

VARIANT FCC TEST REPORT

(Part 15, Subpart E)

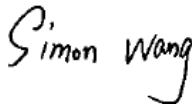
Applicant:	Shenzhen Zolon Technology Co., Ltd.
Address:	401, Building 3, Shenzhen Software Park, Maling Community, Yuehai Street, Nanshan District, Shenzhen City, Guangdong Province, P.R.C

Manufacturer or Supplier:	Shenzhen Zolon Technology Co., Ltd.
Address:	401, Building 3, Shenzhen Software Park, Maling Community, Yuehai Street, Nanshan District, Shenzhen City, Guangdong Province, P.R.C
Product:	Smart Desktop Terminal
Brand Name:	ZOLON
Model Name:	L1400
FCC ID:	2AV5BL1400
Date of tests:	Feb. 16, 2022 ~ Jun. 17, 2022

The tests have been carried out according to the requirements of the following standard:

☒ **FCC Part 15, Subpart E, Section 15.407**

CONCLUSION: The submitted sample was found to COMPLY with the test requirement

Prepared by Simon Wang Engineer / Mobile Department	Approved by Luke Lu Manager / Mobile Department
 Date: Jun. 16, 2023	 Date: Jun. 16, 2023

This report is governed by, and incorporates by reference, the Conditions of Testing as posted at the date of issuance of this report at <http://www.bureauveritas.com/home/about-us/our-business/cps/about-us/terms-conditions/> and is intended for your exclusive use. Any copying or replication of this report to or for any other person or entity, or use of our name or trademark, is permitted only with our prior written permission. This report sets forth our findings solely with respect to the test samples identified herein. The results set forth in this report are not indicative or representative of the quality or characteristics of the lot from which a test sample was taken or any similar or identical product unless specifically and expressly noted. Our report includes all of the tests requested by you and the results thereof based upon the information that you provided to us. Measurement uncertainty is only provided upon request for accredited tests. Statements of conformity are based on simple acceptance criteria without taking measurement uncertainty into account, unless otherwise requested in writing. You have 60 days from date of issuance of this report to notify us of any material error or omission caused by our negligence or if you require measurement uncertainty; provided, however, that such notice shall be in writing and shall specifically address the issue you wish to raise. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents.

TABLE OF CONTENTS

RELEASE CONTROL RECORD	4
1 SUMMARY OF TEST RESULTS	5
1.1 MEASUREMENT UNCERTAINTY	5
2 GENERAL INFORMATION	6
2.1 GENERAL DESCRIPTION OF EUT	6
2.2 DESCRIPTION OF TEST MODES	8
2.2.1 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL	10
2.3 DUTY CYCLE OF TEST SIGNAL	15
2.4 DESCRIPTION OF SUPPORT UNITS	16
2.4.1 CONFIGURATION OF SYSTEM UNDER TEST	17
2.5 GENERAL DESCRIPTION OF APPLIED STANDARDS	17
3 TEST TYPES AND RESULTS	18
3.1 RADIATED EMISSION AND BANDEDGE MEASUREMENT	18
3.1.1 LIMITS OF RADIATED EMISSION AND BANDEDGE MEASUREMENT	18
3.1.2 LIMITS OF UNWANTED EMISSION	18
3.1.3 TEST INSTRUMENTS	19
3.1.4 TEST PROCEDURES	20
3.1.5 DEVIATION FROM TEST STANDARD	20
3.1.6 TEST SETUP	21
3.1.7 EUT OPERATING CONDITION	22
3.1.8 TEST RESULTS	23
3.2 OUT OF BAND EMISSION MEASUREMENT	104
3.2.1 LIMITS OF OUT OF BAND EMISSION MEASUREMENT	104
3.2.2 TEST INSTRUMENTS	105
3.2.3 TEST PROCEDURES	105
3.2.4 DEVIATION FROM TEST STANDARD	105
3.2.5 TEST SETUP	105
3.2.6 EUT OPERATING CONDITION	105
3.2.7 TEST RESULTS	106
3.3 CONDUCTED EMISSION MEASUREMENT	107
3.3.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT	107
3.3.2 TEST INSTRUMENTS	107
3.3.3 TEST PROCEDURES	107



3.3.4	DEVIATION FROM TEST STANDARD	108
3.3.5	TEST SETUP	108
3.3.6	EUT OPERATING CONDITIONS	108
3.3.7	TEST RESULTS	109
3.4	MAXIMUM CONDUCTED OUTPUT POWER MEASUREMENT	111
3.4.1	LIMITS OF MAXIMUM CONDUCTED OUTPUT POWER MEASUREMENT	111
3.4.2	TEST SETUP	112
3.4.3	TEST INSTRUMENTS	112
3.4.4	TEST PROCEDURE	113
3.4.5	DEVIATION FROM TEST STANDARD	115
3.4.6	EUT OPERATING CONDITIONS	115
3.4.7	TEST RESULTS	116
3.5	MAXIMUM POWER SPECTRAL DENSITY MEASUREMENT	117
3.5.1	LIMITS OF MAXIMUM POWER SPECTRAL DENSITY MEASUREMENT	117
3.5.2	TEST SETUP	117
3.5.3	TEST INSTRUMENTS	117
3.5.4	TEST PROCEDURES	118
3.5.5	DEVIATION FROM TEST STANDARD	118
3.5.6	EUT OPERATING CONDITIONS	118
3.5.7	TEST RESULTS	119
4	PHOTOGRAPHS OF THE TEST CONFIGURATION	120
5	APPENDIX A – MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB	121
	APPENDIX 1:	122

RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
W7L-P22010035RF03	Original release	Mar. 08, 2022
W7L- P22050011RF03	Based on the original report W7L-P21120035RF03 add 6 pogopin contacts (USB signal), change antenna shape and position and modified the main board. In this report verify RSE worst case, other test data is copied from the original test report.	Jun. 17, 2022
W7L-P23060012RF03	Based on the original product changing the FCC ID, applicant and manufacturer information, band name.	Jun. 16, 2023

1 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC PART 15, SUBPART E		
STANDARD SECTION	TEST TYPE AND LIMIT	RESULT
15.407(b)(6)	AC Power Conducted Emission	Compliance
15.407(b) (1/2/3/4/5)	Radiated Emission & Band Edge Measurement	Compliance
15.407(a/1/2/3)	Maximum conducted output Power	Compliance
15.407(a/1/2/3)	Peak Power Spectral Density	Compliance
15.403(i)	26 dB Bandwidth	Compliance
15.407(e)	6 dB Bandwidth	Compliance
15.203	Antenna Requirement	Compliance

1.1 MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

MEASUREMENT	UNCERTAINTY
AC Power Conducted emissions	±2.70dB
Radiated emissions (30MHz~1GHz)	±4.98dB
Radiated emissions (1GHz ~6GHz)	±4.70dB
Radiated emissions (6GHz ~18GHz)	±4.60dB
Radiated emissions (18GHz ~40GHz)	±4.12dB
Conducted emissions	±4.01dB
Occupied Channel Bandwidth	±43.58KHz
Conducted Output power	±2.06dB
Power Spectral Density	±0.85 dB

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k = 2$.



2 GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

PRODUCT	Smart Desktop Terminal
BRAND NAME	ZOLON
MODEL NAME	L1400
NOMINAL VOLTAGE	12Vdc (adapter or host equipment)
MODULATION	BPSK,QPSK,16QAM,64QAM,256QAM
TRANSFER RATE	802.11a: 54.0/ 48.0/ 36.0/ 24.0/ 18.0/ 12.0/ 9.0/ 6.0Mbps 802.11n: up to 150Mbps 802.11ac: up to 433.33Mbps
OPERATING FREQUENCY	5180 ~ 5240MHz, 5260 ~ 5320MHz, 5500 ~ 5700MHz, 5745 ~ 5825MHz
NUMBER OF CHANNEL	5180 ~ 5240MHz: 4 for 802.11a, 802.11n, 802.11ac (20MHz) 2 for 802.11n, 802.11ac (40MHz) 1 for 802.11ac (80MHz) 5260 ~ 5320MHz: 4 for 802.11a, 802.11n, 802.11ac (20MHz) 2 for 802.11n, 802.11ac (40MHz) 1 for 802.11ac (80MHz) 5500 ~ 5700MHz: 11 for 802.11a, 802.11n, 802.11ac(20MHz) 5 for 802.11n, 802.11ac (40MHz) 2 for 802.11ac (80MHz) 5745 ~ 5825MHz: 5 for 802.11a, 802.11n, 802.11ac (20MHz) 2 for 802.11n, 802.11ac (40MHz) 1 for 802.11ac (80MHz)
AVERAGE POWER	35.56mW for 5180 ~ 5240MHz 34.51mW for 5260 ~ 5320MHz 35.08mW for 5500 ~ 5700MHz 38.28mW for 5745 ~ 5825MHz
ANTENNA TYPE	FPC Antenna
ANTENNA GAIN	3 dBi for 5180 ~ 5240MHz 3 dBi for 5260 ~ 5320MHz 3 dBi for 5500 ~ 5720MHz 3 dBi for 5745 ~ 5825MHz
I/O PORTS	Refer to user's manual
CABLE SUPPLIED	N/A

**NOTE:**

1. For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.
2. The EUT incorporates a SISO function. Physically, the EUT provides one completed transmitter and one receiver.

MODULATION MODE	TX FUNCTION
802.11a	1TX/1RX
802.11n/802.11ac (20MHz)	1TX/1RX
802.11n/802.11ac (40MHz)	1TX/1RX
802.11ac (80MHz)	1TX/1RX

3. For the test results, the EUT had been tested with all conditions. But only the worst case was shown in test report.
4. The EUT was declared as client equipment without radar detection function by the manufacturer.

