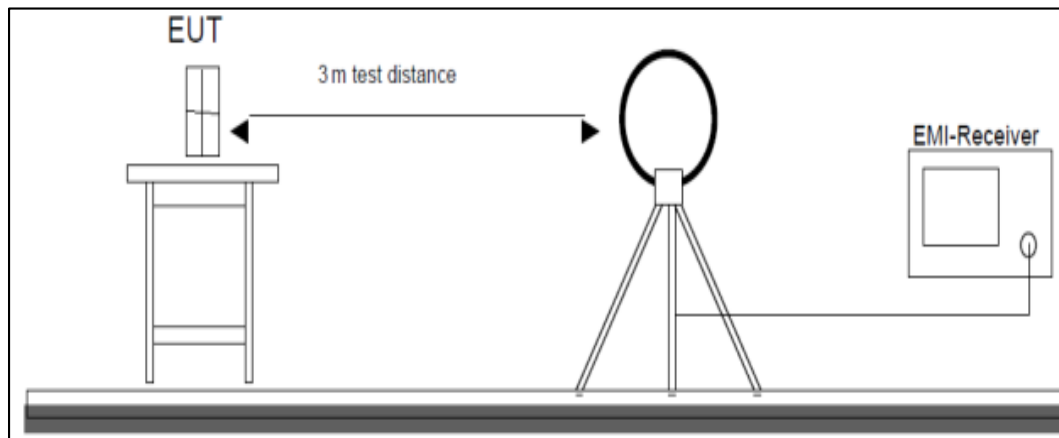


Figure 1: Frequency Range 9 kHz - 30 MHz

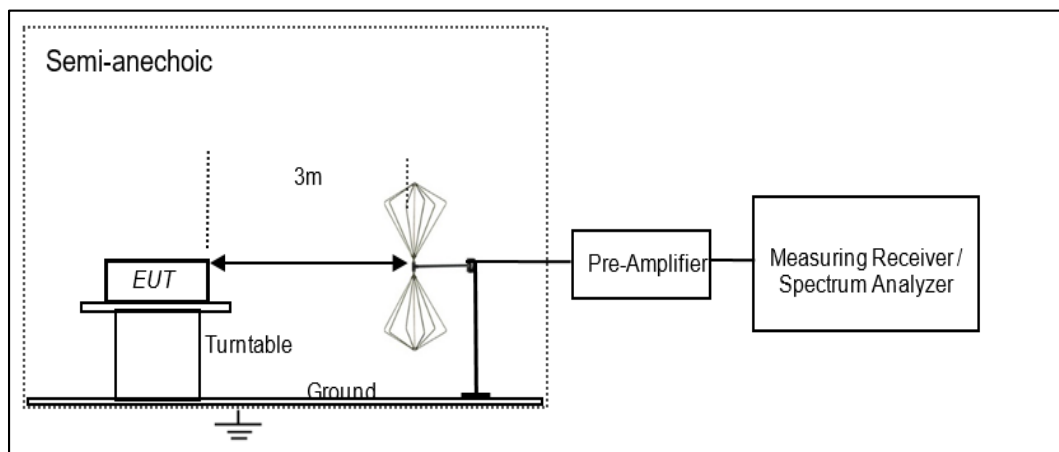


Figure 2: Frequency Range 30 MHz - 200 MHz

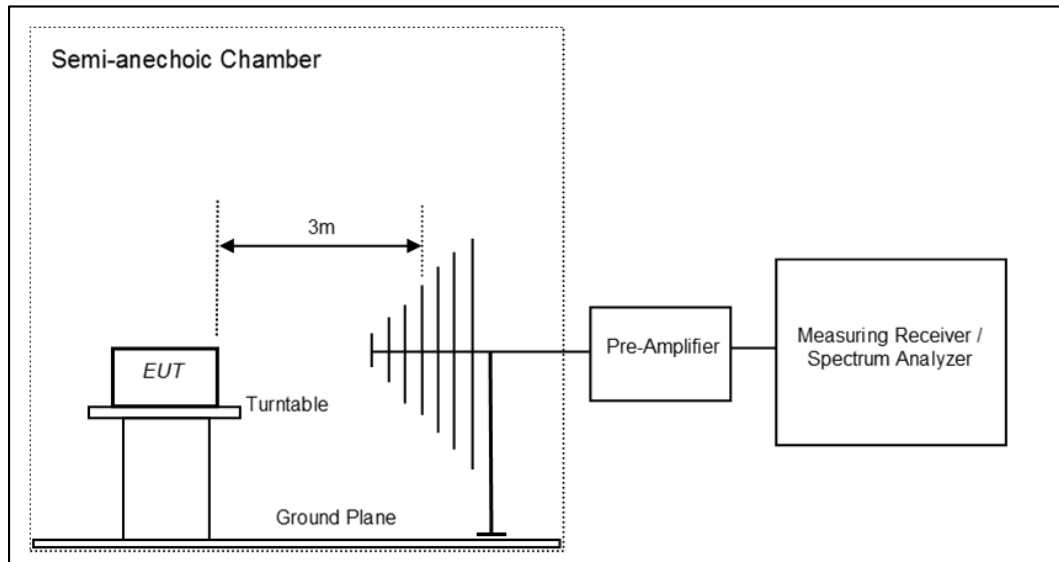


Figure 3: Frequency Range 200 MHz - 1GHz

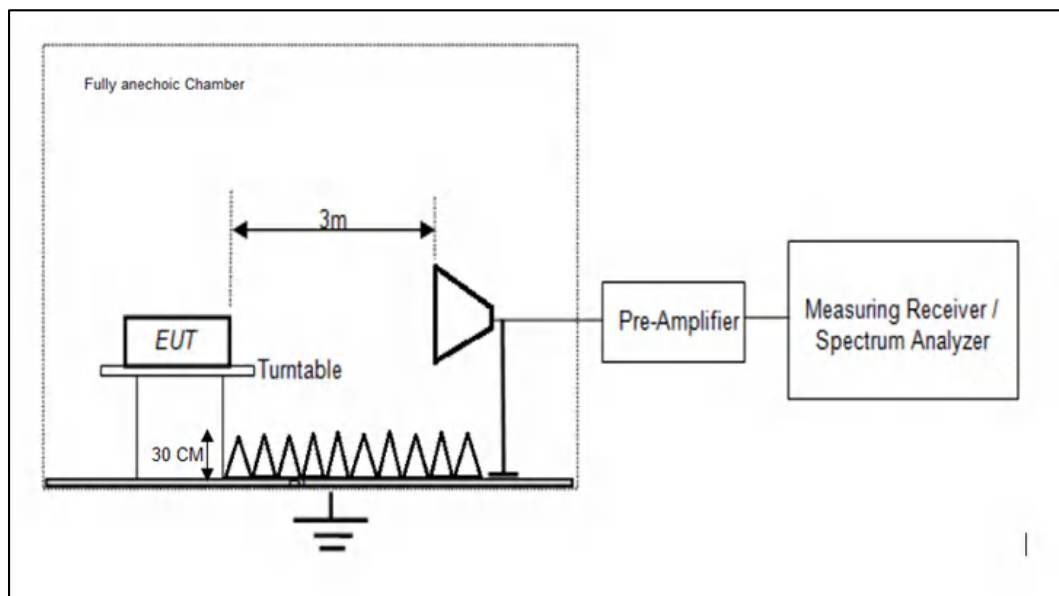


Figure 4: Frequency Range above 1 GHz

Frequency Range 30MHz to 10th harmonics of the highest fundamental frequency

Test performed as per ANSI C63.10-2013

Radiated spurious emission test are performed as below.

All the radiated emission measurements are performed in accordance with common requirement specified in 5.2 followed by substitution measurement as listed below

The equipment under test is placed on non-conductive table at 3m away from the receive antenna in accordance with above mentioned standard. Turn table is rotated through 360 degree, and receiver antenna height is varied in order to determine the level of maximum emission. The maximum emission level and position of the maximized emission is recorded with use of spectrum analyzer.

EUT power measured in a radiated test configuration using the signal (antenna) substitution techniques as per ANSI C63.10-2013 clause G.5.3

The ERP/EIRP may be determined from the power setting of a signal generator used in the signal (antenna) substitution test configuration as follows in Equation

$$ERP \text{ EIRP} = PT + GT - LC$$

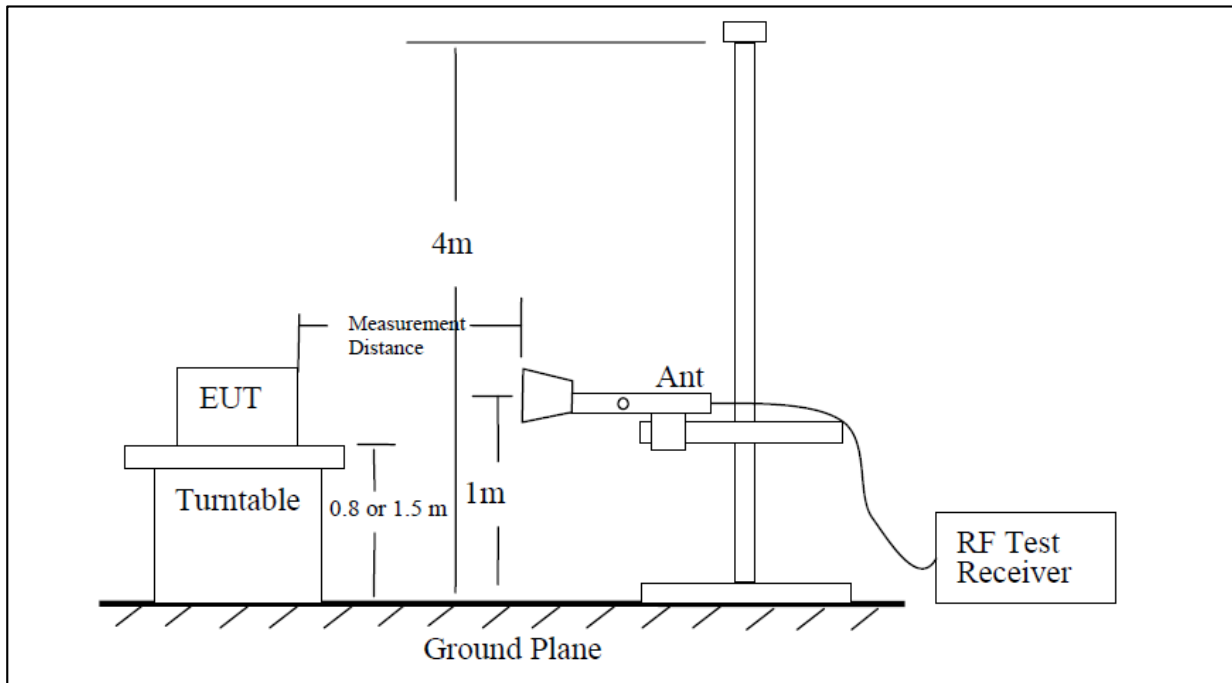
where

PSG is the power setting of the signal generator that produces the same received power reading as the DUT, in dBm, dBW, or psd

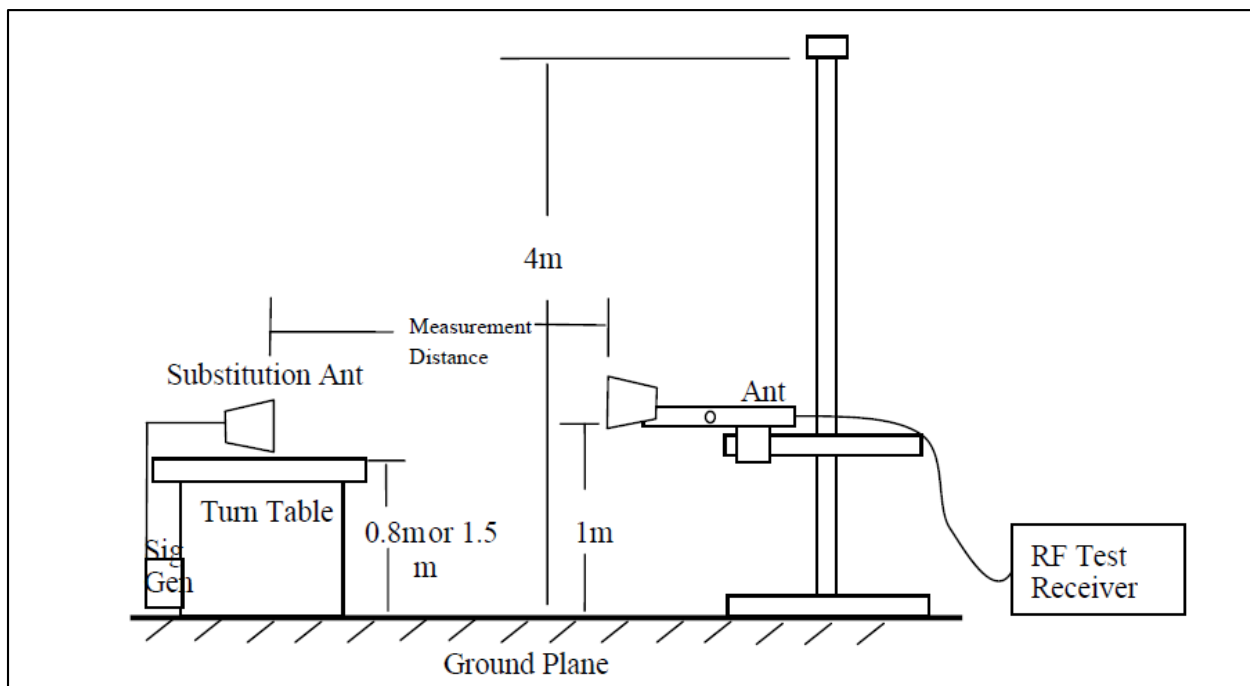
GT is the gain of the substitute antenna, in dBd (i.e., ERP) or dBi (i.e., EIRP)

LC is the signal loss in the cable connecting the signal generator to the substitute antenna, in dB

Test site-up for radiated measurements



Substitution method set-up for radiated emission



7 TEST RESULTS

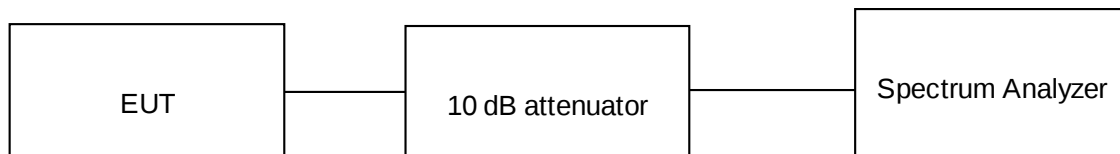
7.1 Emission Bandwidth

Result

Pass

Test Specification	FCC part 15 Subpart C & E, 15.247 (a) (2), 15.407 (a) & (e) / RSS 247 Issue 2, Section 6.2.1.1; 6.2.2.1; 6.2.3.1; 6.2.4.1 & RSS Gen Issue 5, Section 6.7
Test Method	Subclause 6.9.2 of ANSI C63.10
Measurement Bandwidth	Refer Test Method below
Detector	Refer Test Method below
Port of testing	Antenna port
Requirement	1. 99% emission band width measurement for reporting purpose only in the band 5150-5250 MHz 2. 99% emission band width measurement for reporting purpose only in the band 5250-5350 MHz 3. 99% emission band width measurement for reporting purpose only in the band 5470-5725 MHz 2. For equipment operating in the band 5725-5850 MHz, the minimum 6 dB bandwidth shall be at least 500 kHz

Test Method:



The following procedure shall be used for measuring (99%) power bandwidth:

1. Set center frequency to the nominal EUT channel center frequency
2. Set span = 1.5 times to 5.0 times the OBW
3. Set RBW = 1% to 5% of the OBW
4. Set VBW $\geq 3 \times$ RBW
5. Use the 99% power bandwidth function of the instrument
6. Use sample detector with single sweep mode, or use Peak detector and Max Hold mode (until the trace is stabilized)

The following procedure shall be used for measuring 6dB or 26dB emission bandwidth:

1. Set center frequency to the nominal EUT channel center frequency
2. Set span = 1.5 times to 5.0 times the OBW
3. Set RBW = 1% to 5% of the OBW (for 26 dB BW) & 100 kHz (for 6dB BW)
4. Set VBW $\geq 3 \times$ RBW
5. Determine the “-xx dB down amplitude” using [(reference value) - xx]. Alternatively, this calculation may be made by using the marker-delta function of the instrument.

Note : All the steps in measurement method of KDB 789033 D02, ANSI C63.10 section 6.9.2 & 6.9.3, RSS GEN section 6.9 are followed

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 19 von 207

Page 19 of 207

Test Condition:

Normal Test Condition:

Temperature (Norm) = + 25 °C

Voltage = 3.3 V DC through AC to Dc adaptor

Relative humidity: 62 %

KDB Guidelines applied:

Measurements were made as per section C & D in KDB 789033 D02 General UNII Test Procedures New Rules v02r01

Test results:

Note:

1. All the losses are included during measurement and final values are mentioned in the test report.

10 dB attenuator + 0.8 dB Cable loss = 10.8 dB total offset

Note: Refer Attached Appendix for test Plots

Antenna Type: 1001932PT (Flex/PCB) Antenna MIMO Results

Modulation: 802.11a :

Modulation	Data rate (Mbps)	Measured Frequency (MHz)	26 dB emission bandwidth (MHz)	99% Occupied Bandwidth (MHz)
802.11a : UNII 1	6	5180	21.60	16.80
		5240	21.80	16.80
	54	5180	21.80	16.70
		5240	23.30	17.00
802.11a : UNII 2a	6	5260	21.80	16.80
		5320	21.80	16.90
	54	5260	25.40	17.00
		5320	21.60	16.70
802.11a : UNII 2c	6	5500	21.60	16.80
		5700	21.60	16.70
		5720	21.77	17.20
			15.67 -UNII 2C	13.69 -UNII 2C
	54	5500	6.10 -UNII 3	3.51 -UNII 3
			21.40	16.90
		5700	21.50	16.80
			21.96	17.15
	54	5720	15.32 -UNII 2C	13.49 -UNII 2C
			6.64 -UNII 3	3.66 -UNII 3

Modulation: 802.11a : UNII 3

Data rate (Mbps)	Measured Frequency (MHz)	6 dB emission bandwidth (MHz)	Minimum Limit (MHz)
6	5745	16.40	0.5
	5825	16.40	0.5
54	5745	16.60	0.5
	5825	16.60	0.5

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 20 von 207

Page 20 of 207

Data rate (Mbps)	Measured Frequency (MHz)	99% Occupied Bandwidth (MHz)
6	5745	16.70
	5825	18.00
54	5745	16.70
	5825	16.80

Modulation: 802.11n-HT20:

Modulation	Data rate	Measured Frequency (MHz)	26 dB emission bandwidth (MHz)	99% Occupied Bandwidth (MHz)
802.11n-HT20: UNII 1	MCS0	5180	22.30	17.80
		5240	22.60	18.00
	MCS7	5180	22.00	17.90
		5240	22.20	17.90
802.11n-HT20: UNII 2a	MCS0	5260	22.00	18.10
		5320	21.90	18.00
	MCS7	5260	21.90	17.90
		5320	21.70	17.90
802.11n-HT20: UNII 2c	MCS0	5500	21.90	17.90
		5700	21.80	17.90
		5720	21.81	18.14
			15.71 -UNII 2C 6.10 -UNII 3	14.03 -UNII 2C 4.11 -UNII 3
	MCS7	5500	21.70	17.90
		5700	21.80	17.90
		5720	23.26	18.12
			16.41 -UNII 2C 6.85 -UNII 3	14.01 -UNII 2C 4.11 -UNII 3

Modulation: 802.11n-HT20: UNII 3

Data rate	Measured Frequency (MHz)	6 dB emission bandwidth (MHz)	Minimum Limit (MHz)
MCS0	5745	17.60	0.5
	5825	17.60	0.5
MCS7	5745	17.80	0.5
	5825	17.80	0.5

Data rate	Measured Frequency (MHz)	99% Occupied Bandwidth (MHz)
MCS0	5745	18.10
	5825	17.90
MCS7	5745	17.90
	5825	17.90

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 21 von 207

Page 21 of 207

Modulation: 802.11ac-VHT20:

Modulation	Data rate	Measured Frequency (MHz)	26 dB emission bandwidth (MHz)	99% Occupied Bandwidth (MHz)
802.11ac-VHT20: UNII 1	MCS0	5180	22.10	17.80
		5240	22.00	17.90
	MCS9	5180	22.00	17.90
		5240	21.70	17.80
802.11ac-VHT20: UNII 2a	MCS0	5260	22.10	17.90
		5320	21.80	17.90
	MCS9	5260	21.60	17.80
		5320	21.50	17.80
802.11ac-VHT20: UNII 2c	MCS0	5500	21.60	17.90
		5700	22.00	17.90
		5720	21.76	18.07
		5720	15.36 -UNII 2C 6.40 -UNII 3	14.11 -UNII 2C 3.96 -UNII 3
	MCS9	5500	21.50	17.90
		5700	21.70	17.90
		5720	21.54	18.11
		5720	14.81 -UNII 2C 6.73 -UNII 3	14.12 -UNII 2C 3.99 -UNII 3

Modulation: 802.11ac-VHT20: UNII 3

Data rate	Measured Frequency (MHz)	6 dB emission bandwidth (MHz)	Minimum Limit (MHz)
MCS0	5745	18.65	0.5
	5825	18.65	0.5
MCS9	5745	19.20	0.5
	5825	19.20	0.5

Data rate	Measured Frequency (MHz)	99% Occupied Bandwidth (MHz)
MCS0	5745	19.00
	5825	19.00
MCS9	5745	19.20
	5825	19.10

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 22 von 207

Page 22 of 207

Modulation: 802.11ax-HE20:

Modulation	Data rate	Measured Frequency (MHz)	26 dB emission bandwidth (MHz)	99% Occupied Bandwidth (MHz)
802.11ax-HE20: UNII 1	MCS0	5180	21.60	19.00
		5240	21.50	19.00
	MCS11	5180	22.00	19.20
		5240	22.00	19.20
802.11ax-HE20: UNII 2a	MCS0	5260	21.70	19.00
		5320	21.40	19.00
	MCS11	5260	21.90	19.20
		5320	21.80	19.10
802.11ax-HE20: UNII 2c	MCS0	5500	21.40	19.00
		5700	21.40	18.90
		5720	21.56	18.96
			15.64 -UNII 2C 5.92 -UNII 3	14.46 -UNII 2C 4.50 -UNII 3
	MCS11	5500	21.80	19.10
		5700	21.90	19.20
		5720	21.99	19.13
			14.66 -UNII 2C 7.33 -UNII 3	14.57 -UNII 2C 4.56 -UNII 3

Modulation: 802.11ax-HE20: UNII 3

Data rate	Measured Frequency (MHz)	6 dB emission bandwidth (MHz)	Minimum Limit (MHz)
MCS0	5745	18.65	0.5
	5825	18.65	0.5
MCS11	5745	19.20	0.5
	5825	19.20	0.5

Data rate	Measured Frequency (MHz)	99% Occupied Bandwidth (MHz)
MCS0	5745	19.00
	5825	19.00
MCS11	5745	19.20
	5825	19.10

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 23 von 207

Page 23 of 207

Modulation: 802.11n-HT40:

Modulation	Data rate	Measured Frequency (MHz)	26 dB emission bandwidth (MHz)	99% Occupied Bandwidth (MHz)
802.11n-HT40: UNII 1	MCS0	5190	36.98	36.50
		5230	36.81	37.00
	MCS7	5190	36.74	36.50
		5230	36.78	36.75
802.11n-HT40: UNII 2a	MCS0	5270	36.65	38.25
		5310	36.78	36.50
	MCS7	5270	36.30	36.75
		5310	36.72	36.50
802.11n-HT40: UNII 2c	MCS0	5510	36.78	36.75
		5590	36.83	44.50
		5670	36.82	36.75
		5710	36.74	42.00
	MCS7	5510	36.84	36.75
		5590	36.81	36.75
		5670	36.79	36.75
		5710	36.79	36.50

Modulation: 802.11n-HT40: UNII 3

Data rate	Measured Frequency (MHz)	6 dB emission bandwidth (MHz)	Minimum Limit (MHz)
MCS0	5755	36.40	0.5
	5795	36.15	0.5
MCS7	5755	36.55	0.5
	5795	36.55	0.5

Data rate	Measured Frequency (MHz)	99% Occupied Bandwidth (MHz)
MCS0	5755	36.75
	5795	36.75
MCS7	5755	36.75
	5795	36.50

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 24 von 207

Page 24 of 207

Modulation: 802.11ac-VHT40:

Modulation	Data rate	Measured Frequency (MHz)	26 dB emission bandwidth (MHz)	99% Occupied Bandwidth (MHz)
802.11ac-VHT40: UNII 1	MCS0	5190	36.99	36.75
		5230	36.91	36.75
	MCS9	5190	37.03	37.03
		5230	37.06	37.05
802.11ac-VHT40: UNII 2a	MCS0	5270	36.70	37.25
		5310	36.76	36.50
	MCS9	5270	36.99	36.75
		5310	37.07	36.50
802.11ac-VHT40: UNII 2c	MCS0	5510	36.97	36.75
		5590	36.78	37.50
		5670	36.78	36.75
		5710	36.74	37.25
	MCS9	5510	37.07	36.75
		5590	37.11	36.75
		5670	37.01	36.75
		5710	37.12	36.50

Modulation: 802.11ac-VHT40MHz: UNII 3

Data rate	Measured Frequency (MHz)	6 dB emission bandwidth (MHz)	Minimum Limit (MHz)
MCS0	5755	36.40	0.5
	5795	36.15	0.5
MCS9	5755	36.55	0.5
	5795	36.55	0.5

Data rate	Measured Frequency (MHz)	99% Occupied Bandwidth (MHz)
MCS0	5755	36.75
	5795	36.75
MCS9	5755	36.75
	5795	36.50

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 25 von 207

Page 25 of 207

Modulation: 802.11ax-HE40:

Modulation	Data rate	Measured Frequency (MHz)	26 dB emission bandwidth (MHz)	99% Occupied Bandwidth (MHz)
802.11ax-HE40: UNII 1	MCS0	5190	37.86	37.75
		5230	37.92	37.75
	MCS11	5190	37.91	37.75
		5230	37.90	37.75
802.11ax-HE40: UNII 2a	MCS0	5270	37.84	38.00
		5310	37.93	37.75
	MCS11	5270	37.84	37.75
		5310	37.90	37.75
802.11ax-HE40: UNII 2c	MCS0	5510	37.88	37.75
		5590	37.96	38.50
		5670	37.84	37.75
		5710	37.84	38.25
	MCS11	5510	37.95	37.75
		5590	37.87	37.75
		5670	37.84	37.75
		5710	37.89	37.75

Modulation: 802.11ax-HE40: UNII 3

Data rate	Measured Frequency (MHz)	6 dB emission bandwidth (MHz)	Minimum Limit (MHz)
MCS0	5745	37.90	0.5
	5825	37.75	0.5
MCS11	5745	37.95	0.5
	5825	37.95	0.5

Data rate	Measured Frequency (MHz)	99% Occupied Bandwidth (MHz)
MCS0	5745	37.75
	5825	37.75
MCS11	5745	37.75
	5825	37.75

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 26 von 207

Page 26 of 207

Modulation: 802.11ac-VHT80:

Modulation	Data rate	Measured Frequency (MHz)	26 dB emission bandwidth (MHz)	99% Occupied Bandwidth (MHz)
802.11ac-VHT80: UNII 1	MCS0	5210	76.21	76.50
	MCS9	5210	75.94	76.50
802.11ac-VHT80: UNII 2a	MCS0	5290	75.80	76.50
	MCS9	5290	75.76	76.50
802.11ac-VHT80: UNII 2c	MCS0	5530	75.74	76.00
	MCS9	5690	75.84	76.50
	MCS0	5530	75.79	76.00
	MCS9	5690	75.84	76.50

Modulation: 802.11ac-VHT80: UNII 3

Data rate	Measured Frequency (MHz)	6 dB emission bandwidth (MHz)	Minimum Limit (MHz)
MCS0	5775	75.45	0.5
MCS9	5775	75.50	0.5

Data rate	Measured Frequency (MHz)	99% Occupied Bandwidth (MHz)
MCS0	5755	76.50
MCS9	5755	76.50

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 27 von 207

Page 27 of 207

Modulation: 802.11ax-HE80:

Modulation	Data rate	Measured Frequency (MHz)	26 dB emission bandwidth (MHz)	99% Occupied Bandwidth (MHz)
802.11ax- HE80: UNII 1	MCS0	5210	77.24	77.00
	MCS11	5210	77.21	77.50
802.11ax- HE80: UNII 2a	MCS0	5290	76.97	77.50
	MCS11	5290	77.16	77.50
802.11ax- HE80: UNII 2c	MCS0	5530	76.96	77.50
	MCS11	5690	76.99	77.50
	MCS0	5530	76.95	77.00
	MCS11	5690	77.11	77.50

Modulation: 802.11ax-HE80: UNII 3

Data rate	Measured Frequency (MHz)	6 dB emission bandwidth (MHz)	Minimum Limit (MHz)
MCS0	5775	77.55	0.5
MCS11	5775	77.80	0.5

Data rate	Measured Frequency (MHz)	99% Occupied Bandwidth (MHz)
MCS0	5755	77.50
MCS11	5755	77.50

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 28 von 207

Page 28 of 207

Antenna Type: FPA3020-10A (Flex/PCB) Antenna MIMO Results

Modulation: 802.11a :

Modulation	Data rate (Mbps)	Measured Frequency (MHz)	26 dB emission bandwidth (MHz)	99% Occupied Bandwidth (MHz)
802.11a : UNII 1	6	5180	21.60	16.80
		5240	21.80	16.80
	54	5180	21.80	16.70
		5240	23.30	17.00
802.11a : UNII 2a	6	5260	21.80	16.80
		5320	21.80	16.90
	54	5260	25.40	17.00
		5320	21.60	16.70
802.11a : UNII 2c	6	5500	21.60	16.80
		5700	21.60	16.70
		5720	21.77	17.20
			15.67 -UNII 2C 6.10 -UNII 3	13.69 -UNII 2C 3.51 -UNII 3
	54	5500	21.40	16.90
		5700	21.50	16.80
		5720	21.96	17.15
			15.32 -UNII 2C 6.64 -UNII 3	13.49 -UNII 2C 3.66 -UNII 3

Modulation: 802.11a : UNII 3

Data rate (Mbps)	Measured Frequency (MHz)	6 dB emission bandwidth (MHz)	Minimum Limit (MHz)
6	5745	16.40	0.5
	5825	16.10	0.5
54	5745	16.60	0.5
	5825	16.60	0.5

Data rate (Mbps)	Measured Frequency (MHz)	99% Occupied Bandwidth (MHz)
6	5745	17.10
	5825	16.80
54	5745	16.90
	5825	16.80

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 29 von 207

Page 29 of 207

Modulation: 802.11n-HT20:

Modulation	Data rate	Measured Frequency (MHz)	26 dB emission bandwidth (MHz)	99% Occupied Bandwidth (MHz)
802.11n-HT20: UNII 1	MCS0	5180	22.00	17.80
		5240	22.60	18.00
	MCS7	5180	22.00	17.90
		5240	22.20	17.90
802.11n-HT20: UNII 2a	MCS0	5260	22.00	18.10
		5320	21.90	18.00
	MCS7	5260	21.90	17.90
		5320	21.70	17.90
802.11n-HT20: UNII 2c	MCS0	5500	21.90	17.90
		5700	21.80	17.90
		5720	21.81	18.14
			15.71 -UNII 2C 6.10 -UNII 3	14.03 -UNII 2C 4.11 -UNII 3
	MCS7	5500	21.70	17.90
		5700	21.80	17.90
		5720	23.26	18.12
			16.41 -UNII 2C 6.85 -UNII 3	14.01 -UNII 2C 4.11 -UNII 3

Modulation: 802.11n-HT20: UNII 3

Data rate	Measured Frequency (MHz)	6 dB emission bandwidth (MHz)	Minimum Limit (MHz)
MCS0	5745	17.60	0.5
	5825	17.40	0.5
MCS7	5745	17.80	0.5
	5825	17.80	0.5

Data rate	Measured Frequency (MHz)	99% Occupied Bandwidth (MHz)
MCS0	5745	18.10
	5825	18.20
MCS7	5745	17.90
	5825	17.90

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 30 von 207

Page 30 of 207

Modulation: 802.11ac-VHT20:

Modulation	Data rate	Measured Frequency (MHz)	26 dB emission bandwidth (MHz)	99% Occupied Bandwidth (MHz)
802.11ac-VHT20: UNII 1	MCS0	5180	21.90	17.90
		5240	22.00	17.90
	MCS9	5180	22.00	17.90
		5240	21.70	17.80
802.11ac-VHT20: UNII 2a	MCS0	5260	22.10	17.90
		5320	21.80	17.90
	MCS9	5260	21.60	17.80
		5320	21.50	17.80
802.11ac-VHT20: UNII 2c	MCS0	5500	21.60	17.90
		5700	22.00	17.90
		5720	21.76 15.36 -UNII 2C 6.40 -UNII 3	18.07 14.11 -UNII 2C 3.96 -UNII 3
		5720	21.54 14.81 -UNII 2C 6.73 -UNII 3	18.11 14.12 -UNII 2C 3.99 -UNII 3
	MCS9	5500	21.50	17.90
		5700	21.70	17.90
		5720	21.54	18.11
		5720	14.81 -UNII 2C 6.73 -UNII 3	14.12 -UNII 2C 3.99 -UNII 3

Modulation: 802.11ac-VHT20: UNII 3

Data rate	Measured Frequency (MHz)	6 dB emission bandwidth (MHz)	Minimum Limit (MHz)
MCS0	5745	17.60	0.5
	5825	17.15	0.5
MCS9	5745	17.80	0.5
	5825	17.80	0.5

Data rate	Measured Frequency (MHz)	99% Occupied Bandwidth (MHz)
MCS0	5745	17.90
	5825	18.90
MCS9	5745	17.80
	5825	18.90

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 31 von 207

Page 31 of 207

Modulation: 802.11ax-HE20:

Modulation	Data rate	Measured Frequency (MHz)	26 dB emission bandwidth (MHz)	99% Occupied Bandwidth (MHz)
802.11ax-HE20: UNII 1	MCS0	5180	21.60	19.00
		5240	21.50	19.00
	MCS11	5180	22.00	19.20
		5240	22.00	19.20
802.11ax-HE20: UNII 2a	MCS0	5260	21.70	19.00
		5320	21.40	19.00
	MCS11	5260	21.90	19.20
		5320	21.80	19.10
802.11ax-HE20: UNII 2c	MCS0	5500	21.40	19.00
		5700	21.40	18.90
		5720	21.56	18.96
			15.64 -UNII 2C 5.92 -UNII 3	14.46 -UNII 2C 4.50 -UNII 3
	MCS11	5500	21.80	19.10
		5700	21.90	19.20
		5720	21.99	19.13
			14.66 -UNII 2C 7.33 -UNII 3	14.57 -UNII 2C 4.56 -UNII 3

Modulation: 802.11ax-HE20: UNII 3

Data rate	Measured Frequency (MHz)	6 dB emission bandwidth (MHz)	Minimum Limit (MHz)
MCS0	5745	18.85	0.5
	5825	18.55	0.5
MCS11	5745	19.20	0.5
	5825	19.20	0.5

Data rate	Measured Frequency (MHz)	99% Occupied Bandwidth (MHz)
MCS0	5745	19.00
	5825	19.10
MCS11	5745	19.20
	5825	19.10

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 32 von 207

Page 32 of 207

Modulation: 802.11n-HT40:

Modulation	Data rate	Measured Frequency (MHz)	26 dB emission bandwidth (MHz)	99% Occupied Bandwidth (MHz)
802.11n-HT40: UNII 1	MCS0	5190	41.00	36.75
		5230	41.57	36.75
	MCS7	5190	40.96	36.50
		5230	40.97	36.50
802.11n-HT40: UNII 2a	MCS0	5270	41.27	38.00
		5310	41.47	36.50
	MCS7	5270	41.10	36.50
		5310	41.19	36.25
802.11n-HT40: UNII 2c	MCS0	5510	41.41	36.75
		5590	41.29	44.50
		5670	41.24	36.75
		5710	41.39	43.75
	MCS7	5510	41.42	36.75
		5590	41.00	36.75
		5670	40.84	36.75
		5710	41.11	36.50

Modulation: 802.11n-HT40: UNII 3

Data rate	Measured Frequency (MHz)	6 dB emission bandwidth (MHz)	Minimum Limit (MHz)
MCS0	5755	36.40	0.5
	5795	36.15	0.5
MCS7	5755	36.55	0.5
	5795	36.55	0.5

Data rate	Measured Frequency (MHz)	99% Occupied Bandwidth (MHz)
MCS0	5755	36.75
	5795	36.75
MCS7	5755	36.75
	5795	36.75

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 33 von 207

Page 33 of 207

Modulation: 802.11ac-VHT40:

Modulation	Data rate	Measured Frequency (MHz)	26 dB emission bandwidth (MHz)	99% Occupied Bandwidth (MHz)
802.11ac-VHT40: UNII 1	MCS0	5190	41.49	36.75
		5230	41.49	36.75
	MCS9	5190	41.22	36.75
		5230	41.24	36.75
802.11ac-VHT40: UNII 2a	MCS0	5270	41.81	37.00
		5310	41.40	36.50
	MCS9	5270	41.13	36.75
		5310	41.15	36.75
802.11ac-VHT40: UNII 2c	MCS0	5510	41.53	36.75
		5590	41.33	38.00
		5670	41.45	36.75
		5710	41.63	37.50
	MCS9	5510	41.22	36.75
		5590	41.24	36.75
		5670	41.32	36.75
		5710	41.24	36.50

Modulation: 802.11ac-VHT40: UNII 3

Data rate	Measured Frequency (MHz)	6 dB emission bandwidth (MHz)	Minimum Limit (MHz)
MCS0	5755	36.40	0.5
	5795	36.15	0.5
MCS9	5755	36.55	0.5
	5795	36.50	0.5

Data rate	Measured Frequency (MHz)	99% Occupied Bandwidth (MHz)
MCS0	5755	36.75
	5795	36.50
MCS9	5755	36.75
	5795	36.50

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 34 von 207

Page 34 of 207

Modulation: 802.11ax-HE40:

Modulation	Data rate	Measured Frequency (MHz)	26 dB emission bandwidth (MHz)	99% Occupied Bandwidth (MHz)
802.11ax-HE40: UNII 1	MCS0	5190	41.41	37.75
		5230	41.41	37.75
	MCS11	5190	41.36	37.75
		5230	41.18	37.75
802.11ax-HE40: UNII 2a	MCS0	5270	41.47	37.75
		5310	41.02	37.75
	MCS11	5270	41.20	37.75
		5310	41.50	37.75
802.11ax-HE40: UNII 2c	MCS0	5510	41.38	37.75
		5590	41.04	38.00
		5670	41.26	37.75
		5710	41.29	38.00
	MCS11	5510	41.84	37.75
		5590	41.43	37.75
		5670	41.29	37.75
		5710	41.31	37.75

Modulation: 802.11ax-HE40: UNII 3

Data rate	Measured Frequency (MHz)	6 dB emission bandwidth (MHz)	Minimum Limit (MHz)
MCS0	5755	37.75	0.5
	5795	37.05	0.5
MCS11	5755	37.75	0.5
	5795	37.30	0.5

Data rate	Measured Frequency (MHz)	99% Occupied Bandwidth (MHz)
MCS0	5755	37.75
	5795	37.75
MCS11	5755	37.75
	5795	37.75

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 35 von 207

Page 35 of 207

Modulation: 802.11ac-VHT80:

Modulation	Data rate	Measured Frequency (MHz)	26 dB emission bandwidth (MHz)	99% Occupied Bandwidth (MHz)
802.11ac-VHT80: UNII 1	MCS0	5210	82.76	76.50
	MCS9	5210	82.00	76.50
802.11ac-VHT80: UNII 2a	MCS0	5290	82.25	76.50
	MCS9	5290	81.39	76.50
802.11ac-VHT80: UNII 2c	MCS0	5530	81.63	76.50
	MCS9	5690	82.44	76.50
	MCS0	5530	81.55	76.00
	MCS9	5690	82.20	76.50

Modulation: 802.11ac-VHT80: UNII 3

Data rate	Measured Frequency (MHz)	6 dB emission bandwidth (MHz)	Minimum Limit (MHz)
MCS0	5775	75.45	0.5
MCS9	5775	75.50	0.5

Data rate	Measured Frequency (MHz)	99% Occupied Bandwidth (MHz)
MCS0	5775	76.50
MCS9	5775	76.50

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 36 von 207

Page 36 of 207

Modulation: 802.11ax-HE80:

Modulation	Data rate	Measured Frequency (MHz)	26 dB emission bandwidth (MHz)	99% Occupied Bandwidth (MHz)
802.11ax- HE80: UNII 1	MCS0	5210	82.04	77.50
	MCS11	5210	81.95	77.50
802.11ax- HE80: UNII 2a	MCS0	5290	81.98	77.50
	MCS11	5290	82.20	77.50
802.11ax- HE80: UNII 2c	MCS0	5530	81.78	77.00
	MCS11	5690	81.75	77.50
	MCS0	5530	81.48	77.50
	MCS11	5690	82.60	77.50

Modulation: 802.11ax-HE80: UNII 3

Data rate	Measured Frequency (MHz)	6 dB emission bandwidth (MHz)	Minimum Limit (MHz)
MCS0	5775	76.95	0.5
MCS11	5775	77.80	0.5

Data rate	Measured Frequency (MHz)	99% Occupied Bandwidth (MHz)
MCS0	5775	77.50
MCS11	5775	77.50

7.2 Maximum Conducted Output Power

Result

Pass

Test Specification

FCC part 15 Subpart C & E, 15.247 (b), 15.407 (a) / RSS 247 Issue 2 Section 6.2.1; 6.2.2; 6.2.3; & Section 6.2.4

Test Method

Subclause 12.3.2.4 of ANSI C63.10

Measurement Bandwidth

Refer the remarks below

Detector

Average sample detector mode

Port of testing

Antenna port

Requirement for FCC

1. For client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW

2. For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in megahertz

3. For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W

1. For the band 5.15-5.25 GHz, the maximum e.i.r.p. shall not exceed 200 mW or 10 + 10 log₁₀ (B), dBm, whichever power is less. B is the 99% emission bandwidth in megahertz

2a. For the band 5.250 -5.350 GHz, the maximum conducted output power shall not exceed 250 mW or 11 + 10 log₁₀B, dBm, whichever is less

2b. For the band 5.250 -5.350 GHz, the maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 log₁₀B, dBm, whichever is less. B is the 99% emission bandwidth in megahertz

Requirement for IC

3a. For the band 5.470-5.725GHz, The maximum conducted output power shall not exceed 250 mW or 11 + 10 log₁₀B, dBm, whichever is less

3b. For the band 5.470-5.725GHz, The maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 log₁₀B, dBm, whichever is less. B is the 99% emission bandwidth in megahertz

4. For the band 5.725-5.85 GHz, The maximum conducted output power shall not exceed 1 W

Prüfbericht - Nr.:

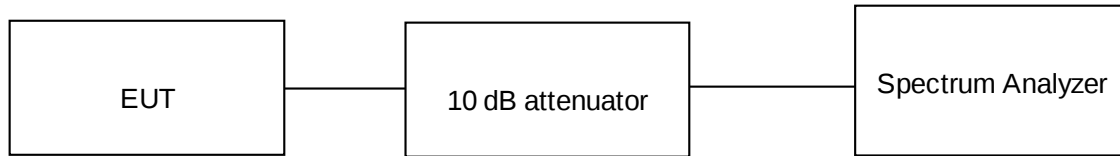
Test Report No.:

IN23VER9 001

Seite 38 von 207

Page 38 of 207

Test Method



The following procedure shall be used (trace averaging across on and off times of the EUT transmissions, followed by duty cycle correction):

1. Set center frequency to the nominal EUT channel center frequency
2. Set span to encompass the EBW (or, alternatively, the entire 99% occupied bandwidth) of the signal.
3. Set RBW = 1MHz
4. Set VBW $\geq 3 \times$ RBW
5. Number of points in sweep $\geq 2 \times$ span / RBW. (This ensures that bin-to-bin spacing is $\leq$ RBW/2, so that narrowband signals are not lost between frequency bins.)
6. Sweep time = auto
7. Detector = power averaging (rms), if available. Otherwise, use sample detector mode
8. Do not use sweep triggering. Allow the sweep to "free run."
9. Trace average at least 100 traces and Compute power by integrating the spectrum across the EBW
10. Add $10 \log(1/x)$, where x is the duty cycle, to the measured power in order to compute the average power during the actual transmission times (because the measurement represents an average over both the on and off times of the transmission)

Test Condition:

Normal Test Condition:

Temperature (Norm) = + 25 °C Voltage = 3.3 V DC through AC to Dc adaptor Relative humidity: 62 %

KDB Guidelines applied:

Measurements were made as per section E (2) sub-section (d) in KDB 789033 D02 General UNII Test Procedures New Rules v02r01

