



RF MEASUREMENT REPORT

FCC ID: WIYS1U2M4001
Applicant: CASTLES TECHNOLOGY CO., LTD.
Product: POS Terminal
Model No.: S1U2-M4
Trademark: 
FCC Rule(s): Part90 Subpart R
Result: Complies
Received Date: 2025-02-12
Test Date: 2025-02-13 ~ 2025-03-13

Reviewed By:

Yuri Li

Yuri Li

Approved By:

Robin Wu

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
R25S1009034-U302	V01	Initial Report	2025-03-26	Valid

Note: This report is supplement to the FCC ID “WIYS1U2M4001” adding additional bands and related data.

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 under Testing.....	6
1.6. Description of Available Antennas.....	7
1.7. Test Methodology	7
2. Test Configuration.....	8
2.1. Test System Connection Diagram.....	8
2.2. Test Environment Condition	8
3. Measuring Instrument	9
4. Decision Rules and Measurement Uncertainty	10
4.1. Decision Rules	10
4.2. Measurement Uncertainty	10
5. Test Result.....	11
5.1. Summary	11
5.2. Occupied Bandwidth Measurement	12
5.2.1. Test Limit	12
5.2.2. Test Procedure	12
5.2.3. Test Setting	12
5.2.4. Test Setup	12
5.2.5. Test Result.....	12
5.3. Frequency Stability Measurement	13
5.3.1. Test Limit	13
5.3.2. Test Procedure	13
5.3.3. Test Setting	13
5.3.4. Test Setup	14
5.3.5. Test Result.....	14
5.4. Equivalent Isotropically Radiated Power Measurement	15
5.4.1. Test Limit	15
5.4.2. Test Procedure	15
5.4.3. Test Setting	15
5.4.4. Test Setup	16

5.4.5. Test Result.....	16
5.5. Conducted Band-Edge Measurement.....	17
5.5.1. Test Limit	17
5.5.2. Test Procedure	17
5.5.3. Test Setting	17
5.5.4. Test Setup	18
5.5.5. Test Result.....	18
5.6. Emission Mask Measurement.....	19
5.6.1. Test Limit	19
5.6.2. Test Procedure	19
5.6.3. Test Setting	19
5.6.4. Test Setup	20
5.6.5. Test Result.....	20
5.7. Conducted Spurious Emissions Measurement.....	21
5.7.1. Test Limit	21
5.7.2. Test Procedure	21
5.7.3. Test Setting	21
5.7.4. Test Setup	22
5.7.5. Test Result.....	22
5.8. Radiated Spurious Emissions Measurement.....	23
5.8.1. Test Limit	23
5.8.2. Test Procedure	23
5.8.3. Test Setting	23
5.8.4. Test Setup	24
5.8.5. Test Result.....	24
Appendix A - Test Result.....	25
A.1 Occupied Bandwidth Test Result	25
A.2 Frequency Stability Test Result.....	29
A.3 Equivalent Isotropically Radiated Power Test Result.....	30
A.4 Conducted Band-Edge Test Result.....	33
A.5 Emission Mask Test Result.....	35
A.6 Conducted Spurious Emissions Test Result	38
A.7 Radiated Spurious Emissions Test Result	40
Appendix B - Test Setup Photograph	42
Appendix C - EUT Photograph	43

1. General Information

1.1. Applicant

CASTLES TECHNOLOGY CO., LTD.

6F, NO. 207-5, SEC. 3, BEIXIN RD., XINDIAN DISTRICT, NEW TAIPEI CITY 231030, TAIWAN (R.O.C.)

1.2. Manufacturer

CASTLES TECHNOLOGY CO., LTD.

6F, NO. 207-5, SEC. 3, BEIXIN RD., XINDIAN DISTRICT, NEW TAIPEI CITY 231030, TAIWAN (R.O.C.)

1.3. Testing Facility

☒	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 Location (Suzhou - Wujiang) Building 1, No.1 Xingdong Road, Wujiang, Suzhou, Jiangsu, People's Republic of China
	Laboratory Accreditations
	A2LA: 3628.01 FCC: CN1166 VCCI: ☐ R-20025 ☐ G-20034 ☐ C-20020 ☐ T-20020 ☐ R-20141 ☐ G-20134 ☐ C-20103 ☐ T-20104
	CNAS: L10551 ISED: CN0001
☐	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 FCC: CN1284
CNAS: L10551 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: 3261 FCC: 291082, TW3261
ISED: TW3261	

1.4. Product Information

Product Name	POS Terminal
Model No.	S1U2-M4
Trademark	
Serial Number	115244802968 (Radiated) 115244802974 (Conducted)
NFC Specification	13.56MHz
Wi-Fi Specification	802.11a/b/g/n/ac
Bluetooth Specification	BT5.0
GNSS Specification	GPS, GLONASS, GALILEO, BEIDOU
3GPP Specification	WCDMA Band II/IV/V LTE Band 2/4/5/7/12/13/14/17/25/26/66/38/41
Operating Temperature Range	-20 ~ 70 °C
Supply Voltage Rating	9 ~ 48Vdc, Normal 9Vdc
Antenna Specification	Refer to Section 1.6
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 Testing

E-UTRA Specification	
FDD TX Frequency Range	Band 14: 788 ~ 798MHz
FDD RX Frequency Range	Band 14: 758 ~ 768MHz
Support Bandwidth	5MHz, 10MHz
Support Power Class	PC3
Modulation	UL up to 64QAM

1.6. Description of Available Antennas

Technology	Frequency Range (MHz)	Antenna Type	MaxPeak Gain (dBi)
LTE Band 14	788 ~ 798	Monopole Antenna	3.89
Note: All antenna information (Antenna type and Peak Gain) is provided by the manufacturer.			

