

TEST REPORT

Application No.: SHCR2305000942HS
FCC ID: 2BA82HKTCLB
Applicant: Zhejiang Hangkong Tech Co., Ltd
Address of Applicant: No.1912 Binxing Road Baisheng Building, Hangzhou
Manufacturer: Zhejiang Hangkong Tech Co., Ltd
Address of Manufacturer: No.1912 Binxing Road Baisheng Building, Hangzhou
Factory: Zhejiang Hangkong Tech Co., Ltd
Address of Factory: No.1912 Binxing Road Baisheng Building, Hangzhou
Equipment Under Test (EUT):
EUT Name: Mewwell Cat Litter Box
Model No.: HKHSL02
Standard(s) : 47 CFR Part 15, Subpart C 15.249
Date of Receipt: 2023-05-11
Date of Test: 2023-05-19 to 2023-06-13
Date of Issue: 2023-06-19

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

Parlan Zhan

Parlam Zhan
Laboratory Manager



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Revision Record			
Version	Description	Date	Remark
00	Original	2023-06-19	/

Authorized for issue by:			
		Bill Wu	
		Bill Wu/Project Engineer	
		Parlam Zhan	
		Parlam Zhan/ Reviewer	



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
Conducted Emissions at AC Power Line (150kHz-30MHz)	47 CFR Part 15, Subpart C 15.249	ANSI C63.10 (2013) Section 6.2	47 CFR Part 15, Subpart C 15.207	Pass
20dB Bandwidth		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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4 General Information

4.1 Details of E.U.T.

Power supply:	DC 12V By adapter Adapter: Model:GA-1201000CL Input:100-240V~50/60Hz Output:12V 1A
Testing voltage:	AC 12V 60Hz
S/N:	SNX000201
Firmware version:	V01
Center Frequency:	5850MHz
Antenna Type:	Integral Antenna
Modulation Type:	GFSK
Number of Channels:	1

4.2 Description of Support Units

The EUT has been tested as an independent unit.

4.3 Measurement Uncertainty

No.	Item	Measurement Uncertainty
1	Radio Frequency	8.4×10^{-8}
2	Timeout	2s
3	Duty Cycle	0.37%
4	Occupied Bandwidth	3%
5	RF Radiated Power	5.1dB (Below 1GHz) 4.9dB (Above 1GHz)
6	Radiated Spurious Emission Test	4.2dB (Below 30MHz) 4.5dB (30MHz-1GHz) 5.1dB (1GHz-18GHz) 5.4dB (Above 18GHz)
7	Temperature Test	1°C
8	Humidity Test	3%
9	Supply Voltages	1.5%
10	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:

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588 West Jindu Road, Xinqiao, Songjiang, 201612 Shanghai, China

Tel: +86 21 6191 5666

Fax: +86 21 6191 5678

No tests were sub-contracted.

Note:

1. SGS is not responsible for wrong test results due to incorrect information (e.g. max. clock frequency, highest internal 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 (Certificate No. 6332.01)

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. is accredited by the American Association for Laboratory Accreditation(A2LA).

• FCC (Designation Number: CN1301)

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. has been recognized as an accredited testing laboratory.

• ISED (CAB Identifier: CN0020)

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. EMC Laboratory has been recognized by Innovation, Science and Economic Development Canada (ISED) as an accredited testing laboratory.

Company Number: 8617A

• VCCI (Member No.: 3061)

The 3m Semi-anechoic chamber and Shielded Room of SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-13868, C-14336, T-12221, G-10830 respectively.

4.6 Deviation from Standards

None

4.7 Abnormalities from Standard Conditions

None



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5 Equipment List

Conducted Emissions					
Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
EMI test receiver	Rohde & Schwarz	ESR7	SHEM162-1	2022/12/20	2023/12/19
Line impedance stabilization network	SCHWARZBECK	NSLK8127	SHEM061-1	2022/12/20	2023/12/19
Line impedance stabilization network	EMCO	3816_2	SHEM019-1	2022/12/20	2023/12/19
Pulse limiter	Rohde & Schwarz	ESH3-Z2	SHEM029-1	2022/12/20	2023/12/19
Shielding Room	ZHONGYU	8*4*3M	SHEM079-2	2020/12/20	2023/12/19
CE test Cable	/	/	SHEM172-1	2022/12/20	2023/12/19
Test Software	ESE	e3	Version: 6.191211	N/A	N/A

Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
RF Radiated Test					
EMI test Receiver	R&S	ESU40	SHEM051-1	2022-12-20	2023-12-19
Spectrum Analyzer	R&S	FSP-30	SHEM002-1	2022-12-20	2023-12-19
Communication Tester	R&S	CMW500	SHEM268-1	2023-06-01	2024-05-31
Loop Antenna (9kHz-30MHz)	Schwarzbeck	FMZB1519	SHEM135-1	2022-12-20	2023-12-19
Antenna (25MHz-2GHz)	Schwarzbeck	VULB9168	SHEM048-1	2021-09-11	2023-09-10
Antenna (25MHz-2GHz)	Schwarzbeck	VULB9168	SHEM202-1	2022-05-07	2024-05-06
Horn Antenna (1-18GHz)	Schwarzbeck	HF906	SHEM009-1	2022-08-11	2024-08-10
Horn Antenna (1-18GHz)	Schwarzbeck	BBHA9120D	SHEM050-1	2021-09-18	2023-09-17
Horn Antenna (14-40GHz)	Schwarzbeck	BBHA 9170	SHEM049-1	2021-09-18	2023-09-17
Pre-Amplifier	HP	8447D	SHEM236-1	2022-08-02	2023-08-01
High-amplifier (14-40GHz)	Schwarzbeck	10001	SHEM049-2	2022-12-20	2023-12-19
Band Filter	LORCH	9BRX-875/X150	SHEM156-1	/	/
Band Filter	LORCH	13BRX-1950/X500	SHEM083-2	/	/
Band Filter	LORCH	5BRX-2400/X200	SHEM155-1	/	/
Band Filter	LORCH	5BRX-5500/X1000	SHEM157-2	/	/
High pass Filter	Wainwright	WHK3.0/18G	SHEM157-1	/	/
High pass Filter	Wainwright	WHKS1700	SHEM157-3	/	/
Semi/Fully Anechoic	ST	11*6*6M	SHEM078-2	2020-05-25	2023-05-24
RE test Cable	/	RE01, RE02, RE06	/	2023-01-07	2024-01-06
Test software	ESE	E3	Version: 6.111221a	/	/



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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.

Antenna location: Refer to Internal photos



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7.1.4 Measurement Procedure and Data

- 1) The mains terminal disturbance voltage test was conducted in a shielded room.
- 2) The EUT was connected to AC power source through a LISN 1 (Line Impedance Stabilization Network) which provides a 50ohm/50μH + 5ohm linear impedance. The power cables of all other units of the EUT were connected to a second LISN 2, which was bonded to the ground reference plane in the same way as the LISN 1 for the unit being measured. A multiple socket outlet strip was used to connect multiple power cables to a single LISN provided the rating of the LISN was not exceeded.
- 3) The tabletop EUT was placed upon a non-metallic table 0.8m above the ground reference plane. And for floor-standing arrangement, the EUT was placed directly on the horizontal ground reference plane or 10mm above the horizontal ground reference plane with insulating material.
- 4) The test was performed with a vertical ground reference plane. The rear of the EUT shall be 0.4 m from the vertical ground reference plane. The vertical ground reference plane was bonded to the horizontal ground reference plane. The LISN 1 was placed 0.8 m from the boundary of the unit under test and bonded to a ground reference plane for LISNs mounted on top of the ground reference plane. This distance was between the closest points of the LISN 1 and the EUT. All other units of the EUT and associated equipment was at least 0.8 m from the LISN 2.
- 5) In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10 on conducted measurement.

Remark: Level=Read Level+ Cable Loss+ LISN Factor



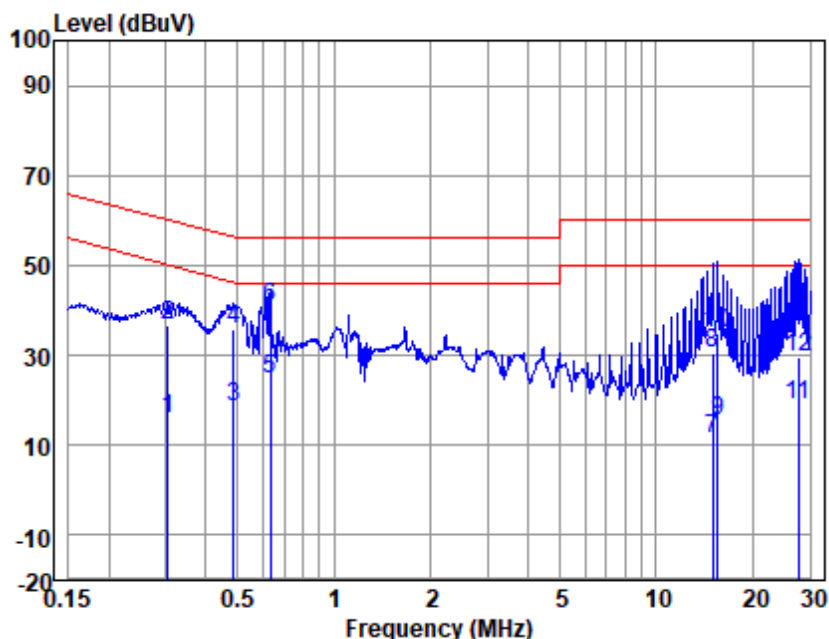
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Test Mode: 00; Line: Live line



