



RF MEASUREMENT REPORT

FCC ID: 2APJ4-SLM156
Application: MeiG Smart Technology Co., Ltd
Product: CAT-M Module
Model No.: SLM156
Brand Name: MEIGLink
FCC Rule Part(s): Part 2, 22 (H), 24 (E), 27
Test Procedure(s): ANSI C63.26: 2015
Result: Complies
Test Date: 2022-05-23 ~ 2022-11-02

Reviewed By:

Vincent Yu

Approved By:

Robin Wu



The test results relate only to the samples tested.

This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in ANSI C63.26-2015. Test results reported herein relate only to the item(s) tested.

The test report shall not be reproduced except in full without the written approval of MRT Technology (Suzhou) Co., Ltd.

Revision History

Report No.	Version	Description	Issue Date	Note
2205RSU044-U2	Rev. 01	Initial Report	2023-04-17	Valid

CONTENTS

Description	Page
1. General Information	5
1.1. Applicant	5
1.2. Manufacturer	5
1.3. Testing Facility	5
1.4. Product Information	6
1.5. Radio Specification	6
1.6. Description of Available Antennas	8
1.7. Test Methodology	8
1.8. Device Capabilities	8
2. Test Configuration	9
2.1. Test System Connection Diagram	9
2.2. Test Environment Condition	9
3. Measuring Instrument	10
4. Decision Rules and Measurement Uncertainty	11
4.1. Decision Rules	11
4.2. Measurement Uncertainty	11
5. Test Result	12
5.1. Summary	12
5.2. Occupied Bandwidth Measurement	14
5.2.1. Test Limit	14
5.2.2. Test Procedure	14
5.2.3. Test Setting	14
5.2.4. Test Setup	14
5.2.5. Test Result	15
5.3. Frequency Stability Measurement	16
5.3.1. Test Limit	16
5.3.2. Test Procedure	16
5.3.3. Test Setting	16
5.3.4. Test Setup	17
5.3.5. Test Result	17
5.4. Equivalent Isotropically Radiated Power Measurement	18
5.4.1. Test Limit	18
5.4.2. Test Procedure	18
5.4.3. Test Setting	19

5.4.4.	Test Setup	19
5.4.5.	Test Result	19
5.5.	Band Edge Measurement	20
5.5.1.	Test Limit	20
5.5.2.	Test Procedure	21
5.5.3.	Test Setting	21
5.5.4.	Test Setup	22
5.5.5.	Test Result	22
5.6.	Peak to Average Ratio Measurement	23
5.6.1.	Test Limit	23
5.6.2.	Test Procedure	23
5.6.3.	Test Setting	23
5.6.4.	Test Setup	23
5.6.5.	Test Result	23
5.7.	Conducted Spurious Emissions Measurement.....	24
5.7.1.	Test Limit	24
5.7.2.	Test Procedure	24
5.7.3.	Test Setting	24
5.7.4.	Test Setup	25
5.7.5.	Test Result	25
5.8.	Radiated Spurious Emissions Measurement.....	26
5.8.1.	Test Limit	26
5.8.2.	Test Procedure	26
5.8.3.	Test Setting	26
5.8.4.	Test Setup	27
5.8.5.	Test Result	28
Appendix A - Test Result		29
A.1	Occupied Bandwidth Test Result	29
A.2	Frequency Stability Test Result.....	41
A.3	Equivalent Isotropically Radited Power Test Result.....	46
A.4	Band Edge Test Result	70
A.5	Peak to Average Radio Test Result	96
A.6	Conducted Spurious Emissions Test Result	101
A.7	Radiated Spurious Emissions Test Result	118
Appendix B - Test Setup Photograph		123
Appendix C - EUT Photograph		124

1.1. Applicant

2nd Floor, Office Building, No.5 Lingxia Road, Fenghuang, Fuyong Street, Bao 'an District, Shenzhen, China

MeiG Smart Technology Co., Ltd

2nd Floor, Office Building, No.5 Lingxia Road, Fenghuang, Fuyong Street, Bao 'an District, Shenzhen, China

☒	Test Site – MRT Suzhou Laboratory				
	Laboratory Location (Suzhou - Wuzhong)				
	D8 Building, No.2 Tian'edang Rd., Wuzhong Economic Development Zone, Suzhou, China				
	Laboratory Location (Suzhou - SIP)				
	4b Building, Liando U Valley, No.200 Xingpu Rd., Shengpu Town, Suzhou Industrial Park, China				
	Laboratory Accreditations				
A2LA: 3628.01		CNAS: L10551			
FCC: CN1166		ISED: CN0001			
VCCI:	☐ R-20025	☐ G-20034	☐ C-20020	☐ T-20020	
	☐ R-20141	☐ G-20134	☐ C-20103	☐ T-20104	
☐	Test Site – MRT Shenzhen Laboratory				
	Laboratory Location (Shenzhen)				
	1G, Building A, Junxiangda Building, Zhongshanyuan Road West, Nanshan District, Shenzhen, China				
	Laboratory Accreditations				
	A2LA: 3628.02		CNAS: L10551		
	FCC: CN1284		ISED: CN0105		
☐	Test Site – MRT Taiwan Laboratory				
	Laboratory Location (Taiwan)				
	No. 38, Fuxing 2nd Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.)				
	Laboratory Accreditations				
	TAF: L3261-190725				
FCC: 291082, TW3261		ISED: TW3261			

1.4. Product Information

Product Name	CAT-M Module
Model No.	SLM156
IMEI	Conducted Measurement: 868510050004513 Radiated Measurement: 868510050007318
Operating Temperature	-35 ~ 75 °C
Hardware Version	SLM156_V1.01_PCB
Software Version	SLM156_5.0.12_EQ100
Power Type	3.3 ~ 4.2Vdc, typical 3.8Vdc
GSM Specification	
Band	GSM850, PCS1900
Modulation	GMSK, 8PSK
E-UTRA Specification	
Single Band	Cat M Band 2, 4, 5, 12, 13, 14, 25, 26, 66 NB-IoT Band 2, 4, 5, 12, 13, 25, 26, 66, 71
Modulation	Cat M: Uplink up to 16QAM, Downlink up to 16QAM NB-IoT: Uplink BPSK, QPSK; Downlink QPSK
Remark: The information of EUT was provided by the manufacturer, and the accuracy of the information shall be the responsibility of the manufacturer.	

1.5. Radio Specification

FDD Tx Frequency Range	Cat M: Band 2: 1850 ~ 1910 MHz; Band 4: 1710 ~ 1755 MHz Band 5: 824 ~ 849 MHz; Band 12: 699 ~ 716 MHz Band 13: 777 ~ 787 MHz; Band 25: 1850 ~ 1915 MHz Band 26: 824 ~ 849 MHz; Band 66: 1710 ~ 1780 MHz
FDD Rx Frequency Range	Cat M: Band 2: 1930 ~ 1990 MHz; Band 4: 2110 ~ 2155 MHz Band 5: 869 ~ 894 MHz; Band 12: 729 ~ 746 MHz Band 13: 746 ~ 756 MHz; Band 25: 1930 ~ 1995 MHz Band 26: 869 ~ 894 MHz; Band 66: 2110 ~ 2200 MHz

Note 1: For other features of this EUT, test report will be issued separately.

Note 2: The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

Note 3: Band 26 transmit frequency for part 90 rule is 814 ~ 824MHz and part 22 rule is 824 ~ 849MHz. ERP over 15MHz bandwidth complies the ERP limit line of part 22 rule, therefore ERP of the partial frequency

spectrum which falls within part 22 also complies.

1.6. Description of Available Antennas

Technology	Frequency Range (MHz)	Antenna Type	Max Peak Gain (dBi)
Band 2	1850 ~ 1910	PCB Antenna	0.78
Band 4	1710 ~ 1755		-0.10
Band 5	824 ~ 849		0.44
Band 12	699 ~ 716		1.72
Band 13	777 ~ 787		1.59
Band 14	788 ~ 798		0.66
Band 25	1850 ~ 1915		0.71
Band 26	814 ~ 849		0.49
Band 66	1710 ~ 1780		-0.10
Band 71	663 ~ 698		-2.38

Note: All antenna information (Antenna type and Peak Gain) is provided by the manufacturer.

1.7. Test Methodology

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- ANSI C63.26:2015
- FCC CFR 47 Part 2, Part 22, Part 24, Part 27
- FCC KDB 971168 D01 v03r01: Power Meas License Digital Systems
- FCC KDB 971168 D02 v02r01: Misc Rev Approv License Devices
- FCC KDB 412172 D01 v01r01: Determining ERP and EIRP

1.8. Device Capabilities

This device contains the following capabilities:

Working on LTE Cat M Band 2, 4, 5, 12, 13, 14, 25, 26, 66;

Cat M Band 66 (1710 ~ 1780 MHz) overlaps the entire frequency range of Cat M Band 4 (1710 ~ 1755 MHz).

Therefore, test data provided in this report covers Band 4 as well as Band 66.

Cat M Band 25 (1850 ~ 1915 MHz) overlaps the entire frequency range of Cat M Band 2 (1850 ~ 1910 MHz).

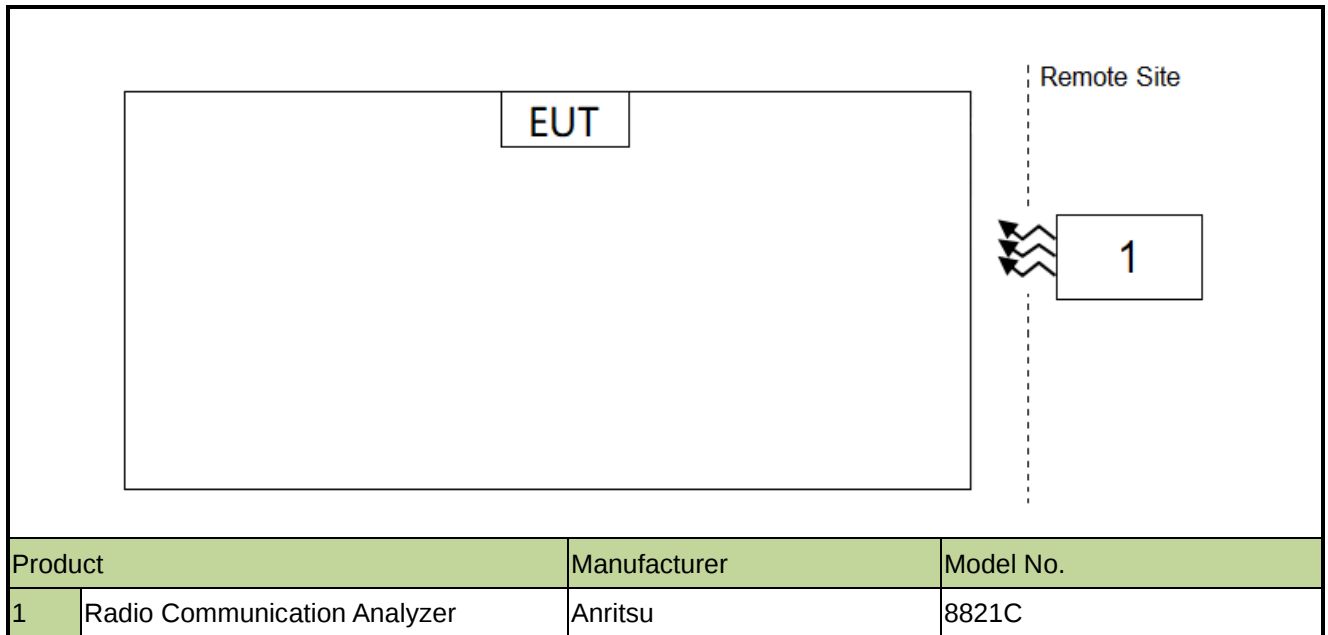
Therefore, test data provided in this report covers Band 2 as well as Band 25.

Cat M Band 26 (814 ~ 849 MHz) overlaps the entire frequency range of Cat M Band 5 (824 ~ 849 MHz).

Therefore, test data provided in this report covers Band 5 as well as Band 26.

2. Test Configuration

2.1. Test System Connection Diagram



2.2. Test Environment Condition

Ambient Temperature	15 ~ 35°C
Relative Humidity	20% ~ 75%RH

3. Measuring Instrument

Instrument	Manufacturer	Model No.	Asset No.	Last Cali. Date	Cali. Due Date	Test Site
TRILOG Antenna	Schwarzbeck	VULB 9162	MRTSUE06022	1 year	2023-05-20	WZ-AC2
EMI Test Receiver	Agilent	N9038A	MRTSUE06125	1 year	2022-06-24	WZ-AC2
				1 year	2023-06-04	
Thermohygrometer	Mingle	ETH529	MRTSUE06170	1 year	2022-12-01	WZ-AC2
Horn Antenna	Schwarzbeck	BBHA 9120D	MRTSUE06171	1 year	2022-10-21	WZ-AC2
				1 year	2023-10-13	
Preamplifier	Schwarzbeck	BBV 9718	MRTSUE06176	1 year	2022-11-12	WZ-AC2
Anechoic Chamber	RIKEN	WZ-AC2	MRTSUE06213	1 year	2023-04-21	WZ-AC2
Thermohygrometer	testo	608-H1	MRTSUE11038	1 year	2022-11-11	WZ-AC2
Thermohygrometer	testo	608-H1	MRTSUE06362	1 year	2023-02-15	WZ-SR6
Shielding Room	HUAMING	WZ-SR6	MRTSUE06443	N/A	N/A	WZ-SR6
Signal Analyzer	Keysight	N9020B	MRTSUE06583	1 year	2022-10-10	WZ-SR6/WZ-TR3
				1 year	2023-10-08	
Radio Communication Analyzer	Anritsu	MT8821C	MRTSUE06960	1 year	2022-07-01	WZ-SR6/WZ-TR3
				1 year	2023-07-08	
Temperature Chamber	BAOYT	BYH-150CL	MRTSUE06051	1 year	2022-10-10	WZ-SR6/WZ-TR3
				1 year	2023-10-08	
Vibration Test System	DongLing	ES-1-150	MRTSUE06206	1 year	2022-08-08	WZ-SR6/WZ-TR3
				1 year	2023-07-07	
Thermohygrometer	testo	608-H1	MRTSUE06401	1 year	2022-06-28	WZ-SR6/WZ-TR3
				1 year	2023-06-06	
Directional Coupler	Agilent	778D	MRTSUE06083	1 year	2023-03-17	WZ-SR6/WZ-TR3
Directional Coupler	narda	4226-10	MRTSUE06562	1 year	2022-10-28	WZ-SR6/WZ-TR3
				1 year	2023-10-27	
Attenuator	MVE	MVE2213	MRTSUE11087	1 year	2022-06-10	WZ-SR6/WZ-TR3
				1 year	2023-06-09	
Attenuator	MVE	MVE2213	MRTSUE11088	1 year	2022-06-10	WZ-SR6/WZ-TR3
				1 year	2023-06-09	

Software	Version	Function
EMI V3	V3.0.0	EMI Test Software
Controller_MF 7802	2.03C	RE Antenna & Turntable

4. Decision Rules and Measurement Uncertainty

4.1. Decision Rules

The Decision Rule is based on Simple Acceptance in accordance with ISO Guide 98-4: 2012 Clause 8.2.
(Measurement uncertainty is not taken into account when stating conformity with a specified requirement.)

