

TEST REPORT

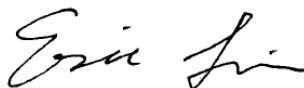
Application No.: KSCR2304000686AT
FCC ID: 2BA76CH11MNT001
Applicant: MotoMotion China Corporation
Address of Applicant: No. 61 Xinggang Road, Zhonglou Economic Development Zone, Changzhou, Jiangsu, P.R. China
Manufacturer: MotoMotion China Corporation
Address of Manufacturer: No. 61 Xinggang Road, Zhonglou Economic Development Zone, Changzhou, Jiangsu, P.R. China
Factory: MotoMotion China Corporation
Address of Factory: No. 61 Xinggang Road, Zhonglou Economic Development Zone, Changzhou, Jiangsu, P.R. China

Equipment Under Test (EUT):

EUT Name: Remote Control
Model No.: CH11-R
Standard(s): 47 CFR Part 15, Subpart C 15.249
Date of Receipt: 2023-04-20
Date of Test: 2023-04-21 to 2023-05-15
Date of Issue: 2023-05-16

Test Result:	Pass*
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* In the configuration tested, the EUT complied with the standards specified above.



Eric Lin
Laboratory Manager



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Revision Record			
Version	Description	Date	Remark
00	Original	2023-05-16	/

Authorized for issue by:			
		<i>Tommie Tang</i>	
		Tommie_Tang/Project Engineer	
		<i>Eric Lin</i>	
		Eric Lin /Reviewer	



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2 Test Summary

Radio Spectrum Technical Requirement				
Item	Standard	Method	Requirement	Result
Antenna Requirement	47 CFR Part 15, Subpart C 15.249	N/A	47 CFR Part 15, Subpart C 15.203	Pass

Radio Spectrum Matter Part				
Item	Standard	Method	Requirement	Result
20dB Bandwidth	47 CFR Part 15, Subpart C 15.249	ANSI C63.10 (2013) Section 6.9	47 CFR Part 15, Subpart C 15.215	Pass
Field Strength of the Fundamental Signal (15.249(a))		ANSI C63.10 (2013) Section 6.5&6.6	47 CFR Part 15, Subpart C 15.249(a)	Pass
Restricted Band Around Fundamental Frequency		ANSI C63.10 (2013) Section 6.10.5	47 CFR Part 15, Subpart C 15.205 & 15.249(d) & 15.209	Pass
Radiated Emissions Below 1GHz		ANSI C63.10 (2013) Section 6.4&6.5	47 CFR Part 15, Subpart C 15.209 & 15.249 (a),(d)	Pass
Radiated Emissions Above 1GHz		ANSI C63.10 (2013) Section 6.6	47 CFR Part 15, Subpart C 15.209 & 15.249 (a),(d)	Pass



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Compliance Certification Services (Kunshan) Inc.

Report No.: KSCR230400068601

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4 General Information

4.1 Details of E.U.T.

Power supply:	DC 4.5V by battery
Operation Frequency:	2402-2460MHz
Modulation Type:	GFSK
Number of Channels:	59
Channel Spacing:	1MHz
Antenna Type:	PCB Antenna
Antenna Gain:	0dBi (Provided by the manufacturer)

4.2 Description of Support Units

Description	Manufacturer	Model No.	Serial No.
--	--	--	--
The EUT has been tested as an independent unit.			



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4.3 Measurement Uncertainty

No.	Item	Measurement Uncertainty
1	Radio Frequency	8.4 x 10 ⁻⁸
2	Timeout	2s
3	Duty Cycle	0.37%
4	Occupied Bandwidth	3%
5	RF Conducted Power	0.6dB
6	RF Power Density	2.9dB
7	Conducted Spurious Emissions	0.75dB
8	RF Radiated Power	5.2dB (Below 1GHz)
		5.9dB (Above 1GHz)
9	Radiated Spurious Emission Test	4.2dB (Below 30MHz)
		4.5dB (30MHz-1GHz)
		5.1dB (1GHz-18GHz)
		5.4dB (Above 18GHz)
10	Temperature Test	1°C
11	Humidity Test	3%
12	Supply Voltages	1.5%
13	Time	3%

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



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4.4 Test Location

All tests were performed at:

Compliance Certification Services (Kunshan) Inc.

No.10 Weiye Rd, Innovation park, Eco&Tec, Development Zone, Kunshan City, Jiangsu, China.

Tel: +86 512 5735 5888 Fax: +86 512 5737 0818

No tests were sub-contracted.

Note:

1. SGS is not responsible for wrong test results due to incorrect information (e.g., max. internal working frequency, antenna gain, cable loss, etc) is provided by the applicant. (If applicable).
2. SGS is not responsible for the authenticity, integrity and the validity of the conclusion based on results of the data provided by applicant. (If applicable).

4.5 Test Facility

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

• A2LA

Compliance Certification Services (Kunshan) Inc. is accredited by the American Association for Laboratory Accreditation (A2LA). Certificate No. 2541.01.

• FCC

Compliance Certification Services (Kunshan) Inc. has been recognized as an accredited testing laboratory. Designation Number: CN1172.

• ISED

Compliance Certification Services (Kunshan) Inc. has been recognized by Innovation, Science and Economic Development Canada (ISED) as an accredited testing laboratory. Company Number: 2324E

• VCCI

The 3m and 10m Semi-anechoic chamber and Shielded Room of Compliance Certification Services (Kunshan) Inc. has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-20134, R-11600, C-11707, T-11499, G-10216 respectively.

4.6 Deviation from Standards

None

4.7 Abnormalities from Standard Conditions

None



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5 Equipment List

Item	Equipment	Manufacturer	Model	Inventory No	Cal Date	Cal. Due Date
Conducted Emission at Mains Terminals (150kHz-30MHz)						
1	EMI Test Receive	R&S	ESCI	KS301101	02/03/2023	02/02/2024
2	LISN	R&S	ENV216	KS301197	01/17/2023	01/16/2024
3	LISN	Schwarzbeck	NNLK 8129	KS301091	01/17/2023	01/16/2024
4	Pulse Limiter	R&S	ESH3-Z2	KUS1902E001	01/17/2023	01/16/2024
5	CE test Cable	Thermax	/	CZ301102	01/17/2023	01/16/2024
6	Test Software	Farad	EZ-EMC	/	N.C.R	N.C.R
RF Conducted Test						
1	Spectrum Analyzer	Keysight	N9020A	KUS1911E004-2	08/22/2022	08/21/2023
2	Spectrum Analyzer	Keysight	N9020A	KUS2001M001-2	08/22/2022	08/21/2023
3	Spectrum Analyzer	Keysight	N9030B	KSEM021-1	02/03/2023	02/02/2024
4	Signal Generator	R&S	SMBV100B	KSEM032	03/16/2023	03/15/2024
5	Signal Generator	R&S	SMW200A	KSEM020-1	08/22/2022	08/21/2023
6	Signal Generator	Agilent	N5182A	KUS2001M001-1	08/22/2022	08/21/2023
7	Radio Communication Test Station	Anritsu	MT8000A	KSEM001-1	08/22/2022	08/21/2023
8	Radio Communication Analyzer	Anritsu	MT8821C	KSEM002-1	03/16/2023	03/15/2024
9	Universal Radio Communication Tester	R&S	CMW500	KUS1911E004-1	08/22/2022	08/21/2023
10	Switcher	CCSRF	FY562	KUS2001M001-3	08/22/2022	08/21/2023
11	AC Power Source	EXTECH	6605	KS301178	N.C.R	N.C.R
12	DC Power Supply	Aglient	E3632A	KS301180	N.C.R	N.C.R
13	Conducted Test Cable	Thermax	RF01-RF04	CZ301111-CZ301120	02/03/2023	02/02/2024
14	Temp. / Humidity Chamber	TERCHY	MHK-120AK	KS301190	11/16/2022	11/15/2023
15	Temperature & Humidity Recorder	Renke Control	RS-WS-N01-6J	KSEM024-5	03/22/2023	03/21/2024
16	Software	BST	TST-PASS	/	N/A	N/A
RF Radiated Test						
1	Spectrum Analyzer	R&S	FSV40	KUS1806E003	08/22/2022	08/21/2023
2	Universal Radio Communication Tester	R&S	CMW500	KSEM009-1	03/16/2023	03/15/2024
3	Signal Generator	Agilent	E8257C	KS301066	08/22/2022	08/21/2023
4	Loop Antenna	COM-POWER	AL-130R	KUS1806E001	03/18/2023	03/17/2025
5	Bilog Antenna	TESEQ	CBL 6112D	KUS1806E005	06/29/2021	06/28/2023
6	Bilog Antenna	SCHWARZBECK	VULB9160	CZ301016	04/13/2021	04/12/2024
7	Horn-antenna(1-18GHz)	Schwarzbeck	BBHA9120D	KS301079	04/02/2022	04/01/2024
8	Horn-antenna(1-18GHz)	ETS-LINDGREN	3117	KS301186	02/21/2023	02/20/2024
9	Horn Antenna(18-40GHz)	Schwarzbeck	BBHA9170	CZ301058	02/26/2023	02/25/2024
10	Amplifier(30MHz~18GHz)	PANSHAN TECHNOLOGY	LNA:1~18G	KSEM010-1	01/17/2023	01/16/2024
11	Amplifier(18~40GHz)	COM-POWER	PAM-840A	KUS1710E001	01/21/2023	01/20/2024



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12	RE Test Cable	REBES MICROWAVE	/	CZ301097	11/12/2022	11/11/2023
13	Temperature & Humidity Recorder	Renke Control	RS-WS-N01-6J	KSEM024-4	03/22/2023	03/21/2024
14	Software	Faratronic	EZ_EMCC-v3A1	/	N/A	N/A



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6 Radio Spectrum Technical Requirement

6.1 Antenna Requirement

6.1.1 Test Requirement:

47 CFR Part 15, Subpart C 15.203

6.1.2 Conclusion

15.203 requirement: 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. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. EUT Antenna: The antenna is integrated on the main PCB and no consideration of replacement. The best case gain of the antenna is 0dBi. Antenna location: Refer to Internal photos



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7 Radio Spectrum Matter Test Results

7.1 20dB Bandwidth

Test Requirement 47 CFR Part 15, Subpart C 15.215
 Test Method: ANSI C63.10 (2013) Section 6.9
 Measurement Distance: 3m

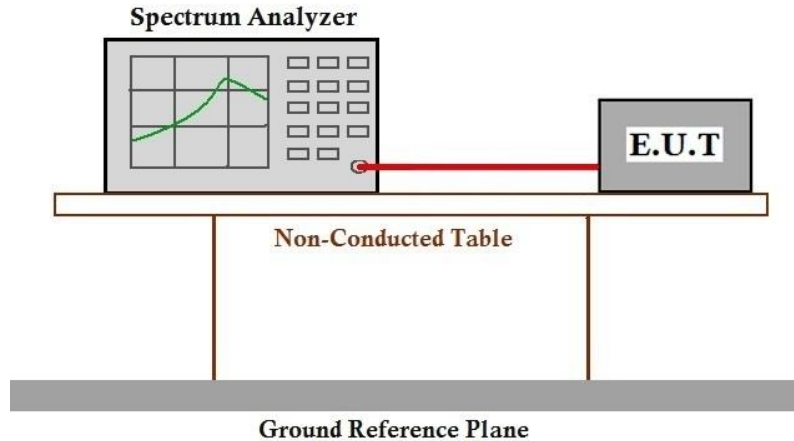
7.1.1 E.U.T. Operation

Operating Environment:
 Temperature: 25.1 °C Humidity: 44.2 % RH Atmospheric Pressure: 1010 mbar

7.1.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	TX mode_Keep the EUT in transmitting with modulation mode.