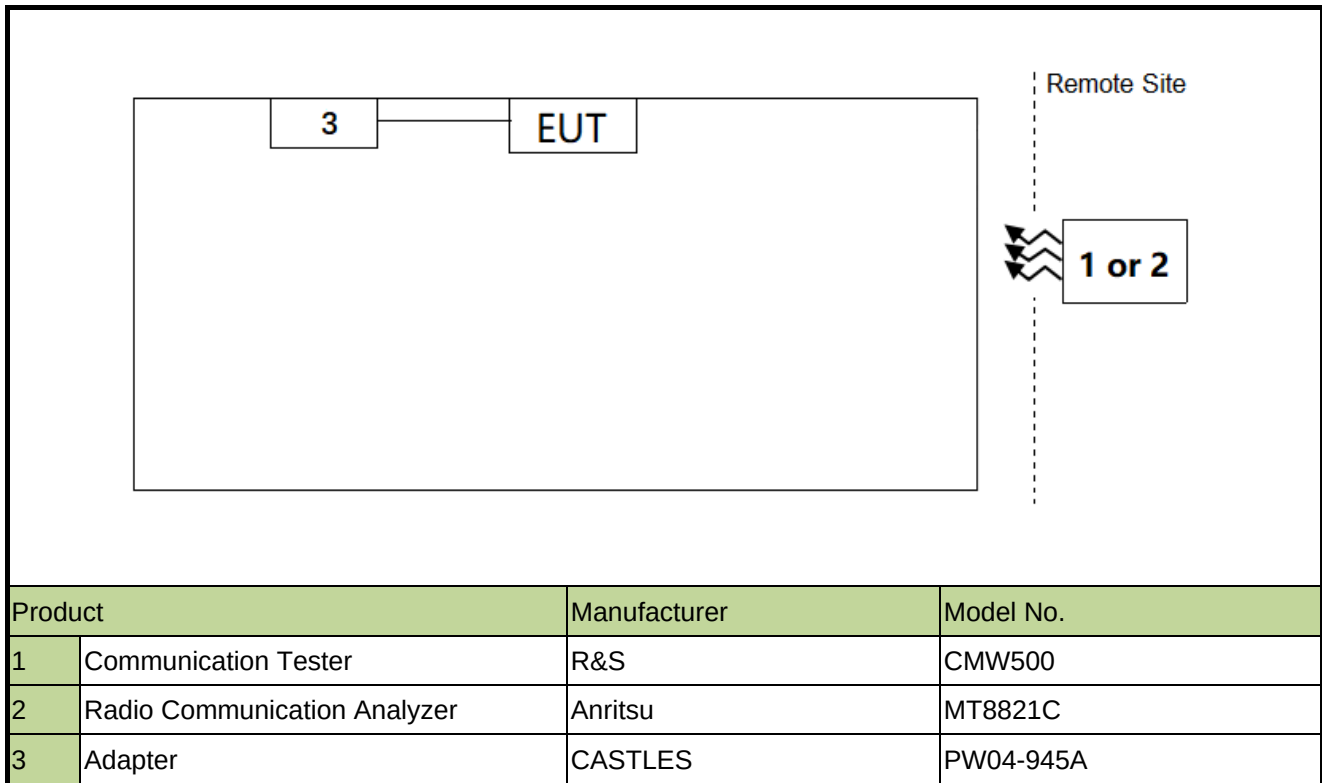
1.7. Test Methodology

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 90
- FCC KDB 971168 D01 v03r01: Power Meas License Digital Systems
- FCC KDB 971168 D02 v02r02: Misc Rev Approv License Devices
- FCC KDB 412172 D01 v01r01: Determining ERP and EIRP

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.	Cali. Interval	Cali. Due Date	Test Site
Temperature Chamber	BAOYT	BYH-150CL	MRTSUE06051	1 year	2025-09-02	WZ-TR3
Thermohygrometer	testo	608-H1	MRTSUE11268	1 year	2025-12-10	WZ-TR3
Thermohygrometer	testo	608-H1	MRTSUE06362	1 year	2026-01-23	WZ-SR6
Shielding Room	HUAMING	WZ-SR6	MRTSUE06443	N/A	N/A	WZ-SR6
Signal Analyzer	Keysight	N9020B	MRTSUE06583	1 year	2025-12-23	WZ-SR6
Radio Communication Analyzer	Anritsu	MT8821C	MRTSUE06960	1 year	2025-06-18	WZ-SR6
Communication Tester	R&S	CMW500	MRTSUE06108	1 year	2025-10-13	WZ-SR6
USB Power Sensor	Keysight	U2021XA	MRTSUE06446	1 year	2025-05-08	WZ-SR6
EMI Test Receiver	R&S	ESR7	MRTSUE06001	1 year	2025-12-05	WZ-AC1
Horn Antenna	Schwarzbeck	BBHA 9120D	MRTSUE06023	1 year	2025-07-26	WZ-AC1
Horn Antenna	Schwarzbeck	BBHA 9170	MRTSUE06024	1 year	2025-09-23	WZ-AC1
Preamplifier	Agilent	83017A	MRTSUE06076	1 year	2025-11-08	WZ-AC1
TRILOG Antenna	Schwarzbeck	VULB 9168	MRTSUE06172	1 year	2025-05-15	WZ-AC1
Anechoic Chamber	TDK	WZ-AC1	MRTSUE06212	1 year	2025-04-19	WZ-AC1
Signal Analyzer	Keysight	N9010B	MRTSUE06607	1 year	2025-10-13	WZ-AC1
Loop Antenna	Schwarzbeck	FMZB 1519 B	MRTSUE06937	1 year	2026-01-04	WZ-AC1
Thermohygrometer	testo	608-H1	MRTSUE11039	1 year	2025-10-16	WZ-AC1

Software	Version	Function
e3	230711	EMI Test Software
Controller_MF 7802	2.03C	RE Antenna & Turntable
UCTS	V 6.23.217.99	license 3G & 4G & 5G
Agilent Power Analyzer/Agilent Power Panel	V R03.09.00	Power

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% ($U=2U_c(y)$):	
Coaxial:	9kHz~30MHz: 2.35dB
Coplanar:	9kHz~30MHz: 2.37dB
Horizontal:	30MHz~200MHz: 3.46dB
	200MHz~1GHz: 3.78dB
	1GHz~40GHz: 4.97dB
Vertical:	30MHz~200MHz: 4.07dB
	200MHz~1GHz: 5.28dB
	1GHz~40GHz: 4.78dB
Conducted Spurious Emissions	
Measuring Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$):	
1.47dB	
Output Power	
Measuring Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$):	
0.66dB	
Occupied Bandwidth	
Measuring Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$):	
69.28kHz	
Frequency Stability	
Measuring Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$):	
8.04Hz	

5. Test Result

5.1. Summary

FCC Part Section(s)	Test Description	Test Condition	Test Result
2.1049	Occupied Bandwidth	Conducted	Pass
2.1055	Frequency Stability		Pass
90.542(a)(6)	Equivalent Radiated Power		Pass
2.1051, 90.543(e)(2)(3)	Transmitter unwanted emissions (band-edge)		Pass
2.1051, 90.210(n)	Emission Mask		
2.1051, 90.543(e)(3) (f)	Transmitter unwanted emissions (spurious)		
2.1053, 90.543(e)(3) (f)	Transmitter Spurious Emissions	Radiated	Pass

Notes:

- 1) The analyzer plots shown in this section were captured using a correction table to account for cable and attenuator losses in the system connecting the EUT to the analyzer across relevant frequencies.
- 2) All supported modulation types were evaluated. The worst-case emission from modulation types was selected. Therefore, the worst-case results for Frequency Stability, Channel Band Edge, Conducted Spurious Emission, and Radiated Spurious Emission were presented in the test report.
- 3) For the radiated emission tests, each axis (X, Y, Z) was also verified. The test results shown in the following sections represent the worst-case emissions.

