FCC RADIO TEST REPORT

Applicant	:	Shenzhen Smart Device Technology Co., LTD
Address	:	17th-18th floor, Guoshi Mansion, Shahe West Road 1801, Nanshan, Shenzhen, China
Equipment	:	Temperature Measurement & Face Recognition Pass Management Module
Model No.	:	SV-1081D
Trade Name	:	N/A
FCC ID	:	2AITMSV-1081D

I HEREBY CERTIFY THAT :

The sample was received on Mar. 25, 2020 and the testing was carried out on Mar. 31, 2020 at Cerpass Technology Corp. The test result refers exclusively to the test presented test model / sample. Without written approval of Cerpass Technology Corp., the test report shall not be reproduced except in full.

Approved by:

Mark Liao / Supervisor

Laboratory Accreditation:

Cerpass Technology Corporation Test Laboratory

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History of this test report

■ ORIGINAL

☐ Additional attachment as following record:

Attachment No.	Issue Date	Description
TEFI2004013	Apr. 01, 2020	Initial Issue

Report Type		Description
■	Original report	NA
□	Derivative Report	NA

1. Summary of Test Procedure and Test Results

1.1 Applicable Standards

ANSI C63.10:2013

FCC Rules and Regulations Part 15 Subpart C §15.247

FCC Rule	. Description of Test	Result
FCC CFR Title 47 Part 15 Subpart C: Section 15.203/15.247 (b)	. Antenna Requirement	Pass
FCC CFR Title 47 Part 15 Subpart C: Section 15.207	. AC Power Line Conducted Emission	Pass
FCC CFR Title 47 Part 15 Subpart C: Section 15.205/15.209; Part2 section 2.1051, 2.1053, 2.1057	. Spurious Emission(Radiated)	Pass
FCC CFR Title 47 Part 15 Subpart C: Section 15.247(d); Part2 section 2.1051 and 2.1057	. Spurious Emission(Conducted)	Pass
FCC CFR Title 47 Part 15 Subpart C: Section 15.247(a)(2); Part2 section 2.1049	. 6dB Bandwidth	Pass
FCC CFR Title 47 Part 15 Subpart C: Section 15.247(b); Part2 section 2.1046	. Maximum Peak Output Power	Pass
FCC CFR Title 47 Part 15 Subpart C: Section 15.247(e)	. Power Spectral Density	Pass

*The lab has lowered the uncertainty risk of test equipment, environment, and staff technicians according to ISO-IEC17025. Therefore we define test result as compliant when it complies with the standard without further evaluation of test result uncertainty.

2. Test Configuration of Equipment under Test

2.1 Feature of Equipment under Test

Product	Temperature Measurement & Face Recognition Pass Management Module
Test Model	SV-1081D
Model Discrepancy	N/A
Frequency Range	802.11b/g/n(20MHz): 2412-2462MHz
Modulation	802.11b: CCK, DQPSK, DBPSK 802.11g: 64 QAM, 16 QAM, QPSK, BPSK 802.11n: BPSK, QPSK,16-QAM, 64-QAM
Data Rate	802.11b: 1, 2, 5.5, 11Mbps 802.11g: 6, 9, 12, 18, 24, 36, 48, 54Mbps 802.11n: up to 144.4Mbps
EUT Power Rating:	Input: DC12V⎓2.5A
Adapter Spec.	Model:ADP-3600K120 Input:100-240V~50/60Hz 1.0A Max Output: +12V⎓3A
Antenna Spec.	FPC Antenna with -1dBi

Note: for more details, please refer to the User's manual of the EUT.

2.2 Carrier Frequency of Channels

802.11b, 802.11g, 802.11n HT 20 (2412MHz~2462MHz)

Channel	Frequency(MHz)	Channel	Frequency(MHz)
***01**	**2412**	07	2442
02	2417	08	2447
03	2422	09	2452
04	2427	10	2457
05	2432	***11**	**2462**
***06**	**2437**	---	---

Note: Channels remarked * are selected to perform test.

2.3 Test Mode and Test Software

a. During testing, the interface cables and equipment positions were varied according to ANSI C63.4.
b. The complete test system included support units and EUT for the RF test.
c. An executive program, "**RFTestTool.apk"** which transmits and receives data through Wireless.
d. The EUT had been tested under operating condition
. After verification, all tests were carried out with the worst case test modes as shown below except radiated spurious emission below 1GHz and power line conducted emissions below 30MHz, which worst case was in normal link mode only.
EUT staying in continuous transmitting mode was programmed.
e. Test modes:

Conducted Emissions from the AC mains power ports / Radiation Emissions (30MHz ~ 1GHz)	
Test Mode	Operating Description
1	802.11b (1 Mbps)
2	802.11g (6 Mbps)
3	802.11n HT20 (6.5 Mbps)
caused "Test Mode 1 " generated the worst case, it was reported as the final data.	
Radiated emission (above 1GHz)	
Test Mode	Operating Description
1	802.11b (1 Mbps)
2	802.11g (6 Mbps)
3	802.11n HT20 (6.5 Mbps)
caused "Test Mode 1~4" generated the worst case, it was reported as the final data.	

2.4 Description of Test System

Device	Manufacturer	Model No.	Description
Adapter	DAJING	ADP-3600K120	N/A

Used cable

Cable	Quantity	Description
DC Cable	1	1.1m Non Shielding with one Core

2.5 General Information of Test

Test Site	**Cerpass Technology Corporation Test Laboratory** Address: No.10, Ln. 2, Lianfu St., Luzhu Dist., Taoyuan City 33848, Taiwan (R.O.C.) Tel:+886-3-3226-888 Fax:+886-3-3226-881	
	FCC	TW1439, TW1079
	IC	4934E-1, 4934E-2
	VCCI	T-2205 for Telecommunication test C-4663 for Conducted emission test R-4218 for Radiated emission test G-10812, G-10813 for radiated disturbance above 1GHz
Frequency Range Investigated:	Conducted: from 150kHz to 30 MHz Radiation: from 30 MHz to 25,000MHz	
Test Distance:	The test distance of radiated emission from antenna to EUT is 3 M.	

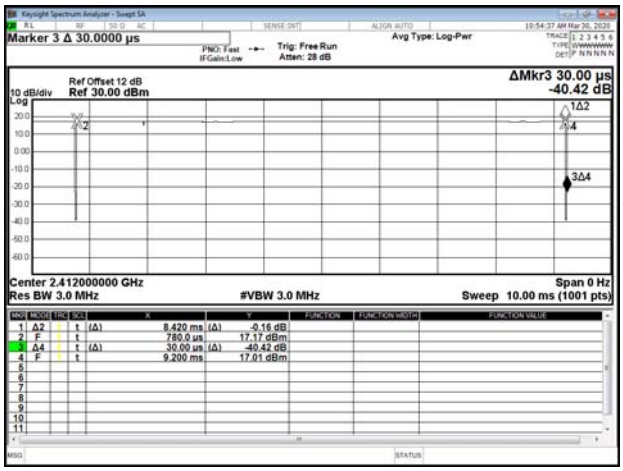
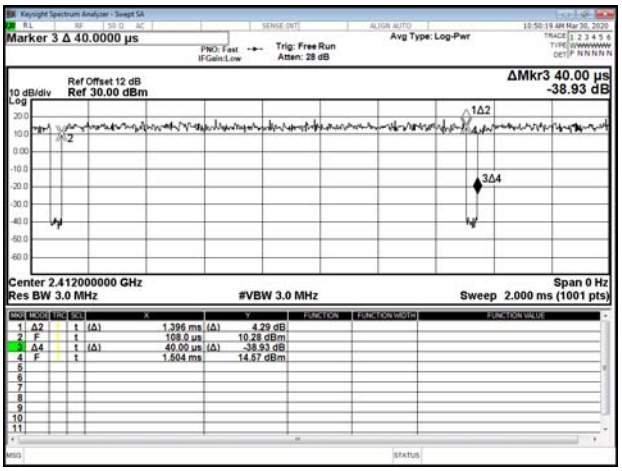
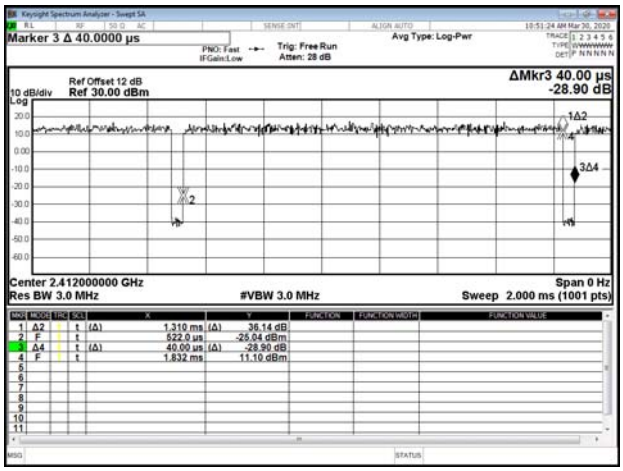
Test Item	Test Site	Tested Date	Environmental Conditions	Tested By
RF Conducted	RFCON01-NK	2020/03/30	22℃ / 63%	Nick Guan
Radiated Emissions	3M01-NK	2020/03/30	26℃ / 51%	Nick Guan
AC Power Line Conducted Emission	CON01-NK	2020/03/31	25℃ / 48%	Nick Guan

2.6 Measurement Uncertainty

Measurement Item	Uncertainty
Radiated Spurious Emission(9KHz~30MHz)	±5.007dB
Radiated Spurious Emission(30MHz~1GHz)	±5.157dB
Radiated Spurious Emission(1GHz~18GHz)	±6.383dB
Radiated Spurious Emission(18GHz~40GHz)	±6.648dB
Conducted Spurious Emission	±1.253dB
6dB Bandwidth	±6.89%
Power Spectral Density	±0.630dB
26 dB Occupied Bandwidth	±6.10%
Frequency Stability	±375KHz
Channel Frequencies Separation	±6.10%
20dB Bandwidth	±6.12%
Dwell Time	±1.34%
Peak Output Power(Conducted Power Meter)	±0.86dB
Temperature	±1.2℃
Humidity	±2.7%
Channel Move Time	±4.53%
Channel Closing Transmission Time	±6.61%
Threshold	±0.631dB
Non occupancy period	±1.17%

2.7 Duty cycle

Mode	Frequency (MHz)	Measurement (%)
802.11b	2412	99.64
802.11g	2412	97.21
802.11n(20MHz)	2412	97.04

Transmit at channel 1 by 802.11b	Transmit at channel 1 by 802.11g
	
Transmit at channel 1 by 802.11n(20MHz)	
	

3. Test Equipment and Ancillaries Used for Tests

Test Item	Radiated Emissions				
Test Site	Semi Anechoic Room(3M02-NK)				
Instrument	Manufacturer	Model No	Serial No	Calibration Date	Valid Date
Bilog Antenna	Schwarzbeck	VULB9168	275	2019/09/24	2020/09/23
Active Loop Antenna	EMCO	6507	40855	2019/05/24	2020/05/23
Horn Antenna	EMCO	3115	31589	2019/04/01	2020/03/31
Horn Anrenna	EMCO	3116	31974	2019/09/17	2020/09/16
EMI Receiver	ROHDE & SCHWARZ	ESCI	101423	2019/05/14	2020/05/13
Spectrum Analyzer	ROHDE & SCHWARZ	FSP 40	100219	2019/07/22	2020/07/21
Preamplifier	EM Electronics corp.	EM330	60660	2020/3/16	2021/3/15
Preamplifier	EMC INSTRUMENTS	EMC051845SE	980333	2019/09/20	2020/09/19
Bluetooth Tester	ROHDE & SCHWARZ	CBT	101133	2019/04/07	2020/04/06
Cable-3in1(30 M-1G)	HARBOUR INDUSTRIES	LL142	CCE1316	2019/09/20	2020/09/19
Cable-0.5m(1G -40G)	Rapidtek	40GHZ 50CM	38MS-38MS50 314	2019/04/09	2020/04/08
Cable-3m(1G-40G)	Rapidtek	40GHZ 300CM	38MS-38MS30 0314	2019/04/09	2020/04/08
Cable-8m(1G-40G)	Rapidtek	40GHZ 800CM	38MS-38MS80 0314	2019/04/10	2020/04/09
E3	AUDIX	v8.2014-8-6	RK-000529	NA	NA

Test Item	RF Conducted				
Test Site	RFCON01-NK				
Instrument	Manufacturer	Model No	Serial No	Calibration Date	Valid Date
Spectrum Analyzer	ROHDE & SCHWARZ	FSP 40	100219	2019/07/22	2020/07/21
Bluetooth Tester	ROHDE & SCHWARZ	CBT	101133	2019/04/07	2020/04/06
Attenuator	KEYSIGHT	8491B	MY39250703	2019/09/12	2020/09/11
TEMP & HUMI CHAMBER	T-MACHINE	TMJ-9712	T-12-040111	2019/08/28	2020/08/27
Power Sensor	Anritsu	MA2411B	1207295	2019/04/11	2020/04/10

Test Item	AC Power Line Conducted Emission				
Test Site	CON02-NK				
Instrument	Manufacturer	Model No	Serial No	Calibration Date	Valid Date
EMI Receiver	ROHDE & SCHWARZ	ESCI	100821	2019/09/16	2020/09/15
Line Impedance Stabilization Network	Schwarzbeck	NSLK 8127	8127-740	2019/05/22	2020/05/21
Pulse Limiter	ROHDE & SCHWARZ	ESH3-Z2	101933	2019/09/11	2020/09/10
Cable-6m(9k~ 300M)	NA	CFD300-NL	NA	2020/3/11	2021/3/10
E3	AUDIX	v8.2014-8-6	RK-000536	NA	NA

4. Antenna Requirements

4.1 Standard Applicable

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

And according to FCC 47 CFR Section 15.247 (b), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

4.2 Antenna Construction and Directional Gain

Antenna	Peak Gain
FPC Antenna	-1.0dBi

5. Test of AC Power Line Conducted Emission

5.1 Test Limit

Conducted Emissions were measured from 150 kHz to 30 MHz with a bandwidth of 9 KHz on the 120 VAC power and return leads of the EUT according to the methods defined in ANSI C63.10-2013. The EUT was placed on a nonmetallic stand in a shielded room 0.8 meters above the ground plane as shown in section 6.2.2. The interface cables and equipment positioning were varied within limits of reasonable applications to determine the position produced maximum conducted emissions.

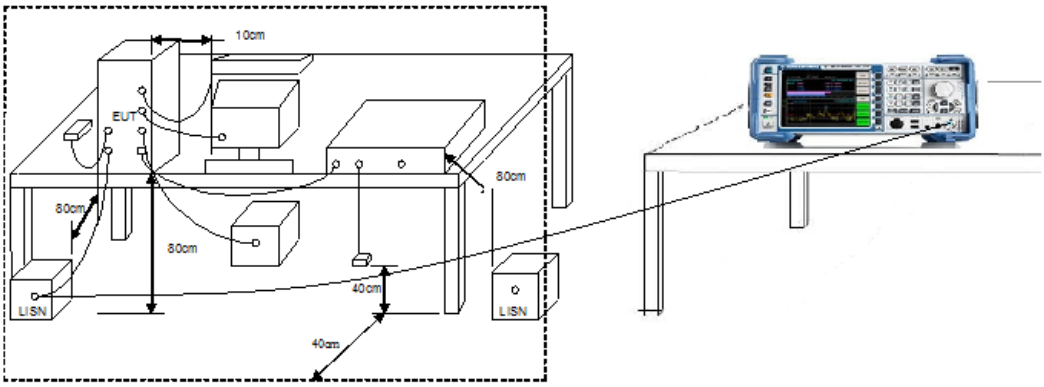
Frequency (MHz)	Quasi Peak (dB μ V)	Average (dB μ V)
0.15 – 0.5	66-56*	56-46*
0.5 – 5.0	56	46
5.0 – 30.0	60	50

*Decreases with the logarithm of the frequency.

5.2 Test Procedures

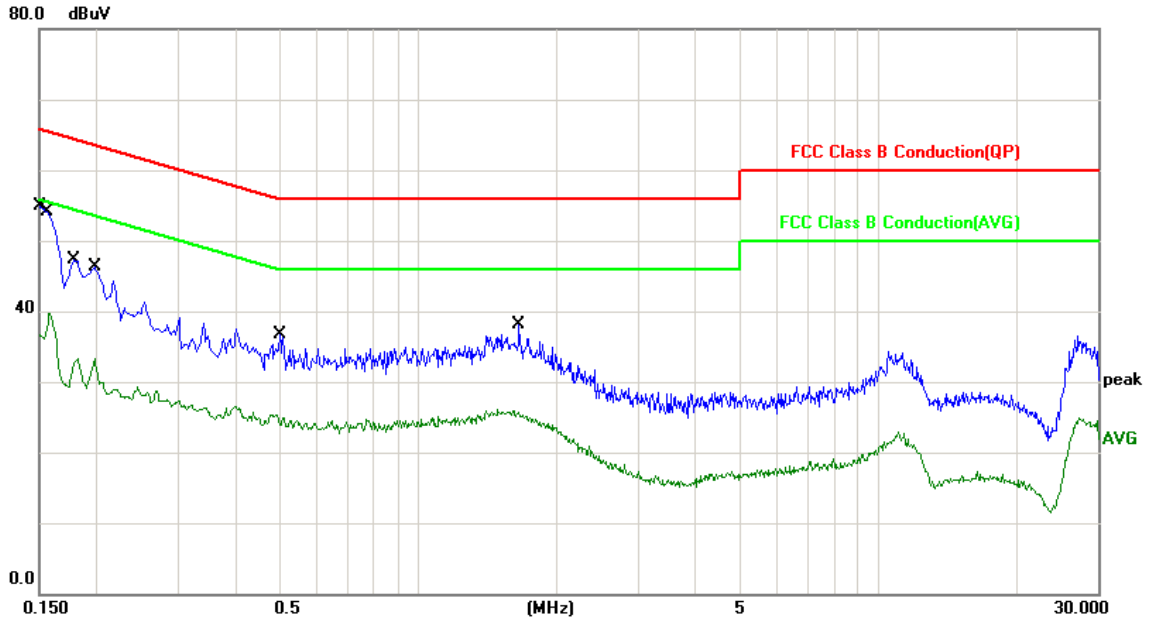
The EUT was setup according to ANSI C63.10, 2013 and tested according to DTS test procedure of Oct 2014 KDB558074 for compliance to FCC 47CFR 15.247 requirements. The EUT was placed on a platform of nominal size, 1 m by 1.5 m, raised 80 cm above the conducting ground plane. The vertical conducting plane was located 40 cm to the rear of the EUT. All other surfaces of EUT were at least 80 cm from any other grounded conducting surface. The EUT and simulators are connected to the main power through a line impedance stabilization network (LISN). The LISN provides a 50 ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN. (Please refer to the block diagram of the test setup and photographs) Each current-carrying conductor of the EUT power cord, except the ground (safety) conductor, was individually connected through a LISN to the input power source. The excess length of the power cord between the EUT and the LISN receptacle were folded back and forth at the center of the lead to form a bundle not exceeding 40 cm in length. Conducted emissions were investigated over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9kHz.

