



FCC RF TEST REPORT

47 CFR FCC Part 15 Subpart C § 15.249

FCC ID : 2AD9M-003A
EQUIPMENT : Smartphone
BRAND NAME : LEOMO
MODEL NAME : LEM-TS1
MARKETING NAME : LEOMO TYPE-S
APPLICANT : LEOMO, Inc.
7-22-17 Nishi Gotanda TOC Bldg. 7F
Shinagawa-ku, Tokyo, 1410031, Japan
MANUFACTURER : LEOMO, Inc.
2000 Central Avenue, Suite 150, Boulder CO
80301, USA

The product was received on Apr. 24, 2019 and testing was completed on Jun. 19, 2019. We, Sporton International (Kunshan) Inc., would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.

This report contains data that were produced under subcontract by Laboratory SPORTON INTERNATIONAL INC.

The test results in this report apply exclusively to the tested model / sample. Without written approval of Sporton International (Kunshan) Inc., the test report shall not be reproduced except in full.

Jason Jia

Reviewed by: Jason Jia / Supervisor

James Huang

Approved by: James Huang / Manager



Sporton International (Kunshan) Inc.

***No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300
People's Republic of China***



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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR942441G	Rev. 01	Initial issue of report	Jun. 25, 2019
FR942441G	Rev. 02	Update the address of Applicant.	Jul. 15, 2019



SUMMARY OF THE TEST RESULT

Applied Standard: 47 CFR FCC Part 15 Subpart C § 15.249				
Part	FCC Rule	Description of Test	Result	Remark
3.1	15.207	AC Power Line Conducted Emissions	Complies	Under limit 7.53 dB at 0.77775 MHz
3.2	2.1049	20dB & 99% Occupied Bandwidth	Complies	-
3.3	15.249(a)	Field Strength of Fundamental Emissions	Complies	Max level 88.29 dB μ V/m at 2402 MHz
3.3	15.249(a)(d)	Radiated Spurious Emissions	Complies	Under limit 12.28 dB at 2483.55MHz
3.4	15.203	Antenna Requirements	Complies	-

1. GENERAL INFORMATION

1.1 Applicant

LEOMO, Inc.

7-22-17 Nishi Gotanda TOC Bldg. 7F Shinagawa-ku, Tokyo, 1410031, Japan

1.2 Manufacturer

LEOMO, Inc.

2000 Central Avenue, Suite 150, Boulder CO 80301, USA

1.3 Product Details

For more detailed features description, please refer to the manufacturer's specifications or user's manual.

Items	Description
Modulation	GFSK
Channel Bandwidth (99%)	0.979MHz
Max. Field Strength (Peak)	88.29dB μ V/m
Max. Field Strength (Average)	39.17dB μ V/m
ANT+ Channel Number	79
ANT+ Frequency Range	2402-2480MHz

1.4 Modification of EUT

No modifications are made to the EUT during all test items.



1.5 Table for Test Modes

Investigation has been done on all the possible configurations for searching the worst cases. The following table is a list of the test modes shown in this test report.

Test Items	Mode
AC Power Line Conducted Emissions	CTX
Field Strength of Fundamental Emissions	CTX
Bandwidth	CTX
Radiated Emissions	CTX

Note:

1. CTX=continuously transmitting.
2. The programmed RF utility, "QRCT Tool" installed in the notebook to make the EUT get into the engineering modes to continuously transmit.

1.6 Table for Testing Locations

Sporton International (Kunshan) Inc. is accredited to ISO/IEC 17025:2017 by American Association for Laboratory Accreditation with Certificate Number 5145.02.

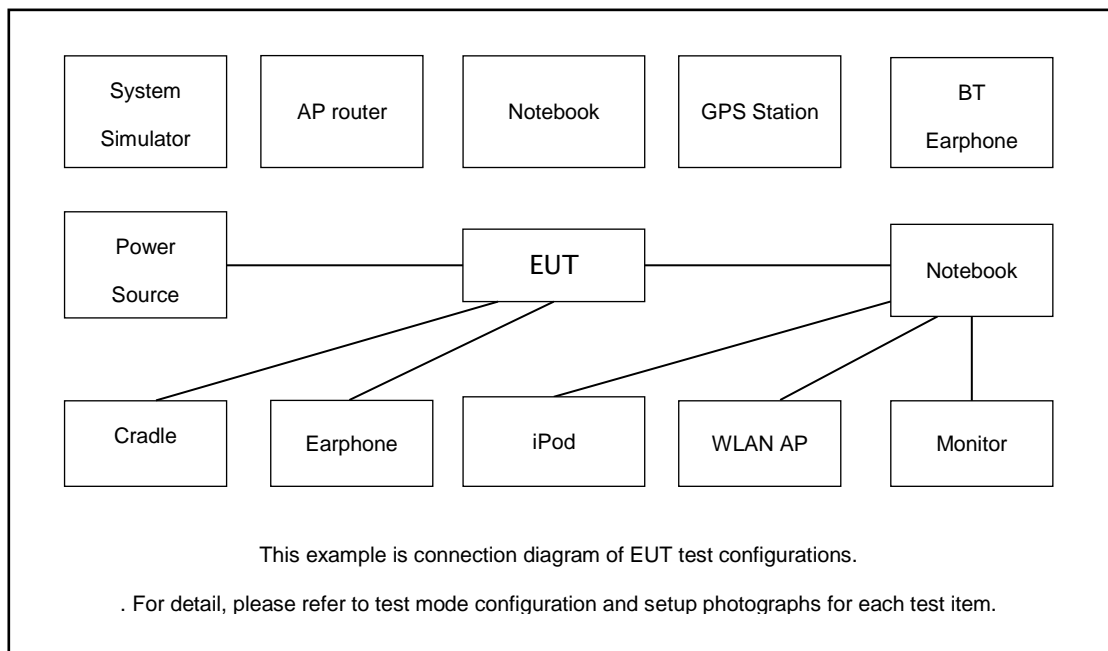
Test Firm	Sporton International (Kunshan) Inc.		
Test Site Location	No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300 People's Republic of China TEL : +86-512-57900158 FAX : +86-512-57900958		
Test Site No.	Sporton Site No.	FCC Designation No.	FCC Test Firm Registration No.
	03CH05-KS	CN1257	314309

SPORTON INTERNATIONAL INC. is accredited to ISO 17025 by Taiwan Accreditation Foundation (TAF code : 1190) and under the FCC-recognized accredited testing laboratories by Mutual Recognition Agreement (MRA) in FCC Test.

