CFR 47 FCC PART 15 SUBPART E
ISED RSS-247 ISSUE 2

TEST REPORT

For

WIFI+BT Module

MODEL NUMBER: WCT5HM2511

FCC ID: 2AC23-WCT5H

IC: 12290A-WCT5H

REPORT NUMBER: 4789290585.1-10

ISSUE DATE: March 18, 2020

Prepared for

Hui Zhou Gaoshengda Technology Co.,LTD
NO.75 Zhongkai Development Area Huizhou, Guangdong China

Prepared by

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Revision History

Rev.	Issue Date	Revisions	Revised By
V0	3/18/2020	Initial Issue	

Summary of Test Results			
Clause	Test Items	FCC/IC Rules	Test Results
1	6dB/26dB Bandwidth	FCC 15.407 (a)&(e) RSS-247 Clause 6.2	PASS
2	99% Occupied Bandwidth	RSS-Gen Clause 6.7	PASS
3	Maximum Conducted Output Power	FCC 15.407 (a) RSS-247 Clause 6.2	PASS
4	Power Spectral Density	FCC 15.407 (a) RSS-247 Clause 6.2	PASS
5	Radiated Bandedge and Spurious Emission	FCC 15.407 (b) FCC 15.209 FCC 15.205 RSS-247 Clause 6.2 RSS-GEN Clause 8.9	PASS
6	Conducted Emission Test For AC Power Port	FCC 15.207 RSS-GEN Clause 8.8	PASS
7	Frequency Stability	FCC 15.407 (g)	PASS
8	Antenna Requirement	FCC 15.203 RSS-GEN Clause 8.3	PASS
Note: This test report is only published to and used by the applicant, and it is not for evidence purpose in China.			

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1. ATTESTATION OF TEST RESULTS

Applicant Information

Company Name: Hui Zhou Gaoshengda Technology Co.,LTD
Address: NO.75 Zhongkai Development Area Huizhou, Guangdong China

Manufacturer Information

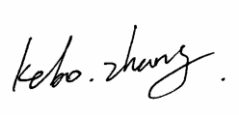
Company Name: Hui Zhou Gaoshengda Technology Co.,LTD
Address: NO.75 Zhongkai Development Area Huizhou, Guangdong China

EUT Description

EUT Name: WIFI+BT Module
Model: WCT5HM2511
Sample Status: Normal
Sample ID: 2755848
Sample Received Date: February 28, 2020
Date of Tested: February 28, 2020~ March 10, 2020

APPLICABLE STANDARDS	
STANDARD	**TEST RESULTS**
CFR 47 FCC PART 15 SUBPART E	PASS
ISED RSS-247 Issue 2	PASS
ISED RSS-GEN Issue 5	PASS

Prepared By:



Kebo Zhang
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Checked By:

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Laboratory Leader

Approved By:

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Laboratory Manager

2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with ANSI C63.10-2013, CFR 47 FCC Part 2, CFR 47 FCC Part 15, KDB 789033 D02 v02r01, RSS-GEN Issue 5, RSS-247 Issue 2, KDB414788 D01 Radiated Test Site v01.

3. FACILITIES AND ACCREDITATION

Accreditation Certificate	**A2LA (Certificate No.: 4102.01)** UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has been assessed and proved to be in compliance with A2LA. **FCC (FCC Designation No.: CN1187)** UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. Has been recognized to perform compliance testing on equipment subject to the Commission's Delcaration of Conformity (DoC) and Certification rules **ISED(Company No.: 21320)** UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has been registered and fully described in a report filed with ISED. The Company Number is 21320. **VCCI (Registration No.: G-20019, R-20004, C-20012 and T-20011)** UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has been assessed and proved to be in compliance with VCCI, the Membership No. is 3793. Facility Name: Chamber D, the VCCI registration No. is G-20019 and R-20004 Shielding Room B , the VCCI registration No. is C-20012 and T-20011

Note 1: All tests measurement facilities use to collect the measurement data are located at Building 10, Innovation Technology Park, Song Shan Lake Hi tech Development Zone, Dongguan, 523808, China

Note 2: The test anechoic chamber in UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch had been calibrated and compared to the open field sites and the test anechoic chamber is shown to be equivalent to or worst case from the open field site.

Note 3: For below 30MHz, lab had performed measurements at test anechoic chamber and comparing to measurements obtained on an open field site. And these measurements below 30MHz had been correlated to measurements performed on an OFS.

4. CALIBRATION AND UNCERTAINTY

4.1. MEASURING INSTRUMENT CALIBRATION

The measuring equipment utilized to perform the tests documented in this report has been calibrated in accordance with the manufacturer's recommendations, and is traceable to recognize national standards.

4.2. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

Test Item	Uncertainty
Uncertainty for Conduction emission test	3.62dB
Uncertainty for Radiation Emission test(include Fundamental emission) (9KHz-30MHz)	2.2dB
Uncertainty for Radiation Emission test(include Fundamental emission) (30MHz-1GHz)	4.00dB
Uncertainty for Radiation Emission test (1GHz to 26GHz)(include Fundamental emission)	5.78dB (1GHz-18Gz)
	5.23dB (18GHz-26Gz)
	5.64dB (26GHz-40Gz)
Note: This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.	

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

EUT Name	WIFI+BT Module
Model	WCT5HM2511
Radio Technology	IEEE802.11a IEEE802.11n HT20/n HT40 IEEE802.11ac VHT20/VHT40/VHT80
Operation frequency	UNII-1/UNII-3
Modulation	OFDM(BPSK,QPSK,16QAM,64QAM,256QAM)
Power Supply	DC 5V

5.2. MAXIMUM EIRP

UNII-1 BAND

IEE Std.	Frequency (MHz)	Max Power (dBm)	Max EIRP (dBm)
802.11a	5150-5250	15.91	19.74
802.11n HT20	5150-5250	14.52	18.35
802.11n HT40	5150-5250	15.07	18.90
802.11ac VHT20	5150-5250	14.19	18.02
802.11ac VHT40	5150-5250	14.93	18.76
802.11ac VHT80	5150-5250	14.63	18.46

UNII-3 BAND

IEE Std. 802.11	Frequency (MHz)	Max Power (dBm)
802.11a	5725-5850	15.89
802.11n HT20	5725-5850	14.56
802.11n HT40	5725-5850	14.45
802.11ac VHT20	5725-5850	14.44
802.11ac VHT40	5725-5850	14.44
802.11ac VHT80	5725-5850	15.55

5.3. CHANNEL LIST

20 MHz Bandwidth Channel frequencies		
Band	Channel	Frequency (MHz)
UNII-1	36	5180
	40	5200
	44	5220
	48	5240
UNII-3	149	5745
	153	5765
	157	5785
	161	5805
	165	5825

40 MHz Bandwidth Channel frequencies		
Band	Channel	Frequency (MHz)
UNII-1	38	5190
	46	5230
UNII-3	151	5755
	159	5795

80 MHz Bandwidth Channel frequencies		
Band	Channel	Frequency (MHz)
UNII-1	42	5210
UNII-3	155	5775

5.4. THE WORSE CASE POWER SETTING PARAMETER

The Worse Case Power Setting Parameter			
Test Software	QATool_Dbg		
Frequency Band	mode	channel	setting
UNII-1	802.11a	5180	1A
		5200	1A
		5240	1A
	802.11n (20M)	5180	1A
		5200	1A
		5240	1A
	802.11ac (20M)	5180	1A
		5200	1A
		5240	1A
	802.11n (40M)	5190	1A
		5230	1A
	802.11ac (40M)	5190	1A
		5230	1A
	802.11ac (80M)	5210	1A
UNII-3	802.11a	5745	1B
		5785	1B
		5825	1C
	802.11n (20M)	5745	1B
		5785	1B
		5825	1C
	802.11ac (20M)	5745	1A
		5785	1A
		5825	1B
	802.11n (40M)	5755	1B
		5795	1B
	802.11ac (40M)	5755	1A
		5795	1A
	802.11ac (80M)	5775	1B

5.5. THE WORSE CASE CONFIGURATIONS

Worst-case data rates as provided by the client were:

802.11a mode: 6 Mbps
802.11n HT20 mode: MCS0
802.11n HT40 mode: MCS0
802.11ac VHT20 mode: MCS0
802.11ac VHT40 mode: MCS0
802.11ac VHT80 mode: MCS0

802.11ac VHT20 and VHT40 mode are different from 802.11nHT20 and HT40 only in control messages, so for these 4 modes, only 802.11nHT20 and 802.11nHT40 worst case power modes data are recorded in the report .

5.6. DESCRIPTION OF AVAILABLE ANTENNAS

Antenna model	Frequency (MHz)	Antenna Type	Antenna Gain (dBi)
WCT5H-20	5150-5850	PIFA Antenna	3.79
WCT5H-40	5150-5850	PIFA Antenna	3.83
WCT5H-60	5150-5850	PIFA Antenna	3.64

Note: The Antenna WCT5H-20/ WCT5H-40/ WCT5H-60 are the same type antenna, they differ only in line length, we use the worst kind WCT5H-40 to test.

IEE Std. 802.11	Transmit and Receive Mode	Description
802.11a	1TX, 1RX	Chain 0 can be used as transmitting/receiving antenna.
802.11n HT20	1TX, 1RX	Chain 0 can be used as transmitting/receiving antenna.
802.11n HT40	1TX, 1RX	Chain 0 can be used as transmitting/receiving antenna.
802.11ac VHT20	1TX, 1RX	Chain 0 can be used as transmitting/receiving antenna.
802.11ac VHT40	1TX, 1RX	Chain 0 can be used as transmitting/receiving antenna.
802.11ac VHT80	1TX, 1RX	Chain 0 can be used as transmitting/receiving antenna.

5.7. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Item	Equipment	Brand Name	Model Name	Remarks
1	PC	Dell	Vostro 3902	8KNDDB2
2	USB TO UART	/	/	/

I/O CABLES

Cable No	Port	Connector Type	Cable Type	Cable Length(m)	Remarks
1	USB	/	/	1.0	/

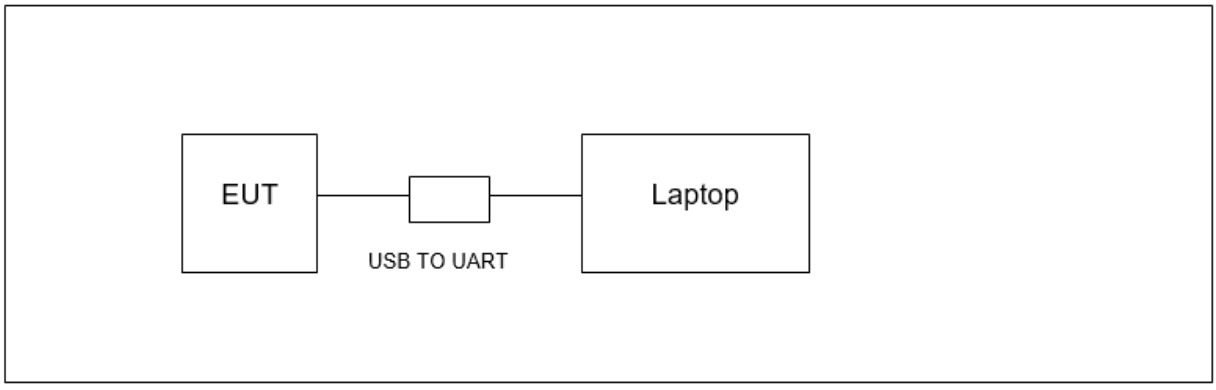
ACCESSORIES

Item	Accessory	Brand Name	Model Name	Description
1	/	/	/	/

TEST SETUP

The EUT can work in engineering mode with a software.

SETUP DIAGRAM FOR TESTS



6. MEASURING INSTRUMENT AND SOFTWARE USED

Conducted Emissions						
Instrument						
Used	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
☑	EMI Test Receiver	R&S	ESR3	101961	Dec.05,2019	Dec.05,2020
☑	Two-Line V-Network	R&S	ENV216	101983	Dec.05,2019	Dec.05,2020
☑	Artificial Mains Networks	Schwarzbeck	NSLK 8126	8126465	Dec.05,2019	Dec.05,2020
Software						
Used	Description		Manufacturer	Name	Version	
☑	Test Software for Conducted disturbance		Farad	EZ-EMC	Ver. UL-3A1	
Radiated Emissions						
Instrument						
Used	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
☑	MXE EMI Receiver	KESIGHT	N9038A	MY56400036	Dec.06,2019	Dec.06,2020
☑	Hybrid Log Periodic Antenna	TDK	HLP-3003C	130960	Sep.17, 2018	Sep.17, 2021
☑	Preamplifier	HP	8447D	2944A09099	Dec.05,2019	Dec.05,2020
☑	EMI Measurement Receiver	R&S	ESR26	101377	Dec.05,2019	Dec.05,2020
☑	Horn Antenna	TDK	HRN-0118	130939	Sep.17, 2018	Sep.17, 2021
☑	High Gain Horn Antenna	Schwarzbeck	BBHA-9170	691	Aug.11, 2018	Aug.11, 2021
☑	Preamplifier	TDK	PA-02-0118	TRS-305-00066	Dec.05,2019	Dec.05,2020
☑	Preamplifier	TDK	PA-02-2	TRS-307-00003	Dec.05,2019	Dec.05,2020
☑	Preamplifier	TDK	PA-02-3	TRS-308-00002	Dec.05,2019	Dec.05,2020
☑	Loop antenna	Schwarzbeck	1519B	00008	Jan.07, 2019	Jan.07, 2022
☑	Band Reject Filter	Wainwright	WRCJV12-5695-5725-5850-5880-40SS	4	Dec.05,2019	Dec.05,2020
☑	Band Reject Filter	Wainwright	WRCJV20-5120-5150-5350-5380-60SS	2	Dec.05,2019	Dec.05,2020
☑	Band Reject Filter	Wainwright	WRCJV20-5440-	1	Dec.05,2019	Dec.05,2020

			5470-5725-5755-60SS			
☑	High Pass Filter	Wainwright	WHKX10-5850-6500-1800-40SS	4	Dec.05,2019	Dec.05,2020

Software				
Used	Description	Manufacturer	Name	Version
☑	Test Software for Radiated disturbance	Farad	EZ-EMC	Ver. UL-3A1

Other instruments

Used	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
☑	Spectrum Analyzer	Keysight	N9030A	MY55410512	Dec.06,2019	Dec.06,2020
☑	Power sensor, Power Meter	R&S	OSP120	100921	Dec.06,2019	Dec.06,2020

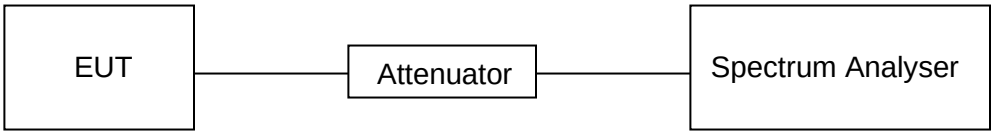
7. ANTENNA PORT TEST RESULTS

7.1. ON TIME AND DUTY CYCLE

LIMITS

None; for reporting purposes only

TEST SETUP



TEST ENVIRONMENT

Temperature	24.2°C	Relative Humidity	53%
Atmosphere Pressure	101kPa	Test Voltage	DC 5V

RESULTS

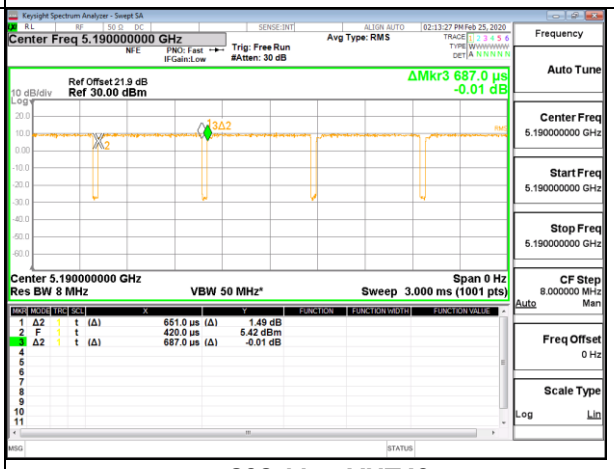
Mode	ON Time (ms)	Period (ms)	Duty Cycle x (Linear)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	1/T Minimum VBW (KHz)	Final setting For VBW (kHz)
802.11a	1.392	1.428	0.9748	97.48%	0.11	0.718	1
802.11n HT20	1.296	1.332	0.9730	97.30%	0.12	0.772	1
802.11ac VHT20	1.308	1.344	0.9732	97.32%	0.12	0.765	1
802.11n HT40	0.648	0.681	0.9515	95.15%	0.22	1.543	2
802.11ac VHT40	0.651	0.687	0.9480	94.80%	0.23	1.536	2
802.11ac VHT80	0.325	0.360	0.9028	90.28%	0.44	3.077	4

Note:
Duty Cycle Correction Factor=10log (1/x).
Where: x is Duty Cycle (Linear)
Where: T is On Time
If that calculated VBW is not available on the analyzer then the next higher value should be used.

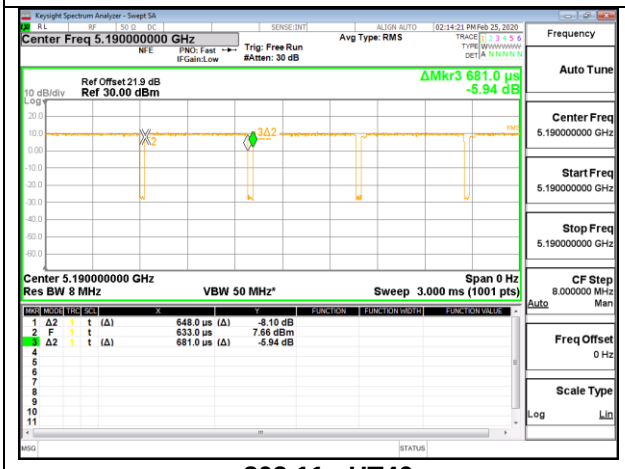
802.11a

802.11n HT20

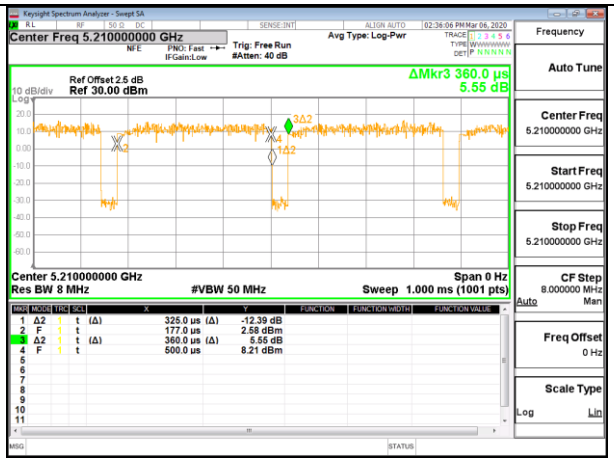
802.11ac VHT20



802.11ac VHT40



802.11n HT40



802.11ac HT80

7.2. 6/26/99% dB BANDWIDTH

LIMITS

CFR 47 FCC Part15, Subpart E ISED RSS-247		
Test Item	Limit	Frequency Range (MHz)
Bandwidth	26 dB Bandwidth	5150-5250
	26 dB Bandwidth	5250-5350
	26 dB Bandwidth	For FCC:5470-5725 For IC:5470-5600 5650-5725
	Minimum 500kHz 6dB Bandwidth	5725-5850

ISED RSS-247		
RSS-Gen Clause 6.7	99% Bandwidth	For reporting purposes only.

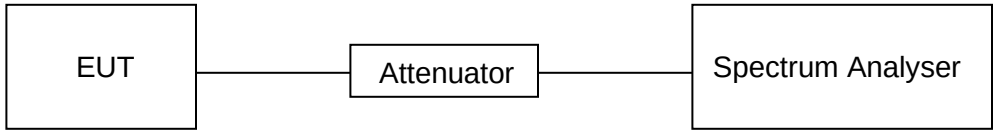
TEST PROCEDURE

Connect the UUT to the spectrum analyser and use the following settings:

Center Frequency	The center frequency of the channel under test
Detector	Peak
RBW	For 6dB Bandwidth: RBW=100kHz For 26dB Bandwidth: approximately 1% of the emission bandwidth. For 99% Occupied Bandwidth: 1% to 5% of the OBW
VBW	For 6dB Bandwidth: ≥3×RBW For 26dB Bandwidth: >RBW For 99% Occupied Bandwidth: ≥3×RBW
Trace	Max hold
Sweep	Auto couple

Allow the trace to stabilize and measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6dB/26dB&99% Occupied Bandwidth relative to the maximum level measured in the fundamental emission.

TEST SETUP



TEST ENVIRONMENT

Temperature	24.2°C	Relative Humidity	53%
Atmosphere Pressure	101kPa	Test Voltage	DC 5V

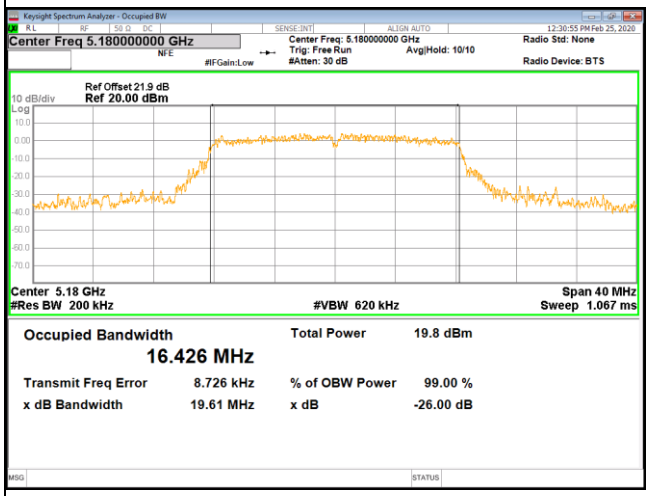
RESULTS

7.2.1. 802.11a MODE

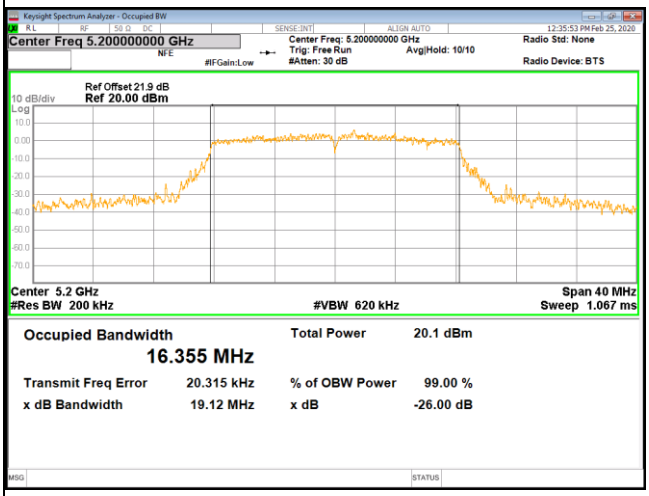
UNII-1 BAND

Channel	Frequency (MHz)	26 dB BW (MHz)	99% BW (MHz)
Low	5180	19.61	16.426
Mid	5200	19.12	16.355
High	5240	19.59	16.336

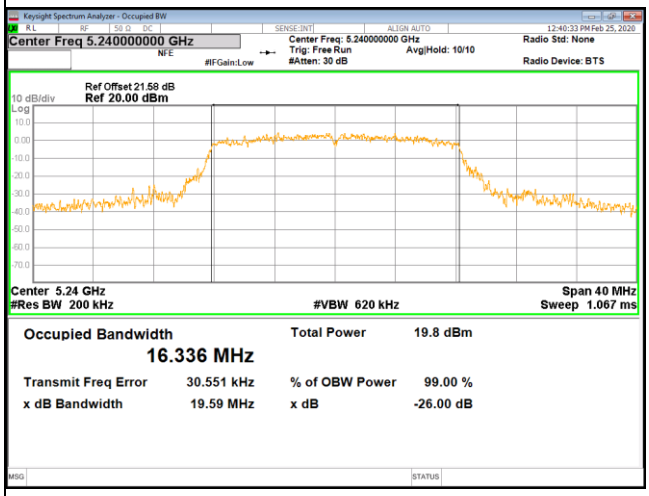
Low CHANNEL



Mid CHANNEL



High CHANNEL

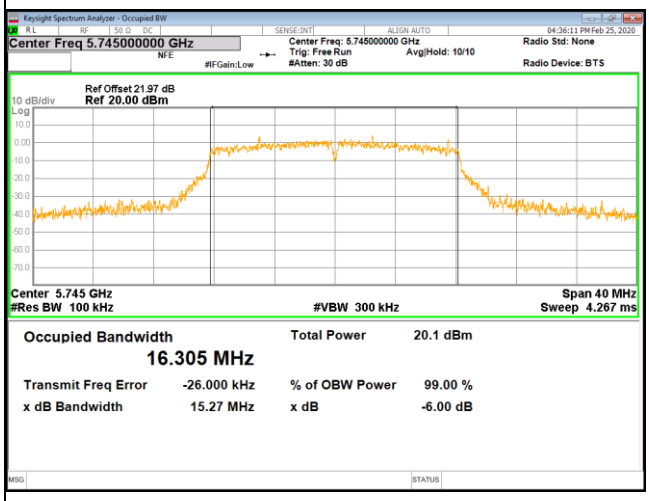


UNII-3 BAND

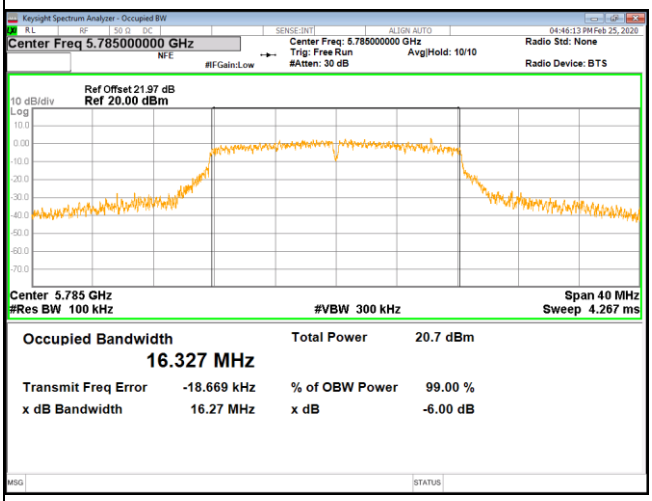
Channel	Frequency (MHz)	6 dB BW (MHz)	99% BW (MHz)	Limit For 6dB BW (KHz)	Result
Low	5745	15.27	16.415	500	PASS
Mid	5785	16.27	16.411	500	PASS
High	5825	15.59	16.456	500	PASS

6dB BW

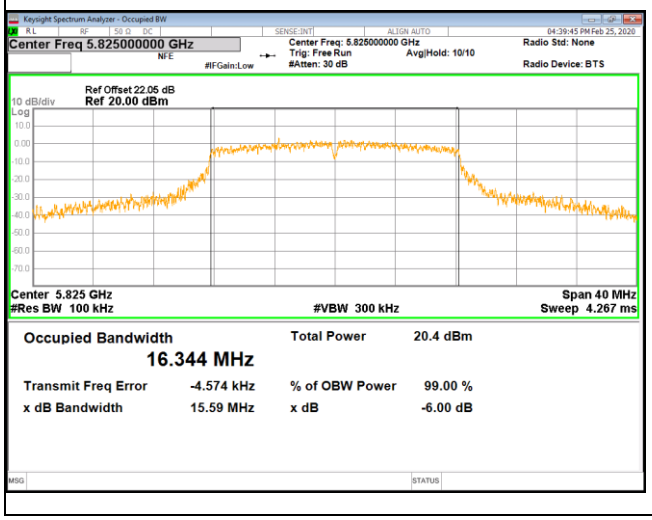
Low CHANNEL



Mid CHANNEL

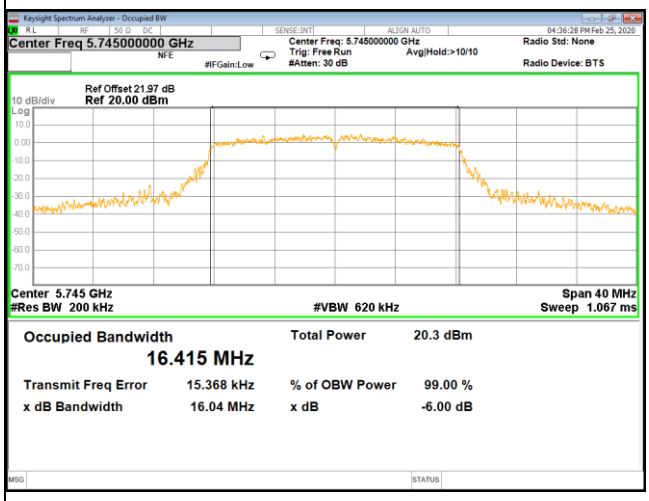


High CHANNEL

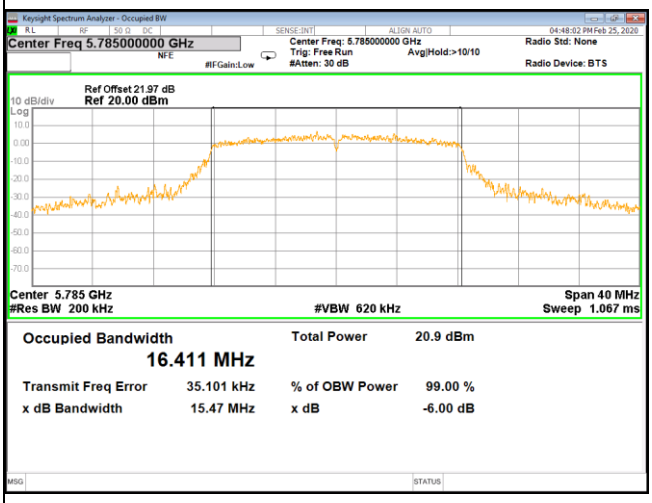


99% BW

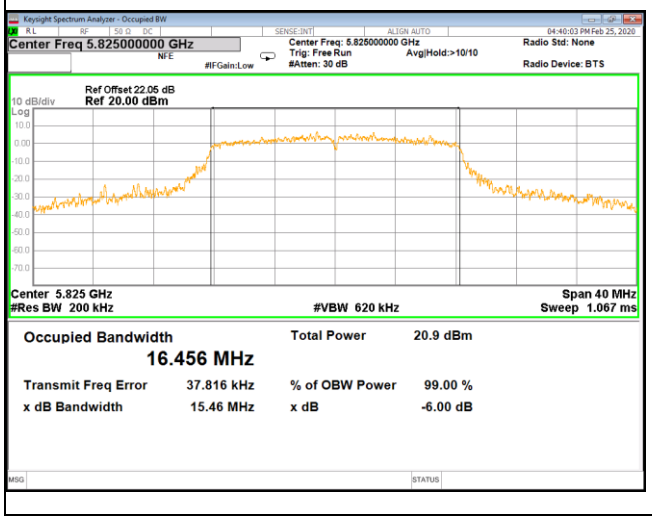
Low CHANNEL



Mid CHANNEL



High CHANNEL



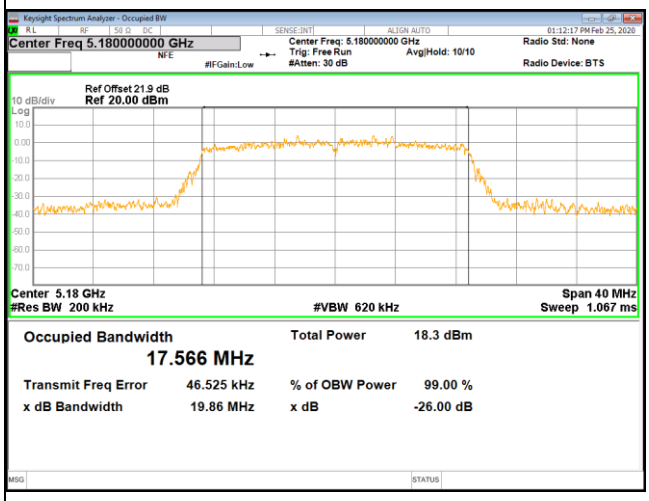
Note: All the modes and antenna ports had been tested, only the worst data recorded in the report.

