

FCC TEST REPORT

For

SHANGHAI MERIT TECHNOLOGY CORP.

2.4GHz radio system

Trade Name : MERITRC

Model No. : T2HF

FCC ID : XJ6T2HF

Frequency range : 2406-2475MHz

Number of Channel : 67CH

Type of antenna : Internal monopole Antenna,

Type of Modulation : FHSS

Applicant : SHANGHAI MERIT TECHNOLOGY CORP.
1058 TAOGAN ROAD, SHESHAN TOWN, SONGJIANG,
SHANGHAI, CHINA 201602

Regulation : **FCC Part 15.247 Subpart C**

Prepared by : Shenzhen AOV Testing Technology Co., Ltd.
2-6/F, No.5, Yuantou Lane, Tanglang, Taoyuan Street,
Nanshan District, Shenzhen, Guangdong, China

Test Date : July 20-21, 2010

Date of Report : July 22, 2010

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TEST REPORT DECLARATION

Applicant : SHANGHAI MERIT TECHNOLOGY CORP.
 Manufacturer : SHANGHAI MERIT TECHNOLOGY CORP.
 EUT Description : 2.4GHz radio system

Test Procedure Used:

FCC Part 15.247 Subpart C

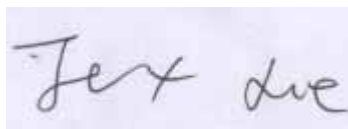
The E. U. T. listed below has been completed RF testing by Shenzhen AOV Testing Technology Co., Ltd. at the test site of Bontek Compliance Testing Laboratory Ltd. And the Interference emissions can pass **FCC Part 15 Subpart B** limitations.

The test configurations and the facility comply with the radiated test site criteria in **ANSI C63.4-2003**.

Date of Test:

July 20-21, 2010

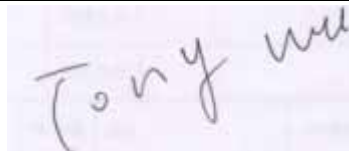
Name of the organization
performing the tests by:



Felix XIE

Engineer
 Bontek Compliance Testing Laboratory Ltd.

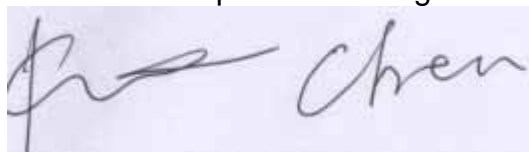
Reviewed by:



Tony WU

Manager
 Bontek Compliance Testing Laboratory Ltd.

Reviewed by:



Kait CHEN

Project Manager
 Shenzhen AOV Testing Technology Co., Ltd.

1. TEST PROCEDURES AND RESULTS

FCC Rules	Description of Test	Result
Section 15.247(b)(1)	MAXIMUM PEAK OUTPUT POWER	Compliant
Section 15.247(a)(1)	hopping channel separation and BANDWIDTH	Compliant
Section 15.247(a)(1)(iii)	Number of hopping frequency	Compliant
Section 15.247(d)	BAND EDGE	Compliant
Section 15.247(a)(1)	20db bANDWIDTH	Compliant
Section 15.247(a)(1)(iii)	DWELL TIME	Compliant
Section 15.247(d) Section 15.209	RADIATED EMISSION	Compliant
15.247(b)(4)	RF Exposure Compliance Requirement	Compliant
Section 15.203	ANTENNA REQUIREMENT	Compliant

POWER OUTPUT:

Use the following spectrum analyzer settings:

Span = approximately 5 times the 20 dB bandwidth, centered on a hopping channel

RBW > the 20 dB bandwidth of the emission being measured

VBW ≥ RBW

Sweep = auto

Detector function = peak

Trace = max hold

Allow the trace to stabilize. Use the marker-to-peak function to set the marker to the peak of the emission. The indicated level is the peak output power (see the NOTE above regarding external attenuation and cable loss). The limit is specified in one of the subparagraphs of this Section. Submit this plot. A peak responding power meter may be used instead of a spectrum analyzer.

Hopping channel separation and BANDWIDTH:

The EUT must have its hopping function enabled. Use the following spectrum analyzer settings:

Span = wide enough to capture the peaks of two adjacent channels

Resolution (or IF) Bandwidth (RBW) ≥ 1% of the span

Video (or Average) Bandwidth (VBW) ≥ RBW

Sweep = auto

Detector function = peak

Trace = max hold

Allow the trace to stabilize. Use the marker-delta function to determine the separation between the peaks of the adjacent channels. The limit is specified in one of the subparagraphs of this Section. Submit this plot.

Number of hopping frequency:

The EUT must have its hopping function enabled. Use the following spectrum analyzer settings:

Span = the frequency band of operation

RBW \geq 1% of the span

VBW \geq RBW

Sweep = auto

Detector function = peak

Trace = max hold

Allow the trace to stabilize. It may prove necessary to break the span up to sections, in order to clearly show all of the hopping frequencies. The limit is specified in one of the subparagraphs of this Section. Submit this plot(s).

20dB bANDWIDTH:

Use the following spectrum analyzer settings:

Span = approximately 2 to 3 times the 20 dB bandwidth, centered on a hopping channel

RBW \geq 1% of the 20 dB bandwidth

VBW \geq RBW

Sweep = auto

Detector function = peak

Trace = max hold

The EUT should be transmitting at its maximum data rate. Allow the trace to stabilize. Use the marker-to-peak function to set the marker to the peak of the emission. Use the marker-delta function to measure 20 dB down one side of the emission. Reset the marker-delta function, and move the marker to the other side of the emission, until it is (as close as possible to) even with the reference marker level. The marker-delta reading at this point is the 20 dB bandwidth of the emission. If this value varies with different modes of operation (e.g., data rate, modulation format, etc.), repeat this test for each variation. The limit is specified in one of the subparagraphs of this Section. Submit this plot(s).

DWELL TIME:

The EUT must have its hopping function enabled. Use the following spectrum analyzer settings:

Span = zero span, centered on a hopping channel

RBW = 1 MHz

VBW \geq RBW

Sweep = as necessary to capture the entire dwell time per hopping channel

Detector function = peak

Trace = max hold

If possible, use the marker-delta function to determine the dwell time. If this value varies with different modes of operation (e.g., data rate, modulation format, etc.), repeat this test for each variation. The limit is specified in one of the subparagraphs of this Section. Submit this plot(s). An oscilloscope may be used instead of a spectrum analyzer.

RADIATED EMISSION:

This test is required for any spurious emission or modulation product that falls in a Restricted Band, as defined in Section 15.205. It must be performed with the highest gain of each type of antenna proposed for use with the EUT. Use the following spectrum analyzer settings:

Span = wide enough to fully capture the emission being measured

RBW = 1 MHz for $f \geq 1$ GHz, 100 kHz for $f < 1$ GHz

VBW \geq RBW

Sweep = auto

Detector function = peak

Trace = max hold

Follow the guidelines in ANSI C63.4-1992 with respect to maximizing the emission by rotating the EUT, measuring the emission while the EUT is situated in three orthogonal planes (if appropriate), adjusting the measurement antenna height and polarization, etc. A pre-amp and a high pass filter are required for this test, in order to provide the measuring system with sufficient sensitivity. Allow the trace to stabilize. The peak reading of the emission, after being corrected by the antenna factor, cable loss, pre-amp gain, etc., is the peak field strength, which must comply with the limit specified in Section 15.35(b). Submit this data.

Now set the VBW to 10 Hz, while maintaining all of the other instrument settings. This peak level, once corrected, must comply with the limit specified in Section 15.209. If the dwell time per channel of the hopping signal is less than 100 ms, then the reading obtained with the 10 Hz VBW may be further adjusted by a "duty cycle correction factor", derived from $20\log(\text{dwell time}/100 \text{ ms})$, in an effort to demonstrate compliance with the 15.209 limit. Submit this data.

If the emission on which a radiated measurement must be made is located at the edge of the authorized band of operation, then the alternative "marker-delta" method, listed at the end of this document, may be employed.