List of Accessory:

ACCESSORIES	BRAND	MODEL	SPECIFICATION
AC Adapter	/	ADT-65NS-D00	I/P: 100-240Vac, 1.6A, O/P: 12Vdc, 5.0A, 1.8 meter

2.2 DESCRIPTION OF TEST MODES

FOR 5180 ~ 5240MHz

4 channels are provided for 802.11a, 802.11n, 802.11ac (20MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
36	5180 MHz	44	5220 MHz
40	5200 MHz	48	5240 MHz

2 channels are provided for 802.11n, 802.11ac (40MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
38	5190 MHz	46	5230 MHz

1 channel is provided for 802.11ac (80MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
42	5210 MHz		

FOR 5250 ~ 5350MHz

4 channels are provided for 802.11a, 802.11n, 802.11ac (20MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
52	5260 MHz	60	5300 MHz
56	5280 MHz	64	5320 MHz

2 channels are provided for 802.11n, 802.11ac (40MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
54	5270 MHz	62	5310 MHz

1 channel is provided for 802.11ac (80MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
58	5290 MHz		

FOR 5470 ~ 5725MHz

11 channels are provided for 802.11a, 802.11n, 802.11ac (20MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
100	5500 MHz	124	5620MHz
104	5520 MHz	128	5640MHz
108	5540 MHz	132	5660 MHz
112	5560 MHz	136	5680 MHz
116	5580 MHz	140	5700 MHz
120	5600 MHz		

5 channels are provided for 802.11n, 802.11ac (40MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
102	5510 MHz	126	5630MHz
110	5550 MHz	134	5670 MHz
118	5590 MHz		

2 channel is provided for 802.11ac (80MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
106	5530 MHz		
122	5610 MHz		

FOR 5725 ~ 5850MHz

5 channels are provided for 802.11a, 802.11n, 802.11ac (20MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
149	5745 MHz	161	5805 MHz
153	5765 MHz	165	5825 MHz
157	5785 MHz		

2 channels are provided for 802.11n, 802.11ac (40MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
151	5755 MHz	159	5795 MHz

1 channel is provided for 802.11ac (80MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
155	5775 MHz		



2.2.1 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL

EUT CONFIGURE MODE	APPLICABLE TO				DESCRIPTION
	RE $\geq$ 1G	RE<1G	PLC	APCM	
A	√	√	√	-	Powered by Adapter with wifi(5G) link
B	-	-	-	√	Powered by Battery with wifi(5G) link
C	-	-	-	-	Powered by USB with wifi(5G) link

Where

RE $\geq$ 1G: Radiated Emission above 1GHz**RE<1G:** Radiated Emission below 1GHz**PLC:** Power Line Conducted Emission**APCM:** Antenna Port Conducted Measurement**NOTE:**The EUT had been pre-tested on the positioned of each 3 axis. The worst case was found when positioned on **X-plane**.**NOTE:** “-” means no effect.**RADIATED EMISSION TEST (BELOW 1GHz):**

- ☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- ☒ Following channel(s) was (were) selected for the final test as listed below.

EUT CONFIGURE MODE	MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION	DATA RATE (Mbps)
A	802.11a	5180-5240	36 to 48	36	OFDM	MCS0

RADIATED EMISSION TEST (ABOVE 1GHz):

- ☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- ☒ Following channel(s) was (were) selected for the final test as listed below.

EUT CONFIGURE MODE	MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION	DATA RATE (Mbps)
A	802.11a	5180-5240	36 to 48	36, 40, 48	OFDM	6.0
A	802.11n (20MHz)		36 to 48	36, 40, 48	OFDM	MCS0
A	802.11n (40MHz)		38 to 46	38, 46	OFDM	MCS0
A	802.11ac (20MHz)		36 to 48	36, 40, 48	OFDM	MCS0
A	802.11ac (40MHz)		38 to 46	38, 46	OFDM	MCS0
A	802.11ac (80MHz)		42	42	OFDM	MCS0
A	802.11a	5260-5320	52 to 64	52, 60, 64	OFDM	6.0
A	802.11n (20MHz)		52 to 64	52, 60, 64	OFDM	MCS0
A	802.11n (40MHz)		54 to 62	54, 62	OFDM	MCS0
A	802.11ac (20MHz)		52 to 64	52, 60, 64	OFDM	MCS0
A	802.11ac (40MHz)		54 to 62	54, 62	OFDM	MCS0
A	802.11ac (80MHz)		58	58	OFDM	MCS0
A	802.11a	5500-5700	100 to 140	100, 116, 140	OFDM	6.0
A	802.11n (20MHz)		100 to 140	100, 116, 140	OFDM	MCS0
A	802.11n (40MHz)		102 to 134	102, 110, 134	OFDM	MCS0
A	802.11ac (20MHz)		100 to 140	100, 116, 140	OFDM	MCS0
A	802.11ac (40MHz)		102 to 134	102, 110, 134	OFDM	MCS0
A	802.11ac (80MHz)		106	106	OFDM	MCS0
A	802.11a	5745-5850	149 to 165	100, 116, 140	OFDM	6.0
A	802.11n (20MHz)		149 to 165	100, 116, 140	OFDM	MCS0
A	802.11ac (40MHz)		151 to 159	102, 110, 134	OFDM	MCS0
A	802.11ac (20MHz)		149 to 165	100, 116, 140	OFDM	MCS0
A	802.11n (40MHz)		151 to 159	102, 110, 134	OFDM	MCS0
A	802.11ac (80MHz)		155	106	OFDM	MCS0

**POWER LINE CONDUCTED EMISSION TEST:**

- ☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- ☒ Following channel(s) was (were) selected for the final test as listed below.

EUT CONFIGURE MODE	MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION	DATA RATE (Mbps)
A	802.11a	5180-5240	36 to 48	36	OFDM	MCS0

BANDEDGE MEASUREMENT:

- ☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- ☒ Following channel(s) was (were) selected for the final test as listed below.

EUT CONFIGURE MODE	MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION	DATA RATE (Mbps)
A	802.11a	5180-5240	36 to 48	36, 40, 48	OFDM	6.0
A	802.11n (20MHz)		36 to 48	36, 40, 48	OFDM	MCS0
A	802.11n (40MHz)		38 to 46	38, 46	OFDM	MCS0
A	802.11ac (20MHz)		36 to 48	36, 40, 48	OFDM	MCS0
A	802.11ac (40MHz)		38 to 46	38, 46	OFDM	MCS0
A	802.11ac (80MHz)		42	42	OFDM	MCS0
A	802.11a	5260-5320	52 to 64	52, 60, 64	OFDM	6.0
A	802.11n (20MHz)		52 to 64	52, 60, 64	OFDM	MCS0
A	802.11n (40MHz)		54 to 62	54, 62	OFDM	MCS0
A	802.11ac (20MHz)		52 to 64	52, 60, 64	OFDM	MCS0
A	802.11ac (40MHz)		54 to 62	54, 62	OFDM	MCS0
A	802.11ac (80MHz)		58	58	OFDM	MCS0
A	802.11a	5500-5700	100 to 140	100, 116, 140	OFDM	6.0
A	802.11n (20MHz)		100 to 140	100, 116, 140	OFDM	MCS0
A	802.11n (40MHz)		102 to 134	102, 110, 134	OFDM	MCS0
A	802.11ac (20MHz)		100 to 140	100, 116, 140	OFDM	MCS0
A	802.11ac (40MHz)		102 to 134	102, 110, 134	OFDM	MCS0

A	802.11ac (80MHz)		106	106	OFDM	MCS0
A	802.11a	5745-5850	149 to 165	100, 116, 140	OFDM	6.0
A	802.11n (20MHz)		149 to 165	100, 116, 140	OFDM	MCS0
A	802.11ac (40MHz)		151 to 159	102, 110, 134	OFDM	MCS0
A	802.11ac (20MHz)		149 to 165	100, 116, 140	OFDM	MCS0
A	802.11n (40MHz)		151 to 159	102, 110, 134	OFDM	MCS0
A	802.11ac (80MHz)		155	106	OFDM	MCS0

ANTENNA PORT CONDUCTED MEASUREMENT:

- ☒ This item includes all test value of each mode, but only includes spectrum plot of worst value of each mode.
- ☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- ☒ Following channel(s) was (were) selected for the final test as listed below.

