

Page:

Report No.: SHEM180400307901

1 of 169

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

Telephone: +86 (0) 21 6191 5666

Fax: +86 (0) 21 6191 5678

ee.shanghai@sgs.com

TEST REPORT

**Application No.**: SHEM1804003079CR **FCC ID:** 2ADTD-MP7608HN

Applicant: Hangzhou Hikvision Digital Technology Co., Ltd.

Address of Applicant: No.555 Qianmo Road, Binjiang District, Hangzhou 310052, China

Manufacturer: Hangzhou Hikvision Digital Technology Co., Ltd.

Address of Manufacturer: No. 555, Qianmo Road, Binjiang District, Hangzhou City, Zhejiang

Province, China

**Factory:** 1. Hangzhou Hikvision Technology Co., Ltd.

2. Hangzhou Hikvision Electronics Co., Ltd.

3, Hangzhou Hikvision Digital Technology Co., Ltd.

Address of Factory: 1. No.700, Dongliu Road, Binjiang District, Hangzhou City, Zhejiang, 310052,

China

2. No.299, Qiushi Road, Tonglu Economic Development Zone, Tonglu

County, Hangzhou, Zhejiang, 310052, China.

3, No. 555 Qianmo Road, Binjiang District, Hangzhou 310052, China

**Equipment Under Test (EUT):** 

EUT Name: Mobile Digital Video Recorder

Model No.: DS-MP7608HN/GW/WI58, DS-MP7608/GW/WI58, DS-MP7608H/GW/WI58,

DS-MP7608HN/GLF/WI58, DS-MP7608/GLF/WI58, DS-

MP7608H/GLF/WI58, DS-MP7YYY/AAA/BBBB, DS-MP7YYYN/AAA/BBBB,

DS-MP7YYYH/AAA/BBBB, DS-MP7YYYHN/AAA/BBBB

Please refer to section 2 of this report which indicates which model was

actually tested and which were electrically identical.

Trade mark: HIKVISION

Standard(s): 47 CFR Part 15, Subpart E 15.407

**Date of Receipt:** 2018-04-25

**Date of Test:** 2018-05-02 to 2018-06-01

**Date of Issue:** 2018-06-05

Test Result: Pass\*



Parlam Zhan E&E Section 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.

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions.aspx</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-and-Conditions.aspx</a> and, for electronic format documents, subject to Terms and Condition is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

<sup>\*</sup> In the configuration tested, the EUT complied with the standards specified above.



Report No.: SHEM180400307901

Page: 2 of 169

Revision Record			
Version	Description	Date	Remark
00	Original	2018-06-05	/

Authorized for issue by:		
	Vincent Zhu	
	Vincent Zhu / Project Engineer	
	Darlam Zhan	
	Parlam Zhan /Reviewer	



Report No.: SHEM180400307901

Page: 3 of 169

# 2 Test Summary

Radio Spectrum Technical Requirement				
Item	Standard	Method	Requirement	Result
Antenna Requirement	47 CFR Part 15, Subpart E 15.407	N/A	47 CFR Part 15, Subpart C 15.203	Customer Declaration
Transmission in the Absence of Data	47 CFR Part 15, Subpart E 15.407	N/A	47 CFR Part 15, Subpart C 15.407 (c)	Pass

N/A: Not applicable

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	N/A*	
99% Bandwidth	47 CFR Part 15, Subpart E 15.407	KDB 789033 II D	N/A	Pass	
26dB Emission bandwidth	47 CFR Part 15, Subpart E 15.407	KDB 789033 D02 II C 1	47 CFR Part 15, Subpart C 15.407 (a)	Pass	
Minimum 6 dB bandwidth (5.725- 5.85 GHz band )	47 CFR Part 15, Subpart E 15.407	KDB 789033 D02 II C 2	47 CFR Part 15, Subpart C 15.407 (e)	Pass	
Maximum Conducted output power	47 CFR Part 15, Subpart E 15.407	KDB 789033 D02 II E	47 CFR Part 15, Subpart C 15.407 (a)	Pass	
Peak Power spectrum density	47 CFR Part 15, Subpart E 15.407	KDB 789033 D02 II F	47 CFR Part 15, Subpart C 15.407 (a)	Pass	
Radiated Emissions	47 CFR Part 15, Subpart E 15.407	KDB 789033 D02 II G	47 CFR Part 15, Subpart C 15.209 & 15.407(b)	Pass	
Radiated Emissions which fall in the restricted bands	47 CFR Part 15, Subpart E 15.407	KDB 789033 D02 II G	47 CFR Part 15, Subpart C 15.209 & 15.407(b)	Pass	
Frequency Stability	47 CFR Part 15, Subpart E 15.407	ANSI C63.10 (2013) Section 6.8	47 CFR Part 15, Subpart C 15.407 (g)	Pass	

N/A\*: This EUT in working mode is powered by battery only; therefore the AC Conducted Emission test is not applicable.

#### **Declaration of EUT Family Grouping:**

Note1: There are series models mentioned in this report, and they are the identical in electrical and electronic characters. Only the model DS-MP7608HN/GW/WI58, DS-MP7608HN/GLF/WI58 was tested since their differences were the model number, trade name and appearance.

the model contains "GW" use the module of UC20: FCC ID: XMR201510UC20.(DS-MP7608HN/GW/WI58).

The model contains "GLF" use the module of ME909u-523: FCC ID:QISME909u-523.( DS-MP7608HN/GLF/WI58),

Note2: Only one model was shown as the test setup photos since all models were same for the test setup.

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions.aspx</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Document at <a href="http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized atteration, forgery or falsification of the content or appearance of this document is unlawful offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.



Report No.: SHEM180400307901

Page: 4 of 169

# 3 Contents

			Page
1	COVE	ER PAGE	1
2	TEST	SUMMARY	3
3	CONT	TENTS	4
4	GENE	ERAL INFORMATION	6
•			
		DETAILS OF E.U.T.	_
		DESCRIPTION OF SUPPORT UNITS	
		TEST LOCATION	
		TEST FACILITY	
		DEVIATION FROM STANDARDS	
		ABNORMALITIES FROM STANDARD CONDITIONS	
5		PMENT LIST	
6		O SPECTRUM TECHNICAL REQUIREMENT	
		ANTENNA REQUIREMENT	
	6.1.1	Test Requirement:	
	6.1.2	Conclusion	
		TRANSMISSION IN THE ABSENCE OF DATA	
	6.2.1	Test Requirement:	
	6.2.2		
7	RADIO	O SPECTRUM MATTER TEST RESULTS	11
	7.1	CONDUCTED EMISSIONS AT AC POWER LINE (150kHz-30MHz)	11
	7.1.1	,	
	7.1.2	Test Setup Diagram	
	7.1.3	Measurement Procedure and Data	
		99% BANDWIDTH	
	7.2.1	,	
	7.2.2	1 0	
	7.2.3 7.3 2		
		26DB EMISSION BANDWIDTH	
	7.3.1 7.3.2	E.U.T. Operation Test Setup Diagram	
	7.3.3		
		MINIMUM 6 DB BANDWIDTH (5.725-5.85 GHz BAND )	
	7.4.1	· · · · · · · · · · · · · · · · · · ·	
	7.4.2	Test Setup Diagram	
	7.4.3		
	7.5 N	MAXIMUM CONDUCTED OUTPUT POWER	
	7.5.1	E.U.T. Operation	16
	7.5.2	Test Setup Diagram	16
	7.5.3		
		PEAK POWER SPECTRUM DENSITY	
	7.6.1	E.U.T. Operation	
	7.6.2	Test Setup Diagram	
	7.6.3		
	7.7 F	RADIATED EMISSIONS	19



Report No.: SHEM180400307901

Page: 5 of 169

8 TE	ST SETUP PHOTOGRAPHS	169
7.9	9.3 Measurement Procedure and Data	168
7.9	9.2 Test Setup Diagram	168
7.9	9.1 E.U.T. Operation	168
7.9		
7.8	B.3 Measurement Procedure and Data	49
7.8	3.2 Test Setup Diagram	49
7.8	B.1 E.U.T. Operation	48
7.8	RADIATED EMISSIONS WHICH FALL IN THE RESTRICTED BANDS	48
7.7	7.3 Measurement Procedure and Data	20
7.7	7.2 Test Setup Diagram	
7.7	7.1 E.U.T. Operation	19



Report No.: SHEM180400307901

Page: 6 of 169

# 4 General Information

### 4.1 Details of E.U.T.

Power supply: DC 9V~32V by Battery

Test voltage: DC 24V

Operation Frequency: 5725-5850MHz

Antenna Gain Antenna 1:3.5 dBi, Antenna 2:3.5 dBi

Antenna Type Antenna 1:Monopole Antenna 2: Monopole Antenna

Modulation OFDM(256QAM, 64QAM, 16QAM, QPSK, BPSK)

Data Rate: 802.11a: 6/9/12/18/24/36/48/54Mbps

802.11n: MCS0-15 802.11ac: MCS0-9

Number of Channel: 802.11 a/n(HT20) /ac(HT20): 5 Channel 149, 153, 157, 161, 165

802.11 n(HT40) /ac(HT40): 2 Channel 151, 159

802.11 ac(HT80): 1 Channel 155

### 4.2 Description of Support Units

Description	Manufacturer	Model No.	Serial No.
Laptop	Lenovo	ThinkPad X100e	/
SecureCRT	VanDyke	V 6.2.0	1
Serial port adapter plate	/	Test Plate 3	/

### 4.3 Measurement Uncertainty

No.	Item	Measurement Uncertainty
1	Radio Frequency	7.25 x 10-8
2	Timeout	2s
3	Duty cycle	0.37%
4	Occupied Bandwidth	3%
5	RF conducted power	0.75dB
6	RF power density	2.84dB
7	Conducted Spurious emissions	0.75dB
8	DE Dadiated newer	4.5dB (Below 1GHz)
0	RF Radiated power	4.8dB (Above 1GHz)
		4.2dB (Below 30MHz)
9	Dadiated Caurious emission toot	4.4dB (30MHz-1GHz)
9	Radiated Spurious emission test	4.6dB (1GHz-18GHz)
		5.2dB (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.



Report No.: SHEM180400307901

Page: 7 of 169

#### 4.4 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. E&E Lab

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

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

No tests were sub-contracted.

### 4.5 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 17025:2005 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.

#### • NVLAP (Certificate No. 201034-0)

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. is accredited by the National Voluntary Laboratory Accreditation Program(NVLAP). Certificate No. 201034-0.

#### • FCC -Designation Number: CN5033

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

Designation Number: CN5033. Test Firm Registration Number: 479755.

#### • Industry Canada (IC) - IC Assigned Code: 8617A

The 3m Semi-anechoic chamber of SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 8617A-1.

#### VCCI (Member No.: 3061)

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

### 4.6 Deviation from Standards

None

#### 4.7 Abnormalities from Standard Conditions

None



Report No.: SHEM180400307901

Page: 8 of 169

# 5 Equipment List

Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
Conducted Test			, ,		
Spectrum Analyzer	R&S	FSP-30	SHEM002-1	2017-12-20	2018-12-19
Spectrum Analyzer	Agilent	N9020A	SHEM181-1	2017-09-26	2018-09-25
Power meter	R&S	NRP	SHEM057-1	2017-12-26	2018-12-25
Power Sensor	R&S	NRP-Z22	SHEM136-1	2017-07-22	2018-07-21
Power Sensor	R&S	NRP-Z91	SHEM057-2	2017-12-26	2018-12-25
Signal Generator	R&S	SMR40	SHEM058-1	2017-07-03	2018-07-02
Signal Generator	Agilent	N5182A	SHEM182-1	2017-09-26	2018-09-25
Communication Tester	R&S	CMW270	SHEM183-1	2017-10-22	2018-10-21
Switcher	Tonscend	JS0806	SHEM184-1	2017-09-26	2018-09-25
Splitter	Anritsu	MA1612A	SHEM185-1	/	/
Coupler	e-meca	803-S-1	SHEM186-1	/	/
High-low Temp Cabinet	Suzhou Zhihe	TL-40	SHEM087-1	2017-09-26	2018-09-25
AC Power Stabilizer	WOCEN	6100	SHEM045-1	2017-12-26	2018-12-25
DC Power Supply	QJE	QJ30003SII	SHEM046-1	2017-12-26	2018-12-25
Conducted test Cable	/	RF01, RF 02	/	2017-12-26	2018-12-25
Radiated Test					
EMI test receiver	R&S	ESU40	SHEM051-1	2017-12-20	2018-12-19
Spectrum Analyzer	R&S	FSP-30	SHEM002-1	2017-12-20	2018-12-19
Loop Antenna (9kHz-30MHz)	Schwarzbeck	FMZB1519	SHEM135-1	2017-04-10	2020-04-09
Antenna (25MHz-2GHz)	Schwarzbeck	VULB9168	SHEM048-1	2017-02-28	2020-02-27
Antenna (25MHz-3GHz)	Schwarzbeck	HL562	SHEM010-1	2017-02-28	2020-02-27
Horn Antenna (1-8GHz)	Schwarzbeck	HF906	SHEM009-1	2017-10-24	2020-10-23
Horn Antenna (1-18GHz)	Schwarzbeck	BBHA9120D	SHEM050-1	2017-01-14	2020-01-13
Horn Antenna (14-40GHz)	Schwarzbeck	BBHA 9170	SHEM049-1	2017-12-03	2020-12-02
Pre-amplifier (9KHz-2GHz)	CLAVIIO	LNA-0001-412010	SHEM164-1	2017-08-22	2018-08-21
Pre-amplifier (1-18GHz)	CLAVIIO	BDLNA-0118-352810	SHEM050-2	2017-08-22	2018-08-21
High-amplifier (14-40GHz)	Schwarzbeck	10001	SHEM049-2	2017-12-20	2018-12-19
Band filter	LORCH	9BRX-875/X150-SR	SHEM156-1	/	/
Band filter	LORCH	13BRX-1950/X500-SR	SHEM083-2	/	/
Band filter	LORCH	5BRX-2400/X200-SR	SHEM155-1	/	/
Band filter	LORCH	5BRX-5500/X1000-SR	SHEM157-2	/	/
High pass Filter	Wainwright	WHK3.0/18G-100SS	SHEM157-1	/	/
High pass Filter	Wainwright	WHKS1700-3SS	SHEM157-3	/	/
Semi/Fully Anechoic	ST	11*6*6M	SHEM078-2	2017-07-22	2020-07-21
RE test Cable	/	RE01, RE02, RE06	/	2017-12-26	2018-12-25



Report No.: SHEM180400307901

Page: 9 of 169

# 6 Radio Spectrum Technical Requirement

### 6.1 Antenna Requirement

### 6.1.1 Test Requirement:

47 CFR Part 15, Subpart C 15.203

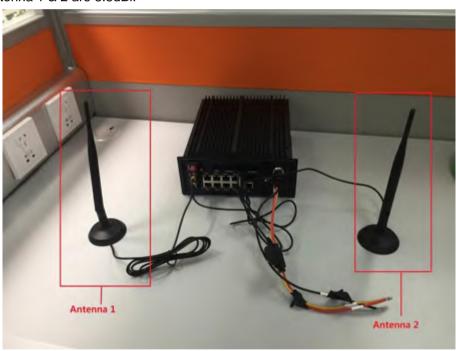
#### 6.1.2 Conclusion

#### 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 antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit permanently attached antenna or of an so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

#### **EUT Antenna:**

The antenna 1 & 2 are monopole antenna and no consideration of replacement. The best case gain of the antenna 1 & 2 are 3.5dBi.





Report No.: SHEM180400307901

Page: 10 of 169

#### 6.2 Transmission in the Absence of Data

### 6.2.1 Test Requirement:

47 CFR Part 15, Subpart C 15.407 (c)

#### 6.2.2 Conclusion

### Standard Requirement:

The device shall automatically discontinue transmission in case of either absence of information to transmit or operational failure. These provisions are not intended to preclude the transmission of control or signalling information or the use of repetitive codes used by certain digital technologies to complete frame or burst intervals.

Applicants shall include in their application for equipment authorization a description of how this requirement is met.

#### **EUT Details:**

WIFI chip (RTL8812AU-VS) support automatically discontinue transmission in case of either absence of information to transmit or operational failure, if the chip detect absence of information to transmit or operational failure, it will be automatically shut off.



Report No.: SHEM180400307901

Page: 11 of 169

# 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

I imit

	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.			

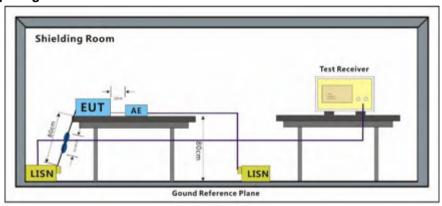
### 7.1.1 E.U.T. Operation

Operating Environment:

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

Test mode N/A

### 7.1.2 Test Setup Diagram





Report No.: SHEM180400307901

Page: 12 of 169

#### 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 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

Note: This EUT in working mode is powered by battery only; therefore the AC Conducted Emission test is not applicable.



Report No.: SHEM180400307901

Page: 13 of 169

#### 7.2 99% Bandwidth

Test Requirement N/A

Test Method: KDB 789033 II D

#### 7.2.1 E.U.T. Operation

Operating Environment:

Temperature: 21 °C Humidity: 45 % RH Atmospheric Pressure: 1010 mbar

Test mode a: Engineering Mode\_Using test software to control EUT working in continuous

transmitting and select channel and modulation type. (For: DS-

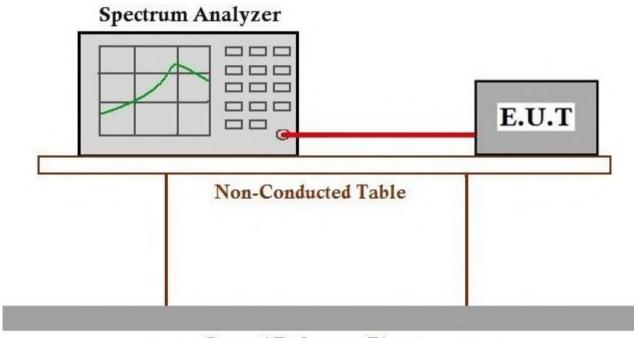
MP7608HN/GW/WI58 Antenna 1)

c: Engineering Mode\_Using test software to control EUT working in continuous

transmitting and select channel and modulation type. (For: DS-

MP7608HN/GW/WI58 Antenna 2)

#### 7.2.2 Test Setup Diagram



### Ground Reference Plane

### 7.2.3 Measurement Procedure and Data



Report No.: SHEM180400307901

Page: 14 of 169

### 7.3 26dB Emission bandwidth

Test Requirement 47 CFR Part 15, Subpart C 15.407 (a)

Test Method: KDB 789033 D02 II C 1

#### 7.3.1 E.U.T. Operation

Operating Environment:

Temperature: 21 °C Humidity: 45 % RH Atmospheric Pressure: 1010 mbar

Test mode a: Engineering Mode\_Using test software to control EUT working in continuous

transmitting and select channel and modulation type. (For: DS-

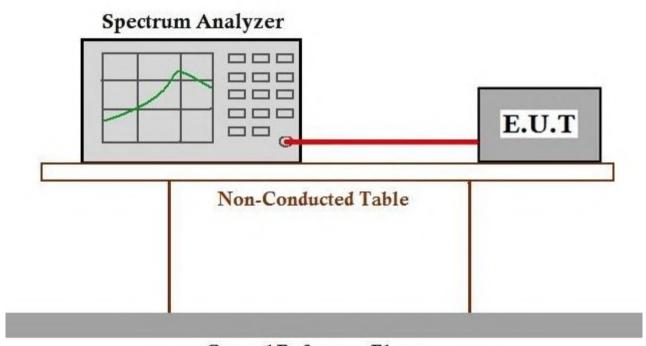
MP7608HN/GW/WI58 Antenna 1)

c: Engineering Mode\_Using test software to control EUT working in continuous

transmitting and select channel and modulation type.(For: DS-

MP7608HN/GW/WI58 Antenna 2)

### 7.3.2 Test Setup Diagram



### **Ground Reference Plane**

### 7.3.3 Measurement Procedure and Data



Report No.: SHEM180400307901

Page: 15 of 169

### 7.4 Minimum 6 dB bandwidth (5.725-5.85 GHz band )

Test Requirement 47 CFR Part 15, Subpart C 15.407 (e)

Test Method: KDB 789033 D02 II C 2

Limit: ≥500 kHz

### 7.4.1 E.U.T. Operation

Operating Environment:

Temperature: 21 °C Humidity: 45 % RH Atmospheric Pressure: 1010 mbar

Test mode a: Engineering Mode\_Using test software to control EUT working in continuous

transmitting and select channel and modulation type.(For: DS-

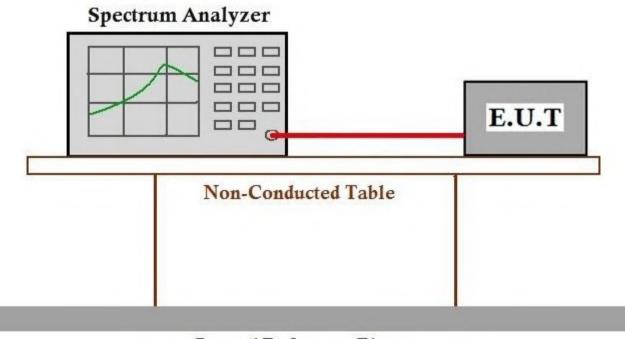
MP7608HN/GW/WI58 Antenna 1)

c: Engineering Mode\_Using test software to control EUT working in continuous

transmitting and select channel and modulation type.(For: DS-

MP7608HN/GW/WI58 Antenna 2)

#### 7.4.2 Test Setup Diagram



### Ground Reference Plane

#### 7.4.3 Measurement Procedure and Data



Report No.: SHEM180400307901

Page: 16 of 169

### 7.5 Maximum Conducted output power

Test Requirement 47 CFR Part 15, Subpart C 15.407 (a)

Test Method: KDB 789033 D02 II E

Limit:

Frequency band(MHz)	Limit
F1F0 F2F0	≤1W(30dBm) for master device
5150-5250	≤250mW(24dBm) for client device
5250-5350	≤250mW(24dBm) for client device or 11dBm+10logB*
5470-5725	≤250mW(24dBm) for client device or 11dBm+10logB*
5725-5850	≤1W(30dBm)

Remark: \*Where B is the 26dB emission bandwidth in MHz.

The maximum conducted output power must be measured over any interval of continuous transmission using instrumentation calibrated in terms of an rms-equivalent voltage.

### 7.5.1 E.U.T. Operation

Operating Environment:

Temperature: 21 °C Humidity: 45 % RH Atmospheric Pressure: 1010 mbar

Test mode a: Engineering Mode\_Using test software to control EUT working in continuous

transmitting and select channel and modulation type.(For: DS-

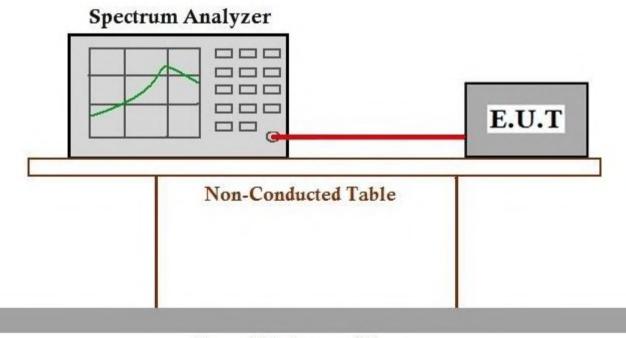
MP7608HN/GW/WI58 Antenna 1)

c: Engineering Mode Using test software to control EUT working in continuous

transmitting and select channel and modulation type.(For: DS-

MP7608HN/GW/WI58 Antenna 2)

### 7.5.2 Test Setup Diagram



### Ground Reference Plane

#### 7.5.3 Measurement Procedure and Data

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions.aspx</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx</a>. Attention is drawn to the limitation of liability, indeminification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.



Report No.: SHEM180400307901

Page: 17 of 169



Report No.: SHEM180400307901

Page: 18 of 169

### 7.6 Peak Power spectrum density

Test Requirement 47 CFR Part 15, Subpart C 15.407 (a)

Test Method: KDB 789033 D02 II F

Limit:

Frequency band(MHz)	Limit
F1F0 F2F0	≤17dBm in 1MHz for master device
5150-5250	≤11dBm in 1MHz for client device
5250-5350	≤11dBm in 1MHz for client device
5470-5725	≤11dBm in 1MHz for client device
5725-5850	≤30dBm in 500 kHz

Remark: The maximum power spectral density is measured as a conducted emission by direct connection of a calibrated test instrument to the equipment under test.

