

Report No.: SHEM210600581203

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TEST REPORT

Application No.: SHEM2106005812CR

FCC ID: 2A2CXFBXB001

Applicant: Suijimanbu (SHANGHAI) Sports Technology Co. Ltd.

Address of Applicant: 1201 Building B, Greenbelt Convergence Center, 500 Yunjin Road, Xuhui

District, Shanghai, China

Manufacturer: Suijimanbu (SHANGHAI) Sports Technology Co. Ltd.

Address of Manufacturer: 1201 Building B, Greenbelt Convergence Center, 500 Yunjin Road, Xuhui

District, Shanghai, China

Factory: WNQ (Shanghai) Body-building Equipment Co.,Ltd

Address of Factory: No. 388, Beiying Road, (No. 1588, Beiying Road, Qingpu Area, Shanghai.

China

Equipment Under Test (EUT):

EUT Name: freebeat

Model No.: xbike

Trade mark: freebeat

Standard(s): 47 CFR Part 15, Subpart C 15.247

Date of Receipt: 2021-06-09

Date of Test: 2021-06-21 to 2021-07-27

Date of Issue: 2021-07-27

Test Result: Pass*

varlan 2han

Parlam Zhan 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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^{*} In the configuration tested, the EUT complied with the standards specified above.



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Revision Record							
Version	Description	Date	Remark				
00	Original	2021-07-27	1				

Authorized for issue by:	
	Vint-m
	Vincent Zhu /Project Engineer
	Parlam Zhan
	Parlam Zhan / Reviewer



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2 Test Summary

Radio Spectrum Technical Requirement							
Item	Standard	Method	Requirement	Result			
Antenna Requirement	47 CFR Part 15, Subpart C 15.247	N/A	47 CFR Part 15, Subpart C 15.203 & 15.247(b)(4)	Pass			

Radio Spectrum Matte	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				
Maximum Peak Conducted 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				
Maximum Peak 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: 12VDC 3A by adapter

Adapter:

Model: XSG-1203000HUS

Input: 100-240VAC 50/60Hz 0.8A Max

Output: 12VDC 3A

Test voltage: AC 120V 60Hz

Antenna Gain: 1.97dBi (Provided by manufacturer)

Antenna Type: PIFA 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

Operation Frequency: 802.11b/g/n(HT20): 2412MHz to 2462MHz

4.2 Description of Support Units

The EUT has been tested with associated equipment below.

Description	Manufacturer	Model No.
Laptop	Lenovo	ThinkPad X100e

4.3 Power level setting using in test

Channel	802.11b	802.11g	802.11n(HT20)
1	17	15	13
6	17	15	13
11	17	15	13



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4.4 Measurement Uncertainty

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

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



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4.5 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. E&E Lab 588 West Jindu Road, Xingiao, Songjiang, 201612 Shanghai, China

Tel: +86 21 6191 5666 Fax: +86 21 6191 5678

No tests were sub-contracted.

4.6 Test Facility

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

• CNAS (No. CNAS L0599)

CNAS has accredited SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. to ISO/IEC 17025:2017 General Requirements for the Competence of Testing and Calibration Laboratories (CNAS-CL01 Accreditation Criteria for the Competence of Testing and Calibration Laboratories) for the competence in the field of testing.

• 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.

4.7 Deviation from Standards

None

4.8 Abnormalities from Standard Conditions

None



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5 Equipment List

Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
Conducted Emission at Ma			mirement, me	34. 24.0	Jul 200 200
EMI test receiver	R&S	ESR7	SHEM162-1	2020-12-20	2021-12-19
LISN	Schwarzbeck	NSLK8127	SHEM061-1	2020-12-20	2021-12-19
LISN	EMCO	3816/2	SHEM019-1	2020-12-20	2021-12-19
Pulse limiter	R&S	ESH3-Z2	SHEM029-1	2020-12-20	2021-12-19
Shielding Room	ZHONGYU	8*4*3M	SHEM079-2	2020-12-20	2021-12-19
CE test Cable	/	CE01	/ J ILIVIO 7 9-2	2020-12-20	2021-12-19
CL test Cable	,	CLUT	Version:	2020-12-20	2021-12-19
Test software	ESE	E3	6.111221a	/	/
RF Conducted Test			0.1112214		
Spectrum Analyzer	R&S	FSP-30	SHEM002-1	2020-12-20	2021-12-19
Spectrum Analyzer	Agilent	N9020A	SHEM181-1	2020-08-13	2021-08-12
Signal Generator	R&S	SMR20	SHEM006-1	2020-08-13	2021-08-12
Signal Generator	Agilent	N5182A	SHEM182-1	2020-08-13	2021-08-12
Communication Tester	R&S	CMW270	SHEM183-1	2020-08-13	2021-08-12
Switcher	Tonscend	JS0806	SHEM184-1	2020-08-13	2021-08-12
Power Sensor	Keysight	U2021XA * 4	SHEM184-1	2020-08-13	2021-08-12
Splitter	Anritsu	MA1612A	SHEM185-1	1	/
Coupler	e-meca	803-S-1	SHEM186-1	1	/
High-low Temp Cabinet	Suzhou Zhihe	TL-40	SHEM087-1	2018-09-25	2021-09-24
AC Power Stabilizer	APC	KDF-31020T-V0-F0	SHEM216-1	2020-12-20	2021-12-19
DC Power Supply	MCH	MCH-303A	SHEM210-1	2020-12-20	2021-12-19
Conducted test Cable	/	RF01~RF04	/	2020-12-20	2021-12-19
	,	JS Tonscend	,	2020 12 20	2021 12 10
Test software	Tonscend	BT/WIFI System	Version: 2.6	/	/
RF Radiated Test		,			l
EMI test Receiver	R&S	ESU40	SHEM051-1	2020-12-20	2021-12-19
Spectrum Analyzer	R&S	FSP-30	SHEM002-1	2020-12-20	2021-12-19
Loop Antenna (9kHz-30MHz)	Schwarzbeck	FMZB1519	SHEM135-1	2020-12-20	2021-12-19
Antenna (25MHz-2GHz)	Schwarzbeck	VULB9168	SHEM048-1	2019-10-14	2021-10-13
Antenna (25MHz-2GHz)	Schwarzbeck	VULB9168	SHEM202-1	2020-04-30	2022-04-29
Horn Antenna (1-18GHz)	Schwarzbeck	HF906	SHEM009-1	2018-10-24	2021-10-23
Horn Antenna (1-18GHz)	Schwarzbeck	BBHA9120D	SHEM050-1	2019-10-14	2021-10-13
Horn Antenna (14-40GHz)	Schwarzbeck	BBHA 9170	SHEM049-1	2018-10-31	2021-10-30
Pre-amplifier (9KHz-2GHz)	CLAVIIO	BDLNA-0001	SHEM164-1	2020-08-13	2021-08-12
Pre-amplifier (1-18GHz)	CLAVIIO	BDLNA-0118	SHEM050-2	2020-08-13	2021-08-12
High-amplifier (14-40GHz)	Schwarzbeck	10001	SHEM049-2	2020-12-20	2021-12-19
Signal Generator	R&S	SMR40	SHEM058-1	2020-08-13	2021-08-12
Band Filter	LORCH	9BRX-875/X150	SHEM156-1	1	1
Band Filter	LORCH	13BRX-1950/X500	SHEM083-2	1	1
Band Filter	LORCH	5BRX-2400/X200	SHEM155-1	1	1
Band Filter	LORCH	5BRX-5500/X1000	SHEM157-2	1	1
High pass Filter	Wainwright	WHK3.0/18G	SHEM157-1	1	1
High pass Filter	Wainwright	WHKS1700	SHEM157-3	1	1
Semi/Fully Anechoic	ST	11*6*6M	SHEM078-2	2020-05-25	2023-05-24
RE test Cable	1	RE01, RE02, RE06	/	2020-12-20	2021-12-19
			Version:		
Test software	ESE	E3	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 & 15.247(b)(4)

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 PIFA Antenna and no consideration of replacement. The best case gain of the antenna is 1.97dBi.

Antenna location: Refer to Appendix (Internal Photos)



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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:

Eraguanay of amission/MU=)	Conducted limit(dBµV)			
Frequency of emission(MHz)	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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7.1.1 E.U.T. Operation

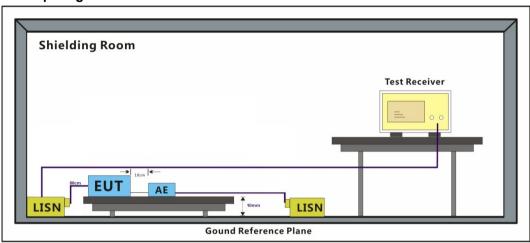
Operating Environment:

Temperature: 22 °C Humidity: 50 % RH Atmospheric Pressure: 1020 mbar

Test mode d: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). Only the data of worst case is recorded in the report.