7.2.2. 802.11n HT20 MODE

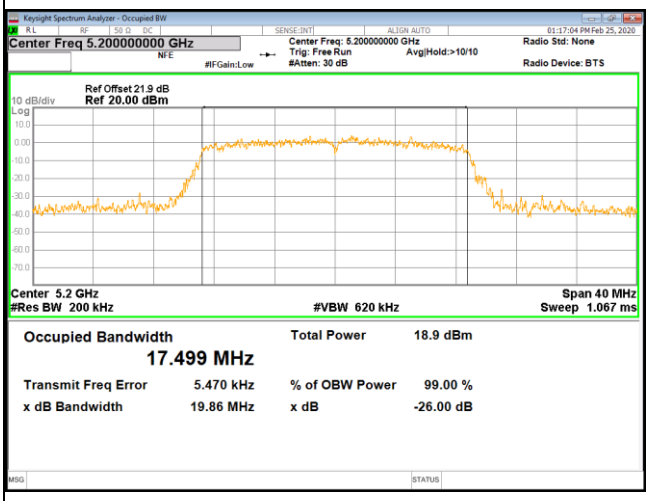
UNII-1 BAND

Channel	Frequency (MHz)	26 dB BW (MHz)	99% BW (MHz)
Low	5180	19.86	17.566
Mid	5200	19.86	17.499
High	5240	19.92	17.536

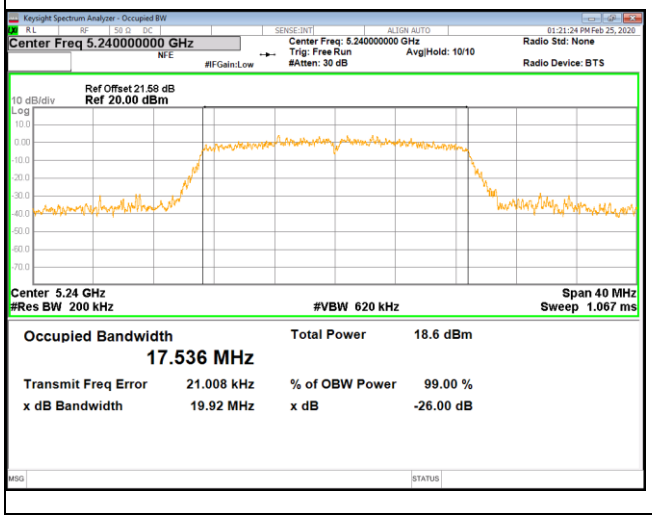
Low CHANNEL



Mid CHANNEL



High CHANNEL

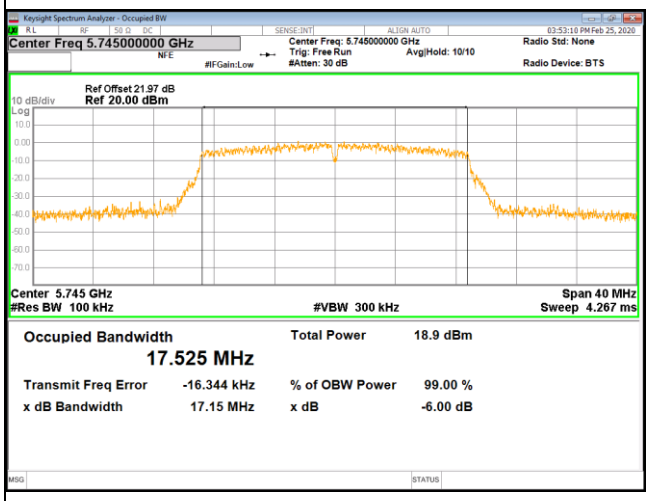


UNII-3 BAND

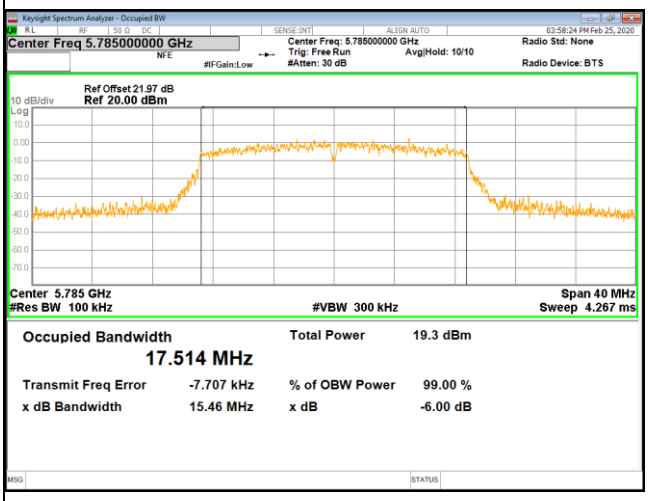
Channel	Frequency (MHz)	6 dB BW (MHz)	99% BW (MHz)	Limit For 6dB BW (KHz)	Result
Low	5745	17.15	17.534	500	PASS
Mid	5785	15.46	17.532	500	PASS
High	5825	15.81	17.559	500	PASS

6dB BW

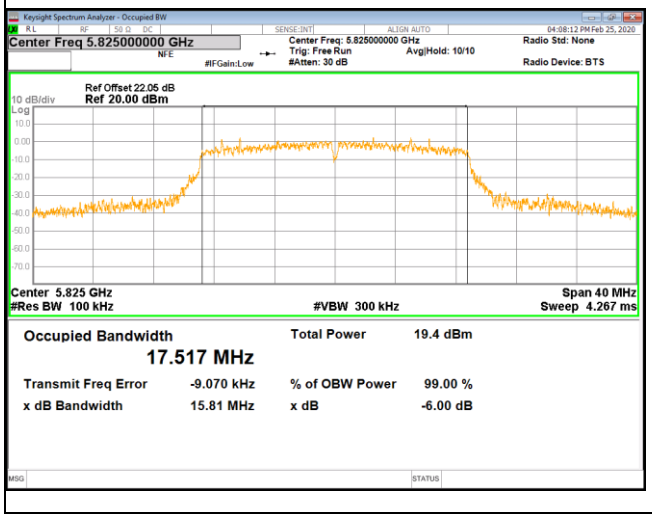
Low CHANNEL



Mid CHANNEL

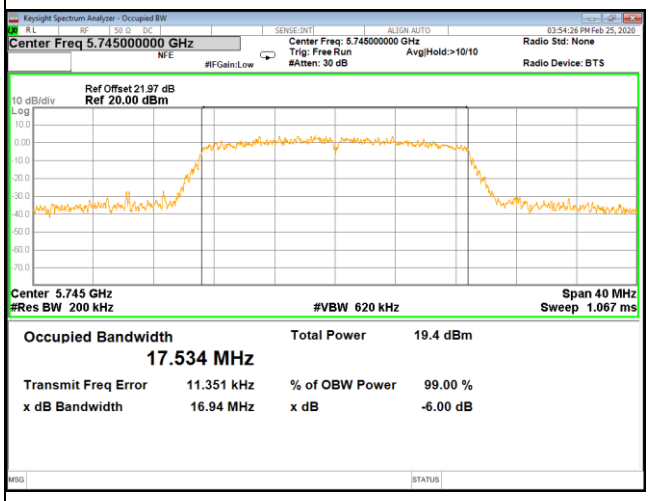


High CHANNEL

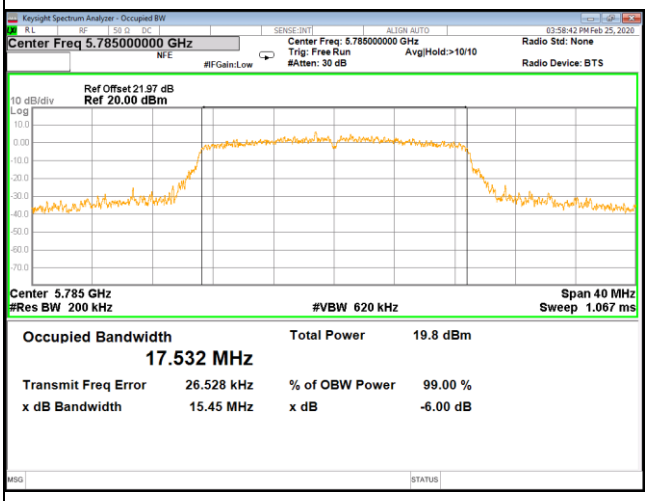


99% BW

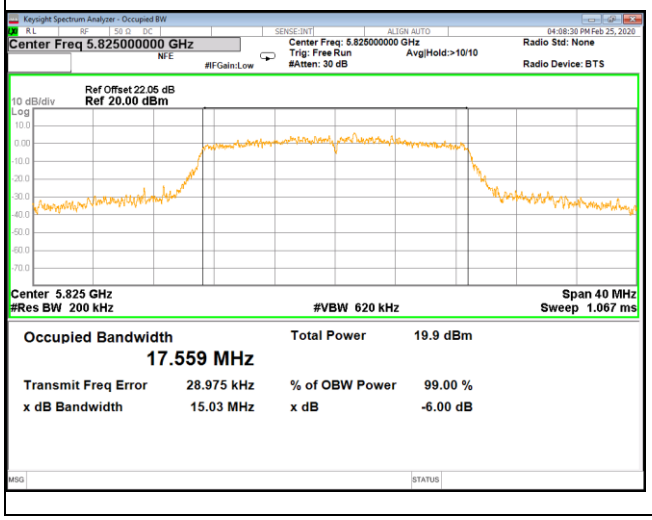
Low CHANNEL



Mid CHANNEL



High CHANNEL



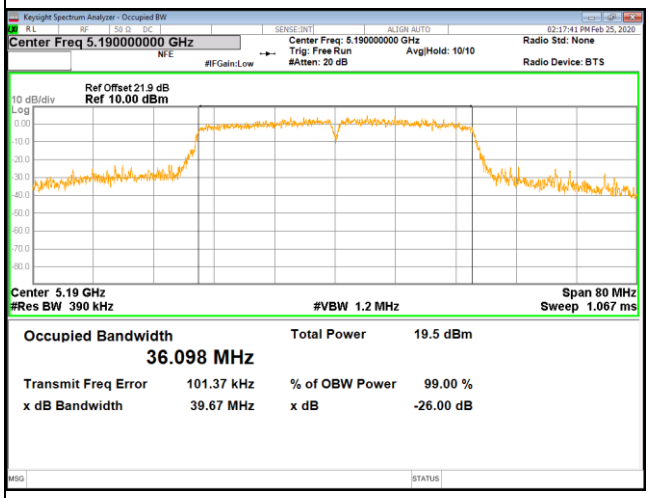
Note: All the modes and antenna ports had been tested, only the worst data recorded in the report.

7.2.3. 802.11n HT40 MODE

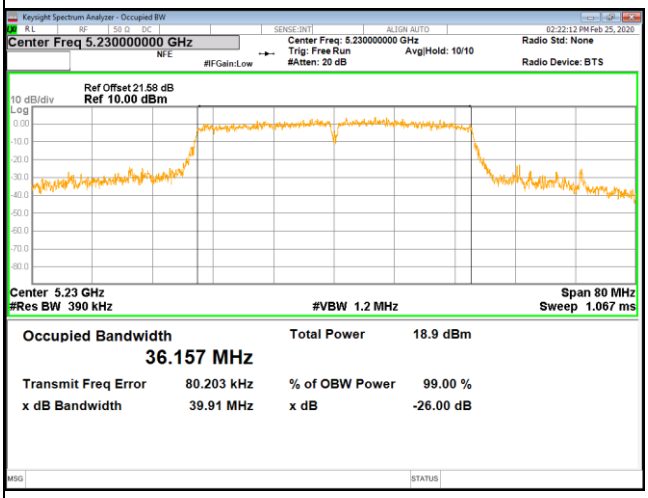
UNII-1 BAND

Channel	Frequency (MHz)	26 dB BW (MHz)	99% BW (MHz)
Low	5190	39.67	36.098
High	5230	39.91	36.157

Low CHANNEL



High CHANNEL

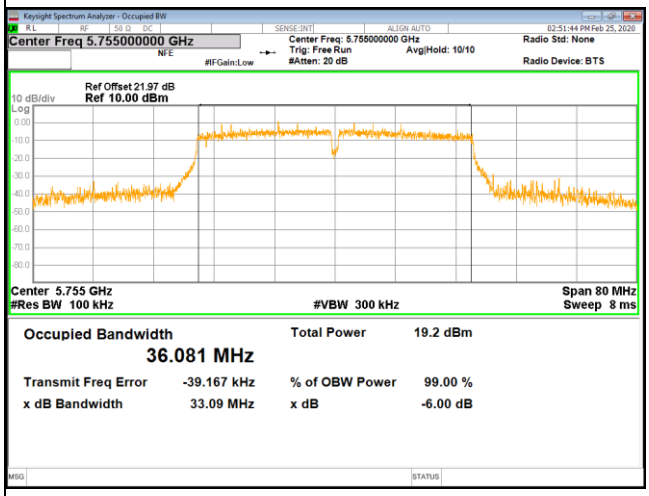


UNII-3 BAND

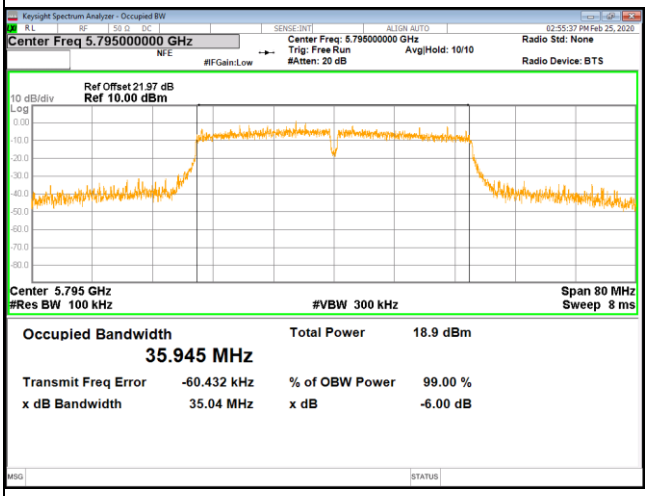
Channel	Frequency (MHz)	6 dB BW (MHz)	99% BW (MHz)	Limit (KHz)	Result
Low	5755	33.09	36.180	500	PASS
High	5795	35.04	36.115	500	PASS

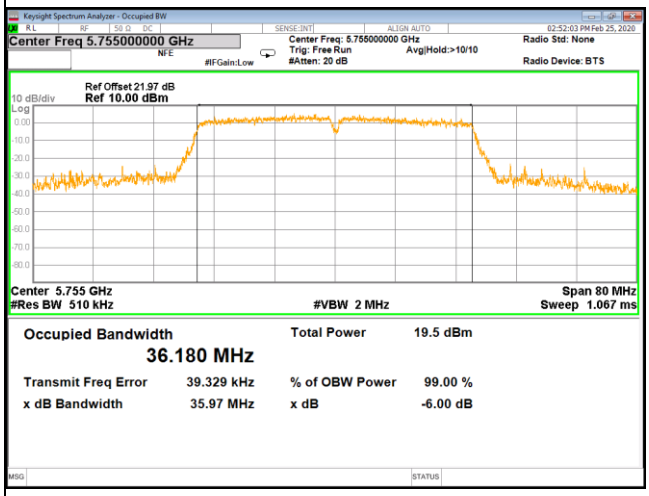
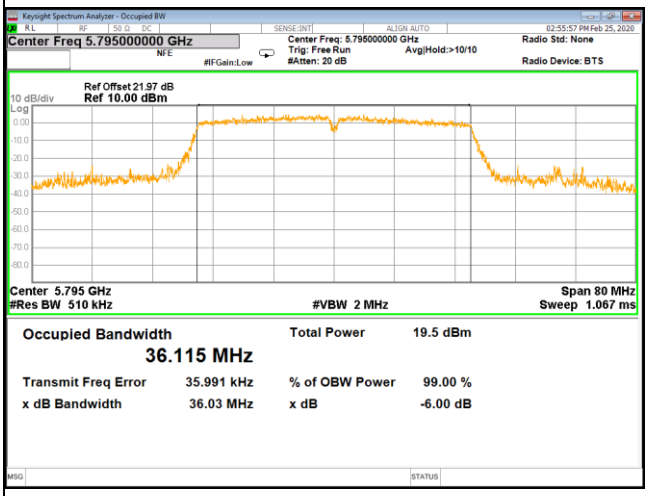
6dB BW

Low CHANNEL



High CHANNEL



99% BW	
Low CHANNEL	**High CHANNEL**
	

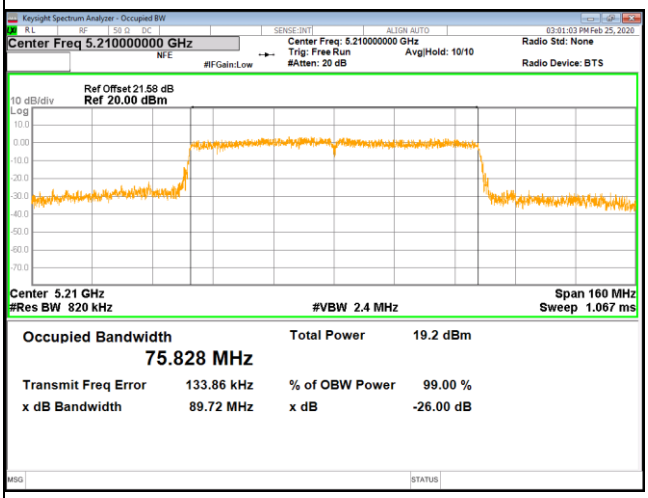
Note: All the modes and antenna ports had been tested, only the worst data recorded in the report.

7.2.4. 802.11ac VHT80 MODE

UNII-1 BAND

Channel	Frequency (MHz)	26 dB BW (MHz)	99% BW (MHz)
Mid	5210	89.72	75.828

Mid CHANNEL

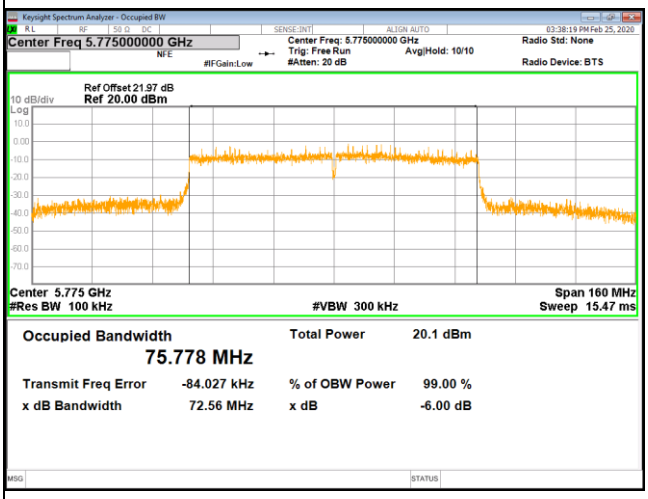


UNII-3 BAND

Channel	Frequency (MHz)	6 dB BW (MHz)	99% BW (MHz)	Limit For 6dB BW (KHz)	Result
Mid	5775	72.56	76.019	500	PASS

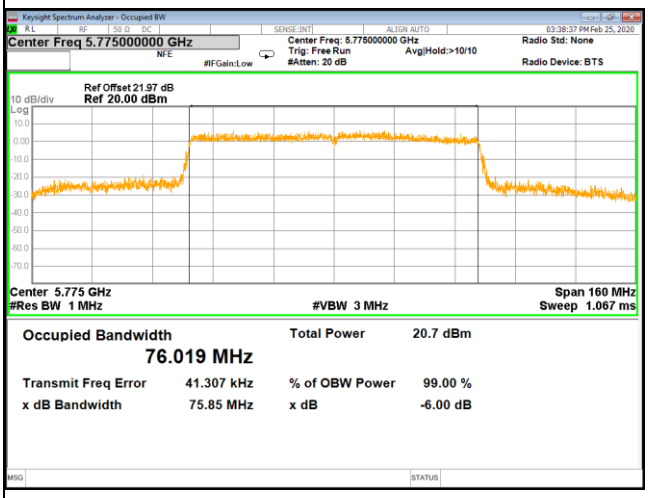
6dB BW

Mid CHANNEL



99% BW

Mid CHANNEL



Note: All the modes and antenna ports had been tested, only the worst data recorded in the report.

7.3. MAXIMUM CONDUCTED OUTPUT POWER

LIMITS

CFR 47 FCC Part15, Subpart E		
Test Item	Limit	Frequency Range (MHz)
Conducted Output Power	For FCC client devices:250mW (24dBm)	5150-5250
	1 Watt (30dBm)	5725-5850

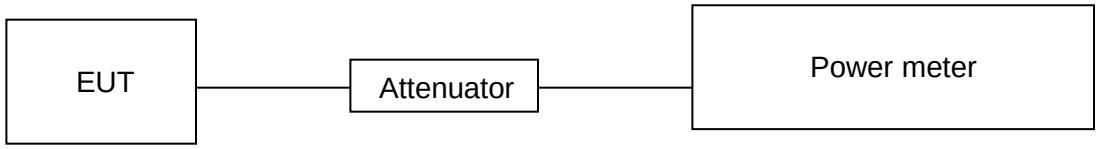
ISED RSS-247		
Test Item	Limit	Frequency Range (MHz)
Conducted Output Power	Maximum e.i.r.p. shall not exceed 200 mW or 10 + 10 log10B, dBm, whichever is less where B is the 99% emission bandwidth in megahertz	5150-5250
	1 Watt (30dBm)	5725-5850

Note: If transmitting antennas of directional gain greater than 6 dBi are used, the maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

TEST PROCEDURE

Refer to KDB 789033 D02 General UNII Test Procedures New Rules v02r01
Connect the EUT to the a broadband average RF power meter, the power meter shall have a video bandwidth that is greater than or equal to the bandwidth and shall utilize a fast-responding diode detector.

TEST SETUP



TEST ENVIRONMENT

Temperature	24.2°C	Relative Humidity	53%
Atmosphere Pressure	101kPa	Test Voltage	DC 5V

RESULTS

7.3.1. UNII-1 BAND

Mode	Frequency (MHz)	Antenna	CONDUCTED POWER (dBm)	FCC Limit (dBm)	EIRP (dBm)	ISED EIRP Limit (dBm)	Result
802.11a	5180	0	15.49	24	19.32	22.1	PASS
	5200	0	15.91	24	19.74	22.1	PASS
	5240	0	15.54	24	19.37	22.1	PASS
802.11n HT20	5180	0	13.94	24	17.77	22.4	PASS
	5200	0	14.52	24	18.35	22.4	PASS
	5240	0	14.19	24	18.02	22.4	PASS
802.11ac VHT20	5180	0	14.19	24	18.02	22.4	PASS
	5200	0	13.97	24	17.80	22.4	PASS
	5240	0	13.89	24	17.72	22.4	PASS
802.11n HT40	5190	0	15.07	24	18.90	23	PASS
	5230	0	14.55	24	18.38	23	PASS
802.11ac VHT40	5190	0	14.93	24	18.76	23	PASS
	5230	0	14.49	24	18.32	23	PASS
802.11ac VHT80	5210	0	14.63	24	18.46	23	PASS

Note: 1.Conducted Power=Meas. Level+ Correction Factor
2.EIRP=conducted Power + Antenna Gain
3. The test results have already included the duty cycle correction factor. About correction Factor please refer to section 7.1

7.3.2. UNII-3 BAND

Mode	Frequency (MHz)	Antenna	CONDUCTED POWER (dBm)	Limit (dBm)	Result
802.11a	5745	0	15.04	30	PASS
	5785	0	15.89	30	PASS
	5825	0	15.72	30	PASS
802.11n HT20	5745	0	14.26	30	PASS
	5785	0	14.37	30	PASS
	5825	0	14.56	30	PASS
802.11ac VHT20	5745	0	13.73	30	PASS
	5785	0	14.26	30	PASS
	5825	0	14.44	30	PASS
802.11n HT40	5755	0	14.45	30	PASS
	5795	0	14.17	30	PASS
802.11ac VHT40	5755	0	14.44	30	PASS
	5795	0	14.29	30	PASS
802.11ac VHT80	5775	0	15.55	30	PASS

Note: 1.Conducted Power=Meas. Level+ Correction Factor
2. The test results have already included the duty cycle correction factor. About correction Factor please refer to section 7.1

7.4. POWER SPECTRAL DENSITY

LIMITS

CFR 47 FCC Part15, Subpart E ISED RSS-247		
Test Item	Limit	Frequency Range (MHz)
Power Spectral Density	For FCC: Other than Mobile and portable:17dBm/MHz Mobile and portable:11dBm/MHz	5150-5250
	For RSS: e.i.r.p. 10dBm/MHz	
	11dBm/MHz	5250-5350
	11dBm/MHz	For FCC:5470-5725 For IC:5470-5600 5650-5725
	30dBm/500kHz	5725-5850
Note: 1. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.		

TEST PROCEDURE

Connect the UUT to the spectrum analyser and use the following settings:

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

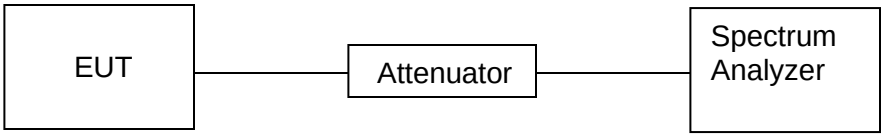
Center Frequency	The center frequency of the channel under test
Detector	RMS
RBW	1MHz
VBW	≥3 × RBW
Span	Encompass the entire emissions bandwidth (EBW) of the signal
Trace	Max hold
Sweep time	Auto

For U-NII-3:

Center Frequency	The center frequency of the channel under test
Detector	RMS
RBW	500kHz
VBW	≥3 × RBW
Span	Encompass the entire emissions bandwidth (EBW) of the signal
Trace	Max hold
Sweep time	Auto

Allow trace to fully stabilize and use the peak marker function to determine the maximum amplitude level within the RBW.

TEST SETUP



TEST ENVIRONMENT

Temperature	24.2°C	Relative Humidity	53%
Atmosphere Pressure	101kPa	Test Voltage	DC 5V

RESULTS

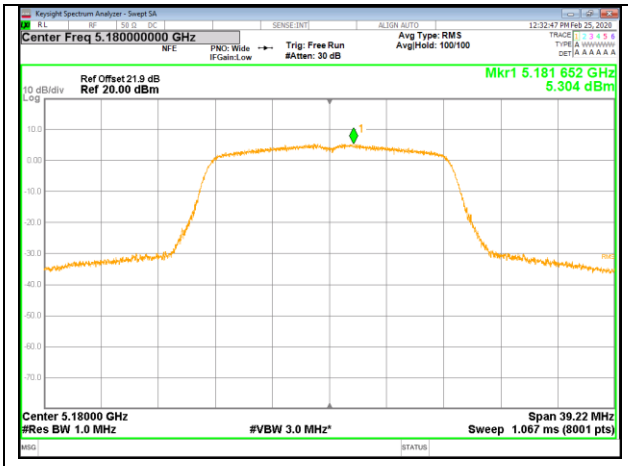
7.4.1. 802.11a MODE

UNII-1 BAND

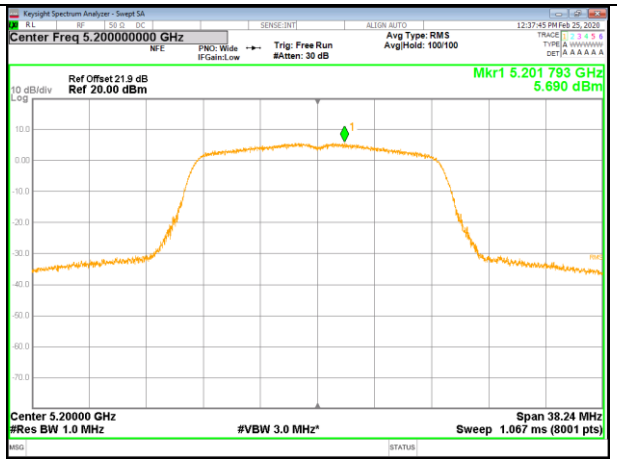
Test Channel	Frequency (MHz)	ANT	DCCF (dB)	PSD Result (dBm/MHz)	FCC Limit (dBm/MHz)	EIRP Result (dBm/MHz)	ISED EIRP Limit (dBm/MHz)
Low	5180	0	0.11	5.414	11	9.244	10
Mid	5200	0	0.11	5.800		9.630	
High	5240	0	0.11	5.740		9.570	

Note:

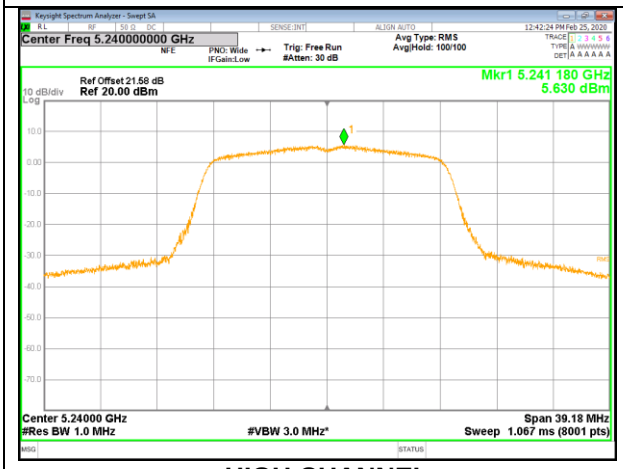
1. For test plots, it does not include the duty cycle correction factor.
2. PSD result=Test plots result+ Duty Cycle Correction Factor
3. The test results have already included the duty cycle correction factor. About correction Factor please refer to section 7.1.



LOW CHANNEL



MID CHANNEL



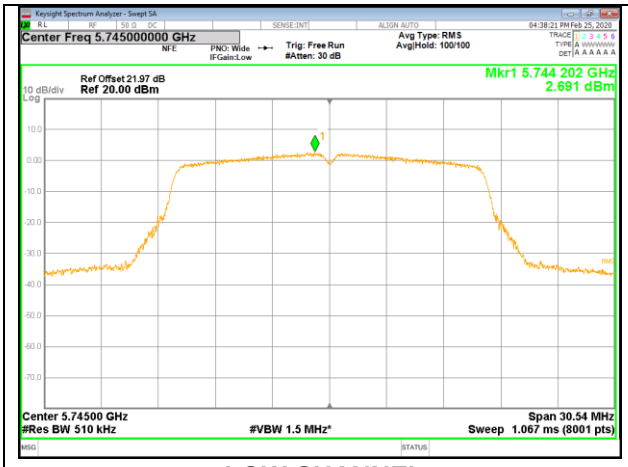
HIGH CHANNEL

UNII-3 BAND

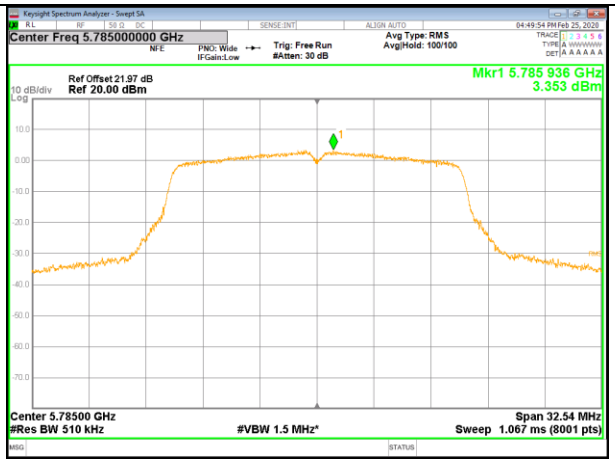
Test Channel	Frequency (MHz)	ANT	DCCF (dB)	PSD Result (dBm/500KHz)	Limit (dBm/500KHz)
Low	5745	0	0.11	2.801	30
Mid	5785	0	0.11	3.463	
High	5825	0	0.11	3.541	

Note:

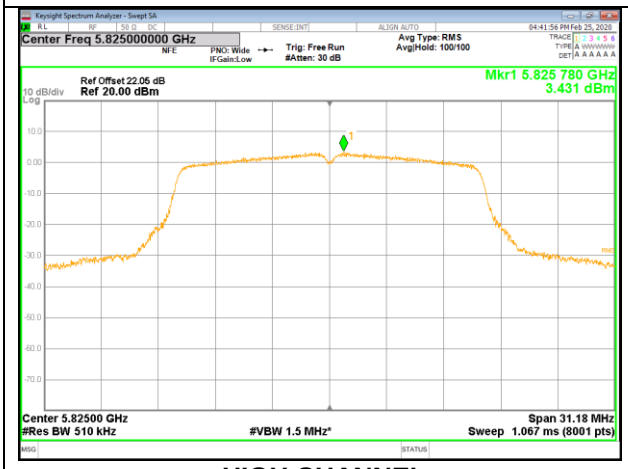
1. For test plots, it does not include the duty cycle correction factor.
2. PSD result=Test plots result+ Correction Factor
3. The test results have already included the duty cycle correction factor. About correction Factor please refer to section 7.1.



LOW CHANNEL



MID CHANNEL



HIGH CHANNEL

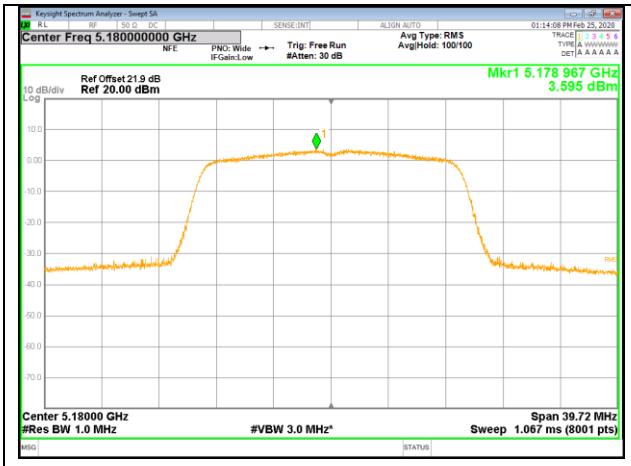
7.4.2. 802.11n HT20 MODE

UNII-1 BAND

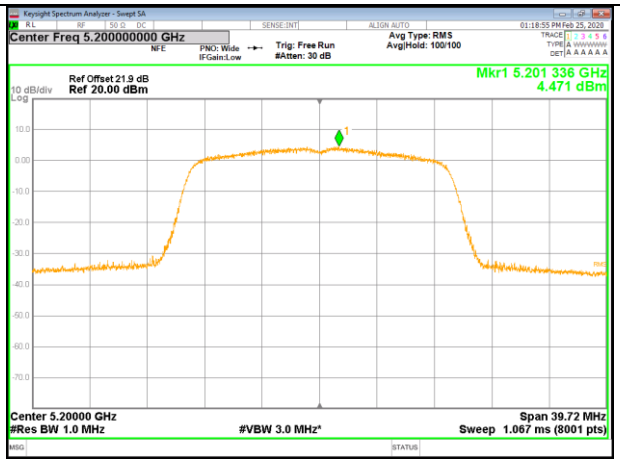
Test Channel	Frequency (MHz)	ANT	DCCF (dB)	PSD Result (dBm/MHz)	FCC Limit (dBm/MHz)	EIRP Result (dBm/MHz)	EIRP Limit (dBm/MHz)
Low	5180	0	0.12	3.715	11	7.545	10
Mid	5200	0	0.12	4.591		8.421	
High	5240	0	0.12	4.338		8.168	

Note:

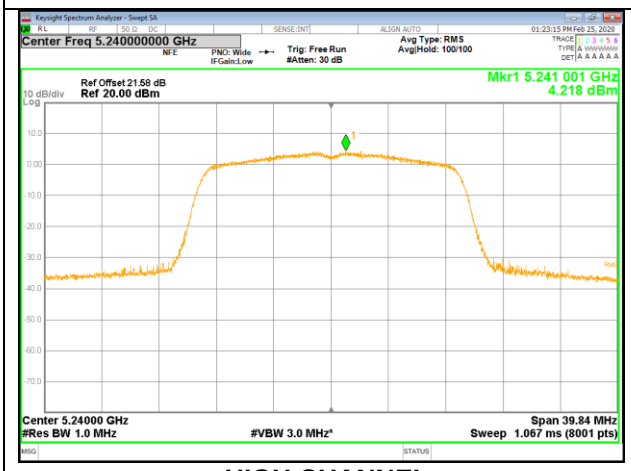
1. For test plots, it does not include the duty cycle correction factor.
2. PSD result=Test plots result+ Correction Factor
3. The PSD test results have already included the duty cycle correction factor. About correction Factor please refer to section 7.1.



