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Report No.: GZEM190801489403
Page: 1 of 105
FCC ID: PUU-CSWONXXBWF1T

TEST REPORT

Application No.: GZEM1908014894CR
Applicant: GE Lighting
Address of Applicant: Nele park, Cleveland, OH 44112
Manufacturer: GE Lighting
Address of Manufacturer: Nele park, Cleveland, OH 44112
Factory: Nanchang Innotech Techonology Co.,Ltd
Address of Factory: No.399, Rule Lake Avenue, Nanchang Airport Economic Zone, Nanchang, China
Equipment Under Test (EUT):
FCC ID: PUU-CSWONXXBWF1T
EUT Name: smart switch
Model No.: CSWONBLBWF1
HVIN
Trade Mark: GE
Standard(s) : 47 CFR Part 15, Subpart C 15.247
Date of Receipt: 2019-08-07
Date of Test: 2019-08-13 to 2019-08-19
Date of Issue: 2019-08-25

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

Kobe Jian

EMC Laboratory Manager

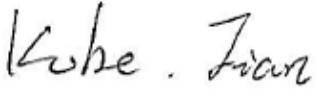
The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards. Any mention of SGS International Electrical Approvals or testing done by SGS International Electrical Approvals in connection with, distribution or use of the product described in this report must be approved by SGS International Electrical Approvals in writing.



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Revision Record				
Version	Chapter	Date	Modifier	Remark
01		2019-08-25		Original

Authorized for issue by:			
Tested By	 Kevin_Zhang /Project Engineer	2019-08-13 to 2019-08-19	Date
Checked By	 Ricky_Liu /Reviewer	2019-08-25	Date

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2 Test Summary

Radio Spectrum Technical Requirement				
Item	Standard	Method	Requirement	Result
Antenna Requirement	47 CFR Part 15, Subpart C 15.247	N/A	47 CFR Part 15, Subpart C 15.203 & 15.247(c)	Pass

Radio Spectrum Matter Part				
Item	Standard	Method	Requirement	Result
Conducted Emissions at AC Power Line (150kHz-30MHz)	47 CFR Part 15, Subpart C 15.247	ANSI C63.10 (2013) Section 6.2	47 CFR Part 15, Subpart C 15.207	Pass
Minimum 6dB Bandwidth	47 CFR Part 15, Subpart C 15.247	ANSI C63.10 (2013) Section 11.8.1	47 CFR Part 15, Subpart C 15.247a(2)	Pass
Conducted Peak Output Power	47 CFR Part 15, Subpart C 15.247	ANSI C63.10 (2013) Section 11.9.1	47 CFR Part 15, Subpart C 15.247(b)(3)	Pass
Power Spectrum Density	47 CFR Part 15, Subpart C 15.247	ANSI C63.10 (2013) Section 11.10.2	47 CFR Part 15, Subpart C 15.247(e)	Pass
Conducted Band Edges Measurement	47 CFR Part 15, Subpart C 15.247	ANSI C63.10 (2013) Section 11.13.3.2	47 CFR Part 15, Subpart C 15.247(d)	Pass
Conducted Spurious Emissions	47 CFR Part 15, Subpart C 15.247	ANSI C63.10 (2013) Section 11.11	47 CFR Part 15, Subpart C 15.247(d)	Pass
Radiated Emissions which fall in the restricted bands	47 CFR Part 15, Subpart C 15.247	ANSI C63.10 (2013) Section 6.10.5	47 CFR Part 15, Subpart C 15.209 & 15.247(d)	Pass
Radiated Spurious Emissions	47 CFR Part 15, Subpart C 15.247	ANSI C63.10 (2013) Section 6.4,6.5,6.6	47 CFR Part 15, Subpart C 15.209 & 15.247(d)	Pass

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4 General Information

4.1 Details of E.U.T.

Power Supply:	AC 120V 60Hz
Test Voltage:	AC 120V 60Hz
Cable:	GROUND cable (unshielded, 20cm) NEUTRAL cable (unshielded, 20cm) LINE cable (unshielded, 20cm) LOAD cable (unshielded, 20cm)
Antenna Gain	0dBi
Antenna Type	Integrated Antenna
Channel Spacing	5MHz
Modulation Type	802.11b: DSSS (CCK, DQPSK, DBPSK) 802.11g/n: OFDM (64QAM, 16QAM, QPSK, BPSK)
Number of Channels	802.11b/g/n(HT20):11 802.11n(HT40):7
Operation Frequency	802.11b/g/n(HT20): 2412MHz to 2462MHz 802.11n(HT40): 2422MHz to 2452MHz

4.2 Environment Parameter

Environment Parameter	Selected Values During Tests	
Relative Humidity	Ambient	
Value	Temperature(°C)	Voltage(V)
TNVN	25	120
TLVN	0	120
THVN	50	120

Note:

VN: Normal Voltage

TN: Normal Temperature

TL: Low Extreme Test Temperature

TH: High Extreme Test Temperature



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Operation Frequency each of channel (802.11b/g/n HT20)							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
1	2412MHz	5	2432MHz	9	2452MHz		
2	2417MHz	6	2437MHz	10	2457MHz		
3	2422MHz	7	2442MHz	11	2462MHz		
4	2427MHz	8	2447MHz				

Operation Frequency each of channel(802.11n HT40)					
Channel	Frequency	Channel	Frequency	Channel	Frequency
3	2422MHz	6	2437MHz	9	2452MHz
4	2427MHz	7	2442MHz		
5	2432MHz	8	2447MHz		

Using test software was control EUT work in continuous transmitter and receiver mode. And select test channel as below:

For 802.11b/g/n (HT20):

Channel	Frequency
The lowest channel (CH1)	2412MHz
The middle channel (CH7)	2442MHz
The highest channel (CH11)	2462MHz

For 802.11n (HT40):

Channel	Frequency
The lowest channel (CH3)	2422MHz
The middle channel (CH7)	2442MHz
The highest channel (CH9)	2452MHz

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4.3 Description of Support Units

Description	Manufacturer	Model No.	Serial No.
iPad mini	Apple	A1432	/
Laptop	Apple	A1466	C1MQ2JLNG940
Router	NETGEAR	DGN2200	REF. No. SEA2200

4.4 Measurement Uncertainty

No.	Item	Measurement Uncertainty
1	Radio Frequency	$\pm 5.5 \times 10^{-8}$
2	Duty cycle	$\pm 0.57\%$
3	Occupied Bandwidth	$\pm 3\%$
4	RF Conducted power	$\pm 0.68\text{dB}$
5	RF Power Density	$\pm 1.50\text{dB}$
6	Conducted Spurious Emissions	$\pm 1.04\text{dB}$
7	RF Radiated Power	$\pm 4.5\text{dB}$ (below 1GHz)
		$\pm 4.8\text{dB}$ (above 1GHz)
8	Radiated Spurious Emission Test	$\pm 4.5\text{dB}$ (30MHz-1GHz)
		$\pm 4.8\text{dB}$ (1GHz-18GHz)
9	Temperature	$\pm 0.4^\circ\text{C}$
10	Humidity	$\pm 1.3\%$
11	Supply Voltages	$\pm 1.5\%$
12	Time	$\pm 3\%$

4.5 Test Location

All tests were performed at:

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No tests were sub-contracted.

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4.6 Test Facility

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

● NVLAP (Lab Code: 200611-0)

SGS-CSTC Standards Technical Services Co., Ltd., Guangzhou EMC Laboratory is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP/NIST). NVLAP Code: 200611-0.

The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the Federal Government.

● ACMA

SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory can also perform testing for the Australian C-Tick mark as a result of our NVLAP accreditation.

● SGS UK(Certificate No.: 32), SGS-TUV SAARLAND and SGS-FIMKO

Have approved SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory as a supplier of EMC TESTING SERVICES and SAFETY TESTING SERVICES.

● CNAS (Lab Code: L0167)

SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory has been assessed and in compliance with CNAS-CL01:2018 accreditation criteria for testing laboratories (identical to ISO/IEC 17025:2017 General Requirements) for the Competence of Testing Laboratories.

● FCC Recognized 2.948 Listed Test Firm(Registration No.: 282399)

SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration 282399, May 31, 2002.

● FCC Recognized Accredited Test Firm(Registration No.: 486818)

SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory has been accredited and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Designation Number: CN5016, Test Firm Registration Number: 486818, Jul 13, 2017.

● Industry Canada (Registration No.: 4620B, CAB identifier: CN0052)

SGS-CSTC Standards Technical Services Co., Ltd., has been registered by Innovation Science and Economic Development Canada for Wireless Device Testing laboratories to test to Canadian radio equipment requirements. Registration No. 4620B, CAB identifier: CN0052.

● VCCI (Registration No.: R-12460, C-12584, G-10449 and T-11179)

The 10m Semi-anechoic chamber and Shielded Room of SGS-CSTC Standards Technical Services Co., Ltd. have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-12460, C-12584, G-10449 and T-11179 respectively.

● CBTL (Lab Code: TL129)

SGS-CSTC Standards Technical Services Co., Ltd., E&E Laboratory has been assessed and fully comply with the requirements of ISO/IEC 17025:2005, the Basic Rules, IECEE 01 and Rules of procedure IECEE 02, and the relevant IECEE CB-Scheme Operational documents.



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4.7 Deviation from Standards

None

4.8 Abnormalities from Standard Conditions

None



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5 Equipment List

Conducted Emissions at AC Power Line (150kHz-30MHz)					
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
Shielding Room	Zhong Yu	8m x 3m x 3.8m	EMC0306	N/A	N/A
Two-Line V-Netwok	R&S	ENV216	EMC0118	2019-01-11	2020-01-10
LISN	R&S	ENV216	EMC2135	2018-09-21	2019-09-20
EMI Test Receiver	Rohde & Schwarz	ESCS30	EMC0506	2018-11-19	2019-11-18
Coaxial Cable	HangTianXing	2m	EMC0107	2018-09-20	2020-09-19
Voltage Probe	SGS	N/A	EMC0106	2018-04-04	2020-04-03
Conical Metal Housing	SGS-EMC	N/A	EMC0167	2018-04-19	2020-04-18
Test Software E3c	Audix	Ver. 5.4.1221b	GZE100-62	N/A	N/A

Minimum 6dB Bandwidth					
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
EXA Signal Analyzer	AgilentTechnologies	N9010A	EMC2138	2018-11-19	2019-11-18
6dB Attenuator	HP	8491A	EMC2062	2018-04-04	2020-04-03
Test Software JS1120-3	HangTianXing	V2.6	GZE100-69	N/A	N/A
MI CABLE	SGS	0.8M	EMC2136	2017-11-02	2019-11-01
MI CABLE	SGS	0.8M	EMC2137	2017-11-02	2019-11-01

Conducted Peak Output Power					
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
EXA Signal Analyzer	AgilentTechnologies	N9010A	EMC2138	2018-11-19	2019-11-18
6dB Attenuator	HP	8491A	EMC2062	2018-04-04	2020-04-03
Test Software JS1120-3	HangTianXing	V2.6	GZE100-69	N/A	N/A
MI CABLE	SGS	0.8M	EMC2136	2017-11-02	2019-11-01
MI CABLE	SGS	0.8M	EMC2137	2017-11-02	2019-11-01

Power Spectrum Density					
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
EXA Signal Analyzer	AgilentTechnologies	N9010A	EMC2138	2018-11-19	2019-11-18
6dB Attenuator	HP	8491A	EMC2062	2018-04-04	2020-04-03
Test Software JS1120-3	HangTianXing	V2.6	GZE100-69	N/A	N/A
MI CABLE	SGS	0.8M	EMC2136	2017-11-02	2019-11-01
MI CABLE	SGS	0.8M	EMC2137	2017-11-02	2019-11-01

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Conducted Band Edges Measurement

Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
MXA Signal Analyzer	AgilentTechnologies	N9020A	SEM004-10	2019-02-24	2020-02-23
ESG Vector Signal Generator	Keysight	E4438C	SEM006-03	2019-04-05	2020-04-04
EXG Analog Signal Generator	AgilentTechnologies	N5171B	SEM006-04	2017-07-26	2020-07-25
Power Meter	AgilentTechnologies	U2021XA_Ch2	SEM009-02	2018-09-20	2019-09-19
Power Meter	AgilentTechnologies	U2021XA_Ch3	SEM009-03	2018-09-20	2019-09-19
EXA Signal Analyzer	AgilentTechnologies	N9010A	EMC2138	2018-11-19	2019-11-18
6dB Attenuator	HP	8491A	EMC2062	2018-04-04	2020-04-03
Test Software JS1120-3	HangTianXing	V2.6	GZE100-69	N/A	N/A
MI CABLE	SGS	0.8M	EMC2136	2017-11-02	2019-11-01
MI CABLE	SGS	0.8M	EMC2137	2017-11-02	2019-11-01

Conducted Spurious Emissions

Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
EXA Signal Analyzer	AgilentTechnologies	N9010A	EMC2138	2018-11-19	2019-11-18
6dB Attenuator	HP	8491A	EMC2062	2018-04-04	2020-04-03
Test Software JS1120-3	HangTianXing	V2.6	GZE100-69	N/A	N/A
MI CABLE	SGS	0.8M	EMC2136	2017-11-02	2019-11-01
MI CABLE	SGS	0.8M	EMC2137	2017-11-02	2019-11-01

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Radiated Emissions which fall in the restricted bands					
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
EMI Test Receiver	Rohde & Schwarz	ESIB26	EMC0522	2019-01-20	2020-01-19
EMI Test Receiver	Rohde & Schwarz	ESCI	EMC0056	2019-01-20	2020-01-19
Chamber cable	HangTianXing	N/A	EMC0542	2019-06-28	2021-06-27
Trilog Broadband Antenna 30MHz-1GHz	SCHWARZBECKME SS-ELEKTRONIK	VULB 9160	EMC2025	2016-09-08	2019-09-07
Bi-log Type Antenna	Schaffner -Chase	CBL6112B	EMC0524	2016-09-08	2019-09-07
Bi-log Type Antenna	Schaffner -Chase	CBL6143	EMC0519	2017-05-04	2020-05-03
Horn Antenna 1GHz-18GHz	SCHWARZBECK MESS-ELEKTRONIK	BBHA 9120D	EMC2026	2016-09-09	2019-09-08
1GHz-26.5 GHz Pre-Amplifier	Agilent	8449B	EMC0521	2019-01-07	2020-01-08
Amplifier	HP	8447F	EMC2065	2019-05-29	2020-05-28
Pre-Amplifier MH648A	ANRITSU CORP	MH648A	EMC2086	2018-11-19	2019-11-18
Active Loop Antenna	EMCO	6502	EMC0523	2018-03-05	2020-03-04
High Pass Filter(915MHz)	FSY MICROWAVE	HM1465-9SS	EMC2079	2019-01-11	2020-01-10
2.4GHz Filter	Micro-Tronics	BRM 50702	EMC2069	2019-01-11	2020-01-10
10m Semi-Anechoic Chamber	ETS	N/A	EMC0530	2018-12-08	2019-12-07
966 Anechoic Chamber	C.R.T	9m x 6m x 6m	EMC2142	2017-12-19	2019-12-18
MXE EMI Receiver	Keysight	N9038A	EMC2139	2018-11-19	2019-11-18
EXA Signal Analyzer	Keysight	N9010A	EMC2138	2018-11-19	2019-11-18
Trilog Broadband Antenna 30MHz-1GHz	SCHWARZBECKME SS-ELEKTRONIK	VULB 9168	SEM003-18	2019-02-22	2022-02-22
Test Software E3	Audix	Ver.6.120110a	GZE100-61	N/A	N/A

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Radiated Spurious Emissions					
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
EMI Test Receiver	Rohde & Schwarz	ESIB26	EMC0522	2019-01-20	2020-01-19
EMI Test Receiver	Rohde & Schwarz	ESCI	EMC0056	2019-01-20	2020-01-19
Chamber cable	HangTianXing	N/A	EMC0542	2019-06-28	2021-06-27
Trilog Broadband Antenna 30MHz-1GHz	SCHWARZBECKME SS-ELEKTRONIK	VULB 9160	EMC2025	2016-09-08	2019-09-07
Bi-log Type Antenna	Schaffner -Chase	CBL6112B	EMC0524	2016-09-08	2019-09-07
Bi-log Type Antenna	Schaffner -Chase	CBL6143	EMC0519	2017-05-04	2020-05-03
Horn Antenna 1GHz-18GHz	SCHWARZBECK MESS-ELEKTRONIK	BBHA 9120D	EMC2026	2016-09-09	2019-09-08
1GHz-26.5 GHz Pre-Amplifier	Agilent	8449B	EMC0521	2019-01-07	2020-01-08
Amplifier	HP	8447F	EMC2065	2019-05-29	2020-05-28
Pre-Amplifier MH648A	ANRITSU CORP	MH648A	EMC2086	2018-11-19	2019-11-18
Active Loop Antenna	EMCO	6502	EMC0523	2018-03-05	2020-03-04
High Pass Filter(915MHz)	FSY MICROWAVE	HM1465-9SS	EMC2079	2019-01-11	2020-01-10
2.4GHz Filter	Micro-Tronics	BRM 50702	EMC2069	2019-01-11	2020-01-10
10m Semi-Anechoic Chamber	ETS	N/A	EMC0530	2018-12-08	2019-12-07
966 Anechoic Chamber	C.R.T	9m x 6m x 6m	EMC2142	2017-12-19	2019-12-18
MXE EMI Receiver	Keysight	N9038A	EMC2139	2018-11-19	2019-11-18
EXA Signal Analyzer	Keysight	N9010A	EMC2138	2018-11-19	2019-11-18
Trilog Broadband Antenna 30MHz-1GHz	SCHWARZBECKME SS-ELEKTRONIK	VULB 9168	SEM003-18	2019-02-22	2022-02-22
Test Software E3	Audix	Ver.6.120110a	GZE100-61	N/A	N/A

General used equipment					
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
DMM	Fluke	73	EMC0006	2019-07-16	2020-07-15
DMM	Fluke	73	EMC0007	2019-07-16	2020-07-15

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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 & 15.247(c)

6.1.2 Conclusion

Standard 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.

