

TEST REPORT

Report No.: BCTC2312929228-3E

Applicant: Jiangsu Nicetown Intelligent Energy Co., Ltd

Product Name: AC EV CHARGER

Test Model: EVHome 50A

Tested Date: 2023-12-07 to 2023-12-29

Issued Date: 2023-12-29



Shenzhen **BCTC** Testing Co., Ltd.



FCC ID:2BCJ4-EVHOME50A

Product Name: AC EV CHARGER

Trademark: NURZVIY

Model/Type Reference: EVHome 50A
EVHome 32A, EVHome 40A, EVHome 48A, EVHome 50A 14-50,
EVHome 50A 6-50, EVHome 48A 14-50, EVHome 48A 6-50,
EVHome 40A 14-50, EVHome 40A 6-50, EVHome 32A 14-50,
EVHome 32A 6-50

Prepared For: Jiangsu Nicetown Intelligent Energy Co., Ltd

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Manufacturer: Jiangsu Nicetown Intelligent Energy Co., Ltd

Address: Room 1, Building 519, Chengxin Road, Jiangning District, Nanjing China

Prepared By: Shenzhen BCTC Testing Co., Ltd.

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Sample Received Date: 2023-12-07

Sample Tested Date: 2023-12-07 to 2023-12-29

Issue Date: 2023-12-29

Report No.: BCTC2312929228-3E

Test Standards: FCC Part15.225
ANSI C63.10-2013

Test Results: PASS

Remark: This is NFC radio test report.

Tested by:



Brave Zeng/ Project Handler

Approved by:



Zero Zhou/Reviewer

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(Note: N/A Means Not Applicable)

1. Version

Report No.	Issue Date	Description	Approved
BCTC2312929228-3E	2023-12-29	Original	Valid

2. Test Summary

The Product has been tested according to the following specifications:

No.	Test Parameter	Clause No	Results
1	15.207	Conducted Emission	PASS
2	Part 15.209(a), 15.225(d)	Radiated Spurious Emission	PASS
3	15.215	Bandwidth	PASS
4	Part 15.209(a), 15.225(a)(b)(c)(d)	Band Edge Emission	PASS
5	Part 15.225(e)	Transmitter Frequency Stability (Temperature & Voltage Variation)	PASS
6	15.203	Antenna Requirement	PASS

3. Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the Product as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

No.	Item	Uncertainty
1	3m chamber Radiated spurious emission(30MHz-1GHz)	U=4.3dB
2	3m chamber Radiated spurious emission(9KHz-30MHz)	U=3.7dB
3	3m chamber Radiated spurious emission(1GHz-18GHz)	U=4.5dB
4	3m chamber Radiated spurious emission(18GHz-40GHz)	U=3.34dB
5	Conducted Emission (150kHz-30MHz)	U=3.20dB
6	Conducted Adjacent channel power	U=1.38dB
7	Conducted output power uncertainty Above 1G	U=1.576dB
8	Conducted output power uncertainty below 1G	U=1.28dB
9	humidity uncertainty	U=5.3%
10	Temperature uncertainty	U=0.59°C

4. Product Information And Test Setup

4.1 Product Information

Model/Type Reference:	EVHome 50A EVHome 32A,EVHome 40A,EVHome 48A, EVHome 50A 14-50, EVHome 50A 6-50,EVHome 48A 14-50,EVHome 48A 6-50, EVHome 40A 14-50,EVHome 40A 6-50,EVHome 32A 14-50, EVHome 32A 6-50
Model Differences:	All the model are the same circuit and RF module, except model names.
Operation Frequency:	13.56 MHz
Modulation Type:	ASK
Number Of Channel	1 CH
Antenna installation:	Internal antenna
Antenna Gain:	0 dBi
Ratings:	AC 90-260V
Remark:	The antenna gain of the product comes from the antenna report provided by the customer, and the test data is affected by the customer information.

4.2 Test Setup Configuration

See test photographs attached in *EUT TEST SETUP PHOTOGRAPHS* for the actual connections between Product and support equipment.

4.3 Support Equipment

No.	Device Type	Brand	Model	Series No.	Note
E-1	AC EV CHARGER	NURZVIY	EVHome 50A	/	EUT

Item	Shielded Type	Ferrite Core	Length	Note
C-1	N/A	N/A	0.3M	DC cable unshielded

Notes:

1. All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.
2. Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.

4.4 Channel List

Channel List	
Channel	Frequency(MHz)
01	13.56

4.5 Test Mode

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

For All Mode	Description
Mode 1	TX Mode

Link mode (Conducted emission and Radiated emission)	
Final Test Mode	Description
Mode 1	TX Mode

Notes:

- (1) The measurements are performed at the highest, middle, lowest available channels.
- (2) Fully-charged battery is used during the test.

5. Test Facility And Test Instrument Used

5.1 Test Facility

All measurement facilities used to collect the measurement data are located at Shenzhen BCTC Testing Co., Ltd. Address:1-2/F., Building B, Pengzhou Industrial Park, No.158, Fuyuan 1st Road, Zhancheng, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, China. The site and apparatus are constructed in conformance with the requirements of ANSI C63.4 and CISPR 16-1-1 other equivalent standards.

FCC Test Firm Registration Number: 712850

A2LA certificate registration number is: CN1212

ISED Registered No.: 23583

ISED CAB identifier: CN0017

5.2 Test Instrument Used

Conducted Emissions Test					
Equipment	Manufacturer	Model#	Serial#	Last Cal.	Next Cal.
Receiver	R&S	ESCI	101421	Sep.6, 2023	Sep.5, 2024
AMN	SCHWHRZBE CK	NSLK8128	05152	Sep.6, 2023	Sep.5, 2024
Pulse Limiter	SCHWHRZBE CK	VTSD 9561-F-N	00547	Sep.6, 2023	Sep.5, 2024
ISN	SCHWHRZBE CK	NTFM 8158	00316	Sep.6, 2023	Sep.5, 2024
Pulse limiter	Schwarzbeck	VTSD9561-F	01323	Sept. 22, 2023	Sept. 21, 2024

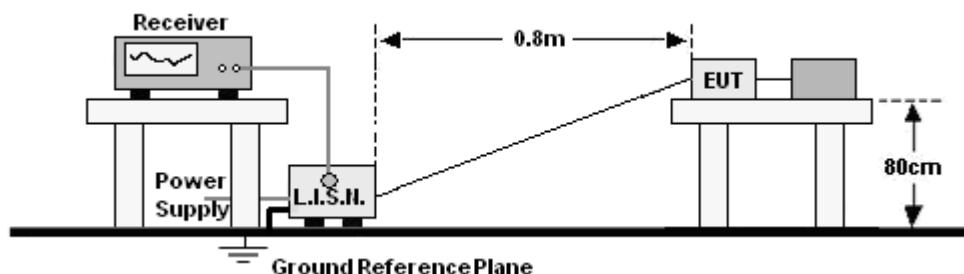
RF Conducted Test					
Equipment	Manufacturer	Model#	Serial#	Last Cal.	Next Cal.
Power Metter	Keysight	E4419	\	May 15, 2023	May 14, 2024
Power Sensor (AV)	Keysight	E9300A	\	May 15, 2023	May 14, 2024
Signal Analyzer 20kHz-26.5G Hz	Keysight	N9020A	MY49100060	May 15, 2023	May 14, 2024
Spectrum Analyzer 9kHz-40GHz	R&S	FSP 40	\	May 15, 2023	May 14, 2024

