

FCC Test Report (WLAN)

Report No.: RF141008E03H-1

FCC ID: PPD-QCNFA435

Test Model: QCNFA435

Received Date: Dec. 09, 2014

Test Date: Dec. 09, 2014 & July 27 to 30, 2015

Issued Date: Aug. 07, 2015

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A D T

Release Control Record

Issue No.	Description	Date Issued
RF141008E03H-1	Original release.	Aug. 07, 2015



A D T

1 Certificate of Conformity

Product: Single Stream 802.11a/b/g/n/ac + BT 4.1 M.2 Type Card

Brand: Qualcomm Atheros

Test Model: QCNFA435

Sample Status: R&D SAMPLE

Applicant: Qualcomm Atheros, Inc.

Test Date: Dec. 09, 2014 & July 27 to 30, 2015

Standards: 47 CFR FCC Part 15, Subpart E (Section 15.407)
ANSI C63.10: 2013

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

Prepared by :

Date:

Aug. 07, 2015

Midoli Peng / Specialist

Approved by :

Date:

Aug. 07, 2015

May Chen / Manager

2 Summary of Test Results

47 CFR FCC Part 15, Subpart E (SECTION 15.407 Under New Rule)			
FCC Clause	Test Item	Result	Remarks
15.407(b)(6)	AC Power Conducted Emissions	PASS	Meet the requirement of limit. Minimum passing margin is -13.98dB at 0.39219MHz.
15.407(b)(1/2/3/4/6)	Radiated Emissions & Band Edge Measurement	PASS	Meet the requirement of limit. Minimum passing margin is -3.6dB at 497.75MHz.
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(e)	6dB bandwidth	PASS	Meet the requirement of limit. (U-NII-3 Band only)
15.407(g)	Frequency Stability	PASS	Meet the requirement of limit.
15.203	Antenna Requirement	PASS	Antenna connector is IPEX not a standard connector.

- NOTE:** 1. For WLAN: The EUT was operating in 2400 ~ 2483.5MHz, 5.15~5.35GHz, 5.47~5.725GHz and 5.725~5.850GHz frequencies band. This report was recorded the RF parameters including 5.15~5.35GHz, 5.47~5.725GHz and 5.725~5.850GHz. For the 2400 ~ 2483.5MHz RF parameters was recorded in another test report.
2. This report is prepared for FCC Class II change.
- ◆ **For 2.4GHz:** Only Radiated Emissions and Band Edge and Conducted power Measurement need to be performed.
 - ◆ **For 5GHz (5.15~5.35GHz, 5.47~5.725GHz):** Only Radiated Emissions and Band Edge and Max Average Transmit Power Measurement need to be performed.
 - ◆ **For 5GHz (5.725~5.850GHz):** All test Measurement need to be performed.

2.1 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	Expended Uncertainty (k=2) (±)
Conducted Emissions at mains ports	150kHz ~ 30MHz	2.86 dB
Radiated Emissions up to 1 GHz	30MHz ~ 1GHz	5.31 dB
Radiated Emissions above 1 GHz	1GHz ~ 6GHz	3.65 dB
	6GHz ~ 18GHz	3.88 dB
	18GHz ~ 40GHz	4.11 dB

2.2 Modification Record

There were no modifications required for compliance.

3 General Information

3.1 General Description of EUT (WLAN)

Product	Single Stream 802.11a/b/g/n/ac + BT 4.1 M.2 Type Card
Brand	Qualcomm Atheros
Test Model	QCNFA435
Status of EUT	R&D SAMPLE
Power Supply Rating	3.3Vdc from host equipment
Modulation Type	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM 256QAM for OFDM in 11ac mode and VHT (20/40) mode in 2.4GHz
Modulation Technology	DSSS, OFDM
Transfer Rate	802.11b: up to 11Mbps 802.11a/g: up to 54Mbps 802.11n : up to 150Mbps 802.11ac: up to 433.3Mbps
Operating Frequency	For 15.407 5.18 ~ 5.24GHz, 5.26 ~ 5.32GHz, 5.50 ~ 5.72GHz, 5.745 ~ 5.825GHz For 15.247 2.412 ~ 2.462GHz
Number of Channel	For 15.407 25 for 802.11a, 802.11n (HT20), 802.11ac (VHT20) 12 for 802.11n (HT40), 802.11ac (VHT40) 6 for 802.11ac (VHT80) For 15.247 11 for 802.11b/g, 802.11n (HT20), VHT20 7 for 802.11n (HT40), VHT40
Output Power	For 15.407 802.11a: 55.335 mW 802.11ac (VHT20): 53.951mW 802.11ac (VHT40): 52.119mW 802.11ac (VHT80): 23.988mW For 15.247 802.11b: 246.604mW 802.11g: 303.389mW 802.11n (HT20): 284.446mW 802.11n (HT40): 246.037mW
Antenna Type	See item 3.2
Antenna Connector	See item 3.2
Accessory Device	NA
Data Cable Supplied	NA

Note:

1. This report is prepared for FCC Class II change. The difference compared with the Report No.: RF141008E03-1 R1 design is as the following:
 - ◆ Chip revision (QCA9377) from V1.0 to V1.1. No RF change is made in chip revision.
 - ◆ Update UNII-3 band to new UNII rule
 - ◆ Add Single Antenna hardware variant (remove RX diversity antenna connector).
 - ◆ Add 5mm Modular SAR.
 - ◆ Enable TX diversity for 2 antenna connectors SKU to allow transmission in another antenna connector
2. According to above conditions, the EUT was tested for below information:
 - ◆ **For 2.4GHz:** Only Radiated Emissions and Band Edge and Conducted power Measurement need to be performed.
 - ◆ **For 5GHz (5.15~5.35GHz, 5.47~5.725GHz):** Only Radiated Emissions and Band Edge and Max Average Transmit Power Measurement need to be performed.
 - ◆ **For 5GHz (5.725~5.850GHz):** All test Measurement need to be performed.
3. There are Bluetooth technology and WLAN technology used for the EUT.
4. The modular has four variant designs as following table:

Variant No.	Description	Version
SKU #1	2 Antenna connectors	1.0
SKU #2	1 Antenna connector	1.0
SKU #3	2 Antenna connectors	1.1
SKU #4	1 Antenna connect	1.1

Note: From the above Variants, SKU #3 was selected as representative model for the test and its data was recorded in this report.

5. The EUT incorporates a 1T1R function.

2.4GHz Band			
MODULATION MODE	DATA RATE (MCS)	TX & RX CONFIGURATION	
802.11b	1 ~ 11Mbps	1TX	1RX
802.11g	6 ~ 54Mbps	1TX	1RX
802.11n (HT20)	MCS 0~7	1TX	1RX
802.11n (HT40)	MCS 0~7	1TX	1RX
VHT20	MCS 0~8, Nss=1	1TX	1RX
VHT40	MCS 0~9, Nss=1	1TX	1RX
5GHz Band			
MODULATION MODE	DATA RATE (MCS)	TX & RX CONFIGURATION	
802.11a	6 ~ 54Mbps	1TX	1RX
802.11n (HT20)	MCS 0~7	1TX	1RX
802.11n (HT40)	MCS 0~7	1TX	1RX
802.11ac (VHT20)	MCS 0~8, Nss=1	1TX	1RX
802.11ac (VHT40)	MCS 0~9, Nss=1	1TX	1RX
802.11ac (VHT80)	MCS 0~9, Nss=1	1TX	1RX

Note: The modulation and bandwidth are similar for 802.11n mode for 20MHz (40MHz) and 802.11ac mode for 20MHz (40MHz), therefore investigated worst case to representative mode in test report. (Final test mode refer section 3.3.1)

6. The EUT was pre-tested under the following modes:

Test Mode	Data rate
Mode A	400ns GI
Mode B	800ns GI

From the above modes, the worst case was found in **Mode B**. Therefore only the test data of the mode was recorded in this report.

7. WLAN/BT coexistence mode:

◆ 1x1 WLAN + BT:

➤ 5GHz 802.11a/an (or 11ac) transmit concurrent with BT.

➤ 2.4GHz: timely shared coexistence.

8. The emission (conducted & radiated emission) of the simultaneous operation (WiFi <5GHz> & Bluetooth) have been evaluated and no non-compliance found. The detail combinations of transmitters / frequencies / modes as below table

Mode	Available Channel	Tested Channel	Modulation Technology
5 GHz (802.11a)	36 to 165	52	OFDM
+			
Bluetooth (GFSK)	0 to 78	39	FHSS

9. The above EUT information was declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications or user's manual.

3.2 Description of Antenna

The antenna gain was declared by client; please refer to the following table:

Ant. No.	Transmitter Circuit	Brand	Model	Ant. Type	2.4GHz Gain with cable loss (dBi)	5GHz Gain with cable loss (dBi)	2.4GHz Cable Loss (dB)	5GHz Cable Loss (dB)	Connector Type	Cable Length (mm)
1	Chain (0)	WNC	81.EBJ15.005	PIFA	3.00	5.15~5.35GHz: 2.56	1.15	5.15~5.35GHz: 1.70	IPEX	300
						5.47~5.725GHz: 4.76		5.47~5.725GHz: 1.74		
						5.725~5.85GHz: 4.76		5.725~5.85GHz: 1.79		
	Chain (1)	WNC	81.EBJ15.005	PIFA	3.62	5.15~5.35GHz: 3.08	1.15	5.15~5.35GHz: 1.70	IPEX	300
						5.47~5.725GHz: 3.31		5.47~5.725GHz: 1.74		
						5.725~5.85GHz: 2.42		5.725~5.85GHz: 1.79		
2	Chain (0)	WNC	81.ED415.001	PIFA	0.22	5.15~5.35GHz: 5.56	0.96	5.15~5.35GHz: 1.29	IPEX	300
						5.47~5.725GHz: 5.03		5.47~5.725GHz: 1.36		
						5.725~5.85GHz: 3.14		5.725~5.85GHz: 1.38		
	Chain (1)	WNC	81.ED415.001	PIFA	1.48	5.15~5.35GHz: 5.17	0.96	5.15~5.35GHz: 1.29	IPEX	300
						5.47~5.725GHz: 5.34		5.47~5.725GHz: 1.36		
						5.725~5.85GHz: 2.94		5.725~5.85GHz: 1.38		

Note: 1. Above antenna gains of antenna are Total (H+V).

Following antenna combination(s) was (were) selected as representative mode for test or evaluate in this report as listed.

[5725~5850MHz:](#)

Transmitter Circuit	Brand	Model	Ant. Type	5GHz Gain with cable loss (dBi)	5GHz Cable Loss (dB)	Connector Type	Cable Length (mm)
Chain (0)+(1)	WNC	81.EBJ15.005	PIFA	5.725~5.85GHz: 4.76	5.725~5.85GHz: 1.79	IPEX	300

[5150~5350MHz, 5470~5600MHz and 5650~5725MHz:](#)

Transmitter Circuit	Brand	Model	Ant. Type	5GHz Gain with cable loss (dBi)	5GHz Cable Loss (dB)	Connector Type	Cable Length (mm)
Chain (0)+(1)	WNC	81.ED415.001	PIFA	5.15~5.35GHz: 5.56	5.15~5.35GHz: 1.29	IPEX	300
				5.47~5.725GHz: 5.34	5.47~5.725GHz: 1.36		

3.3 Description of Test Modes

FOR 5180 ~ 5240MHz

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

Channel	Frequency	Channel	Frequency
36	5180 MHz	44	5220 MHz
40	5200 MHz	48	5240 MHz

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

Channel	Frequency	Channel	Frequency
38	5190 MHz	46	5230 MHz

1 channel is provided for 802.11ac (VHT80):

Channel	Frequency
42	5210MHz

FOR 5260 ~ 5320MHz

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

Channel	Frequency	Channel	Frequency
52	5260 MHz	60	5300 MHz
56	5280 MHz	64	5320 MHz

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

Channel	Frequency	Channel	Frequency
54	5270 MHz	62	5310 MHz

1 channel is provided for 802.11ac (VHT80):

Channel	Frequency
58	5290MHz

FOR 5500 ~ 5720MHz

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

Channel	Frequency	Channel	Frequency
100	5500 MHz	124	5620 MHz
104	5520 MHz	128	5640 MHz
108	5540 MHz	132	5660 MHz
112	5560 MHz	136	5680 MHz
116	5580 MHz	140	5700 MHz
120	5600 MHz	144	5720 MHz

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

Channel	Frequency	Channel	Frequency
102	5510 MHz	126	5630 MHz
110	5550 MHz	134	5670 MHz
118	5590 MHz	142	5710 MHz

3 channels are provided for 802.11ac (VHT80):

Channel	Frequency	Channel	Frequency
106	5530MHz	138	5690 MHz
122	5610 MHz		

Note : The listed channels in the DFS band (5250~5350MHz and 5470~5725MHz) are passive scan only.

FOR 5745 ~ 5825MHz:

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

Channel	Frequency	Channel	Frequency
149	5745MHz	161	5805MHz
153	5765MHz	165	5825MHz
157	5785MHz		

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

Channel	Frequency	Channel	Frequency
151	5755MHz	159	5795MHz

1 channel is provided for 802.11ac (VHT80):

Channel	Frequency
155	5775MHz

3.3.1 Test Mode Applicability and Tested Channel Detail

EUT CONFIGURE MODE	APPLICABLE TO				DESCRIPTION
	UE≥1G	UE<1G	PLC	APCM	
-	√	√	√	√	-

Where **UE≥1G**: Unwanted Emission above 1GHz **UE<1G**: Unwanted Emission below 1GHz
PLC: Power Line Conducted Emission **APCM**: Antenna Port Conducted Measurement

Unwanted 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.

MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	DATA RATE (Mbps)
802.11a	5180-5240	36 to 48	36, 40, 48	OFDM	6
802.11ac (VHT20)		36 to 48	36, 40, 48	OFDM	6.5
802.11ac (VHT40)		38 to 46	38, 46	OFDM	13.5
802.11ac (VHT80)		42	42	OFDM	29.3
802.11a	5260-5320	52 to 64	52, 60, 64	OFDM	6
802.11ac (VHT20)		52 to 64	52, 60, 64	OFDM	6.5
802.11ac (VHT40)		54 to 62	54, 62	OFDM	13.5
802.11ac (VHT80)		58	58	OFDM	29.3
802.11a	5500-5720	100 to 144	100, 120, 140, 144	OFDM	6
802.11ac (VHT20)		100 to 144	100, 120, 140, 144	OFDM	6.5
802.11ac (VHT40)		102 to 142	102, 118, 134, 142	OFDM	13.5
802.11ac (VHT80)		106 to 138	106, 122, 138	OFDM	29.3
802.11a	5745-5825	149 to 165	149, 157, 165	OFDM	6
802.11ac (VHT20)		149 to 165	149, 157, 165	OFDM	6.5
802.11ac (VHT40)		151 to 159	151, 159	OFDM	13.5
802.11ac (VHT80)		155	155	OFDM	29.3

Unwanted 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.

MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	DATA RATE (Mbps)
802.11a	5180-5320, 5500-5720, 5745-5825	36 to 64, 100 to 144, 149 to 165	165	OFDM	6

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.

MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	DATA RATE (Mbps)
802.11a	5180-5320, 5500-5720, 5745-5825	36 to 64, 100 to 144, 149 to 165	165	OFDM	6

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.

MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	DATA RATE (Mbps)
802.11a	5180-5240	36 to 48	36, 40, 48	OFDM	6
802.11ac (VHT20)		36 to 48	36, 40, 48	OFDM	6.5
802.11ac (VHT40)		38 to 46	38, 46	OFDM	13.5
802.11ac (VHT80)		42	42	OFDM	29.3
802.11a	5260-5320	52 to 64	52, 60, 64	OFDM	6
802.11ac (VHT20)		52 to 64	52, 60, 64	OFDM	6.5
802.11ac (VHT40)		54 to 62	54, 62	OFDM	13.5
802.11ac (VHT80)		58	58	OFDM	29.3
802.11a	5500-5720	100 to 144	100, 120, 140, 144	OFDM	6
802.11ac (VHT20)		100 to 144	100, 120, 140, 144	OFDM	6.5
802.11ac (VHT40)		102 to 142	102, 118, 134, 142	OFDM	13.5
802.11ac (VHT80)		106 to 138	106, 122, 138	OFDM	29.3
802.11a	5745-5825	149 to 165	149, 157, 165	OFDM	6
802.11ac (VHT20)		149 to 165	149, 157, 165	OFDM	6.5
802.11ac (VHT40)		151 to 159	151, 159	OFDM	13.5
802.11ac (VHT80)		155	155	OFDM	29.3

Test Condition:

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER (SYSTEM)	TESTED BY
UE≥1G	26deg. C, 68%RH	120Vac, 60Hz	Tim Ho
UE<1G	25deg. C, 68%RH	120Vac, 60Hz	Tim Ho
PLC	26deg. C, 57%RH	120Vac, 60Hz	Jyunchu Lin
APCM	25deg. C, 60%RH	120Vac, 60Hz	Anderson Chen

3.4 Duty Cycle of Test Signal

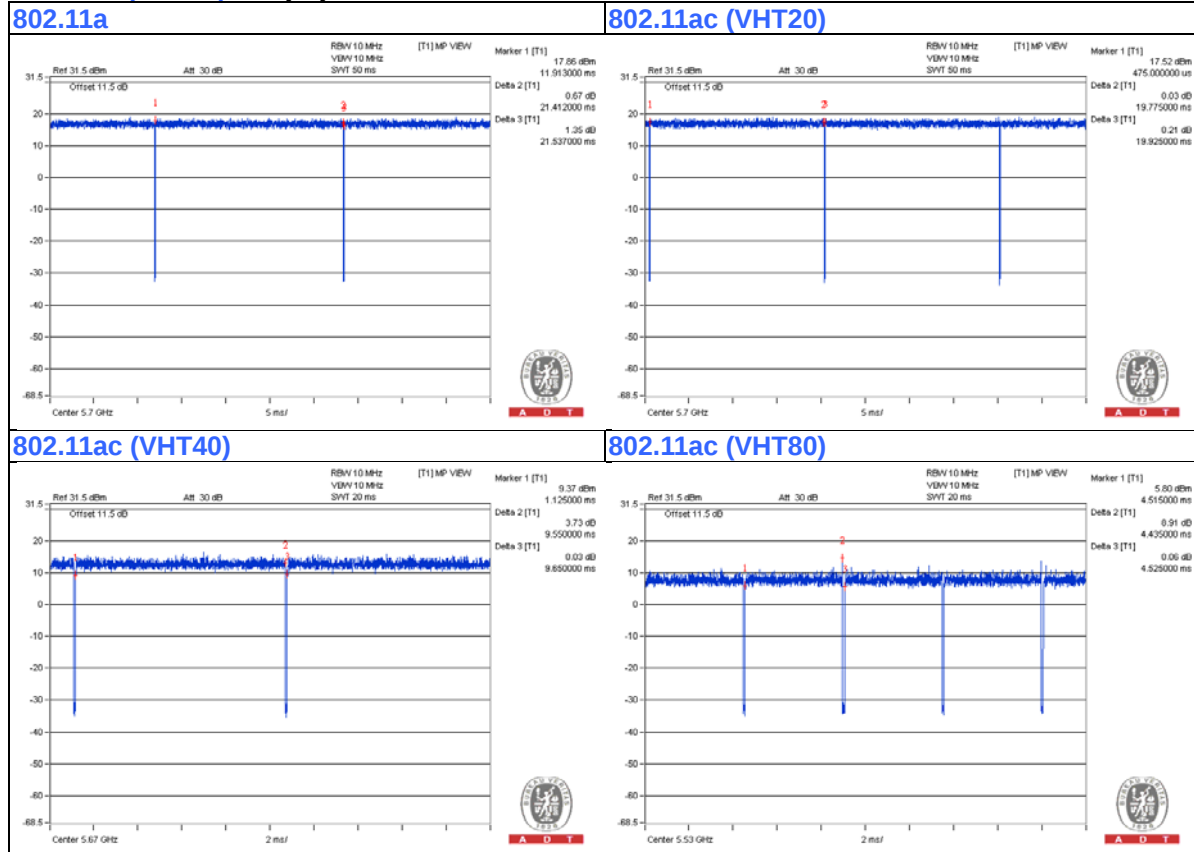
Duty cycle of test signal is $\geq 98\%$, duty factor is not required.

802.11a: Duty cycle = 21.412 ms/21.537 ms = 0.994

802.11ac (VHT20): Duty cycle = 19.775 ms/19.925 ms = 0.992

802.11ac (VHT40): Duty cycle = 9.55 ms/9.65 ms = 0.99

802.11ac (VHT80): Duty cycle = 4.435 ms/4.525 ms = 0.98



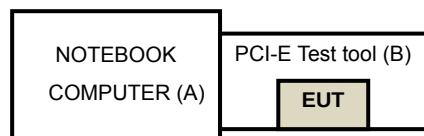
3.5 Description of Support Units

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	Remark
A	NOTEBOOK COMPUTER	DELL	E6420	H62T3R1	FCC DoC	Provided by Lab
B	PCI-E Test tool	Qualcomm Atheros	NA	NA	NA	Supplied by Client

NOTE: All power cords of the above support units are non-shielded (1.8 m).

3.5.1 Configuration of System under Test



3.6 General Description of Applied Standards

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

FCC Part 15, Subpart E (15.407)

789033 D02 General UNII Test Procedures New Rules v01

644545 D03 Guidance for IEEE 802.11ac v01

ANSI C63.10-2013

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

4 Test Types and Results

4.1 Transmit Power Measurement

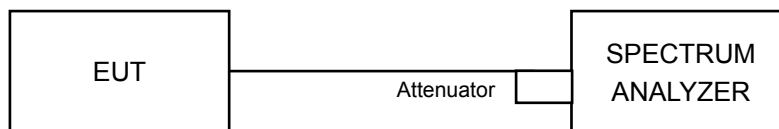
4.1.1 Limits of Transmit Power Measurement

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 (24 dBm) or 11 dBm+10 log B*
U-NII-2C	✓		250mW (24 dBm) or 11 dBm+10 log B*
U-NII-3	✓		1 Watt (30 dBm)

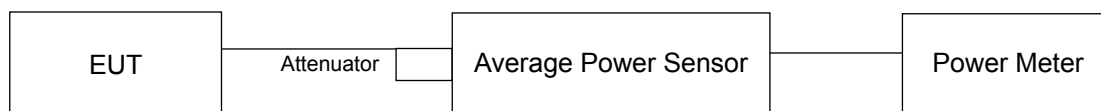
Note: *B is the 26 dB emission bandwidth in megahertz

4.1.2 Test Setup

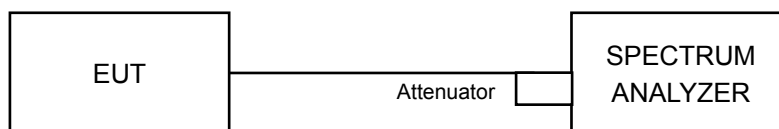
For channel straddling 5725MHz:



For other channels:



FOR 26dB OCCUPIED BANDWIDTH



4.1.3 Test Instruments

For channel straddling 5725MHz:

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
SPECTRUM ANALYZER R&S	FSP 40	100060	May 08, 2015	May 07, 2016

- NOTE:**
1. The test was performed in Oven room 2.
 2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
 3. Tested Date: July 27, 2015

For other channels:

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Power meter Anritsu	ML2495A	1014008	Apr. 28, 2015	Apr. 27, 2016
Power sensor Anritsu	MA2411B	0917122	Apr. 28, 2015	Apr. 27, 2016

- NOTE:**
1. The test was performed in Oven room 2.
 2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
 3. Tested Date: July 27, 2015

FOR 26dB OCCUPIED BANDWIDTH

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
SPECTRUM ANALYZER R&S	FSP 40	100060	May 08, 2014	May 07, 2015

- NOTE:**
1. The test was performed in Oven A.
 2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
 3. Tested Date: Dec. 09, 2014

4.1.4 Test Procedures

FOR AVERAGE POWER MEASUREMENT

For channel straddling 5725MHz:

Method SA-1

1. Set span to encompass the entire emission bandwidth (EBW) of the signal.
2. Set RBW = 1MHz.
3. Set the VBW $\geq 3 \times$ RBW.
4. Number of points in sweep ≥ 2 Span / RBW.
5. Sweep time = auto.
6. Set trigger to free run (duty cycle ≥ 98 percent)
7. Detector = RMS.
8. Trace average at least 100 traces in power averaging mode
9. Compute power by integrating the spectrum across the 26 dB EBW of the signal.