2. GENERAL INFORMATION

1.1. General Information

Applicant : SHANGHAI MERIT TECHNOLOGY CORP.
1058 TAOGAN ROAD, SHESHAN TOWN,
SONGJIANG, SHANGHAI, CHINA 201602

Manufacturer : SHANGHAI MERIT TECHNOLOGY CORP.
1058 TAOGAN ROAD, SHESHAN TOWN,
SONGJIANG, SHANGHAI, CHINA 201602

1.2. Test Facility

Test Firm : Bontek Compliance Testing Laboratory Ltd.
Certificated by FCC, Registration No.: 338263
Address : FL.1, Building H-3, Hua Qiao Cheng East Industrial Area
Qiaocheng East Road, Nanshan, Shenzhen, P.R.China
Tel : 86-755-86337020
Fax : 86-755-86337028

1.3. Test Instrument Used

No.	Equipment	Manufacturer	Model No.	S/N	Calibrator date	Calibration due date
1.	EMI Test Receiver	R&S	ESPI	100097	2010-2-22	2011-2-22
2.	Single Power Conductor Module	FCC	FCC-LISN-5-50-1-01-CISPR25	07101	2010-2-22	2011-2-22
3.	EMI Test Receiver	R&S	ESCI	100687	2010-2-22	2011-2-22
4.	EMI Test Receiver	R&S	FSU	BCT-019	2010-2-22	2011-2-22
5.	Amplifier	HP	8447D	1937A02492	2010-2-22	2011-2-22
6.	TRILOG Broadband Test-Antenna	SCHWARZBECK	VULB9163	9163-324	2010-2-22	2011-2-22
7.	Horn Antenna	SCHWARZBECK	BBHA9120A	B08000991-0001	2010-2-22	2011-2-22
8.	High Field Biconical Antenna	ELECTRO-METRICS	EM-6913	166	2010-2-22	2011-2-22
9.	Log Periodic Antenna	ELECTRO-METRICS	EM-6950	811	2010-2-22	2011-2-22
10.	Remote Active Vertical Antenna	ELECTRO-METRICS	EM-6892	304	2010-2-22	2011-2-22
11.	Teo Line Single Phase Module	SCHWARZBECK	NSLK8128	D-69250	2010-2-22	2011-2-22
12.	Positioning Controller	C&C	CC-C-1F	MF7802113	2010-2-22	2011-2-22
13.	Triple-Loop Antenna	EVERFINE	LLA-2	607004	2010-2-22	2011-2-22
14.	10dB attenuator	SCHWARZBECK	MTAIMP-136	R65.90.0001#06	2010-2-22	2011-2-22

3. MAXIMUM PEAK OUTPUT POWER

3.1.Rules Part No.

15.247(b) (1)

3.2.Method: 15.247(c)

The device under test has an integral antenna and the power was measured on a radiated basis.

3.3.Limits

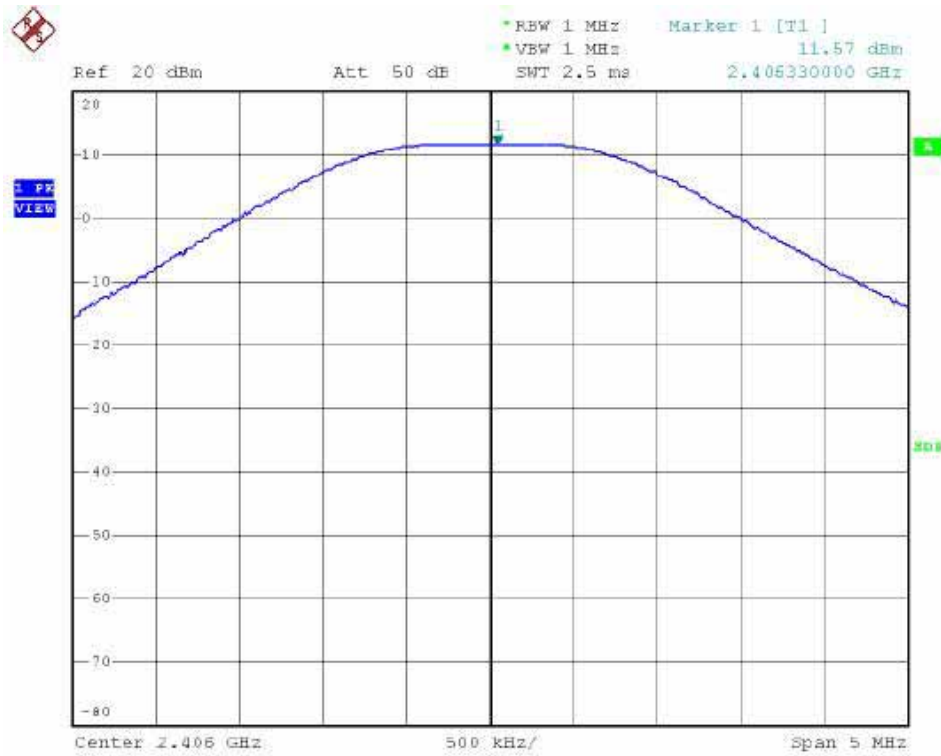
The maximum peak output power measurement is 1W or +30dBm.

3.4.Test Result

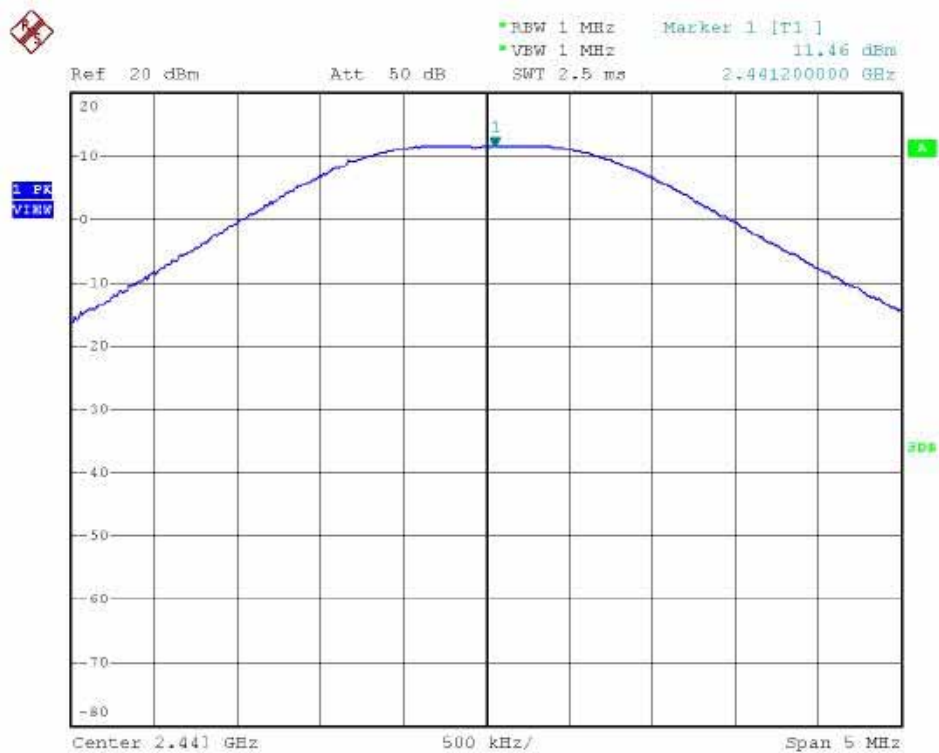
PASS

Channel	Frequency (MHz)	Peak output power (dBm)	Limit (dBm)
Low	2406	11.57	30
Middle	2441	11.46	30
High	2475	11.14	30