EUT CONFIGURE MODE	MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION	DATA RATE (Mbps)
A	802.11a	5180-5240	36 to 48	36, 40, 48	OFDM	6.0
A	802.11n (20MHz)		36 to 48	36, 40, 48	OFDM	MCS0
A	802.11n (40MHz)		38 to 46	38, 46	OFDM	MCS0
A	802.11ac (20MHz)		36 to 48	36, 40, 48	OFDM	MCS0
A	802.11ac (40MHz)		38 to 46	38, 46	OFDM	MCS0
A	802.11ac (80MHz)		42	42	OFDM	MCS0
A	802.11a	5260-5320	52 to 64	56, 60, 64	OFDM	6.0
A	802.11n (20MHz)		52 to 64	56, 60, 64	OFDM	MCS0
A	802.11n (40MHz)		54 to 62	54, 62	OFDM	MCS0
A	802.11ac (20MHz)		52 to 64	56, 60, 64	OFDM	MCS0
A	802.11ac (40MHz)		54 to 62	54, 62	OFDM	MCS0
A	802.11ac (80MHz)		58	58	OFDM	MCS0
A	802.11a	5500-5700	100 to 140	100, 116, 140	OFDM	6.0
A	802.11n (20MHz)		100 to 140	100, 116, 140	OFDM	MCS0
A	802.11n (40MHz)		102 to 134	102, 110, 134	OFDM	MCS0



A	802.11ac (20MHz)		100 to 140	100, 116, 140	OFDM	MCS0
A	802.11ac (40MHz)		102 to 134	102, 110, 134	OFDM	MCS0
A	802.11ac (80MHz)		106	106	OFDM	MCS0
A	802.11a	5745-5850	149 to 165	100, 116, 140	OFDM	6.0
A	802.11n (20MHz)		149 to 165	100, 116, 140	OFDM	MCS0
A	802.11ac (40MHz)		151 to 159	102, 110, 134	OFDM	MCS0
A	802.11ac (20MHz)		149 to 165	100, 116, 140	OFDM	MCS0
A	802.11n (40MHz)		151 to 159	102, 110, 134	OFDM	MCS0
A	802.11ac (80MHz)		155	106	OFDM	MCS0

TEST CONDITION:

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
RE<1G	23deg. C, 70%RH	DC 12V	Star Le
RE≥1G	23deg. C, 70%RH	DC 12V	Star Le
PLC	25deg. C, 52%RH	DC 12V	Lily Zhao
APCM	25deg. C, 60%RH	DC 12V	Lily Zhao

2.3 DUTY CYCLE OF TEST SIGNAL

Please Refer to Appendix 1 Of this test report.

WORST-CASE DATA:

Measured Duty Cycle		
Mode		Duty Cycle [%]
		ANT1
5GHZ	11a	98.07
	11n20	97.93
	11n40	95.88
	11ac20	97.94
	11ac40	95.88
	11ac80	91.84

Note:

Duty cycle of test signal is < 98%, duty factor shall be considered.

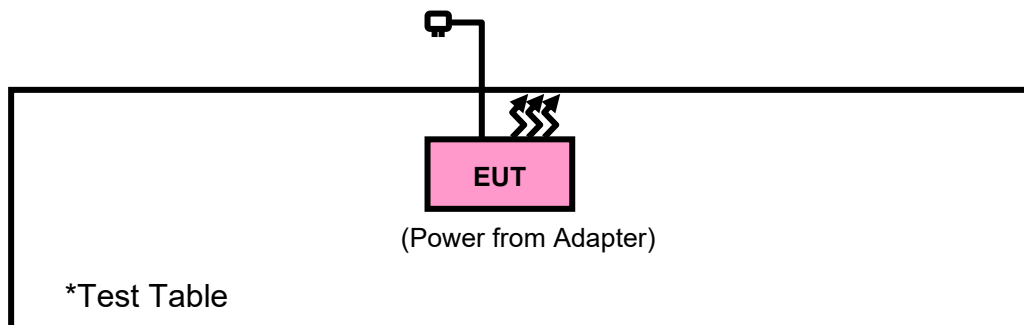
2.4 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	Desktop	Lenovo	M73 SFF	PC04GRQV	N/A
2	Desktop	Lenovo	M73 SFF	PC06CS27	N/A
3	Laptop	Lenovo	Thnikpad L440	R90FTFKN	N/A
4	DC source	Kikusui/JP	PMX18-5A	0000001	N/A

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	AC Line: Unshielded, Detachable 1.5m
2	AC Line: Unshielded, Detachable 1.5m
3	AC Line: Unshielded, Detachable 1.5m
4	DC Line: Unshielded, Detachable 1.0m

2.4.1 CONFIGURATION OF SYSTEM UNDER TEST



2.5 GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT is a RF Product. According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

FCC Part 15, Subpart E (15.407)

KDB 789033 D02 General U-NII Test Procedures New Rules v02r01

ANSI C63.10-2013

All test items have been performed and recorded as per the above standards.

NOTE: The EUT is also considered as a kind of computer peripheral, because the connection to computer is necessary for typical use. It has been verified to comply with the requirements of FCC Part 15, Subpart B, Class B (Certification). The test report has been issued separately.

3 TEST TYPES AND RESULTS

3.1 RADIATED EMISSION AND BANDEDGE MEASUREMENT

3.1.1 LIMITS OF RADIATED EMISSION AND BANDEDGE MEASUREMENT

Radiated emissions which fall in the restricted bands must comply with the radiated emission limits specified as below table:

FREQUENCIES (MHz)	FIELD STRENGTH (microvolts/meter)	MEASUREMENT DISTANCE (meters)
0.009 ~ 0.490	2400/F(kHz)	300
0.490 ~ 1.705	24000/F(kHz)	30
1.705 ~ 30.0	30	30
30 ~ 88	100	3
88 ~ 216	150	3
216 ~ 960	200	3
Above 960	500	3

NOTE:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
3. For frequencies above 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition of modulation.

3.1.2 LIMITS OF UNWANTED EMISSION

RESTRICTED BANDS	APPLICABLE TO	LIMIT	
	789033 D02 General UNII Test Procedures New Rules v02r01	FIELD STRENGTH AT 3m (dBµV/m)	
		PK : 74	AV : 54
OUT OF THE RESTRICTED BANDS	APPLICABLE TO	EIRP LIMIT (dBm/MHz)	EQUIVALENT FIELD STRENGTH AT 3m (dBµV/m)
	15.407(b)(1)	PK : -27	PK : 68.2
	15.407(b)(2)		
	15.407(b)(3)		
	15.407(b)(4)	See note 2 (FCC 16-24)	



NOTE:

1. The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength:

$$E = \frac{1000000 \sqrt{30P}}{3} \mu\text{V/m, where P is the eirp (Watts).}$$

2. All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

3.1.3 TEST INSTRUMENTS

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
3m Semi-anechoic Chamber	ETS-LINDGREN	9m*6m*6m	Euroshieldpn-CT0001143-1216	May. 19,20	May. 18,23
Bilog Antenna	ETS-LINDGREN	3143B	00161965	Mar. 05,21	Mar. 04,22
Bilog Antenna	ETS-LINDGREN	3143B	00161965	Mar. 04,22	Mar. 03,23
Horn Antenna	ETS-LINDGREN	3117	00168728	Apr. 02,21	Apr. 01,22
Horn Antenna	ETS-LINDGREN	3117	00168728	Apr. 01,22	Mar. 31,23
Horn Antenna (18GHz-40GHz)	N/A	QWH-SL-18-40-K-SG/QMS-00361	15433	Aug. 25, 21	Aug. 24, 22
Test Software	E3	V 9.160323	N/A	N/A	N/A
Test Software	ADT	ADT_Radiated_V7.6.15.9.2	N/A	N/A	N/A
10dB Attenuator	JFW/USA	50HF-010-SMA	1505	Jun. 03,21	Jun. 02,22
10dB Attenuator	JFW/USA	50HF-010-SMA	1505	Jun. 02,22	Jun. 01,23
MXE EMI Receiver	KEYSIGHT	N9038A-544	MY54450026	Apr. 22,21	Apr. 21,22
MXE EMI Receiver	KEYSIGHT	N9038A-544	MY54450026	Apr. 21,22	Apr. 20,23
Signal Pre-Amplifier	EMSI	EMC 9135	980249	Jun. 02,21	Jun. 01,22
Signal Pre-Amplifier	EMSI	EMC 9135	980249	Jun. 01,22	May. 31,23
Signal Pre-Amplifier	EMSI	EMC 012645B	980257	Jun. 03,21	Jun. 02,22
Signal Pre-Amplifier	EMSI	EMC 012645B	980257	Jun. 02,22	Jun. 01,23
Signal Pre-Amplifier	EMSI	EMC 184045B	980259	Apr. 22,21	Apr. 21,22
Signal Pre-Amplifier	EMSI	EMC 184045B	980259	Apr. 21,22	Apr. 20,23

NOTE:

1. The calibration interval of the above test instruments is 12 months or 36 months and the calibrations are traceable to CEPREI/CHINA, GRGT/CHINA and NIM/CHINA.
2. The test was performed in 3m Chamber.
3. The FCC Site Registration No. is 525120; The Designation No. is CN1171.

3.1.4 TEST PROCEDURES

- a. The EUT was placed on the top of a rotating table 0.8 meters (for below 1GHz) / 1.5 meters (for above 1GHz) above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The antenna is a broadband antenna, and its height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

NOTE:

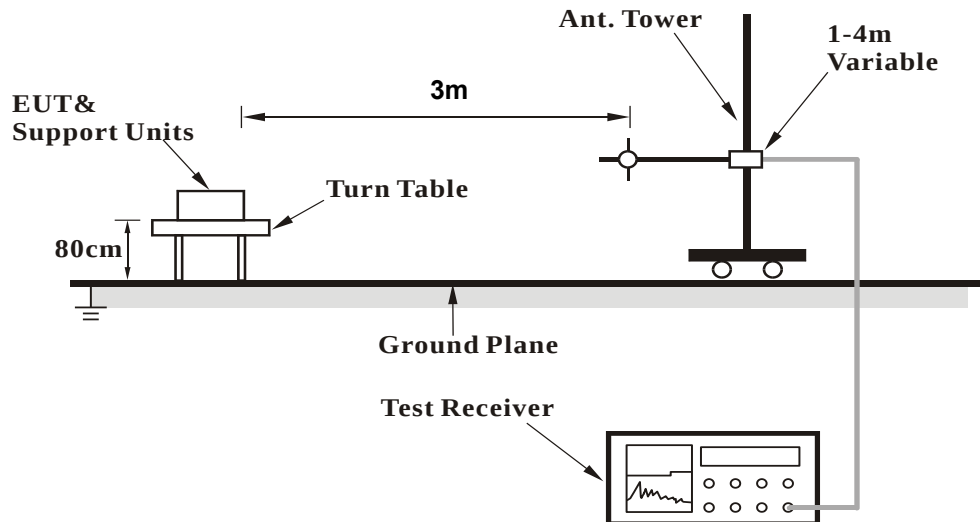
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Peak detection (PK) and Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 3MHz for RMS Average (Duty cycle < 98%) for Average detection (AV) at frequency above 1GHz, then the measurement results was added to a correction factor ($10 \log(1/\text{duty cycle})$).
4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 10Hz (Duty cycle $\geq 98\%$) for Average detection (AV) at frequency above 1GHz.
5. All modes of operation were investigated and the worst-case emissions are reported.