For other channels:

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 OCCUPIED BANDWIDTH

1. Set RBW = approximately 1% of the emission bandwidth.
2. Set the VBW $>$ RBW.
3. Detector = Peak.
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%.

4.1.5 Deviation from Test Standard

No deviation.

4.1.6 EUT Operating Conditions

The software (QCART Version: 3.0.33.0) provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

4.1.7 Test Results

802.11a

POWER OUTPUT

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)	Limit (dBm)	Pass / Fail
36	5180	25.003	13.98	24	Pass
40	5200	35.645	15.52	24	Pass
48	5240	52.723	17.22	24	Pass
52	5260	55.335	17.43	24	Pass
60	5300	31.477	14.98	24	Pass
64	5320	26.062	14.16	24	Pass
100	5500	21.627	13.35	23.99	Pass
120	5600	54.45	17.36	24	Pass
140	5700	17.179	12.35	23.92	Pass
*144 (UNII-2c Band)	5720	25.586	14.08	24	Pass
*144 (UNII-3 Band)	5720	4.764	6.78	30	Pass
149	5745	30.549	14.85	30	Pass
157	5785	54.325	17.35	30	Pass
165	5825	35.563	15.51	30	Pass

Note: * Test was performed in accordance with Measurement follow FCC KDB 789033 UNII test procedure Method SA-1 and use spectrum analyzer test.

The Total Power for the straddle channel:

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)
*144	5720	30.35	17.59

Note: The total power was calculated through formula and record the value for reference only.

802.11a

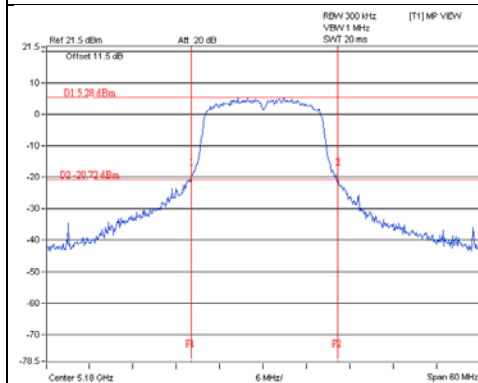
26dB OCCUPIED BANDWIDTH

CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc BANDWIDTH (MHz)
36	5180	20.40
40	5200	41.34
48	5240	41.28
52	5260	44.92
60	5300	45.15
64	5320	33.71
100	5500	19.94
120	5600	41.26
140	5700	19.62
144 (UNII-2c Band)	5720	26.49

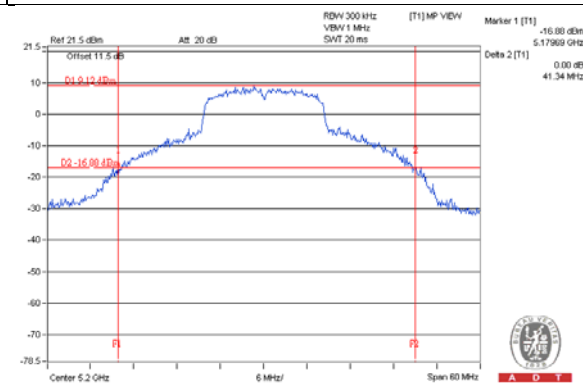
Note For U-NII-2A, U-NII-2C, U-NII-3 Band output power limitation is determined based on : 26dBc bandwidth.

Power Limit = 11dBm + 10logB < U-NII-2A, U-NII-2C >			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Limit (dBm)
52	5260	44.92	27.52 > 24
60	5300	45.15	27.54 > 24
64	5320	33.71	26.27 > 24
100	5500	19.94	23.99 < 24
120	5600	41.26	27.15 > 24
140	5700	19.62	23.92 < 24
144 (UNII-2c Band)	5720	26.49	25.23 > 24

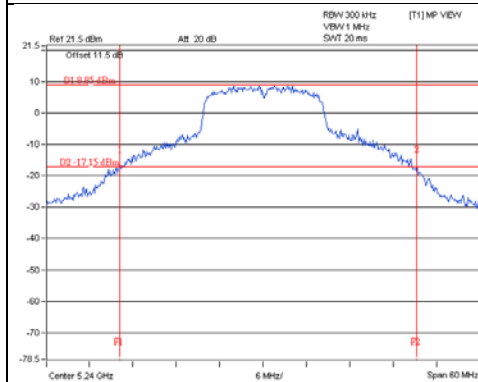
CH36



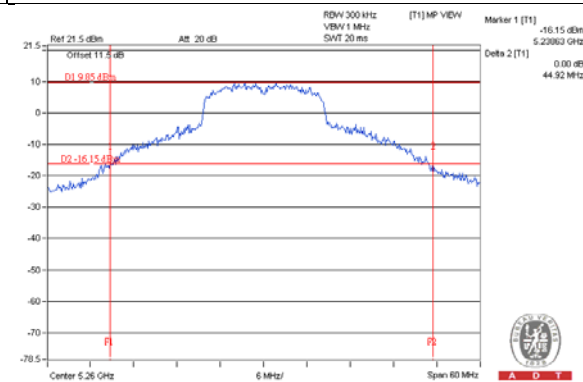
CH40



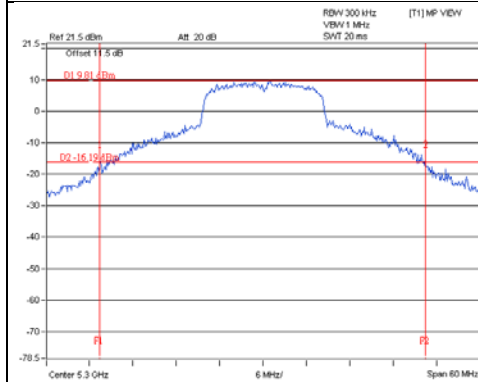
CH48



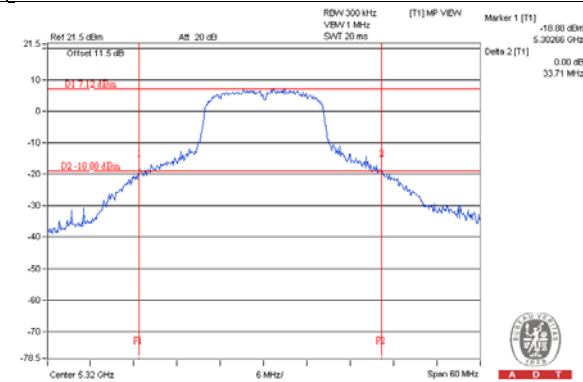
CH52



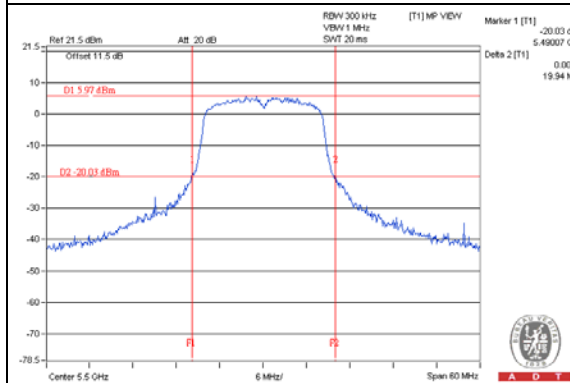
CH60



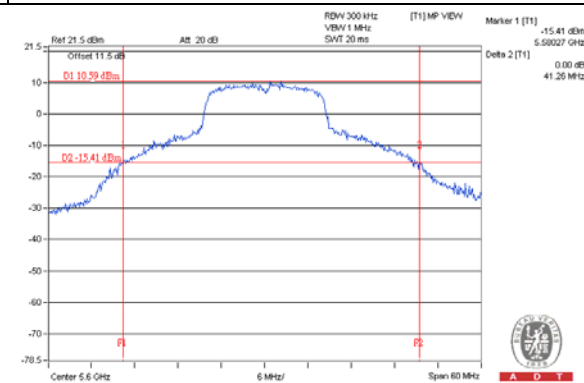
CH64



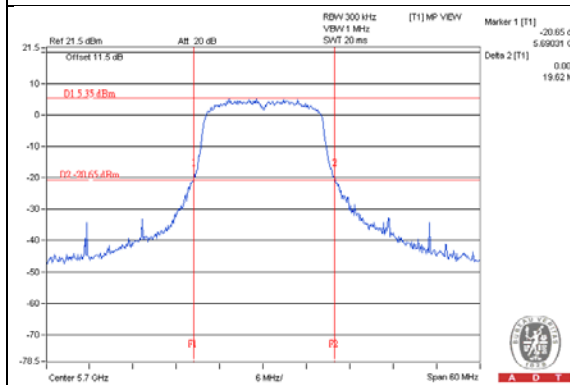
CH100



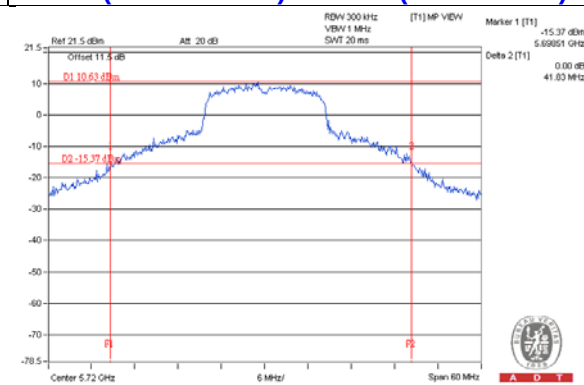
CH120



CH140



CH144 (UNII-2c Band) / CH144 (UNII-3 Band)



NOTE:

For CH144 (UNII-2c Band) = 5725 - Marker 1

802.11ac (VHT20)

POWER OUTPUT

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)	Limit (dBm)	Pass / Fail
36	5180	24.21	13.84	24	Pass
40	5200	35.563	15.51	24	Pass
48	5240	52.24	17.18	24	Pass
52	5260	51.642	17.13	24	Pass
60	5300	30.339	14.82	24	Pass
64	5320	22.284	13.48	24	Pass
100	5500	19.999	13.01	24	Pass
120	5600	53.951	17.32	24	Pass
140	5700	20.137	13.04	24	Pass
*144 (UNII-2c Band)	5720	21.827	13.39	24	Pass
*144 (UNII-3 Band)	5720	4.753	6.77	30	Pass
149	5745	30.549	14.85	30	Pass
157	5785	52.119	17.17	30	Pass
165	5825	37.497	15.74	30	Pass

Note: * Test was performed in accordance with Measurement follow FCC KDB 789033 UNII test procedure Method SA-1 and use spectrum analyzer test.

The Total Power for the straddle channel:

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)
*144	5720	26.58	17.56

Note: The total power was calculated through formula and record the value for reference only.

802.11ac (VHT20)

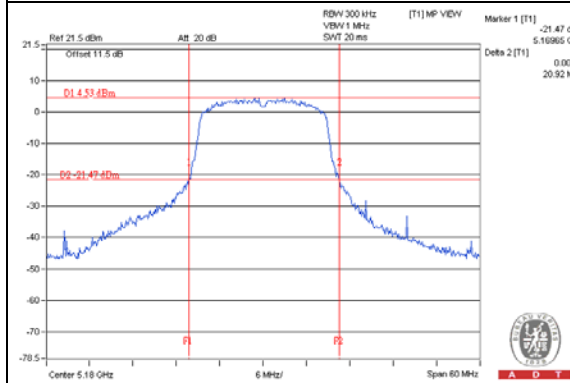
26dB OCCUPIED BANDWIDTH

CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc BANDWIDTH (MHz)
36	5180	20.92
40	5200	44.66
48	5240	44.27
52	5260	48.04
60	5300	42.17
64	5320	24.07
100	5500	21.03
120	5600	45.72
140	5700	20.50
144 (UNII-2c Band)	5720	25.32

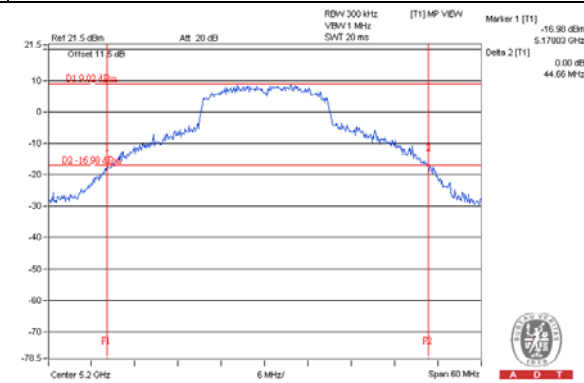
Note For U-NII-2A, U-NII-2C, U-NII-3 Band output power limitation is determined based on : 26dBc bandwidth.

Power Limit = 11dBm + 10logB < U-NII-2A, U-NII-2C >			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Limit (dBm)
52	5260	48.04	27.81 > 24
60	5300	42.17	27.25 > 24
64	5320	24.07	24.81 > 24
100	5500	21.03	24.22 > 24
120	5600	45.72	27.6 > 24
140	5700	20.50	24.11 > 24
144 (UNII-2c Band)	5720	25.32	25.03 > 24

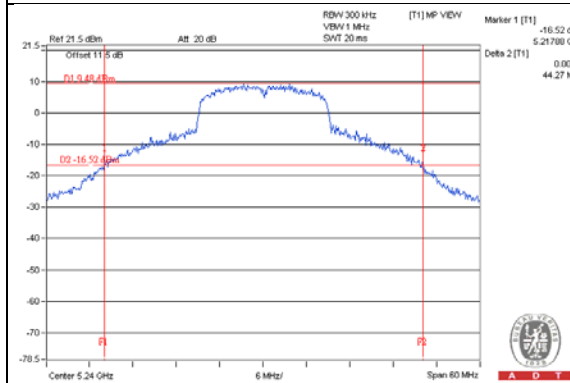
CH36



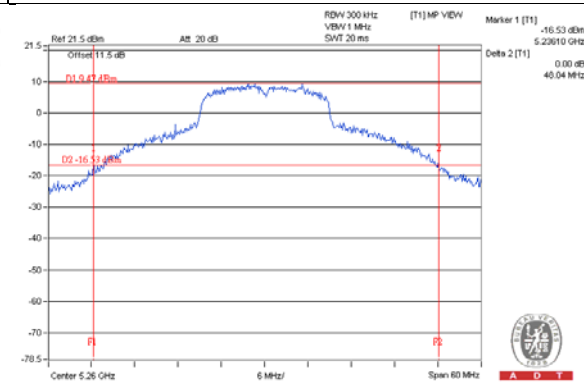
CH40



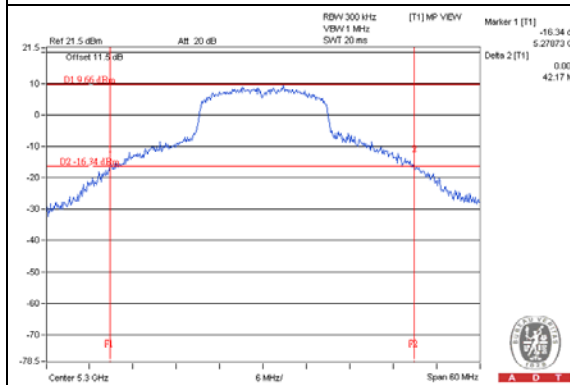
CH48



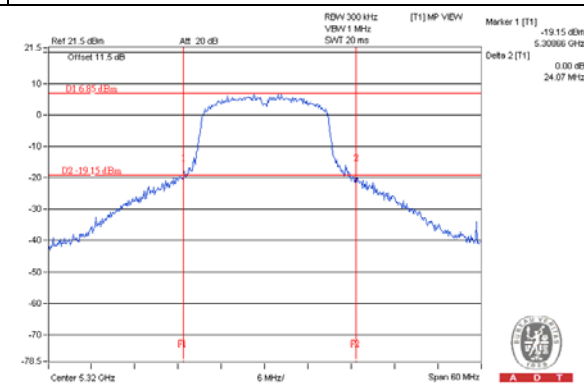
CH52



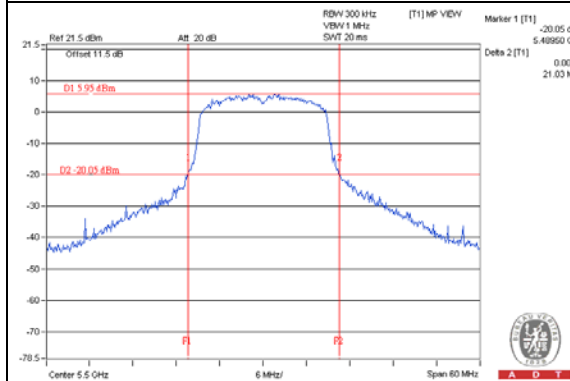
CH60



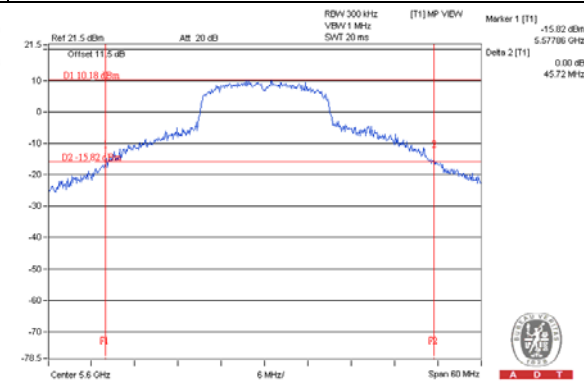
CH64



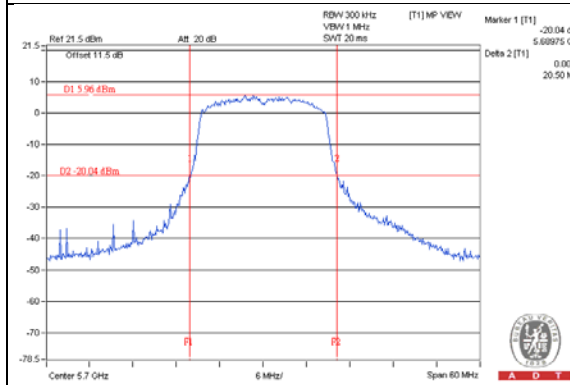
CH100



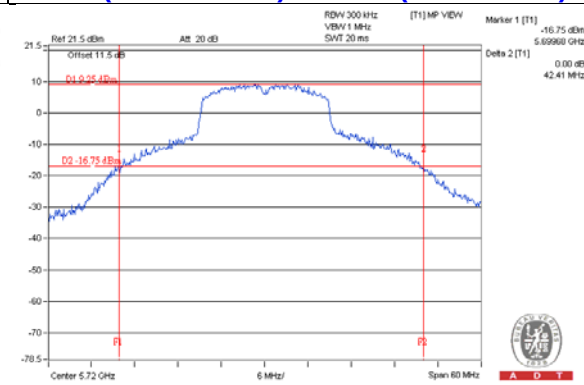
CH120



CH140



CH144 (UNII-2c Band) / CH144 (UNII-3 Band)



NOTE:

For CH144 (UNII-2c Band) = 5725 - Marker 1

802.11ac (VHT40)

POWER OUTPUT

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)	Limit (dBm)	Pass / Fail
38	5190	10.046	10.02	24	Pass
46	5230	38.194	15.82	24	Pass
54	5270	31.769	15.02	24	Pass
62	5310	11.885	10.75	24	Pass
102	5510	12.794	11.07	24	Pass
118	5590	52.119	17.17	24	Pass
134	5670	22.029	13.43	24	Pass
*142 (UNII-2c Band)	5710	22.699	13.56	24	Pass
*142 (UNII-3 Band)	5710	1.589	2.01	30	Pass
151	5755	20.606	13.14	30	Pass
159	5795	33.266	15.22	30	Pass

Note: * Test was performed in accordance with Measurement follow FCC KDB 789033 UNII test procedure Method SA-1 and use spectrum analyzer test.

The Total Power for the straddle channel:

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)
*142	5710	24.288	17.02

802.11ac (VHT40)

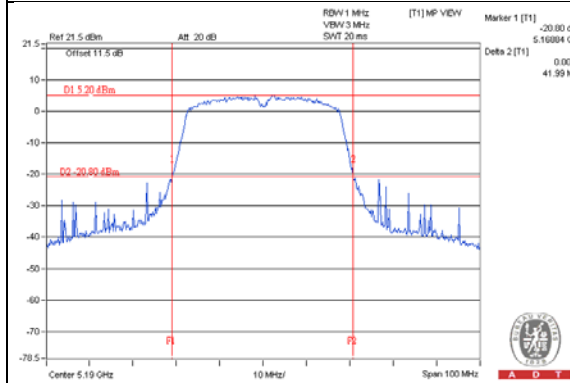
26dB OCCUPIED BANDWIDTH

CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc BANDWIDTH (MHz)
38	5190	41.99
46	5230	81.48
54	5270	74.17
62	5310	42.39
102	5510	42.01
118	5590	83.97
134	5670	43.85
142 (UNII-2c Band)	5710	56.92

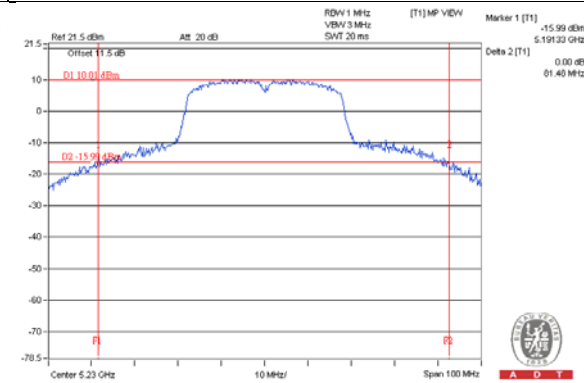
Note For U-NII-2A, U-NII-2C, U-NII-3 Band output power limitation is determined based on : 26dBc bandwidth.