LOW CHANNEL



MID CHANNEL



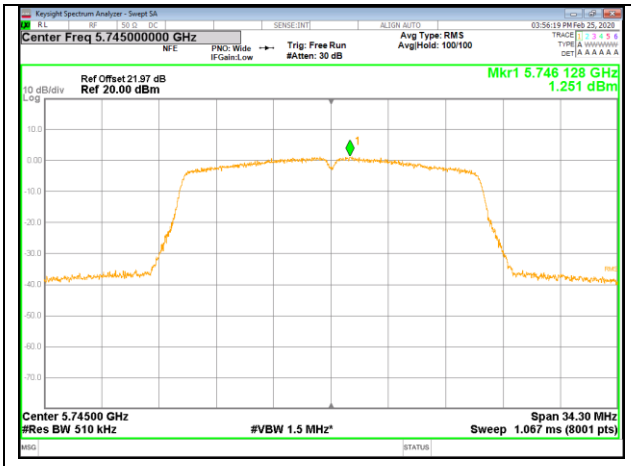
HIGH CHANNEL

UNII-3 BAND

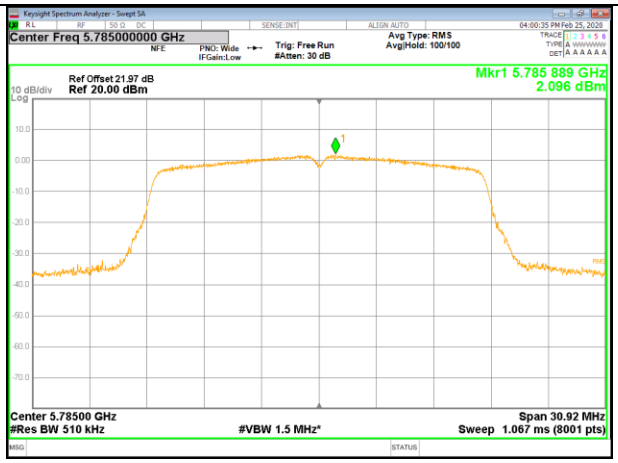
Test Channel	Frequency (MHz)	ANT	DCCF (dB)	PSD Result (dBm/500KHz)	Limit (dBm/500KHz)
Low	5745	0	0.12	1.371	30
Mid	5785	0	0.12	2.216	
High	5825	0	0.12	2.270	

Note:

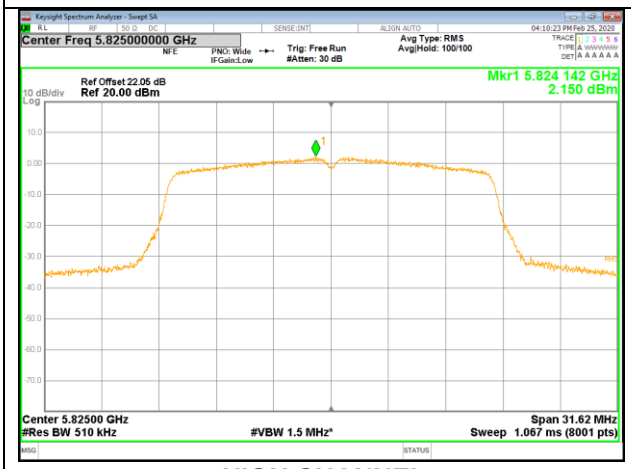
1. For test plots, it does not include the duty cycle correction factor.
2. PSD result=Test plots result+ Correction Factor
3. The PSD test results have already included the duty cycle correction factor. About correction Factor please refer to section 7.1.



LOW CHANNEL



MID CHANNEL



HIGH CHANNEL

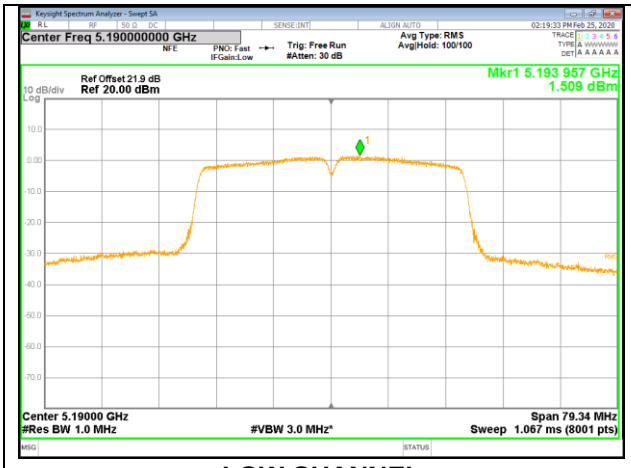
7.4.3. 802.11n HT40 MODE

UNII-1 BAND

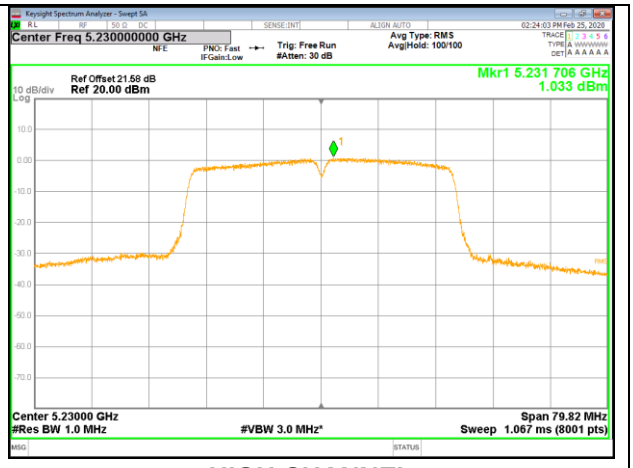
Test Channel	Frequency (MHz)	ANT	DCCF (dB)	PSD Result (dBm/MHz)	Limit (dBm/MHz)	EIRP Result (dBm/MHz)	EIRP Limit (dBm/MHz)
Low	5190	0	0.22	1.729	11	5.559	10
High	5230	0	0.22	1.253		5.083	10

Note:

1. For test plots, it does not include the duty cycle correction factor.
2. PSD result=Test plots result+ Correction Factor
3. The PSD test results have already included the duty cycle correction factor. About correction Factor please refer to section 7.1.



LOW CHANNEL



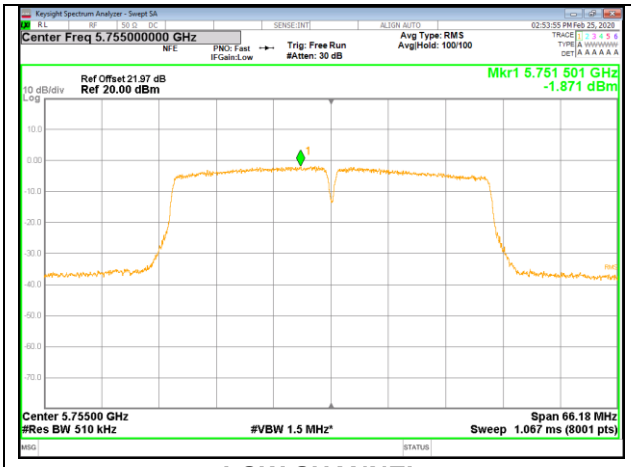
HIGH CHANNEL

UNII-3 BAND

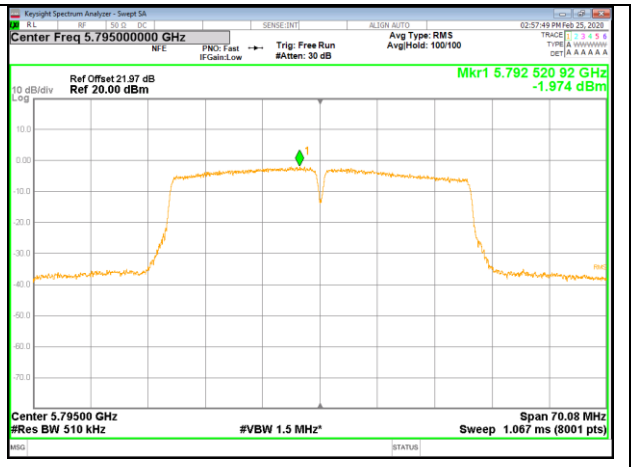
Test Channel	Frequency (MHz)	ANT	DCCF (dB)	Meas. Level (dBm/500KHz)	Limit (dBm/500KHz)
Low	5755	0	0.22	-1.651	30
High	5795	0	0.22	-1.754	

Note:

1. For test plots, it does not include the duty cycle correction factor.
2. PSD result=Test plots result+ Correction Factor
3. The PSD test results have already included the duty cycle correction factor. About correction Factor please refer to section 7.1.



LOW CHANNEL



HIGH CHANNEL

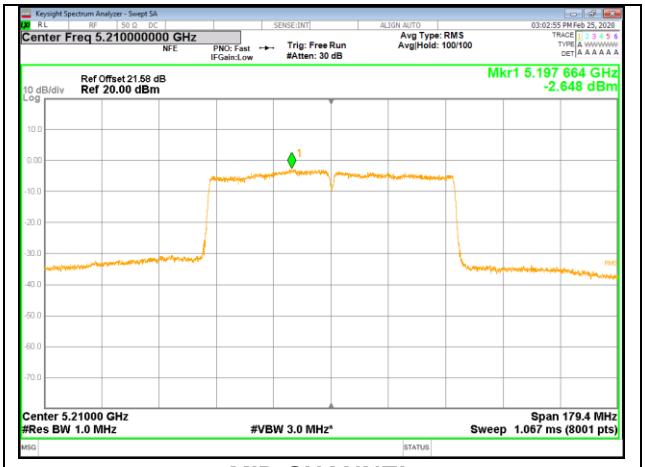
7.4.4. 802.11ac VHT80 MODE

UNII-1 BAND

Test Channel	Frequency (MHz)	ANT	DCCF (dB)	PSD Result (dBm/MHz)	Limit (dBm/MHz)	EIRP Result (dBm/MHz)	EIRP Limit (dBm/MHz)
Mid	5210	0	0.44	-2.208	11	1.622	10

Note:

1. For test plots, it does not include the duty cycle correction factor.
2. PSD result=Test plots result+ Correction Factor
3. The PSD test results have already included the duty cycle correction factor. About correction Factor please refer to section 7.1.



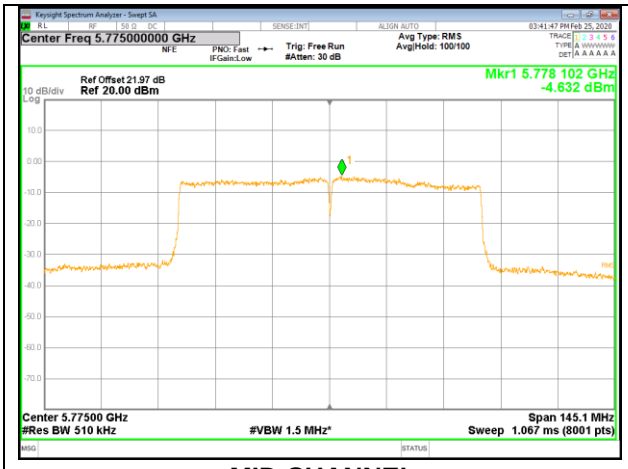
MID CHANNEL

UNII-3 BAND

Test Channel	Frequency (MHz)	ANT	DCCF (dB)	Meas. Level (dBm/500KHz)	Limit (dBm/500KHz)
Mid	5775	0	0.44	-4.192	30

Note:

1. For test plots, it does not include the duty cycle correction factor.
2. PSD result=Test plots result+ Correction Factor
3. The PSD test results have already included the duty cycle correction factor. About correction Factor please refer to section 7.1.



MID CHANNEL

Note: All the modes and antenna ports had been tested, only the worst data recorded in the report.

8. RADIATED TEST RESULTS

LIMITS

Please refer to CFR 47 FCC §15.205, §15.209 and §15.407(b) (4)

Please refer to ISED RSS-GEN Clause 8.9

Radiation Disturbance Test Limit for FCC (Class B)(9kHz-1GHz)

Frequency (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
960~1000	500	3

Note: 1) At frequencies at or above 30 MHz, measurements may be performed at a distance other than what is specified provided: measurements are not made in the near field except where it can be shown that near field measurements are appropriate due to the characteristics of the device; and it can be demonstrated that the signal levels needed to be measured at the distance employed can be detected by the measurement equipment. Measurements shall not be performed at a distance greater than 30 meters unless it can be further demonstrated that measurements at a distance of 30 meters or less are impractical. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse linear-distance for field strength measurements; inverse-linear-distance-squared for power density measurements).

(2) At frequencies below 30 MHz, measurements may be performed at a distance closer than that specified in the regulations; however, an attempt should be made to avoid making measurements in the near field. Pending the development of an appropriate measurement procedure for measurements performed below 30 MHz, when performing measurements at a closer distance than specified, the results shall be extrapolated to the specified distance by either making measurements at a minimum of two distances on at least one radial to determine the proper extrapolation factor or by using the square of an inverse linear distance extrapolation factor (40 dB/decade). This paragraph (f) shall not apply to Access BPL devices operating below 30 MHz.

IC Restricted bands please refer to ISED RSS-GEN Clause 8.10.
FCC Restricted bands please refer to CFR 47 FCC 15.209.

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

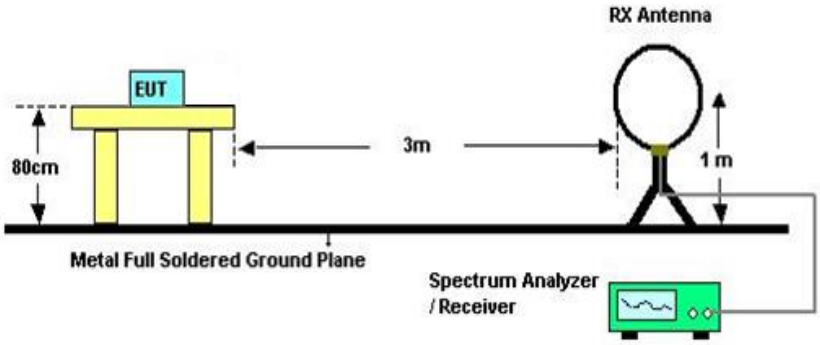
LIMITS OF RADIATED EMISSION MEASUREMENT (Below 1GHz)			
Frequency Range (MHz)	Field Strength Limit (uV/m) at 3 m	Field Strength Limit (dBuV/m) at 3 m	
		Quasi-Peak	
30 - 88	100	40	
88 - 216	150	43.5	
216 - 960	200	46	
Above 960	500	54	
Above 1000	500	Peak	Average
		74	54

Limits of unwanted emission out of the restricted bands

LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1GHz)		
Frequency Range (MHz)	EIRP Limit	Field Strength Limit (dBuV/m) at 3 m
5150~5250 MHz	PK:-27 (dBm/MHz)	PK:68.2(dBμV/m)
5250~5350 MHz		
5470~5725 MHz		
5725~5850 MHz	PK:-27 (dBm/MHz) *1 PK:10 (dBm/MHz) *2 PK:15.6 (dBm/MHz) *3 PK:27 (dBm/MHz) *4	PK: 68.2(dBμV/m) *1 PK:105.2 (dBμV/m) *2 PK: 110.8(dBμV/m) *3 PK:122.2 (dBμV/m) *4
Note: *1 beyond 75 MHz or more above of the band edge. *2 below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above. *3 below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above. *4 from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.		

TEST SETUP AND PROCEDURE

Below 30MHz



The setting of the spectrum analyser

RBW	200Hz (From 9kHz to 0.15MHz)/ 9kHz (From 0.15MHz to 30MHz)
VBW	200Hz (From 9kHz to 0.15MHz)/ 9kHz (From 0.15MHz to 30MHz)
Sweep	Auto
Detector	Peak/QP/ Average
Trace	Max hold

1. The testing follows the guidelines in ANSI C63.10-2013

2. The EUT was arranged to its worst case and then turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level. Both Horizontal, Face-on and Face-off polarizations of the antenna are set to make the measurement.

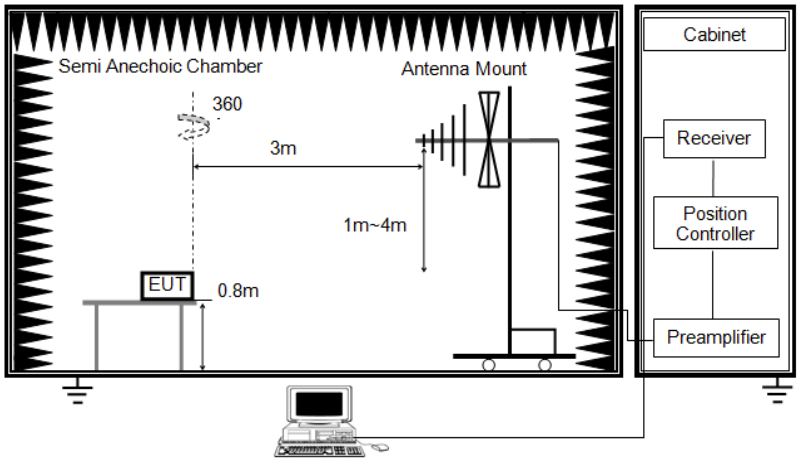
3. The EUT was placed on a turntable with 0.8 meter above ground.

4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.

5. For measurement below 1GHz, the initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured. If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.

6. Although these tests were performed other than open field site, adequate comparison measurements were confirmed against 30m open field site. Therefore sufficient tests were made to demonstrate that the alternative site produces results that correlate with the ones of tests made in an open field site based on KDB 414788.

Below 1G



The setting of the spectrum analyser

RBW	120kHz
VBW	300kHz
Sweep	Auto
Detector	Peak/QP
Trace	Max hold

1. The testing follows the guidelines in ANSI C63.10-2013.

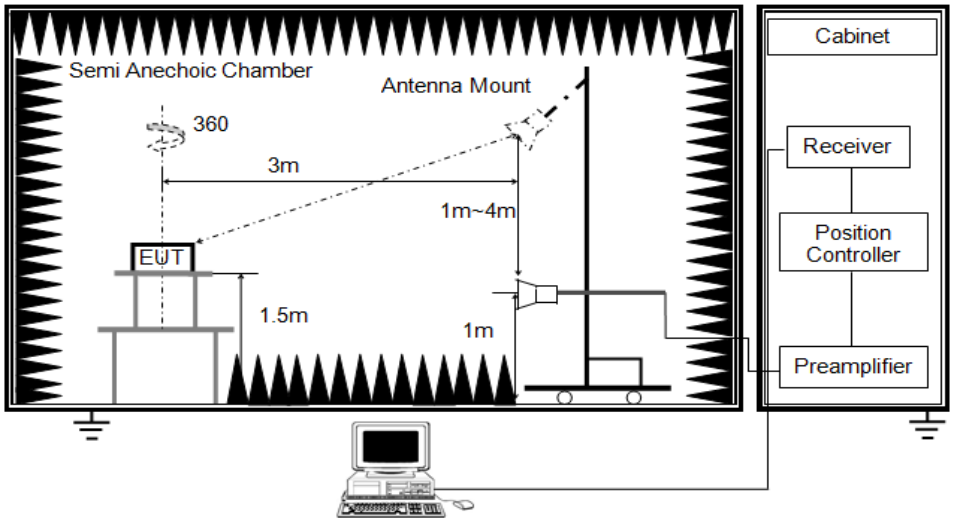
2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

3. The EUT was placed on a turntable with 0.8 meter above ground.

4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.

5. For measurement below 1GHz, the initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured. If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.

Above 1G



The setting of the spectrum analyser

RBW	1MHz
VBW	PEAK: 3MHz AVG: see note 6
Sweep	Auto
Detector	Peak
Trace	Max hold

1. The testing follows the guidelines in ANSI C63.10-2013.

2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

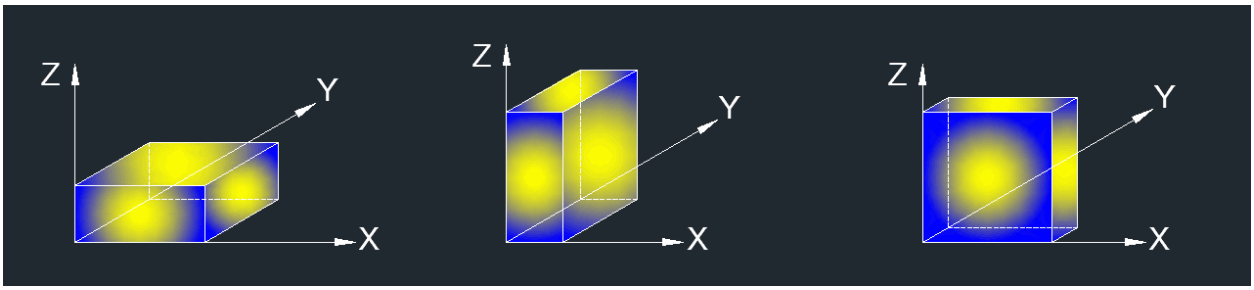
3. The EUT was placed on a turntable with 1.5m above ground.

4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.

5. For measurement above 1GHz, the emission measurement will be measured by the peak detector. This peak level, once corrected, must comply with the limit specified in Section 15.209.

6. For measurements above 1 GHz the resolution bandwidth is set to 1 MHz, then the video bandwidth is set to 3 MHz for peak measurements and 1 MHz resolution bandwidth with 1/T video bandwidth with peak detector for average measurements. For the Duty Cycle please refer to clause 7.1.ON TIME AND DUTY CYCLE.

X axis, Y axis, Z axis positions:



Note 1: For all radiated test, EUT in each of three orthogonal axis emissions had been tested, but only the worst case (X axis) data recorded in the report.

Note 2: The EUT was fully exercised with external accessories during the test. In the case of multiple accessory external ports, an external accessory shall be connected to one of each type of port.

Note 3: The EUT does not support simultaneous transmission.

TEST ENVIRONMENT

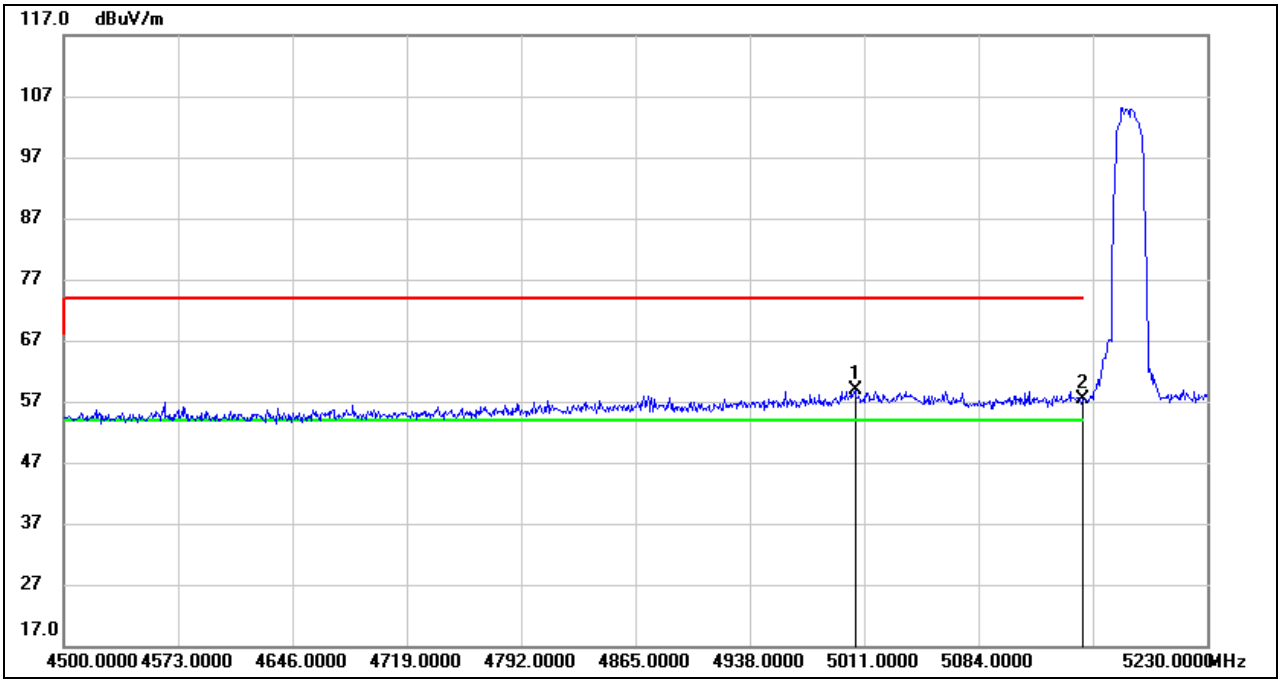
Temperature	23.4°C	Relative Humidity	54%
Atmosphere Pressure	101kPa	Test Voltage	DC 5V

8.1. 802.11a MODE

8.1.1. UNII-1 BAND

RESTRICTED BANDEDGE LOW CHANNEL

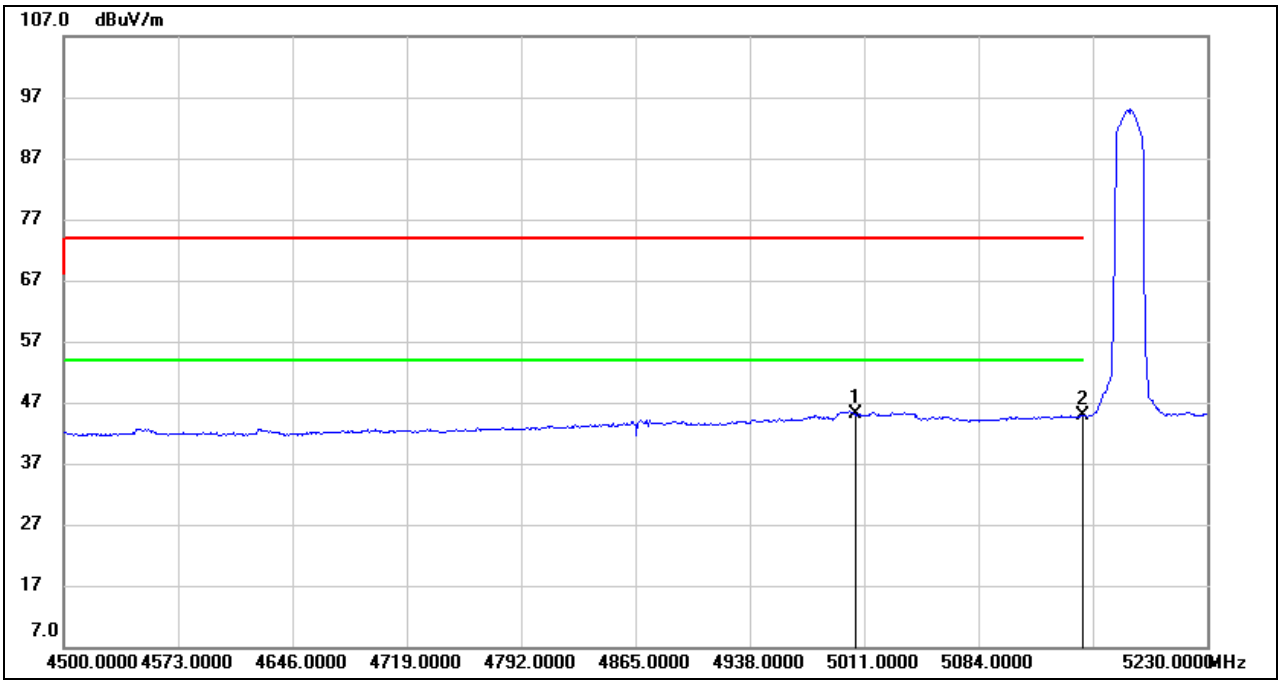
HORIZONTAL RESULTS
PEAK



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5005.160	18.71	40.08	58.79	74.00	-15.21	peak
2	5150.000	16.93	40.46	57.39	74.00	-16.61	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Only the worst case emission will be recorder, if it complies with the limit, the other emissions deemed to comply with the limit.

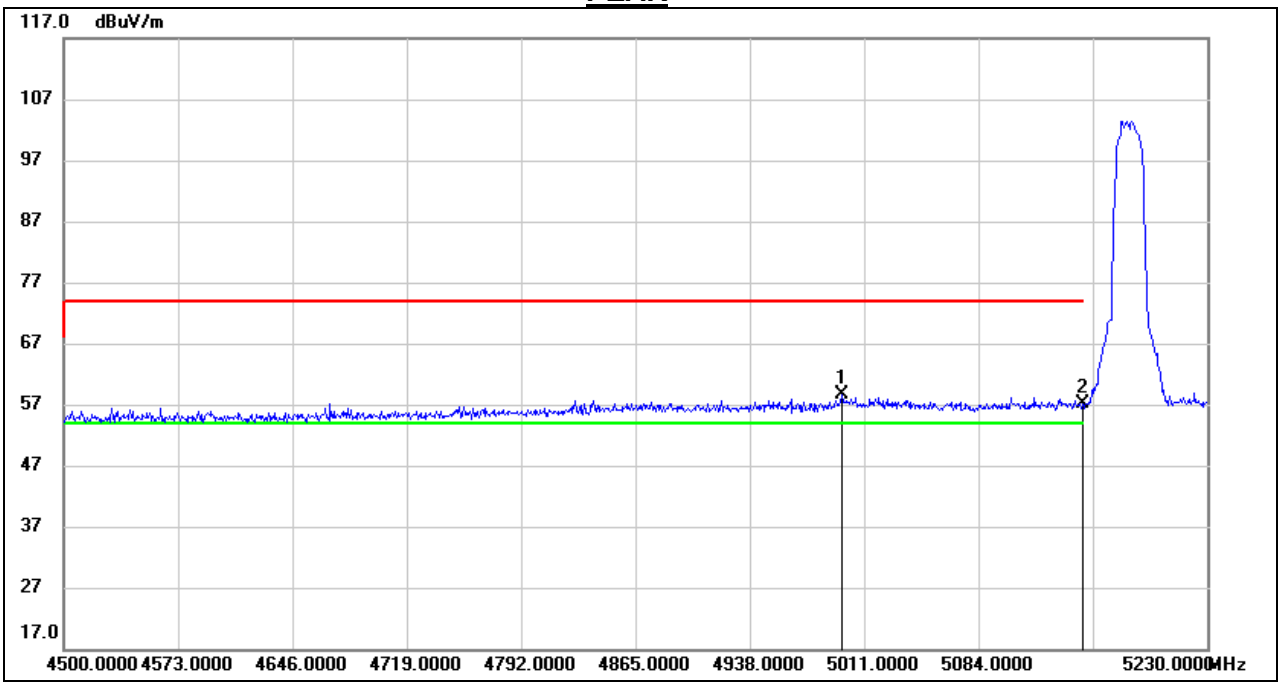
AVG



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5005.160	5.16	40.08	45.24	54.00	-8.76	AVG
2	5150.000	4.31	40.46	44.77	54.00	-9.23	AVG

Note: 1. Measurement = Reading Level + Correct Factor.
2. AVG: VBW=1/Ton where: ton is transmit duration.
3. For duty cycle, please refer to clause 7.1.
4. Only the worst case emission will be recorder, if it complies with the limit, the other emissions deemed to comply with the limit.

