

TEST REPORT

Applicant	BenQ Corporation
Address	16 Jihu Road, Neihu, Taipei 114, Taiwan

Manufacturer or Supplier	BenQ Corporation
Address	16 Jihu Road, Neihu, Taipei 114, Taiwan
Product Name	Wireless USB Adapter
Brand Name	BenQ
Model	TDY31
Additional Model & Model Difference	N/A
Date of tests	Aug. 26, 2021 ~ Sep. 26, 2021

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

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

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

Tested by Andy Zhu Supervisor / EMC Department	Approved by Glyn He Assistant Manager / EMC Department
	 Date: Jan. 04, 2022

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Test Report No.: RF2107WDG0280-2

RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
RF2107WDG0280-2	Original release.	Jan. 04, 2022

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	No antenna connector is used

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	3.05dB
Radiated emissions	9KHz ~ 30MHz	2.16dB
	30MHz ~ 1GMHz	3.82dB
	1GHz ~ 18GHz	4.94dB
	18GHz ~ 40GHz	5.07dB

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 NAME	Wireless USB Adapter
MODEL NO.	TDY31
FCC ID	JVPTDY31
POWER SUPPLY	DC 5V From USB host unit
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 300.0Mbps 802.11ac : up to 866.6Mbps
OPERATING FREQUENCY	5180 ~ 5240MHz, 5260 ~ 5320MHz 5500 ~ 5700MHz, 5745 ~ 5825MHz
NUMBER OF CHANNEL	See section 2.2
CONDUCTED OUTPUT POWER	71.807 mW for 5150 ~ 5250MHz (Maximum AVG Power) 54.963 mW for 5250 ~ 5350MHz (Maximum AVG Power) 36.288 mW for 5470 ~ 5725MHz (Maximum AVG Power) 48.957 mW for 5725 ~ 5850MHz (Maximum AVG Power)
ANTENNA TYPE	5180 ~ 5240MHz: FPC antenna with 2dBi gain 5260 ~ 5320MHz: FPC antenna with 2dBi gain 5500 ~ 5700MHz: FPC antenna with 2dBi gain 5745 ~ 5825MHz: FPC antenna with 2dBi gain
I/O PORTS	Refer to user's manual
CABLE SUPPLIED	N/A

NOTES:

1. For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.
2. For the test results, the EUT had been tested with all conditions. But only the worst case was shown in test report.
3. The EUT incorporates a MIMO function. Physically, the EUT provides 2 completed transmitter and 2 receiver.

MODULATION MODE	TX FUNCTION
802.11a	2TX
802.11n (HT20), 802.11ac (VHT20)	2TX
802.11n (HT40), 802.11ac (VHT40)	2TX
802.11ac (VHT80)	2TX

* The modulation and bandwidth are similar for 802.11n mode for HT20 / HT40 and 802.11ac mode for VHT20 / VHT40, therefore investigated worst case to representative mode in test report. (Final test mode refer section 3.2.1)



4. Please refer to the EUT photo document (Reference No.: 2107WDG0280) for detailed product photo.

5. ANTENNA LIST

Ant. No.	Vendor	Antenna Type	Operation Frequency Range (MHz)	Gain (dBi)
Chain 0	Tengxiang Technology.Inc	FPC	5GHz	2
Chain 1		FPC	5GHz	2
Directional Gain for PSD			5.01dBi	
Directional Gain for power			2dBi	

All antennas have the same gain, Directional gain = GANT + Array Gain, where Array Gain is as follows.
For power spectral density (PSD) measurements on all devices, Array Gain = $10 \log(\text{NANT}/\text{NSS}=1)$ dB.
For power measurements on IEEE 802.11 devices, Array Gain = 0 dB (i.e., no array gain) for $\text{NANT} \leq 4$

2.2 DESCRIPTION OF TEST MODES

FOR 5150 ~ 5250MHz

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

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

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

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
38	5190 MHz	46	5230 MHz

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

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
42	5210MHz	--	--

FOR 5250 ~ 5350MHz

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

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

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

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
54	5270 MHz	62	5310 MHz

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

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
58	5290MHz	--	--

FOR 5470 ~ 5725MHz

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

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	--	--

4 channels are provided for 802.11a c 40MHz, 802.11n (40MHz):

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

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

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
106	5530MHz	122	5610MHz

FOR 5725 ~ 5850MHz

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

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

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

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
151	5755MHz	159	5795MHz

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

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 Notebook 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:

1. 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, 112, 140	OFDM	BPSK	6.0
	802.11n (20MHz)		100 to 140	100, 112, 140	OFDM	BPSK	6.5
	802.11n (40MHz)		102 to 134	102, 110, 134	OFDM	BPSK	13.5
	802.11ac 80MHz		106, 122	106, 122	OFDM	BPSK	29.3
	802.11a	5725-5850	149 to 165	149, 157, 165	OFDM	BPSK	6.0
	802.11n (20MHz)		149 to 165	149, 157, 165	OFDM	BPSK	6.5
	802.11n (40MHz)		151 to 159	151, 159	OFDM	BPSK	13.5
	802.11ac 80MHz		155	155	OFDM	BPSK	29.3

RADIATED EMISSION TEST (BELOW 1GHz):

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

☒ Following channel(s) was (were) selected for the final test as listed below.

EUT CONFIGURE MODE	MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A	802.11a	5150-5250 5250-5350 5470-5725 5725-5850	36 to 48 52 to 64 100 to 140 149 to 165	36	OFDM	BPSK	6.0

POWER LINE CONDUCTED EMISSION TEST:

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

EUT CONFIGURE MODE	MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A	802.11a	5150-5250 5250-5350 5470-5725 5725-5850	36 to 48 52 to 64 100 to 140 149 to 165	36	OFDM	BPSK	6.0

ANTENNA PORT CONDUCTED MEASUREMENT:

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

EUT CONFIGURE MODE	MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A	802.11a	5150-5250	36 to 48	36, 40, 48	OFDM	BPSK	6.0
	802.11n (20MHz)		36 to 48	36, 40, 48	OFDM	BPSK	6.5
	802.11n (40MHz)		38 to 46	38, 46	OFDM	BPSK	13.5
	802.11ac 80MHz		42	42	OFDM	BPSK	29.3
	802.11a	5250-5350	52 to 64	52, 60, 64	OFDM	BPSK	6.0
	802.11n (20MHz)		52 to 64	52, 60, 64	OFDM	BPSK	6.5
	802.11n (40MHz)		54 to 62	54, 62	OFDM	BPSK	13.5
	802.11ac 80MHz		58	58	OFDM	BPSK	29.3
	802.11a	5470-5725	100 to 140	100, 112, 140	OFDM	BPSK	6.0
	802.11n (20MHz)		100 to 140	100, 112, 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	TESTED BY
RE<1G	24deg. C, 55%RH	DC 5V from Notebook	Jelly
RE≥1G	24deg. C, 55%RH	DC 5V from Notebook	Jelly
PLC	20deg. C, 56%RH	DC 5V from Notebook	Alex
APCM	20deg. C, 55%RH	DC 5V from Notebook	Vincent



BUREAU
VERITAS

Test Report No.: RF2107WDG0280-2

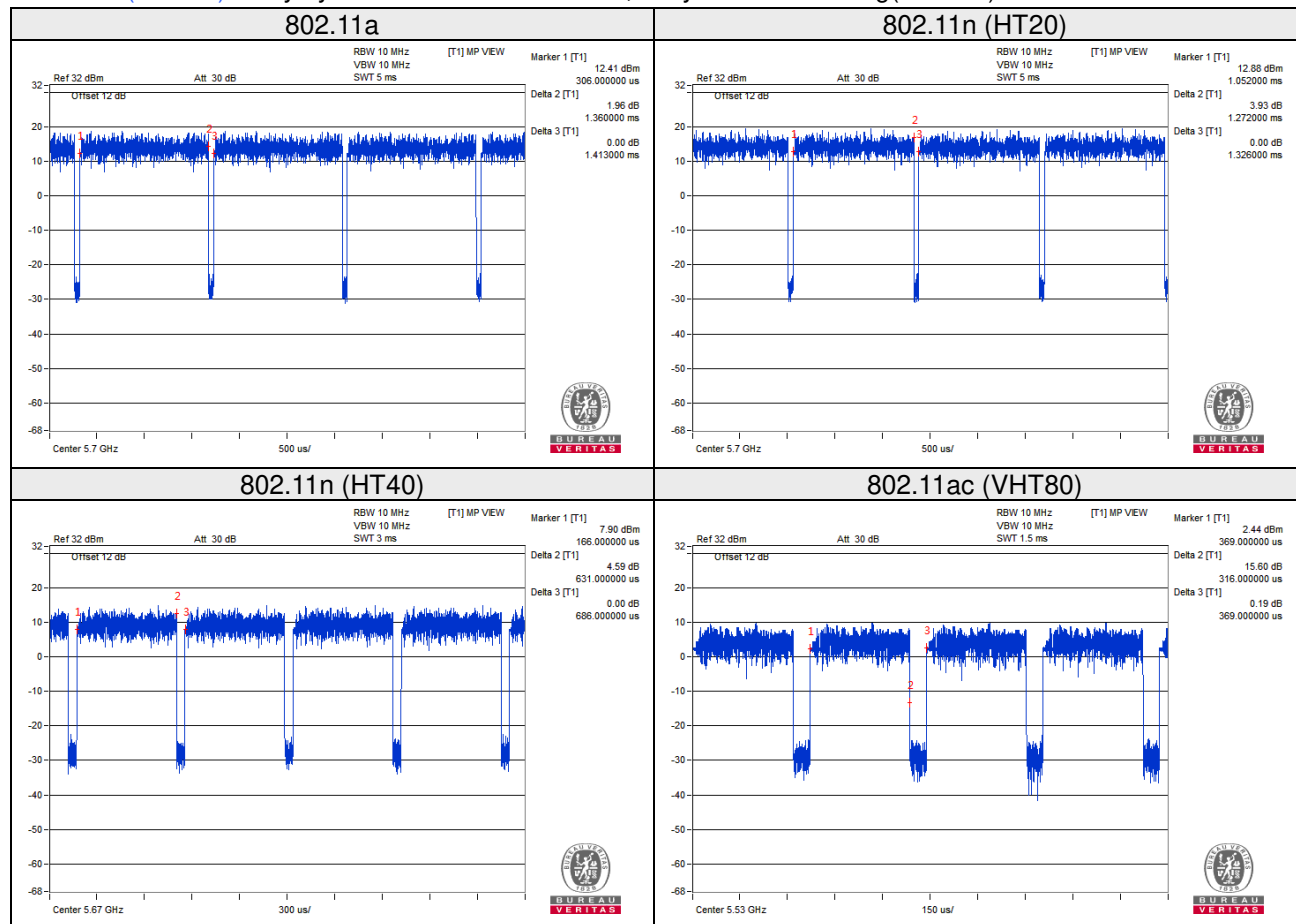
2.3 DUTY CYCLE OF TEST SIGNAL

802.11a: Duty cycle = $1.360/1.413 = 0.962$, Duty factor = $10 * \log(1/0.923) = 0.166$

802.11n (HT20): Duty cycle = $1.272/1.326 = 0.959$, Duty factor = $10 * \log(1/0.929) = 0.181$

802.11n (HT40): Duty cycle = $0.631/0.686 = 0.920$, Duty factor = $10 * \log(1/0.845) = 0.363$

802.11ac (VHT80): Duty cycle = $0.316/0.369 = 0.856$, Duty factor = $10 * \log(1/0.761) = 0.673$



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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	Notebook	DELL	Latitude 5280	77K2GH2	N/A

NO.	DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	AC Line: Unshielded, Detachable 0.8m, DC Line: Unshielded, Detachable 1.8m

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)

KDB 789033 D02 General UNII Test Procedures New Rules v02r01

KDB 662911 D01 Multiple Transmitter Output v02r01

ANSI C63.10-2013

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

3. TEST TYPES AND RESULTS

3.1 RADIATED EMISSION AND BANDEDGE MEASUREMENT

3.1.1 LIMITS OF RADIATED EMISSION AND BANDEDGE MEASUREMENT

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

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

NOTE:

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

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

3.1.3 TEST INSTRUMENTS

Equipment	Manufacturer	Model No.	Serial No.	Next Cal.
EMI Test Receiver	Rohde&Schwarz	ESU40	100449	Mar. 07,22
Signal and Spectrum Analyzer	Rohde&Schwarz	FSV7	102331	May 09, 22
Active Loop Antenna (9KHz -30MHz)	SCHWARZBECK	FMZB 1519B	1519B-045	May 29,22
Amplifier (9KHz -1GHz)	Burgeon	BPA-530	100210	Mar. 13,22
Bilog Antenna (20MHz -2GHz)	Teseq	CBL 6111D	30643	May 29,22
Horn Antenna (1GHz -18GHz)	ETS -Lindgren	3117	00062558	May 29,22
Horn Antenna (18GHz -40GHz)	SCHWARZBECK	BBHA 9170	BBHA9170147	May 09, 22
3m Semi-anechoic Chamber	ETS-LINDGREN	9m*6m*6m	NSEMC003	May 22,22
Test Software	ADT	ADT_Radiated_V7.6.15.9.2	N/A	N/A
Broadband Preamplifier (1GHz~18GHz)	SCHWARZBECK	BBV9718	305	May 08,22
Pre-Amplifier (18GHz-40GHz)	EMCI	EMC 184045	980102	Mar. 13,22
Test Software	ADT	ADT_Radiated_V7.6.15.9.2	N/A	N/A

NOTES:

1. The calibration interval of the above test instruments are 12, 24 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:

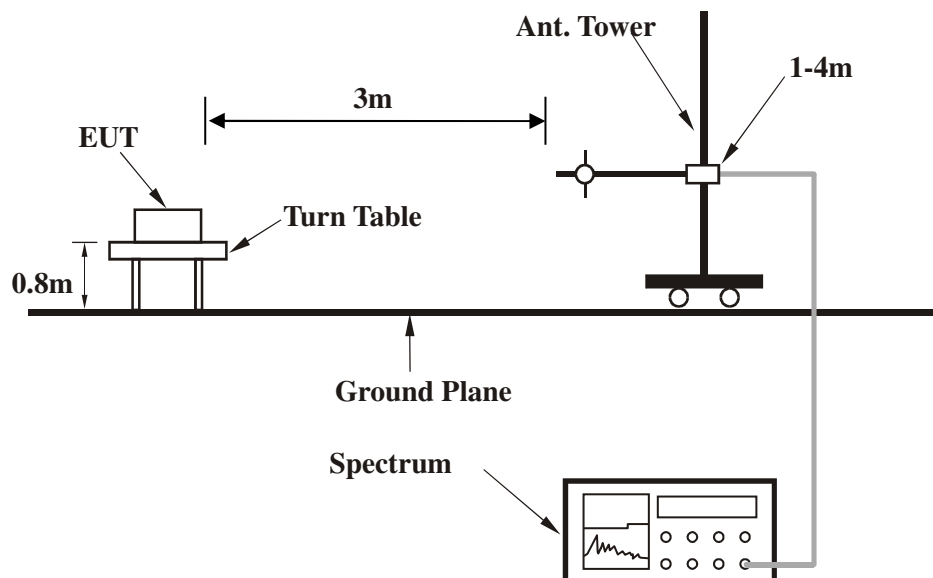
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
3. The resolution 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.

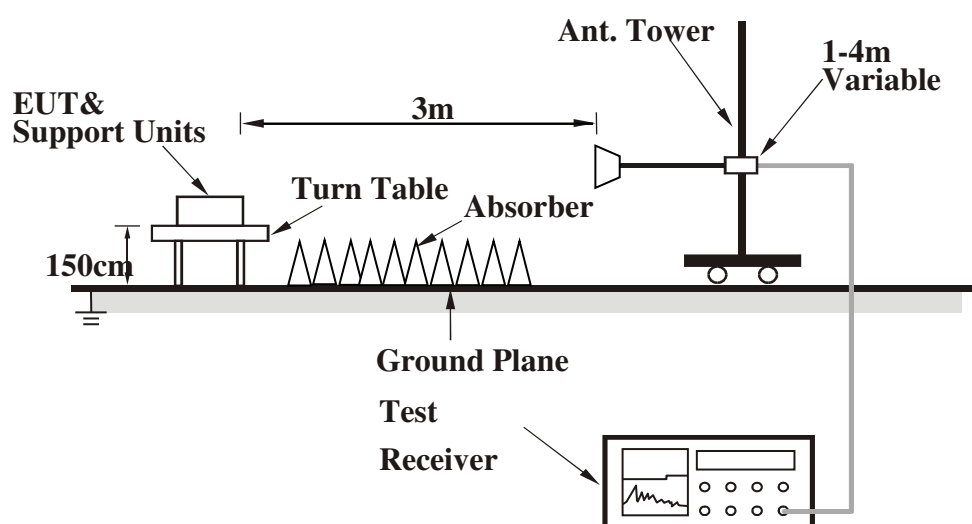
3.1.6 TEST SETUP

Below 1GHz test setup



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

Above 1GHz test setup



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

3.1.7 EUT OPERATING CONDITION

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

3.1.8 FTEST RESULTS

BELOW 1GHz WORST-CASE DATA

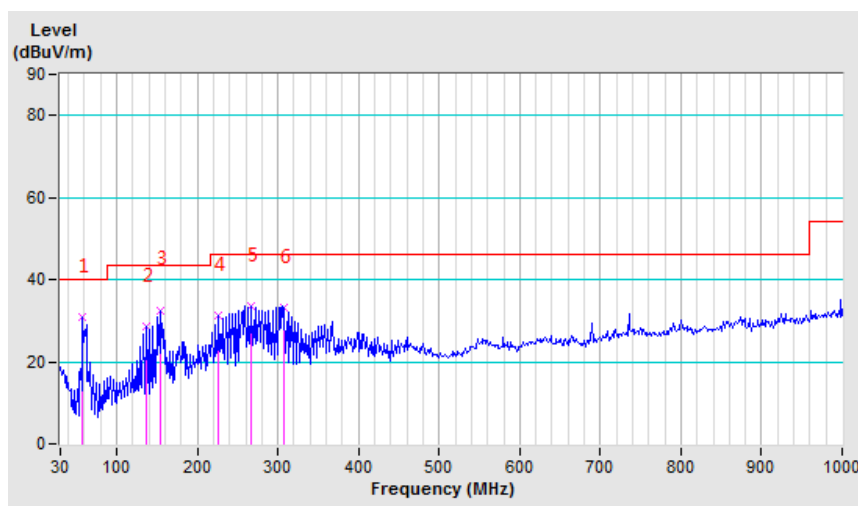
802.11a

CHANNEL	TX Channel 36	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 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	58.12	30.95	40.00	-9.05	2.98H	152	54.83	-23.88
2	136.84	28.74	43.50	-14.76	1.67H	303	45.84	-17.10
3	153.71	32.57	43.50	-10.93	2.87H	179	49.17	-16.60
4	226.81	31.21	46.00	-14.79	2.96H	204	48.93	-17.72
5	267.58	33.45	46.00	-12.55	1.30H	82	46.74	-13.29
6	308.35	33.32	46.00	-12.68	1.39H	77	45.61	-12.29

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 less than 20dB margin against the limit.
4. Margin value = Emission level – Limit value.

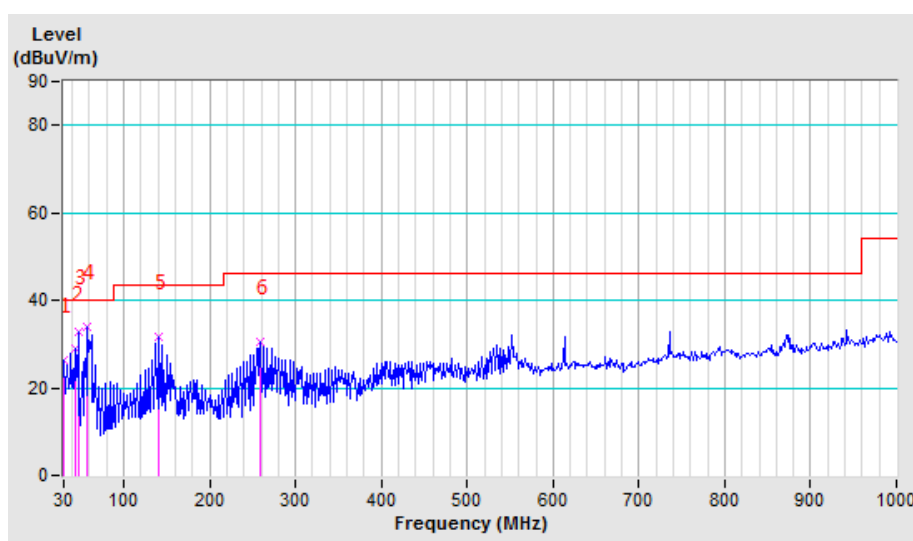


CHANNEL	TX Channel 36	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 1GHz		

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	26.45	40.00	-13.55	2.68V	192	37.23	-10.78
2	42.65	29.12	40.00	-10.88	2.08V	47	46.48	-17.36
3	46.87	32.93	40.00	-7.07	2.23V	122	52.92	-19.99
4	58.12	33.85	40.00	-6.15	1.73V	208	57.73	-23.88
5	141.06	31.68	43.50	-11.82	2.94V	242	48.82	-17.14
6	259.14	30.35	46.00	-15.65	1.48V	301	43.07	-12.72

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 less than 20dB margin against the limit.
4. Margin value = Emission level – Limit value.



Band 1 (5150-5250MHz):

ABOVE 1GHz DATA

802.11a

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

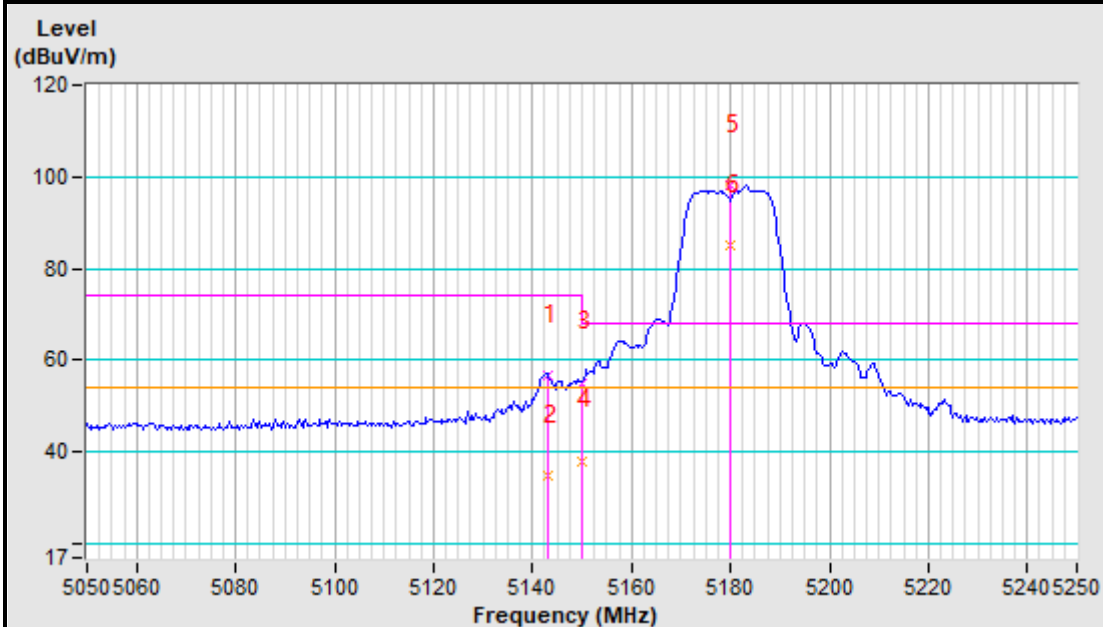
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5143.00	56.59 PK	74.00	-17.41	2.70H	108	50.80	5.79
2	5143.00	34.79 AV	54.00	-19.21	2.70H	108	29.00	5.79
3	5150.00	55.08 PK	74.00	-18.92	1.69H	108	49.28	5.80
4	5150.00	38.13 AV	54.00	-15.87	1.69H	108	32.33	5.80
5	*5180.00	98.03 PK			2.22H	108	92.17	5.86
6	*5180.00	85.00 AV			2.22H	108	79.14	5.86
7	#10360.00	60.23 PK	68.20	-7.97	2.51H	0	46.83	13.40
8	15540.00	59.23 PK	74.00	-14.77	1.71H	0	40.36	18.87
9	15540.00	45.84 AV	54.00	-8.16	1.71H	0	26.97	18.87
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	5143.00	64.54 PK	74.00	-9.46	1.53V	84	58.75	5.79
2	5143.00	39.98 AV	54.00	-14.02	1.53V	84	34.19	5.79
3	5150.00	62.64 PK	74.00	-11.36	1.67V	84	56.84	5.80
4	5150.00	45.16 AV	54.00	-8.84	1.67V	84	39.36	5.80
5	*5180.00	106.06 PK			1.92V	84	100.20	5.86
6	*5180.00	92.47 AV			1.92V	84	86.61	5.86
7	#10360.00	61.24 PK	68.20	-6.96	1.72V	0	47.84	13.40
8	15540.00	59.73 PK	74.00	-14.27	1.78V	0	40.86	18.87
9	15540.00	46.31 AV	54.00	-7.69	1.78V	0	27.44	18.87

REMARKS:

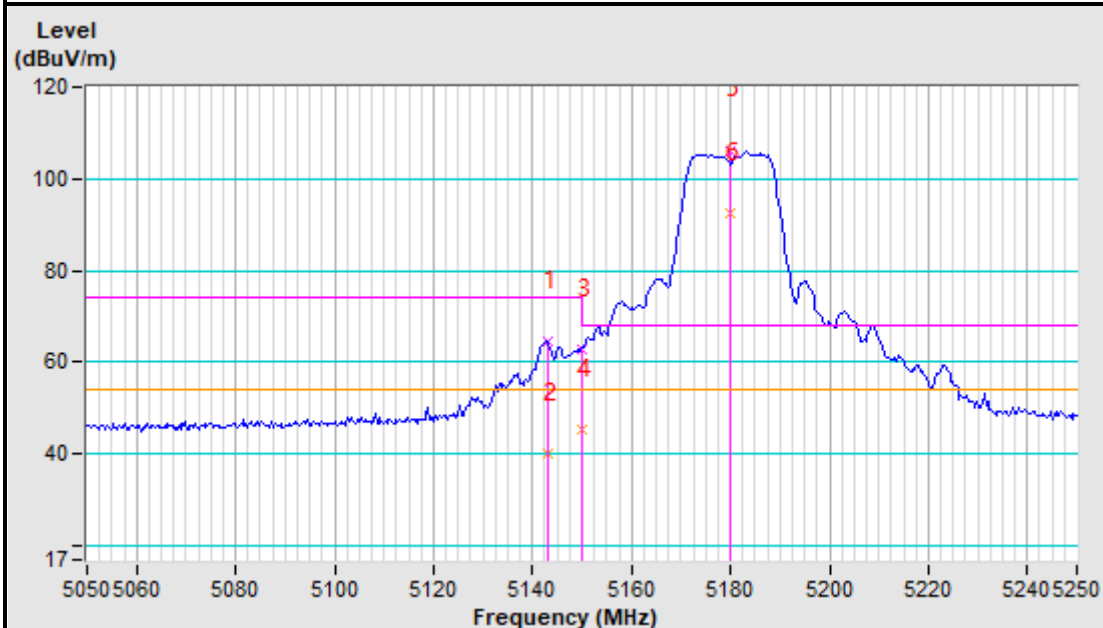
1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The emission levels of other frequencies were less than 20dB margin against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental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

Band edge Plot

5180MHz Horizontal



5180MHz Vertical



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	5143.00	57.16 PK	74.00	-16.84	1.67H	233	51.37	5.79
2	5143.00	48.84 AV	54.00	-5.16	1.67H	233	43.05	5.79
3	5150.00	60.13 PK	74.00	-13.87	2.60H	233	54.33	5.80
4	5150.00	47.25 AV	54.00	-6.75	2.60H	233	41.45	5.80
5	*5200.00	100.14 PK			1.97H	233	94.25	5.89
6	*5200.00	91.16 AV			1.97H	233	85.27	5.89
7	#10400.00	55.16 PK	68.20	-13.04	2.54H	0	41.65	13.51
8	15600.00	58.16 PK	74.00	-15.84	2.81H	0	39.20	18.96
9	15600.00	42.63 AV	54.00	-11.37	2.81H	0	23.67	18.96
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	5143.00	62.94 PK	74.00	-11.06	2.44V	77	57.15	5.79
2	5143.00	50.03 AV	54.00	-3.97	2.44V	77	44.24	5.79
3	5150.00	61.51 PK	74.00	-12.49	1.86V	77	55.71	5.80
4	5150.00	49.13 AV	54.00	-4.87	1.86V	77	43.33	5.80
5	*5200.00	107.49 PK			2.50V	77	101.60	5.89
6	*5200.00	94.57 AV			2.50V	77	88.68	5.89
7	#10400.00	57.49 PK	68.20	-10.71	1.83V	0	43.98	13.51
8	15600.00	59.43 PK	74.00	-14.57	2.61V	0	40.47	18.96
9	15600.00	44.94 AV	54.00	-9.06	2.61V	0	25.98	18.96

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 less than 20dB margin against the limit.
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	5143.00	58.27 PK	74.00	-15.73	1.83H	305	52.48	5.79
2	5143.00	47.25 AV	54.00	-6.75	1.83H	305	41.46	5.79
3	5150.00	60.14 PK	74.00	-13.86	1.84H	305	54.34	5.80
4	5150.00	46.37 AV	54.00	-7.63	1.84H	305	40.57	5.80
5	*5240.00	99.27 PK			2.62H	305	93.30	5.97
6	*5240.00	86.29 AV			2.62H	305	80.32	5.97
7	5350.00	61.05 PK	74.00	-12.95	2.55H	305	54.88	6.17
8	5350.00	47.27 AV	54.00	-6.73	2.55H	305	41.10	6.17
9	5387.00	62.54 PK	74.00	-11.46	2.54H	305	56.31	6.23
10	5387.00	46.11 AV	54.00	-7.89	2.54H	305	39.88	6.23
11	#10480.00	60.57 PK	68.20	-7.63	2.84H	0	46.82	13.75
12	15720.00	61.25 PK	74.00	-12.75	1.76H	0	42.10	19.15
13	15720.00	48.27 AV	54.00	-5.73	1.76H	0	29.12	19.15
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	5143.00	60.85 PK	74.00	-13.15	2.88V	299	55.06	5.79
2	5143.00	49.32 AV	54.00	-4.68	2.88V	299	43.53	5.79
3	5150.00	62.66 PK	74.00	-11.34	2.62V	299	56.86	5.80
4	5150.00	48.99 AV	54.00	-5.01	2.62V	299	43.19	5.80
5	*5240.00	104.52 PK			2.63V	299	98.55	5.97
6	*5240.00	91.65 AV			2.63V	299	85.68	5.97
7	5350.00	63.03 PK	74.00	-10.97	2.67V	299	56.86	6.17
8	5350.00	49.60 AV	54.00	-4.40	2.67V	299	43.43	6.17
9	5387.00	64.41 PK	74.00	-9.59	2.61V	299	58.18	6.23
10	5387.00	48.29 AV	54.00	-5.71	2.61V	299	42.06	6.23
11	#10480.00	62.15 PK	68.20	-6.05	2.09V	0	48.40	13.75
12	15720.00	62.18 PK	74.00	-11.82	2.80V	0	43.03	19.15
13	15720.00	50.16 AV	54.00	-3.84	2.80V	0	31.01	19.15

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 less than 20dB margin against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

802.11n (20MHz)

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5143.00	65.40 PK	74.00	-8.60	2.63H	92	59.61	5.79
2	5143.00	49.30 AV	54.00	-4.70	2.63H	92	43.51	5.79
3	5150.00	64.81 PK	74.00	-9.19	2.18H	92	59.01	5.80
4	5150.00	50.37 AV	54.00	-3.63	2.18H	92	44.57	5.80
5	*5180.00	105.88 PK			2.41H	92	100.02	5.86
6	*5180.00	92.67 AV			2.41H	92	86.81	5.86
7	#10360.00	60.25 PK	68.20	-7.95	1.85H	0	46.85	13.40
8	15540.00	60.29 PK	74.00	-13.71	2.25H	0	41.42	18.87
9	15540.00	46.71 AV	54.00	-7.29	2.25H	0	27.84	18.87
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	5143.00	63.72 PK	74.00	-10.28	1.85V	87	57.93	5.79
2	5143.00	49.11 AV	54.00	-4.89	1.85V	87	43.32	5.79
3	5150.00	64.29 PK	74.00	-9.71	2.67V	87	58.49	5.80
4	5150.00	49.77 AV	54.00	-4.23	2.67V	87	43.97	5.80
5	*5180.00	101.99 PK			2.74V	87	96.13	5.86
6	*5180.00	89.27 AV			2.74V	87	83.41	5.86
7	#10360.00	61.21 PK	68.20	-6.99	1.89V	0	47.81	13.40
8	15540.00	61.57 PK	74.00	-12.43	2.10V	0	42.70	18.87
9	15540.00	47.29 AV	54.00	-6.71	2.10V	0	28.42	18.87

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 less than 20dB margin against the limit.
4. Margin value = Emission level – Limit value.
5. " * " : Fundamental frequency.
6. " # " : The radiated frequency is out of the restricted band.



Band edge Plot

The spectrum plot shows the received signal level across a frequency range from 5050 MHz to 5250 MHz. The y-axis represents the level in dBuV/m, ranging from 17 to 120. A magenta line indicates a stepped noise floor, which is constant at approximately 75 dBuV/m from 5050 MHz to 5145 MHz, then drops to approximately 68 dBuV/m from 5145 MHz to 5250 MHz. The signal spectrum (blue line) shows a broad peak centered around 5180 MHz, reaching a maximum level of approximately 100 dBuV/m. Several points are marked on the spectrum: point 1 is at approximately 5145 MHz, point 2 is at approximately 5150 MHz, point 3 is at approximately 5155 MHz, point 4 is at approximately 5160 MHz, point 5 is at approximately 5175 MHz, and point 6 is at approximately 5180 MHz. Vertical magenta lines extend from points 1, 2, 3, 4, and 5 down to the 50 dBuV/m reference line.

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	5143.00	62.22 PK	74.00	-11.78	1.97H	93	56.43	5.79
2	5143.00	49.38 AV	54.00	-4.62	1.97H	93	43.59	5.79
3	5150.00	62.90 PK	74.00	-11.10	2.46H	93	57.10	5.80
4	5150.00	49.12 AV	54.00	-4.88	2.46H	93	43.32	5.80
5	*5200.00	105.61 PK			1.61H	93	99.72	5.89
6	*5200.00	92.95 AV			1.61H	93	87.06	5.89
7	#10400.00	57.36 PK	68.20	-10.84	2.56H	0	43.85	13.51
8	15600.00	59.72 PK	74.00	-14.28	2.99H	0	40.76	18.96
9	15600.00	45.06 AV	54.00	-8.94	2.99H	0	26.10	18.96
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	5143.00	62.44 PK	74.00	-11.56	1.93V	97	56.65	5.79
2	5143.00	49.37 AV	54.00	-4.63	1.93V	97	43.58	5.79
3	5150.00	62.62 PK	74.00	-11.38	1.74V	97	56.82	5.80
4	5150.00	49.13 AV	54.00	-4.87	1.74V	97	43.33	5.80
5	*5200.00	102.58 PK			1.70V	97	96.69	5.89
6	*5200.00	89.62 AV			1.70V	97	83.73	5.89
7	#10400.00	56.24 PK	68.20	-11.96	1.59V	0	42.73	13.51
8	15600.00	58.24 PK	74.00	-15.76	2.61V	0	39.28	18.96
9	15600.00	43.84 AV	54.00	-10.16	2.61V	0	24.88	18.96

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 less than 20dB margin against the limit.
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	5143.00	61.80 PK	74.00	-12.20	2.99H	91	56.01	5.79
2	5143.00	49.38 AV	54.00	-4.62	2.99H	91	43.59	5.79
3	5150.00	63.45 PK	74.00	-10.55	2.70H	91	57.65	5.80
4	5150.00	49.26 AV	54.00	-4.74	2.70H	91	43.46	5.80
5	*5240.00	106.79 PK			2.58H	91	100.82	5.97
6	*5240.00	93.81 AV			2.58H	91	87.84	5.97
7	5350.00	62.81 PK	74.00	-11.19	2.69H	91	56.64	6.17
8	5350.00	50.16 AV	54.00	-3.84	2.69H	91	43.99	6.17
9	5387.00	63.11 PK	74.00	-10.89	2.85H	91	56.88	6.23
10	5387.00	49.94 AV	54.00	-4.06	2.85H	91	43.71	6.23
11	#10480.00	60.64 PK	68.20	-7.56	2.50H	0	46.89	13.75
12	15720.00	60.58 PK	74.00	-13.42	1.59H	0	41.43	19.15
13	15720.00	46.66 AV	54.00	-7.34	1.59H	0	27.51	19.15
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	5143.00	61.67 PK	74.00	-12.33	2.77V	293	55.88	5.79
2	5143.00	49.36 AV	54.00	-4.64	2.77V	293	43.57	5.79
3	5150.00	62.28 PK	74.00	-11.72	1.50V	293	56.48	5.80
4	5150.00	49.10 AV	54.00	-4.90	1.50V	293	43.30	5.80
5	*5240.00	103.52 PK			2.04V	293	97.55	5.97
6	*5240.00	90.69 AV			2.04V	293	84.72	5.97
7	5350.00	63.04 PK	74.00	-10.96	2.33V	293	56.87	6.17
8	5350.00	50.19 AV	54.00	-3.81	2.33V	293	44.02	6.17
9	5387.00	63.57 PK	74.00	-10.43	2.59V	293	57.34	6.23
10	5387.00	49.90 AV	54.00	-4.10	2.59V	293	43.67	6.23
11	#10480.00	60.26 PK	68.20	-7.94	1.62V	0	46.51	13.75
12	15720.00	60.16 PK	74.00	-13.84	2.64V	0	41.01	19.15
13	15720.00	46.28 AV	54.00	-7.72	2.64V	0	27.13	19.15

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 less than 20dB margin against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

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	5143.00	65.13 PK	74.00	-8.87	1.53H	91	59.34	5.79
2	5143.00	51.00 AV	54.00	-3.00	1.53H	91	45.21	5.79
3	5150.00	67.55 PK	74.00	-6.45	1.78H	91	61.75	5.80
4	5150.00	53.12 AV	54.00	-0.88	1.78H	91	47.32	5.80
5	*5190.00	101.32 PK			2.65H	91	95.44	5.88
6	*5190.00	86.69 AV			2.65H	91	80.81	5.88
7	#10380.00	60.25 PK	68.20	-7.95	2.46H	0	46.79	13.46
8	15570.00	60.54 PK	74.00	-13.46	2.91H	0	41.62	18.92
9	15570.00	46.32 AV	54.00	-7.68	2.91H	0	27.40	18.92
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5143.00	63.34 PK	74.00	-10.66	1.85V	101	57.55	5.79
2	5143.00	49.83 AV	54.00	-4.17	1.85V	101	44.04	5.79
3	5150.00	64.48 PK	74.00	-9.52	2.57V	101	58.68	5.80
4	5150.00	50.80 AV	54.00	-3.20	2.57V	101	45.00	5.80
5	*5190.00	96.21 PK			2.32V	101	90.33	5.88
6	*5190.00	82.30 AV			2.32V	101	76.42	5.88
7	#10380.00	59.84 PK	68.20	-8.36	2.18V	0	46.38	13.46
8	15570.00	60.21 PK	74.00	-13.79	2.36V	0	41.29	18.92
9	15570.00	46.17 AV	54.00	-7.83	2.36V	0	27.25	18.92

REMARKS:

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

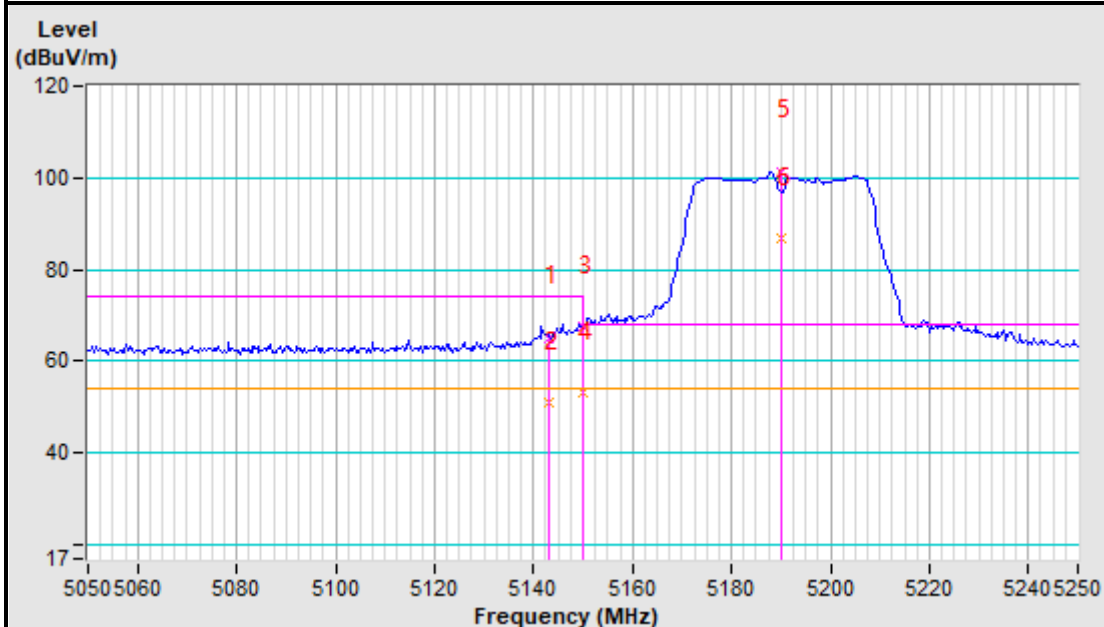


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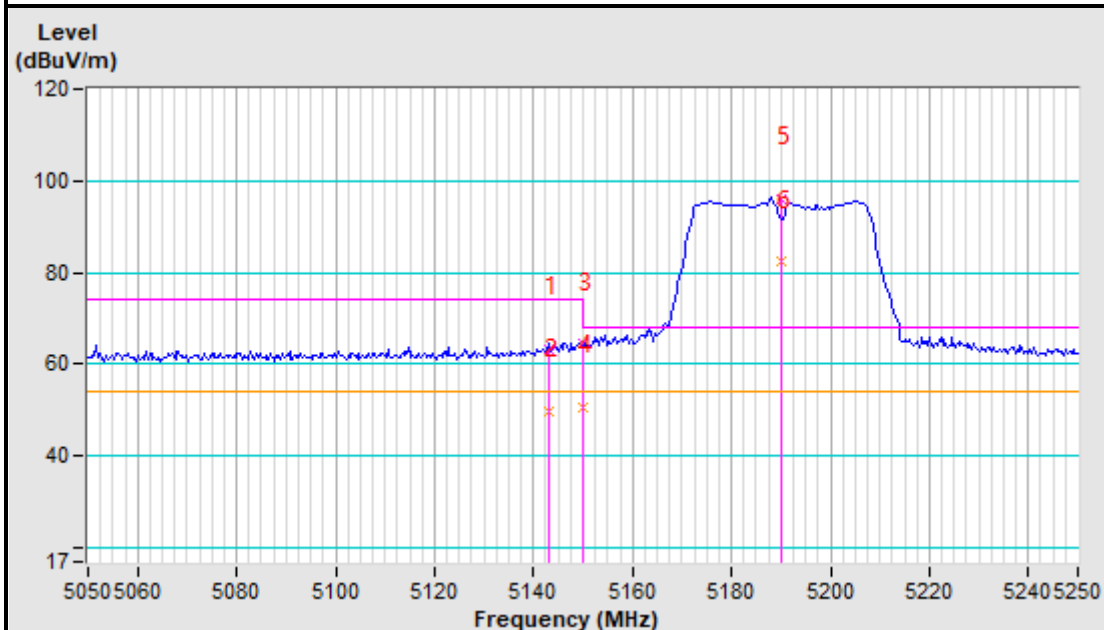
Test Report No.: RF2107WDG0280-2

Band edge Plot

5190MHz Horizontal



5190MHz Vertical



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	5143.00	63.35 PK	74.00	-10.65	1.92H	85	57.56	5.79
2	5143.00	49.09 AV	54.00	-4.91	1.92H	85	43.30	5.79
3	5150.00	62.69 PK	74.00	-11.31	2.44H	85	56.89	5.80
4	5150.00	49.33 AV	54.00	-4.67	2.44H	85	43.53	5.80
5	*5230.00	103.29 PK			1.70H	85	97.34	5.95
6	*5230.00	88.63 AV			1.70H	85	82.68	5.95
7	#10460.00	59.63 PK	68.20	-8.57	2.93H	0	45.95	13.68
8	15690.00	60.25 PK	74.00	-13.75	1.76H	0	41.15	19.10
9	15690.00	45.84 AV	54.00	-8.16	1.76H	0	26.74	19.10
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	5143.00	62.19 PK	74.00	-11.81	2.67V	94	56.40	5.79
2	5143.00	49.08 AV	54.00	-4.92	2.67V	94	43.29	5.79
3	5150.00	62.64 PK	74.00	-11.36	2.62V	94	56.84	5.80
4	5150.00	49.24 AV	54.00	-4.76	2.62V	94	43.44	5.80
5	*5230.00	99.64 PK			1.57V	94	93.69	5.95
6	*5230.00	85.17 AV			1.57V	94	79.22	5.95
7	#10460.00	58.25 PK	68.20	-9.95	2.86V	0	44.57	13.68
8	15690.00	59.55 PK	74.00	-14.45	2.44V	0	40.45	19.10
9	15690.00	44.36 AV	54.00	-9.64	2.44V	0	25.26	19.10

REMARKS:

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

802.11ac (80MHz)

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5143.00	67.24 PK	74.00	-6.76	2.68H	89	61.45	5.79
2	5143.00	52.98 AV	54.00	-1.02	2.68H	89	47.19	5.79
3	5150.00	68.18 PK	74.00	-5.82	2.35H	89	62.38	5.80
4	5150.00	52.58 AV	54.00	-1.42	2.35H	89	46.78	5.80
5	*5210.00	103.09 PK			2.16H	89	97.18	5.91
6	*5210.00	84.35 AV			2.16H	89	78.44	5.91
7	#10420.00	60.25 PK	68.20	-7.95	1.58H	0	46.67	13.58
8	15630.00	60.47 PK	74.00	-13.53	2.26H	0	41.46	19.01
9	15630.00	45.63 AV	54.00	-8.37	2.26H	0	26.62	19.01
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	5143.00	63.75 PK	74.00	-10.25	2.88V	292	57.96	5.79
2	5143.00	50.13 AV	54.00	-3.87	2.88V	292	44.34	5.79
3	5150.00	65.96 PK	74.00	-8.04	2.78V	292	60.16	5.80
4	5150.00	50.34 AV	54.00	-3.66	2.78V	292	44.54	5.80
5	*5210.00	96.13 PK			2.32V	292	90.22	5.91
6	*5210.00	78.61 AV			2.32V	292	72.70	5.91
7	#10420.00	59.48 PK	68.20	-8.72	1.63V	0	45.90	13.58
8	15630.00	58.97 PK	74.00	-15.03	1.74V	0	39.96	19.01
9	15630.00	44.27 AV	54.00	-9.73	1.74V	0	25.26	19.01

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 less than 20dB margin against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.