7.1.3 Test Setup Diagram



7.1.4 Measurement Procedure and Data

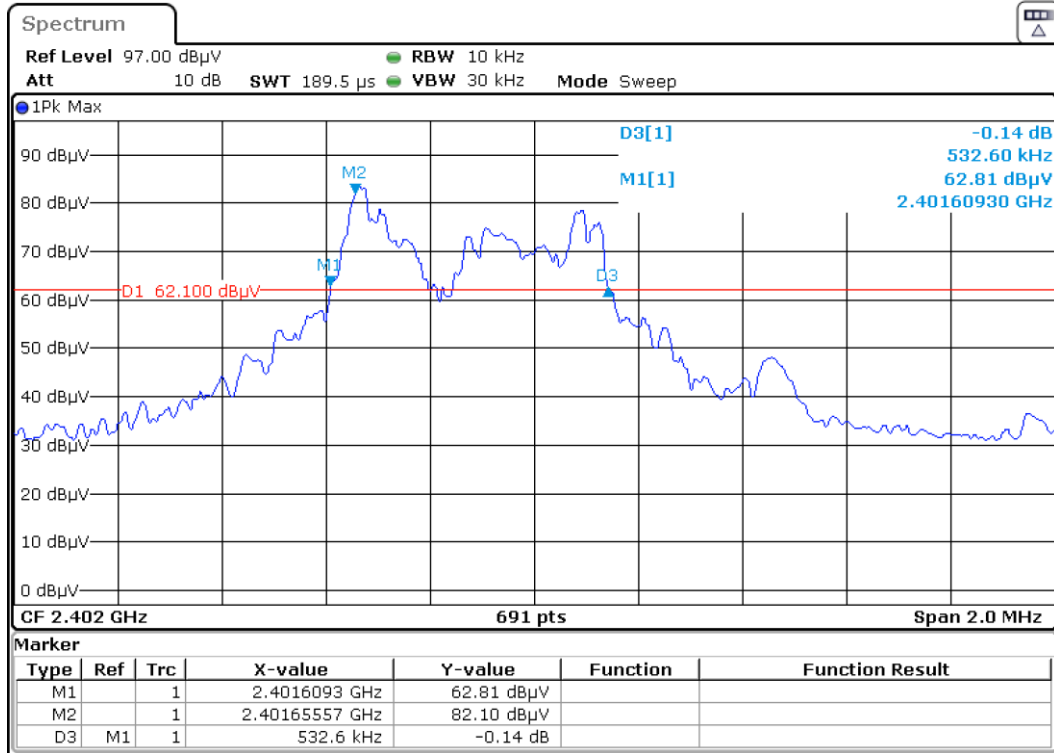


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Frequency (MHz)	Bandwidth (kHz)	Result
2402	532.6	PASS
2431	529.7	PASS
2460	538.4	PASS

2402MHz

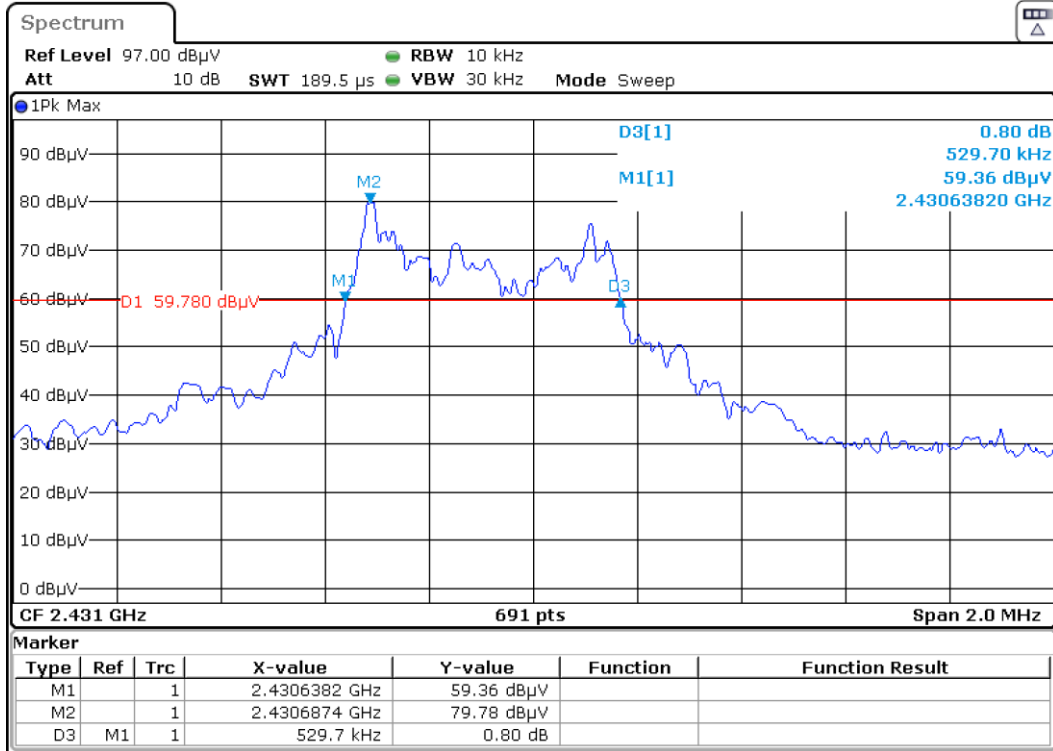


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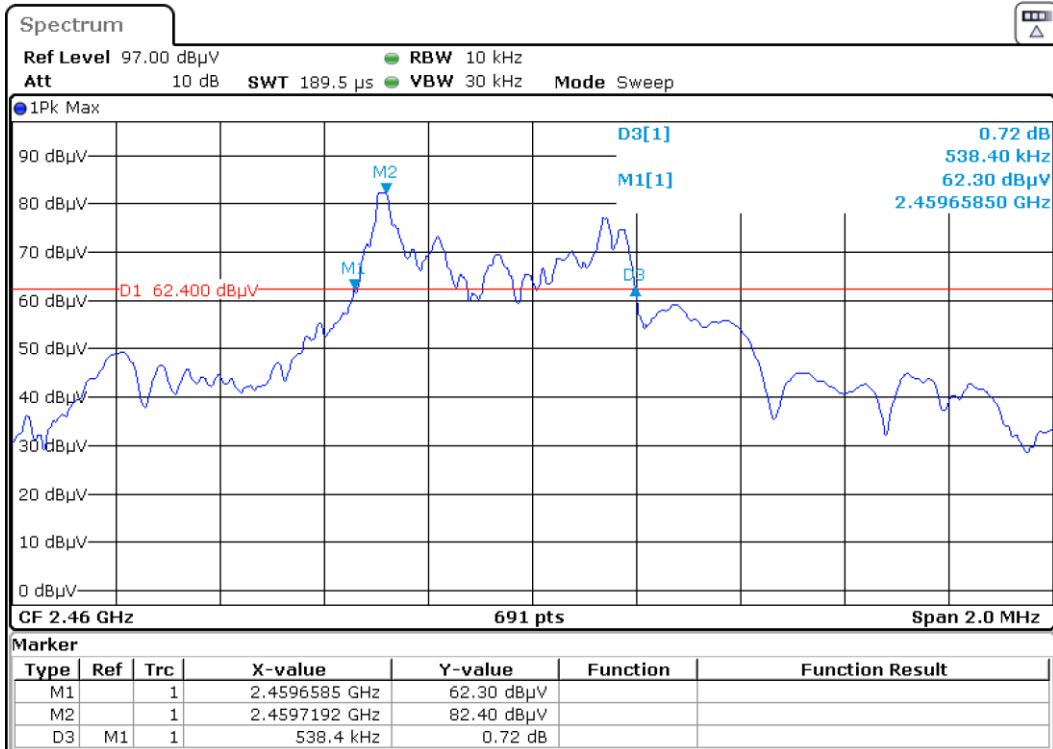
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2431MHz



2460MHz



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7.2 Field Strength of the Fundamental Signal (15.249(a))

Test Requirement 47 CFR Part 15, Subpart C 15.249(a)
 Test Method: ANSI C63.10 (2013) Section 6.5&6.6
 Measurement Distance: 3m

Limit:

Fundamental frequency(MHz)	Field strength of fundamental(millivolts/meter)	Field strength of harmonics(microvolts/meter)
902-928	50	500
2400-2483.5	50	500
5725-5875	50	500
24000-24250	250	2500

Remark: The frequencies above 1000MHz are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation.

For fundamental frequency in “902-928MHz”, the field strength of fundamental is based on Quasi-Peak.