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 $50 \text{ohm}/50 \mu\text{H} + 5 \text{ohm}$ 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: LISN=Read Level+ Cable Loss+ LISN Factor



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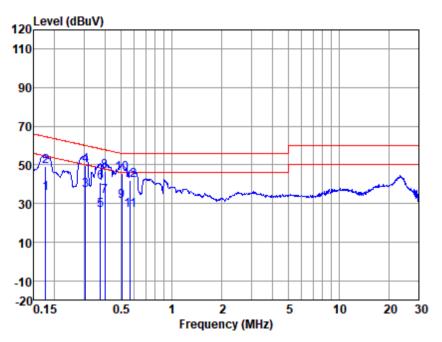
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Mode:d; Line:Live Line



LISN : LINE EUT/Project No : 5812CR

Test Mode : a

	Freq (MHz)	Read level (dBuV)	LISN Factor (dB)	Cable Loss (dB)	Emission Level (dBuV)	Limit (dBuV)	Over Limit (dB)	Remark
1	0.18	25.26	0.20	9.91	35.37	54.64	-19.27	Average
2	0.18	39.33	0.20	9.91	49.44	64.64	-15.20	QP
3	0.31	26.90	0.20	9.94	37.04	50.10	-13.06	Average
4	0.31	39.60	0.20	9.94	49.74	60.10	-10.36	QP
5	0.38	16.19	0.20	9.93	26.32	48.39	-22.07	Average
6	0.38	30.85	0.20	9.93	40.98	58.39	-17.41	QP
7	0.40	23.38	0.20	9.93	33.51	47.86	-14.35	Average
8	0.40	36.31	0.20	9.93	46.44	57.86	-11.42	QP
9	0.50	20.93	0.20	9.93	31.06	46.00	-14.94	Average
10	0.50	35.60	0.20	9.93	45.73	56.00	-10.27	QP
11	0.57	16.60	0.20	9.92	26.72	46.00	-19.28	Average
12	0.57	31.75	0.20	9.92	41.87	56.00	-14.13	QP

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



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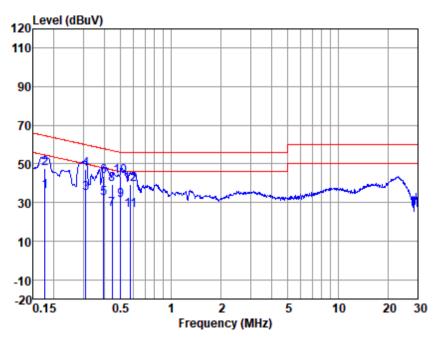
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Mode:d; Line:Neutral Line



LISN : NEUTRAL EUT/Project No : 5812CR

Test Mode : a

	Freq	Read	LISN	Cable	Emission		0ver	
		level	Factor	Loss	Level	Limit	Limit	Remark
	(MHz)	(dBuV)	(dB)	(dB)	(dBuV)	(dBuV)	(dB)	
1	0.18	25.92	0.20	9.91	36.03	54.64	-18.61	Average
2	0.18	37.78	0.20	9.91	47.89	64.64	-16.75	QP
3	0.31	24.44	0.20	9.94	34.58	49.97	-15.39	Average
4	0.31	37.22	0.20	9.94	47.36	59.97	-12.61	QP
5	0.40	22.08	0.20	9.93	32.21	47.95	-15.74	Average
6	0.40	33.36	0.20	9.93	43.49	57.95	-14.46	QP
7	0.45	16.51	0.20	9.93	26.64	46.93	-20.29	Average
8	0.45	29.52	0.20	9.93	39.65	56.93	-17.28	QP
9	0.50	20.85	0.20	9.93	30.98	46.00	-15.02	Average
10	0.50	33.34	0.20	9.93	43.47	56.00	-12.53	QP
11	0.58	15.89	0.20	9.92	26.01	46.00	-19.99	Average
12	0.58	29.40	0.20	9.92	39.52	56.00	-16.48	QP

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



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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:

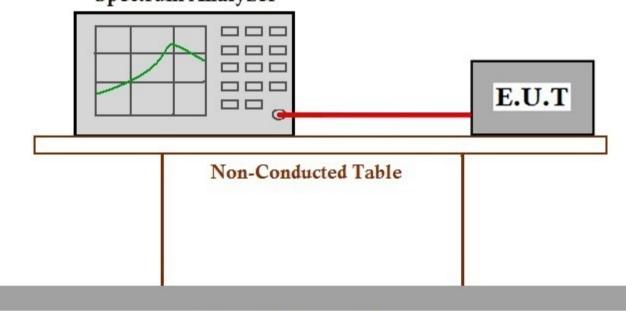
Temperature: 22 °C Humidity: 50 % RH Atmospheric Pressure: 1001 mbar

Test mode d: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). Only the data of worst case is recorded in the report.

7.2.2 Test Setup Diagram

Spectrum Analyzer



Ground Reference Plane

7.2.3 Measurement Procedure and Data

The detailed test data see: Appendix C for SHEM210600581203



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7.3 Maximum Peak Conducted 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)
	1 for ≥50 hopping channels
902-928	0.25 for 25≤ hopping channels <50
	1 for digital modulation
	1 for ≥75 non-overlapping hopping channels
2400-2483.5	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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7.3.1 E.U.T. Operation

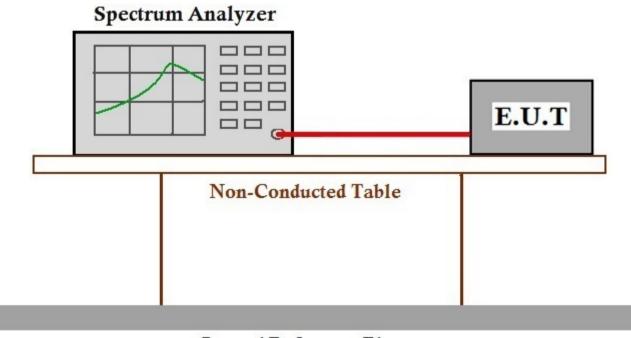
Operating Environment:

Temperature: 22 °C Humidity: 50 % RH Atmospheric Pressure: 1001 mbar

Test mode d: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). Only the data of worst case is recorded in the report.

7.3.2 Test Setup Diagram



Ground Reference Plane

7.3.3 Measurement Procedure and Data

The detailed test data see: Appendix C for SHEM210600581203



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7.4 Maximum Peak 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: ≤8dBm in any 3 kHz band during any time interval of continuous

transmission

7.4.1 E.U.T. Operation

Operating Environment:

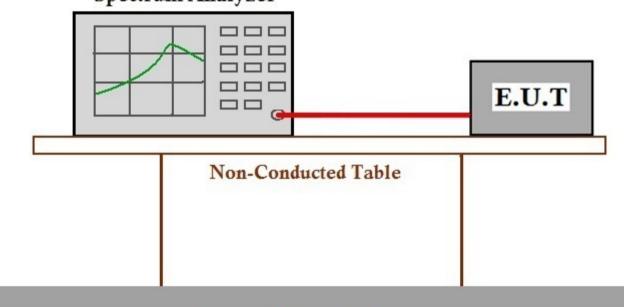
Temperature: 22 °C Humidity: 50 % RH Atmospheric Pressure: 1001 mbar

Test mode d: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). Only the data of worst case is recorded in the report.

7.4.2 Test Setup Diagram

Spectrum Analyzer



Ground Reference Plane

7.4.3 Measurement Procedure and Data

The detailed test data see: Appendix C for SHEM210600581203



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7.5 Conducted Band Edges Measurement

47 CFR Part 15, Subpart C 15.247(d) **Test Requirement** 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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7.5.1 E.U.T. Operation

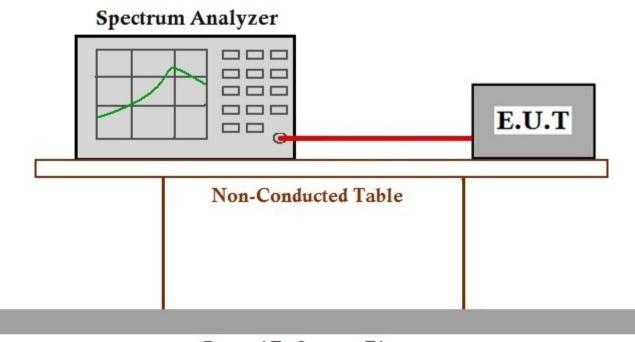
Operating Environment:

Temperature: 22 °C Humidity: 50 % RH Atmospheric Pressure: 1001 mbar

Test mode d: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). Only the data of worst case is recorded in the report.

7.5.2 Test Setup Diagram



Ground Reference Plane

7.5.3 Measurement Procedure and Data

The detailed test data see: Appendix C for SHEM210600581203



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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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7.6.1 E.U.T. Operation

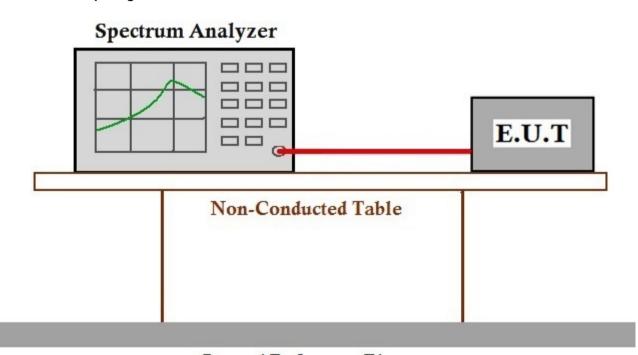
Operating Environment:

Temperature: 22 °C Humidity: 50 % RH Atmospheric Pressure: 1001 mbar

Test mode d: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). Only the data of worst case is recorded in the report.

7.6.2 Test Setup Diagram



Ground Reference Plane

7.6.3 Measurement Procedure and Data

The detailed test data see: Appendix C for SHEM210600581203



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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

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

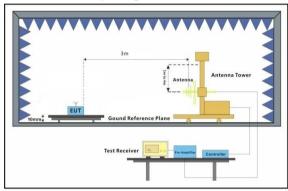
Operating Environment:

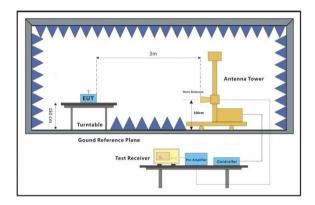
Temperature: 22 °C Humidity: 50 % RH Atmospheric Pressure: 1001 mbar

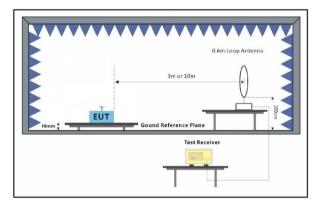
Test mode d:TX mode_Keep the EUT in continuously transmitting mode with all modulation

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). Only the data of worst case is recorded in the report.

7.7.2 Test Setup Diagram









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7.7.3 Measurement Procedure and Data

- a. For below 1GHz, the EUT was placed on the top of a 10mm insulating material above the horizontal ground reference plane 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.



