TEST REPORT

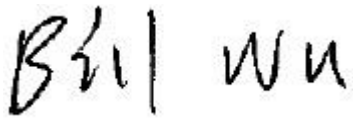
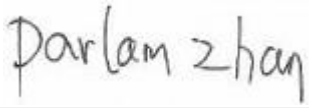
Application No.:	SHEM1908016763CR
FCC ID:	2ACOE-WG217
Applicant:	Skylab M&C Technology Co., Ltd.
Address of Applicant:	6/F,Building 9,Lijincheng park,Gongye East Rd,Longhua St,Longhua District,Shenzhen 518109,China
Manufacturer:	Skylab M&C Technology Co., Ltd.
Address of Manufacturer:	6/F,Building 9,Lijincheng park,Gongye East Rd,Longhua St,Longhua District,Shenzhen 518109,China
Equipment Under Test (EUT):	
EUT Name:	WiFi Module
Model No.:	WG217
Standard(s) :	47 CFR Part 15, Subpart E 15.407
Date of Receipt:	2019-08-30
Date of Test:	2019-09-03 to 2019-09-07
Date of Issue:	2019-09-09
Test Result:	**Pass***

* In the configuration tested, the EUT complied with the standards specified above.

Parlam Zhan
E&E Section Manager

The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards. Any mention of SGS International Electrical Approvals or testing done by SGS International Electrical Approvals in connection with, distribution or use of the product described in this report must be approved by SGS International Electrical Approvals in writing.

Revision Record			
Version	**Description**	**Date**	**Remark**
00	Original	2019-09-09	/

Authorized for issue by:				
				
		Bill Wu / Project Engineer		
				
		Parlam Zhan / Reviewer		

2 Test Summary

Radio Spectrum Matter Part				
Item	**Standard**	**Method**	**Requirement**	**Result**
Radiated Emissions	47 CFR Part 15, Subpart E 15.407	KDB 789033 D02 II G	47 CFR Part 15, Subpart C 15.209 & 15.407(b)	Pass
Radiated Emissions which fall in the restricted bands	47 CFR Part 15, Subpart E 15.407	KDB 789033 D02 II G	47 CFR Part 15, Subpart C 15.209 & 15.407(b)	Pass

Remark: The device using a wireless module WG217 has been certified. We just fully retest RSE for this product, other test data reference to original module report TCT1890321E019.

3 Contents

4 General Information

4.1 Details of E.U.T.

Power supply: DC 5V from PC
Test voltage: DC 5V

Operation Frequency:	Band	Mode	Frequency Range(MHz)	Number of channels
	Band 1	802.11a/n(HT20)/ac(HT20)	5180-5240	4
		802.11n(HT40)/ac(HT40)	5190-5230	2
		802.11ac(HT80)	5210	1
Modulation Type:	802.11a: OFDM (64QAM, 16QAM, QPSK, BPSK) 802.11n: OFDM (BPSK, QPSK, 16QAM, 64QAM) 802.11ac: OFDM (BPSK, QPSK, 16QAM, 64QAM, 256QAM)			
Channel Spacing:	802.11a/n(HT20)/ac(HT20): 20MHz 802.11n(HT40)/ac(HT40): 40MHz 802.11ac(HT80): 80MHz			
Antenna Gain	3.5dBi			
Antenna Type	PCB Antenna			

4.2 Description of Support Units

Description	Manufacturer	Model No.	Serial No.
Laptop	Lenovo	ThinkPad X100e	/
Serial port adapter plate	/	Test Plate 3	/

4.3 Measurement Uncertainty

No.	Item	Measurement Uncertainty
1	Radio Frequency	±8.4 x 10^{-8}
2	Timeout	±2s
3	Duty cycle	±0.37%
4	Occupied Bandwidth	±3%
5	RF conducted power	±0.6dB
6	RF power density	±2.84dB
7	Conducted Spurious emissions	±0.75dB
8	RF Radiated power	±4.6dB (Below 1GHz)
		±4.1dB (Above 1GHz)
9	Radiated Spurious emission test	±4.2dB (Below 30MHz)
		±4.4dB (30MHz-1GHz)
		±4.8dB (1GHz-18GHz)
		±5.2dB (Above 18GHz)
10	Temperature test	±1°C
11	Humidity test	±3%
12	Supply voltages	±1.5%
13	Time	±3%

Note: The measurement uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

4.4 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd. Shanghai Branch

588 West Jindu Road, Xinqiao, Songjiang, 201612 Shanghai, China

Tel: +86 21 6191 5666 Fax: +86 21 6191 5678

No tests were sub-contracted.

4.5 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

• CNAS (No. CNAS L0599)

CNAS has accredited SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. to ISO/IEC 17025:2005 General Requirements for the Competence of Testing and Calibration Laboratories (CNAS-CL01 Accreditation Criteria for the Competence of Testing and Calibration Laboratories) for the competence in the field of testing.

• NVLAP (Certificate No. 201034-0)

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. is accredited by the National Voluntary Laboratory Accreditation Program(NVLAP). Certificate No. 201034-0.

• FCC –Designation Number: CN5033

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. has been recognized as an accredited testing laboratory.

Designation Number: CN5033. Test Firm Registration Number: 479755.

• Innovation, Science and Economic Development Canada

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. EMC Laboratory has been recognized by ISED as an accredited testing laboratory.

IC Registration No.: 8617A-1. CAB identifier: CN0020.

• VCCI (Member No.: 3061)

The 3m Semi-anechoic chamber and Shielded Room of SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-13868, C-14336, T-12221, G-10830 respectively.

4.6 Deviation from Standards

None

4.7 Abnormalities from Standard Conditions

None

5 Equipment List

Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
Conducted Test					
Spectrum Analyzer	R&S	FSP-30	SHEM002-1	2018-12-20	2019-12-19
Spectrum Analyzer	Agilent	N9020A	SHEM181-1	2019-08-13	2020-08-12
Signal Generator	R&S	SMR20	SHEM006-1	2019-08-13	2020-08-12
Signal Generator	Agilent	N5182A	SHEM182-1	2019-08-13	2020-08-12
Communication Tester	R&S	CMW270	SHEM183-1	2019-08-13	2020-08-12
Switcher	Tonscend	JS0806	SHEM184-1	2019-08-13	2020-08-12
Power Sensor	Keysight	U2021XA * 4	SHEM184-1	2019-08-13	2020-08-12
Splitter	Anritsu	MA1612A	SHEM185-1	/	/
Coupler	e-meca	803-S-1	SHEM186-1	/	/
High-low Temp Cabinet	Suzhou Zhihe	TL-40	SHEM087-1	2017-09-25	2020-09-24
AC Power Stabilizer	WOCEN	6100	SHEM045-1	2018-12-26	2019-12-25
DC Power Supply	MCN	MCH-303A	SHEM210-1	2018-12-26	2019-12-25
Conducted test Cable	/	RF01~RF04	/	2018-12-26	2019-12-25
Radiated Test					
EMI test Receiver	R&S	ESU40	SHEM051-1	2018-12-20	2019-12-19
Spectrum Analyzer	R&S	FSP-30	SHEM002-1	2018-12-20	2019-12-19
Loop Antenna (9kHz-30MHz)	Schwarzbeck	FMZB1519	SHEM135-1	2017-04-10	2020-04-09
Antenna (25MHz-2GHz)	Schwarzbeck	VULB9168	SHEM048-1	2017-02-28	2020-02-27
Antenna (25MHz-3GHz)	Schwarzbeck	HL562	SHEM010-1	2017-02-28	2020-02-27
Horn Antenna (1-8GHz)	Schwarzbeck	HF906	SHEM009-1	2017-10-24	2020-10-23
Horn Antenna (1-18GHz)	Schwarzbeck	BBHA9120D	SHEM050-1	2017-01-14	2020-01-13
Horn Antenna (14-40GHz)	Schwarzbeck	BBHA 9170	SHEM049-1	2017-12-03	2020-12-02
Pre-amplifier (9KHz-2GHz)	CLAVIIO	BDLNA-0001	SHEM164-1	2019-08-13	2020-08-12
Pre-amplifier (1-18GHz)	CLAVIIO	BDLNA-0118	SHEM050-2	2019-08-13	2020-08-12
High-amplifier (14-40GHz)	Schwarzbeck	10001	SHEM049-2	2018-12-20	2019-12-19
Signal Generator	R&S	SMR40	SHEM058-1	2019-08-13	2020-08-12
Band Filter	LORCH	9BRX-875/X150	SHEM156-1	/	/
Band Filter	LORCH	13BRX-1950/X500	SHEM083-2	/	/
Band Filter	LORCH	5BRX-2400/X200	SHEM155-1	/	/
Band Filter	LORCH	5BRX-5500/X1000	SHEM157-2	/	/
High pass Filter	Wainwright	WHK3.0/18G	SHEM157-1	/	/
High pass Filter	Wainwright	WHKS1700	SHEM157-3	/	/
Semi/Fully Anechoic	ST	11*6*6M	SHEM078-2	2017-07-22	2020-07-21
RE test Cable	/	RE01, RE02, RE06	/	2018-12-26	2019-12-25

6 Radio Spectrum Matter Test Results

6.1 Radiated Emissions

Test Requirement 47 CFR Part 15, Subpart C 15.209 & 15.407(b)

Test Method: KDB 789033 D02 II G

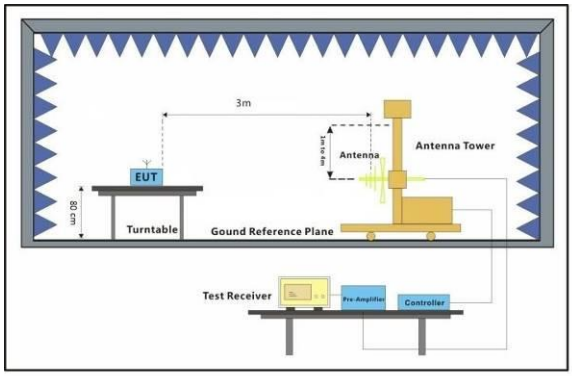
6.1.1 E.U.T. Operation

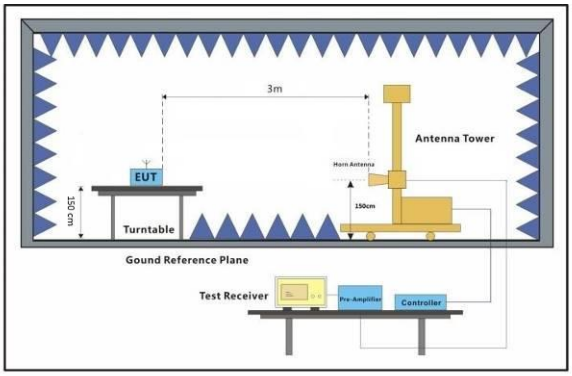
Operating Environment:

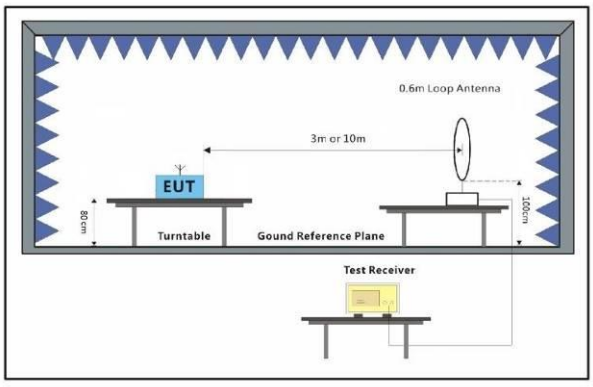
Temperature: 22 °C Humidity: 50 % RH Atmospheric Pressure: 1002 mbar

Test mode a:TX mode (Band 1)_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n(HT20); data rate @ MCS0 is the worst case of IEEE 802.11n(HT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT20); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT80). Only the data of worst case is recorded in the report.

6.1.2 Test Setup Diagram







6.1.3 Measurement Procedure and Data

a. For below 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 or 10 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.

b. For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.

c. The EUT was set 3 or 10 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

d. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

e. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

f. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

g. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

h. Test the EUT in the lowest channel, the middle channel, the Highest channel.

i. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.

j. Repeat above procedures until all frequencies measured was complete.

Remark:

1. Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor

2. For emission below 1GHz, through the pre-scan found the worst case is the lowest channel of 802.11a. Only the worst case is recorded in the report.

3. Scan from 9kHz to 40GHz, the disturbance above 18GHz and below 30MHz was very low. The points marked on above plots are the highest emissions could be found when testing, so only above points had been displayed. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need not be reported.

4. As shown in this section, for frequencies above 1GHz, the field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. For the emissions whose peak level is lower than the average limit, only the peak measurement is shown in the report.

Mode:a; Polarization:Horizontal; Modulation:a; bandwidth:20MHz; Channel:Low

Frequency	RX_R	Factor	Emission	Limit	Over Limit	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
10360	34.16	14.28	48.44	68.2	-19.76	peak
15540	27.39	21.58	48.97	54	-5.03	peak
20720	30.17	23.16	53.33	54	-0.67	peak

Mode:a; Polarization:Vertical; Modulation:a; bandwidth:20MHz; Channel:Low

Frequency	RX_R	Factor	Emission	Limit	Over Limit	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
10360	31.85	14.28	46.13	68.2	-22.07	peak
15540	29.56	21.58	51.14	54	-2.86	peak
20720	29.39	23.16	52.55	54	-1.45	peak

Mode:a; Polarization:Horizontal; Modulation:a; bandwidth:20MHz; Channel:middle

Frequency	RX_R	Factor	Emission	Limit	Over Limit	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
10440	32.84	14.14	46.98	68.2	-21.22	peak
15660	28.74	21.22	49.96	54	-4.04	peak
20880	25.54	23.24	48.78	54	-5.22	peak

Mode:a; Polarization:Vertical; Modulation:a; bandwidth:20MHz; Channel:middle

Frequency	RX_R	Factor	Emission	Limit	Over Limit	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
10440	35.91	14.14	50.05	68.2	-18.15	peak
15660	27.36	21.22	48.58	54	-5.42	peak
20880	26.29	23.24	49.53	54	-4.47	peak

Mode:a; Polarization:Horizontal; Modulation:a; bandwidth:20MHz; Channel:High

Frequency	RX_R	Factor	Emission	Limit	Over Limit	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
10480	33.75	14.08	47.83	68.2	-20.37	peak
15720	32.20	21.10	53.30	54	-0.70	peak
20960	28.93	23.64	52.57	54	-1.43	peak

Mode:a; Polarization:Vertical; Modulation:a; bandwidth:20MHz; Channel:High

Frequency	RX_R	Factor	Emission	Limit	Over Limit	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
10480	33.87	14.08	47.95	68.2	-20.25	peak
15720	25.86	21.10	46.96	54	-7.04	peak
20960	28.16	23.64	51.80	54	-2.20	peak