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.

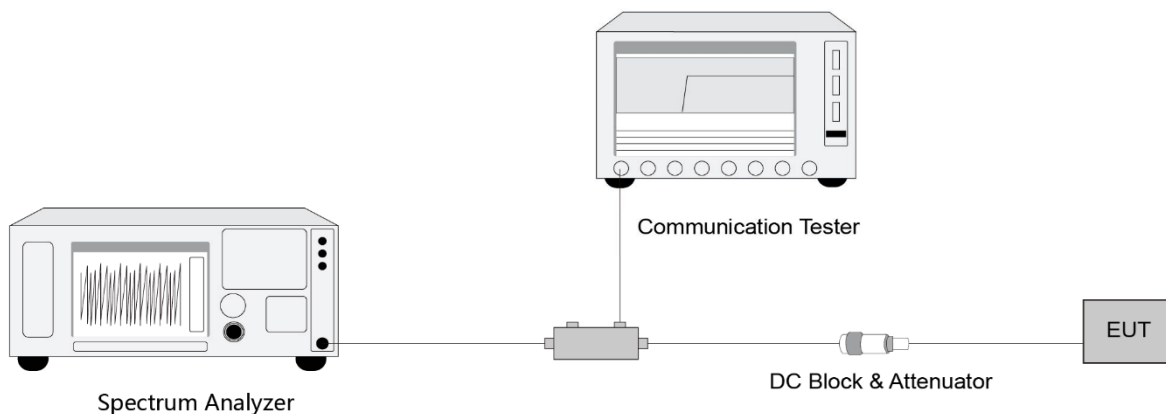
5.2.2. Test Procedure

ANSI C63.26-2015 - Section 5.4.4

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.

5.3.2. Test Procedure

ANSI C63.26-2015 - Section 5.6

5.3.3. Test Setting

1. A reference point shall be established at the applicable unwanted emissions limit using a RBW equal to the RBW required by the unwanted emissions specification of the applicable regulatory standard. These reference points measured using the lowest and highest channel of operation shall be identified as f_L and f_H respectively.
2. Use the frequency error function of the instrument and record the frequency error.
3. Change the temperature of equipment and repeat Steps 2.
4. Change the Voltage of equipment and repeat Steps 2.
5. The frequency error offset determined in the above methods shall be added or subtracted from the values of f_L and f_H and the resulting frequencies must remain within the band

Frequency Stability Under Temperature Variations:

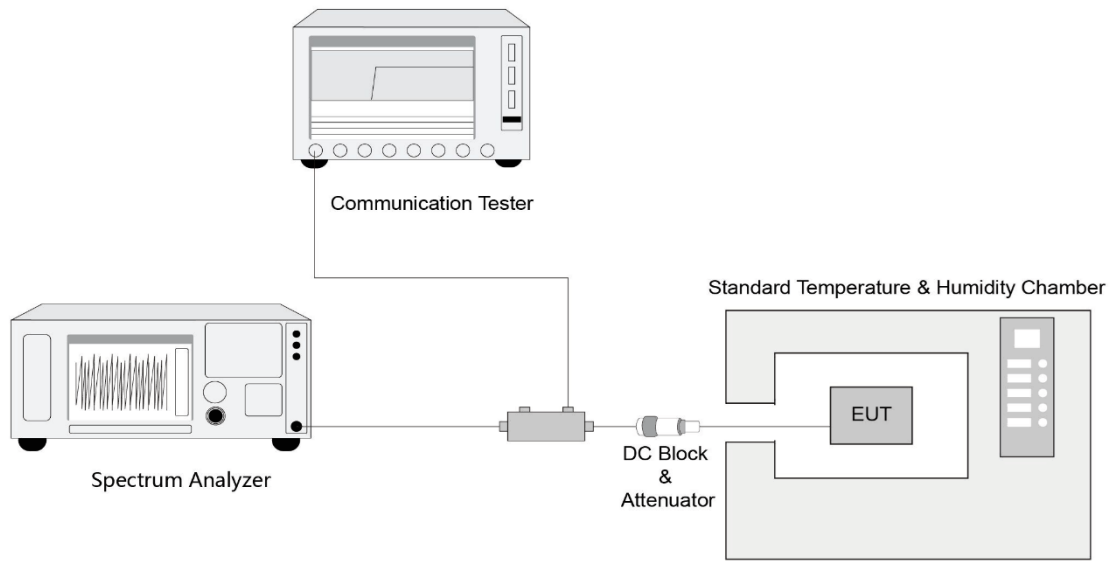
The equipment under test was connected to an external AC or DC power supply and input rated voltage. RF output was connected to a frequency counter or spectrum analyzer via feed through attenuators. The EUT was placed inside the temperature chamber. Set the spectrum analyzer RBW low enough to obtain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

Control stations and mobile stations transmitting in the 758-768 MHz band and the 788-798 MHz band are limited to 30 watts ERP.