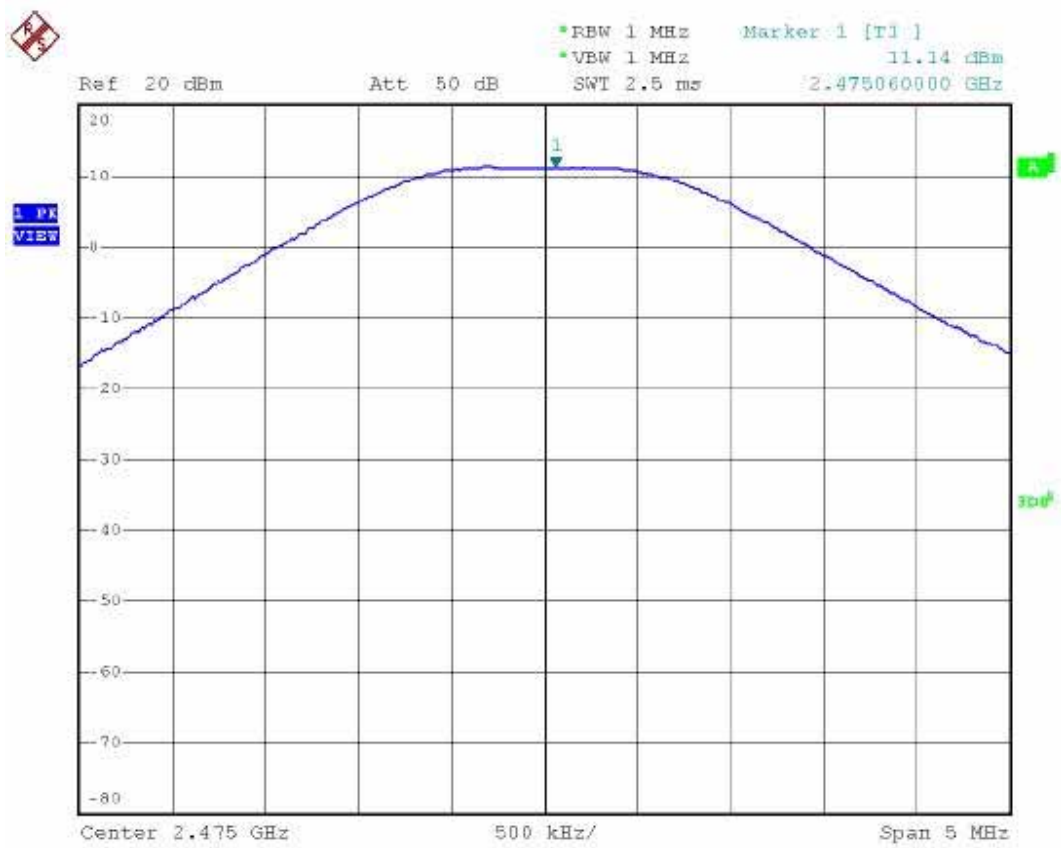
Low Channel: 2406MHz



Middle Channel: 2441MHz



High Channel: 2475MHz



4. NUMBER OF HOPPING FREQUENCY

4.1. Test Standard

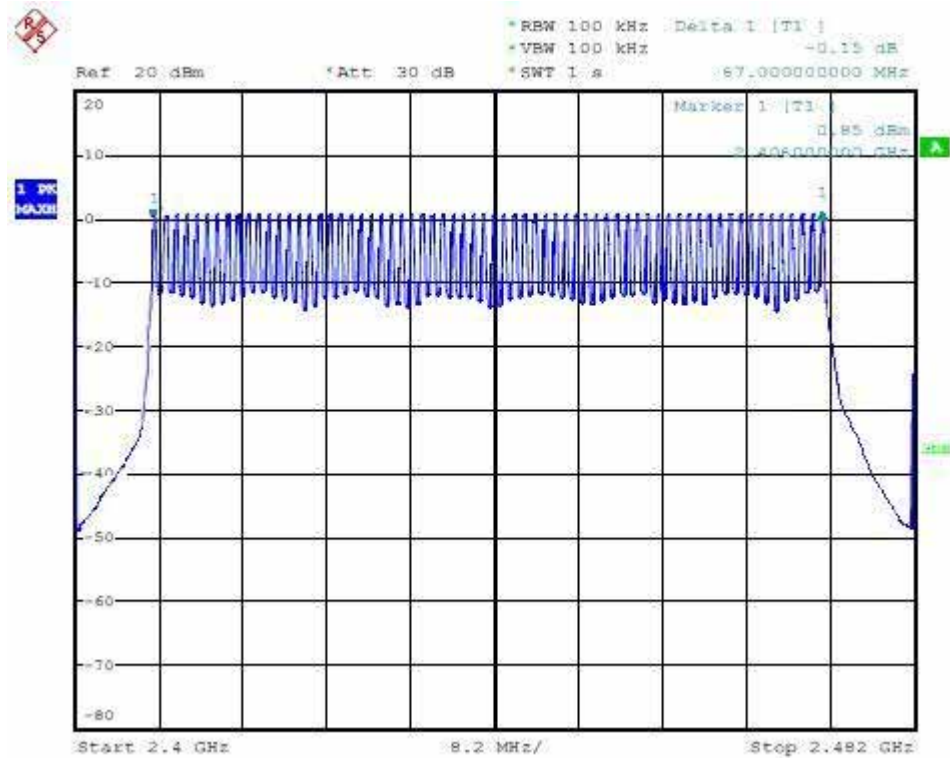
15.247(a) (1)

4.2. Test Result

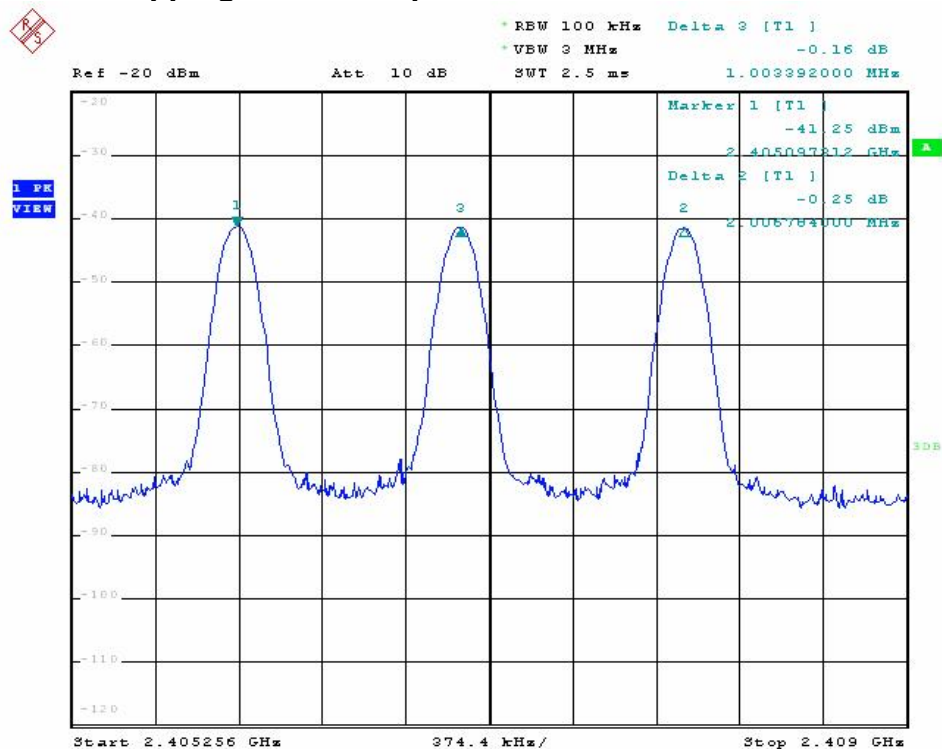
PASS

Hopping Channel is 67.

Detailed information, Please refer to the following page.



Hopping channel separation and BANDWIDTH



5. BAND EDGE

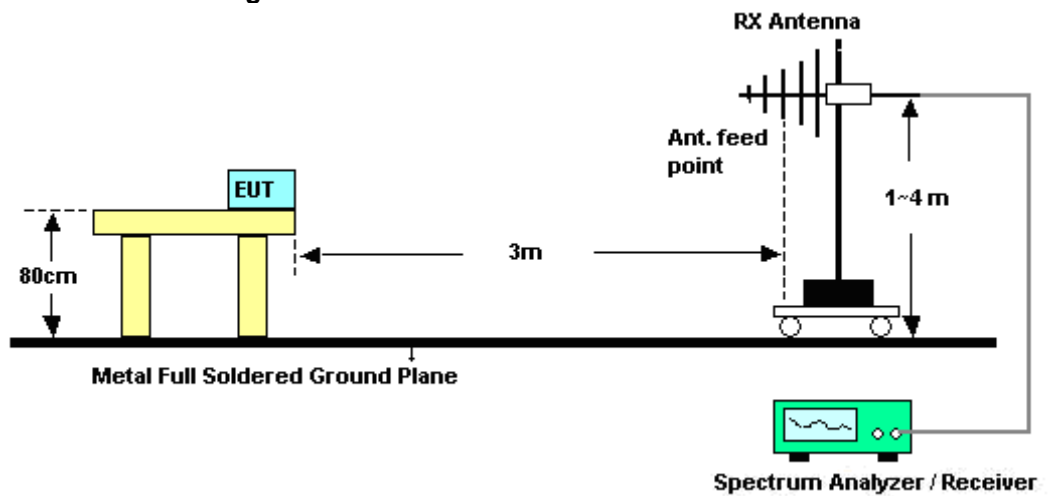
5.1.Rules Part No.

15.247(c)

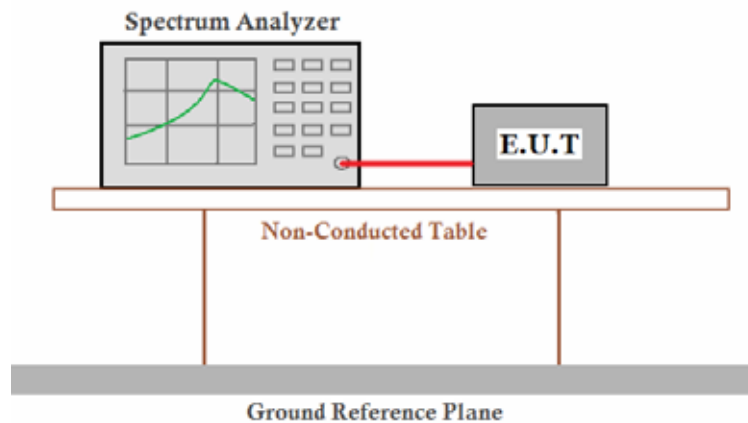
Test Method: ANSI C63.4:2003 and KDB DA00-705

Test setup:

<Radiated Band Edges>



<Conducted Band Edges>



Test mode: Transmitting mode

Temperature: 25~27

Relative Humidity: 48~51%

5.2.Limits

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum 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.