Band edge Plot

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	5143.00	45.43 PK	74.00	-28.57	2.74H	118	39.64	5.79
2	5143.00	33.63 AV	54.00	-20.37	2.74H	118	27.84	5.79
3	5150.00	45.53 PK	74.00	-28.47	2.73H	118	39.73	5.80
4	5150.00	33.24 AV	54.00	-20.76	2.73H	118	27.44	5.80
5	*5260.00	107.24 PK			2.58H	118	101.24	6.00
6	*5260.00	97.91 AV			2.58H	118	91.91	6.00
7	5350.00	46.93 PK	74.00	-27.07	1.81H	118	40.76	6.17
8	5350.00	33.90 AV	54.00	-20.10	1.81H	118	27.73	6.17
9	5387.00	46.50 PK	74.00	-27.50	2.69H	118	40.27	6.23
10	5387.00	34.11 AV	54.00	-19.89	2.69H	118	27.88	6.23
11	#10520.00	60.44 PK	68.20	-7.76	2.72H	0	46.62	13.82
12	15780.00	60.56 PK	74.00	-13.44	2.35H	0	41.33	19.23
13	15780.00	46.22 AV	54.00	-7.78	2.35H	0	26.99	19.23
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	5143.00	45.22 PK	74.00	-28.78	2.02V	142	39.43	5.79
2	5143.00	32.36 AV	54.00	-21.64	2.02V	142	26.57	5.79
3	5150.00	44.11 PK	74.00	-29.89	2.14V	142	38.31	5.80
4	5150.00	32.04 AV	54.00	-21.96	2.14V	142	26.24	5.80
5	*5260.00	103.67 PK			1.50V	142	97.67	6.00
6	*5260.00	93.61 AV			1.50V	142	87.61	6.00
7	5350.00	45.30 PK	74.00	-28.70	1.95V	0	39.13	6.17
8	5350.00	33.18 AV	54.00	-20.82	1.95V	0	27.01	6.17
9	5387.00	44.87 PK	74.00	-29.13	2.22V	142	38.64	6.23
10	5387.00	33.27 AV	54.00	-20.73	2.22V	142	27.04	6.23
11	#10520.00	58.63 PK	68.20	-9.57	2.81V	0	44.81	13.82
12	15780.00	59.48 PK	74.00	-14.52	1.90V	0	40.25	19.23
13	15780.00	45.16 AV	54.00	-8.84	1.90V	0	25.93	19.23

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).



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3. The emission levels of other frequencies were less than 20dB margin against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.

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	98.97 PK			1.62H	126	92.89	6.08
2	*5300.00	88.92 AV			1.62H	126	82.84	6.08
3	5350.00	44.79 PK	74.00	-29.21	2.07H	126	38.62	6.17
4	5350.00	32.38 AV	54.00	-21.62	2.07H	126	26.21	6.17
5	5387.00	44.53 PK	74.00	-29.47	2.31H	126	38.30	6.23
6	5387.00	32.97 AV	54.00	-21.03	2.31H	126	26.74	6.23
7	10600.00	58.15 PK	74.00	-15.85	2.81H	0	44.24	13.91
8	10600.00	43.29 AV	54.00	-10.71	2.81H	0	29.38	13.91
9	15900.00	59.13 PK	74.00	-14.87	1.83H	0	39.71	19.42
10	15900.00	44.58 AV	54.00	-9.42	1.83H	0	25.16	19.42
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	107.48 PK			1.58V	126	101.40	6.08
2	*5300.00	97.37 AV			1.58V	126	91.29	6.08
3	5350.00	45.84 PK	74.00	-28.16	1.75V	126	39.67	6.17
4	5350.00	34.28 AV	54.00	-19.72	1.75V	126	28.11	6.17
5	5387.00	46.28 PK	74.00	-27.72	1.79V	126	40.05	6.23
6	5387.00	34.15 AV	54.00	-19.85	1.79 V	126	27.92	6.23
7	10600.00	59.24 PK	74.00	-14.76	2.53V	0	45.33	13.91
8	10600.00	44.53 AV	54.00	-9.47	2.53V	0	30.62	13.91
9	15900.00	60.15 PK	74.00	-13.85	2.88V	0	40.73	19.42
10	15900.00	45.26 AV	54.00	-8.74	2.88V	0	25.84	19.42

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 less than 20dB margin against the limit.
4. Margin value = Emission level – Limit value.
5. " * " : Fundamental frequency.

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	97.86 PK			1.78H	316	91.75	6.11
2	*5320.00	87.76 AV			1.78H	316	81.65	6.11
3	5350.00	48.07 PK	74.00	-25.93	2.01H	316	41.90	6.17
4	5350.00	33.48 AV	54.00	-20.52	2.01H	316	27.31	6.17
5	5387.00	44.54 PK	74.00	-29.46	2.07H	316	38.31	6.23
6	5387.00	33.29 AV	54.00	-20.71	2.07H	316	27.06	6.23
7	10640.00	58.63 PK	74.00	-15.37	2.74H	0	44.68	13.95
8	10640.00	44.91 AV	54.00	-9.09	2.74H	0	30.96	13.95
9	15900.00	59.18 PK	74.00	-14.82	2.29H	0	39.76	19.42
10	15900.00	45.27 AV	54.00	-8.73	2.29H	0	25.85	19.42
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	107.45 PK			1.90V	109	101.34	6.11
2	*5320.00	97.07 AV			1.90V	109	90.96	6.11
3	5350.00	57.12 PK	74.00	-16.88	2.36V	109	50.95	6.17
4	5350.00	38.22 AV	54.00	-15.78	2.36V	109	32.05	6.17
5	5387.00	47.00 PK	74.00	-27.00	1.51V	109	40.77	6.23
6	5387.00	34.98 AV	54.00	-19.02	1.51V	109	28.75	6.23
7	10640.00	59.29 PK	74.00	-14.71	2.18V	0	45.34	13.95
8	10640.00	45.14 AV	54.00	-8.86	2.18V	0	31.19	13.95
9	15900.00	60.08 PK	74.00	-13.92	2.05V	0	40.66	19.42
10	15900.00	45.97 AV	54.00	-8.03	2.05V	0	26.55	19.42

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 less than 20dB margin against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.

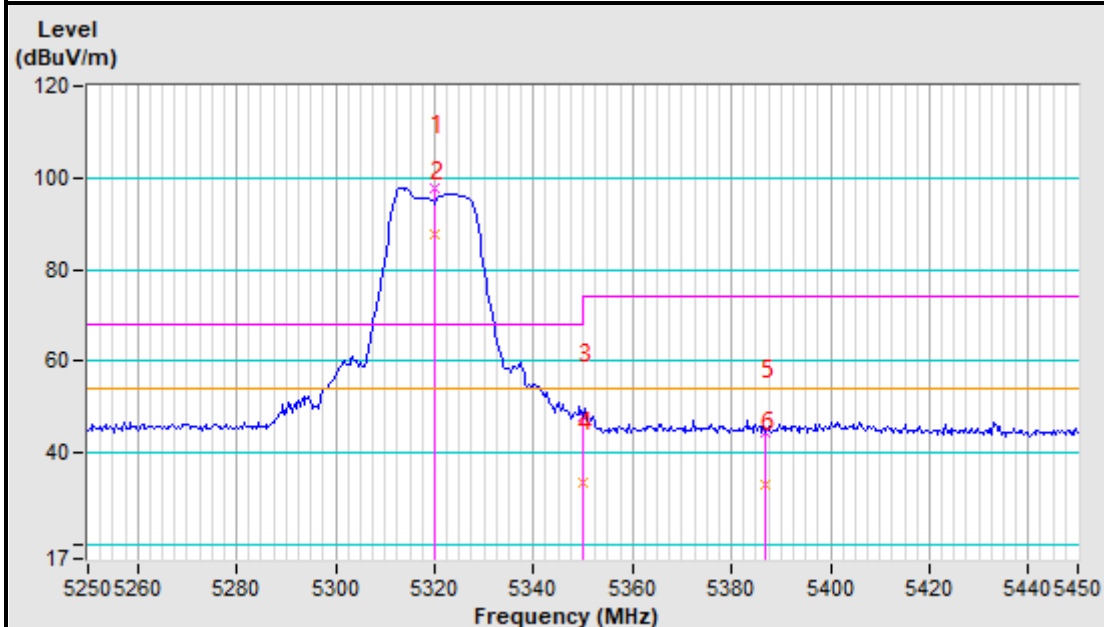


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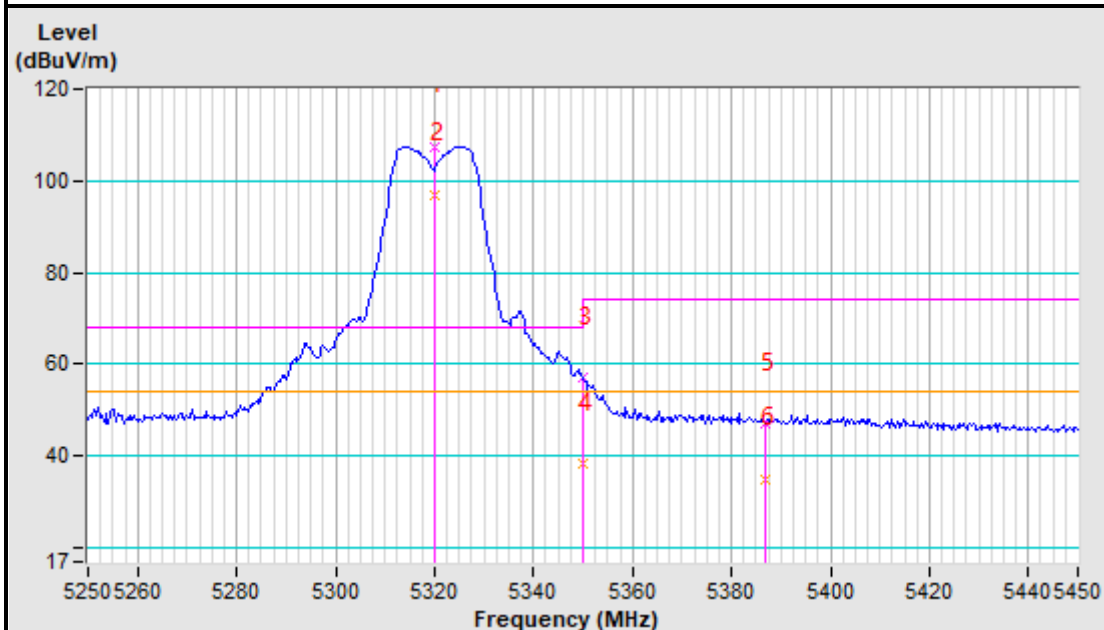
Test Report No.: RF2107WDG0280-2

Band edge Plot

5320MHz Horizontal



5320MHz Vertical





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Test Report No.: RF2107WDG0280-2

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	5143.00	44.64 PK	74.00	-29.36	1.94H	320	38.85	5.79
2	5143.00	32.10 AV	54.00	-21.90	1.94H	320	26.31	5.79
3	5150.00	43.95 PK	74.00	-30.05	2.88H	320	38.15	5.80
4	5150.00	31.42 AV	54.00	-22.58	2.88H	320	25.62	5.80
5	*5260.00	97.93 PK			2.39H	320	91.93	6.00
6	*5260.00	88.47 AV			2.39H	320	82.47	6.00
7	5350.00	44.34 PK	74.00	-29.66	1.89H	320	38.17	6.17
8	5350.00	32.52 AV	54.00	-21.48	1.89H	320	26.35	6.17
9	5387.00	44.06 PK	74.00	-29.94	2.72H	320	37.83	6.23
10	5387.00	32.82 AV	54.00	-21.18	2.72H	320	26.59	6.23
11	#10520.00	58.15 PK	68.20	-10.05	1.95H	0	44.33	13.82
12	15780.00	59.28 PK	74.00	-14.72	2.64H	0	40.05	19.23
13	15780.00	45.19 AV	54.00	-8.81	2.64H	0	25.96	19.23
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	5143.00	44.92 PK	74.00	-29.08	1.60V	66	39.13	5.79
2	5143.00	33.55 AV	54.00	-20.45	1.60V	66	27.76	5.79
3	5150.00	45.34 PK	74.00	-28.66	2.24V	66	39.54	5.80
4	5150.00	32.86 AV	54.00	-21.14	2.24V	66	27.06	5.80
5	*5260.00	105.98 PK			1.74V	66	99.98	6.00
6	*5260.00	96.17 AV			1.74V	66	90.17	6.00
7	5350.00	46.68 PK	74.00	-27.32	1.81V	66	40.51	6.17
8	5350.00	33.53 AV	54.00	-20.47	1.81V	66	27.36	6.17
9	5387.00	45.69 PK	74.00	-28.31	2.25V	66	39.46	6.23
10	5387.00	33.78 AV	54.00	-20.22	2.25V	66	27.55	6.23
11	#10520.00	60.26 PK	68.20	-7.94	2.31V	0	46.44	13.82
12	15780.00	60.54 PK	74.00	-13.46	1.87V	0	41.31	19.23
13	15780.00	46.15 AV	54.00	-7.85	1.87V	0	26.92	19.23

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 less than 20dB margin against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.

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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	97.57 PK			2.17H	316	91.49	6.08
2	*5300.00	87.53 AV			2.17H	316	81.45	6.08
3	5350.00	44.59 PK	74.00	-29.41	2.41H	316	38.42	6.17
4	5350.00	32.62 AV	54.00	-21.38	2.41H	316	26.45	6.17
5	5387.00	45.33 PK	74.00	-28.67	1.69H	316	39.10	6.23
6	5387.00	32.96 AV	54.00	-21.04	1.69H	316	26.73	6.23
7	10600.00	59.15 PK	74.00	-14.85	1.89H	0	45.24	13.91
8	10600.00	44.28 AV	54.00	-9.72	1.89H	0	30.37	13.91
9	15900.00	59.27 PK	74.00	-14.73	1.85H	0	39.85	19.42
10	15900.00	45.02 AV	54.00	-8.98	1.85H	0	25.60	19.42
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	106.05 PK			2.42V	88	99.97	6.08
2	*5300.00	95.76 AV			2.42V	88	89.68	6.08
3	5350.00	48.19 PK	74.00	-25.81	2.13V	88	42.02	6.17
4	5350.00	34.56 AV	54.00	-19.44	2.13V	88	28.39	6.17
5	5387.00	46.68 PK	74.00	-27.32	1.92V	88	40.45	6.23
6	5387.00	34.58 AV	54.00	-19.42	1.92V	88	28.35	6.23
7	10600.00	60.18 PK	74.00	-13.82	2.68V	0	46.27	13.91
8	10600.00	46.13 AV	54.00	-7.87	2.68V	0	32.22	13.91
9	15900.00	60.71 PK	74.00	-13.29	1.70V	0	41.29	19.42
10	15900.00	46.25 AV	54.00	-7.75	1.70V	0	26.83	19.42

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 less than 20dB margin against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.

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	98.29 PK			2.10H	127	92.18	6.11
2	*5320.00	87.94 AV			2.10H	127	81.83	6.11
3	5350.00	51.14 PK	74.00	-22.86	2.19 H	127	44.97	6.17
4	5350.00	34.44 AV	54.00	-19.56	2.19H	127	28.27	6.17
5	5387.00	44.71 PK	74.00	-29.29	2.41H	127	38.48	6.23
6	5387.00	33.15 AV	54.00	-20.85	2.41H	127	26.92	6.23
7	10640.00	59.17 PK	74.00	-14.83	1.67H	0	45.22	13.95
8	10640.00	44.26 AV	54.00	-9.74	1.67H	0	30.31	13.95
9	15960.00	59.38 PK	74.00	-14.62	2.86H	0	39.87	19.51
10	15960.00	45.28 AV	54.00	-8.72	2.86H	0	25.77	19.51
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	105.69 PK			1.60V	90	99.58	6.11
2	*5320.00	95.45 AV			1.60V	90	89.34	6.11
3	5350.00	60.79 PK	74.00	-13.21	1.78V	90	54.62	6.17
4	5350.00	39.30 AV	54.00	-14.70	1.78V	90	33.13	6.17
5	5387.00	46.71 PK	74.00	-27.29	2.44V	90	40.48	6.23
6	5387.00	34.72 AV	54.00	-19.28	2.44V	90	28.49	6.23
7	10640.00	60.25 PK	74.00	-13.75	2.80V	0	46.30	13.95
8	10640.00	45.83 AV	54.00	-8.17	2.80V	0	31.88	13.95
9	15960.00	60.39 PK	74.00	-13.61	2.38V	0	40.88	19.51
10	15960.00	46.02 AV	54.00	-7.98	2.38V	0	26.51	19.51

REMARKS:

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

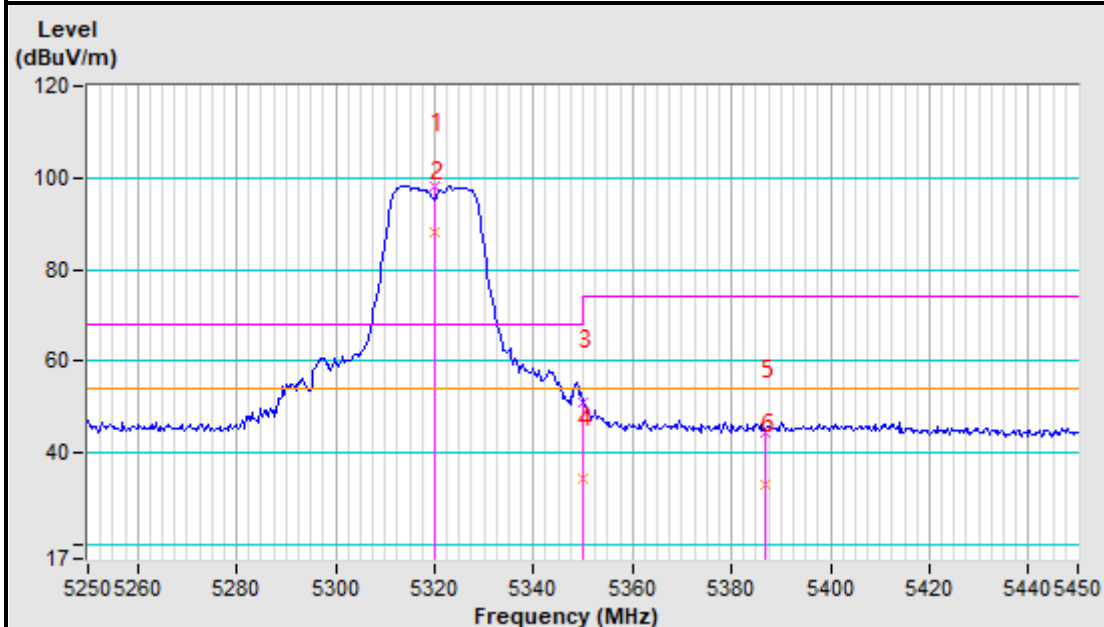


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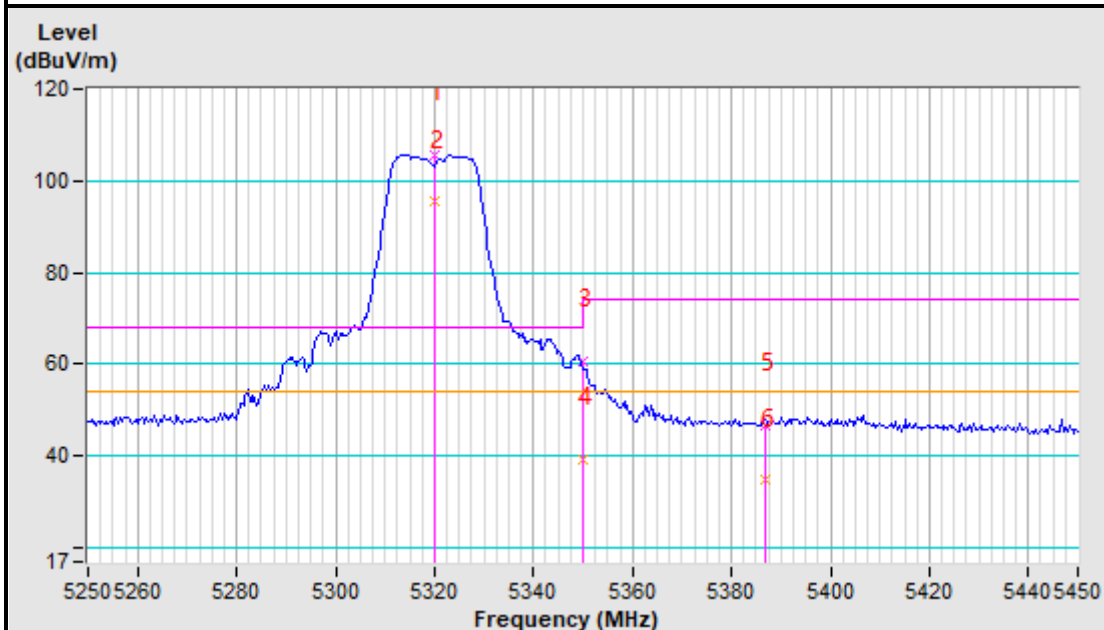
Test Report No.: RF2107WDG0280-2

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	96.91 PK			2.08H	136	90.89	6.02
2	*5270.00	86.22 AV			2.08H	136	80.20	6.02
3	5350.00	45.63 PK	74.00	-28.37	2.77H	136	39.46	6.17
4	5350.00	32.62 AV	54.00	-21.38	2.77H	136	26.45	6.17
5	5387.00	44.22 PK	74.00	-29.78	2.56H	136	37.99	6.23
6	5387.00	33.09 AV	54.00	-20.91	2.56H	136	26.86	6.23
7	#10540.00	58.63 PK	68.20	-9.57	2.27H	0	44.79	13.84
8	15810.00	59.27 PK	74.00	-14.73	2.81H	0	39.99	19.28
9	15810.00	44.63 AV	54.00	-9.37	2.81H	0	25.35	19.28
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	103.64 PK			2.45V	76	97.62	6.02
2	*5270.00	92.98 AV			2.45V	76	86.96	6.02
3	5350.00	47.71 PK	74.00	-26.29	2.09V	76	41.54	6.17
4	5350.00	34.88 AV	54.00	-19.12	2.09V	76	28.71	6.17
5	5387.00	45.55 PK	74.00	-28.45	1.98V	76	39.32	6.23
6	5387.00	33.88 AV	54.00	-20.12	1.98V	76	27.65	6.23
7	#10540.00	60.15 PK	68.20	-8.05	2.97V	0	46.31	13.84
8	15810.00	60.29 PK	74.00	-13.71	2.36V	0	41.01	19.28
9	15810.00	46.11 AV	54.00	-7.89	2.36V	0	26.83	19.28

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 less than 20dB margin against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.

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	95.96 PK			2.82V	135	89.87	6.09
2	*5310.00	85.71 AV			2.82V	135	79.62	6.09
3	5350.00	54.74 PK	74.00	-19.26	1.53V	135	48.57	6.17
4	5350.00	41.09 AV	54.00	-12.91	1.53V	135	34.92	6.17
5	5356.00	56.60 PK	74.00	-17.40	1.88V	135	50.42	6.18
6	5356.00	38.26 AV	54.00	-15.74	1.88V	135	32.08	6.18
7	10620.00	58.18 PK	74.00	-15.82	2.43V	0	44.25	13.93
8	10620.00	44.36 AV	54.00	-9.64	2.43V	0	30.43	13.93
9	15930.00	59.25 PK	74.00	-14.75	1.89V	0	39.79	19.46
10	15930.00	44.73 AV	54.00	-9.27	1.89V	0	25.27	19.46
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	*5310.00	103.77 PK			1.58V	81	97.68	6.09
2	*5310.00	92.81 AV			1.58V	81	86.72	6.09
3	5350.00	62.71 PK	74.00	-11.29	1.87V	81	56.54	6.17
4	5350.00	48.96 AV	54.00	-5.04	1.87V	81	42.79	6.17
5	5356.00	63.16 PK	74.00	-10.84	2.45V	81	56.98	6.18
6	5356.00	49.28 AV	54.00	-4.72	2.45V	81	43.10	6.18
7	10620.00	59.64 PK	74.00	-14.36	1.97V	0	45.71	13.93
8	10620.00	45.63 AV	54.00	-8.37	1.97V	0	31.70	13.93
9	15930.00	60.28 PK	74.00	-13.72	2.12V	0	40.82	19.46
10	15930.00	45.89 AV	54.00	-8.11	2.12V	0	26.43	19.46

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 less than 20dB margin against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.

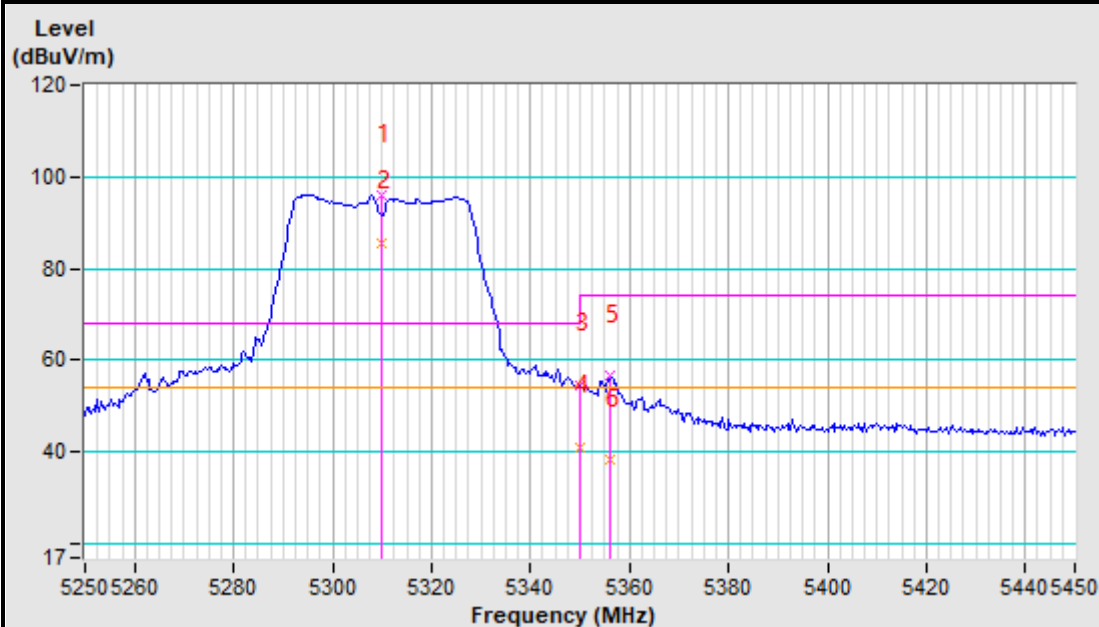


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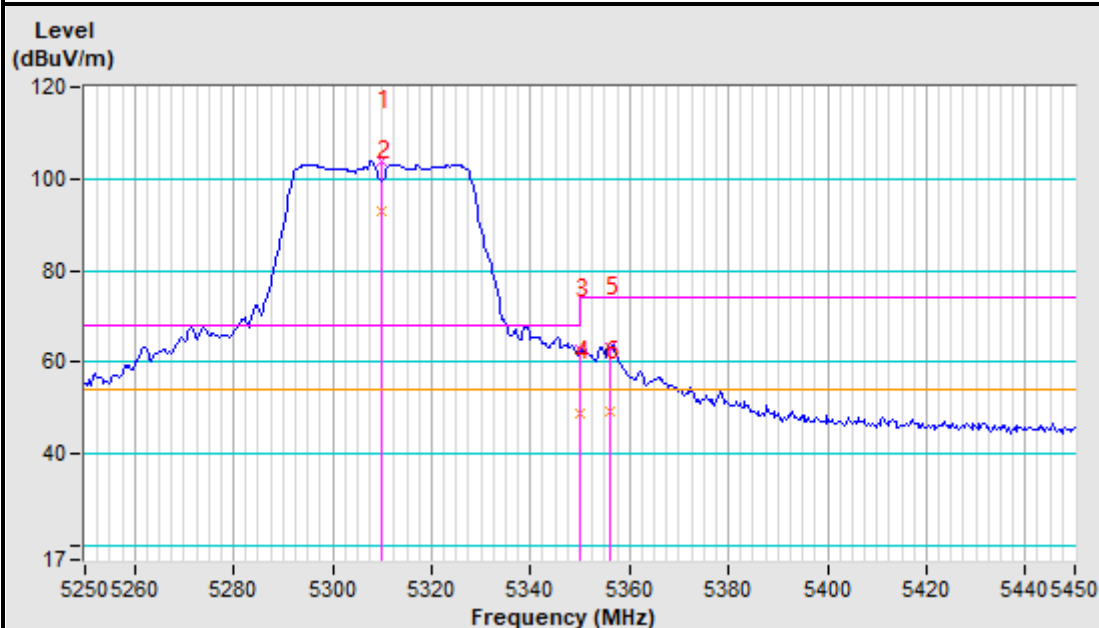
Test Report No.: RF2107WDG0280-2

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	93.29 PK			1.58H	318	87.23	6.06
2	*5290.00	82.61 AV			1.58H	318	76.55	6.06
3	5350.00	55.05 PK	74.00	-18.95	2.78H	318	48.88	6.17
4	5350.00	41.42 AV	54.00	-12.58	2.78H	318	35.25	6.17
5	5381.00	55.40 PK	74.00	-18.60	2.88H	318	49.17	6.23
6	5381.00	38.36 AV	54.00	-15.64	2.88H	318	32.13	6.23
7	#10580.00	58.48 PK	68.20	-9.72	1.66H	0	44.59	13.89
8	15870.00	59.43 PK	74.00	-14.57	2.34H	0	40.06	19.37
9	15870.00	45.25 AV	54.00	-8.75	2.34H	0	25.88	19.37
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5290.00	100.95 PK			1.91V	90	94.89	6.06
2	*5290.00	89.22 AV			1.91V	90	83.16	6.06
3	5350.00	63.88 PK	74.00	-10.12	2.68V	90	57.71	6.17
4	5350.00	50.51 AV	54.00	-3.49	2.68V	90	44.34	6.17
5	5381.64	64.47 PK	74.00	-9.53	2.89V	90	58.24	6.23
6	5381.64	46.86 AV	54.00	-7.14	2.89V	90	40.63	6.23
7	#10580.00	59.28 PK	68.20	-8.92	1.64V	0	45.39	13.89
8	15870.00	60.15 PK	74.00	-13.85	1.69V	0	40.78	19.37
9	15870.00	46.29 AV	54.00	-7.71	1.69V	0	26.92	19.37

REMARKS:

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

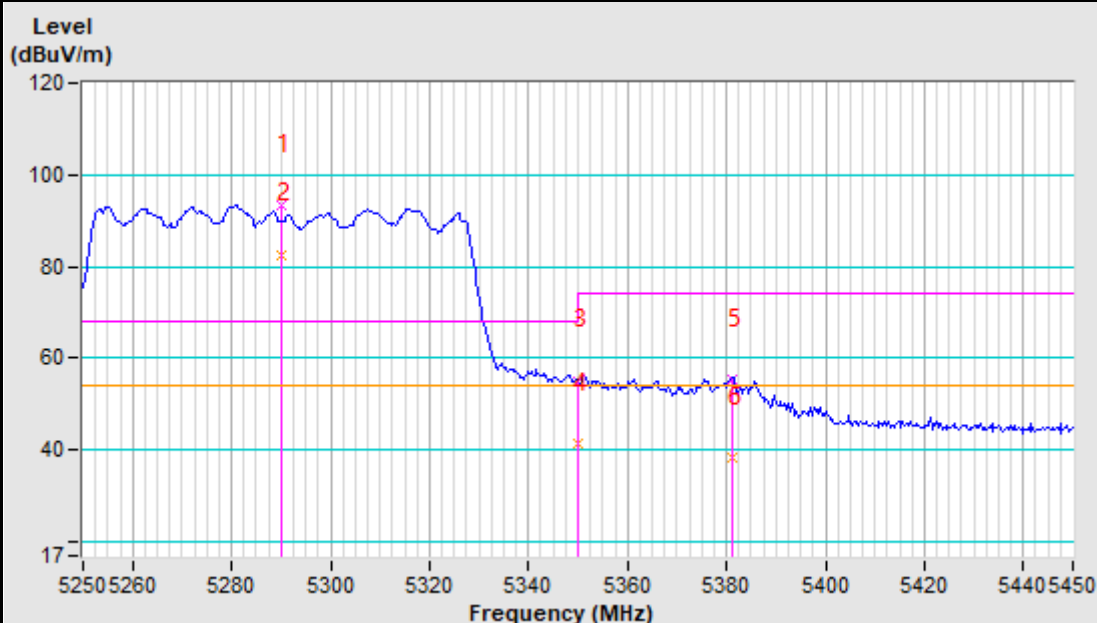


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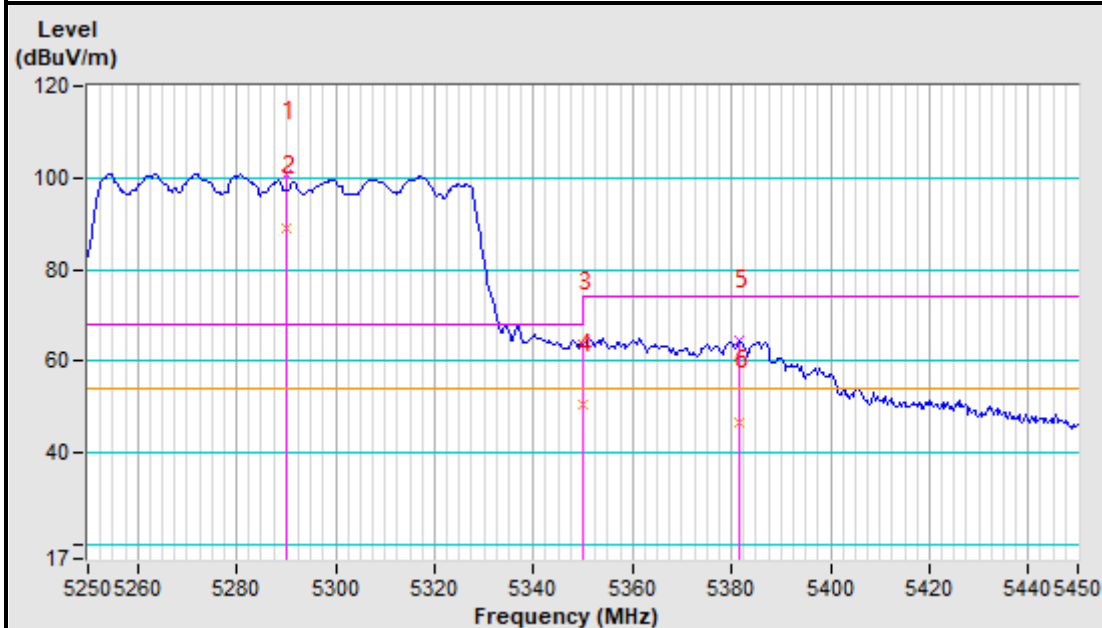
Test Report No.: RF2107WDG0280-2

Band edge Plot

5290MHz Horizontal



5290MHz Vertical



Band 3 (5470-5725MHz):

ABOVE 1GHz DATA

802.11a

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

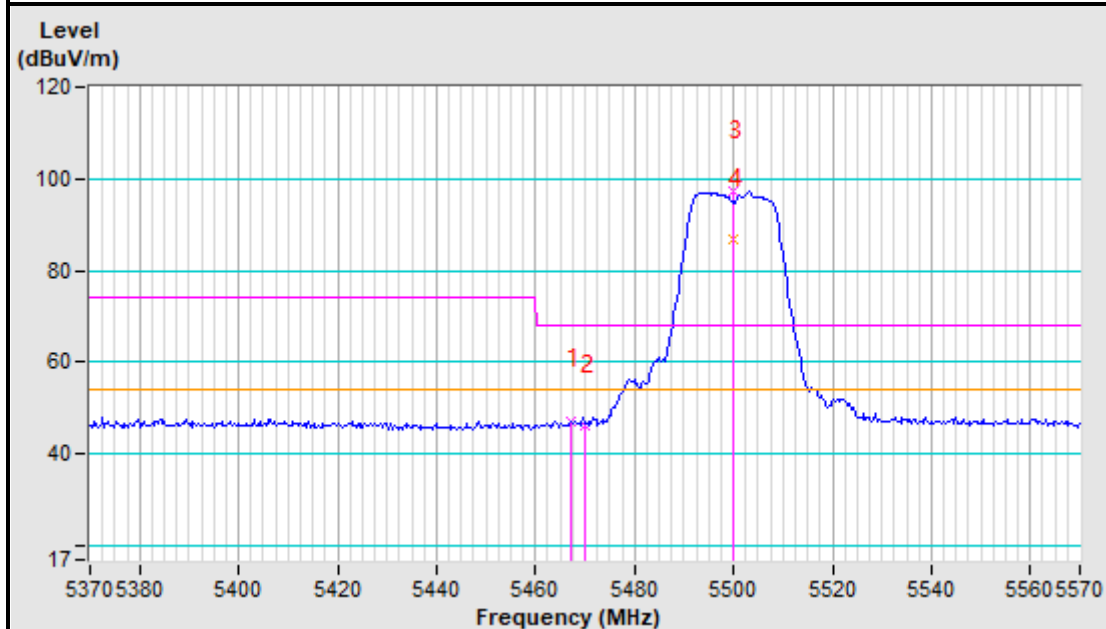
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5467.16	47.20 PK	68.20	-21.00	1.58H	41	40.82	6.38
2	#5470.00	46.22 PK	68.20	-21.98	1.08H	41	39.84	6.38
3	*5500.00	97.18 PK			2.78H	41	90.74	6.44
4	*5500.00	86.79 AV			2.78H	41	80.35	6.44
5	11000.00	58.25 PK	74.00	-15.75	2.88H	0	43.89	14.36
6	11000.00	45.29 AV	54.00	-8.71	2.88H	0	30.93	14.36
7	#16500.00	59.44 PK	68.20	-8.76	1.66H	0	39.33	20.11
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	#5467.80	50.11 PK	68.20	-18.09	1.91V	87	43.73	6.38
2	#5470.00	50.32 PK	68.20	-17.88	1.41V	87	43.94	6.38
3	*5500.00	102.77 PK			2.68V	87	96.33	6.44
4	*5500.00	94.84 AV			2.68V	87	88.40	6.44
5	11000.00	59.84 PK	74.00	-14.16	2.89V	0	45.48	14.36
6	11000.00	46.27 AV	54.00	-7.73	2.89V	0	31.91	14.36
7	#16500.00	60.28 PK	68.20	-7.92	1.64V	0	40.17	20.11