7.2.1 E.U.T. Operation

Operating Environment:

Temperature: 25.1 °C Humidity: 44.2 % RH Atmospheric Pressure: 1010 mbar

7.2.2 Test Mode Description

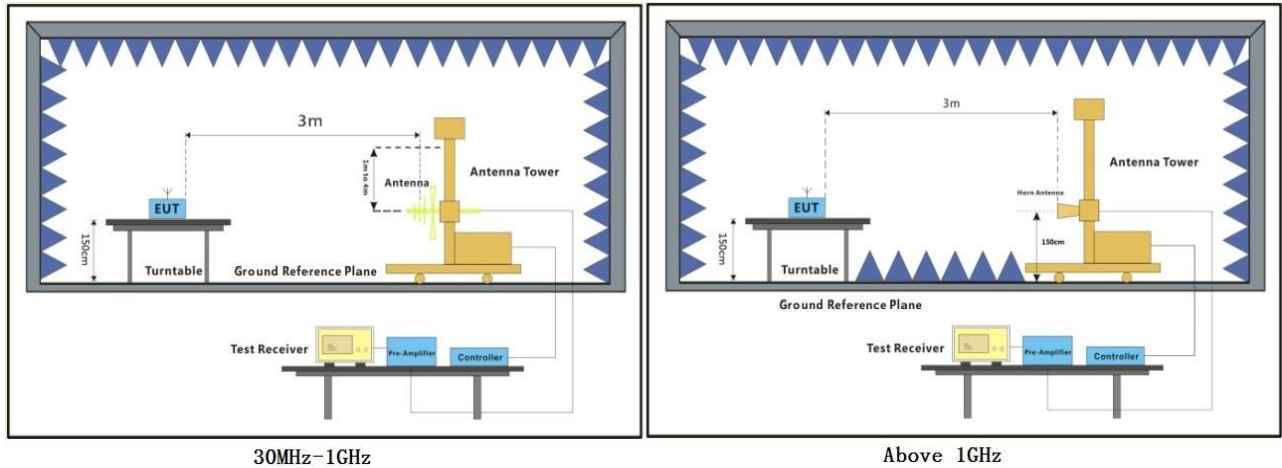
Pre-scan / Final test	Mode Code	Description
Final test	00	TX mode_Keep the EUT in transmitting with modulation mode.



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7.2.3 Test Setup Diagram



7.2.4 Measurement Procedure and Data

- a. For below 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 or 10 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
 - b. For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
 - c. The EUT was set 3 or 10 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
 - d. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
 - e. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
 - f. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
 - g. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.
 - h. Test the EUT in the lowest channel, the middle channel, the Highest channel.
 - i. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.
 - j. Repeat above procedures until all frequencies measured was complete.
- Remark: Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor



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Report No.: KSCR230400068601

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Frequency (MHz)	Read Level (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Detector	Polarization
2402	106.18	-19.38	86.80	94.00	-7.20	Peak	Horizontal
	100.40	-19.38	81.02	94.00	-12.98	Peak	Vertical

Frequency (MHz)	Read Level (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Detector	Polarization
2431	105.92	-19.03	86.89	94.00	-7.11	Peak	Horizontal
	100.24	-19.03	81.21	94.00	-12.79	Peak	Vertical

Frequency (MHz)	Read Level (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Detector	Polarization
2460	106.56	-18.83	87.70	94.00	-6.30	Peak	Horizontal
	96.72	-18.83	77.89	94.00	-16.11	Peak	Vertical

Remark: If the Peak value below the AV Limit, the AV test doesn't perform for this submission.



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7.3 Restricted Band Around Fundamental Frequency

Test Requirement 47 CFR Part 15, Subpart C 15.205 & 15.249(d) & 15.209

Test Method: ANSI C63.10 (2013) Section 6.10.5

Measurement Distance: 3m

Limit:

Frequency	Limit (dBuV/m @3m)	Remark
30MHz-88MHz	40.0	Quasi-peak Value
88MHz-216MHz	43.5	Quasi-peak Value
216MHz-960MHz	46.0	Quasi-peak Value
960MHz-1GHz	54.0	Quasi-peak Value
Above 1GHz	54.0	Average Value
Above 1GHz	74.0	Peak Value

Emission radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in Section 15.209, whichever is the lesser attenuation.

7.3.1 E.U.T. Operation

Operating Environment:

Temperature: 25.1 °C Humidity: 44.2 % RH Atmospheric Pressure: 1010 mbar

7.3.2 Test Mode Description

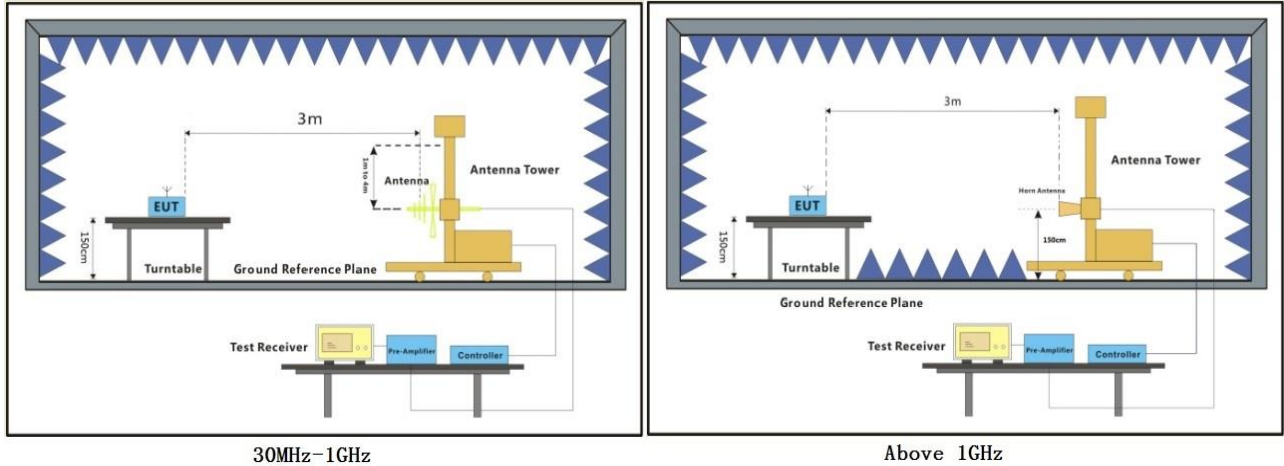
Pre-scan / Final test	Mode Code	Description
Final test	00	TX mode_Keep the EUT in transmitting with modulation mode.



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7.3.3 Test Setup Diagram



7.3.4 Measurement Procedure and Data

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- For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- The EUT was set 3 or 10 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.
- Test the EUT in the lowest channel, the middle channel, the Highest channel.
- The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.
- Repeat above procedures until all frequencies measured was complete.

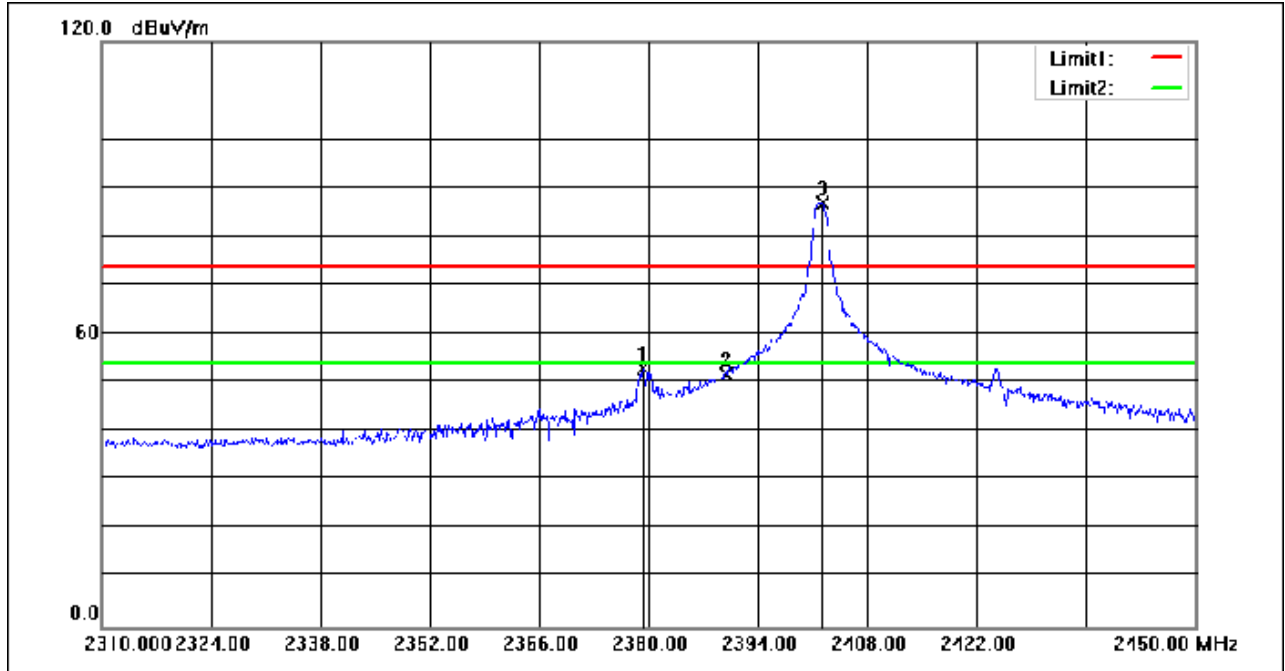
Remark: Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor



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2402MHz Horizontal



No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2379.300	72.39	-19.50	52.89	74.00	-21.11	peak
2	2390.000	71.23	-19.45	51.78	74.00	-22.22	peak
3	2402.260	106.18	-19.38	86.80	74.00	12.80	peak