### 7.6.1 E.U.T. Operation

**Operating Environment:** 

Temperature: 21 °C Humidity: 45 % RH Atmospheric Pressure: 1010 mbar

Test mode a: Engineering Mode\_Using test software to control EUT working in continuous

transmitting and select channel and modulation type.(For: DS-

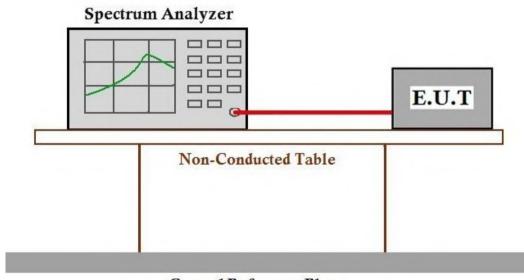
MP7608HN/GW/WI58 Antenna 1)

c: Engineering Mode\_Using test software to control EUT working in continuous

transmitting and select channel and modulation type.(For: DS-

MP7608HN/GW/WI58 Antenna 2)

### 7.6.2 Test Setup Diagram



Ground Reference Plane

#### 7.6.3 Measurement Procedure and Data



Report No.: SHEM180400307901

Page: 19 of 169

#### 7.7 Radiated Emissions

Test Requirement 47 CFR Part 15, Subpart C 15.209 & 15.407(b)

Test Method: KDB 789033 D02 II G

#### 7.7.1 E.U.T. Operation

Operating Environment:

Temperature: 21 °C Humidity: 45 % RH Atmospheric Pressure: 1010 mbar

Test mode a: Engineering Mode\_Using test software to control EUT working in continuous

transmitting and select channel and modulation type. (For: DS-

MP7608HN/GW/WI58 Antenna 1)

b: a: Engineering Mode\_Using test software to control EUT working in continuous

transmitting and select channel and modulation type. (For: DS-

MP7608HN/GLF/WI58 Antenna 1)

c: Engineering Mode\_Using test software to control EUT working in continuous

transmitting and select channel and modulation type. (For: DS-

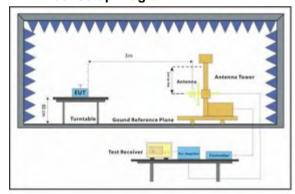
MP7608HN/GW/WI58 Antenna 2)

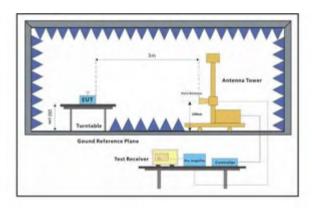
d: a: Engineering Mode\_Using test software to control EUT working in continuous

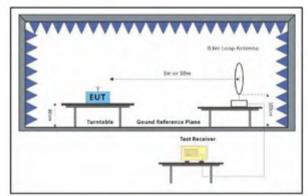
transmitting and select channel and modulation type. (For: DS-

MP7608HN/GLF/WI58 Antenna 2)

#### 7.7.2 Test Setup Diagram









Report No.: SHEM180400307901

Page: 20 of 169

#### 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.

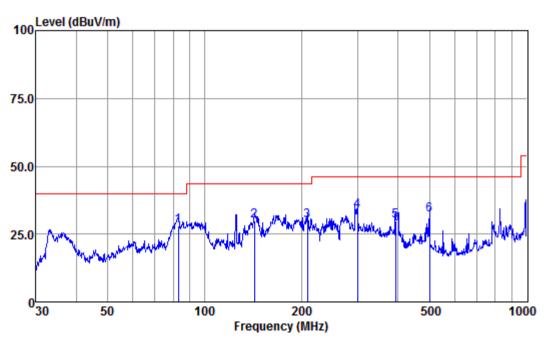
Remark: Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor



Report No.: SHEM180400307901

Page: 21 of 169

Below 1GHz: Mode: a



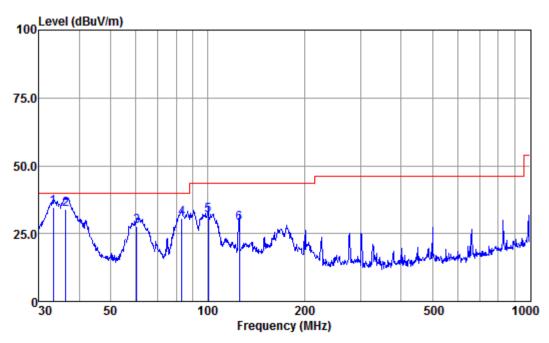
# Antenna Polarity : HORIZONTAL

		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	82.94	62.46	8.03	0.39	42.68	28.20	40.00	-11.80	QP
2	142.82	60.48	11.48	0.61	42.63	29.94	43.50	-13.56	QP
3	209.31	61.98	9.83	0.71	42.51	30.01	43.50	-13.49	QP
4	299.32	62.00	13.17	0.84	42.40	33.61	46.00	-12.39	QP
5	392.10	56.15	14.96	0.98	42.12	29.97	46.00	-16.03	QP
6	501.18	55.90	17.24	1.18	42.14	32.18	46.00	-13.82	QP



Report No.: SHEM180400307901

Page: 22 of 169



### Antenna Polarity : VERTICAL

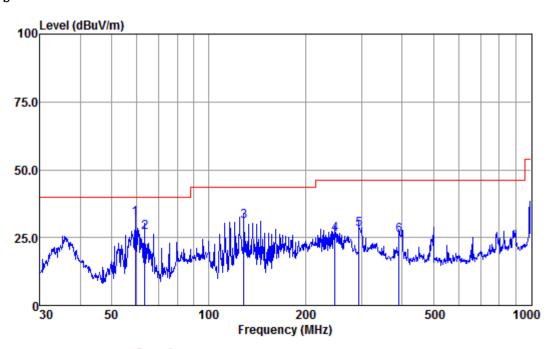
		Read	Antenna	Cable	Preamp	Emission	Limit	0ver	
	Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Remark
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	33.21	61.55	15.65	0.20	42.61	34.79	40.00	-5.21	QP
2	36.38	60.48	15.97	0.21	42.62	34.04	40.00	-5.96	QP
3	60.49	57.42	12.55	0.30	42.65	27.62	40.00	-12.38	QP
4	83.23	64.74	8.03	0.39	42.68	30.48	40.00	-9.52	QP
5	100.58	64.34	9.51	0.45	42.69	31.61	43.50	-11.89	QP
6	125.89	59.02	11.70	0.56	42.67	28.61	43.50	-14.89	QP



Report No.: SHEM180400307901

Page: 23 of 169

#### Mode: b



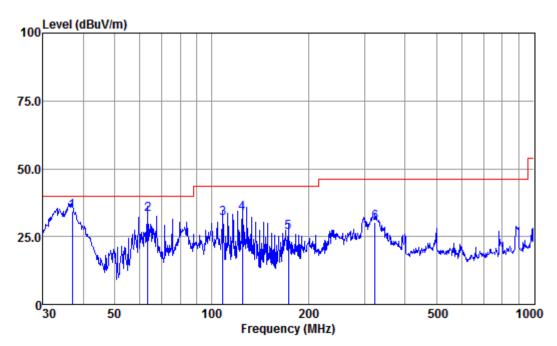
### Antenna Polarity : HORIZONTAL

		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	59.23	61.97	12.45	0.30	42.65	32.07	40.00	-7.93	QP
2	63.54	57.30	12.16	0.31	42.66	27.11	40.00	-12.89	QP
3	129.01	60.56	12.56	0.58	42.66	31.04	43.50	-12.46	QP
4	247.68	56.55	11.40	0.77	42.46	26.26	46.00	-19.74	QP
5	293.08	56.67	12.97	0.83	42.41	28.06	46.00	-17.94	QP
6	390.72	52.20	14.94	0.98	42.12	26.00	46.00	-20.00	QP



Report No.: SHEM180400307901

Page: 24 of 169



# Antenna Polarity : VERTICAL

		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	37.02	60.87	16.03	0.21	42.62	34.49	40.00	-5.51	QP
2	63.54	63.52	12.16	0.31	42.66	33.33	40.00	-6.67	QP
3	108.65	64.22	9.59	0.49	42.70	31.60	43.50	-11.90	QP
4	125.01	64.38	11.46	0.55	42.67	33.72	43.50	-9.78	QP
5	173.81	56.84	11.71	0.65	42.57	26.63	43.50	-16.87	QР
6	322.19	57.94	13.66	0.88	42.33	30.15	46.00	-15.85	ŌΡ



Report No.: SHEM180400307901

Page: 25 of 169

Above	1	G	Н	7
ADO VE	- 1	J		_

Mode:a; Polarization:Horizontal; Modulation:a; bandwidth:20MHz; Channel:Lov										
Frequency	$RX_R$	Factor	Emission	Limit	Margin	Detector				
MHz	dBuV	dB	dBuV/m	dBuV/m	dB					
11490	33.71	14.41	48.12	54	-5.88	peak				
17235	25.81	22.57	48.38	68.2	-19.82	peak				
22980	24.15	24.45	48.60	54	-5.40	peak				

Mode:a; Pol	arization:\	/ertical; Mo	dulation:a;	bandwidth:2	20MHz; Ch	annel:Low
Frequency	RX_R	Factor	Emission	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
11490	32.12	14.41	46.53	54	-7.47	peak
17235	29.50	22.57	52.07	68.2	-16.13	peak
22980	27.95	24.45	52.40	54	-1.60	peak

Mode:a;	Polari	zation:Hor	izontal; Mo	odulation:a;	bandwidth:	:20MHz;	Channel:middle
Frequen	icy F	RX_R	Factor I	Emission	Limit	Margin	Detector
MHz	C	dBuV	dB	dBuV/m	dBuV/m	dB	
11570	) 3	34.94	14.25	49.19	54	-4.81	peak
17355	5 2	25.45	21.86	47.31	68.2	-20.89	peak
23140	) 2	27.55	24.68	52.23	68.2	-15.97	peak

Mode:a; Polarization:Vertical; Modulation:a; bandwidth:20MHz; Channel:middle											
Frequency	$RX_R$	Factor	Emission	Limit	Margin	Detector					
MHz	dBuV	dB	dBuV/m	dBuV/m	dB						
11570	32.59	14.25	46.84	54	-7.16	peak					
17355	28.97	21.86	50.83	68.2	-17.37	peak					
23140	24.59	24.68	49.27	68.2	-18.93	peak					

Mode:a; Pola	arization:l	bandwid	dth:20MHz;	Channel:High		
Frequency	$RX_R$	Factor	Emission	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
11650	30.90	14.06	44.96	54	-9.04	peak
17475	25.51	21.15	46.66	68.2	-21.54	peak
23300	26.30	25.11	51.41	68.2	-16.79	peak



Report No.: SHEM180400307901

Page: 26 of 169

Mode:a; Polarization:Vertical; Modulation:a; bandwidth:20MHz; Channel:High										
Frequency	$RX_R$	Factor	Emission	Limit	Margin	Detector				
MHz	dBuV	dB	dBuV/m	dBuV/m	dB					
11650	32.06	14.06	46.12	54	-7.88	peak				
17475	28.83	21.15	49.98	68.2	-18.22	peak				
23300	24.31	25.11	49.42	68.2	-18.78	peak				

Mode:a; Pola	arization:l	Horizontal;	Modulation:n	; bandwid	th:20MHz;	Channel:Low
Frequency	$RX_R$	Factor	Emission	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
11490	31.45	14.41	45.86	54	-8.14	peak
17235	29.81	22.57	52.38	68.2	-15.82	peak
22980	27.36	24.45	51.81	54	-2.19	peak

Mode:a; Polarization:Vertical; Modulation:n; bandwidth:20MHz; Channel:Low								
Frequency	$RX_R$	Factor	Emission	Limit	Margin	Detector		
MHz	dBuV	dB	dBuV/m	dBuV/m	dB			
11490	32.60	14.41	47.01	54	-6.99	peak		
17235	27.06	22.57	49.63	68.2	-18.57	peak		
22980	26.27	24.45	50.72	54	-3.28	peak		

Mode:a; Po	larization:F	lorizontal;	Modulation:n;	bandwid	lth:20MHz;	Channel:middle
Frequency	$RX_R$	Factor	Emission	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
11570	32.16	14.25	46.41	54	-7.59	peak
17355	26.65	21.86	48.51	68.2	-19.69	peak
23140	24.89	24.68	49.57	68.2	-18.63	peak

Mode:a; Polarization:Vertical; Modulation:n; bandwidth:20MHz; Channel:middle Frequency RX\_R Factor **Emission** Limit Margin Detector MHz dBuV dB dBuV/m dBuV/m dΒ 11570 32.36 14.25 46.61 54 -7.39 peak 17355 30.18 21.86 52.04 -16.16 68.2 peak 23140 28.21 24.68 52.89 68.2 -15.31 peak



Report No.: SHEM180400307901

Page: 27 of 169

Mode:a; Po	larization:H	lorizontal;	Modulation:n;	bandwid	lth:20MHz;	Channel:High
Frequency	RX_R	Factor	Emission	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
11650	33.44	14.06	47.50	54	-6.50	peak
17475	29.12	21.15	50.27	68.2	-17.93	peak
23300	27.25	25.11	52.36	68.2	-15.84	peak

Mode:a; Polarization:Vertical; Modulation:n; bandwidth:20MHz; Channel:High							
Frequency	$RX_R$	Factor	Emission	Limit	Margin	Detector	
MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
11650	34.15	14.06	48.21	54	-5.79	peak	
17475	28.11	21.15	49.26	68.2	-18.94	peak	
23300	29.99	25.11	55.10	68.2	-13.10	peak	

Mode:a; Pol	arization:F	lorizontal;	Modulation:n;	bandwid	th:40MHz;	Channel:Low
Frequency	$RX_R$	Factor	Emission	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
11510	30.57	14.40	44.97	54	-9.03	peak
17265	27.62	22.40	50.02	68.2	-18.18	peak
23020	26.84	24.68	51.52	54	-2.48	peak

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

Frequency	$RX_R$	Factor	Emission	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
11510	35.16	14.40	49.56	54	-4.44	peak
17265	28.60	22.40	51.00	68.2	-17.20	peak
23020	27.24	24.68	51.92	54	-2.08	peak

Mode:a; Pola	arization:ŀ	Horizontal;	Modulation:n;	bandwid	lth:40MHz;	Channel:High
Frequency	$RX_R$	Factor	Emission	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
11590	32.06	14.20	46.26	54	-7.74	peak
17385	27.17	21.68	48.85	68.2	-19.35	peak
23180	27.65	24.72	52.37	68.2	-15.83	peak



Report No.: SHEM180400307901

Page: 28 of 169

Mode:a; Pol	arization:\	/ertical; Mo	bandwidth:4	40MHz; Ch	annel:High	
Frequency	$RX_R$	Factor	Emission	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
11590	32.64	14.20	46.84	54	-7.16	peak
17385	30.25	21.68	51.93	68.2	-16.27	peak
23180	29.36	24.72	54.08	68.2	-14.12	peak

Mode:a; Pol	arization:H	Horizontal;	Modulation:c;	bandwid	th:20MHz;	Channel:Low
Frequency	RX_R	Factor	Emission	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
11490	31.83	14.41	46.24	54	-7.76	peak
17235	28.60	22.57	51.17	68.2	-17.03	peak
22980	29.32	24.45	53.77	54	-0.23	peak

Mode:a; Polarization:Vertical; Modulation:c; bandwidth:20MHz; Channel:Low							
Frequency	$RX_R$	Factor	Emission	Limit	Margin	Detector	
MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
11490	33.52	14.41	47.93	54	-6.07	peak	
17235	27.36	22.57	49.93	68.2	-18.27	peak	
22980	27.34	24.45	51.79	54	-2.21	peak	

Mode:a; Pola	arization:H	Horizontal;	Modulation:c;	bandwid	lth:20MHz;	Channel:middle
Frequency	$RX_R$	Factor	Emission	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
11570	35.58	14.25	49.83	54	-4.17	peak
17355	28.16	21.86	50.02	68.2	-18.18	peak
23140	24.89	24.68	49.57	68.2	-18.63	peak

Mode:a; Polarization:Vertical; Modulation:c; bandwidth:20MHz; Channel:middle							
Frequency	$RX_R$	Factor	Emission	Limit	Margin	Detector	
MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
11570	35.23	14.25	49.48	54	-4.52	peak	
17355	31.06	21.86	52.92	68.2	-15.28	peak	
23140	29.93	24.68	54.61	68.2	-13.59	peak	



Report No.: SHEM180400307901

Page: 29 of 169

Mode:a; Po	olarization:H	lorizontal;	Modulation:c	; bandwid	th:20MHz;	Channel:High
Frequency	RX_R	Factor	Emission	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
11650	32.63	14.06	46.69	54	-7.31	peak
17475	27.88	21.15	49.03	68.2	-19.17	peak
23300	26.49	25.11	51.60	68.2	-16.60	peak

Mode:a; Polarization:Vertical; Modulation:c;				bandwidth:2	20MHz; Ch	annel:High
Frequency	RX_R	Factor	Emission	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
11650	33.34	14.06	47.40	54	-6.60	peak
17475	26.62	21.15	47.77	68.2	-20.43	peak
23300	26.58	25.11	51.69	68.2	-16.51	peak

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

Frequency	RX_R	Factor	Emission	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
11510	33.97	14.40	48.37	54	-5.63	peak
17265	28.46	22.40	50.86	68.2	-17.34	peak
23020	30.93	24.68	55.61	54	1.61	peak

Mode:a; Polarization:Vertical; Modulation:c; bandwidth:40MHz; Channel:L							
Frequency	$RX_R$	Factor	Emission	Limit	Margin	Detector	
MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
11510	34.75	14.40	49.15	54	-4.85	peak	
17265	26.14	22.40	48.54	68.2	-19.66	peak	
23020	23.84	24.68	48.52	54	-5.48	peak	

Mode:a; Pol	arization:F	Horizontal;	Modulation:	; bandwid	th:40MHz;	Channel:High
Frequency	$RX_R$	Factor	Emission	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
11590	35.46	14.20	49.66	54	-4.34	peak
17385	30.45	21.68	52.13	68.2	-16.07	peak
23180	26.03	24.72	50.75	68.2	-17.45	peak



Report No.: SHEM180400307901

Page: 30 of 169

Mode:a; Pola	arization:\	/ertical; Mo	dulation:c;	bandwidth:4	10MHz; Ch	annel:High
Frequency	$RX_R$	Factor	Emission	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
11590	33.08	14.20	47.28	54	-6.72	peak
17385	26.19	21.68	47.87	68.2	-20.33	peak
23180	24.64	24.72	49.36	68.2	-18.84	peak

Mode:a; Polarization:Horizontal;			Modulation:c;	bandwid	th:80MHz;	Channel:Low
Frequency	$RX_R$	Factor	Emission	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
11550	34.68	14.30	48.98	54	-5.02	peak
17325	29.90	22.04	51.94	68.2	-16.26	peak
23100	28.58	24.60	53.18	54	-0.82	peak

Mode:a; Po	larization:V	ertical; Mo	dulation:c;	bandwidth:8	30MHz; Ch	annel:Low
Frequency	$RX_R$	Factor	Emission	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
11550	31.63	14.30	45.93	54	-8.07	peak
17325	28.88	22.04	50.92	68.2	-17.28	peak
23100	24.86	24.60	49.46	54	-4.54	peak

Mode:b; F	Polarization:H	orizontal;	Modulation:a;	bandwid	th:20MHz;	Channel:Low
Frequenc	y RX_R	Factor	Emission	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
11490	36.45	14.41	50.86	54	-3.14	peak
17235	26.07	22.57	48.64	68.2	-19.56	peak
22980	24.49	24.45	48.94	54	-5.06	peak

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

Frequency	RX_R	Factor	Emission	Limit	Margin	Detector	
MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
11490	31.56	14.41	45.97	54	-8.03	peak	
17235	25.80	22.57	48.37	68.2	-19.83	peak	
22980	27.53	24.45	51.98	54	-2.02	peak	

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions.aspx</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Document at <a href="http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized atteration, forgery or falsification of the content or appearance of this document is unlawful offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.



Report No.: SHEM180400307901

Page: 31 of 169

Mode:b; Pola	arization:ŀ	Horizontal;	Modulation:a	; bandwid	th:20MHz;	Channel:middle
Frequency	$RX_R$	Factor	Emission	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
11570	33.25	14.25	47.50	54	-6.50	peak
17355	28.22	21.86	50.08	68.2	-18.12	peak
23140	25.76	24.68	50.44	68.2	-17.76	peak

Mode:b; Polarization:Vertical; Modulation:a; bandwidth:20MHz; Channel:middle								
Frequency	$RX_R$	Factor	Emission	Limit	Margin	Detector		
MHz	dBuV	dB	dBuV/m	dBuV/m	dB			
11570	32.19	14.25	46.44	54	-7.56	peak		
17355	28.13	21.86	49.99	68.2	-18.21	peak		
23140	24.32	24.68	49.00	68.2	-19.20	peak		

Mode:b; Pol	arization:F	Horizontal;	Modulation:a;	bandwid	th:20MHz;	Channel:High
Frequency	$RX_R$	Factor	Emission	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
11650	33.72	14.06	47.78	54	-6.22	peak
17475	29.36	21.15	50.51	68.2	-17.69	peak
23300	28.36	25.11	53.47	68.2	-14.73	peak

Mode:b; Polarization:Vertical; Modulation:a; bandwidth:20MHz; Channel:High							
Frequency	RX_R	Factor	Emission	Limit	Margin	Detector	
MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
11650	31.34	14.06	45.40	54	-8.60	peak	
17475	26.14	21.15	47.29	68.2	-20.91	peak	
23300	24.15	25.11	49.26	68.2	-18.94	peak	

Mode:b; Pol	arization:I	Horizontal;	Modulation:n;	bandwid	th:20MHz;	Channel:Low
Frequency	$RX_R$	Factor	Emission	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
11490	33.92	14.41	48.33	54	-5.67	peak
17235	27.52	22.57	50.09	68.2	-18.11	peak
22980	28.41	24.45	52.86	54	-1.14	peak



Report No.: SHEM180400307901

Page: 32 of 169

Mode:b; Polarization:Vertical; Modulation:n; bandwidth:20MHz; Channel:Low							
Frequency	$RX_R$	Factor	Emission	Limit	Margin	Detector	
MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
11490	35.94	14.41	50.35	54	-3.65	peak	
17235	26.59	22.57	49.16	68.2	-19.04	peak	
22980	26.45	24.45	50.90	54	-3.10	peak	

Mode:b; Pol	arization:l	Horizontal;	Modulation:n;	bandwid	lth:20MHz;	Channel:middle
Frequency	$RX_R$	Factor	Emission	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
11570	33.21	14.25	47.46	54	-6.54	peak
17355	27.09	21.86	48.95	68.2	-19.25	peak
23140	24.03	24.68	48.71	68.2	-19.49	peak

Mode:b; Polarization:Vertical; Modulation:n; bandwidth:20MHz; Channel:middle							
Frequency	$RX_R$	Factor	Emission	Limit	Margin	Detector	
MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
11570	35.41	14.25	49.66	54	-4.34	peak	
17355	27.52	21.86	49.38	68.2	-18.82	peak	
23140	24.91	24.68	49.59	68.2	-18.61	peak	

Mode:b; Pol	arization:F	lorizontal;	Modulation:n	; bandwid	th:20MHz;	Channel:High
Frequency	$RX_R$	Factor	Emission	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
11650	34.67	14.06	48.73	54	-5.27	peak
17475	28.01	21.15	49.16	68.2	-19.04	peak
23300	25.36	25.11	50.47	68.2	-17.73	peak

Mode:b; Polarization:Vertical; Modulation:n; bandwidth:20MHz; Channel:High								
Frequency	$RX_R$	Factor	Emission	Limit	Margin	Detector		
MHz	dBuV	dB	dBuV/m	dBuV/m	dB			
11650	36.01	14.06	50.07	54	-3.93	peak		
17475	26.42	21.15	47.57	68.2	-20.63	peak		
23300	29.35	25.11	54.46	68.2	-13.74	peak		



Report No.: SHEM180400307901

Page: 33 of 169

Mode:b; Pol	arization:	Horizontal;	Modulation:n;	bandwid	th:40MHz;	Channel:Low
Frequency	$RX_R$	Factor	Emission	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
11510	33.57	14.40	47.97	54	-6.03	peak
17265	26.82	22.40	49.22	68.2	-18.98	peak
23020	23.33	24.68	48.01	54	-5.99	peak

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

Frequency	$RX_R$	Factor	Emission	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
11510	32.31	14.40	46.71	54	-7.29	peak
17265	26.91	22.40	49.31	68.2	-18.89	peak
23020	26.29	24.68	50.97	54	-3.03	peak

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

Frequency	$RX_R$	Factor	Emission	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
11590	31.78	14.20	45.98	54	-8.02	peak
17385	29.34	21.68	51.02	68.2	-17.18	peak
23180	26.46	24.72	51.18	68.2	-17.02	peak

