Equipment



FCC Test Report

: AC450 WLAN Band Extender

Brand Name : EDIMAX

Model No. : EW-7288AC / GAP-288AC

FCC ID : NDD9572881411

Standard : 47 CFR FCC Part 15.407

Operating Band : 5150 MHz - 5250 MHz

5725 MHz - 5850 MHz

FCC Classification : UNII

Applicant : EDIMAX TECHNOLOGY CO., LTD.
Manufacturer No.3, Wu-Chuan 3rd Road,

Wu-Ku Industrial Park, New Taipei City,

Taiwan

Function : ☐ Outdoor AP; ☐ Indoor AP; ☐ Fixed P2P AP

Portable Client

The product sample received on Jun. 24, 2014 and completely tested on Jul. 17, 2014. We, SPORTON, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.10-2009 and shown compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC., the test report shall not be reproduced except in full.

Reviewed by:

Wayne Hsu V Assistant Manager

Testing Laboratory
1190

SPORTON INTERNATIONAL INC.

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: Rev. 01

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Summary of Test Result

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Conformance Test Specifications						
Report Clause	' IDSCRIPTION					
1.1.2	15.203	Antenna Requirement	Complied			
3.1	15.207	AC Power-line Conducted Emissions	Complied			
3.2	15.407(a)	Emission Bandwidth	Complied			
3.3	15.407(a)	RF Output Power (Maximum Conducted Output Power)	Complied			
3.4	15.407(a)	Peak Power Spectral Density	Complied			
3.5	15.407(b)	Transmitter Bandedge Emissions	Complied			
3.6	15.407(b)	Transmitter Unwanted Emissions	Complied			
3.7	15.407(g)	Frequency Stability	Complied			

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Revision History

Report No.: FR462302AN

Report No.	Version	Description	Issued Date
FR462302AN	Rev. 01	Initial issue of report	Aug. 06, 2014

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General Description 1

1.1 Information

1.1.1 RF General Information

RF General Information						
Frequency Range (MHz)	IEEE Std. 802.11	Ch. Freq. (MHz)	Channel Number	Transmit Chains (N _{TX})	RF Output Power (dBm)	
5150-5250	а	5180-5240	36-48 [4]	1	17.35	
5725-5850		5745-5825	149-165 [5]	1	20.09	
5150-5250	n (HT20) /	5180-5240	36-48 [4]	1 / 1	17.31 / 17.25	
5725-5850	ac (VHT20)	5745-5825	149-165 [5]	1 / 1	20.13 / 20.54	
5150-5250	n (HT40) /	5190-5230	38-46 [2]	1 / 1	17.25 / 17.26	
5725-5850	ac (VHT40)	5755-5795	151-159 [2]	1 / 1	17.92 / 17.57	
5150-5250	ac (VHT80)	5210	48 [1]	1	16.78	
5725-5850		5775	155 [1]	1	14.67	

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Note 1: RF output power specifies that Maximum Conducted Output Power.

Note 2: 802.11a/n uses a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM modulation.

Note 3: 802.11ac uses a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM, 256QAM modulation.

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1.1.2 Antenna Information

	Antenna Category				
\boxtimes	External antenna (antenna permanently attached)				
	☐ Temporary RF connector provided				
	No temporary RF connector provided Transmit chains bypass antenna and soldered temporary RF connector provided for connected measurement. In case of conducted measurements the transmitter shall be connected to the measuring equipment via a suitable attenuator and correct for all losses in the RF path.				

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	Antenna General Information				
No.	No. Ant. Cat. Ant. Type Gain (dBi)				
1	External	DIPOLE	2.80		

1.1.3 Type of EUT

	Identify EUT			
EU	EUT Serial Number N/A			
Pre	sentation of Equipment	☐ Production; ☐ Pre-Production; ☒ Prototype		
		Type of EUT		
\boxtimes	Stand-alone			
	Combined (EUT where the radio part is fully integrated within another device)			
	Combined Equipment - Brand Name / Model No.:			
	Plug-in radio (EUT intended for a variety of host systems)			
	Host System - Brand Name / Model No.:			
	Other:			

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1.1.4 Test Signal Duty Cycle

	Operated Mode for Worst Duty Cycle				
	Operated normally mode for worst duty cycle				
\boxtimes	Operated test mode for worst duty cycle				
Test Signal Duty Cycle (x) Power Duty Factor [dB] – (10 log 1/x)					
\boxtimes	91.67% - IEEE 802.11a	0.38			
\boxtimes	92.08% - IEEE 802.11n (HT20)	0.36			
\boxtimes	85.46% - IEEE 802.11n (HT40)	0.68			
\boxtimes	92.08% - IEEE 802.11ac (VHT20)	0.36			
\boxtimes	85.46% - IEEE 802.11ac (VHT40)	0.68			
\boxtimes	79.99% - IEEE 802.11ac (VHT80)	0.97			

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1.1.5 EUT Operational Condition

Supply Voltage		□ DC	
Type of DC Source	☐ Externa DC supply		
Test Voltage			
Test Climatic	⊠ Tnom (20°C)		☐ Tmin (-20°C)

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1.2 Accessories and Support Equipment

Accessories Information					
Adapter	Brand Name	DVE	Model Name	DSC-5PFC-05 FUS 050060	
Adapter	Power Rating	I/P: 100 - 240 Vac, 0.2A	A, O/P: 5 Vdc,	== 0.6 A	
USB Cable	Brand Name	EXTENDING	Model Name	-	
USB Cable	Signal Line	0.9 meter, shielded cab	e, w/o ferrite o	ore	

Reminder: Regarding to more detail and other information, please refer to user manual.

	Support Equipment - AC Conduction					
No.	No. Equipment Brand Name Model Name FCC ID					
1	Notebook	DELL	E5530	DoC		

	Support Equipment - RF Conducted						
No.	No. Equipment Brand Name Model Name FCC ID						
1	Notebook	DELL	E5500	DoC			

	Support Equipment - Radiated Emission							
No.	. Equipment Brand Name Model Name FCC ID							
1	1 Notebook DELL PP25L DoC							

1.3 Testing Applied Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- 47 CFR FCC Part 15
- ANSI C63.10-2009
- FCC KDB 789033 D02 v01
- FCC KDB 644545 D01 v01r01
- FCC KDB 644545 D02 v01
- FCC KDB 662911 v02r01
- FCC-14-30A1-UNII

1.4 Testing Location Information

	Testing Location								
HWA YA ADD: No. 52, Hwa Ya 1 st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C.									
TEL: 886-3-327-3456 FAX: 886-3-327-0973									
	Test Condition			Test Site No.	Test Engineer	Test Environment			
AC Conduction				CO04-HY	Zeus	22°C / 55%			
RF Conducted				TH06-HY	Cain	23.6°C / 67.2%			
Radiated Emission				03CH03-HY	Leo	24.9°C / 53%			

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1.5 Measurement Uncertainty

ISO/IEC 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report. The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor (k=2)

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Me	easurement Uncertainty			
Test Item		Uncertainty		
AC power-line conducted emissions		±2.3 dB		
Emission bandwidth, 26dB bandwidth		±1.4 %		
RF output power, conducted		±0.6 dB		
Power density, conducted		±0.8 dB		
Unwanted emissions, conducted	9 – 150 kHz	±0.4 dB		
	0.15 – 30 MHz	±0.4 dB		
	30 – 1000 MHz	±0.5 dB		
	1 – 18 GHz	±0.7 dB		
	18 – 40 GHz	±0.8 dB		
	40 – 200 GHz	N/A		
All emissions, radiated	9 – 150 kHz	±2.5 dB		
	0.15 – 30 MHz	±2.3 dB		
	30 – 1000 MHz	±2.6 dB		
	1 – 18 GHz	±3.6 dB		
	18 – 40 GHz	±3.8 dB		
	40 – 200 GHz	N/A		
Temperature		±0.8 °C		
Humidity		±3 %		
DC and low frequency voltages		±3 %		
Time		±1.4 %		
Duty Cycle		±1.4 %		

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2 Test Configuration of EUT

2.1 The Worst Case Modulation Configuration

Worst Modulation Used for Conformance Testing										
Modulation Mode	Modulation Mode Transmit Chains (N _{TX}) Data Rate / MCS Worst Data Rate / M									
11a	1	6-54Mbps	6 Mbps							
HT20	HT20 1		M0							
HT40	1	M0-7	MO							
VHT20	1	M0-8	MO							
VHT40	VHT40 1		T40 1 M0-9		MO					
VHT80	1	M0-9	M0							

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2.2 The Worst Case Power Setting Parameter

The W	The Worst Case Power Setting Parameter (5150-5250MHz band)								
Test Software Version		RTL819x 2.3_ 13/11/21							
		Test Frequency (MHz)							
Modulation Mode	N _{TX}		NCB: 20MH	z	NCB:	40MHz	NCB: 80MHz		
		5180	5200	5240	5190	5230	5210		
11a	1	63	63	63	-	-	-		
HT20	1	63	63	63	-	-	-		
HT40	1	-	-	-	63	63	-		
VHT20	1	63	63	63	-	-	-		
VHT40	1	-	-	-	63	63	-		
VHT80	1	-	-	-	-	-	63		

The W	orst (Case Powe	r Setting P	arameter (57	25-5850MH	z band)			
Test Software Version	Software Version RTL819x 2.3_ 13/11/21								
		Test Frequency (MHz)							
Modulation Mode	N_{TX}		NCB: 20M	łz	NCB:	40MHz	NCB: 80MHz		
		5745	5785	5825	5755	5795	5775		
11a	1	40	61	40	-	-	-		
HT20	1	40	61	40	-	-	-		
HT40	1	-	-	-	39	46	-		
VHT20	1	42	63	38	-	-	-		
VHT40	1	-	-	-	39	46	-		
VHT80	1	-	-	-	-	-	38		

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2.3 The Worst Case Measurement Configuration

The Worst Case Mode for Following Conformance Tests					
Tests Item AC power-line conducted emissions					
Condition	AC power-line conducted measurement for line and neutral Test Voltage: 120Vac / 60Hz				
Operating Mode	Operating Mode Description				
1	Adapter Mode & Transmitter				
2	USB Mode & Transmitter				
	FORD AND A COLUMN				

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Note 1: Frequency 5150 ~ 5250 MHz, operating mode 1 is the worst case and it was record in this test report.

Note 2: Frequency 5725 ~ 5850 MHz, operating mode 2 is the worst case and it was record in this test report.

Th	The Worst Case Mode for Following Conformance Tests					
Tests Item	RF Output Power, Peak Power Spectral Density, Emission Bandwidth, Peak Excursion, Transmitter Conducted Unwanted Emissions Transmitter Conducted Bandedge Emissions					
Test Condition	Conducted measurement at transmit chains					
Modulation Mode 11a, HT20, HT40, VHT20, VHT40, VHT80						

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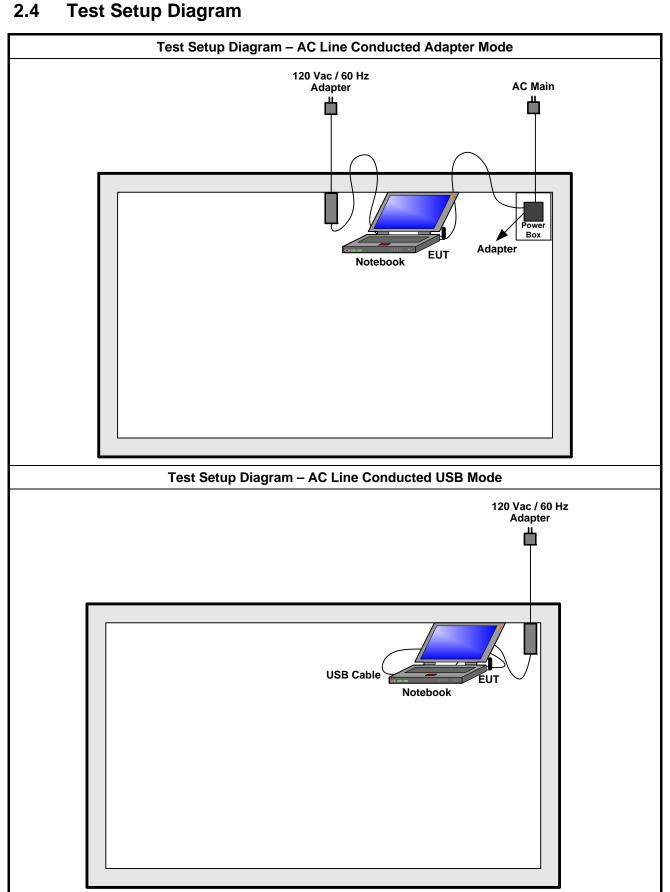


Т	he Worst Case Mode for Fo	ollowing Conformance Tes	sts				
Tests Item	Transmitter Radiated Unwanted Emissions Transmitter Radiated Bandedge Emissions						
Test Condition	Radiated measurement If EUT consist of multiple antenna assembly (multiple antenna are used in EUT regardless of spatial multiplexing MIMO configuration), the radiated test should be performed with highest antenna gain of each antenna type.						
	⊠ EUT will be placed in □ □	fixed position. The planes is	s Z.				
User Position	EUT will be placed in mobile position and operating multiple positions. EUT shall be performed three orthogonal planes.						
	EUT will be a hand-held or body-worn battery-powered devices and operating multiple positions. EUT shall be performed two or three orthogonal planes.						
	Adapter Mode & Transmitter						
	USB Mode & Transmitter						
Operating Mode (Below 1GHz)	Note 1: Frequency 5150 ~ 5250 MHz, operating mode 1 is the worst case and it was record in this test report. Note 2: Frequency 5725 ~ 5850 MHz, operating mode 2 is the worst case and it was record in this test report.						
Operating Mode (Above 1GHZ)	Adapter Mode & Transmitter						
Modulation Mode	11a, HT20, HT40, VHT20, VHT40, VHT80						
	X Plane	Y Plane	Z Plane				
Orthogonal Planes of EUT							

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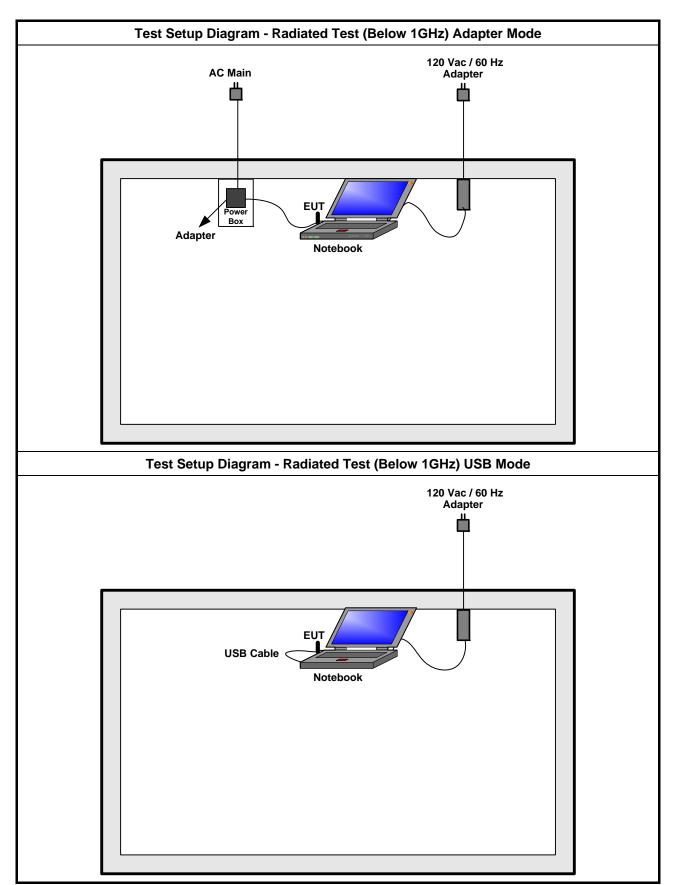


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Test Setup Diagram - Radiated Test (Above 1GHz)

120 Vac / 60 Hz
Adapter

Adapter

Notebook

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3 Transmitter Test Result

3.1 AC Power-line Conducted Emissions

3.1.1 AC Power-line Conducted Emissions Limit

AC Power-line Conducted Emissions Limit							
Frequency Emission (MHz) Quasi-Peak Average							
0.15-0.5	66 - 56 *	56 - 46 *					
0.5-5	56	46					
5-30	60	50					

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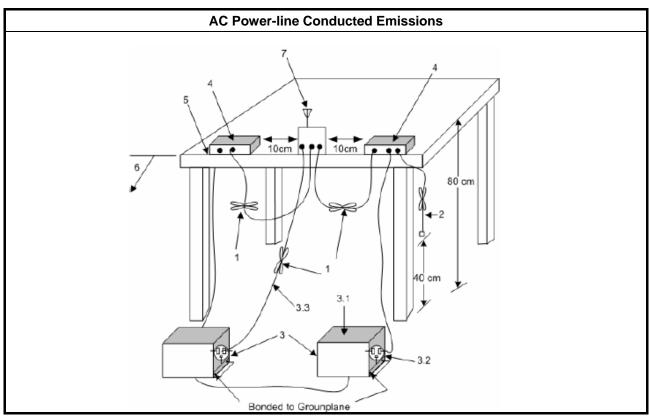
3.1.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

3.1.3 Test Procedures

	Test Method
\boxtimes	Refer as ANSI C63.10-2009, clause 6.2 for AC power-line conducted emissions.