Test Site	SPORTON INTERNATIONAL INC.		
Test Site Location	No.52, Huaya 1st Rd., Guishan Dist. Taoyuan City Taiwan Tel: 886-3-327-3456 FAX: +886-3-327-0978		
Test Site No.	Sporton Site No.	FCC designation No.	FCC Test Firm Registration No.
	CO05-HY, TH05-HY	TW1190	553509

Test data subcontracted: All test item of this report except Radiated Spurious Emission.

1.7 Connection Diagram of Test System



2. TEST RESULT

2.1 AC Power Line Conducted Emissions Measurement

2.1.1 Limit

For a Low-power Radio-frequency device which is designed to be connected to the AC power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed below limits table.

Frequency (MHz)	QP Limit (dB μ V)	AV Limit (dB μ V)
0.15~0.5	66~56	56~46
0.5~5	56	46
5~30	60	50

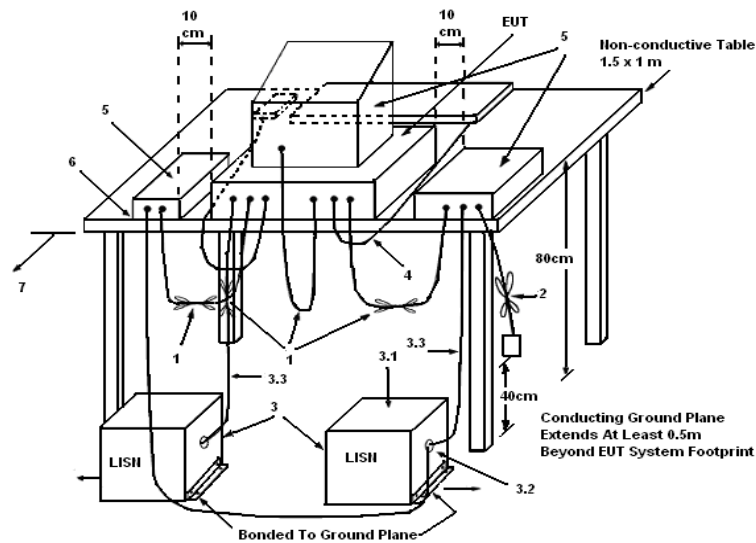
2.1.2 Measuring Instruments

Please refer to section 4 of equipment list in this report.

2.1.3 Test Procedures

1. Configure the EUT according to ANSI C63.4. The EUT or host of EUT has to be placed 0.4 meter far from the conducting wall of the shielding room and at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT or host of EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connected to the other LISNs. The LISN should provide 50uH/50ohms coupling impedance.
4. The frequency range from 150 kHz to 30 MHz was searched.
5. Set the test-receiver system to Peak Detect Function and Specified Bandwidth (IF bandwidth = 9kHz) with Maximum Hold Mode.
6. The measurement has to be done between each power line and ground at the power terminal.

2.1.4 Test Setup Layout



LEGEND:

- (1) Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
- (2) I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
- (3) EUT connected to one LISN. Unused LISN measuring port connectors shall be terminated in 50 Ω . LISN can be placed on top of, or immediately beneath, reference ground plane.
 - (3.1) All other equipment powered from additional LISN(s).
 - (3.2) Multiple outlet strip can be used for multiple power cords of non-EUT equipment.
 - (3.3) LISN at least 80 cm from nearest part of EUT chassis.
- (4) Cables of hand-operated devices, such as keyboards, mice, etc., shall be placed as for normal use.
- (5) Non-EUT components of EUT system being tested.
- (6) Rear of EUT, including peripherals, shall all be aligned and flush with rear of tabletop.
- (7) Rear of tabletop shall be 40 cm removed from a vertical conducting plane that is bonded to the ground plane.

2.1.5 Test Deviation

There is no deviation with the original standard.

