



Test Report No.: RF200430N014-4



TEST REPORT

Applicant	Lenovo (Shanghai) Electronics Technology Co., Ltd.
Address	Section 304-305, Building No. 4, # 222, Meiyue Road, China (Shanghai) Pilot Free Trade Zone

Manufacturer or Supplier	Lenovo PC HK Limited
Address	23/F, Lincoln House, Taikoo Place 979 King's Road, Quarry Bay, Hong Kong, P.R.China
Product Name	Lenovo Smart Clock Essential
Brand Name	Lenovo
Model	Lenovo CD-4N341Y
Additional Model & Model Difference	N/A
Date of tests	Apr. 30, 2020 ~ Jun. 28, 2020

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

Tested by Andy Zhu
Project Engineer / EMC Department

Approved by Glyn He
Assistant Manager / EMC Department

Date: Jul. 06, 2020

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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.....	7
2.2.1 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL	10
2.3 DUTY CYCLE OF TEST SIGNAL	12
2.4 DESCRIPTION OF SUPPORT UNITS.....	13
2.5 GENERAL DESCRIPTION OF APPLIED STANDARDS.....	13
3. TEST TYPES AND RESULTS.....	14
3.1 RADIATED EMISSION AND BANDEDGE MEASUREMENT	14
3.1.1 LIMITS OF RADIATED EMISSION AND BANDEDGE MEASUREMENT.....	14
3.1.2 LIMITS OF UNWANTED EMISSION OUT OF THE RESTRICTED BANDS	15
3.1.3 TEST INSTRUMENTS.....	16
3.1.4 TEST PROCEDURES	17
3.1.5 DEVIATION FROM TEST STANDARD	17
3.1.6 TEST SETUP	18
3.1.7 EUT OPERATING CONDITION	19
3.1.8 TEST RESULTS	20
3.2 CONDUCTED EMISSION MEASUREMENT.....	67
3.2.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT	85
3.2.2 TEST INSTRUMENTS.....	85
3.2.3 TEST PROCEDURES	86
3.2.4 DEVIATION FROM TEST STANDARD	86
3.2.5 TEST SETUP	86
3.2.6 EUT OPERATING CONDITIONS	86
3.2.7 TEST RESULTS	87
3.3 TRANSMIT POWER MEASUREMENT	89



3.3.1	LIMITS OF TRANSMIT POWER MEASUREMENT	89
3.3.2	TEST SETUP	89
3.3.3	TEST INSTRUMENTS.....	90
3.3.4	TEST PROCEDURE.....	90
3.3.5	DEVIATION FROM TEST STANDARD	91
3.3.6	EUT OPERATING CONDITIONS	91
3.3.7	TEST RESULTS	92
3.4	PEAK POWER SPECTRAL DENSITY MEASUREMENT.....	105
3.4.1	LIMITS OF PEAK POWER SPECTRAL DENSITY MEASUREMENT	105
3.4.2	TEST SETUP	105
3.4.3	TEST INSTRUMENTS.....	105
3.4.4	TEST PROCEDURES	105
3.4.5	DEVIATION FROM TEST STANDARD	106
3.4.6	EUT OPERATING CONDITIONS	106
3.4.7	TEST RESULTS	107
3.5	FREQUENCY STABILITY	115
3.5.1	LIMITS OF FREQUENCY STABILITY MEASUREMENT.....	115
3.5.2	TEST SETUP	115
3.5.3	TEST INSTRUMENTS.....	115
3.5.4	TEST PROCEDURE.....	116
3.5.5	DEVIATION FROM TEST STANDARD	116
3.5.6	EUT OPERATING CONDITION	116
3.5.7	TEST RESULTS	117
4.	PHOTOGRAPHS OF THE TEST CONFIGURATION	120
5.	APPENDIX A – MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB	121



Test Report No.: RF200430N014-4

RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
RF200430N014-4	Original release.	Jul. 06, 2020

1. SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC PART 15, SUBPART E (SECTION 15.407 UNDER NEW RULE)			
STANDARD SECTION	TEST TYPE	RESULT	REMARK
15.407(b)(6)	AC Power Conducted Emissions	PASS	Meet the requirement of limit.
15.407(b) (1/2/3/4/6)	Radiated Emissions & Band Edge Measurement	PASS	Meet the requirement of limit.
15.407(a)(1/2/3)	Max Average Transmit Power	PASS	Meet the requirement of limit.
15.407(a)(1/2/3)	Peak Power Spectral Density	PASS	Meet the requirement of limit.
15.407(g)	Frequency Stability	PASS	Meet the requirement of limit.
15.203	Antenna Requirement	PASS	Antenna connector is i-pex not a standard connector.

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	FREQUENCY	UNCERTAINTY
Conducted emissions	9kHz~30MHz	2.70dB
Radiated emissions	9KHz ~ 30MHz	2.16dB
	30MHz ~ 1GMHz	3.60dB
	1GHz ~ 18GHz	4.82dB
	18GHz ~ 40GHz	5.00dB

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	Lenovo Smart Clock Essential
BRAND	Lenovo
MODEL NO.	Lenovo CD-4N341Y
FCC ID	O57CD4N341Y
POWER SUPPLY	DC 12V from Adapter
MODULATION TYPE	256QAM, 64QAM, 16QAM, QPSK, BPSK for OFDM
MODULATION TECHNOLOGY	OFDM
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 433.3Mbps
OPERATING FREQUENCY	5180 ~ 5240MHz, 5260 ~ 5320MHz 5500 ~ 5700MHz, 5745 ~ 5825MHz
NUMBER OF CHANNEL	5180 ~ 5240MHz: 4 channels for 802.11a, 802.11n,11ac (20MHz) 2 channels for 802.11n,11ac (40MHz): 1 channel for 802.11ac 80MHz 5260 ~ 5320MHz: 4 channels for 802.11a, 802.11n (20MHz) 2 channels for 802.11n, 11ac (40MHz) 1 channel for 802.11ac (80MHz) 5500 ~ 5700MHz: 11 channels for 802.11a, 802.11n (20MHz) 5 channels for 802.11n (40MHz) 2 channel for 802.11ac (80MHz) 5745 ~ 5825MHz: 5 channels for 802.11a, 802.11n,11ac (20MHz) 2 channels for 802.11n,11ac (40MHz) 1 channel for 802.11ac (80MHz)
CONDUCTED OUTPUT POWER	18.99dBm for 5180 ~ 5240MHz (Maximum AVG Power) 19.05dBm for 5260 ~ 5320MHz (Maximum AVG Power) 18.91dBm for 5500 ~ 5700MHz (Maximum AVG Power) 18.72dBm for 5745 ~ 5825MHz (Maximum AVG Power)
ANTENNA TYPE	5180 ~ 5240MHz: PIFA antenna with 2.96dBi gain 5260 ~ 5320MHz: PIFA antenna with 2.96dBi gain 5500 ~ 5700MHz: PIFA antenna with 2.96dBi gain 5745 ~ 5825MHz: PIFA antenna with 2.96dBi gain
I/O PORTS	Refer to user's manual
CABLE SUPPLIED	N/A

NOTES:

1. The above EUT information is declared by manufacturer and for more detailed features description, please refers to the manufacturer's specifications or user's manual.
2. Please refer to the EUT photo document (Reference No.: 200430N014) for detailed product photo.
3. The EUT have SISO function, provides 1 completed transmitter and 1 receiver.

MODULATION MODE	FUNCTION
802.11a	1TX/1RX
802.11n (HT20), 802.11ac (VHT20)	1TX/1RX
802.11n (HT40), 802.11ac (VHT40)	1TX/1RX
802.11ac (VHT80)	1TX/1RX

The modulation and bandwidth are similar for 802.11n mode for HT20 / HT40 and 802.11ac mode for VHT20 / VHT40, therefore investigated worst case for final test were chosen 802.11n (HT20/HT40) and record in the report.

4. The EUT were powered by the following Adapter, only the worst case adapter 1 was showed in the report.

ADAPTER 1	
BRAND:	Lenovo (chenyang)
MODEL:	AD18W2002
INPUT:	AC 100-240V, 50/60Hz 0.8A Max
OUTPUT:	DC 12V, 1.5A
AC LINE:	Unshielded, Non-detachable, 150cm.
MANUFACTURER	Chen Yang electronic
ADAPTER 2	
BRAND:	Lenovo (Acbel)
MODEL:	AD18W2002
INPUT:	AC 100-240V, 50/60Hz 0.8A Max
OUTPUT:	DC 12V, 1.5A
AC LINE:	Unshielded, Non-detachable, 150cm.
MANUFACTURER	ACBEL ELECTRICAL

2.2 DESCRIPTION OF TEST MODES

FOR 5150 ~ 5250MHz

4 channels are provided for 802.11a, 802.11n (HT20), 802.11ac (VHT20):

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

2 channels are provided for 802.11n (HT40), 802.11ac (VHT40):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
38	5190 MHz	46	5230 MHz

1 channel is provided for 802.11ac (VHT80):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
42	5210MHz	--	--

FOR 5250 ~ 5350MHz

4 channels are provided for 802.11a, 802.11n (HT20), 802.11ac (VHT20):

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

2 channels are provided for 802.11n (HT40), 802.11ac (VHT40):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
54	5270 MHz	62	5310 MHz

1 channel is provided for 802.11ac (VHT80):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
58	5290MHz	--	--



FOR 5470 ~ 5725MHz

11 channels are provided for 802.11a, 802.11n (HT20), 802.11ac (VHT20):

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

5 channels are provided for 802.11n (HT40), 802.11ac (VHT40):

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

2 channel is provided for 802.11ac (VHT80):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
106	5530MHz	122	5610MHz

FOR 5725 ~ 5850MHz

5 channels are provided for 802.11a, 802.11n (HT20), 802.11ac (VHT20):

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

2 channels are provided for 802.11n (HT40), 802.11ac (VHT40):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
151	5755MHz	159	5795MHz

1 channel is provided for 802.11ac (VHT80):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
155	5775MHz	--	--



2.2.1 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL

EUT CONFIGURE MODE	APPLICABLE TO				DESCRIPTION
	RE≥1G	RE<1G	PLC	APCM	
A	√	√	√	√	Powered by Adapter with wifi(5G) link

Where **RE≥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 (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 TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A	802.11a	5150-5250	36 to 48	36, 40, 48	OFDM	BPSK	6.0
	802.11n (20MHz)		36 to 48	36, 40, 48	OFDM	BPSK	6.5
	802.11n (40MHz)		38 to 46	38, 46	OFDM	BPSK	13.5
	802.11ac 80MHz		42	42	OFDM	BPSK	29.3
	802.11a	5250-5350	52 to 64	52, 60, 64	OFDM	BPSK	6.0
	802.11n (20MHz)		52 to 64	52, 60, 64	OFDM	BPSK	6.5
	802.11n (40MHz)		54 to 62	54, 62	OFDM	BPSK	13.5
	802.11ac 80MHz		58	58	OFDM	BPSK	29.3
	802.11a	5470-5725	100 to 140	100, 116, 140	OFDM	BPSK	6.0
	802.11n (20MHz)		100 to 140	100, 116, 140	OFDM	BPSK	6.5
	802.11n (40MHz)		102 to 134	102, 110, 134	OFDM	BPSK	13.5
	802.11ac 80MHz		106, 122	106, 122	OFDM	BPSK	29.3
	802.11a	5725-5850	149 to 165	149, 157, 165	OFDM	BPSK	6.0
	802.11n (20MHz)		149 to 165	149, 157, 165	OFDM	BPSK	6.5
	802.11n (40MHz)		151 to 159	151, 159	OFDM	BPSK	13.5
	802.11ac 80MHz		155	155	OFDM	BPSK	29.3

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 TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A	802.11a	5150-5250 5250-5350 5470-5725 5725-5850	36 to 48 52 to 64 100 to 140 149 to 165	36	OFDM	BPSK	6.0



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 TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A	802.11a	5150-5250 5250-5350 5470-5725 5725-5850	36 to 48 52 to 64 100 to 140 149 to 165	36	OFDM	BPSK	6.0

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 TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A	802.11a	5150-5250	36 to 48	36, 40, 48	OFDM	BPSK	6.0
	802.11n (20MHz)		36 to 48	36, 40, 48	OFDM	BPSK	6.5
	802.11n (40MHz)		38 to 46	38, 46	OFDM	BPSK	13.5
	802.11ac 80MHz		42	42	OFDM	BPSK	29.3
	802.11a	5250-5350	52 to 64	52, 60, 64	OFDM	BPSK	6.0
	802.11n (20MHz)		52 to 64	52, 60, 64	OFDM	BPSK	6.5
	802.11n (40MHz)		54 to 62	54, 62	OFDM	BPSK	13.5
	802.11ac 80MHz		58	58	OFDM	BPSK	29.3
	802.11a	5470-5725	100 to 140	100, 116, 140	OFDM	BPSK	6.0
	802.11n (20MHz)		100 to 140	100, 116, 140	OFDM	BPSK	6.5
	802.11n (40MHz)		102 to 134	102, 110, 134	OFDM	BPSK	13.5
	802.11ac 80MHz		106, 122	106, 122	OFDM	BPSK	29.3
	802.11a	5725-5850	149 to 165	149, 157, 165	OFDM	BPSK	6.0
	802.11n (20MHz)		149 to 165	149, 157, 165	OFDM	BPSK	6.5
	802.11n (40MHz)		151 to 159	151, 159	OFDM	BPSK	13.5
	802.11ac 80MHz		155	155	OFDM	BPSK	29.3

TEST CONDITION:

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER(Adapter)	TESTED BY
RE<1G	24deg. C, 55%RH	AC 120V/60Hz	Vincent
RE≥1G	24deg. C, 55%RH	AC 120V/60Hz	Vincent
PLC	20deg. C, 56%RH	AC 120V/60Hz	Daniel
APCM	20deg. C, 55%RH	AC 120V/60Hz	Daniel



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Test Report No.: RF200430N014-4

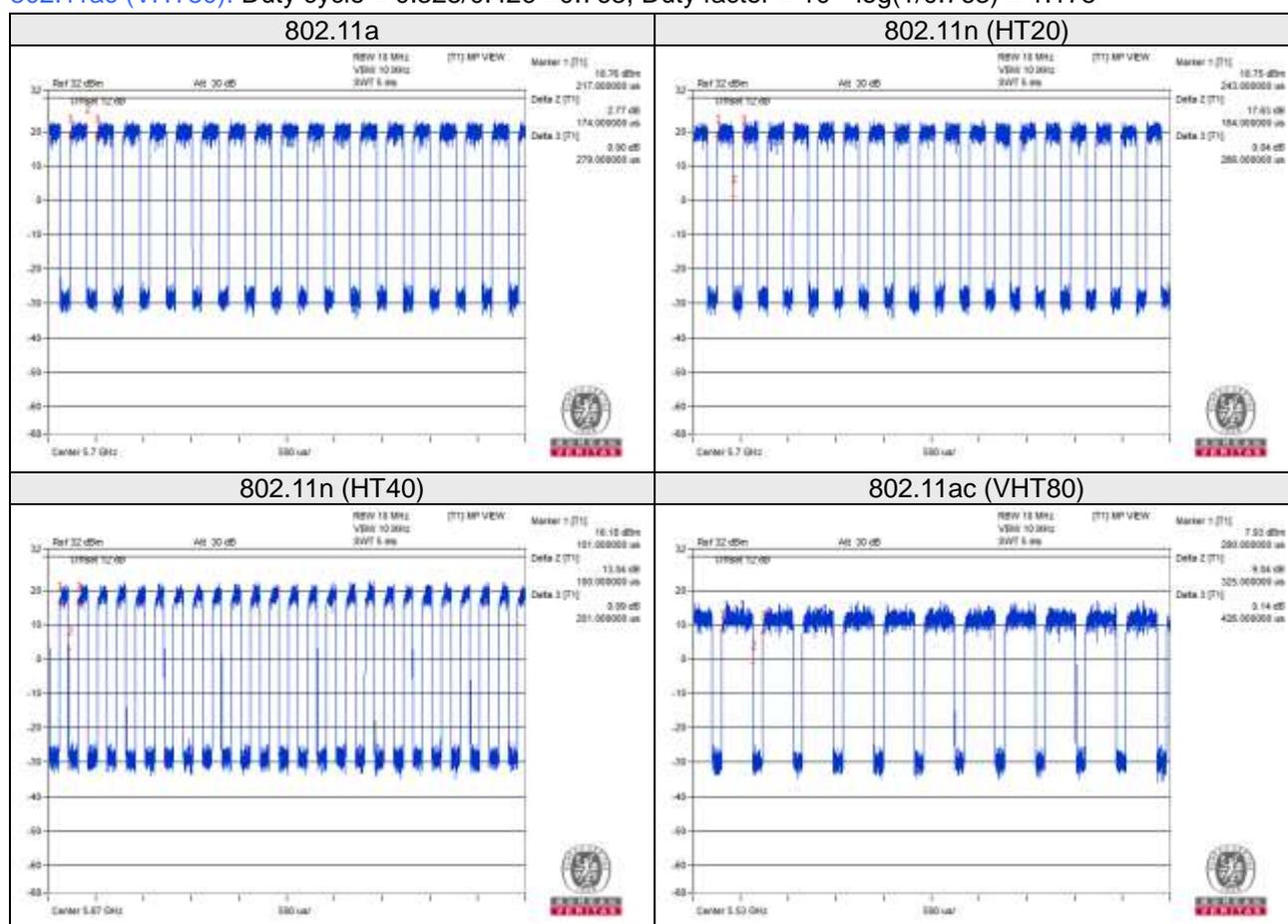
2.3 DUTY CYCLE OF TEST SIGNAL

802.11a: Duty cycle = 0.174/0.279 = 0.624, Duty factor = $10 * \log(1/0.624) = 2.048$

802.11n (HT20): Duty cycle = 0.164/0.266 = 0.617, Duty factor = $10 * \log(1/0.617) = 2.097$

802.11n (HT40): Duty cycle = 0.1/0.201 = 0.498, Duty factor = $10 * \log(1/0.498) = 3.028$

802.11ac (VHT80): Duty cycle = 0.325/0.426 = 0.763, Duty factor = $10 * \log(1/0.763) = 1.175$





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	N/A	N/A	N/A	N/A	N/A

NO.	DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	N/A

2.5 GENERAL DESCRIPTION OF APPLIED STANDARDS

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

FCC Part 15, Subpart E (15.407)

789033 D02 General UNII Test Procedures New Rules v02r01

ANSI C63.10-2013

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

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

NOTES:

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 30dB under any condition of modulation.



3.1.2 LIMITS OF UNWANTED EMISSION OUT OF THE RESTRICTED BANDS

APPLICABLE TO	LIMIT	
789033 D02 General UNII Test Procedures New Rules v02r01	FIELD STRENGTH AT 3m	
	PK: 74 (dBµV/m)	AV: 54 (dBµV/m)
APPLICABLE TO	EIRP LIMIT	EQUIVALENT FIELD STRENGTH AT 3m
15.407(b)(1)	PK: -27 (dBm/MHz)	PK: 68.2 (dBµV/m)
15.407(b)(2)		
15.407(b)(3)		
15.407(b)(4)	Note	Note

NOTE: For transmitters operating in the 5.725-5.85 GHz band:

Section 15.407(b)(4) specifies the unwanted emissions limit for the U-NII-3 band. A band emissions mask is specified in Section 15.407(b)(4)(i). An alternative to the band emissions mask is specified in Section 15.407(b)(4)(ii). The alternative limits are based on the highest antenna gain specified in the filing. There are also marketing and importation restrictions for the alternative limit.

15.407(b)(4)(i) 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.

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

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



Test Report No.: RF200430N014-4

3.1.3 TEST INSTRUMENTS

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
EMI Test Receiver	Rohde&Schwarz	ESU40	100449	Mar. 18,20	Mar. 17,21
Signal and Spectrum Analyzer	Rohde&Schwarz	FSV7	102331	May 14, 20	May 13, 21
Active Loop Antenna (9KHz -30MHz)	SCHWARZBECK	FMZB 1519B	1519B-045	May 28,20	May 27,21
Amplifier (9KHz -1GHz)	Burgeon	BPA-530	100210	Mar. 15,20	Mar. 14,21
Bilog Antenna (20MHz -2GHz)	Teseq	CBL 6111D	30643	May 30,20	May 29,21
Horn Antenna (1GHz -18GHz)	ETS -Lindgren	3117	00062558	May 30,20	May 29,21
Horn Antenna (18GHz -40GHz)	SCHWARZBECK	BBHA 9170	BBHA9170147	May 10, 20	May 09, 21
3m Semi-anechoic Chamber	ETS-LINDGREN	9m*6m*6m	NSEMC003	May 23,20	May 22,21
Test Software	ADT	ADT_Radiated_V7.6.15.9.2	N/A	N/A	N/A
Broadband Preamplifier (1GHz~18GHz)	SCHWARZBECK	BBV9718	305	May 09,20	May 08,21
Pre-Amplifier (18GHz-40GHz)	EMCI	EMC 184045	980102	Mar. 04,20	Mar. 03,21
Test Software	ADT	ADT_Radiated_V7.6.15.9.2	N/A	N/A	N/A
BLUETOOTH TESTER	Rohde&Schwarz	CBT32	100811	May 20,20	May 19,21

NOTES:

1. The calibration interval of the above test instruments are 12 months and the calibrations are traceable to CEPREI/CHINA, GRGT/CHINA and NIM/CHINA.
2. The horn antenna is used only for the measurement of emission frequency above 1GHz if tested.
3. The FCC Site Registration No. is 749762.



3.1.4 TEST PROCEDURES

- a. The EUT was placed on the top of a rotating table 1.5 meters(above 1GHz) and 0.8 meters(below 1GHz) above the ground at a 3 meters semi-anechoic chamber. 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.

NOTES:

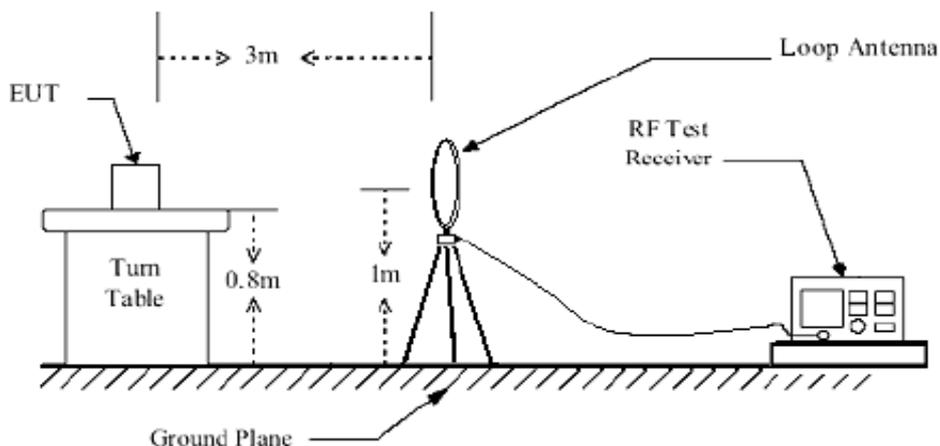
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is $\geq 1/T$ (Duty cycle < 98%) or 10Hz(Duty cycle > 98%) for Average detection (AV) at frequency above 1GHz.
4. All modes of operation were investigated and the worst-case emissions are reported.

3.1.5 DEVIATION FROM TEST STANDARD

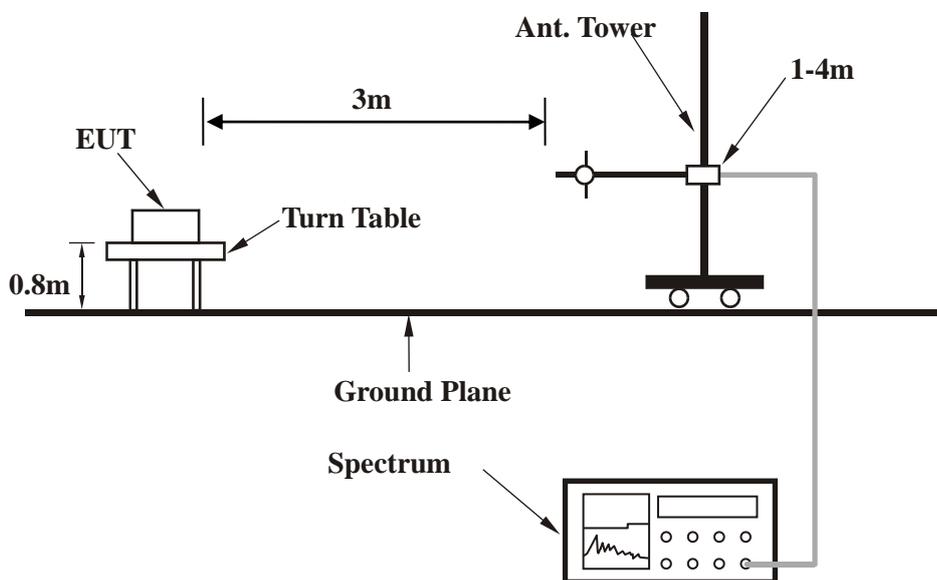
No deviation.

3.1.6 TEST SETUP

Below 30MHz

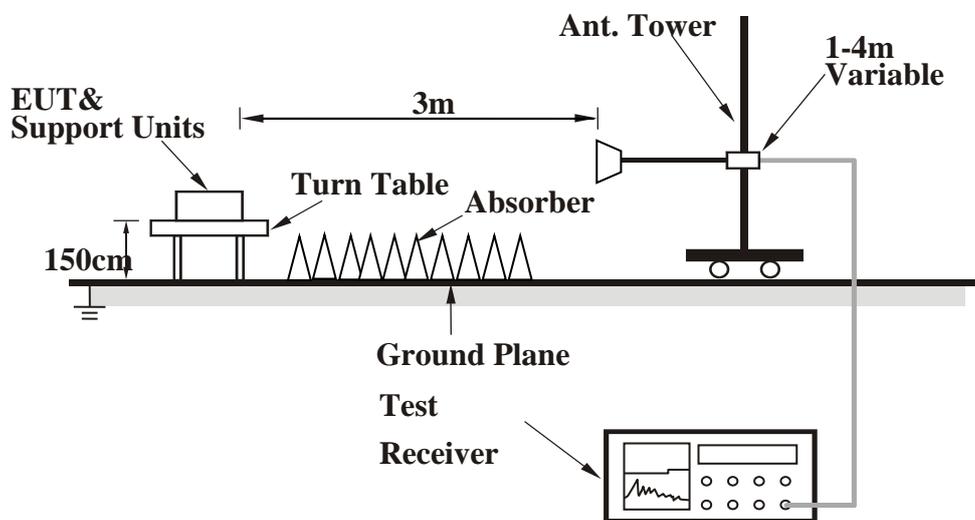


Below 1GHz test setup



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

Above 1GHz test setup



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

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

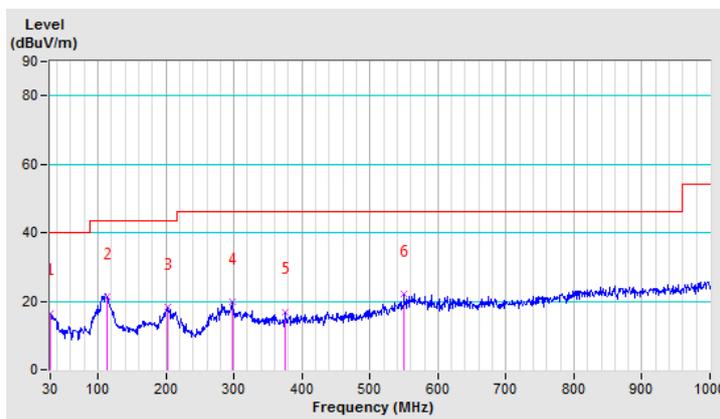
802.11a

CHANNEL	TX Channel 36	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9KHz ~ 1GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	30.00	16.57 QP	40.00	-23.43	1.00 H	152	28.39	-11.82
2	113.42	21.34 QP	43.50	-22.16	1.00 H	303	40.01	-18.67
3	201.69	18.16 QP	43.50	-25.34	1.00 H	179	37.51	-19.35
4	297.72	19.81 QP	46.00	-26.19	1.00 H	204	35.20	-15.39
5	374.35	16.95 QP	46.00	-29.05	1.00 H	82	30.26	-13.31
6	549.92	21.98 QP	46.00	-24.02	1.00 H	77	31.38	-9.40

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The emission levels of other frequencies were greater than 20dB margin.
4. 9KHz~30MHz have been test and test data more than 20dB margin.
5. Margin value = Emission level – Limit value.





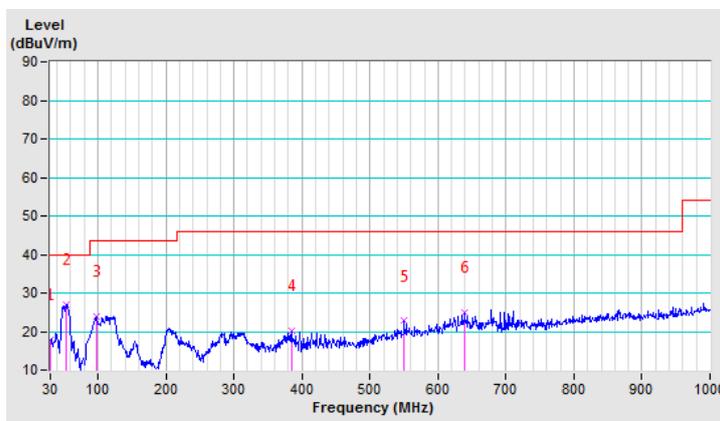
Test Report No.: RF200430N014-4

CHANNEL	TX Channel 36	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9KHz ~ 1GHz		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	30.00	17.95 QP	40.00	-22.05	1.00 V	61	29.77	-11.82
2	53.28	26.88 QP	40.00	-13.12	1.00 V	46	49.75	-22.87
3	96.93	23.88 QP	43.50	-19.62	1.00 V	34	43.51	-19.63
4	384.05	20.26 QP	46.00	-25.74	1.00 V	23	33.27	-13.01
5	549.92	22.79 QP	46.00	-23.21	1.00 V	12	32.19	-9.40
6	639.16	24.92 QP	46.00	-21.08	1.00 V	2	33.02	-8.10

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The emission levels of other frequencies were greater than 20dB margin.
4. 9KHz~30MHz have been test and test data more than 20dB margin.
5. Margin value = Emission level – Limit value.