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

Frequency	$RX_R$	Factor	Emission	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
11590	31.73	14.20	45.93	54	-8.07	peak
17385	29.09	21.68	50.77	68.2	-17.43	peak
23180	27.18	24.72	51.90	68.2	-16.30	peak

Mode:b; Polarization:Horizontal; Modulation:c; bandwidth:20MHz; Channel:Low Frequency RX\_R Factor **Emission** Limit Margin Detector MHz dBuV dB dBuV/m dBuV/m dΒ 11490 14.41 48.14 54 33.73 -5.86 peak 17235 22.57 51.17 -17.03 28.60 68.2 peak 22980 26.37 24.45 50.82 54 -3.18 peak



Report No.: SHEM180400307901

Page: 34 of 169

Mode:b; Pola	arization:\	/ertical; Mo	odulation:c; k	oandwidth:2	20MHz; Cl	nannel:Low
Frequency	RX_R	Factor	Emission	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
11490	36.68	14.41	51.09	54	-2.91	peak
17235	29.24	22.57	51.81	68.2	-16.39	peak
22980	28.87	24.45	53.32	54	-0.68	peak
Mode:b; Pola	arization:l	Horizontal;	Modulation:	; bandwidt	h:20MHz;	Channel:middle
Frequency	RX_R	Factor	Emission	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
11570	32.57	14.25	46.82	54	-7.18	peak
17355	27.66	21.86	49.52	68.2	-18.68	peak
23140	24.62	24.68	49.30	68.2	-18.90	peak

Mode:b; Polarization:Vertical; Modulation:c; bandwidth:20MHz; Channel:mide						annel:middle
Frequency	$RX_R$	Factor	Emission	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
11570	31.96	14.25	46.21	54	-7.79	peak
17355	27.59	21.86	49.45	68.2	-18.75	peak
23140	27.17	24.68	51.85	68.2	-16.35	peak

Mode:b; Pol	arization:l	Horizontal;	Modulation:c;	bandwid	th:20MHz;	Channel:High
Frequency	$RX_R$	Factor	Emission	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
11650	35.25	14.06	49.31	54	-4.69	peak
17475	30.41	21.15	51.56	68.2	-16.64	peak
23300	26.95	25.11	52.06	68.2	-16.14	peak

Mode:b; Polarization:Vertical; Modulation:c; bandwidth:20MHz; Channel						annel:High
Frequency	$RX_R$	Factor	Emission	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
11650	36.23	14.06	50.29	54	-3.71	peak
17475	30.53	21.15	51.68	68.2	-16.52	peak
23300	26.30	25.11	51.41	68.2	-16.79	peak



Report No.: SHEM180400307901

Page: 35 of 169

Mode:b; Pol	arization:H	Horizontal;	Modulation:c;	bandwid	th:40MHz;	Channel:Low
Frequency	$RX_R$	Factor	Emission	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
11510	32.36	14.40	46.76	54	-7.24	peak
17265	29.23	22.40	51.63	68.2	-16.57	peak
23020	28.04	24.68	52.72	54	-1.28	peak

Mode:b; Polarization:Vertical; Modulation:c; bandwidth:40MHz; Channel:L						annel:Low
Frequency	$RX_R$	Factor	Emission	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
11510	33.11	14.40	47.51	54	-6.49	peak
17265	26.02	22.40	48.42	68.2	-19.78	peak
23020	25.53	24.68	50.21	54	-3.79	peak

Mode:b; Pol	arization:F	lorizontal;	Modulation:c	; bandwid	th:40MHz;	Channel:High
Frequency	$RX_R$	Factor	Emission	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
11590	35.61	14.20	49.81	54	-4.19	peak
17385	27.06	21.68	48.74	68.2	-19.46	peak
23180	24.30	24.72	49.02	68.2	-19.18	peak

Mode:b; Polarization:Vertical; Modulation:c;				bandwidth:40MHz; Channel:High		
Frequency	$RX_R$	Factor	Emission	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
11590	34.46	14.20	48.66	54	-5.34	peak
17385	26.60	21.68	48.28	68.2	-19.92	peak
23180	25.20	24.72	49.92	68.2	-18.28	peak

Mode:b; Pol	arization:l	Horizontal;	Modulation:c;	bandwid	th:80MHz;	Channel:Low
Frequency	$RX_R$	Factor	Emission	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
11550	31.99	14.30	46.29	54	-7.71	peak
17325	31.02	22.04	53.06	68.2	-15.14	peak
23100	27.03	24.60	51.63	54	-2.37	peak



Report No.: SHEM180400307901

Page: 36 of 169

Mode:b; Pol	arization:\	ertical; Mo	dulation:c;	bandwidth:8	30MHz; Ch	annel:Low
Frequency	$RX_R$	Factor	Emission	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
11550	32.83	14.30	47.13	54	-6.87	peak
17325	28.54	22.04	50.58	68.2	-17.62	peak
23100	26.40	24.60	51.00	54	-3.00	peak

Mode:c; Pola	arization:ŀ	Horizontal;	Modulation:a;	bandwid	th:20MHz;	Channel:Low
Frequency	$RX_R$	Factor	Emission	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
11490	32.28	14.41	46.69	54	-7.31	peak
17235	28.69	22.57	51.26	68.2	-16.94	peak
22980	27.33	24.45	51.78	54	-2.22	peak

Mode:c; Polarization:Vertical; Modulation:a; bandwidth:20MHz; Channel:Low							
Frequency	$RX_R$	Factor	Emission	Limit	Margin	Detector	
MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
11490	30.56	14.41	44.97	54	-9.03	peak	
17235	27.55	22.57	50.12	68.2	-18.08	peak	
22980	25.36	24.45	49.81	54	-4.19	peak	

Mode:c; Po	larization:H	lorizontal;	Modulation:a;	bandwid	lth:20MHz;	Channel:middle
Frequency	$RX_R$	Factor	Emission	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
11570	34.06	14.25	48.31	54	-5.69	peak
17355	26.15	21.86	48.01	68.2	-20.19	peak
23140	28.55	24.68	53.23	68.2	-14.97	peak

Mode:c; Polarization:Vertical; Modulation:a; bandwidth:20MHz; Channel:middle Frequency RX\_R Factor **Emission** Limit Margin Detector MHz dBuV dB dBuV/m dBuV/m dB 11570 33.47 14.25 47.72 54 -6.28 peak 17355 26.19 21.86 48.05 68.2 -20.15 peak 23140 28.83 24.68 53.51 68.2 -14.69 peak



Report No.: SHEM180400307901

Page: 37 of 169

Mode:c; Pol	arization:H	lorizontal;	Modulation:a;	bandwid	th:20MHz;	Channel:High
Frequency	$RX_R$	Factor	Emission	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
11650	34.40	14.06	48.46	54	-5.54	peak
17475	25.70	21.15	46.85	68.2	-21.35	peak
23300	29.38	25.11	54.49	68.2	-13.71	peak

Mode:c; Polarization:Vertical; Modulation:a; bandwidth:20MHz; Channel:High							
Frequency	$RX_R$	Factor	Emission	Limit	Margin	Detector	
MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
11650	35.04	14.06	49.10	54	-4.90	peak	
17475	29.48	21.15	50.63	68.2	-17.57	peak	
23300	24.66	25.11	49.77	68.2	-18.43	peak	

Mode:c; Pola	arization:F	lorizontal;	Modulation:n;	bandwid	th:20MHz;	Channel:Low
Frequency	$RX_R$	Factor	Emission	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
11490	31.73	14.41	46.14	54	-7.86	peak
17235	26.97	22.57	49.54	68.2	-18.66	peak
22980	26.46	24.45	50.91	54	-3.09	peak

Mode:c; Polarization:Vertical; Modulation:n; bandwidth:20MHz; Channel:Low									
Frequency	$RX_R$	Factor	Emission	Limit	Margin	Detector			
MHz	dBuV	dB	dBuV/m	dBuV/m	dB				
11490	35.86	14.41	50.27	54	-3.73	peak			
17235	27.32	22.57	49.89	68.2	-18.31	peak			
22980	23.69	24.45	48.14	54	-5.86	peak			

Mode:c; Pol	arization:H	Horizontal;	Modulation:n;	bandwid	lth:20MHz;	Channel:middle
Frequency	$RX_R$	Factor	Emission	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
11570	36.02	14.25	50.27	54	-3.73	peak
17355	29.40	21.86	51.26	68.2	-16.94	peak
23140	23.15	24.68	47.83	68.2	-20.37	peak



Report No.: SHEM180400307901

Page: 38 of 169

Mode:c; Polarization:Vertical; Modulation:n; bandwidth:20MHz; Channel:middle								
Frequency	$RX_R$	Factor	Emission	Limit	Margin	Detector		
MHz	dBuV	dB	dBuV/m	dBuV/m	dB			
11570	34.23	14.25	48.48	54	-5.52	peak		
17355	29.51	21.86	51.37	68.2	-16.83	peak		
23140	27.19	24.68	51.87	68.2	-16.33	peak		

Mode:c; Pola	arization:l	Horizontal;	Modulation:n;	bandwid	lth:20MHz;	Channel:High
Frequency	RX_R	Factor	Emission	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
11650	32.23	14.06	46.29	54	-7.71	peak
17475	29.32	21.15	50.47	68.2	-17.73	peak
23300	25.59	25.11	50.70	68.2	-17.50	peak

Mode:c; Polarization:Vertical; Modulation:n; bandwidth:20MHz; Channel:High						
Frequency	$RX_R$	Factor	Emission	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
11650	32.00	14.06	46.06	54	-7.94	peak
17475	29.25	21.15	50.40	68.2	-17.80	peak
23300	26.12	25.11	51.23	68.2	-16.97	peak

Mode:c; Pola	arization:F	lorizontal;	Modulation:n	; bandwidt	th:40MHz;	Channel:Low
Frequency	$RX_R$	Factor	Emission	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
11510	34.53	14.40	48.93	54	-5.07	peak
17265	28.40	22.40	50.80	68.2	-17.40	peak
23020	23.32	24.68	48.00	54	-6.00	peak

Mode:c; Polarization:Vertical; Modulation:n; bandwidth:40MHz; Channel:Low								
Frequency	$RX_R$	Factor	Emission	Limit	Margin	Detector		
MHz	dBuV	dB	dBuV/m	dBuV/m	dB			
11510	32.36	14.40	46.76	54	-7.24	peak		
17265	29.14	22.40	51.54	68.2	-16.66	peak		
23020	25.09	24.68	49.77	54	-4.23	peak		



Report No.: SHEM180400307901

Page: 39 of 169

Mode:c; Pola	arization:F	Horizontal;	Modulation:n;	bandwid	th:40MHz;	Channel:High
Frequency	$RX_R$	Factor	Emission	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
11590	34.63	14.20	48.83	54	-5.17	peak
17385	27.29	21.68	48.97	68.2	-19.23	peak
23180	26.22	24.72	50.94	68.2	-17.26	peak

Mode:c; Polarization:Vertical; Modulation:n; bandwidth:40MHz; Channel:High						
Frequency	$RX_R$	Factor	Emission	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
11590	32.15	14.20	46.35	54	-7.65	peak
17385	26.25	21.68	47.93	68.2	-20.27	peak
23180	29.40	24.72	54.12	68.2	-14.08	peak

Mode:c; Pol	arization:F	lorizontal;	Modulation:c;	bandwidt	th:20MHz;	Channel:Low
Frequency	RX_R	Factor	Emission	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
11490	35.74	14.41	50.15	54	-3.85	peak
17235	27.79	22.57	50.36	68.2	-17.84	peak
22980	27.23	24.45	51.68	54	-2.32	peak

Mode:c; Polarization:Vertical; Modulation:c; bandwidth:20MHz; Channel:Low								
Frequency	RX_R	Factor	Emission	Limit	Margin	Detector		
MHz	dBuV	dB	dBuV/m	dBuV/m	dB			
11490	36.21	14.41	50.62	54	-3.38	peak		
17235	30.21	22.57	52.78	68.2	-15.42	peak		
22980	27.42	24.45	51.87	54	-2.13	peak		

Mode:c; Pola	arization:H	Horizontal;	Modulation:c;	bandwid	lth:20MHz;	Channel:middle
Frequency	RX_R	Factor	Emission	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
11570	32.88	14.25	47.13	54	-6.87	peak
17355	27.70	21.86	49.56	68.2	-18.64	peak
23140	28.87	24.68	53.55	68.2	-14.65	peak



Report No.: SHEM180400307901

Page: 40 of 169

Mode:c; Polarization:Vertical; Modulation:c; bandwidth:20MHz; Channel:middle							
Frequency	RX_R	Factor	Emission	Limit	Margin	Detector	
MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
11570	34.98	14.25	49.23	54	-4.77	peak	
17355	31.14	21.86	53.00	68.2	-15.20	peak	
23140	30.22	24.68	54.90	68.2	-13.30	peak	

Mode:c; Pola	arization:F	Horizontal;	Modulation:c;	bandwid	th:20MHz;	Channel:High
Frequency	RX_R	Factor	Emission	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
11650	32.94	14.06	47.00	54	-7.00	peak
17475	30.18	21.15	51.33	68.2	-16.87	peak
23300	24.08	25.11	49.19	68.2	-19.01	peak

Mode:c; Polarization:Vertical; Modulation:c; bandwidth:20MHz; Channel:High								
Frequency	RX_R	Factor	Emission	Limit	Margin	Detector		
MHz	dBuV	dB	dBuV/m	dBuV/m	dB			
11650	35.02	14.06	49.08	54	-4.92	peak		
17475	30.61	21.15	51.76	68.2	-16.44	peak		
23300	25.03	25.11	50.14	68.2	-18.06	peak		

Mode:c; Pola	arization:H	Horizontal;	Modulation:c;	bandwid	th:40MHz;	Channel:Low
Frequency	$RX_R$	Factor	Emission	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
11510	34.48	14.40	48.88	54	-5.12	peak
17265	28.53	22.40	50.93	68.2	-17.27	peak
23020	25.30	24.68	49.98	54	-4.02	peak

Mode:c; Polarization:Vertical; Modulation:c; bandwidth:40MHz; Channel:Low Frequency RX\_R Factor **Emission** Limit Margin Detector MHz dBuV dB dBuV/m dBuV/m dΒ 11510 32.78 14.40 47.18 54 -6.82 peak 17265 29.04 22.40 51.44 68.2 -16.76 peak 23020 27.05 24.68 51.73 54 -2.27 peak



Report No.: SHEM180400307901

Page: 41 of 169

Mode:c; Polarization:Horizontal;			Modulation:c;	bandwid	th:40MHz;	Channel:High	
Frequency	$RX_R$	Factor	Emission	Limit	Margin	Detector	
MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
11590	35.93	14.20	50.13	54	-3.87	peak	
17385	28.61	21.68	50.29	68.2	-17.91	peak	
23180	26.01	24.72	50.73	68.2	-17.47	peak	

Mode:c; Polarization:Vertical; Modulation:c; bandwidth:40MHz; Channel:High							
Frequency	$RX_R$	Factor	Emission	Limit	Margin	Detector	
MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
11590	31.99	14.20	46.19	54	-7.81	peak	
17385	25.71	21.68	47.39	68.2	-20.81	peak	
23180	25.26	24.72	49.98	68.2	-18.22	peak	

Mode:c; Polarization:Horizontal;			Modulation:c;	bandwidth:80MHz;		Channel:Low	
Frequency	$RX_R$	Factor	Emission	Limit	Margin	Detector	
MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
11550	31.38	14.30	45.68	54	-8.32	peak	
17325	29.56	22.04	51.60	68.2	-16.60	peak	
23100	28.53	24.60	53.13	54	-0.87	peak	

Mode:c; Polarization:Vertical; Modulation:c; bandwidth:80MHz; Channel:Low							
Frequency	$RX_R$	Factor	Emission	Limit	Margin	Detector	
MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
11550	33.20	14.30	47.50	54	-6.50	peak	
17325	30.54	22.04	52.58	68.2	-15.62	peak	
23100	27.27	24.60	51.87	54	-2.13	peak	

Mode:d; Pola	arization:l	Horizontal;	Modulation:a	bandwid	th:20MHz;	Channel:Low
Frequency	$RX_R$	Factor	Emission	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
11490	31.54	14.41	45.95	54	-8.05	peak
17235	27.50	22.57	50.07	68.2	-18.13	peak
22980	27.09	24.45	51.54	54	-2.46	peak



23300

26.32

25.11

51.43

## SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd.

Report No.: SHEM180400307901

Page: 42 of 169

Mode:d; Polarization:Vertical; Modulation:a; bandwidth:20MHz; Channel:Low									
Frequency	$RX_R$	Factor	Emission	Limit	Margin	Detector			
MHz	dBuV	dB	dBuV/m	dBuV/m	dB				
11490	34.20	14.41	48.61	54	-5.39	peak			
17235	25.54	22.57	48.11	68.2	-20.09	peak			
22980	26.38	24.45	50.83	54	-3.17	peak			
						Channel:middle			
Frequency	RX_R	Factor	Emission	Limit	Margin	Detector			
MHz	dBuV	dB	dBuV/m	dBuV/m	dB				
11570	32.14	14.25	46.39	54	-7.61	peak			
17355	27.66	21.86	49.52	68.2	-18.68	peak			
23140	28.27	24.68	52.95	68.2	-15.25	peak			
*					•	nannel:middle			
Frequency	RX_R	Factor	Emission	Limit	Margin	Detector			
MHz	dBuV	dB	dBuV/m	dBuV/m	dB				
11570	34.83	14.25	49.08	54	-4.92	peak			
17355	28.29	21.86	50.15	68.2	-18.05	peak			
23140	26.96	24.68	51.64	68.2	-16.56	peak			
						Channel:High			
Frequency	RX_R	Factor	Emission	Limit	Margin	Detector			
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	_			
11650	33.11	14.06	47.17	54	-6.83	peak			
17475	27.09	21.15	48.24	68.2	-19.96	peak			
23300	26.28	25.11	51.39	68.2	-16.81	peak			
Mode:d; Pola	rizotion:\	/ortical: M	odulation: a:	handwidth:	20MU <del>-</del> - CI	oonnol: High			
Frequency	RX_R	Factor	Emission	Limit	Margin	Detector			
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	20100101			
11650	33.62	14.06	47.68	54	-6.32	peak			
17475	27.76	21.15	48.91	68.2	-0.32 -19.29	peak			
1/4/5	21.10	∠1.15	40.91	00.2	-19.29	р <del>с</del> ак			

68.2

-16.77

peak



Report No.: SHEM180400307901

Page: 43 of 169

Mode:d; Pol	arization:H	Horizontal;	Modulation:n	; bandwid	th:20MHz;	Channel:Low
Frequency	$RX_R$	Factor	Emission	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
11490	31.26	14.41	45.67	54	-8.33	peak
17235	28.77	22.57	51.34	68.2	-16.86	peak
22980	26.56	24.45	51.01	54	-2.99	peak

Mode:d; Polarization:Vertical; Modulation:n; bandwidth:20MHz; Channel:Low								
Frequency	$RX_R$	Factor	Emission	Limit	Margin	Detector		
MHz	dBuV	dB	dBuV/m	dBuV/m	dB			
11490	36.23	14.41	50.64	54	-3.36	peak		
17235	28.71	22.57	51.28	68.2	-16.92	peak		
22980	24.66	24.45	49.11	54	-4.89	peak		

Mod	de:d; Pola	rization:Ho	rizontal; N	lodulation:n;	bandwidth	:20MHz;	Channel:middle
Fre	equency	RX_R	Factor	Emission	Limit	Margin	Detector
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
1	1570	33.24	14.25	47.49	54	-6.51	peak
1	7355	28.53	21.86	50.39	68.2	-17.81	peak
2	23140	26.08	24.68	50.76	68.2	-17.44	peak

Mode:d; Pola	Mode:d; Polarization:Vertical; Modulation:n; bandwidth:20MHz; Channel:middle							
Frequency	RX_R	Factor	Emission	Limit	Margin	Detector		
MHz	dBuV	dB	dBuV/m	dBuV/m	dB			
11570	34.79	14.25	49.04	54	-4.96	peak		
17355	29.55	21.86	51.41	68.2	-16.79	peak		
23140	23.49	24.68	48.17	68.2	-20.03	peak		

Mode:d; Pol	arization:F	Horizontal;	Modulation:n	; bandwid	th:20MHz;	Channel:High
Frequency	$RX_R$	Factor	Emission	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
11650	32.48	14.06	46.54	54	-7.46	peak
17475	26.99	21.15	48.14	68.2	-20.06	peak
23300	29.45	25.11	54.56	68.2	-13.64	peak



Report No.: SHEM180400307901

Page: 44 of 169

Mode:d; Pol	arization:\	Vertical; Mo	dulation:n;	bandwidth:2	20MHz; Ch	annel:High
Frequency	$RX_R$	Factor	Emission	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
11650	32.08	14.06	46.14	54	-7.86	peak
17475	27.63	21.15	48.78	68.2	-19.42	peak
23300	28.97	25.11	54.08	68.2	-14.12	peak

Mode:d; Pol	arization:H	lorizontal;	Modulation:n	; bandwid	th:40MHz;	Channel:Low
Frequency	RX_R	Factor	Emission	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
11510	35.22	14.40	49.62	54	-4.38	peak
17265	29.59	22.40	51.99	68.2	-16.21	peak
23020	25.63	24.68	50.31	54	-3.69	peak

Mode:d; Pol	arization:\	/ertical; Mo	dulation:n;	bandwidth:4	40MHz; Ch	annel:Low
Frequency	$RX_R$	Factor	Emission	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
11510	32.46	14.40	46.86	54	-7.14	peak
17265	26.18	22.40	48.58	68.2	-19.62	peak
23020	27.69	24.68	52.37	54	-1.63	peak

Mode:d; Pol	arization:ŀ	Horizontal;	Modulation:n;	bandwid	lth:40MHz;	Channel:High
Frequency	$RX_R$	Factor	Emission	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
11590	32.65	14.20	46.85	54	-7.15	peak
17385	26.02	21.68	47.70	68.2	-20.50	peak
23180	23.42	24.72	48.14	68.2	-20.06	peak

Mode:d; Polarization:Vertical; Modulation:n; bandwidth:40MHz; Channel:High								
Frequency	$RX_R$	Factor	Emission	Limit	Margin	Detector		
MHz	dBuV	dB	dBuV/m	dBuV/m	dB			
11590	32.25	14.20	46.45	54	-7.55	peak		
17385	27.94	21.68	49.62	68.2	-18.58	peak		
23180	29.55	24.72	54.27	68.2	-13.93	peak		



Report No.: SHEM180400307901

Page: 45 of 169

Mode:d; Pol	arization:F	Horizontal;	Modulation:c;	bandwid	th:20MHz;	Channel:Low
Frequency	$RX_R$	Factor	Emission	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
11490	33.40	14.41	47.81	54	-6.19	peak
17235	28.07	22.57	50.64	68.2	-17.56	peak
22980	24.99	24.45	49.44	54	-4.56	peak

Mode:d; Polarization:Vertical; Modulation:c; bandwidth:20MHz; Channel:Low						
Frequency	$RX_R$	Factor	Emission	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
11490	34.45	14.41	48.86	54	-5.14	peak
17235	29.88	22.57	52.45	68.2	-15.75	peak
22980	25.10	24.45	49.55	54	-4.45	peak

Mode:d;	Polarization:H	orizontal;	Modulation:c;	bandwic	th:20MHz;	Channel:middle
Frequenc	cy RX_R	Factor	Emission	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
11570	36.41	14.25	50.66	54	-3.34	peak
17355	25.62	21.86	47.48	68.2	-20.72	peak
23140	27.62	24.68	52.30	68.2	-15.90	peak

Mode:d; Polarization:Vertical; Modulation:c; bandwidth:20MHz; Channel:middle						
Frequency	$RX_R$	Factor	Emission	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
11570	36.31	14.25	50.56	54	-3.44	peak
17355	30.88	21.86	52.74	68.2	-15.46	peak
23140	26.99	24.68	51.67	68.2	-16.53	peak

Mode:d; Po	larization:H	lorizontal;	Modulation:c;	bandwid	th:20MHz;	Channel:High
Frequency	$RX_R$	Factor	Emission	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
11650	32.78	14.06	46.84	54	-7.16	peak
17475	27.13	21.15	48.28	68.2	-19.92	peak
23300	27.12	25.11	52.23	68.2	-15.97	peak



Report No.: SHEM180400307901

Page: 46 of 169

arization:\	/ertical; Mo	dulation:c;	bandwidth:2	20MHz; Ch	annel:High
$RX_R$	Factor	Emission	Limit	Margin	Detector
dBuV	dB	dBuV/m	dBuV/m	dB	
36.24	14.06	50.30	54	-3.70	peak
27.60	21.15	48.75	68.2	-19.45	peak
26.06	25.11	51.17	68.2	-17.03	peak
	RX_R dBuV 36.24 27.60	RX_R Factor dBuV dB 36.24 14.06 27.60 21.15	RX_R         Factor         Emission           dBuV         dB         dBuV/m           36.24         14.06         50.30           27.60         21.15         48.75	RX_R         Factor         Emission         Limit           dBuV         dB         dBuV/m         dBuV/m           36.24         14.06         50.30         54           27.60         21.15         48.75         68.2	dBuV dB dBuV/m dBuV/m dB 36.24 14.06 50.30 54 -3.70 27.60 21.15 48.75 68.2 -19.45

Mode:d; Pol	arization:l	Horizontal;	Modulation:c	bandwid	th:40MHz;	Channel:Low
Frequency	$RX_R$	Factor	Emission	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
11510	31.74	14.40	46.14	54	-7.86	peak
17265	30.84	22.40	53.24	68.2	-14.96	peak
23020	28.08	24.68	52.76	54	-1.24	peak

Mode:d; Pol	larization:\	ertical; Mo	dulation:c;	bandwidth:	40MHz; Ch	annel:Low
Frequency	RX_R	Factor	Emission	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
11510	34.79	14.40	49.19	54	-4.81	peak
17265	29.44	22.40	51.84	68.2	-16.36	peak
23020	28.35	24.68	53.03	54	-0.97	peak

Mode:d; Pol	arization:l	Horizontal;	Modulation:c;	bandwid	th:40MHz;	Channel:High
Frequency	$RX_R$	Factor	Emission	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
11590	35.66	14.20	49.86	54	-4.14	peak
17385	29.26	21.68	50.94	68.2	-17.26	peak
23180	24.98	24.72	49.70	68.2	-18.50	peak

Mode:d; Polarization:Vertical; Modulation:c; bandwidth:40MHz; Channel:High						
Frequency	$RX_R$	Factor	Emission	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
11590	34.26	14.20	48.46	54	-5.54	peak
17385	25.96	21.68	47.64	68.2	-20.56	peak
23180	26.78	24.72	51.50	68.2	-16.70	peak



Report No.: SHEM180400307901

Page: 47 of 169

Mode:d; Po	larization:H	lorizontal;	Modulation:c;	bandwid	th:80MHz;	Channel:Low
Frequency	RX_R	Factor	Emission	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
11550	34.50	14.30	48.80	54	-5.20	peak
17325	30.19	22.04	52.23	68.2	-15.97	peak
23100	26.09	24.60	50.69	54	-3.31	peak

Mode:d; Polarization:Vertical; Modulation:c; bandwidth:80MHz; Channel:Low

Frequency	RX_R	Factor	Emission	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
11550	32.40	14.30	46.70	54	-7.30	peak
17325	26.67	22.04	48.71	68.2	-19.49	peak
23100	23.53	24.60	48.13	54	-5.87	peak



Report No.: SHEM180400307901

Page: 48 of 169

#### 7.8 Radiated Emissions which fall in the restricted bands

Test Requirement 47 CFR Part 15, Subpart C 15.209 & 15.407(b)

Test Method: KDB 789033 D02 II G

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.