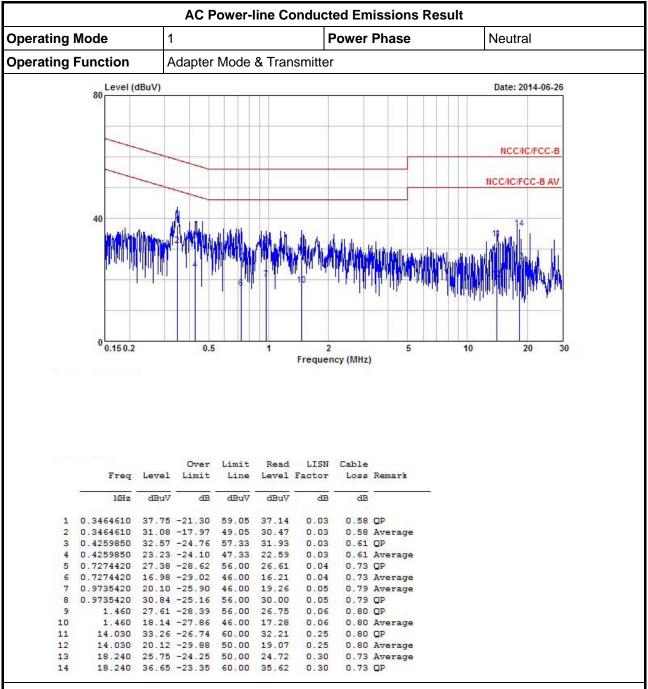
3.1.4 Test Setup



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3.1.5 Test Result of AC Power-line Conducted Emissions



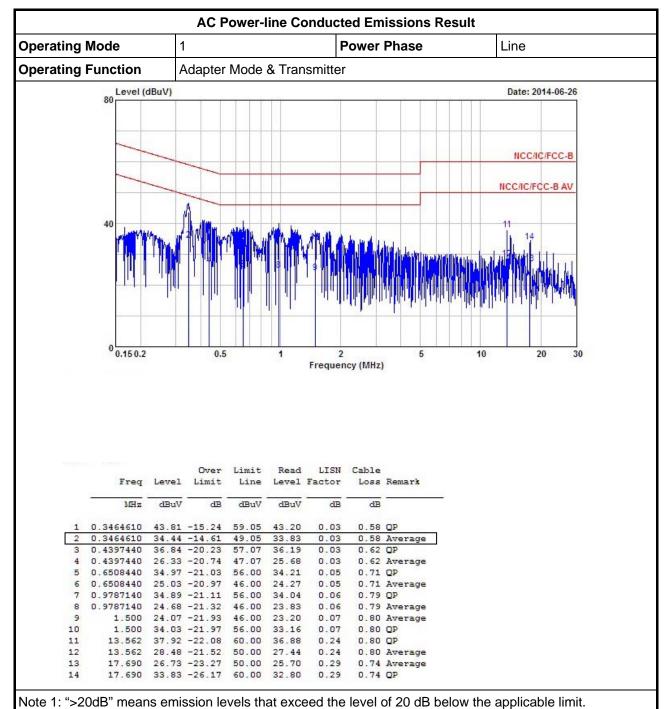
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Note 1: ">20dB" means emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found emissions (No emissions were detected.)

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Note 2: "N/F" means Nothing Found emissions (No emissions were detected.)

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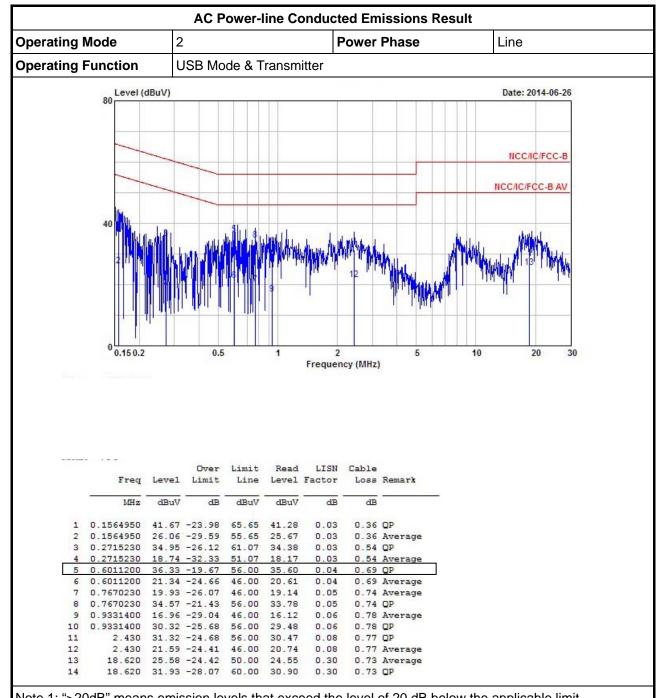
	Freq	Level	Limit	Line	Level	Factor	Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.1606960	29.02	-26.41	55.43	28.63	0.02	0.37	Average
2	0.1606960	40.06	-25.37	65.43	39.67	0.02	0.37	QP
3	0.6405800	16.60	-29.40	46.00	15.86	0.04	0.70	Average
4	0.6405800	34.62	-21.38	56.00	33.88	0.04	0.70	QP
5	0.7670230	34.71	-21.29	56.00	33.93	0.04	0.74	QP
6	0.7670230	19.81	-26.19	46.00	19.03	0.04	0.74	Average
7	0.9581900	20.22	-25.78	46.00	19.38	0.05	0.79	Average
8	0.9581900	32.02	-23.98	56.00	31.18	0.05	0.79	QP
9	2.190	22.08	-23.92	46.00	21.23	0.06	0.79	Average
10	2.190	33.70	-22.30	56.00	32.85	0.06	0.79	QP
11	2.710	31.62	-24.38	56.00	30.79	0.07	0.76	QP
12	2.710	22.99	-23.01	46.00	22.16	0.07	0.76	Average
13	18.230	26.71	-23.29	50.00	25.68	0.30	0.73	Average
14	18.230	36.22	-23.78	60.00	35.19	0.30	0.73	QP

Note 1: ">20dB" means emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found emissions (No emissions were detected.)

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Note 1: ">20dB" means emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found emissions (No emissions were detected.)

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3.2 Emission Bandwidth

3.2.1 Emission Bandwidth Limit

	Emission Bandwidth Limit							
UN	JNII Devices							
\boxtimes	For the 5.15-5.25 GHz band, N/A							
	For the 5.25-5.35 GHz band, the maximum conducted output power shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in MHz.							
	For the 5.47-5.725 GHz band, the maximum conducted output power shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in MHz.							
\boxtimes	For the 5.725-5.85 GHz band, 6 dB emission bandwidth ≥ 500kHz.							

3.2.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

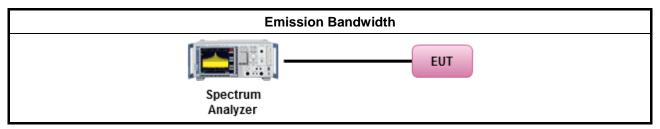
3.2.3 Test Procedures

	Test Method									
\boxtimes	For	For the emission bandwidth shall be measured using one of the options below:								
	\boxtimes	Ref	er as FCC KDB 789033 D02 v01, clause C for EBW and clause D for OBW measurement.							
		Ref	er as ANSI C63.10, clause 6.9.1 for occupied bandwidth testing.							
		Ref	er as IC RSS-Gen, clause 4.6 for bandwidth testing.							
\boxtimes	For	cond	ucted measurement.							
	\boxtimes	The	EUT supports single transmit chain and measurements performed on this transmit chain.							
		The	EUT supports diversity transmitting and the results on transmit chain port 1 is the worst case.							
		The	EUT supports multiple transmit chains using options given below:							
			Option 1: Multiple transmit chains measurements need to be performed on one of the active transmit chains (antenna outputs). All measurement had be performed on transmit chains 1.							
			Option 2: Multiple transmit chains measurements need to be performed on each transmit chains individually (antenna outputs). All measurement had be performed on all transmit chains.							

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3.2.4 Test Setup



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3.2.5 Test Result of Emission Bandwidth

	UNII Emission Bandwidth Result (5150-5250MHz band)						
Condit	ion		Emission Bandwidth (MHz)				
Modulation Mode	N _{TX}	Freq. (MHz)	99% Bandwidth	26dB Bandwidth			
11a	1	5180	16.49	19.67			
11a	1	5200	16.69	21.67			
11a	1	5240	16.84	21.60			
HT20	1	5180	17.71	20.70			
HT20	1	5200	17.76	21.77			
HT20	1	5240	17.84	21.12			
HT40	1	5190	36.78	47.64			
HT40	1	5230	36.70	52.04			
VHT20	1	5180	17.69	20.67			
VHT20	1	5200	17.84	20.72			
VHT20	1	5240	17.69	20.35			
VHT40	1	5190	36.70	48.20			
VHT40	1	5230	36.74	54.56			
VHT80	1	5210	75.72	84.40			
Resu	lt		Con	nplied			

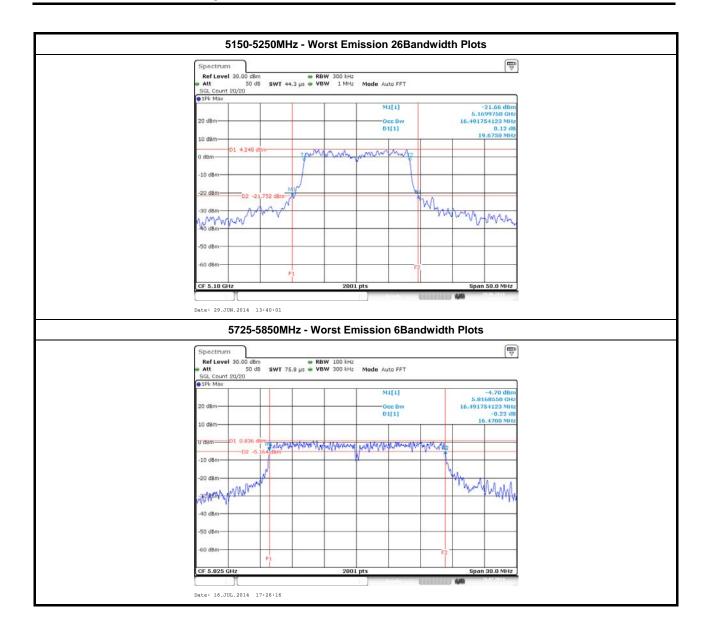
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UNII Emission Bandwidth Result (5725-5850MHz band)						
Condit	ion		Emission Bandwidth (MHz)			
Modulation Mode	N _{TX}	Freq. (MHz)	99% Bandwidth	6dB Bandwidth		
11a	1	5745	16.52	16.54		
11a	1	5785	25.09	16.51		
11a	1	5825	16.49	16.47		
HT20	1	5745	17.64	17.61		
HT20	1	5785	25.86	17.67		
HT20	1	5825	17.67	17.61		
HT40	1	5755	36.22	36.00		
HT40	1	5795	36.38	33.88		
VHT20	1	5745	17.66	17.76		
VHT20	1	5785	25.50	17.70		
VHT20	1	5825	17.64	17.61		
VHT40	1	5755	36.18	35.36		
VHT40	1	5795	37.74	35.68		
VHT80	1	5775	75.56	75.20		
Limit			-	≥ 500 kHz		
Resu	ılt		Com	plied		

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3.3 RF Output Power

3.3.1 RF Output Power Limit

	Maximum Conducted Output Power Limit						
UNI	JNII Devices						
\boxtimes	For	the 5.15-5.25 GHz band:					
		Outdoor AP: the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W. If G_{TX} > 6 dBi, then P_{Out} = 30 - (G_{TX} - 6). e.i.r.p. at any elevation angle above 30 degrees \leq 125mW [21dBm]					
	\boxtimes	Indoor AP: the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W. If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)$					
		Point-to-point AP: the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W If $G_{TX} > 23$ dBi, then $P_{Out} = 30 - (G_{TX} - 23)$.					
		Mobile or Portable Client: the maximum conducted output power (P_{Out}) shall not exceed the lesser of 250 mW. If $G_{TX} > 6$ dBi, then $P_{Out} = 24 - (G_{TX} - 6)$.					
	250	the 5.25-5.35 GHz band, the maximum conducted output power (P_{Out}) shall not exceed the lesser of mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in MHz. If $G_{TX} > 6$ dBi, then = $24 - (G_{TX} - 6)$.					
	of 2	the 5.47-5.725 GHz band, the maximum conducted output power (P_{Out}) shall not exceed the lesser 50 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in MHz. If $G_{TX} > 6$ dBi, then = $24 - (G_{TX} - 6)$.					
\boxtimes	For	the 5.725-5.85 GHz band:					
		Point-to-multipoint systems (P2M): the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W. If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)$.					
		Point-to-point systems (P2P): the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W.					
		aximum conducted output power in dBm, e maximum transmitting antenna directional gain in dBi.					

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3.3.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

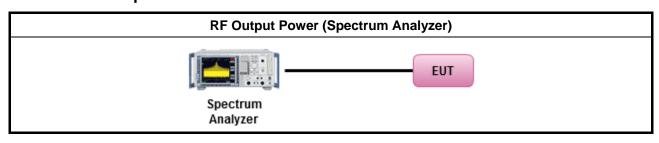
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3.3.3 Test Procedures

		Test Method
\boxtimes	Max	imum Conducted Output Power
	[duty	/ cycle ≥ 98% or external video / power trigger]
		Refer as FCC KDB 789033 D02 v01, clause E Method SA-1 (spectral trace averaging).
		Refer as FCC KDB 789033 D02 v01, clause E Method SA-1 Alt. (RMS detection with slow sweep speed)
	duty	cycle < 98% and average over on/off periods with duty factor
	\boxtimes	Refer as FCC KDB 789033 D02 v01, clause E Method SA-2 (spectral trace averaging).
		Refer as FCC KDB 789033 D02 v01, clause E Method SA-2 Alt. (RMS detection with slow sweep speed)
	Wide	eband RF power meter and average over on/off periods with duty factor
		Refer as FCC KDB 789033 D02 v01, clause E Method PM (using an RF average power meter).
\boxtimes	For	conducted measurement.
	\boxtimes	The EUT supports single transmit chain and measurements performed on this transmit chain.
		The EUT supports diversity transmitting and the results on transmit chain port 1 is the worst case.
		The EUT supports multiple transmit chains using options given below: Refer as FCC KDB 662911, In-band power measurements. Using the measure-and-sum approach, measured all transmit ports individually. Sum the power (in linear power units e.g., mW) of all ports for each individual sample and save them.
		If multiple transmit chains, EIRP calculation could be following as methods: $P_{total} = P_1 + P_2 + \ldots + P_n$ (calculated in linear unit [mW] and transfer to log unit [dBm]) $EIRP_{total} = P_{total} + DG$

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3.3.4 Test Setup



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3.3.5 Test Result of Maximum Conducted Output Power

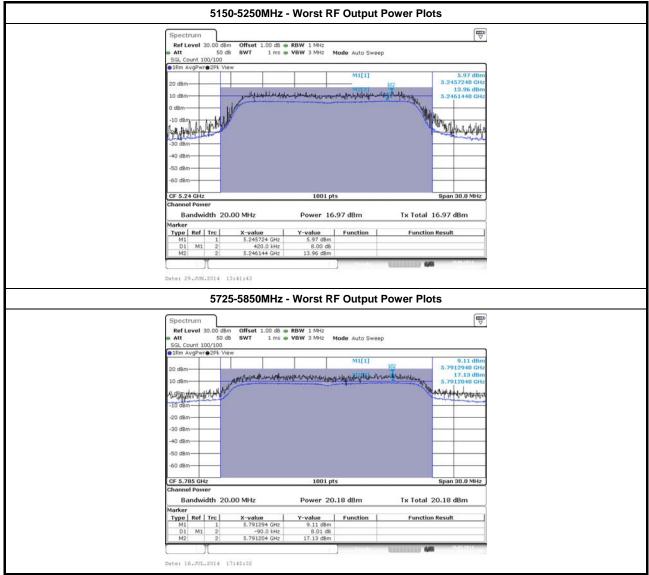
	Maximum Conducted Output Power (5150-5250MHz band)						
Modulation Mode	N _{TX}	Freq. (MHz)	Output Power (dBm)	Antenna Gain (dBi)	Power Limit		
11a	1	5180	16.21	2.80	30.00		
11a	1	5200	16.81	2.80	30.00		
11a	1	5240	17.35	2.80	30.00		
HT20	1	5180	16.57	2.80	30.00		
HT20	1	5200	17.06	2.80	30.00		
HT20	1	5240	17.31	2.80	30.00		
HT40	1	5190	16.73	2.80	30.00		
HT40	1	5230	17.25	2.80	30.00		
VHT20	1	5180	16.57	2.80	30.00		
VHT20	1	5200	16.73	2.80	30.00		
VHT20	1	5240	17.25	2.80	30.00		
VHT40	1	5190	16.88	2.80	30.00		
VHT40	1	5230	17.26	2.80	30.00		
VHT80	1	5210	16.78	2.80	30.00		
Resi	ult	_		Complied			

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	Maximum Conducted Output Power (5725-5850MHz band)						
Modulation Mode	N _{TX}	Freq. (MHz)	Output Power (dBm)	Antenna Gain (dBi)	Power Limit		
11a	1	5745	15.36	2.80	30.00		
11a	1	5785	20.09	2.80	30.00		
11a	1	5825	16.88	2.80	30.00		
HT20	1	5745	14.79	2.80	30.00		
HT20	1	5785	20.13	2.80	30.00		
HT20	1	5825	16.58	2.80	30.00		
HT40	1	5755	14.56	2.80	30.00		
HT40	1	5795	17.92	2.80	30.00		
VHT20	1	5745	16.16	2.80	30.00		
VHT20	1	5785	20.54	2.80	30.00		
VHT20	1	5825	15.64	2.80	30.00		
VHT40	1	5755	14.65	2.80	30.00		
VHT40	1	5795	17.57	2.80	30.00		
VHT80	1	5775	14.67	2.80	30.00		
Resu	ılt			Complied			

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Note 1: RF Output Power Plots w/o Duty Factor

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3.4 Peak Power Spectral Density

3.4.1 Peak Power Spectral Density Limit

		Peak Power Spectral Density Limit							
UNI	I Dev	vices							
\boxtimes	For the 5.15-5.25 GHz band:								
		Outdoor AP: the peak power spectral density (PPSD) shall not exceed the lesser of 17dBm/MHz. If $G_{TX} > 6$ dBi, then $P_{Out} = 17 - (G_{TX} - 6)$.							
	\boxtimes	Indoor AP: the peak power spectral density (PPSD) shall not exceed the lesser of 17dBm/MHz. If $G_{TX} > 6$ dBi, then $P_{Out} = 17 - (G_{TX} - 6)$.							
		Point-to-point AP: the peak power spectral density (PPSD) shall not exceed the lesser of 17dBm/MHz. If $G_{TX} > 23$ dBi, then $P_{Out} = 17 - (G_{TX} - 23)$.							
		Mobile or Portable Client: the peak power spectral density (PPSD) \leq 11 dBm/MHz. If $G_{TX} > 6$ dBi, then PPSD= 11 $-$ ($G_{TX} - 6$)							
		the 5.25-5.35 GHz band, the peak power spectral density (PPSD) \leq 11 dBm/MHz. If $G_{TX} > 6$ dBi, a PPSD= 11 $-(G_{TX} - 6)$.							
		the 5.47-5.725 GHz band, the peak power spectral density (PPSD) \leq 11 dBm/MHz. If $G_{TX} > 6$ dBi, a PPSD= 11 – ($G_{TX} - 6$).							
\boxtimes	For	the 5.725-5.85 GHz band:							
		Point-to-multipoint systems (P2M): the peak power spectral density (PPSD) \leq 30 dBm/500kHz. If $G_{TX} > 6$ dBi, then PPSD= $30 - (G_{TX} - 6)$.							
		Point-to-point systems (P2P): the peak power spectral density (PPSD) ≤ 30 dBm/500kHz.							
pow	PPSD = peak power spectral density that he same method as used to determine the conducted output lower shall be used to determine the power spectral density. And power spectral density in dBm/MHz G_{TX} = the maximum transmitting antenna directional gain in dBi.								