4.2. Measurement Uncertainty

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

Radiated Spurious Emissions
Measurement Uncertainty for a Level of Confidence of 95% ($U=2Uc(y)$): Horizontal: 9kHz ~ 300MHz: 5.04dB 300MHz ~ 1GHz: 4.95dB 1GHz ~ 40GHz: 6.40dB Vertical: 9kHz ~ 300MHz: 5.24dB 300MHz ~ 1GHz: 6.03dB 1GHz ~ 40GHz: 6.40dB
Conducted Spurious Emissions
Measuring Uncertainty for a Level of Confidence of 95% ($U=2Uc(y)$): 0.78dB
Output Power
Measuring Uncertainty for a Level of Confidence of 95% ($U=2Uc(y)$): 1.13dB
Occupied Bandwidth
Measuring Uncertainty for a Level of Confidence of 95% ($U=2Uc(y)$): 0.28%
Frequency Stability
Measuring Uncertainty for a Level of Confidence of 95% ($U=2Uc(y)$): 76.2Hz

5. Test Result

5.1. Summary

FCC Part Section(s)	Test Description	Test Limit	Test Condition	Test Result	Reference
2.1049	Occupied Bandwidth	N/A	Conducted	Pass	Section 5.2
2.1055, 22.355 24.235, 27.54	Frequency Stability	< 2.5 ppm		Pass	Section 5.3
22.913(a)(5)	Equivalent Radiated Power (Band 5/26)	< 7 Watts Max ERP		Pass	Section 5.4
27.50(b)(9) 27.50(c)(9)	Equivalent Radiated Power (Band 12, 13)	< 30 Watts Max ERP			
24.232(c)	Equivalent Isotropic Radiated Power (Band 2/25)	< 2 Watts Max EIRP			
27.50(d)(4)	Equivalent Isotropic Radiated Power (Band 4/66)	< 1 Watts Max EIRP			
24.232(d), 27.50(d)(5)	Peak to Average Ratio	< 13dB		Pass	Section 5.6

2.1051, 22.917(a) 24.238(a), 27.53(c), 27.53(h)	Band Edge (Band 2/25, 4/66, 5/26, 12, 13)	$< 43 + 10\log_{10} (P_{\text{Watts}})$		Pass	Section 5.5, 5.7
2.1051, 22.917(a) 24.238(a), 27.53(c), 27.53(h)	Spurious Emission (Band 2/25, 4/66, 5/26, 12, 13)	$< 43 + 10\log_{10} (P_{\text{Watts}})$			
2.1053, 22.917(a) 24.238(a), 27.53(c), 27.53(h)	Spurious Emissions (Band 2/25, 4/66, 5/26, 12, 13)	$< 43 + 10\log_{10} (P_{\text{Watts}})$	Radiated	Pass	Section 5.8

Notes:

- 1) The analyzer plots shown in this section were all taken with a correction table loaded into the analyzer. The correction table was used to account for the losses of the cables and attenuators used as part of the system to connect the EUT to the analyzer at all frequencies of interest.
- 2) All supported modulation types were evaluated. The worst-case emission of modulation was selected. Therefore, the Frequency Stability, Channel Band Edge, Conducted Spurious Emission, Radiated Spurious Emission were presented the worst-case in the test report.

5.2. Occupied Bandwidth Measurement

5.2.1. Test Limit

The occupied bandwidth, that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 percent of the total mean power radiated by a given emission shall be measured.

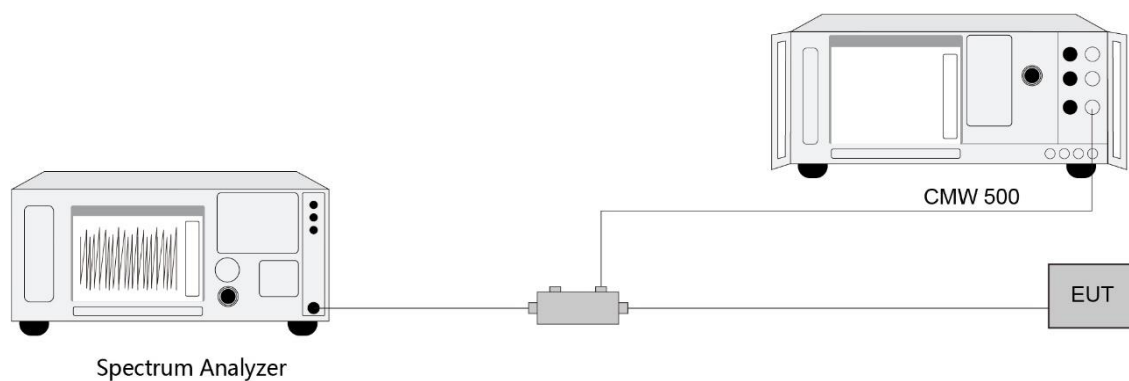
5.2.2. Test Procedure

ANSI C63.26-2015 - Section 5.4

5.2.3. Test Setting

1. Set center frequency to the nominal EUT channel center frequency
2. RBW = The nominal RBW shall be in the range of 1% to 5% of the anticipated OBW
3. VBW $\geq 3 \times$ RBW
4. Detector = Peak
5. Trace mode = max hold
6. Sweep = auto couple
7. Allow the trace to stabilize
8. Use the 99% power bandwidth function of the instrument and report the measured bandwidth.

5.2.4. Test Setup



5.2.5.Test Result

Refer to Appendix A.1.

5.3. Frequency Stability Measurement

5.3.1. Test Limit

The frequency stability shall be measured by variation of ambient temperature and variation of primary supply voltage to ensure that the fundamental emission stays within the authorized frequency block. The frequency stability of the transmitter shall be maintained within $\pm 0.00025\%$ ($\pm 2.5\text{ppm}$) of the center frequency.

5.3.2. Test Procedure

ANSI C63.26-2015 - Section 5.6

5.3.3. Test Setting

Frequency Stability Under Temperature Variations:

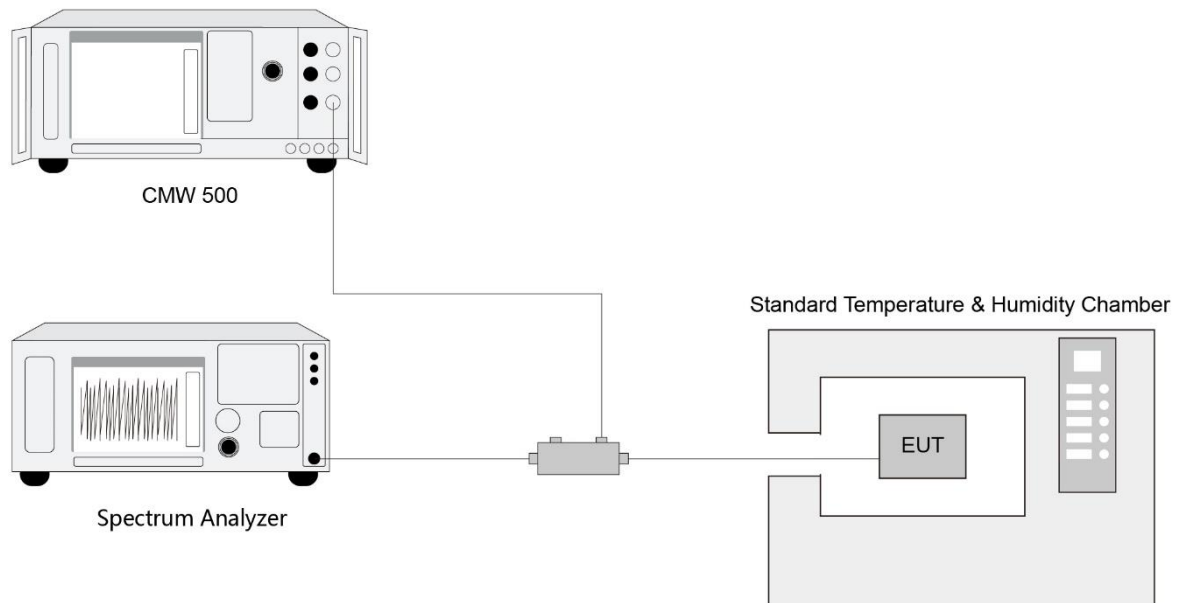
The equipment under test was connected to an external AC or DC power supply and input rated voltage. RF output was connected to a frequency counter or spectrum analyzer via feed through attenuators. The EUT was placed inside the temperature chamber. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and measure EUT 20°C operating frequency as reference frequency. Turn EUT off and set the chamber temperature to highest. After the temperature stabilized for approximately 30 minutes recorded the frequency. Repeat step measure with 10°C decreased per stage until the lowest temperature reached.

Frequency Stability Under Voltage Variations:

Set chamber temperature to 20°C. Use a variable AC power supply / DC power source to power the EUT and set the voltage to rated voltage. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and recorded the frequency.

Reduce the input voltage to specify extreme voltage variation ($\pm 15\%$) and endpoint, record the maximum frequency change.

5.3.4. Test Setup



5.3.5. Test Result

Refer to Appendix A.2.

5.4. Equivalent Isotropically Radiated Power Measurement

5.4.1. Test Limit

Band 5/26:

The ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 watts.

Band 12, 13:

Control stations and mobile stations transmitting in the 746-757 MHz, 776-788 MHz, and 805-806 MHz bands are limited to 30 watts ERP.

Control and mobile stations in the 698-746 MHz band are limited to 30 watts ERP.

Band 2/25:

Mobile and portable stations are limited to 2 watts EIRP and the equipment must employ a means for limiting power to the minimum necessary for successful communications.

Band 4/66:

Fixed, mobile stations operating in the 1710-1755 MHz band and mobile in the 1695-1710 MHz and 1755-1780 MHz bands are limited to 1 watt EIRP.

5.4.2. Test Procedure

ANSI C63.26-2015 - Section 5.2

5.4.3. Test Setting

Average power measurements were performed only when the EUT was transmitting at its maximum power control level using a broadband power meter with a pulse sensor. The power meter implemented triggering and gating capabilities which were set up such that power measurements were recorded only during the ON time of the transmitter.

The relevant equation for determining the maximum ERP or EIRP from the measured RF output power is given in Equation (1) as follows:

$$\text{ERP or EIRP} = P_{\text{Meas}} + G_T$$

where

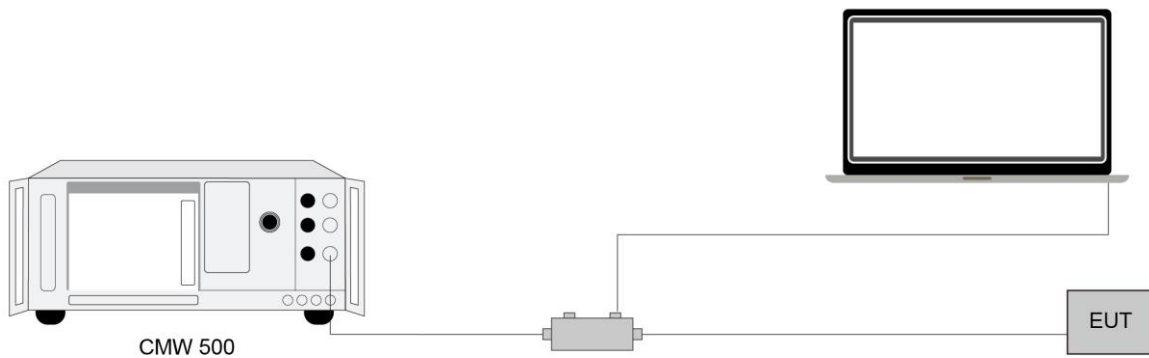
ERP or EIRP effective radiated power or equivalent isotropically radiated power, respectively (expressed in the same units as P_{Meas} , e.g., dBm or dBW)

P_{Meas} measured transmitter output power or PSD, in dBm or dBW

G_T gain of the transmitting antenna, in dBd (ERP) or dBi (EIRP)

$$\text{ERP} = \text{EIRP} - 2.15$$

5.4.4. Test Setup



5.4.5. Test Result

Refer to Appendix A.3.

5.5. Band Edge Measurement

5.5.1. Test Limit

22.917(a), 24.238 (a), 27.53 (g) (h)

For operations in the 824 ~ 849 MHz, 1850 ~ 1910 MHz, 1930 ~ 1990 MHz, 600MHz & 698 ~ 746 MHz and 1710 ~ 1755 MHz, the FCC limit is $43 + 10\log_{10}(P_{\text{Watts}})$ dB below the transmitter power $P(\text{Watts})$ in a 1 MHz bandwidth. However, in the 1MHz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

27.53 (c)

For operations in the 776-788 MHz band, the FCC limit is $43 + 10\log_{10}(P_{\text{Watts}})$ dB below the transmitter power $P(\text{Watts})$ in a 100 kHz bandwidth. However, in the 100 kHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth of at least 30 kHz may be employed. In addition, the power of any unwanted emissions in any 6.25 kHz bandwidth for all frequencies between 763-775 MHz and 793-806 Hz shall be attenuated below the transmitter power, $P(\text{dBW})$, by at least $65 + 10 \log_{10}(P_{\text{Watts}})$, dB, for mobile and portable equipment.

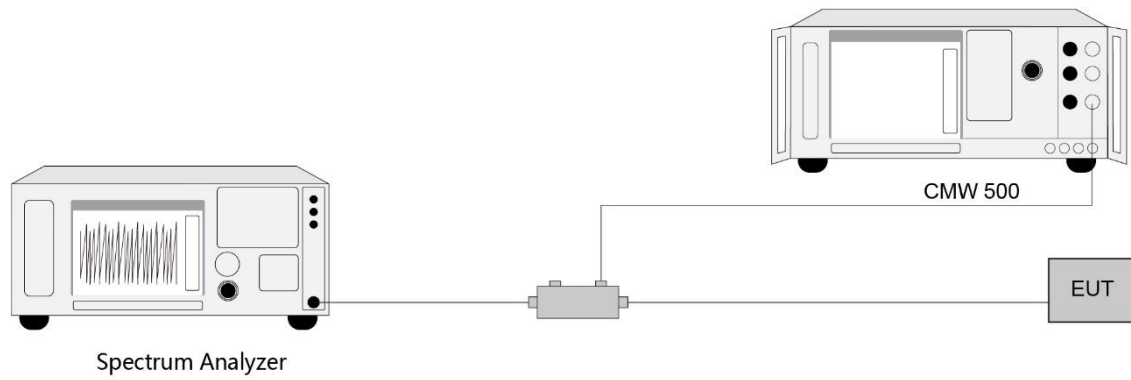
5.5.2.Test Procedure

ANSI C63.26-2015 - Section 5.7

5.5.3.Test Setting

1. Set the analyzer frequency to low or high channel
2. $RBW \geq$ The nominal RBW shall be in the range of 1% of the anticipated OBW (in the 1MHz band immediately outside and adjacent to the band edge). For improvement of the accuracy in the measurement of the average power of a noise-like emission, a RBW narrower than the specified reference bandwidth can be used (generally limited to no less than 1% of the OBW), provided that a subsequent integration is performed over the full required measurement bandwidth. This integration should be performed using the spectrum analyzer's band power functions.
3. $VBW \geq 3 \cdot RBW$
4. Sweep time = auto
5. Detector = power averaging (rms)
6. Set sweep trigger to "free run."
7. User gate triggered such that the analyzer only sweeps when the device is transmitting at full power
8. Trace average at least 100 traces in power averaging (rms) mode if sweep is set to auto-couple. To accurately determine the average power over the on and off time of the transmitter, it can be necessary to increase the number of traces to be averaged above 100, or if using a manually configured sweep time, increase the sweep time.

5.5.4. Test Setup



5.5.5. Test Result

Refer to Appendix A.4.

5.6. Peak to Average Ratio Measurement

5.6.1. Test Limit

A peak to average ratio measurement is performed at the conducted port of the EUT. The spectrum analyzers Complementary Cumulative Distribution Function (CCDF) measurement profile is used to determine the largest deviation between the average and the peak power of the EUT in a given bandwidth. The CCDF curve shows how much time the peak waveform spends at or above a given average power level. The percent of time the signal spends at or above the level defines the probability for that particular power level.

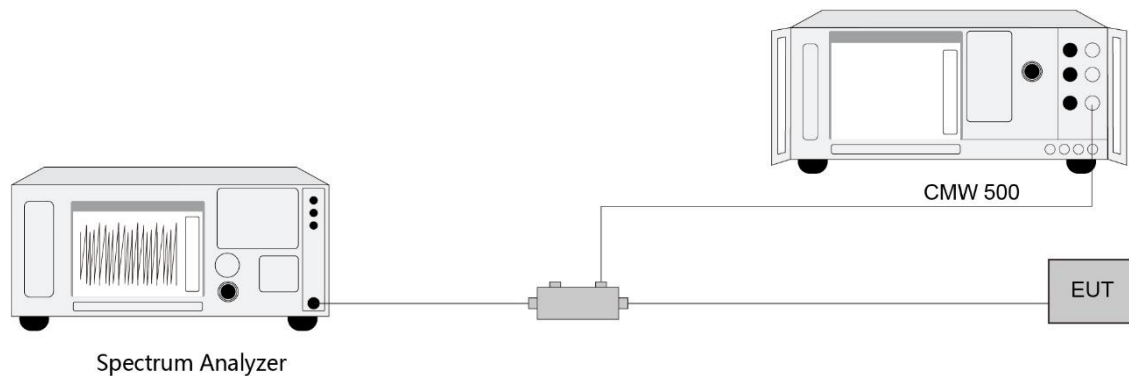
5.6.2. Test Procedure

ANSI C63.26-2015 - Section 5.2.3.4 (CCDF).