3.1.5 DEVIATION FROM TEST STANDARD

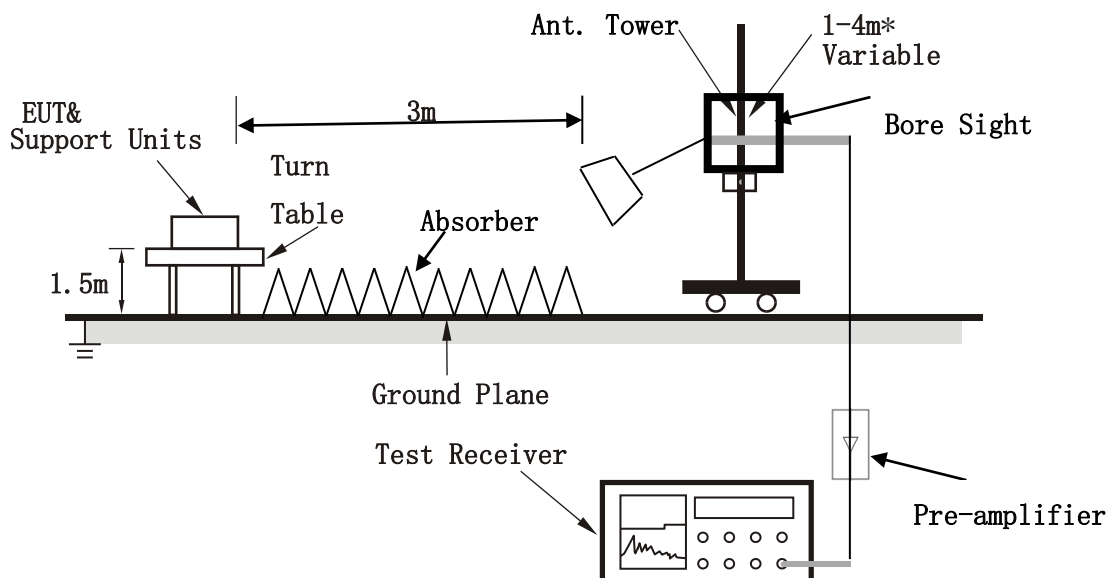
No deviation.

3.1.6 TEST SETUP

< Frequency Range 30MHz~1GHz >



<Frequency Range above 1GHz>



Note: Above 1G is a directional antenna

Depends on the EUT height and the antenna 3dB beamwidth both, refer to section 7.3 of CISPR 16-2-3.

For the actual test configuration, please refer to the attached file (Test Setup Photo).



Test Report No.: W7L-P23060012RF03

3.1.7 EUT OPERATING CONDITION

- a. Set the EUT under full load condition and placed them on a testing table.
- b. Set the transmitter part of EUT under transmission condition continuously at specific channel frequency.
- c. The necessary accessories enable the EUT in full functions.

3.1.8 TEST RESULTS

BELOW 1GHz WORST-CASE DATA:

30 MHz – 1GHz data:

Band 1

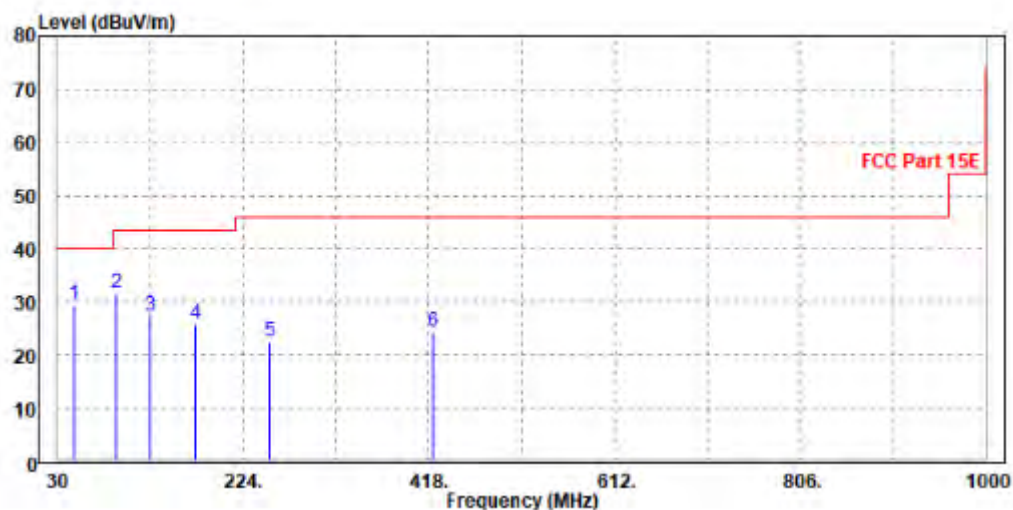
802.11a

CHANNEL	TX Channel 36	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 1GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
48.43	29.54	55.89	40	-10.46	10.29	0.39	37.03	200	0	QP
92.08	31.64	58.79	43.5	-11.86	9.23	0.52	36.9	200	0	QP
127	27.47	54.71	43.5	-16.03	8.84	0.6	36.68	200	0	QP
174.53	25.74	50.21	43.5	-17.76	11.26	0.7	36.43	200	0	QP
251.16	22.47	44.39	46	-23.53	13.51	0.84	36.27	200	0	QP
422.85	24.34	43.07	46	-21.66	16.63	1.11	36.47	200	0	QP

REMARKS:

1. Emission level (dBuV/m) = Read level (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.

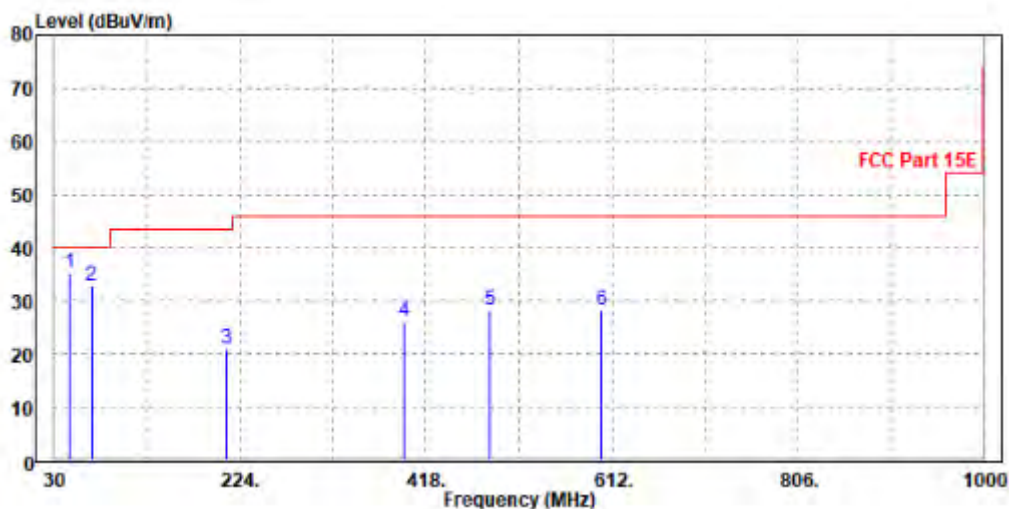


CHANNEL	Channel 36	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 1GHz		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
46.49	35.2	60.94	40	-4.8	10.96	0.38	37.08	100	0	QP
68.8	32.98	61.31	40	-7.02	8.16	0.47	36.96	100	0	QP
210.42	21.12	44.93	43.5	-22.38	11.73	0.75	36.29	100	0	QP
394.72	26.08	45.25	46	-19.92	16.18	1.06	36.41	100	0	QP
484.93	28.15	46.14	46	-17.85	17.4	1.2	36.59	100	0	QP
600.36	28.39	44.28	46	-17.61	19.6	1.36	36.85	100	0	QP

REMARKS:

1. Emission level (dBuV/m) = Read level (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.



**ABOVE 1GHz WORST-CASE DATA:**

Note: For higher frequency, the emission is too low to be detected.

Band 1

802.11a

CHANNEL	TX Channel 36	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	55.97	57.04	74	-18.03	34.52	9.92	45.51	100	15	Peak
5150	49.48	50.55	54	-4.52	34.52	9.92	45.51	100	15	Average
5180	97.81	98.87	-	-	34.54	9.91	45.51	100	15	Peak
5180	90.81	91.87	-	-	34.54	9.91	45.51	100	15	Average
5350	53.58	54.56	74	-20.42	34.68	9.85	45.51	100	15	Peak
5350	47.33	48.31	54	-6.67	34.68	9.85	45.51	100	15	Average
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	54.53	55.52	74	-19.47	34.6	9.92	45.51	150	360	Peak
5150	48.71	49.7	54	-5.29	34.6	9.92	45.51	150	360	Average
5180	100.52	101.52	-	-	34.6	9.91	45.51	150	360	Peak
5180	94.07	95.07	-	-	34.6	9.91	45.51	150	360	Average
5350	54.29	55.35	74	-19.71	34.6	9.85	45.51	150	360	Peak
5350	47.01	48.07	54	-6.99	34.6	9.85	45.51	150	360	Average

REMARKS:

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
Margin value = Emission level – Limit value.
2. 5180MHz: Fundamental frequency.