Power Limit = 11dBm + 10logB < U-NII-2A, U-NII-2C >			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Limit (dBm)
54	5270	74.17	29.7 > 24
62	5310	42.39	27.27 > 24
102	5510	42.01	27.23 > 24
110	5550	83.97	30.24 > 24
134	5670	43.85	27.41 > 24
142 (UNII-2c Band)	5710	56.92	28.55 > 24

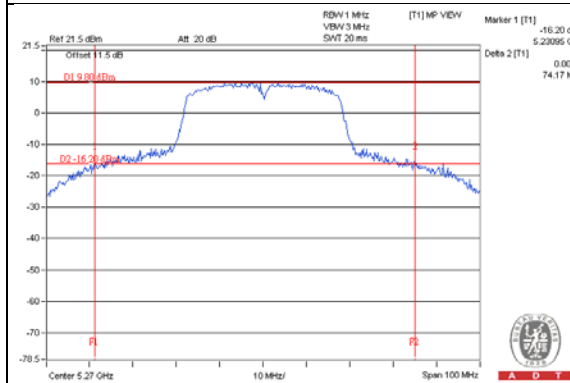
CH38



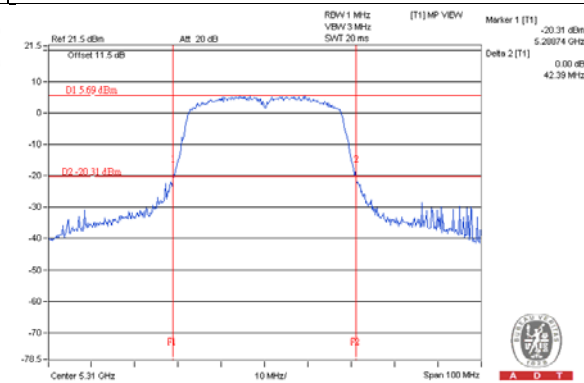
CH46



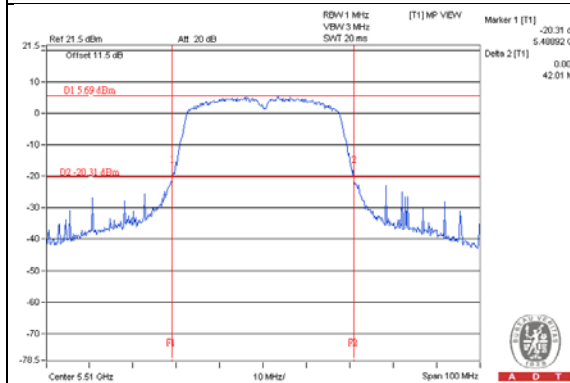
CH54



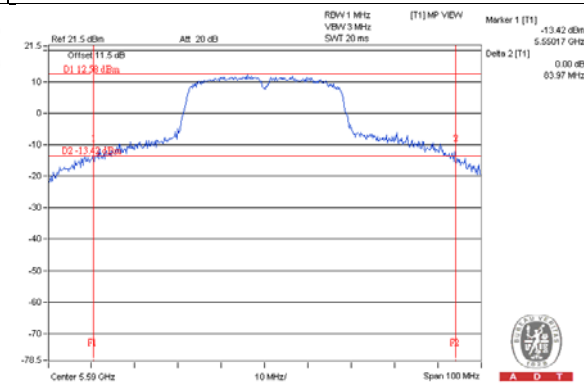
CH62



CH102

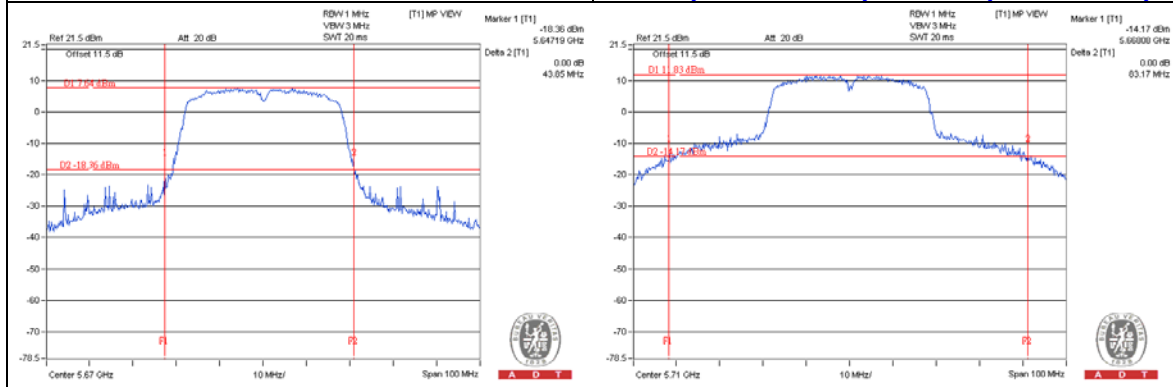


CH118



CH134

CH142 (UNII-2c Band) / CH142 (UNII-3 Band)



NOTE:

For CH142 (UNII-2c Band) = 5725 - Marker 1

802.11ac (VHT80)

POWER OUTPUT

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)	Limit (dBm)	Pass / Fail
42	5210	15.311	11.85	24	Pass
58	5290	10.52	10.22	24	Pass
106	5530	9.616	9.83	24	Pass
122	5610	23.988	13.80	24	Pass
*138 (UNII-2c Band)	5690	16.368	12.14	24	Pass
*138 (UNII-3 Band)	5690	0.3741	-4.27	30	Pass
155	5775	18.155	12.59	30	Pass

Note: * Test was performed in accordance with Measurement follow FCC KDB 789033 UNII test procedure Method SA-1 and use spectrum analyzer test.

The Total Power for the straddle channel:

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)
*138	5690	16.7421	16.12

802.11ac (VHT80)

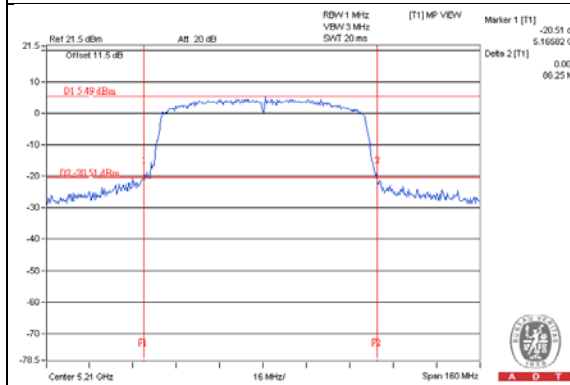
26dB OCCUPIED BANDWIDTH

CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc BANDWIDTH (MHz)
42	5210	86.25
58	5290	81.69
106	5530	82.77
122	5610	102.32
138 (UNII-2c Band)	5690	82.74

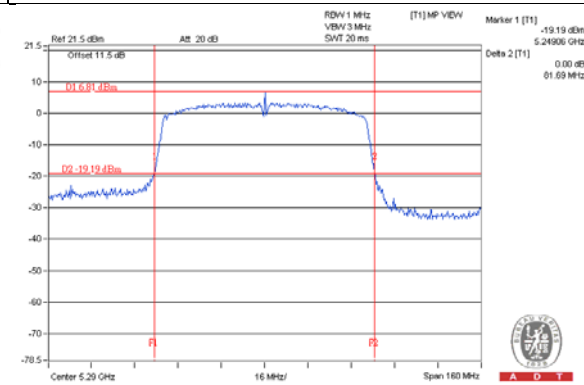
Note For U-NII-2A, U-NII-2C, U-NII-3 Band output power limitation is determined based on : 26dBc bandwidth.

Power Limit = 11dBm + 10logB < U-NII-2A, U-NII-2C >			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Limit (dBm)
58	5290	81.69	30.12 > 24
106	5530	82.77	30.17 > 24
122	5610	102.32	31.09 > 24
138 (UNII-2c Band)	5690	82.74	30.17 > 24

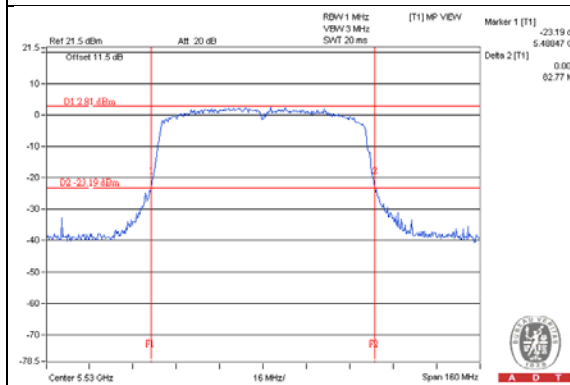
CH42



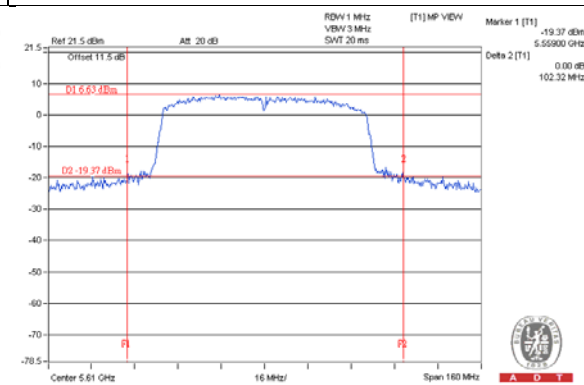
CH58



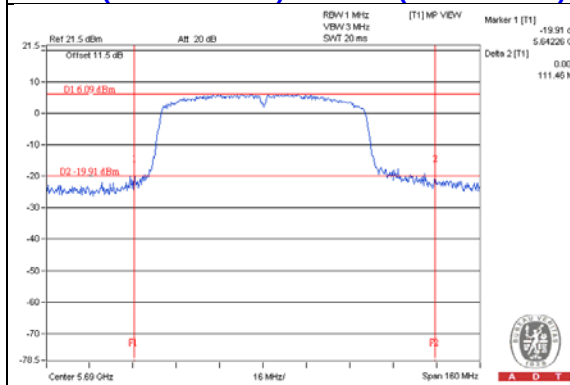
CH106



CH122



CH138 (UNII-2c Band) / CH138 (UNII-3 Band)



NOTE:

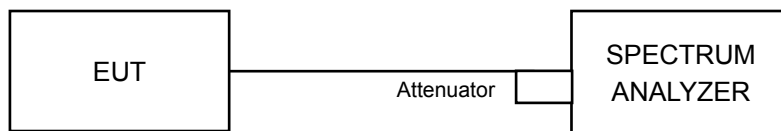
For CH138 (UNII-2c Band) = 5725 - Marker 1

4.2 Peak Power Spectral Density Measurement

4.2.1 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/ MHz

4.2.2 Test Setup



4.2.3 Test Instruments

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
SPECTRUM ANALYZER R&S	FSP 40	100060	May 08, 2015	May 07, 2016

- NOTE:**
1. The test was performed in Oven room 2.
 2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
 3. Tested Date: July 27, 2015

4.2.4 Test Procedures

For U-NII-3:

- a. Set span to encompass the entire emission bandwidth (EBW) of the signal.
- b. Set RBW = 300 kHz, Set VBW $\geq$ 1 MHz, Detector = RMS
- c. Use the peak marker function to determine the maximum power level in any 300 kHz band segment within the fundamental EBW.
- d. Scale the observed power level to an equivalent value in 500 kHz by adjusting (reducing) the measured power by a bandwidth correction factor (BWCF) where $BWCF = 10\log(500 \text{ kHz}/300\text{kHz})$
- e. Sweep time = auto, trigger set to "free run".
- f. Trace average at least 100 traces in power averaging mode.
- g. Record the max value

4.2.5 Deviation from Test Standard

No deviation.

4.2.6 EUT Operating Conditions

The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

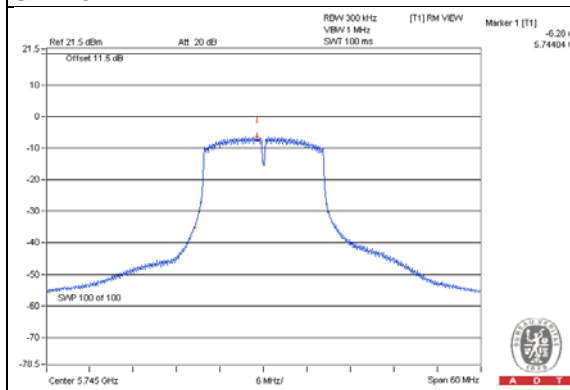
4.2.7 Test Results

For U-NII-3:

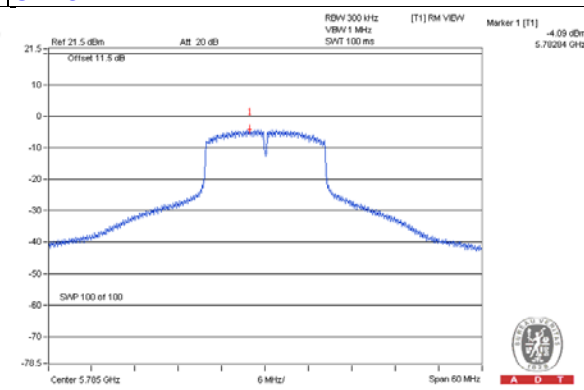
802.11a

Chan.	Chan. Freq. (MHz)	PSD (dBm/300kHz)	PSD (dBm/500kHz)	Limit (dBm/500kHz)	Pass /Fail
149	5745	-6.28	-4.06	30	Pass
157	5785	-4.09	-1.87	30	Pass
165	5825	-6.16	-3.94	30	Pass

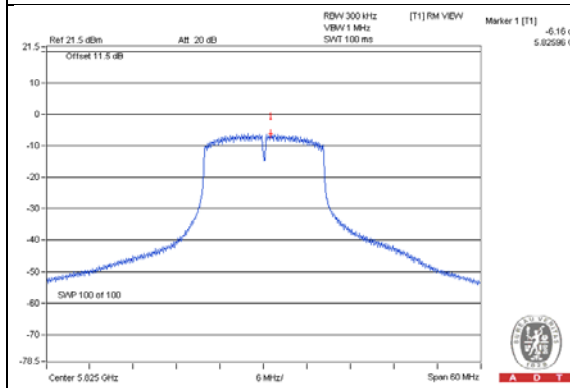
CH149



CH157



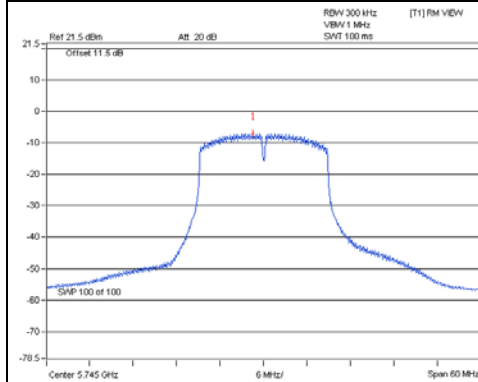
CH165



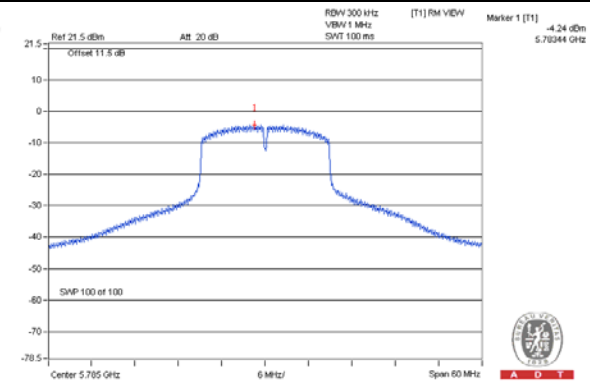
802.11ac (VHT20)

Chan.	Chan. Freq. (MHz)	PSD (dBm/300kHz)	PSD (dBm/500kHz)	Limit (dBm/500kHz)	Pass /Fail
149	5745	-7.05	-4.83	30	Pass
157	5785	-4.24	-2.02	30	Pass
165	5825	-5.53	-3.31	30	Pass

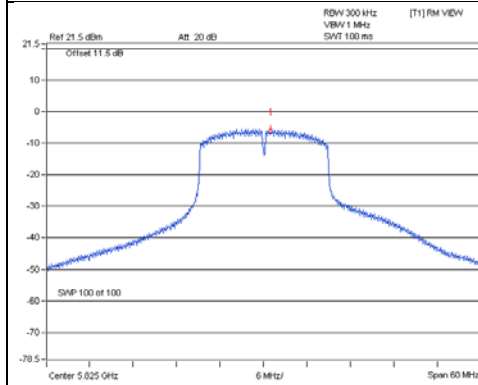
CH149



CH157



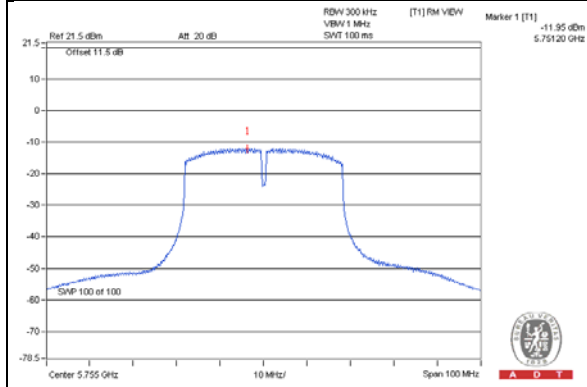
CH165



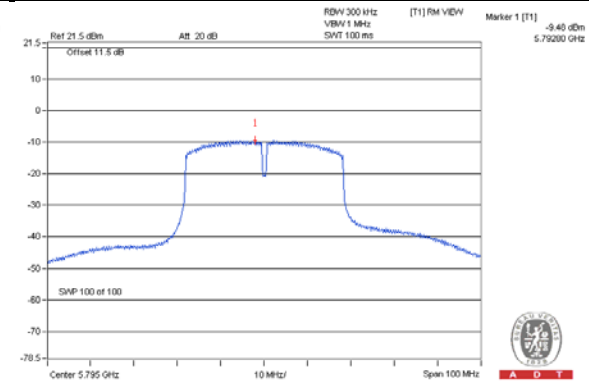
802.11ac (VHT40)

Chan.	Chan. Freq. (MHz)	PSD (dBm/300kHz)	PSD (dBm/500kHz)	Limit (dBm/500kHz)	Pass /Fail
151	5755	-11.95	-9.73	30	Pass
159	5795	-9.48	-7.26	30	Pass

CH151



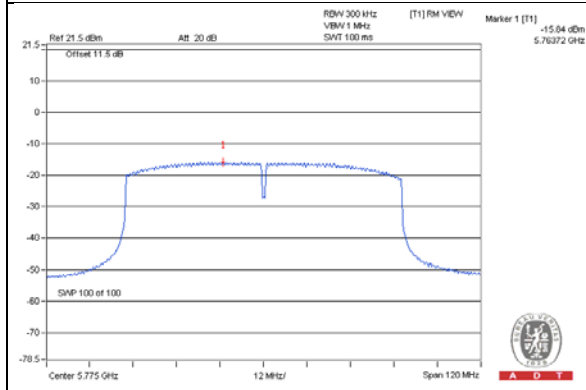
CH159



802.11ac (VHT80)

Chan.	Chan. Freq. (MHz)	PSD (dBm/300kHz)	PSD (dBm/500kHz)	Limit (dBm/500kHz)	Pass /Fail
155	5775	-15.84	-13.62	30	Pass

CH155

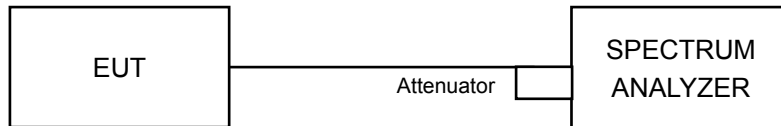


4.3 6dB Bandwidth Measurement

4.3.1 Limits of 6dB Bandwidth Measurement

The minimum of 6dB Bandwidth Measurement is 0.5MHz.

4.3.2 Test Setup



4.3.3 Test Instruments

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
SPECTRUM ANALYZER R&S	FSP 40	100060	May 08, 2015	May 07, 2016

- NOTE:**
1. The test was performed in Oven room 2.
 2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
 3. Tested Date: July 27, 2015

4.3.4 Test Procedures

MEASUREMENT PROCEDURE REF

- a. Set resolution bandwidth (RBW) = 100kHz
- b. Set the video bandwidth (VBW) $\geq 3 \times$ RBW, Detector = Peak.
- c. Trace mode = max hold.
- d. Sweep = auto couple.
- e. Measure the maximum width of the emission that is constrained by the frequencies associated with the two amplitude points (upper and lower) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission

4.3.5 Deviation from Test Standard

No deviation.

4.3.6 EUT Operating Conditions

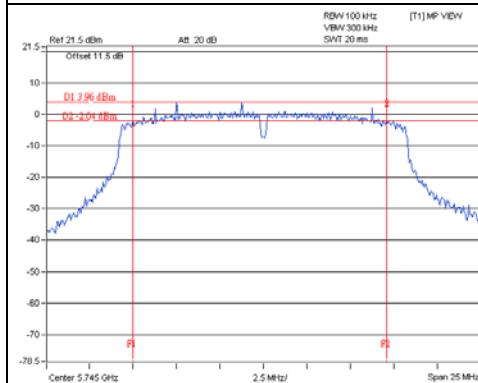
The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

4.3.7 Test Results

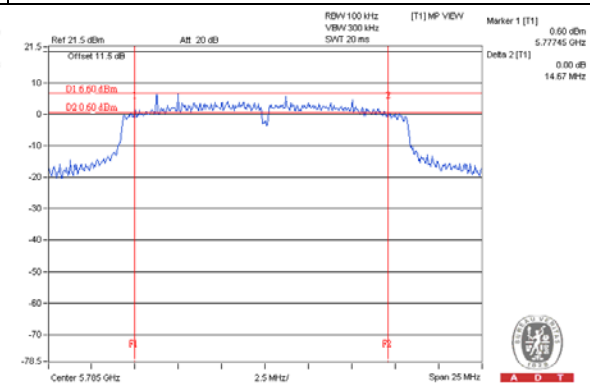
802.11a

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
149	5745	14.66	0.5	Pass
157	5785	14.67	0.5	Pass
165	5825	15.94	0.5	Pass

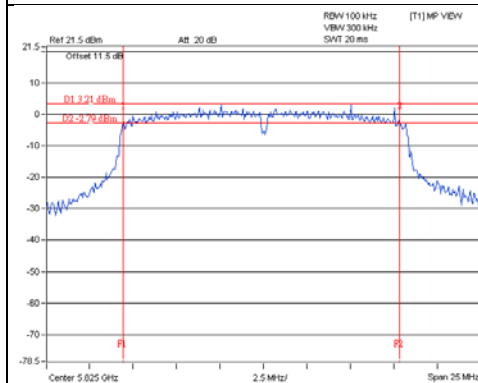
CH149



CH157



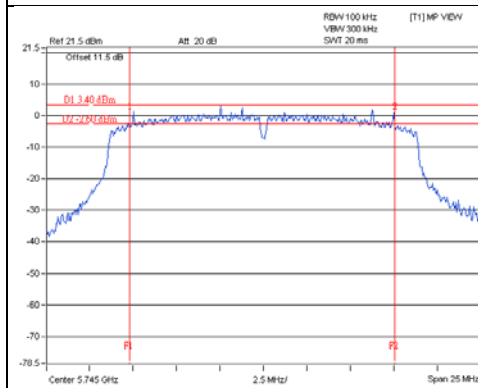
CH165



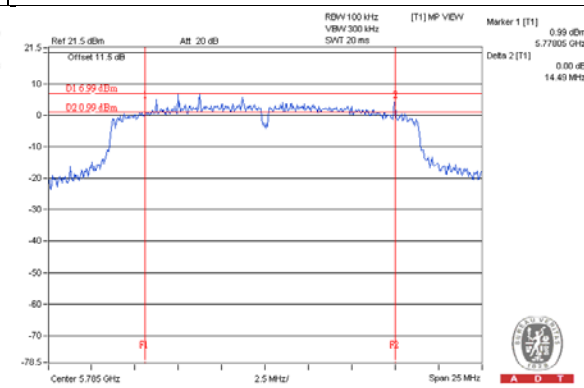
802.11ac (VHT20)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
149	5745	15.31	0.5	Pass
157	5785	14.49	0.5	Pass
165	5825	14.68	0.5	Pass

