5. Radiated Emission Measurement

Test Result: PASS

5.1 Limits for Radiated Emission

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a)

Section 15.209(a) Limit			
Frequency (MHz)	**Measurement Distance (m)**	**Field Strength (dBuV/m)**	**Field Strength (uV/m)**
0.009 - 0.490	300	67.6/kHz	2400/kHz
0.490 - 1.705	30	87.6/kHz	24000/kHz
1.705 – 30	30	29.5	30
30 – 88	3	40.0	100
88 – 216	3	43.5	150
216 – 960	3	46.0	200
960以上	3	54.0	500

5.2 Test Instruments

Test Site and Equipment	Manufacturer	Model No./Serial No.	Last Cal.
EMI Test Receiver (9kHz~2.75GHz)	R&S	ESCS 30/ 836858/020	July 25, 2003
Broadband Antenna (30MHz~3000MHz)	R&S	HL-562/ 360543/010	May 20, 2003
Broadband Antenna (30MHz~3000MHz)	R&S	HL-562/ 360543/007	February 17, 2004
* Double-Ridge Waveguide Horn Ant. (1GHz~18GHz)	R&S	HF-906/ 359287/002	March 18, 2004
*Double ridge HORN ANTENNA (18GHz~26GHz)	EMCO	3116/ 20533	December 8, 2003
Pre-Amplifier (10MHz~2GHz)	Mini Circuit	ZKL-2/ 001	April 17, 2004
Pre-Amplifier (10MHz~2GHz)	Mini Circuit	ZKL-2/ 002	April 17, 2004
* Pre-amplifier (100MHz~18GHz)	MITEQ	JS4-00101800-28-5A/ 742229	February 14, 2004
*Pre-amplifier (18GHz~26GHz)	MITEQ	JS4-18002600-30-5A / 741923	March 14, 2004
Spectrum (9kHz~7GHz)	R&S	FSP7/ 100106	May 16, 2003
* Spectrum (9kHz~40GHz)	R&S	FSP40/ 10031	May 16, 2003
RF Cable	N/A	N/A/ C0049	April 17, 2004
RF Cable	N/A	N/A/ C0050	April 17, 2004
* RF Cable	Huber + Suhner	104/ C0031	August 1, 2003
TR1 Semi - anechoic Chamber	ETS.LINDGREN	TR1/ 17627-B	April 11, 2004

Note:

1. "*" : These instruments are used only for the measurement of emission frequency above 1000MHz.
2. The calibration interval of the above test equipment is one year and the calibrations are traceable to NML/ROC.
3. NCR : No Calibration Required.
4. The calibration date of the semi-anechoic chamber listed above is the date of NSA measurement.

Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor k = 2. The assessed measurement uncertainty for horizontal / vertical polarization radiated emission are 4.62dB and 4.52dB respectively. The values are less than U_{cispr} in table 1 of CISPR 16-4.

5.3 Test Procedures

a. The EUT was set up per the test configuration figured in the next section of this chapter to simulate the typical usage per the user's manual.

b. If the EUT is tabletop equipment, it was placed on a wooden table with a height of 0.8 meters above the reference ground plane in the semi-anechoic chamber. If the EUT is floor-standing equipment, it was placed on a non-conducted support with a height of 0.1 meters above the reference ground plane in the semi-anechoic chamber.

c. The EUT was set 3m away from the interference receiving antenna.

d. Rapidly sweep the signal in the test frequency range by using the spectrum through the Maximum-peak detector.

e. Rotate the EUT from 0° to 360° and position the receiving antenna at heights from 1 to 4 meters above the reference ground plane continuously to determine at least six frequencies associated with higher emission levels and record them.

f. Then measure each frequency found from step e. by using the spectrum with rotating the EUT and positioning the receiving antenna height to determine the maximum level.

g. Finely tune the antenna and turntable around the recorded position of each frequency found from step f.

h. For measurement of frequency below 1000MHz, set the receiver detector to be Quasi-Peak per CISPR 16-1 to find out the maximum level occurred.

i. For measurement of frequency above 1000MHz, set the spectrum detector to be Peak or Average to find out the maximum level occurred, if any.

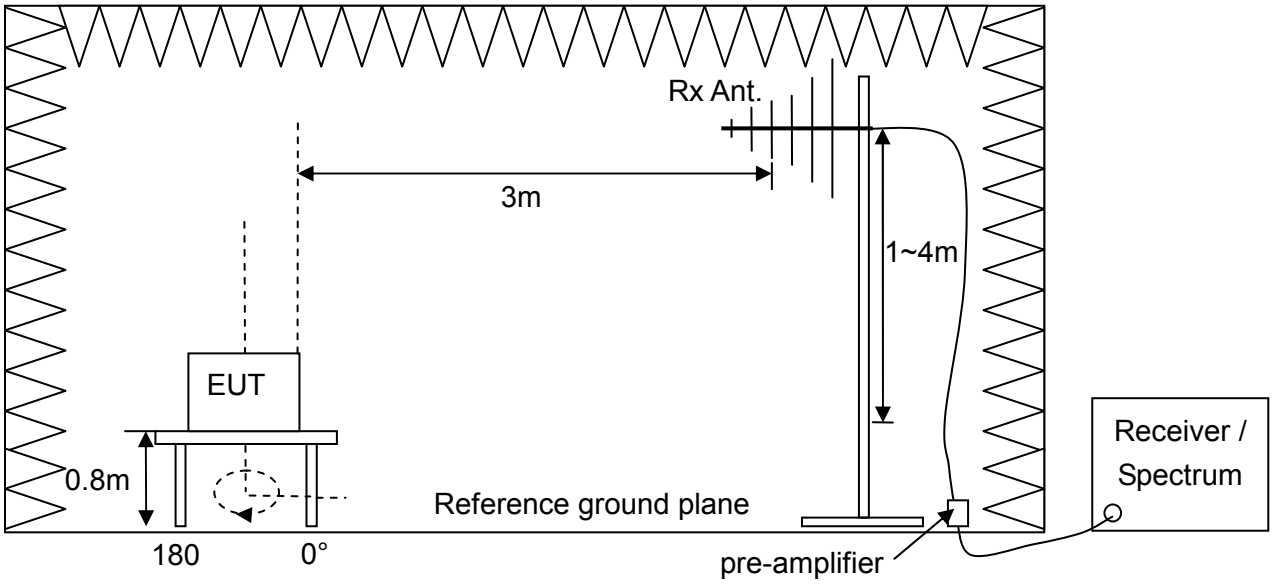
j. Record the frequency and polarization of the receiving antenna and compare the maximum level with the required limit.

k. Change the receiving antenna to another polarization to measure radiated emission by following step d. to j. again.

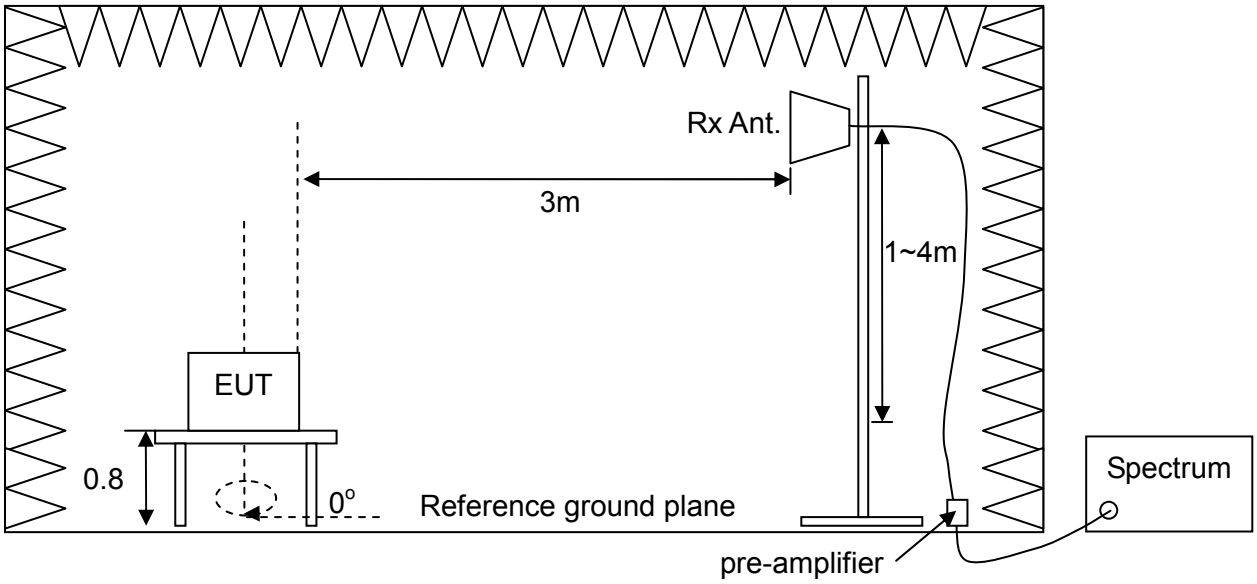
l. If the peak emission level measured from step e. is 10dB lower than the limit specified, then the emission values presented will be the peak value only. Otherwise, accurate Q.P. value will be measured and presented.

5.4 Test Configurations

Radiated Emission Measurement below 1000MHz



Radiated Emission Measurement above 1000MHz (if any)



5.5 Photographs of the Test Configurations

Please refer to the Attachment 1 of the present report.

5.6 Test Results

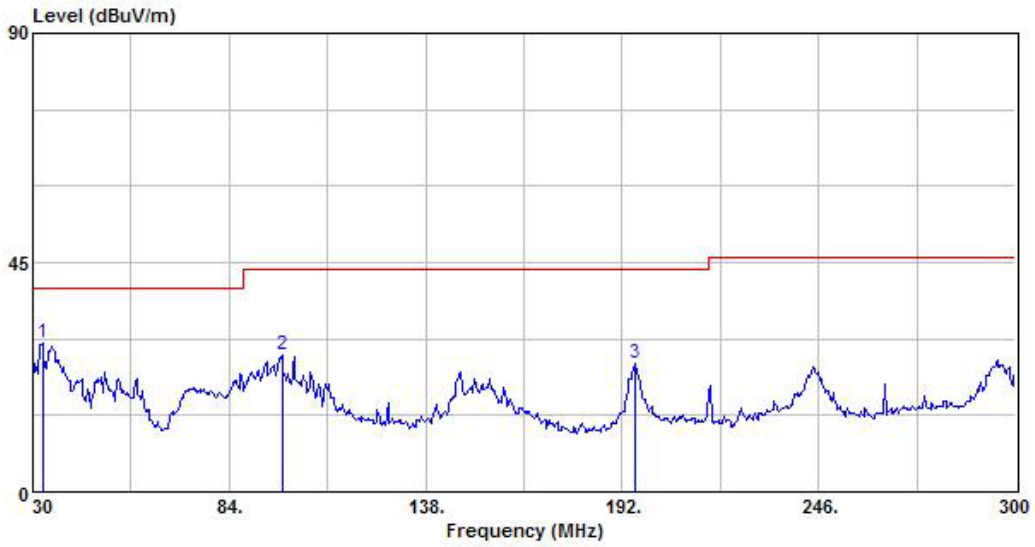
Radiated Emission Measurement below 1000MHz

Test Mode	:	**Channel 1, Transmitter with ANT-OMNI-8**			
Tester	:	Alex	**Temperature**	:	19°C
Humidity	:	53%RH	**Frequency Range**	:	30MHz~300MHz
IF Bandwidth	:	120kHz	**Polarization**	:	**Horizontal**

	Freq. (MHz)	Reading Data (dBuV)	Correction Factor (dB1/m)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	32.70	40.27	-11.16	29.11	40.00	10.89
2	98.58	46.42	-19.52	26.90	43.50	16.60
3	195.78	45.52	-20.26	25.26	43.50	18.24

Note：

1. Correction Factor (dB1/m) = Cable Loss + Antenna Factor – Gain of Preamplifier
2. Emission Level (dBuV/m) = Reading Data + Correction Factor
3. Margin (dB) = Limit – Emission Level