15.247(b) (4) requirement:

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



EUT Antenna:

The antenna is integrated on the main PCB and no consideration of replacement. The best case gain of the antenna is 0dBi.



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7 Radio Spectrum Matter Test Results

7.1 Conducted Emissions at AC Power Line (150kHz-30MHz)

Test Requirement 47 CFR Part 15, Subpart C 15.207

Test Method: ANSI C63.10 (2013) Section 6.2

Limit:

Frequency of emission(MHz)	Conducted limit(dB μ V)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

*Decreases with the logarithm of the frequency.

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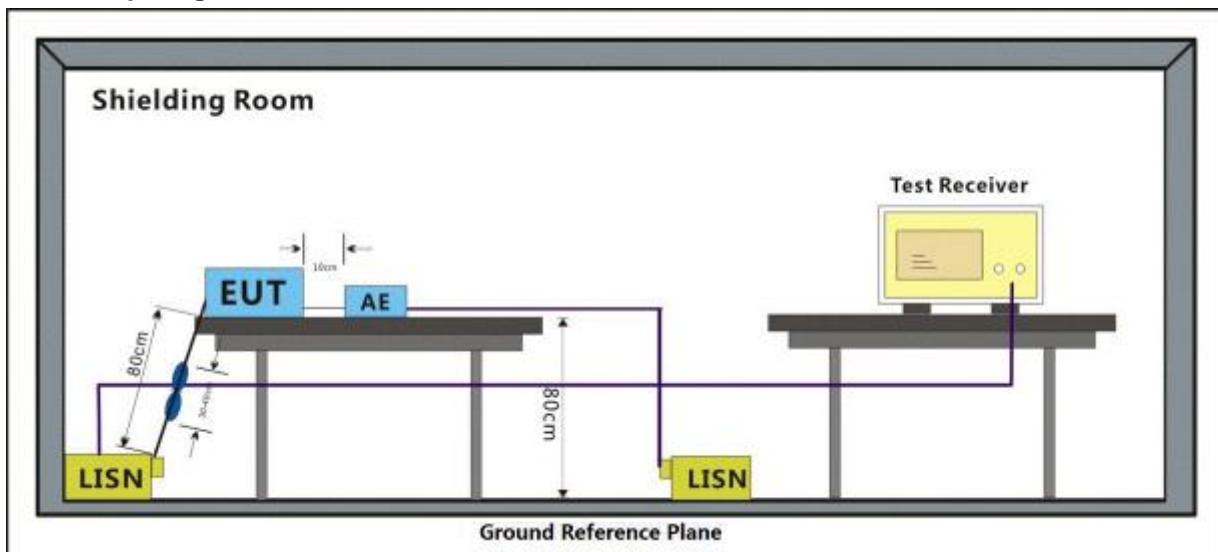
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7.1.1 E.U.T. Operation

Operating Environment:

Temperature: 23.4 °C Humidity: 52 % RH Atmospheric Pressure: 1020 mbar
Test mode d: Wireless Working_Keep the EUT in communication with other device.

7.1.2 Test Setup Diagram



7.1.3 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/50 μ H + 50hm 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 on the horizontal ground reference plane,
- 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: LISN=Read Level+ Cable Loss+ LISN Factor



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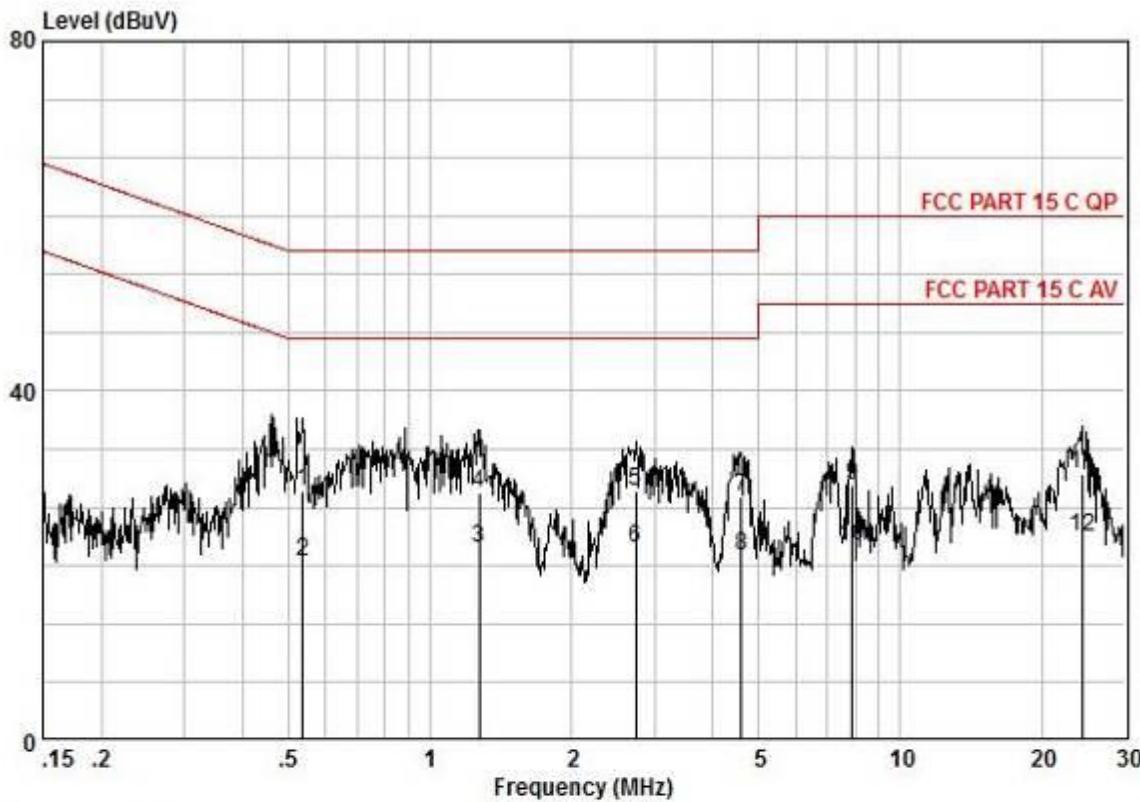
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Mode:d; Line:Live Line



Pol	:LIVE						
No	:	:					
Model	:	:					
Frequency	read level	Cable Loss	LISN Factor	Measured level	Limit Line	Over limit	Remark
0.53	18.80	0.10	9.67	28.57	56.00	-27.43	QP
0.53	10.72	0.10	9.67	20.49	46.00	-25.51	AVERAGE
1.27	12.32	0.10	9.68	22.10	46.00	-23.90	AVERAGE
1.27	18.63	0.10	9.68	28.41	56.00	-27.59	QP
2.74	18.66	0.18	9.69	28.53	56.00	-27.47	QP
2.74	12.18	0.18	9.69	22.05	46.00	-23.95	AVERAGE
4.60	17.97	0.20	9.71	27.88	56.00	-28.12	QP
4.60	11.34	0.20	9.71	21.25	46.00	-24.75	AVERAGE
7.89	19.10	0.30	9.74	29.14	60.00	-30.86	QP
7.89	12.12	0.30	9.74	22.16	50.00	-27.84	AVERAGE
24.40	20.31	0.40	9.79	30.50	50.00	-19.50	AVERAGE
24.40	13.14	0.40	9.79	23.33	50.00	-26.67	AVERAGE

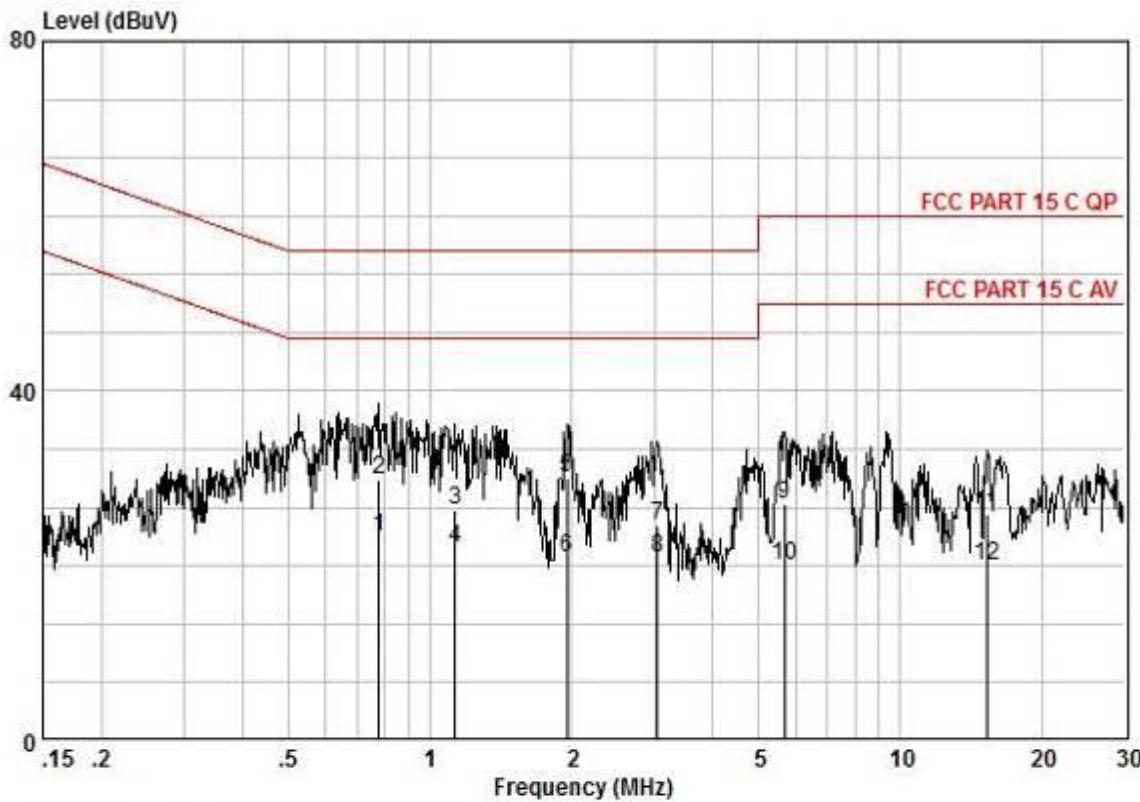
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Mode:d; Line:Neutral Line



Pol	:NEUTRAL						
No	:	:	:	:	:	:	:
Model	:	:	:	:	:	:	:
Frequency	read	Cable	LISN	Measured	Limit	Over	Remark
MHz	level	Loss	Factor	level	Line	limit	
0.78	13.52	0.10	9.61	23.23	46.00	-22.77	AVERAGE
0.78	20.12	0.10	9.61	29.83	56.00	-26.17	QP
1.13	16.63	0.10	9.61	26.34	56.00	-29.66	QP
1.13	12.34	0.10	9.61	22.05	46.00	-23.95	AVERAGE
1.96	20.41	0.10	9.62	30.13	56.00	-25.87	QP
1.96	11.30	0.10	9.62	21.02	46.00	-24.98	AVERAGE
3.04	14.82	0.20	9.62	24.64	56.00	-31.36	QP
3.04	11.16	0.20	9.62	20.98	46.00	-25.02	AVERAGE
5.68	17.07	0.20	9.67	26.94	60.00	-33.06	QP
5.68	10.27	0.20	9.67	20.14	50.00	-29.86	AVERAGE
15.31	15.68	0.40	9.83	25.91	60.00	-34.09	QP
15.31	9.74	0.40	9.83	19.97	50.00	-30.03	AVERAGE

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7.2 Minimum 6dB Bandwidth

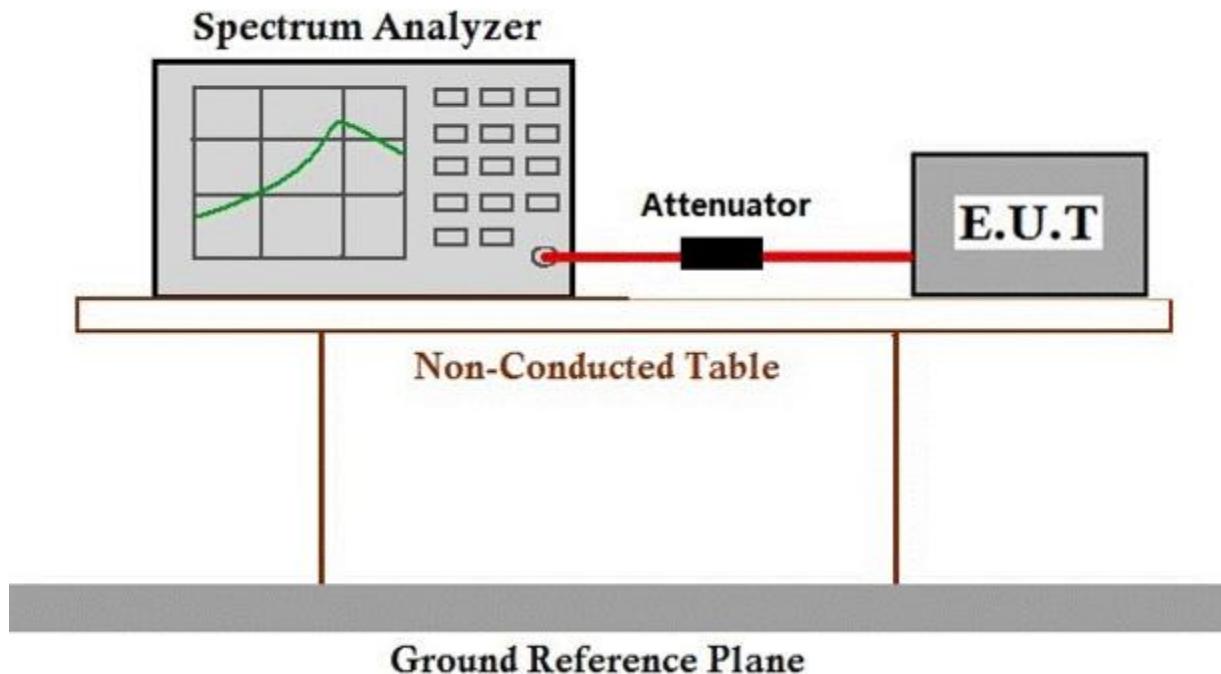
Test Requirement 47 CFR Part 15, Subpart C 15.247a(2)
Test Method: ANSI C63.10 (2013) Section 11.8.1
Limit: ≥ 500 kHz

7.2.1 E.U.T. Operation

Operating Environment:

Temperature: 25.3 °C Humidity: 55.5 % RH Atmospheric Pressure: 1020 mbar
Test mode c:TX mode_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 1Mbps is the worst case of IEEE 802.11b; data rate @ 6Mbps is the worst case of IEEE 802.11g; data rate @ 6.5Mbps is the worst case of IEEE 802.11n(HT20); data rate @ 13.5Mbps is the worst case of IEEE 802.11n(HT40). Only the data of worst case is recorded in the report.