Radiated Emissions Test (966 Chamber01)					
Equipment	Manufacturer	Model#	Serial#	Last Cal.	Next Cal.
966 chamber	ChengYu	966 Room	966	May 15, 2023	May 14, 2026
Receiver	R&S	ESR3	102075	May 15, 2023	May 14, 2024
Receiver	R&S	ESRP	101154	May 15, 2023	May 14, 2024
Amplifier	Schwarzbeck	BBV9744	9744-0037	May 15, 2023	May 14, 2024
TRILOG Broadband Antenna	Schwarzbeck	VULB9163	942	May 29, 2023	May 28, 2024
Loop Antenna(9KHz -30MHz)	Schwarzbeck	FMZB1519B	00014	May 31, 2023	May 30, 2024
Amplifier	SKET	LAPA_01G1 8G-45dB	SK2021040901	May 15, 2023	May 14, 2024
Horn Antenna	Schwarzbeck	BBHA9120D	1541	May 31, 2023	May 30, 2024
Amplifier(18G Hz-40GHz)	MITEQ	TTA1840-35-HG	2034381	May 15, 2023	May 14, 2024
Horn Antenn(18GH z-40GHz)	Schwarzbeck	BBHA9170	00822	May 31, 2023	May 30, 2024
Spectrum Analyzer9kHz-40GHz	R&S	FSP40	100363	May 15, 2023	May 14, 2024
Software	Frad	EZ-EMC	FA-03A2 RE	\	\

Radiated Emissions Test (966 Chamber02)					
Equipment	Manufacturer	Model#	Serial#	Last Cal.	Next Cal.
966 chamber	SKET	966 Room	966	Nov. 02. 2021	Nov. 01.2024
Receiver	R&S	ESR3	102075	May 15, 2023	May 14, 2024
Receiver	R&S	ESRI7	100010	Nov. 13. 2023	Nov. 12, 2024
Amplifier	SKET	LNPA-30M01 G-30	SK2021082004	Nov. 13. 2023	Nov. 12, 2024
TRILOG Broadband Antenna	Schwarzbeck	VULB9168	1323	Mar. 06, 2022	Mar. 05, 2024
Loop Antenna(9KHz -30MHz)	Schwarzbeck	FMZB1519B	00014	May 31, 2023	May 30, 2024
Amplifier	SKET	LAPA_01G1 8G-45dB	SK2021040901	May 15, 2023	May 14, 2024
Horn Antenna	Schwarzbeck	BBHA9120D	1541	May 31, 2023	May 30, 2024
Amplifier(18G Hz-40GHz)	MITEQ	TTA1840-35-HG	2034381	May 15, 2023	May 14, 2024
Horn Antenn(18GH z-40GHz)	Schwarzbeck	BBHA9170	00822	May 31, 2023	May 30, 2024
Spectrum Analyzer9kHz-40GHz	R&S	FSP40	100363	May 15, 2023	May 14, 2024
Software	Frad	EZ-EMC	FA-03A2 RE	\	\

6. Conducted Emissions

6.1 Block Diagram Of Test Setup



6.2 Limit

Frequency (MHz)	Limit (dBuV)	
	Quas-peak	Average
0.15 -0.5	66 - 56 *	56 - 46 *
0.50 -5.0	56.00	46.00
5.0 -30.0	60.00	50.00

Notes:
1. *Decreasing linearly with logarithm of frequency.
2. The lower limit shall apply at the transition frequencies.

6.3 Test Procedure

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

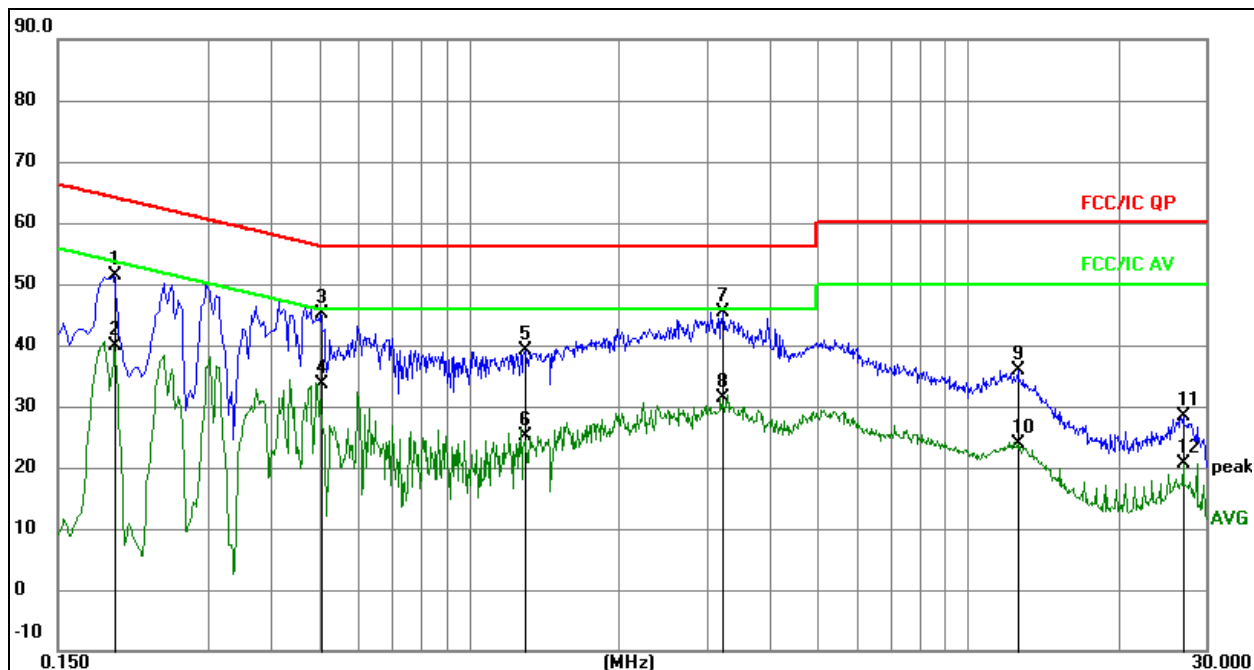
- The Product was placed on a nonconductive table 0.8 m above the horizontal ground reference plane, and 0.4 m from the vertical ground reference plane, and connected to the main through Line Impedance Stability Network (L.I.S.N).
- The RBW of the receiver was set at 9 kHz in 150 kHz ~ 30MHz with Peak and AVG detector in Max Hold mode. Run the receiver's pre-scan to record the maximum disturbance generated from Product in all power lines in the full band.
- For each frequency whose maximum record was higher or close to limit, measure its QP and AVG values and record.