5.3.Test Procedure

1. The testing follows the guidelines in ANSI C63.4-2003 and FCC Public Notice DA 00-705 Measurement Guidelines.
2. RF antenna conducted test: Set RBW = 300kHz, Video bandwidth (VBW) \geq RBW. Band edge emissions must be at least 20 dB down from the highest emission level within the authorized band as measured with a 300k Hz RBW. Note: If the device complies with the use of power option 2 the attenuation under this paragraph shall be 30 dB instead of 20 dB.
3. Radiated emission test: Applies to band edge emissions that fall in the restricted bands listed in FCC Section 15.205. The maximum permitted average field strength is listed in FCC Section 15.209. A pre-amp is necessary for this measurement. For measurements above 1 GHz, set RBW = 1MHz, VBW = 1MHz, Sweep: Auto for Peak; set RBW = 1MHz, VBW = 10 Hz, Sweep: Auto for Average. If the emission is pulsed, modify the unit for continuous operation; use the settings shown above, then correct the reading by subtracting the peak-average correction factor, derived from the appropriate duty cycle calculation. See FCC Section 15.35(b) and (c).
4. In case the emission is fail due to the used RBW / VBW is too wide, marker-delta method of FCC Public Notice DA 00-705 will be followed.

5.4.Test Result

PASS

Detailed information, Please refer to the following page.

Test Result of Radiated Band Edges

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2406.05	32.80	54.00	-21.20	29.40	32.02	5.51	34.13	114	0	Average
2406.03	45.69	74.00	-28.31	42.29	32.02	5.51	34.13	114	0	Peak

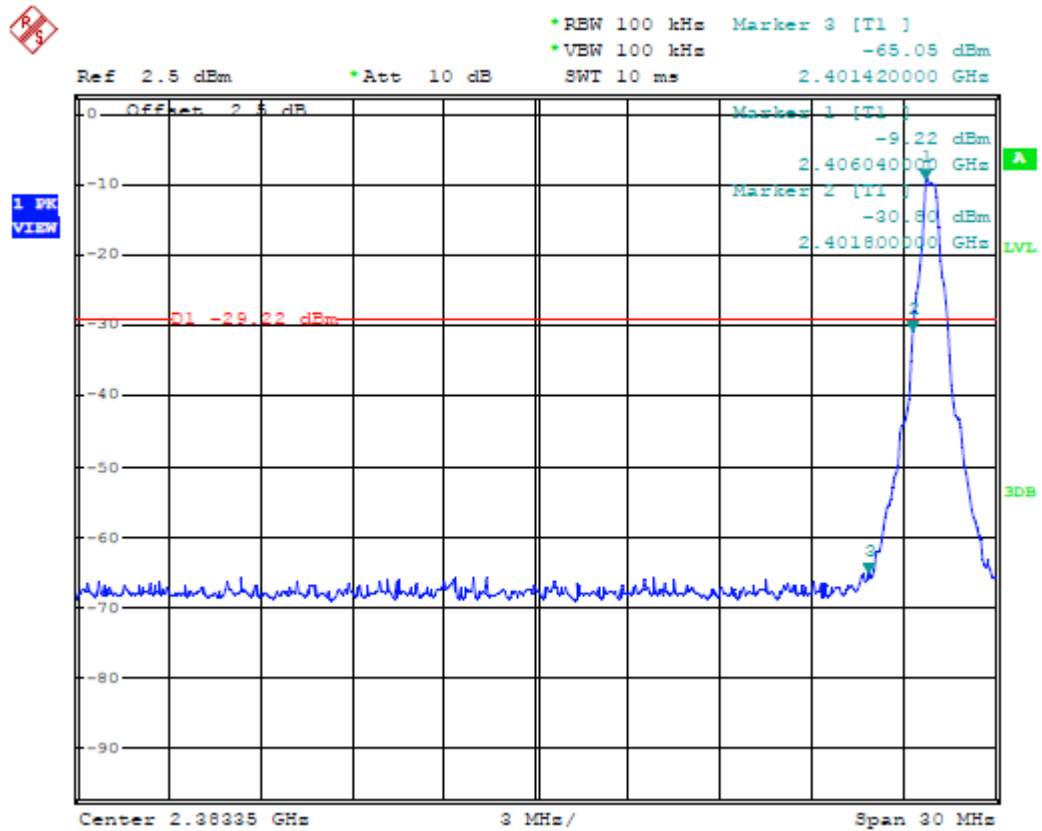
ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2406.05	32.57	54.00	-21.43	29.14	32.11	5.47	34.15	100	40	Average
2406.03	45.60	74.00	-28.40	42.17	32.11	5.47	34.15	100	40	Peak

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2475.05	45.12	54.00	-8.88	41.66	32.27	5.38	34.19	110	0	Average
2475.03	56.63	74.00	-17.37	53.17	32.27	5.38	34.19	110	0	Peak

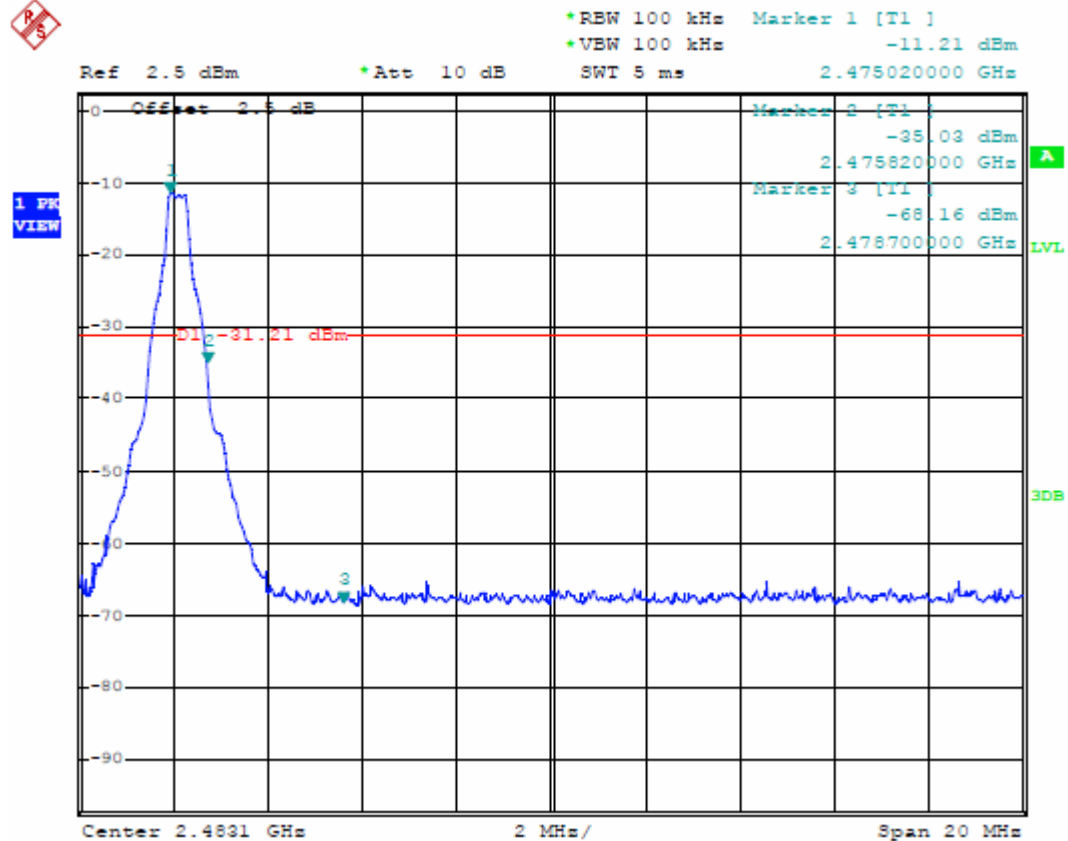
ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2475.05	41.16	54.00	-12.84	37.70	32.27	5.38	34.19	181	15	Average
2475.03	50.59	74.00	-23.41	47.13	32.27	5.38	34.19	181	15	Peak

Test Result of Conducted Band Edges

Low channel: 2406MHz



High channel: 2475MHz



6. 20DB BANDWIDTH

6.1.Rules Part No.