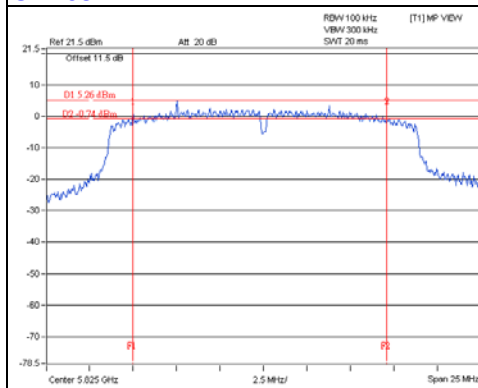
CH149



CH157



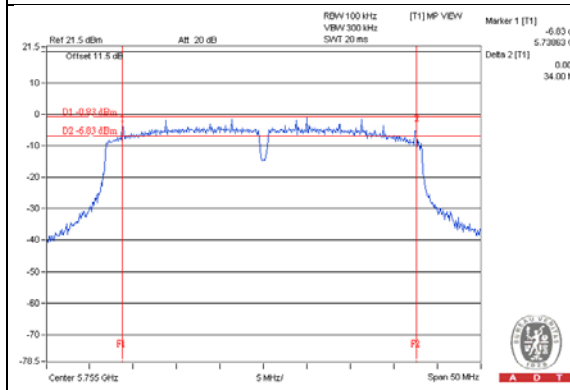
CH165



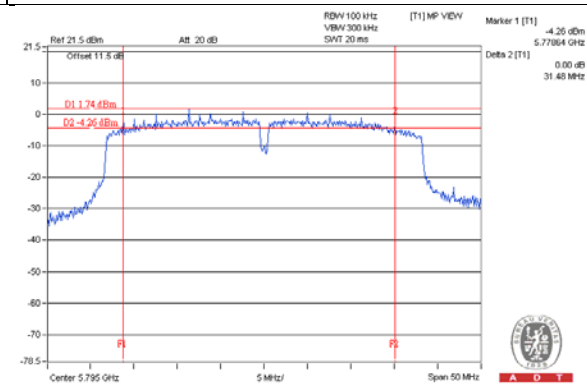
802.11ac (VHT40)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
151	5755	34.00	0.5	Pass
159	5795	31.48	0.5	Pass

CH151



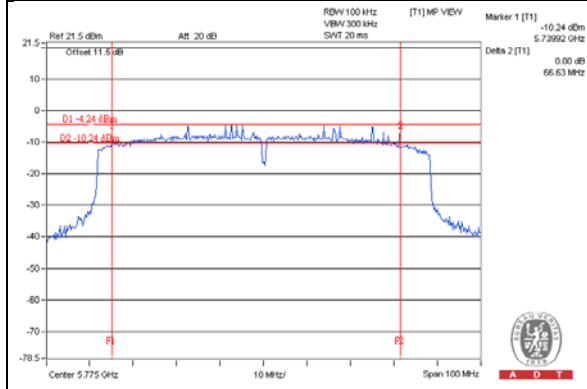
CH159



802.11ac (VHT80)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
155	5775	66.63	0.5	Pass

CH155



4.4 Unwanted Emission Measurement (Radiated Versus Conducted)

4.4.1 Limits of Unwanted Emission 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:

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

Limits of Unwanted Emission out of the Restricted Bands

APPLICABLE TO	LIMIT	
789033 D02 General UNII Test Procedure New Rules v01	FIELD STRENGTH AT 3m	
	PK:74 (dBuV/m)	AV:54 (dBuV/m)
APPLICABLE TO	EIRP LIMIT	EQUIVALENT FIELD STRENGTH AT 3m
15.407(b)(1)	PK:-27 (dBm/MHz)	PK:68.2 (dBuV/m)
15.407(b)(2)		
15.407(b)(3)		
15.407(b)(4)	PK:-27 (dBm/MHz) ^{*1} PK:-17 (dBm/MHz) ^{*2}	PK:68.2 (dBuV/m) ^{*1} PK:78.2 (dBuV/m) ^{*2}

NOTE: ^{*1} beyond 10MHz of the band edge ^{*2} within 10 MHz of band edge

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

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

4.4.2 Test Instruments

For above 1GHz test:

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Test Receiver Agilent	N9038A	MY51210202	Dec. 12, 2014	Dec. 11, 2015
Horn_Antenna AISI	AIH.8018	000032009111 0	Feb. 09, 2015	Feb. 08, 2016
Pre-Amplifier Agilent	8449B	3008A02578	June 23, 2015	June 22, 2016
RF Cable	NA	131205 131216 131217 SNMY23684/ 4	Jan. 16, 2015	Jan. 15, 2016
Spectrum Analyzer R&S	FSV40	100964	June 26, 2015	June 25, 2016
Pre-Amplifier SPACEK LABS	SLKKa-48-6	9K16	Dec. 12, 2014	Dec. 11, 2015
Horn_Antenna SCHWARZBECK	BBHA 9170	9170-424	Feb. 05, 2015	Feb. 04, 2016
RF Cable	NA	329751/4 RF104-204	Dec. 11, 2014	Dec. 10, 2015
Software	ADT_Radiated _V8.7.07	NA	NA	NA
Antenna Tower & Turn Table CT	NA	NA	NA	NA

Note:

1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in 966 Chamber No. G.
3. The FCC Site Registration No. is 966073.
4. The VCCI Site Registration No. is G-137.
5. The CANADA Site Registration No. is IC 7450H-2.
6. Tested Date: July 29, 2015

For below 1GHz test:

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Test Receiver Agilent	N9038A	MY51210202	Dec. 12,2014	Dec. 11,2015
Pre-Amplifier Mini-Circuits	ZFL-1000VH2 B	AMP-ZFL-07	May 08, 2015	May 07, 2016
Trilog Broadband Antenna SCHWARZBECK	VULB 9168	9168-406	Feb. 03, 2015	Feb. 02, 2016
RF Cable	8D	966-3-1 966-3-2 966-3-3	Apr. 03, 2015	Apr. 02, 2016
Software	ADT_Radiated _V8.7.07	NA	NA	NA
Antenna Tower & Turn Table CT	NA	NA	NA	NA

Note:

1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The horn antenna, preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
3. The test was performed in 966 Chamber No. 3.
4. The FCC Site Registration No. is
6. The CANADA Site Registration No. is
7. Tested Date: July 30, 2015

4.4.3 Test Procedures

Following FCC KDB 789033 D02 General UNII Test Procedures:

Radiated versus Conducted Measurements.

The unwanted emission limits in both the restricted and non-restricted bands are based on antenna-port conducted measurements in conjunction with cabinet emissions tests are permitted to demonstrate compliance.

The following steps was performed:

- a. Cabinet emissions measurements. Radiated measurement was performed to ensure that cabinet emissions are below the emission limits. For the cabinet-emission measurements the antenna was replaced by a termination matching the nominal impedance of the antenna.
- b. Conducted tests was performed using equipment that matches the nominal impedance of the antenna assembly used with the EUT
- c. EIRP calculation. A value representative of an upper bound on out-of-band antenna gain (in dBi) shall be added to the measured antenna-port conducted emission power to compute EIRP within the specified measurement bandwidth. (For emissions in the restricted bands, additional calculations are required to convert EIRP to field strength at the specified distance.) The upper bound on antenna gain for a device with a single RF output shall be selected as the maximum in-band gain of the antenna across all operating bands or 2 dBi, whichever is greater
- d. For all of Radiation emission test
 - d-1. The EUT was placed on the top of a rotating table 0.8 meters (for below 1GHz) / 1.5 meters (for above 1GHz) above the ground at a 3 meters chamber room. The table was rotated 360 degrees to determine the position of the highest radiation.
 - d-2. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
 - d-3. The height of antenna 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-4. 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.
 - d-5. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
 - d-6. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

NOTE:

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

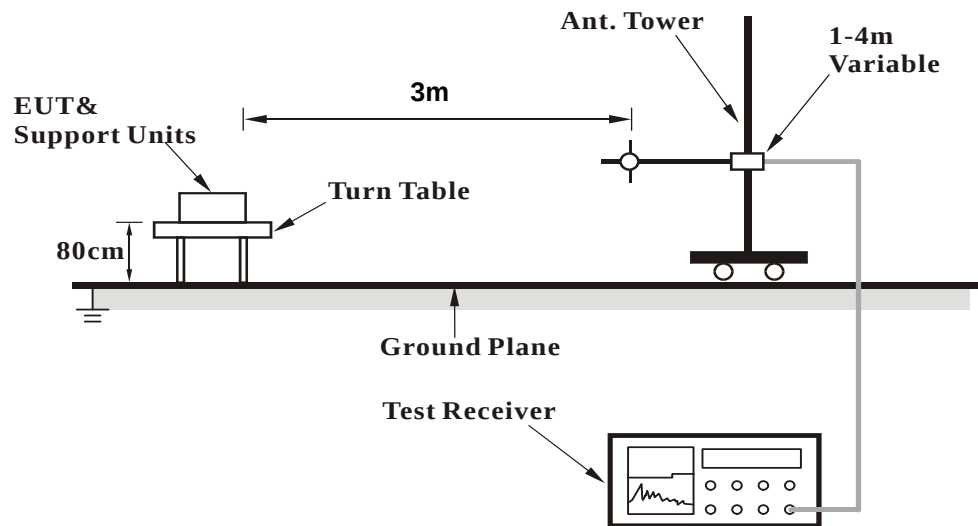
4.4.4 Deviation from Test Standard

No deviation.

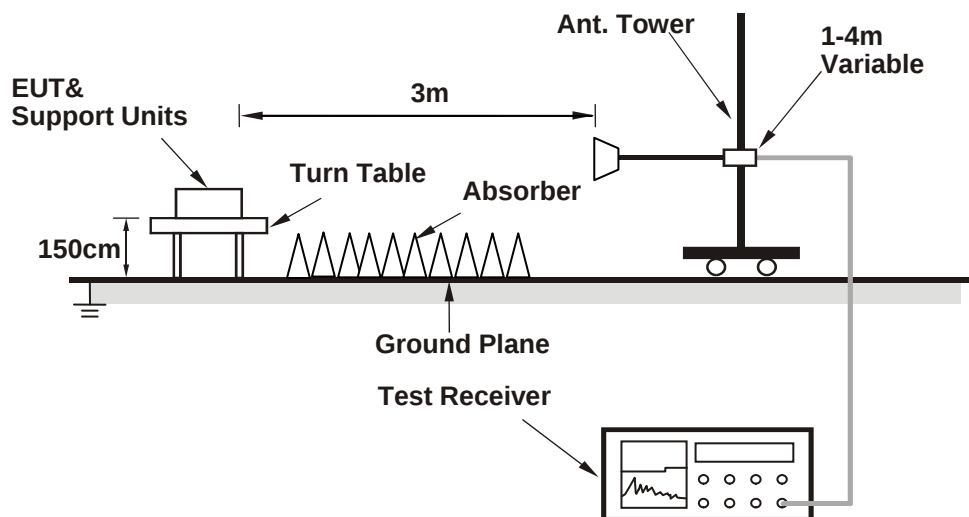
4.4.5 Test Setup

For radiated configuration:

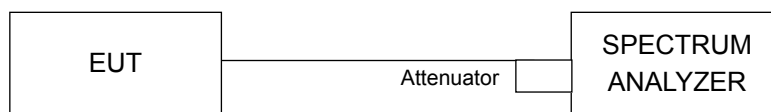
<Frequency Range below 1GHz>



<Frequency Range above 1GHz>



For conducted configuration:



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

4.4.6 EUT Operating Conditions

1. Connect the EUT with the support unit A (Notebook Computer) which is placed on a testing table.
2. The communication partner run test program "QCART Version: 3.0.33.0" to enable EUT under transmission/receiving condition continuously at specific channel frequency.

4.4.7 Test Results (Radiated Measurement)

Radiated versus Conducted Measurement	
☐ Conducted measurement	☒ Radiated measurement
<u>For Radiated measurement:</u> The level of unwanted emissions was measured when radiated by the cabinet or structure of the equipment with the antenna connector(s) terminated by a specified load (cabinet radiation) <u>For Conducted measurement:</u> The level of unwanted emissions was measured as their power in a specified load (conducted spurious emissions).	

Radiated test was done with 50ohm terminator on antenna port

Above 1GHz Data

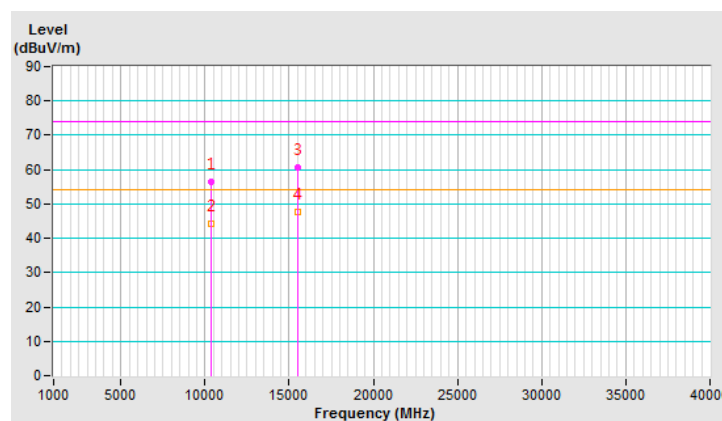
802.11a

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	#10360.00	56.4 PK	74.0	-17.6	1.94 H	137	41.90	14.50
2	#10360.00	44.2 AV	54.0	-9.8	1.94 H	137	29.70	14.50
3	15540.00	60.5 PK	74.0	-13.5	1.80 H	223	41.82	18.68
4	15540.00	47.8 AV	54.0	-6.2	1.80 H	223	29.12	18.68

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) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " # ": The radiated frequency is out of the restricted band.

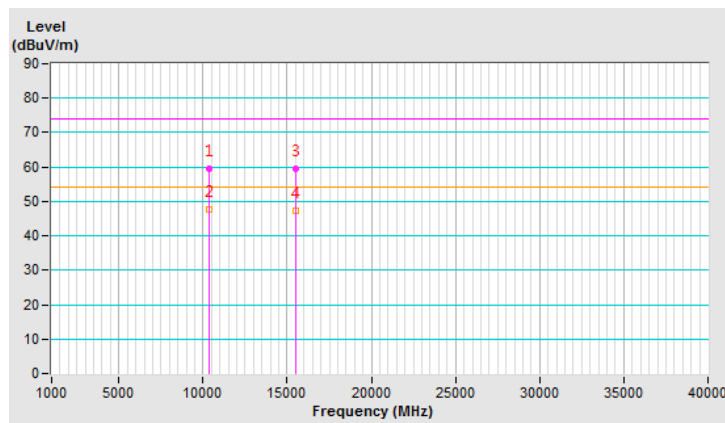


CHANNEL	TX Channel 36	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

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	#10360.00	59.5 PK	74.0	-14.5	1.97 V	66	45.00	14.50
2	#10360.00	47.6 AV	54.0	-6.4	1.97 V	66	33.10	14.50
3	15540.00	59.4 PK	74.0	-14.6	1.88 V	204	40.72	18.68
4	15540.00	47.1 AV	54.0	-6.9	1.88 V	204	28.42	18.68

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) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " # ": The radiated frequency is out of the restricted band.

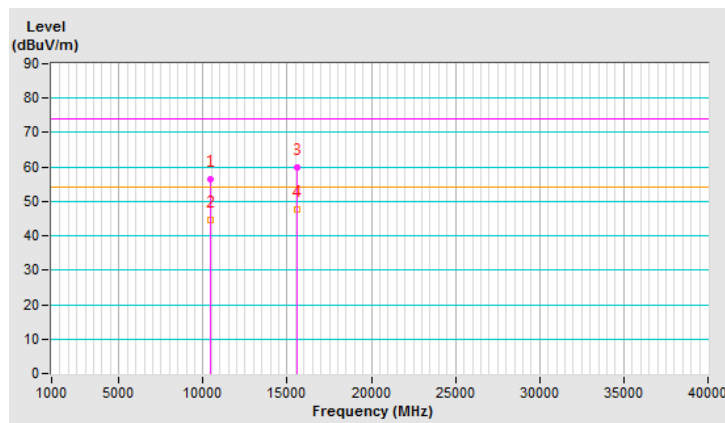


CHANNEL	TX Channel 40	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

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	#10400.00	56.5 PK	74.0	-17.5	2.02 H	122	41.90	14.60
2	#10400.00	44.5 AV	54.0	-9.5	2.02 H	122	29.90	14.60
3	15600.00	60.0 PK	74.0	-14.0	1.81 H	224	41.10	18.90
4	15600.00	47.6 AV	54.0	-6.4	1.81 H	224	28.70	18.90

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " # ": The radiated frequency is out of the restricted band.

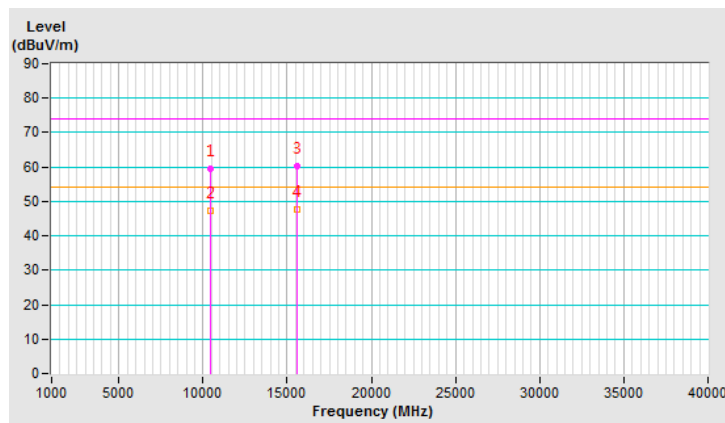


CHANNEL	TX Channel 40	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

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	#10400.00	59.5 PK	74.0	-14.5	1.98 V	49	44.90	14.60
2	#10400.00	47.2 AV	54.0	-6.8	1.98 V	49	32.60	14.60
3	15600.00	60.2 PK	74.0	-13.8	1.82 V	183	41.30	18.90
4	15600.00	47.5 AV	54.0	-6.5	1.82 V	183	28.60	18.90

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " # ": The radiated frequency is out of the restricted band.

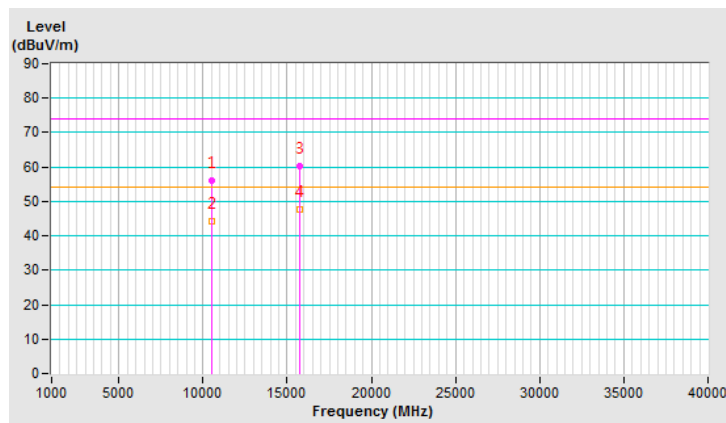


CHANNEL	TX Channel 48	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

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	#10480.00	56.2 PK	74.0	-17.8	1.97 H	129	41.73	14.47
2	#10480.00	44.2 AV	54.0	-9.8	1.97 H	129	29.73	14.47
3	15720.00	60.2 PK	74.0	-13.8	1.75 H	222	41.16	19.04
4	15720.00	47.5 AV	54.0	-6.5	1.75 H	222	28.46	19.04

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " # ": The radiated frequency is out of the restricted band.

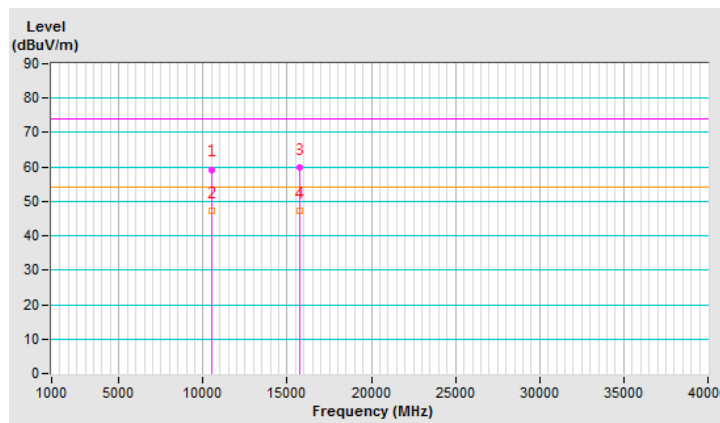


CHANNEL	TX Channel 48	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: 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	#10480.00	59.3 PK	74.0	-14.7	1.97 V	62	44.83	14.47
2	#10480.00	47.2 AV	54.0	-6.8	1.97 V	62	32.73	14.47
3	15720.00	59.8 PK	74.0	-14.2	1.84 V	195	40.76	19.04
4	15720.00	47.3 AV	54.0	-6.7	1.84 V	195	28.26	19.04

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " # ": The radiated frequency is out of the restricted band.

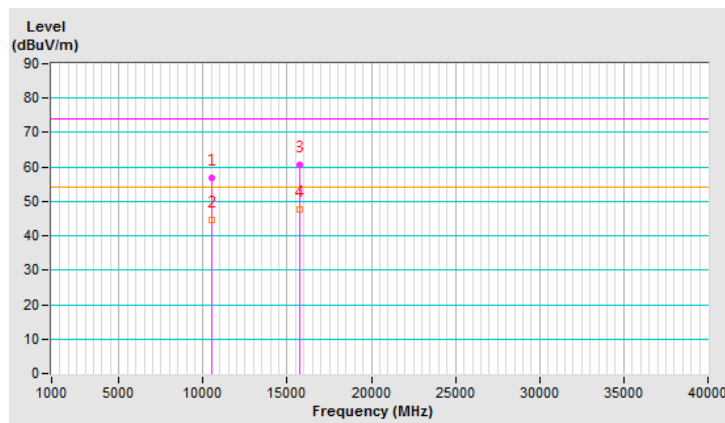


CHANNEL	TX Channel 52	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

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	#10520.00	56.7 PK	74.0	-17.3	1.93 H	135	42.24	14.46
2	#10520.00	44.7 AV	54.0	-9.3	1.93 H	135	30.24	14.46
3	15780.00	60.5 PK	74.0	-13.5	1.70 H	235	41.28	19.22
4	15780.00	47.6 AV	54.0	-6.4	1.70 H	235	28.38	19.22

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) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " # ": The radiated frequency is out of the restricted band.

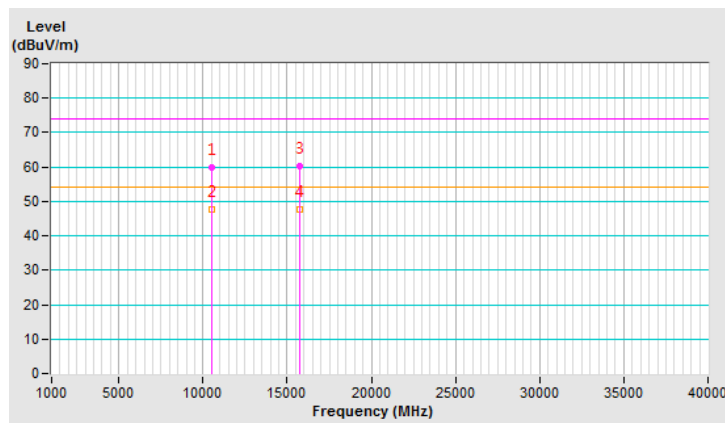


CHANNEL	TX Channel 52	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

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	#10520.00	60.0 PK	74.0	-14.0	1.92 V	66	45.54	14.46
2	#10520.00	47.6 AV	54.0	-6.4	1.92 V	66	33.14	14.46
3	15780.00	60.1 PK	74.0	-13.9	1.85 V	206	40.88	19.22
4	15780.00	47.7 AV	54.0	-6.3	1.85 V	206	28.48	19.22

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) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " # ": The radiated frequency is out of the restricted band.