6.4 EUT operating Conditions

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

6.5 Test Result

Temperature:	26 °C	Relative Humidity:	54%
Pressure:	101KPa	Test Voltage:	AC 240V/60Hz
Test Mode:	Mode 13	Polarization:	L1

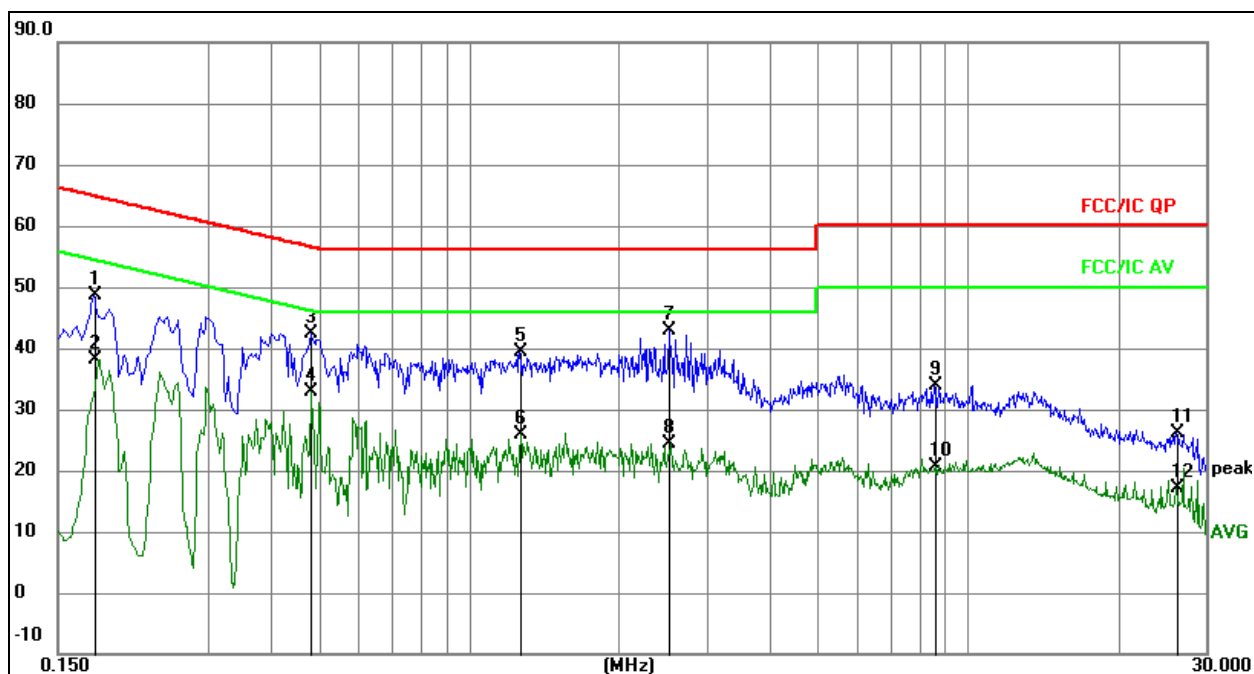


Remark:

1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.
3. Measurement = Reading Level + Correct Factor
4. Over = Measurement - Limit

No.	Mk.	Freq. MHz	Reading Level	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector
1		0.1945	41.75	9.60	51.35	63.84	-12.49	QP
2		0.1945	30.28	9.60	39.88	53.84	-13.96	AVG
3		0.5047	35.40	9.62	45.02	56.00	-10.98	QP
4		0.5047	23.97	9.62	33.59	46.00	-12.41	AVG
5		1.2960	29.43	9.73	39.16	56.00	-16.84	QP
6		1.2960	15.45	9.73	25.18	46.00	-20.82	AVG
7	*	3.2239	35.58	9.80	45.38	56.00	-10.62	QP
8		3.2239	21.49	9.80	31.29	46.00	-14.71	AVG
9		12.5821	26.16	9.66	35.82	60.00	-24.18	QP
10		12.5821	14.11	9.66	23.77	50.00	-26.23	AVG
11		26.9836	18.71	9.72	28.43	60.00	-31.57	QP
12		26.9836	10.80	9.72	20.52	50.00	-29.48	AVG

Temperature:	26 °C	Relative Humidity:	54%
Pressure:	101KPa	Test Voltage:	AC 240V/60Hz
Test Mode:	Mode 13	Polarization:	L2

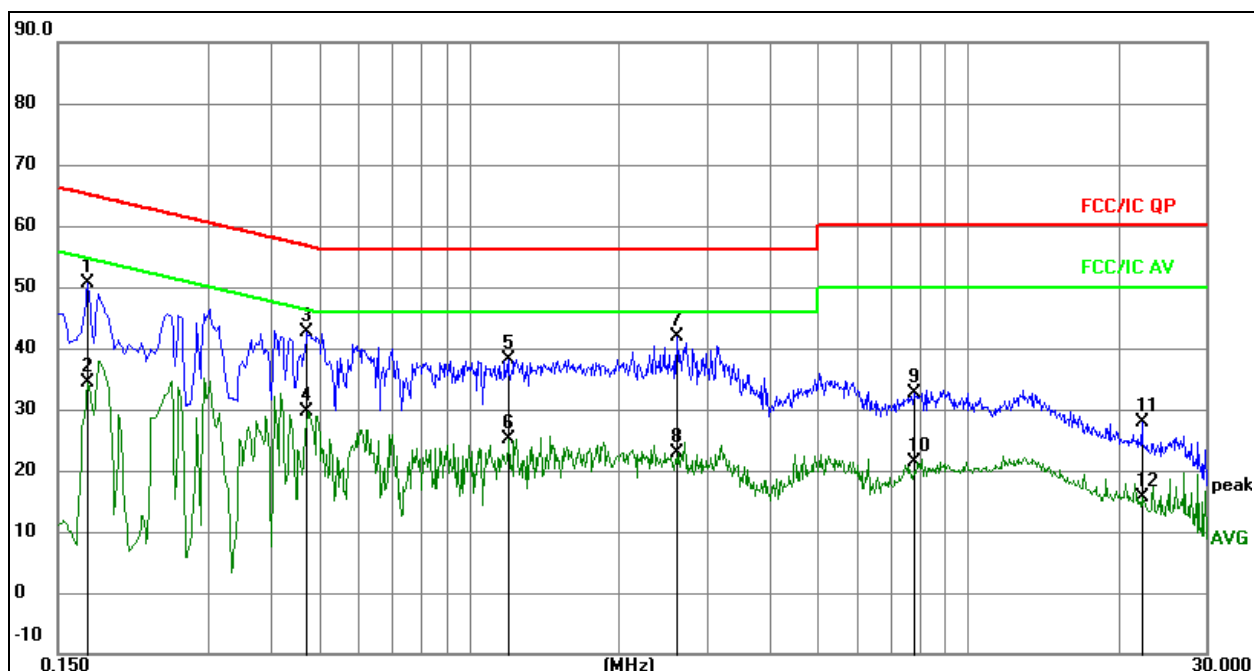


Remark:

1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.
3. Measurement = Reading Level + Correct Factor
4. Over = Measurement - Limit

No.	Mk.	Freq. MHz	Reading Level dB	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector
1		0.1770	39.18	9.56	48.74	64.63	-15.89	QP
2		0.1770	28.54	9.56	38.10	54.63	-16.53	AVG
3		0.4830	32.87	9.62	42.49	56.29	-13.80	QP
4		0.4830	23.21	9.62	32.83	46.29	-13.46	AVG
5		1.2660	29.71	9.73	39.44	56.00	-16.56	QP
6		1.2660	16.08	9.73	25.81	46.00	-20.19	AVG
7	*	2.5215	33.02	9.76	42.78	56.00	-13.22	QP
8		2.5215	14.62	9.76	24.38	46.00	-21.62	AVG
9		8.5470	24.22	9.70	33.92	60.00	-26.08	QP
10		8.5470	11.01	9.70	20.71	50.00	-29.29	AVG
11		26.2050	16.35	9.73	26.08	60.00	-33.92	QP
12		26.2050	7.36	9.73	17.09	50.00	-32.91	AVG

Temperature:	26 °C	Relative Humidity:	54%
Pressure:	101KPa	Test Voltage:	AC 240V/60Hz
Test Mode:	Mode 13	Polarization:	L3