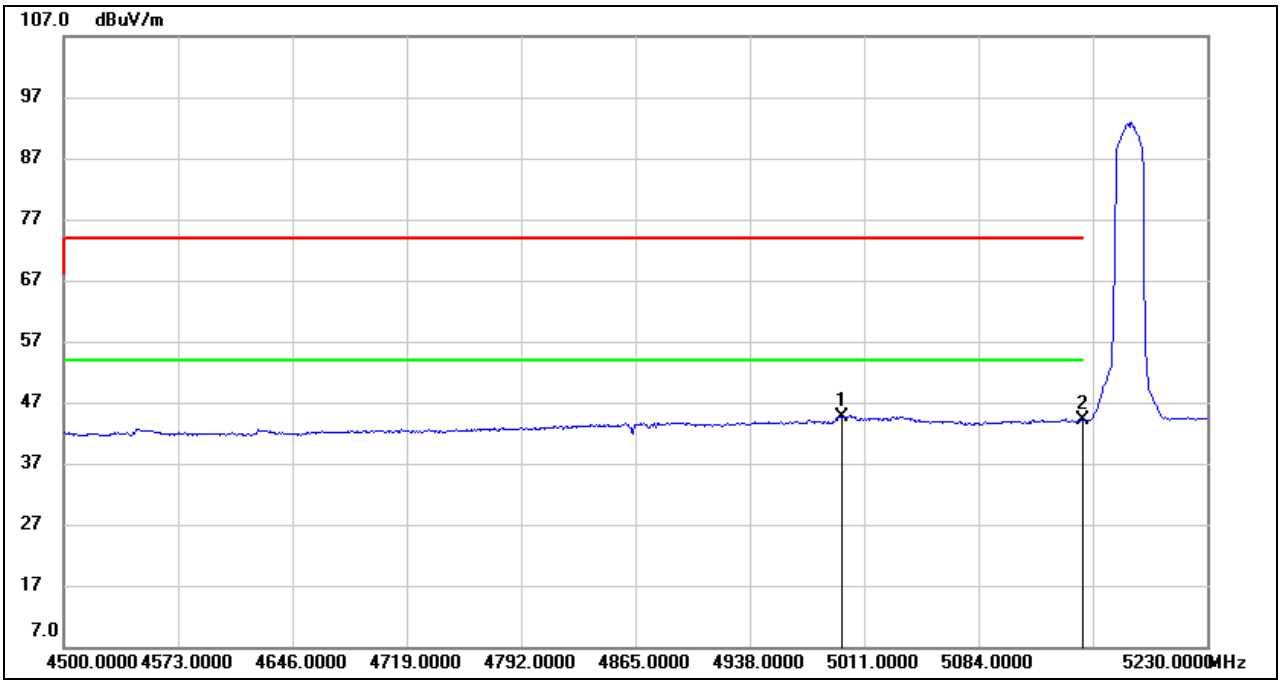
VERTICAL RESULTS
PEAK



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4997.130	18.47	40.05	58.52	74.00	-15.48	peak
2	5150.000	16.55	40.46	57.01	74.00	-16.99	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Only the worst case emission will be recorder, if it complies with the limit, the other emissions deemed to comply with the limit.

AVG

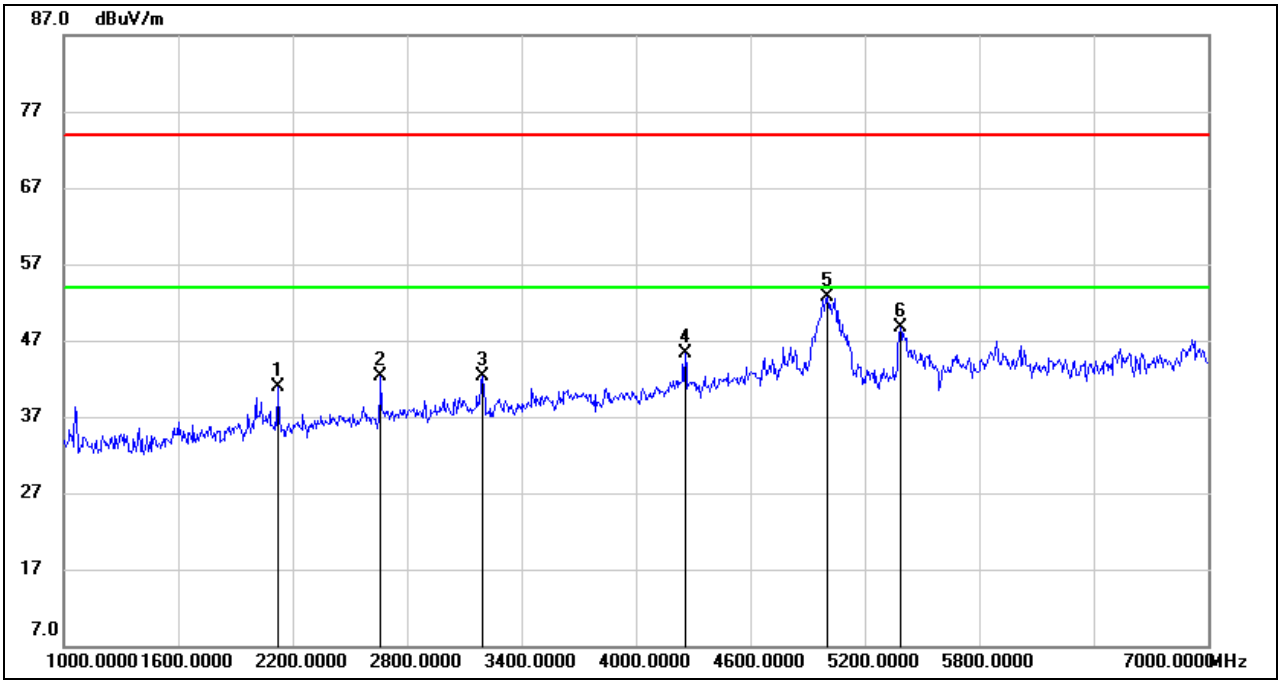


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4997.130	4.50	40.05	44.55	54.00	-9.45	AVG
2	5150.000	3.65	40.46	44.11	54.00	-9.89	AVG

Note: 1. Measurement = Reading Level + Correct Factor.
2. AVG: VBW=1/Ton where: ton is transmit duration.
3. For duty cycle, please refer to clause 7.1.
4. Only the worst case emission will be recorder, if it complies with the limit, the other emissions deemed to comply with the limit.

HARMONICS AND SPURIOUS EMISSIONS LOW CHANNEL

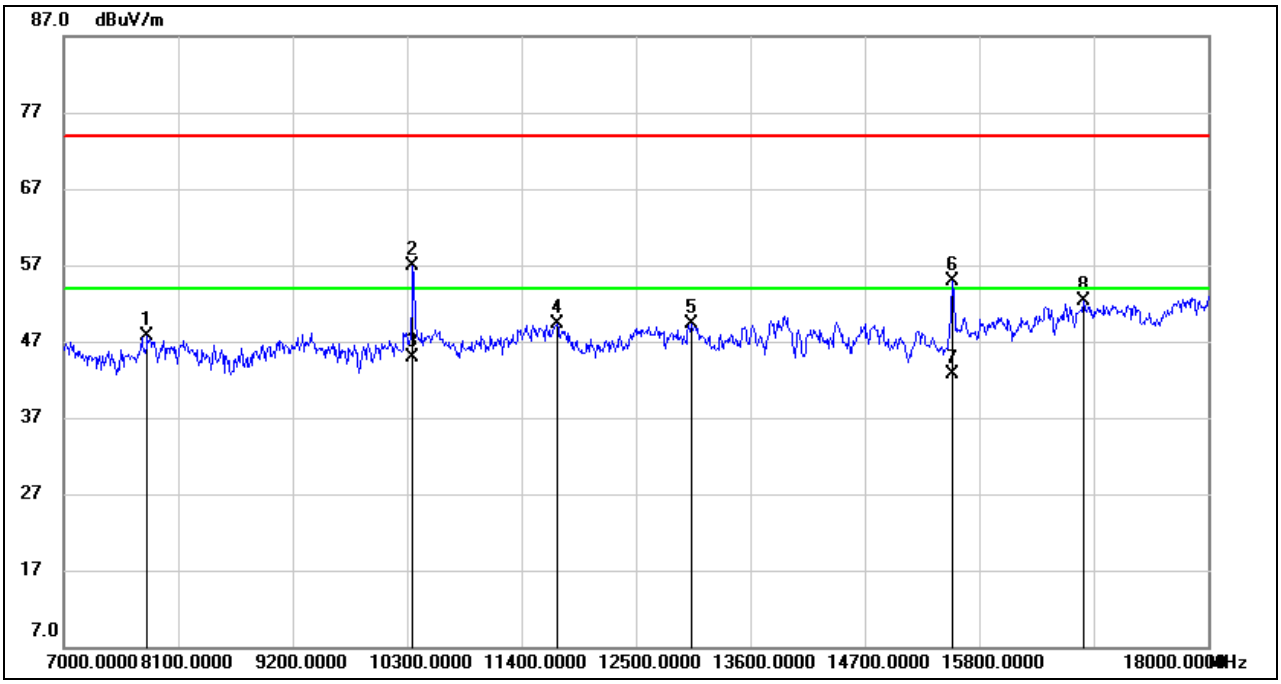
HORIZONTAL RESULTS
1-7GHz



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2122.000	50.01	-9.12	40.89	74.00	-33.11	peak
2	2662.000	49.23	-6.96	42.27	74.00	-31.73	peak
3	3196.000	46.97	-4.73	42.24	74.00	-31.76	peak
4	4258.000	46.19	-0.96	45.23	74.00	-28.77	peak
5	5002.000	50.07	2.70	52.77	74.00	-21.23	peak
6	5386.000	45.62	3.01	48.63	74.00	-25.37	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.
6. Owing to the highest peak level of unwanted emission out of the restricted bands complies with the lowest limit(54dBuV/m), so all the test point were deemed to comply with the limits list in the standard.

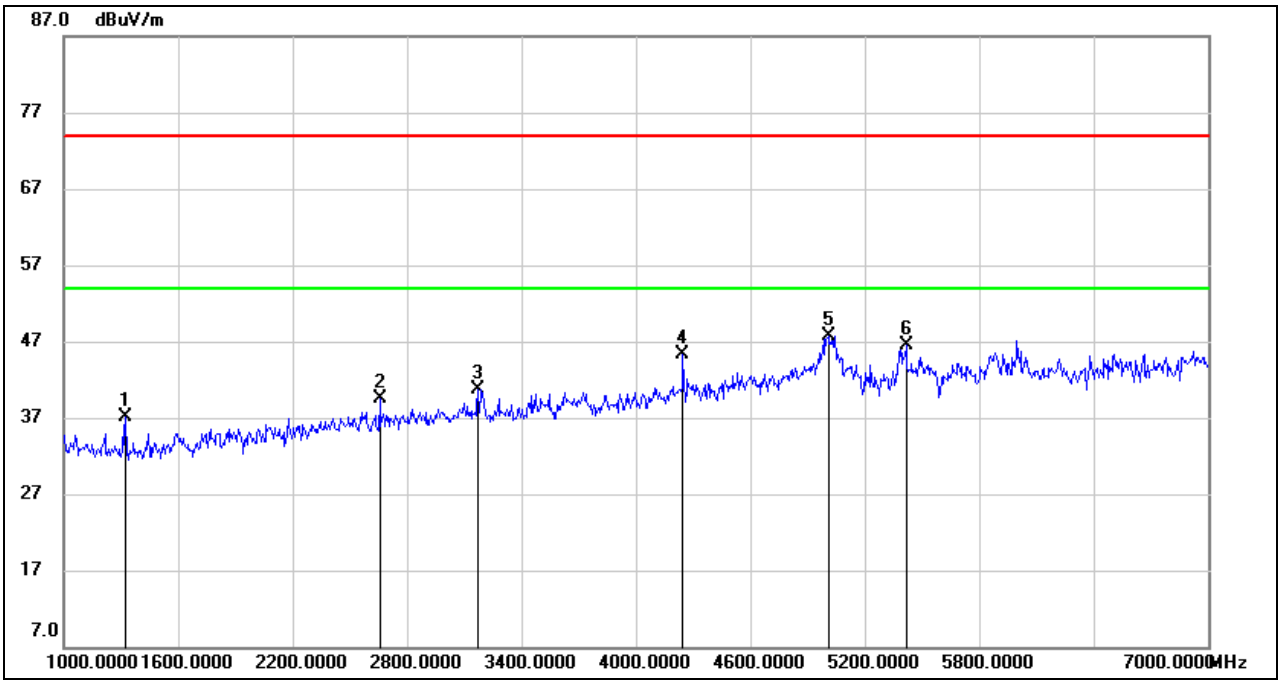
HORIZONTAL RESULTS
7-18GHz



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7803.000	39.73	7.91	47.64	74.00	-26.36	peak
2	10362.039	45.96	11.02	56.98	74.00	-17.02	peak
3	10362.039	33.85	11.02	44.87	54.00	-9.13	AVG
4	11741.000	36.27	13.04	49.31	74.00	-24.69	peak
5	13039.000	34.24	15.04	49.28	74.00	-24.72	peak
6	15541.966	38.43	16.56	54.99	74.00	-19.01	peak
7	15541.966	26.11	16.56	42.67	54.00	-11.33	AVG
8	16801.000	32.36	19.95	52.31	74.00	-21.69	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. AVG: VBW=1/Ton where: ton is transmit duration.
5. For transmit duration, please refer to clause 7.1.
6. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
7. Proper operation of the transmitter prior to adding the filter to the measurement chain.
8. Owing to the highest peak level of unwanted emission out of the restricted bands complies with the lowest limit(54dBuV/m), so all the test point were deemed to comply with the limits list in the standard.

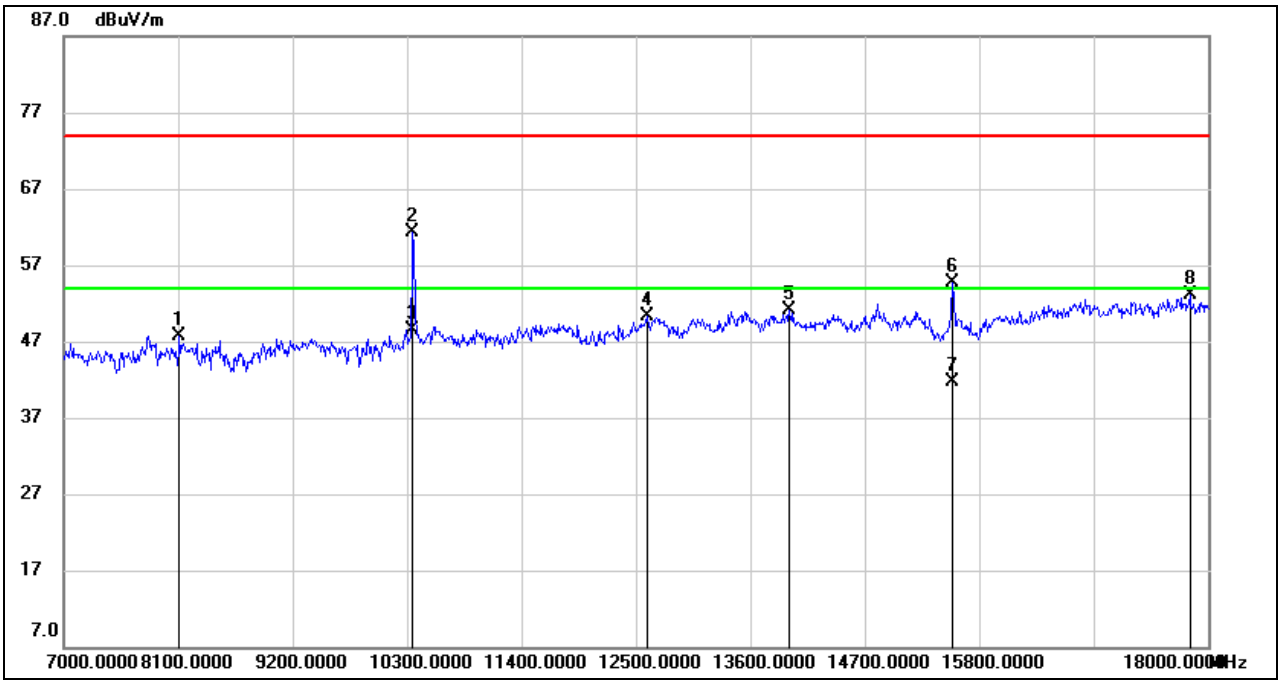
VERTICAL RESULTS
1-7GHz



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1324.000	49.45	-12.31	37.14	74.00	-36.86	peak
2	2656.000	46.51	-7.01	39.50	74.00	-34.50	peak
3	3172.000	45.41	-4.62	40.79	74.00	-33.21	peak
4	4246.000	46.22	-0.94	45.28	74.00	-28.72	peak
5	5008.000	45.06	2.71	47.77	74.00	-26.23	peak
6	5416.000	43.30	3.28	46.58	74.00	-27.42	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.
6. Owing to the highest peak level of unwanted emission out of the restricted bands complies with the lowest limit(54dBuV/m), so all the test point were deemed to comply with the limits list in the standard.

7-18GHz



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	8111.000	39.86	7.88	47.74	74.00	-26.26	peak
2	10362.000	50.29	11.02	61.31	74.00	-12.69	peak
3	10362.000	37.49	11.02	48.51	54.00	-5.49	AVG
4	12610.000	36.35	14.03	50.38	74.00	-23.62	peak
5	13974.000	34.96	16.07	51.03	74.00	-22.97	peak
6	15540.300	38.22	16.55	54.77	74.00	-19.23	peak
7	15540.300	25.06	16.55	41.61	54.00	-12.39	AVG
8	17824.000	29.72	23.32	53.04	74.00	-20.96	peak

Note: 1. Measurement = Reading Level + Correct Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Peak: Peak detector.

4. AVG: VBW=1/Ton where: ton is transmit duration.

5. For transmit duration, please refer to clause 7.1.

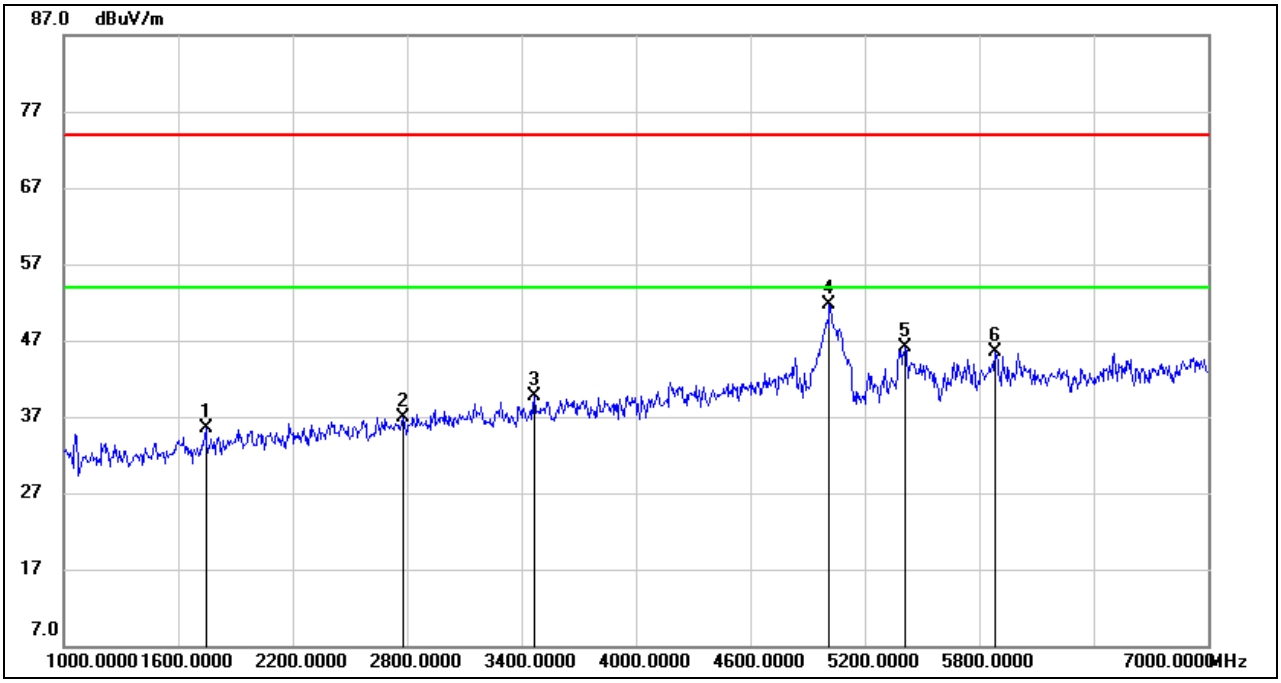
6. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.

7. Proper operation of the transmitter prior to adding the filter to the measurement chain.

8. Owing to the highest peak level of unwanted emission out of the restricted bands complies with the lowest limit(54dBuV/m), so all the test point were deemed to comply with the limits list in the standard.

HARMONICS AND SPURIOUS EMISSIONS MID CHANNEL

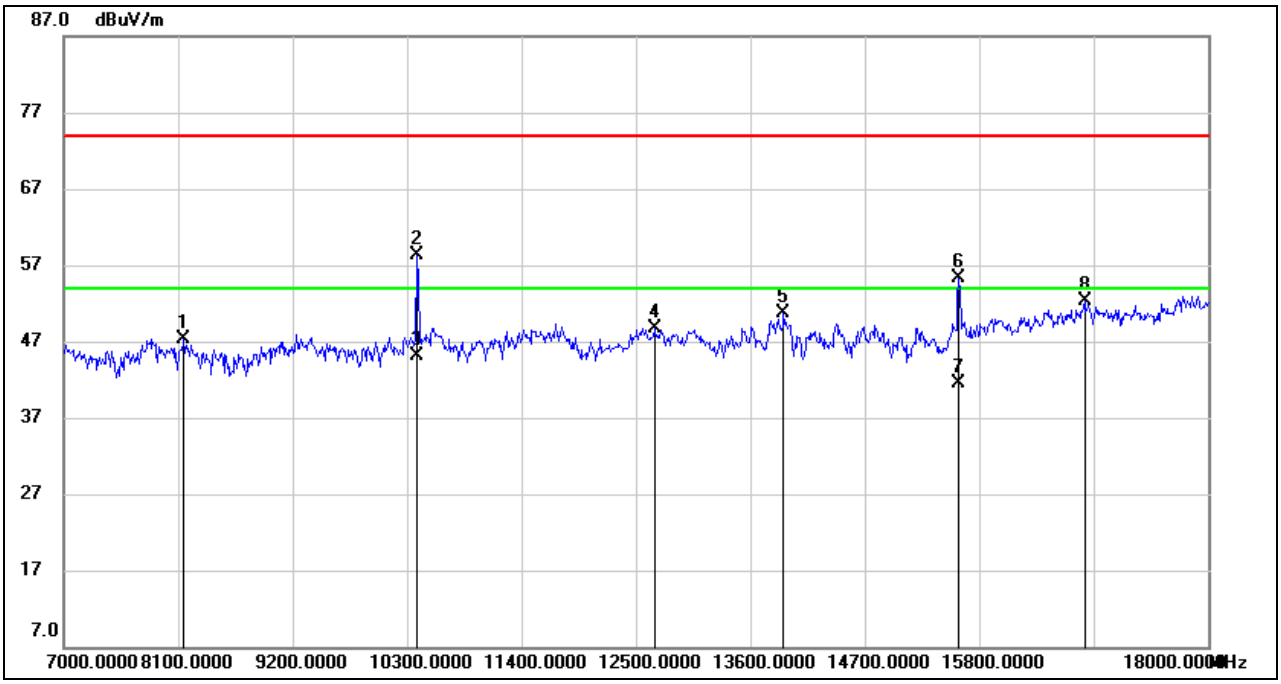
HORIZONTAL RESULTS
1-7GHz



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1744.000	46.11	-10.59	35.52	74.00	-38.48	peak
2	2776.000	43.17	-6.19	36.98	74.00	-37.02	peak
3	3466.000	43.87	-4.11	39.76	74.00	-34.24	peak
4	5014.000	49.02	2.73	51.75	74.00	-22.25	peak
5	5410.000	43.01	3.19	46.20	74.00	-27.80	peak
6	5884.000	40.40	5.14	45.54	74.00	-28.46	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.
6. Owing to the highest peak level of unwanted emission out of the restricted bands complies with the lowest limit(54dBuV/m), so all the test point were deemed to comply with the limits list in the standard.

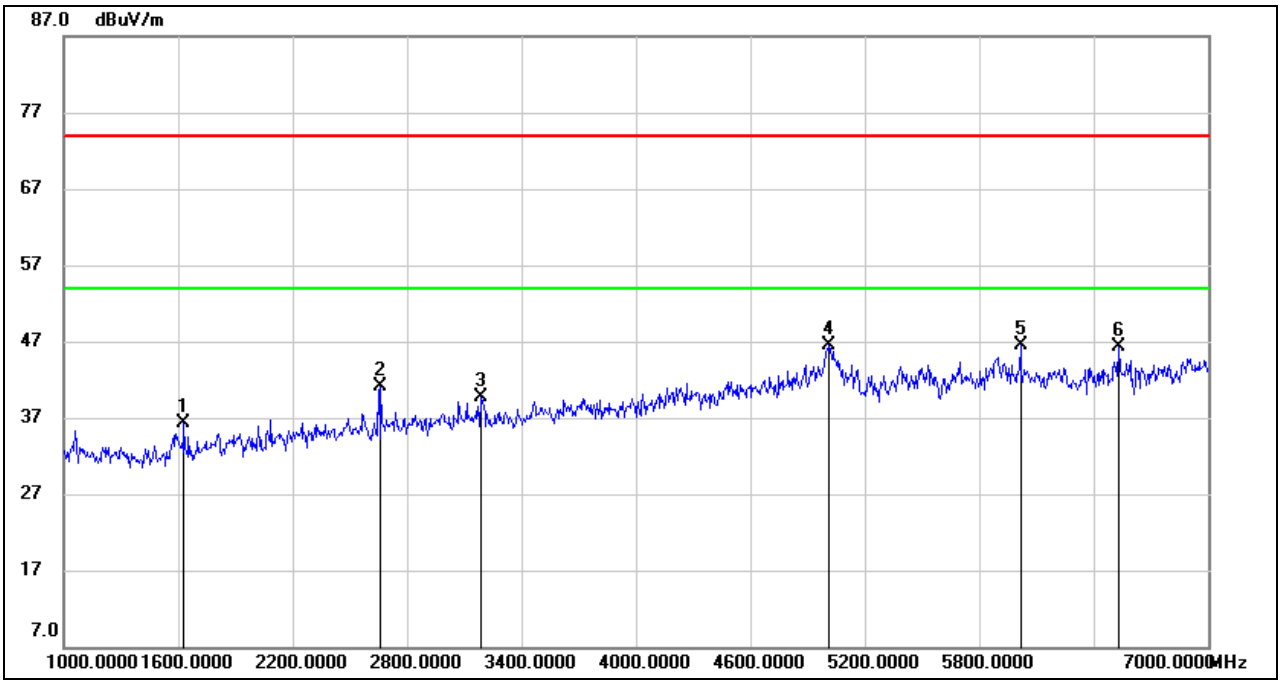
HORIZONTAL RESULTS
7-18GHz



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	8155.000	39.24	8.15	47.39	74.00	-26.61	peak
2	10401.720	47.25	10.97	58.22	74.00	-15.78	peak
3	10401.720	34.23	10.97	45.20	54.00	-8.80	AVG
4	12676.000	34.47	14.22	48.69	74.00	-25.31	peak
5	13919.000	34.56	16.17	50.73	74.00	-23.27	peak
6	15602.120	38.43	16.97	55.40	74.00	-18.60	peak
7	15602.120	24.47	16.97	41.44	54.00	-12.56	AVG
8	16812.000	32.32	19.95	52.27	74.00	-21.73	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. AVG: VBW=1/Ton where: ton is transmit duration.
5. For transmit duration, please refer to clause 7.1.
6. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
7. Proper operation of the transmitter prior to adding the filter to the measurement chain.
8. Owing to the highest peak level of unwanted emission out of the restricted bands complies with the lowest limit(54dBuV/m), so all the test point were deemed to comply with the limits list in the standard.

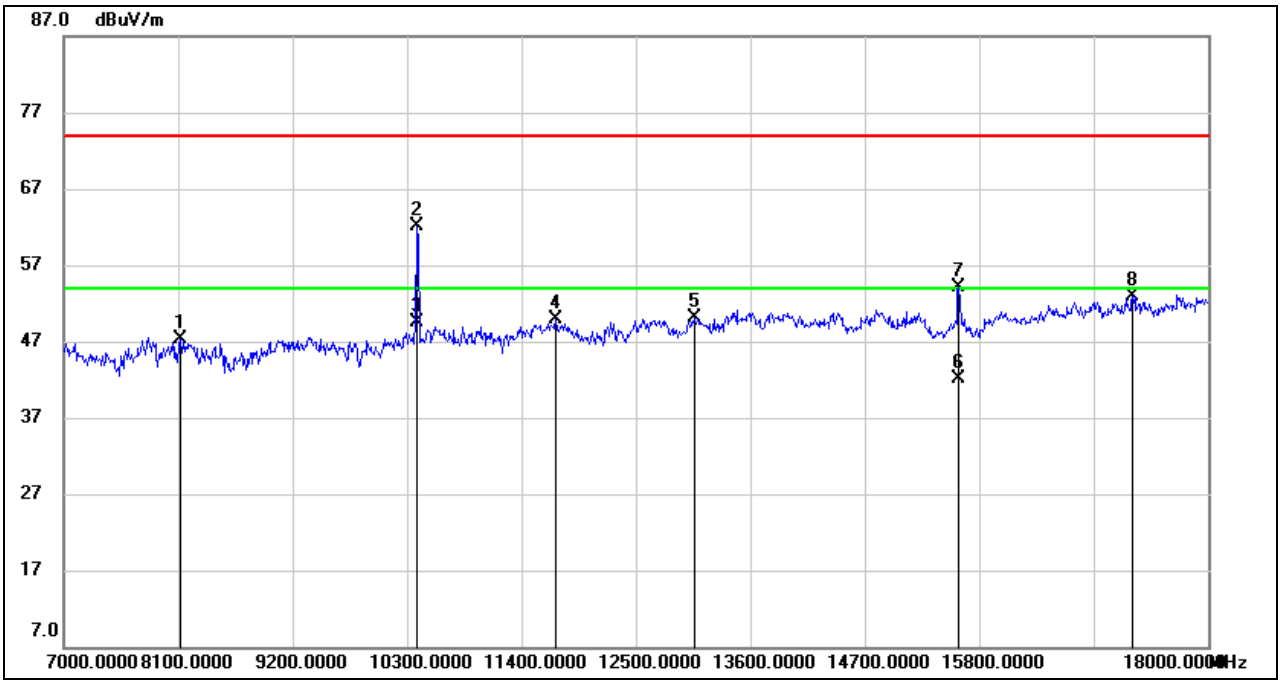
VERTICAL RESULTS
1-7GHz



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1630.000	47.31	-11.08	36.23	74.00	-37.77	peak
2	2662.000	48.15	-6.96	41.19	74.00	-32.81	peak
3	3184.000	44.37	-4.67	39.70	74.00	-34.30	peak
4	5014.000	43.82	2.73	46.55	74.00	-27.45	peak
5	6016.000	42.17	4.34	46.51	74.00	-27.49	peak
6	6532.000	39.43	6.90	46.33	74.00	-27.67	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.
6. Owing to the highest peak level of unwanted emission out of the restricted bands complies with the lowest limit(54dBuV/m), so all the test point were deemed to comply with the limits list in the standard.

7-18GHz



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	8122.000	39.37	7.95	47.32	74.00	-26.68	peak
2	10401.500	51.13	10.97	62.10	74.00	-11.90	peak
3	10401.500	38.55	10.97	49.52	54.00	-4.48	AVG
4	11730.000	36.83	13.02	49.85	74.00	-24.15	peak
5	13061.000	34.97	15.10	50.07	74.00	-23.93	peak
6	15600.360	25.19	16.98	42.17	54.00	-11.83	AVG
7	15600.360	37.09	16.98	54.07	74.00	-19.93	peak
8	17274.000	31.41	21.54	52.95	74.00	-21.05	peak

Note: 1. Measurement = Reading Level + Correct Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Peak: Peak detector.

4. AVG: VBW=1/Ton where: ton is transmit duration.

5. For transmit duration, please refer to clause 7.1.

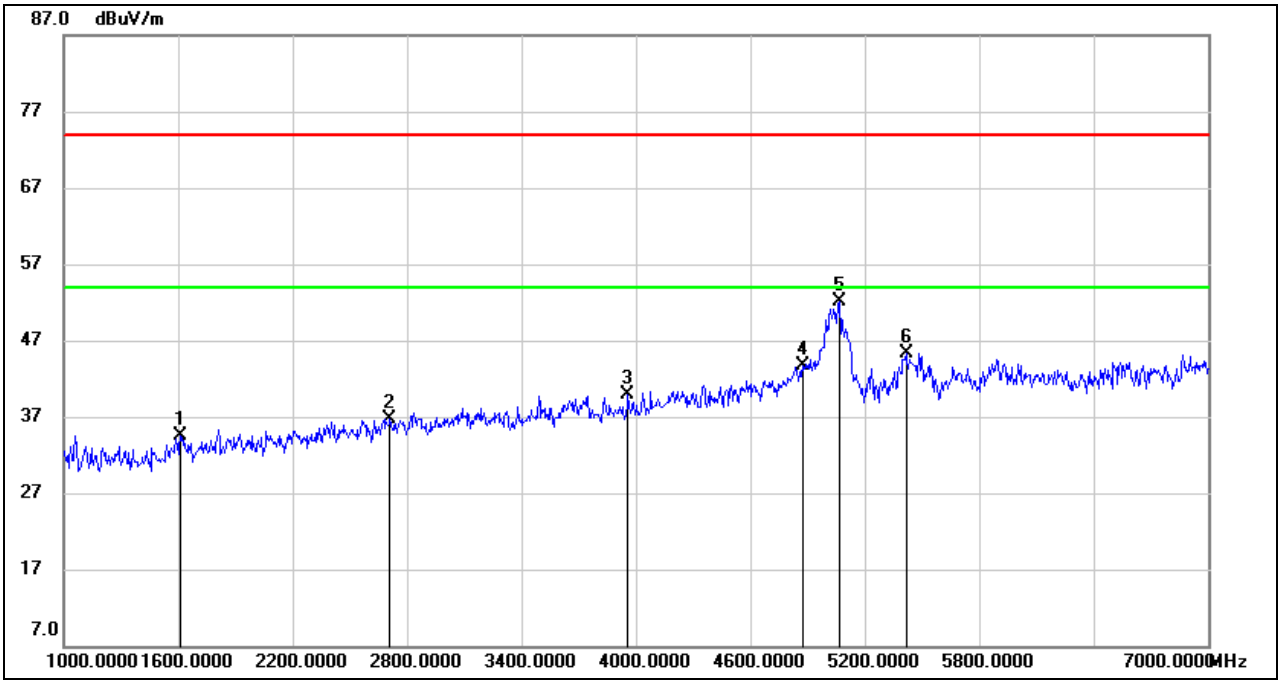
6. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.