2.1.6 EUT Operation during Test

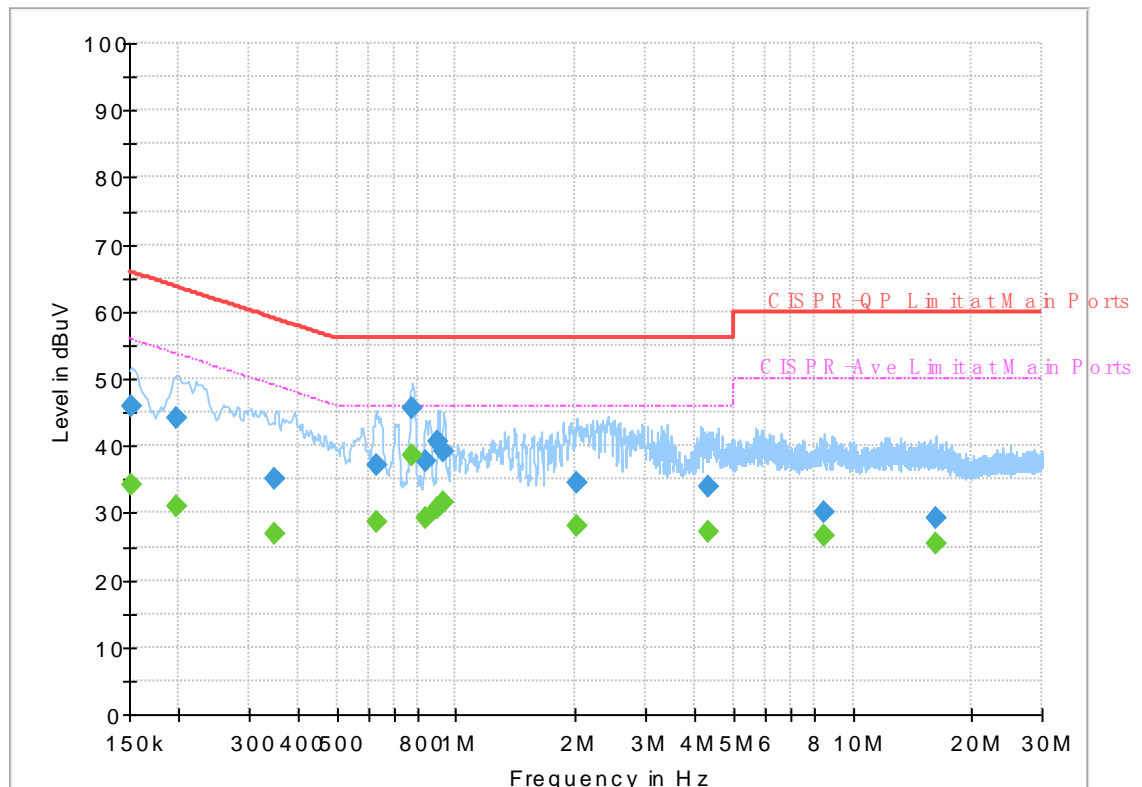
The EUT was placed on the test table and programmed in transmitting function.



2.1.7 Results of AC Power Line Conducted Emissions Measurement

Test Engineer :	Jimmy Chang	Temperature :	24~26°C
		Relative Humidity :	54~56%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		

Full Spectrum



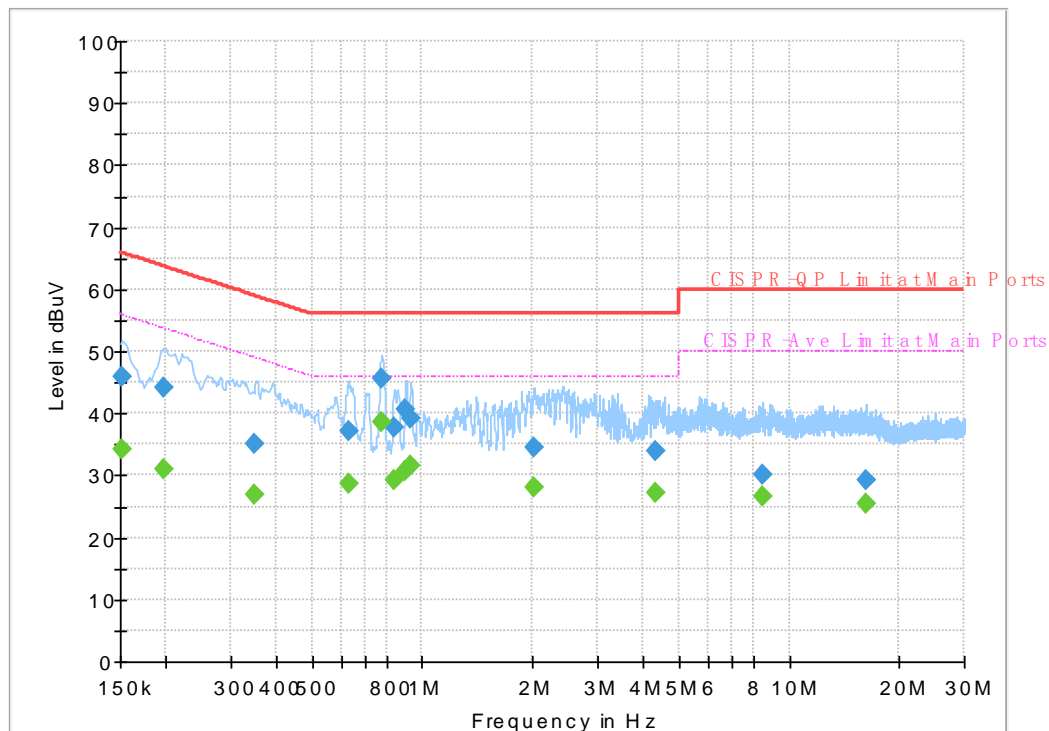
Final_Result

Frequency	QuasiPeak	Average	Limit	Margin	Line	Filter	Corr.
0.152250	---	34.09	55.88	21.79	L1	OFF	19.5
0.152250	46.01	---	65.88	19.87	L1	OFF	19.5
0.197250	---	30.95	53.73	22.78	L1	OFF	19.5
0.197250	44.22	---	63.73	19.51	L1	OFF	19.5
0.350250	---	27.04	48.96	21.92	L1	OFF	19.5
0.350250	35.22	---	58.96	23.74	L1	OFF	19.5
0.627000	---	28.76	46.00	17.24	L1	OFF	19.6
0.627000	37.19	---	56.00	18.81	L1	OFF	19.6
0.777750	---	38.47	46.00	7.53	L1	OFF	19.6
0.777750	45.69	---	56.00	10.31	L1	OFF	19.6
0.836250	---	29.23	46.00	16.77	L1	OFF	19.6
0.836250	37.68	---	56.00	18.32	L1	OFF	19.6



Test Engineer :	Jimmy Chang	Temperature :	24~26°C
		Relative Humidity :	54~56%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		