7.2.2 Test Setup Diagram



7.2.3 Measurement Procedure and Data

The detailed test data see: Appendix 15.247



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7.3 Conducted Peak Output Power

Test Requirement 47 CFR Part 15, Subpart C 15.247(b)(3)

Test Method: ANSI C63.10 (2013) Section 11.9.1

Limit:

Frequency range(MHz)	Output power of the intentional radiator(watt)
902-928	1 for ≥ 50 hopping channels
	0.25 for $25 \leq$ hopping channels < 50
	1 for digital modulation
2400-2483.5	1 for ≥ 75 non-overlapping hopping channels
	0.125 for all other frequency hopping systems
	1 for digital modulation
5725-5850	1 for frequency hopping systems and digital modulation

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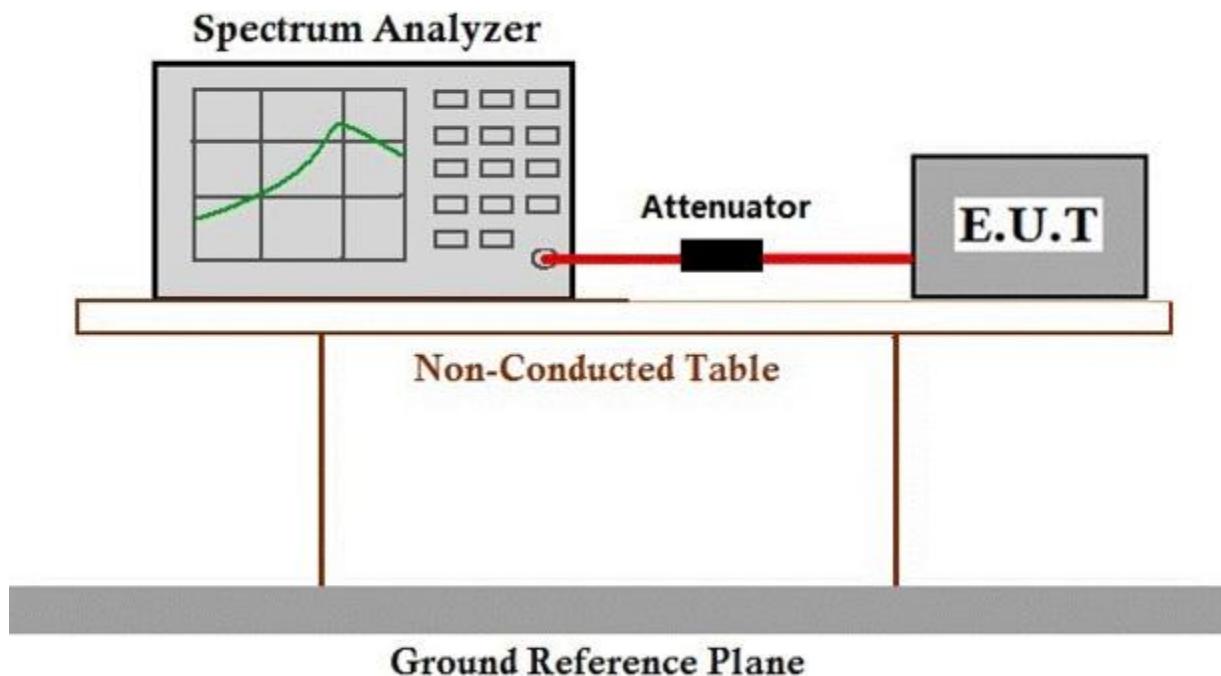
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7.3.1 E.U.T. Operation

Operating Environment:

Temperature: 25.3 °C Humidity: 55.5 % RH Atmospheric Pressure: 1020 mbar
Test mode c:TX mode_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 1Mbps is the worst case of IEEE 802.11b; data rate @ 6Mbps is the worst case of IEEE 802.11g; data rate @ 6.5Mbps is the worst case of IEEE 802.11n(HT20); data rate @ 13.5Mbps is the worst case of IEEE 802.11n(HT40). Only the data of worst case is recorded in the report.

7.3.2 Test Setup Diagram



7.3.3 Measurement Procedure and Data

The detailed test data see: Appendix 15.247

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7.4 Power Spectrum Density

Test Requirement 47 CFR Part 15, Subpart C 15.247(e)

Test Method: ANSI C63.10 (2013) Section 11.10.2

Limit: $\leq 8\text{dBm}$ in any 3 kHz band during any time interval of continuous transmission

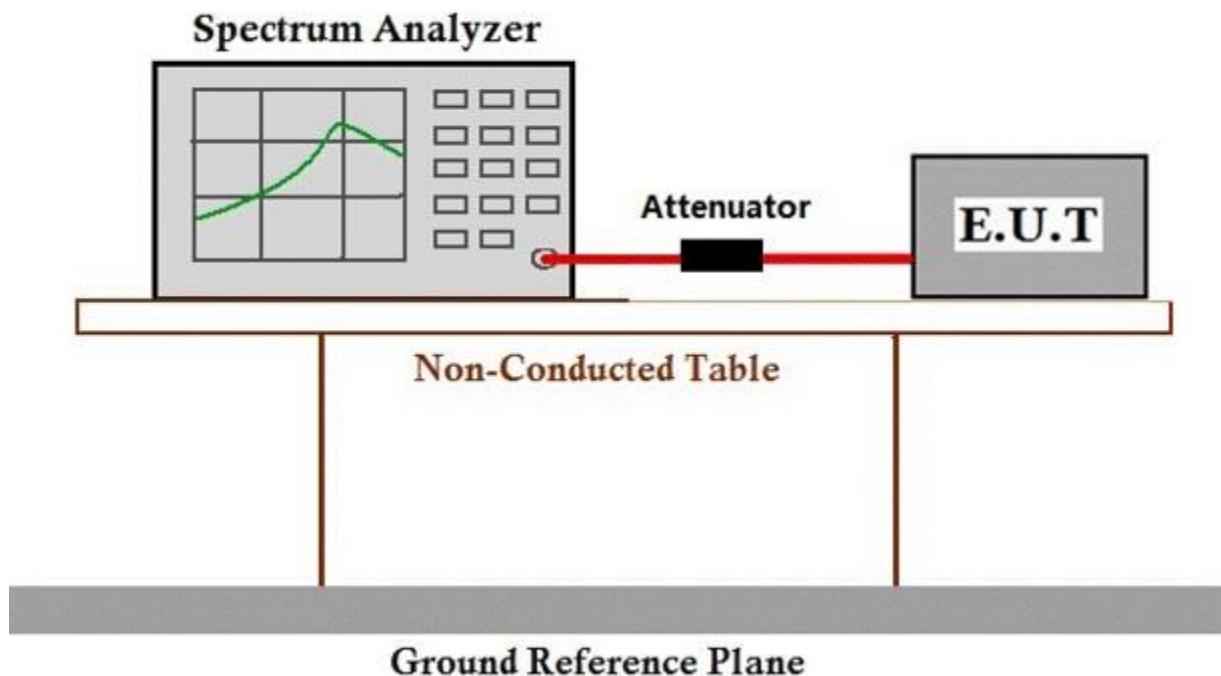
7.4.1 E.U.T. Operation

Operating Environment:

Temperature: 25.3 °C Humidity: 55.4 % RH Atmospheric Pressure: 1020 mbar

Test mode c:TX mode_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 1Mbps is the worst case of IEEE 802.11b; data rate @ 6Mbps is the worst case of IEEE 802.11g; data rate @ 6.5Mbps is the worst case of IEEE 802.11n(HT20); data rate @ 13.5Mbps is the worst case of IEEE 802.11n(HT40). Only the data of worst case is recorded in the report.

7.4.2 Test Setup Diagram



7.4.3 Measurement Procedure and Data

The detailed test data see: Appendix 15.247

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7.5 Conducted Band Edges Measurement

Test Requirement

47 CFR Part 15, Subpart C 15.247(d)

Test Method:

ANSI C63.10 (2013) Section 11.13.3.2

Limit:

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)



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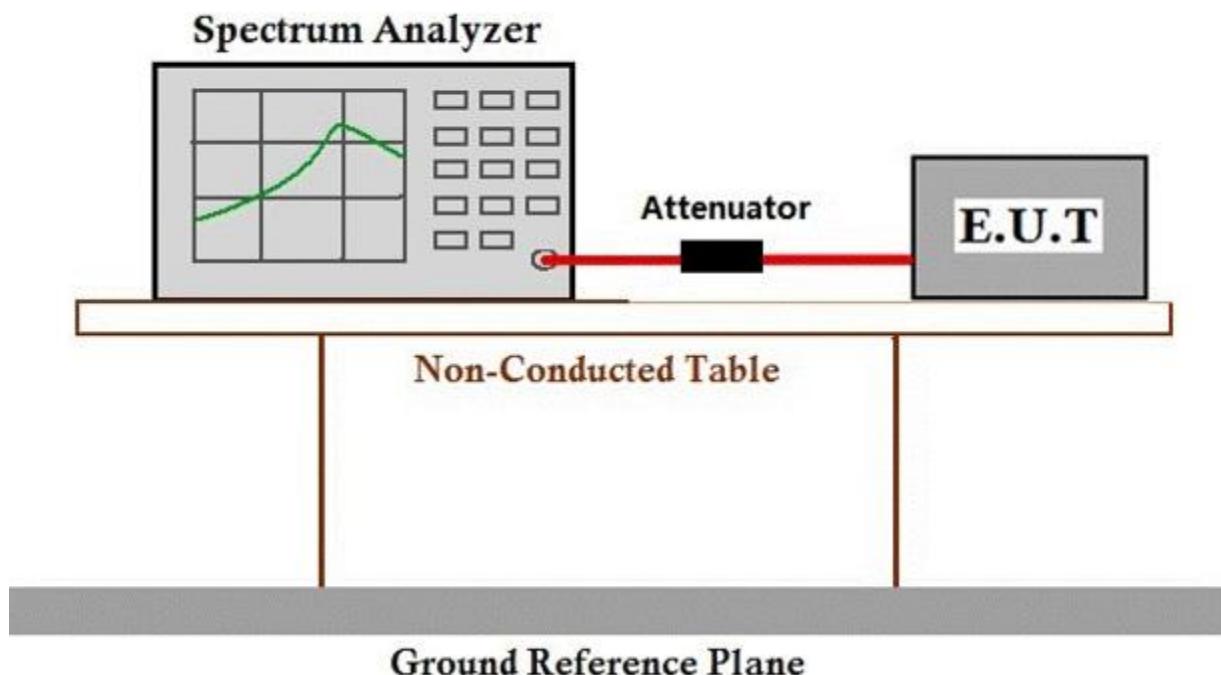
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7.5.1 E.U.T. Operation

Operating Environment:

Temperature: 25.3 °C Humidity: 55.3 % RH Atmospheric Pressure: 1020 mbar
Test mode c:TX mode_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 1Mbps is the worst case of IEEE 802.11b; data rate @ 6Mbps is the worst case of IEEE 802.11g; data rate @ 6.5Mbps is the worst case of IEEE 802.11n(HT20); data rate @ 13.5Mbps is the worst case of IEEE 802.11n(HT40). Only the data of worst case is recorded in the report.

7.5.2 Test Setup Diagram



7.5.3 Measurement Procedure and Data

The detailed test data see: Appendix 15.247

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7.6 Conducted Spurious Emissions

Test Requirement	47 CFR Part 15, Subpart C 15.247(d)
Test Method:	ANSI C63.10 (2013) Section 11.11
Limit:	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c))



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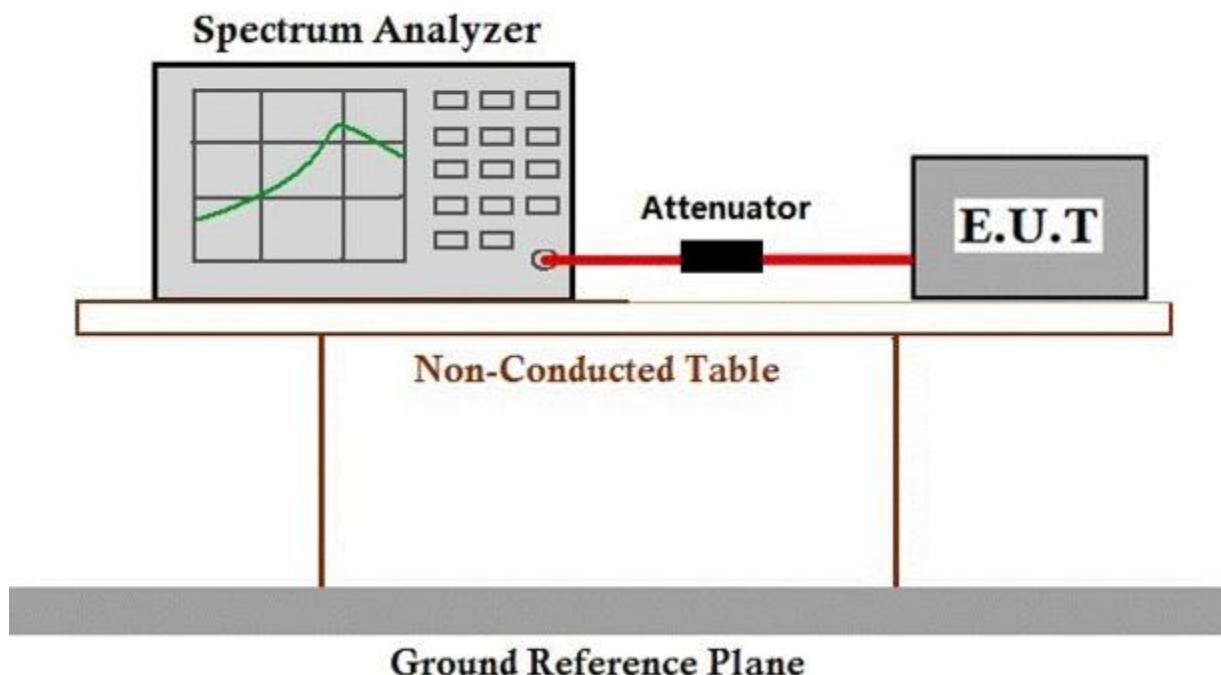
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7.6.1 E.U.T. Operation

Operating Environment:

Temperature: 25.3 °C Humidity: 55.4 % RH Atmospheric Pressure: 1020 mbar
Test mode c:TX mode_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 1Mbps is the worst case of IEEE 802.11b; data rate @ 6Mbps is the worst case of IEEE 802.11g; data rate @ 6.5Mbps is the worst case of IEEE 802.11n(HT20); data rate @ 13.5Mbps is the worst case of IEEE 802.11n(HT40). Only the data of worst case is recorded in the report.