5.3 Typical Test Setup



5.4 Test Result and Data

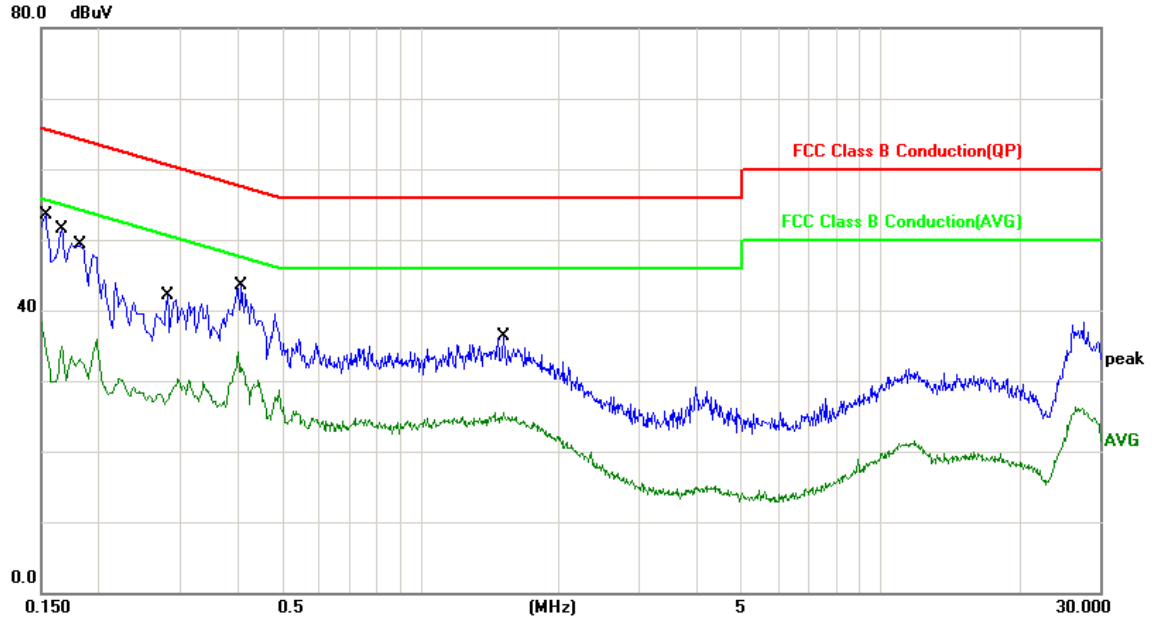
Power:	AC 120V/60Hz	Pol/Phase:	LINE
Test Mode:	Mode 1		



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1500	10.06	41.21	51.27	65.99	-14.72	QP
2	0.1500	10.06	26.10	36.16	55.99	-19.83	AVG
3	0.1580	10.06	36.17	46.23	65.56	-19.33	QP
4	0.1580	10.06	20.53	30.59	55.56	-24.97	AVG
5	0.1780	10.06	34.49	44.55	64.57	-20.02	QP
6	0.1780	10.06	21.52	31.58	54.57	-22.99	AVG
7	0.1980	10.06	32.05	42.11	63.69	-21.58	QP
8	0.1980	10.06	20.44	30.50	53.69	-23.19	AVG
9	0.5020	9.89	19.48	29.37	56.00	-26.63	QP
10	0.5020	9.89	14.12	24.01	46.00	-21.99	AVG
11	1.6540	10.74	19.02	29.76	56.00	-26.24	QP
12	1.6540	10.74	13.96	24.70	46.00	-21.30	AVG

Note: Level = Reading + Factor
Margin = Level – Limit

Power:	AC 120V/60Hz	Pol/Phase:	NEUTRAL
Test Mode:	Mode 1		



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1539	10.06	37.69	47.75	65.78	-18.03	QP
2	0.1539	10.06	23.50	33.56	55.78	-22.22	AVG
3	0.1660	10.06	34.13	44.19	65.15	-20.96	QP
4	0.1660	10.06	20.47	30.53	55.15	-24.62	AVG
5	0.1819	10.06	35.01	45.07	64.39	-19.32	QP
6	0.1819	10.06	22.57	32.63	54.39	-21.76	AVG
7	0.2819	10.01	24.40	34.41	60.76	-26.35	QP
8	0.2819	10.01	17.43	27.44	50.76	-23.32	AVG
9	0.4100	9.94	28.12	38.06	57.65	-19.59	QP
10	0.4100	9.94	20.17	30.11	47.65	-17.54	AVG
11	1.5140	10.15	19.25	29.40	56.00	-26.60	QP
12	1.5140	10.15	14.09	24.24	46.00	-21.76	AVG

Note: Level = Reading + Factor
Margin = Level – Limit

6. Test of Spurious Emission (Radiated)

6.1 Test Limit

In any 100kHz 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 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. If the transmitter measurement is based on the maximum conducted output power, the attenuation required under this paragraph shall be 30dB instead of 20dB. In addition, radiated emissions which fall in section 15.205(a) the restricted bands must also comply with the radiated emission limit specified in section 15.209(a).

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

6.2 Test Procedures

a. The EUT was placed on a rotatable table top 0.8 meter for frequency below 1GHz and 1.5meter for frequency above 1GHz above ground.

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

c. The table was rotated 360 degrees to determine the position of the highest radiation.

d. The antenna is a broadband antenna and its height is varied between one meter and four meters above ground to find the maximum value of the field strength both horizontal polarization and vertical polarization of the antenna are set to make the measurement.

e. For each suspected emission the EUT was arranged to its worst case and then tune the antenna tower (from 1 M to 4 M) and turn table (from 0 degree to 360 degrees) to find the maximum reading.

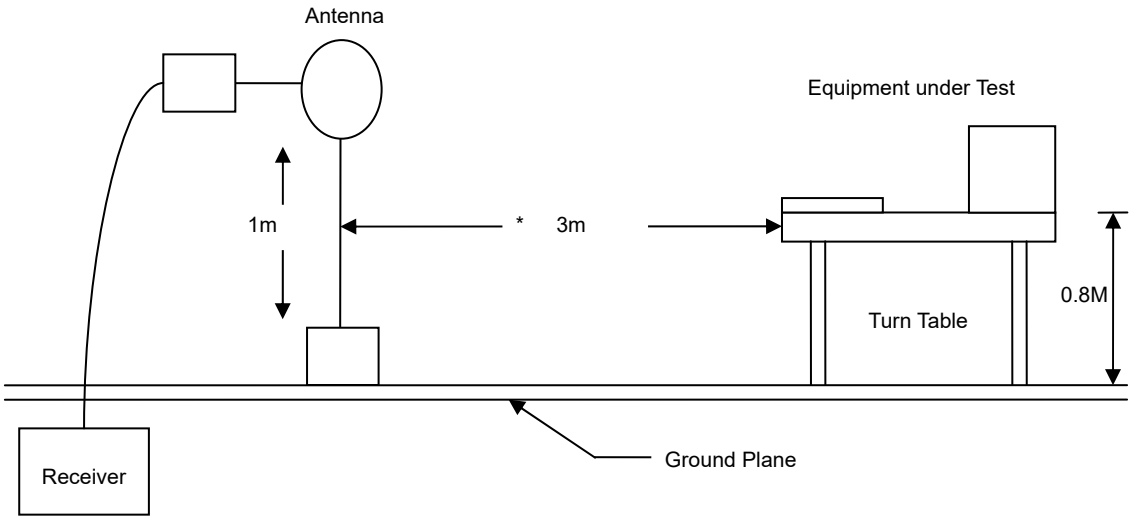
f. Set the test-receiver system to Peak or CISPR quasi-peak Detect Function and specified bandwidth with Maximum Hold Mode.

g. If the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions which do not have 3 dB margin will be repeated one by one using the quasi-peak method and reported.

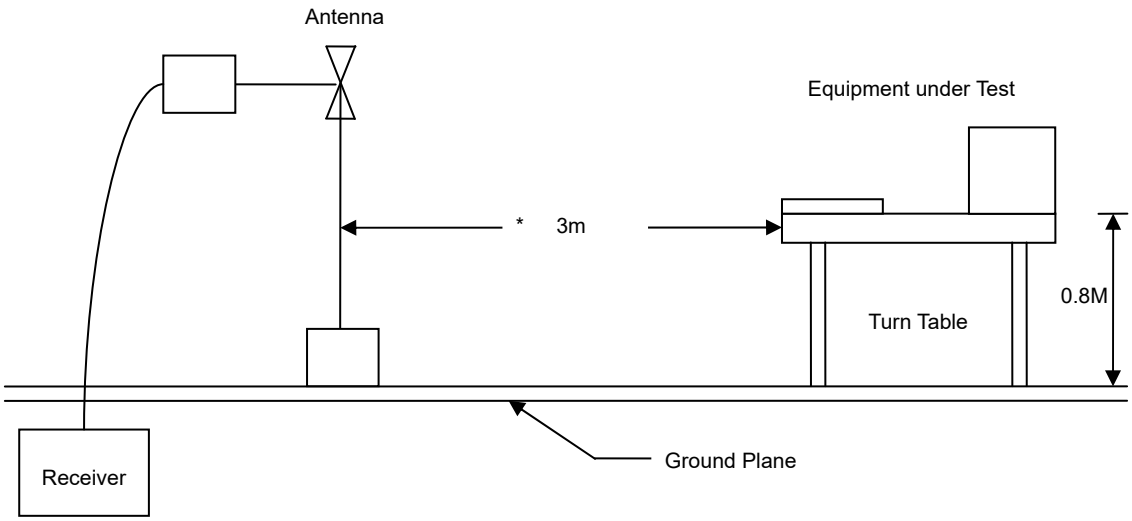
h. For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than AVG limit (that means the emission level in peak mode also complies with the limit in AVG mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in AVG mode again and reported.

6.3 Typical Test Setup

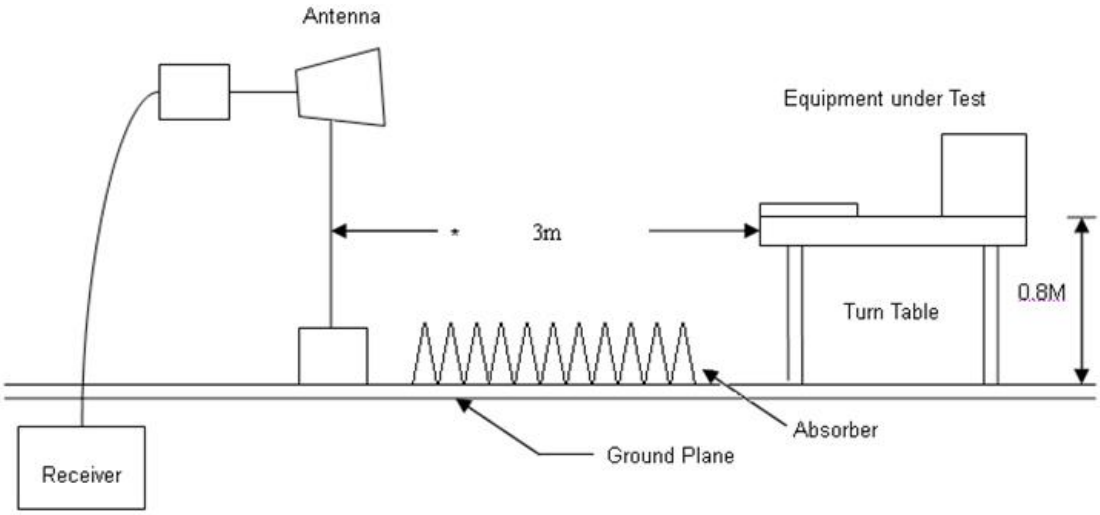
Below 30MHz test setup



30MHz- 1GHz Test Setup



Above 1GHz Test Setup



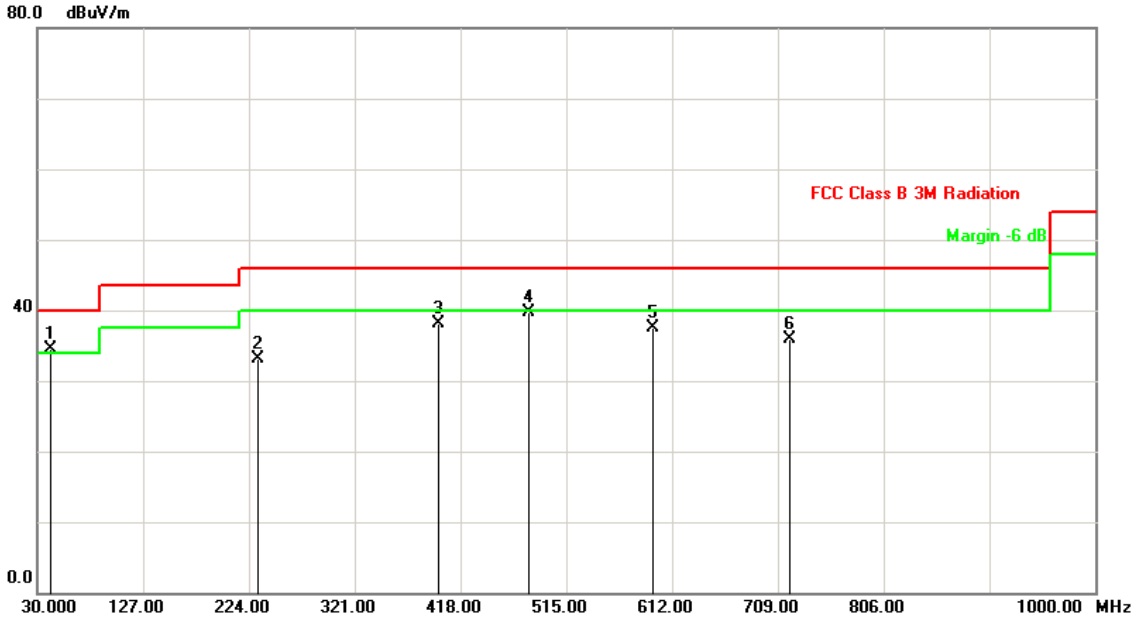
6.4 Test Result and Data (9KHz ~ 30MHz)

The 9kHz-30MHz spurious emission is under limit 20dB more.

6.5 Test Result and Data (30MHz ~ 1GHz)

Power	AC 120V/60Hz	Pol/Phase	VERTICAL
Test Mode	Mode 1		

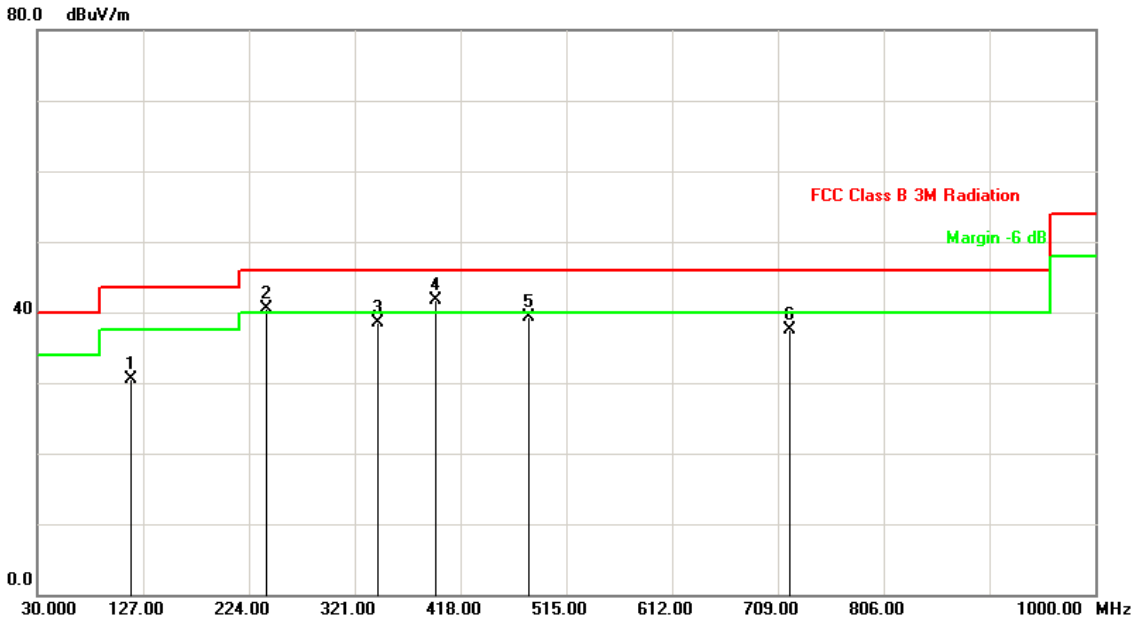
Note : Level = Reading + Factor
Margin = Level – Limit
Factor = Antenna Factor + Cable Loss – Amplifier Factor
The 9KHz -30MHz spurious emission is under limit 20dB more



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	41.6400	-13.15	47.63	34.48	40.00	-5.52	QP	143	12
2	231.7600	-11.48	44.58	33.10	46.00	-12.90	peak	100	317
3	397.6298	-6.53	44.54	38.01	46.00	-7.99	peak	100	129
4	480.0800	-1.92	41.67	39.75	46.00	-6.25	peak	200	8
5	594.5400	-2.41	39.86	37.45	46.00	-8.55	peak	100	331
6	720.6399	-0.71	36.58	35.87	46.00	-10.13	peak	100	58

Power	AC 120V/60Hz	Pol/Phase	HORIZONTAL
Test Mode	Mode 1		

Note : Level = Reading + Factor
Margin = Level – Limit
Factor = Antenna Factor + Cable Loss – Amplifier Factor
The 9KHz -30MHz spurious emission is under limit 20dB more

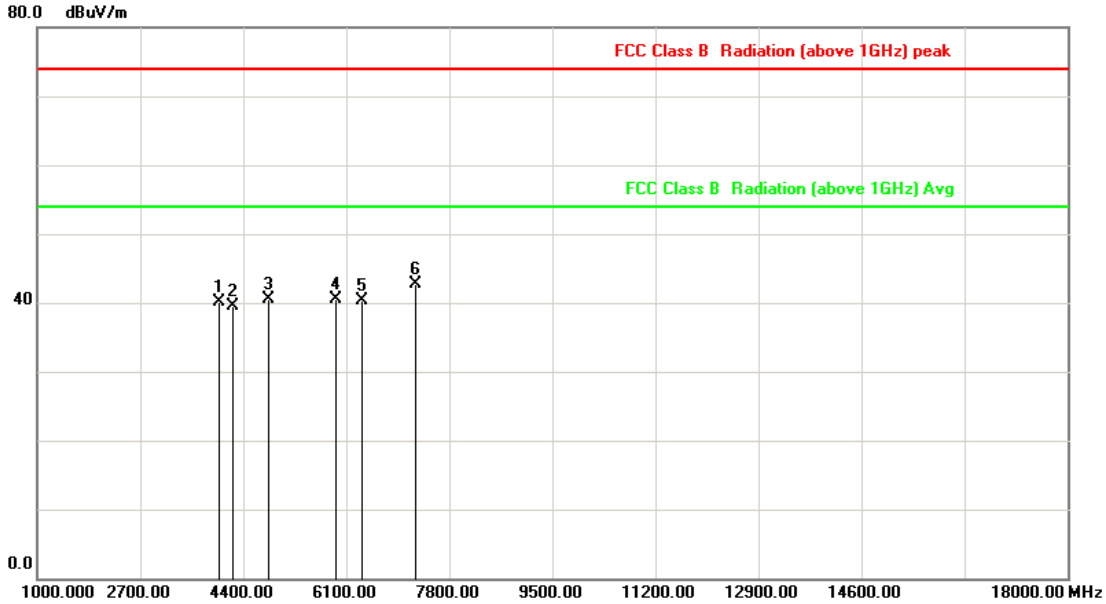


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	116.3300	-10.38	40.95	30.57	43.50	-12.93	peak	100	12
2	239.5200	-11.03	51.63	40.60	46.00	-5.40	QP	186	301
3	342.3399	-5.85	44.28	38.43	46.00	-7.57	peak	100	186
4	395.6899	-6.60	48.23	41.63	46.00	-4.37	QP	175	1
5	480.0800	-1.92	41.23	39.31	46.00	-6.69	peak	200	274
6	720.6399	-0.71	38.15	37.44	46.00	-8.56	peak	100	9

6.6 Test Result and Data (1GHz ~ 25GHz)

Power	AC 120V/60Hz	Pol/Phase	VERTICAL
Test Mode	Mode 1, CH01	Operation mode	TX

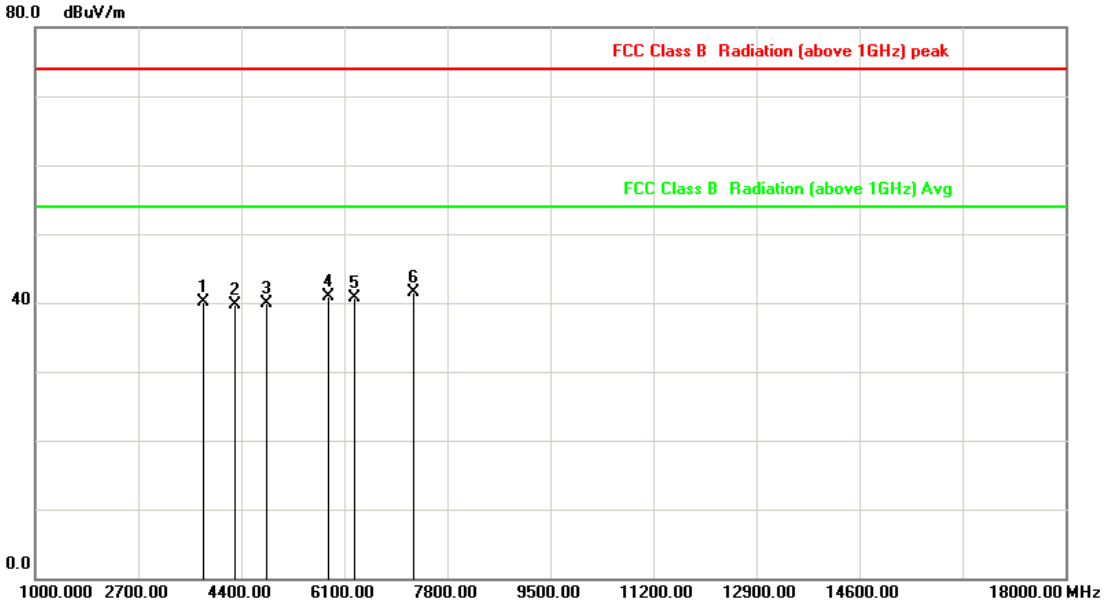
Note : Level = Reading + Factor
Margin = Level – Limit
Factor = Antenna Factor + Cable Loss – Amplifier Factor
The 18000MHz - 25000MHz spurious emission is under limit 20dB more.