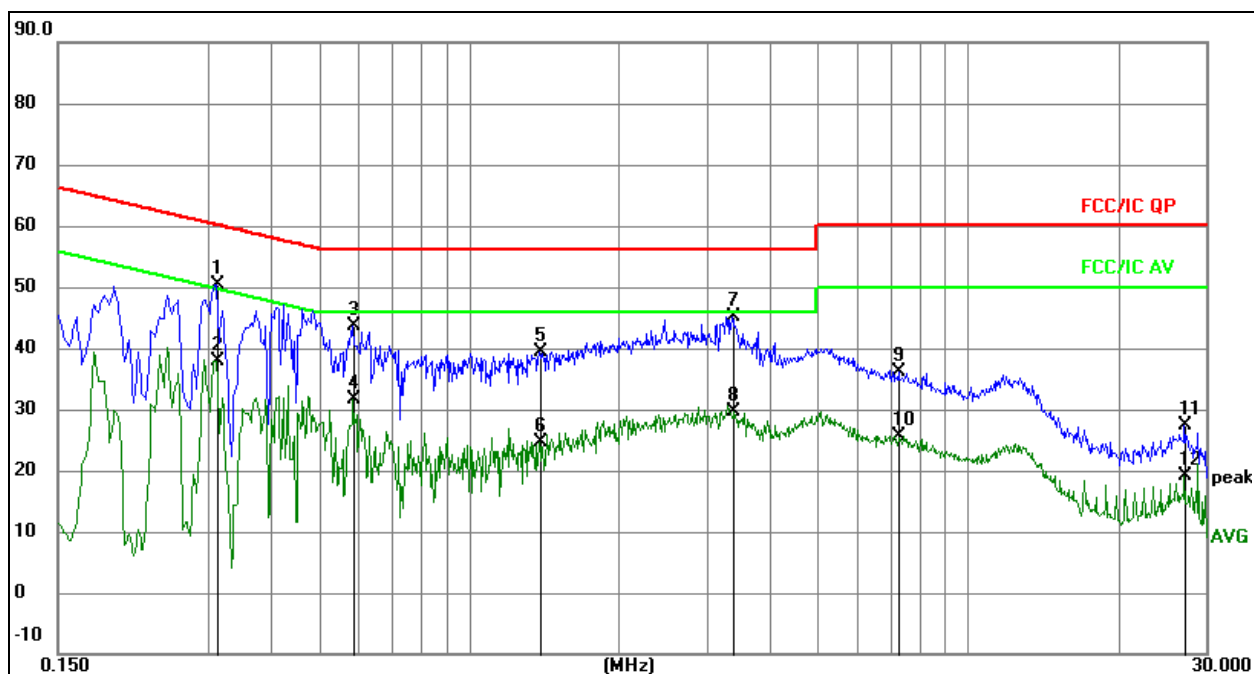


Remark:

1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.
3. Measurement = Reading Level + Correct Factor
4. Over = Measurement - Limit

No. Mk.	Freq. MHz	Reading Level	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector
1	0.1720	40.98	9.55	50.53	64.86	-14.33	QP
2	0.1720	24.71	9.55	34.26	54.86	-20.60	AVG
3 *	0.4736	32.94	9.62	42.56	56.45	-13.89	QP
4	0.4736	19.92	9.62	29.54	46.45	-16.91	AVG
5	1.1970	28.38	9.73	38.11	56.00	-17.89	QP
6	1.1970	15.41	9.73	25.14	46.00	-20.86	AVG
7	2.6082	32.13	9.76	41.89	56.00	-14.11	QP
8	2.6082	13.11	9.76	22.87	46.00	-23.13	AVG
9	7.8101	22.80	9.72	32.52	60.00	-27.48	QP
10	7.8101	11.57	9.72	21.29	50.00	-28.71	AVG
11	22.2977	18.17	9.76	27.93	60.00	-32.07	QP
12	22.2977	5.81	9.76	15.57	50.00	-34.43	AVG

Temperature:	26 °C	Relative Humidity:	54%
Pressure:	101KPa	Test Voltage:	AC 240V/60Hz
Test Mode:	Mode 13	Polarization:	N


Remark:

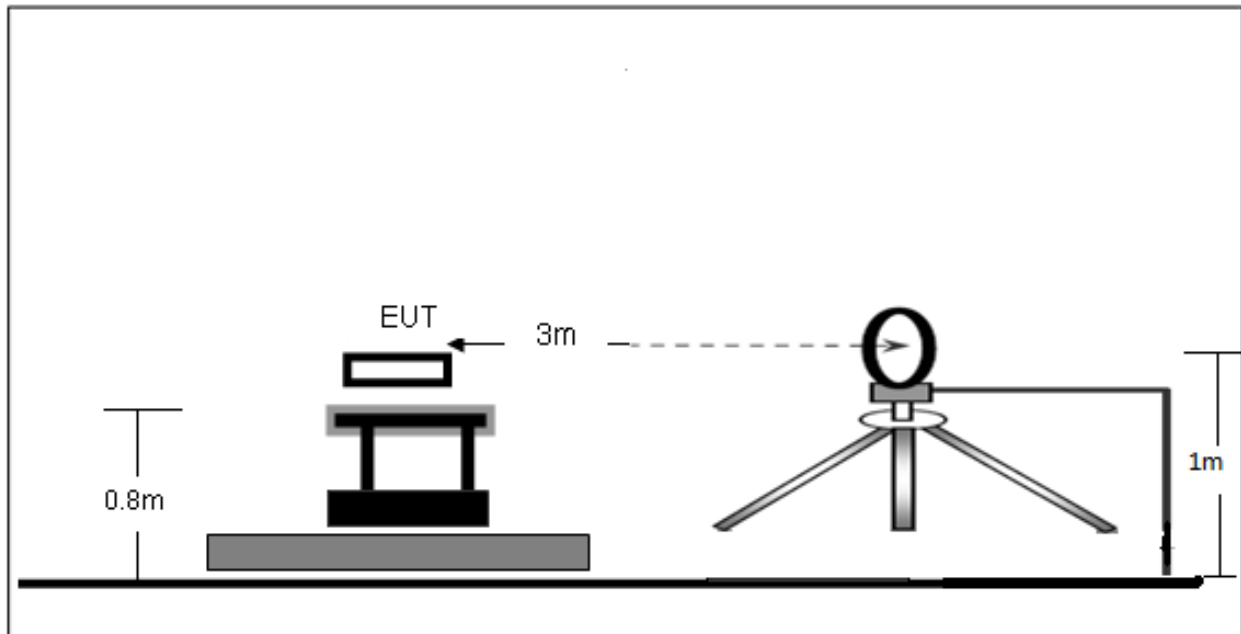
1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.
3. Measurement = Reading Level + Correct Factor
4. Over = Measurement - Limit

No.	Mk.	Freq. MHz	Reading Level dB	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector
1	*	0.3120	40.86	9.61	50.47	59.92	-9.45	QP
2		0.3120	28.32	9.61	37.93	49.92	-11.99	AVG
3		0.5864	34.08	9.62	43.70	56.00	-12.30	QP
4		0.5864	22.11	9.62	31.73	46.00	-14.27	AVG
5		1.3874	29.75	9.73	39.48	56.00	-16.52	QP
6		1.3874	14.81	9.73	24.54	46.00	-21.46	AVG
7		3.3765	35.33	9.81	45.14	56.00	-10.86	QP
8		3.3765	19.93	9.81	29.74	46.00	-16.26	AVG
9		7.2600	26.32	9.73	36.05	60.00	-23.95	QP
10		7.2600	16.01	9.73	25.74	50.00	-24.26	AVG
11		27.1410	17.69	9.72	27.41	60.00	-32.59	QP
12		27.1410	9.32	9.72	19.04	50.00	-30.96	AVG