#### 7.8.1 E.U.T. Operation

Operating Environment:

Temperature: 21 °C Humidity: 45 % RH Atmospheric Pressure: 1010 mbar

Test mode a: Engineering Mode\_Using test software to control EUT working in continuous

transmitting and select channel and modulation type.(For: DS-

MP7608HN/GW/WI58 Antenna 1)

b: a: Engineering Mode\_Using test software to control EUT working in continuous

transmitting and select channel and modulation type. (For: DS-

MP7608HN/GLF/WI58 Antenna 1)

c: Engineering Mode Using test software to control EUT working in continuous

transmitting and select channel and modulation type.(For: DS-

MP7608HN/GW/WI58 Antenna 2)

d: a: Engineering Mode\_Using test software to control EUT working in continuous

transmitting and select channel and modulation type. (For: DS-

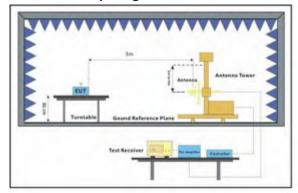
MP7608HN/GLF/WI58 Antenna 2)

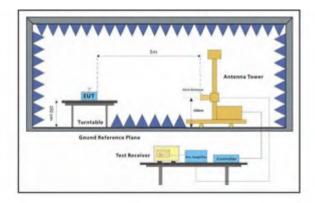


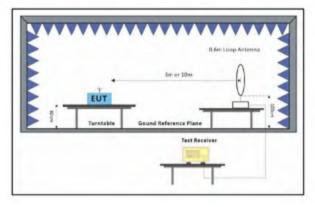
Report No.: SHEM180400307901

Page: 49 of 169

#### 7.8.2 Test Setup Diagram







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

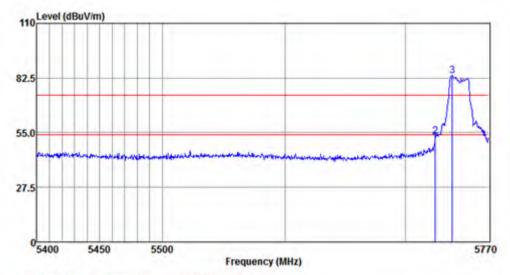
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="http://www.sqs.com/en/Terms-and-Conditions.rems-and-Conditions-and-Conditions-and-Conditions-and-Conditions-and-Conditions-and-Conditions-and-Conditions-and-Conditions-and-Condi



Report No.: SHEM180400307901

Page: 50 of 169

Mode:a; Polarization:Horizontal; Modulation:a; bandwidth:20MHz; Channel:Low



Antenna Polarity : HORIZONTAL

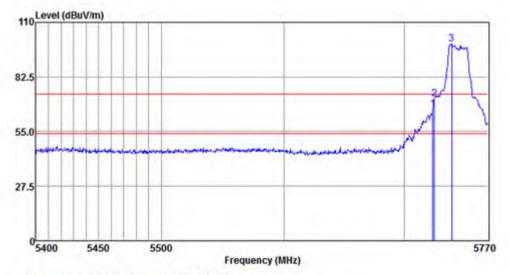
		Read	Antenna	Cable	Preamp	Emission	Limit	Over	
	Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Remark
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5724.67	48.06	32.15	9.00	38.75	50.46	74.00	-23.54	Peak
2	5725.00	50.61	32.15	9.00	38.75	53.01	74.00	-20.99	Peak
3	5739.11	81.31	32.15	9.00	38.76	83.70	74.00	9.70	Peak



Report No.: SHEM180400307901

Page: 51 of 169

Mode:a; Polarization:Vertical; Modulation:a; bandwidth:20MHz; Channel:Low



Antenna Polarity : VERTICAL

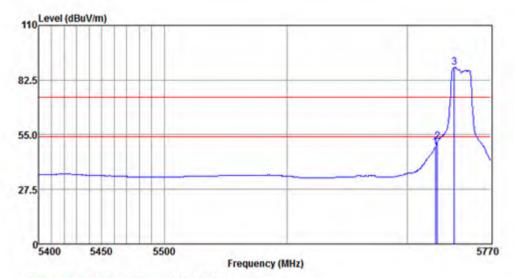
	Freq	Read Level	Antenna Factor			Emission Level	Limit Line	Over Limit	Remark
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5723.54	63.95	32.15	9.00	38.75	66.35	74.00	-7.65	Peak
2	5725.00	68.97	32.15	9.00	38.75	71.37	74.00	-2.63	Peak
3	5739.49	96.71	32.15	9.00	38.76	99.10	74.00	25.10	Peak



Report No.: SHEM180400307901

Page: 52 of 169

Mode:a; Polarization:Vertical; Modulation:a; bandwidth:20MHz; Channel:Low



#### Antenna Polarity : VERTICAL

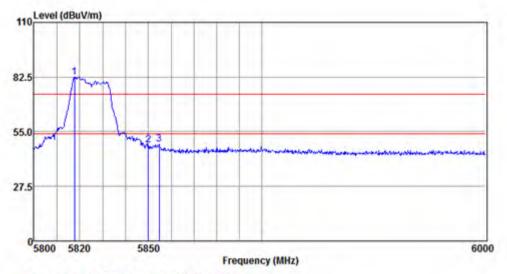
	Freq	Read Level	Antenna Factor		Preamp Factor	Emission Level	Limit Line		Remark
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5723.16	46.28	32.15	9.00	38.75	48.68	54.00	-5.32	Average
2	5725.00	49.09	32.15	9.00	38.75	51.49	54.00	-2.51	Average
3	5739.11	86.68	32.15	9.00	38.76	89.07	54.00	35.07	Average



Report No.: SHEM180400307901

Page: 53 of 169

Mode:a; Polarization:Horizontal; Modulation:a; bandwidth:20MHz; Channel:High



Antenna Polarity : HORIZONTAL

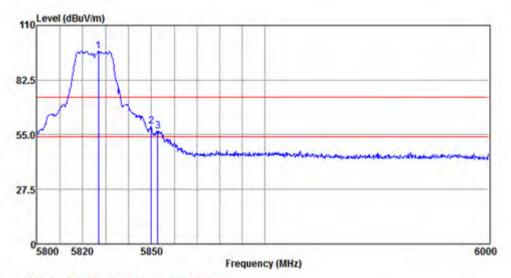
	Freq	Read Level	Antenna Factor	Cable Loss		Emission Level	Limit Line		Remark
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5817.72	80.10	32.16	8.87	38.78	82.35	74.00	8.35	Peak
2	5850.00	45.81	32.17	8.90	38.75	48.13	74.00	-25.87	Peak
3	5854.72	46.30	32.17	8.90	38.75	48.62	74.00	-25.38	Peak



Report No.: SHEM180400307901

Page: 54 of 169

Mode:a; Polarization: Vertical; Modulation:a; bandwidth: 20MHz; Channel: High



Antenna Polarity : VERTICAL

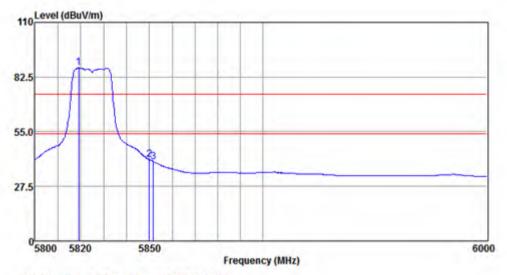
	Read	Antenna	Cable	Preamp	Emission	Limit	Over	
Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Remark
******								
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1 5826.80	94.86	32.17	8.87	38.77	97.13	74.00	23.13	Peak
2 5850.00	56.86	32.17	8.90	38.75	59.18	74.00	-14.82	Peak
3 5852.74	54.53	32.17	8.90	38.75	56.85	74.00	-17.15	Peak



Report No.: SHEM180400307901

Page: 55 of 169

Mode:a; Polarization: Vertical; Modulation:a; bandwidth: 20MHz; Channel: High



Antenna Polarity : VERTICAL

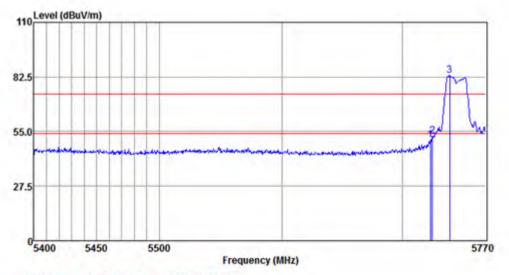
		Read	Antenna	Cable	Preamp	Emission	Limit	Over	
	Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Remark
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5819.10	84.83	32.16	8.87	38.78	87.08	54.00	33.08	Average
2	5850.00	38.57	32.17	8.90	38.75	40.89	54.00	-13.11	Average
3	5851.75	37.62	32.17	8.90	38.75	39.94	54.00	-14.06	Average



Report No.: SHEM180400307901

Page: 56 of 169

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



Antenna Polarity : HORIZONTAL

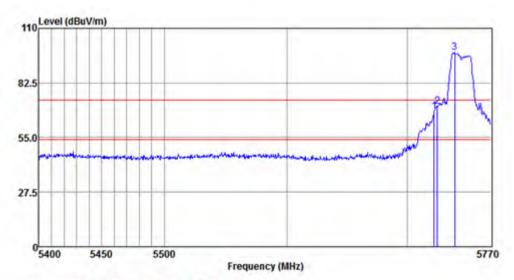
	Freq	Read Level	Antenna Factor	Cable Loss		Emission Level	Limit Line	Over Limit	Remark
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5723.16	48.21	32.15	9.00	38.75	50.61	74.00	-23.39	Peak
2	5725.00	50.19	32.15	9.00	38.75	52.59	74.00	-21.41	Peak
3	5739.49	80.67	32.15	9.00	38.76	83.06	74.00	9.06	Peak



Report No.: SHEM180400307901

Page: 57 of 169

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



Antenna Polarity : VERTICAL

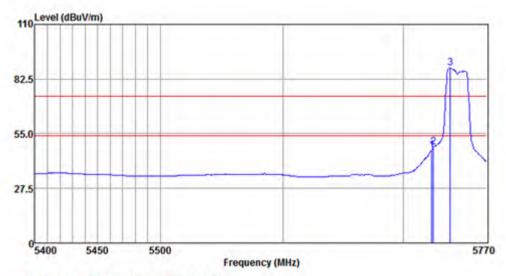
	Freq	Read	Antenna Factor	Cable Loss		Emission Level	Limit Line	Over	Remark
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5722.40	65.65	32.15	9.00	38.75	68.05	74.00	-5.95	Peak
2	5725.00	68.43	32.15	9.00	38.75	70.83	74.00	-3.17	Peak
3	5739.49	95.35	32.15	9.00	38.76	97.74	74.00	23.74	Peak



Report No.: SHEM180400307901

Page: 58 of 169

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



Antenna Polarity : VERTICAL

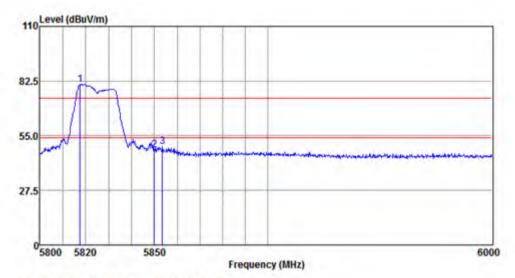
	Freq	Read Level	Antenna Factor		Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5723.54	44.37	32.15	9.00	38.75	46.77	54.00	-7.23	Average
2	5725.00	45.95	32.15	9.00	38.75	48.35	54.00	-5.65	Average
3	5739.11	85.72	32.15	9.00	38.76	88.11	54.00	34.11	Average



Report No.: SHEM180400307901

Page: 59 of 169

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



Antenna Polarity : HORIZONTAL

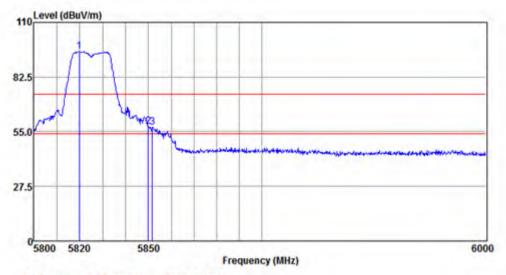
	Freq	Read Level				Emission Level	Limit Line		Remark
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5817.53	78.53	32.16	8.87	38.78	80.78	74.00	6.78	Peak
2	5850.00	45.75	32.17	8.90	38.75	48.07	74.00	-25.93	Peak
3	5853.53	47.10	32.17	8.90	38.75	49.42	74.00	-24.58	Peak



Report No.: SHEM180400307901

Page: 60 of 169

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



Antenna Polarity : VERTICAL

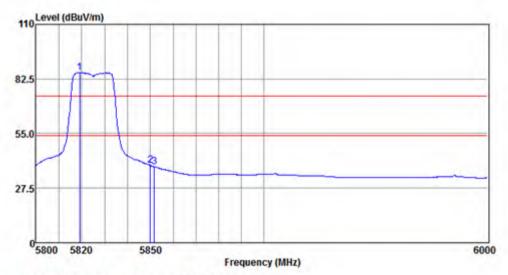
	Frea					Emission Level			Remark
	ried	rever	ractor	LU33	raccor	rever	Line	CIMIC	ivelilar K
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5819.70	93.26	32.16	8.87	38.78	95.51	74.00	21.51	Peak
2	5850.00	55.37	32.17	8.90	38.75	57.69	74.00	-16.31	Peak
3	5851.75	55.07	32.17	8.90	38.75	57.39	74.00	-16.61	Peak



Report No.: SHEM180400307901

Page: 61 of 169

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



Antenna Polarity : VERTICAL

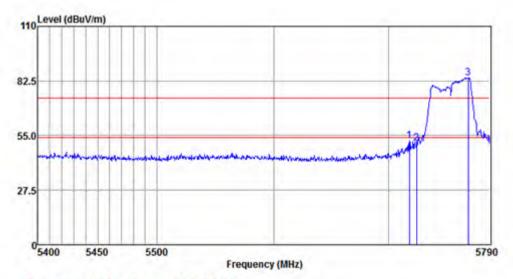
	Freq	Read Level		Cable Loss	Preamp	Emission Level	Limit Line	Over Limit	Remark
	Freq	rever	Factor	LOSS	Factor	rever	Line	Limit	Kemark
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5819.10	83.57	32.16	8.87	38.78	85.82	54.00	31.82	Average
2	5850.00	36.56	32.17	8.90	38.75	38.88	54.00	-15.12	Average
3	5851.75	35.91	32.17	8.90	38.75	38.23	54.00	-15.77	Average



Report No.: SHEM180400307901

Page: 62 of 169

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



Antenna Polarity : HORIZONTAL

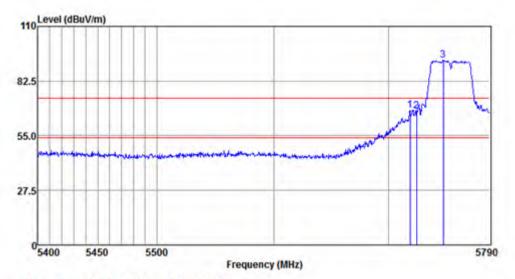
		Read	Antenna	Cable	Preamp	Emission	Limit	Over	
	Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Remark
		*****							
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5718.58	49.78	32.14	9.00	38.74	52.18	74.00	-21.82	Peak
2	5725.00	48.73	32.15	9.00	38.75	51.13	74.00	-22.87	Peak
3	5770.65	81.87	32.15	8.93	38.78	84.17	74.00	10.17	Peak



Report No.: SHEM180400307901

Page: 63 of 169

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



#### Antenna Polarity : VERTICAL

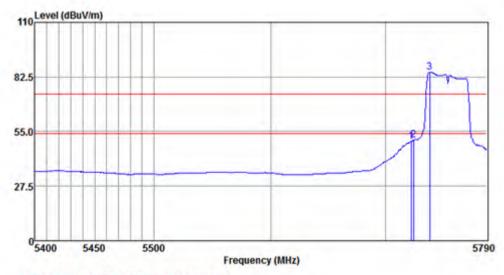
	Freq	Read Level				Emission Level	Limit Line	Over Limit	Remark
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5719.37	65.50	32.14	9.00	38.74	67.90	74.00	-6.10	Peak
2	5725.00	65.05	32.15	9.00	38.75	67.45	74.00	-6.55	Peak
3	5748.56	90.44	32.15	9.00	38.76	92.83	74.00	18.83	Peak



Report No.: SHEM180400307901

Page: 64 of 169

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



Antenna Polarity : VERTICAL

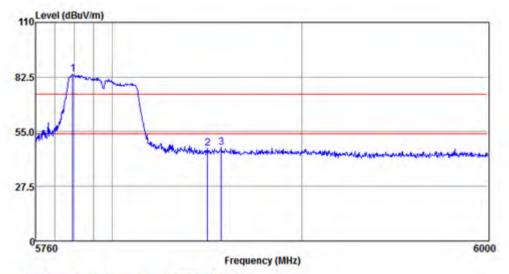
	Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
						*****			
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5722.96	47.65	32.15	9.00	38.75	50.05	54.00	-3.95	Average
2	5725.00	48.17	32.15	9.00	38.75	50.57	54.00	-3.43	Average
3	5739.35	82.55	32.15	9.00	38.76	84.94	54.00	30.94	Average



Report No.: SHEM180400307901

Page: 65 of 169

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



#### Antenna Polarity : HORIZONTAL

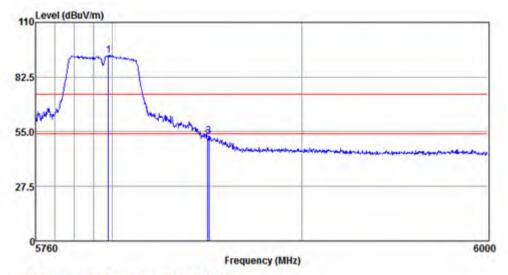
	Freq	Read Level	Antenna Factor		Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
							*****		
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5779.31	81.75	32.16	8.93	38.79	84.05	74.00	10.05	Peak
2	5850.00	44.30	32.17	8.90	38.75	46.62	74.00	-27.38	Peak
3	5857.22	44.60	32.17	8.90	38.74	46.93	74.00	-27.07	Peak



Report No.: SHEM180400307901

Page: 66 of 169

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



Antenna Polarity : VERTICAL

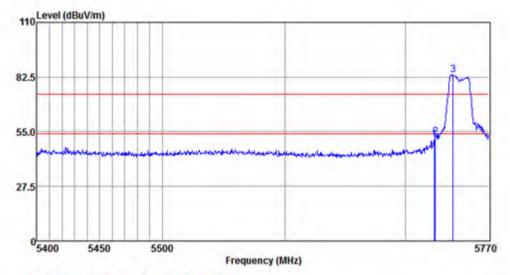
	Freq	Read Level				Emission Level	Limit Line		Remark
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5797.75	91.31	32.16	8.87	38.80	93.54	74.00	19.54	Peak
2	5850.00	48.99	32.17	8.90	38.75	51.31	74.00	-22.69	Peak
3	5850.76	50.39	32.17	8.90	38.75	52.71	74.00	-21.29	Peak



Report No.: SHEM180400307901

Page: 67 of 169

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



Antenna Polarity : HORIZONTAL

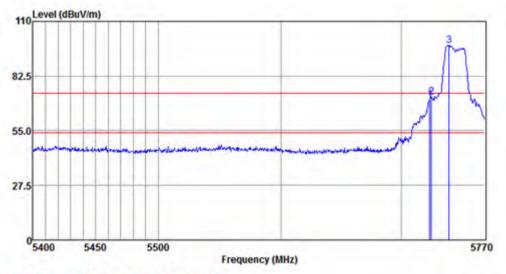
		Read	Antenna	Cable	Preamp	Emission	Limit	Over	
	Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Remark
			******						
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5723.92	48.72	32.15	9.00	38.75	51.12	74.00	-22.88	Peak
2	5725.00	49.77	32.15	9.00	38.75	52.17	74.00	-21.83	Peak
3	5739.87	81.27	32.15	9.00	38.76	83.66	74.00	9.66	Peak



Report No.: SHEM180400307901

Page: 68 of 169

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



Antenna Polarity : VERTICAL

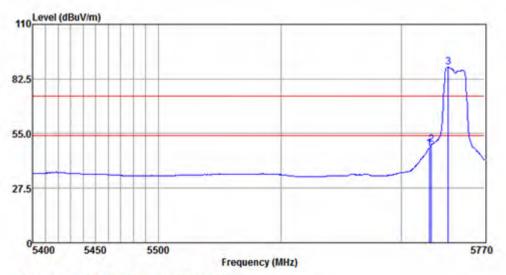
	Freq					Emission Level			Remark
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5723.54	68.26	32.15	9.00	38.75	70.66	74.00	-3.34	Peak
2	5725.00	69.46	32.15	9.00	38.75	71.86	74.00	-2.14	Peak
3	5739.87	95.63	32.15	9.00	38.76	98.02	74.00	24.02	Peak



Report No.: SHEM180400307901

Page: 69 of 169

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



Antenna Polarity : VERTICAL

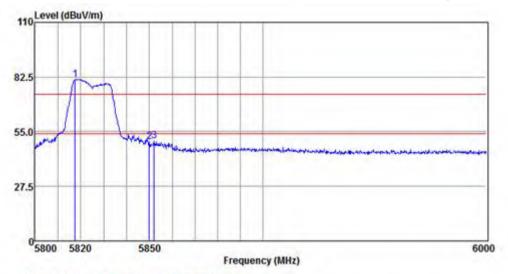
	Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5723.16	45.19	32.15	9.00	38.75	47.59	54.00	-6.41	Average
2	5725.00	47.10	32.15	9.00	38.75	49.50	54.00	-4.50	Average
3	5739.11	86.02	32.15	9.00	38.76	88.41	54.00	34.41	Average