5.6.3. Test Setting

1. Set the resolution / measurement bandwidth $\geq$ signal's occupied bandwidth
2. Set the number of counts to a value that stabilizes the measured CCDF curve
3. Record the maximum PARR level associated with a probability of 0.1%

5.6.4. Test Setup



5.6.5. Test Result

Refer to Appendix A.5

5.7. Conducted Spurious Emissions Measurement

5.7.1. Test Limit

The level of the carrier and the various conducted spurious and harmonic frequencies is measured by means of a calibrated spectrum analyzer. The spectrum is scanned from the lowest frequency generated in the equipment up to a frequency including its 10th harmonic. All out of band emissions are measured with a spectrum analyzer connected to the antenna terminal of the EUT while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies. All data rates were investigated to determine the worst-case configuration. All modes of operation were investigated and the worst-case configuration results are reported in this section.

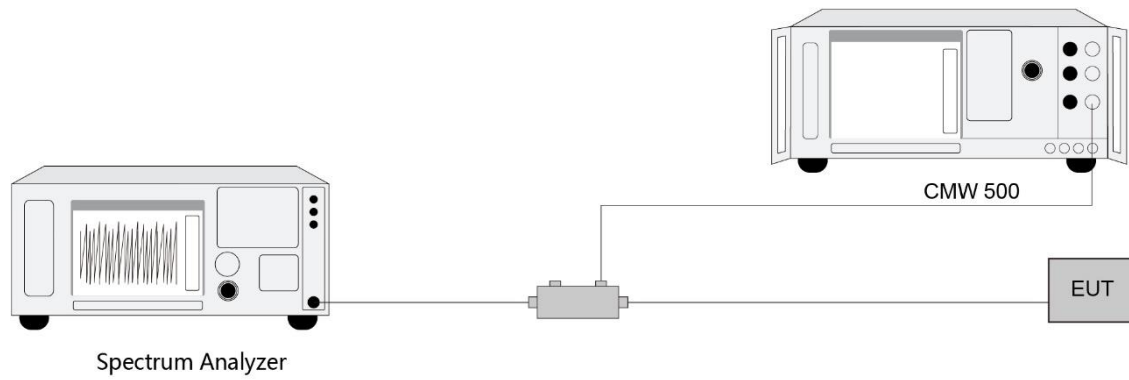
The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB.

5.7.2. Test Procedure

ANSI C63.26-2015 - Section 5.7

5.7.3. Test Setting

1. Set the analyzer frequency to low, mid, high channel.
2. RBW = 1MHz
3. VBW $\geq 3 \times$ RBW
4. Sweep time = auto
5. Detector = power averaging (rms)
6. Set sweep trigger to "free run."
7. User gate triggered such that the analyzer only sweeps when the device is transmitting at full power.
8. Trace average at least 100 traces in power averaging (rms) mode if sweep is set to auto-couple. To accurately determine the average power over the on and off time of the transmitter, it can be necessary to increase the number of traces to be averaged above 100, or if using a manually configured sweep time, increase the sweep time.

5.7.4.Test Setup**5.7.5.Test Result**

Refer to Appendix A.6

5.8. Radiated Spurious Emissions Measurement

5.8.1. Test Limit

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB. The emission limit equal to -13dBm.

For Cat M Band 13, For operations in the 746-758 MHz, 775-788 MHz, and 805-806 MHz bands, emissions in the band 1559-1610 MHz shall be limited to -70 dBW/MHz (-40dBm/MHz) equivalent isotropically radiated power (EIRP) for wideband signals, and -80 dBW (-50dBm) EIRP for discrete emissions of less than 700 Hz bandwidth.

$E \text{ (dB}\mu\text{V/m)} = \text{EIRP (dBm)} - 20 \log D + 104.8$; where D is the measurement distance in meters. The emission limit equal to 82.3dB μ V/m.

5.8.2. Test Procedure

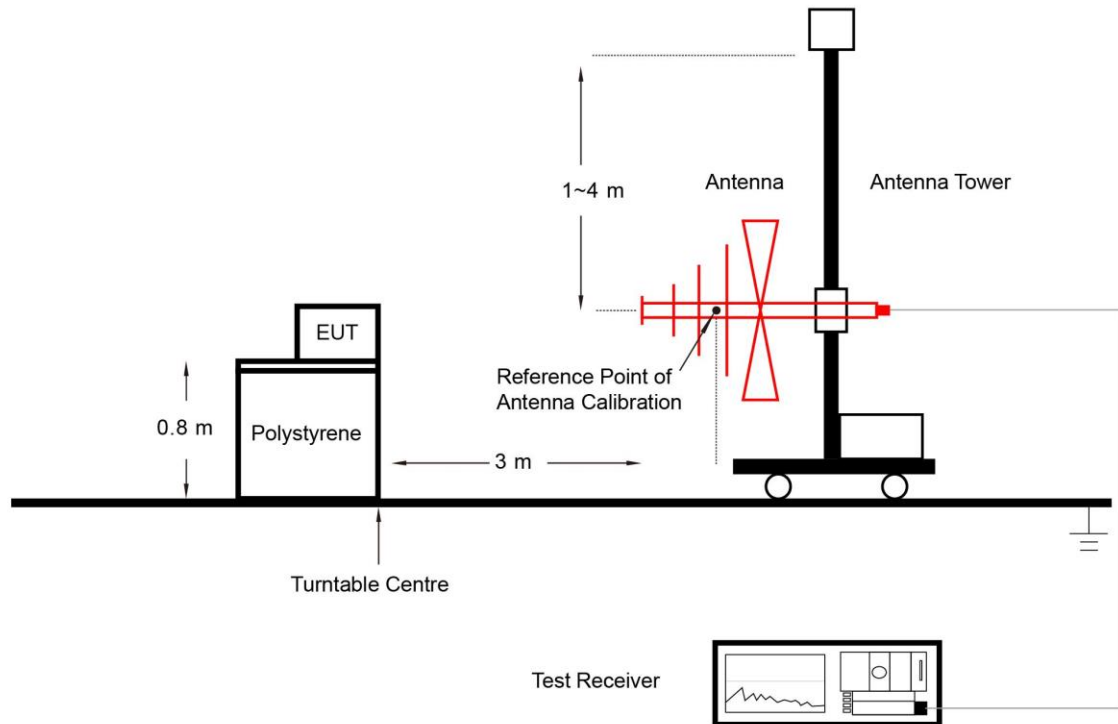
ANSI C63.26-2015 - Section 5.2.7 & 5.5

5.8.3. Test Setting

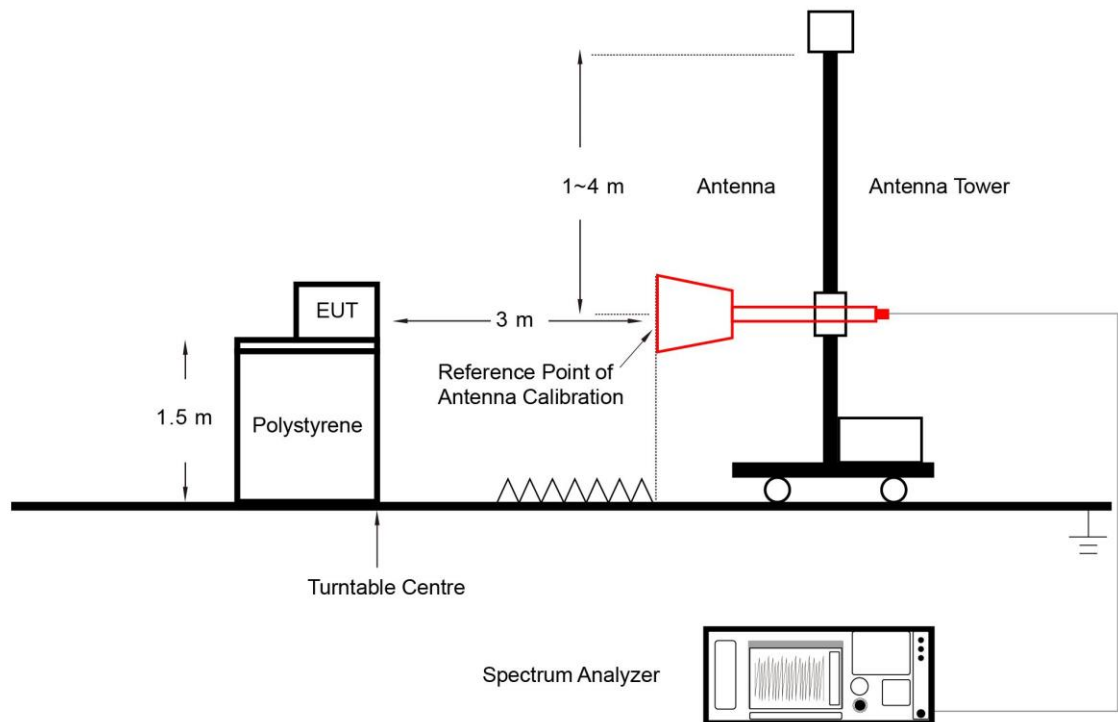
1. RBW = 1MHz
2. VBW $\geq 3 \times$ RBW
3. Sweep time $\geq 10 \times$ (number of points in sweep) $\times$ (transmission symbol period)
4. Detector = Peak
5. Trace mode = max hold
6. The trace was allowed to stabilize

5.8.4. Test Setup

Below 1GHz Test Setup:



Above 1GHz Test Setup:



5.8.5.Test Result

Refer to Appendix A.7.

Appendix A - Test Result

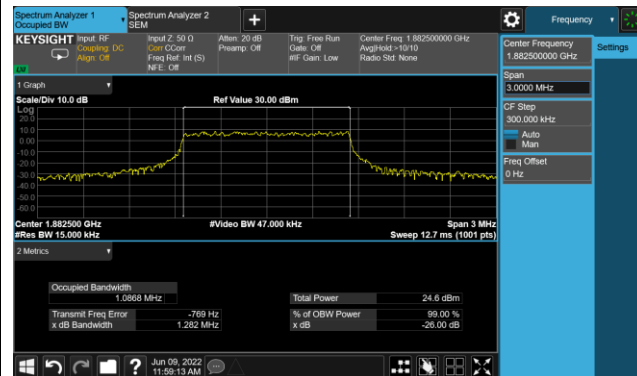
A.1 Occupied Bandwidth Test Result

Test Site	WZ-SR6	Test Engineer	Cloud Guo
Test Date	2022/05/25~2022/06/90	Test Band	Band 2/25

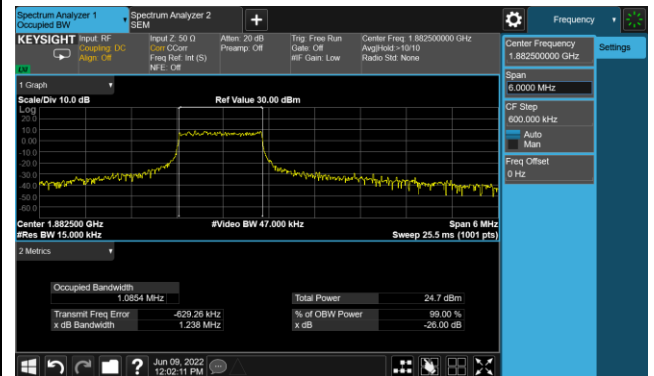
Frequency (MHz)	Bandwidth (MHz)	99% Bandwidth (MHz)
QPSK		
1882.5	1.4	1.09
	3	1.09
	5	1.09
	10	1.09
	15	1.10
	20	1.12
16QAM		
1882.5	1.4	0.91
	3	0.91
	5	0.92
	10	0.94
	15	0.93
	20	0.95