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.
1	4003.333	-1.87	42.05	40.18	74.00	-33.82	peak
2	4230.000	-0.72	40.29	39.57	74.00	-34.43	peak
3	4824.000	1.27	39.27	40.54	74.00	-33.46	peak
4	5930.000	3.09	37.46	40.55	74.00	-33.45	peak
5	6355.000	3.40	36.94	40.34	74.00	-33.66	peak
6	7236.000	6.00	36.64	42.64	74.00	-31.36	peak

Power	AC 120V/60Hz	Pol/Phase	HORIZONTAL
Test Mode	Mode 1, CH01	Operation mode	TX

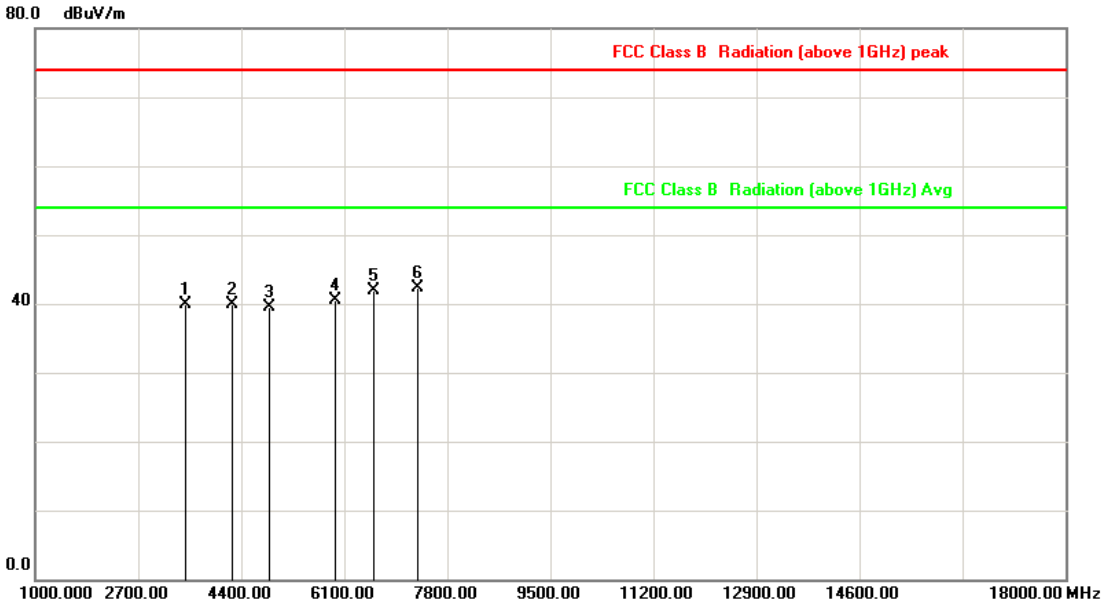
Note : Level = Reading + Factor
Margin = Level – Limit
Factor = Antenna Factor + Cable Loss – Amplifier Factor
The 18000MHz - 25000MHz spurious emission is under limit 20dB more.



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.
1	3776.667	-2.65	42.83	40.18	74.00	-33.82	peak
2	4286.667	-0.43	40.06	39.63	74.00	-34.37	peak
3	4824.000	1.27	38.59	39.86	74.00	-34.14	peak
4	5845.000	2.88	37.96	40.84	74.00	-33.16	peak
5	6270.000	3.37	37.37	40.74	74.00	-33.26	peak
6	7236.000	6.00	35.52	41.52	74.00	-32.48	peak

Power	AC 120V/60Hz	Pol/Phase	VERTICAL
Test Mode	Mode 1, CH06	Operation mode	TX

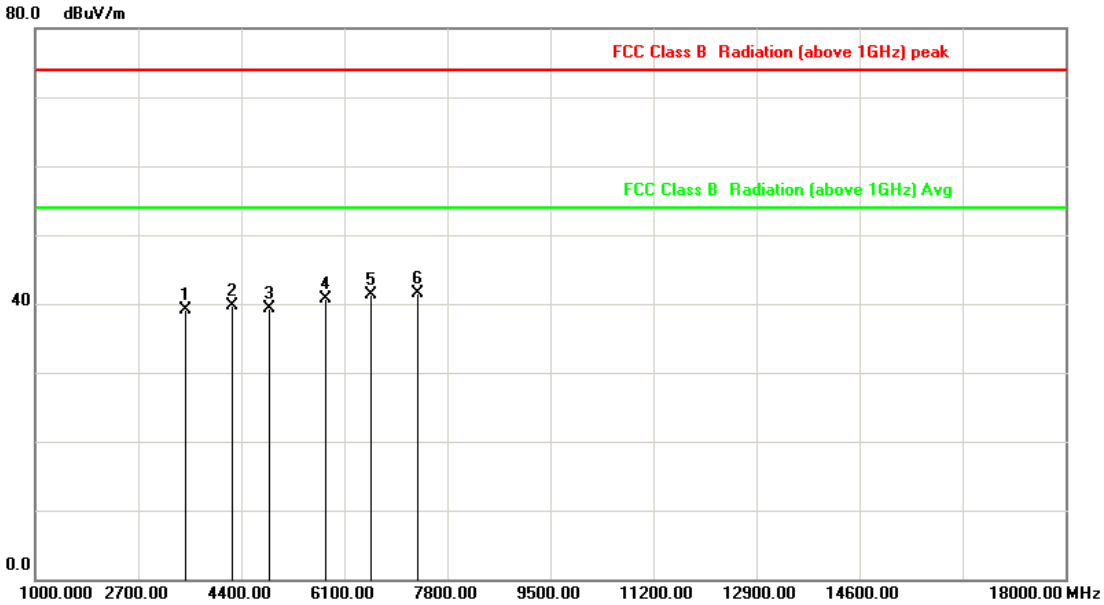
Note : Level = Reading + Factor
Margin = Level – Limit
Factor = Antenna Factor + Cable Loss – Amplifier Factor
The 18000MHz - 25000MHz spurious emission is under limit 20dB more.



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.
1	3493.333	-3.64	43.45	39.81	74.00	-34.19	peak
2	4258.333	-0.57	40.41	39.84	74.00	-34.16	peak
3	4874.000	1.36	38.11	39.47	74.00	-34.53	peak
4	5958.333	3.16	37.38	40.54	74.00	-33.46	peak
5	6581.667	3.72	38.21	41.93	74.00	-32.07	peak
6	7311.000	6.29	36.02	42.31	74.00	-31.69	peak

Power	AC 120V/60Hz	Pol/Phase	HORIZONTAL
Test Mode	Mode 1, CH06	Operation mode	TX

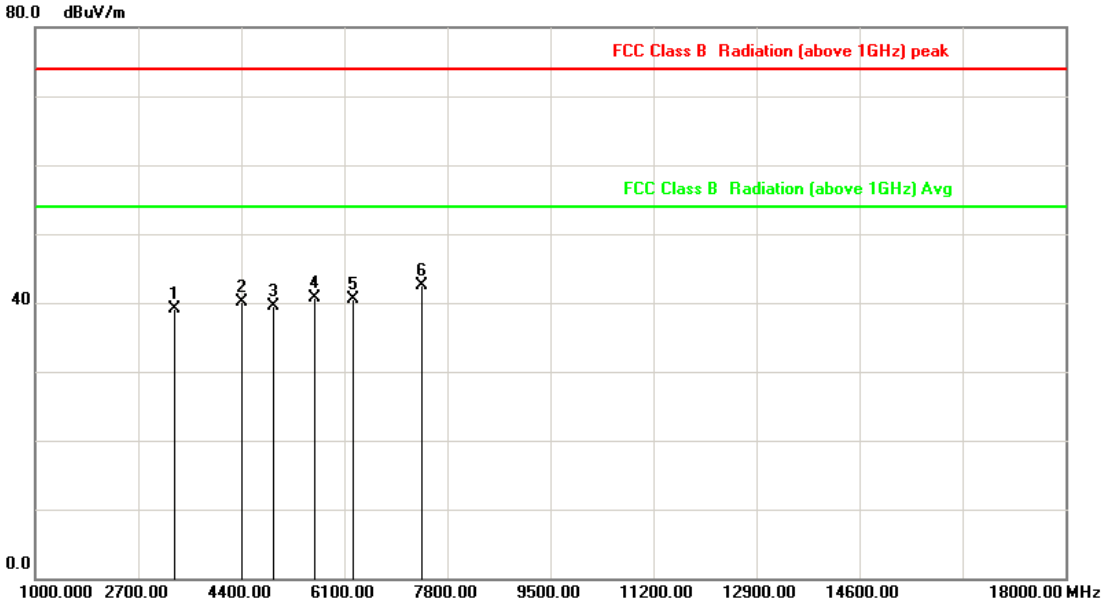
Note : Level = Reading + Factor
Margin = Level – Limit
Factor = Antenna Factor + Cable Loss – Amplifier Factor
The 18000MHz - 25000MHz spurious emission is under limit 20dB more.



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.
1	3493.333	-3.64	42.67	39.03	74.00	-34.97	peak
2	4258.333	-0.57	40.21	39.64	74.00	-34.36	peak
3	4874.000	1.36	37.96	39.32	74.00	-34.68	peak
4	5788.333	2.74	37.93	40.67	74.00	-33.33	peak
5	6553.333	3.63	37.68	41.31	74.00	-32.69	peak
6	7311.000	6.29	35.30	41.59	74.00	-32.41	peak

Power	AC 120V/60Hz	Pol/Phase	VERTICAL
Test Mode	Mode 1, CH11	Operation mode	TX

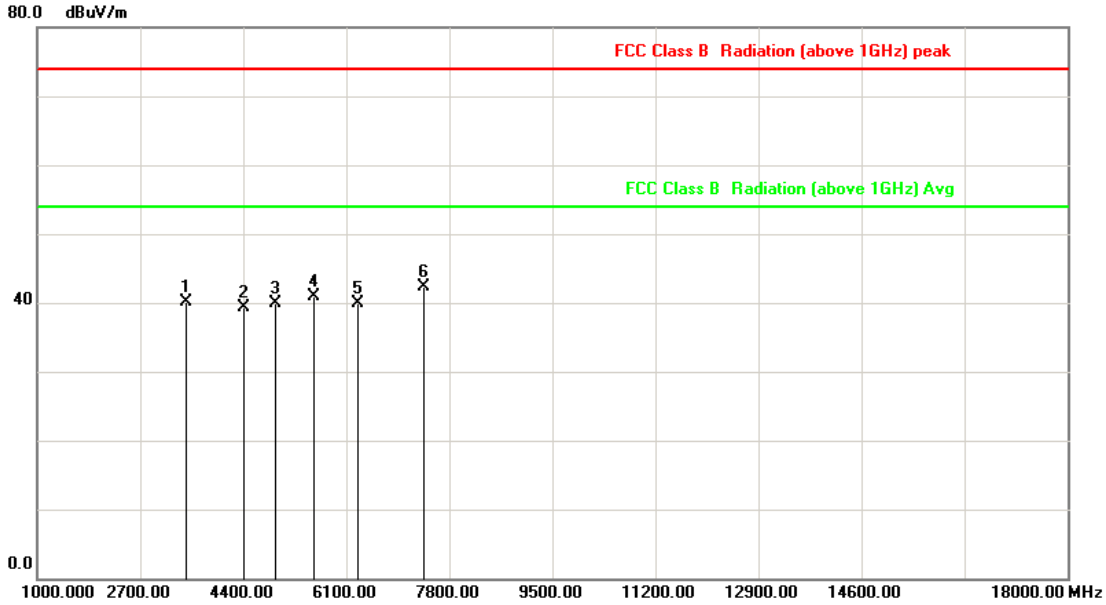
Note : Level = Reading + Factor
Margin = Level – Limit
Factor = Antenna Factor + Cable Loss – Amplifier Factor
The 18000MHz - 25000MHz spurious emission is under limit 20dB more.



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.
1	3295.000	-4.68	43.70	39.02	74.00	-34.98	peak
2	4400.000	0.15	39.96	40.11	74.00	-33.89	peak
3	4924.000	1.46	38.00	39.46	74.00	-34.54	peak
4	5618.333	2.31	38.45	40.76	74.00	-33.24	peak
5	6241.667	3.36	37.05	40.41	74.00	-33.59	peak
6	7386.000	6.59	35.87	42.46	74.00	-31.54	peak

Power	AC 120V/60Hz	Pol/Phase	HORIZONTAL
Test Mode	Mode 1, CH11	Operation mode	TX

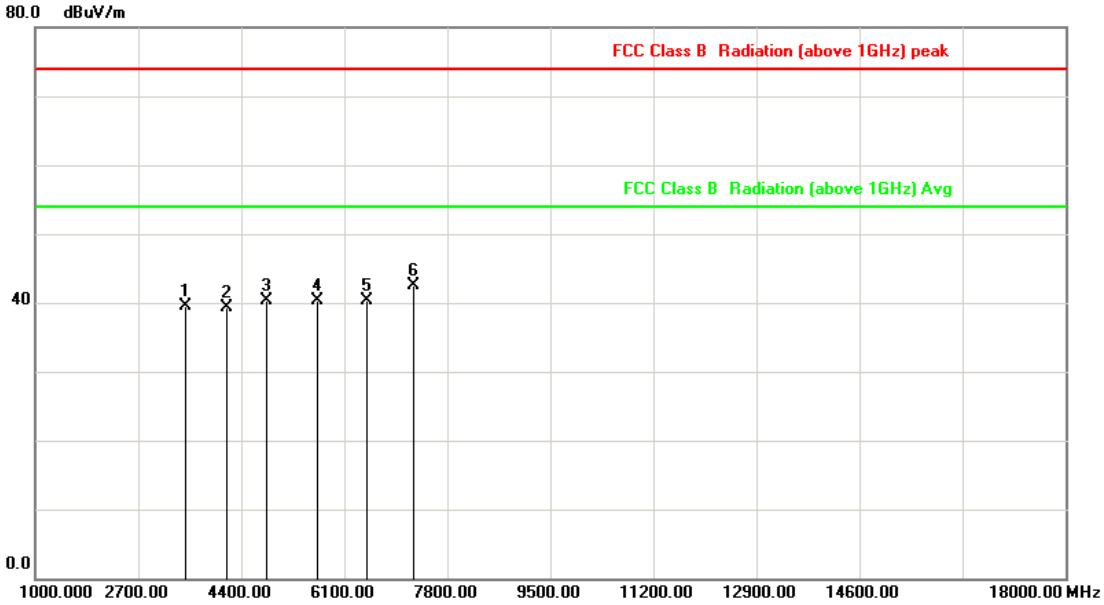
Note : Level = Reading + Factor
Margin = Level – Limit
Factor = Antenna Factor + Cable Loss – Amplifier Factor
The 18000MHz - 25000MHz spurious emission is under limit 20dB more.



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.
1	3465.000	-3.78	43.84	40.06	74.00	-33.94	peak
2	4400.000	0.15	39.24	39.39	74.00	-34.61	peak
3	4924.000	1.46	38.44	39.90	74.00	-34.10	peak
4	5561.667	2.17	38.72	40.89	74.00	-33.11	peak
5	6298.333	3.38	36.46	39.84	74.00	-34.16	peak
6	7386.000	6.59	35.81	42.40	74.00	-31.60	peak

Power	AC 120V/60Hz	Pol/Phase	VERTICAL
Test Mode	Mode 2, CH01	Operation mode	TX

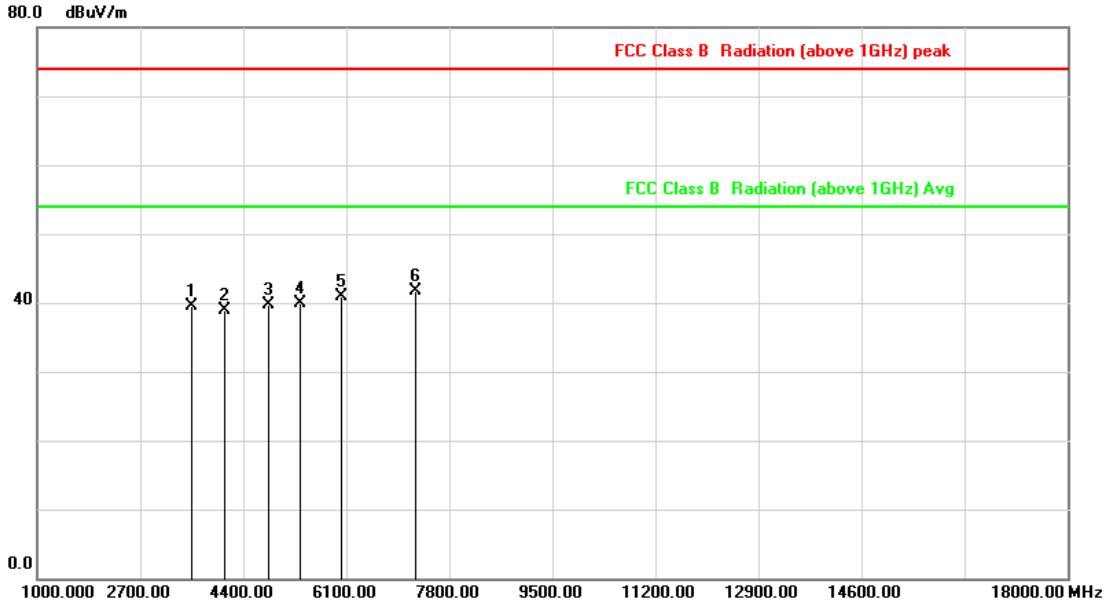
Note : Level = Reading + Factor
Margin = Level – Limit
Factor = Antenna Factor + Cable Loss – Amplifier Factor
The 18000MHz - 25000MHz spurious emission is under limit 20dB more.