Note: Refer Attached Appendix for test Plots

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 39 von 207

Page 39 of 207

Test results:

Note:

1. All the losses are included during measurement and final values are mentioned in the test report
10 dB attenuator + 0.8 dB Cable loss = 10.8 dB total offset
2. Duty cycle correction factor is considered in Final Average power
Duty cycle Correction factor = $10^{\text{LOG}(1/X)}$ Where X is Duty Cycle
3. This product do not support additional beamforming gain / directional gain, it uses signal antenna and hence directional gain of the single antenna is (4.40 dBi)
4. e.i.r.p = Maximum Average output power (dBm) + Antenna gain in dBi

Antenna Type: 1001932PT (Flex/PCB) Antenna MIMO Results

Modulation: 802.11a:

Data rate (Mbps)	Measured Frequency (MHz)	Measured Average Power (dBm)	Duty Cycle X %	Duty cycle correction factor (dB)	Maximum Average output power (dBm)	e.i.r.p (dBm)	FCC Power Limit (dBm)	IC power (dBm)	IC e.i.r.p Limit (dBm)
a_mode-6Mbps	5180	14.65	90.68	0.42	15.07	19.47	24.00	-	22.25
	5240	16.60	90.68	0.42	17.02	21.42	24.00	-	22.25
	5260	16.26	90.65	0.43	16.69	21.09	24.00	23.25	22.25
	5320	14.57	90.65	0.43	15.00	19.40	24.00	23.28	22.28
	5500	11.86	90.66	0.43	12.29	16.69	24.00	23.25	22.25
	5700	11.29	90.66	0.43	11.72	16.12	24.00	23.23	22.23
	5720	14.87	90.68	0.42	15.29	19.69	24.00	23.25	22.25
	5745	13.62	90.66	0.43	14.05	18.45	30.00	30.00	-
	5825	18.93	90.68	0.42	19.35	23.75	30.00	30.00	-
a_mode-54Mbps	5180	14.66	55.28	2.57	17.23	21.63	24.00	-	22.23
	5240	18.94	55.26	2.58	21.52	25.92	24.00	-	22.30
	5260	18.33	55.55	2.55	20.88	25.28	24.00	23.30	22.30
	5320	14.46	55.28	2.57	17.03	21.43	24.00	23.23	22.23
	5500	12.05	55.33	2.57	14.62	19.02	24.00	23.28	22.28
	5700	11.32	55.34	2.57	13.89	18.29	24.00	23.25	22.25
	5720	16.27	55.31	2.57	18.84	23.24	24.00	23.28	22.28
	5745	15.55	55.30	2.57	18.12	22.52	30.00	30.00	-
	5825	15.73	55.30	2.57	18.30	22.70	30.00	30.00	-

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 40 von 207

Page 40 of 207

Modulation: 802.11n-HT20:

Data rate	Measured Frequency (MHz)	Measured Average Power (dBm)	Duty Cycle X %	Duty cycle correction factor (dB)	Maximum Average output power (dBm)	e.i.r.p (dBm)	FCC Power Limit (dBm)	IC power (dBm)	IC e.i.r.p Limit (dBm)
n_mode-HT20-MCS0	5180	13.68	90.07	0.45	14.13	18.53	24.00	-	22.50
	5240	16.48	90.07	0.45	16.93	21.33	24.00	-	22.55
	5260	16.16	90.09	0.45	16.61	21.01	24.00	23.58	22.58
	5320	14.57	90.05	0.46	15.03	19.43	24.00	23.55	22.55
	5500	12.00	90.10	0.45	12.45	16.85	24.00	23.53	22.53
	5700	10.08	90.08	0.45	10.53	14.93	24.00	23.53	22.53
	5720	14.74	90.07	0.45	15.19	19.59	24.00	23.53	22.53
	5745	14.49	90.07	0.45	14.94	19.34	30.00	30.00	-
n_mode-HT20-MCS7	5825	14.57	90.10	0.45	15.02	19.42	30.00	30.00	-
	5180	12.52	53.59	2.71	15.23	19.63	24.00	-	22.53
	5240	17.91	53.56	2.71	20.62	25.02	24.00	-	22.53
	5260	17.34	53.55	2.71	20.05	24.45	24.00	23.53	22.53
	5320	14.42	53.57	2.71	17.13	21.53	24.00	23.53	22.53
	5500	12.10	53.60	2.71	14.81	19.21	24.00	23.53	22.53
	5700	10.21	53.65	2.70	12.91	17.31	24.00	23.53	22.53
	5720	15.49	53.59	2.71	18.20	22.60	24.00	23.55	22.55
n_mode-HT20-MCS7	5745	14.56	53.60	2.71	17.27	21.67	30.00	30.00	-
	5825	14.74	53.62	2.71	17.45	21.85	30.00	30.00	-

Modulation: 802.11ac-VHT20:

Data rate	Measured Frequency (MHz)	Measured Average Power (dBm)	Duty Cycle X %	Duty cycle correction factor (dB)	Maximum Average output power (dBm)	e.i.r.p (dBm)	FCC Power Limit (dBm)	IC power (dBm)	IC e.i.r.p Limit (dBm)
ac_mode-VHT20-MCS0	5180	12.68	90.15	0.45	13.13	17.53	24.00	-	22.50
	5240	16.55	90.11	0.45	17.00	21.40	24.00	-	22.53
	5260	16.21	90.07	0.45	16.66	21.06	24.00	23.53	22.53
	5320	13.69	90.12	0.45	14.14	18.54	24.00	23.53	22.53
	5500	12.02	90.15	0.45	12.47	16.87	24.00	23.53	22.53
	5700	10.11	90.16	0.45	10.56	14.96	24.00	23.53	22.53
	5720	14.76	90.12	0.45	15.21	19.61	24.00	23.53	22.53
	5745	13.54	90.15	0.45	13.99	18.39	30.00	30.00	-
ac_mode-VHT20-MCS9	5825	13.65	90.15	0.45	14.10	18.50	30.00	30.00	-
	5180	13.54	51.06	2.92	16.46	20.86	24.00	-	22.53
	5240	16.12	51.09	2.92	19.04	23.44	24.00	-	22.50
	5260	15.63	51.10	2.92	18.55	22.95	24.00	23.50	22.50
	5320	14.40	51.10	2.92	17.32	21.72	24.00	23.50	22.50
	5500	12.15	51.13	2.91	15.06	19.46	24.00	23.53	22.53
	5700	10.22	51.17	2.91	13.13	17.53	24.00	23.53	22.53
	5720	13.69	51.44	2.89	16.58	20.98	24.00	23.53	22.53
ac_mode-VHT20-MCS9	5745	14.60	51.13	2.91	17.51	21.91	30.00	30.00	-
	5825	14.78	51.13	2.91	17.69	22.09	30.00	30.00	-

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 41 von 207

Page 41 of 207

Modulation: 802.11ax-HE20:

Data rate	Measured Frequency (MHz)	Measured Average Power (dBm)	Duty Cycle X %	Duty cycle correction factor (dB)	Maximum Average output power (dBm)	e.i.r.p (dBm)	FCC Power Limit (dBm)	IC power (dBm)	IC e.i.r.p Limit (dBm)
ax_mode-HE20-MCS0	5180	13.84	87.65	0.57	14.41	18.81	24.00	-	22.79
	5240	16.68	87.65	0.57	17.25	21.65	24.00	-	22.79
	5260	16.33	87.62	0.57	16.90	21.30	24.00	23.79	22.79
	5320	14.74	87.65	0.57	15.31	19.71	24.00	23.79	22.79
	5500	12.12	87.66	0.57	12.69	17.09	24.00	23.79	22.79
	5700	10.21	87.67	0.57	10.78	15.18	24.00	23.76	22.76
	5720	14.89	87.63	0.57	15.46	19.86	24.00	23.79	22.79
	5745	13.67	87.66	0.57	14.24	18.64	30.00	30.00	22.79
ax_mode-HE20-MCS11	5825	14.83	87.63	0.57	15.40	19.80	30.00	30.00	-
	5180	12.66	45.10	3.46	16.12	20.52	24.00	-	22.83
	5240	13.33	35.09	4.55	17.88	22.28	24.00	-	22.83
	5260	12.67	45.09	3.46	16.13	20.53	24.00	23.83	22.83
	5320	12.53	45.08	3.46	15.99	20.39	24.00	23.81	22.81
	5500	11.24	45.11	3.46	14.70	19.10	24.00	23.81	22.81
	5700	10.40	45.15	3.45	13.85	18.25	24.00	23.83	22.83
	5720	10.66	45.16	3.45	14.11	18.51	24.00	23.83	22.83
	5745	11.60	45.13	3.46	15.06	19.46	30.00	30.00	-
	5825	11.69	45.15	3.45	15.14	19.54	30.00	30.00	-

Modulation: 802.11n-HT40:

Data rate	Measured Frequency (MHz)	Measured Average Power (dBm)	Duty Cycle X %	Duty cycle correction factor (dB)	Maximum Average output power (dBm)	e.i.r.p (dBm)	FCC Power Limit (dBm)	IC power (dBm)	IC e.i.r.p Limit (dBm)
n_mode-HT40-MCS0	5190	13.10	81.89	0.87	13.97	18.37	24.00	-	23.00
	5230	16.50	81.88	0.87	17.37	21.77	24.00	-	23.00
	5270	19.20	81.86	0.87	20.07	24.47	24.00	23.97	30.00
	5310	15.90	81.89	0.87	16.77	21.17	24.00	23.97	30.00
	5510	11.10	81.91	0.87	11.97	16.37	24.00	23.97	30.00
	5590	18.30	81.88	0.87	19.17	23.57	24.00	23.97	30.00
	5670	13.50	81.91	0.87	14.37	18.77	24.00	23.97	30.00
	5710	18.10	81.87	0.87	18.97	23.37	24.00	23.97	30.00
	5755	14.60	81.90	0.87	15.47	19.87	30.00	30.00	-
	5795	16.60	81.90	0.87	17.47	21.87	30.00	30.00	-
n_mode-HT40-MCS7	5190	12.90	40.90	3.88	16.78	21.18	24.00	-	23.00
	5230	17.30	40.81	3.89	21.19	25.59	24.00	-	23.00
	5270	17.00	40.87	3.89	20.89	25.29	24.00	23.97	30.00
	5310	15.70	40.89	3.88	19.58	23.98	24.00	23.97	30.00
	5510	11.20	40.96	3.88	15.08	19.48	24.00	23.97	30.00
	5590	15.50	40.93	3.88	19.38	23.78	24.00	23.97	30.00
	5670	13.60	40.96	3.88	17.48	21.88	24.00	23.97	30.00
	5710	15.20	40.93	3.88	19.08	23.48	24.00	23.97	30.00
	5755	15.80	40.92	3.88	19.68	24.08	30.00	30.00	-
	5795	15.40	40.94	3.88	19.28	23.68	30.00	30.00	-

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 42 von 207

Page 42 of 207

Modulation: 802.11ac-VHT40:

Data rate	Measured Frequency (MHz)	Measured Average Power (dBm)	Duty Cycle X %	Duty cycle correction factor (dB)	Maximum Average output power (dBm)	e.i.r.p (dBm)	FCC Power Limit (dBm)	IC power (dBm)	IC e.i.r.p Limit (dBm)
ac_mode_VHT40_MCS0	5190	10.90	81.94	0.86	11.76	16.16	24.00	-	25.65
	5230	15.30	81.93	0.87	16.17	20.57	24.00	-	25.65
	5270	16.90	81.93	0.87	17.77	22.17	24.00	23.97	25.71
	5310	13.70	81.91	0.87	14.57	18.97	24.00	23.97	25.62
	5510	8.40	81.99	0.86	9.26	13.66	24.00	23.97	25.65
	5590	14.70	81.96	0.86	15.56	19.96	24.00	23.97	25.74
	5670	11.00	81.98	0.86	11.86	16.26	24.00	23.97	25.65
	5710	14.30	81.97	0.86	15.16	19.56	24.00	23.97	25.71
	5755	21.00	81.97	0.86	21.86	26.26	30.00	30.00	-
	5795	20.90	74.93	1.25	22.15	26.55	30.00	30.00	-
ac_mode_VHT40_MCS9	5190	22.00	37.73	4.23	26.23	30.63	24.00	-	28.08
	5230	22.00	37.77	4.23	26.23	30.63	24.00	-	28.33
	5270	14.50	37.82	4.22	18.72	23.12	24.00	23.97	25.65
	5310	14.20	37.79	4.23	18.43	22.83	24.00	23.97	25.62
	5510	9.50	37.89	4.21	13.71	18.11	24.00	23.97	25.65
	5590	12.70	37.83	4.22	16.92	21.32	24.00	23.97	25.65
	5670	12.00	37.87	4.22	16.22	20.62	24.00	23.97	25.65
	5710	12.50	37.88	4.22	16.72	21.12	24.00	23.97	25.62
	5755	13.10	37.87	4.22	17.32	21.72	30.00	30.00	-
	5795	12.70	37.88	4.22	16.92	21.32	30.00	30.00	-

Modulation: 802.11ax-HE40:

Data rate	Measured Frequency (MHz)	Measured Average Power (dBm)	Duty Cycle X %	Duty cycle correction factor (dB)	Maximum Average output power (dBm)	e.i.r.p (dBm)	FCC Power Limit (dBm)	IC power (dBm)	IC e.i.r.p Limit (dBm)
ax_mode_HE40_MCS0	5190	13.40	78.89	1.03	14.43	18.83	24.00	-	25.77
	5230	17.60	78.88	1.03	18.63	23.03	24.00	-	25.77
	5270	19.40	78.90	1.03	20.43	24.83	24.00	23.97	25.80
	5310	15.20	78.88	1.03	16.23	20.63	24.00	23.97	25.77
	5510	11.50	78.94	1.03	12.53	16.93	24.00	23.97	25.77
	5590	18.60	78.89	1.03	19.63	24.03	24.00	23.97	25.85
	5670	13.70	78.91	1.03	14.73	19.13	24.00	23.97	25.77
	5710	18.30	78.92	1.03	19.33	23.73	24.00	23.97	25.83
	5755	15.00	78.91	1.03	16.03	20.43	30.00	30.00	-
	5795	14.80	78.91	1.03	15.83	20.23	30.00	30.00	-
ax_mode_HE40_MCS11	5190	13.10	37.86	4.22	17.32	21.72	24.00	-	25.77
	5230	13.20	37.86	4.22	17.42	21.82	24.00	-	25.77
	5270	12.90	37.86	4.22	17.12	21.52	24.00	23.97	25.77
	5310	12.70	37.83	4.22	16.92	21.32	24.00	23.97	25.77
	5510	11.40	37.93	4.21	15.61	20.01	24.00	23.97	25.77
	5590	11.20	40.92	3.88	15.08	19.48	24.00	23.97	25.77
	5670	11.30	40.92	3.88	15.18	19.58	24.00	23.97	25.77
	5710	10.90	40.92	3.88	14.78	19.18	24.00	23.97	25.77
	5755	11.40	40.92	3.88	15.28	19.68	30.00	30.00	-
	5795	11.10	40.94	3.88	14.98	19.38	30.00	30.00	-

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 43 von 207

Page 43 of 207

Modulation: 802.11ac-VHT80:

Data rate	Measured Frequency (MHz)	Measured Average Power (dBm)	Duty Cycle X %	Duty cycle correction factor (dB)	Maximum Average output power (dBm)	e.i.r.p (dBm)	FCC Power Limit (dBm)	IC power (dBm)	IC e.i.r.p Limit (dBm)
ac_mode-VHT80-MCS0	5210	10.80	69.26	1.60	12.40	16.80	24.00	23.97	35.84
	5290	11.20	69.31	1.59	12.79	17.19	24.00	23.97	35.84
	5530	11.10	69.35	1.59	12.69	17.09	24.00	23.97	35.81
	5690	15.70	69.33	1.59	17.29	21.69	24.00	23.97	35.84
	5755	15.40	69.32	1.59	16.99	21.39	30.00	30.00	35.84
ac_mode-VHT80-MCS9	5210	13.80	30.77	5.12	18.92	23.32	24.00	23.97	35.84
	5290	13.00	30.82	5.11	18.11	22.51	24.00	23.97	35.84
	5530	12.00	30.79	5.12	17.12	21.52	24.00	23.97	35.81
	5690	12.80	30.87	5.10	17.90	22.30	24.00	23.97	35.84
	5755	12.80	30.84	5.11	17.91	22.31	30.00	30.00	35.84

Modulation: 802.11ax-HE80:

Data rate	Measured Frequency (MHz)	Measured Average Power (dBm)	Duty Cycle X %	Duty cycle correction factor (dB)	Maximum Average output power (dBm)	e.i.r.p (dBm)	FCC Power Limit (dBm)	IC power (dBm)	IC e.i.r.p Limit (dBm)
ax_mode-VHT80-MCS0	5210	14.60	66.73	1.76	16.36	20.76	24.00	23.97	35.86
	5290	13.60	66.80	1.75	15.35	19.75	24.00	23.97	35.89
	5530	13.50	66.77	1.75	15.25	19.65	24.00	23.97	35.89
	5690	18.20	66.82	1.75	19.95	24.35	24.00	23.97	35.89
	5755	18.40	66.77	1.75	20.15	24.55	30.00	30.00	35.89
ax_mode-VHT80-MCS11	5210	12.00	35.23	4.53	16.53	20.93	24.00	23.97	35.89
	5290	10.90	35.24	4.53	15.43	19.83	24.00	23.97	35.89
	5530	10.60	35.28	4.52	15.12	19.52	24.00	23.97	35.86
	5690	10.30	35.33	4.52	14.82	19.22	24.00	23.97	35.89
	5755	10.40	35.12	4.54	14.94	19.34	30.00	30.00	35.89

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 44 von 207

Page 44 of 207

Test results:

Note:

1. All the losses are included during measurement and final values are mentioned in the test report
10 dB attenuator + 0.8 dB Cable loss = 10.8 dB total offset
2. Duty cycle correction factor is considered in Final Average power
Duty cycle Correction factor = $10 \cdot \log(1/X)$ Where X is Duty Cycle
3. This product do not support additional beamforming gain / directional gain, it uses signal antenna and hence directional gain of the single antenna is (5.58 dBi)
4. e.i.r.p = Maximum Average output power (dBm) + Antenna gain in dBi

Antenna Type: FPA3020-10 (Flex/PCB) Antenna MIMO Results

Modulation: 802.11a:

Data rate (Mbps)	Measured Frequency (MHz)	Measured Average Power (dBm)	Duty Cycle X %	Duty cycle correction factor (dB)	Maximum Average output power (dBm)	e.i.r.p (dBm)	FCC Power Limit (dBm)	IC power (dBm)	IC e.i.r.p Limit (dBm)
a_mode-6Mbps	5180	15.64	90.65	0.43	16.07	21.65	24.00	-	22.25
	5240	16.60	90.68	0.42	17.02	22.60	24.00	-	22.25
	5260	16.26	90.65	0.43	16.69	22.27	24.00	23.25	22.25
	5320	14.57	90.65	0.43	15.00	20.58	24.00	23.28	22.28
	5500	11.86	90.66	0.43	12.29	17.87	24.00	23.25	22.25
	5700	11.29	90.66	0.43	11.72	17.30	24.00	23.23	22.23
	5720	14.87	90.68	0.42	15.29	20.87	24.00	23.25	22.25
	5745	18.03	90.66	0.43	18.46	24.04	30.00	30.00	-
	5825	17.62	90.66	0.43	18.05	23.63	30.00	30.00	-
a_mode-54Mbps	5180	14.66	55.28	2.57	17.23	22.81	24.00	-	22.23
	5240	18.94	55.26	2.58	21.52	27.10	24.00	-	22.30
	5260	18.33	55.55	2.55	20.88	26.46	24.00	23.30	22.30
	5320	14.46	55.28	2.57	17.03	22.61	24.00	23.23	22.23
	5500	12.05	55.33	2.57	14.62	20.20	24.00	23.28	22.28
	5700	11.32	55.34	2.57	13.89	19.47	24.00	23.25	22.25
	5720	16.27	55.31	2.57	18.84	24.42	24.00	23.28	22.28
	5745	17.96	55.26	2.58	20.54	26.12	30.00	30.00	-
	5825	17.64	55.30	2.57	20.21	25.79	30.00	30.00	-

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 45 von 207

Page 45 of 207

Modulation: 802.11n-HT20:

Data rate	Measured Frequency (MHz)	Measured Average Power (dBm)	Duty Cycle X %	Duty cycle correction factor (dB)	Maximum Average output power (dBm)	e.i.r.p (dBm)	FCC Power Limit (dBm)	IC power (dBm)	IC e.i.r.p Limit (dBm)
n_mode-HT20-MCS0	5180	13.55	90.10	0.45	14.00	19.58	24.00	-	22.50
	5240	16.48	90.07	0.45	16.93	22.51	24.00	-	22.55
	5260	16.16	90.09	0.45	16.61	22.19	24.00	23.58	22.58
	5320	14.57	90.05	0.46	15.03	20.61	24.00	23.55	22.55
	5500	12.00	90.10	0.45	12.45	18.03	24.00	23.53	22.53
	5700	10.08	90.08	0.45	10.53	16.11	24.00	23.53	22.53
	5720	14.74	90.07	0.45	15.19	20.77	24.00	23.53	22.53
	5745	17.10	90.10	0.45	17.55	23.13	30.00	30.00	-
n_mode-HT20-MCS7	5825	18.28	90.10	0.45	18.73	24.31	30.00	30.00	-
	5180	12.52	53.59	2.71	15.23	20.81	24.00	-	22.53
	5240	17.91	53.56	2.71	20.62	26.20	24.00	-	22.53
	5260	17.34	53.55	2.71	20.05	25.63	24.00	23.53	22.53
	5320	14.42	53.57	2.71	17.13	22.71	24.00	23.53	22.53
	5500	12.10	53.60	2.71	14.81	20.39	24.00	23.53	22.53
	5700	10.21	53.65	2.70	12.91	18.49	24.00	23.53	22.53
	5720	15.49	53.59	2.71	18.20	23.78	24.00	23.55	22.55
	5745	17.18	53.57	2.71	19.89	25.47	30.00	30.00	-
	5825	16.87	53.59	2.71	19.58	25.16	30.00	30.00	-

Modulation: 802.11ac-VHT20:

Data rate	Measured Frequency (MHz)	Measured Average Power (dBm)	Duty Cycle X %	Duty cycle correction factor (dB)	Maximum Average output power (dBm)	e.i.r.p (dBm)	FCC Power Limit (dBm)	IC power (dBm)	IC e.i.r.p Limit (dBm)
ac_mode-VHT20-MCS0	5180	14.63	90.14	0.45	15.08	20.66	24.00	-	22.53
	5240	16.55	90.11	0.45	17.00	22.58	24.00	-	22.53
	5260	16.21	90.07	0.45	16.66	22.24	24.00	23.53	22.53
	5320	15.12	90.14	0.45	15.57	21.15	24.00	23.53	22.53
	5500	12.02	90.15	0.45	12.47	18.05	24.00	23.53	22.53
	5700	10.11	90.16	0.45	10.56	16.14	24.00	23.53	22.53
	5720	14.76	90.12	0.45	15.21	20.79	24.00	23.53	22.53
	5745	16.26	90.15	0.45	16.71	22.29	30.00	30.00	-
ac_mode-VHT20-MCS9	5825	19.14	90.15	0.45	19.59	25.17	30.00	30.00	-
	5180	13.54	51.06	2.92	16.46	22.04	24.00	-	22.53
	5240	16.12	51.09	2.92	19.04	24.62	24.00	-	22.50
	5260	15.63	51.10	2.92	18.55	24.13	24.00	23.50	22.50
	5320	14.40	51.10	2.92	17.32	22.90	24.00	23.50	22.50
	5500	12.15	51.13	2.91	15.06	20.64	24.00	23.53	22.53
	5700	10.22	51.17	2.91	13.13	18.71	24.00	23.53	22.53
	5720	13.69	51.44	2.89	16.58	22.16	24.00	23.53	22.53
	5745	14.60	51.13	2.91	17.51	23.09	30.00	30.00	-
	5825	14.78	51.13	2.91	17.69	23.27	30.00	30.00	-

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 46 von 207

Page 46 of 207

Modulation: 802.11ax-HE20:

Data rate	Measured Frequency (MHz)	Measured Average Power (dBm)	Duty Cycle X %	Duty cycle correction factor (dB)	Maximum Average output power (dBm)	e.i.r.p (dBm)	FCC Power Limit (dBm)	IC power (dBm)	IC e.i.r.p Limit (dBm)
ax_mode-HE20-MCS0	5180	13.84	87.65	0.57	14.41	19.99	24.00	-	22.79
	5240	16.68	87.65	0.57	17.25	22.83	24.00	-	22.79
	5260	16.33	87.62	0.57	16.90	22.48	24.00	23.79	22.79
	5320	14.74	87.65	0.57	15.31	20.89	24.00	23.79	22.79
	5500	12.12	87.66	0.57	12.69	18.27	24.00	23.79	22.79
	5700	10.21	87.67	0.57	10.78	16.36	24.00	23.76	22.76
	5720	14.89	87.63	0.57	15.46	21.04	24.00	23.79	22.79
	5745	17.30	87.63	0.57	17.87	23.45	30.00	30.00	-
	5825	18.44	87.63	0.57	19.01	24.59	30.00	30.00	-
ax_mode-HE20-MCS11	5180	12.66	45.10	3.46	16.12	21.70	24.00	-	22.83
	5240	13.33	35.09	4.55	17.88	23.46	24.00	-	22.83
	5260	12.67	45.09	3.46	16.13	21.71	24.00	23.83	22.83
	5320	12.53	45.08	3.46	15.99	21.57	24.00	23.81	22.81
	5500	11.24	45.11	3.46	14.70	20.28	24.00	23.81	22.81
	5700	10.40	45.15	3.45	13.85	19.43	24.00	23.83	22.83
	5720	10.66	45.16	3.45	14.11	19.69	24.00	23.83	22.83
	5745	11.60	45.13	3.46	15.06	20.64	30.00	30.00	-
	5825	11.69	45.15	3.45	15.14	20.72	30.00	30.00	-

Modulation: 802.11n-HT40:

Data rate	Measured Frequency (MHz)	Measured Average Power (dBm)	Duty Cycle X %	Duty cycle correction factor (dB)	Maximum Average output power (dBm)	e.i.r.p (dBm)	FCC Power Limit (dBm)	IC power (dBm)	IC e.i.r.p Limit (dBm)
n_mode-HT40-MCS0	5190	13.10	81.89	0.87	13.97	19.55	24.00	-	25.65
	5230	16.50	81.86	0.87	17.37	22.95	24.00	-	25.65
	5270	19.10	81.86	0.87	19.97	25.55	24.00	23.97	25.80
	5310	15.80	81.89	0.87	16.67	22.25	24.00	23.97	25.62
	5510	11.20	81.91	0.87	12.07	17.65	24.00	23.97	25.65
	5590	18.20	81.87	0.87	19.07	24.65	24.00	23.97	26.48
	5670	13.50	81.88	0.87	14.37	19.95	24.00	23.97	25.65
	5710	18.10	81.87	0.87	18.97	24.55	24.00	23.97	26.41
	5755	14.70	81.91	0.87	15.57	21.15	30.00	30.00	-
	5795	16.50	81.90	0.87	17.37	22.95	30.00	30.00	-
n_mode-HT40-MCS7	5190	13.00	40.88	3.88	16.88	22.46	24.00	-	25.62
	5230	17.20	40.81	3.89	21.09	26.67	24.00	-	25.62
	5270	17.10	40.85	3.89	20.99	26.57	24.00	23.97	25.62
	5310	15.70	40.87	3.89	19.59	25.17	24.00	23.97	25.59
	5510	11.20	40.97	3.88	15.08	20.66	24.00	23.97	25.65
	5590	15.50	40.93	3.88	19.38	24.96	24.00	23.97	25.65
	5670	13.50	40.95	3.88	17.38	22.96	24.00	23.97	25.65
	5710	15.20	40.92	3.88	19.08	24.66	24.00	23.97	25.62
	5755	15.70	40.93	3.88	19.58	25.16	30.00	30.00	-
	5795	15.40	40.92	3.88	19.28	24.86	30.00	30.00	-

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 47 von 207

Page 47 of 207

Modulation: 802.11ac-VHT40:

Data rate	Measured Frequency (MHz)	Measured Average Power (dBm)	Duty Cycle X %	Duty cycle correction factor (dB)	Maximum Average output power (dBm)	e.i.r.p (dBm)	FCC Power Limit (dBm)	IC power (dBm)	IC e.i.r.p Limit (dBm)
ac_mode_VHT40_MCS0	5190	13.20	81.98	0.86	14.06	19.64	24.00	-	25.65
	5230	17.40	81.94	0.86	18.26	23.84	24.00	-	25.65
	5270	17.20	81.97	0.86	18.06	23.64	24.00	23.97	25.68
	5310	15.90	81.92	0.87	16.77	22.35	24.00	23.97	25.62
	5510	11.40	81.98	0.86	12.26	17.84	24.00	23.97	25.65
	5590	17.50	81.95	0.86	18.36	23.94	24.00	23.97	25.80
	5670	13.60	81.97	0.86	14.46	20.04	24.00	23.97	25.65
	5710	17.20	81.96	0.86	18.06	23.64	24.00	23.97	25.74
	5755	15.70	81.99	0.86	16.56	22.14	30.00	30.00	-
ac_mode_VHT40_MCS9	5795	15.50	81.99	0.86	16.36	21.94	30.00	30.00	-
	5190	12.90	37.89	4.21	17.11	22.69	24.00	-	25.65
	5230	16.30	37.86	4.22	20.52	26.10	24.00	-	25.65
	5270	15.90	37.85	4.22	20.12	25.70	24.00	23.97	25.65
	5310	15.80	37.82	4.22	20.02	25.60	24.00	23.97	25.65
	5510	11.20	37.96	4.21	15.41	20.99	24.00	23.97	25.65
	5590	14.60	37.88	4.22	18.82	24.40	24.00	23.97	25.65
	5670	13.60	37.90	4.21	17.81	23.39	24.00	23.97	25.65
	5710	14.30	37.94	4.21	18.51	24.09	24.00	23.97	25.62
	5755	14.90	37.92	4.21	19.11	24.69	30.00	30.00	-
	5795	14.50	37.93	4.21	18.71	24.29	30.00	30.00	-

Modulation: 802.11ax-HE40:

Data rate	Measured Frequency (MHz)	Measured Average Power (dBm)	Duty Cycle X %	Duty cycle correction factor (dB)	Maximum Average output power (dBm)	e.i.r.p (dBm)	FCC Power Limit (dBm)	IC power (dBm)	IC e.i.r.p Limit (dBm)
ax_mode_HE40_MCS0	5190	12.90	78.92	1.03	13.93	19.51	24.00	-	25.77
	5230	17.70	78.87	1.03	18.73	24.31	24.00	-	25.77
	5270	18.90	78.90	1.03	19.93	25.51	24.00	23.97	25.77
	5310	15.10	78.91	1.03	16.13	21.71	24.00	23.97	25.77
	5510	11.80	78.93	1.03	12.83	18.41	24.00	23.97	25.77
	5590	19.20	78.89	1.03	20.23	25.81	24.00	23.97	25.80
	5670	14.50	78.92	1.03	15.53	21.11	24.00	23.97	25.77
	5710	18.90	78.89	1.03	19.93	25.51	24.00	23.97	25.80
	5755	15.70	78.92	1.03	16.73	22.31	30.00	30.00	-
ax_mode_HE40_MCS11	5795	15.40	78.93	1.03	16.43	22.01	30.00	30.00	-
	5190	12.70	37.87	4.22	16.92	22.50	24.00	-	25.77
	5230	13.30	37.86	4.22	17.52	23.10	24.00	-	25.77
	5270	12.20	37.88	4.22	16.42	22.00	24.00	23.97	25.77
	5310	12.50	37.86	4.22	16.72	22.30	24.00	23.97	25.77
	5510	11.70	37.92	4.21	15.91	21.49	24.00	23.97	25.77
	5590	11.50	37.93	4.21	15.71	21.29	24.00	23.97	25.77
	5670	11.80	37.92	4.21	16.01	21.59	24.00	23.97	25.77
	5710	11.30	37.96	4.21	15.51	21.09	24.00	23.97	25.77
	5755	11.90	37.95	4.21	16.11	21.69	30.00	30.00	-
	5795	11.80	37.95	4.21	16.01	21.59	30.00	30.00	-

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 48 von 207

Page 48 of 207

Modulation: 802.11ac-VHT80:

Data rate	Measured Frequency (MHz)	Measured Average Power (dBm)	Duty Cycle X %	Duty cycle correction factor (dB)	Maximum Average output power (dBm)	e.i.r.p (dBm)	FCC Power Limit (dBm)	IC power (dBm)	IC e.i.r.p Limit (dBm)
ac_mode-VHT80-MCS0	5210	14.10	69.24	1.60	15.70	21.28	24.00	23.97	35.84
	5290	14.30	69.32	1.59	15.89	21.47	24.00	23.97	35.84
	5530	11.30	69.33	1.59	12.89	18.47	24.00	23.97	35.84
	5690	15.80	69.33	1.59	17.39	22.97	24.00	23.97	35.84
	5755	15.40	69.30	1.59	16.99	22.57	30.00	30.00	35.84
ac_mode-VHT80-MCS9	5210	13.80	30.77	5.12	18.92	24.50	24.00	23.97	35.84
	5290	13.10	30.81	5.11	18.21	23.79	24.00	23.97	35.84
	5530	12.00	30.78	5.12	17.12	22.70	24.00	23.97	35.81
	5690	12.90	30.86	5.11	18.01	23.59	24.00	23.97	35.84
	5755	12.80	30.83	5.11	17.91	23.49	30.00	30.00	35.84

Modulation: 802.11ax-HE80:

Data rate	Measured Frequency (MHz)	Measured Average Power (dBm)	Duty Cycle X %	Duty cycle correction factor (dB)	Maximum Average output power (dBm)	e.i.r.p (dBm)	FCC Power Limit (dBm)	IC power (dBm)	IC e.i.r.p Limit (dBm)
ax_mode-VHT80-MCS0	5210	16.60	66.75	1.76	18.36	23.94	24.00	23.97	35.89
	5290	16.80	66.77	1.75	18.55	24.13	24.00	23.97	35.89
	5530	13.60	66.79	1.75	15.35	20.93	24.00	23.97	35.86
	5690	18.20	66.82	1.75	19.95	25.53	24.00	23.97	35.89
	5755	18.40	66.76	1.75	20.15	25.73	30.00	30.00	35.89
ax_mode-VHT80-MCS9	5210	12.00	35.23	4.53	16.53	22.11	24.00	23.97	35.89
	5290	11.00	35.23	4.53	15.53	21.11	24.00	23.97	35.89
	5530	10.60	35.29	4.52	15.12	20.70	24.00	23.97	35.89
	5690	10.30	35.33	4.52	14.82	20.40	24.00	23.97	35.89
	5755	10.60	35.34	4.52	15.12	20.70	30.00	30.00	35.89

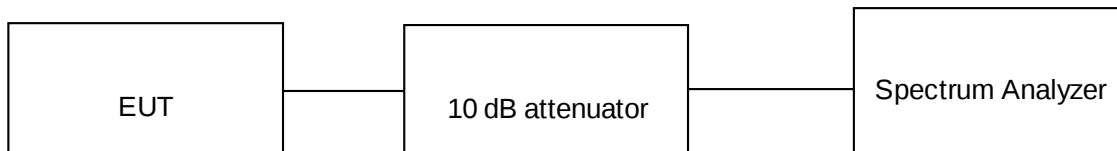
7.3 Maximum Power Spectral Density

Result

Pass

Test Specification	FCC part 15 Subpart C 15.407 (a) / RSS 247 Issue 2 Section 6.2.1; 6.2.2; 6.2.3; & Section 6.2.4
Test Method	Subclause 12.5 of ANSI C63.10
Measurement Bandwidth	100kHz/300kHz/1 MHz
Detector	Average sample detector
Port of testing	Antenna port
Requirement for FCC	1. For client devices in the 5.15-5.25 GHz band, the maximum power spectral density shall not exceed 11 dBm in any 1 MHz band 2. For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band 3. For the band 5.725-5.85 GHz, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band
Requirement for IC	1. For the band 5.15-5.25 GHz, The e.i.r.p. spectral density shall not exceed 10 dBm in any 1 MHz band 2. For the 5.25-5.35 GHz, the power spectral density shall not exceed 11 dBm in any 1.0 MHz band 3. For the 5.47-5.725 GHz, the power spectral density shall not exceed 11 dBm in any 1.0 MHz band 4. For the band 5.725-5.85 GHz, The output power spectral density shall not exceed 30 dBm in any 500 kHz band

Test Method:



Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 50 von 207

Page 50 of 207

The following procedure shall be used:

1. Set center frequency to the nominal EUT channel center frequency
2. Set span to encompass the EBW (or, alternatively, the entire 99% occupied bandwidth) of the signal
3. Set RBW = 1MHz (5.15-5.25 GHz band) / 500kHz (5.725-5.85 GHz band)
4. Set VBW $\geq 3 \times$ RBW
5. Number of points in sweep $\geq 2 \times$ span / RBW. (This ensures that bin-to-bin spacing is $\leq$ RBW/2, so that narrowband signals are not lost between frequency bins.)
6. Sweep time = auto
7. Detector = power averaging (rms), if available. Otherwise, use sample detector mode
8. Do not use sweep triggering. Allow the sweep to "free run."
9. Trace average at least 100 traces and Compute power by integrating the spectrum across the EBW
10. Add $10 \log(1/x)$, where x is the duty cycle, to the measured power in order to compute the average power during the actual transmission times (because the measurement represents an average over both the on and off times of the transmission)
11. If measurements are performed using a reduced resolution bandwidth (< 1 MHz, or < 500 kHz) and integrated over 1 MHz, or 500 kHz bandwidth, the following adjustments to the procedures apply:
 - a. Set RBW = 300 kHz
 - b. Set VBW ≥ 3 RBW
 - c. If measurement bandwidth of Maximum PSD is specified in 500 kHz

$$\text{PSD bandwidth correction Factor} = 10 * \log(500 \text{ kHz} / \text{RBW})$$

Test Condition:

Normal Test Condition:

Temperature (Norm) = + 25 °C Voltage = 3.3 V DC through AC to Dc adaptor Relative humidity: 62 %

KDB Guidelines applied:

Measurements were made as per section F in KDB 789033 D02 General UNII Test Procedures New Rules v02r01

Note: Refer Attached Appendix for test Plots

Prüfbericht - Nr.:
Test Report No.:

IN23VER9 001

Seite 51 von 207
Page 51 of 207

Antenna Type: 1001932PT (Flex/PCB) Antenna MIMO Results

Note:

1. All the losses are included during measurement and final values are mentioned in the test report
10 dB attenuator + 0.8 dB Cable loss = 10.8 dB total offset
2. Duty cycle correction factor is considered in Final Average power
Duty cycle Correction factor = $10 \cdot \log(1/X)$ Where X is Duty Cycle
3. This product do not support additional beamforming gain / directional gain, it uses signal antenna and hence directional gain of the single antenna is (4.40 dBi)
4. e.i.r.p = Maximum Average output power (dBm) + Antenna gain in dBi

Modulation: 802.11a – UNII 1, UNII2a, UNII2c

Data rate (Mbps)	Measured Frequency (MHz)	Measured Average PSD 1 (dBm/1MHz)	Measured Average PSD 2 (dBm/1MHz)	Total Chain1 + Chain2 PSD	Duty Cycle X %	Duty cycle correction factor (dB)	PSD (e.i.r.p) (dBm/1MHz)	FCC PSD Limit (dBm/1MHz)	IC e.i.r.p SD (dBm/1MHz)
a_mode-6Mbps	5180	-0.92	-1.46	1.83	90.68	0.42	3.36	11.00	10.00
	5240	2.15	1.79	4.98	90.68	0.42	6.61	11.00	10.00
	5260	1.94	1.55	4.76	90.65	0.43	6.38	11.00	10.00
	5320	1.74	-0.04	3.95	90.65	0.43	4.79	11.00	10.00
	5500	-0.34	-0.16	2.76	90.66	0.43	4.67	11.00	10.00
	5700	-0.17	-1.18	2.36	90.66	0.43	3.65	11.00	10.00
	5720	0.89	0.63	3.77	90.68	0.42	5.45	11.00	10.00
a_mode-54Mbps	5180	-1.75	-2.13	1.07	55.28	2.57	4.84	11.00	10.00
	5240	2.45	1.73	5.12	55.26	2.58	8.71	11.00	10.00
	5260	2.68	1.47	5.13	55.55	2.55	8.42	11.00	10.00
	5320	-1.31	-2.66	1.08	55.28	2.57	4.31	11.00	10.00
	5500	-3.02	-3.38	-0.19	55.33	2.57	3.59	11.00	10.00
	5700	-2.12	-4.39	-0.10	55.34	2.57	2.58	11.00	10.00
	5720	1.38	0.33	3.90	55.31	2.57	7.30	11.00	10.00

Modulation: 802.11a – UNII 3

Data rate (Mbps)	Measured Frequency (MHz)	Measured Average PSD 1 (dBm/0.1MHz)	Measured Average PSD 2 (dBm/0.1MHz)	Total Chain1 + Chain2 PSD (dBm/0.1MHz)	Duty Cycle X %	Duty cycle correction factor (dB)	Bandwidth Correction factor (dB)	PSD (e.i.r.p) (dBm/0.5MHz)	FCC PSD Limit (dBm/0.5MHz)	IC e.i.r.p SD (dBm/0.5MHz)
a_mode-6Mbps	5745	-7.16	-7.23	-4.18	90.66	0.43	6.99	7.63	30.00	10.00
	5825	-6.16	-6.76	-3.44	90.68	0.42	6.99	8.38	30.00	10.00
a_mode-54Mbps	5745	-6.47	-7.92	-4.12	55.30	2.57	6.99	9.84	30.00	10.00
	5825	-8.39	-8.23	-5.30	55.30	2.57	6.99	8.66	30.00	10.00

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 52 von 207

Page 52 of 207

Modulation: 802.11n – UNII 1, UNII2a, UNII2c

Data rate	Measured Frequency (MHz)	Measured Average PSD 1 (dBm/1MHz)	Measured Average PSD 2 (dBm/1MHz)	Total Chain1 + Chain2 PSD	Duty Cycle X %	Duty cycle correction factor (dB)	PSD (e.i.r.p) (dBm/1MHz)	FCC PSD Limit (dBm/1MHz)	IC e.i.r.p SD (dBm/1MHz)
n_mode-HT20-MCS0	5180	0.32	-0.34	3.01	90.07	0.45	4.51	11.00	10.00
	5240	1.98	1.31	4.67	90.07	0.45	6.16	11.00	10.00
	5260	2.34	0.97	4.72	90.09	0.45	5.82	11.00	10.00
	5320	1.21	-0.18	3.58	90.05	0.46	4.68	11.00	10.00
	5500	-0.62	-0.80	2.30	90.10	0.45	4.05	11.00	10.00
	5700	-1.32	-3.04	0.91	90.08	0.45	1.81	11.00	10.00
	5720	1.47	0.75	4.14	90.07	0.45	5.60	11.00	10.00
n_mode-HT20-MCS7	5180	-3.19	-3.25	-0.21	53.59	2.71	3.86	11.00	10.00
	5240	1.28	-0.68	3.42	53.56	2.71	6.43	11.00	10.00
	5260	0.79	-0.04	3.41	53.55	2.71	7.07	11.00	10.00
	5320	-1.58	-3.09	0.74	53.57	2.71	4.02	11.00	10.00
	5500	-3.59	-3.99	-0.78	53.60	2.71	3.12	11.00	10.00
	5700	-4.51	-5.91	-2.14	53.65	2.70	1.19	11.00	10.00
	5720	0.22	-0.76	2.77	53.59	2.71	6.35	11.00	10.00

Modulation: 802.11n – UNII 3

Data rate	Measured Frequency (MHz)	Measured Average PSD 1 (dBm/0.1MHz)	Measured Average PSD 2 (dBm/0.1MHz)	Total Chain1 + Chain2 PSD (dBm/0.1MHz)	Duty Cycle X %	Duty cycle correction factor (dB)	Bandwidth Correction factor (dB)	PSD (e.i.r.p) (dBm/0.5MHz)	FCC PSD Limit (dBm/0.5MHz)	IC e.i.r.p SD (dBm/0.5MHz)
n_mode-HT20-MCS0	5745	-6.43	-7.02	-3.70	90.07	0.45	6.99	8.14	30.00	10.00
	5825	-6.91	-7.34	-4.11	90.10	0.45	6.99	7.73	30.00	10.00
n_mode-HT20-MCS7	5745	-8.10	-9.03	-5.53	53.60	2.71	6.99	8.57	30.00	10.00
	5825	-9.17	-9.34	-6.24	53.62	2.71	6.99	7.85	30.00	10.00