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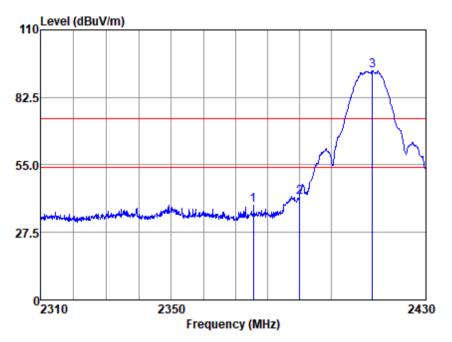
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Mode:d; Polarization:Horizontal; Modulation:b; bandwidth:20MHz; Channel:Low



Antenna Polarity :HORIZONTAL

EUT/Project :5812CR Test mode :2412MHz

		Read	Antenna	Cable	Preamp	Emission	ı Limit	0ver	
	Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	2375.608	45.44	27.18	8.39	42.33	38.68	74.00	-35.32	Peak
2	2390.000	48.52	27.23	8.46	42.37	41.84	74.00	-32.16	Peak
3	2413.076	100.12	27.32	8.46	42.40	93.50	74.00	19.50	Peak

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



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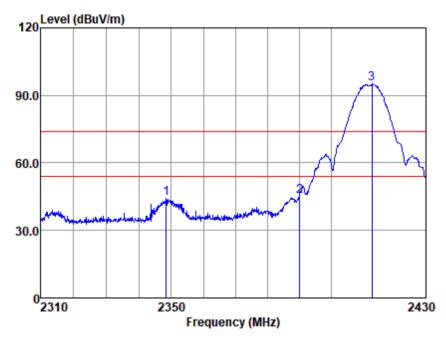
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Mode:d; Polarization:Vertical; Modulation:b; bandwidth:20MHz; Channel:Low



Antenna Polarity :VERTICAL EUT/Project :5812CR Test mode :2412MHz

	Freq		Antenna Factor						Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	2348.454		-			_			Peak
2	2390.000	51.66	27.23	8.46	42.37	44.98	74.00	-29.02	Peak
3	2412.832	101.73	27.32	8.46	42.40	95.11	74.00	21.11	Peak

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



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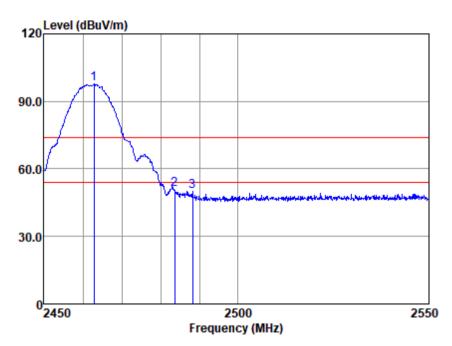
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Mode:d; Polarization:Horizontal; Modulation:b; bandwidth:20MHz; Channel:High



Antenna Polarity :HORIZONTAL EUT/Project :5812CR

Test mode :2462MHz

		Read	Antenna	Cable	Preamp	Emissior	ı Limit	0ver	
	Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	2462.874	104.05	27.48	8.60	42.40	97.73	74.00	23.73	Peak
2	2483.500	57.12	27.55	8.60	42.40	50.87	74.00	-23.13	Peak
3	2488.226	56.07	27.55	8.67	42.40	49.89	74.00	-24.11	Peak

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



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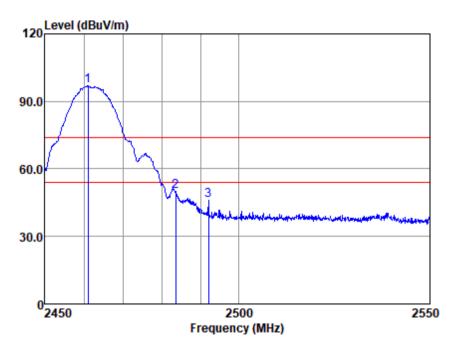
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Mode:d; Polarization:Vertical; Modulation:b; bandwidth:20MHz; Channel:High



Antenna Polarity :VERTICAL EUT/Project :5812CR Test mode :2462MHz

		Read	Antenna	Cable	Preamp	Emission	ı Limit	0ver	
	Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	2461.002	103.36	27.48	8.60	42.40	97.04	74.00	23.04	Peak
2	2483.500	56.46	27.55	8.60	42.40	50.21	74.00	-23.79	Peak
3	2492.012	52.34	27.58	8.67	42.40	46.19	74.00	-27.81	Peak

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



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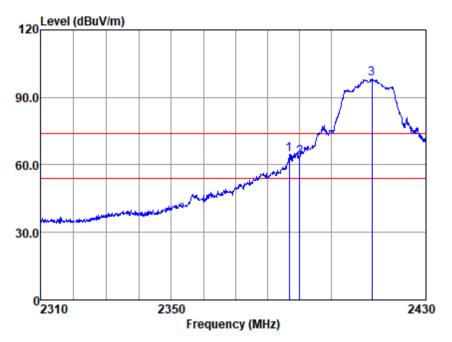
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Mode:d; Polarization:Horizontal; Modulation:g; bandwidth:20MHz; Channel:Low



Antenna Polarity :HORIZONTAL

EUT/Project :5812CR Test mode :2412MHz

		Read	Antenna	Cable	Preamp	Emission	ı Limit	0ver	
	Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	2386.823	71.41	27.23	8.46	42.37	64.73	74.00	-9.27	Peak
2	2390.000	70.03	27.23	8.46	42.37	63.35	74.00	-10.65	Peak
3	2412.832	104.75	27.32	8.46	42.40	98.13	74.00	24.13	Peak

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



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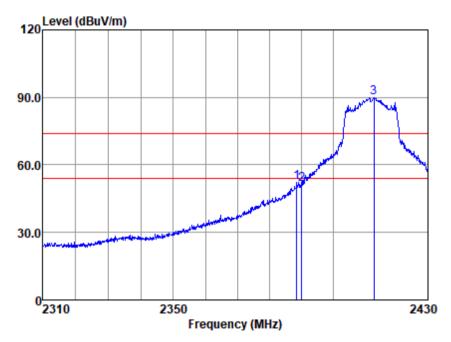
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Mode:d; Polarization:Horizontal; Modulation:g; bandwidth:20MHz; Channel:Low



Antenna Polarity :HORIZONTAL EUT/Project :5812CR

Test mode :2412MHz

		Read	Antenna	Cable	Preamp	Emission	n Limit	0ver	
	Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	2388.516	58.73	27.23	8.46	42.37	52.05	54.00	-1.95	Average
2	2390.000	58.16	27.23	8.46	42.37	51.48	54.00	-2.52	Average
3	2412.954	96.37	27.32	8.46	42.40	89.75	54.00	35.75	Average

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



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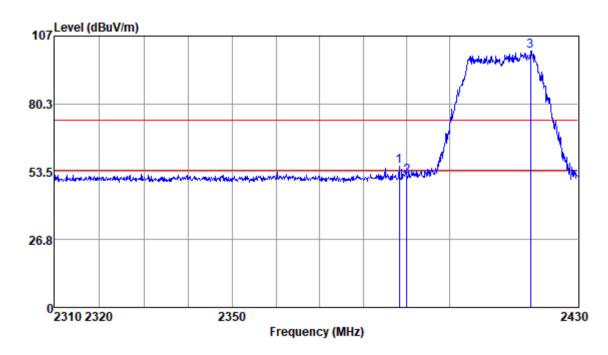
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Mode:d; Polarization:Vertical; Modulation:g; bandwidth:20MHz; Channel:Low



Antenna Polarity : VERTICAL

	Read	Antenna	Cable	Preamp	Emission	Limit	0ver	
Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
2388.27	61.31	28.97	2.77	37.40	55.65	74.00	-18.35	Peak
2390.00	57.57	28.97	2.77	37.40	51.91	74.00	-22.09	Peak
2418.83	106.76	29.04	2.81	37.43	101.18	74.00	27.18	Peak

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



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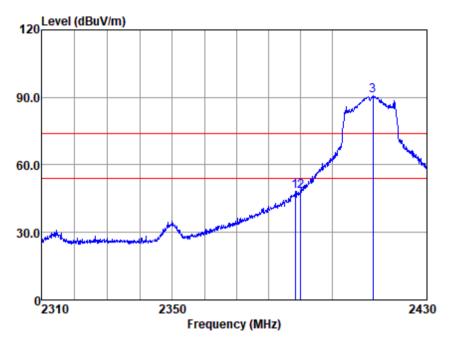
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Mode:d; Polarization:Vertical; Modulation:g; bandwidth:20MHz; Channel:Low



Antenna Polarity :VERTICAL EUT/Project :5812CR Test mode :2412MHz

		Read	Antenna	Cable	Preamp	Emission	Limit	0ver	
	Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	2388.395	54.87	27.23	8.46	42.37	48.19	54.00	-5.81	Average
2	2390.000	54.82	27.23	8.46	42.37	48.14	54.00	-5.86	Average
3	2412.954	97.26	27.32	8.46	42.40	90.64	54.00	36.64	Average

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



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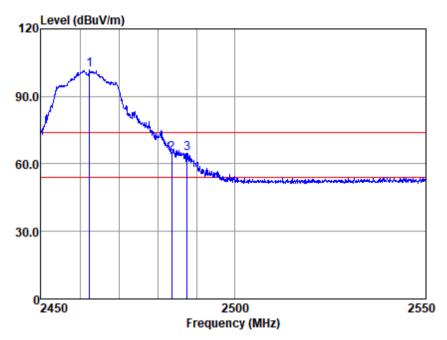
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Mode:d; Polarization:Horizontal; Modulation:g; bandwidth:20MHz; Channel:High



Antenna Polarity :HORIZONTAL EUT/Project :5812CR Test mode :2462MHz

	Freq					Emissior Level			Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	2462.479	107.99	27.48	8.60	42.40	101.67	74.00	27.67	Peak
2	2483.500	71.07	27.55	8.60	42.40	64.82	74.00	-9.18	Peak
3	2487.530	70.84	27.55	8.67	42.40	64.66	74.00	-9.34	Peak