15.247(b)

6.2.Limits

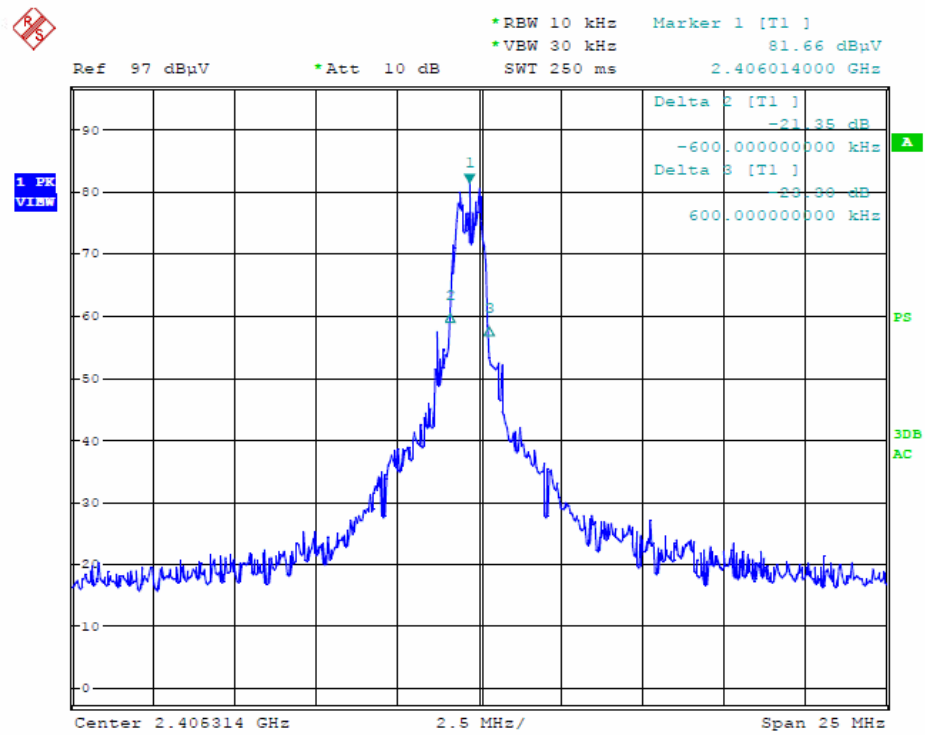
The bandwidth of the emission shall be no wider than 0.25% of the center frequency for devices operating above 70 MHz and below 900 MHz. For devices operating above 900 MHz, the emission shall be no wider than 0.5% of the center frequency. Bandwidth is determined at the points 20 dB down from the modulated carrier.

6.3.Test Result

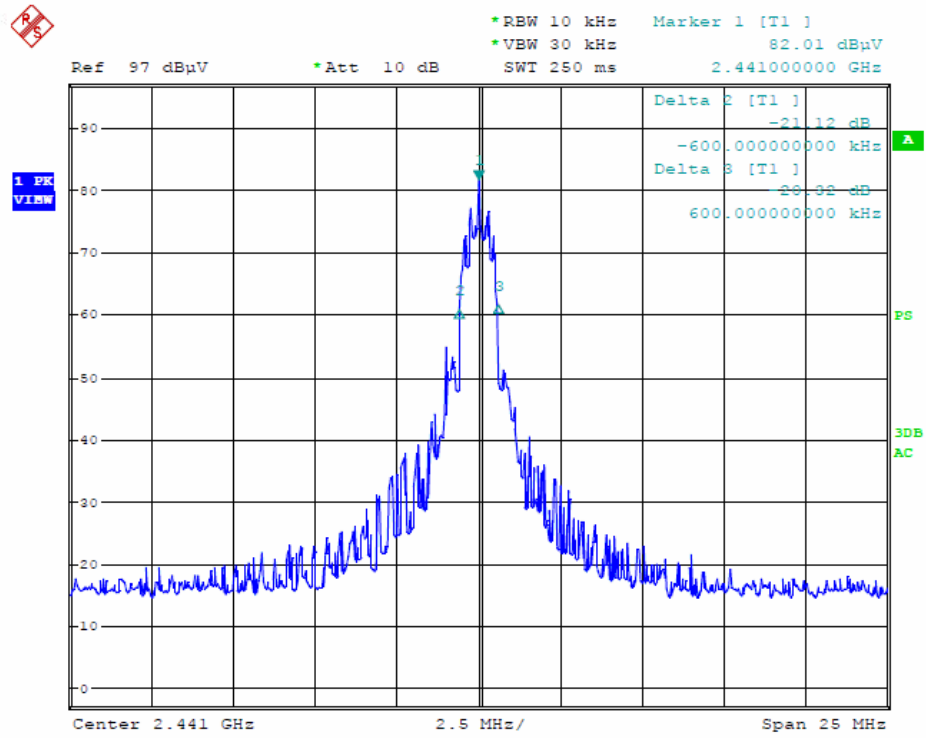
PASS

Detailed information, Please refer to the following page.

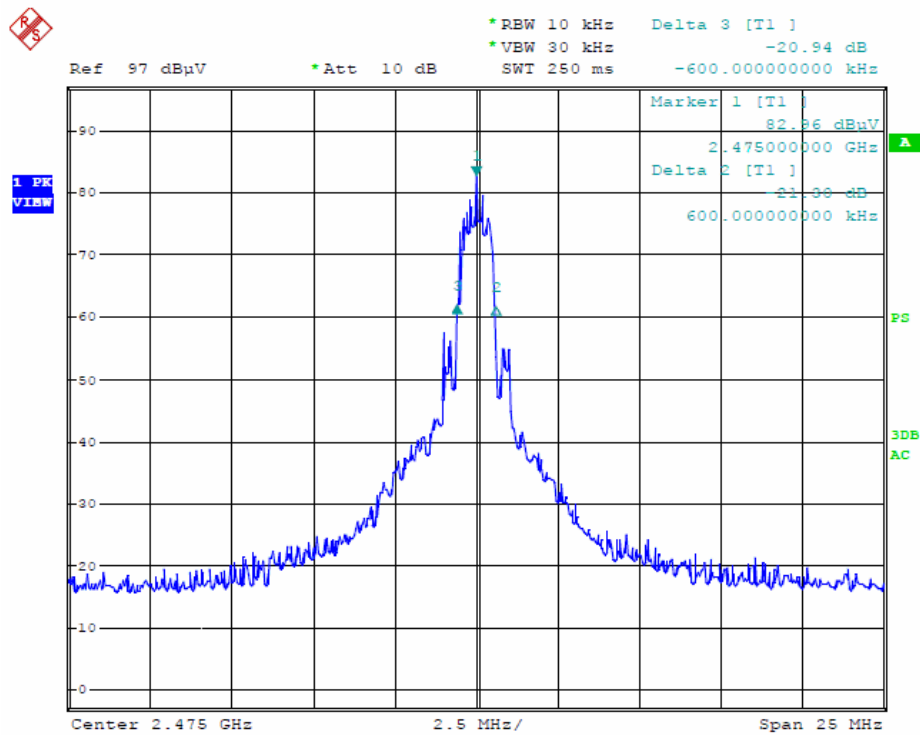
Low Channel: 2406MHz



Middle Channel: 2441MHz



High Channel: 2475MHz



7. DWELL TIME

7.1.Rules Part No.

15.247(a)

7.2.Limits

Per 15.247(a) (1)(iii) At least 15 hopping Frequencies.

7.3.Test Result

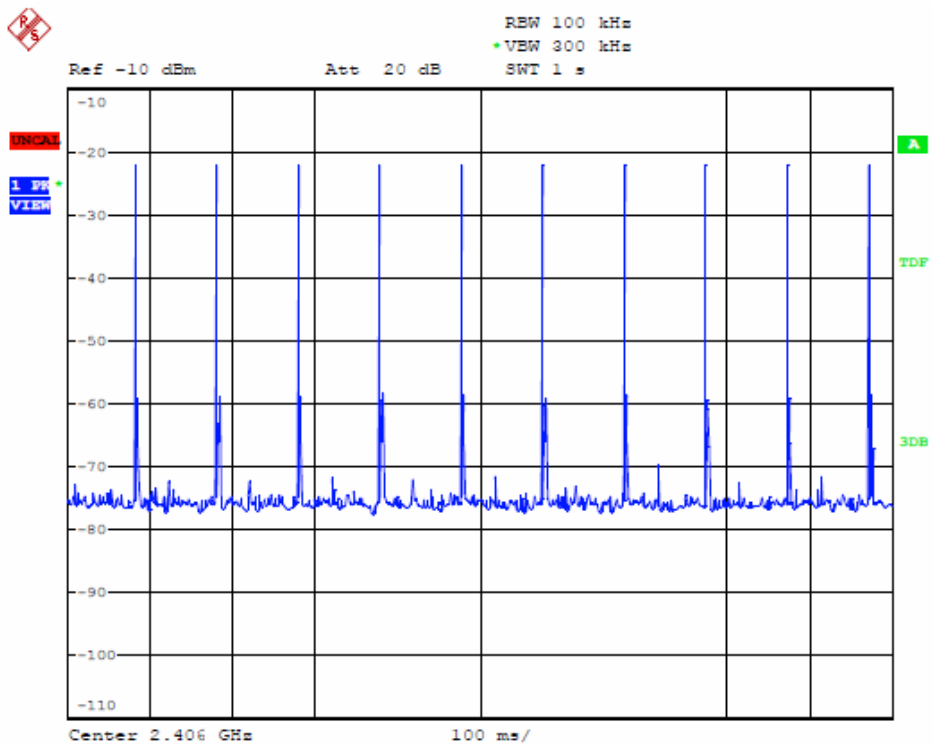
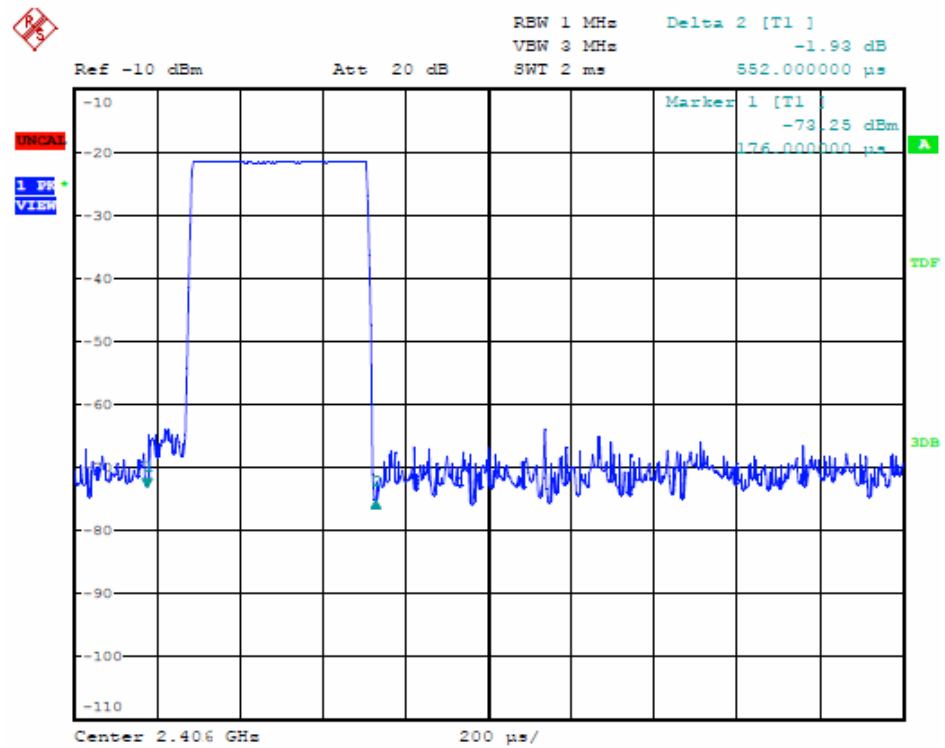
PASS