Mode:a; Polarization:Horizontal; Modulation:n; bandwidth:20MHz; Channel:Low

Frequency	RX_R	Factor	Emission	Limit	Over Limit	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
10360	31.89	14.28	46.17	68.2	-22.03	peak
15540	27.12	21.58	48.70	54	-5.30	peak
20720	29.34	23.16	52.50	54	-1.50	peak

Mode:a; Polarization:Vertical; Modulation:n; bandwidth:20MHz; Channel:Low

Frequency	RX_R	Factor	Emission	Limit	Over Limit	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
10360	31.87	14.28	46.15	68.2	-22.05	peak
15540	30.86	21.58	52.44	54	-1.56	peak
20720	30.08	23.16	53.24	54	-0.76	peak

Mode:a; Polarization:Horizontal; Modulation:n; bandwidth:20MHz; Channel:middle

Frequency	RX_R	Factor	Emission	Limit	Over Limit	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
10440	28.03	14.14	42.17	68.2	-26.03	peak
15660	29.51	21.22	50.73	54	-3.27	peak
20880	25.70	23.24	48.94	54	-5.06	peak

Mode:a; Polarization:Vertical; Modulation:n; bandwidth:20MHz; Channel:middle

Frequency	RX_R	Factor	Emission	Limit	Over Limit	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
10440	33.71	14.14	47.85	68.2	-20.35	peak
15660	29.95	21.22	51.17	54	-2.83	peak
20880	26.94	23.24	50.18	54	-3.82	peak

Mode:a; Polarization:Horizontal; Modulation:n; bandwidth:20MHz; Channel:High

Frequency	RX_R	Factor	Emission	Limit	Over Limit	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
10480	31.16	14.08	45.24	68.2	-22.96	peak
15720	26.54	21.10	47.64	54	-6.36	peak
20960	26.02	23.64	49.66	54	-4.34	peak

Mode:a; Polarization:Vertical; Modulation:n; bandwidth:20MHz; Channel:High

Frequency	RX_R	Factor	Emission	Limit	Over Limit	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
10480	32.08	14.08	46.16	68.2	-22.04	peak
15720	27.43	21.10	48.53	54	-5.47	peak
20960	27.56	23.64	51.20	54	-2.80	peak

Mode:a; Polarization:Horizontal; Modulation:n; bandwidth:40MHz; Channel:Low

Frequency	RX_R	Factor	Emission	Limit	Over Limit	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
10380	33.79	14.25	48.04	68.2	-20.16	peak
15570	27.37	21.49	48.86	54	-5.14	peak
20760	25.76	23.16	48.92	54	-5.08	peak

Mode:a; Polarization:Vertical; Modulation:n; bandwidth:40MHz; Channel:Low

Frequency	RX_R	Factor	Emission	Limit	Over Limit	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
10380	34.27	14.25	48.52	68.2	-19.68	peak
15570	30.96	21.49	52.45	54	-1.55	peak
20760	26.00	23.16	49.16	54	-4.84	peak

Mode:a; Polarization:Horizontal; Modulation:n; bandwidth:40MHz; Channel:High

Frequency	RX_R	Factor	Emission	Limit	Over Limit	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
10460	33.56	14.11	47.67	68.2	-20.53	peak
15690	28.07	21.14	49.21	54	-4.79	peak
20920	27.46	23.31	50.77	54	-3.23	peak

Mode:a; Polarization:Vertical; Modulation:n; bandwidth:40MHz; Channel:High

Frequency	RX_R	Factor	Emission	Limit	Over Limit	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
10460	33.97	14.11	48.08	68.2	-20.12	peak
15690	26.78	21.14	47.92	54	-6.08	peak
20920	30.48	23.31	53.79	54	-0.21	peak

Mode:a; Polarization:Horizontal; Modulation:c; bandwidth:20MHz; Channel:Low

Frequency	RX_R	Factor	Emission	Limit	Over Limit	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
10360	32.86	14.28	47.14	68.2	-21.06	peak
15540	28.40	21.58	49.98	54	-4.02	peak
20720	27.88	23.16	51.04	54	-2.96	peak

Mode:a; Polarization:Vertical; Modulation:c; bandwidth:20MHz; Channel:Low

Frequency	RX_R	Factor	Emission	Limit	Over Limit	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
10360	29.52	14.28	43.80	68.2	-24.40	peak
15540	26.89	21.58	48.47	54	-5.53	peak
20720	28.02	23.16	51.18	54	-2.82	peak

Mode:a; Polarization:Horizontal; Modulation:c; bandwidth:20MHz; Channel:middle

Frequency	RX_R	Factor	Emission	Limit	Over Limit	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
10440	30.93	14.14	45.07	68.2	-23.13	peak
15660	28.39	21.22	49.61	54	-4.39	peak
20880	27.62	23.24	50.86	54	-3.14	peak

Mode:a; Polarization:Vertical; Modulation:c; bandwidth:20MHz; Channel:middle

Frequency	RX_R	Factor	Emission	Limit	Over Limit	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
10440	34.38	14.14	48.52	68.2	-19.68	peak
15660	31.41	21.22	52.63	54	-1.37	peak
20880	30.03	23.24	53.27	54	-0.73	peak

Mode:a; Polarization:Horizontal; Modulation:c; bandwidth:20MHz; Channel:High

Frequency	RX_R	Factor	Emission	Limit	Over Limit	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
10480	33.31	14.08	47.39	68.2	-20.81	peak
15720	30.22	21.10	51.32	54	-2.68	peak
20960	27.61	23.64	51.25	54	-2.75	peak

Mode:a; Polarization:Vertical; Modulation:c; bandwidth:20MHz; Channel:High

Frequency	RX_R	Factor	Emission	Limit	Over Limit	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
10480	34.88	14.08	48.96	68.2	-19.24	peak
15720	30.19	21.10	51.29	54	-2.71	peak
20960	28.56	23.64	52.20	54	-1.80	peak

Mode:a; Polarization:Horizontal; Modulation:c; bandwidth:40MHz; Channel:Low

Frequency	RX_R	Factor	Emission	Limit	Over Limit	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
10380	30.95	14.25	45.20	68.2	-23.00	peak
15570	27.24	21.49	48.73	54	-5.27	peak
20760	30.06	23.16	53.22	54	-0.78	peak

Mode:a; Polarization:Vertical; Modulation:c; bandwidth:40MHz; Channel:Low

Frequency	RX_R	Factor	Emission	Limit	Over Limit	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
10380	30.07	14.25	44.32	68.2	-23.88	peak
15570	29.23	21.49	50.72	54	-3.28	peak
20760	29.39	23.16	52.55	54	-1.45	peak

Mode:a; Polarization:Horizontal; Modulation:c; bandwidth:40MHz; Channel:High

Frequency	RX_R	Factor	Emission	Limit	Over Limit	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
10460	32.74	14.11	46.85	68.2	-21.35	peak
15690	26.54	21.14	47.68	54	-6.32	peak
20920	30.22	23.31	53.53	54	-0.47	peak

Mode:a; Polarization:Vertical; Modulation:c; bandwidth:40MHz; Channel:High

Frequency	RX_R	Factor	Emission	Limit	Over Limit	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
10460	32.22	14.11	46.33	68.2	-21.87	peak
15690	30.40	21.14	51.54	54	-2.46	peak
20920	27.24	23.31	50.55	54	-3.45	peak

Mode:a; Polarization:Horizontal; Modulation:c; bandwidth:80MHz; Channel:Low

Frequency	RX_R	Factor	Emission	Limit	Over Limit	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
10420	32.77	14.17	46.94	68.2	-21.26	peak
15630	26.91	21.32	48.23	54	-5.77	peak
20840	28.94	23.54	52.48	54	-1.52	peak

Mode:a; Polarization:Vertical; Modulation:c; bandwidth:80MHz; Channel:Low

Frequency	RX_R	Factor	Emission	Limit	Over Limit	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
10420	32.95	14.17	47.12	68.2	-21.08	peak
15630	27.53	21.32	48.85	54	-5.15	peak
20840	28.03	23.54	51.57	54	-2.43	peak

6.2 Radiated Emissions which fall in the restricted bands

Test Requirement 47 CFR Part 15, Subpart C 15.209 & 15.407(b)

Test Method: KDB 789033 D02 II G

Limit:

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
Above 960	500	3
Remark: The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90kHz, 110-490kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation.		

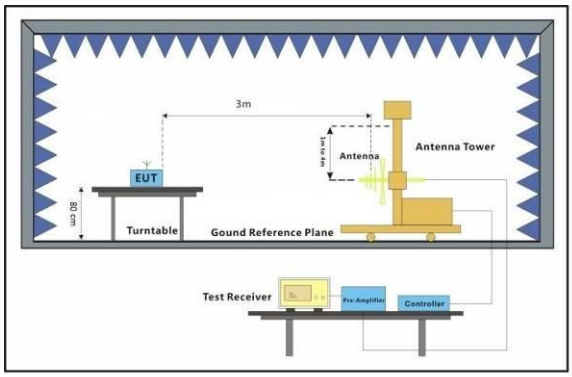
6.2.1 E.U.T. Operation

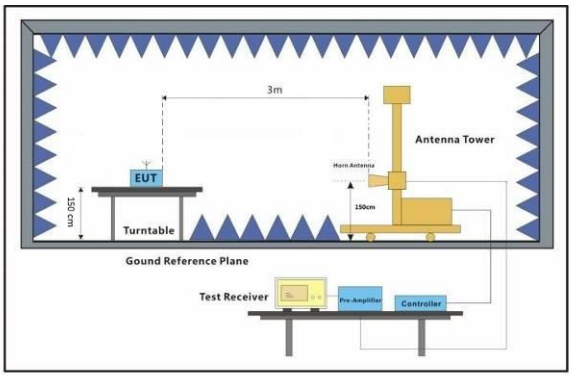
Operating Environment:

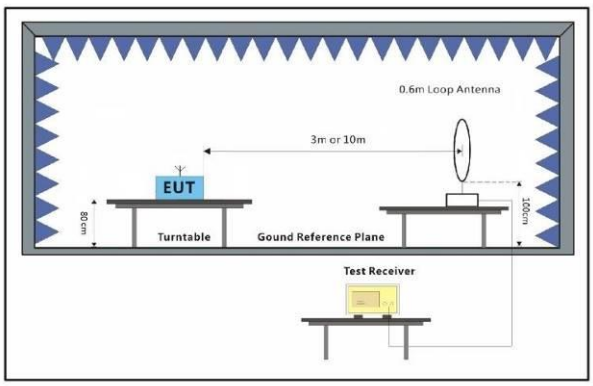
Temperature: 22 °C Humidity: 50 % RH Atmospheric Pressure: 1002 mbar

Test mode a:TX mode (Band 1)_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n(HT20); data rate @ MCS0 is the worst case of IEEE 802.11n(HT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT20); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT80). Only the data of worst case is recorded in the report.

6.2.2 Test Setup Diagram







6.2.3 Measurement Procedure and Data

a. For below 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 or 10 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.

b. For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.

c. The EUT was set 3 or 10 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

d. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

e. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

f. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

g. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

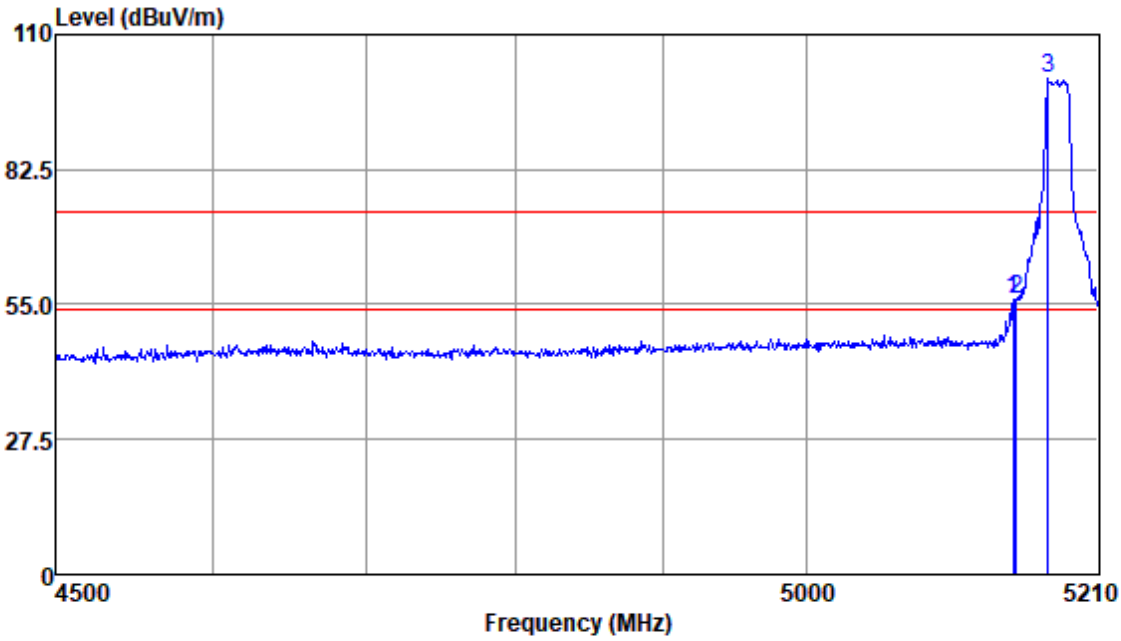
h. Test the EUT in the lowest channel, the middle channel, the Highest channel.

i. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.

j. Repeat above procedures until all frequencies measured was complete.