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



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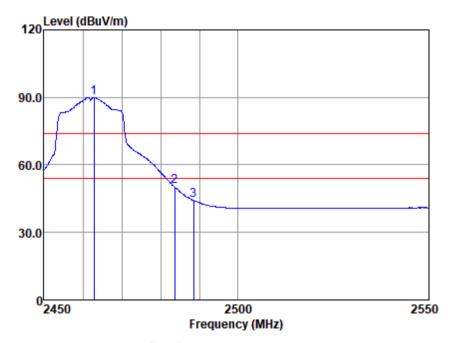
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Mode:d; Polarization:Horizontal; Modulation:g; bandwidth:20MHz; Channel:High



Antenna Polarity :HORIZONTAL EUT/Project :5812CR Test mode :2462MHz

		Read	Antenna	Cable	Preamp	Emission	ı Limit	0ver	
	Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	2462.775	96.32	27.48	8.60	42.40	90.00	54.00	36.00	Average
2	2483.500	56.58	27.55	8.60	42.40	50.33	54.00	-3.67	Average
3	2488.425	50.45	27.55	8.67	42.40	44.27	54.00	-9.73	Average

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



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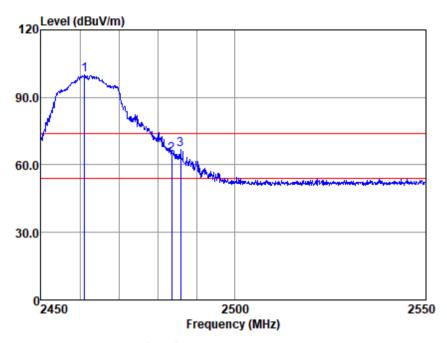
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Mode:d; Polarization:Vertical; Modulation:g; bandwidth:20MHz; Channel:High



Antenna Polarity :VERTICAL EUT/Project :5812CR Test mode :2462MHz

	Freq		Antenna Factor						Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	2461.101		-			-	-		Peak
2	2483.500	71.00	27.55	8.60	42.40	64.75	74.00	-9.25	Peak
3	2485.938	73.10	27.55	8.67	42.40	66.92	74.00	-7.08	Peak

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



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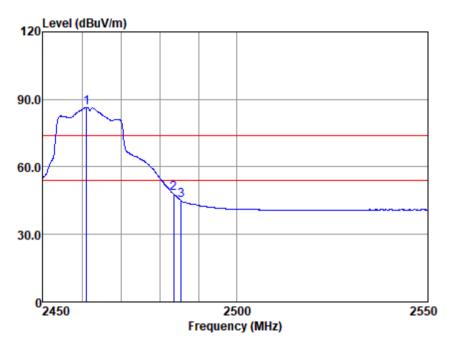
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Mode:d; Polarization:Vertical; Modulation:g; bandwidth:20MHz; Channel:High



Antenna Polarity :VERTICAL EUT/Project :5812CR Test mode :2462MHz

		Read	Antenna	Cable	Preamp	Emissior	ı Limit	0ver	
	Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	2461.199	92.88	27.48	8.60	42.40	86.56	54.00	32.56	Average
2	2483.500	54.30	27.55	8.60	42.40	48.05	54.00	-5.95	Average
3	2485.441	51.33	27.55	8.67	42.40	45.15	54.00	-8.85	Average

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



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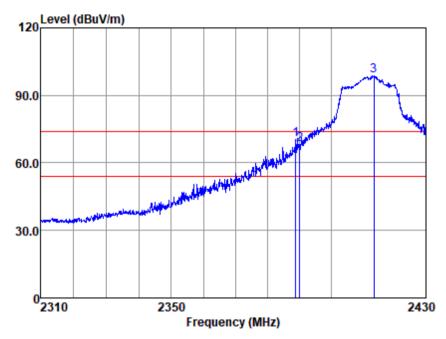
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Mode:d; Polarization:Horizontal; Modulation:n; bandwidth:20MHz; Channel:Low



Antenna Polarity :HORIZONTAL

EUT/Project :5812CR Test mode :2412MHz

		Read	Antenna	Cable	Preamp	Emissior	ı Limit	0ver	
	Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	2388.879	76.92	27.23	8.46	42.37	70.24	74.00	-3.76	Peak
2	2390.000	74.66	27.23	8.46	42.37	67.98	74.00	-6.02	Peak
3	2413.565	105.12	27.32	8.53	42.40	98.57	74.00	24.57	Peak

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



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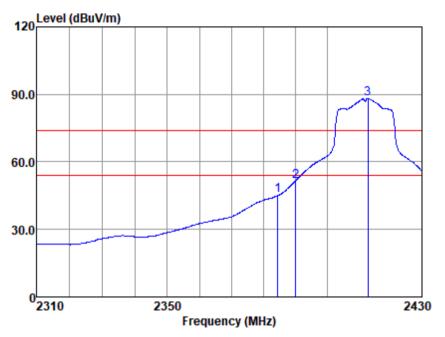
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Mode:d; Polarization:Horizontal; Modulation:n; bandwidth:20MHz; Channel:Low



Antenna Polarity :HORIZONTAL

EUT/Project :5812CR Test mode :2412MHz

		Read	Antenna	Cable	Preamp	Emissior	ı Limit	0ver	
	Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	2384.407	51.76	27.23	8.46	42.37	45.08	54.00	-8.92	Average
2	2390.000	58.14	27.23	8.46	42.37	51.46	54.00	-2.54	Average
3	2412.832	94.81	27.32	8.46	42.40	88.19	54.00	34.19	Average

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



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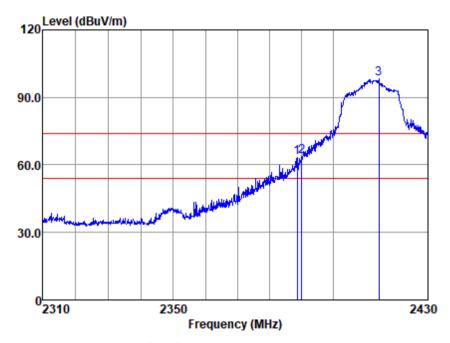
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Mode:d; Polarization:Vertical; Modulation:n; bandwidth:20MHz; Channel:Low



Antenna Polarity :VERTICAL EUT/Project :5812CR Test mode :2412MHz

	Freq		Antenna Factor						Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	2388.637	69.82	27.23	8.46	42.37	63.14	74.00	-10.86	Peak
2	2390.000	70.26	27.23	8.46	42.37	63.58	74.00	-10.42	Peak
3	2414.421	104.70	27.32	8.53	42.40	98.15	74.00	24.15	Peak

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



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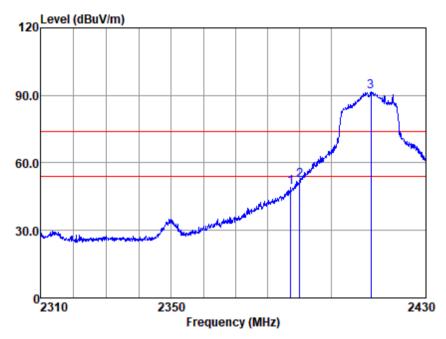
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Mode:d; Polarization:Vertical; Modulation:n; bandwidth:20MHz; Channel:Low



Antenna Polarity :VERTICAL EUT/Project :5812CR Test mode :2412MHz

		Read	Antenna	Cable	Preamp	Emission	ı Limit	0ver	
	Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	2387.186	55.76	27.23	8.46	42.37	49.08	54.00	-4.92	Average
2	2390.000	59.02	27.23	8.46	42.37	52.34	54.00	-1.66	Average
3	2412.588	98.09	27.32	8.46	42.40	91.47	54.00	37.47	Average

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



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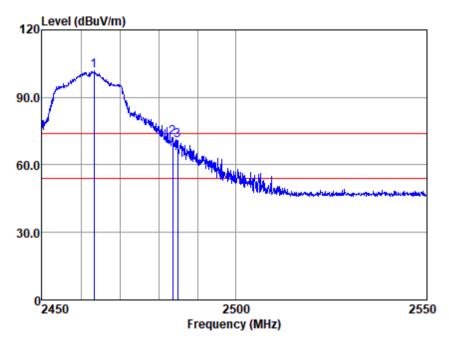
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Mode:d; Polarization:Horizontal; Modulation:n; bandwidth:20MHz; Channel:High



Antenna Polarity :HORIZONTAL EUT/Project :5812CR Test mode :2462MHz

		Read	Antenna	Cable	Preamp) Emission	Limit	0ver	
	Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	2463.366	107.97	27.48	8.60	42.40	101.65	74.00	27.65	Peak
2	2483.500	78.29	27.55	8.60	42.40	72.04	74.00	-1.96	Peak
3	2484.844	77.14	27.55	8.67	42.40	70.96	74.00	-3.04	Peak

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



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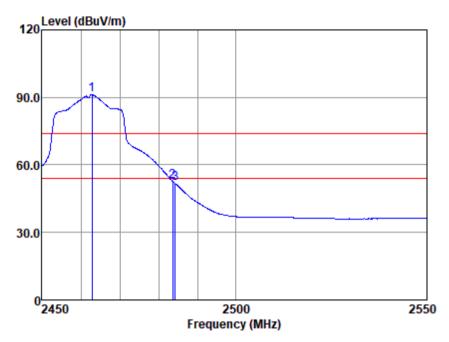
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Mode:d; Polarization:Horizontal; Modulation:n; bandwidth:20MHz; Channel:High



Antenna Polarity :HORIZONTAL EUT/Project :5812CR Test mode :2462MHz

		Read	Antenna	Cable	Preamp	Emission	Limit	0ver	
	Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	2462.775	97.52	27.48	8.60	42.40	91.20	54.00	37.20	Average
2	2483.500	59.15	27.55	8.60	42.40	52.90	54.00	-1.10	Average
3	2484.148	58.10	27.55	8.60	42.40	51.85	54.00	-2.15	Average