99% Bandwidth - QPSK

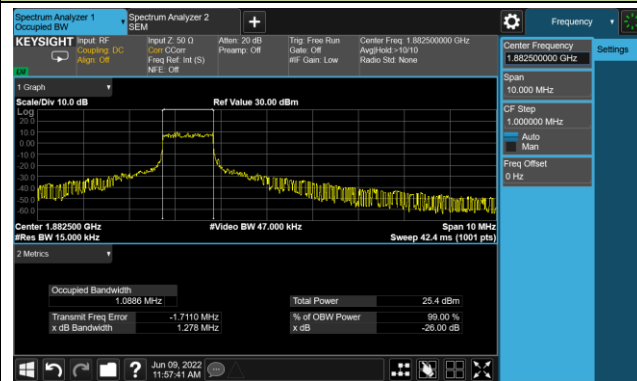
1.4MHz Channel Bandwidth



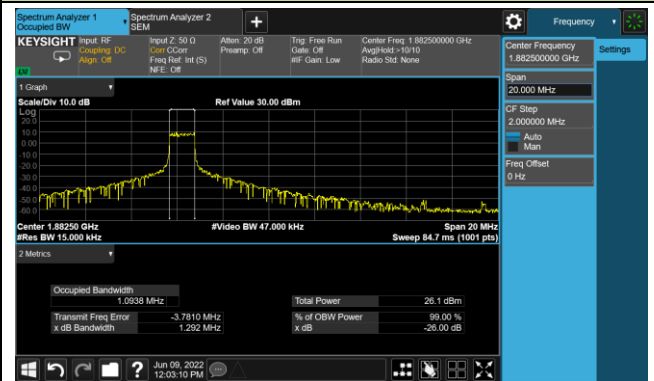
3MHz Channel Bandwidth



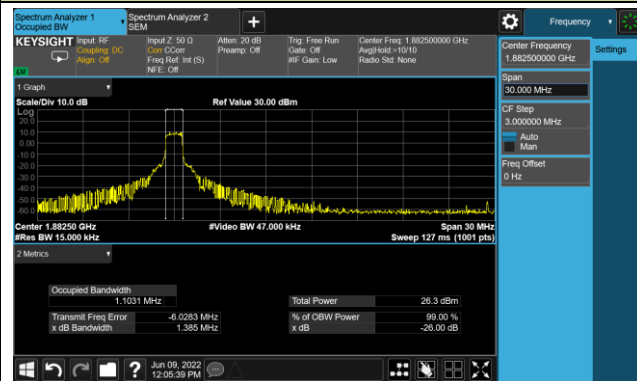
5MHz Channel Bandwidth



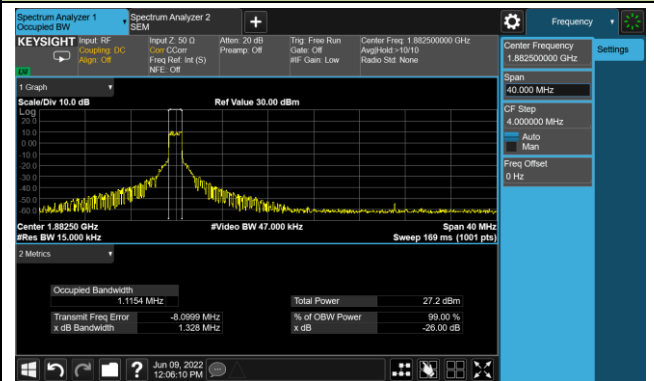
10MHz Channel Bandwidth



15MHz Channel Bandwidth

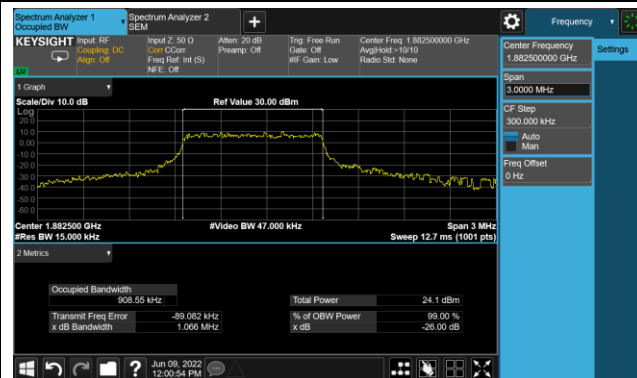


20MHz Channel Bandwidth

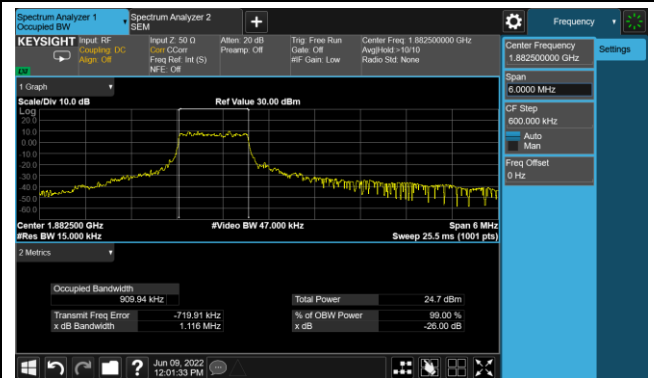


99% Bandwidth - 16QAM

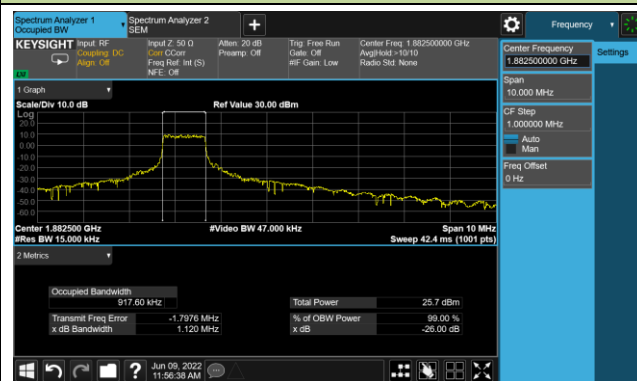
1.4MHz Channel Bandwidth



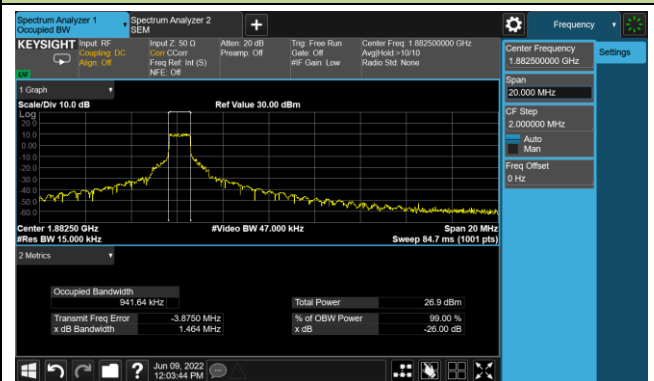
3MHz Channel Bandwidth



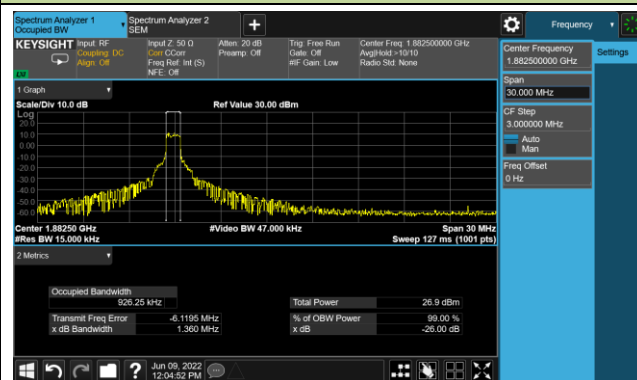
5MHz Channel Bandwidth



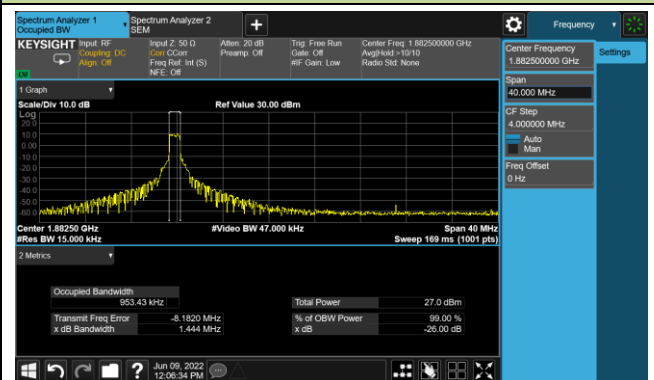
10MHz Channel Bandwidth



15MHz Channel Bandwidth



20MHz Channel Bandwidth

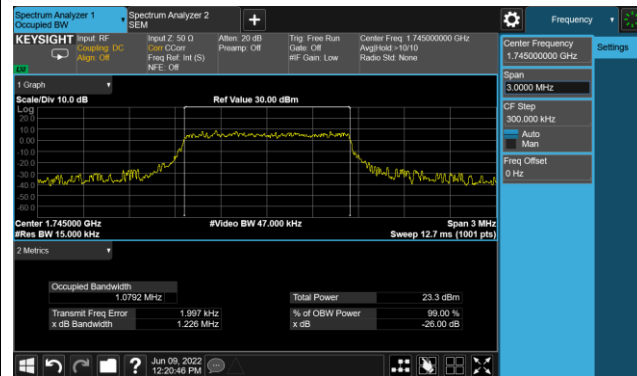


Test Site	WZ-SR6	Test Engineer	Cloud Guo
Test Date	2022/05/25~2022/07/29	Test Band	Band 4/66

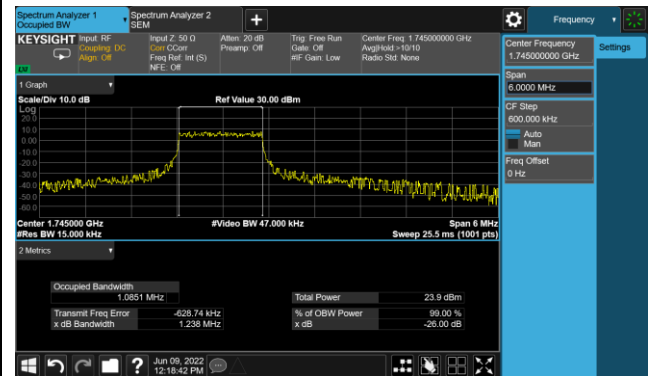
Frequency (MHz)	Bandwidth (MHz)	99% Bandwidth (MHz)
QPSK		
1745.0	1.4	1.08
	3	1.09
	5	1.08
	10	1.10
	15	1.11
	20	1.11
16QAM		
1745.0	1.4	0.90
	3	0.91
	5	0.91
	10	0.92
	15	0.92
	20	0.95

99% Bandwidth - QPSK

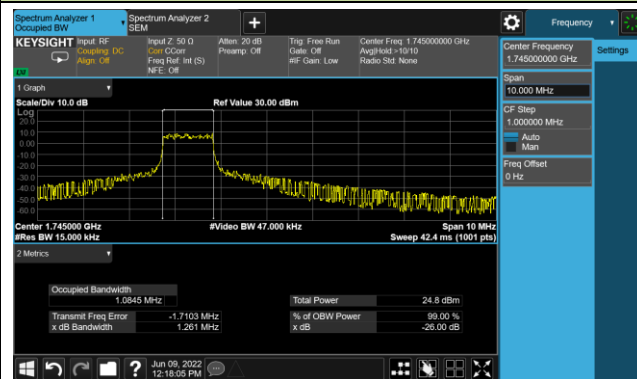
1.4MHz Channel Bandwidth



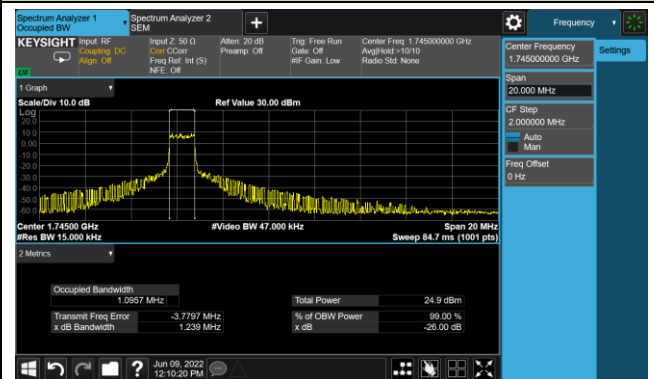
3MHz Channel Bandwidth



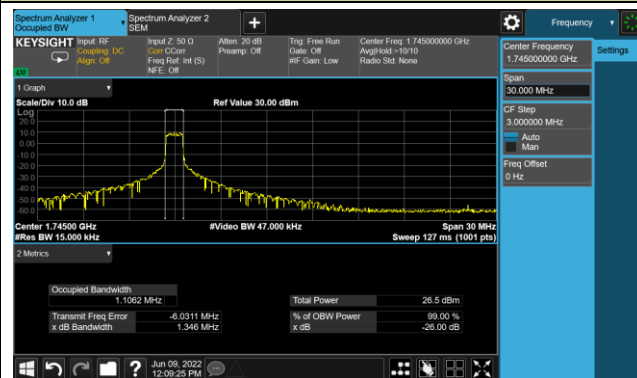
5MHz Channel Bandwidth



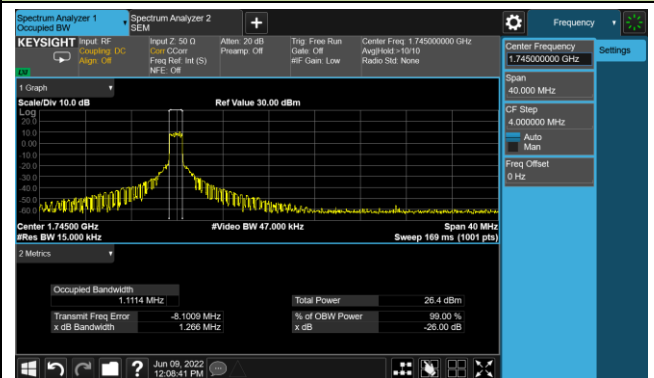
10MHz Channel Bandwidth



15MHz Channel Bandwidth

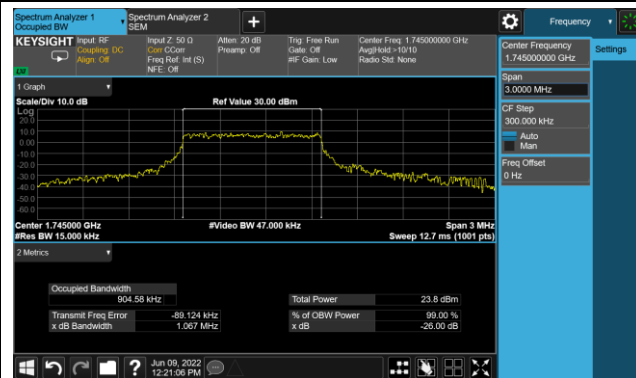


20MHz Channel Bandwidth



99% Bandwidth - 16QAM

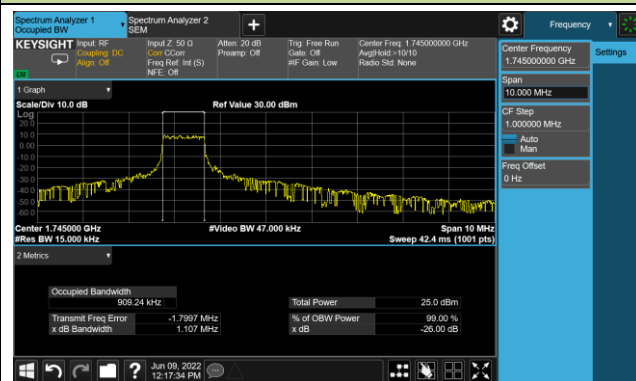
1.4MHz Channel Bandwidth



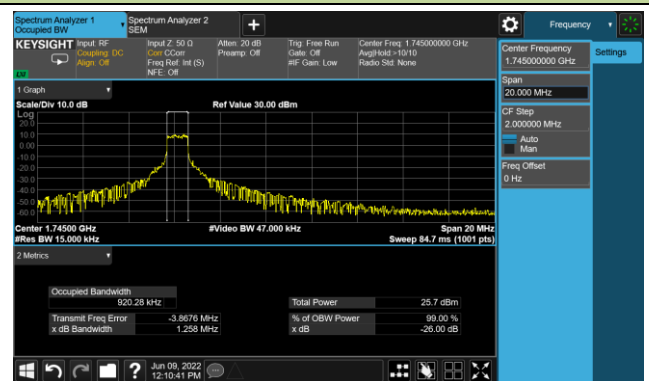
3MHz Channel Bandwidth



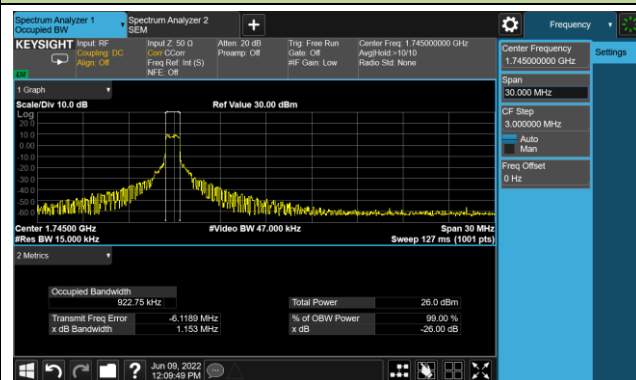
5MHz Channel Bandwidth



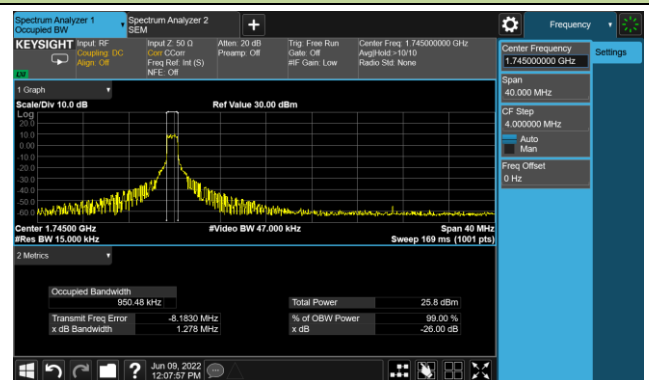
10MHz Channel Bandwidth



15MHz Channel Bandwidth



20MHz Channel Bandwidth

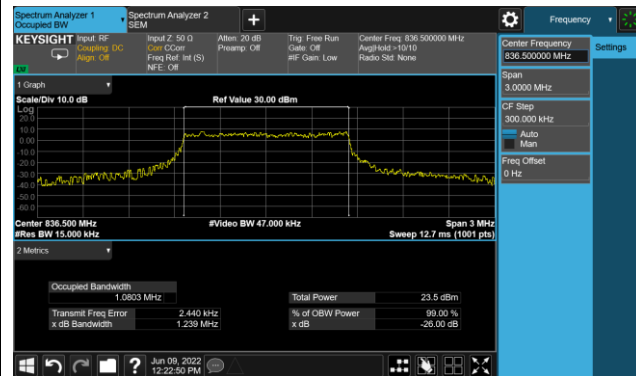


Test Site	WZ-SR6	Test Engineer	Cloud Guo
Test Date	2022/05/25~2022/06/09	Test Band	Band 5/26

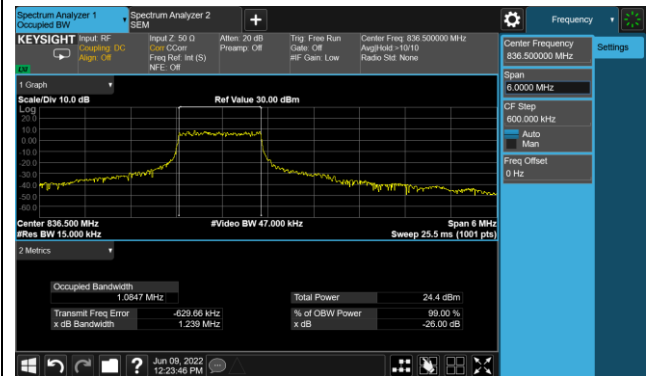
Frequency (MHz)	Bandwidth (MHz)	99% Bandwidth (MHz)
QPSK		
836.5	1.4	1.08
	3	1.08
	5	1.09
	10	1.10
	15	1.11
821.5	15	1.10
16QAM		
836.5	1.4	0.90
	3	0.91
	5	0.91
	10	0.93
	15	0.93
821.5	15	0.93