7.6.2 Test Setup Diagram



7.6.3 Measurement Procedure and Data

The detailed test data see: Appendix 15.247

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7.7 Radiated Emissions which fall in the restricted bands

Test Requirement 47 CFR Part 15, Subpart C 15.209 & 15.247(d)

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

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
Above 960	500	3

Remark: The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90kHz, 110-490kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector, 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.



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7.7.1 E.U.T. Operation

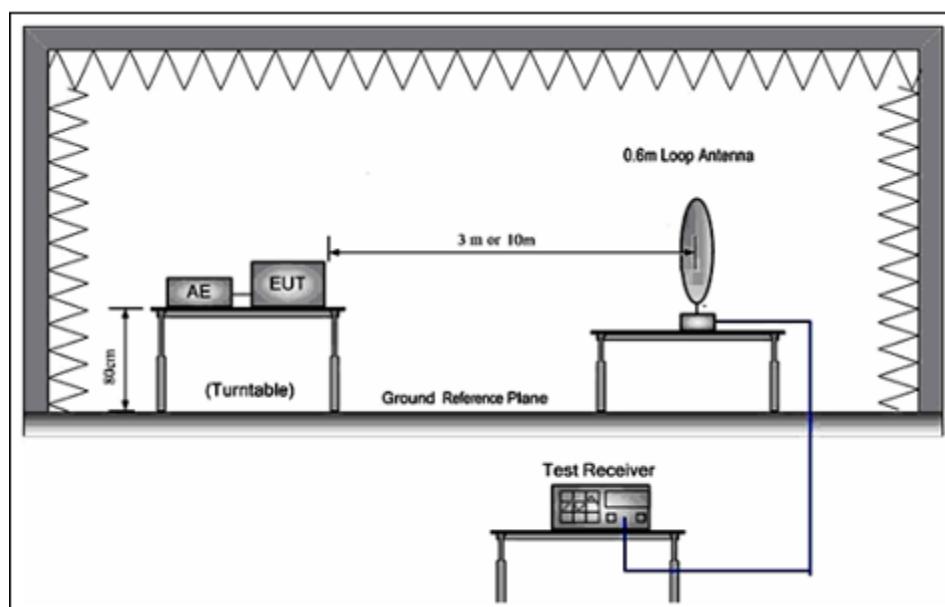
Operating Environment:

Temperature: 25.5 °C Humidity: 52.8 % RH Atmospheric Pressure: 1020 mbar

Test mode c:TX mode_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 1Mbps is the worst case of IEEE 802.11b; data rate @ 6Mbps is the worst case of IEEE 802.11g; data rate @ 6.5Mbps is the worst case of IEEE 802.11n(HT20); data rate @ 13.5Mbps is the worst case of IEEE 802.11n(HT40). Only the data of worst case is recorded in the report.

7.7.2 Test Setup Diagram

9kHz to 30MHz



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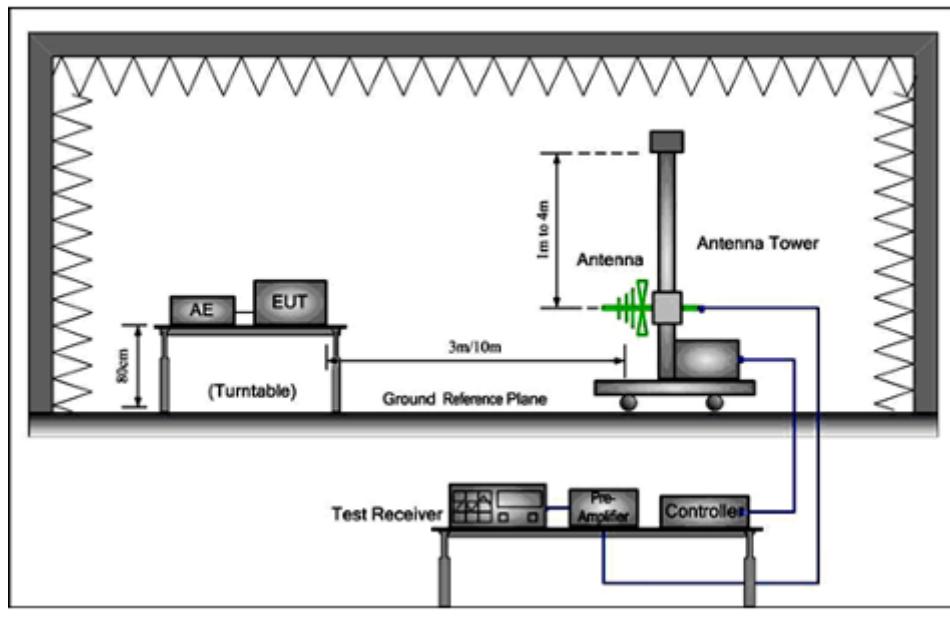
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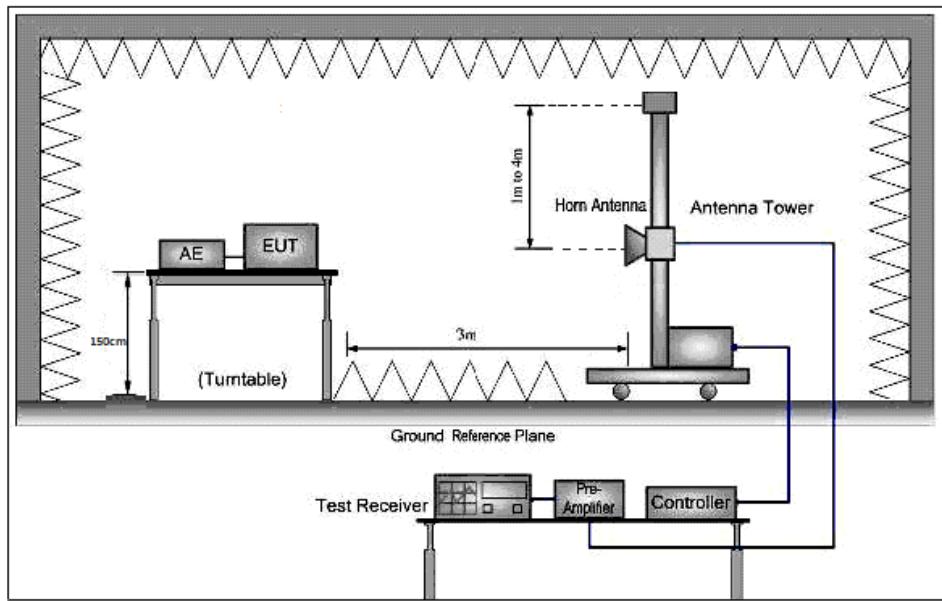
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30MHz to 1GHz



Above 1GHz



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SGS-CSTC Standards Technical Services Co., Ltd.
Guangzhou Branch Inspection & Testing Services Laboratory

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7.7.3 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 1: Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor

Remark 2: 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.

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



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Mode:c; Polarization:Horizontal; Modulation:b; bandwidth:20MHz; Channel:Low

Freq	ReadAntenna		Cable Preamp		Limit Level	Line Limit	Over Pol/Phase	Remark
	Level	Factor	Loss	Factor				
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB
1	2310.000	36.36	26.25	3.32	37.44	28.49	54.00	-25.51 HORIZONTAL Average
2	2310.000	46.23	26.25	3.32	37.44	38.36	74.00	-35.64 HORIZONTAL Peak
3	2390.000	47.35	26.43	3.48	37.42	39.84	54.00	-14.16 HORIZONTAL Average
4	2390.000	54.03	26.43	3.48	37.42	46.52	74.00	-27.48 HORIZONTAL Peak
5	2483.500	42.92	26.58	3.53	37.40	35.63	54.00	-18.37 HORIZONTAL Average
6	2483.500	54.39	26.58	3.53	37.40	47.10	74.00	-26.90 HORIZONTAL Peak
7	2500.000	41.09	26.60	3.40	37.39	33.70	54.00	-20.30 HORIZONTAL Average
8	2500.000	49.63	26.60	3.40	37.39	42.24	74.00	-31.76 HORIZONTAL Peak

Mode:c; Polarization:Vertical; Modulation:b; bandwidth:20MHz; Channel:Low

Freq	ReadAntenna		Cable Preamp		Limit Level	Line Limit	Over Pol/Phase	Remark
	Level	Factor	Loss	Factor				
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB
1	2310.000	41.01	26.25	3.32	37.44	33.14	54.00	-20.86 VERTICAL Average
2	2310.000	47.15	26.25	3.32	37.44	39.28	74.00	-34.72 VERTICAL Peak
3	2390.000	45.24	26.43	3.48	37.42	37.73	54.00	-16.27 VERTICAL Average
4	2390.000	52.66	26.43	3.48	37.42	45.15	74.00	-28.85 VERTICAL Peak
5	2483.500	39.80	26.58	3.53	37.40	32.51	54.00	-21.49 VERTICAL Average
6	2483.500	49.44	26.58	3.53	37.40	42.15	74.00	-31.85 VERTICAL Peak
7	2500.000	40.43	26.60	3.40	37.39	33.04	54.00	-20.96 VERTICAL Average
8	2500.000	48.45	26.60	3.40	37.39	41.06	74.00	-32.94 VERTICAL Peak

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Mode:c; Polarization:Horizontal; Modulation:b; bandwidth:20MHz; Channel:High

Freq	ReadAntenna		Cable Preamp		Limit Level	Line Limit	Over Pol/Phase	Remark
	Level	Factor	Loss	Factor				
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB
1	2310.000	40.47	26.25	3.32	37.44	32.60	54.00	-21.40 HORIZONTAL Average
2	2310.000	47.57	26.25	3.32	37.44	39.70	74.00	-34.30 HORIZONTAL Peak
3	2390.000	43.22	26.43	3.48	37.42	35.71	54.00	-18.29 HORIZONTAL Average
4	2390.000	51.05	26.43	3.48	37.42	43.54	74.00	-30.46 HORIZONTAL Peak
5	2483.500	49.61	26.58	3.53	37.40	42.32	54.00	-11.68 HORIZONTAL Average
6	2483.500	61.00	26.58	3.53	37.40	53.71	74.00	-20.29 HORIZONTAL Peak
7	2500.000	42.17	26.60	3.40	37.39	34.78	54.00	-19.22 HORIZONTAL Average
8	2500.000	53.93	26.60	3.40	37.39	46.54	74.00	-27.46 HORIZONTAL Peak

Mode:c; Polarization:Vertical; Modulation:b; bandwidth:20MHz; Channel:High

Freq	ReadAntenna		Cable Preamp		Limit Level	Line Limit	Over Pol/Phase	Remark
	Level	Factor	Loss	Factor				
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB
1	2310.000	40.69	26.25	3.32	37.44	32.82	54.00	-21.18 VERTICAL Average
2	2310.000	48.04	26.25	3.32	37.44	40.17	74.00	-33.83 VERTICAL Peak
3	2390.000	42.29	26.43	3.48	37.42	34.78	54.00	-19.22 VERTICAL Average
4	2390.000	48.38	26.43	3.48	37.42	40.87	74.00	-33.13 VERTICAL Peak
5	2483.500	41.26	26.58	3.53	37.40	33.97	54.00	-20.03 VERTICAL Average
6	2483.500	50.49	26.58	3.53	37.40	43.20	74.00	-30.80 VERTICAL Peak
7	2500.000	36.96	26.60	3.40	37.39	29.57	54.00	-24.43 VERTICAL Average
8	2500.000	48.00	26.60	3.40	37.39	40.61	74.00	-33.39 VERTICAL Peak

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Mode:c; Polarization:Horizontal; Modulation:g; bandwidth:20MHz; Channel:Low

Freq	ReadAntenna		Cable Preamp		Limit Level	Line Limit	Over Pol/Phase	Remark
	Level	Factor	Loss	Factor				
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB
1	2310.000	41.68	26.25	3.32	37.44	33.81	54.00	-20.19 HORIZONTAL Average
2	2310.000	49.09	26.25	3.32	37.44	41.22	74.00	-32.78 HORIZONTAL Peak
3	2390.000	53.79	26.43	3.48	37.42	46.28	54.00	-7.72 HORIZONTAL Average
4	2390.000	68.89	26.43	3.48	37.42	61.38	74.00	-12.62 HORIZONTAL Peak
5	2483.500	48.17	26.58	3.53	37.40	40.88	54.00	-13.12 HORIZONTAL Average
6	2483.500	59.29	26.58	3.53	37.40	52.00	74.00	-22.00 HORIZONTAL Peak
7	2500.000	41.46	26.60	3.40	37.39	34.07	54.00	-19.93 HORIZONTAL Average
8	2500.000	50.67	26.60	3.40	37.39	43.28	74.00	-30.72 HORIZONTAL Peak

Mode:c; Polarization:Vertical; Modulation:g; bandwidth:20MHz; Channel:Low

Freq	ReadAntenna		Cable Preamp		Limit Level	Line Limit	Over Pol/Phase	Remark
	Level	Factor	Loss	Factor				
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB
1	2310.000	42.83	26.25	3.32	37.44	34.96	54.00	-19.04 VERTICAL Average
2	2310.000	48.55	26.25	3.32	37.44	40.68	74.00	-33.32 VERTICAL Peak
3	2390.000	52.10	26.43	3.48	37.42	44.59	54.00	-9.41 VERTICAL Average
4	2390.000	61.86	26.43	3.48	37.42	54.35	74.00	-19.65 VERTICAL Peak
5	2483.500	44.29	26.58	3.53	37.40	37.00	54.00	-17.00 VERTICAL Average
6	2483.500	51.64	26.58	3.53	37.40	44.35	74.00	-29.65 VERTICAL Peak
7	2500.000	42.86	26.60	3.40	37.39	35.47	54.00	-18.53 VERTICAL Average
8	2500.000	49.03	26.60	3.40	37.39	41.64	74.00	-32.36 VERTICAL Peak

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Mode:c; Polarization:Horizontal; Modulation:g; bandwidth:20MHz; Channel:High

Freq	ReadAntenna		Cable Preamp		Limit Level	Line Limit	Over Pol/Phase	Remark
	Level	Factor	Loss	Factor				
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB
1	2310.000	39.26	26.25	3.32	37.44	31.39	54.00	-22.61 HORIZONTAL Average
2	2310.000	48.54	26.25	3.32	37.44	40.67	74.00	-33.33 HORIZONTAL Peak
3	2390.000	46.94	26.43	3.48	37.42	39.43	54.00	-14.57 HORIZONTAL Average
4	2390.000	56.23	26.43	3.48	37.42	48.72	74.00	-25.28 HORIZONTAL Peak
5	2483.500	54.41	26.58	3.53	37.40	47.12	54.00	-6.88 HORIZONTAL Average
6	2483.500	67.48	26.58	3.53	37.40	60.19	74.00	-13.81 HORIZONTAL Peak
7	2500.000	49.48	26.60	3.40	37.39	42.09	54.00	-11.91 HORIZONTAL Average
8	2500.000	57.37	26.60	3.40	37.39	49.98	74.00	-24.02 HORIZONTAL Peak

Mode:c; Polarization:Vertical; Modulation:g; bandwidth:20MHz; Channel:High

Freq	ReadAntenna		Cable Preamp		Limit Level	Line Limit	Over Pol/Phase	Remark
	Level	Factor	Loss	Factor				
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB
1	2310.000	37.61	26.25	3.32	37.44	29.74	54.00	-24.26 VERTICAL Average
2	2310.000	46.18	26.25	3.32	37.44	38.31	74.00	-35.69 VERTICAL Peak
3	2390.000	41.29	26.43	3.48	37.42	33.78	54.00	-20.22 VERTICAL Average
4	2390.000	47.05	26.43	3.48	37.42	39.54	74.00	-34.46 VERTICAL Peak
5	2483.500	46.79	26.58	3.53	37.40	39.50	54.00	-14.50 VERTICAL Average
6	2483.500	55.42	26.58	3.53	37.40	48.13	74.00	-25.87 VERTICAL Peak
7	2500.000	40.33	26.60	3.40	37.39	32.94	54.00	-21.06 VERTICAL Average
8	2500.000	48.39	26.60	3.40	37.39	41.00	74.00	-33.00 VERTICAL Peak