REMARKS:

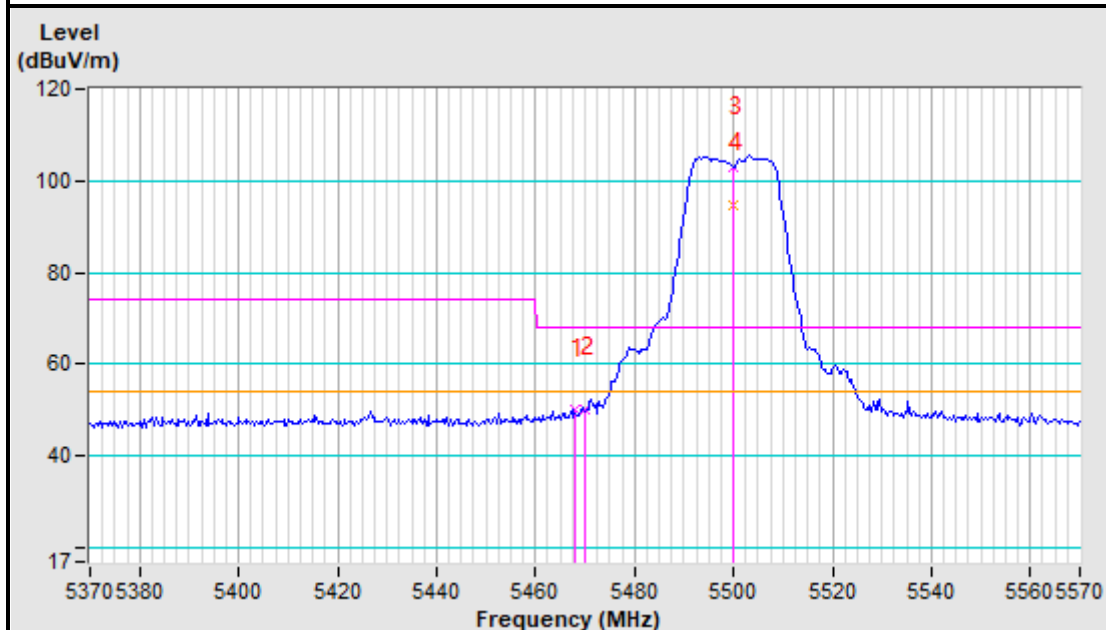
1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The emission levels of other frequencies were less than 20dB margin against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental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

Band edge Plot

5500MHz Horizontal



5500MHz Vertical



CHANNEL	TX Channel 112	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	42.59 PK	68.20	-25.61	1.56H	15	36.21	6.38
2	*5580.00	95.74 PK			2.17H	15	89.06	6.68
3	*5580.00	89.36 AV			2.17H	15	82.68	6.68
4	11160.00	59.27 PK	74.00	-14.73	1.62H	0	44.59	14.68
5	11160.00	44.66 AV	54.00	-9.34	1.62H	0	29.98	14.68
6	#16740.00	60.15 PK	68.20	-8.05	1.84H	0	39.59	20.56
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	45.84 PK	68.20	-22.36	2.86V	305	39.46	6.38
2	*5580.00	104.58 PK			2.39V	305	97.90	6.68
3	*5580.00	94.77 AV			2.39V	305	88.09	6.68
4	11160.00	60.28 PK	74.00	-13.72	2.08V	0	45.60	14.68
5	11160.00	46.37 AV	54.00	-7.63	2.08V	0	31.69	14.68
6	#16740.00	61.44 PK	68.20	-6.76	1.70V	0	40.88	20.56

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 less than 20dB margin against the limit.
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)

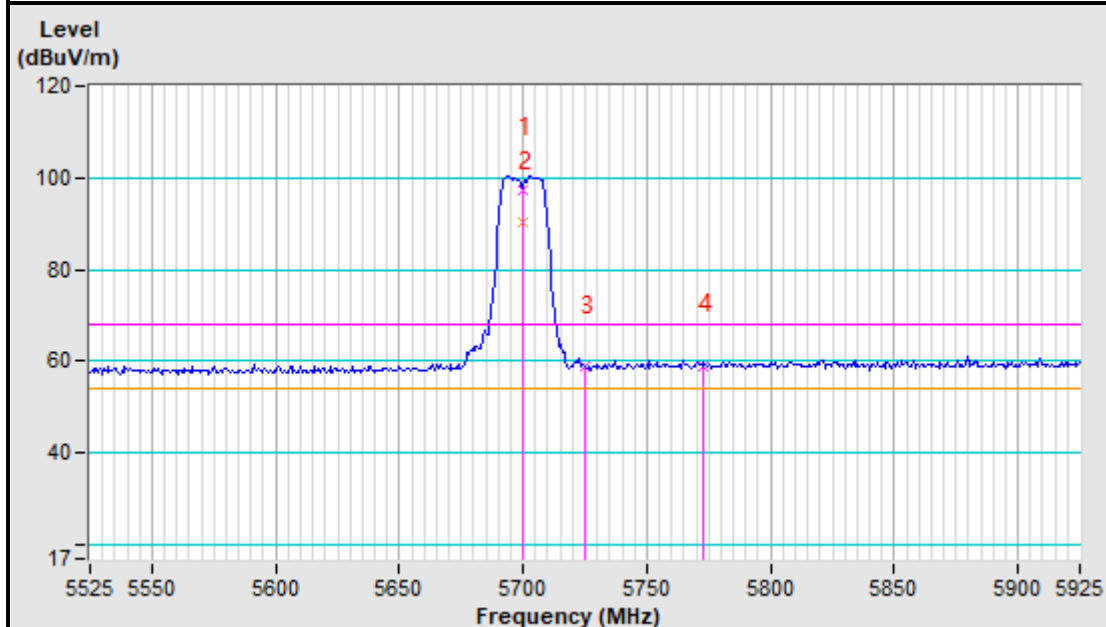
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	97.43 PK			2.42H	134	90.40	7.03
2	*5700.00	90.21 AV			2.42H	134	83.18	7.03
3	#5725.00	58.71 PK	68.20	-9.49	2.05H	134	51.61	7.10
4	#5773.00	59.11 PK	68.20	-9.09	2.05H	134	51.87	7.24
5	11400.00	58.28 PK	74.00	-15.72	2.12H	0	43.13	15.15
6	11400.00	44.74 AV	54.00	-9.26	2.12H	0	29.59	15.15
7	#17100.00	59.33 PK	68.20	-8.87	1.63H	0	38.28	21.05
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	101.65 PK			2.49V	114	94.62	7.03
2	*5700.00	93.81 AV			2.49V	114	86.78	7.03
3	#5725.00	58.31 PK	68.20	-9.89	1.77V	114	51.21	7.10
4	#5773.00	60.27 PK	68.20	-7.93	1.77V	114	53.03	7.24
5	11400.00	59.77 PK	74.00	-14.23	2.83V	0	44.62	15.15
6	11400.00	45.26 AV	54.00	-8.74	2.83V	0	30.11	15.15
7	#17100.00	60.35 PK	68.20	-7.85	2.55V	0	39.30	21.05

REMARKS:

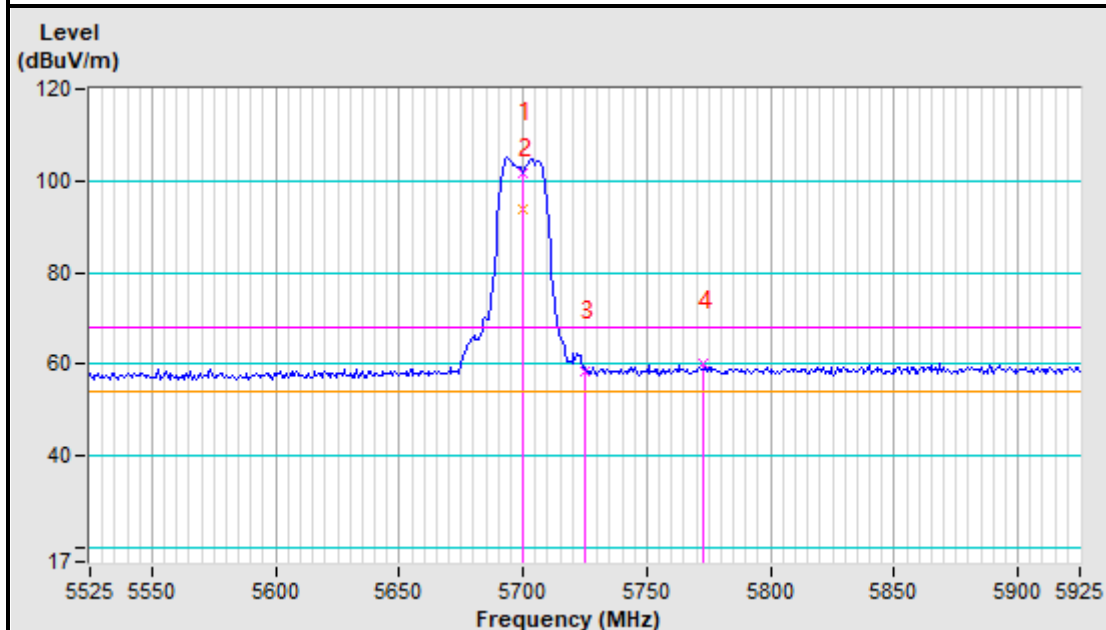
1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The emission levels of other frequencies were less than 20dB margin against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental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

Band edge Plot

5700MHz Horizontal



5700MHz Vertical



802.11n (20MHz)

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

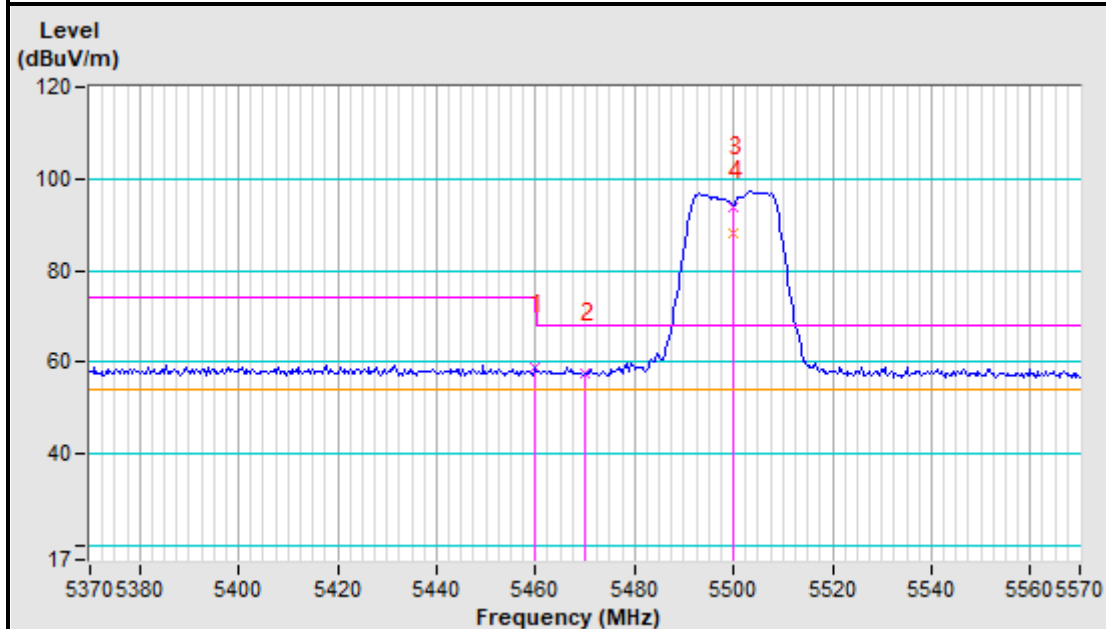
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	59.02 PK	74.00	-14.98	2.22H	59	52.65	6.37
2	#5470.00	57.47 PK	68.20	-10.73	2.92H	59	51.09	6.38
3	*5500.00	93.71 PK			2.62H	59	87.27	6.44
4	*5500.00	88.18 AV			2.62H	59	81.74	6.44
5	11000.00	58.63 PK	74.00	-15.37	1.86H	0	44.27	14.36
6	11000.00	44.25 AV	54.00	-9.75	1.86H	0	29.89	14.36
7	#16500.00	59.27 PK	68.20	-8.93	2.37H	0	39.16	20.11
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	5460.00	58.37 PK	74.00	-15.63	1.88V	101	52.00	6.37
2	#5470.00	58.35 PK	68.20	-9.85	2.43V	101	51.97	6.38
3	*5500.00	101.58 PK			2.24V	101	95.14	6.44
4	*5500.00	94.00 AV			2.24V	101	87.56	6.44
5	11000.00	59.24 PK	74.00	-14.76	2.70V	0	44.88	14.36
6	11000.00	45.19 AV	54.00	-8.81	2.70V	0	30.83	14.36
7	#16500.00	60.25 PK	68.20	-7.95	1.81V	0	40.14	20.11

REMARKS:

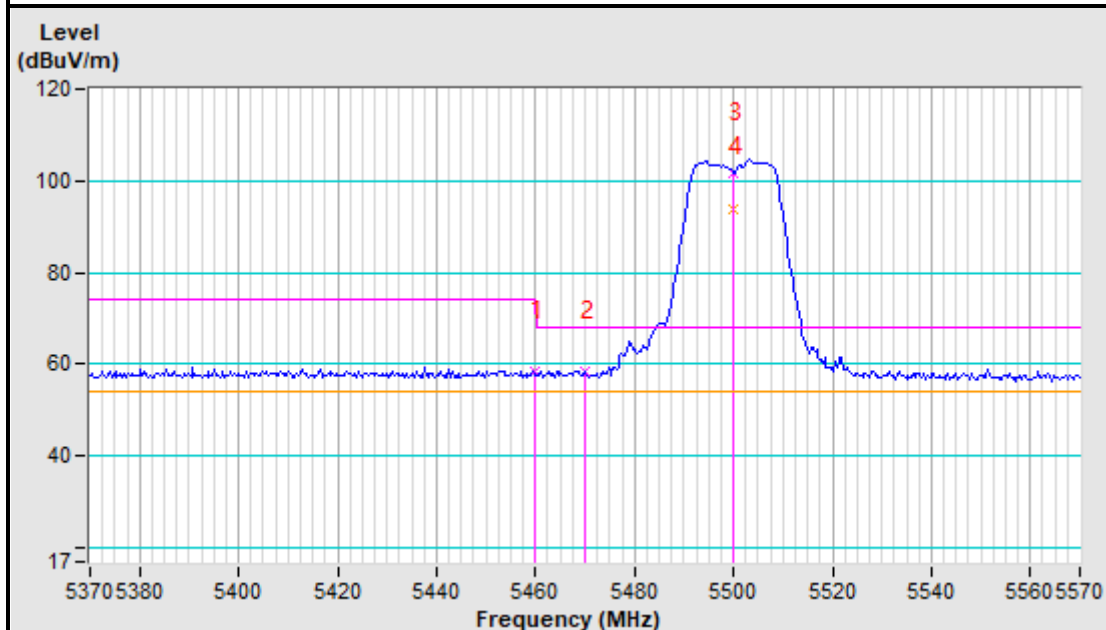
1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The emission levels of other frequencies were less than 20dB margin against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental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

Band edge Plot

5500MHz Horizontal



5500MHz Vertical



CHANNEL	TX Channel 112	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	42.15 PK	68.20	-26.05	1.66H	244	35.77	6.38
2	*5580.00	95.28 PK			2.23H	244	88.60	6.68
3	*5580.00	88.56 AV			2.23H	244	81.88	6.68
4	11160.00	58.25 PK	74.00	-15.75	2.71H	0	43.57	14.68
5	11160.00	43.14 AV	54.00	-10.86	2.71H	0	28.46	14.68
6	#16740.00	59.34 PK	68.20	-8.86	2.97H	0	38.78	20.56
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	45.54 PK	68.20	-22.66	1.85V	103	39.16	6.38
2	*5580.00	103.81 PK			2.34V	103	97.13	6.68
3	*5580.00	93.53 AV			2.34V	103	86.85	6.68
4	11160.00	59.69 PK	74.00	-14.31	1.82V	0	45.01	14.68
5	11160.00	45.84 AV	54.00	-8.16	1.82V	0	31.16	14.68
6	#16740.00	60.11 PK	68.20	-8.09	1.73V	0	39.55	20.56

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 less than 20dB margin against the limit.
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)

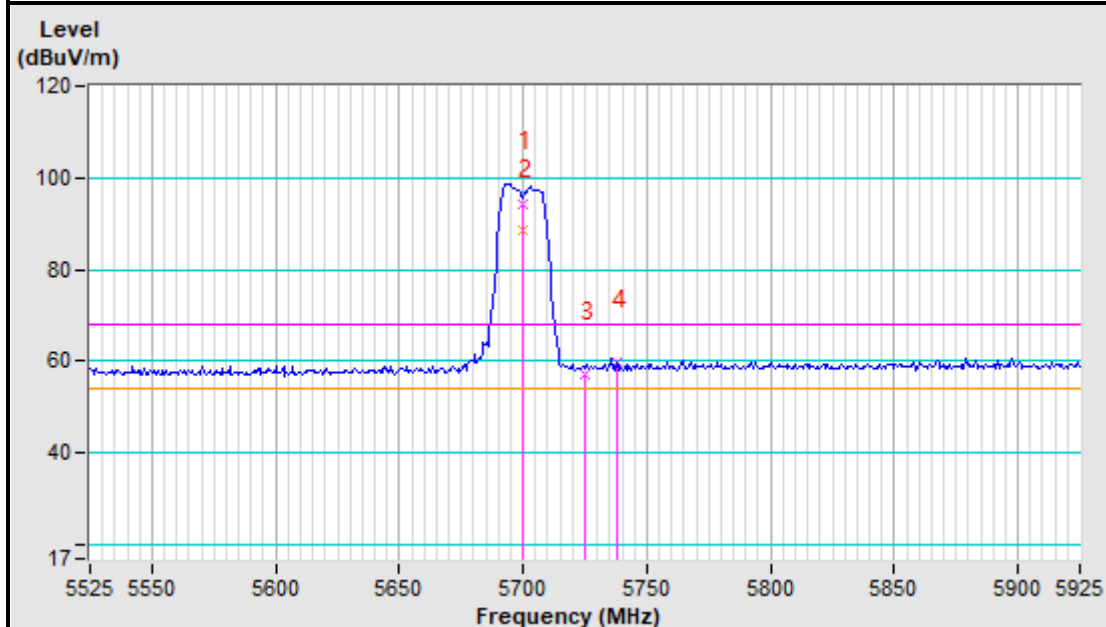
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	94.45 PK			2.11H	127	87.42	7.03
2	*5700.00	88.41 AV			2.11H	127	81.38	7.03
3	#5725.00	57.35 PK	68.20	-10.85	2.69H	127	50.25	7.10
4	#5737.80	59.91 PK	68.20	-8.29	2.69H	127	52.78	7.13
5	11400.00	58.22 PK	74.00	-15.78	2.26H	0	43.07	15.15
6	11400.00	44.58 AV	54.00	-9.42	2.26H	0	29.43	15.15
7	#17100.00	59.63 PK	68.20	-8.57	2.01H	0	38.58	21.05
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	99.97 PK			2.52V	107	92.94	7.03
2	*5700.00	92.24 AV			2.52V	107	85.21	7.03
3	#5725.00	57.96 PK	68.20	-10.24	2.89V	107	50.86	7.10
4	#5737.16	59.46 PK	68.20	-8.74	2.89V	107	52.33	7.13
5	11400.00	59.63 PK	74.00	-14.37	1.51V	0	44.48	15.15
6	11400.00	45.67 AV	54.00	-8.33	1.51V	0	30.52	15.15
7	#17100.00	60.29 PK	68.20	-7.91	2.16V	0	39.24	21.05

REMARKS:

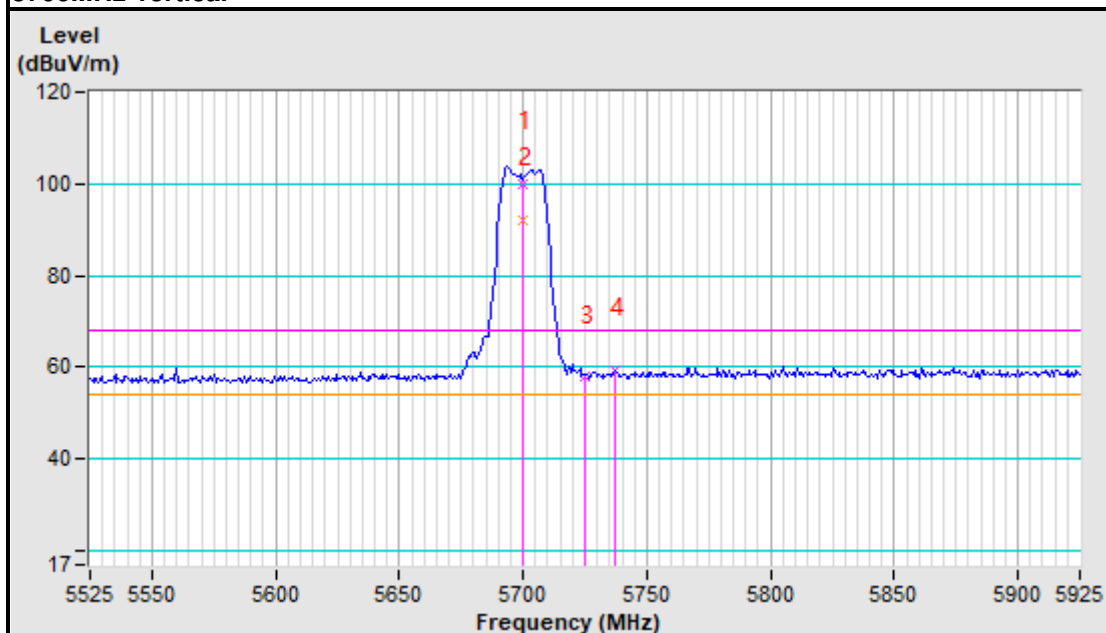
1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The emission levels of other frequencies were less than 20dB margin against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental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

Band edge Plot

5700MHz Horizontal



5700MHz Vertical



802.11n (40MHz)

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

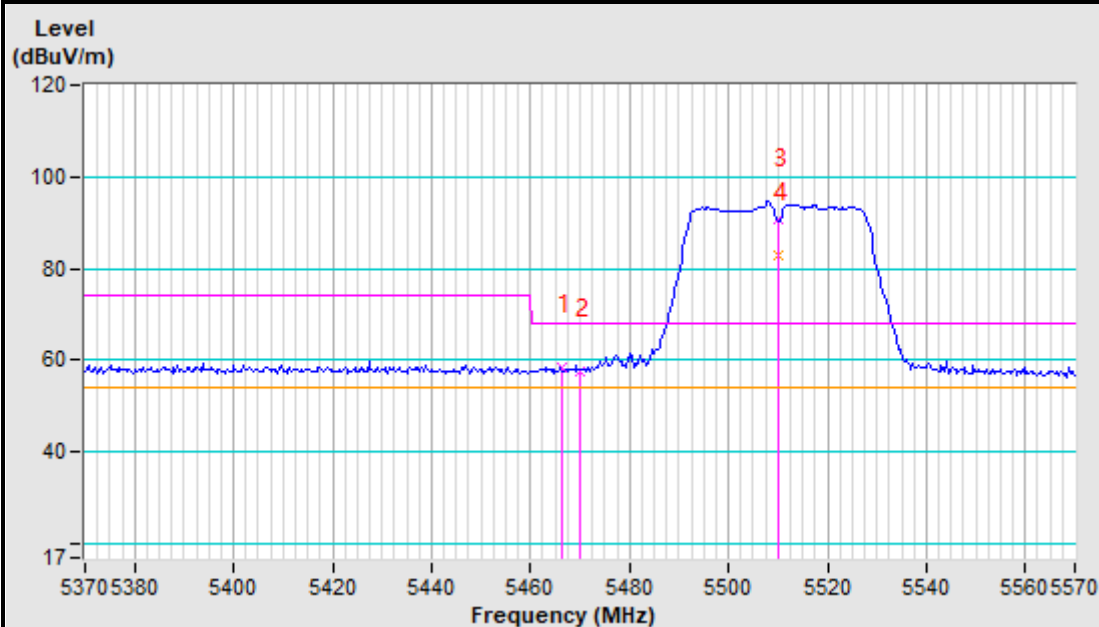
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5466.16	58.53 PK	68.20	-9.67	1.60H	51	52.15	6.38
2	#5470.00	57.69 PK	68.20	-10.51	1.60H	51	51.31	6.38
3	*5510.00	90.70 PK			2.87H	51	84.23	6.47
4	*5510.00	83.06 AV			2.87H	51	76.59	6.47
5	11020.00	57.59 PK	74.00	-16.41	2.53H	0	43.20	14.39
6	11020.00	44.26 AV	54.00	-9.74	2.53H	0	29.87	14.39
7	#16530.00	58.64 PK	68.20	-9.56	2.29H	0	38.48	20.16
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	#5466.16	61.61 PK	68.20	-6.59	1.70V	102	55.23	6.38
2	#5470.00	60.97 PK	68.20	-7.23	1.70V	102	54.59	6.38
3	*5510.00	97.40 PK			1.76V	102	90.93	6.47
4	*5510.00	91.11 AV			1.76V	102	84.64	6.47
5	11020.00	59.63 PK	74.00	-14.37	2.16V	0	45.24	14.39
6	11020.00	45.59 AV	54.00	-8.41	2.16V	0	31.20	14.39
7	#16530.00	60.25 PK	68.20	-7.95	1.85V	0	40.09	20.16

REMARKS:

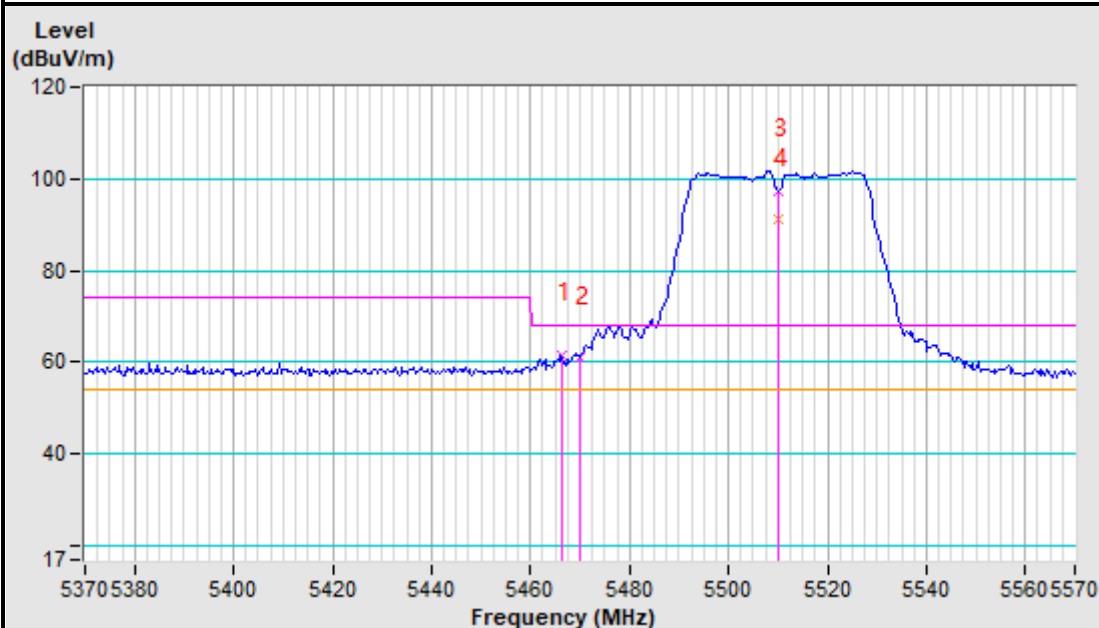
1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The emission levels of other frequencies were less than 20dB margin against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental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

Band edge Plot

5510MHz Horizontal



5510MHz Vertical



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	*5550.00	93.37 PK			2.80H	341	86.79	6.58
2	*5550.00	83.73 AV			2.80H	341	77.15	6.58
3	#5725.00	45.47 PK	68.20	-22.73	1.81H	341	38.37	7.10
4	11100.00	58.63 PK	74.00	-15.37	1.81H	0	44.08	14.55
5	11100.00	45.27 AV	54.00	-8.73	1.55H	0	30.72	14.55
6	#16650.00	59.43 PK	68.20	-8.77	1.55H	0	39.04	20.39
7	#16650.00	45.94 AV	54.00	-8.06	2.04H	0	25.55	20.39
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	*5550.00	101.10 PK			1.76H	65	94.52	6.58
2	*5550.00	92.58 AV			1.76H	65	86.00	6.58
3	#5725.00	50.26 PK	68.20	-17.94	1.72H	65	43.16	7.10
4	11100.00	60.25 PK	74.00	-13.75	1.72H	0	45.70	14.55
5	11100.00	46.18 AV	54.00	-7.82	2.06H	0	31.63	14.55
6	#16650.00	61.14 PK	68.20	-7.06	2.06H	0	40.75	20.39
7	#16650.00	47.53 AV	54.00	-6.47	2.60H	0	27.14	20.39

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 less than 20dB margin against the limit.
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	90.87 PK			2.05H	132	83.94	6.93
2	*5670.00	85.12 AV			2.05H	132	78.19	6.93
3	#5725.00	57.37 PK	68.20	-10.83	1.75H	132	50.27	7.10
4	#5729.48	57.59 PK	68.20	-10.61	1.75H	132	50.48	7.11
5	11340.00	57.49 PK	74.00	-16.51	1.64H	0	42.47	15.02
6	11340.00	45.85 AV	54.00	-8.15	1.64H	0	30.83	15.02
7	#17010.00	59.29 PK	68.20	-8.91	2.31H	0	38.26	21.03
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5670.00	96.51 PK			2.45V	78	89.58	6.93
2	*5670.00	89.74 AV			2.45V	78	82.81	6.93
3	#5725.00	58.20 PK	68.20	-10.00	1.62V	78	51.10	7.10
4	#5729.48	58.48 PK	68.20	-9.72	1.62V	78	51.37	7.11
5	11340.00	59.26 PK	74.00	-14.74	2.62V	0	44.24	15.02
6	11340.00	47.53 AV	54.00	-6.47	2.62V	0	32.51	15.02
7	#17010.00	60.51 PK	68.20	-7.69	2.10V	0	39.48	21.03

REMARKS:

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

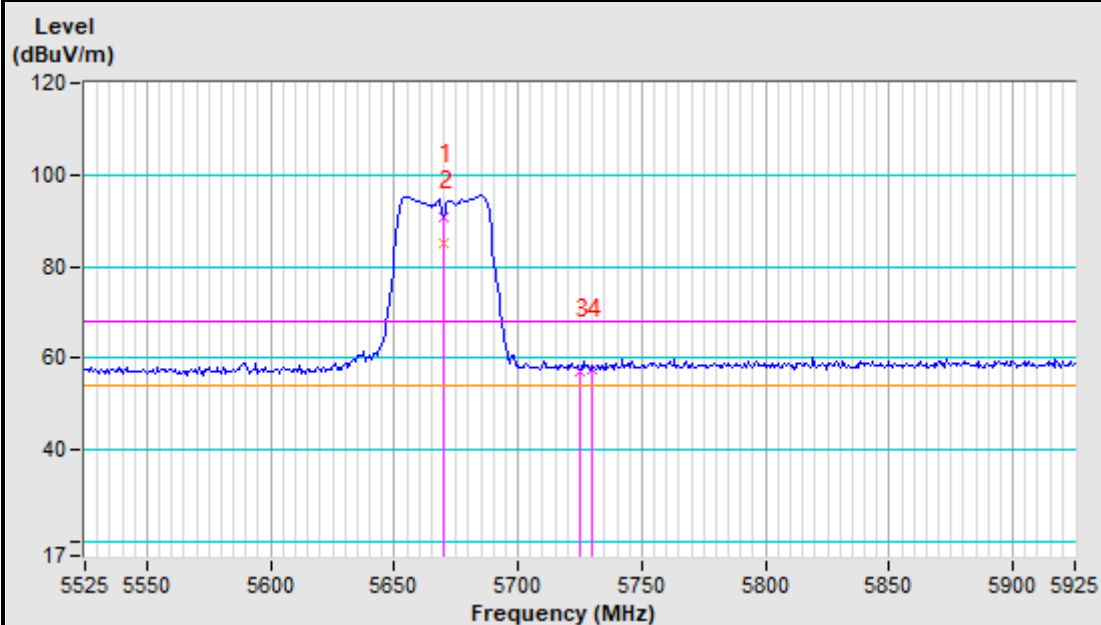


BUREAU
VERITAS

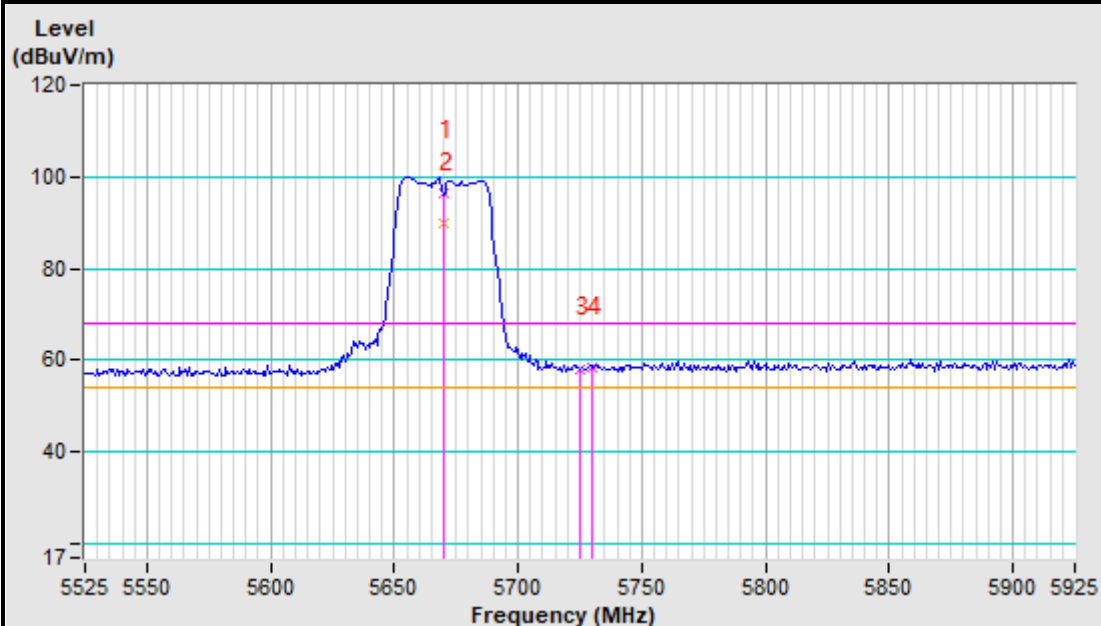
Test Report No.: RF2107WDG0280-2

Band edge Plot

5670MHz Horizontal



5670MHz Vertical



802.11ac 80MHz

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

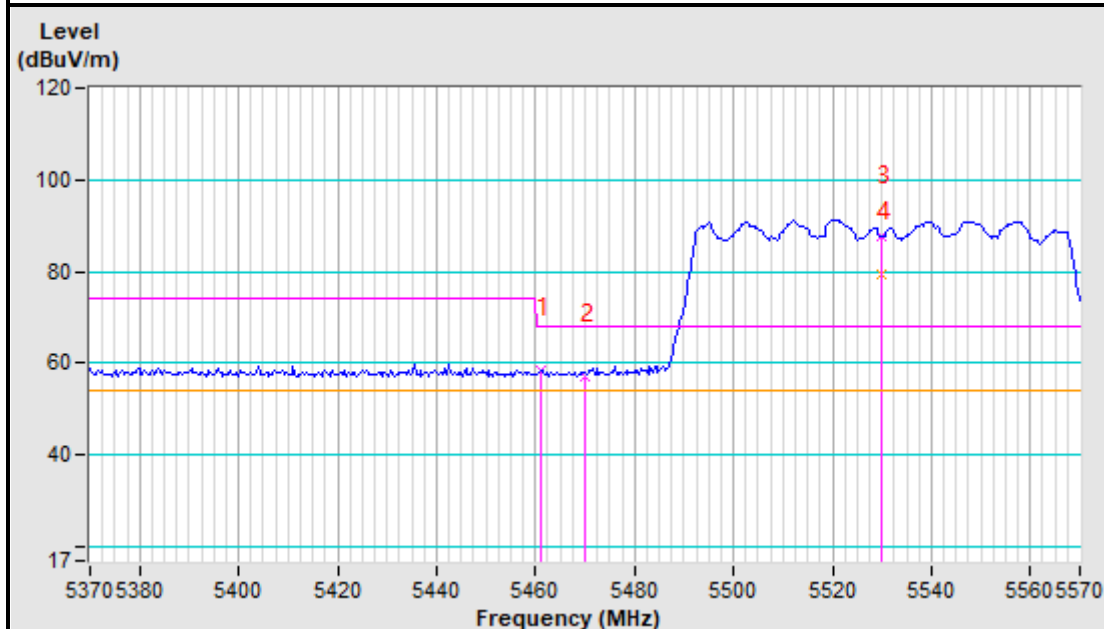
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5461.04	58.60 PK	68.20	-9.60	2.34H	332	52.23	6.37
2	#5470.00	57.35 PK	68.20	-10.85	2.34H	332	50.97	6.38
3	*5530.00	87.57 PK			1.54H	332	81.04	6.53
4	*5530.00	79.45 AV			1.54H	332	72.92	6.53
5	11060.00	58.47 PK	74.00	-15.53	2.48H	0	44.00	14.47
6	11060.00	44.36 AV	54.00	-9.64	2.48H	0	29.89	14.47
7	#16590.00	58.74 PK	68.20	-9.46	1.67H	0	38.46	20.28
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	#5461.04	61.28 PK	68.20	-6.92	2.94H	79	54.91	6.37
2	#5470.00	60.02 PK	68.20	-8.18	2.94H	79	53.64	6.38
3	*5530.00	95.70 PK			2.03H	79	89.17	6.53
4	*5530.00	86.77 AV			2.03H	79	80.24	6.53
5	11060.00	59.25 PK	74.00	-14.75	2.22H	0	44.78	14.47
6	11060.00	45.16 AV	54.00	-8.84	2.22H	0	30.69	14.47
7	#16590.00	60.14 PK	68.20	-8.06	1.63H	0	39.86	20.28

REMARKS:

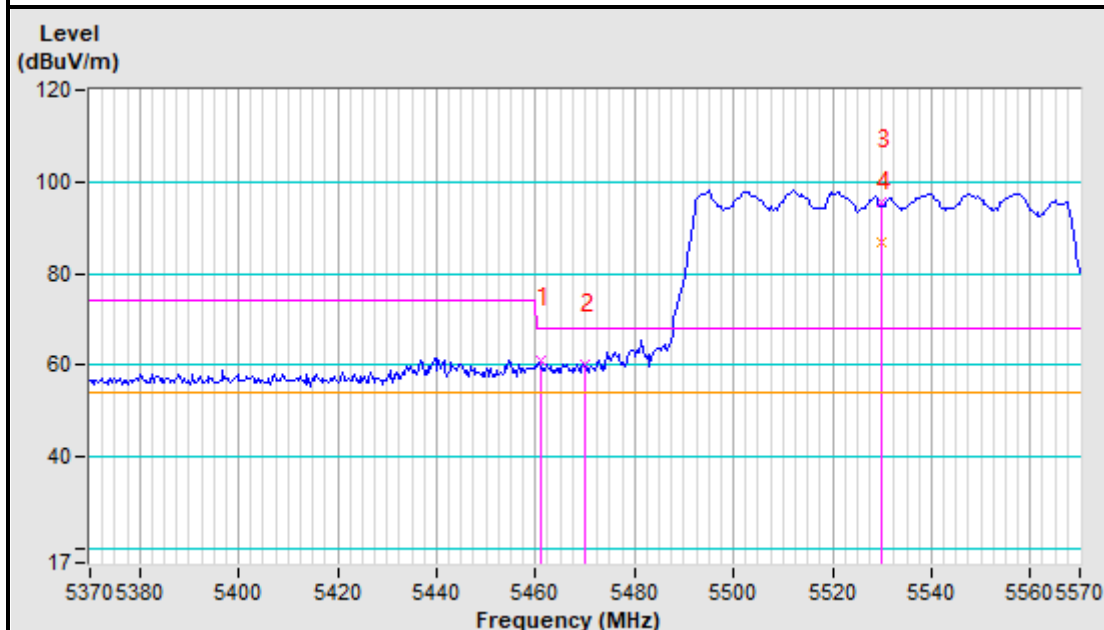
1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The emission levels of other frequencies were less than 20dB margin against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental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

Band edge Plot

5530MHz Horizontal



5530MHz Vertical



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	89.20 PK			1.74H	133	82.44	6.76
2	*5610.00	82.43 AV			1.74H	133	75.67	6.76
3	#5725.00	57.29 PK	68.20	-10.91	1.84H	133	50.19	7.10
4	#5730.12	57.38 PK	68.20	-10.82	1.84H	133	50.27	7.11
5	11220.00	58.15 PK	74.00	-15.85	2.69H	0	43.36	14.79
6	11220.00	44.79 AV	54.00	-9.21	2.69H	0	30.00	14.79
7	#16830.00	59.28 PK	68.20	-8.92	1.58H	0	38.56	20.72
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	95.39 PK			2.95V	109	88.63	6.76
2	*5610.00	87.45 AV			2.95V	109	80.69	6.76
3	#5725.00	59.24 PK	68.20	-8.96	1.72V	109	52.14	7.10
4	#5730.12	60.61 PK	68.20	-7.59	1.72V	109	53.50	7.11
5	11220.00	59.74 PK	74.00	-14.26	2.66V	0	44.95	14.79
6	11220.00	45.83 AV	54.00	-8.17	2.66V	0	31.04	14.79
7	#16830.00	60.53 PK	68.20	-7.67	2.01V	0	39.81	20.72

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 less than 20dB margin against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