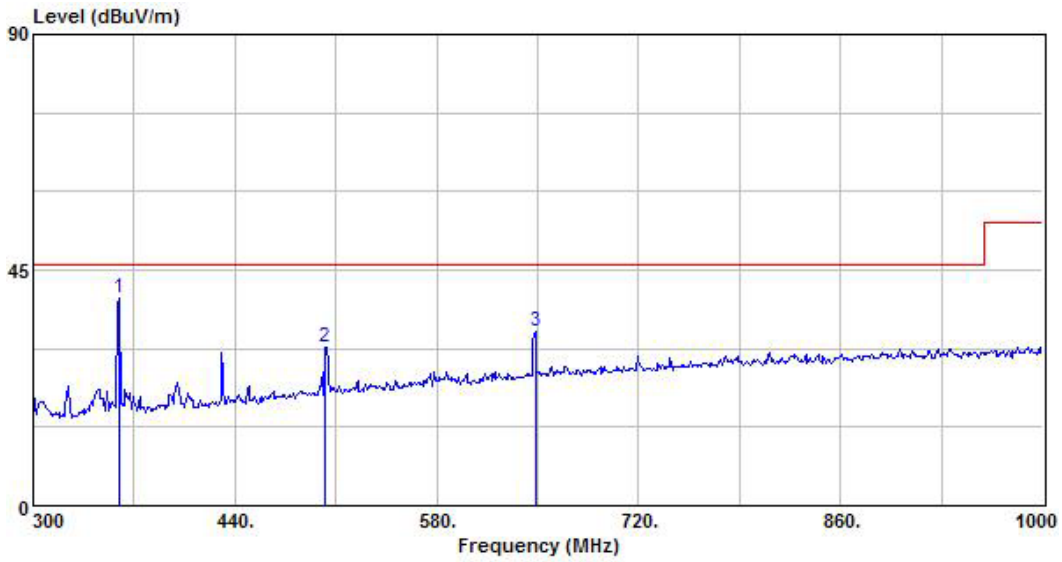


Test Mode	:	**Channel 1, Transmitter with ANT-OMNI-8**			
Tester	:	Alex	**Temperature**	:	19°C
Humidity	:	53%RH	**Frequency Range**	:	300MHz~1GHz
IF Bandwidth	:	120kHz	**Polarization**	:	**Horizontal**

	Frequency (MHz)	Reading Data (dBuV)	Correction Factor (dB1/m)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	360.20	54.14	-14.46	39.68	46.00	6.32
2	503.00	40.83	-10.61	30.22	46.00	15.78
3	648.60	40.73	-7.36	33.37	46.00	12.63

Note：

1. Correction Factor (dB1/m) = Cable Loss + Antenna Factor – Gain of Preamplifier
2. Emission Level (dBuV/m) = Reading Data + Correction Factor
3. Margin (dB) = Limit – Emission Level

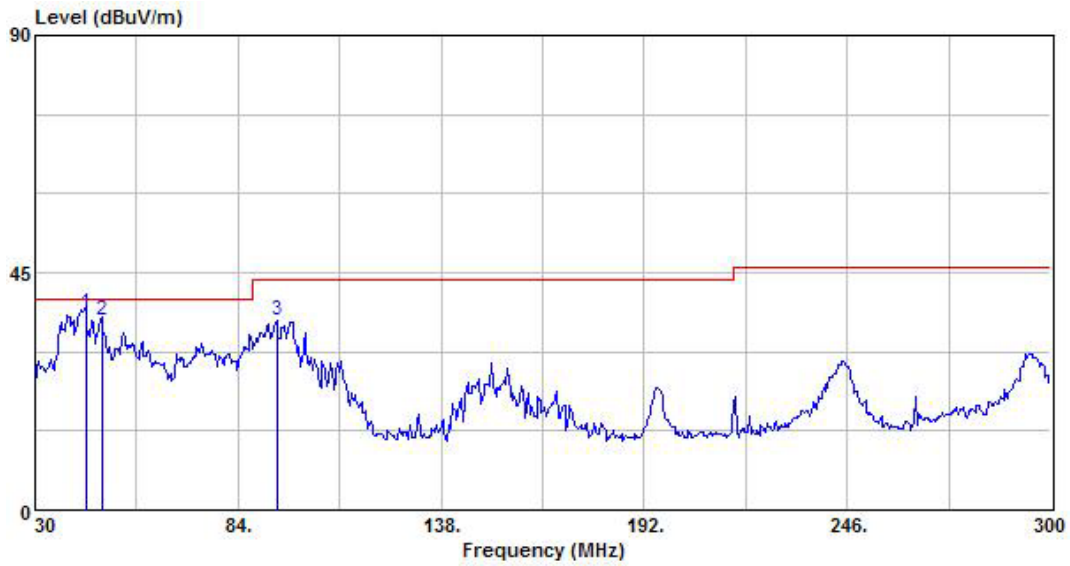


Test Mode	:	**Channel 1, Transmitter with ANT-OMNI-8**			
Tester	:	Alex	**Temperature**	:	19°C
Humidity	:	53%RH	**Frequency Range**	:	30MHz~300MHz
IF Bandwidth	:	120kHz	**Polarization**	:	**Vertical**

	Freq. (MHz)	Reading Data (dBuV)	Correction Factor (dB1/m)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	43.80	54.60	-17.27	37.33	40.00	2.67
2	47.80	55.78	-19.82	35.96	40.00	4.04
3	94.26	55.72	-19.84	35.88	43.50	7.62

Note：

1. Correction Factor (dB1/m) = Cable Loss + Antenna Factor – Gain of Preamplifier
2. Emission Level (dBuV/m) = Reading Data + Correction Factor
3. Margin (dB) = Limit – Emission Level

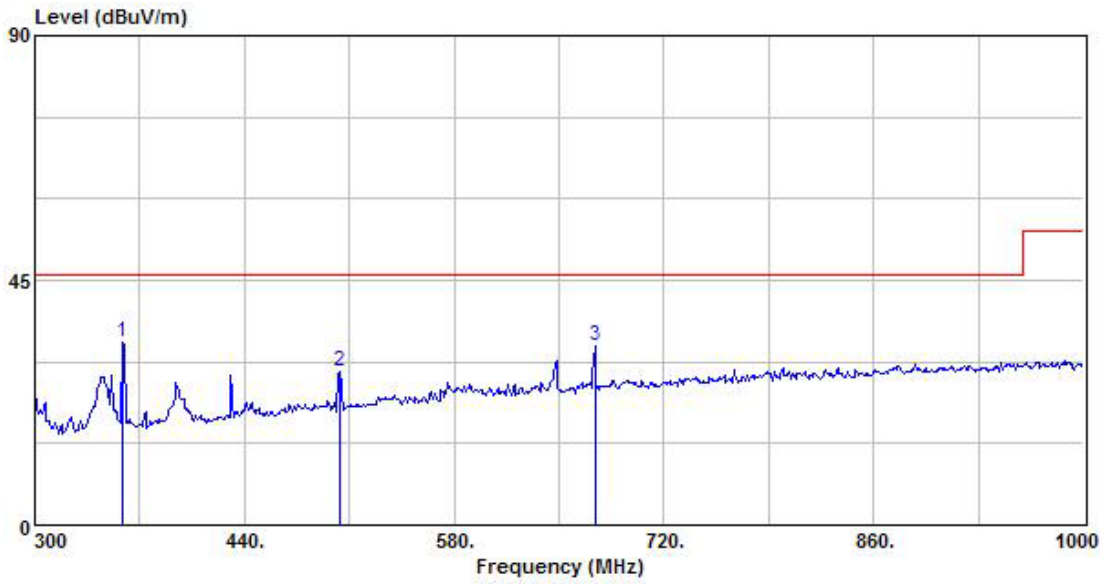


Test Mode	:	**Channel 1, Transmitter with ANT-OMNI-8**			
Tester	:	Alex	**Temperature**	:	19°C
Humidity	:	53%RH	**Frequency Range**	:	300MHz~1GHz
IF Bandwidth	:	120kHz	**Polarization**	:	**Vertical**

	Frequency (MHz)	Reading Data (dBuV)	Correction Factor (dB1/m)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	358.10	48.05	-14.53	33.52	46.00	12.48
2	503.70	38.85	-10.60	28.25	46.00	17.75
3	673.80	39.82	-6.96	32.86	46.00	13.14

Note：

1. Correction Factor (dB1/m) = Cable Loss + Antenna Factor – Gain of Preamplifier
2. Emission Level (dBuV/m) = Reading Data + Correction Factor
3. Margin (dB) = Limit – Emission Level

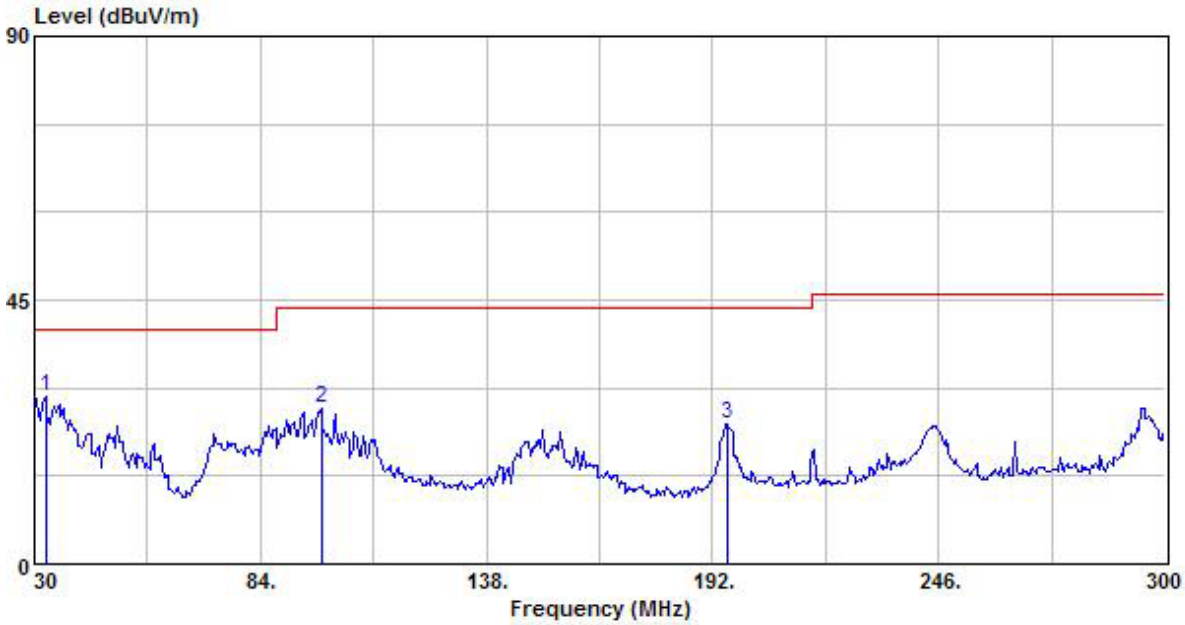


Test Mode	:	**Channel 6, Transmitter with ANT-OMNI-8**			
Tester	:	Alex	**Temperature**	:	19°C
Humidity	:	53%RH	**Frequency Range**	:	30MHz~300MHz
IF Bandwidth	:	120kHz	**Polarization**	:	**Horizontal**

	Freq. (MHz)	Reading Data (dBuV)	Correction Factor (dB1/m)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	32.70	39.79	-11.16	28.63	40.00	11.37
2	98.58	45.93	-19.52	26.41	43.50	17.09
3	195.78	44.17	-20.26	23.91	43.50	19.59

Note：

1. Correction Factor (dB1/m) = Cable Loss + Antenna Factor – Gain of Preamplifier
2. Emission Level (dBuV/m) = Reading Data + Correction Factor
3. Margin (dB) = Limit – Emission Level