7. Proper operation of the transmitter prior to adding the filter to the measurement chain.

8. Owing to the highest peak level of unwanted emission out of the restricted bands complies with the lowest limit(54dBuV/m), so all the test point were deemed to comply with the limits list in the standard.

HARMONICS AND SPURIOUS EMISSIONS HIGH CHANNEL

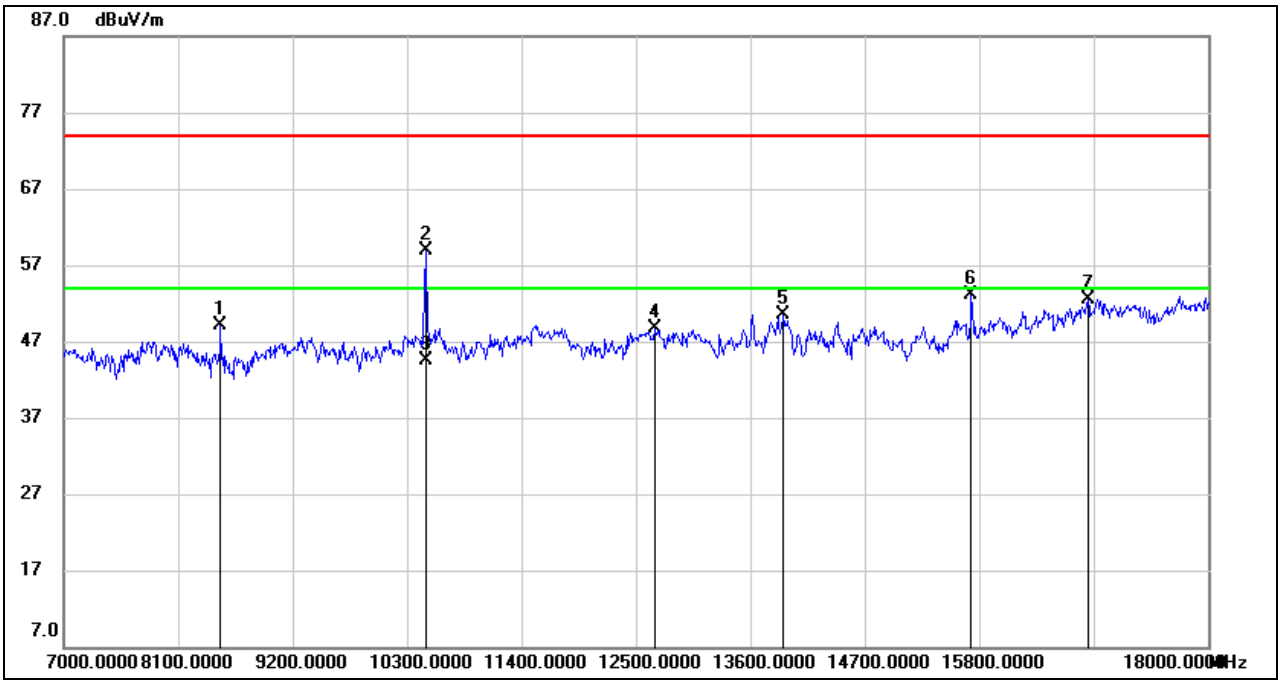
HORIZONTAL RESULTS
1-7GHz



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1612.000	45.64	-11.10	34.54	74.00	-39.46	peak
2	2710.000	43.36	-6.56	36.80	74.00	-37.20	peak
3	3958.000	42.35	-2.43	39.92	74.00	-34.08	peak
4	4876.000	41.54	2.24	43.78	74.00	-30.22	peak
5	5068.000	49.27	2.79	52.06	74.00	-21.94	peak
6	5416.000	42.01	3.28	45.29	74.00	-28.71	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.
6. Owing to the highest peak level of unwanted emission out of the restricted bands complies with the lowest limit(54dBuV/m), so all the test point were deemed to comply with the limits list in the standard.

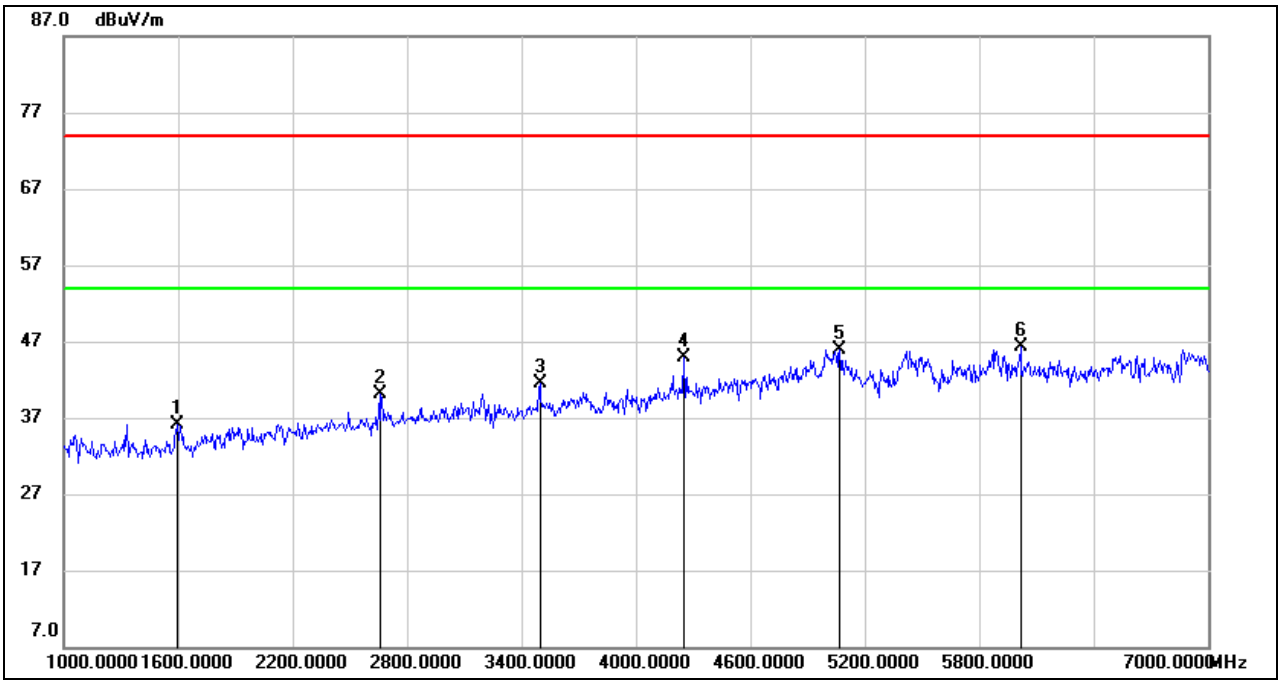
HORIZONTAL RESULTS
7-18GHz



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	8507.000	41.73	7.42	49.15	74.00	-24.85	peak
2	10478.200	47.51	11.30	58.81	74.00	-15.19	peak
3	10478.200	33.11	11.30	44.41	54.00	-9.59	AVG
4	12676.000	34.44	14.22	48.66	74.00	-25.34	peak
5	13919.000	34.31	16.17	50.48	74.00	-23.52	peak
6	15723.000	36.28	16.78	53.06	74.00	-20.94	peak
7	16845.000	32.61	19.96	52.57	74.00	-21.43	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. AVG: VBW=1/Ton where: ton is transmit duration.
5. For transmit duration, please refer to clause 7.1.
6. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
7. Proper operation of the transmitter prior to adding the filter to the measurement chain.
8. Owing to the highest peak level of unwanted emission out of the restricted bands complies with the lowest limit(54dBuV/m), so all the test point were deemed to comply with the limits list in the standard.

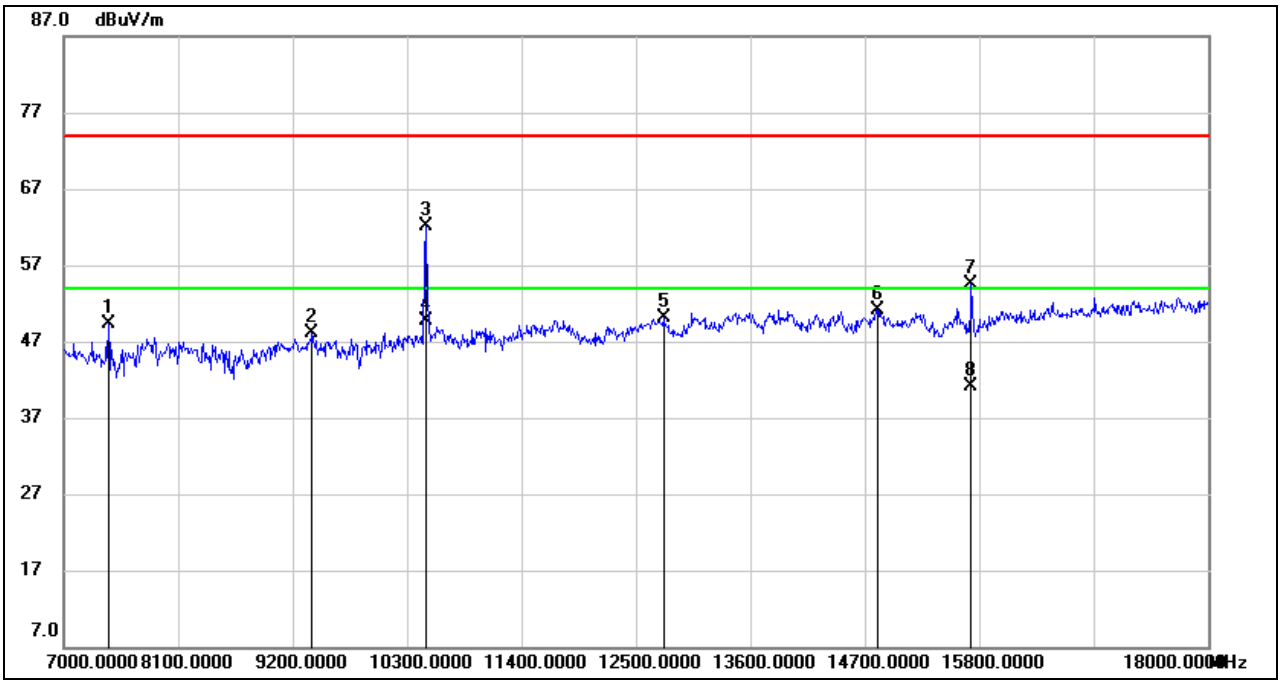
VERTICAL RESULTS
1-7GHz



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1594.000	47.36	-11.17	36.19	74.00	-37.81	peak
2	2656.000	47.14	-7.01	40.13	74.00	-33.87	peak
3	3496.000	45.41	-3.90	41.51	74.00	-32.49	peak
4	4252.000	45.81	-0.95	44.86	74.00	-29.14	peak
5	5068.000	43.18	2.79	45.97	74.00	-28.03	peak
6	6016.000	41.95	4.34	46.29	74.00	-27.71	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.
6. Owing to the highest peak level of unwanted emission out of the restricted bands complies with the lowest limit(54dBuV/m), so all the test point were deemed to comply with the limits list in the standard.

7-18GHz



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7429.000	42.98	6.37	49.35	74.00	-24.65	peak
2	9387.000	38.56	9.52	48.08	74.00	-25.92	peak
3	10482.000	50.75	11.31	62.06	74.00	-11.94	peak
4	10482.000	38.35	11.31	49.66	54.00	-4.34	AVG
5	12764.000	34.85	15.16	50.01	74.00	-23.99	peak
6	14821.000	35.21	15.94	51.15	74.00	-22.85	peak
7	15722.640	37.77	16.78	54.55	74.00	-19.45	peak
8	15722.640	24.25	16.78	41.03	54.00	-12.97	AVG

Note: 1. Measurement = Reading Level + Correct Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Peak: Peak detector.

4. AVG: VBW=1/Ton where: ton is transmit duration.

5. For transmit duration, please refer to clause 7.1.

6. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.

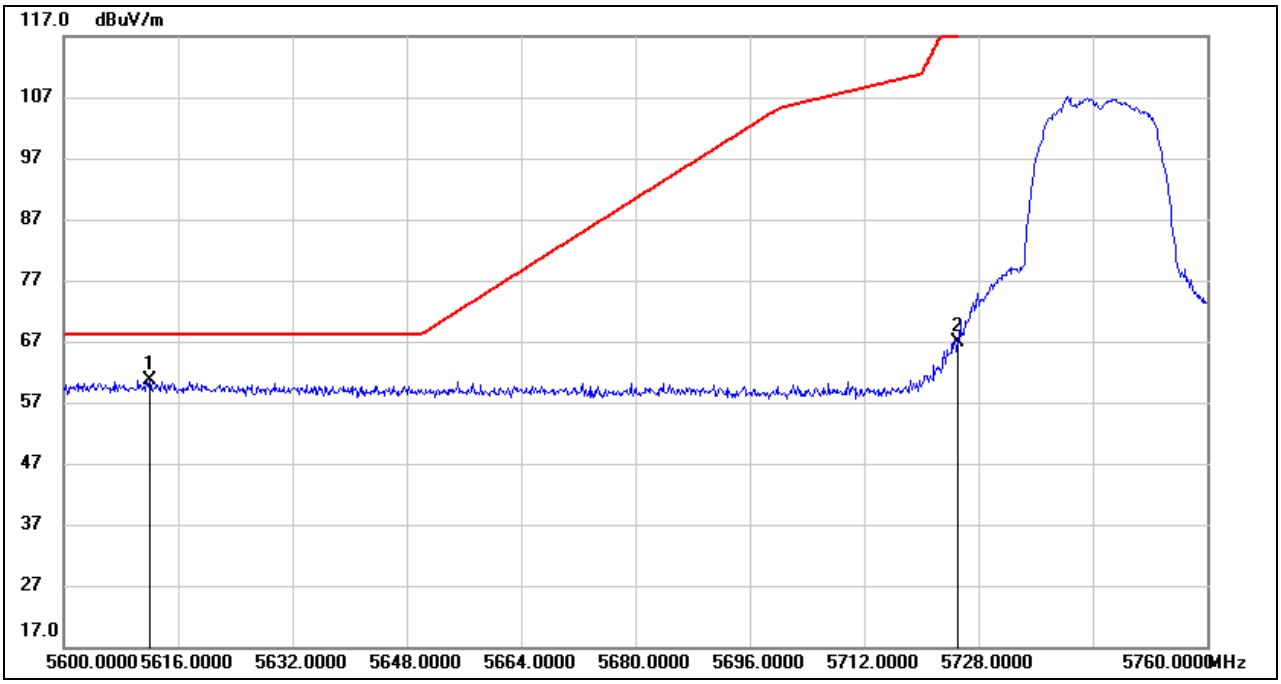
7. Proper operation of the transmitter prior to adding the filter to the measurement chain.

8. Owing to the highest peak level of unwanted emission out of the restricted bands complies with the lowest limit(54dBuV/m), so all the test point were deemed to comply with the limits list in the standard.

8.1.2. UNII-3 BAND

RESTRICTED BANDEDGE LOW CHANNEL

HORIZONTAL RESULTS
PEAK



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5612.000	19.10	41.46	60.56	68.20	-7.64	peak
2	5725.000	25.39	41.61	67.00	122.20	-55.20	peak

Note: 1. Measurement = Reading Level + Correct Factor.

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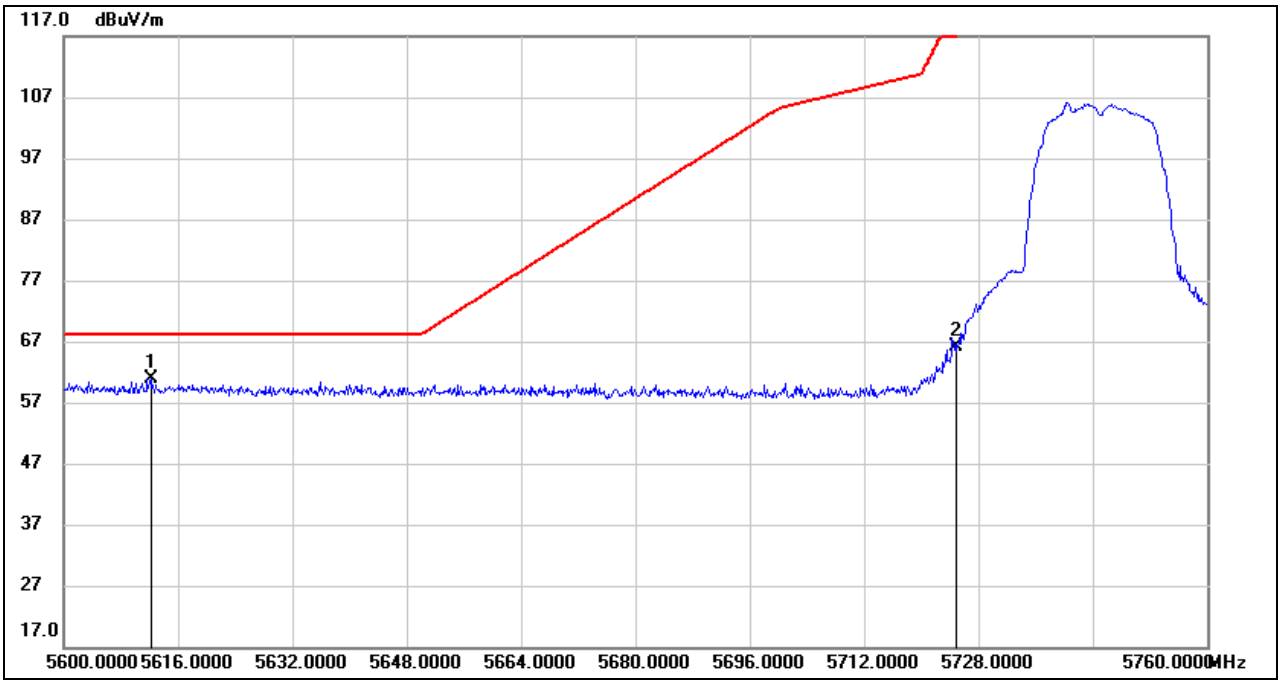
VERTICAL RESULTS
PEAK

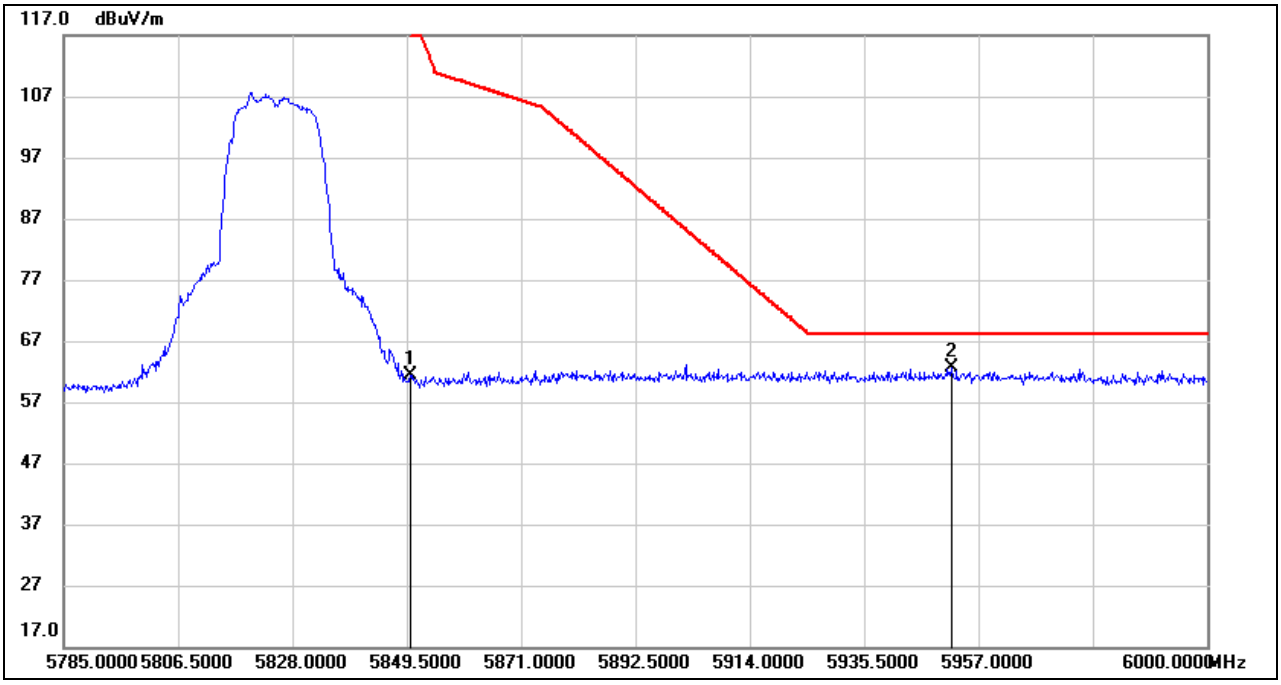


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5612.160	19.47	41.46	60.93	68.20	-7.27	peak
2	5725.000	24.53	41.61	66.14	122.20	-56.06	peak

Note: 1. Measurement = Reading Level + Correct Factor.

RESTRICTED BANDEDGE HIGH CHANNEL

HORIZONTAL RESULTS
PEAK



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5850.000	18.50	42.89	61.39	122.20	-60.81	peak
2	5952.055	19.76	42.96	62.72	68.20	-5.48	peak

Note: 1. Measurement = Reading Level + Correct Factor.

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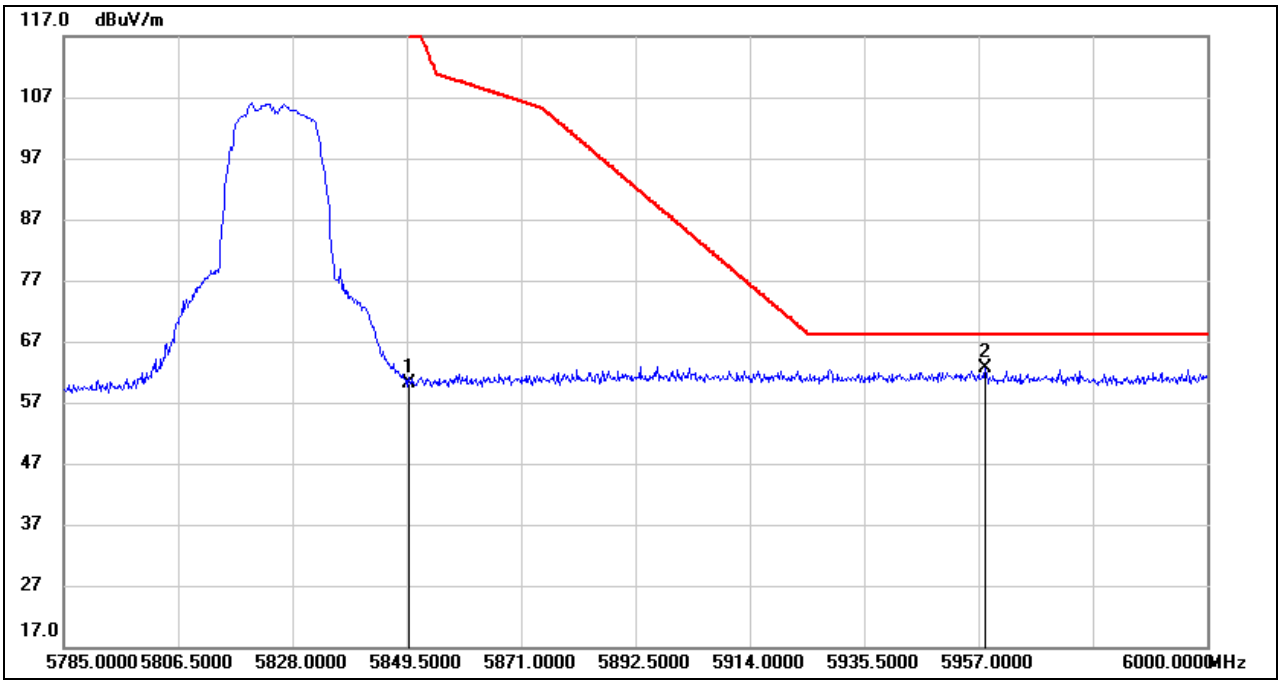
VERTICAL RESULTS
PEAK

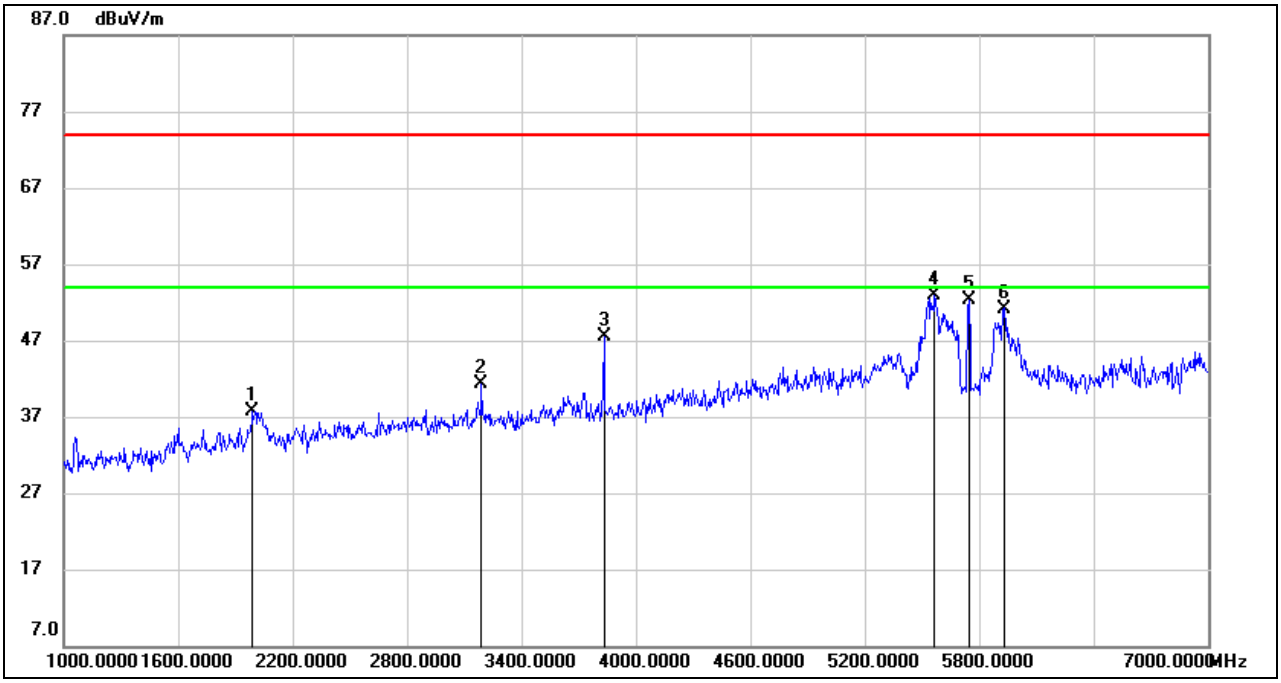


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5850.000	17.24	42.89	60.13	122.20	-62.07	peak
2	5958.290	19.88	42.85	62.73	68.20	-5.47	peak

Note: 1. Measurement = Reading Level + Correct Factor.

HARMONICS AND SPURIOUS EMISSIONS LOW CHANNEL

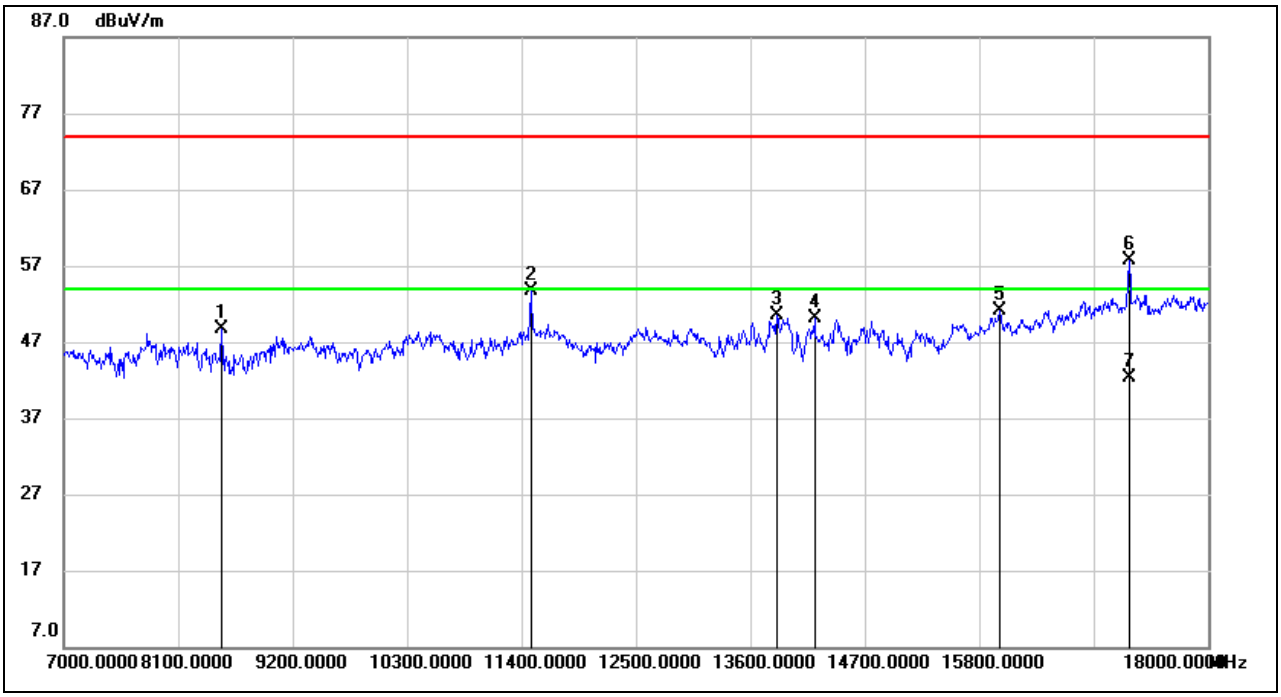
HORIZONTAL RESULTS
1-7GHz



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1990.000	47.57	-9.86	37.71	74.00	-36.29	peak
2	3190.000	45.98	-4.71	41.27	74.00	-32.73	peak
3	3832.000	50.35	-2.79	47.56	74.00	-26.44	peak
4	5566.000	49.30	3.68	52.98	74.00	-21.02	peak
5	5746.000	48.57	3.76	52.33	74.00	-21.67	peak
6	5932.000	46.10	5.10	51.20	74.00	-22.80	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.
6. Owing to the highest peak level of unwanted emission out of the restricted bands complies with the lowest limit(54dBuV/m), so all the test point were deemed to comply with the limits list in the standard.

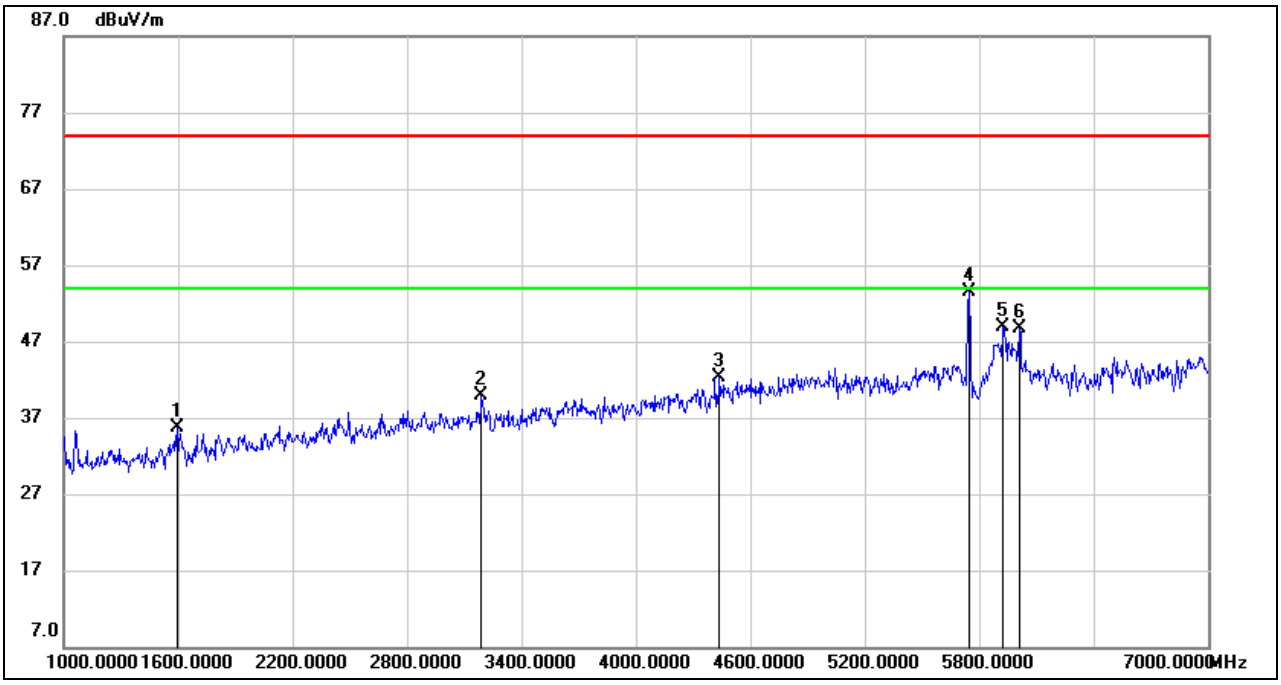
HORIZONTAL RESULTS
7-18GHz



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	8518.000	41.25	7.39	48.64	74.00	-25.36	peak
2	11488.000	40.31	13.32	53.63	74.00	-20.37	peak
3	13853.000	33.85	16.63	50.48	74.00	-23.52	peak
4	14216.000	33.74	16.34	50.08	74.00	-23.92	peak
5	15998.000	33.44	17.69	51.13	74.00	-22.87	peak
6	17234.285	36.54	21.20	57.74	74.00	-16.26	peak
7	17234.285	21.15	21.20	42.35	54.00	-11.65	AVG

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. AVG: VBW=1/Ton where: ton is transmit duration.
5. For transmit duration, please refer to clause 7.1.
6. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
7. Proper operation of the transmitter prior to adding the filter to the measurement chain.
8. Owing to the highest peak level of unwanted emission out of the restricted bands complies with the lowest limit(54dBuV/m), so all the test point were deemed to comply with the limits list in the standard.