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3.4.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

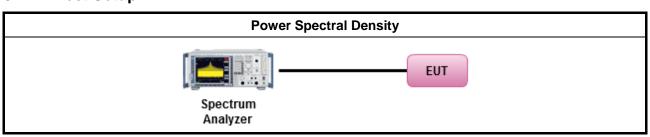
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3.4.3 Test Procedures

		Test Method							
\boxtimes	outp func	eak power spectral density procedures that the same method as used to determine the conducted utput power shall be used to determine the peak power spectral density and use the peak search unction on the spectrum analyzer to find the peak of the spectrum. For the peak power spectral density hall be measured using below options:							
		Refer as FCC KDB 789033 D02 v01, F)5) power spectral density can be measured using resolution bandwidths $<$ 1 MHz provided that the results are integrated over 1 MHz bandwidth							
	[duty	cycle ≥ 98% or external video / power trigger]							
		Refer as FCC KDB 789033 D02 v01, clause E Method SA-1 (spectral trace averaging).							
		Refer as FCC KDB 789033 D02 v01, clause E Method SA-1 Alt. (RMS detection with slow sweep speed) $$							
	duty	cycle < 98% and average over on/off periods with duty factor							
	\boxtimes	Refer as FCC KDB 789033 D02 v01, clause E Method SA-2 (spectral trace averaging).							
		Refer as FCC KDB 789033 D02 v01, clause E Method SA-2 Alt. (RMS detection with slow sweep speed) $$							
\boxtimes	For	conducted measurement.							
	\boxtimes	The EUT supports single transmit chain and measurements performed on this transmit chain.							
		The EUT supports diversity transmitting and the results on transmit chain port 1 is the worst case.							
		The EUT supports multiple transmit chains using options given below:							
		Option 1: Measure and sum the spectra across the outputs. Refer as FCC KDB 662911, In-band power measurements. Using the measure-and-sum approach, measured all transmit ports individually. Sum the power (in linear power units e.g., mW) of all ports for each individual sample and save them.							
		Option 2: Measure and add 10 log(N) dB, where N is the number of transmit chains. Refer as FCC KDB 662911, In-band power spectral density (PSD). Performed at each transmit chains and each transmit chains shall be compared with the limit have been reduced with 10 log(N). Or each transmit chains shall be add 10 log(N) to compared with the limit.							
		If multiple transmit chains, EIRP PPSD calculation could be following as methods: $ PPSD_{total} = PPSD_1 + PPSD_2 + \ldots + PPSD_n \\ (calculated in linear unit [mW] and transfer to log unit [dBm]) \\ EIRP_{total} = PPSD_{total} + DG $							
		Each individually PPSD plots refer as test report clause 3.3.5 with each individually PPSD plots.							

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3.4.4 Test Setup



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3.4.5 Test Result of Peak Power Spectral Density

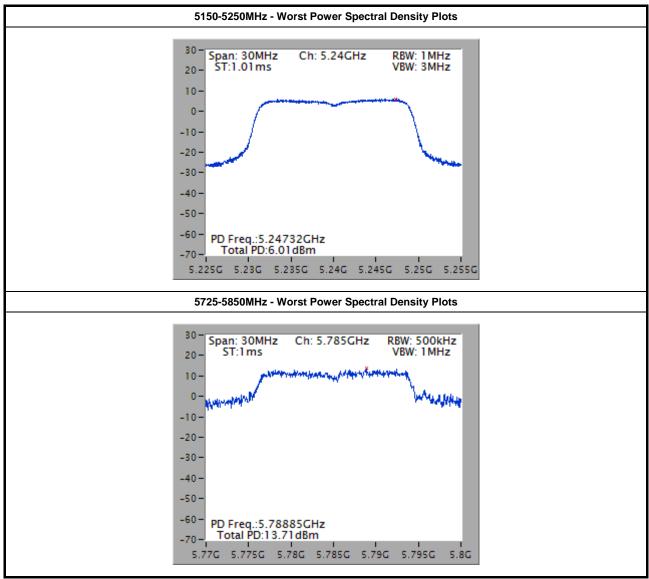
	Peak Power Spectral Density Result (5150-5250MHz band)						
Modulation Mode	N _{TX}	Freq. (MHz)	Peak Power Spectral Density (dBm)	PSD Limit	Antenna Gain (dBi)		
11a	1	5180	5.66	17.00	2.80		
11a	1	5200	6.02	17.00	2.80		
11a	1	5240	6.35	17.00	2.80		
HT20	1	5180	5.42	17.00	2.80		
HT20	1	5200	6.05	17.00	2.80		
HT20	1	5240	6.37	17.00	2.80		
HT40	1	5190	2.62	17.00	2.80		
HT40	1	5230	3.16	17.00	2.80		
VHT20	1	5180	5.51	17.00	2.80		
VHT20	1	5200	5.55	17.00	2.80		
VHT20	1	5240	6.35	17.00	2.80		
VHT40	1	5190	2.68	17.00	2.80		
VHT40	1	5230	3.24	17.00	2.80		
VHT80	1	5210	0.87	17.00	2.80		
Resu	ılt			Complied			

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	Peak Power Spectral Density Result (5725-5850MHz band)						
Modulation Mode	N _{TX}	Freq. (MHz)	Peak Power Spectral Density (dBm)	PSD Limit (500kHz)	Antenna Gain (dBi)		
11a	1	5745	8.95	30.00	2.80		
11a	1	5785	13.68	30.00	2.80		
11a	1	5825	9.92	30.00	2.80		
HT20	1	5745	7.79	30.00	2.80		
HT20	1	5785	13.61	30.00	2.80		
HT20	1	5825	9.41	30.00	2.80		
HT40	1	5755	4.53	30.00	2.80		
HT40	1	5795	8.21	30.00	2.80		
VHT20	1	5745	9.01	30.00	2.80		
VHT20	1	5785	14.07	30.00	2.80		
VHT20	1	5825	8.45	30.00	2.80		
VHT40	1	5755	4.57	30.00	2.80		
VHT40	1	5795	6.95	30.00	2.80		
VHT80	1	5775	5.24	30.00	2.80		
Resu	ılt	•		Complied	•		

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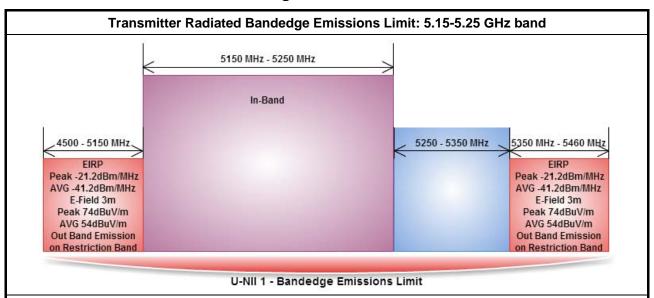
Note 1: Power Density Plots w/o Duty Factor

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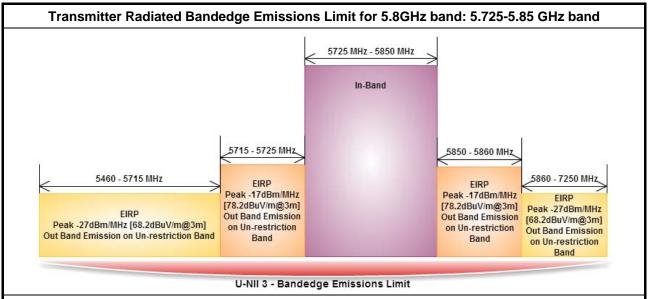
3.5 Transmitter Bandedge Emissions

3.5.1 Transmitter Radiated Bandedge Emissions Limit



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Refer as FCC KDB 789033 D02 v01, G)2)c)(i) specifying that if a non-restricted-band out-of-band emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm or -17 dBm peak emission limit. Reason for change: to ensure that emission requirements in the non-restricted bands are not more stringent than those in the restricted bands.



Refer as FCC KDB 789033 D02 v01, G)2)c)(i) specifying that if a non-restricted-band out-of-band emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm or -17 dBm peak emission limit. Reason for change: to ensure that emission requirements in the non-restricted bands are not more stringent than those in the restricted bands.

3.5.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

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3.5.3 Test Procedures

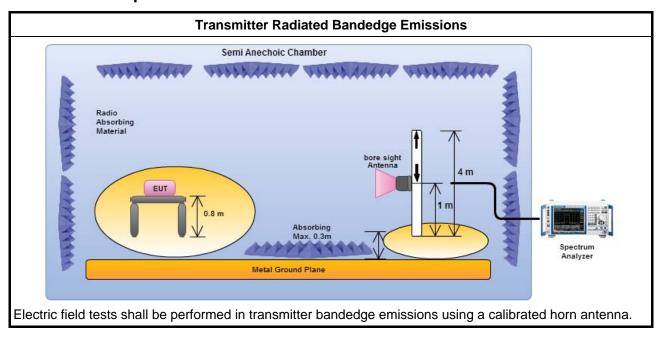
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Test Method The average emission levels shall be measured in [duty cycle ≥ 98 or duty factor]. Refer as ANSI C63.10, clause 6.9.2.2 bandedge testing shall be performed at the lowest frequency channel and highest frequency channel within the allowed operating band. If EUT operate in adjacent contiguous bands, bandedge testing performed at the lowest frequency channel at lower-band and highest frequency channel at higher-band. Transmitter in-band emissions will consist of adjacent contiguous bands (e.g., IEEE 802.11ac VHT160 The lowest frequency channel at lower-band and highest frequency channel at higher-band in-band emissions will consist of two adjacent contiguous bands.) Operating in 5.15-5.25 GHz band (lower-band) and 5.25-5.35 GHz band (higher-band). Operating in 5.47-5.725 GHz band (lower-band) and 5.725-5.85 GHz band (higher-band). If EUT operate in individual non-contiguous bands, bandedge testing performed at the lowest frequency channel and highest frequency channel within lower-band and higher-band. (e.g., (e.g., IEEE 802.11ac VHT160) Operating in 5.25-5.35 GHz band (lower-band) and 5.47-5.725 GHz band (higher-band). Operating in 5.15-5.25 GHz band (lower-band) and 5.725-5.85 GHz band (higher-band). \boxtimes For the transmitter unwanted emissions shall be measured using following options below: Refer as FCC KDB 789033 D02 v01, clause G)2) for unwanted emissions into non-restricted bands. \boxtimes Refer as FCC KDB 789033 D02 v01, clause G)1) for unwanted emissions into restricted bands. Refer as FCC KDB 789033 D02 v01, G)6) Method AD (Trace Averaging). Refer as FCC KDB 789033 D02 v01, G)6) Method VB (Reduced VBW). Refer as ANSI C63.10, clause 4.2.3.2.3 (Reduced VBW). VBW ≥ 1/T, where T is pulse time. Refer as ANSI C63.10, clause 4.2.3.2.4 average value of pulsed emissions. Refer as FCC KDB 789033 D02 v01, clause G)5) measurement procedure peak limit. Refer as ANSI C63.10, clause 4.2.3.2.2 measurement procedure peak limit. X For the transmitter bandedge emissions shall be measured using following options below: Refer as FCC KDB 789033 D02 v01, clause G)3)d) for narrower resolution bandwidth (100kHz) using the band power and summing the spectral levels (i.e., 1 MHz). \boxtimes Refer as ANSI C63.10, clause 6.9.2 for band-edge testing. Refer as ANSI C63.10, clause 6.9.3 for marker-delta method for band-edge measurements. For radiated measurement, refer as ANSI C63.10, clause 6.6. Test distance is 3m. Measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse of linear distance for field-strength measurements, inverse of linear distance-squared for power-density measurements). Measurements in the bandedge are typically made at a closer distance 3m, because the instrumentation noise floor is typically close to the radiated emission limit.

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3.5.4 Test Setup



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3.5.5 Transmitter Radiated Bandedge Emissions (with Antenna)

Modulation Mode	N _{TX}	Freq. (MHz)	Measure Distance (m)	Freq. (MHz) PK	Level (dBuV/m) PK	Limit (dBuV/m) PK	Freq. (MHz) AV	Level (dBuV/m) AV	Limit (dBuV/m) AV	Pol.
11a	1	5180	3	5147.20	63.86	74	5150.00	48.29	54	V
11a	1	5240	3	5363.40	63.39	74	5399.70	50.15	54	V
HT20	1	5180	3	5145.80	65.19	74	5150.00	48.18	54	V
HT20	1	5240	3	5399.40	61.26	74	5395.80	47.63	54	V
HT40	1	5190	3	5146.42	68.81	74	5149.94	52.34	54	V
HT40	1	5230	3	5383.80	62.47	74	5390.40	49.27	54	V
VHT20	1	5180	3	5146.60	65.76	74	5149.90	49.00	54	V
VHT20	1	5240	3	5397.00	59.55	74	5360.40	48.80	54	V
VHT40	1	5190	3	5146.86	69.51	74	5149.50	52.19	54	V
VHT40	1	5230	3	5383.20	62.22	74	5390.40	49.98	54	V
VHT80	1	5210	3	5148.60	68.73	74	5150.00	52.89	54	V
VHT80	1	5210	3	5387.40	60.38	74	5370.60	48.51	54	V

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Modulation Mode	N _{TX}	Freq. (MHz)	Measure Distance (m)	Freq. (MHz) PK	Level (dBuV/m) PK	Limit (dBuV/m) PK	Pol.
11a	1	5745	3	5724.55	76.97	78.2	V
11a	1	5825	3	5850.18	71.20	78.2	V
HT20	1	5745	3	5724.97	74.59	78.2	V
HT20	1	5825	3	5850.18	72.59	78.2	V
HT40	1	5755	3	5723.84	70.50	78.2	V
HT40	1	5795	3	5850.10	68.59	78.2	V
VHT20	1	5745	3	5724.76	77.56	78.2	V
VHT20	1	5825	3	5850.07	71.86	78.2	V
VHT40	1	5755	3	5723.84	70.26	78.2	V
VHT40	1	5795	3	5851.60	68.63	78.2	V
VHT80	1	5775	3	5723.98	67.86	78.2	V

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3.6 Transmitter Unwanted Emissions

3.6.1 Transmitter Radiated Unwanted Emissions Limit

Unwanted emiss	sions below 1 GHz and re	stricted band emissions a	bove 1GHz limit
Frequency Range (MHz)	Field Strength (uV/m)	Field Strength (dBuV/m)	Measure Distance (m)
0.009~0.490	2400/F(kHz)	48.5 - 13.8	300
0.490~1.705	24000/F(kHz)	33.8 - 23	30
1.705~30.0	30	29	30
30~88	100	40	3
88~216	150	43.5	3
216~960	200	46	3
Above 960	500	54	3

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Note 1: Test distance for frequencies at or above 30 MHz, measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse of linear distance for field-strength measurements, inverse of linear distance-squared for power-density measurements).

Note 2: Test distance for frequencies at below 30 MHz, measurements may be performed at a distance closer than the EUT limit distance; however, an attempt should be made to avoid making measurements in the near field. When performing measurements below 30 MHz at a closer distance than the limit distance, the results shall be extrapolated to the specified distance by either making measurements at a minimum of two or more distances on at least one radial to determine the proper extrapolation factor or by using the square of an inverse linear distance extrapolation factor (40 dB/decade). The test report shall specify the extrapolation method used to determine compliance of the EUT.

	Un-restricted band emissions above 1GHz Limit					
Operating Band Limit						
5.15 - 5.25 GHz	e.i.r.p27 dBm [68.2 dBuV/m@3m]					
5.725 - 5.85 GHz	5.715 5.725 GHz: e.i.r.p17 dBm [78.2 dBuV/m@3m] 5.85 5.86 GHz: e.i.r.p17 dBm [78.2 dBuV/m@3m] Other un-restricted band: e.i.r.p27 dBm [68.2 dBuV/m@3m]					

Note 1: Measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse of linear distance for field-strength measurements, inverse of linear distance-squared for power-density measurements).