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



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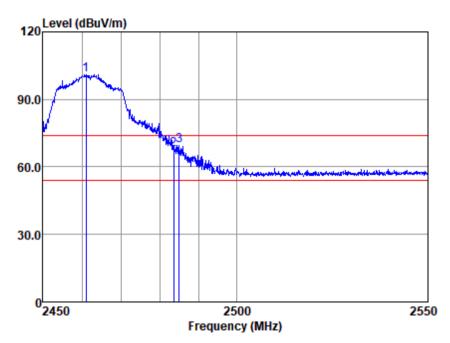
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Mode:d; Polarization:Vertical; Modulation:n; bandwidth:20MHz; Channel:High



Antenna Polarity :VERTICAL EUT/Project :5812CR Test mode :2462MHz

		Read	Antenna	Cable	Preamp) Emission	n Limit	0ver	
	Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	2461.002	107.24	27.48	8.60	42.40	100.92	74.00	26.92	Peak
2	2483.500	73.93	27.55	8.60	42.40	67.68	74.00	-6.32	Peak
3	2485.043	75.72	27.55	8.67	42.40	69.54	74.00	-4.46	Peak

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



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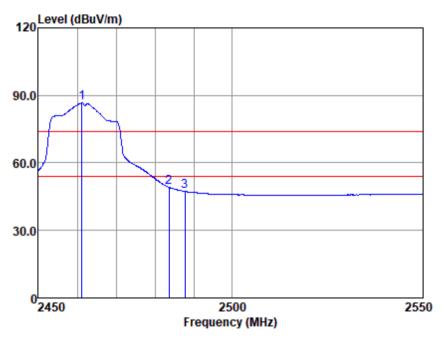
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Mode:d; Polarization:Vertical; Modulation:n; bandwidth:20MHz; Channel:High



Antenna Polarity :VERTICAL EUT/Project :5812CR Test mode :2462MHz

	Freq		Antenna Factor						Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	2461.101		-			-	-		Average
2	2483.500	55.44	27.55	8.60	42.40	49.19	54.00	-4.81	Average
3	2487.629	53.51	27.55	8.67	42.40	47.33	54.00	-6.67	Average

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



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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

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:

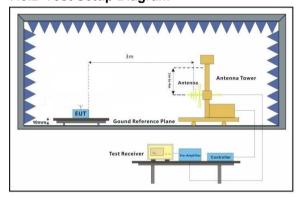
Temperature: 22 °C Humidity: 50 % RH Atmospheric Pressure: 1001 mbar

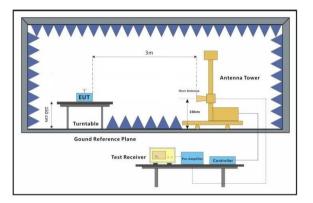
Test mode d:TX mode_Keep the EUT in continuously transmitting mode with all modulation

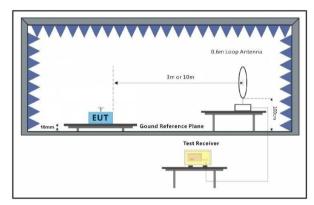
types. All data rates for each modulation type have been tested and found the data rate @ 1Mbps is the worst case of IEEE 802.11b; data rate @ 6Mbps is the worst case of IEEE 802.11g; data rate @ 6.5Mbps is the worst case of IEEE

802.11n(HT20). Only the data of worst case is recorded in the report.

7.8.2 Test Setup Diagram









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7.8.3 Measurement Procedure and Data

- a. For below 1GHz, the EUT was placed on the top of a 10mm insulating material above the horizontal ground reference plane 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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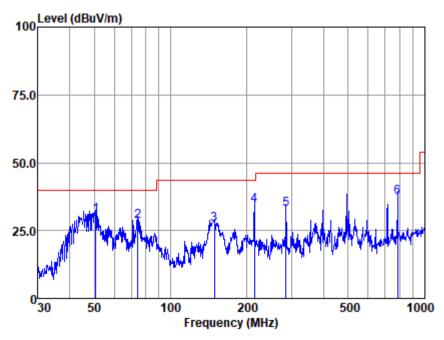
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Below 1GHz



Antenna Polarity :HORIZONTAL EUT/Project :5812CR

	Read	Antenna	Cable	Preamp	Emissior	ı Limit	0ver	
Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Remark
MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
50.764	47.96	13.65	1.01	32.02	30.60	40.00	-9.40	QP
74.396	47.59	10.58	1.26	31.11	28.32	40.00	-11.68	QP
148.441	43.86	12.84	1.85	31.42	27.13	43.50	-16.37	QP
213.763	53.64	9.73	2.33	31.23	34.47	43.50	-9.03	QP
284.977	48.39	12.94	2.76	31.36	32.73	46.00	-13.27	QP
785.093	43.17	22.24	4.46	32.44	37.43	46.00	-8.57	QP
	MHz 50.764 74.396 148.441 213.763 284.977	MHz dBuV 50.764 47.96 74.396 47.59 148.441 43.86 213.763 53.64 284.977 48.39	Freq Level Factor MHz dBuV dB/m 50.764 47.96 13.65 74.396 47.59 10.58 148.441 43.86 12.84 213.763 53.64 9.73 284.977 48.39 12.94	Freq Level Factor Loss MHz dBuV dB/m dB 50.764 47.96 13.65 1.01 74.396 47.59 10.58 1.26 148.441 43.86 12.84 1.85 213.763 53.64 9.73 2.33 284.977 48.39 12.94 2.76	Freq Level Factor Loss Factor MHz dBuV dB/m dB dB 50.764 47.96 13.65 1.01 32.02 74.396 47.59 10.58 1.26 31.11 148.441 43.86 12.84 1.85 31.42 213.763 53.64 9.73 2.33 31.23 284.977 48.39 12.94 2.76 31.36	Freq Level Factor Loss Factor Level MHz dBuV dB/m dB dB dBuV/m 50.764 47.96 13.65 1.01 32.02 30.60 74.396 47.59 10.58 1.26 31.11 28.32 148.441 43.86 12.84 1.85 31.42 27.13 213.763 53.64 9.73 2.33 31.23 34.47 284.977 48.39 12.94 2.76 31.36 32.73	Freq Level Factor Loss Factor Level Line MHz dBuV dB/m dB dB dBuV/m dBuV/m 50.764 47.96 13.65 1.01 32.02 30.60 40.00 74.396 47.59 10.58 1.26 31.11 28.32 40.00 148.441 43.86 12.84 1.85 31.42 27.13 43.50 213.763 53.64 9.73 2.33 31.23 34.47 43.50 284.977 48.39 12.94 2.76 31.36 32.73 46.00	Freq Level Factor Loss Factor Level Limit Over MHz dBuV dB/m dB dB dBuV/m dBuV/m dB dB dBuV/m dBuV/m dB <

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



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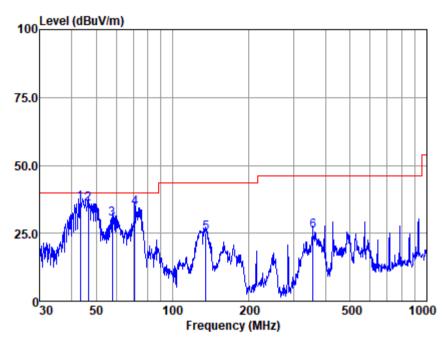
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Antenna Polarity :VERTICAL EUT/Project :5812CR

		Read	Antenna	Cable	Preamp	Emissio	n Limit	0ver	
	Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	43.202	54.08	13.39	0.92	32.12	36.27	40.00	-3.73	QP
2	46.503	53.51	13.56	0.96	32.12	35.91	40.00	-4.09	QP
3	57.796	47.76	13.23	1.09	31.73	30.35	40.00	-9.65	QP
4	71.080	53.17	11.44	1.23	31.38	34.46	40.00	-5.54	QP
5	135.506	42.89	12.20	1.76	31.71	25.14	43.50	-18.36	QP
6	356.676	39.45	14.48	3.01	31.12	25.82	46.00	-20.18	QP

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



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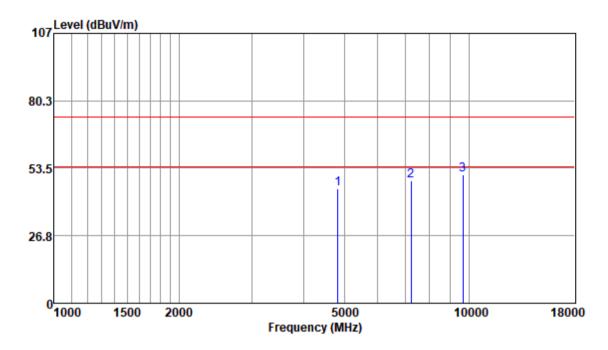




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Above 1GHz

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



Antenna Polarity : HORIZONTAL

	Read	Antenna	Cable	Preamp	Emission	Limit	0ver	
Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
4824.00	45.79	33.78	4.46	38.73	45.30	74.00	-28.70	Peak
7236.00	43.45	36.35	5.76	37.16	48.40	74.00	-25.60	Peak
9648.00	40.85	37.69	6.53	34.17	50.90	74.00	-23.10	Peak

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



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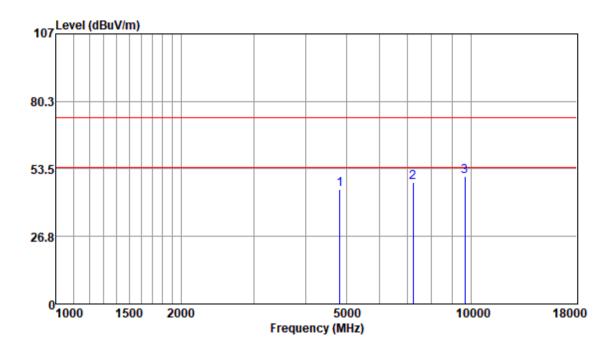
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Mode:d; Polarization:Vertical; Modulation:b; bandwidth:20MHz; Channel:Low



Antenna Polarity : VERTICAL

	Read	Antenna	Cable	Preamp	Emission	Limit	0ver	
Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
4824.00	45.99	33.78	4.46	38.73	45.50	74.00	-28.50	Peak
7236.00	43.25	36.35	5.76	37.16	48.20	74.00	-25.80	Peak
9648.00	40.65	37.69	6.53	34.17	50.70	74.00	-23.30	Peak