99% Bandwidth - QPSK

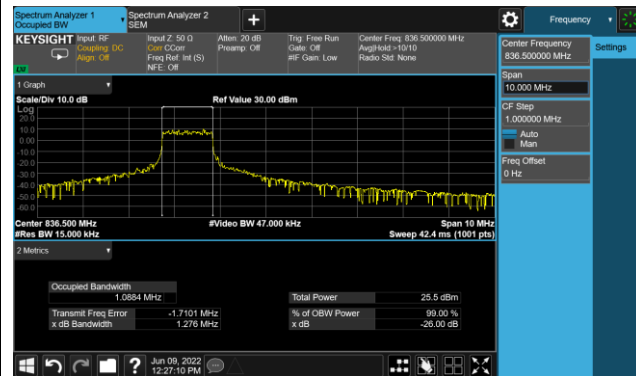
1.4MHz Channel Bandwidth



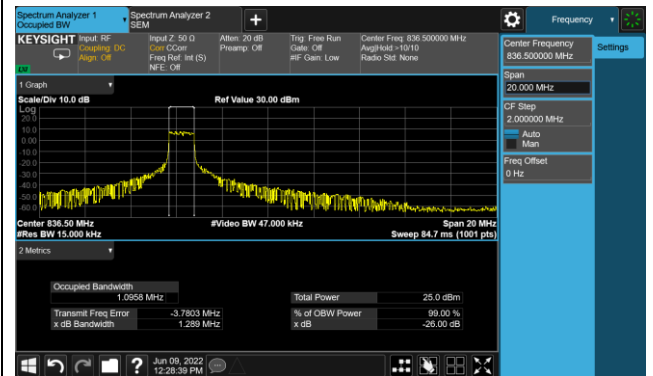
3MHz Channel Bandwidth



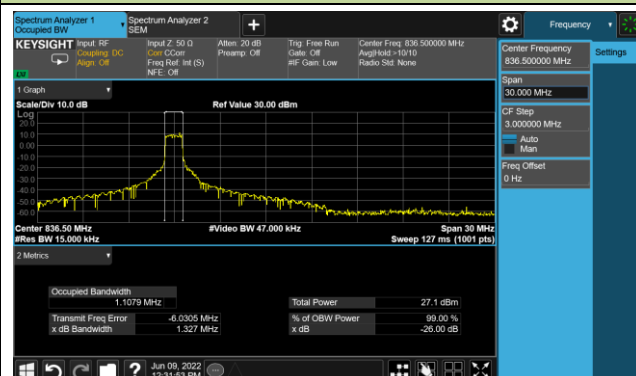
5MHz Channel Bandwidth



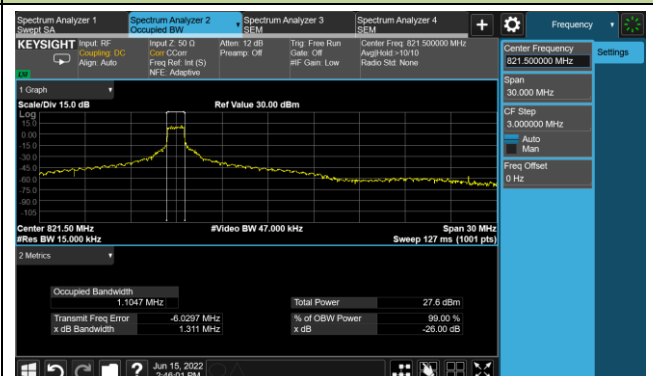
10MHz Channel Bandwidth



15MHz Channel Bandwidth

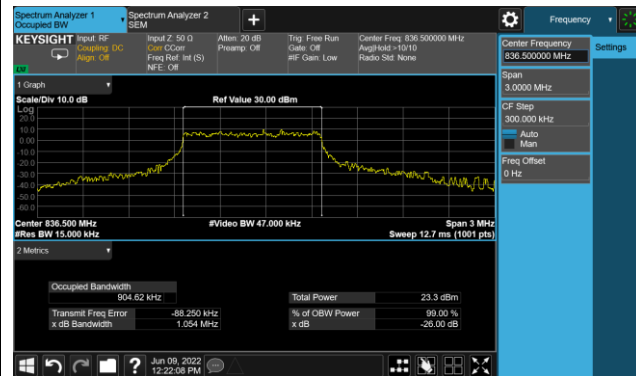


821.5MHz

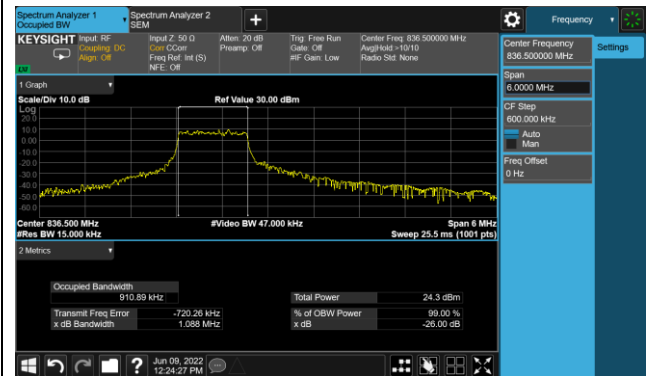


99% Bandwidth -16QAM

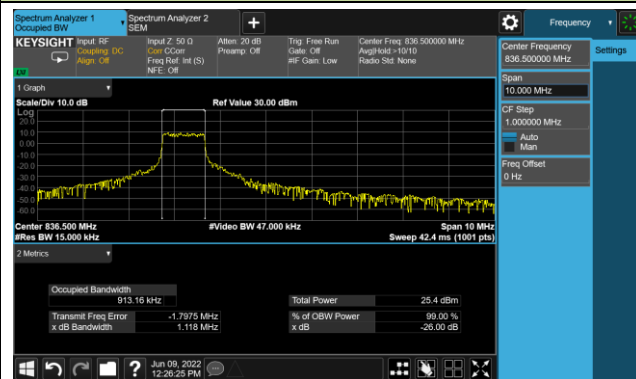
1.4MHz Channel Bandwidth



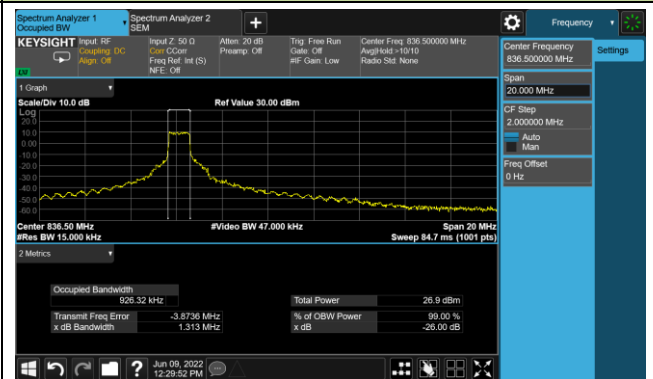
3MHz Channel Bandwidth



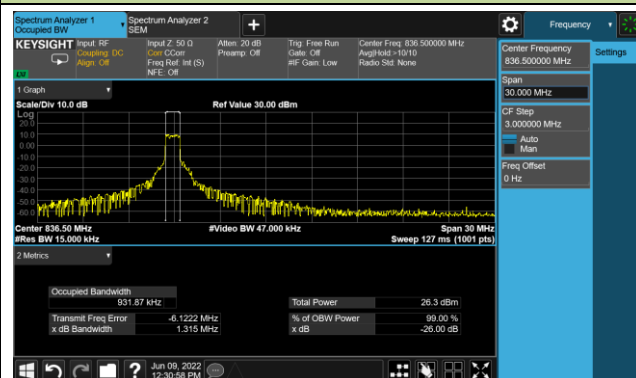
5MHz Channel Bandwidth



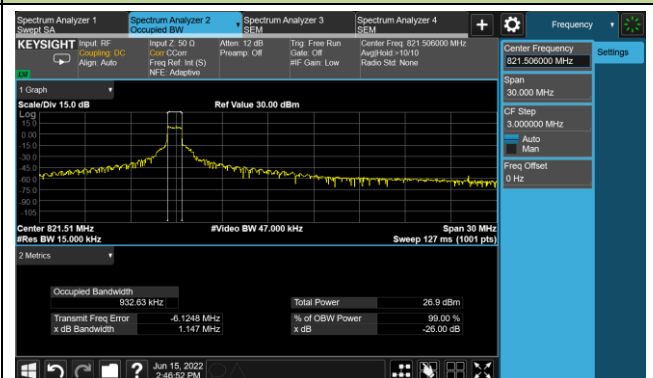
10MHz Channel Bandwidth



15MHz Channel Bandwidth



821.5MHz

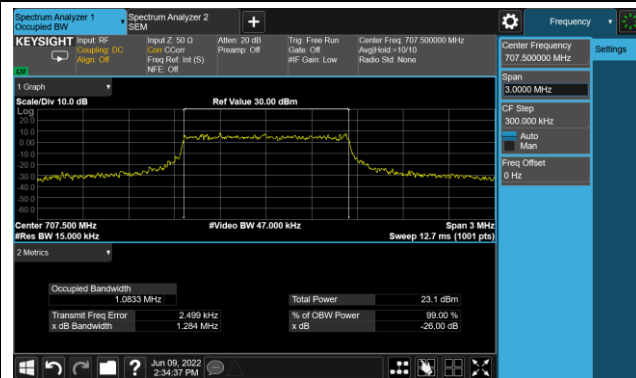


Test Site	WZ-SR6	Test Engineer	Cloud Guo
Test Date	2022/06/09	Test Band	Cat M Band 12

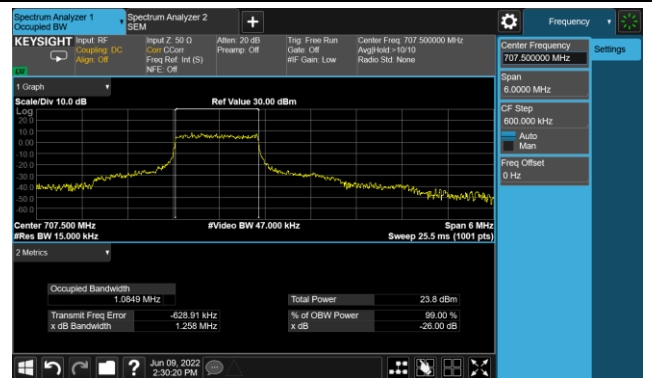
Frequency (MHz)	Bandwidth (MHz)	99% Bandwidth (MHz)
QPSK		
707.5	1.4	1.08
	3	1.08
	5	1.09
	10	1.09
16QAM		
707.5	1.4	0.91
	3	0.91
	5	0.91
	10	0.93

