



RF MEASUREMENT REPORT

FCC ID: 2AGCDJACSTT1001V3

Application: JACS Solutions, Inc.

Product: TT1001 10.1 inch Tablet

Model No.: TT1001V3

Brand Name: JACS

FCC Rule Part(s): Part 96

Test Procedure(s): ANSI C63.26: 2015

Result: Complies

Test Date: 2022-06-20 ~ 2022-07-08

Reviewed By:

Sunny Sun

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
2205RSU053-U1	Rev. 01	Initial Report	2022-07-21	Valid

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1.1. Applicant

809 Pinnacle Drive, Suite R, Linthicum Heights, MD 21090

JACS Solutions, Inc.

809 Pinnacle Drive, Suite R, Linthicum Heights, MD 21090

☒	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	TT1001 10.1 inch Tablet
Model No.	TT1001V3
IMEI	352327110977601
Supply Voltage	Model No.: BCT050200-078EU Brand Name: JACS Input: 100V - 240V~ 50/60Hz 0.3A Output: 5VDC 2000mA 10W
Internal Battery	Model No.: 499098PV Rated Capacity: 6500mAh/24.7Wh Rated Voltage: 3.8VDC Limited Charging Voltage: 4.35VDC Manufacturer: GUANGDONG YUNGBANG NEW ENERGY CO., LTD
E-UTRA Band	Band 48
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 under Test

TDD Tx Frequency Range	LTE Band 48: 3550 ~ 3700 MHz
TDD Rx Frequency Range	LTE Band 48: 3550 ~ 3700 MHz
Type of Modulation	QPSK, 16QAM
Antenna Type	PIFA
Antenna Gain	1.5 dBi

1.6. Test Methodology

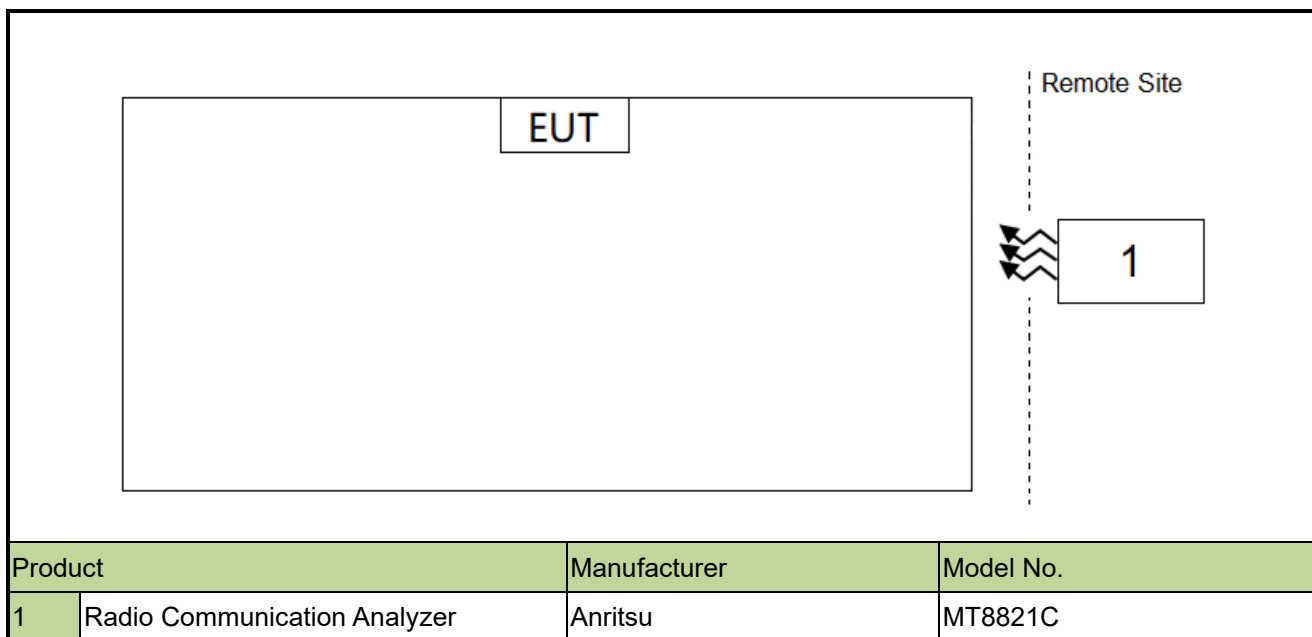
According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- ANSI C63.26:2015
- FCC 47 CFR Part 96
- FCC KDB 971168 D01 v03r01: Power Meas License Digital Systems
- 940660 D01 Part 96 CBRS v03
- FCC KDB 412172 D01 v01r01: Determining ERP and EIRP
- 940660 D01 Part 96 CBRS v02
- WINNF-TS-0122 V1.0.2: Test and Certification for Citizens Broadband Radio Service (CBRS);

Conformance and Performance Test Technical Specification; CBSD/DP as Unit Under Test (UUT)

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 Name	Manufacturer	Model No.	Asset No.	Cali. Interval	Cal. Due Date	Test Site
TRILOG Antenna	Schwarzbeck	VULB 9162	MRTSUE06022	1 year	2023-05-20	WZ-AC2
Loop Antenna	Schwarzbeck	FMZB 1519	MRTSUE06025	1 year	2022-10-28	WZ-AC2
EMI Test Receiver	Agilent	N9038A	MRTSUE06125	1 year	2023-06-04	WZ-AC2
Thermohygrometer	Mingle	ETH529	MRTSUE06170	1 year	2022-12-01	WZ-AC2
Horn Antenna	Schwarzbeck	BBHA 9120D	MRTSUE06171	1 year	2022-10-21	WZ-AC2
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
Horn Antenna	ETS	3117	MRTSUE06257	1 year	2022-09-25	WZ-AC2
Horn Antenna	Schwarzbeck	BBHA 9170	MRTSUE06597	1 year	2022-12-01	WZ-AC2
Preamplifier	EMCI	EMC184045SE	MRTSUE06640	1 year	2023-01-13	WZ-AC2
Preamplifier	EMCI	EMC051845SE	MRTSUE06987	1 year	2022-09-09	WZ-AC2
Thermohygrometer	testo	Testo 608-H1	MRTSUE11038	1 year	2022-11-11	WZ-AC2
Notch Filter	MVE	MFN-3550.3700.S3	MRTSUE06512	1 year	2023-06-02	WZ
Temperature Chamber	BAOYT	BYH-150CL	MRTSUE06051	1 year	2022-10-10	WZ-TR3
Communication Tester	R&S	CMW500	MRTSUE06108	1 year	2023-04-06	WZ-SR6
Vibration Test System	DongLing	ES-1-150	MRTSUE06206	1 year	2022-08-08	WZ-TR3
Thermohygrometer	testo	608-H1	MRTSUE06362	1 year	2023-02-15	WZ-SR6
Thermohygrometer	testo	608-H1	MRTSUE06401	1 year	2023-06-06	WZ-TR3
Shielding Room	HUAMING	WZ-SR6	MRTSUE06443	N/A	N/A	WZ-SR6
Signal Analyzer	Keysight	N9020B	MRTSUE06583	1 year	2022-10-10	WZ-SR6
Radio Communication Analyzer	Anritsu	MT8821C	MRTSUE06960	1 year	2022-07-01	WZ-SR6
Signal Analyzer	Keysight	N9020B	MRTSUE07037	1 year	2023-03-29	WZ-SR6
Attenuator	MVE	MVE2213	MRTSUE11092	1 year	2023-06-09	WZ
Attenuator	MVE	MVE2213	MRTSUE11093	1 year	2023-06-09	WZ
Directional Coupler	narda	4226-20	MRTSUE06065	1 year	2023-03-17	WZ
Directional Coupler	Agilent	778D	MRTSUE06083	1 year	2023-03-17	WZ

Software	Version	Manufacturer	Function	Date	Location
EMI V3	V 3.0.0	QuieTek	EMI Test Software	2010-01	EMC-WZ
Controller_MF 7802	1.02	MF	RE Antenna & turntable	2015-07-05	EMC-WZ-AC2

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% ($U=2U_c(y)$): 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% ($U=2U_c(y)$): 0.78dB
Output Power
Measuring Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$): 1.13dB
Occupied Bandwidth
Measuring Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$): 0.28%
Frequency Stability
Measuring Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$): 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	Section5.2
2.1055	Frequency Stability	Refer to section 5.3		Pass	Section5.3
96.41(b)	Equivalent Isotropic Radiated Power	Refer to section 5.4		Pass	Section5.4
2.1051 96.41(e)	Spurious Emissions. Band Edge Emissions	Refer to section 5.5, 5.6		Pass	Section 5.5, 5.6
2.1053, 96.41(e)	Spurious Emissions	Refer to section 5.7	Radiated	Pass	Section5.7
96.47	End User Device Additional Requirements (CBSD Protocol)	Refer to section 5.8		Pass	Section5.8

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) Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations the worst-case was found.
- 3) All supported modulation types were evaluated. The worst-case emission of modulation was selected. Therefore, the Frequency Stability, Band Edge, Radiated & Conducted Spurious Emission were presented 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.