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



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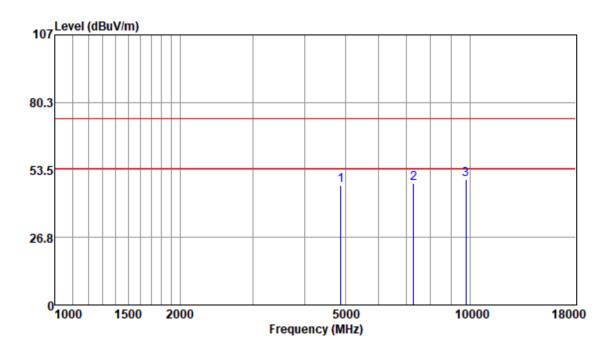
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Mode:d; Polarization:Horizontal; Modulation:b; bandwidth:20MHz; Channel:middle



Antenna Polarity : HORIZONTAL

Read	Antenna	Cable	Preamp	Emission	Limit	0ver	
Level	Factor	Loss	Factor	Level	Line	Limit	Remark
dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
47.68	33.93	4.47	38.78	47.30	74.00	-26.70	Peak
43.01	36.47	5.83	37.11	48.20	74.00	-25.80	Peak
39.77	37.68	6.50	34.15	49.80	74.00	-24.20	Peak
	dBuv 47.68 43.01	Level Factor dBuv dB/m 47.68 33.93 43.01 36.47	Level Factor Loss dBuv dB/m dB 47.68 33.93 4.47 43.01 36.47 5.83	Level Factor Loss Factor dBuv dB/m dB dB 47.68 33.93 4.47 38.78 43.01 36.47 5.83 37.11	Level Factor Loss Factor Level dBuv dB/m dB dB dBuv/m 47.68 33.93 4.47 38.78 47.30 43.01 36.47 5.83 37.11 48.20	Level Factor Loss Factor Level Line dBuv dB/m dB dB dBuv/m dBuv/m 47.68 33.93 4.47 38.78 47.30 74.00 43.01 36.47 5.83 37.11 48.20 74.00	Read Antenna Cable Preamp Emission Limit Over Level Factor Loss Factor Level Line Limit dBuv dB/m dB dBuv/m dBuv/m dBuv/m dB 47.68 33.93 4.47 38.78 47.30 74.00 -26.70 43.01 36.47 5.83 37.11 48.20 74.00 -25.80 39.77 37.68 6.50 34.15 49.80 74.00 -24.20

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



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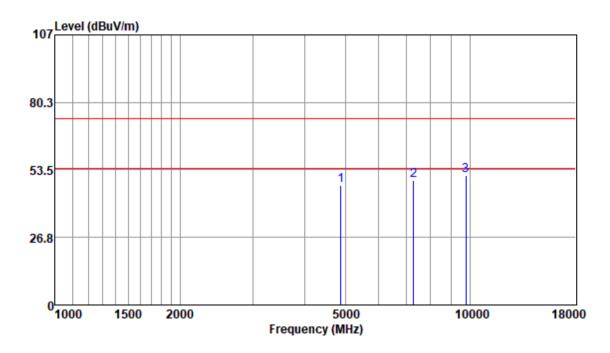
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Mode:d; Polarization:Vertical; Modulation:b; bandwidth:20MHz; Channel:middle



Antenna Polarity : VERTICAL

Freq					Emission Level			Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
4874.00	47.68	33.93	4.47	38.78	47.30	74.00	-26.70	Peak
7311.00	44.31	36.47	5.83	37.11	49.50	74.00	-24.50	Peak
9748.00	41.47	37.68	6.50	34.15	51.50	74.00	-22.50	Peak

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



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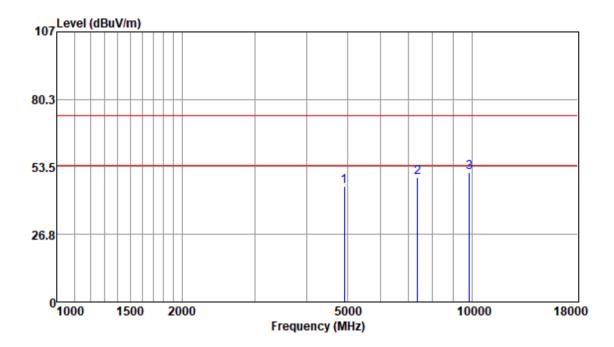
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Mode:d; Polarization:Horizontal; Modulation:b; bandwidth:20MHz; Channel:High



Antenna Polarity : HORIZONTAL

Freq					Emission Level			Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
4924.00	46.17	33.98	4.48	38.83	45.80	74.00	-28.20	Peak
7386.00	43.86	36.48	5.92	37.06	49.20	74.00	-24.80	Peak
9848.00	41.48	37.56	6.49	34.13	51.40	74.00	-22.60	Peak

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



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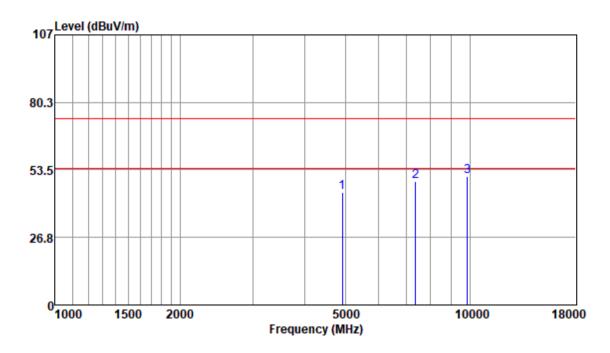
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Mode:d; Polarization:Vertical; Modulation:b; bandwidth:20MHz; Channel:High



Antenna Polarity : VERTICAL

	Read	Antenna	Cable	Preamp	Emission	Limit	0ver	
Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
4924.00	45.17	33.98	4.48	38.83	44.80	74.00	-29.20	Peak
7386.00	43.76	36.48	5.92	37.06	49.10	74.00	-24.90	Peak
9848.00	40.98	37.56	6.49	34.13	50.90	74.00	-23.10	Peak

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



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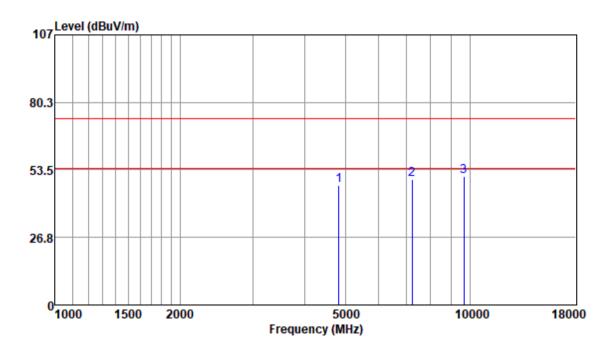
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Mode:d; Polarization:Horizontal; Modulation:g; bandwidth:20MHz; Channel:Low



Antenna Polarity : HORIZONTAL

Read	Antenna	Cable	Preamp	Emission	Limit	0ver	
Level	Factor	Loss	Factor	Level	Line	Limit	Remark
dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
47.69	33.78	4.46	38.73	47.20	74.00	-26.80	Peak
44.95	36.35	5.76	37.16	49.90	74.00	-24.10	Peak
41.05	37.69	6.53	34.17	51.10	74.00	-22.90	Peak
	Level dBuv 47.69 44.95	Level Factor dBuv dB/m 47.69 33.78 44.95 36.35	Level Factor Loss dBuv dB/m dB 47.69 33.78 4.46 44.95 36.35 5.76	Level Factor Loss Factor dBuv dB/m dB dB 47.69 33.78 4.46 38.73 44.95 36.35 5.76 37.16	Level Factor Loss Factor Level dBuv dB/m dB dB dBuv/m 47.69 33.78 4.46 38.73 47.20 44.95 36.35 5.76 37.16 49.90	Level Factor Loss Factor Level Line dBuv dB/m dB dB dBuv/m dBuv/m 47.69 33.78 4.46 38.73 47.20 74.00 44.95 36.35 5.76 37.16 49.90 74.00	Read Antenna Cable Preamp Emission Limit Over Level Factor Loss Factor Level Line Limit dBuv dB/m dB dBuv/m dBuv/m dB 47.69 33.78 4.46 38.73 47.20 74.00 -26.80 44.95 36.35 5.76 37.16 49.90 74.00 -24.10 41.05 37.69 6.53 34.17 51.10 74.00 -22.90

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



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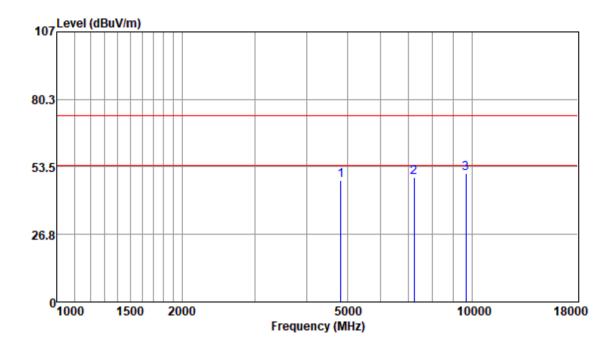
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Antenna Polarity : VERTICAL

Freq					Emission Level			Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
4824.00	48.69	33.78	4.46	38.73	48.20	74.00	-25.80	Peak
7236.00	44.55	36.35	5.76	37.16	49.50	74.00	-24.50	Peak
9648.00	40.85	37.69	6.53	34.17	50.90	74.00	-23.10	Peak