Remark: Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor

Mode:a; Polarization:Horizontal; Modulation:a; bandwidth:20MHz; Channel:Low

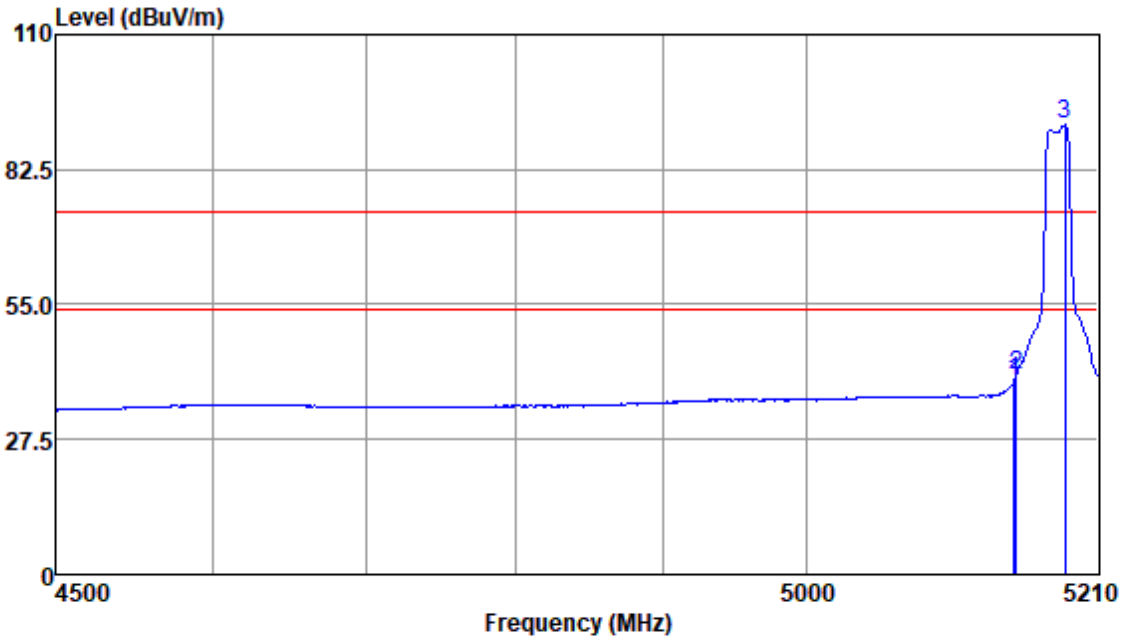


Antenna Polarity :HORIZONTAL

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
5147.79	54.13	31.61	9.06	38.81	55.99	74.00	-18.01	Peak
5150.00	54.01	31.61	9.06	38.81	55.87	74.00	-18.13	Peak
5173.49	99.21	31.65	8.86	38.80	100.92	74.00	26.92	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Mode:a; Polarization:Horizontal; Modulation:a; bandwidth:20MHz; Channel:Low

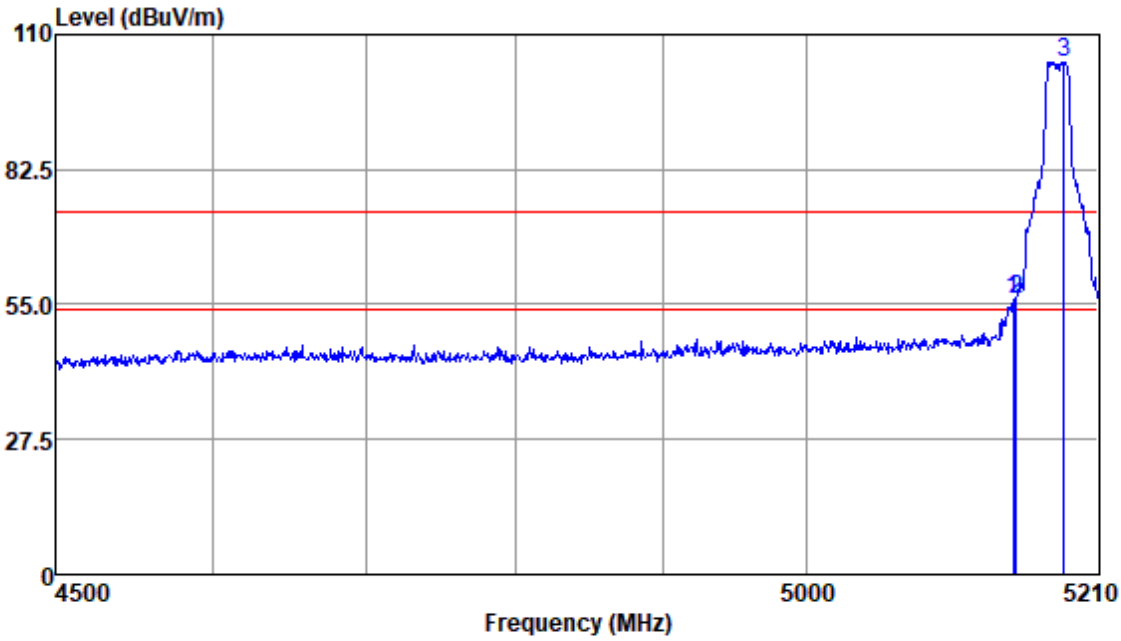


Antenna Polarity :HORIZONTAL

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
5148.54	37.71	31.61	9.06	38.81	39.57	54.00	-14.43	Average
5150.05	38.69	31.61	9.06	38.81	40.55	54.00	-13.45	Average
5185.63	89.94	31.65	8.86	38.80	91.65	54.00	37.65	Average

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Mode:a; Polarization:Vertical; Modulation:a; bandwidth:20MHz; Channel:Low

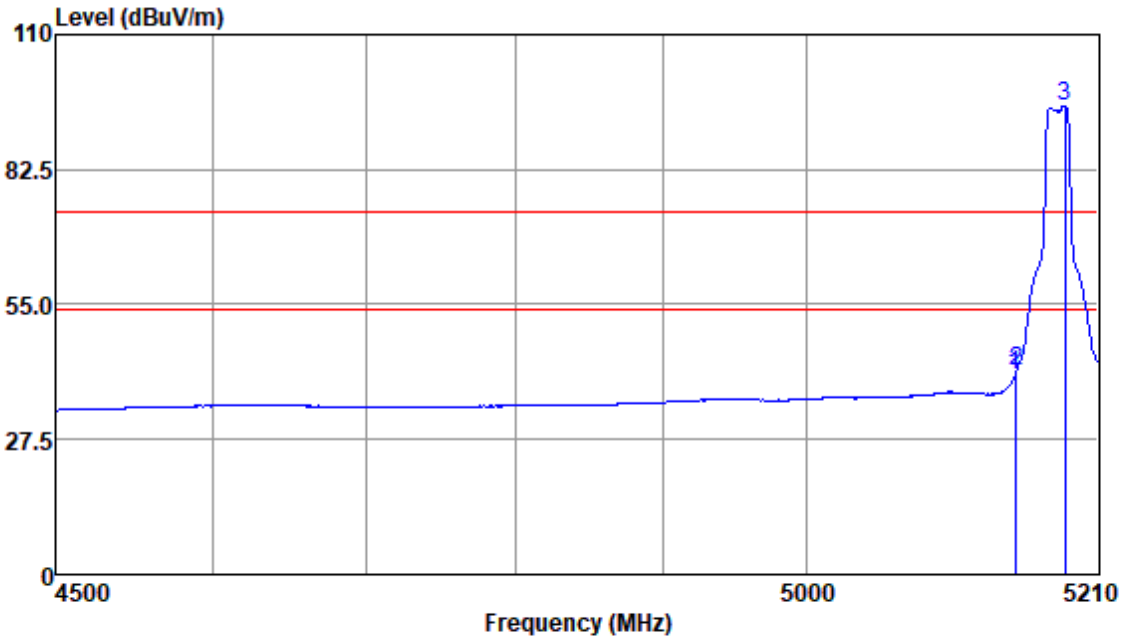


Antenna Polarity :VERTICAL

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
5147.79	53.97	31.61	9.06	38.81	55.83	74.00	-18.17	Peak
5150.00	54.18	31.61	9.06	38.81	56.04	74.00	-17.96	Peak
5184.87	102.71	31.65	8.86	38.80	104.42	74.00	30.42	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Mode:a; Polarization:Vertical; Modulation:a; bandwidth:20MHz; Channel:Low

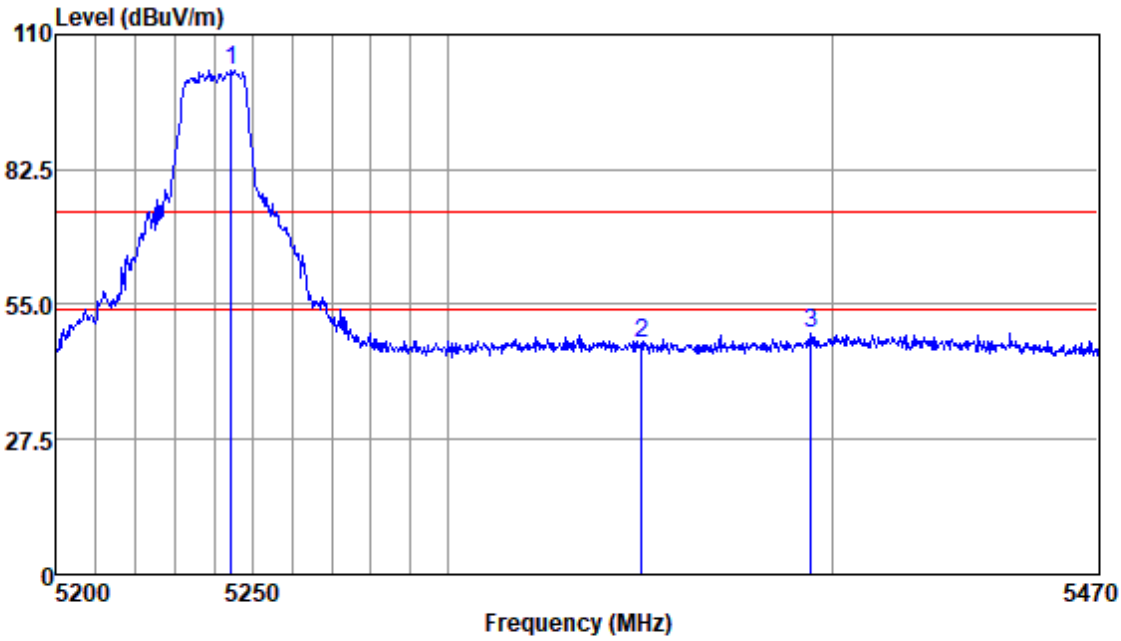


Antenna Polarity :VERTICAL

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
5149.29	38.85	31.61	9.06	38.81	40.71	54.00	-13.29	Average
5150.00	39.41	31.61	9.06	38.81	41.27	54.00	-12.73	Average
5185.63	93.79	31.65	8.86	38.80	95.50	54.00	41.50	Average

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Mode:a; Polarization:Horizontal; Modulation:a; bandwidth:20MHz; Channel:High

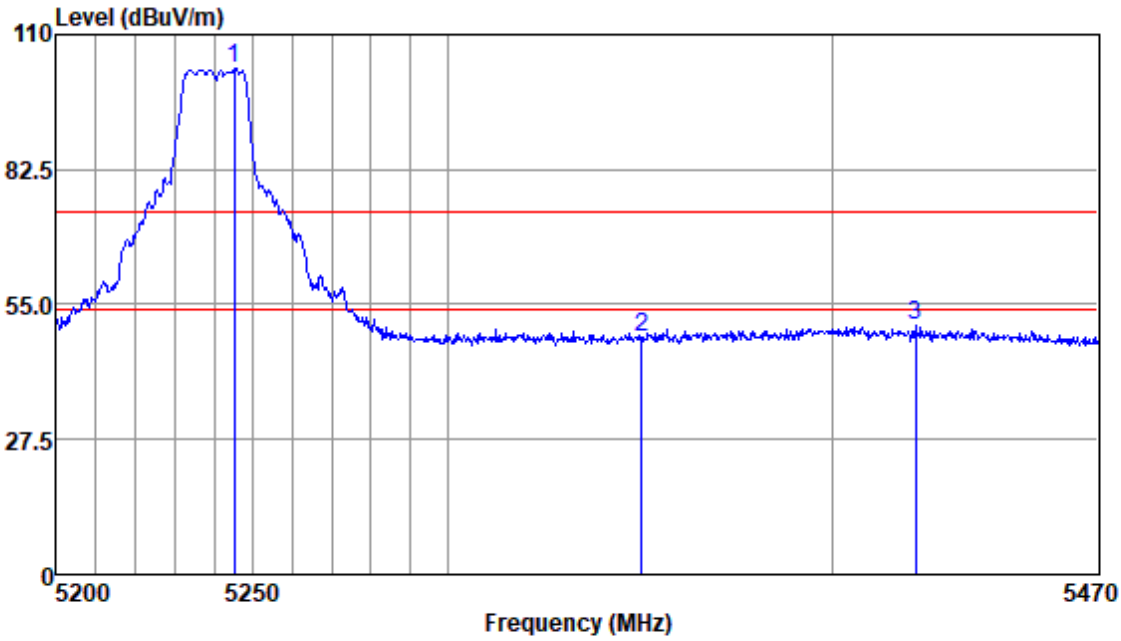


Antenna Polarity :HORIZONTAL

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
5244.41	101.22	31.74	8.68	38.77	102.87	74.00	28.87	Peak
5350.00	44.53	31.89	9.20	38.70	46.92	74.00	-27.08	Peak
5394.11	46.26	31.95	9.44	38.68	48.97	74.00	-25.03	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Mode:a; Polarization:Vertical; Modulation:a; bandwidth:20MHz; Channel:High

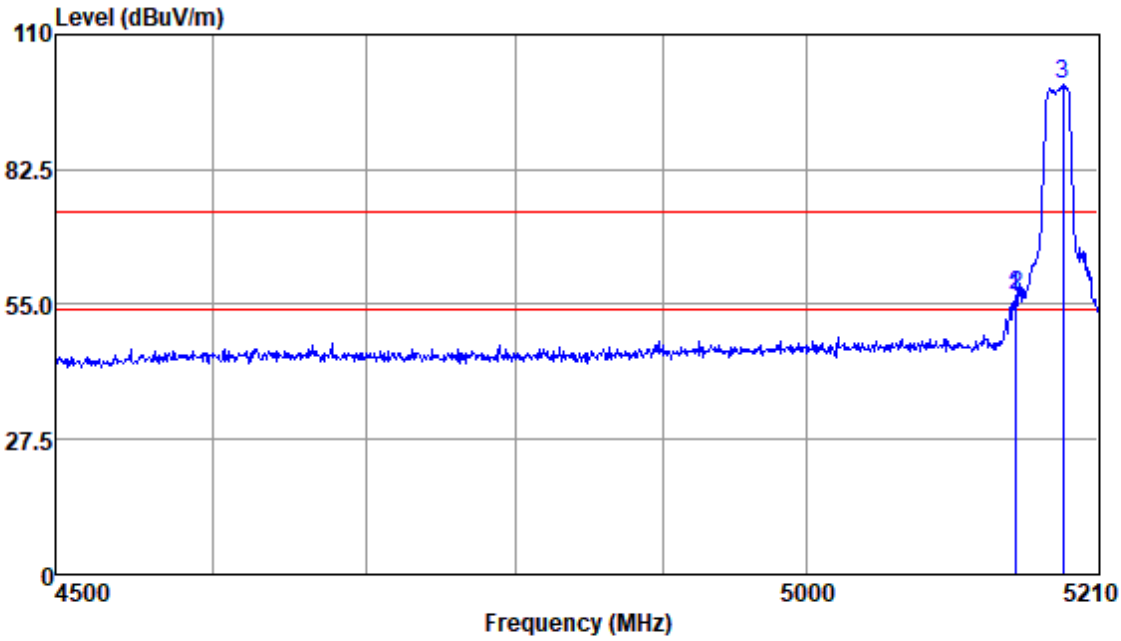


Antenna Polarity :VERTICAL

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
5245.21	101.50	31.74	8.68	38.77	103.15	74.00	29.15	Peak
5350.00	45.79	31.89	9.20	38.70	48.18	74.00	-25.82	Peak
5421.76	47.95	31.99	9.34	38.66	50.62	74.00	-23.38	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Mode:a; Polarization:Horizontal; Modulation:n; bandwidth:20MHz; Channel:Low