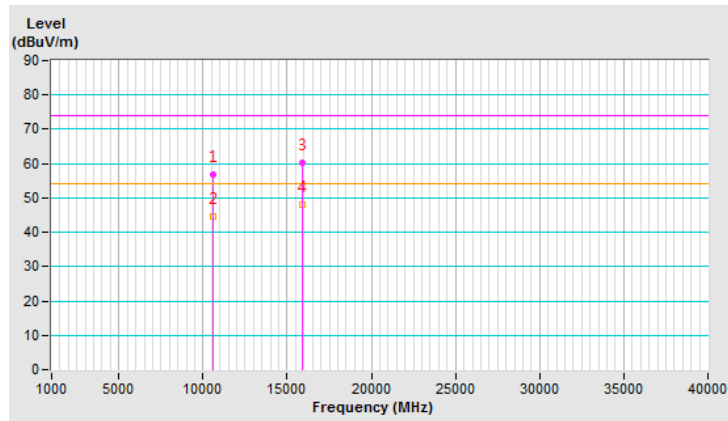


CHANNEL	TX Channel 60	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

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	10600.00	56.8 PK	74.0	-17.2	2.00 H	134	42.26	14.54
2	10600.00	44.6 AV	54.0	-9.4	2.00 H	134	30.06	14.54
3	15900.00	60.4 PK	74.0	-13.6	1.77 H	212	41.01	19.39
4	15900.00	47.9 AV	54.0	-6.1	1.77 H	212	28.51	19.39

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) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

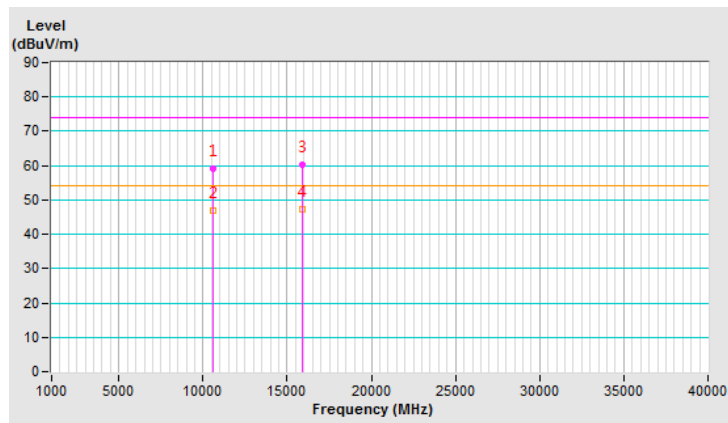


CHANNEL	TX Channel 60	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

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	10600.00	59.1 PK	74.0	-14.9	2.00 V	56	44.56	14.54
2	10600.00	46.9 AV	54.0	-7.1	2.00 V	56	32.36	14.54
3	15900.00	60.1 PK	74.0	-13.9	1.79 V	198	40.71	19.39
4	15900.00	47.4 AV	54.0	-6.6	1.79 V	198	28.01	19.39

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) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

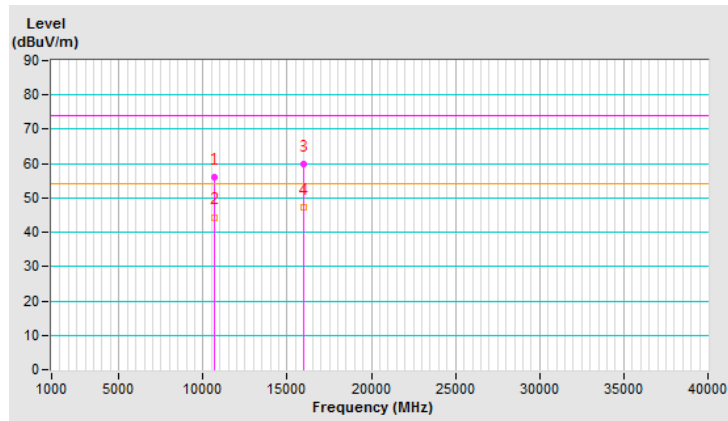


CHANNEL	TX Channel 64	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

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	10640.00	56.1 PK	74.0	-17.9	1.94 H	121	41.52	14.58
2	10640.00	44.4 AV	54.0	-9.6	1.94 H	121	29.82	14.58
3	15960.00	59.9 PK	74.0	-14.1	1.79 H	216	40.55	19.35
4	15960.00	47.4 AV	54.0	-6.6	1.79 H	216	28.05	19.35

REMARKS:

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

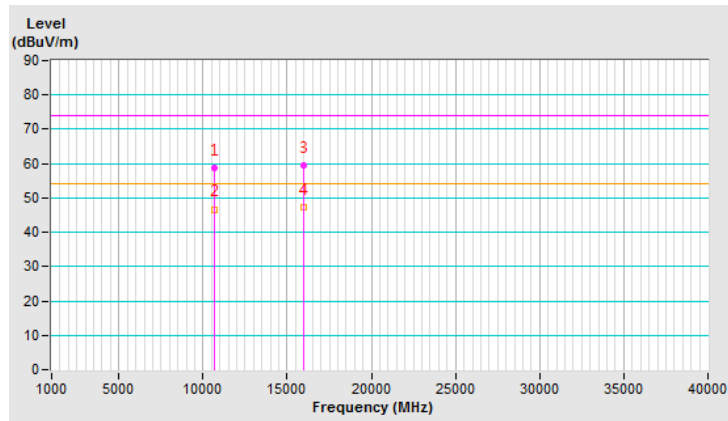


CHANNEL	TX Channel 64	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

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	10640.00	58.6 PK	74.0	-15.4	1.96 V	48	44.02	14.58
2	10640.00	46.7 AV	54.0	-7.3	1.96 V	48	32.12	14.58
3	15960.00	59.5 PK	74.0	-14.5	1.84 V	194	40.15	19.35
4	15960.00	47.1 AV	54.0	-6.9	1.84 V	194	27.75	19.35

REMARKS:

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

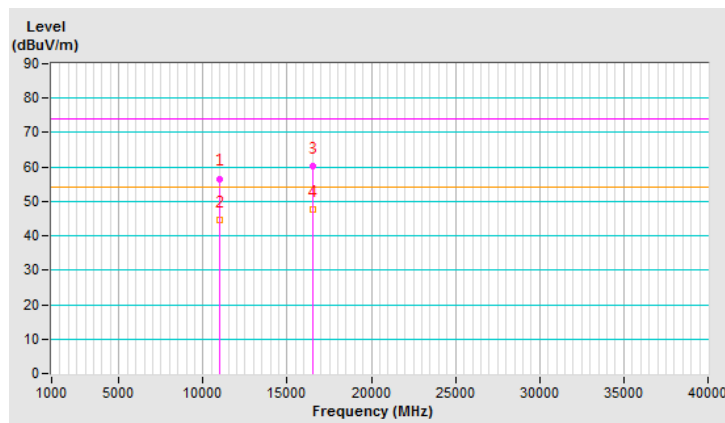


CHANNEL	TX Channel 100	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

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	11000.00	56.6 PK	74.0	-17.4	1.97 H	123	41.33	15.27
2	11000.00	44.7 AV	54.0	-9.3	1.97 H	123	29.43	15.27
3	#16500.00	60.4 PK	74.0	-13.6	1.71 H	237	39.53	20.87
4	#16500.00	47.5 AV	54.0	-6.5	1.71 H	237	26.63	20.87

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) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " # ": The radiated frequency is out of the restricted band.

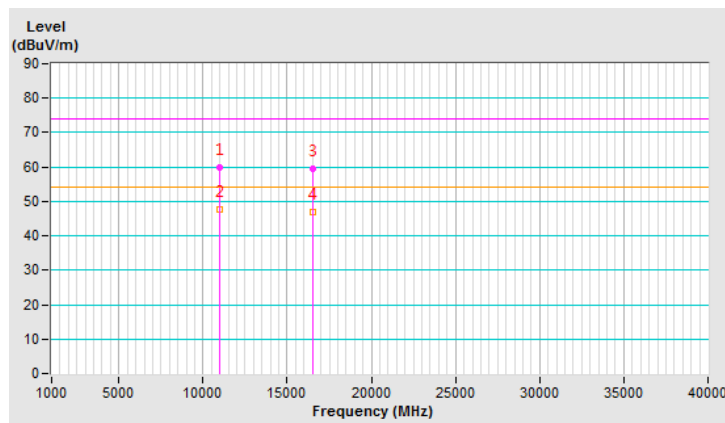


CHANNEL	TX Channel 100	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

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	11000.00	59.9 PK	74.0	-14.1	2.01 V	54	44.63	15.27
2	11000.00	47.5 AV	54.0	-6.5	2.01 V	54	32.23	15.27
3	#16500.00	59.4 PK	74.0	-14.6	1.78 V	205	38.53	20.87
4	#16500.00	46.8 AV	54.0	-7.2	1.78 V	205	25.93	20.87

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) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " # ": The radiated frequency is out of the restricted band.

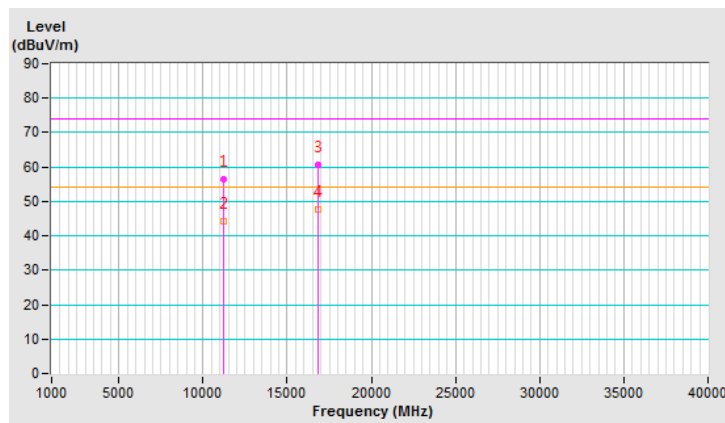


CHANNEL	TX Channel 120	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

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	11200.00	56.3 PK	74.0	-17.7	1.91 H	120	41.07	15.23
2	11200.00	44.2 AV	54.0	-9.8	1.91 H	120	28.97	15.23
3	#16800.00	60.5 PK	74.0	-13.5	1.80 H	228	38.57	21.93
4	#16800.00	47.6 AV	54.0	-6.4	1.80 H	228	25.67	21.93

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) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " # ": The radiated frequency is out of the restricted band.

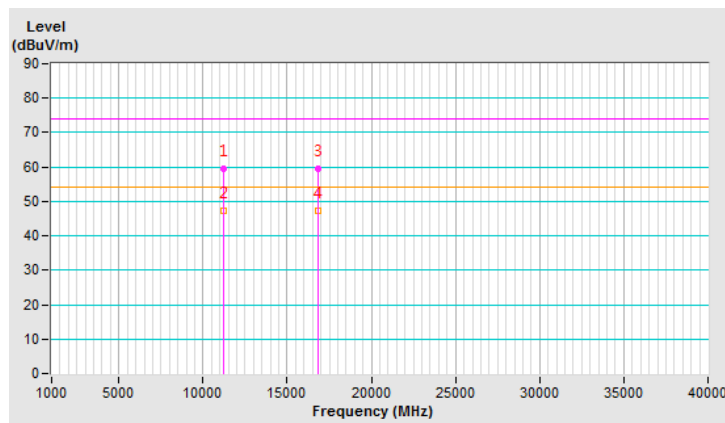


CHANNEL	TX Channel 120	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

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	11200.00	59.5 PK	74.0	-14.5	2.03 V	49	44.27	15.23
2	11200.00	47.4 AV	54.0	-6.6	2.03 V	49	32.17	15.23
3	#16800.00	59.6 PK	74.0	-14.4	1.82 V	202	37.67	21.93
4	#16800.00	47.3 AV	54.0	-6.7	1.82 V	202	25.37	21.93

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) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " # ": The radiated frequency is out of the restricted band.

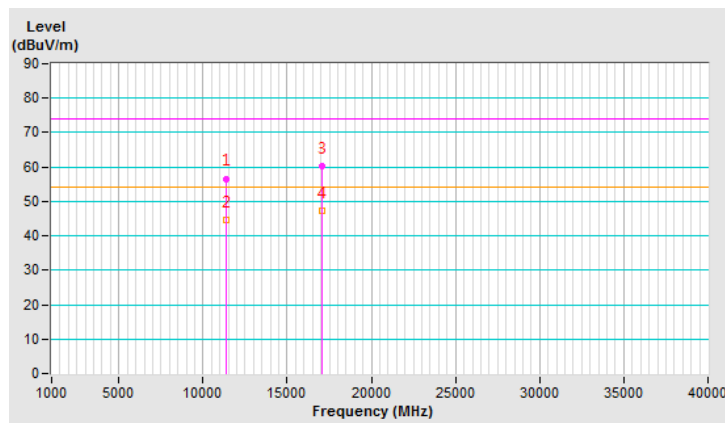


CHANNEL	TX Channel 140	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

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	11400.00	56.6 PK	74.0	-17.4	2.02 H	122	41.25	15.35
2	11400.00	44.5 AV	54.0	-9.5	2.02 H	122	29.15	15.35
3	#17100.00	60.2 PK	74.0	-13.8	1.80 H	231	36.40	23.80
4	#17100.00	47.2 AV	54.0	-6.8	1.80 H	231	23.40	23.80

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " # ": The radiated frequency is out of the restricted band.

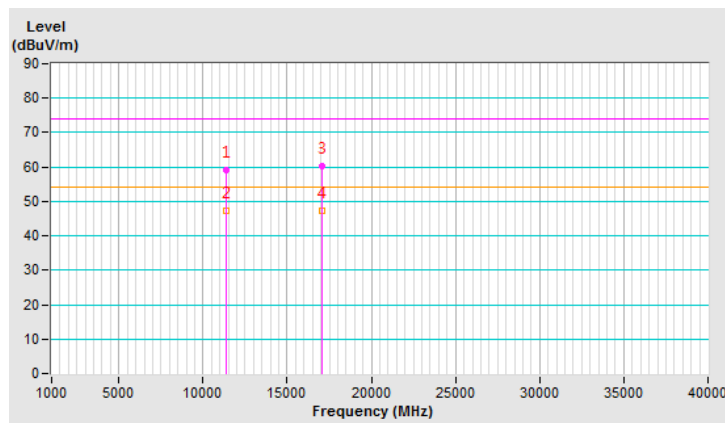


CHANNEL	TX Channel 140	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: 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	11400.00	59.2 PK	74.0	-14.8	2.02 V	77	43.85	15.35
2	11400.00	47.1 AV	54.0	-6.9	2.02 V	77	31.75	15.35
3	#17100.00	60.1 PK	74.0	-13.9	1.81 V	191	36.30	23.80
4	#17100.00	47.4 AV	54.0	-6.6	1.81 V	191	23.60	23.80

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " # ": The radiated frequency is out of the restricted band.

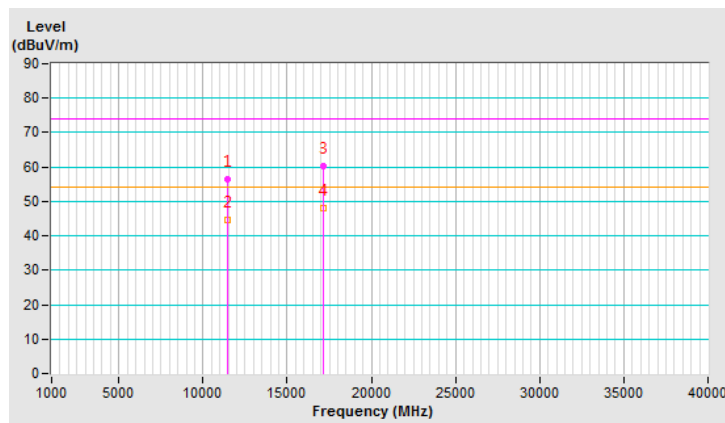


CHANNEL	TX Channel 144	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

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	11440.00	56.3 PK	74.0	-17.7	1.99 H	130	41.17	15.13
2	11440.00	44.5 AV	54.0	-9.5	1.99 H	130	29.37	15.13
3	#17160.00	60.3 PK	74.0	-13.7	1.76 H	212	36.83	23.47
4	#17160.00	47.9 AV	54.0	-6.1	1.76 H	212	24.43	23.47

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) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " # ": The radiated frequency is out of the restricted band.

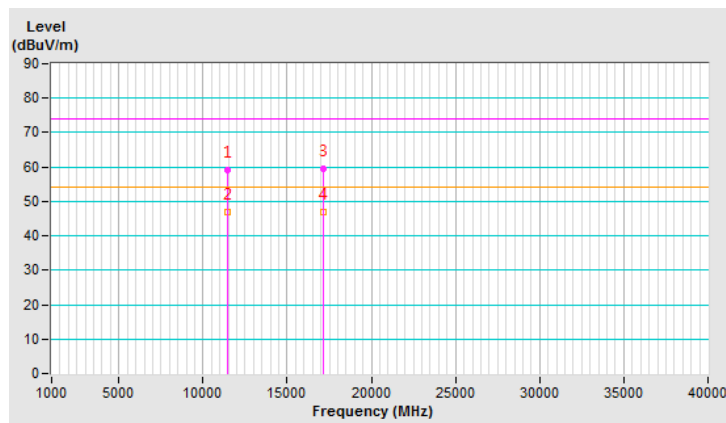


CHANNEL	TX Channel 144	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

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	11440.00	59.0 PK	74.0	-15.0	1.92 V	74	43.87	15.13
2	11440.00	47.0 AV	54.0	-7.0	1.92 V	74	31.87	15.13
3	#17160.00	59.6 PK	74.0	-14.4	1.84 V	193	36.13	23.47
4	#17160.00	46.9 AV	54.0	-7.1	1.84 V	193	23.43	23.47

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) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " # ": The radiated frequency is out of the restricted band.

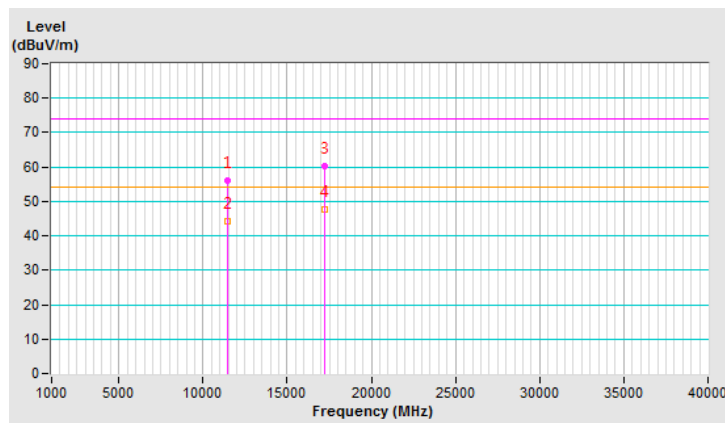


CHANNEL	TX Channel 149	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

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	11490.00	56.2 PK	74.0	-17.8	2.00 H	135	41.34	14.86
2	11490.00	44.1 AV	54.0	-9.9	2.00 H	135	29.24	14.86
3	#17235.00	60.4 PK	74.0	-13.6	1.81 H	237	37.17	23.23
4	#17235.00	47.6 AV	54.0	-6.4	1.81 H	237	24.37	23.23

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) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " # ": The radiated frequency is out of the restricted band.

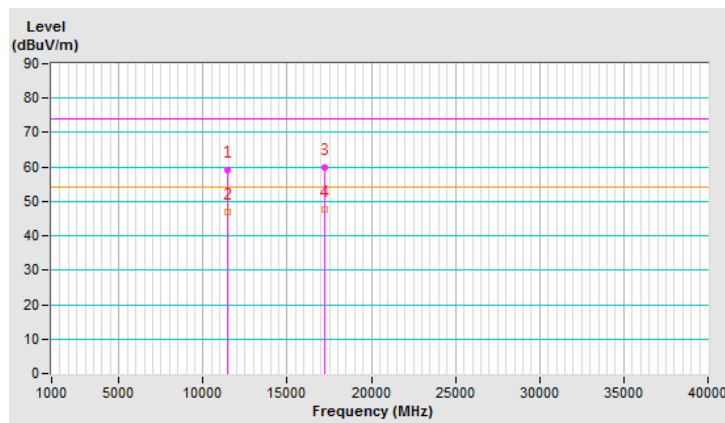


CHANNEL	TX Channel 149	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

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	11490.00	59.1 PK	74.0	-14.9	1.96 V	53	44.24	14.86
2	11490.00	46.9 AV	54.0	-7.1	1.96 V	53	32.04	14.86
3	#17235.00	59.8 PK	74.0	-14.2	1.85 V	199	36.57	23.23
4	#17235.00	47.5 AV	54.0	-6.5	1.85 V	199	24.27	23.23

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) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " # ": The radiated frequency is out of the restricted band.

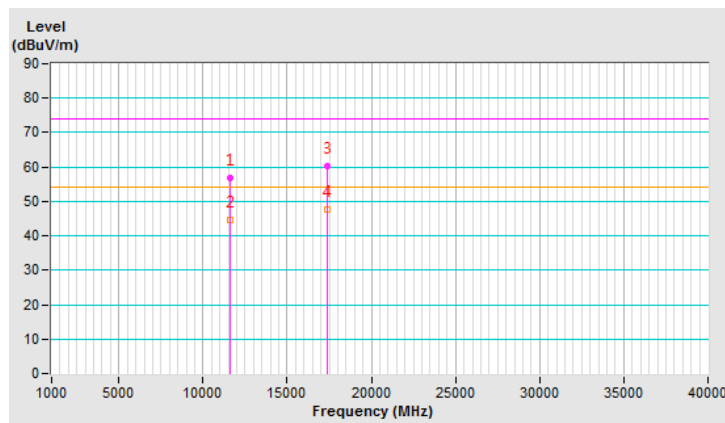


CHANNEL	TX Channel 157	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

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	11570.00	56.8 PK	74.0	-17.2	1.97 H	122	41.60	15.20
2	11570.00	44.5 AV	54.0	-9.5	1.97 H	122	29.30	15.20
3	#17355.00	60.4 PK	74.0	-13.6	1.79 H	210	36.84	23.56
4	#17355.00	47.6 AV	54.0	-6.4	1.79 H	210	24.04	23.56

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) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " # ": The radiated frequency is out of the restricted band.

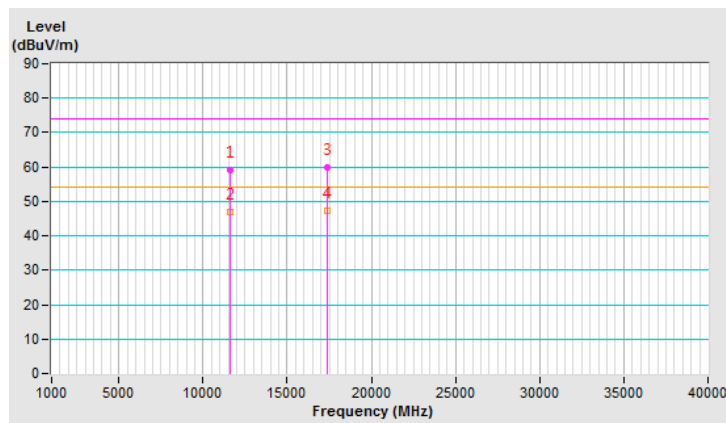


CHANNEL	TX Channel 157	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

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	11570.00	59.2 PK	74.0	-14.8	1.92 V	75	44.00	15.20
2	11570.00	46.8 AV	54.0	-7.2	1.92 V	75	31.60	15.20
3	#17355.00	59.7 PK	74.0	-14.3	1.88 V	186	36.14	23.56
4	#17355.00	47.3 AV	54.0	-6.7	1.88 V	186	23.74	23.56

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) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " # ": The radiated frequency is out of the restricted band.