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



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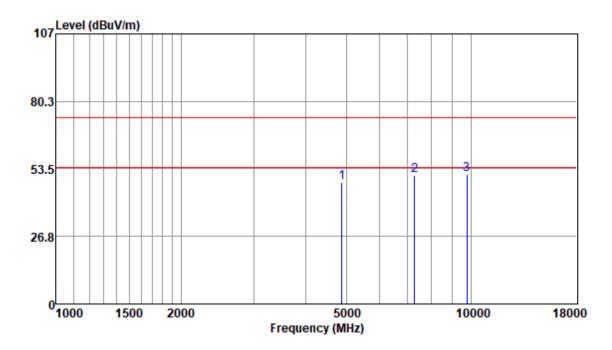
NO.588 West Jindu Road, Songjiang District, Shanghai, China 201612 中国・上海・松江区金都西路588号 邮编: 201612 $\begin{array}{lll} \mbox{t(86-21) 61915666} & \mbox{f(86-21) 61915678} & \mbox{www.sgsgroup.com.cn} \\ \mbox{t(86-21) 61915666} & \mbox{f(86-21) 61915678} & \mbox{e sgs.china@sgs.com} \end{array}$





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



Antenna Polarity : HORIZONTAL

Read	Antenna	Cable	Preamp	Emission	Limit	0ver	
Level	Factor	Loss	Factor	Level	Line	Limit	Remark
dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
48.68	33.93	4.47	38.78	48.30	74.00	-25.70	Peak
45.71	36.47	5.83	37.11	50.90	74.00	-23.10	Peak
41.17	37.68	6.50	34.15	51.20	74.00	-22.80	Peak
	Level dBuv 48.68 45.71	Level Factor dBuv dB/m 48.68 33.93 45.71 36.47	Level Factor Loss dBuv dB/m dB 48.68 33.93 4.47 45.71 36.47 5.83	Level Factor Loss Factor dBuv dB/m dB dB 48.68 33.93 4.47 38.78 45.71 36.47 5.83 37.11	Level Factor Loss Factor Level dBuv dB/m dB dB dBuv/m 48.68 33.93 4.47 38.78 48.30 45.71 36.47 5.83 37.11 50.90	Level Factor Loss Factor Level Line dBuv dB/m dB dB dBuv/m dBuv/m 48.68 33.93 4.47 38.78 48.30 74.00 45.71 36.47 5.83 37.11 50.90 74.00	Read Antenna Cable Preamp Emission Limit Over Level Factor Loss Factor Level Line Limit dBuv dB/m dB dBuv/m dBuv/m dB 48.68 33.93 4.47 38.78 48.30 74.00 -25.70 45.71 36.47 5.83 37.11 50.90 74.00 -23.10 41.17 37.68 6.50 34.15 51.20 74.00 -22.80

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



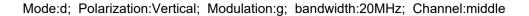
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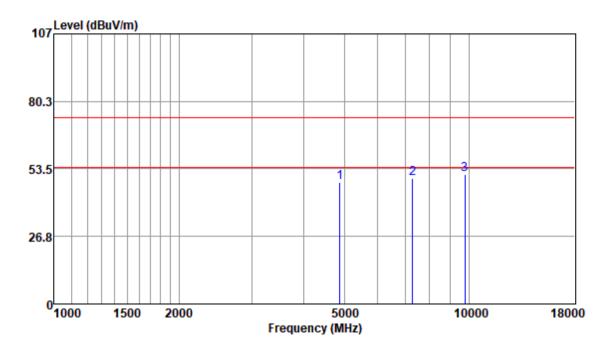
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Antenna Polarity : VERTICAL

Read	Antenna	Cable	Preamp	Emission	Limit	0ver	
Level	Factor	Loss	Factor	Level	Line	Limit	Remark
dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
48.68	33.93	4.47	38.78	48.30	74.00	-25.70	Peak
44.71	36.47	5.83	37.11	49.90	74.00	-24.10	Peak
41.27	37.68	6.50	34.15	51.30	74.00	-22.70	Peak
	Level dBuv 48.68 44.71	Level Factor dBuv dB/m 48.68 33.93 44.71 36.47	Level Factor Loss dBuv dB/m dB 48.68 33.93 4.47 44.71 36.47 5.83	Level Factor Loss Factor dBuv dB/m dB dB 48.68 33.93 4.47 38.78 44.71 36.47 5.83 37.11	Level Factor Loss Factor Level dBuv dB/m dB dB dBuv/m 48.68 33.93 4.47 38.78 48.30 44.71 36.47 5.83 37.11 49.90	Level Factor Loss Factor Level Line dBuv dB/m dB dB dBuv/m dBuv/m 48.68 33.93 4.47 38.78 48.30 74.00 44.71 36.47 5.83 37.11 49.90 74.00	Read Antenna Cable Preamp Emission Limit Over Level Factor Loss Factor Level Line Limit dBuv dB/m dB dBuv/m dBuv/m dB 48.68 33.93 4.47 38.78 48.30 74.00 -25.70 44.71 36.47 5.83 37.11 49.90 74.00 -24.10 41.27 37.68 6.50 34.15 51.30 74.00 -22.70

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



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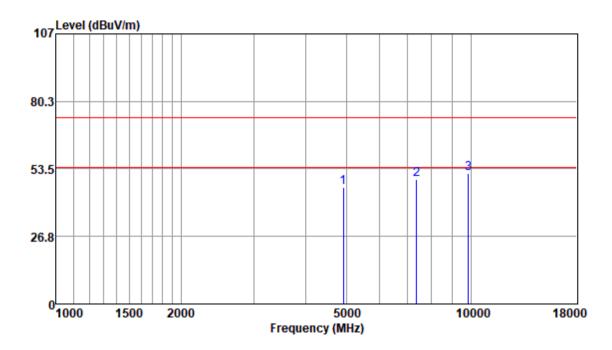
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Mode:d; Polarization:Horizontal; Modulation:g; bandwidth:20MHz; Channel:High



Antenna Polarity : HORIZONTAL

Read	Antenna	Cable	Preamp	Emission	Limit	0ver	
Level	Factor	Loss	Factor	Level	Line	Limit	Remark
dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
46.57	33.98	4.48	38.83	46.20	74.00	-27.80	Peak
43.96	36.48	5.92	37.06	49.30	74.00	-24.70	Peak
41.78	37.56	6.49	34.13	51.70	74.00	-22.30	Peak
	dBuv 46.57 43.96	Level Factor dBuv dB/m 46.57 33.98 43.96 36.48	Level Factor Loss dBuv dB/m dB 46.57 33.98 4.48 43.96 36.48 5.92	Level Factor Loss Factor dBuv dB/m dB dB 46.57 33.98 4.48 38.83 43.96 36.48 5.92 37.06	Level Factor Loss Factor Level dBuv dB/m dB dB dBuv/m 46.57 33.98 4.48 38.83 46.20 43.96 36.48 5.92 37.06 49.30	Level Factor Loss Factor Level Line dBuv dB/m dB dB dBuv/m dBuv/m 46.57 33.98 4.48 38.83 46.20 74.00 43.96 36.48 5.92 37.06 49.30 74.00	Read Antenna Cable Preamp Emission Limit Over Level Factor Loss Factor Level Line Limit dBuv dB/m dB dBuv/m dBuv/m dBuv/m dB 46.57 33.98 4.48 38.83 46.20 74.00 -27.80 43.96 36.48 5.92 37.06 49.30 74.00 -24.70 41.78 37.56 6.49 34.13 51.70 74.00 -22.30

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



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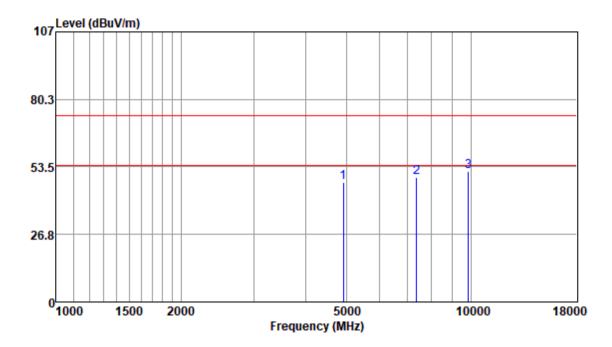
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Antenna Polarity : VERTICAL

	Read	Antenna	Cable	Preamp	Emission	Limit	0ver	
Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
4924.00	47.67	33.98	4.48	38.83	47.30	74.00	-26.70	Peak
7386.00	44.16	36.48	5.92	37.06	49.50	74.00	-24.50	Peak
9848.00	41.78	37.56	6.49	34.13	51.70	74.00	-22.30	Peak

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



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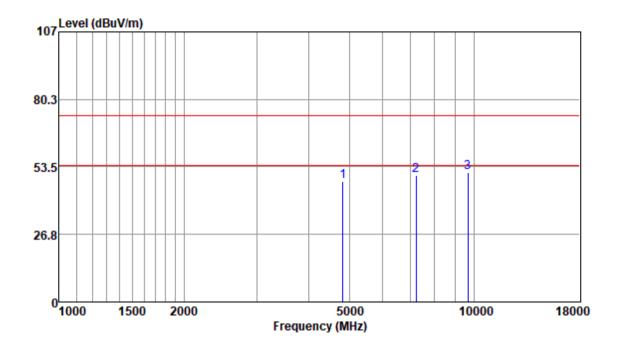
NO.588 West Jindu Road, Songjiang District, Shanghai, China 201612 中国・上海・松江区金都西路588号 邮編: 201612 $\begin{array}{lll} \mbox{t(86-21) 61915666} & \mbox{f(86-21) 61915678} & \mbox{www.sgsgroup.com.cn} \\ \mbox{t(86-21) 61915666} & \mbox{f(86-21) 61915678} & \mbox{e sgs.china@sgs.com} \end{array}$