3.6.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

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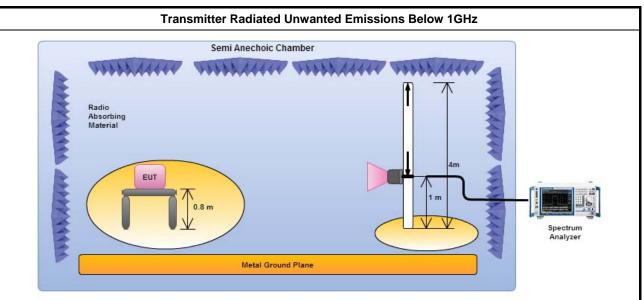
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3.6.3 Test Procedures

	Test Method
perfe equi abov are be e dista	surements may be performed at a distance other than the limit distance provided they are not ormed in the near field and the emissions to be measured can be detected by the measurement pment. Measurements shall not be performed at a distance greater than 30 m for frequencies we 30 MHz, unless it can be further demonstrated that measurements at a distance of 30 m or less impractical. When performing measurements at a distance other than that specified, the results shall extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse of linear ance for field-strength measurements, inverse of linear distance-squared for power-density surements).
The	average emission levels shall be measured in [duty cycle ≥ 98 or duty factor].
For	the transmitter unwanted emissions shall be measured using following options below:
\boxtimes	Refer as FCC KDB 789033 D02 v01, clause G)2) for unwanted emissions into non-restricted bands.
\boxtimes	Refer as FCC KDB 789033 D02 v01, clause G)1) for unwanted emissions into restricted bands.
	Refer as FCC KDB 789033 D02 v01, G)6) Method AD (Trace Averaging).
	Refer as FCC KDB 789033 D02 v01, G)6) Method VB (Reduced VBW).
	Refer as ANSI C63.10, clause 4.2.3.2.3 (Reduced VBW). VBW ≥ 1/T, where T is pulse time.
	Refer as ANSI C63.10, clause 4.2.3.2.4 average value of pulsed emissions.
	Refer as FCC KDB 789033 D02 v01, clause G)5) measurement procedure peak limit.
	Refer as ANSI C63.10, clause 4.2.3.2.2 measurement procedure peak limit.
For	radiated measurement.
	Refer as ANSI C63.10, clause 6.4 for radiated emissions below 30 MHz and test distance is 3m.
	Refer as ANSI C63.10, clause 6.5 for radiated emissions 30 MHz to 1 GHz and test distance is 3m.
\boxtimes	Refer as ANSI C63.10, clause 6.6 for radiated emissions above 1GHz. For 1 GHz to 5 GHz, test distance is 3m; For 5 GHz to 40 GHz, test distance is 3m.
The	any unwanted emissions level shall not exceed the fundamental emission level.
	mplitude of spurious emissions that are attenuated by more than 20 dB below the permissible value no need to be reported.

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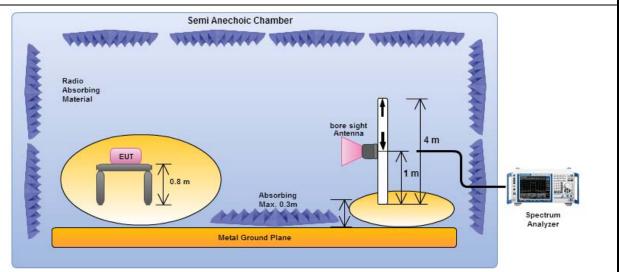
3.6.4 Test Setup



Report No.: FR462302AN

Magnetic field tests shall be performed in the frequency range of 9 kHz to 30 MHz using a calibrated loop antenna. Electric field tests shall be performed in the frequency range of 30 MHz to 1000 MHz using a calibrated bi-log antenna.

Transmitter Radiated Unwanted Emissions Above 1GHz



Electric field tests shall be performed in the frequency range of 1 GHz to 10th harmonic of highest fundamental frequency or 40 GHz using a calibrated horn antenna.

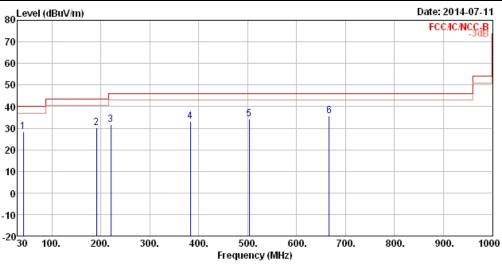
3.6.5 Transmitter Radiated Unwanted Emissions-with Antenna (Below 30MHz)

All amplitude of spurious emissions that are attenuated by more than 20 dB below the permissible value has no need to be reported.

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3.6.6 Transmitter Radiated Unwanted Emissions (Below 1GHz)





	Freq	Le∨el	0∨er Limit			Antenna Factor				A/Pos	T/Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	41.64	28.39	-11.61	40.00	42.73	11.95	1.04	27.33	Peak		
2	191.02	30.16	-13.34	43.50	45.90	9.13	2.27	27.14	Peak		
3	220.12	31.59	-14.41	46.00	46.61	9.58	2.44	27.04	Peak		
4	383.08	33.15	-12.85	46.00	42.11	14.98	3.27	27.21	Peak		
5	503.36	34.37	-11.63	46.00	41.38	17.16	3.79	27.96	Peak		
6	666.32	35.76	-10.24	46.00	40.37	18.75	4.42	27.78	Peak		

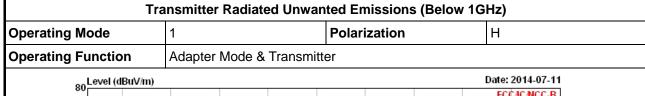
Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

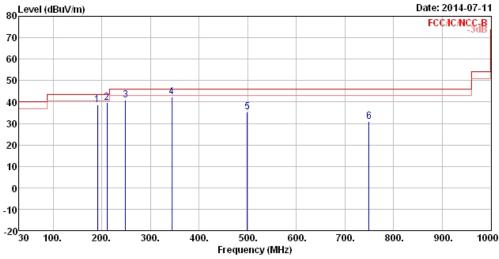
Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical).

Note 4: No level of unwanted emissions exceeds the level of the fundamental emission.

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	Freq	Le∨el	0∨er Limit			Antenna Factor				A/Pos	T/Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	191.02	38.74	-4.76	43.50	54.48	9.13	2.27	27.14	Peak		
2	210.42	39.85	-3.65	43.50	55.09	9.45	2.39	27.08	Peak		
3	249.22	40.89	-5.11	46.00	52.56	12.64	2.60	26.91	Peak		
4	344.28	42.31	-3.69	46.00	52.02	14.16	3.09	26.96	Peak		
5	499.48	35.33	-10.67	46.00	42.38	17.14	3.77	27.96	Peak		
6	749.74	31.03	- 14. 97	46.00	34.54	19.54	4.66	27.71	Peak		

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical).

Note 4: No level of unwanted emissions exceeds the level of the fundamental emission.

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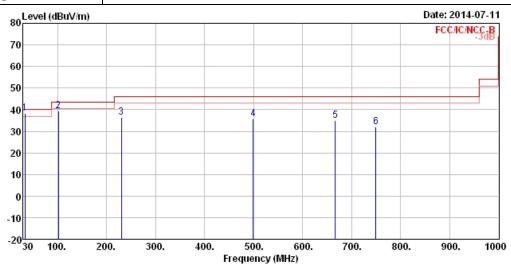


Transmitter Radiated Unwanted Emissions (Below 1GHz)

Operating Mode 2 Polarization V

Operating Function USB Mode & Transmitter

Report No.: FR462302AN



	Freq	Level	0∨er Limit			Antenna Factor				A/Pos	T/Pos
_	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1 !	33.88	38.27	-1.73	40.00	47.96	16.67	0.92	27.28	OP		
2	101.78	39.56	-3.94	43.50	53.92	11.22	1.61	27.19	Peak		
3	229.82	36.50	-9.50	46.00	50.52	10.48	2.50	27.00	Peak		
4	499.48	35.84	-10.16	46.00	42.89	17.14	3.77	27.96	Peak		
5	666.32	34.89	-11.11	46.00	39.50	18.75	4.42	27.78	Peak		
6	749.74	31.96	- 14.04	46.00	35.47	19.54	4.66	27.71	Peak		

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

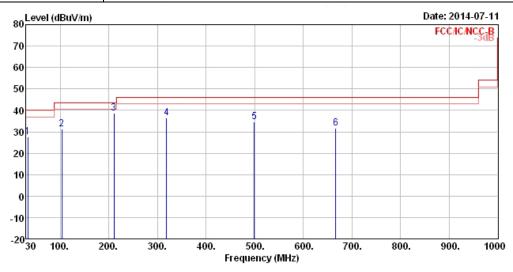
Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical).

Note 4: No level of unwanted emissions exceeds the level of the fundamental emission.

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	Freq	Le∨el	0∨er Limit	Limit Line		Antenna Factor				A/Pos	T/Pos
-	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	33.88	27.45	-12.55	40.00	37 .1 4	16.67	0.92	27.28	Peak		
2	103.72	31.22	-12.28	43.50	45.23	11.55	1.63	27.19	Peak		
3	210.42	38.50	-5.00	43.50	53.74	9.45	2.39	27.08	Peak		
4	319.06	36.59	-9.41	46.00	46.75	13.66	2.98	26.80	Peak		
5	499.48	34.79	-11.21	46.00	41.84	17.14	3.77	27.96	Peak		
6	666.32	31.54	-14.46	46.00	36.15	18.75	4.42	27.78	Peak		

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

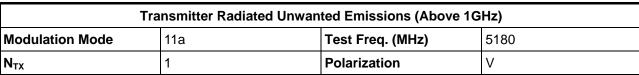
Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical).

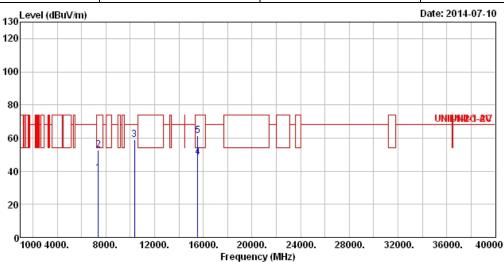
Note 4: No level of unwanted emissions exceeds the level of the fundamental emission.

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.6.7 Transmitter Radiated Unwanted Emissions (Above 1GHz) for 5150-5250MHz

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	Freq	Level		Limit Line						A/Pos	T/Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	7380.00	39.00	- 15 . 00	54.00	28.32	36.03	7.34	32.69	Average	0	0
2	7380.00	52.66	-21.34	74.00	41.98	36.03	7.34	32.69	Peak	0	0
3	10360.00	59.05	-9.15	68.20	44.83	38.07	8.92	32.77	Peak	0	0
4	15540.00	48.58	-5.42	54.00	31.32	37.87	11.59	32.20	Average	0	0
5	15540.00	61.18	-12.82	74.00	43.92	37.87	11.59	32.20	Peak	0	0

- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
- Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

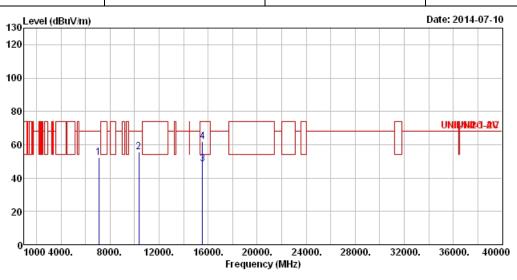
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Transmitter Radiated Unwanted Emissions (Above 1GHz)

Modulation Mode 11a Test Freq. (MHz) 5180

N_{TX} 1 Polarization H

Report No.: FR462302AN



			0∨er	Limit	ReadA	Antenna	Cable	Preamp		A/Pos	T/Pos
	Freq	Le∨el	Limit	Line	Le∨el	Factor	Loss	Factor	Remark		
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		Cm	deg
1	7076.00	52.39	-15.81	68.20	42.53	35.35	7.11	32.60	Peak	Ø	0
2	10360.00	55.63	-12.57	68.20	41.41	38.07	8.92	32.77	Peak	0	0
3	15540.00	48.61	-5.39	54.00	31.35	37.87	11.59	32.20	Average	0	0
4	15540.00	62.10	-11.90	74.00	44.84	37.87	11.59	32.20	Peak	0	0

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

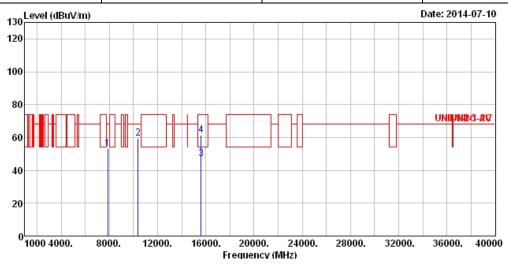
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.

Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

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Tra	nsmitter Radiated Unwan	ted Emissions (Above 1G	Hz)					
Modulation Mode	11a	Test Freq. (MHz)	5200					
N _{TX} 1 Polarization V								



			0∨er	Limit	Read	Antenna	Cable	Preamp		A/Pos	T/Pos	
	Freq	Le∨el	Limit	Line	Le∨el	Factor	Loss	Factor	Remark			
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		Cm	deg	
1	7880.00	53.09	- 15 . 11	68.20	41.35	36.45	8.07	32.78	Peak	0	0	
2	10400.00	59.25	-8.95	68.20	44.96	38.08	8.94	32.73	Peak	0	0	
3	15600.00	47.17	-6.83	54.00	29.98	37.82	11.59	32.22	A∨erage	0	0	
4	15600.00	61.56	-12.44	74.00	44.37	37.82	11.59	32.22	Peak	0	a	

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

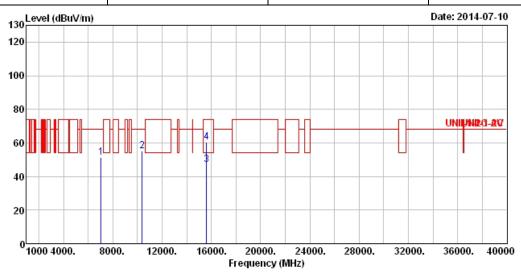
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.

Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

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Tra	nsmitter Radiated Unwan	ted Emissions (Above 1G	Hz)							
Modulation Mode	11a	Test Freq. (MHz)	5200							
N_{TX}	N _{TX} 1 Polarization H									



			0∨er	Limit	ReadA	ntenna	Cable	Preamp		A/Pos	T/Pos
	Freq	Le∨el	Limit	Line	Le∨el	Factor	Loss	Factor	Remark		
	MHz	dBuV/m	dB	dBuV/m	dBu∀	dB/m	dB	dB		cm	deg
1	7060.00	51.33	- 16.8 7	68.20	41.54	35.31	7.08	32.60	Peak	0	0
2	10400.00	55.34	-12.86	68.20	41.05	38.08	8.94	32.73	Peak	0	0
3	15600.00	47.06	-6.94	54.00	29.87	37.82	11.59	32.22	Average	0	0
4	15600.00	60.40	-13.60	74.00	43.21	37.82	11.59	32.22	Peak	0	0

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.

Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

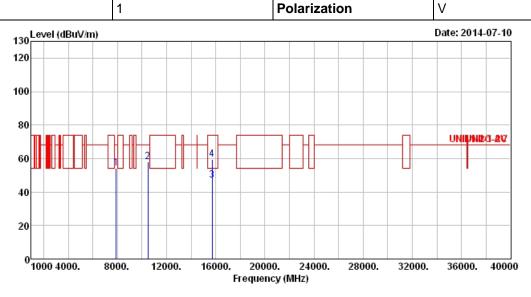
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Transmitter Radiated Unwanted Emissions (Above 1GHz)

Modulation Mode 11a Test Freq. (MHz) 5240

N_{TX} 1 Polarization V

Report No.: FR462302AN



			0∨er	Limit	Read/	Antenna	Cable	Preamp		A/Pos	T/Pos	
	Freq	Le∨el	Limit	Line	Le∨el	Factor	Loss	Factor	Remark			
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		Cm	deg	
1	7916.00	54.16	-14.04	68.20	42.33	36.47	8.14	32.78	Peak	0	0	
2	10480.00	58.28	-9.92	68.20	43.86	38.10	8.99	32.67	Peak	0	0	
3	15720.00	46.89	-7.11	54.00	29.83	37.72	11.59	32.25	Average	0	0	
4	15720.00	59.45	-14.55	74.00	42.39	37.72	11.59	32.25	Peak	0	0	

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

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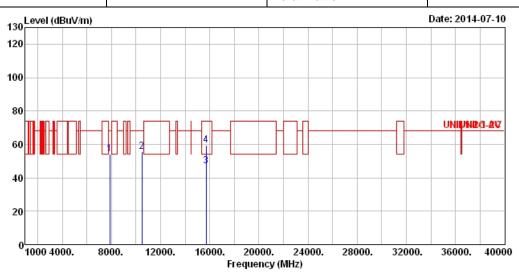
Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.

Т	ransmitter Radiated Unwar	nted Emissions (Above 1G	iHz)
Modulation Mode	11a	Test Freq. (MHz)	5240
N _{TX}	1	Polarization	Н



	Freq	Level		Limit Line						A/Pos	T/Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		CIII	deg
1	7884.00	54.31	-13.89	68.20	42.50	36.45	8.14	32.78	Peak	0	0
2	10480.00	55.80	-12.40	68.20	41.38	38.10	8.99	32.67	Peak	0	0
3	15720.00	46.89	-7.11	54.00	29.83	37.72	11.59	32.25	A∨erage	0	0
4	15720.00	59.64	-14.36	74.00	42.58	37.72	11.59	32.25	Peak	0	0

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

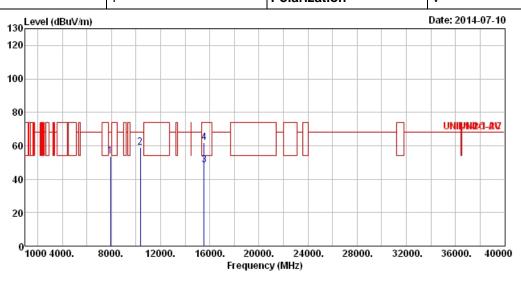
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.

Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

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Transmitter Radiated Unwanted Emissions (Above 1GHz)										
Modulation Mode	HT20	Test Freq. (MHz)	5180							
N _{TV}	1	Polarization	V							



			0∨er	Limit	ReadA	∖ntenna	Cable	Preamp		A/Pos	T/Pos
	Freq	Le∨el	Limit	Line	Le∨el	Factor	Loss	Factor	Remark		
	MHz	dBuV/m	dB	dBuV/m	dBu∀	dB/m	dB	dB		cm	deg
1	7924.00	53.50	- 14. 70	68.20	41.61	36.47	8.21	32.79	Peak	0	0
2	10360.00	58.80	-9.40	68.20	44.58	38.07	8.92	32.77	Peak	0	0
3	15540.00	48.62	-5.38	54.00	31.36	37.87	11.59	32.20	A∨erage	0	0
4	15540.00	62.10	-11.90	74.00	44.84	37.87	11.59	32.20	Peak	0	0

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

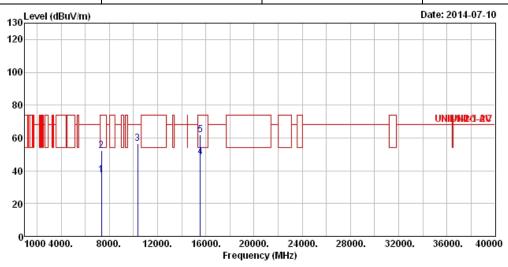
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.

Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

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Tra	Transmitter Radiated Unwanted Emissions (Above 1GHz)										
Modulation Mode	HT20	Test Freq. (MHz)	5180								
N _{TX}	1	Polarization	Н								



	Freq	Le∨el	O∨er Limit	Limit Line		Antenna Factor				A/Pos	T/Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB			deg
1	7334.00	37.57	-16.43	54.00	27.00	35.96	7.28	32.67	Average	0	0
2	7334.00	52.23	-21.77	74.00	41.66	35.96	7.28	32.67	Peak	0	0
3	10360.00	56.43	-11.77	68.20	42.21	38.07	8.92	32.77	Peak	0	0
4	15540.00	48.69	-5.31	54.00	31.43	37.87	11.59	32.20	Average	0	0
5	15540 00	62 09	-11 91	74 00	44 83	37 87	11 59	32 20	Peak	9	9

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.

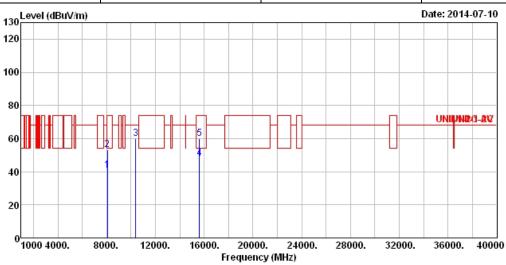
Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

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Transmitter Radiated Unwanted Emissions (Above 1GHz)									
Modulation Mode	HT20	Test Freq. (MHz)	5200						
N _{TX}	1	Polarization	V						

Report No.: FR462302AN



			0∨er	Limit	ReadA	∖ntenna	Cable	Preamp		A/Pos	T/Pos
	Freq	Le∨el	Limit	Line	Le∨el	Factor	Loss	Factor	Remark		
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	8068.00	40.95	-13.05	54.00	28.90	36.61	8.24	32.80	A∨erage	0	0
2	8068.00	53.40	-20.60	74.00	41.35	36.61	8.24	32.80	Peak	0	0
3	10400.00	60.12	-8.08	68.20	45.83	38.08	8.94	32.73	Peak	0	0
4	15600.00	48. 1 3	-5.87	54.00	30.94	37.82	11.59	32.22	Average	0	0
5	15600.00	60.04	-13.96	74.00	42.85	37.82	11.59	32.22	Peak	0	0

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.

Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

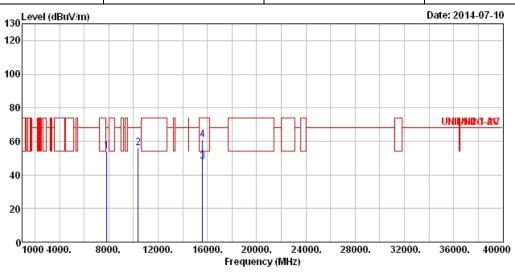
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Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Tra	Transmitter Radiated Unwanted Emissions (Above 1GHz)										
Modulation Mode	HT20	Test Freq. (MHz)	5200								
N _{TX}	1	Polarization	Н								



			0∨er	Limit	Read/	∖ntenna	Cable	Preamp		A/Pos	T/Pos
	Freq	Le∨el	Limit	Line	Le∨el	Factor	Loss	Factor	Remark		
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB			deg
1	7852.00	54.33	-13.87	68.20	42.60	36.44	8.07	32.78	Peak	0	0
2	10400.00	56.26	-11.94	68.20	41.97	38.08	8.94	32.73	Peak	0	0
3	15600.00	48.05	-5.95	54.00	30.86	37.82	11.59	32.22	Average	0	0
4	15600.00	61.10	-12.90	74.00	43.91	37.82	11.59	32.22	Peak	0	0

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

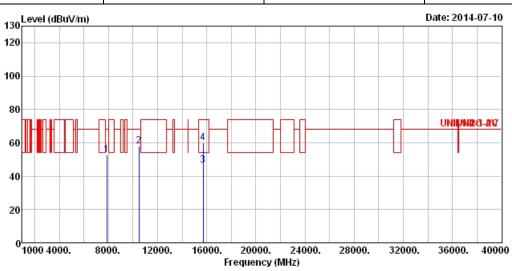
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.

Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

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Transmitter Radiated Unwanted Emissions (Above 1GHz)										
Modulation Mode	HT20	Test Freq. (MHz)	5240							
N _{TX}	1	Polarization	V							



			0∨er	Limit	ReadA	htenna	Cable	Preamp		A/Pos	T/Pos	
	Freq	Le∨el	Limit	Line	Le∨el	Factor	Loss	Factor	Remark			
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		Cm	deg	
1	7860.00	52.97	- 15.23	68.20	41.23	36.45	8.07	32.78	Peak	0	0	
2	10480.00	58.00	-10.20	68.20	43.58	38.10	8.99	32.67	Peak	0	0	
3	15720.00	46.72	-7.28	54.00	29.66	37.72	11.59	32.25	A∨erage	0	0	
4	15720.00	59.73	-14.27	74.00	42.67	37.72	11.59	32.25	Peak	0	0	

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.

Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

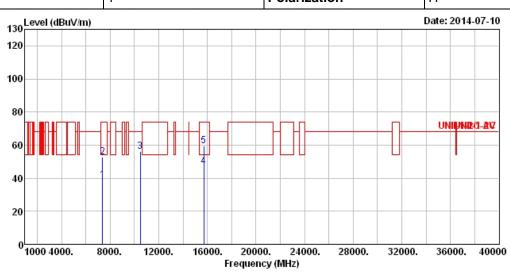
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Transmitter Radiated Unwanted Emissions (Above 1GHz)

Modulation Mode HT20 Test Freq. (MHz) 5240

N_{TX} 1 Polarization H

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			0∨er	Limit	ReadA	Antenna	Cable	Preamp		A/Pos	T/Pos
	Freq	Le∨el	Limit	Line	Le∨el	Factor	Loss	Factor	Remark		
	MHZ	dBuV/m	qB	dBuV/m	dBu∀	dB/m	dB	dB		cm	deg
1	7396.00	39 08	- 14 92	54 00	28 36	36 97	7 3/1	32 69	Average	0	0
2	7396.00								_	0	0
3	10480.00							32.67		0	0
4	15720.00									0	0
5										0	-
5	15720.00	59.41	-14.59	/4.00	42.35	3/./2	11.59	32.25	Peak	0	0

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.

Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

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Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

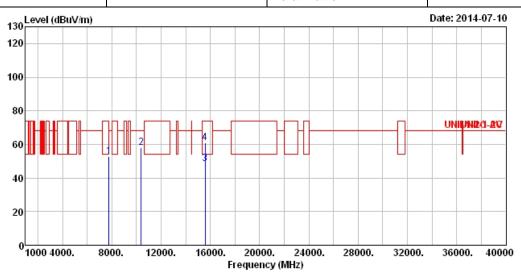
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Transmitter Radiated Unwanted Emissions (Above 1GHz)

Modulation Mode HT40 Test Freq. (MHz) 5190

N_{TX} 1 Polarization V

Report No.: FR462302AN



			0∨er	Limit	Read/	htenna	Cable	Preamp		A/Pos	T/Pos
	Freq	Le∨el	Limit	Line	Le∨el	Factor	Loss	Factor	Remark		
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB			deg
1	7760.00	52.94	- 15.26	68.20	41.43	36.41	7.86	32.76	Peak	0	Ø
2	10380.00	57.87	-10.33	68.20	43.60	38.08	8.94	32.75	Peak	0	0
3	15570.00	48.54	-5.46	54.00	31.31	37.84	11.59	32.20	A∨erage	0	0
4	15570.00	61.11	-12.89	74.00	43.88	37.84	11.59	32.20	Peak	0	0

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.

Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

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Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

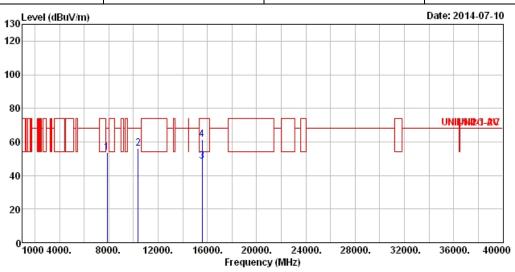
Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.



Transmitter Radiated Unwanted Emissions (Above 1GHz)										
Modulation Mode	Modulation Mode HT40 Test Freq. (MHz) 5190									
N _{TX}	1	Polarization	Н							

Report No.: FR462302AN



	Freq	Le∨el				Antenna Factor				A/Pos	T/Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	7876.00	53.64	-14.56	68.20	41.90	36.45	8.07	32.78	Peak	Ø	Ø
2	10380.00	55.96	-12.24	68.20	41.69	38.08	8.94	32.75	Peak	0	0
3	15570.00	48.64	-5.36	54.00	31.41	37.84	11.59	32.20	Average	0	0
4	15570 00	61 56	- 12 44	74 99	44 33	37 84	11 59	32 20	Peak	a	9

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

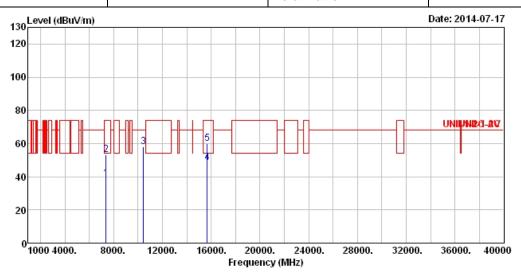
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.

Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

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Transmitter Radiated Unwanted Emissions (Above 1GHz)										
Modulation Mode	HT40	Test Freq. (MHz)	5230							
NTY	1	Polarization	V							



			0∨er	Limit	ReadA	∖ntenna	Cable	Preamp		A/Pos	T/Pos
	Freq	Le∨el	Limit	Line	Le∨el	Factor	Loss	Factor	Remark		
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	7388.00	39.07	- 14. 93	54.00	28.35	36.07	7.34	32.69	A∨erage	0	0
2	7388.00	53.21	-20.79	74.00	42.49	36.07	7.34	32.69	Peak	0	0
3	10460.00	57.92	-10.28	68.20	43.53	38.09	8.99	32.69	Peak	0	0
4	15690.00	48.62	-5.38	54.00	31.52	37.75	11.59	32.24	Average	0	0
5	15690.00	59.98	-14.02	74.00	42.88	37.75	11.59	32.24	Peak	0	0

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.

Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

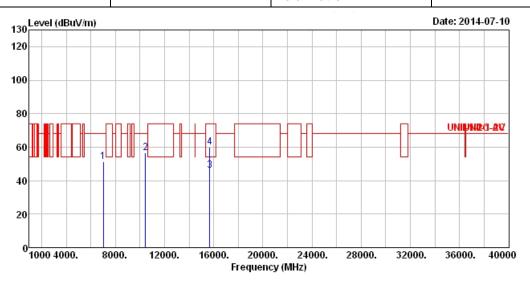
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Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Transmitter Radiated Unwanted Emissions (Above 1GHz)										
Modulation Mode	HT40	Test Freq. (MHz)	5230							
N _{TY}	1	Polarization	Н							



			0∨er	Limit	ReadA	htenna	Cable	Preamp		A/Pos	T/Pos
	Freq	Le∨el	Limit	Line	Le∨el	Factor	Loss	Factor	Remark		
	MHz	dBuV/m	dB	dBuV/m	dBu∀	dB/m	dB	dB		cm	deg
1	70 1 6.00	51.49	-16.71	68.20	41.79	35.24	7.05	32.59	Peak	0	0
2	10460.00	56.37	-11.83	68.20	41.98	38.09	8.99	32.69	Peak	0	0
3	15690.00	46.28	-7.72	54.00	29.18	37.75	11.59	32.24	A∨erage	0	0
4	15690.00	59.77	-14.23	74.00	42.67	37.75	11.59	32.24	Peak	0	0

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.

Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

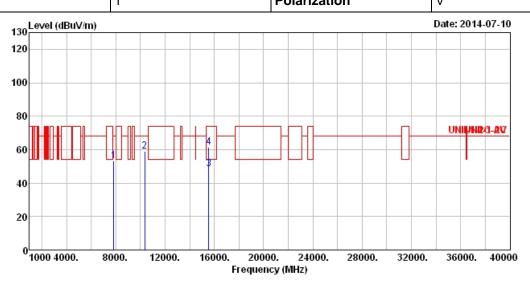
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Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Transmitter Radiated Unwanted Emissions (Above 1GHz)									
Modulation Mode	VHT20	Test Freq. (MHz)	5180						
N _{TX}	1	Polarization	V						



			0∨er	Limit	Read	Antenna	Cable	Preamp		A/Pos	T/Pos
	Freq	Le∨el	Limit	Line	Le∨el	Factor	Loss	Factor	Remark		
	MHz	dBuV/m	dB	dBuV/m	dBu∀	dB/m	dB	dB		cm	deg
1	7836.00	53.43	- 14. 77	68.20	41.77	36.43	8.00	32.77	Peak	0	0
2	10360.00	58.91	-9.29	68.20	44.69	38.07	8.92	32.77	Peak	0	0
3	15540.00	48.51	-5.49	54.00	31.25	37.87	11.59	32.20	A∨erage	0	0
4	15540.00	61.23	-12.77	74.00	43.97	37.87	11.59	32.20	Peak	0	0

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.

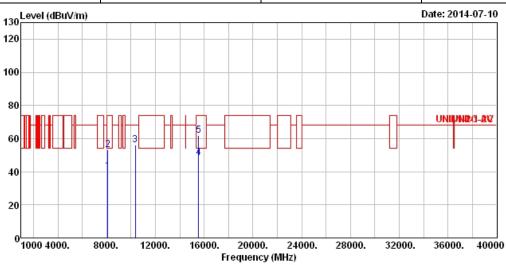
Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

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Transmitter Radiated Unwanted Emissions (Above 1GHz)									
Modulation ModeVHT20Test Freq. (MHz)5180									
N _{TX}	N _{TX} 1 Polarization H								

Report No.: FR462302AN



			0∨er	Limit	Read	Antenna	Cable	Preamp		A/Pos	T/Pos
	Freq	Le∨el	Limit	Line	Level	Factor	Loss	Factor	Remark		
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	8100.00	40.49	-13.51	54.00	28.40	36.67	8.22	32.80	A∨erage	0	0
2	8100.00	53. 1 7	-20.83	74.00	41.08	36.67	8.22	32.80	Peak	0	0
3	10360.00	56.01	-12.19	68.20	41.79	38.07	8.92	32.77	Peak	0	0
4	15540.00	48.58	-5.42	54.00	31.32	37.87	11.59	32.20	Average	0	0
5	15540.00	61.72	-12.28	74.00	44.46	37.87	11.59	32.20	Peak	0	0

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.

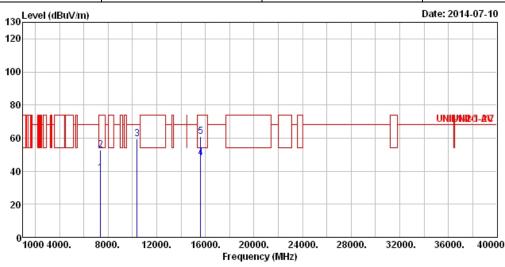
Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

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Transmitter Radiated Unwanted Emissions (Above 1GHz)								
Modulation ModeVHT20Test Freq. (MHz)5200								
N _{TX} 1 Polarization V								

Report No.: FR462302AN



			0∨er	Limit	Read∆	∖ntenna	Cable	Preamp		A/Pos	T/Pos
	Freq	Le∨el	Limit	Line	Le∨el	Factor	Loss	Factor	Remark		
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB			deg
1	7392.00	38.67	-15.33	54.00	27.95	36.07	7.34	32.69	Average	Ø	0
2	7392.00	52.55	-21.45	74.00	41.83	36.07	7.34	32.69	Peak	0	0
3	10400.00	59.62	-8.58	68.20	45.33	38.08	8.94	32.73	Peak	0	0
4	15600.00	48.04	-5.96	54.00	30.85	37.82	11.59	32.22	A∨erage	0	0
5	15600.00	60.95	-13.05	74.00	43.76	37.82	11.59	32.22	Peak	0	0

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.

Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

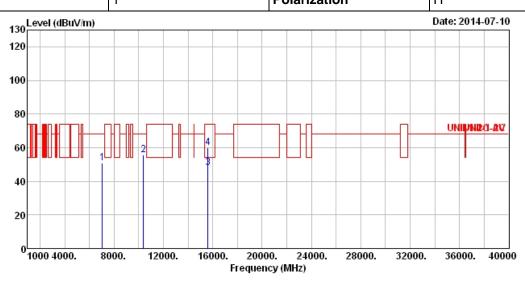
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Transmitter Radiated Unwanted Emissions (Above 1GHz)

Modulation Mode VHT20 Test Freq. (MHz) 5200

N_{TX} 1 Polarization H

Report No.: FR462302AN



	Freq	Le∨el	0∨er Limit	Limit Line		Antenna Factor				A/Pos	T/Pos
	MHz	$\overline{\text{dBuV/m}}$	dB	dBuV/m	dBuV	dB/m	dB	dB		Cm	deg
1	7056.00	50.95	- 17 . 25	68.20	41.15	35.31	7.08	32.59	Peak	0	0
2	10400.00	55.61	-12.59	68.20	41.32	38.08	8.94	32.73	Peak	0	0
3	15600.00	47.99	-6.01	54.00	30.80	37.82	11.59	32.22	A∨erage	0	0
4	15600.00	59.97	-14.03	74.00	42.78	37.82	11.59	32.22	Peak	0	0

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.