Report No.: SHEM180400307901

Page: 70 of 169

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



Antenna Polarity : HORIZONTAL

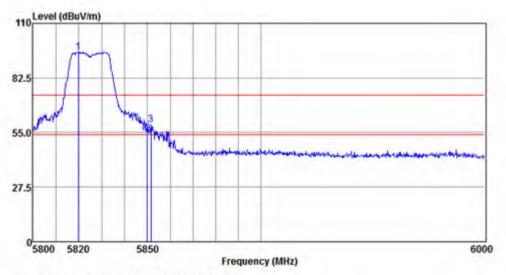
	Freq	Read Level	Antenna Factor		Preamp Factor	Emission Level	Limit Line		Remark
						******			
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5817.53	79.12	32.16	8.87	38.78	81.37	74.00	7.37	Peak
2	5850.00	47.42	32.17	8.90	38.75	49.74	74.00	-24.26	Peak
3	5852.14	48.01	32.17	8.90	38.75	50.33	74.00	-23.67	Peak



Report No.: SHEM180400307901

Page: 71 of 169

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



Antenna Polarity : VERTICAL

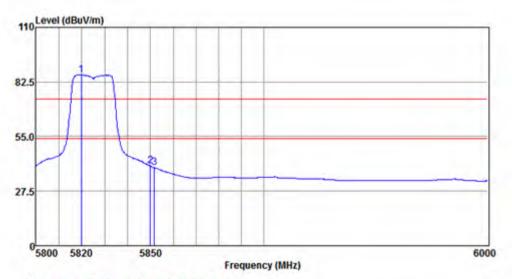
	Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5819.70	93.30	32.16	8.87	38.78	95.55	74.00	21.55	Peak
2	5850.00	52.07	32.17	8.90	38.75	54.39	74.00	-19.61	Peak
3	5851.55	56.40	32.17	8.90	38.75	58.72	74.00	-15.28	Peak



Report No.: SHEM180400307901

Page: 72 of 169

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



#### Antenna Polarity : VERTICAL

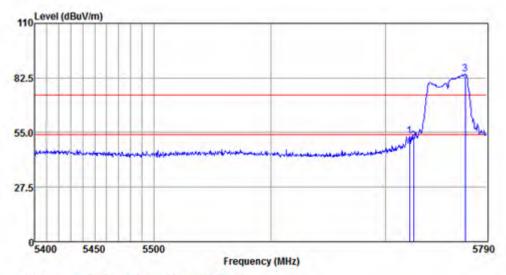
	Freq	Read Level	Antenna Factor			Emission Level	Limit Line		Remark
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5819.70	83.97	32.16	8.87	38.78	86.22	54.00	32.22	Average
2	5850.00	37.83	32.17	8.90	38.75	40.15	54.00	-13.85	Average
3	5851.75	36.96	32.17	8.90	38.75	39.28	54.00	-14.72	Average



Report No.: SHEM180400307901

Page: 73 of 169

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



Antenna Polarity : HORIZONTAL

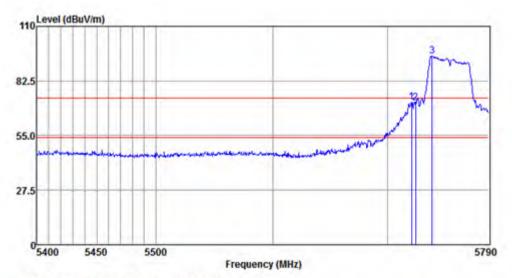
	Francis	Read				Emission			Damank
	Freq	rever	Factor	LOSS	Factor	revel	Line	Limit	Remark
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5721.37	50.75	32.14	9.00	38.74	53.15	74.00	-20.85	Peak
2	5725.00	48.35	32.15	9.00	38.75	50.75	74.00	-23.25	Peak
3	5770.65	82.03	32.15	8.93	38.78	84.33	74.00	10.33	Peak



Report No.: SHEM180400307901

Page: 74 of 169

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



# Antenna Polarity : VERTICAL

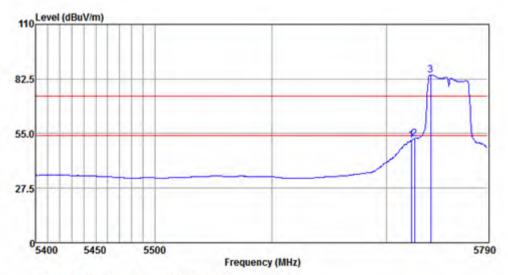
	Freq	Read Level	Antenna Factor			Emission Level	Limit Line	Over Limit	Remark
	*****								
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5721.37	69.36	32.14	9.00	38.74	71.76	74.00	-2.24	Peak
2	5725.00	68.85	32.15	9.00	38.75	71.25	74.00	-2.75	Peak
3	5739.75	92.70	32.15	9.00	38.76	95.09	74.00	21.09	Peak



Report No.: SHEM180400307901

Page: 75 of 169

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



Antenna Polarity : VERTICAL

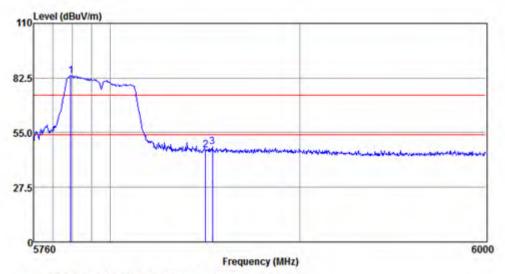
	Freq	Read			Preamp	Emission	Limit Line	Over	Remark
	Freq	rever	Factor	LOSS	Factor	rever	Line	Limit	Remark
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5722.17	49.26	32.15	9.00	38.75	51.66	54.00	-2.34	Average
2	5725.00	49.94	32.15	9.00	38.75	52.34	54.00	-1.66	Average
3	5739.35	82.23	32.15	9.00	38.76	84.62	54.00	30.62	Average



Report No.: SHEM180400307901

Page: 76 of 169

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



Antenna Polarity : HORIZONTAL

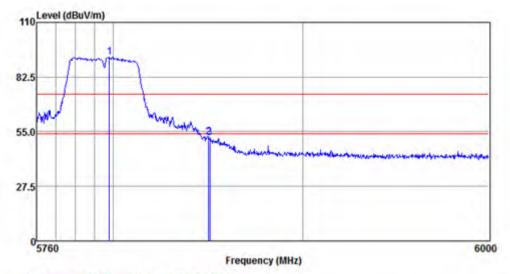
	Freq		Antenna Factor			Emission Level	Limit Line		Remark
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5779.31	81.29	32.16	8.93	38.79	83.59	74.00	9.59	Peak
2	5850.00	43.94	32.17	8.90	38.75	46.26	74.00	-27.74	Peak
3	5853.63	45.53	32.17	8.90	38.75	47.85	74.00	-26.15	Peak



Report No.: SHEM180400307901

Page: 77 of 169

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



Antenna Polarity : VERTICAL

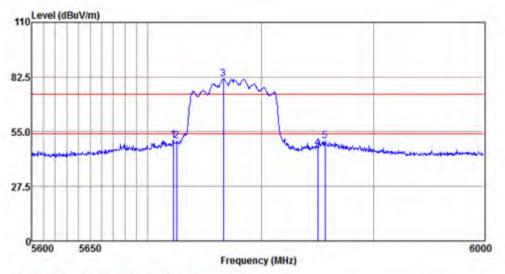
		Read	Antenna	Cable	Preamp	Emission	Limit	Over	
	Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Remark
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5797.75	90.37	32.16	8.87	38.80	92.60	74.00	18.60	Peak
2	5850.00	50.13	32.17	8.90	38.75	52.45	74.00	-21.55	Peak
3	5850.76	49.67	32.17	8.90	38.75	51.99	74.00	-22.01	Peak



Report No.: SHEM180400307901

Page: 78 of 169

Mode:a; Polarization:Horizontal; Modulation:c; bandwidth:80MHz; Channel:Low



Antenna Polarity : HORIZONTAL

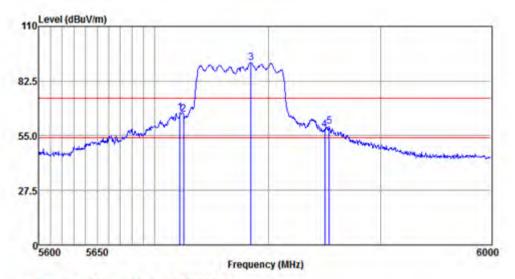
	Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
					*****				*****
	MHZ	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5722.25	48.46	32.15	9.00	38.75	50.86	74.00	-23.14	Peak
2	5725.00	47.83	32.15	9.00	38.75	50.23	74.00	-23.77	Peak
3	5766.24	79.39	32.15	8.93	38.78	81.69	74.00	7.69	Peak
4	5850.00	44.55	32.17	8.90	38.75	46.87	74.00	-27.13	Peak
5	5856.45	47.94	32.17	8.90	38.74	50.27	74.00	-23.73	Peak



Report No.: SHEM180400307901

Page: 79 of 169

Mode:a; Polarization:Vertical; Modulation:c; bandwidth:80MHz; Channel:Low



#### Antenna Polarity : VERTICAL

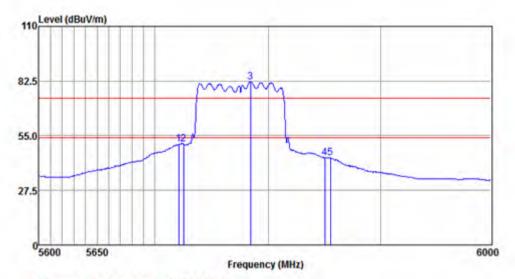
		Read				Emission		Over	
	Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Remark
	Acres .		******		*****		*****		
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5721.85	64.31	32.14	9.00	38.74	66.71	74.00	-7.29	Peak
2	5725.01	63.54	32.15	9.00	38.75	65.94	74.00	-8.06	Peak
3	5784.17	89.51	32.16	8.93	38.79	91.81	74.00	17.81	Peak
4	5850.00	55.61	32.17	8.90	38.75	57.93	74.00	-16.07	Peak
5	5853.62	57.15	32.17	8.90	38.75	59.47	74.00	-14.53	Peak



Report No.: SHEM180400307901

Page: 80 of 169

Mode:a; Polarization:Vertical; Modulation:c; bandwidth:80MHz; Channel:Low



#### Antenna Polarity : VERTICAL

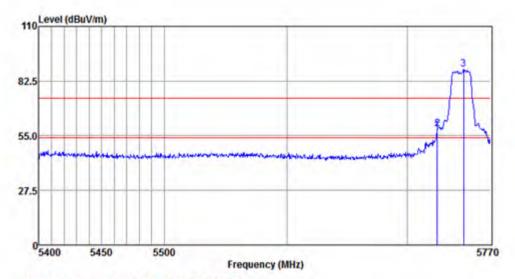
Fr	eq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
M	Hz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1 5720	.67	48.37	32.14	9.00	38.74	50.77	54.00	-3.23	Average
2 5725	.00	48.24	32.15	9.00	38.75	50.64	54.00	-3.36	Average
3 5783	.77	79.84	32.16	8.93	38.79	82.14	54.00	28.14	Average
4 5850	.00	41.56	32.17	8.90	38.75	43.88	54.00	-10.12	Average
5 5854	.83	41.37	32.17	8.90	38.75	43.69	54.00	-10.31	Average



Report No.: SHEM180400307901

Page: 81 of 169

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



#### Antenna Polarity : HORIZONTAL

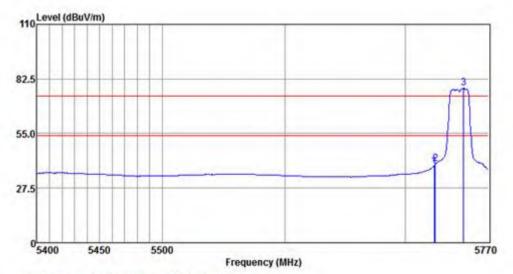
	Freq	Read Level	Antenna Factor			Emission Level	Limit Line		Remark
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5724.67	55.36	32.15	9.00	38.75	57.76	74.00	-16.24	Peak
2	5725.00	55.94	32.15	9.00	38.75	58.34	74.00	-15.66	Peak
3	5747.10	86.11	32.15	9.00	38.76	88.50	74.00	14.50	Peak



Report No.: SHEM180400307901

Page: 82 of 169

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



## Antenna Polarity : HORIZONTAL

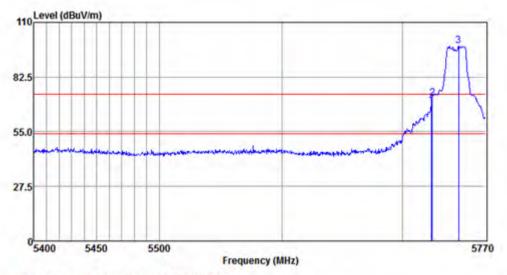
		Read	Antenna	Cable	Preamp	Emission	Limit	Over	
	Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Remark
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5723.92	36.34	32.15	9.00	38.75	38.74	54.00	-15.26	Average
2	5725.00	37.30	32.15	9.00	38.75	39.70	54.00	-14.30	Average
3	5748.63	75.42	32.15	9.00	38.76	77.81	54.00	23.81	Average



Report No.: SHEM180400307901

Page: 83 of 169

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



Antenna Polarity : VERTICAL

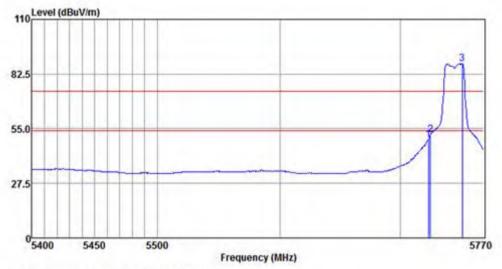
	Freq		Antenna Factor			Emission Level	Limit Line		Remark
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5723.92	65.88	32.15	9.00	38.75	68.28	74.00	-5.72	Peak
2	5725.00	69.53	32.15	9.00	38.75	71.93	74.00	-2.07	Peak
3	5747.10	95.65	32.15	9.00	38.76	98.04	74.00	24.04	Peak



Report No.: SHEM180400307901

Page: 84 of 169

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



Antenna Polarity : VERTICAL

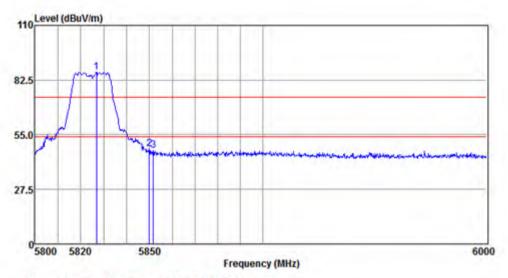
		Read	Antenna	Cable	Preamp	Emission	Limit	Over	
	Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Remark
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5723.16	47.05	32.15	9.00	38.75	49.45	54.00	-4.55	Average
2	5725.00	49.59	32.15	9.00	38.75	51.99	54.00	-2.01	Average
3	5751.67	85.45	32.15	8.93	38.76	87.77	54.00	33.77	Average



Report No.: SHEM180400307901

Page: 85 of 169

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



Antenna Polarity : HORIZONTAL

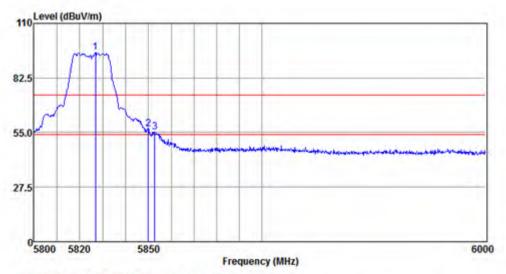
	Freq	Read Level				Emission Level			Remark
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5826.80	84.28	32.17	8.87	38.77	86.55	74.00	12.55	Peak
2	5850.00	45.56	32.17	8.90	38.75	47.88	74.00	-26.12	Peak
3	5851.75	44.75	32.17	8.90	38.75	47.07	74.00	-26.93	Peak



Report No.: SHEM180400307901

Page: 86 of 169

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



Antenna Polarity : VERTICAL

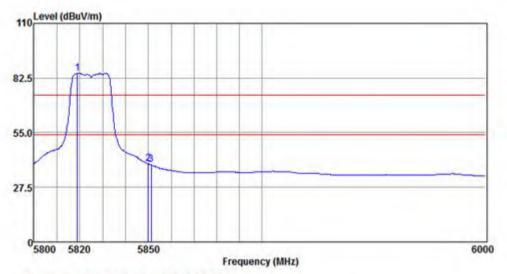
	Freq		Antenna Factor			Emission Level	Limit Line		Remark
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5826.80	92.96	32.17	8.87	38.77	95.23	74.00	21.23	Peak
2	5850.00	54.64	32.17	8.90	38.75	56.96	74.00	-17.04	Peak
3	5852.74	52.81	32.17	8.90	38.75	55.13	74.00	-18.87	Peak



Report No.: SHEM180400307901

Page: 87 of 169

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



Antenna Polarity : VERTICAL

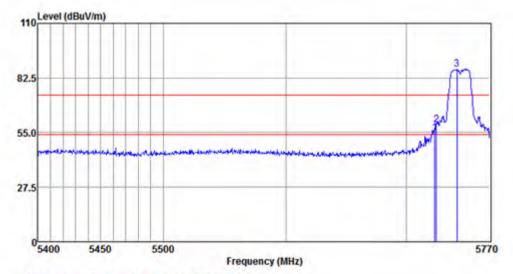
		Read	Antenna	Cable	Preamp	Emission	Limit	Over	
	Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Remark
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5818.91	82.64	32.16	8.87	38.78	84.89	54.00	30.89	Average
2	5850.00	36.93	32.17	8.90	38.75	39.25	54.00	-14.75	Average
3	5851.15	36.50	32.17	8.90	38.75	38.82	54.00	-15.18	Average



Report No.: SHEM180400307901

Page: 88 of 169

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



Antenna Polarity : HORIZONTAL

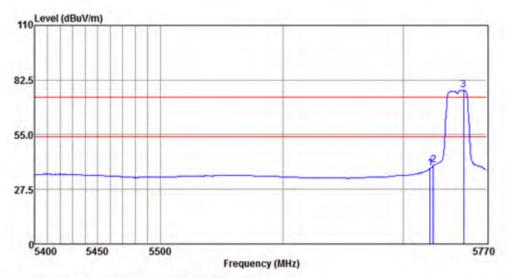
	Freq	Read Level			100	Emission Level	Limit Line		Remark
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5723.54	52.34	32.15	9.00	38.75	54.74	74.00	-19.26	Peak
2	5725.00	56.45	32.15	9.00	38.75	58.85	74.00	-15.15	Peak
3	5742.15	84.55	32.15	9.00	38.76	86.94	74.00	12.94	Peak



Report No.: SHEM180400307901

Page: 89 of 169

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



Antenna Polarity : HORIZONTAL

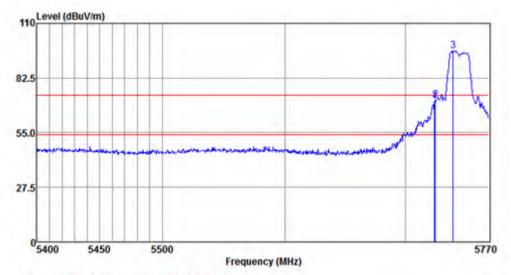
,	req	Read Level	Antenna Factor			Emission Level	Limit Line		Remark
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1 572	22.40	35.64	32.15	9.00	38.75	38.04	54.00	-15.96	Average
2 572	25.00	37.21	32.15	9.00	38.75	39.61	54.00	-14.39	Average
3 575	50.53	75.03	32.15	9.00	38.76	77.42	54.00	23.42	Average



Report No.: SHEM180400307901

Page: 90 of 169

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



#### Antenna Polarity : VERTICAL

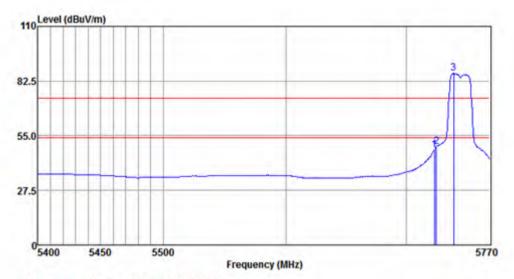
	Freq	Read Level		Cable Loss		Emission Level	Limit Line	Over Limit	Remark
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5724.29	68.26	32.15	9.00	38.75	70.66	74.00	-3.34	Peak
2	5725.00	68.93	32.15	9.00	38.75	71.33	74.00	-2.67	Peak
3	5739.87	93.81	32.15	9.00	38.76	96.20	74.00	22.20	Peak



Report No.: SHEM180400307901

Page: 91 of 169

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



#### Antenna Polarity : VERTICAL

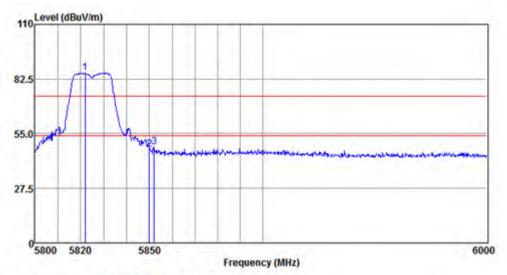
	Freq	Read Level	Antenna Factor		Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5723.16	45.32	32.15	9.00	38.75	47.72	54.00	-6.28	Average
2	5725.00	47.18	32.15	9.00	38.75	49.58	54.00	-4.42	Average
3	5739.49	83.93	32.15	9.00	38.76	86.32	54.00	32.32	Average



Report No.: SHEM180400307901

Page: 92 of 169

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



Antenna Polarity : HORIZONTAL

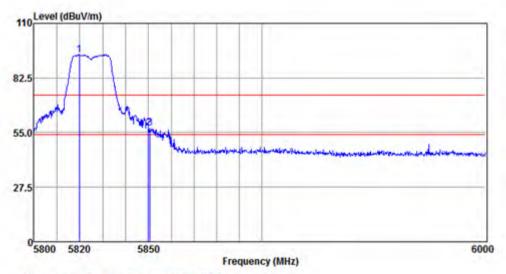
	Freq	Read Level	Antenna Factor		Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
							*****		
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5821.87	83.29	32.16	8.87	38.78	85.54	74.00	11.54	Peak
2	5850.00	44.59	32.17	8.90	38.75	46.91	74.00	-27.09	Peak
3	5852.14	45.89	32.17	8.90	38.75	48.21	74.00	-25.79	Peak



Report No.: SHEM180400307901

Page: 93 of 169

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



Antenna Polarity : VERTICAL

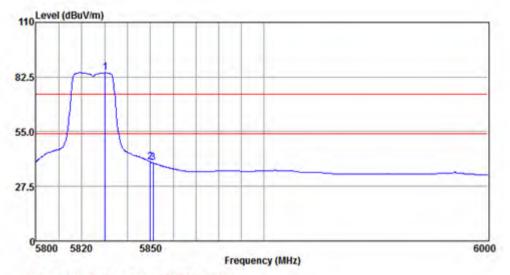
	Freq	Read Level	Antenna Factor			Emission Level	Limit Line		Remark
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5819.70	91.92	32.16	8.87	38.78	94.17	74.00	20.17	Peak
2	5850.00	55.00	32.17	8.90	38.75	57.32	74.00	-16.68	Peak
3	5850.75	54.75	32.17	8.90	38.75	57.07	74.00	-16.93	Peak



Report No.: SHEM180400307901

Page: 94 of 169

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



#### Antenna Polarity : VERTICAL

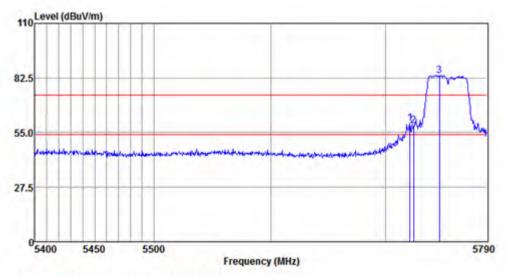
		Read	Antenna	Cable	Preamp	Emission	Limit	Over	
	Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Remark
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5830.16	82.43	32.17	8.90	38.77	84.73	54.00	30.73	Average
2	5850.00	37.53	32.17	8.90	38.75	39.85	54.00	-14.15	Average
3	5851.15	36.92	32.17	8.90	38.75	39.24	54.00	-14.76	Average



Report No.: SHEM180400307901

Page: 95 of 169

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



Antenna Polarity : HORIZONTAL

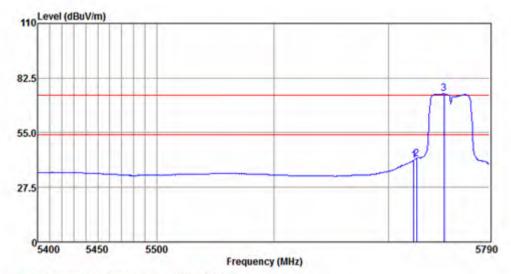
		Read	Antenna	Cable	Preamp	Emission	Limit	Over	
	Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Remark
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5721.77	57.38	32.14	9.00	38.74	59.78	74.00	-14.22	Peak
2	5725.00	56.11	32.15	9.00	38.75	58.51	74.00	-15.49	Peak
3	5747.76	81.41	32.15	9.00	38.76	83.80	74.00	9.80	Peak