Full Spectrum



Final_Result

Frequency	QuasiPeak	CAverage	Limit	Margin	Line	Filter	Corr.
0.901500	---	30.75	46.00	15.25	L1	OFF	19.6
0.901500	40.75	---	56.00	15.25	L1	OFF	19.6
0.930750	---	31.71	46.00	14.29	L1	OFF	19.6
0.930750	39.16	---	56.00	16.84	L1	OFF	19.6
2.006250	---	27.94	46.00	18.06	L1	OFF	19.6
2.006250	34.61	---	56.00	21.39	L1	OFF	19.6
4.308000	---	27.22	46.00	18.78	L1	OFF	19.7
4.308000	33.83	---	56.00	22.17	L1	OFF	19.7
8.495250	---	26.68	50.00	23.32	L1	OFF	19.9
8.495250	30.14	---	60.00	29.86	L1	OFF	19.9
16.156500	---	25.37	50.00	24.63	L1	OFF	20.1
16.156500	29.15	---	60.00	30.85	L1	OFF	20.1

2.2 20dB and & 99% Occupied Bandwidth

2.2.1 Limit

Intentional radiators must be designed to ensure that the 20 dB bandwidth of the emissions in the specific band.

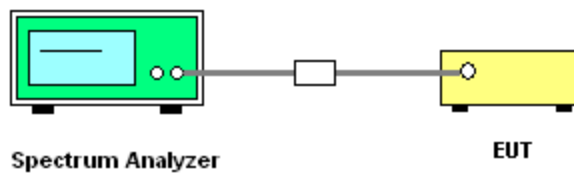
2.2.2 Measuring Instruments

Please refer to section 4 of equipment list in this report.

2.2.3 Test Procedures

1. The transmitter output port was connected to the spectrum analyzer.
2. Measured the spectrum width with highest power setting.

2.2.4 Test Setup Layout



2.2.5 Test Deviation

There is no deviation with the original standard.

2.2.6 EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

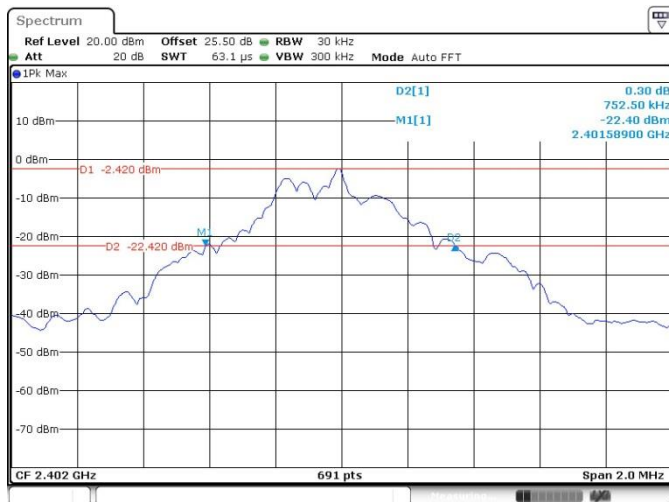


2.2.7 Test Result of 20dB Spectrum Bandwidth

Final Test Date	Jun. 19, 2019	Test Site No.	TH05-HY
Temperature	21~25	Humidity	51~54
Test Engineer	Osolemio Chang		

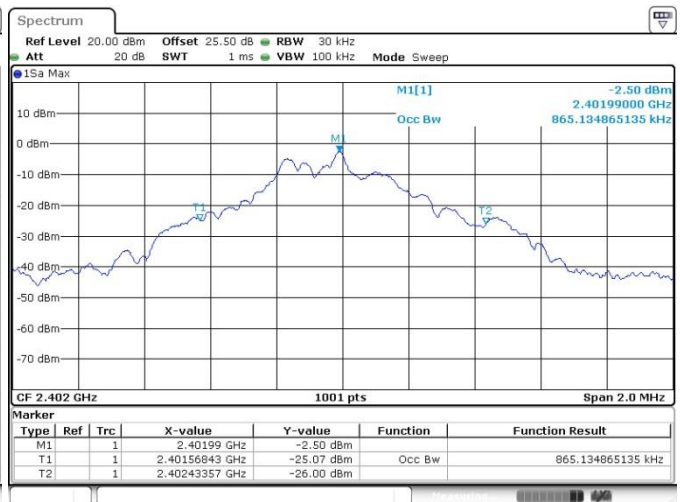
Frequency	20dB BW (MHz)	99% OBW (MHz)
2402MHz	0.753	0.865
2440MHz	0.758	0.867
2480MHz	0.889	0.979