CHANNEL	TX Channel 40	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	56.95	59.26	74	-17.05	34.52	9.52	46.35	100	265	Peak
5150	49.43	51.74	54	-4.57	34.52	9.52	46.35	100	265	Average
5200	95.46	97.62	-	-	34.56	9.62	46.34	100	265	Peak
5200	88.05	90.21	-	-	34.56	9.62	46.34	100	265	Average
5350	54.88	56.56	74	-19.12	34.68	9.94	46.3	100	265	Peak
5350	48.85	50.53	54	-5.15	34.68	9.94	46.3	100	265	Average
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	55.55	57.78	74	-18.45	34.6	9.52	46.35	100	95	Peak
5150	49.2	51.43	54	-4.8	34.6	9.52	46.35	100	95	Average
5200	100.57	102.69	-	-	34.6	9.62	46.34	100	95	Peak
5200	92.96	95.08	-	-	34.6	9.62	46.34	100	95	Average
5350	55.36	57.12	74	-18.64	34.6	9.94	46.3	100	95	Peak
5350	48.35	50.11	54	-5.65	34.6	9.94	46.3	100	95	Average

REMARKS:

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
Margin value = Emission level – Limit value.
2. 5200MHz: Fundamental frequency.

CHANNEL	TX Channel 48	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	55.4	57.71	74	-18.6	34.52	9.52	46.35	100	265	Peak
5150	49.51	51.82	54	-4.49	34.52	9.52	46.35	100	265	Average
5240	95.84	97.87	-	-	34.59	9.71	46.33	100	265	Peak
5240	88.64	90.67	-	-	34.59	9.71	46.33	100	265	Average
5350	55.02	56.7	74	-18.98	34.68	9.94	46.3	100	265	Peak
5350	48.49	50.17	54	-5.51	34.68	9.94	46.3	100	265	Average
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	55.31	57.54	74	-18.69	34.6	9.52	46.35	100	95	Peak
5150	49.69	51.92	54	-4.31	34.6	9.52	46.35	100	95	Average
5240	102.13	104.15	-	-	34.6	9.71	46.33	100	95	Peak
5240	95.78	97.8	-	-	34.6	9.71	46.33	100	95	Average
5350	53.59	55.35	74	-20.41	34.6	9.94	46.3	100	95	Peak
5350	48.38	50.14	54	-5.62	34.6	9.94	46.3	100	95	Average

REMARKS:

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
Margin value = Emission level – Limit value.
2. 5240MHz: Fundamental frequency.



802.11n (20MHz)

CHANNEL	TX Channel 36	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	55.82	58.13	74	-18.18	34.52	9.52	46.35	100	300	Peak
5150	50	52.31	54	-4	34.52	9.52	46.35	100	300	Average
5180	95.02	97.25	-	-	34.54	9.58	46.35	100	300	Peak
5180	88.59	90.82	-	-	34.54	9.58	46.35	100	300	Average
5350	55.44	57.12	74	-18.56	34.68	9.94	46.3	100	300	Peak
5350	48.52	50.2	54	-5.48	34.68	9.94	46.3	100	300	Average
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	55.96	58.19	74	-18.04	34.6	9.52	46.35	100	95	Peak
5150	49.45	51.68	54	-4.55	34.6	9.52	46.35	100	95	Average
5180	99.9	102.07	-	-	34.6	9.58	46.35	100	95	Peak
5180	92.53	94.7	-	-	34.6	9.58	46.35	100	95	Average
5350	54.47	56.23	74	-19.53	34.6	9.94	46.3	100	95	Peak
5350	48.98	50.74	54	-5.02	34.6	9.94	46.3	100	95	Average

REMARKS:

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
Margin value = Emission level – Limit value.
2. 5180MHz: Fundamental frequency.

CHANNEL	TX Channel 40	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	57.18	59.49	74	-16.82	34.52	9.52	46.35	100	265	Peak
5150	49.5	51.81	54	-4.5	34.52	9.52	46.35	100	265	Average
5200	95.84	98	-	-	34.56	9.62	46.34	100	265	Peak
5200	88.05	90.21	-	-	34.56	9.62	46.34	100	265	Average
5350	54.76	56.44	74	-19.24	34.68	9.94	46.3	100	265	Peak
5350	48.1	49.78	54	-5.9	34.68	9.94	46.3	100	265	Average
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	56.07	58.3	74	-17.93	34.6	9.52	46.35	100	95	Peak
5150	50.25	52.48	54	-3.75	34.6	9.52	46.35	100	95	Average
5200	99.86	101.98	-	-	34.6	9.62	46.34	100	95	Peak
5200	92.73	94.85	-	-	34.6	9.62	46.34	100	95	Average
5350	54.36	56.12	74	-19.64	34.6	9.94	46.3	100	95	Peak
5350	48.35	50.11	54	-5.65	34.6	9.94	46.3	100	95	Average

REMARKS:

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
Margin value = Emission level – Limit value.
2. 5200MHz: Fundamental frequency.

CHANNEL	TX Channel 48	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	56.84	59.15	74	-17.16	34.52	9.52	46.35	100	265	Peak
5150	49.48	51.79	54	-4.52	34.52	9.52	46.35	100	265	Average
5240	95.07	97.1	-	-	34.59	9.71	46.33	100	265	Peak
5240	88.53	90.56	-	-	34.59	9.71	46.33	100	265	Average
5350	54.22	55.9	74	-19.78	34.68	9.94	46.3	100	265	Peak
5350	48.47	50.15	54	-5.53	34.68	9.94	46.3	100	265	Average
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	54.84	57.07	74	-19.16	34.6	9.52	46.35	100	95	Peak
5150	49.79	52.02	54	-4.21	34.6	9.52	46.35	100	95	Average
5240	102.09	104.11	-	-	34.6	9.71	46.33	100	95	Peak
5240	95.11	97.13	-	-	34.6	9.71	46.33	100	95	Average
5350	54.01	55.77	74	-19.99	34.6	9.94	46.3	100	95	Peak
5350	48.71	50.47	54	-5.29	34.6	9.94	46.3	100	95	Average

REMARKS:

- Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
Margin value = Emission level – Limit value.
- 5240MHz: Fundamental frequency.



802.11n (40MHz)

CHANNEL	TX Channel 38	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	54.86	57.17	74	-19.14	34.52	9.52	46.35	100	265	Peak
5150	50.27	52.58	54	-3.73	34.52	9.52	46.35	100	265	Average
5190	91.64	93.83	-	-	34.55	9.6	46.34	100	265	Peak
5190	84.53	86.72	-	-	34.55	9.6	46.34	100	265	Average
5350	54.86	56.54	74	-19.14	34.68	9.94	46.3	100	265	Peak
5350	48.8	50.48	54	-5.2	34.68	9.94	46.3	100	265	Average
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	54.64	56.87	74	-19.36	34.6	9.52	46.35	110	303	Peak
5150	50.38	52.61	54	-3.62	34.6	9.52	46.35	110	303	Average
5190	97.45	99.59	-	-	34.6	9.6	46.34	110	303	Peak
5190	90.19	92.33	-	-	34.6	9.6	46.34	110	303	Average
5350	54.31	56.07	74	-19.69	34.6	9.94	46.3	110	303	Peak
5350	48.98	50.74	54	-5.02	34.6	9.94	46.3	110	303	Average

REMARKS:

- Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
Margin value = Emission level – Limit value.
- 5190MHz: Fundamental frequency.

CHANNEL	TX Channel 46	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	56.01	58.32	74	-17.99	34.52	9.52	46.35	100	265	Peak
5150	50.18	52.49	54	-3.82	34.52	9.52	46.35	100	265	Average
5230	91.21	93.27	-	-	34.58	9.69	46.33	100	265	Peak
5230	83.11	85.17	-	-	34.58	9.69	46.33	100	265	Average
5350	54.17	55.85	74	-19.83	34.68	9.94	46.3	100	265	Peak
5350	48.17	49.85	54	-5.83	34.68	9.94	46.3	100	265	Average
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	55.16	57.39	74	-18.84	34.6	9.52	46.35	100	305	Peak
5150	50.11	52.34	54	-3.89	34.6	9.52	46.35	100	305	Average
5230	99	101.04	-	-	34.6	9.69	46.33	100	305	Peak
5230	90.65	92.69	-	-	34.6	9.69	46.33	100	305	Average
5350	55.13	56.89	74	-18.87	34.6	9.94	46.3	100	305	Peak
5350	49.54	51.3	54	-4.46	34.6	9.94	46.3	100	305	Average

REMARKS:

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
Margin value = Emission level – Limit value.
2. 5230MHz: Fundamental frequency.



802.11ac (20MHz)

CHANNEL	TX Channel 36	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	57.45	59.76	74	-16.55	34.52	9.52	46.35	100	265	Peak
5150	48.97	51.28	54	-5.03	34.52	9.52	46.35	100	265	Average
5180	94.7	96.93	-	-	34.54	9.58	46.35	100	265	Peak
5180	88.31	90.54	-	-	34.54	9.58	46.35	100	265	Average
5350	53.35	55.03	74	-20.65	34.68	9.94	46.3	100	265	Peak
5350	48.79	50.47	54	-5.21	34.68	9.94	46.3	100	265	Average
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	56.09	58.32	74	-17.91	34.6	9.52	46.35	110	95	Peak
5150	50.28	52.51	54	-3.72	34.6	9.52	46.35	110	95	Average
5180	102.69	104.86	-	-	34.6	9.58	46.35	110	95	Peak
5180	96.6	98.77	-	-	34.6	9.58	46.35	110	95	Average
5350	54.53	56.29	74	-19.47	34.6	9.94	46.3	110	95	Peak
5350	48.23	49.99	54	-5.77	34.6	9.94	46.3	110	95	Average

REMARKS:

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
Margin value = Emission level – Limit value.
2. 5180MHz: Fundamental frequency.

