



Test Report No.: RF200407N032-4



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 Frame
Brand Name	Lenovo
Model	Lenovo CD-3L501F
Additional Model & Model Difference	N/A
Date of tests	Apr. 07, 2020 ~ Apr. 27, 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

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Project Engineer / EMC Department

Approved by Glyn He
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Date: May 13, 2020

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Test Report No.: RF200407N032-4

RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
RF200407N032-4	Original release.	May 13, 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 Frame
BRAND	Lenovo
MODEL NO.	Lenovo CD-3L501F
FCC ID	O57CD3L501F
POWER SUPPLY	DC 20V 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	14.40dBm for 5180 ~ 5240MHz (Maximum AVG Power) 13.42dBm for 5260 ~ 5320MHz (Maximum AVG Power) 13.42dBm for 5500 ~ 5700MHz (Maximum AVG Power) 13.57dBm for 5745 ~ 5825MHz (Maximum AVG Power)
ANTENNA TYPE	5180 ~ 5240MHz: PIFA antenna with 4.94dBi gain 5260 ~ 5320MHz: PIFA antenna with 4.94dBi gain 5500 ~ 5700MHz: PIFA antenna with 4.94dBi gain 5745 ~ 5825MHz: PIFA antenna with 4.94dBi 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.: 200407N032) 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:

ADAPTER	
BRAND:	N/A
MODEL:	PA-1300-42
INPUT:	AC 100-240V, 50/60Hz 1.4A MAX
OUTPUT:	DC 20V, 1.5A
AC LINE:	Unshielded, Non-Detachable, 180cm



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 **Z-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 5470-5725 5725-5850	36 to 48 100 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 5470-5725 5725-5850	36 to 48 100 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	Hu
RE≥1G	24deg. C, 55%RH	AC 120V/60Hz	Hu
PLC	20deg. C, 56%RH	AC 120V/60Hz	Robert Cheng
APCM	20deg. C, 55%RH	AC 120V/60Hz	Robert Cheng



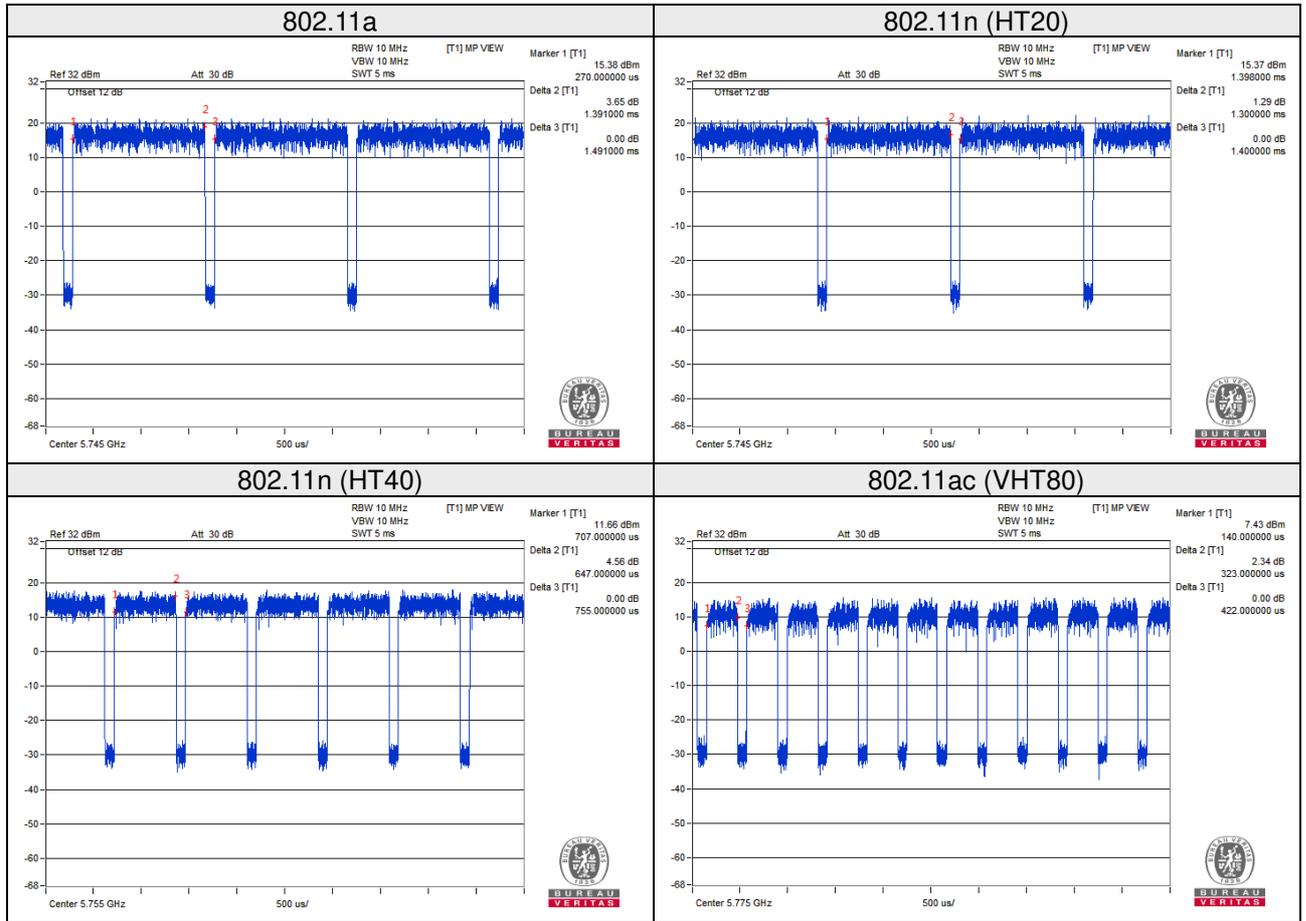
2.3 DUTY CYCLE OF TEST SIGNAL

802.11a: Duty cycle = 1.391/1.491 = 0.933, Duty factor = 10 * log(1/0.933) = 0.301

802.11n (HT20): Duty cycle = 1.3/1.4 = 0.929, Duty factor = 10 * log(1/0.929) = 0.920

802.11n (HT40): Duty cycle = 0.647/0.755 = 0.857, Duty factor = 10 * log(1/0.857) = 0.670

802.11ac (VHT80): Duty cycle = 0.323/0.422 = 0.765, Duty factor = 10 * log(1/0.765) = 1.163





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 v01r03

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 v01r03	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:

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



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 22,19	May 21,20
Active Loop Antenna (9KHz -30MHz)	SCHWARZBECK	FMZB 1519B	1519B-045	May 28,19	May 27,20
Amplifier (9KHz -1GHz)	Burgeon	BPA-530	100210	Mar. 15,20	Mar. 14,21
Bilog Antenna (20MHz -2GHz)	Teseq	CBL 6111D	30643	Jun. 23,19	Jun. 22,20
Horn Antenna (1GHz -18GHz)	ETS -Lindgren	3117	00062558	Jun. 23,19	Jun. 22,20
Horn Antenna (18GHz -40GHz)	SCHWARZBECK	BBHA 9170	BBHA9170147	Jun. 23,19	Jun. 22,20
3m Semi-anechoic Chamber	ETS-LINDGREN	9m*6m*6m	NSEMC003	Apr. 21,20	Apr. 20,21
Test Software	ADT	ADT_Radiated_V7.6.15.9.2	N/A	N/A	N/A
Broadband Preamplifier (1GHz~18GHz)	SCHWARZBECK	BBV9718	305	Apr. 21,20	Apr. 20,21
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

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.

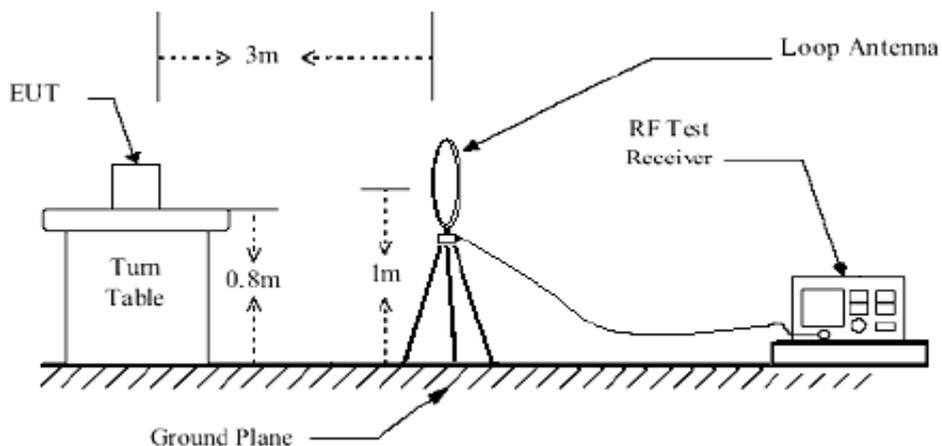
3.1.5 DEVIATION FROM TEST STANDARD

No deviation.

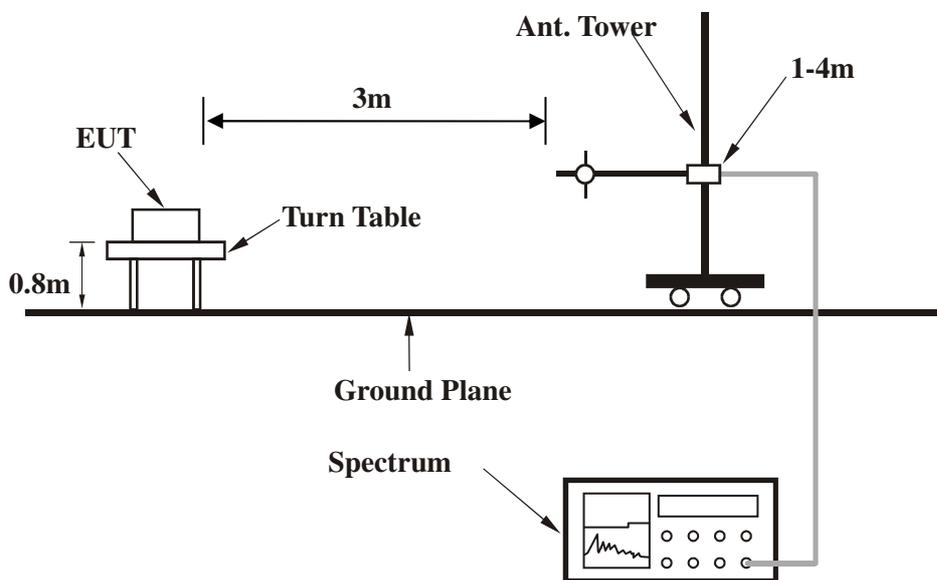


3.1.6 TEST SETUP

Below 30MHz



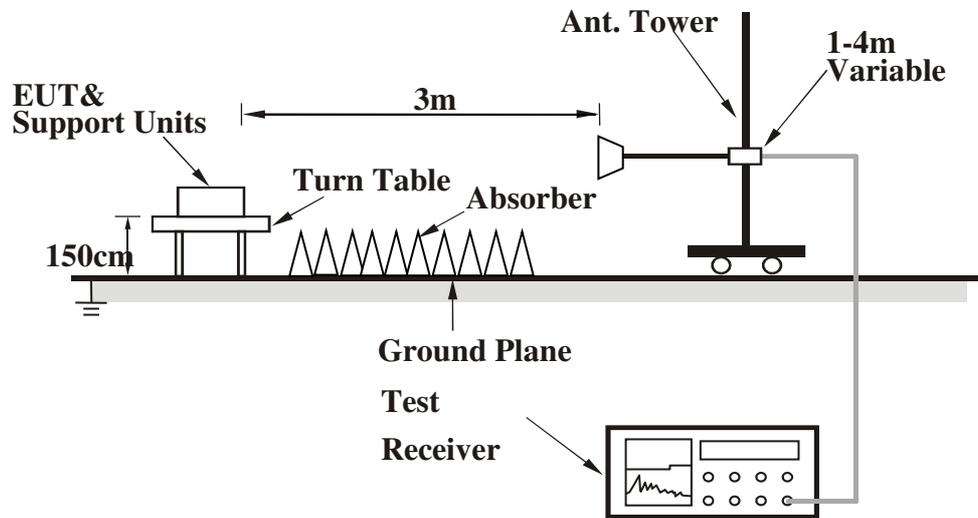
Below 1GHz test setup



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.



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3.1.8 TEST RESULTS

BELOW 1GHz WORST-CASE DATA

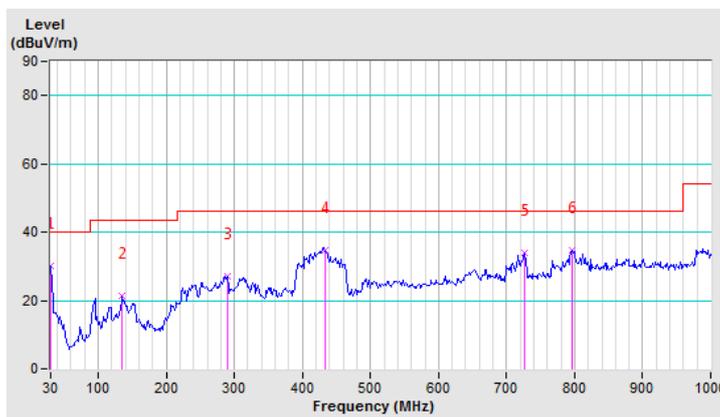
802.11a

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	30.24 QP	40.00	-9.76	1.00 H	152	41.24	-11.00
2	135.71	21.43 QP	43.50	-22.07	1.00 H	303	37.76	-16.33
3	289.60	27.11 QP	46.00	-18.89	1.00 H	179	40.13	-13.02
4	432.61	34.75 QP	46.00	-11.25	1.00 H	204	42.98	-8.23
5	726.41	33.90 QP	46.00	-12.10	1.00 H	82	36.04	-2.14
6	796.36	34.80 QP	46.00	-11.20	1.00 H	77	35.35	-0.55

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.





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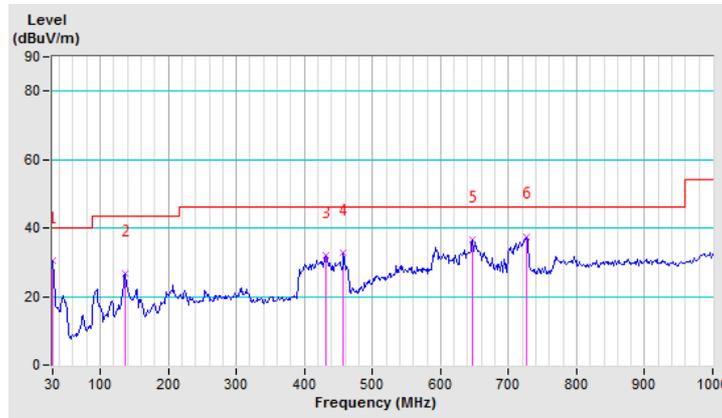
Test Report No.: RF200407N032-4

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	30.39 QP	40.00	-9.61	1.00 V	61	41.39	-11.00
2	137.26	26.71 QP	43.50	-16.79	1.00 V	46	42.90	-16.19
3	431.06	32.03 QP	46.00	-13.97	1.00 V	34	40.30	-8.27
4	457.48	32.71 QP	46.00	-13.29	1.00 V	23	40.38	-7.67
5	647.13	36.44 QP	46.00	-9.56	1.00 V	12	39.67	-3.23
6	726.41	37.55 QP	46.00	-8.45	1.00 V	2	39.69	-2.14

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.





BUREAU VERITAS

Test Report No.: RF200407N032-4

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	5150.00	51.63 PK	74.00	-22.37	2.00 H	8	43.40	8.23
2	5150.00	39.68 AV	54.00	-14.32	2.00 H	8	31.45	8.23
3	*5180.00	103.22 PK			2.00 H	8	94.93	8.29
4	*5180.00	89.96 AV			2.00 H	8	81.67	8.29
5	#10360.00	60.62 PK	68.20	-7.58	1.00 H	153	42.76	17.86
6	15540.00	64.03 PK	74.00	-9.97	1.00 H	145	39.76	24.27
7	15540.00	50.61 AV	54.00	-3.39	1.00 H	145	26.34	24.27

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	50.81 PK	74.00	-23.19	2.00 V	262	42.58	8.23
2	5150.00	38.96 AV	54.00	-15.04	2.00 V	262	30.73	8.23
3	*5180.00	101.41 PK			2.00 V	262	93.12	8.29
4	*5180.00	87.78 AV			2.00 V	262	79.49	8.29
5	#10360.00	59.79 PK	68.20	-8.41	1.00 V	105	41.93	17.86
6	15540.00	64.25 PK	74.00	-9.75	1.00 V	130	39.98	24.27
7	15540.00	50.92 AV	54.00	-3.08	1.00 V	130	26.65	24.27

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.

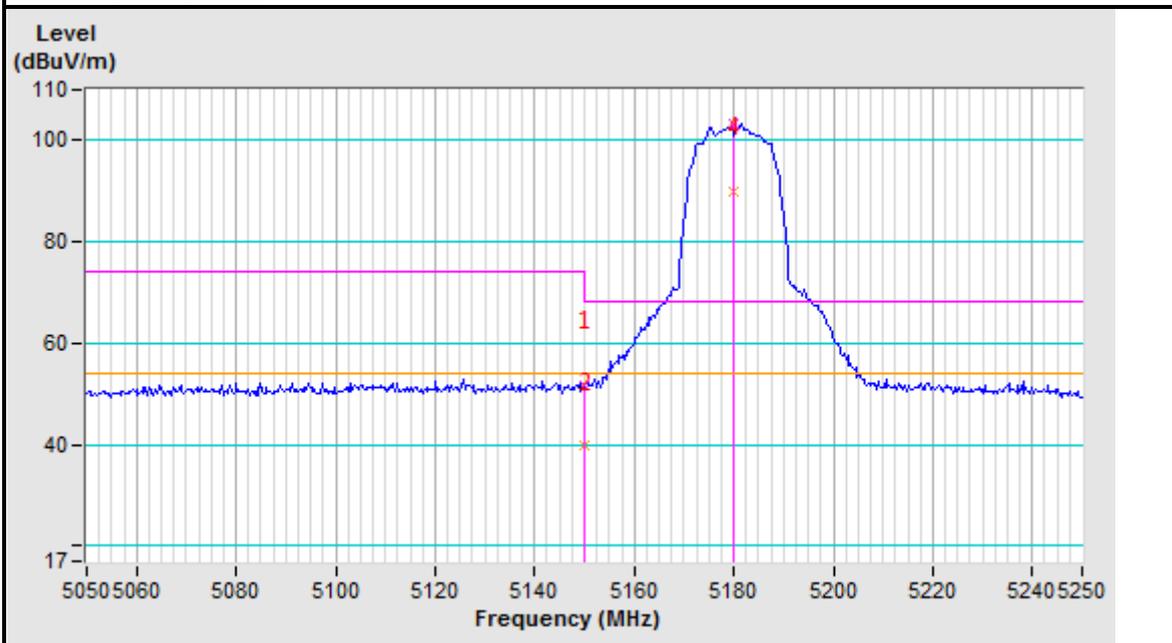


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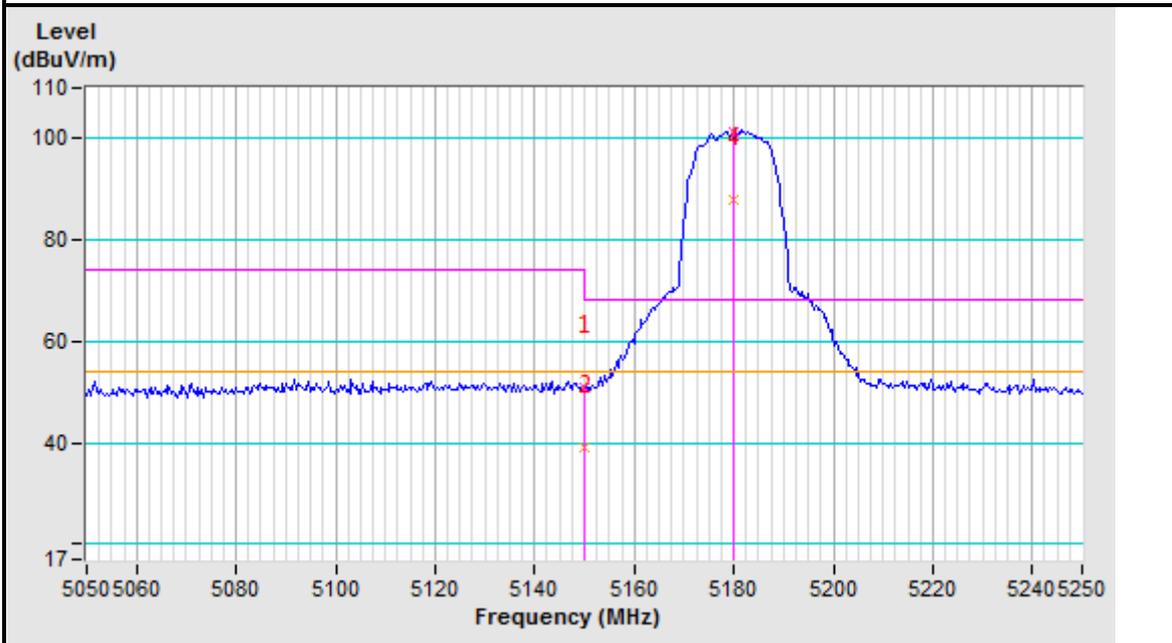
Test Report No.: RF200407N032-4

Band edge Plot

5180MHz Horizontal



5180MHz Vertical





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Test Report No.: RF200407N032-4

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	51.62 PK	74.00	-22.38	1.02 H	360	43.41	8.21
2	5140.00	39.02 AV	54.00	-14.98	1.02 H	360	30.81	8.21
3	5150.00	50.74 PK	74.00	-23.26	1.02 H	360	42.51	8.23
4	5150.00	38.80 AV	54.00	-15.20	1.02 H	360	30.57	8.23
5	*5200.00	105.31 PK			1.02 H	360	96.97	8.34
6	*5200.00	91.31 AV			1.02 H	360	82.97	8.34
7	#10400.00	58.27 PK	68.20	-9.93	1.00 H	137	40.32	17.95
8	15600.00	65.11 PK	74.00	-8.89	1.00 H	165	40.71	24.40
9	15600.00	50.42 AV	54.00	-3.58	1.00 H	165	26.02	24.40

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	50.71 PK	74.00	-23.29	2.00 V	262	42.50	8.21
2	5140.00	38.62 AV	54.00	-15.38	2.00 V	262	30.41	8.21
3	5150.00	50.58 PK	74.00	-23.42	2.00 V	262	42.35	8.23
4	5150.00	38.47 AV	54.00	-15.53	2.00 V	262	30.24	8.23
5	*5200.00	102.60 PK			2.00 V	262	94.26	8.34
6	*5200.00	88.85 AV			2.00 V	262	80.51	8.34
7	#10400.00	60.03 PK	68.20	-8.17	1.00 V	137	42.08	17.95
8	15600.00	64.58 PK	74.00	-9.42	1.00 V	105	40.18	24.40
9	15600.00	50.69 AV	54.00	-3.31	1.00 V	105	26.29	24.40

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. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.



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	5130.00	51.28 PK	74.00	-22.72	1.42 H	8	43.08	8.20
2	5130.00	38.78 AV	54.00	-15.22	1.42 H	8	30.58	8.20
3	5150.00	51.67 PK	74.00	-22.33	1.42 H	8	43.44	8.23
4	5150.00	38.73 AV	54.00	-15.27	1.42 H	8	30.50	8.23
5	*5240.00	104.72 PK			1.42 H	7	96.29	8.43
6	*5240.00	90.79 AV			1.42 H	7	82.36	8.43
7	5350.00	52.07 PK	74.00	-21.93	1.42 H	8	43.41	8.66
8	5350.00	39.25 AV	54.00	-14.75	1.42 H	8	30.59	8.66
9	5360.00	52.26 PK	74.00	-21.74	1.42 H	8	43.58	8.68
10	5360.00	39.02 AV	54.00	-14.98	1.42 H	8	30.34	8.68
11	#10480.00	60.19 PK	68.20	-8.01	1.00 H	146	42.06	18.13
12	15720.00	65.86 PK	74.00	-8.14	1.00 H	152	41.20	24.66
13	15720.00	50.26 AV	54.00	-3.74	1.00 H	152	25.60	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	50.61 PK	74.00	-23.39	2.00 V	264	42.41	8.20
2	5130.00	38.54 AV	54.00	-15.46	2.00 V	264	30.34	8.20
3	5150.00	51.28 PK	74.00	-22.72	2.00 V	262	43.05	8.23
4	5150.00	38.21 AV	54.00	-15.79	2.00 V	262	29.98	8.23
5	*5240.00	102.84 PK			2.00 V	262	94.41	8.43
6	*5240.00	89.13 AV			2.00 V	262	80.70	8.43
7	5350.00	51.17 PK	74.00	-22.83	2.00 V	264	42.51	8.66
8	5350.00	39.10 AV	54.00	-14.90	2.00 V	264	30.44	8.66
9	5360.00	52.38 PK	74.00	-21.62	2.00 V	264	43.70	8.68
10	5360.00	39.21 AV	54.00	-14.79	2.00 V	264	30.53	8.68
11	#10480.00	60.15 PK	68.20	-8.05	1.00 V	0	42.02	18.13
12	15720.00	65.36 PK	74.00	-8.64	1.00 V	73	40.70	24.66
13	15720.00	50.88 AV	54.00	-3.12	1.00 V	73	26.22	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.



BUREAU VERITAS

Test Report No.: RF200407N032-4

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)
3	5150.00	55.19 PK	74.00	-18.81	1.99 H	8	46.96	8.23
4	5150.00	39.65 AV	54.00	-14.35	1.99 H	8	31.42	8.23
5	*5180.00	103.97 PK			1.99 H	8	95.68	8.29
6	*5180.00	89.97 AV			1.99 H	8	81.68	8.29
7	#10360.00	60.67 PK	68.20	-7.53	1.00 H	157	42.81	17.86
8	15540.00	64.99 PK	74.00	-9.01	1.00 H	105	40.72	24.27
9	15540.00	50.73 AV	54.00	-3.27	1.00 H	105	26.46	24.27
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)
3	5150.00	53.48 PK	74.00	-20.52	1.87 V	263	45.25	8.23
4	5150.00	39.21 AV	54.00	-14.79	1.87 V	263	30.98	8.23
5	*5180.00	102.25 PK			1.87 V	263	93.96	8.29
6	*5180.00	88.61 AV			1.87 V	263	80.32	8.29
7	#10360.00	60.01 PK	68.20	-8.19	1.00 V	0	42.15	17.86
8	15540.00	65.09 PK	74.00	-8.91	1.00 V	85	40.82	24.27
9	15540.00	50.42 AV	54.00	-3.58	1.00 V	85	26.15	24.27

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.

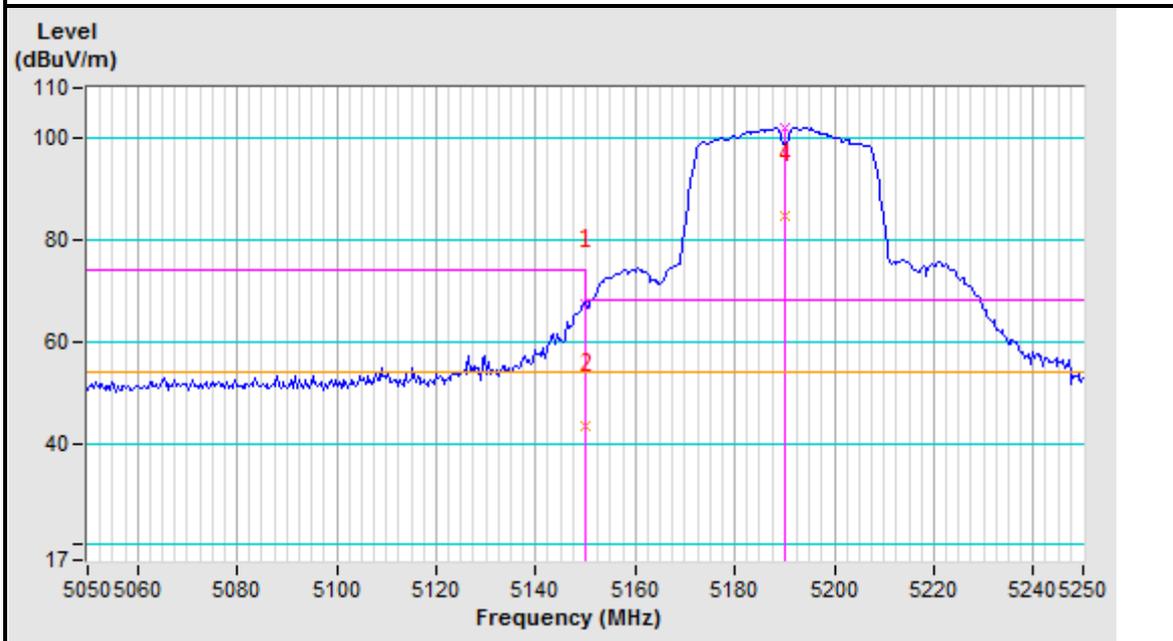


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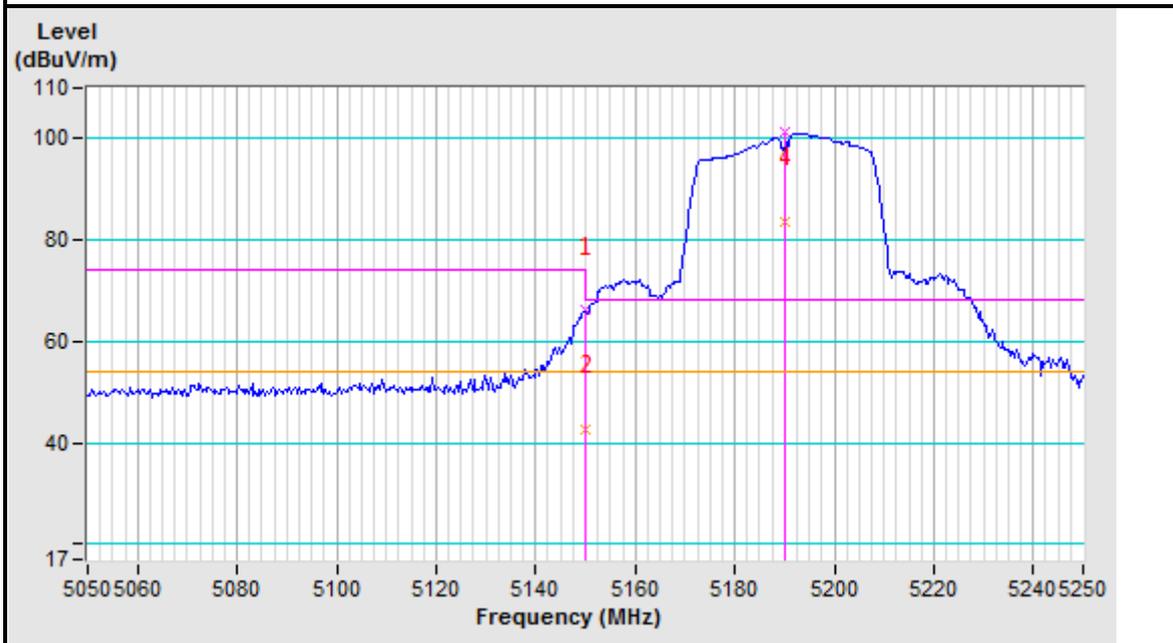
Test Report No.: RF200407N032-4