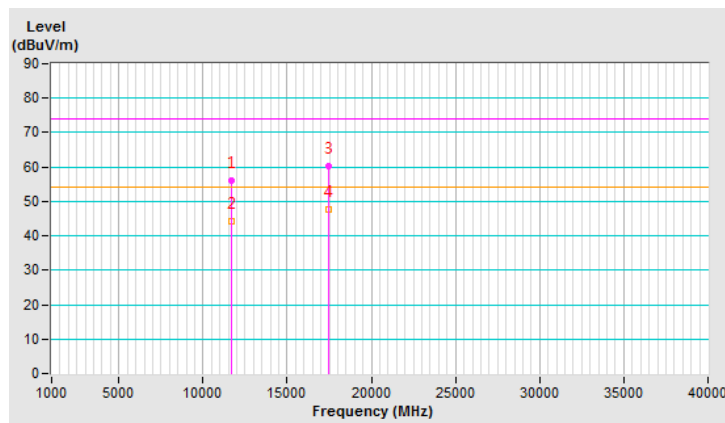


CHANNEL	TX Channel 165	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

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	11650.00	56.1 PK	74.0	-17.9	1.95 H	116	40.70	15.40
2	11650.00	44.2 AV	54.0	-9.8	1.95 H	116	28.80	15.40
3	#17475.00	60.4 PK	74.0	-13.6	1.80 H	221	36.31	24.09
4	#17475.00	47.8 AV	54.0	-6.2	1.80 H	221	23.71	24.09

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) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " # ": The radiated frequency is out of the restricted band.

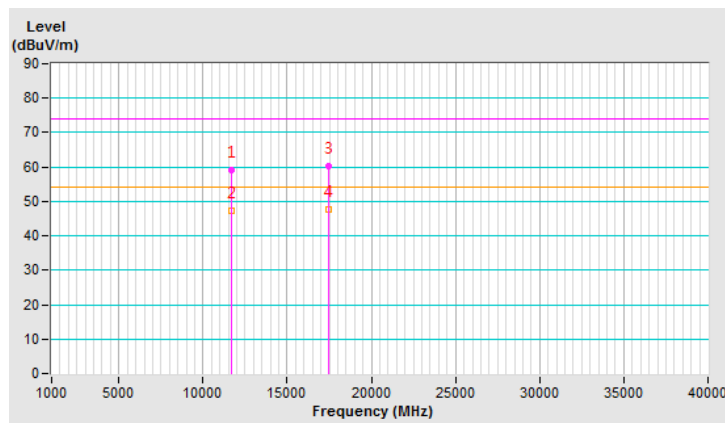


CHANNEL	TX Channel 165	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

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	11650.00	59.1 PK	74.0	-14.9	2.00 V	57	43.70	15.40
2	11650.00	47.1 AV	54.0	-6.9	2.00 V	57	31.70	15.40
3	#17475.00	60.2 PK	74.0	-13.8	1.79 V	203	36.11	24.09
4	#17475.00	47.5 AV	54.0	-6.5	1.79 V	203	23.41	24.09

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) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " # ": The radiated frequency is out of the restricted band.



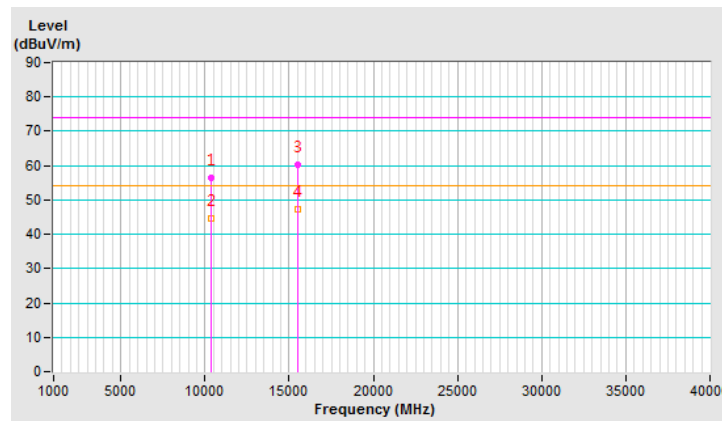
802.11ac (VHT20)

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	#10360.00	56.3 PK	74.0	-17.7	1.99 H	131	41.80	14.50
2	#10360.00	44.5 AV	54.0	-9.5	1.99 H	131	30.00	14.50
3	15540.00	60.2 PK	74.0	-13.8	1.81 H	213	41.52	18.68
4	15540.00	47.3 AV	54.0	-6.7	1.81 H	213	28.62	18.68

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) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " # ": The radiated frequency is out of the restricted band.

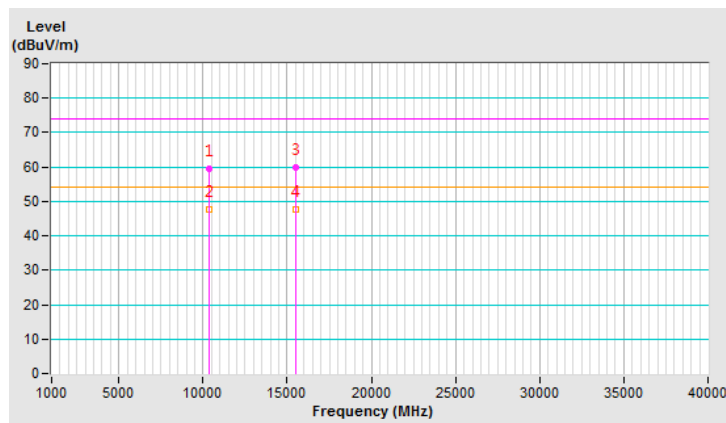


CHANNEL	TX Channel 36	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

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	#10360.00	59.5 PK	74.0	-14.5	1.99 V	61	45.00	14.50
2	#10360.00	47.5 AV	54.0	-6.5	1.99 V	61	33.00	14.50
3	15540.00	59.9 PK	74.0	-14.1	1.85 V	197	41.22	18.68
4	15540.00	47.6 AV	54.0	-6.4	1.85 V	197	28.92	18.68

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) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " # ": The radiated frequency is out of the restricted band.

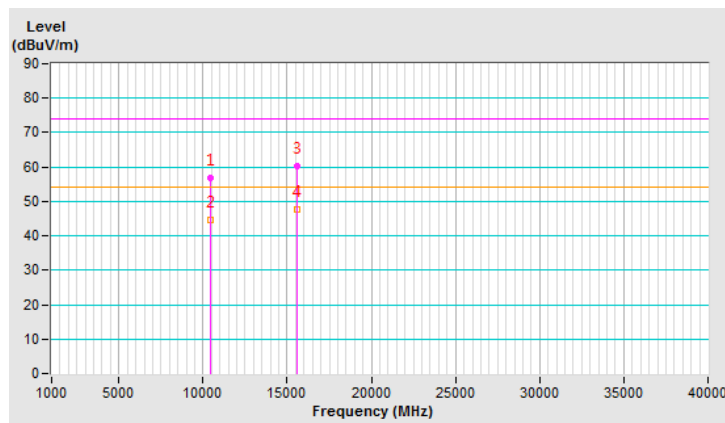


CHANNEL	TX Channel 40	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

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	#10400.00	56.7 PK	74.0	-17.3	2.00 H	122	42.10	14.60
2	#10400.00	44.5 AV	54.0	-9.5	2.00 H	122	29.90	14.60
3	15600.00	60.2 PK	74.0	-13.8	1.77 H	234	41.30	18.90
4	15600.00	47.7 AV	54.0	-6.3	1.77 H	234	28.80	18.90

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " # ": The radiated frequency is out of the restricted band.

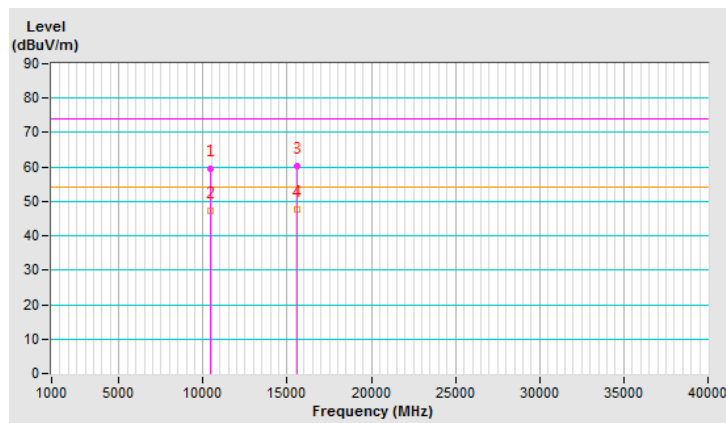


CHANNEL	TX Channel 40	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

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	#10400.00	59.5 PK	74.0	-14.5	2.00 V	70	44.90	14.60
2	#10400.00	47.3 AV	54.0	-6.7	2.00 V	70	32.70	14.60
3	15600.00	60.4 PK	74.0	-13.6	1.87 V	187	41.50	18.90
4	15600.00	47.6 AV	54.0	-6.4	1.87 V	187	28.70	18.90

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " # ": The radiated frequency is out of the restricted band.

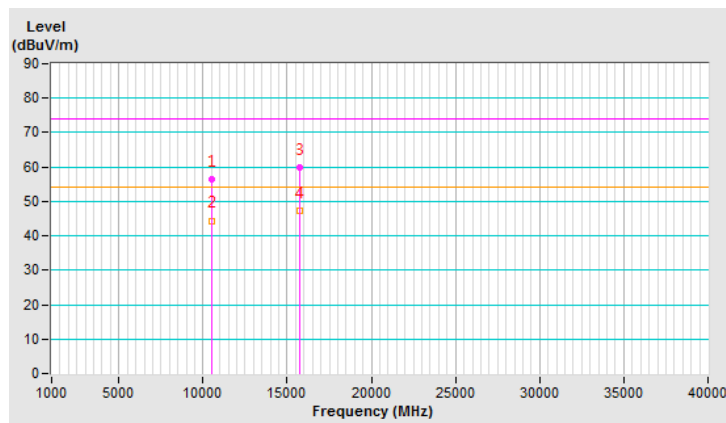


CHANNEL	TX Channel 48	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

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	#10480.00	56.5 PK	74.0	-17.5	1.96 H	140	42.03	14.47
2	#10480.00	44.4 AV	54.0	-9.6	1.96 H	140	29.93	14.47
3	15720.00	60.0 PK	74.0	-14.0	1.81 H	224	40.96	19.04
4	15720.00	47.3 AV	54.0	-6.7	1.81 H	224	28.26	19.04

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " # ": The radiated frequency is out of the restricted band.

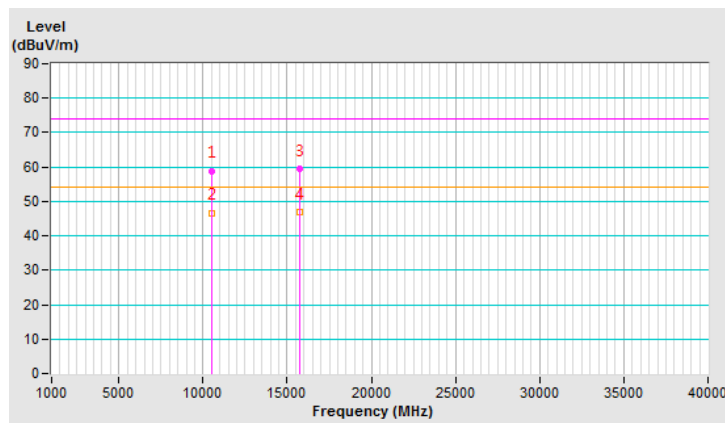


CHANNEL	TX Channel 48	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: 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	#10480.00	58.9 PK	74.0	-15.1	1.99 V	78	44.43	14.47
2	#10480.00	46.7 AV	54.0	-7.3	1.99 V	78	32.23	14.47
3	15720.00	59.6 PK	74.0	-14.4	1.81 V	197	40.56	19.04
4	15720.00	47.0 AV	54.0	-7.0	1.81 V	197	27.96	19.04

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " # ": The radiated frequency is out of the restricted band.

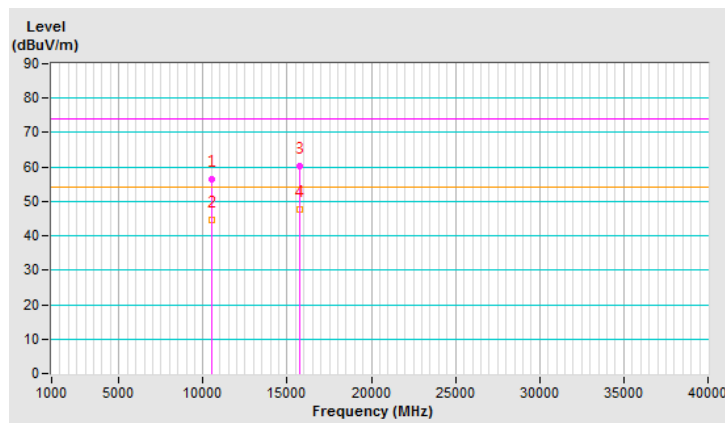


CHANNEL	TX Channel 52	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

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	#10520.00	56.5 PK	74.0	-17.5	1.98 H	122	42.04	14.46
2	#10520.00	44.7 AV	54.0	-9.3	1.98 H	122	30.24	14.46
3	15780.00	60.3 PK	74.0	-13.7	1.73 H	226	41.08	19.22
4	15780.00	47.7 AV	54.0	-6.3	1.73 H	226	28.48	19.22

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) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " # ": The radiated frequency is out of the restricted band.

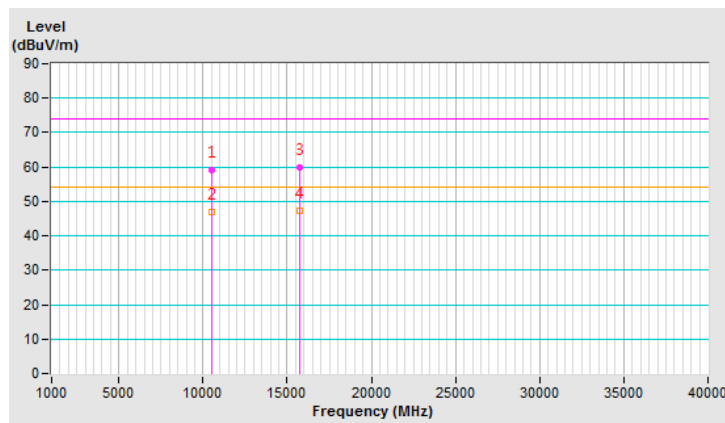


CHANNEL	TX Channel 52	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

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	#10520.00	59.1 PK	74.0	-14.9	2.02 V	71	44.64	14.46
2	#10520.00	46.9 AV	54.0	-7.1	2.02 V	71	32.44	14.46
3	15780.00	59.7 PK	74.0	-14.3	1.88 V	189	40.48	19.22
4	15780.00	47.4 AV	54.0	-6.6	1.88 V	189	28.18	19.22

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) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " # ": The radiated frequency is out of the restricted band.

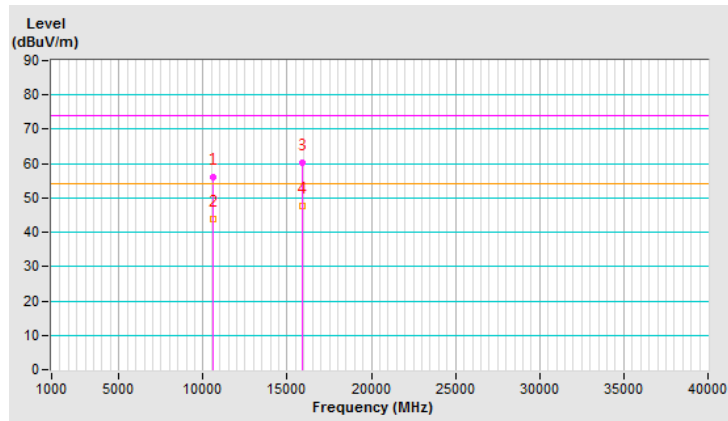


CHANNEL	TX Channel 60	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

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	10600.00	56.0 PK	74.0	-18.0	1.94 H	116	41.46	14.54
2	10600.00	44.0 AV	54.0	-10.0	1.94 H	116	29.46	14.54
3	15900.00	60.2 PK	74.0	-13.8	1.78 H	231	40.81	19.39
4	15900.00	47.7 AV	54.0	-6.3	1.78 H	231	28.31	19.39

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) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

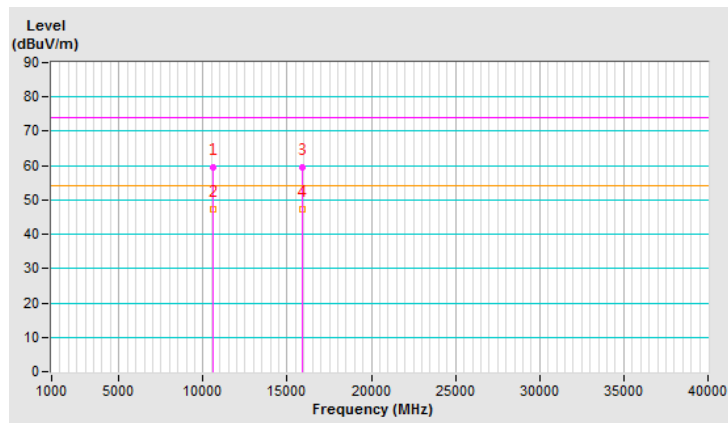


CHANNEL	TX Channel 60	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

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	10600.00	59.4 PK	74.0	-14.6	1.99 V	49	44.86	14.54
2	10600.00	47.2 AV	54.0	-6.8	1.99 V	49	32.66	14.54
3	15900.00	59.6 PK	74.0	-14.4	1.85 V	184	40.21	19.39
4	15900.00	47.1 AV	54.0	-6.9	1.85 V	184	27.71	19.39

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) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

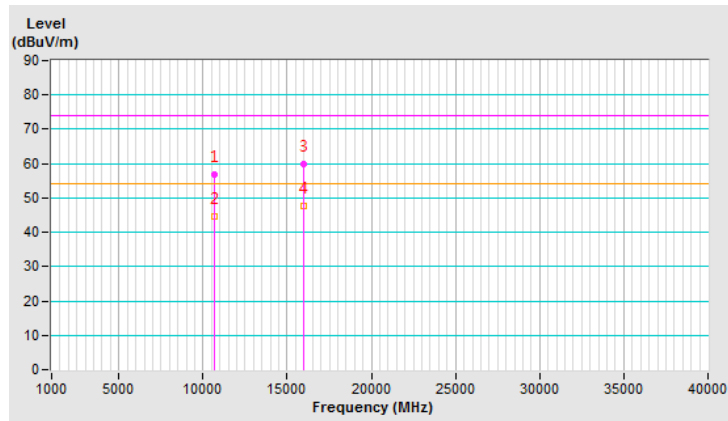


CHANNEL	TX Channel 64	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

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	10640.00	56.8 PK	74.0	-17.2	1.96 H	123	42.22	14.58
2	10640.00	44.5 AV	54.0	-9.5	1.96 H	123	29.92	14.58
3	15960.00	59.9 PK	74.0	-14.1	1.73 H	224	40.55	19.35
4	15960.00	47.5 AV	54.0	-6.5	1.73 H	224	28.15	19.35

REMARKS:

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

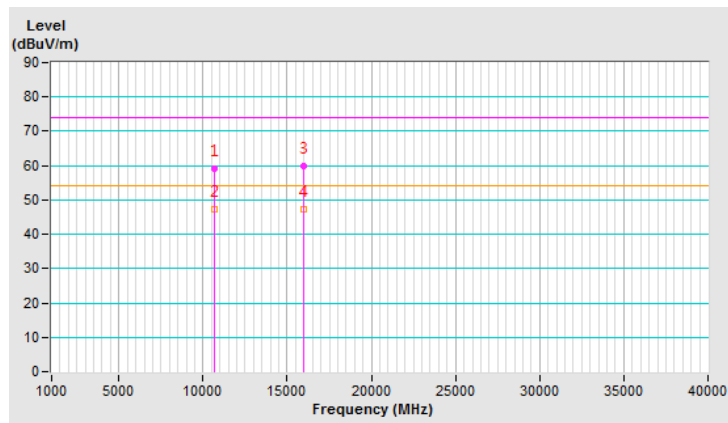


CHANNEL	TX Channel 64	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

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	10640.00	59.1 PK	74.0	-14.9	2.03 V	58	44.52	14.58
2	10640.00	47.1 AV	54.0	-6.9	2.03 V	58	32.52	14.58
3	15960.00	59.8 PK	74.0	-14.2	1.85 V	182	40.45	19.35
4	15960.00	47.2 AV	54.0	-6.8	1.85 V	182	27.85	19.35

REMARKS:

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

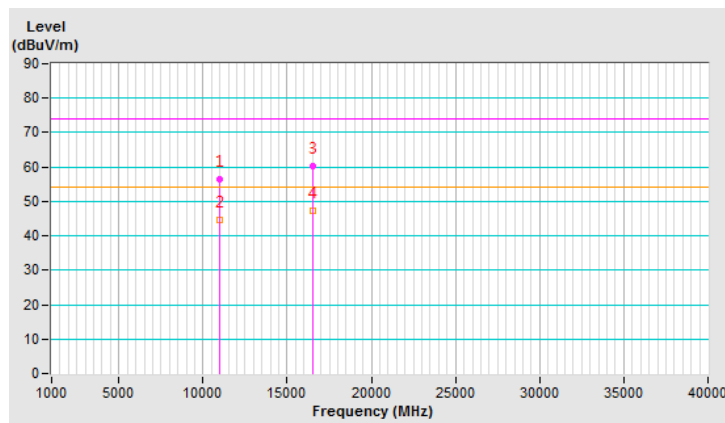


CHANNEL	TX Channel 100	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

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	11000.00	56.3 PK	74.0	-17.7	1.95 H	133	41.03	15.27
2	11000.00	44.6 AV	54.0	-9.4	1.95 H	133	29.33	15.27
3	#16500.00	60.3 PK	74.0	-13.7	1.80 H	221	39.43	20.87
4	#16500.00	47.4 AV	54.0	-6.6	1.80 H	221	26.53	20.87

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) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " # ": The radiated frequency is out of the restricted band.

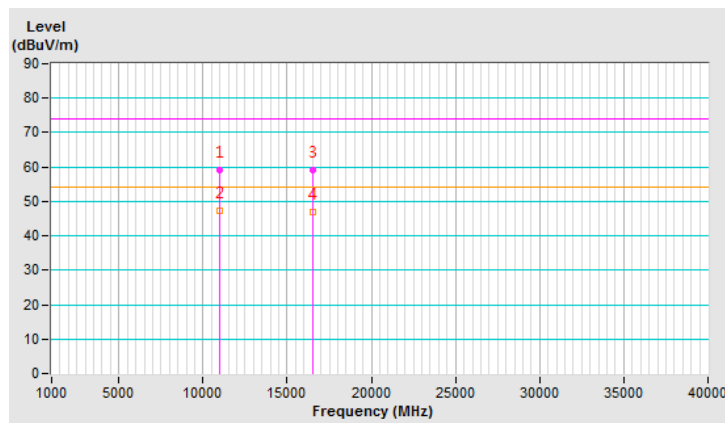


CHANNEL	TX Channel 100	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

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	11000.00	59.2 PK	74.0	-14.8	1.94 V	67	43.93	15.27
2	11000.00	47.1 AV	54.0	-6.9	1.94 V	67	31.83	15.27
3	#16500.00	59.2 PK	74.0	-14.8	1.84 V	183	38.33	20.87
4	#16500.00	46.9 AV	54.0	-7.1	1.84 V	183	26.03	20.87

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) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " # ": The radiated frequency is out of the restricted band.