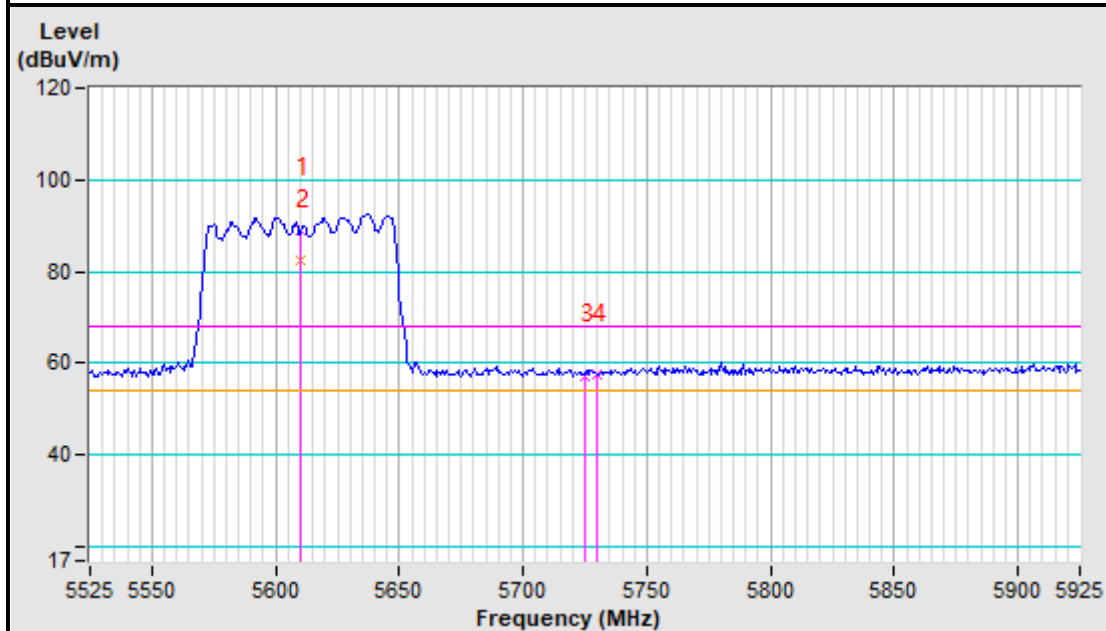


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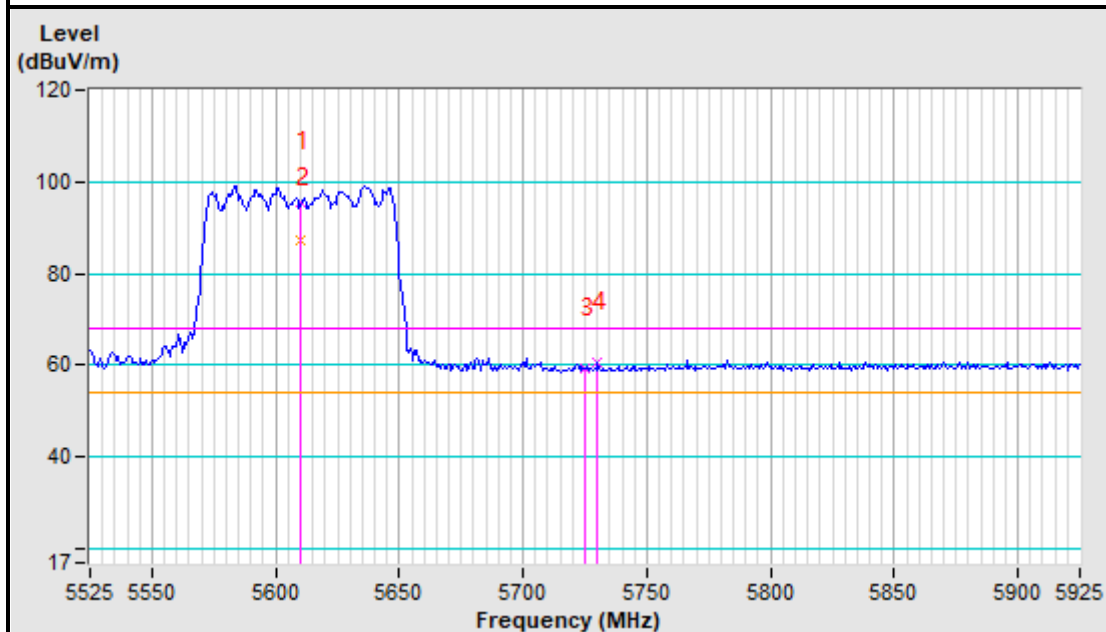
Test Report No.: RF2107WDG0280-2

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	#5590.60	49.99 PK	68.20	-18.21	1.56H	110	43.28	6.71
2	#5725.00	66.18 PK	122.20	-56.02	1.56H	110	59.08	7.10
3	#5898.88	49.22 PK	87.49	-38.27	2.44H	110	41.61	7.61
4	#10360.00	60.23 PK	68.20	-7.97	2.44H	0	46.83	13.40
5	15540.00	59.23 PK	74.00	-14.77	1.83H	0	40.36	18.87
6	15540.00	45.84 AV	54.00	-8.16	1.83H	0	26.97	18.87
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	#5583.88	49.95 PK	68.20	-18.25	2.50V	116	43.27	6.68
2	#5725.00	68.39 PK	122.20	-53.81	2.50V	116	61.29	7.10
3	#5899.72	50.06 PK	86.87	-36.81	2.63V	116	42.45	7.61
4	#10360.00	61.24 PK	68.20	-6.96	2.63V	0	47.84	13.40
5	15540.00	59.73 PK	74.00	-14.27	2.07V	0	40.86	18.87
6	15540.00	46.31 AV	54.00	-7.69	2.07V	0	27.44	18.87

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 less than 20dB margin against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

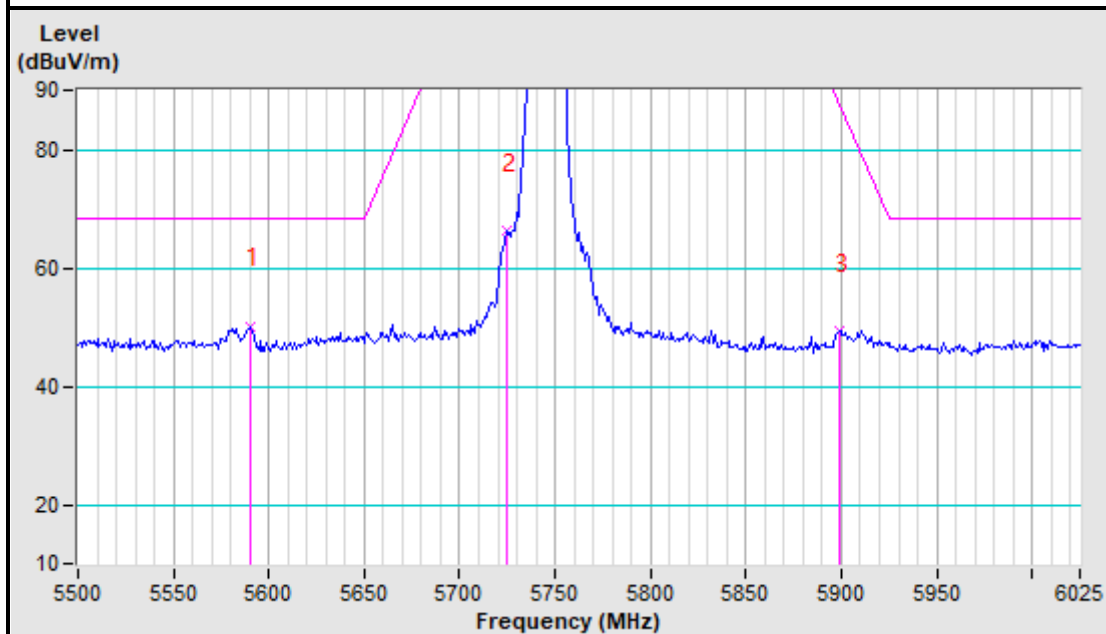


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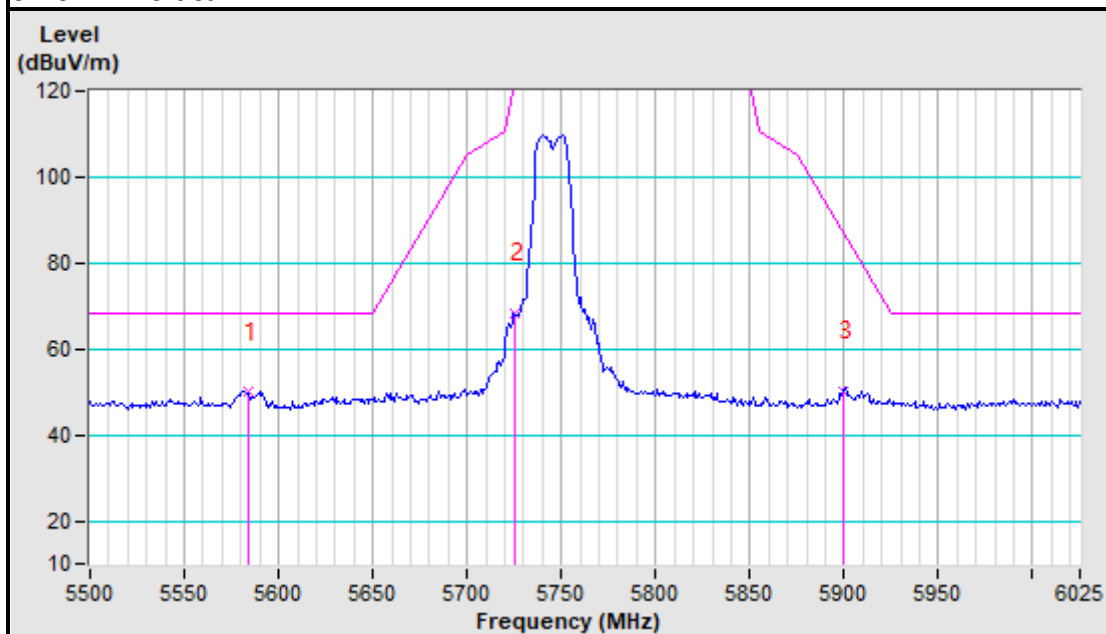
Test Report No.: RF2107WDG0280-2

Band edge Plot

5745MHz Horizontal



5745MHz Vertical



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	*5785.00	107.43 PK			2.12H	15	100.16	7.27
2	*5785.00	97.49 AV			2.12H	15	90.22	7.27
3	#10360.00	60.25 PK	68.20	-7.95	2.45H	0	46.85	13.40
4	11570.00	59.14 PK	74.00	-14.86	1.79H	0	43.62	15.52
5	11570.00	45.28 AV	54.00	-8.72	1.79H	0	29.76	15.52
6	15540.00	60.29 PK	74.00	-13.71	1.96H	0	41.42	18.87
7	15540.00	46.71 AV	54.00	-7.29	1.96H	0	27.84	18.87
8	#17355.00	59.15 PK	68.20	-9.05	2.74H	0	38.06	21.09
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	*5785.00	108.37 PK			1.80V	291	101.10	7.27
2	*5785.00	98.65 AV			1.80V	291	91.38	7.27
3	#10360.00	61.21 PK	68.20	-6.99	2.86V	0	47.81	13.40
4	11570.00	60.83 PK	74.00	-13.17	2.97V	0	45.31	15.52
5	11570.00	46.19 AV	54.00	-7.81	2.97V	0	30.67	15.52
6	15540.00	61.57 PK	74.00	-12.43	1.84V	0	42.70	18.87
7	15540.00	47.29 AV	54.00	-6.71	1.84V	0	28.42	18.87
8	#17355.00	60.93 PK	68.20	-7.27	2.69V	0	39.84	21.09

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 less than 20dB margin against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

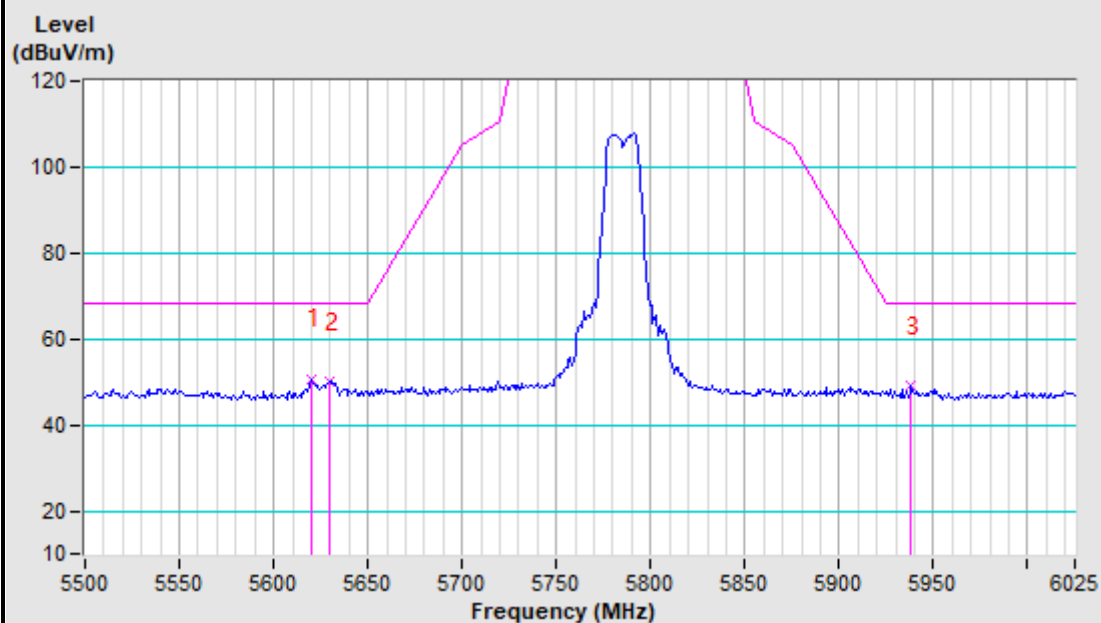


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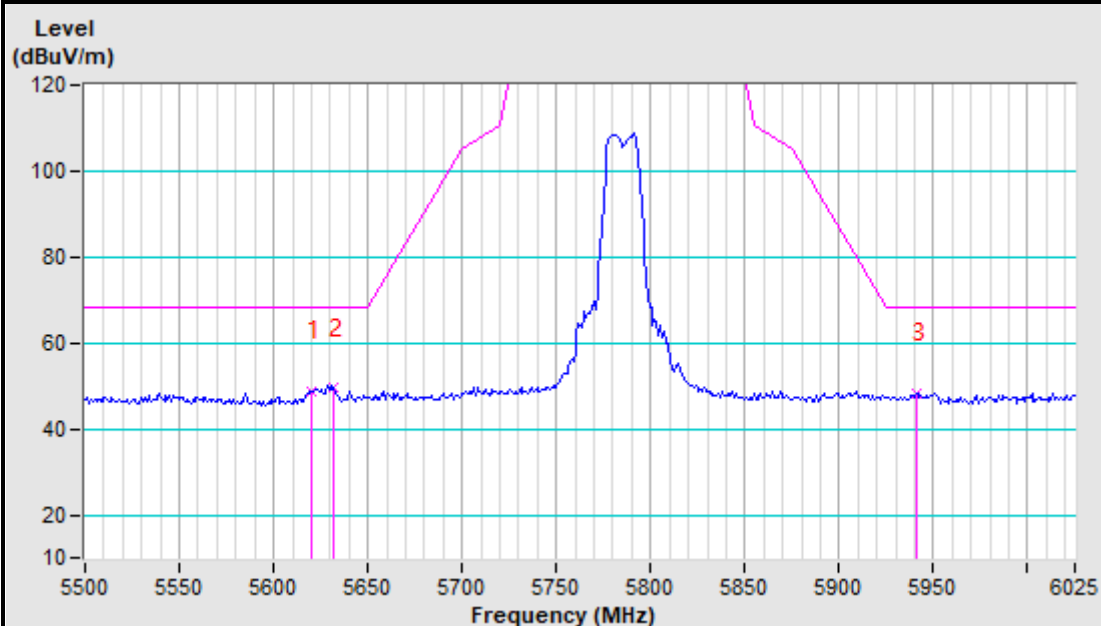
Test Report No.: RF2107WDG0280-2

Band edge Plot

5785MHz Horizontal



5785MHz Vertical



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	#5662.68	49.63 PK	77.61	-27.98	2.41H	120	42.71	6.92
2	*5825.00	106.16 PK			2.51H	38	98.77	7.39
3	*5825.00	96.14 AV			2.51H	38	88.75	7.39
4	#5850.00	55.04 PK	122.20	-67.16	1.96H	120	47.58	7.46
5	#5993.64	48.29 PK	68.20	-19.91	1.56H	120	40.41	7.88
6	11650.00	58.43 PK	74.00	-15.57	2.63H	0	42.70	15.73
7	11650.00	43.92 AV	54.00	-10.08	2.63H	0	28.19	15.73
8	#17475.00	58.54 PK	68.20	-9.66	1.88H	0	37.43	21.11
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	#5662.68	50.96 PK	77.61	-26.65	1.75V	113	44.04	6.92
2	*5825.00	107.06 PK			1.85V	143	99.67	7.39
3	*5825.00	97.32 AV			1.85V	143	89.93	7.39
4	#5850.00	56.90 PK	122.20	-65.30	2.36V	113	49.44	7.46
5	#5991.12	49.15 PK	68.20	-19.05	1.20V	113	41.28	7.87
6	11650.00	60.03 PK	74.00	-13.97	1.80V	0	44.30	15.73
7	11650.00	45.16 AV	54.00	-8.84	1.80V	0	29.43	15.73
8	#17475.00	60.27 PK	68.20	-7.93	2.80V	0	39.16	21.11

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 less than 20dB margin against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

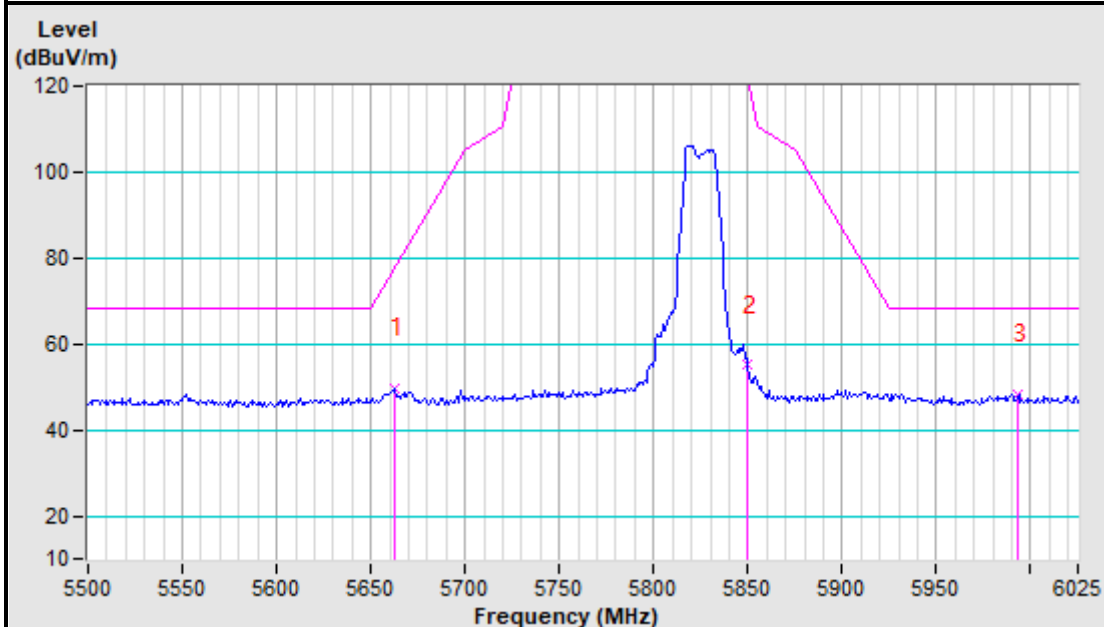


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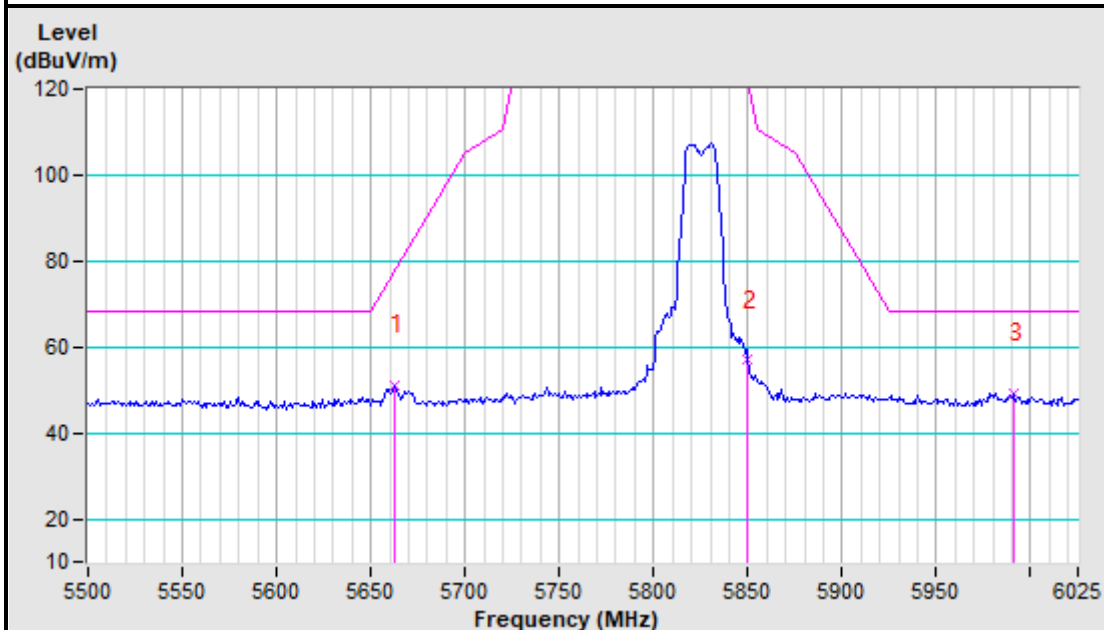
Test Report No.: RF2107WDG0280-2

Band edge Plot

5825MHz Horizontal



5825MHz Vertical



802.11n (20MHz)

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

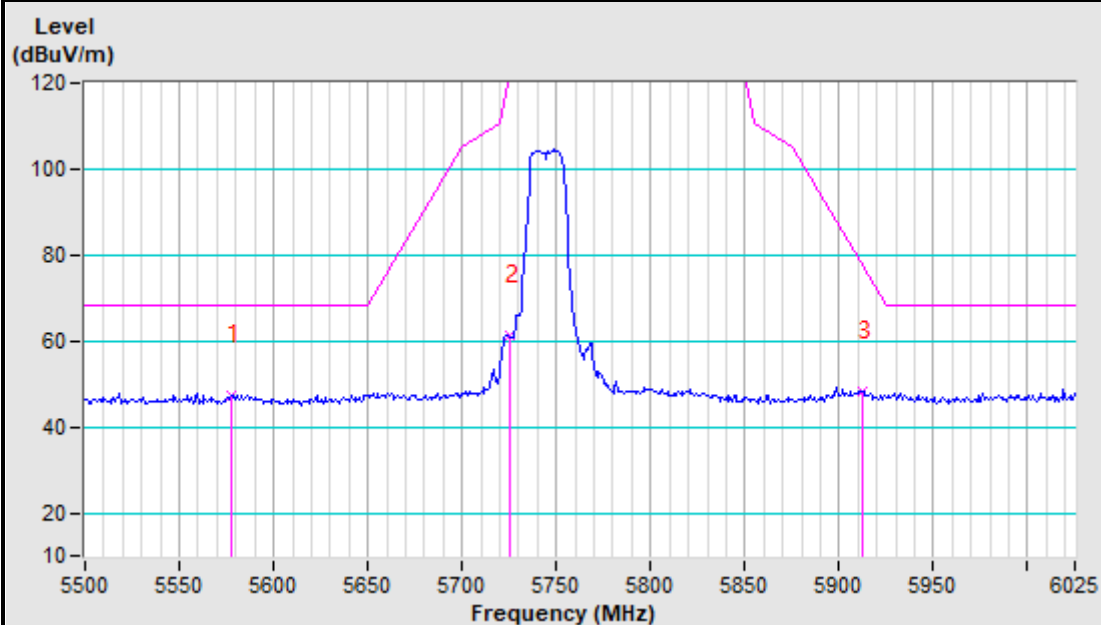
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5578.00	47.35 PK	68.20	-20.85	1.88H	301	40.68	6.67
2	#5725.00	61.24 PK	122.20	-60.96	1.45H	301	54.14	7.10
3	#5912.32	48.41 PK	77.55	-29.14	2.37H	301	40.76	7.65
4	#10380.00	60.25 PK	68.20	-7.95	1.97H	0	46.79	13.46
5	15570.00	60.54 PK	74.00	-13.46	2.25H	0	41.62	18.92
6	15570.00	46.32 AV	54.00	-7.68	2.25H	0	27.40	18.92
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5579.68	46.99 PK	68.20	-21.21	1.77V	35	40.31	6.68
2	#5725.00	61.37 PK	122.20	-60.83	2.41V	35	54.27	7.10
3	#5995.48	47.50 PK	68.20	-20.70	2.53V	35	39.61	7.89
4	#10380.00	59.84 PK	68.20	-8.36	1.42V	0	46.38	13.46
5	15570.00	60.21 PK	74.00	-13.79	2.13V	0	41.29	18.92
6	15570.00	46.17 AV	54.00	-7.83	2.13V	0	27.25	18.92

REMARKS:

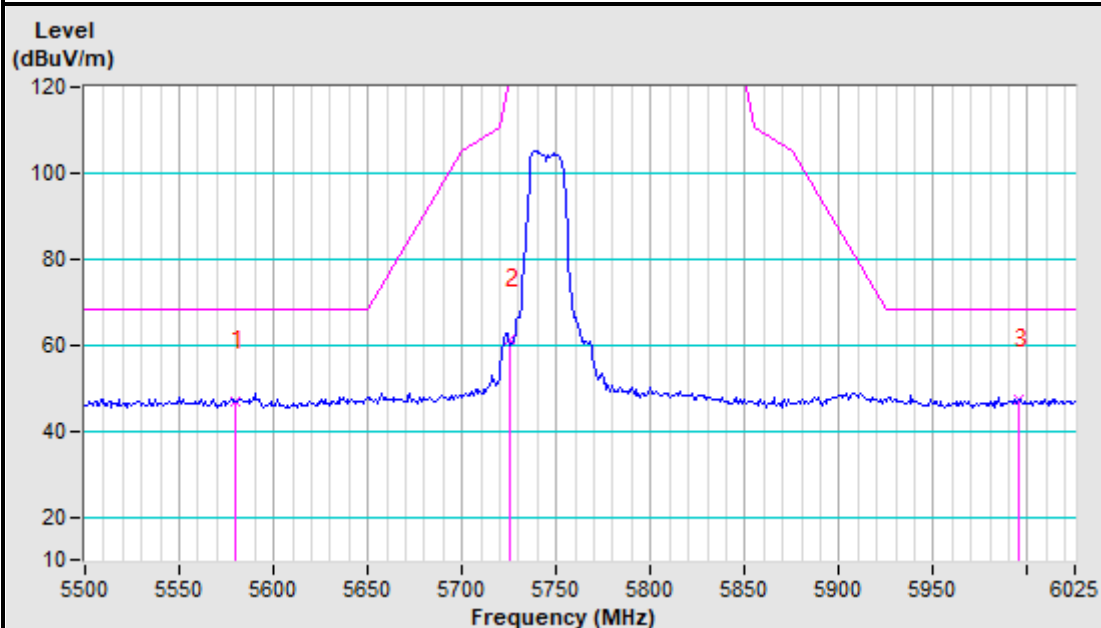
1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The emission levels of other frequencies were less than 20dB margin against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental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

Band edge Plot

5745MHz Horizontal



5745MHz Vertical



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	#5614.66	47.21 PK	68.20	-20.99	2.26H	306	40.43	6.78
2	#5633.14	47.91 PK	68.20	-20.29	2.40H	306	41.08	6.83
3	#5952.34	47.59 PK	68.20	-20.61	1.60H	306	39.83	7.76
4	#10420.00	60.25 PK	68.20	-7.95	1.82H	0	46.67	13.58
5	15630.00	60.47 PK	74.00	-13.53	2.02H	0	41.46	19.01
6	15630.00	45.63 AV	54.00	-8.37	2.02H	0	26.62	19.01
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	#5552.50	47.54 PK	68.20	-20.66	2.12V	34	40.95	6.59
2	#5629.78	48.53 PK	68.20	-19.67	2.61V	34	41.71	6.82
3	#6001.90	48.21 PK	68.20	-19.99	2.06V	34	40.31	7.90
4	#10420.00	59.48 PK	68.20	-8.72	2.16V	0	45.90	13.58
5	15630.00	58.97 PK	74.00	-15.03	2.26V	0	39.96	19.01
6	15630.00	44.27 AV	54.00	-9.73	2.26V	0	25.26	19.01

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 less than 20dB margin against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

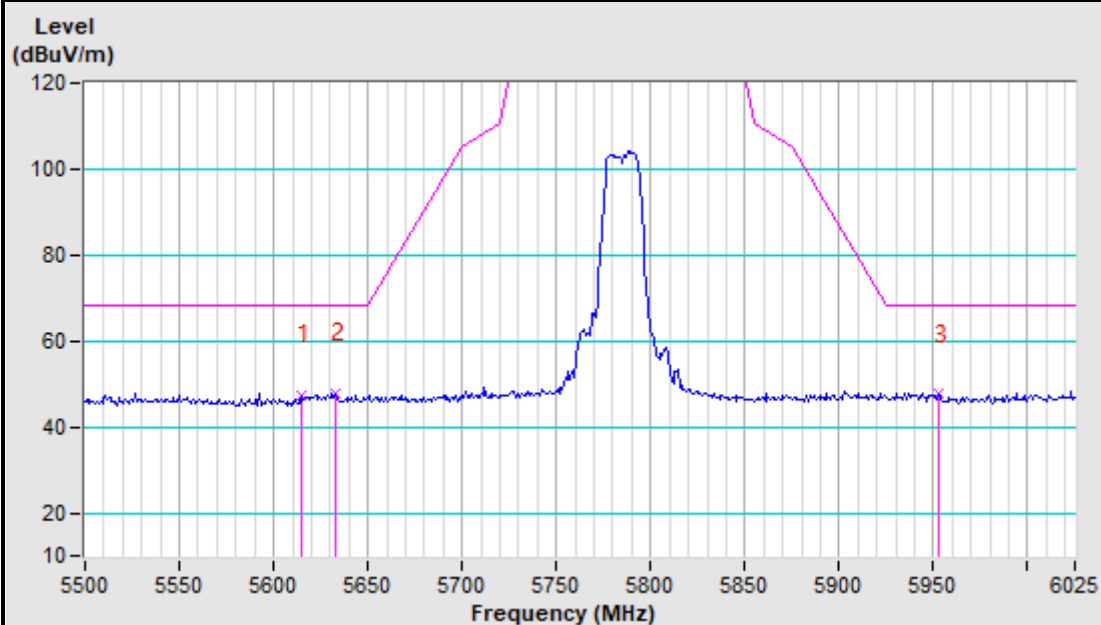


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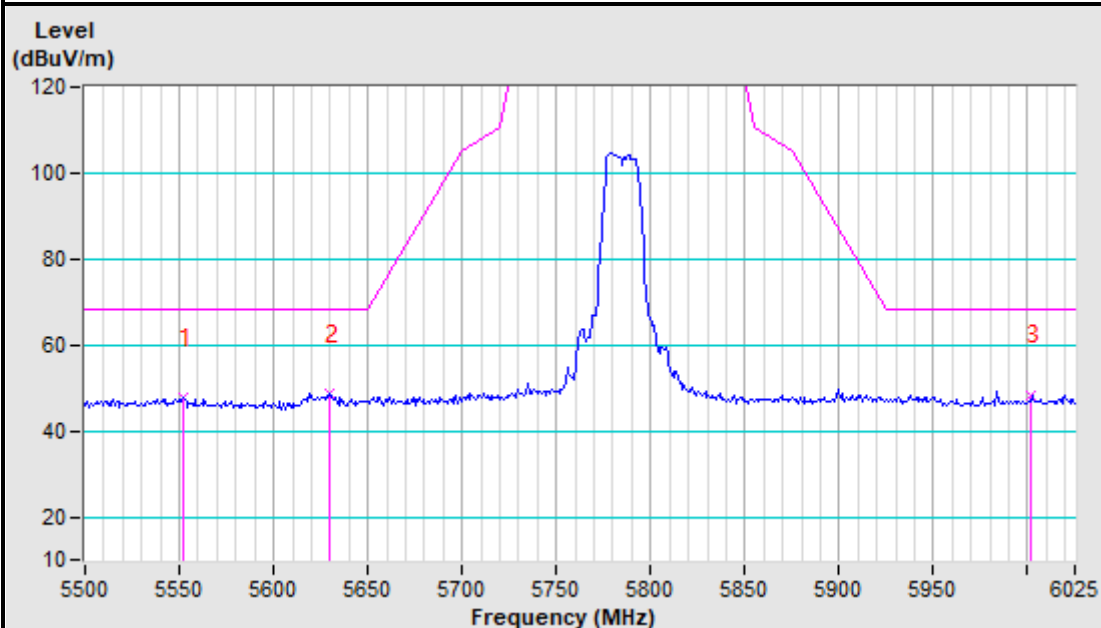
Test Report No.: RF2107WDG0280-2

Band edge Plot

5785MHz Horizontal



5785MHz Vertical



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	#5632.44	47.55 PK	68.20	-20.65	2.02H	97	40.72	6.83
2	*5825.00	103.18 PK			2.07H	79	95.79	7.39
3	*5825.00	93.12 AV			2.07H	79	85.73	7.39
4	#5850.00	50.66 PK	122.20	-71.54	2.61H	97	43.20	7.46
5	#5989.44	47.86 PK	68.20	-20.34	1.96H	97	39.99	7.87
6	11650.00	59.24 PK	74.00	-14.76	2.17H	0	43.51	15.73
7	11650.00	44.30 AV	54.00	-9.70	2.17H	0	28.57	15.73
8	#17475.00	58.99 PK	68.20	-9.21	2.34H	0	37.88	21.11
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	#5587.92	46.13 PK	68.20	-22.07	2.76V	290	39.44	6.69
2	*5825.00	103.23 PK			2.15V	44	95.84	7.39
3	*5825.00	93.32 AV			2.15V	44	85.93	7.39
4	#5850.00	52.48 PK	122.20	-69.72	2.12V	290	45.02	7.46
5	#5940.72	49.07 PK	68.20	-19.13	1.65V	290	41.34	7.73
6	11650.00	60.16 PK	74.00	-13.84	1.79V	0	44.43	15.73
7	11650.00	45.81 AV	54.00	-8.19	1.79V	0	30.08	15.73
8	#17475.00	60.38 PK	68.20	-7.82	1.64V	0	39.27	21.11

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 less than 20dB margin against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

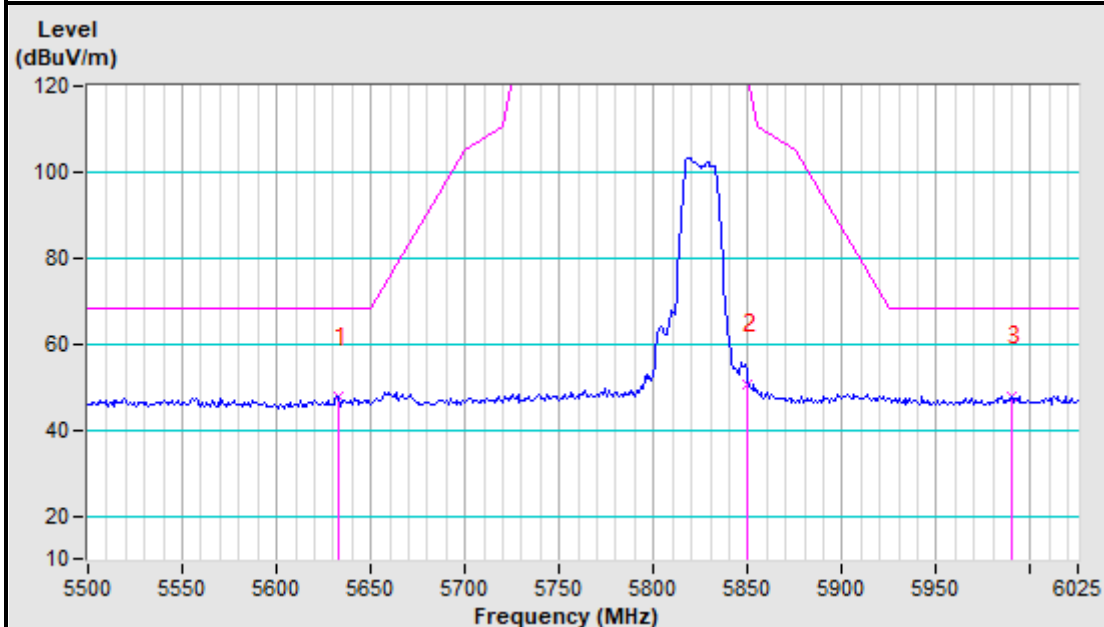


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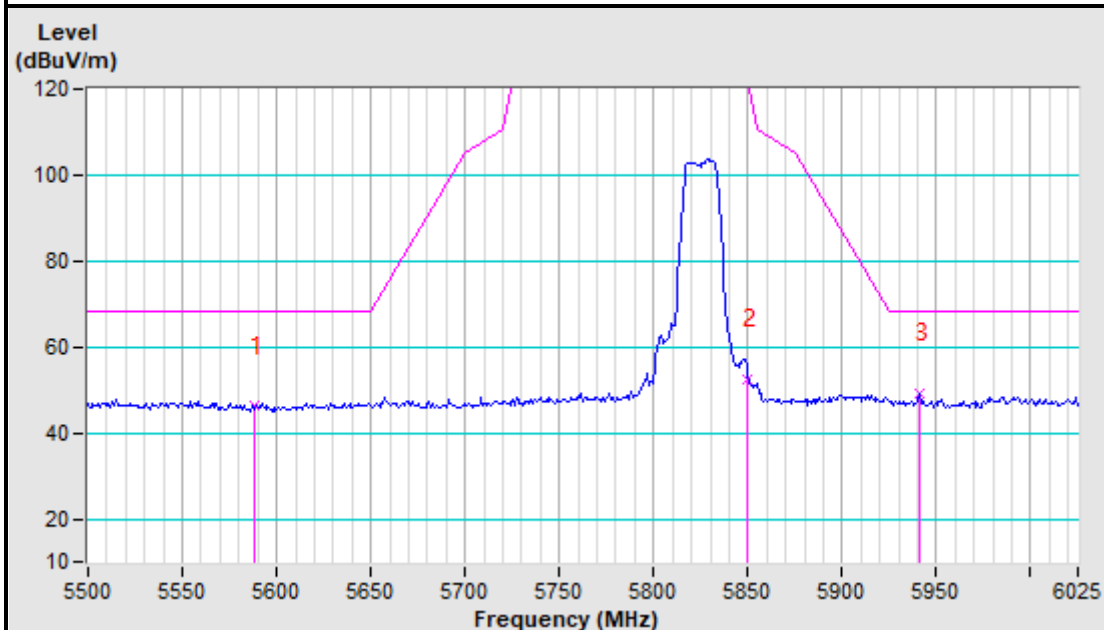
Test Report No.: RF2107WDG0280-2

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	#5603.20	46.64 PK	68.20	-21.56	2.68H	308	39.90	6.74
2	#5725.00	60.13 PK	122.20	-62.07	2.73H	308	53.03	7.10
3	*5755.00	100.74 PK			2.92H	48	93.56	7.18
4	*5755.00	90.22 AV			2.92H	48	83.04	7.18
5	#5970.28	47.49 PK	68.20	-20.71	1.60H	308	39.67	7.82
6	11510.00	58.29 PK	74.00	-15.71	2.20H	0	42.92	15.37
7	11510.00	44.08 AV	54.00	-9.92	2.20H	0	28.71	15.37
8	#17265.00	59.83 PK	68.20	-8.37	2.50H	0	38.76	21.07
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	#5635.96	47.82 PK	68.20	-20.38	1.63V	307	40.99	6.83
2	#5725.00	62.74 PK	122.20	-59.46	2.15V	307	55.64	7.10
3	*5755.00	101.51 PK			1.58V	209	94.33	7.18
4	*5755.00	90.88 AV			1.58V	209	83.70	7.18
5	#5984.56	47.56 PK	68.20	-20.64	1.97V	307	39.70	7.86
6	11510.00	59.82 PK	74.00	-14.18	1.64V	0	44.45	15.37
7	11510.00	45.13 AV	54.00	-8.87	1.64V	0	29.76	15.37
8	#17265.00	60.46 PK	68.20	-7.74	2.36V	0	39.39	21.07

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 less than 20dB margin against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