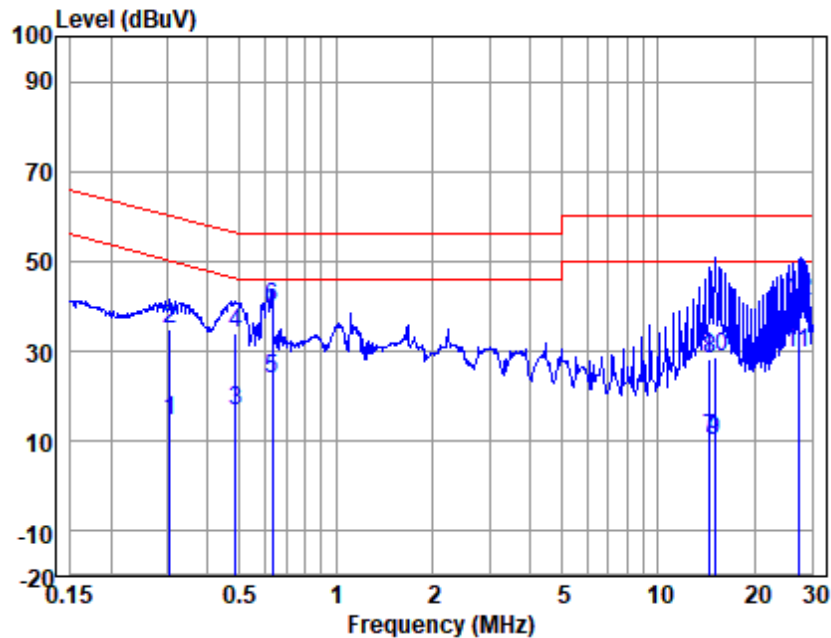
LISN : LINE
EUT/Project No : 0942HS
Test Mode : 00

	Freq (MHz)	Read level (dBuV)	LISN Factor (dB)	Cable Loss (dB)	Emission Level (dBuV)	Limit (dBuV)	Over Limit (dB)	Remark
1	0.31	5.85	0.31	9.87	16.03	50.10	-34.07	Average
2	0.31	26.29	0.31	9.87	36.47	60.10	-23.63	QP
3	0.49	8.54	0.21	9.86	18.61	46.23	-27.62	Average
4	0.49	25.76	0.21	9.86	35.83	56.23	-20.40	QP
5	0.63	14.80	0.20	9.86	24.86	46.00	-21.14	Average
6	0.63	30.64	0.20	9.86	40.70	56.00	-15.30	QP
7	14.99	0.76	0.50	10.03	11.29	50.00	-38.71	Average
8	14.99	19.86	0.50	10.03	30.39	60.00	-29.61	QP
9	15.55	5.04	0.51	10.03	15.58	50.00	-34.42	Average
10	15.55	24.21	0.51	10.03	34.75	60.00	-25.25	QP
11	27.71	7.59	1.30	10.10	18.99	50.00	-31.01	Average
12	27.71	18.35	1.30	10.10	29.75	60.00	-30.25	QP

Notes: Emission Level = Read Level + LISN Factor + Cable loss



Test Mode: 00; Line: Neutral Line



LISN : NEUTRAL
EUT/Project No : 0942HS
Test Mode : 00

	Freq (MHz)	Read level (dBuV)	LISN Factor (dB)	Cable Loss (dB)	Emission Level (dBuV)	Limit (dBuV)	Over Limit (dB)	Remark
1	0.31	4.21	0.30	9.87	14.38	50.10	-35.72	Average
2	0.31	24.53	0.30	9.87	34.70	60.10	-25.40	QP
3	0.49	6.61	0.30	9.86	16.77	46.23	-29.46	Average
4	0.49	23.88	0.30	9.86	34.04	56.23	-22.19	QP
5	0.63	13.80	0.30	9.86	23.96	46.00	-22.04	Average
6	0.63	29.76	0.30	9.86	39.92	56.00	-16.08	QP
7	14.44	0.29	0.42	10.02	10.73	50.00	-39.27	Average
8	14.44	17.72	0.42	10.02	28.16	60.00	-31.84	QP
9	14.99	-0.14	0.40	10.03	10.29	50.00	-39.71	Average
10	14.99	18.27	0.40	10.03	28.70	60.00	-31.30	QP
11	27.27	18.06	1.28	10.10	29.44	50.00	-20.56	Average
12	27.27	29.60	1.28	10.10	40.98	60.00	-19.02	QP

Notes: Emission Level = Read Level + LISN Factor + Cable loss



7.2 20dB Bandwidth

Test Requirement 47 CFR Part 15, Subpart C 15.215

Test Method: ANSI C63.10 (2013) Section 6.9

7.2.1 E.U.T. Operation

Operating Environment:

Temperature: 25.0 °C

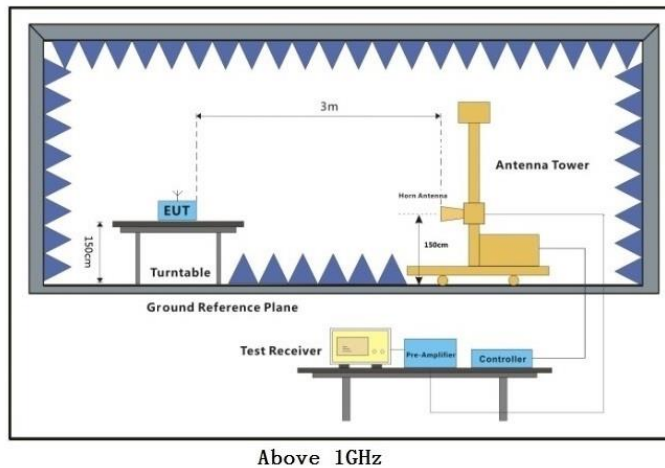
Humidity: 56.1 % RH

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.