Report No.: SHEM180400307901

Page: 96 of 169

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



Antenna Polarity : HORIZONTAL

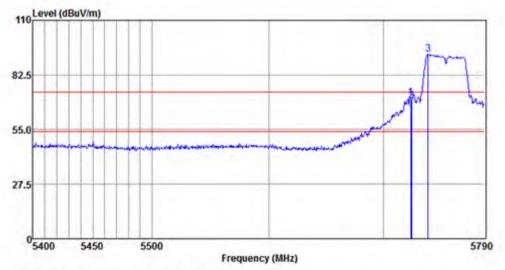
	Freq	Read Level	Antenna Factor		Preamp Factor	Emission Level	Limit Line		Remark
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5722.57	38.75	32.15	9.00	38.75	41.15	54.00	-12.85	Average
2	5725.00	39.56	32.15	9.00	38.75	41.96	54.00	-12.04	Average
3	5749.36	72.12	32.15	9.00	38.76	74.51	54.00	20.51	Average



Report No.: SHEM180400307901

Page: 97 of 169

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



Antenna Polarity : VERTICAL

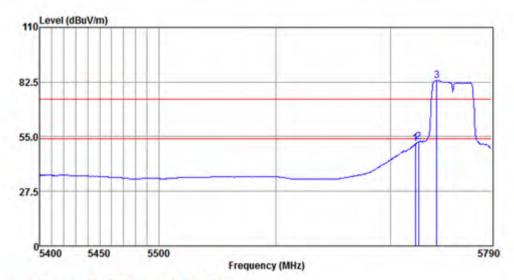
	Freq	Read Level	Antenna Factor		Preamp Factor	Emission Level	Limit Line		Remark
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5724.16	68.44	32.15	9.00	38.75	70.84	74.00	-3.16	Peak
2	5725.00	67.20	32.15	9.00	38.75	69.60	74.00	-4.40	Peak
3	5739.75	90.51	32.15	9.00	38.76	92.90	74.00	18.90	Peak



Report No.: SHEM180400307901

Page: 98 of 169

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



#### Antenna Polarity : VERTICAL

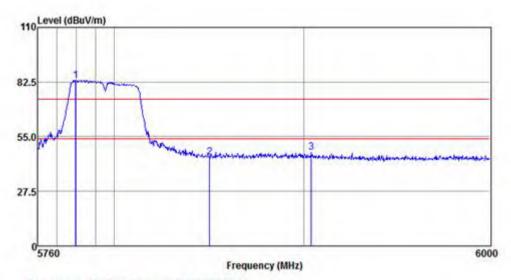
	Freq	Read Level	Antenna Factor		Preamp Factor	Emission Level	Limit Line		Remark
							*****		
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5722.17	48.98	32.15	9.00	38.75	51.38	54.00	-2.62	Average
2	5725.00	49.89	32.15	9.00	38.75	52.29	54.00	-1.71	Average
3	5740.95	80.94	32.15	9.00	38.76	83.33	54.00	29.33	Average



Report No.: SHEM180400307901

Page: 99 of 169

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



Antenna Polarity : HORIZONTAL

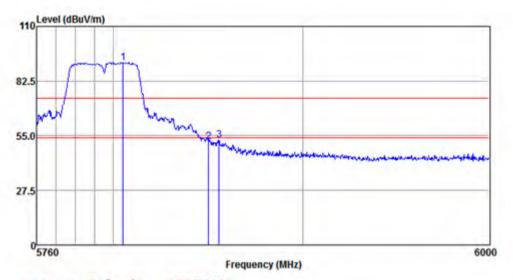
	Fara	Read	Antenna Factor	Cable Loss		Emission	Limit Line	Over	Remark
	Freq	rever	ractor	LOSS	Factor	rever	Line	CIMIC	Kemark
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5779.55	81.10	32.16	8.93	38.79	83.40	74.00	9.40	Peak
2	5850.00	42.19	32.17	8.90	38.75	44.51	74.00	-29.49	Peak
3	5904.03	44.81	32.18	8.93	38.70	47.22	74.00	-26.78	Peak



Report No.: SHEM180400307901

Page: 100 of 169

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



Antenna Polarity : VERTICAL

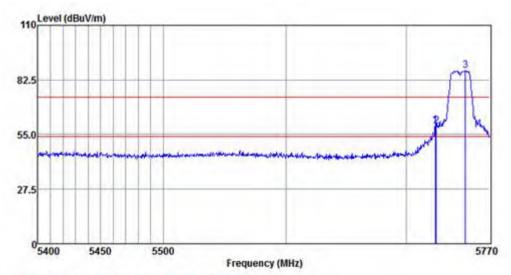
	Freq					Emission Level	Limit Line	Over Limit	Remark
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5805.09	89.71	32.16	8.87	38.80	91.94	74.00	17.94	Peak
2	5850.00	49.70	32.17	8.90	38.75	52.02	74.00	-21.98	Peak
3	5855.54	50.57	32.17	8.90	38.75	52.89	74.00	-21.11	Peak



Report No.: SHEM180400307901

Page: 101 of 169

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



Antenna Polarity : HORIZONTAL

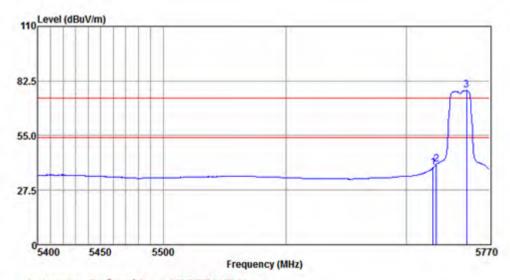
	Freq	Read Level			The second second second	Emission Level			Remark
	******								******
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5723.92	57.41	32.15	9.00	38.75	59.81	74.00	-14.19	Peak
2	5725.00	57.05	32.15	9.00	38.75	59.45	74.00	-14.55	Peak
3	5749.39	84.93	32.15	9.00	38.76	87.32	74.00	13.32	Peak



Report No.: SHEM180400307901

Page: 102 of 169

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



Antenna Polarity : HORIZONTAL

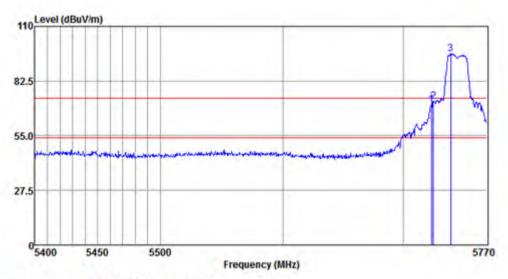
	Freq	Read	Antenna Factor	Cable Loss		Emission Level	Limit Line	Over Limit	Remark
	rreq	rever	ractor	LUSS	ractor	rever	Line	LIMIC	Remark
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5722.40	36.44	32.15	9.00	38.75	38.84	54.00	-15.16	Average
2	5725.00	38.26	32.15	9.00	38.75	40.66	54.00	-13.34	Average
3	5750.53	75.36	32.15	9.00	38.76	77.75	54.00	23.75	Average



Report No.: SHEM180400307901

Page: 103 of 169

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



Antenna Polarity : VERTICAL

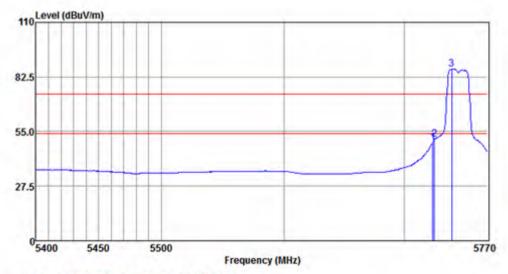
	Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5723.16	68.29	32.15	9.00	38.75	70.69	74.00	-3.31	Peak
2	5725.00	69.93	32.15	9.00	38.75	72.33	74.00	-1.67	Peak
3	5739.49	93.86	32.15	9.00	38.76	96.25	74.00	22.25	Peak



Report No.: SHEM180400307901

Page: 104 of 169

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



#### Antenna Polarity : VERTICAL

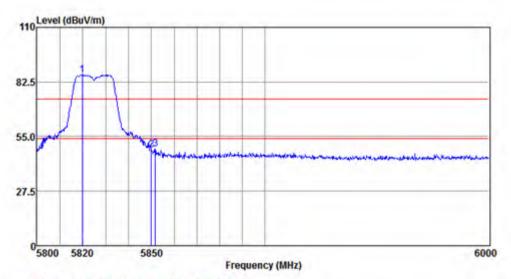
	Freq	Read Level		Cable Loss	Preamp	Emission Level	Limit	Over Limit	Remark
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5723.54	46.96	32.15	9.00	38.75	49.36	54.00	-4.64	Average
2	5725.00	48.66	32.15	9.00	38.75	51.06	54.00	-2.94	Average
3	5739.49	84.24	32.15	9.00	38.76	86.63	54.00	32.63	Average



Report No.: SHEM180400307901

Page: 105 of 169

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



#### Antenna Polarity : HORIZONTAL

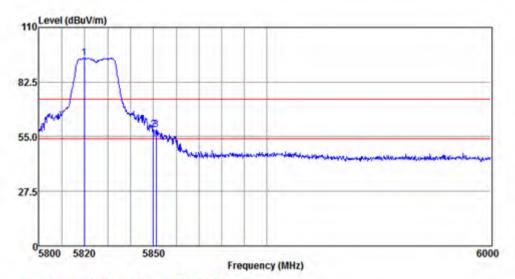
		Read	Antenna	Cable	Preamp	Emission	Limit	Over	
	Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Remark
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5819.70	83.95	32.16	8.87	38.78	86.20	74.00	12.20	Peak
2	5850.00	45.98	32.17	8.90	38.75	48.30	74.00	-25.70	Peak
3	5851.75	46.26	32.17	8.90	38.75	48.58	74.00	-25.42	Peak



Report No.: SHEM180400307901

Page: 106 of 169

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



#### Antenna Polarity : VERTICAL

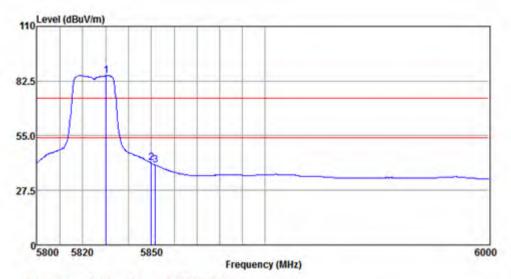
	Freq	Read	Antenna Factor			Emission	Limit Line		Remark
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5819.70	92.48	32.16	8.87	38.78	94.73	74.00	20.73	Peak
2	5850.00	56.06	32.17	8.90	38.75	58.38	74.00	-15.62	Peak
3	5851.15	56.12	32.17	8.90	38.75	58.44	74.00	-15.56	Peak



Report No.: SHEM180400307901

Page: 107 of 169

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



Antenna Polarity : VERTICAL

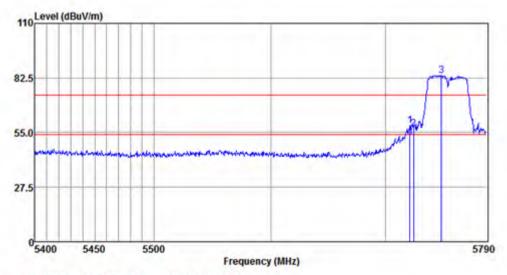
	Freq	Read	Antenna Factor	Cable Loss	Preamp	Emission	Limit Line	Over Limit	Remark
	rred	rever	ractor	LUSS	ractor	rever	Line	LIMIL	Kemark
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5830.16	82.95	32.17	8.90	38.77	85.25	54.00	31.25	Average
2	5850.00	38.90	32.17	8.90	38.75	41.22	54.00	-12.78	Average
3	5851.75	37.89	32.17	8.90	38.75	40.21	54.00	-13.79	Average



Report No.: SHEM180400307901

Page: 108 of 169

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



Antenna Polarity : HORIZONTAL

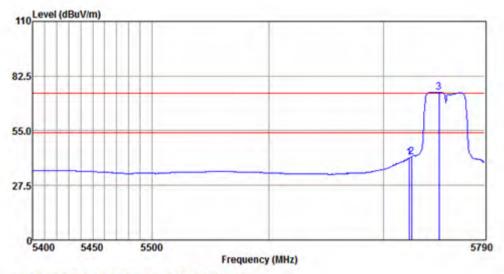
	Freq	Read	Antenna Factor		Preamp Factor	Emission	Limit Line		Remark
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5721.77	55.96	32.14	9.00	38.74	58.36	54.00	4.36	Average
2	5725.00	54.45	32.15	9.00	38.75	56.85	54.00	2.85	Average
3	5749.77	81.35	32.15	9.00	38.76	83.74	54.00	29.74	Average



Report No.: SHEM180400307901

Page: 109 of 169

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



Antenna Polarity : HORIZONTAL

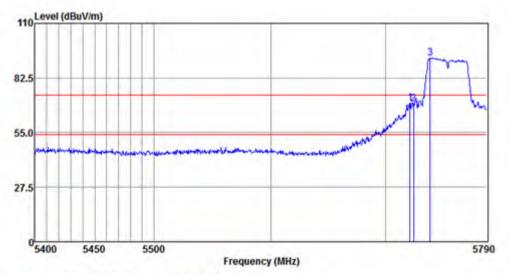
		Read	Antenna	Cable	Preamp	Emission	Limit	Over	
	Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Remark
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5722.96	38.88	32.15	9.00	38.75	41.28	54.00	-12.72	Average
2	5725.00	39.50	32.15	9.00	38.75	41.90	54.00	-12.10	Average
3	5749.36	72.04	32.15	9.00	38.76	74.43	54.00	20.43	Average



Report No.: SHEM180400307901

Page: 110 of 169

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



# Antenna Polarity : VERTICAL

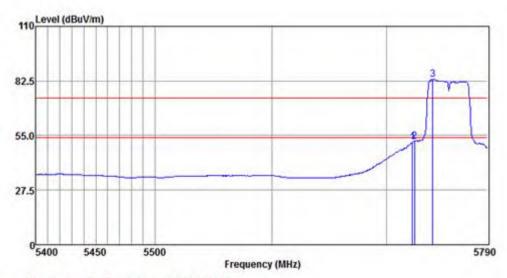
		Read				Emission	Limit	Over	
	Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Remark
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5721.77	67.38	32.14	9.00	38.74	69.78	74.00	-4.22	Peak
2	5725.00	67.05	32.15	9.00	38.75	69.45	74.00	-4.55	Peak
3	5739.75	90.24	32.15	9.00	38.76	92.63	74.00	18.63	Peak



Report No.: SHEM180400307901

Page: 111 of 169

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



Antenna Polarity : VERTICAL

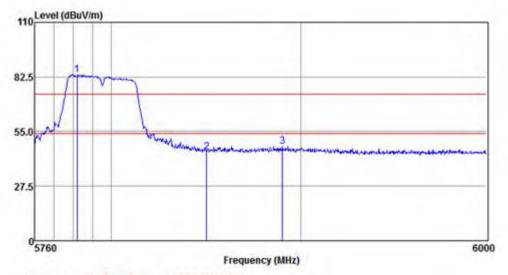
		Read	Antenna	Cable	Preamp	Emission	Limit	Over	
	Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Remark
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5723.36	49.26	32.15	9.00	38.75	51.66	54.00	-2.34	Average
2	5725.00	49.66	32.15	9.00	38.75	52.06	54.00	-1.94	Average
3	5740.95	80.89	32.15	9.00	38.76	83.28	54.00	29.28	Average



Report No.: SHEM180400307901

Page: 112 of 169

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



Antenna Polarity : HORIZONTAL

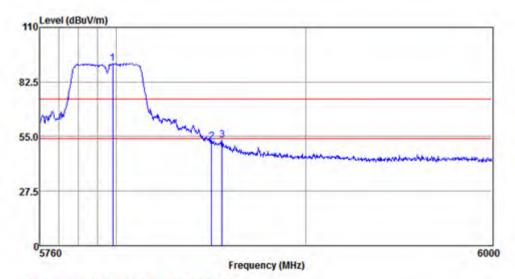
	Freq	Read Level	Antenna Factor		Preamp Factor	Emission Level	Limit Line		Remark
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5781.91	81.18	32.16	8.93	38.79	83.48	74.00	9.48	Peak
2	5850.00	42.51	32.17	8.90	38.75	44.83	74.00	-29.17	Peak
3	5890.31	45.22	32.18	8.93	38.70	47.63	74.00	-26.37	Peak



Report No.: SHEM180400307901

Page: 113 of 169

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



### Antenna Polarity : VERTICAL

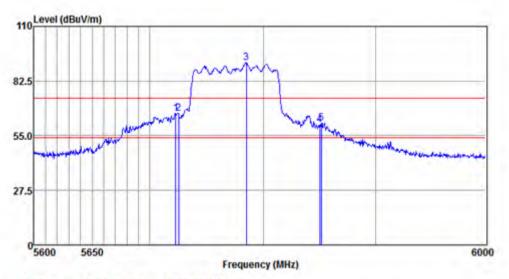
	Freq	Read Level	Antenna Factor			Emission Level	Limit Line		Remark
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5797.98	89.64	32.16	8.87	38.80	91.87	74.00	17.87	Peak
2	5850.00	49.98	32.17	8.90	38.75	52.30	74.00	-21.70	Peak
3	5855.54	50.83	32.17	8.90	38.75	53.15	74.00	-20.85	Peak



Report No.: SHEM180400307901

Page: 114 of 169

Mode:b; Polarization:Vertical; Modulation:c; bandwidth:80MHz; Channel:Low



Antenna Polarity : VERTICAL

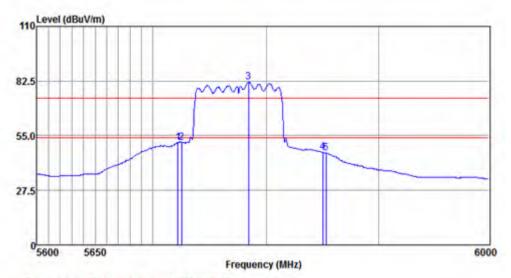
	1.15	Read	Antenna			Emission		Over	1000
	Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Remark
				****					
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5722.64	63.81	32.15	9.00	38.75	66.21	74.00	-7.79	Peak
2	5725.00	63.76	32.15	9.00	38.75	66.16	74.00	-7.84	Peak
3	5784.57	89.33	32.16	8.93	38.79	91.63	74.00	17.63	Peak
4	5850.00	58.28	32.17	8.90	38.75	60.60	74.00	-13.40	Peak
5	5851.20	58.97	32.17	8.90	38.75	61.29	74.00	-12.71	Peak



Report No.: SHEM180400307901

Page: 115 of 169

Mode:b; Polarization:Vertical; Modulation:c; bandwidth:80MHz; Channel:Low



Antenna Polarity : VERTICAL

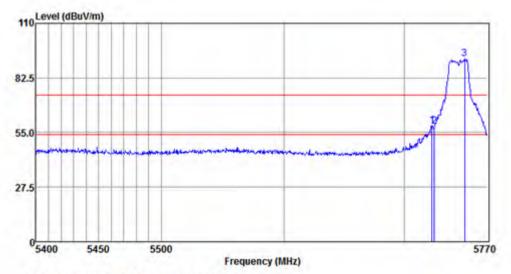
Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
							*****	
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
721.85	49.23	32.14	9.00	38.74	51.63	54.00	-2.37	Average
725.00	49.21	32.15	9.00	38.75	51.61	54.00	-2.39	Average
783.77	79.63	32.16	8.93	38.79	81.93	54.00	27.93	Average
850.00	44.32	32.17	8.90	38.75	46.64	54.00	-7.36	Average
852.81	43.78	32.17	8.90	38.75	46.10	54.00	-7.90	Average
	MHz 721.85 725.00 783.77 850.00	MHz dBuv 721.85 49.23 725.00 49.21 783.77 79.63 850.00 44.32	MHz dBuv dB/m 721.85 49.23 32.14 725.00 49.21 32.15 783.77 79.63 32.16 850.00 44.32 32.17	Freq Level Factor Loss  MHz dBuv dB/m dB 721.85 49.23 32.14 9.00 725.00 49.21 32.15 9.00 783.77 79.63 32.16 8.93 850.00 44.32 32.17 8.90	Freq Level Factor Loss Factor  MHz dBuv dB/m dB dB  721.85 49.23 32.14 9.00 38.74  725.00 49.21 32.15 9.00 38.75  783.77 79.63 32.16 8.93 38.79  850.00 44.32 32.17 8.90 38.75	Freq Level Factor Loss Factor Level  MHz dBuv dB/m dB dB dBuv/m  721.85 49.23 32.14 9.00 38.74 51.63  725.00 49.21 32.15 9.00 38.75 51.61  783.77 79.63 32.16 8.93 38.79 81.93  850.00 44.32 32.17 8.90 38.75 46.64	Freq Level Factor Loss Factor Level Line  MHz dBuv dB/m dB dB dBuv/m dBuv/m  721.85 49.23 32.14 9.00 38.74 51.63 54.00  725.00 49.21 32.15 9.00 38.75 51.61 54.00  783.77 79.63 32.16 8.93 38.79 81.93 54.00  850.00 44.32 32.17 8.90 38.75 46.64 54.00	Freq Level Factor Loss Factor Level Line Limit  MHz dBuv dB/m dB dB dBuv/m dBuv/m dB 721.85 49.23 32.14 9.00 38.74 51.63 54.00 -2.37 725.00 49.21 32.15 9.00 38.75 51.61 54.00 -2.39 783.77 79.63 32.16 8.93 38.79 81.93 54.00 27.93 850.00 44.32 32.17 8.90 38.75 46.64 54.00 -7.36



Report No.: SHEM180400307901

Page: 116 of 169

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



#### Antenna Polarity : HORIZONTAL

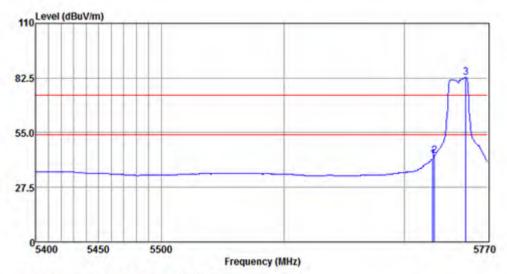
		Read	Antenna	Cable	Preamp	Emission	Limit	Over	
	Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Remark
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5722.78	55.98	32.15	9.00	38.75	58.38	74.00	-15.62	Peak
2	5725.00	55.77	32.15	9.00	38.75	58.17	74.00	-15.83	Peak
3	5750.53	89.60	32.15	9.00	38.76	91.99	74.00	17.99	Peak



Report No.: SHEM180400307901

Page: 117 of 169

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



#### Antenna Polarity : HORIZONTAL

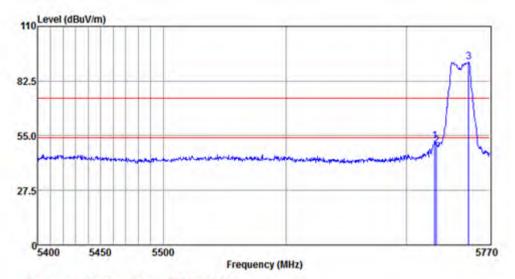
	Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5723.54	39.55	32.15	9.00	38.75	41.95	54.00	-12.05	Average
2	5725.00	41.00	32.15	9.00	38.75	43.40	54.00	-10.60	Average
3	5751.29	80.38	32.15	8.93	38.76	82.70	54.00	28.70	Average



Report No.: SHEM180400307901

Page: 118 of 169

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



### Antenna Polarity : VERTICAL

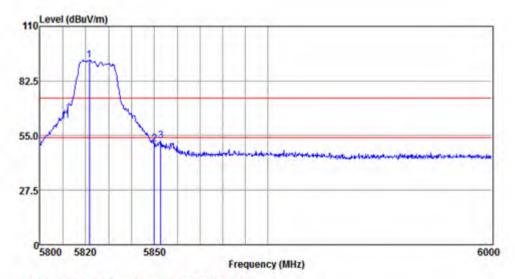
	Freq	Read Level	Antenna Factor			Emission Level			Remark
			******						
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5723.54	50.13	32.15	9.00	38.75	52.53	74.00	-21.47	Peak
2	5725.00	47.50	32.15	9.00	38.75	49.90	74.00	-24.10	Peak
3	5752.06	89.88	32.15	8.93	38.76	92.20	74.00	18.20	Peak