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Mode:c; Polarization:Horizontal; Modulation:n; bandwidth:20MHz; Channel:Low

Freq	ReadAntenna		Cable Preamp		Limit Level	Line Limit	Over Pol/Phase	Remark
	Level	Factor	Loss	Factor				
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB
1	2310.000	42.07	26.25	3.32	37.44	34.20	54.00	-19.80 HORIZONTAL Average
2	2310.000	48.24	26.25	3.32	37.44	40.37	74.00	-33.63 HORIZONTAL Peak
3	2390.000	52.73	26.43	3.48	37.42	45.22	54.00	-8.78 HORIZONTAL Average
4	2390.000	60.35	26.43	3.48	37.42	52.84	74.00	-21.16 HORIZONTAL Peak
5	2483.500	47.72	26.58	3.53	37.40	40.43	54.00	-13.57 HORIZONTAL Average
6	2483.500	56.08	26.58	3.53	37.40	48.79	74.00	-25.21 HORIZONTAL Peak
7	2500.000	43.87	26.60	3.40	37.39	36.48	54.00	-17.52 HORIZONTAL Average
8	2500.000	50.19	26.60	3.40	37.39	42.80	74.00	-31.20 HORIZONTAL Peak

Mode:c; Polarization:Vertical; Modulation:n; bandwidth:20MHz; Channel:Low

Freq	ReadAntenna		Cable Preamp		Limit Level	Line Limit	Over Pol/Phase	Remark
	Level	Factor	Loss	Factor				
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB
1	2310.000	41.67	26.25	3.32	37.44	33.80	54.00	-20.20 VERTICAL Average
2	2310.000	46.81	26.25	3.32	37.44	38.94	74.00	-35.06 VERTICAL Peak
3	2390.000	53.25	26.43	3.48	37.42	45.74	54.00	-8.26 VERTICAL Average
4	2390.000	61.20	26.43	3.48	37.42	53.69	74.00	-20.31 VERTICAL Peak
5	2483.500	46.83	26.58	3.53	37.40	39.54	54.00	-14.46 VERTICAL Average
6	2483.500	57.09	26.58	3.53	37.40	49.80	74.00	-24.20 VERTICAL Peak
7	2500.000	43.18	26.60	3.40	37.39	35.79	54.00	-18.21 VERTICAL Average
8	2500.000	49.81	26.60	3.40	37.39	42.42	74.00	-31.58 VERTICAL Peak

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Mode:c; Polarization:Horizontal; Modulation:n; bandwidth:20MHz; Channel:High

Freq	ReadAntenna		Cable Preamp		Limit Level	Line Limit	Over Pol/Phase	Remark
	Level	Factor	Loss	Factor				
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB
1	2310.000	44.35	26.25	3.32	37.44	36.48	54.00	-17.52 HORIZONTAL Average
2	2310.000	49.77	26.25	3.32	37.44	41.90	74.00	-32.10 HORIZONTAL Peak
3	2390.000	48.83	26.43	3.48	37.42	41.32	54.00	-12.68 HORIZONTAL Average
4	2390.000	54.36	26.43	3.48	37.42	46.85	74.00	-27.15 HORIZONTAL Peak
5	2483.500	55.64	26.58	3.53	37.40	48.35	54.00	-5.65 HORIZONTAL Average
6	2483.500	68.73	26.58	3.53	37.40	61.44	74.00	-12.56 HORIZONTAL Peak
7	2500.000	45.95	26.60	3.40	37.39	38.56	54.00	-15.44 HORIZONTAL Average
8	2500.000	54.95	26.60	3.40	37.39	47.56	74.00	-26.44 HORIZONTAL Peak

Mode:c; Polarization:Vertical; Modulation:n; bandwidth:20MHz; Channel:High

Freq	ReadAntenna		Cable Preamp		Limit Level	Line Limit	Over Pol/Phase	Remark
	Level	Factor	Loss	Factor				
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB
1	2310.000	38.07	26.25	3.32	37.44	30.20	54.00	-23.80 VERTICAL Average
2	2310.000	47.59	26.25	3.32	37.44	39.72	74.00	-34.28 VERTICAL Peak
3	2390.000	46.89	26.43	3.48	37.42	39.38	54.00	-14.62 VERTICAL Average
4	2390.000	53.48	26.43	3.48	37.42	45.97	74.00	-28.03 VERTICAL Peak
5	2483.500	53.00	26.58	3.53	37.40	45.71	54.00	-8.29 VERTICAL Average
6	2483.500	66.55	26.58	3.53	37.40	59.26	74.00	-14.74 VERTICAL Peak
7	2500.000	50.35	26.60	3.40	37.39	42.96	54.00	-11.04 VERTICAL Average
8	2500.000	55.11	26.60	3.40	37.39	47.72	74.00	-26.28 VERTICAL Peak

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Mode:c; Polarization:Horizontal; Modulation:n; bandwidth:40MHz; Channel:Low

Freq	ReadAntenna		Cable Preamp		Limit Level	Line Limit	Over Pol/Phase	Remark
	Level	Factor	Loss	Factor				
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB
1	2310.000	48.80	26.25	3.32	37.44	40.93	54.00	-13.07 HORIZONTAL Average
2	2310.000	48.25	26.25	3.32	37.44	40.38	74.00	-33.62 HORIZONTAL Peak
3	2390.000	51.58	26.43	3.48	37.42	44.07	54.00	-9.93 HORIZONTAL Average
4	2390.000	63.57	26.43	3.48	37.42	56.06	74.00	-17.94 HORIZONTAL Peak
5	2483.500	49.80	26.58	3.53	37.40	42.51	54.00	-11.49 HORIZONTAL Average
6	2483.500	56.11	26.58	3.53	37.40	48.82	74.00	-25.18 HORIZONTAL Peak
7	2500.000	43.46	26.60	3.40	37.39	36.07	54.00	-17.93 HORIZONTAL Average
8	2500.000	49.43	26.60	3.40	37.39	42.04	74.00	-31.96 HORIZONTAL Peak

Mode:c; Polarization:Vertical; Modulation:n; bandwidth:40MHz; Channel:Low

Freq	ReadAntenna		Cable Preamp		Limit Level	Line Limit	Over Pol/Phase	Remark
	Level	Factor	Loss	Factor				
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB
1	2310.000	40.55	26.25	3.32	37.44	32.68	54.00	-21.32 VERTICAL Average
2	2310.000	48.03	26.25	3.32	37.44	40.16	74.00	-33.84 VERTICAL Peak
3	2390.000	52.50	26.43	3.48	37.42	44.99	54.00	-9.01 VERTICAL Average
4	2390.000	61.13	26.43	3.48	37.42	53.62	74.00	-20.38 VERTICAL Peak
5	2483.500	49.71	26.58	3.53	37.40	42.42	54.00	-11.58 VERTICAL Average
6	2483.500	55.15	26.58	3.53	37.40	47.86	74.00	-26.14 VERTICAL Peak
7	2500.000	43.77	26.60	3.40	37.39	36.38	54.00	-17.62 VERTICAL Average
8	2500.000	50.45	26.60	3.40	37.39	43.06	74.00	-30.94 VERTICAL Peak

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Mode:c; Polarization:Horizontal; Modulation:n; bandwidth:40MHz; Channel:High

Freq	ReadAntenna		Cable Preamp		Limit Level	Line Limit	Over Pol/Phase	Remark
	Level	Factor	Loss	Factor				
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB
1	2310.000	42.86	26.25	3.32	37.44	34.99	54.00	-19.01 HORIZONTAL Average
2	2310.000	47.84	26.25	3.32	37.44	39.97	74.00	-34.03 HORIZONTAL Peak
3	2390.000	47.71	26.43	3.48	37.42	40.20	54.00	-13.80 HORIZONTAL Average
4	2390.000	56.63	26.43	3.48	37.42	49.12	74.00	-24.88 HORIZONTAL Peak
5	2483.500	55.60	26.58	3.53	37.40	48.31	54.00	-5.69 HORIZONTAL Average
6	2483.500	69.73	26.58	3.53	37.40	62.44	74.00	-11.56 HORIZONTAL Peak
7	2500.000	48.30	26.60	3.40	37.39	40.91	54.00	-13.09 HORIZONTAL Average
8	2500.000	58.39	26.60	3.40	37.39	51.00	74.00	-23.00 HORIZONTAL Peak

Mode:c; Polarization:Vertical; Modulation:n; bandwidth:40MHz; Channel:High

Freq	ReadAntenna		Cable Preamp		Limit Level	Line Limit	Over Pol/Phase	Remark
	Level	Factor	Loss	Factor				
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB
1	2310.000	41.04	26.25	3.32	37.44	33.17	54.00	-20.83 VERTICAL Average
2	2310.000	46.91	26.25	3.32	37.44	39.04	74.00	-34.96 VERTICAL Peak
3	2390.000	45.61	26.43	3.48	37.42	38.10	54.00	-15.90 VERTICAL Average
4	2390.000	52.91	26.43	3.48	37.42	45.40	74.00	-28.60 VERTICAL Peak
5	2483.500	52.00	26.58	3.53	37.40	44.71	54.00	-9.29 VERTICAL Average
6	2483.500	66.55	26.58	3.53	37.40	59.26	74.00	-14.74 VERTICAL Peak
7	2500.000	50.02	26.60	3.40	37.39	42.63	54.00	-11.37 VERTICAL Average
8	2500.000	59.10	26.60	3.40	37.39	51.71	74.00	-22.29 VERTICAL Peak

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7.8 Radiated Spurious Emissions

Test Requirement 47 CFR Part 15, Subpart C 15.209 & 15.247(d)

Test Method: ANSI C63.10 (2013) Section 6.4,6.5,6.6

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
Above 960	500	3

Remark: The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90kHz, 110-490kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector, 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.



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7.8.1 E.U.T. Operation

Operating Environment:

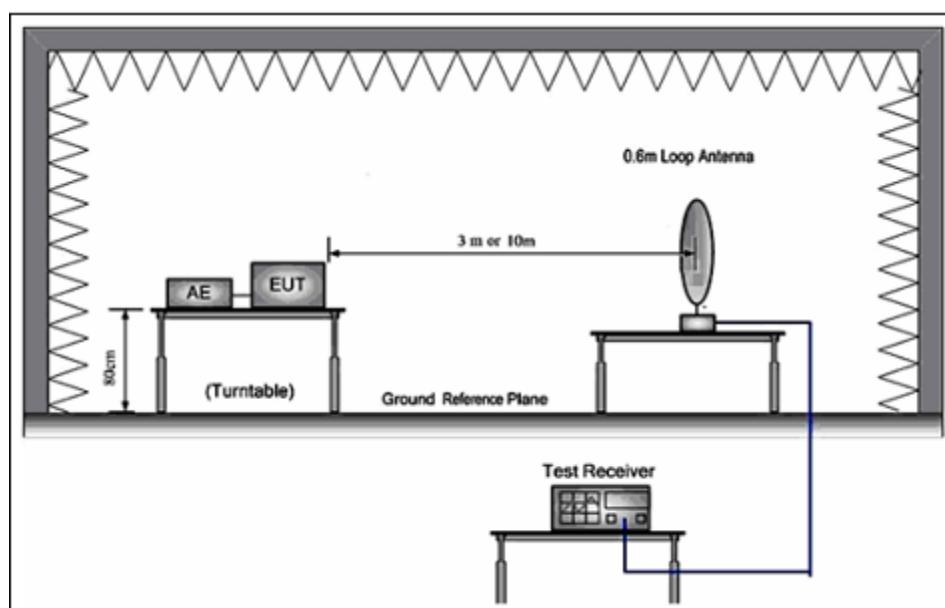
Temperature: 25.5 °C Humidity: 56.8 % RH Atmospheric Pressure: 1020 mbar

Test mode

c:TX mode_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 1Mbps is the worst case of IEEE 802.11b; data rate @ 6Mbps is the worst case of IEEE 802.11g; data rate @ 6.5Mbps is the worst case of IEEE 802.11n(HT20); data rate @ 13.5Mbps is the worst case of IEEE 802.11n(HT40). Only the data of worst case is recorded in the report.

7.8.2 Test Setup Diagram

9kHz to 30MHz



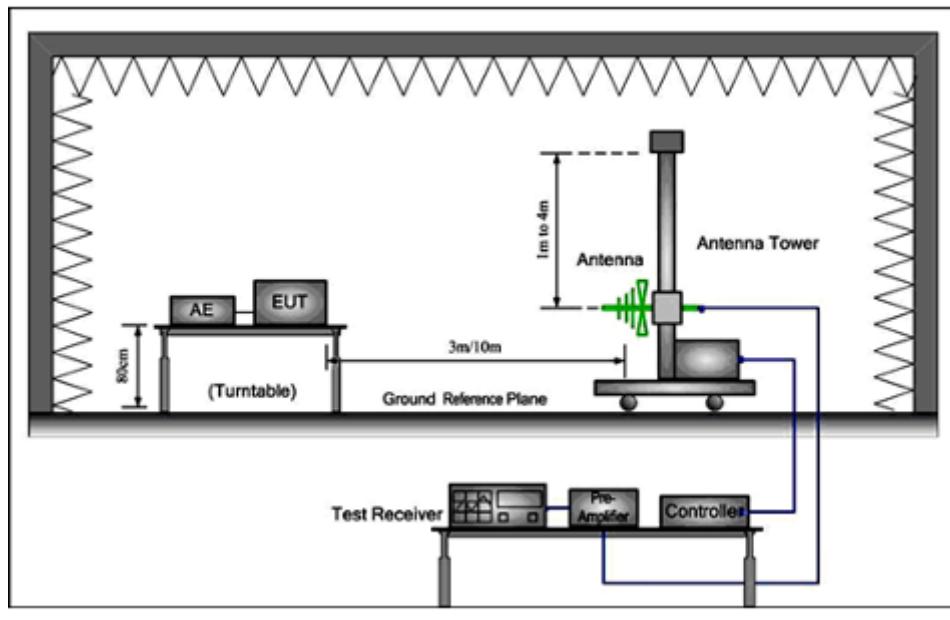
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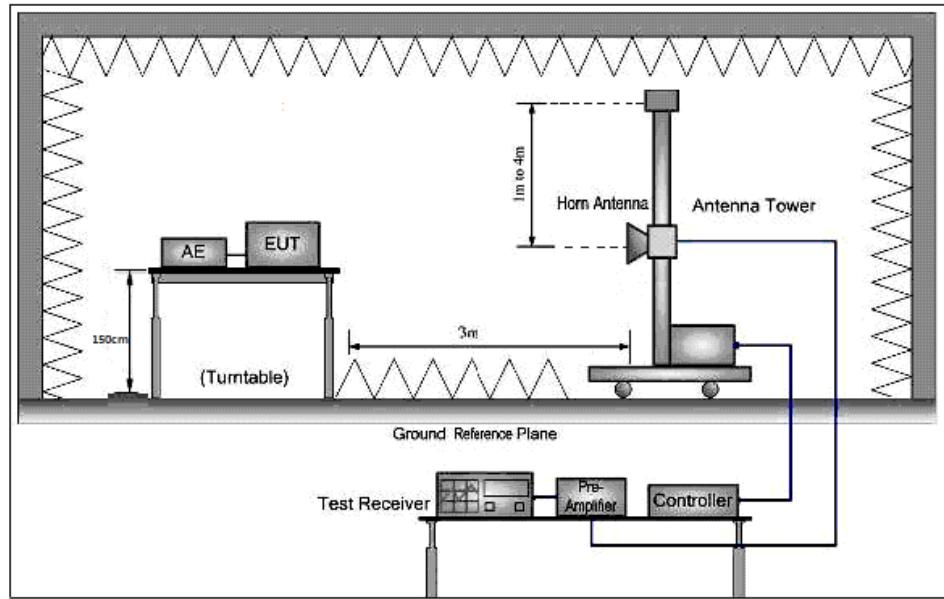