7.2.3 Test Setup Diagram



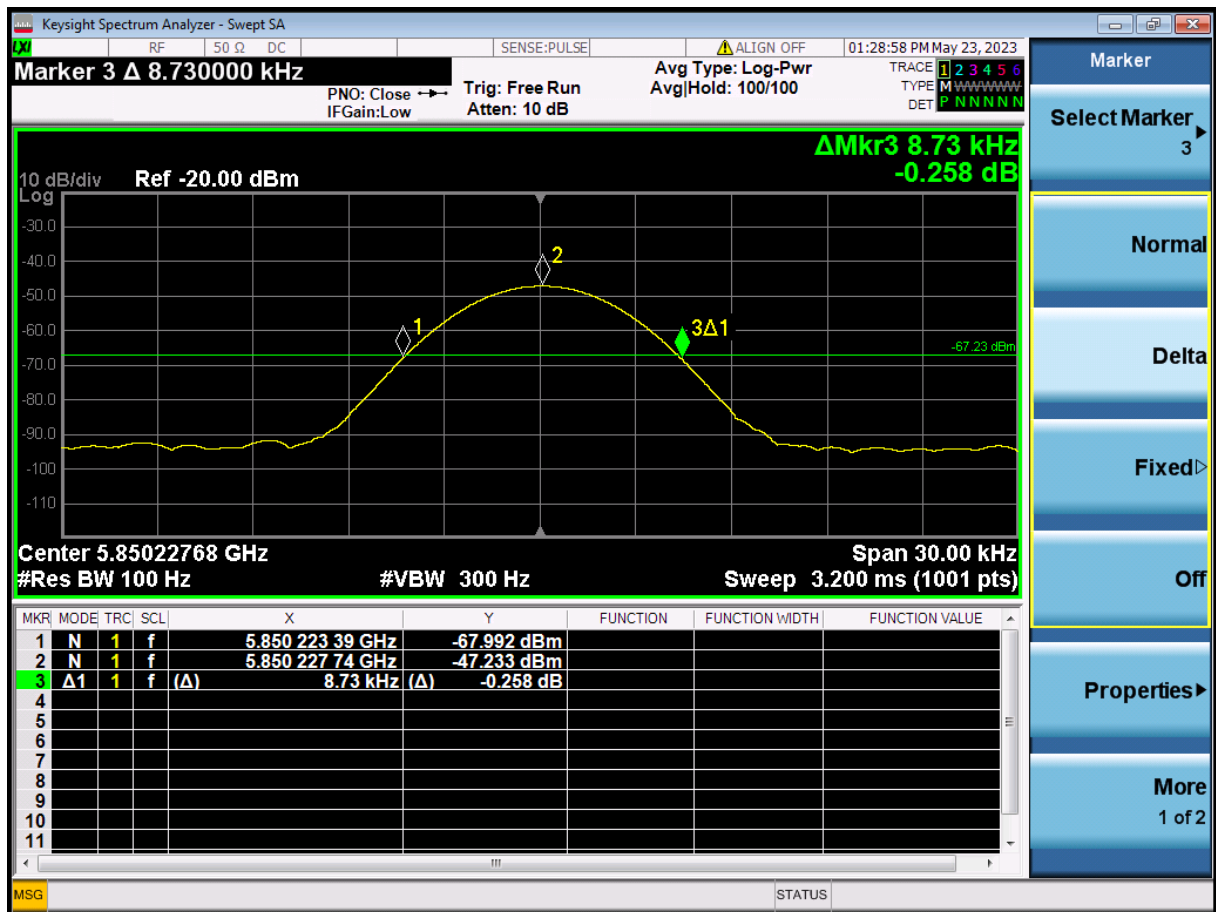
7.2.4 Measurement Procedure and Data



Frequency (MHz)	Bandwidth (kHz)	Result
5850	8.73	PASS

Test plot as follows:

Channel: 5850MHz



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7.3 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

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.

7.3.1 E.U.T. Operation

Operating Environment:

Temperature: 25.0 °C Humidity: 56.2 % 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.

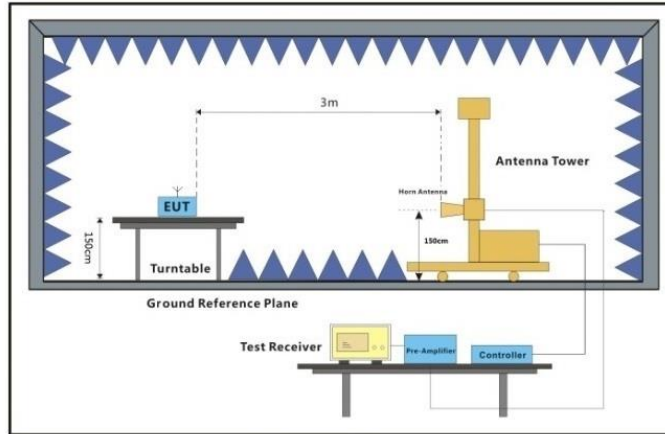

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7.3.3 Test Setup Diagram



Above 1GHz

7.3.4 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



Frequency (MHz)	Read Level (dBUV)	Factor (dB/m)	Level (dBUV/m)	Limit Line (dBUV/m)	Over Limit (dB)	Detector	Polarization
5850	86.69	3.7	90.09	94	-3.91	Peak	Horizontal
	84.76	3.7	88.46	94	-5.54	Peak	Vertical

- 1) The basic equation with a sample calculation is as follows: Level = Read Level + Factor.