Report No.: SHEM180400307901

Page: 119 of 169

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



Antenna Polarity : HORIZONTAL

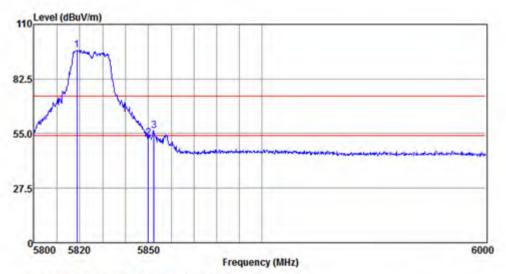
		Read	Antenna	Cable	Preamp	Emission	Limit	Over	
	Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Remark
		*****							
	MHz	dBuy	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5821.47	90.68	32.16	8.87	38.78	92.93	74.00	18.93	Peak
2	5850.00	48.45	32.17	8.90	38.75	50.77	74.00	-23.23	Peak
3	5852.74	50.06	32.17	8.90	38.75	52.38	74.00	-21.62	Peak



Report No.: SHEM180400307901

Page: 120 of 169

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



Antenna Polarity : VERTICAL

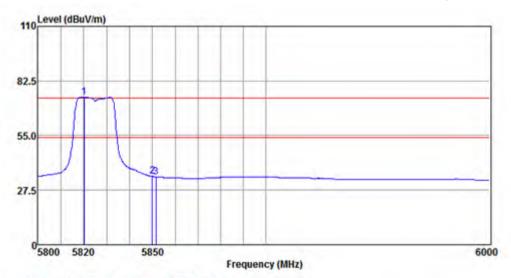
					2.00	Emission	Limit		
	Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Remark
				*****					
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5818.71	94.68	32.16	8.87	38.78	96.93	74.00	22.93	Peak
2	5850.00	50.31	32.17	8.90	38.75	52.63	74.00	-21.37	Peak
3	5852.54	54.01	32.17	8.90	38.75	56.33	74.00	-17.67	Peak



Report No.: SHEM180400307901

Page: 121 of 169

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



Antenna Polarity : VERTICAL

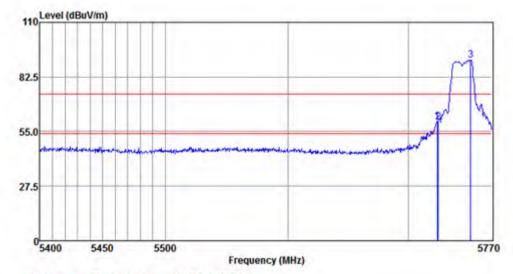
	Face	Read			Preamp Factor	Emission		Over Limit	Damank
	Freq	rever	Factor	Loss	Factor	rever	Line	Limit	Remark
				*****					
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5820.09	72.22	32.16	8.87	38.78	74.47	54.00	20.47	Average
2	5850.00	32.05	32.17	8.90	38.75	34.37	54.00	-19.63	Average
3	5851.55	31.83	32.17	8.90	38.75	34.15	54.00	-19.85	Average



Report No.: SHEM180400307901

Page: 122 of 169

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



#### Antenna Polarity : HORIZONTAL

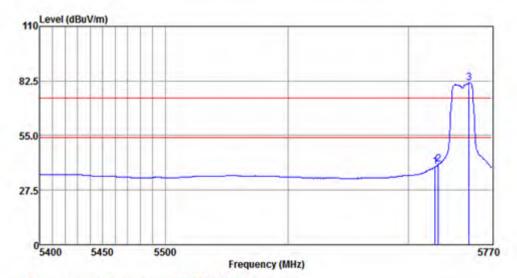
	Freq				1 1 1 1 1 1 1 1 1	Emission	Limit Line		Remark	
	Freq	rever	Factor	LOSS	Factor	rever	Line	Limit	Remark	
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB		
1	5723.92	57.62	32.15	9.00	38.75	60.02	74.00	-13.98	Peak	
2	5725.00	57.32	32.15	9.00	38.75	59.72	74.00	-14.28	Peak	
3	5752.06	88.79	32.15	8.93	38.76	91.11	74.00	17.11	Peak	



Report No.: SHEM180400307901

Page: 123 of 169

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



Antenna Polarity : HORIZONTAL

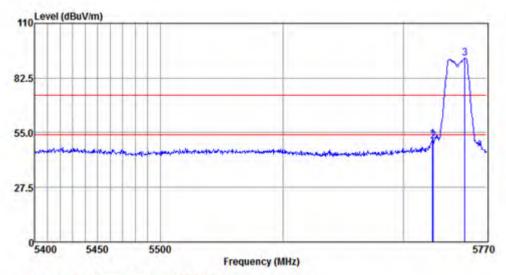
		Read	Antenna	Cable	Preamp	Emission	Limit	Over	
	Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Remark
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5722.40	36.89	32.15	9.00	38.75	39.29	54.00	-14.71	Average
2	5725.00	38.18	32.15	9.00	38.75	40.58	54.00	-13.42	Average
3	5750.91	79.14	32.15	9.00	38.76	81.53	54.00	27.53	Average



Report No.: SHEM180400307901

Page: 124 of 169

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



Antenna Polarity : VERTICAL

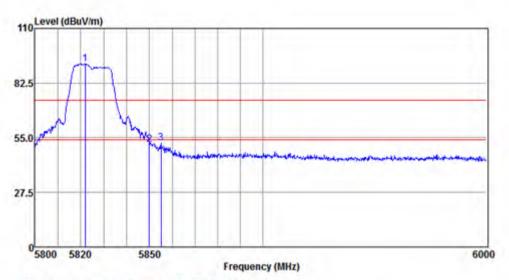
	Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
							*****		
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5724.29	49.53	32.15	9.00	38.75	51.93	74.00	-22.07	Peak
2	5725.00	48.14	32.15	9.00	38.75	50.54	74.00	-23.46	Peak
3	5751.29	90.07	32.15	8.93	38.76	92.39	74.00	18.39	Peak



Report No.: SHEM180400307901

Page: 125 of 169

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



Antenna Polarity : HORIZONTAL

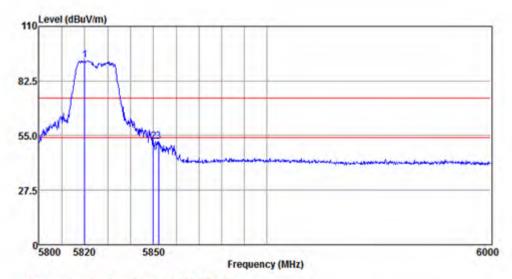
	Freq					Emission Level	Limit Line		Remark
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5821.87	90.00	32.16	8.87	38.78	92.25	74.00	18.25	Peak
2	5850.00	49.35	32.17	8.90	38.75	51.67	74.00	-22.33	Peak
3	5855.12	50.15	32.17	8.90	38.75	52.47	74.00	-21.53	Peak



Report No.: SHEM180400307901

Page: 126 of 169

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



### Antenna Polarity : VERTICAL

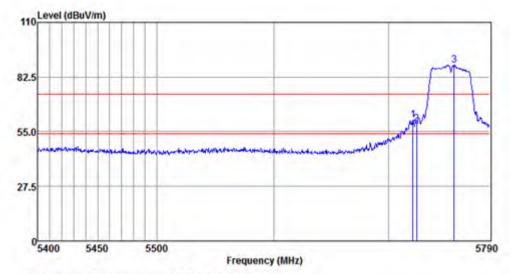
	Freq	Read Level	Antenna Factor			Emission Level	Limit Line		Remark
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5819.89	90.51	32.16	8.87	38.78	92.76	74.00	18.76	Peak
2	5850.00	49.64	32.17	8.90	38.75	51.96	74.00	-22.04	Peak
3	5852.34	49.76	32.17	8.90	38.75	52.08	74.00	-21.92	Peak



Report No.: SHEM180400307901

Page: 127 of 169

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



#### Antenna Polarity : HORIZONTAL

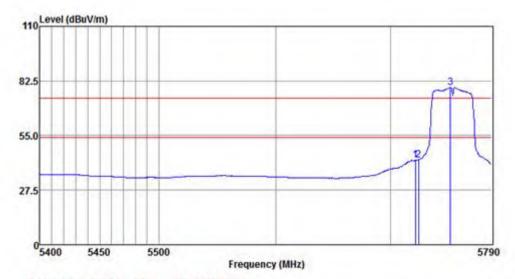
Freq	Read Level	Antenna Factor		Preamp Factor	Emission Level	Limit Line		Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1 5721.77	58.60	32.14	9.00	38.74	61.00	74.00	-13.00	Peak
2 5725.00	56.41	32.15	9.00	38.75	58.81	74.00	-15.19	Peak
3 5758.19	86.21	32.15	8.93	38.78	88.51	74.00	14.51	Peak



Report No.: SHEM180400307901

Page: 128 of 169

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



Antenna Polarity : HORIZONTAL

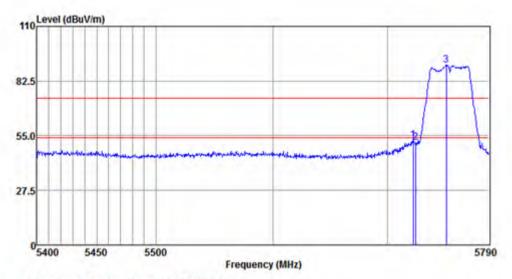
		Read	Antenna	Cable	Preamp	Emission	Limit	Over	
	Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Remark
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5722.17	40.15	32.15	9.00	38.75	42.55	54.00	-11.45	Average
2	5725.00	40.40	32.15	9.00	38.75	42.80	54.00	-11.20	Average
3	5753.38	76.82	32.15	8.93	38.76	79.14	54.00	25.14	Average



Report No.: SHEM180400307901

Page: 129 of 169

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



Antenna Polarity : VERTICAL

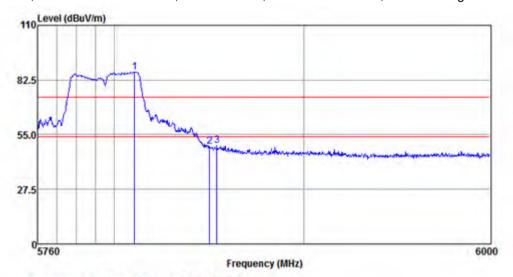
	Freq	Read Level	Antenna Factor			Emission Level	Limit Line	Over Limit	Remark
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5722.96	50.53	32.15	9.00	38.75	52.93	74.00	-21.07	Peak
1	2 5725.00	49.30	32.15	9.00	38.75	51.70	74.00	-22.30	Peak
13	3 5752.17	88.14	32.15	8.93	38.76	90.46	74.00	16.46	Peak



Report No.: SHEM180400307901

Page: 130 of 169

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



# Antenna Polarity : HORIZONTAL

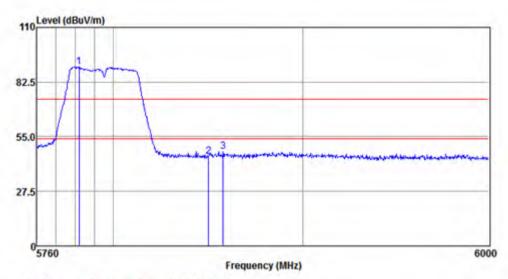
	Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
					******				
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5810.54	84.40	32.16	8.87	38.78	86.65	74.00	12.65	Peak
2	5850.00	46.83	32.17	8.90	38.75	49.15	74.00	-24.85	Peak
3	5853.87	47.25	32.17	8.90	38.75	49.57	74.00	-24.43	Peak



Report No.: SHEM180400307901

Page: 131 of 169

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



Antenna Polarity : VERTICAL

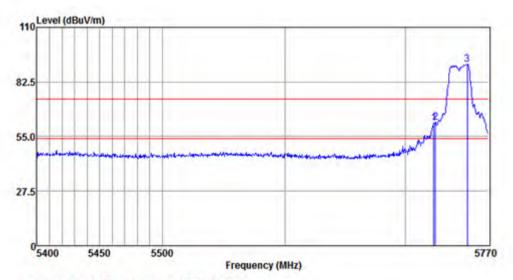
		Read	Antenna	Cable	Preamp	Emission	Limit	Over	
	Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Remark
	MHz	dBuy	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5781.91	87.74	32.16	8.93	38.79	90.04	74.00	16.04	Peak
2	5850.00	42.75	32.17	8.90	38.75	45.07	74.00	-28.93	Peak
3	5857.70	45.22	32.17	8.90	38.74	47.55	74.00	-26.45	Peak



Report No.: SHEM180400307901

Page: 132 of 169

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



Antenna Polarity : HORIZONTAL

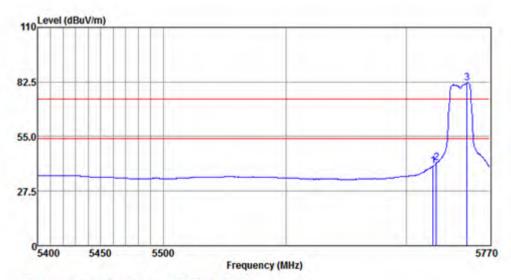
	Freq					Emission Level	Limit Line	Over Limit	Remark
						*****			
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5723.54	59.15	32.15	9.00	38.75	61.55	74.00	-12.45	Peak
2	5725.00	59.82	32.15	9.00	38.75	62.22	74.00	-11.78	Peak
3	5751.67	89.19	32.15	8.93	38.76	91.51	74.00	17.51	Peak



Report No.: SHEM180400307901

Page: 133 of 169

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



Antenna Polarity : HORIZONTAL

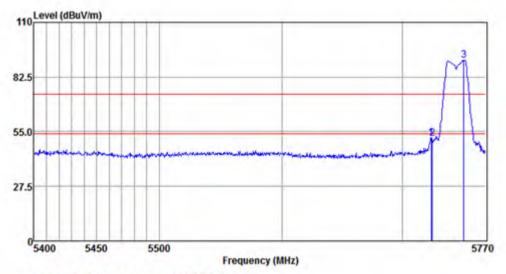
	Freq	Read Level	Antenna Factor	Cable Loss		Emission Level	Limit Line	Over Limit	Remark
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5722.40	37.85	32.15	9.00	38.75	40.25	54.00	-13.75	Average
2	5725.00	39.34	32.15	9.00	38.75	41.74	54.00	-12.26	Average
3	5750.91	79.59	32.15	9.00	38.76	81.98	54.00	27.98	



Report No.: SHEM180400307901

Page: 134 of 169

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



Antenna Polarity : VERTICAL

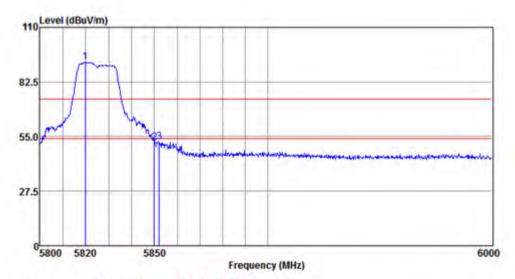
	Freq	Read Level	Antenna Factor	Cable Loss		Emission Level	Limit Line		Remark
					*****				
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5723.92	49.59	32.15	9.00	38.75	51.99	74.00	-22.01	Peak
2	5725.00	49.00	32.15	9.00	38.75	51.40	74.00	-22.60	Peak
3	5751.29	88.68	32.15	8.93	38.76	91.00	74.00	17.00	Peak



Report No.: SHEM180400307901

Page: 135 of 169

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



Antenna Polarity : HORIZONTAL

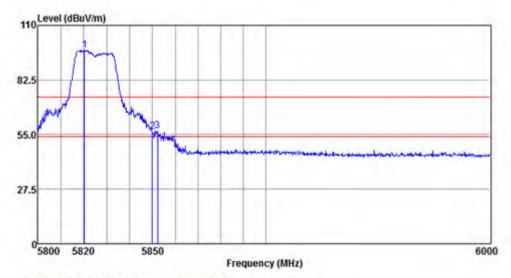
	Freq	Read Level	Antenna Factor		Preamp Factor	Emission Level	Limit Line		Remark
								*****	
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5819.70	90.21	32.16	8.87	38.78	92.46	74.00	18.46	Peak
2	5850.00	49.72	32.17	8.90	38.75	52.04	74.00	-21.96	Peak
3	5852.14	50.12	32.17	8.90	38.75	52.44	74.00	-21.56	Peak



Report No.: SHEM180400307901

Page: 136 of 169

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



### Antenna Polarity : VERTICAL

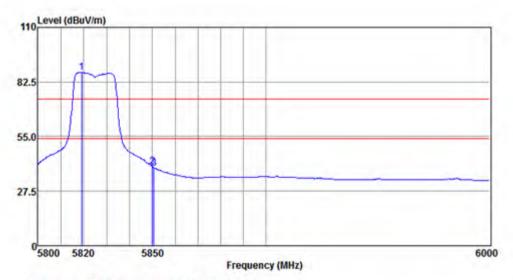
		Read	Antenna	Cable	Preamp	Emission	Limit	Over	
	Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Remark
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5820.29	95.06	32.16	8.87	38.78	97.31	74.00	23.31	Peak
2	5850.00	54.18	32.17	8.90	38.75	56.50	74.00	-17.50	Peak
3	5852.34	54.59	32.17	8.90	38.75	56.91	74.00	-17.09	Peak



Report No.: SHEM180400307901

Page: 137 of 169

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



Antenna Polarity : VERTICAL

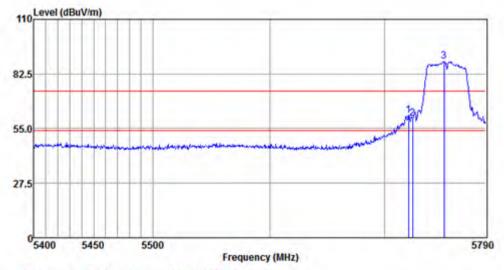
		Read				Emission			
	Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Remark
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5819.10	85.18	32.16	8.87	38.78	87.43	54.00	33.43	Average
2	5850.00	37.61	32.17	8.90	38.75	39.93	54.00	-14.07	Average
3	5850.75	36.83	32.17	8.90	38.75	39.15	54.00	-14.85	Average



Report No.: SHEM180400307901

Page: 138 of 169

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



Antenna Polarity : HORIZONTAL

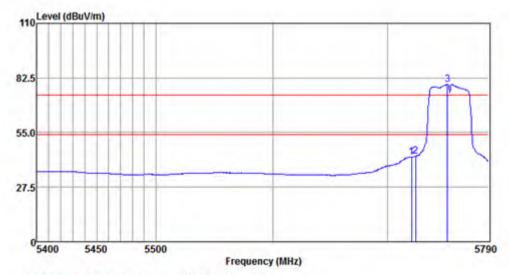
		Read			The state of the s	Emission			
	Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Remark
			******					*****	
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5721.37	59.13	32.14	9.00	38.74	61.53	74.00	-12.47	Peak
2	5725.00	57.50	32.15	9.00	38.75	59.90	74.00	-14.10	Peak
3	5752.97	86.40	32.15	8.93	38.76	88.72	74.00	14.72	Peak



Report No.: SHEM180400307901

Page: 139 of 169

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



Antenna Polarity : HORIZONTAL

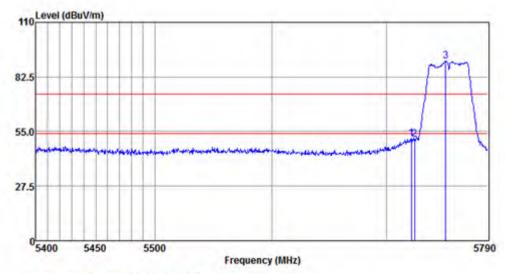
	Freq	Read Level		Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5721.37	40.22	32.14	9.00	38.74	42.62	54.00	-11.38	Average
2	5725.00	40.54	32.15	9.00	38.75	42.94	54.00	-11.06	Average
3	5753.38	76.90	32.15	8.93	38.76	79.22	54.00	25.22	Average



Report No.: SHEM180400307901

Page: 140 of 169

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



#### Antenna Polarity : VERTICAL

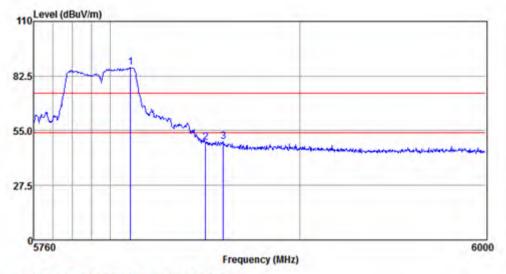
	2465	Read				Emission			
	Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Remark
								*****	
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5722.17	48.97	32.15	9.00	38.75	51.37	74.00	-22.63	Peak
2	5725.00	48.88	32.15	9.00	38.75	51.28	74.00	-22.72	Peak
3	5752.57	88.07	32.15	8.93	38.76	90.39	74.00	16.39	Peak



Report No.: SHEM180400307901

Page: 141 of 169

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



### Antenna Polarity : HORIZONTAL

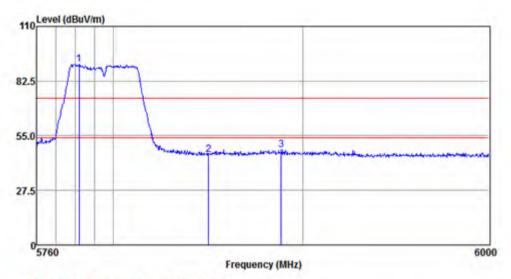
	Freq	Read Level			Preamp Factor	Emission Level	Limit Line		Remark
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5810.54	84.41	32.16	8.87	38.78	86.66	74.00	12.66	Peak
2	5850.00	46.95	32.17	8.90	38.75	49.27	74.00	-24.73	Peak
3	5859.37	47.23	32.17	8.90	38.74	49.56	74.00	-24.44	Peak



Report No.: SHEM180400307901

Page: 142 of 169

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



### Antenna Polarity : VERTICAL

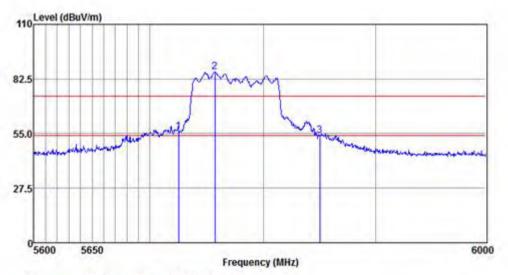
	Freq	Read Level				Emission Level			Remark
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5781.91	88.70	32.16	8.93	38.79	91.00	74.00	17.00	Peak
2	5850.00	42.96	32.17	8.90	38.75	45.28	74.00	-28.72	Peak
3	5888.62	45.57	32.18	8.93	38.72	47.96	74.00	-26.04	Peak



Report No.: SHEM180400307901

Page: 143 of 169

Mode:c; Polarization:Horizontal; Modulation:c; bandwidth:80MHz; Channel:Low



Antenna Polarity : HORIZONTAL

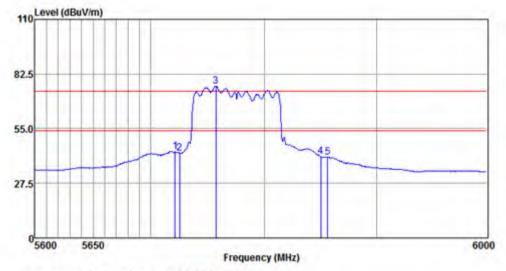
	Freq	Read Level				Emission Level	Limit Line	Over Limit	Remark
			******						
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5725.00	53.68	32.15	9.00	38.75	56.08	74.00	-17.92	Peak
2	5756.70	83.67	32.15	8.93	38.78	85.97	74.00	11.97	Peak
3	5850.00	51.67	32.17	8.90	38.75	53.99	74.00	-20.01	Peak



Report No.: SHEM180400307901

Page: 144 of 169

Mode:c; Polarization:Horizontal; Modulation:c; bandwidth:80MHz; Channel:Low



Antenna Polarity : HORIZONTAL

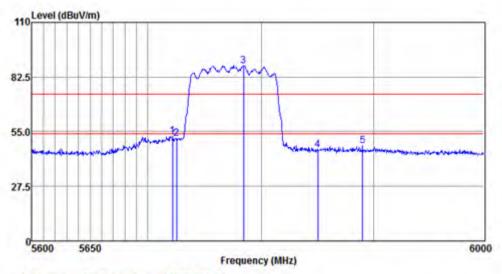
		Read	Antenna	Cable	Preamp	Emission	Limit	Over	
	Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Remark
			******	****	*****			*****	
	MHz	dBuy	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5721.06	40.96	32.14	9.00	38.74	43.36	54.00	-10.64	Average
2	5725.00	40.21	32.15	9.00	38.75	42.61	54.00	-11.39	Average
3	5756.70	74.11	32.15	8.93	38.78	76.41	54.00	22.41	Average
4	5850.00	38.53	32.17	8.90	38.75	40.85	54.00	-13.15	Average
5	5856.04	38.28	32.17	8.90	38.74	40.61	54.00	-13.39	Average