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 53 von 207

Page 53 of 207

Modulation: 802.11ac – UNII 1, UNII2a, UNII2c

Data rate	Measured Frequency (MHz)	Measured Average PSD 1 (dBm/1MHz)	Measured Average PSD 2 (dBm/1MHz)	Total Chain1 + Chain2 PSD	Duty Cycle X %	Duty cycle correction factor (dB)	PSD (e.i.r.p) (dBm/1MHz)	FCC PSD Limit (dBm/1MHz)	IC e.i.r.p SD (dBm/1MHz)
ac_mode-VHT20-MCS0	5180	-0.47	-1.64	1.99	90.15	0.45	3.21	11.00	10.00
	5240	2.39	1.06	4.79	90.11	0.45	5.91	11.00	10.00
	5260	2.27	0.81	4.61	90.07	0.45	5.66	11.00	10.00
	5320	0.89	-1.26	2.96	90.12	0.45	3.59	11.00	10.00
	5500	-0.07	-0.82	2.58	90.15	0.45	4.03	11.00	10.00
	5700	-1.68	-3.00	0.72	90.16	0.45	1.85	11.00	10.00
	5720	1.10	0.43	3.79	90.12	0.45	5.28	11.00	10.00
ac_mode-VHT20-MCS9	5180	-2.55	-3.87	-0.15	51.06	2.92	3.45	11.00	10.00
	5240	-1.27	-1.49	1.63	51.09	2.92	5.83	11.00	10.00
	5260	-1.02	-1.92	1.56	51.10	2.92	5.40	11.00	10.00
	5320	-1.34	-3.27	0.81	51.10	2.92	4.05	11.00	10.00
	5500	-2.79	-3.77	-0.24	51.13	2.91	3.54	11.00	10.00
	5700	-4.82	-6.44	-2.54	51.17	2.91	0.87	11.00	10.00
	5720	-2.30	-2.61	0.56	51.44	2.89	4.68	11.00	10.00

Modulation: 802.11ac – UNII 3

Data rate	Measured Frequency (MHz)	Measured Average PSD 1 (dBm/0.1MHz)	Measured Average PSD 2 (dBm/0.1MHz)	Total Chain1 + Chain2 PSD (dBm/0.1MHz)	Duty Cycle X %	Duty cycle correction factor (dB)	Bandwidth Correction factor (dB)	PSD (e.i.r.p) (dBm/0.5MHz)	FCC PSD Limit (dBm/0.5MHz)	IC e.i.r.p SD (dBm/0.5MHz)
ac_mode-VHT20-MCS0	5745	-6.91	-8.39	-4.58	90.15	0.45	6.99	7.26	30.00	10.00
	5825	-8.00	-8.55	-5.26	90.15	0.45	6.99	6.58	30.00	10.00
ac_mode-VHT20-MCS9	5745	-8.89	-8.66	-5.76	51.13	2.91	6.99	8.54	30.00	10.00
	5825	-8.57	-8.55	-5.55	51.13	2.91	6.99	8.75	30.00	10.00

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 54 von 207

Page 54 of 207

Modulation: 802.11ax – UNII 1, UNII2a, UNII2c

Data rate	Measured Frequency (MHz)	Measured Average PSD 1 (dBm/1MHz)	Measured Average PSD 2 (dBm/1MHz)	Total Chain1 + Chain2 PSD	Duty Cycle X %	Duty cycle correction factor (dB)	PSD (e.i.r.p) (dBm/1MHz)	FCC PSD Limit (dBm/1MHz)	IC e.i.r.p SD (dBm/1MHz)
ax_mode-HE20-MCS0	5180	0.35	0.19	3.28	87.65	0.57	5.16	11.00	10.00
	5240	2.39	1.53	4.99	87.65	0.57	6.50	11.00	10.00
	5260	2.81	1.17	5.08	87.62	0.57	6.14	11.00	10.00
	5320	1.82	-0.20	3.94	87.65	0.57	4.77	11.00	10.00
	5500	0.40	0.84	3.64	87.66	0.57	5.81	11.00	10.00
	5700	-1.99	-2.44	0.80	87.67	0.57	2.53	11.00	10.00
	5720	1.47	0.81	4.16	87.63	0.57	5.78	11.00	10.00
ax_mode-HE20-MCS11	5180	-4.01	-5.08	-1.50	45.10	3.46	2.78	11.00	10.00
	5240	-5.58	-5.86	-2.71	35.09	4.55	3.09	11.00	10.00
	5260	-3.80	-5.20	-1.43	45.09	3.46	2.66	11.00	10.00
	5320	-4.06	-6.30	-2.03	45.08	3.46	1.56	11.00	10.00
	5500	-4.74	-5.40	-2.05	45.11	3.46	2.46	11.00	10.00
	5700	-5.07	-6.02	-2.51	45.15	3.45	1.83	11.00	10.00
	5720	-4.50	-6.87	-2.51	45.16	3.45	0.98	11.00	10.00

Modulation: 802.11ax – UNII 3

Data rate	Measured Frequency (MHz)	Measured Average PSD 1 (dBm/0.1MHz)	Measured Average PSD 2 (dBm/0.1MHz)	Total Chain1 + Chain2 PSD (dBm/0.1MHz)	Duty Cycle X %	Duty cycle correction factor (dB)	Bandwidth Correction factor (dB)	PSD (e.i.r.p) (dBm/0.5MHz)	FCC PSD Limit (dBm/0.5MHz)	IC e.i.r.p SD (dBm/0.5MHz)
ax_mode-HE20-MCS0	5745	-8.44	-8.98	-5.69	87.66	0.57	6.99	6.27	30.00	10.00
	5825	-7.76	-7.76	-4.75	87.63	0.57	6.99	7.21	30.00	10.00
ax_mode-HE20-MCS11	5745	-11.92	-12.96	-9.40	45.13	3.46	6.99	5.45	30.00	10.00
	5825	-12.16	-14.25	-10.07	45.15	3.45	6.99	4.77	30.00	10.00

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 55 von 207

Page 55 of 207

Modulation: 802.11n – UNII 1, UNII2a, UNII2c

Data rate	Measured Frequency (MHz)	Measured Average PSD 1 (dBm/1MHz)	Measured Average PSD 2 (dBm/1MHz)	Total Chain1 + Chain2 PSD	Duty Cycle X %	Duty cycle correction factor (dB)	PSD (e.i.r.p) (dBm/1MHz)	FCC PSD Limit (dBm/1MHz)	IC e.i.r.p SD (dBm/1MHz)
n_mode-HT40-MCS0	5190	-6.49	-7.96	-4.15	81.89	0.87	-2.69	11.00	10.00
	5230	-2.58	-3.60	-0.05	81.88	0.87	1.67	11.00	10.00
	5270	-0.44	-1.23	2.19	81.86	0.87	4.04	11.00	10.00
	5310	-3.29	-4.46	-0.83	81.89	0.87	0.81	11.00	10.00
	5510	-8.24	-7.65	-4.92	81.91	0.87	-2.38	11.00	10.00
	5590	-1.44	-1.16	1.71	81.88	0.87	4.11	11.00	10.00
	5670	-6.00	-5.96	-2.97	81.91	0.87	-0.69	11.00	10.00
	5710	-0.92	-0.91	2.10	81.87	0.87	4.36	11.00	10.00
n_mode-HT40-MCS7	5190	-7.76	-10.03	-5.74	40.90	3.88	-1.75	11.00	10.00
	5230	-4.28	-5.39	-1.79	40.81	3.89	2.90	11.00	10.00
	5270	-4.66	-5.82	-2.19	40.87	3.89	2.47	11.00	10.00
	5310	-6.00	-7.41	-3.64	40.89	3.88	0.87	11.00	10.00
	5510	-9.57	-10.32	-6.92	40.96	3.88	-2.04	11.00	10.00
	5590	-6.36	-6.04	-3.19	40.93	3.88	2.24	11.00	10.00
	5670	-8.08	-8.86	-5.44	40.96	3.88	-0.58	11.00	10.00
	5710	-5.98	-6.74	-3.33	40.93	3.88	1.54	11.00	10.00

Modulation: 802.11n – UNII 3

Data rate	Measured Frequency (MHz)	Measured Average PSD 1 (dBm/0.1MHz)	Measured Average PSD 2 (dBm/0.1MHz)	Total Chain1 + Chain2 PSD (dBm/0.1MHz)	Duty Cycle X %	Duty cycle correction factor (dB)	Bandwidth Correction factor (dB)	PSD (e.i.r.p) (dBm/0.5MHz)	FCC PSD Limit (dBm/0.5MHz)	IC e.i.r.p SD (dBm/0.5MHz)
n_mode-HT40-MCS0	5755	-13.98	-12.63	-10.24	81.90	0.87	6.99	2.01	30.00	10.00
	5795	-11.59	-10.43	-7.96	81.90	0.87	6.99	4.30	30.00	10.00
n_mode-HT40-MCS7	5755	-12.05	-11.77	-8.90	40.92	3.88	6.99	6.37	30.00	10.00
	5795	-12.01	-12.30	-9.14	40.94	3.88	6.99	6.13	30.00	10.00

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 56 von 207

Page 56 of 207

Modulation: 802.11ac – UNII 1, UNII2a, UNII2c

Data rate	Measured Frequency (MHz)	Measured Average PSD 1 (dBm/1MHz)	Measured Average PSD 2 (dBm/1MHz)	Total Chain1 + Chain2 PSD	Duty Cycle X %	Duty cycle correction factor (dB)	PSD (e.i.r.p) (dBm/1MHz)	FCC PSD Limit (dBm/1MHz)	IC e.i.r.p SD (dBm/1MHz)
ac_mode-VHT40-MCS0	5190	-5.78	-7.91	-3.71	81.94	0.86	-2.65	11.00	10.00
	5230	-1.65	-3.13	0.68	81.93	0.87	2.14	11.00	10.00
	5270	-0.37	-0.90	2.38	81.93	0.87	4.37	11.00	10.00
	5310	-3.79	-4.60	-1.17	81.91	0.87	0.67	11.00	10.00
	5510	-7.81	-7.73	-4.76	81.99	0.86	-2.47	11.00	10.00
	5590	-1.78	-1.78	1.23	81.96	0.86	3.48	11.00	10.00
	5670	-5.16	-6.02	-2.56	81.98	0.86	-0.76	11.00	10.00
	5710	-1.66	-1.78	1.29	81.97	0.86	3.48	11.00	10.00
ac_mode-VHT40-MCS9	5190	-8.53	-10.32	-6.32	37.73	4.23	-1.69	11.00	10.00
	5230	-5.98	-6.20	-3.08	37.77	4.23	2.43	11.00	10.00
	5270	-5.73	-7.40	-3.47	37.82	4.22	1.22	11.00	10.00
	5310	-6.93	-7.29	-4.10	37.79	4.23	1.34	11.00	10.00
	5510	-10.17	-10.84	-7.48	37.89	4.21	-2.23	11.00	10.00
	5590	-7.27	-7.47	-4.36	37.83	4.22	1.15	11.00	10.00
	5670	-8.42	-8.19	-5.29	37.87	4.22	0.43	11.00	10.00
	5710	-7.50	-7.33	-4.40	37.88	4.22	1.29	11.00	10.00

Modulation: 802.11ac – UNII 3

Data rate	Measured Frequency (MHz)	Measured Average PSD 1 (dBm/0.1MHz)	Measured Average PSD 2 (dBm/0.1MHz)	Total Chain1 + Chain2 PSD (dBm/0.1MHz)	Duty Cycle X %	Duty cycle correction factor (dB)	Bandwidth Correction factor (dB)	PSD (e.i.r.p) (dBm/0.5MHz)	FCC PSD Limit (dBm/0.5MHz)	IC e.i.r.p SD (dBm/0.5MHz)
ac_mode-VHT40-MCS0	5755	-11.14	-11.36	-8.24	81.97	0.86	6.99	4.02	30.00	10.00
	5795	-11.18	-11.38	-8.27	74.93	1.25	6.99	4.37	30.00	10.00
ac_mode-VHT40-MCS9	5755	-13.14	-13.58	-10.34	37.87	4.22	6.99	5.26	30.00	10.00
	5795	-12.70	-13.81	-10.21	37.88	4.22	6.99	5.40	30.00	10.00

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 57 von 207

Page 57 of 207

Modulation: 802.11ax – UNII 1, UNII2a, UNII2c

Data rate	Measured Frequency (MHz)	Measured Average PSD 1 (dBm/1MHz)	Measured Average PSD 2 (dBm/1MHz)	Total Chain1 + Chain2 PSD	Duty Cycle X %	Duty cycle correction factor (dB)	PSD (e.i.r.p) (dBm/1MHz)	FCC PSD Limit (dBm/1MHz)	IC e.i.r.p SD (dBm/1MHz)
ax_mode-HE40-MCS0	5190	-5.82	-7.73	-3.66	78.89	1.03	-2.30	11.00	10.00
	5230	-1.36	-2.79	0.99	78.88	1.03	2.64	11.00	10.00
	5270	-0.32	-1.26	2.25	78.90	1.03	4.17	11.00	10.00
	5310	-4.68	-5.61	-2.11	78.88	1.03	-0.18	11.00	10.00
	5510	-7.28	-7.87	-4.55	78.94	1.03	-2.44	11.00	10.00
	5590	-0.80	-0.68	2.27	78.89	1.03	4.75	11.00	10.00
	5670	-4.94	-6.19	-2.51	78.91	1.03	-0.76	11.00	10.00
	5710	-0.34	-1.05	2.33	78.92	1.03	4.38	11.00	10.00
ax_mode-HE40-MCS11	5190	-9.05	-10.98	-6.90	37.86	4.22	-2.36	11.00	10.00
	5230	-9.16	-9.85	-6.48	37.86	4.22	-1.23	11.00	10.00
	5270	-9.25	-11.12	-7.07	37.86	4.22	-2.50	11.00	10.00
	5310	-9.08	-10.86	-6.87	37.83	4.22	-2.24	11.00	10.00
	5510	-10.02	-11.29	-7.60	37.93	4.21	-2.68	11.00	10.00
	5590	-10.28	-10.55	-7.40	40.92	3.88	-2.27	11.00	10.00
	5670	-9.87	-10.91	-7.35	40.92	3.88	-2.63	11.00	10.00
	5710	-10.66	-10.86	-7.75	40.92	3.88	-2.58	11.00	10.00

Modulation: 802.11ax – UNII 3

Data rate	Measured Frequency (MHz)	Measured Average PSD 1 (dBm/0.1MHz)	Measured Average PSD 2 (dBm/0.1MHz)	Total Chain1 + Chain2 PSD (dBm/0.1MHz)	Duty Cycle X %	Duty cycle correction factor (dB)	Bandwidth Correction factor (dB)	PSD (e.i.r.p) (dBm/0.5MHz)	FCC PSD Limit (dBm/0.5MHz)	IC e.i.r.p SD (dBm/0.5MHz)
ax_mode-HE40-MCS0	5755	-13.38	-13.39	-10.37	78.91	1.03	6.99	2.04	30.00	10.00
	5795	-13.06	-13.27	-10.15	78.91	1.03	6.99	2.27	30.00	10.00
ax_mode-HE40-MCS11	5755	-17.27	-17.40	-14.32	40.92	3.88	6.99	0.95	30.00	10.00
	5795	-17.74	-18.40	-15.05	40.94	3.88	6.99	0.22	30.00	10.00

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 58 von 207

Page 58 of 207

Modulation: 802.11ac – UNII 1, UNII2a, UNII2c

Data rate	Measured Frequency (MHz)	Measured Average PSD 1 (dBm/1MHz)	Measured Average PSD 2 (dBm/1MHz)	Total Chain1 + Chain2 PSD	Duty Cycle X %	Duty cycle correction factor (dB)	PSD (e.i.r.p) (dBm/1MHz)	FCC PSD Limit (dBm/1MHz)	IC e.i.r.p SD (dBm/1MHz)
ac_mode-VHT80-MCS0	5210	-9.20	-11.08	-7.03	69.26	1.60	-5.08	11.00	10.00
	5290	-9.38	-10.21	-6.76	69.31	1.59	-4.22	11.00	10.00
	5530	-9.33	-10.34	-6.80	69.35	1.59	-4.35	11.00	10.00
	5690	-4.77	-5.28	-2.01	69.33	1.59	0.71	11.00	10.00
ac_mode-VHT80-MCS9	5210	-10.28	-11.11	-7.66	30.77	5.12	-1.59	11.00	10.00
	5290	-12.09	-11.98	-9.02	30.82	5.11	-2.47	11.00	10.00
	5530	-12.10	-12.85	-9.45	30.79	5.12	-3.33	11.00	10.00
	5690	-11.44	-11.86	-8.63	30.87	5.10	-2.36	11.00	10.00

Modulation: 802.11ac – UNII 3

Data rate	Measured Frequency (MHz)	Measured Average PSD 1 (dBm/0.1MHz)	Measured Average PSD 2 (dBm/0.1MHz)	Total Chain1 + Chain2 PSD (dBm/0.1MHz)	Duty Cycle X %	Duty cycle correction factor (dB)	Bandwidth Correction factor (dB)	PSD (e.i.r.p) (dBm/0.5MHz)	FCC PSD Limit (dBm/0.5MHz)	IC e.i.r.p SD (dBm/0.5MHz)
ac_mode-VHT80-MCS0	5755	-12.66	-13.34	-9.98	69.32	1.59	6.99	3.00	30.00	10.00
ac_mode-VHT80-MCS9	5755	-16.99	-18.53	-14.68	30.84	5.11	6.99	1.82	30.00	10.00

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 59 von 207

Page 59 of 207

Modulation: 802.11ax – UNII 1, UNII2a, UNII2c

Data rate	Measured Frequency (MHz)	Measured Average PSD 1 (dBm/1MHz)	Measured Average PSD 2 (dBm/1MHz)	Total Chain1 + Chain2 PSD	Duty Cycle X %	Duty cycle correction factor (dB)	PSD (e.i.r.p) (dBm/1MHz)	FCC PSD Limit (dBm/1MHz)	IC e.i.r.p SD (dBm/1MHz)
ax_mode-HE80-MCS0	5210	-8.36	-9.78	-6.00	66.73	1.76	-3.62	11.00	10.00
	5290	-8.90	-9.93	-6.37	66.80	1.75	-3.78	11.00	10.00
	5530	-9.14	-10.28	-6.66	66.77	1.75	-4.13	11.00	10.00
	5690	-3.85	-5.04	-1.39	66.82	1.75	1.11	11.00	10.00
ax_mode-HE80-MCS11	5210	11.99	-15.08	12.00	35.23	4.53	-6.15	11.00	10.00
	5290	-14.45	-16.05	-12.17	35.24	4.53	-7.12	11.00	10.00
	5530	-13.27	-15.18	-11.11	35.28	4.52	-6.26	11.00	10.00
	5690	-15.47	-15.43	-12.44	35.33	4.52	-6.51	11.00	10.00

Modulation: 802.11ax – UNII 3

Data rate	Measured Frequency (MHz)	Measured Average PSD 1 (dBm/0.1MHz)	Measured Average PSD 2 (dBm/0.1MHz)	Total Chain1 + Chain2 PSD (dBm/0.1MHz)	Duty Cycle X %	Duty cycle correction factor (dB)	Bandwidth Correction factor (dB)	PSD (e.i.r.p) (dBm/0.5MHz)	FCC PSD Limit (dBm/0.5MHz)	IC e.i.r.p SD (dBm/0.5MHz)
ax_mode-HE80-MCS0	5775	-12.66	-13.34	-9.98	69.32	1.59	6.99	3.00	30.00	10.00
ax_mode-HE80-MCS11	5775	-16.99	-18.53	-14.68	30.84	5.11	6.99	1.82	30.00	10.00

Prüfbericht - Nr.:
Test Report No.:

IN23VER9 001

Seite 60 von 207
Page 60 of 207

Antenna Type: FPA3020-10 (Flex/PCB) Antenna MIMO Results

Note:

1. All the losses are included during measurement and final values are mentioned in the test report
10 dB attenuator + 0.8 dB Cable loss = 10.8 dB total offset
2. Duty cycle correction factor is considered in Final Average power
Duty cycle Correction factor = $10 \cdot \log(1/X)$ Where X is Duty Cycle
3. This product do not support additional beamforming gain / directional gain, it uses signal antenna and hence directional gain of the single antenna is (5.58 dBi)
4. e.i.r.p = Maximum Average output power (dBm) + Antenna gain in dBi

Modulation: 802.11a – UNII 1, UNII2a, UNII2c

Data rate (Mbps)	Measured Frequency (MHz)	Measured Average PSD 1 (dBm/1MHz)	Measured Average PSD 2 (dBm/1MHz)	Total Chain1 + Chain2 PSD	Duty Cycle X %	Duty cycle correction factor (dB)	PSD (e.i.r.p) (dBm/1MHz)	FCC PSD Limit (dBm/1MHz)	IC e.i.r.p SD (dBm/1MHz)
a_mode-6Mbps	5180	1.83	0.83	4.37	90.65	0.43	6.84	11.00	10.00
	5240	2.83	1.22	5.11	90.68	0.42	7.22	11.00	10.00
	5260	2.50	0.99	4.82	90.65	0.43	7.00	11.00	10.00
	5320	1.74	-0.04	3.95	90.65	0.43	5.97	11.00	10.00
	5500	-0.34	-0.16	2.76	90.66	0.43	5.85	11.00	10.00
	5700	-0.17	-1.18	2.36	90.66	0.43	4.83	11.00	10.00
	5720	1.62	0.67	4.18	90.68	0.42	6.67	11.00	10.00
a_mode-54Mbps	5180	-1.75	-2.13	1.07	55.28	2.57	6.02	11.00	10.00
	5240	2.45	1.73	5.12	55.26	2.58	9.89	11.00	10.00
	5260	2.68	1.47	5.13	55.55	2.55	9.60	11.00	10.00
	5320	-1.31	-2.66	1.08	55.28	2.57	5.49	11.00	10.00
	5500	-3.02	-3.38	-0.19	55.33	2.57	4.77	11.00	10.00
	5700	-2.12	-4.39	-0.10	55.34	2.57	3.76	11.00	10.00
	5720	1.38	0.33	3.90	55.31	2.57	8.48	11.00	10.00

Modulation: 802.11a – UNII 3

Data rate (Mbps)	Measured Frequency (MHz)	Measured Average PSD 1 (dBm/0.1MHz)	Measured Average PSD 2 (dBm/0.1MHz)	Total Chain1 + Chain2 PSD (dBm/0.1MHz)	Duty Cycle X %	Duty cycle correction factor (dB)	Bandwidth Correction factor (dB)	PSD (e.i.r.p) (dBm/0.5MHz)	FCC PSD Limit (dBm/0.5MHz)	IC e.i.r.p SD (dBm/0.5MHz)
a_mode-6Mbps	5745	-3.13	-3.47	-0.29	90.66	0.43	6.99	12.71	30.00	10.00
	5825	-3.62	-4.03	-0.81	90.66	0.43	6.99	12.19	30.00	10.00
a_mode-54Mbps	5745	-5.26	-5.87	-2.54	55.26	2.58	6.99	12.60	30.00	10.00
	5825	-6.08	-6.75	-3.39	55.30	2.57	6.99	11.75	30.00	10.00

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 61 von 207

Page 61 of 207

Modulation: 802.11n – UNII 1, UNII2a, UNII2c

Data rate	Measured Frequency (MHz)	Measured Average PSD 1 (dBm/1MHz)	Measured Average PSD 2 (dBm/1MHz)	Total Chain1 + Chain2 PSD	Duty Cycle X %	Duty cycle correction factor (dB)	PSD (e.i.r.p) (dBm/1MHz)	FCC PSD Limit (dBm/1MHz)	IC e.i.r.p SD (dBm/1MHz)
n_mode-HT20-MCS0	5180	-0.85	-1.80	1.71	90.10	0.45	4.23	11.00	10.00
	5240	2.55	1.34	5.00	90.07	0.45	7.37	11.00	10.00
	5260	2.63	0.36	4.65	90.09	0.45	6.39	11.00	10.00
	5320	1.21	-0.18	3.58	90.05	0.46	5.86	11.00	10.00
	5500	-0.62	-0.80	2.30	90.10	0.45	5.23	11.00	10.00
	5700	-1.32	-3.04	0.91	90.08	0.45	2.99	11.00	10.00
	5720	1.40	0.04	3.78	90.07	0.45	6.07	11.00	10.00
n_mode-HT20-MCS7	5180	-3.19	-3.25	-0.21	53.59	2.71	5.04	11.00	10.00
	5240	1.28	-0.68	3.42	53.56	2.71	7.61	11.00	10.00
	5260	0.79	-0.04	3.41	53.55	2.71	8.25	11.00	10.00
	5320	-1.58	-3.09	0.74	53.57	2.71	5.20	11.00	10.00
	5500	-3.59	-3.99	-0.78	53.60	2.71	4.30	11.00	10.00
	5700	-4.51	-5.91	-2.14	53.65	2.70	2.37	11.00	10.00
	5720	0.22	-0.76	2.77	53.59	2.71	7.53	11.00	10.00

Modulation: 802.11n – UNII 3

Data rate	Measured Frequency (MHz)	Measured Average PSD 1 (dBm/0.1MHz)	Measured Average PSD 2 (dBm/0.1MHz)	Total Chain1 + Chain2 PSD (dBm/0.1MHz)	Duty Cycle X %	Duty cycle correction factor (dB)	Bandwidth Correction factor (dB)	PSD (e.i.r.p) (dBm/0.5MHz)	FCC PSD Limit (dBm/0.5MHz)	IC e.i.r.p SD (dBm/0.5MHz)
n_mode-HT20-MCS0	5745	-4.90	-5.13	-2.00	90.10	0.45	6.99	11.02	30.00	10.00
	5825	-3.78	-3.69	-0.72	90.10	0.45	6.99	12.30	30.00	10.00
n_mode-HT20-MCS7	5745	-6.46	-7.06	-3.74	53.57	2.71	6.99	11.54	30.00	10.00
	5825	-7.19	-7.54	-4.35	53.59	2.71	6.99	10.93	30.00	10.00

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 62 von 207

Page 62 of 207

Modulation: 802.11ac – UNII 1, UNII2a, UNII2c

Data rate	Measured Frequency (MHz)	Measured Average PSD 1 (dBm/1MHz)	Measured Average PSD 2 (dBm/1MHz)	Total Chain1 + Chain2 PSD	Duty Cycle X %	Duty cycle correction factor (dB)	PSD (e.i.r.p) (dBm/1MHz)	FCC PSD Limit (dBm/1MHz)	IC e.i.r.p SD (dBm/1MHz)
ac_mode-VHT20-MCS0	5180	0.28	-0.09	3.11	90.14	0.45	5.94	11.00	10.00
	5240	1.99	1.24	4.64	90.11	0.45	7.27	11.00	10.00
	5260	2.18	1.05	4.66	90.07	0.45	7.08	11.00	10.00
	5320	1.50	-0.16	3.76	90.14	0.45	5.87	11.00	10.00
	5500	-0.07	-0.82	2.58	90.15	0.45	5.21	11.00	10.00
	5700	-1.68	-3.00	0.72	90.16	0.45	3.03	11.00	10.00
	5720	1.41	0.39	3.94	90.12	0.45	6.42	11.00	10.00
ac_mode-VHT20-MCS9	5180	-2.55	-3.87	-0.15	51.06	2.92	4.63	11.00	10.00
	5240	-1.27	-1.49	1.63	51.09	2.92	7.01	11.00	10.00
	5260	-1.02	-1.92	1.56	51.10	2.92	6.58	11.00	10.00
	5320	-1.34	-3.27	0.81	51.10	2.92	5.23	11.00	10.00
	5500	-2.79	-3.77	-0.24	51.13	2.91	4.72	11.00	10.00
	5700	-4.82	-6.44	-2.54	51.17	2.91	2.05	11.00	10.00
	5720	-2.30	-2.61	0.56	51.44	2.89	5.86	11.00	10.00

Modulation: 802.11ac – UNII 3

Data rate	Measured Frequency (MHz)	Measured Average PSD 1 (dBm/0.1MHz)	Measured Average PSD 2 (dBm/0.1MHz)	Total Chain1 + Chain2 PSD (dBm/0.1MHz)	Duty Cycle X %	Duty cycle correction factor (dB)	Bandwidth Correction factor (dB)	PSD (e.i.r.p) (dBm/0.5MHz)	FCC PSD Limit (dBm/0.5MHz)	IC e.i.r.p SD (dBm/0.5MHz)
ac_mode-VHT20-MCS0	5745	-5.68	-6.03	-2.84	90.15	0.45	6.99	10.18	30.00	10.00
	5825	-2.81	-2.62	0.30	90.15	0.45	6.99	13.32	30.00	10.00
ac_mode-VHT20-MCS9	5745	-8.89	-8.66	-5.76	51.13	2.91	6.99	9.72	30.00	10.00
	5825	-8.57	-8.55	-5.55	51.13	2.91	6.99	9.93	30.00	10.00

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 63 von 207

Page 63 of 207

Modulation: 802.11ax – UNII 1, UNII2a, UNII2c

Data rate	Measured Frequency (MHz)	Measured Average PSD 1 (dBm/1MHz)	Measured Average PSD 2 (dBm/1MHz)	Total Chain1 + Chain2 PSD	Duty Cycle X %	Duty cycle correction factor (dB)	PSD (e.i.r.p) (dBm/1MHz)	FCC PSD Limit (dBm/1MHz)	IC e.i.r.p SD (dBm/1MHz)
ax_mode-HE20-MCS0	5180	0.35	0.19	3.28	87.65	0.57	6.34	11.00	10.00
	5240	2.32	1.30	4.85	87.65	0.57	7.45	11.00	10.00
	5260	2.23	1.15	4.73	87.62	0.57	7.30	11.00	10.00
	5320	1.82	-0.20	3.94	87.65	0.57	5.95	11.00	10.00
	5500	0.40	0.84	3.64	87.66	0.57	6.99	11.00	10.00
	5700	-1.99	-2.44	0.80	87.67	0.57	3.71	11.00	10.00
	5720	2.18	1.05	4.66	87.63	0.57	7.20	11.00	10.00
ax_mode-HE20-MCS11	5180	-4.01	-5.08	-1.50	45.10	3.46	3.96	11.00	10.00
	5240	-5.58	-5.86	-2.71	35.09	4.55	4.27	11.00	10.00
	5260	-3.80	-5.20	-1.43	45.09	3.46	3.84	11.00	10.00
	5320	-4.06	-6.30	-2.03	45.08	3.46	2.74	11.00	10.00
	5500	-4.74	-5.40	-2.05	45.11	3.46	3.64	11.00	10.00
	5700	-5.07	-6.02	-2.51	45.15	3.45	3.01	11.00	10.00
	5720	-4.50	-6.87	-2.51	45.16	3.45	2.16	11.00	10.00

Modulation: 802.11ax – UNII 3

Data rate	Measured Frequency (MHz)	Measured Average PSD 1 (dBm/0.1MHz)	Measured Average PSD 2 (dBm/0.1MHz)	Total Chain1 + Chain2 PSD (dBm/0.1MHz)	Duty Cycle X %	Duty cycle correction factor (dB)	Bandwidth Correction factor (dB)	PSD (e.i.r.p) (dBm/0.5MHz)	FCC PSD Limit (dBm/0.5MHz)	IC e.i.r.p SD (dBm/0.5MHz)
ax_mode-HE20-MCS0	5745	-5.34	-5.96	-2.63	87.63	0.57	6.99	10.51	30.00	10.00
	5825	-4.34	-26.22	-4.31	87.63	0.57	6.99	8.83	30.00	10.00
ax_mode-HE20-MCS11	5745	-11.92	-12.96	-9.40	45.13	3.46	6.99	6.63	30.00	10.00
	5825	-12.16	-14.25	-10.07	45.15	3.45	6.99	5.95	30.00	10.00

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 64 von 207

Page 64 of 207

Modulation: 802.11n – UNII 1, UNII2a, UNII2c

Data rate	Measured Frequency (MHz)	Measured Average PSD 1 (dBm/1MHz)	Measured Average PSD 2 (dBm/1MHz)	Total Chain1 + Chain2 PSD	Duty Cycle X %	Duty cycle correction factor (dB)	PSD (e.i.r.p) (dBm/1MHz)	FCC PSD Limit (dBm/1MHz)	IC e.i.r.p SD (dBm/1MHz)
n_mode-HT40-MCS0	5190	-5.63	-7.88	-3.60	81.89	0.87	-2.61	11.00	10.00
	5230	-2.39	-3.64	0.04	81.86	0.87	1.63	11.00	10.00
	5270	-0.27	-1.16	2.32	81.86	0.87	4.11	11.00	10.00
	5310	-5.30	-4.60	-1.93	81.89	0.87	0.67	11.00	10.00
	5510	-6.85	-8.23	-4.48	81.91	0.87	-2.96	11.00	10.00
	5590	-0.52	-0.91	2.30	81.87	0.87	4.36	11.00	10.00
	5670	-4.65	-6.01	-2.27	81.88	0.87	-0.74	11.00	10.00
	5710	-0.03	-1.19	2.44	81.87	0.87	4.08	11.00	10.00
n_mode-HT40-MCS7	5190	-8.58	-10.59	-6.46	40.88	3.88	-2.31	11.00	10.00
	5230	-4.37	-5.56	-1.91	40.81	3.89	2.73	11.00	10.00
	5270	-4.81	-6.03	-2.37	40.85	3.89	2.26	11.00	10.00
	5310	-6.81	-7.54	-4.15	40.87	3.89	0.75	11.00	10.00
	5510	-10.13	-10.26	-7.18	40.97	3.88	-1.98	11.00	10.00
	5590	-6.57	-5.85	-3.18	40.93	3.88	2.43	11.00	10.00
	5670	-7.33	-8.48	-4.86	40.95	3.88	-0.20	11.00	10.00
	5710	-5.76	-6.12	-2.93	40.92	3.88	2.16	11.00	10.00

Modulation: 802.11n – UNII 3

Data rate	Measured Frequency (MHz)	Measured Average PSD 1 (dBm/0.1MHz)	Measured Average PSD 2 (dBm/0.1MHz)	Total Chain1 + Chain2 PSD (dBm/0.1MHz)	Duty Cycle X %	Duty cycle correction factor (dB)	Bandwidth Correction factor (dB)	PSD (e.i.r.p) (dBm/0.5MHz)	FCC PSD Limit (dBm/0.5MHz)	IC e.i.r.p SD (dBm/0.5MHz)
n_mode-HT40-MCS0	5755	-12.53	-12.33	-9.42	81.90	0.87	6.99	2.84	30.00	10.00
	5795	-10.23	-10.76	-7.48	81.90	0.87	6.99	4.78	30.00	10.00
n_mode-HT40-MCS7	5755	-12.22	-12.17	-9.18	40.92	3.88	6.99	6.09	30.00	10.00
	5795	-12.60	-12.02	-9.29	40.94	3.88	6.99	5.98	30.00	10.00

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 65 von 207

Page 65 of 207

Modulation: 802.11ac – UNII 1, UNII2a, UNII2c

Data rate	Measured Frequency (MHz)	Measured Average PSD 1 (dBm/1MHz)	Measured Average PSD 2 (dBm/1MHz)	Total Chain1 + Chain2 PSD	Duty Cycle X %	Duty cycle correction factor (dB)	PSD (e.i.r.p) (dBm/1MHz)	FCC PSD Limit (dBm/1MHz)	IC e.i.r.p SD (dBm/1MHz)
ac_mode-VHT40-MCS0	5190	-5.92	-7.49	-3.62	81.98	0.86	-2.23	11.00	10.00
	5230	-1.77	-3.05	0.65	81.94	0.86	2.21	11.00	10.00
	5270	-2.33	-3.08	0.32	81.97	0.86	2.18	11.00	10.00
	5310	-3.69	-4.63	-1.12	81.92	0.87	0.64	11.00	10.00
	5510	-6.88	-7.97	-4.38	81.98	0.86	-2.71	11.00	10.00
	5590	-1.38	-1.38	1.63	81.95	0.86	3.88	11.00	10.00
	5670	-5.66	-5.99	-2.81	81.97	0.86	-0.73	11.00	10.00
	5710	-1.08	-2.04	1.48	81.96	0.86	3.22	11.00	10.00
ac_mode-VHT40-MCS9	5190	-8.88	-10.61	-6.65	37.89	4.21	-2.00	11.00	10.00
	5230	-5.32	-6.00	-2.64	37.86	4.22	2.62	11.00	10.00
	5270	-6.43	-6.73	-3.57	37.85	4.22	1.89	11.00	10.00
	5310	-6.35	-7.16	-3.73	37.82	4.22	1.46	11.00	10.00
	5510	-10.17	-10.59	-7.36	37.96	4.21	-1.98	11.00	10.00
	5590	-7.20	-7.59	-4.38	37.88	4.22	1.03	11.00	10.00
	5670	-7.41	-8.83	-5.05	37.90	4.21	-0.22	11.00	10.00
	5710	-6.84	-7.44	-4.12	37.94	4.21	1.17	11.00	10.00

Modulation: 802.11ac – UNII 3

Data rate	Measured Frequency (MHz)	Measured Average PSD 1 (dBm/0.1MHz)	Measured Average PSD 2 (dBm/0.1MHz)	Total Chain1 + Chain2 PSD (dBm/0.1MHz)	Duty Cycle X %	Duty cycle correction factor (dB)	Bandwidth Correction factor (dB)	PSD (e.i.r.p) (dBm/0.5MHz)	FCC PSD Limit (dBm/0.5MHz)	IC e.i.r.p SD (dBm/0.5MHz)
ac_mode-VHT40-MCS0	5755	-10.85	-11.40	-8.11	81.97	0.86	6.99	4.15	30.00	10.00
	5795	-11.04	-11.40	-8.21	74.93	1.25	6.99	4.44	30.00	10.00
ac_mode-VHT40-MCS9	5755	-13.10	-13.19	-10.13	37.87	4.22	6.99	5.47	30.00	10.00
	5795	-14.16	-12.58	-10.29	37.88	4.22	6.99	5.32	30.00	10.00

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 66 von 207

Page 66 of 207

Modulation: 802.11ax – UNII 1, UNII2a, UNII2c

Data rate	Measured Frequency (MHz)	Measured Average PSD 1 (dBm/1MHz)	Measured Average PSD 2 (dBm/1MHz)	Total Chain1 + Chain2 PSD	Duty Cycle X %	Duty cycle correction factor (dB)	PSD (e.i.r.p) (dBm/1MHz)	FCC PSD Limit (dBm/1MHz)	IC e.i.r.p SD (dBm/1MHz)
ax_mode-HE40-MCS0	5190	-5.98	-7.78	-3.78	78.92	1.03	-2.35	11.00	10.00
	5230	-2.00	-2.60	0.72	78.87	1.03	2.83	11.00	10.00
	5270	-0.48	-1.12	2.22	78.90	1.03	4.31	11.00	10.00
	5310	-5.14	-5.51	-2.31	78.91	1.03	-0.08	11.00	10.00
	5510	-7.38	-7.93	-4.64	78.93	1.03	-2.50	11.00	10.00
	5590	-0.63	-1.04	2.18	78.89	1.03	4.39	11.00	10.00
	5670	-4.62	-5.88	-2.19	78.92	1.03	-0.45	11.00	10.00
	5710	-0.27	-1.20	2.30	78.89	1.03	4.23	11.00	10.00
ax_mode-HE40-MCS11	5190	-8.74	-10.35	-6.46	37.87	4.22	-1.73	11.00	10.00
	5230	-8.94	-9.89	-6.38	37.86	4.22	-1.27	11.00	10.00
	5270	-8.54	-10.79	-6.51	37.88	4.22	-2.17	11.00	10.00
	5310	-9.66	-10.83	-7.20	37.86	4.22	-2.21	11.00	10.00
	5510	-10.41	-10.83	-7.60	37.92	4.21	-2.22	11.00	10.00
	5590	-10.62	-10.80	-7.70	37.93	4.21	-2.19	11.00	10.00
	5670	-10.80	-11.70	-8.22	37.92	4.21	-3.09	11.00	10.00
	5710	-11.19	-11.29	-8.23	37.96	4.21	-2.68	11.00	10.00

Modulation: 802.11ax – UNII 3

Data rate	Measured Frequency (MHz)	Measured Average PSD 1 (dBm/0.1MHz)	Measured Average PSD 2 (dBm/0.1MHz)	Total Chain1 + Chain2 PSD (dBm/0.1MHz)	Duty Cycle X %	Duty cycle correction factor (dB)	Bandwidth Correction factor (dB)	PSD (e.i.r.p) (dBm/0.5MHz)	FCC PSD Limit (dBm/0.5MHz)	IC e.i.r.p SD (dBm/0.5MHz)
ax_mode-HE40-MCS0	5755	-13.27	-13.11	-10.18	78.91	1.03	6.99	2.24	30.00	10.00
	5795	-13.16	-13.75	-10.43	78.91	1.03	6.99	1.98	30.00	10.00
ax_mode-HE40-MCS11	5755	-16.76	-17.62	-14.16	40.92	3.88	6.99	1.11	30.00	10.00
	5795	-17.07	-16.65	-13.84	40.94	3.88	6.99	1.42	30.00	10.00

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 67 von 207

Page 67 of 207

Modulation: 802.11ac – UNII 1, UNII2a, UNII2c

Data rate	Measured Frequency (MHz)	Measured Average PSD 1 (dBm/1MHz)	Measured Average PSD 2 (dBm/1MHz)	Total Chain1 + Chain2 PSD	Duty Cycle X %	Duty cycle correction factor (dB)	PSD (e.i.r.p) (dBm/1MHz)	FCC PSD Limit (dBm/1MHz)	IC e.i.r.p SD (dBm/1MHz)
ac_mode-VHT80-MCS0	5210	-6.46	-7.73	-4.04	69.24	1.60	-1.73	11.00	10.00
	5290	-6.86	-7.26	-4.05	69.32	1.59	-1.27	11.00	10.00
	5530	-9.5	-10.72	-7.06	69.33	1.59	-4.73	11.00	10.00
	5690	-4.64	-5.65	-2.11	69.33	1.59	0.34	11.00	10.00
ac_mode-VHT80-MCS9	5210	-10.01	-11.15	-7.53	30.77	5.12	-1.63	11.00	10.00
	5290	-11.29	-12.07	-8.65	30.81	5.11	-2.56	11.00	10.00
	5530	-11.64	-12.96	-9.24	30.78	5.12	-3.44	11.00	10.00
	5690	-10.76	-12.43	-8.50	30.86	5.11	-2.92	11.00	10.00

Modulation: 802.11ac – UNII 3

Data rate	Measured Frequency (MHz)	Measured Average PSD 1 (dBm/0.1MHz)	Measured Average PSD 2 (dBm/0.1MHz)	Total Chain1 + Chain2 PSD (dBm/0.1MHz)	Duty Cycle X %	Duty cycle correction factor (dB)	Bandwidth Correction factor (dB)	PSD (e.i.r.p) (dBm/0.5MHz)	FCC PSD Limit (dBm/0.5MHz)	IC e.i.r.p SD (dBm/0.5MHz)
ac_mode-VHT40-MCS0	5775	-12.66	-13.34	-9.98	69.30	1.59	6.99	3.01	30.00	10.00
ac_mode-VHT40-MCS9	5775	-16.99	-18.53	-14.68	30.83	5.11	6.99	1.82	30.00	10.00

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 68 von 207

Page 68 of 207

Modulation: 802.11ax – UNII 1, UNII2a, UNII2c

Data rate	Measured Frequency (MHz)	Measured Average PSD 1 (dBm/1MHz)	Measured Average PSD 2 (dBm/1MHz)	Total Chain1 + Chain2 PSD	Duty Cycle X %	Duty cycle correction factor (dB)	PSD (e.i.r.p) (dBm/1MHz)	FCC PSD Limit (dBm/1MHz)	IC e.i.r.p SD (dBm/1MHz)
ax_mode-HE40-MCS0	5210	-8.36	-9.78	-6.00	66.73	1.76	-3.62	11.00	10.00
	5290	-8.9	-9.93	-6.37	66.80	1.75	-3.78	11.00	10.00
	5530	-9.14	-10.28	-6.66	66.77	1.75	-4.13	11.00	10.00
	5690	-3.85	-5.04	-1.39	66.82	1.75	1.11	11.00	10.00
ax_mode-HE40-MCS11	5210	-6.5	-8.08	-4.21	66.75	1.76	-1.92	11.00	10.00
	5290	-6.2	-6.98	-3.56	66.77	1.75	-0.83	11.00	10.00
	5530	-8.3	-9.94	-6.03	66.79	1.75	-3.79	11.00	10.00
	5690	-4.64	-5.35	-1.97	66.82	1.75	0.80	11.00	10.00

Modulation: 802.11ax – UNII 3

Data rate	Measured Frequency (MHz)	Measured Average PSD 1 (dBm/0.1MHz)	Measured Average PSD 2 (dBm/0.1MHz)	Total Chain1 + Chain2 PSD (dBm/0.1MHz)	Duty Cycle X %	Duty cycle correction factor (dB)	Bandwidth Correction factor (dB)	PSD (e.i.r.p) (dBm/0.5MHz)	FCC PSD Limit (dBm/0.5MHz)	IC e.i.r.p SD (dBm/0.5MHz)
ax_mode-HE40-MCS0	5775	-13.17	-13.41	-10.28	66.76	1.75	6.99	2.87	30.00	10.00
ax_mode-HE40-MCS11	5775	-21.37	-21.96	-18.64	35.34	4.52	6.99	-2.74	30.00	10.00

7.4 Dynamic Frequency Selection (DFS)

Result

Pass

Test Specification 15.407 (h) / RSS 247 Issue 2 Section 6.3

Test Method FCC KDB Publication 905462 D02 & 905462 D03

Port of testing Conducted method

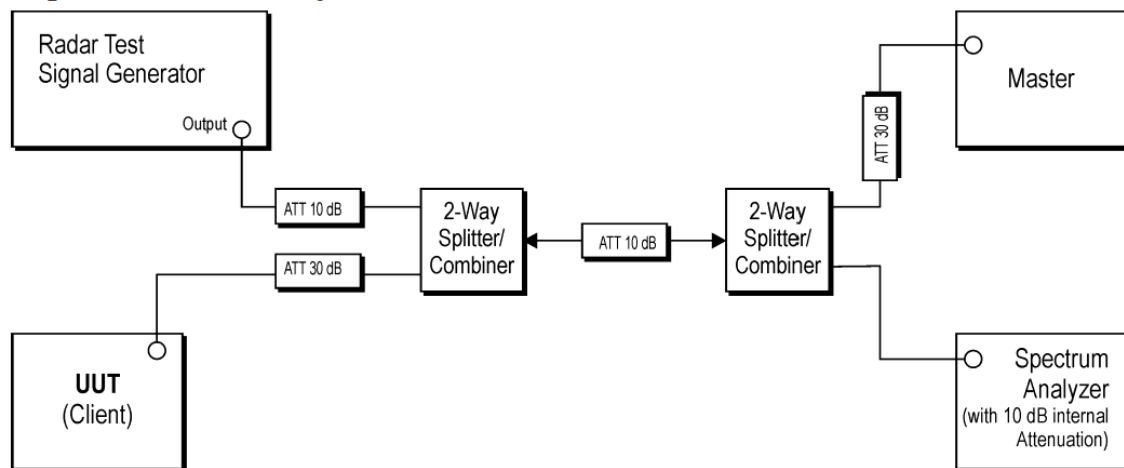
UUT Type Client without radar detection capabilities

1. Transmit power control (TPC). U-NII devices operating in the 5.25-5.35 GHz band and the 5.47-5.725 GHz band shall employ a TPC mechanism. The U-NII device is required to have the capability to operate at least 6 dB below the mean EIRP value of 30 dBm. A TPC mechanism is not required for systems with an e.i.r.p. of less than 500 mW

Requirement 2. Radar Detection Function of Dynamic Frequency Selection (DFS). U-NII devices operating with any part of its 26 dB emission bandwidth in the 5.25-5.35 GHz and 5.47-5.725 GHz bands shall employ a DFS radar detection mechanism to detect the presence of radar systems and to avoid co-channel operation with radar systems. Operators shall only use equipment with a DFS mechanism that is turned on when operating in these bands

Test Setup :

Setup for Client with injection at the Master



Note: FCC Certified Access Point is used for testing with FCC ID: **MSQ-RTAXHP00**

Limits :

Applicability of DFS Requirements Prior to Use of a Channel			
Requirement	Operational Mode		
	Master	Client Without Radar Detection	Client With Radar Detection
<i>Non-Occupancy Period</i>	Yes	Not required	Yes
<i>DFS Detection Threshold</i>	Yes	Not required	Yes
<i>Channel Availability Check Time</i>	Yes	Not required	Not required
<i>U-NII Detection Bandwidth</i>	Yes	Not required	Yes

Applicability of DFS requirements during normal operation

Requirement	Operational Mode	
	Master Device or Client with Radar Detection	Client Without Radar Detection
<i>DFS Detection Threshold</i>	Yes	Not required
<i>Channel Closing Transmission Time</i>	Yes	Yes
<i>Channel Move Time</i>	Yes	Yes
<i>U-NII Detection Bandwidth</i>	Yes	Not required

The operational behavior and individual DFS requirements that are associated with these modes are as follows: as per KDB 905462 D02 UNII DFS Compliance Procedures New Rules v02

Client Devices

- A *Client Device* will not transmit before having received appropriate control signals from a *Master Device*.
- A *Client Device* will stop all its transmissions whenever instructed by a *Master Device* to which it is associated and will meet the *Channel Move Time* and *Channel Closing Transmission Time* requirements. The *Client Device* will not resume any transmissions until it has again received control signals from a *Master Device*.
- If a *Client Device* is performing *In-Service Monitoring* and detects a *Radar Waveform* above the *DFS Detection Threshold*, it will inform the *Master Device*. This is equivalent to the *Master Device* detecting the *Radar Waveform* and d) through f) of section 5.1.1 apply.
- Irrespective of *Client Device* or *Master Device* detection the *Channel Move Time* and *Channel Closing Transmission Time* requirements remain the same.
- The client test frequency must be monitored to ensure no transmission of any type has occurred for 30 minutes. Note: If the client moves with the master, the device is considered compliant if nothing appears in the client non-occupancy period test. For devices that shut down (rather than moving channels), no beacons should appear.