99% Bandwidth - QPSK

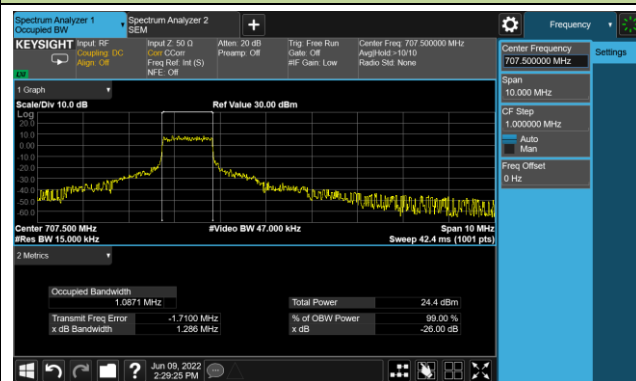
1.4MHz Channel Bandwidth



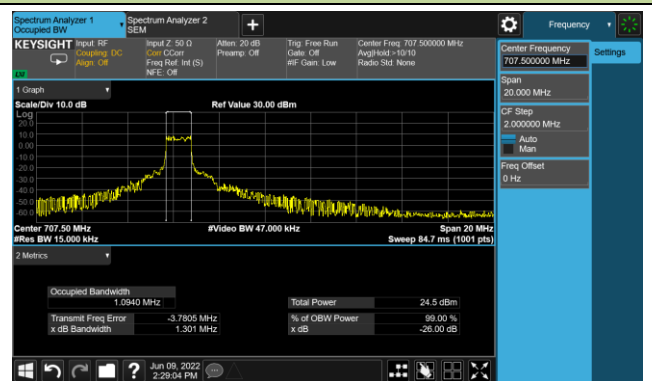
3MHz Channel Bandwidth



5MHz Channel Bandwidth

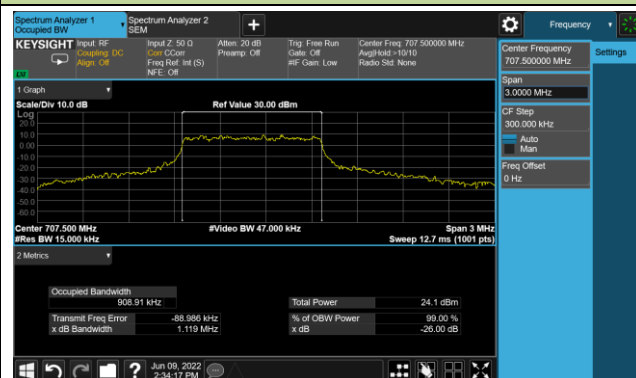


10MHz Channel Bandwidth

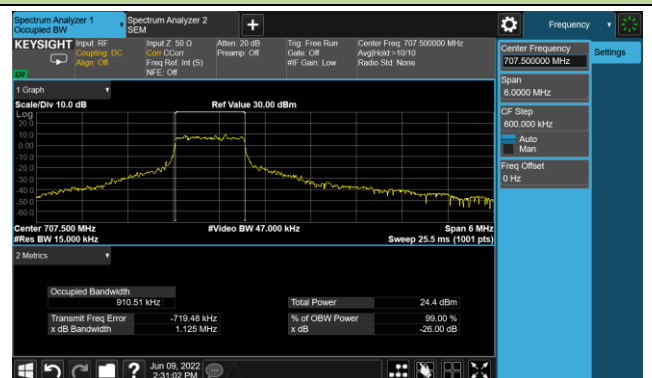


99% Bandwidth - 16QAM

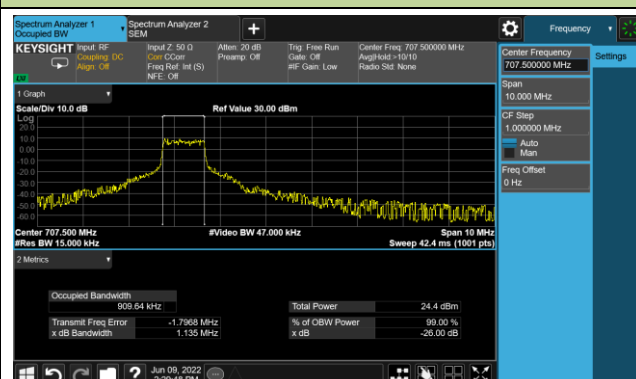
1.4MHz Channel Bandwidth



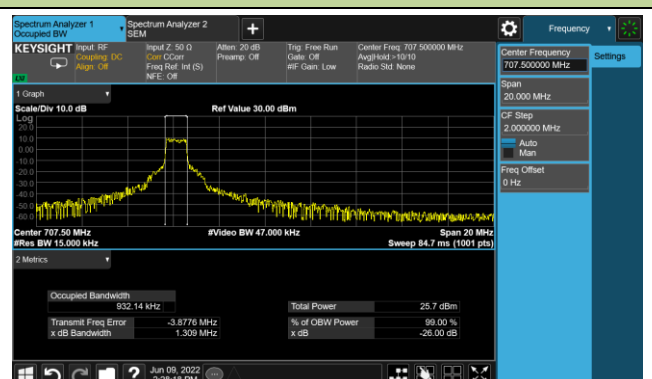
3MHz Channel Bandwidth



5MHz Channel Bandwidth

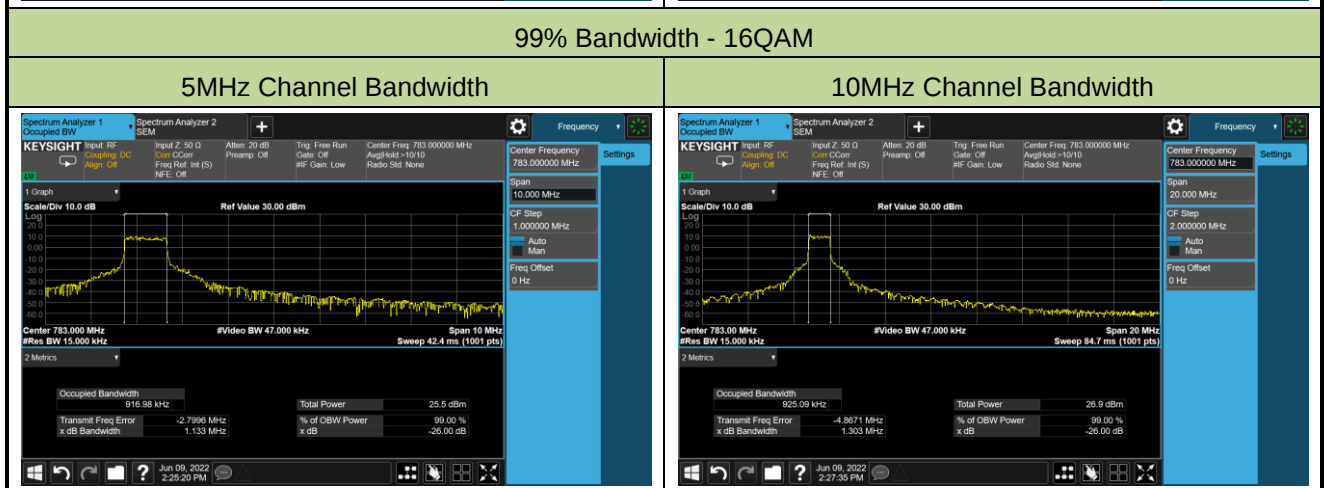
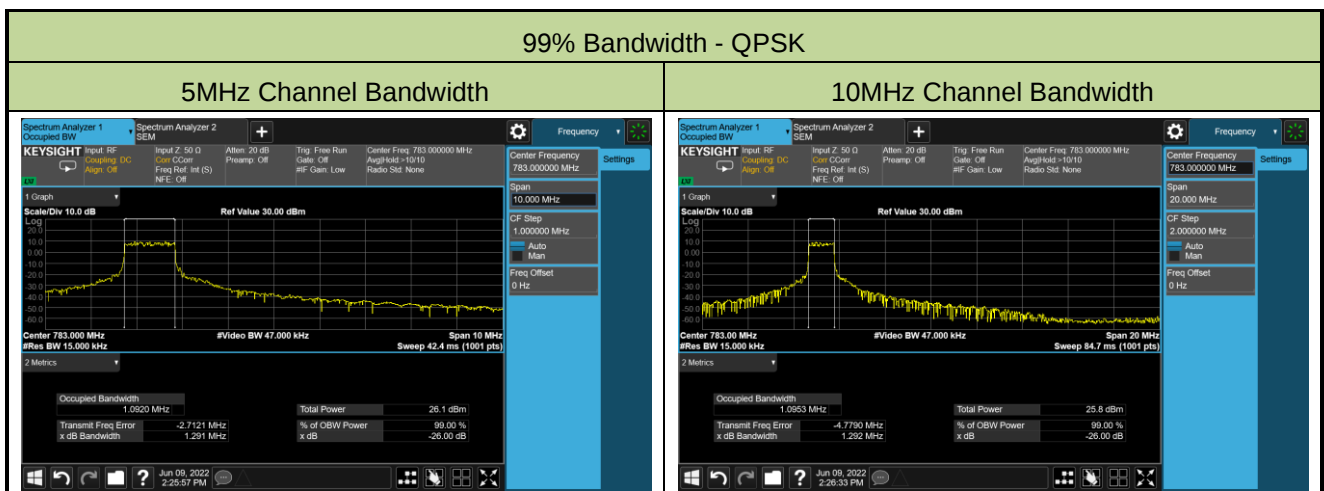


10MHz Channel Bandwidth



Test Site	WZ-SR6	Test Engineer	Cloud Guo
Test Date	2022/06/09	Test Band	Cat M Band 13

Frequency (MHz)	Bandwidth (MHz)	99% Bandwidth (MHz)
QPSK		
782.0	5	1.09
	10	1.10
16QAM		
782.0	5	0.92
	10	0.93



A.2 Frequency Stability Test Result

Test Site	WZ-TR3	Test Engineer	Cloud Guo
Test Date	2022/07/22~2022/07/24	Test Band	Cat M Band 2/25

Power (VDC)	Temp (°C)	Frequency Tolerance (ppm)
3.8	- 30	-0.0041
	- 20	-0.0027
	- 10	-0.0028
	0	-0.0039
	+ 10	-0.0041
	+ 20 (Ref)	-0.0043
	+ 30	-0.0118
	+ 40	-0.0090
	+ 50	-0.0098
4.2	+ 20	-0.0057
3.3	+ 20	-0.0058

Test Site	WZ-TR3	Test Engineer	Cloud Guo
Test Date	2022/07/22~2022/07/24	Test Band	Cat M Band 4/66

Power (VDC)	Temp (°C)	Frequency Tolerance (ppm)
3.8	- 30	0.0032
	- 20	0.0013
	- 10	-0.0020
	0	0.0017
	+ 10	0.0015
	+ 20 (Ref)	-0.0041
	+ 30	0.0025
	+ 40	-0.0032
	+ 50	-0.0041
4.2	+ 20	-0.0038
3.3	+ 20	-0.0028

Test Site	WZ-TR3	Test Engineer	Cloud Guo
Test Date	2022/07/22~2022/07/24	Test Band	Cat M Band 5/26

Power (VDC)	Temp (°C)	Frequency Tolerance (ppm)
3.8	- 30	-0.0079
	- 20	-0.0062
	- 10	-0.0066
	0	-0.0056
	+ 10	-0.0082
	+ 20 (Ref)	-0.0106
	+ 30	-0.0066
	+ 40	-0.0099
	+ 50	-0.0071
4.2	+ 20	-0.0230
3.3	+ 20	-0.0204

Test Site	WZ-TR3	Test Engineer	Cloud Guo
Test Date	2022/07/22~2022/07/24	Test Band	Cat M Band 12

Power (VDC)	Temp (°C)	Frequency Tolerance (ppm)
3.8	- 30	-0.0044
	- 20	-0.0059
	- 10	-0.0059
	0	-0.0068
	+ 10	-0.0062
	+ 20 (Ref)	-0.0090
	+ 30	-0.0105
	+ 40	-0.0078
	+ 50	-0.0066
4.2	+ 20	-0.0065
3.3	+ 20	-0.0133

Test Site	WZ-TR3	Test Engineer	Cloud Guo
Test Date	2022/07/22~2022/07/24	Test Band	Cat M Band 13

Power (VDC)	Temp (°C)	Frequency Tolerance (ppm)
3.8	- 30	-0.0124
	- 20	0.0047
	- 10	0.0049
	0	0.0081
	+ 10	0.0058
	+ 20 (Ref)	-0.0134
	+ 30	-0.0043
	+ 40	0.0078
	+ 50	0.0052
4.2	+ 20	-0.0110
3.3	+ 20	-0.0130

A.3 Equivalent Isotropically Radited Power Test Result

Test Site	WZ-SR6	Test Engineer	Cloud Guo
Test Date	2022/05/25~2022/05/30	Test Band	Cat M Band 2/25

Frequency (MHz)	Channel Bandwidth (MHz)	Index	RB Size	RB Offset	Output Power (dBm)	EIRP (dBm)	Limit (dBm)
QPSK							
1850.7	1.4	0	1	0	20.91	21.69	< 33.01
			1	2	20.73	21.51	< 33.01
			1	5	20.48	21.26	< 33.01
			6	0	18.31	19.09	< 33.01
1882.5		0	1	0	20.74	21.52	< 33.01
			1	2	20.42	21.20	< 33.01
			1	5	20.33	21.11	< 33.01
			6	0	18.41	19.19	< 33.01
1914.3		0	1	0	20.50	21.28	< 33.01
			1	2	20.45	21.23	< 33.01
			1	5	20.25	21.03	< 33.01
			6	0	18.27	19.05	< 33.01
1851.5	3	0	1	0	20.68	21.46	< 33.01
			1	2	20.66	21.44	< 33.01
			1	5	20.46	21.24	< 33.01
			6	0	18.37	19.15	< 33.01
1882.5		0	1	0	20.71	21.49	< 33.01
			1	2	20.63	21.41	< 33.01
			1	5	20.43	21.21	< 33.01
			6	0	18.34	19.12	< 33.01
1913.5		1	1	0	20.44	21.22	< 33.01
			1	2	20.40	21.18	< 33.01
			1	5	20.22	21.00	< 33.01
			6	0	18.30	19.08	< 33.01
Note: The EIRP (dBm) = Output Power (dBm) + Antenna Gain (dBi)							

Frequency (MHz)	Channel Bandwidth (MHz)	Index	RB Size	RB Offset	Output Power (dBm)	EIRP (dBm)	Limit (dBm)	
QPSK								
1852.5	5	0	1	0	20.76	21.54	< 33.01	
			1	2	20.62	21.40	< 33.01	
			1	5	20.34	21.12	< 33.01	
			6	0	19.42	20.20	< 33.01	
1882.5		1	1	0	20.48	21.26	< 33.01	
			1	2	20.49	21.27	< 33.01	
			1	5	20.27	21.05	< 33.01	
			6	0	19.44	20.22	< 33.01	
1912.5		3	1	0	20.29	21.07	< 33.01	
			1	2	20.18	20.96	< 33.01	
			1	5	20.08	20.86	< 33.01	
			6	0	19.23	20.01	< 33.01	
1855.0	10	0	1	0	20.70	21.48	< 33.01	
			1	2	20.61	21.39	< 33.01	
			1	5	20.36	21.14	< 33.01	
			6	0	19.36	20.14	< 33.01	
1882.5		3	1	0	20.44	21.22	< 33.01	
			1	2	20.44	21.22	< 33.01	
			1	5	20.26	21.04	< 33.01	
			6	0	19.40	20.18	< 33.01	
1910.0		7	1	0	20.28	21.06	< 33.01	
			1	2	20.27	21.05	< 33.01	
			1	5	20.08	20.86	< 33.01	
			6	0	19.20	19.98	< 33.01	
Note: The EIRP (dBm) = Output Power (dBm) + Antenna Gain (dBi)								

Frequency (MHz)	Channel Bandwidth (MHz)	Index	RB Size	RB Offset	Output Power (dBm)	EIRP (dBm)	Limit (dBm)
QPSK							
1857.5	15	0	1	0	20.63	21.41	< 33.01
			1	2	20.58	21.36	< 33.01
			1	5	20.35	21.13	< 33.01
			6	0	20.45	21.23	< 33.01
1882.5		5	1	0	20.42	21.20	< 33.01
			1	2	20.43	21.21	< 33.01
			1	5	20.22	21.00	< 33.01
			6	0	20.38	21.16	< 33.01
1907.5		11	1	0	20.26	21.04	< 33.01
			1	2	20.28	21.06	< 33.01
			1	5	20.16	20.94	< 33.01
			6	0	20.28	21.06	< 33.01
1860.0	20	0	1	0	20.67	21.45	< 33.01
			1	2	20.59	21.37	< 33.01
			1	5	20.24	21.02	< 33.01
			6	0	20.41	21.19	< 33.01
1882.5		7	1	0	20.40	21.18	< 33.01
			1	2	20.41	21.19	< 33.01
			1	5	20.23	21.01	< 33.01
			6	0	20.36	21.14	< 33.01
1905.0		15	1	0	20.28	21.06	< 33.01
			1	2	20.29	21.07	< 33.01
			1	5	20.08	20.86	< 33.01
			6	0	20.32	21.10	< 33.01
Note: The EIRP (dBm) = Output Power (dBm) + Antenna Gain (dBi)							

Frequency (MHz)	Channel Bandwidth (MHz)	Index	RB Size	RB Offset	Output Power (dBm)	EIRP (dBm)	Limit (dBm)	
16QAM								
1850.7	1.4	0	1	0	19.72	20.50	< 33.01	
			1	2	19.21	19.99	< 33.01	
			1	5	19.13	19.91	< 33.01	
			5	0	18.45	19.23	< 33.01	
1882.5		0	1	0	19.58	20.36	< 33.01	
			1	2	19.46	20.24	< 33.01	
			1	5	19.37	20.15	< 33.01	
			5	0	18.42	19.20	< 33.01	
1914.3		0	1	0	19.45	20.23	< 33.01	
			1	2	19.32	20.10	< 33.01	
			1	5	19.25	20.03	< 33.01	
			5	1	18.22	19.00	< 33.01	
1851.5	3	0	1	0	19.77	20.55	< 33.01	
			1	2	19.38	20.16	< 33.01	
			1	5	19.49	20.27	< 33.01	
			5	0	18.41	19.19	< 33.01	
1882.5		0	1	0	19.53	20.31	< 33.01	
			1	2	19.51	20.29	< 33.01	
			1	5	19.30	20.08	< 33.01	
			5	0	18.37	19.15	< 33.01	
1913.5		1	1	0	19.54	20.32	< 33.01	
			1	2	19.24	20.02	< 33.01	
			1	5	19.36	20.14	< 33.01	
			5	1	18.23	19.01	< 33.01	
Note: The EIRP (dBm) = Output Power (dBm) + Antenna Gain (dBi)								

Frequency (MHz)	Channel Bandwidth (MHz)	Index	RB Size	RB Offset	Output Power (dBm)	EIRP (dBm)	Limit (dBm)	
16QAM								
1852.5	5	0	1	0	21.22	22.00	< 33.01	
			1	2	20.48	21.26	< 33.01	
			1	5	19.99	20.77	< 33.01	
			5	0	19.14	19.92	< 33.01	
1882.5		1	1	0	21.12	21.90	< 33.01	
			1	2	20.42	21.20	< 33.01	
			1	5	19.96	20.74	< 33.01	
			5	0	19.20	19.98	< 33.01	
1912.5		3	1	0	20.36	21.14	< 33.01	
			1	2	19.88	20.66	< 33.01	
			1	5	19.77	20.55	< 33.01	
			5	1	18.96	19.74	< 33.01	
1855.0	10	0	1	0	20.72	21.50	< 33.01	
			1	2	20.59	21.37	< 33.01	
			1	5	19.94	20.72	< 33.01	
			5	0	20.45	21.23	< 33.01	
1882.5		3	1	0	20.92	21.70	< 33.01	
			1	2	20.43	21.21	< 33.01	
			1	5	19.94	20.72	< 33.01	
			5	0	20.46	21.24	< 33.01	
1910.0		7	1	0	20.67	21.45	< 33.01	
			1	2	19.92	20.70	< 33.01	
			1	5	19.78	20.56	< 33.01	
			5	1	20.28	21.06	< 33.01	
Note: The EIRP (dBm) = Output Power (dBm) + Antenna Gain (dBi)								

Frequency (MHz)	Channel Bandwidth (MHz)	Index	RB Size	RB Offset	Output Power (dBm)	EIRP (dBm)	Limit (dBm)	
16QAM								
1857.5	15	0	1	0	21.06	21.84	< 33.01	
			1	2	20.56	21.34	< 33.01	
			1	5	19.93	20.71	< 33.01	
			5	0	20.43	21.21	< 33.01	
1882.5		5	1	0	20.73	21.51	< 33.01	
			1	2	20.56	21.34	< 33.01	
			1	5	19.90	20.68	< 33.01	
			5	0	20.45	21.23	< 33.01	
1907.5		11	1	0	20.36	21.14	< 33.01	
			1	2	19.87	20.65	< 33.01	
			1	5	19.74	20.52	< 33.01	
			5	1	20.33	21.11	< 33.01	
1860.0	20	0	1	0	21.05	21.83	< 33.01	
			1	2	20.56	21.34	< 33.01	
			1	5	20.04	20.82	< 33.01	
			5	0	20.42	21.20	< 33.01	
1882.5		7	1	0	20.73	21.51	< 33.01	
			1	2	20.39	21.17	< 33.01	
			1	5	19.91	20.69	< 33.01	
			5	0	20.43	21.21	< 33.01	
1905.0		15	1	0	20.31	21.09	< 33.01	
			1	2	19.88	20.66	< 33.01	
			1	5	19.76	20.54	< 33.01	
			5	1	20.31	21.09	< 33.01	
Note: The EIRP (dBm) = Output Power (dBm) + Antenna Gain (dBi)								