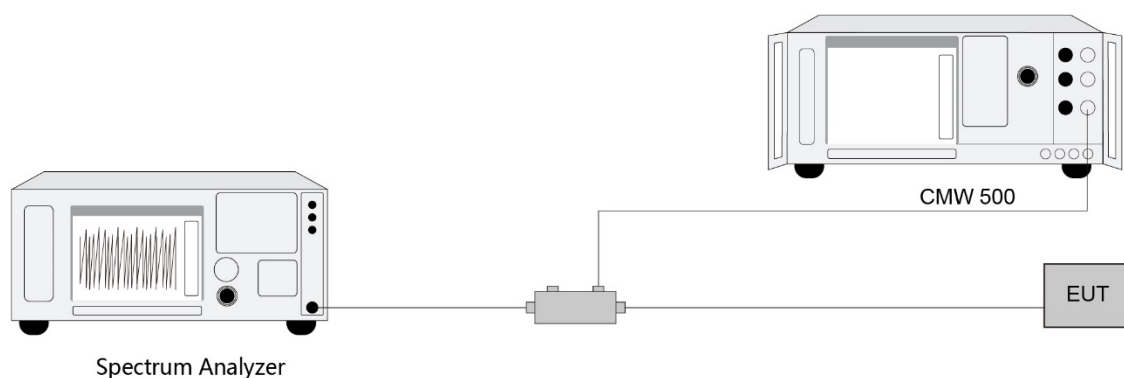
5.2.2. Test Procedure

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:

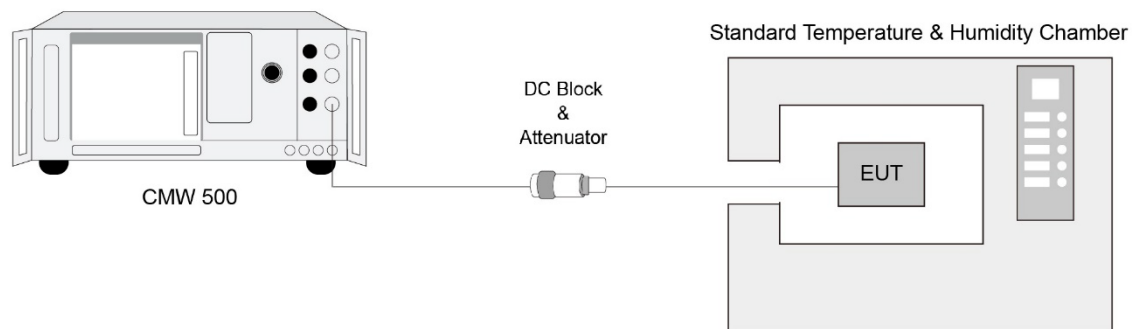
The equipment under test was connected to an external AC or DC power supply and input rated voltage. RF output was connected to a frequency counter or spectrum analyzer via feed through attenuators. The EUT was placed inside the temperature chamber. Set the spectrum analyzer RBW low enough to obtain 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

The maximum effective isotropic radiated power (EIRP) End User Device is 23dBm/10MHz

5.4.2. Test Procedure

ANSI C63.26-2015 - Section 5.2.4.4.2 & 5.2.5.5

5.4.3. Test Setting

When the fundamental condition for average power measurements cannot be realized (i.e., the EUT can not be configured to transmit at full-power on a continuous basis (i.e., duty cycle < 98%) and the instrumentation cannot be configured to measure only during active full-power transmissions), then the following procedure can be used if the EUT duty cycle is constant (i.e., duty cycle variations are less than or equal to $\pm 2\%$).

- a) Set span to $2 \times$ to $3 \times$ the OBW.
- b) Set RBW = 1% to 5% of the OBW.
- c) Set VBW $\geq 3 \times$ RBW.
- d) Set number of measurement points in sweep $\geq 2 \times$ span / RBW.
- e) Sweep time:
 - 1) Set = auto-couple, or
 - 2) Set $\geq [10 \times (\text{number of points in sweep}) \times (\text{transmission symbol period})]$ for single sweep (automation-compatible) measurement.
- f) Detector = power averaging (rms).
- g) Set sweep trigger to "free run."
- h) 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.
- i) User gate triggered such that the analyzer only sweeps when the device is transmitting at full power.
- j) Using the marker function to identify the maximum PSD.

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

$$\text{ERP or EIRP} = P_{\text{Meas}} + G_T \quad (1)$$

where

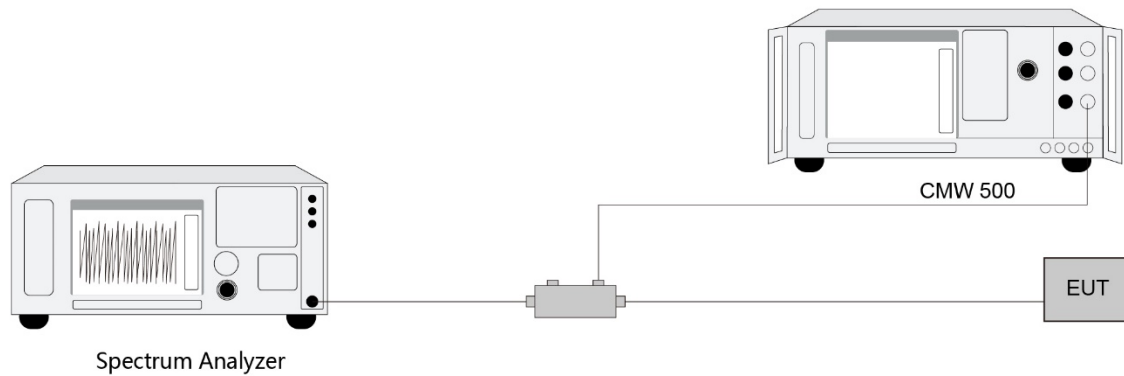
ERP or EIRP effective radiated power or equivalent isotropically radiated power, respectively (expressed in the same units as P_{Meas} , e.g., dBm or dBW)

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)

For devices utilizing multiple antennas, see 6.4 for guidance with respect to determining the effective array transmit antenna gain term to be used in the above equation.

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

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 conducted power of any emission outside the fundamental emission (whether in or outside of the authorized band) shall not exceed -13 dBm/MHz within 0-10 megahertz above the upper SAS-assigned channel edge and within 0-10 megahertz below the lower SAS-assigned channel edge. At all frequencies greater than 10 megahertz above the upper SAS assigned channel edge and less than 10 MHz below the lower SAS assigned channel edge, the conducted power of any emission shall not exceed -25 dBm/MHz. The conducted power of any emissions below 3530 MHz or above 3720 MHz shall not exceed -40 dBm/MHz.

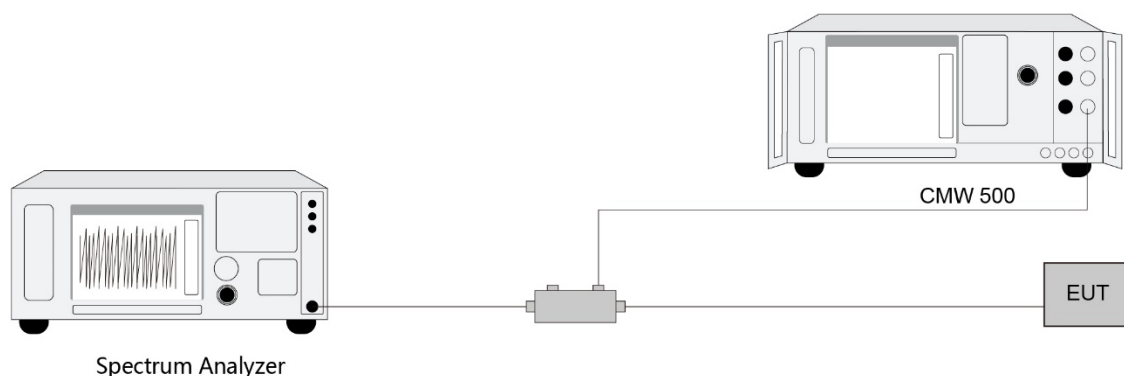
5.5.2. Test Procedure

ANSI C63.26-2015 - Section 5.7

5.5.3. Test Setting

1. Set the analyzer frequency to low, middle, 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.
9. Used power integration when using a measurement bandwidth smaller than the specified bandwidth.

5.5.4. Test Setup



5.5.5. Test Result

Refer to Appendix A.4.

5.6. Conducted Spurious Emissions Measurement

5.6.1. 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.

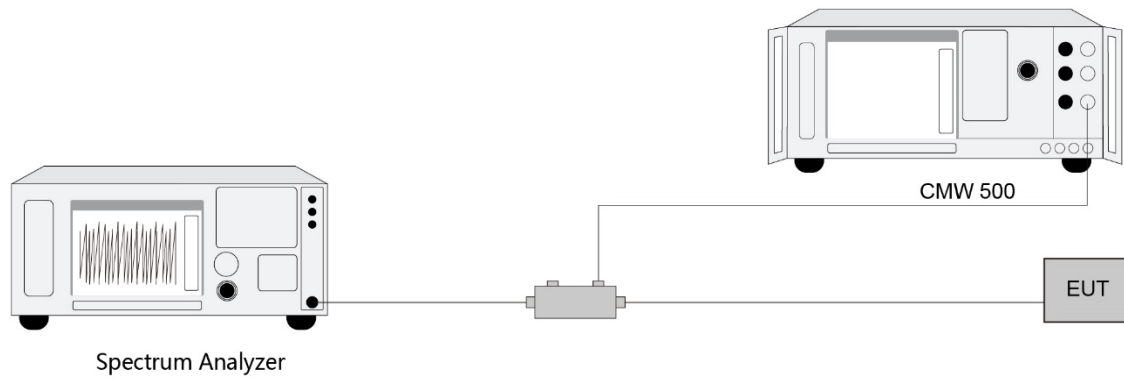
The conducted power of any emissions below 3530MHz or above 3720MHz shall not exceed -40dBm/MHz.

5.6.2. Test Procedure

ANSI C63.26-2015 - Section 5.7

5.6.3. Test Setting

1. Set the analyzer frequency to low, mid, high channel.
2. RBW = 1MHz
3. VBW $\geq$ 3*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.

5.6.4. Test Setup**5.6.5. Test Result**

Refer to Appendix A.5.

5.7. Radiated Spurious Emissions Measurement

5.7.1. Test Limit

Out of band emissions: The power of any emissions below 3530 MHz or above 3720 MHz shall not exceed -40dBm/MHz.

$E \text{ (dB}\mu\text{V/m)} = \text{EIRP (dBm)} - 20 \log D + 104.8$; where D is the measurement distance in meters. The emission limit equal to 55.3dB μ V/m.