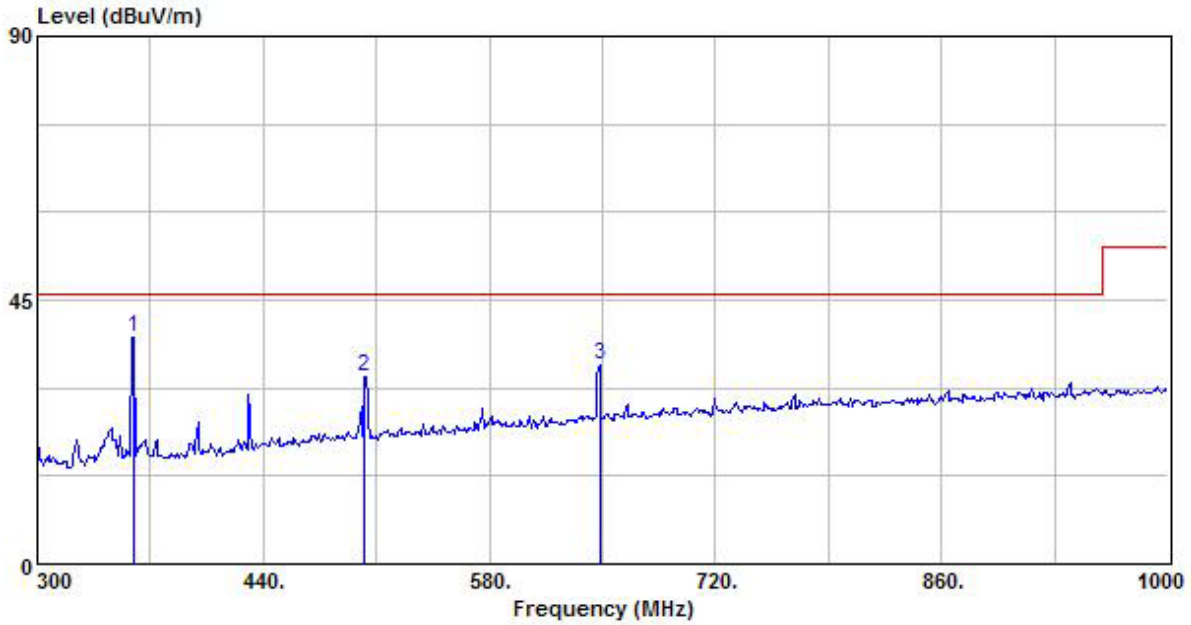


Test Mode	:	**Channel 6, Transmitter with ANT-OMNI-8**			
Tester	:	Alex	**Temperature**	:	19°C
Humidity	:	53%RH	**Frequency Range**	:	300MHz~1GHz
IF Bandwidth	:	120kHz	**Polarization**	:	**Horizontal**

	Frequency (MHz)	Reading Data (dBuV)	Correction Factor (dB1/m)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	360.20	53.17	-14.46	38.71	46.00	7.29
2	503.00	42.66	-10.61	32.05	46.00	13.95
3	648.60	41.35	-7.36	33.99	46.00	12.01

Note：

1. Correction Factor (dB1/m) = Cable Loss + Antenna Factor – Gain of Preamplifier
2. Emission Level (dBuV/m) = Reading Data + Correction Factor
3. Margin (dB) = Limit – Emission Level

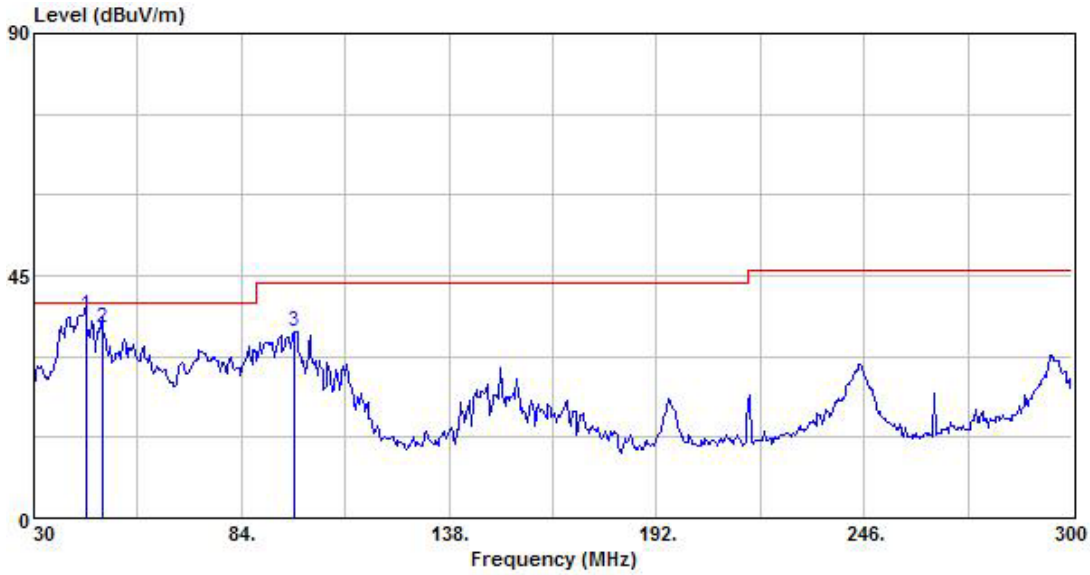


Test Mode	:	**Channel 6, Transmitter with ANT-OMNI-8**			
Tester	:	Alex	**Temperature**	:	19°C
Humidity	:	53%RH	**Frequency Range**	:	30MHz~300MHz
IF Bandwidth	:	120kHz	**Polarization**	:	**Vertical**

	Freq. (MHz)	Reading Data (dBuV)	Correction Factor (dB1/m)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	43.81	54.77	-17.27	37.50	40.00	2.50
2	47.80	55.18	-19.81	35.37	40.00	4.63
3	97.77	54.16	-19.58	34.58	43.50	8.92

Note：

1. Correction Factor (dB1/m) = Cable Loss + Antenna Factor – Gain of Preamplifier
2. Emission Level (dBuV/m) = Reading Data + Correction Factor
3. Margin (dB) = Limit – Emission Level

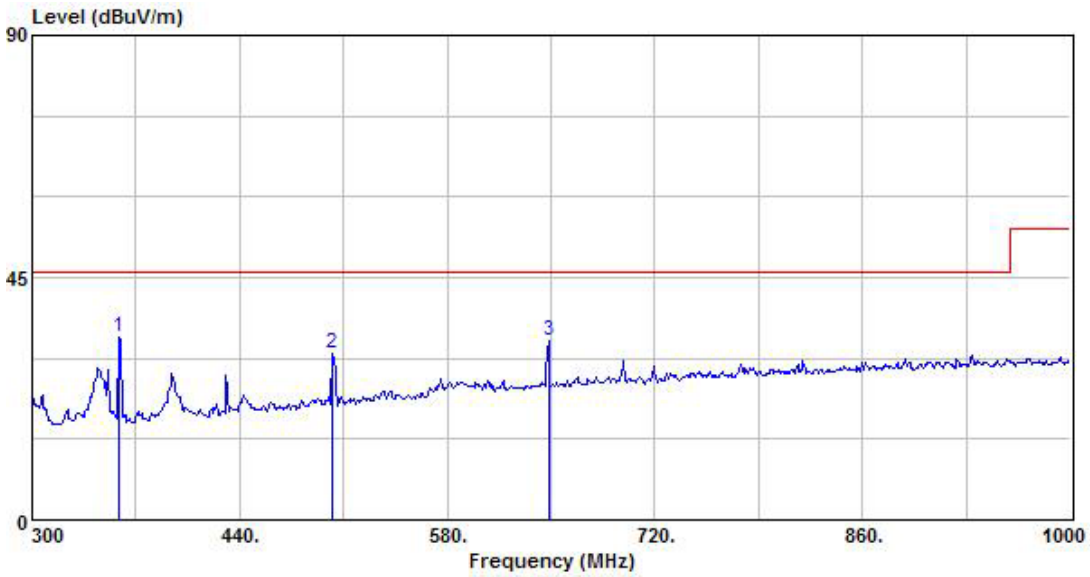


Test Mode	:	**Channel 6, Transmitter with ANT-OMNI-8**			
Tester	:	Alex	**Temperature**	:	19°C
Humidity	:	53%RH	**Frequency Range**	:	300MHz~1GHz
IF Bandwidth	:	120kHz	**Polarization**	:	**Vertical**

	Frequency (MHz)	Reading Data (dBuV)	Correction Factor (dB1/m)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	358.10	48.48	-14.53	33.95	46.00	12.05
2	503.00	41.60	-10.61	30.99	46.00	15.01
3	648.60	40.54	-7.36	33.18	46.00	12.82

Note：

1. Correction Factor (dB1/m) = Cable Loss + Antenna Factor – Gain of Preamplifier
2. Emission Level (dBuV/m) = Reading Data + Correction Factor
3. Margin (dB) = Limit – Emission Level

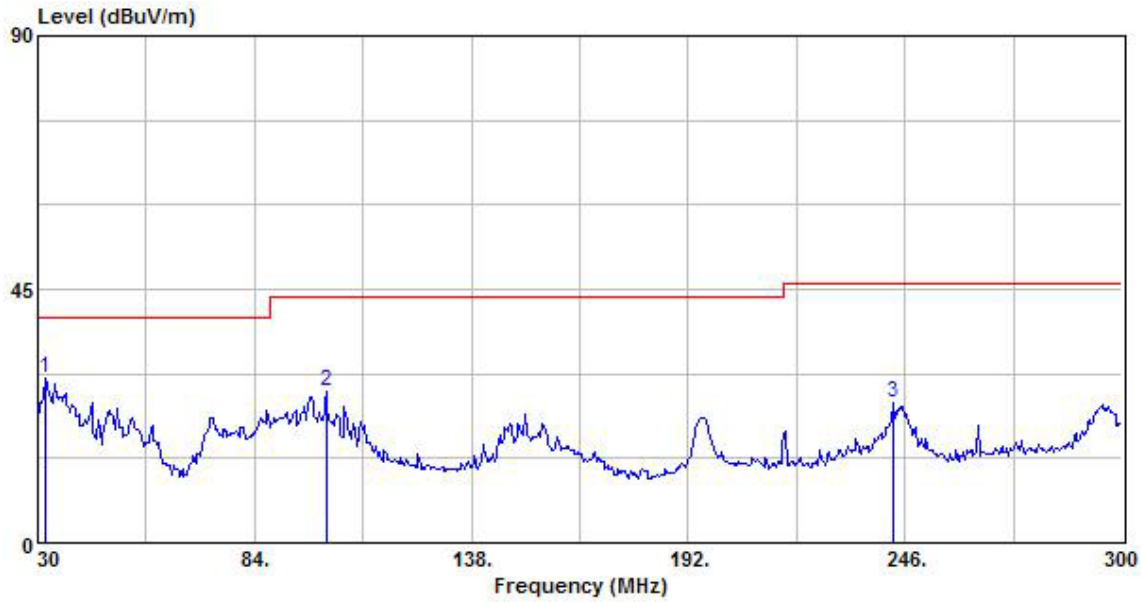


Test Mode	:	**Channel 11, Transmitter with ANT-OMNI-8**			
Tester	:	Alex	**Temperature**	:	19°C
Humidity	:	53%RH	**Frequency Range**	:	30MHz~300MHz
IF Bandwidth	:	120kHz	**Polarization**	:	**Horizontal**

	Freq. (MHz)	Reading Data (dBuV)	Correction Factor (dB1/m)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	31.89	40.41	-11.16	29.25	40.00	10.75
2	101.82	46.06	-19.30	26.76	43.50	16.74
3	243.30	43.52	-18.68	24.84	46.00	21.16

Note：

1. Correction Factor (dB1/m) = Cable Loss + Antenna Factor – Gain of Preamplifier
2. Emission Level (dBuV/m) = Reading Data + Correction Factor
3. Margin (dB) = Limit – Emission Level