Test Site	WZ-SR6	Test Engineer	Cloud Guo
Test Date	2022/05/25~2022/05/30	Test Band	Cat M Band 4/66

Frequency (MHz)	Channel Bandwidth (MHz)	Index	RB Size	RB Offset	Output Power (dBm)	EIRP (dBm)	Limit (dBm)
QPSK							
1710.7	1.4	0	1	0	20.04	19.94	< 30.00
			1	2	19.81	19.71	< 30.00
			1	5	19.58	19.48	< 30.00
			6	0	17.98	17.88	< 30.00
1745.0		0	1	0	20.33	20.23	< 30.00
			1	2	20.01	19.91	< 30.00
			1	5	19.94	19.84	< 30.00
			6	0	18.08	17.98	< 30.00
1779.3		0	1	0	20.15	20.05	< 30.00
			1	2	20.15	20.05	< 30.00
			1	5	20.17	20.07	< 30.00
			6	0	18.24	18.14	< 30.00
1711.5	3	0	1	0	19.88	19.78	< 30.00
			1	2	19.75	19.65	< 30.00
			1	5	19.78	19.68	< 30.00
			6	0	17.97	17.87	< 30.00
1745.0		0	1	0	20.13	20.03	< 30.00
			1	2	20.04	19.94	< 30.00
			1	5	19.99	19.89	< 30.00
			6	0	18.15	18.05	< 30.00
1778.5		1	1	0	20.41	20.31	< 30.00
			1	2	19.99	19.89	< 30.00
			1	5	20.17	20.07	< 30.00
			6	0	18.09	17.99	< 30.00
Note: The EIRP (dBm) = Output Power (dBm) + Antenna Gain (dBi)							

Frequency (MHz)	Channel Bandwidth (MHz)	Index	RB Size	RB Offset	Output Power (dBm)	EIRP (dBm)	Limit (dBm)	
QPSK								
1712.5	5	0	1	0	19.74	19.64	< 30.00	
			1	2	19.74	19.64	< 30.00	
			1	5	19.78	19.68	< 30.00	
			6	0	18.93	18.83	< 30.00	
1745.0		1	1	0	19.93	19.83	< 30.00	
			1	2	19.95	19.85	< 30.00	
			1	5	19.71	19.61	< 30.00	
			6	0	19.14	19.04	< 30.00	
1777.5		3	1	0	20.21	20.11	< 30.00	
			1	2	19.97	19.87	< 30.00	
			1	5	20.11	20.01	< 30.00	
			6	0	19.17	19.07	< 30.00	
1715.0	10	0	1	0	19.91	19.81	< 30.00	
			1	2	19.66	19.56	< 30.00	
			1	5	19.71	19.61	< 30.00	
			6	0	18.85	18.75	< 30.00	
1745.0		3	1	0	19.88	19.78	< 30.00	
			1	2	19.89	19.79	< 30.00	
			1	5	19.69	19.59	< 30.00	
			6	0	19.09	18.99	< 30.00	
1775.0		7	1	0	19.98	19.88	< 30.00	
			1	2	19.97	19.87	< 30.00	
			1	5	19.76	19.66	< 30.00	
			6	0	19.16	19.06	< 30.00	
Note: The EIRP (dBm) = Output Power (dBm) + Antenna Gain (dBi)								

Frequency (MHz)	Channel Bandwidth (MHz)	Index	RB Size	RB Offset	Output Power (dBm)	EIRP (dBm)	Limit (dBm)
QPSK							
1717.5	15	0	1	0	19.85	19.75	< 30.00
			1	2	19.85	19.75	< 30.00
			1	5	19.65	19.55	< 30.00
			6	0	19.76	19.66	< 30.00
1745.0		5	1	0	19.86	19.76	< 30.00
			1	2	19.88	19.78	< 30.00
			1	5	19.73	19.63	< 30.00
			6	0	19.95	19.85	< 30.00
1772.5		11	1	0	20.36	20.26	< 30.00
			1	2	19.98	19.88	< 30.00
			1	5	19.92	19.82	< 30.00
			6	0	20.29	20.19	< 30.00
1720.0	20	0	1	0	19.84	19.74	< 30.00
			1	2	19.85	19.75	< 30.00
			1	5	19.62	19.52	< 30.00
			6	0	19.75	19.65	< 30.00
1745.0		7	1	0	19.93	19.83	< 30.00
			1	2	19.85	19.75	< 30.00
			1	5	19.74	19.64	< 30.00
			6	0	19.93	19.83	< 30.00
1770.0		15	1	0	20.08	19.98	< 30.00
			1	2	19.98	19.88	< 30.00
			1	5	19.85	19.75	< 30.00
			6	0	20.39	20.29	< 30.00
Note: The EIRP (dBm) = Output Power (dBm) + Antenna Gain (dBi)							

Frequency (MHz)	Channel Bandwidth (MHz)	Index	RB Size	RB Offset	Output Power (dBm)	EIRP (dBm)	Limit (dBm)	
16QAM								
1710.7	1.4	0	1	0	19.23	19.13	< 30.00	
			1	2	19.11	19.01	< 30.00	
			1	5	19.05	18.95	< 30.00	
			5	0	18.14	18.04	< 30.00	
1745.0		0	1	0	19.32	19.22	< 30.00	
			1	2	19.23	19.13	< 30.00	
			1	5	18.81	18.71	< 30.00	
			5	0	18.23	18.13	< 30.00	
1779.3		0	1	0	19.19	19.09	< 30.00	
			1	2	19.03	18.93	< 30.00	
			1	5	18.91	18.81	< 30.00	
			5	1	18.11	18.01	< 30.00	
1711.5	3	0	1	0	19.34	19.24	< 30.00	
			1	2	19.15	19.05	< 30.00	
			1	5	19.04	18.94	< 30.00	
			5	0	18.07	17.97	< 30.00	
1745.0		0	1	0	19.46	19.36	< 30.00	
			1	2	19.28	19.18	< 30.00	
			1	5	19.07	18.97	< 30.00	
			5	0	18.37	18.27	< 30.00	
1778.5		1	1	0	19.18	19.08	< 30.00	
			1	2	19.00	18.90	< 30.00	
			1	5	18.97	18.87	< 30.00	
			5	1	18.04	17.94	< 30.00	
Note: The EIRP (dBm) = Output Power (dBm) + Antenna Gain (dBi)								

Frequency (MHz)	Channel Bandwidth (MHz)	Index	RB Size	RB Offset	Output Power (dBm)	EIRP (dBm)	Limit (dBm)	
16QAM								
1712.5	5	0	1	0	19.56	19.46	< 30.00	
			1	2	19.42	19.32	< 30.00	
			1	5	19.34	19.24	< 30.00	
			5	0	18.67	18.57	< 30.00	
1745.0		1	1	0	19.73	19.63	< 30.00	
			1	2	19.53	19.43	< 30.00	
			1	5	19.41	19.31	< 30.00	
			5	0	18.81	18.71	< 30.00	
1777.5		3	1	0	19.95	19.85	< 30.00	
			1	2	19.97	19.87	< 30.00	
			1	5	20.04	19.94	< 30.00	
			5	1	19.27	19.17	< 30.00	
1715.0	10	0	1	0	19.58	19.48	< 30.00	
			1	2	19.40	19.30	< 30.00	
			1	5	19.39	19.29	< 30.00	
			5	0	19.87	19.77	< 30.00	
1745.0		3	1	0	19.81	19.71	< 30.00	
			1	2	19.56	19.46	< 30.00	
			1	5	19.55	19.45	< 30.00	
			5	0	19.86	19.76	< 30.00	
1775.0		7	1	0	20.48	20.38	< 30.00	
			1	2	20.41	20.31	< 30.00	
			1	5	20.24	20.14	< 30.00	
			5	1	20.32	20.22	< 30.00	
Note: The EIRP (dBm) = Output Power (dBm) + Antenna Gain (dBi)								

Frequency (MHz)	Channel Bandwidth (MHz)	Index	RB Size	RB Offset	Output Power (dBm)	EIRP (dBm)	Limit (dBm)
16QAM							
1717.5	15	0	1	0	19.54	19.44	< 30.00
			1	2	19.44	19.34	< 30.00
			1	5	19.35	19.25	< 30.00
			5	0	19.82	19.72	< 30.00
1745.0		5	1	0	19.78	19.68	< 30.00
			1	2	19.57	19.47	< 30.00
			1	5	19.74	19.64	< 30.00
			5	0	19.85	19.75	< 30.00
1772.5		11	1	0	19.94	19.84	< 30.00
			1	2	19.97	19.87	< 30.00
			1	5	19.91	19.81	< 30.00
			5	1	20.15	20.05	< 30.00
1720.0	20	0	1	0	19.51	19.41	< 30.00
			1	2	19.43	19.33	< 30.00
			1	5	19.32	19.22	< 30.00
			5	0	19.81	19.71	< 30.00
1745.0		7	1	0	19.92	19.82	< 30.00
			1	2	19.64	19.54	< 30.00
			1	5	19.63	19.53	< 30.00
			5	0	19.83	19.73	< 30.00
1770.0		15	1	0	20.40	20.30	< 30.00
			1	2	20.07	19.97	< 30.00
			1	5	20.04	19.94	< 30.00
			5	1	20.38	20.28	< 30.00
Note: The EIRP (dBm) = Output Power (dBm) + Antenna Gain (dBi)							

Test Site	WZ-SR6	Test Engineer	Cloud Guo
Test Date	2022/10/19	Test Band	Cat M Band 5/26

Frequency (MHz)	Channel Bandwidth (MHz)	Index	RB Size	RB Offset	Output Power (dBm)	ERP (dBm)	Limit (dBm)
QPSK							
824.7	1.4	0	1	0	21.41	19.70	< 38.45
			1	2	21.38	19.67	< 38.45
			1	5	21.23	19.52	< 38.45
			6	0	19.21	17.50	< 38.45
836.5		0	1	0	21.42	19.71	< 38.45
			1	2	21.37	19.66	< 38.45
			1	5	21.13	19.42	< 38.45
			6	0	19.20	17.49	< 38.45
848.3		0	1	0	21.47	19.76	< 38.45
			1	2	21.42	19.71	< 38.45
			1	5	21.32	19.61	< 38.45
			6	0	19.18	17.47	< 38.45
825.5	3	0	1	0	21.29	19.58	< 38.45
			1	2	21.35	19.64	< 38.45
			1	5	21.14	19.43	< 38.45
			6	0	19.17	17.46	< 38.45
836.5		0	1	0	21.45	19.74	< 38.45
			1	2	21.35	19.64	< 38.45
			1	5	21.12	19.41	< 38.45
			6	0	19.16	17.45	< 38.45
847.5		1	1	0	21.33	19.62	< 38.45
			1	2	21.30	19.59	< 38.45
			1	5	21.07	19.36	< 38.45
			6	0	19.19	17.48	< 38.45
Note: The ERP (dBm) = Output Power (dBm) + Antenna Gain (dBi) - 2.15							

Note: The ERP (dBm) = Output Power (dBm) + Antenna Gain (dBi) - 2.15

Frequency (MHz)	Channel Bandwidth (MHz)	Index	RB Size	RB Offset	Output Power (dBm)	ERP (dBm)	Limit (dBm)	
QPSK								
826.5	5	0	1	0	21.31	19.60	< 38.45	
			1	2	21.30	19.59	< 38.45	
			1	5	21.14	19.43	< 38.45	
			6	0	20.37	18.66	< 38.45	
836.5		1	1	0	21.36	19.65	< 38.45	
			1	2	21.34	19.63	< 38.45	
			1	5	21.10	19.39	< 38.45	
			6	0	20.47	18.76	< 38.45	
846.5		3	1	0	21.52	19.81	< 38.45	
			1	2	21.39	19.68	< 38.45	
			1	5	21.15	19.44	< 38.45	
			6	0	20.33	18.62	< 38.45	
829.0	10	0	1	0	21.29	19.58	< 38.45	
			1	2	21.28	19.57	< 38.45	
			1	5	21.10	19.39	< 38.45	
			6	0	20.37	18.66	< 38.45	
836.5		3	1	0	21.47	19.76	< 38.45	
			1	2	21.29	19.58	< 38.45	
			1	5	21.10	19.39	< 38.45	
			6	0	20.39	18.68	< 38.45	
844.0		7	1	0	21.44	19.73	< 38.45	
			1	2	21.20	19.49	< 38.45	
			1	5	21.01	19.30	< 38.45	
			6	0	20.28	18.57	< 38.45	
Note: The ERP (dBm) = Output Power (dBm) + Antenna Gain (dBi) - 2.15								

Frequency (MHz)	Channel Bandwidth (MHz)	Index	RB Size	RB Offset	Output Power (dBm)	ERP (dBm)	Limit (dBm)
QPSK							
831.5	15	0	1	0	21.32	19.61	< 38.45
			1	2	21.29	19.58	< 38.45
			1	5	21.08	19.37	< 38.45
			6	0	21.32	19.61	< 38.45
836.5		5	1	0	21.28	19.57	< 38.45
			1	2	21.26	19.55	< 38.45
			1	5	21.11	19.40	< 38.45
			6	0	21.39	19.68	< 38.45
841.5		11	1	0	21.38	19.67	< 38.45
			1	2	21.37	19.66	< 38.45
			1	5	21.19	19.48	< 38.45
			6	0	21.63	19.92	< 38.45
Note: The ERP (dBm) = Output Power (dBm) + Antenna Gain (dBi) - 2.15							

Frequency (MHz)	Channel Bandwidth (MHz)	Index	RB Size	RB Offset	Output Power (dBm)	ERP (dBm)	Limit (dBm)	
16QAM								
824.7	1.4	0	1	0	20.06	18.35	< 38.45	
			1	2	19.97	18.26	< 38.45	
			1	5	19.74	18.03	< 38.45	
			5	0	18.96	17.25	< 38.45	
836.5		0	1	0	20.20	18.49	< 38.45	
			1	2	20.12	18.41	< 38.45	
			1	5	19.89	18.18	< 38.45	
			5	0	19.01	17.30	< 38.45	
848.3		0	1	0	20.33	18.62	< 38.45	
			1	2	20.20	18.49	< 38.45	
			1	5	19.99	18.28	< 38.45	
			5	1	18.93	17.22	< 38.45	
825.5	3	0	1	0	20.56	18.85	< 38.45	
			1	2	20.71	19.00	< 38.45	
			1	5	20.62	18.91	< 38.45	
			5	0	19.42	17.71	< 38.45	
836.5		0	1	0	20.13	18.42	< 38.45	
			1	2	20.07	18.36	< 38.45	
			1	5	20.22	18.51	< 38.45	
			5	0	19.12	17.41	< 38.45	
847.5		1	1	0	20.34	18.63	< 38.45	
			1	2	20.22	18.51	< 38.45	
			1	5	20.02	18.31	< 38.45	
			5	1	19.01	17.30	< 38.45	
Note: The ERP (dBm) = Output Power (dBm) + Antenna Gain (dBi) - 2.15								

Frequency (MHz)	Channel Bandwidth (MHz)	Index	RB Size	RB Offset	Output Power (dBm)	ERP (dBm)	Limit (dBm)
16QAM							
826.5	5	0	1	0	21.10	19.39	< 38.45
			1	2	20.94	19.23	< 38.45
			1	5	20.76	19.05	< 38.45
			5	0	21.39	19.68	< 38.45
836.5		1	1	0	20.93	19.22	< 38.45
			1	2	21.02	19.31	< 38.45
			1	5	20.82	19.11	< 38.45
			5	0	21.24	19.53	< 38.45
846.5		3	1	0	21.03	19.32	< 38.45
			1	2	21.01	19.30	< 38.45
			1	5	20.82	19.11	< 38.45
			5	1	20.81	19.10	< 38.45
829.0	10	0	1	0	21.05	19.34	< 38.45
			1	2	20.92	19.21	< 38.45
			1	5	20.74	19.03	< 38.45
			5	0	21.38	19.67	< 38.45
836.5		3	1	0	20.95	19.24	< 38.45
			1	2	20.93	19.22	< 38.45
			1	5	20.82	19.11	< 38.45
			5	0	21.28	19.57	< 38.45
844.0		7	1	0	21.47	19.76	< 38.45
			1	2	21.03	19.32	< 38.45
			1	5	20.83	19.12	< 38.45
			5	1	21.62	19.91	< 38.45
Note: The ERP (dBm) = Output Power (dBm) + Antenna Gain (dBi) - 2.15							