Band edge Plot

5180MHz Horizontal



5180MHz Vertical





BUREAU VERITAS

Test Report No.: RF200407N032-4

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	52.36 PK	74.00	-21.64	1.02 H	360	44.15	8.21
2	5140.00	39.02 AV	54.00	-14.98	1.02 H	360	30.81	8.21
3	5150.00	51.12 PK	74.00	-22.88	1.02 H	360	42.89	8.23
4	5150.00	38.80 AV	54.00	-15.20	1.02 H	360	30.57	8.23
5	*5200.00	105.35 PK			1.02 H	360	97.01	8.34
6	*5200.00	90.92 AV			1.02 H	360	82.58	8.34
7	#10400.00	60.27 PK	68.20	-7.93	1.00 H	205	42.32	17.95
8	15600.00	64.53 PK	74.00	-9.47	1.02 H	360	40.13	24.40
9	15600.00	50.71 AV	54.00	-3.29	1.02 H	360	26.31	24.40

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	50.91 PK	74.00	-23.09	1.89 V	261	42.70	8.21
2	5140.00	38.77 AV	54.00	-15.23	1.89 V	261	30.56	8.21
3	5150.00	51.42 PK	74.00	-22.58	1.89 V	261	43.19	8.23
4	5150.00	39.00 AV	54.00	-15.00	1.89 V	261	30.77	8.23
5	*5200.00	103.26 PK			1.89 V	261	94.92	8.34
6	*5200.00	88.90 AV			1.89 V	261	80.56	8.34
7	#10400.00	59.77 PK	68.20	-8.43	1.00 V	112	41.82	17.95
8	15600.00	64.03 PK	74.00	-9.97	1.00 V	360	39.63	24.40
9	15600.00	50.91 AV	54.00	-3.09	1.00 V	360	26.51	24.40

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. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

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BUREAU VERITAS

Test Report No.: RF200407N032-4

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	51.89 PK	74.00	-22.11	1.87 H	8	43.68	8.21
2	5140.00	38.57 AV	54.00	-15.43	1.87 H	8	30.36	8.21
3	5150.00	51.44 PK	74.00	-22.56	1.87 H	8	43.21	8.23
4	5150.00	38.48 AV	54.00	-15.52	1.87 H	8	30.25	8.23
5	*5240.00	104.43 PK			1.87 H	8	96.00	8.43
6	*5240.00	90.26 AV			1.87 H	8	81.83	8.43
7	5350.00	51.40 PK	74.00	-22.60	1.87 H	8	42.74	8.66
8	5350.00	39.23 AV	54.00	-14.77	1.87 H	8	30.57	8.66
9	5360.00	51.95 PK	74.00	-22.05	1.87 H	8	43.27	8.68
10	5360.00	39.05 AV	54.00	-14.95	1.87 H	8	30.37	8.68
11	#10480.00	60.29 PK	68.20	-7.91	1.00 H	0	42.16	18.13
12	15720.00	65.34 PK	74.00	-8.66	1.00 H	173	40.68	24.66
13	15720.00	50.67 AV	54.00	-3.33	1.00 H	173	26.01	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	51.97 PK	74.00	-22.03	1.92 V	261	43.77	8.20
2	5130.00	39.02 AV	54.00	-14.98	1.92 V	261	30.82	8.20
3	5150.00	51.29 PK	74.00	-22.71	1.92 V	261	43.06	8.23
4	5150.00	38.34 AV	54.00	-15.66	1.92 V	261	30.11	8.23
5	*5240.00	102.93 PK			1.92 V	261	94.50	8.43
6	*5240.00	88.82 AV			1.92 V	261	80.39	8.43
7	5350.00	50.80 PK	74.00	-23.20	1.92 V	261	42.14	8.66
8	5350.00	38.95 AV	54.00	-15.05	1.92 V	261	30.29	8.66
9	5360.00	51.72 PK	74.00	-22.28	1.92 V	261	43.04	8.68
10	5360.00	39.18 AV	54.00	-14.82	1.92 V	261	30.50	8.68
11	#10480.00	60.32 PK	68.20	-7.88	1.00 V	0	42.19	18.13
12	15720.00	65.03 PK	74.00	-8.97	1.00 V	171	40.37	24.66
13	15720.00	50.45 AV	54.00	-3.55	1.00 V	171	25.79	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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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	5150.00	67.41 PK	74.00	-6.59	1.88 H	358	59.18	8.23
2	5150.00	43.29 AV	54.00	-10.71	1.88 H	358	35.06	8.23
3	*5190.00	102.16 PK			1.88 H	358	93.84	8.32
4	*5190.00	84.62 AV			1.88 H	358	76.30	8.32
5	#10380.00	60.06 PK	68.20	-8.14	1.00 H	0	42.16	17.90
6	15570.00	65.39 PK	74.00	-8.61	1.00 H	106	41.06	24.33
7	15570.00	50.38 AV	54.00	-3.62	1.00 H	106	26.05	24.33

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	66.16 PK	74.00	-7.84	1.82 V	263	57.93	8.23
2	5150.00	42.78 AV	54.00	-11.22	1.82 V	263	34.55	8.23
3	*5190.00	101.14 PK			1.82 V	263	92.82	8.32
4	*5190.00	83.72 AV			1.82 V	263	75.40	8.32
5	#10380.00	61.02 PK	68.20	-7.18	1.00 V	87	43.12	17.90
6	15570.00	66.05 PK	74.00	-7.95	1.00 V	107	41.72	24.33
7	15570.00	50.84 AV	54.00	-3.16	1.00 V	107	26.51	24.33

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.

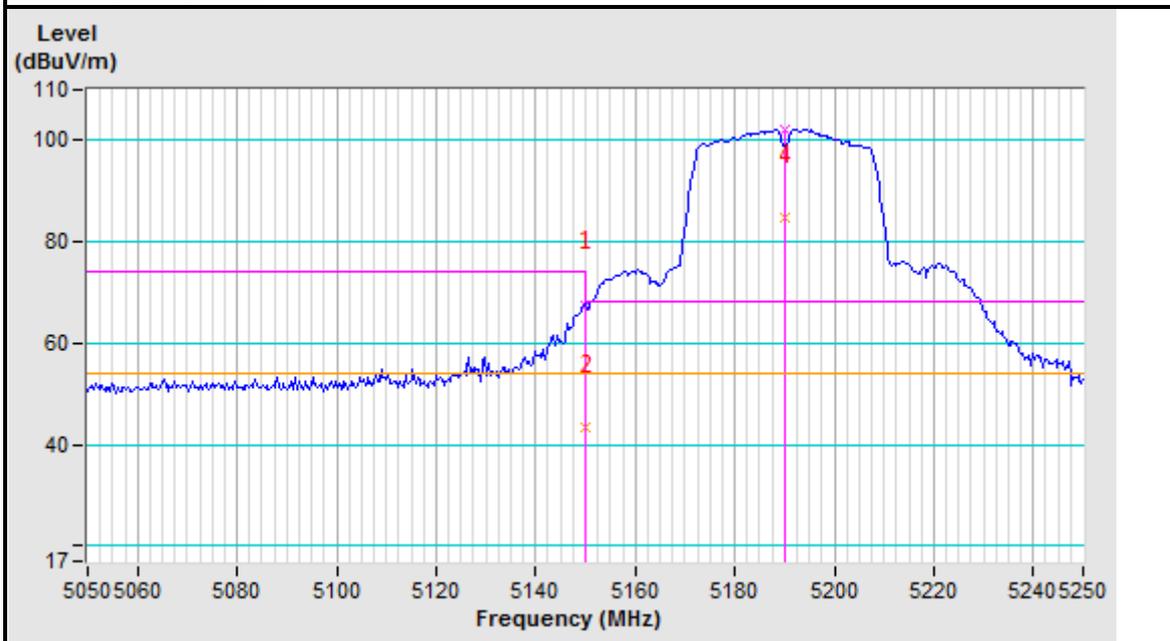


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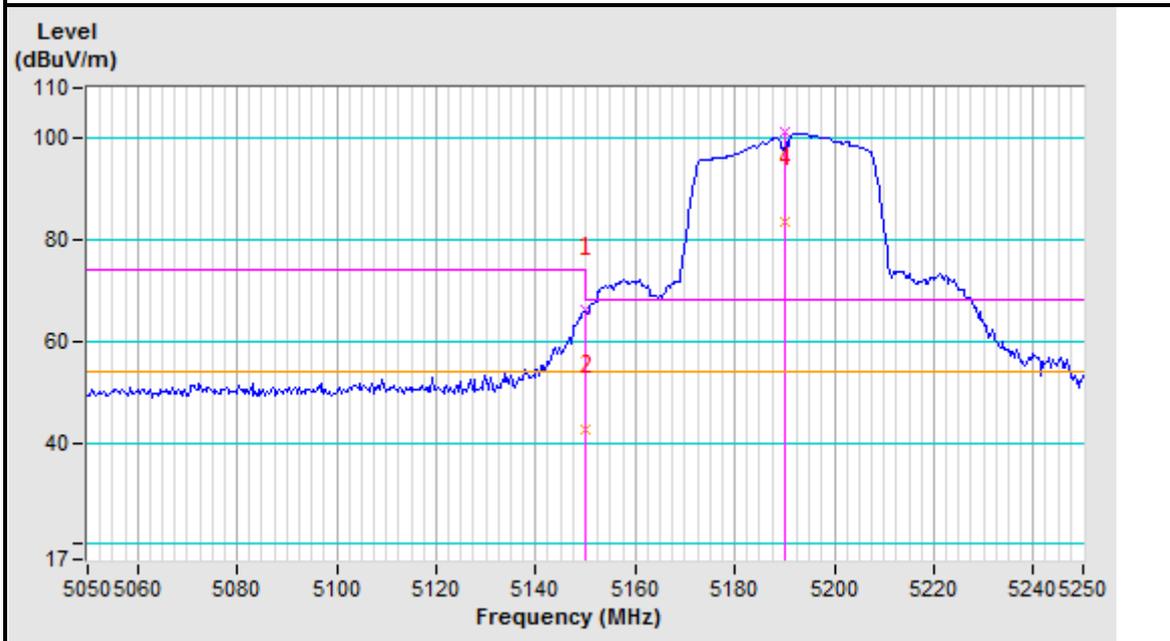
Test Report No.: RF200407N032-4

Band edge Plot

5190MHz Horizontal



5190MHz Vertical





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Test Report No.: RF200407N032-4

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	51.62 PK	74.00	-22.38	1.96 H	8	43.41	8.21
2	5140.00	38.72 AV	54.00	-15.28	1.96 H	8	30.51	8.21
3	5150.00	52.68 PK	74.00	-21.32	1.96 H	8	44.45	8.23
4	5150.00	38.53 AV	54.00	-15.47	1.96 H	8	30.30	8.23
5	*5230.00	101.77 PK			1.96 H	8	93.37	8.40
6	*5230.00	84.41 AV			1.96 H	8	76.01	8.40
7	#10460.00	60.49 PK	68.20	-7.71	1.00 H	0	42.41	18.08
8	15690.00	65.37 PK	74.00	-8.63	1.00 H	173	40.78	24.59
9	15690.00	50.34 AV	54.00	-3.66	1.00 H	173	25.75	24.59

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	51.05 PK	74.00	-22.95	1.90 V	261	42.84	8.21
2	5140.00	39.17 AV	54.00	-14.83	1.90 V	261	30.96	8.21
3	5150.00	51.93 PK	74.00	-22.07	1.90 V	261	43.70	8.23
4	5150.00	38.52 AV	54.00	-15.48	1.90 V	261	30.29	8.23
5	*5230.00	100.33 PK			1.90 V	261	91.93	8.40
6	*5230.00	83.00 AV			1.90 V	261	74.60	8.40
7	#10460.00	60.53 PK	68.20	-7.67	1.00 V	175	42.45	18.08
8	15690.00	66.13 PK	74.00	-7.87	1.00 V	97	41.54	24.59
9	15690.00	50.47 AV	54.00	-3.53	1.00 V	97	25.88	24.59

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.: RF200407N032-4

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	5147.75	65.60 PK	74.00	-8.40	1.85 H	360	57.37	8.23
2	5147.75	43.11 AV	54.00	-10.89	1.85 H	360	34.88	8.23
3	5150.00	63.03 PK	74.00	-10.97	1.85 H	360	54.80	8.23
4	5150.00	43.81 AV	54.00	-10.19	1.85 H	360	35.58	8.23
5	*5210.00	100.61 PK			1.85 H	360	92.24	8.37
6	*5210.00	72.43 AV			1.85 H	360	64.06	8.37
7	#10420.00	61.05 PK	68.20	-7.15	1.00 H	138	43.06	17.99
8	15630.00	66.17 PK	74.00	-7.83	1.00 H	39	41.71	24.46
9	15630.00	50.97 AV	54.00	-3.03	1.00 H	39	26.51	24.46

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	62.56 PK	74.00	-11.44	1.88 V	213	54.33	8.23
2	5150.00	42.92 AV	54.00	-11.08	1.88 V	213	34.69	8.23
3	*5210.00	98.31 PK			1.88 V	213	89.94	8.37
4	*5210.00	71.22 AV			1.88 V	213	62.85	8.37
5	#10420.00	60.87 PK	68.20	-7.33	1.00 V	0	42.88	17.99
6	15630.00	65.47 PK	74.00	-8.53	1.00 V	167	41.01	24.46
7	15630.00	50.78 AV	54.00	-3.22	1.00 V	167	26.32	24.46

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.

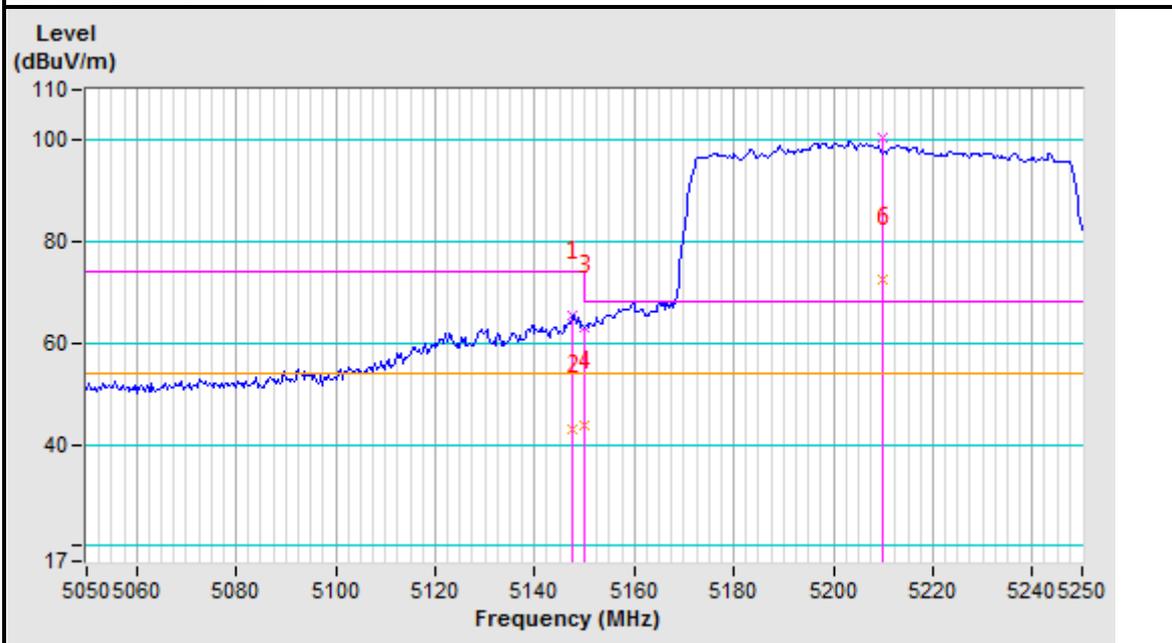


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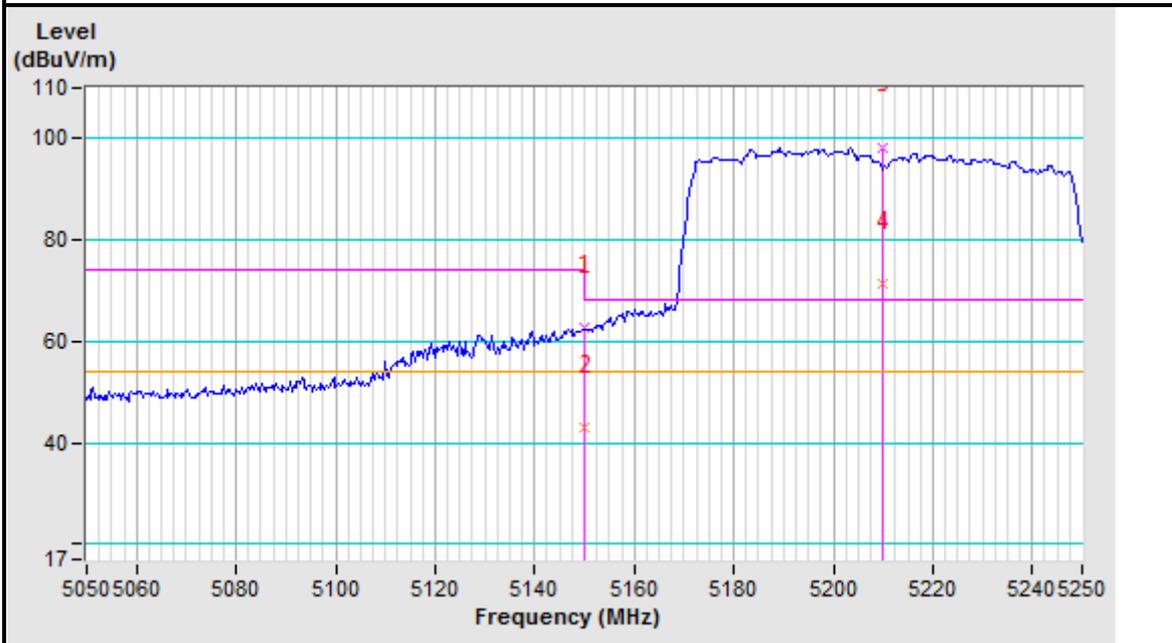
Test Report No.: RF200407N032-4

Band edge Plot

5210MHz Horizontal



5210MHz Vertical





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Test Report No.: RF200407N032-4

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	5140.00	50.19 PK	74.00	-23.81	1.00 H	10	41.98	8.21
2	5140.00	37.05 AV	54.00	-16.95	1.00 H	10	28.84	8.21
3	5150.00	50.06 PK	74.00	-23.94	1.00 H	10	41.83	8.23
4	5150.00	37.25 AV	54.00	-16.75	1.00 H	10	29.02	8.23
5	*5260.00	103.20 PK			1.00 H	10	94.74	8.46
6	*5260.00	89.11 AV			1.00 H	10	80.65	8.46
7	5360.00	51.40 PK	74.00	-22.60	1.00 H	10	42.72	8.68
8	5360.00	38.52 AV	54.00	-15.48	1.00 H	10	29.84	8.68
9	#10520.00	60.58 PK	68.20	-7.62	1.00 H	0	42.37	18.21
10	15780.00	65.79 PK	74.00	-8.21	1.00 H	182	41.01	24.78
11	15780.00	50.37 AV	54.00	-3.63	1.00 H	182	25.59	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	5140.00	50.77 PK	74.00	-23.23	1.95 V	268	42.56	8.21
2	5140.00	37.61 AV	54.00	-16.39	1.95 V	268	29.40	8.21
3	5150.00	50.35 PK	74.00	-23.65	1.95 V	268	42.12	8.23
4	5150.00	37.46 AV	54.00	-16.54	1.95 V	268	29.23	8.23
5	*5260.00	101.90 PK			1.95 V	268	93.44	8.46
6	*5260.00	87.51 AV			1.95 V	268	79.05	8.46
7	5360.00	51.22 PK	74.00	-22.78	1.95 V	268	42.54	8.68
8	5360.00	38.72 AV	54.00	-15.28	1.95 V	268	30.04	8.68
9	#10520.00	59.28 PK	68.20	-8.92	1.00 V	17	41.07	18.21
10	15780.00	65.05 PK	74.00	-8.95	1.00 V	43	40.27	24.78
11	15780.00	50.17 AV	54.00	-3.83	1.00 V	43	25.39	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.

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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	103.82 PK			2.00 H	8	95.27	8.55
2	*5300.00	89.92 AV			2.00 H	8	81.37	8.55
3	5350.00	51.96 PK	74.00	-22.04	2.00 H	8	43.30	8.66
4	5350.00	39.44 AV	54.00	-14.56	2.00 H	8	30.78	8.66
5	5360.00	52.09 PK	74.00	-21.91	2.00 H	8	43.41	8.68
6	5360.00	39.21 AV	54.00	-14.79	2.00 H	8	30.53	8.68
7	10600.00	59.82 PK	74.00	-14.18	1.00 H	124	41.48	18.34
8	10600.00	46.09 AV	54.00	-7.91	1.00 H	124	27.75	18.34
9	15900.00	66.10 PK	74.00	-7.90	1.00 H	248	41.06	25.04
10	15900.00	50.40 AV	54.00	-3.60	1.00 H	248	25.36	25.04

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	99.00 PK			1.00 V	280	90.45	8.55
2	*5300.00	84.79 AV			1.00 V	280	76.24	8.55
3	5350.00	51.03 PK	74.00	-22.97	1.00 V	280	42.37	8.66
4	5350.00	38.27 AV	54.00	-15.73	1.00 V	280	29.61	8.66
5	5360.00	52.17 PK	74.00	-21.83	1.00 V	280	43.49	8.68
6	5360.00	38.54 AV	54.00	-15.46	1.00 V	280	29.86	8.68
7	10600.00	60.62 PK	74.00	-13.38	1.00 V	99	42.28	18.34
8	10600.00	46.34 AV	54.00	-7.66	1.00 V	99	28.00	18.34
9	15900.00	66.24 PK	74.00	-7.76	1.00 V	205	41.20	25.04
10	15900.00	50.64 AV	54.00	-3.36	1.00 V	205	25.60	25.04

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.



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Test Report No.: RF200407N032-4

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	103.65 PK			1.25 H	7	95.05	8.60
2	*5320.00	89.60 AV			1.25 H	7	81.00	8.60
3	5350.00	52.60 PK	74.00	-21.40	1.25 H	7	43.94	8.66
4	5350.00	39.70 AV	54.00	-14.30	1.25 H	7	31.04	8.66
5	10640.00	60.05 PK	74.00	-13.95	1.00 H	82	41.64	18.41
6	10640.00	47.21 AV	54.00	-6.79	1.00 H	82	28.80	18.41
7	15960.00	66.47 PK	74.00	-7.53	1.00 H	65	41.30	25.17
8	15960.00	50.70 AV	54.00	-3.30	1.00 H	65	25.53	25.17

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	102.19 PK			2.00 V	263	93.59	8.60
2	*5320.00	87.93 AV			2.00 V	263	79.33	8.60
3	5350.00	51.30 PK	74.00	-22.70	2.00 V	263	42.64	8.66
4	5350.00	39.50 AV	54.00	-14.50	2.00 V	263	30.84	8.66
5	10640.00	60.59 PK	74.00	-13.41	1.00 V	34	42.18	18.41
6	10640.00	46.77 AV	54.00	-7.23	1.00 V	34	28.36	18.41
7	15960.00	66.75 PK	74.00	-7.25	1.00 V	137	41.58	25.17
8	15960.00	50.63 AV	54.00	-3.37	1.00 V	137	25.46	25.17

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.

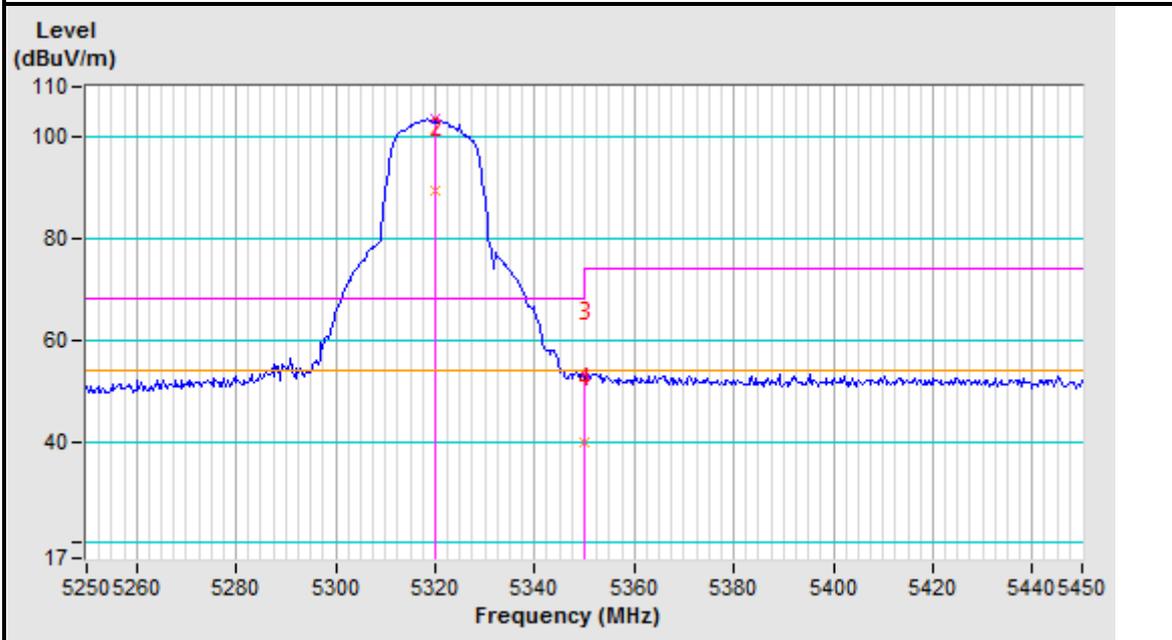


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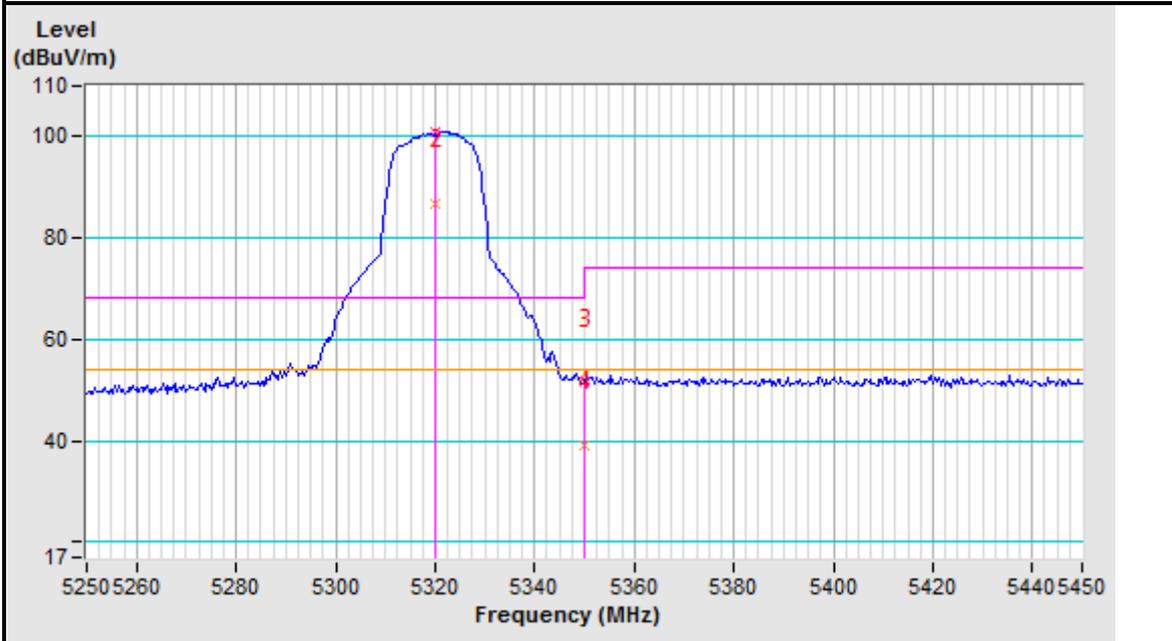
Test Report No.: RF200407N032-4

Band edge Plot

5320MHz Horizontal



5320MHz Vertical





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Test Report No.: RF200407N032-4

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	5140.00	50.25 PK	74.00	-23.75	1.28 H	8	42.04	8.21
2	5140.00	38.07 AV	54.00	-15.93	1.28 H	8	29.86	8.21
3	5150.00	50.84 PK	74.00	-23.16	1.28 H	8	42.61	8.23
4	5150.00	37.69 AV	54.00	-16.31	1.28 H	8	29.46	8.23
5	*5260.00	102.36 PK			1.28 H	8	93.90	8.46
6	*5260.00	87.61 AV			1.28 H	8	79.15	8.46
7	5350.00	51.66 PK	74.00	-22.34	1.28 H	8	43.00	8.66
8	5350.00	38.32 AV	54.00	-15.68	1.28 H	8	29.66	8.66
9	5360.00	51.81 PK	74.00	-22.19	1.28 H	8	43.13	8.68
10	5360.00	38.83 AV	54.00	-15.17	1.28 H	8	30.15	8.68
11	#10520.00	60.78 PK	68.20	-7.42	1.00 H	103	42.57	18.21
12	15780.00	66.44 PK	74.00	-7.56	1.00 H	177	41.66	24.78
13	15780.00	50.71 AV	54.00	-3.29	1.00 H	177	25.93	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	5140.00	51.17 PK	74.00	-22.83	1.98 V	267	42.96	8.21
2	5140.00	38.03 AV	54.00	-15.97	1.98 V	267	29.82	8.21
3	5150.00	50.36 PK	74.00	-23.64	1.98 V	267	42.13	8.23
4	5150.00	38.02 AV	54.00	-15.98	1.98 V	267	29.79	8.23
5	*5260.00	100.05 PK			1.98 V	267	91.59	8.46
6	*5260.00	85.45 AV			1.98 V	267	76.99	8.46
7	5350.00	51.02 PK	74.00	-22.98	1.98 V	267	42.36	8.66
8	5350.00	37.79 AV	54.00	-16.21	1.98 V	267	29.13	8.66
9	5360.00	52.11 PK	74.00	-21.89	1.98 V	267	43.43	8.68
10	5360.00	38.58 AV	54.00	-15.42	1.98 V	267	29.90	8.68
11	#10520.00	60.03 PK	68.20	-8.17	1.00 V	85	41.82	18.21
12	15780.00	65.97 PK	74.00	-8.03	1.00 V	105	41.19	24.78
13	15780.00	50.35 AV	54.00	-3.65	1.00 V	105	25.57	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.

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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	102.95 PK			1.33 H	8	94.40	8.55
2	*5300.00	88.43 AV			1.33 H	8	79.88	8.55
3	5350.00	52.05 PK	74.00	-21.95	1.33 H	8	43.39	8.66
4	5350.00	39.77 AV	54.00	-14.23	1.33 H	8	31.11	8.66
5	5360.00	52.19 PK	74.00	-21.81	1.33 H	8	43.51	8.68
6	5360.00	39.85 AV	54.00	-14.15	1.33 H	8	31.17	8.68
7	10600.00	60.79 PK	74.00	-13.21	1.00 H	28	42.45	18.34
8	10600.00	46.52 AV	54.00	-7.48	1.00 H	28	28.18	18.34
9	15900.00	66.73 PK	74.00	-7.27	1.00 H	0	41.69	25.04
10	15900.00	50.72 AV	54.00	-3.28	1.00 H	0	25.68	25.04

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	100.29 PK			1.00 V	278	91.74	8.55
2	*5300.00	85.01 AV			1.00 V	278	76.46	8.55
3	5350.00	52.14 PK	74.00	-21.86	1.00 V	278	43.48	8.66
4	5350.00	38.71 AV	54.00	-15.29	1.00 V	278	30.05	8.66
5	5360.00	52.27 PK	74.00	-21.73	1.00 V	278	43.59	8.68
6	5360.00	38.93 AV	54.00	-15.07	1.00 V	278	30.25	8.68
7	10600.00	59.71 PK	74.00	-14.29	1.00 V	35	41.37	18.34
8	10600.00	46.05 AV	54.00	-7.95	1.00 V	35	27.71	18.34
9	15900.00	66.80 PK	74.00	-7.20	1.00 V	315	41.76	25.04
10	15900.00	50.52 AV	54.00	-3.48	1.00 V	315	25.48	25.04

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.