Report No.: SHEM180400307901

Page: 145 of 169

Mode:c; Polarization:Vertical; Modulation:c; bandwidth:80MHz; Channel:Low



Antenna Polarity : VERTICAL

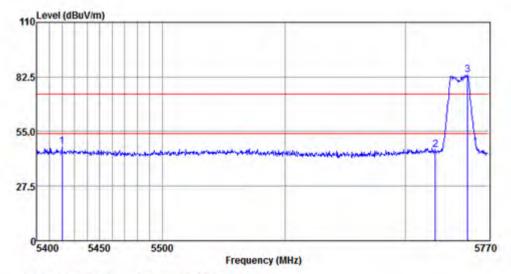
	Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
								*****	
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5721.46	50.39	32.14	9.00	38.74	52.79	74.00	-21.21	Peak
2	5725.00	49.09	32.15	9.00	38.75	51.49	74.00	-22.51	Peak
3	5783.77	85.97	32.16	8.93	38.79	88.27	74.00	14.27	Peak
4	5850.00	43.50	32.17	8.90	38.75	45.82	74.00	-28.18	Peak
5	5890.08	45.46	32.18	8.93	38.70	47.87	74.00	-26.13	Peak



Report No.: SHEM180400307901

Page: 146 of 169

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



Antenna Polarity : HORIZONTAL

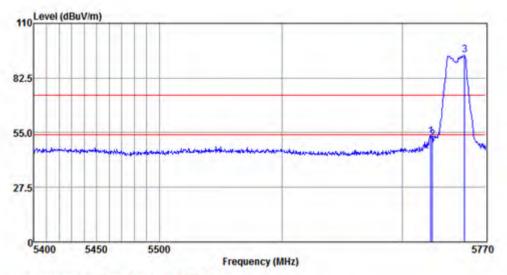
	Freq	Read Level	Antenna Factor		Preamp Factor	Emission Level	Limit Line		Remark
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5420.08	44.67	31.99	9.34	38.66	47.34	74.00	-26.66	Peak
2	5725.00	43.42	32.15	9.00	38.75	45.82	74.00	-28.18	Peak
3	5752.06	81.10	32.15	8.93	38.76	83.42	74.00	9.42	Peak



Report No.: SHEM180400307901

Page: 147 of 169

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



Antenna Polarity : VERTICAL

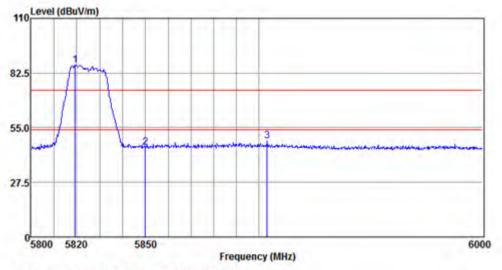
		Read	Antenna			Emission	Limit		
	Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Remark
						*****			
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5723.54	50.87	32.15	9.00	38.75	53.27	74.00	-20.73	Peak
2	5725.00	49.15	32.15	9.00	38.75	51.55	74.00	-22.45	Peak
3	5752.06	91.74	32.15	8.93	38.76	94.06	74.00	20.06	Peak



Report No.: SHEM180400307901

Page: 148 of 169

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



Antenna Polarity : HORIZONTAL

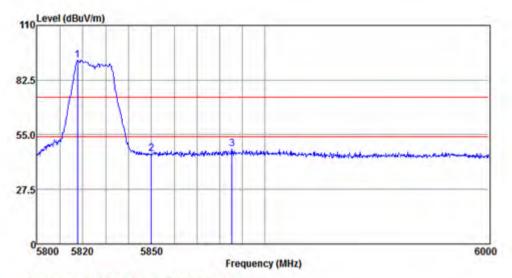
	Freq	Read Level	Antenna Factor		Preamp Factor	Emission Level	Limit Line		Remark
					+				
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5819.30	84.22	32.16	8.87	38.78	86.47	74.00	12.47	Peak
2	5850.00	42.91	32.17	8.90	38.75	45.23	74.00	-28.77	Peak
3	5903.75	45.80	32.18	8.93	38.70	48.21	74.00	-25.79	Peak



Report No.: SHEM180400307901

Page: 149 of 169

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



## Antenna Polarity : VERTICAL

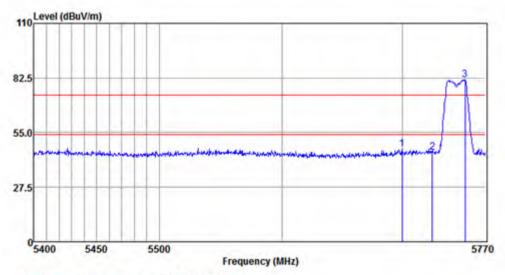
	Freq	Read Level				Emission Level			Remark
	*****								
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5817.72	90.23	32.16	8.87	38.78	92.48	74.00	18.48	Peak
2	5850.00	43.06	32.17	8.90	38.75	45.38	74.00	-28.62	Peak
3	5885.57	45.67	32.18	8.93	38.72	48.06	74.00	-25.94	Peak



Report No.: SHEM180400307901

Page: 150 of 169

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



Antenna Polarity : HORIZONTAL

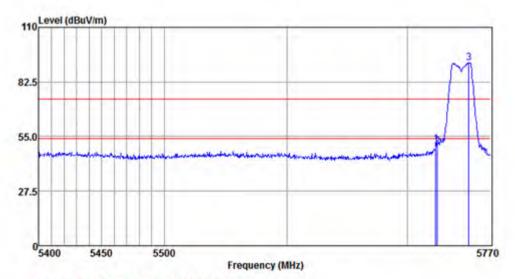
	3-3-	Read				Emission			4.00
	Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Remark
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5699.69	44.38	32.14	9.06	38.73	46.85	74.00	-27.15	Peak
2	5725.00	42.85	32.15	9.00	38.75	45.25	74.00	-28.75	Peak
3	5752.44	79.31	32.15	8.93	38.76	81.63	74.00	7.63	Peak



Report No.: SHEM180400307901

Page: 151 of 169

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



### Antenna Polarity : VERTICAL

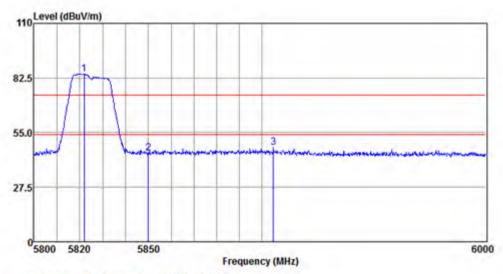
	Freq	Read Level	Antenna Factor	Cable Loss		Emission Level	Limit Line	Over Limit	Remark
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5723.54	48.78	32.15	9.00	38.75	51.18	74.00	-22.82	Peak
2	5725.00	47.64	32.15	9.00	38.75	50.04	74.00	-23.96	Peak
3	5751.29	89.93	32.15	8.93	38.76	92.25	74.00	18.25	Peak



Report No.: SHEM180400307901

Page: 152 of 169

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



Antenna Polarity : HORIZONTAL

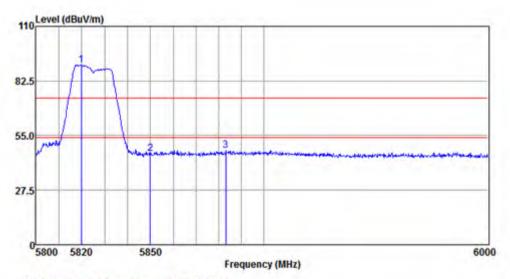
		Read	Antenna	Cable	Preamp	Emission	Limit	Over	
	Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Remark
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5821.87	82.36	32.16	8.87	38.78	84.61	74.00	10.61	Peak
2	5850.00	42.28	32.17	8.90	38.75	44.60	74.00	-29.40	Peak
3	5905.16	44.92	32.18	8.93	38.70	47.33	74.00	-26.67	Peak



Report No.: SHEM180400307901

Page: 153 of 169

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



Antenna Polarity : VERTICAL

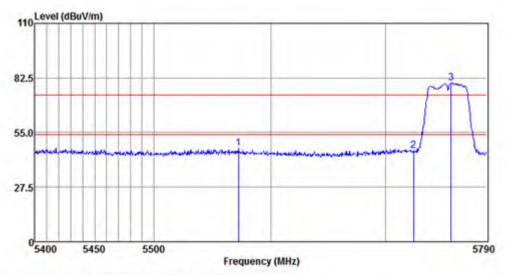
		Read	Antenna	Cable	Preamp	Emission	Limit	Over	
	Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Remark
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5819.70	88.23	32.16	8.87	38.78	90.48	74.00	16.48	Peak
2	5850.00	43.51	32.17	8.90	38.75	45.83	74.00	-28.17	Peak
3	5883.18	45.27	32.18	8.93	38.72	47.66	74.00	-26.34	Peak



Report No.: SHEM180400307901

Page: 154 of 169

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



Antenna Polarity : HORIZONTAL

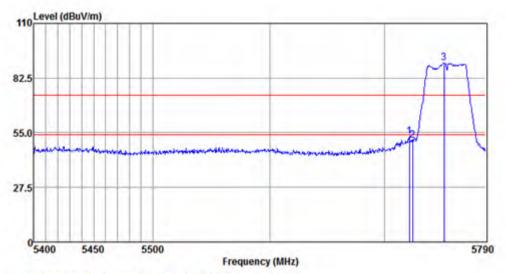
	Freq		Antenna Factor			Emission Level	Limit Line		Remark
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5572.14	44.51	32.11	9.01	38.64	46.99	74.00	-27.01	Peak
2	5725.00	43.51	32.15	9.00	38.75	45.91	74.00	-28.09	Peak
3	5758.19	77.73	32.15	8.93	38.78	80.03	74.00	6.03	Peak



Report No.: SHEM180400307901

Page: 155 of 169

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



## Antenna Polarity : VERTICAL

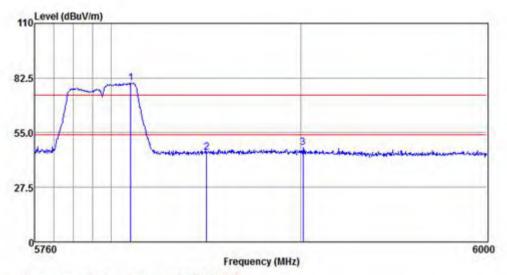
	Freq					Emission Level			Remark
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5722.17	50.85	32.15	9.00	38.75	53.25	74.00	-20.75	Peak
2	5725.00	48.92	32.15	9.00	38.75	51.32	74.00	-22.68	Peak
3	5752.97	87.79	32.15	8.93	38.76	90.11	74.00	16.11	Peak



Report No.: SHEM180400307901

Page: 156 of 169

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



Antenna Polarity : HORIZONTAL

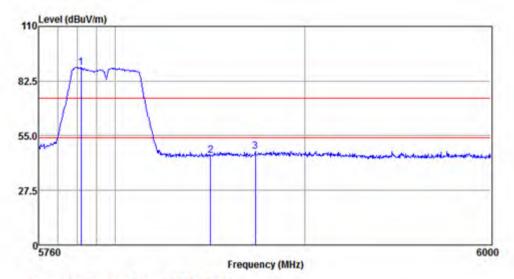
	Freq	Read Level	Antenna Factor		Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5810.07	77.68	32.16	8.87	38.78	79.93	74.00	5.93	Peak
2	5850.00	42.86	32.17	8.90	38.75	45.18	74.00	-28.82	Peak
3	5901.14	45.09	32.18	8.93	38.70	47.50	74.00	-26.50	Peak



Report No.: SHEM180400307901

Page: 157 of 169

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



Antenna Polarity : VERTICAL

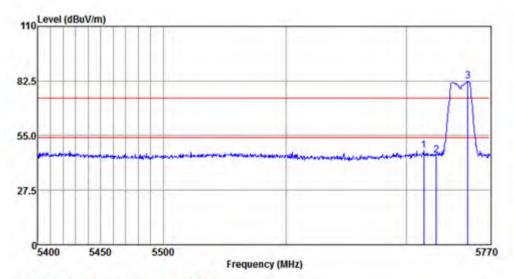
		Read	Antenna	Cable	Preamp	Emission	Limit	Over	
	Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Remark
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5781.91	87.00	32.16	8.93	38.79	89.30	74.00	15.30	Peak
1	5850.00	42.81	32.17	8.90	38.75	45.13	74.00	-28.87	Peak
3	5873.74	44.76	32.18	8.93	38.72	47.15	74.00	-26.85	Peak



Report No.: SHEM180400307901

Page: 158 of 169

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



Antenna Polarity : HORIZONTAL

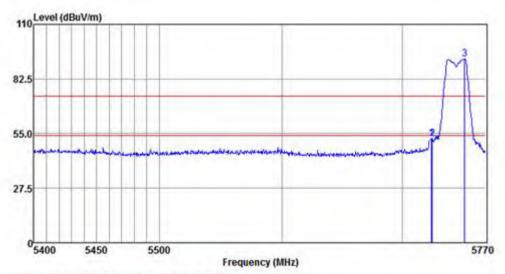
	Freq					Emission Level			Remark
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5714.44	45.22	32.14	9.00	38.74	47.62	74.00	-26.38	Peak
2	5725.00	42.58	32.15	9.00	38.75	44.98	74.00	-29.02	Peak
3	5751.29	79.90	32.15	8.93	38.76	82.22	74.00	8.22	Peak



Report No.: SHEM180400307901

Page: 159 of 169

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



Antenna Polarity : VERTICAL

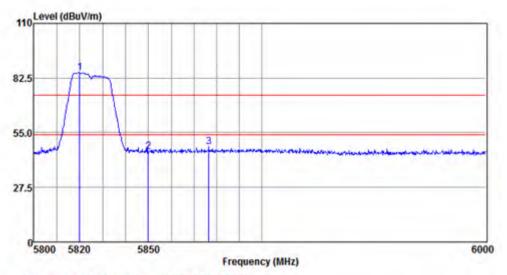
	Freq	Read Level				Emission Level			Remark
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5724.29	49.92	32.15	9.00	38.75	52.32	74.00	-21.68	Peak
2	5725.00	49.95	32.15	9.00	38.75	52.35	74.00	-21.65	Peak
3	5752.06	90.39	32.15	8.93	38.76	92.71	74.00	18.71	Peak



Report No.: SHEM180400307901

Page: 160 of 169

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



Antenna Polarity : HORIZONTAL

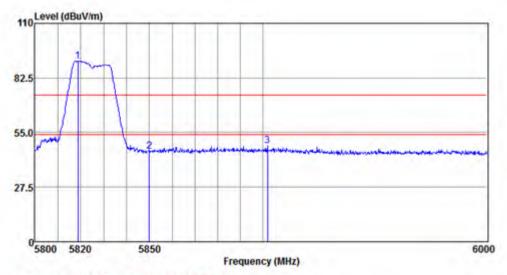
Freq	Read Level					Limit Line	Over Limit	Remark
							*****	
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
5819.89	82,94	32.16	8.87	38.78	85.19	74.00	11.19	Peak
5850.00	43.05	32.17	8.90	38.75	45.37	74.00	-28.63	Peak
5876.60	45.50	32.18	8.93	38.72	47.89	74.00	-26.11	Peak
		Freq Level  MHz dBuv  5819.89 82.94  5850.00 43.05	MHz dBuv dB/m 5819.89 82.94 32.16 5850.00 43.05 32.17	Freq Level Factor Loss  MHz dBuv dB/m dB  5819.89 82.94 32.16 8.87  5850.00 43.05 32.17 8.90	Freq Level Factor Loss Factor  MHz dBuv dB/m dB dB 5819.89 82.94 32.16 8.87 38.78 5850.00 43.05 32.17 8.90 38.75	Freq Level Factor Loss Factor Level  MHz dBuv dB/m dB dB dBuv/m  5819.89 82.94 32.16 8.87 38.78 85.19  5850.00 43.05 32.17 8.90 38.75 45.37	Freq Level Factor Loss Factor Level Line  MHz dBuv dB/m dB dB dBuv/m dBuv/m 5819.89 82.94 32.16 8.87 38.78 85.19 74.00 5850.00 43.05 32.17 8.90 38.75 45.37 74.00	Freq Level Factor Loss Factor Level Line Limit  MHz dBuv dB/m dB dB dBuv/m dBuv/m dB 5819.89 82.94 32.16 8.87 38.78 85.19 74.00 11.19 5850.00 43.05 32.17 8.90 38.75 45.37 74.00 -28.63



Report No.: SHEM180400307901

Page: 161 of 169

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



Antenna Polarity : VERTICAL

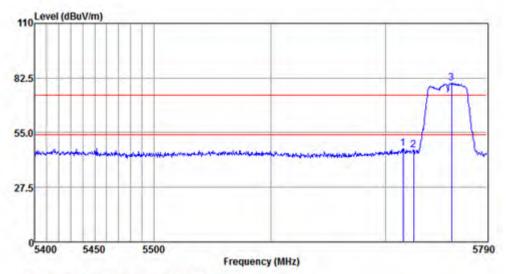
	400	Read									
	Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Remark		
						*****					
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB			
1	5818.71	88.87	32.16	8.87	38.78	91.12	74.00	17.12	Peak		
2	5850.00	43.34	32.17	8.90	38.75	45.66	74.00	-28.34	Peak		
3	5902.15	46.04	32.18	8.93	38.70	48.45	74.00	-25.55	Peak		



Report No.: SHEM180400307901

Page: 162 of 169

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



Antenna Polarity : HORIZONTAL

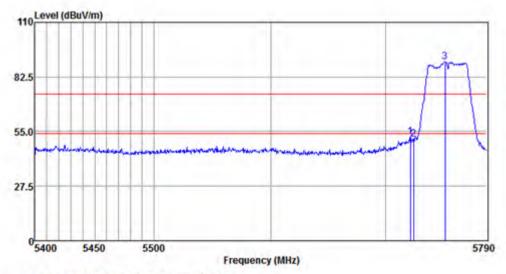
	Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
							*****		
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5715.79	44.84	32.14	9.00	38.74	47.24	74.00	-26.76	Peak
2	5725.00	43.84	32.15	9.00	38.75	46.24	74.00	-27.76	Peak
3	5758.59	77.80	32.15	8.93	38.78	80.10	74.00	6.10	Peak



Report No.: SHEM180400307901

Page: 163 of 169

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



### Antenna Polarity : VERTICAL

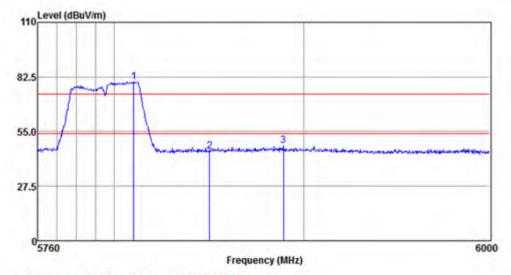
		Read	Antenna	Cable	Preamp	Emission	Limit	Over	
	Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Remark
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5722.17	49.85	32.15	9.00	38.75	52.25	74.00	-21.75	Peak
2	5725.00	48.92	32.15	9.00	38.75	51.32	74.00	-22.68	Peak
3	5752.97	87.77	32.15	8.93	38.76	90.09	74.00	16.09	Peak



Report No.: SHEM180400307901

Page: 164 of 169

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



Antenna Polarity : HORIZONTAL

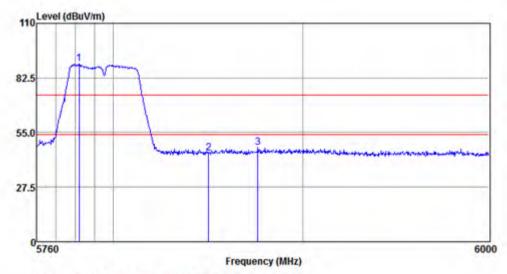
	Freq	Read Level	Antenna Factor			Emission Level	Limit Line		Remark
									******
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5810.07	77.70	32.16	8.87	38.78	79.95	74.00	5.95	Peak
2	5850.00	42.87	32.17	8.90	38.75	45.19	74.00	-28.81	Peak
3	5889.10	45.31	32.18	8.93	38.72	47.70	74.00	-26.30	Peak



Report No.: SHEM180400307901

Page: 165 of 169

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



Antenna Polarity : VERTICAL

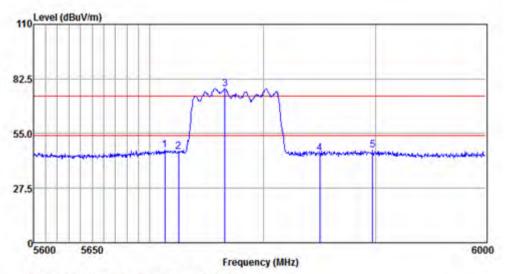
	Freq	Read Level	Antenna Factor	Cable Loss		Emission Level	Limit Line	Over Limit	Remark
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5781.91	87.26	32.16	8.93	38.79	89.56	74.00	15.56	Peak
2	5850.00	42.40	32.17	8.90	38.75	44.72	74.00	-29.28	Peak
3	5876.14	45.08	32.18	8.93	38.72	47.47	74.00	-26.53	Peak



Report No.: SHEM180400307901

Page: 166 of 169

Mode:d; Polarization:Horizontal; Modulation:c; bandwidth:80MHz; Channel:Low



Antenna Polarity : HORIZONTAL

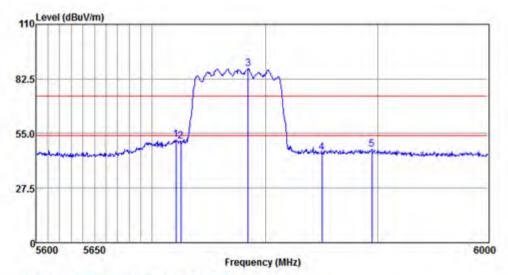
		Read	Antenna	Cable	Preamp	Emission	Limit	Over	
	Freq	Leve1	Factor	Loss	Factor	Level	Line	Limit	Remark
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5713.17	44.08	32.14	9.00	38.74	46.48	74.00	-27.52	Peak
2	5725.00	43.45	32.15	9.00	38.75	45.85	74.00	-28.15	Peak
3	5765.84	75.36	32.15	8.93	38.78	77.66	74.00	3.66	Peak
4	5850.00	42.67	32.17	8.90	38.75	44.99	74.00	-29.01	Peak
5	5897.40	44.07	32.18	8.93	38.70	46.48	74.00	-27.52	Peak



Report No.: SHEM180400307901

Page: 167 of 169

Mode:d; Polarization:Vertical; Modulation:c; bandwidth:80MHz; Channel:Low



Antenna Polarity : VERTICAL

	Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
								*****	
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	5720.67	49.49	32.14	9.00	38.74	51.89	74.00	-22.11	Peak
2	5725.00	48.72	32.15	9.00	38.75	51.12	74.00	-22.88	Peak
3	5784.17	85.35	32.16	8.93	38.79	87.65	74.00	13.65	Peak
4	5850.00	43.04	32.17	8.90	38.75	45.36	74.00	-28.64	Peak
5	5894.55	44.56	32.18	8.93	38.70	46.97	74.00	-27.03	Peak



Report No.: SHEM180400307901

Page: 168 of 169

### 7.9 Frequency Stability

Test Requirement 47 CFR Part 15, Subpart C 15.407 (g)
Test Method: ANSI C63.10 (2013) Section 6.8

Limit: The frequency tolerance shall be maintained within the band of operation

frequency over a temperature variation of 0 degrees to 35 degrees C at normal supply voltage, and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20 degrees C.

### 7.9.1 E.U.T. Operation

**Operating Environment:** 

Temperature: 21 °C Humidity: 45 % RH Atmospheric Pressure: 1010 mbar

Test mode a: Engineering Mode\_Using test software to control EUT working in continuous

transmitting and select channel and modulation type.(For: DS-

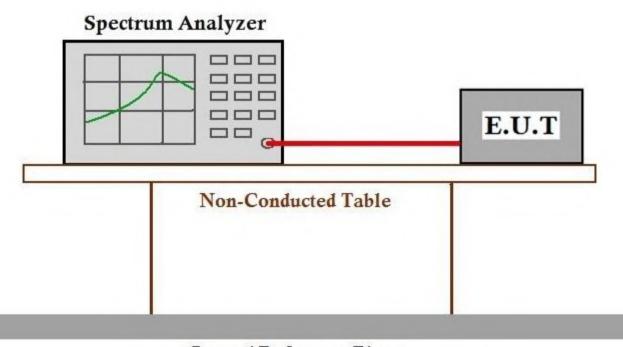
MP7608HN/GW/WI58 Antenna 1)

c: Engineering Mode\_Using test software to control EUT working in continuous

transmitting and select channel and modulation type.(For: DS-

MP7608HN/GW/WI58 Antenna 2)

### 7.9.2 Test Setup Diagram



## Ground Reference Plane

#### 7.9.3 Measurement Procedure and Data

The detailed test data see: Appendix A for SHEM180400307901



Report No.: SHEM180400307901

Page: 169 of 169

# 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 -