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.
1	3493.333	-3.64	43.08	39.44	74.00	-34.56	peak
2	4173.333	-1.01	40.24	39.23	74.00	-34.77	peak
3	4824.000	1.27	39.08	40.35	74.00	-33.65	peak
4	5646.667	2.38	37.95	40.33	74.00	-33.67	peak
5	6468.333	3.45	36.76	40.21	74.00	-33.79	peak
6	7236.000	6.00	36.58	42.58	74.00	-31.42	peak

Power	AC 120V/60Hz	Pol/Phase	HORIZONTAL
Test Mode	Mode 2, CH01	Operation mode	TX

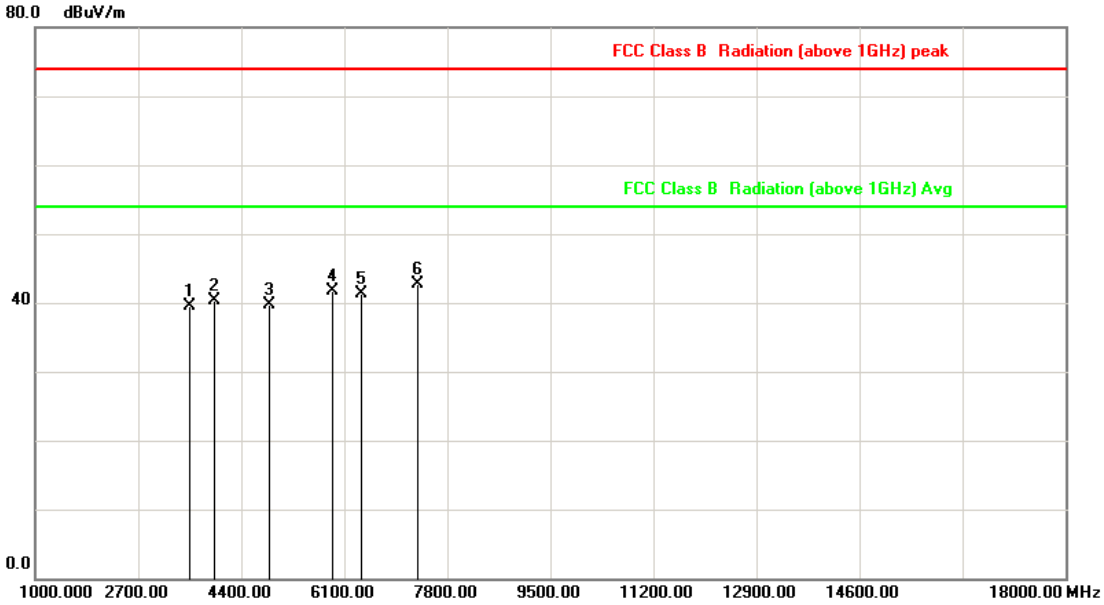
Note : Level = Reading + Factor
Margin = Level – Limit
Factor = Antenna Factor + Cable Loss – Amplifier Factor
The 18000MHz - 25000MHz spurious emission is under limit 20dB more.



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.
1	3550.000	-3.43	43.03	39.60	74.00	-34.40	peak
2	4088.333	-1.44	40.38	38.94	74.00	-35.06	peak
3	4824.000	1.27	38.36	39.63	74.00	-34.37	peak
4	5335.000	1.88	37.98	39.86	74.00	-34.14	peak
5	6015.000	3.27	37.55	40.82	74.00	-33.18	peak
6	7236.000	6.00	35.71	41.71	74.00	-32.29	peak

Power	AC 120V/60Hz	Pol/Phase	VERTICAL
Test Mode	Mode 2, CH06	Operation mode	TX

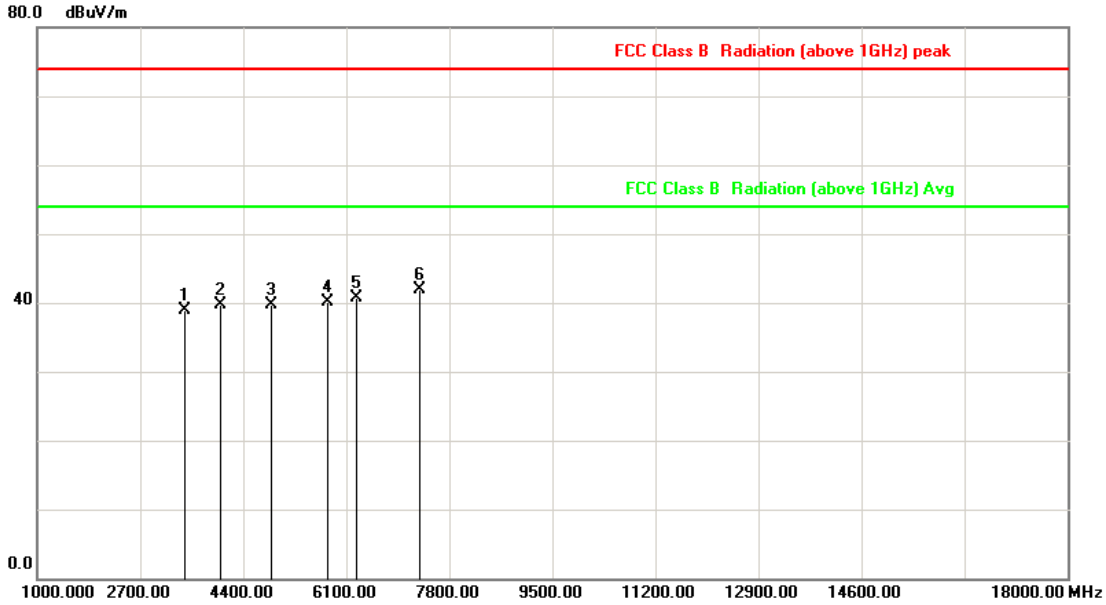
Note : Level = Reading + Factor
Margin = Level – Limit
Factor = Antenna Factor + Cable Loss – Amplifier Factor
The 18000MHz - 25000MHz spurious emission is under limit 20dB more.



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.
1	3550.000	-3.43	42.95	39.52	74.00	-34.48	peak
2	3946.667	-2.07	42.40	40.33	74.00	-33.67	peak
3	4874.000	1.36	38.37	39.73	74.00	-34.27	peak
4	5901.667	3.02	38.69	41.71	74.00	-32.29	peak
5	6383.333	3.41	37.89	41.30	74.00	-32.70	peak
6	7311.000	6.29	36.47	42.76	74.00	-31.24	peak

Power	AC 120V/60Hz	Pol/Phase	HORIZONTAL
Test Mode	Mode 2, CH06	Operation mode	TX

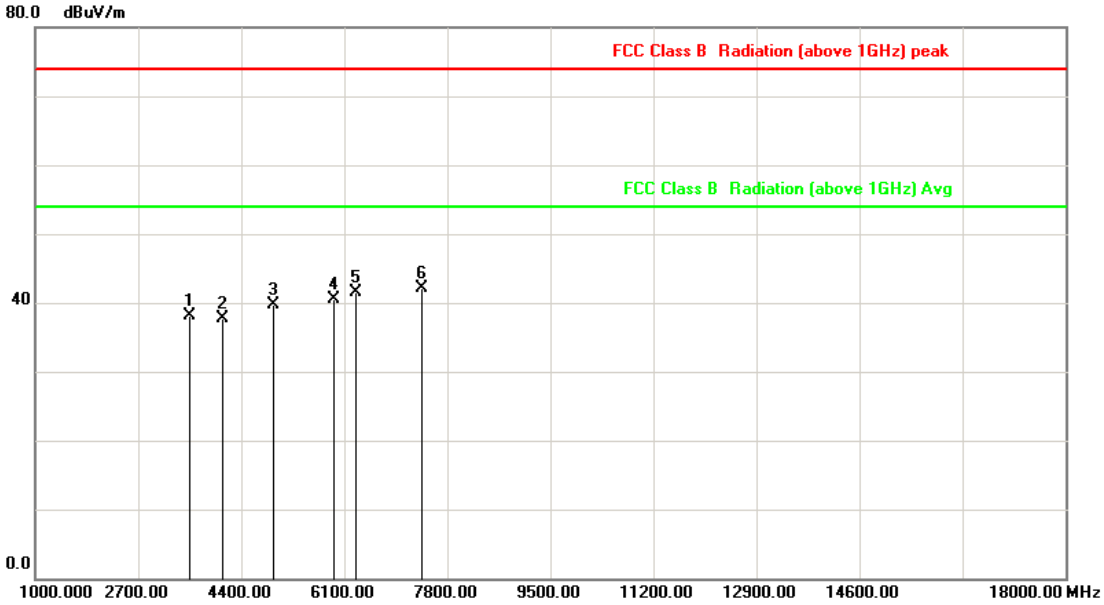
Note : Level = Reading + Factor
Margin = Level – Limit
Factor = Antenna Factor + Cable Loss – Amplifier Factor
The 18000MHz - 25000MHz spurious emission is under limit 20dB more.



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.
1	3436.667	-3.93	42.79	38.86	74.00	-35.14	peak
2	4031.667	-1.73	41.39	39.66	74.00	-34.34	peak
3	4874.000	1.36	38.26	39.62	74.00	-34.38	peak
4	5788.333	2.74	37.43	40.17	74.00	-33.83	peak
5	6270.000	3.37	37.43	40.80	74.00	-33.20	peak
6	7311.000	6.29	35.52	41.81	74.00	-32.19	peak

Power	AC 120V/60Hz	Pol/Phase	VERTICAL
Test Mode	Mode 2, CH11	Operation mode	TX

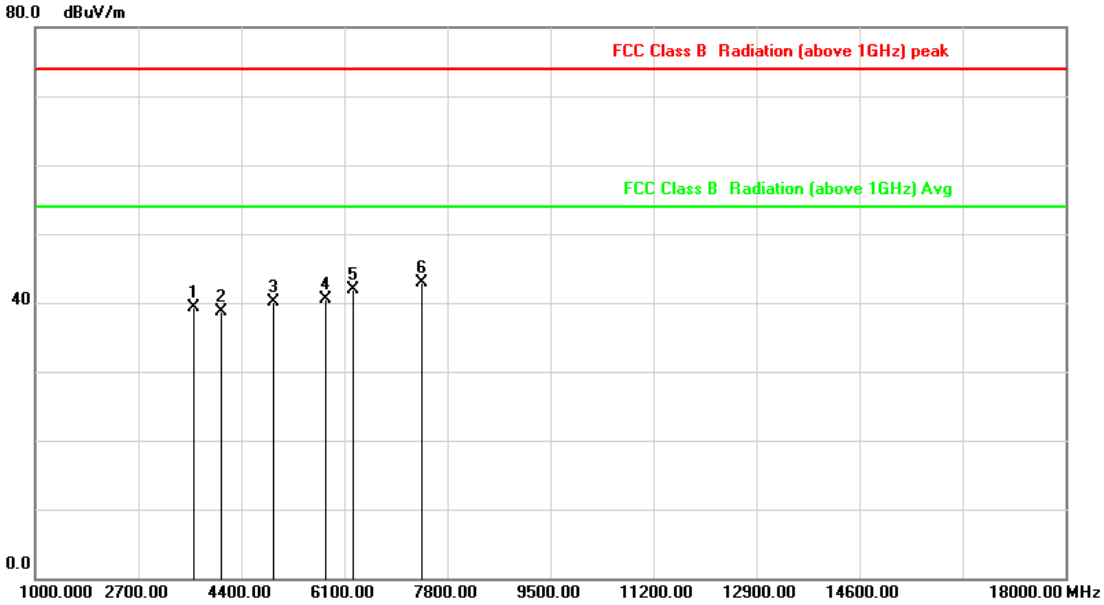
Note : Level = Reading + Factor
Margin = Level – Limit
Factor = Antenna Factor + Cable Loss – Amplifier Factor
The 18000MHz - 25000MHz spurious emission is under limit 20dB more.



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.
1	3550.000	-3.43	41.62	38.19	74.00	-35.81	peak
2	4088.333	-1.44	39.23	37.79	74.00	-36.21	peak
3	4924.000	1.46	38.33	39.79	74.00	-34.21	peak
4	5930.000	3.09	37.43	40.52	74.00	-33.48	peak
5	6298.333	3.38	38.17	41.55	74.00	-32.45	peak
6	7386.000	6.59	35.49	42.08	74.00	-31.92	peak

Power	AC 120V/60Hz	Pol/Phase	HORIZONTAL
Test Mode	Mode 2, CH11	Operation mode	TX

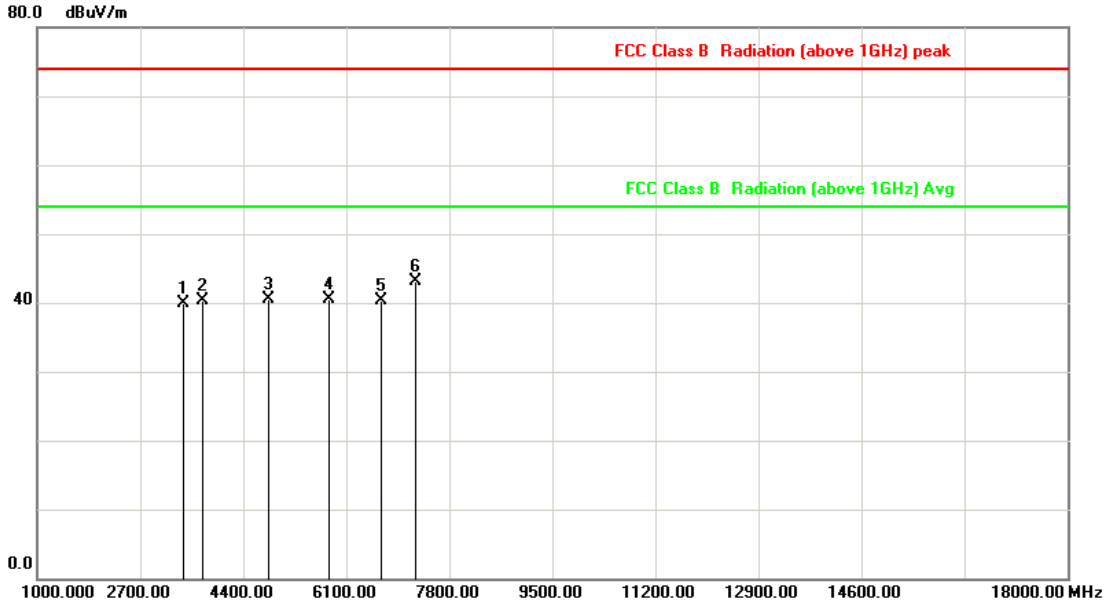
Note : Level = Reading + Factor
Margin = Level – Limit
Factor = Antenna Factor + Cable Loss – Amplifier Factor
The 18000MHz - 25000MHz spurious emission is under limit 20dB more.



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.
1	3606.667	-3.24	42.48	39.24	74.00	-34.76	peak
2	4060.000	-1.58	40.34	38.76	74.00	-35.24	peak
3	4924.000	1.46	38.67	40.13	74.00	-33.87	peak
4	5788.333	2.74	37.73	40.47	74.00	-33.53	peak
5	6241.667	3.36	38.62	41.98	74.00	-32.02	peak
6	7386.000	6.59	36.22	42.81	74.00	-31.19	peak

Power	AC 120V/60Hz	Pol/Phase	VERTICAL
Test Mode	Mode 3, CH01	Operation mode	TX

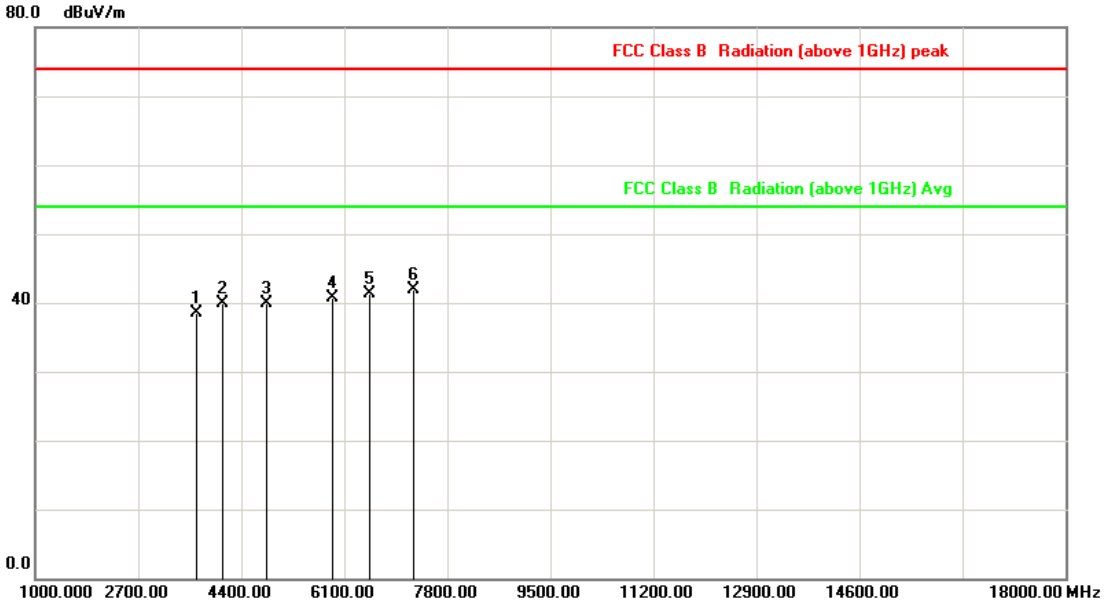
Note : Level = Reading + Factor
Margin = Level – Limit
Factor = Antenna Factor + Cable Loss – Amplifier Factor
The 18000MHz - 25000MHz spurious emission is under limit 20dB more.



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.
1	3408.333	-4.08	43.93	39.85	74.00	-34.15	peak
2	3720.000	-2.85	43.11	40.26	74.00	-33.74	peak
3	4824.000	1.27	39.27	40.54	74.00	-33.46	peak
4	5816.667	2.81	37.60	40.41	74.00	-33.59	peak
5	6666.667	4.00	36.30	40.30	74.00	-33.70	peak
6	7236.000	6.00	37.10	43.10	74.00	-30.90	peak

Power	AC 120V/60Hz	Pol/Phase	HORIZONTAL
Test Mode	Mode 3, CH01	Operation mode	TX

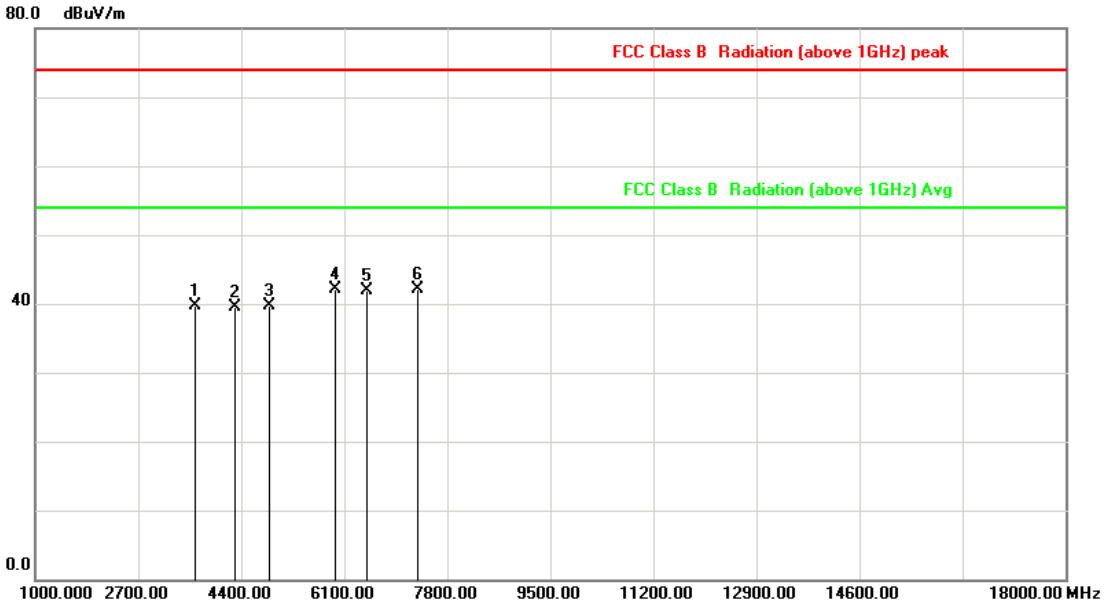
Note : Level = Reading + Factor
Margin = Level – Limit
Factor = Antenna Factor + Cable Loss – Amplifier Factor
The 18000MHz - 25000MHz spurious emission is under limit 20dB more.