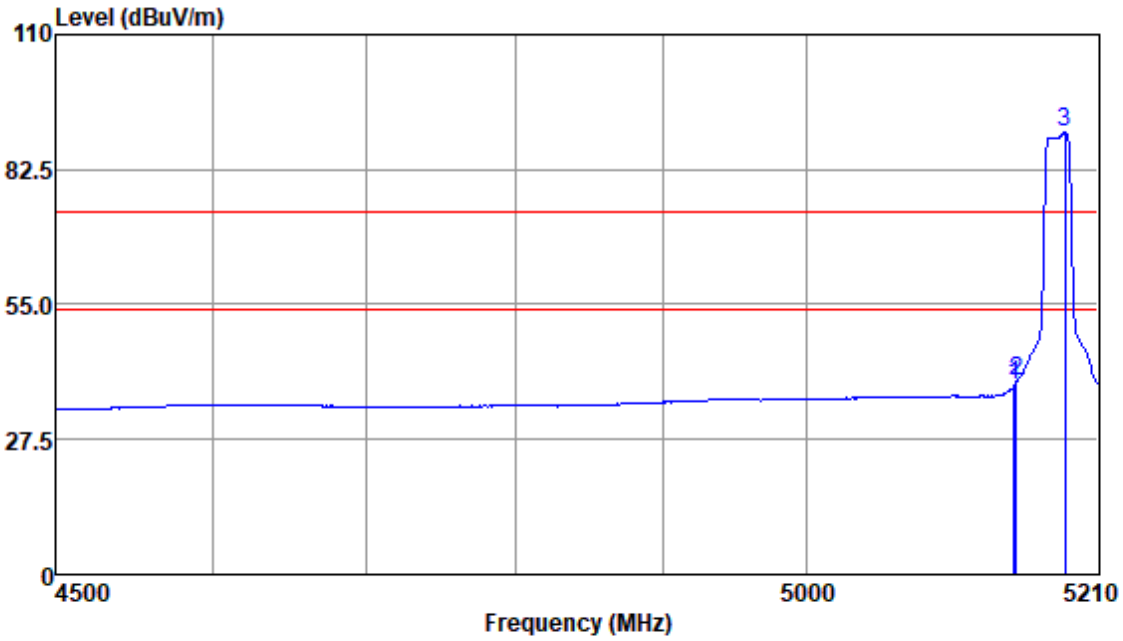


Antenna Polarity :HORIZONTAL

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
5149.29	54.45	31.61	9.06	38.81	56.31	74.00	-17.69	Peak
5150.00	55.07	31.61	9.06	38.81	56.93	74.00	-17.07	Peak
5184.11	98.03	31.65	8.86	38.80	99.74	74.00	25.74	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Mode:a; Polarization:Horizontal; Modulation:n; bandwidth:20MHz; Channel:Low

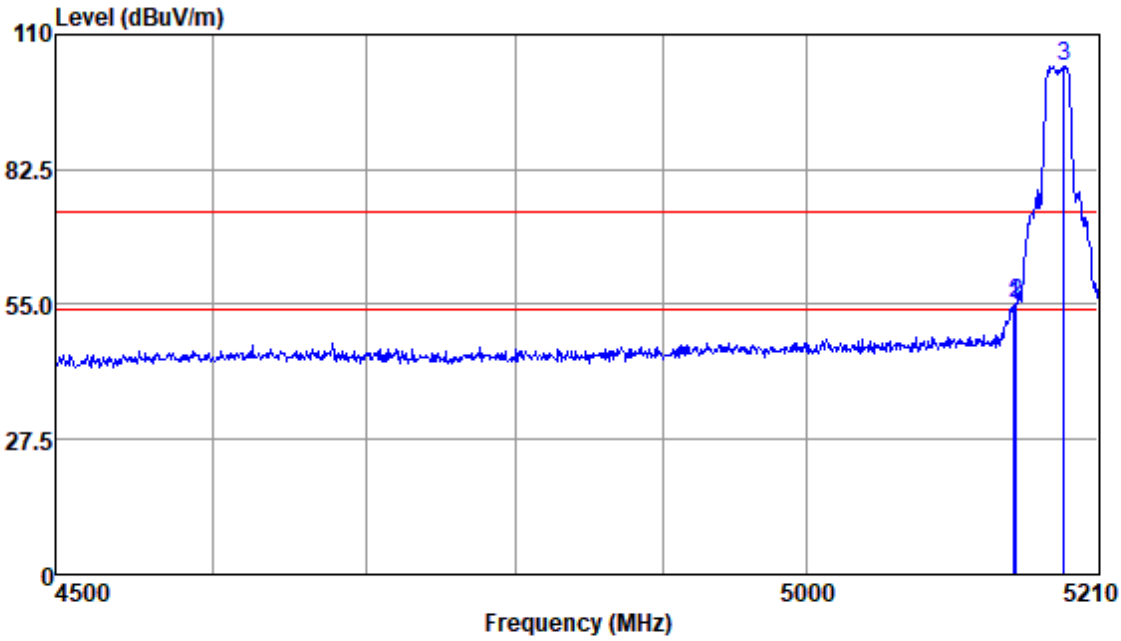


Antenna Polarity :HORIZONTAL

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
5148.54	36.55	31.61	9.06	38.81	38.41	54.00	-15.59	Average
5150.00	37.31	31.61	9.06	38.81	39.17	54.00	-14.83	Average
5185.63	88.51	31.65	8.86	38.80	90.22	54.00	36.22	Average

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Mode:a; Polarization:Vertical; Modulation:n; bandwidth:20MHz; Channel:Low

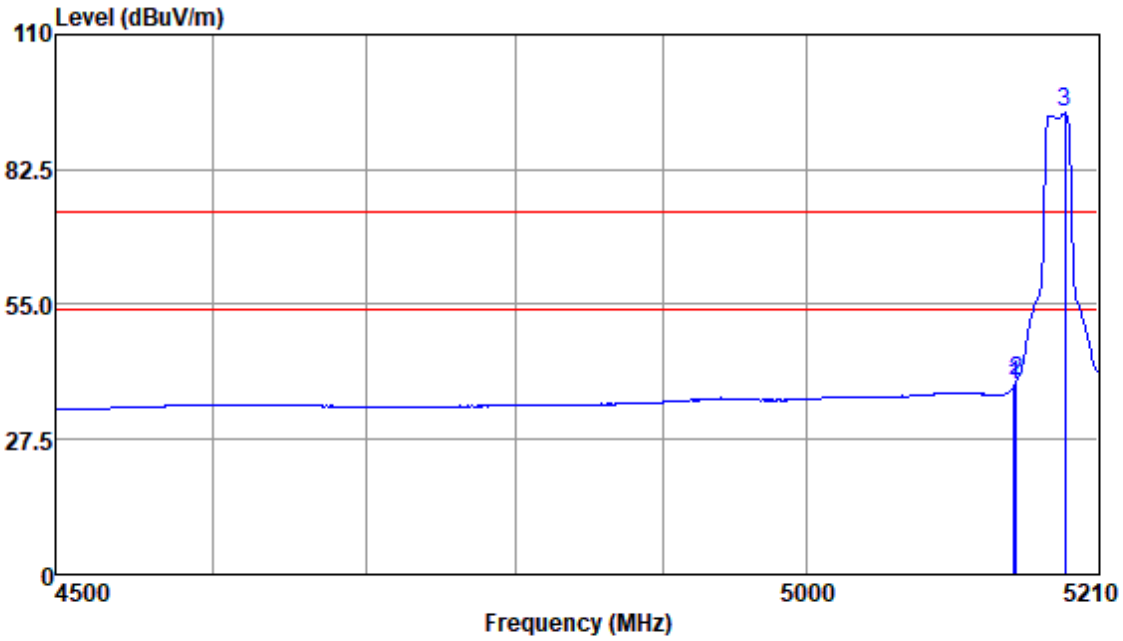


Antenna Polarity :VERTICAL

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
5148.54	53.08	31.61	9.06	38.81	54.94	74.00	-19.06	Peak
5150.00	53.32	31.61	9.06	38.81	55.18	74.00	-18.82	Peak
5184.87	101.90	31.65	8.86	38.80	103.61	74.00	29.61	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Mode:a; Polarization:Vertical; Modulation:n; bandwidth:20MHz; Channel:Low

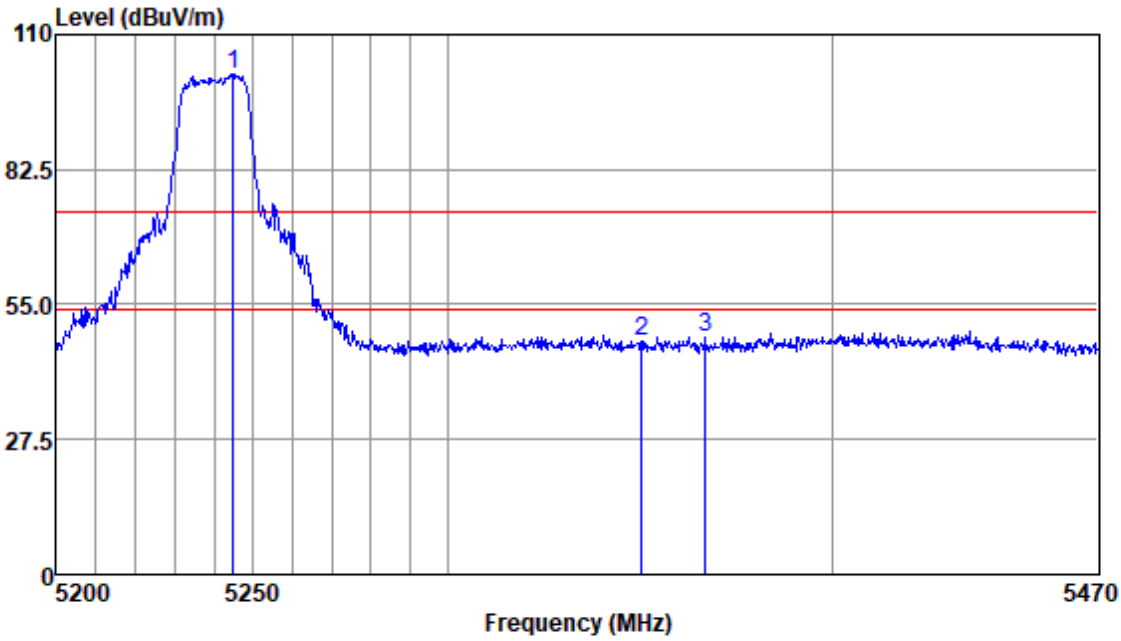


Antenna Polarity :VERTICAL

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
5148.54	36.53	31.61	9.06	38.81	38.39	54.00	-15.61	Average
5150.00	37.55	31.61	9.06	38.81	39.41	54.00	-14.59	Average
5185.63	92.38	31.65	8.86	38.80	94.09	54.00	40.09	Average

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Mode:a; Polarization:Horizontal; Modulation:n; bandwidth:20MHz; Channel:High

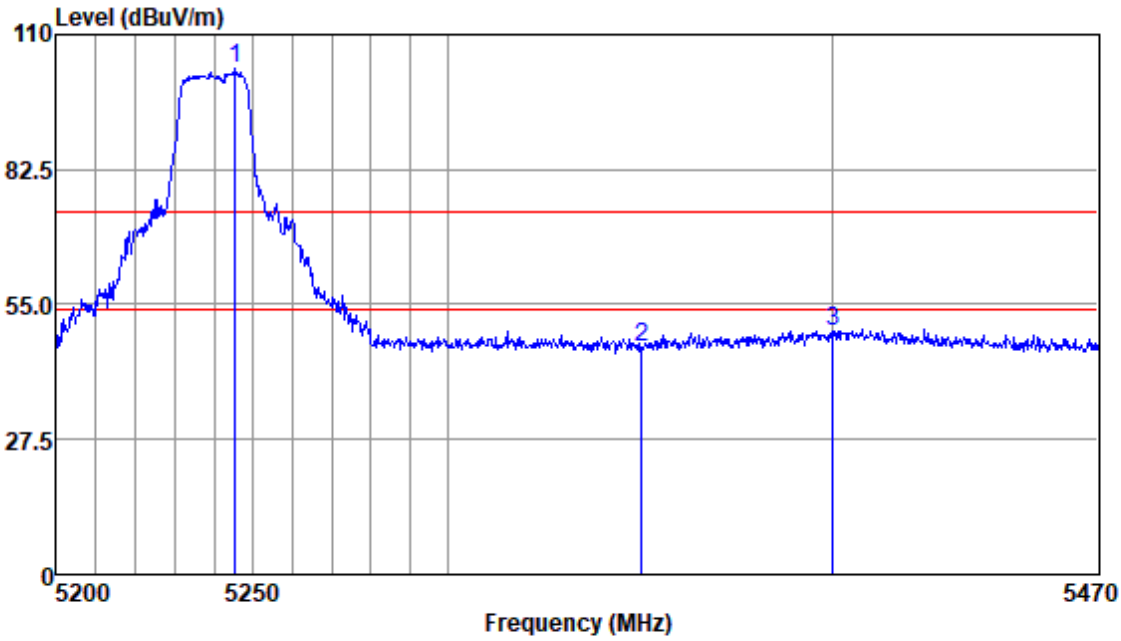


Antenna Polarity :HORIZONTAL

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
5244.94	100.32	31.74	8.68	38.77	101.97	74.00	27.97	Peak
5350.00	45.25	31.89	9.20	38.70	47.64	74.00	-26.36	Peak
5366.60	46.03	31.91	9.20	38.69	48.45	74.00	-25.55	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Mode:a; Polarization:Vertical; Modulation:n; bandwidth:20MHz; Channel:High

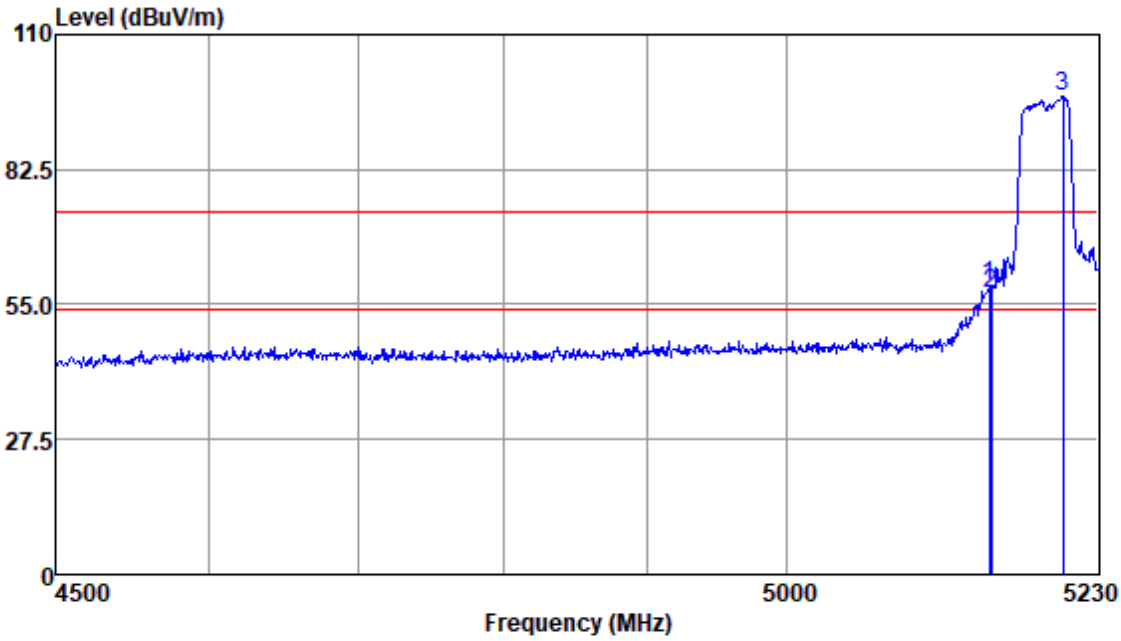


Antenna Polarity :VERTICAL

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
5245.47	101.32	31.74	8.68	38.77	102.97	74.00	28.97	Peak
5350.00	44.07	31.89	9.20	38.70	46.46	74.00	-27.54	Peak
5399.85	46.92	31.95	9.44	38.68	49.63	74.00	-24.37	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Mode:a; Polarization:Horizontal; Modulation:n; bandwidth:40MHz; Channel:Low