5.7.2. Test Procedure

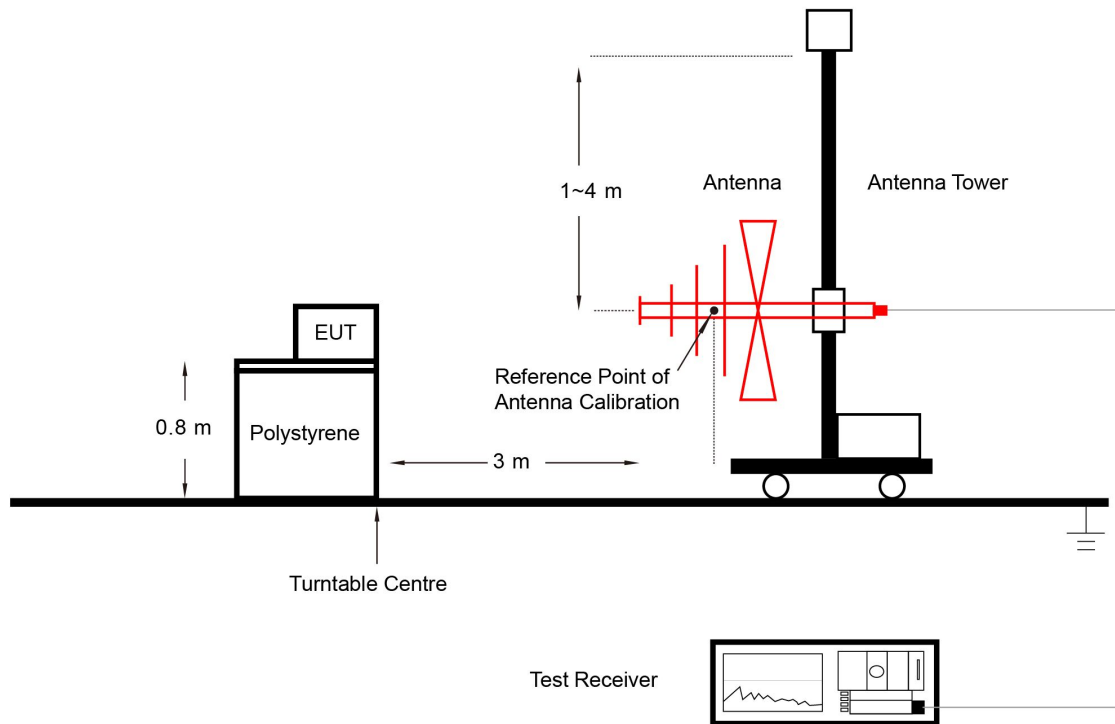
ANSI C63.26-2015 - Section 5.2.7 & 5.5

5.7.3. Test Setting

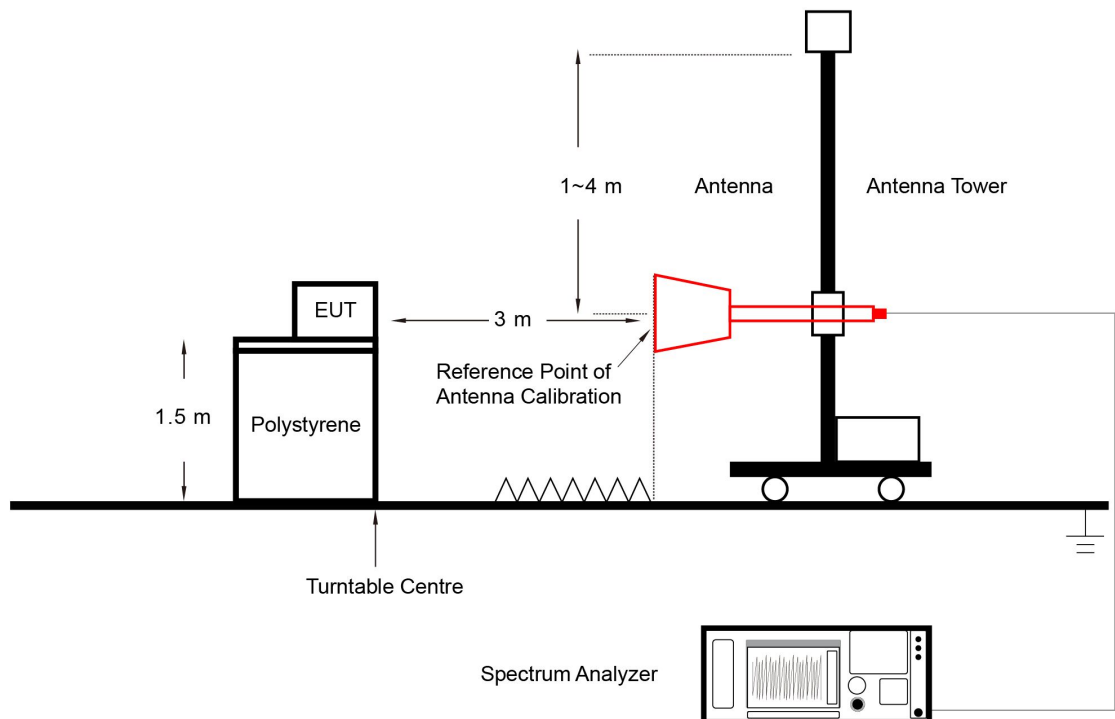
1. RBW = 1MHz
2. VBW $\geq 3 \times$ RBW
3. Sweep time $\geq 10 \times$ (number of points in sweep) $\times$ (transmission symbol period)
4. Detector = Peak
5. Trace mode = max hold
6. The trace was allowed to stabilize

5.7.4. Test Setup

Below 1GHz Test Setup:



Above 1GHz Test Setup:



5.7.5. Test Result

Refer to Appendix A.6.

5.8. End User Device Additional Requirement (CBSD Protocol) Measurement

5.8.1. Test Limit

End User Devices may operate only if they can positively receive and decode an authorization signal transmitted by aCBSD, including the frequencies and power limits for their operation.

An End User Device must discontinue operations, change frequencies, or change its operational power level within 10 seconds of receiving instructions from its associated CBSD

5.8.2. Test Procedure

KDB 940660 D01 v03, WINNF-TS-0122 V1.0.2.

5.8.3. Test Setting

The EUT was connected via an RF cable to a certified CBSD (Sercomm Corp. FCC ID: P27-SCE4255W) and spectrum analyzer. The following procedure is performed by applying WINNF-TS-0122 CBRS CBSD Test Specification.

Step 1:

- a. Setup WINNF.PT.C.HBT.1 with 3570 ~ 3590MHz and power level at 13 dBm/MHz.
- b. Enable Smallcell service from EPC Manage Tool.
- c. Check EUT Tx frequency and power.
- d. Disable Smallcell service from EPC Manage Tool and check EUT stop transmission within 10s.

Step 2:

- a. Setup WINNF.PT.C.HBT.1 with 3670 ~ 3690MHz and power level at 8 dBm/MHz.
- b. Enable Smallcell service from EPC Manage Tool.
- c. Check EUT Tx frequency and power.
- d. Disable smallcell service from EPC Manage Tool and check EUT stop transmission within 10s.

5.8.4. Test Result

Refer to Appendix A.7.

Appendix A - Test Result

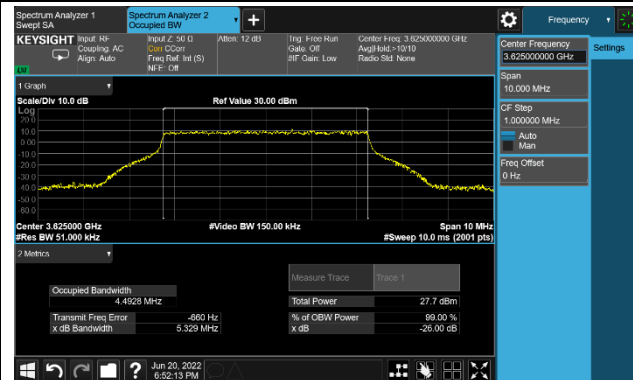
A.1 Occupied Bandwidth Test Result

Test Site	WZ-SR6	Test Engineer	Larry Yan
Test Date	2022-06-20	Test Band	Band 48

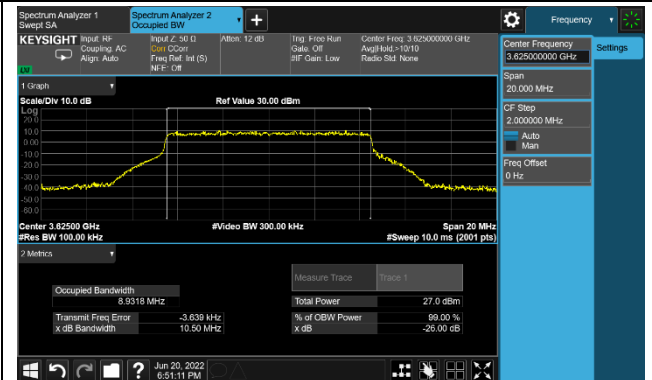
Modulation	Frequency (MHz)	Bandwidth (MHz)	99% Bandwidth (MHz)
QPSK	3625.0	5	4.49
		10	8.93
		15	13.47
		20	17.93
16QAM	3625.0	5	4.48
		10	8.93
		15	13.47
		20	17.87