(The Factor is calculated by adding the Antenna Factor, Cable Loss and Preamp Factor)

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



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7.4 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

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.

7.4.1 E.U.T. Operation

Operating Environment:

Temperature: 25.0 °C Humidity: 56.1 % 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.



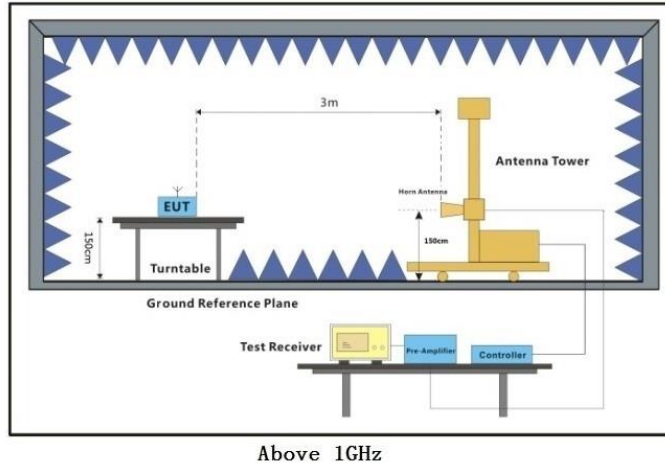
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7.4.3 Test Setup Diagram



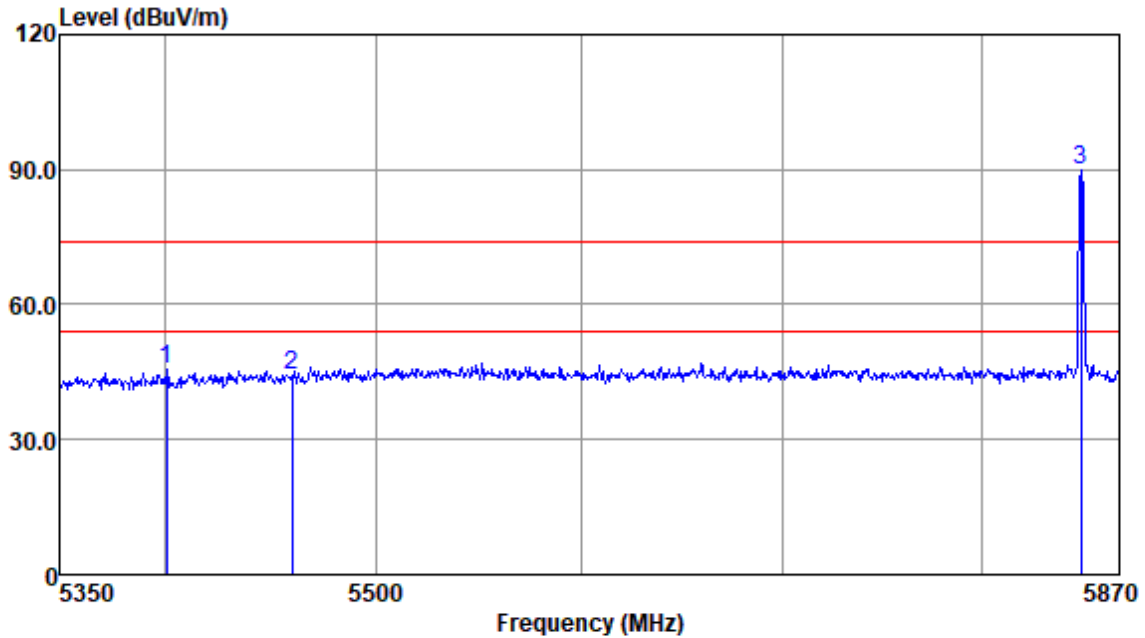
7.4.4 Measurement Procedure and Data

- 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.
- 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