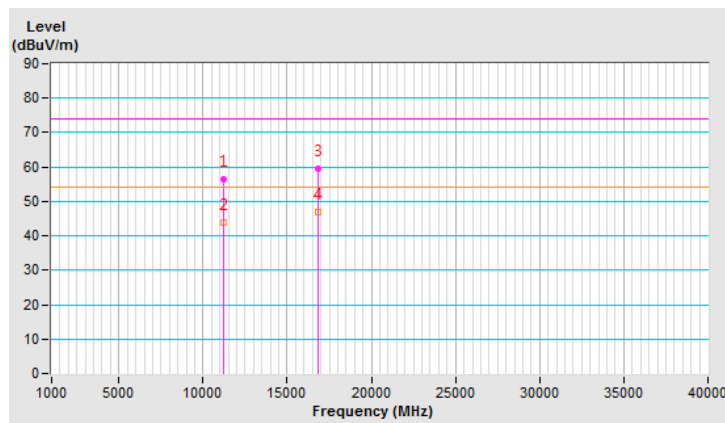


CHANNEL	TX Channel 120	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

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	11200.00	56.3 PK	74.0	-17.7	1.98 H	139	41.07	15.23
2	11200.00	44.0 AV	54.0	-10.0	1.98 H	139	28.77	15.23
3	#16800.00	59.6 PK	74.0	-14.4	1.77 H	228	37.67	21.93
4	#16800.00	47.0 AV	54.0	-7.0	1.77 H	228	25.07	21.93

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) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " # ": The radiated frequency is out of the restricted band.

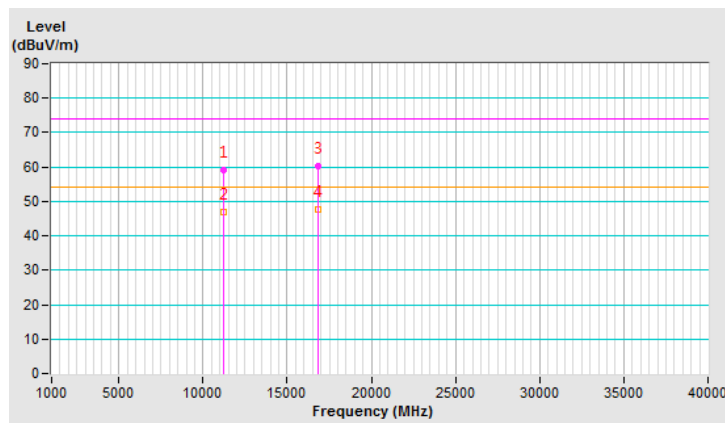


CHANNEL	TX Channel 120	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

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	11200.00	59.1 PK	74.0	-14.9	1.95 V	49	43.87	15.23
2	11200.00	47.0 AV	54.0	-7.0	1.95 V	49	31.77	15.23
3	#16800.00	60.2 PK	74.0	-13.8	1.85 V	183	38.27	21.93
4	#16800.00	47.8 AV	54.0	-6.2	1.85 V	183	25.87	21.93

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) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " # ": The radiated frequency is out of the restricted band.

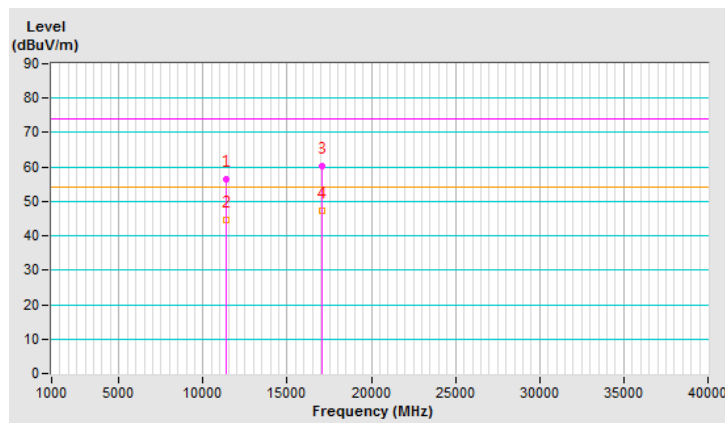


CHANNEL	TX Channel 140	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

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	11400.00	56.3 PK	74.0	-17.7	1.95 H	137	40.95	15.35
2	11400.00	44.6 AV	54.0	-9.4	1.95 H	137	29.25	15.35
3	#17100.00	60.2 PK	74.0	-13.8	1.81 H	213	36.40	23.80
4	#17100.00	47.3 AV	54.0	-6.7	1.81 H	213	23.50	23.80

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " # ": The radiated frequency is out of the restricted band.

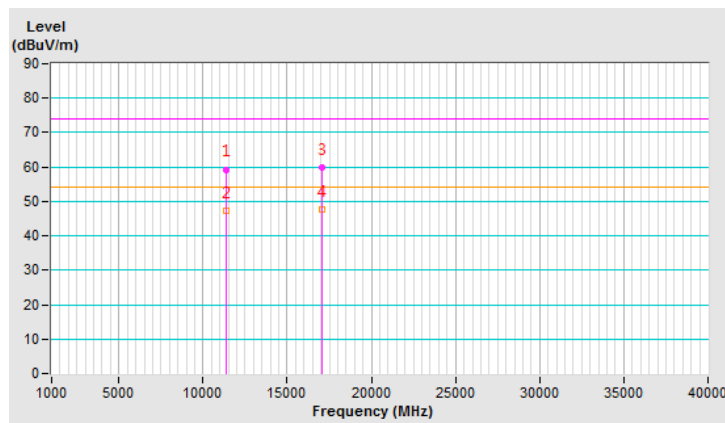


CHANNEL	TX Channel 140	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: 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	11400.00	59.3 PK	74.0	-14.7	1.93 V	61	43.95	15.35
2	11400.00	47.2 AV	54.0	-6.8	1.93 V	61	31.85	15.35
3	#17100.00	59.8 PK	74.0	-14.2	1.79 V	187	36.00	23.80
4	#17100.00	47.5 AV	54.0	-6.5	1.79 V	187	23.70	23.80

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " # ": The radiated frequency is out of the restricted band.

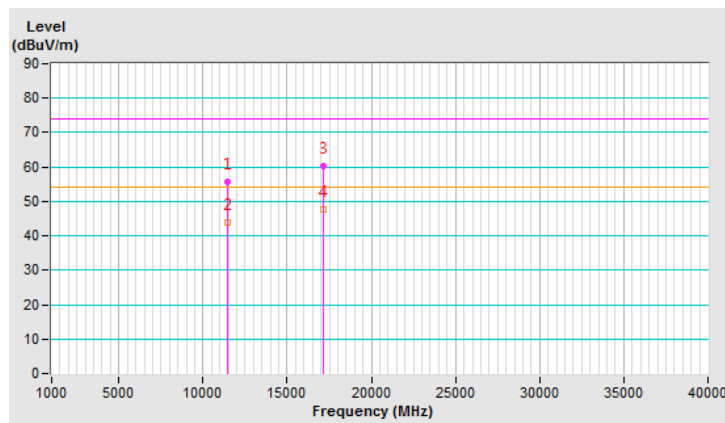


CHANNEL	TX Channel 144	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

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	11440.00	55.7 PK	74.0	-18.3	1.92 H	119	40.57	15.13
2	11440.00	43.9 AV	54.0	-10.1	1.92 H	119	28.77	15.13
3	#17160.00	60.3 PK	74.0	-13.7	1.70 H	231	36.83	23.47
4	#17160.00	47.8 AV	54.0	-6.2	1.70 H	231	24.33	23.47

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) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " # ": The radiated frequency is out of the restricted band.

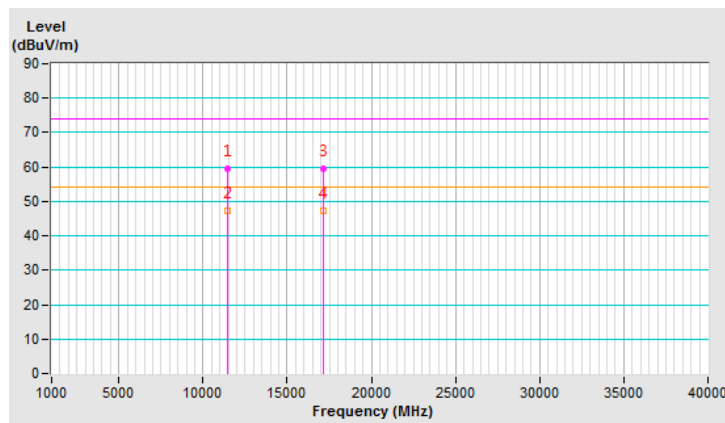


CHANNEL	TX Channel 144	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

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	11440.00	59.5 PK	74.0	-14.5	2.00 V	74	44.37	15.13
2	11440.00	47.1 AV	54.0	-6.9	2.00 V	74	31.97	15.13
3	#17160.00	59.5 PK	74.0	-14.5	1.89 V	193	36.03	23.47
4	#17160.00	47.3 AV	54.0	-6.7	1.89 V	193	23.83	23.47

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) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " # ": The radiated frequency is out of the restricted band.

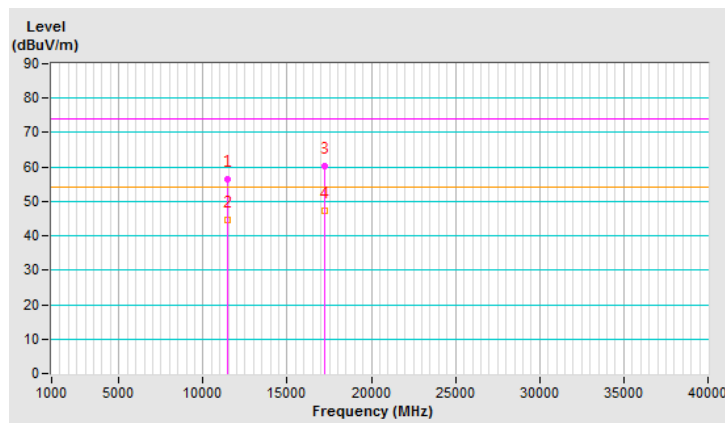


CHANNEL	TX Channel 149	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

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	11490.00	56.3 PK	74.0	-17.7	1.99 H	130	41.44	14.86
2	11490.00	44.5 AV	54.0	-9.5	1.99 H	130	29.64	14.86
3	#17235.00	60.3 PK	74.0	-13.7	1.73 H	218	37.07	23.23
4	#17235.00	47.4 AV	54.0	-6.6	1.73 H	218	24.17	23.23

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) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " # ": The radiated frequency is out of the restricted band.

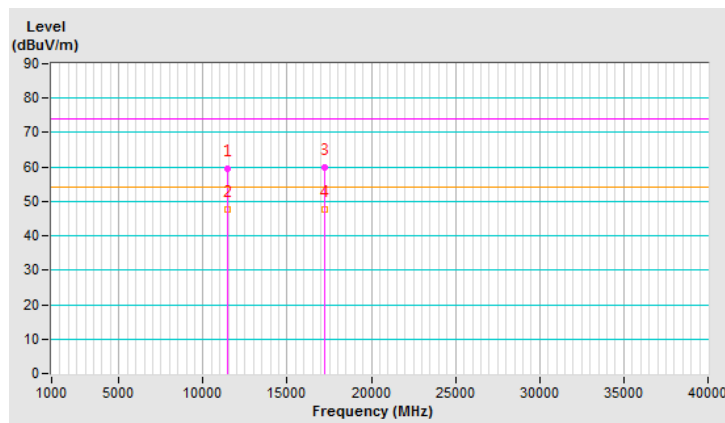


CHANNEL	TX Channel 149	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

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	11490.00	59.6 PK	74.0	-14.4	1.92 V	78	44.74	14.86
2	11490.00	47.7 AV	54.0	-6.3	1.92 V	78	32.84	14.86
3	#17235.00	60.0 PK	74.0	-14.0	1.89 V	209	36.77	23.23
4	#17235.00	47.5 AV	54.0	-6.5	1.89 V	209	24.27	23.23

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) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " # ": The radiated frequency is out of the restricted band.

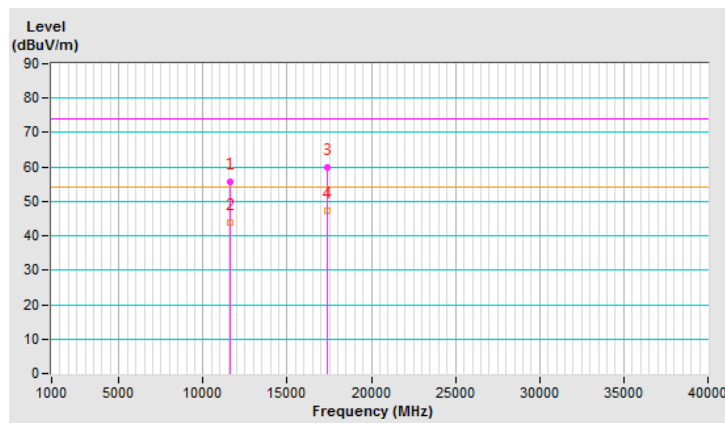


CHANNEL	TX Channel 157	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

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	11570.00	55.8 PK	74.0	-18.2	2.03 H	114	40.60	15.20
2	11570.00	43.9 AV	54.0	-10.1	2.03 H	114	28.70	15.20
3	#17355.00	59.8 PK	74.0	-14.2	1.81 H	212	36.24	23.56
4	#17355.00	47.1 AV	54.0	-6.9	1.81 H	212	23.54	23.56

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) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " # ": The radiated frequency is out of the restricted band.

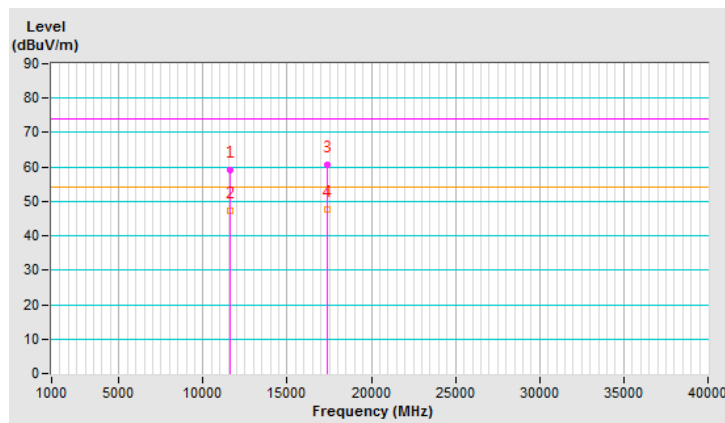


CHANNEL	TX Channel 157	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

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	11570.00	59.2 PK	74.0	-14.8	1.95 V	66	44.00	15.20
2	11570.00	47.1 AV	54.0	-6.9	1.95 V	66	31.90	15.20
3	#17355.00	60.5 PK	74.0	-13.5	1.88 V	193	36.94	23.56
4	#17355.00	47.8 AV	54.0	-6.2	1.88 V	193	24.24	23.56

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) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " # ": The radiated frequency is out of the restricted band.

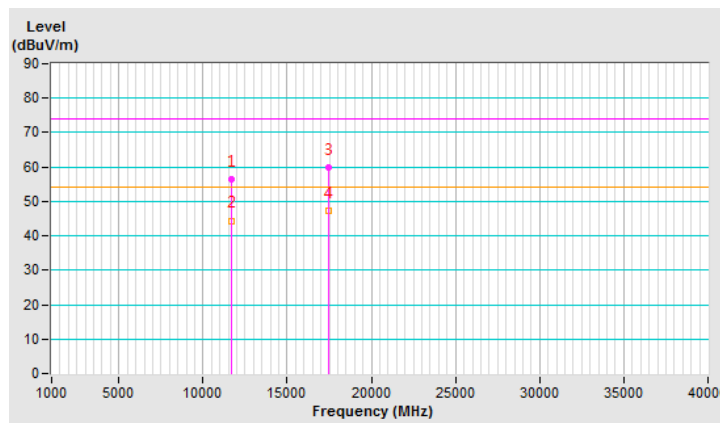


CHANNEL	TX Channel 165	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

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	11650.00	56.4 PK	74.0	-17.6	2.01 H	137	41.00	15.40
2	11650.00	44.4 AV	54.0	-9.6	2.01 H	137	29.00	15.40
3	#17475.00	60.0 PK	74.0	-14.0	1.76 H	219	35.91	24.09
4	#17475.00	47.4 AV	54.0	-6.6	1.76 H	219	23.31	24.09

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) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " # ": The radiated frequency is out of the restricted band.

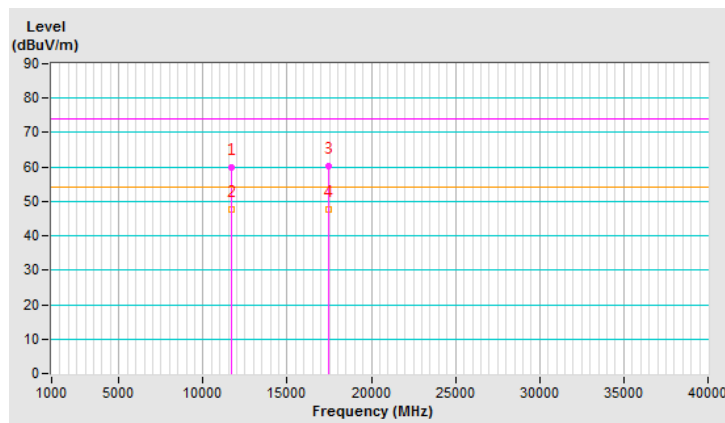


CHANNEL	TX Channel 165	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

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	11650.00	60.0 PK	74.0	-14.0	1.99 V	47	44.60	15.40
2	11650.00	47.7 AV	54.0	-6.3	1.99 V	47	32.30	15.40
3	#17475.00	60.3 PK	74.0	-13.7	1.90 V	198	36.21	24.09
4	#17475.00	47.7 AV	54.0	-6.3	1.90 V	198	23.61	24.09

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) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " # ": The radiated frequency is out of the restricted band.



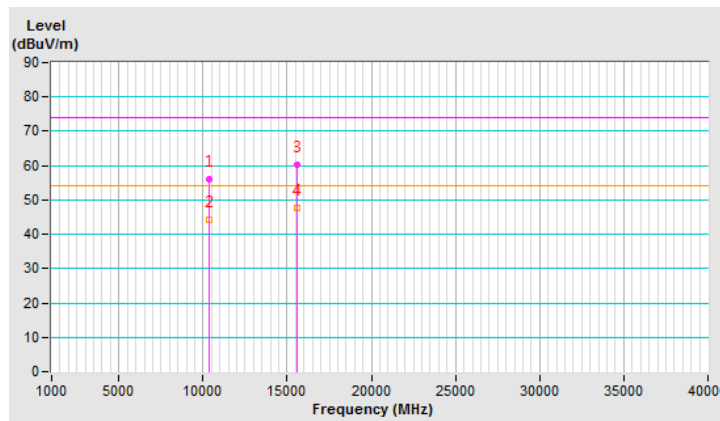
802.11ac (VHT40)

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	#10380.00	56.0 PK	74.0	-18.0	2.01 H	135	41.45	14.55
2	#10380.00	44.3 AV	54.0	-9.7	2.01 H	135	29.75	14.55
3	15570.00	60.4 PK	74.0	-13.6	1.74 H	206	41.61	18.79
4	15570.00	47.5 AV	54.0	-6.5	1.74 H	206	28.71	18.79

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) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " # ": The radiated frequency is out of the restricted band.

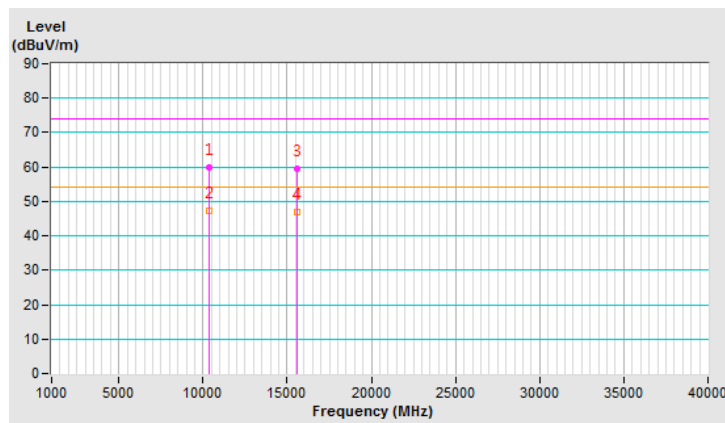


CHANNEL	TX Channel 38	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

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	#10380.00	59.7 PK	74.0	-14.3	1.91 V	55	45.15	14.55
2	#10380.00	47.3 AV	54.0	-6.7	1.91 V	55	32.75	14.55
3	15570.00	59.6 PK	74.0	-14.4	1.82 V	207	40.81	18.79
4	15570.00	46.8 AV	54.0	-7.2	1.82 V	207	28.01	18.79

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) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " # ": The radiated frequency is out of the restricted band.

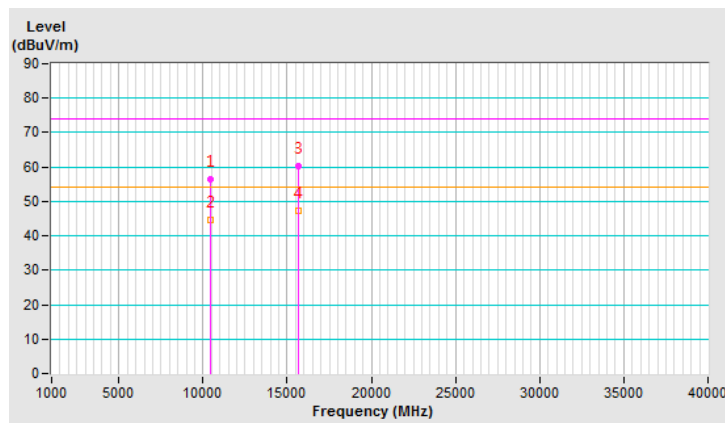


CHANNEL	TX Channel 46	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

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	#10460.00	56.3 PK	74.0	-17.7	1.92 H	130	41.79	14.51
2	#10460.00	44.6 AV	54.0	-9.4	1.92 H	130	30.09	14.51
3	15690.00	60.2 PK	74.0	-13.8	1.78 H	216	41.23	18.97
4	15690.00	47.3 AV	54.0	-6.7	1.78 H	216	28.33	18.97

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) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " # ": The radiated frequency is out of the restricted band.