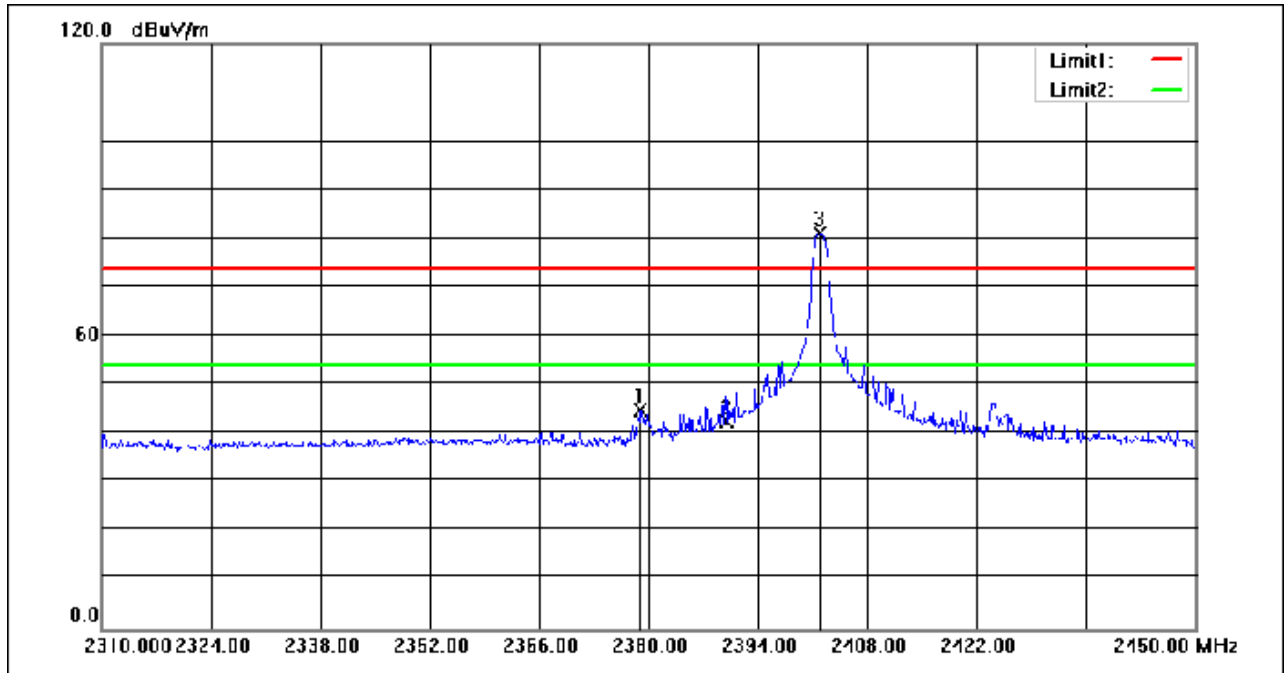


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2402MHz Vertical



No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2379.020	64.33	-19.50	44.83	74.00	-29.17	peak
2	2390.000	61.90	-19.45	42.45	74.00	-31.55	peak
3	2401.840	100.40	-19.38	81.02	74.00	7.02	peak

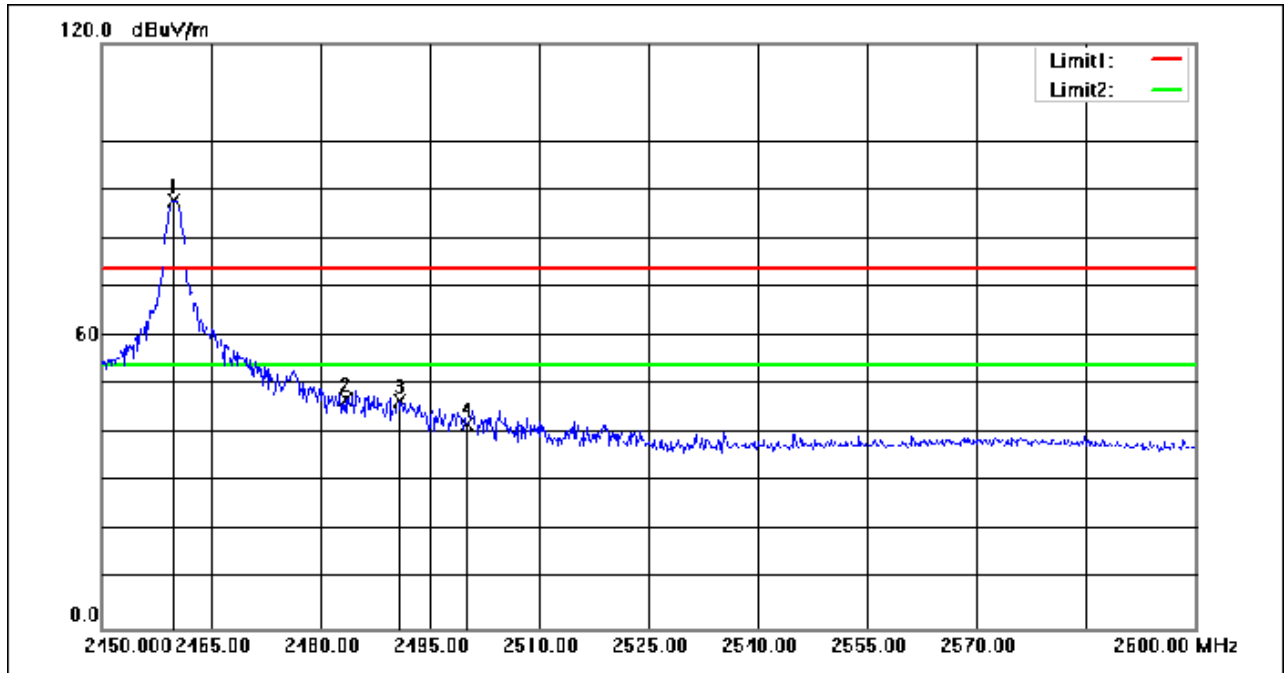


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2460MHz Horizontal



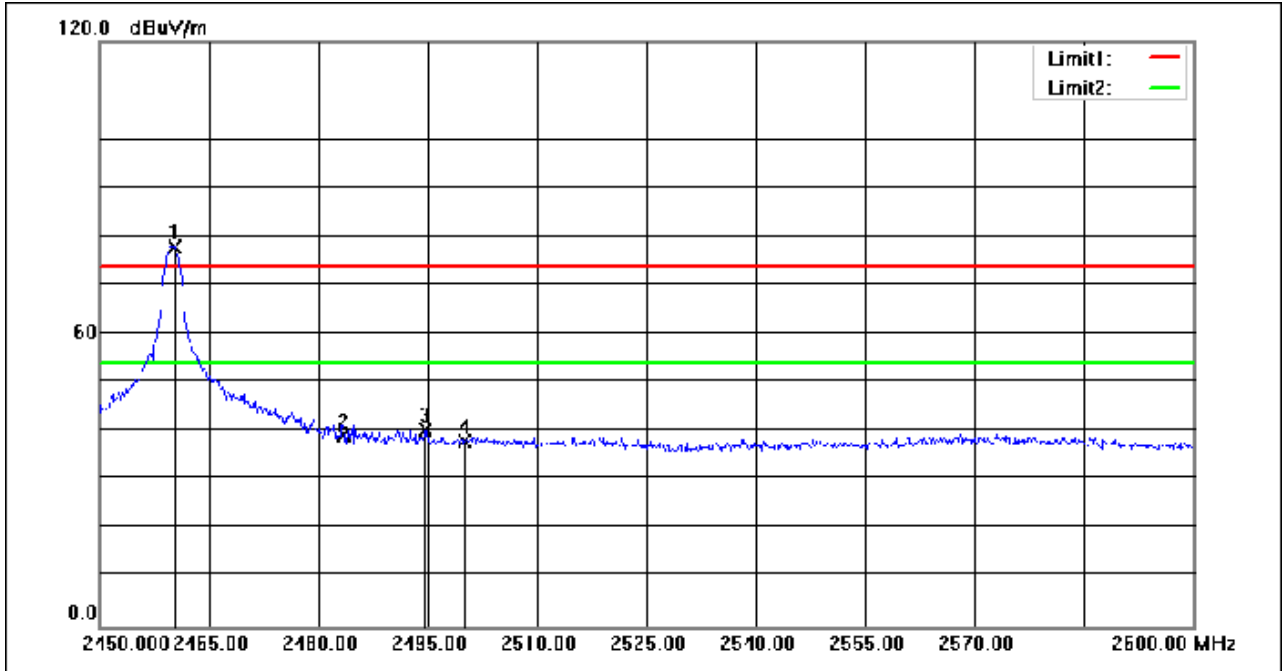
No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2459.900	106.53	-18.83	87.70	74.00	13.70	peak
2	2483.500	65.80	-18.92	46.88	74.00	-27.12	peak
3	2490.950	65.46	-18.95	46.51	74.00	-27.49	peak
4	2500.000	60.77	-18.98	41.79	74.00	-32.21	peak



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2460MHz Vertical



No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2460.200	96.72	-18.83	77.89	74.00	3.89	peak
2	2483.500	57.95	-18.92	39.03	74.00	-34.97	peak
3	2494.700	59.42	-18.96	40.46	74.00	-33.54	peak
4	2500.000	56.83	-18.98	37.85	74.00	-36.15	peak



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Compliance Certification Services (Kunshan) Inc.

Report No.: KSCR230400068601

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7.4 Radiated Emissions Below 1GHz

Test Requirement 47 CFR Part 15, Subpart C 15.209 & 15.249 (a),(d)

Test Method: ANSI C63.10 (2013) Section 6.4&6.5

Measurement Distance: 3m

Limit:

Frequency(MHz)	Field strength(microvolts/meter)	Measurement distance(meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100	3
88-216	150	3
216-960	200	3
960-1000	500	3

7.4.1 E.U.T. Operation

Operating Environment:

Temperature: 25.1 °C Humidity: 44.2 % RH Atmospheric Pressure: 1010 mbar

7.4.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	TX mode_Keep the EUT in transmitting with modulation mode.

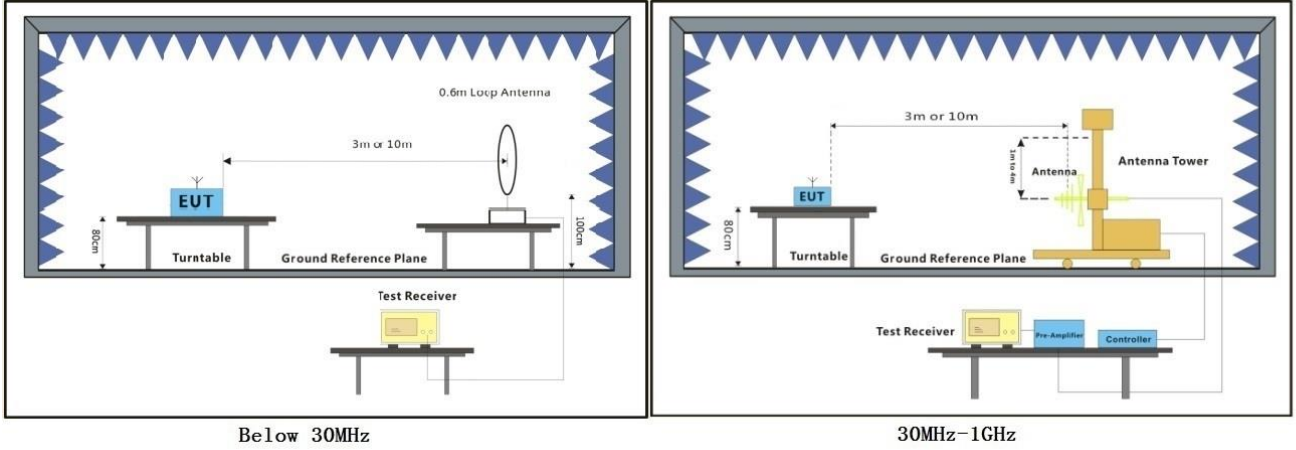


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7.4.3 Test Setup Diagram



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7.4.4 Measurement Procedure and Data

- a. For below 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 or 10 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using quasi-peak method as specified and then reported in a data sheet.
- g. Test the EUT in the lowest channel, the middle channel, the Highest channel.
- h. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.
- i. Repeat above procedures until all frequencies measured was complete.