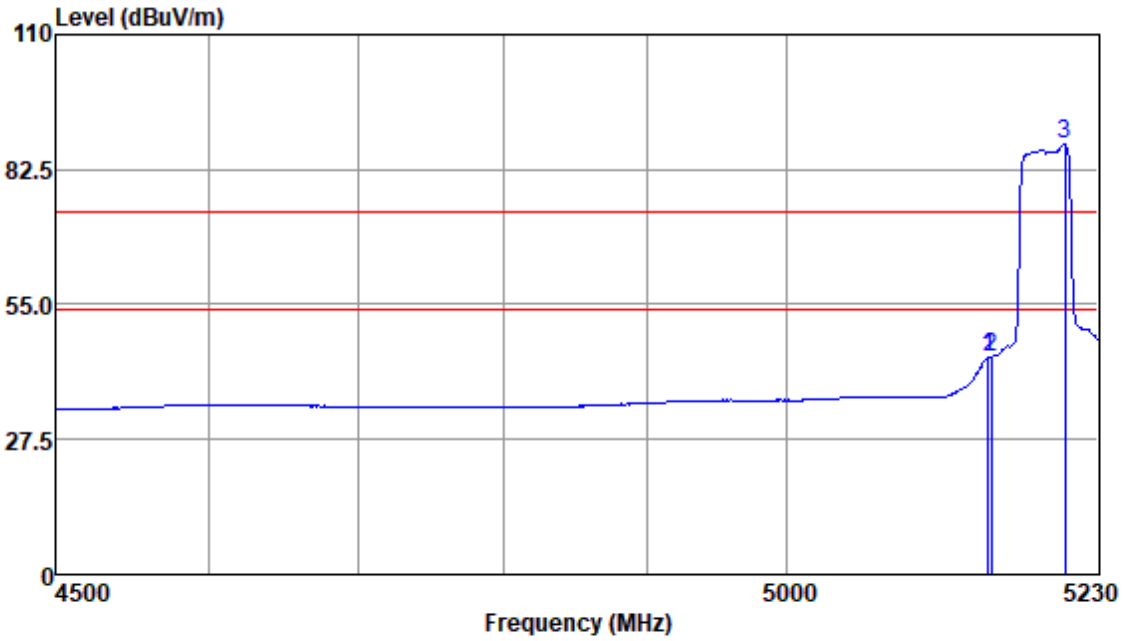


Antenna Polarity :HORIZONTAL

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
5148.09	57.17	31.61	9.06	38.81	59.03	74.00	-14.97	Peak
5150.00	55.26	31.61	9.06	38.81	57.12	74.00	-16.88	Peak
5203.34	96.00	31.70	8.66	38.78	97.58	74.00	23.58	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Mode:a; Polarization:Horizontal; Modulation:n; bandwidth:40MHz; Channel:Low

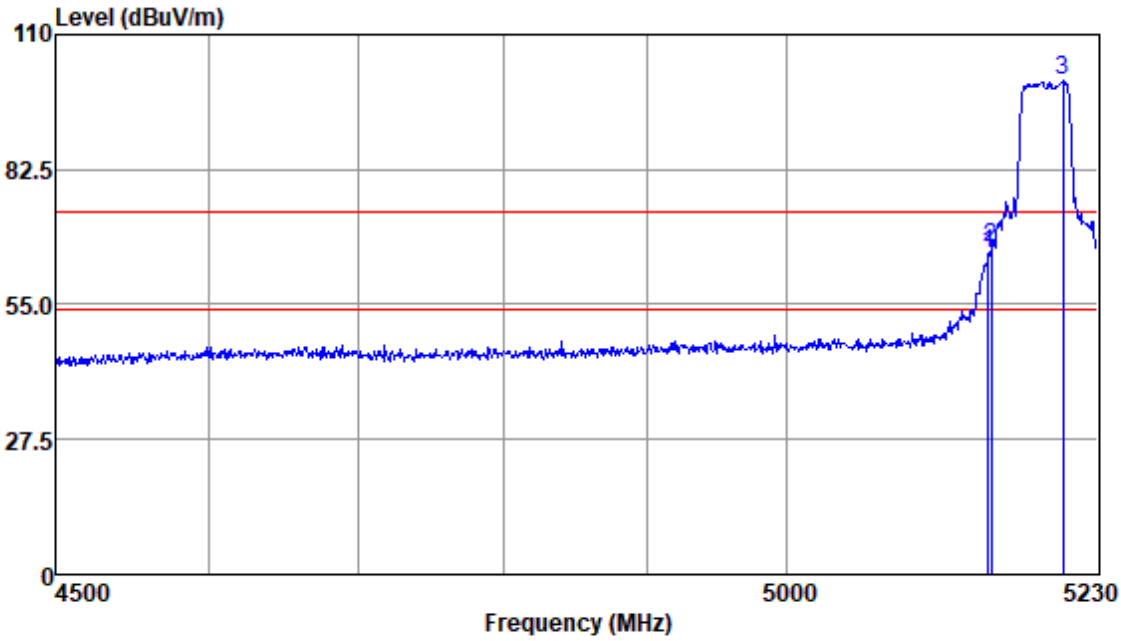


Antenna Polarity :HORIZONTAL

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
5147.32	42.21	31.61	9.06	38.81	44.07	54.00	-9.93	Average
5150.00	42.35	31.61	9.06	38.81	44.21	54.00	-9.79	Average
5204.90	86.09	31.70	8.66	38.78	87.67	54.00	33.67	Average

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Mode:a; Polarization:Vertical; Modulation:n; bandwidth:40MHz; Channel:Low

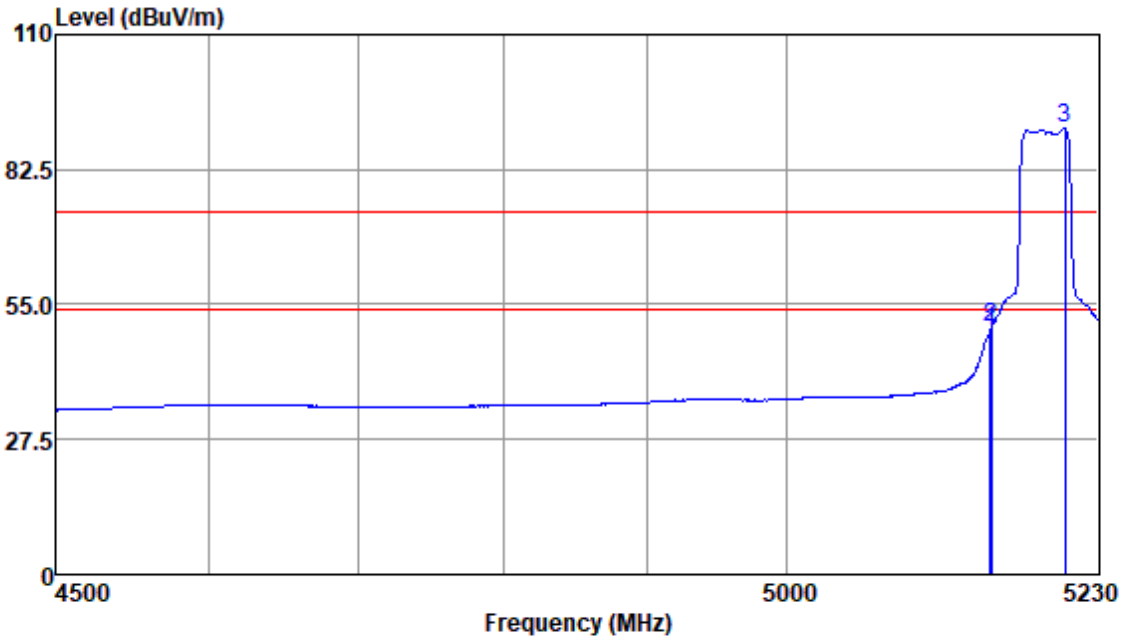


Antenna Polarity :VERTICAL

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
5147.32	63.52	31.61	9.06	38.81	65.38	74.00	-8.62	Peak
5150.00	64.79	31.61	9.06	38.81	66.65	74.00	-7.35	Peak
5203.34	99.00	31.70	8.66	38.78	100.58	74.00	26.58	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Mode:a; Polarization:Vertical; Modulation:n; bandwidth:40MHz; Channel:Low

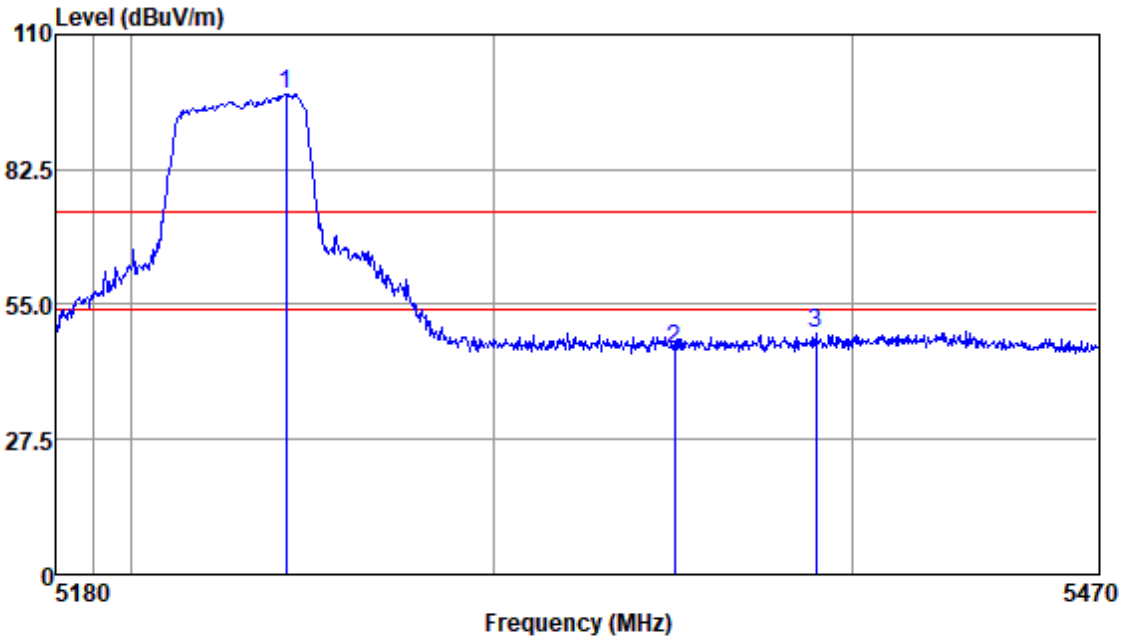


Antenna Polarity :VERTICAL

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
5148.87	47.70	31.61	9.06	38.81	49.56	54.00	-4.44	Average
5150.00	48.31	31.61	9.06	38.81	50.17	54.00	-3.83	Average
5204.90	89.21	31.70	8.66	38.78	90.79	54.00	36.79	Average

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Mode:a; Polarization:Horizontal; Modulation:n; bandwidth:40MHz; Channel:High

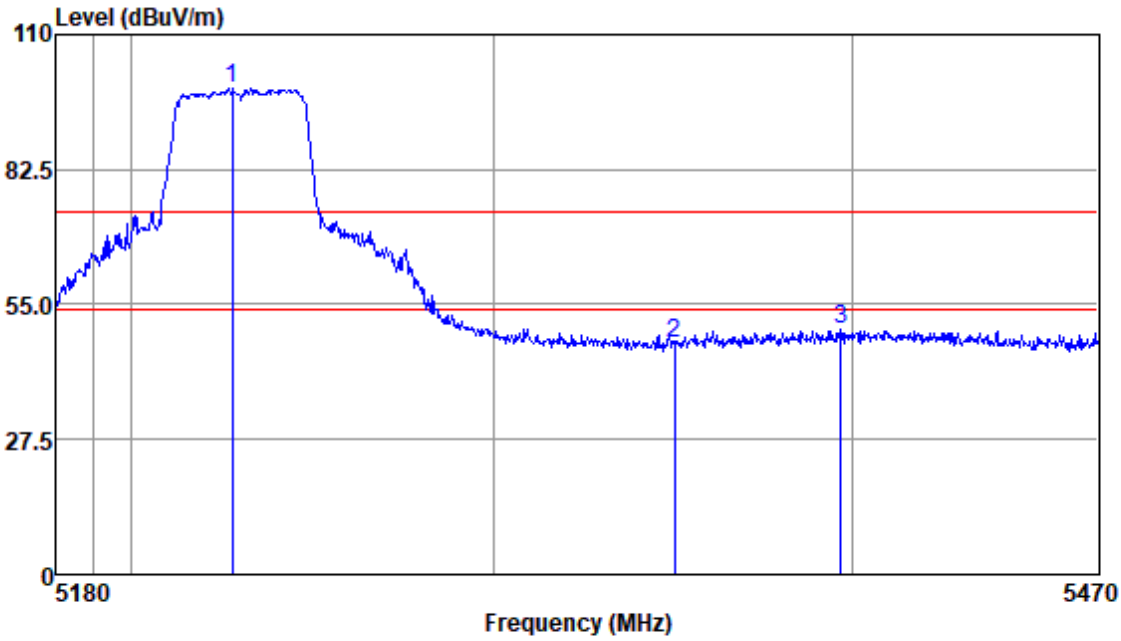


Antenna Polarity :HORIZONTAL

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
5242.45	96.29	31.74	8.68	38.77	97.94	74.00	23.94	Peak
5350.00	43.30	31.89	9.20	38.70	45.69	74.00	-28.31	Peak
5389.84	46.49	31.95	9.44	38.68	49.20	74.00	-24.80	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Mode:a; Polarization:Vertical; Modulation:n; bandwidth:40MHz; Channel:High