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



Antenna Polarity : HORIZONTAL

Read	Antenna	Cable	Preamp	Emission	Limit	0ver	
Level	Factor	Loss	Factor	Level	Line	Limit	Remark
dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
48.39	33.78	4.46	38.73	47.90	74.00	-26.10	Peak
45.35	36.35	5.76	37.16	50.30	74.00	-23.70	Peak
41.45	37.69	6.53	34.17	51.50	74.00	-22.50	Peak
	dBuv 48.39 45.35	Level Factor dBuv dB/m 48.39 33.78 45.35 36.35	Level Factor Loss dBuv dB/m dB 48.39 33.78 4.46 45.35 36.35 5.76	Level Factor Loss Factor dBuv dB/m dB dB 48.39 33.78 4.46 38.73 45.35 36.35 5.76 37.16	Level Factor Loss Factor Level dBuv dB/m dB dB dBuv/m 48.39 33.78 4.46 38.73 47.90 45.35 36.35 5.76 37.16 50.30	Level Factor Loss Factor Level Line dBuv dB/m dB dB dBuv/m dBuv/m 48.39 33.78 4.46 38.73 47.90 74.00 45.35 36.35 5.76 37.16 50.30 74.00	Read Antenna Cable Preamp Emission Limit Over Level Factor Level Line Limit dBuv dB/m dB dBuv/m dBuv/m dB 48.39 33.78 4.46 38.73 47.90 74.00 -26.10 45.35 36.35 5.76 37.16 50.30 74.00 -23.70 41.45 37.69 6.53 34.17 51.50 74.00 -22.50

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



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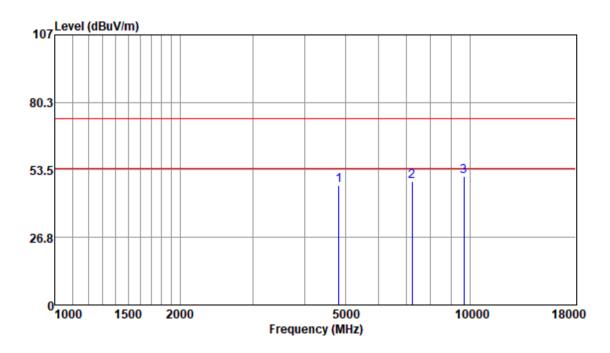
NO.588 West Jindu Road, Songjiang District, Shanghai, China 201612 中国・上海・松江区金都西路588号 邮编: 201612 $\begin{array}{lll} t(86\text{--}21)\, 61915666 & f(86\text{--}21)\, 61915678 & \text{www.sgsgroup.com.cn} \\ t(86\text{--}21)\, 61915666 & f(86\text{--}21)\, 61915678 & \text{e.sgs.china@sgs.com} \end{array}$





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Antenna Polarity : VERTICAL

Freq					Emission Level			Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
4824.00	47.79	33.78	4.46	38.73	47.30	74.00	-26.70	Peak
7236.00	43.95	36.35	5.76	37.16	48.90	74.00	-25.10	Peak
9648.00	40.85	37.69	6.53	34.17	50.90	74.00	-23.10	Peak

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



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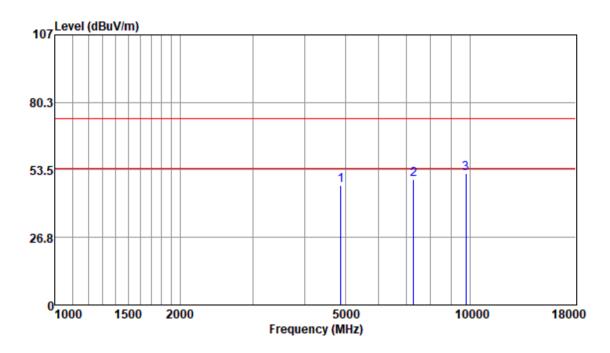
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Mode:d; Polarization:Horizontal; Modulation:n; bandwidth:20MHz; Channel:middle



Antenna Polarity : HORIZONTAL

Read	Antenna	Cable	Preamp	Emission	Limit	0ver	
Level	Factor	Loss	Factor	Level	Line	Limit	Remark
dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
47.88	33.93	4.47	38.78	47.50	74.00	-26.50	Peak
44.41	36.47	5.83	37.11	49.60	74.00	-24.40	Peak
42.17	37.68	6.50	34.15	52.20	74.00	-21.80	Peak
	Level dBuv 47.88 44.41	Level Factor dBuv dB/m 47.88 33.93 44.41 36.47	Level Factor Loss dBuv dB/m dB 47.88 33.93 4.47 44.41 36.47 5.83	Level Factor Loss Factor dBuv dB/m dB dB 47.88 33.93 4.47 38.78 44.41 36.47 5.83 37.11	Level Factor Loss Factor Level dBuv dB/m dB dB dBuv/m 47.88 33.93 4.47 38.78 47.50 44.41 36.47 5.83 37.11 49.60	Level Factor Loss Factor Level Line dBuv dB/m dB dB dBuv/m dBuv/m 47.88 33.93 4.47 38.78 47.50 74.00 44.41 36.47 5.83 37.11 49.60 74.00	Read Antenna Cable Preamp Emission Limit Over Level Factor Loss Factor Level Line Limit dBuv dB/m dB dB uv/m dBuv/m dB 47.88 33.93 4.47 38.78 47.50 74.00 -26.50 44.41 36.47 5.83 37.11 49.60 74.00 -24.40 42.17 37.68 6.50 34.15 52.20 74.00 -21.80

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



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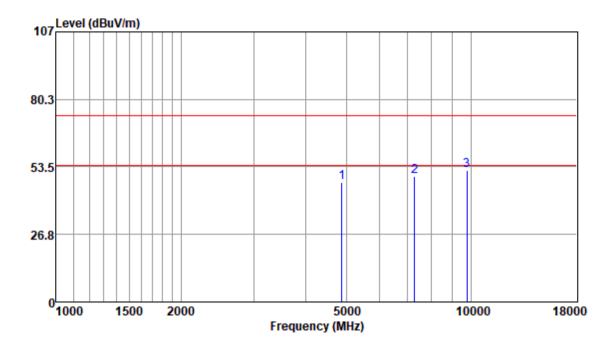
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Antenna Polarity : VERTICAL

Freq					Emission Level			Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
4874.00	47.68	33.93	4.47	38.78	47.30	74.00	-26.70	Peak
7311.00	44.61	36.47	5.83	37.11	49.80	74.00	-24.20	Peak
9748.00	42.07	37.68	6.50	34.15	52.10	74.00	-21.90	Peak

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



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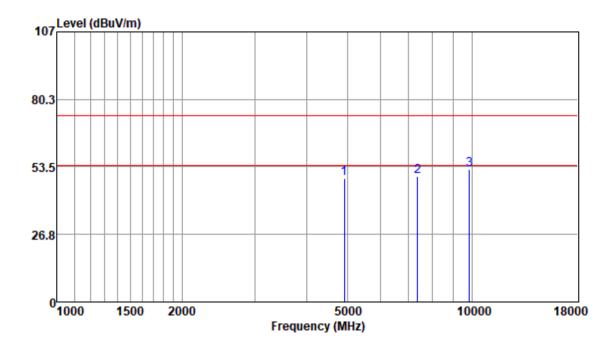
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Mode:d; Polarization:Horizontal; Modulation:n; bandwidth:20MHz; Channel:High



Antenna Polarity : HORIZONTAL

Read	Antenna	Cable	Preamp	Emission	Limit	0ver	
Level	Factor	Loss	Factor	Level	Line	Limit	Remark
dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
49.27	33.98	4.48	38.83	48.90	74.00	-25.10	Peak
44.46	36.48	5.92	37.06	49.80	74.00	-24.20	Peak
42.68	37.56	6.49	34.13	52.60	74.00	-21.40	Peak
	dBuv 49.27 44.46	Level Factor dBuv dB/m 49.27 33.98 44.46 36.48	Level Factor Loss dBuv dB/m dB 49.27 33.98 4.48 44.46 36.48 5.92	Level Factor Loss Factor dBuv dB/m dB dB 49.27 33.98 4.48 38.83 44.46 36.48 5.92 37.06	Level Factor Loss Factor Level dBuv dB/m dB dB dBuv/m 49.27 33.98 4.48 38.83 48.90 44.46 36.48 5.92 37.06 49.80	Level Factor Loss Factor Level Line dBuv dB/m dB dB dBuv/m dBuv/m 49.27 33.98 4.48 38.83 48.90 74.00 44.46 36.48 5.92 37.06 49.80 74.00	Read Antenna Cable Preamp Emission Limit Over Level Factor Loss Factor Level Line Limit dBuv dB/m dB dBuv/m dBuv/m dB 49.27 33.98 4.48 38.83 48.90 74.00 -25.10 44.46 36.48 5.92 37.06 49.80 74.00 -24.20 42.68 37.56 6.49 34.13 52.60 74.00 -21.40

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



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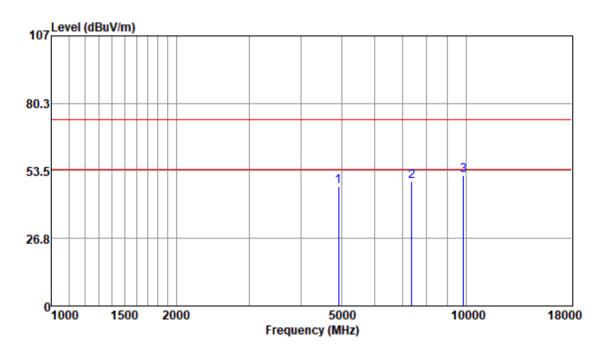
NO.588 West Jindu Road, Songjiang District, Shanghai, China 201612 中国・上海・松江区金都西路588号 邮編: 201612 $\begin{array}{lll} t(86\text{--}21)\, 61915666 & f(86\text{--}21)\, 61915678 & \text{www.sgsgroup.com.cn} \\ t(86\text{--}21)\, 61915666 & f(86\text{--}21)\, 61915678 & \text{e.sgs.china@sgs.com} \end{array}$





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



Antenna Polarity : VERTICAL

Freq					Emission Level			Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
4924.00	47.67	33.98	4.48	38.83	47.30	74.00	-26.70	Peak
7386.00	43.86	36.48	5.92	37.06	49.20	74.00	-24.80	Peak
9848.00	41.88	37.56	6.49	34.13	51.80	74.00	-22.20	Peak

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



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8 Test Setup Photographs

Refer to the < Test Setup photos-FCC>.

9 EUT Constructional Details

Refer to the < External Photos > & < Internal Photos >.

- End of the Report -



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