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.
1	3663.333	-3.04	41.52	38.48	74.00	-35.52	peak
2	4088.333	-1.44	41.38	39.94	74.00	-34.06	peak
3	4824.000	1.27	38.67	39.94	74.00	-34.06	peak
4	5901.667	3.02	37.67	40.69	74.00	-33.31	peak
5	6525.000	3.54	37.80	41.34	74.00	-32.66	peak
6	7236.000	6.00	35.82	41.82	74.00	-32.18	peak

Power	AC 120V/60Hz	Pol/Phase	VERTICAL
Test Mode	Mode 3, CH06	Operation mode	TX

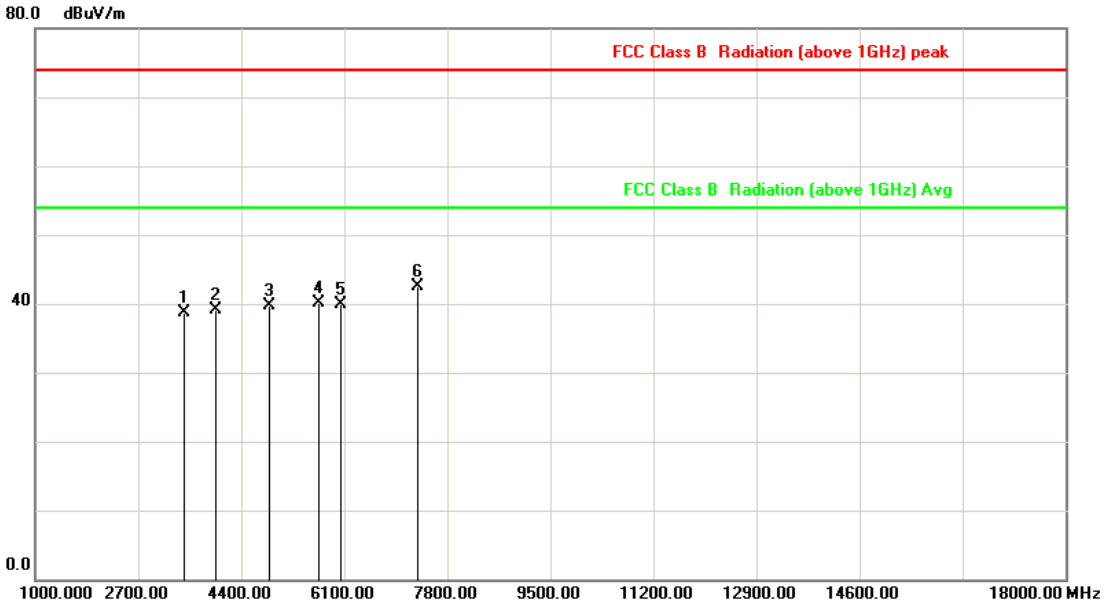
Note : Level = Reading + Factor
Margin = Level – Limit
Factor = Antenna Factor + Cable Loss – Amplifier Factor
The 18000MHz - 25000MHz spurious emission is under limit 20dB more.



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.
1	3635.000	-3.14	42.82	39.68	74.00	-34.32	peak
2	4286.667	-0.43	40.00	39.57	74.00	-34.43	peak
3	4874.000	1.36	38.38	39.74	74.00	-34.26	peak
4	5958.333	3.16	38.88	42.04	74.00	-31.96	peak
5	6468.333	3.45	38.49	41.94	74.00	-32.06	peak
6	7311.000	6.29	35.87	42.16	74.00	-31.84	peak

Power	AC 120V/60Hz	Pol/Phase	HORIZONTAL
Test Mode	Mode 3, CH06	Operation mode	TX

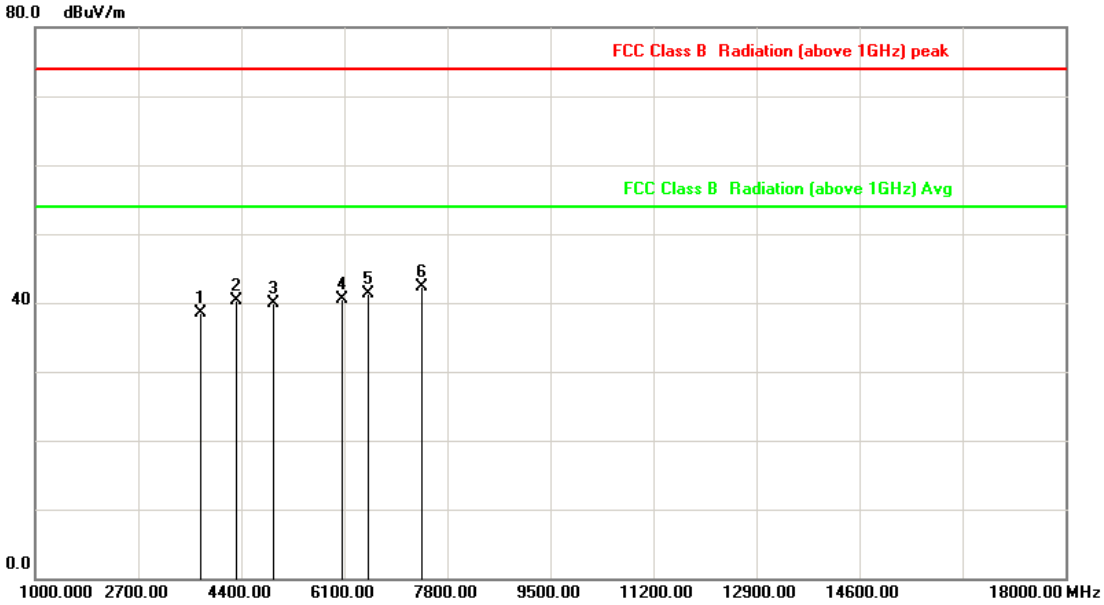
Note : Level = Reading + Factor
Margin = Level – Limit
Factor = Antenna Factor + Cable Loss – Amplifier Factor
The 18000MHz - 25000MHz spurious emission is under limit 20dB more.



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.
1	3465.000	-3.78	42.41	38.63	74.00	-35.37	peak
2	3975.000	-1.98	41.12	39.14	74.00	-34.86	peak
3	4874.000	1.36	38.41	39.77	74.00	-34.23	peak
4	5675.000	2.45	37.73	40.18	74.00	-33.82	peak
5	6043.333	3.28	36.59	39.87	74.00	-34.13	peak
6	7311.000	6.29	36.20	42.49	74.00	-31.51	peak

Power	AC 120V/60Hz	Pol/Phase	VERTICAL
Test Mode	Mode 3, CH11	Operation mode	TX

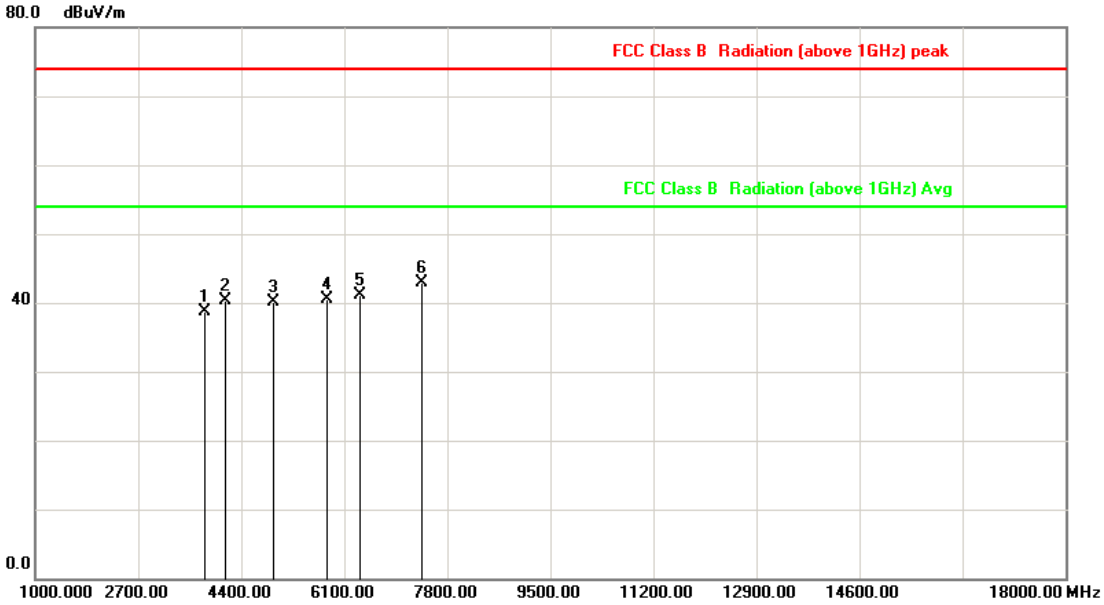
Note : Level = Reading + Factor
Margin = Level – Limit
Factor = Antenna Factor + Cable Loss – Amplifier Factor
The 18000MHz - 25000MHz spurious emission is under limit 20dB more.



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.
1	3720.000	-2.85	41.33	38.48	74.00	-35.52	peak
2	4315.000	-0.28	40.59	40.31	74.00	-33.69	peak
3	4924.000	1.46	38.39	39.85	74.00	-34.15	peak
4	6071.667	3.29	37.24	40.53	74.00	-33.47	peak
5	6496.667	3.46	37.77	41.23	74.00	-32.77	peak
6	7386.000	6.59	35.71	42.30	74.00	-31.70	peak

Power	AC 120V/60Hz	Pol/Phase	HORIZONTAL
Test Mode	Mode 3, CH11	Operation mode	TX

Note : Level = Reading + Factor
Margin = Level – Limit
Factor = Antenna Factor + Cable Loss – Amplifier Factor
The 18000MHz - 25000MHz spurious emission is under limit 20dB more.



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.
1	3805.000	-2.56	41.33	38.77	74.00	-35.23	peak
2	4145.000	-1.15	41.50	40.35	74.00	-33.65	peak
3	4924.000	1.46	38.56	40.02	74.00	-33.98	peak
4	5816.667	2.81	37.74	40.55	74.00	-33.45	peak
5	6355.000	3.40	37.78	41.18	74.00	-32.82	peak
6	7386.000	6.59	36.34	42.93	74.00	-31.07	peak

6.7 Restricted Bands of Operation

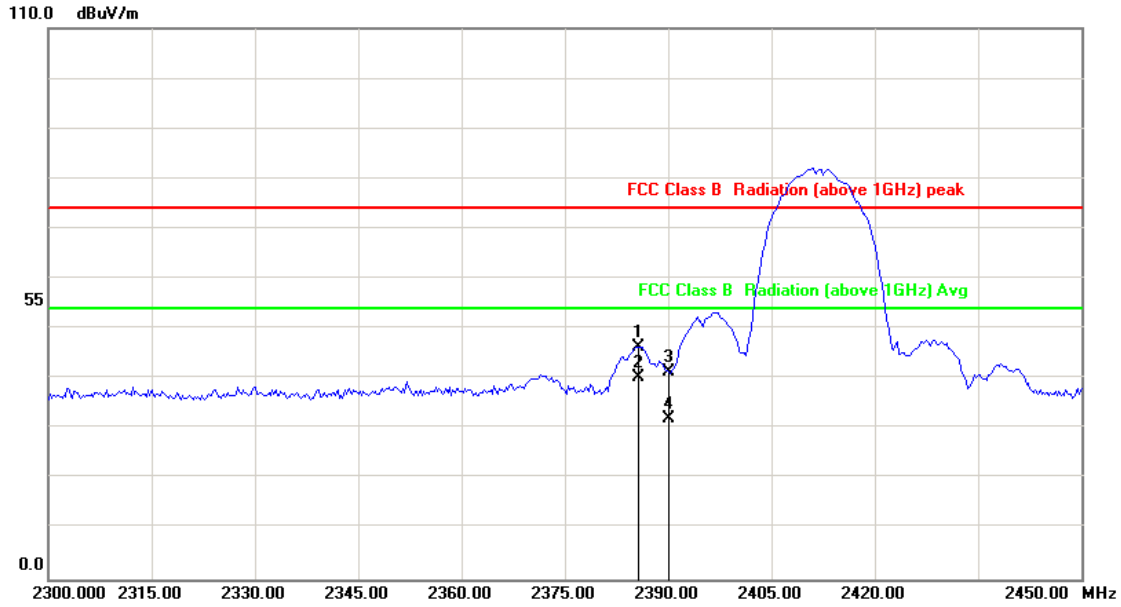
Only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz
0.09000 – 0.11000	16.42000 – 16.42300	399.9 – 410.0	4.500 – 5.250
0.49500 – 0.505**	16.69475 – 16.69525	608.0 – 614.0	5.350 – 5.460
2.17350 – 2.19050	16.80425 – 16.80475	960.0 – 1240.0	7.250 – 7.750
4.12500 – 4.12800	25.50000 – 25.67000	1300.0 – 1427.0	8.025 – 8.500
4.17725 – 4.17775	37.50000 – 38.25000	1435.0 – 1626.5	9.000 – 9.200
4.20725 – 4.20775	73.00000 – 74.60000	1645.5 – 1646.5	9.300 – 9.500
6.21500 – 6.21800	74.80000 – 75.20000	1660.0 – 1710.0	10.600 – 12.700
6.26775 – 6.26825	108.00000 – 121.94000	1718.8 – 1722.2	13.250 – 13.400
6.31175 – 6.31225	123.00000 – 138.00000	2200.0 – 2300.0	14.470 – 14.500
8.29100 – 8.29400	149.90000 – 150.05000	2310.0 – 2390.0	15.350 – 16.200
8.36200 – 8.36600	156.52475 – 156.52525	2483.5 – 2500.0	17.700 – 21.400
8.37625 – 8.38675	156.70000 – 156.90000	2655.0 – 2900.0	22.010 – 23.120
8.41425 – 8.41475	162.01250 – 167.17000	3260.0 – 3267.0	23.600 – 24.000
12.29000 – 12.29300	167.72000 – 173.20000	3332.0 – 3339.0	31.200 – 31.800
12.51975 – 12.52025	240.00000 – 285.00000	3345.8 – 3358.0	36.430 – 36.500
12.57675 – 12.57725	322.00000 – 335.40000	3600.0 – 4400.0	Above 38.6
13.36000 – 13.41000			

**: Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz

6.8 Restrict Band Emission Measurement Data

Power :	AC 120V/60Hz	Pol/Phase :	VERTICAL
Test Mode :	802.11b, CH01		

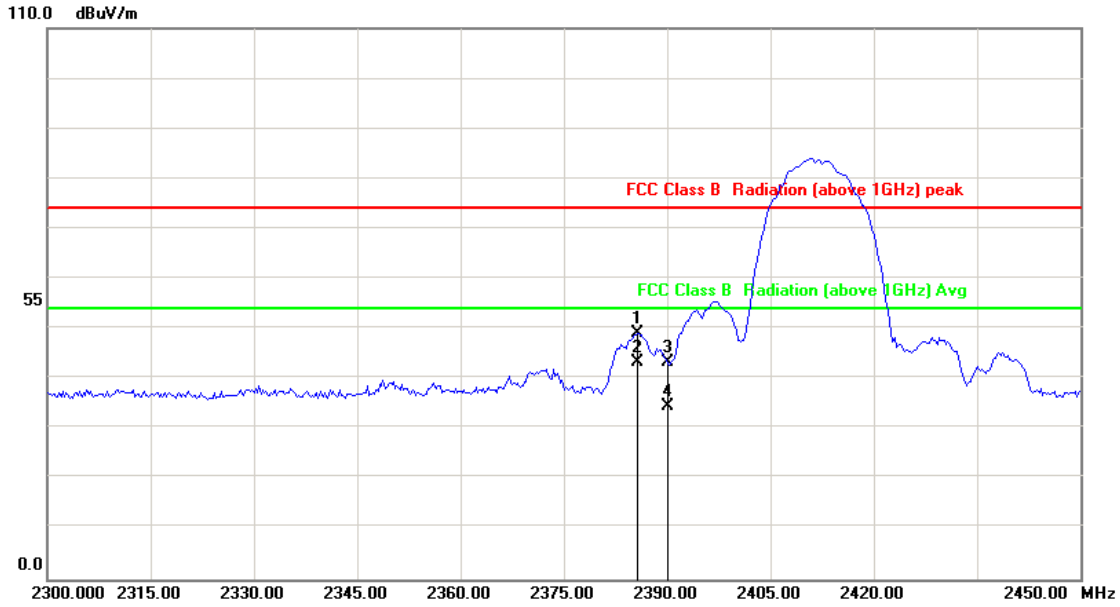


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2385.750	-10.07	56.51	46.44	74.00	-27.56	peak
2	2385.750	-10.07	50.27	40.20	54.00	-13.80	AVG
3	2390.000	-10.05	51.54	41.49	74.00	-32.51	peak
4	2390.000	-10.05	42.05	32.00	54.00	-22.00	AVG

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. Measurement Level = Reading Level + Correct Factor

Power :	AC 120V/60Hz	Pol/Phase :	HORIZONTAL
Test Mode :	802.11b, CH01		

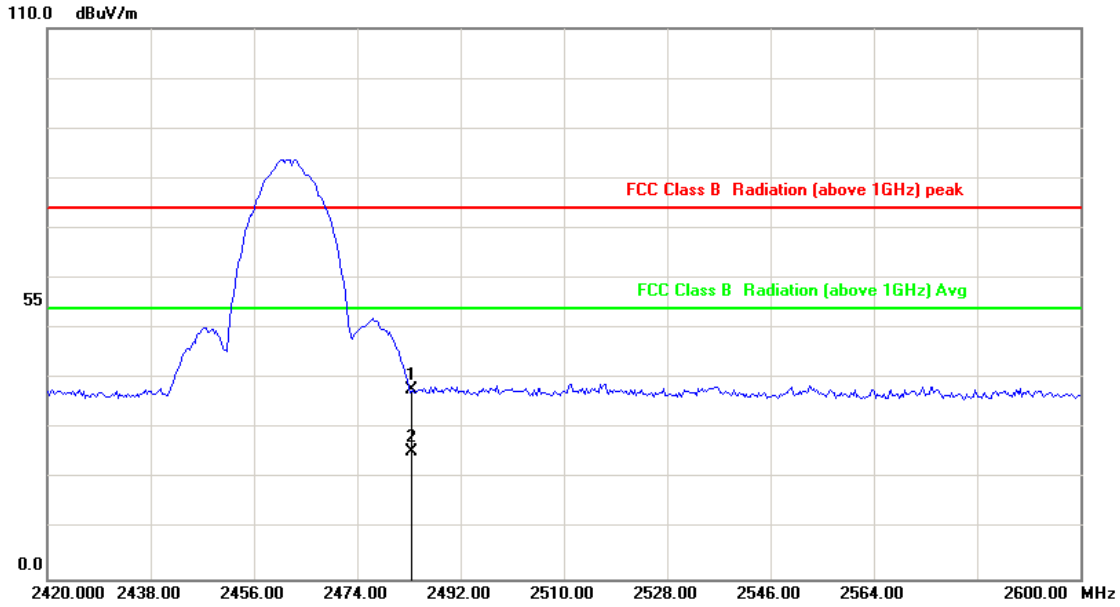


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2385.750	-10.07	59.13	49.06	74.00	-24.94	peak
2	2385.750	-10.07	53.35	43.28	54.00	-10.72	AVG
3	2390.000	-10.05	53.44	43.39	74.00	-30.61	peak
4	2390.000	-10.05	44.67	34.62	54.00	-19.38	AVG

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. Measurement Level = Reading Level + Correct Factor