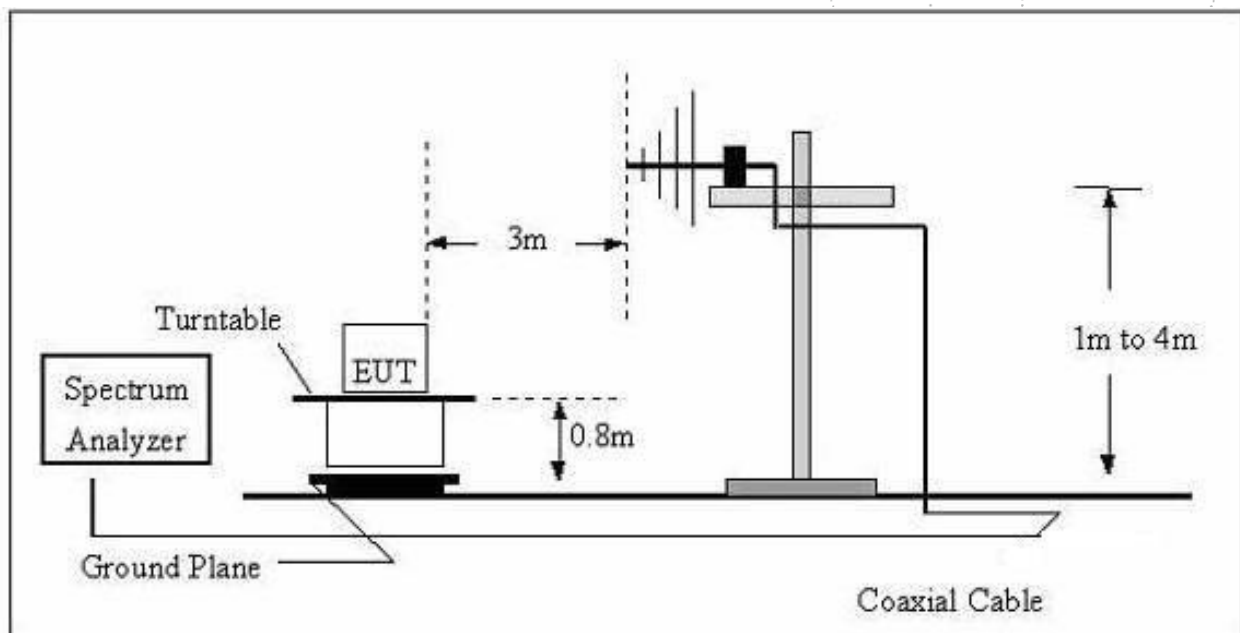
7. Radiated Emissions

7.1 Block Diagram Of Test Setup

(A) Radiated Emission Test-Up Frequency Below 30MHz



(B) Radiated Emission Test-Up Frequency 30MHz~1GHz



7.2 Limit

20dBc in any 100 kHz bandwidth outside the operating frequency band. In case the emission fall within the restricted band specified on 15.205(a), then the 15.209(a) limit in the table below has to be followed.

Frequency	Field Strength	Distance	Field Strength Limit at 3m Distance	
(MHz)	uV/m	(m)	uV/m	dBuV/m
0.009 ~ 0.490	2400/F(kHz)	300	$10000 * 2400/F(kHz)$	$20\log^{(2400/F(kHz))} + 80$
0.490 ~ 1.705	24000/F(kHz)	30	$100 * 24000/F(kHz)$	$20\log^{(24000/F(kHz))} + 40$
1.705 ~ 30	30	30	$100 * 30$	$20\log^{(30)} + 40$
30 ~ 88	100	3	100	$20\log^{(100)}$
88 ~ 216	150	3	150	$20\log^{(150)}$
216 ~ 960	200	3	200	$20\log^{(200)}$
Above 960	500	3	500	$20\log^{(500)}$

Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~150kHz / RB 200Hz for QP
Start ~ Stop Frequency	150kHz~30MHz / RB 9kHz for QP
Start ~ Stop Frequency	30MHz~1000MHz / RB 120kHz for QP

Below 1GHz test procedure as below:

- 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.
- The EUT was set 3 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.

Above 1GHz test procedure as below:

- Different between above is the test site, change from Semi- Anechoic Chamber to fully Anechoic Chamber and change form table 0.8 metre to 1.5 metre(Above 18GHz the distance is 1 meter and table is 1.5 metre).

- Test the EUT in the lowest channel ,the middle channel ,the Highest channel.

Note: Both horizontal and vertical antenna polarities were tested and performed pretest to three orthogonal axis. The worst case emissions were reported.

7.3 EUT Operating Conditions

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

7.4 Test Result

Temperature:	26°C	Relative Humidity:	54%
Pressure:	101 kpa	Test Voltage:	AC 240V/60Hz
Test Mode:	Mode 1	Polarization:	Coaxial

Frequency (kHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
21.03	64.11	20.15	84.26	141.15	-56.89	PK
21.03	40.69	20.15	60.84	121.15	-60.31	AV
60.29	52.66	20.33	72.99	132.00	-59.01	PK
60.29	38.21	20.33	58.54	112.00	-53.46	AV
150.59	54.69	20.55	75.24	124.05	-48.81	PK
150.59	47.97	20.55	68.52	104.05	-35.53	AV
513.18	25.99	20.64	46.63	73.40	-26.77	QP
752.49	29.15	21.26	50.41	70.07	-19.66	QP
1233.78	18.45	22.32	40.77	65.78	-25.01	QP

Note:

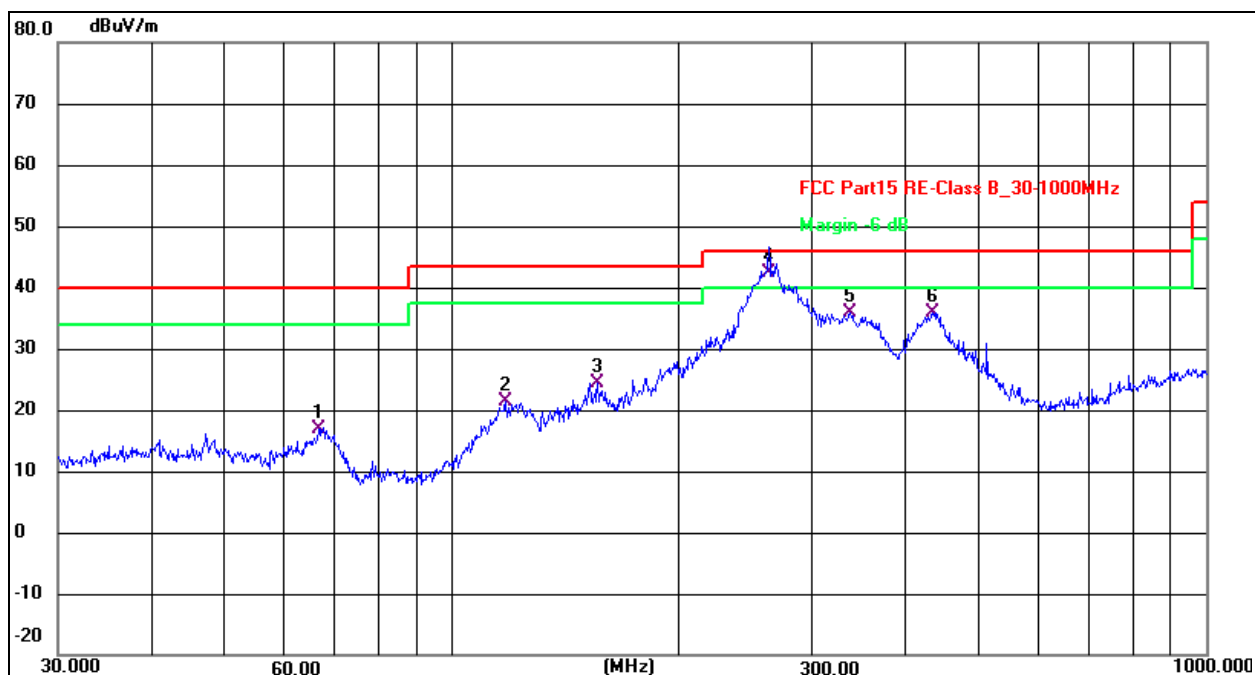
Pre-scan in the all of mode, the worst case in of was recorded.