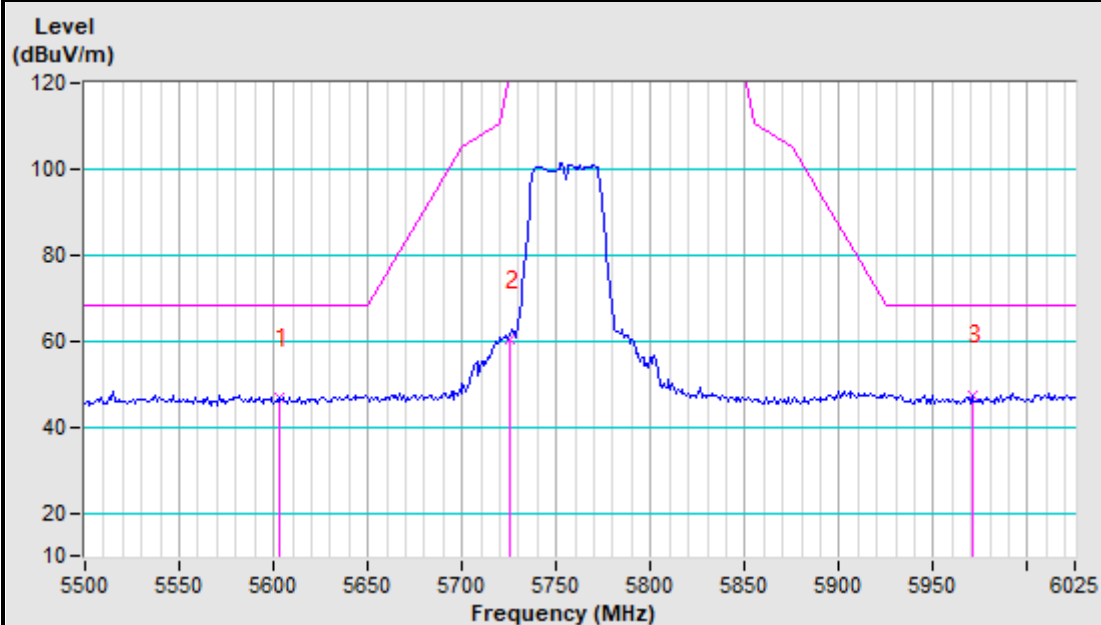


BUREAU
VERITAS

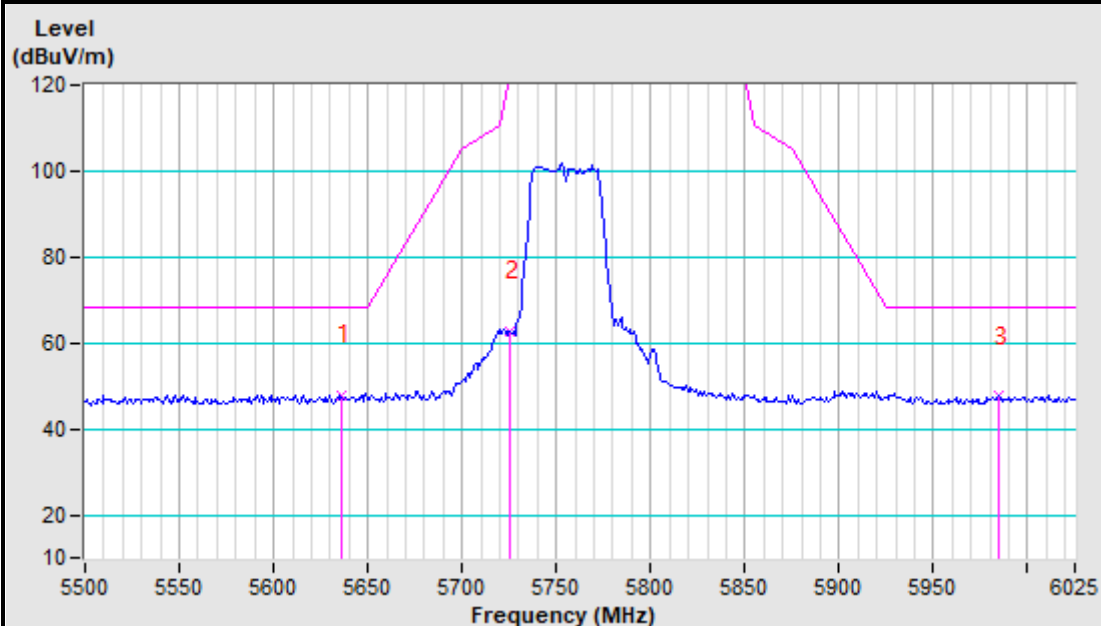
Test Report No.: RF2107WDG0280-2

Band edge Plot

5755MHz Horizontal



5755MHz Vertical



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	#5639.16	48.19 PK	68.20	-20.01	2.55H	92	41.34	6.85
2	*5795.00	100.59 PK			2.42H	326	93.29	7.30
3	*5795.00	90.61 AV			2.42H	326	83.31	7.30
4	#5850.00	47.13 PK	122.20	-75.07	2.42H	92	39.67	7.46
5	#5974.32	47.34 PK	68.20	-20.86	2.31H	92	39.51	7.83
6	11590.00	58.94 PK	74.00	-15.06	2.00H	0	43.37	15.57
7	11590.00	44.18 AV	54.00	-9.82	2.00H	0	28.61	15.57
8	#17385.00	59.37 PK	68.20	-8.83	2.29H	0	38.27	21.10
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	#5637.48	48.36 PK	68.20	-19.84	1.59V	290	41.51	6.85
2	*5795.00	101.53 PK			1.81V	149	94.23	7.30
3	*5795.00	91.20 AV			1.81V	149	83.90	7.30
4	#5850.00	48.44 PK	122.20	-73.76	2.74V	290	40.98	7.46
5	#6001.20	48.03 PK	68.20	-20.17	1.66V	290	40.13	7.90
6	11590.00	60.11 PK	74.00	-13.89	2.26V	0	44.54	15.57
7	11590.00	46.05 AV	54.00	-7.95	2.26V	0	30.48	15.57
8	#17385.00	60.34 PK	68.20	-7.86	2.57V	0	39.24	21.10

REMARKS:

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

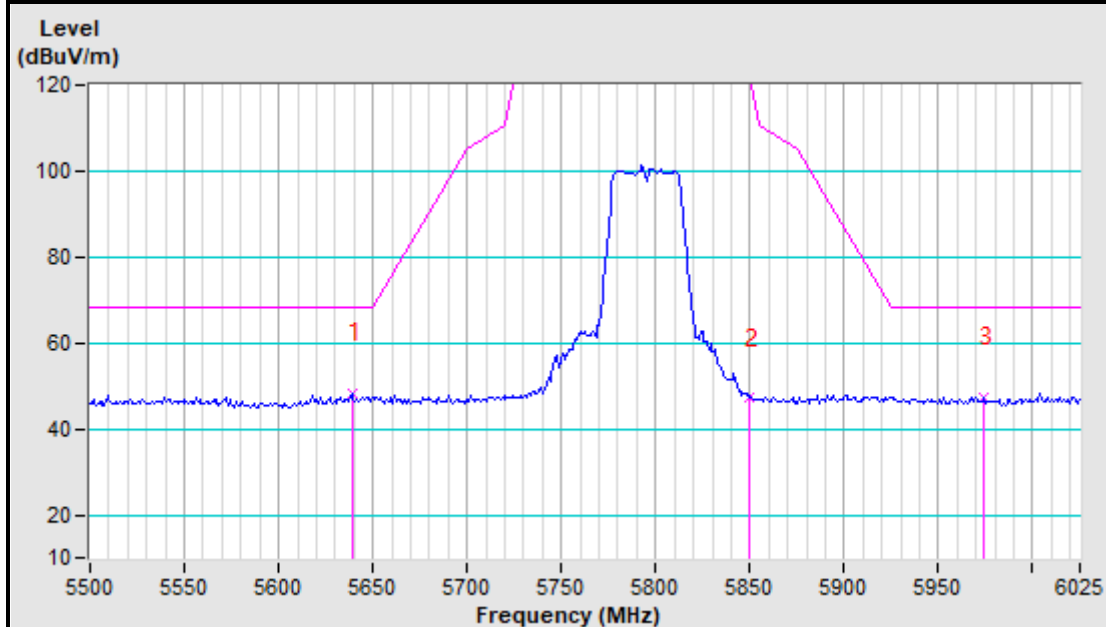


BUREAU
VERITAS

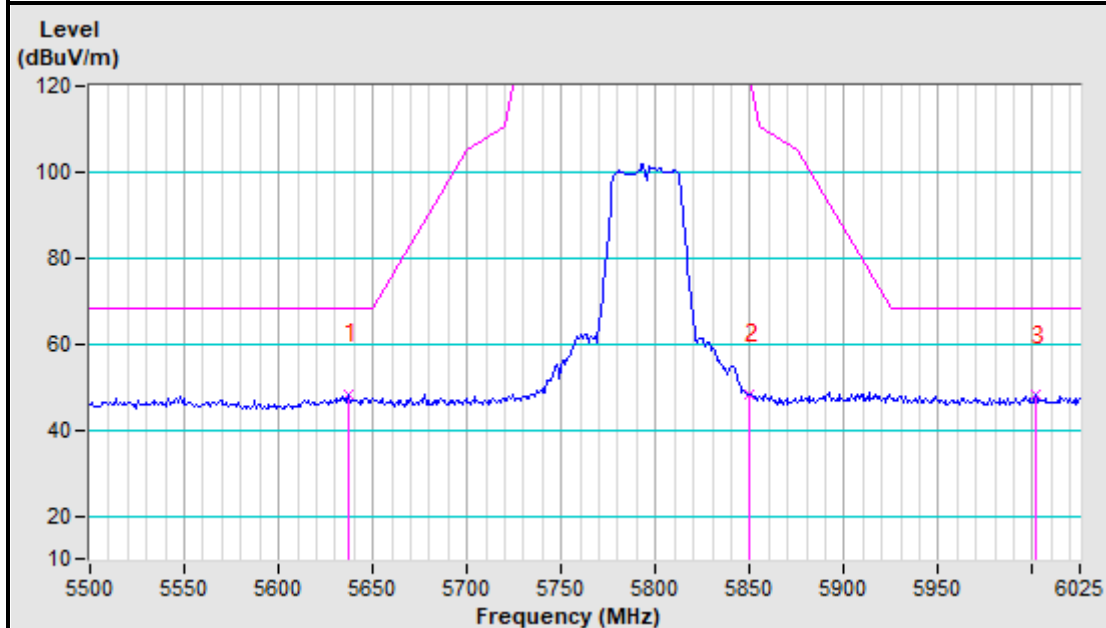
Test Report No.: RF2107WDG0280-2

Band edge Plot

5795MHz Horizontal



5795MHz Vertical





**BUREAU
VERITAS**

Test Report No.: RF2107WDG0280-2

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	#5686.20	59.24 PK	95.02	-35.78	1.83H	305	52.25	6.99
2	#5725.00	61.85 PK	122.20	-60.35	2.90H	305	54.75	7.10
3	#5755.00	99.05 PK			1.82H	105	91.87	7.18
4	#5755.00	88.08 AV			1.82H	105	80.90	7.18
5	#5850.00	56.83 PK	122.20	-65.37	2.26H	305	49.37	7.46
6	11550.00	59.63 PK	74.00	-14.37	2.53H	0	44.16	15.47
7	11550.00	43.59 AV	54.00	-10.41	2.53H	0	28.12	15.47
8	#17325.00	59.48 PK	68.20	-8.72	2.02H	0	38.40	21.08
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	#5686.20	59.70 PK	95.02	-35.32	1.60V	38	52.71	6.99
2	#5725.00	62.67 PK	122.20	-59.53	2.40V	38	55.57	7.10
3	#5755.00	99.17 PK			2.45V	266	91.99	7.18
4	#5755.00	88.12 AV			2.45V	266	80.94	7.18
5	#5850.00	57.87 PK	122.20	-64.33	1.60V	38	50.41	7.46
6	11550.00	60.35 PK	74.00	-13.65	2.39V	0	44.88	15.47
7	11550.00	44.57 AV	54.00	-9.43	2.39V	0	29.10	15.47
8	#17325.00	60.58 PK	68.20	-7.62	2.69V	0	39.50	21.08

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 less than 20dB margin against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

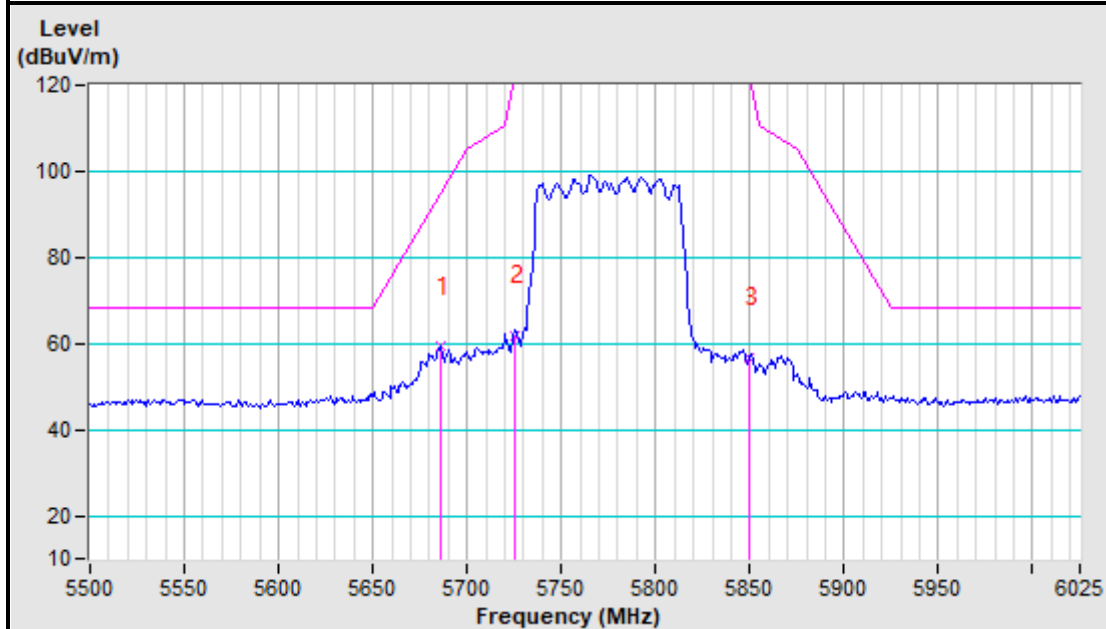


BUREAU
VERITAS

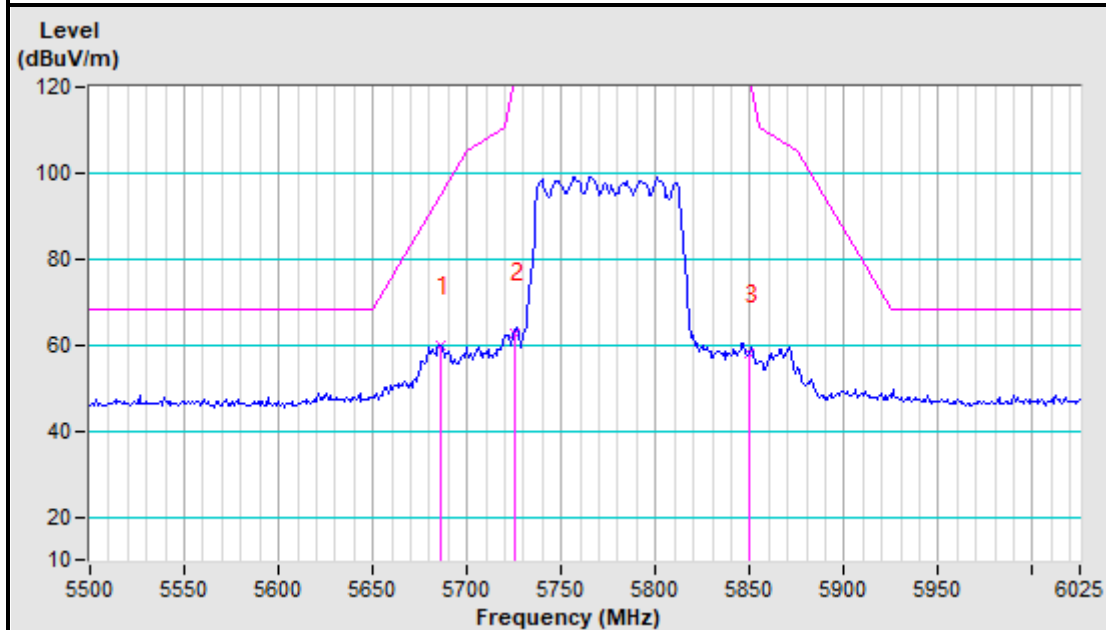
Test Report No.: RF2107WDG0280-2

Band edge Plot

5775MHz Horizontal



5775MHz Vertical



3.2 CONDUCTED EMISSION MEASUREMENT

3.2.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

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

- NOTE:** 1. The lower limit shall apply at the transition frequencies.
2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.
3. 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.	Next Cal.
EMI Test Receiver	Rohde&Schwarz	ESR7	101494	Mar. 07,22
Artificial Mains Network	Rohde&Schwarz	ENV216	101173	Mar. 07,22
Artificial Mains Network	Rohde&Schwarz	ESH3-Z5	100317	Mar. 07,22
Voltage probe	SCHWARZBECK	TK 9421	TK 9421-176	Sep. 17,22
Test software	ADT	ADT_Cond_V7.3 .7	N/A	N/A

NOTES:

1. The test was performed in shielded room 553.
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.

3.2.3 TEST PROCEDURES

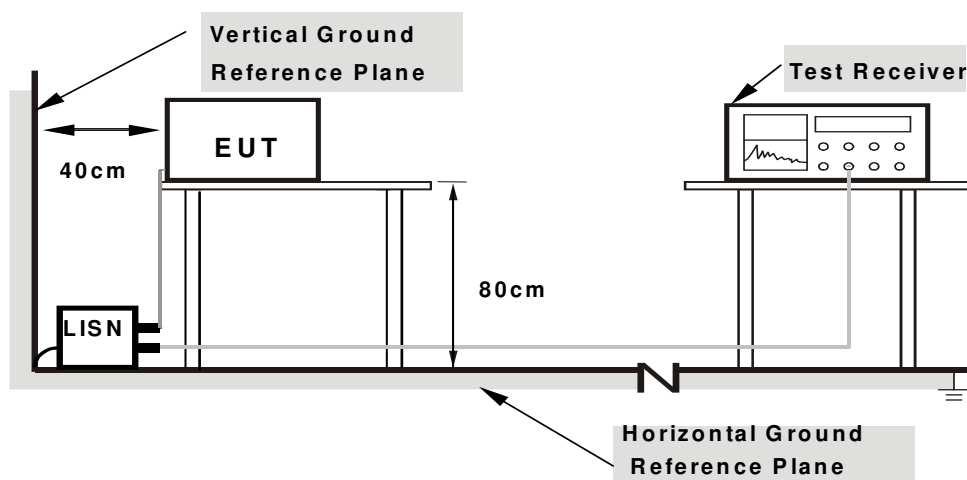
- The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance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

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

3.2.4 DEVIATION FROM TEST STANDARD

No deviation.

3.2.5 TEST SETUP



Note: 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 3.1.6

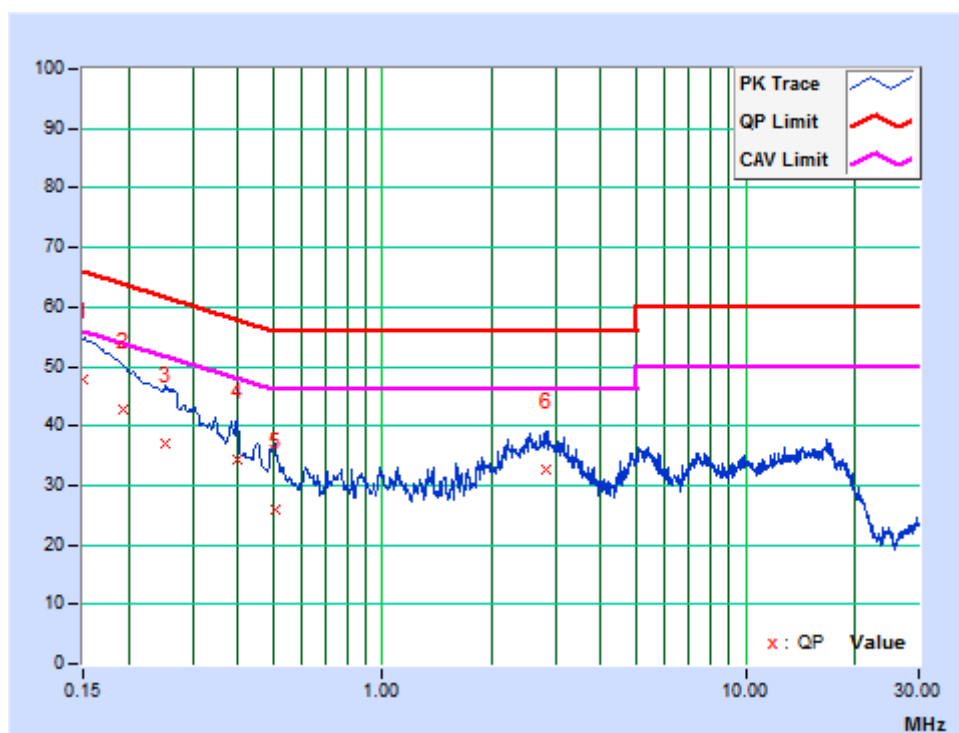
3.2.7 TEST RESULTS

CONDUCTED WORST-CASE DATA: 802.11a

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	9.66	38.08	14.83	47.74	24.49	66.00	56.00	-18.26	-31.51
2	0.19275	9.70	33.03	8.31	42.73	18.01	63.92	53.92	-21.18	-35.90
3	0.25277	9.74	27.39	9.53	37.13	19.27	61.67	51.67	-24.53	-32.39
4	0.39701	9.82	24.62	18.92	34.44	28.74	57.92	47.92	-23.48	-19.18
5	0.50617	9.83	16.24	9.34	26.07	19.17	56.00	46.00	-29.93	-26.83
6	2.80725	9.85	22.74	13.06	32.59	22.91	56.00	46.00	-23.41	-23.09

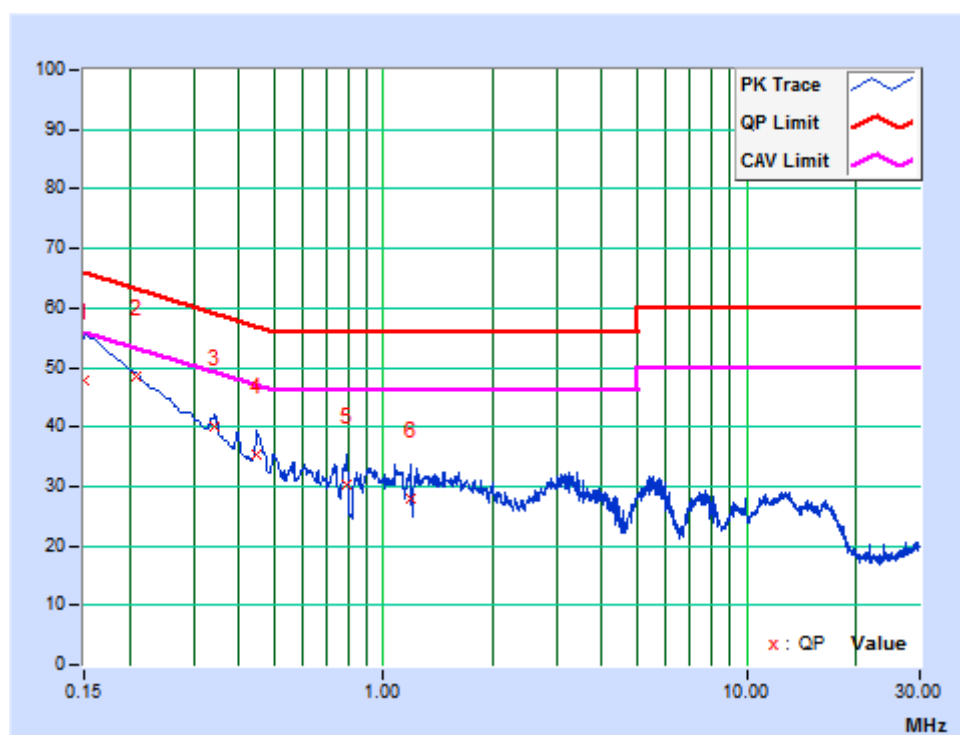
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading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



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	9.66	38.07	18.96	47.73	28.62	66.00	56.00	-18.27	-27.38
2	0.20850	9.72	38.67	23.47	48.39	33.19	63.26	53.26	-14.87	-20.07
3	0.34335	9.80	30.28	16.35	40.08	26.15	59.12	49.12	-19.04	-22.97
4	0.44947	9.83	25.40	18.84	35.23	28.67	56.88	46.88	-21.65	-18.21
5	0.79084	9.83	20.58	13.42	30.41	23.25	56.00	46.00	-25.59	-22.75
6	1.19175	9.83	18.07	7.27	27.90	17.10	56.00	46.00	-28.10	-28.90

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.



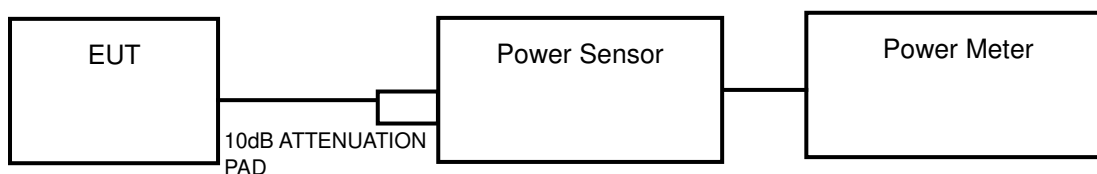
3.3 TRANSMIT POWER MEASUREMENT

3.3.1 LIMITS OF TRANSMIT POWER MEASUREMENT

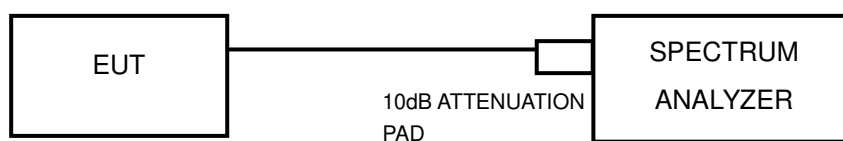
Operation Band	EUT Category		LIMIT
U-NII-1		Outdoor Access Point	1 Watt (30 dBm) (Max. e.i.r.p $\leq$ 125mW(21 dBm) at any elevation angle above 30 degrees as measured from the horizon)
		Fixed point-to-point Access Point	1 Watt (30 dBm)
		Indoor Access Point	1 Watt (30 dBm)
	√	Mobile and Portable client 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.	Next Cal.
Power Sensor	Keysight	U2021XA	MY55060016	N/A
Power Sensor	Keysight	U2021XA	MY55060018	May 09, 22
Power Meter	Anritsu	ML2495A	1139001	Feb. 24,22
Power Sensor	Anritsu	MA2411B	1531155	Feb. 24,22
Digital Multimeter	FLUKE	15B	A1220010DG	N/A
Humid & Temp Programmable Tester	Haida	HD-225T	110807201	Nov. 03,21
Oscilloscope	Agilent	DSO9254A	MY51260160	Aug. 10,22
Signal and Spectrum Analyzer	Rohde&Schwarz	FSV40	101094	Feb. 24,22
Signal Generator	Agilent	N5183A	MY50140980	Aug. 10,22
MXG-B RF Vector Signal Generator	Keysight	N5182B	MY56200288	Sep. 04,22
Attenuator	MINI	BW-S10W2+	S130129FGE2	N/A
DC Source	Keysight	E3642A	MY56146098	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)		Total Max. power output		LIMIT (dBm)	PASS /FAIL
		Chain 0	Chain 1	Chain 0	Chain 1	mW	dBm		
36	5180	15.11	15.91	32.434	38.994	71.428	18.54	24.00	PASS
40	5200	14.82	15.37	30.339	34.435	64.774	18.11	24.00	PASS
48	5240	15.44	15.66	34.995	36.813	71.807	18.56	24.00	PASS
52	5260	14.33	14.45	27.102	27.861	54.963	17.40	24.00	PASS
60	5300	14.00	14.28	25.119	26.792	51.911	17.15	24.00	PASS
64	5320	13.63	13.07	23.067	20.277	43.344	16.37	24.00	PASS
100	5500	11.72	13.15	14.859	20.654	35.5132	15.50	24.00	PASS
116	5580	11.83	12.84	15.241	19.231	34.4714	15.37	24.00	PASS
140	5700	11.68	12.41	14.723	17.418	32.1412	15.07	24.00	PASS
149	5745	12.31	11.24	17.022	13.305	30.326	14.82	30.00	PASS
157	5785	12.93	11.80	19.634	15.136	34.769	15.41	30.00	PASS
165	5825	13.01	11.59	19.999	14.421	34.420	15.37	30.00	PASS

For Band 2~Band 3: Limit = 11dBm+10log(26 BW)=11+10log(20.57)=24.13dBm > 24dBm

20.57MHz Calculated results correspond to the worst limiting results.

NOTE: Directional gain = 2dBi + 10log(2) = 5.01dBi < 6dBi , so the limit is no need to be reduced.

802.11n (20MHz)

Channel Number	FREQ. (MHz)	AVG. CONDUCTED POWER (dBm)		AVG. CONDUCTED POWER (mW)		Total Max. power output		LIMIT (dBm)	PASS /FAIL
		Chain 0	Chain 1	Chain 0	Chain 1	mW	dBm		
36	5180	13.32	14.63	21.478	29.04	50.518	17.03	24.00	PASS
40	5200	13.51	14.65	22.439	29.174	51.613	17.13	24.00	PASS
48	5240	14.06	14.69	25.468	29.444	54.912	17.40	24.00	PASS
52	5260	14.15	14.20	26.002	26.303	52.305	17.19	24.00	PASS
60	5300	13.83	13.60	24.155	22.909	47.064	16.73	24.00	PASS
64	5320	13.44	13.47	22.08	22.233	44.313	16.47	24.00	PASS
100	5500	10.29	11.30	10.691	13.49	24.181	13.83	24.00	PASS
116	5580	10.65	11.90	11.614	15.488	27.102	14.33	24.00	PASS
140	5700	13.31	11.72	21.429	14.859	36.288	15.60	24.00	PASS
149	5745	14.37	12.37	27.353	17.258	44.611	16.49	30.00	PASS
157	5785	14.69	12.38	29.444	17.298	46.742	16.70	30.00	PASS
165	5825	14.43	12.97	27.733	19.815	47.548	16.77	30.00	PASS

For Band 2~Band 3: Limit = 11dBm+10log(26 BW)=11+10log(21.07)=24.24dBm > 24dBm

21.07MHz Calculated results correspond to the worst limiting results.

NOTE: Directional gain = 2dBi + 10log(2) = 5.01dBi < 6dBi , so the limit is no need to be reduced.

802.11n (40MHz)

Channel Number	FREQ. (MHz)	AVG. CONDUCTED POWER (dBm)		AVG. CONDUCTED POWER (mW)		Total Max. power output		LIMIT (dBm)	PASS /FAIL
		Chain 0	Chain 1	Chain 0	Chain 1	mW	dBm		
38	5190	12.31	13.31	17.022	21.429	38.451	15.85	24.00	PASS
46	5230	14.51	14.98	28.249	31.477	59.726	17.76	24.00	PASS
54	5270	14.07	14.08	25.527	25.586	51.113	17.09	24.00	PASS
62	5310	14.02	14.66	25.235	29.242	54.477	17.36	24.00	PASS
102	5510	10.56	12.24	11.376	16.749	28.125	14.49	24.00	PASS
110	5550	10.92	11.31	12.359	13.521	25.88	14.13	24.00	PASS
134	5670	12.01	10.94	15.885	12.417	28.302	14.52	24.00	PASS
151	5755	14.79	12.50	30.13	17.783	47.913	16.80	24.00	PASS
159	5795	14.85	12.65	30.549	18.408	48.957	16.90	30.00	PASS

For Band 2~Band 3: Limit = 11dBm+10log(26 BW)=11+10log(44.04)=27.44dBm > 24dBm

44.04MHz Calculated results correspond to the worst limiting results.

NOTE: Directional gain = 2dBi + 10log(2) = 5.01dBi < 6dBi , so the limit is no need to be reduced.

802.11ac (80MHz)

Channel Number	FREQ. (MHz)	AVG. CONDUCTED POWER (dBm)		AVG. CONDUCTED POWER (mW)		Total Max. power output		LIMIT (dBm)	PASS /FAIL
		Chain 0	Chain 1	Chain 0	Chain 1	mW	dBm		
42	5210	13.89	14.11	24.491	25.763	50.254	17.01	24.00	PASS
58	5290	13.81	14.43	24.044	27.733	51.777	17.14	24.00	PASS
106	5530	10.29	10.61	10.691	11.508	22.199	13.46	24.00	PASS
122	5610	10.73	10.98	11.83	12.531	24.361	13.87	24.00	PASS
155	5775	14.51	12.15	28.249	16.406	44.655	16.50	30.00	PASS

For Band 2~Band 3: Limit = 11dBm+10log(26 BW)=11+10log(82.76)=30.18dBm > 24dBm

82.76MHz Calculated results correspond to the worst limiting results.

NOTE: Directional gain = 2dBi + 10log(2) = 5.01dBi < 6dBi , so the limit is no need to be reduced.

26dB BANDWIDTH:

802.11a

Channel Number	Freq. (MHz)	26dB DOWN BANDWIDTH (MHz)		PASS /FAIL
		Chain 0	Chain 1	
36	5180	21.41	20.74	PASS
40	5200	21.19	20.74	PASS
48	5240	21.29	20.57	PASS
52	5260	21.25	20.80	PASS
60	5300	21.31	20.62	PASS
64	5320	21.33	20.61	PASS
100	5500	21.40	20.82	PASS
132	5660	21.33	20.76	PASS
140	5700	21.34	20.71	PASS

802.11n (20MHz)

Channel Number	Freq. (MHz)	26dB DOWN BANDWIDTH (MHz)		PASS /FAIL
		Chain 0	Chain 1	
36	5180	21.39	21.17	PASS
40	5200	21.49	21.15	PASS
48	5240	21.52	21.11	PASS
52	5260	21.39	21.08	PASS
60	5300	21.40	21.07	PASS
64	5320	21.36	21.13	PASS
100	5500	21.55	21.12	PASS
132	5660	21.40	21.13	PASS
140	5700	21.42	21.15	PASS

802.11n (40MHz)

Channel Number	Freq. (MHz)	26dB DOWN BANDWIDTH (MHz)		PASS /FAIL
		Chain 0	Chain 1	
38	5190	44.94	44.10	PASS
46	5230	44.84	44.12	PASS
54	5270	44.73	44.16	PASS
62	5310	44.79	44.12	PASS
102	5510	44.83	43.88	PASS
118	5590	44.90	44.04	PASS
134	5670	44.82	44.04	PASS

802.11ac (80MHz)

Channel Number	Freq. (MHz)	26dB DOWN BANDWIDTH (MHz)		PASS /FAIL
		Chain 0	Chain 1	
42	5210	84.20	82.91	PASS
58	5290	84.12	82.76	PASS
106	5530	83.99	82.81	PASS
122	5610	84.02	82.93	PASS

6dB BANDWIDTH For 5725-5850MHz

802.11a

Channel Number	Freq. (MHz)	6dB DOWN BANDWIDTH (MHz)		PASS /FAIL
		Chain 0	Chain 1	
149	5745	16.37	16.35	PASS
157	5785	16.37	16.37	PASS
165	5825	16.38	16.37	PASS

802.11n (20M)

Channel Number	Freq. (MHz)	6dB DOWN BANDWIDTH (MHz)		PASS /FAIL
		Chain 0	Chain 1	
149	5745	16.99	16.95	PASS
157	5785	17.00	16.73	PASS
165	5825	16.99	16.96	PASS

802.11n (40M)

Channel Number	Freq. (MHz)	6dB DOWN BANDWIDTH (MHz)		PASS /FAIL
		Chain 0	Chain 1	
151	5755	35.93	35.59	PASS
159	5795	35.91	35.37	PASS

802.11ac (80MHz)

Channel Number	Freq. (MHz)	6dB DOWN BANDWIDTH (MHz)		PASS /FAIL
		Chain 0	Chain 1	
155	5775	75.52	75.42	PASS



26dB bandwidth Test Plot

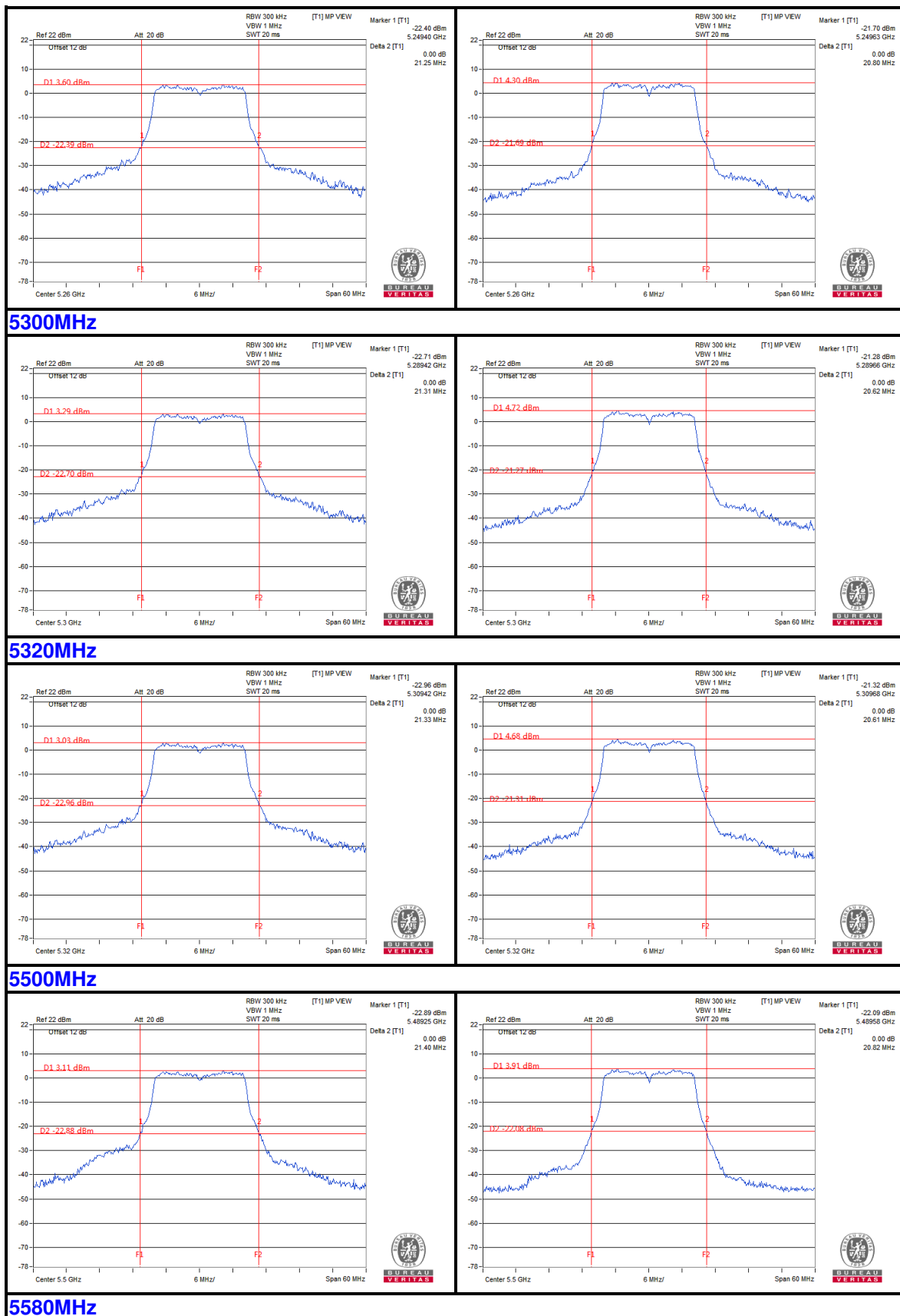


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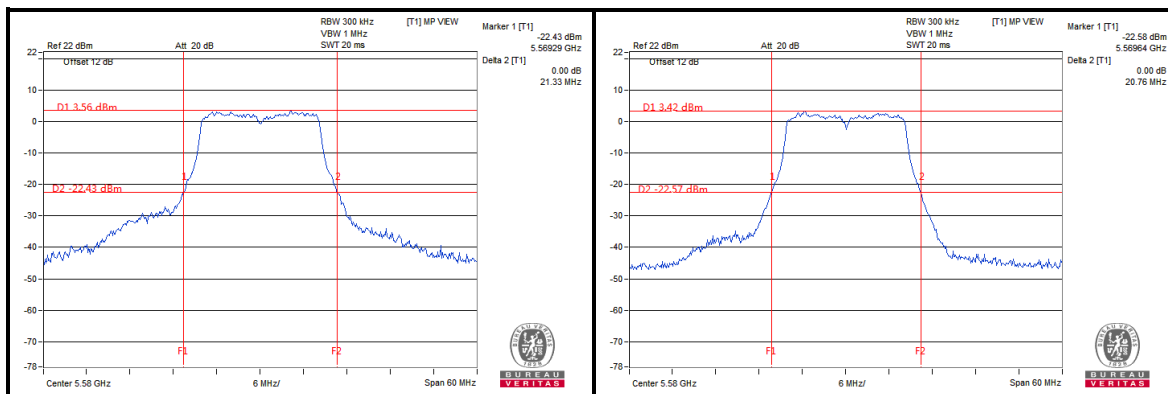
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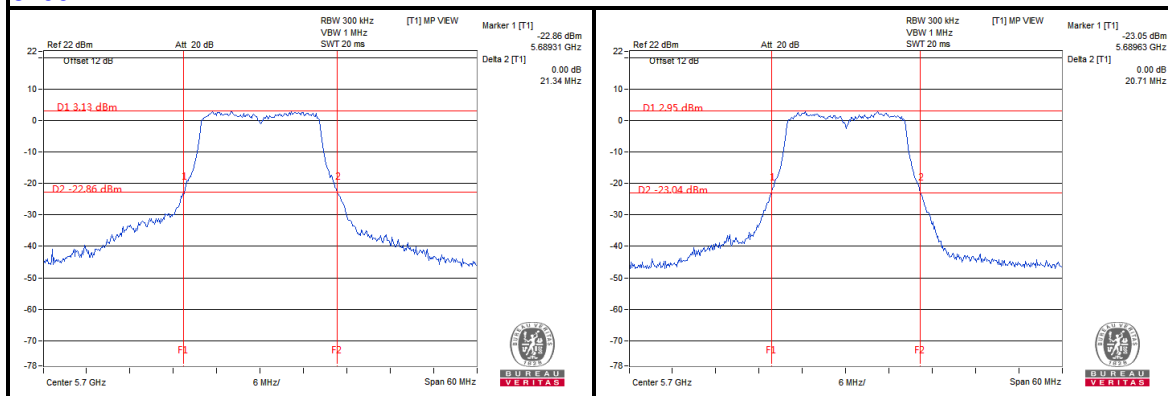


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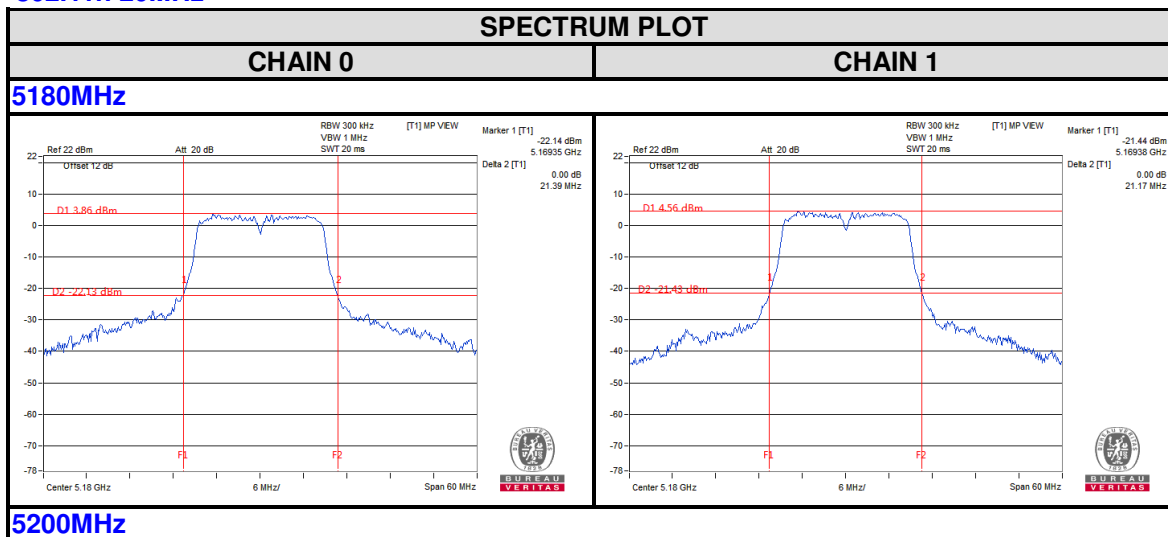
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5700MHz