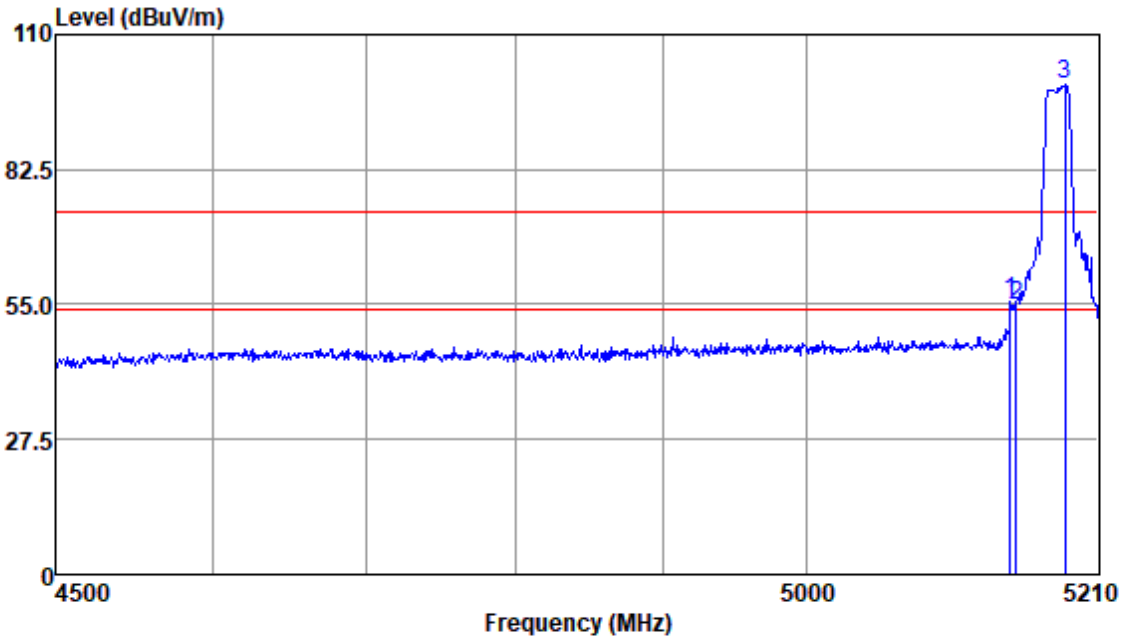


Antenna Polarity :VERTICAL

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
5227.91	97.30	31.72	8.66	38.78	98.90	74.00	24.90	Peak
5350.00	44.69	31.89	9.20	38.70	47.08	74.00	-26.92	Peak
5396.89	47.13	31.95	9.44	38.68	49.84	74.00	-24.16	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Mode:a; Polarization:Horizontal; Modulation:c; bandwidth:20MHz; Channel:Low

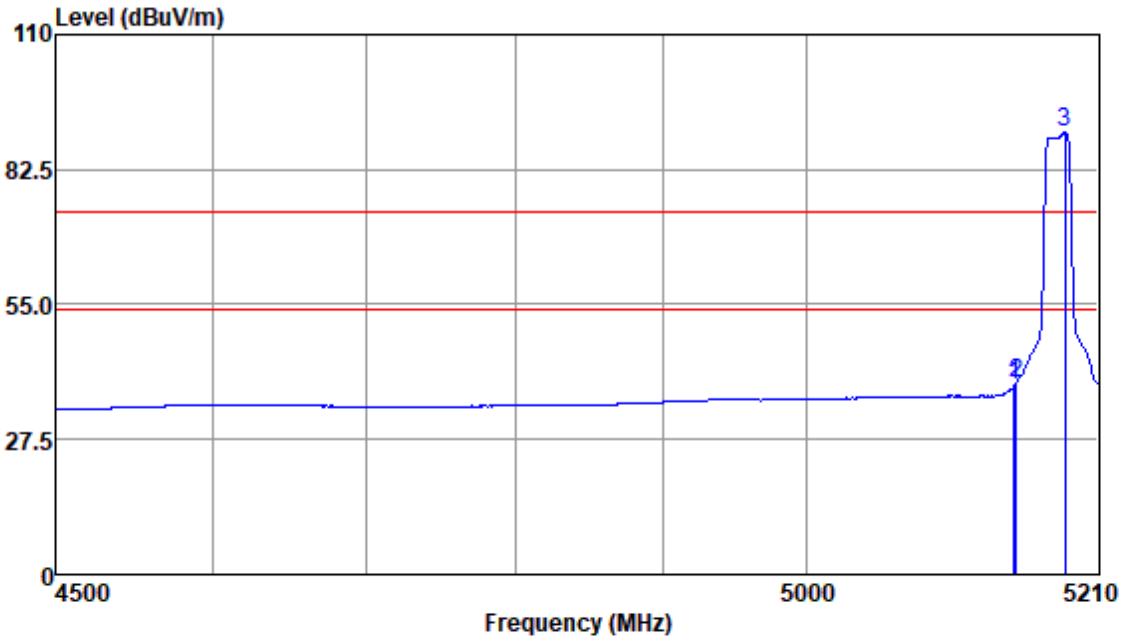


Antenna Polarity :HORIZONTAL

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
5145.52	53.84	31.61	9.06	38.81	55.70	74.00	-18.30	Peak
5150.00	52.81	31.61	9.06	38.81	54.67	74.00	-19.33	Peak
5185.63	98.06	31.65	8.86	38.80	99.77	74.00	25.77	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Mode:a; Polarization:Horizontal; Modulation:c; bandwidth:20MHz; Channel:Low

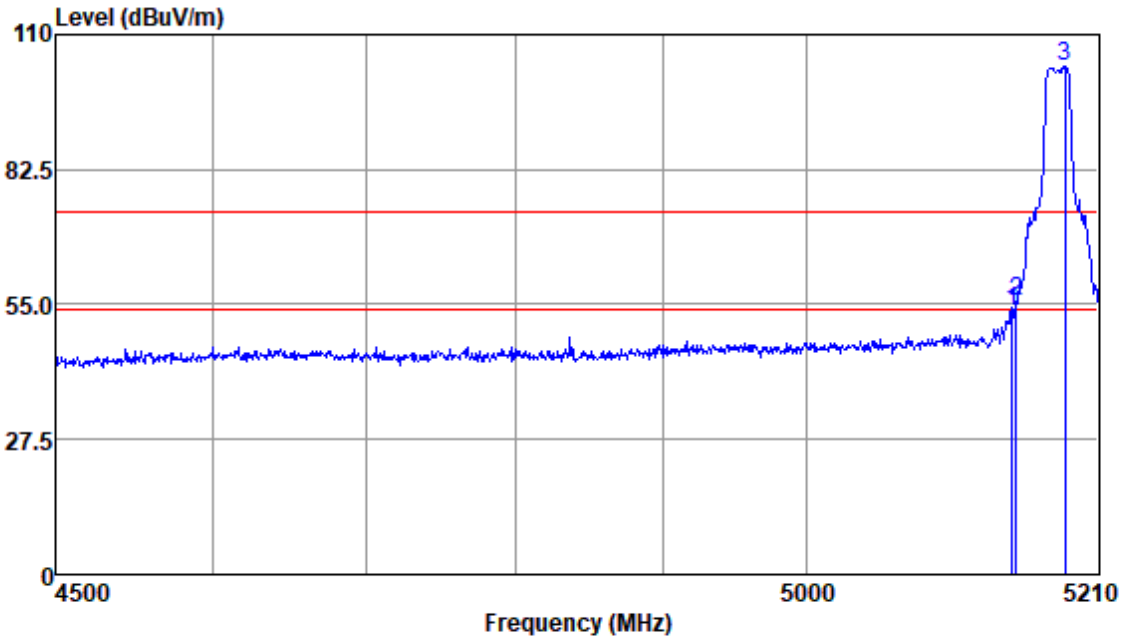


Antenna Polarity :HORIZONTAL

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
5148.54	36.50	31.61	9.06	38.81	38.36	54.00	-15.64	Average
5150.00	37.29	31.61	9.06	38.81	39.15	54.00	-14.85	Average
5185.63	88.51	31.65	8.86	38.80	90.22	54.00	36.22	Average

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Mode:a; Polarization:Vertical; Modulation:c; bandwidth:20MHz; Channel:Low

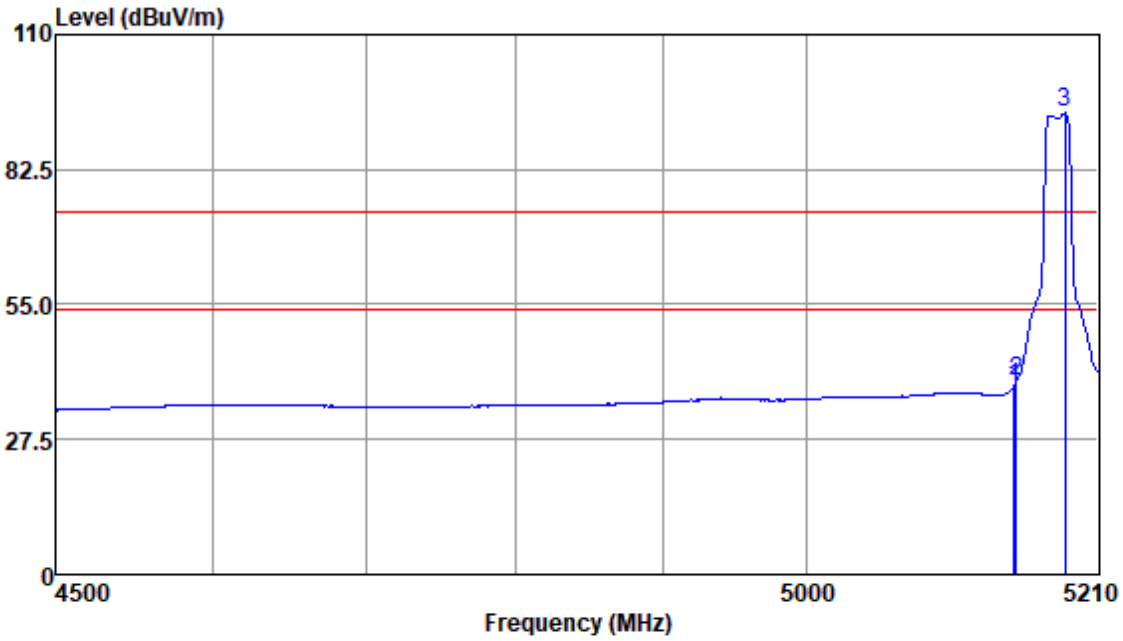


Antenna Polarity :VERTICAL

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
5147.03	51.83	31.61	9.06	38.81	53.69	74.00	-20.31	Peak
5150.00	53.57	31.61	9.06	38.81	55.43	74.00	-18.57	Peak
5185.63	101.81	31.65	8.86	38.80	103.52	74.00	29.52	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Mode:a; Polarization:Vertical; Modulation:c; bandwidth:20MHz; Channel:Low

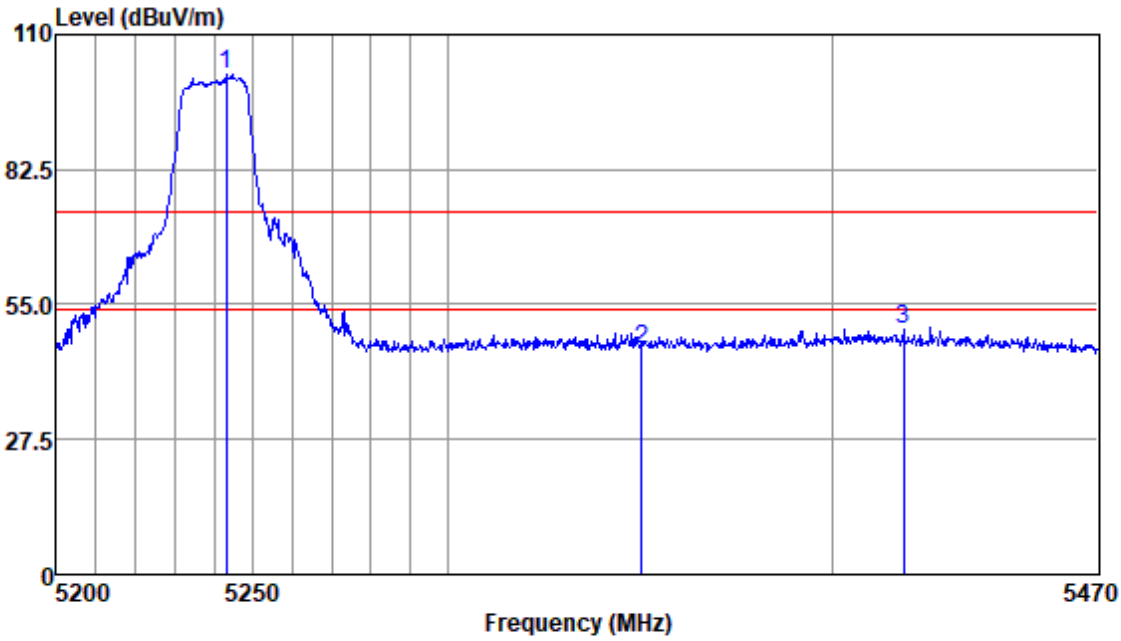


Antenna Polarity :VERTICAL

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
5148.54	36.49	31.61	9.06	38.81	38.35	54.00	-15.65	Average
5150.05	37.55	31.61	9.06	38.81	39.41	54.00	-14.59	Average
5185.63	92.33	31.65	8.86	38.80	94.04	54.00	40.04	Average

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Mode:a; Polarization:Horizontal; Modulation:c; bandwidth:20MHz; Channel:High