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Test Report No.: RF200407N032-4

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	103.61 PK			1.25 H	8	95.01	8.60
2	*5320.00	89.36 AV			1.25 H	8	80.76	8.60
3	5350.00	53.12 PK	74.00	-20.88	1.25 H	8	44.46	8.66
4	5350.00	39.92 AV	54.00	-14.08	1.25 H	8	31.26	8.66
5	10640.00	60.17 PK	74.00	-13.83	1.00 H	62	41.76	18.41
6	10640.00	45.82 AV	54.00	-8.18	1.00 H	62	27.41	18.41
7	15960.00	66.71 PK	74.00	-7.29	1.00 H	0	41.54	25.17
8	15960.00	50.73 AV	54.00	-3.27	1.00 H	0	25.56	25.17

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	100.99 PK			1.82 V	262	92.39	8.60
2	*5320.00	86.76 AV			1.82 V	262	78.16	8.60
3	5350.00	51.51 PK	74.00	-22.49	1.82 V	262	42.85	8.66
4	5350.00	39.17 AV	54.00	-14.83	1.82 V	262	30.51	8.66
5	10640.00	60.85 PK	74.00	-13.15	1.00 V	0	42.44	18.41
6	10640.00	46.15 AV	54.00	-7.85	1.00 V	0	27.74	18.41
7	15960.00	65.52 PK	74.00	-8.48	1.00 V	0	40.35	25.17
8	15960.00	50.19 AV	54.00	-3.81	1.00 V	0	25.02	25.17

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.

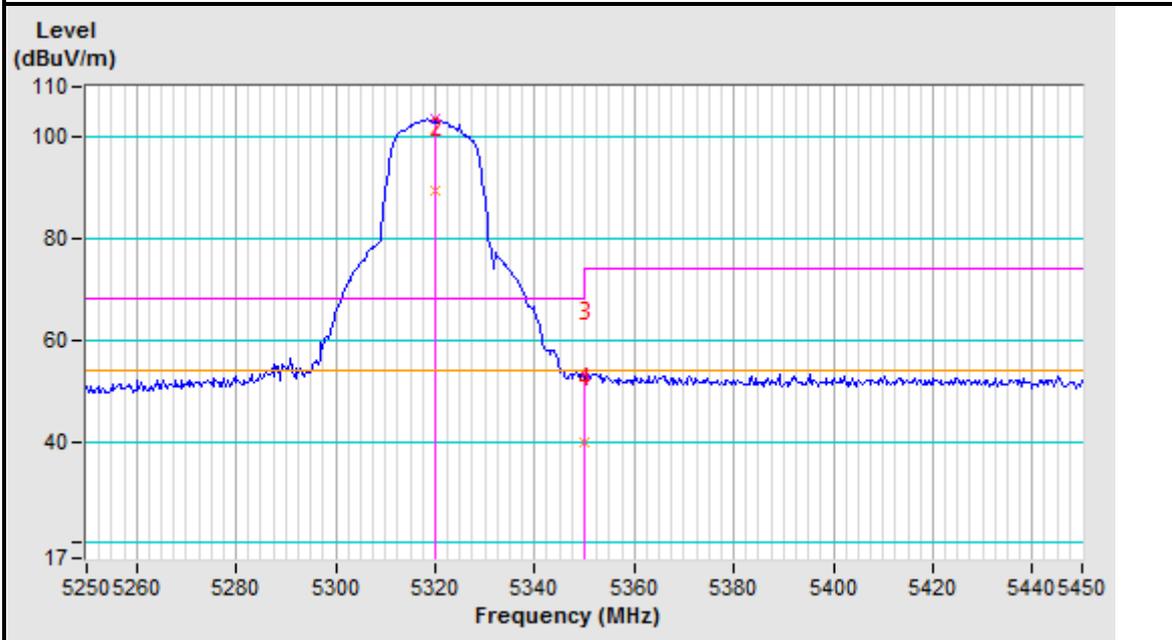


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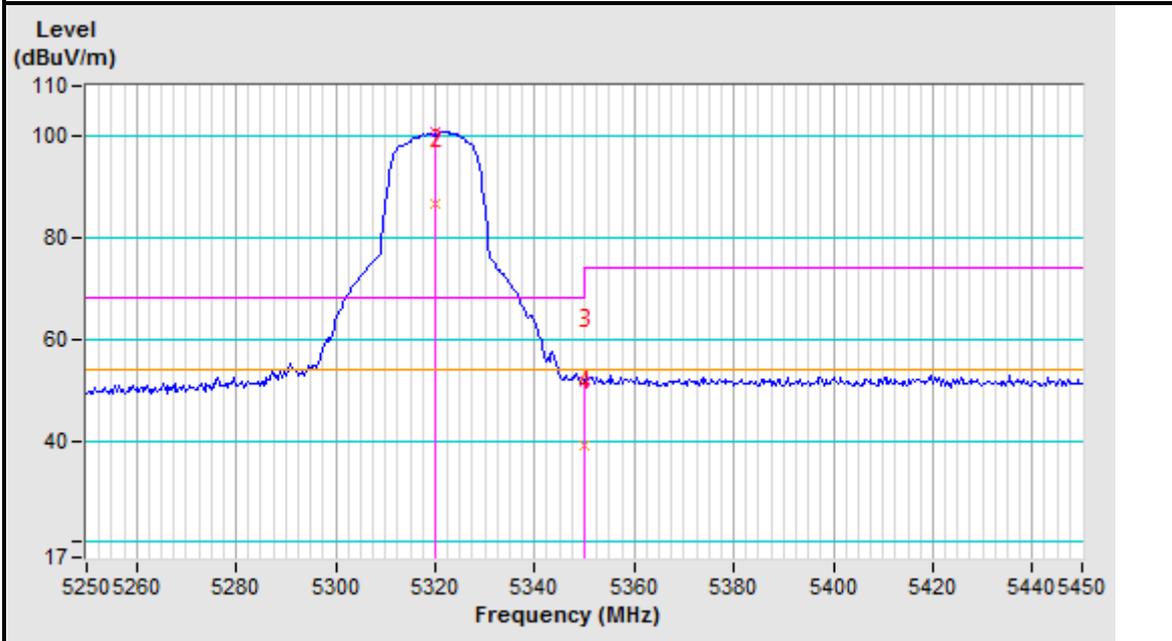
Test Report No.: RF200407N032-4

Band edge Plot

5320MHz Horizontal



5320MHz Vertical



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	100.19 PK			1.33 H	8	91.70	8.49
2	*5270.00	82.23 AV			1.33 H	8	73.74	8.49
3	5350.00	51.60 PK	74.00	-22.40	1.33 H	8	42.94	8.66
4	5350.00	39.15 AV	54.00	-14.85	1.33 H	8	30.49	8.66
5	5360.00	51.16 PK	74.00	-22.84	1.33 H	8	42.48	8.68
6	5360.00	39.27 AV	54.00	-14.73	1.33 H	8	30.59	8.68
7	#10540.00	60.13 PK	68.20	-8.07	1.00 H	0	41.89	18.24
8	15810.00	65.89 PK	74.00	-8.11	1.00 H	105	41.04	24.85
9	15810.00	50.42 AV	54.00	-3.58	1.00 H	105	25.57	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	*5270.00	97.22 PK			2.05 V	266	88.73	8.49
2	*5270.00	80.33 AV			2.05 V	266	71.84	8.49
3	5350.00	51.54 PK	74.00	-22.46	2.05 V	266	42.88	8.66
4	5350.00	38.73 AV	54.00	-15.27	2.05 V	266	30.07	8.66
5	5360.00	52.05 PK	74.00	-21.95	2.05 V	266	43.37	8.68
6	5360.00	38.92 AV	54.00	-15.08	2.05 V	266	30.24	8.68
7	#10540.00	59.71 PK	68.20	-8.49	1.00 V	0	41.47	18.24
8	15810.00	66.90 PK	74.00	-7.10	1.00 V	175	42.05	24.85
9	15810.00	50.71 AV	54.00	-3.29	1.00 V	175	25.86	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.
6. " # ": The radiated frequency is out of the restricted band.



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Test Report No.: RF200407N032-4

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	100.36 PK			1.22 H	8	91.79	8.57
2	*5310.00	83.20 AV			1.22 H	8	74.63	8.57
3	5350.00	62.23 PK	74.00	-11.77	1.22 H	8	53.57	8.66
4	5350.00	40.79 AV	54.00	-13.21	1.22 H	8	32.13	8.66
5	10620.00	60.12 PK	74.00	-13.88	1.00 H	0	41.74	18.38
6	10620.00	46.22 AV	54.00	-7.78	1.00 H	0	27.84	18.38
7	15930.00	66.17 PK	74.00	-7.83	1.00 H	177	41.06	25.11
8	15930.00	50.71 AV	54.00	-3.29	1.00 H	177	25.60	25.11

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	99.09 PK			1.92 V	263	90.52	8.57
2	*5310.00	81.84 AV			1.92 V	263	73.27	8.57
3	5350.00	59.54 PK	74.00	-14.46	1.92 V	263	50.88	8.66
4	5350.00	39.90 AV	54.00	-14.10	1.92 V	263	31.24	8.66
5	10620.00	60.11 PK	74.00	-13.89	1.00 V	105	41.73	18.38
6	10620.00	46.72 AV	54.00	-7.28	1.00 V	105	28.34	18.38
7	15930.00	66.05 PK	74.00	-7.95	1.00 V	173	40.94	25.11
8	15930.00	50.40 AV	54.00	-3.60	1.00 V	173	25.29	25.11

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.

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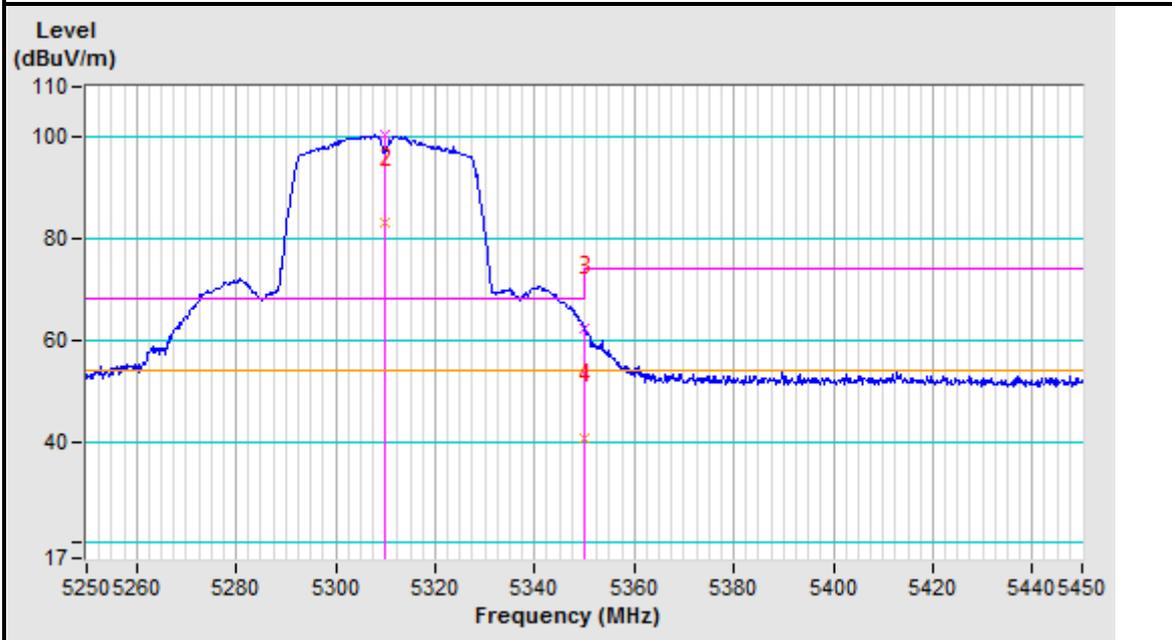


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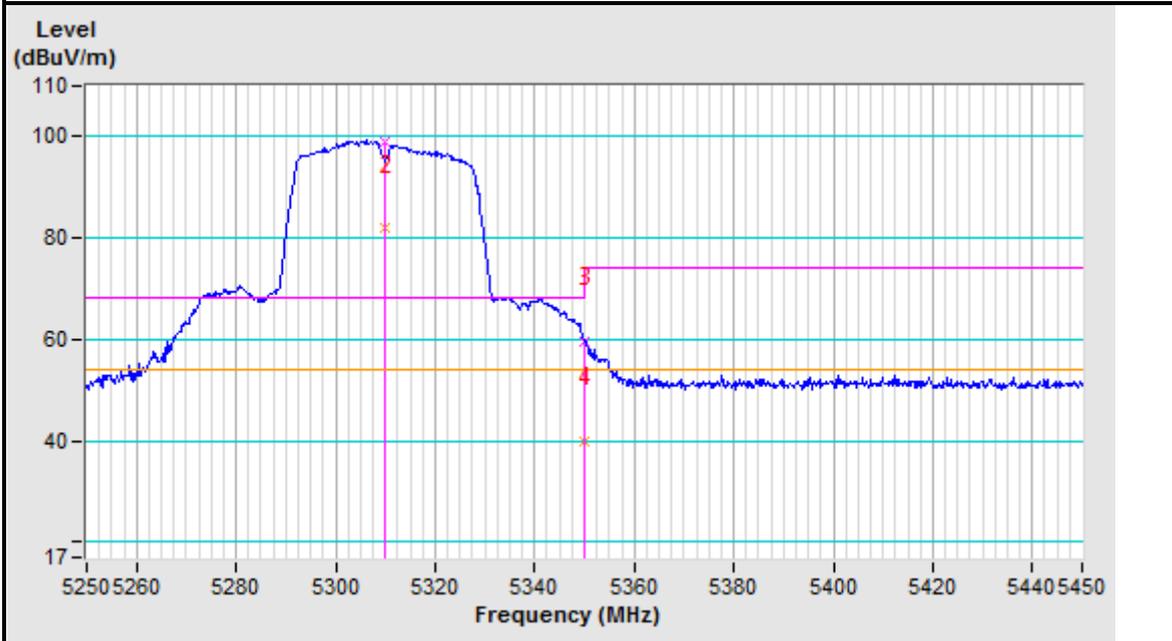
Test Report No.: RF200407N032-4

Band edge Plot

5310MHz Horizontal



5310MHz Vertical





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	97.81 PK			1.00 H	6	89.29	8.52
2	*5290.00	70.96 AV			1.00 H	6	62.44	8.52
3	5350.00	61.34 PK	74.00	-12.66	1.00 H	6	52.68	8.66
4	5350.00	42.08 AV	54.00	-11.92	1.00 H	6	33.42	8.66
5	5363.46	61.12 PK	74.00	-12.88	1.00 H	6	52.44	8.68
6	5363.46	40.15 AV	54.00	-13.85	1.00 H	6	31.47	8.68
7	#10580.00	61.17 PK	68.20	-7.03	1.00 H	315	42.86	18.31
8	15870.00	66.13 PK	74.00	-7.87	1.00 H	311	41.15	24.98
9	15870.00	50.78 AV	54.00	-3.22	1.00 H	311	25.80	24.98

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

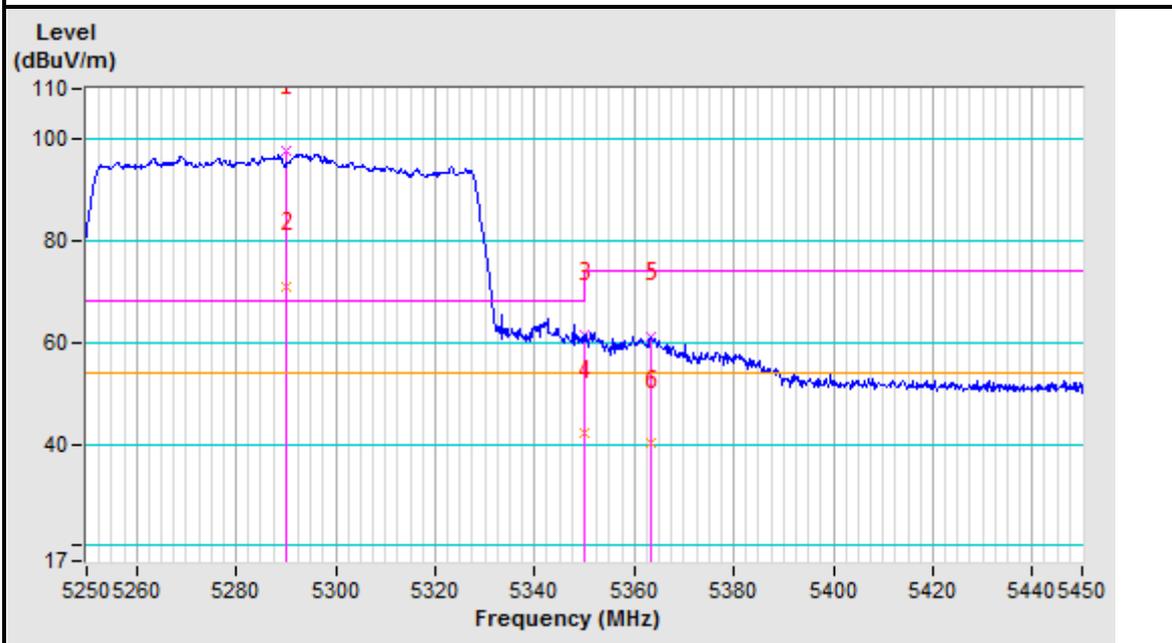
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5290.00	96.06 PK			1.93 V	264	87.54	8.52
2	*5290.00	69.18 AV			1.93 V	264	60.66	8.52
3	5350.00	59.35 PK	74.00	-14.65	1.93 V	264	50.69	8.66
4	5350.00	41.16 AV	54.00	-12.84	1.93 V	264	32.50	8.66
5	#10580.00	60.28 PK	68.20	-7.92	1.00 V	0	41.97	18.31
6	15870.00	65.73 PK	74.00	-8.27	1.00 V	16	40.75	24.98
7	15870.00	50.35 AV	54.00	-3.65	1.00 V	16	25.37	24.98

REMARKS:

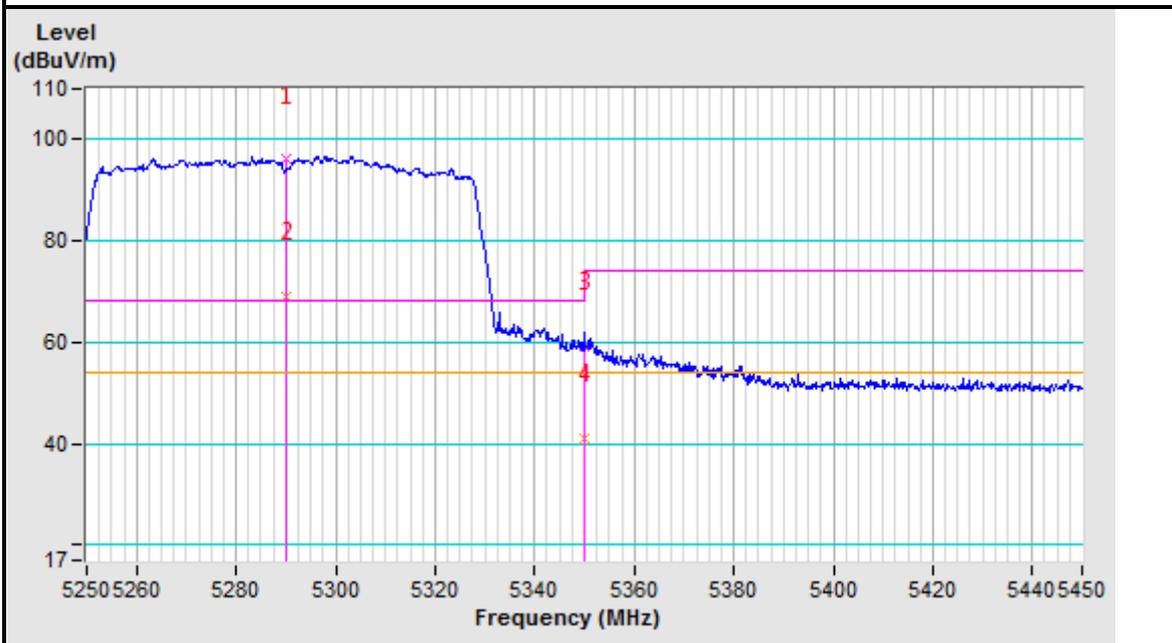
1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The emission levels of other frequencies were greater than 20dB margin.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.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

Band edge Plot

5290MHz Horizontal



5290MHz Vertical





BUREAU VERITAS

Test Report No.: RF200407N032-4

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	#5470.00	53.13 PK	68.20	-15.07	1.73 H	5	44.22	8.91
2	*5500.00	103.77 PK			1.73 H	5	94.80	8.97
3	*5500.00	90.08 AV			1.73 H	5	81.11	8.97
4	11000.00	60.05 PK	74.00	-13.95	1.00 H	36	41.01	19.04
5	11000.00	45.78 AV	54.00	-8.22	1.00 H	36	26.74	19.04
6	#16500.00	64.73 PK	68.20	-3.47	1.00 H	17	39.17	25.56
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	#5470.00	52.57 PK	68.20	-15.63	1.00 V	305	43.66	8.91
2	*5500.00	100.63 PK			1.00 V	305	91.66	8.97
3	*5500.00	86.60 AV			1.00 V	305	77.63	8.97
4	11000.00	60.19 PK	74.00	-13.81	1.00 V	315	41.15	19.04
5	11000.00	45.82 AV	54.00	-8.18	1.00 V	315	26.78	19.04
6	#16500.00	65.02 PK	68.20	-3.18	1.00 V	17	39.46	25.56

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.

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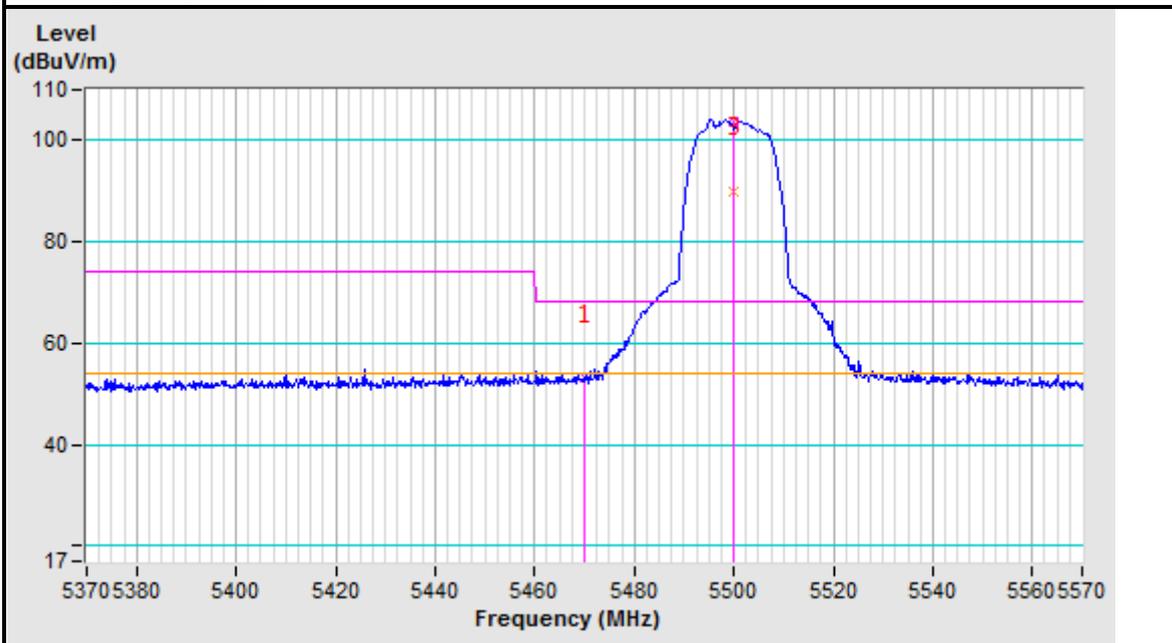


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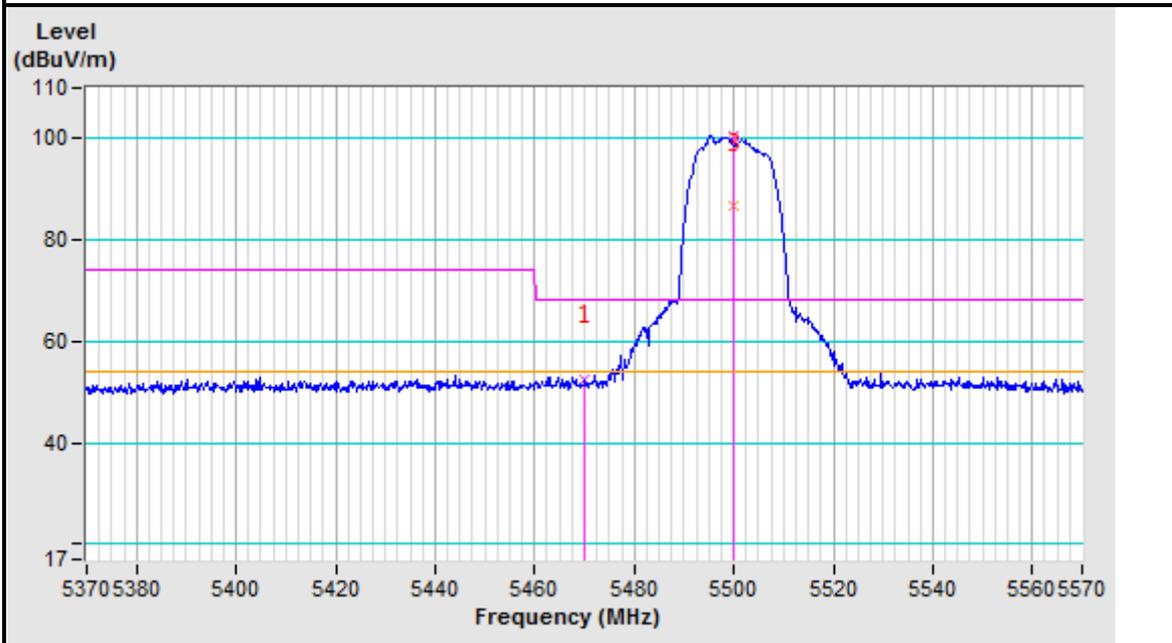
Test Report No.: RF200407N032-4

Band edge Plot

5500MHz Horizontal



5500MHz Vertical





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	51.59 PK	68.20	-16.61	1.68 H	6	42.68	8.91
2	*5580.00	104.10 PK			1.68 H	6	94.92	9.18
3	*5580.00	90.03 AV			1.68 H	6	80.85	9.18
4	11160.00	59.38 PK	74.00	-14.62	1.00 H	155	40.15	19.23
5	11160.00	45.48 AV	54.00	-8.52	1.00 H	155	26.25	19.23
6	#16740.00	64.72 PK	68.20	-3.48	1.00 H	12	38.42	26.30

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	51.50 PK	68.20	-16.70	1.00 V	303	42.59	8.91
2	*5580.00	98.85 PK			1.00 V	303	89.67	9.18
3	*5580.00	85.36 AV			1.00 V	303	76.18	9.18
4	11160.00	60.72 PK	74.00	-13.28	1.00 V	105	41.49	19.23
5	11160.00	45.91 AV	54.00	-8.09	1.00 V	105	26.68	19.23
6	#16740.00	64.42 PK	68.20	-3.78	1.00 V	0	38.12	26.30

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.



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	100.75 PK			1.00 H	99	91.25	9.50
2	*5700.00	87.08 AV			1.00 H	99	77.58	9.50
3	#5725.00	52.44 PK	68.20	-15.76	1.00 H	99	42.88	9.56
4	11400.00	60.03 PK	74.00	-13.97	1.00 H	37	40.50	19.53
5	11400.00	45.69 AV	54.00	-8.31	1.00 H	37	26.16	19.53
6	#17100.00	64.82 PK	68.20	-3.38	1.00 H	103	37.62	27.20

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	99.16 PK			1.00 V	303	89.66	9.50
2	*5700.00	85.98 AV			1.00 V	303	76.48	9.50
3	#5725.00	51.05 PK	68.20	-17.15	1.00 V	303	41.49	9.56
4	11400.00	59.69 PK	74.00	-14.31	1.00 V	105	40.16	19.53
5	11400.00	45.25 AV	54.00	-8.75	1.00 V	105	25.72	19.53
6	#17100.00	64.33 PK	68.20	-3.87	1.00 V	170	37.13	27.20

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.