802.11n 20MHz



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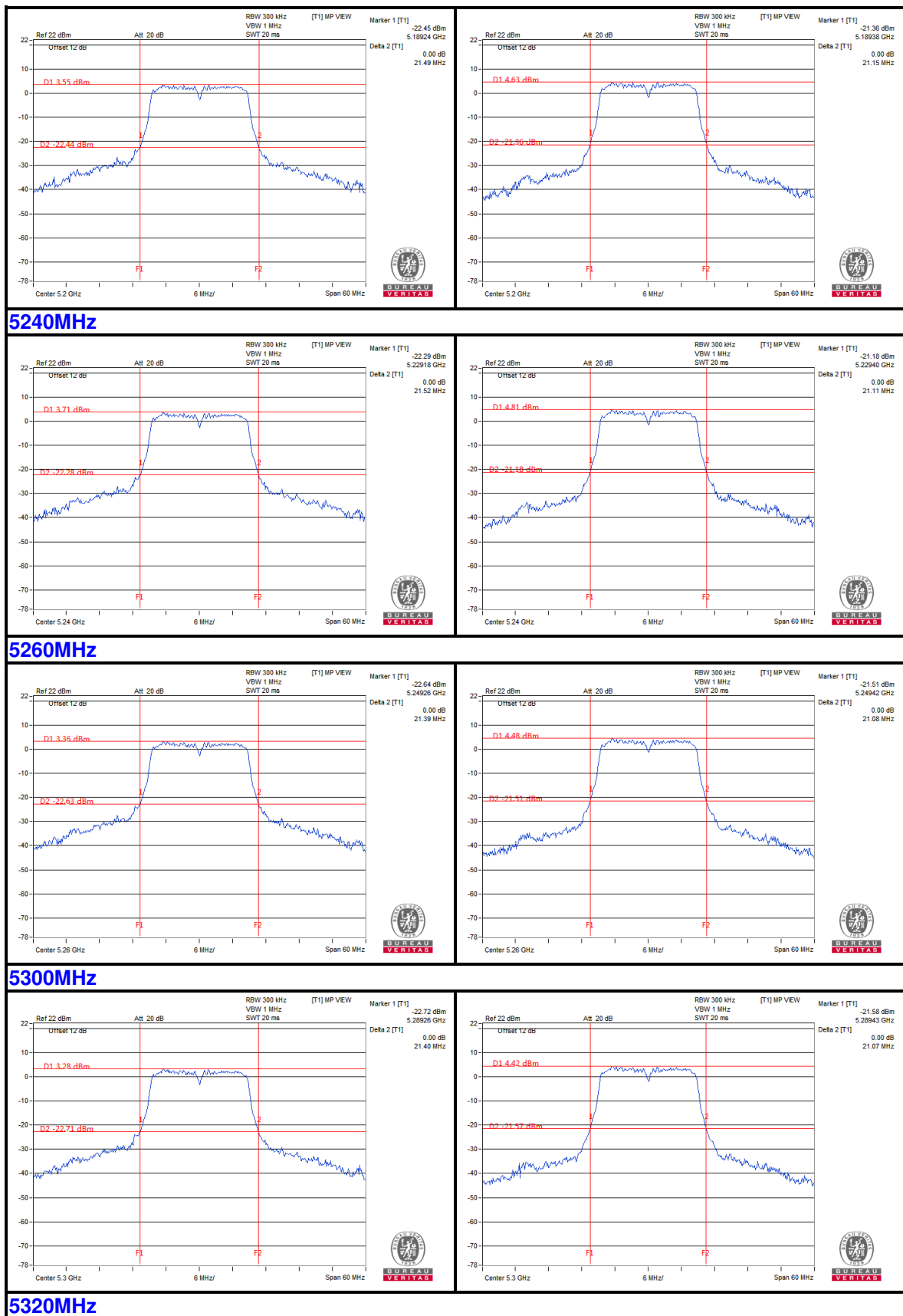
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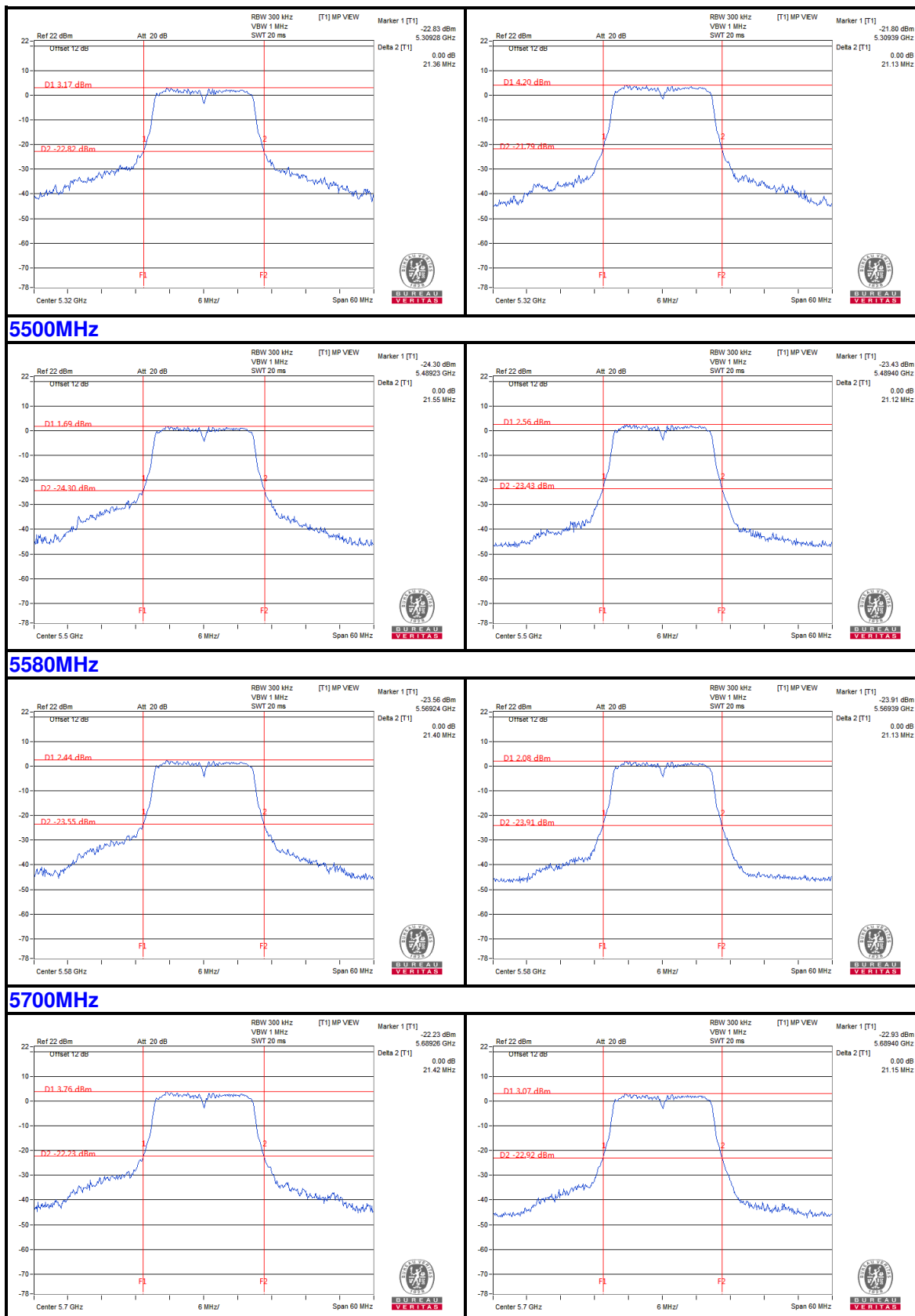
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802.11n 40MHz



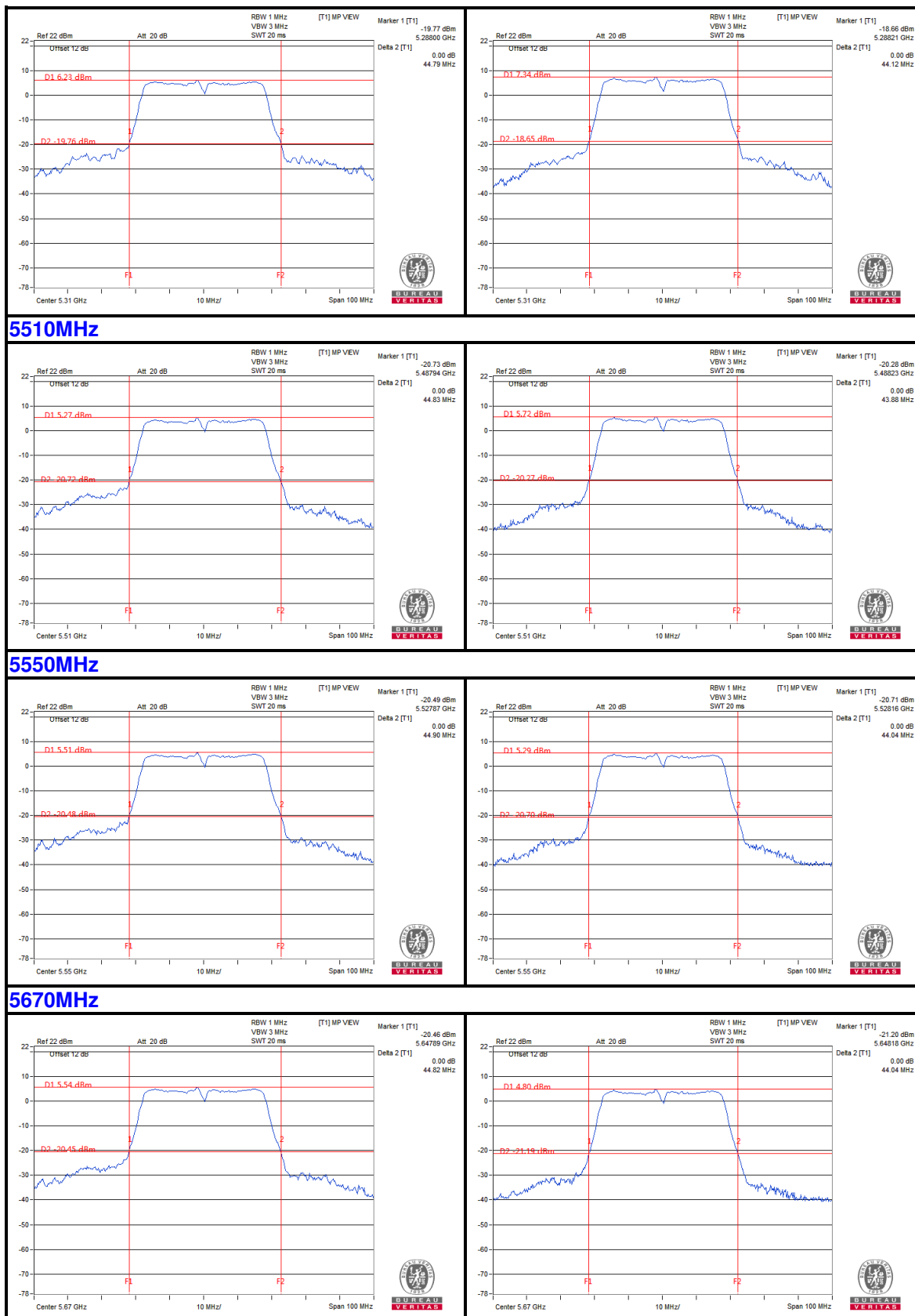
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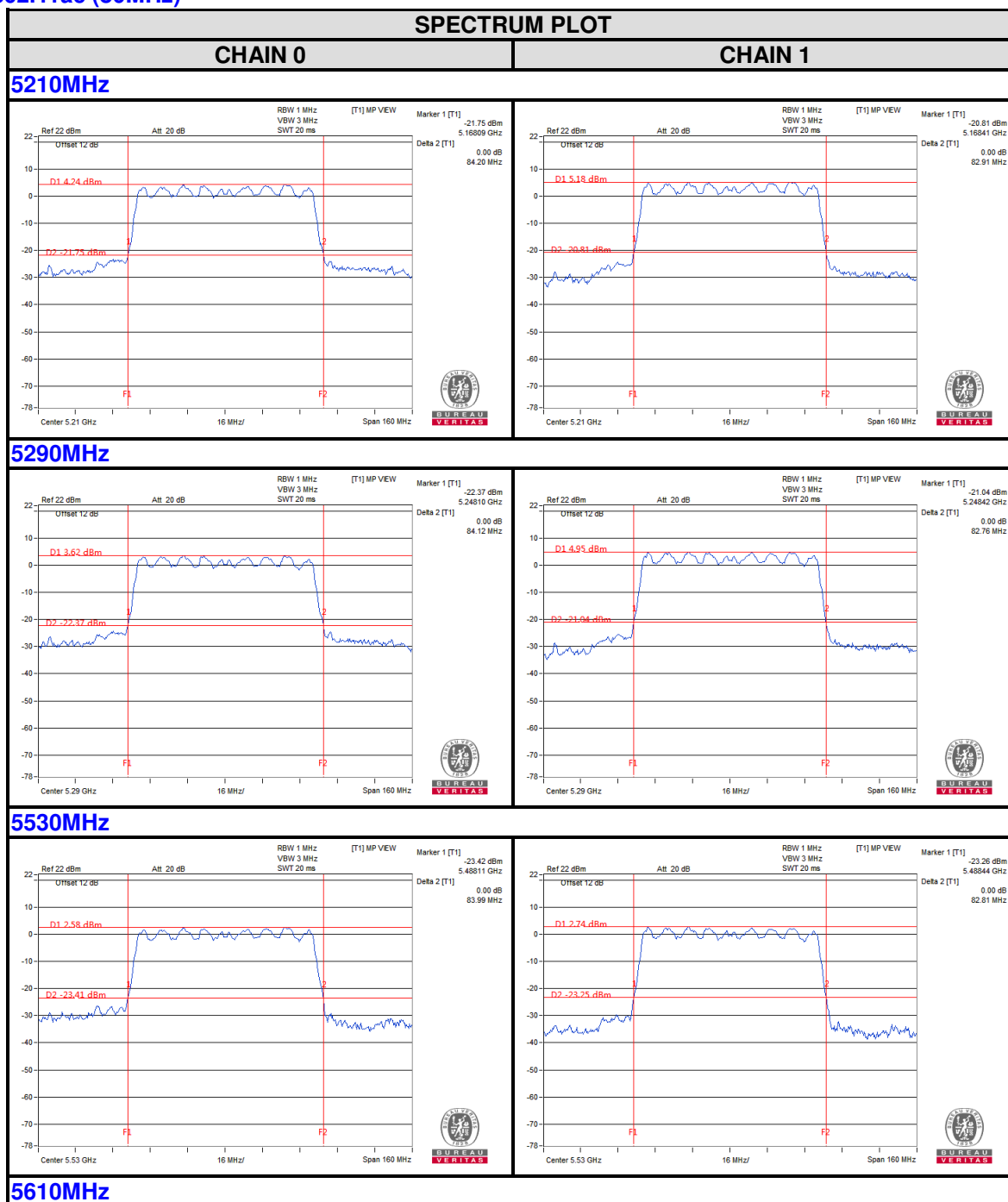
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802.11ac (80MHz)



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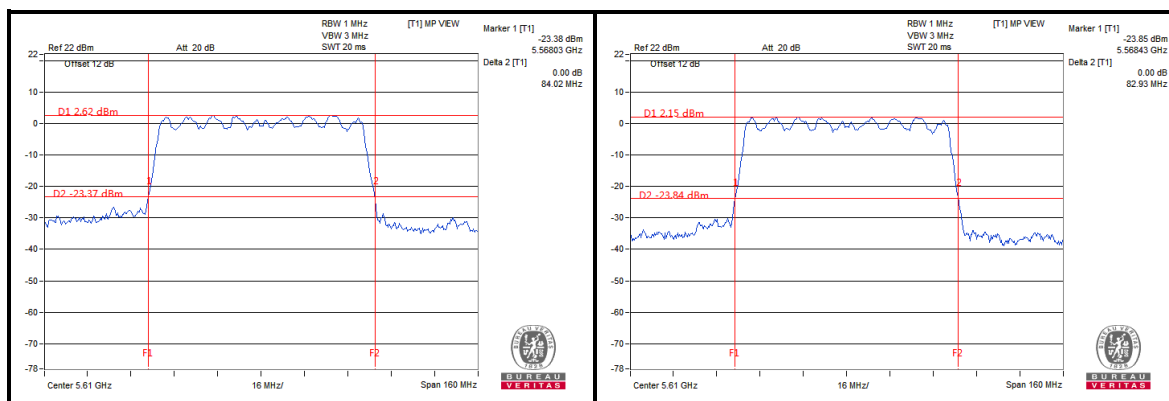
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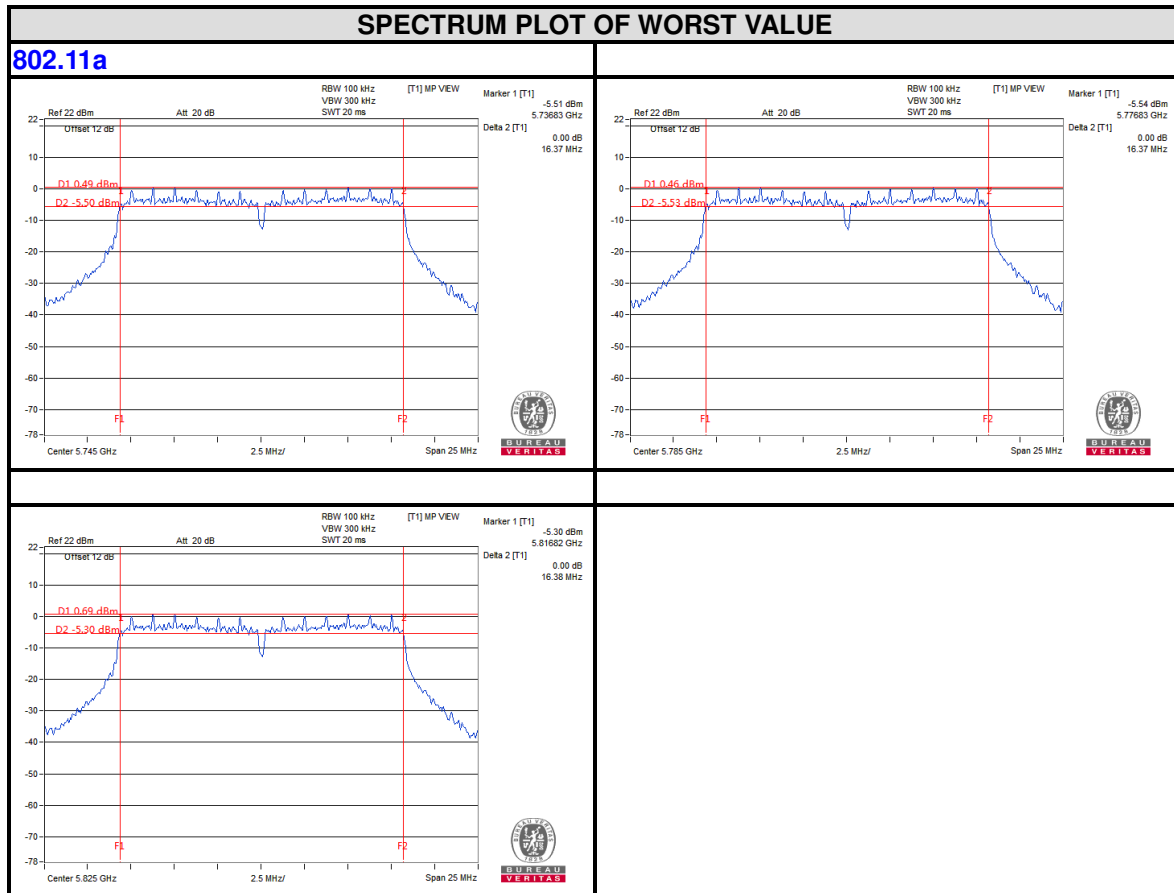


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6dB BANDWIDTH For 5725-5850MHz

Chain 0



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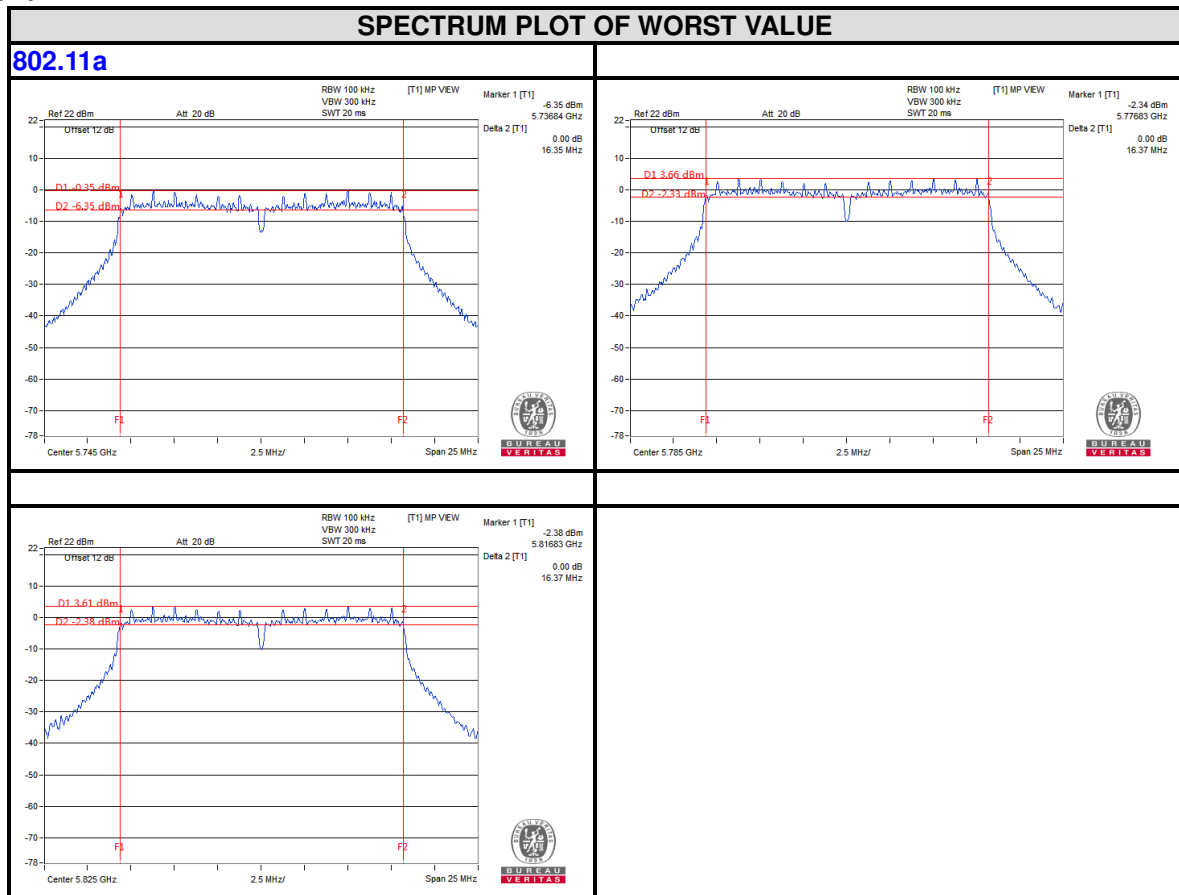
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Chain 1



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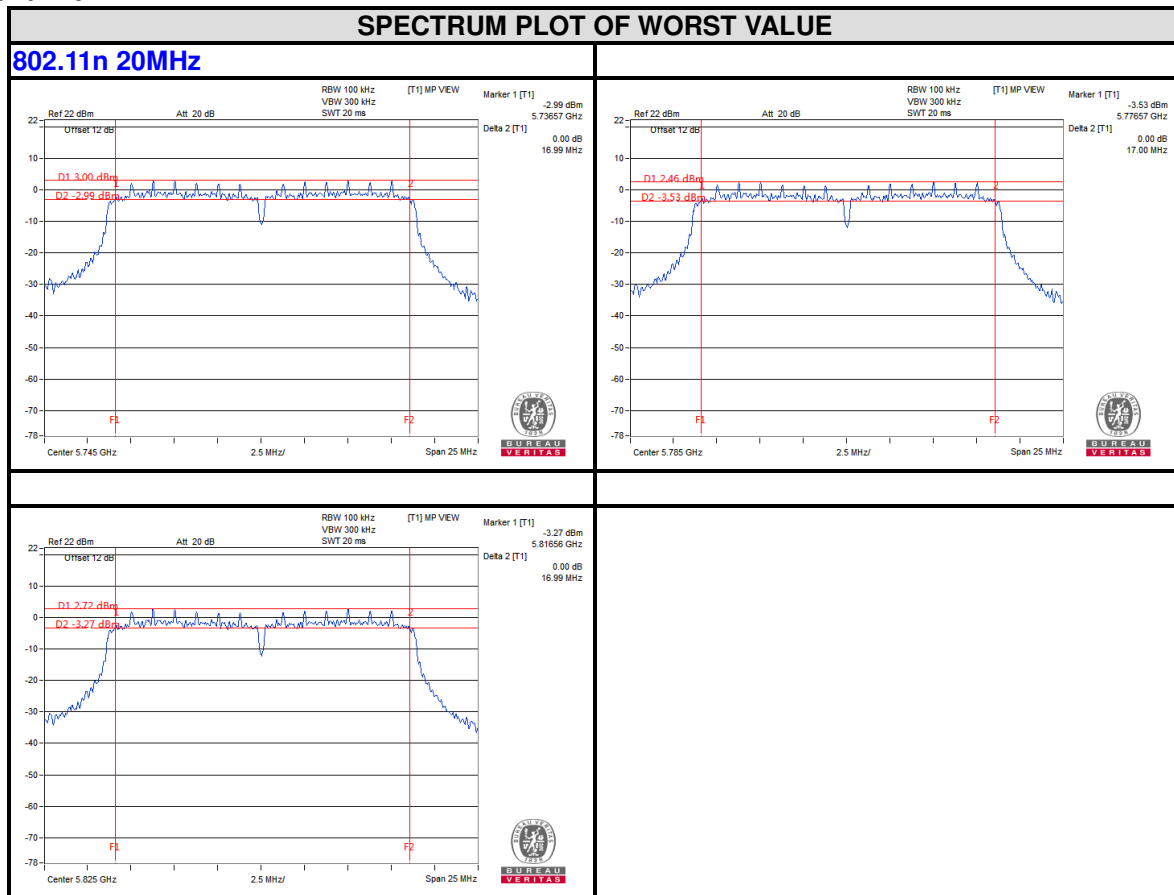
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Chain 0



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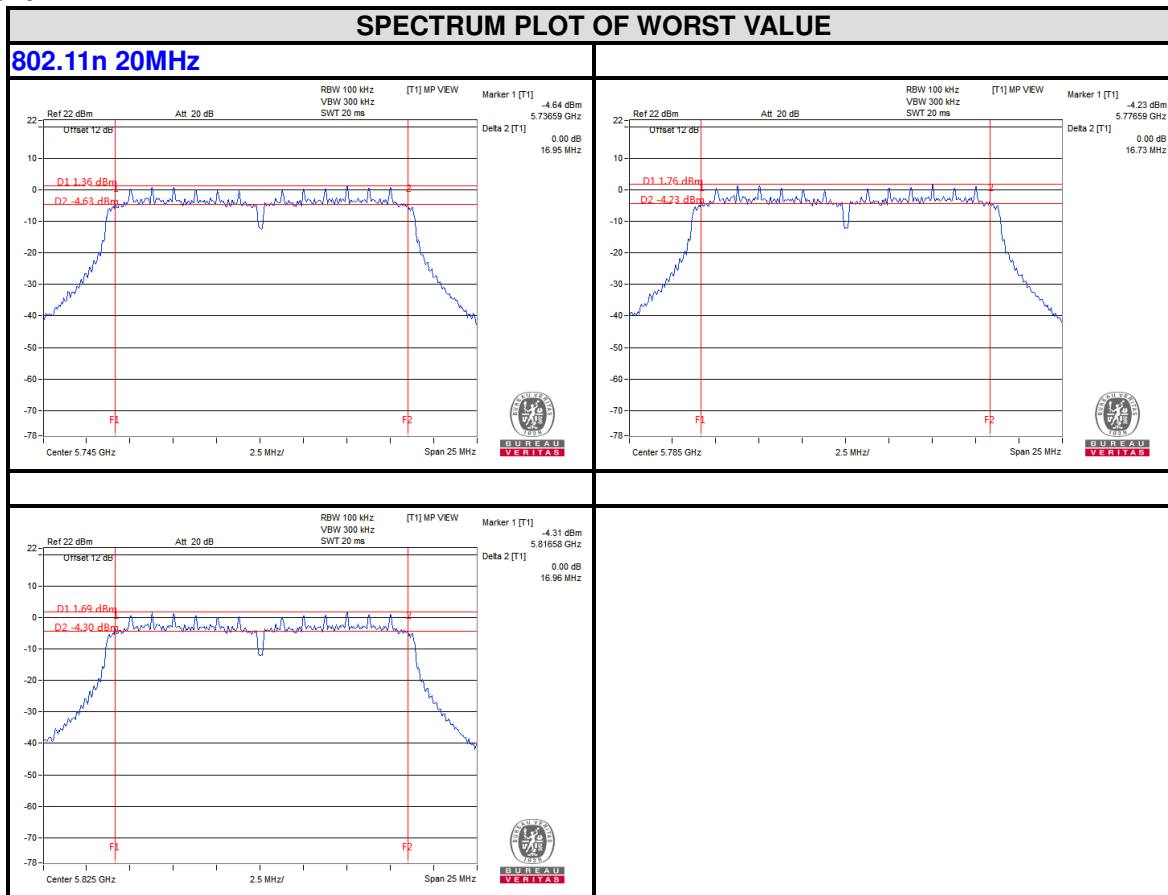
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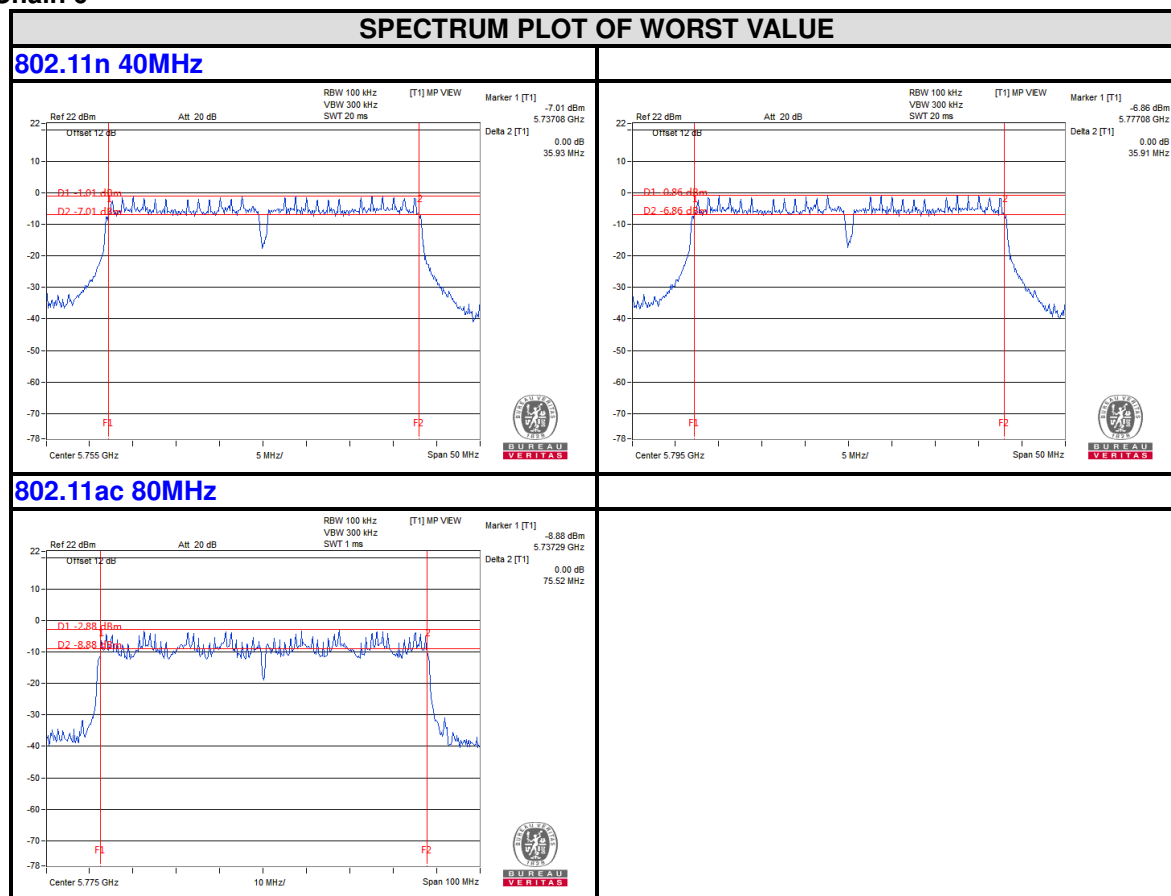
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Chain 0



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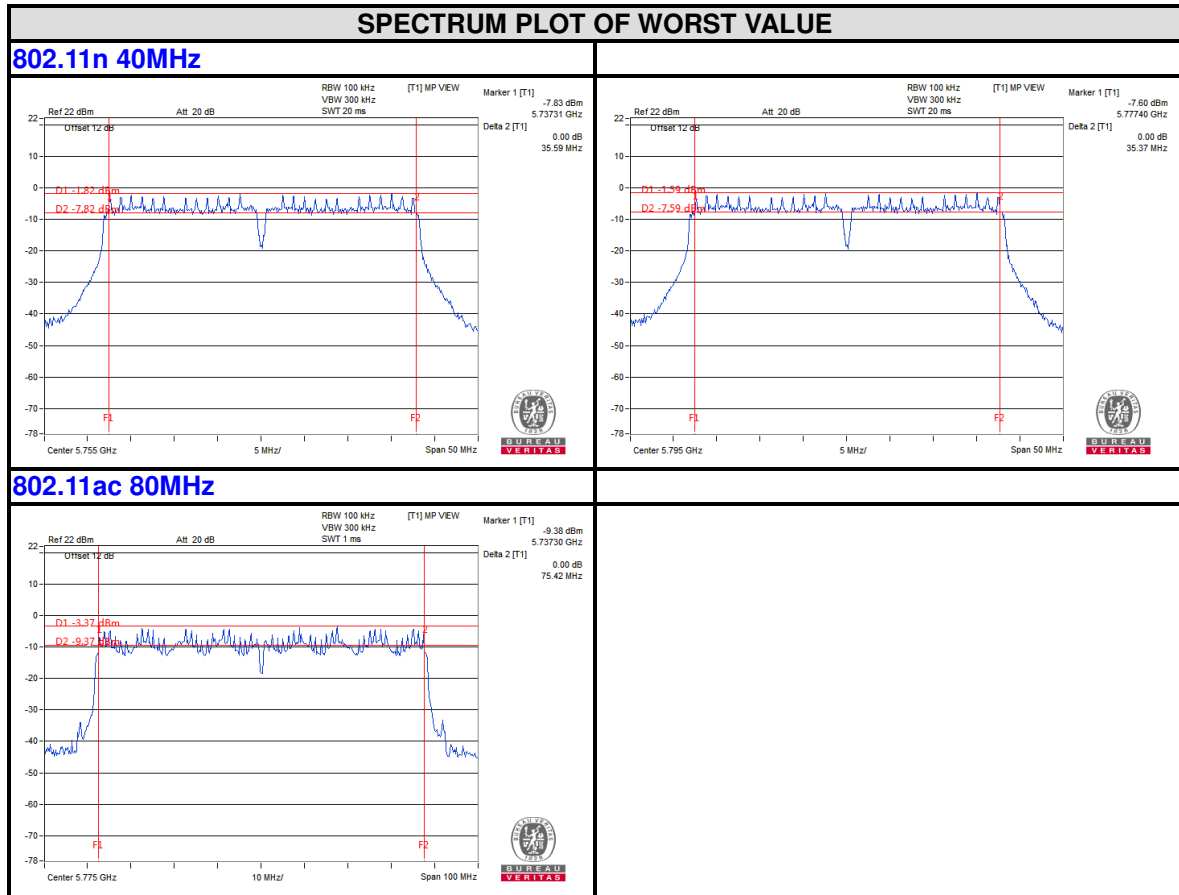
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Chain 1



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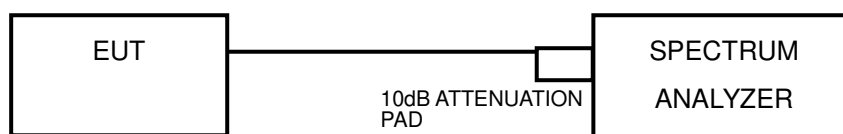
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3.4 PEAK POWER SPECTRAL DENSITY MEASUREMENT

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 Number	Frequency (MHz)	RF Power Level in 1MHz BW (dBm)		RF Power Level in 1MHz BW (mW)		Total power density		MAX. Limit (dBm)	PASS / FAIL
		Chain 0	Chain 1	Chain 0	Chain 1	mW	dBm		
36	5180	0.21	1.62	1.0495	1.4521	2.502	3.98	11.00	PASS
40	5200	0.53	1.55	1.1298	1.4289	2.559	4.08	11.00	PASS
48	5240	0.55	1.53	1.1350	1.4223	2.557	4.08	11.00	PASS
52	5260	-0.52	0.36	0.8872	1.0864	1.9736	2.95	11.00	PASS
60	5300	-0.77	0.22	0.8375	1.0520	1.8895	2.76	11.00	PASS
64	5320	-1.05	-0.05	0.7852	0.9886	1.7738	2.49	11.00	PASS
100	5500	-1.11	-0.52	0.7745	0.8872	1.6616	2.21	11.00	PASS
116	5580	-0.69	-1.20	0.8531	0.7586	1.6117	2.07	11.00	PASS
140	5700	-0.88	-1.54	0.8166	0.7015	1.5180	1.81	11.00	PASS

Note:1.Refer to section 2.3 for duty cycle spectrum plot.

2.Direction gain = 2dBi + 10log(2) = 5.01dBi < 6dBi , so the limit is no need to be reduced.

802.11n (20MHz)

Channel Number	Frequency (MHz)	RF Power Level in 1MHz BW (dBm)		RF Power Level in 1MHz BW (mW)		Total power density		MAX. Limit (dBm)	PASS / FAIL
		Chain 0	Chain 1	Chain 0	Chain 1	mW	dBm		
36	5180	-0.35	0.39	0.9226	1.0940	2.0165	3.05	11.00	PASS
40	5200	-0.49	0.33	0.8933	1.0789	1.9723	2.95	11.00	PASS
48	5240	-0.60	0.40	0.8710	1.0965	1.9674	2.94	11.00	PASS
52	5260	-1.11	0.17	0.7745	1.0399	1.8144	2.59	11.00	PASS
60	5300	-1.02	-0.01	0.7907	0.9977	1.7884	2.52	11.00	PASS
64	5320	-1.28	-0.30	0.7447	0.9333	1.6780	2.25	11.00	PASS
100	5500	-2.31	-1.59	0.5875	0.6934	1.2809	1.08	11.00	PASS
116	5580	-1.89	-2.27	0.6471	0.5929	1.2401	0.93	11.00	PASS
140	5700	-0.60	-1.15	0.8710	0.7674	1.6383	2.14	11.00	PASS

Note:1.Refer to section 2.3 for duty cycle spectrum plot.

2.Direction gain = 2dBi + 10log(2) = 5.01dBi < 6dBi , so the limit is no need to be reduced.



802.11n (40MHz)

Channel Number	Frequency (MHz)	RF Power Level in 1MHz BW (dBm)		RF Power Level in 1MHz BW (mW)		Total power density		MAX. Limit (dBm)	PASS / FAIL
		Chain 0	Chain 1	Chain 0	Chain 1	mW	dBm		
38	5190	-5.57	-2.22	0.2773	0.5998	0.8771	-0.57	11.00	PASS
46	5230	-3.73	-2.62	0.4236	0.5470	0.9707	-0.13	11.00	PASS
54	5270	-4.20	-3.05	0.3802	0.4955	0.8756	-0.58	11.00	PASS
62	5310	-4.34	-3.20	0.3681	0.4786	0.8468	-0.72	11.00	PASS
102	5510	-5.29	-4.91	0.2958	0.3228	0.6187	-2.09	11.00	PASS
110	5550	-5.09	-5.31	0.3097	0.2944	0.6042	-2.19	11.00	PASS
134	5670	-5.08	-5.75	0.3105	0.2661	0.5765	-2.39	11.00	PASS

Note:1.Refer to section 2.3 for duty cycle spectrum plot.

2.Directionality gain = $2\text{dBi} + 10\log(2) = 5.01\text{dBi} < 6\text{dBi}$, so the limit is no need to be reduced.

802.11ac (80MHz)

Channel Number	Frequency (MHz)	RF Power Level in 1MHz BW (dBm)		RF Power Level in 1MHz BW (mW)		Total power density		MAX. Limit (dBm)	PASS / FAIL
		Chain 0	Chain 1	Chain 0	Chain 1	mW	dBm		
42	5210	-5.80	-4.81	0.2630	0.3304	0.5934	-2.27	11.00	PASS
58	5290	-6.65	-5.40	0.2163	0.2884	0.5047	-2.97	11.00	PASS
106	5530	-7.71	-7.52	0.1694	0.1770	0.3464	-4.60	11.00	PASS
122	5610	-7.49	-8.24	0.1782	0.1500	0.3282	-4.84	11.00	PASS

Note:1.Refer to section 2.3 for duty cycle spectrum plot.