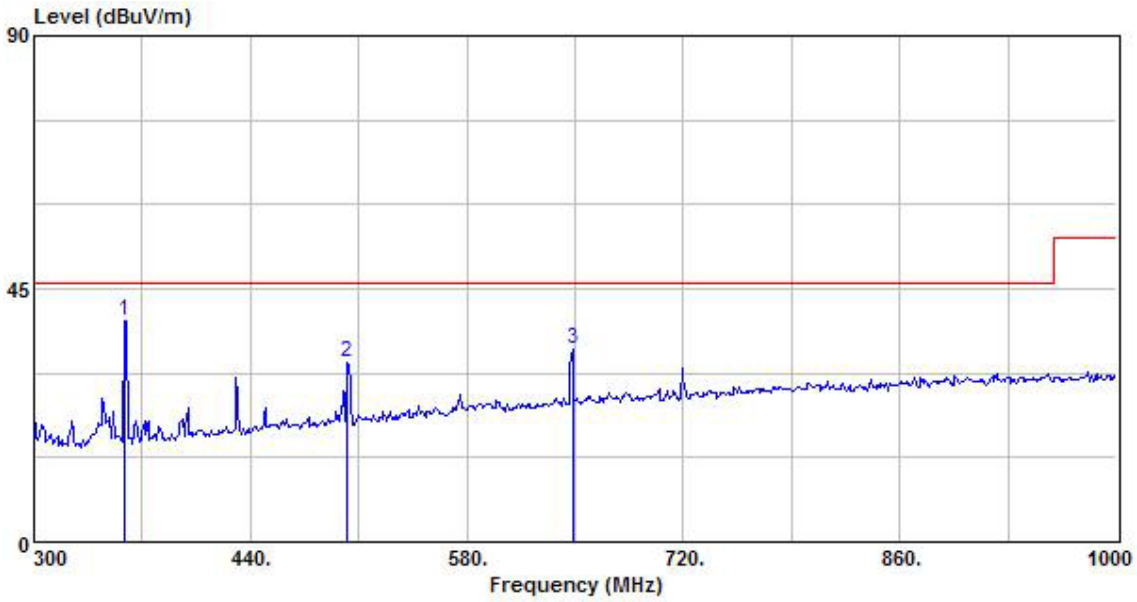


Test Mode	:	**Channel 11, Transmitter with ANT-OMNI-8**			
Tester	:	Alex	**Temperature**	:	19°C
Humidity	:	53%RH	**Frequency Range**	:	300MHz~1GHz
IF Bandwidth	:	120kHz	**Polarization**	:	**Horizontal**

	Frequency (MHz)	Reading Data (dBuV)	Correction Factor (dB1/m)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	358.10	53.97	-14.53	39.44	46.00	6.56
2	503.00	42.60	-10.61	31.99	46.00	14.01
3	648.60	41.59	-7.36	34.23	46.00	11.77

Note：

1. Correction Factor (dB1/m) = Cable Loss + Antenna Factor – Gain of Preamplifier
2. Emission Level (dBuV/m) = Reading Data + Correction Factor
3. Margin (dB) = Limit – Emission Level

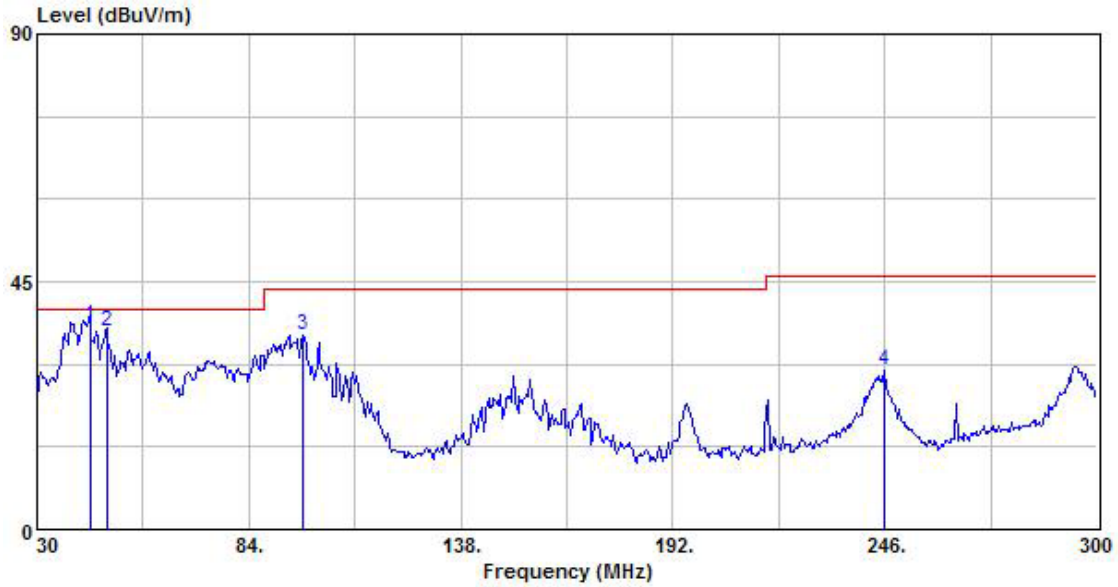


Test Mode	:	**Channel 11, Transmitter with ANT-OMNI-8**			
Tester	:	Alex	**Temperature**	:	19°C
Humidity	:	53%RH	**Frequency Range**	:	30MHz~300MHz
IF Bandwidth	:	120kHz	**Polarization**	:	**Vertical**

	Freq. (MHz)	Reading Data (dBuV)	Correction Factor (dB1/m)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	43.80	54.36	-17.27	37.09	40.00	2.91
2	47.80	55.61	-19.82	35.79	40.00	4.21
3	97.77	54.94	-19.58	35.36	43.50	8.14
4	245.73	47.65	-18.62	29.03	46.00	16.97

Note：

1. Correction Factor (dB1/m) = Cable Loss + Antenna Factor – Gain of Preamplifier
2. Emission Level (dBuV/m) = Reading Data + Correction Factor
3. Margin (dB) = Limit – Emission Level

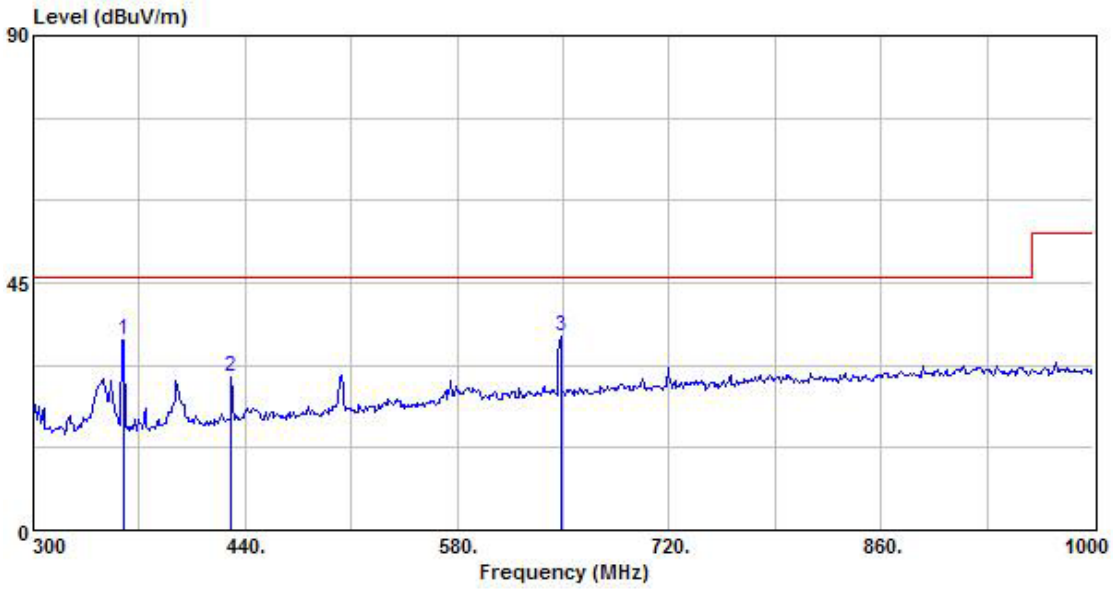


Test Mode	:	**Channel 11, Transmitter with ANT-OMNI-8**			
Tester	:	Alex	**Temperature**	:	19°C
Humidity	:	53%RH	**Frequency Range**	:	300MHz~1GHz
IF Bandwidth	:	120kHz	**Polarization**	:	**Vertical**

	Frequency (MHz)	Reading Data (dBuV)	Correction Factor (dB1/m)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	360.20	49.12	-14.46	34.66	46.00	11.34
2	430.90	40.22	-12.45	27.77	46.00	18.23
3	648.60	42.51	-7.36	35.15	46.00	10.85

Note：

1. Correction Factor (dB1/m) = Cable Loss + Antenna Factor – Gain of Preamplifier
2. Emission Level (dBuV/m) = Reading Data + Correction Factor
3. Margin (dB) = Limit – Emission Level

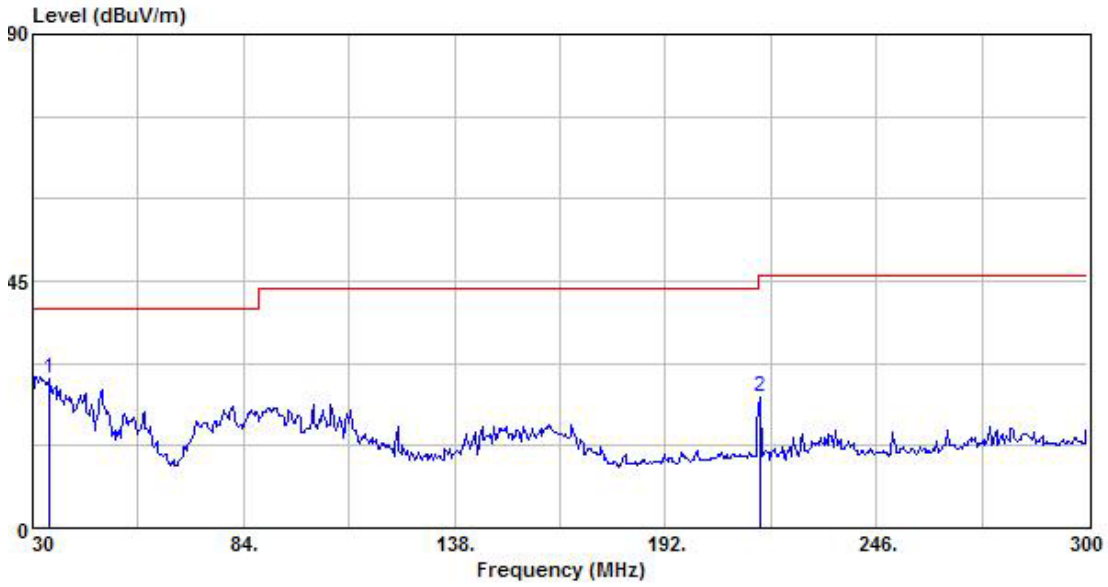


Test Mode	:	**Channel 1, Transmitter with ANT-OMNI-12**			
Tester	:	Alex	**Temperature**	:	19°C
Humidity	:	53%RH	**Frequency Range**	:	30MHz~300MHz
IF Bandwidth	:	120kHz	**Polarization**	:	**Horizontal**

	Freq. (MHz)	Reading Data (dBuV)	Correction Factor (dB1/m)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	34.05	38.51	-11.17	27.34	40.00	12.66
2	216.30	43.42	-19.68	23.74	46.00	22.26

Note：

1. Correction Factor (dB1/m) = Cable Loss + Antenna Factor – Gain of Preamplifier
2. Emission Level (dBuV/m) = Reading Data + Correction Factor
3. Margin (dB) = Limit – Emission Level

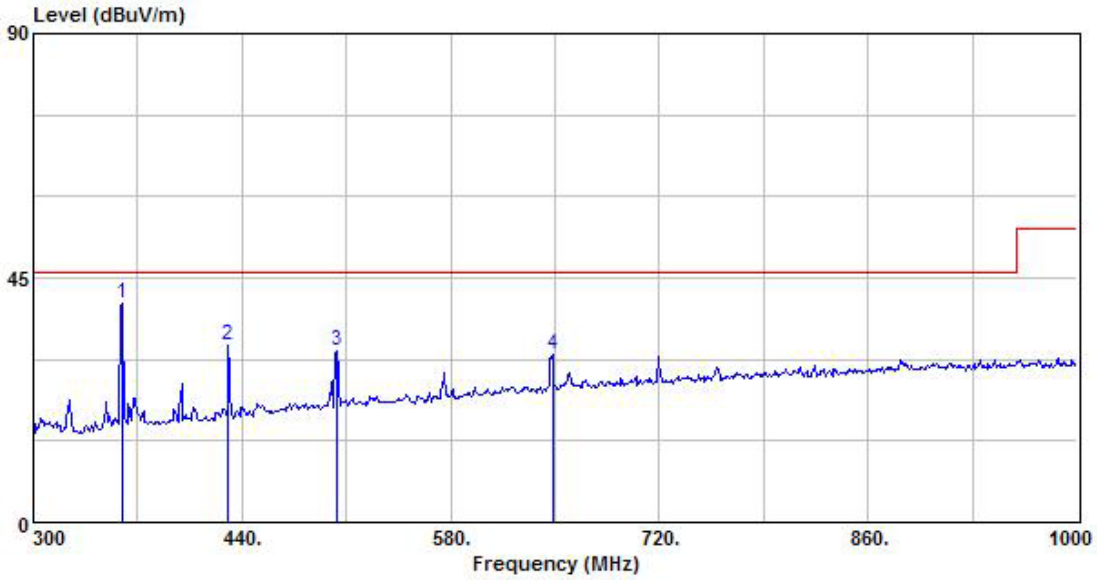


Test Mode	:	**Channel 1, Transmitter with ANT-OMNI-12**			
Tester	:	Alex	**Temperature**	:	19°C
Humidity	:	53%RH	**Frequency Range**	:	300MHz~1GHz
IF Bandwidth	:	120kHz	**Polarization**	:	**Horizontal**