99% Bandwidth - QPSK

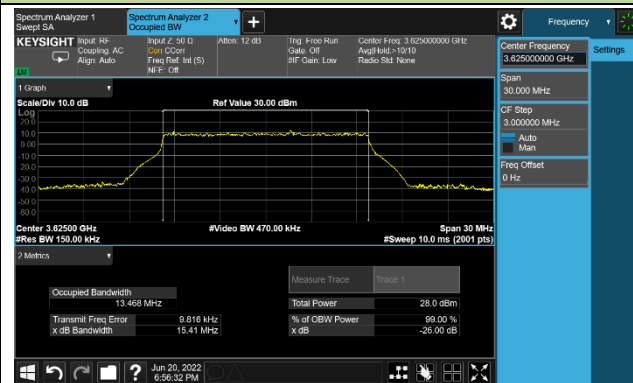
5MHz Channel Bandwidth



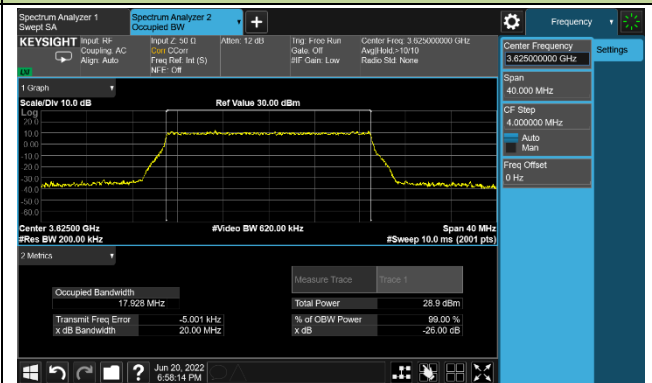
10MHz Channel Bandwidth



15MHz Channel Bandwidth

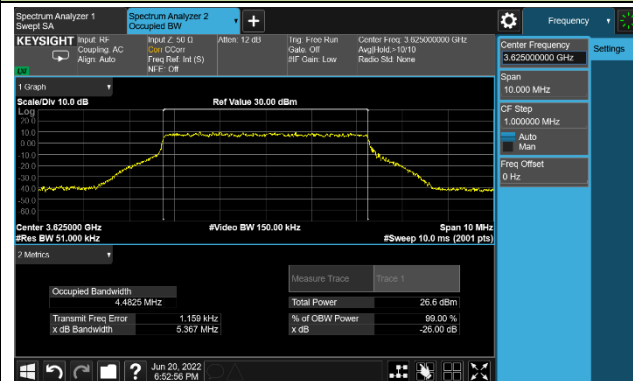


20MHz Channel Bandwidth

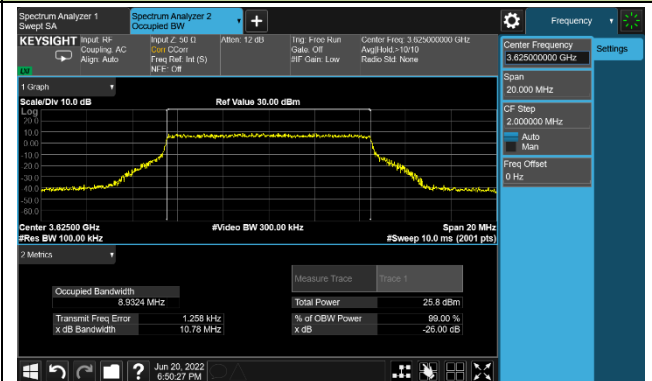


99% Bandwidth -16QAM

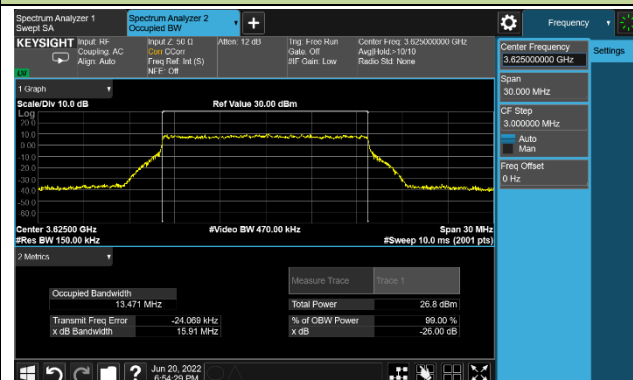
5MHz Channel Bandwidth



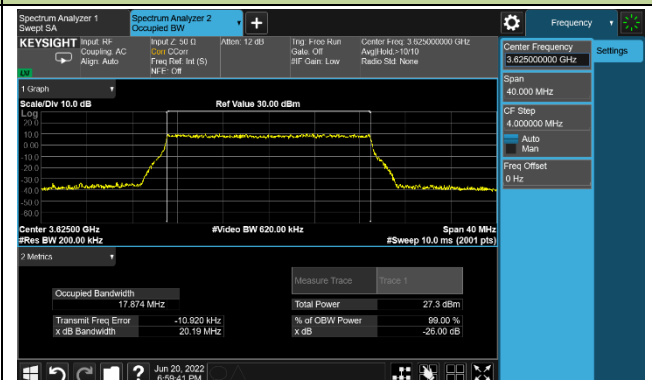
10MHz Channel Bandwidth



15MHz Channel Bandwidth



20MHz Channel Bandwidth



A.2 Frequency Stability Test Result

Test Site	WZ-TR3	Test Engineer	Larry Yan
Test Date	2022-07-08	Test Band	Band 48

Power (Vdc)	Temp. (°C)	Frequency Tolerance (ppm)
3.80V	- 30	0.0029
	- 20	0.0038
	- 10	0.0051
	0	0.0049
	+ 10	0.0023
	+ 20	0.0041
	+ 30	0.0033
	+ 40	0.0029
	+ 50	0.0084
3.60V	+ 20	0.0036
4.35V	+ 20	0.0032

A.3 Equivalent Isotropically Radiated Power Test Result

Test Site	WZ-SR6	Test Engineer	Larry Yan
Test Date	2022-06-20	Test Band	Band 48

Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm/10MHz)	EIRP (dBm/ 10MHz)	Limit (dBm/ 10MHz)
QPSK						
3552.5	5	1	0	20.69	22.19	<23.00
3625.0				20.90	22.40	<23.00
3697.5				19.60	21.10	<23.00
3552.5	5	1	12	20.46	21.96	<23.00
3625.0				20.95	22.45	<23.00
3697.5				21.00	22.50	<23.00
3552.5	5	1	24	20.58	22.08	<23.00
3625.0				20.31	21.81	<23.00
3697.5				19.98	21.48	<23.00
3552.5	5	25	0	20.24	21.74	<23.00
3625.0				19.67	21.17	<23.00
3697.5				18.98	20.48	<23.00
3555.0	10	1	0	20.69	22.19	<23.00
3625.0				19.88	21.38	<23.00
3695.0				19.85	21.35	<23.00
3555.0	10	1	24	21.39	22.89	<23.00
3625.0				21.19	22.69	<23.00
3695.0				21.15	22.65	<23.00
3555.0	10	1	49	21.20	22.70	<23.00
3625.0				20.08	21.58	<23.00
3695.0				20.17	21.67	<23.00
3555.0	10	50	0	20.33	21.83	<23.00
3625.0				19.39	20.89	<23.00
3695.0				19.45	20.95	<23.00

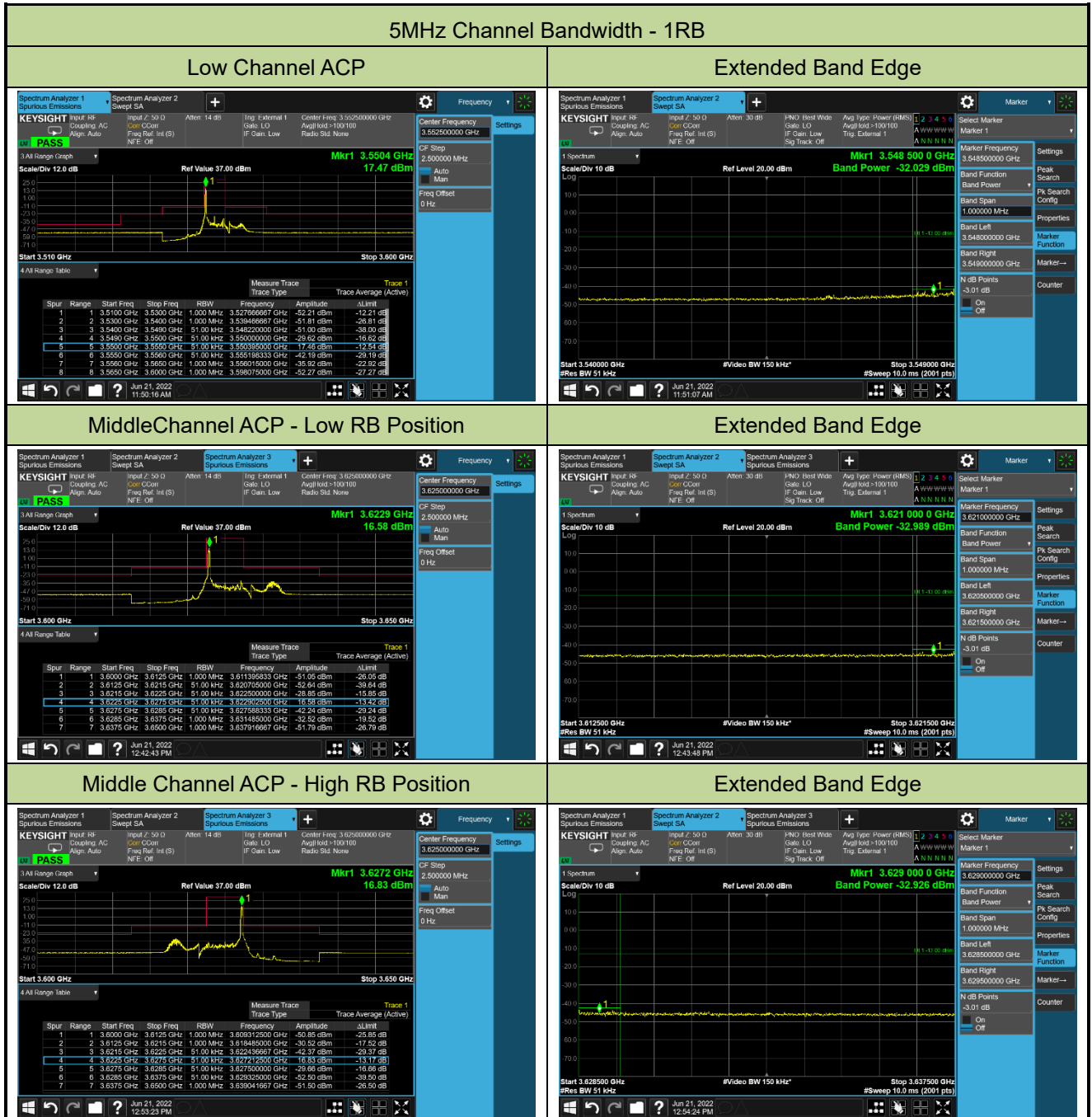
Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm/10MHz)	EIRP (dBm/ 10MHz)	Limit (dBm/ 10MHz)
QPSK						
3557.5	15	1	0	21.12	22.62	<23.00
3625.0				20.87	22.37	<23.00
3692.5				20.50	22.00	<23.00
3557.5	15	1	37	21.21	22.71	<23.00
3625.0				20.87	22.37	<23.00
3692.5				20.74	22.24	<23.00
3557.5	15	1	74	21.02	22.52	<23.00
3625.0				20.64	22.14	<23.00
3692.5				20.87	22.37	<23.00
3557.5	15	75	0	18.79	20.29	<23.00
3625.0				18.32	19.82	<23.00
3692.5				18.22	19.72	<23.00
3560.0	20	1	0	21.26	22.76	<23.00
3625.0				21.36	22.86	<23.00
3690.0				21.20	22.70	<23.00
3560.0	20	1	50	20.95	22.45	<23.00
3625.0				20.63	22.13	<23.00
3690.0				20.67	22.17	<23.00
3560.0	20	1	99	21.43	22.93	<23.00
3625.0				21.06	22.56	<23.00
3690.0				21.24	22.74	<23.00
3560.0	20	100	0	17.67	19.17	<23.00
3625.0				17.39	18.89	<23.00
3690.0				17.40	18.90	<23.00

Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm/10MHz)	EIRP (dBm/ 10MHz)	Limit (dBm/ 10MHz)
16QAM						
3552.5	5	1	0	20.15	21.65	<23.00
3625.0				20.37	21.87	<23.00
3697.5				20.03	21.53	<23.00
3552.5	5	1	12	20.46	21.96	<23.00
3625.0				20.11	21.61	<23.00
3697.5				19.91	21.41	<23.00
3552.5	5	1	24	19.83	21.33	<23.00
3625.0				20.22	21.72	<23.00
3697.5				20.14	21.64	<23.00
3552.5	5	25	0	19.48	20.98	<23.00
3625.0				18.67	20.17	<23.00
3697.5				18.53	20.03	<23.00
3555.0	10	1	0	19.90	21.40	<23.00
3625.0				19.23	20.73	<23.00
3695.0				19.53	21.03	<23.00
3555.0	10	1	24	20.71	22.21	<23.00
3625.0				19.95	21.45	<23.00
3695.0				20.10	21.60	<23.00
3555.0	10	1	49	20.25	21.75	<23.00
3625.0				19.34	20.84	<23.00
3695.0				19.69	21.19	<23.00
3555.0	10	50	0	19.28	20.78	<23.00
3625.0				18.52	20.02	<23.00
3695.0				18.56	20.06	<23.00

Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm/10MHz)	EIRP (dBm/ 10MHz)	Limit (dBm/ 10MHz)
16QAM						
3557.5	15	1	0	20.99	22.49	<23.00
3625.0				20.14	21.64	<23.00
3692.5				19.78	21.28	<23.00
3557.5	15	1	37	20.93	22.43	<23.00
3625.0				20.26	21.76	<23.00
3692.5				19.77	21.27	<23.00
3557.5	15	1	74	20.79	22.29	<23.00
3625.0				20.03	21.53	<23.00
3692.5				19.63	21.13	<23.00
3557.5	15	75	0	18.07	19.57	<23.00
3625.0				17.26	18.76	<23.00
3692.5				17.27	18.77	<23.00
3560.0	20	1	0	21.06	22.56	<23.00
3625.0				20.72	22.22	<23.00
3690.0				20.59	22.09	<23.00
3560.0	20	1	50	20.37	21.87	<23.00
3625.0				19.88	21.38	<23.00
3690.0				19.94	21.44	<23.00
3560.0	20	1	99	21.07	22.57	<23.00
3625.0				20.42	21.92	<23.00
3690.0				20.61	22.11	<23.00
3560.0	20	100	0	16.98	18.48	<23.00
3625.0				16.35	17.85	<23.00
3690.0				16.31	17.81	<23.00

A.4 Band Edge Test Result

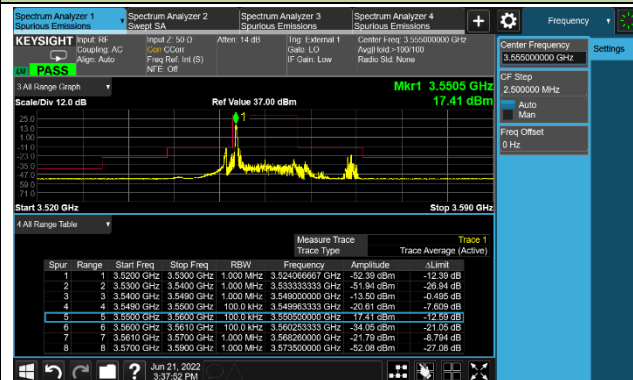
Test Site	WZ-SR6	Test Engineer	Larry Yan
Test Date	2022-06-21	Test Band	Band 48