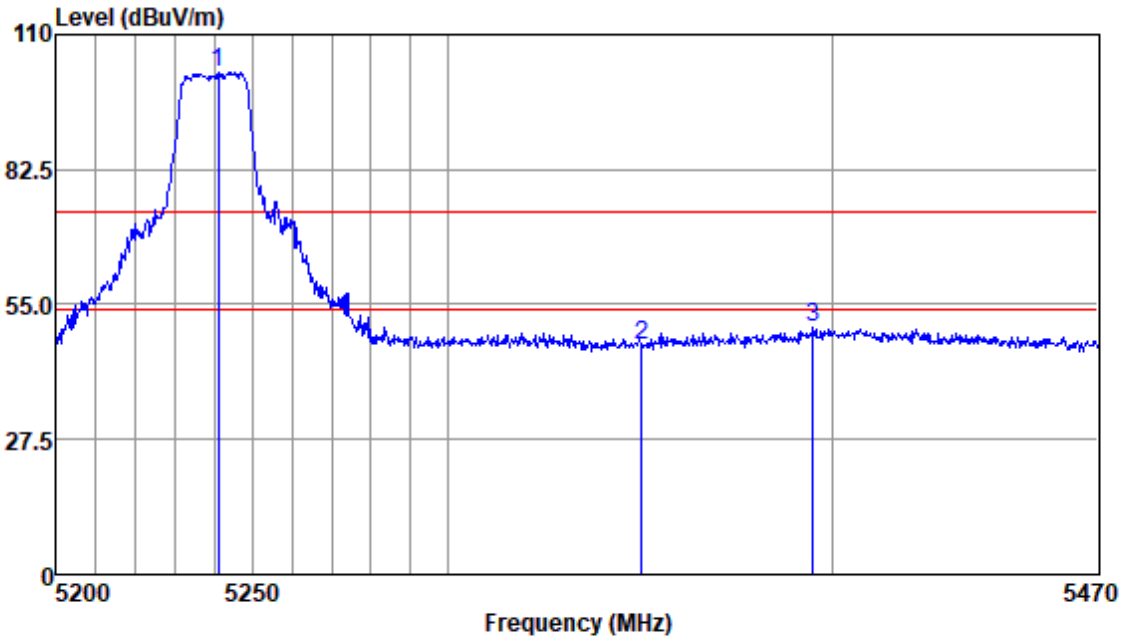


Antenna Polarity :HORIZONTAL

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
5243.08	100.05	31.74	8.68	38.77	101.70	74.00	27.70	Peak
5350.00	43.35	31.89	9.20	38.70	45.74	74.00	-28.26	Peak
5418.47	47.22	31.99	9.34	38.66	49.89	74.00	-24.11	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Mode:a; Polarization:Vertical; Modulation:c; bandwidth:20MHz; Channel:High

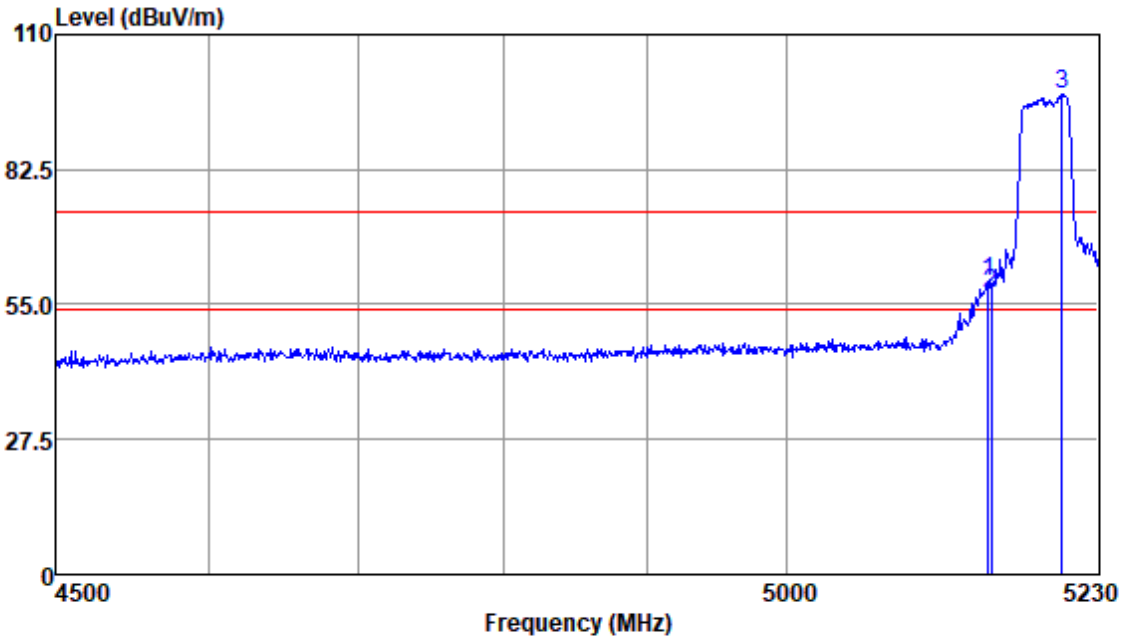


Antenna Polarity :VERTICAL

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
5240.96	100.48	31.74	8.68	38.77	102.13	74.00	28.13	Peak
5350.00	44.42	31.89	9.20	38.70	46.81	74.00	-27.19	Peak
5394.66	47.46	31.95	9.44	38.68	50.17	74.00	-23.83	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Mode:a; Polarization:Horizontal; Modulation:c; bandwidth:40MHz; Channel:Low

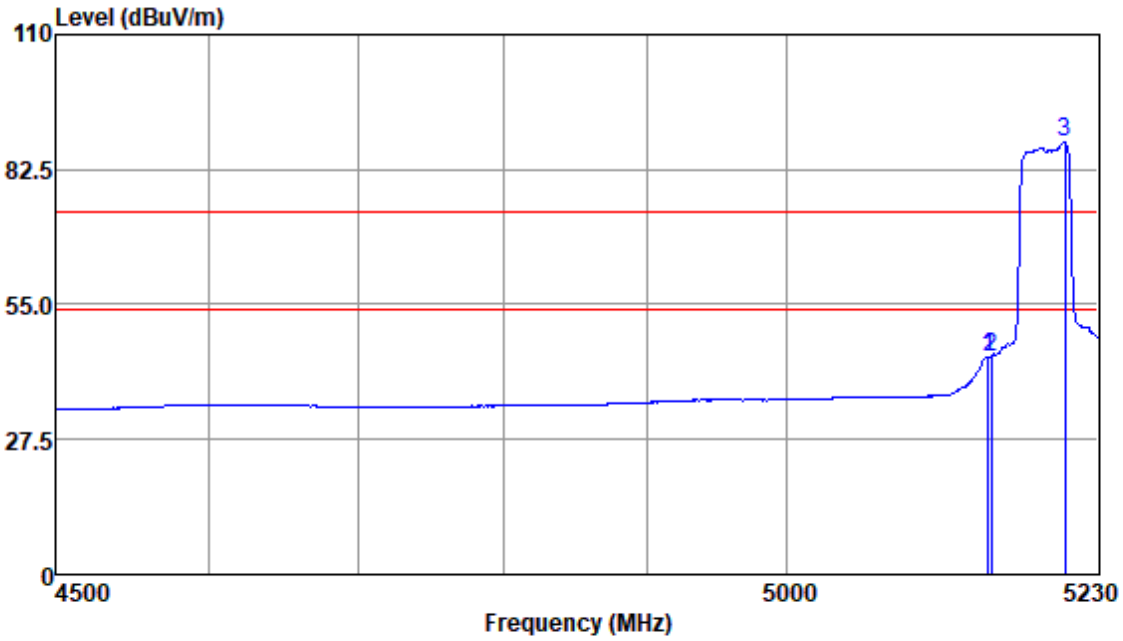


Antenna Polarity :HORIZONTAL

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
5147.32	57.86	31.61	9.06	38.81	59.72	74.00	-14.28	Peak
5150.00	55.40	31.61	9.06	38.81	57.26	74.00	-16.74	Peak
5202.55	96.33	31.70	8.66	38.78	97.91	74.00	23.91	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Mode:a; Polarization:Horizontal; Modulation:c; bandwidth:40MHz; Channel:Low

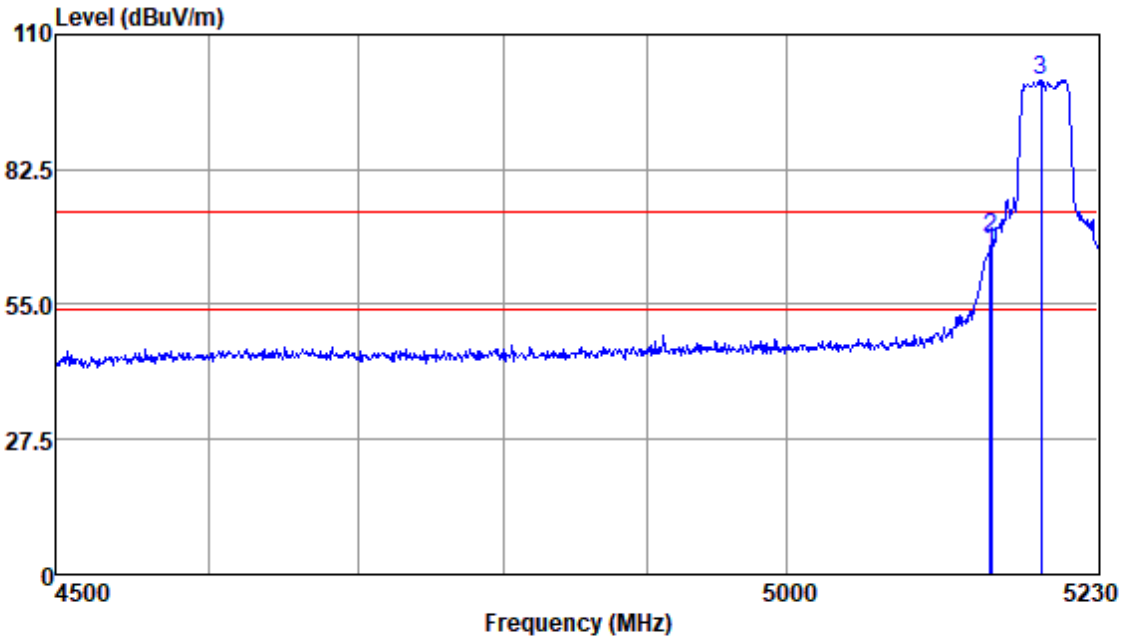


Antenna Polarity :HORIZONTAL

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
5147.32	42.37	31.61	9.06	38.81	44.23	54.00	-9.77	Average
5150.00	42.50	31.61	9.06	38.81	44.36	54.00	-9.64	Average
5204.90	86.37	31.70	8.66	38.78	87.95	54.00	33.95	Average

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Mode:a; Polarization:Vertical; Modulation:c; bandwidth:40MHz; Channel:Low

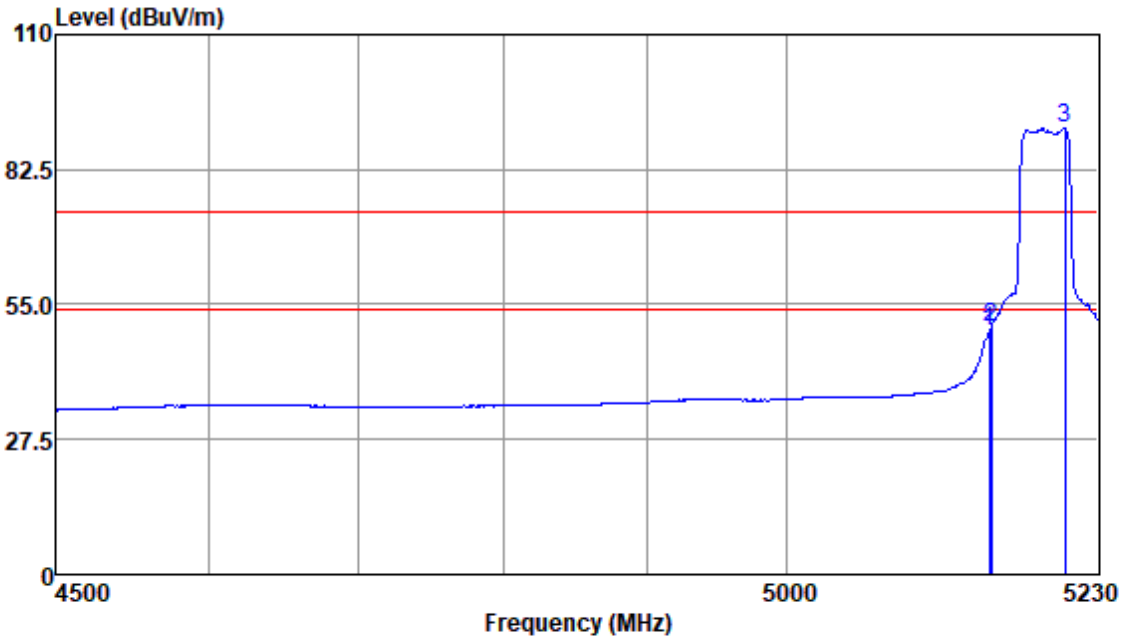


Antenna Polarity :VERTICAL

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
5148.87	63.81	31.61	9.06	38.81	65.67	74.00	-8.33	Peak
5150.00	66.58	31.61	9.06	38.81	68.44	74.00	-5.56	Peak
5186.94	99.08	31.68	8.86	38.79	100.83	74.00	26.83	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Mode:a; Polarization:Vertical; Modulation:c; bandwidth:40MHz; Channel:Low

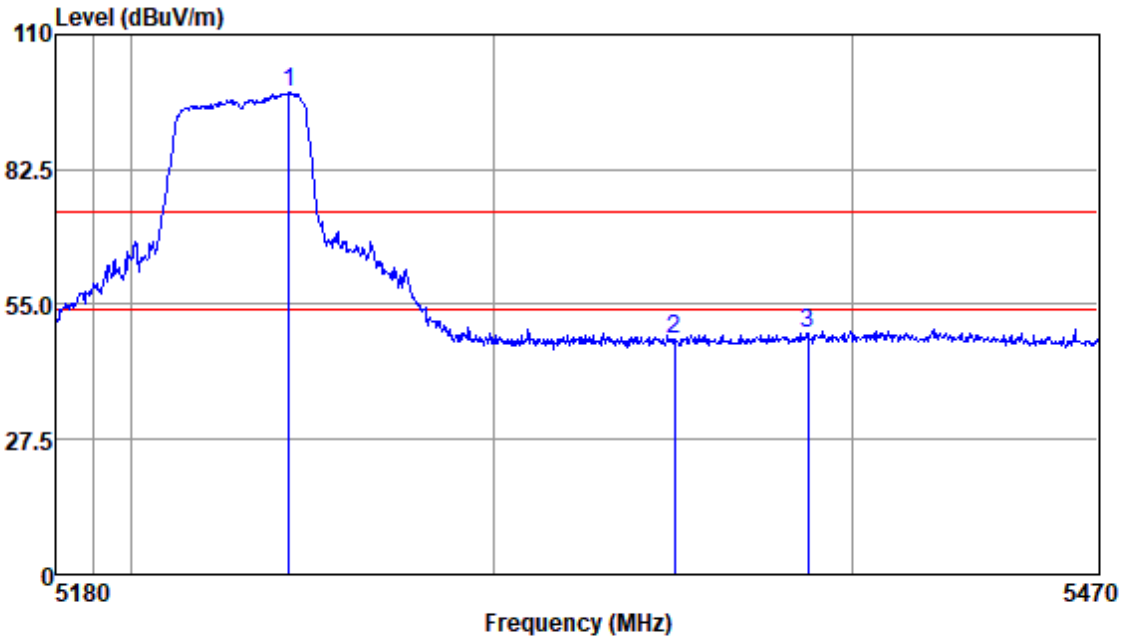


Antenna Polarity :VERTICAL

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
5148.09	47.59	31.61	9.06	38.81	49.45	54.00	-4.55	Average
5150.00	48.54	31.61	9.06	38.81	50.40	54.00	-3.60	Average
5204.90	89.29	31.70	8.66	38.78	90.87	54.00	36.87	Average