DFS Detection Thresholds

below provides the *DFS Detection Thresholds* for *Master Devices* as well as *Client Devices* incorporating *In-Service Monitoring*.

DFS Detection Thresholds for Master Devices and Client Devices with Radar Detection

Maximum Transmit Power	Value (See Notes 1, 2, and 3)
EIRP $\geq$ 200 milliwatt	-64 dBm
EIRP $<$ 200 milliwatt and power spectral density $<$ 10 dBm/MHz	-62 dBm
EIRP $<$ 200 milliwatt that do not meet the power spectral density requirement	-64 dBm

Note 1: This is the level at the input of the receiver assuming a 0 dBi receive antenna.

Note 2: Throughout these test procedures an additional 1 dB has been added to the amplitude of the test transmission waveforms to account for variations in measurement equipment. This will ensure that the test signal is at or above the detection threshold level to trigger a DFS response.

Note3: EIRP is based on the highest antenna gain. For MIMO devices refer to KDB Publication 662911 D01.

Response Requirements

provides the response requirements for *Master* and *Client Devices* incorporating DFS.

DFS Response Requirement Values

Parameter	Value
<i>Non-occupancy period</i>	Minimum 30 minutes
<i>Channel Availability Check Time</i>	60 seconds
<i>Channel Move Time</i>	10 seconds See Note 1.
<i>Channel Closing Transmission Time</i>	200 milliseconds + an aggregate of 60 milliseconds over remaining 10 second period. See Notes 1 and 2.
<i>U-NII Detection Bandwidth</i>	Minimum 100% of the U- NII 99% transmission power bandwidth. See Note 3.

Note 1: *Channel Move Time* and the *Channel Closing Transmission Time* should be performed with Radar Type 0. The measurement timing begins at the end of the Radar Type 0 burst.

Note 2: The *Channel Closing Transmission Time* is comprised of 200 milliseconds starting at the beginning of the *Channel Move Time* plus any additional intermittent control signals required to facilitate a *Channel move* (an aggregate of 60 milliseconds) during the remainder of the 10 second period. The aggregate duration of control signals will not count quiet periods in between transmissions.

Note 3: During the *U-NII Detection Bandwidth* detection test, radar type 0 should be used. For each frequency step the minimum percentage of detection is 90 percent. Measurements are performed with no data traffic.

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 72 von 207

Page 72 of 207

Note :

1. This UUT is classified as Client device without radar detection capabilities, hence only *Channel Move Time* and *Channel Closing Transmission Time* are applicable
2. *Channel Move Time* and *Channel Closing Transmission Time* is performed with Radar Type 0
3. *U-NII Detection Bandwidth* is not applicable for this device

Test Condition:

Normal Test Condition:

Temperature (Norm) = + 25 °C Voltage = 3.3 V DC through AC to Dc adaptor Relative humidity: 62 %

KDB Guidelines applied:

Measurements were made following the guidelines of 905462 D02 UNII DFS Compliance Procedures New Rules v02 & 905462 D03 Client Without DFS New Rules v01r02

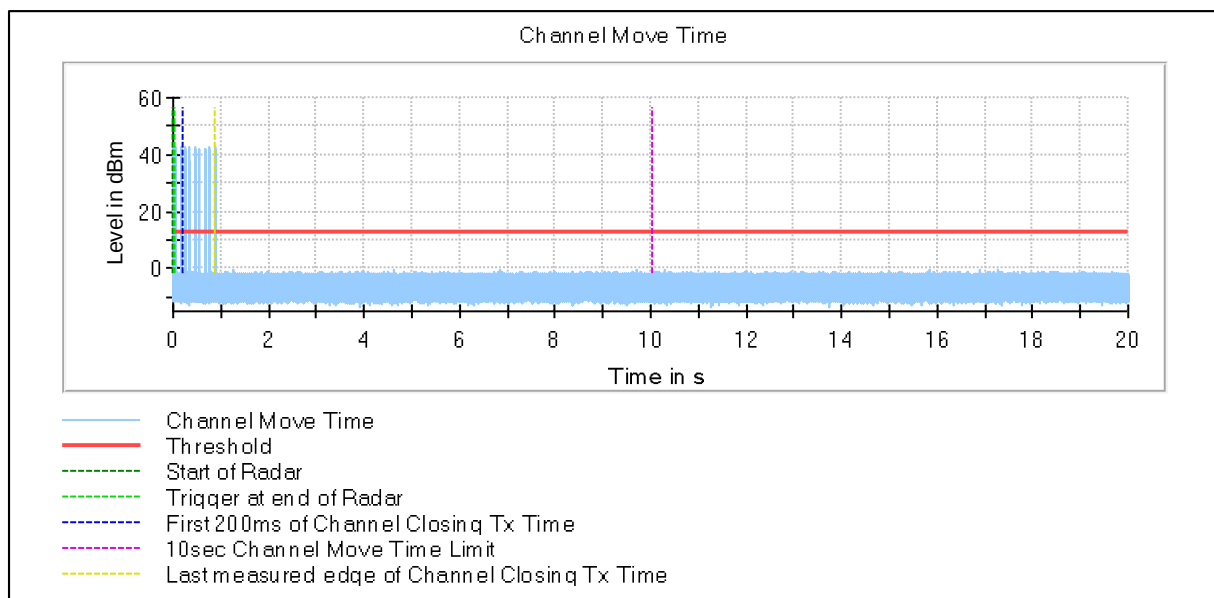
Test results:

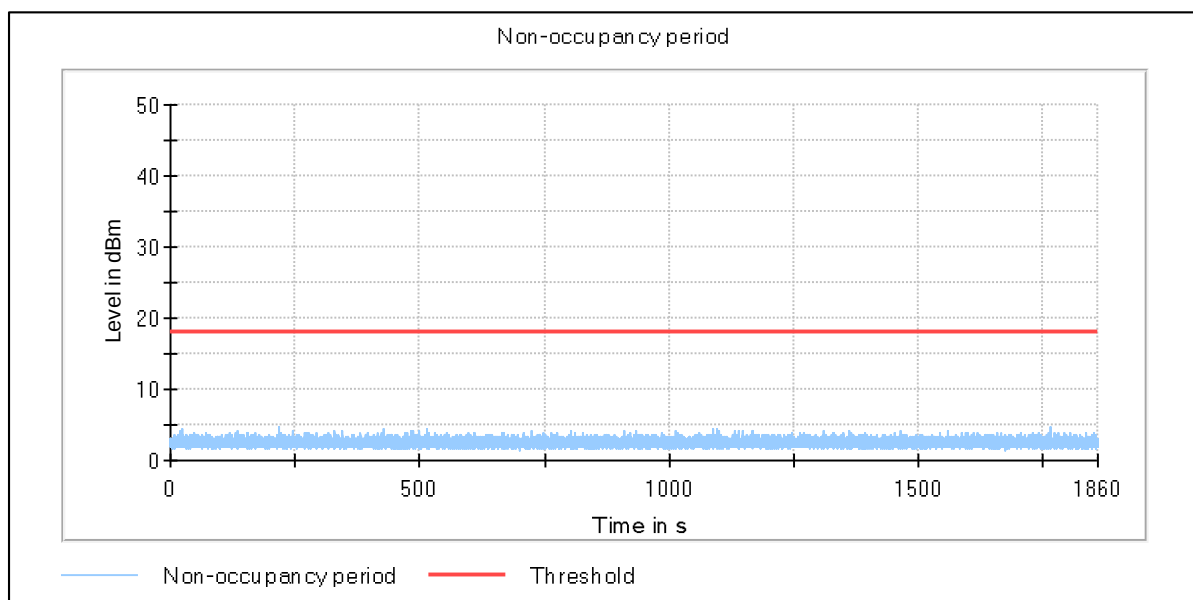
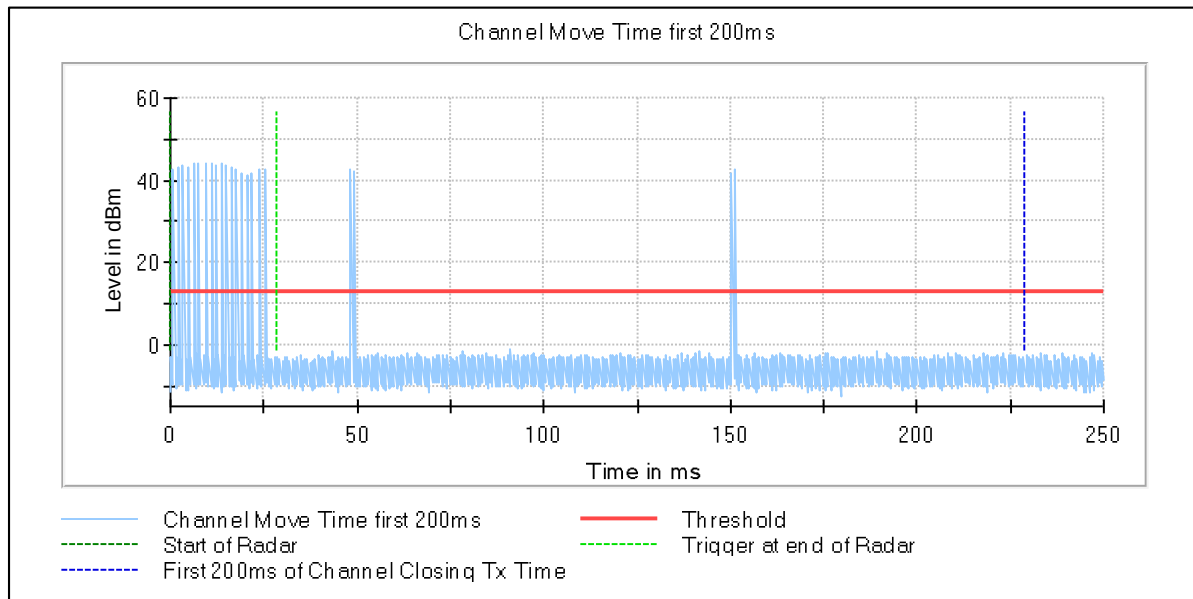
DFS In-Service Monitoring

UNII band : UNII 2a

Channel Bandwidth : 20MHz

Operating Frequency (MHz)	Test	Measured Value	Limit
5320	Channel move Time	0.839 sec	10 sec
	Channel Closing Transmission Time	1.640 ms + 4.148 ms	200 milliseconds + an aggregate of 60 milliseconds over remaining 10 second period
	Non Occupancy Time	0	Min 30 minutes





Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

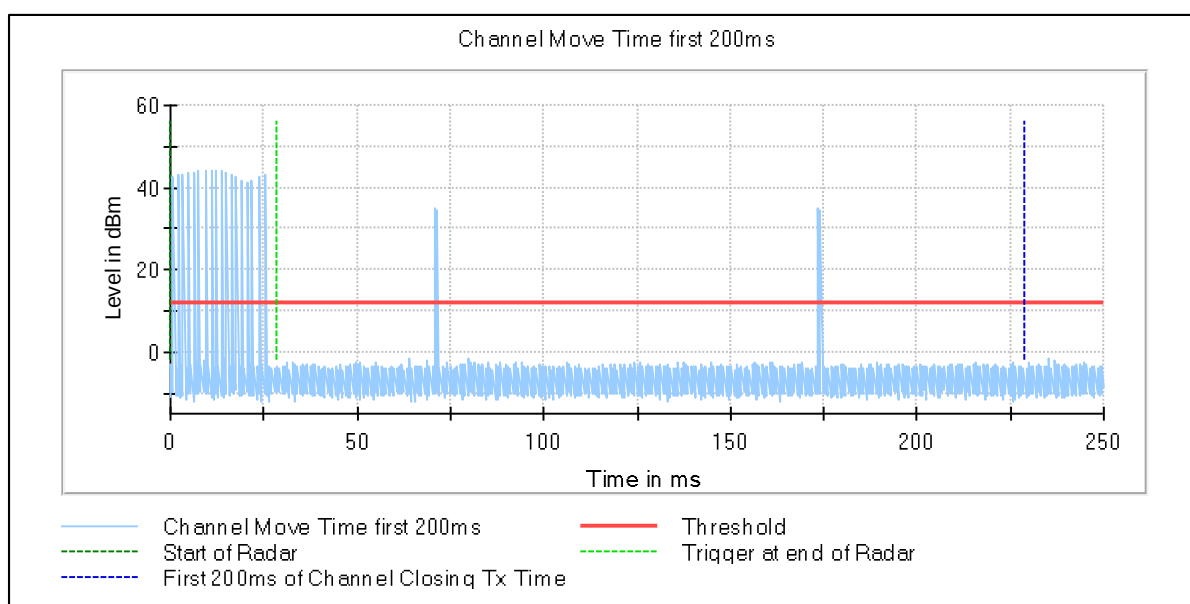
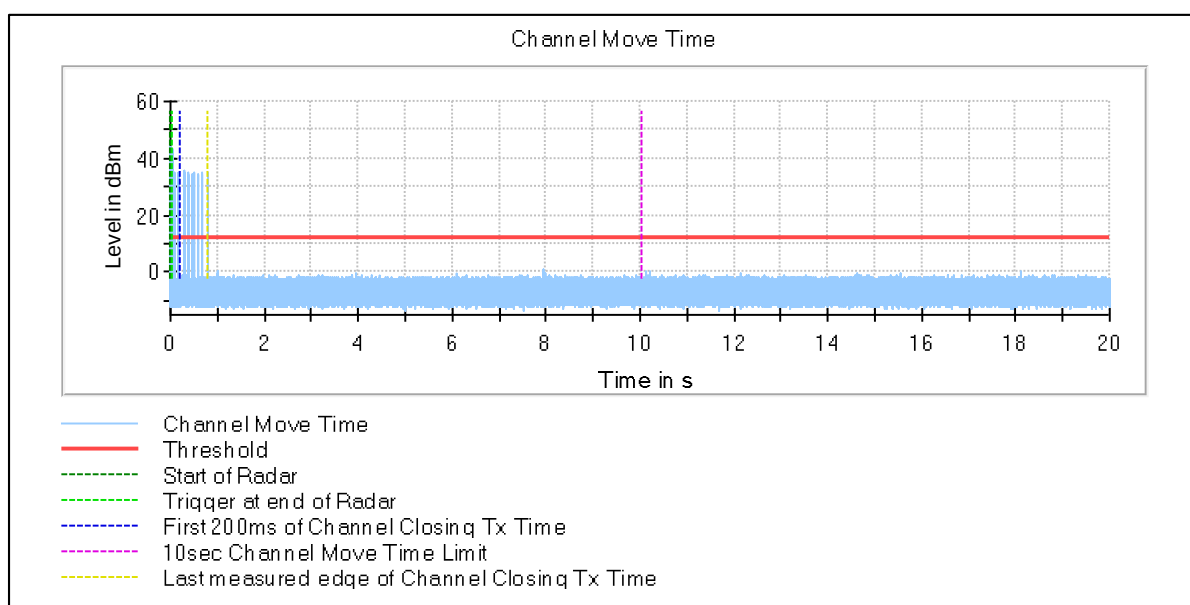
Seite 74 von 207

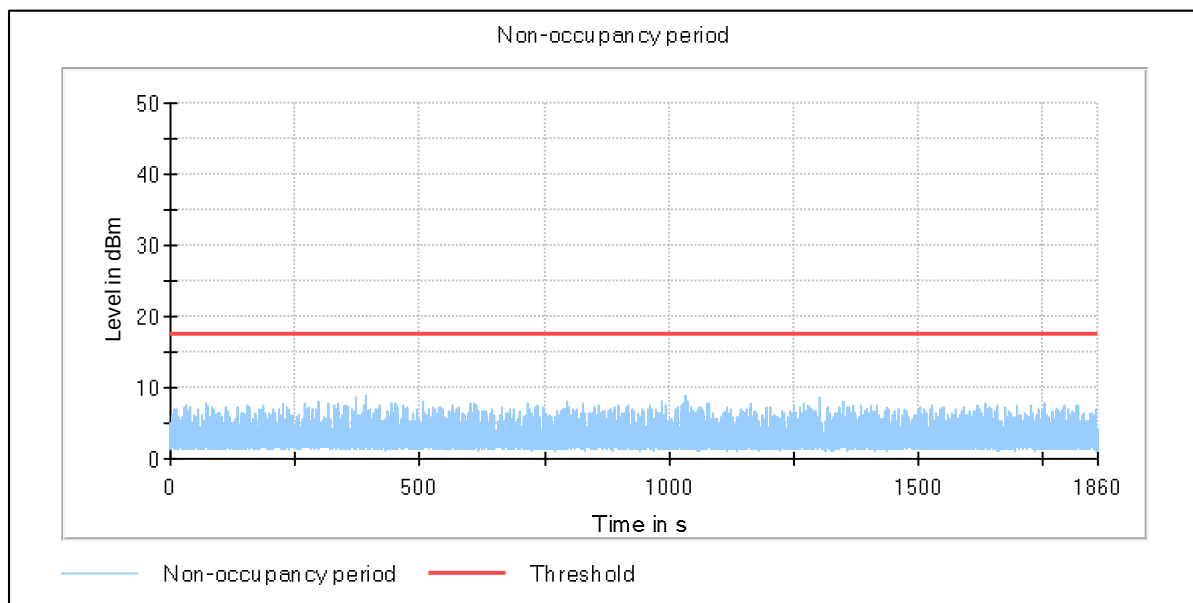
Page 74 of 207

UNII band : UNII 2a

Channel Bandwidth : 40MHz

Operating Frequency (MHz)	Test	Measured Value	Limit
5310	Channel move Time	0.760 sec	10 sec
	Channel Closing Transmission Time	1.168 ms + 3.808 ms	200 milliseconds + an aggregate of 60 milliseconds over remaining 10 second period
	Non Occupancy Time	0	Min 30 minutes

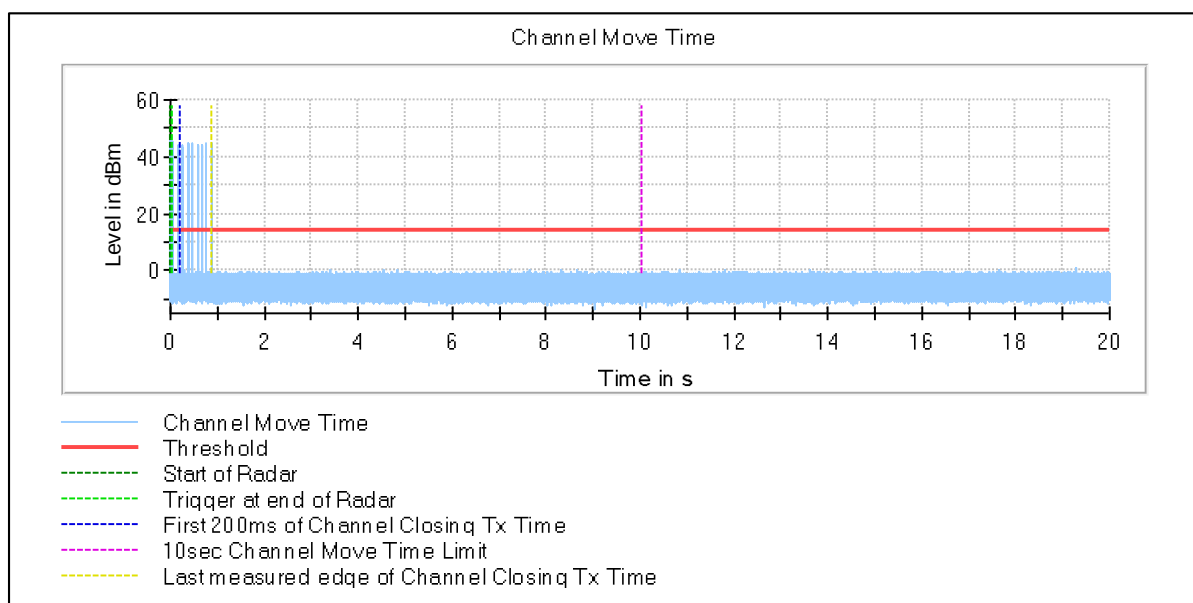


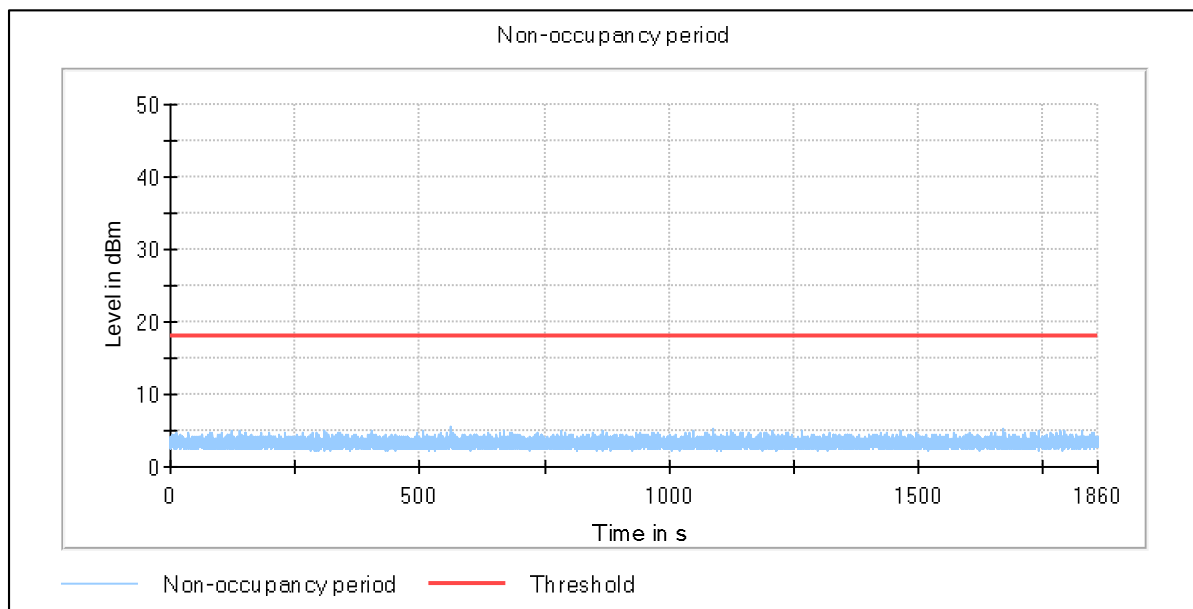
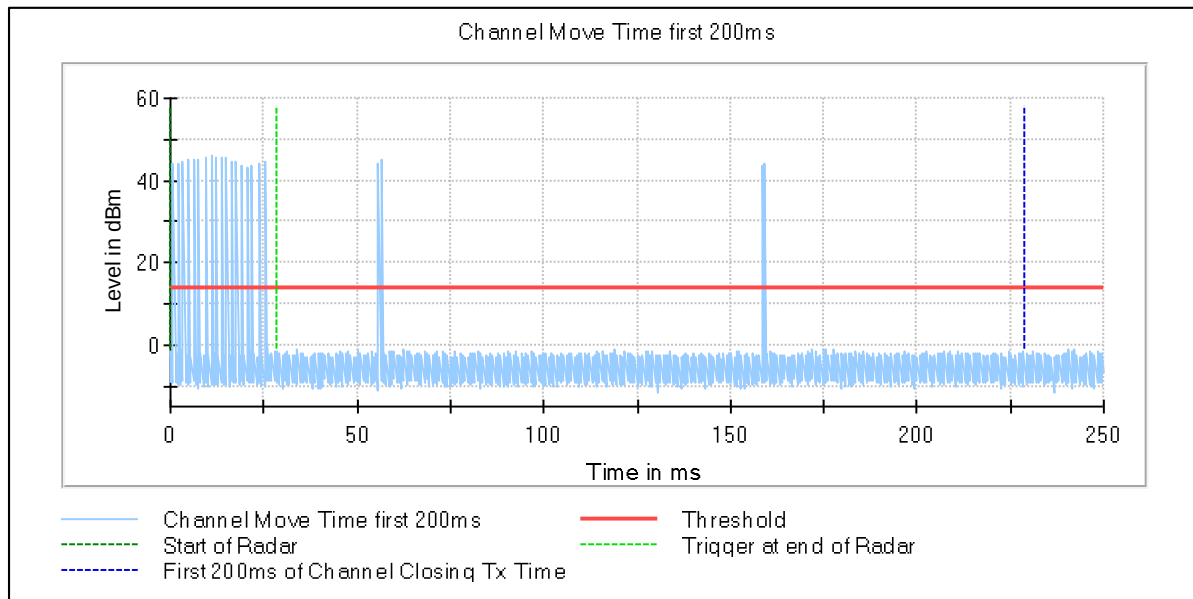


UNII band : UNII 2c

Channel Bandwidth : 20MHz

Operating Frequency (MHz)	Test	Measured Value	Limit
5500	Channel move Time	0.847 sec	10 sec
	Channel Closing Transmission Time	1.128 ms + 4.036 ms	200 milliseconds + an aggregate of 60 milliseconds over remaining 10 second period
	Non Occupancy Time	0	Min 30 minutes





Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 77 von 207

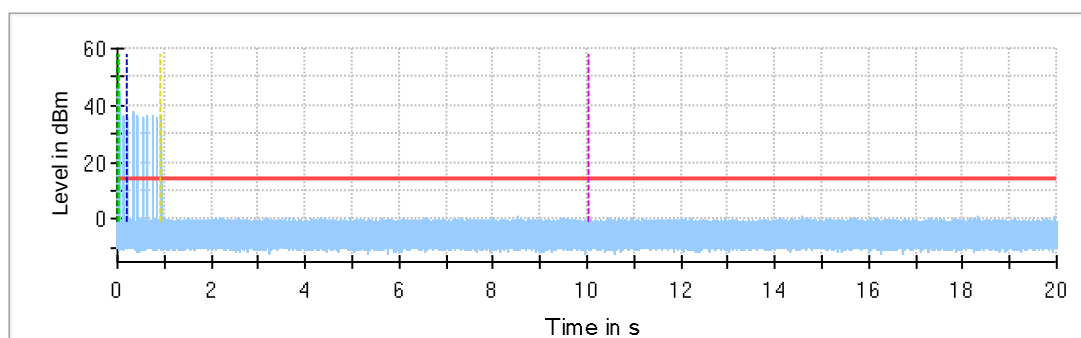
Page 77 of 207

UNII band : UNII 2c

Channel Bandwidth : 40MHz

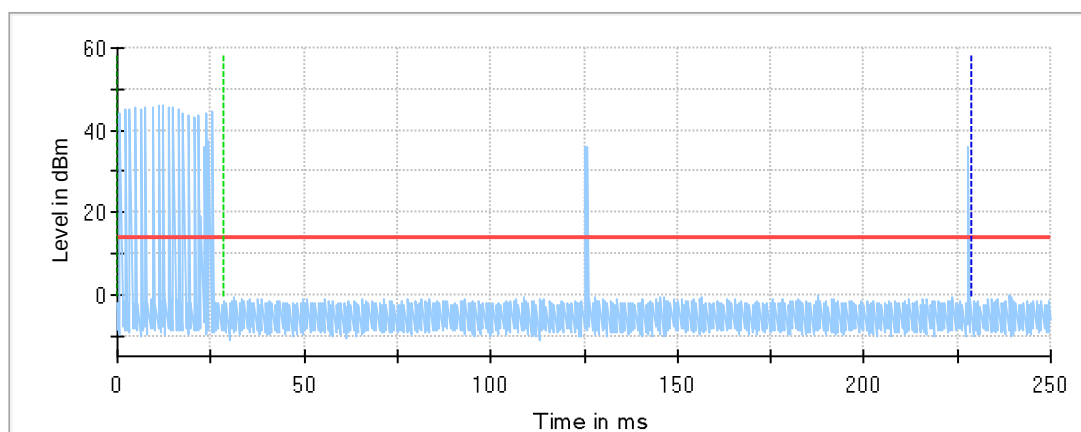
Operating Frequency (MHz)	Test	Measured Value	Limit
5510	Channel move Time	0.917 s	10 sec
	Channel Closing Transmission Time	1.136 ms + 4.140 ms	200 milliseconds + an aggregate of 60 milliseconds over remaining 10 second period
	Non Occupancy Time	0	Min 30 minutes

Channel Move Time

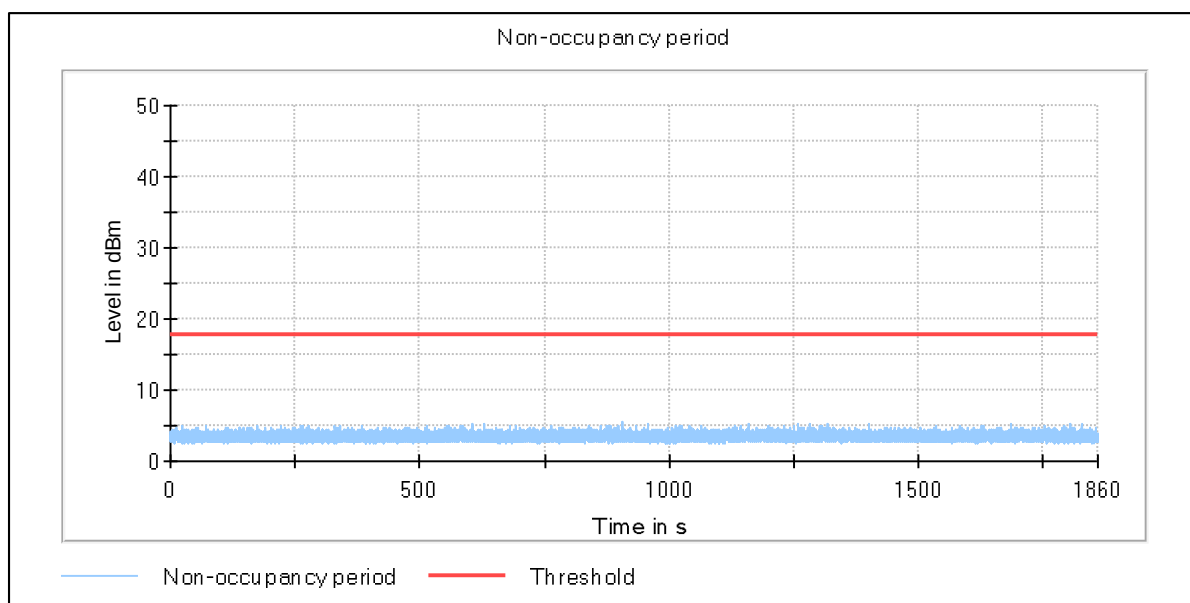


- Channel Move Time
- Threshold
- - - Start of Radar
- - - Trigger at end of Radar
- - - First 200ms of Channel Closing Tx Time
- 10sec Channel Move Time Limit
- - - Last measured edge of Channel Closing Tx Time

Channel Move Time first 200ms



- Channel Move Time first 200ms
- Threshold
- - - Start of Radar
- - - Trigger at end of Radar
- - - First 200ms of Channel Closing Tx Time



7.5 Spurious Radiated Emissions & Restricted Bands of Operation
Result Pass

Test Specification	FCC part 15 Subpart C & E Section 15.407 (b) (15.205 & 15.209) / RSS 247 Issue 2 Section 6.2.1; 6.2.2; 6.2.3; 6.2.4 / RSS Gen Issue 5 Section 8.9 & 8.10
Test Method	ANSI C 63.10 – 2013
Measurement Bandwidth	100kHz for below 1GHz 1MHz for above 1GHz
Measurement Location	Semi Anechoic Chamber 30MHz - 1 GHz Fully Anechoic Chamber 1 GHz - 40GHz
Measuring Distance	3 m
Detector	Refer Remark
Requirement	As per the limits mentioned in the below table
Test setup	Refer TEST METHODOLOGY

Limit:

Table 6: Undesirable emission limits

Frequency Band	Limit
5.15-5.25 GHz	e.i.r.p. -27dBm [68.2 dBuV/3m]
5.25-5.35 GHz	e.i.r.p. -27dBm [68.2 dBuV/3m]
5.47-5.725 GHz	e.i.r.p. -27dBm [68.2 dBuV/3m]
5.725-5.85 GHz	5.715 GHz to 5.725 GHz - e.i.r.p. -17dBm [78.2 dBuV/3m] 5.85 GHz to 5.86 GHz - e.i.r.p. -17dBm [78.2 dBuV/3m] other frequency range - e.i.r.p. -27dBm [68.2 dBuV/3m]

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 80 von 207

Page 80 of 207

Table 7: Transmitter limits for Radiated emission

Frequency (MHz)	Field strength (μV/m)	Field strength (dBμV/m)	Distance of Measurement (m)
0.009 – 0.490	2400/F(kHz)	48.50 – 13.80	300*
0.490 – 1.705	24000/F(kHz)	33.80 – 23.00	30*
1.705 -30	30	29.54	30*
30-88	100	40.0	3
88-216	150	43.5	3
216-960	200	46.0	3
Above 960	500	54.0	3

Remark: * The limit shows in the table above of frequency range 0.009 – 0.490, 0.490 – 1.705 MHz and 1.705-30MHz is at 300 meter, 30 meter and 30 meter range respectively, which corresponds to 128.51 – 93.80, 73.80 – 62.96 and 69.54 dBμV/m at 3m range by extrapolation calculation and the measurement of loop antenna.

The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9–90 kHz, 110–490 kHz and above 1000 MHz Radiated emission limits in these three bands are based on measurements employing an average detector.

Test Condition:

Normal Test Condition:

Temperature (Norm) = + 25 °C

Voltage = 3.3 V DC through AC to Dc adaptor

Relative humidity: 62 %

Note: Refer Attached Appendix for test Plots

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 81 von 207

Page 81 of 207

Test results:

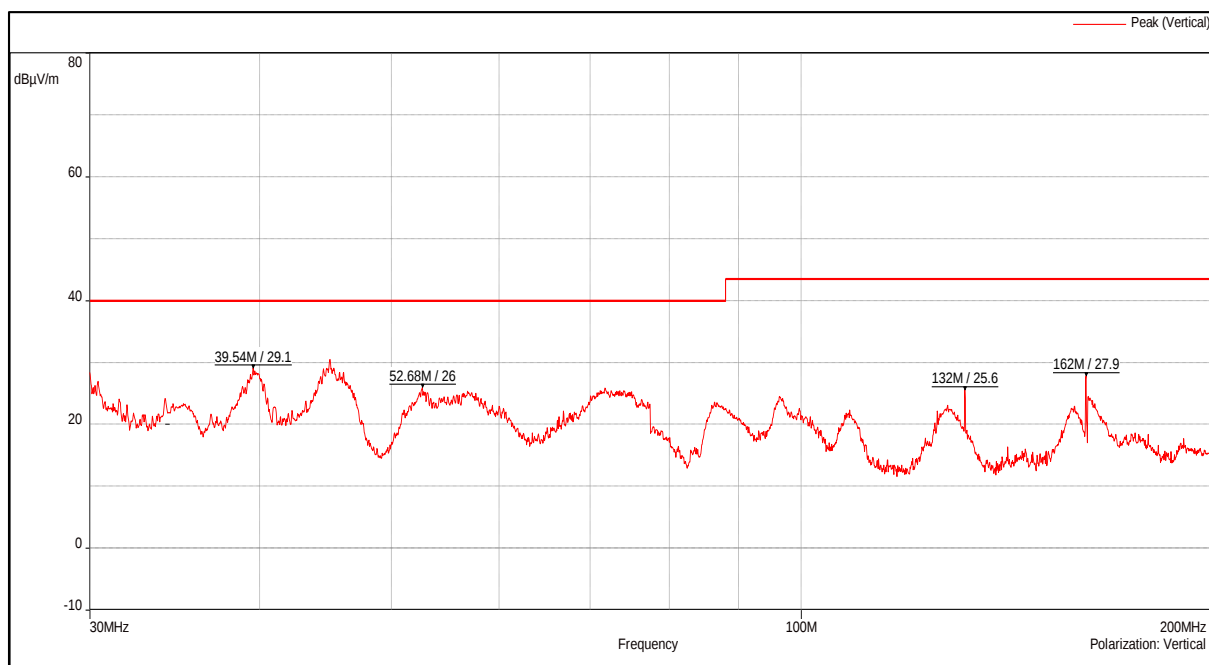
Note: All the losses are included during measurement and final values are mentioned in the test report. Refer TEST METHODOLOGY for more details

Test results for Frequency range : 9kHz – 30MHz

No Emissions found in the frequency range 9kHz – 30MHz

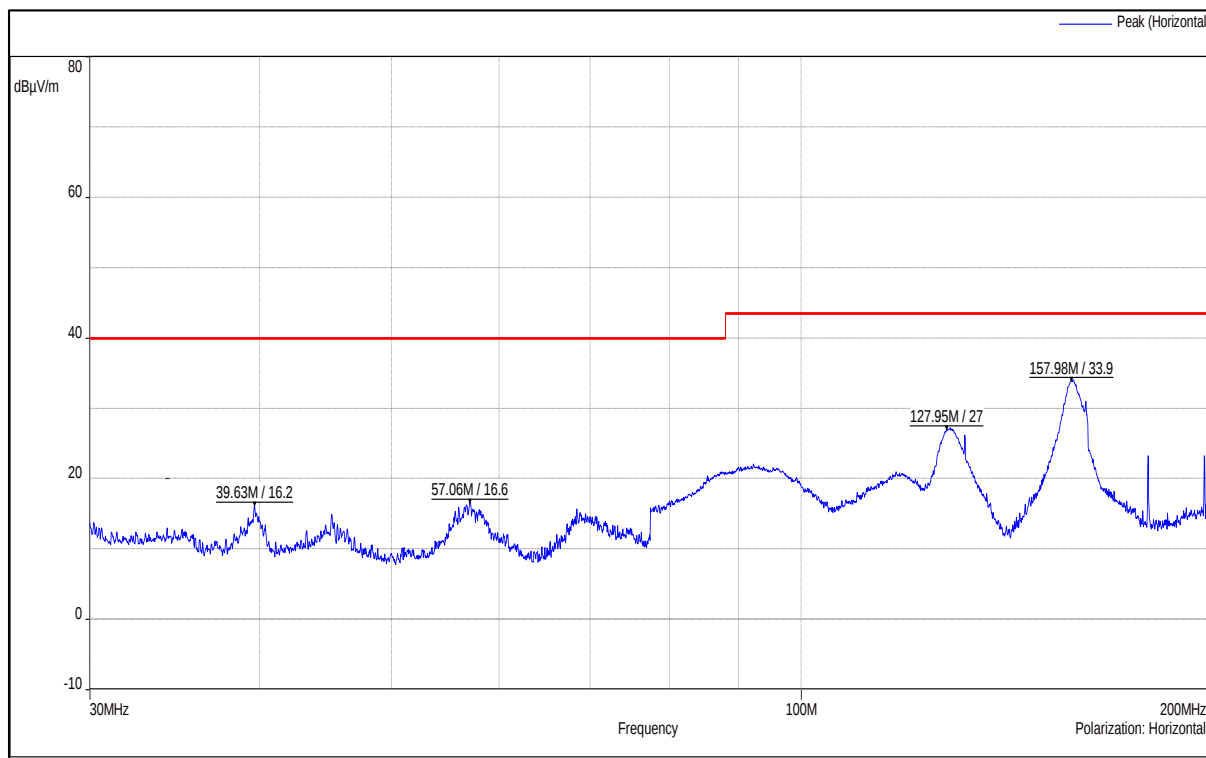
Test results for frequency range 30MHz – 1GHz

Antenna Polarization	Measured Frequency (MHz)	Measured Value (dBμV/m)	Limit (dBμV/m)	Margin (dB)
Vertical	39.54	29.10	40.00	-10.90
	52.68	26.00	40.00	-14.00
	132.00	25.60	43.50	-17.90
	162.00	27.90	43.50	-15.60
	238.64	9.99	46.00	-36.01
	395.99	12.90	46.00	-33.10
	653.45	14.90	46.00	-31.10
Horizontal	39.63	16.20	40.00	-23.80
	57.06	16.60	43.50	-26.90
	127.95	27.00	43.50	-16.50
	157.98	33.93	43.50	-9.57
	263.99	3.93	46.00	-42.07
	395.99	18.70	46.00	-27.30
	659.84	14.20	46.00	-31.80