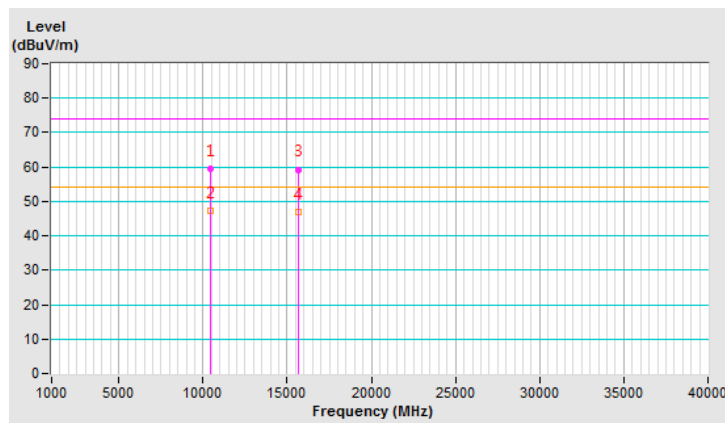


CHANNEL	TX Channel 46	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

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	#10460.00	59.6 PK	74.0	-14.4	2.03 V	57	45.09	14.51
2	#10460.00	47.4 AV	54.0	-6.6	2.03 V	57	32.89	14.51
3	15690.00	59.3 PK	74.0	-14.7	1.85 V	205	40.33	18.97
4	15690.00	46.9 AV	54.0	-7.1	1.85 V	205	27.93	18.97

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) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " # ": The radiated frequency is out of the restricted band.

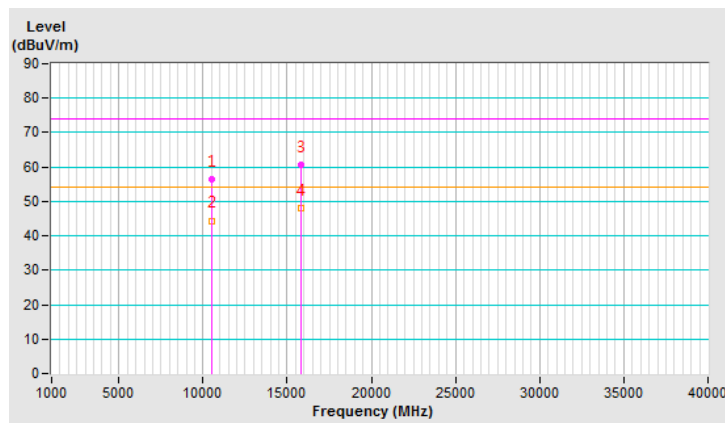


CHANNEL	TX Channel 54	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

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	#10540.00	56.3 PK	74.0	-17.7	1.98 H	113	41.83	14.47
2	#10540.00	44.4 AV	54.0	-9.6	1.98 H	113	29.93	14.47
3	15810.00	60.5 PK	74.0	-13.5	1.73 H	214	41.20	19.30
4	15810.00	47.9 AV	54.0	-6.1	1.73 H	214	28.60	19.30

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " # ": The radiated frequency is out of the restricted band.

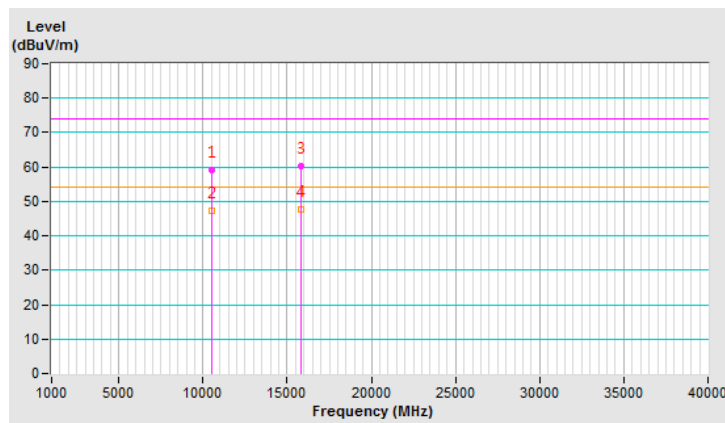


CHANNEL	TX Channel 54	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

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	#10540.00	59.1 PK	74.0	-14.9	1.97 V	76	44.63	14.47
2	#10540.00	47.2 AV	54.0	-6.8	1.97 V	76	32.73	14.47
3	15810.00	60.1 PK	74.0	-13.9	1.81 V	193	40.80	19.30
4	15810.00	47.5 AV	54.0	-6.5	1.81 V	193	28.20	19.30

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " # ": The radiated frequency is out of the restricted band.

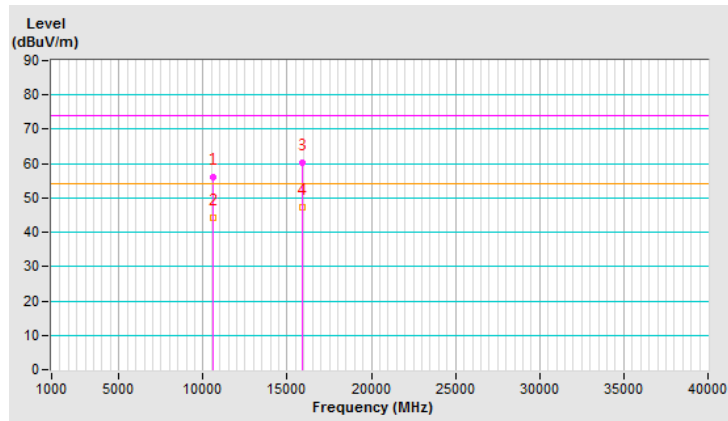


CHANNEL	TX Channel 62	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

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	10620.00	56.0 PK	74.0	-18.0	1.91 H	145	41.43	14.57
2	10620.00	44.3 AV	54.0	-9.7	1.91 H	145	29.73	14.57
3	15930.00	60.2 PK	74.0	-13.8	1.70 H	216	40.83	19.37
4	15930.00	47.4 AV	54.0	-6.6	1.70 H	216	28.03	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) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

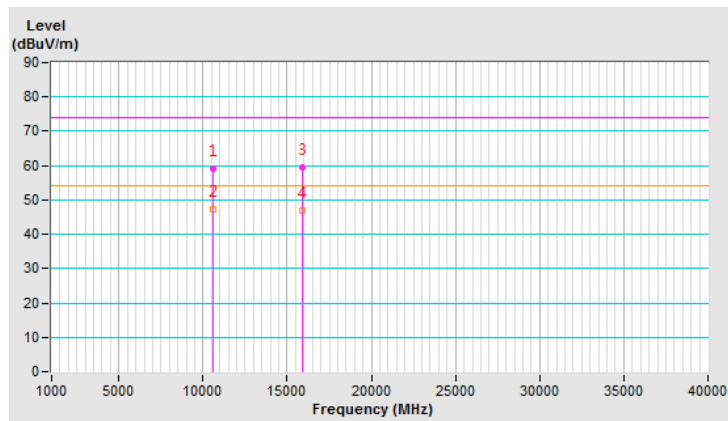


CHANNEL	TX Channel 62	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

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	10620.00	59.2 PK	74.0	-14.8	1.93 V	55	44.63	14.57
2	10620.00	47.2 AV	54.0	-6.8	1.93 V	55	32.63	14.57
3	15930.00	59.6 PK	74.0	-14.4	1.88 V	197	40.23	19.37
4	15930.00	46.9 AV	54.0	-7.1	1.88 V	197	27.53	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) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

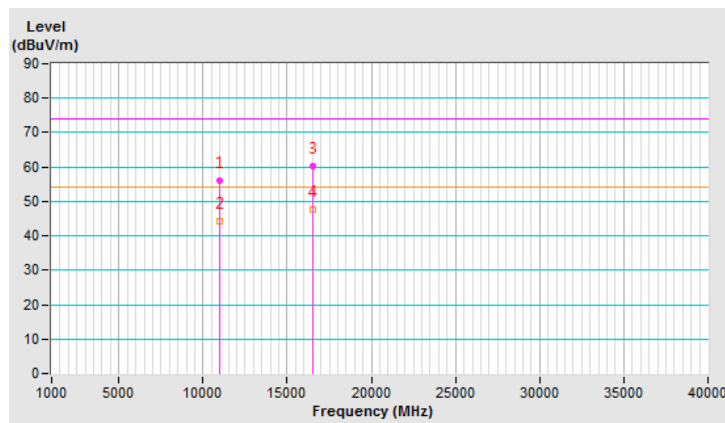


CHANNEL	TX Channel 102	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

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	11020.00	56.1 PK	74.0	-17.9	1.99 H	141	40.83	15.27
2	11020.00	44.1 AV	54.0	-9.9	1.99 H	141	28.83	15.27
3	#16530.00	60.3 PK	74.0	-13.7	1.73 H	230	39.23	21.07
4	#16530.00	47.8 AV	54.0	-6.2	1.73 H	230	26.73	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) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " # ": The radiated frequency is out of the restricted band.

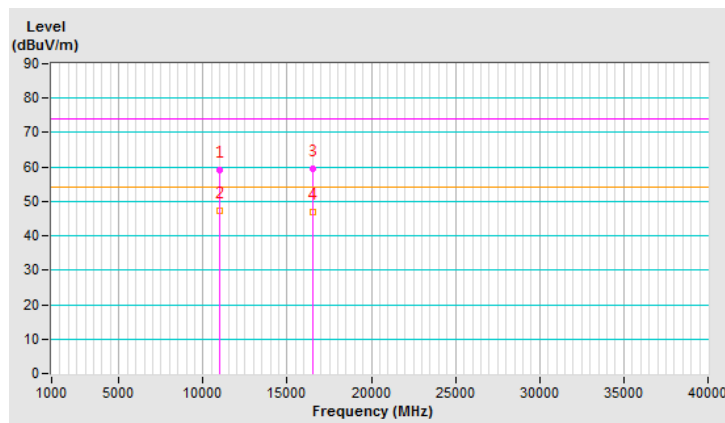


CHANNEL	TX Channel 102	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

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	11020.00	59.0 PK	74.0	-15.0	1.96 V	77	43.73	15.27
2	11020.00	47.2 AV	54.0	-6.8	1.96 V	77	31.93	15.27
3	#16530.00	59.6 PK	74.0	-14.4	1.81 V	191	38.53	21.07
4	#16530.00	46.8 AV	54.0	-7.2	1.81 V	191	25.73	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) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " # ": The radiated frequency is out of the restricted band.

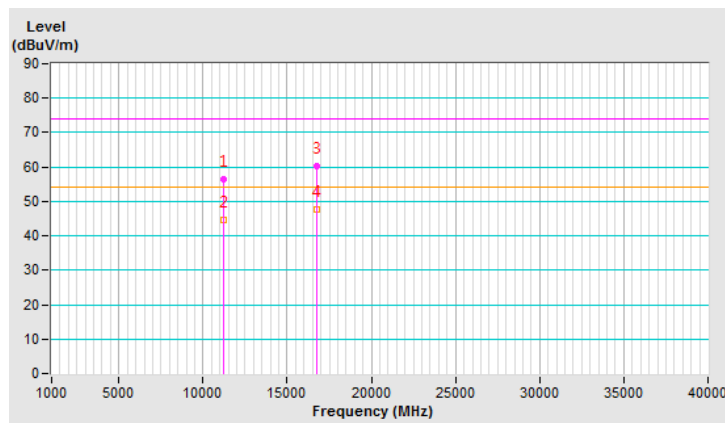


CHANNEL	TX Channel 118	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

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	11180.00	56.3 PK	74.0	-17.7	1.96 H	119	41.06	15.24
2	11180.00	44.6 AV	54.0	-9.4	1.96 H	119	29.36	15.24
3	#16770.00	60.3 PK	74.0	-13.7	1.80 H	225	38.45	21.85
4	#16770.00	47.8 AV	54.0	-6.2	1.80 H	225	25.95	21.85

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " # ": The radiated frequency is out of the restricted band.

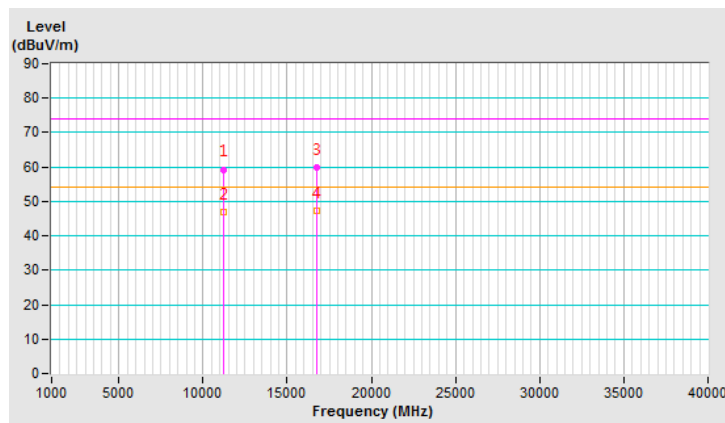


CHANNEL	TX Channel 118	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

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	11180.00	59.3 PK	74.0	-14.7	1.91 V	65	44.06	15.24
2	11180.00	47.0 AV	54.0	-7.0	1.91 V	65	31.76	15.24
3	#16770.00	59.8 PK	74.0	-14.2	1.86 V	195	37.95	21.85
4	#16770.00	47.1 AV	54.0	-6.9	1.86 V	195	25.25	21.85

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " # ": The radiated frequency is out of the restricted band.

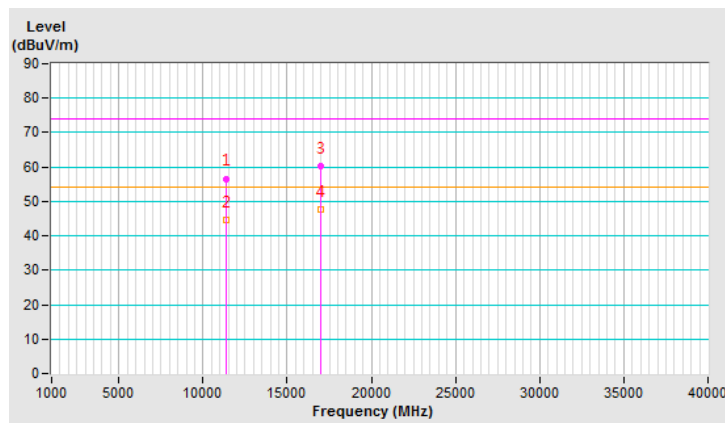


CHANNEL	TX Channel 134	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

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	11340.00	56.6 PK	74.0	-17.4	1.98 H	144	41.36	15.24
2	11340.00	44.7 AV	54.0	-9.3	1.98 H	144	29.46	15.24
3	#17010.00	60.2 PK	74.0	-13.8	1.79 H	221	36.98	23.22
4	#17010.00	47.5 AV	54.0	-6.5	1.79 H	221	24.28	23.22

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) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " # ": The radiated frequency is out of the restricted band.

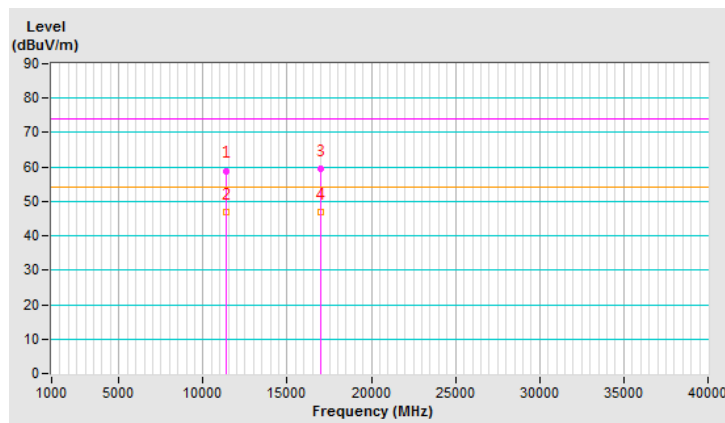


CHANNEL	TX Channel 134	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: 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	11340.00	58.9 PK	74.0	-15.1	2.03 V	67	43.66	15.24
2	11340.00	46.9 AV	54.0	-7.1	2.03 V	67	31.66	15.24
3	#17010.00	59.5 PK	74.0	-14.5	1.86 V	210	36.28	23.22
4	#17010.00	47.0 AV	54.0	-7.0	1.86 V	210	23.78	23.22

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) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " # ": The radiated frequency is out of the restricted band.

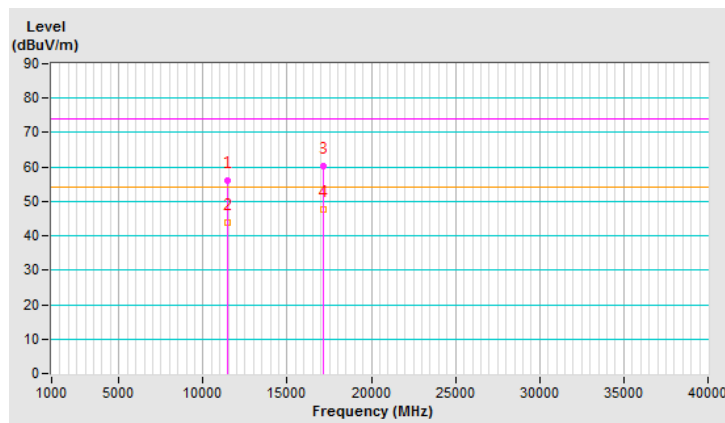


CHANNEL	TX Channel 142	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

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	11420.00	56.1 PK	74.0	-17.9	1.91 H	122	40.86	15.24
2	11420.00	43.9 AV	54.0	-10.1	1.91 H	122	28.66	15.24
3	#17130.00	60.4 PK	74.0	-13.6	1.70 H	233	36.77	23.63
4	#17130.00	47.8 AV	54.0	-6.2	1.70 H	233	24.17	23.63

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " # ": The radiated frequency is out of the restricted band.

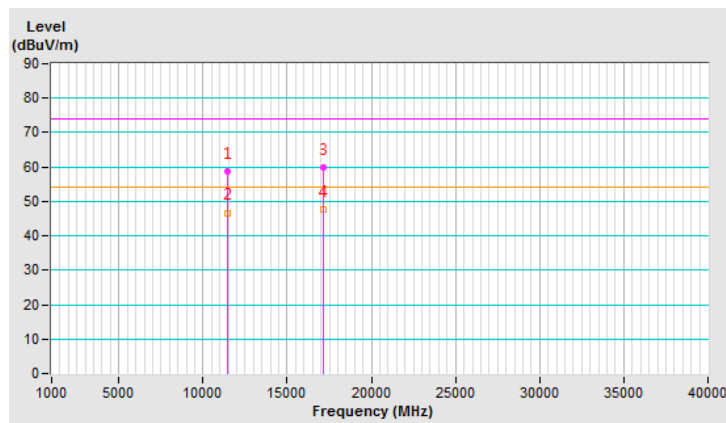


CHANNEL	TX Channel 142	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

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	11420.00	58.8 PK	74.0	-15.2	2.01 V	50	43.56	15.24
2	11420.00	46.7 AV	54.0	-7.3	2.01 V	50	31.46	15.24
3	#17130.00	60.0 PK	74.0	-14.0	1.80 V	204	36.37	23.63
4	#17130.00	47.5 AV	54.0	-6.5	1.80 V	204	23.87	23.63

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " # ": The radiated frequency is out of the restricted band.

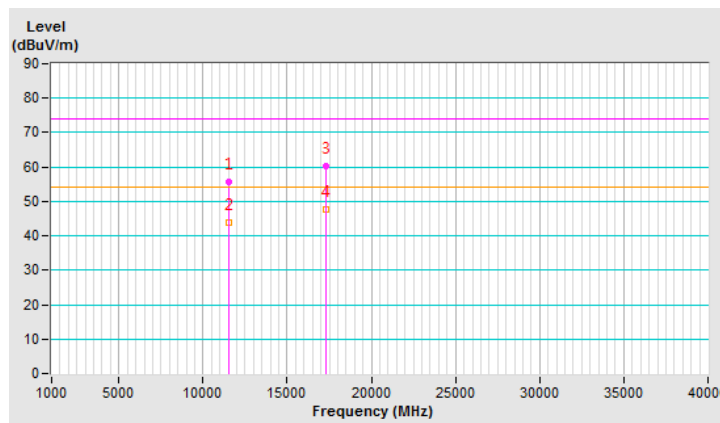


CHANNEL	TX Channel 151	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

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	11510.00	55.7 PK	74.0	-18.3	2.03 H	135	40.85	14.85
2	11510.00	43.7 AV	54.0	-10.3	2.03 H	135	28.85	14.85
3	#17265.00	60.3 PK	74.0	-13.7	1.73 H	218	37.07	23.23
4	#17265.00	47.8 AV	54.0	-6.2	1.73 H	218	24.57	23.23

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) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " # ": The radiated frequency is out of the restricted band.

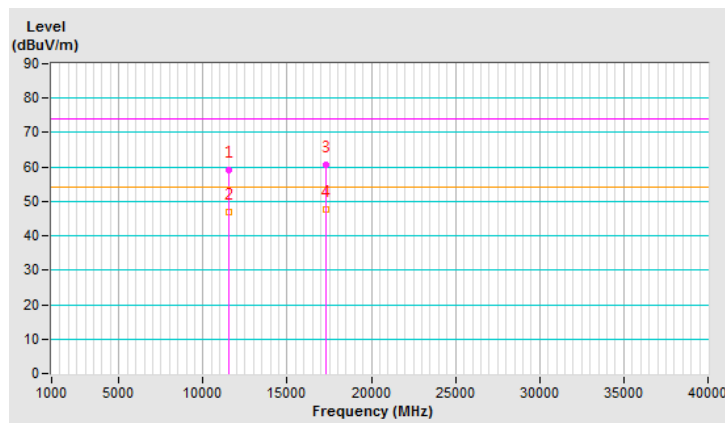


CHANNEL	TX Channel 151	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

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	11510.00	59.0 PK	74.0	-15.0	1.99 V	72	44.15	14.85
2	11510.00	46.8 AV	54.0	-7.2	1.99 V	72	31.95	14.85
3	#17265.00	60.5 PK	74.0	-13.5	1.86 V	196	37.27	23.23
4	#17265.00	47.7 AV	54.0	-6.3	1.86 V	196	24.47	23.23

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) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " # ": The radiated frequency is out of the restricted band.

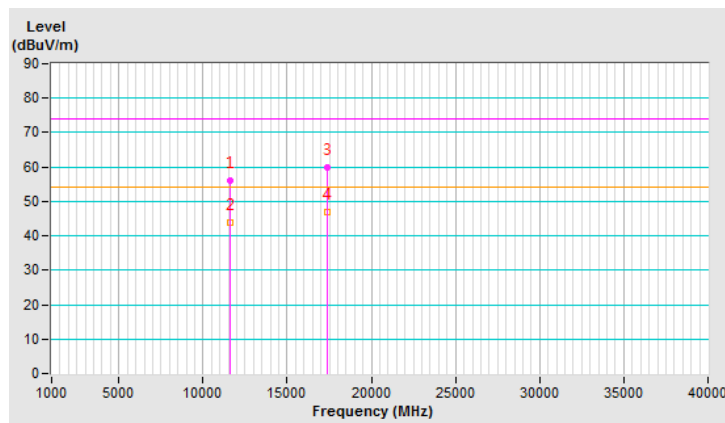


CHANNEL	TX Channel 159	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

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	11590.00	56.1 PK	74.0	-17.9	1.98 H	125	40.79	15.31
2	11590.00	44.0 AV	54.0	-10.0	1.98 H	125	28.69	15.31
3	#17385.00	59.7 PK	74.0	-14.3	1.79 H	216	35.94	23.76
4	#17385.00	47.0 AV	54.0	-7.0	1.79 H	216	23.24	23.76

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) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " # ": The radiated frequency is out of the restricted band.



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

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	11590.00	60.1 PK	74.0	-13.9	1.96 V	76	44.79	15.31
2	11590.00	47.7 AV	54.0	-6.3	1.96 V	76	32.39	15.31
3	#17385.00	60.1 PK	74.0	-13.9	1.88 V	197	36.34	23.76
4	#17385.00	47.5 AV	54.0	-6.5	1.88 V	197	23.74	23.76

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) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " # ": The radiated frequency is out of the restricted band.