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Mode:a; Polarization:Horizontal; Modulation:c; bandwidth:40MHz; Channel:High

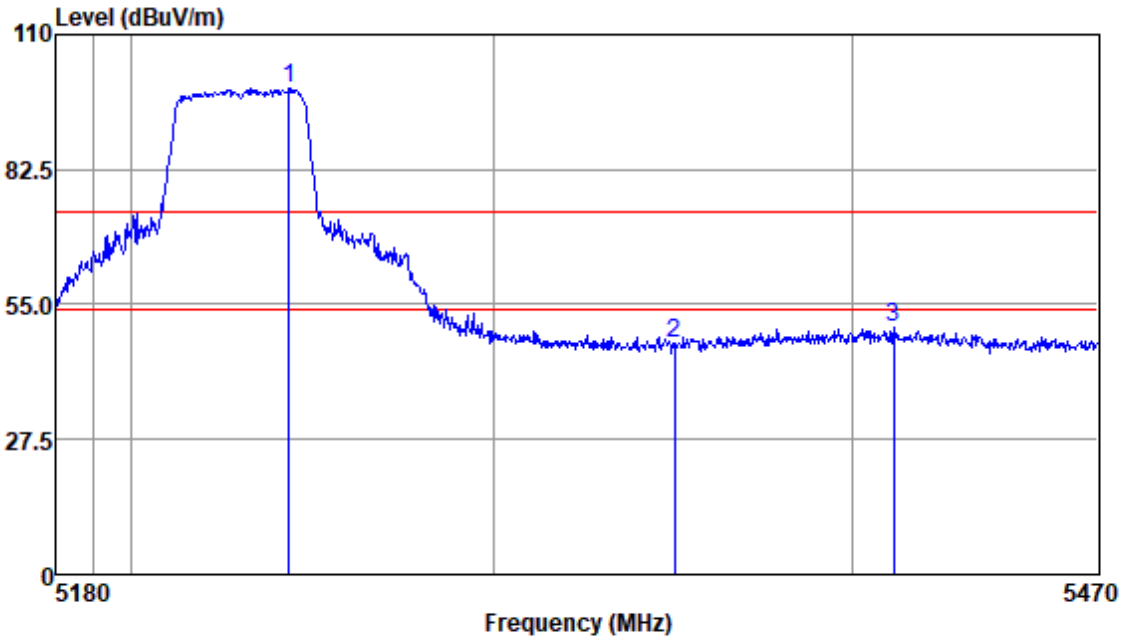


Antenna Polarity :HORIZONTAL

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
5243.31	96.48	31.74	8.68	38.77	98.13	74.00	24.13	Peak
5350.00	45.37	31.89	9.20	38.70	47.76	74.00	-26.24	Peak
5387.50	46.61	31.95	9.44	38.68	49.32	74.00	-24.68	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Mode:a; Polarization:Vertical; Modulation:c; bandwidth:40MHz; Channel:High

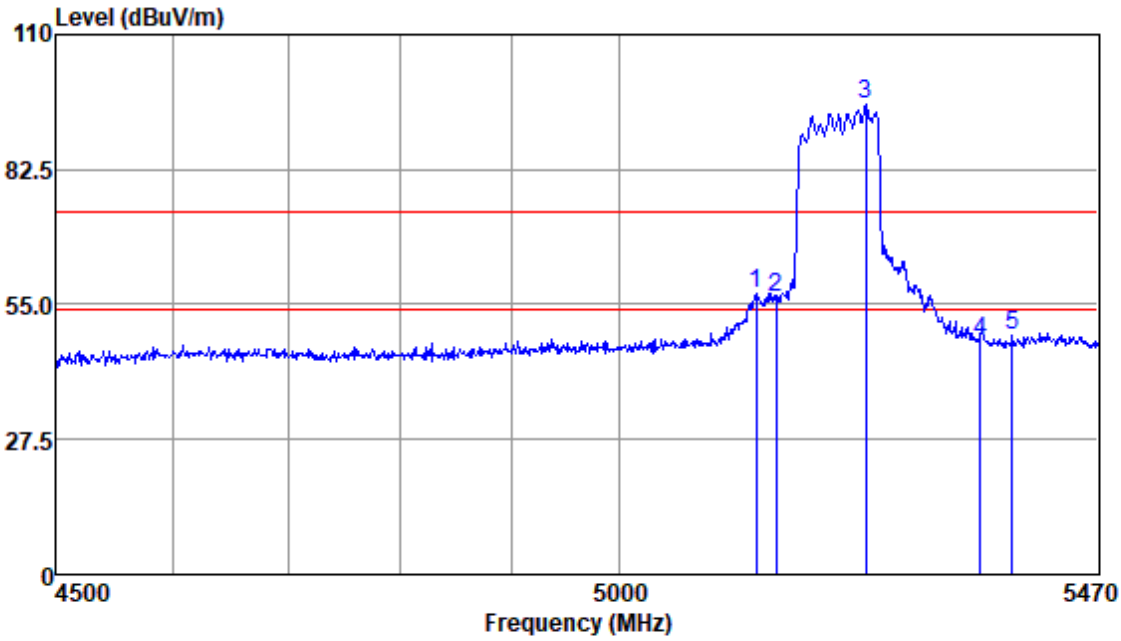


Antenna Polarity :VERTICAL

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
5243.31	97.25	31.74	8.68	38.77	98.90	74.00	24.90	Peak
5350.00	44.70	31.89	9.20	38.70	47.09	74.00	-26.91	Peak
5411.91	47.43	31.97	9.44	38.67	50.17	74.00	-23.83	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Mode:a; Polarization:Horizontal; Modulation:c; bandwidth:80MHz; Channel:Low

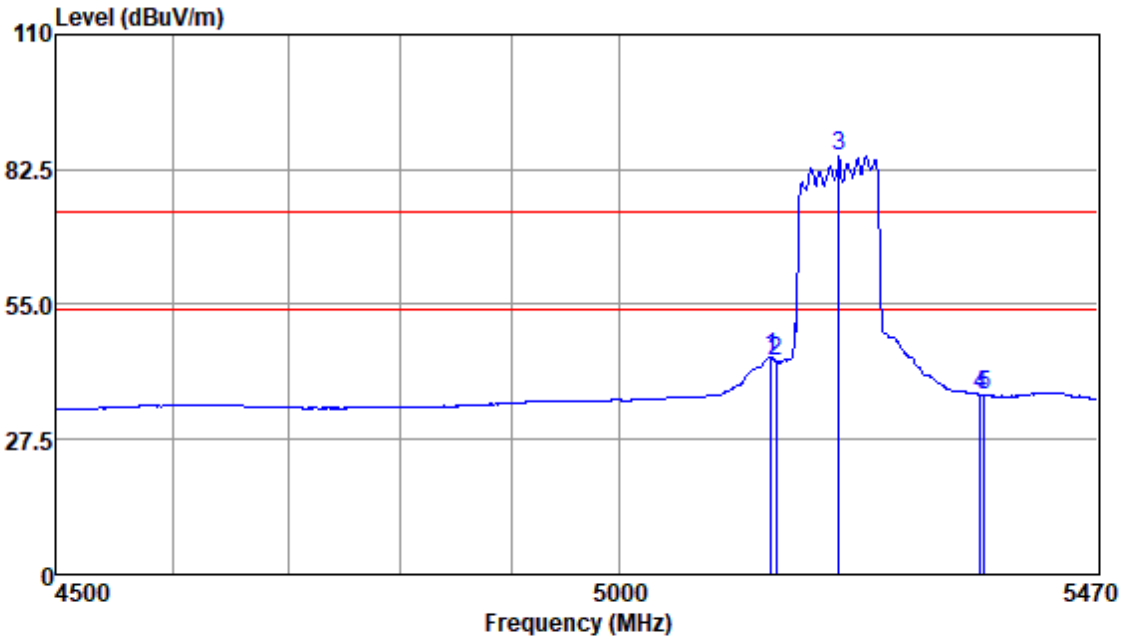


Antenna Polarity :HORIZONTAL

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
5130.75	55.33	31.59	9.06	38.82	57.16	74.00	-16.84	Peak
5150.00	54.55	31.61	9.06	38.81	56.41	74.00	-17.59	Peak
5237.00	94.00	31.74	8.68	38.77	95.65	74.00	21.65	Peak
5350.00	45.13	31.89	9.20	38.70	47.52	74.00	-26.48	Peak
5382.09	46.16	31.93	9.44	38.68	48.85	74.00	-25.15	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Mode:a; Polarization:Horizontal; Modulation:c; bandwidth:80MHz; Channel:Low

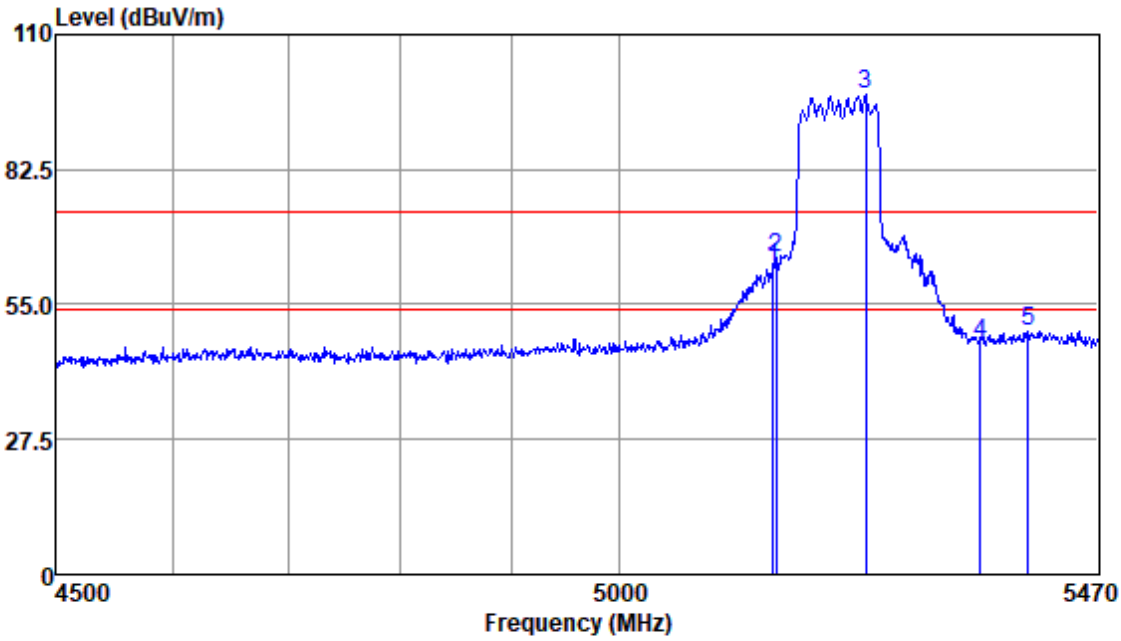


Antenna Polarity :HORIZONTAL

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
5144.79	42.36	31.61	9.06	38.81	44.22	54.00	-9.78	Average
5150.00	41.61	31.61	9.06	38.81	43.47	54.00	-10.53	Average
5210.49	83.80	31.70	8.66	38.78	85.38	54.00	31.38	Average
5350.00	34.31	31.89	9.20	38.70	36.70	54.00	-17.30	Average
5354.85	34.08	31.91	9.20	38.69	36.50	54.00	-17.50	Average

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Mode:a; Polarization:Vertical; Modulation:c; bandwidth:80MHz; Channel:Low

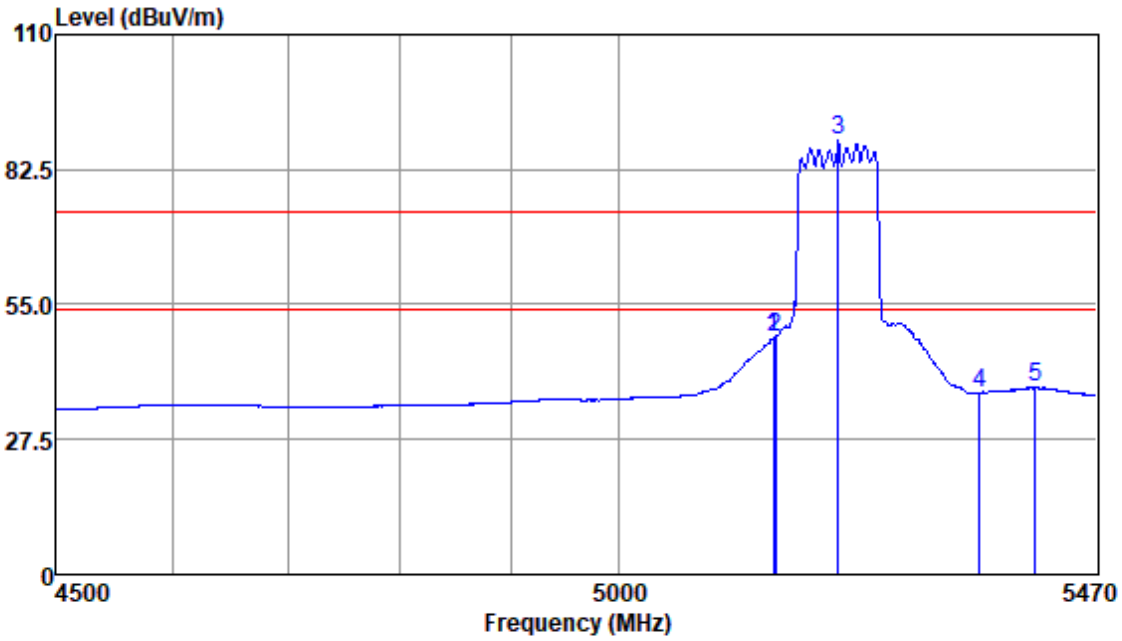


Antenna Polarity :VERTICAL

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
5146.80	60.52	31.61	9.06	38.81	62.38	74.00	-11.62	Peak
5150.00	62.82	31.61	9.06	38.81	64.68	74.00	-9.32	Peak
5237.00	96.00	31.74	8.68	38.77	97.65	74.00	23.65	Peak
5350.00	44.88	31.89	9.20	38.70	47.27	74.00	-26.73	Peak
5398.93	47.00	31.95	9.44	38.68	49.71	74.00	-24.29	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Mode:a; Polarization:Vertical; Modulation:c; bandwidth:80MHz; Channel:Low



Antenna Polarity :VERTICAL

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
5147.81	46.31	31.61	9.06	38.81	48.17	54.00	-5.83	Average
5150.00	46.57	31.61	9.06	38.81	48.43	54.00	-5.57	Average
5210.49	87.08	31.70	8.66	38.78	88.66	54.00	34.66	Average
5350.00	34.71	31.89	9.20	38.70	37.10	54.00	-16.90	Average
5406.31	35.33	31.97	9.44	38.67	38.07	54.00	-15.93	Average

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

7 Photographs

Refer to the < photos >.

- End of the Report -