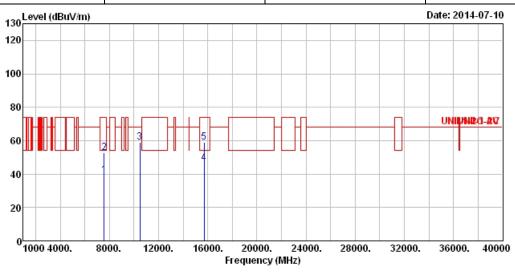
Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

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Transmitter Radiated Unwanted Emissions (Above 1GHz)								
Modulation Mode VHT20 Test Freq. (MHz) 5240								
N _{TX}	1	Polarization	V					

Report No.: FR462302AN



			0∨er	Limit	ReadA	Antenna	Cable	Preamp		A/Pos	T/Pos
	Freq	Le∨el	Limit	Line	Le∨el	Factor	Loss	Factor	Remark		
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	7592.00	39.53	-14.47	54.00	28.36	36.34	7.57	32.74	A∨erage	0	0
2	7592.00	52.60	-21.40	74.00	41.43	36.34	7.57	32.74	Peak	0	0
3	10480.00	59.23	-8.97	68.20	44.81	38.10	8.99	32.67	Peak	0	0
4	15720.00	46.41	-7.59	54.00	29.35	37.72	11.59	32.25	A∨erage	0	0
5	15720.00	59.09	-14.91	74.00	42.03	37.72	11.59	32.25	Peak	0	0

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.

Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

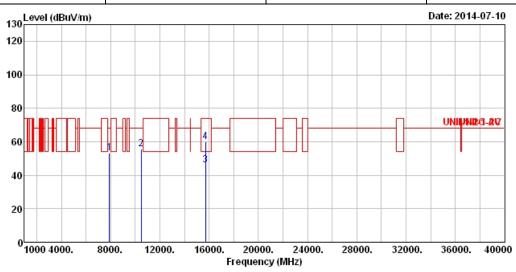
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Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Tra	Transmitter Radiated Unwanted Emissions (Above 1GHz)								
Modulation ModeVHT20Test Freq. (MHz)5240									
N _{TX}	1	Polarization	Н						



			0∨er	Limit	Read/	∖ntenna	Cable	Preamp		A/Pos	T/Pos
	Freq	Le∨el	Limit	Line	Le∨el	Factor	Loss	Factor	Remark		
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	7920.00	53.19	- 15 . 01	68.20	41.36	36.47	8.14	32.78	Peak	Ø	Ø
2	10480.00	55.66	-12.54	68.20	41.24	38.10	8.99	32.67	Peak	0	0
3	15720.00	46.01	-7.99	54.00	28.95	37.72	11.59	32.25	Average	0	0
4	15720.00	59.77	-14.23	74.00	42.71	37.72	11.59	32.25	Peak	0	0

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

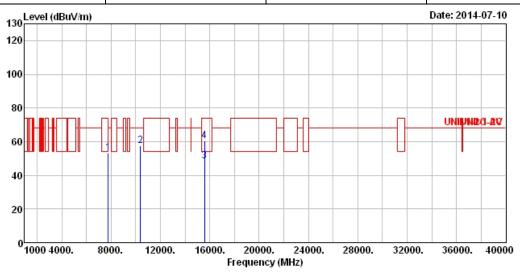
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.

Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

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Tra	Transmitter Radiated Unwanted Emissions (Above 1GHz)								
Modulation Mode VHT40 Test Freq. (MHz) 5190									
N _{TX}	1	Polarization	V						



			0∨er	Limit	ReadA	∖ntenna	Cable	Preamp		A/Pos	T/Pos
	Freq	Le∨el	Limit	Line	Le∨el	Factor	Loss	Factor	Remark		
	MHz	dBuV/m	dB	dBuV/m	dBu∀	dB/m	dB	dB		cm	deg
1	7764.00	53. 1 4	- 15.06	68.20	41.63	36.41	7.86	32.76	Peak	0	0
2	10380.00	57.62	-10.58	68.20	43.35	38.08	8.94	32.75	Peak	0	0
3	15570.00	48.38	-5.62	54.00	31.15	37.84	11.59	32.20	A∨erage	0	0
4	15570.00	60.49	-13.51	74.00	43.26	37.84	11.59	32.20	Peak	0	0

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.

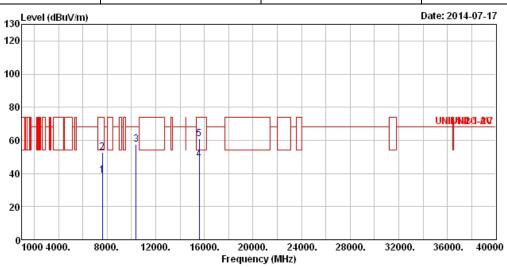
Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

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Tra	Transmitter Radiated Unwanted Emissions (Above 1GHz)									
Modulation Mode VHT40 Test Freq. (MHz) 5190										
N _{TX}										

Report No.: FR462302AN



			0∨er	Limit	ReadA	Antenna	Cable	Preamp		A/Pos	T/Pos
	Freq	Le∨el	Limit	Line	Le∨el	Factor	Loss	Factor	Remark		
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	7620.00	39.01	-14.99	54.00	27.76	36.35	7.64	32.74	Average	0	0
2	7620.00	52.66	-21.34	74.00	41.41	36.35	7.64	32.74	Peak	0	0
3	10380.00	57.70	-10.50	68.20	43.43	38.08	8.94	32.75	Peak	0	0
4	15570.00	48.42	-5.58	54.00	31.19	37.84	11.59	32.20	Average	0	0
5	15570.00	60.88	-13.12	74.00	43.65	37.84	11.59	32.20	Peak	0	0

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

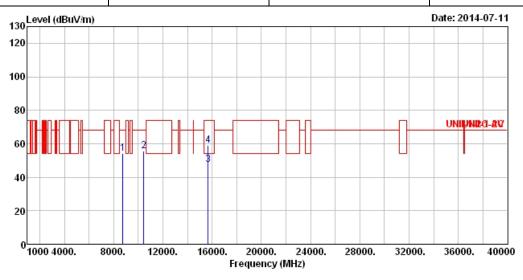
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.

Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

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Transmitter Radiated Unwanted Emissions (Above 1GHz)										
Modulation Mode	VHT40	Test Freq. (MHz)	5230							
N _{TX}	1	Polarization	V							



			0∨er	Limit	Read	Antenna	Cable	Preamp		A/Pos	T/Pos
	Freq	Le∨el	Limit	Line	Le∨el	Factor	Loss	Factor	Remark		
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	8760.00	54.37	-13.83	68.20	41.89	37.50	7.88	32.90	Peak		
2	10460.00	55.87	-12.33	68.20	41.48	38.09	8.99	32.69	Peak		
3	15690.00	47.53	-6.47	54.00	30.43	37.75	11.59	32.24	Average		
4	15690.00	59.23	-14.77	74.00	42.13	37.75	11.59	32.24	Peak		

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

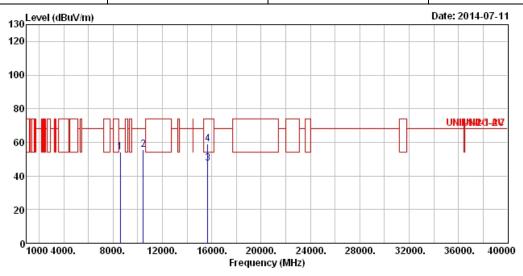
Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.

Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

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Transmitter Radiated Unwanted Emissions (Above 1GHz)									
Modulation Mode	VHT40	Test Freq. (MHz)	5230						
N _{TX}	1	Polarization	Н						

Report No.: FR462302AN



			0∨er	Limit	ReadA	Antenna	Cable	Preamp		A/Pos	T/Pos
	Freq	Le∨el	Limit	Line	Le∨el	Factor	Loss	Factor	Remark		
	MHz	dBuV/m	dB	dBuV/m	dBu∀	dB/m	dB	dB		cm	deg
1	8586.00	54.00	-14.20	68.20	41.52	37.37	7.95	32.84	Peak		
2	10460.00	55.50	-12.70	68.20	41.11	38.09	8.99	32.69	Peak		
3	15690.00	47.64	-6.36	54.00	30.54	37.75	11.59	32.24	A∨erage		
4	15690.00	59.16	-14.84	74.00	42.06	37.75	11.59	32.24	Peak		

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.

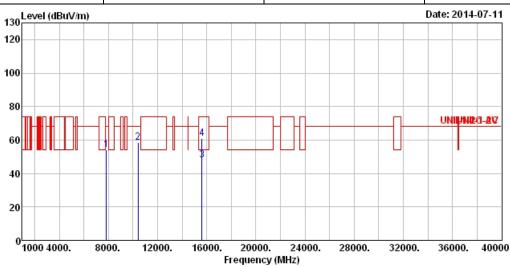
Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

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Transmitter Radiated Unwanted Emissions (Above 1GHz)									
Modulation Mode	VHT80	Test Freq. (MHz)	5210						
N _{TX}	1	Polarization	V						

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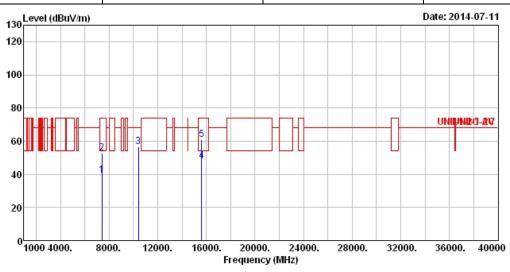


			0∨er	Limit	Read/	Antenna	Cable	Preamp		A/Pos	T/Pos
	Freq	Le∨el	Limit	Line	Le∨el	Factor	Loss	Factor	Remark		
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		Cm	deg
1	7836.00	54.02	- 14 . 18	68.20	42.36	36.43	8.00	32.77	Peak	0	0
2	10420.00	58.30	-9.90	68.20	43.98	38.08	8.97	32.73	Peak	0	0
3	15630.00	48.09	-5.91	54.00	30.94	37.79	11.59	32.23	Average	0	0
4	15630.00	60.80	-13.20	74.00	43.65	37.79	11.59	32.23	Peak	0	0

- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
- Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

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Transmitter Radiated Unwanted Emissions (Above 1GHz)										
Modulation Mode	VHT80	Test Freq. (MHz)	5210							
N_{TX}	1	Polarization	Н							



			0∨er	Limit	ReadA	Antenna	Cable	Preamp		A/Pos	T/Pos
	Freq	Le∨el	Limit	Line	Le∨el	Factor	Loss	Factor	Remark		
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	7400.00	39.24	- 1 4.76	54.00	28.52	36.07	7.34	32.69	A∨erage	0	0
2	7400.00	52.87	-21.13	74.00	42.15	36.07	7.34	32.69	Peak	0	0
3	10420.00	56.68	-11.52	68.20	42.36	38.08	8.97	32.73	Peak	0	0
4	15630.00	47.99	-6.01	54.00	30.84	37.79	11.59	32.23	Average	0	0
5	15630.00	60.72	-13.28	74.00	43.57	37.79	11.59	32.23	Peak	0	0

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

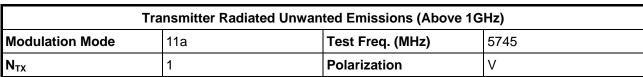
Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.

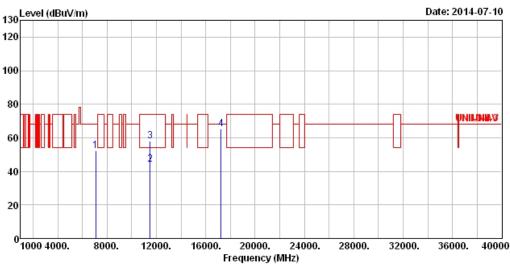
Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

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3.6.8 Transmitter Radiated Unwanted Emissions (Above 1GHz) for 5725-5850MHz

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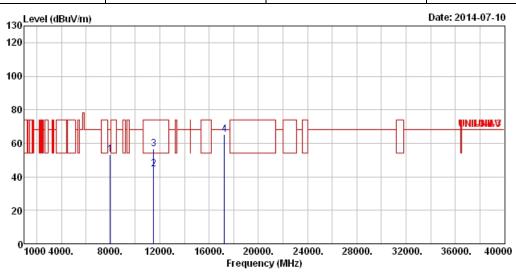
	Freq	Le∨el				Antenna Factor				A/Pos	T/Pos
•	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	7076.00	52.25	- 15 . 95	68.20	42.39	35.35	7.11	32.60	Peak	Ø	0
2	11490.00	44.34	-9.66	54.00	27.86	38.78	10.04	32.34	A∨erage	0	0
3	11490.00	57.86	-16.14	74.00	41.38	38.78	10.04	32.34	Peak	0	0
4	17235.00	65.44	-2.76	68.20	42.55	42.68	11.59	31.38	Peak	0	0

- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
- Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

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FCC Test Report Report No.: FR462302AN

Transmitter Radiated Unwanted Emissions (Above 1GHz)									
Modulation Mode	Modulation Mode 11a Test Freq. (MHz) 5745								
N _{TX}	N _{TX} 1 Polarization H								



			0∨er	Limit	ReadA	ntenna	Cable	Preamp		A/Pos	T/Pos
	Freq	Le∨el	Limit	Line	Le∨el	Factor	Loss	Factor	Remark		
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	7956.00	53.47	-14.73	68.20	41.57	36.48	8.21	32.79	Peak	0	0
2	11490.00	44.67	-9.33	54.00	28.19	38.78	10.04	32.34	A∨erage	0	0
3	11490.00	56.79	-17.21	74.00	40.31	38.78	10.04	32.34	Peak	0	0
4	17235.00	65.27	-2.93	68.20	42.38	42.68	11.59	31.38	Peak	0	0

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

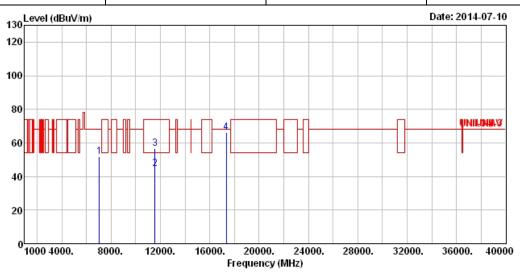
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.

Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

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Transmitter Radiated Unwanted Emissions (Above 1GHz)									
Modulation Mode	Modulation Mode 11a Test Freq. (MHz) 5785								
N_{TX}	1	Polarization	V						



			0∨er	Limit	Read∆	ntenna	Cable	Preamp		A/Pos	T/Pos
	Freq	Le∨el	Limit	Line	Le∨el	Factor	Loss	Factor	Remark		
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	7048.00	51.99	-16.21	68.20	42.19	35.31	7.08	32.59	Peak	0	0
2	11570.00	44.85	-9 .1 5	54.00	28.32	38.84	10.04	32.35	A∨erage	0	0
3	11570.00	56.65	-17.35	74.00	40.12	38.84	10.04	32.35	Peak	0	0
4	17355.00	66.07	-2.13	68.20	42.11	43.52	11.85	31.41	Peak	0	0

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

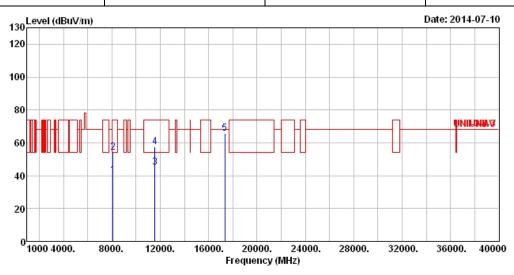
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.

Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

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Transmitter Radiated Unwanted Emissions (Above 1GHz)								
Modulation Mode	11a	Test Freq. (MHz)	5785					
N _{TX}	1	Polarization	Н					



	Freq	Le∨el		Limit Line						A/Pos	T/Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	8092.00	40.28	-13.72	54.00	28.22	36.64	8.22	32.80	A∨erage	0	Ø
2	8092.00	54.05	-19.95	74.00	41.99	36.64	8.22	32.80	Peak	0	0
3	11570.00	45.18	-8.82	54.00	28.65	38.84	10.04	32.35	A∨erage	0	0
4	11570.00	57.70	-16.30	74.00	41.17	38.84	10.04	32.35	Peak	0	0
5	17355.00	65.91	-2.29	68.20	41.95	43.52	11.85	31.41	Peak	0	0

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.

Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

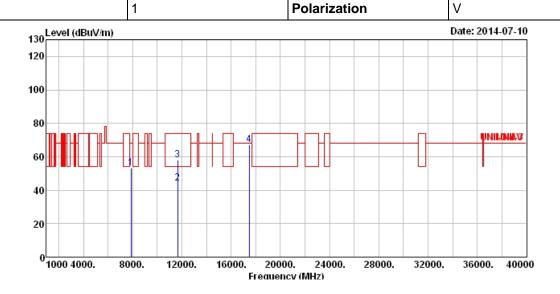
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 N_{TX}

Transmitter Radiated Unwanted Emissions (Above 1GHz)							
odulation Mode	11a	Test Freq. (MHz)	5825				

Report No.: FR462302AN



	- France	Laval		Limit						A/Pos	T/Pos
	Freq	re∨eı	Limit	Line	rever	Factor	LOSS	Factor	Kemark		
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	7868.00	E2 20	14 00	69.20	41 E.C	26 AE	9 07	22 79	Dook	0	0
2	11650.00									0	0
3	11650.00								_	0	ø
4	17475.00	67. 1 7	-1.03	68.20	42.15	44.36	12.11	31.45	Peak	0	0

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.

Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

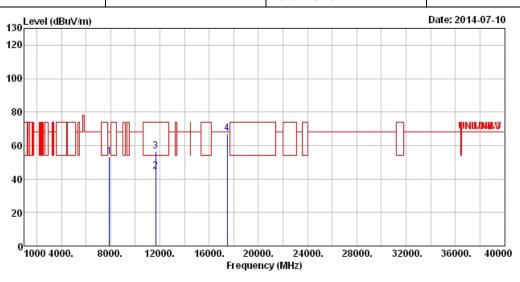
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Transmitter Radiated Unwanted Emissions (Above 1GHz)

Modulation Mode 11a Test Freq. (MHz) 5825

N_{TX} 1 Polarization H

Report No.: FR462302AN



			0∨er	Limit	Read/	∖ntenna	Cable	Preamp		A/Pos	T/Pos
	Freq	Le∨el	Limit	Line	Le∨el	Factor	Loss	Factor	Remark		
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	7896.00	53.34	- 14.86	68.20	41.52	36.46	8.14	32.78	Peak	Ø	Ø
2	11650.00	44.54	-9.46	54.00	27.99	38.88	10.03	32.36	Average	0	0
3	11650.00	56.40	-17.60	74.00	39.85	38.88	10.03	32.36	Peak	0	0
4	17475.00	66.94	-1.26	68.20	41.92	44.36	12.11	31.45	Peak	0	0

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.