CHANNEL	TX Channel 40	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	55.58	57.89	74	-18.42	34.52	9.52	46.35	100	265	Peak
5150	49.91	52.22	54	-4.09	34.52	9.52	46.35	100	265	Average
5200	94.7	96.86	-	-	34.56	9.62	46.34	100	265	Peak
5200	88.34	90.5	-	-	34.56	9.62	46.34	100	265	Average
5350	53.47	55.15	74	-20.53	34.68	9.94	46.3	100	265	Peak
5350	48.11	49.79	54	-5.89	34.68	9.94	46.3	100	265	Average
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	53.85	56.08	74	-20.15	34.6	9.52	46.35	110	95	Peak
5150	50.39	52.62	54	-3.61	34.6	9.52	46.35	110	95	Average
5200	102.44	104.56	-	-	34.6	9.62	46.34	110	95	Peak
5200	96.15	98.27	-	-	34.6	9.62	46.34	110	95	Average
5350	53.49	55.25	74	-20.51	34.6	9.94	46.3	110	95	Peak
5350	48.38	50.14	54	-5.62	34.6	9.94	46.3	110	95	Average

REMARKS:

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
Margin value = Emission level – Limit value.
2. 5200MHz: Fundamental frequency.

CHANNEL	TX Channel 48	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	54.91	57.22	74	-19.09	34.52	9.52	46.35	100	265	Peak
5150	49.87	52.18	54	-4.13	34.52	9.52	46.35	100	265	Average
5240	96.43	98.46	-	-	34.59	9.71	46.33	100	265	Peak
5240	88.41	90.44	-	-	34.59	9.71	46.33	100	265	Average
5350	55.16	56.84	74	-18.84	34.68	9.94	46.3	100	265	Peak
5350	48.3	49.98	54	-5.7	34.68	9.94	46.3	100	265	Average
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	55.26	57.49	74	-18.74	34.6	9.52	46.35	110	95	Peak
5150	49.6	51.83	54	-4.4	34.6	9.52	46.35	110	95	Average
5240	102.56	104.58	-	-	34.6	9.71	46.33	110	95	Peak
5240	95.7	97.72	-	-	34.6	9.71	46.33	110	95	Average
5350	54.69	56.45	74	-19.31	34.6	9.94	46.3	110	95	Peak
5350	49.27	51.03	54	-4.73	34.6	9.94	46.3	110	95	Average

REMARKS:

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
Margin value = Emission level – Limit value.
2. 5240MHz: Fundamental frequency.



802.11ac (40MHz)

CHANNEL	TX Channel 38	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	55.34	57.65	74	-18.66	34.52	9.52	46.35	100	265	Peak
5150	49.85	52.16	54	-4.15	34.52	9.52	46.35	100	265	Average
5190	90.86	93.05	-	-	34.55	9.6	46.34	100	265	Peak
5190	84.46	86.65	-	-	34.55	9.6	46.34	100	265	Average
5350	56.01	57.69	74	-17.99	34.68	9.94	46.3	100	265	Peak
5350	48.69	50.37	54	-5.31	34.68	9.94	46.3	100	265	Average
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	55.19	57.42	74	-18.81	34.6	9.52	46.35	110	303	Peak
5150	50.07	52.3	54	-3.93	34.6	9.52	46.35	110	303	Average
5190	97.21	99.35	-	-	34.6	9.6	46.34	110	303	Peak
5190	90.83	92.97	-	-	34.6	9.6	46.34	110	303	Average
5350	53.15	54.91	74	-20.85	34.6	9.94	46.3	110	303	Peak
5350	48.58	50.34	54	-5.42	34.6	9.94	46.3	110	303	Average

REMARKS:

- Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
Margin value = Emission level – Limit value.
- 5190MHz: Fundamental frequency.

CHANNEL	TX Channel 46	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	56.77	59.08	74	-17.23	34.52	9.52	46.35	100	265	Peak
5150	49.48	51.79	54	-4.52	34.52	9.52	46.35	100	265	Average
5230	90.92	92.98	-	-	34.58	9.69	46.33	100	265	Peak
5230	83.54	85.6	-	-	34.58	9.69	46.33	100	265	Average
5350	54.91	56.59	74	-19.09	34.68	9.94	46.3	100	265	Peak
5350	48.45	50.13	54	-5.55	34.68	9.94	46.3	100	265	Average
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	54.08	56.31	74	-19.92	34.6	9.52	46.35	110	303	Peak
5150	50.24	52.47	54	-3.76	34.6	9.52	46.35	110	303	Average
5230	96.08	98.12	-	-	34.6	9.69	46.33	110	303	Peak
5230	89.78	91.82	-	-	34.6	9.69	46.33	110	303	Average
5350	54.04	55.8	74	-19.96	34.6	9.94	46.3	110	303	Peak
5350	49.1	50.86	54	-4.9	34.6	9.94	46.3	110	303	Average

REMARKS:

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
Margin value = Emission level – Limit value.
2. 5230MHz: Fundamental frequency.



802.11ac (80MHz)

CHANNEL	TX Channel 42	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	51.98	54.29	74	-22.02	34.52	9.52	46.35	100	265	Peak
5150	48.19	50.5	54	-5.81	34.52	9.52	46.35	100	265	Average
5210	88.42	90.55	-	-	34.57	9.64	46.34	100	265	Peak
5210	82.3	84.43	-	-	34.57	9.64	46.34	100	265	Average
5350	51.9	53.58	74	-22.1	34.68	9.94	46.3	100	265	Peak
5350	46.76	48.44	54	-7.24	34.68	9.94	46.3	100	265	Average
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	53.41	55.64	74	-20.59	34.6	9.52	46.35	125	95	Peak
5150	48.56	50.79	54	-5.44	34.6	9.52	46.35	125	95	Average
5210	95.54	97.64	-	-	34.6	9.64	46.34	125	95	Peak
5210	89.27	91.37	-	-	34.6	9.64	46.34	125	95	Average
5350	51.17	52.93	74	-22.83	34.6	9.94	46.3	125	95	Peak
5350	47.11	48.87	54	-6.89	34.6	9.94	46.3	125	95	Average

REMARKS:

- Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
Margin value = Emission level – Limit value.
- 5210MHz: Fundamental frequency.



Band 2

802.11a

CHANNEL	TX Channel 52	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	54.87	57.18	74	-19.13	34.52	9.52	46.35	100	165	Peak
5150	49.46	51.77	54	-4.54	34.52	9.52	46.35	100	165	Average
5260	96.34	98.3	-	-	34.61	9.75	46.32	100	165	Peak
5260	89.32	91.28	-	-	34.61	9.75	46.32	100	165	Average
5350	54.04	55.72	74	-19.96	34.68	9.94	46.3	100	165	Peak
5350	48.91	50.59	54	-5.09	34.68	9.94	46.3	100	165	Average
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	56.53	58.76	74	-17.47	34.6	9.52	46.35	100	308	Peak
5150	49.73	51.96	54	-4.27	34.6	9.52	46.35	100	308	Average
5260	104.63	106.6	-	-	34.6	9.75	46.32	100	308	Peak
5260	97.65	99.62	-	-	34.6	9.75	46.32	100	308	Average
5350	56.29	58.05	74	-17.71	34.6	9.94	46.3	100	308	Peak
5350	48.71	50.47	54	-5.29	34.6	9.94	46.3	100	308	Average

REMARKS:

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
Margin value = Emission level – Limit value.
2. 5260MHz: Fundamental frequency.

CHANNEL	TX Channel 60	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	55.47	57.78	74	-18.53	34.52	9.52	46.35	105	265	Peak
5150	50.21	52.52	54	-3.79	34.52	9.52	46.35	105	265	Average
5300	98.41	100.25	-	-	34.64	9.83	46.31	105	265	Peak
5300	92.33	94.17	-	-	34.64	9.83	46.31	105	265	Average
5350	55.56	57.24	74	-18.44	34.68	9.94	46.3	105	265	Peak
5350	48.78	50.46	54	-5.22	34.68	9.94	46.3	105	265	Average
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	54.99	57.22	74	-19.01	34.6	9.52	46.35	100	308	Peak
5150	50.16	52.39	54	-3.84	34.6	9.52	46.35	100	308	Average
5300	104.14	106.02	-	-	34.6	9.83	46.31	100	308	Peak
5300	96.75	98.63	-	-	34.6	9.83	46.31	100	308	Average
5350	55.92	57.68	74	-18.08	34.6	9.94	46.3	100	308	Peak
5350	49.53	51.29	54	-4.47	34.6	9.94	46.3	100	308	Average

REMARKS:

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
Margin value = Emission level – Limit value.
2. 5300MHz: Fundamental frequency.