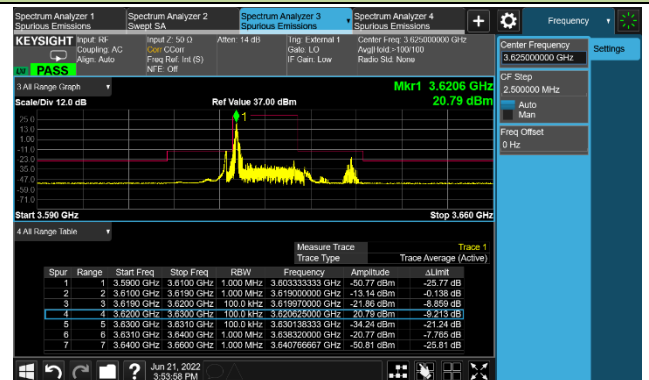


10MHz Channel Bandwidth - 1RB

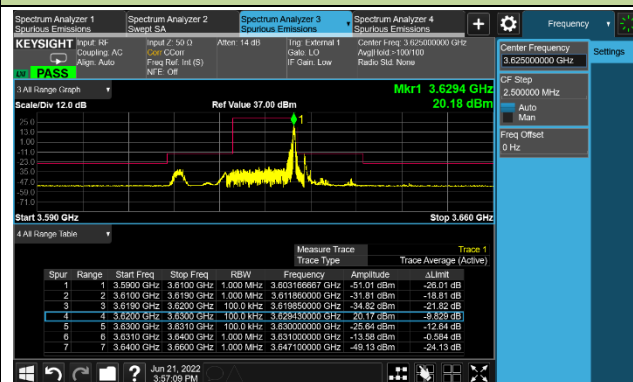
Low Channel ACP



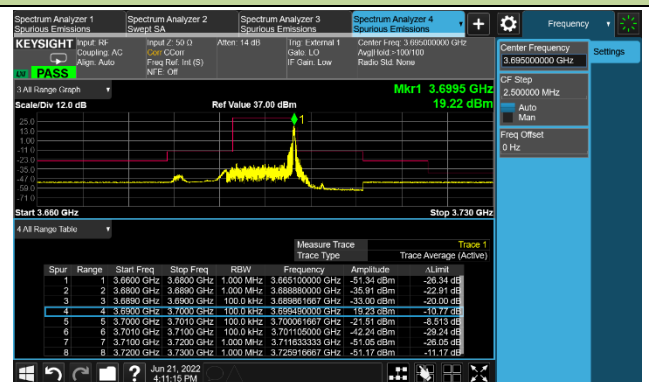
MiddleChannel ACP - Low RB Position



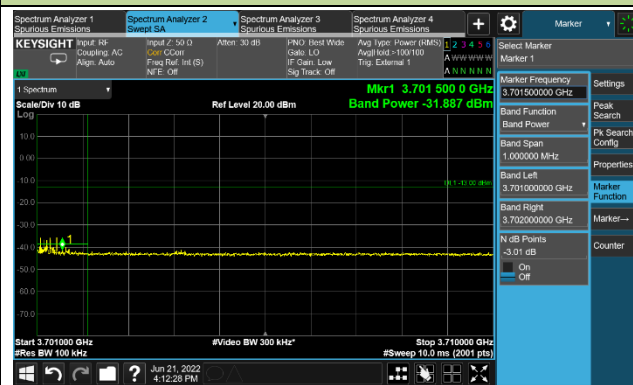
MiddleChannel ACP - High RB Position



High Channel ACP

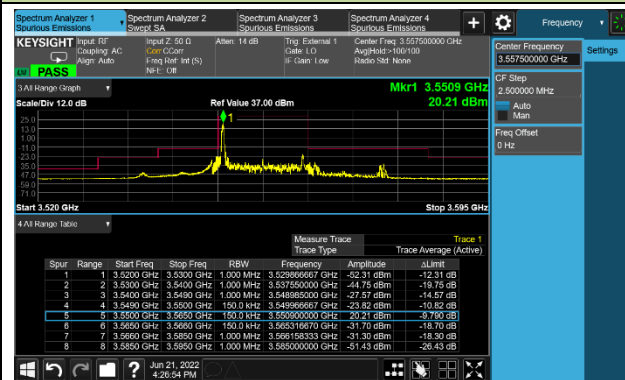


Extended Band Edge

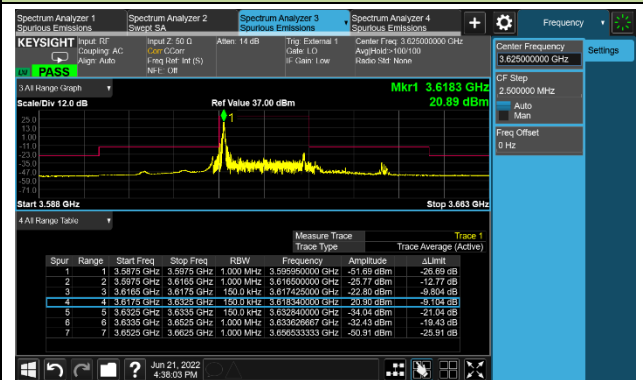


15MHz Channel Bandwidth - 1RB

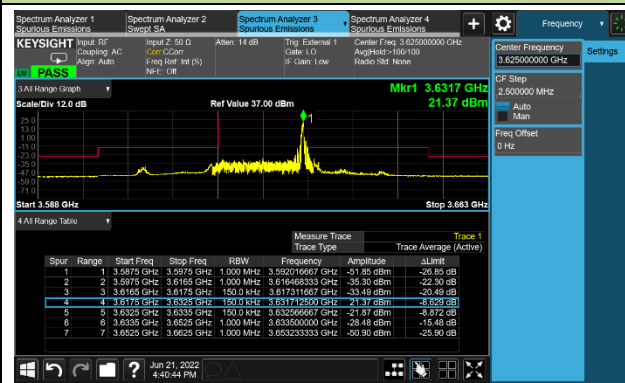
Low Channel ACP



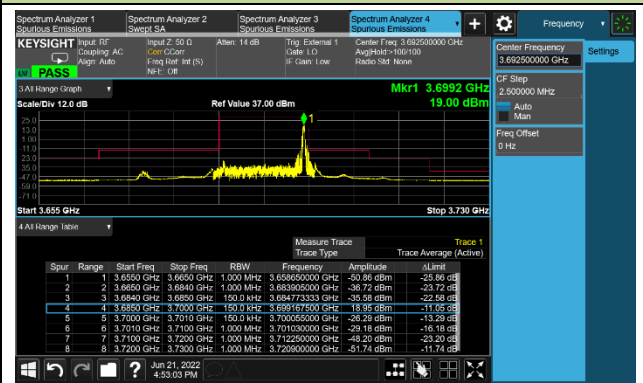
MiddleChannel ACP - Low RB Position



MiddleChannel ACP - High RB Position

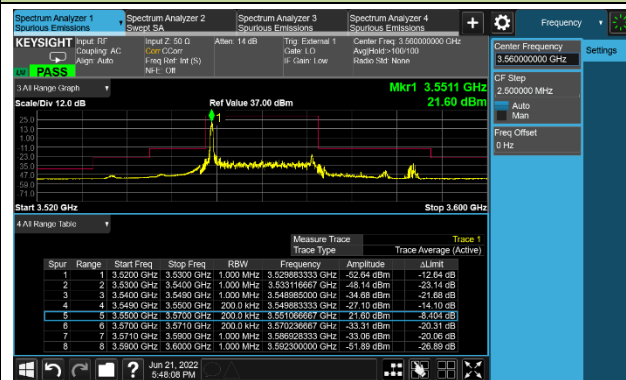


High Channel ACP

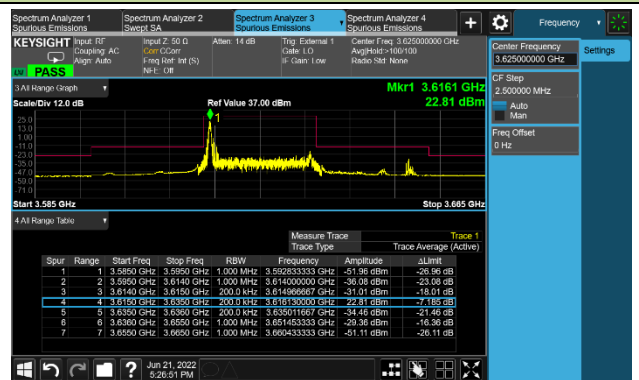


20MHz Channel Bandwidth - 1RB

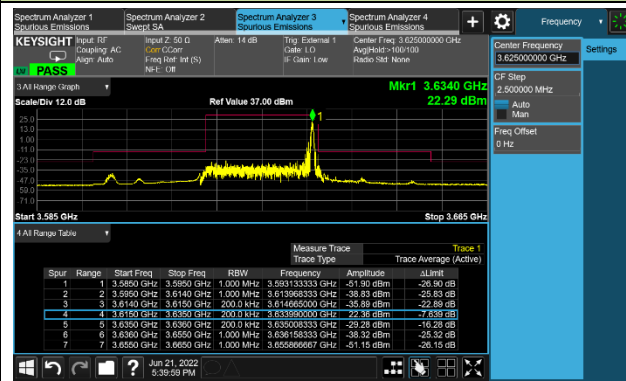
Low Channel ACP



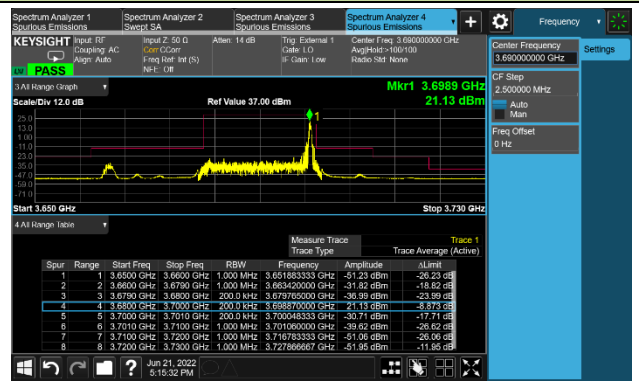
MiddleChannel ACP - Low RB Position



MiddleChannel ACP - High RB Position

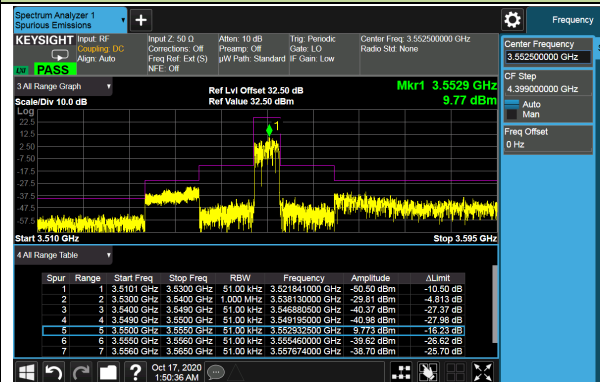


High Channel ACP

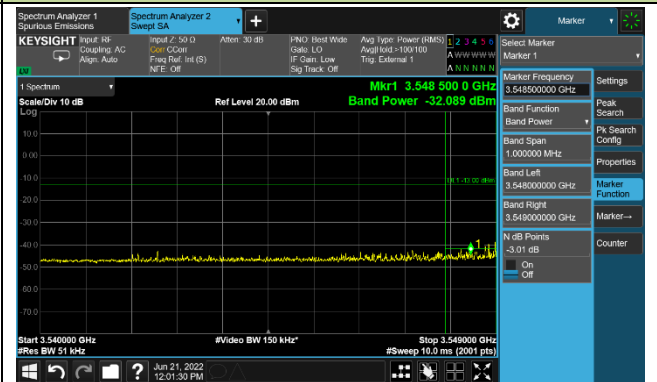


5MHz Channel Bandwidth - Full RB

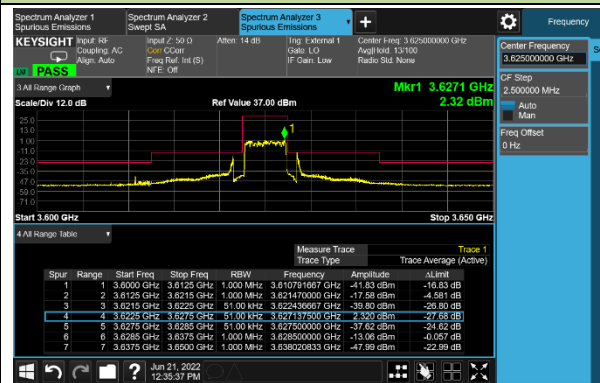
Low Channel ACP



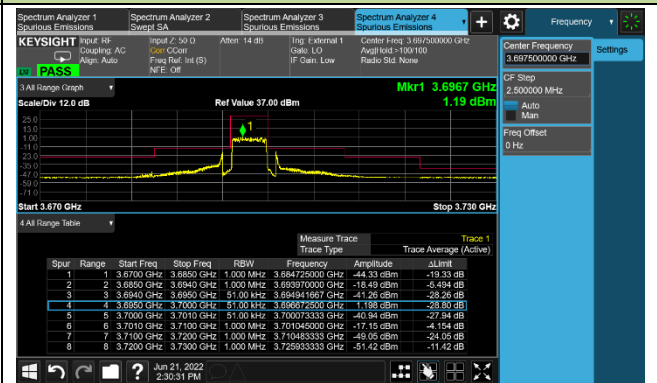
Extended Band Edge



Middle Channel ACP

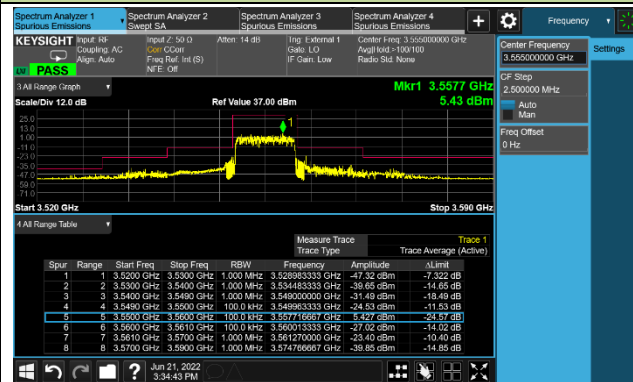


High Channel ACP

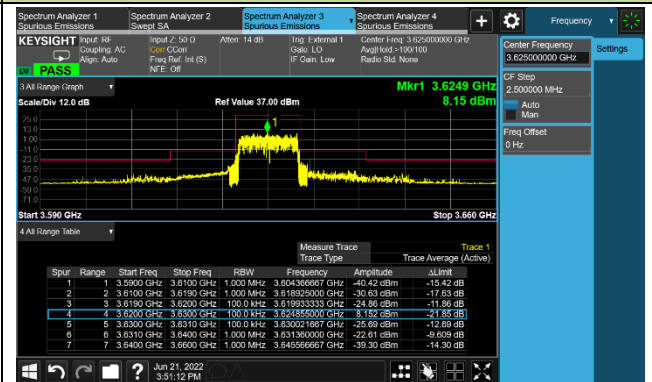


10MHz Channel Bandwidth - Full RB