5.4.2. Test Procedure

ANSI C63.26-2015 - Section 5.2.4.2

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

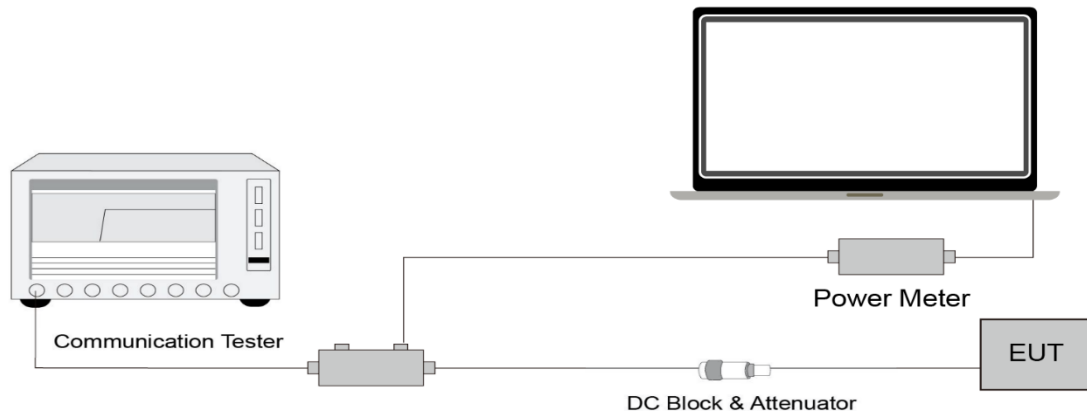
ERP or EIRP effective radiated power or equivalent isotropically radiated power, respectively (expressed in the same units as P_{Meas} , e.g., dBm or dBW)

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. Conducted Band-Edge Measurement

5.5.1. Test Limit

For operations in the 758-768 MHz and the 788-798 MHz bands, the power of any emission outside the licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, in accordance with the following:

- (1) On all frequencies between 769-775 MHz and 799-805 MHz, by a factor not less than $65 + 10 \log (P)$ dB in a 6.25 kHz band segment, for mobile and portable stations;
- (2) On any frequency between 775-788 MHz, above 805 MHz, and below 758 MHz, by at least $43 + 10 \log (P)$ dB.

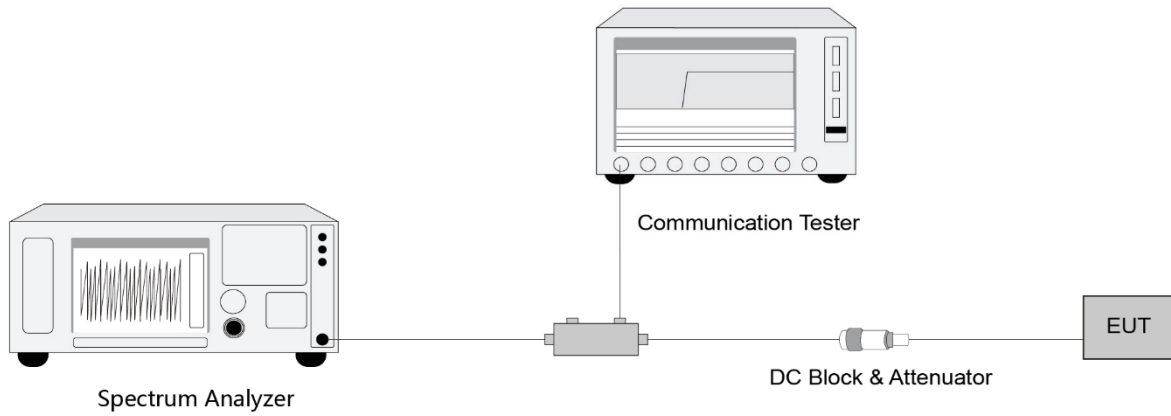
5.5.2. Test Procedure

ANSI C63.26-2015 – Section 5.7

5.5.3. Test Setting

1. Set the analyzer frequency to Low or High channel
2. RBW = specified resolution bandwidth, 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 frequency block group, 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. If the EUT can be configured to transmit continuously, then set the trigger to free run
7. If the EUT cannot be configured to transmit continuously, then use a sweep trigger with the level set to enable triggering only on full power bursts and configure the EUT to transmit at full power for the entire duration of each sweep. Verify that the sweep time is less than or equal to the transmission burst duration.
Time gating can also be used under similar constraints
8. Compute the power by integrating the spectrum across the specified resolution bandwidth using the instrument's band or channel power measurement function, with the band/channel limits set equal to the specified resolution bandwidth, when using a measurement bandwidth smaller than the specified bandwidth. Otherwise, Use the peak marker function to determine the maximum amplitude level.

5.5.4. Test Setup



5.5.5. Test Result

Refer to Appendix A.4.

5.6. Emission Mask Measurement

5.6.1. Test Limit

Emission Mask B, for transmitters that are equipped with an audio low-pass filter, the power of any emission must be attenuated below the unmodulated carrier power (P) as follows:

- (1) On any frequency removed from the assigned frequency by more than 50 percent, but not more than 100 percent of the authorized bandwidth: At least 25 dB.
- (2) On any frequency removed from the assigned frequency by more than 100 percent, but not more than 250 percent of the authorized bandwidth: At least 35 dB.
- (3) On any frequency removed from the assigned frequency by more than 250 percent of the authorized bandwidth: At least $43 + 10 \log (P)$ dB.

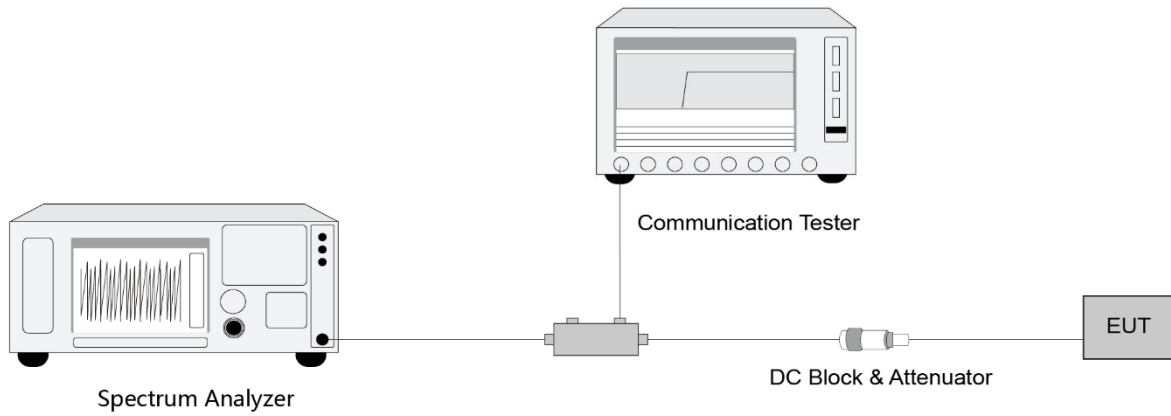
5.6.2. Test Procedure

ANSI C63.26-2015 - Section 5.7

5.6.3. Test Setting

1. Set the analyzer frequency to Low , Middle and High channel
2. RBW = specified resolution bandwidth, 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 frequency block group, 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. If the EUT can be configured to transmit continuously, then set the trigger to free run
7. If the EUT cannot be configured to transmit continuously, then use a sweep trigger with the level set to enable triggering only on full power bursts and configure the EUT to transmit at full power for the entire duration of each sweep. Verify that the sweep time is less than or equal to the transmission burst duration.
Time gating can also be used under similar constraints
8. Compute the power by integrating the spectrum across the specified resolution bandwidth using the instrument's band or channel power measurement function, with the band/channel limits set equal to the specified resolution bandwidth, when using a measurement bandwidth smaller than the specified bandwidth. Otherwise, Use the peak marker function to determine the maximum amplitude level.