Band 1 (5150-5250MHz):

ABOVE 1GHZ DATA

802.11a

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5147.76	70.02 PK	74.00	-3.98	1.00 H	170	61.31	8.71
2	5147.76	48.79 AV	54.00	-5.21	1.00 H	170	40.08	8.71
3	5150.00	70.30 PK	74.00	-3.70	1.00 H	170	61.59	8.71
4	5150.00	49.01 AV	54.00	-4.99	1.00 H	170	40.30	8.71
5	*5180.00	106.49 PK			1.00 H	170	97.78	8.71
6	*5180.00	74.65 AV			1.00 H	170	65.94	8.71
7	#10360.00	64.70 PK	68.20	-3.50	1.00 H	130	47.06	17.64
8	15540.00	67.75 PK	74.00	-6.25	1.00 H	125	43.38	24.37
9	15540.00	50.13 AV	54.00	-3.87	1.00 H	125	25.76	24.37

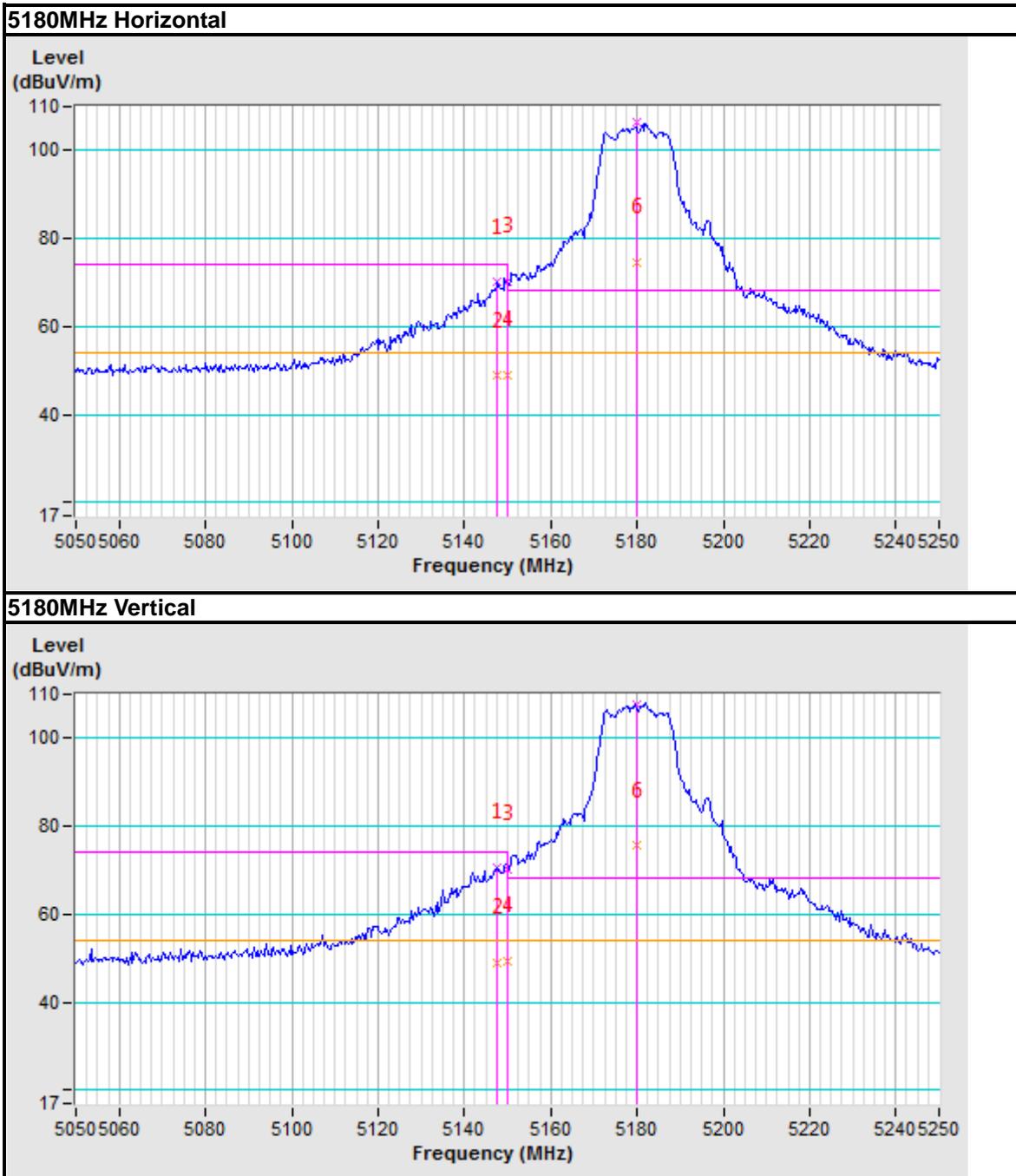
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5147.44	70.63 PK	74.00	-3.37	1.00 V	163	61.92	8.71
2	5147.44	48.92 AV	54.00	-5.08	1.00 V	163	40.21	8.71
3	5150.00	70.30 PK	74.00	-3.70	1.00 V	163	61.59	8.71
4	5150.00	49.46 AV	54.00	-4.54	1.00 V	163	40.75	8.71
5	*5180.00	107.54 PK			1.00 V	163	98.83	8.71
6	*5180.00	75.54 AV			1.00 V	163	66.83	8.71
7	#10360.00	63.22 PK	68.20	-4.98	1.00 V	139	45.58	17.64
8	15540.00	67.77 PK	74.00	-6.23	1.00 V	140	43.40	24.37
9	15540.00	50.33 AV	54.00	-3.67	1.00 V	140	25.96	24.37

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The emission levels of other frequencies were greater than 20dB margin.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

Band edge Plot





Test Report No.: RF200430N014-4

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5140.00	51.80 PK	74.00	-22.20	1.00 H	172	43.10	8.70
2	5140.00	38.56 AV	54.00	-15.44	1.00 H	172	29.86	8.70
3	5150.00	56.22 PK	74.00	-17.78	1.00 H	172	47.51	8.71
4	5150.00	41.03 AV	54.00	-12.97	1.00 H	172	32.32	8.71
5	*5200.00	105.57 PK			1.00 H	172	96.84	8.73
6	*5200.00	74.13 AV			1.00 H	172	65.40	8.73
7	#10400.00	64.83 PK	68.20	-3.37	1.00 H	164	47.01	17.82
8	15600.00	67.18 PK	74.00	-6.82	1.00 H	170	42.73	24.45
9	15600.00	50.69 AV	54.00	-3.31	1.00 H	170	26.24	24.45

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5140.00	54.55 PK	74.00	-19.45	1.00 V	154	45.85	8.70
2	5140.00	40.39 AV	54.00	-13.61	1.00 V	154	31.69	8.70
3	5150.00	59.62 PK	74.00	-14.38	1.00 V	154	50.91	8.71
4	5150.00	43.11 AV	54.00	-10.89	1.00 V	154	34.40	8.71
5	*5200.00	109.15 PK			1.00 V	154	100.42	8.73
6	*5200.00	77.25 AV			1.00 V	154	68.52	8.73
7	#10400.00	64.93 PK	68.20	-3.27	1.00 V	175	47.11	17.82
8	15600.00	66.94 PK	74.00	-7.06	1.00 V	172	42.49	24.45
9	15600.00	50.74 AV	54.00	-3.26	1.00 V	172	26.29	24.45

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The emission levels of other frequencies were greater than 20dB margin.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.



Test Report No.: RF200430N014-4

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5140.00	50.11 PK	74.00	-23.89	1.00 H	8	41.41	8.70
2	5140.00	37.02 AV	54.00	-16.98	1.00 H	8	28.32	8.70
3	5150.00	49.60 PK	74.00	-24.40	1.00 H	8	40.89	8.71
4	5150.00	37.05 AV	54.00	-16.95	1.00 H	8	28.34	8.71
5	*5240.00	104.85 PK			1.00 H	7	96.11	8.74
6	*5240.00	74.10 AV			1.00 H	7	65.36	8.74
7	5350.00	50.97 PK	74.00	-23.03	1.00 H	8	42.20	8.77
8	5350.00	38.23 AV	54.00	-15.77	1.00 H	8	29.46	8.77
9	5400.00	50.65 PK	74.00	-23.35	1.00 H	8	41.86	8.79
10	5400.00	38.15 AV	54.00	-15.85	1.00 H	8	29.36	8.79
11	#10480.00	64.60 PK	68.20	-3.60	1.00 H	146	46.42	18.18
12	15720.00	66.54 PK	74.00	-7.46	1.00 H	152	41.94	24.60
13	15720.00	50.76 AV	54.00	-3.24	1.00 H	152	26.16	24.60

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5130.00	50.97 PK	74.00	-23.03	1.00 V	155	42.26	8.71
2	5130.00	37.83 AV	54.00	-16.17	1.00 V	155	29.12	8.71
3	5150.00	49.67 PK	74.00	-24.33	1.00 V	155	40.96	8.71
4	5150.00	37.82 AV	54.00	-16.18	1.00 V	155	29.11	8.71
5	*5240.00	109.66 PK			1.00 V	155	100.92	8.74
6	*5240.00	77.17 AV			1.00 V	155	68.43	8.74
7	5350.00	50.83 PK	74.00	-23.17	1.00 V	155	42.06	8.77
8	5350.00	38.63 AV	54.00	-15.37	1.00 V	155	29.86	8.77
9	5399.00	52.80 PK	74.00	-21.20	1.00 V	155	44.02	8.78
10	5399.00	38.48 AV	54.00	-15.52	1.00 V	155	29.70	8.78
11	#10480.00	65.45 PK	68.20	-2.75	1.00 V	160	47.27	18.18
12	15720.00	67.13 PK	74.00	-6.87	1.00 V	160	42.53	24.60
13	15720.00	50.83 AV	54.00	-3.17	1.00 V	160	26.23	24.60

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The emission levels of other frequencies were greater than 20dB margin.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

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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

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5147.12	70.01 PK	74.00	-3.99	1.00 H	171	61.30	8.71
2	5147.12	47.85 AV	54.00	-6.15	1.00 H	171	39.14	8.71
3	5150.00	70.07 PK	74.00	-3.93	1.00 H	171	61.36	8.71
4	5150.00	47.94 AV	54.00	-6.06	1.00 H	171	39.23	8.71
5	*5180.00	105.28 PK			1.00 H	171	96.57	8.71
6	*5180.00	72.94 AV			1.00 H	171	64.23	8.71
7	#10360.00	64.50 PK	68.20	-3.70	1.00 H	135	46.86	17.64
8	15540.00	67.52 PK	74.00	-6.48	1.00 H	130	43.15	24.37
9	15540.00	50.43 AV	54.00	-3.57	1.00 H	130	26.06	24.37

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5145.19	71.14 PK	74.00	-2.86	1.00 V	162	62.44	8.70
2	5145.19	48.96 AV	54.00	-5.04	1.00 V	162	40.26	8.70
3	5150.00	71.48 PK	74.00	-2.52	1.00 V	162	62.77	8.71
4	5150.00	49.09 AV	54.00	-4.91	1.00 V	162	40.38	8.71
5	*5180.00	108.11 PK			1.00 V	162	99.40	8.71
6	*5180.00	74.44 AV			1.00 V	162	65.73	8.71
7	#10360.00	64.62 PK	68.20	-3.58	1.00 V	145	46.98	17.64
8	15540.00	67.24 PK	74.00	-6.76	1.00 V	150	42.87	24.37
9	15540.00	50.67 AV	54.00	-3.33	1.00 V	150	26.30	24.37

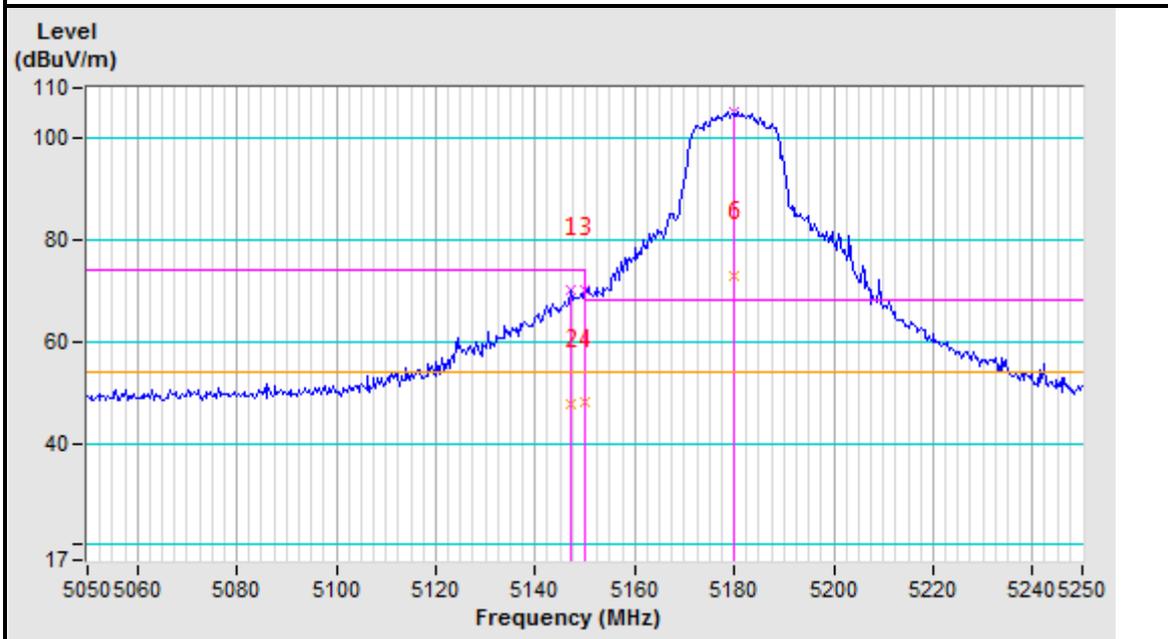
REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The emission levels of other frequencies were greater than 20dB margin.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

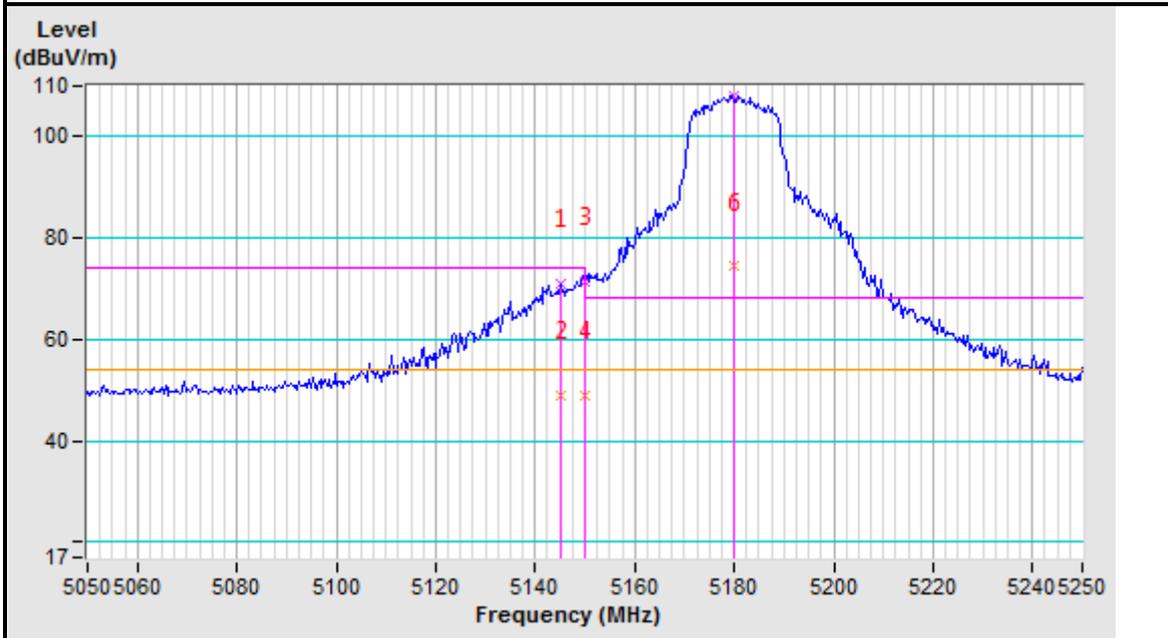


Band edge Plot

5180MHz Horizontal



5180MHz Vertical





Test Report No.: RF200430N014-4

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5140.00	53.06 PK	74.00	-20.94	1.00 H	360	44.36	8.70
2	5140.00	39.42 AV	54.00	-14.58	1.00 H	360	30.72	8.70
3	5150.00	55.61 PK	74.00	-18.39	1.00 H	360	46.90	8.71
4	5150.00	41.21 AV	54.00	-12.79	1.00 H	360	32.50	8.71
5	*5200.00	105.22 PK			1.00 H	360	96.49	8.73
6	*5200.00	73.38 AV			1.00 H	360	64.65	8.73
7	#10400.00	65.35 PK	68.20	-2.85	1.00 H	205	47.53	17.82
8	15600.00	66.67 PK	74.00	-7.33	1.00 H	360	42.22	24.45
9	15600.00	51.16 AV	54.00	-2.84	1.00 H	360	26.71	24.45

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5140.00	55.97 PK	74.00	-18.03	1.00 V	261	47.27	8.70
2	5140.00	41.35 AV	54.00	-12.65	1.00 V	261	32.65	8.70
3	5150.00	61.27 PK	74.00	-12.73	1.00 V	261	52.56	8.71
4	5150.00	43.26 AV	54.00	-10.74	1.00 V	261	34.55	8.71
5	*5200.00	107.22 PK			1.00 V	261	98.49	8.73
6	*5200.00	74.58 AV			1.00 V	261	65.85	8.73
7	#10400.00	66.13 PK	68.20	-2.07	1.00 V	112	48.31	17.82
8	15600.00	66.47 PK	74.00	-7.53	1.00 V	360	42.02	24.45
9	15600.00	51.60 AV	54.00	-2.40	1.00 V	360	27.15	24.45

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The emission levels of other frequencies were greater than 20dB margin.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.



Test Report No.: RF200430N014-4

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5125.00	51.05 PK	74.00	-22.95	1.00 H	114	42.35	8.70
2	5125.00	37.79 AV	54.00	-16.21	1.00 H	114	29.09	8.70
3	5150.00	48.84 PK	74.00	-25.16	1.00 H	114	40.13	8.71
4	5150.00	37.57 AV	54.00	-16.43	1.00 H	114	28.86	8.71
5	*5240.00	106.19 PK			1.00 H	114	97.45	8.74
6	*5240.00	73.50 AV			1.00 H	114	64.76	8.74
7	5350.00	51.36 PK	74.00	-22.64	1.00 H	114	42.59	8.77
8	5350.00	38.65 AV	54.00	-15.35	1.00 H	114	29.88	8.77
9	5400.00	52.06 PK	74.00	-21.94	1.00 H	114	43.27	8.79
10	5400.00	38.81 AV	54.00	-15.19	1.00 H	114	30.02	8.79
11	#10480.00	65.28 PK	68.20	-2.92	1.00 H	56	47.10	18.18
12	15720.00	67.02 PK	74.00	-6.98	1.00 H	56	42.42	24.60
13	15720.00	51.58 AV	54.00	-2.42	1.00 H	56	26.98	24.60

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5141.00	51.27 PK	74.00	-22.73	1.00 V	137	42.56	8.71
2	5141.00	37.76 AV	54.00	-16.24	1.00 V	137	29.05	8.71
3	5150.00	49.63 PK	74.00	-24.37	1.00 V	137	40.92	8.71
4	5150.00	37.73 AV	54.00	-16.27	1.00 V	137	29.02	8.71
5	*5240.00	108.34 PK			1.00 V	137	99.60	8.74
6	*5240.00	75.07 AV			1.00 V	137	66.33	8.74
7	5350.00	51.73 PK	74.00	-22.27	1.00 V	137	42.96	8.77
8	5350.00	38.79 AV	54.00	-15.21	1.00 V	137	30.02	8.77
9	5429.00	52.80 PK	74.00	-21.20	1.00 V	137	44.00	8.80
10	5429.00	38.91 AV	54.00	-15.09	1.00 V	137	30.11	8.80
11	#10480.00	66.48 PK	68.20	-1.72	1.00 V	261	48.30	18.18
12	15720.00	67.52 PK	74.00	-6.48	1.00 V	261	42.92	24.60
13	15720.00	51.79 AV	54.00	-2.21	1.00 V	261	27.19	24.60

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The emission levels of other frequencies were greater than 20dB margin.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

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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

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5147.40	68.33 PK	74.00	-5.67	1.00 H	116	59.62	8.71
2	5147.40	45.75 AV	54.00	-8.25	1.00 H	116	37.04	8.71
3	5150.00	69.50 PK	74.00	-4.50	1.00 H	116	60.79	8.71
4	5150.00	45.89 AV	54.00	-8.11	1.00 H	116	37.18	8.71
5	*5190.00	102.68 PK			1.00 H	116	93.96	8.72
6	*5190.00	64.67 AV			1.00 H	116	55.95	8.72
7	#10380.00	65.24 PK	68.20	-2.96	1.00 H	130	47.51	17.73
8	15570.00	66.64 PK	74.00	-7.36	1.00 H	106	42.23	24.41
9	15570.00	50.66 AV	54.00	-3.34	1.00 H	106	26.25	24.41

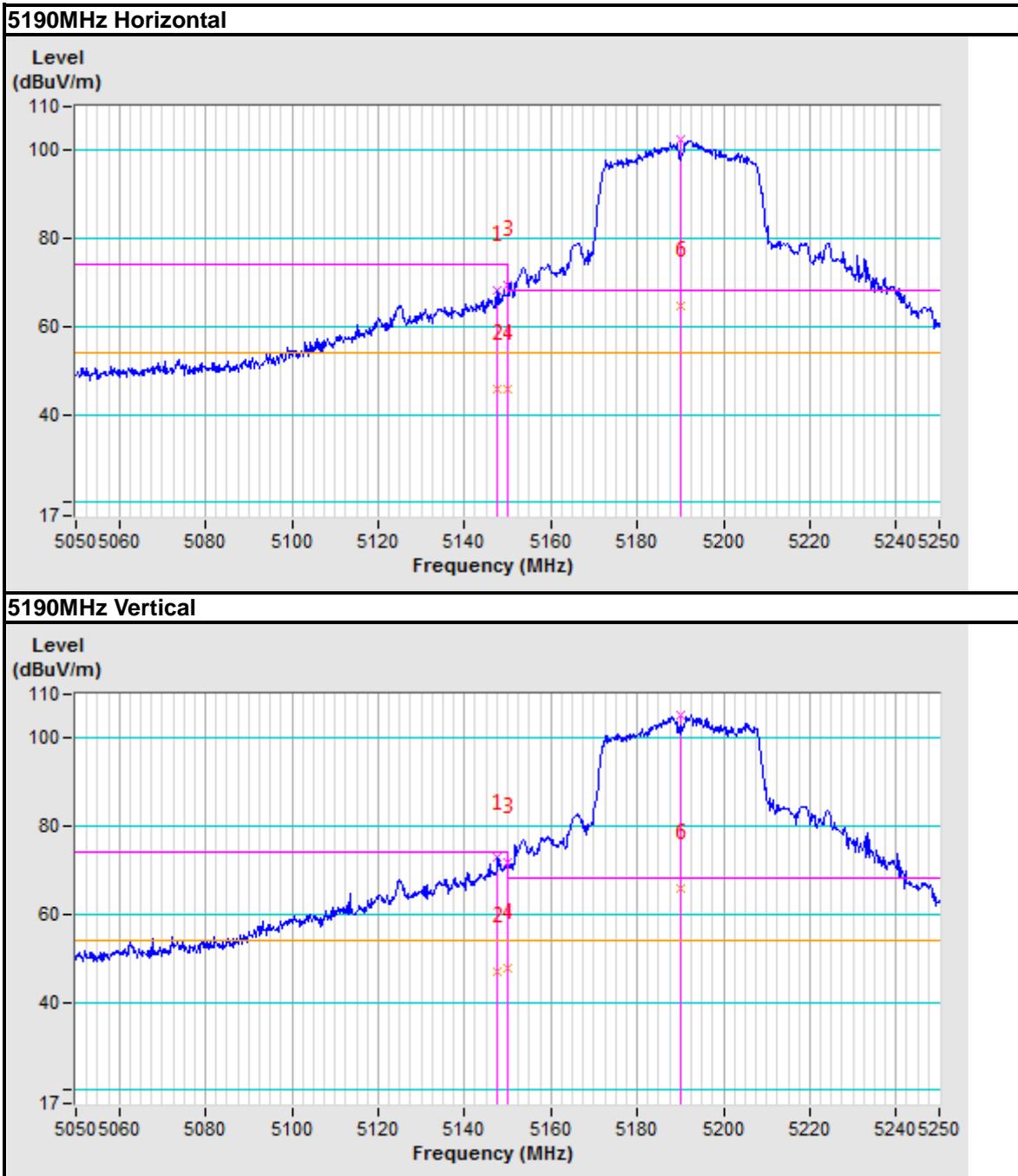
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5147.60	72.87 PK	74.00	-1.13	1.00 V	179	64.16	8.71
2	5147.60	47.14 AV	54.00	-6.86	1.00 V	179	38.43	8.71
3	5150.00	71.87 PK	74.00	-2.13	1.00 V	179	63.16	8.71
4	5150.00	47.78 AV	54.00	-6.22	1.00 V	179	39.07	8.71
5	*5190.00	105.25 PK			1.00 V	179	96.53	8.72
6	*5190.00	66.05 AV			1.00 V	179	57.33	8.72
7	#10380.00	63.15 PK	68.20	-5.05	1.00 V	88	45.42	17.73
8	15570.00	66.38 PK	74.00	-7.62	1.00 V	107	41.97	24.41
9	15570.00	50.62 AV	54.00	-3.38	1.00 V	107	26.21	24.41

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The emission levels of other frequencies were greater than 20dB margin.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

Band edge Plot





Test Report No.: RF200430N014-4

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5140.00	59.03 PK	74.00	-14.97	1.00 H	108	50.33	8.70
2	5140.00	42.41 AV	54.00	-11.59	1.00 H	108	33.71	8.70
3	5150.00	63.48 PK	74.00	-10.52	1.00 H	108	54.77	8.71
4	5150.00	43.18 AV	54.00	-10.82	1.00 H	108	34.47	8.71
5	*5230.00	103.98 PK			1.00 H	108	95.25	8.73
6	*5230.00	65.87 AV			1.00 H	108	57.14	8.73
7	#10460.00	67.44 PK	68.20	-0.76	1.00 H	105	49.35	18.09
8	15690.00	66.21 PK	74.00	-7.79	1.00 H	173	41.65	24.56
9	15690.00	52.13 AV	54.00	-1.87	1.00 H	173	27.57	24.56

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5140.00	60.23 PK	74.00	-13.77	1.00 V	139	51.53	8.70
2	5140.00	42.96 AV	54.00	-11.04	1.00 V	139	34.26	8.70
3	5150.00	63.03 PK	74.00	-10.97	1.00 V	139	54.32	8.71
4	5150.00	42.85 AV	54.00	-11.15	1.00 V	139	34.14	8.71
5	*5230.00	106.51 PK			1.00 V	139	97.78	8.73
6	*5230.00	67.65 AV			1.00 V	139	58.92	8.73
7	#10460.00	66.28 PK	68.20	-1.92	1.00 V	150	48.19	18.09
8	15690.00	65.86 PK	74.00	-8.14	1.00 V	95	41.30	24.56
9	15690.00	52.06 AV	54.00	-1.94	1.00 V	95	27.50	24.56

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The emission levels of other frequencies were greater than 20dB margin.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.



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

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5140.00	69.10 PK	74.00	-4.90	1.00 H	360	60.40	8.70
2	5140.00	47.30 AV	54.00	-6.70	1.00 H	360	38.60	8.70
3	5150.00	68.10 PK	74.00	-5.90	1.00 H	360	59.39	8.71
4	5150.00	47.63 AV	54.00	-6.37	1.00 H	360	38.92	8.71
5	*5210.00	99.91 PK			1.00 H	360	91.18	8.73
6	*5210.00	76.59 AV			1.00 H	360	67.86	8.73
7	#10420.00	63.56 PK	68.20	-4.64	1.00 H	138	45.65	17.91
8	15630.00	66.30 PK	74.00	-7.70	1.00 H	39	41.82	24.48
9	15630.00	52.36 AV	54.00	-1.64	1.00 H	39	27.88	24.48

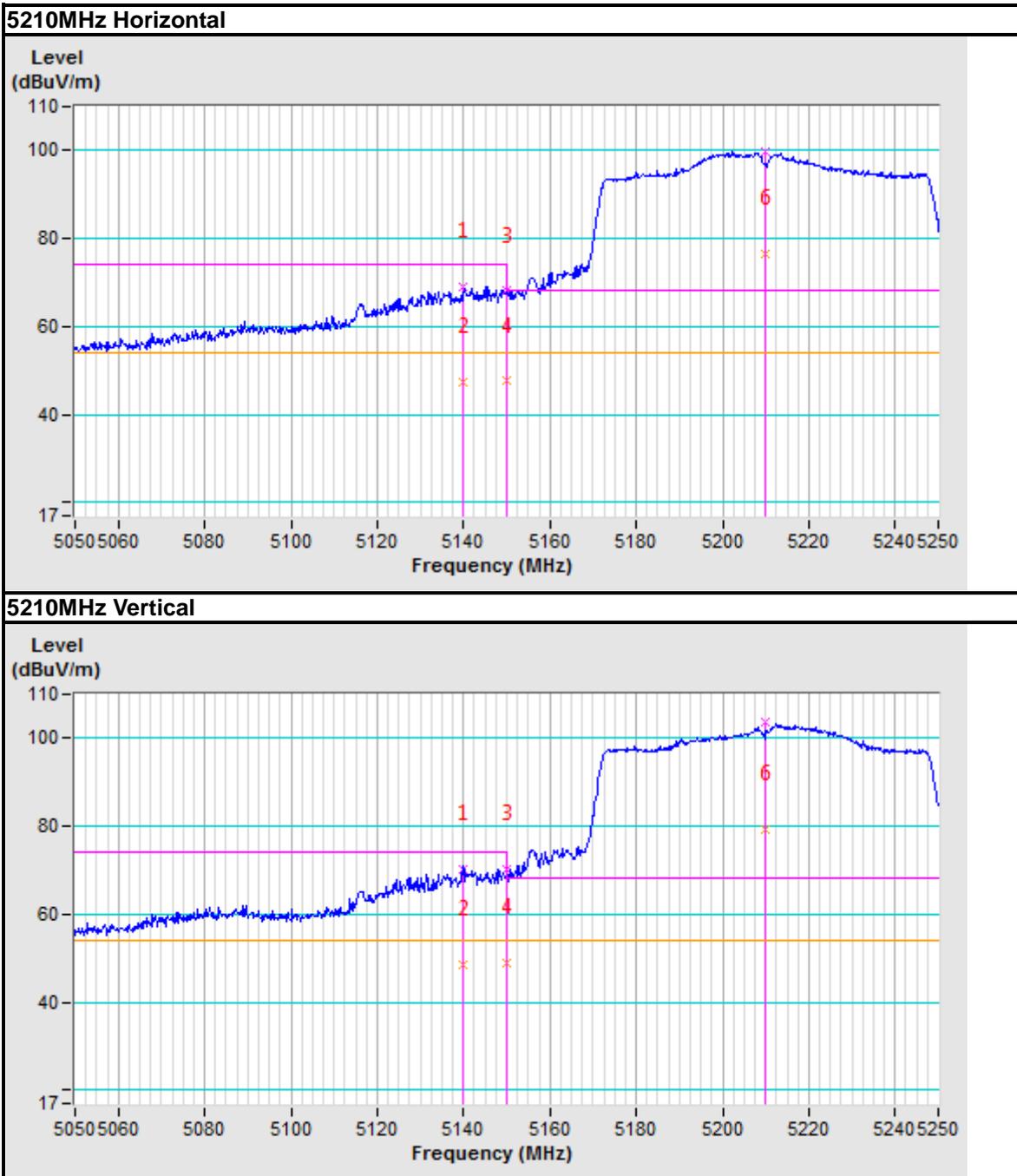
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5140.00	70.29 PK	74.00	-3.71	1.00 V	138	61.59	8.70
2	5140.00	48.55 AV	54.00	-5.45	1.00 V	138	39.85	8.70
3	5150.00	70.21 PK	74.00	-3.79	1.00 V	138	61.50	8.71
4	5150.00	48.85 AV	54.00	-5.15	1.00 V	138	40.14	8.71
5	*5210.00	103.87 PK			1.00 V	138	95.14	8.73
6	*5210.00	79.38 AV			1.00 V	138	70.65	8.73
7	#10420.00	63.75 PK	68.20	-4.45	1.00 V	105	45.84	17.91
8	15630.00	65.92 PK	74.00	-8.08	1.00 V	167	41.44	24.48
9	15630.00	52.35 AV	54.00	-1.65	1.00 V	167	27.87	24.48

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The emission levels of other frequencies were greater than 20dB margin.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

Band edge Plot





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VERITAS**

Test Report No.: RF200430N014-4

Band 2 (5250-5350MHz):

ABOVE 1GHz DATA

802.11a

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	49.63 PK	74.00	-24.37	1.00 H	119	40.92	8.71
2	5150.00	37.66 AV	54.00	-16.34	1.00 H	119	28.95	8.71
3	*5260.00	105.07 PK			1.00 H	119	96.33	8.74
4	*5260.00	73.70 AV			1.00 H	119	64.96	8.74
5	5350.00	51.61 PK	74.00	-22.39	1.00 H	119	42.84	8.77
6	5350.00	38.95 AV	54.00	-15.05	1.00 H	119	30.18	8.77
7	5400.00	52.25 PK	74.00	-21.75	1.00 H	119	43.46	8.79
8	5400.00	38.89 AV	54.00	-15.11	1.00 H	119	30.10	8.79
9	#10520.00	66.86 PK	68.20	-1.34	1.00 H	102	48.55	18.31
10	15780.00	67.29 PK	74.00	-6.71	1.00 H	182	42.63	24.66
11	15780.00	51.28 AV	54.00	-2.72	1.00 H	182	26.62	24.66

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	49.49 PK	74.00	-24.51	1.00 V	140	40.78	8.71
2	5150.00	37.75 AV	54.00	-16.25	1.00 V	140	29.04	8.71
3	*5260.00	107.25 PK			1.00 V	140	98.51	8.74
4	*5260.00	75.16 AV			1.00 V	140	66.42	8.74
5	5350.00	51.40 PK	74.00	-22.60	1.00 V	140	42.63	8.77
6	5350.00	39.03 AV	54.00	-14.97	1.00 V	140	30.26	8.77
7	5400.00	52.03 PK	74.00	-21.97	1.00 V	140	43.24	8.79
8	5400.00	38.92 AV	54.00	-15.08	1.00 V	140	30.13	8.79
9	#10520.00	66.85 PK	68.20	-1.35	1.00 V	90	48.54	18.31
10	15780.00	67.68 PK	74.00	-6.32	1.00 V	43	43.02	24.66
11	15780.00	51.52 AV	54.00	-2.48	1.00 V	73	26.86	24.66

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The emission levels of other frequencies were greater than 20dB margin.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

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Test Report No.: RF200430N014-4

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	108.25 PK			1.00 H	117	99.50	8.75
2	*5300.00	76.28 AV			1.00 H	117	67.53	8.75
3	5350.00	56.40 PK	74.00	-17.60	1.00 H	117	47.63	8.77
4	5350.00	40.81 AV	54.00	-13.19	1.00 H	117	32.04	8.77
5	5380.00	53.21 PK	74.00	-20.79	1.00 H	117	44.43	8.78
6	5380.00	39.26 AV	54.00	-14.74	1.00 H	117	30.48	8.78
7	10600.00	68.18 PK	74.00	-5.82	1.00 H	103	49.73	18.45
8	10600.00	52.05 AV	54.00	-1.95	1.00 H	103	33.60	18.45
9	15900.00	66.79 PK	74.00	-7.21	1.00 H	248	41.98	24.81
10	15900.00	51.51 AV	54.00	-2.49	1.00 H	248	26.70	24.81

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	109.70 PK			1.00 V	140	100.95	8.75
2	*5300.00	77.32 AV			1.00 V	140	68.57	8.75
3	5350.00	58.44 PK	74.00	-15.56	1.00 V	140	49.67	8.77
4	5350.00	41.65 AV	54.00	-12.35	1.00 V	140	32.88	8.77
5	5354.00	58.66 PK	74.00	-15.34	1.00 V	140	49.88	8.78
6	5354.00	41.15 AV	54.00	-12.85	1.00 V	140	32.37	8.78
7	10600.00	69.64 PK	74.00	-4.36	1.00 V	95	51.19	18.45
8	10600.00	53.02 AV	54.00	-0.98	1.00 V	95	34.57	18.45
9	15900.00	66.92 PK	74.00	-7.08	1.00 V	118	42.11	24.81
10	15900.00	51.56 AV	54.00	-2.44	1.00 V	118	26.75	24.81

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The emission levels of other frequencies were greater than 20dB margin.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.