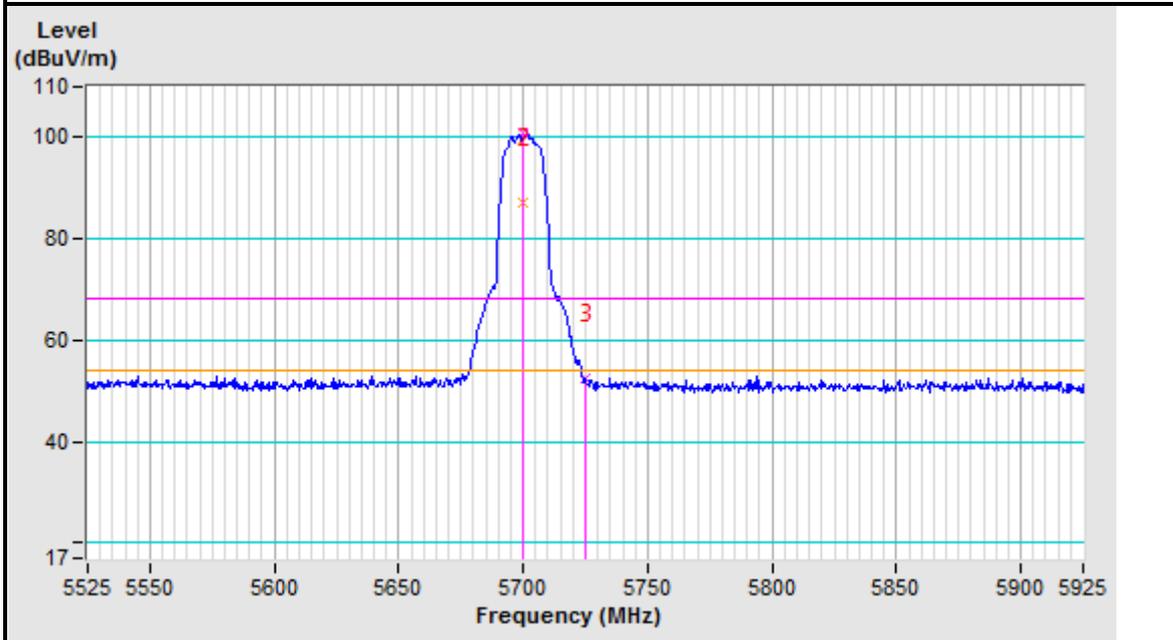


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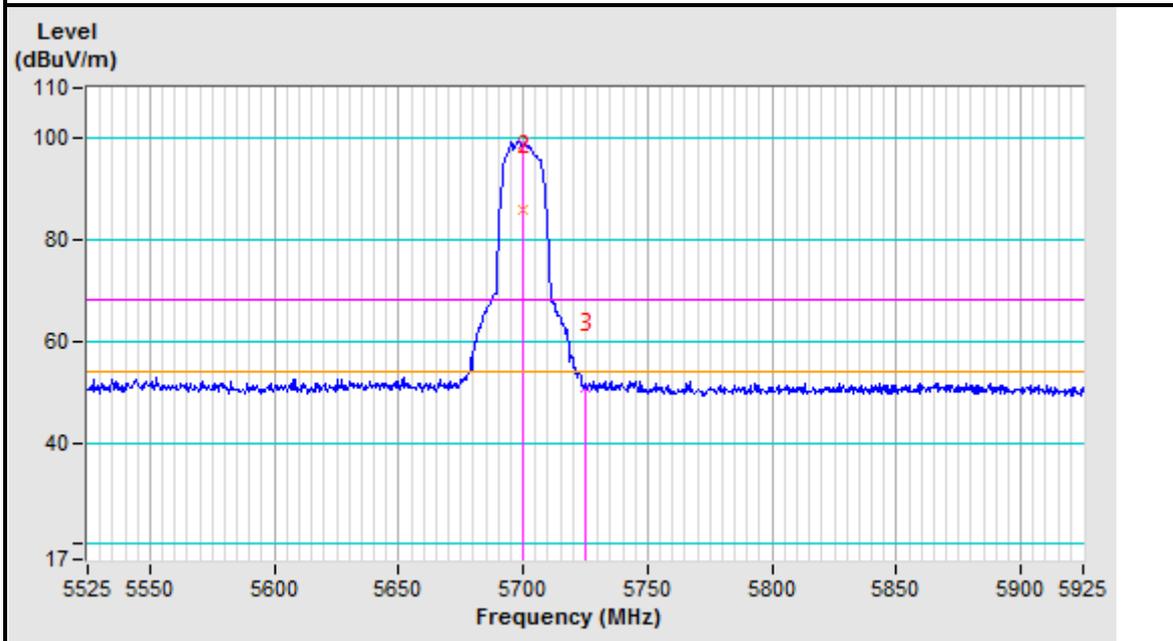
Test Report No.: RF200407N032-4

Band edge Plot

5700MHz Horizontal



5700MHz Vertical



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	#5470.00	52.49 PK	68.20	-15.71	1.09 H	82	43.58	8.91
2	*5500.00	103.30 PK			1.09 H	82	94.33	8.97
3	*5500.00	89.21 AV			1.09 H	82	80.24	8.97
4	11000.00	60.28 PK	74.00	-13.72	1.00 H	350	41.24	19.04
5	11000.00	45.60 AV	54.00	-8.40	1.00 H	350	26.56	19.04
6	#16500.00	65.03 PK	68.20	-3.17	1.00 H	49	39.47	25.56
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	#5470.00	51.58 PK	68.20	-16.62	1.00 V	305	42.67	8.91
2	*5500.00	100.17 PK			1.00 V	305	91.20	8.97
3	*5500.00	86.29 AV			1.00 V	305	77.32	8.97
4	11000.00	59.77 PK	74.00	-14.23	1.00 V	154	40.73	19.04
5	11000.00	45.42 AV	54.00	-8.58	1.00 V	154	26.38	19.04
6	#16500.00	64.42 PK	68.20	-3.78	1.00 V	0	38.86	25.56

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.

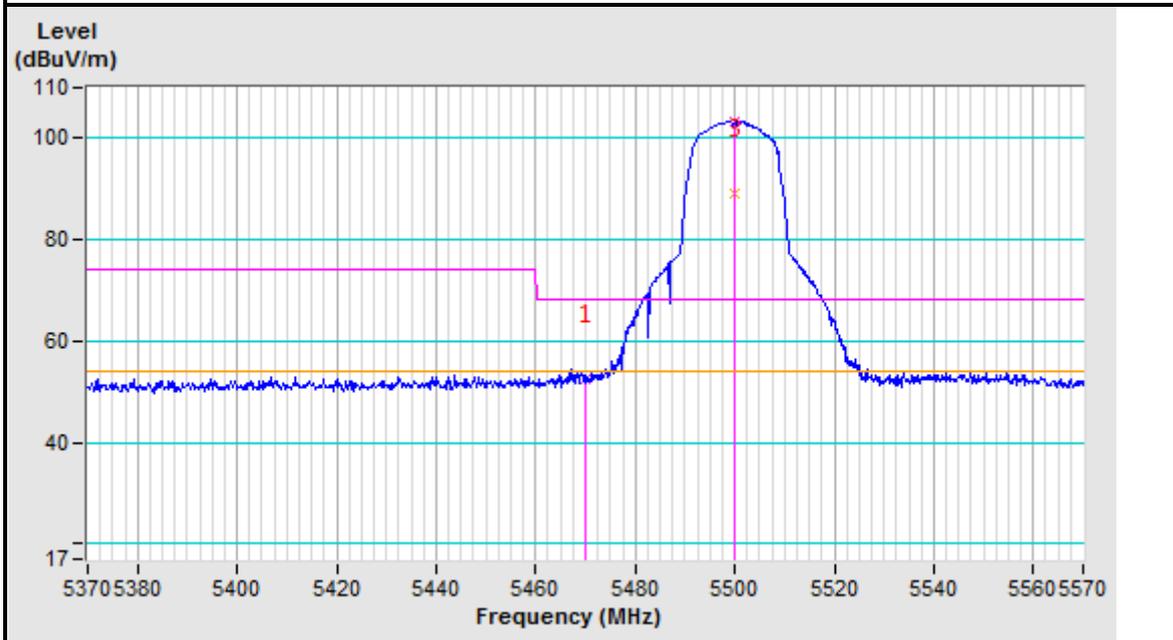


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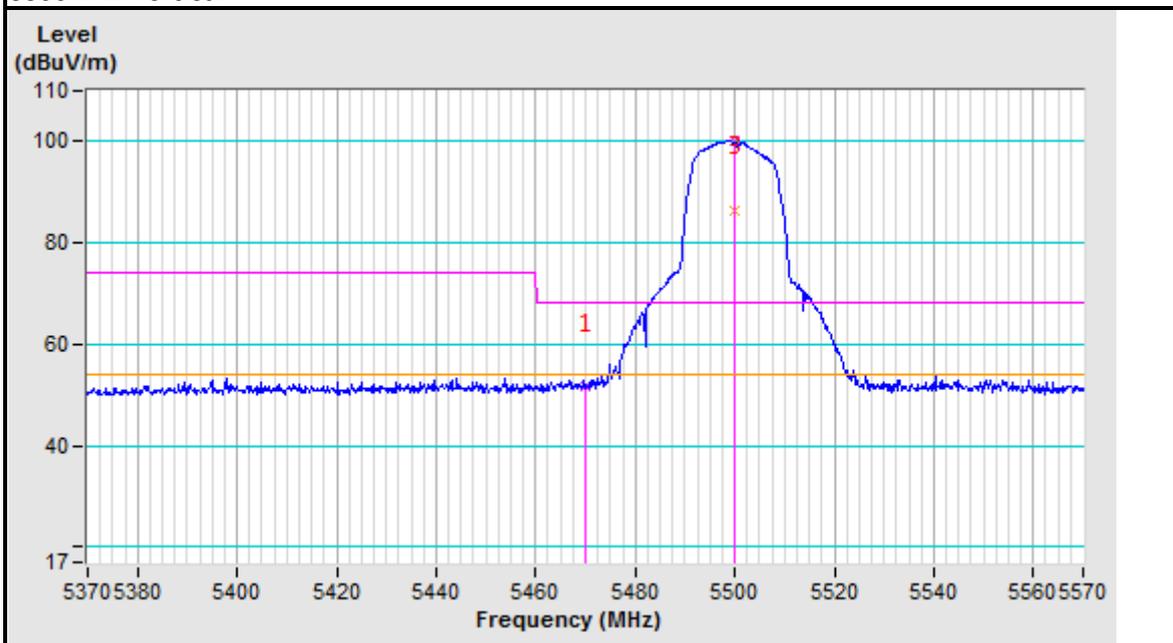
Test Report No.: RF200407N032-4

Band edge Plot

5500MHz Horizontal



5500MHz Vertical





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Test Report No.: RF200407N032-4

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	50.89 PK	68.20	-17.31	1.00 H	89	41.98	8.91
2	*5580.00	102.96 PK			1.00 H	89	93.78	9.18
3	*5580.00	89.04 AV			1.00 H	89	79.86	9.18
4	11160.00	60.13 PK	74.00	-13.87	1.00 H	174	40.90	19.23
5	11160.00	45.09 AV	54.00	-8.91	1.00 H	174	25.86	19.23
6	#16740.00	64.87 PK	68.20	-3.33	1.00 H	0	38.57	26.30

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	51.05 PK	68.20	-17.15	1.00 V	304	42.14	8.91
2	*5580.00	100.02 PK			1.00 V	304	90.84	9.18
3	*5580.00	86.41 AV			1.00 V	304	77.23	9.18
4	11160.00	60.03 PK	74.00	-13.97	1.00 V	85	40.80	19.23
5	11160.00	45.70 AV	54.00	-8.30	1.00 V	85	26.47	19.23
6	#16740.00	64.17 PK	68.20	-4.03	1.00 V	0	37.87	26.30

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.



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	101.08 PK			1.30 H	99	91.58	9.50
2	*5700.00	87.24 AV			1.30 H	99	77.74	9.50
3	#5725.00	55.90 PK	68.20	-12.30	1.30 H	99	46.34	9.56
4	11400.00	60.68 PK	74.00	-13.32	1.00 H	87	41.15	19.53
5	11400.00	46.37 AV	54.00	-7.63	1.00 H	87	26.84	19.53
6	#17100.00	65.05 PK	68.20	-3.15	1.00 H	89	37.85	27.20

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	99.08 PK			1.00 V	302	89.58	9.50
2	*5700.00	85.52 AV			1.00 V	302	76.02	9.50
3	#5725.00	52.21 PK	68.20	-15.99	1.00 V	302	42.65	9.56
4	11400.00	60.58 PK	74.00	-13.42	1.00 V	25	41.05	19.53
5	11400.00	45.12 AV	54.00	-8.88	1.00 V	25	25.59	19.53
6	#17100.00	64.78 PK	68.20	-3.42	1.00 V	147	37.58	27.20

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.

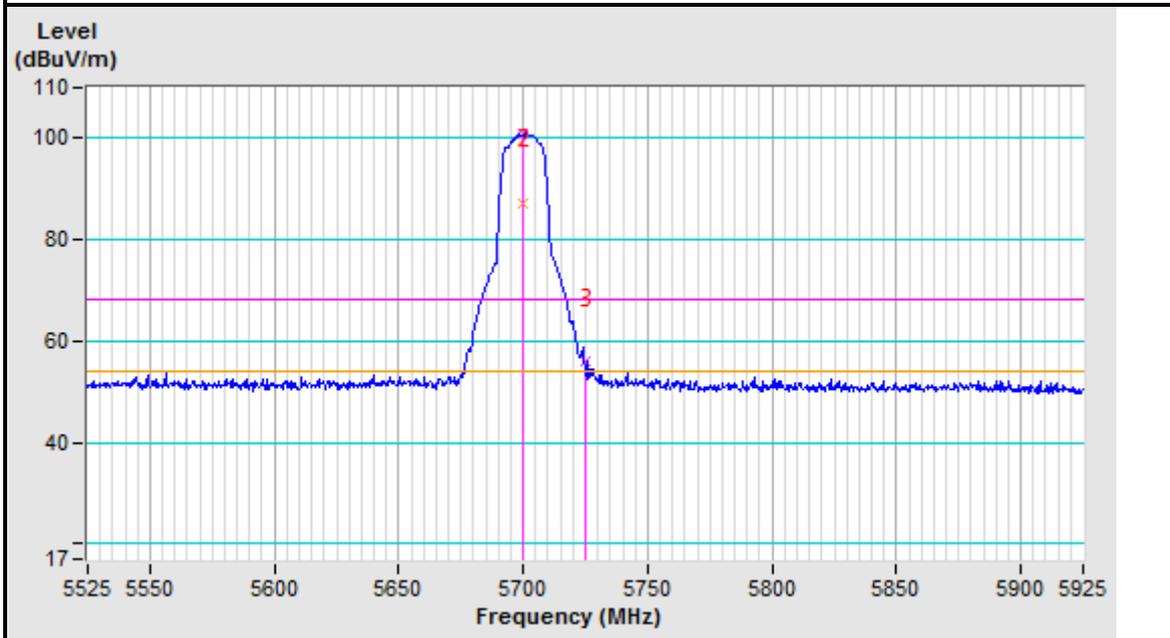


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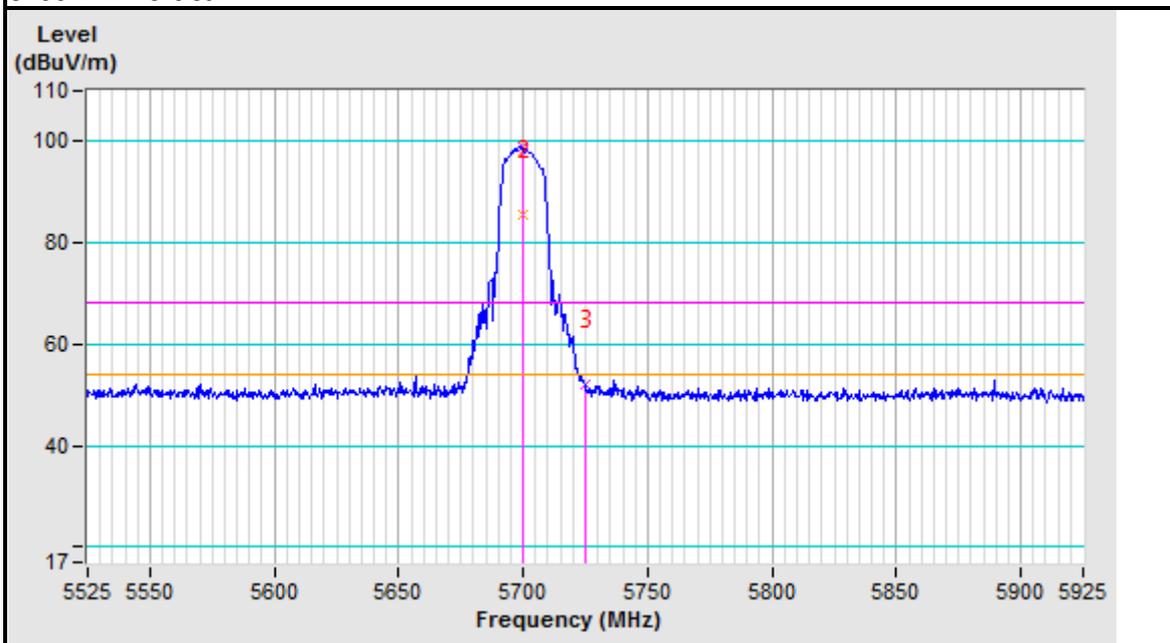
Test Report No.: RF200407N032-4

Band edge Plot

5700MHz Horizontal



5700MHz Vertical





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Test Report No.: RF200407N032-4

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	#5470.00	65.86 PK	68.20	-2.34	1.71 H	6	56.95	8.91
2	*5510.00	101.70 PK			1.71 H	6	92.71	8.99
3	*5510.00	84.41 AV			1.71 H	6	75.42	8.99
4	11020.00	60.35 PK	74.00	-13.65	1.00 H	112	41.28	19.07
5	11020.00	45.79 AV	54.00	-8.21	1.00 H	112	26.72	19.07
6	#16530.00	64.36 PK	68.20	-3.84	1.00 H	0	38.71	25.65
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	63.26 PK	68.20	-4.94	1.00 V	304	54.35	8.91
2	*5510.00	97.75 PK			1.00 V	304	88.76	8.99
3	*5510.00	80.82 AV			1.00 V	304	71.83	8.99
4	11020.00	59.73 PK	74.00	-14.27	1.00 V	360	40.66	19.07
5	11020.00	45.28 AV	54.00	-8.72	1.00 V	360	26.21	19.07
6	#16530.00	64.15 PK	68.20	-4.05	1.00 V	87	38.50	25.65

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.

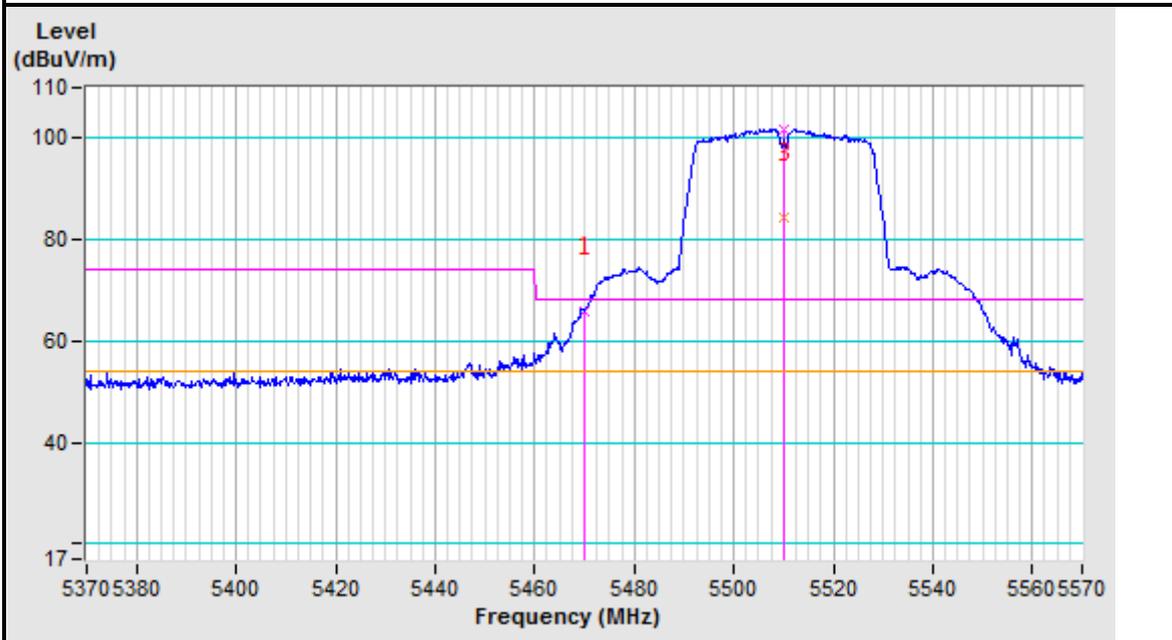


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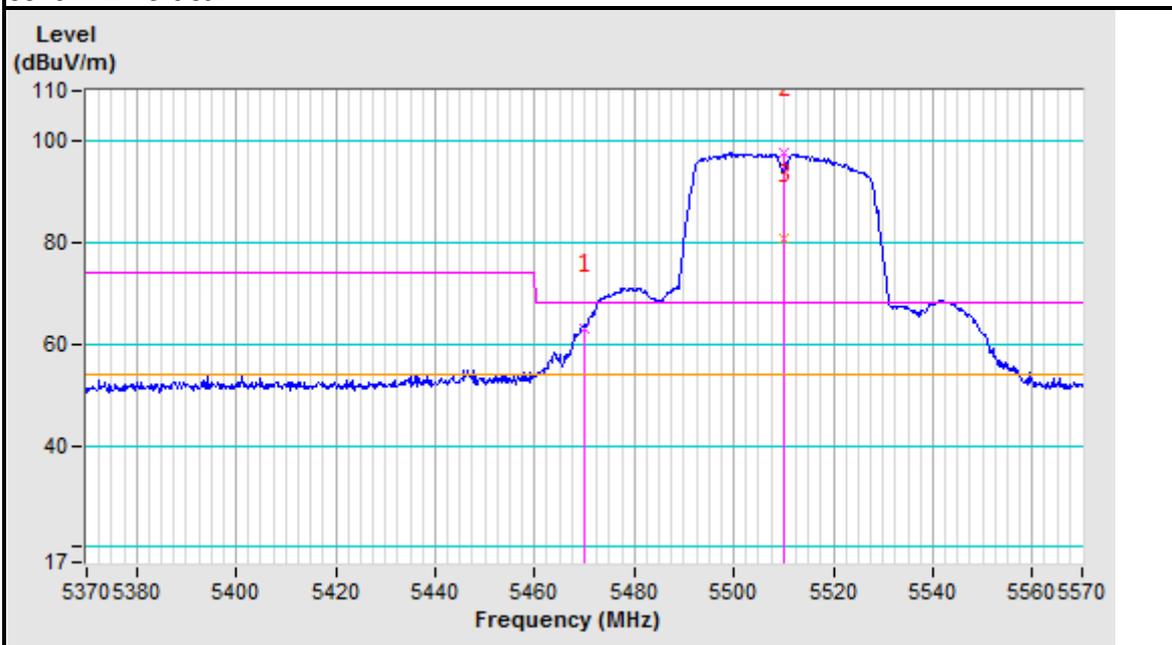
Test Report No.: RF200407N032-4

Band edge Plot

5510MHz Horizontal



5510MHz Vertical





BUREAU VERITAS

Test Report No.: RF200407N032-4

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	52.13 PK	68.20	-16.07	1.49 H	6	43.22	8.91
2	*5550.00	102.12 PK			1.49 H	6	93.02	9.10
3	*5550.00	84.67 AV			1.49 H	6	75.57	9.10
4	11100.00	61.03 PK	74.00	-12.97	1.00 H	25	41.87	19.16
5	11100.00	46.82 AV	54.00	-7.18	1.00 H	25	27.66	19.16
6	#16650.00	64.03 PK	68.20	-4.17	1.00 H	87	38.01	26.02

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	#5470.00	51.72 PK	68.20	-16.48	1.00 V	319	42.81	8.91
2	*5550.00	97.01 PK			1.00 V	319	87.91	9.10
3	*5550.00	79.55 AV			1.00 V	319	70.45	9.10
4	11100.00	60.32 PK	74.00	-13.68	1.00 V	73	41.16	19.16
5	11100.00	46.08 AV	54.00	-7.92	1.00 V	73	26.92	19.16
6	#16650.00	64.03 PK	68.20	-4.17	1.00 V	153	38.01	26.02

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.



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	98.69 PK			1.82 H	53	89.28	9.41
2	*5670.00	81.74 AV			1.82 H	53	72.33	9.41
3	#5725.00	52.06 PK	68.20	-16.14	1.00 H	53	42.50	9.56
4	11340.00	60.28 PK	74.00	-13.72	1.00 H	70	40.82	19.46
5	11340.00	45.71 AV	54.00	-8.29	1.00 H	70	26.25	19.46
6	#17010.00	64.10 PK	68.20	-4.10	1.00 H	204	36.99	27.11
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	97.74 PK			1.05 V	358	88.33	9.41
2	*5670.00	81.25 AV			1.05 V	358	71.84	9.41
3	#5725.00	51.42 PK	68.20	-16.78	1.05 V	358	41.86	9.56
4	11340.00	60.44 PK	74.00	-13.56	1.00 V	168	40.98	19.46
5	11340.00	46.02 AV	54.00	-7.98	1.00 V	168	26.56	19.46
6	#17010.00	64.25 PK	68.20	-3.95	1.00 V	25	37.14	27.11

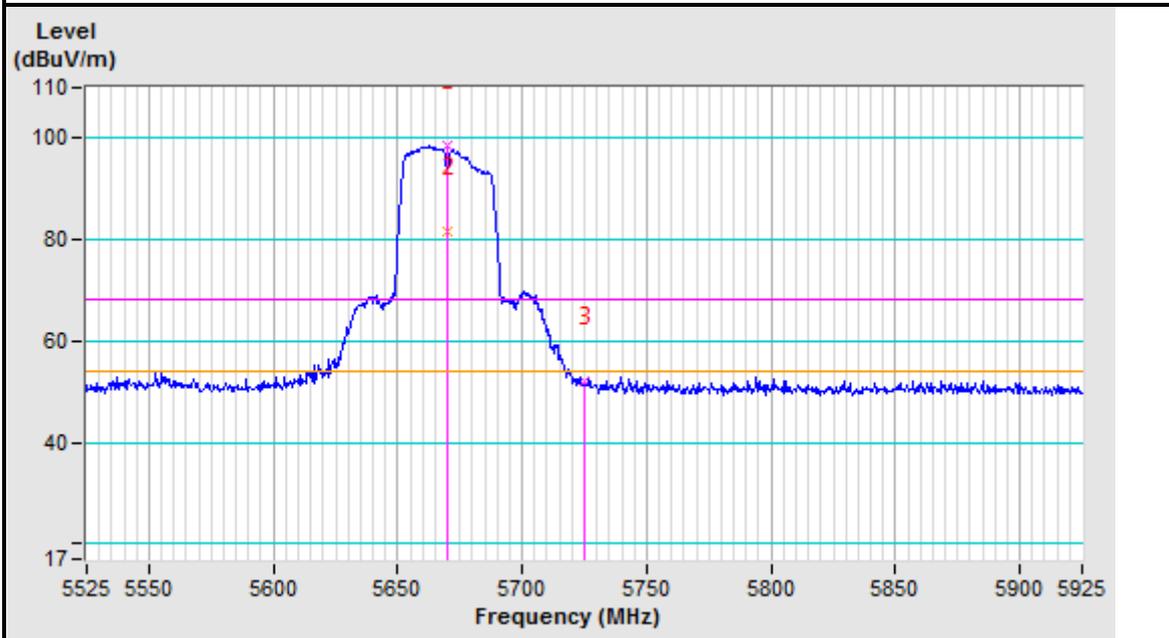
REMARKS:

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.

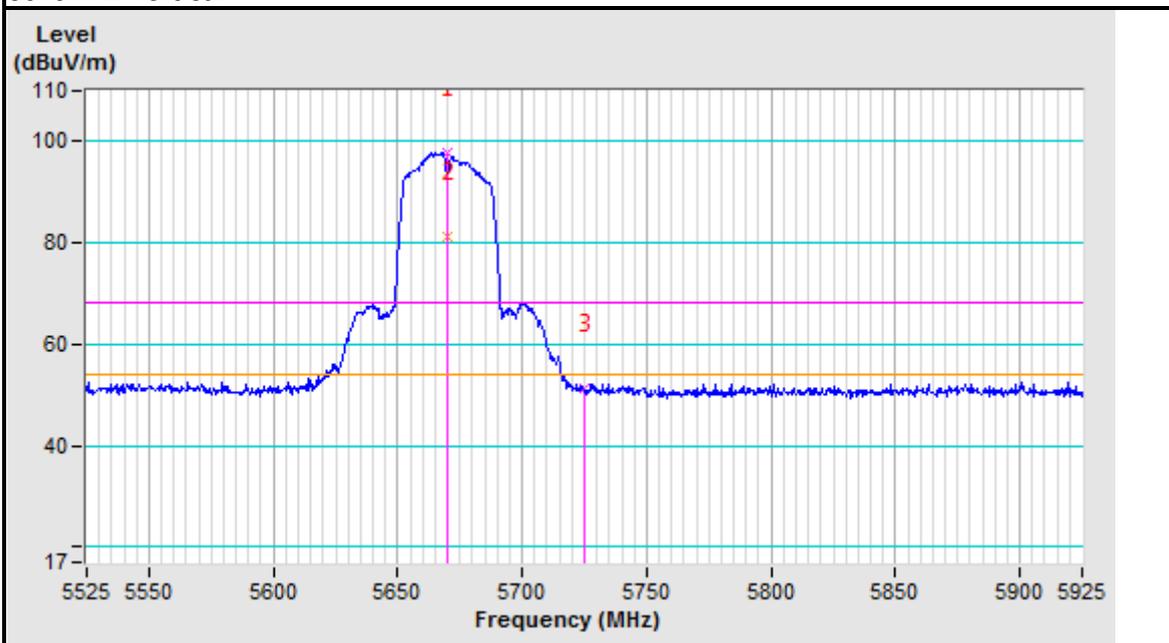


Band edge Plot

5670MHz Horizontal



5670MHz Vertical





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Test Report No.: RF200407N032-4

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	#5468.39	65.94 PK	68.20	-2.26	1.35 H	87	57.04	8.90
2	#5470.00	62.72 PK	68.20	-5.48	1.35 H	87	53.81	8.91
3	*5530.00	100.04 PK			1.35 H	87	90.99	9.05
4	*5530.00	73.04 AV			1.35 H	87	63.99	9.05
5	11060.00	60.84 PK	74.00	-13.16	1.00 H	17	41.73	19.11
6	11060.00	46.22 AV	54.00	-7.78	1.00 H	17	27.11	19.11
7	#16590.00	64.71 PK	68.20	-3.49	1.00 H	151	38.87	25.84
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	#5470.00	60.52 PK	68.20	-7.68	1.00 V	305	51.61	8.91
2	*5530.00	94.58 PK			1.00 V	305	85.53	9.05
3	*5530.00	69.34 AV			1.00 V	305	60.29	9.05
4	11060.00	59.21 PK	74.00	-14.79	1.00 V	102	40.10	19.11
5	11060.00	45.41 AV	54.00	-8.59	1.00 V	102	26.30	19.11
6	#16590.00	64.05 PK	68.20	-4.15	1.00 V	0	38.21	25.84

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.