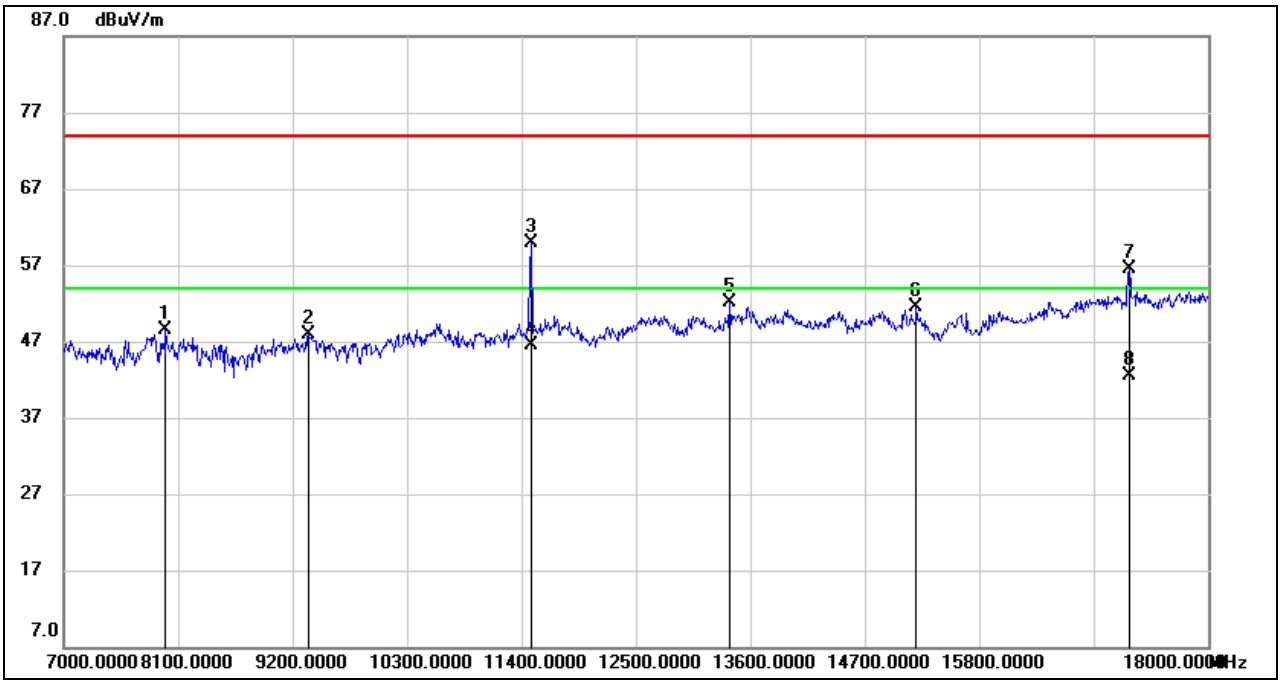
VERTICAL RESULTS
1-7GHz



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1594.000	46.94	-11.17	35.77	74.00	-38.23	peak
2	3190.000	44.55	-4.71	39.84	74.00	-34.16	peak
3	4438.000	42.71	-0.31	42.40	74.00	-31.60	peak
4	5746.000	49.71	3.76	53.47	74.00	-20.53	peak
5	5926.000	43.75	5.16	48.91	74.00	-25.09	peak
6	6010.000	44.41	4.36	48.77	74.00	-25.23	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.
6. Owing to the highest peak level of unwanted emission out of the restricted bands complies with the lowest limit(54dBuV/m), so all the test point were deemed to comply with the limits list in the standard.

7-18GHz



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7979.000	41.11	7.47	48.58	74.00	-25.42	peak
2	9354.000	38.26	9.64	47.90	74.00	-26.10	peak
3	11492.300	46.58	13.31	59.89	74.00	-14.11	peak
4	11492.300	33.17	13.31	46.48	54.00	-7.52	AVG
5	13402.000	35.94	16.17	52.11	74.00	-21.89	peak
6	15195.000	35.40	16.14	51.54	74.00	-22.46	peak
7	17232.740	34.97	21.44	56.41	74.00	-17.59	peak
8	17232.740	21.02	21.44	42.46	54.00	-11.54	AVG

Note: 1. Measurement = Reading Level + Correct Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Peak: Peak detector.

4. AVG: VBW=1/Ton where: ton is transmit duration.

5. For transmit duration, please refer to clause 7.1.

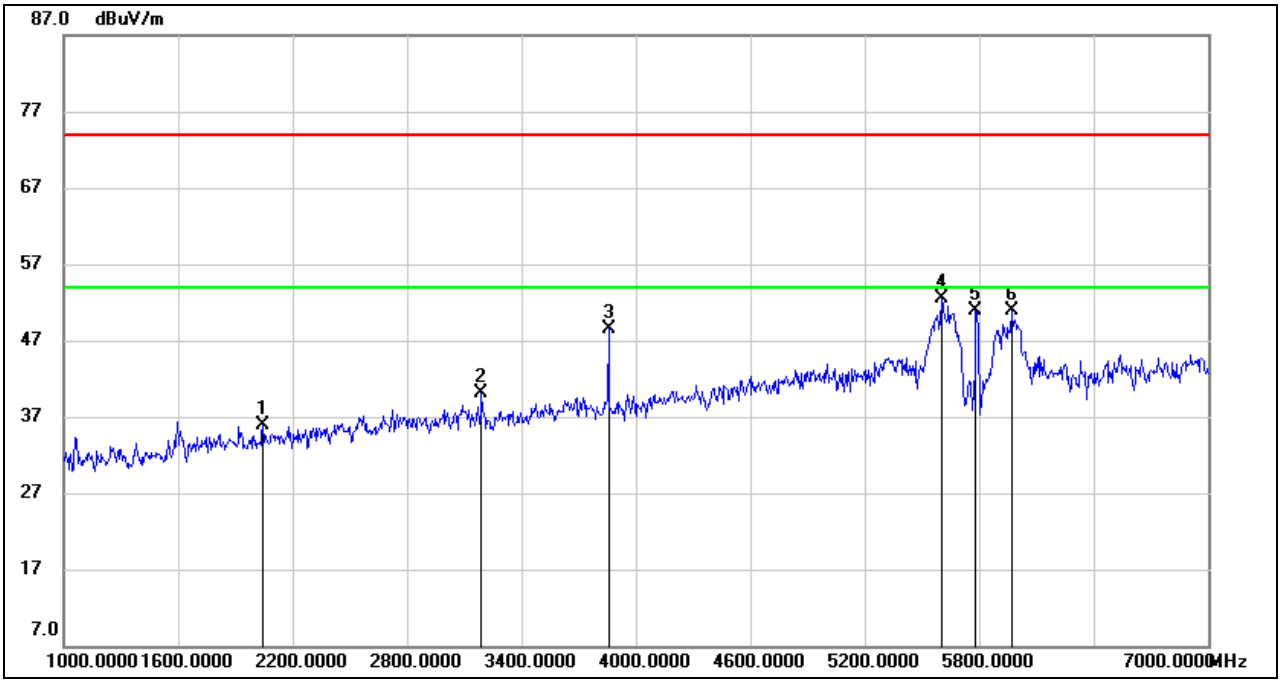
6. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.

7. Proper operation of the transmitter prior to adding the filter to the measurement chain.

8. Owing to the highest peak level of unwanted emission out of the restricted bands complies with the lowest limit(54dBuV/m), so all the test point were deemed to comply with the limits list in the standard.

HARMONICS AND SPURIOUS EMISSIONS MID CHANNEL

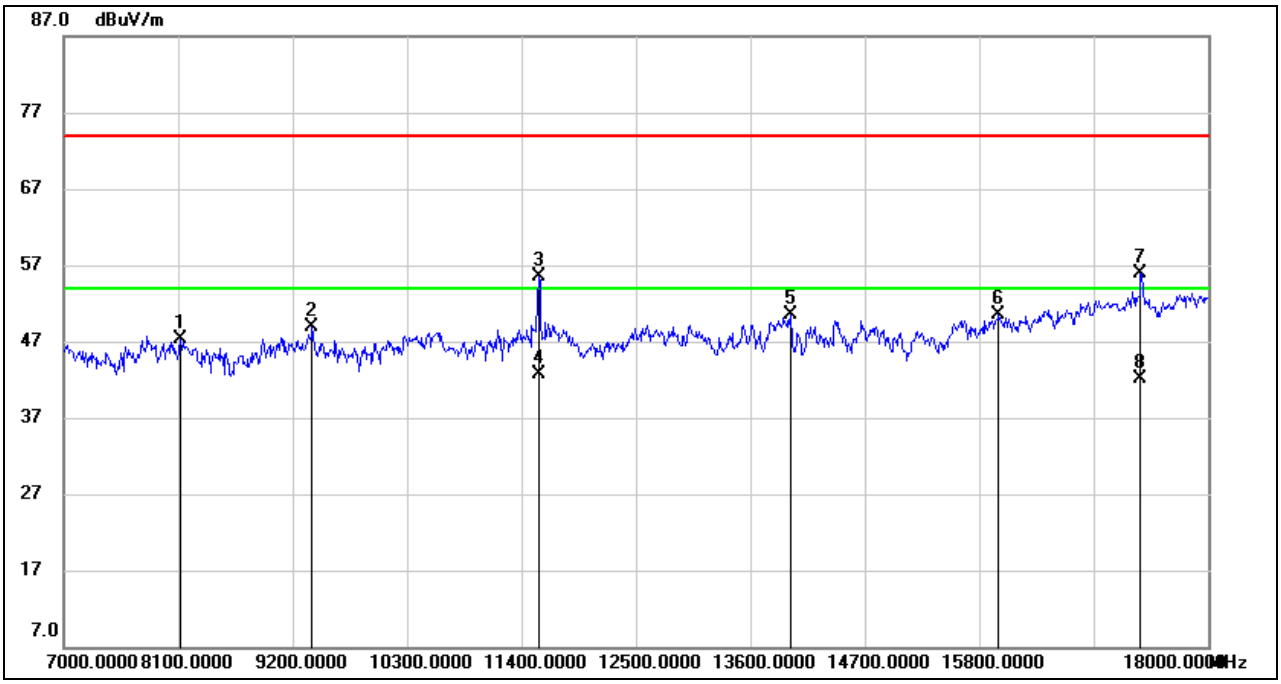
HORIZONTAL RESULTS
1-7GHz



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2044.000	45.41	-9.60	35.81	74.00	-38.19	peak
2	3190.000	44.85	-4.71	40.14	74.00	-33.86	peak
3	3856.000	51.28	-2.68	48.60	74.00	-25.40	peak
4	5602.000	49.24	3.31	52.55	74.00	-21.45	peak
5	5782.000	47.32	3.67	50.99	74.00	-23.01	peak
6	5968.000	46.26	4.73	50.99	74.00	-23.01	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.
6. Owing to the highest peak level of unwanted emission out of the restricted bands complies with the lowest limit(54dBuV/m), so all the test point were deemed to comply with the limits list in the standard.

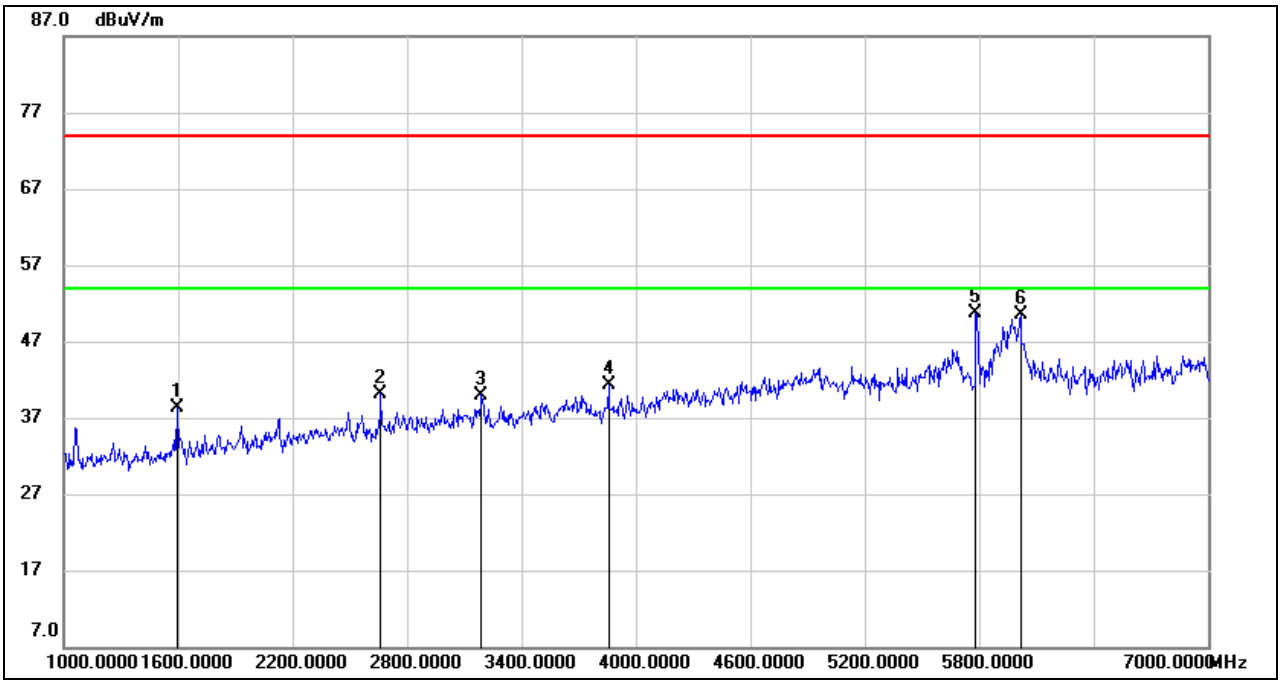
HORIZONTAL RESULTS
7-18GHz



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	8122.000	39.45	7.95	47.40	74.00	-26.60	peak
2	9387.000	39.33	9.52	48.85	74.00	-25.15	peak
3	11571.390	42.21	13.25	55.46	74.00	-18.54	peak
4	11571.390	29.52	13.25	42.77	54.00	-11.23	AVG
5	13985.000	34.50	16.05	50.55	74.00	-23.45	peak
6	15987.000	32.92	17.67	50.59	74.00	-23.41	peak
7	17355.358	34.29	21.56	55.85	74.00	-18.15	peak
8	17355.358	20.54	21.56	42.10	54.00	-11.90	AVG

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. AVG: VBW=1/Ton where: ton is transmit duration.
5. For transmit duration, please refer to clause 7.1.
6. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
7. Proper operation of the transmitter prior to adding the filter to the measurement chain.
8. Owing to the highest peak level of unwanted emission out of the restricted bands complies with the lowest limit(54dBuV/m), so all the test point were deemed to comply with the limits list in the standard.

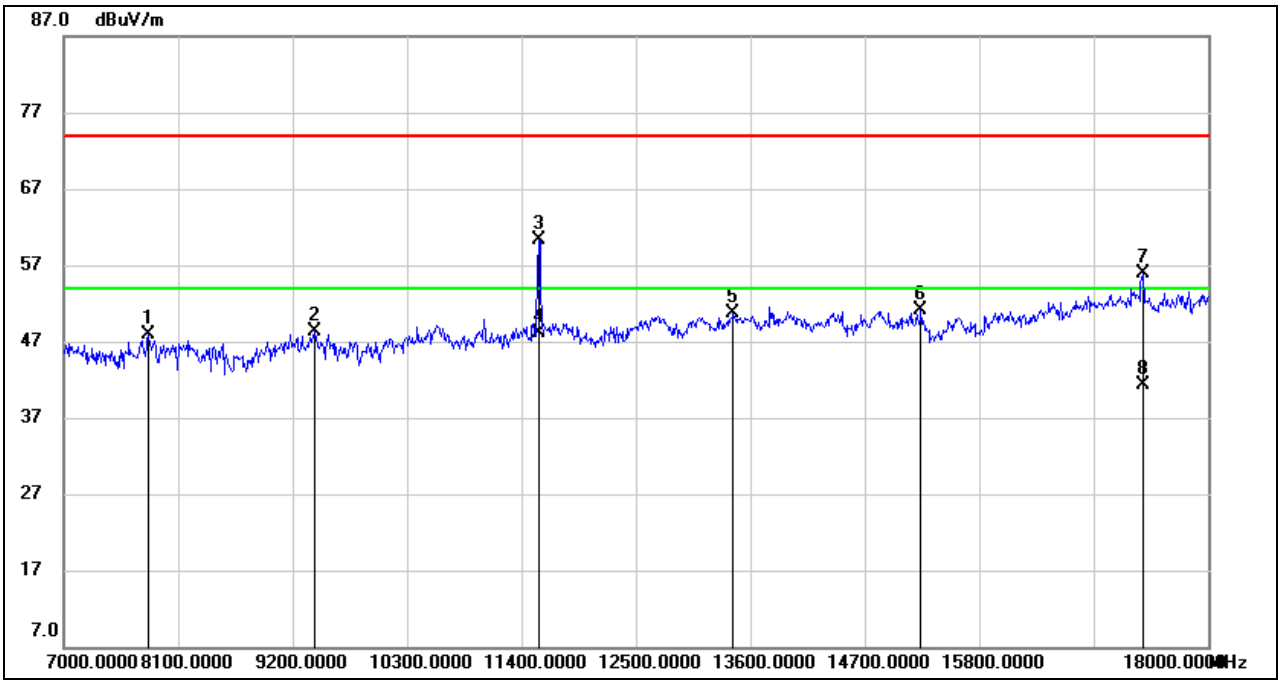
VERTICAL RESULTS
1-7GHz



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1594.000	49.39	-11.17	38.22	74.00	-35.78	peak
2	2662.000	47.03	-6.96	40.07	74.00	-33.93	peak
3	3190.000	44.71	-4.71	40.00	74.00	-34.00	peak
4	3856.000	44.02	-2.68	41.34	74.00	-32.66	peak
5	5782.000	46.94	3.67	50.61	74.00	-23.39	peak
6	6016.000	46.18	4.34	50.52	74.00	-23.48	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.
6. Owing to the highest peak level of unwanted emission out of the restricted bands complies with the lowest limit(54dBuV/m), so all the test point were deemed to comply with the limits list in the standard.

7-18GHz



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7814.000	39.77	8.10	47.87	74.00	-26.13	peak
2	9409.000	38.34	9.93	48.27	74.00	-25.73	peak
3	11567.800	46.74	13.49	60.23	74.00	-13.77	peak
4	11567.880	34.66	13.49	48.15	54.00	-5.85	AVG
5	13435.000	34.67	16.08	50.75	74.00	-23.25	peak
6	15239.000	35.02	16.10	51.12	74.00	-22.88	peak
7	17373.000	34.31	21.63	55.94	74.00	-18.06	peak
8	17373.000	19.76	21.63	41.39	54.00	-12.61	AVG

Note: 1. Measurement = Reading Level + Correct Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Peak: Peak detector.

4. AVG: VBW=1/Ton where: ton is transmit duration.

5. For transmit duration, please refer to clause 7.1.

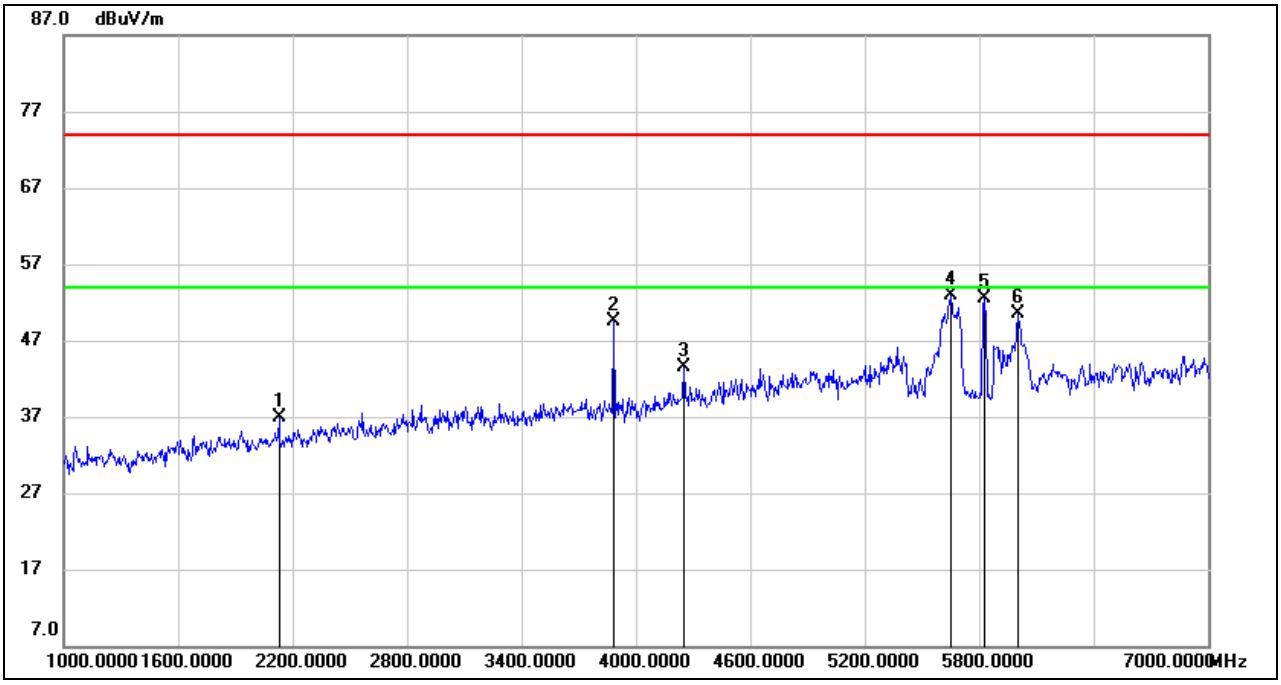
6. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.

7. Proper operation of the transmitter prior to adding the filter to the measurement chain.

8. Owing to the highest peak level of unwanted emission out of the restricted bands complies with the lowest limit(54dBuV/m), so all the test point were deemed to comply with the limits list in the standard.

HARMONICS AND SPURIOUS EMISSIONS HIGH CHANNEL

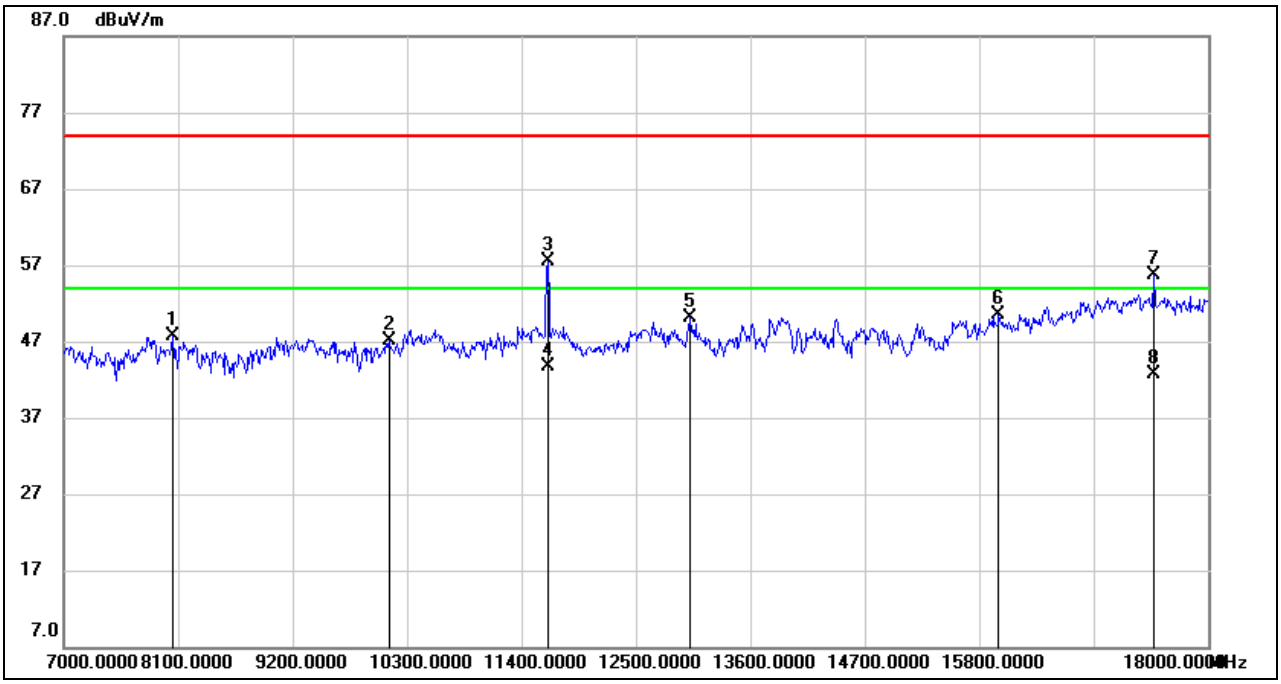
HORIZONTAL RESULTS
1-7GHz



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2128.000	45.99	-9.08	36.91	74.00	-37.09	peak
2	3886.000	52.12	-2.56	49.56	74.00	-24.44	peak
3	4252.000	44.43	-0.95	43.48	74.00	-30.52	peak
4	5650.000	49.25	3.59	52.84	74.00	-21.16	peak
5	5830.000	48.39	4.18	52.57	74.00	-21.43	peak
6	6004.000	46.09	4.39	50.48	74.00	-23.52	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.
6. Owing to the highest peak level of unwanted emission out of the restricted bands complies with the lowest limit(54dBuV/m), so all the test point were deemed to comply with the limits list in the standard.

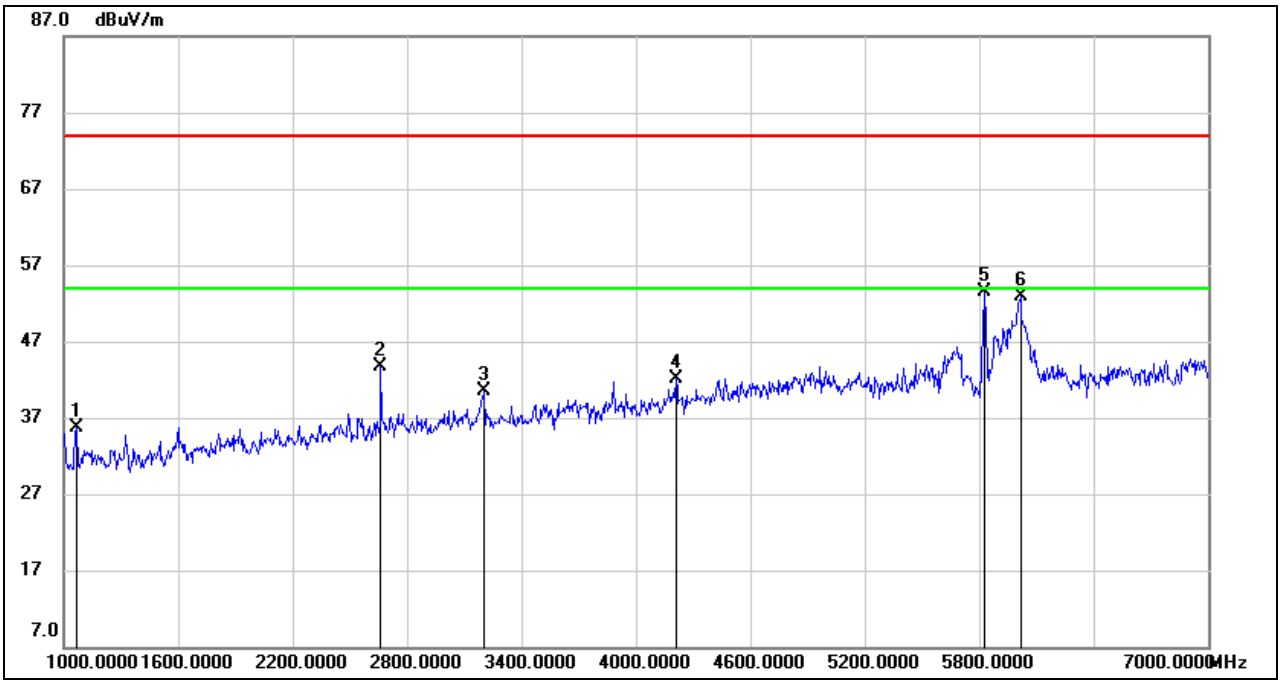
HORIZONTAL RESULTS
7-18GHz



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	8045.000	40.32	7.30	47.62	74.00	-26.38	peak
2	10124.000	36.70	10.46	47.16	74.00	-26.84	peak
3	11650.300	44.35	13.06	57.41	74.00	-16.59	peak
4	11650.300	30.60	13.06	43.66	54.00	-10.34	AVG
5	13017.000	35.10	14.98	50.08	74.00	-23.92	peak
6	15987.000	32.92	17.67	50.59	74.00	-23.41	peak
7	17471.861	34.36	21.37	55.73	74.00	-18.27	peak
8	17471.861	21.38	21.37	42.75	54.00	-11.25	AVG

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. AVG: VBW=1/Ton where: ton is transmit duration.
5. For transmit duration, please refer to clause 7.1.
6. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
7. Proper operation of the transmitter prior to adding the filter to the measurement chain.
8. Owing to the highest peak level of unwanted emission out of the restricted bands complies with the lowest limit(54dBuV/m), so all the test point were deemed to comply with the limits list in the standard.

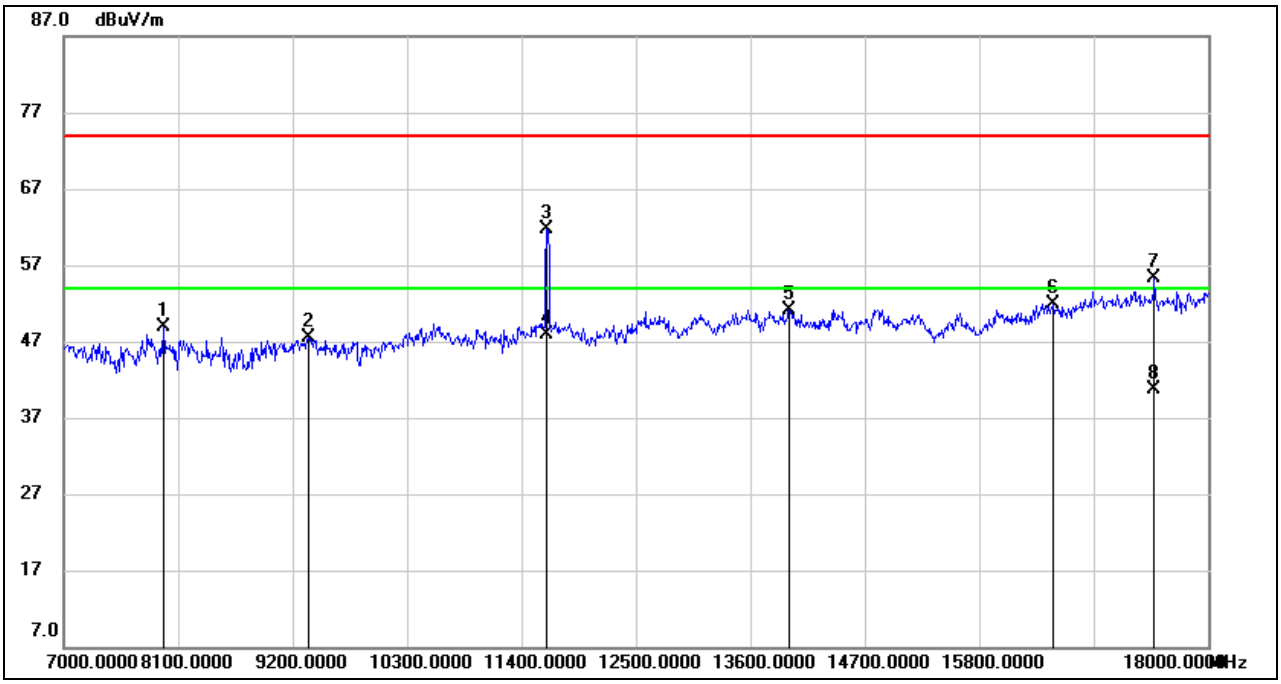
VERTICAL RESULTS
1-7GHz



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1066.000	49.15	-13.52	35.63	74.00	-38.37	peak
2	2662.000	50.72	-6.96	43.76	74.00	-30.24	peak
3	3202.000	45.19	-4.74	40.45	74.00	-33.55	peak
4	4210.000	42.88	-0.86	42.02	74.00	-31.98	peak
5	5830.000	49.33	4.18	53.51	74.00	-20.49	peak
6	6016.000	48.64	4.34	52.98	74.00	-21.02	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.
6. Owing to the highest peak level of unwanted emission out of the restricted bands complies with the lowest limit(54dBuV/m), so all the test point were deemed to comply with the limits list in the standard.