Test Report No.: RF200430N014-4

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	107.89 PK			1.00 H	118	99.12	8.77
2	*5320.00	76.13 AV			1.00 H	118	67.36	8.77
3	5350.00	65.69 PK	74.00	-8.31	1.00 H	118	56.92	8.77
4	5350.00	45.91 AV	54.00	-8.09	1.00 H	118	37.14	8.77
5	5358.33	62.87 PK	74.00	-11.13	1.00 H	118	54.10	8.77
6	5358.33	45.28 AV	54.00	-8.72	1.00 H	118	36.51	8.77
7	10640.00	64.48 PK	74.00	-9.52	1.00 H	104	45.96	18.52
8	10640.00	48.95 AV	54.00	-5.05	1.00 H	104	30.43	18.52
9	15960.00	66.70 PK	74.00	-7.30	1.00 H	65	41.81	24.89
10	15960.00	51.48 AV	54.00	-2.52	1.00 H	65	26.59	24.89

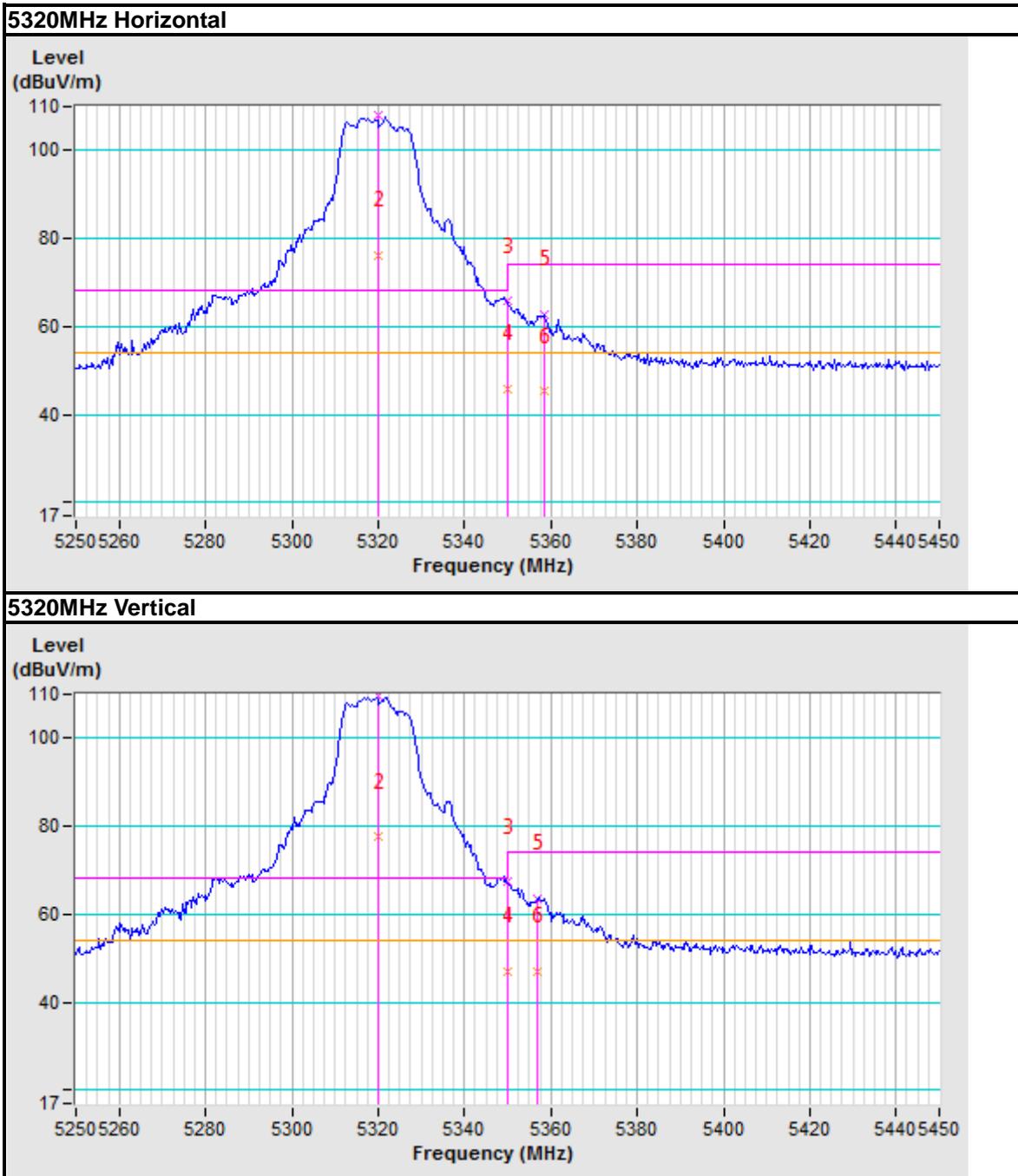
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	109.71 PK			1.00 V	140	100.94	8.77
2	*5320.00	77.57 AV			1.00 V	140	68.80	8.77
3	5350.00	67.34 PK	74.00	-6.66	1.00 V	140	58.57	8.77
4	5350.00	47.06 AV	54.00	-6.94	1.00 V	140	38.29	8.77
5	5357.05	63.69 PK	74.00	-10.31	1.00 V	140	54.92	8.77
6	5357.05	46.89 AV	54.00	-7.11	1.00 V	140	38.12	8.77
7	10640.00	66.03 PK	74.00	-7.97	1.00 V	96	47.51	18.52
8	10640.00	48.92 AV	54.00	-5.08	1.00 V	96	30.40	18.52
9	15960.00	66.85 PK	74.00	-7.15	1.00 V	173	41.96	24.89
10	15960.00	51.53 AV	54.00	-2.47	1.00 V	173	26.64	24.89

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The emission levels of other frequencies were greater than 20dB margin.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.

Band edge Plot





BUREAU
VERITAS

Test Report No.: RF200430N014-4

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

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5130.00	51.39 PK	74.00	-22.61	1.00 H	117	42.68	8.71
2	5130.00	38.03 AV	54.00	-15.97	1.00 H	117	29.32	8.71
3	5150.00	50.47 PK	74.00	-23.53	1.00 H	117	41.76	8.71
4	5150.00	37.90 AV	54.00	-16.10	1.00 H	117	29.19	8.71
5	*5260.00	105.14 PK			1.00 H	117	96.40	8.74
6	*5260.00	72.49 AV			1.00 H	117	63.75	8.74
7	5350.00	50.94 PK	74.00	-23.06	1.00 H	117	42.17	8.77
8	5350.00	38.41 AV	54.00	-15.59	1.00 H	117	29.64	8.77
9	5380.00	51.37 PK	74.00	-22.63	1.00 H	117	42.59	8.78
10	5380.00	38.33 AV	54.00	-15.67	1.00 H	117	29.55	8.78
11	#10520.00	67.10 PK	68.20	-1.10	1.00 H	103	48.79	18.31
12	15780.00	67.18 PK	74.00	-6.82	1.00 H	177	42.52	24.66
13	15780.00	51.63 AV	54.00	-2.37	1.00 H	177	26.97	24.66

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5130.00	50.44 PK	74.00	-23.56	1.00 V	140	41.73	8.71
2	5130.00	38.06 AV	54.00	-15.94	1.00 V	140	29.35	8.71
3	5150.00	49.18 PK	74.00	-24.82	1.00 V	140	40.47	8.71
4	5150.00	37.97 AV	54.00	-16.03	1.00 V	140	29.26	8.71
5	*5260.00	107.46 PK			1.00 V	140	98.72	8.74
6	*5260.00	74.42 AV			1.00 V	140	65.68	8.74
7	5350.00	51.61 PK	74.00	-22.39	1.00 V	140	42.84	8.77
8	5350.00	38.63 AV	54.00	-15.37	1.00 V	140	29.86	8.77
9	5380.00	52.27 PK	74.00	-21.73	1.00 V	140	43.49	8.78
10	5380.00	38.43 AV	54.00	-15.57	1.00 V	140	29.65	8.78
11	#10520.00	64.80 PK	68.20	-3.40	1.00 V	89	46.49	18.31
12	15780.00	67.32 PK	74.00	-6.68	1.00 V	105	42.66	24.66
13	15780.00	51.37 AV	54.00	-2.63	1.00 V	105	26.71	24.66

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The emission levels of other frequencies were greater than 20dB margin.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

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Test Report No.: RF200430N014-4

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	108.67 PK			1.00 H	114	99.92	8.75
2	*5300.00	76.49 AV			1.00 H	114	67.74	8.75
3	5350.00	56.62 PK	74.00	-17.38	1.00 H	114	47.85	8.77
4	5350.00	40.86 AV	54.00	-13.14	1.00 H	114	32.09	8.77
5	5380.00	52.89 PK	74.00	-21.11	1.00 H	114	44.11	8.78
6	5380.00	39.35 AV	54.00	-14.65	1.00 H	114	30.57	8.78
7	10600.00	68.23 PK	74.00	-5.77	1.00 H	104	49.78	18.45
8	10600.00	52.09 AV	54.00	-1.91	1.00 H	104	33.64	18.45
9	15900.00	66.71 PK	74.00	-7.29	1.00 H	28	41.90	24.81
10	15900.00	51.57 AV	54.00	-2.43	1.00 H	28	26.76	24.81

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	109.65 PK			1.00 V	138	100.90	8.75
2	*5300.00	77.12 AV			1.00 V	138	68.37	8.75
3	5350.00	58.12 PK	74.00	-15.88	1.00 V	138	49.35	8.77
4	5350.00	41.54 AV	54.00	-12.46	1.00 V	138	32.77	8.77
5	5380.00	58.87 PK	74.00	-15.13	1.00 V	138	50.09	8.78
6	5380.00	40.89 AV	54.00	-13.11	1.00 V	138	32.11	8.78
7	10600.00	69.72 PK	74.00	-4.28	1.00 V	93	51.27	18.45
8	10600.00	52.89 AV	54.00	-1.11	1.00 V	93	34.44	18.45
9	15900.00	66.83 PK	74.00	-7.17	1.00 V	35	42.02	24.81
10	15900.00	51.42 AV	54.00	-2.58	1.00 V	35	26.61	24.81

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The emission levels of other frequencies were greater than 20dB margin.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.



Test Report No.: RF200430N014-4

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	107.64 PK			1.00 H	118	98.87	8.77
2	*5320.00	74.66 AV			1.00 H	118	65.89	8.77
3	5350.00	69.64 PK	74.00	-4.36	1.00 H	118	60.87	8.77
4	5350.00	46.30 AV	54.00	-7.70	1.00 H	118	37.53	8.77
5	5351.28	70.22 PK	74.00	-3.78	1.00 H	118	61.45	8.77
6	5351.28	46.89 AV	54.00	-7.11	1.00 H	118	38.12	8.77
7	10640.00	64.19 PK	74.00	-9.81	1.00 H	103	45.67	18.52
8	10640.00	50.32 AV	54.00	-3.68	1.00 H	103	31.80	18.52
9	15960.00	66.73 PK	74.00	-7.27	1.00 H	62	41.84	24.89
10	15960.00	51.89 AV	54.00	-2.11	1.00 H	62	27.00	24.89

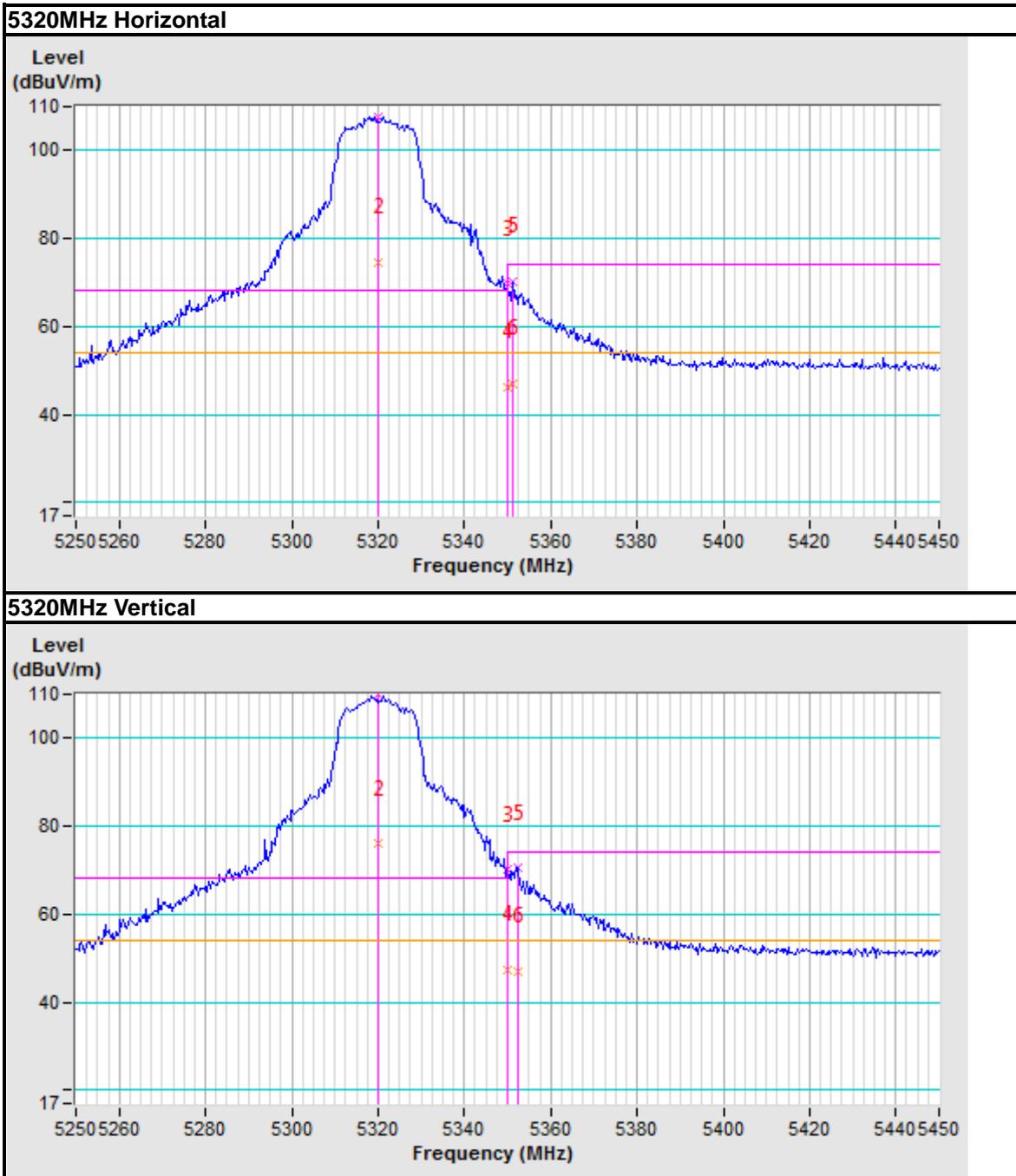
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	109.87 PK			1.00 V	187	101.10	8.77
2	*5320.00	75.98 AV			1.00 V	187	67.21	8.77
3	5350.00	70.08 PK	74.00	-3.92	1.00 V	187	61.31	8.77
4	5350.00	47.48 AV	54.00	-6.52	1.00 V	187	38.71	8.77
5	5352.24	70.50 PK	74.00	-3.50	1.00 V	187	61.73	8.77
6	5352.24	46.95 AV	54.00	-7.05	1.00 V	187	38.18	8.77
7	10640.00	67.61 PK	74.00	-6.39	1.00 V	94	49.09	18.52
8	10640.00	51.13 AV	54.00	-2.87	1.00 V	94	32.61	18.52
9	15960.00	66.35 PK	74.00	-7.65	1.00 V	52	41.46	24.89
10	15960.00	51.61 AV	54.00	-2.39	1.00 V	52	26.72	24.89

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The emission levels of other frequencies were greater than 20dB margin.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.

Band edge Plot





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								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5270.00	102.17 PK			1.00 H	274	93.42	8.75
2	*5270.00	64.41 AV			1.00 H	274	55.66	8.75
3	5350.00	52.79 PK	74.00	-21.21	1.00 H	274	44.02	8.77
4	5350.00	39.63 AV	54.00	-14.37	1.00 H	274	30.86	8.77
5	5370.00	53.40 PK	74.00	-20.60	1.00 H	274	44.63	8.77
6	5370.00	39.40 AV	54.00	-14.60	1.00 H	274	30.63	8.77
7	#10540.00	66.21 PK	68.20	-1.99	1.00 H	102	47.87	18.34
8	15810.00	67.17 PK	74.00	-6.83	1.00 H	105	42.47	24.70
9	15810.00	51.36 AV	54.00	-2.64	1.00 H	105	26.66	24.70

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5270.00	105.13 PK			1.00 V	141	96.38	8.75
2	*5270.00	66.18 AV			1.00 V	141	57.43	8.75
3	5350.00	57.20 PK	74.00	-16.80	1.00 V	141	48.43	8.77
4	5350.00	41.66 AV	54.00	-12.34	1.00 V	141	32.89	8.77
5	5360.00	55.78 PK	74.00	-18.22	1.00 V	141	47.00	8.78
6	5360.00	41.07 AV	54.00	-12.93	1.00 V	141	32.29	8.78
7	#10540.00	66.18 PK	68.20	-2.02	1.00 V	93	47.84	18.34
8	15810.00	68.08 PK	74.00	-5.92	1.00 V	175	43.38	24.70
9	15810.00	51.96 AV	54.00	-2.04	1.00 V	175	27.26	24.70

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The emission levels of other frequencies were greater than 20dB margin.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.



Test Report No.: RF200430N014-4

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5310.00	100.67 PK			1.00 H	116	91.91	8.76
2	*5310.00	64.03 AV			1.00 H	116	55.27	8.76
3	5350.00	67.40 PK	74.00	-6.60	1.00 H	116	58.63	8.77
4	5350.00	43.07 AV	54.00	-10.93	1.00 H	116	34.30	8.77
5	5353.21	63.54 PK	74.00	-10.46	1.00 H	116	54.77	8.77
6	5353.21	42.78 AV	54.00	-11.22	1.00 H	116	34.01	8.77
7	10620.00	62.87 PK	74.00	-11.13	1.00 H	105	44.38	18.49
8	10620.00	47.31 AV	54.00	-6.69	1.00 H	105	28.82	18.49
9	15930.00	66.76 PK	74.00	-7.24	1.00 H	177	41.91	24.85
10	15930.00	51.62 AV	54.00	-2.38	1.00 H	177	26.77	24.85

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

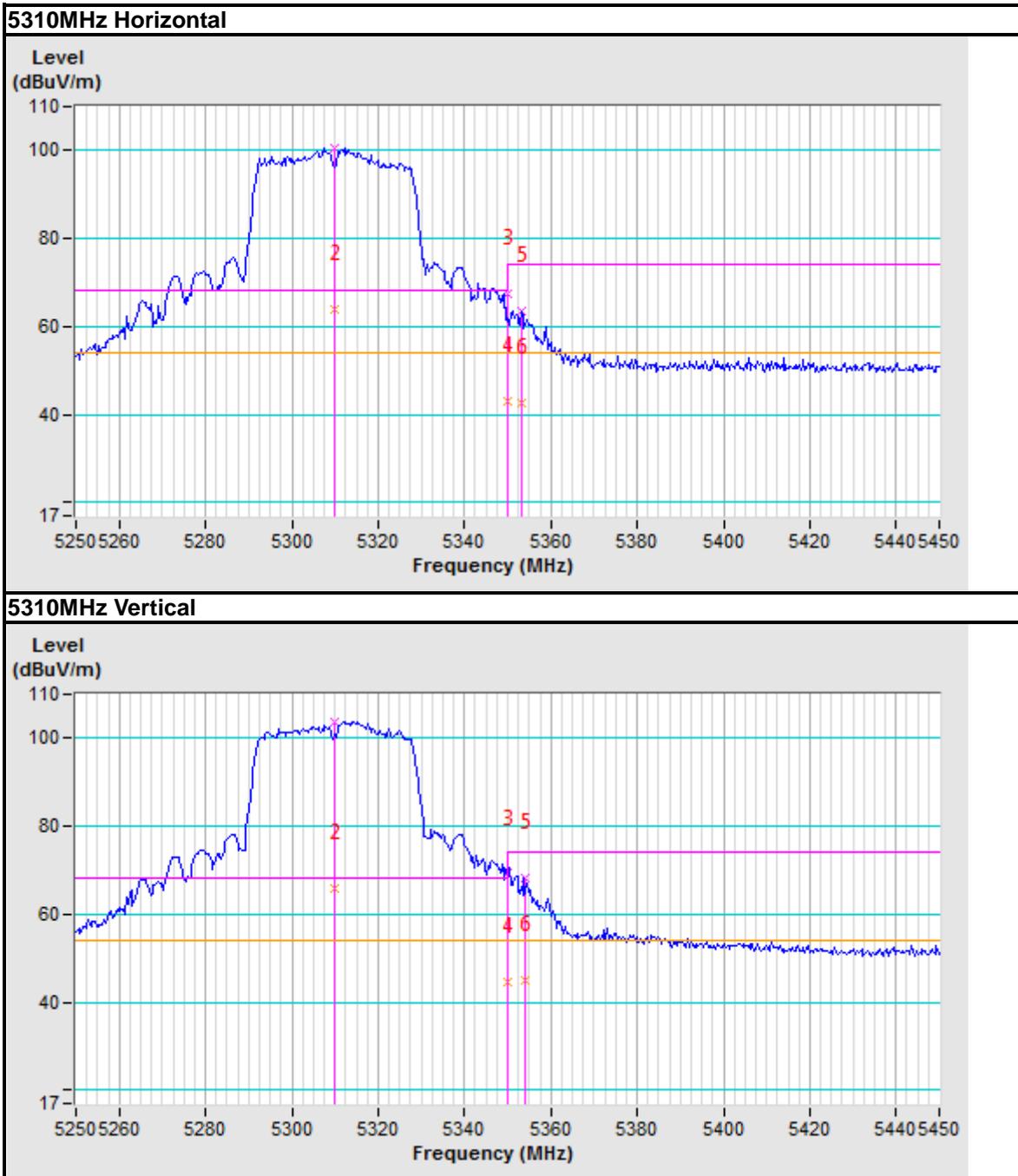
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5310.00	103.88 PK			1.00 V	145	95.12	8.76
2	*5310.00	65.80 AV			1.00 V	145	57.04	8.76
3	5350.00	69.28 PK	74.00	-4.72	1.00 V	145	60.51	8.77
4	5350.00	44.64 AV	54.00	-9.36	1.00 V	145	35.87	8.77
5	5353.85	68.33 PK	74.00	-5.67	1.00 V	145	59.55	8.78
6	5353.85	45.17 AV	54.00	-8.83	1.00 V	145	36.39	8.78
7	10620.00	63.03 PK	74.00	-10.97	1.00 V	95	44.54	18.49
8	10620.00	47.59 AV	54.00	-6.41	1.00 V	95	29.10	18.49
9	15930.00	66.32 PK	74.00	-7.68	1.00 V	173	41.47	24.85
10	15930.00	51.52 AV	54.00	-2.48	1.00 V	173	26.67	24.85

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The emission levels of other frequencies were greater than 20dB margin.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.



Band edge Plot





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

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5290.00	97.96 PK			1.00 H	120	89.21	8.75
2	*5290.00	75.52 AV			1.00 H	120	66.77	8.75
3	5350.00	71.32 PK	74.00	-2.68	1.00 H	120	62.55	8.77
4	5350.00	51.03 AV	54.00	-2.97	1.00 H	120	42.26	8.77
5	5354.17	69.12 PK	74.00	-4.88	1.00 H	120	60.34	8.78
6	5354.17	48.79 AV	54.00	-5.21	1.00 H	120	40.01	8.78
7	#10580.00	61.71 PK	68.20	-6.49	1.00 H	106	43.30	18.41
8	15870.00	66.26 PK	74.00	-7.74	1.00 H	311	41.48	24.78
9	15870.00	51.26 AV	54.00	-2.74	1.00 H	311	26.48	24.78

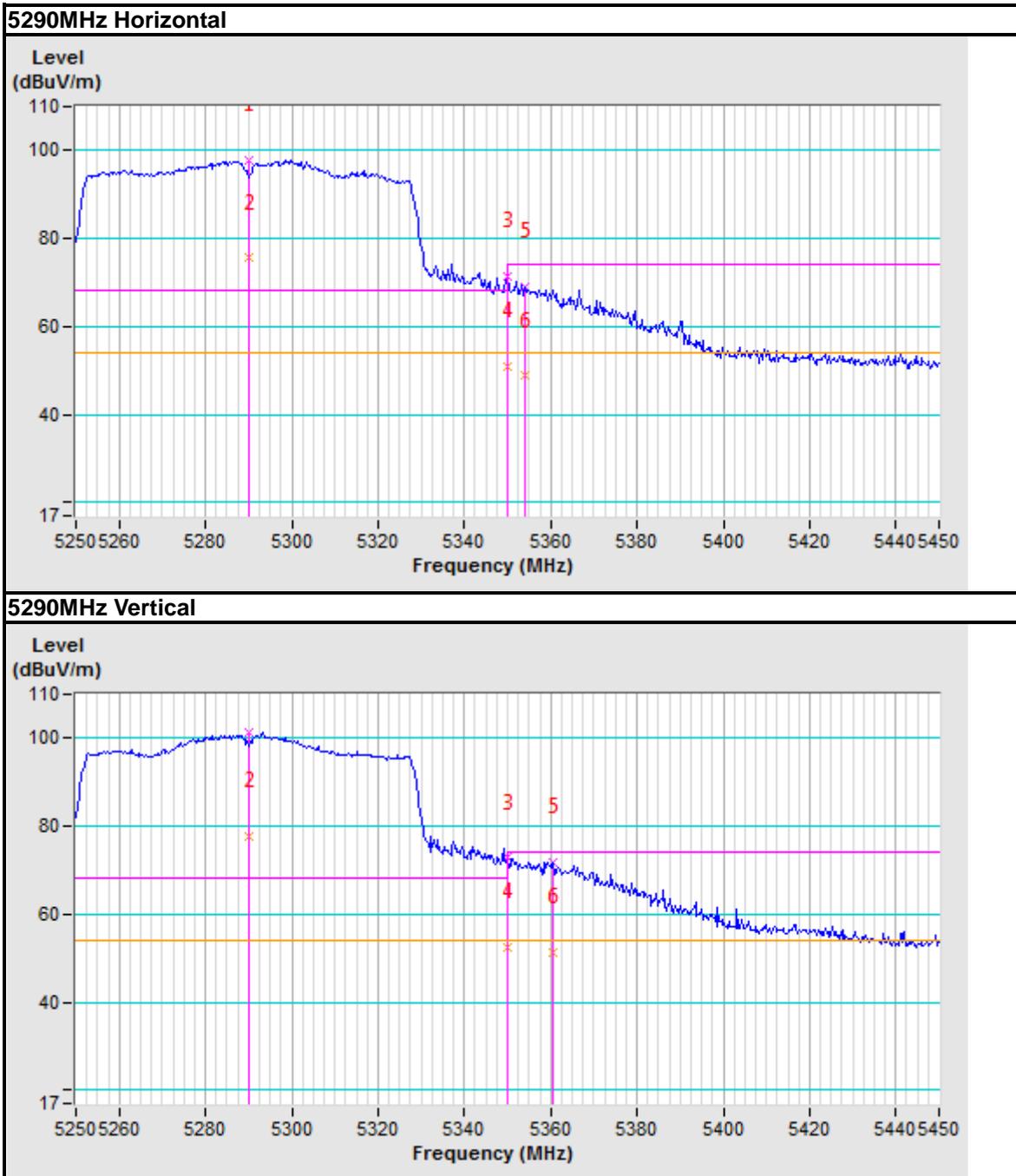
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5290.00	101.24 PK			1.00 V	178	92.49	8.75
2	*5290.00	77.81 AV			1.00 V	178	69.06	8.75
3	5350.00	72.77 PK	74.00	-1.23	1.00 V	178	64.00	8.77
4	5350.00	52.63 AV	54.00	-1.37	1.00 V	178	43.86	8.77
5	5360.58	71.76 PK	74.00	-2.24	1.00 V	178	62.98	8.78
6	5360.58	51.45 AV	54.00	-2.55	1.00 V	178	42.67	8.78
7	#10580.00	62.23 PK	68.20	-5.97	1.00 V	89	43.82	18.41
8	15870.00	66.78 PK	74.00	-7.22	1.00 V	264	42.00	24.78
9	15870.00	52.07 AV	54.00	-1.93	1.00 V	246	27.29	24.78

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The emission levels of other frequencies were greater than 20dB margin.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

Band edge Plot





Band 3 (5470-5725MHz):

ABOVE 1GHz DATA

802.11a

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5465.19	59.19 PK	68.20	-9.01	1.00 H	5	50.38	8.81
2	5470.00	61.86 PK	68.20	-6.34	1.00 H	5	53.05	8.81
3	*5500.00	105.35 PK			1.00 H	5	96.53	8.82
4	*5500.00	74.67 AV			1.00 H	36	65.85	8.82
5	11000.00	61.63 PK	74.00	-12.37	1.00 H	36	42.45	19.18
6	11000.00	47.14 AV	54.00	-6.86	1.00 H	36	27.96	19.18
7	#16500.00	66.13 PK	68.20	-2.07	1.00 H	17	41.10	25.03

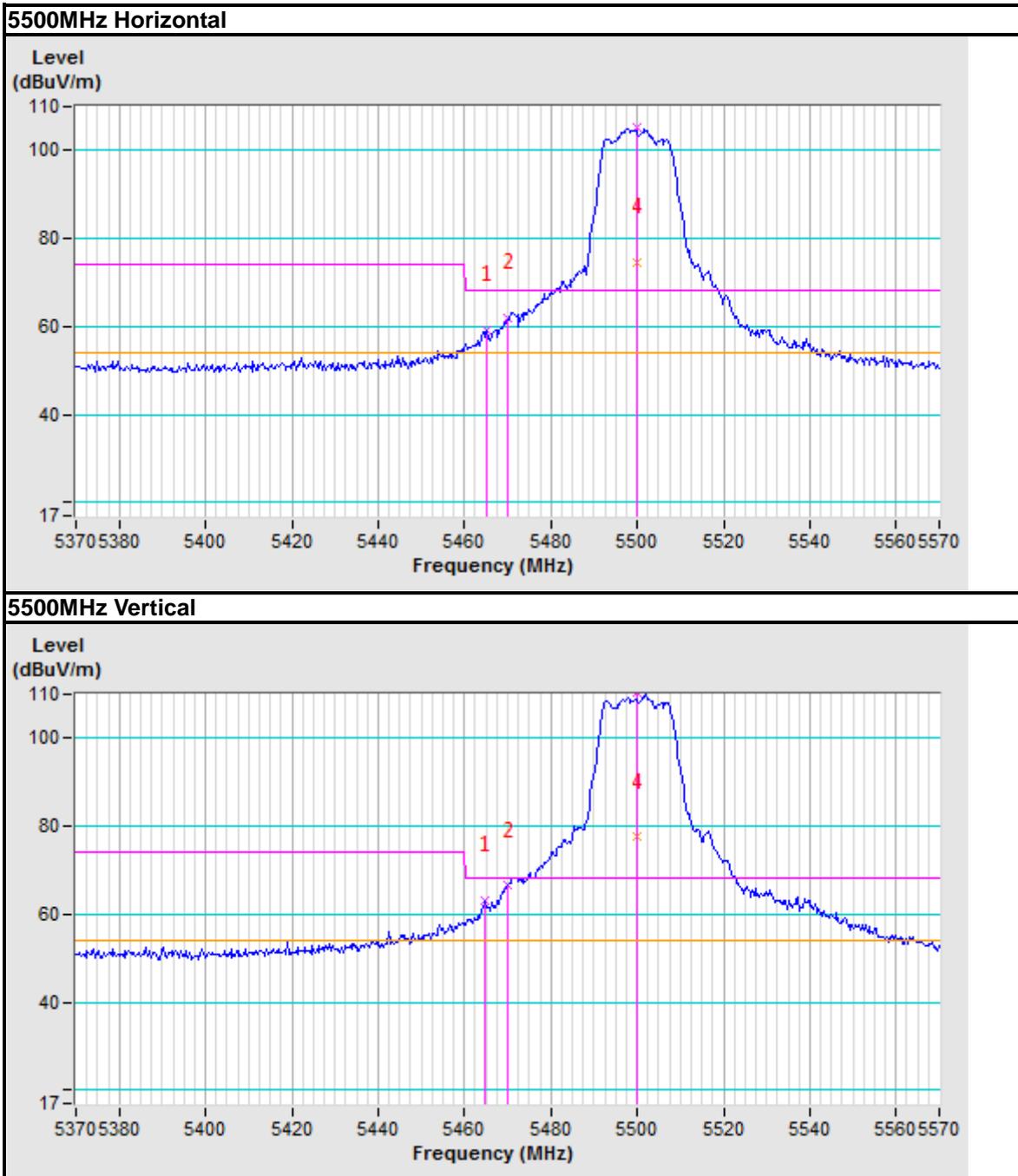
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5464.87	63.25 PK	68.20	-4.95	1.00 V	305	54.44	8.81
2	5470.00	66.54 PK	68.20	-1.66	1.00 V	305	57.73	8.81
3	*5500.00	110.25 PK			1.00 V	305	101.43	8.82
4	*5500.00	77.61 AV			1.00 V	315	68.79	8.82
5	11000.00	61.27 PK	74.00	-12.73	1.00 V	251	42.09	19.18
6	11000.00	47.24 AV	54.00	-6.76	1.00 V	315	28.06	19.18
7	#16500.00	65.38 PK	68.20	-2.82	1.00 V	17	40.35	25.03

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The emission levels of other frequencies were greater than 20dB margin.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

Band edge Plot





Test Report No.: RF200430N014-4

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5470.00	53.08 PK	68.20	-15.12	1.00 H	196	44.27	8.81
2	*5580.00	107.54 PK			1.00 H	196	98.36	9.18
3	*5580.00	75.41 AV			1.00 H	196	66.23	9.18
4	11160.00	60.31 PK	74.00	-13.69	1.00 H	89	40.83	19.48
5	11160.00	46.52 AV	54.00	-7.48	1.00 H	89	27.04	19.48
6	#16740.00	65.08 PK	68.20	-3.12	1.00 H	160	39.28	25.80
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5470.00	51.10 PK	68.20	-17.10	1.00 V	303	42.29	8.81
2	*5580.00	113.05 PK			1.00 V	303	103.87	9.18
3	*5580.00	79.36 AV			1.00 V	303	70.18	9.18
4	11160.00	60.71 PK	74.00	-13.29	1.00 V	105	41.23	19.48
5	11160.00	46.53 AV	54.00	-7.47	1.00 V	105	27.05	19.48
6	#16740.00	65.12 PK	68.20	-3.08	1.00 V	89	39.32	25.80

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The emission levels of other frequencies were greater than 20dB margin.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.