Power :	AC 120V/60Hz	Pol/Phase :	VERTICAL
Test Mode :	802.11b, CH11		

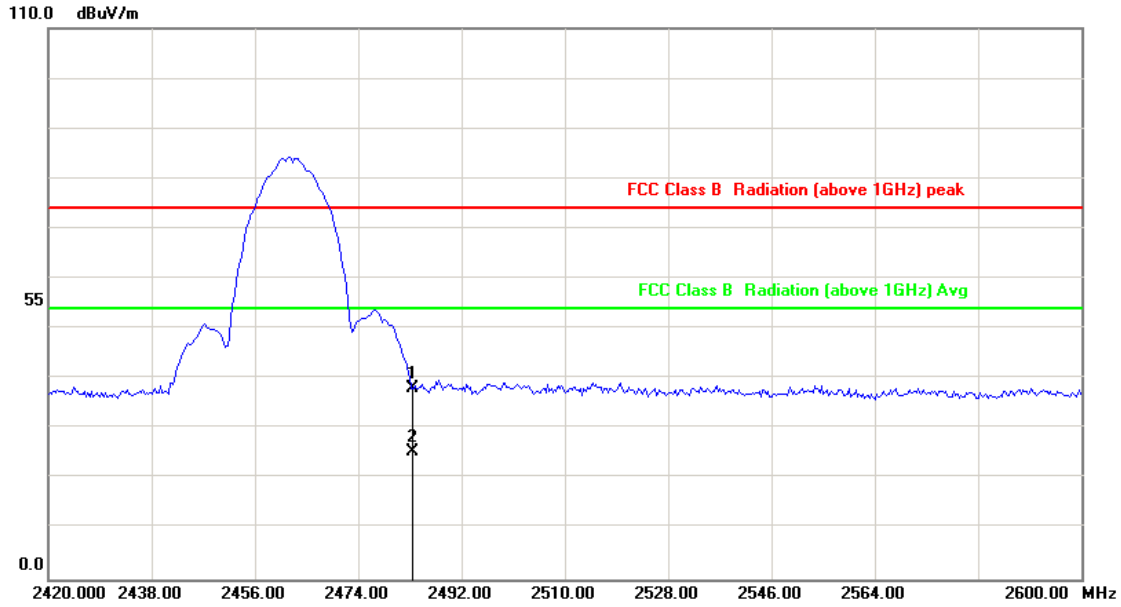


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2483.500	-9.65	47.48	37.83	74.00	-36.17	peak
2	2483.500	-9.65	35.02	25.37	54.00	-28.63	AVG

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. Measurement Level = Reading Level + Correct Factor

Power :	AC 120V/60Hz	Pol/Phase :	HORIZONTAL
Test Mode :	802.11b, CH11		

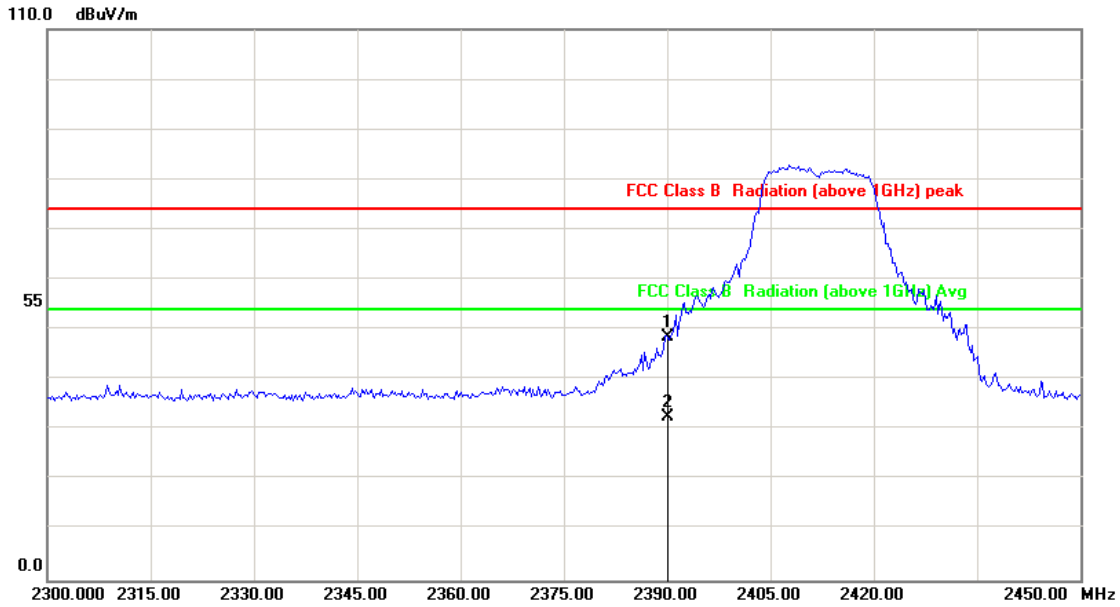


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2483.500	-9.65	47.85	38.20	74.00	-35.80	peak
2	2483.500	-9.65	35.06	25.41	54.00	-28.59	AVG

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. Measurement Level = Reading Level + Correct Factor

Power :	AC 120V/60Hz	Pol/Phase :	VERTICAL
Test Mode :	802.11g, CH01		

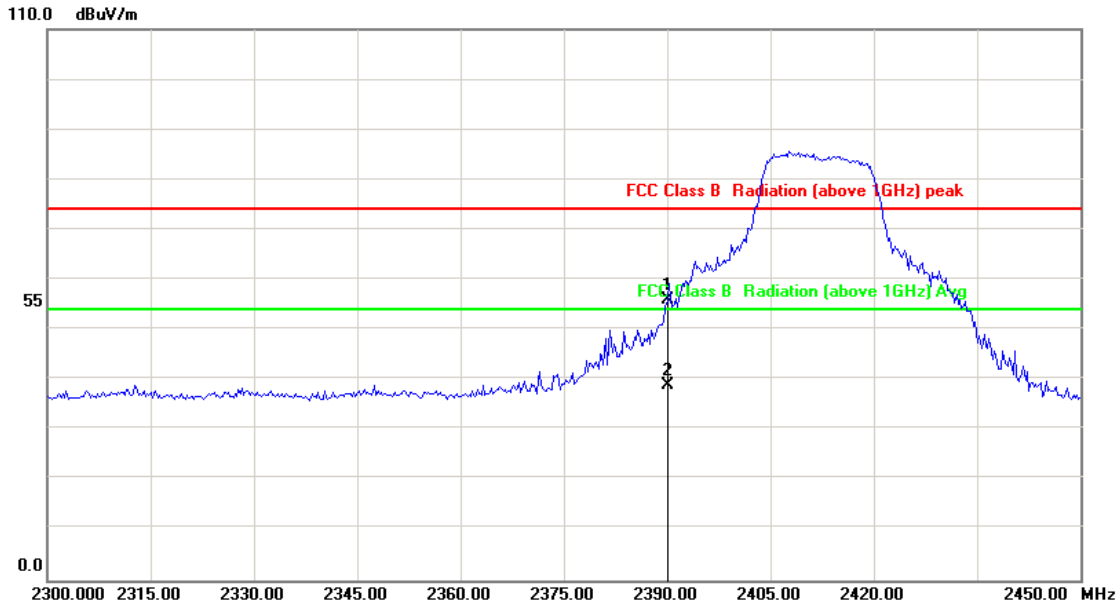


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2390.000	-10.05	58.55	48.50	74.00	-25.50	peak
2	2390.000	-10.05	42.61	32.56	54.00	-21.44	AVG

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. Measurement Level = Reading Level + Correct Factor

Power :	AC 120V/60Hz	Pol/Phase :	HORIZONTAL
Test Mode :	802.11g, CH01		

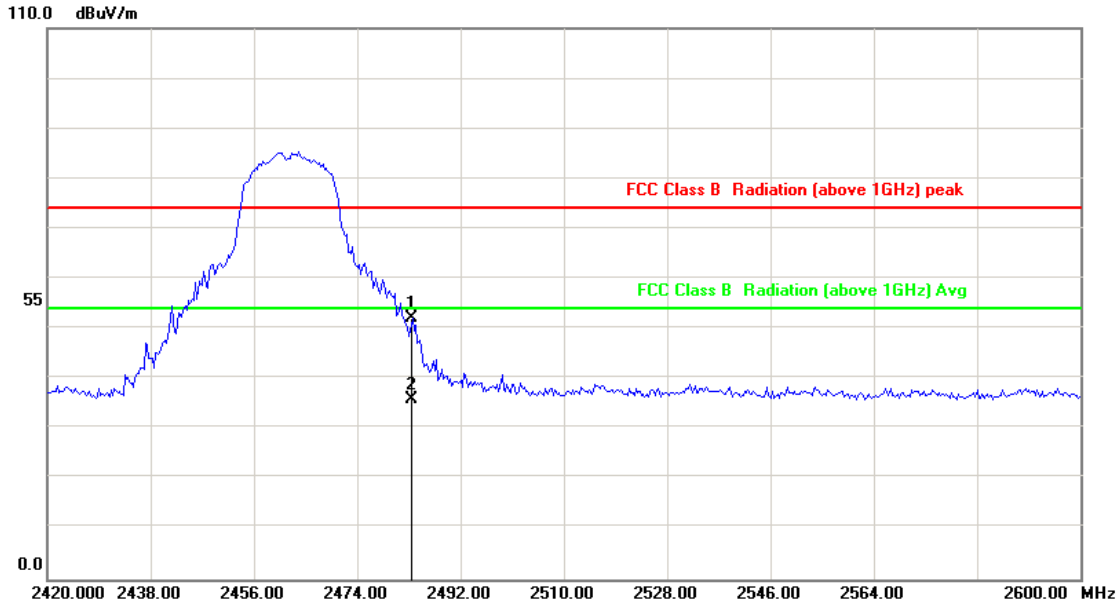


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2390.000	-10.05	65.96	55.91	74.00	-18.09	peak
2	2390.000	-10.05	49.00	38.95	54.00	-15.05	AVG

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. Measurement Level = Reading Level + Correct Factor

Power :	AC 120V/60Hz	Pol/Phase :	VERTICAL
Test Mode :	802.11g, CH11		

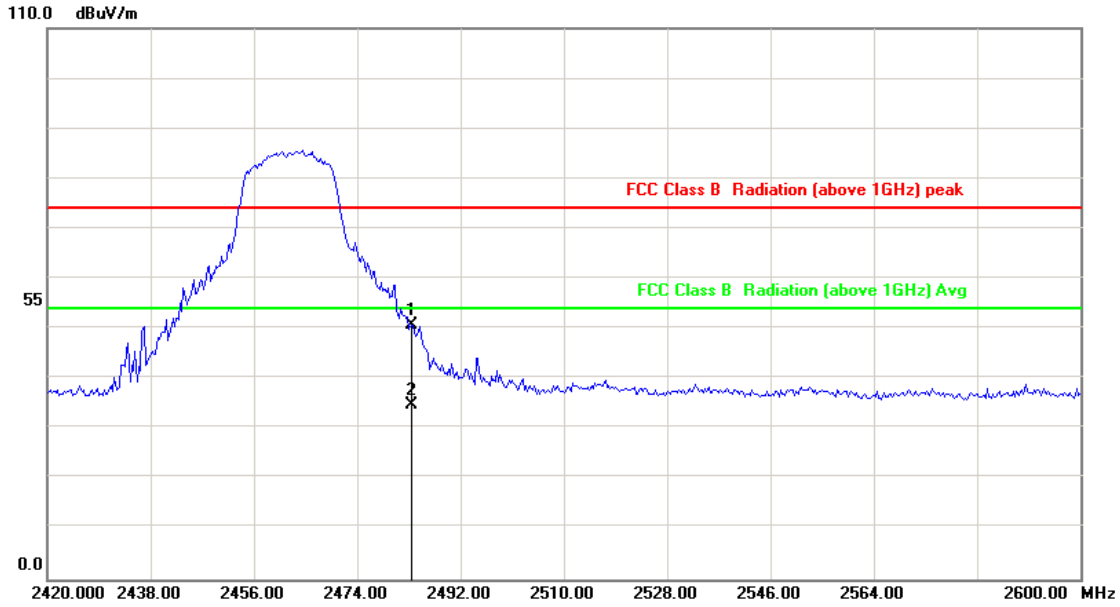


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2483.500	-9.65	61.71	52.06	74.00	-21.94	peak
2	2483.500	-9.65	45.51	35.86	54.00	-18.14	AVG

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. Measurement Level = Reading Level + Correct Factor

Power :	AC 120V/60Hz	Pol/Phase :	HORIZONTAL
Test Mode :	802.11g, CH11		

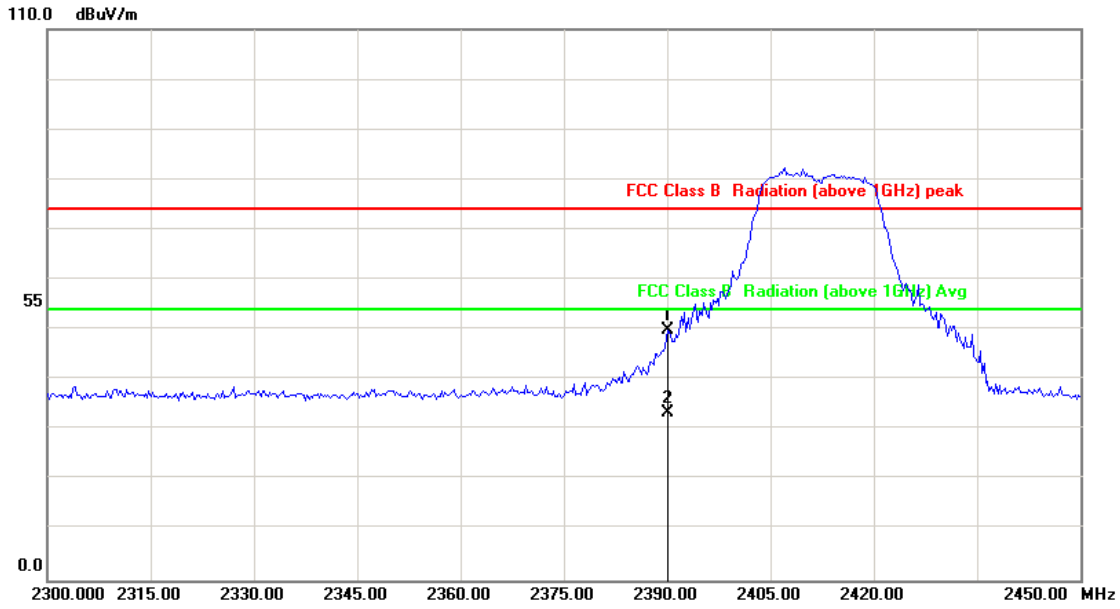


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2483.500	-9.65	60.49	50.84	74.00	-23.16	peak
2	2483.500	-9.65	44.43	34.78	54.00	-19.22	AVG

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. Measurement Level = Reading Level + Correct Factor

Power :	AC 120V/60Hz	Pol/Phase :	VERTICAL
Test Mode :	802.11n HT20, CH01		

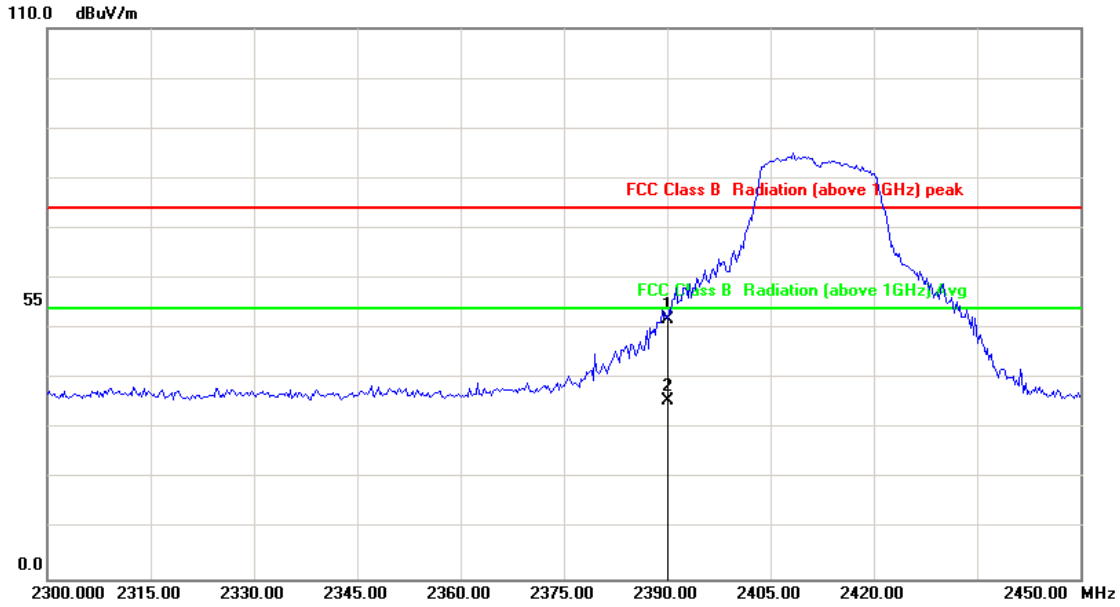


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2390.000	-10.05	60.01	49.96	74.00	-24.04	peak
2	2390.000	-10.05	43.55	33.50	54.00	-20.50	AVG

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. Measurement Level = Reading Level + Correct Factor

Power :	AC 120V/60Hz	Pol/Phase :	HORIZONTAL
Test Mode :	802.11n HT20, CH01		

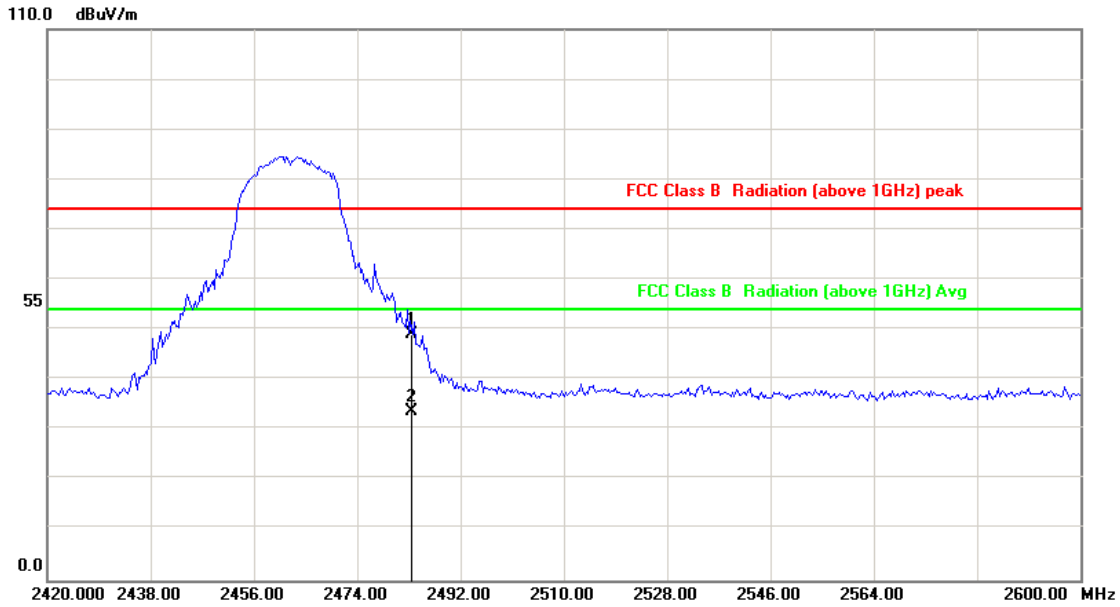


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2390.000	-10.05	61.77	51.72	74.00	-22.28	peak
2	2390.000	-10.05	45.79	35.74	54.00	-18.26	AVG

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. Measurement Level = Reading Level + Correct Factor

Power :	AC 120V/60Hz	Pol/Phase :	VERTICAL
Test Mode :	802.11n HT20, CH11		

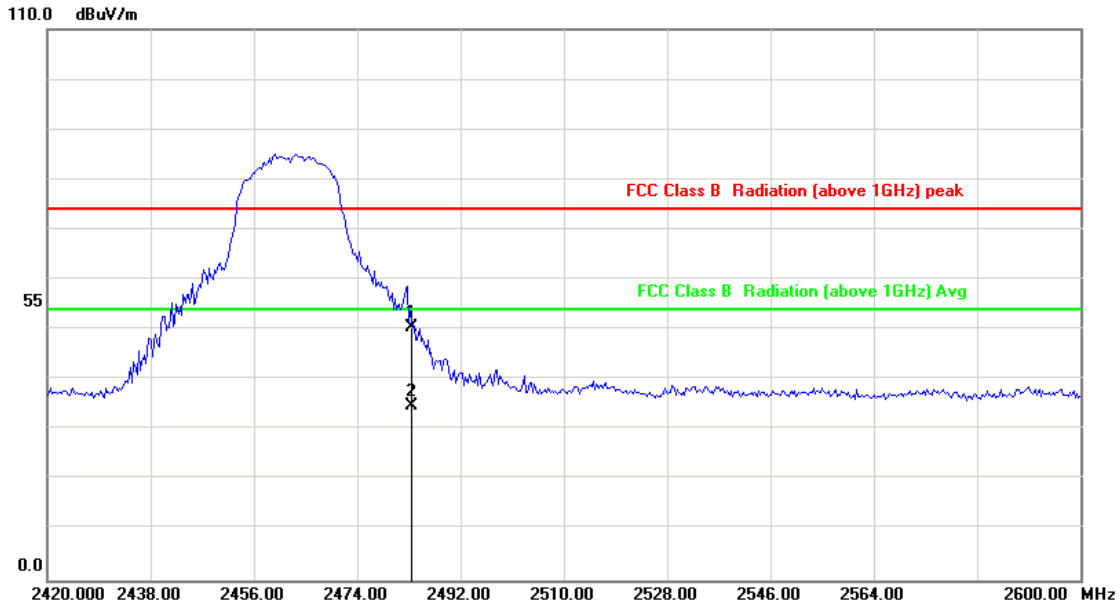


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2483.500	-9.65	58.62	48.97	74.00	-25.03	peak
2	2483.500	-9.65	43.43	33.78	54.00	-20.22	AVG

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. Measurement Level = Reading Level + Correct Factor

Power :	AC 120V/60Hz	Pol/Phase :	HORIZONTAL
Test Mode :	802.11n HT20, CH11		



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2483.500	-9.65	60.15	50.50	74.00	-23.50	peak
2	2483.500	-9.65	44.31	34.66	54.00	-19.34	AVG

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. Measurement Level = Reading Level + Correct Factor

7. Test of Spurious Emission (Conducted)

7.1 Test Limit

In any 100 kHz bandwidth outside of the authorized frequency band, the emissions which fall in the non-restricted bands shall be attenuated at least 20 dB / 30dB relative to the maximum PSD level in 100 kHz by RF conducted measurement and 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).