Factor = antenna factor + cable loss – pre-amplifier.

Margin = Emission Level- Limit.

Between 30MHz – 1GHz

Temperature:	26 °C	Relative Humidity:	54%
Pressure:	101KPa	Test Voltage:	AC 240V/60Hz
Test Mode:	Mode 1	Polarization:	Horizontal

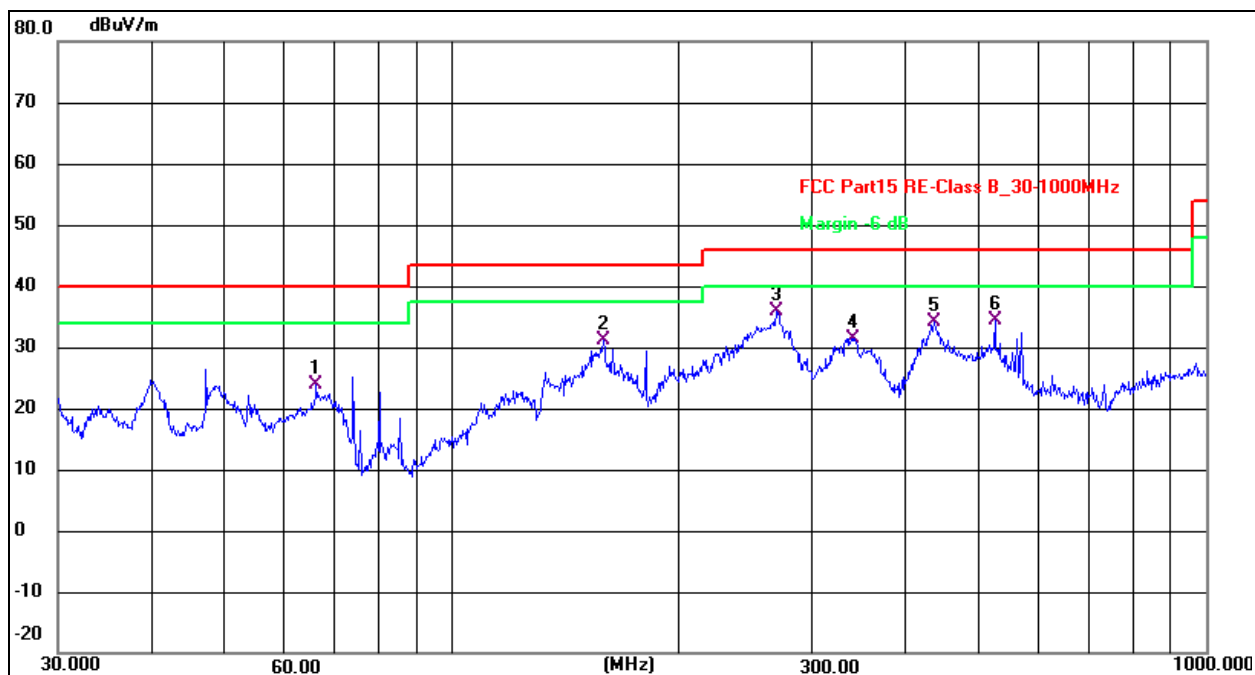


Remark:

- Factor = Antenna Factor + Cable Loss – Pre-amplifier.
- Measurement = Reading Level + Correct Factor
- Over = Measurement - Limit

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	66.4989	32.89	-15.89	17.00	40.00	-23.00	QP
2	117.7725	38.32	-17.05	21.27	43.50	-22.23	QP
3	155.9101	39.22	-14.72	24.50	43.50	-19.00	QP
4 *	262.8955	56.65	-14.31	42.34	46.00	-3.66	QP
5	337.2155	48.31	-12.34	35.97	46.00	-10.03	QP
6	434.0651	45.22	-9.24	35.98	46.00	-10.02	QP

Temperature:	26 °C	Relative Humidity:	54%
Pressure:	101KPa	Test Voltage:	AC 240V/60Hz
Test Mode:	Mode 1	Polarization:	Vertical



Remark:

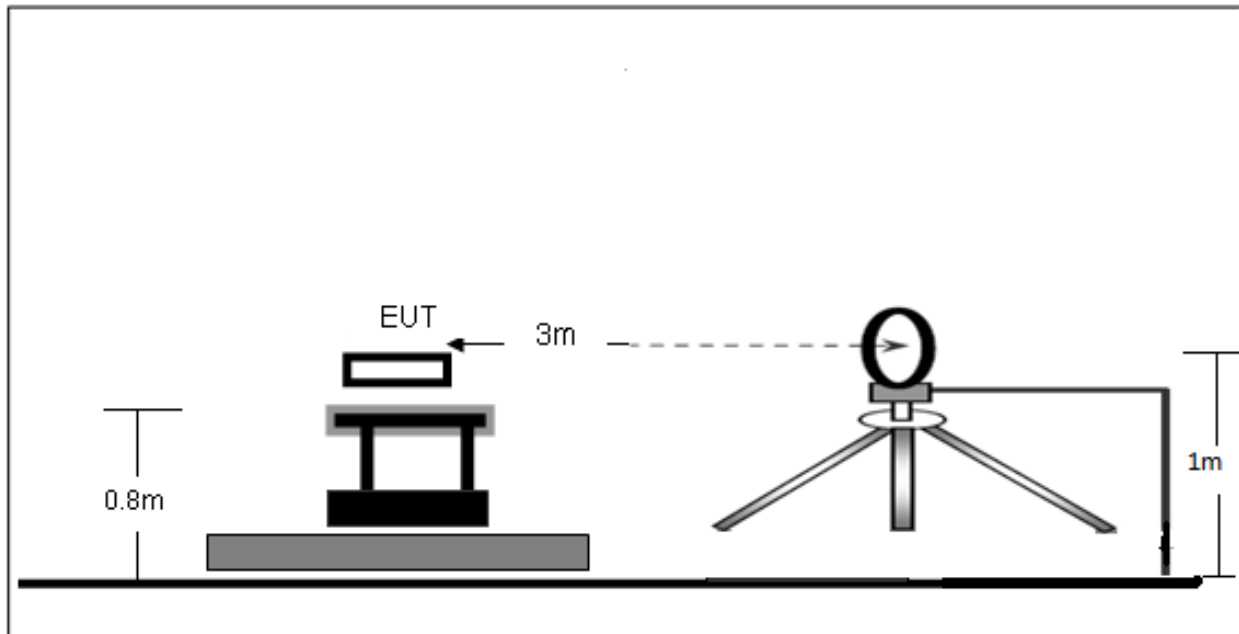
1. Factor = Antenna Factor + Cable Loss – Pre-amplifier.
2. Measurement = Reading Level + Correct Factor
3. Over = Measurement - Limit

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	66.0342	39.70	-15.84	23.86	40.00	-16.14	QP
2	158.6677	46.07	-14.86	31.21	43.50	-12.29	QP
3 *	269.4284	49.85	-14.07	35.78	46.00	-10.22	QP
4	340.7817	43.74	-12.28	31.46	46.00	-14.54	QP
5	435.5898	43.21	-9.19	34.02	46.00	-11.98	QP
6	524.5541	39.57	-5.28	34.29	46.00	-11.71	QP

8. Radiated Band Emission Measurement

8.1 Block Diagram Of Test Setup

Radiated Emission Test-Up Frequency Below 30MHz



8.2 Limit

FCC Part15 C Section 15.209 and 15.225

LIMITS OF RADIATED EMISSION MEASUREMENT (Below 30MHz)

- 15.848 microvolts/m (84 dB μ V/m) at 30 m, within the band 13.553– 13.567 MHz.
- 334 microvolts/m (50.5 dB μ V/m) at 30 m, within the bands 13.410– 13.553 MHz and 13.567– 13.710 MHz.
- 106 microvolts/m (40.5 dB μ V/m) at 30 m, within the bands 13.110– 13.410 MHz and 13.710– 14.010 MHz.
- 30 microvolts/m (29.5 dB μ V/m) at 30 m, outside the band 13.110– 14.010 MHz.