Test Report No.: RF200430N014-4

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	101.60 PK			1.00 H	99	91.87	9.73
2	*5700.00	72.45 AV			1.00 H	99	62.72	9.73
3	#5725.00	55.89 PK	68.20	-12.31	1.00 H	99	46.05	9.84
4	11400.00	61.50 PK	74.00	-12.50	1.00 H	37	41.57	19.93
5	11400.00	47.44 AV	54.00	-6.56	1.00 H	37	27.51	19.93
6	#17100.00	65.23 PK	68.20	-2.97	1.00 H	103	38.53	26.70

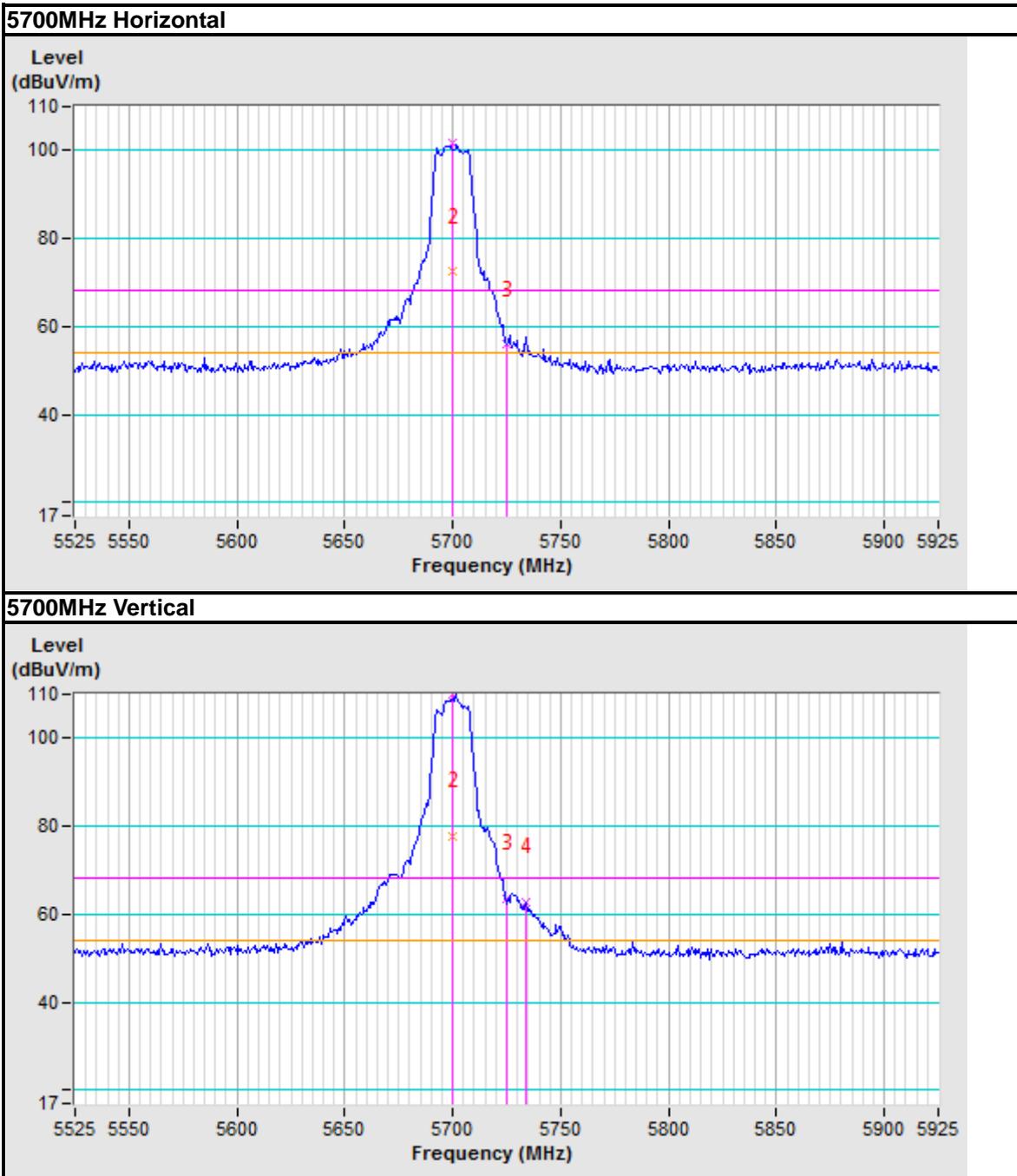
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	110.12 PK			1.00 V	183	100.39	9.73
2	*5700.00	77.73 AV			1.00 V	183	68.00	9.73
3	#5725.00	63.66 PK	68.20	-4.54	1.00 V	183	53.82	9.84
4	#5733.97	62.81 PK	68.20	-5.39	1.00 V	183	52.93	9.88
5	11400.00	61.30 PK	74.00	-12.70	1.00 V	130	41.37	19.93
6	11400.00	47.40 AV	54.00	-6.60	1.00 V	130	27.47	19.93
7	#17100.00	65.35 PK	68.20	-2.85	1.00 V	130	38.65	26.70

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The emission levels of other frequencies were greater than 20dB margin.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

Band edge Plot





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								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5465.51	61.80 PK	68.20	-6.40	1.00 H	0	52.99	8.81
2	#5470.00	61.48 PK	68.20	-6.72	1.00 H	124	52.67	8.81
3	*5500.00	103.65 PK			1.00 H	124	94.83	8.82
4	*5500.00	72.24 AV			1.00 H	124	63.42	8.82
5	11000.00	61.43 PK	74.00	-12.57	1.00 H	305	42.25	19.18
6	11000.00	47.03 AV	54.00	-6.97	1.00 H	305	27.85	19.18
7	#16500.00	65.89 PK	68.20	-2.31	1.00 H	305	40.86	25.03

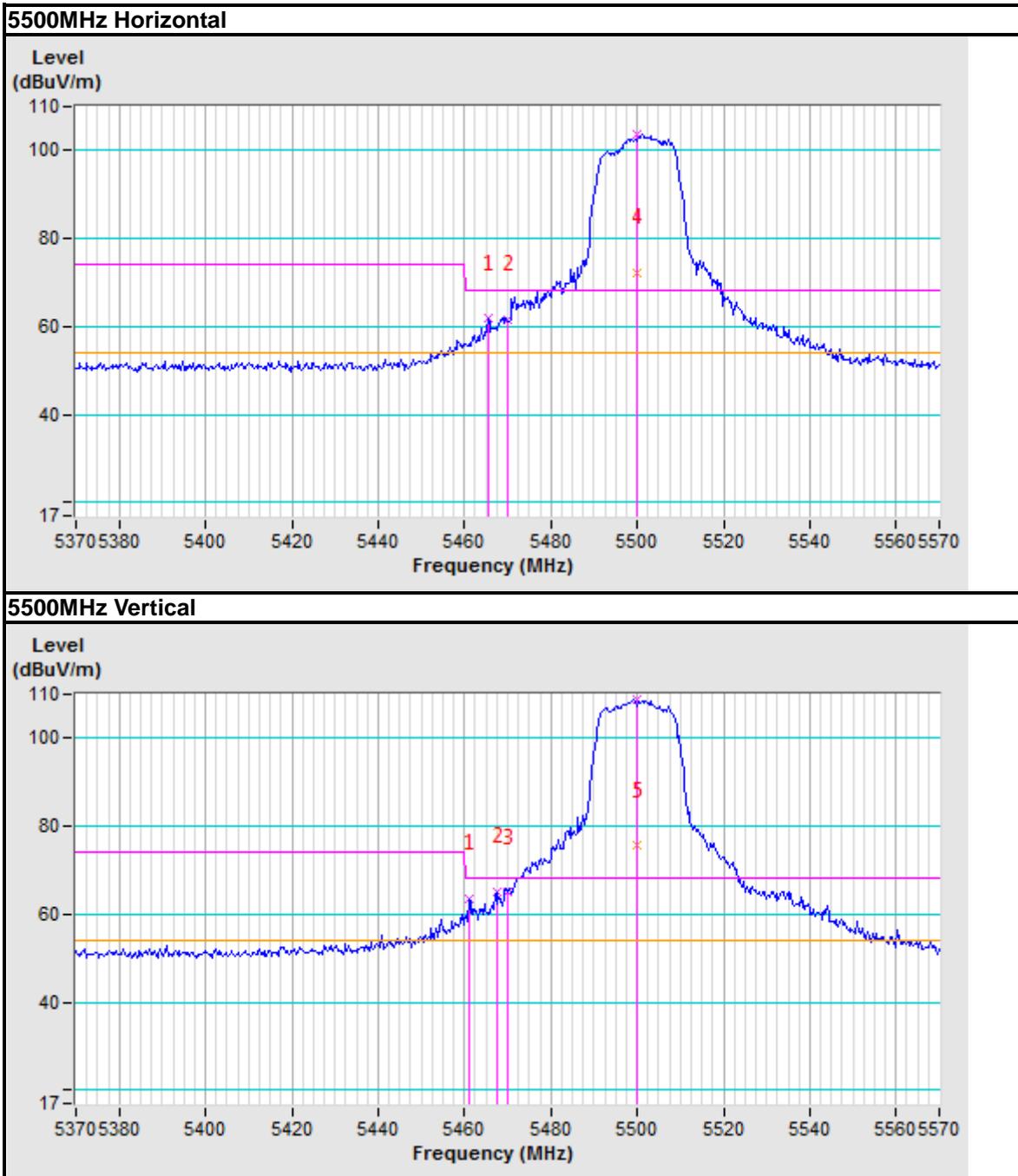
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	1000.00	61.09 PK	74.00	-12.91	1.00 V	65	63.23	-2.14
2	1000.00	47.22 AV	54.00	-6.78	1.00 V	65	49.36	-2.14
3	#5461.03	63.49 PK	68.20	-4.71	1.00 V	181	54.68	8.81
4	#5467.76	65.20 PK	68.20	-3.00	1.00 V	181	56.39	8.81
5	#5470.00	64.88 PK	68.20	-3.32	1.00 V	181	56.07	8.81
6	*5500.00	108.99 PK			1.00 V	181	100.17	8.82
7	*5500.00	75.58 AV			1.00 V	181	66.76	8.82

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The emission levels of other frequencies were greater than 20dB margin.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.



Band edge Plot





Test Report No.: RF200430N014-4

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5470.00	52.45 PK	68.20	-15.75	1.00 H	89	43.64	8.81
2	*5580.00	106.87 PK			1.00 H	89	97.69	9.18
3	*5580.00	74.68 AV			1.00 H	89	65.50	9.18
4	11160.00	60.15 PK	74.00	-13.85	1.00 H	174	40.67	19.48
5	11160.00	46.05 AV	54.00	-7.95	1.00 H	174	26.57	19.48
6	#16740.00	65.03 PK	68.20	-3.17	1.00 H	88	39.23	25.80
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5470.00	51.75 PK	68.20	-16.45	1.00 V	304	42.94	8.81
2	*5580.00	113.25 PK			1.00 V	304	104.07	9.18
3	*5580.00	79.43 AV			1.00 V	304	70.25	9.18
4	11160.00	61.14 PK	74.00	-12.86	1.00 V	85	41.66	19.48
5	11160.00	46.63 AV	54.00	-7.37	1.00 V	85	27.15	19.48
6	#16740.00	65.23 PK	68.20	-2.97	1.00 V	182	39.43	25.80

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The emission levels of other frequencies were greater than 20dB margin.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.



Test Report No.: RF200430N014-4

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	103.55 PK			1.00 H	243	93.82	9.73
2	*5700.00	72.18 AV			1.00 H	243	62.45	9.73
3	#5725.00	60.33 PK	68.20	-7.87	1.00 H	243	50.49	9.84
4	#5732.60	58.18 PK	68.20	-10.02	1.00 H	243	48.30	9.88
5	11400.00	61.13 PK	74.00	-12.87	1.00 H	240	41.20	19.93
6	11400.00	47.44 AV	54.00	-6.56	1.00 H	240	27.51	19.93
7	#17100.00	65.43 PK	68.20	-2.77	1.00 H	87	38.73	26.70

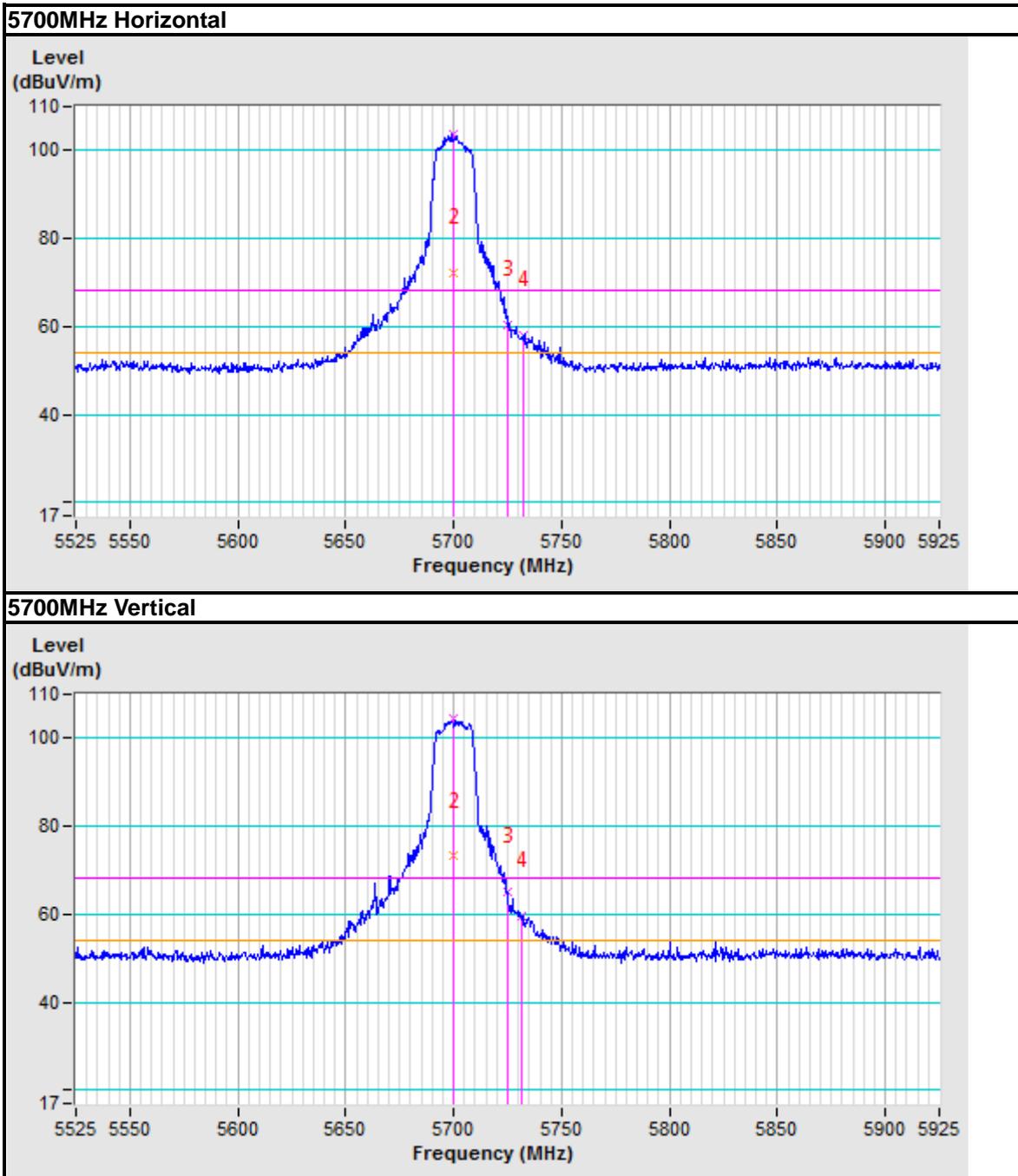
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	104.46 PK			1.00 V	145	94.73	9.73
2	*5700.00	73.17 AV			1.00 V	145	63.44	9.73
3	#5725.00	65.06 PK	68.20	-3.14	1.00 V	145	55.22	9.84
4	#5731.80	59.56 PK	68.20	-8.64	1.00 V	145	49.70	9.86
5	11400.00	61.47 PK	74.00	-12.53	1.00 V	240	41.54	19.93
6	11400.00	47.42 AV	54.00	-6.58	1.00 V	240	27.49	19.93
7	#17100.00	65.86 PK	68.20	-2.34	1.00 V	147	39.16	26.70

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The emission levels of other frequencies were greater than 20dB margin.
4. Margin value = Emission level – Limit value.
5. " * " : Fundamental frequency.
6. " # " : The radiated frequency is out of the restricted band.

Band edge Plot





802.11n (40MHz)

CHANNEL	TX Channel 102	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5465.00	62.65 PK	68.20	-5.55	1.00 H	175	53.84	8.81
2	#5470.00	60.73 PK	68.20	-7.47	1.00 H	175	51.92	8.81
3	*5510.00	100.82 PK			1.00 H	175	91.96	8.86
4	*5510.00	64.23 AV			1.00 H	175	55.37	8.86
5	11020.00	61.49 PK	74.00	-12.51	1.00 H	170	42.27	19.22
6	11020.00	47.31 AV	54.00	-6.69	1.00 H	170	28.09	19.22
7	#16530.00	65.43 PK	68.20	-2.77	1.00 H	112	40.30	25.13

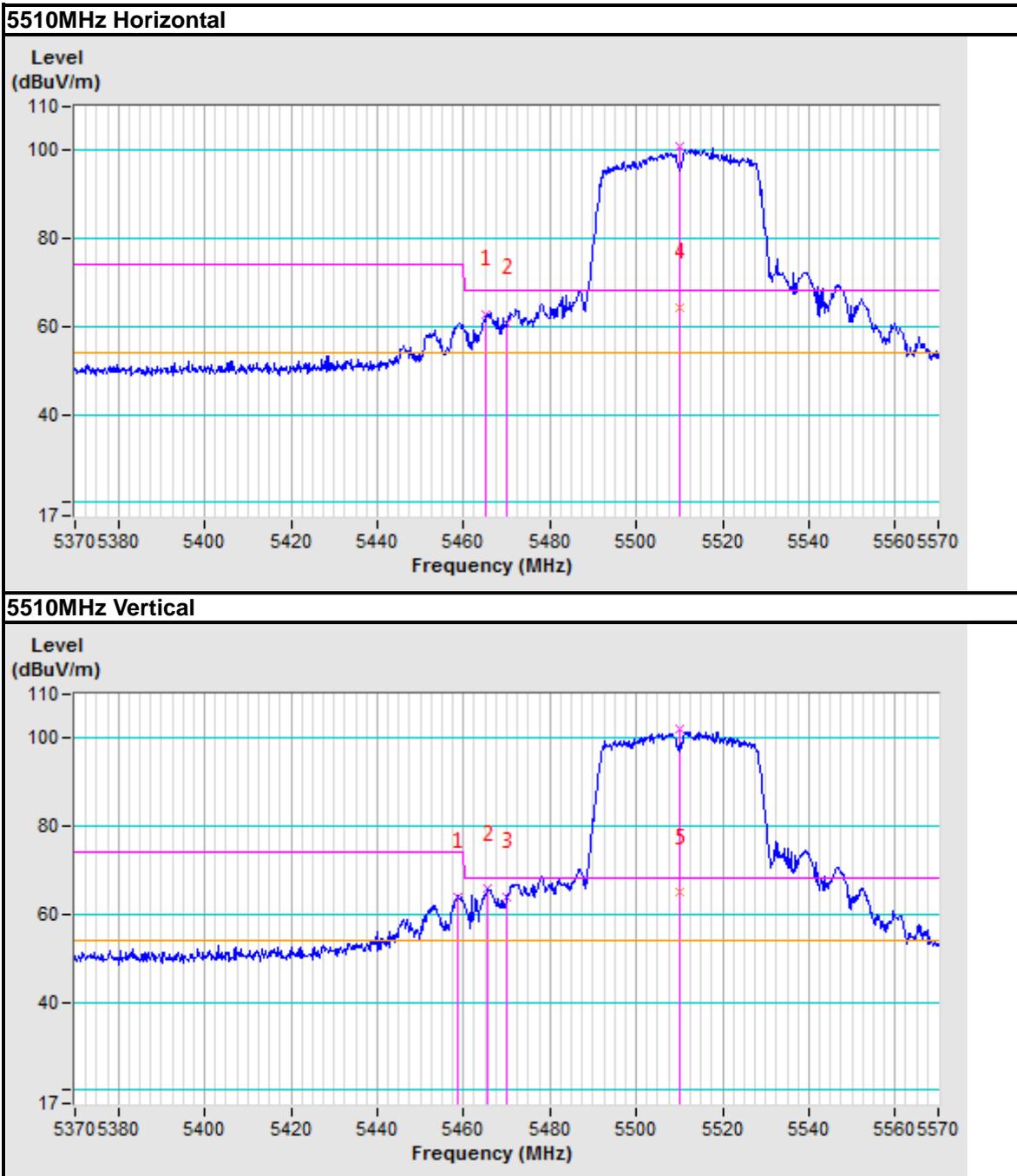
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5458.60	64.06 PK	74.00	-9.94	1.00 V	154	55.25	8.81
2	5458.60	46.36 AV	54.00	-7.64	1.00 V	154	37.55	8.81
3	#5465.64	65.70 PK	68.20	-2.50	1.00 V	154	56.89	8.81
4	#5470.00	63.99 PK	68.20	-4.21	1.00 V	154	55.18	8.81
5	*5510.00	102.09 PK			1.00 V	154	93.23	8.86
6	*5510.00	64.89 AV			1.00 V	154	56.03	8.86
7	11020.00	61.20 PK	74.00	-12.80	1.00 V	175	41.98	19.22
8	11020.00	47.23 AV	54.00	-6.77	1.00 V	170	28.01	19.22
9	#16530.00	65.59 PK	68.20	-2.61	1.00 V	170	40.46	25.13

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The emission levels of other frequencies were greater than 20dB margin.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.



Band edge Plot





Test Report No.: RF200430N014-4

CHANNEL	TX Channel 110	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5470.00	61.66 PK	68.20	-6.54	1.00 H	6	52.85	8.81
2	*5550.00	107.16 PK			1.00 H	6	98.11	9.05
3	*5550.00	67.46 AV			1.00 H	6	58.41	9.05
4	11100.00	62.12 PK	74.00	-11.88	1.00 H	25	42.76	19.36
5	11100.00	47.65 AV	54.00	-6.35	1.00 H	25	28.29	19.36
6	#16650.00	65.96 PK	68.20	-2.24	1.00 H	87	40.45	25.51

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5470.00	60.70 PK	68.20	-7.50	1.00 V	319	51.89	8.81
2	*5550.00	108.92 PK			1.00 V	319	99.87	9.05
3	*5550.00	68.59 AV			1.00 V	319	59.54	9.05
4	11100.00	61.61 PK	74.00	-12.39	1.00 V	73	42.25	19.36
5	11100.00	47.80 AV	54.00	-6.20	1.00 V	73	28.44	19.36
6	#16650.00	65.33 PK	68.20	-2.87	1.00 V	153	39.82	25.51

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The emission levels of other frequencies were greater than 20dB margin.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.



Test Report No.: RF200430N014-4

CHANNEL	TX Channel 134	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5670.00	102.21 PK			1.00 H	166	92.63	9.58
2	*5670.00	65.71 AV			1.00 H	166	56.13	9.58
3	#5725.00	62.96 PK	68.20	-5.24	1.00 H	166	53.12	9.84
4	#5728.20	63.41 PK	68.20	-4.79	1.00 H	358	53.56	9.85
5	11340.00	61.45 PK	74.00	-12.55	1.00 H	358	41.64	19.81
6	11340.00	47.11 AV	54.00	-6.89	1.00 H	358	27.30	19.81
7	#17010.00	65.11 PK	68.20	-3.09	1.00 H	168	38.48	26.63

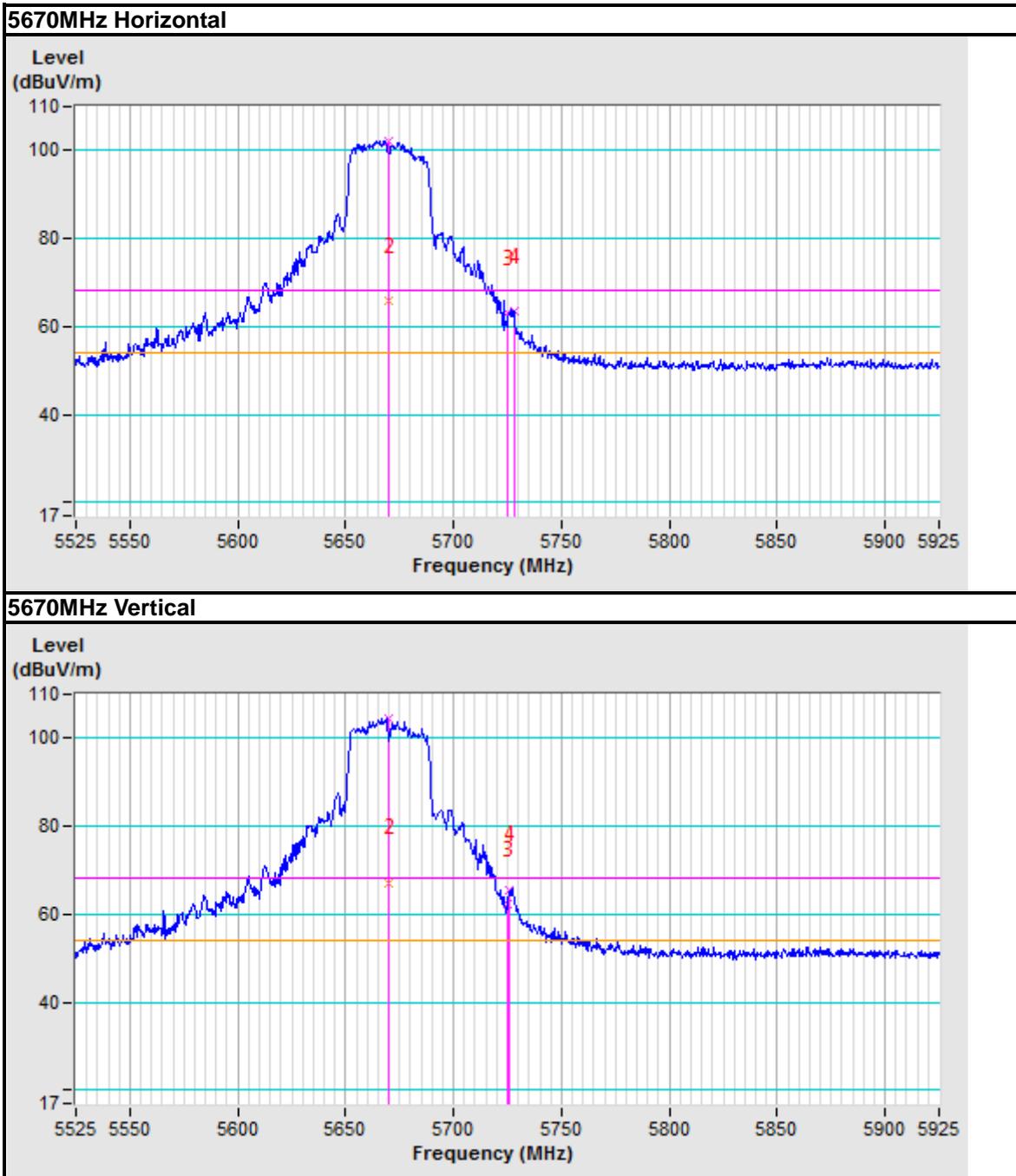
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5670.00	104.38 PK			1.00 V	152	94.80	9.58
2	*5670.00	66.99 AV			1.00 V	152	57.41	9.58
3	#5725.00	62.22 PK	68.20	-5.98	1.00 V	152	52.38	9.84
4	#5726.00	65.49 PK	68.20	-2.71	1.00 V	152	55.65	9.84
5	11340.00	62.27 PK	74.00	-11.73	1.00 V	113	42.46	19.81
6	11340.00	48.08 AV	54.00	-5.92	1.00 V	113	28.27	19.81
7	#17010.00	65.55 PK	68.20	-2.65	1.00 V	113	38.92	26.63

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The emission levels of other frequencies were greater than 20dB margin.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

Band edge Plot





802.11ac 80MHz

CHANNEL	TX Channel 106	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

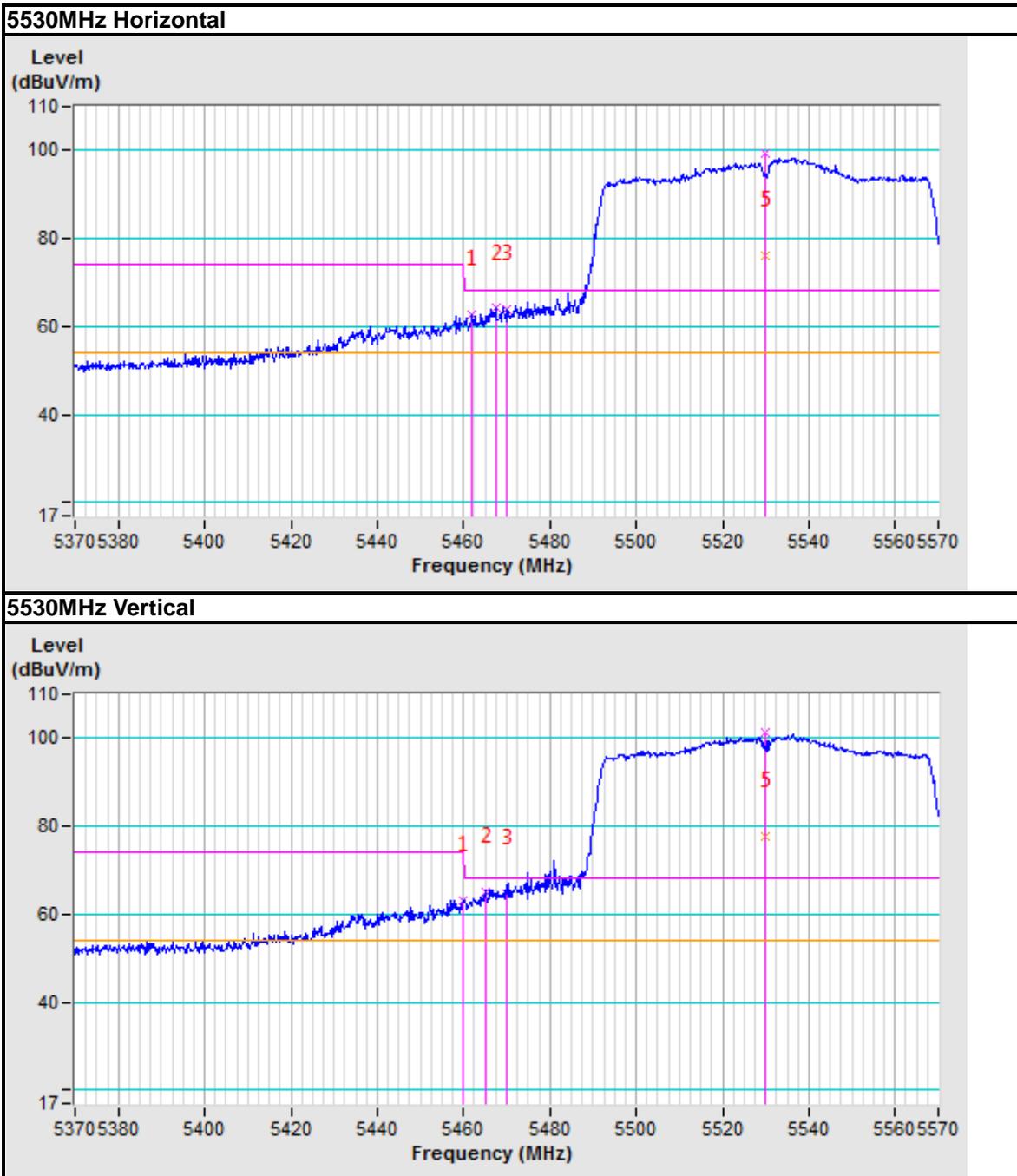
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5462.00	62.67 PK	68.20	-5.53	1.00 H	173	53.87	8.80
2	#5467.40	64.16 PK	68.20	-4.04	1.00 H	173	55.35	8.81
3	#5470.00	63.96 PK	68.20	-4.24	1.00 H	173	55.15	8.81
4	*5530.00	99.20 PK			1.00 H	173	90.25	8.95
5	*5530.00	76.05 AV			1.00 H	173	67.10	8.95
6	11060.00	61.86 PK	74.00	-12.14	1.00 H	305	42.57	19.29
7	11060.00	47.62 AV	54.00	-6.38	1.00 H	305	28.33	19.29
8	#16590.00	65.06 PK	68.20	-3.14	1.00 H	305	39.74	25.32
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	63.04 PK	74.00	-10.96	1.00 V	155	54.23	8.81
2	5460.00	46.23 AV	54.00	-7.77	1.00 V	155	37.42	8.81
3	#5465.20	65.09 PK	68.20	-3.11	1.00 V	155	56.28	8.81
4	#5470.00	64.62 PK	68.20	-3.58	1.00 V	155	55.81	8.81
5	*5530.00	101.32 PK			1.00 V	155	92.37	8.95
6	*5530.00	77.82 AV			1.00 V	155	68.87	8.95
7	11060.00	61.52 PK	74.00	-12.48	1.00 V	140	42.23	19.29
8	11060.00	47.66 AV	54.00	-6.34	1.00 V	140	28.37	19.29
9	#16590.00	65.44 PK	68.20	-2.76	1.00 V	140	40.12	25.32

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The emission levels of other frequencies were greater than 20dB margin.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.