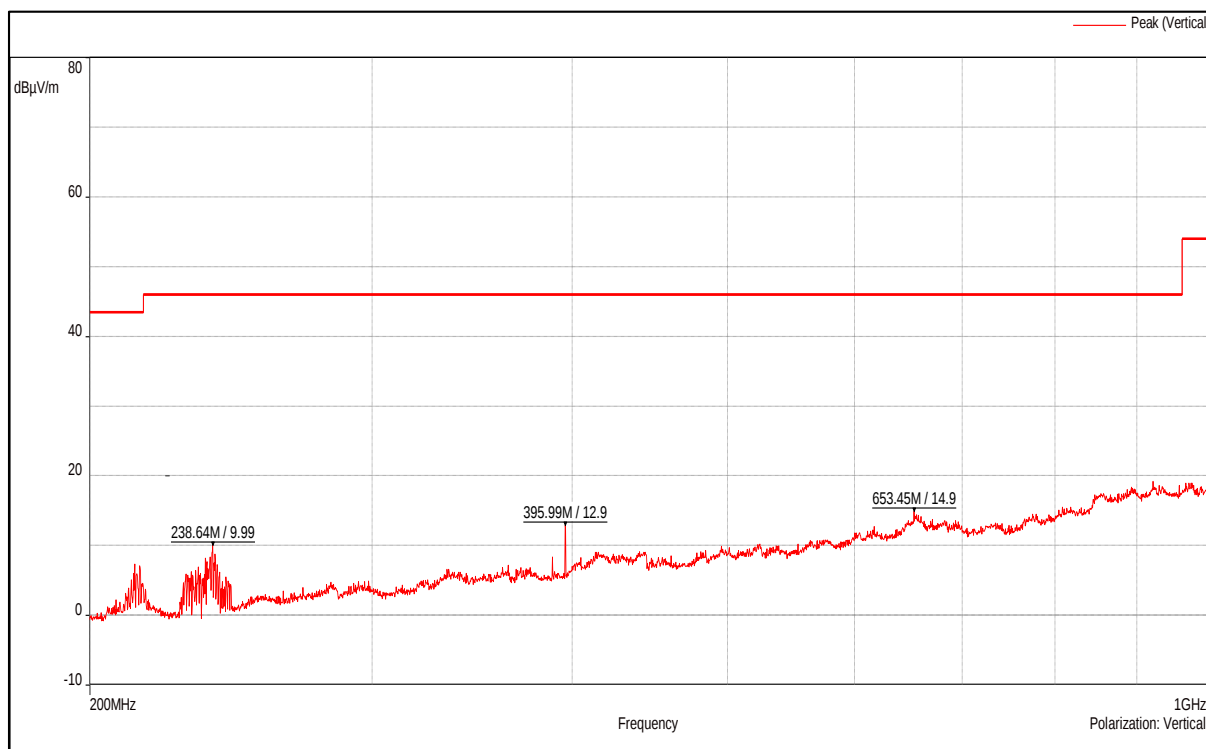
Channel Frequency 30MHz – 200MHz

Polarization Vertical



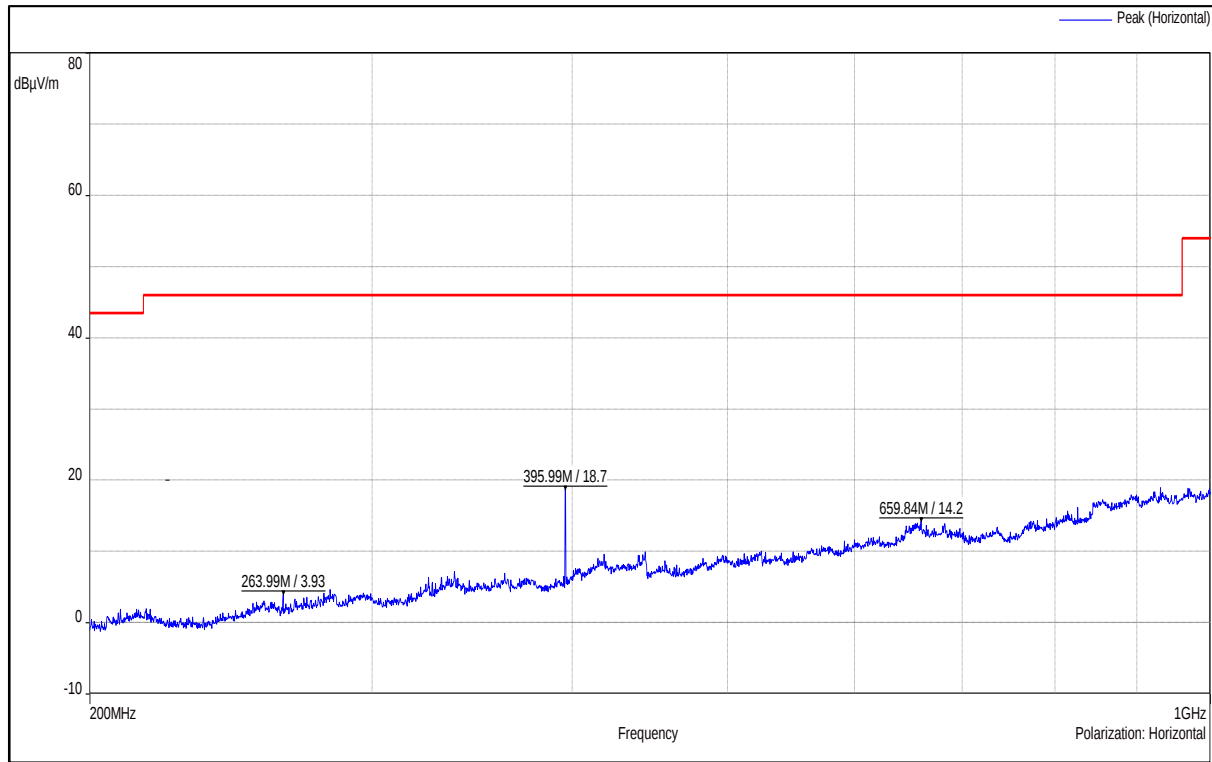
Channel Frequency 30MHz – 200MHz

Polarization Horizontal



Channel Frequency 200MHz – 1GHz

Polarization Vertical



Channel Frequency 200MHz – 1GHz

Polarization Horizontal

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 84 von 207

Page 84 of 207

Test results for frequency range – 1GHz to 40 GHz

Antenna Type: 1001932PT (Flex/PCB) Port1 & Port2 MIMO Antenna Results

Modulation: 802.11a

Data rate: 6Mbps

Channel Frequency (MHz)	Measured Frequency (MHz)	Antenna Polarization	Emission (dBμV/m)	Limit (dBμV/m)	Margin (dB)
5180	5180 (Pk)	Vertical	100.24	-	-
	5180 (Av)		89.72	-	-
	5150 (Pk)		58.11	74*	-15.89
	5150 (Av)		33.82	54*	-20.18
	10360 (Pk)		51.02	68.23	-17.21
	10360 (Av)		39.34	54	-14.66
	15540 (Pk)		52.76	68.23	-15.47
	15540 (Av)		41.26	54	-12.74
	5180 (Pk)	Horizontal	108.94	-	-
	5180 (Av)		100.14	-	-
	5150 (Pk)		64.65	74*	-9.35
	5150 (Av)		42.08	54*	-11.92
	10360 (Pk)		52.37	68.23	-15.86
	10360 (Av)		39.33	54	-14.67
	15540 (Pk)		53.73	68.23	-14.50
	15540 (Av)		41.29	54	-12.71
5240	5240 (Pk)	Vertical	107.82	-	-
	5240 (Av)		96.81	-	-
	5350 (Pk)		48.32	74*	-25.68
	5350 (Av)		35.55	54*	-18.45
	10480 (Pk)		51.17	68.23	-17.06
	10480 (Av)		39.88	54	-14.12
	15720 (Pk)		53.61	68.23	-14.62
	15720 (Av)		41.20	54	-12.80
	5240 (Pk)	Horizontal	115.82	-	-
	5240 (Av)		106.32	-	-
	5350 (Pk)		56.39	74*	-17.61
	5350 (Av)		42.35	54*	-11.65
	10480 (Pk)		51.82	68.23	-16.41
	10480 (Av)		39.94	54	-14.06
	15720 (Pk)		52.58	68.23	-15.65
	15720 (Av)		41.23	54	-12.77
5260	5260 (Pk)	Vertical	107.10	-	-
	5260 (Av)		96.23	-	-
	5350 (Pk)		51.09	74*	-22.91
	5350 (Av)		37.66	54*	-16.34
	10520 (Pk)		51.17	68.23	-17.06
	10520 (Av)		39.98	54	-14.02
	15780 (Pk)		52.88	68.23	-15.35
	15780 (Av)		41.02	54	-12.98
	5260 (Pk)	Horizontal	113.61	-	-
	5260 (Av)		104.90	-	-
	5350 (Pk)		57.27	74*	-16.73
	5350 (Av)		43.10	54*	-10.90
	10520 (Pk)		51.74	68.23	-16.49
	10520 (Av)		39.99	54	-14.01
	15780 (Pk)		53.17	68.23	-15.06
	15780 (Av)		41.02	54	-12.98

Note:

* :- Indicate restricted band frequency in 15.205

Pk: Peak Detector; Av: Average Detector

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 85 von 207

Page 85 of 207

Channel Frequency (MHz)	Measured Frequency (MHz)	Antenna Polarization	Emission (dBµV/m)	Limit (dBµV/m)	Margin (dB)
5320	5320 (Pk)	Vertical	101.77	-	-
	5320 (Av)		91.52	-	-
	5350 (Pk)		56.20	74*	-17.80
	5350 (Av)		35.19	54*	-18.81
	10640 (Pk)		51.05	68.23	-17.18
	10640 (Av)		40.01	54	-13.99
	15960 (Pk)		53.11	68.23	-15.12
	15960 (Av)		41.67	54	-12.33
	5320 (Pk)	Horizontal	108.66	-	-
	5320 (Av)		99.77	-	-
	5350 (Pk)		62.76	74*	-11.24
	5350 (Av)		40.52	54*	-13.48
	10640 (Pk)		52.17	68.23	-16.06
	10640 (Av)		40.08	54	-13.92
	15960 (Pk)		53.26	68.23	-14.97
	15960 (Av)		41.70	54	-12.30
5500	5500 (Pk)	Vertical	103.00	-	-
	5500 (Av)		92.75	-	-
	5460 (Pk)		57.46	74*	-16.54
	5460 (Av)		35.53	54*	-18.47
	11000 (Pk)		51.75	68.23	-16.48
	11000 (Av)		40.70	54	-13.30
	16500 (Pk)		54.63	68.23	-13.60
	16500 (Av)		43.39	54	-10.61
	5500 (Pk)	Horizontal	101.08	-	-
	5500 (Av)		97.87	-	-
	5460 (Pk)		56.31	74*	-17.69
	5460 (Av)		38.39	54*	-15.61
	11000 (Pk)		52.26	68.23	-15.97
	11000 (Av)		40.70	54	-13.30
	16500 (Pk)		54.50	68.23	-13.73
	16500 (Av)		43.37	54	-10.63
5700	5700 (Pk)	Vertical	102.41	-	-
	5700 (Av)		92.57	-	-
	5460 (Pk)		42.33	74*	-31.67
	5460 (Av)		30.04	54*	-23.96
	11400 (Pk)		53.11	68.23	-15.12
	11400 (Av)		41.60	54	-12.40
	17100 (Pk)		55.07	68.23	-13.16
	17100 (Av)		44.28	54	-9.72
	5700 (Pk)	Horizontal	108.11	-	-
	5700 (Av)		99.43	-	-
	5460 (Pk)		43.26	74*	-30.74
	5460 (Av)		30.53	54*	-23.47
	11400 (Pk)		53.36	68.23	-14.87
	11400 (Av)		41.54	54	-12.46
	17100 (Pk)		56.11	68.23	-12.12
	17100 (Av)		44.30	54	-9.70

Note:

* :- Indicate restricted band frequency in 15.205

Pk: Peak Detector; Av: Average Detector

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 86 von 207

Page 86 of 207

Channel Frequency (MHz)	Measured Frequency (MHz)	Antenna Polarization	Emission (dBµV/m)	Limit (dBµV/m)	Margin (dB)
5720	5720 (Pk)	Vertical	109.48	-	-
	5720 (Av)		99.05	-	-
	5460 (Pk)		42.70	74*	-31.30
	5460 (Av)		30.20	54*	-23.80
	11440 (Pk)		52.71	68.23	-15.52
	11440 (Av)		41.56	54	-12.44
	17160 (Pk)		55.58	68.23	-12.65
	17160 (Av)		44.43	54	-9.57
	5720 (Pk)	Horizontal	113.23	-	-
	5720 (Av)		104.31	-	-
	5460 (Pk)		43.06	74*	-30.94
	5460 (Av)		30.64	54*	-23.36
	11440 (Pk)		53.32	68.23	-14.91
	11440 (Av)		41.57	54	-12.43
	17160 (Pk)		55.91	68.23	-12.32
	17160 (Av)		44.60	54	-9.40
5745	5715(Pk)	Vertical	63.36	78.20*	-14.84
	5725(Pk)		69.10	78.20*	-9.10
	5745 (Pk)		102.83	-	-
	5745 (Av)		93.43	-	-
	11490 (Pk)		54.51	68.23	-13.72
	11490 (Av)		42.35	54	-11.65
	17235 (Pk)		56.50	68.23	-11.73
	17235 (Av)		45.33	54	-8.67
	5715(Pk)	Horizontal	68.77	78.20*	-9.43
	5725(Pk)		75.23	78.20*	-2.97
	5745 (Pk)		108.77	-	-
	5745 (Av)		99.55	-	-
	11490 (Pk)		54.51	68.23	-13.72
	11490 (Av)		42.40	54	-11.60
	17235 (Pk)		57.17	68.23	-11.06
	17235 (Av)		45.31	54	-8.69
5825	5825 (Pk)	Vertical	104.33	-	-
	5825 (Av)		94.88	-	-
	5850 (Pk)		62.72	78.20*	-15.48
	5860 (Pk)		60.09	78.20*	-18.11
	11650 (Pk)		54.26	68.23	-13.97
	11650 (Av)		41.69	54	-12.31
	17475 (Pk)		58.52	68.23	-9.71
	17475 (Av)		47.20	54	-6.80
	5825 (Pk)	Horizontal	110.62	-	-
	5825 (Av)		100.81	-	-
	5850 (Pk)		71.16	78.20*	-7.04
	5860 (Pk)		65.34	78.20*	-12.86
	11650 (Pk)		53.17	68.23	-15.06
	11650 (Av)		41.66	54	-12.34
	17475 (Pk)		58.70	68.23	-9.53
	17475 (Av)		47.18	54	-6.82

Note:

* :- Indicate restricted band frequency in 15.205

Pk: Peak Detector; Av: Average Detector

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 87 von 207

Page 87 of 207

Modulation: 802.11a

Data rate: 54Mbps

Channel Frequency (MHz)	Measured Frequency (MHz)	Antenna Polarization	Emission (dBµV/m)	Limit (dBµV/m)	Margin (dB)
5180	5180 (Pk)	Vertical	100.87	-	-
	5180 (Av)		86.05	-	-
	5150 (Pk)		57.96	74*	-16.04
	5150 (Av)		34.70	54*	-19.30
	10360 (Pk)		51.52	68.23	-16.71
	10360 (Av)		39.42	54	-14.58
	15540 (Pk)		53.50	68.23	-14.73
	15540 (Av)		41.49	54	-12.51
	5180 (Pk)	Horizontal	110.73	*	-
	5180 (Av)		96.24	*	-
	5150 (Pk)		67.12	74*	-6.88
	5150 (Av)		44.25	54*	-9.75
	10360 (Pk)		51.66	68.23	-16.57
	10360 (Av)		39.64	54	-14.36
	15540 (Pk)		53.40	68.23	-14.83
	15540 (Av)		41.53	54	-12.47
5240	5240 (Pk)	Vertical	106.99	-	-
	5240 (Av)		91.26	-	-
	5350 (Pk)		46.08	74*	-27.92
	5350 (Av)		33.04	54*	-20.96
	10480 (Pk)		52.23	68.23	-16.00
	10480 (Av)		40.38	54	-13.62
	15720 (Pk)		53.06	68.23	-15.17
	15720 (Av)		41.37	54	-12.63
	5240 (Pk)	Horizontal	114.00	-	-
	5240 (Av)		99.44	-	-
	5350 (Pk)		52.44	74*	-21.56
	5350 (Av)		37.41	54*	-16.59
	10480 (Pk)		52.71	68.23	-15.52
	10480 (Av)		40.12	54	-13.88
	15720 (Pk)		53.71	68.23	-14.52
	15720 (Av)		41.29	54	-12.71
5260	5260 (Pk)	Vertical	102.48	-	-
	5260 (Av)		87.38	-	-
	5350 (Pk)		44.29	74*	-29.71
	5350 (Av)		31.29	54*	-22.71
	10520 (Pk)		52.87	68.23	-15.36
	10520 (Av)		40.14	54	-13.86
	15780 (Pk)		53.31	68.23	-14.92
	15780 (Av)		41.08	54	-12.92
	5260 (Pk)	Horizontal	114.81	-	-
	5260 (Av)		99.57	-	-
	5350 (Pk)		54.13	74*	-19.87
	5350 (Av)		37.75	54*	-16.25
	10520 (Pk)		52.35	68.23	-15.88
	10520 (Av)		40.15	54	-13.85
	15780 (Pk)		53.07	68.23	-15.16
	15780 (Av)		41.07	54	-12.93

Note:

* :- Indicate restricted band frequency in 15.205

Pk: Peak Detector; Av: Average Detector

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 88 von 207

Page 88 of 207

Channel Frequency (MHz)	Measured Frequency (MHz)	Antenna Polarization	Emission (dBµV/m)	Limit (dBµV/m)	Margin (dB)
5320	5320 (Pk)	Vertical	100.18	-	-
	5320 (Av)		84.87	-	-
	5350 (Pk)		58.73	74*	-15.27
	5350 (Av)		33.14	54*	-20.86
	10640 (Pk)		52.34	68.23	-15.89
	10640 (Av)		40.16	54	-13.84
	15960 (Pk)		53.95	68.23	-14.28
	15960 (Av)		41.81	54	-12.19
	5320 (Pk)	Horizontal	111.22	-	-
	5320 (Av)		95.79	-	-
	5350 (Pk)		70.23	74*	-3.77
	5350 (Av)		41.98	54*	-12.02
	10640 (Pk)		52.47	68.23	-15.76
	10640 (Av)		40.17	54	-13.83
	15960 (Pk)		53.53	68.23	-14.70
	15960 (Av)		41.76	54	-12.24
5500	5500 (Pk)	Vertical	101.96	-	-
	5500 (Av)		86.11	-	-
	5460 (Pk)		53.42	74*	-20.58
	5460 (Av)		32.88	54*	-21.12
	11000 (Pk)		53.03	68.23	-15.20
	11000 (Av)		40.78	54	-13.22
	16500 (Pk)		56.31	68.23	-11.92
	16500 (Av)		43.50	54	-10.50
	5500 (Pk)	Horizontal	110.12	-	-
	5500 (Av)		94.51	-	-
	5460 (Pk)		64.73	74*	-9.27
	5460 (Av)		39.92	54*	-14.08
	11000 (Pk)		52.57	68.23	-15.66
	11000 (Av)		40.80	54	-13.20
	16500 (Pk)		55.98	68.23	-12.25
	16500 (Av)		43.50	54	-10.50
5700	5700 (Pk)	Vertical	102.65	-	-
	5700 (Av)		87.15	-	-
	5460 (Pk)		43.49	74*	-30.51
	5460 (Av)		29.88	54*	-24.12
	11400 (Pk)		53.75	68.23	-14.48
	11400 (Av)		41.67	54	-12.33
	17100 (Pk)		56.47	68.23	-11.76
	17100 (Av)		44.47	54	-9.53
	5700 (Pk)	Horizontal	107.55	-	-
	5700 (Av)		92.07	-	-
	5460 (Pk)		43.15	74*	-30.85
	5460 (Av)		30.60	54*	-23.40
	11400 (Pk)		54.35	68.23	-13.88
	11400 (Av)		41.70	54	-12.30
	17100 (Pk)		56.34	68.23	-11.89
	17100 (Av)		44.43	54	-9.57

Note:

* :- Indicate restricted band frequency in 15.205

Pk: Peak Detector; Av: Average Detector

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 89 von 207

Page 89 of 207

Channel Frequency (MHz)	Measured Frequency (MHz)	Antenna Polarization	Emission (dBµV/m)	Limit (dBµV/m)	Margin (dB)
5720	5720 (Pk)	Vertical	106.63	-	-
	5720 (Av)		91.01	-	-
	5460 (Pk)		42.58	74*	-31.42
	5460 (Av)		29.94	54*	-24.06
	11440 (Pk)		53.87	68.23	-14.36
	11440 (Av)		41.82	54	-12.18
	17160 (Pk)		57.35	68.23	-10.88
	17160 (Av)		44.64	54	-9.36
	5720 (Pk)	Horizontal	112.29	-	-
	5720 (Av)		97.13	-	-
	5460 (Pk)		43.53	74*	-30.47
	5460 (Av)		30.76	54*	-23.24
	11440 (Pk)		54.38	68.23	-13.85
	11440 (Av)		42.00	54	-12.00
	17160 (Pk)		57.12	68.23	-11.11
	17160 (Av)		44.62	54	-9.38
5745	5715(Pk)	Vertical	60.31	78.2*	-17.89
	5725(Pk)		67.12	78.2*	-11.08
	5745 (Pk)		103.87	-	-
	5745 (Av)		88.49	-	-
	11490 (Pk)		54.66	68.23	-13.57
	11490 (Av)		42.57	54	-11.43
	17235 (Pk)		57.32	68.23	-10.91
	17235 (Av)		45.46	54	-8.54
	5715(Pk)	Horizontal	69.21	78.2*	-8.99
	5725(Pk)		74.56	78.2*	-3.64
	5745 (Pk)		110.44	-	-
	5745 (Av)		93.38	-	-
	11490 (Pk)		54.91	68.23	-13.32
	11490 (Av)		42.71	54	-11.29
	17235 (Pk)		57.56	68.23	-10.67
	17235 (Av)		45.41	54	-8.59
5825	5825 (Pk)	Vertical	104.48	-	-
	5825 (Av)		88.84	-	-
	5850 (Pk)		66.76	78.2*	-11.44
	5860 (Pk)		62.40	78.2*	-15.80
	11650 (Pk)		54.64	68.23	-13.59
	11650 (Av)		42.43	54	-11.57
	17475 (Pk)		59.53	68.23	-8.70
	17475 (Av)		47.34	54	-6.66
	5825 (Pk)	Horizontal	108.74	-	-
	5825 (Av)		93.56	-	-
	5850 (Pk)		66.17	78.2	-12.03
	5860 (Pk)		61.95	78.2	-16.25
	11650 (Pk)		54.51	68.23	-13.72
	11650 (Av)		42.30	54	-11.70
	17475 (Pk)		59.51	68.23	-8.72
	17475 (Av)		47.32	54	-6.68

Note:

* :- Indicate restricted band frequency in 15.205

Pk: Peak Detector; Av: Average Detector

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 90 von 207

Page 90 of 207

Modulation: 802.11n _ HT 20MHz

Data rate: MCS0

Channel Frequency (MHz)	Measured Frequency (MHz)	Antenna Polarization	Emission (dBµV/m)	Limit (dBµV/m)	Margin (dB)
5180	5180 (Pk)	Vertical	98.47	-	-
	5180 (Av)		88.31	-	-
	5150 (Pk)		61.97	74*	-12.03
	5150 (Av)		38.18	54*	-15.82
	10360 (Pk)		52.17	68.23	-16.06
	10360 (Av)		39.41	54	-14.59
	15540 (Pk)		53.88	68.23	-14.35
	15540 (Av)		41.42	54	-12.58
	5180 (Pk)	Horizontal	109.61	-	-
	5180 (Av)		99.77	-	-
	5150 (Pk)		72.75	74*	-1.25
	5150 (Av)		47.30	54*	-6.70
	10360 (Pk)		51.24	68.23	-16.99
	10360 (Av)		39.44	54	-14.56
	15540 (Pk)		53.21	68.23	-15.02
	15540 (Av)		41.45	54	-12.55
5240	5240 (Pk)	Vertical	102.98	-	-
	5240 (Av)		93.16	-	-
	5350 (Pk)		45.62	74*	-28.38
	5350 (Av)		33.10	54*	-20.90
	10480 (Pk)		52.07	68.23	-16.16
	10480 (Av)		40.19	54	-13.81
	15720 (Pk)		53.81	68.23	-14.42
	15720 (Av)		41.27	54	-12.73
	5240 (Pk)	Horizontal	114.27	-	-
	5240 (Av)		104.90	-	-
	5350 (Pk)		54.66	74*	-19.34
	5350 (Av)		41.17	54*	-12.83
	10480 (Pk)		52.17	68.23	-16.06
	10480 (Av)		40.21	54	-13.79
	15720 (Pk)		53.22	68.23	-15.01
	15720 (Av)		41.26	54	-12.74
5260	5260 (Pk)	Vertical	103.40	-	-
	5260 (Av)		92.24	-	-
	5350 (Pk)		50.66	74*	-23.34
	5350 (Av)		35.88	54*	-18.12
	10520 (Pk)		52.74	68.23	-15.49
	10520 (Av)		40.49	54	-13.51
	15780 (Pk)		53.34	68.23	-14.89
	15780 (Av)		41.10	54	-12.90
	5260 (Pk)	Horizontal	110.60	-	-
	5260 (Av)		100.85	-	-
	5350 (Pk)		55.99	74*	-18.01
	5350 (Av)		41.46	54*	-12.54
	10520 (Pk)		52.36	68.23	-15.87
	10520 (Av)		40.28	54	-13.72
	15780 (Pk)		52.87	68.23	-15.36
	15780 (Av)		41.04	54	-12.96

Note:

* :- Indicate restricted band frequency in 15.205

Pk: Peak Detector; Av: Average Detector

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 91 von 207

Page 91 of 207

Channel Frequency (MHz)	Measured Frequency (MHz)	Antenna Polarization	Emission (dBµV/m)	Limit (dBµV/m)	Margin (dB)
5320	5320 (Pk)	Vertical	99.33	-	-
	5320 (Av)		88.45	-	-
	5350 (Pk)		59.48	74*	-14.52
	5350 (Av)		33.28	54*	-20.72
	10640 (Pk)		52.04	68.23	-16.19
	10640 (Av)		40.12	54	-13.88
	15960 (Pk)		53.66	68.23	-14.57
	15960 (Av)		41.75	54	-12.25
	5320 (Pk)	Horizontal	105.50	-	-
	5320 (Av)		95.81	-	-
	5350 (Pk)		62.65	74*	-11.35
	5350 (Av)		38.14	54*	-15.86
	10640 (Pk)		52.83	68.23	-15.40
	10640 (Av)		40.16	54	-13.84
	15960 (Pk)		54.41	68.23	-13.82
	15960 (Av)		41.75	54	-12.25
5500	5500 (Pk)	Vertical	99.13	-	-
	5500 (Av)		88.71	-	-
	5460 (Pk)		53.92	74*	-20.08
	5460 (Av)		33.37	54*	-20.63
	11000 (Pk)		53.09	68.23	-15.14
	11000 (Av)		40.75	54	-13.25
	16500 (Pk)		55.87	68.23	-12.36
	16500 (Av)		43.46	54	-10.54
	5500 (Pk)	Horizontal	105.87	-	-
	5500 (Av)		97.34	-	-
	5460 (Pk)		61.60	74*	-12.40
	5460 (Av)		40.00	54*	-14.00
	11000 (Pk)		52.73	68.23	-15.50
	11000 (Av)		40.75	54	-13.25
	16500 (Pk)		55.14	68.23	-13.09
	16500 (Av)		43.47	54	-10.53
5700	5700 (Pk)	Vertical	98.35	-	-
	5700 (Av)		88.55	-	-
	5460 (Pk)		42.86	74*	-31.14
	5460 (Av)		30.07	54*	-23.93
	11400 (Pk)		53.84	68.23	-14.39
	11400 (Av)		41.65	54	-12.35
	17100 (Pk)		56.53	68.23	-11.70
	17100 (Av)		44.42	54	-9.58
	5700 (Pk)	Horizontal	104.04	-	-
	5700 (Av)		94.09	-	-
	5460 (Pk)		43.05	74*	-30.95
	5460 (Av)		30.46	54*	-23.54
	11400 (Pk)		54.14	68.23	-14.09
	11400 (Av)		41.69	54	-12.31
	17100 (Pk)		56.06	68.23	-12.17
	17100 (Av)		44.41	54	-9.59

Note:

* :- Indicate restricted band frequency in 15.205

Pk: Peak Detector; Av : Average Detector

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 92 von 207

Page 92 of 207

Channel Frequency (MHz)	Measured Frequency (MHz)	Antenna Polarization	Emission (dBµV/m)	Limit (dBµV/m)	Margin (dB)
5720	5720 (Pk)	Vertical	105.28	-	-
	5720 (Av)		94.77	-	-
	5460 (Pk)		43.07	74*	-30.93
	5460 (Av)		30.13	54*	-23.87
	11440 (Pk)		54.16	68.23	-14.07
	11440 (Av)		41.80	54	-12.20
	17160 (Pk)		57.00	68.23	-11.23
	17160 (Av)		44.63	54	-9.37
	5720 (Pk)	Horizontal	109.91	-	-
	5720 (Av)		101.30	-	-
	5460 (Pk)		43.40	74*	-30.60
	5460 (Av)		30.88	54*	-23.12
	11440 (Pk)		53.86	68.23	-14.37
	11440 (Av)		42.24	54	-11.76
	17160 (Pk)		56.98	68.23	-11.25
	17160 (Av)		44.67	54	-9.33
5745	5715(Pk)	Vertical	66.74	-	-11.46
	5725(Pk)		70.05	-	-8.15
	5745 (Pk)		103.48	74*	-
	5745 (Av)		93.93	54*	-
	11490 (Pk)		54.55	68.23	-13.68
	11490 (Av)		42.66	54	-11.34
	17235 (Pk)		57.28	68.23	-10.95
	17235 (Av)		45.47	54	-8.53
	5715(Pk)	Horizontal	71.26	-	-6.94
	5725(Pk)		75.34	-	-2.86
	5745 (Pk)		107.39	74*	-
	5745 (Av)		97.51	54*	-
	11490 (Pk)		55.40	68.23	-12.83
	11490 (Av)		43.06	54	-10.94
	17235 (Pk)		57.51	68.23	-10.72
	17235 (Av)		45.44	54	-8.56
5825	5825 (Pk)	Vertical	102.13	-	-
	5825 (Av)		92.16	-	-
	5850 (Pk)		61.86	74*	-16.34
	5860 (Pk)		59.00	54*	-19.20
	11650 (Pk)		54.16	68.23	-14.07
	11650 (Av)		42.05	54	-11.95
	17475 (Pk)		58.64	68.23	-9.59
	17475 (Av)		47.34	54	-6.66
	5825 (Pk)	Horizontal	103.61	-	-
	5825 (Av)		93.61	-	-
	5850 (Pk)		66.04	74*	-12.16
	5860 (Pk)		61.36	54*	-16.84
	11650 (Pk)		54.40	68.23	-13.83
	11650 (Av)		42.42	54	-11.58
	17475 (Pk)		58.65	68.23	-9.58
	17475 (Av)		47.32	54	-6.68

Note:

* :- Indicate restricted band frequency in 15.205

Pk: Peak Detector; Av: Average Detector

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 93 von 207

Page 93 of 207

Modulation: 802.11n _ HT 20MHz

Data rate: MCS7

Channel Frequency (MHz)	Measured Frequency (MHz)	Antenna Polarization	Emission (dBµV/m)	Limit (dBµV/m)	Margin (dB)
5180	5180 (Pk)	Vertical	97.89	-	-
	5180 (Av)		82.79	-	-
	5150 (Pk)		55.05	74*	-18.95
	5150 (Av)		33.23	54*	-20.77
	10360 (Pk)		51.74	68.23	-16.49
	10360 (Av)		39.43	54	-14.57
	15540 (Pk)		53.15	68.23	-15.08
	15540 (Av)		41.43	54	-12.57
	5180 (Pk)	Horizontal	108.11	-	-
	5180 (Av)		93.18	-	-
	5150 (Pk)		64.33	74*	-9.67
	5150 (Av)		41.25	54*	-12.75
	10360 (Pk)		51.74	68.23	-16.49
	10360 (Av)		39.40	54	-14.60
	15540 (Pk)		53.81	68.23	-14.42
	15540 (Av)		41.40	54	-12.60
5240	5240 (Pk)	Vertical	100.82	-	-
	5240 (Av)		86.19	-	-
	5350 (Pk)		46.38	74*	-27.62
	5350 (Av)		31.03	54*	-22.97
	10480 (Pk)		52.28	68.23	-15.95
	10480 (Av)		40.21	54	-13.79
	15720 (Pk)		53.14	68.23	-15.09
	15720 (Av)		41.29	54	-12.71
	5240 (Pk)	Horizontal	111.71	-	-
	5240 (Av)		96.70	-	-
	5350 (Pk)		51.26	74*	-22.74
	5350 (Av)		36.47	54*	-17.53
	10480 (Pk)		52.05	68.23	-16.18
	10480 (Av)		40.32	54	-13.68
	15720 (Pk)		54.29	68.23	-13.94
	15720 (Av)		41.26	54	-12.74
5260	5260 (Pk)	Vertical	100.04	-	-
	5260 (Av)		85.46	-	-
	5350 (Pk)		44.92	74*	-29.08
	5350 (Av)		31.33	54*	-22.67
	10520 (Pk)		53.10	68.23	-15.13
	10520 (Av)		40.53	54	-13.47
	15780 (Pk)		53.20	68.23	-15.03
	15780 (Av)		41.04	54	-12.96
	5260 (Pk)	Horizontal	111.48	-	-
	5260 (Av)		96.21	-	-
	5350 (Pk)		54.82	74*	-19.18
	5350 (Av)		37.12	54*	-16.88
	10520 (Pk)		52.69	68.23	-15.54
	10520 (Av)		40.43	54	-13.57
	15780 (Pk)		53.81	68.23	-14.42
	15780 (Av)		41.09	54	-12.91

Note:

* :- Indicate restricted band frequency in 15.205

Pk: Peak Detector; Av: Average Detector

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 94 von 207

Page 94 of 207

Channel Frequency (MHz)	Measured Frequency (MHz)	Antenna Polarization	Emission (dBµV/m)	Limit (dBµV/m)	Margin (dB)
5320	5320 (Pk)	Vertical	104.92	-	-
	5320 (Av)		89.71	-	-
	5350 (Pk)		58.48	74*	-15.52
	5350 (Av)		35.83	54*	-18.17
	10640 (Pk)		52.86	68.23	-15.37
	10640 (Av)		40.33	54	-13.67
	15960 (Pk)		54.09	68.23	-14.14
	15960 (Av)		41.76	54	-12.24
	5320 (Pk)	Horizontal	106.01	-	-
	5320 (Av)		91.19	-	-
	5350 (Pk)		62.80	74*	-11.20
	5350 (Av)		37.10	54*	-16.90
	10640 (Pk)		52.17	68.23	-16.06
	10640 (Av)		40.19	54	-13.81
	15960 (Pk)		54.11	68.23	-14.12
	15960 (Av)		41.76	54	-12.24
5500	5500 (Pk)	Vertical	99.28	-	-
	5500 (Av)		84.32	-	-
	5460 (Pk)		50.97	74*	-23.03
	5460 (Av)		32.80	54*	-21.20
	11000 (Pk)		53.20	68.23	-15.03
	11000 (Av)		40.85	54	-13.15
	16500 (Pk)		55.97	68.23	-12.26
	16500 (Av)		43.52	54	-10.48
	5500 (Pk)	Horizontal	106.11	-	-
	5500 (Av)		91.46	-	-
	5460 (Pk)		60.27	74*	-13.73
	5460 (Av)		39.46	54*	-14.54
	11000 (Pk)		52.82	68.23	-15.41
	11000 (Av)		40.77	54	-13.23
	16500 (Pk)		55.47	68.23	-12.76
	16500 (Av)		43.53	54	-10.47
5700	5700 (Pk)	Vertical	97.60	-	-
	5700 (Av)		82.39	-	-
	5460 (Pk)		42.79	74*	-31.21
	5460 (Av)		30.15	54*	-23.85
	11400 (Pk)		55.02	68.23	-13.21
	11400 (Av)		42.65	54	-11.35
	17100 (Pk)		57.65	68.23	-10.58
	17100 (Av)		45.45	54	-8.55
	5700 (Pk)	Horizontal	101.09	-	-
	5700 (Av)		86.09	-	-
	5460 (Pk)		43.06	74*	-30.94
	5460 (Av)		30.29	54*	-23.71
	11400 (Pk)		53.86	68.23	-14.37
	11400 (Av)		41.74	54	-12.26
	17100 (Pk)		57.09	68.23	-11.14
	17100 (Av)		44.47	54	-9.53

Note:

* :- Indicate restricted band frequency in 15.205

Pk: Peak Detector; Av: Average Detector

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 95 von 207

Page 95 of 207

Channel Frequency (MHz)	Measured Frequency (MHz)	Antenna Polarization	Emission (dBµV/m)	Limit (dBµV/m)	Margin (dB)
5720	5720 (Pk)	Vertical	103.75	-	-
	5720 (Av)		88.37	-	-
	5460 (Pk)		43.03	74*	-30.97
	5460 (Av)		30.12	54*	-23.88
	11440 (Pk)		53.79	68.23	-14.44
	11440 (Av)		41.76	54	-12.24
	17160 (Pk)		56.87	68.23	-11.36
	17160 (Av)		44.61	54	-9.39
	5720 (Pk)	Horizontal	109.12	-	-
	5720 (Av)		94.16	-	-
	5460 (Pk)		42.98	74*	-31.02
	5460 (Av)		30.59	54*	-23.41
	11440 (Pk)		54.17	68.23	-14.06
	11440 (Av)		42.15	54	-11.85
	17160 (Pk)		56.22	68.23	-12.01
	17160 (Av)		44.65	54	-9.35
5745	5715(Pk)	Vertical	62.51	78.20*	-15.69
	5725(Pk)		67.03	78.20*	-11.17
	5745 (Pk)		102.63	-	-
	5745 (Av)		86.88	-	-
	11490 (Pk)		55.02	68.23	-13.21
	11490 (Av)		42.65	54	-11.35
	17235 (Pk)		57.65	68.23	-10.58
	17235 (Av)		45.45	54	-8.55
	5715(Pk)	Horizontal	67.75	78.20*	-10.45
	5725(Pk)		72.24	78.20*	-5.96
	5745 (Pk)		108.06	-	-
	5745 (Av)		92.66	-	-
	11490 (Pk)		54.71	68.23	-13.52
	11490 (Av)		42.75	54	-11.25
	17235 (Pk)		57.41	68.23	-10.82
	17235 (Av)		45.46	54	-8.54
5825	5825 (Pk)	Vertical	101.26	-	-
	5825 (Av)		86.09	-	-
	5850 (Pk)		60.44	78.20*	-17.76
	5860 (Pk)		54.87	78.20*	-23.33
	11650 (Pk)		53.67	68.23	-14.56
	11650 (Av)		42.04	54	-11.96
	17475 (Pk)		59.34	68.23	-8.89
	17475 (Av)		47.46	54	-6.54
	5825 (Pk)	Horizontal	108.52	-	-
	5825 (Av)		93.49	-	-
	5850 (Pk)		67.58	78.20*	-10.62
	5860 (Pk)		63.50	78.20*	-14.70
	11650 (Pk)		54.11	68.23	-14.12
	11650 (Av)		42.13	54	-11.87
	17475 (Pk)		60.73	68.23	-7.50
	17475 (Av)		47.47	54	-6.53

Note:

* :- Indicate restricted band frequency in 15.205

Pk: Peak Detector; Av: Average Detector

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 96 von 207

Page 96 of 207

Modulation: 802.11ac _ VHT 20MHz

Data rate: MCS0

Channel Frequency (MHz)	Measured Frequency (MHz)	Antenna Polarization	Emission (dBμV/m)	Limit (dBμV/m)	Margin (dB)
5180	5180 (Pk)	Vertical	97.13	-	-
	5180 (Av)		86.79	-	-
	5150 (Pk)		57.89	74*	-16.11
	5150 (Av)		32.53	54*	-21.47
	10360 (Pk)		51.23	68.23	-17.00
	10360 (Av)		39.61	54	-14.39
	15540 (Pk)		53.59	68.23	-14.64
	15540 (Av)		41.55	54	-12.45
	5180 (Pk)	Horizontal	107.45	-	-
	5180 (Av)		98.18	-	-
	5150 (Pk)		66.07	74*	-7.93
	5150 (Av)		41.23	54*	-12.77
	10360 (Pk)		52.18	68.23	-16.05
	10360 (Av)		39.58	54	-14.42
	15540 (Pk)		53.67	68.23	-14.56
	15540 (Av)		41.61	54	-12.39
5240	5240 (Pk)	Vertical	103.41	-	-
	5240 (Av)		93.20	-	-
	5350 (Pk)		46.20	74*	-27.80
	5350 (Av)		33.73	54*	-20.27
	10480 (Pk)		52.54	68.23	-15.69
	10480 (Av)		40.60	54	-13.40
	15720 (Pk)		54.26	68.23	-13.97
	15720 (Av)		41.39	54	-12.61
	5240 (Pk)	Horizontal	113.11	-	-
	5240 (Av)		103.67	-	-
	5350 (Pk)		51.97	74*	-22.03
	5350 (Av)		38.81	54*	-15.19
	10480 (Pk)		53.39	68.23	-14.84
	10480 (Av)		43.65	54	-10.35
	15720 (Pk)		53.32	68.23	-14.91
	15720 (Av)		41.40	54	-12.60
5260	5260 (Pk)	Vertical	104.57	-	-
	5260 (Av)		94.68	-	-
	5350 (Pk)		50.65	74*	-23.35
	5350 (Av)		36.42	54*	-17.58
	10520 (Pk)		53.27	68.23	-14.96
	10520 (Av)		41.16	54	-12.84
	15780 (Pk)		53.19	68.23	-15.04
	15780 (Av)		41.10	54	-12.90
	5260 (Pk)	Horizontal	113.27	-	-
	5260 (Av)		103.08	-	-
	5350 (Pk)		57.92	74*	-16.08
	5350 (Av)		42.33	54*	-11.67
	10520 (Pk)		52.63	68.23	-15.60
	10520 (Av)		40.92	54	-13.08
	15780 (Pk)		53.67	68.23	-14.56
	15780 (Av)		41.16	54	-12.84

Note:

* :- Indicate restricted band frequency in 15.205

Pk: Peak Detector; Av: Average Detector

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 97 von 207

Page 97 of 207

Channel Frequency (MHz)	Measured Frequency (MHz)	Antenna Polarization	Emission (dBµV/m)	Limit (dBµV/m)	Margin (dB)
5320	5320 (Pk)	Vertical	97.78	-	-
	5320 (Av)		87.75	-	-
	5350 (Pk)		60.63	74*	-13.37
	5350 (Av)		33.18	54*	-20.82
	10640 (Pk)		52.30	68.23	-15.93
	10640 (Av)		40.21	54	-13.79
	15960 (Pk)		53.33	68.23	-14.90
	15960 (Av)		41.89	54	-12.11
	5320 (Pk)	Horizontal	107.11	-	-
	5320 (Av)		97.99	-	-
	5350 (Pk)		69.16	74*	-4.84
	5350 (Av)		40.22	54*	-13.78
	10640 (Pk)		53.13	68.23	-15.10
	10640 (Av)		40.27	54	-13.73
	15960 (Pk)		54.83	68.23	-13.40
	15960 (Av)		41.86	54	-12.14
5500	5500 (Pk)	Vertical	99.81	-	-
	5500 (Av)		90.10	-	-
	5460 (Pk)		59.76	74*	-14.24
	5460 (Av)		34.73	54*	-19.27
	11000 (Pk)		53.08	68.23	-15.15
	11000 (Av)		40.79	54	-13.21
	16500 (Pk)		56.21	68.23	-12.02
	16500 (Av)		43.52	54	-10.48
	5500 (Pk)	Horizontal	104.22	-	-
	5500 (Av)		94.34	-	-
	5460 (Pk)		63.28	74*	-10.72
	5460 (Av)		37.24	54*	-16.76
	11000 (Pk)		52.70	68.23	-15.53
	11000 (Av)		40.81	54	-13.19
	16500 (Pk)		55.31	68.23	-12.92
	16500 (Av)		43.54	54	-10.46
5700	5700 (Pk)	Vertical	98.92	-	-
	5700 (Av)		88.07	-	-
	5460 (Pk)		43.07	74*	-30.93
	5460 (Av)		30.19	54*	-23.81
	11400 (Pk)		53.40	68.23	-14.83
	11400 (Av)		41.70	54	-12.30
	17100 (Pk)		56.42	68.23	-11.81
	17100 (Av)		44.47	54	-9.53
	5700 (Pk)	Horizontal	105.14	-	-
	5700 (Av)		95.45	-	-
	5460 (Pk)		43.12	74*	-30.88
	5460 (Av)		30.71	54*	-23.29
	11400 (Pk)		55.07	68.23	-13.16
	11400 (Av)		42.18	54	-11.82
	17100 (Pk)		56.83	68.23	-11.40
	17100 (Av)		44.51	54	-9.49