	Frequency (MHz)	Reading Data (dBuV)	Correction Factor (dB1/m)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	360.20	54.65	-14.46	40.19	46.00	5.81
2	430.90	44.87	-12.45	32.42	46.00	13.58
3	503.70	42.18	-10.60	31.58	46.00	14.42
4	648.60	38.35	-7.36	30.99	46.00	15.01

Note：

1. Correction Factor (dB1/m) = Cable Loss + Antenna Factor – Gain of Preamplifier
2. Emission Level (dBuV/m) = Reading Data + Correction Factor
3. Margin (dB) = Limit – Emission Level

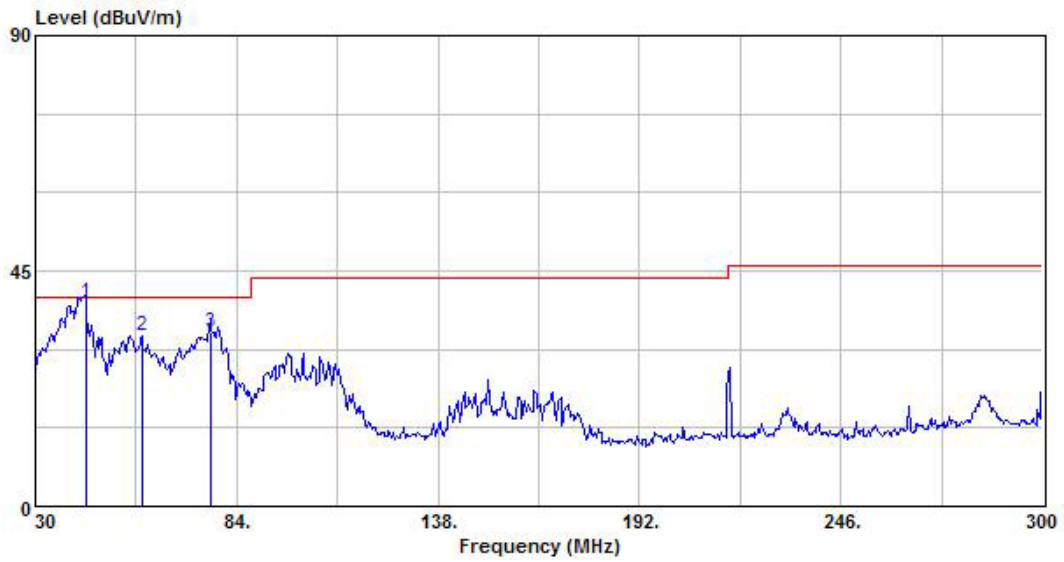


Test Mode	:	**Channel 1, Transmitter with ANT-OMNI-12**			
Tester	:	Alex	**Temperature**	:	19°C
Humidity	:	53%RH	**Frequency Range**	:	30MHz~300MHz
IF Bandwidth	:	120kHz	**Polarization**	:	**Vertical**

	Freq. (MHz)	Reading Data (dBuV)	Correction Factor (dB1/m)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	43.81	56.11	-17.27	38.84	40.00	1.16
2	58.62	56.14	-23.57	32.57	40.00	7.43
3	77.21	54.62	-21.24	33.38	40.00	6.62

Note：

1. Correction Factor (dB1/m) = Cable Loss + Antenna Factor – Gain of Preamplifier
2. Emission Level (dBuV/m) = Reading Data + Correction Factor
3. Margin (dB) = Limit – Emission Level

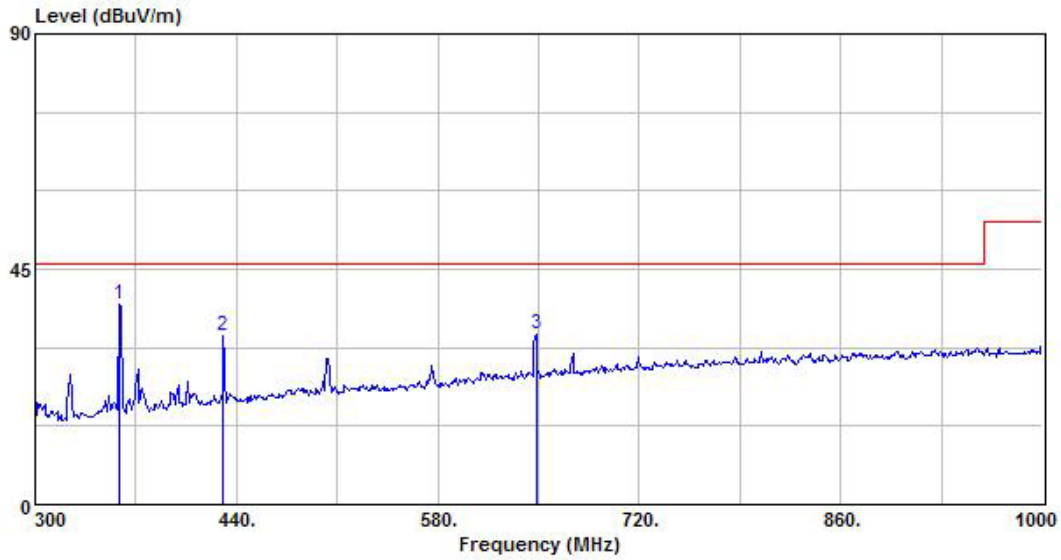


Test Mode	:	**Channel 1, Transmitter with ANT-OMNI-12**			
Tester	:	Alex	**Temperature**	:	19°C
Humidity	:	53%RH	**Frequency Range**	:	300MHz~1GHz
IF Bandwidth	:	120kHz	**Polarization**	:	**Vertical**

	Frequency (MHz)	Reading Data (dBuV)	Correction Factor (dB1/m)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	358.10	52.65	-14.53	38.12	46.00	7.88
2	430.90	44.60	-12.45	32.15	46.00	13.85
3	648.60	40.08	-7.36	32.72	46.00	13.28

Note：

1. Correction Factor (dB1/m) = Cable Loss + Antenna Factor – Gain of Preamplifier
2. Emission Level (dBuV/m) = Reading Data + Correction Factor
3. Margin (dB) = Limit – Emission Level

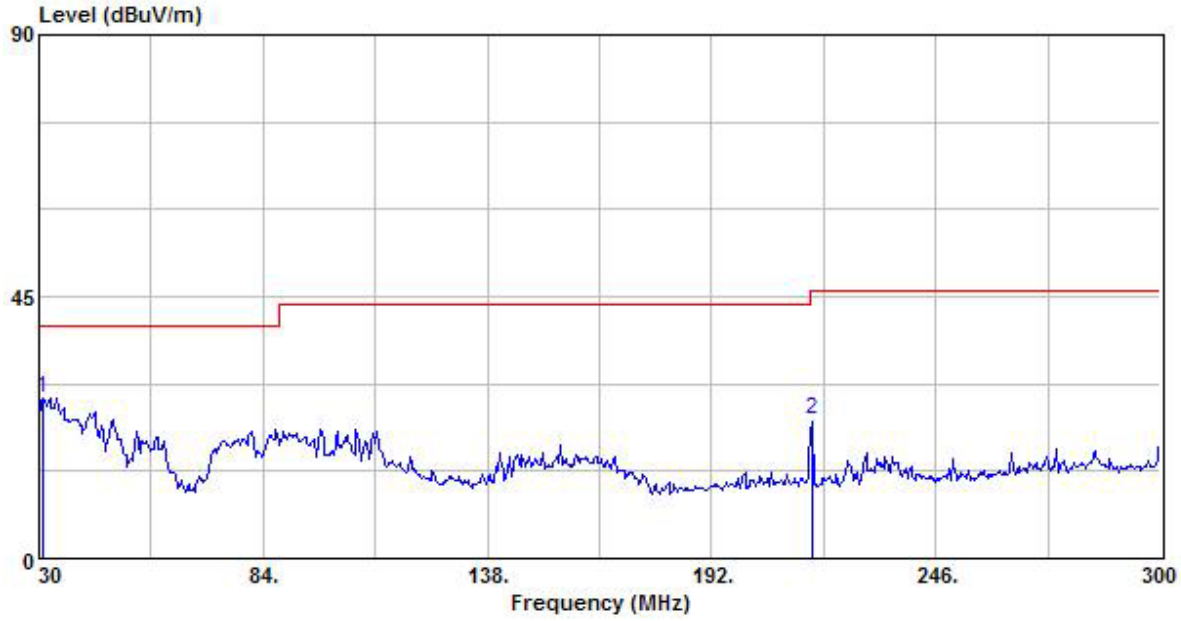


Test Mode	:	**Channel 6, Transmitter with ANT-OMNI-12**			
Tester	:	Alex	**Temperature**	:	19°C
Humidity	:	53%RH	**Frequency Range**	:	30MHz~300MHz
IF Bandwidth	:	120kHz	**Polarization**	:	**Horizontal**

	Freq. (MHz)	Reading Data (dBuV)	Correction Factor (dB1/m)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	30.81	38.82	-11.15	27.67	40.00	12.33
2	216.30	43.36	-19.68	23.68	46.00	22.32

Note：

1. Correction Factor (dB1/m) = Cable Loss + Antenna Factor – Gain of Preamplifier
2. Emission Level (dBuV/m) = Reading Data + Correction Factor
3. Margin (dB) = Limit – Emission Level

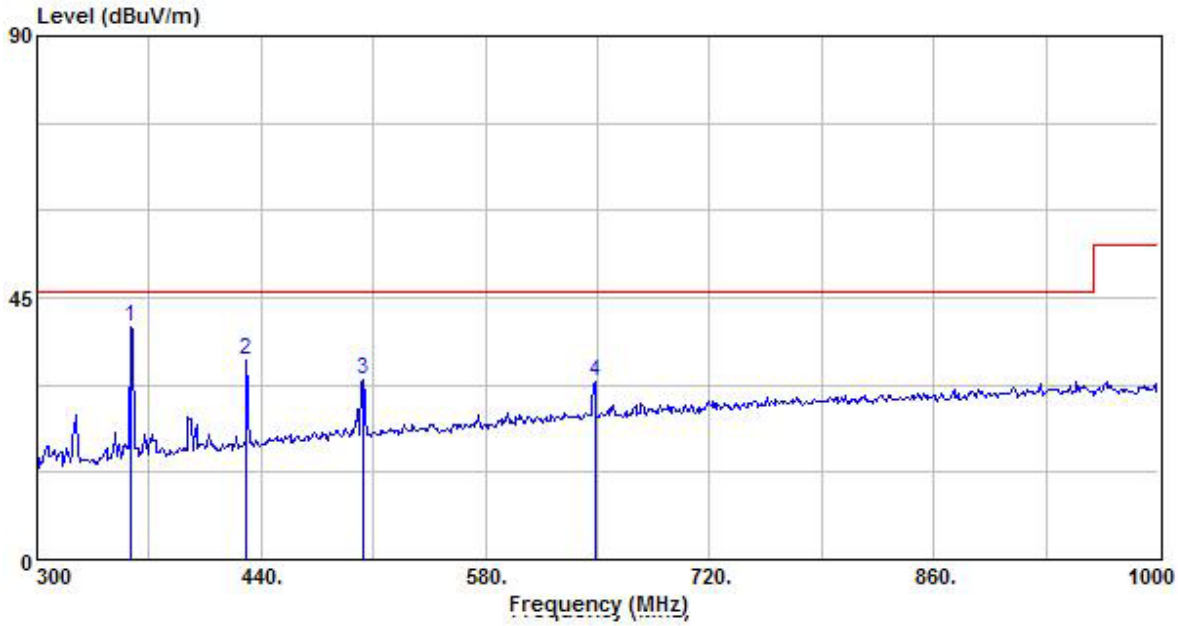


Test Mode	:	**Channel 6, Transmitter with ANT-OMNI-12**			
Tester	:	Alex	**Temperature**	:	19°C
Humidity	:	53%RH	**Frequency Range**	:	300MHz~1GHz
IF Bandwidth	:	120kHz	**Polarization**	:	**Horizontal**