20 dB Bandwidth Plot on 2402MHz



Date: 19 JUN 2019 00:55:20

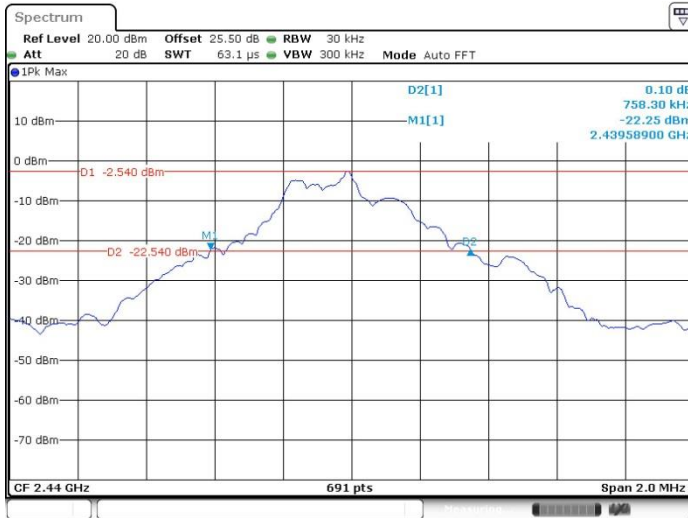
99% Bandwidth Plot on 2402MHz



Date: 19 JUN 2019 00:54:23

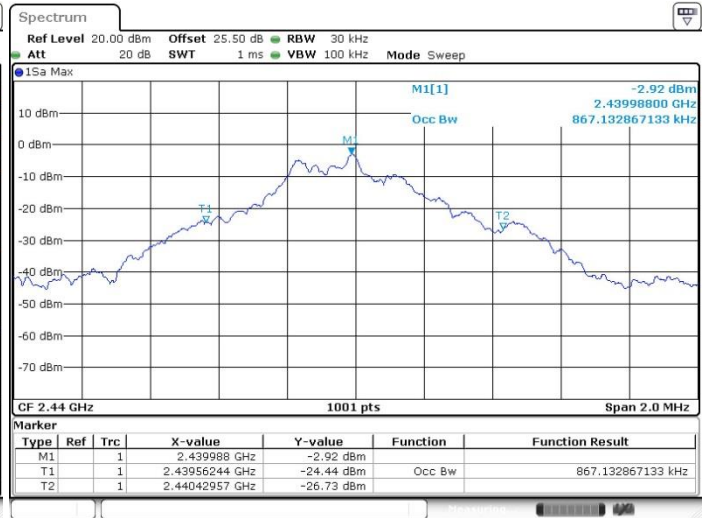


20 dB Bandwidth Plot on 2440MHz



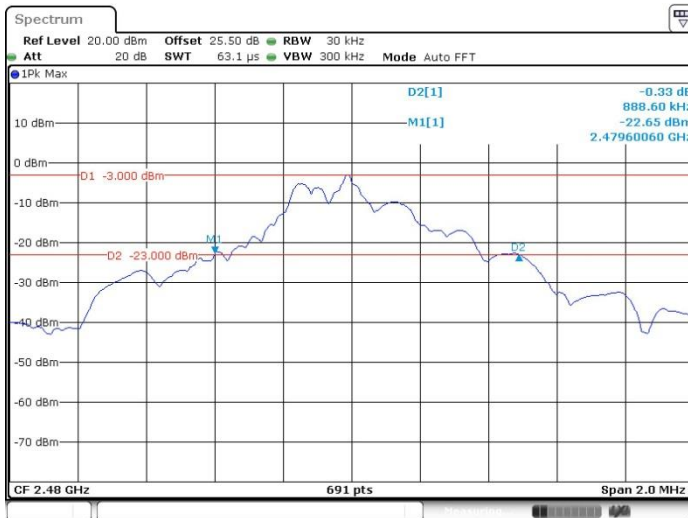
Date: 19 JUN 2019 00:51:44

99% Bandwidth Plot on 2440MHz



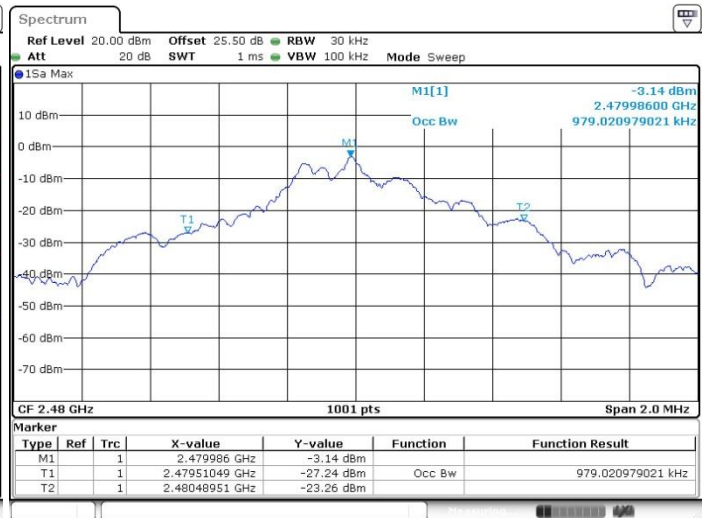
Date: 19 JUN 2019 00:41:34

20 dB Bandwidth Plot on 2480MHz



Date: 19 JUN 2019 00:53:32

99% Bandwidth Plot on 2480MHz



Date: 19 JUN 2019 00:52:35

2.3 Field Strength of Fundamental Emissions and Radiated Spurious Emissions

2.3.1 Limit

The field strength measured at 3 meters shall not exceed the limits in the following table:

Fundamental Frequencies(MHz)	Field Strength(millivolts/m)	
	Fundamental	Harmonics
902~928	50	0.5
2400~2483.5	50	0.5
5725~5875	50	0.5

Note: The limits shown in the above table are based on measurements using an average detector, except for the fundamental emission in the frequency band 902-928 MHz, which is based on measurements using a CISPR quasi-peak detector.

Emissions 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 field strength limits listed in 15.209 as below, whichever is less stringent.

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

2.3.2 Measuring Instruments

Please refer to section 4 of equipment list in this report.

2.3.3 Test Procedures

1. The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively above ground.
2. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
3. 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 turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level to comply with the guidelines.
4. Set to the maximum power setting and enable the EUT transmit continuously.

Remark:

1. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level
2. For average measurement: use duty cycle correction factor method per 15.35(c).