A period transmit time = $0.4 \times 75 = 30$

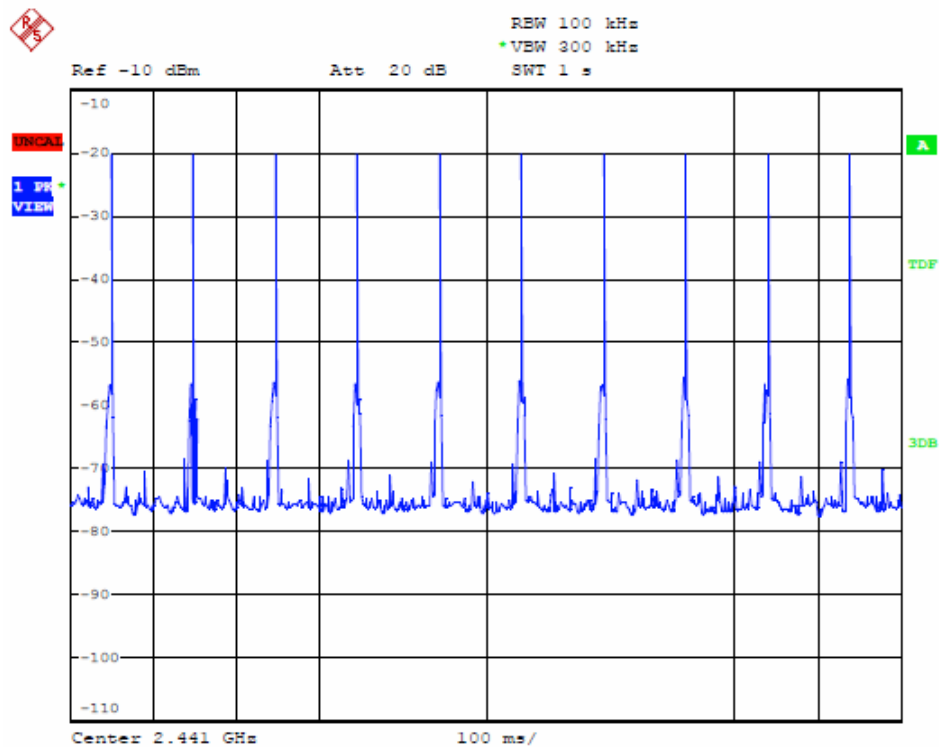
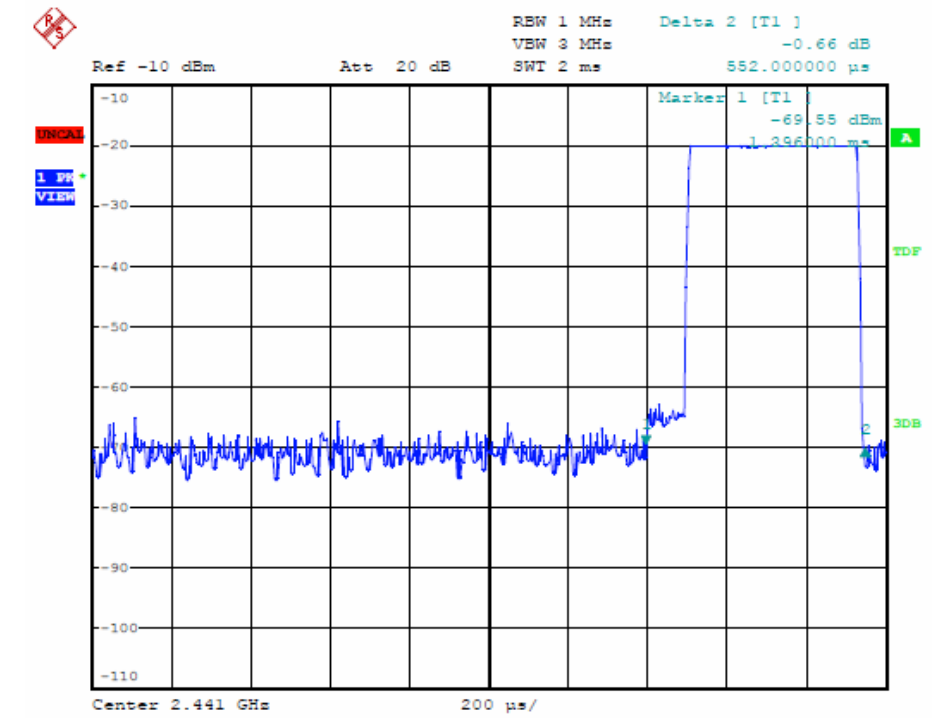
Dwell time = pulse time \times burst (in 1 sec.) $\times 30$

Channel Frequency (MHz)	Pulse Time (ms)	Burst (in 1 sec.)	Dell Time (ms)	Limit (ms)
2406	0.552	10	165.6	<400
2441	0.552	10	165.6	<400
2475	0.548	10	164.4	<400