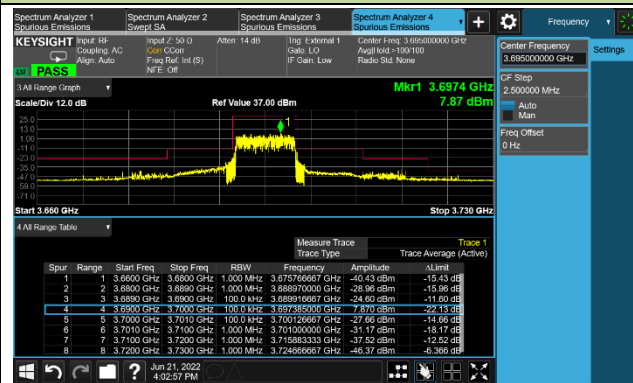
Low Channel ACP



Middle Channel ACP

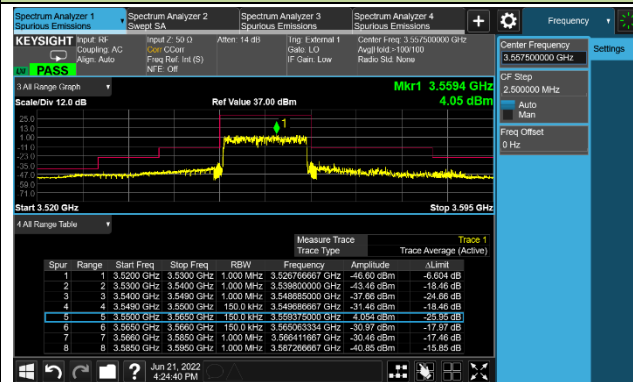


High Channel ACP

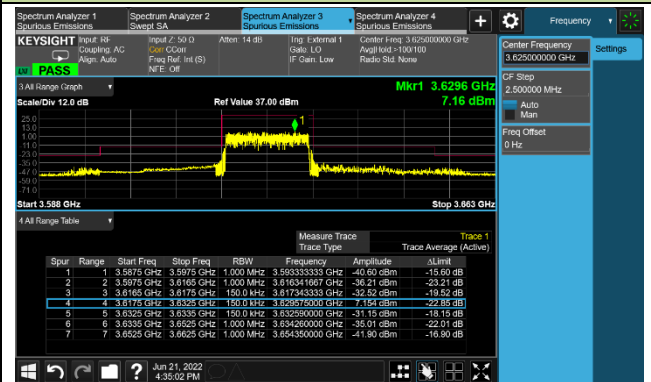


15MHz Channel Bandwidth - Full RB

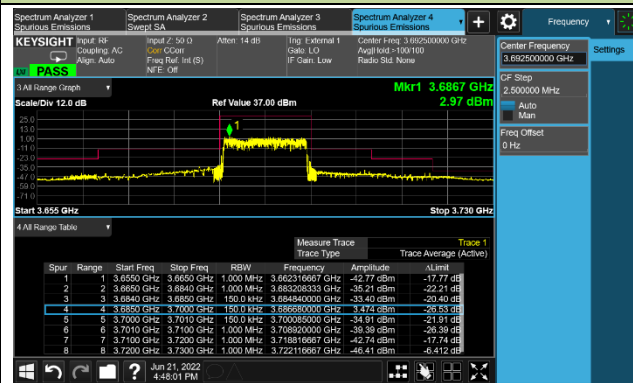
Low Channel ACP



Middle Channel ACP

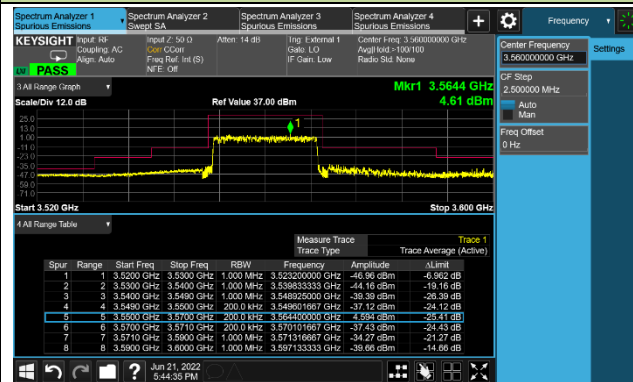


High Channel ACP

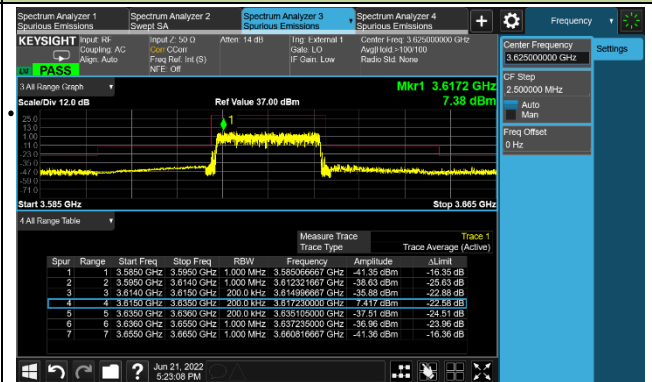


20MHz Channel Bandwidth - Full RB

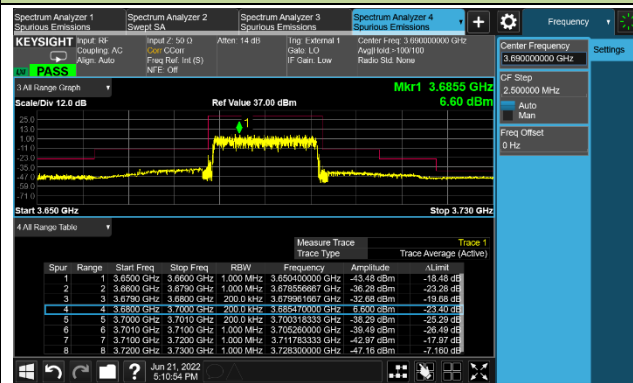
Low Channel ACP



Middle Channel ACP



High Channel ACP



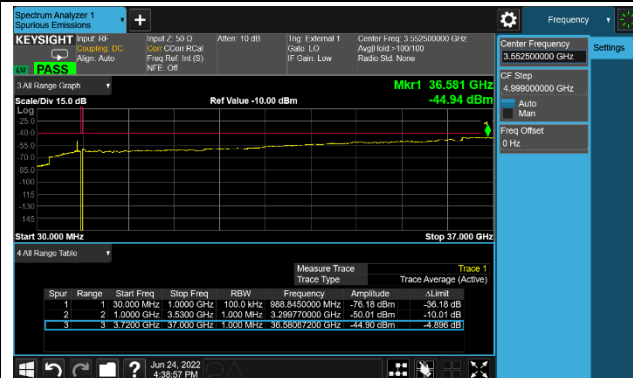
A.5 Conducted Spurious Emissions Test Result

Test Site	WZ-SR6	Test Engineer	Larry Yan
Test Date	2022-06-24	Test Band	Band 48

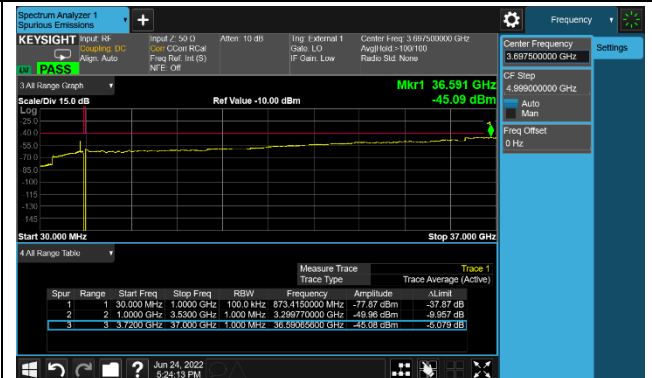
Frequency (MHz)	Channel Bandwidth (MHz)	Frequency Range (MHz)	Max Spurious Emissions (dBm/MHz)	Limit (dBm/ MHz)	Result
QPSK					
3552.5	5	30 ~ 40000	-44.94	≤ -40.00	Pass
3625.0	5	30 ~ 40000	-45.09	≤ -40.00	Pass
3697.5	5	30 ~ 40000	-45.34	≤ -40.00	Pass
3555.0	10	30 ~ 40000	-45.15	≤ -40.00	Pass
3625.0	10	30 ~ 40000	-45.07	≤ -40.00	Pass
3695.0	10	30 ~ 40000	-45.13	≤ -40.00	Pass
3557.5	15	30 ~ 40000	-45.01	≤ -40.00	Pass
3625.0	15	30 ~ 40000	-46.30	≤ -40.00	Pass
3692.5	15	30 ~ 40000	-46.31	≤ -40.00	Pass
3550.0	20	30 ~ 40000	-46.38	≤ -40.00	Pass
3625.0	20	30 ~ 40000	-46.33	≤ -40.00	Pass
3690.0	20	30 ~ 40000	-46.31	≤ -40.00	Pass