Duty cycle = On time/100 milliseconds

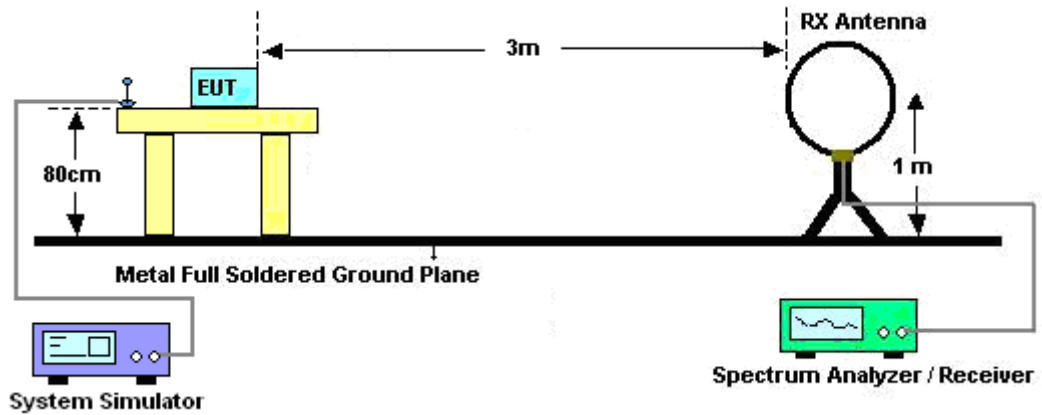
On time = $N1 \cdot L1 + N2 \cdot L2 + \dots + Nn-1 \cdot L_{Nn-1} + Nn \cdot Ln$

Where N1 is number of type 1 pulses, L1 is length of type 1 pulses, etc.

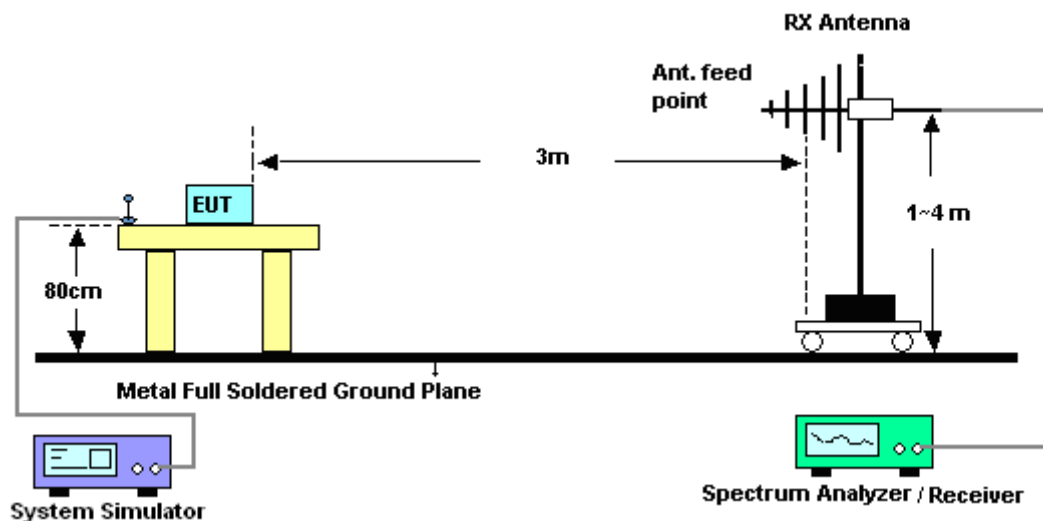
Average Emission Level = Peak Emission Level + $20 \cdot \log(\text{Duty cycle})$

2.3.4 Test Setup Layout

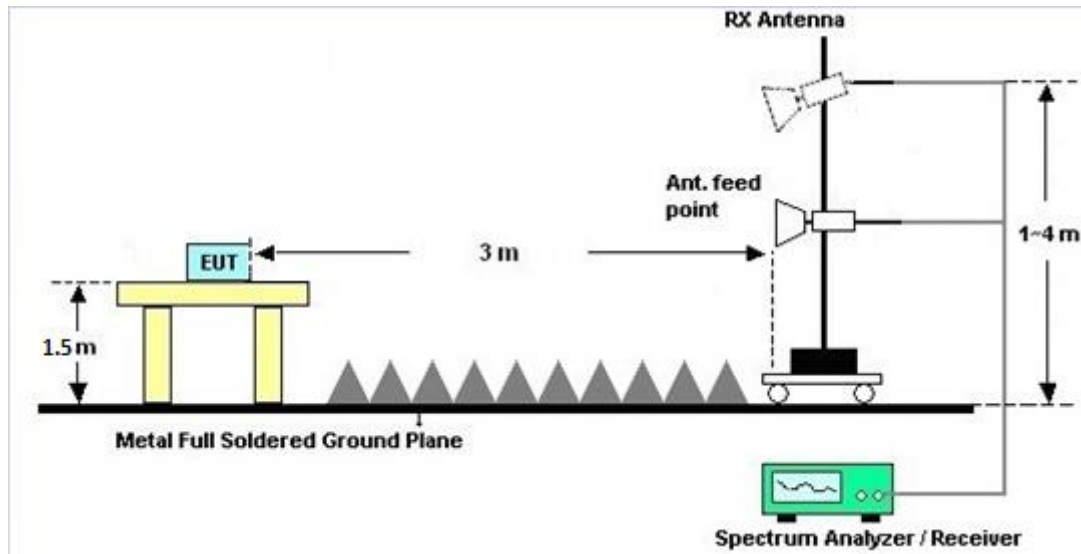
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



2.3.5 Test Deviation

There is no deviation with the original standard.

2.3.6 EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

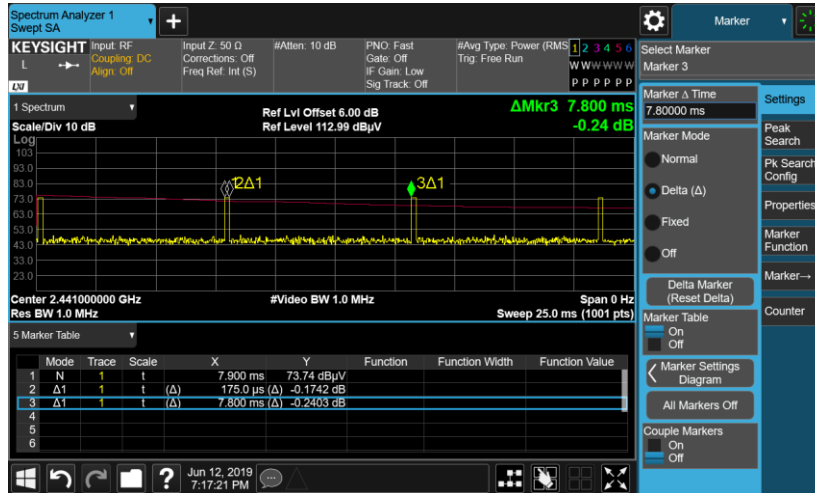
2.3.7 Test Results of Radiated Spurious Emissions (9 kHz ~ 30 MHz)

The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line per 15.31(o) was not reported.