Band edge Plot





Test Report No.: RF200430N014-4

CHANNEL	TX Channel 122	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

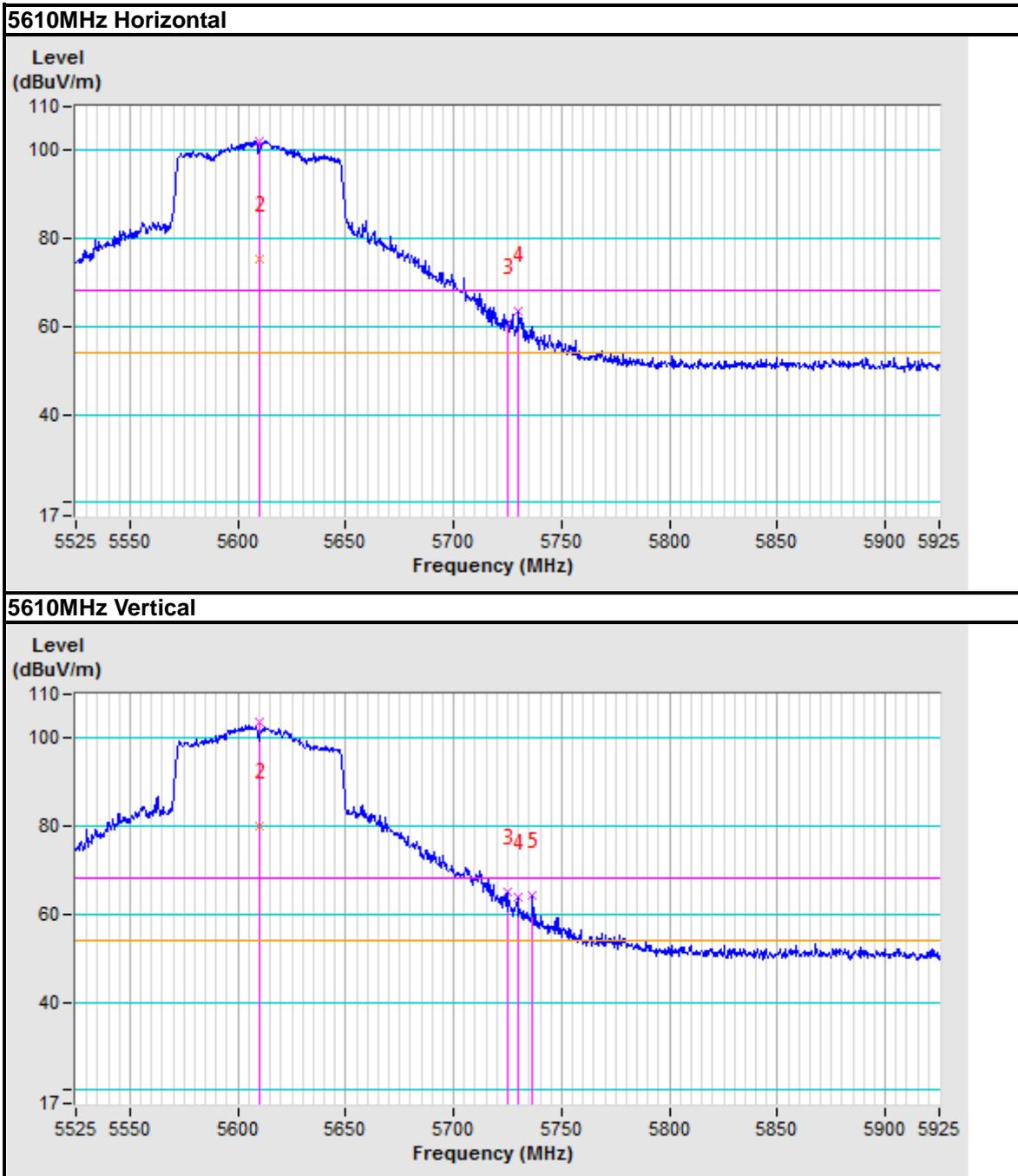
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTIO N FACTOR (dB/m)
1	*5610.00	102.10 PK			1.00 H	167	92.78	9.32
2	*5610.00	75.19 AV			1.00 H	167	65.87	9.32
3	#5725.00	60.90 PK	68.20	-7.30	1.00 H	167	51.06	9.84
4	#5730.00	63.45 PK	68.20	-4.75	1.00 H	167	53.59	9.86

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTIO N FACTOR (dB/m)
1	*5610.00	103.72 PK			1.00 V	143	94.40	9.32
2	*5610.00	79.93 AV			1.00 V	143	70.61	9.32
3	#5725.00	64.88 PK	68.20	-3.32	1.00 V	143	55.04	9.84
4	#5729.80	63.80 PK	68.20	-4.40	1.00 V	143	53.94	9.86
5	#5736.60	64.20 PK	68.20	-4.00	1.00 V	143	54.31	9.89

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The emission levels of other frequencies were greater than 20dB margin.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

Band edge Plot





Band 4 (5725-5850MHz):

ABOVE 1GHz DATA

802.11a

CHANNEL	TX Channel 149	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5635.45	52.99 PK	68.20	-15.21	2.00 H	242	43.56	9.43
2	#5725.00	79.10 PK	122.20	-43.10	1.00 H	242	69.26	9.84
3	*5745.00	106.62 PK			1.00 H	242	96.69	9.93
4	*5745.00	75.59 AV			1.00 H	242	65.66	9.93
5	#5962.52	52.79 PK	68.20	-15.41	2.00 H	242	41.88	10.91
6	11490.00	60.56 PK	74.00	-13.44	1.00 H	255	40.47	20.09
7	11490.00	46.08 AV	54.00	-7.92	1.00 H	255	25.99	20.09
8	#17235.00	64.95 PK	68.20	-3.25	1.00 H	255	38.13	26.82

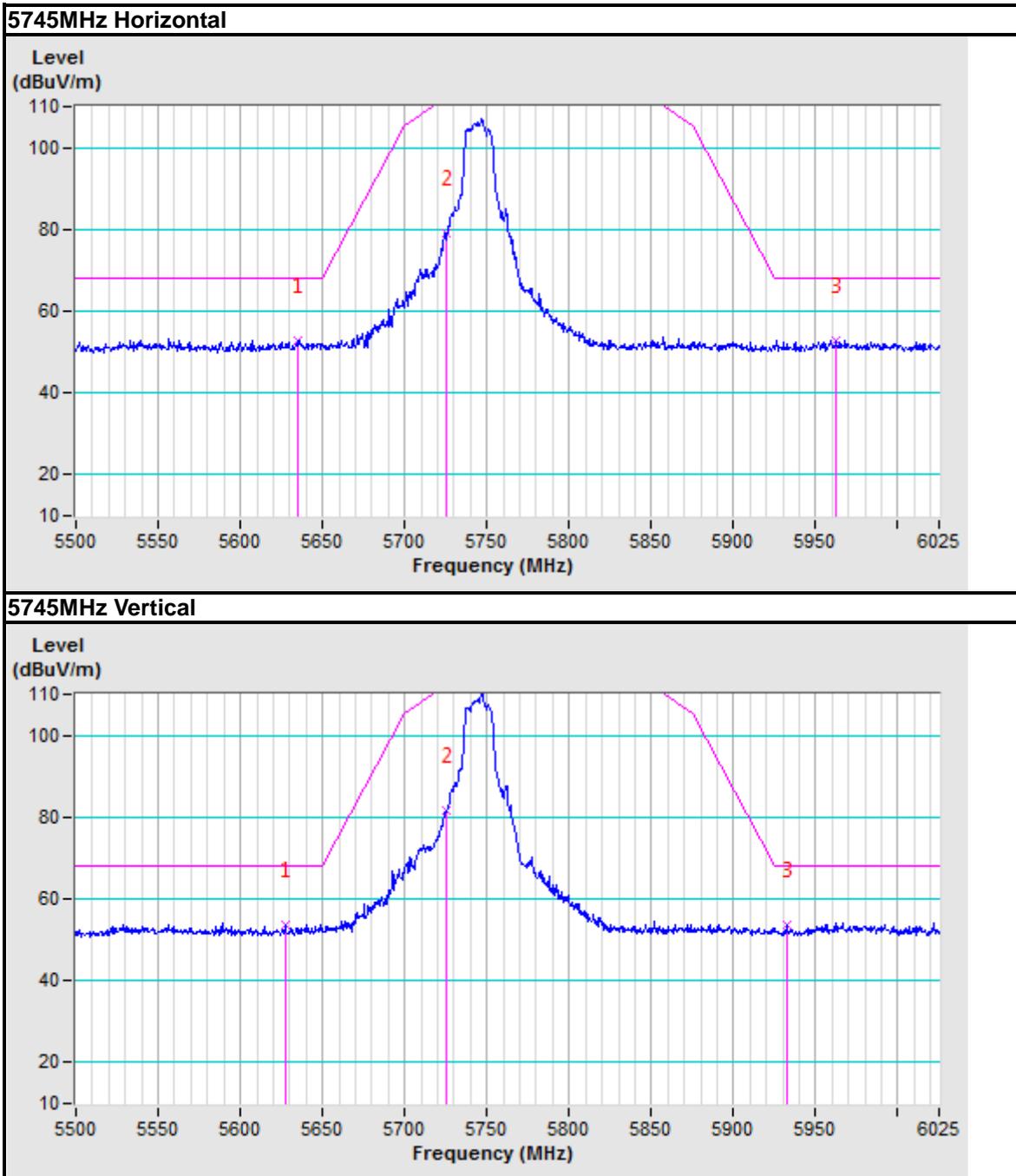
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5627.05	53.60 PK	68.20	-14.60	2.00 V	145	44.21	9.39
2	#5725.00	81.55 PK	122.20	-40.65	1.00 V	144	71.71	9.84
3	*5745.00	109.24 PK			1.00 V	145	99.31	9.93
4	*5745.00	76.08 AV			1.00 V	145	66.15	9.93
5	#5932.07	53.60 PK	68.20	-14.60	2.00 V	145	42.83	10.77
6	11490.00	61.22 PK	74.00	-12.78	1.00 V	220	41.13	20.09
7	11490.00	46.89 AV	54.00	-7.11	1.00 V	220	26.80	20.09
8	#17235.00	65.03 PK	68.20	-3.17	1.00 V	220	38.21	26.82

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The emission levels of other frequencies were greater than 20dB margin.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

Band edge Plot





Test Report No.: RF200430N014-4

CHANNEL	TX Channel 157	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5634.93	52.36 PK	68.20	-15.84	2.00 H	242	42.93	9.43
2	*5785.00	107.24 PK			1.00 H	241	97.14	10.10
3	*5785.00	74.96 AV			1.00 H	241	64.86	10.10
4	#5914.23	53.68 PK	76.15	-22.47	2.00 H	242	42.99	10.69
5	#5975.12	53.23 PK	68.20	-14.97	2.00 H	242	42.26	10.97
6	11570.00	60.68 PK	74.00	-13.32	1.00 H	53	40.42	20.26
7	11570.00	46.78 AV	54.00	-7.22	1.00 H	53	26.52	20.26
8	#17355.00	65.04 PK	68.20	-3.16	1.00 H	53	38.12	26.92

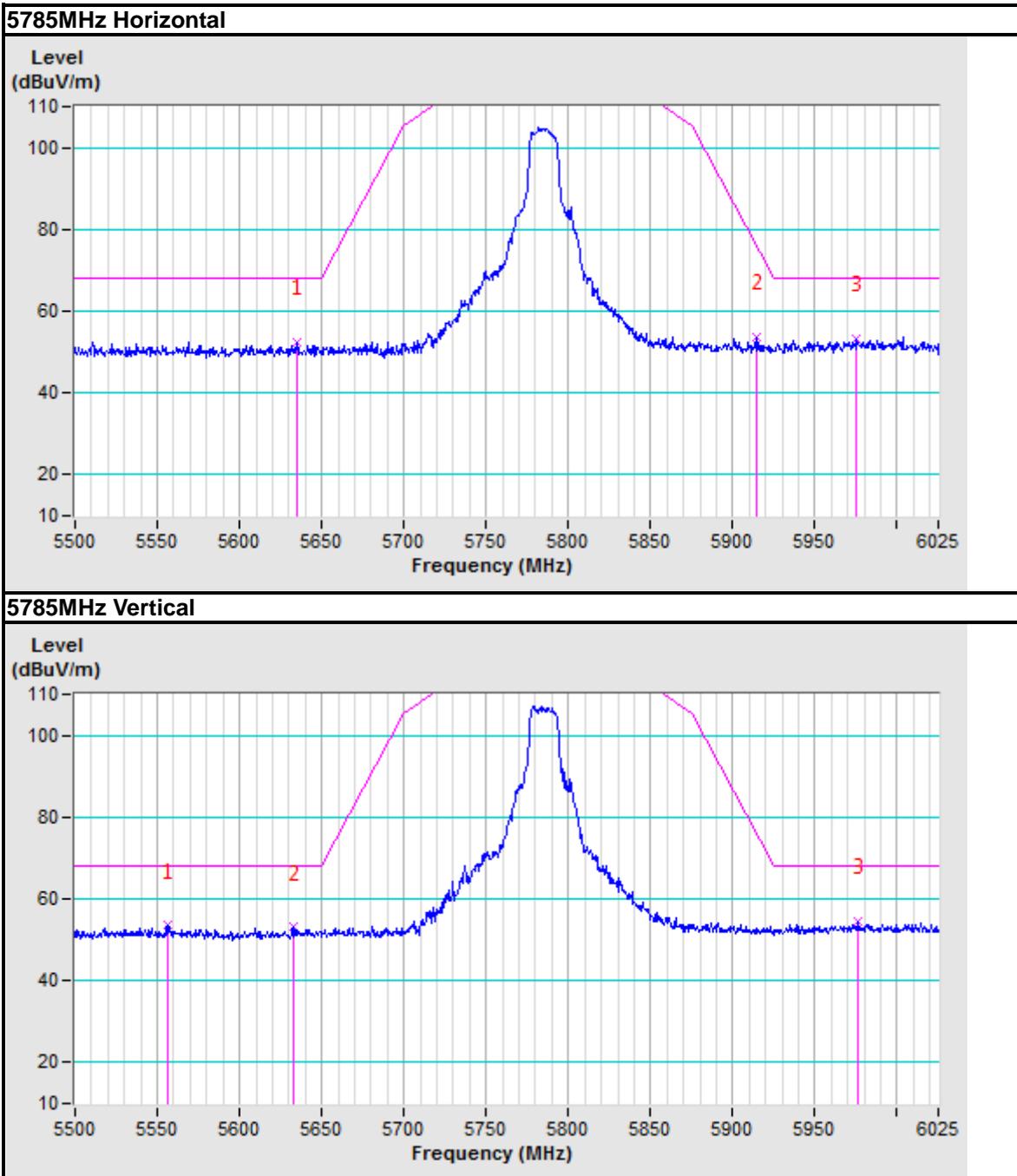
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5556.70	53.47 PK	68.20	-14.73	1.00 V	242	44.40	9.07
2	#5633.35	53.07 PK	68.20	-15.13	1.00 V	241	43.65	9.42
3	*5785.00	109.41 PK			1.00 V	241	99.31	10.10
4	*5785.00	76.24 AV			1.00 V	242	66.14	10.10
5	#5976.18	54.60 PK	68.20	-13.60	1.00 V	242	43.63	10.97
6	11570.00	61.53 PK	74.00	-12.47	1.00 V	53	41.27	20.26
7	11570.00	47.18 AV	54.00	-6.82	1.00 V	53	26.92	20.26
8	#17355.00	65.27 PK	68.20	-2.93	1.00 V	53	38.35	26.92

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The emission levels of other frequencies were greater than 20dB margin.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

Band edge Plot





Test Report No.: RF200430N014-4

CHANNEL	TX Channel 165	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5613.93	52.85 PK	68.20	-15.35	2.00 H	165	43.51	9.34
2	*5825.00	105.75 PK			1.00 H	165	95.46	10.29
3	*5825.00	74.89 AV			1.00 H	165	64.60	10.29
4	#5850.00	69.22 PK	122.20	-52.98	2.00 H	165	58.82	10.40
5	#5964.10	54.18 PK	68.20	-14.02	2.00 H	165	43.26	10.92
6	11650.00	61.93 PK	74.00	-12.07	1.00 H	130	41.49	20.44
7	11650.00	47.49 AV	54.00	-6.51	1.00 H	130	27.05	20.44
8	#17475.00	64.96 PK	68.20	-3.24	1.00 H	130	37.94	27.02

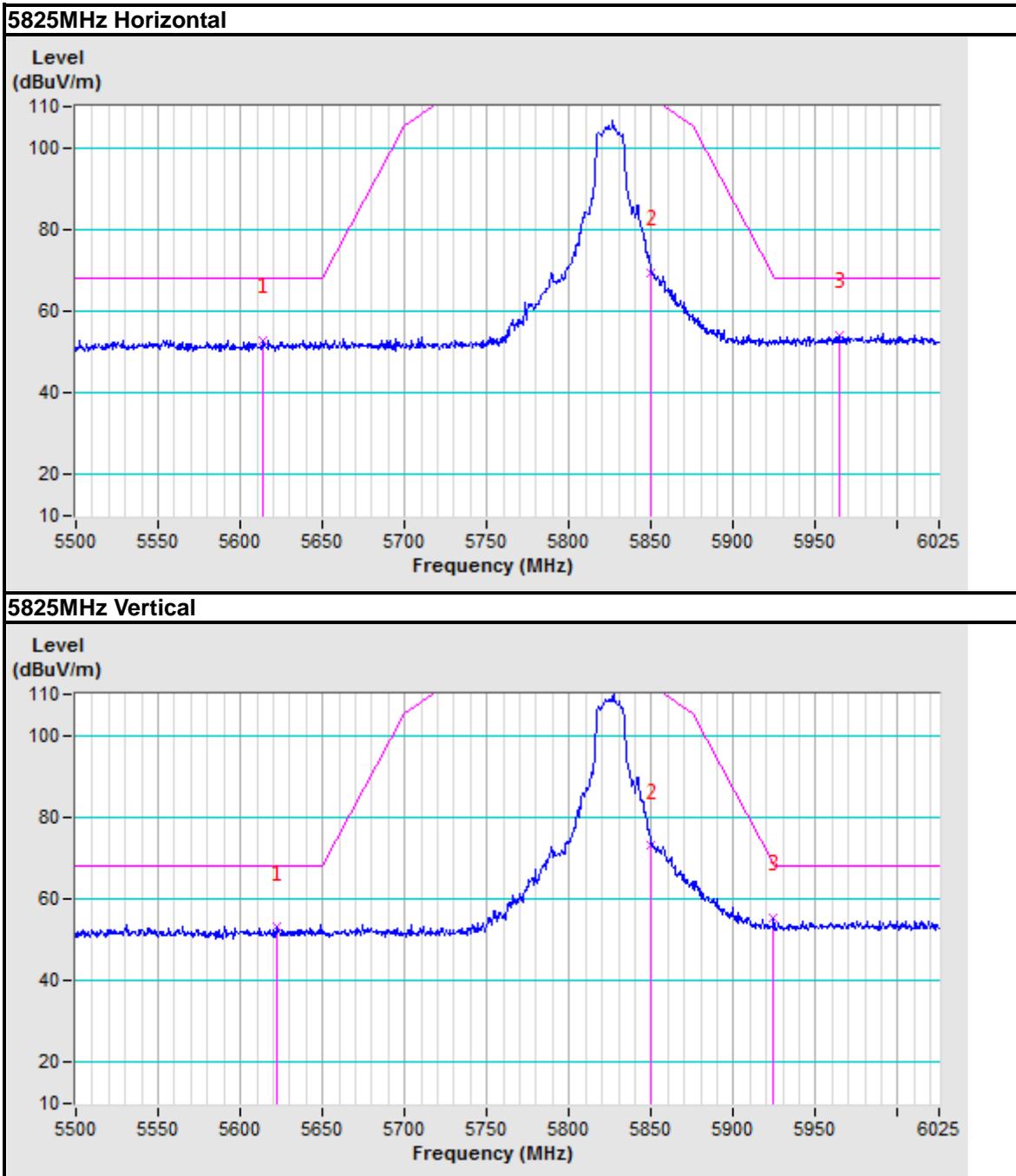
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5621.80	53.05 PK	68.20	-15.15	2.00 V	153	43.68	9.37
2	*5825.00	108.81 PK			1.00 V	153	98.52	10.29
3	*5825.00	76.40 AV			1.00 V	153	66.11	10.29
4	#5850.00	72.99 PK	122.20	-49.21	2.00 V	153	62.59	10.40
5	#5924.20	55.23 PK	68.79	-13.56	2.00 V	153	44.50	10.73
6	11650.00	61.65 PK	74.00	-12.35	1.00 V	130	41.21	20.44
7	11650.00	47.53 AV	54.00	-6.47	1.00 V	130	27.09	20.44
8	#17475.00	65.15 PK	68.20	-3.05	1.00 V	130	38.13	27.02

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The emission levels of other frequencies were greater than 20dB margin.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

Band edge Plot





BUREAU
VERITAS

Test Report No.: RF200430N014-4

802.11n (20MHz)

CHANNEL	TX Channel 149	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5524.15	53.73 PK	68.20	-14.47	1.00 H	66	44.80	8.93
2	#5725.00	81.04 PK	122.20	-41.16	1.00 H	66	71.20	9.84
3	*5745.00	107.31 PK			1.00 H	53	97.38	9.93
4	*5745.00	74.67 AV			1.00 H	53	64.74	9.93
5	#5958.32	53.61 PK	68.20	-14.59	1.00 H	45	42.72	10.89
6	11490.00	60.12 PK	74.00	-13.88	1.00 H	53	40.03	20.09
7	11490.00	47.21 AV	54.00	-6.79	1.00 H	53	27.12	20.09
8	#17235.00	64.38 PK	68.20	-3.82	1.00 H	53	37.56	26.82

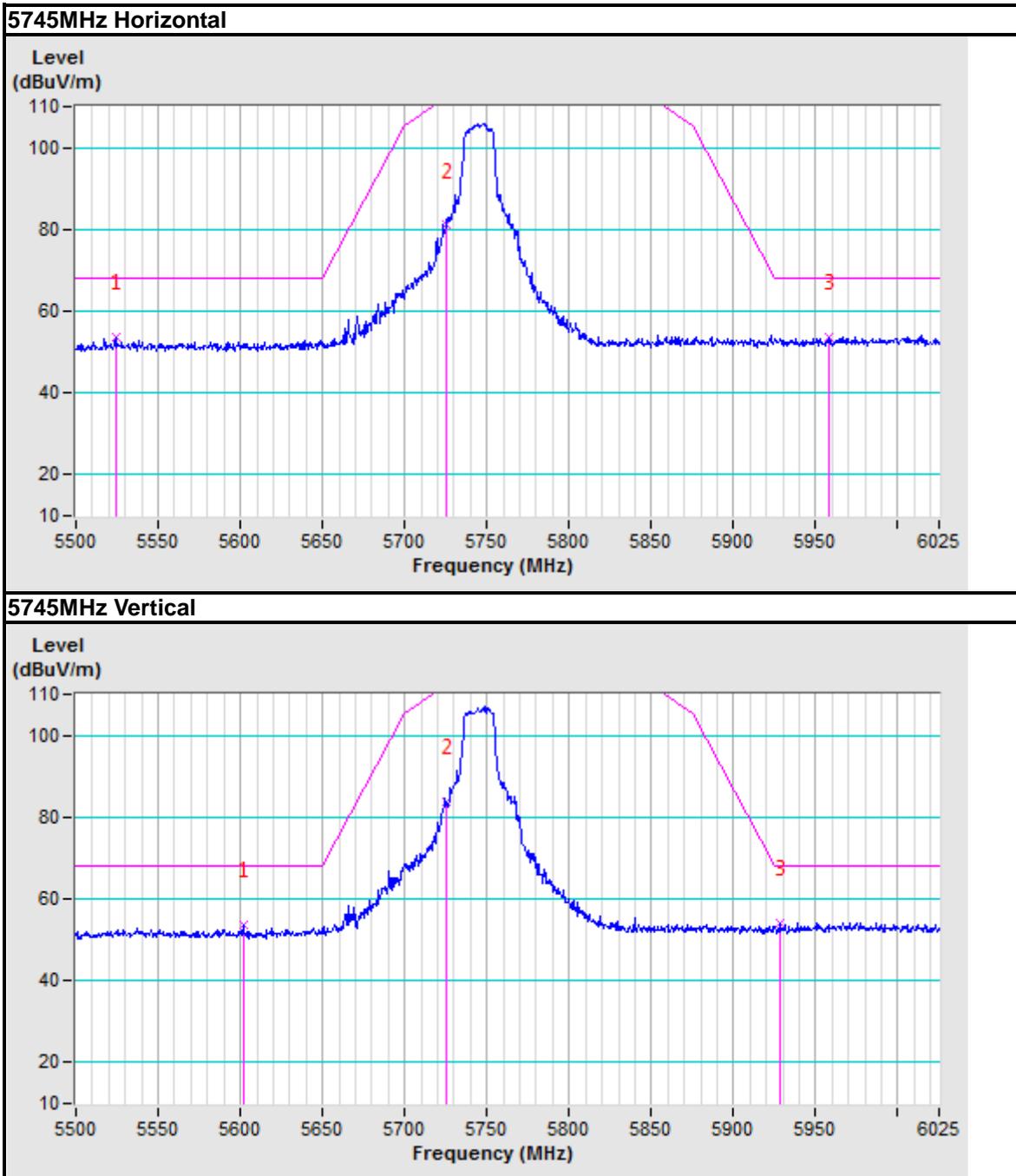
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5601.85	53.65 PK	68.20	-14.55	1.00 V	255	44.37	9.28
2	#5725.00	83.66 PK	122.20	-38.54	1.00 V	255	73.82	9.84
3	*5745.00	108.52 PK			1.00 V	302	98.59	9.93
4	*5745.00	74.81 AV			1.00 V	302	64.88	9.93
5	#5928.40	54.05 PK	68.20	-14.15	1.00 V	100	43.29	10.76
6	11490.00	60.87 PK	74.00	-13.13	1.00 V	57	40.78	20.09
7	11490.00	47.30 AV	54.00	-6.70	1.00 V	57	27.21	20.09
8	#17235.00	64.61 PK	68.20	-3.59	1.00 V	151	37.79	26.82

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The emission levels of other frequencies were greater than 20dB margin.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

Band edge Plot





Test Report No.: RF200430N014-4

CHANNEL	TX Channel 157	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5560.37	53.80 PK	68.20	-14.40	1.00 H	167	44.71	9.09
2	#5621.27	53.84 PK	68.20	-14.36	1.00 H	167	44.47	9.37
3	*5785.00	106.98 PK			1.00 H	166	96.88	10.10
4	*5785.00	74.88 AV			1.00 H	166	64.78	10.10
5	#5993.50	54.42 PK	68.20	-13.78	1.00 H	167	43.37	11.05
6	11570.00	60.75 PK	74.00	-13.25	1.00 H	149	40.49	20.26
7	11570.00	46.87 AV	54.00	-7.13	1.00 H	147	26.61	20.26
8	#17355.00	64.99 PK	68.20	-3.21	1.00 H	147	38.07	26.92

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

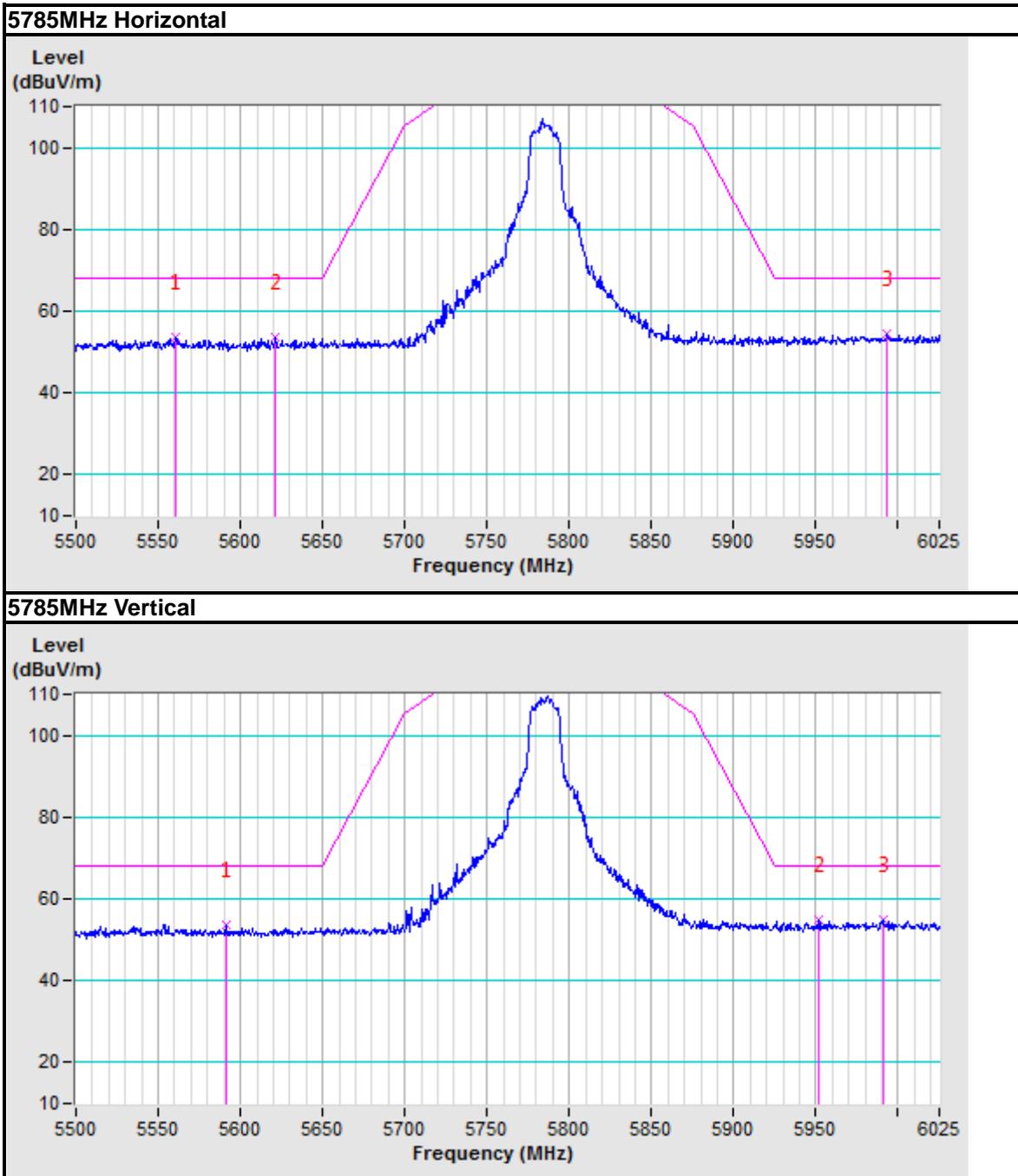
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5591.35	53.68 PK	68.20	-14.52	1.00 V	149	44.45	9.23
2	*5785.00	109.22 PK			1.00 V	149	99.12	10.10
3	*5785.00	75.89 AV			1.00 V	149	65.79	10.10
4	#5951.50	55.04 PK	68.20	-13.16	1.00 V	149	44.18	10.86
5	#5990.87	55.01 PK	68.20	-13.19	1.00 V	149	43.97	11.04
6	11570.00	61.43 PK	74.00	-12.57	1.00 V	150	41.17	20.26
7	11570.00	47.12 AV	54.00	-6.88	1.00 V	150	26.86	20.26
8	#17355.00	65.08 PK	68.20	-3.12	1.00 V	150	38.16	26.92

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The emission levels of other frequencies were greater than 20dB margin.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.