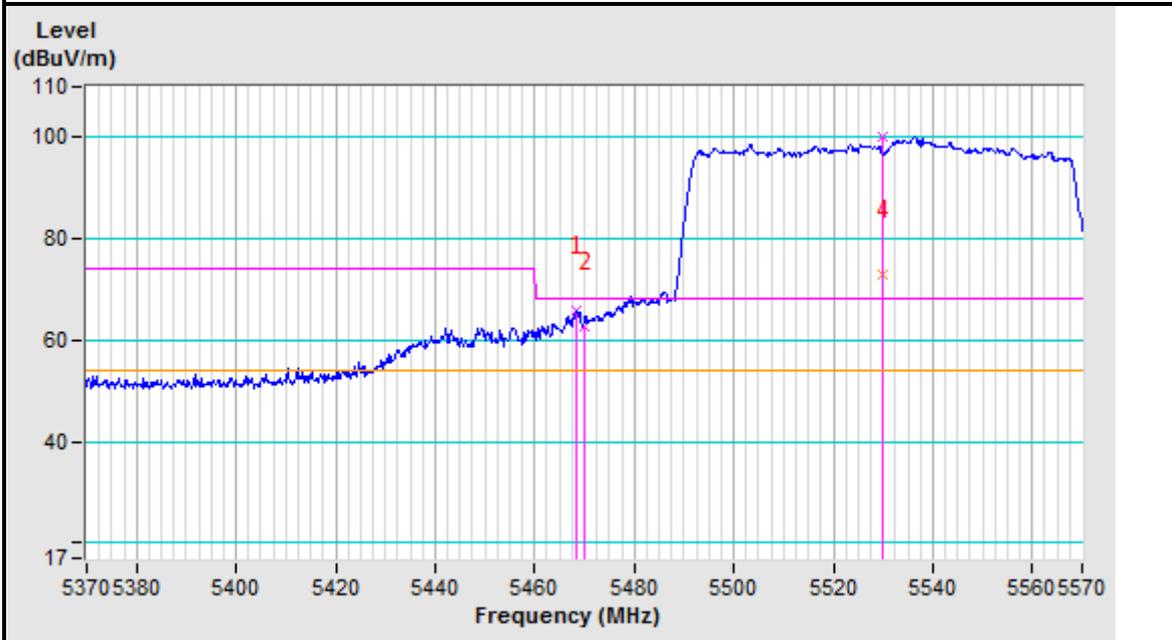


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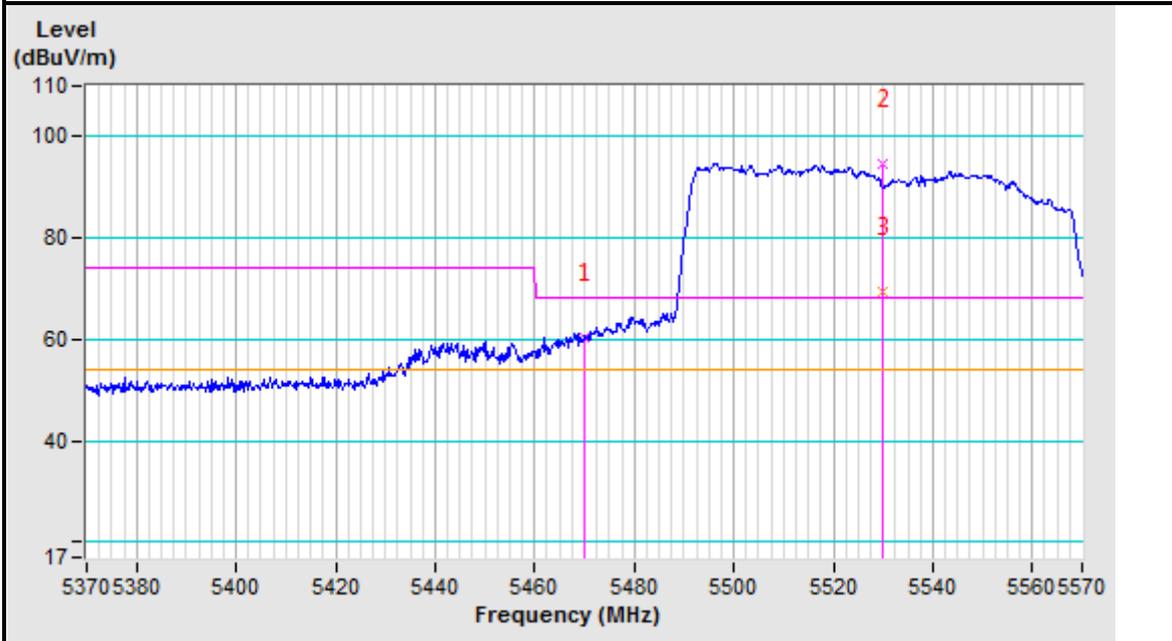
Test Report No.: RF200407N032-4

Band edge Plot

5530MHz Horizontal



5530MHz Vertical





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VERITAS**

Test Report No.: RF200407N032-4

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)	CORRECTION FACTOR (dB/m)
1	*5610.00	96.43 PK			1.00 H	5	87.17	9.26
2	*5610.00	70.81 AV			1.00 H	5	61.55	9.26
3	#5725.00	51.48 PK	68.20	-16.72	1.00 H	5	41.92	9.56
4	11220.00	60.05 PK	74.00	-13.95	1.00 H	97	40.74	19.31
5	11220.00	46.30 AV	54.00	-7.70	1.00 H	97	26.99	19.31
6	#16830.00	64.91 PK	68.20	-3.29	1.00 H	105	38.34	26.57

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	*5610.00	92.46 PK			1.00 V	302	83.20	9.26
2	*5610.00	68.49 AV			1.00 V	302	59.23	9.26
3	#5725.00	51.63 PK	68.20	-16.57	1.00 V	302	42.07	9.56
4	11220.00	59.47 PK	74.00	-14.53	1.00 V	67	40.16	19.31
5	11220.00	45.86 AV	54.00	-8.14	1.00 V	67	26.55	19.31
6	#16830.00	63.89 PK	68.20	-4.31	1.00 V	71	37.32	26.57

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.

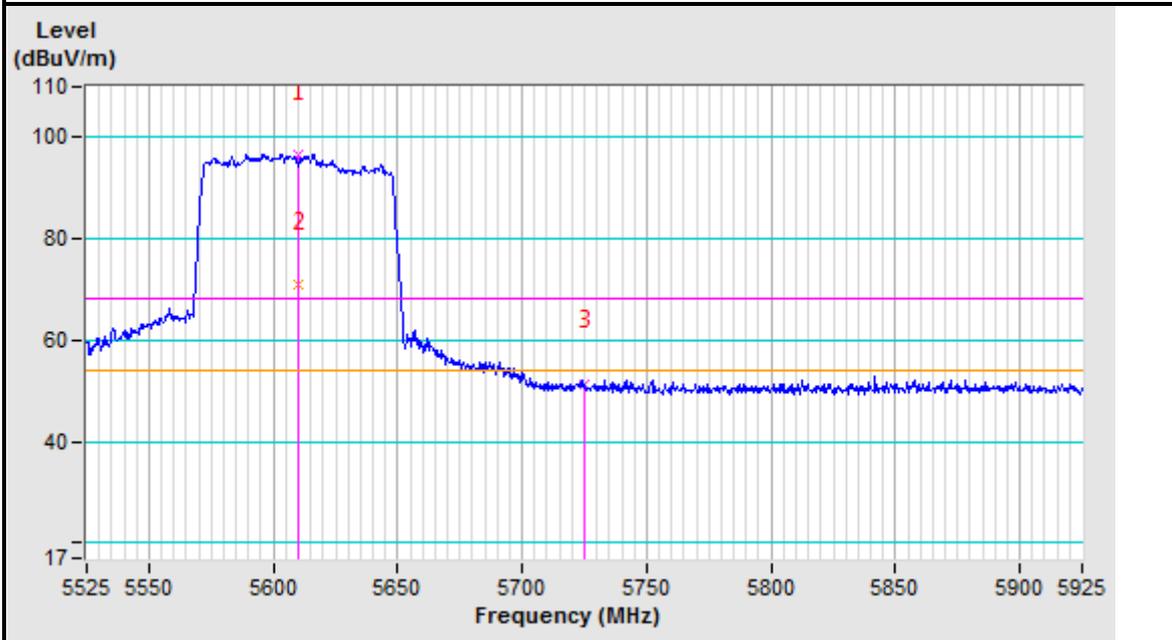


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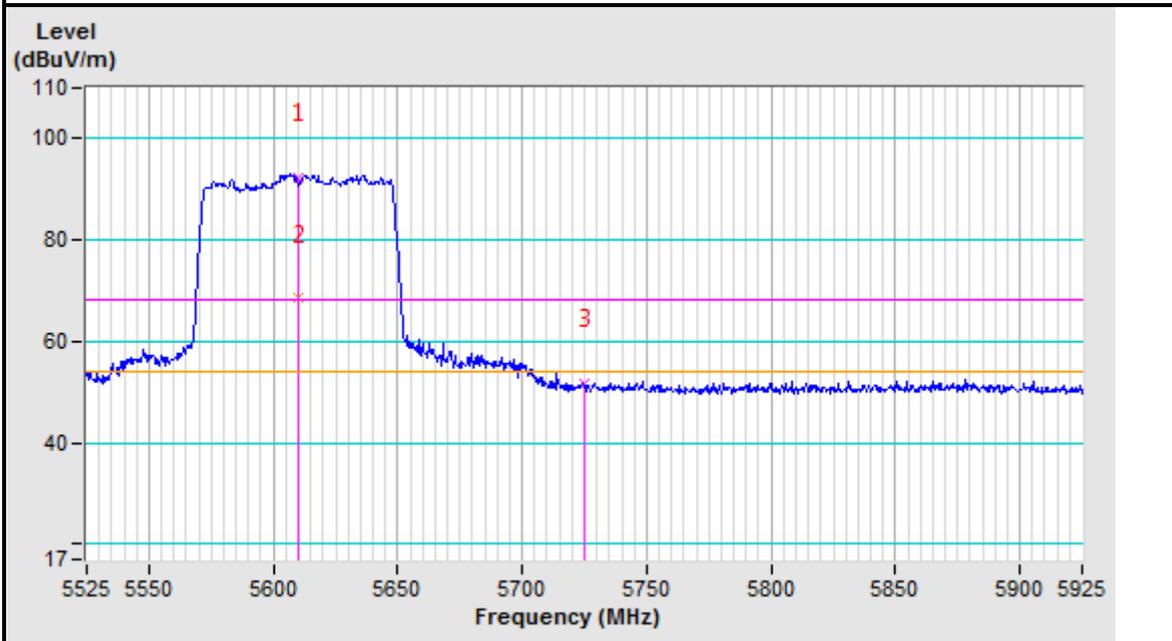
Test Report No.: RF200407N032-4

Band edge Plot

5610MHz Horizontal



5610MHz Vertical





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	#5655.04	51.67 PK	71.95	-20.28	1.00 H	0	42.30	9.37
2	#5725.00	59.80 PK	122.20	-62.40	1.00 H	0	50.24	9.56
3	*5745.00	102.22 PK			1.00 H	353	92.61	9.61
4	*5745.00	88.16 AV			1.00 H	353	78.55	9.61
5	#5882.33	52.90 PK	99.75	-46.85	1.00 H	0	42.93	9.97
6	11490.00	61.24 PK	74.00	-12.76	1.00 H	67	41.60	19.64
7	11490.00	45.77 AV	54.00	-8.23	1.00 H	67	26.13	19.64
8	#17235.00	64.08 PK	68.20	-4.12	1.00 H	0	36.73	27.35

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

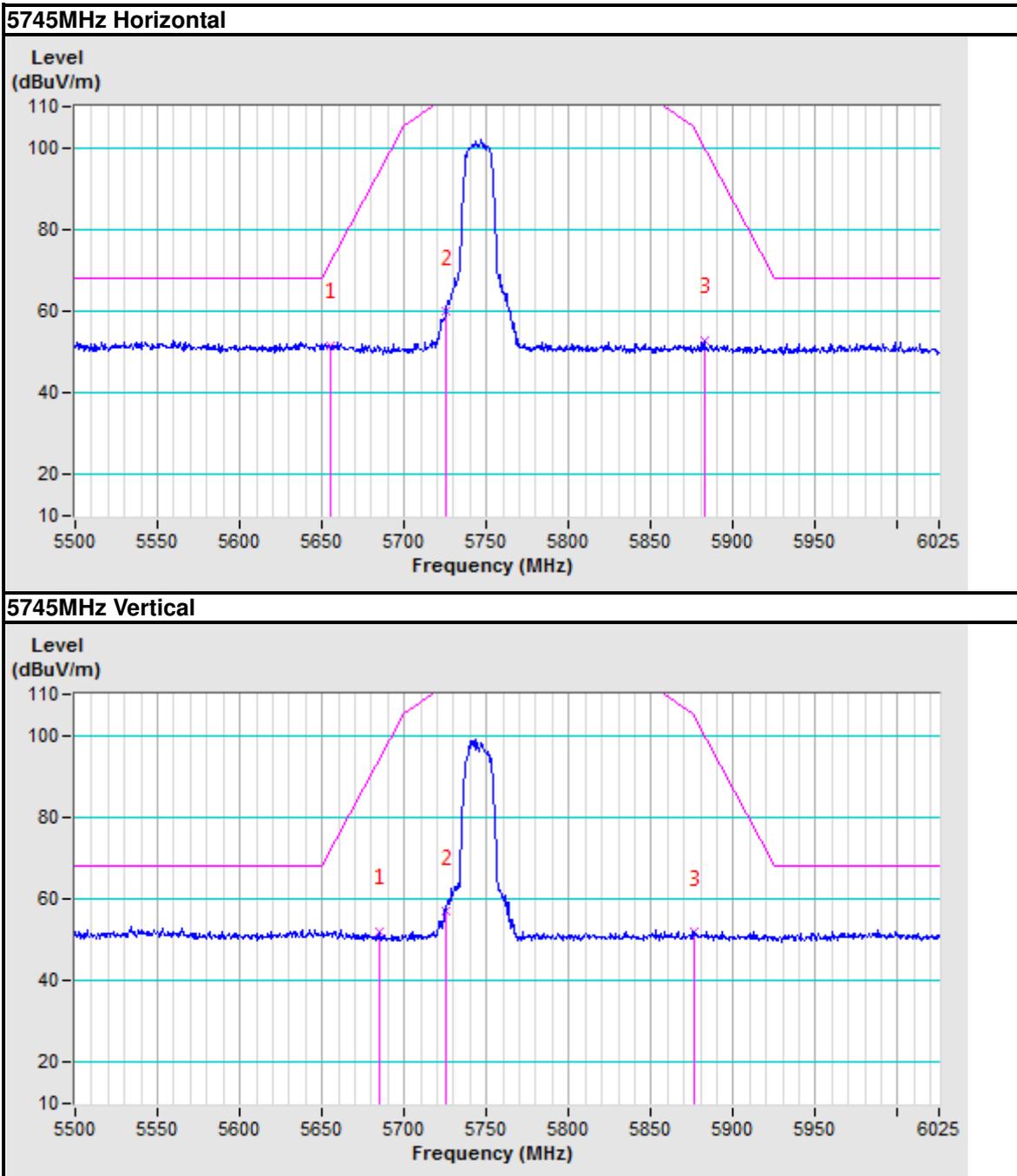
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5684.62	52.09 PK	93.85	-41.76	1.00 V	0	42.64	9.45
2	#5725.00	56.83 PK	122.20	-65.37	1.00 V	0	47.27	9.56
3	*5745.00	100.17 PK			1.00 V	302	90.56	9.61
4	*5745.00	85.64 AV			1.00 V	302	76.03	9.61
5	#5876.44	51.81 PK	104.13	-52.32	1.00 V	0	41.86	9.95
6	11490.00	60.05 PK	74.00	-13.95	1.00 V	15	40.41	19.64
7	11490.00	45.87 AV	54.00	-8.13	1.00 V	15	26.23	19.64
8	#17235.00	64.02 PK	68.20	-4.18	1.00 V	0	36.67	27.35

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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Test Report No.: RF200407N032-4

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	#5654.88	51.42 PK	71.82	-20.40	1.00 H	6	42.05	9.37
2	#5764.25	57.88 PK	152.20	-94.32	1.00 H	0	48.22	9.66
3	*5785.00	102.69 PK			1.17 H	53	92.98	9.71
4	*5785.00	88.48 AV			1.17 H	53	78.77	9.71
5	#5955.24	51.58 PK	68.20	-16.62	1.00 H	0	41.42	10.16
6	11570.00	59.79 PK	74.00	-14.21	1.00 H	12	39.99	19.80
7	11570.00	46.27 AV	54.00	-7.73	1.00 H	12	26.47	19.80
8	#17355.00	64.78 PK	68.20	-3.42	1.00 H	0	37.30	27.48

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	#5654.88	52.42 PK	71.82	-19.40	1.00 V	0	43.05	9.37
2	#5769.30	63.33 PK	152.20	-88.87	1.00 V	0	53.65	9.68
3	*5785.00	98.33 PK			1.00 V	338	88.62	9.71
4	*5785.00	84.40 AV			1.00 V	338	74.69	9.71
5	#5884.56	52.77 PK	98.10	-45.33	1.00 V	0	42.79	9.98
6	11570.00	60.39 PK	74.00	-13.61	1.00 V	32	40.59	19.80
7	11570.00	46.11 AV	54.00	-7.89	1.00 V	32	26.31	19.80
8	#17355.00	64.22 PK	68.20	-3.98	1.00 V	0	36.74	27.48

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.

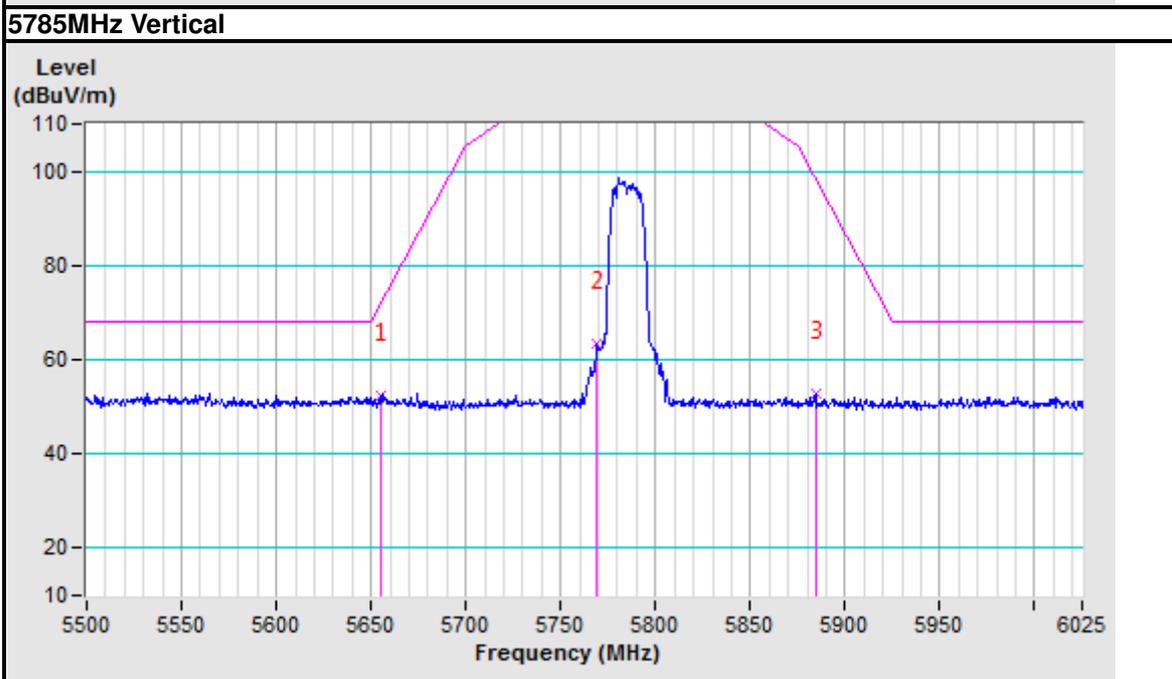
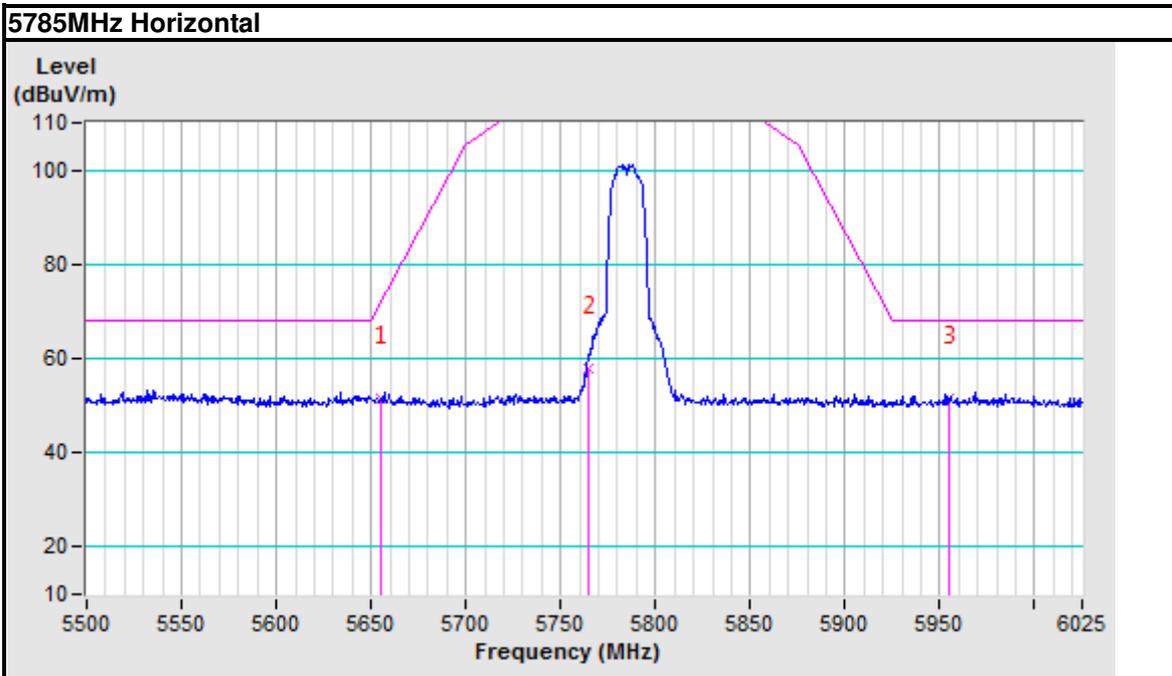
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Band edge Plot





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Test Report No.: RF200407N032-4

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	#5639.66	52.21 PK	68.20	-15.99	1.00 H	0	42.88	9.33
2	*5825.00	102.33 PK			1.70 H	84	92.51	9.82
3	*5825.00	88.06 AV			1.70 H	84	78.24	9.82
4	#5850.00	51.16 PK	122.20	-71.04	1.00 H	0	41.28	9.88
5	#5892.91	51.34 PK	91.91	-40.57	1.00 H	0	41.34	10.00
6	11650.00	61.16 PK	74.00	-12.84	1.70 H	84	41.18	19.98
7	11650.00	46.40 AV	54.00	-7.60	1.70 H	84	26.42	19.98
8	#17475.00	64.80 PK	68.20	-3.40	1.00 H	0	37.18	27.62

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	#5637.14	52.30 PK	68.20	-15.90	1.00 V	0	42.97	9.33
2	*5825.00	98.41 PK			1.00 V	101	88.59	9.82
3	*5825.00	84.12 AV			1.00 V	101	74.30	9.82
4	#5850.00	51.95 PK	122.20	-70.25	1.00 V	0	42.07	9.88
5	#5900.48	50.75 PK	86.31	-35.56	1.00 V	0	40.73	10.02
6	11650.00	60.70 PK	74.00	-13.30	1.00 V	130	40.72	19.98
7	11650.00	46.28 AV	54.00	-7.72	1.00 V	130	26.30	19.98
8	#17475.00	64.11 PK	68.20	-4.09	1.00 V	0	36.49	27.62

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.

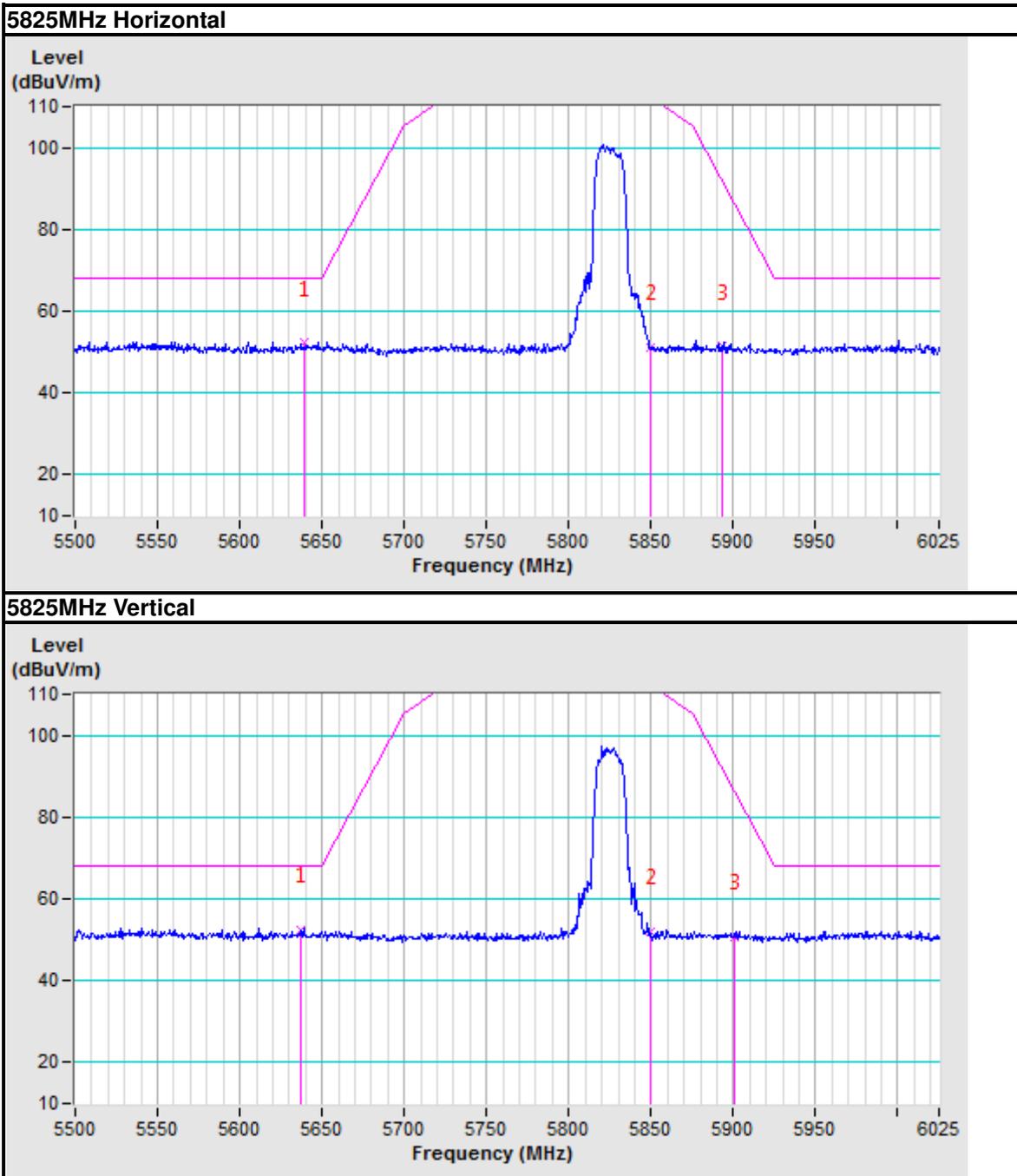
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Band edge Plot





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Test Report No.: RF200407N032-4

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	#5642.55	51.64 PK	68.20	-16.56	1.00 H	0	42.30	9.34
2	#5725.00	64.63 PK	122.20	-57.57	1.00 H	0	55.07	9.56
3	*5745.00	102.71 PK			1.00 H	53	93.10	9.61
4	*5745.00	87.23 AV			1.00 H	53	77.62	9.61
5	#5883.17	53.01 PK	99.13	-46.12	1.00 H	0	43.03	9.98
6	11490.00	59.70 PK	74.00	-14.30	1.00 H	53	40.06	19.64
7	11490.00	45.39 AV	54.00	-8.61	1.00 H	53	25.75	19.64
8	#17235.00	64.10 PK	68.20	-4.10	1.00 H	53	36.75	27.35

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	#5644.23	51.92 PK	68.20	-16.28	1.00 V	0	42.57	9.35
2	#5725.00	60.26 PK	122.20	-61.94	1.00 V	0	50.70	9.56
3	*5745.00	100.00 PK			1.00 V	302	90.39	9.61
4	*5745.00	85.55 AV			1.00 V	302	75.94	9.61
5	#5864.66	52.22 PK	108.09	-55.87	1.00 V	0	42.30	9.92
6	11490.00	59.68 PK	74.00	-14.32	1.00 V	57	40.04	19.64
7	11490.00	46.11 AV	54.00	-7.89	1.00 V	57	26.47	19.64
8	#17235.00	63.79 PK	68.20	-4.41	1.00 V	151	36.44	27.35

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.

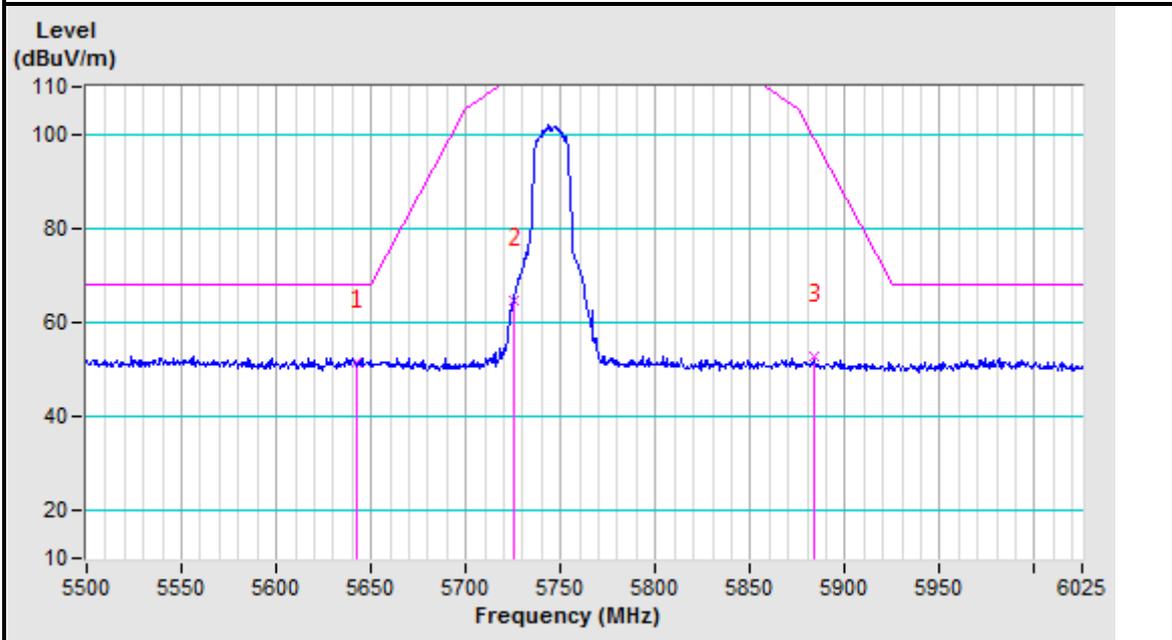


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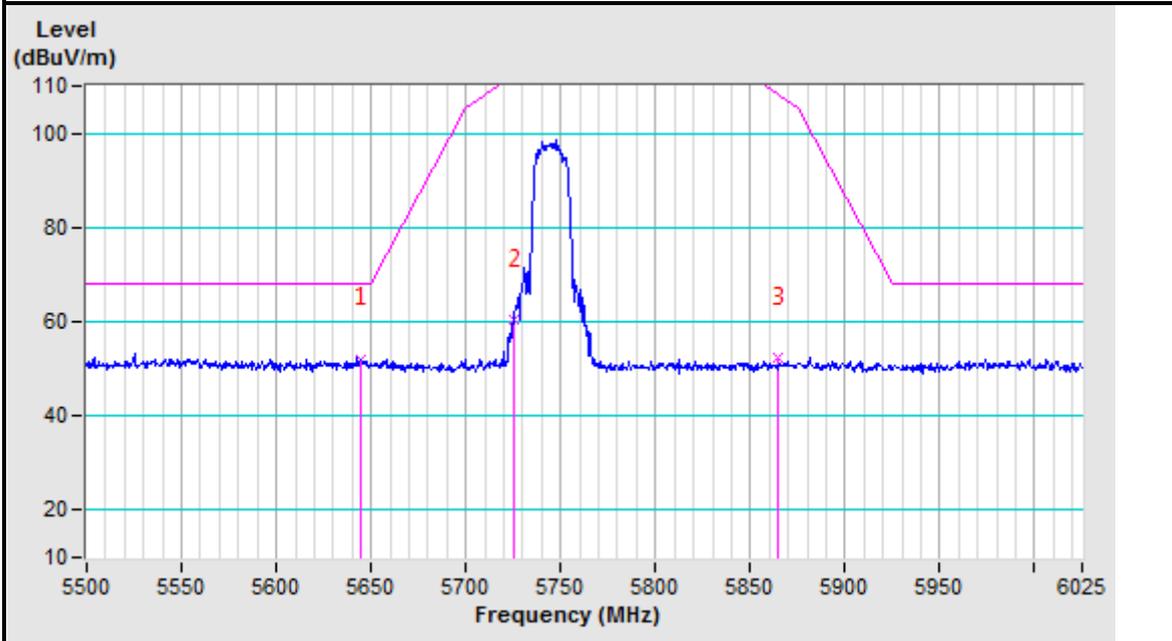
Test Report No.: RF200407N032-4

Band edge Plot

5745MHz Horizontal



5745MHz Vertical





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Test Report No.: RF200407N032-4