Note:

* :- Indicate restricted band frequency in 15.205

Pk: Peak Detector; Av : Average Detector

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 98 von 207

Page 98 of 207

Channel Frequency (MHz)	Measured Frequency (MHz)	Antenna Polarization	Emission (dBµV/m)	Limit (dBµV/m)	Margin (dB)
5720	5720 (Pk)	Vertical	107.07	-	-
	5720 (Av)		97.08	-	-
	5460 (Pk)		42.80	74*	-31.20
	5460 (Av)		30.32	54*	-23.68
	11440 (Pk)		54.55	68.23	-13.68
	11440 (Av)		42.46	54	-11.54
	17160 (Pk)		56.75	68.23	-11.48
	17160 (Av)		44.74	54	-9.26
	5720 (Pk)	Horizontal	112.13	-	-
	5720 (Av)		102.80	-	-
	5460 (Pk)		43.80	74*	-30.20
	5460 (Av)		31.26	54*	-22.74
	11440 (Pk)		64.28	68.23	-3.95
	11440 (Av)		47.99	54	-6.01
	17160 (Pk)		58.21	68.23	-10.02
	17160 (Av)		44.73	54	-9.27
5745	5715(Pk)	Vertical	64.63	78.20*	-13.57
	5725(Pk)		69.52	78.20*	-8.68
	5745 (Pk)		101.26	-	-
	5745 (Av)		90.20	-	-
	11490 (Pk)		54.90	68.23	-13.33
	11490 (Av)		42.63	54	-11.37
	17235 (Pk)		57.28	68.23	-10.95
	17235 (Av)		45.47	54	-8.53
	5715(Pk)	Horizontal	66.35	78.20*	-11.85
	5725(Pk)		70.24	78.20*	-7.96
	5745 (Pk)		102.83	-	-
	5745 (Av)		93.12	-	-
	11490 (Pk)		57.85	68.23	-10.38
	11490 (Av)		44.00	54	-10.00
	17235 (Pk)		57.99	68.23	-10.24
	17235 (Av)		45.47	54	-8.53
5825	5825 (Pk)	Vertical	107.05	-	-
	5825 (Av)		96.19	-	-
	5850 (Pk)		72.80	78.20*	-5.40
	5860 (Pk)		65.72	78.20*	-12.48
	11650 (Pk)		55.95	68.23	-12.28
	11650 (Av)		42.19	54	-11.81
	17475 (Pk)		59.44	68.23	-8.79
	17475 (Av)		47.32	54	-6.68
	5825 (Pk)	Horizontal	108.34	-	-
	5825 (Av)		98.17	-	-
	5850 (Pk)		75.39	78.20*	-2.81
	5860 (Pk)		67.77	78.20*	-10.43
	11650 (Pk)		60.48	68.23	-7.75
	11650 (Av)		46.27	54	-7.73
	17475 (Pk)		59.38	68.23	-8.85
	17475 (Av)		47.30	54	-6.70

Note:

* :- Indicate restricted band frequency in 15.205

Pk: Peak Detector; Av: Average Detector

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 99 von 207

Page 99 of 207

Modulation: 802.11ac _ VHT 20MHz

Data rate: MCS9

Channel Frequency (MHz)	Measured Frequency (MHz)	Antenna Polarization	Emission (dBμV/m)	Limit (dBμV/m)	Margin (dB)
5180	5180 (Pk)	Vertical	100.41	-	-
	5180 (Av)		84.39	-	-
	5150 (Pk)		58.84	74*	-15.16
	5150 (Av)		34.11	54*	-19.89
	10360 (Pk)		50.94	68.23	-17.29
	10360 (Av)		39.34	54	-14.66
	15540 (Pk)		53.45	68.23	-14.78
	15540 (Av)		41.40	54	-12.60
	5180 (Pk)	Horizontal	108.94	-	-
	5180 (Av)		93.09	-	-
	5150 (Pk)		64.93	74*	-9.07
	5150 (Av)		41.68	54*	-12.32
	10360 (Pk)		51.07	68.23	-17.16
	10360 (Av)		39.40	54	-14.60
	15540 (Pk)		53.73	68.23	-14.50
	15540 (Av)		41.44	54	-12.56
5240	5240 (Pk)	Vertical	102.03	-	-
	5240 (Av)		86.33	-	-
	5350 (Pk)		43.04	74*	-30.96
	5350 (Av)		31.05	54*	-22.95
	10480 (Pk)		52.04	68.23	-16.19
	10480 (Av)		39.97	54	-14.03
	15720 (Pk)		52.82	68.23	-15.41
	15720 (Av)		41.21	54	-12.79
	5240 (Pk)	Horizontal	111.05	-	-
	5240 (Av)		94.61	-	-
	5350 (Pk)		48.96	74*	-25.04
	5350 (Av)		35.54	54*	-18.46
	10480 (Pk)		51.92	68.23	-16.31
	10480 (Av)		40.08	54	-13.92
	15720 (Pk)		53.48	68.23	-14.75
	15720 (Av)		41.24	54	-12.76
5260	5260 (Pk)	Vertical	99.48	-	-
	5260 (Av)		83.22	-	-
	5350 (Pk)		44.48	74*	-29.52
	5350 (Av)		30.82	54*	-23.18
	10520 (Pk)		53.09	68.23	-15.14
	10520 (Av)		40.19	54	-13.81
	15780 (Pk)		53.04	68.23	-15.19
	15780 (Av)		41.03	54	-12.97
	5260 (Pk)	Horizontal	110.19	-	-
	5260 (Av)		93.04	-	-
	5350 (Pk)		50.84	74*	-23.16
	5350 (Av)		36.01	54*	-17.99
	10520 (Pk)		52.54	68.23	-15.69
	10520 (Av)		40.11	54	-13.89
	15780 (Pk)		52.73	68.23	-15.50
	15780 (Av)		41.07	54	-12.93

Note:

* :- Indicate restricted band frequency in 15.205

Pk: Peak Detector; Av: Average Detector

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 100 von 207

Page 100 of 207

Channel Frequency (MHz)	Measured Frequency (MHz)	Antenna Polarization	Emission (dBµV/m)	Limit (dBµV/m)	Margin (dB)
5320	5320 (Pk)	Vertical	97.81	-	-
	5320 (Av)		82.41	-	-
	5350 (Pk)		55.10	74*	-18.90
	5350 (Av)		32.36	54*	-21.64
	10640 (Pk)		51.97	68.23	-16.26
	10640 (Av)		40.19	54	-13.81
	15960 (Pk)		54.24	68.23	-13.99
	15960 (Av)		41.81	54	-12.19
	5320 (Pk)	Horizontal	107.03	-	-
	5320 (Av)		90.49	-	-
	5350 (Pk)		65.48	74*	-8.52
	5350 (Av)		36.67	54*	-17.33
	10640 (Pk)		53.00	68.23	-15.23
	10640 (Av)		40.15	54	-13.85
	15960 (Pk)		54.27	68.23	-13.96
	15960 (Av)		41.83	54	-12.17
5500	5500 (Pk)	Vertical	97.55	-	-
	5500 (Av)		82.33	-	-
	5460 (Pk)		44.41	74*	-29.59
	5460 (Av)		32.31	54*	-21.69
	11000 (Pk)		53.09	68.23	-15.14
	11000 (Av)		40.71	54	-13.29
	16500 (Pk)		55.59	68.23	-12.64
	16500 (Av)		43.52	54	-10.48
	5500 (Pk)	Horizontal	105.13	-	-
	5500 (Av)		89.04	-	-
	5460 (Pk)		51.59	74*	-22.41
	5460 (Av)		36.29	54*	-17.71
	11000 (Pk)		52.94	68.23	-15.29
	11000 (Av)		40.72	54	-13.28
	16500 (Pk)		55.54	68.23	-12.69
	16500 (Av)		43.50	54	-10.50
5700	5700 (Pk)	Vertical	97.05	-	-
	5700 (Av)		81.47	-	-
	5460 (Pk)		42.57	74*	-31.43
	5460 (Av)		29.97	54*	-24.03
	11400 (Pk)		53.98	68.23	-14.25
	11400 (Av)		41.67	54	-12.33
	17100 (Pk)		56.22	68.23	-12.01
	17100 (Av)		44.41	54	-9.59
	5700 (Pk)	Horizontal	103.62	-	-
	5700 (Av)		87.22	-	-
	5460 (Pk)		42.38	74*	-31.62
	5460 (Av)		30.25	54*	-23.75
	11400 (Pk)		53.76	68.23	-14.47
	11400 (Av)		41.86	54	-12.14
	17100 (Pk)		56.72	68.23	-11.51
	17100 (Av)		44.43	54	-9.57

Note:

* :- Indicate restricted band frequency in 15.205

Pk: Peak Detector; Av: Average Detector

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 101 von 207

Page 101 of 207

Channel Frequency (MHz)	Measured Frequency (MHz)	Antenna Polarization	Emission (dBµV/m)	Limit (dBµV/m)	Margin (dB)
5720	5720 (Pk)	Vertical	102.36	-	-
	5720 (Av)		86.19	-	-
	5460 (Pk)		43.26	74*	-30.74
	5460 (Av)		30.00	54*	-24.00
	11440 (Pk)		53.87	68.23	-14.36
	11440 (Av)		41.67	54	-12.33
	17160 (Pk)		56.42	68.23	-11.81
	17160 (Av)		44.70	54	-9.30
	5720 (Pk)	Horizontal	104.69	-	-
	5720 (Av)		88.40	-	-
	5460 (Pk)		42.83	74*	-31.17
	5460 (Av)		30.23	54*	-23.77
	11440 (Pk)		56.16	68.23	-12.07
	11440 (Av)		42.42	54	-11.58
	17160 (Pk)		56.65	68.23	-11.58
	17160 (Av)		44.65	54	-9.35
5745	5715(Pk)	Vertical	62.65	78.20*	-15.55
	5725(Pk)		69.52	78.20*	-8.68
	5745 (Pk)		102.34	-	-
	5745 (Av)		86.49	-	-
	11490 (Pk)		55.36	68.23	-12.87
	11490 (Av)		42.52	54	-11.48
	17235 (Pk)		57.78	68.23	-10.45
	17235 (Av)		45.48	54	-8.52
	5715(Pk)	Horizontal	66.70	78.20*	-11.50
	5725(Pk)		71.47	78.20*	-6.73
	5745 (Pk)		105.78	-	-
	5745 (Av)		89.89	-	-
	11490 (Pk)		57.24	68.23	-10.99
	11490 (Av)		44.00	54	-10.00
	17235 (Pk)		58.12	68.23	-10.11
	17235 (Av)		45.46	54	-8.54
5825	5825 (Pk)	Vertical	102.25	-	-
	5825 (Av)		85.95	-	-
	5850 (Pk)		63.33	78.20*	-14.87
	5860 (Pk)		56.34	78.20*	-21.86
	11650 (Pk)		55.72	68.23	-12.51
	11650 (Av)		42.55	54	-11.45
	17475 (Pk)		59.44	68.23	-8.79
	17475 (Av)		47.29	54	-6.71
	5825 (Pk)	Horizontal	108.77	-	-
	5825 (Av)		93.19	-	-
	5850 (Pk)		68.61	78.20*	-9.59
	5860 (Pk)		63.18	78.20*	-15.02
	11650 (Pk)		60.48	68.23	-7.75
	11650 (Av)		45.68	54	-8.32
	17475 (Pk)		59.92	68.23	-8.31
	17475 (Av)		47.29	54	-6.71

Note:

* :- Indicate restricted band frequency in 15.205

Pk: Peak Detector; Av: Average Detector

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 102 von 207

Page 102 of 207

Modulation: 802.11ax_ HE 20MHz

Data rate: MCS0

Channel Frequency (MHz)	Measured Frequency (MHz)	Antenna Polarization	Emission (dBμV/m)	Limit (dBμV/m)	Margin (dB)
5180	5180 (Pk)	Vertical	100.86	-	-
	5180 (Av)		87.89	-	-
	5150 (Pk)		56.95	74*	-17.05
	5150 (Av)		34.09	54*	-19.91
	10360 (Pk)		51.25	68.23	-16.98
	10360 (Av)		39.37	54	-14.63
	15540 (Pk)		53.65	68.23	-14.58
	15540 (Av)		41.39	54	-12.61
	5180 (Pk)	Horizontal	111.44	-	-
	5180 (Av)		99.24	-	-
	5150 (Pk)		67.93	74*	-6.07
	5150 (Av)		43.20	54*	-10.80
	10360 (Pk)		51.28	68.23	-16.95
	10360 (Av)		39.41	54	-14.59
	15540 (Pk)		53.11	68.23	-15.12
	15540 (Av)		41.43	54	-12.57
5240	5240 (Pk)	Vertical	106.56	-	-
	5240 (Av)		93.09	-	-
	5350 (Pk)		54.45	74*	-19.55
	5350 (Av)		40.63	54*	-13.37
	10480 (Pk)		51.87	68.23	-16.36
	10480 (Av)		40.33	54	-13.67
	15720 (Pk)		53.42	68.23	-14.81
	15720 (Av)		41.28	54	-12.72
	5240 (Pk)	Horizontal	117.71	-	-
	5240 (Av)		104.87	-	-
	5350 (Pk)		62.71	74*	-11.29
	5350 (Av)		49.13	54*	-4.87
	10480 (Pk)		51.76	68.23	-16.47
	10480 (Av)		39.49	54	-14.51
	15720 (Pk)		53.65	68.23	-14.58
	15720 (Av)		41.23	54	-12.77
5260	5260 (Pk)	Vertical	106.97	-	-
	5260 (Av)		93.30	-	-
	5350 (Pk)		55.76	74*	-18.24
	5350 (Av)		40.19	54*	-13.81
	10520 (Pk)		52.83	68.23	-15.40
	10520 (Av)		41.46	54	-12.54
	15780 (Pk)		53.16	68.23	-15.07
	15780 (Av)		41.04	54	-12.96
	5260 (Pk)	Horizontal	116.46	-	-
	5260 (Av)		102.84	-	-
	5350 (Pk)		63.01	74*	-10.99
	5350 (Av)		47.40	54*	-6.60
	10520 (Pk)		52.79	68.23	-15.44
	10520 (Av)		40.50	54	-13.50
	15780 (Pk)		53.18	68.23	-15.05
	15780 (Av)		41.01	54	-12.99

Note:

* :- Indicate restricted band frequency in 15.205

Pk: Peak Detector; Av: Average Detector

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 103 von 207

Page 103 of 207

Channel Frequency (MHz)	Measured Frequency (MHz)	Antenna Polarization	Emission (dBµV/m)	Limit (dBµV/m)	Margin (dB)
5320	5320 (Pk)	Vertical	102.13	-	-
	5320 (Av)		88.55	-	-
	5350 (Pk)		61.14	74*	-12.86
	5350 (Av)		33.91	54*	-20.09
	10640 (Pk)		52.33	68.23	-15.90
	10640 (Av)		40.17	54	-13.83
	15960 (Pk)		54.18	68.23	-14.05
	15960 (Av)		41.72	54	-12.28
	5320 (Pk)	Horizontal	110.72	-	-
	5320 (Av)		97.27	-	-
	5350 (Pk)		67.45	74*	-6.55
	5350 (Av)		40.17	54*	-13.83
	10640 (Pk)		52.66	68.23	-15.57
	10640 (Av)		40.23	54	-13.77
	15960 (Pk)		53.56	68.23	-14.67
	15960 (Av)		41.78	54	-12.22
5500	5500 (Pk)	Vertical	102.51	-	-
	5500 (Av)		89.09	-	-
	5460 (Pk)		54.24	74*	-19.76
	5460 (Av)		33.41	54*	-20.59
	11000 (Pk)		52.64	68.23	-15.59
	11000 (Av)		40.76	54	-13.24
	16500 (Pk)		55.28	68.23	-12.95
	16500 (Av)		43.48	54	-10.52
	5500 (Pk)	Horizontal	110.00	-	-
	5500 (Av)		97.33	-	-
	5460 (Pk)		64.22	74*	-9.78
	5460 (Av)		40.14	54*	-13.86
	11000 (Pk)		52.58	68.23	-15.65
	11000 (Av)		40.80	54	-13.20
	16500 (Pk)		55.26	68.23	-12.97
	16500 (Av)		43.51	54	-10.49
5700	5700 (Pk)	Vertical	100.66	-	-
	5700 (Av)		87.15	-	-
	5460 (Pk)		43.53	74*	-30.47
	5460 (Av)		30.00	54*	-24.00
	11400 (Pk)		53.69	68.23	-14.54
	11400 (Av)		41.68	54	-12.32
	17100 (Pk)		56.27	68.23	-11.96
	17100 (Av)		44.41	54	-9.59
	5700 (Pk)	Horizontal	105.67	-	-
	5700 (Av)		92.29	-	-
	5460 (Pk)		42.59	74*	-31.41
	5460 (Av)		30.38	54*	-23.62
	11400 (Pk)		53.90	68.23	-14.33
	11400 (Av)		42.15	54	-11.85
	17100 (Pk)		56.54	68.23	-11.69
	17100 (Av)		44.44	54	-9.56

Note:

* :- Indicate restricted band frequency in 15.205

Pk: Peak Detector; Av : Average Detector

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 104 von 207

Page 104 of 207

Channel Frequency (MHz)	Measured Frequency (MHz)	Antenna Polarization	Emission (dBµV/m)	Limit (dBµV/m)	Margin (dB)
5720	5720 (Pk)	Vertical	106.59	-	-
	5720 (Av)		93.49	-	-
	5460 (Pk)		42.66	74*	-31.34
	5460 (Av)		30.12	54*	-23.88
	11440 (Pk)		55.10	68.23	-13.13
	11440 (Av)		42.19	54	-11.81
	17160 (Pk)		56.42	68.23	-11.81
	17160 (Av)		44.70	54	-9.30
	5720 (Pk)	Horizontal	112.71	-	-
	5720 (Av)		99.37	-	-
	5460 (Pk)		43.26	74*	-30.74
	5460 (Av)		31.10	54*	-22.90
	11440 (Pk)		63.93	68.23	-4.30
	11440 (Av)		48.52	54	-5.48
	17160 (Pk)		56.65	68.23	-11.58
	17160 (Av)		44.65	54	-9.35
5745	5715(Pk)	Vertical	56.54	78.20*	-21.66
	5725(Pk)		60.70	78.20*	-17.50
	5745 (Pk)		101.57	-	-
	5745 (Av)		88.14	-	-
	11490 (Pk)		55.02	68.23	-13.21
	11490 (Av)		42.59	54	-11.41
	17235 (Pk)		57.06	68.23	-11.17
	17235 (Av)		45.45	54	-8.55
	5715(Pk)	Horizontal	61.84	78.20*	-16.36
	5725(Pk)		68.89	78.20*	-9.31
	5745 (Pk)		106.39	-	-
	5745 (Av)		92.97	-	-
	11490 (Pk)		58.89	68.23	-9.34
	11490 (Av)		45.12	54	-8.88
	17235 (Pk)		57.01	68.23	-11.22
	17235 (Av)		45.44	54	-8.56
5825	5825 (Pk)	Vertical	103.31	-	-
	5825 (Av)		89.97	-	-
	5850 (Pk)		63.23	78.20*	-14.97
	5860 (Pk)		57.55	78.20*	-20.65
	11650 (Pk)		55.41	68.23	-12.82
	11650 (Av)		42.45	54	-11.55
	17475 (Pk)		59.62	68.23	-8.61
	17475 (Av)		47.38	54	-6.62
	5825 (Pk)	Horizontal	109.98	-	-
	5825 (Av)		96.45	-	-
	5850 (Pk)		68.98	78.20*	-9.22
	5860 (Pk)		64.02	78.20*	-14.18
	11650 (Pk)		61.36	68.23	-6.87
	11650 (Av)		46.74	54	-7.26
	17475 (Pk)		59.96	68.23	-8.27
	17475 (Av)		47.27	54	-6.73

Note:

* :- Indicate restricted band frequency in 15.205

Pk: Peak Detector; Av: Average Detector

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 105 von 207

Page 105 of 207

Modulation: 802.11ax _ HE 20MHz

Data rate: MCS11

Channel Frequency (MHz)	Measured Frequency (MHz)	Antenna Polarization	Emission (dBµV/m)	Limit (dBµV/m)	Margin (dB)
5180	5180 (Pk)	Vertical	99.72	-	-
	5180 (Av)		81.90	-	-
	5150 (Pk)		53.68	74*	-20.32
	5150 (Av)		33.53	54*	-20.47
	10360 (Pk)		50.97	68.23	-17.26
	10360 (Av)		39.34	54	-14.66
	15540 (Pk)		53.48	68.23	-14.75
	15540 (Av)		41.37	54	-12.63
	5180 (Pk)	Horizontal	109.00	-	-
	5180 (Av)		90.20	-	-
	5150 (Pk)		64.85	74*	-9.15
	5150 (Av)		40.41	54*	-13.59
	10360 (Pk)		51.09	68.23	-17.14
	10360 (Av)		39.38	54	-14.62
	15540 (Pk)		53.04	68.23	-15.19
	15540 (Av)		41.37	54	-12.63
5240	5240 (Pk)	Vertical	99.53	-	-
	5240 (Av)		81.80	-	-
	5350 (Pk)		42.64	74*	-31.36
	5350 (Av)		30.47	54*	-23.53
	10480 (Pk)		51.93	68.23	-16.30
	10480 (Av)		39.95	54	-14.05
	15720 (Pk)		53.01	68.23	-15.22
	15720 (Av)		41.27	54	-12.73
	5240 (Pk)	Horizontal	108.23	-	-
	5240 (Av)		89.74	-	-
	5350 (Pk)		48.21	74*	-25.79
	5350 (Av)		33.29	54*	-20.71
	10480 (Pk)		52.04	68.23	-16.19
	10480 (Av)		39.97	54	-14.03
	15720 (Pk)		53.48	68.23	-14.75
	15720 (Av)		41.30	54	-12.70
5260	5260 (Pk)	Vertical	97.81	-	-
	5260 (Av)		78.79	-	-
	5350 (Pk)		42.94	74*	-31.06
	5350 (Av)		30.12	54*	-23.88
	10520 (Pk)		52.58	68.23	-15.65
	10520 (Av)		40.07	54	-13.93
	15780 (Pk)		52.61	68.23	-15.62
	15780 (Av)		41.06	54	-12.94
	5260 (Pk)	Horizontal	108.30	-	-
	5260 (Av)		89.74	-	-
	5350 (Pk)		48.84	74*	-25.16
	5350 (Av)		33.86	54*	-20.14
	10520 (Pk)		52.24	68.23	-15.99
	10520 (Av)		39.94	54	-14.06
	15780 (Pk)		53.25	68.23	-14.98
	15780 (Av)		40.91	54	-13.09

Note:

* :- Indicate restricted band frequency in 15.205

Pk: Peak Detector; Av: Average Detector

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 106 von 207

Page 106 of 207

Channel Frequency (MHz)	Measured Frequency (MHz)	Antenna Polarization	Emission (dBµV/m)	Limit (dBµV/m)	Margin (dB)
5320	5320 (Pk)	Vertical	99.52	-	-
	5320 (Av)		81.47	-	-
	5350 (Pk)		48.75	74*	-25.25
	5350 (Av)		31.60	54*	-22.40
	10640 (Pk)		51.72	68.23	-16.51
	10640 (Av)		39.94	54	-14.06
	15960 (Pk)		53.46	68.23	-14.77
	15960 (Av)		41.66	54	-12.34
	5320 (Pk)	Horizontal	107.65	-	-
	5320 (Av)		89.04	-	-
	5350 (Pk)		56.77	74*	-17.23
	5350 (Av)		35.91	54*	-18.09
	10640 (Pk)		51.50	68.23	-16.73
	10640 (Av)		40.05	54	-13.95
	15960 (Pk)		53.92	68.23	-14.31
	15960 (Av)		41.72	54	-12.28
5500	5500 (Pk)	Vertical	100.07	-	-
	5500 (Av)		82.25	-	-
	5460 (Pk)		45.62	74*	-28.38
	5460 (Av)		32.44	54*	-21.56
	11000 (Pk)		53.48	68.23	-14.75
	11000 (Av)		40.61	54	-13.39
	16500 (Pk)		55.85	68.23	-12.38
	16500 (Av)		43.33	54	-10.67
	5500 (Pk)	Horizontal	104.41	-	-
	5500 (Av)		85.90	-	-
	5460 (Pk)		52.28	74*	-21.72
	5460 (Av)		35.45	54*	-18.55
	11000 (Pk)		53.31	68.23	-14.92
	11000 (Av)		40.56	54	-13.44
	16500 (Pk)		56.01	68.23	-12.22
	16500 (Av)		43.29	54	-10.71
5700	5700 (Pk)	Vertical	98.17	-	-
	5700 (Av)		80.32	-	-
	5460 (Pk)		43.00	74*	-31.00
	5460 (Av)		29.92	54*	-24.08
	11400 (Pk)		53.90	68.23	-14.33
	11400 (Av)		41.45	54	-12.55
	17100 (Pk)		56.37	68.23	-11.86
	17100 (Av)		44.17	54	-9.83
	5700 (Pk)	Horizontal	105.66	-	-
	5700 (Av)		87.90	-	-
	5460 (Pk)		43.23	74*	-30.77
	5460 (Av)		30.25	54*	-23.75
	11400 (Pk)		53.60	68.23	-14.63
	11400 (Av)		41.53	54	-12.47
	17100 (Pk)		56.18	68.23	-12.05
	17100 (Av)		44.20	54	-9.80

Note:

* :- Indicate restricted band frequency in 15.205

Pk: Peak Detector; Av: Average Detector

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 107 von 207

Page 107 of 207

Channel Frequency (MHz)	Measured Frequency (MHz)	Antenna Polarization	Emission (dBµV/m)	Limit (dBµV/m)	Margin (dB)
5720	5720 (Pk)	Vertical	98.35	-	-
	5720 (Av)		80.11	-	-
	5460 (Pk)		43.00	74*	-31.00
	5460 (Av)		29.87	54*	-24.13
	11440 (Pk)		52.64	68.23	-15.59
	11440 (Av)		41.35	54	-12.65
	17160 (Pk)		56.95	68.23	-11.28
	17160 (Av)		44.25	54	-9.75
	5720 (Pk)	Horizontal	105.95	-	-
	5720 (Av)		87.71	-	-
	5460 (Pk)		42.76	74*	-31.24
	5460 (Av)		30.15	54*	-23.85
	11440 (Pk)		53.44	68.23	-14.79
	11440 (Av)		41.39	54	-12.61
	17160 (Pk)		56.20	68.23	-12.03
	17160 (Av)		44.28	54	-9.72
5745	5715(Pk)	Vertical	48.90	78.20*	-29.30
	5725(Pk)		57.48	78.20*	-20.72
	5745 (Pk)		98.79	-	-
	5745 (Av)		80.22	-	-
	11490 (Pk)		55.46	68.23	-12.77
	11490 (Av)		42.23	54	-11.77
	17235 (Pk)		57.89	68.23	-10.34
	17235 (Av)		45.09	54	-8.91
	5715(Pk)	Horizontal	57.65	78.20*	-20.55
	5725(Pk)		64.30	78.20*	-13.90
	5745 (Pk)		104.30	-	-
	5745 (Av)		85.65	-	-
	11490 (Pk)		54.58	68.23	-13.65
	11490 (Av)		42.24	54	-11.76
	17235 (Pk)		57.21	68.23	-11.02
	17235 (Av)		45.12	54	-8.88
5825	5825 (Pk)	Vertical	100.00	-	-
	5825 (Av)		81.15	-	-
	5850 (Pk)		54.25	78.20*	-23.95
	5860 (Pk)		46.91	78.20*	-31.29
	11650 (Pk)		53.42	68.23	-14.81
	11650 (Av)		41.41	54	-12.59
	17475 (Pk)		58.97	68.23	-9.26
	17475 (Av)		46.94	54	-7.06
	5825 (Pk)	Horizontal	106.25	-	-
	5825 (Av)		87.16	-	-
	5850 (Pk)		61.92	78.20*	-16.28
	5860 (Pk)		35.18	78.20*	-43.02
	11650 (Pk)		53.67	68.23	-14.56
	11650 (Av)		41.61	54	-12.39
	17475 (Pk)		59.36	68.23	-8.87
	17475 (Av)		46.93	54	-7.07

Note:

* :- Indicate restricted band frequency in 15.205

Pk: Peak Detector; Av: Average Detector

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 108 von 207

Page 108 of 207

Modulation: 802.11n _ HT 40MHz

Data rate: MCS0

Channel Frequency (MHz)	Measured Frequency (MHz)	Antenna Polarization	Emission (dBµV/m)	Limit (dBµV/m)	Margin (dB)
5190	5190 (Pk)	Vertical	95.29	-	-
	5190 (Av)		84.30	-	-
	5150 (Pk)		58.78	74*	-15.22
	5150 (Av)		38.20	54*	-15.80
	10380 (Pk)		52.17	68.23	-16.06
	10380 (Av)		39.64	54	-14.36
	15570 (Pk)		52.74	68.23	-15.49
	15570 (Av)		40.69	54	-13.31
	5190 (Pk)	Horizontal	104.52	-	-
	5190 (Av)		93.56	-	-
	5150 (Pk)		70.59	74*	-3.41
	5150 (Av)		49.60	54*	-4.40
	10380 (Pk)		51.65	68.23	-16.58
	10380 (Av)		39.64	54	-14.36
	15570 (Pk)		51.98	68.23	-16.25
	15570 (Av)		40.55	54	-13.45
5230	5230 (Pk)	Vertical	97.90	-	-
	5230 (Av)		86.63	-	-
	5350 (Pk)		49.95	74*	-24.05
	5350 (Av)		32.79	54*	-21.21
	10460 (Pk)		51.33	68.23	-16.90
	10460 (Av)		39.67	54	-14.33
	15690 (Pk)		52.73	68.23	-15.50
	15690 (Av)		40.23	54	-13.77
	5230 (Pk)	Horizontal	107.49	-	-
	5230 (Av)		96.37	-	-
	5350 (Pk)		57.05	74*	-16.95
	5350 (Av)		38.38	54*	-15.62
	10460 (Pk)		51.58	68.23	-16.65
	10460 (Av)		39.77	54	-14.23
	15690 (Pk)		52.84	68.23	-15.39
	15690 (Av)		40.27	54	-13.73
5270	5270 (Pk)	Vertical	99.65	-	-
	5270 (Av)		88.63	-	-
	5350 (Pk)		58.10	74*	-15.90
	5350 (Av)		40.49	54*	-13.51
	10540 (Pk)		51.73	68.23	-16.50
	10540 (Av)		39.87	54	-14.13
	15810 (Pk)		52.73	68.23	-15.50
	15810 (Av)		40.08	54	-13.92
	5270 (Pk)	Horizontal	109.33	-	-
	5270 (Av)		98.72	-	-
	5350 (Pk)		66.65	74*	-7.35
	5350 (Av)		48.04	54*	-5.96
	10540 (Pk)		51.85	68.23	-16.38
	10540 (Av)		39.91	54	-14.09
	15810 (Pk)		51.46	68.23	-16.77
	15810 (Av)		40.02	54	-13.98

Note:

* :- Indicate restricted band frequency in 15.205

Pk: Peak Detector; Av: Average Detector

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 109 von 207

Page 109 of 207

Channel Frequency (MHz)	Measured Frequency (MHz)	Antenna Polarization	Emission (dBµV/m)	Limit (dBµV/m)	Margin (dB)
5310	5310 (Pk)	Vertical	97.13	-	-
	5310 (Av)		86.48	-	-
	5350 (Pk)		57.99	74*	-16.01
	5350 (Av)		40.09	54*	-13.91
	10620 (Pk)		51.93	68.23	-16.30
	10620 (Av)		39.64	54	-14.36
	15930 (Pk)		53.16	68.23	-15.07
	15930 (Av)		40.66	54	-13.34
	5310 (Pk)	Horizontal	106.34	-	-
	5310 (Av)		95.01	-	-
	5350 (Pk)		69.37	74*	-4.63
	5350 (Av)		49.75	54*	-4.25
	10620 (Pk)		51.83	68.23	-16.40
	10620 (Av)		36.69	54	-17.31
	15930 (Pk)		52.88	68.23	-15.35
	15930 (Av)		40.63	54	-13.37
5510	5510 (Pk)	Vertical	94.21	-	-
	5510 (Av)		83.57	-	-
	5460 (Pk)		49.90	74*	-24.10
	5460 (Av)		33.58	54*	-20.42
	11020 (Pk)		52.21	68.23	-16.02
	11020 (Av)		40.52	54	-13.48
	16530 (Pk)		54.25	68.23	-13.98
	16530 (Av)		42.73	54	-11.27
	5510 (Pk)	Horizontal	100.27	-	-
	5510 (Av)		89.46	-	-
	5460 (Pk)		56.14	74*	-17.86
	5460 (Av)		38.51	54*	-15.49
	11020 (Pk)		53.12	68.23	-15.11
	11020 (Av)		40.46	54	-13.54
	16530 (Pk)		54.44	68.23	-13.79
	16530 (Av)		42.77	54	-11.23
5590	5590 (Pk)	Vertical	103.07	-	-
	5590 (Av)		91.71	-	-
	5460 (Pk)		53.02	74*	-20.98
	5460 (Av)		38.46	54*	-15.54
	11180 (Pk)		52.32	68.23	-15.91
	11180 (Av)		40.10	54	-13.90
	16770 (Pk)		56.49	68.23	-11.74
	16770 (Av)		43.59	54	-10.41
	5590 (Pk)	Horizontal	107.96	-	-
	5590 (Av)		96.92	-	-
	5460 (Pk)		60.49	74*	-13.51
	5460 (Av)		44.42	54*	-9.58
	11180 (Pk)		51.87	68.23	-16.36
	11180 (Av)		40.13	54	-13.87
	16770 (Pk)		54.99	68.23	-13.24
	16770 (Av)		43.53	54	-10.47

Note:

* :- Indicate restricted band frequency in 15.205

Pk: Peak Detector; Av: Average Detector

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 110 von 207

Page 110 of 207

Channel Frequency (MHz)	Measured Frequency (MHz)	Antenna Polarization	Emission (dBµV/m)	Limit (dBµV/m)	Margin (dB)
5670	5670 (Pk)	Vertical	96.89	-	-
	5670 (Av)		86.11	-	-
	5460 (Pk)		42.90	74*	-31.10
	5460 (Av)		30.40	54*	-23.60
	11340 (Pk)		53.22	68.23	-15.01
	11340 (Av)		40.54	54	-13.46
	17010 (Pk)		55.52	68.23	-12.71
	17010 (Av)		43.57	54	-10.43
	5670 (Pk)	Horizontal	102.56	-	-
	5670 (Av)		91.57	-	-
	5460 (Pk)		44.56	74*	-29.44
	5460 (Av)		31.54	54*	-22.46
	11340 (Pk)		52.75	68.23	-15.48
	11340 (Av)		40.47	54	-13.53
	17010 (Pk)		56.51	68.23	-11.72
	17010 (Av)		43.60	54	-10.40
5710	5710 (Pk)	Vertical	102.91	-	-
	5710 (Av)		91.68	-	-
	5460 (Pk)		43.44	74*	-30.56
	5460 (Av)		30.57	54*	-23.43
	11420 (Pk)		53.69	68.23	-14.54
	11420 (Av)		41.28	54	-12.72
	17130 (Pk)		56.09	68.23	-12.14
	17130 (Av)		43.97	54	-10.03
	5710 (Pk)	Horizontal	107.40	-	-
	5710 (Av)		96.28	-	-
	5460 (Pk)		43.83	74*	-30.17
	5460 (Av)		31.91	54*	-22.09
	11420 (Pk)		53.45	68.23	-14.78
	11420 (Av)		41.52	54	-12.48
	17130 (Pk)		55.65	68.23	-12.58
	17130 (Av)		43.94	54	-10.06
5755	5755 (Pk)	Vertical	97.84	-	-
	5755 (Av)		86.39	-	-
	5715(Pk)		62.88	78.20*	-15.32
	5725(Pk)		66.03	78.20*	-12.17
	11510 (Pk)		54.17	68.23	-14.06
	11510 (Av)		42.14	54	-11.86
	17265(Pk)		57.56	68.23	-10.67
	17265(Av)		44.42	54	-9.58
	5755 (Pk)	Horizontal	103.22	-	-
	5755 (Av)		92.49	-	-
	5715(Pk)		71.20	78.20*	-7.00
	5725(Pk)		72.84	78.20*	-5.36
	11510 (Pk)		54.90	68.23	-13.33
	11510 (Av)		42.23	54	-11.77
	17265(Pk)		56.28	68.23	-11.95
	17265(Av)		44.43	54	-9.57

Note:

* :- Indicate restricted band frequency in 15.205

Pk: Peak Detector; Av: Average Detector

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 111 von 207

Page 111 of 207

Channel Frequency (MHz)	Measured Frequency (MHz)	Antenna Polarization	Emission (dBµV/m)	Limit (dBµV/m)	Margin (dB)
5795	5795 (Pk)	Vertical	101.61	-	-
	5795 (Av)		90.18	-	-
	5850 (Pk)		62.33	78.20*	-15.87
	5860 (Pk)		58.08	78.20*	-20.12
	11590 (Pk)		54.47	68.23	-13.76
	11590 (Av)		41.72	54	-12.28
	17385 (Pk)		57.18	68.23	-11.05
	17385 (Av)		45.00	54	-9.00
	5795 (Pk)	Horizontal	106.56	-	-
	5795 (Av)		95.14	-	-
	5850 (Pk)		68.54	78.20*	-9.66
	5860 (Pk)		62.71	78.20*	-15.49
	11590 (Pk)		53.76	68.23	-14.47
	11590 (Av)		41.87	54	-12.13
	17385 (Pk)		56.36	68.23	-11.87
	17385 (Pk)		45.00	54	-9.00

Note:

* :- Indicate restricted band frequency in 15.205

Pk: Peak Detector; Av: Average Detector

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 112 von 207

Page 112 of 207

Modulation: 802.11n _ HT 40MHz

Data rate: MCS7

Channel Frequency (MHz)	Measured Frequency (MHz)	Antenna Polarization	Emission (dBµV/m)	Limit (dBµV/m)	Margin (dB)
5190	5190 (Pk)	Vertical	94.20	-	-
	5190 (Av)		76.88	-	-
	5150 (Pk)		52.55	74*	-21.45
	5150 (Av)		35.13	54*	-18.87
	10380 (Pk)		51.45	68.23	-16.78
	10380 (Av)		39.23	54	-14.77
	15570 (Pk)		52.64	68.23	-15.59
	15570 (Av)		40.38	54	-13.62
	5190 (Pk)	Horizontal	103.25	-	-
	5190 (Av)		86.40	-	-
	5150 (Pk)		67.62	74*	-6.38
	5150 (Av)		45.66	54*	-8.34
	10380 (Pk)		51.14	68.23	-17.09
	10380 (Av)		39.22	54	-14.78
	15570 (Pk)		52.74	68.23	-15.49
	15570 (Av)		40.37	54	-13.63
5230	5230 (Pk)	Vertical	98.07	-	-
	5230 (Av)		80.67	-	-
	5350 (Pk)		45.83	74*	-28.17
	5350 (Av)		31.41	54*	-22.59
	10460 (Pk)		51.99	68.23	-16.24
	10460 (Av)		39.37	54	-14.63
	15690 (Pk)		52.18	68.23	-16.05
	15690 (Av)		40.01	54	-13.99
	5230 (Pk)	Horizontal	107.64	-	-
	5230 (Av)		91.23	-	-
	5350 (Pk)		54.54	74*	-19.46
	5350 (Av)		36.50	54*	-17.50
	10460 (Pk)		52.10	68.23	-16.13
	10460 (Av)		39.40	54	-14.60
	15690 (Pk)		52.07	68.23	-16.16
	15690 (Av)		40.07	54	-13.93
5270	5270 (Pk)	Vertical	97.59	-	-
	5270 (Av)		80.34	-	-
	5350 (Pk)		52.04	74*	-21.96
	5350 (Av)		32.13	54*	-21.87
	10540 (Pk)		51.89	68.23	-16.34
	10540 (Av)		39.58	54	-14.42
	15810 (Pk)		52.20	68.23	-16.03
	15810 (Av)		39.91	54	-14.09
	5270 (Pk)	Horizontal	106.67	-	-
	5270 (Av)		89.94	-	-
	5350 (Pk)		60.79	74*	-13.21
	5350 (Av)		37.08	54*	-16.92
	10540 (Pk)		51.72	68.23	-16.51
	10540 (Av)		39.61	54	-14.39
	15810 (Pk)		52.06	68.23	-16.17
	15810 (Av)		39.89	54	-14.11

Note:

* :- Indicate restricted band frequency in 15.205

Pk: Peak Detector; Av: Average Detector

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 113 von 207

Page 113 of 207

Channel Frequency (MHz)	Measured Frequency (MHz)	Antenna Polarization	Emission (dBµV/m)	Limit (dBµV/m)	Margin (dB)
5310	5310 (Pk)	Vertical	96.60	-	-
	5310 (Av)		79.24	-	-
	5350 (Pk)		58.72	74*	-15.28
	5350 (Av)		37.23	54*	-16.77
	10620 (Pk)		50.83	68.23	-17.40
	10620 (Av)		39.51	54	-14.49
	15930 (Pk)		52.80	68.23	-15.43
	15930 (Av)		40.57	54	-13.43
	5310 (Pk)	Horizontal	105.27	-	-
	5310 (Av)		88.29	-	-
	5350 (Pk)		69.11	74*	-4.89
	5350 (Av)		45.62	54*	-8.38
	10620 (Pk)		52.50	68.23	-15.73
	10620 (Av)		39.49	54	-14.51
	15930 (Pk)		52.79	68.23	-15.44
	15930 (Av)		40.58	54	-13.42
5510	5510 (Pk)	Vertical	93.52	-	-
	5510 (Av)		76.52	-	-
	5460 (Pk)		47.65	74*	-26.35
	5460 (Av)		32.43	54*	-21.57
	11020 (Pk)		53.05	68.23	-15.18
	11020 (Av)		40.33	54	-13.67
	16530 (Pk)		54.42	68.23	-13.81
	16530 (Av)		42.66	54	-11.34
	5510 (Pk)	Horizontal	99.37	-	-
	5510 (Av)		82.43	-	-
	5460 (Pk)		55.43	74*	-18.57
	5460 (Av)		36.07	54*	-17.93
	11020 (Pk)		52.16	68.23	-16.07
	11020 (Av)		40.36	54	-13.64
	16530 (Pk)		54.60	68.23	-13.63
	16530 (Av)		42.62	54	-11.38
5590	5590 (Pk)	Vertical	98.58	-	-
	5590 (Av)		81.33	-	-
	5460 (Pk)		43.65	74*	-30.35
	5460 (Av)		30.76	54*	-23.24
	11180 (Pk)		52.12	68.23	-16.11
	11180 (Av)		39.96	54	-14.04
	16770 (Pk)		56.51	68.23	-11.72
	16770 (Av)		43.42	54	-10.58
	5590 (Pk)	Horizontal	104.67	-	-
	5590 (Av)		87.39	-	-
	5460 (Pk)		49.23	74*	-24.77
	5460 (Av)		32.77	54*	-21.23
	11180 (Pk)		52.29	68.23	-15.94
	11180 (Av)		40.00	54	-14.00
	16770 (Pk)		55.66	68.23	-12.57
	16770 (Av)		43.46	54	-10.54

Note:

* :- Indicate restricted band frequency in 15.205

Pk: Peak Detector; Av: Average Detector

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 114 von 207

Page 114 of 207

Channel Frequency (MHz)	Measured Frequency (MHz)	Antenna Polarization	Emission (dBμV/m)	Limit (dBμV/m)	Margin (dB)
5670	5670 (Pk)	Vertical	96.62	-	-
	5670 (Av)		79.68	-	-
	5460 (Pk)		43.38	74*	-30.62
	5460 (Av)		30.24	54*	-23.76
	11340 (Pk)		53.25	68.23	-14.98
	11340 (Av)		40.44	54	-13.56
	17010 (Pk)		54.99	68.23	-13.24
	17010 (Av)		43.57	54	-10.43
	5670 (Pk)	Horizontal	102.21	-	-
	5670 (Av)		85.02	-	-
	5460 (Pk)		43.72	74*	-30.28
	5460 (Av)		30.80	54*	-23.20
	11340 (Pk)		52.30	68.23	-15.93
	11340 (Av)		40.42	54	-13.58
	17010 (Pk)		56.40	68.23	-11.83
	17010 (Av)		43.54	54	-10.46
5710	5710 (Pk)	Vertical	98.65	-	-
	5710 (Av)		81.78	-	-
	5460 (Pk)		42.58	74*	-31.42
	5460 (Av)		30.22	54*	-23.78
	11420 (Pk)		53.52	68.23	-14.71
	11420 (Av)		41.11	54	-12.89
	17130 (Pk)		55.76	68.23	-12.47
	17130 (Av)		43.97	54	-10.03
	5710 (Pk)	Horizontal	103.76	-	-
	5710 (Av)		86.69	-	-
	5460 (Pk)		43.17	74*	-30.83
	5460 (Av)		30.67	54*	-23.33
	11420 (Pk)		53.76	68.23	-14.47
	11420 (Av)		41.08	54	-12.92
	17130 (Pk)		55.96	68.23	-12.27
	17130 (Av)		43.89	54	-10.11
5755	5755 (Pk)	Vertical	98.29	-	-
	5755 (Av)		80.66	-	-
	5715(Pk)		62.37	78.20*	-15.83
	5725(Pk)		62.23	78.20*	-15.97
	11510 (Pk)		53.99	68.23	-14.24
	11510 (Av)		42.10	54	-11.9
	17265(Pk)		55.82	68.23	-12.41
	17265(Av)		44.38	54	-9.62
	5755 (Pk)	Horizontal	103.36	-	-
	5755 (Av)		85.92	-	-
	5715(Pk)		69.64	78.20*	-8.56
	5725(Pk)		71.22	78.20*	-6.98
	11510 (Pk)		54.96	68.23	-13.27
	11510 (Av)		42.19	54	-11.81
	17265(Pk)		56.54	68.23	-11.69
	17265(Av)		44.38	54	-9.62