7.2 Test Procedure

KDB 558074 D01 DTS Meas Guidance v05r02

1. Reference level measurement

(a) Set instrument center frequency to DTS channel center frequency

(b) Set the span to ≥ 1.5 times the DTS bandwidth

(c) Set the RBW = 100 kHz

(d) Set the VBW ≥ 3 x RBW

(e) Detector = peak

(f) Sweep time = auto couple

(g) Trace mode = max hold

(h) Allow trace to fully stabilize

2. Emission level measurement

(a) Set the center frequency and span to encompass frequency range to be measured

(b) RBW = 100kHz

(c) VBW = 300kHz

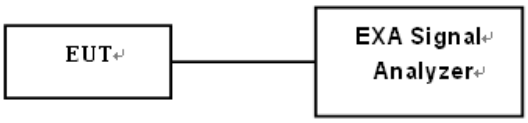
(d) Detector = Peak

(e) Trace mode = max hold

(f) Sweep time = auto couple

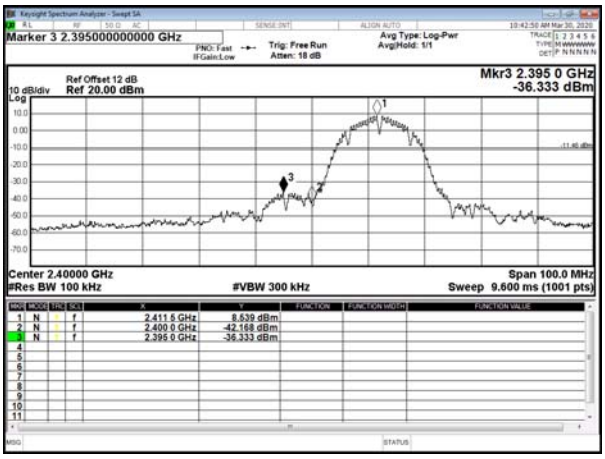
(g) The trace was allowed to stabilize

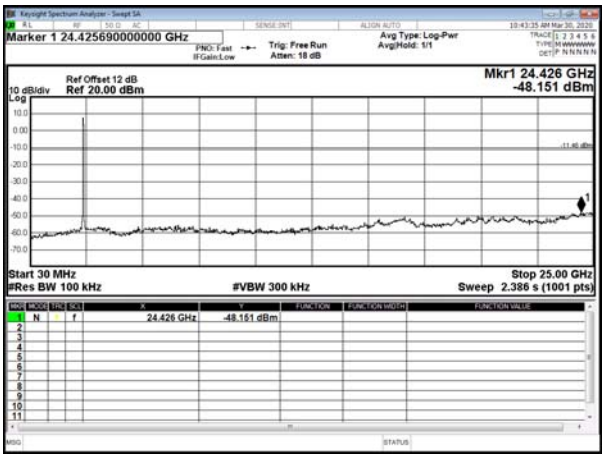
7.3 Test Setup Layout



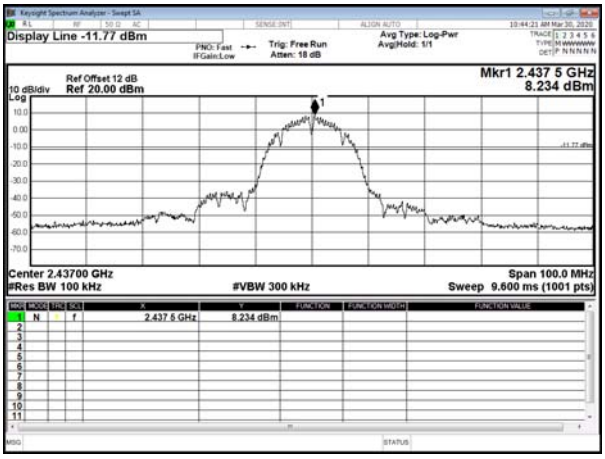
7.4 Test Result and Data

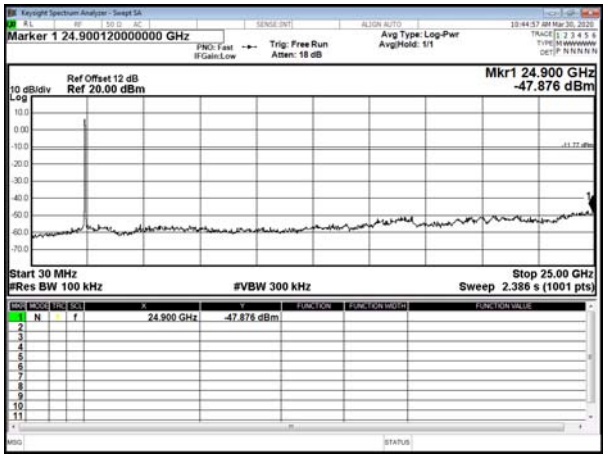
Modulation Standard: 802.11b
Channel: 01



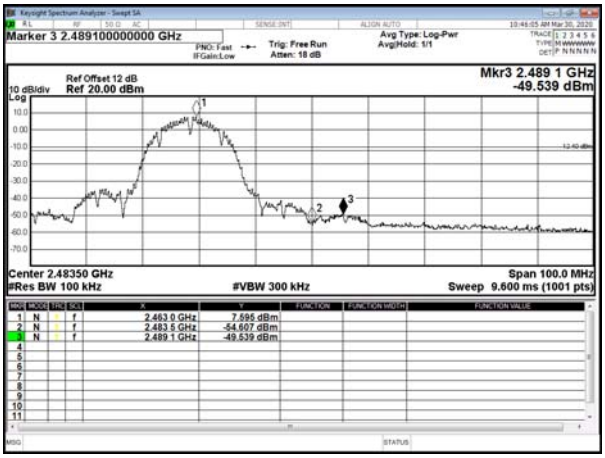


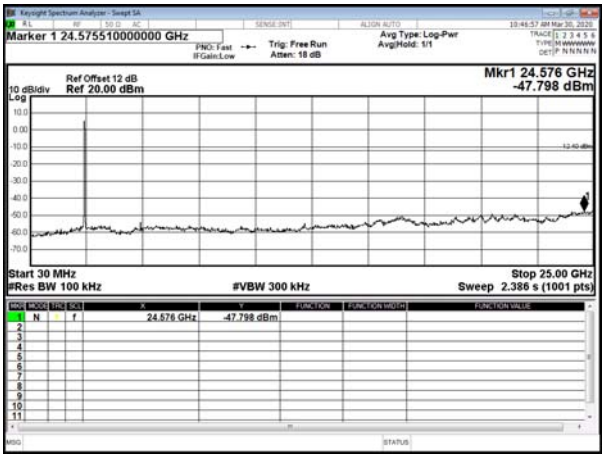
Modulation Standard: 802.11b
Channel: 06



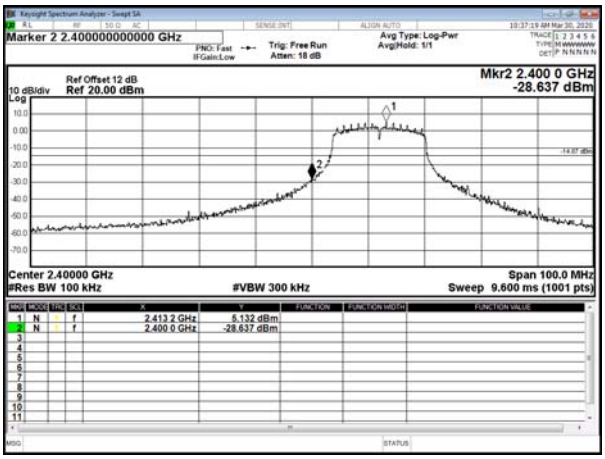


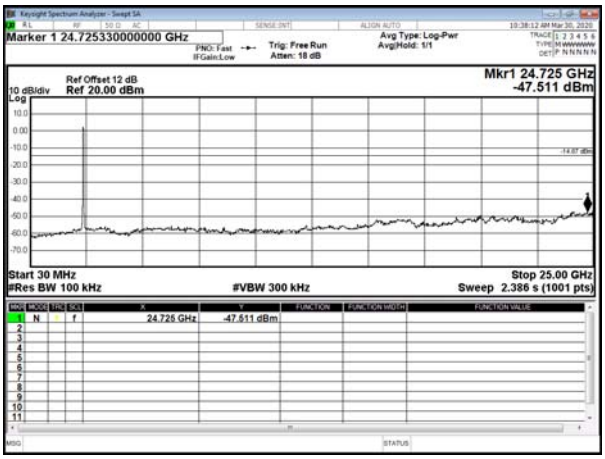
Modulation Standard: 802.11b
Channel: 11



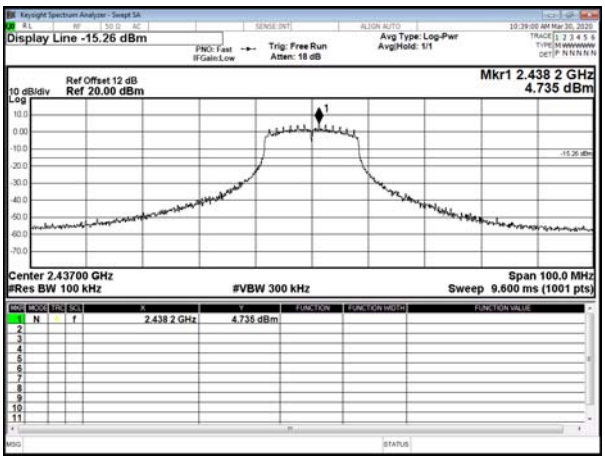


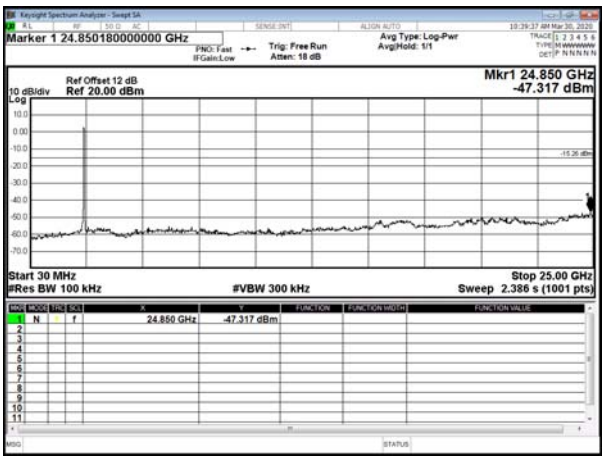
Modulation Standard: 802.11g
Channel: 01



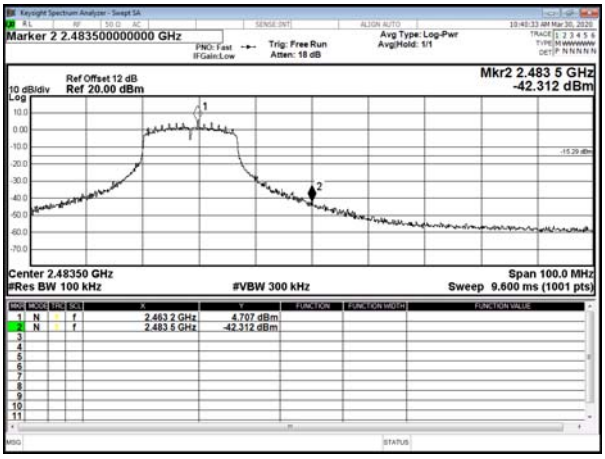


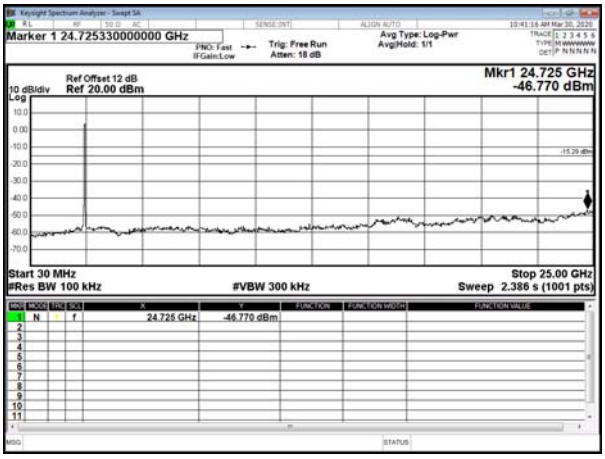
Modulation Standard: 802.11g
Channel: 06



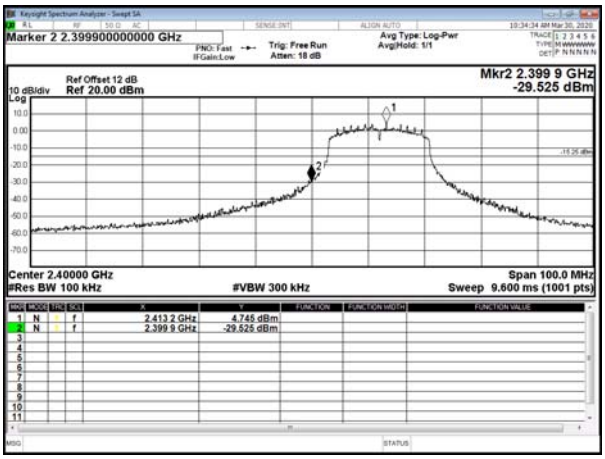


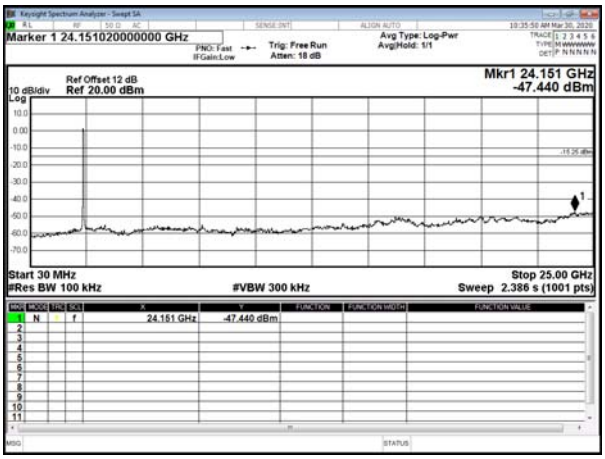
Modulation Standard: 802.11g
Channel: 11



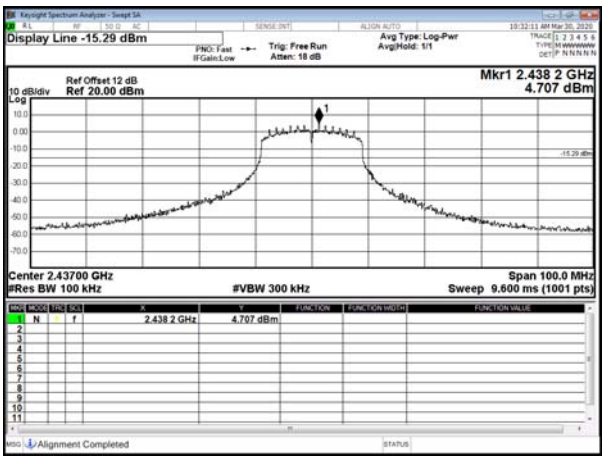


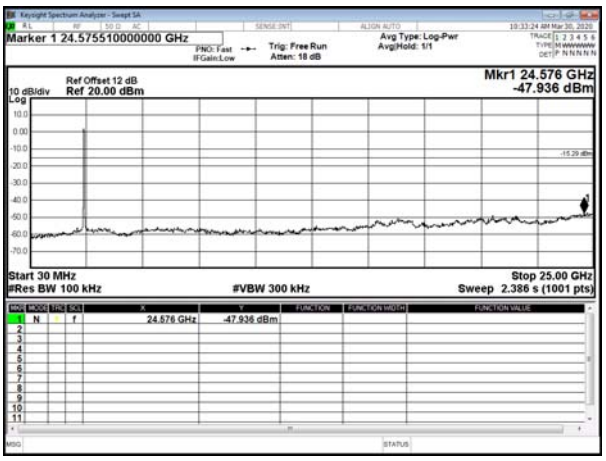
Modulation Standard: 802.11n HT20
Channel: 01



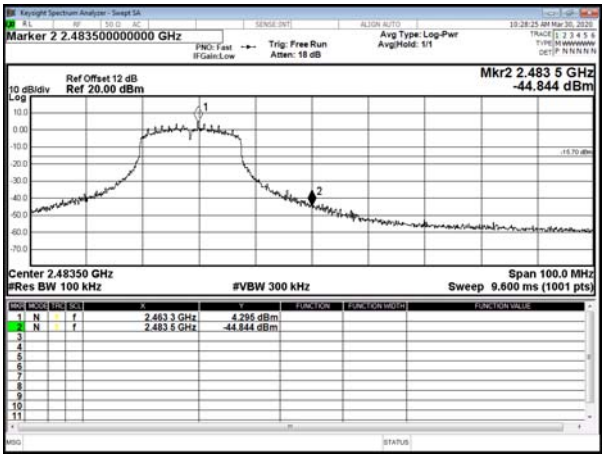


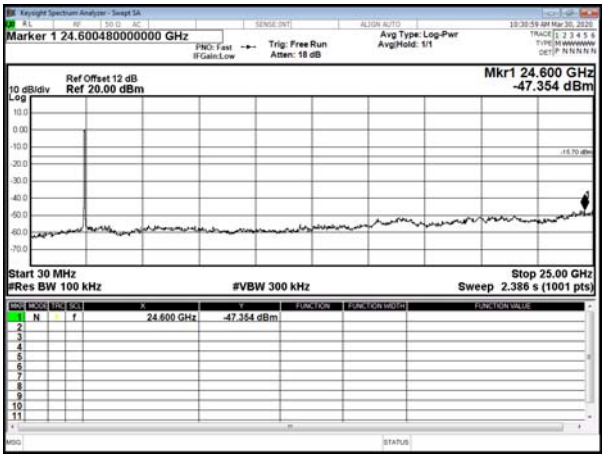
Modulation Standard: 802.11n HT20
Channel: 06





Modulation Standard: 802.11n HT20
Channel: 11





8. 6dB Bandwidth Measurement Data

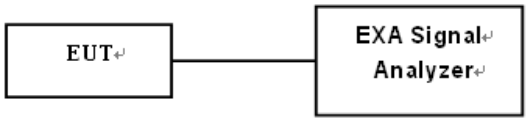
8.1 Test Limit

The minimum of 6dB Bandwidth Measurement is 0.5 MHz.