Band edge Plot





Test Report No.: RF200430N014-4

CHANNEL	TX Channel 165	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5543.05	52.74 PK	68.20	-15.46	1.00 H	239	43.72	9.02
2	*5825.00	104.99 PK			1.00 H	239	94.70	10.29
3	*5825.00	74.13 AV			1.00 H	239	63.84	10.29
4	#5850.00	75.25 PK	122.20	-46.95	1.00 H	239	64.85	10.40
5	#5966.73	53.33 PK	68.20	-14.87	1.00 H	239	42.40	10.93
6	11650.00	61.20 PK	74.00	-12.80	1.00 H	220	40.76	20.44
7	11650.00	47.33 AV	54.00	-6.67	1.00 H	220	26.89	20.44
8	#17475.00	64.86 PK	68.20	-3.34	1.00 H	220	37.84	27.02

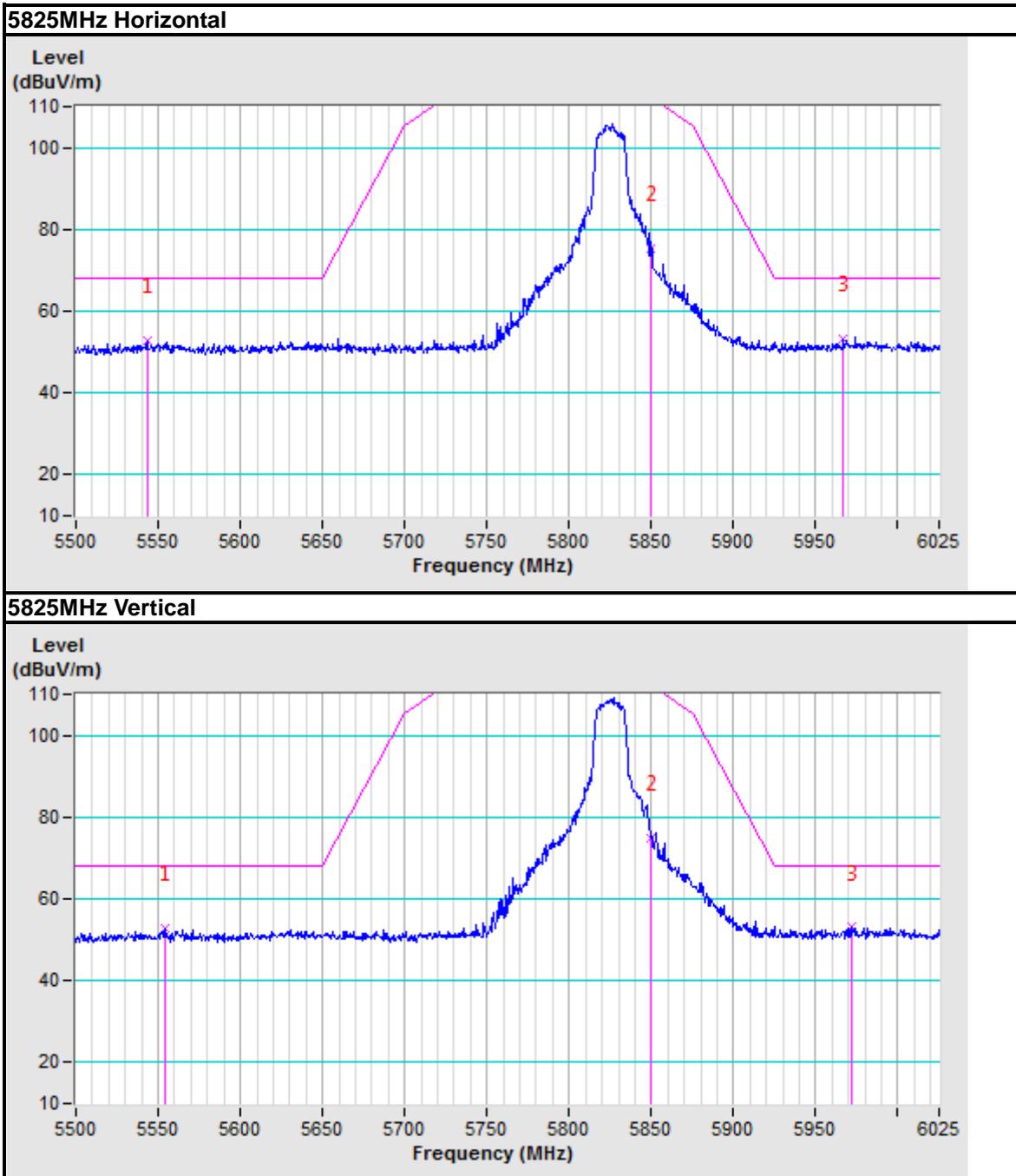
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5554.07	52.94 PK	68.20	-15.26	1.00 V	159	43.88	9.06
2	*5825.00	109.12 PK			1.00 V	152	98.83	10.29
3	*5825.00	76.53 AV			1.00 V	152	66.24	10.29
4	#5850.00	74.84 PK	122.20	-47.36	1.00 V	159	64.44	10.40
5	#5971.98	53.05 PK	68.20	-15.15	1.00 V	159	42.09	10.96
6	11650.00	61.75 PK	74.00	-12.25	1.00 V	110	41.31	20.44
7	11650.00	47.68 AV	54.00	-6.32	1.00 V	110	27.24	20.44
8	#17475.00	65.11 PK	68.20	-3.09	1.00 V	110	38.09	27.02

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The emission levels of other frequencies were greater than 20dB margin.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

Band edge Plot





802.11n (40MHz)

CHANNEL	TX Channel 151	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5650.15	63.82 PK	68.31	-4.49	1.00 H	142	54.32	9.50
2	#5725.00	85.59 PK	122.20	-36.61	1.00 H	142	75.75	9.84
3	*5755.00	106.45 PK			1.00 H	353	96.48	9.97
4	*5755.00	66.50 AV			1.00 H	353	56.53	9.97
5	#5971.45	54.24 PK	68.20	-13.96	1.00 H	130	43.29	10.95
6	11510.00	61.50 PK	74.00	-12.50	1.00 H	131	41.37	20.13
7	11510.00	46.80 AV	54.00	-7.20	1.00 H	131	26.67	20.13
8	#17265.00	64.66 PK	68.20	-3.54	1.00 H	177	37.82	26.84

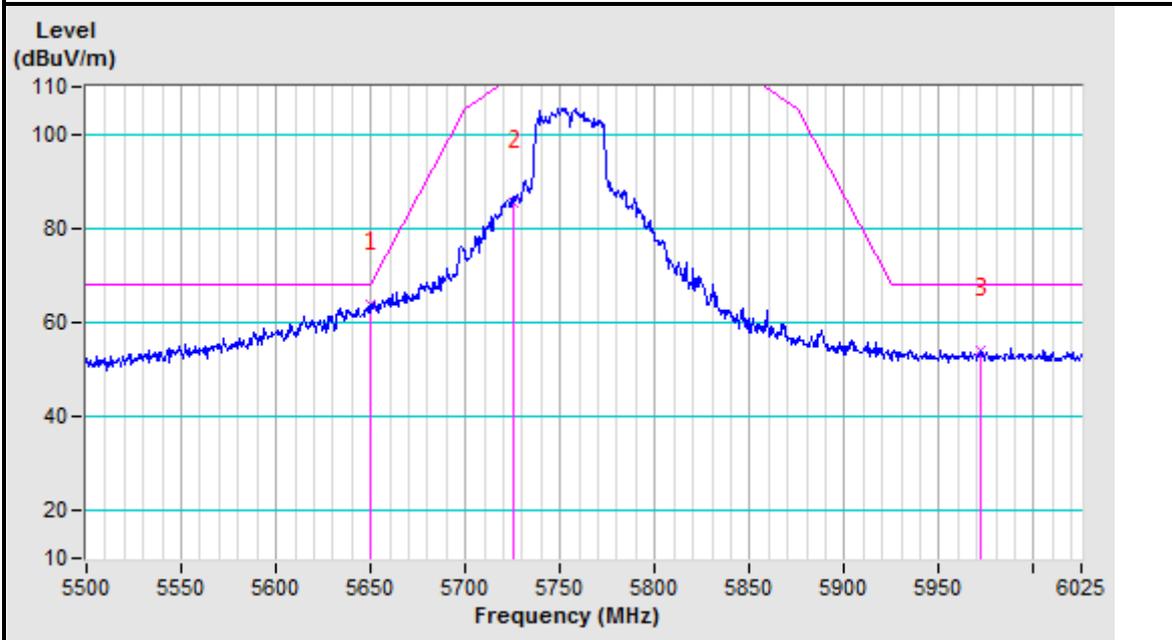
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5633.35	63.88 PK	68.20	-4.32	1.00 V	142	54.46	9.42
2	#5725.00	87.84 PK	122.20	-34.36	1.00 V	142	78.00	9.84
3	*5755.00	107.88 PK			1.00 V	98	97.91	9.97
4	*5755.00	67.47 AV			1.00 V	98	57.50	9.97
5	#5922.10	57.57 PK	70.34	-12.77	1.00 V	142	46.84	10.73
6	11510.00	61.05 PK	74.00	-12.95	1.00 V	92	40.92	20.13
7	11510.00	47.02 AV	54.00	-6.98	1.00 V	92	26.89	20.13
8	#17265.00	65.05 PK	68.20	-3.15	1.00 V	174	38.21	26.84

REMARKS:

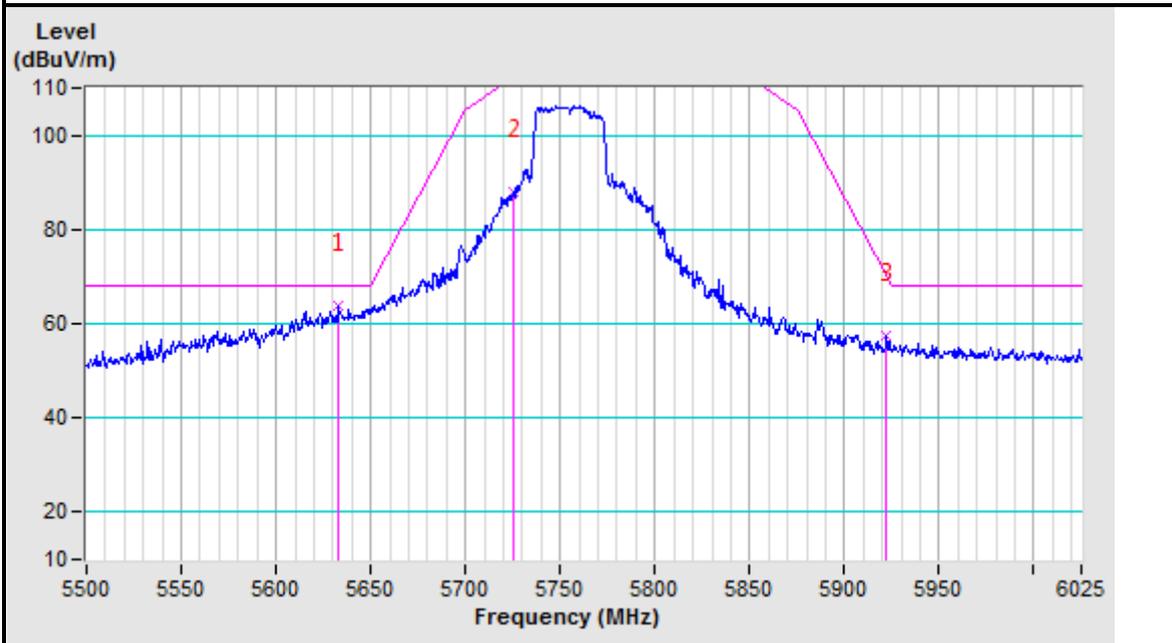
1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The emission levels of other frequencies were greater than 20dB margin.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

Band edge Plot

5755MHz Horizontal



5755MHz Vertical





Test Report No.: RF200430N014-4

CHANNEL	TX Channel 159	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5648.05	59.84 PK	68.20	-8.36	1.00 H	150	50.35	9.49
2	*5795.00	105.56 PK			1.00 H	294	95.40	10.16
3	*5795.00	66.36 AV			1.00 H	294	56.20	10.16
4	#5850.00	72.47 PK	122.20	-49.73	1.00 H	160	62.07	10.40
5	#5927.35	58.89 PK	68.20	-9.31	1.00 H	160	48.14	10.75
6	11590.00	61.43 PK	74.00	-12.57	1.00 H	97	41.12	20.31
7	11590.00	46.90 AV	54.00	-7.10	1.00 H	97	26.59	20.31
8	#17265.00	64.71 PK	68.20	-3.49	1.00 H	33	37.87	26.84

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

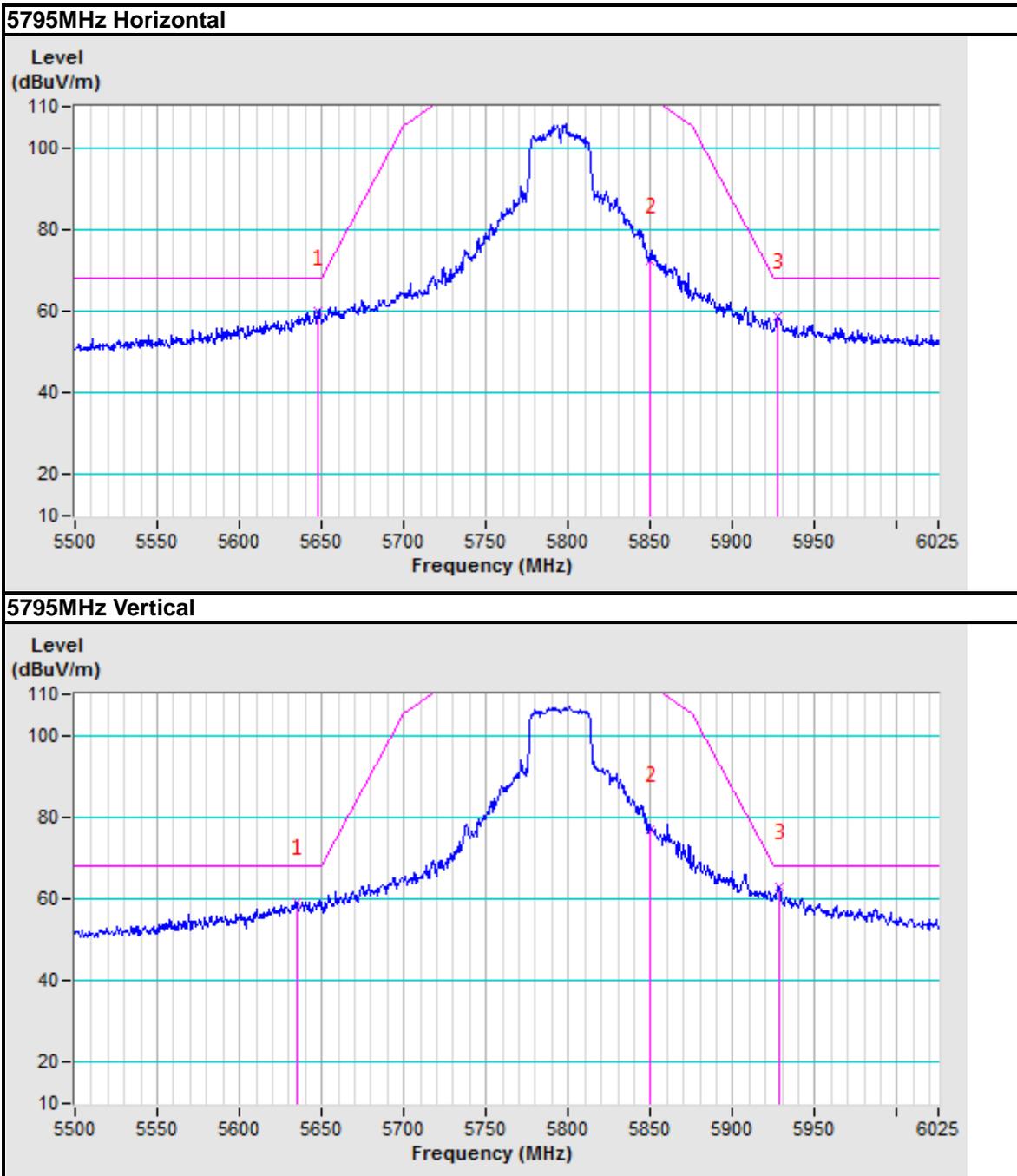
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5634.93	59.09 PK	68.20	-9.11	1.00 V	89	49.66	9.43
2	*5795.00	109.15 PK			1.00 V	100	98.99	10.16
3	*5795.00	68.52 AV			1.00 V	100	58.36	10.16
4	#5850.00	76.84 PK	122.20	-45.36	1.00 V	110	66.44	10.40
5	#5927.87	63.16 PK	68.20	-5.04	1.00 V	110	52.40	10.76
6	11590.00	61.83 PK	74.00	-12.17	1.00 V	176	41.52	20.31
7	11590.00	47.21 AV	54.00	-6.79	1.00 V	176	26.90	20.31
8	#17385.00	65.10 PK	68.20	-3.10	1.00 V	108	38.15	26.95

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The emission levels of other frequencies were greater than 20dB margin.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.



Band edge Plot





802.11ac 80MHz

CHANNEL	TX Channel 155	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5644.37	64.45 PK	68.20	-3.75	1.00 H	130	54.98	9.47
2	#5725.00	78.27 PK	122.20	-43.93	1.00 H	130	68.43	9.84
3	*5775.00	101.05 PK			1.00 H	53	90.99	10.06
4	*5775.00	77.76 AV			1.00 H	53	67.70	10.06
5	#5850.00	74.69 PK	122.20	-47.51	1.00 H	162	64.29	10.40
6	11550.00	60.74 PK	74.00	-13.26	1.00 H	360	40.52	20.22
7	11550.00	46.57 AV	54.00	-7.43	1.00 H	360	26.35	20.22
8	#17325.00	64.58 PK	68.20	-3.62	1.00 H	71	37.68	26.90

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

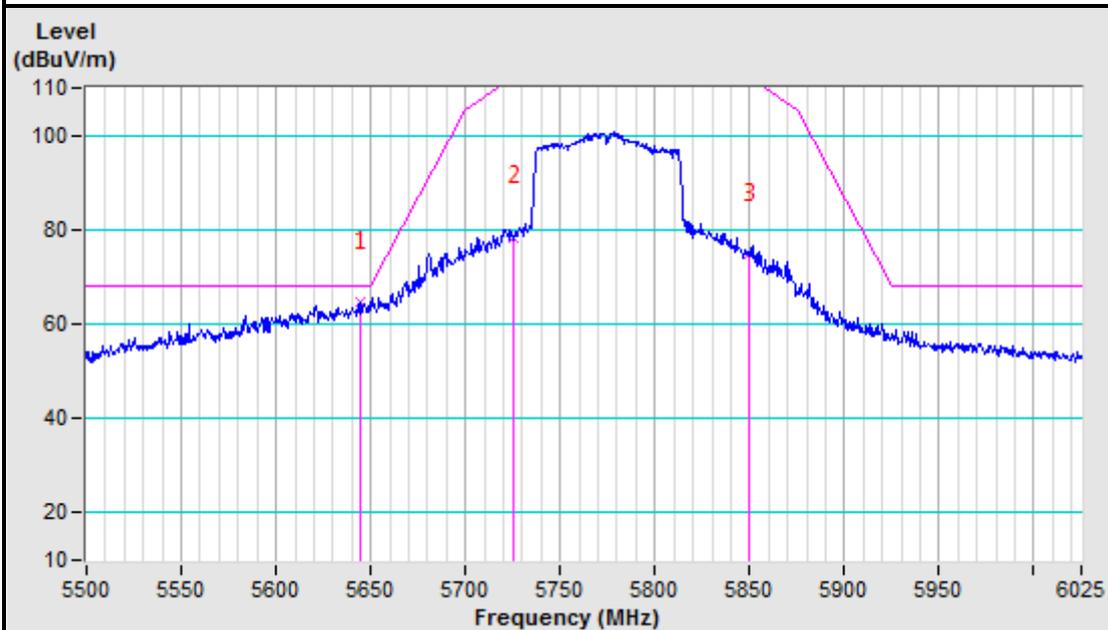
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5644.37	65.20 PK	68.20	-3.00	1.00 V	200	55.73	9.47
2	#5725.00	80.21 PK	122.20	-41.99	1.00 V	302	70.37	9.84
3	*5775.00	103.67 PK			1.00 V	302	93.61	10.06
4	*5775.00	79.62 AV			1.00 V	159	69.56	10.06
5	#5850.00	78.42 PK	122.20	-43.78	1.00 V	159	68.02	10.40
6	11550.00	61.41 PK	74.00	-12.59	1.00 V	58	41.19	20.22
7	11550.00	46.82 AV	54.00	-7.18	1.00 V	58	26.60	20.22
8	#17325.00	64.91 PK	68.20	-3.29	1.00 V	5	38.01	26.90

REMARKS:

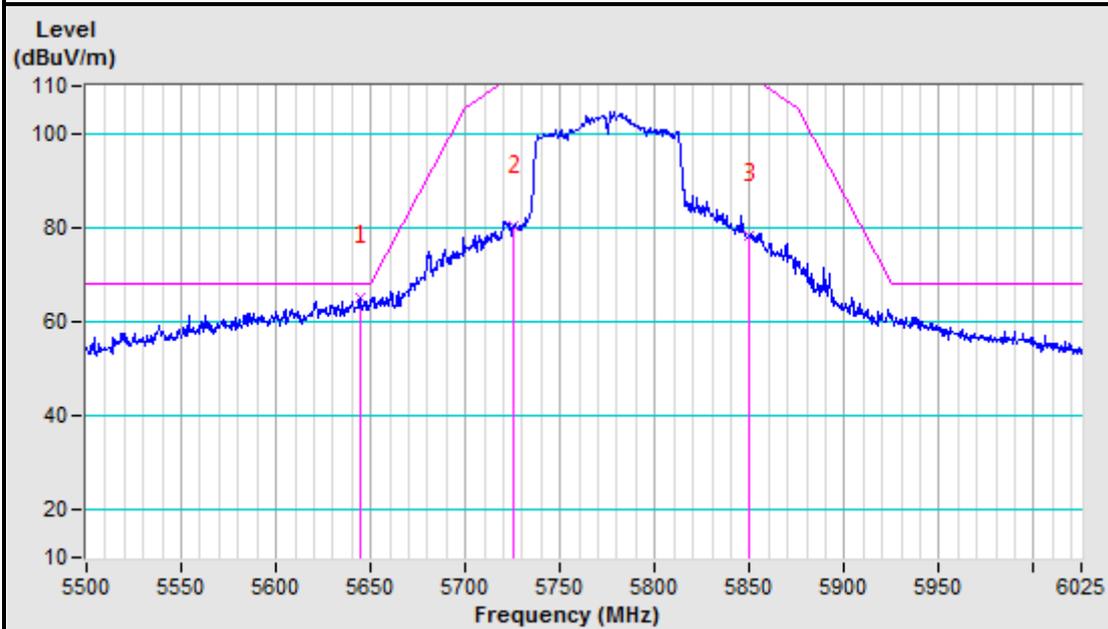
1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The emission levels of other frequencies were greater than 20dB margin.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

Band edge Plot

5775MHz Horizontal



5775MHz Vertical





3.2 CONDUCTED EMISSION MEASUREMENT

3.2.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

FREQUENCY OF EMISSION (MHz)	CONDUCTED LIMIT (dB μ V)	
	Quasi-peak	Average
0.15 ~ 0.5	66 to 56	56 to 46
0.5 ~ 5	56	46
5 ~ 30	60	50

- NOTES:**
- The lower limit shall apply at the transition frequencies.
 - The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.
 - All emanations from a class A/B digital device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified above.

3.2.2 TEST INSTRUMENTS

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
EMI Test Receiver	Rohde&Schwarz	ESR7	101494	Mar. 12,20	Mar. 11,21
Artificial Mains Network	Rohde&Schwarz	ENV216	101173	Mar. 12,20	Mar. 11,21
Artificial Mains Network	Rohde&Schwarz	ESH3-Z5	100317	Mar. 12,20	Mar. 11,21
Voltage probe	SCHWARZBECK	TK 9421	TK 9421-176	Sep. 24,19	Sep. 23,20
Test software	ADT	ADT_Cond_V7.3.7	N/A	N/A	N/A

- NOTES:**
- The test was performed in shielded room 553.
 - The calibration interval of the above test instruments is 12 months. And the calibrations are traceable to CEPREI/CHINA, GRGT/CHINA and NIM/CHINA.

3.2.3 TEST PROCEDURES

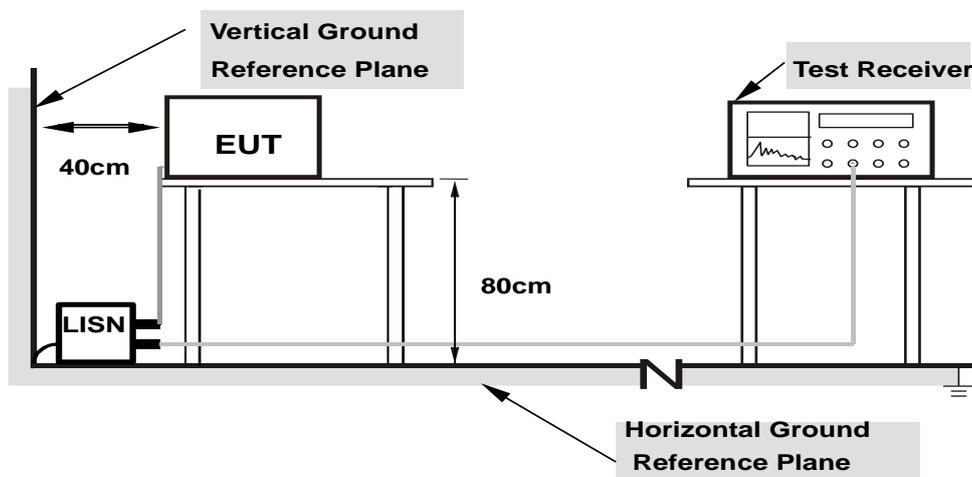
- The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.
- Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) were not recorded.

NOTE: All modes of operation were investigated and the worst-case emissions are reported.

3.2.4 DEVIATION FROM TEST STANDARD

No deviation.

3.2.5 TEST SETUP



- Note:**
- Support units were connected to second LISN.
 - Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes

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

3.2.6 EUT OPERATING CONDITIONS

Same as 3.1.7



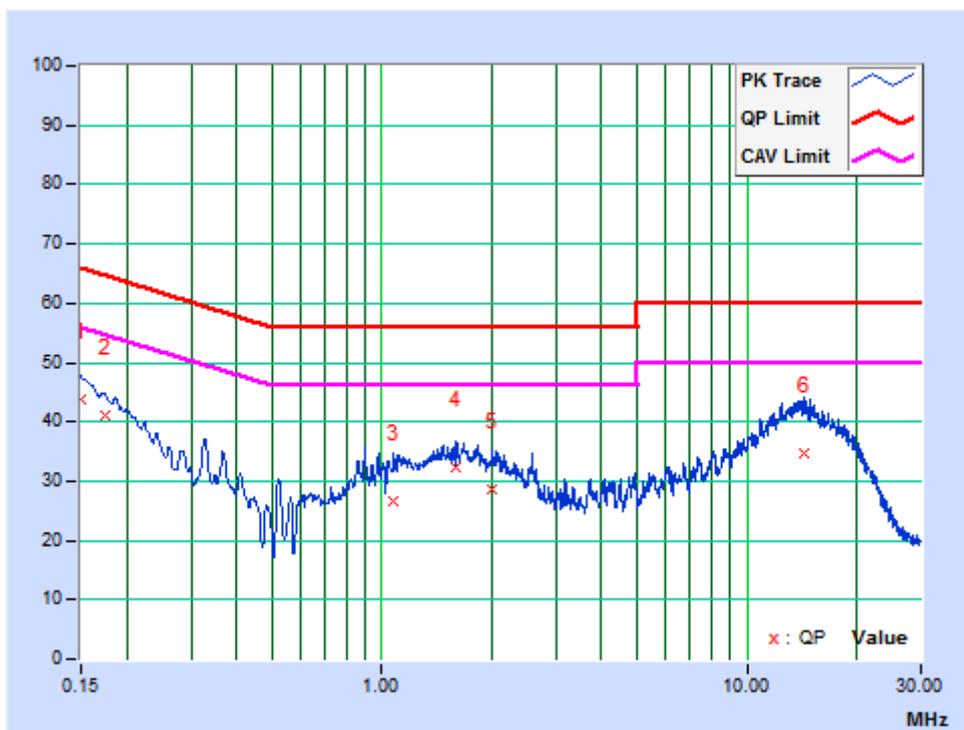
3.2.7 TEST RESULTS

CONDUCTED WORST-CASE DATA: 802.11a CH36

PHASE	Line	6dB BANDWIDTH	9kHz
-------	------	---------------	------

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15000	10.01	33.91	16.40	43.92	26.41	66.00	56.00	-22.08	-29.59
2	0.17475	10.00	31.03	14.46	41.03	24.46	64.73	54.73	-23.70	-30.27
3	1.07141	10.03	16.73	2.95	26.76	12.98	56.00	46.00	-29.24	-33.02
4	1.59450	10.01	22.18	9.00	32.19	19.01	56.00	46.00	-23.81	-26.99
5	2.00317	10.01	18.50	8.18	28.51	18.19	56.00	46.00	-27.49	-27.81
6	14.36775	10.19	24.62	14.51	34.81	24.70	60.00	50.00	-25.19	-25.30

- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. The emission levels of other frequencies were very low against the limit.
 3. Margin value = Emission level - Limit value
 4. Correction factor = Insertion loss + Cable loss
 5. Emission Level = Correction Factor + Reading Value.