Frequency (MHz)	Channel Bandwidth (MHz)	Index	RB Size	RB Offset	Output Power (dBm)	ERP (dBm)	Limit (dBm)
16QAM							
831.5	15	0	1	0	20.92	19.21	< 38.45
			1	2	21.08	19.37	< 38.45
			1	5	20.88	19.17	< 38.45
			5	0	21.30	19.59	< 38.45
836.5		5	1	0	21.18	19.47	< 38.45
			1	2	21.15	19.44	< 38.45
			1	5	20.97	19.26	< 38.45
			5	0	21.35	19.64	< 38.45
841.5		11	1	0	21.37	19.66	< 38.45
			1	2	21.35	19.64	< 38.45
			1	5	21.18	19.47	< 38.45
			5	1	21.56	19.85	< 38.45
Note: The ERP (dBm) = Output Power (dBm) + Antenna Gain (dBi) - 2.15							

Test Site	WZ-SR6	Test Engineer	Cloud Guo
Test Date	2022/05/25~2022/05/30	Test Band	Cat M Band 12

Frequency (MHz)	Channel Bandwidth (MHz)	Index	RB Size	RB Offset	Output Power (dBm)	ERP (dBm)	Limit (dBm)
QPSK							
699.7	1.4	0	1	0	20.11	19.68	< 44.77
			1	2	19.87	19.44	< 44.77
			1	5	20.17	19.74	< 44.77
			6	0	18.15	17.72	< 44.77
707.5		0	1	0	20.02	19.59	< 44.77
			1	2	19.79	19.36	< 44.77
			1	5	19.84	19.41	< 44.77
			6	0	18.17	17.74	< 44.77
715.3		0	1	0	19.91	19.48	< 44.77
			1	2	19.59	19.16	< 44.77
			1	5	19.90	19.47	< 44.77
			6	0	18.02	17.59	< 44.77
700.5	0	1	0	19.89	19.46	< 44.77	
		1	2	20.00	19.57	< 44.77	
		1	5	20.11	19.68	< 44.77	
		6	0	18.09	17.66	< 44.77	
707.5	0	1	0	19.89	19.46	< 44.77	
		1	2	19.71	19.28	< 44.77	
		1	5	19.85	19.42	< 44.77	
		6	0	18.08	17.65	< 44.77	
714.5	1	1	0	19.81	19.38	< 44.77	
		1	2	19.63	19.20	< 44.77	
		1	5	19.73	19.30	< 44.77	
		6	0	18.18	17.75	< 44.77	
Note: The ERP (dBm) = Output Power (dBm) + Antenna Gain (dBi) - 2.15							

Frequency (MHz)	Channel Bandwidth (MHz)	Index	RB Size	RB Offset	Output Power (dBm)	ERP (dBm)	Limit (dBm)
QPSK							
701.5	5	0	1	0	19.55	19.12	< 44.77
			1	2	19.72	19.29	< 44.77
			1	5	19.87	19.44	< 44.77
			6	0	18.95	18.52	< 44.77
707.5		1	1	0	20.08	19.65	< 44.77
			1	2	19.92	19.49	< 44.77
			1	5	19.76	19.33	< 44.77
			6	0	19.24	18.81	< 44.77
713.5		3	1	0	19.91	19.48	< 44.77
			1	2	19.82	19.39	< 44.77
			1	5	19.75	19.32	< 44.77
			6	0	19.05	18.62	< 44.77
704.0	10	0	1	0	19.88	19.45	< 44.77
			1	2	19.91	19.48	< 44.77
			1	5	19.94	19.51	< 44.77
			6	0	19.37	18.94	< 44.77
707.5		3	1	0	20.00	19.57	< 44.77
			1	2	19.95	19.52	< 44.77
			1	5	19.76	19.33	< 44.77
			6	0	19.29	18.86	< 44.77
711.0		7	1	0	19.92	19.49	< 44.77
			1	2	19.88	19.45	< 44.77
			1	5	19.79	19.36	< 44.77
			6	0	19.07	18.64	< 44.77
Note: The ERP (dBm) = Output Power (dBm) + Antenna Gain (dBi) - 2.15							

Frequency (MHz)	Channel Bandwidth (MHz)	Index	RB Size	RB Offset	Output Power (dBm)	ERP (dBm)	Limit (dBm)
16QAM							
699.7	1.4	0	1	0	19.07	18.64	< 44.77
			1	2	18.98	18.55	< 44.77
			1	5	18.90	18.47	< 44.77
			5	0	18.01	17.58	< 44.77
707.5		0	1	0	19.12	18.69	< 44.77
			1	2	19.02	18.59	< 44.77
			1	5	18.98	18.55	< 44.77
			5	0	18.11	17.68	< 44.77
715.3		0	1	0	18.92	18.49	< 44.77
			1	2	18.80	18.37	< 44.77
			1	5	18.94	18.51	< 44.77
			5	1	17.98	17.55	< 44.77
700.5	0	1	0	19.02	18.59	< 44.77	
		1	2	18.99	18.56	< 44.77	
		1	5	18.90	18.47	< 44.77	
		5	0	18.06	17.63	< 44.77	
707.5	0	1	0	19.07	18.64	< 44.77	
		1	2	18.95	18.52	< 44.77	
		1	5	18.81	18.38	< 44.77	
		5	0	18.01	17.58	< 44.77	
714.5	1	1	0	18.97	18.54	< 44.77	
		1	2	18.67	18.24	< 44.77	
		1	5	18.84	18.41	< 44.77	
		5	1	17.86	17.43	< 44.77	
Note: The ERP (dBm) = Output Power (dBm) + Antenna Gain (dBi) - 2.15							

Frequency (MHz)	Channel Bandwidth (MHz)	Index	RB Size	RB Offset	Output Power (dBm)	ERP (dBm)	Limit (dBm)
16QAM							
701.5	5	0	1	0	19.51	19.08	< 44.77
			1	2	19.51	19.08	< 44.77
			1	5	19.32	18.89	< 44.77
			5	0	19.27	18.84	< 44.77
707.5		1	1	0	19.95	19.52	< 44.77
			1	2	19.88	19.45	< 44.77
			1	5	19.81	19.38	< 44.77
			5	0	19.21	18.78	< 44.77
713.5		3	1	0	19.68	19.25	< 44.77
			1	2	19.58	19.15	< 44.77
			1	5	19.59	19.16	< 44.77
			5	1	18.99	18.56	< 44.77
704.0	10	0	1	0	19.95	19.52	< 44.77
			1	2	19.86	19.43	< 44.77
			1	5	19.75	19.32	< 44.77
			5	0	20.06	19.63	< 44.77
707.5		3	1	0	21.07	20.64	< 44.77
			1	2	21.05	20.62	< 44.77
			1	5	20.85	20.42	< 44.77
			5	0	20.06	19.63	< 44.77
711.0		7	1	0	21.02	20.59	< 44.77
			1	2	20.92	20.49	< 44.77
			1	5	20.78	20.35	< 44.77
			5	1	19.91	19.48	< 44.77
Note: The ERP (dBm) = Output Power (dBm) + Antenna Gain (dBi) - 2.15							

Test Site	WZ-SR6	Test Engineer	Cloud Guo
Test Date	2022/05/25~2022/05/30	Test Band	Cat M Band 13

Frequency (MHz)	Channel Bandwidth (MHz)	Index	RB Size	RB Offset	Output Power (dBm)	ERP (dBm)	Limit (dBm)
QPSK							
779.5	5	0	1	0	20.00	19.44	< 44.77
			1	2	19.55	18.99	< 44.77
			1	5	19.78	19.22	< 44.77
			6	0	18.96	18.40	< 44.77
782.0		1	1	0	19.95	19.39	< 44.77
			1	2	19.79	19.23	< 44.77
			1	5	19.71	19.15	< 44.77
			6	0	18.99	18.43	< 44.77
784.5		3	1	0	19.56	19.00	< 44.77
			1	2	19.53	18.97	< 44.77
			1	5	19.40	18.84	< 44.77
			6	0	18.77	18.21	< 44.77
782.0	10	0	1	0	19.76	19.20	< 44.77
			1	2	19.82	19.26	< 44.77
			1	5	19.74	19.18	< 44.77
			6	0	19.00	18.44	< 44.77
782.0		3	1	0	19.58	19.02	< 44.77
			1	2	19.93	19.37	< 44.77
			1	5	19.74	19.18	< 44.77
			6	0	18.99	18.43	< 44.77
782.0		7	1	0	19.48	18.92	< 44.77
			1	2	19.45	18.89	< 44.77
			1	5	19.41	18.85	< 44.77
			6	0	18.76	18.20	< 44.77
Note: The ERP (dBm) = Output Power (dBm) + Antenna Gain (dBi) - 2.15							

Note: The ERP (dBm) = Output Power (dBm) + Antenna Gain (dBi) - 2.15

Frequency (MHz)	Channel Bandwidth (MHz)	Index	RB Size	RB Offset	Output Power (dBm)	ERP (dBm)	Limit (dBm)	
16QAM								
779.5	5	0	1	0	20.02	19.46	< 44.77	
			1	2	19.73	19.17	< 44.77	
			1	5	19.65	19.09	< 44.77	
			5	0	19.11	18.55	< 44.77	
782.0		1	1	0	20.46	19.90	< 44.77	
			1	2	19.94	19.38	< 44.77	
			1	5	19.74	19.18	< 44.77	
			5	0	18.77	18.21	< 44.77	
784.5		3	1	0	19.58	19.02	< 44.77	
			1	2	19.50	18.94	< 44.77	
			1	5	19.41	18.85	< 44.77	
			5	1	18.77	18.21	< 44.77	
782.0	10	0	1	0	20.05	19.49	< 44.77	
			1	2	19.94	19.38	< 44.77	
			1	5	19.69	19.13	< 44.77	
			5	0	19.86	19.30	< 44.77	
782.0		3	1	0	20.52	19.96	< 44.77	
			1	2	19.93	19.37	< 44.77	
			1	5	19.39	18.83	< 44.77	
			5	0	19.90	19.34	< 44.77	
782.0		7	1	0	19.58	19.02	< 44.77	
			1	2	19.48	18.92	< 44.77	
			1	5	19.36	18.80	< 44.77	
			5	1	19.74	19.18	< 44.77	
Note: The ERP (dBm) = Output Power (dBm) + Antenna Gain (dBi) - 2.15								

A.4 Band Edge Test Result

Test Site	WZ-SR6	Test Engineer	Cloud Guo
Test Date	2022/05/26	Test Band	Cat M Band 2/25

1.4MHz Channel Bandwidth - 1RB

Lower Band Edge_Index 0



Upper Band Edge_Index 0



3MHz Channel Bandwidth - 1RB

Lower Band Edge_Index 0

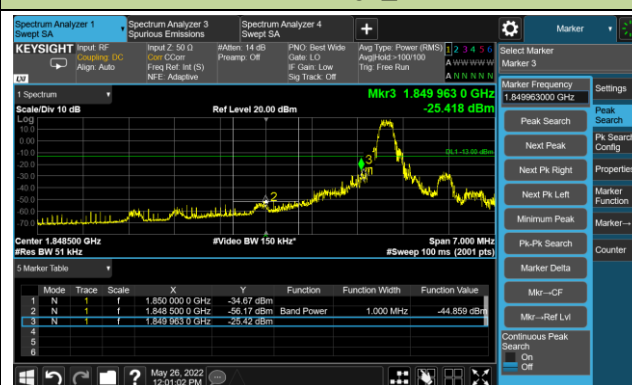


Upper Band Edge_Index 1



5MHz Channel Bandwidth - 1RB

Lower Band Edge_Index 0



Upper Band Edge_Index 3



10MHz Channel Bandwidth - 1RB

Lower Band Edge_Index 0



Upper Band Edge_Index 7



15MHz Channel Bandwidth - 1RB

Lower Band Edge_Index 0



Upper Band Edge_Index 11



20MHz Channel Bandwidth - 1RB

Lower Band Edge_Index 0

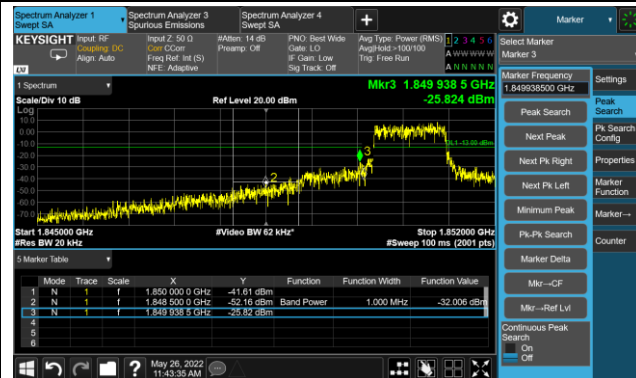


Upper Band Edge_Index 15

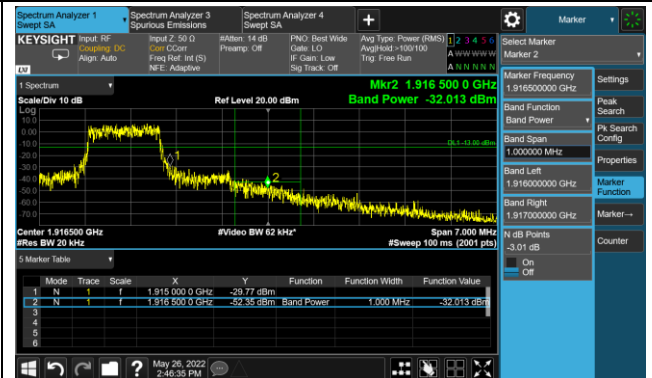


1.4MHz Channel Bandwidth - Full RB

Lower Band Edge_Index 0

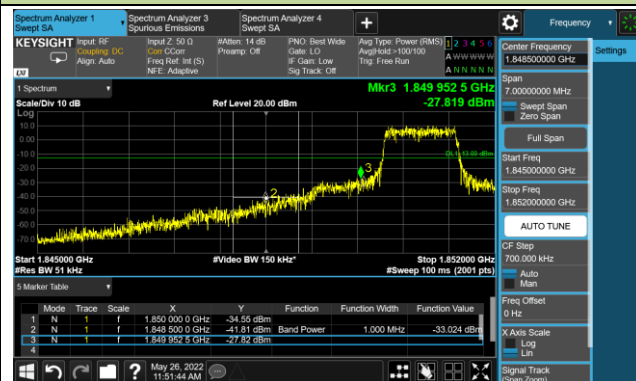


Upper Band Edge_Index 0



3MHz Channel Bandwidth - Full RB

Lower Band Edge_Index 0

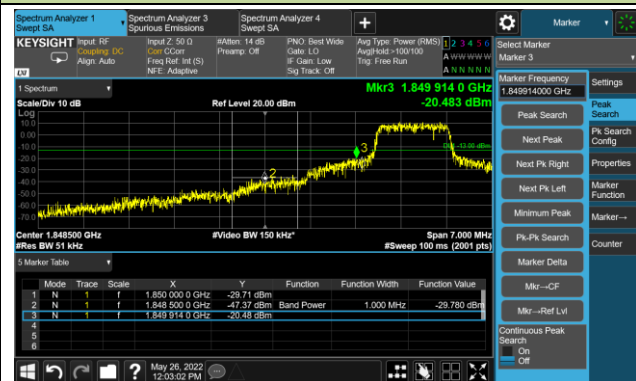


Upper Band Edge_Index 1



5MHz Channel Bandwidth - Full RB

Lower Band Edge_Index 0



Upper Band Edge_Index 3