	Frequency (MHz)	Reading Data (dBuV)	Correction Factor (dB1/m)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	358.10	54.04	-14.53	39.51	46.00	6.49
2	430.90	42.16	-12.45	29.71	46.00	16.29
3	503.70	42.33	-10.60	31.73	46.00	14.27
4	648.60	41.96	-7.36	34.60	46.00	11.40

Note：

1. Correction Factor (dB1/m) = Cable Loss + Antenna Factor – Gain of Preamplifier
2. Emission Level (dBuV/m) = Reading Data + Correction Factor
3. Margin (dB) = Limit – Emission Level

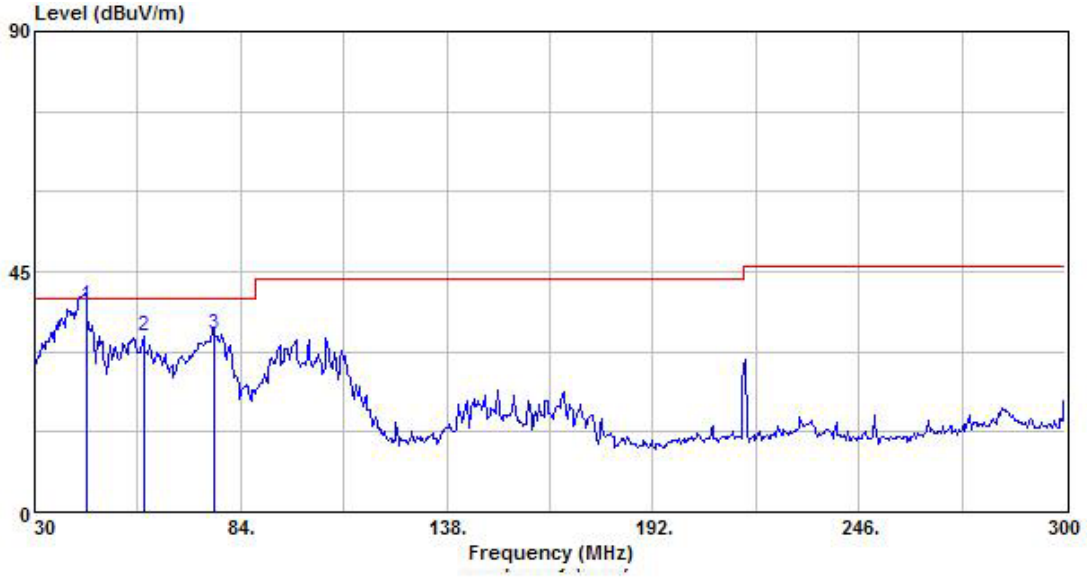


Test Mode	:	**Channel 6, Transmitter with ANT-OMNI-12**			
Tester	:	Alex	**Temperature**	:	19°C
Humidity	:	53%RH	**Frequency Range**	:	30MHz~300MHz
IF Bandwidth	:	120kHz	**Polarization**	:	**Vertical**

	Freq. (MHz)	Reading Data (dBuV)	Correction Factor (dB1/m)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	43.82	56.05	-17.28	38.77	40.00	1.23
2	58.62	56.39	-23.57	32.82	40.00	7.18
3	77.21	54.49	-21.24	33.25	40.00	6.75

Note：

1. Correction Factor (dB1/m) = Cable Loss + Antenna Factor – Gain of Preamplifier
2. Emission Level (dBuV/m) = Reading Data + Correction Factor
3. Margin (dB) = Limit – Emission Level

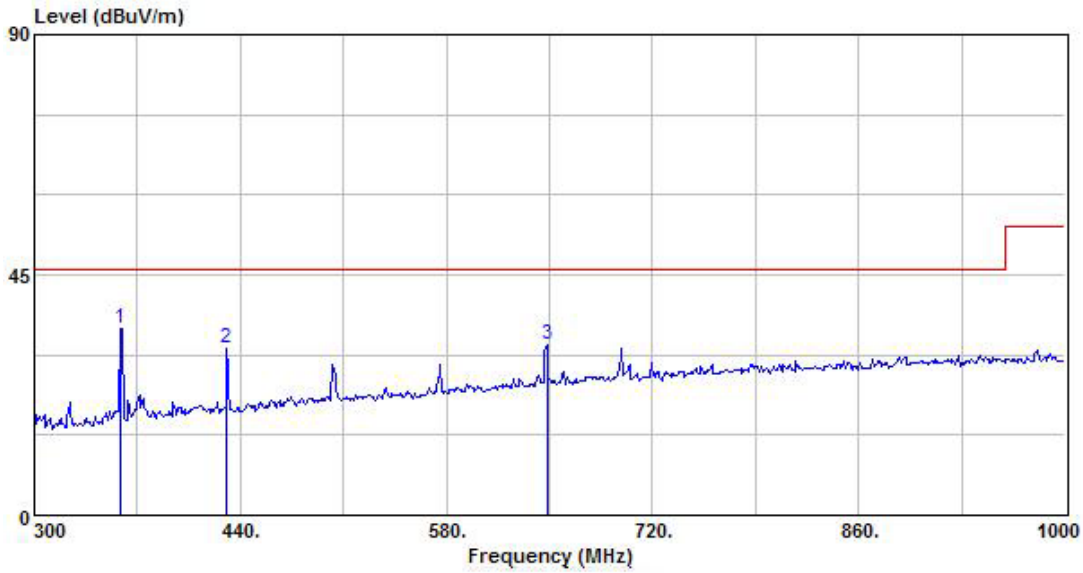


Test Mode	:	**Channel 6, Transmitter with ANT-OMNI-12**			
Tester	:	Alex	**Temperature**	:	19°C
Humidity	:	53%RH	**Frequency Range**	:	300MHz~1GHz
IF Bandwidth	:	120kHz	**Polarization**	:	**Vertical**

	Frequency (MHz)	Reading Data (dBuV)	Correction Factor (dB1/m)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	358.10	49.57	-14.53	35.04	46.00	10.96
2	430.90	43.82	-12.45	31.37	46.00	14.63
3	648.60	39.21	-7.36	31.85	46.00	14.15

Note：

1. Correction Factor (dB1/m) = Cable Loss + Antenna Factor – Gain of Preamplifier
2. Emission Level (dBuV/m) = Reading Data + Correction Factor
3. Margin (dB) = Limit – Emission Level

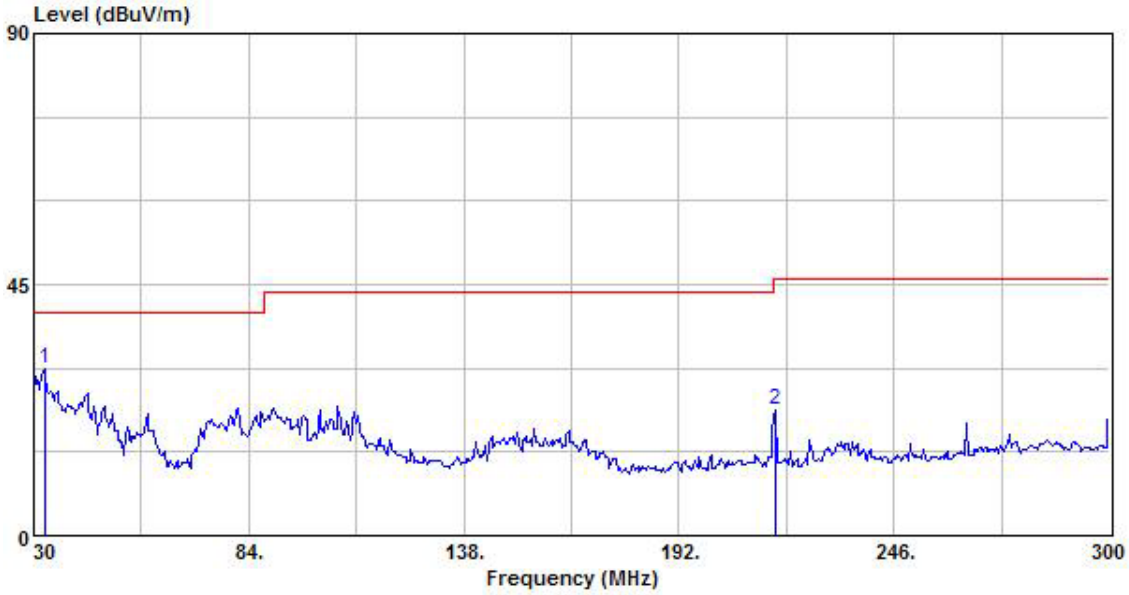


Test Mode	:	**Channel 11, Transmitter with ANT-OMNI-12**			
Tester	:	Alex	**Temperature**	:	19°C
Humidity	:	53%RH	**Frequency Range**	:	30MHz~300MHz
IF Bandwidth	:	120kHz	**Polarization**	:	**Horizontal**

	Freq. (MHz)	Reading Data (dBuV)	Correction Factor (dB1/m)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	32.70	41.16	-11.16	30.00	40.00	10.00
2	216.30	42.06	-19.68	22.38	46.00	23.62

Note：

1. Correction Factor (dB1/m) = Cable Loss + Antenna Factor – Gain of Preamplifier
2. Emission Level (dBuV/m) = Reading Data + Correction Factor
3. Margin (dB) = Limit – Emission Level

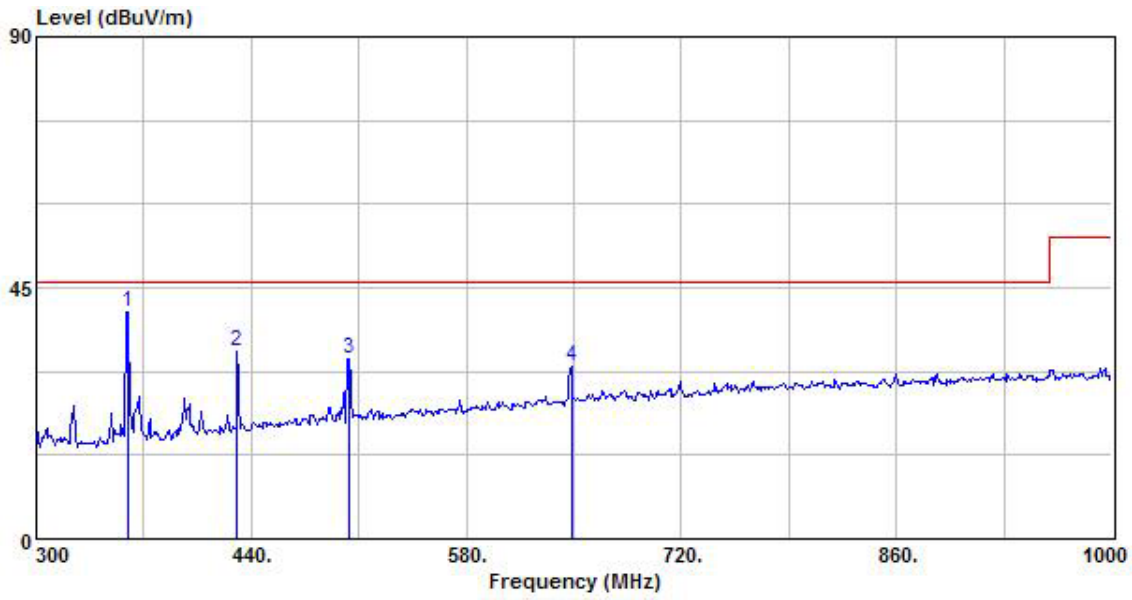


Test Mode	:	**Channel 11, Transmitter with ANT-OMNI-12**			
Tester	:	Alex	**Temperature**	:	19°C
Humidity	:	53%RH	**Frequency Range**	:	300MHz~1GHz
IF Bandwidth	:	120kHz	**Polarization**	:	**Horizontal**