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	#5550.76	53.17 PK	68.20	-15.03	1.00 H	0	44.07	9.10
2	#5655.09	51.86 PK	71.98	-20.12	1.00 H	0	42.49	9.37
3	*5785.00	101.97 PK			1.00 H	68	92.26	9.71
4	*5785.00	87.12 AV			1.00 H	68	77.41	9.71
5	#5947.88	52.45 PK	68.20	-15.75	1.00 H	0	42.31	10.14
6	11570.00	60.85 PK	74.00	-13.15	1.00 H	83	41.05	19.80
7	11570.00	46.90 AV	54.00	-7.10	1.00 H	83	27.10	19.80
8	#17355.00	64.41 PK	68.20	-3.79	1.00 H	108	36.93	27.48

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	#5625.64	52.05 PK	68.20	-16.15	1.00 V	0	42.76	9.29
2	#5682.01	52.66 PK	91.93	-39.27	1.00 V	0	43.21	9.45
3	*5785.00	99.72 PK			1.00 V	305	90.01	9.71
4	*5785.00	84.91 AV			1.00 V	305	75.20	9.71
5	#5867.95	52.19 PK	107.17	-54.98	1.00 V	0	42.26	9.93
6	11570.00	59.79 PK	74.00	-14.21	1.00 V	0	39.99	19.80
7	11570.00	45.81 AV	54.00	-8.19	1.00 V	0	26.01	19.80
8	#17355.00	63.71 PK	68.20	-4.49	1.00 V	174	36.23	27.48

REMARKS:

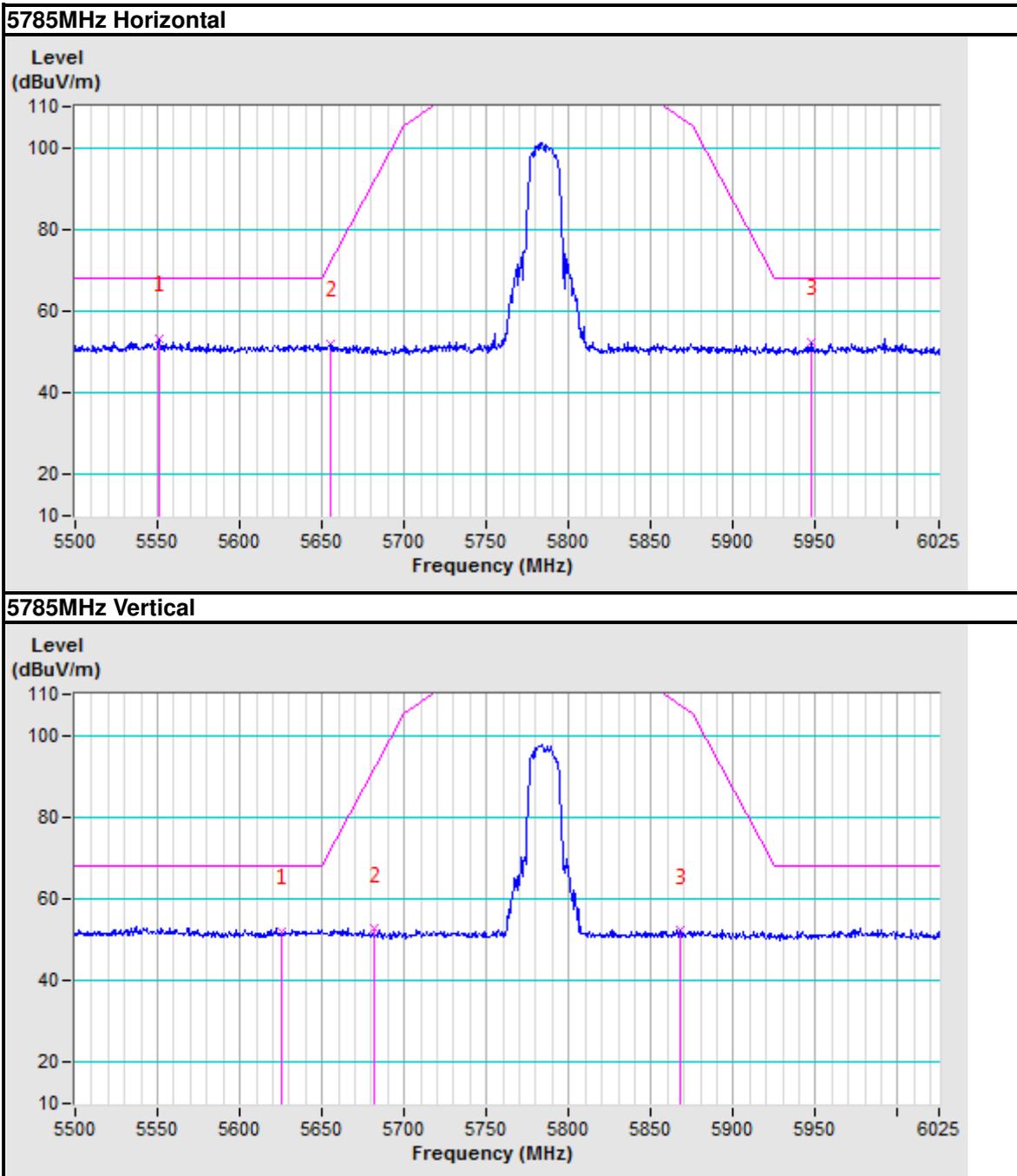
1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The emission levels of other frequencies were greater than 20dB margin.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.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



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Test Report No.: RF200407N032-4

Band edge Plot





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Test Report No.: RF200407N032-4

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	#5729.69	51.81 PK	152.20	-100.39	1.00 H	0	42.23	9.58
2	*5825.00	102.05 PK			1.00 H	308	92.23	9.82
3	*5825.00	88.14 AV			1.00 H	308	78.32	9.82
4	#5850.00	52.61 PK	122.20	-69.59	1.00 H	0	42.73	9.88
5	#5910.58	52.20 PK	78.84	-26.64	1.00 H	0	42.15	10.05
6	11650.00	61.03 PK	74.00	-12.97	1.00 H	89	41.05	19.98
7	11650.00	46.52 AV	54.00	-7.48	1.00 H	89	26.54	19.98
8	#17475.00	64.19 PK	68.20	-4.01	1.00 H	0	36.57	27.62

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	#5665.44	50.87 PK	79.66	-28.79	1.00 V	0	41.47	9.40
2	*5825.00	97.98 PK			1.00 V	101	88.16	9.82
3	*5825.00	83.74 AV			1.00 V	101	73.92	9.82
4	#5850.00	51.10 PK	122.20	-71.10	1.00 V	0	41.22	9.88
5	#5940.56	52.59 PK	68.20	-15.61	1.00 V	0	42.46	10.13
6	11650.00	61.71 PK	74.00	-12.29	1.00 V	105	41.73	19.98
7	11650.00	46.80 AV	54.00	-7.20	1.00 V	105	26.82	19.98
8	#17475.00	64.01 PK	68.20	-4.19	1.00 V	179	36.39	27.62

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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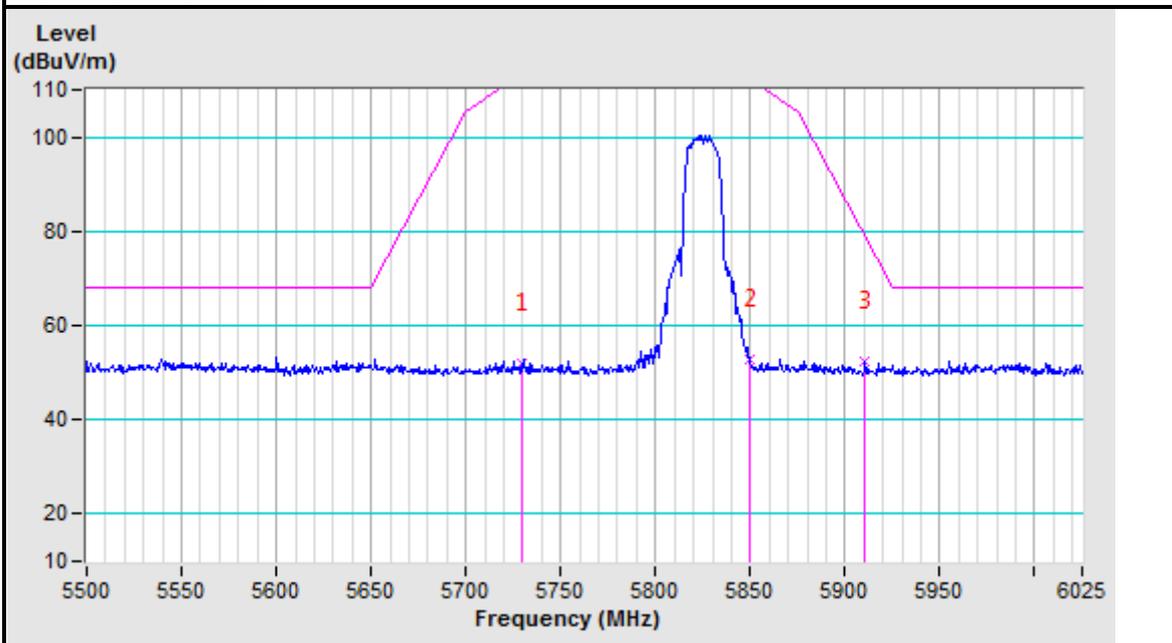


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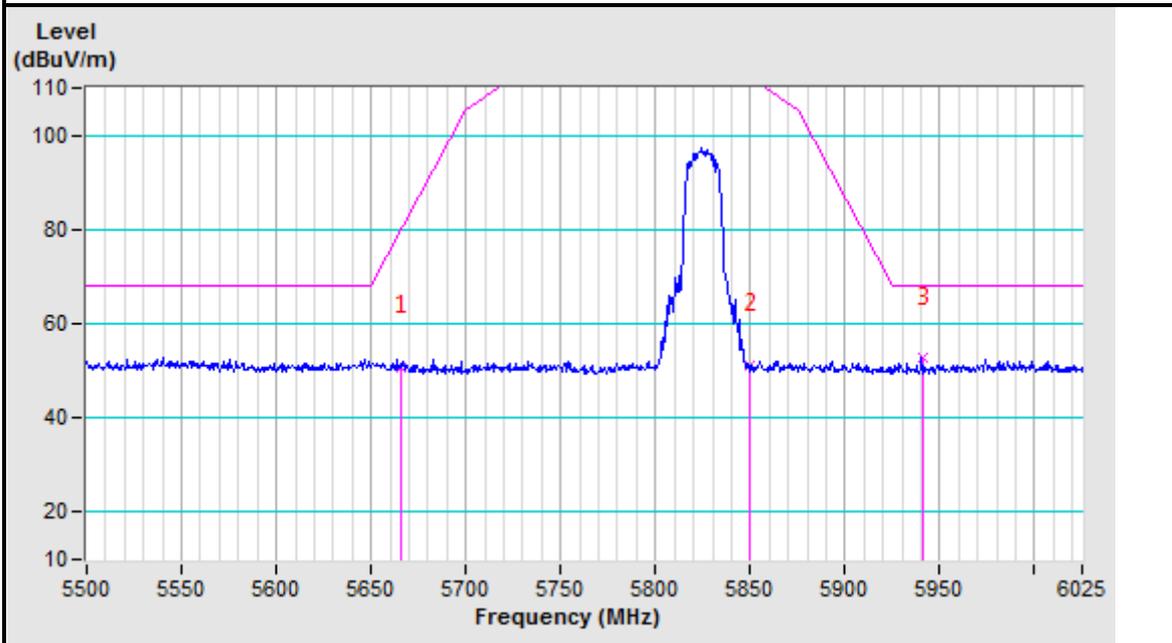
Test Report No.: RF200407N032-4

Band edge Plot

5825MHz Horizontal



5825MHz Vertical





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	#5637.50	52.48 PK	68.20	-15.72	1.00 H	0	43.15	9.33
2	#5725.00	69.14 PK	122.20	-53.06	1.00 H	0	59.58	9.56
3	*5755.00	100.45 PK			1.00 H	353	90.81	9.64
4	*5755.00	83.37 AV			1.00 H	353	73.73	9.64
5	#5878.97	51.50 PK	102.25	-50.75	1.00 H	0	41.54	9.96
6	11510.00	59.62 PK	74.00	-14.38	1.00 H	131	39.95	19.67
7	11510.00	45.77 AV	54.00	-8.23	1.00 H	131	26.10	19.67
8	#17265.00	64.05 PK	68.20	-4.15	1.00 H	177	36.67	27.38

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

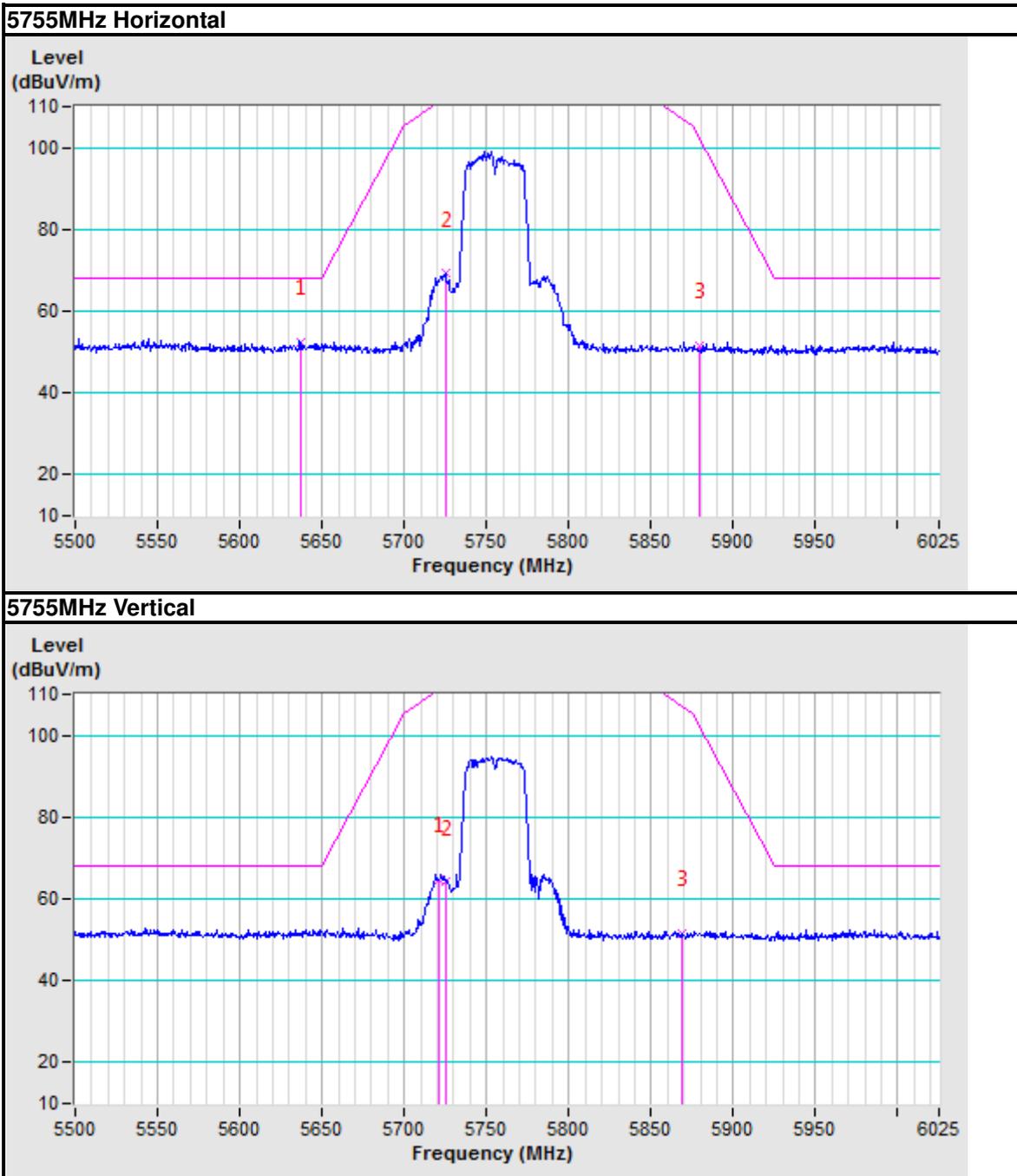
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5720.79	64.81 PK	112.61	-47.80	1.00 V	0	55.26	9.55
2	#5725.00	64.07 PK	122.20	-58.13	1.00 V	0	54.51	9.56
3	*5755.00	95.06 PK			1.00 V	98	85.42	9.64
4	*5755.00	78.34 AV			1.00 V	98	68.70	9.64
5	#5868.87	51.49 PK	106.91	-55.42	1.00 V	0	41.55	9.94
6	11510.00	60.72 PK	74.00	-13.28	1.00 V	92	41.05	19.67
7	11510.00	40.77 AV	54.00	-13.23	1.00 V	92	21.10	19.67
8	#17265.00	63.87 PK	68.20	-4.33	1.00 V	174	36.49	27.38

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.: RF200407N032-4

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	#5675.00	50.93 PK	86.74	-35.81	1.00 H	0	41.50	9.43
2	*5795.00	99.26 PK			1.00 H	294	89.51	9.75
3	*5795.00	81.92 AV			1.00 H	294	72.17	9.75
4	#5850.00	51.55 PK	122.20	-70.65	1.00 H	0	41.67	9.88
5	#5895.43	51.62 PK	90.04	-38.42	1.00 H	0	41.61	10.01
6	11590.00	61.79 PK	74.00	-12.21	1.00 H	97	41.95	19.84
7	11590.00	46.08 AV	54.00	-7.92	1.00 H	97	26.24	19.84
8	#17385.00	63.97 PK	68.20	-4.23	1.00 H	33	36.45	27.52

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	#5645.55	52.00 PK	68.20	-16.20	1.00 V	0	42.65	9.35
2	*5795.00	95.82 PK			1.00 V	100	86.07	9.75
3	*5795.00	78.30 AV			1.00 V	100	68.55	9.75
4	#5850.00	50.30 PK	122.20	-71.90	1.00 V	0	40.42	9.88
5	#5883.65	51.77 PK	98.77	-47.00	1.00 V	0	41.79	9.98
6	11590.00	60.77 PK	74.00	-13.23	1.00 V	176	40.93	19.84
7	11590.00	46.89 AV	54.00	-7.11	1.00 V	176	27.05	19.84
8	#17385.00	64.33 PK	68.20	-3.87	1.00 V	108	36.81	27.52

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.

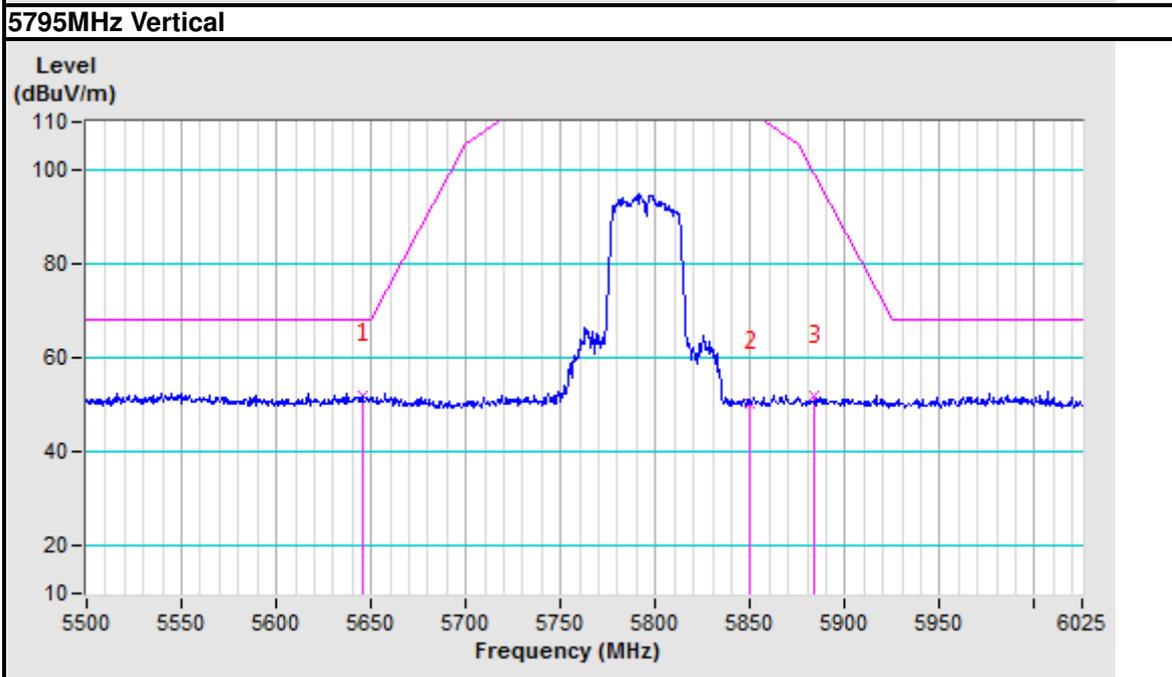
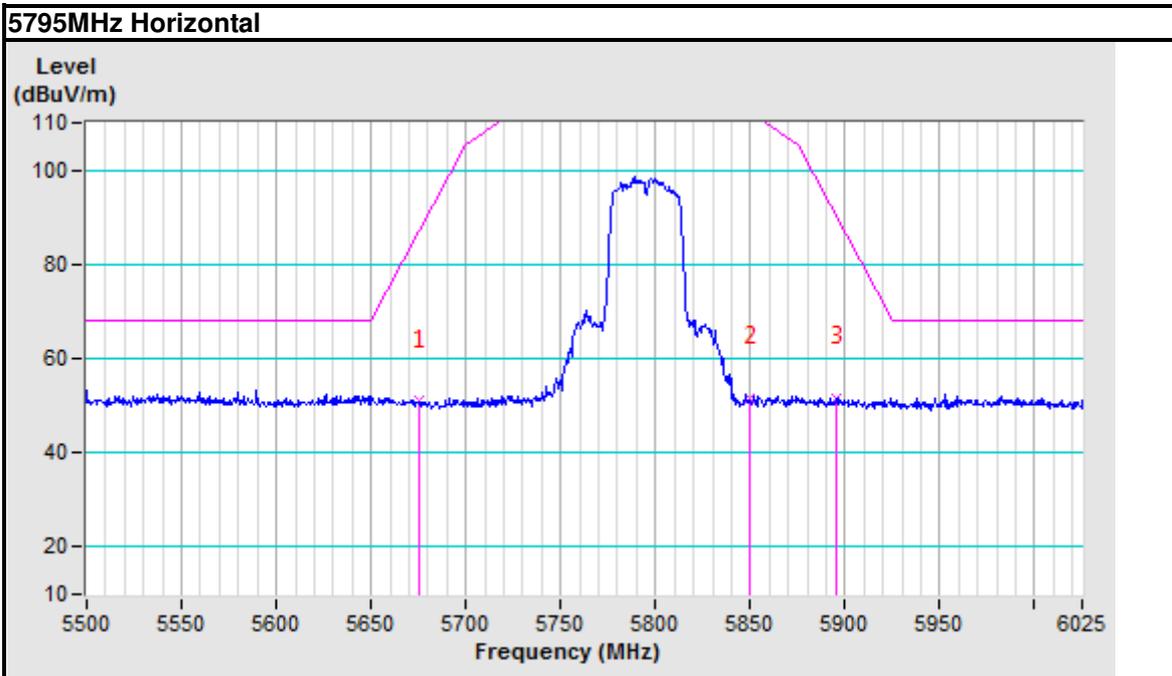
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Band edge Plot





BUREAU VERITAS

Test Report No.: RF200407N032-4

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	#5700.60	56.43 PK	105.37	-48.94	1.00 H	0	46.93	9.50
2	#5725.00	60.01 PK	122.20	-62.19	1.00 H	0	50.45	9.56
3	*5775.00	96.06 PK			1.00 H	53	86.37	9.69
4	*5775.00	69.85 AV			1.00 H	53	60.16	9.69
5	#5850.00	54.43 PK	122.20	-67.77	1.00 H	0	44.55	9.88
6	11550.00	60.97 PK	74.00	-13.03	1.00 H	360	41.21	19.76
7	11550.00	46.89 AV	54.00	-7.11	1.00 H	360	27.13	19.76
8	#17325.00	64.13 PK	68.20	-4.07	1.00 H	71	36.68	27.45

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	#5725.00	56.92 PK	122.20	-65.28	1.00 V	0	47.36	9.56
2	*5775.00	92.91 PK			1.00 V	302	83.22	9.69
3	*5775.00	68.08 AV			1.00 V	302	58.39	9.69
4	#5850.00	51.21 PK	122.20	-70.99	1.00 V	0	41.33	9.88
5	#5855.43	53.91 PK	110.68	-56.77	1.00 V	0	44.01	9.90
6	11550.00	59.86 PK	74.00	-14.14	1.00 V	58	40.10	19.76
7	11550.00	45.72 AV	54.00	-8.28	1.00 V	58	25.96	19.76
8	#17325.00	63.89 PK	68.20	-4.31	1.00 V	5	36.44	27.45

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.

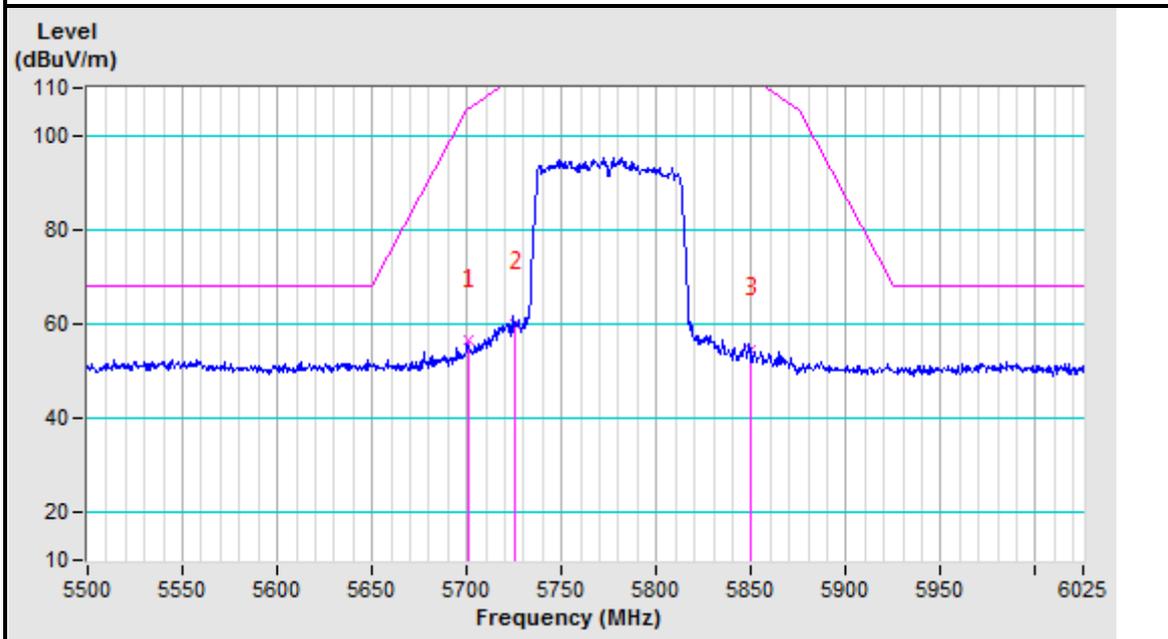


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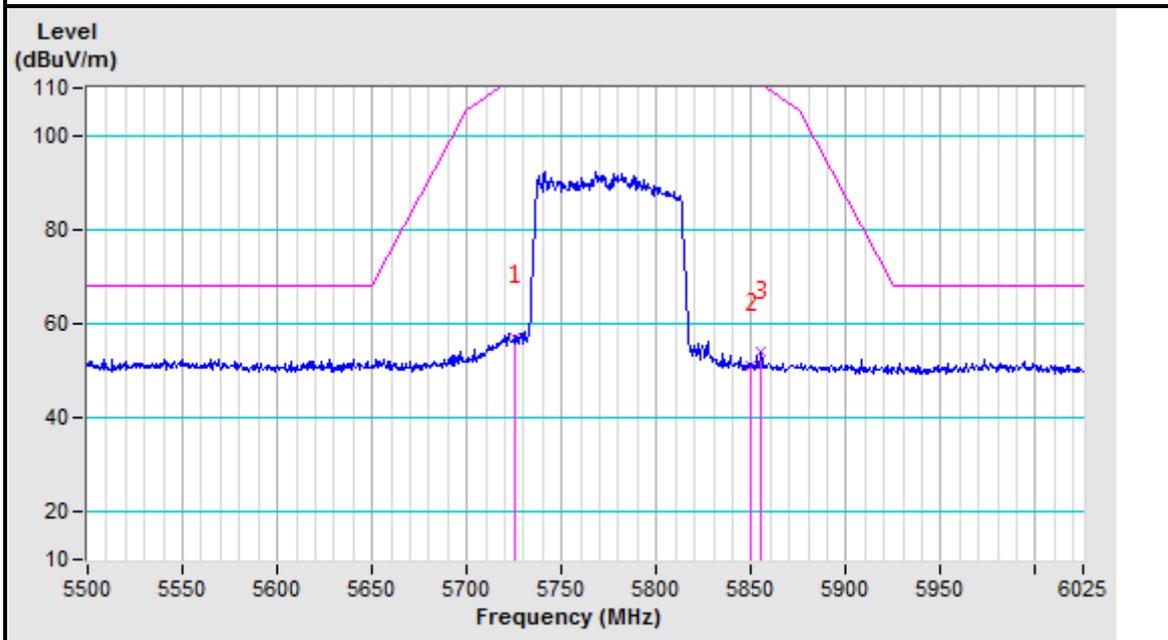
Test Report No.: RF200407N032-4

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 (dBµV)	
	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

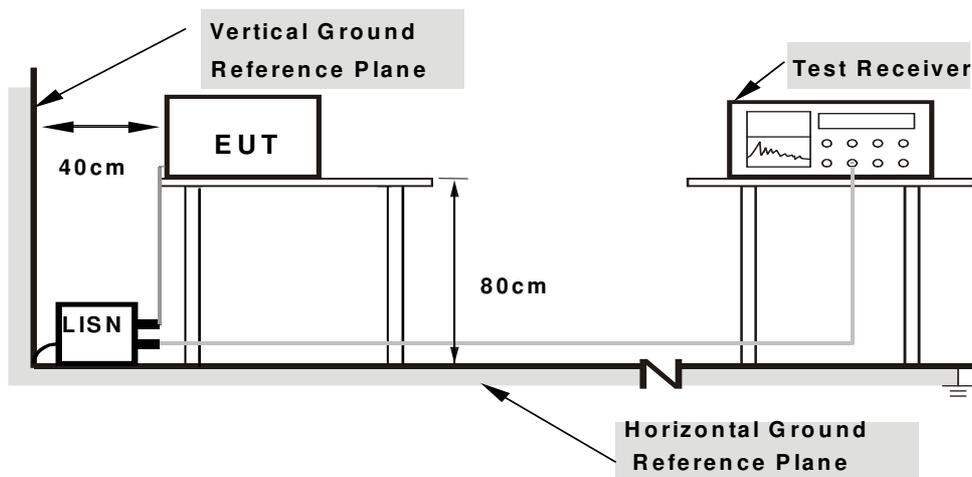
- a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.
- b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- c. 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:**
- 1. Support units were connected to second LISN.
 - 2. 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

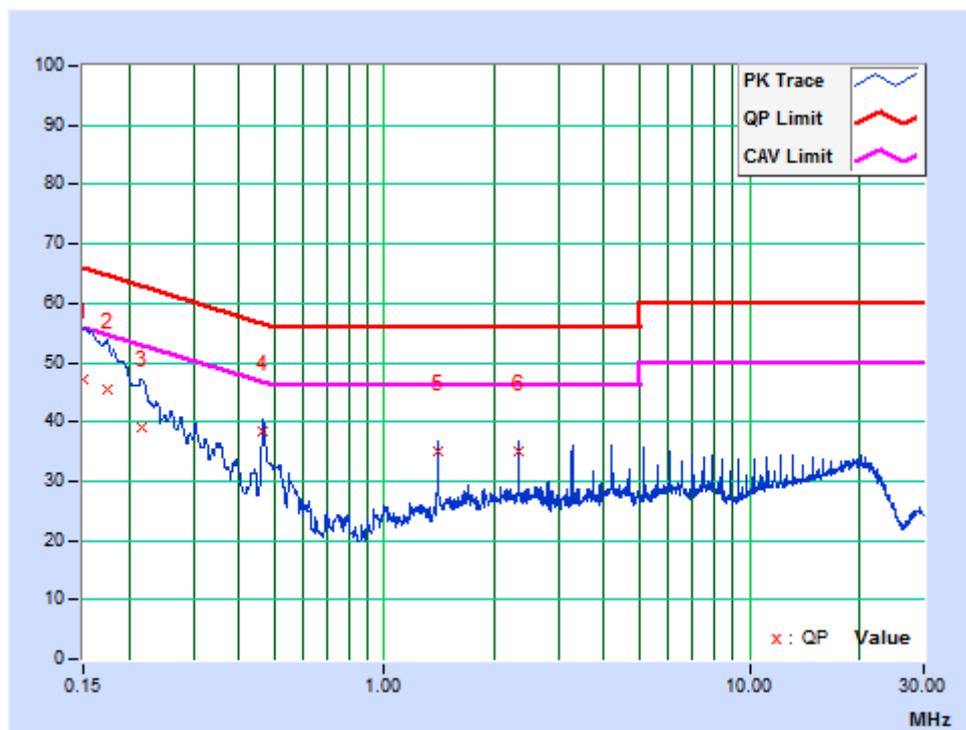
3.2.7 TEST RESULTS

CONDUCTED WORST-CASE DATA: 802.11a CH36

PHASE	Line	6dB BANDWIDTH	9kHz
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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	36.79	16.88	47.00	27.09	66.00	56.00	-19.00	-28.91
2	0.17466	10.21	35.12	15.33	45.33	25.54	64.74	54.74	-19.41	-29.20
3	0.21573	10.21	28.90	10.39	39.11	20.60	62.98	52.98	-23.87	-32.38
4	0.46725	10.22	28.17	27.16	38.39	37.38	56.56	46.56	-18.17	-9.18
5	1.40100	10.23	24.91	24.37	35.14	34.60	56.00	46.00	-20.86	-11.40
6	2.33467	10.22	24.82	3.51	35.04	13.73	56.00	46.00	-20.96	-32.27

- 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.