Notes:

- The limit for radiated test was performed according to FCC PART 15C.
- The tighter limit applies at the band edges.
- Emission level (dB μ V/m)=20log Emission level (μ V/m).

8.3 Test Procedure

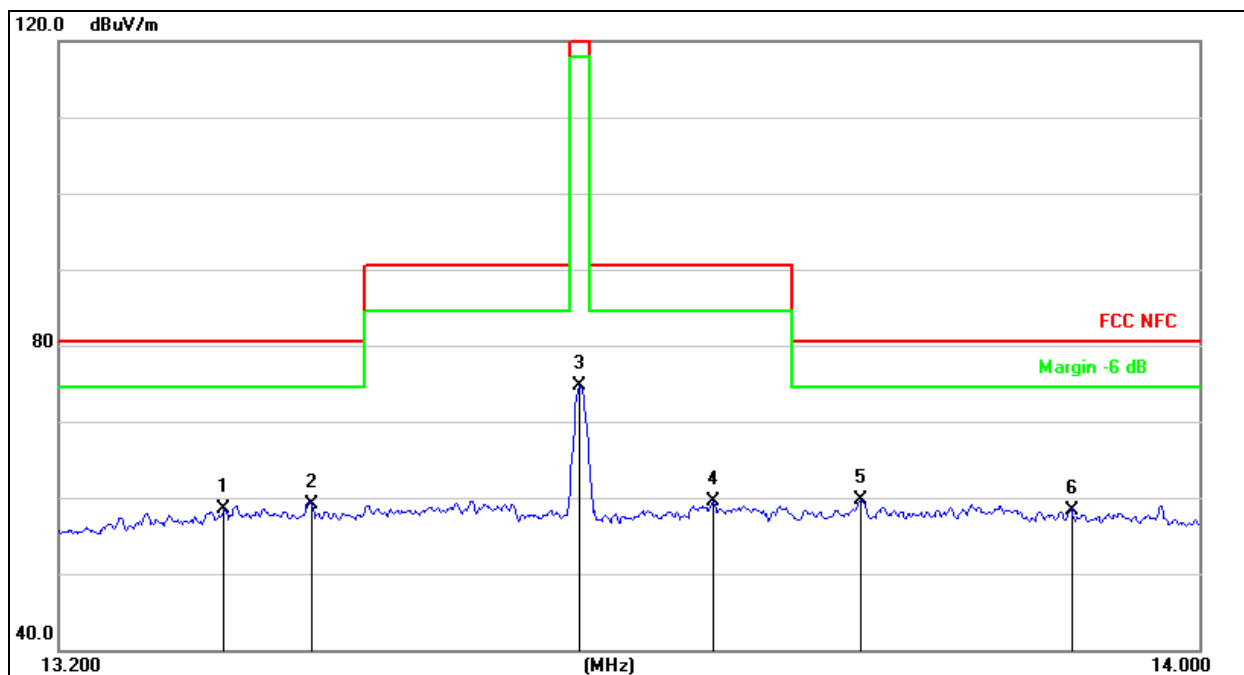
- The Product is placed on a turntable 0.8 meters above the ground in the chamber, 3 meter away from the antenna (loop antenna). The maximum values of the field strength are recorded by adjusting the polarizations of the test antenna and rotating the turntable.
- For each suspected emission, the Product was arranged to its worst case and then turn table was turned from 0 degrees to 360 degrees to find the maximum reading.
- The test frequency analyzer system was set to Peak Detect (300Hz RBW in 9kHz to 150kHz and 10kHz RBW in 150kHz to 30MHz) Function and Specified Bandwidth with Maximum Hold Mode.

8.4 EUT Operating Conditions

The EUT tested system was configured as the statements of 4.5 Unless otherwise a special operating condition is specified in the follows during the testing.

The report only show the worst antenna Polarity's data.

8.5 Test Result



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector
1		13.3133	37.99	20.43	58.42	80.50	-22.08	peak
2		13.3734	38.59	20.43	59.02	80.50	-21.48	peak
3		13.5600	54.33	20.44	74.77	124.0	-49.23	peak
4		13.6536	39.09	20.45	59.54	90.50	-30.96	peak
5	*	13.7576	39.25	20.46	59.71	80.50	-20.79	peak
6		13.9077	37.93	20.47	58.40	80.50	-22.10	peak

9. Bandwidth Test

9.1 Block Diagram Of Test Setup



9.2 Test Procedure

FCC Part15 (15.215)	
Section	Test Item
15.215	Bandwidth

1. Set RBW = 1% to 5% of the OBW
2. Set the video bandwidth (VBW) $\geq$ RBW.
3. Detector = Peak.
4. Trace mode = max hold.
5. Sweep = auto couple.
6. Allow the trace to stabilize.
7. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 20 dB relative to the maximum level measured in the fundamental emission.

9.3 EUT Operation Conditions

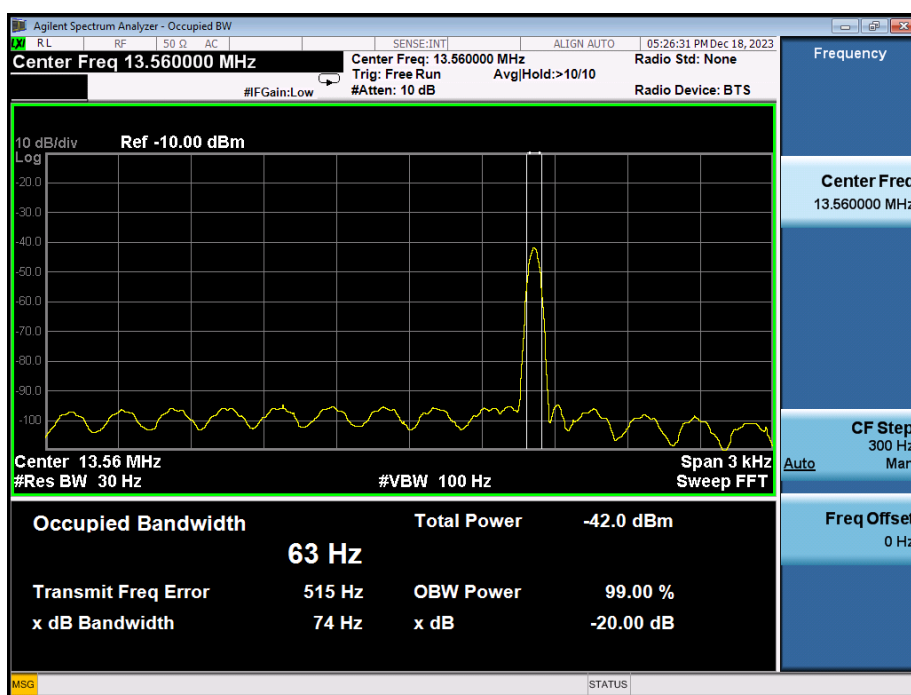
The EUT tested system was configured as the statements of 4.2 Unless otherwise a special operating condition is specified in the follows during the testing.