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30MHz to 1GHz



Above 1GHz



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7.8.3 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:

- 1) For emission below 1GHz, through pre-scan found the worst case is the lowest channel. Only the worst case is recorded in the report.
- 2) The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:
Final Test Level = Receiver Reading + Antenna Factor + Cable Factor – Preamplifier Factor
- 3) Scan from 9kHz to 25GHz, the disturbance above 18GHz and 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.
- 4) 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



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Mode:c; Polarization:Horizontal; Modulation:b; bandwidth:20MHz; Channel:Low

Freq	ReadAntenna		Cable Preamp		Limit Level	Over Line Limit	Over Limit Pol/Phase	Remark
	Level	Factor	Loss	Factor				
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB
1	46.340	29.67	13.91	0.70	26.50	17.78	40.00	-22.22 HORIZONTAL QP
2	104.903	46.57	9.86	1.12	26.40	31.15	43.50	-12.35 HORIZONTAL QP
3	133.151	44.03	12.40	1.24	26.42	31.25	43.50	-12.25 HORIZONTAL QP
4	143.326	45.21	13.58	1.28	26.43	33.64	43.50	-9.86 HORIZONTAL QP
5	170.793	49.41	13.07	1.39	26.44	37.43	43.50	-6.07 HORIZONTAL QP
6	253.837	45.96	12.10	1.67	26.58	33.15	46.00	-12.85 HORIZONTAL QP

Mode:c; Polarization:Horizontal; Modulation:b; bandwidth:20MHz; Channel:Low

Freq	ReadAntenna		Cable Preamp		Limit Level	Over Line Limit	Over Limit Pol/Phase	Remark
	Level	Factor	Loss	Factor				
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB
1	2694.998	40.71	27.06	3.59	37.31	34.05	54.00	-19.95 HORIZONTAL Average
2	2694.998	45.82	27.06	3.59	37.31	39.16	74.00	-34.84 HORIZONTAL Peak
3	3141.145	40.41	27.90	3.95	37.02	35.24	54.00	-18.76 HORIZONTAL Average
4	3141.145	46.46	27.90	3.95	37.02	41.29	74.00	-32.71 HORIZONTAL Peak
5	4824.237	39.44	30.82	5.42	36.94	38.74	54.00	-15.26 HORIZONTAL Average
6	4824.237	44.54	30.82	5.42	36.94	43.84	74.00	-30.16 HORIZONTAL Peak
7	7236.427	36.50	35.55	6.03	36.93	41.15	54.00	-12.85 HORIZONTAL Average
8	7236.427	41.77	35.55	6.03	36.93	46.42	74.00	-27.58 HORIZONTAL Peak
9	9648.187	36.91	37.54	7.06	37.08	44.43	54.00	-9.57 HORIZONTAL Average
10	9648.187	43.73	37.54	7.06	37.08	51.25	74.00	-22.75 HORIZONTAL Peak
11	12060.280	33.96	39.46	8.17	37.17	44.42	54.00	-9.58 HORIZONTAL Average
12	12060.280	44.23	39.46	8.17	37.17	54.69	74.00	-19.31 HORIZONTAL Peak

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Mode:c; Polarization:Vertical; Modulation:b; bandwidth:20MHz; Channel:Low

Freq	ReadAntenna		Cable Preamp		Limit Level	Line Limit	Over Pol/Phase	Remark
	Level	Factor	Loss	Factor				
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB
1	47.659	42.33	13.99	0.70	26.50	30.52	40.00	-9.48 VERTICAL QP
2	78.689	41.47	9.35	0.97	26.42	25.37	40.00	-14.63 VERTICAL QP
3	107.510	47.40	10.25	1.13	26.40	32.38	43.50	-11.12 VERTICAL QP
4	146.888	44.91	13.70	1.29	26.43	33.47	43.50	-10.03 VERTICAL QP
5	199.986	43.44	10.20	1.50	26.45	28.69	43.50	-14.81 VERTICAL QP
6	257.422	45.95	12.15	1.67	26.59	33.18	46.00	-12.82 VERTICAL QP

Mode:c; Polarization:Vertical; Modulation:b; bandwidth:20MHz; Channel:Low

Freq	ReadAntenna		Cable Preamp		Limit Level	Line Limit	Over Pol/Phase	Remark
	Level	Factor	Loss	Factor				
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB
1	2603.126	42.36	26.79	3.50	37.35	35.30	54.00	-18.70 VERTICAL Average
2	2603.126	47.29	26.79	3.50	37.35	40.23	74.00	-33.77 VERTICAL Peak
3	3177.672	38.62	27.90	3.99	37.01	33.50	54.00	-20.50 VERTICAL Average
4	3177.672	45.26	27.90	3.99	37.01	40.14	74.00	-33.86 VERTICAL Peak
5	4824.000	37.13	30.82	5.42	36.94	36.43	54.00	-17.57 VERTICAL Average
6	4824.000	44.53	30.82	5.42	36.94	43.83	74.00	-30.17 VERTICAL Peak
7	7236.443	34.84	35.55	6.03	36.93	39.49	54.00	-14.51 VERTICAL Average
8	7236.443	40.84	35.55	6.03	36.93	45.49	74.00	-28.51 VERTICAL Peak
9	9648.475	36.92	37.54	7.06	37.08	44.44	54.00	-9.56 VERTICAL Average
10	9648.475	44.09	37.54	7.06	37.08	51.61	74.00	-22.39 VERTICAL Peak
11	12060.200	36.15	39.46	8.17	37.17	46.61	54.00	-7.39 VERTICAL Average
12	12060.200	43.10	39.46	8.17	37.17	53.56	74.00	-20.44 VERTICAL Peak

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Mode:c; Polarization:Horizontal; Modulation:b; bandwidth:20MHz; Channel:middle

Freq	ReadAntenna		Cable Preamp		Limit Level	Line Limit	Over Pol/Phase	Remark
	Level	Factor	Loss	Factor				
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB
1	2702.799	39.58	27.09	3.60	37.31	32.96	54.00	-21.04 HORIZONTAL Average
2	2702.799	45.54	27.09	3.60	37.31	38.92	74.00	-35.08 HORIZONTAL Peak
3	3682.374	38.00	28.43	4.54	36.93	34.04	54.00	-19.96 HORIZONTAL Average
4	3682.374	43.91	28.43	4.54	36.93	39.95	74.00	-34.05 HORIZONTAL Peak
5	4884.143	39.18	30.95	5.52	36.95	38.70	54.00	-15.30 HORIZONTAL Average
6	4884.143	44.04	30.95	5.52	36.95	43.56	74.00	-30.44 HORIZONTAL Peak
7	7326.146	36.67	35.74	6.13	36.92	41.62	54.00	-12.38 HORIZONTAL Average
8	7326.146	43.52	35.74	6.13	36.92	48.47	74.00	-25.53 HORIZONTAL Peak
9	9768.480	36.20	37.74	7.01	37.09	43.86	54.00	-10.14 HORIZONTAL Average
10	9768.480	46.25	37.74	7.01	37.09	53.91	74.00	-20.09 HORIZONTAL Peak
11	12210.970	32.76	39.21	8.08	37.06	42.99	54.00	-11.01 HORIZONTAL Average
12	12210.970	42.26	39.21	8.08	37.06	52.49	74.00	-21.51 HORIZONTAL Peak

Mode:c; Polarization:Vertical; Modulation:b; bandwidth:20MHz; Channel:middle

Freq	ReadAntenna		Cable Preamp		Limit Level	Line Limit	Over Pol/Phase	Remark
	Level	Factor	Loss	Factor				
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB
1	2855.380	39.40	27.67	3.70	37.17	33.60	54.00	-20.40 VERTICAL Average
2	2855.380	45.54	27.67	3.70	37.17	39.74	74.00	-34.26 VERTICAL Peak
3	3608.619	38.05	28.17	4.50	36.94	33.78	54.00	-20.22 VERTICAL Average
4	3608.619	44.89	28.17	4.50	36.94	40.62	74.00	-33.38 VERTICAL Peak
5	4884.151	38.00	30.95	5.52	36.95	37.52	54.00	-16.48 VERTICAL Average
6	4884.151	43.60	30.95	5.52	36.95	43.12	74.00	-30.88 VERTICAL Peak
7	7326.207	35.04	35.74	6.13	36.92	39.99	54.00	-14.01 VERTICAL Average
8	7326.207	42.45	35.74	6.13	36.92	47.40	74.00	-26.60 VERTICAL Peak
9	9768.200	36.80	37.74	7.01	37.09	44.46	54.00	-9.54 VERTICAL Average
10	9768.200	42.08	37.74	7.01	37.09	49.74	74.00	-24.26 VERTICAL Peak
11	12210.740	34.99	39.21	8.08	37.06	45.22	54.00	-8.78 VERTICAL Average
12	12210.740	44.70	39.21	8.08	37.06	54.93	74.00	-19.07 VERTICAL Peak

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Mode:c; Polarization:Horizontal; Modulation:b; bandwidth:20MHz; Channel:High

Freq	ReadAntenna		Cable Preamp		Limit Level	Line Limit	Over Pol/Phase	Remark
	Level	Factor	Loss	Factor				
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB
1	2664.019	39.23	26.95	3.56	37.33	32.41	54.00	-21.59 HORIZONTAL Average
2	2664.019	45.21	26.95	3.56	37.33	38.39	74.00	-35.61 HORIZONTAL Peak
3	3567.138	38.02	28.06	4.45	36.94	33.59	54.00	-20.41 HORIZONTAL Average
4	3567.138	44.50	28.06	4.45	36.94	40.07	74.00	-33.93 HORIZONTAL Peak
5	4924.662	40.20	31.01	5.60	36.95	39.86	54.00	-14.14 HORIZONTAL Average
6	4924.662	44.92	31.01	5.60	36.95	44.58	74.00	-29.42 HORIZONTAL Peak
7	7386.207	35.11	35.85	6.19	36.92	40.23	54.00	-13.77 HORIZONTAL Average
8	7386.207	41.48	35.85	6.19	36.92	46.60	74.00	-27.40 HORIZONTAL Peak
9	9848.880	33.41	37.82	6.99	37.09	41.13	54.00	-12.87 HORIZONTAL Average
10	9848.880	43.04	37.82	6.99	37.09	50.76	74.00	-23.24 HORIZONTAL Peak
11	12310.390	32.20	39.03	8.01	36.97	42.27	54.00	-11.73 HORIZONTAL Average
12	12310.390	44.27	39.03	8.01	36.97	54.34	74.00	-19.66 HORIZONTAL Peak

Mode:c; Polarization:Vertical; Modulation:b; bandwidth:20MHz; Channel:High

Freq	ReadAntenna		Cable Preamp		Limit Level	Line Limit	Over Pol/Phase	Remark
	Level	Factor	Loss	Factor				
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB
1	2814.411	38.28	27.56	3.70	37.21	32.33	54.00	-21.67 VERTICAL Average
2	2814.411	45.83	27.56	3.70	37.21	39.88	74.00	-34.12 VERTICAL Peak
3	3992.781	41.79	29.48	4.60	36.90	38.97	54.00	-15.03 VERTICAL Average
4	3992.781	46.32	29.48	4.60	36.90	43.50	74.00	-30.50 VERTICAL Peak
5	4924.668	40.88	31.01	5.60	36.95	40.54	54.00	-13.46 VERTICAL Average
6	4924.668	45.81	31.01	5.60	36.95	45.47	74.00	-28.53 VERTICAL Peak
7	7386.150	39.60	35.85	6.19	36.92	44.72	54.00	-9.28 VERTICAL Average
8	7386.150	44.17	35.85	6.19	36.92	49.29	74.00	-24.71 VERTICAL Peak
9	9848.390	38.89	37.82	6.99	37.09	46.61	54.00	-7.39 VERTICAL Average
10	9848.390	44.88	37.82	6.99	37.09	52.60	74.00	-21.40 VERTICAL Peak
11	12310.930	36.97	39.03	8.01	36.97	47.04	54.00	-6.96 VERTICAL Average
12	12310.930	46.17	39.03	8.01	36.97	56.24	74.00	-17.76 VERTICAL Peak

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Mode:c; Polarization:Horizontal; Modulation:g; bandwidth:20MHz; Channel:Low

Freq	ReadAntenna		Cable Preamp		Limit Level	Line Limit	Over Pol/Phase	Remark
	Level	Factor	Loss	Factor				
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB
1	2990.531	42.35	27.89	3.79	37.08	36.95	54.00	-17.05 HORIZONTAL Average
2	2990.531	49.33	27.89	3.79	37.08	43.93	74.00	-30.07 HORIZONTAL Peak
3	3834.438	37.44	29.12	4.60	36.91	34.25	54.00	-19.75 HORIZONTAL Average
4	3834.438	45.35	29.12	4.60	36.91	42.16	74.00	-31.84 HORIZONTAL Peak
5	4824.962	41.40	30.82	5.42	36.94	40.70	54.00	-13.30 HORIZONTAL Average
6	4824.962	50.48	30.82	5.42	36.94	49.78	74.00	-24.22 HORIZONTAL Peak
7	7236.945	37.68	35.55	6.03	36.93	42.33	54.00	-11.67 HORIZONTAL Average
8	7236.945	45.44	35.55	6.03	36.93	50.09	74.00	-23.91 HORIZONTAL Peak
9	9648.373	30.60	37.54	7.06	37.08	38.12	54.00	-15.88 HORIZONTAL Average
10	9648.373	39.69	37.54	7.06	37.08	47.21	74.00	-26.79 HORIZONTAL Peak
11	12060.860	35.50	39.46	8.17	37.17	45.96	54.00	-8.04 HORIZONTAL Average
12	12060.860	43.71	39.46	8.17	37.17	54.17	74.00	-19.83 HORIZONTAL Peak

Mode:c; Polarization:Vertical; Modulation:g; bandwidth:20MHz; Channel:Low

Freq	ReadAntenna		Cable Preamp		Limit Level	Line Limit	Over Pol/Phase	Remark
	Level	Factor	Loss	Factor				
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB
1	2664.019	39.15	26.95	3.56	37.33	32.33	54.00	-21.67 VERTICAL Average
2	2664.019	46.11	26.95	3.56	37.33	39.29	74.00	-34.71 VERTICAL Peak
3	3495.691	42.15	27.90	4.30	36.95	37.40	54.00	-16.60 VERTICAL Average
4	3495.691	47.33	27.90	4.30	36.95	42.58	74.00	-31.42 VERTICAL Peak
5	4824.751	44.67	30.82	5.42	36.94	43.97	54.00	-10.03 VERTICAL Average
6	4824.751	52.26	30.82	5.42	36.94	51.56	74.00	-22.44 VERTICAL Peak
7	7236.209	36.25	35.55	6.03	36.93	40.90	54.00	-13.10 VERTICAL Average
8	7236.209	41.83	35.55	6.03	36.93	46.48	74.00	-27.52 VERTICAL Peak
9	9648.818	37.71	37.54	7.06	37.08	45.23	54.00	-8.77 VERTICAL Average
10	9648.818	43.36	37.54	7.06	37.08	50.88	74.00	-23.12 VERTICAL Peak
11	12060.200	35.54	39.46	8.17	37.17	46.00	54.00	-8.00 VERTICAL Average
12	12060.200	42.78	39.46	8.17	37.17	53.24	74.00	-20.76 VERTICAL Peak

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Mode:c; Polarization:Horizontal; Modulation:g; bandwidth:20MHz; Channel:middle