	Frequency (MHz)	Reading Data (dBuV)	Correction Factor (dB1/m)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	360.20	55.14	-14.46	40.68	46.00	5.32
2	430.90	46.19	-12.45	33.74	46.00	12.26
3	503.70	42.90	-10.60	32.30	46.00	13.70
4	648.60	38.16	-7.36	30.80	46.00	15.20

Note：

1. Correction Factor (dB1/m) = Cable Loss + Antenna Factor – Gain of Preamplifier
2. Emission Level (dBuV/m) = Reading Data + Correction Factor
3. Margin (dB) = Limit – Emission Level

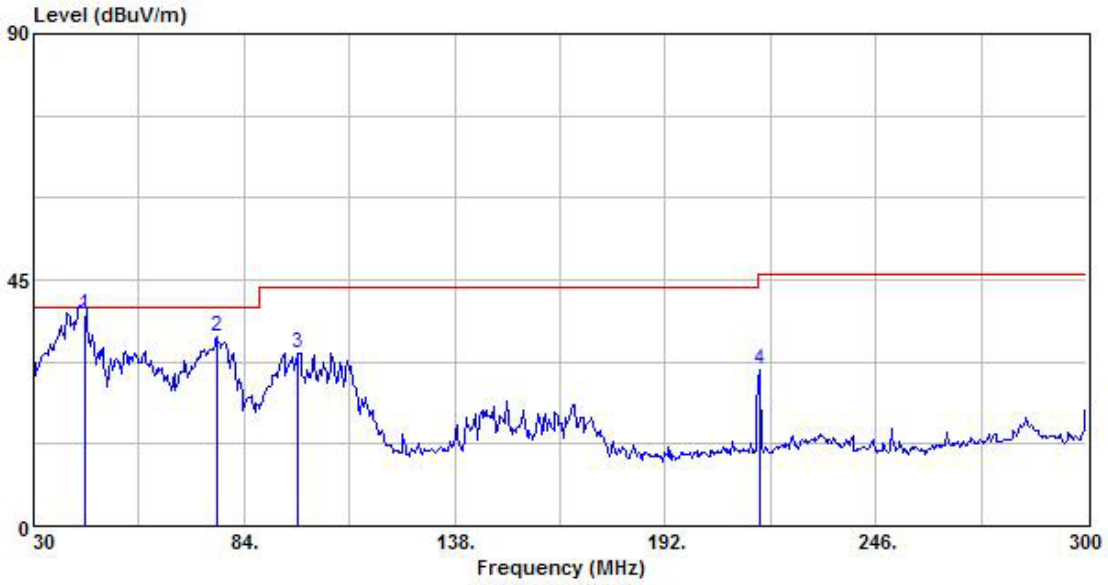


Test Mode	:	**Channel 11, Transmitter with ANT-OMNI-12**			
Tester	:	Alex	**Temperature**	:	19°C
Humidity	:	53%RH	**Frequency Range**	:	30MHz~300MHz
IF Bandwidth	:	120kHz	**Polarization**	:	**Vertical**

	Freq. (MHz)	Reading Data (dBuV)	Correction Factor (dB1/m)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	42.95	55.50	-16.74	38.76	40.00	1.24
2	76.98	55.89	-21.28	34.61	40.00	5.39
3	97.77	51.21	-19.58	31.63	43.50	11.87
4	216.30	48.31	-19.68	28.63	46.00	17.37

Note：

1. Correction Factor (dB1/m) = Cable Loss + Antenna Factor – Gain of Preamplifier
2. Emission Level (dBuV/m) = Reading Data + Correction Factor
3. Margin (dB) = Limit – Emission Level

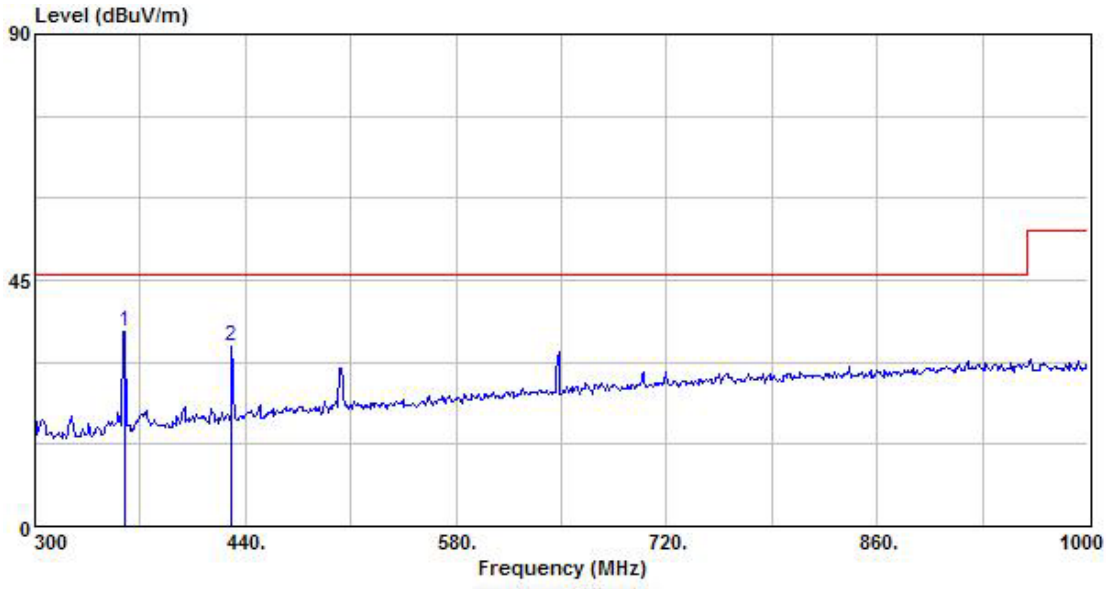


Test Mode	:	**Channel 11, Transmitter with ANT-OMNI-12**			
Tester	:	Alex	**Temperature**	:	19°C
Humidity	:	53%RH	**Frequency Range**	:	300MHz~1GHz
IF Bandwidth	:	120kHz	**Polarization**	:	**Vertical**

	Frequency (MHz)	Reading Data (dBuV)	Correction Factor (dB1/m)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	360.20	49.95	-14.46	35.49	46.00	10.51
2	430.90	45.34	-12.45	32.89	46.00	13.11

Note：

1. Correction Factor (dB1/m) = Cable Loss + Antenna Factor – Gain of Preamplifier
2. Emission Level (dBuV/m) = Reading Data + Correction Factor
3. Margin (dB) = Limit – Emission Level

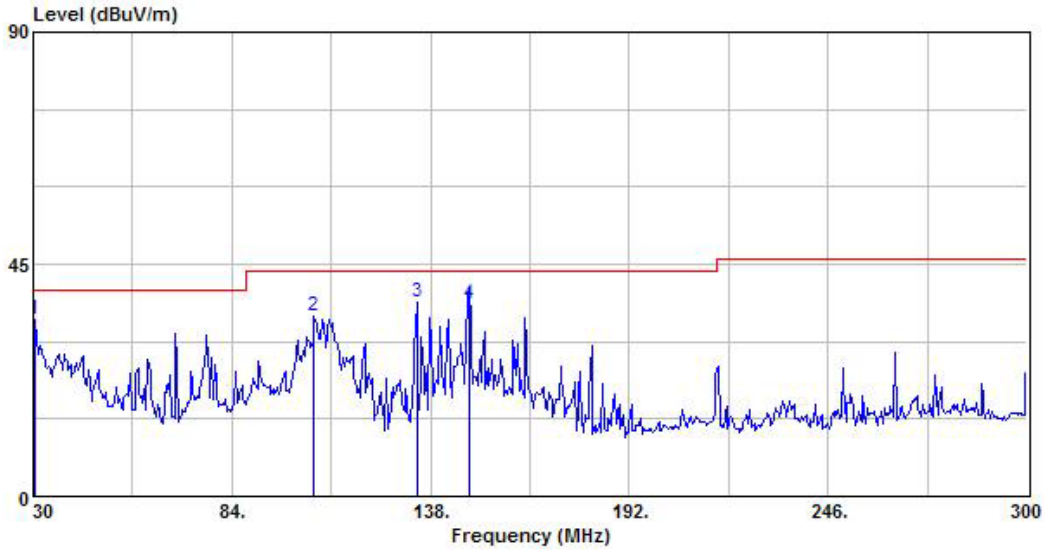


Test Mode	:	**Channel 1, Transmitter with FLAT-PATCH-ANTENNA**			
Tester	:	Alex	**Temperature**	:	19°C
Humidity	:	53%RH	**Frequency Range**	:	30MHz~300MHz
IF Bandwidth	:	120kHz	**Polarization**	:	**Horizontal**

	Freq. (MHz)	Reading Data (dBuV)	Correction Factor (dB1/m)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	30.54	45.24	-11.15	34.09	40.00	5.91
2	106.41	53.84	-19.01	34.83	43.50	8.67
3	134.22	57.57	-19.89	37.68	43.50	5.82
4	148.53	58.34	-20.95	37.39	43.50	6.11

Note：

1. Correction Factor (dB1/m) = Cable Loss + Antenna Factor – Gain of Preamplifier
2. Emission Level (dBuV/m) = Reading Data + Correction Factor
3. Margin (dB) = Limit – Emission Level

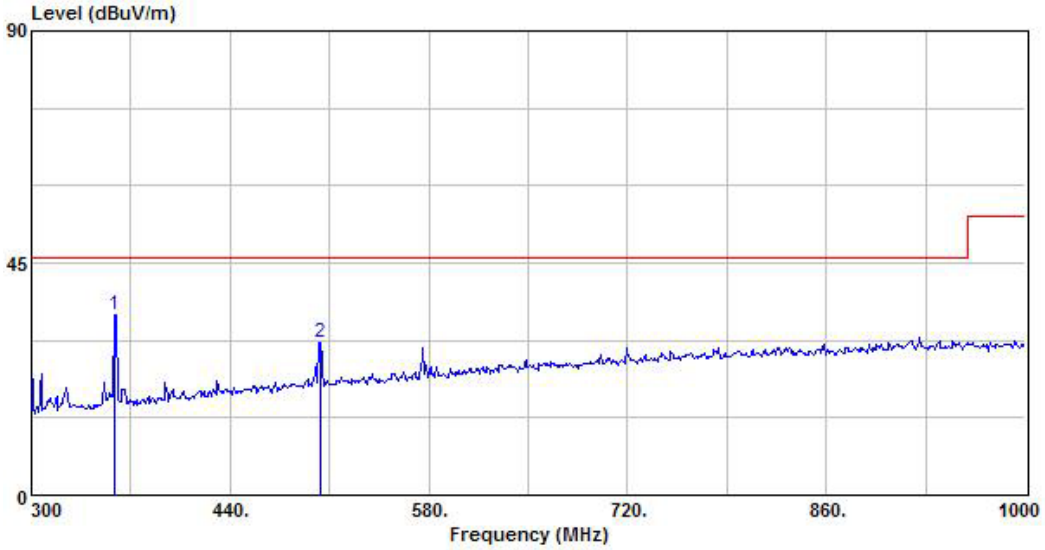


Test Mode	:	**Channel 1, Transmitter with FLAT-PATCH-ANTENNA**			
Tester	:	Alex	**Temperature**	:	19°C
Humidity	:	53%RH	**Frequency Range**	:	300MHz~1GHz
IF Bandwidth	:	120kHz	**Polarization**	:	**Horizontal**

	Frequency (MHz)	Reading Data (dBuV)	Correction Factor (dB1/m)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	358.10	49.46	-14.53	34.93	46.00	11.07
2	503.70	40.17	-10.60	29.57	46.00	16.43

Note：

1. Correction Factor (dB1/m) = Cable Loss + Antenna Factor – Gain of Preamplifier
2. Emission Level (dBuV/m) = Reading Data + Correction Factor
3. Margin (dB) = Limit – Emission Level