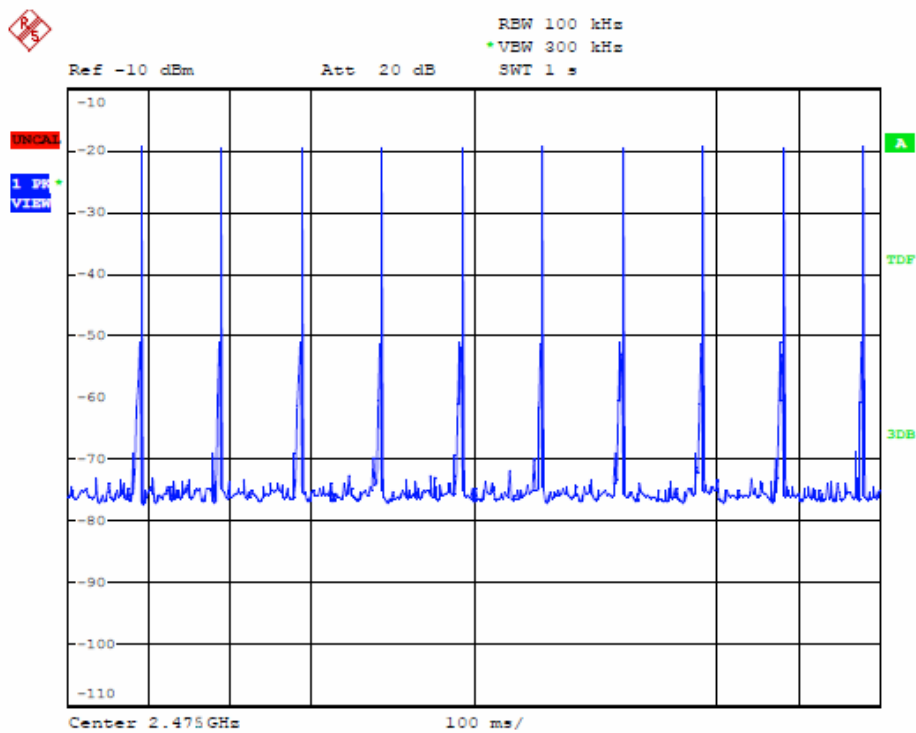
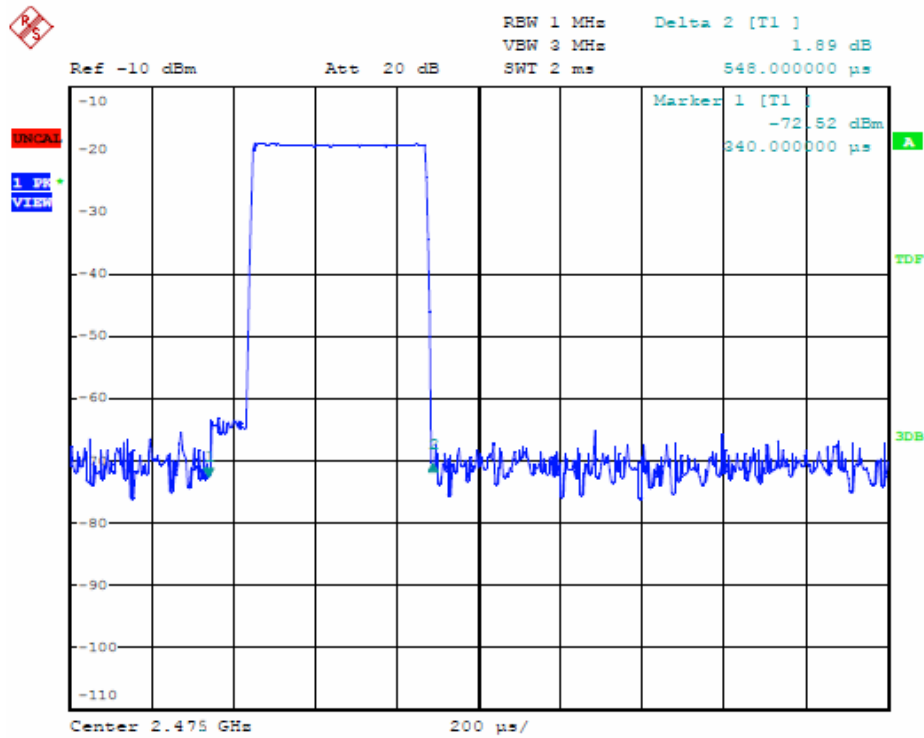
Low CH: 2406MHz



Middle CH: 2441MHz



High CH: 2475MHz



8. RADIATED EMISSION

8.1.Rules Part No.

15.247(c), 15.205 &15.209(b)

8.2.Limits

Except as provided elsewhere in this Subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency of (MHz)	Emission Field Strength (microvolts/meter)
30 - 88	100 (40)
88 - 216	150 (43.5)
216 - 960	200 (46.0)
Above 960	500 (54.0)

8.3.Test Procedure

ANSI STANDARD C63.4-2003 10.1.7 MEASUREMENT PROCEDURES:

The EUT is placed on a turned table that is 0.8 meter above the ground. The turned table can rotate 360 degrees to determine the position of the maximum emission level. The EUT is set 3 meters away from the receiving antenna that is mounted on the antenna tower. The antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level. Broadband antenna (log periodical antenna and horn antenna) is used as receiving antenna. Both horizontal and vertical polarization of the antenna is set on test.

The spectrum was scanned from 30 MHz to 10th harmonic of the fundamental.

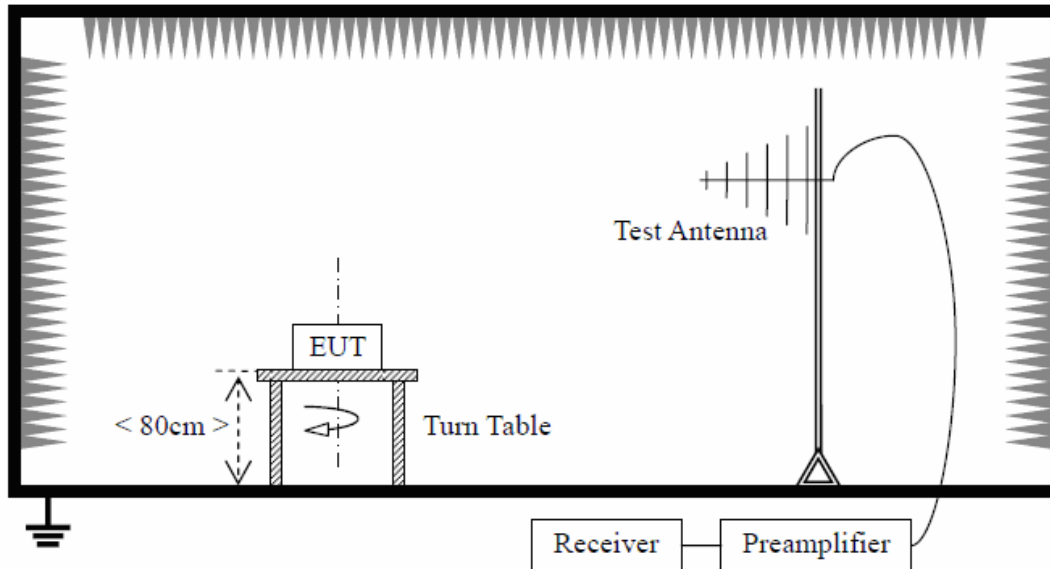
EMISSIONS RADIATED OUTSIDE OF THE SPECIFIED FREQUENCY BANDS, EXCEPT FOR HARMONICS, SHALL BE ATTENUATED BY AT LEAST 20 dB BELOW THE LEVEL OF THE FUNDAMENTAL OR TO THE GENERAL RADIATED EMISSION LIMITS IN 15.209, WHICHEVER IS THE LESSER ATTENUATION.

Emissions that fall in the restricted bands (15.205) must be less than 54dBuV/m otherwise the spurious and harmonics must be attenuated by at least 20dBc.

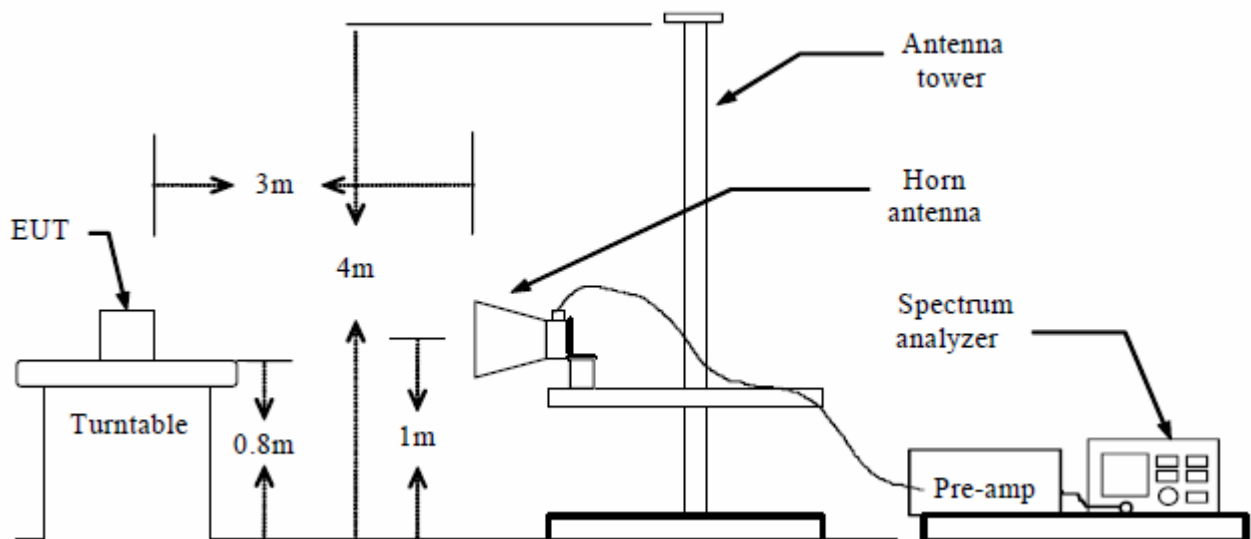
The product tested in the 3 position, XYZ 3-axis, take the worst result.

8.4. Test setup

Below 1G



Above 1G



8.5. Test Result

PASS

The frequency range from 30MHz to 25GHz is investigated.