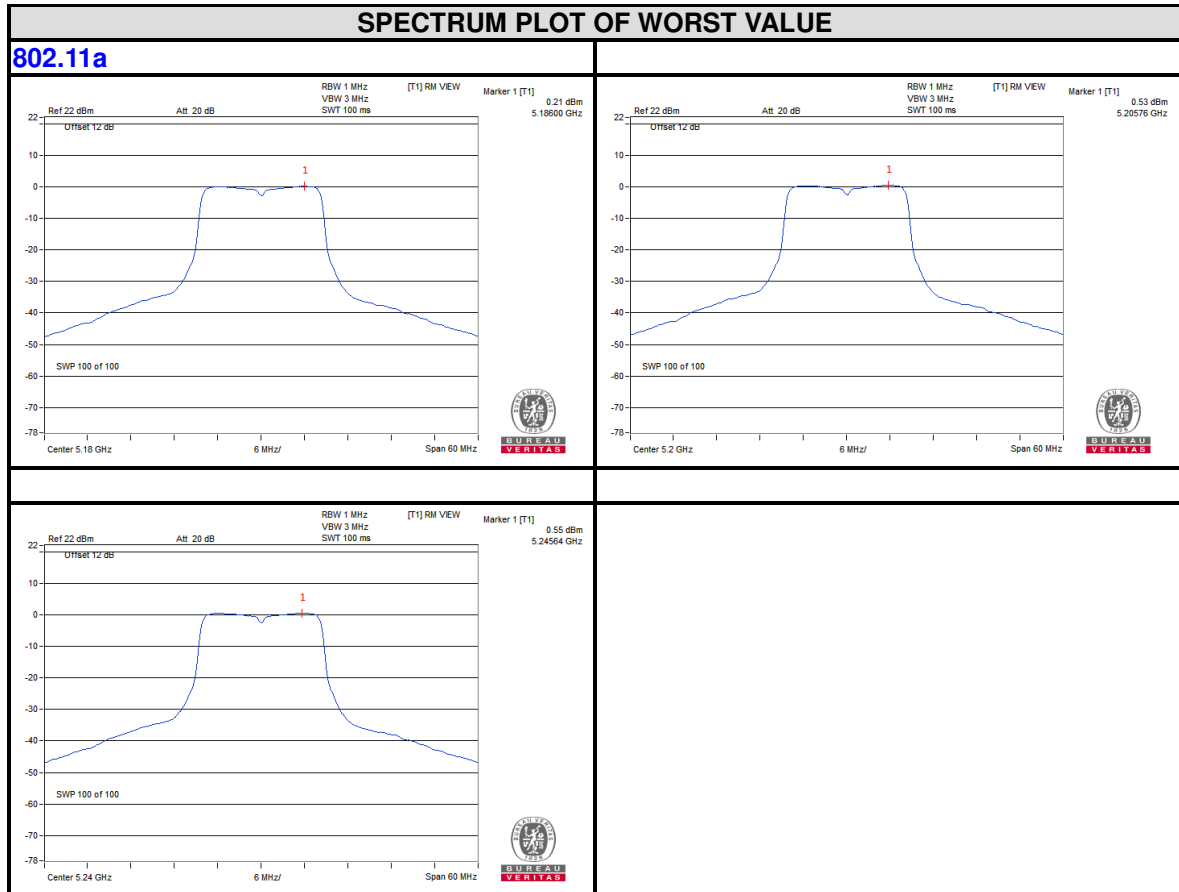
2.Directionality gain = $2\text{dBi} + 10\log(2) = 5.01\text{dBi} < 6\text{dBi}$, so the limit is no need to be reduced.



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PSD Test Plot
BAND 1
5150-5250MHz
Chain 0



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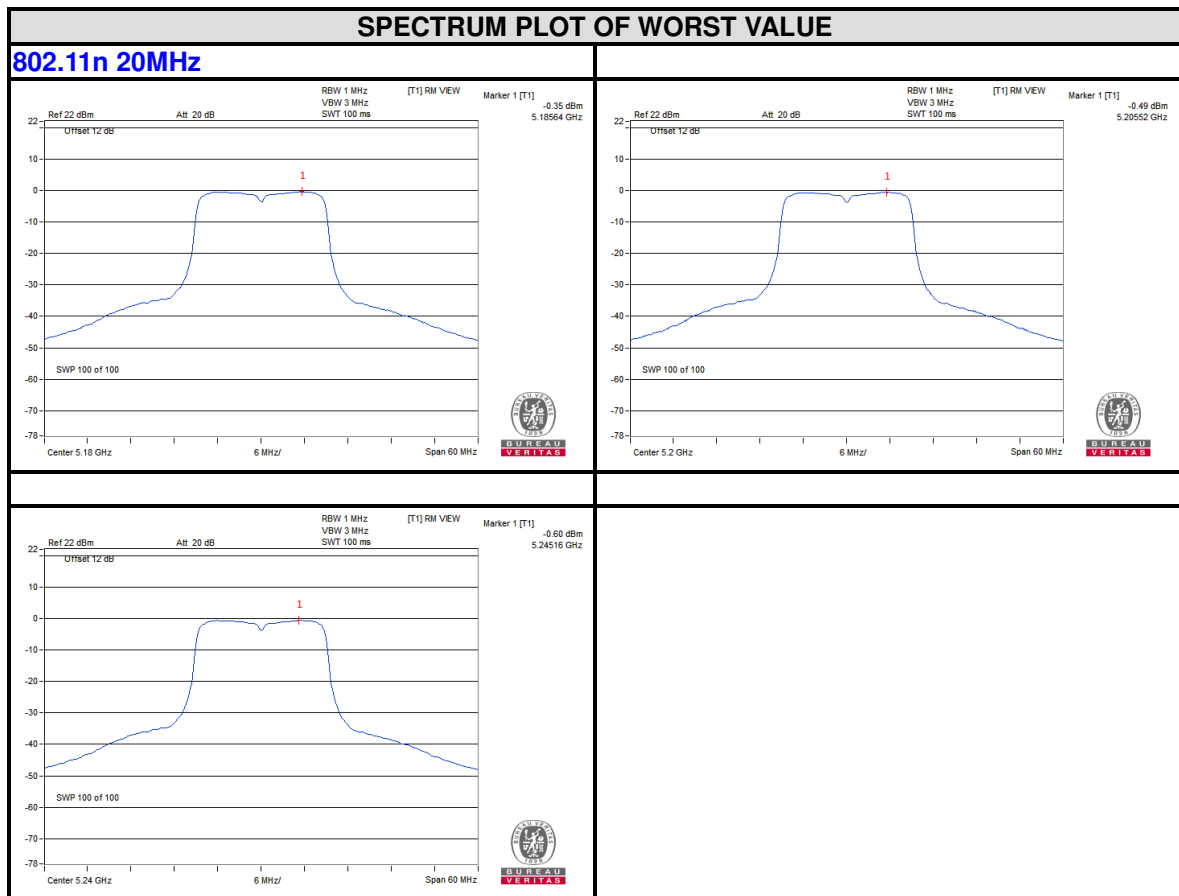
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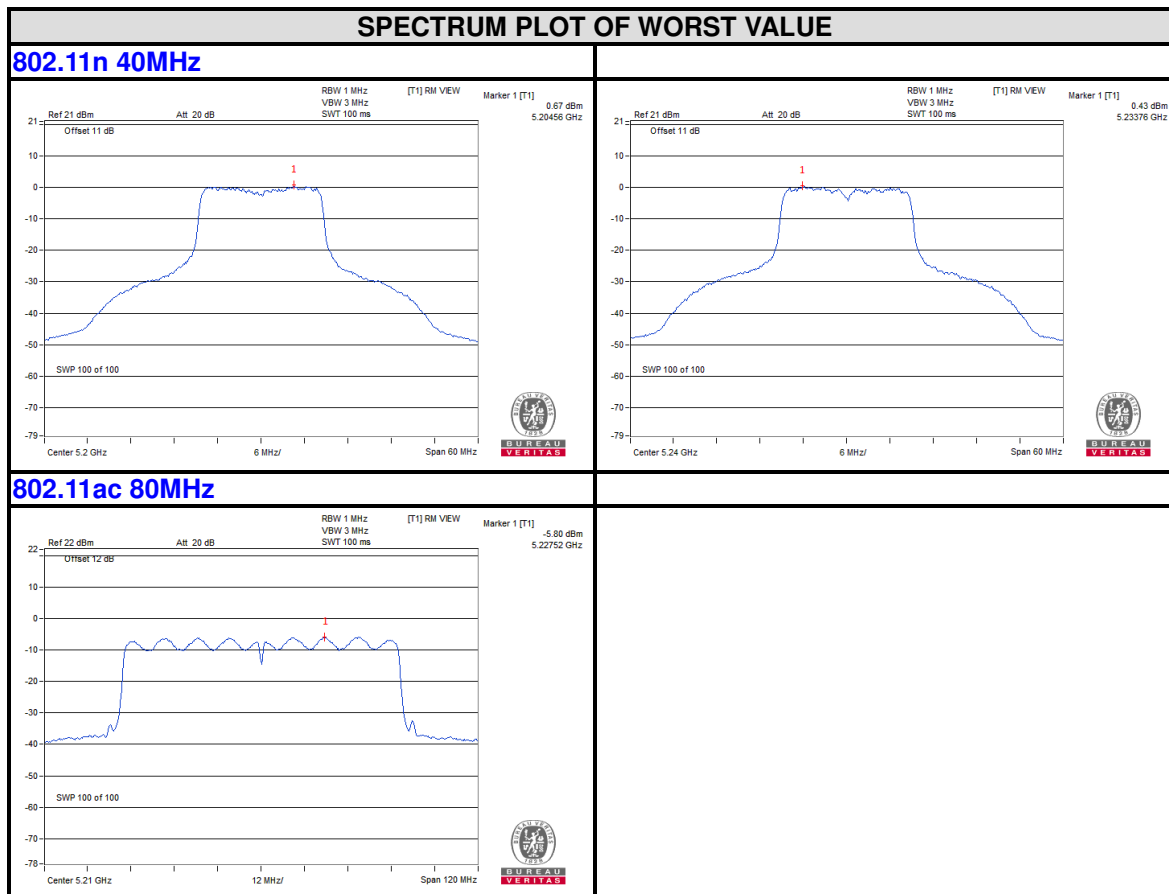
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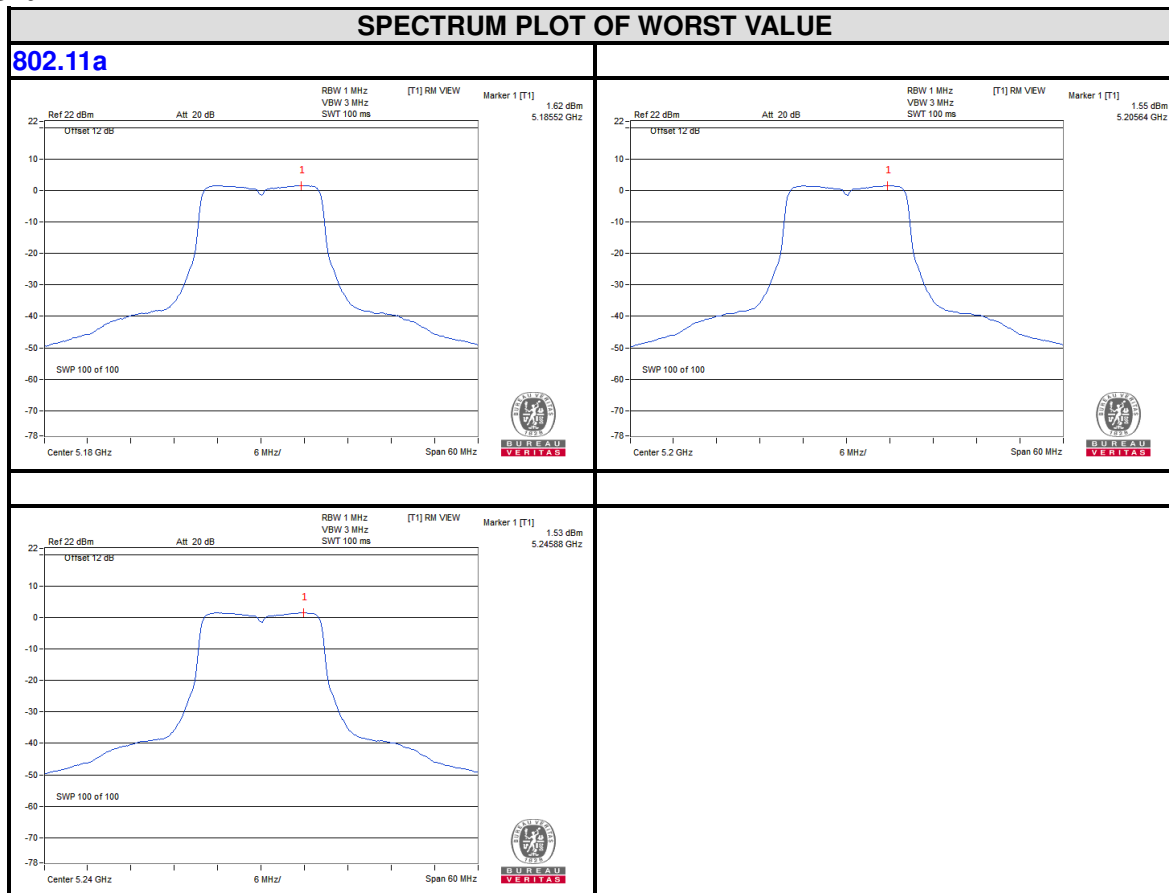
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Chain 1



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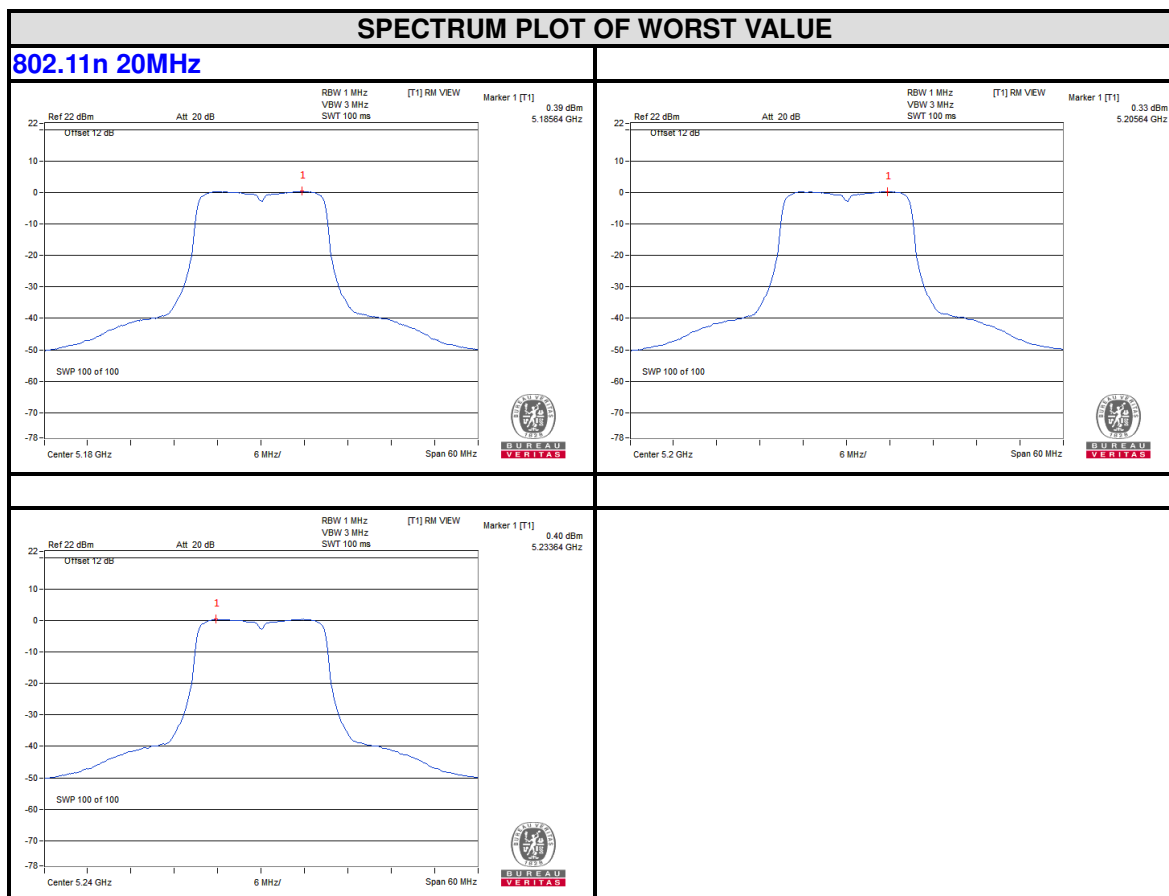
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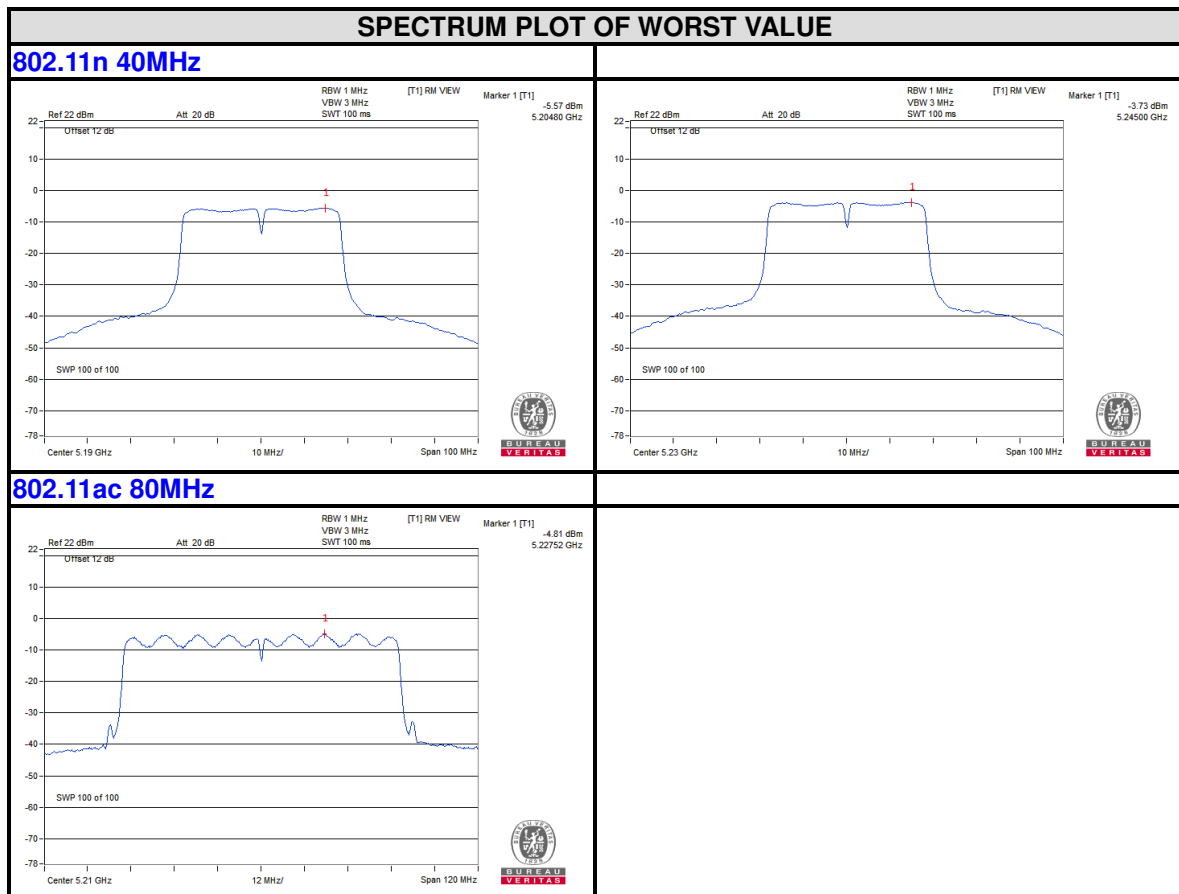
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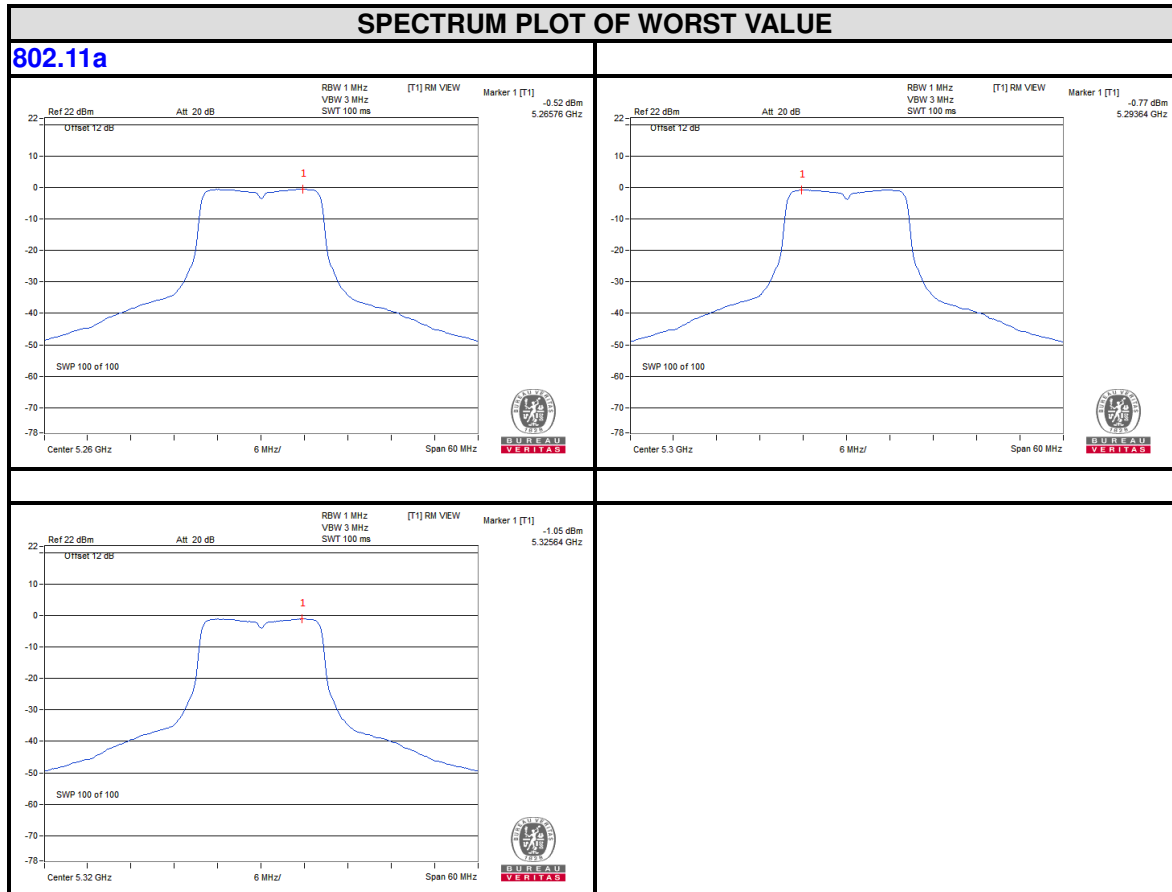


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BAND 2
5250-5350MHz

Chain 0



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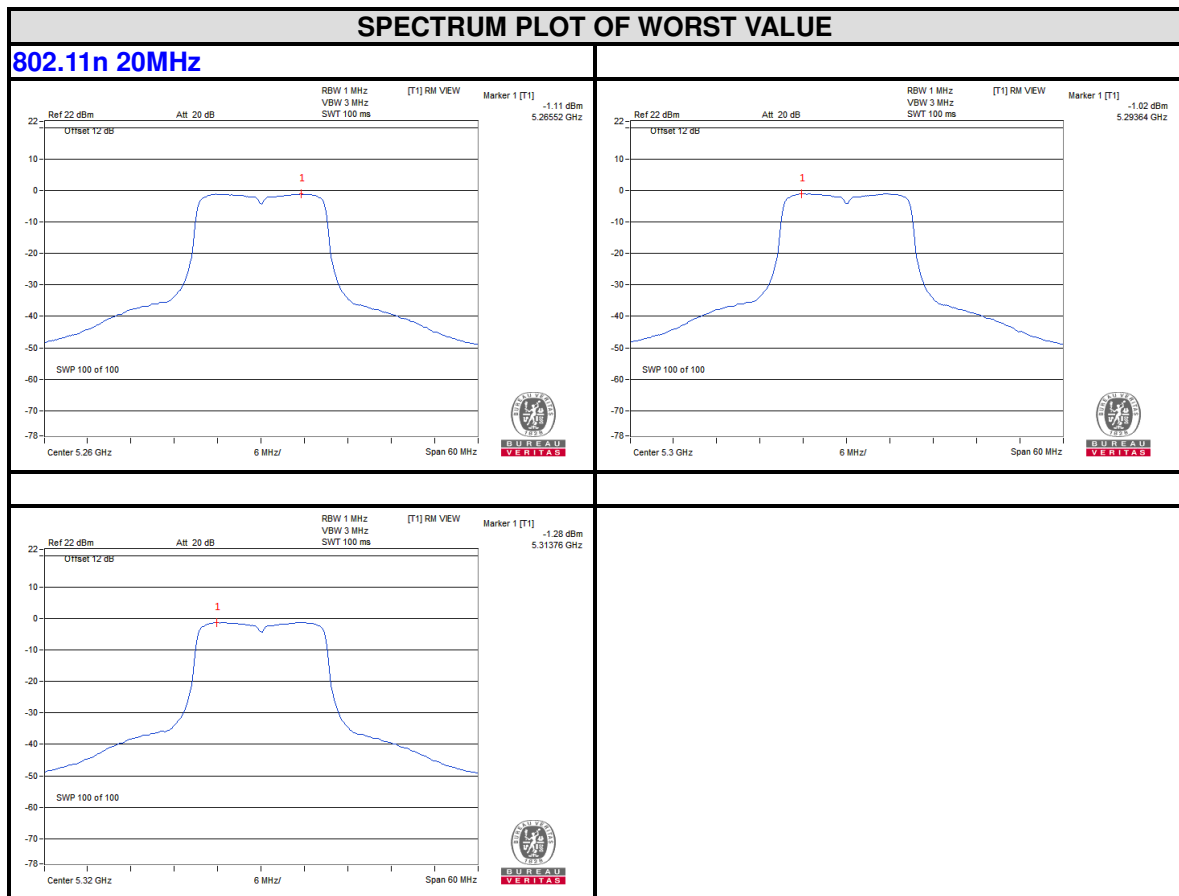
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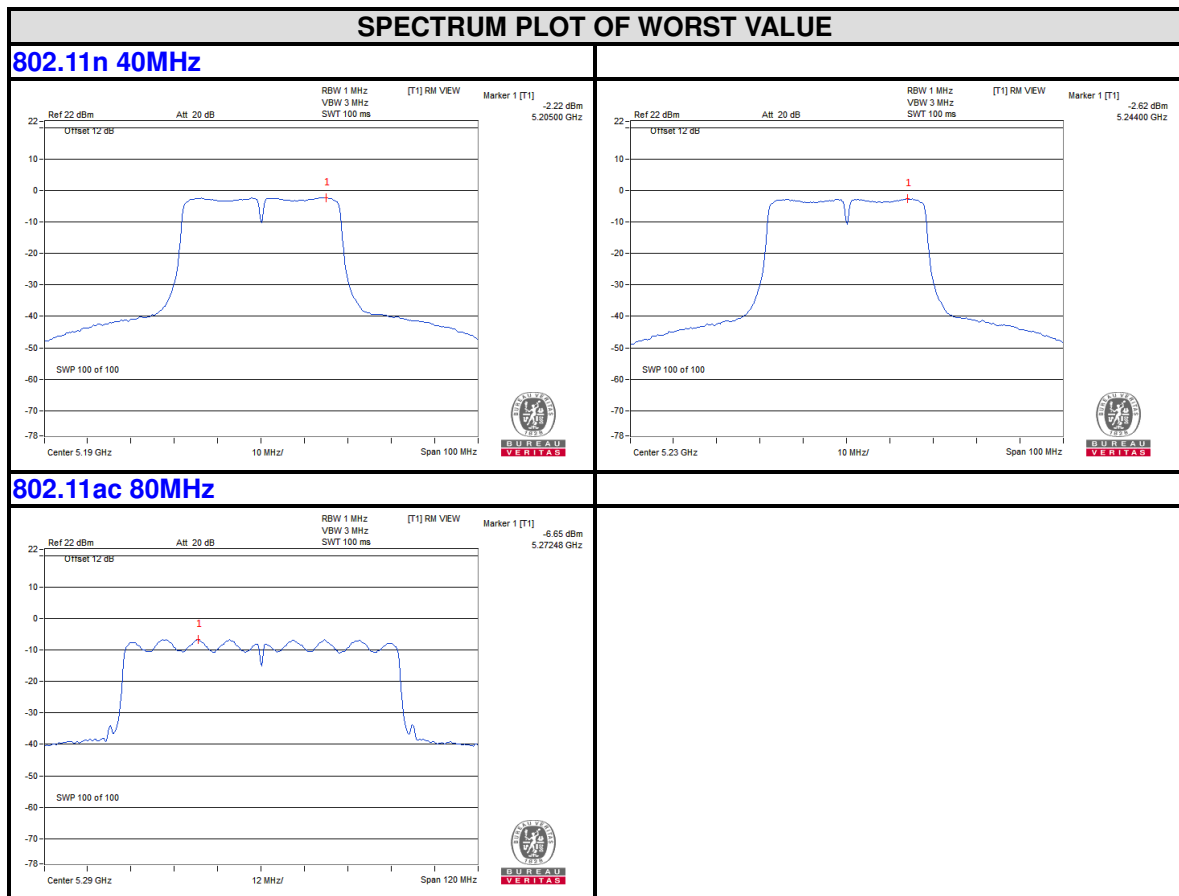
No. 96, Guantai Road (Houjie Section), Houjie
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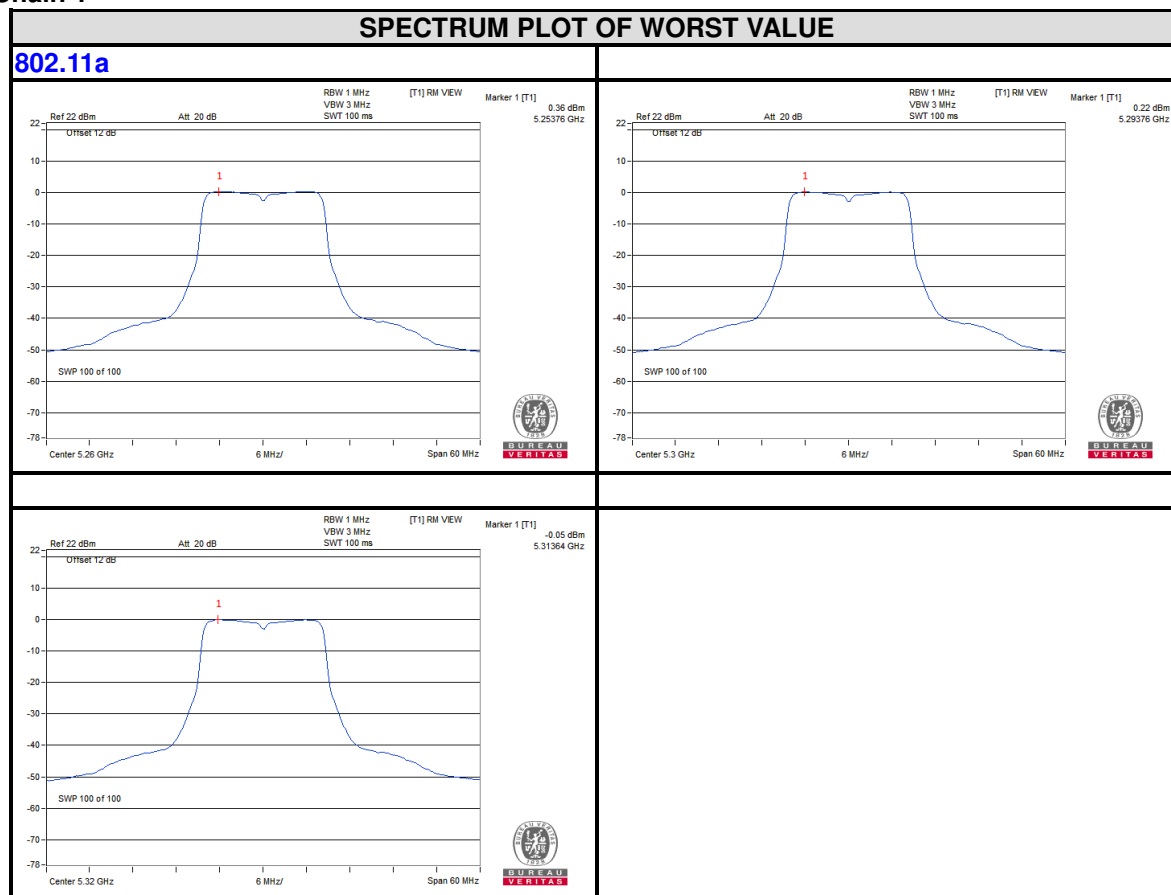
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Chain 1



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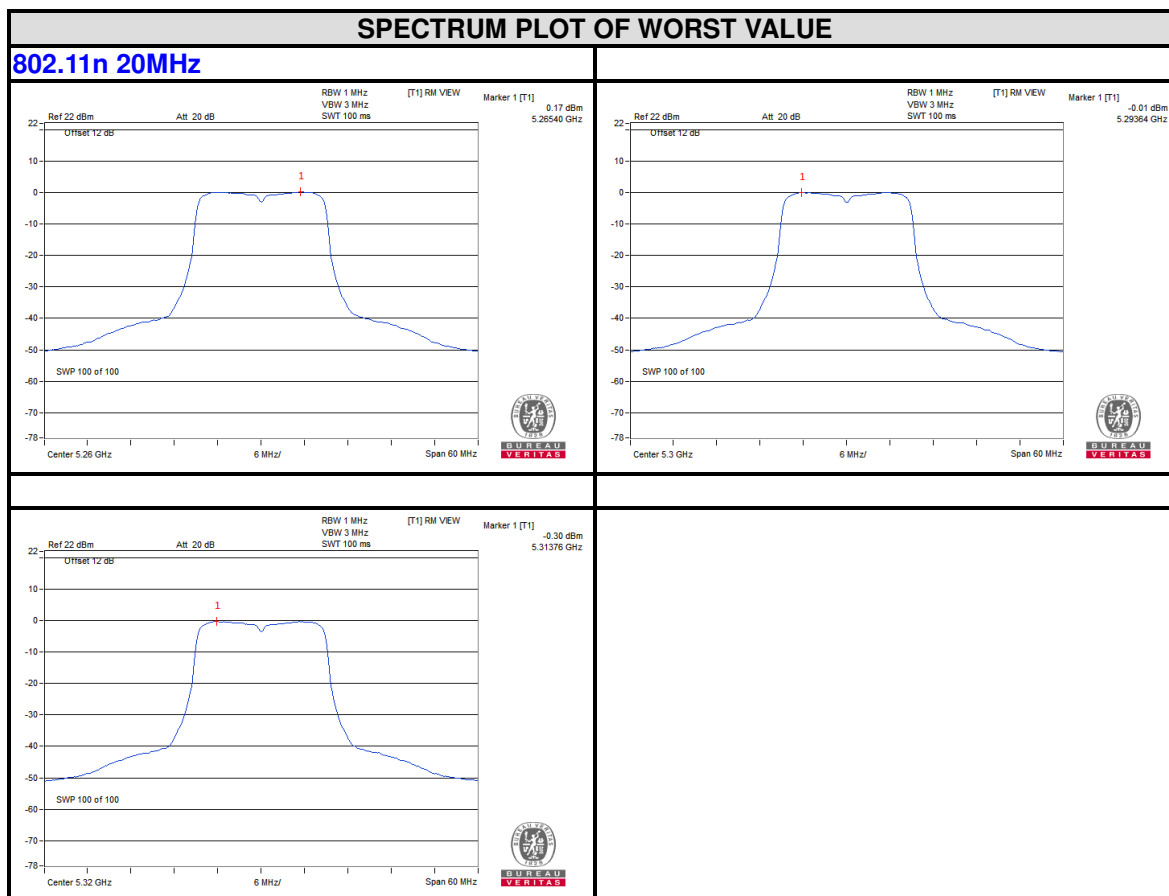
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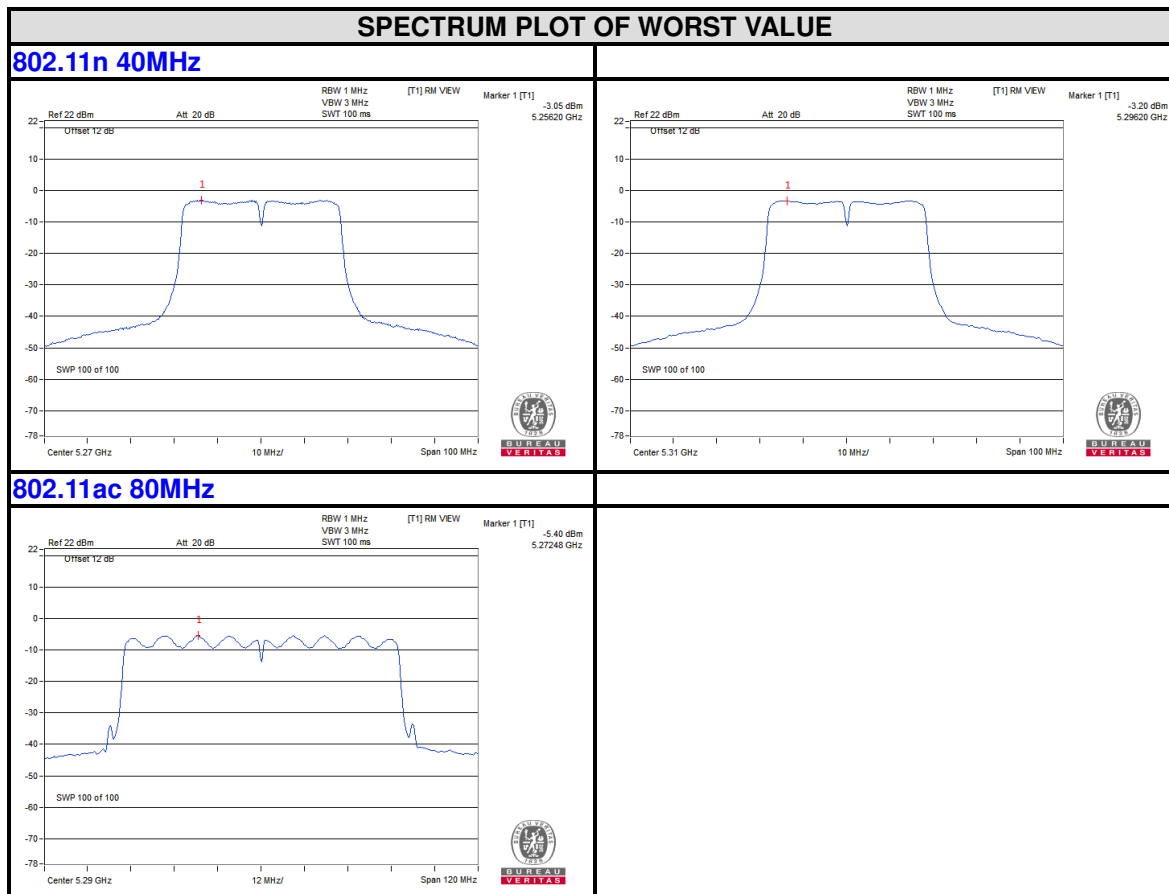
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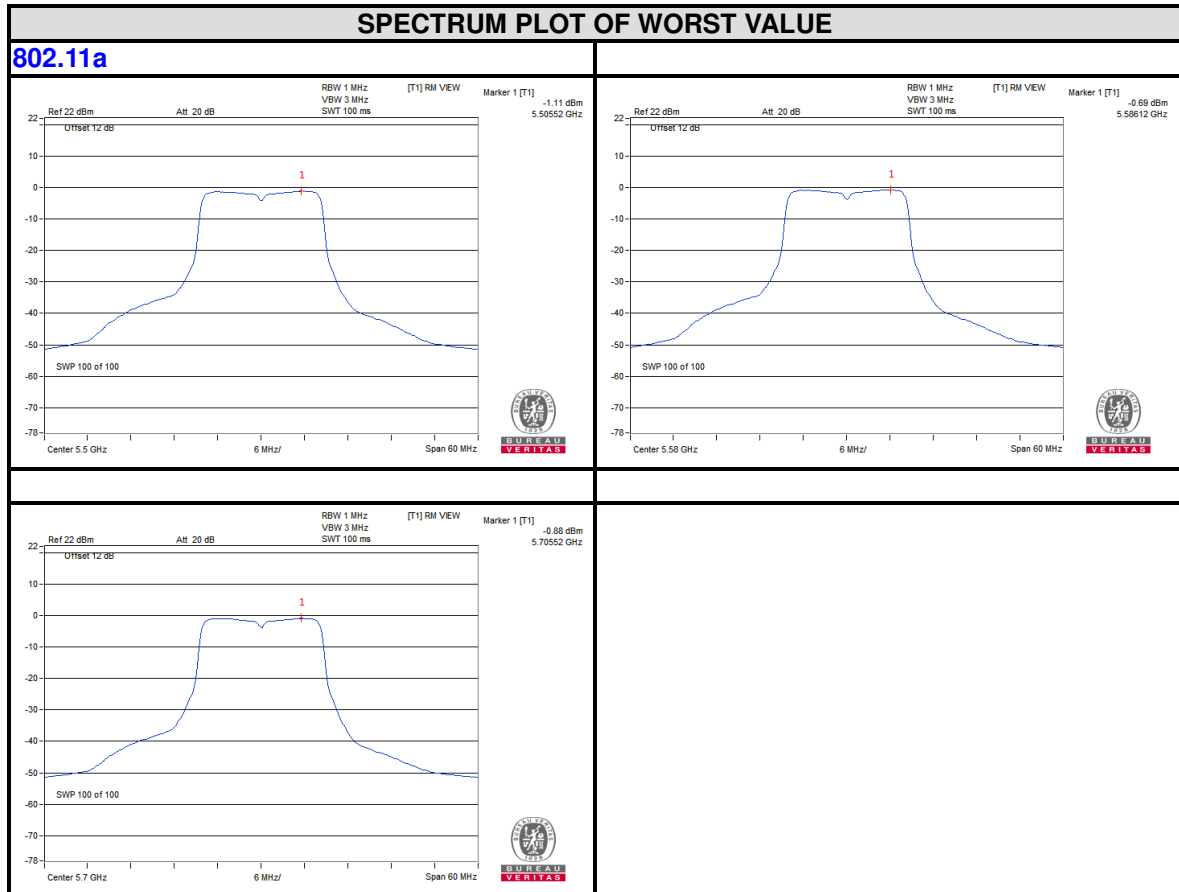
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BAND 3
5470-5725MHz
Chain 0