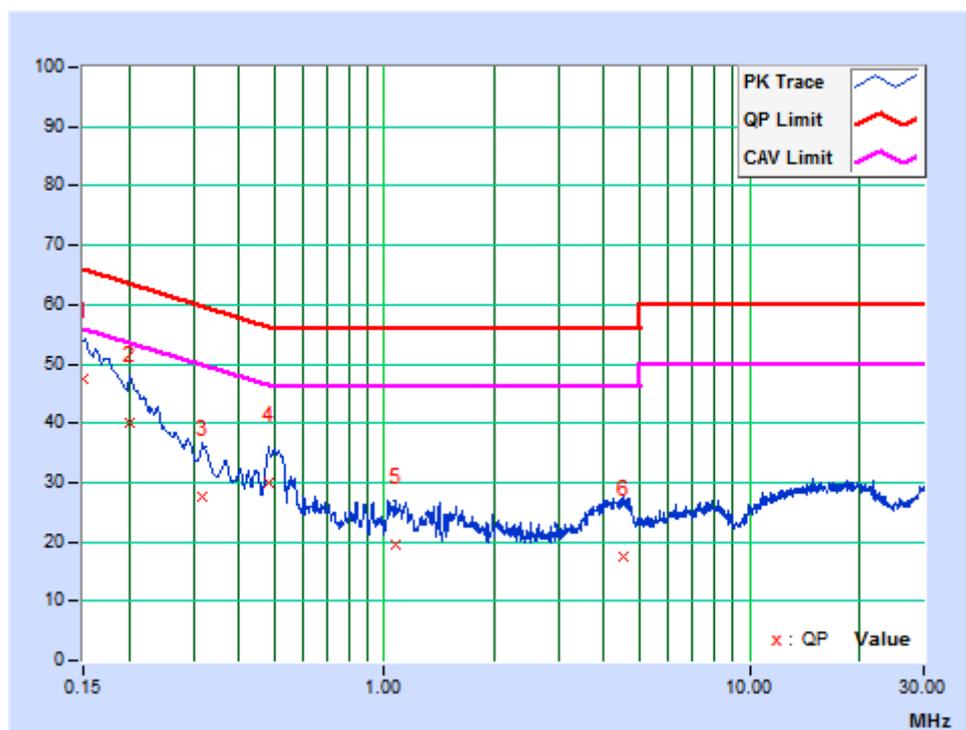
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PHASE	Neutral	6dB BANDWIDTH	9kHz
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No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15000	10.01	37.43	15.97	47.44	25.98	66.00	56.00	-18.56	-30.02
2	0.20142	10.00	29.90	10.60	39.90	20.60	63.55	53.55	-23.65	-32.95
3	0.31888	10.01	17.47	5.56	27.48	15.57	59.74	49.74	-32.26	-34.17
4	0.48075	10.02	19.87	7.45	29.89	17.47	56.33	46.33	-26.44	-28.86
5	1.06858	10.03	9.39	-1.27	19.42	8.76	56.00	46.00	-36.58	-37.24
6	4.51275	10.03	7.46	0.55	17.49	10.58	56.00	46.00	-38.51	-35.42

- 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.





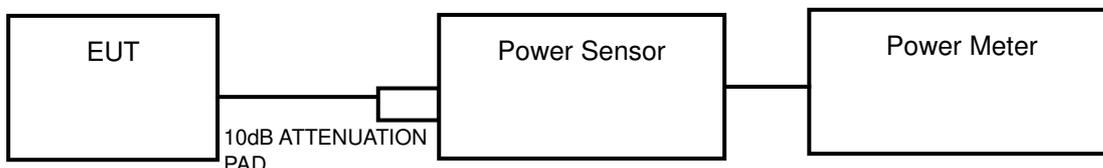
3.3 TRANSMIT POWER MEASUREMENT

3.3.1 LIMITS OF TRANSMIT POWER MEASUREMENT

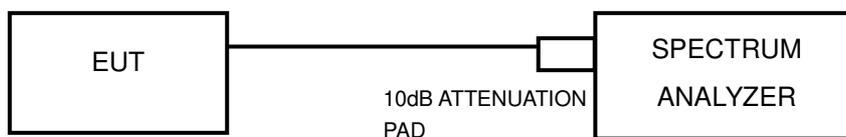
Operation Band	EUT Category		LIMIT
U-NII-1		Outdoor Access Point	1 Watt (30 dBm) (Max. e.i.r.p \leq 125mW(21 dBm) at any elevation angle above 30 degrees as measured from the horizon)
		Fixed point-to-point Access Point	1 Watt (30 dBm)
		Indoor Access Point	1 Watt (30 dBm)
	√	Mobile and Portable client 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 22,19	May 21,20
Power Sensor	Keysight	U2021XA	MY55060018	May 22,19	May 21,20
Power Meter	Anritsu	ML2495A	1139001	Mar. 18,20	Mar. 17,21
Power Sensor	Anritsu	MA2411B	1531155	Mar. 18,20	Mar. 17,21
Digital Multimeter	FLUKE	15B	A1220010DG	Oct. 17, 19	Oct.16, 20
Humid & Temp Programmable Tester	Haida	HD-225T	110807201	Oct.31,19	Oct. 30,20
Oscilloscope	Agilent	DSO9254A	MY51260160	Sep. 18,19	Sep. 17,20
Signal and Spectrum Analyzer	Rohde&Schwarz	FSV40	101094	Mar. 18,20	Mar. 17,21
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
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	13.66	23.227	24.00	PASS
40	5200	13.69	23.388	24.00	PASS
48	5240	14.09	25.645	24.00	PASS
52	5260	12.43	17.498	24.00	PASS
60	5300	12.53	17.906	24.00	PASS
64	5320	12.00	15.849	24.00	PASS
100	5500	12.21	16.634	24.00	PASS
116	5580	12.46	17.62	24.00	PASS
140	5700	12.01	15.885	24.00	PASS
149	5745	13.56	22.699	30.00	PASS
157	5785	13.57	22.751	30.00	PASS
165	5825	13.24	21.086	30.00	PASS

Note:

5180 ~ 5240MHz Max. Gain = 4.94dBi < 6dBi, so the limit no ned to be reduced.

5260 ~ 5320MHz Max. Gain = 4.94dBi < 6dBi, so the limit no ned to be reduced

5500 ~ 5700MHz Max. Gain = 4.94dBi < 6dBi, so the limit no ned to be reduced

5745 ~ 5825MHz Max. Gain = 4.94dBi < 6dBi, so the limit no ned to be reduced

For 5260 ~ 5320MHz, 5500 ~ 5700MHz

1. $11\text{dBm} + 10\log(20.21) = 24.06\text{ dBm} > 24\text{dBm}$
2. $11\text{dBm} + 10\log(20.28) = 24.07\text{ dBm} > 24\text{dBm}$
3. $11\text{dBm} + 10\log(20.18) = 24.05\text{ dBm} > 24\text{dBm}$
4. $11\text{dBm} + 10\log(20.08) = 24.03\text{ dBm} > 24\text{dBm}$
5. $11\text{dBm} + 10\log(20.16) = 24.04\text{ dBm} > 24\text{dBm}$
6. $11\text{dBm} + 10\log(20.19) = 24.05\text{ dBm} > 24\text{dBm}$



802.11n (20MHz)

CHANNEL NUMBER	FREQ. (MHz)	AVG. CONDUCTED POWER (dBm)	AVG. CONDUCTED POWER (mW)	LIMIT (dBm)	PASS /FAIL
36	5180	13.55	22.646	24.00	PASS
40	5200	13.51	22.439	24.00	PASS
48	5240	13.87	24.378	24.00	PASS
52	5260	12.31	17.022	24.00	PASS
60	5300	12.36	17.219	24.00	PASS
64	5320	11.97	15.74	24.00	PASS
100	5500	12.07	16.106	24.00	PASS
116	5580	12.33	17.10	24.00	PASS
140	5700	12.14	16.368	24.00	PASS
149	5745	13.41	21.928	30.00	PASS
157	5785	13.41	21.928	30.00	PASS
165	5825	13.00	19.953	30.00	PASS

Note:

For 5260 ~ 5320MHz, 5500 ~ 5700MHz

11dBm + 10log (20.46) = 24.11 dBm > 24dBm

11dBm + 10log (20.48) = 24.11 dBm > 24dBm

11dBm + 10log (20.51) = 24.12 dBm > 24dBm

11dBm + 10log (20.51) = 24.12 dBm > 24dBm

11dBm + 10log (20.49) = 24.12 dBm > 24dBm

11dBm + 10log (20.52) = 25.12 dBm > 24dBm



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802.11n (40MHz)

CHANNEL NUMBER	FREQ. (MHz)	AVG. CONDUCTED POWER (dBm)	AVG. CONDUCTED POWER (mW)	LIMIT (dBm)	PASS /FAIL
38	5190	14.40	27.542	24.00	PASS
46	5230	13.69	23.388	24.00	PASS
54	5270	13.05	20.184	24.00	PASS
62	5310	13.03	20.091	24.00	PASS
102	5510	12.88	19.409	24.00	PASS
110	5550	13.07	20.277	24.00	PASS
134	5670	13.42	21.979	24.00	PASS
151	5755	13.23	21.038	30.00	PASS
159	5795	13.10	20.417	30.00	PASS

Note:

For 5260 ~ 5320MHz, 5500 ~ 5700MHz

$11\text{dBm} + 10\log(41.57) = 27.19\text{ dBm} > 24\text{dBm}$

$11\text{dBm} + 10\log(41.62) = 27.19\text{ dBm} > 24\text{dBm}$

$11\text{dBm} + 10\log(41.58) = 27.19\text{ dBm} > 24\text{dBm}$

$11\text{dBm} + 10\log(41.59) = 27.19\text{ dBm} > 24\text{dBm}$

$11\text{dBm} + 10\log(41.52) = 27.18\text{ dBm} > 24\text{dBm}$



802.11ac (80MHz)

CHANNEL NUMBER	FREQ. (MHz)	AVG. CONDUCTED POWER (dBm)	AVG. CONDUCTED POWER (mW)	LIMIT (dBm)	PASS /FAIL
42	5210	13.99	25.061	24.00	PASS
58	5290	13.42	21.979	24.00	PASS
106	5530	12.47	17.660	24.00	PASS
122	5610	12.56	18.030	24.00	PASS
155	5775	12.67	18.493	30.00	PASS

Note:

For 5260 ~ 5320MHz, 5500 ~ 5700MHz

$11\text{dBm} + 10\log(82.26) = 30.15\text{ dBm} > 24\text{dBm}$

$11\text{dBm} + 10\log(82.32) = 30.16\text{ dBm} > 24\text{dBm}$

$11\text{dBm} + 10\log(82.28) = 30.15\text{ dBm} > 24\text{dBm}$



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26dB BANDWIDTH:

802.11a

Channel Number	Freq. (MHz)	26dB DOWN BANDWIDTH (MHz)	PASS /FAIL
36	5180	20.22	PASS
40	5200	20.16	PASS
48	5240	20.20	PASS
52	5260	20.21	PASS
60	5300	20.28	PASS
64	5320	20.18	PASS
100	5500	20.08	PASS
116	5580	20.16	PASS
140	5700	20.19	PASS

802.11n (20MHz)

Channel Number	Freq. (MHz)	26dB DOWN BANDWIDTH (MHz)	PASS /FAIL
36	5180	20.47	PASS
40	5200	20.46	PASS
48	5240	20.51	PASS
52	5260	20.46	PASS
60	5300	20.48	PASS
64	5320	20.51	PASS
100	5500	20.51	PASS
116	5580	20.49	PASS
140	5700	20.52	PASS



802.11n (40MHz)

Channel Number	Freq. (MHz)	26dB DOWN BANDWIDTH (MHz)	PASS /FAIL
38	5190	41.54	PASS
46	5230	41.71	PASS
54	5270	41.57	PASS
62	5310	41.62	PASS
102	5510	41.58	PASS
110	5550	41.59	PASS
134	5670	41.52	PASS

802.11ac (80MHz)

Channel Number	Freq. (MHz)	26dB DOWN BANDWIDTH (MHz)	PASS /FAIL
42	5210	82.26	PASS
58	5290	82.26	PASS
106	5530	82.32	PASS
122	5610	82.28	PASS



6dB BANDWIDTH For 5725-5850MHz

802.11a

Channel Number	Freq. (MHz)	6dB DOWN BANDWIDTH (MHz)	PASS /FAIL
149	5745	15.15	PASS
157	5785	15.19	PASS
165	5825	15.18	PASS

802.11n (20M)

Channel Number	Freq. (MHz)	6dB DOWN BANDWIDTH (MHz)	PASS /FAIL
149	5745	15.17	PASS
157	5785	15.19	PASS
165	5825	15.19	PASS

802.11n (40M)

Channel Number	Freq. (MHz)	6dB DOWN BANDWIDTH (MHz)	PASS /FAIL
151	5755	35.31	PASS
159	5795	35.31	PASS

802.11ac (80MHz)

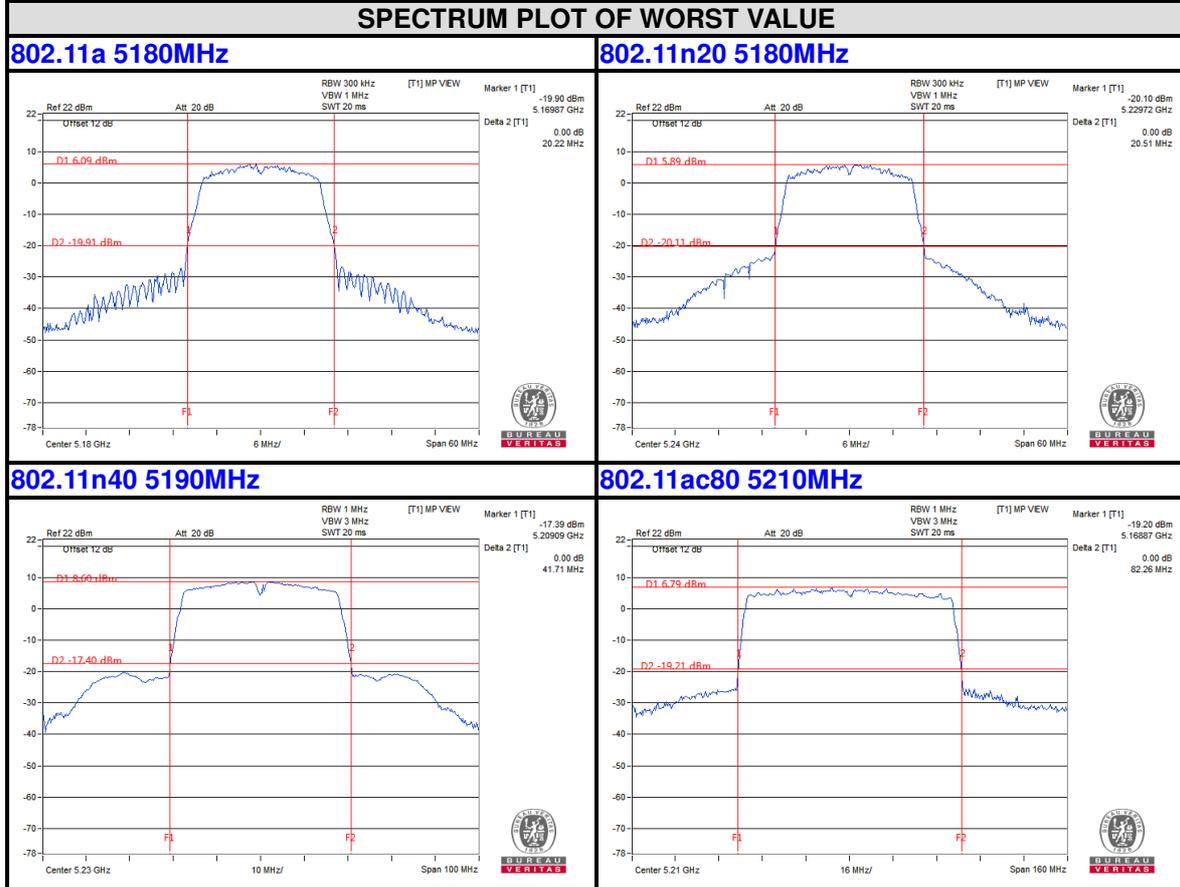
Channel Number	Freq. (MHz)	6dB DOWN BANDWIDTH (MHz)	PASS /FAIL
155	5775	76.24	PASS



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26dB bandwidth Test Plot For 5150-5250MHz



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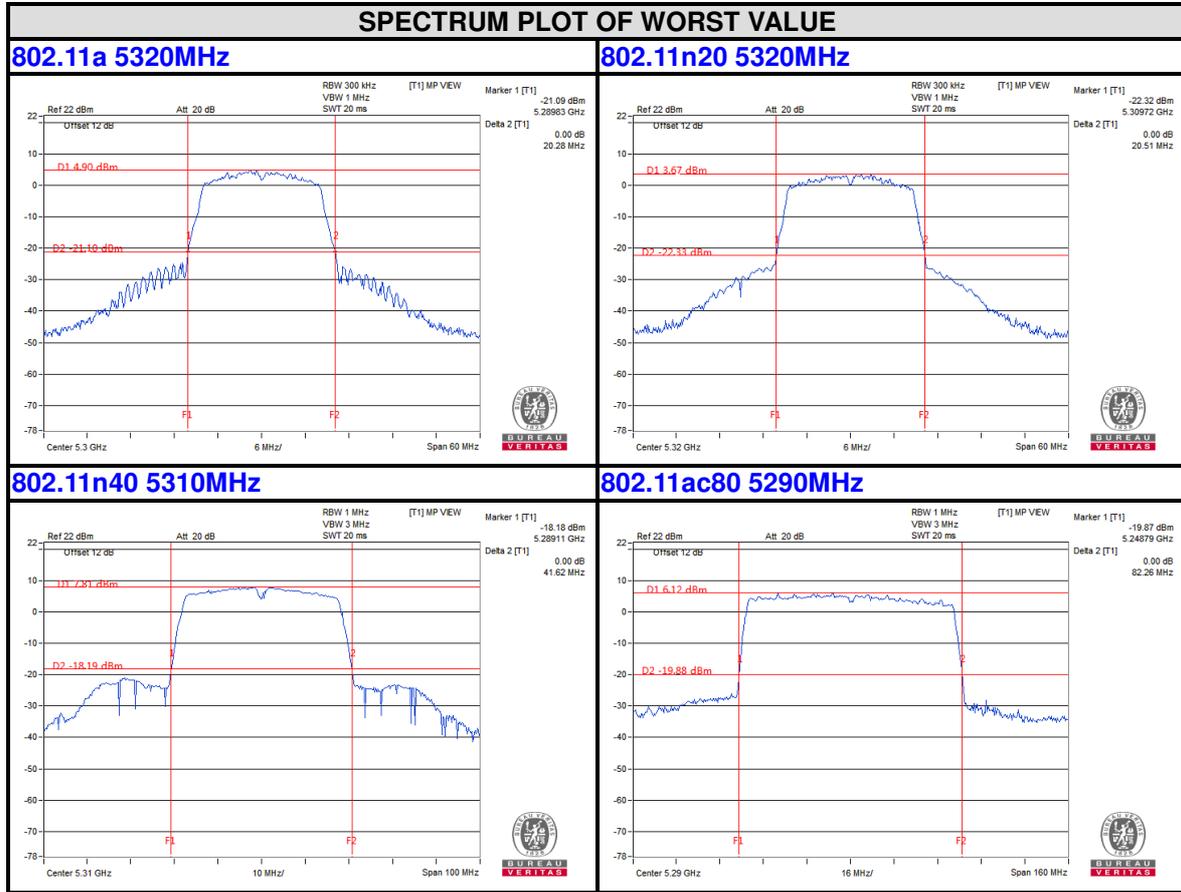
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For 5250-5350MHz



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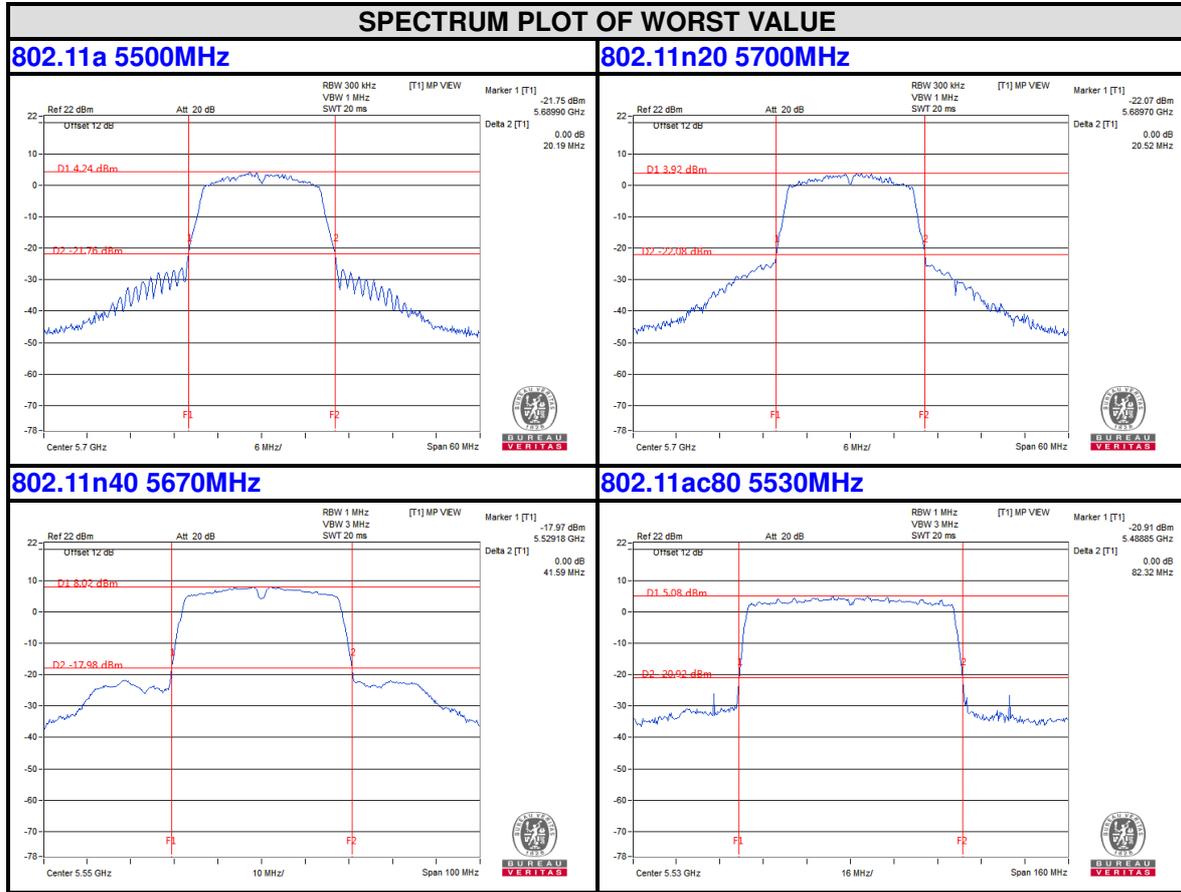
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For 5470-5725MHz



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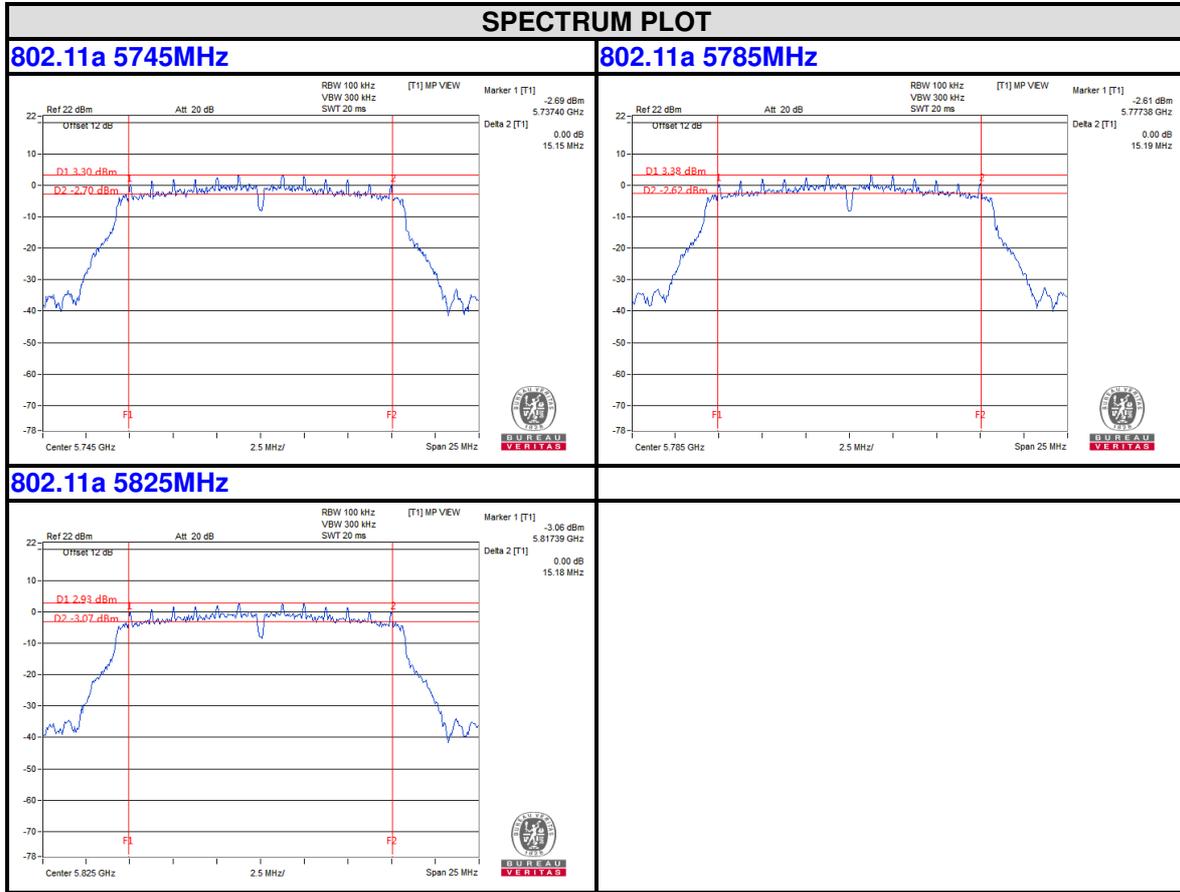
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6dB BANDWIDTH For 5725-5850MHz