Low Channel: 2406MHz

Horizontal:

Frequency (MHz)	PK (dBuV/m)	Read Level (dBuV/m)	Limit (dBuV/m)	Margin (dBuV/m)
32.940	34.50	30.10	40.0	9.90
43.570	30.05	30.00	40.0	10.00
51.220	33.70	31.20	40.0	8.80
156.350	35.50	33.50	43.5	10.00
350.550	36.03	35.00	46.0	11.00
725.450	35.00	32.00	46.0	14.00
4812.300	38.50	37.10	54.0	(AV)16.90
7218.800	38.60	37.00	54.0	(AV)17.00
9624.650	35.00	32.50	54.0	(AV)21.50
12030.550	32.05	32.00	54.0	(AV)22.00
14436.530	33.00	31.02	54.0	(AV)22.98
24060.250	31.00	31.00	54.0	(AV)23.00

Vertical:

Frequency (MHz)	PK (dBuV/m)	Read Level (dBuV/m)	Limit (dBuV/m)	Margin (dBuV/m)
32.040	37.10	33.60	40.0	6.40
33.500	36.50	33.50	40.0	6.50
51.220	33.10	30.70	40.0	9.30
70.620	35.60	33.30	40.0	6.70
126.530	35.50	32.02	43.5	11.48
215.000	32.80	30.50	43.5	13.00
869.800	36.90	36.50	46.0	9.50
4812.300	40.20	38.20	54.0	(AV)15.80
7218.800	38.90	37.40	54.0	(AV)16.60
9624.650	35.00	34.00	54.0	(AV)20.00
12030.550	33.50	33.01	54.0	(AV)20.09
14436.530	33.07	31.20	54.0	(AV)22.80
24060.250	33.23	31.50	54.0	(AV)22.50

Middle Channel: 2441MHz

Horizontal:

Frequency (MHz)	PK (dBuV/m)	Read Level (dBuV/m)	Limit (dBuV/m)	Margin (dBuV/m)
32.940	33.60	31.30	40.0	8.70
37.900	30.55	30.00	40.0	10.0
39.200	32.65	30.50	40.0	9.50
61.520	31.20	30.50	40.0	9.50
70.820	34.90	33.20	40.0	6.80
898.020	36.10	34.90	46.0	11.10
4812.300	37.60	36.40	54.0	(AV)17.60
7218.800	38.30	37.10	54.0	(AV)16.90
9624.650	35.50	32.20	54.0	(AV)21.80
12030.550	36.20	33.50	54.0	(AV)20.50
14436.530	33.55	32.50	54.0	(AV)21.50
24060.250	35.50	34.02	54.0	(AV)19.98

Vertical:

Frequency (MHz)	PK (dBuV/m)	Read Level (dBuV/m)	Limit (dBuV/m)	Margin (dBuV/m)
32.040	37.00	34.20	40.0	5.80
35.580	33.02	31.02	40.0	8.98
51.220	32.70	30.10	40.0	9.90
71.820	35.70	34.60	40.0	5.40
898.020	36.80	35.70	46.0	10.30
912.030	35.50	35.00	46.0	11.00
4812.300	39.80	37.00	54.0	(AV)17.00
7218.800	40.30	37.60	54.0	(AV)16.40
9624.650	38.52	36.52	54.0	(AV)17.48
12030.550	40.65	38.00	54.0	(AV)16.00
14436.530	42.58	41.56	54.0	(AV)12.44
24060.250	43.55	40.50	54.0	(AV)13.50

High Channel: 2475MHz

Horizontal:

Frequency (MHz)	PK (dBuV/m)	Read Level (dBuV/m)	Limit (dBuV/m)	Margin (dBuV/m)
31.940	35.50	30.50	40.0	9.50
35.500	33.50	30.10	40.0	9.90
55.220	31.20	29.60	40.0	10.40
73.820	34.20	33.00	40.0	7.00
215.02	35.00	33.00	40.0	7.00
902.180	39.70	36.60	46.0	9.40
4812.300	37.80	37.10	54.0	(AV)16.90
7218.800	41.60	38.10	54.0	(AV)15.90
9624.650	40.00	37.00	54.0	(AV)17.00
12030.550	35.50	33.50	54.0	(AV)21.50
14436.530	32.00	32.00	54.0	(AV)22.00
24060.250	32.50	32.00	54.0	(AV)22.00

Vertical:

Frequency (MHz)	PK (dBuV/m)	Read Level (dBuV/m)	Limit (dBuV/m)	Margin (dBuV/m)
31.940	38.60	35.30	40.0	4.70
55.220	33.20	30.50	40.0	9.50
74.620	35.40	34.50	40.0	5.50
95.050	37.50	35.30	43.5	8.20
898.020	36.90	35.90	46.0	10.10
955.000	35.00	33.05	46.0	12.95
4812.300	43.20	39.10	54.00	(AV)14.90
7218.800	39.30	37.20	54.00	(AV)16.80
9624.650	38.00	35.20	54.00	(AV)18.80
12030.550	36.05	35.00	54.00	(AV)19.00
14436.530	33.00	31.00	54.00	(AV)23.00
24060.250	31.00	30.50	54.00	(AV)23.50

9. RESTRICTED BANDS OF OPERATION

Section 15.205:

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

MHz	MHz	MHz	GHz
0.090 – 0.110	16.42 – 16.423	399.9 – 410	4.5 – 5.15
¹ 0.495 – 0.505	16.69475 – 16.69525	608 – 614	5.35 – 5.46
2.1735 – 2.1905	16.80425 – 16.80475	960 – 1240	7.25 – 7.75
4.125 – 4.128	25.5 – 25.67	1300 – 1427	8.025 – 8.5
2. 17725 – 4.17775	37.5 – 38.25	1435 – 1626.5	9.0 – 9.2
2. 20725 – 4.20775	73 – 74.6	1645.5 – 1646.5	9.3 – 9.5
6.215 – 6.218	74.8 – 75.2	1660 – 1710	10.6 – 12.7
6.26775 – 6.26825	108 – 121.94	1718.8 – 1722.2	13.25 – 13.4
6.31175 – 6.31225	123 – 138	2200 – 2300	14.47 – 14.5
8.291 – 8.294	149.9 – 150.05	2310 – 2390	15.35 – 16.2
8.362 – 8.366	156.52475 –	2483.5 – 2500	17.7 – 21.4
8.37625 – 8.38675	156.52525	2655 – 2900	22.01 – 23.12
8.41425 – 8.41475	156.7 – 156.9	3260 – 3267	23.6 – 24.0
12.29 – 12.293	162.0125 – 167.17	3332 – 3339	31.2 – 31.8
12.51975 – 12.52025	167.72 – 173.2	3345.8 – 3358	36.43 – 36.5
12.57675 – 12.57725	240 – 285	3600 – 4400	(²)
13.36 – 13.41	322 – 335.4		

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

² Above 38.6

10.RF EXPOSURE COMPLIANCE REQUIREMENT

Standard requirement

15.247(b)(4) requirement:

(4) The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

EUT RF Exposure

The Max Conducted Peak Output Power is **11.57dBm(0.01435mW)** in lowest channel (2.406GHz);

The best case gain of the antenna is 2dBi.

2dBi logarithmic terms convert to numeric result is nearly 1.58

According to the formula, calculate the EIRP test result:

$EIRP = P \times G = 0.01435mW \times 1.58 = 0.22673mW$

SAR requirement:

$S = 60 / f(GHz) = 60 / 2.406 = 24.93mW$;

< .

So the SAR report is not required.

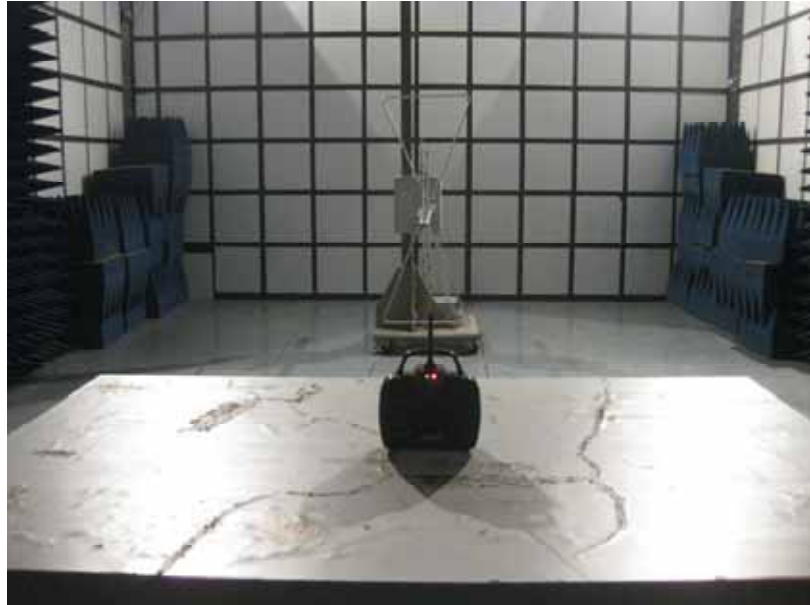
11.ANTENNA REQUIREMENT

According to 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. Antenna is fixed by enclosure, can not be changed except take apart the product.

12. PHOTOGRAPH OF TEST

Radiated Emission

Below 1GHz



Above 1GHz