Freq	ReadAntenna		Cable Preamp		Limit Level	Line Limit	Over Pol/Phase	Remark
	Level	Factor	Loss	Factor				
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB
1	2990.531	41.18	27.89	3.79	37.08	35.78	54.00	-18.22 HORIZONTAL Average
2	2990.531	48.15	27.89	3.79	37.08	42.75	74.00	-31.25 HORIZONTAL Peak
3	3834.438	40.75	29.12	4.60	36.91	37.56	54.00	-16.44 HORIZONTAL Average
4	3834.438	45.72	29.12	4.60	36.91	42.53	74.00	-31.47 HORIZONTAL Peak
5	4884.058	39.48	30.95	5.52	36.95	39.00	54.00	-15.00 HORIZONTAL Average
6	4884.058	47.35	30.95	5.52	36.95	46.87	74.00	-27.13 HORIZONTAL Peak
7	7326.999	38.07	35.74	6.13	36.92	43.02	54.00	-10.98 HORIZONTAL Average
8	7326.999	43.33	35.74	6.13	36.92	48.28	74.00	-25.72 HORIZONTAL Peak
9	9768.945	38.89	37.74	7.01	37.09	46.55	54.00	-7.45 HORIZONTAL Average
10	9768.945	43.09	37.74	7.01	37.09	50.75	74.00	-23.25 HORIZONTAL Peak
11	12060.210	36.49	39.46	8.17	37.17	46.95	54.00	-7.05 HORIZONTAL Average
12	12060.210	44.35	39.46	8.17	37.17	54.81	74.00	-19.19 HORIZONTAL Peak

Mode:c; Polarization:Vertical; Modulation:g; bandwidth:20MHz; Channel:middle

Freq	ReadAntenna		Cable Preamp		Limit Level	Line Limit	Over Pol/Phase	Remark
	Level	Factor	Loss	Factor				
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB
1	2880.247	40.06	27.72	3.70	37.14	34.34	54.00	-19.66 VERTICAL Average
2	2880.247	44.40	27.72	3.70	37.14	38.68	74.00	-35.32 VERTICAL Peak
3	3746.792	39.08	28.76	4.58	36.92	35.50	54.00	-18.50 VERTICAL Average
4	3746.792	45.31	28.76	4.58	36.92	41.73	74.00	-32.27 VERTICAL Peak
5	4884.620	38.25	30.95	5.52	36.95	37.77	54.00	-16.23 VERTICAL Average
6	4884.620	45.23	30.95	5.52	36.95	44.75	74.00	-29.25 VERTICAL Peak
7	7236.049	39.41	35.55	6.03	36.93	44.06	54.00	-9.94 VERTICAL Average
8	7236.049	45.37	35.55	6.03	36.93	50.02	74.00	-23.98 VERTICAL Peak
9	9648.349	39.67	37.54	7.06	37.08	47.19	54.00	-6.81 VERTICAL Average
10	9648.349	45.28	37.54	7.06	37.08	52.80	74.00	-21.20 VERTICAL Peak
11	12060.850	35.77	39.46	8.17	37.17	46.23	54.00	-7.77 VERTICAL Average
12	12060.850	43.68	39.46	8.17	37.17	54.14	74.00	-19.86 VERTICAL Peak

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Mode:c; Polarization:Horizontal; Modulation:g; bandwidth:20MHz; Channel:High

Freq	ReadAntenna		Cable Preamp		Limit Level	Line Limit	Over Pol/Phase	Remark
	Level	Factor	Loss	Factor				
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB
1	2990.531	39.76	27.89	3.79	37.08	34.36	54.00	-19.64 HORIZONTAL Average
2	2990.531	48.15	27.89	3.79	37.08	42.75	74.00	-31.25 HORIZONTAL Peak
3	3834.438	38.85	29.12	4.60	36.91	35.66	54.00	-18.34 HORIZONTAL Average
4	3834.438	45.72	29.12	4.60	36.91	42.53	74.00	-31.47 HORIZONTAL Peak
5	4924.918	38.89	31.01	5.60	36.95	38.55	54.00	-15.45 HORIZONTAL Average
6	4924.918	45.92	31.01	5.60	36.95	45.58	74.00	-28.42 HORIZONTAL Peak
7	7386.646	36.63	35.85	6.19	36.92	41.75	54.00	-12.25 HORIZONTAL Average
8	7386.646	45.39	35.85	6.19	36.92	50.51	74.00	-23.49 HORIZONTAL Peak
9	9848.020	37.12	37.82	6.99	37.09	44.84	54.00	-9.16 HORIZONTAL Average
10	9848.020	45.77	37.82	6.99	37.09	53.49	74.00	-20.51 HORIZONTAL Peak
11	12310.760	35.17	39.03	8.01	36.97	45.24	54.00	-8.76 HORIZONTAL Average
12	12310.760	44.96	39.03	8.01	36.97	55.03	74.00	-18.97 HORIZONTAL Peak

Mode:c; Polarization:Vertical; Modulation:g; bandwidth:20MHz; Channel:High

Freq	ReadAntenna		Cable Preamp		Limit Level	Line Limit	Over Pol/Phase	Remark
	Level	Factor	Loss	Factor				
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB
1	2990.531	47.05	27.89	3.79	37.08	41.65	54.00	-12.35 VERTICAL Average
2	2990.531	55.24	27.89	3.79	37.08	49.84	74.00	-24.16 VERTICAL Peak
3	3703.723	37.94	28.52	4.56	36.93	34.09	54.00	-19.91 VERTICAL Average
4	3703.723	44.79	28.52	4.56	36.93	40.94	74.00	-33.06 VERTICAL Peak
5	4924.977	39.13	31.01	5.60	36.95	38.79	54.00	-15.21 VERTICAL Average
6	4924.977	45.76	31.01	5.60	36.95	45.42	74.00	-28.58 VERTICAL Peak
7	7386.172	37.29	35.85	6.19	36.92	42.41	54.00	-11.59 VERTICAL Average
8	7386.172	43.38	35.85	6.19	36.92	48.50	74.00	-25.50 VERTICAL Peak
9	9848.371	37.89	37.82	6.99	37.09	45.61	54.00	-8.39 VERTICAL Average
10	9848.371	45.83	37.82	6.99	37.09	53.55	74.00	-20.45 VERTICAL Peak
11	12310.490	33.78	39.03	8.01	36.97	43.85	54.00	-10.15 VERTICAL Average
12	12310.490	43.73	39.03	8.01	36.97	53.80	74.00	-20.20 VERTICAL Peak

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Mode:c; Polarization:Horizontal; Modulation:n; bandwidth:20MHz; Channel:Low

Freq	ReadAntenna		Cable Preamp		Limit Level	Line Limit	Over Pol/Phase	Remark
	Level	Factor	Loss	Factor				
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB
1	3196.094	42.27	27.90	4.00	37.01	37.16	54.00	-16.84 HORIZONTAL Average
2	3196.094	47.66	27.90	4.00	37.01	42.55	74.00	-31.45 HORIZONTAL Peak
3	3823.371	39.92	29.08	4.60	36.91	36.69	54.00	-17.31 HORIZONTAL Average
4	3823.371	46.16	29.08	4.60	36.91	42.93	74.00	-31.07 HORIZONTAL Peak
5	4824.962	44.66	30.82	5.42	36.94	43.96	54.00	-10.04 HORIZONTAL Average
6	4824.962	54.16	30.82	5.42	36.94	53.46	74.00	-20.54 HORIZONTAL Peak
7	7236.353	37.12	35.55	6.03	36.93	41.77	54.00	-12.23 HORIZONTAL Average
8	7236.353	43.22	35.55	6.03	36.93	47.87	74.00	-26.13 HORIZONTAL Peak
9	9648.260	36.90	37.54	7.06	37.08	44.42	54.00	-9.58 HORIZONTAL Average
10	9648.260	44.21	37.54	7.06	37.08	51.73	74.00	-22.27 HORIZONTAL Peak
11	12060.250	35.07	39.46	8.17	37.17	45.53	54.00	-8.47 HORIZONTAL Average
12	12060.250	44.57	39.46	8.17	37.17	55.03	74.00	-18.97 HORIZONTAL Peak

Mode:c; Polarization:Vertical; Modulation:n; bandwidth:20MHz; Channel:Low

Freq	ReadAntenna		Cable Preamp		Limit Level	Line Limit	Over Pol/Phase	Remark
	Level	Factor	Loss	Factor				
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB
1	2990.531	42.15	27.89	3.79	37.08	36.75	54.00	-17.25 VERTICAL Average
2	2990.531	50.30	27.89	3.79	37.08	44.90	74.00	-29.10 VERTICAL Peak
3	3856.668	38.41	29.19	4.60	36.91	35.29	54.00	-18.71 VERTICAL Average
4	3856.668	46.30	29.19	4.60	36.91	43.18	74.00	-30.82 VERTICAL Peak
5	4824.962	44.94	30.82	5.42	36.94	44.24	54.00	-9.76 VERTICAL Average
6	4824.962	53.96	30.82	5.42	36.94	53.26	74.00	-20.74 VERTICAL Peak
7	7236.436	37.70	35.55	6.03	36.93	42.35	54.00	-11.65 VERTICAL Average
8	7236.436	42.37	35.55	6.03	36.93	47.02	74.00	-26.98 VERTICAL Peak
9	9648.480	38.99	37.54	7.06	37.08	46.51	54.00	-7.49 VERTICAL Average
10	9648.480	44.78	37.54	7.06	37.08	52.30	74.00	-21.70 VERTICAL Peak
11	12060.100	37.10	39.46	8.17	37.17	47.56	54.00	-6.44 VERTICAL Average
12	12060.100	44.31	39.46	8.17	37.17	54.77	74.00	-19.23 VERTICAL Peak

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Mode:c; Polarization:Horizontal; Modulation:n; bandwidth:20MHz; Channel:middle

Freq	ReadAntenna		Cable Preamp		Limit Level	Line	Over Limit	Pol/Phase	Remark
	Level	Factor	Loss	Factor					
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	2913.740	39.20	27.78	3.71	37.12	33.57	54.00	-20.43	HORIZONTAL Average
2	2913.740	44.82	27.78	3.71	37.12	39.19	74.00	-34.81	HORIZONTAL Peak
3	3845.537	36.44	29.15	4.60	36.91	33.28	54.00	-20.72	HORIZONTAL Average
4	3845.537	43.99	29.15	4.60	36.91	40.83	74.00	-33.17	HORIZONTAL Peak
5	4844.721	40.43	30.88	5.45	36.94	39.82	54.00	-14.18	HORIZONTAL Average
6	4844.721	46.83	30.88	5.45	36.94	46.22	74.00	-27.78	HORIZONTAL Peak
7	7266.852	37.32	35.60	6.06	36.92	42.06	54.00	-11.94	HORIZONTAL Average
8	7266.852	43.35	35.60	6.06	36.92	48.09	74.00	-25.91	HORIZONTAL Peak
9	9768.164	39.34	37.74	7.01	37.09	47.00	54.00	-7.00	HORIZONTAL Average
10	9768.164	45.45	37.74	7.01	37.09	53.11	74.00	-20.89	HORIZONTAL Peak
11	12210.900	34.00	39.21	8.08	37.06	44.23	54.00	-9.77	HORIZONTAL Average
12	12210.900	44.67	39.21	8.08	37.06	54.90	74.00	-19.10	HORIZONTAL Peak

Mode:c; Polarization:Vertical; Modulation:n; bandwidth:20MHz; Channel:middle

Freq	ReadAntenna		Cable Preamp		Limit Level	Line	Over Limit	Pol/Phase	Remark
	Level	Factor	Loss	Factor					
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	2625.796	42.01	26.85	3.52	37.35	35.03	54.00	-18.97	VERTICAL Average
2	2625.796	47.36	26.85	3.52	37.35	40.38	74.00	-33.62	VERTICAL Peak
3	3901.516	39.83	29.30	4.60	36.91	36.82	54.00	-17.18	VERTICAL Average
4	3901.516	46.45	29.30	4.60	36.91	43.44	74.00	-30.56	VERTICAL Peak
5	4884.999	39.23	30.95	5.52	36.95	38.75	54.00	-15.25	VERTICAL Average
6	4884.999	44.54	30.95	5.52	36.95	44.06	74.00	-29.94	VERTICAL Peak
7	7326.026	37.13	35.74	6.13	36.92	42.08	54.00	-11.92	VERTICAL Average
8	7326.026	41.41	35.74	6.13	36.92	46.36	74.00	-27.64	VERTICAL Peak
9	9768.151	39.97	37.74	7.01	37.09	47.63	54.00	-6.37	VERTICAL Average
10	9768.151	45.20	37.74	7.01	37.09	52.86	74.00	-21.14	VERTICAL Peak
11	12210.930	35.49	39.21	8.08	37.06	45.72	54.00	-8.28	VERTICAL Average
12	12210.930	46.20	39.21	8.08	37.06	56.43	74.00	-17.57	VERTICAL Peak

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Mode:c; Polarization:Horizontal; Modulation:n; bandwidth:20MHz; Channel:High

Freq	ReadAntenna		Cable Preamp		Limit Level	Line Limit	Over Pol/Phase	Remark
	Level	Factor	Loss	Factor				
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB
1	2939.115	40.05	27.82	3.74	37.10	34.51	54.00	-19.49 HORIZONTAL Average
2	2939.115	44.16	27.82	3.74	37.10	38.62	74.00	-35.38 HORIZONTAL Peak
3	4074.388	37.80	29.56	4.60	36.90	35.06	54.00	-18.94 HORIZONTAL Average
4	4074.388	43.00	29.56	4.60	36.90	40.26	74.00	-33.74 HORIZONTAL Peak
5	4924.875	37.96	31.01	5.60	36.95	37.62	54.00	-16.38 HORIZONTAL Average
6	4924.875	44.49	31.01	5.60	36.95	44.15	74.00	-29.85 HORIZONTAL Peak
7	7386.806	38.38	35.85	6.19	36.92	43.50	54.00	-10.50 HORIZONTAL Average
8	7386.806	43.16	35.85	6.19	36.92	48.28	74.00	-25.72 HORIZONTAL Peak
9	9848.588	37.73	37.82	6.99	37.09	45.45	54.00	-8.55 HORIZONTAL Average
10	9848.588	42.04	37.82	6.99	37.09	49.76	74.00	-24.24 HORIZONTAL Peak
11	12310.390	37.20	39.03	8.01	36.97	47.27	54.00	-6.73 HORIZONTAL Average
12	12310.390	44.27	39.03	8.01	36.97	54.34	74.00	-19.66 HORIZONTAL Peak

Mode:c; Polarization:Vertical; Modulation:n; bandwidth:20MHz; Channel:High

Freq	ReadAntenna		Cable Preamp		Limit Level	Line Limit	Over Pol/Phase	Remark
	Level	Factor	Loss	Factor				
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB
1	2922.174	42.63	27.79	3.72	37.12	37.02	54.00	-16.98 VERTICAL Average
2	2922.174	46.02	27.79	3.72	37.12	40.41	74.00	-33.59 VERTICAL Peak
3	3901.516	42.83	29.30	4.60	36.91	39.82	54.00	-14.18 VERTICAL Average
4	3901.516	46.45	29.30	4.60	36.91	43.44	74.00	-30.56 VERTICAL Peak
5	4924.975	39.12	31.01	5.60	36.95	38.78	54.00	-15.22 VERTICAL Average
6	4924.975	43.71	31.01	5.60	36.95	43.37	74.00	-30.63 VERTICAL Peak
7	7386.436	36.30	35.85	6.19	36.92	41.42	54.00	-12.58 VERTICAL Average
8	7386.436	41.63	35.85	6.19	36.92	46.75	74.00	-27.25 VERTICAL Peak
9	9848.957	38.14	37.82	6.99	37.09	45.86	54.00	-8.14 VERTICAL Average
10	9848.957	42.22	37.82	6.99	37.09	49.94	74.00	-24.06 VERTICAL Peak
11	12310.600	30.84	39.03	8.01	36.97	40.91	54.00	-13.09 VERTICAL Average
12	12310.600	43.20	39.03	8.01	36.97	53.27	74.00	-20.73 VERTICAL Peak