Note:

* :- Indicate restricted band frequency in 15.205

Pk: Peak Detector; Av: Average Detector

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 115 von 207

Page 115 of 207

Channel Frequency (MHz)	Measured Frequency (MHz)	Antenna Polarization	Emission (dBµV/m)	Limit (dBµV/m)	Margin (dB)
5795	5795 (Pk)	Vertical	97.99	-	-
	5795 (Av)		80.43	-	-
	5850 (Pk)		56.57	78.20*	-21.63
	5860 (Pk)		53.32	78.20*	-24.88
	11590 (Pk)		53.03	68.23	-15.20
	11590 (Av)		41.49	54	-12.51
	17385 (Pk)		56.72	68.23	-11.51
	17385 (Av)		44.96	54	-9.04
	5795 (Pk)	Horizontal	104.46	-	-
	5795 (Av)		87.59	-	-
	5850 (Pk)		62.33	78.20*	-15.87
	5860 (Pk)		57.24	78.20*	-20.96
	11590 (Pk)		54.12	68.23	-14.11
	11590 (Av)		41.53	54	-12.47
	17385 (Pk)		56.45	68.23	-11.78
	17385 (Pk)		44.98	54	-9.02

Note:

* :- Indicate restricted band frequency in 15.205

Pk: Peak Detector; Av: Average Detector

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 116 von 207

Page 116 of 207

Modulation: 802.11ac _ VHT 40MHz

Data rate: MCS0

Channel Frequency (MHz)	Measured Frequency (MHz)	Antenna Polarization	Emission (dBµV/m)	Limit (dBµV/m)	Margin (dB)
5190	5190 (Pk)	Vertical	94.47	-	-
	5190 (Av)		83.58	-	-
	5150 (Pk)		55.50	74*	-18.50
	5150 (Av)		38.01	54*	-15.99
	10380 (Pk)		51.91	68.23	-16.32
	10380 (Av)		39.26	54	-14.74
	15570 (Pk)		53.21	68.23	-15.02
	15570 (Av)		40.38	54	-13.62
	5190 (Pk)	Horizontal	105.20	-	-
	5190 (Av)		93.77	-	-
	5150 (Pk)		66.79	74*	-7.21
	5150 (Av)		49.24	54*	-4.76
	10380 (Pk)		51.08	68.23	-17.15
	10380 (Av)		39.26	54	-14.74
	15570 (Pk)		52.40	68.23	-15.83
	15570 (Av)		40.27	54	-13.73
5230	5230 (Pk)	Vertical	99.49	-	-
	5230 (Av)		88.07	-	-
	5350 (Pk)		50.83	74*	-23.17
	5350 (Av)		34.49	54*	-19.51
	10460 (Pk)		52.54	68.23	-15.69
	10460 (Av)		39.42	54	-14.58
	15690 (Pk)		51.82	68.23	-16.41
	15690 (Av)		40.04	54	-13.96
	5230 (Pk)	Horizontal	108.23	-	-
	5230 (Av)		97.54	-	-
	5350 (Pk)		61.14	74*	-12.86
	5350 (Av)		43.49	54*	-10.51
	10460 (Pk)		52.00	68.23	-16.23
	10460 (Av)		39.41	54	-14.59
	15690 (Pk)		52.70	68.23	-15.53
	15690 (Av)		40.06	54	-13.94
5270	5270 (Pk)	Vertical	100.90	-	-
	5270 (Av)		89.48	-	-
	5350 (Pk)		58.86	74*	-15.14
	5350 (Av)		42.00	54*	-12.00
	10540 (Pk)		51.32	68.23	-16.91
	10540 (Av)		39.62	54	-14.38
	15810 (Pk)		51.42	68.23	-16.81
	15810 (Av)		39.93	54	-14.07
	5270 (Pk)	Horizontal	108.89	-	-
	5270 (Av)		97.97	-	-
	5350 (Pk)		67.72	74*	-6.28
	5350 (Av)		49.08	54*	-4.92
	10540 (Pk)		52.24	68.23	-15.99
	10540 (Av)		39.61	54	-14.39
	15810 (Pk)		51.60	68.23	-16.63
	15810 (Av)		39.86	54	-14.14

Note:

* :- Indicate restricted band frequency in 15.205

Pk: Peak Detector; Av: Average Detector

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 117 von 207

Page 117 of 207

Channel Frequency (MHz)	Measured Frequency (MHz)	Antenna Polarization	Emission (dBµV/m)	Limit (dBµV/m)	Margin (dB)
5310	5310 (Pk)	Vertical	97.12	-	-
	5310 (Av)		86.32	-	-
	5350 (Pk)		57.26	74*	-16.74
	5350 (Av)		40.21	54*	-13.79
	10620 (Pk)		50.34	68.23	-17.89
	10620 (Av)		39.47	54	-14.53
	15930 (Pk)		52.43	68.23	-15.80
	15930 (Av)		40.51	54	-13.49
	5310 (Pk)	Horizontal	105.91	-	-
	5310 (Av)		95.21	-	-
	5350 (Pk)		68.85	74*	-5.15
	5350 (Av)		49.78	54*	-4.22
	10620 (Pk)		51.00	68.23	-17.23
	10620 (Av)		39.50	54	-14.50
	15930 (Pk)		52.09	68.23	-16.14
	15930 (Av)		40.51	54	-13.49
5510	5510 (Pk)	Vertical	94.41	-	-
	5510 (Av)		83.28	-	-
	5460 (Pk)		48.45	74*	-25.55
	5460 (Av)		33.12	54*	-20.88
	11020 (Pk)		52.52	68.23	-15.71
	11020 (Av)		40.36	54	-13.64
	16530 (Pk)		54.49	68.23	-13.74
	16530 (Av)		42.67	54	-11.33
	5510 (Pk)	Horizontal	101.19	-	-
	5510 (Av)		89.95	-	-
	5460 (Pk)		57.54	74*	-16.46
	5460 (Av)		38.94	54*	-15.06
	11020 (Pk)		52.25	68.23	-15.98
	11020 (Av)		40.35	54	-13.65
	16530 (Pk)		55.33	68.23	-12.90
	16530 (Av)		42.64	54	-11.36
5590	5590 (Pk)	Vertical	101.36	-	-
	5590 (Av)		90.67	-	-
	5460 (Pk)		49.40	74*	-24.60
	5460 (Av)		34.38	54*	-19.62
	11180 (Pk)		52.43	68.23	-15.80
	11180 (Av)		39.96	54	-14.04
	16770 (Pk)		55.27	68.23	-12.96
	16770 (Av)		43.45	54	-10.55
	5590 (Pk)	Horizontal	106.99	-	-
	5590 (Av)		96.21	-	-
	5460 (Pk)		55.04	74*	-18.96
	5460 (Av)		39.72	54*	-14.28
	11180 (Pk)		52.17	68.23	-16.06
	11180 (Av)		39.97	54	-14.03
	16770 (Pk)		55.06	68.23	-13.17
	16770 (Av)		43.49	54	-10.51

Note:

* :- Indicate restricted band frequency in 15.205

Pk: Peak Detector; Av: Average Detector

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 118 von 207

Page 118 of 207

Channel Frequency (MHz)	Measured Frequency (MHz)	Antenna Polarization	Emission (dBµV/m)	Limit (dBµV/m)	Margin (dB)
5670	5670 (Pk)	Vertical	97.47	-	-
	5670 (Av)		86.46	-	-
	5460 (Pk)		43.40	74*	-30.60
	5460 (Av)		30.44	54*	-23.56
	11340 (Pk)		52.38	68.23	-15.85
	11340 (Av)		40.44	54	-13.56
	17010 (Pk)		55.02	68.23	-13.21
	17010 (Av)		43.56	54	-10.44
	5670 (Pk)	Horizontal	102.92	-	-
	5670 (Av)		91.80	-	-
	5460 (Pk)		44.16	74*	-29.84
	5460 (Av)		31.53	54*	-22.47
	11340 (Pk)		52.55	68.23	-15.68
	11340 (Av)		40.49	54	-13.51
	17010 (Pk)		55.21	68.23	-13.02
	17010 (Av)		43.53	54	-10.47
5710	5710 (Pk)	Vertical	101.77	-	-
	5710 (Av)		90.79	-	-
	5460 (Pk)		42.67	74*	-31.33
	5460 (Av)		30.46	54*	-23.54
	11420 (Pk)		52.96	68.23	-15.27
	11420 (Av)		41.24	54	-12.76
	17130 (Pk)		56.13	68.23	-12.10
	17130 (Av)		43.93	54	-10.07
	5710 (Pk)	Horizontal	106.79	-	-
	5710 (Av)		95.13	-	-
	5460 (Pk)		44.15	74*	-29.85
	5460 (Av)		31.68	54*	-22.32
	11420 (Pk)		53.77	68.23	-14.46
	11420 (Av)		41.31	54	-12.69
	17130 (Pk)		55.19	68.23	-13.04
	17130 (Av)		43.55	54	-10.45
5755	5755 (Pk)	Vertical	99.01	-	-
	5755 (Av)		87.63	-	-
	5715(Pk)		66.16	78.20*	-12.04
	5725(Pk)		64.46	78.20*	-13.74
	11510 (Pk)		54.60	68.23	-13.63
	11510 (Av)		42.21	54	-11.79
	17265(Pk)		56.39	68.23	-11.84
	17265(Av)		44.41	54	-9.59
	5755 (Pk)	Horizontal	104.86	-	-
	5755 (Av)		93.51	-	-
	5715(Pk)		73.52	78.20*	-4.68
	5725(Pk)		75.03	78.20*	-3.17
	11510 (Pk)		53.91	68.23	-14.32
	11510 (Av)		42.22	54	-11.78
	17265(Pk)		55.87	68.23	-12.36
	17265(Av)		44.33	54	-9.67

Note:

* :- Indicate restricted band frequency in 15.205

Pk: Peak Detector; Av: Average Detector

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 119 von 207

Page 119 of 207

Channel Frequency (MHz)	Measured Frequency (MHz)	Antenna Polarization	Emission (dBµV/m)	Limit (dBµV/m)	Margin (dB)
5795	5795 (Pk)	Vertical	100.67	-	-
	5795 (Av)		89.15	-	-
	5850 (Pk)		55.95	78.20*	-22.25
	5860 (Pk)		54.21	78.20*	-23.99
	11590 (Pk)		53.18	68.23	-15.05
	11590 (Av)		41.56	54	-12.44
	17385 (Pk)		57.42	68.23	-10.81
	17385 (Av)		44.96	54	-9.04
	5795 (Pk)	Horizontal	105.74	-	-
	5795 (Av)		93.98	-	-
	5850 (Pk)		61.31	78.20*	-16.89
	5860 (Pk)		59.17	78.20*	-19.03
	11590 (Pk)		53.74	68.23	-14.49
	11590 (Av)		41.71	54	-12.29
	17385 (Pk)		57.30	68.23	-10.93
	17385 (Pk)		45.01	54	-8.99

Note:

* :- Indicate restricted band frequency in 15.205

Pk: Peak Detector; Av: Average Detector

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 120 von 207

Page 120 of 207

Modulation: 802.11ac _ VHT 40MHz

Data rate: MCS9

Channel Frequency (MHz)	Measured Frequency (MHz)	Antenna Polarization	Emission (dBµV/m)	Limit (dBµV/m)	Margin (dB)
5190	5190 (Pk)	Vertical	94.38	-	-
	5190 (Av)		76.42	-	-
	5150 (Pk)		53.34	74*	-20.66
	5150 (Av)		35.20	54*	-18.80
	10380 (Pk)		51.78	68.23	-16.45
	10380 (Av)		39.18	54	-14.82
	15570 (Pk)		51.83	68.23	-16.40
	15570 (Av)		40.27	54	-13.73
	5190 (Pk)	Horizontal	104.55	-	-
	5190 (Av)		86.98	-	-
	5150 (Pk)		65.99	74*	-8.01
	5150 (Av)		45.76	54*	-8.24
	10380 (Pk)		50.67	68.23	-17.56
	10380 (Av)		39.21	54	-14.79
	15570 (Pk)		52.51	68.23	-15.72
	15570 (Av)		40.33	54	-13.67
5230	5230 (Pk)	Vertical	97.40	-	-
	5230 (Av)		79.27	-	-
	5350 (Pk)		45.22	74*	-28.78
	5350 (Av)		31.18	54*	-22.82
	10460 (Pk)		51.27	68.23	-16.96
	10460 (Av)		39.35	54	-14.65
	15690 (Pk)		51.34	68.23	-16.89
	15690 (Av)		39.97	54	-14.03
	5230 (Pk)	Horizontal	107.33	-	-
	5230 (Av)		89.57	-	-
	5350 (Pk)		51.88	74*	-22.12
	5350 (Av)		35.04	54*	-18.96
	10460 (Pk)		51.39	68.23	-16.84
	10460 (Av)		39.37	54	-14.63
	15690 (Pk)		51.51	68.23	-16.72
	15690 (Av)		39.95	54	-14.05
5270	5270 (Pk)	Vertical	96.68	-	-
	5270 (Av)		78.85	-	-
	5350 (Pk)		51.64	74*	-22.36
	5350 (Av)		31.47	54*	-22.53
	10540 (Pk)		52.21	68.23	-16.02
	10540 (Av)		39.58	54	-14.42
	15810 (Pk)		51.74	68.23	-16.49
	15810 (Av)		39.58	54	-14.42
	5270 (Pk)	Horizontal	106.32	-	-
	5270 (Av)		88.63	-	-
	5350 (Pk)		59.00	74*	-15.00
	5350 (Av)		36.05	54*	-17.95
	10540 (Pk)		50.74	68.23	-17.49
	10540 (Av)		39.59	54	-14.41
	15810 (Pk)		51.15	68.23	-17.08
	15810 (Av)		39.81	54	-14.19

Note:

* :- Indicate restricted band frequency in 15.205

Pk: Peak Detector; Av: Average Detector

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 121 von 207

Page 121 of 207

Channel Frequency (MHz)	Measured Frequency (MHz)	Antenna Polarization	Emission (dBµV/m)	Limit (dBµV/m)	Margin (dB)
5310	5310 (Pk)	Vertical	96.98	-	-
	5310 (Av)		78.73	-	-
	5350 (Pk)		57.80	74*	-16.20
	5350 (Av)		36.44	54*	-17.56
	10620 (Pk)		50.64	68.23	-17.59
	10620 (Av)		39.40	54	-14.60
	15930 (Pk)		52.24	68.23	-15.99
	15930 (Av)		40.57	54	-13.43
	5310 (Pk)	Horizontal	105.89	-	-
	5310 (Av)		88.18	-	-
	5350 (Pk)		66.63	74*	-7.37
	5350 (Av)		45.06	54*	-8.94
	10620 (Pk)		51.85	68.23	-16.38
	10620 (Av)		39.48	54	-14.52
	15930 (Pk)		51.98	68.23	-16.25
	15930 (Av)		40.55	54	-13.45
5510	5510 (Pk)	Vertical	93.60	-	-
	5510 (Av)		75.65	-	-
	5460 (Pk)		47.33	74*	-26.67
	5460 (Av)		32.14	54*	-21.86
	11020 (Pk)		52.36	68.23	-15.87
	11020 (Av)		40.35	54	-13.65
	16530 (Pk)		54.34	68.23	-13.89
	16530 (Av)		42.65	54	-11.35
	5510 (Pk)	Horizontal	100.41	-	-
	5510 (Av)		82.77	-	-
	5460 (Pk)		55.24	74*	-18.76
	5460 (Av)		35.84	54*	-18.16
	11020 (Pk)		52.71	68.23	-15.52
	11020 (Av)		40.35	54	-13.65
	16530 (Pk)		55.27	68.23	-12.96
	16530 (Av)		42.69	54	-11.31
5590	5590 (Pk)	Vertical	97.41	-	-
	5590 (Av)		79.92	-	-
	5460 (Pk)		43.28	74*	-30.72
	5460 (Av)		30.68	54*	-23.32
	11180 (Pk)		51.67	68.23	-16.56
	11180 (Av)		39.89	54	-14.11
	16770 (Pk)		54.78	68.23	-13.45
	16770 (Av)		43.40	54	-10.60
	5590 (Pk)	Horizontal	103.79	-	-
	5590 (Av)		86.06	-	-
	5460 (Pk)		48.02	74*	-25.98
	5460 (Av)		32.31	54*	-21.69
	11180 (Pk)		51.38	68.23	-16.85
	11180 (Av)		39.97	54	-14.03
	16770 (Pk)		55.16	68.23	-13.07
	16770 (Av)		43.41	54	-10.59

Note:

* :- Indicate restricted band frequency in 15.205

Pk: Peak Detector; Av: Average Detector

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 122 von 207

Page 122 of 207

Channel Frequency (MHz)	Measured Frequency (MHz)	Antenna Polarization	Emission (dBµV/m)	Limit (dBµV/m)	Margin (dB)
5670	5670 (Pk)	Vertical	97.64	-	-
	5670 (Av)		79.61	-	-
	5460 (Pk)		43.36	74*	-30.64
	5460 (Av)		30.27	54*	-23.73
	11340 (Pk)		51.91	68.23	-16.32
	11340 (Av)		40.42	54	-13.58
	17010 (Pk)		55.06	68.23	-13.17
	17010 (Av)		43.58	54	-10.42
	5670 (Pk)	Horizontal	102.32	-	-
	5670 (Av)		84.79	-	-
	5460 (Pk)		43.92	74*	-30.08
	5460 (Av)		30.83	54*	-23.17
	11340 (Pk)		51.93	68.23	-16.30
	11340 (Av)		40.40	54	-13.60
	17010 (Pk)		55.79	68.23	-12.44
	17010 (Av)		43.55	54	-10.45
5710	5710 (Pk)	Vertical	97.58	-	-
	5710 (Av)		79.31	-	-
	5460 (Pk)		42.65	74*	-31.35
	5460 (Av)		30.22	54*	-23.78
	11420 (Pk)		52.35	68.23	-15.88
	11420 (Av)		41.11	54	-12.89
	17130 (Pk)		55.93	68.23	-12.30
	17130 (Av)		43.87	54	-10.13
	5710 (Pk)	Horizontal	103.50	-	-
	5710 (Av)		85.84	-	-
	5460 (Pk)		43.44	74*	-30.56
	5460 (Av)		30.65	54*	-23.35
	11420 (Pk)		53.54	68.23	-14.69
	11420 (Av)		41.20	54	-12.80
	17130 (Pk)		55.19	68.23	-13.04
	17130 (Av)		43.83	54	-10.17
5755	5755 (Pk)	Vertical	98.96	-	-
	5755 (Av)		80.19	-	-
	5715(Pk)		60.66	78.20*	-17.54
	5725(Pk)		63.01	78.20*	-15.19
	11510 (Pk)		54.86	68.23	-13.37
	11510 (Av)		42.15	54	-11.85
	17265(Pk)		56.54	68.23	-11.69
	17265(Av)		44.41	54	-9.59
	5755 (Pk)	Horizontal	103.01	-	-
	5755 (Av)		85.30	-	-
	5715(Pk)		67.36	78.20*	-10.84
	5725(Pk)		70.32	78.20*	-7.88
	11510 (Pk)		54.61	68.23	-13.62
	11510 (Av)		42.29	54	-11.71
	17265(Pk)		57.21	68.23	-11.02
	17265(Av)		44.38	54	-9.62

Note:

* :- Indicate restricted band frequency in 15.205

Pk: Peak Detector; Av: Average Detector

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 123 von 207

Page 123 of 207

Channel Frequency (MHz)	Measured Frequency (MHz)	Antenna Polarization	Emission (dBµV/m)	Limit (dBµV/m)	Margin (dB)
5795	5795 (Pk)	Vertical	99.43	-	-
	5795 (Av)		80.77	-	-
	5850 (Pk)		54.02	78.20*	-24.18
	5860 (Pk)		50.79	78.20*	-27.41
	11590 (Pk)		53.71	68.23	-14.52
	11590 (Av)		41.52	54	-12.48
	17385 (Pk)		57.33	68.23	-10.90
	17385 (Av)		44.92	54	-9.08
	5795 (Pk)	Horizontal	103.78	-	-
	5795 (Av)		86.18	-	-
	5850 (Pk)		58.44	78.20*	-19.76
	5860 (Pk)		56.87	78.20*	-21.33
	11590 (Pk)		53.87	68.23	-14.36
	11590 (Av)		41.53	54	-12.47
	17385 (Pk)		57.75	68.23	-10.48
	17385 (Pk)		45.00	54	-9.00

Note:

* :- Indicate restricted band frequency in 15.205

Pk: Peak Detector; Av: Average Detector

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 124 von 207

Page 124 of 207

Modulation: 802.11ax _ HE 40MHz

Data rate: MCS0

Channel Frequency (MHz)	Measured Frequency (MHz)	Antenna Polarization	Emission (dBµV/m)	Limit (dBµV/m)	Margin (dB)
5190	5190 (Pk)	Vertical	96.38	-	-
	5190 (Av)		82.27	-	-
	5150 (Pk)		56.52	74*	-17.48
	5150 (Av)		39.86	54*	-14.14
	10380 (Pk)		50.90	68.23	-17.33
	10380 (Av)		39.44	54	-14.56
	15570 (Pk)		52.33	68.23	-15.90
	15570 (Av)		40.41	54	-13.59
	5190 (Pk)	Horizontal	106.75	-	-
	5190 (Av)		92.88	-	-
	5150 (Pk)		69.92	74*	-4.08
	5150 (Av)		52.22	54*	-1.78
	10380 (Pk)		51.12	68.23	-17.11
	10380 (Av)		39.55	54	-14.45
	15570 (Pk)		53.12	68.23	-15.11
	15570 (Av)		40.44	54	-13.56
5230	5230 (Pk)	Vertical	100.42	-	-
	5230 (Av)		86.20	-	-
	5350 (Pk)		55.41	74*	-18.59
	5350 (Av)		38.69	54*	-15.31
	10460 (Pk)		51.71	68.23	-16.52
	10460 (Av)		39.47	54	-14.53
	15690 (Pk)		57.67	68.23	-10.56
	15690 (Av)		40.21	54	-13.79
	5230 (Pk)	Horizontal	111.12	-	-
	5230 (Av)		96.36	-	-
	5350 (Pk)		63.69	74*	-10.31
	5350 (Av)		45.73	54*	-8.27
	10460 (Pk)		52.45	68.23	-15.78
	10460 (Av)		39.62	54	-14.38
	15690 (Pk)		52.28	68.23	-15.95
	15690 (Av)		40.22	54	-13.78
5270	5270 (Pk)	Vertical	102.26	-	-
	5270 (Av)		87.56	-	-
	5350 (Pk)		58.32	74*	-15.68
	5350 (Av)		42.05	54*	-11.95
	10540 (Pk)		51.58	68.23	-16.65
	10540 (Av)		39.78	54	-14.22
	15810 (Pk)		51.14	68.23	-17.09
	15810 (Av)		39.98	54	-14.02
	5270 (Pk)	Horizontal	110.95	-	-
	5270 (Av)		96.91	-	-
	5350 (Pk)		68.82	74*	-5.18
	5350 (Av)		49.76	54*	-4.24
	10540 (Pk)		51.82	68.23	-16.41
	10540 (Av)		39.83	54	-14.17
	15810 (Pk)		51.74	68.23	-16.49
	15810 (Av)		40.01	54	-13.99

Note:

* :- Indicate restricted band frequency in 15.205

Pk: Peak Detector; Av: Average Detector

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 125 von 207

Page 125 of 207

Channel Frequency (MHz)	Measured Frequency (MHz)	Antenna Polarization	Emission (dBµV/m)	Limit (dBµV/m)	Margin (dB)
5310	5310 (Pk)	Vertical	87.55	-	-
	5310 (Av)		73.05	-	-
	5350 (Pk)		52.54	74*	-21.46
	5350 (Av)		34.93	54*	-19.07
	10620 (Pk)		51.32	68.23	-16.91
	10620 (Av)		39.63	54	-14.37
	15930 (Pk)		52.47	68.23	-15.76
	15930 (Av)		40.60	54	-13.40
	5310 (Pk)	Horizontal	106.52	-	-
	5310 (Av)		92.81	-	-
	5350 (Pk)		67.59	74*	-6.41
	5350 (Av)		51.04	54*	-2.96
	10620 (Pk)		50.86	68.23	-17.37
	10620 (Av)		39.59	54	-14.41
	15930 (Pk)		52.65	68.23	-15.58
	15930 (Av)		40.62	54	-13.38
5510	5510 (Pk)	Vertical	95.25	-	-
	5510 (Av)		80.67	-	-
	5460 (Pk)		49.69	74*	-24.31
	5460 (Av)		33.43	54*	-20.57
	11020 (Pk)		52.95	68.23	-15.28
	11020 (Av)		40.52	54	-13.48
	16530 (Pk)		55.11	68.23	-13.12
	16530 (Av)		42.71	54	-11.29
	5510 (Pk)	Horizontal	102.80	-	-
	5510 (Av)		88.52	-	-
	5460 (Pk)		59.49	74*	-14.51
	5460 (Av)		40.90	54*	-13.10
	11020 (Pk)		53.18	68.23	-15.05
	11020 (Av)		40.52	54	-13.48
	16530 (Pk)		55.68	68.23	-12.55
	16530 (Av)		42.72	54	-11.28
5590	5590 (Pk)	Vertical	103.85	-	-
	5590 (Av)		89.63	-	-
	5460 (Pk)		52.69	74*	-21.31
	5460 (Av)		36.62	54*	-17.38
	11180 (Pk)		52.04	68.23	-16.19
	11180 (Av)		40.16	54	-13.84
	16770 (Pk)		55.56	68.23	-12.67
	16770 (Av)		43.49	54	-10.51
	5590 (Pk)	Horizontal	109.80	-	-
	5590 (Av)		95.31	-	-
	5460 (Pk)		60.21	74*	-13.79
	5460 (Av)		42.92	54*	-11.08
	11180 (Pk)		52.42	68.23	-15.81
	11180 (Av)		40.16	54	-13.84
	16770 (Pk)		55.56	68.23	-12.67
	16770 (Av)		43.43	54	-10.57

Note:

* :- Indicate restricted band frequency in 15.205

Pk: Peak Detector; Av: Average Detector

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 126 von 207

Page 126 of 207

Channel Frequency (MHz)	Measured Frequency (MHz)	Antenna Polarization	Emission (dBµV/m)	Limit (dBµV/m)	Margin (dB)
5670	5670 (Pk)	Vertical	98.50	-	-
	5670 (Av)		84.76	-	-
	5460 (Pk)		43.15	74*	-30.85
	5460 (Av)		30.66	54*	-23.34
	11340 (Pk)		51.81	68.23	-16.42
	11340 (Av)		40.60	54	-13.40
	17010 (Pk)		55.27	68.23	-12.96
	17010 (Av)		43.52	54	-10.48
	5670 (Pk)	Horizontal	104.30	-	-
	5670 (Av)		90.10	-	-
	5460 (Pk)		45.37	74*	-28.63
	5460 (Av)		32.56	54*	-21.44
	11340 (Pk)		52.28	68.23	-15.95
	11340 (Av)		40.50	54	-13.50
	17010 (Pk)		54.83	68.23	-13.40
	17010 (Av)		43.56	54	-10.44
5710	5710 (Pk)	Vertical	104.75	-	-
	5710 (Av)		89.94	-	-
	5460 (Pk)		44.69	74*	-29.31
	5460 (Av)		31.97	54*	-22.03
	11420 (Pk)		52.82	68.23	-15.41
	11420 (Av)		41.33	54	-12.67
	17130 (Pk)		55.61	68.23	-12.62
	17130 (Av)		43.87	54	-10.13
	5710 (Pk)	Horizontal	109.58	-	-
	5710 (Av)		95.21	-	-
	5460 (Pk)		49.47	74*	-24.53
	5460 (Av)		35.57	54*	-18.43
	11420 (Pk)		53.75	68.23	-14.48
	11420 (Av)		41.52	54	-12.48
	17130 (Pk)		54.51	68.23	-13.72
	17130 (Av)		43.89	54	-10.11
5755	5755 (Pk)	Vertical	101.15	-	-
	5755 (Av)		86.31	-	-
	5715(Pk)		65.15	78.20*	-13.05
	5725(Pk)		68.74	78.20*	-9.46
	11510 (Pk)		53.53	68.23	-14.7
	11510 (Av)		42.22	54	-11.78
	17265(Pk)		56.22	68.23	-12.01
	17265(Av)		44.32	54	-9.68
	5755 (Pk)	Horizontal	105.33	-	-
	5755 (Av)		90.67	-	-
	5715(Pk)		71.51	78.20*	-6.69
	5725(Pk)		74.67	78.20*	-3.53
	11510 (Pk)		54.69	68.23	-13.54
	11510 (Av)		42.24	54	-11.76
	17265(Pk)		56.71	68.23	-11.52
	17265(Av)		44.37	54	-9.63

Note:

* :- Indicate restricted band frequency in 15.205

Pk: Peak Detector; Av: Average Detector

Prüfbericht - Nr.:
Test Report No.:

IN23VER9 001

Seite 127 von 207
Page 127 of 207

Channel Frequency (MHz)	Measured Frequency (MHz)	Antenna Polarization	Emission (dBμV/m)	Limit (dBμV/m)	Margin (dB)
5795	5795 (Pk)	Vertical	100.80	-	-
	5795 (Av)		86.24	-	-
	5850 (Pk)		56.40	78.20*	-21.80
	5860 (Pk)		54.46	78.20*	-23.74
	11590 (Pk)		53.73	68.23	-14.50
	11590 (Av)		41.48	54	-12.52
	17385 (Pk)		57.36	68.23	-10.87
	17385 (Av)		44.97	54	-9.03
	5795 (Pk)	Horizontal	105.92	-	-
	5795 (Av)		91.53	-	-
	5850 (Pk)		60.51	78.20*	-17.69
	5860 (Pk)		59.56	78.20*	-18.64
	11590 (Pk)		53.74	68.23	-14.49
	11590 (Av)		41.66	54	-12.34
	17385 (Pk)		57.52	68.23	-10.71
	17385 (Pk)		44.95	54	-9.05

Note:

* :- Indicate restricted band frequency in 15.205

Pk: Peak Detector; Av: Average Detector

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 128 von 207

Page 128 of 207

Modulation: 802.11ax _ HE 40MHz

Data rate: MCS11

Channel Frequency (MHz)	Measured Frequency (MHz)	Antenna Polarization	Emission (dBµV/m)	Limit (dBµV/m)	Margin (dB)
5190	5190 (Pk)	Vertical	96.08	-	-
	5190 (Av)		76.31	-	-
	5150 (Pk)		56.31	74*	-17.69
	5150 (Av)		37.87	54*	-16.13
	10380 (Pk)		51.08	68.23	-17.15
	10380 (Av)		39.25	54	-14.75
	15570 (Pk)		51.71	68.23	-16.52
	15570 (Av)		40.41	54	-13.59
	5190 (Pk)	Horizontal	105.56	-	-
	5190 (Av)		86.08	-	-
	5150 (Pk)		67.06	74*	-6.94
	5150 (Av)		46.61	54*	-7.39
	10380 (Pk)		51.12	68.23	-17.11
	10380 (Av)		39.29	54	-14.71
	15570 (Pk)		52.68	68.23	-15.55
	15570 (Av)		40.42	54	-13.58
5230	5230 (Pk)	Vertical	97.63	-	-
	5230 (Av)		78.21	-	-
	5350 (Pk)		45.43	74*	-28.57
	5350 (Av)		31.10	54*	-22.90
	10460 (Pk)		51.26	68.23	-16.97
	10460 (Av)		39.37	54	-14.63
	15690 (Pk)		51.37	68.23	-16.86
	15690 (Av)		40.08	54	-13.92
	5230 (Pk)	Horizontal	104.89	-	-
	5230 (Av)		86.38	-	-
	5350 (Pk)		52.92	74*	-21.08
	5350 (Av)		34.37	54*	-19.63
	10460 (Pk)		51.76	68.23	-16.47
	10460 (Av)		39.41	54	-14.59
	15690 (Pk)		51.61	68.23	-16.62
	15690 (Av)		40.09	54	-13.91
5270	5270 (Pk)	Vertical	94.55	-	-
	5270 (Av)		74.88	-	-
	5350 (Pk)		43.41	74*	-30.59
	5350 (Av)		30.43	54*	-23.57
	10540 (Pk)		51.90	68.23	-16.33
	10540 (Av)		39.66	54	-14.34
	15810 (Pk)		51.82	68.23	-16.41
	15810 (Av)		39.94	54	-14.06
	5270 (Pk)	Horizontal	98.85	-	-
	5270 (Av)		79.80	-	-
	5350 (Pk)		45.89	74*	-28.11
	5350 (Av)		32.02	54*	-21.98
	10540 (Pk)		51.90	68.23	-16.33
	10540 (Av)		39.66	54	-14.34
	15810 (Pk)		51.82	68.23	-16.41
	15810 (Av)		39.94	54	-14.06

Note:

* :- Indicate restricted band frequency in 15.205

Pk: Peak Detector; Av: Average Detector

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 129 von 207

Page 129 of 207

Channel Frequency (MHz)	Measured Frequency (MHz)	Antenna Polarization	Emission (dBµV/m)	Limit (dBµV/m)	Margin (dB)
5310	5310 (Pk)	Vertical	97.67	-	-
	5310 (Av)		78.00	-	-
	5350 (Pk)		52.83	74*	-21.17
	5350 (Av)		34.94	54*	-19.06
	10620 (Pk)		51.56	68.23	-16.67
	10620 (Av)		39.61	54	-14.39
	15930 (Pk)		52.49	68.23	-15.74
	15930 (Av)		40.61	54	-13.39
	5310 (Pk)	Horizontal	103.77	-	-
	5310 (Av)		84.57	-	-
	5350 (Pk)		59.73	74*	-14.27
	5350 (Av)		40.00	54*	-14.00
	10620 (Pk)		51.45	68.23	-16.78
	10620 (Av)		39.58	54	-14.42
	15930 (Pk)		53.43	68.23	-14.80
	15930 (Av)		40.59	54	-13.41
5510	5510 (Pk)	Vertical	98.78	-	-
	5510 (Av)		79.38	-	-
	5460 (Pk)		54.55	74*	-19.45
	5460 (Av)		34.96	54*	-19.04
	11020 (Pk)		52.32	68.23	-15.91
	11020 (Av)		40.42	54	-13.58
	16530 (Pk)		54.88	68.23	-13.35
	16530 (Av)		42.66	54	-11.34
	5510 (Pk)	Horizontal	99.51	-	-
	5510 (Av)		80.82	-	-
	5460 (Pk)		58.29	74*	-15.71
	5460 (Av)		36.34	54*	-17.66
	11020 (Pk)		51.71	68.23	-16.52
	11020 (Av)		40.42	54	-13.58
	16530 (Pk)		54.33	68.23	-13.90
	16530 (Av)		42.59	54	-11.41
5590	5590 (Pk)	Vertical	98.50	-	-
	5590 (Av)		79.69	-	-
	5460 (Pk)		44.55	74*	-29.45
	5460 (Av)		30.80	54*	-23.20
	11180 (Pk)		52.19	68.23	-16.04
	11180 (Av)		40.00	54	-14.00
	16770 (Pk)		55.25	68.23	-12.98
	16770 (Av)		43.45	54	-10.55
	5590 (Pk)	Horizontal	99.17	-	-
	5590 (Av)		81.21	-	-
	5460 (Pk)		44.03	74*	-29.97
	5460 (Av)		31.08	54*	-22.92
	11180 (Pk)		51.24	68.23	-16.99
	11180 (Av)		40.00	54	-14.00
	16770 (Pk)		55.60	68.23	-12.63
	16770 (Av)		43.44	54	-10.56

Note:

* :- Indicate restricted band frequency in 15.205

Pk: Peak Detector; Av: Average Detector

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 130 von 207

Page 130 of 207

Channel Frequency (MHz)	Measured Frequency (MHz)	Antenna Polarization	Emission (dBµV/m)	Limit (dBµV/m)	Margin (dB)
5670	5670 (Pk)	Vertical	99.14	-	-
	5670 (Av)		79.30	-	-
	5460 (Pk)		43.00	74*	-31.00
	5460 (Av)		30.40	54*	-23.60
	11340 (Pk)		52.57	68.23	-15.66
	11340 (Av)		40.47	54	-13.53
	17010 (Pk)		55.35	68.23	-12.88
	17010 (Av)		43.49	54	-10.51
	5670 (Pk)	Horizontal	102.23	-	-
	5670 (Av)		84.25	-	-
	5460 (Pk)		44.01	74*	-29.99
	5460 (Av)		31.19	54*	-22.81
	11340 (Pk)		52.41	68.23	-15.82
	11340 (Av)		40.54	54	-13.46
	17010 (Pk)		54.93	68.23	-13.30
	17010 (Av)		43.56	54	-10.44
5710	5710 (Pk)	Vertical	98.63	-	-
	5710 (Av)		79.26	-	-
	5460 (Pk)		43.16	74*	-30.84
	5460 (Av)		30.28	54*	-23.72
	11420 (Pk)		53.32	68.23	-14.91
	11420 (Av)		41.10	54	-12.90
	17130 (Pk)		55.75	68.23	-12.48
	17130 (Av)		43.92	54	-10.08
	5710 (Pk)	Horizontal	98.82	-	-
	5710 (Av)		80.27	-	-
	5460 (Pk)		43.28	74*	-30.72
	5460 (Av)		30.30	54*	-23.70
	11420 (Pk)		52.94	68.23	-15.29
	11420 (Av)		41.07	54	-12.93
	17130 (Pk)		54.95	68.23	-13.28
	17130 (Av)		43.90	54	-10.10
5755	5755 (Pk)	Vertical	97.67	-	-
	5755 (Av)		78.55	-	-
	5715(Pk)		57.00	78.20*	-21.2
	5725(Pk)		59.48	78.20*	-18.72
	11510 (Pk)		54.04	68.23	-14.19
	11510 (Av)		42.18	54	-11.82
	17265(Pk)		56.32	68.23	-11.91
	17265(Av)		44.38	54	-9.62
	5755 (Pk)	Horizontal	99.71	-	-
	5755 (Av)		81.72	-	-
	5715(Pk)		61.87	78.20*	-16.33
	5725(Pk)		63.57	78.20*	-14.63
	11510 (Pk)		54.47	68.23	-13.76
	11510 (Av)		42.17	54	-11.83
	17265(Pk)		56.98	68.23	-11.25
	17265(Av)		44.40	54	-9.6

Note:

* :- Indicate restricted band frequency in 15.205

Pk: Peak Detector; Av: Average Detector

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 131 von 207

Page 131 of 207

Channel Frequency (MHz)	Measured Frequency (MHz)	Antenna Polarization	Emission (dBµV/m)	Limit (dBµV/m)	Margin (dB)
5795	5795 (Pk)	Vertical	95.77	-	-
	5795 (Av)		77.59	-	-
	5850 (Pk)		47.84	78.20*	-30.36
	5860 (Pk)		46.45	78.20*	-31.75
	11590 (Pk)		53.13	68.23	-15.10
	11590 (Av)		41.45	54	-12.55
	17385 (Pk)		57.26	68.23	-10.97
	17385 (Av)		44.96	54	-9.04
	5795 (Pk)	Horizontal	101.35	-	-
	5795 (Av)		82.67	-	-
	5850 (Pk)		52.99	78.20*	-25.21
	5860 (Pk)		49.59	78.20*	-28.61
	11590 (Pk)		53.92	68.23	-14.31
	11590 (Av)		41.43	54	-12.57
	17385 (Pk)		57.17	68.23	-11.06
	17385 (Pk)		45.01	54	-8.99

Note:

* :- Indicate restricted band frequency in 15.205

Pk: Peak Detector; Av: Average Detector

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 132 von 207

Page 132 of 207

Modulation: 802.11ac _ VHT 80MHz

Data rate: MCS0

Channel Frequency (MHz)	Measured Frequency (MHz)	Antenna Polarization	Emission (dBµV/m)	Limit (dBµV/m)	Margin (dB)
5210	5210 (Pk)	Vertical	88.76	-	-
	5210 (Av)		75.45	-	-
	5150 (Pk)		51.83	74*	-22.17
	5150 (Av)		35.66	54*	-18.34
	10420 (Pk)		50.84	68.23	-17.39
	10420 (Av)		39.11	54	-14.89
	15630 (Pk)		53.46	68.23	-14.77
	15630 (Av)		40.32	54	-13.68
	5210 (Pk)	Horizontal	98.95	-	-
	5210 (Av)		84.32	-	-
	5150 (Pk)		63.39	74*	-10.61
	5150 (Av)		44.34	54*	-9.66
	10420 (Pk)		51.53	68.23	-16.70
	10420 (Av)		39.10	54	-14.90
	15630 (Pk)		53.40	68.23	-14.83
	15630 (Av)		40.28	54	-13.72
5290	5290 (Pk)	Vertical	88.77	-	-
	5290 (Av)		74.55	-	-
	5350 (Pk)		54.56	74*	-19.44
	5350 (Av)		38.18	54*	-15.82
	10580 (Pk)		52.88	68.23	-15.35
	10580 (Av)		39.70	54	-14.30
	15870 (Pk)		51.87	68.23	-16.36
	15870 (Av)		40.13	54	-13.87
	5290 (Pk)	Horizontal	99.74	-	-
	5290 (Av)		84.92	-	-
	5350 (Pk)		64.54	74*	-9.46
	5350 (Av)		46.54	54*	-7.46
	10580 (Pk)		51.59	68.23	-16.64
	10580 (Av)		39.66	54	-14.34
	15870 (Pk)		52.81	68.23	-15.42
	15870 (Av)		40.13	54	-13.87
5530	5530 (Pk)	Vertical	90.91	-	-
	5530 (Av)		77.82	-	-
	5460 (Pk)		55.83	74*	-18.17
	5460 (Av)		38.05	54*	-15.95
	11060 (Pk)		53.97	68.23	-14.26
	11060 (Av)		40.44	54	-13.56
	16590 (Pk)		55.04	68.23	-13.19
	16590 (Av)		42.67	54	-11.33
	5530 (Pk)	Horizontal	98.29	-	-
	5530 (Av)		84.41	-	-
	5460 (Pk)		61.58	74*	-12.42
	5460 (Av)		44.72	54*	-9.28
	11060 (Pk)		51.99	68.23	-16.24
	11060 (Av)		40.47	54	-13.53
	16590 (Pk)		54.89	68.23	-13.34
	16590 (Av)		42.68	54	-11.32

Note:

* :- Indicate restricted band frequency in 15.205

Pk: Peak Detector; Av: Average Detector

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 133 von 207

Page 133 of 207

Channel Frequency (MHz)	Measured Frequency (MHz)	Antenna Polarization	Emission (dBµV/m)	Limit (dBµV/m)	Margin (dB)
5690	5690 (Pk)	Vertical	95.19	-	-
	5690 (Av)		80.89	-	-
	5460 (Pk)		48.08	74*	-25.92
	5460 (Av)		33.73	54*	-20.27
	11380 (Pk)		53.27	68.23	-14.96
	11380 (Av)		41.21	54	-12.79
	17070 (Pk)		55.05	68.23	-13.18
	17070 (Av)		43.55	54	-10.45
	5690 (Pk)	Horizontal	102.71	-	-
	5690 (Av)		88.35	-	-
	5460 (Pk)		57.72	74*	-16.28
	5460 (Av)		39.70	54*	-14.30
	11380 (Pk)		53.24	68.23	-14.99
	11380 (Av)		41.24	54	-12.76
	17070 (Pk)		55.97	68.23	-12.26
	17070 (Av)		43.47	54	-10.53
5775	5775 (Pk)	Vertical	94.34	-	-
	5775 (Av)		79.39	-	-
	11550 (Pk)		56.65	68.23	-11.58
	11550 (Av)		42.22	54	-11.78
	17325 (Pk)		55.84	68.23	-12.39
	17325 (Av)		44.37	54	-9.63
	5775 (Pk)	Horizontal	99.50	-	-
	5775 (Av)		83.58	-	-
	11550 (Pk)		53.93	68.23	-14.30
	11550 (Av)		42.23	54	-11.77
	17325 (Pk)		56.23	68.23	-12.00
	17325 (Av)		44.38	54	-9.62