2.3.8 Duty cycle correction factor for average measurement

On time (One Pulse) Plot on 2441MHz

**Note:**

1. Worst case Duty cycle = on time/100 milliseconds = $2 * 0.175 / 100 = 0.35 \%$
2. Worst case Duty cycle correction factor = $20 * \log(\text{Duty cycle}) = -49.12 \text{ dB}$



2.3.9 Test Result of Field Strength of Fundamental Emissions and Spurious Emissions

Test Date	Jun. 12, 2019	Test Engineer	Carry Xu
Temperature	27~30	Humidity	41~45

2.4GHz 2400~2483.5MHz

BT (Band Edge @ 3m)

BT	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
BT CH00 2402MHz		2389.43	53.42	-20.58	74	53.6	31.3	5.48	36.96	305	46	P	H
	*	2389.43	4.30	-49.70	54	-	-	-	-	-	46	A	H
		2402	86.29	-	-	86.47	31.3	5.48	36.96	305	-	P	H
		2402	37.17	-	-	-	-	-	-	-	-	A	H
		2387.22	53.86	-20.14	74	54.04	31.3	5.48	36.96	100	72	P	V
	*	2387.22	4.74	-49.26	54	-	-	-	-	-	-	A	V
		2402	88.29	-	-	88.47	31.3	5.48	36.96	100	72	P	V
		2402	39.17	-	-	-	-	-	-	-	-	A	V
BT CH 78 2480MHz	*	2480	84.19	-	-	84.02	31.59	5.55	36.97	169	28	P	H
		2480	35.07	-	-	-	-	-	-	-	-	A	H
		2483.55	59.52	-14.48	74	59.35	31.59	5.55	36.97	169	28	P	H
		2483.55	10.40	-43.60	54	-	-	-	-	-	-	A	H
	*	2480	86.29	-	-	86.12	31.59	5.55	36.97	109	69	P	V
		2480	37.17	-	-	-	-	-	-	-	-	A	V
		2483.55	61.72	-12.28	74	61.55	31.59	5.55	36.97	109	69	P	V
		2483.55	12.60	-41.40	54	-	-	-	-	-	-	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



2.4GHz 2400~2483.5MHz

BT (Harmonic @ 3m)

BT	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
BT CH 00 2402MHz		4806	40.76	-33.24	74	59.91	34.88	8.1	62.13	100	360	P	H
		4806	40.27	-33.73	74	59.42	34.88	8.1	62.13	100	360	P	V
BT CH 38 2440MHz		4880	39.26	-34.74	74	58.36	34.92	8.09	62.11	100	360	P	H
		7320	41.54	-32.46	74	59.26	35.3	9.75	62.77	100	360	P	H
		4880	40.26	-33.74	74	59.36	34.92	8.09	62.11	100	360	P	V
		7320	40.56	-33.44	74	58.28	35.3	9.75	62.77	100	360	P	V
BT CH 78 2480MHz		4962	40.81	-33.19	74	59.87	34.97	8.05	62.08	100	360	P	H
		7440	40.18	-33.82	74	57.75	35.37	9.84	62.78	100	360	P	H
		4962	39.76	-34.24	74	58.82	34.97	8.05	62.08	100	360	P	V
		7440	39.97	-34.03	74	57.54	35.37	9.84	62.78	100	360	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Emission below 1GHz

2.4GHz BT (LF)

BT	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
2.4GHz BT LF		97.9	18.78	-24.72	43.5	33.17	16.4	1.14	31.93	-	-	P	H
		178.41	23.36	-20.14	43.5	37.97	15.77	1.54	31.92	-	-	P	H
		196.84	25.33	-18.17	43.5	40.25	15.36	1.62	31.9	100	0	P	H
		881.66	24.94	-21.06	46	26.42	26.69	3.41	31.58	-	-	P	H
		942.77	25.1	-28.9	54	25.47	27.15	3.54	31.06	-	-	P	H
		979.63	25.81	-28.19	54	25.45	27.5	3.57	30.71	-	-	P	H
		52.31	23.86	-16.14	40	41.9	13.06	0.84	31.94	100	0	P	V
		97.9	21.86	-21.64	43.5	36.25	16.4	1.14	31.93	-	-	P	V
		178.41	24.99	-18.51	43.5	39.6	15.77	1.54	31.92	-	-	P	V
		198.78	27.24	-16.26	43.5	42.19	15.32	1.63	31.9	-	-	P	V
		785.63	25.24	-20.76	46	28.2	25.97	3.23	32.16	-	-	P	V
		974.78	26.51	-27.49	54	26.24	27.45	3.57	30.75	-	-	P	V
Remark	1. No other spurious found. 2. All results are PASS against limit line.												



2.4 Antenna Requirements

2.4.1 Limit

Except for special regulations, the Low-power Radio-frequency Devices must not be equipped with any jacket for installing an antenna with extension cable. 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 shall be considered sufficient to comply with the provisions of this Section. The manufacturer may design the unit so that the user can replace a broken antenna, but the use of a standard antenna jack or electrical connector is prohibited.