Test Mode: 00; Polarity: Horizontal



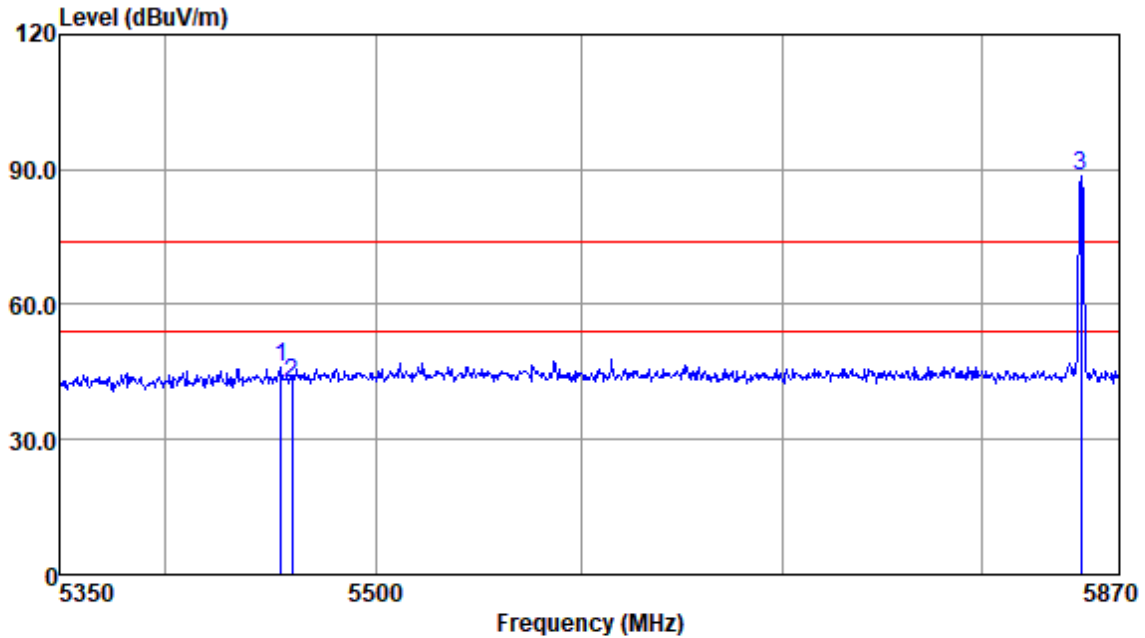
Antenna Polarity :HORIZONTAL

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
5400.36	43.14	34.34	5.02	36.95	45.55	74.00	-28.45	Peak
5460.00	41.61	34.44	5.09	36.97	44.17	74.00	-29.83	Peak
5850.43	86.39	34.61	6.13	37.04	90.09	74.00	16.09	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor



Test Mode: 00; Polarity: Vertical



Antenna Polarity :VERTICAL

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
5454.73	43.60	34.44	5.09	36.97	46.16	74.00	-27.84	Peak
5460.00	39.85	34.44	5.09	36.97	42.41	74.00	-31.59	Peak
5850.43	84.76	34.61	6.13	37.04	88.46	74.00	14.46	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor



7.5 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

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

7.5.1 E.U.T. Operation

Operating Environment:

Temperature: 25.0 °C

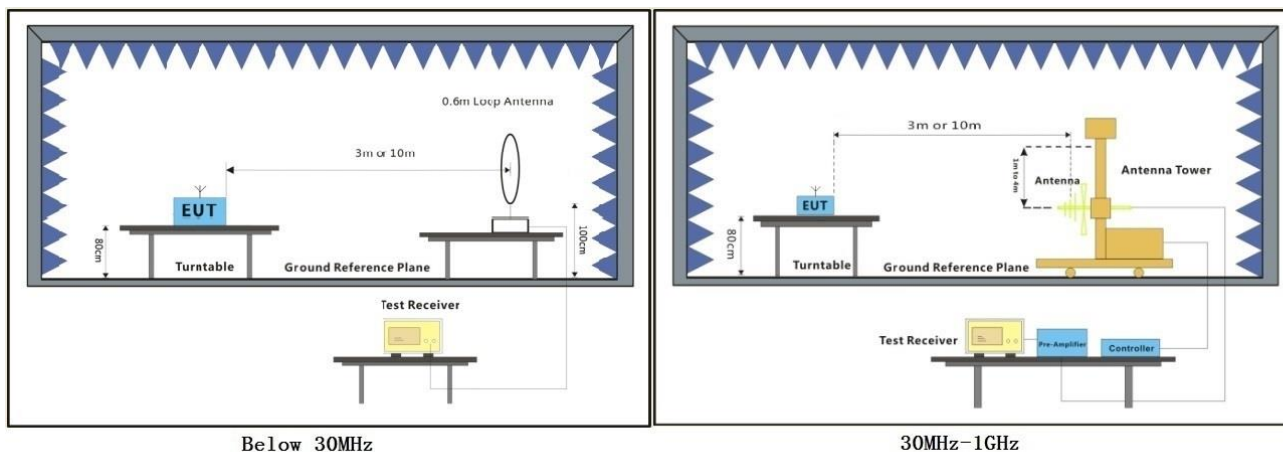
Humidity: 55.8 % RH

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 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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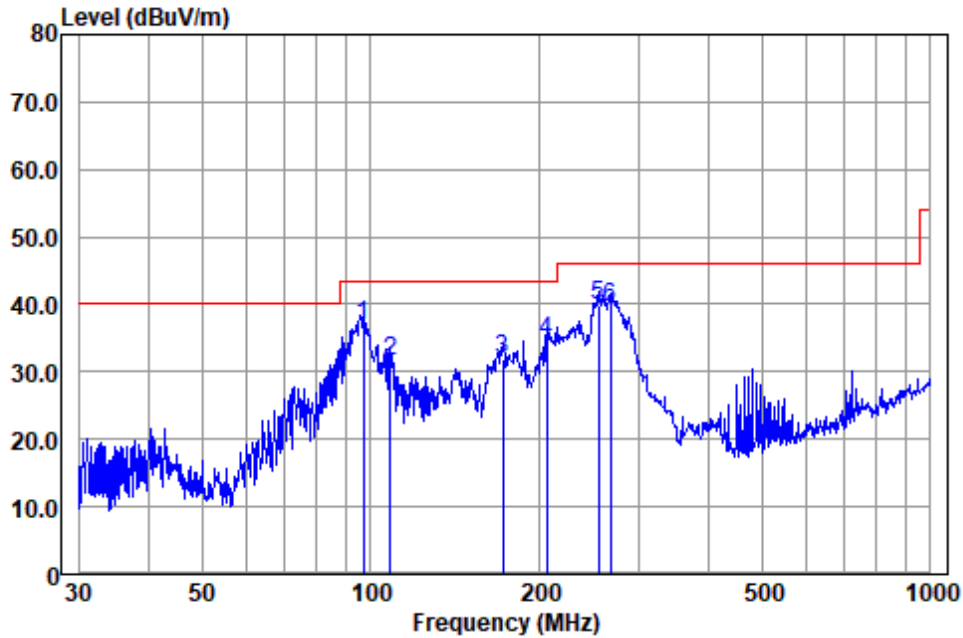
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Test Mode: 00; Polarity: Horizontal



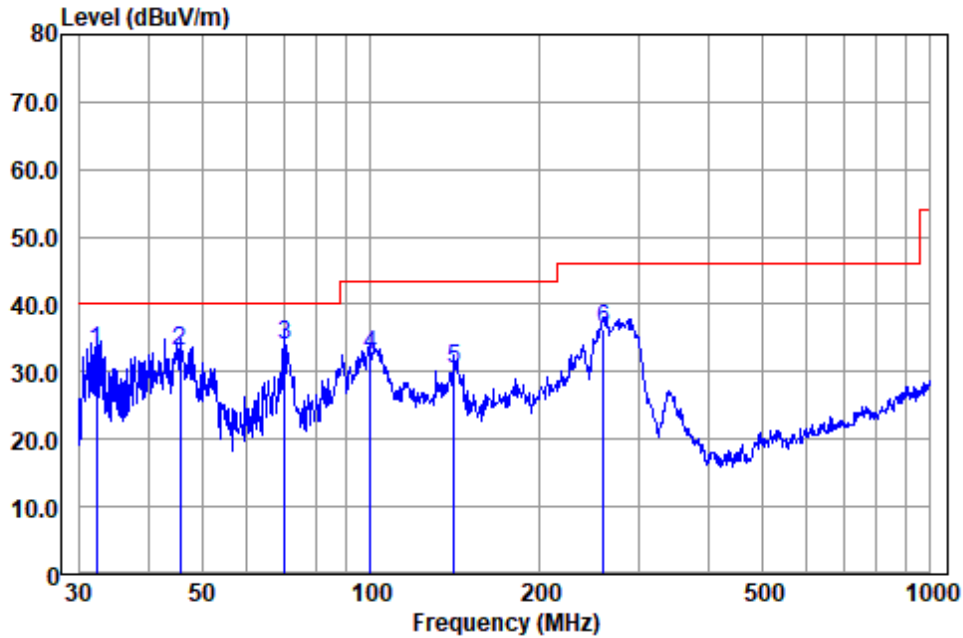
Antenna Polarity :HORIZONTAL
EUT/Project :0942HS
Test mode :00

	Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	97.115	60.00	8.60	1.85	33.60	36.85	43.50	-6.65	QP
2	108.267	52.78	10.33	1.98	33.58	31.51	43.50	-11.99	QP
3	171.995	50.22	12.41	2.60	33.41	31.82	43.50	-11.68	QP
4	206.398	54.83	9.87	3.14	33.27	34.57	43.50	-8.93	QP
5	254.728	57.93	11.84	3.30	33.09	39.98	46.00	-6.02	QP
6	268.485	57.06	12.25	3.44	33.06	39.69	46.00	-6.31	QP

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor



Test Mode: 00; Polarity: Vertical



Antenna Polarity :VERTICAL

EUT/Project :0942HS

Test mode :00

	Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	32.293	53.59	12.23	0.94	33.70	33.06	40.00	-6.94	QP
2	45.695	51.91	13.77	0.96	33.70	32.94	40.00	-7.06	QP
3	70.090	54.53	11.50	1.45	33.60	33.88	40.00	-6.12	QP
4	99.878	54.97	9.10	1.86	33.60	32.33	43.50	-11.17	QP
5	140.835	48.42	13.10	2.48	33.52	30.48	43.50	-13.02	QP
6	260.144	53.84	12.00	3.41	33.08	36.17	46.00	-9.83	QP