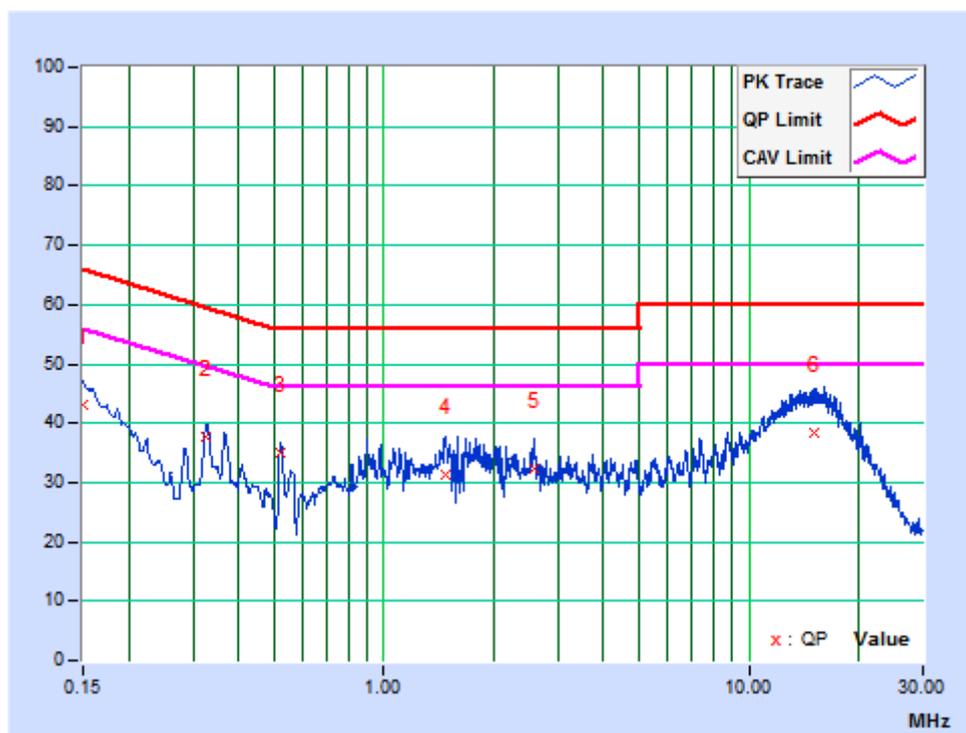


Test Report No.: RF200430N014-4

PHASE	Neutral	6dB BANDWIDTH	9kHz
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No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15000	10.21	32.84	15.48	43.05	25.69	66.00	56.00	-22.95	-30.31
2	0.32569	10.22	27.59	22.52	37.81	32.74	59.56	49.56	-21.76	-16.83
3	0.52385	10.22	24.92	21.53	35.14	31.75	56.00	46.00	-20.86	-14.25
4	1.46850	10.23	21.10	12.86	31.33	23.09	56.00	46.00	-24.67	-22.91
5	2.57550	10.22	21.95	14.66	32.17	24.88	56.00	46.00	-23.83	-21.12
6	15.03825	10.32	28.04	18.92	38.36	29.24	60.00	50.00	-21.64	-20.76

- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. The emission levels of other frequencies were very low against the limit.
 3. Margin value = Emission level - Limit value
 4. Correction factor = Insertion loss + Cable loss
 5. Emission Level = Correction Factor + Reading Value.



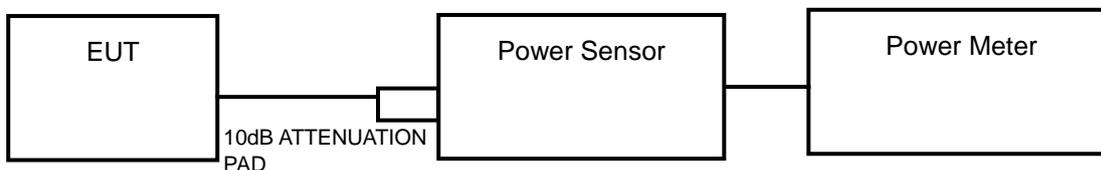
3.3 TRANSMIT POWER MEASUREMENT

3.3.1 LIMITS OF TRANSMIT POWER MEASUREMENT

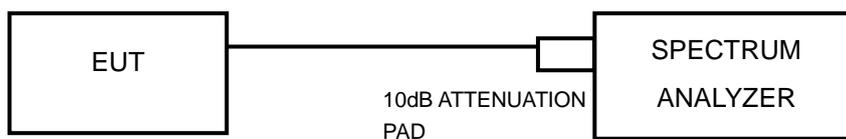
Operation Band	EUT Category		LIMIT
U-NII-1		Outdoor Access Point	1 Watt (30 dBm) (Max. e.i.r.p \leq 125mW(21 dBm) at any elevation angle above 30 degrees as measured from the horizon)
		Fixed point-to-point Access Point	1 Watt (30 dBm)
		Indoor Access Point	1 Watt (30 dBm)
	√	Mobile and Portable client device	250mW (24 dBm)
U-NII-2A	√		250mW(24dBm) or 11 dBm+10LogB*
U-NII-2C	√		250mW(24dBm) or 11 dBm+10LogB*
U-NII-3	√		1 Watt (30 dBm)

NOTE: 1. Where B is the 26dB emission bandwidth in MHz.

3.3.2 TEST SETUP



FOR 6/26dB BANDWIDTH





3.3.3 TEST INSTRUMENTS

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
Power Sensor	Keysight	U2021XA	MY55060016	May 22,20	May 21,21
Power Sensor	Keysight	U2021XA	MY55060018	May 22,20	May 21,21
Power Meter	Anritsu	ML2495A	1139001	Mar. 12,20	Mar. 11,21
Power Sensor	Anritsu	MA2411B	1531155	Mar. 12,20	Mar. 11,21
Digital Multimeter	FLUKE	15B	A1220010DG	Oct. 17, 19	Oct.16, 20
Humid & Temp Programmable Tester	Haida	HD-2257	110807201	Nov.15,19	Nov. 14,20
Oscilloscope	Agilent	DSO9254A	MY51260160	Sep. 18,19	Sep. 17,20
Signal and Spectrum Analyzer	Rohde&Schwarz	FSV40	101094	Mar. 13,20	Mar. 12,21
Signal Generator	Agilent	N5183A	MY50140980	Sep. 19,19	Sep. 18,20
MXG-B RF Vector Signal Generator	Keysight	N5182B	MY56200288	Sep. 12,19	Sep. 11,20
BLUETOOTH TESTER	Rohde&Schwarz	CBT32	100811	May 20,20	May 19,21
Attenuator	MINI	BW-S10W2+	S130129FGE2	N/A	N/A
DC Source	Keysight	E3642A	MY56146098	N/A	N/A

NOTES:

1. The test was performed in RF Oven room.
2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to CEPREI/CHINA, GRGT/CHINA and NIM/CHINA.

3.3.4 TEST PROCEDURE

FOR AVERAGE POWER MEASUREMENT

Method PM is used to perform output power measurement, trigger and gating function of wide band power meter is enabled to measure max output power of TX on burst. Duty factor is not added to measured value.

FOR 26dB BANDWIDTH

- 1) Set RBW = approximately 1% of the emission bandwidth.
- 2) Set the VBW > RBW.
- 3) Detector = RMS.
- 4) Trace mode = max hold.
- 5) Measure the maximum width of the emission that is 26 dB down from the peak of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.



FOR 6dB BANDWIDTH

- 1) Set RBW = 100 kHz.
- 2) Set the video bandwidth (VBW) ≥ 3 RBW.
- 3) Detector = Peak.
- 4) Trace mode = max hold.
- 5) Sweep = auto couple.
- 6) Allow the trace to stabilize.
- 7) Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

3.3.5 DEVIATION FROM TEST STANDARD

No deviation.

3.3.6 EUT OPERATING CONDITIONS

The software provided by client to enable the EUT under transmission condition continuously at specific channel frequencies individually.



3.3.7 TEST RESULTS

OUTPUT POWER:

802.11a

CHANNEL NUMBER	FREQ. (MHz)	AVG. CONDUCTED POWER (dBm)	AVG. CONDUCTED POWER (mW)	LIMIT (dBm)	PASS /FAIL
36	5180	18.91	77.804	24.00	PASS
40	5200	18.90	77.625	24.00	PASS
48	5240	18.53	71.285	24.00	PASS
52	5260	17.71	59.02	24.00	PASS
60	5300	18.96	78.705	24.00	PASS
64	5320	18.78	75.509	24.00	PASS
100	5500	16.41	43.752	24.00	PASS
116	5580	18.91	77.804	24.00	PASS
140	5700	18.10	64.565	24.00	PASS
149	5745	18.15	65.313	30.00	PASS
157	5785	18.72	74.473	30.00	PASS
165	5825	18.49	70.632	30.00	PASS

Note:

5180 ~ 5240MHz Max. Gain = 2.96dBi < 6dBi, so the limit no need to be reduced.

5260 ~ 5320MHz Max. Gain = 2.96dBi < 6dBi, so the limit no need to be reduced

5500 ~ 5700MHz Max. Gain = 2.96dBi < 6dBi, so the limit no need to be reduced

5745 ~ 5825MHz Max. Gain = 2.96dBi < 6dBi, so the limit no need to be reduced

For 5260 ~ 5320MHz, 5500 ~ 5700MHz

1. $11\text{dBm} + 10\log(31.35) = 25.96\text{ dBm} > 24\text{dBm}$
2. $11\text{dBm} + 10\log(23.75) = 24.75\text{ dBm} > 24\text{dBm}$
3. $11\text{dBm} + 10\log(23.73) = 24.75\text{ dBm} > 24\text{dBm}$
4. $11\text{dBm} + 10\log(23.44) = 24.69\text{ dBm} > 24\text{dBm}$
5. $11\text{dBm} + 10\log(31.57) = 25.99\text{ dBm} > 24\text{dBm}$
6. $11\text{dBm} + 10\log(31.71) = 26.01\text{ dBm} > 24\text{dBm}$



802.11n (20MHz)

CHANNEL NUMBER	FREQ. (MHz)	AVG. CONDUCTED POWER (dBm)	AVG. CONDUCTED POWER (mW)	LIMIT (dBm)	PASS /FAIL
36	5180	18.97	78.886	24.00	PASS
40	5200	18.71	74.302	24.00	PASS
48	5240	18.49	70.632	24.00	PASS
52	5260	17.37	54.576	24.00	PASS
60	5300	19.05	80.353	24.00	PASS
64	5320	18.83	76.384	24.00	PASS
100	5500	15.21	33.189	24.00	PASS
116	5580	18.81	76.033	24.00	PASS
140	5700	18.18	65.766	24.00	PASS
149	5745	18.15	65.313	30.00	PASS
157	5785	18.71	74.302	30.00	PASS
165	5825	18.55	71.614	30.00	PASS

Note:

For 5260 ~ 5320MHz, 5500 ~ 5700MHz

$11\text{dBm} + 10\log(23.67) = 24.74 \text{ dBm} > 24\text{dBm}$

$11\text{dBm} + 10\log(23.39) = 24.69 \text{ dBm} > 24\text{dBm}$

$11\text{dBm} + 10\log(25.52) = 25.07 \text{ dBm} > 24\text{dBm}$

$11\text{dBm} + 10\log(21.79) = 24.38 \text{ dBm} > 24\text{dBm}$

$11\text{dBm} + 10\log(31.64) = 26.00 \text{ dBm} > 24\text{dBm}$

$11\text{dBm} + 10\log(30.47) = 25.84 \text{ dBm} > 24\text{dBm}$



802.11n (40MHz)

CHANNEL NUMBER	FREQ. (MHz)	AVG. CONDUCTED POWER (dBm)	AVG. CONDUCTED POWER (mW)	LIMIT (dBm)	PASS /FAIL
38	5190	17.71	59.02	24.00	PASS
46	5230	17.09	51.168	24.00	PASS
54	5270	17.08	51.05	24.00	PASS
62	5310	13.27	21.232	24.00	PASS
102	5510	12.92	19.588	24.00	PASS
110	5550	17.78	59.979	24.00	PASS
134	5670	18.42	69.502	24.00	PASS
151	5755	18.37	68.707	30.00	PASS
159	5795	18.06	63.973	30.00	PASS

Note:

For 5260 ~ 5320MHz, 5500 ~ 5700MHz

$11\text{dBm} + 10\log(64.56) = 29.10 \text{ dBm} > 24\text{dBm}$

$11\text{dBm} + 10\log(65.07) = 29.13 \text{ dBm} > 24\text{dBm}$

$11\text{dBm} + 10\log(69.95) = 29.45 \text{ dBm} > 24\text{dBm}$

$11\text{dBm} + 10\log(44.00) = 27.44 \text{ dBm} > 24\text{dBm}$

$11\text{dBm} + 10\log(40.64) = 27.09 \text{ dBm} > 24\text{dBm}$



802.11ac (80MHz)

CHANNEL NUMBER	FREQ. (MHz)	AVG. CONDUCTED POWER (dBm)	AVG. CONDUCTED POWER (mW)	LIMIT (dBm)	PASS /FAIL
42	5210	18.99	79.25	24.00	PASS
58	5290	15.87	38.637	24.00	PASS
106	5530	15.39	34.594	24.00	PASS
122	5610	18.22	66.374	24.00	PASS
155	5775	17.87	61.235	30.00	PASS

Note:

For 5260 ~ 5320MHz, 5500 ~ 5700MHz

$11\text{dBm} + 10\log(118.23) = 29.96\text{ dBm} > 24\text{dBm}$

$11\text{dBm} + 10\log(89.04) = 29.95\text{ dBm} > 24\text{dBm}$

$11\text{dBm} + 10\log(89.52) = 29.95\text{dBm} > 24\text{dBm}$



26dB BANDWIDTH:

802.11a

Channel Number	Freq. (MHz)	26dB DOWN BANDWIDTH (MHz)	PASS /FAIL
36	5180	31.35	PASS
40	5200	23.75	PASS
48	5240	23.73	PASS
52	5260	23.44	PASS
60	5300	31.57	PASS
64	5320	31.71	PASS
100	5500	21.30	PASS
116	5580	27.21	PASS
140	5700	21.72	PASS

802.11n (20MHz)

Channel Number	Freq. (MHz)	26dB DOWN BANDWIDTH (MHz)	PASS /FAIL
36	5180	23.67	PASS
40	5200	23.39	PASS
48	5240	25.52	PASS
52	5260	21.79	PASS
60	5300	31.64	PASS
64	5320	30.47	PASS
100	5500	21.39	PASS
116	5580	24.94	PASS
140	5700	21.73	PASS



802.11n (40MHz)

Channel Number	Freq. (MHz)	26dB DOWN BANDWIDTH (MHz)	PASS /FAIL
38	5190	64.56	PASS
46	5230	65.07	PASS
54	5270	69.95	PASS
62	5310	44.00	PASS
102	5510	40.64	PASS
110	5550	70.12	PASS
134	5670	66.16	PASS

802.11ac (80MHz)

Channel Number	Freq. (MHz)	26dB DOWN BANDWIDTH (MHz)	PASS /FAIL
42	5210	118.23	PASS
58	5290	89.04	PASS
106	5530	89.52	PASS
122	5610	100.05	PASS



6dB BANDWIDTH For 5725-5850MHz

802.11a

Channel Number	Freq. (MHz)	6dB DOWN BANDWIDTH (MHz)	PASS /FAIL
149	5745	16.29	PASS
157	5785	16.17	PASS
165	5825	15.83	PASS

802.11n (20M)

Channel Number	Freq. (MHz)	6dB DOWN BANDWIDTH (MHz)	PASS /FAIL
149	5745	17.71	PASS
157	5785	17.73	PASS
165	5825	17.72	PASS

802.11n (40M)

Channel Number	Freq. (MHz)	6dB DOWN BANDWIDTH (MHz)	PASS /FAIL
151	5755	36.50	PASS
159	5795	36.49	PASS

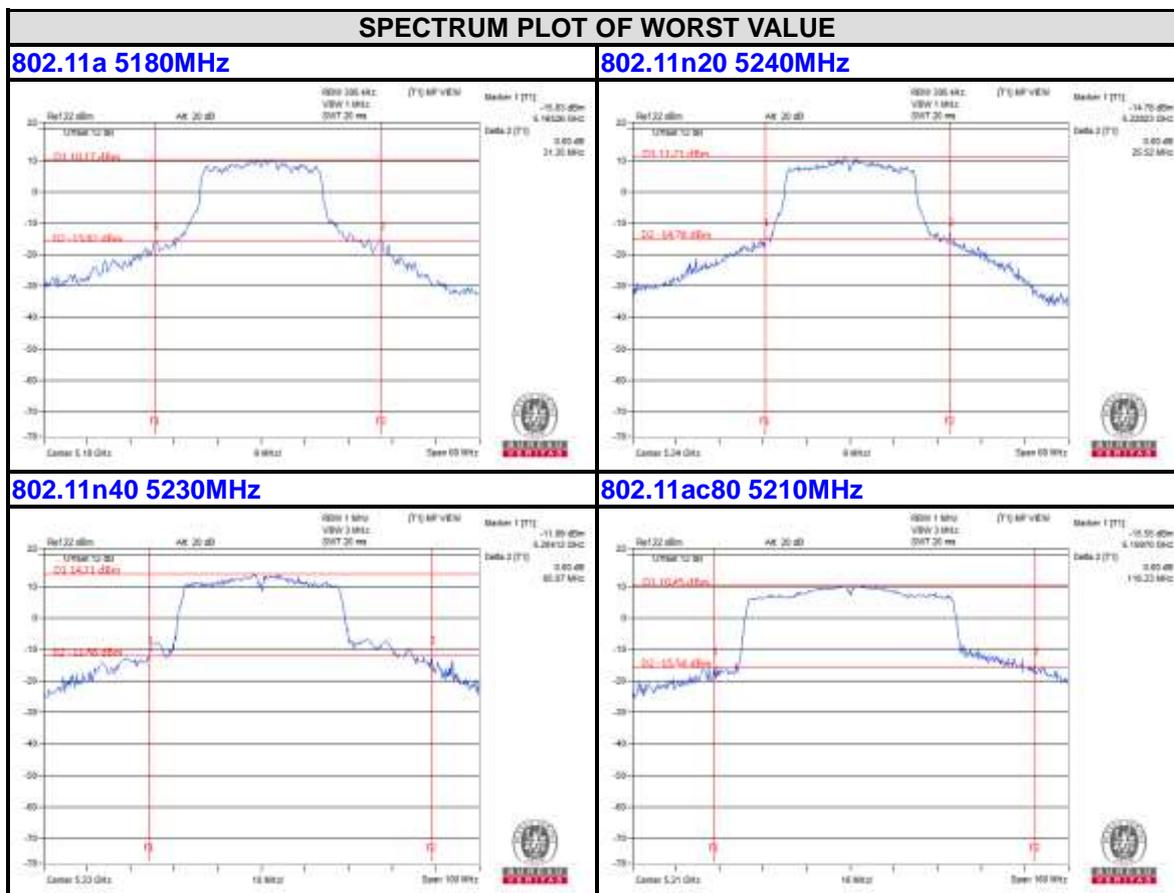
802.11ac (80MHz)

Channel Number	Freq. (MHz)	6dB DOWN BANDWIDTH (MHz)	PASS /FAIL
155	5775	75.76	PASS



Test Report No.: RF200430N014-4

26dB bandwidth Test Plot
For 5150-5250MHz



Bureau Veritas Shenzhen Co., Ltd.
Dongguan Branch

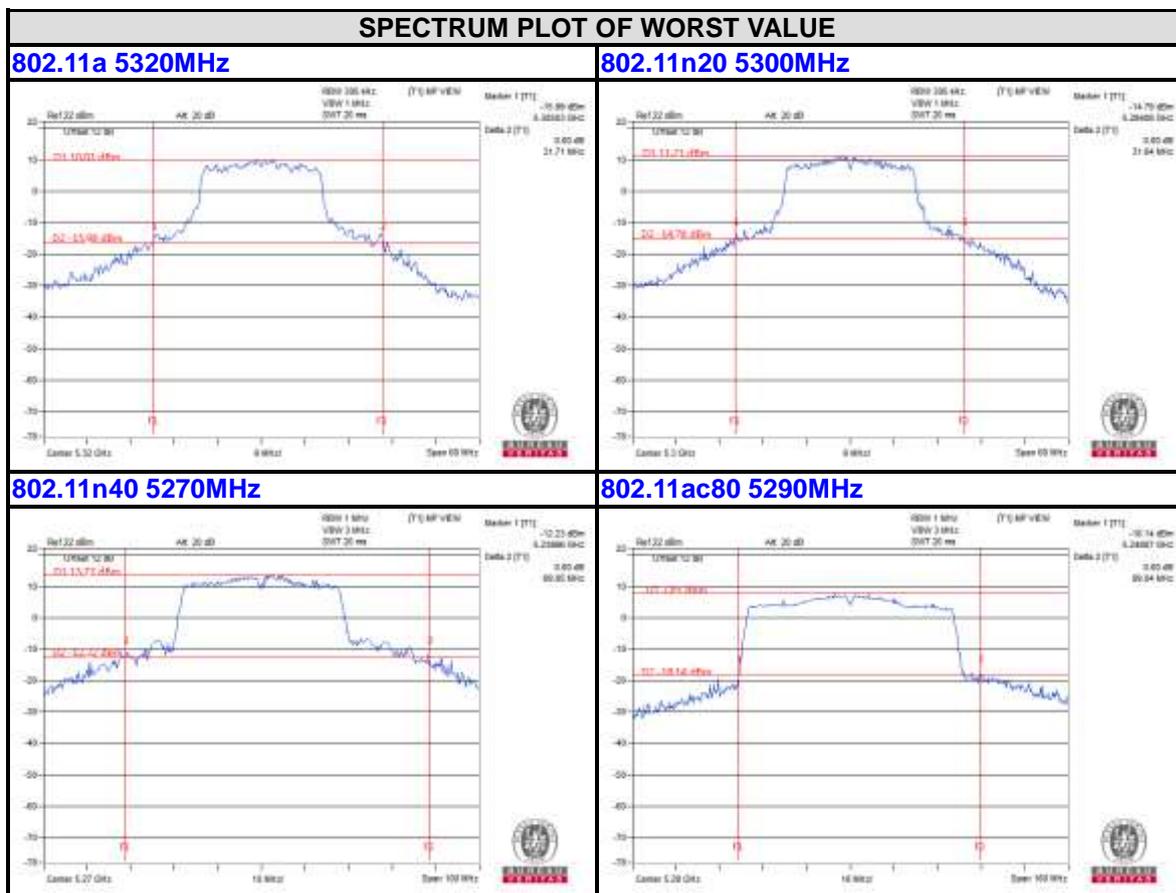
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Test Report No.: RF200430N014-4

For 5250-5350MHz



Bureau Veritas Shenzhen Co., Ltd.
Dongguan Branch

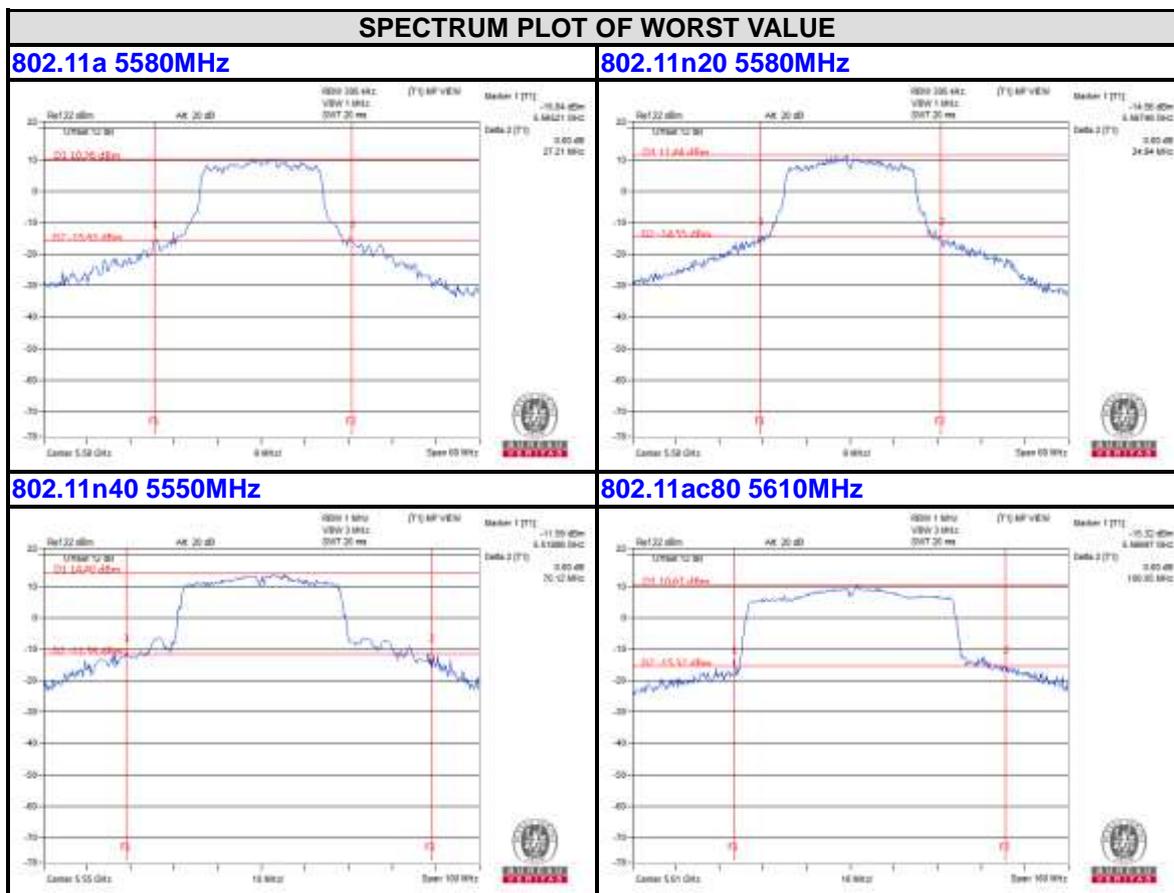
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Test Report No.: RF200430N014-4

For 5470-5725MHz

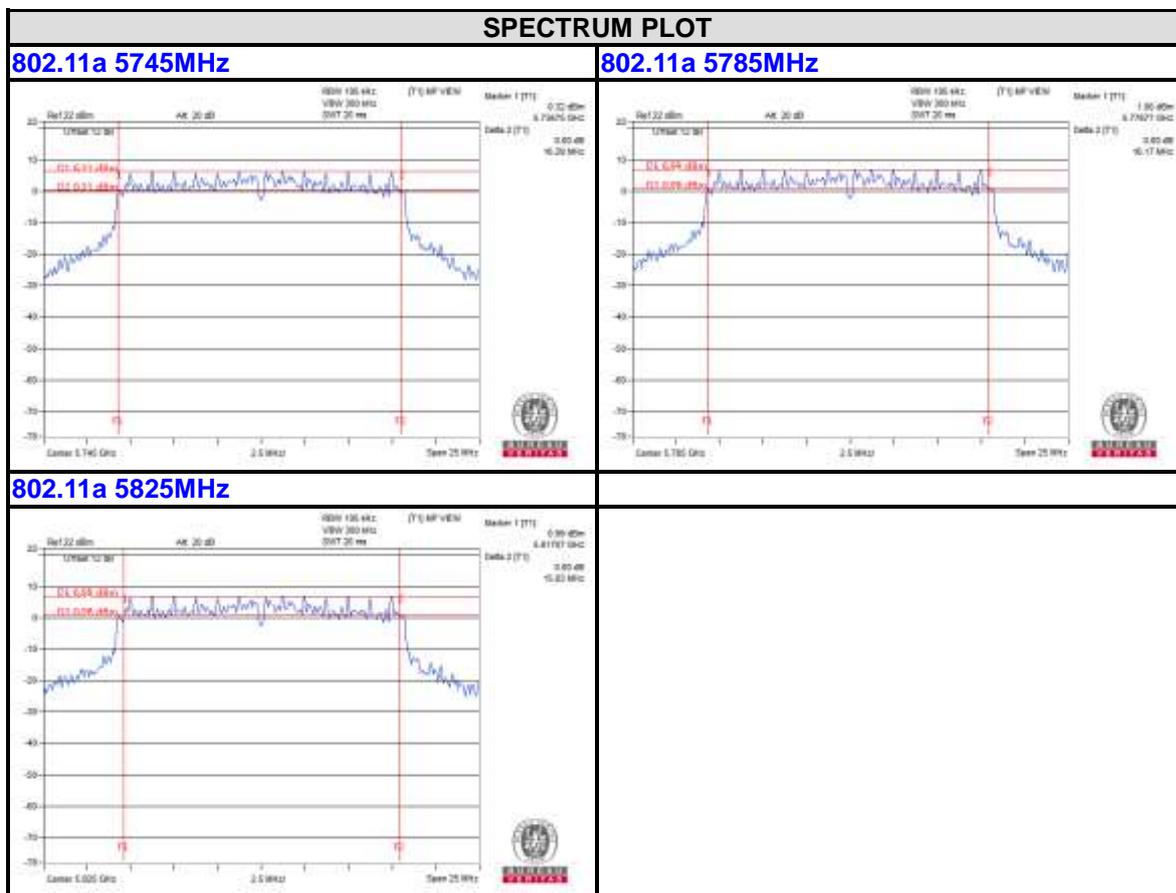




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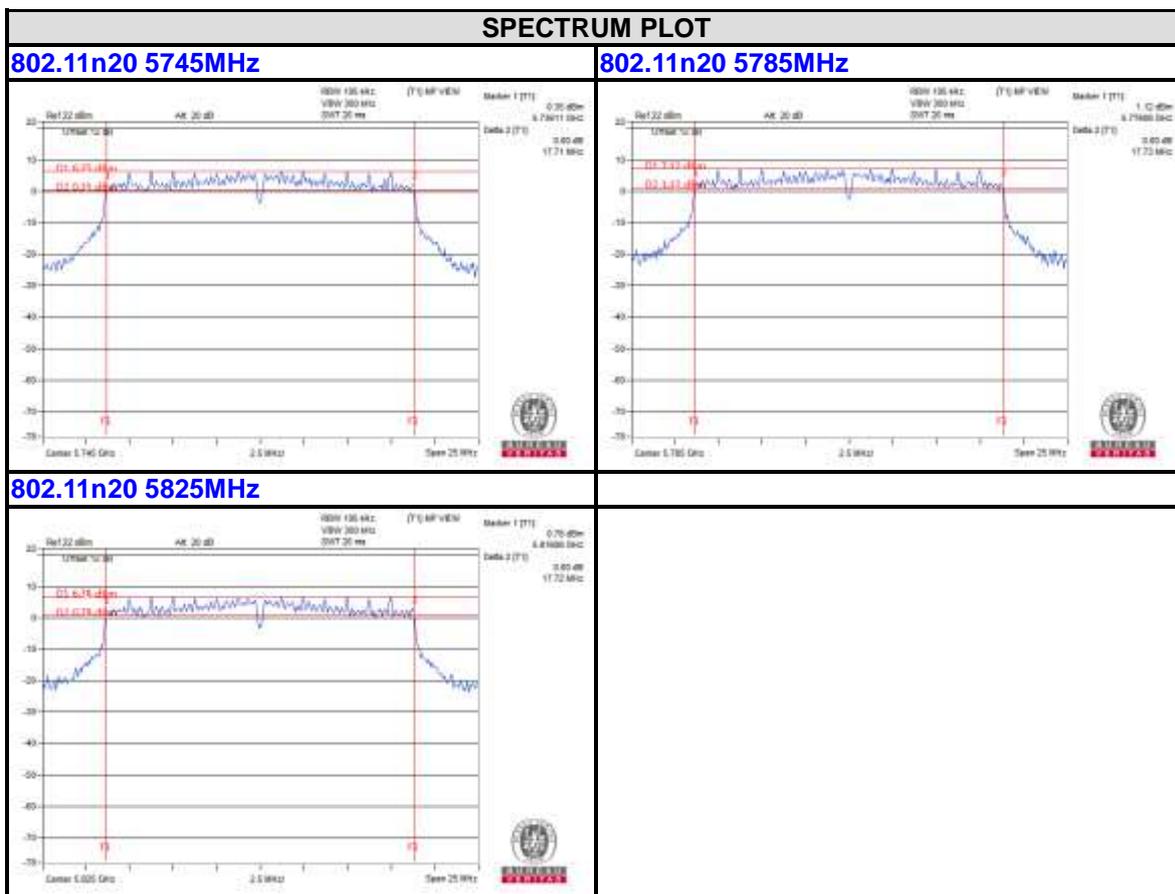
Test Report No.: RF200430N014-4

6dB BANDWIDTH For 5725-5850MHz





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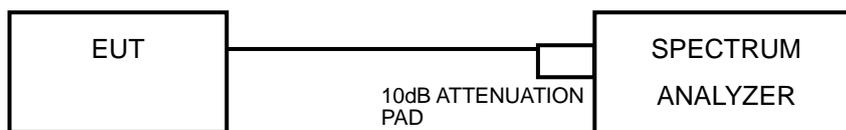


3.4 PEAK POWER SPECTRAL DENSITY MEASUREMENT

3.4.1 LIMITS OF PEAK POWER SPECTRAL DENSITY MEASUREMENT

Operation Band	EUT Category		LIMIT
U-NII-1		Outdoor Access Point	17dBm/ MHz
		Fixed point-to-point Access Point	
		Indoor Access Point	
	√	Mobile and Portable client device	11dBm/ MHz
U-NII-2A	√		11dBm/ MHz
U-NII-2C	√		11dBm/ MHz
U-NII-3	√		30dBm/ 500kHz

3.4.2 TEST SETUP



3.4.3 TEST INSTRUMENTS

Refer to section 3.3.3 to get information of above instrument.