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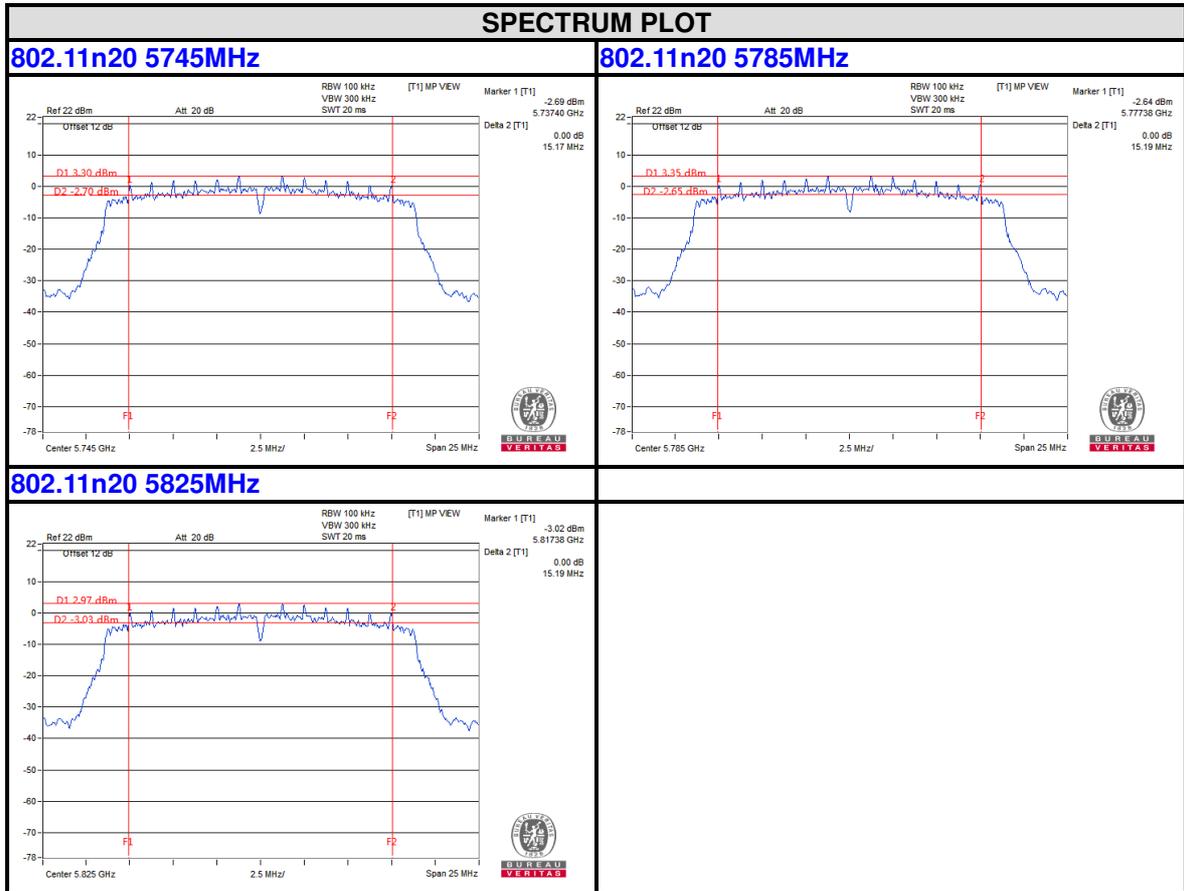
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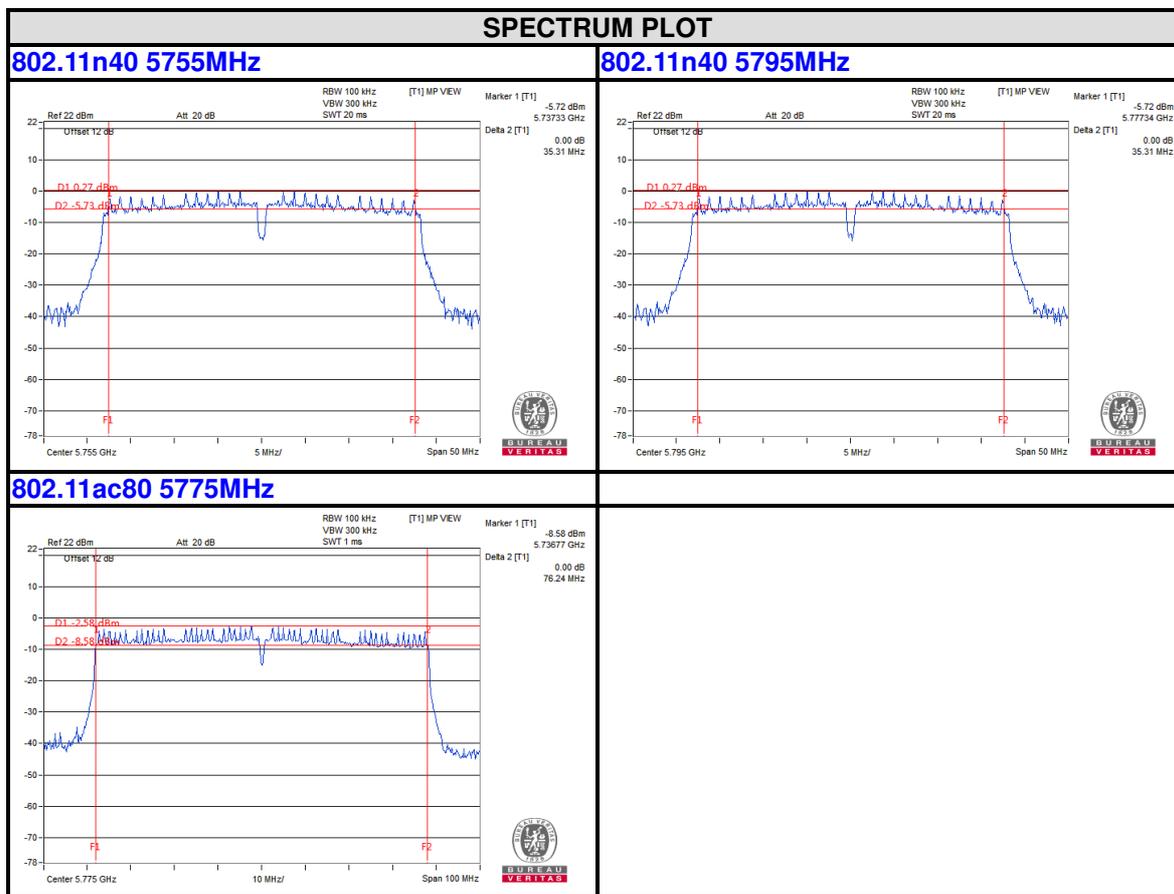
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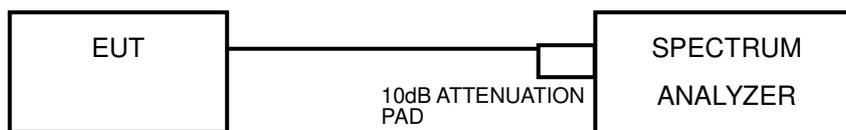


3.4 PEAK POWER SPECTRAL DENSITY MEASUREMENT

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)



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	1.87	0.301	2.171	11.00	PASS
40	5200	2.20	0.301	2.501	11.00	PASS
48	5240	2.20	0.301	2.501	11.00	PASS
52	5260	0.73	0.301	1.031	11.00	PASS
60	5300	0.79	0.301	1.091	11.00	PASS
64	5320	-0.04	0.301	0.261	11.00	PASS
100	5500	0.26	0.301	0.561	11.00	PASS
116	5580	0.58	0.301	0.881	11.00	PASS
140	5700	0.13	0.301	0.431	11.00	PASS

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

Chan.	Freq. (MHz)	PSD (dBm/300kHz)	PSD (dBm/500kHz)	Duty Factor (dB)	Total PSD (dBm/500k Hz)	Limit (dBm/500kHz)	PASS / FAIL
149	5745	-6.51	-4.29	0.301	-3.989	30.00	PASS
157	5785	-6.37	-4.15	0.301	-3.849	30.00	PASS
165	5825	-7.00	-4.78	0.301	-4.479	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	1.56	0.920	2.480	11.00	PASS
40	5200	1.77	0.920	2.690	11.00	PASS
48	5240	1.94	0.920	2.860	11.00	PASS
52	5260	0.29	0.920	1.210	11.00	PASS
60	5300	0.46	0.920	1.380	11.00	PASS
64	5320	-0.48	0.920	0.440	11.00	PASS
100	5500	-0.09	0.920	0.830	11.00	PASS
116	5580	0.23	0.920	1.150	11.00	PASS
140	5700	-0.23	0.920	0.690	11.00	PASS

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

Chan.	Freq. (MHz)	PSD (dBm/300kHz)	PSD (dBm/500kHz)	Duty Factor (dB)	Total PSD (dBm/500k Hz)	Limit (dBm/500kHz)	PASS / FAIL
149	5745	-6.96	-4.74	0.920	-3.82	30.00	PASS
157	5785	-6.96	-4.74	0.920	-3.82	30.00	PASS
165	5825	-7.32	-5.10	0.920	-4.18	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	-1.05	0.670	-0.380	11.00	PASS
46	5230	-1.77	0.670	-1.100	11.00	PASS
54	5270	-2.42	0.670	-1.750	11.00	PASS
62	5310	-2.70	0.670	-2.030	11.00	PASS
102	5510	-2.62	0.670	-1.950	11.00	PASS
118	5590	-2.49	0.670	-1.820	11.00	PASS
134	5670	-2.22	0.670	-1.550	11.00	PASS

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

Chan.	Freq. (MHz)	PSD (dBm/300kHz)	PSD (dBm/500kHz)	Duty Factor (dB)	Total PSD (dBm/500k Hz)	Limit (dBm/500kHz)	PASS / FAIL
151	5755	-10.92	-8.70	0.670	-8.03	30.00	PASS
159	5795	-11.06	-8.84	0.670	-8.17	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	-7.89	1.163	-6.727	11.00	PASS
58	5290	-8.61	1.163	-7.447	11.00	PASS
106	5530	-10.02	1.163	-8.857	11.00	PASS
122	5610	-9.60	1.163	-8.437	11.00	PASS

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

Chan.	Freq. (MHz)	PSD (dBm/300kHz)	PSD (dBm/500kHz)	Duty Factor (dB)	Total PSD (dBm/500kHz)	Limit (dBm/500kHz)	PASS / FAIL
155	5775	-18.39	-16.17	1.163	-15.007	30.00	PASS

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

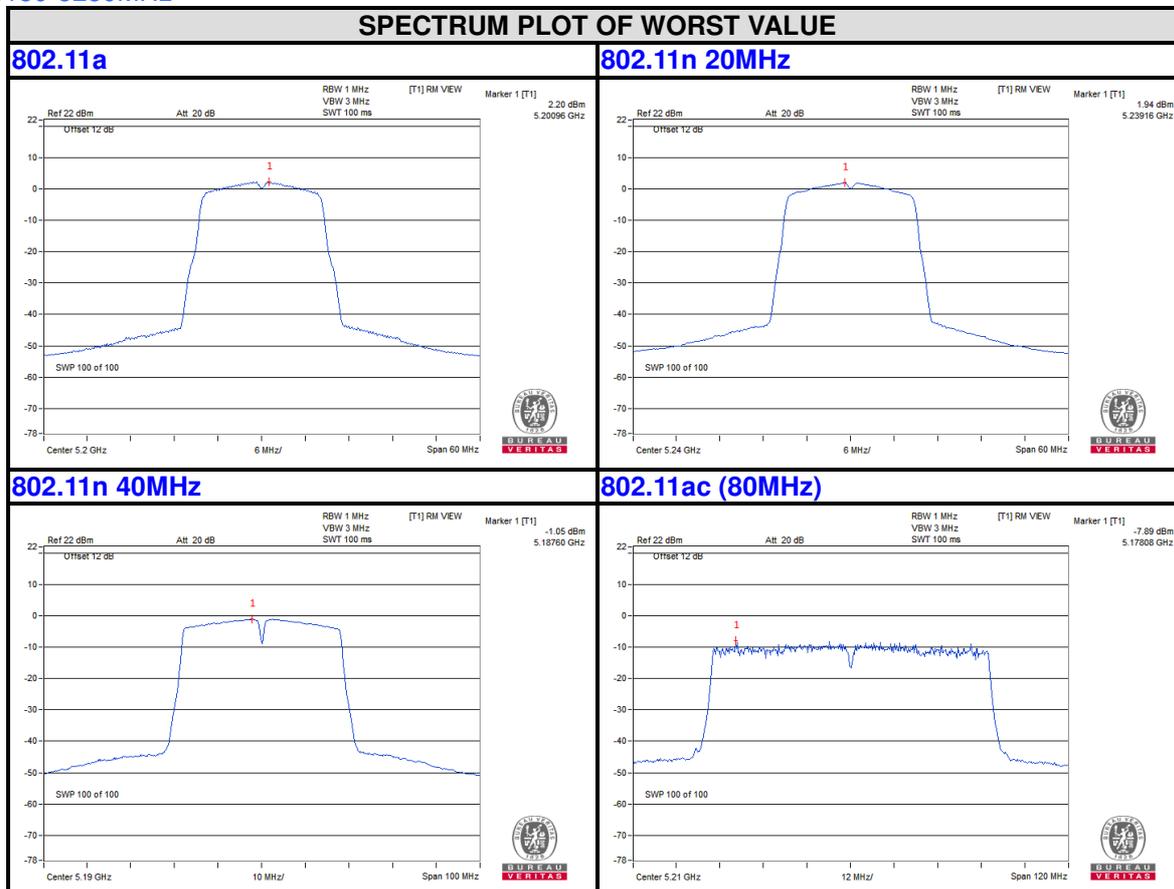


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PSD Test Plot

BAND 1
5150-5250MHz



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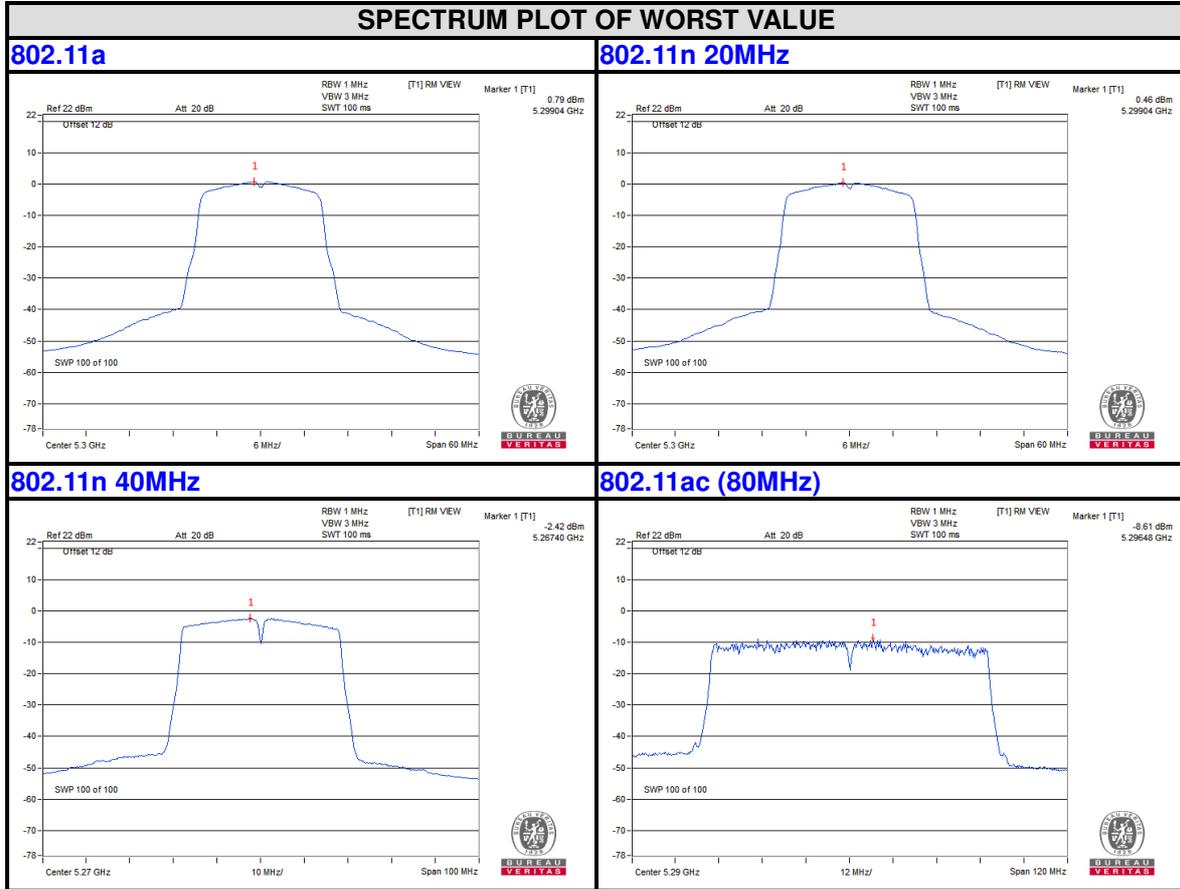
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BAND 2
5250-5350MHz



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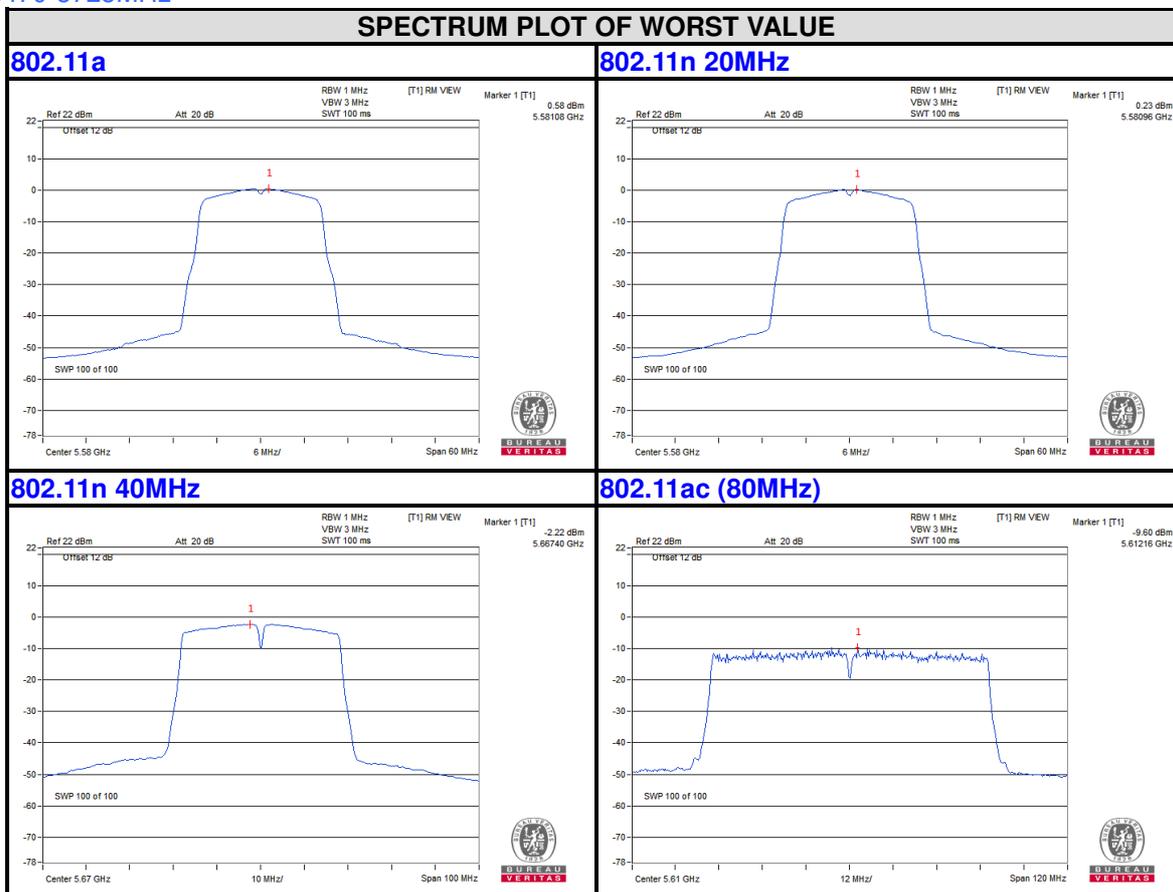
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BAND 3
5470-5725MHz



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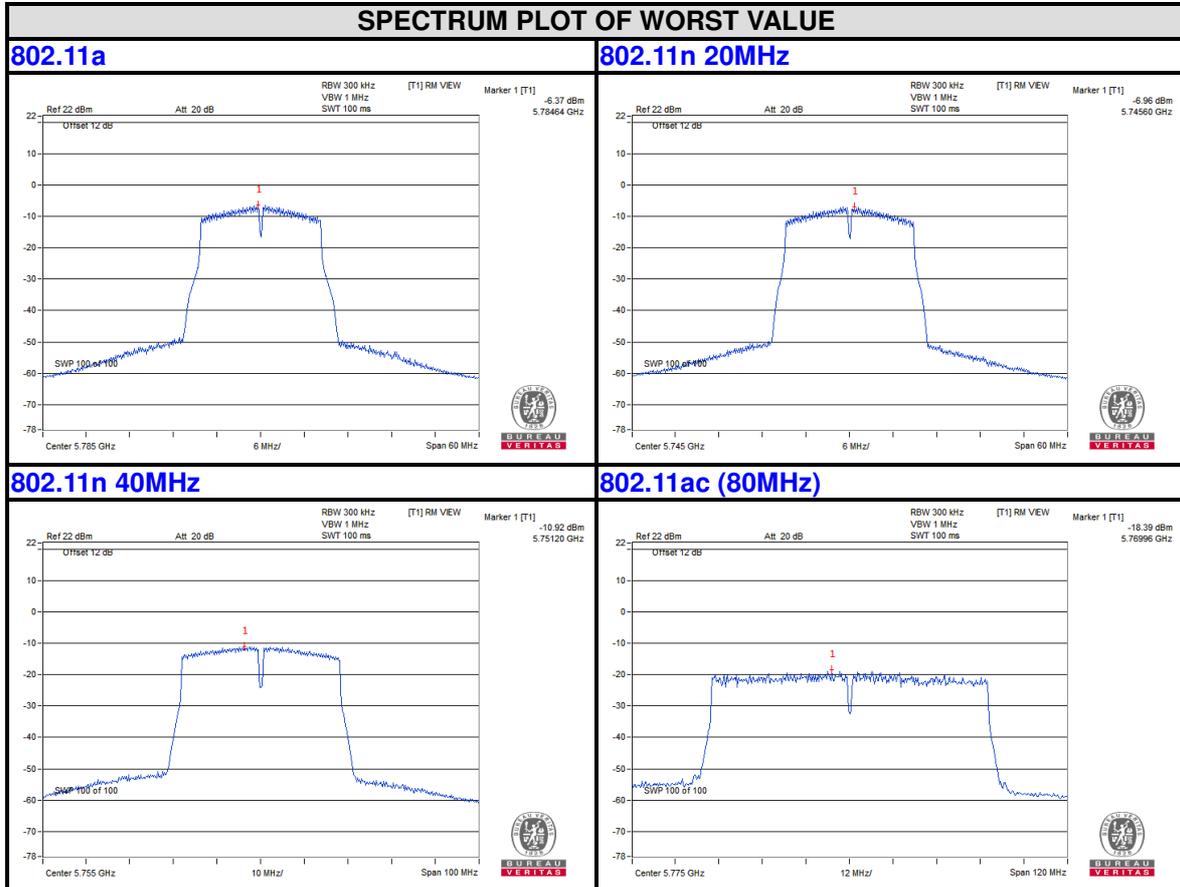
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BAND4
5725-5850MHz



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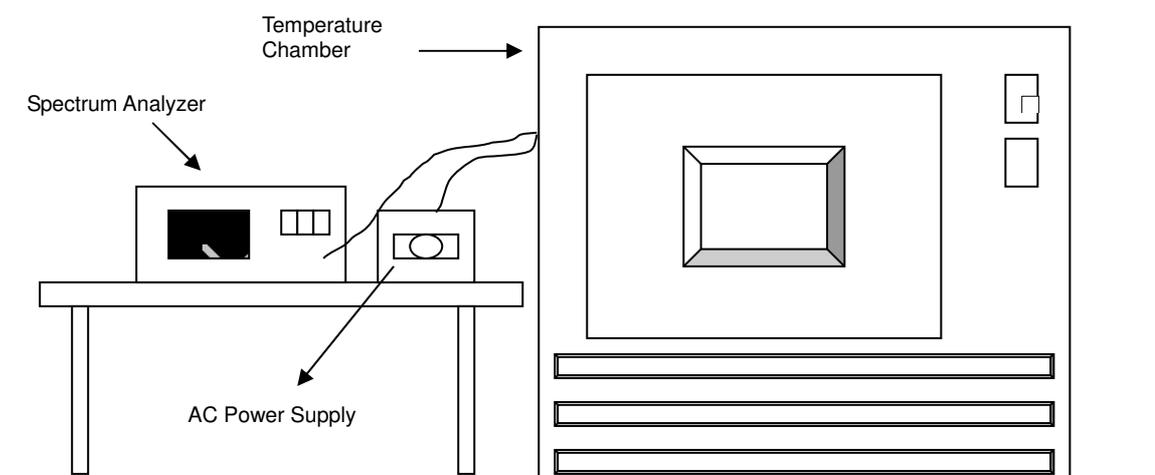
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3.5 FREQUENCY STABILITY

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.



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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.



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	Measured Frequency (MHz)	Frequency Drift	Measured Frequency (MHz)	Frequency Drift	Measured Frequency (MHz)	Frequency Drift
50	120	5179.9925	-0.00014	5179.991	-0.00017	5179.992	-0.00015	5179.9905	-0.00018
40	120	5180.0213	0.00041	5180.0171	0.00033	5180.019	0.00037	5180.0212	0.00041
30	120	5180.002	0.00004	5180.0049	0.00009	5180.0015	0.00003	5180.005	0.00010
20	120	5180.0184	0.00036	5180.0159	0.00031	5180.0156	0.00030	5180.0186	0.00036
10	120	5179.9853	-0.00028	5179.9849	-0.00029	5179.9828	-0.00033	5179.9846	-0.00030
0	120	5180.0161	0.00031	5180.0193	0.00037	5180.0189	0.00036	5180.0158	0.00031
-10	120	5179.9756	-0.00047	5179.9726	-0.00053	5179.9744	-0.00049	5179.9737	-0.00051
-20	120	5179.9758	-0.00047	5179.9747	-0.00049	5179.9755	-0.00047	5179.9751	-0.00048
-30	120	5179.9925	-0.00014	5179.991	-0.00017	5179.992	-0.00015	5179.9905	-0.00018

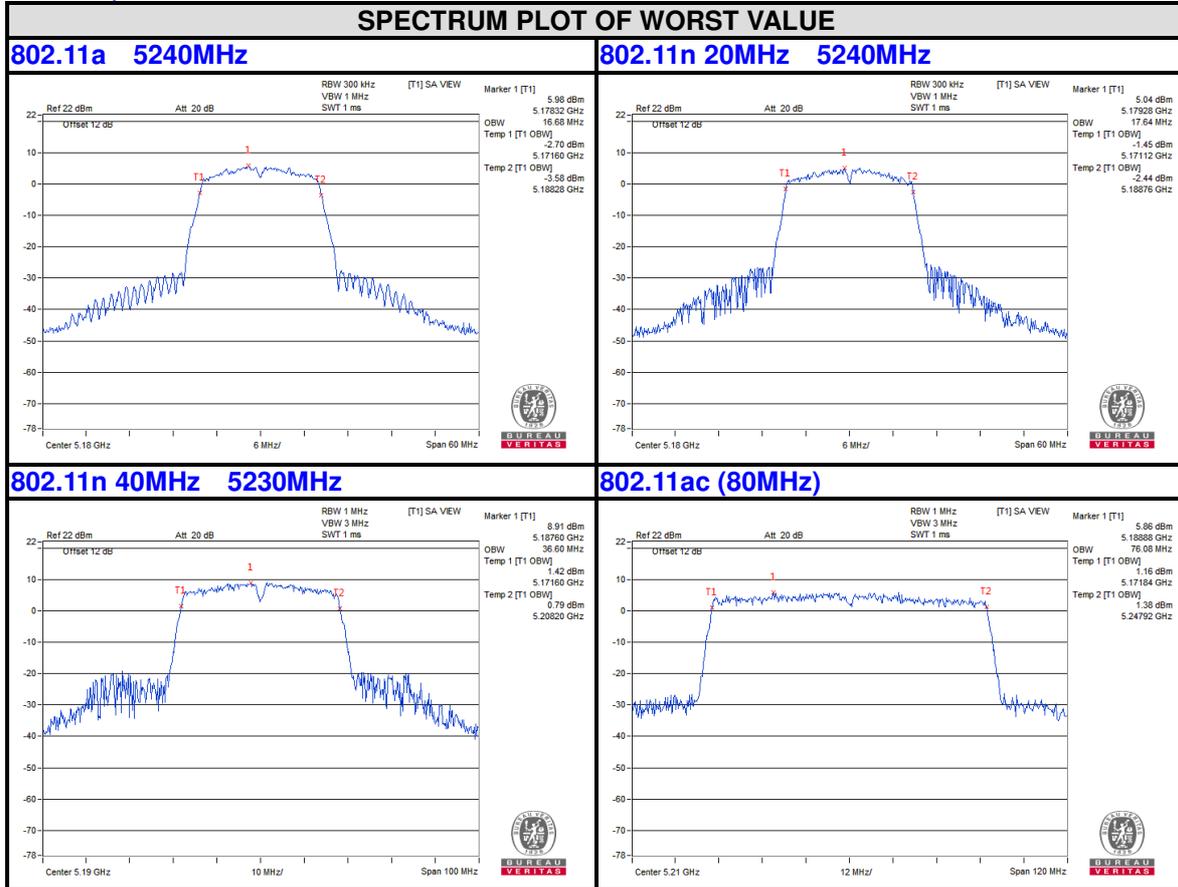
FREQUENCY STABILITY VERSUS TEMP.									
OPERATING FREQUENCY: 5180MHz									
TEMP. (°C)	POWER SUPPLY (Vac)	0 MINUTE		2 MINUTE		5 MINUTE		10 MINUTE	
		Measured Frequency (MHz)	Frequency Drift	Measured Frequency (MHz)	Frequency Drift	Measured Frequency (MHz)	Frequency Drift	Measured Frequency (MHz)	Frequency Drift
20	138	5180.0185	0.00036	5180.0151	0.00029	5180.0152	0.00029	5180.0194	0.00037
	120	5180.0184	0.00036	5180.0159	0.00031	5180.0156	0.00030	5180.0186	0.00036
	102	5180.0177	0.00034	5180.015	0.00029	5180.016	0.00031	5180.018	0.00035



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



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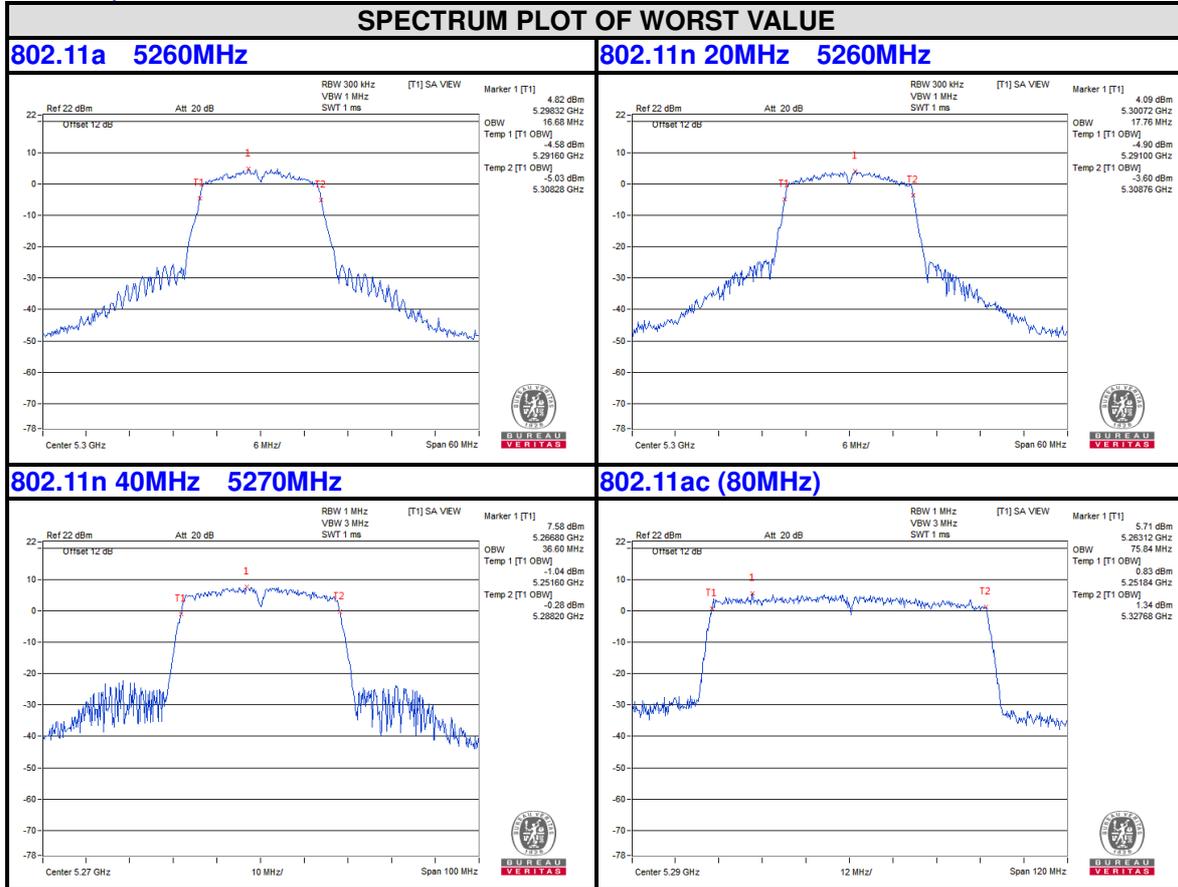
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Band 2
5250-5350MHz
99% Occupied Bandwidth Without over Band 1



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4. PHOTOGRAPHS OF THE TEST CONFIGURATION

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



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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---