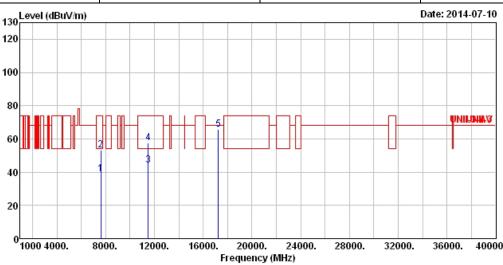
Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

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Transmitter Radiated Unwanted Emissions (Above 1GHz)									
Modulation Mode	Modulation Mode HT20 Test Freq. (MHz) 5745								
N _{TX}	1	Polarization	V						

Report No.: FR462302AN



				Limit						A/Pos	T/Pos
	Freq	Le∨el	Limit	Line	Le∨el	Factor	Loss	Factor	Remark		
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	7620.00	39.01	-14.99	54.00	27.76	36.35	7.64	32.74	Average	Ø	ø
2	7620.00	53.24	-20.76	74.00	41.99	36.35	7.64	32.74	Peak	0	0
3	11490.00	44.03	-9.97	54.00	27.55	38.78	10.04	32.34	A∨erage	0	0
4	11490.00	57.39	-16.61	74.00	40.91	38.78	10.04	32.34	Peak	0	0
5	17235.00	65.70	-2.50	68.20	42.81	42.68	11.59	31.38	Peak	0	0

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

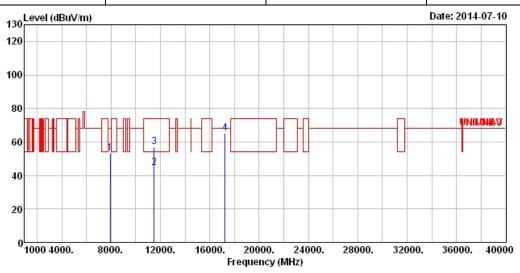
Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.

Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

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FCC Test Report Report No.: FR462302AN

Transmitter Radiated Unwanted Emissions (Above 1GHz)										
Modulation Mode HT20 Test Freq. (MHz) 5745										
N_{TX}	N _{TX} 1 Polarization H									



			0∨er	Limit	Read/	htenna	Cable	Preamp		A/Pos	T/Pos
	Freq	Le∨el	Limit	Line	Le∨el	Factor	Loss	Factor	Remark		
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB			deg
1	7952.00	53.25	-14.95	68.20	41.35	36.48	8.21	32.79	Peak	0	0
2	11490.00	44.72	-9.28	54.00	28.24	38.78	10.04	32.34	A∨erage	0	0
3	11490.00	57.18	-16.82	74.00	40.70	38.78	10.04	32.34	Peak	0	0
4	17235.00	65.07	-3.13	68.20	42.18	42.68	11.59	31.38	Peak	0	0

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

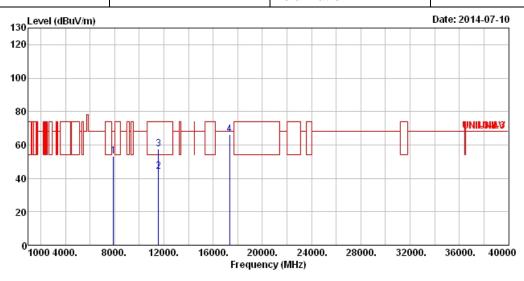
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.

Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

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	Transmitter Rad	liated Unwanted Emissions (Above	1GHz)
Modulation Mode	HT20	Test Freq. (MHz)	5785
N _{TX}	1	Polarization	V



			0∨er	Limit	ReadA	Antenna	Cable	Preamp		A/Pos	T/Pos	
	Freq	Le∨el	Limit	Line	Le∨el	Factor	Loss	Factor	Remark			
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg	
1	7904.00	53.18	- 15 . 02	68.20	41.36	36.46	8.14	32.78	Peak	0	0	
2	11570.00	44.18	-9.82	54.00	27.65	38.84	10.04	32.35	A∨erage	0	0	
3	11570.00	57.64	-16.36	74.00	41.11	38.84	10.04	32.35	Peak	0	0	
4	17355.00	66.14	-2.06	68.20	42.18	43.52	11.85	31.41	Peak	0	0	

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

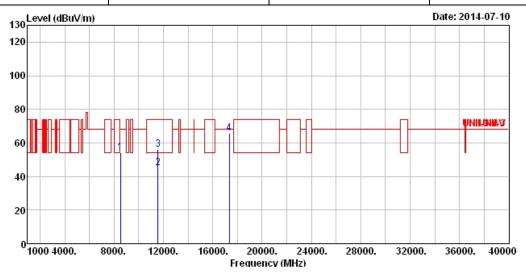
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.

Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

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Transmitter Radiated Unwanted Emissions (Above 1GHz)										
Modulation Mode	Modulation Mode HT20 Test Freq. (MHz) 5785									
N _{TX} 1 Polarization H										



	Freq	Le∨el		Limit Line						A/Pos	T/Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		Cm	deg
1	8524.00	54.32	-13.88	68.20	41.82	37.33	7.99	32.82	Peak	0	0
2	11570.00	45.13	-8.87	54.00	28.60	38.84	10.04	32.35	A∨erage	0	0
3	11570.00	56.29	-17.71	74.00	39.76	38.84	10.04	32.35	Peak	0	0
4	17355.00	65.83	-2.37	68.20	41.87	43.52	11.85	31.41	Peak	0	0

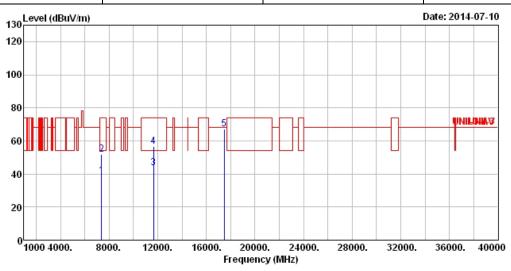
- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
- Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

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Transmitter Radiated Unwanted Emissions (Above 1GHz)									
Modulation Mode	HT20	Test Freq. (MHz)	5825						
N _{TX}	1	Polarization	V						

Report No.: FR462302AN



	Freq	Le∨el		Limit Line						A/Pos	T/Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	-		deg
1	7372.00	38.65	-15.35	54.00	28.00	36.03	7.31	32.69	Average	0	0
2	7372.00	51.97	-22.03	74.00	41.32	36.03	7.31	32.69	Peak	0	0
3	11650.00	43.70	-10.30	54.00	27.15	38.88	10.03	32.36	A∨erage	0	0
4	11650.00	56.43	-17.57	74.00	39.88	38.88	10.03	32.36	Peak	0	0
5	17475.00	67.20	-1.00	68.20	42.18	44.36	12.11	31.45	Peak	0	0

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

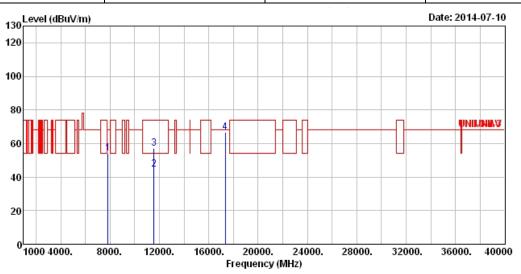
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.

Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

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Transmitter Radiated Unwanted Emissions (Above 1GHz)									
Modulation Mode	HT20	Test Freq. (MHz)	5825						
N_{TX}	1	Polarization	Н						



	Freq	Le∨el		Limit Line						A/Pos	T/Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB			deg
1	7836.00	54.19	-14.01	68.20	42.53	36.43	8.00	32.77	Peak	0	0
2	11570.00	44.63	-9.37	54.00	28.10	38.84	10.04	32.35	Average	0	0
3	11570.00	57.10	-16.90	74.00	40.57	38.84	10.04	32.35	Peak	0	0
4	17355.00	66.49	-1.71	68.20	42.53	43.52	11.85	31.41	Peak	0	0

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

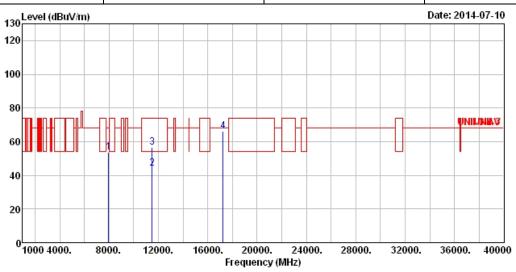
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.

Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

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Transmitter Radiated Unwanted Emissions (Above 1GHz)									
Modulation Mode	HT40	Test Freq. (MHz)	5755						
N _{TX}	1	Polarization	V						



			0∨er	Limit	Read	Antenna	Cable	Preamp		A/Pos	T/Pos
	Freq	Le∨el	Limit	Line	Le∨el	Factor	Loss	Factor	Remark		
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		CM	deg
1	7972.00	53.52	- 14.68	68.20	41.54	36.49	8.28	32./9	Peak	0	0
2	11510.00	44.15	-9.85	54.00	27.65	38.80	10.04	32.34	A∨erage	0	0
3	11510.00	56.74	-17.26	74.00	40.24	38.80	10.04	32.34	Peak	0	0
4	17265.00	66.06	-2.14	68.20	42.85	42.92	11.68	31.39	Peak	0	0

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.

Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

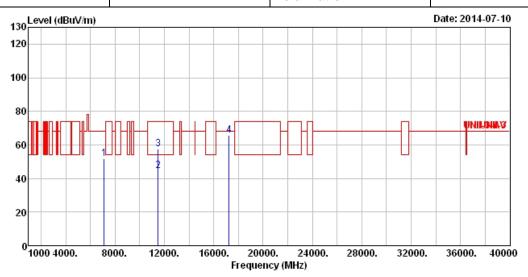
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Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

-	Fransmitter Radiated Unw	anted Emissions (Above	1GHz)
Modulation Mode	HT40	Test Freq. (MHz)	5755
N _{TX}	1	Polarization	Н



	Freq	Le∨el				Antenna Factor				A/Pos	T/Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	7116.00	51.78	-16.42	68.20	41.79	35.47	7.14	32.62	Peak	0	0
2	11510.00	44.70	-9.30	54.00	28.20	38.80	10.04	32.34	A∨erage	0	0
3	11510.00	57.76	-16.24	74.00	41.26	38.80	10.04	32.34	Peak	0	0
4	17265.00	65.89	-2.31	68.20	42.68	42.92	11.68	31.39	Peak	0	0

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.

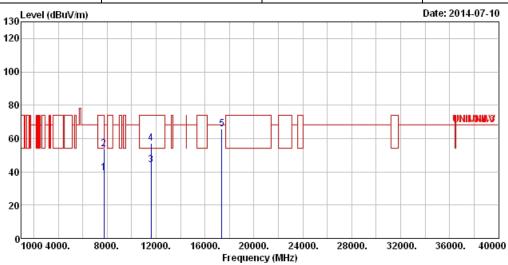
Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

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Tra	Transmitter Radiated Unwanted Emissions (Above 1GHz)										
Modulation Mode	HT40	Test Freq. (MHz)	5795								
N _{TX}	1	Polarization	V								

Report No.: FR462302AN



	Freq	Le∨el		Limit Line						A/Pos	T/Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	7728.00	39.30	-14.70	54.00	27.81	36.39	7.86	32.76	A∨erage	0	Ø
2	7728.00	53.50	-20.50	74.00	42.01	36.39	7.86	32.76	Peak	0	0
3	11590.00	44.22	-9.78	54.00	27.69	38.85	10.03	32.35	Average	0	0
4	11590.00	57.00	-17.00	74.00	40.47	38.85	10.03	32.35	Peak	0	0
5	17385.00	65.62	-2.58	68.20	41.35	43.76	11.94	31.43	Peak	0	0

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.

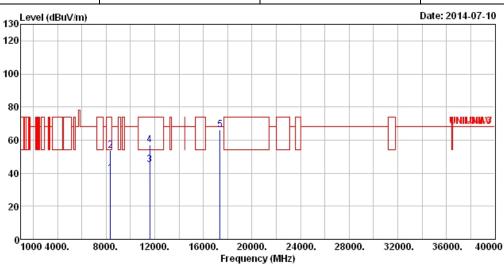
Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

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Tra	Transmitter Radiated Unwanted Emissions (Above 1GHz)										
Modulation Mode	HT40	Test Freq. (MHz)	5795								
N _{TX}	1	Polarization	Н								

Report No.: FR462302AN



			0∨er	Limit	Read∆	ntenna	Cable	Preamp		A/Pos	T/Pos
	Freq	Le∨el	Limit	Line	Le∨el	Factor	Loss	Factor	Remark		
	MHz	dBuV/m	dB	dBuV/m	dBu∀	dB/m	dB	dB		cm	deg
1	8356.00	40.02	-13.98	54.00	27.68	37.08	8.07	32.81	A∨erage	0	0
2	8356.00	53.68	-20.32	74.00	41.34	37.08	8.07	32.81	Peak	0	0
3	11590.00	45.17	-8.83	54.00	28.64	38.85	10.03	32.35	Average	0	0
4	11590.00	57.00	-17.00	74.00	40.47	38.85	10.03	32.35	Peak	0	0
5	17385.00	66.17	-2.03	68.20	41.90	43.76	11.94	31.43	Peak	0	0

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.

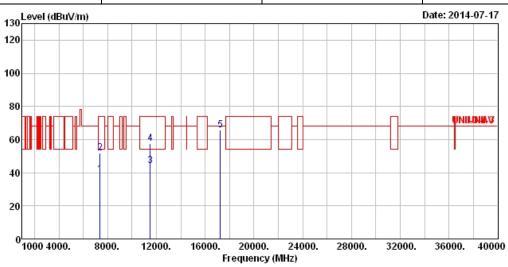
Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

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Tra	Transmitter Radiated Unwanted Emissions (Above 1GHz)										
Modulation Mode	VHT20	Test Freq. (MHz)	5745								
N _{TX}	1	Polarization	V								

Report No.: FR462302AN



			0∨er	Limit	ReadA	Antenna	Cable	Preamp		A/Pos	T/Pos
	Freq	Le∨el	Limit	Line	Le∨el	Factor	Loss	Factor	Remark		
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	7380.00	38.81	- 15 . 19	54.00	28.13	36.03	7.34	32.69	A∨erage	0	0
2	7380.00	51.98	-22.02	74.00	41.30	36.03	7.34	32.69	Peak	0	0
3	11490.00	44.32	-9.68	54.00	27.84	38.78	10.04	32.34	Average	0	0
4	11490.00	57.61	-16.39	74.00	41.13	38.78	10.04	32.34	Peak	0	0
5	17235.00	65.78	-2.42	68.20	42.89	42.68	11.59	31.38	Peak	0	0

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

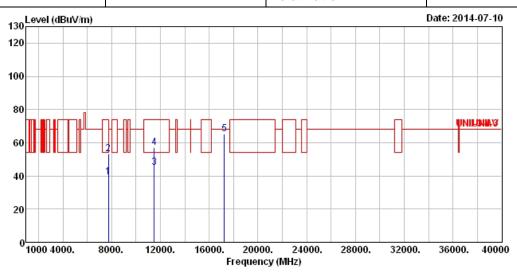
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.

Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

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1	Transmitter Radiated Unwanted Emissions (Above 1GHz)											
Modulation Mode	VHT20	Test Freq. (MHz)	5745									
N _{TY}	1	Polarization	Н									



			0∨er	Limit	Read	Antenna	Cable	Preamp		A/Pos	T/Pos
	Freq	Le∨el	Limit	Line	Le∨el	Factor	Loss	Factor	Remark		
	MHz	dBuV/m	dB	dBuV/m	dBu∀	dB/m	dB	dB		cm	deg
1	7740.00	39.30	- 14. 70	54.00	27.81	36.39	7.86	32.76	A∨erage	0	0
2	7740.00	53.03	-20.97	74.00	41.54	36.39	7.86	32.76	Peak	0	0
3	11490.00	45.07	-8.93	54.00	28.59	38.78	10.04	32.34	A∨erage	0	0
4	11490.00	56.99	-17.01	74.00	40.51	38.78	10.04	32.34	Peak	0	0
5	17235.00	65.29	-2.91	68.20	42.40	42.68	11.59	31.38	Peak	0	0

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

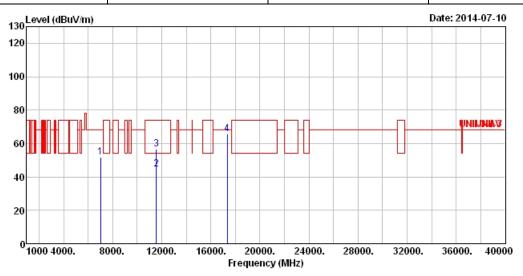
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.

Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

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Tra	Transmitter Radiated Unwanted Emissions (Above 1GHz)										
Modulation Mode	VHT20	Test Freq. (MHz)	5785								
N _{TX}	1	Polarization	V								



			0∨er	Limit	Read/	Antenna	Cable	Preamp		A/Pos	T/Pos
	Freq	Le∨el	Limit	Line	Le∨el	Factor	Loss	Factor	Remark		
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB			deg
1	7032.00	51.93	-16.27	68.20	42.16	35.28	7.08	32.59	Peak	0	Ø
2	11570.00	44.49	-9.51	54.00	27.96	38.84	10.04	32.35	Average	0	0
3	11570.00	56.66	-17.34	74.00	40.13	38.84	10.04	32.35	Peak	0	0
4	17355.00	65.71	-2.49	68.20	41.75	43.52	11.85	31.41	Peak	0	0

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.

Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

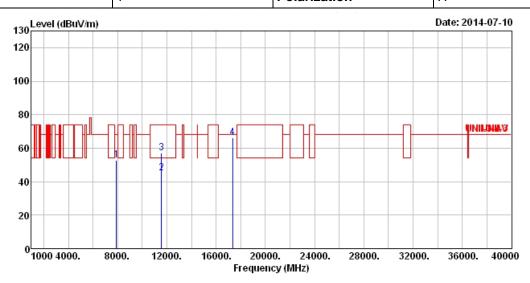
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Transmitter Radiated Unwanted Emissions (Above 1GHz)

Modulation Mode VHT20 Test Freq. (MHz) 5785

N_{TX} 1 Polarization H

Report No.: FR462302AN



			0∨er	Limit	ReadA	htenna	Cable	Preamp		A/Pos	T/Pos
	Freq	Le∨el	Limit	Line	Le∨el	Factor	Loss	Factor	Remark		
	MHz	dBuV/m	dB	dBuV/m	dBu∀	dB/m	dB	dB		cm	deg
1	7904.00	52.95	- 15 . 25	68.20	41.13	36.46	8.14	32.78	Peak	0	0
2	11570.00	45. 1 3	-8.87	54.00	28.60	38.84	10.04	32.35	A∨erage	0	0
3	11570.00	56.98	-17.02	74.00	40.45	38.84	10.04	32.35	Peak	0	0
4	17355.00	66.03	-2.17	68.20	42.07	43.52	11.85	31.41	Peak	0	0

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

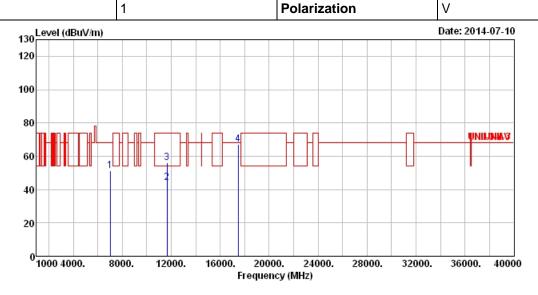
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.

Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

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Tra	Transmitter Radiated Unwanted Emissions (Above 1GHz)										
Modulation Mode	VHT20	Test Freq. (MHz)	5825								
N _{TX}	1	Polarization	V								



			0∨er	Limit	Read	Antenna	Cable	Preamp		A/Pos	T/Pos
	Freq	Le∨el	Limit	Line	Le∨el	Factor	Loss	Factor	Remark		
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	7016.00	51.44	-16.76	68.20	41.74	35.24	7.05	32.59	Peak	0	Ø
2	11650.00	44.07	-9.93	54.00	27.52	38.88	10.03	32.36	Average	0	0
3	11650.00	56.27	-17.73	74.00	39.72	38.88	10.03	32.36	Peak	0	0
4	17475.00	67.09	-1.11	68.20	42.07	44.36	12.11	31.45	Peak	0	0

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.

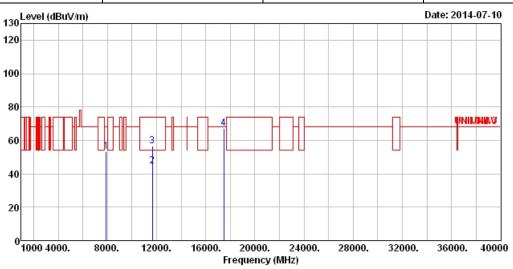
Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

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Transmitter Radiated Unwanted Emissions (Above 1GHz)										
Modulation Mode	VHT20	Test Freq. (MHz)	5825							
N _{TX}	N _{TX} 1 Polarization H									

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			0∨er	Limit	ReadA	htenna	Cable	Preamp		A/Pos	T/Pos
	Freq	Le∨el	Limit	Line	Le∨el	Factor	Loss	Factor	Remark		
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		Cm	deg
	7016 00	FD 00	45 43	60.20	44.25	26.47		22.70			
1	79 1 6.00	53.08	- 15 . 12	68.20	41.25	36.4/	8.14	32./8	Peak	0	0
2	11650.00	44.45	-9.55	54.00	27.90	38.88	10.03	32.36	A∨erage	0	0
3	11650.00	56.42	-17.58	74.00	39.87	38.88	10.03	32.36	Peak	0	0
4	17475.00	67.20	-1.00	68.20	42.18	44.36	12.11	31.45	Peak	0	0

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

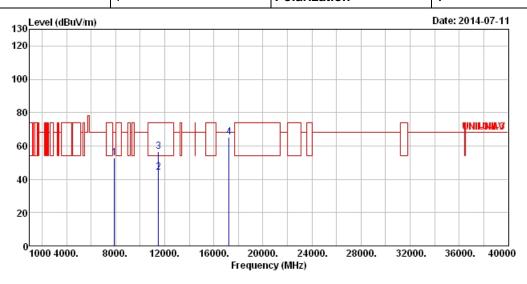
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.

Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

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	Transmitter Radia	ated Unwanted Emissions (Abov	e 1GHz)
Modulation Mode	VHT40	Test Freq. (MHz)	5755
N _{TY}	1	Polarization	V



			0∨er	Limit	Read/	Antenna	Cable	Preamp		A/Pos	T/Pos
	Freq	Le∨el	Limit	Line	Le∨el	Factor	Loss	Factor	Remark		
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		Cm	deg
1	7917.00	52.98	- 15.22	68.20	41.15	36.47	8.14	32.78	Peak		
2	11510.00	44.22	-9.78	54.00	27.72	38.80	10.04	32.34	A∨erage		
3	11510.00	56.59	-17.41	74.00	40.09	38.80	10.04	32.34	Peak		
4	17265.00	65.44	-2.76	68.20	42.23	42.92	11.68	31.39	Peak		

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

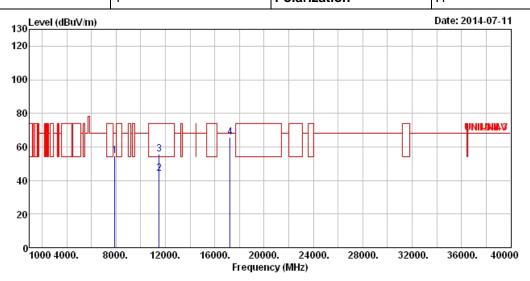
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.

Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

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Tra	Transmitter Radiated Unwanted Emissions (Above 1GHz)										
Modulation Mode	VHT40	Test Freq. (MHz)	5755								
N _{TV}	1	Polarization	Н								



			0∨er	Limit	Read/	Antenna	Cable	Preamp		A/Pos	T/Pos
	Freq	Le∨el	Limit	Line	Le∨el	Factor	Loss	Factor	Remark		
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		CM	deg
1	7896.00	54.86	-13.34	68.20	43.04	36.46	8.14	32.78	Peak		
2	11510.00	44.07	-9.93	54.00	27.57	38.80	10.04	32.34	A∨erage		
3	11510.00	55.88	-18.12	74.00	39.38	38.80	10.04	32.34	Peak		
4	17265.00	65.68	-2.52	68.20	42.47	42.92	11.68	31.39	Peak		

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.

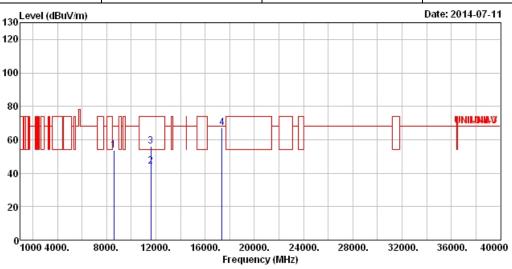
Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

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Transmitter Radiated Unwanted Emissions (Above 1GHz)											
Modulation Mode	VHT40	Test Freq. (MHz)	5795								
N_{TX}											

Report No.: FR462302AN



			0∨er	Limit	ReadA	Antenna	Cable	Preamp		A/Pos	T/Pos
	Freq	Le∨el	Limit	Line	Le∨el	Factor	Loss	Factor	Remark		
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		CM	deg
	0004 00	F2 62	44.57			27.20	7.05	22.04			
1	8604.00	53.83	-14.3/	68.20	41.34	3/.38	7.95	32.84	Peak		
2	11590.00	44.12	-9.88	54.00	27.59	38.85	10.03	32.35	A∨erage		
3	11590.00	56.10	-17.90	74.00	39.57	38.85	10.03	32.35	Peak		
4	17385.00	67.29	-0.91	68.20	43.02	43.76	11.94	31.43	Peak		

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

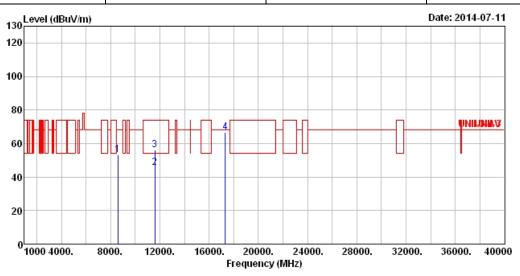
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.

Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

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Transmitter Radiated Unwanted Emissions (Above 1GHz)										
Modulation Mode	VHT40	Test Freq. (MHz)	5795							
N _{TX}	1	Polarization	Н							



			0∨er	Limit	ReadA	htenna	Cable	Preamp		A/Pos	T/Pos
	Freq	Le∨el	Limit	Line	Le∨el	Factor	Loss	Factor	Remark		
	MHz	dBuV/m	dB	dBuV/m	dBu∀	dB/m	dB	dB		cm	deg
1	8598.00	53.32	- 14.88	68.20	40.83	37.38	7.95	32.84	Peak		
2	11590.00	45.72	-8.28	54.00	29.19	38.85	10.03	32.35	Average		
3	11590.00	55.91	-18.09	74.00	39.38	38.85	10.03	32.35	Peak		
4	17305.00	66.86	-1.34	68.20	43.33	43.16	11.77	31.40	Peak		

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.

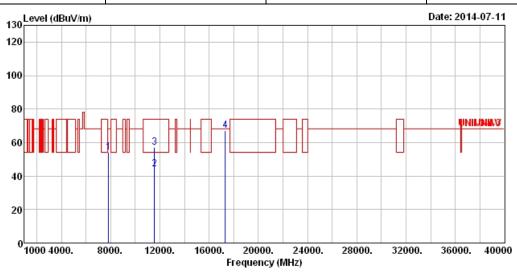
Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

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Transmitter Radiated Unwanted Emissions (Above 1GHz)						
Modulation Mode	VHT80	Test Freq. (MHz)	5775			
N _{TX}	1	Polarization	V			

Report No.: FR462302AN



			0∨er	Limit	Read/	Antenna	Cable	Preamp		A/Pos	T/Pos
	Freq	Le∨el	Limit	Line	Le∨el	Factor	Loss	Factor	Remark		
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		Cm	deg
1	7824.00	54.28	-13.92	68.20	42.62	36.43	8.00	32.77	Peak	Ø	0
2	11550.00	44.37	-9.63	54.00	27.85	38.83	10.04	32.35	A∨erage	0	0
3	11550.00	57.09	-16.91	74.00	40.57	38.83	10.04	32.35	Peak	0	0
4	17325.00	67. 1 3	-1.07	68.20	43.41	43.28	11.85	31.41	Peak	0	0

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.

Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

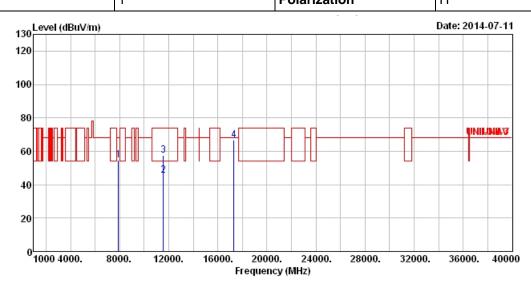
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Transmitter Radiated Unwanted Emissions (Above 1GHz)

Modulation Mode VHT80 Test Freq. (MHz) 5775

N_{TX} 1 Polarization H

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	Freq	Le∨el		Limit Line						A/Pos	T/Pos
-	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		Cm	deg
1	7892.00	54.72	-13.48	68.20	42.91	36.45	8.14	32.78	Peak	0	0
2	11550.00	45.50	-8.50	54.00	28.98	38.83	10.04	32.35	A∨erage	0	0
3	11550.00	57.39	-16.61	74.00	40.87	38.83	10.04	32.35	Peak	0	0
4	17325.00	66.48	-1.72	68.20	42.76	43.28	11.85	31.41	Peak	0	0

- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
- Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

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3.7 Frequency Stability

3.7.1 Frequency Stability Limit

Frequency Stability Limit UNII Devices ☐ In-band emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual. IEEE Std. 802.11n-2009 ☐ The transmitter center frequency tolerance shall be ± 20 ppm maximum for the 5 GHz band and ± 25 ppm maximum for the 2.4 GHz band.

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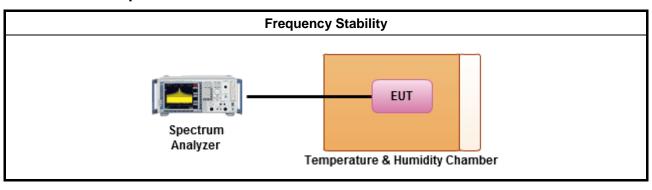
3.7.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

3.7.3 Test Procedures

		Test Method						
\boxtimes	Refer as ANSI C63.10, clause 6.8 for frequency stability tests							
	□ Frequency stability with respect to ambient temperature							
	\boxtimes	Frequency stability when varying supply voltage						
\boxtimes	For	conducted measurement.						
		For conducted measurements on devices with multiple transmit chains: Measurements need only to be performed on one of the active transmit chains (antenna outputs)						
		radiated measurement. The equipment to be measured and the test antenna shall be oriented to in the maximum emitted power level.						

3.7.4 Test Setup



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3.7.5 Test Result of Frequency Stability

	Frequency Stability Result							
Мо	de	Frequency Stability (ppm)						
Condition	Freq. (MHz)	Test Frequency (MHz)	Frequency Stability (ppm)					
T _{20°C} Vmax	5180	5179.97728	-4.3861					
T _{20°C} Vmin	5180	5179.97771	-4.3031					
T _{50°C} Vnom	5180	5180.03488	6.7336					
T _{40°C} Vnom	5180	5180.00014	0.0270					
T _{30°C} Vnom	5180	5179.98162	-3.5483					
T _{20°C} Vnom	5180	5179.97742	-4.3591					
T _{10°C} Vnom	5180	5179.98437	-3.0174					
T _{0°C} Vnom	5180	5180.02865	5.5309					
T _{-10°C} Vnom	5180	5179.98133	-3.6042					
T _{-20°C} Vnom	5180	5180.01389	2.6815					
Limit (ppm)	20						
Res	ult	Complied						

Note 1: Measure at 85 % [Vmin] and 115 % [Vmax] of the nominal voltage [Vnom]. Note 2: The nominal voltage refer test report clause 1.1.5 for EUT operational condition.

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4 Test Equipment and Calibration Data

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
EMC Receiver	R&S	ESCS 30	100174	9kHz ~ 2.75GHz	Mar. 26, 2014	AC Conduction
LISN	SCHWARZBECK MESS-ELEKTRONIK	NSLK 8127	8127-477	9kHz ~ 30MHz	Jan. 21, 2014	AC Conduction
RF Cable	HUBER+SUHNER	RG213/U	7.61183201e+012	9kHz ~ 30MHz	Oct. 30, 2013	AC Conduction
EMI Filter	LINDGREN	LRE-2030	2651	< 450 Hz	N/A	AC Conduction

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Note: Calibration Interval of instruments listed above is one year.

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
Spectrum Analyzer	R&S	FSV 40	101013	9KHz~40GHz	Jan. 25, 2014	RF Conducted
Temp. and Humidity Chamber	Giant Force	GTH-225-20-S	MAB0103-001	-20 ~ 100°C	Nov. 20, 2013	RF Conducted
Signal Generator	R&S	SMB 100A	175727	100kHz~40GHz	Jan. 07, 2014	RF Conducted
RF Cable-1m	HUBER+SUHNER	SUCOFLEX_104	SN 324557	30MHz ~ 26.5GHz	Dec. 02, 2013	RF Conducted
AC Power Source	G.W	APS-9102	EL920581	AC 0V ~ 300V	Jul. 16, 2013	RF Conducted

Note: Calibration Interval of instruments listed above is one year.

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
3m Semi Anechoic Chamber	SIDT FRANKONIA	SAC-3M	03CH03-HY	30MHz ~ 1GHz 3m	Nov. 30, 2013	Radiation
Amplifier	HP	8447D	2944A08033	10kHz ~ 1.3GHz	May. 05, 2014	Radiation
Amplifier	Agilent	8449B	3008A02120	1GHz ~ 26.5GHz	Aug. 20, 2013	Radiation
Spectrum	R&S	FSP40	100004	9kHz ~ 40GHz	Mar. 27, 2014	Radiation
Bilog Antenna	SCHAFFNER	CBL 6112D	22237	30MHz ~ 1GHz	Sep. 21, 2013	Radiation
Horn Antenna	ETS · LINDGREN	3115	6744	1GHz ~ 18GHz	May 05, 2014	Radiation
Horn Antenna	SCHWARZBECK	BBHA9170	BBHA9170154	15GHz ~ 40GHz	Jan. 10, 2014	Radiation
RF Cable-R03m	Jye Bao	RG142	CB021	9kHz ~ 1GHz	Nov. 16, 2013	Radiation
RF Cable-high	SUHNER	SUCOFLEX 106	03CH03-HY	1GHz ~ 40GHz	Dec. 11, 2013	Radiation
Turn Table	EM Electronics	EM Electronics	060615	0 ~ 360 degree	N/A	Radiation
Antenna Mast	MF	MF-7802	MF780208179	1 ~ 4 m	N/A	Radiation

Note: Calibration Interval of instruments listed above is one year.

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
Amplifier	EM	EM18G40G	060604	18GHz ~ 40GHz	Oct. 17. 2013	Radiation
Loop Antenna	TESEQ	HLA 6120	31244	9kHz ~ 30MHz	Dec. 02, 2012	Radiation

Note: Calibration Interval of instruments listed above is two year.

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