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Mode:c; Polarization:Horizontal; Modulation:n; bandwidth:40MHz; Channel:Low

Freq	ReadAntenna		Cable Preamp		Limit Level	Line Limit	Over Pol/Phase	Remark
	Level	Factor	Loss	Factor				
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB
1	2990.531	41.42	27.89	3.79	37.08	36.02	54.00	-17.98 HORIZONTAL Average
2	2990.531	49.33	27.89	3.79	37.08	43.93	74.00	-30.07 HORIZONTAL Peak
3	3619.064	38.05	28.20	4.51	36.94	33.82	54.00	-20.18 HORIZONTAL Average
4	3619.064	45.46	28.20	4.51	36.94	41.23	74.00	-32.77 HORIZONTAL Peak
5	4824.982	38.81	30.82	5.42	36.94	38.11	54.00	-15.89 HORIZONTAL Average
6	4824.982	46.92	30.82	5.42	36.94	46.22	74.00	-27.78 HORIZONTAL Peak
7	7236.214	34.99	35.55	6.03	36.93	39.64	54.00	-14.36 HORIZONTAL Average
8	7236.214	39.32	35.55	6.03	36.93	43.97	74.00	-30.03 HORIZONTAL Peak
9	9648.804	37.20	37.54	7.06	37.08	44.72	54.00	-9.28 HORIZONTAL Average
10	9648.804	43.82	37.54	7.06	37.08	51.34	74.00	-22.66 HORIZONTAL Peak
11	12060.530	34.24	39.46	8.17	37.17	44.70	54.00	-9.30 HORIZONTAL Average
12	12060.530	42.81	39.46	8.17	37.17	53.27	74.00	-20.73 HORIZONTAL Peak

Mode:c; Polarization:Vertical; Modulation:n; bandwidth:40MHz; Channel:Low

Freq	ReadAntenna		Cable Preamp		Limit Level	Line Limit	Over Pol/Phase	Remark
	Level	Factor	Loss	Factor				
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB
1	2990.531	50.42	27.89	3.79	37.08	45.02	54.00	-8.98 VERTICAL Average
2	2990.531	56.98	27.89	3.79	37.08	51.58	74.00	-22.42 VERTICAL Peak
3	3495.691	41.15	27.90	4.30	36.95	36.40	54.00	-17.60 VERTICAL Average
4	3495.691	47.33	27.90	4.30	36.95	42.58	74.00	-31.42 VERTICAL Peak
5	4824.241	38.29	30.82	5.42	36.94	37.59	54.00	-16.41 VERTICAL Average
6	4824.241	44.83	30.82	5.42	36.94	44.13	74.00	-29.87 VERTICAL Peak
7	7236.695	36.72	35.55	6.03	36.93	41.37	54.00	-12.63 VERTICAL Average
8	7236.695	42.94	35.55	6.03	36.93	47.59	74.00	-26.41 VERTICAL Peak
9	9648.272	36.53	37.54	7.06	37.08	44.05	54.00	-9.95 VERTICAL Average
10	9648.272	44.19	37.54	7.06	37.08	51.71	74.00	-22.29 VERTICAL Peak
11	12060.420	33.24	39.46	8.17	37.17	43.70	54.00	-10.30 VERTICAL Average
12	12060.420	45.24	39.46	8.17	37.17	55.70	74.00	-18.30 VERTICAL Peak

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Mode:c; Polarization:Horizontal; Modulation:n; bandwidth:40MHz; Channel:middle

Freq	ReadAntenna		Cable Preamp		Limit Level	Line Limit	Over Pol/Phase	Remark
	Level	Factor	Loss	Factor				
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB
1	2990.531	41.76	27.89	3.79	37.08	36.36	54.00	-17.64 HORIZONTAL Average
2	2990.531	48.15	27.89	3.79	37.08	42.75	74.00	-31.25 HORIZONTAL Peak
3	3834.438	37.75	29.12	4.60	36.91	34.56	54.00	-19.44 HORIZONTAL Average
4	3834.438	45.72	29.12	4.60	36.91	42.53	74.00	-31.47 HORIZONTAL Peak
5	4884.365	40.52	30.95	5.52	36.95	40.04	54.00	-13.96 HORIZONTAL Average
6	4884.365	46.51	30.95	5.52	36.95	46.03	74.00	-27.97 HORIZONTAL Peak
7	7326.524	37.65	35.74	6.13	36.92	42.60	54.00	-11.40 HORIZONTAL Average
8	7326.524	46.64	35.74	6.13	36.92	51.59	74.00	-22.41 HORIZONTAL Peak
9	9768.221	36.94	37.74	7.01	37.09	44.60	54.00	-9.40 HORIZONTAL Average
10	9768.221	45.13	37.74	7.01	37.09	52.79	74.00	-21.21 HORIZONTAL Peak
11	12210.610	36.08	39.21	8.08	37.06	46.31	54.00	-7.69 HORIZONTAL Average
12	12210.610	44.74	39.21	8.08	37.06	54.97	74.00	-19.03 HORIZONTAL Peak

Mode:c; Polarization:Vertical; Modulation:n; bandwidth:40MHz; Channel:middle

Freq	ReadAntenna		Cable Preamp		Limit Level	Line Limit	Over Pol/Phase	Remark
	Level	Factor	Loss	Factor				
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB
1	2798.189	40.87	27.52	3.70	37.23	34.86	54.00	-19.14 VERTICAL Average
2	2798.189	46.82	27.52	3.70	37.23	40.81	74.00	-33.19 VERTICAL Peak
3	3495.691	39.06	27.90	4.30	36.95	34.31	54.00	-19.69 VERTICAL Average
4	3495.691	45.08	27.90	4.30	36.95	40.33	74.00	-33.67 VERTICAL Peak
5	4884.150	37.53	30.95	5.52	36.95	37.05	54.00	-16.95 VERTICAL Average
6	4884.150	43.96	30.95	5.52	36.95	43.48	74.00	-30.52 VERTICAL Peak
7	7326.443	35.02	35.74	6.13	36.92	39.97	54.00	-14.03 VERTICAL Average
8	7326.443	40.02	35.74	6.13	36.92	44.97	74.00	-29.03 VERTICAL Peak
9	9768.788	35.99	37.74	7.01	37.09	43.65	54.00	-10.35 VERTICAL Average
10	9768.788	42.24	37.74	7.01	37.09	49.90	74.00	-24.10 VERTICAL Peak
11	12210.990	34.27	39.21	8.08	37.06	44.50	54.00	-9.50 VERTICAL Average
12	12210.990	41.54	39.21	8.08	37.06	51.77	74.00	-22.23 VERTICAL Peak

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Mode:c; Polarization:Horizontal; Modulation:n; bandwidth:40MHz; Channel:High

Freq	ReadAntenna		Cable Preamp		Limit Level	Line Limit	Over Pol/Phase	Remark
	Level	Factor	Loss	Factor				
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB
1	2990.531	41.76	27.89	3.79	37.08	36.36	54.00	-17.64 HORIZONTAL Average
2	2990.531	48.15	27.89	3.79	37.08	42.75	74.00	-31.25 HORIZONTAL Peak
3	3834.438	38.85	29.12	4.60	36.91	35.66	54.00	-18.34 HORIZONTAL Average
4	3834.438	45.72	29.12	4.60	36.91	42.53	74.00	-31.47 HORIZONTAL Peak
5	4904.058	40.20	30.97	5.55	36.95	39.77	54.00	-14.23 HORIZONTAL Average
6	4904.058	47.11	30.97	5.55	36.95	46.68	74.00	-27.32 HORIZONTAL Peak
7	7356.999	38.80	35.78	6.15	36.92	43.81	54.00	-10.19 HORIZONTAL Average
8	7356.999	43.28	35.78	6.15	36.92	48.29	74.00	-25.71 HORIZONTAL Peak
9	9806.600	37.71	37.79	7.00	37.09	45.41	54.00	-8.59 HORIZONTAL Average
10	9806.600	45.80	37.79	7.00	37.09	53.50	74.00	-20.50 HORIZONTAL Peak
11	12260.490	36.80	39.15	8.06	37.03	46.98	54.00	-7.02 HORIZONTAL Average
12	12260.490	43.76	39.15	8.06	37.03	53.94	74.00	-20.06 HORIZONTAL Peak

Mode:c; Polarization:Vertical; Modulation:n; bandwidth:40MHz; Channel:High

Freq	ReadAntenna		Cable Preamp		Limit Level	Line Limit	Over Pol/Phase	Remark
	Level	Factor	Loss	Factor				
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB
1	2956.155	41.63	27.84	3.76	37.09	36.14	54.00	-17.86 VERTICAL Average
2	2956.155	46.65	27.84	3.76	37.09	41.16	74.00	-32.84 VERTICAL Peak
3	3823.371	38.66	29.08	4.60	36.91	35.43	54.00	-18.57 VERTICAL Average
4	3823.371	45.74	29.08	4.60	36.91	42.51	74.00	-31.49 VERTICAL Peak
5	4904.307	39.45	30.97	5.55	36.95	39.02	54.00	-14.98 VERTICAL Average
6	4904.307	46.49	30.97	5.55	36.95	46.06	74.00	-27.94 VERTICAL Peak
7	7356.172	38.32	35.78	6.15	36.92	43.33	54.00	-10.67 VERTICAL Average
8	7356.172	43.48	35.78	6.15	36.92	48.49	74.00	-25.51 VERTICAL Peak
9	9806.432	37.61	37.79	7.00	37.09	45.31	54.00	-8.69 VERTICAL Average
10	9806.432	44.55	37.79	7.00	37.09	52.25	74.00	-21.75 VERTICAL Peak
11	12260.700	32.63	39.15	8.06	37.03	42.81	54.00	-11.19 VERTICAL Average
12	12260.700	45.01	39.15	8.06	37.03	55.19	74.00	-18.81 VERTICAL Peak

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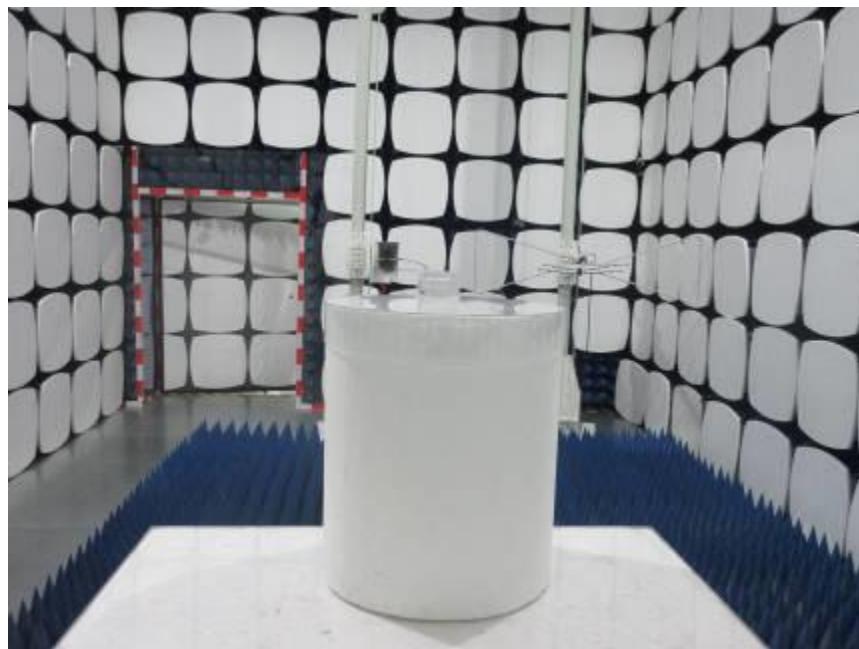
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8 Photographs

8.1 Conducted Emissions at AC Power Line (150kHz-30MHz) Test Setup



8.2 Radiated Emissions which fall in the restricted bands Test Setup



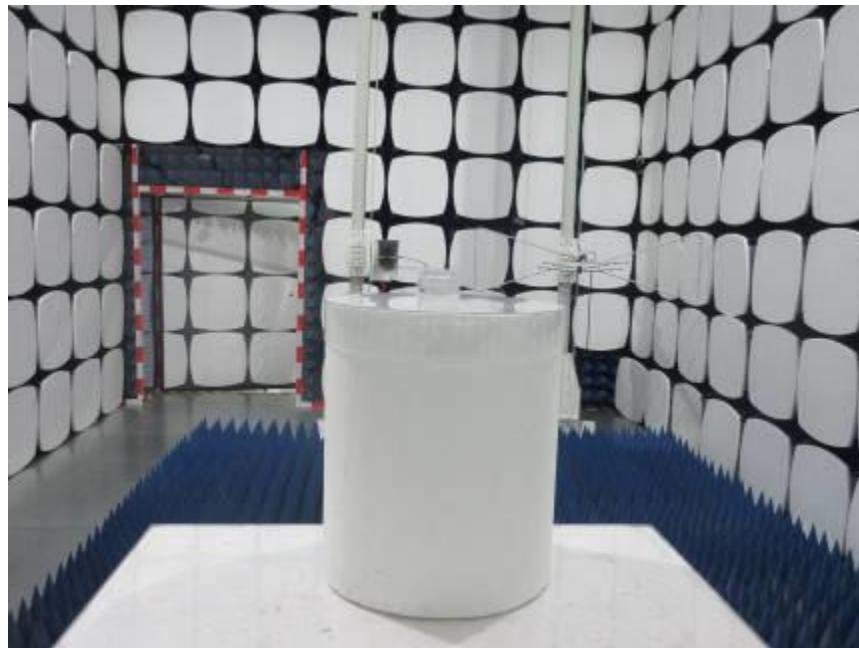
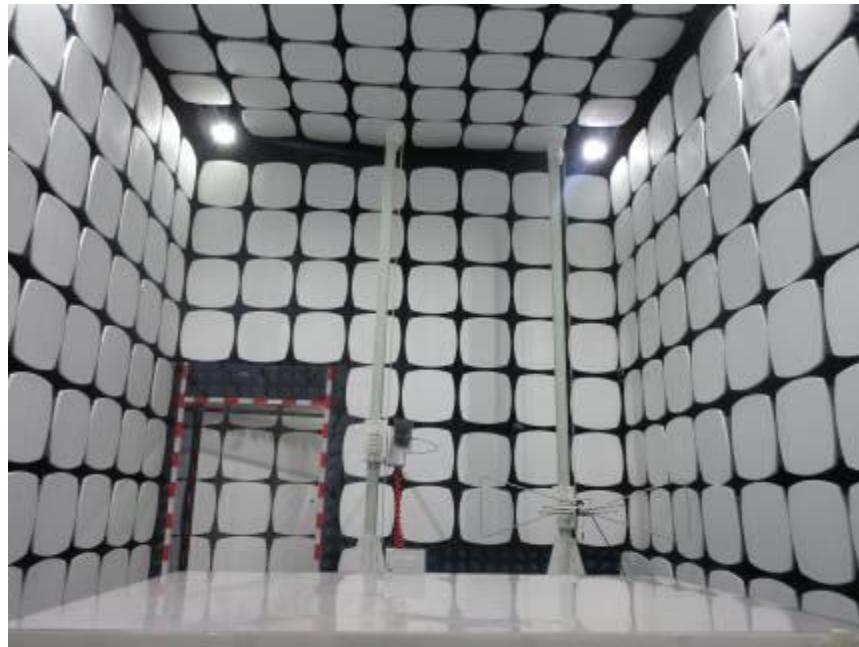
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8.3 Radiated Spurious Emissions Test Setup



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8.4 RF Conducted Test Setup



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8.5 EUT Constructional Details

Please refer to Appendix A - Photographs of EUT Constructional Details for GZEM1908014894CR.



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