3.4.4 TEST PROCEDURES

For U-NII-1, U-NII-2A, U-NII-2C band:

Using method SA-2

- 1) Set span to encompass the entire emission bandwidth (EBW) of the signal.
- 2) Set RBW = 1MHz, Set VBW =3 MHz, Detector = RMS
- 3) Set Channel power measure = 1MHz
- 4) Sweep time = auto, trigger set to “free run”.
- 5) Trace average at least 100 traces in power averaging mode.
- 6) Record the max value and add 10 log (1/duty cycle)



Test Report No.: RF200430N014-4

For U-NII-3 band:

Using method SA-2

- 1) Set span to encompass the entire emission bandwidth (EBW) of the signal.
- 2) Set RBW = 300 kHz, Set VBW = 1 MHz, Detector = RMS
- 3) Set Channel power measure = 1MHz
- 4) Sweep time = auto, trigger set to "free run".
- 5) Trace average at least 100 traces in power averaging mode.
- 6) Record the max value and add 10 log (1/duty cycle)

3.4.5 DEVIATION FROM TEST STANDARD

No deviation.

3.4.6 EUT OPERATING CONDITIONS

Same as 3.3.6



3.4.7 TEST RESULTS

For U-NII-1, U-NII-2A & U-NII-2C, For U-NII-3:

802.11a

Channel	Frequency (MHz)	PSD W/O Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD with Duty Factor (dBm/MHz)	MAX. Limit (dBm)	PASS / FAIL
36	5180	4.93	2.048	6.978	11.00	PASS
40	5200	4.86	2.048	6.908	11.00	PASS
48	5240	4.37	2.048	6.418	11.00	PASS
52	5260	3.41	2.048	5.458	11.00	PASS
60	5300	4.84	2.048	6.888	11.00	PASS
64	5320	4.68	2.048	6.728	11.00	PASS
100	5500	2.10	2.048	4.148	11.00	PASS
116	5580	4.88	2.048	6.928	11.00	PASS
140	5700	3.97	2.048	6.018	11.00	PASS

Note: Refer to section 2.3 for duty cycle spectrum plot.

Channel	Frequency (MHz)	PSD W/O Duty Factor (dBm/500kHz)	Duty Factor (dB)	Total PSD (dBm/500kHz)	Limit (dBm/500kHz)	PASS / FAIL
149	5745	-3.09	2.048	-1.042	30.00	PASS
157	5785	-3.47	2.048	-1.422	30.00	PASS
165	5825	-4.04	2.048	-1.992	30.00	PASS

Note: Refer to section 2.3 for duty cycle spectrum plot.



802.11n (20MHz)

Channel	Frequency (MHz)	PSD W/O Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD with Duty Factor (dBm/MHz)	MAX. Limit (dBm)	PASS / FAIL
36	5180	4.26	2.097	6.357	11.00	PASS
40	5200	4.15	2.097	6.247	11.00	PASS
48	5240	3.93	2.097	6.027	11.00	PASS
52	5260	2.66	2.097	4.757	11.00	PASS
60	5300	4.44	2.097	6.537	11.00	PASS
64	5320	4.15	2.097	6.247	11.00	PASS
100	5500	0.64	2.097	2.737	11.00	PASS
116	5580	4.24	2.097	6.337	11.00	PASS
140	5700	3.46	2.097	5.557	11.00	PASS

Note: Refer to section 2.3 for duty cycle spectrum plot.

Channel	Frequency (MHz)	PSD W/O Duty Factor (dBm/500kHz)	Duty Factor (dB)	Total PSD (dBm/500kHz)	Limit (dBm/500kHz)	PASS / FAIL
149	5745	-3.50	2.097	-1.403	30.00	PASS
157	5785	-3.92	2.097	-1.823	30.00	PASS
165	5825	-4.23	2.097	-2.133	30.00	PASS

Note: Refer to section 2.3 for duty cycle spectrum plot.



802.11n (40MHz)

Channel	Frequency (MHz)	PSD W/O Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD with Duty Factor (dBm/MHz)	MAX. Limit (dBm)	PASS / FAIL
38	5190	0.84	3.028	3.868	11.00	PASS
46	5230	0.45	3.028	3.478	11.00	PASS
54	5270	0.20	3.028	3.228	11.00	PASS
62	5310	-3.58	3.028	-0.552	11.00	PASS
102	5510	-4.04	3.028	-1.012	11.00	PASS
118	5590	0.67	3.028	3.698	11.00	PASS
134	5670	1.48	3.028	4.508	11.00	PASS

Note: Refer to section 2.3 for duty cycle spectrum plot.

Channel	Frequency (MHz)	PSD W/O Duty Factor (dBm/500kHz)	Duty Factor (dB)	Total PSD (dBm/500kHz)	Limit (dBm/500k Hz)	PASS / FAIL
151	5755	-7.00	3.028	-3.972	30.00	PASS
159	5795	-7.25	3.028	-4.222	30.00	PASS

Note: Refer to section 2.3 for duty cycle spectrum plot.



802.11ac (80MHz)

Channel	Frequency (MHz)	PSD W/O Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD with Duty Factor (dBm/MHz)	MAX. Limit (dBm)	PASS / FAIL
42	5210	-1.00	1.175	0.7943	11.00	PASS
58	5290	-3.88	1.175	0.4093	11.00	PASS
106	5530	-4.47	1.175	0.3573	11.00	PASS
122	5610	-1.62	1.175	0.6887	11.00	PASS

Note: Refer to section 2.3 for duty cycle spectrum plot.

Channel	Frequency (MHz)	PSD W/O Duty Factor (dBm/500kHz)	Duty Factor (dB)	Total PSD (dBm/500kHz)	Limit (dBm/500kHz)	PASS / FAIL
155	5775	-11.63	1.175	-10.455	30.00	PASS

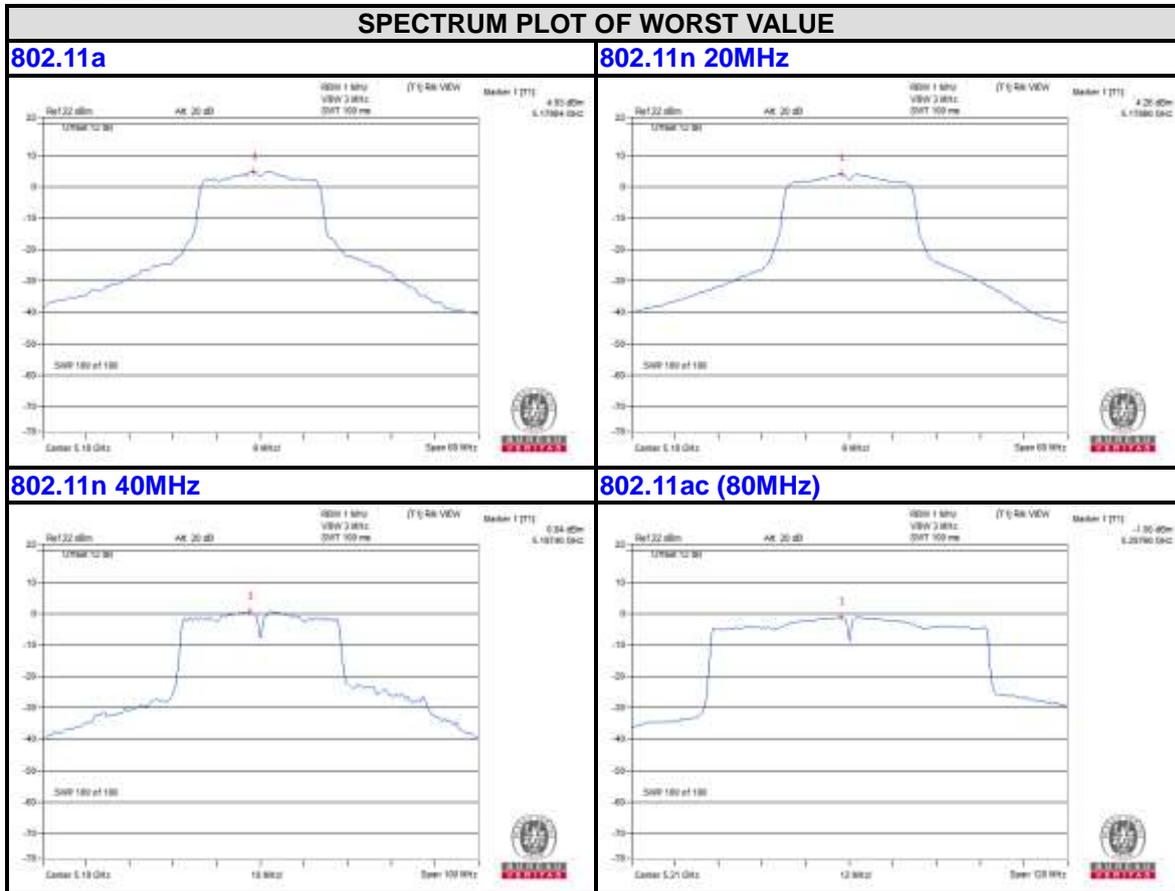
Note: Refer to section 2.3 for duty cycle spectrum plot.

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PSD Test Plot

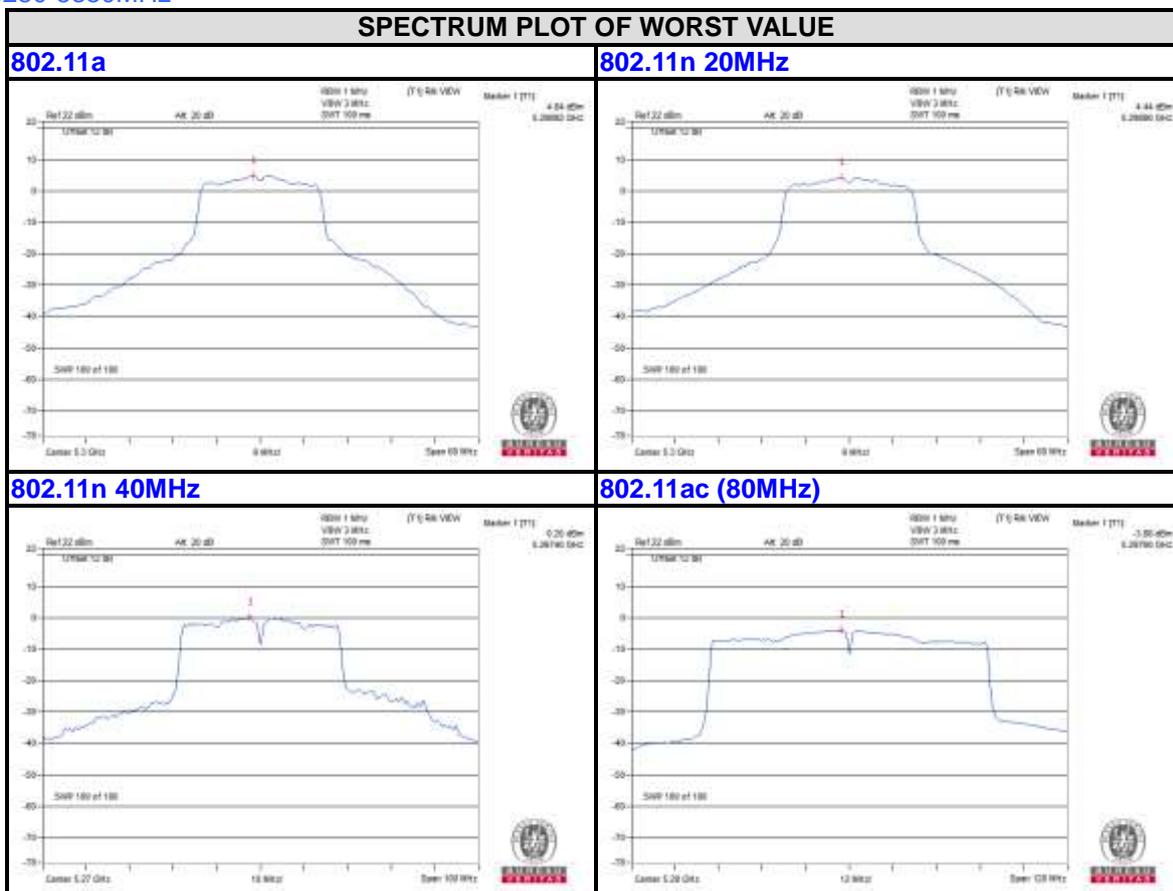
BAND 1
5150-5250MHz





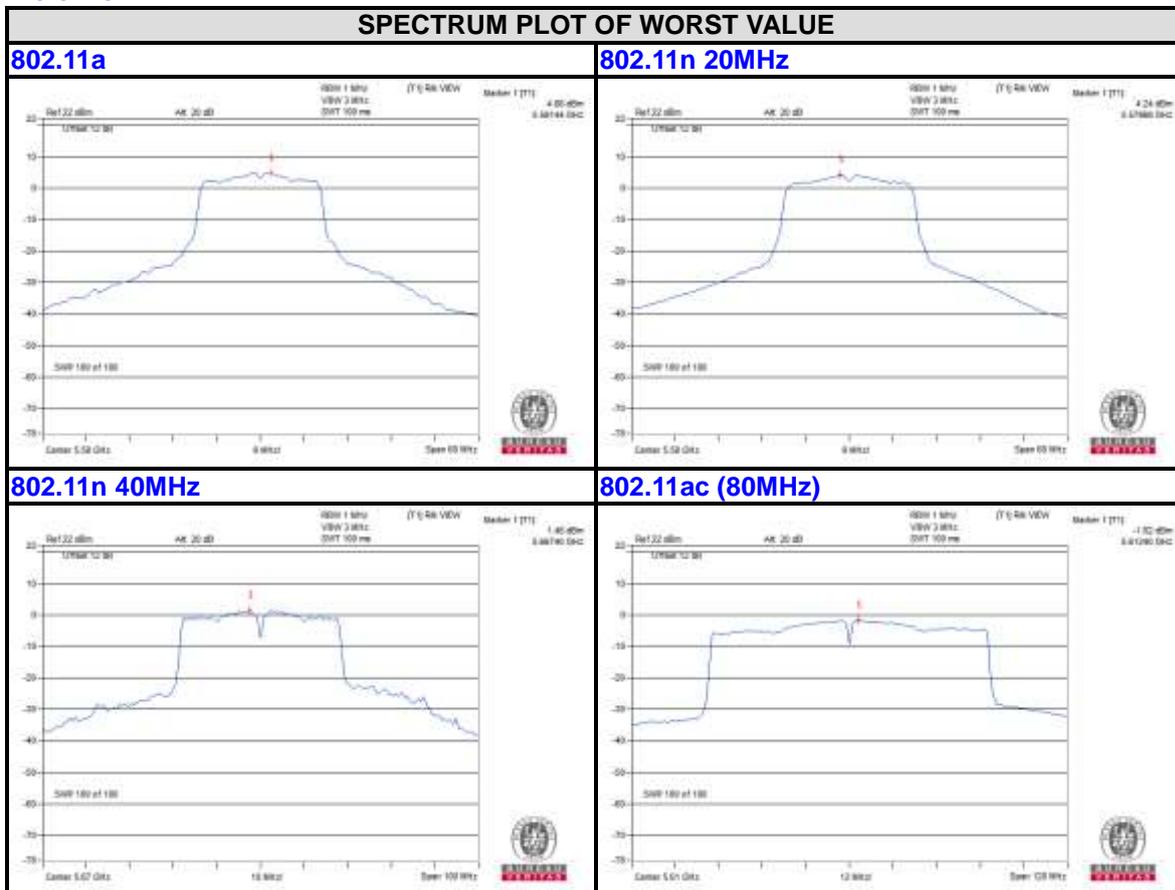
Test Report No.: RF200430N014-4

BAND 2
5250-5350MHz





BAND 3
5470-5725MHz

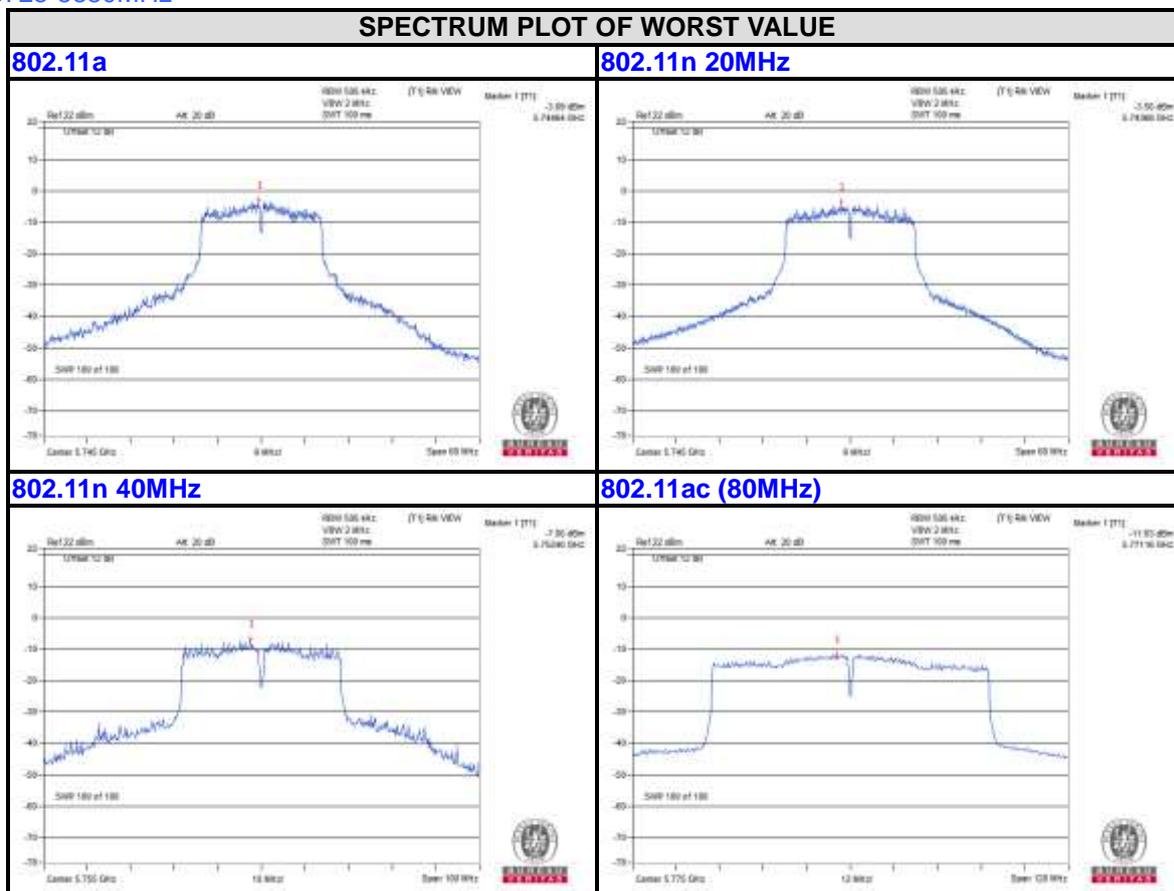




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BAND4
5725-5850MHz

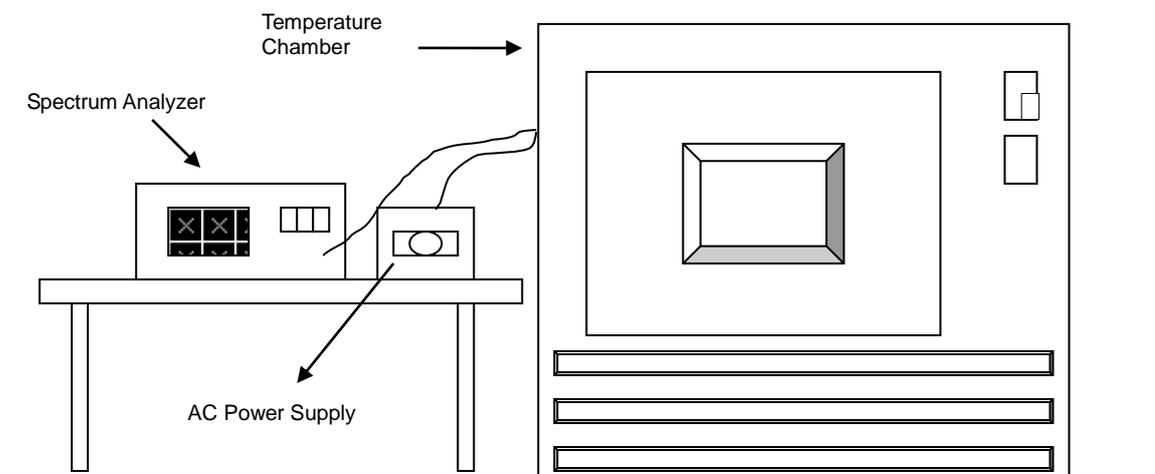


3.5 FREQUENCY STABILITY

3.5.1 LIMITS OF FREQUENCY STABILITY MEASUREMENT

The frequency of the carrier signal shall be maintained within band of operation.

3.5.2 TEST SETUP



3.5.3 TEST INSTRUMENTS

Refer to section 3.3.3 to get information of above instrument.



Test Report No.: RF200430N014-4

3.5.4 TEST PROCEDURE

- a. The EUT was placed inside the environmental test chamber and powered by nominal AC voltage.
- b. Turn the EUT on and couple its output to a spectrum analyzer.
- c. Turn the EUT off and set the chamber to the highest temperature specified.
- d. Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize, turn the EUT on and measure the operating frequency after 2, 5, and 10 minutes.
- e. Repeat step 2 and 3 with the temperature chamber set to the lowest temperature.
- f. The test chamber was allowed to stabilize at +20 degree C for a minimum of 30 minutes. The supply voltage was then adjusted on the EUT from 85% to 115% and the frequency record.

3.5.5 DEVIATION FROM TEST STANDARD

No deviation.

3.5.6 EUT OPERATING CONDITION

Set the EUT transmit at un-modulation mode to test frequency stability.



Test Report No.: RF200430N014-4

3.5.7 TEST RESULTS

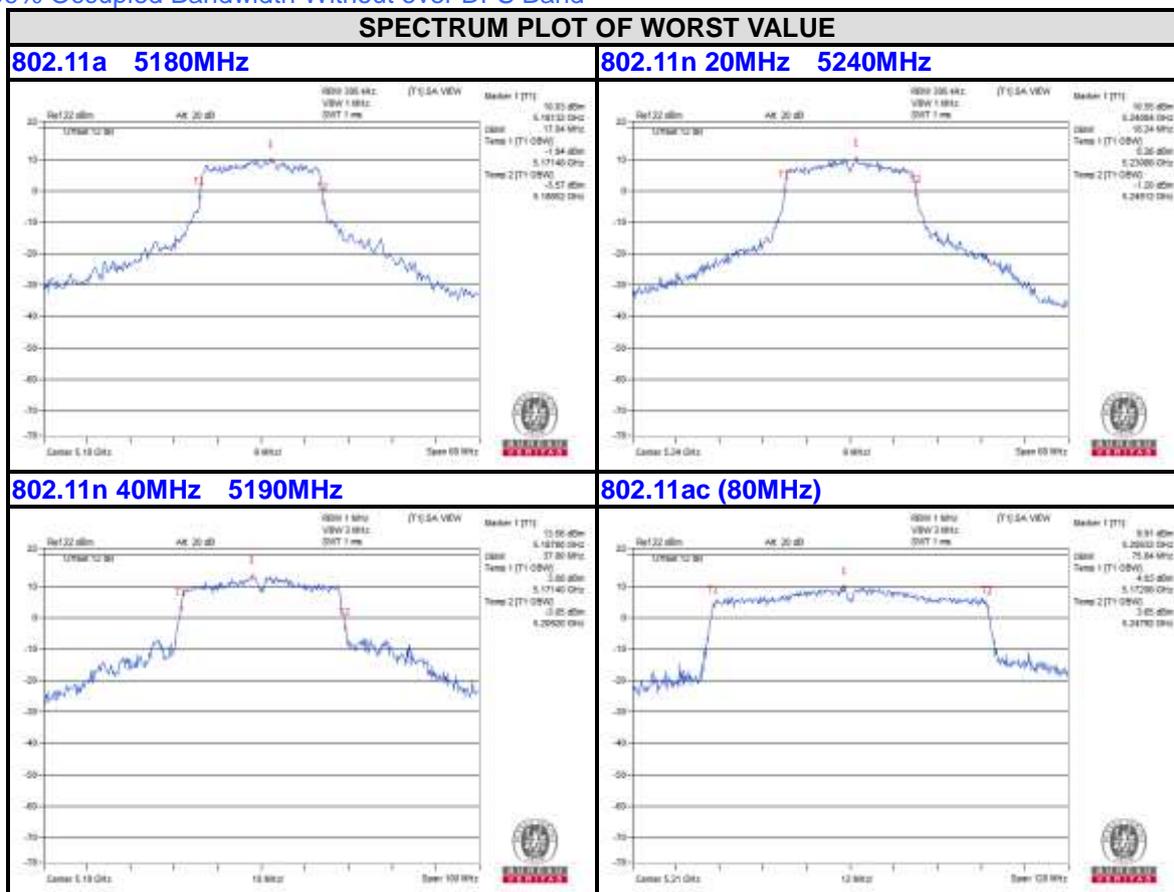
FREQUENCY STABILITY VERSUS TEMP.									
OPERATING FREQUENCY: 5180MHz									
TEMP. (°C)	POWER SUPPLY (Vac)	0 MINUTE		2 MINUTE		5 MINUTE		10 MINUTE	
		Measured Frequency (MHz)	Frequency Drift						
50	120	5179.9954	-0.00009	5179.9981	-0.00004	5179.9953	-0.00009	5179.9963	-0.00007
40	120	5179.9873	-0.00025	5179.9852	-0.00029	5179.9849	-0.00029	5179.9845	-0.00030
30	120	5180.0022	0.00004	5180.0014	0.00003	5180.0037	0.00007	5180.0036	0.00007
20	120	5179.998	-0.00004	5179.9956	-0.00008	5179.9944	-0.00011	5179.9942	-0.00011
10	120	5179.9752	-0.00048	5179.9769	-0.00045	5179.9749	-0.00048	5179.9753	-0.00048
0	120	5180.0001	0.00000	5180.0021	0.00004	5180.0021	0.00004	5179.9997	-0.00001
-10	120	5179.9877	-0.00024	5179.9872	-0.00025	5179.9908	-0.00018	5179.9906	-0.00018
-20	120	5179.9936	-0.00012	5179.9909	-0.00018	5179.989	-0.00021	5179.9908	-0.00018
-30	120	5179.985	-0.00029	5179.9892	-0.00021	5179.9846	-0.00030	5179.9882	-0.00023

FREQUENCY STABILITY VERSUS TEMP.									
OPERATING FREQUENCY: 5180MHz									
TEMP. (°C)	POWER SUPPLY (Vac)	0 MINUTE		2 MINUTE		5 MINUTE		10 MINUTE	
		Measured Frequency (MHz)	Frequency Drift						
20	138	5179.998	-0.00004	5179.9951	-0.00009	5179.9935	-0.00013	5179.9946	-0.00010
	120	5179.998	-0.00004	5179.9956	-0.00008	5179.9944	-0.00011	5179.9942	-0.00011
	102	5179.9982	-0.00003	5179.9952	-0.00009	5179.9939	-0.00012	5179.9951	-0.00009



Test Report No.: RF200430N014-4

Band 1
5150-5250MHz
99% Occupied Bandwidth Without over DFS Band



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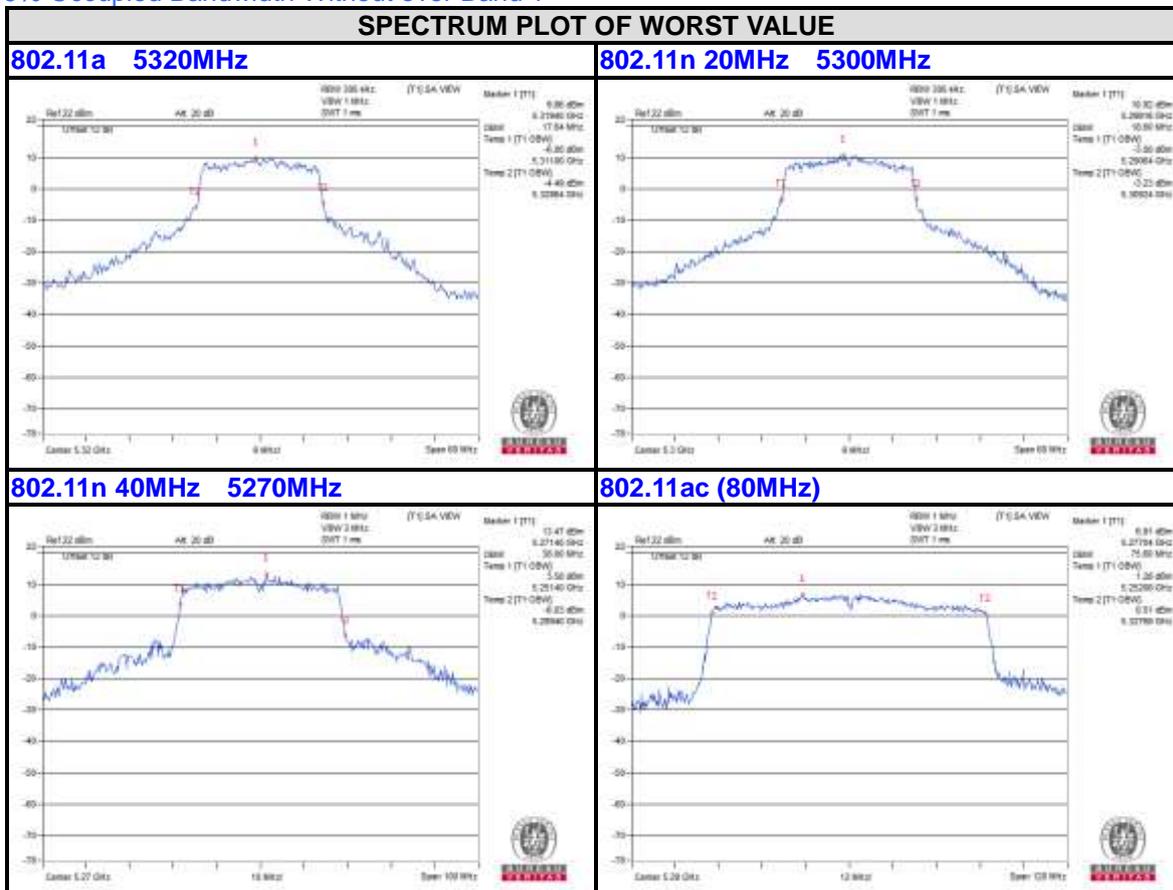
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Band 2
5250-5350MHz
99% Occupied Bandwidth Without over Band 1



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Test Report No.: RF200430N014-4

4. PHOTOGRAPHS OF THE TEST CONFIGURATION

Please refer to the attached file (Test Setup Photo).



Test Report No.: RF200430N014-4

5. APPENDIX A – MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB

No modifications were made to the EUT by the lab during the test.

---END---