2.4.2 Antenna Connector Construction

An embedded-in antenna design is used.



3. LIST OF MEASURING EQUIPMENT

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Hygrometer	Testo	DTM-303A	TP157075	N/A	Nov. 05, 2018	Jun. 19, 2019	Nov. 04, 2019	Conducted (TH05-HY)
Power Meter	Agilent	E4416A	GB41292344	N/A	Dec. 27, 2018	Jun. 19, 2019	Dec. 26, 2019	Conducted (TH05-HY)
Power Sensor	Agilent	E9327A	US40441548	50MHz~18GHz	Dec. 27, 2018	Jun. 19, 2019	Dec. 26, 2019	Conducted (TH05-HY)
Spectrum Analyzer	Rohde & Schwarz	FSP40	100057	9kHz~40GHz	Nov. 21, 2018	Jun. 19, 2019	Nov. 20, 2019	Conducted (TH05-HY)
Programmable Power Supply	GW Instek	PSS-2005	EL890094	1V~20V 0.5A~5A	Oct. 02, 2018	Jun. 19, 2019	Oct. 01, 2019	Conducted (TH05-HY)
Switch Box & RF Cable	Burgeon	ETF-058	EC1208382	N/A	Mar. 27, 2019	Jun. 19, 2019	Mar. 26, 2020	Conducted (TH05-HY)
EMI Test Receiver	Keysight	N9038A	MY57290151	3Hz~8.5GHz;Ma x 30dBm	Jun. 25, 2018	Jun. 12, 2019	Jun. 24, 2019	Radiation (03CH05-KS)
EXA Spectrum Analyzer	Keysight	N9010A	MY55370528	10Hz~44GHz	Oct. 09, 2018	Jun. 12, 2019	Oct. 08, 2019	Radiation (03CH05-KS)
Loop Antenna	R&S	HFH2-Z2	100321	9kHz~30MHz	Oct. 19, 2018	Jun. 12, 2019	Oct. 18, 2019	Radiation (03CH05-KS)
Bilog Antenna	TeseQ	CBL6111D	44483	30MHz~1GHz	Dec. 28, 2018	Jun. 12, 2019	Dec. 27, 2019	Radiation (03CH05-KS)
Double Ridge Horn Antenna	ETS-Lindgren	3117	75959	1GHz~18GHz	Jan. 27, 2019	Jun. 12, 2019	Jan. 26, 2020	Radiation (03CH05-KS)
SHF-EHF Horn	Com-power	AH-840	101070	18GHz~40GHz	Jan. 05, 2019	Jun. 12, 2019	Jan. 04, 2020	Radiation (03CH05-KS)
Amplifier	SONOMA	310N	187289	9KHz~1GHz	Aug. 06, 2018	Jun. 12, 2019	Aug. 05, 2019	Radiation (03CH05-KS)
Amplifier	MITEQ	TTA1840-35-HG	2014749	18~40GHz	Jan. 14, 2019	Jun. 12, 2019	Jan. 13, 2020	Radiation (03CH05-KS)
high gain Amplifier	MITEQ	AMF-7D-001 01800-30-10 P	2025788	1Ghz~18Ghz	Aug. 17, 2018	Jun. 12, 2019	Aug. 16, 2019	Radiation (03CH05-KS)
Amplifier	Keysight	83017A	MY53270316	500MHz~26.5G Hz	Dec. 22, 2018	Jun. 12, 2019	Dec. 21, 2019	Radiation (03CH05-KS)
AC Power Source	Chroma	61601	F104090004	N/A	NCR	Jun. 12, 2019	NCR	Radiation (03CH05-KS)
Turn Table	ChamPro	EM 1000-T	060762-T	0~360 degree	NCR	Jun. 12, 2019	NCR	Radiation (03CH05-KS)
Antenna Mast	ChamPro	EM 1000-A	060762-A	1 m~4 m	NCR	Jun. 12, 2019	NCR	Radiation (03CH05-KS)
AC Power Source	ChainTek	APC-1000W	N/A	N/A	N/A	May 28, 2019	N/A	Conduction (CO05-HY)
EMI Test Receiver	Rohde & Schwarz	ESR3	102388	9KHz~3.6GHz	Nov. 12, 2018	May 28, 2019	Nov. 11, 2019	Conduction (CO05-HY)
Hygrometer	Testo	608-H1	34913912	N/A	Mar. 19, 2019	May 28, 2019	Mar. 18, 2020	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100080	9kHz~30MHz	Nov. 14, 2018	May 28, 2019	Nov. 13, 2019	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100081	9kHz~30MHz	Nov. 09, 2018	May 28, 2019	Nov. 08, 2019	Conduction (CO05-HY)
Software	Rohde & Schwarz	EMC32 V10.30	N/A	N/A	N/A	May 28, 2019	N/A	Conduction (CO05-HY)
LF Cable	HUBER + SUHNER	RG-214/U	LF01	N/A	Dec. 31, 2018	May 28, 2019	Dec. 30, 2019	Conduction (CO05-HY)
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100851	N/A	Dec. 31, 2018	May 28, 2019	Dec. 30, 2019	Conduction (CO05-HY)

Note: Test equipment calibration is traceable to the procedure of ISO17025.

4. UNCERTAINTY OF EVALUATION

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI 63.10-2013. All the measurement uncertainty value were shown with a coverage $K=2$ to indicate 95% level of confidence. The measurement data show herein meets or exceeds the CISPR measurement uncertainty values specified in CISPR 16-4-2 and can be compared directly to specified limit to determine compliance.

Uncertainty of Conducted Emission Measurement (150kHz ~ 30MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	2.7dB
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Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	5.0dB
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Uncertainty of Radiated Emission Measurement (1000 MHz ~ 18000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	5.0dB
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Uncertainty of Radiated Emission Measurement (18000 MHz ~ 40000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	5.0dB
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