Remark:

1. Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor
2. Scan from 9kHz to 30MHz, the disturbance below 30MHz was very low. The points marked on above plots are the highest emissions could be found when testing, so only above points had been displayed. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need not be reported.
3. The disturbance below 1GHz was very low and the harmonics were the highest point could be found when testing, so only the above harmonics had been displayed.

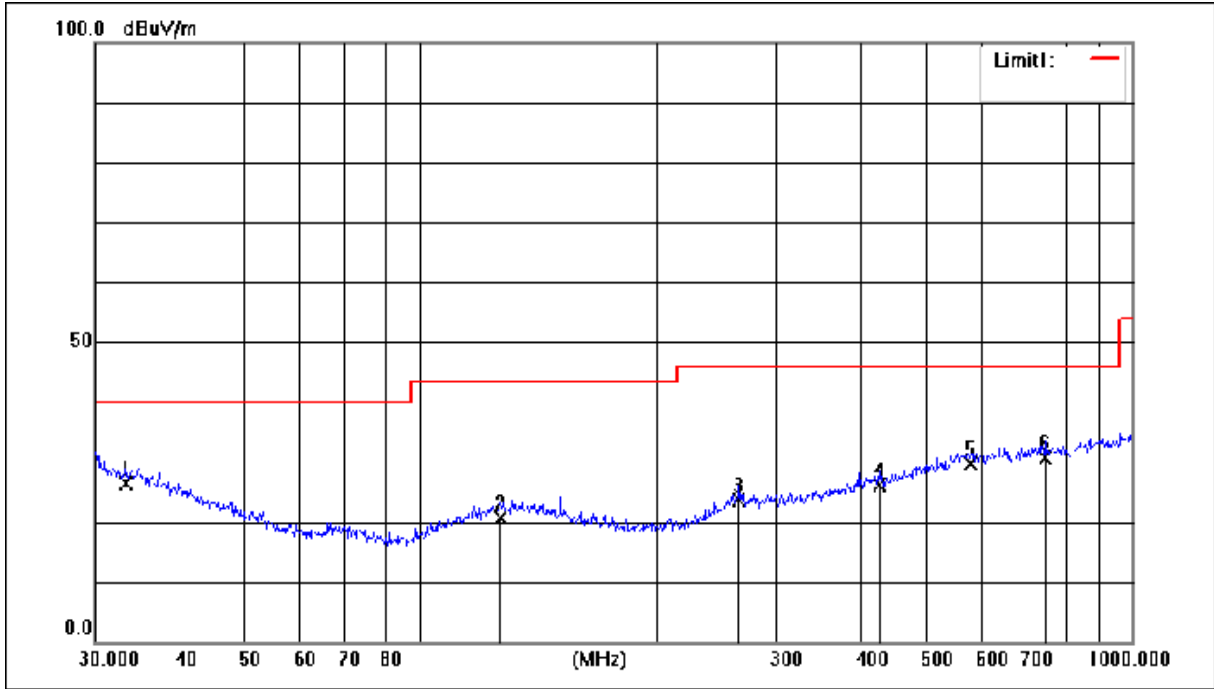


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Test Mode: 2042MHz; Polarity: Horizontal



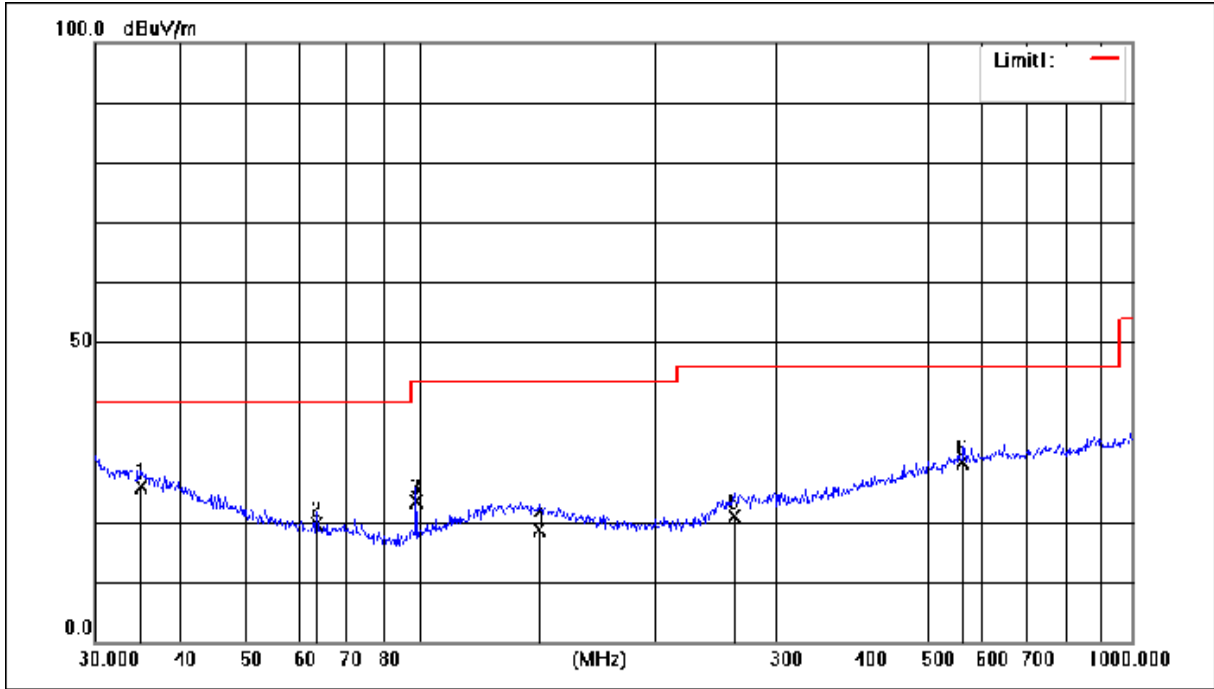
No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	33.3280	1.36	25.03	26.39	40.00	-13.61	QP
2	118.1862	1.41	19.33	20.74	43.50	-22.76	QP
3	264.7457	2.67	20.94	23.61	46.00	-22.39	QP
4	425.0280	2.23	23.95	26.18	46.00	-19.82	QP
5	580.7026	2.63	27.06	29.69	46.00	-16.31	QP
6	747.4825	28.29	2.41	30.70	46.00	-15.30	QP



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Test Mode: 2402MHz; Polarity: Vertical



No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	35.1278	1.18	24.60	25.78	40.00	-14.22	QP
2	63.5356	4.83	14.79	19.62	40.00	-20.38	QP
3	88.9640	8.82	14.66	23.48	43.50	-20.02	QP
4	134.5592	-0.56	19.17	18.61	43.50	-24.89	QP
5	260.1444	0.10	20.88	20.98	46.00	-25.02	QP
6	564.6390	2.34	27.45	29.79	46.00	-16.21	QP

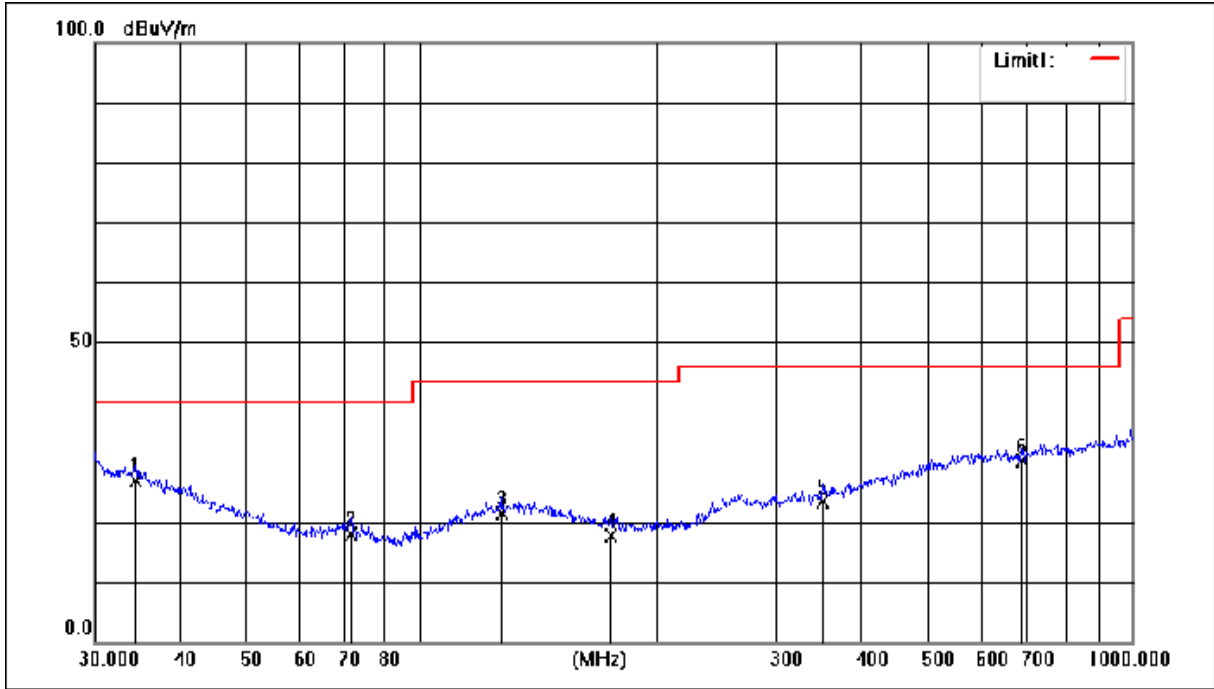


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Test Mode: 2431MHz; Polarity: Horizontal