CHANNEL	TX Channel 64	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	54.6	56.91	74	-19.4	34.52	9.52	46.35	105	265	Peak
5150	50.34	52.65	54	-3.66	34.52	9.52	46.35	105	265	Average
5320	98	99.76	-	-	34.66	9.88	46.3	105	265	Peak
5320	91.12	92.88	-	-	34.66	9.88	46.3	105	265	Average
5350	53.72	55.4	74	-20.28	34.68	9.94	46.3	105	265	Peak
5350	49.02	50.7	54	-4.98	34.68	9.94	46.3	105	265	Average
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	56.08	58.31	74	-17.92	34.6	9.52	46.35	100	285	Peak
5150	49.88	52.11	54	-4.12	34.6	9.52	46.35	100	285	Average
5320	104.66	106.48	-	-	34.6	9.88	46.3	100	285	Peak
5320	97.69	99.51	-	-	34.6	9.88	46.3	100	285	Average
5350	57.01	58.77	74	-16.99	34.6	9.94	46.3	100	285	Peak
5350	49.26	51.02	54	-4.74	34.6	9.94	46.3	100	285	Average

REMARKS:

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
Margin value = Emission level – Limit value.
2. 5230MHz: Fundamental frequency.



802.11n (20MHz)

CHANNEL	TX Channel 52	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	55.33	57.64	74	-18.67	34.52	9.52	46.35	100	255	Peak
5150	49.78	52.09	54	-4.22	34.52	9.52	46.35	100	255	Average
5260	98.6	100.56	-	-	34.61	9.75	46.32	100	255	Peak
5260	91.78	93.74	-	-	34.61	9.75	46.32	100	255	Average
5350	53.99	55.67	74	-20.01	34.68	9.94	46.3	100	255	Peak
5350	48.93	50.61	54	-5.07	34.68	9.94	46.3	100	255	Average
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	54.73	56.96	74	-19.27	34.6	9.52	46.35	100	308	Peak
5150	49.42	51.65	54	-4.58	34.6	9.52	46.35	100	308	Average
5260	104.43	106.4	-	-	34.6	9.75	46.32	100	308	Peak
5260	97.41	99.38	-	-	34.6	9.75	46.32	100	308	Average
5350	54.92	56.68	74	-19.08	34.6	9.94	46.3	100	308	Peak
5350	48.71	50.47	54	-5.29	34.6	9.94	46.3	100	308	Average

REMARKS:

- Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
Margin value = Emission level – Limit value.
- 5260MHz: Fundamental frequency.

CHANNEL	TX Channel 60	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	56.25	58.56	74	-17.75	34.52	9.52	46.35	100	255	Peak
5150	50.12	52.43	54	-3.88	34.52	9.52	46.35	100	255	Average
5300	98.96	100.8	-	-	34.64	9.83	46.31	100	255	Peak
5300	91.12	92.96	-	-	34.64	9.83	46.31	100	255	Average
5350	55.44	57.12	74	-18.56	34.68	9.94	46.3	100	255	Peak
5350	50.1	51.78	54	-3.9	34.68	9.94	46.3	100	255	Average
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	56.74	58.97	74	-17.26	34.6	9.52	46.35	100	308	Peak
5150	50.21	52.44	54	-3.79	34.6	9.52	46.35	100	308	Average
5300	102.72	104.6	-	-	34.6	9.83	46.31	100	308	Peak
5300	96.05	97.93	-	-	34.6	9.83	46.31	100	308	Average
5350	54.75	56.51	74	-19.25	34.6	9.94	46.3	100	308	Peak
5350	48.44	50.2	54	-5.56	34.6	9.94	46.3	100	308	Average

REMARKS:

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
Margin value = Emission level – Limit value.
2. 5300MHz: Fundamental frequency.

CHANNEL	TX Channel 64	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	55.25	57.56	74	-18.75	34.52	9.52	46.35	100	255	Peak
5150	49.14	51.45	54	-4.86	34.52	9.52	46.35	100	255	Average
5320	96.19	97.95	-	-	34.66	9.88	46.3	100	255	Peak
5320	88.14	89.9	-	-	34.66	9.88	46.3	100	255	Average
5350	54.51	56.19	74	-19.49	34.68	9.94	46.3	100	255	Peak
5350	49.45	51.13	54	-4.55	34.68	9.94	46.3	100	255	Average
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	55.71	57.94	74	-18.29	34.6	9.52	46.35	100	310	Peak
5150	50.26	52.49	54	-3.74	34.6	9.52	46.35	100	310	Average
5320	101.87	103.69	-	-	34.6	9.88	46.3	100	310	Peak
5320	94.65	96.47	-	-	34.6	9.88	46.3	100	310	Average
5350	55.16	56.92	74	-18.84	34.6	9.94	46.3	100	310	Peak
5350	48.83	50.59	54	-5.17	34.6	9.94	46.3	100	310	Average

REMARKS:

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
Margin value = Emission level – Limit value.
2. 5320MHz: Fundamental frequency.



802.11n (40MHz)

CHANNEL	TX Channel 54	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	55.88	58.19	74	-18.12	34.52	9.52	46.35	190	70	Peak
5150	49.68	51.99	54	-4.32	34.52	9.52	46.35	190	70	Average
5270	91.62	93.55	-	-	34.62	9.77	46.32	190	70	Peak
5270	86.31	88.24	-	-	34.62	9.77	46.32	190	70	Average
5350	55.64	57.32	74	-18.36	34.68	9.94	46.3	190	70	Peak
5350	48.94	50.62	54	-5.06	34.68	9.94	46.3	190	70	Average
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	56.73	58.96	74	-17.27	34.6	9.52	46.35	100	50	Peak
5150	50.32	52.55	54	-3.68	34.6	9.52	46.35	100	50	Average
5270	98.82	100.77	-	-	34.6	9.77	46.32	100	50	Peak
5270	92.63	94.58	-	-	34.6	9.77	46.32	100	50	Average
5350	53.68	55.44	74	-20.32	34.6	9.94	46.3	100	50	Peak
5350	48.28	50.04	54	-5.72	34.6	9.94	46.3	100	50	Average

REMARKS:

- Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
Margin value = Emission level – Limit value.
- 5270MHz: Fundamental frequency.

CHANNEL	TX Channel 62	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	55.71	58.02	74	-18.29	34.52	9.52	46.35	185	70	Peak
5150	49.91	52.22	54	-4.09	34.52	9.52	46.35	185	70	Average
5310	91.83	93.64	-	-	34.65	9.85	46.31	185	70	Peak
5310	84.21	86.02	-	-	34.65	9.85	46.31	185	70	Average
5350	55.39	57.07	74	-18.61	34.68	9.94	46.3	185	70	Peak
5350	48.63	50.31	54	-5.37	34.68	9.94	46.3	185	70	Average
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	55.09	57.32	74	-18.91	34.6	9.52	46.35	100	50	Peak
5150	50.28	52.51	54	-3.72	34.6	9.52	46.35	100	50	Average
5310	97.99	99.85	-	-	34.6	9.85	46.31	100	50	Peak
5310	92.53	94.39	-	-	34.6	9.85	46.31	100	50	Average
5350	54.49	56.25	74	-19.51	34.6	9.94	46.3	100	50	Peak
5350	48.81	50.57	54	-5.19	34.6	9.94	46.3	100	50	Average

REMARKS:

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
Margin value = Emission level – Limit value.
2. 5310MHz: Fundamental frequency.



802.11ac (20MHz)

CHANNEL	TX Channel 52	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	55.5	57.81	74	-18.5	34.52	9.52	46.35	200	70	Peak
5150	48.93	51.24	54	-5.07	34.52	9.52	46.35	200	70	Average
5260	96.32	98.28	-	-	34.61	9.75	46.32	200	70	Peak
5260	89.09	91.05	-	-	34.61	9.75	46.32	200	70	Average
5350	57.08	58.76	74	-16.92	34.68	9.94	46.3	200	70	Peak
5350	48.06	49.74	54	-5.94	34.68	9.94	46.3	200	70	Average
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	55.75	57.98	74	-18.25	34.6	9.52	46.35	110	310	Peak
5150	50.44	52.67	54	-3.56	34.6	9.52	46.35	110	310	Average
5260	102.5	104.47	-	-	34.6	9.75	46.32	110	310	Peak
5260	95.97	97.94	-	-	34.6	9.75	46.32	110	310	Average
5350	55.16	56.92	74	-18.84	34.6	9.94	46.3	110	310	Peak
5350	48.45	50.21	54	-5.55	34.6	9.94	46.3	110	310	Average

REMARKS:

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
Margin value = Emission level – Limit value.
2. 5260MHz: Fundamental frequency.

CHANNEL	TX Channel 60	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	55.26	57.57	74	-18.74	34.52	9.52	46.35	200	70	Peak
5150	49.63	51.94	54	-4.37	34.52	9.52	46.35	200	70	Average
5300	96.68	98.52	-	-	34.64	9.83	46.31	200	70	Peak
5300	89.82	91.66	-	-	34.64	9.83	46.31	200	70	Average
5350	54	55.68	74	-20	34.68	9.94	46.3	200	70	Peak
5350	48.19	49.87	54	-5.81	34.68	9.94	46.3	200	70	Average
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	57.16	59.39	74	-16.84	34.6	9.52	46.35	110	310	Peak
5150	48.75	50.98	54	-5.25	34.6	9.52	46.35	110	310	Average
5300	102.36	104.24	-	-	34.6	9.83	46.31	110	310	Peak
5300	95.8	97.68	-	-	34.6	9.83	46.31	110	310	Average
5350	55.09	56.85	74	-18.91	34.6	9.94	46.3	110	310	Peak
5350	48.34	50.1	54	-5.66	34.6	9.94	46.3	110	310	Average

REMARKS:

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
Margin value = Emission level – Limit value.
2. 5300MHz: Fundamental frequency.