7-18GHz



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7957.000	41.38	7.50	48.88	74.00	-25.12	peak
2	9354.000	37.94	9.64	47.58	74.00	-26.42	peak
3	11642.000	48.28	13.33	61.61	74.00	-12.39	peak
4	11642.000	34.60	13.33	47.93	54.00	-6.07	AVG
5	13974.000	34.97	16.16	51.13	74.00	-22.87	peak
6	16515.000	32.28	19.61	51.89	74.00	-22.11	peak
7	17477.164	33.78	21.45	55.23	74.00	-18.77	peak
8	17477.164	19.26	21.45	40.71	54.00	-13.29	AVG

Note: 1. Measurement = Reading Level + Correct Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Peak: Peak detector.

4. AVG: VBW=1/Ton where: ton is transmit duration.

5. For transmit duration, please refer to clause 7.1.

6. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.

7. Proper operation of the transmitter prior to adding the filter to the measurement chain.

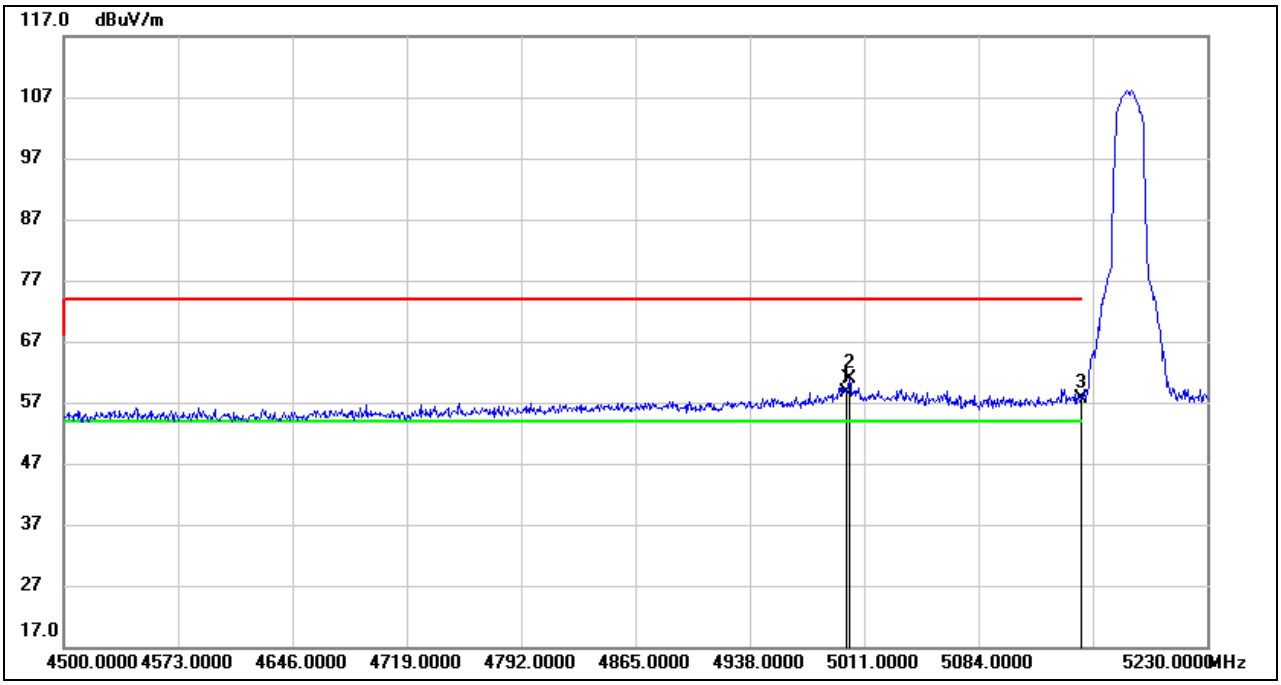
8. Owing to the highest peak level of unwanted emission out of the restricted bands complies with the lowest limit(54dBuV/m), so all the test point were deemed to comply with the limits list in the standard.

8.2. 802.11n HT20 MODE

8.2.1. UNII-1 BAND

RESTRICTED BANDEDGE LOW CHANNEL

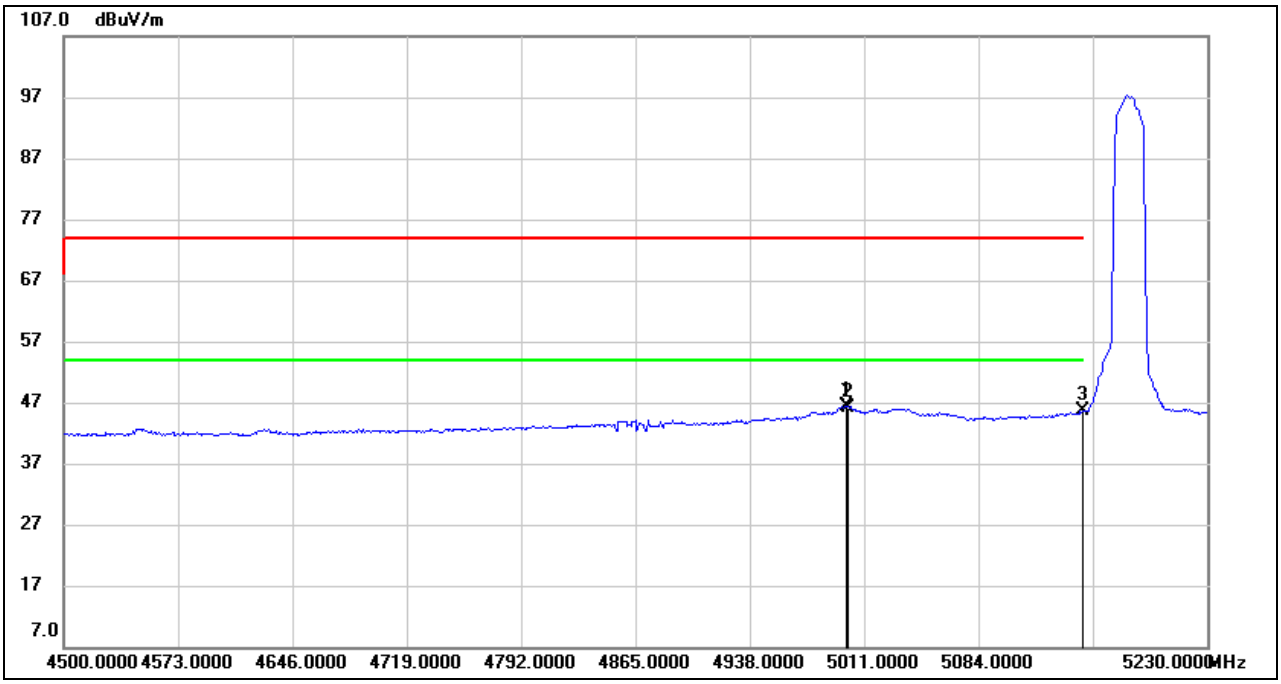
HORIZONTAL RESULTS
PEAK



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4999.320	18.61	40.07	58.68	74.00	-15.32	peak
2	5001.510	20.92	40.07	60.99	74.00	-13.01	peak
3	5150.000	17.24	40.46	57.70	74.00	-16.30	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Only the worst case emission will be recorder, if it complies with the limit, the other emissions deemed to comply with the limit.

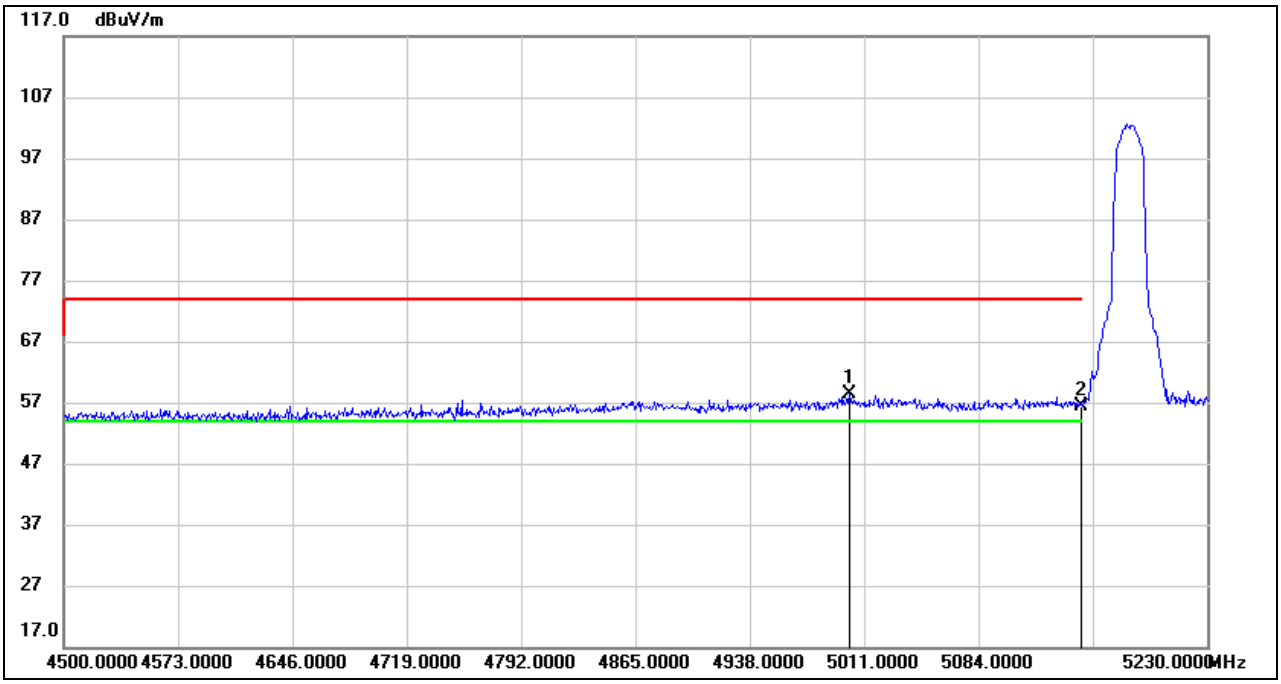
AVG



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4999.320	6.36	40.07	46.43	54.00	-7.57	AVG
2	5001.510	6.13	40.07	46.20	54.00	-7.80	AVG
3	5150.000	5.24	40.46	45.70	54.00	-8.30	AVG

Note: 1. Measurement = Reading Level + Correct Factor.
2. AVG: VBW=1/Ton where: ton is transmit duration.
3. For duty cycle, please refer to clause 7.1.
4. Only the worst case emission will be recorder, if it complies with the limit, the other emissions deemed to comply with the limit.

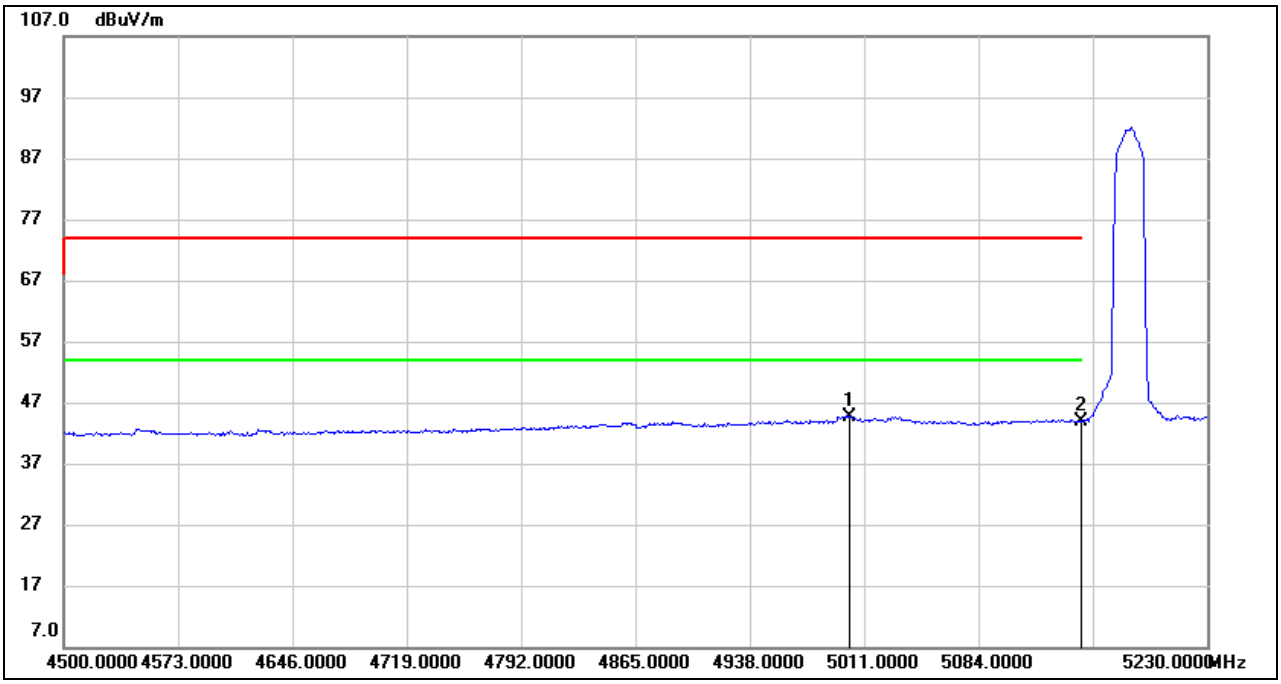
VERTICAL RESULTS
PEAK



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5001.510	18.27	40.07	58.34	74.00	-15.66	peak
2	5150.000	16.02	40.46	56.48	74.00	-17.52	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Only the worst case emission will be recorder, if it complies with the limit, the other emissions deemed to comply with the limit.

AVG

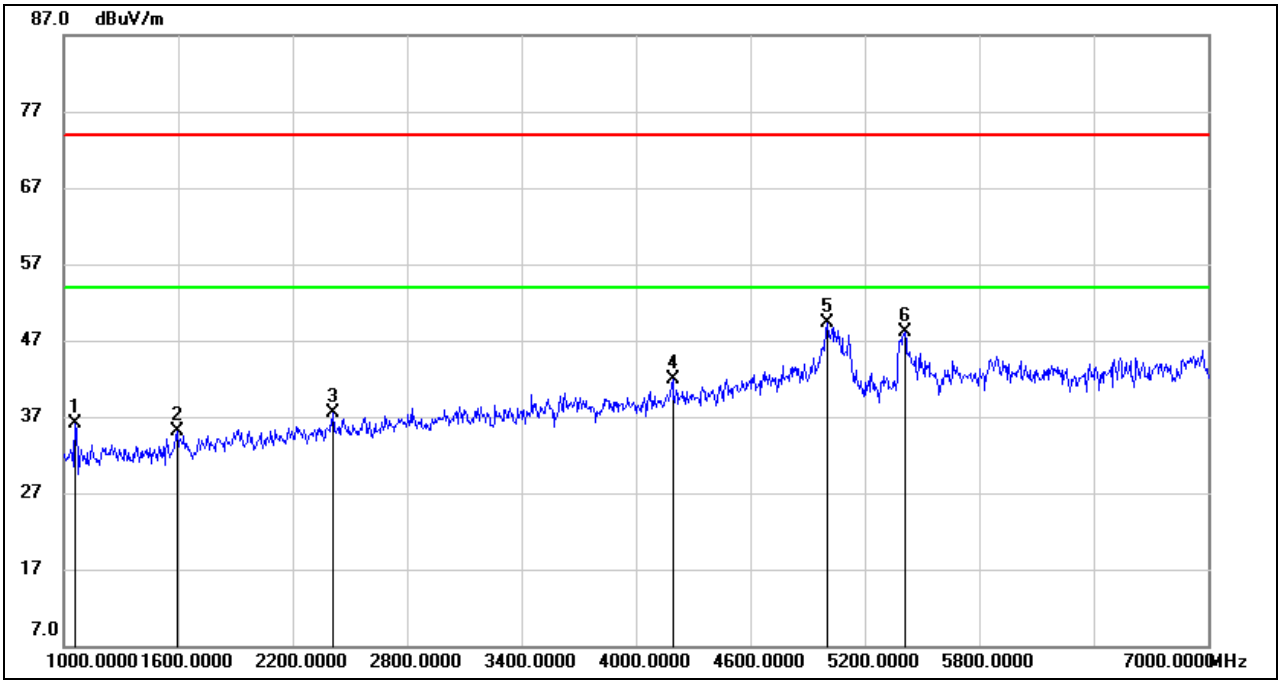


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5001.510	4.66	40.07	44.73	54.00	-9.27	AVG
2	5150.000	3.43	40.46	43.89	54.00	-10.11	AVG

Note: 1. Measurement = Reading Level + Correct Factor.
2. AVG: VBW=1/Ton where: ton is transmit duration.
3. For duty cycle, please refer to clause 7.1.
4. Only the worst case emission will be recorder, if it complies with the limit, the other emissions deemed to comply with the limit.

HARMONICS AND SPURIOUS EMISSIONS LOW CHANNEL

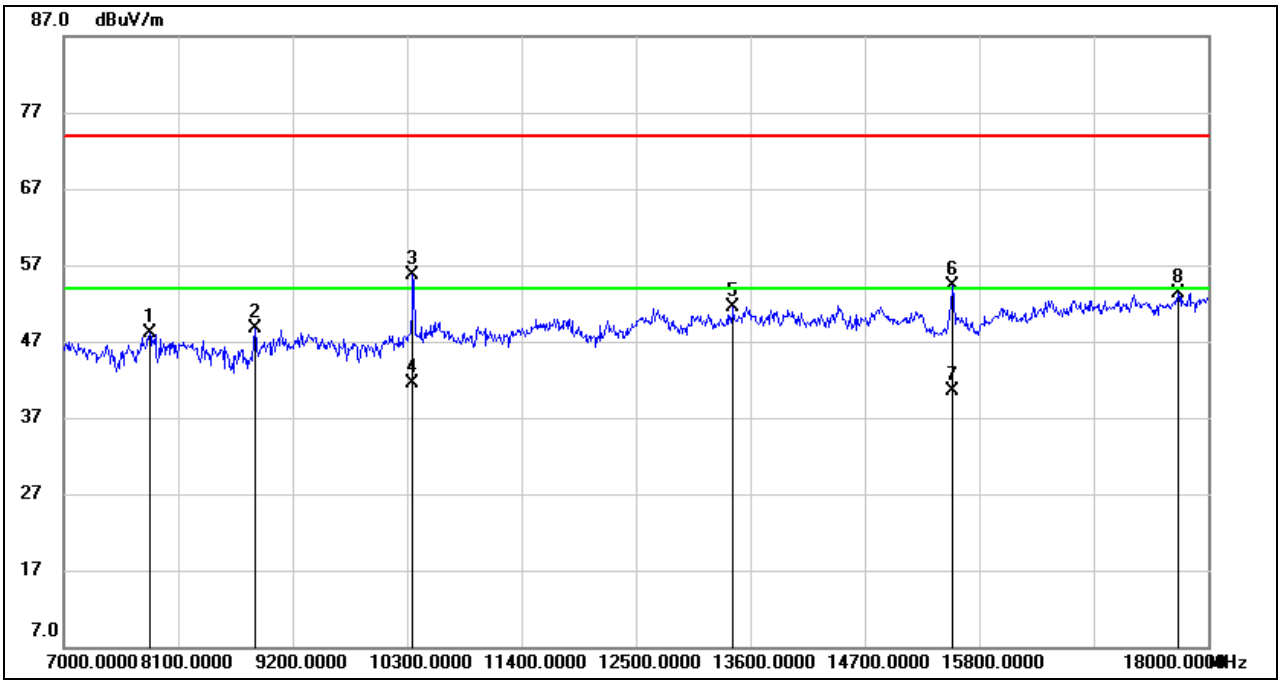
HORIZONTAL RESULTS
1-7GHz



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1060.000	49.71	-13.53	36.18	74.00	-37.82	peak
2	1594.000	46.19	-11.17	35.02	74.00	-38.98	peak
3	2410.000	44.95	-7.52	37.43	74.00	-36.57	peak
4	4192.000	42.75	-0.94	41.81	74.00	-32.19	peak
5	5002.000	46.53	2.70	49.23	74.00	-24.77	peak
6	5410.000	44.82	3.19	48.01	74.00	-25.99	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.
6. Owing to the highest peak level of unwanted emission out of the restricted bands complies with the lowest limit(54dBuV/m), so all the test point were deemed to comply with the limits list in the standard.

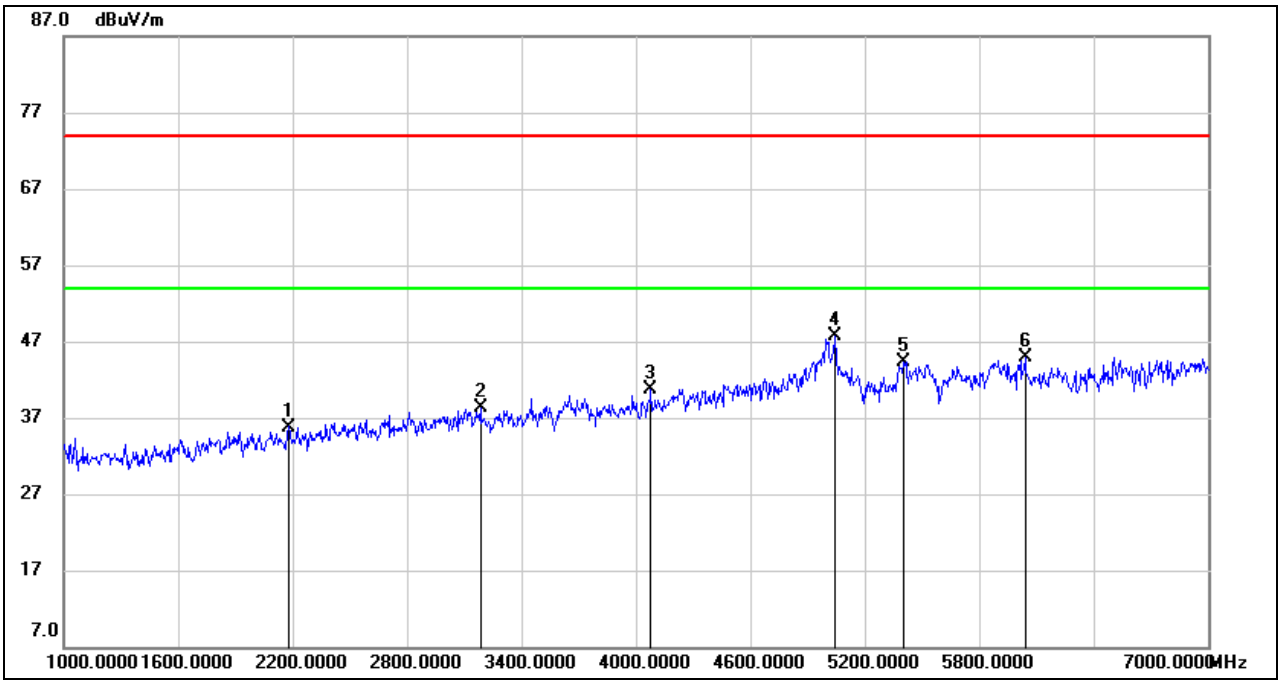
HORIZONTAL RESULTS
7-18GHz



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7825.000	40.05	8.04	48.09	74.00	-25.91	peak
2	8837.000	40.27	8.43	48.70	74.00	-25.30	peak
3	10362.773	44.55	11.22	55.77	74.00	-18.23	peak
4	10362.773	30.27	11.22	41.49	54.00	-12.51	AVG
5	13435.000	35.39	16.08	51.47	74.00	-22.53	peak
6	15542.400	37.51	16.78	54.29	74.00	-19.71	peak
7	15542.400	23.63	16.78	40.41	54.00	-13.59	AVG
8	17714.000	30.60	22.62	53.22	74.00	-20.78	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. AVG: VBW=1/Ton where: ton is transmit duration.
5. For transmit duration, please refer to clause 7.1.
6. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
7. Proper operation of the transmitter prior to adding the filter to the measurement chain.
8. Owing to the highest peak level of unwanted emission out of the restricted bands complies with the lowest limit(54dBuV/m), so all the test point were deemed to comply with the limits list in the standard.

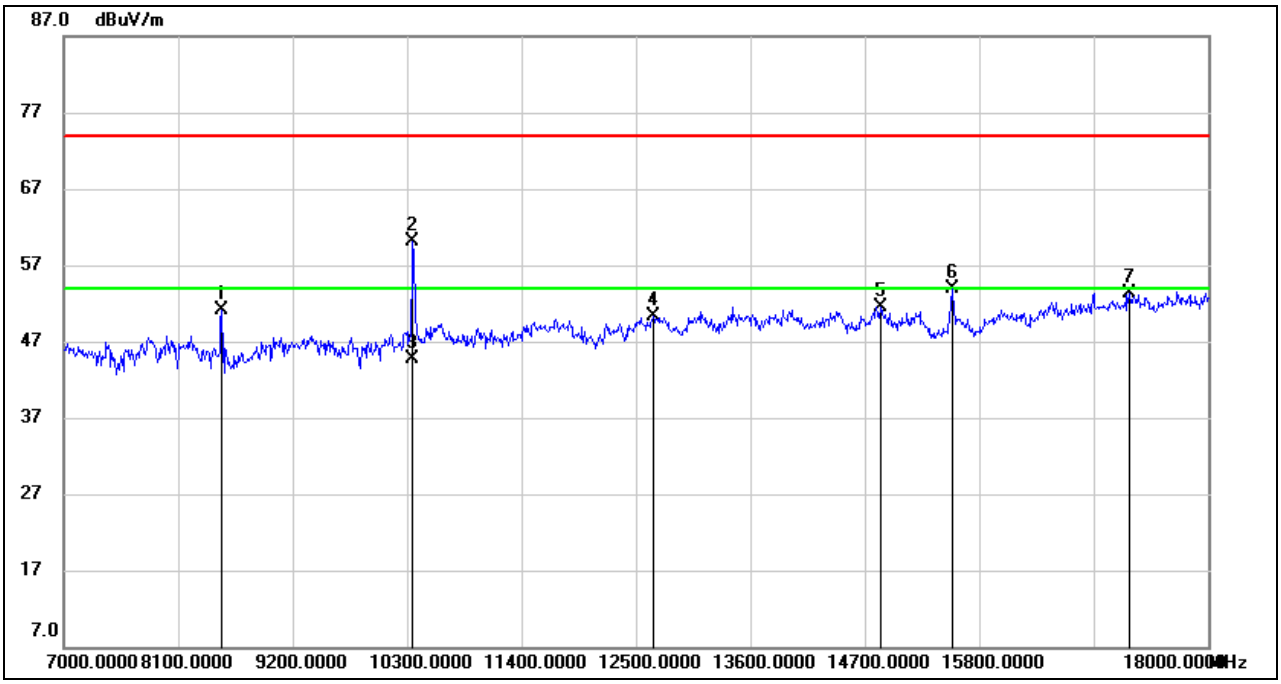
VERTICAL RESULTS
1-7GHz



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2182.000	44.56	-8.76	35.80	74.00	-38.20	peak
2	3184.000	43.05	-4.67	38.38	74.00	-35.62	peak
3	4078.000	42.97	-2.17	40.80	74.00	-33.20	peak
4	5044.000	45.00	2.76	47.76	74.00	-26.24	peak
5	5404.000	41.14	3.11	44.25	74.00	-29.75	peak
6	6040.000	40.70	4.24	44.94	74.00	-29.06	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.
6. Owing to the highest peak level of unwanted emission out of the restricted bands complies with the lowest limit(54dBuV/m), so all the test point were deemed to comply with the limits list in the standard.

7-18GHz



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	8518.000	43.18	7.85	51.03	74.00	-22.97	peak
2	10361.150	48.82	11.23	60.05	74.00	-13.95	peak
3	10361.150	33.56	11.23	44.79	54.00	-9.21	AVG
4	12665.000	35.90	14.35	50.25	74.00	-23.75	peak
5	14854.000	35.28	16.13	51.41	74.00	-22.59	peak
6	15536.000	37.09	16.75	53.84	74.00	-20.16	peak
7	17241.000	31.74	21.48	53.22	74.00	-20.78	peak

Note: 1. Measurement = Reading Level + Correct Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Peak: Peak detector.

4. AVG: VBW=1/Ton where: ton is transmit duration.

5. For transmit duration, please refer to clause 7.1.

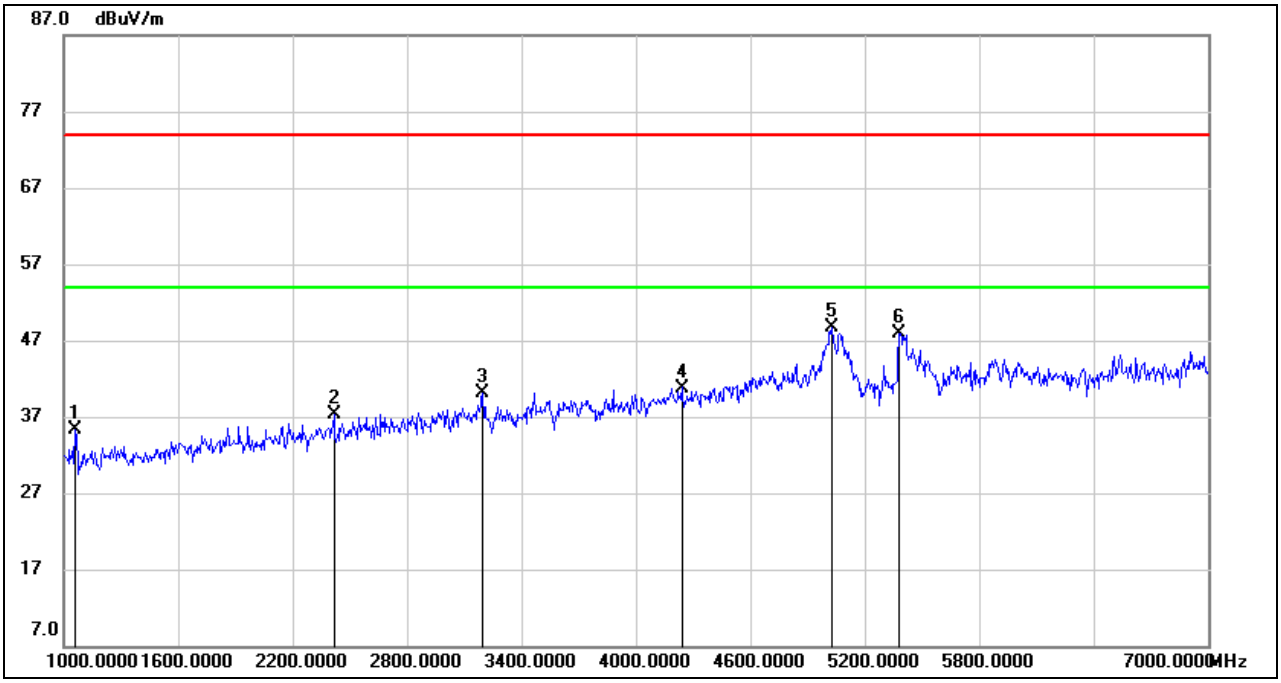
6. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.

7. Proper operation of the transmitter prior to adding the filter to the measurement chain.

8. Owing to the highest peak level of unwanted emission out of the restricted bands complies with the lowest limit(54dBuV/m), so all the test point were deemed to comply with the limits list in the standard.

HARMONICS AND SPURIOUS EMISSIONS MID CHANNEL

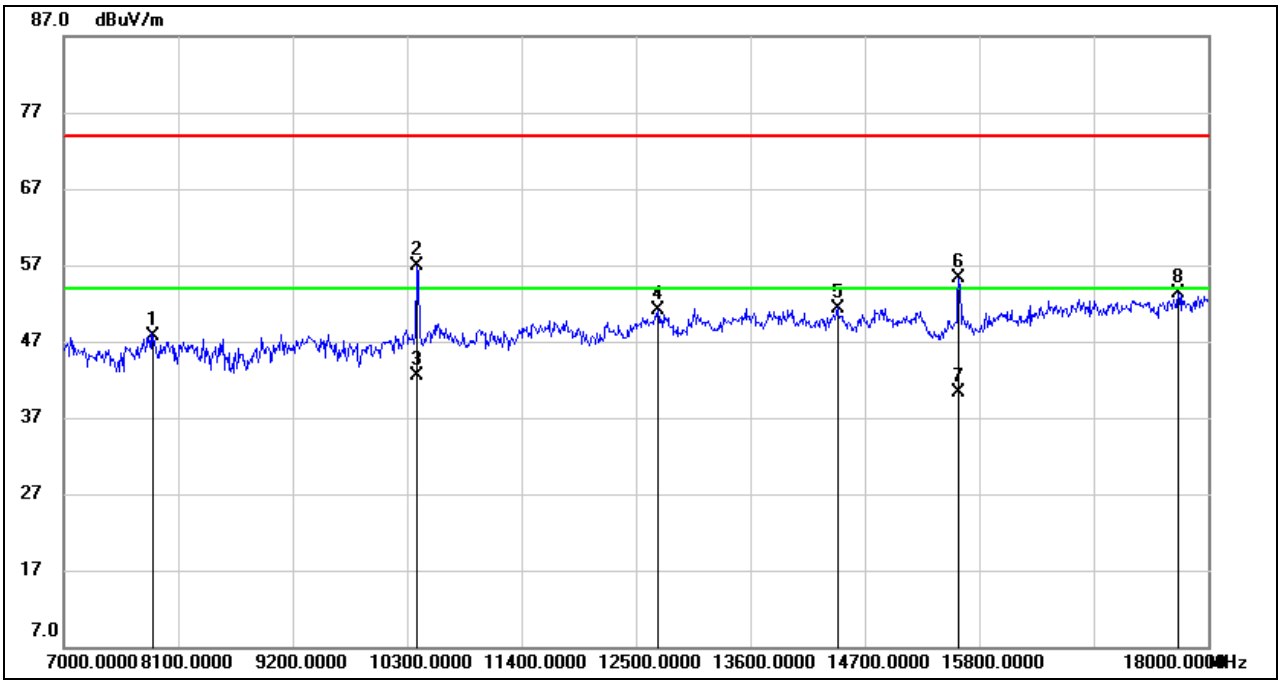
HORIZONTAL RESULTS
1-7GHz



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1060.000	48.75	-13.53	35.22	74.00	-38.78	peak
2	2416.000	44.90	-7.51	37.39	74.00	-36.61	peak
3	3196.000	44.83	-4.73	40.10	74.00	-33.90	peak
4	4240.000	41.72	-0.92	40.80	74.00	-33.20	peak
5	5026.000	45.88	2.73	48.61	74.00	-25.39	peak
6	5380.000	44.99	3.00	47.99	74.00	-26.01	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.
6. Owing to the highest peak level of unwanted emission out of the restricted bands complies with the lowest limit(54dBuV/m), so all the test point were deemed to comply with the limits list in the standard.