No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	34.3964	2.00	24.84	26.84	40.00	-13.16	QP
2	71.3300	2.21	15.71	17.92	40.00	-22.08	QP
3	118.6014	2.04	19.35	21.39	43.50	-22.11	QP
4	171.9946	0.78	16.91	17.69	43.50	-25.81	QP
5	351.7080	1.64	21.84	23.48	46.00	-22.52	QP
6	689.5644	27.57	2.44	30.01	46.00	-15.99	QP

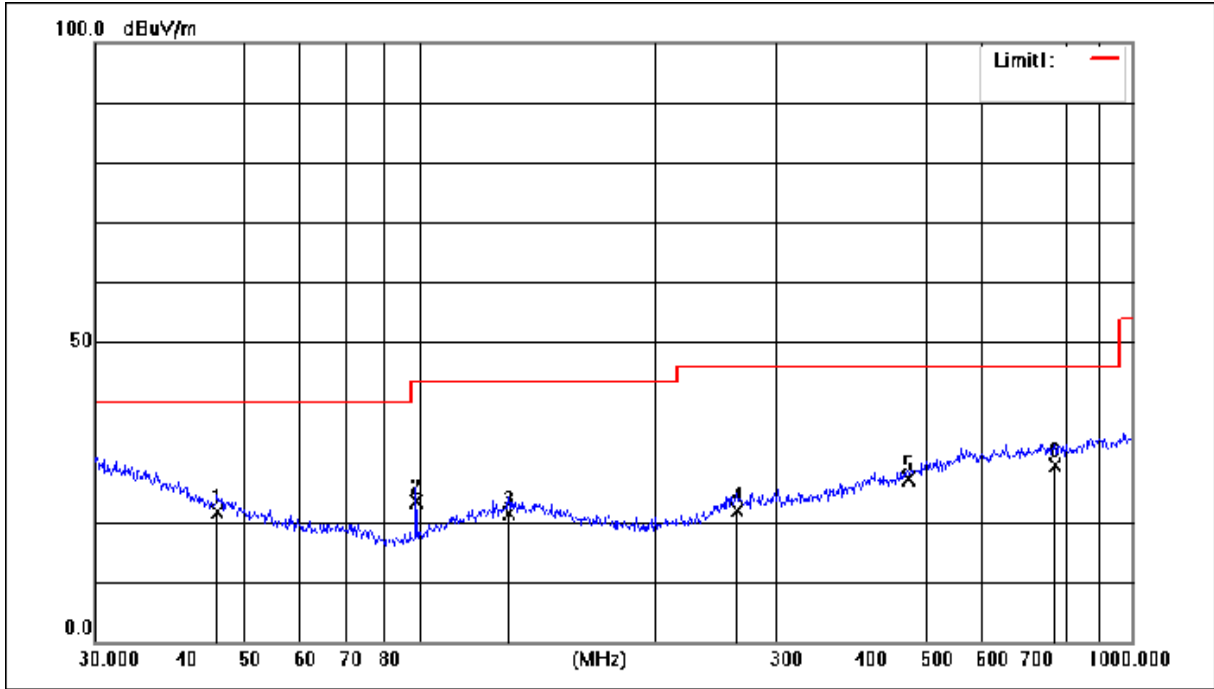


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Test Mode: 2431MHz; Polarity: Vertical



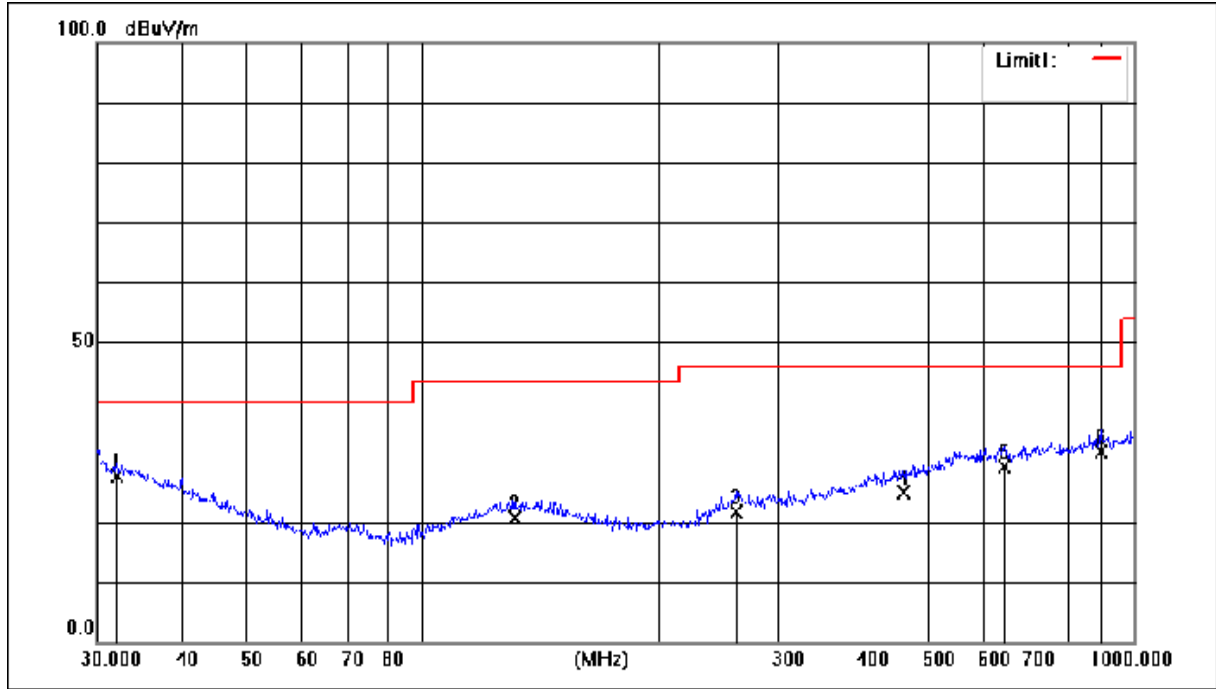
No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	45.3755	1.99	19.65	21.64	40.00	-18.36	QP
2	88.9640	8.83	14.66	23.49	43.50	-20.01	QP
3	121.5486	1.95	19.44	21.39	43.50	-22.11	QP
4	262.8955	0.80	21.00	21.80	46.00	-24.20	QP
5	468.8762	2.16	25.03	27.19	46.00	-18.81	QP
6	771.4486	27.02	2.32	29.34	46.00	-16.66	QP



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Test Mode: 2460MHz; Polarity: Horizontal



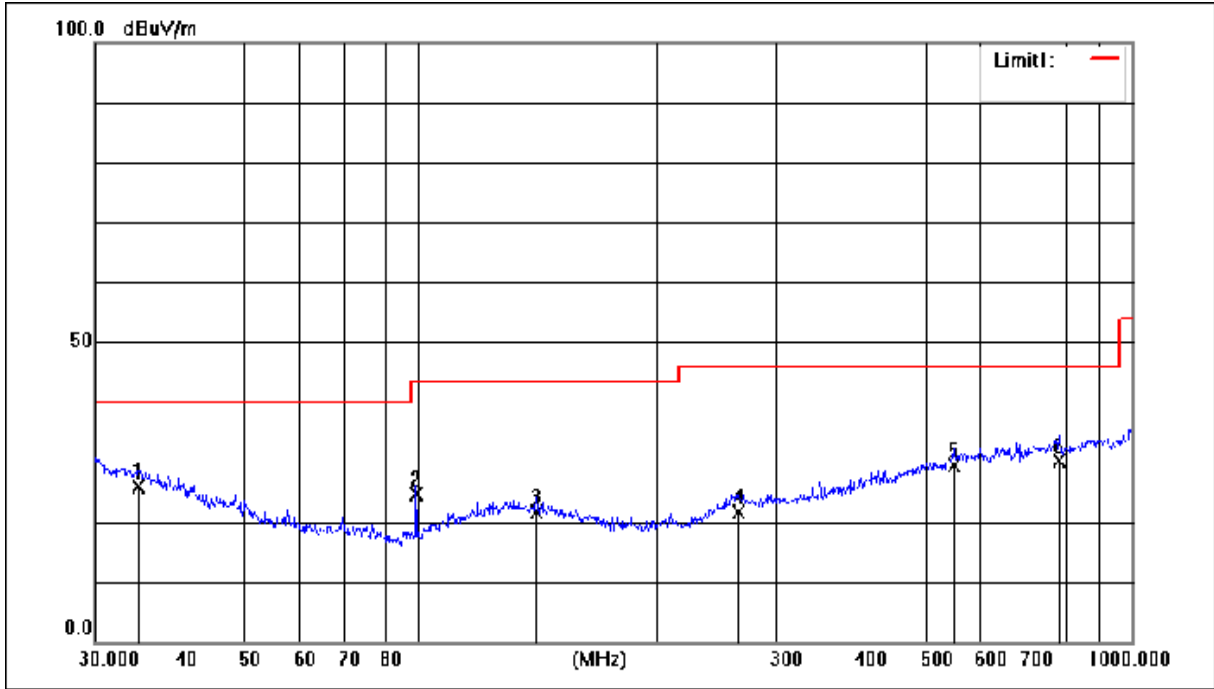
No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	32.0667	2.40	25.21	27.61	40.00	-12.39	QP
2	123.2655	1.21	19.46	20.67	43.50	-22.83	QP
3	260.1444	0.71	20.88	21.59	46.00	-24.41	QP
4	459.1144	0.22	24.71	24.93	46.00	-21.07	QP
5	645.1195	1.34	27.83	29.17	46.00	-16.83	QP
6	893.8567	29.14	2.45	31.59	46.00	-14.41	QP



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Test Mode: 2460MHz; Polarity: Vertical



No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	34.7602	1.05	24.73	25.78	40.00	-14.22	QP
2	88.9640	10.03	14.66	24.69	43.50	-18.81	QP
3	133.6188	2.31	19.24	21.55	43.50	-21.95	QP
4	263.8190	0.63	20.99	21.62	46.00	-24.38	QP
5	547.0977	2.16	27.20	29.36	46.00	-16.64	QP
6	782.3453	27.81	2.27	30.08	46.00	-15.92	QP