CHANNEL	TX Channel 64	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	55.27	57.58	74	-18.73	34.52	9.52	46.35	200	70	Peak
5150	49.54	51.85	54	-4.46	34.52	9.52	46.35	200	70	Average
5320	95.76	97.52	-	-	34.66	9.88	46.3	200	70	Peak
5320	96.02	97.78	-	-	34.66	9.88	46.3	200	70	Average
5350	55.62	57.3	74	-18.38	34.68	9.94	46.3	200	70	Peak
5350	48	49.68	54	-6	34.68	9.94	46.3	200	70	Average
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	55.31	57.54	74	-18.69	34.6	9.52	46.35	110	310	Peak
5150	49.58	51.81	54	-4.42	34.6	9.52	46.35	110	310	Average
5320	102.84	104.66	-	-	34.6	9.88	46.3	110	310	Peak
5320	95.63	97.45	-	-	34.6	9.88	46.3	110	310	Average
5350	53.62	55.38	74	-20.38	34.6	9.94	46.3	110	310	Peak
5350	47.72	49.48	54	-6.28	34.6	9.94	46.3	110	310	Average

REMARKS:

- Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
Margin value = Emission level – Limit value.
- 5320MHz: Fundamental frequency.



802.11ac (40MHz)

CHANNEL	TX Channel 54	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	55.27	57.58	74	-18.73	34.52	9.52	46.35	100	70	Peak
5150	49.65	51.96	54	-4.35	34.52	9.52	46.35	100	70	Average
5270	91.22	93.15	-	-	34.62	9.77	46.32	100	70	Peak
5270	85.12	87.05	-	-	34.62	9.77	46.32	100	70	Average
5350	53.88	55.56	74	-20.12	34.68	9.94	46.3	100	70	Peak
5350	48.55	50.23	54	-5.45	34.68	9.94	46.3	100	70	Average
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	54.52	56.75	74	-19.48	34.6	9.52	46.35	110	310	Peak
5150	50.35	52.58	54	-3.65	34.6	9.52	46.35	110	310	Average
5270	97.95	99.9	-	-	34.6	9.77	46.32	110	310	Peak
5270	92.03	93.98	-	-	34.6	9.77	46.32	110	310	Average
5350	55.31	57.07	74	-18.69	34.6	9.94	46.3	110	310	Peak
5350	47.68	49.44	54	-6.32	34.6	9.94	46.3	110	310	Average

REMARKS:

- Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
Margin value = Emission level – Limit value.
- 5270MHz: Fundamental frequency.

CHANNEL	TX Channel 62	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	54.3	56.61	74	-19.7	34.52	9.52	46.35	100	265	Peak
5150	49.43	51.74	54	-4.57	34.52	9.52	46.35	100	265	Average
5310	90.91	92.72	-	-	34.65	9.85	46.31	100	265	Peak
5310	83.75	85.56	-	-	34.65	9.85	46.31	100	265	Average
5350	54.73	56.41	74	-19.27	34.68	9.94	46.3	100	265	Peak
5350	48.26	49.94	54	-5.74	34.68	9.94	46.3	100	265	Average
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	55.3	57.53	74	-18.7	34.6	9.52	46.35	110	310	Peak
5150	49.2	51.43	54	-4.8	34.6	9.52	46.35	110	310	Average
5310	97.64	99.5	-	-	34.6	9.85	46.31	110	310	Peak
5310	91.07	92.93	-	-	34.6	9.85	46.31	110	310	Average
5350	53.46	55.22	74	-20.54	34.6	9.94	46.3	110	310	Peak
5350	48.09	49.85	54	-5.91	34.6	9.94	46.3	110	310	Average

REMARKS:

- Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
Margin value = Emission level – Limit value.
- 5310MHz: Fundamental frequency.



802.11ac (80MHz)

CHANNEL	TX Channel 58	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	53.56	55.87	74	-20.44	34.52	9.52	46.35	100	270	Peak
5150	50.07	52.38	54	-3.93	34.52	9.52	46.35	100	270	Average
5290	90.36	92.23	-	-	34.63	9.81	46.31	100	270	Peak
5290	84.32	86.19	-	-	34.63	9.81	46.31	100	270	Average
5350	54.61	56.29	74	-19.39	34.68	9.94	46.3	100	270	Peak
5350	48.78	50.46	54	-5.22	34.68	9.94	46.3	100	270	Average
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	52.34	54.57	74	-21.66	34.6	9.52	46.35	110	310	Peak
5150	48.85	51.08	54	-5.15	34.6	9.52	46.35	110	310	Average
5290	94.96	96.86	-	-	34.6	9.81	46.31	110	310	Peak
5290	88.85	90.75	-	-	34.6	9.81	46.31	110	310	Average
5350	54.16	55.92	74	-19.84	34.6	9.94	46.3	110	310	Peak
5350	49.61	51.37	54	-4.39	34.6	9.94	46.3	110	310	Average

REMARKS:

- Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
Margin value = Emission level – Limit value.
- 5290MHz: Fundamental frequency.



Test Report No.: W7L-P23060012RF03

Band 3

802.11a

CHANNEL	TX Channel 100	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5460	55.97	57.29	74	-18.03	34.77	10.17	46.26	188	250	Peak
5460	49.6	50.92	54	-4.4	34.77	10.17	46.26	188	250	Average
5470	55.54	56.83	68.2	-12.66	34.78	10.19	46.26	188	250	Peak
5500	96.68	97.87	-	-	34.8	10.26	46.25	188	250	Peak
5500	90.12	91.31	-	-	34.8	10.26	46.25	188	250	Average
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5460	54.08	55.57	74	-19.92	34.6	10.17	46.26	133	180	Peak
5460	49.16	50.65	54	-4.84	34.6	10.17	46.26	133	180	Average
5470	55.28	56.75	68.2	-12.92	34.6	10.19	46.26	133	180	Peak
5500	104.22	105.61	-	-	34.6	10.26	46.25	133	180	Peak
5500	97.95	99.34	-	-	34.6	10.26	46.25	133	180	Average

REMARKS:

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
Margin value = Emission level – Limit value.
2. 5500MHz: Fundamental frequency.
3. #: Out of restricted band.

CHANNEL	TX Channel 116	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5460	53.16	54.48	74	-20.84	34.77	10.17	46.26	188	250	Peak
5460	48.84	50.16	54	-5.16	34.77	10.17	46.26	188	250	Average
5470	53.92	55.21	68.2	-14.28	34.78	10.19	46.26	188	250	Peak
5580	96.65	97.39	-	-	34.9	10.59	46.23	188	250	Peak
5580	89.44	90.18	-	-	34.9	10.59	46.23	188	250	Average
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5460	53.56	55.05	74	-20.44	34.6	10.17	46.26	133	180	Peak
5460	48.4	49.89	54	-5.6	34.6	10.17	46.26	133	180	Average
5470	53.82	55.29	68.2	-14.38	34.6	10.19	46.26	133	180	Peak
5580	106.44	107.38	-	-	34.7	10.59	46.23	133	180	Peak
5580	99.7	100.64	-	-	34.7	10.59	46.23	133	180	Average

REMARKS:

- Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
Margin value = Emission level – Limit value.
- 5580MHz: Fundamental frequency.
- #: Out of restricted band.

CHANNEL	TX Channel 140	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5700	98.79	98.85	-	-	35.04	11.09	46.19	100	250	Peak
5700	92.16	92.22	-	-	35.04	11.09	46.19	100	250	Average
5725	58.14	58.06	68.2	-10.06	35.07	11.2	46.19	100	250	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5700	107.15	107.41	-	-	34.84	11.09	46.19	133	180	Peak
5700	100.22	100.48	-	-	34.84	11.09	46.19	133	180	Average
5725	60.79	60.91	68.2	-7.41	34.87	11.2	46.19	133	180	Peak

REMARKS:

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
Margin value = Emission level – Limit value.
2. 5700MHz: Fundamental frequency.
3. #: Out of restricted band.

CHANNEL	TX Channel 144	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5470	54.17	55.46	74	-19.83	34.78	10.19	46.26	100	250	Peak
5720	99.47	99.42	-	-	35.06	11.18	46.19	100	250	Peak
5720	93.17	93.12	-	-	35.06	11.18	46.19	100	250	Average
5850	57.97	57.18	68.2	-10.23	35.22	11.72	46.15	100	250	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5470	54.23	55.7	74	-19.77	34.6	10.19	46.26	133	180	Peak
5720	106.1	106.25	-	-	34.86	11.18	46.19	133	180	Peak
5720	100.31	100.46	-	-	34.86	11.18	46.19	133	180	Average
5850	59.17	58.58	68.2	-9.03	35.02	11.72	46.15	133	180	Peak

REMARKS:

- Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
Margin value = Emission level – Limit value.
- 5720MHz: Fundamental frequency.
- #: Out of restricted band.

802.11n (20MHz)

CHANNEL	TX Channel 100	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5460	54.97	56.29	74	-19.03	34.77	10.17	46.26	160	325	Peak
5460	49.04	50.36	54	-4.96	34.77	10.17	46.26	160	325	Average
5470	54.51	55.8	68.2	-13.69	34.78	10.19	46.26	160	325	Peak
5500	95.29	96.48	-	-	34.8	10.26	46.25	160	325	Peak
5500	89.29	90.48	-	-	34.8	10.26	46.25	160	325	Average
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5460	55.43	56.92	74	-18.57	34.6	10.17	46.26	133	180	Peak
5460	48.64	50.13	54	-5.36	34.6	10.17	46.26	133	180	Average
5470	53.27	54.74	68.2	-14.93	34.6	10.19	46.26	133	180	Peak
5500	105.77	107.16	-	-	34.6	10.26	46.25	133	180	Peak
5500	98.88	100.27	-	-	34.6	10.26	46.25	133	180	Average

REMARKS:

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
Margin value = Emission level – Limit value.
2. 5500MHz: Fundamental frequency.
3. #: Out of restricted band.