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.

On any frequency between 775-788 MHz, above 805 MHz, and below 758 MHz, by at least $43 + 10 \log (P)$ dB.

For operations in the 758-775 MHz and 788-805 MHz bands, all emissions including harmonics in the band 1559-1610 MHz shall be limited to -70 dBW/MHz equivalent isotropically radiated power (EIRP) for wideband signals, and -80 dBW EIRP for discrete emissions of less than 700 Hz bandwidth.

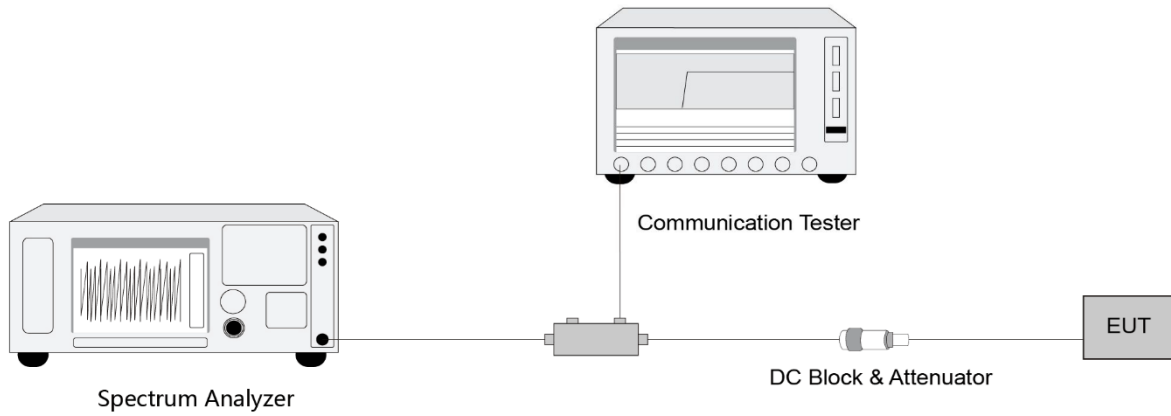
5.7.2. Test Procedure

ANSI C63.26-2015 - Section 5.7

5.7.3. Test Setting

1. Set the analyzer frequency to low, Mid or high channel.
2. RBW = specified resolution bandwidth
3. VBW $\geq 3 \times$ RBW
4. Sweep time = auto
5. Detector = power averaging (rms)
6. If the EUT can be configured to transmit continuously, then set the trigger to free run
7. If the EUT cannot be configured to transmit continuously, then use a sweep trigger with the level set to enable triggering only on full power bursts and configure the EUT to transmit at full power for the entire duration of each sweep. Verify that the sweep time is less than or equal to the transmission burst duration.
Time gating can also be used under similar constraints
8. Use the peak marker function to determine the maximum amplitude level.

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

Out of band emissions: 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 operations in the 758-775 MHz and 788-805 MHz bands, all emissions including harmonics 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. For the purpose of equipment authorization, a transmitter shall be tested with an antenna that is representative of the type that will be used with the equipment in normal operation.

$E \text{ (dB}\mu\text{V/m)} = \text{EIRP (dBm)} - 20 \log D + 104.8$; where D is the measurement distance in meters. The emission limit equal to 82.3dB μ V/m or 55.3dB μ V/m.