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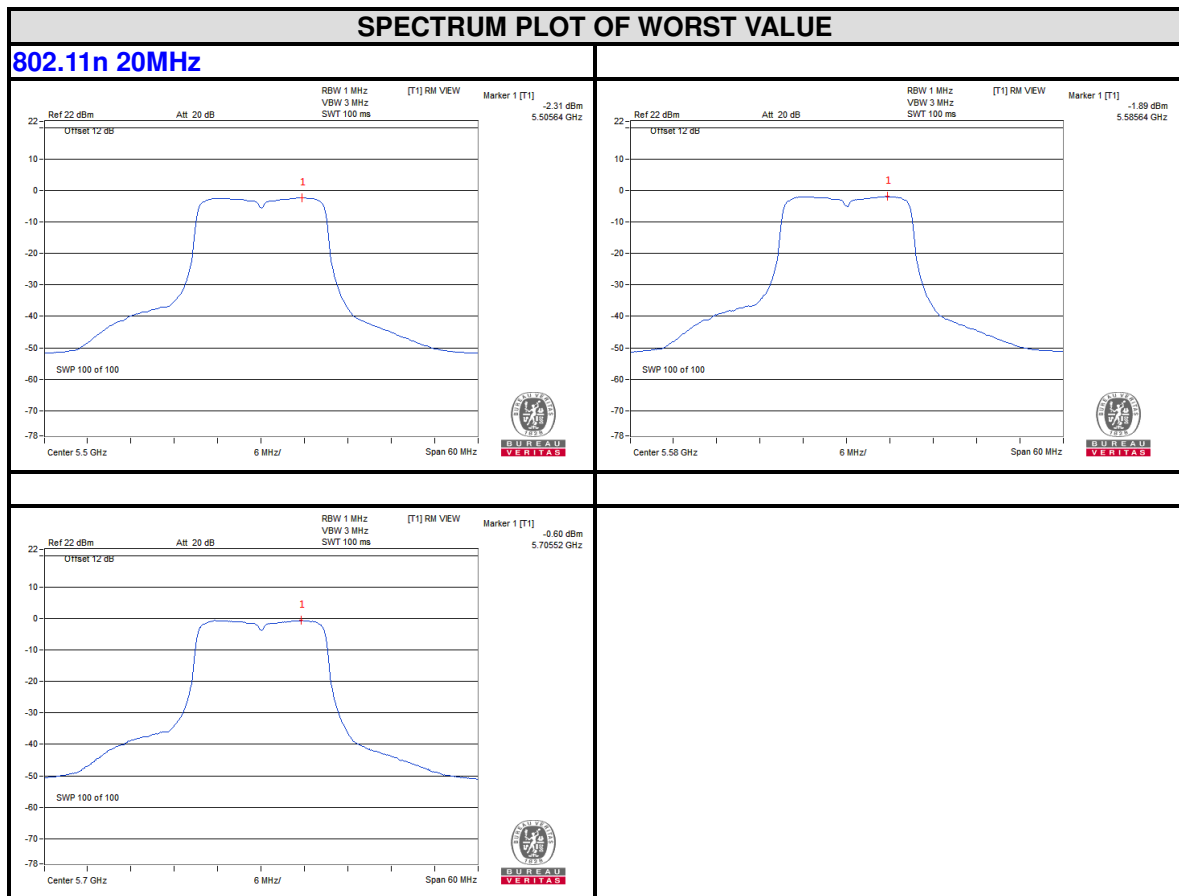
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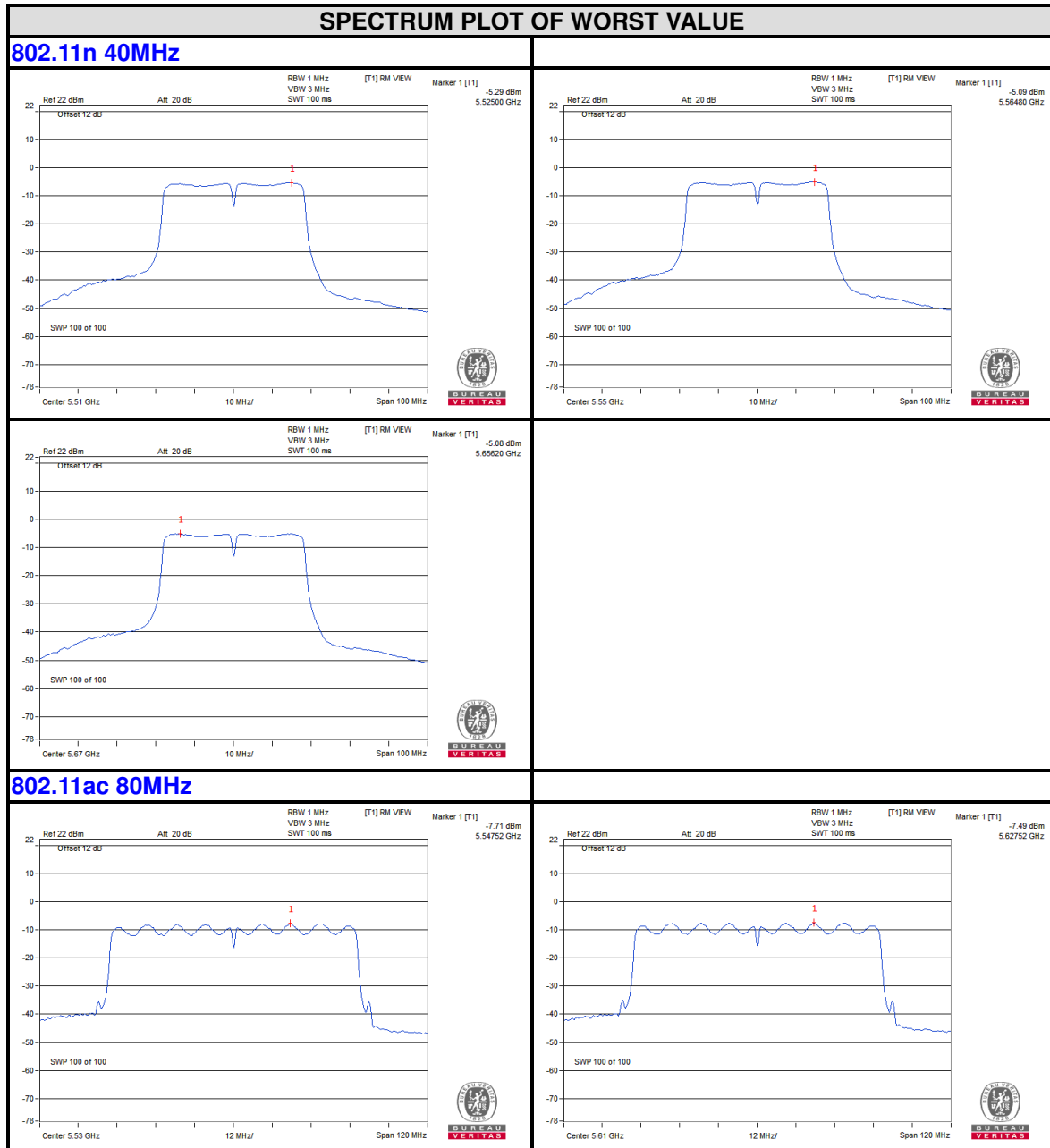
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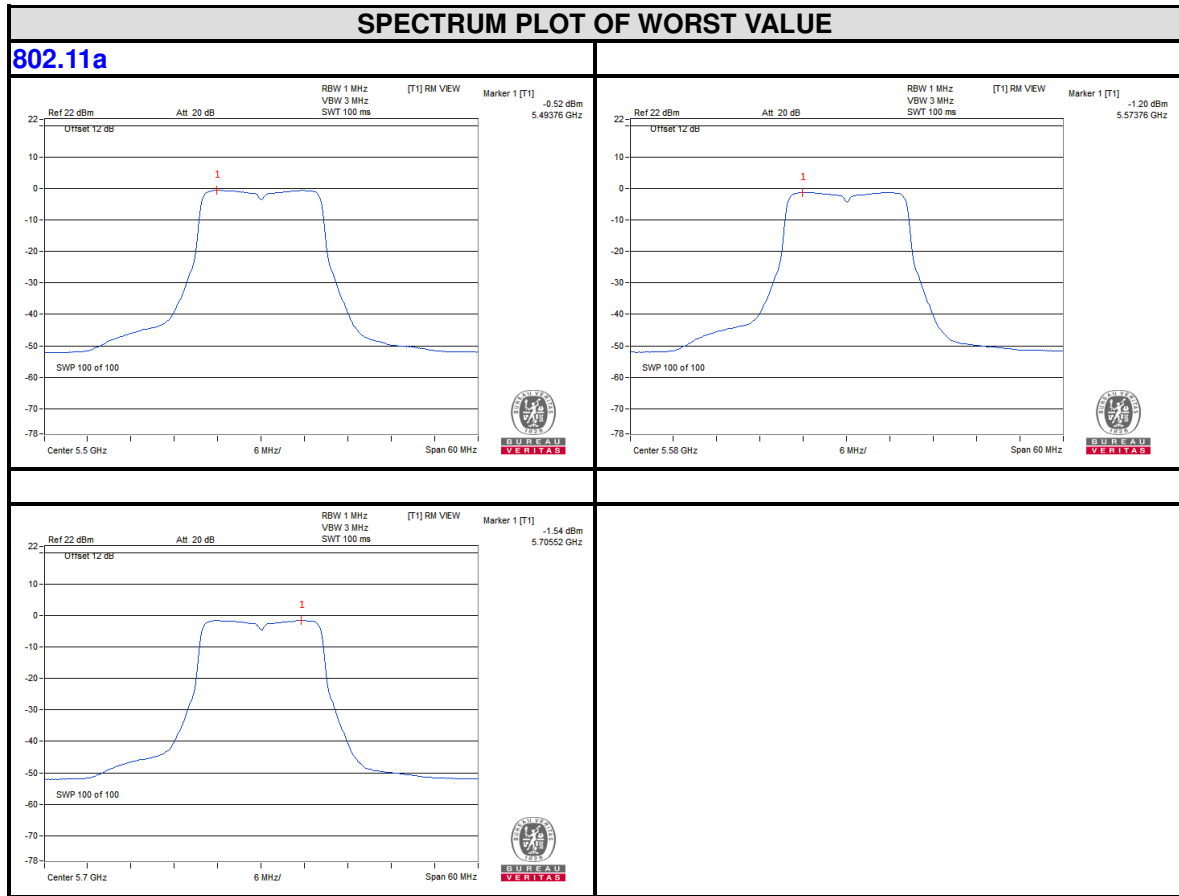
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Chain 1



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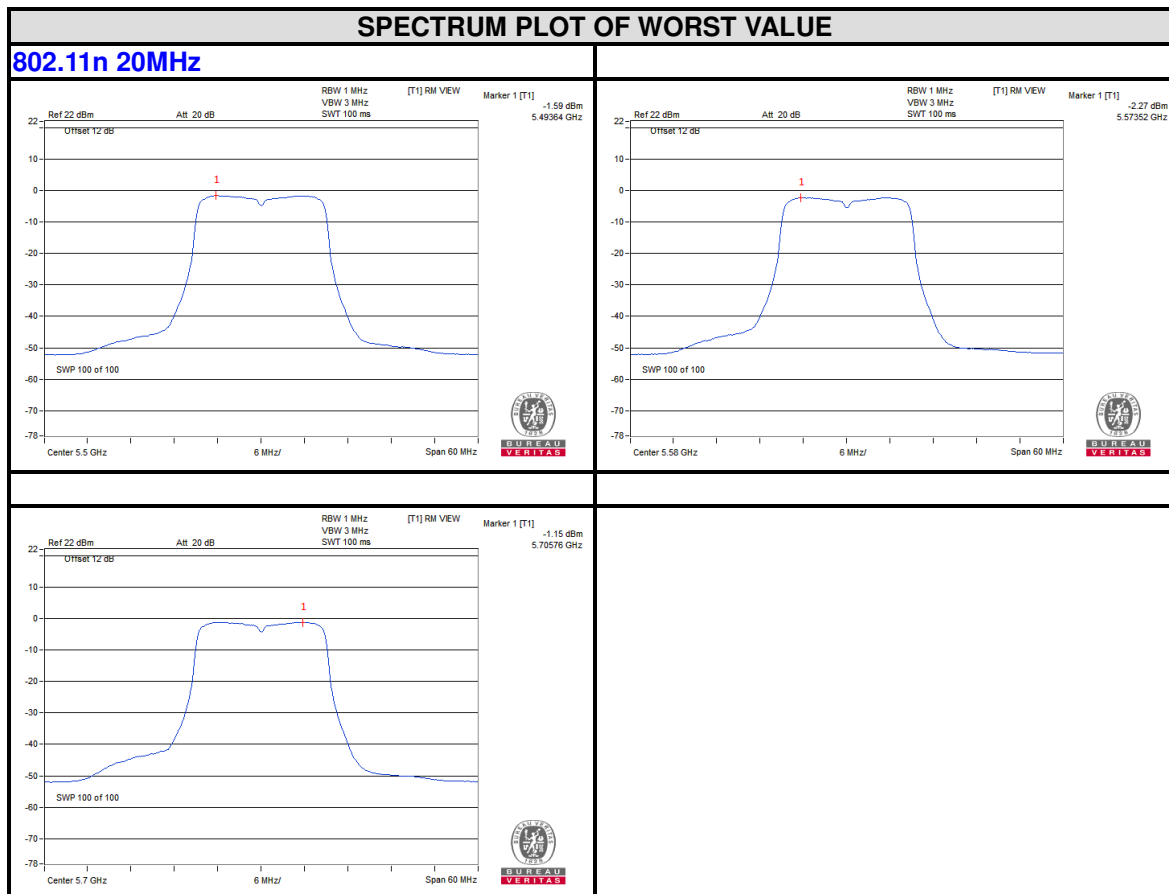
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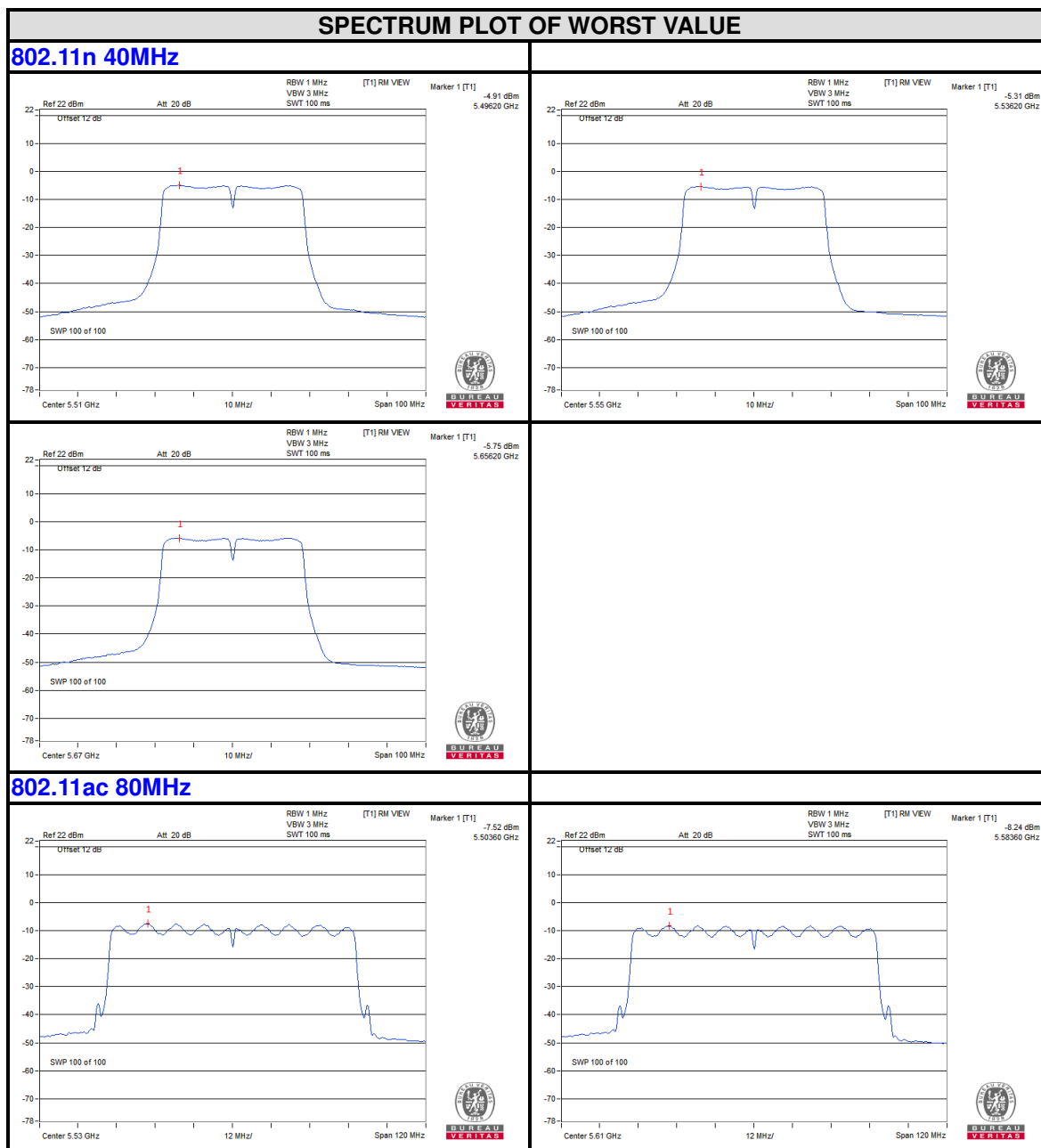
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For U-NII-3:
802.11a

Channel	Freq. (MHz)	PSD (dBm/300kHz)		PSD (dBm/500kHz)		Total PSD (dBm/500kHz)	Limit (dBm/500kHz)	Pass /Fail
		chain 0	chain 1	chain 0	chain 1			
149	5745	-9.79	-10.92	-7.57	-8.70	-5.09	30.00	Pass
157	5785	-9.73	-6.83	-7.51	-4.61	-2.81	30.00	Pass
165	5825	-9.52	-6.75	-7.30	-4.53	-2.69	30.00	Pass

Note:1.Refer to section 3.3 for duty cycle spectrum plot.

2.Direction gain = $2\text{dBi} + 10\log(2) = 5.01\text{dBi} < 6\text{dBi}$, so the limit is no need to be reduced.

802.11n (20MHz)

Channel	Freq. (MHz)	PSD (dBm/300kHz)		PSD (dBm/500kHz)		Total PSD (dBm/500kHz)	Limit (dBm/500kHz)	Pass /Fail
		chain 0	chain 1	chain 0	chain 1			
149	5745	-7.44	-9.13	-5.22	-6.91	-2.97	30.00	Pass
157	5785	-7.70	-8.80	-5.48	-6.58	-2.98	30.00	Pass
165	5825	-7.59	-8.83	-5.37	-6.61	-2.94	30.00	Pass

Note:1.Refer to section 3.3 for duty cycle spectrum plot.

2.Direction gain = $2\text{dBi} + 10\log(2) = 5.01\text{dBi} < 6\text{dBi}$, so the limit is no need to be reduced.

802.11n (40MHz)

Channel	Freq. (MHz)	PSD (dBm/300kHz)		PSD (dBm/500kHz)		Total PSD (dBm/500kHz)	Limit (dBm/500kHz)	Pass /Fail
		chain 0	chain 1	chain 0	chain 1			
151	5755	-12.22	-13.33	-10.00	-11.11	-7.51	30.00	Pass
159	5795	-12.00	-13.04	-9.78	-10.82	-7.26	30.00	Pass

Note:1.Refer to section 3.3 for duty cycle spectrum plot.

2.Direction gain = $2\text{dBi} + 10\log(2) = 5.01\text{dBi} < 6\text{dBi}$, so the limit is no need to be reduced.



802.11ac (80MHz)

Channel	Freq. (MHz)	PSD (dBm/300kHz)		PSD (dBm/500kHz)		Total PSD (dBm/500kHz)	Limit (dBm/500kHz)	Pass /Fail
		chain 0	chain 1	chain 0	chain 1			
155	5775	-14.79	-15.62	-12.57	-13.40	-9.95	30.00	Pass

Note:1.Refer to section 3.3 for duty cycle spectrum plot.

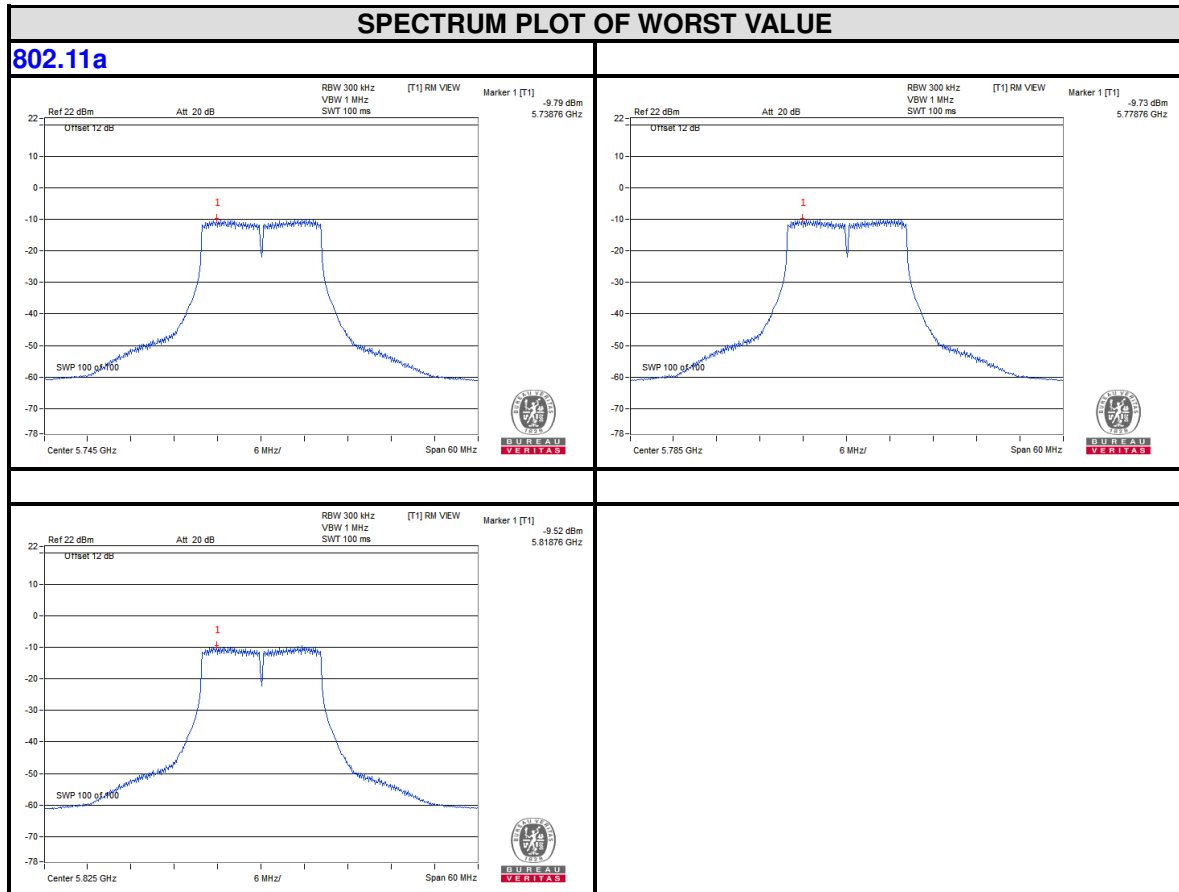
2.Direction gain = $2\text{dBi} + 10\log(2) = 5.01\text{dBi} < 6\text{dBi}$, so the limit is no need to be reduced.



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BAND4
5725-5850MHz
Chain 0



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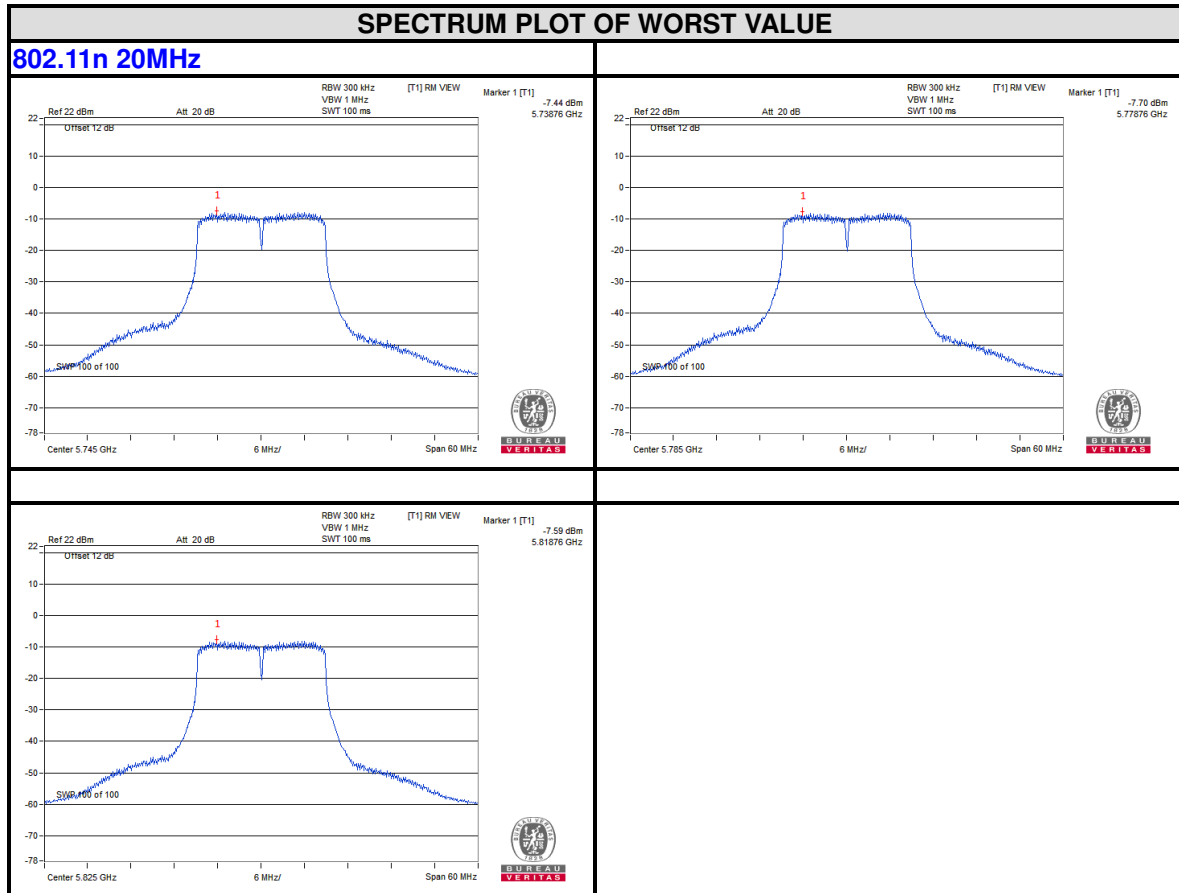
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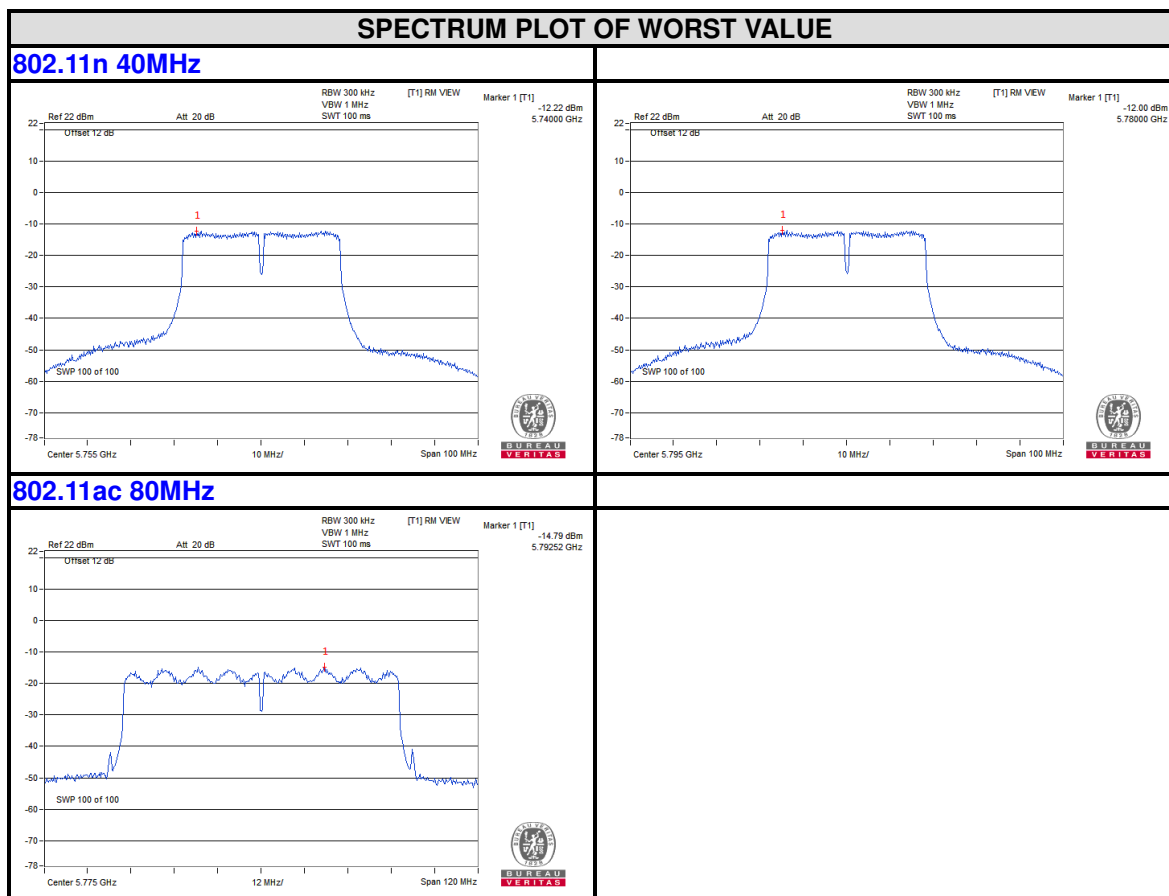
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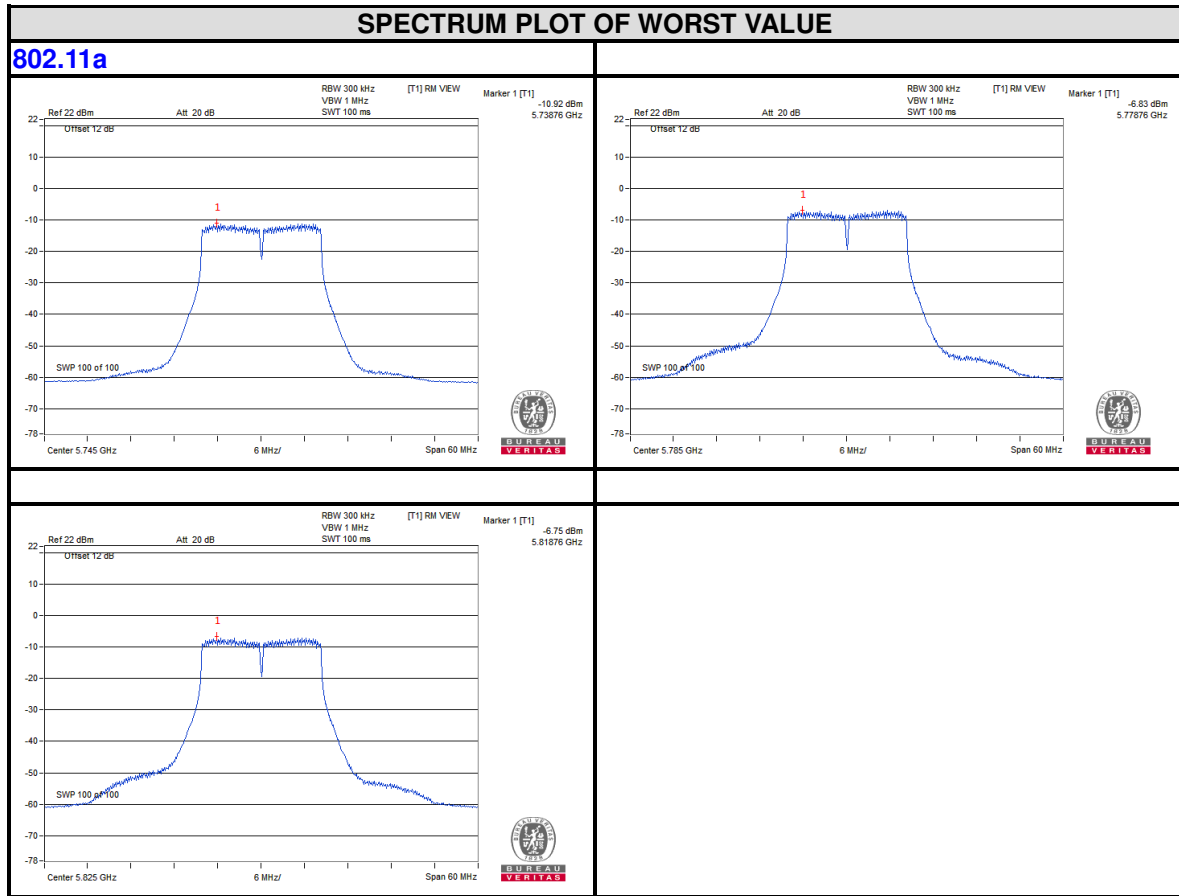
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Chain 1



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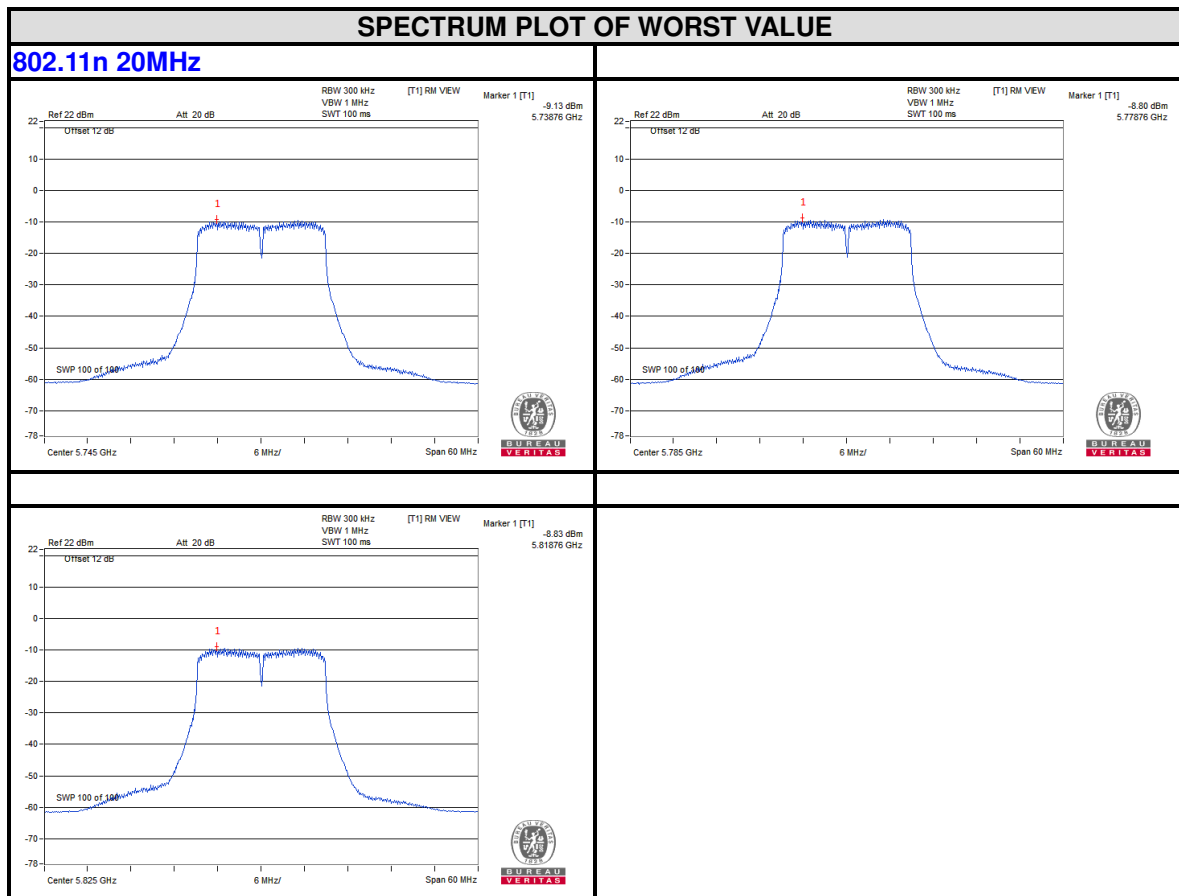
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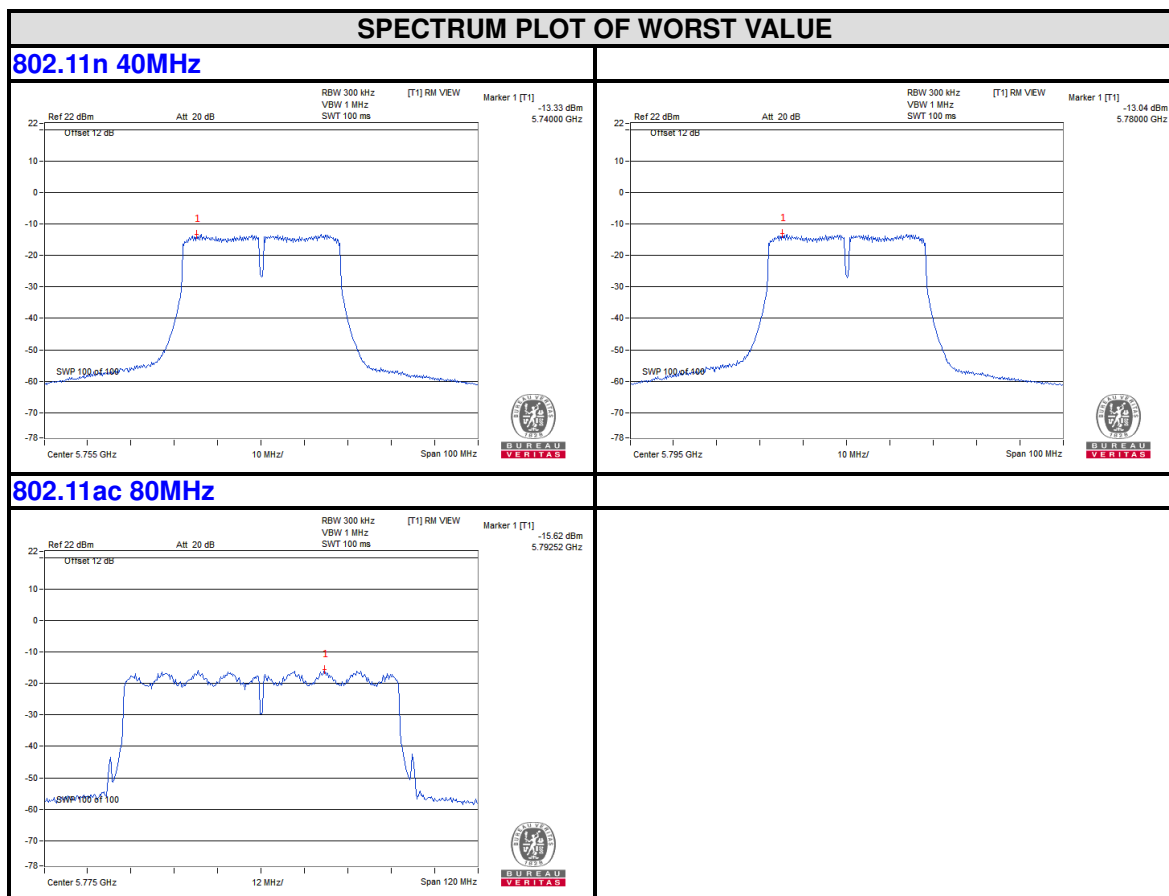
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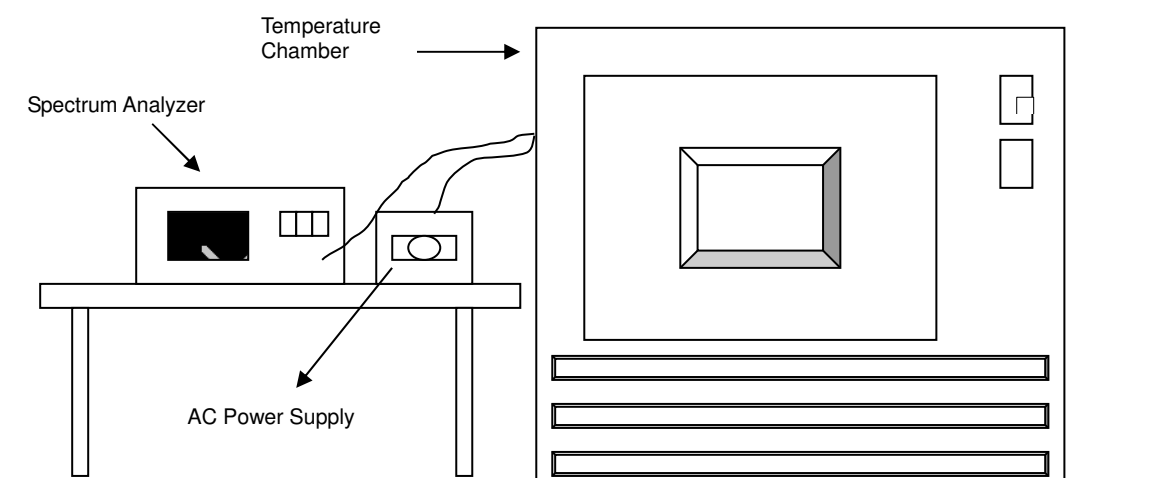
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3.5 FREQUENCY STABILITY

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.

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	5180.0238	0.00046	5180.0196	0.00038	5180.0235	0.00045	5180.0246	0.00047
40	120	5180.0096	0.00019	5180.0088	0.00017	5180.0074	0.00014	5180.0106	0.00020
30	120	5180.0098	0.00019	5180.0093	0.00018	5180.0052	0.00010	5180.0082	0.00016
20	120	5179.9935	-0.00013	5179.9954	-0.00009	5179.994	-0.00012	5179.9964	-0.00007
10	120	5179.9809	-0.00037	5179.9811	-0.00036	5179.9792	-0.00040	5179.9803	-0.00038
0	120	5179.9828	-0.00033	5179.9836	-0.00032	5179.9835	-0.00032	5179.9808	-0.00037
-10	120	5180.0028	0.00005	5179.9998	0.00000	5180.0027	0.00005	5180.0019	0.00004
-20	120	5180.0154	0.00030	5180.0164	0.00032	5180.0134	0.00026	5180.0133	0.00026
-30	120	5179.9802	-0.00038	5179.9797	-0.00039	5179.9789	-0.00041	5179.9796	-0.00039

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	5179.9943	-0.00011	5179.9961	-0.00008	5179.995	-0.00010	5179.9969	-0.00006
	120	5179.9935	-0.00013	5179.9954	-0.00009	5179.994	-0.00012	5179.9964	-0.00007
	102	5179.9927	-0.00014	5179.996	-0.00008	5179.9937	-0.00012	5179.9967	-0.00006



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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---