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7.5 Radiated Emissions Above 1GHz

Test Requirement 47 CFR Part 15, Subpart C 15.209 & 15.249 (a),(d)

Test Method: ANSI C63.10 (2013) Section 6.6

Measurement Distance: 3m

Limit:

Frequency(MHz)	Field strength(microvolts/meter)	Measurement distance(meters)
Above 1000	500	3

7.5.1 E.U.T. Operation

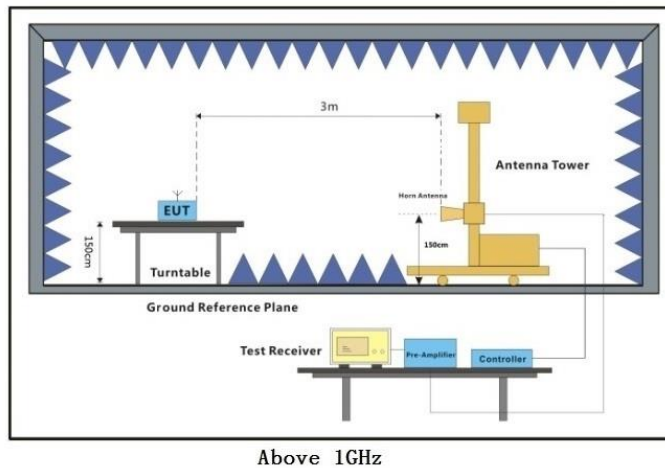
Operating Environment:

Temperature: 25.1 °C Humidity: 44.2 % RH Atmospheric Pressure: 1010 mbar

7.5.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	TX mode_Keep the EUT in transmitting with modulation mode.

7.5.3 Test Setup Diagram



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7.5.4 Measurement Procedure and Data

- a. For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak or average method as specified and then reported in a data sheet.
- g. Test the EUT in the lowest channel, the middle channel, the Highest channel.
- h. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.
- i. Repeat above procedures until all frequencies measured was complete.

Remark:

1. Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor
2. Scan from 18GHz to 40GHz, the disturbance above 18GHz was very low. The points marked on above plots are the highest emissions could be found when testing, so only above points had been displayed. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need not be reported.
3. As shown in this section, for frequencies above 1GHz, the field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. For the emissions whose peak level is lower than the average limit, only the peak measurement is shown in the report.
4. The disturbance above 18GHz were very low and the harmonics were the highest point could be found when testing, so only the above harmonics had been displayed.

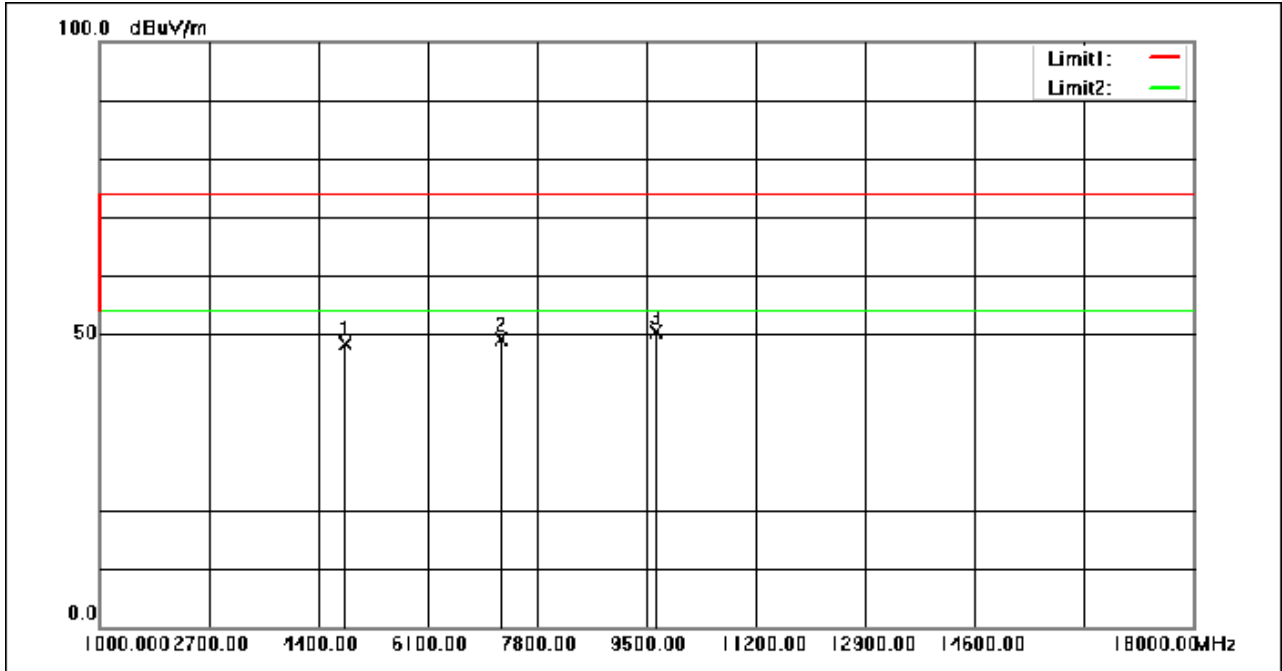


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2402MHz Horizontal



No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4824.000	57.15	-8.78	48.37	74.00	-25.63	peak
2	7236.000	54.92	-5.86	49.06	74.00	-24.94	peak
3	9648.000	51.60	-1.31	50.29	74.00	-23.71	peak

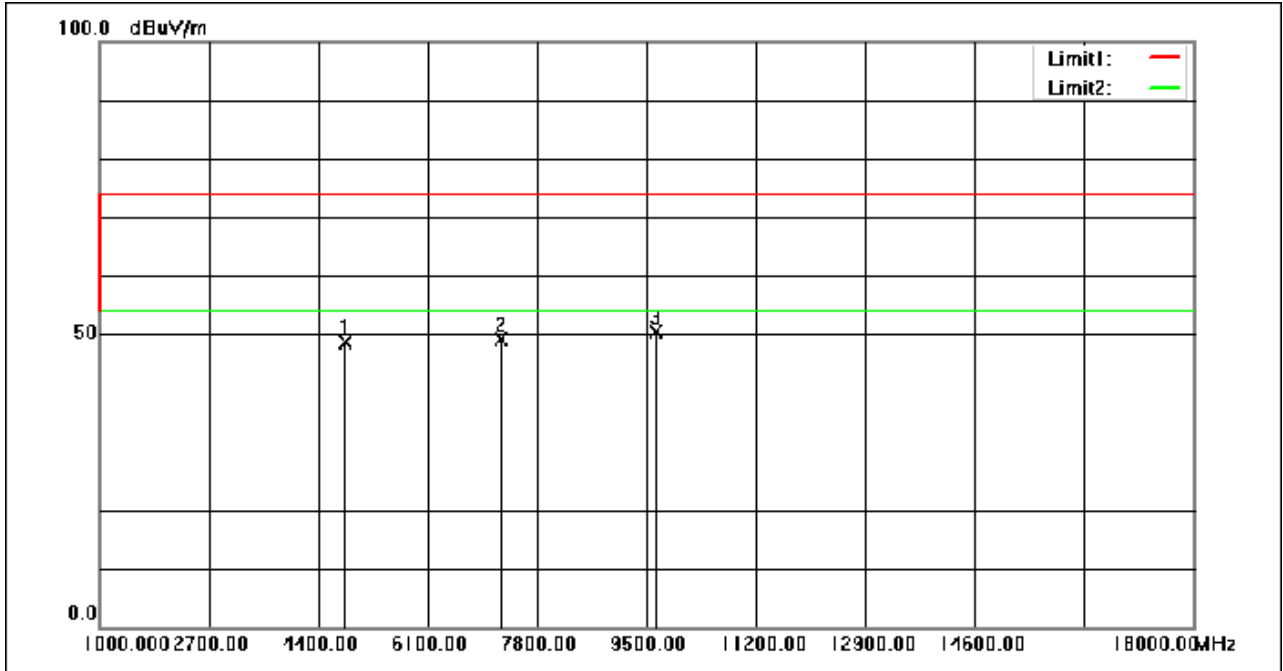


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2402MHz Vertical



No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4824.000	57.46	-8.78	48.68	74.00	-25.32	peak
2	7236.000	54.94	-5.86	49.08	74.00	-24.92	peak
3	9648.000	51.63	-1.31	50.32	74.00	-23.68	peak

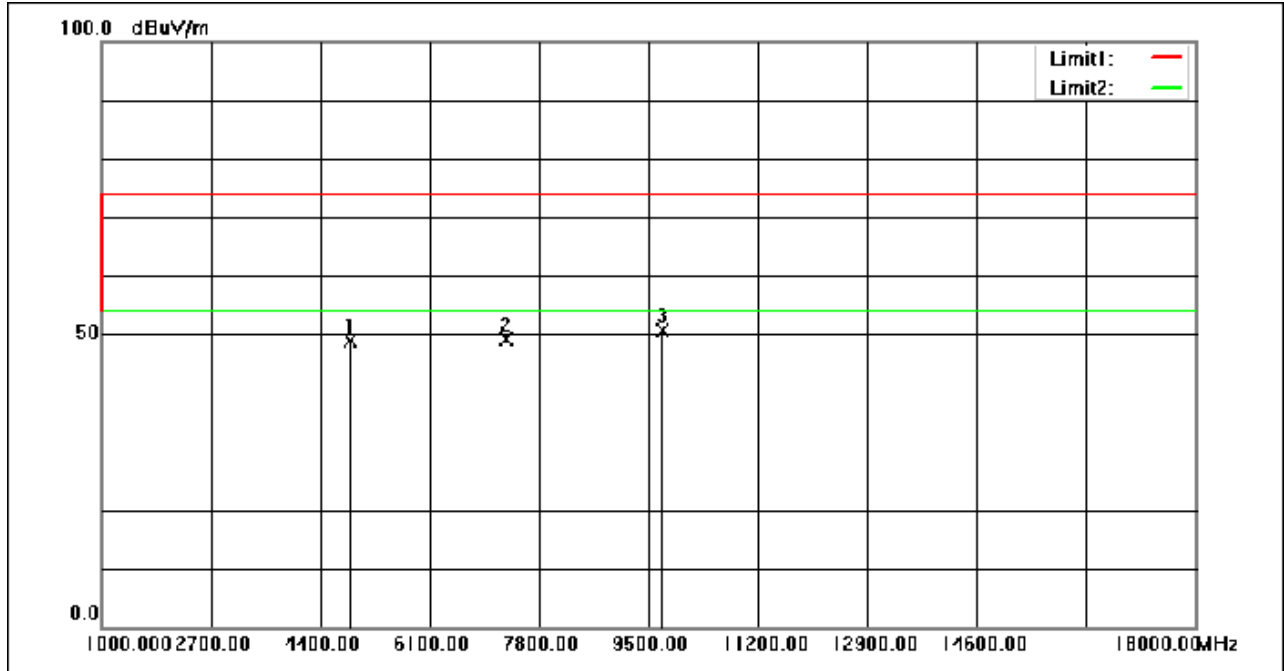


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2431MHz Horizontal



No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4862.000	57.63	-8.65	48.98	74.00	-25.02	peak
2	7293.000	54.81	-5.80	49.01	74.00	-24.99	peak
3	9724.000	51.98	-1.41	50.57	74.00	-23.43	peak