5.8.2. Test Procedure

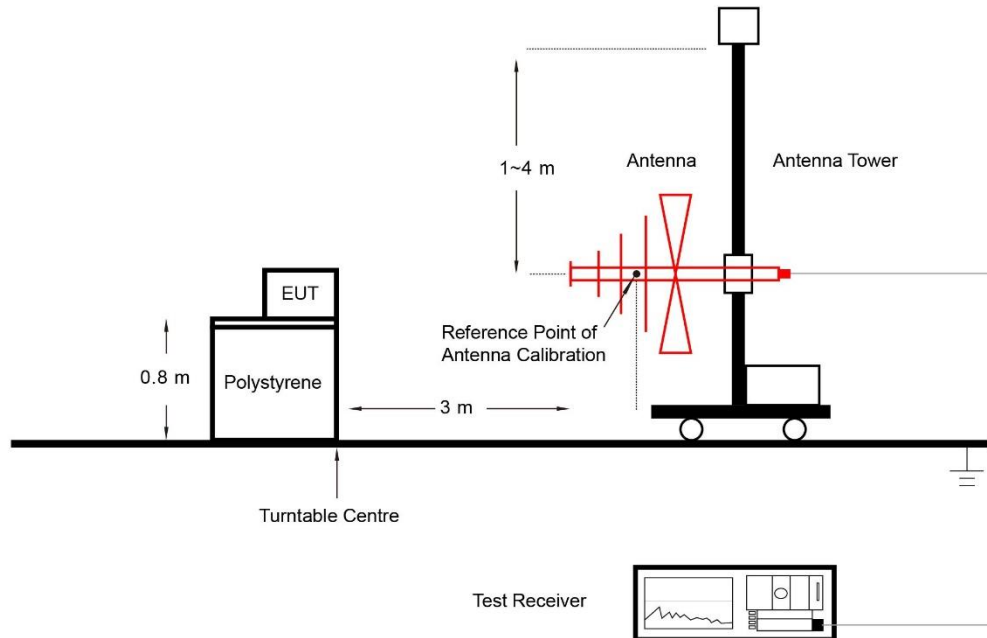
ANSI C63.26-2015 - Section 5.2.7 & 5.5

5.8.3. Test Setting

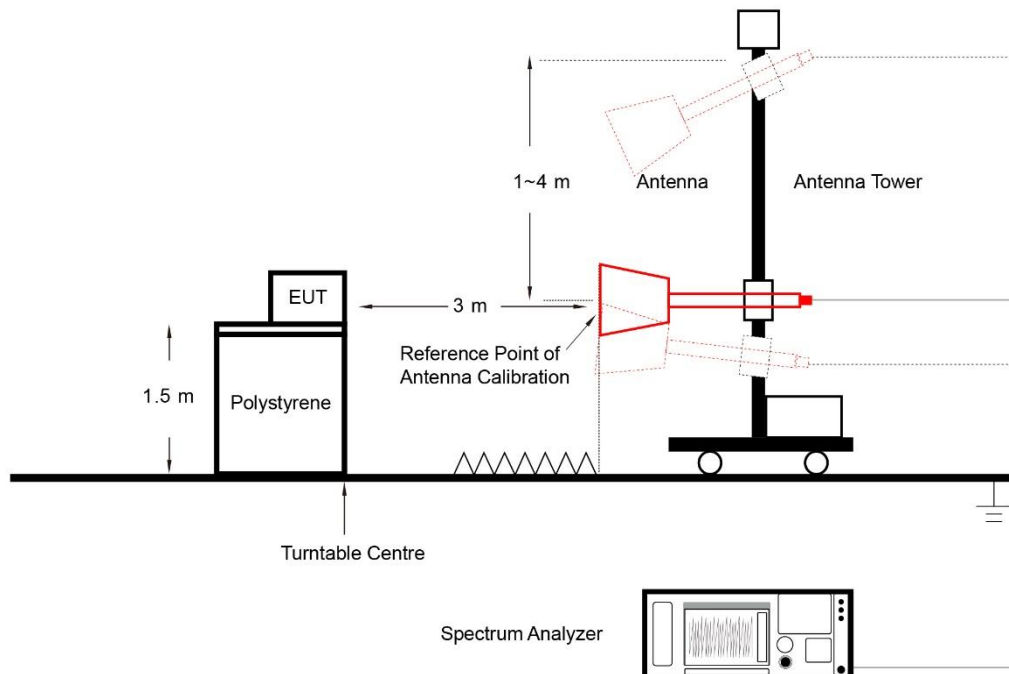
1. RBW = 120kHz or 1MHz
2. VBW $\geq 3 \times$ RBW
3. Sweep time $\geq 10 \times (\text{number of points in sweep}) \times (\text{transmission symbol period})$
4. Detector = CISPR quasi-peak / average detector (Below 1 GHz, compliance with the limits shall be demonstrated using a CISPR quasi-peak detector and the related measurement bandwidth. Above 1 GHz, compliance with the limits shall be demonstrated using a linear average detector with a minimum resolution bandwidth of 1 MHz.)
5. 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

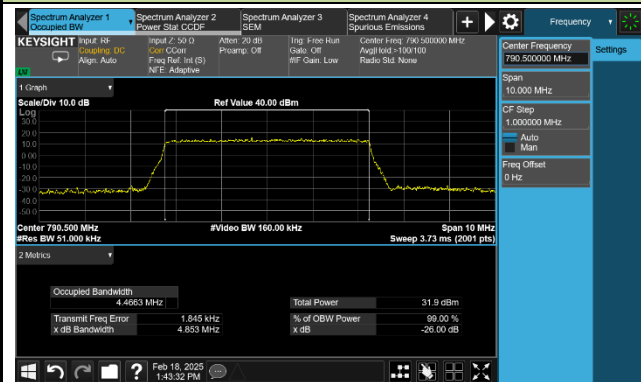
A.1 Occupied Bandwidth Test Result

Test Site	WZ-SR6	Test Engineer	Edith Yu
Test Date	2025-02-18 ~ 2025-02-20	Test Band	Band 14

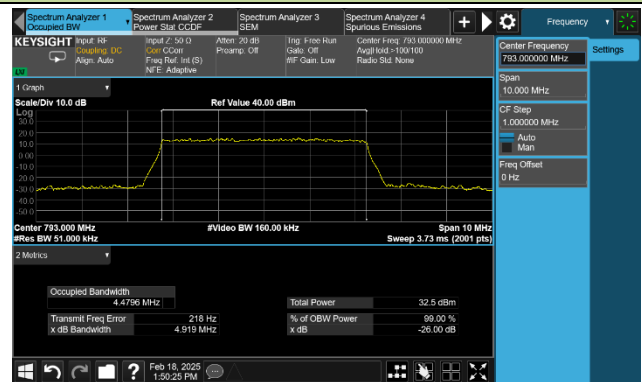
Modulation	Bandwidth (MHz)	Frequency (MHz)	99% Bandwidth (MHz)
QPSK	5	790.5	4.4663
		793.0	4.4796
		795.5	4.4753
	10	793.0	8.9292
16QAM	5	790.5	4.4694
		793.0	4.4639
		795.5	4.4705
	10	793.0	8.9181
64QAM	5	790.5	4.4608
		793.0	4.4674
		795.5	4.4684
	10	793.0	8.8950