Note:

* :- Indicate restricted band frequency in 15.205

Pk: Peak Detector; Av: Average Detector

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 134 von 207

Page 134 of 207

Modulation: 802.11ac _ VHT 80MHz

Data rate: MCS9

Channel Frequency (MHz)	Measured Frequency (MHz)	Antenna Polarization	Emission (dBµV/m)	Limit (dBµV/m)	Margin (dB)
5210	5210 (Pk)	Vertical	88.47	-	-
	5210 (Av)		67.92	-	-
	5150 (Pk)		50.41	74*	-23.59
	5150 (Av)		34.14	54*	-19.86
	10420 (Pk)		51.69	68.23	-16.54
	10420 (Av)		39.09	54	-14.91
	15630 (Pk)		52.18	68.23	-16.05
	15630 (Av)		40.31	54	-13.69
	5210 (Pk)	Horizontal	101.48	-	-
	5210 (Av)		81.95	-	-
	5150 (Pk)		63.00	74*	-11.00
	5150 (Av)		44.52	54*	-9.48
	10420 (Pk)		51.42	68.23	-16.81
	10420 (Av)		39.08	54	-14.92
	15630 (Pk)		52.66	68.23	-15.57
	15630 (Av)		40.32	54	-13.68
5290	5290 (Pk)	Vertical	89.41	-	-
	5290 (Av)		69.40	-	-
	5350 (Pk)		56.03	74*	-17.97
	5350 (Av)		34.99	54*	-19.01
	10580 (Pk)		51.24	68.23	-16.99
	10580 (Av)		39.67	54	-14.33
	15870 (Pk)		51.84	68.23	-16.39
	15870 (Av)		40.14	54	-13.86
	5290 (Pk)	Horizontal	100.36	-	-
	5290 (Av)		80.67	-	-
	5350 (Pk)		65.00	74*	-9.00
	5350 (Av)		42.41	54*	-11.59
	10580 (Pk)		51.76	68.23	-16.47
	10580 (Av)		39.65	54	-14.35
	15870 (Pk)		53.86	68.23	-14.37
	15870 (Av)		40.15	54	-13.85
5530	5530 (Pk)	Vertical	92.27	-	-
	5530 (Av)		73.08	-	-
	5460 (Pk)		53.11	74*	-20.89
	5460 (Av)		34.61	54*	-19.39
	11060 (Pk)		52.17	68.23	-16.06
	11060 (Av)		40.42	54	-13.58
	16590 (Pk)		54.79	68.23	-13.44
	16590 (Av)		42.17	54	-11.83
	5530 (Pk)	Horizontal	97.86	-	-
	5530 (Av)		78.92	-	-
	5460 (Pk)		57.79	74*	-16.21
	5460 (Av)		37.80	54*	-16.20
	11060 (Pk)		52.37	68.23	-15.86
	11060 (Av)		40.40	54	-13.60
	16590 (Pk)		54.50	68.23	-13.73
	16590 (Av)		42.69	54	-11.31

Note:

* :- Indicate restricted band frequency in 15.205

Pk: Peak Detector; Av: Average Detector

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 135 von 207

Page 135 of 207

Channel Frequency (MHz)	Measured Frequency (MHz)	Antenna Polarization	Emission (dBµV/m)	Limit (dBµV/m)	Margin (dB)
5690	5690 (Pk)	Vertical	92.88	-	-
	5690 (Av)		72.3	-	-
	5460 (Pk)		44.17	74*	-29.83
	5460 (Av)		30.87	54*	-23.13
	11380 (Pk)		53.64	68.23	-14.59
	11380 (Av)		41.22	54	-12.78
	17070 (Pk)		55.39	68.23	-12.84
	17070 (Av)		43.47	54	-10.53
	5690 (Pk)	Horizontal	99.05	-	-
	5690 (Av)		79.84	-	-
	5460 (Pk)		49.05	74*	-24.95
	5460 (Av)		32.79	54*	-21.21
	11380 (Pk)		54.29	68.23	-13.94
	11380 (Av)		41.24	54	-12.76
	17070 (Pk)		55.01	68.23	-13.22
	17070 (Av)		43.55	54	-10.45
5775	5775 (Pk)	Vertical	90.22	-	-
	5775 (Av)		70.76	-	-
	11550 (Pk)		53.73	68.23	-14.50
	11550 (Av)		42.14	54	-11.86
	17325 (Pk)		56.57	68.23	-11.66
	17325 (Av)		44.39	54	-9.61
	5775 (Pk)	Horizontal	98.95	-	-
	5775 (Av)		79.31	-	-
	11550 (Pk)		54.24	68.23	-13.99
	11550 (Av)		42.13	54	-11.87
	17325 (Pk)		56.08	68.23	-12.15
	17325 (Av)		44.37	54	-9.63

Note:

* :- Indicate restricted band frequency in 15.205

Pk: Peak Detector; Av : Average Detector

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 136 von 207

Page 136 of 207

Modulation: 802.11ax _ HE 80MHz

Data rate: MCS0

Channel Frequency (MHz)	Measured Frequency (MHz)	Antenna Polarization	Emission (dBµV/m)	Limit (dBµV/m)	Margin (dB)
5210	5210 (Pk)	Vertical	94.17	-	-
	5210 (Av)		78.66	-	-
	5150 (Pk)		56.88	74*	-17.12
	5150 (Av)		40.14	54*	-13.86
	10420 (Pk)		52.13	68.23	-16.10
	10420 (Av)		39.16	54	-14.84
	15630 (Pk)		52.44	68.23	-15.79
	15630 (Av)		40.45	54	-13.55
	5210 (Pk)	Horizontal	104.77	-	-
	5210 (Av)		88.61	-	-
	5150 (Pk)		67.05	74*	-6.95
	5150 (Av)		47.13	54*	-6.87
	10420 (Pk)		51.57	68.23	-16.66
	10420 (Av)		39.16	54	-14.84
	15630 (Pk)		52.32	68.23	-15.91
	15630 (Av)		40.40	54	-13.60
5290	5290 (Pk)	Vertical	93.06	-	-
	5290 (Av)		77.40	-	-
	5350 (Pk)		56.34	74*	-17.66
	5350 (Av)		39.36	54*	-14.64
	10580 (Pk)		52.74	68.23	-15.49
	10580 (Av)		39.69	54	-14.31
	15870 (Pk)		52.87	68.23	-15.36
	15870 (Av)		40.21	54	-13.79
	5290 (Pk)	Horizontal	100.52	-	-
	5290 (Av)		84.40	-	-
	5350 (Pk)		61.17	74*	-12.83
	5350 (Av)		44.52	54*	-9.48
	10580 (Pk)		51.33	68.23	-16.90
	10580 (Av)		39.63	54	-14.37
	15870 (Pk)		52.59	68.23	-15.64
	15870 (Av)		40.25	54	-13.75
5530	5530 (Pk)	Vertical	92.17	-	-
	5530 (Av)		76.43	-	-
	5460 (Pk)		55.87	74*	-18.13
	5460 (Av)		38.65	54*	-15.35
	11060 (Pk)		51.79	68.23	-16.44
	11060 (Av)		40.48	54	-13.52
	16590 (Pk)		54.59	68.23	-13.64
	16590 (Av)		42.71	54	-11.29
	5530 (Pk)	Horizontal	103.02	-	-
	5530 (Av)		86.94	-	-
	5460 (Pk)		64.10	74*	-9.90
	5460 (Av)		46.55	54*	-7.45
	11060 (Pk)		53.23	68.23	-15.00
	11060 (Av)		40.39	54	-13.61
	16590 (Pk)		54.31	68.23	-13.92
	16590 (Av)		42.69	54	-11.31

Note:

* :- Indicate restricted band frequency in 15.205

Pk: Peak Detector; Av: Average Detector

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 137 von 207

Page 137 of 207

Channel Frequency (MHz)	Measured Frequency (MHz)	Antenna Polarization	Emission (dBµV/m)	Limit (dBµV/m)	Margin (dB)
5690	5690 (Pk)	Vertical	97.92	-	-
	5690 (Av)		81.84	-	-
	5460 (Pk)		49.20	74*	-24.80
	5460 (Av)		34.62	54*	-19.38
	11380 (Pk)		52.69	68.23	-15.54
	11380 (Av)		41.25	54	-12.75
	17070 (Pk)		56.20	68.23	-12.03
	17070 (Av)		43.54	54	-10.46
	5690 (Pk)	Horizontal	104.46	-	-
	5690 (Av)		88.56	-	-
	5460 (Pk)		55.06	74*	-18.94
	5460 (Av)		38.25	54*	-15.75
	11380 (Pk)		53.20	68.23	-15.03
	11380 (Av)		41.25	54	-12.75
	17070 (Pk)		55.82	68.23	-12.41
	17070 (Av)		43.54	54	-10.46
5775	5775 (Pk)	Vertical	101.32	-	-
	5775 (Av)		84.63	-	-
	11550 (Pk)		53.80	68.23	-14.43
	11550 (Av)		42.28	54	-11.72
	17325 (Pk)		57.55	68.23	-10.68
	17325 (Av)		44.54	54	-9.46
	5775 (Pk)	Horizontal	106.91	-	-
	5775 (Av)		90.57	-	-
	11550 (Pk)		55.05	68.23	-13.18
	11550 (Av)		42.29	54	-11.71
	17325 (Pk)		56.51	68.23	-11.72
	17325 (Av)		44.56	54	-9.44

Note:

* :- Indicate restricted band frequency in 15.205

Pk: Peak Detector; Av: Average Detector

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 138 von 207

Page 138 of 207

Modulation: 802.11ax _ HE 80MHz

Data rate: MCS11

Channel Frequency (MHz)	Measured Frequency (MHz)	Antenna Polarization	Emission (dBµV/m)	Limit (dBµV/m)	Margin (dB)
5210	5210 (Pk)	Vertical	89.08	-	-
	5210 (Av)		71.19	-	-
	5150 (Pk)		53.55	74*	-20.45
	5150 (Av)		33.85	54*	-20.15
	10420 (Pk)		51.74	68.23	-16.49
	10420 (Av)		39.18	54	-14.82
	15630 (Pk)		52.99	68.23	-15.24
	15630 (Av)		40.46	54	-13.54
	5210 (Pk)	Horizontal	99.93	-	-
	5210 (Av)		81.08	-	-
	5150 (Pk)		57.66	74*	-16.34
	5150 (Av)		39.26	54*	-14.74
	10420 (Pk)		51.22	68.23	-17.01
	10420 (Av)		39.19	54	-14.81
	15630 (Pk)		52.49	68.23	-15.74
	15630 (Av)		40.45	54	-13.55
5290	5290 (Pk)	Vertical	89.18	-	-
	5290 (Av)		69.05	-	-
	5350 (Pk)		50.76	74*	-23.24
	5350 (Av)		33.26	54*	-20.74
	10580 (Pk)		51.51	68.23	-16.72
	10580 (Av)		39.66	54	-14.34
	15870 (Pk)		52.20	68.23	-16.03
	15870 (Av)		40.21	54	-13.79
	5290 (Pk)	Horizontal	100.26	-	-
	5290 (Av)		79.80	-	-
	5350 (Pk)		60.02	74*	-13.98
	5350 (Av)		39.56	54*	-14.44
	10580 (Pk)		51.78	68.23	-16.45
	10580 (Av)		39.61	54	-14.39
	15870 (Pk)		52.13	68.23	-16.10
	15870 (Av)		40.21	54	-13.79
5530	5530 (Pk)	Vertical	88.44	-	-
	5530 (Av)		68.61	-	-
	5460 (Pk)		46.63	74*	-27.37
	5460 (Av)		31.75	54*	-22.25
	11060 (Pk)		52.63	68.23	-15.60
	11060 (Av)		40.44	54	-13.56
	16590 (Pk)		54.70	68.23	-13.53
	16590 (Av)		42.71	54	-11.29
	5530 (Pk)	Horizontal	95.85	-	-
	5530 (Av)		78.27	-	-
	5460 (Pk)		52.56	74*	-21.44
	5460 (Av)		35.60	54*	-18.40
	11060 (Pk)		53.33	68.23	-14.90
	11060 (Av)		40.44	54	-13.56
	16590 (Pk)		54.94	68.23	-13.29
	16590 (Av)		42.70	54	-11.30

Note:

* :- Indicate restricted band frequency in 15.205

Pk: Peak Detector; Av: Average Detector

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 139 von 207

Page 139 of 207

Channel Frequency (MHz)	Measured Frequency (MHz)	Antenna Polarization	Emission (dBµV/m)	Limit (dBµV/m)	Margin (dB)
5690	5690 (Pk)	Vertical	92.03	-	-
	5690 (Av)		72.10	-	-
	5460 (Pk)		43.59	74*	-30.41
	5460 (Av)		30.54	54*	-23.46
	11380 (Pk)		53.83	68.23	-14.40
	11380 (Av)		41.24	54	-12.76
	17070 (Pk)		56.80	68.23	-11.43
	17070 (Av)		43.50	54	-10.50
	5690 (Pk)	Horizontal	97.82	-	-
	5690 (Av)		77.66	-	-
	5460 (Pk)		46.03	74*	-27.97
	5460 (Av)		31.72	54*	-22.28
	11380 (Pk)		54.04	68.23	-14.19
	11380 (Av)		41.26	54	-12.74
	17070 (Pk)		55.78	68.23	-12.45
	17070 (Av)		43.53	54	-10.47
5775	5775 (Pk)	Vertical	89.10	-	-
	5775 (Av)		69.58	-	-
	11550 (Pk)		53.77	68.23	-14.46
	11550 (Av)		42.18	54	-11.82
	17325 (Pk)		56.71	68.23	-11.52
	17325 (Av)		44.51	54	-9.49
	5775 (Pk)	Horizontal	98.54	-	-
	5775 (Av)		77.93	-	-
	11550 (Pk)		54.14	68.23	-14.09
	11550 (Av)		42.20	54	-11.80
	17325 (Pk)		56.71	68.23	-11.52
	17325 (Av)		44.52	54	-9.48

Note:

* :- Indicate restricted band frequency in 15.205

Pk: Peak Detector; Av : Average Detector

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 140 von 207

Page 140 of 207

Antenna Type: FPA3020-10 (Flex/PCB) Port1 & Port2 MIMO Antenna Results

Modulation: 802.11a

Data rate: 6Mbps

Channel Frequency (MHz)	Measured Frequency (MHz)	Antenna Polarization	Emission (dBμV/m)	Limit (dBμV/m)	Margin (dB)
5180	5180 (Pk)	Vertical	99.82	-	-
	5180 (Av)		89.82	-	-
	5150 (Pk)		63.75	74*	-10.25
	5150 (Av)		44.05	54*	-9.95
	10360 (Pk)		51.01	68.23	-17.22
	10360 (Av)		39.46	54	-14.54
	15540 (Pk)		53.45	68.23	-14.78
	15540 (Av)		41.52	54	-12.48
	5180 (Pk)	Horizontal	103.34	-	-
	5180 (Av)		93.62	-	-
	5150 (Pk)		68.75	74*	-5.25
	5150 (Av)		50.00	54*	-4.00
	10360 (Pk)		51.68	68.23	-16.55
	10360 (Av)		39.46	54	-14.54
	15540 (Pk)		54.22	68.23	-14.01
	15540 (Av)		41.56	54	-12.44
5240	5240 (Pk)	Vertical	109.12	-	-
	5240 (Av)		96.49	-	-
	5350 (Pk)		66.56	74*	-7.44
	5350 (Av)		42.06	54*	-11.94
	10480 (Pk)		52.09	68.23	-16.14
	10480 (Av)		40.00	54	-14.00
	15720 (Pk)		52.92	68.23	-15.31
	15720 (Av)		41.31	54	-12.69
	5240 (Pk)	Horizontal	110.91	-	-
	5240 (Av)		98.67	-	-
	5350 (Pk)		68.59	74*	-5.41
	5350 (Av)		43.47	54*	-10.53
	10480 (Pk)		51.76	68.23	-16.47
	10480 (Av)		39.98	54	-14.02
	15720 (Pk)		53.74	68.23	-14.49
	15720 (Av)		41.38	54	-12.62
5260	5260 (Pk)	Vertical	109.24	-	-
	5260 (Av)		96.14	-	-
	5350 (Pk)		67.00	74*	-7.00
	5350 (Av)		45.43	54*	-8.57
	10520 (Pk)		52.23	68.23	-16.00
	10520 (Av)		40.04	54	-13.96
	15780 (Pk)		52.73	68.23	-15.50
	15780 (Av)		41.10	54	-12.90
	5260 (Pk)	Horizontal	110.33	-	-
	5260 (Av)		98.34	-	-
	5350 (Pk)		69.05	74*	-4.95
	5350 (Av)		47.37	54*	-6.63
	10520 (Pk)		52.62	68.23	-15.61
	10520 (Av)		40.04	54	-13.96
	15780 (Pk)		53.33	68.23	-14.90
	15780 (Av)		41.09	54	-12.91

Note:

* :- Indicate restricted band frequency in 15.205

Pk: Peak Detector; Av: Average Detector

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 141 von 207

Page 141 of 207

Channel Frequency (MHz)	Measured Frequency (MHz)	Antenna Polarization	Emission (dBµV/m)	Limit (dBµV/m)	Margin (dB)
5320	5320 (Pk)	Vertical	99.11	-	-
	5320 (Av)		89.31	-	-
	5350 (Pk)		56.32	74*	-17.68
	5350 (Av)		33.53	54*	-20.47
	10640 (Pk)		52.84	68.23	-15.39
	10640 (Av)		40.13	54	-13.87
	15960 (Pk)		54.38	68.23	-13.85
	15960 (Av)		41.73	54	-12.27
	5320 (Pk)	Horizontal	98.90	-	-
	5320 (Av)		89.13	-	-
	5350 (Pk)		55.31	74*	-18.69
	5350 (Av)		32.99	54*	-21.01
	10640 (Pk)		52.99	68.23	-15.24
	10640 (Av)		40.10	54	-13.90
	15960 (Pk)		53.90	68.23	-14.33
	15960 (Av)		41.74	54	-12.26
5500	5500 (Pk)	Vertical	99.12	-	-
	5500 (Av)		89.66	-	-
	5460 (Pk)		52.54	74*	-21.46
	5460 (Av)		33.43	54*	-20.57
	11000 (Pk)		52.68	68.23	-15.55
	11000 (Av)		40.69	54	-13.31
	16500 (Pk)		55.56	68.23	-12.67
	16500 (Av)		43.48	54	-10.52
	5500 (Pk)	Horizontal	102.05	-	-
	5500 (Av)		92.62	-	-
	5460 (Pk)		53.59	74*	-20.41
	5460 (Av)		34.51	54*	-19.49
	11000 (Pk)		53.31	68.23	-14.92
	11000 (Av)		40.76	54	-13.24
	16500 (Pk)		56.24	68.23	-11.99
	16500 (Av)		43.47	54	-10.53
5700	5700 (Pk)	Vertical	100.54	-	-
	5700 (Av)		90.78	-	-
	5460 (Pk)		42.76	74*	-31.24
	5460 (Av)		30.14	54*	-23.86
	11400 (Pk)		54.68	68.23	-13.55
	11400 (Av)		41.67	54	-12.33
	17100 (Pk)		56.50	68.23	-11.73
	17100 (Av)		44.36	54	-9.64
	5700 (Pk)	Horizontal	101.61	-	-
	5700 (Av)		92.46	-	-
	5460 (Pk)		43.00	74*	-31.00
	5460 (Av)		30.22	54*	-23.78
	11400 (Pk)		54.36	68.23	-13.87
	11400 (Av)		41.67	54	-12.33
	17100 (Pk)		56.86	68.23	-11.37
	17100 (Av)		44.37	54	-9.63

Note:

* :- Indicate restricted band frequency in 15.205

Pk: Peak Detector; Av: Average Detector

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 142 von 207

Page 142 of 207

Channel Frequency (MHz)	Measured Frequency (MHz)	Antenna Polarization	Emission (dBµV/m)	Limit (dBµV/m)	Margin (dB)
5720	5720 (Pk)	Vertical	105.85	-	-
	5720 (Av)		95.74	-	-
	5460 (Pk)		42.84	74*	-31.16
	5460 (Av)		30.12	54*	-23.88
	11440 (Pk)		53.34	68.23	-14.89
	11440 (Av)		41.88	54	-12.12
	17160 (Pk)		56.48	68.23	-11.75
	17160 (Av)		44.57	54	-9.43
	5720 (Pk)	Horizontal	106.83	-	-
	5720 (Av)		96.86	-	-
	5460 (Pk)		42.48	74*	-31.52
	5460 (Av)		30.33	54*	-23.67
	11440 (Pk)		53.45	68.23	-14.78
	11440 (Av)		41.90	54	-12.10
	17160 (Pk)		56.34	68.23	-11.89
	17160 (Av)		44.72	54	-9.28
5745	5715(Pk)	Vertical	68.51	78.20*	-9.69
	5725(Pk)		73.31	78.20*	-4.89
	5745 (Pk)		105.25	-	-
	5745 (Av)		94.82	-	-
	11490 (Pk)		54.78	68.23	-13.45
	11490 (Av)		42.55	54	-11.45
	17235 (Pk)		57.12	68.23	-11.11
	17235 (Av)		45.41	54	-8.59
	5715(Pk)	Horizontal	67.46	78.20*	-10.74
	5725(Pk)		72.20	78.20*	-6.00
	5745 (Pk)		103.41	-	-
	5745 (Av)		93.10	-	-
	11490 (Pk)		55.10	68.23	-13.13
	11490 (Av)		42.62	54	-11.38
	17235 (Pk)		57.43	68.23	-10.80
	17235 (Av)		45.39	54	-8.61
5825	5825 (Pk)	Vertical	104.91	-	-
	5825 (Av)		95.62	-	-
	5850 (Pk)		67.50	78.20*	-10.70
	5860 (Pk)		60.71	78.20*	-17.49
	11650 (Pk)		55.28	68.23	-12.95
	11650 (Av)		42.42	54	-11.58
	17475 (Pk)		59.94	68.23	-8.29
	17475 (Av)		47.29	54	-6.71
	5825 (Pk)	Horizontal	105.13	-	-
	5825 (Av)		94.99	-	-
	5850 (Pk)		68.36	78.20*	-9.84
	5860 (Pk)		61.65	78.20*	-16.55
	11650 (Pk)		54.05	68.23	-14.18
	11650 (Av)		42.02	54	-11.98
	17475 (Pk)		59.02	68.23	-9.21
	17475 (Av)		47.35	54	-6.65

Note:

* :- Indicate restricted band frequency in 15.205

Pk: Peak Detector; Av: Average Detector

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 143 von 207

Page 143 of 207

Modulation: 802.11a

Data rate: 54Mbps

Channel Frequency (MHz)	Measured Frequency (MHz)	Antenna Polarization	Emission (dBµV/m)	Limit (dBµV/m)	Margin (dB)
5180	5180 (Pk)	Vertical	100.04	-	-
	5180 (Av)		85.79	-	-
	5150 (Pk)		61.96	74*	-12.04
	5150 (Av)		38.93	54*	-15.07
	10360 (Pk)		51.77	68.23	-16.46
	10360 (Av)		39.31	54	-14.69
	15540 (Pk)		52.65	68.23	-15.58
	15540 (Av)		41.32	54	-12.68
	5180 (Pk)	Horizontal	102.49	-	-
	5180 (Av)		87.83	-	-
	5150 (Pk)		65.54	74*	-8.46
	5150 (Av)		41.33	54*	-12.67
	10360 (Pk)		52.10	68.23	-16.13
	10360 (Av)		39.44	54	-14.56
	15540 (Pk)		53.86	68.23	-14.37
	15540 (Av)		41.49	54	-12.51
5240	5240 (Pk)	Vertical	108.61	-	-
	5240 (Av)		91.01	-	-
	5350 (Pk)		65.28	74*	-8.72
	5350 (Av)		41.97	54*	-12.03
	10480 (Pk)		52.12	68.23	-16.11
	10480 (Av)		39.96	54	-14.04
	15720 (Pk)		52.95	68.23	-15.28
	15720 (Av)		41.13	54	-12.87
	5240 (Pk)	Horizontal	109.75	-	-
	5240 (Av)		92.87	-	-
	5350 (Pk)		65.92	74*	-8.08
	5350 (Av)		42.45	54*	-11.55
	10480 (Pk)		52.69	68.23	-15.54
	10480 (Av)		39.86	54	-14.14
	15720 (Pk)		53.11	68.23	-15.12
	15720 (Av)		41.13	54	-12.87
5260	5260 (Pk)	Vertical	107.76	-	-
	5260 (Av)		90.09	-	-
	5350 (Pk)		68.80	74*	-5.20
	5350 (Av)		45.08	54*	-8.92
	10520 (Pk)		51.64	68.23	-16.59
	10520 (Av)		39.94	54	-14.06
	15780 (Pk)		52.03	68.23	-16.20
	15780 (Av)		40.94	54	-13.06
	5260 (Pk)	Horizontal	109.53	-	-
	5260 (Av)		92.02	-	-
	5350 (Pk)		69.11	74*	-4.89
	5350 (Av)		45.30	54*	-8.70
	10520 (Pk)		51.36	68.23	-16.87
	10520 (Av)		39.90	54	-14.10
	15780 (Pk)		53.05	68.23	-15.18
	15780 (Av)		40.95	54	-13.05

Note:

* :- Indicate restricted band frequency in 15.205

Pk: Peak Detector; Av: Average Detector

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 144 von 207

Page 144 of 207

Channel Frequency (MHz)	Measured Frequency (MHz)	Antenna Polarization	Emission (dBµV/m)	Limit (dBµV/m)	Margin (dB)
5320	5320 (Pk)	Vertical	98.98	-	-
	5320 (Av)		85.00	-	-
	5350 (Pk)		56.72	74*	-17.28
	5350 (Av)		32.71	54*	-21.29
	10640 (Pk)		52.30	68.23	-15.93
	10640 (Av)		40.06	54	-13.94
	15960 (Pk)		53.86	68.23	-14.37
	15960 (Av)		41.69	54	-12.31
	5320 (Pk)	Horizontal	101.01	-	-
	5320 (Av)		86.40	-	-
	5350 (Pk)		58.46	74*	-15.54
	5350 (Av)		33.69	54*	-20.31
	10640 (Pk)		52.08	68.23	-16.15
	10640 (Av)		39.96	54	-14.04
	15960 (Pk)		52.97	68.23	-15.26
	15960 (Av)		41.62	54	-12.38
5500	5500 (Pk)	Vertical	99.47	-	-
	5500 (Av)		84.22	-	-
	5460 (Pk)		49.58	74*	-24.42
	5460 (Av)		32.73	54*	-21.27
	11000 (Pk)		53.00	68.23	-15.23
	11000 (Av)		40.69	54	-13.31
	16500 (Pk)		55.00	68.23	-13.23
	16500 (Av)		43.39	54	-10.61
	5500 (Pk)	Horizontal	99.65	-	-
	5500 (Av)		85.14	-	-
	5460 (Pk)		50.76	74*	-23.24
	5460 (Av)		33.00	54*	-21.00
	11000 (Pk)		52.55	68.23	-15.68
	11000 (Av)		40.63	54	-13.37
	16500 (Pk)		55.54	68.23	-12.69
	16500 (Av)		43.41	54	-10.59
5700	5700 (Pk)	Vertical	99.82	-	-
	5700 (Av)		85.18	-	-
	5460 (Pk)		42.96	74*	-31.04
	5460 (Av)		30.17	54*	-23.83
	11400 (Pk)		53.28	68.23	-14.95
	11400 (Av)		41.61	54	-12.39
	17100 (Pk)		56.03	68.23	-12.20
	17100 (Av)		44.21	54	-9.79
	5700 (Pk)	Horizontal	98.40	-	-
	5700 (Av)		83.32	-	-
	5460 (Pk)		43.59	74*	-30.41
	5460 (Av)		30.07	54*	-23.93
	11400 (Pk)		53.28	68.23	-14.95
	11400 (Av)		41.62	54	-12.38
	17100 (Pk)		55.93	68.23	-12.30
	17100 (Av)		44.25	54	-9.75

Note:

* :- Indicate restricted band frequency in 15.205

Pk: Peak Detector; Av: Average Detector

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 145 von 207

Page 145 of 207

Channel Frequency (MHz)	Measured Frequency (MHz)	Antenna Polarization	Emission (dBμV/m)	Limit (dBμV/m)	Margin (dB)
5720	5720 (Pk)	Vertical	103.59	-	-
	5720 (Av)		88.82	-	-
	5460 (Pk)		42.69	74*	-31.31
	5460 (Av)		30.12	54*	-23.88
	11440 (Pk)		53.05	68.23	-15.18
	11440 (Av)		41.54	54	-12.46
	17160 (Pk)		56.60	68.23	-11.63
	17160 (Av)		44.48	54	-9.52
	5720 (Pk)	Horizontal	103.40	-	-
	5720 (Av)		88.62	-	-
	5460 (Pk)		43.15	74*	-30.85
	5460 (Av)		30.08	54*	-23.92
	11440 (Pk)		53.81	68.23	-14.42
	11440 (Av)		41.60	54	-12.40
	17160 (Pk)		55.96	68.23	-12.27
	17160 (Av)		44.52	54	-9.48
5745	5715(Pk)	Vertical	66.65	78.20*	-11.55
	5725(Pk)		72.79	78.20*	-5.41
	5745 (Pk)		104.06	-	-
	5745 (Av)		89.96	-	-
	11490 (Pk)		54.38	68.23	-13.85
	11490 (Av)		42.46	54	-11.54
	17235 (Pk)		57.04	68.23	-11.19
	17235 (Av)		45.41	54	-8.59
	5715(Pk)	Horizontal	66.37	78.20*	-11.83
	5725(Pk)		71.80	78.20*	-6.40
	5745 (Pk)		102.13	-	-
	5745 (Av)		87.73	-	-
	11490 (Pk)		53.92	68.23	-14.31
	11490 (Av)		42.46	54	-11.54
	17235 (Pk)		56.92	68.23	-11.31
	17235 (Av)		45.37	54	-8.63
5825	5825 (Pk)	Vertical	105.79	-	-
	5825 (Av)		91.03	-	-
	5850 (Pk)		65.92	78.20*	-12.28
	5860 (Pk)		61.00	78.20*	-17.20
	11650 (Pk)		54.42	68.23	-13.81
	11650 (Av)		41.94	54	-12.06
	17475 (Pk)		59.17	68.23	-9.06
	17475 (Av)		47.26	54	-6.74
	5825 (Pk)	Horizontal	102.45	-	-
	5825 (Av)		87.60	-	-
	5850 (Pk)		62.99	78.20*	-15.21
	5860 (Pk)		58.76	78.20*	-19.44
	11650 (Pk)		53.08	68.23	-15.15
	11650 (Av)		41.87	54	-12.13
	17475 (Pk)		58.97	68.23	-9.26
	17475 (Av)		47.19	54	-6.81

Note:

* :- Indicate restricted band frequency in 15.205

Pk: Peak Detector; Av: Average Detector

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 146 von 207

Page 146 of 207

Modulation: 802.11n _ HT 20MHz

Data rate: MCS0

Channel Frequency (MHz)	Measured Frequency (MHz)	Antenna Polarization	Emission (dBµV/m)	Limit (dBµV/m)	Margin (dB)
5180	5180 (Pk)	Vertical	96.92	-	-
	5180 (Av)		86.71	-	-
	5150 (Pk)		63.60	74*	-10.40
	5150 (Av)		37.08	54*	-16.92
	10360 (Pk)		51.24	68.23	-16.99
	10360 (Av)		39.32	54	-14.68
	15540 (Pk)		53.14	68.23	-15.09
	15540 (Av)		41.37	54	-12.63
	5180 (Pk)	Horizontal	99.28	-	-
	5180 (Av)		89.68	-	-
	5150 (Pk)		63.27	74*	-10.73
	5150 (Av)		38.82	54*	-15.18
	10360 (Pk)		51.76	68.23	-16.47
	10360 (Av)		39.31	54	-14.69
	15540 (Pk)		52.52	68.23	-15.71
	15540 (Av)		41.20	54	-12.80
5240	5240 (Pk)	Vertical	106.56	-	-
	5240 (Av)		93.64	-	-
	5350 (Pk)		65.58	74*	-8.42
	5350 (Av)		43.12	54*	-10.88
	10480 (Pk)		51.73	68.23	-16.50
	10480 (Av)		39.95	54	-14.05
	15720 (Pk)		53.55	68.23	-14.68
	15720 (Av)		41.18	54	-12.82
	5240 (Pk)	Horizontal	105.54	-	-
	5240 (Av)		92.77	-	-
	5350 (Pk)		64.37	74*	-9.63
	5350 (Av)		41.90	54*	-12.10
	10480 (Pk)		51.25	68.23	-16.98
	10480 (Av)		39.90	54	-14.10
	15720 (Pk)		52.38	68.23	-15.85
	15720 (Av)		41.23	54	-12.77
5260	5260 (Pk)	Vertical	106.90	-	-
	5260 (Av)		93.40	-	-
	5350 (Pk)		67.88	74*	-6.12
	5350 (Av)		45.01	54*	-8.99
	10520 (Pk)		52.27	68.23	-15.96
	10520 (Av)		39.92	54	-14.08
	15780 (Pk)		52.69	68.23	-15.54
	15780 (Av)		40.97	54	-13.03
	5260 (Pk)	Horizontal	106.56	-	-
	5260 (Av)		45.16	-	-
	5350 (Pk)		67.76	74*	-6.24
	5350 (Av)		45.16	54*	-8.84
	10520 (Pk)		51.78	68.23	-16.45
	10520 (Av)		39.95	54	-14.05
	15780 (Pk)		53.10	68.23	-15.13
	15780 (Av)		40.97	54	-13.03

Note:

* :- Indicate restricted band frequency in 15.205

Pk: Peak Detector; Av: Average Detector

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 147 von 207

Page 147 of 207

Channel Frequency (MHz)	Measured Frequency (MHz)	Antenna Polarization	Emission (dBµV/m)	Limit (dBµV/m)	Margin (dB)
5320	5320 (Pk)	Vertical	97.62	-	-
	5320 (Av)		87.74	-	-
	5350 (Pk)		60.23	74*	-13.77
	5350 (Av)		35.39	54*	-18.61
	10640 (Pk)		52.14	68.23	-16.09
	10640 (Av)		40.11	54	-13.89
	15960 (Pk)		53.49	68.23	-14.74
	15960 (Av)		41.68	54	-12.32
	5320 (Pk)	Horizontal	97.71	-	-
	5320 (Av)		88.03	-	-
	5350 (Pk)		58.89	74*	-15.11
	5350 (Av)		34.83	54*	-19.17
	10640 (Pk)		51.77	68.23	-16.46
	10640 (Av)		40.04	54	-13.96
	15960 (Pk)		53.75	68.23	-14.48
	15960 (Av)		41.69	54	-12.31
5500	5500 (Pk)	Vertical	98.75	-	-
	5500 (Av)		89.28	-	-
	5460 (Pk)		54.85	74*	-19.15
	5460 (Av)		33.16	54*	-20.84
	11000 (Pk)		52.76	68.23	-15.47
	11000 (Av)		40.69	54	-13.31
	16500 (Pk)		55.27	68.23	-12.96
	16500 (Av)		43.42	54	-10.58
	5500 (Pk)	Horizontal	99.51	-	-
	5500 (Av)		89.34	-	-
	5460 (Pk)		55.16	74*	-18.84
	5460 (Av)		33.53	54*	-20.47
	11000 (Pk)		53.23	68.23	-15.00
	11000 (Av)		40.67	54	-13.33
	16500 (Pk)		56.05	68.23	-12.18
	16500 (Av)		43.37	54	-10.63
5700	5700 (Pk)	Vertical	98.20	-	-
	5700 (Av)		88.26	-	-
	5460 (Pk)		42.68	74*	-31.32
	5460 (Av)		30.24	54*	-23.76
	11400 (Pk)		53.14	68.23	-15.09
	11400 (Av)		41.55	54	-12.45
	17100 (Pk)		55.31	68.23	-12.92
	17100 (Av)		44.28	54	-9.72
	5700 (Pk)	Horizontal	99.00	-	-
	5700 (Av)		88.67	-	-
	5460 (Pk)		43.14	74*	-30.86
	5460 (Av)		30.36	54*	-23.64
	11400 (Pk)		54.12	68.23	-14.11
	11400 (Av)		41.63	54	-12.37
	17100 (Pk)		56.22	68.23	-12.01
	17100 (Av)		44.33	54	-9.67

Note:

* :- Indicate restricted band frequency in 15.205

Pk: Peak Detector; Av : Average Detector

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 148 von 207

Page 148 of 207

Channel Frequency (MHz)	Measured Frequency (MHz)	Antenna Polarization	Emission (dBµV/m)	Limit (dBµV/m)	Margin (dB)
5720	5720 (Pk)	Vertical	105.10	-	-
	5720 (Av)		94.96	-	-
	5460 (Pk)		43.31	74*	-30.69
	5460 (Av)		30.26	54*	-23.74
	11440 (Pk)		53.47	68.23	-14.76
	11440 (Av)		41.54	54	-12.46
	17160 (Pk)		56.90	68.23	-11.33
	17160 (Av)		44.47	54	-9.53
	5720 (Pk)	Horizontal	105.83	-	-
	5720 (Av)		95.77	-	-
	5460 (Pk)		43.07	74*	-30.93
	5460 (Av)		30.40	54*	-23.60
	11440 (Pk)		53.49	68.23	-14.74
	11440 (Av)		41.57	54	-12.43
	17160 (Pk)		55.97	68.23	-12.26
	17160 (Av)		44.49	54	-9.51
5745	5715(Pk)	Vertical	67.79	-	-10.41
	5725(Pk)		73.16	-	-5.04
	5745 (Pk)		103.21	74*	-
	5745 (Av)		93.61	54*	-
	11490 (Pk)		54.37	68.23	-13.86
	11490 (Av)		42.41	54	-11.59
	17235 (Pk)		57.22	68.23	-11.01
	17235 (Av)		45.36	54	-8.64
	5715(Pk)	Horizontal	69.76	-	-8.44
	5725(Pk)		74.90	-	-3.30
	5745 (Pk)		104.41	74*	-
	5745 (Av)		93.89	54*	-
	11490 (Pk)		54.24	68.23	-13.99
	11490 (Av)		42.46	54	-11.54
	17235 (Pk)		56.83	68.23	-11.40
	17235 (Av)		45.35	54	-8.65
5825	5825 (Pk)	Vertical	106.28	-	-
	5825 (Av)		95.64	-	-
	5850 (Pk)		74.21	74*	-3.99
	5860 (Pk)		67.22	54*	-10.98
	11650 (Pk)		55.19	68.23	-13.04
	11650 (Av)		42.47	54	-11.53
	17475 (Pk)		59.58	68.23	-8.65
	17475 (Av)		47.21	54	-6.79
	5825 (Pk)	Horizontal	106.51	-	-
	5825 (Av)		96.22	-	-
	5850 (Pk)		72.45	74*	-5.75
	5860 (Pk)		67.29	54*	-10.91
	11650 (Pk)		53.83	68.23	-14.40
	11650 (Av)		42.18	54	-11.82
	17475 (Pk)		60.66	68.23	-7.57
	17475 (Av)		47.22	54	-6.78

Note:

* :- Indicate restricted band frequency in 15.205

Pk: Peak Detector; Av: Average Detector

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 149 von 207

Page 149 of 207

Modulation: 802.11n _ HT 20MHz

Data rate: MCS7

Channel Frequency (MHz)	Measured Frequency (MHz)	Antenna Polarization	Emission (dBµV/m)	Limit (dBµV/m)	Margin (dB)
5180	5180 (Pk)	Vertical	101.96	-	-
	5180 (Av)		87.08	-	-
	5150 (Pk)		61.38	74*	-12.62
	5150 (Av)		37.92	54*	-16.08
	10360 (Pk)		51.05	68.23	-17.18
	10360 (Av)		39.26	68.23	-14.74
	15540 (Pk)		53.01	68.23	-15.22
	15540 (Av)		41.36	68.23	-12.64
	5180 (Pk)	Horizontal	101.83	-	-
	5180 (Av)		87.03	-	-
	5150 (Pk)		62.24	74*	-11.76
	5150 (Av)		38.05	54*	-15.95
	10360 (Pk)		51.84	68.23	-16.39
	10360 (Av)		39.40	68.23	-14.60
	15540 (Pk)		53.60	68.23	-14.63
	15540 (Av)		41.42	68.23	-12.58
5240	5240 (Pk)	Vertical	103.55	-	-
	5240 (Av)		87.22	-	-
	5350 (Pk)		47.68	74*	-26.32
	5350 (Av)		31.81	54*	-22.19
	10480 (Pk)		52.04	68.23	-16.19
	10480 (Av)		39.85	68.23	-14.15
	15720 (Pk)		53.11	68.23	-15.12
	15720 (Av)		41.14	68.23	-12.86
	5240 (Pk)	Horizontal	106.61	-	-
	5240 (Av)		91.19	-	-
	5350 (Pk)		49.53	74*	-24.47
	5350 (Av)		33.59	54*	-20.41
	10480 (Pk)		51.45	68.23	-16.78
	10480 (Av)		39.92	68.23	-14.08
	15720 (Pk)		53.58	68.23	-14.65
	15720 (Av)		41.20	68.23	-12.80
5260	5260 (Pk)	Vertical	101.06	-	-
	5260 (Av)		86.31	-	-
	5350 (Pk)		45.12	74*	-28.88
	5350 (Av)		31.41	54*	-22.59
	10520 (Pk)		51.61	68.23	-16.62
	10520 (Av)		39.89	68.23	-14.11
	15780 (Pk)		52.19	68.23	-16.04
	15780 (Av)		40.88	68.23	-13.12
	5260 (Pk)	Horizontal	104.86	-	-
	5260 (Av)		90.07	-	-
	5350 (Pk)		47.74	74*	-26.26
	5350 (Av)		33.26	54*	-20.74
	10520 (Pk)		52.35	68.23	-15.88
	10520 (Av)		39.91	68.23	-14.09
	15780 (Pk)		52.83	68.23	-15.40
	15780 (Av)		40.92	68.23	-13.08

Note:

* :- Indicate restricted band frequency in 15.205

Pk: Peak Detector; Av: Average Detector

Prüfbericht - Nr.:

Test Report No.:

IN23VER9 001

Seite 150 von 207

Page 150 of 207

Channel Frequency (MHz)	Measured Frequency (MHz)	Antenna Polarization	Emission (dBµV/m)	Limit (dBµV/m)	Margin (dB)
5320	5320 (Pk)	Vertical	97.42	-	-
	5320 (Av)		83.00	-	-
	5350 (Pk)		59.04	74*	-14.96
	5350 (Av)		32.47	54*	-21.53
	10640 (Pk)		52.19	68.23	-16.04
	10640 (Av)		40.04	68.23	-13.96
	15960 (Pk)		53.62	68.23	-14.61
	15960 (Av)		41.72	68.23	-12.28
	5320 (Pk)	Horizontal	100.49	-	-
	5320 (Av)		85.79	-	-
	5350 (Pk)		60.36	74*	-13.64
	5350 (Av)		34.16	54*	-19.84
	10640 (Pk)		52.28	68.23	-15.95
	10640 (Av)		40.05	68.23	-13.95
	15960 (Pk)		53.35	68.23	-14.88
	15960 (Av)		41.69	68.23	-12.31
5500	5500 (Pk)	Vertical	97.58	-	-
	5500 (Av)		83.19	-	-
	5460 (Pk)		50.88	74*	-23.12
	5460 (Av)		32.52	54*	-21.48
	11000 (Pk)		52.99	68.23	-15.24
	11000 (Av)		40.64	68.23	-13.36
	16500 (Pk)		55.17	68.23	-13.06
	16500 (Av)		43.37	68.23	-10.63
	5500 (Pk)	Horizontal	100.37	-	-
	5500 (Av)		85.51	-	-
	5460 (Pk)		52.29	74*	-21.71
	5460 (Av)		33.11	54*	-20.89
	11000 (Pk)		52.15	68.23	-16.08
	11000 (Av)		40.67	68.23	-13.33
	16500 (Pk)		55.31	68.23	-12.92
	16500 (Av)		43.38	68.23	-10.62
5700	5700 (Pk)	Vertical	98.08	-	-
	5700 (Av)		83.48	-	-
	5460 (Pk)		43.34	74*	-30.66
	5460 (Av)		30.03	54*	-23.97
	11400 (Pk)		53.98	68.23	-14.25
	11400 (Av)		41.59	68.23	-12.41
	17100 (Pk)		57.08	68.23	-11.15
	17100 (Av)		44.30	68.23	-9.70
	5700 (Pk)	Horizontal	99.16	-	-
	5700 (Av)		84.19	-	-
	5460 (Pk)		43.88	74*	-30.12
	5460 (Av)		30.07	54*	-23.93
	11400 (Pk)		53.59	68.23	-14.64
	11400 (Av)		41.66	68.23	-12.34
	17100 (Pk)		55.77	68.23	-12.46
	17100 (Av)		44.25	68.23	-9.75

Note:

* :- Indicate restricted band frequency in 15.205

Pk: Peak Detector; Av: Average Detector