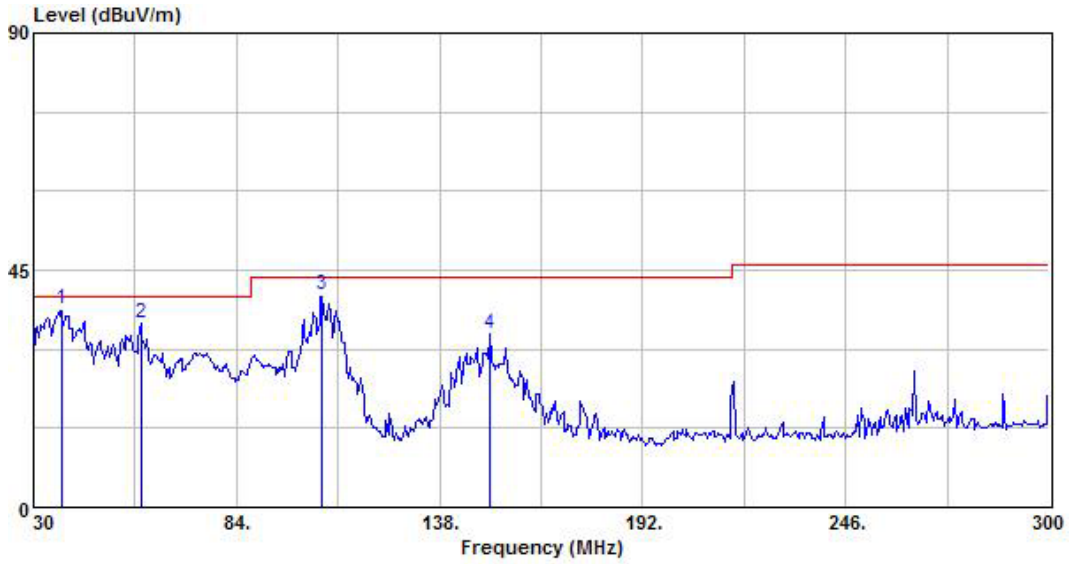


Test Mode	:	**Channel 1, Transmitter with FLAT-PATCH-ANTENNA**			
Tester	:	Alex	**Temperature**	:	19°C
Humidity	:	53%RH	**Frequency Range**	:	30MHz~300MHz
IF Bandwidth	:	120kHz	**Polarization**	:	**Vertical**

	Freq. (MHz)	Reading Data (dBuV)	Correction Factor (dB1/m)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	37.36	50.69	-12.94	37.75	40.00	2.25
2	58.62	58.36	-23.57	34.79	40.00	5.21
3	106.71	59.20	-19.00	40.20	43.50	3.30
4	151.50	53.89	-21.13	32.76	43.50	10.74

Note：

1. Correction Factor (dB1/m) = Cable Loss + Antenna Factor – Gain of Preamplifier
2. Emission Level (dBuV/m) = Reading Data + Correction Factor
3. Margin (dB) = Limit – Emission Level

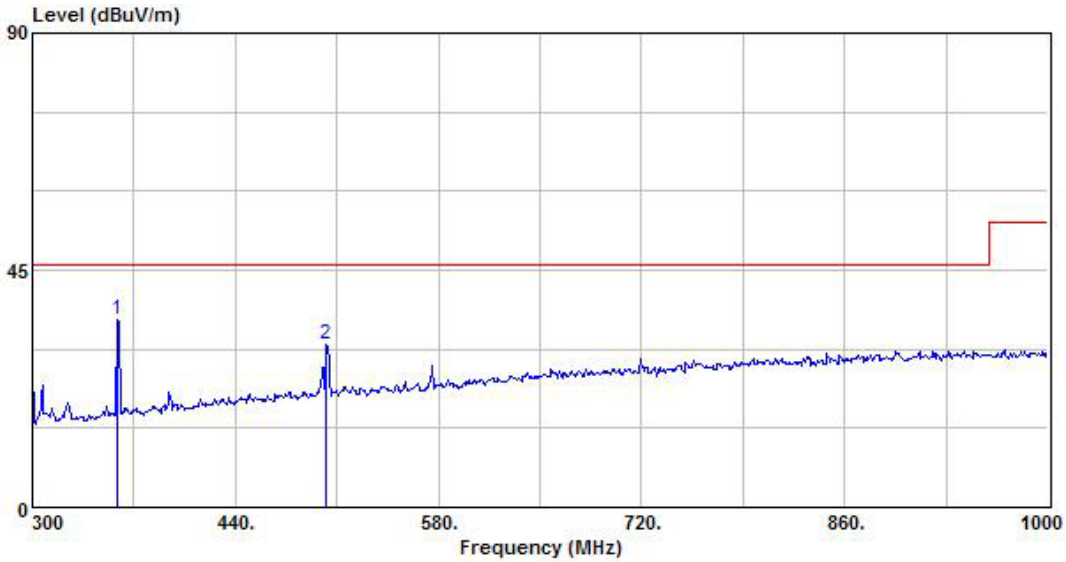


Test Mode	:	**Channel 1, Transmitter with FLAT-PATCH-ANTENNA**			
Tester	:	Alex	**Temperature**	:	19°C
Humidity	:	53%RH	**Frequency Range**	:	300MHz~1GHz
IF Bandwidth	:	120kHz	**Polarization**	:	**Vertical**

	Frequency (MHz)	Reading Data (dBuV)	Correction Factor (dB1/m)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	358.10	50.07	-14.53	35.54	46.00	10.46
2	503.00	41.58	-10.61	30.97	46.00	15.03

Note：

1. Correction Factor (dB1/m) = Cable Loss + Antenna Factor – Gain of Preamplifier
2. Emission Level (dBuV/m) = Reading Data + Correction Factor
3. Margin (dB) = Limit – Emission Level

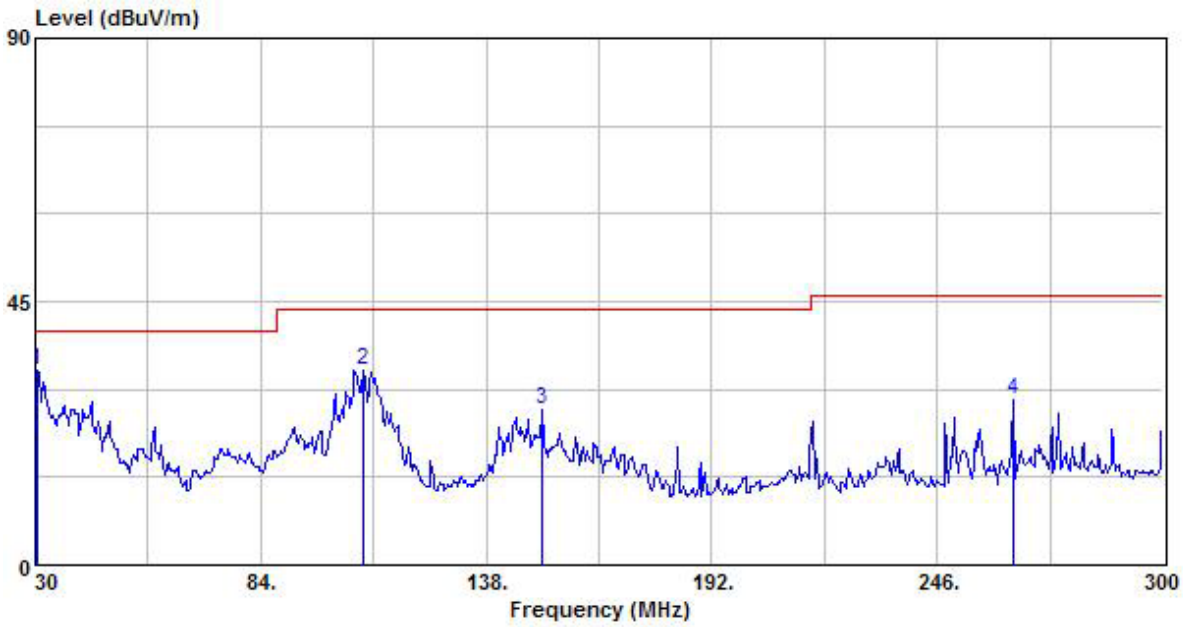


Test Mode	:	**Channel 6, Transmitter with FLAT-PATCH-ANTENNA**			
Tester	:	Alex	**Temperature**	:	19°C
Humidity	:	53%RH	**Frequency Range**	:	30MHz~300MHz
IF Bandwidth	:	120kHz	**Polarization**	:	**Horizontal**

	Freq. (MHz)	Reading Data (dBuV)	Correction Factor (dB1/m)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	30.54	44.25	-11.15	33.10	40.00	6.90
2	108.57	52.27	-18.89	33.38	43.50	10.12
3	151.50	47.59	-21.13	26.46	43.50	17.04
4	264.09	46.06	-17.93	28.13	46.00	17.87

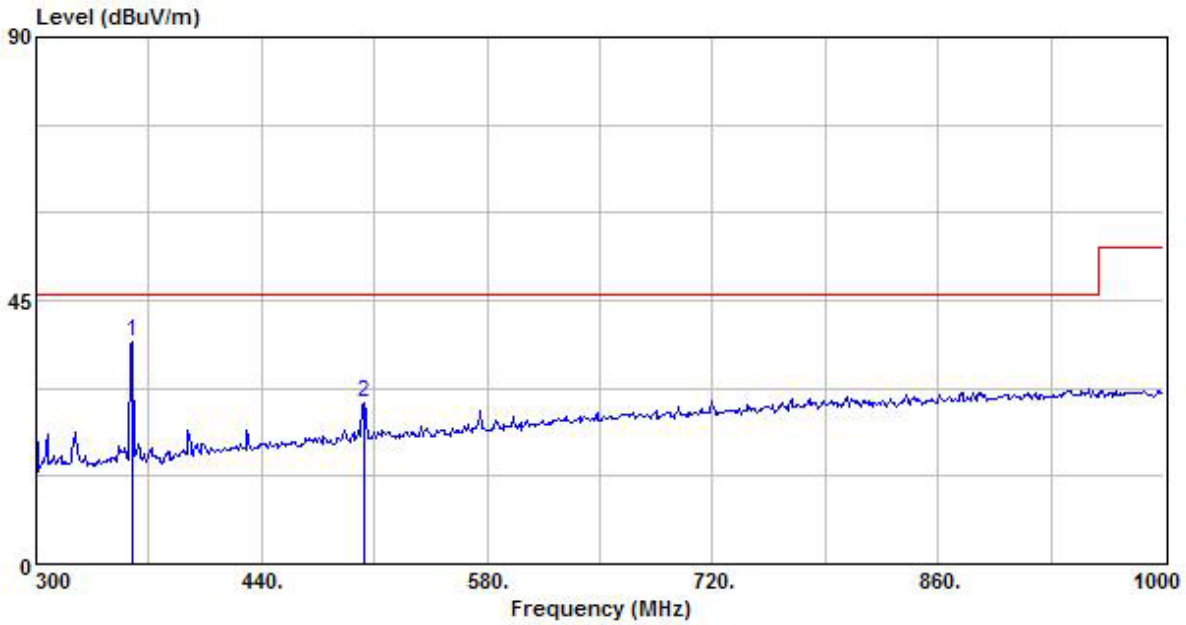
Note：

1. Correction Factor (dB1/m) = Cable Loss + Antenna Factor – Gain of Preamplifier
2. Emission Level (dBuV/m) = Reading Data + Correction Factor
3. Margin (dB) = Limit – Emission Level



Test Mode	:	**Channel 6, Transmitter with FLAT-PATCH-ANTENNA**			
Tester	:	Alex	**Temperature**	:	19°C
Humidity	:	53%RH	**Frequency Range**	:	300MHz~1GHz
IF Bandwidth	:	120kHz	**Polarization**	:	**Horizontal**

	Frequency (MHz)	Reading Data (dBuV)	Correction Factor (dB1/m)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	360.20	52.37	-14.46	37.91	46.00	8.09
2	503.70	38.10	-10.60	27.50	46.00	18.50

Note：

1. Correction Factor (dB1/m) = Cable Loss + Antenna Factor – Gain of Preamplifier
2. Emission Level (dBuV/m) = Reading Data + Correction Factor
3. Margin (dB) = Limit – Emission Level