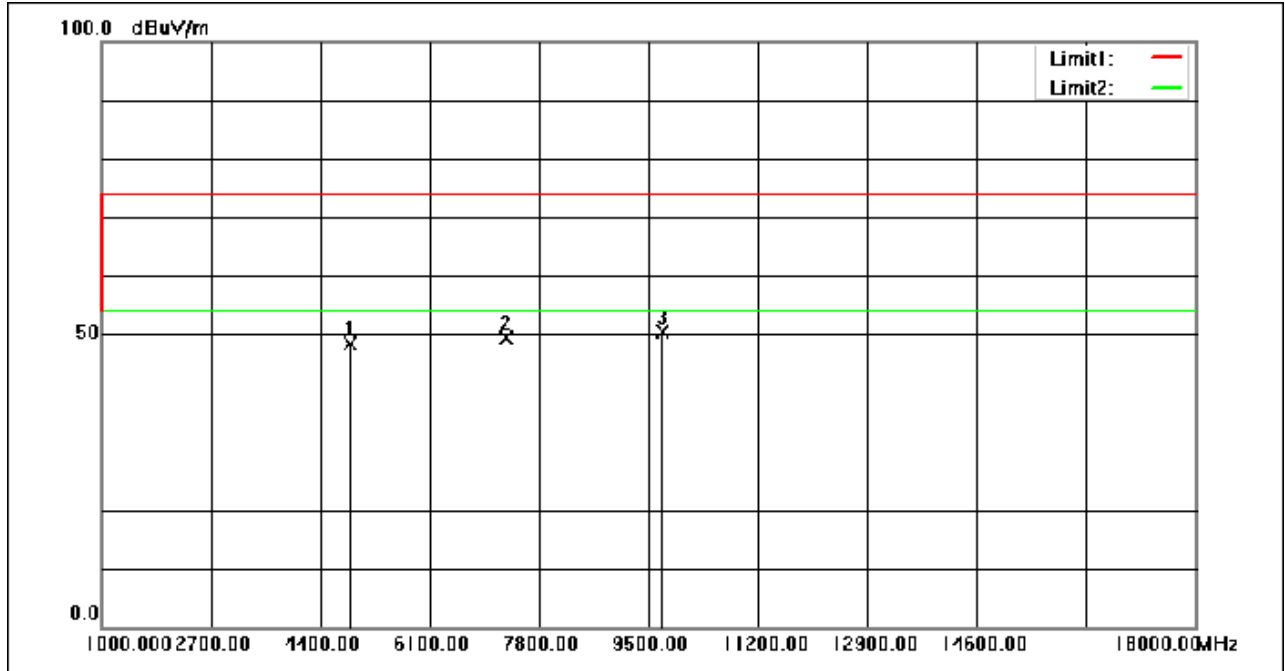


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2431MHz Vertical



No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4862.000	57.14	-8.65	48.49	74.00	-25.51	peak
2	7293.000	55.17	-5.80	49.37	74.00	-24.63	peak
3	9724.000	51.75	-1.41	50.34	74.00	-23.66	peak

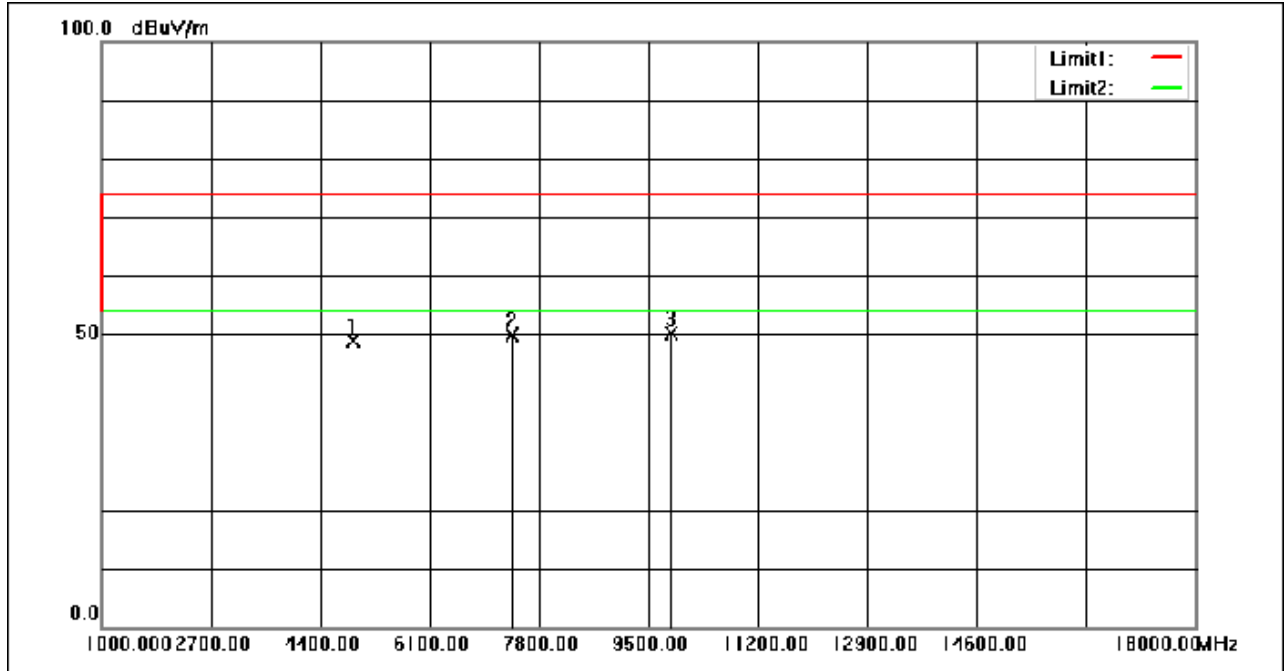


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2460MHz Horizontal



No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4920.000	57.35	-8.45	48.90	74.00	-25.10	peak
2	7380.000	55.62	-5.70	49.92	74.00	-24.08	peak
3	9840.000	51.43	-1.32	50.11	74.00	-23.89	peak

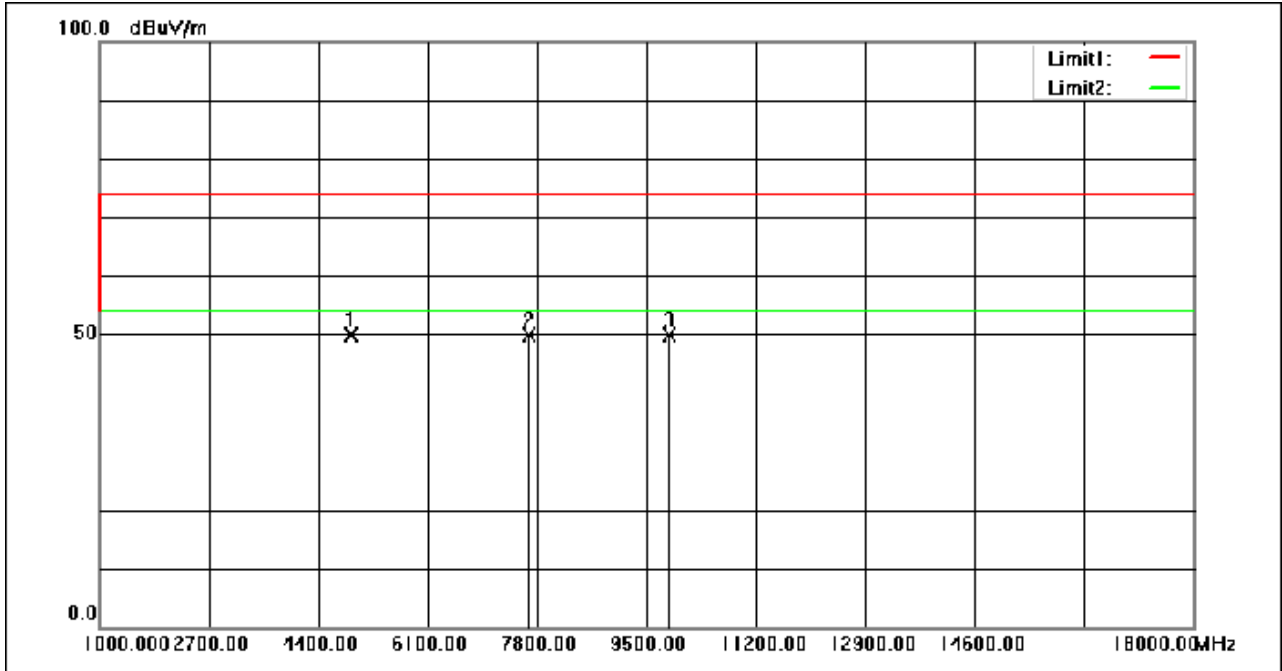


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2460MHz Vertical



No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4920.000	58.45	-8.45	50.00	74.00	-24.00	peak
2	7680.000	55.43	-5.43	50.00	74.00	-24.00	peak
3	9840.000	51.32	-1.32	50.00	74.00	-24.00	peak



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8 Test Setup Photo

Refer to Appendix - Test Setup Photo for KSCR2304000686AT

9 EUT Constructional Details (EUT Photos)

Refer to Appendix - Photographs of EUT Constructional Details for KSCR2304000686AT

- End of the Report -



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