99% Bandwidth – 5MHz – QPSK

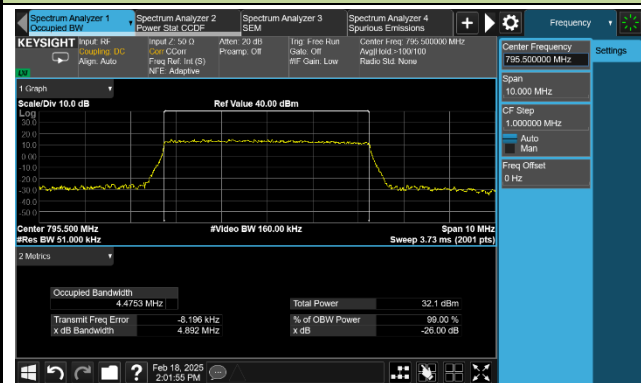
Low Channel



Middle Channel

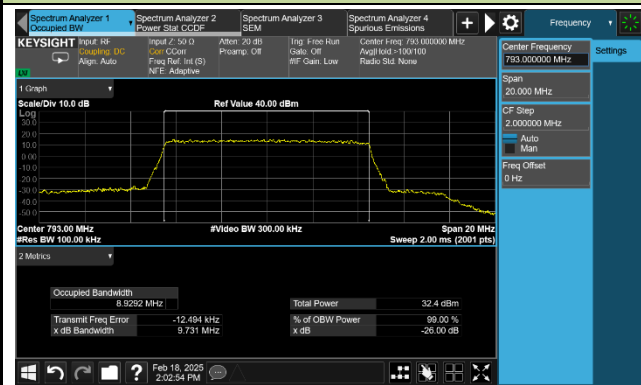


High Channel



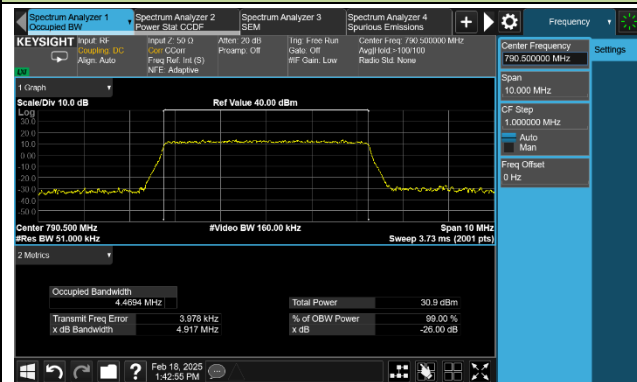
99% Bandwidth – 10MHz – QPSK

Middle Channel

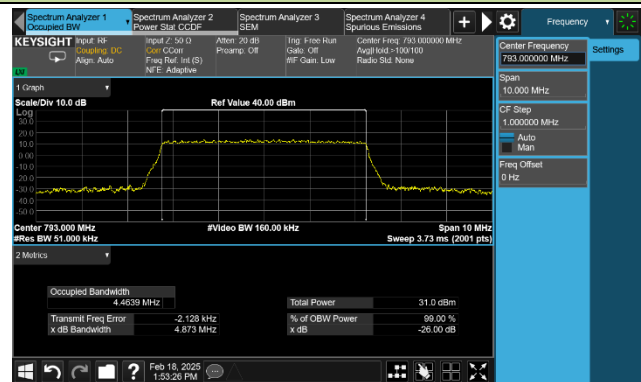


99% Bandwidth – 5MHz – 16QAM

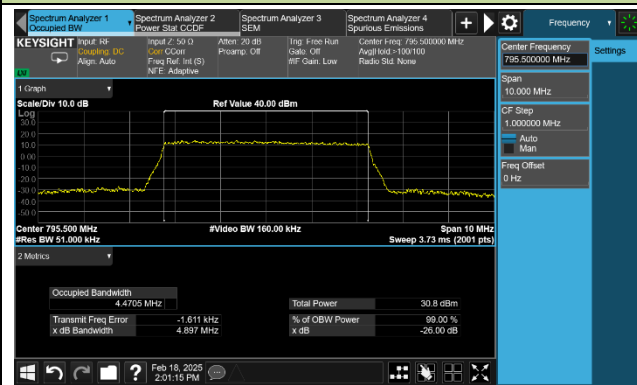
Low Channel



Middle Channel

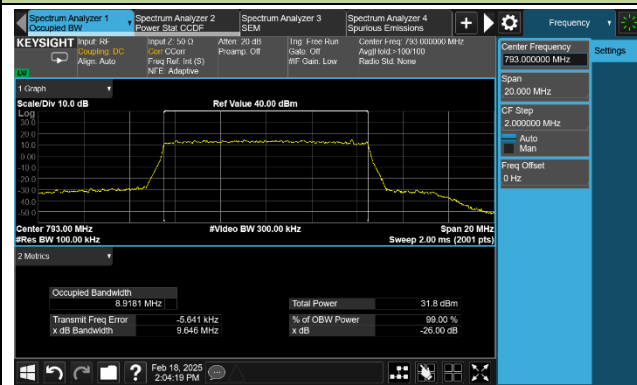


High Channel



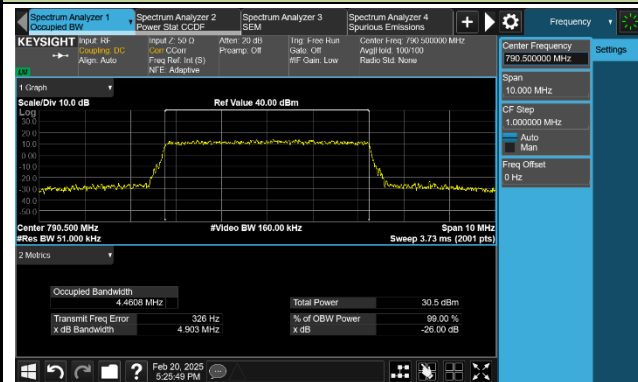
99% Bandwidth – 10MHz – 16QAM

Middle Channel

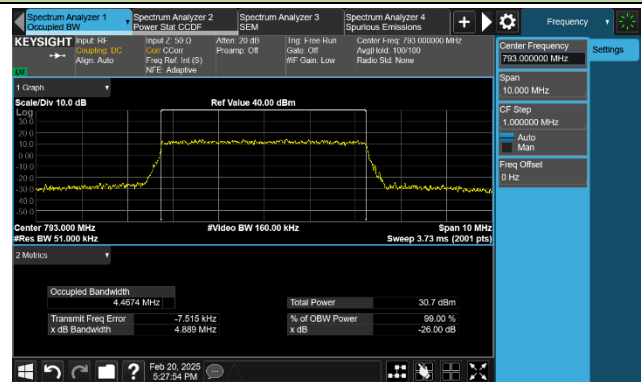


99% Bandwidth – 5MHz – 64QAM

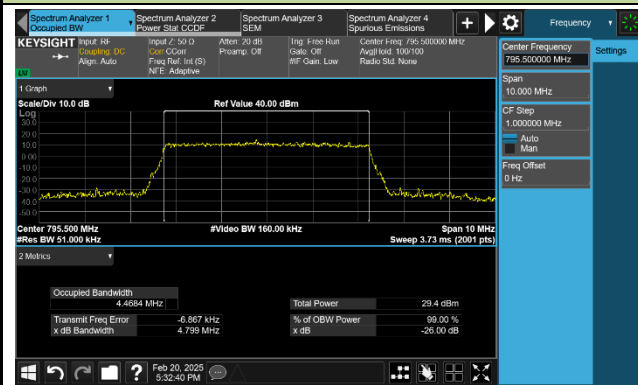
Low Channel



Middle Channel

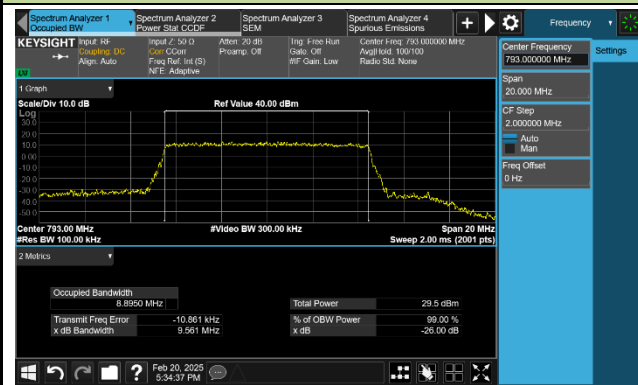


High Channel



99% Bandwidth – 10MHz – 64QAM

Middle Channel



A.2 Frequency Stability Test Result

Test Site	WZ-TR3	Test Engineer	Edith Yu
Test Date	2025-03-08	Test Band	Band 14

Voltage	Temp (°C)	Frequency Range (MHz)		Delta (Hz)	Frequency stability (ppm)	Within Authorized Frequency Block
		788	798			
		f _L	f _H			
Normal	+ 20 (Ref)	788.215	797.780	0.0	0.0000	Pass
	+ 50	788.215	797.780	0.4	0.0005	Pass