5MHz Channel Bandwidth

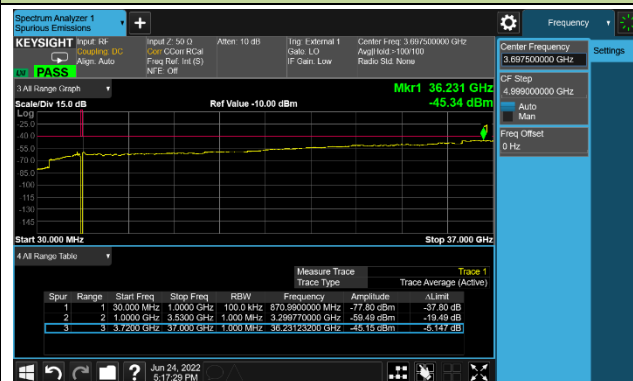
Low Channel



Middle Channel

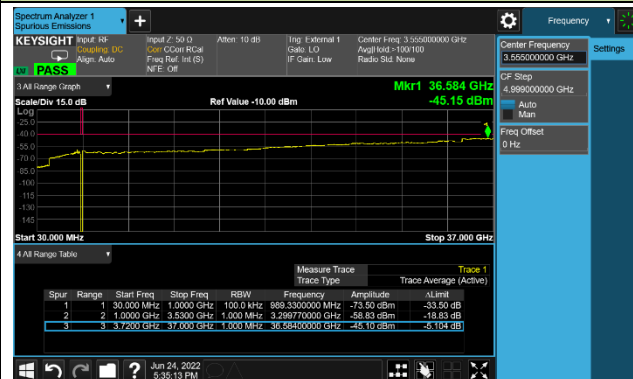


High Channel

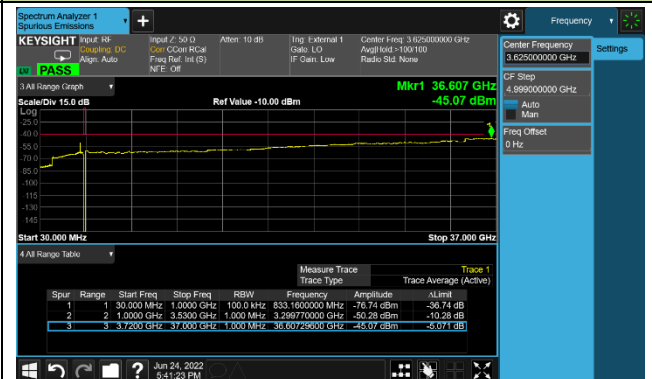


10MHz Channel Bandwidth

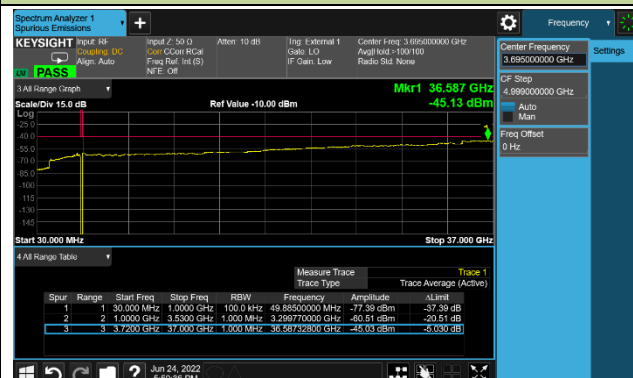
Low Channel



Middle Channel

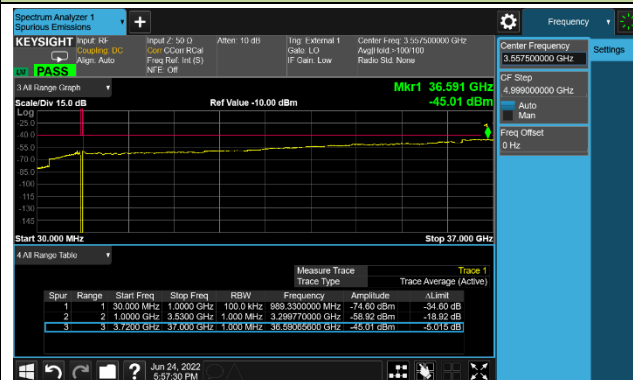


High Channel

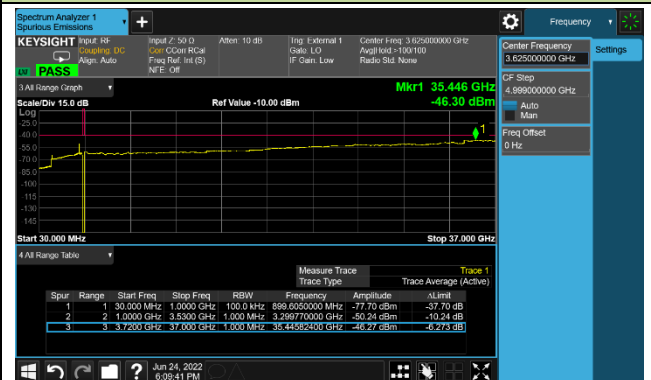


15MHz Channel Bandwidth

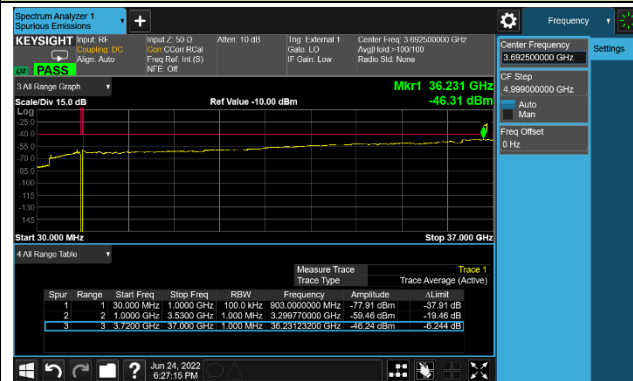
Low Channel



Middle Channel

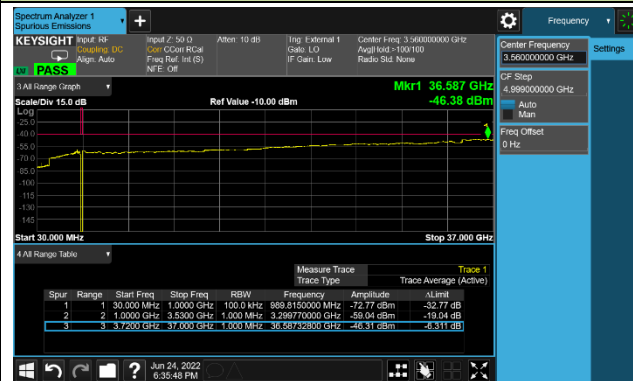


High Channel

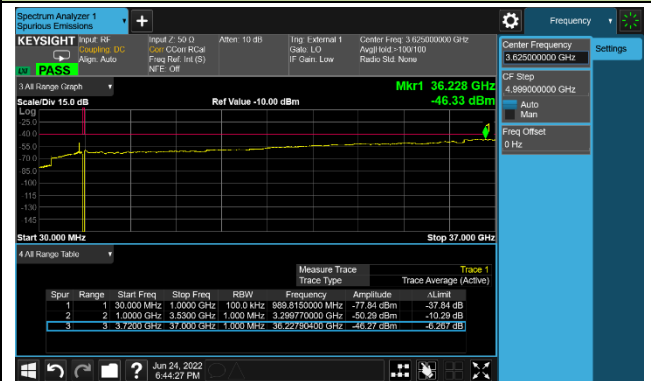


20MHz Channel Bandwidth

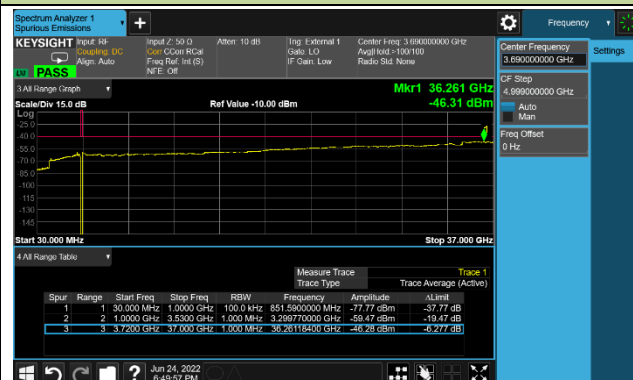
Low Channel



Middle Channel



High Channel



A.6 Radiated Spurious Emissions Test Result

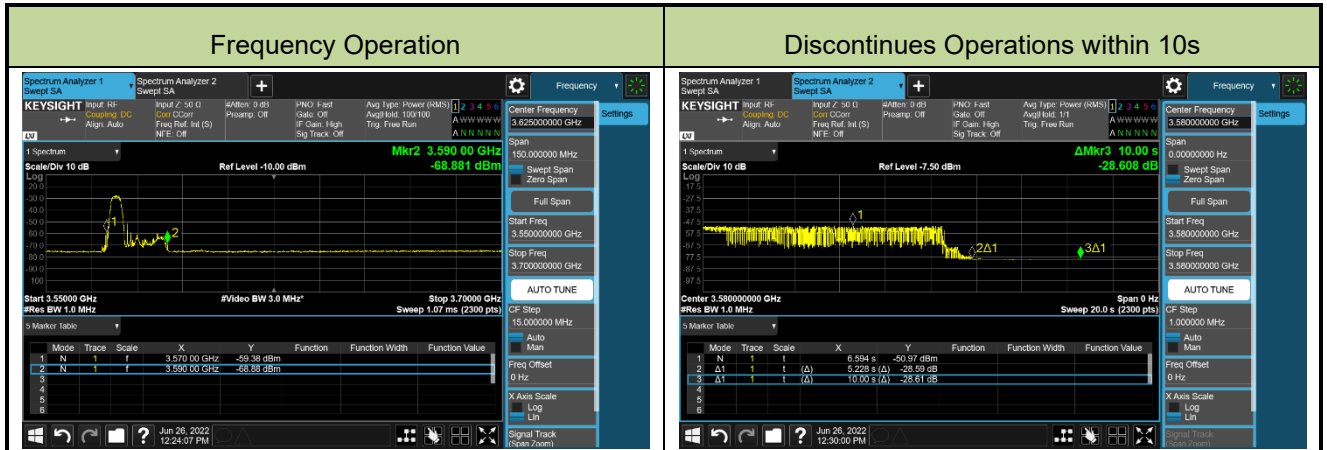
Test Site	WZ-AC2	Test Engineer	Lucas Wang
Test Date	2022-06-23	Test Band	LTE Band 48, 5MHz, 1RB

Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level(dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
Bottom Channel							
43.10	3.09	20.28	23.37	55.30	-31.93	Peak	Horizontal
861.29	3.96	31.03	34.99	55.30	-20.31	Peak	Horizontal
32.43	17.32	17.50	34.82	55.30	-20.48	Peak	Vertical
56.19	12.43	20.16	32.59	55.30	-22.71	Peak	Vertical
7128.50	36.13	11.10	47.23	55.30	-8.07	Peak	Horizontal
10860.00	35.06	16.63	51.69	55.30	-3.61	Peak	Horizontal
7103.00	41.59	10.86	52.45	55.30	-2.85	Peak	Vertical
10650.98	29.97	15.71	45.68	55.30	-9.62	RMS	Vertical
Middle Channel							
604.24	3.28	27.33	30.61	55.30	-24.69	Peak	Horizontal
911.73	5.08	31.31	36.39	55.30	-18.91	Peak	Horizontal
32.91	15.77	17.62	33.39	55.30	-21.91	Peak	Vertical
43.10	13.78	20.28	34.06	55.30	-21.24	Peak	Vertical
8743.50	34.99	12.94	47.93	55.30	-7.37	Peak	Horizontal
10868.48	27.14	16.55	43.69	55.30	-11.61	RMS	Horizontal
7273.00	35.72	11.39	47.11	55.30	-8.19	Peak	Vertical
10868.48	30.01	16.55	46.56	55.30	-8.74	RMS	Vertical
Top Channel							
384.05	10.25	23.12	33.37	55.30	-21.93	Peak	Horizontal
849.65	4.38	30.74	35.12	55.30	-20.18	Peak	Horizontal
32.43	16.05	17.50	33.55	55.30	-21.75	Peak	Vertical
43.10	13.29	20.28	33.57	55.30	-21.73	Peak	Vertical
7366.50	35.37	11.68	47.05	55.30	-8.25	Peak	Horizontal
11099.01	33.79	16.61	50.40	55.30	-4.90	RMS	Horizontal
7417.50	35.51	11.63	47.14	55.30	-8.16	Peak	Vertical
11099.05	37.18	16.61	53.79	55.30	-1.51	RMS	Vertical

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB).

A.7 End User Device Additional Requirement (CBSD Protocol) Test Result

Test Site	WZ-SR6	Test Engineer	Larry Yan
Test Date	2022-06-26	Test Band	CBSD transmit at 3580MHz (20MHz BW), 13dBm/MHz



Marker 1: CBSD sends instructions to discontinue LTE operations.

Marker 2: EUT discontinues operation.

Marker 3: 10 seconds elapsed time from CBSD sending instructions to EUT.

Test Site	WZ-SR6	Test Engineer	Larry Yan
Test Date	2022-06-26	Test Band	CBSD transmit at 3680MHz (20MHz BW), 8dBm/MHz



Marker 1: CBSD sends instructions to discontinue LTE operations.

Marker 2: EUT discontinues operation.

Marker 3: 10 seconds elapsed time from CBSD sending instructions to EUT.

Appendix B - Test Setup Photograph

Refer to “2205RSU053-UT” file.

Appendix C - EUT Photograph

Refer to “2205RSU053-UE” file.

The End