9.4 Test Result

Temperature:	26°C	Relative Humidity:	54%
Test Mode:	ASK	Test Voltage:	AC 240V/60Hz

Frequency (MHz)	20dB bandwidth (Hz)
13.56	74

TX CH 01



10. Transmitter Frequency Stability

10.1 Block Diagram Of Test Setup



10.2 Limit

The frequency tolerance of the carrier signal shall be maintained within $\pm 0.01\%$ of the operating frequency over a temperature variation of -20 degrees to $+50$ degrees C at normal supply voltage, and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20 degrees C. For battery operated equipment, the equipment tests shall be performed using a new battery.
Limit: $\pm 0.01\%$ of 13.56MHz=1356Hz

10.3 Test Procedure

1. Set RBW = 10 kHz.
2. Set the video bandwidth (VBW) $\geq$ RBW.
3. Detector = Peak.
4. Trace mode = max hold.
5. Sweep = auto couple.
6. Allow the trace to stabilize.
7. The transmitter output (antenna port) was connected to the spectrum analyzer.

10.4 EUT Operating Conditions

The EUT tested system was configured as the statements of 4.5 Unless otherwise a special operating condition is specified in the follows during the testing.

10.5 Test Result

Temperature:	26°C	Relative Humidity:	54%
Pressure:	101kPa	Test Voltage:	AC 240V/60Hz
Test Mode :	TX Mode		

Test Conditions			Frequency Deviation		Limit(Hz)	Result
Frequency MHz	Power(V)	Temperature (°C)	Measured Freq. (MHz)	Frequency Error(Hz)		
13.56	120	-20	13.56051	510	1356	PASS
	120	-10	13.56050	500	1356	
	120	0	13.56049	490	1356	
	120	10	13.56052	520	1356	
	120	20	13.56048	480	1356	
	120	30	13.56047	470	1356	
	120	40	13.56046	460	1356	
	120	50	13.56053	530	1356	
	90	20	13.56054	540	1356	
	260	20	13.56050	500	1356	

11. Antenna Requirement

11.1 Standard Requirement

15.203 requirement: For intentional device, according to 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.

11.2 EUT Antenna

The EUT antenna is Internal antenna, It comply with the standard requirement.

12. EUT Photographs

EUT Photo



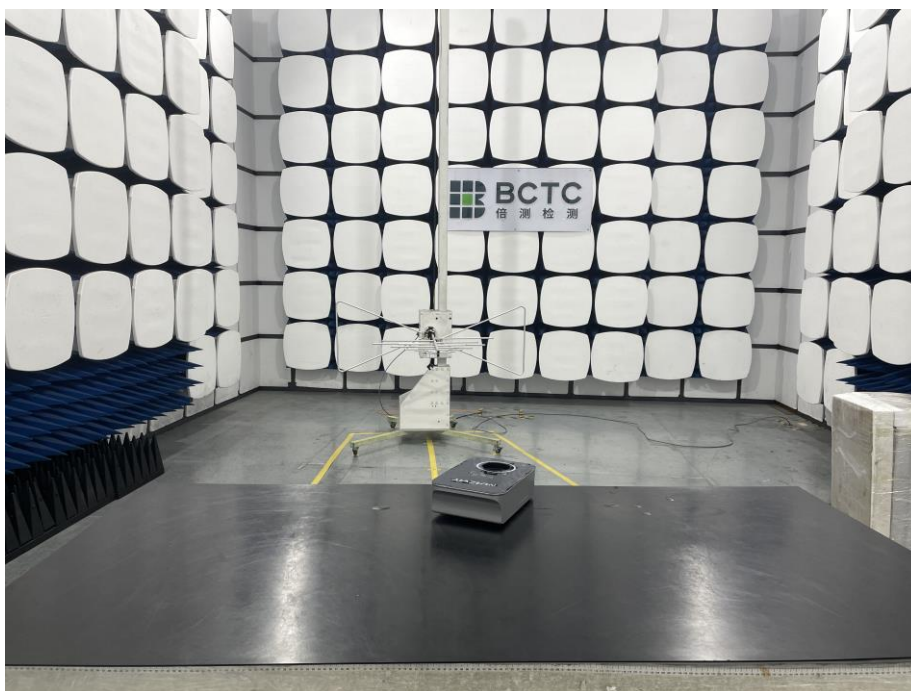
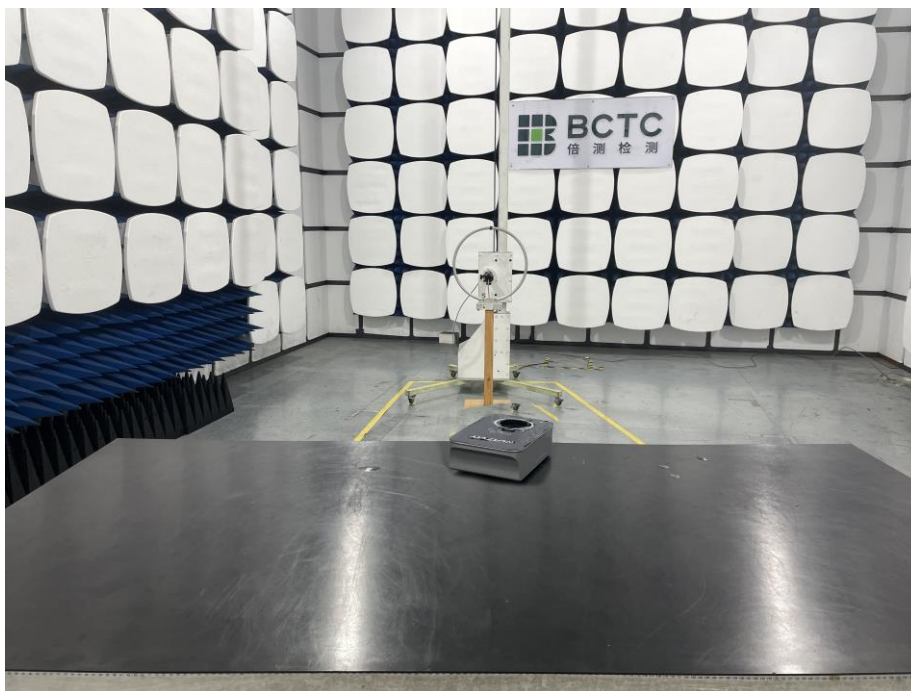
NOTE: Appendix-Photographs Of EUT Constructional Details

13. EUT Test Setup Photographs

Conducted emissions



Radiated Measurement



STATEMENT

1. The equipment lists are traceable to the national reference standards.
2. The test report can not be partially copied unless prior written approval is issued from our lab.
3. The test report is invalid without the "special seal for inspection and testing".
4. The test report is invalid without the signature of the approver.
5. The test process and test result is only related to the Unit Under Test.
6. Sample information is provided by the client and the laboratory is not responsible for its authenticity.
7. The quality system of our laboratory is in accordance with ISO/IEC17025.
8. If there is any objection to this test report, the client should inform issuing laboratory within 15 days from the date of receiving test report.

Address:

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TEL: 400-788-9558

P.C.: 518103

FAX: 0755-33229357

Website: <http://www.chnbctc.com>

E-Mail: bctc@bctc-lab.com.cn

***** END *****