8.2 Test Procedures

a. The transmitter output was connected to the spectrum analyzer.
b. Set RBW of spectrum analyzer to 100 KHz and VBW to 300 KHz.
c. Set spectrum analyzer X dB to 6 dB.
d. Set spectrum analyzer peak detector with maximum hold.

8.3 Test Setup Layout

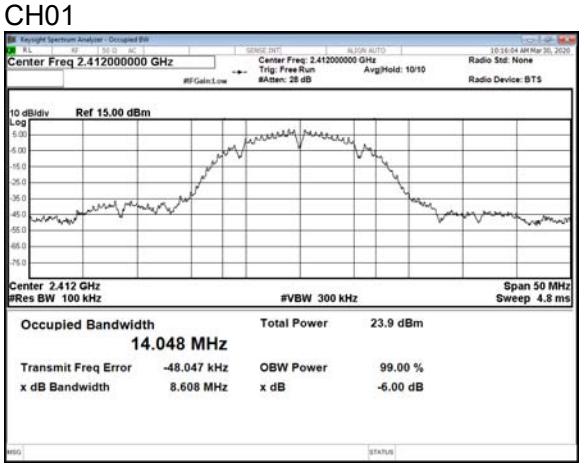


8.4 Test Result and Data

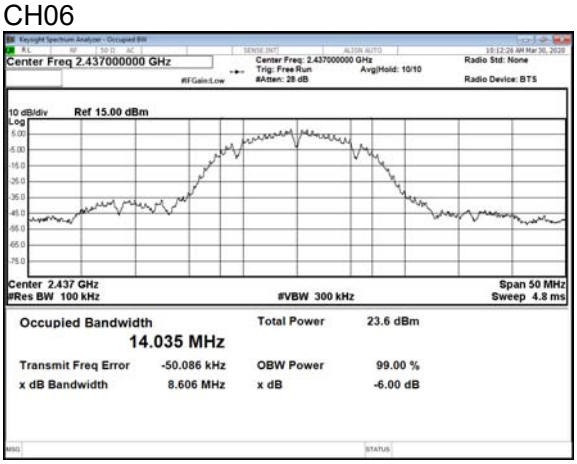
Modulation Type	Channel	Frequency (MHz)	6dB Bandwidth (MHz)
IEEE 802.11b	01	2412	8.608
	06	2437	8.606
	11	2462	9.563
IEEE 802.11g	01	2412	15.13
	06	2437	15.05
	11	2462	15.14
IEEE 802.11n HT20	01	2412	15.17
	06	2437	15.47
	11	2462	15.16

Modulation Type: 802.11b

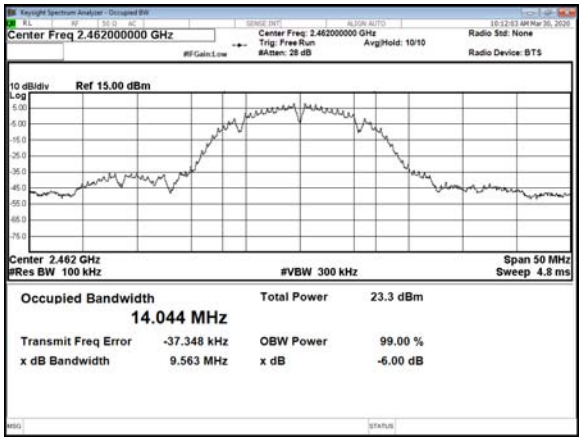
CH01



CH06

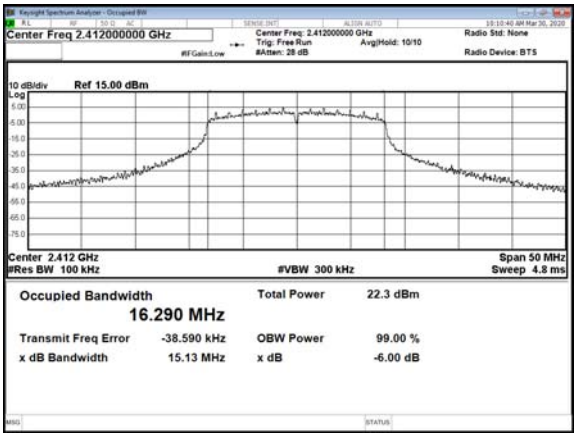


CH11

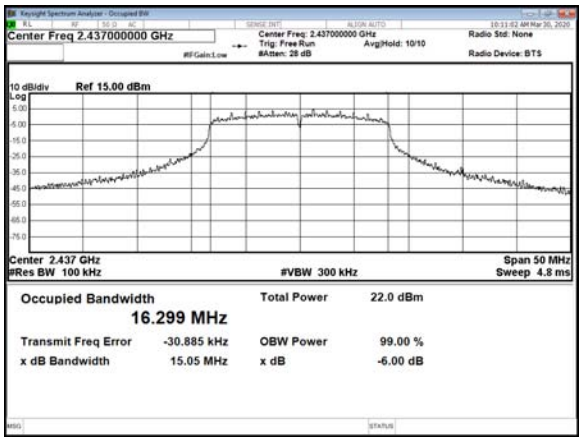


Modulation Type: 802.11g

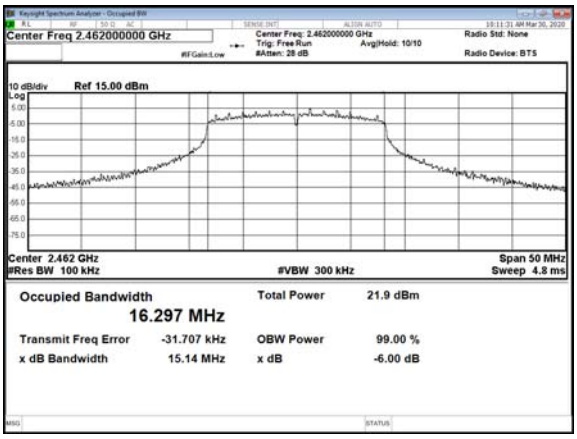
CH01



CH06

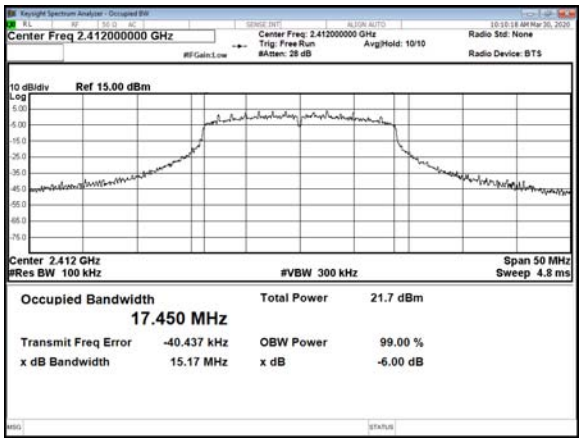


CH11

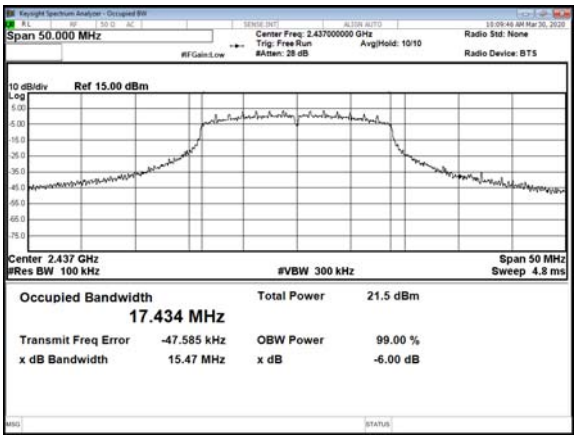


Modulation Type: 802.11n HT20

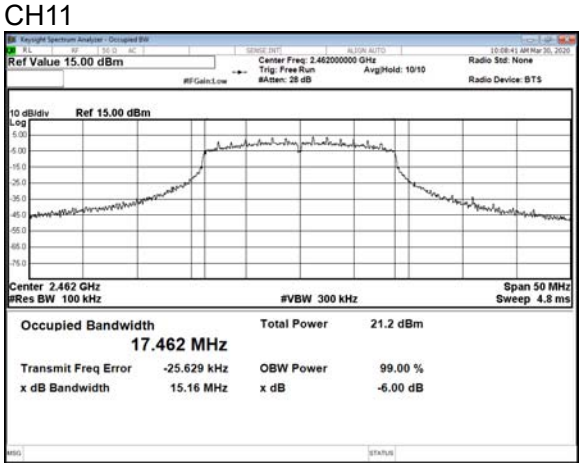
CH01



CH06



CH11



9. Maximum Peak Output Power

9.1 Test Limit

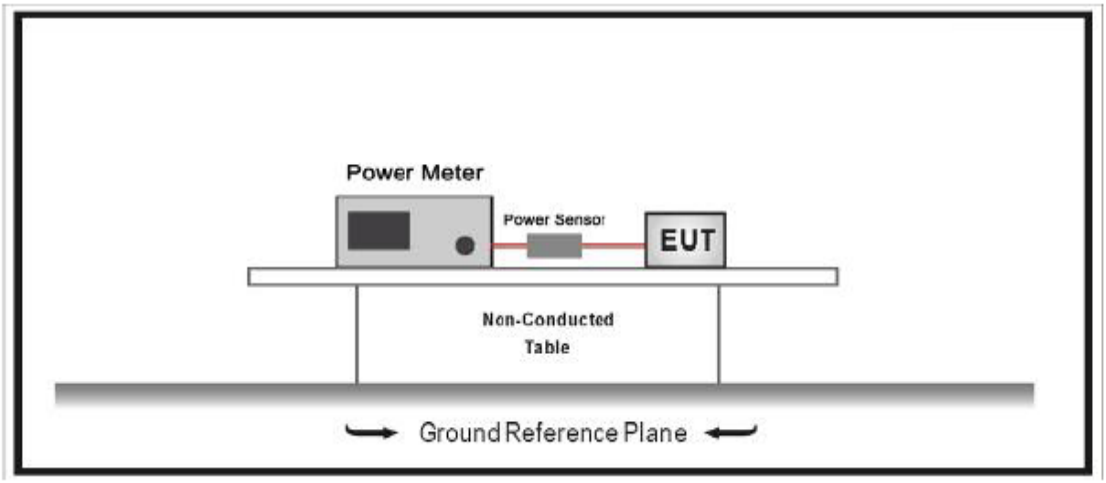
The Maximum Peak Output Power Measurement is 30dBm.

9.2 Test Procedures

Test procedure refers to KDB 558074 D01 DTS Meas Guidance v05r02 Peak power meter method.

The antenna port (RF output) of the EUT was connected to the input (RF input) of a power meter. Power was read directly from the meter and cable loss connection was added to the reading to obtain power at the EUT antenna terminal. The EUT Output Power was set to maximum to produce the worse case test result.

9.3 Test Setup Layout



9.4 Test Result and Data

Modulation Type	Frequency (MHz)	Peak Power (dBm)	Peak Power Output (mW)
IEEE 802.11b	2412	19.95	98.855
	2437	19.43	87.700
	2462	19.06	80.538
IEEE 802.11g	2412	23.43	220.293
	2437	23.00	199.526
	2462	22.81	190.985
IEEE 802.11n HT20	2412	22.64	183.654
	2437	22.41	174.181
	2462	22.09	161.808

10. Power Spectral Density

10.1 Test Limit

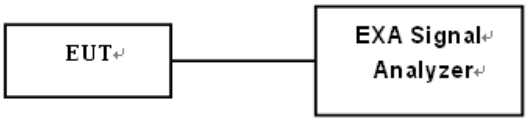
The Maximum of Power Spectral Density Measurement is 8dBm.

10.2 Test Procedures

Test procedure refers to section 11.10.2 Method PKPSD (peak PSD).

The following procedure shall be used if maximum peak conducted output power was used to determine compliance, and it is optional if the maximum conducted (average) output power was used to determine compliance:
a) Set analyzer center frequency to DTS channel center frequency.
b) Set the span to 1.5 times the DTS bandwidth.
c) Set the RBW to 3 kHz ≤ RBW ≤ 100 kHz.
d) Set the VBW ≥ [3 × RBW].
e) Detector = peak.
f) Sweep time = auto couple.
g) Trace mode = max hold.
h) Allow trace to fully stabilize.
i) Use the peak marker function to determine the maximum amplitude level within the RBW.
j) If measured value exceeds requirement, then reduce RBW (but no less than 3 kHz) and repeat.

10.3 Test Setup Layout

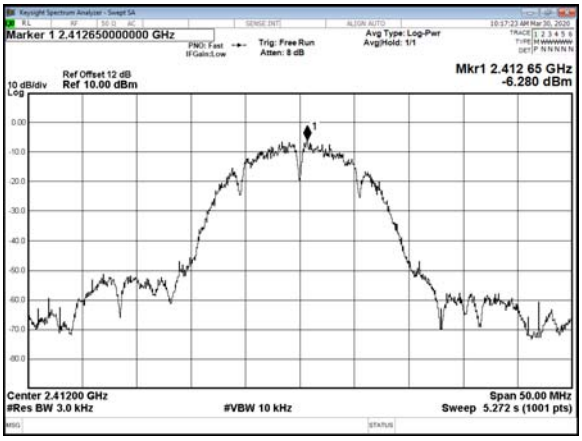


10.4 Test Result and Data

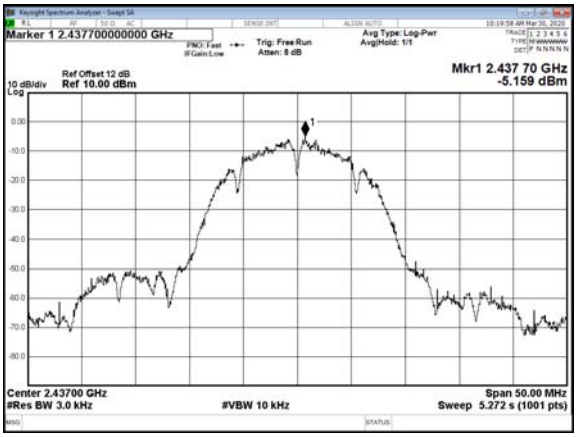
Modulation Type	Frequency (MHz)	Power Spectral Density (dBm)
IEEE 802.11b	2412	-6.28
	2437	-5.159
	2462	-6.067
IEEE 802.11g	2412	-9.118
	2437	-10.249
	2462	-9.778
IEEE 802.11n HT20	2412	-10.18
	2437	-10.527
	2462	-10.807

Modulation Type: 802.11b

CH01



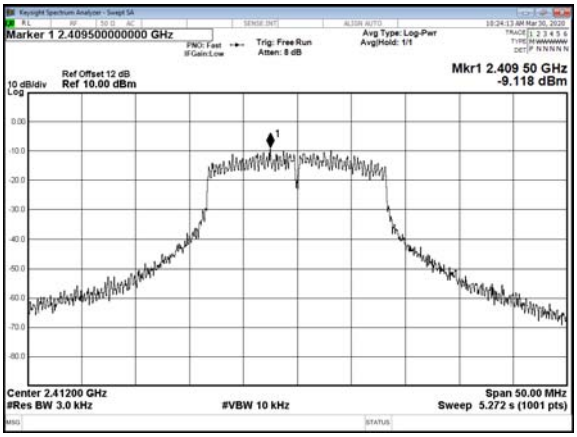
CH06



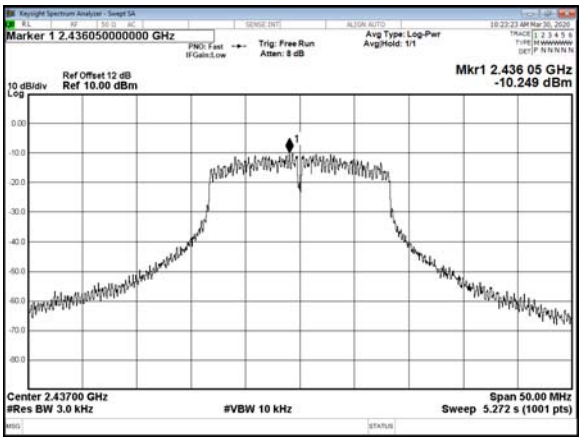
CH11

Modulation Type: 802.11g

CH01



CH06



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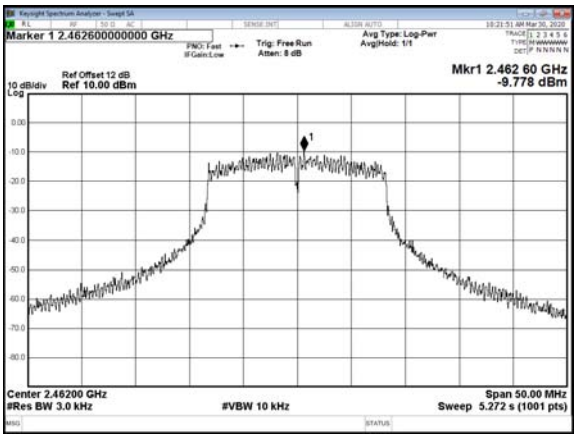
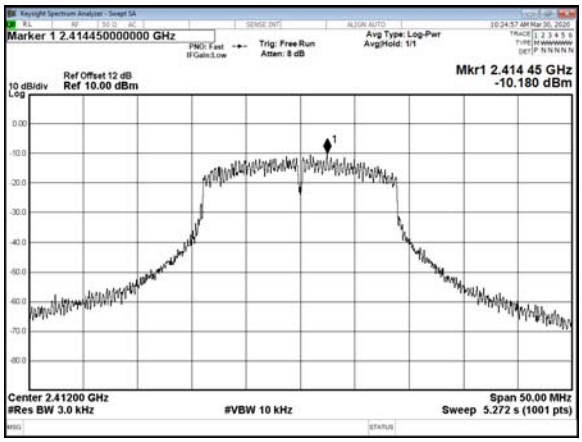


Modulation Type: 802.11n HT20

CH01



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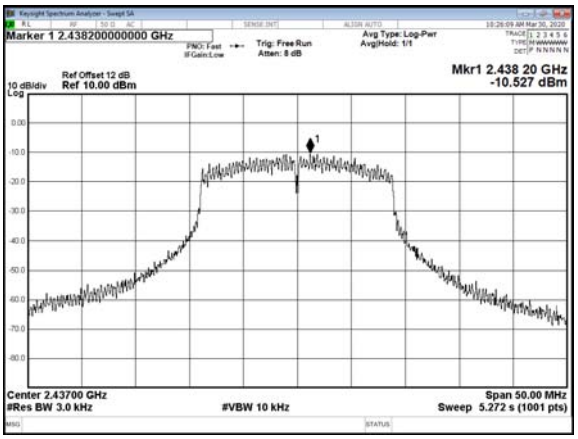
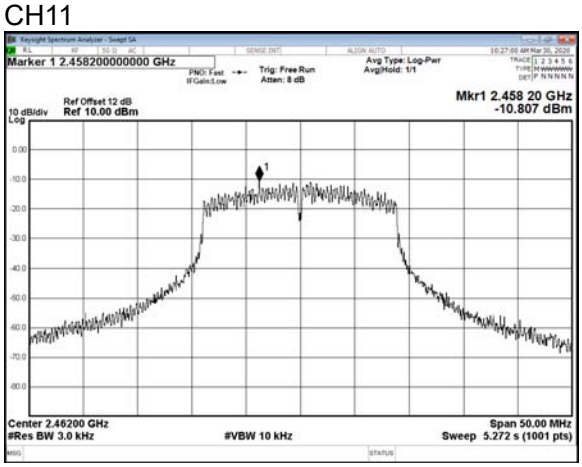


CH11



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