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor



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7.6.4 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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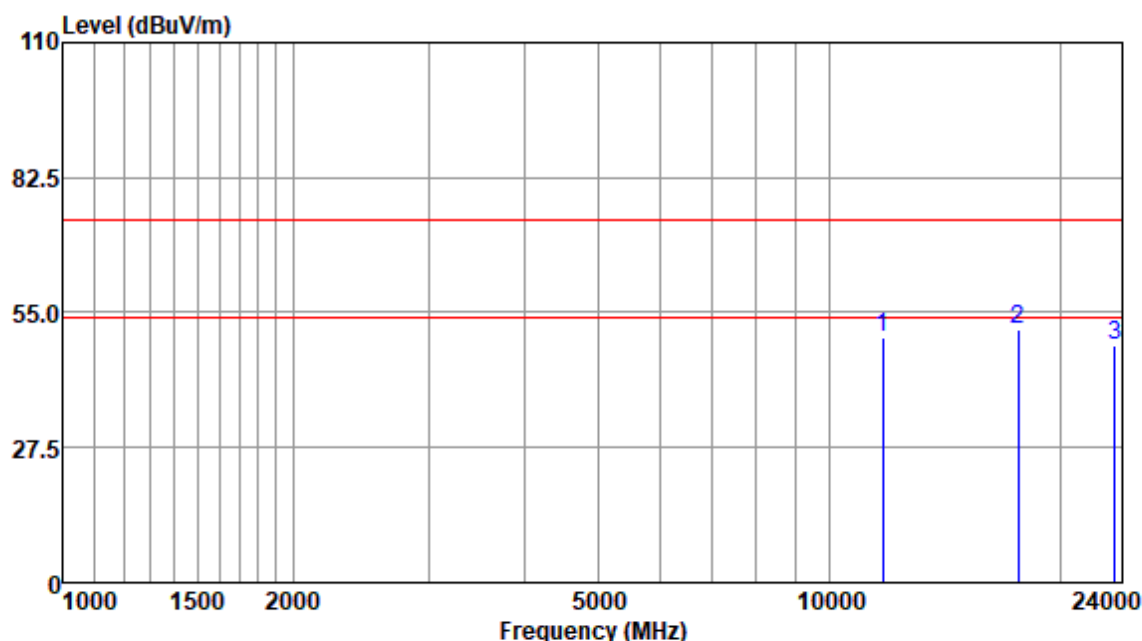
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Test Mode: 00; Polarity: Horizontal



Antenna Polarity :HORIZONTAL

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
11700.00	38.38	38.31	9.91	36.56	50.04	74.00	-23.96	Peak
17550.00	30.90	42.40	13.27	34.93	51.64	74.00	-22.36	Peak
23440.00	31.05	44.80	15.32	42.68	48.49	74.00	-25.51	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor



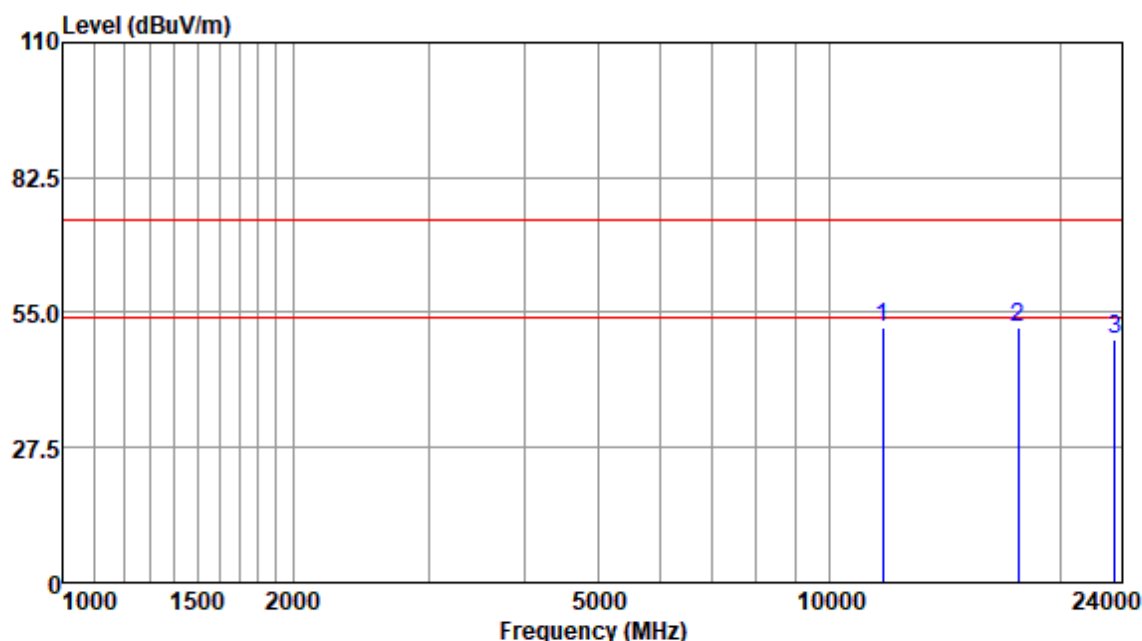
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Test Mode: 00; Polarity: Vertical



Antenna Polarity :VERTICAL

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
11700.00	40.10	38.31	9.91	36.56	51.76	74.00	-22.24	Peak
17550.00	31.09	42.40	13.27	34.93	51.83	74.00	-22.17	Peak
23440.00	31.91	44.80	15.32	42.68	49.35	74.00	-24.65	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor



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8 Test Setup Photo

Refer to Appendix - Test Setup Photo for SHCR2305000942HS

9 EUT Constructional Details (EUT Photos)

Refer to Appendix - Photographs of EUT Constructional Details for SHCR2305000942HS

End of the Report -



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