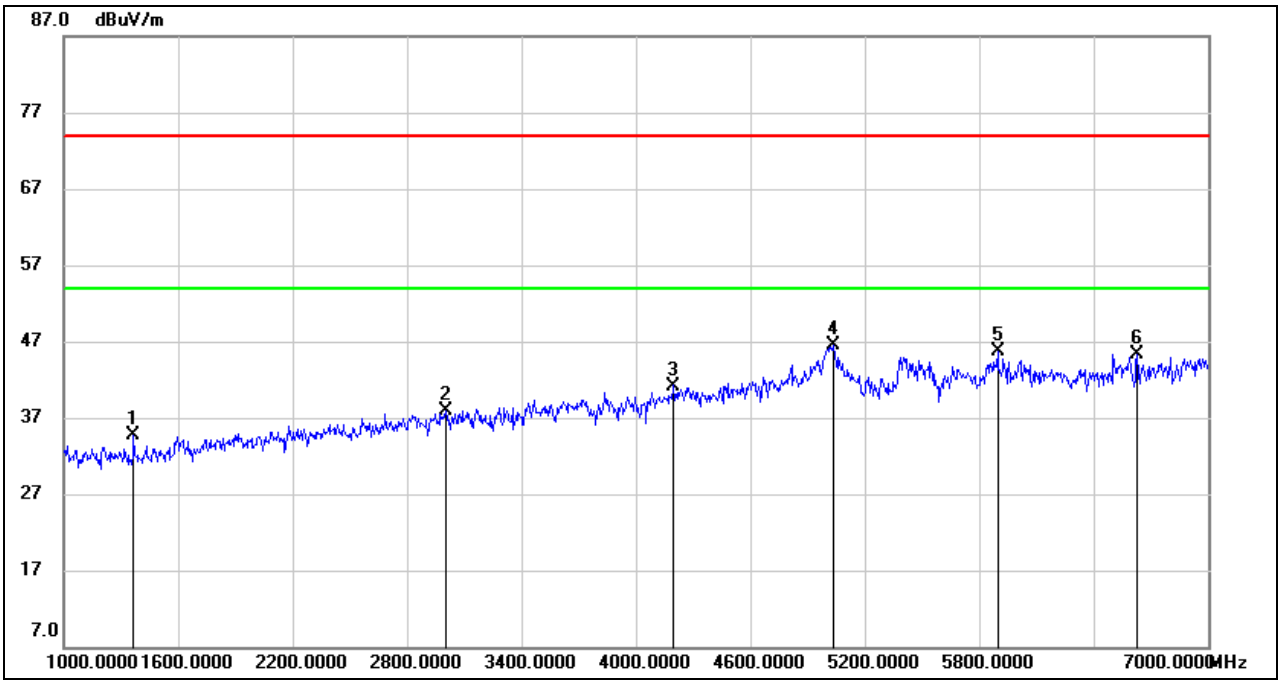
HORIZONTAL RESULTS
7-18GHz



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7858.000	39.85	7.84	47.69	74.00	-26.31	peak
2	10400.200	45.81	11.17	56.98	74.00	-17.02	peak
3	10400.200	31.25	11.17	42.42	54.00	-11.58	AVG
4	12709.000	36.47	14.59	51.06	74.00	-22.94	peak
5	14436.000	34.76	16.64	51.40	74.00	-22.60	peak
6	15599.864	38.16	17.12	55.28	74.00	-18.72	peak
7	15599.864	23.24	17.12	40.36	54.00	-13.64	AVG
8	17714.000	30.59	22.62	53.21	74.00	-20.79	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. AVG: VBW=1/Ton where: ton is transmit duration.
5. For transmit duration, please refer to clause 7.1.
6. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
7. Proper operation of the transmitter prior to adding the filter to the measurement chain.
8. Owing to the highest peak level of unwanted emission out of the restricted bands complies with the lowest limit(54dBuV/m), so all the test point were deemed to comply with the limits list in the standard.

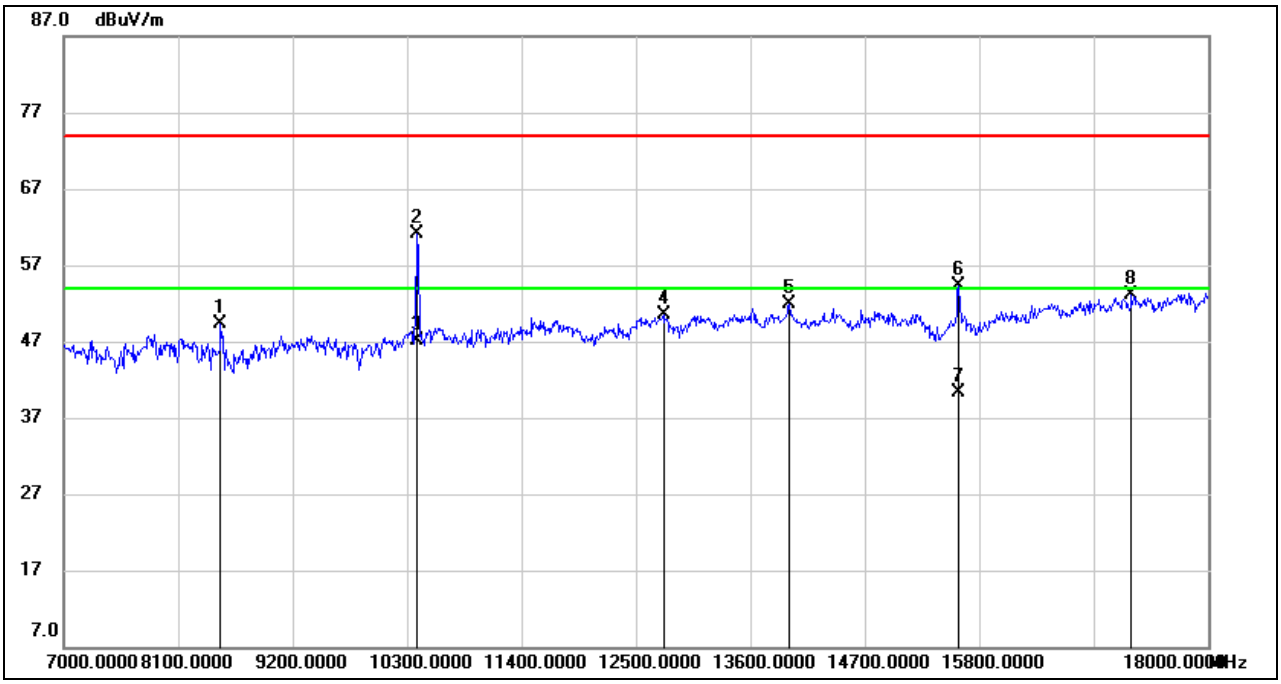
VERTICAL RESULTS
1-7GHz



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1366.000	47.04	-12.29	34.75	74.00	-39.25	peak
2	3004.000	42.96	-5.08	37.88	74.00	-36.12	peak
3	4198.000	42.06	-0.86	41.20	74.00	-32.80	peak
4	5032.000	43.76	2.74	46.50	74.00	-27.50	peak
5	5896.000	40.37	5.36	45.73	74.00	-28.27	peak
6	6628.000	38.80	6.48	45.28	74.00	-28.72	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.
6. Owing to the highest peak level of unwanted emission out of the restricted bands complies with the lowest limit(54dBuV/m), so all the test point were deemed to comply with the limits list in the standard.

7-18GHz



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	8507.000	41.40	7.89	49.29	74.00	-24.71	peak
2	10402.800	49.95	11.17	61.12	74.00	-12.88	peak
3	10402.800	35.86	11.17	47.03	54.00	-6.97	AVG
4	12764.000	34.95	15.54	50.49	74.00	-23.51	peak
5	13974.000	35.79	16.16	51.95	74.00	-22.05	peak
6	15597.760	37.24	17.11	54.35	74.00	-19.65	peak
7	15597.760	23.25	17.11	40.36	54.00	-13.64	AVG
8	17263.000	31.52	21.64	53.16	74.00	-20.84	peak

Note: 1. Measurement = Reading Level + Correct Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Peak: Peak detector.

4. AVG: VBW=1/Ton where: ton is transmit duration.

5. For transmit duration, please refer to clause 7.1.

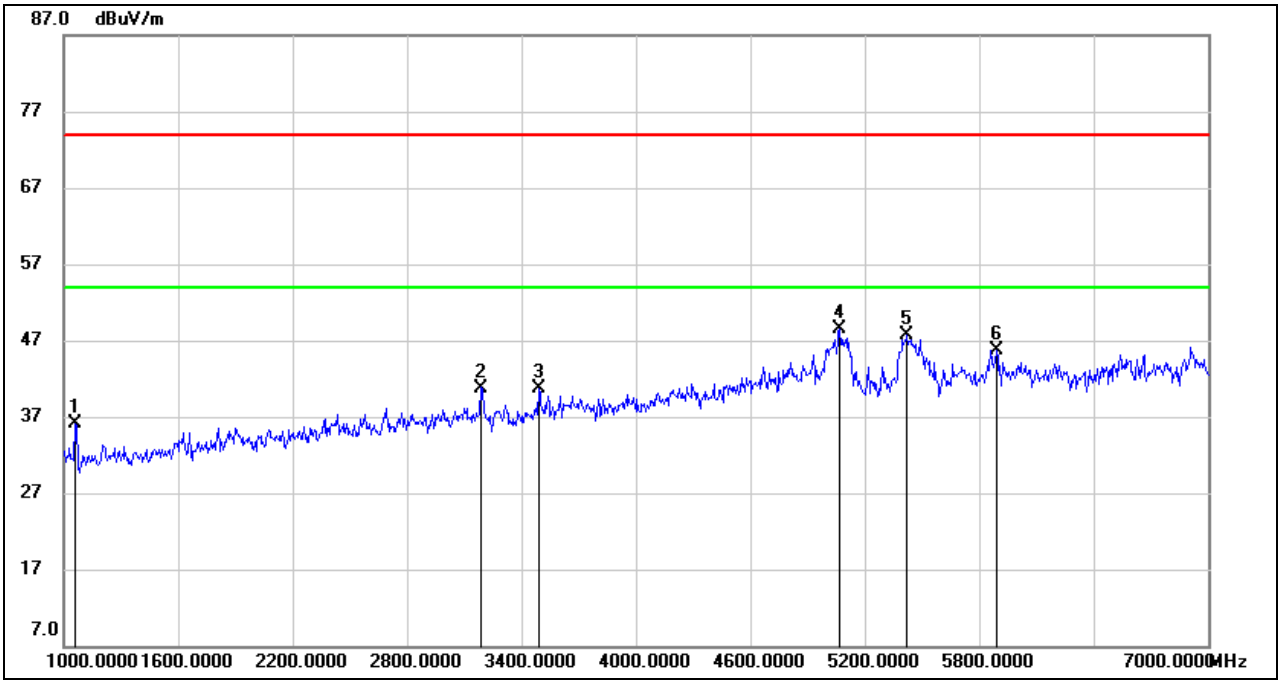
6. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.

7. Proper operation of the transmitter prior to adding the filter to the measurement chain.

8. Owing to the highest peak level of unwanted emission out of the restricted bands complies with the lowest limit(54dBuV/m), so all the test point were deemed to comply with the limits list in the standard.

HARMONICS AND SPURIOUS EMISSIONS HIGH CHANNEL

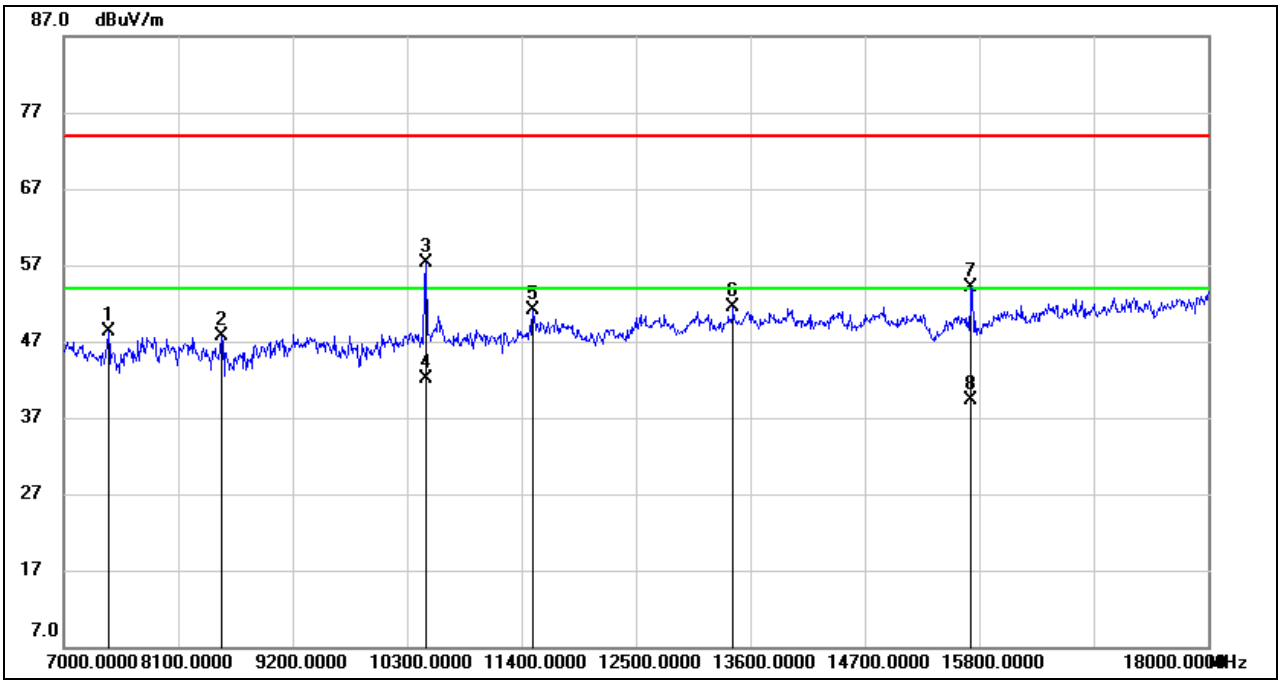
HORIZONTAL RESULTS
1-7GHz



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1060.000	49.67	-13.53	36.14	74.00	-37.86	peak
2	3184.000	45.47	-4.67	40.80	74.00	-33.20	peak
3	3490.000	44.61	-3.95	40.66	74.00	-33.34	peak
4	5068.000	45.77	2.79	48.56	74.00	-25.44	peak
5	5422.000	44.29	3.36	47.65	74.00	-26.35	peak
6	5890.000	40.50	5.26	45.76	74.00	-28.24	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.
6. Owing to the highest peak level of unwanted emission out of the restricted bands complies with the lowest limit(54dBuV/m), so all the test point were deemed to comply with the limits list in the standard.

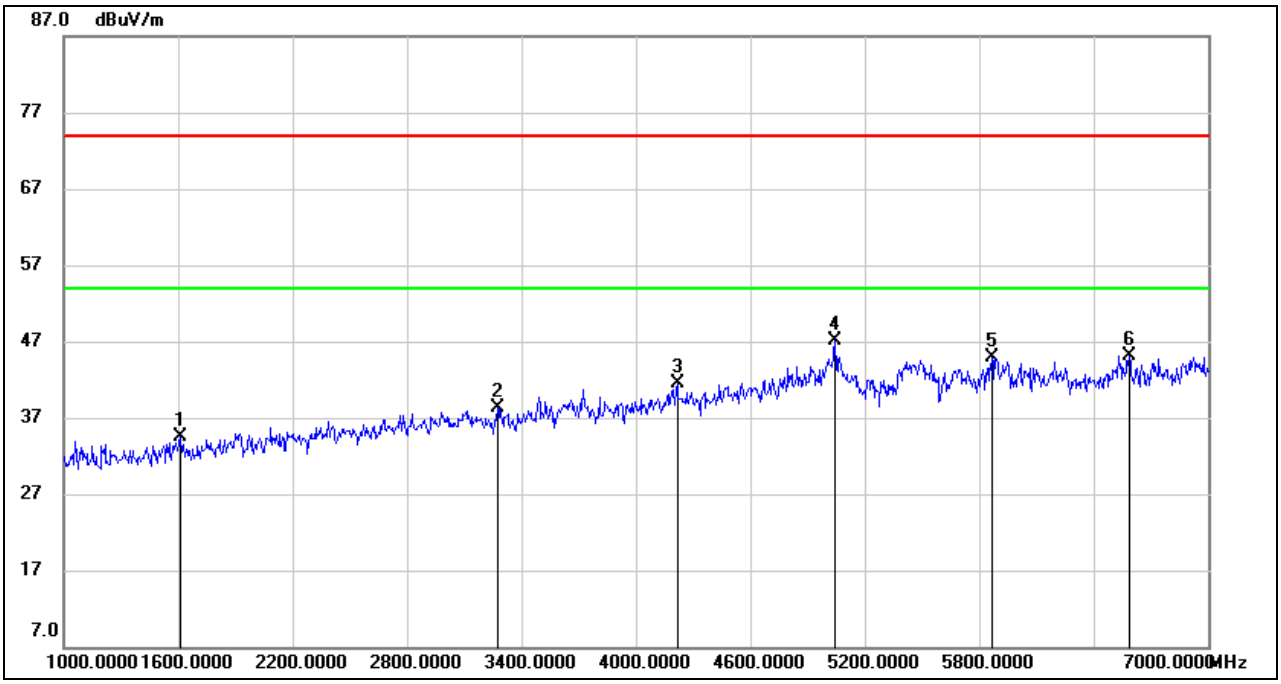
HORIZONTAL RESULTS
7-18GHz



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7429.000	41.28	6.95	48.23	74.00	-25.77	peak
2	8518.000	39.81	7.85	47.66	74.00	-26.34	peak
3	10479.590	45.97	11.32	57.29	74.00	-16.71	peak
4	10479.590	30.72	11.32	42.04	54.00	-11.96	AVG
5	11510.000	37.73	13.39	51.12	74.00	-22.88	peak
6	13435.000	35.45	16.08	51.53	74.00	-22.47	peak
7	15719.969	37.27	16.88	54.15	74.00	-19.85	peak
8	15719.969	22.48	16.88	39.36	54.00	-14.64	AVG

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. AVG: VBW=1/Ton where: ton is transmit duration.
5. For transmit duration, please refer to clause 7.1.
6. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
7. Proper operation of the transmitter prior to adding the filter to the measurement chain.
8. Owing to the highest peak level of unwanted emission out of the restricted bands complies with the lowest limit(54dBuV/m), so all the test point were deemed to comply with the limits list in the standard.

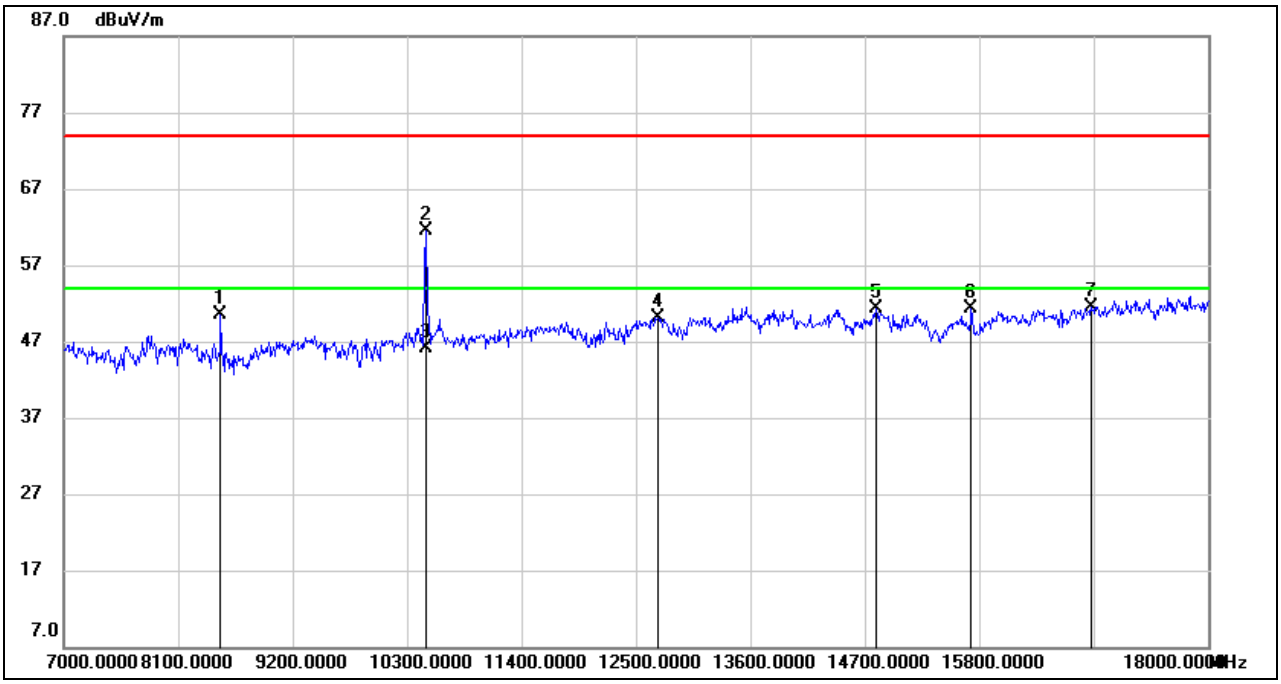
VERTICAL RESULTS
1-7GHz



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1612.000	45.62	-11.10	34.52	74.00	-39.48	peak
2	3274.000	42.85	-4.48	38.37	74.00	-35.63	peak
3	4216.000	42.33	-0.87	41.46	74.00	-32.54	peak
4	5044.000	44.33	2.76	47.09	74.00	-26.91	peak
5	5866.000	40.01	4.82	44.83	74.00	-29.17	peak
6	6586.000	38.58	6.51	45.09	74.00	-28.91	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.
6. Owing to the highest peak level of unwanted emission out of the restricted bands complies with the lowest limit(54dBuV/m), so all the test point were deemed to comply with the limits list in the standard.

7-18GHz



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	8507.000	42.54	7.89	50.43	74.00	-23.57	peak
2	10480.150	50.11	11.32	61.43	74.00	-12.57	peak
3	10480.150	34.76	11.32	46.08	54.00	-7.92	AVG
4	12709.000	35.54	14.59	50.13	74.00	-23.87	peak
5	14810.000	35.23	16.07	51.30	74.00	-22.70	peak
6	15723.000	34.37	16.89	51.26	74.00	-22.74	peak
7	16878.000	31.38	20.12	51.50	74.00	-22.50	peak

Note: 1. Measurement = Reading Level + Correct Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Peak: Peak detector.

4. AVG: VBW=1/Ton where: ton is transmit duration.

5. For transmit duration, please refer to clause 7.1.

6. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.

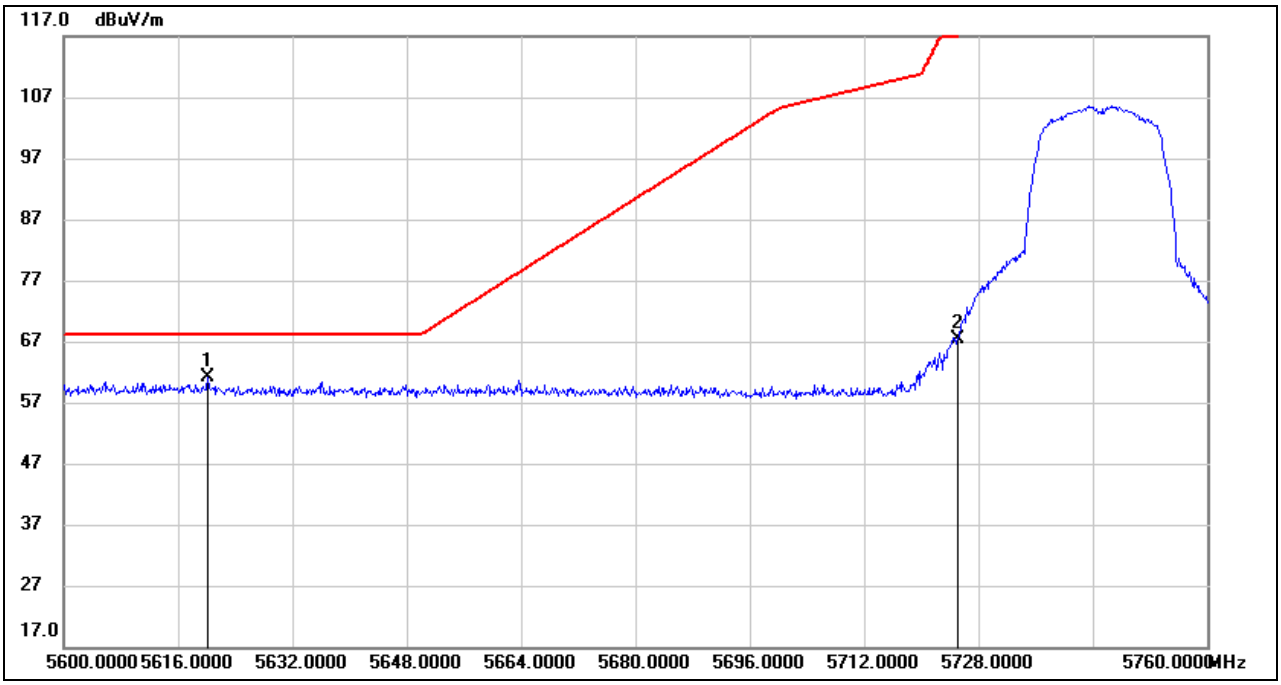
7. Proper operation of the transmitter prior to adding the filter to the measurement chain.

8. Owing to the highest peak level of unwanted emission out of the restricted bands complies with the lowest limit(54dBuV/m), so all the test point were deemed to comply with the limits list in the standard.

8.2.2. UNII-3 BAND

RESTRICTED BANDEDGE LOW CHANNEL

HORIZONTAL RESULTS



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	5620.160	19.61	41.46	61.07	68.20	-7.13	peak
2	5725.000	25.83	41.61	67.44	122.20	-54.76	peak

Note: 1. Measurement = Reading Level + Correct Factor.

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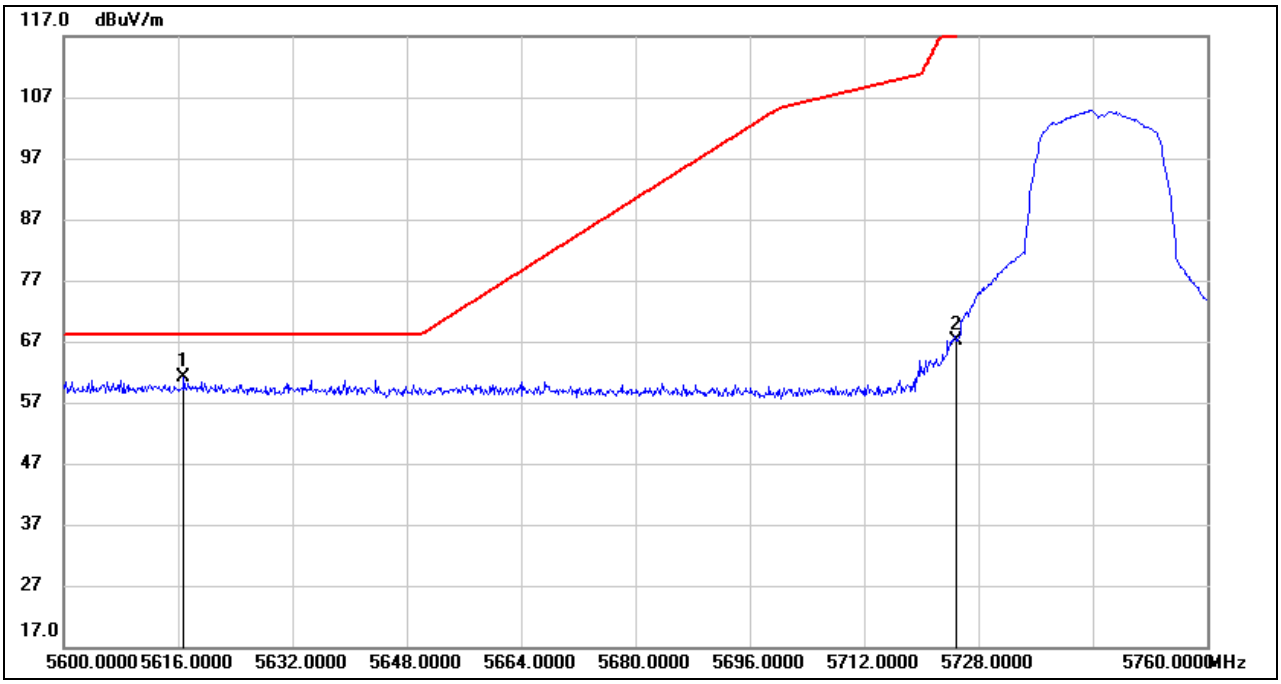
VERTICAL RESULTS

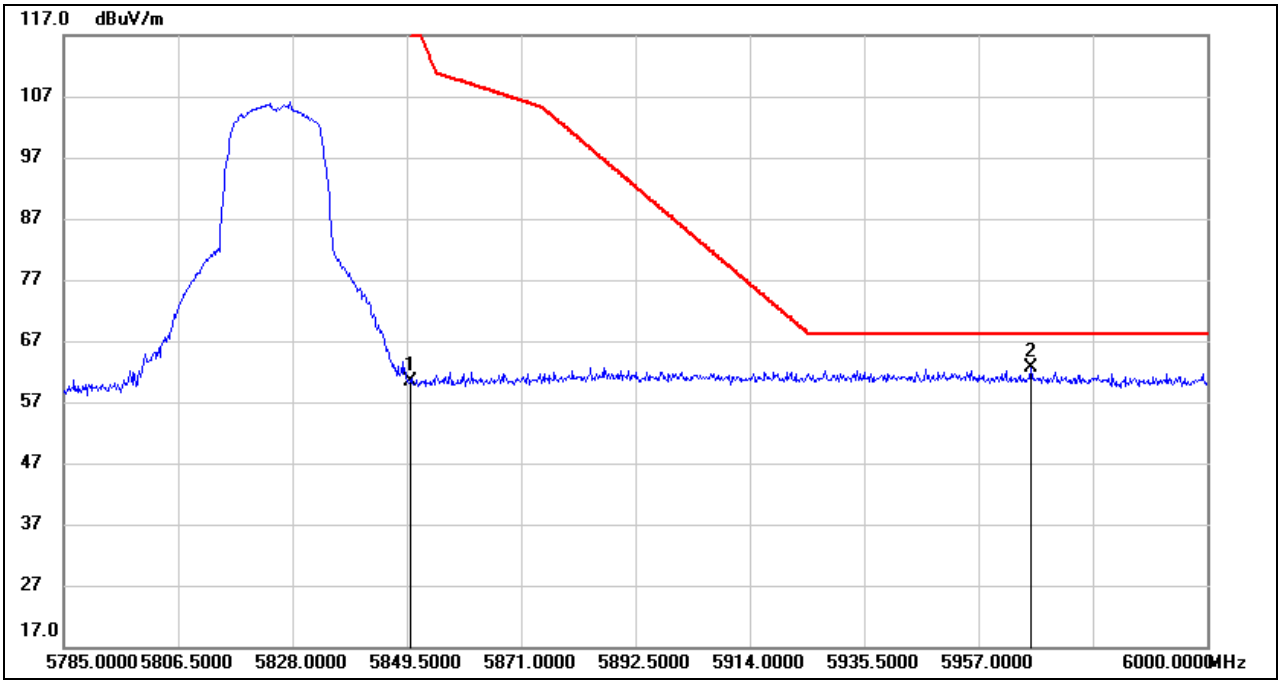


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5616.800	19.75	41.47	61.22	68.20	-6.98	peak
2	5725.000	25.62	41.61	67.23	122.20	-54.97	peak

Note: 1. Measurement = Reading Level + Correct Factor.

RESTRICTED BANDEDGE HIGH CHANNEL

HORIZONTAL RESULTS



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5850.000	17.53	42.89	60.42	122.20	-61.78	peak
2	5966.890	19.95	42.71	62.66	68.20	-5.54	peak

Note: 1. Measurement = Reading Level + Correct Factor.

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