	+ 40	788.215	797.780	-0.5	-0.0006	Pass
	+ 30	788.215	797.780	-2.9	-0.0037	Pass
	+ 10	788.215	797.780	-0.2	-0.0003	Pass
	0	788.215	797.780	-1.1	-0.0014	Pass
	- 10	788.215	797.780	-2.4	-0.0030	Pass
	- 20	788.215	797.780	-4.3	-0.0054	Pass
	- 30	788.215	797.780	0.4	0.0005	Pass
10.35Vdc	+ 20	788.215	797.780	-3.9	-0.0049	Pass
9Vdc	+ 20	788.215	797.780	0.0	0.0000	Pass

Note: The operating voltage is provided by the manufacturer.

A.3 Equivalent Isotropically Radiated Power Test Result

Test Site	WZ-SR6	Test Engineer	Edith Yu
Test Date	2025-02-13 ~ 2025-02-19	Test Band	Band 14

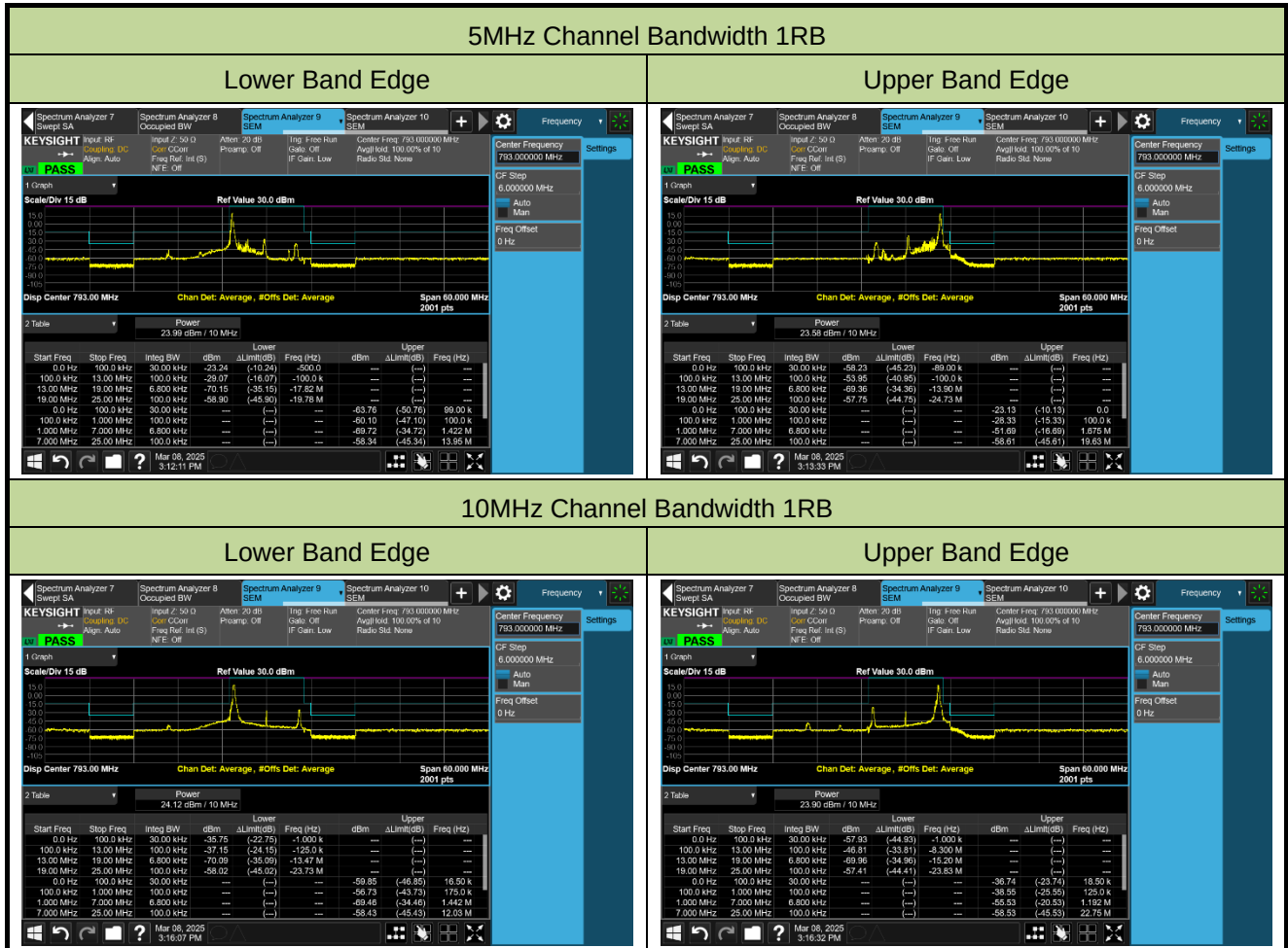
Channel Bandwidth (MHz)	Frequency (MHz)	RB Size	RB Offset	Output Power (dBm)	ERP (dBm)	Limit (dBm)
QPSK						
5	790.5	1	0	24.21	25.95	<44.77
5	793.0			24.09	25.83	<44.77
5	795.5			24.20	25.94	<44.77
5	790.5	1	12	24.62	26.36	<44.77
5	793.0			24.52	26.26	<44.77
5	795.5			24.54	26.28	<44.77
5	790.5	1	24	24.27	26.01	<44.77
5	793.0			24.31	26.05	<44.77
5	795.5			23.88	25.62	<44.77
5	790.5	25	0	23.27	25.01	<44.77
5	793.0			23.32	25.06	<44.77
5	795.5			23.30	25.04	<44.77
10	793.0	1	0	24.22	25.96	<44.77
10	793.0		24	24.40	26.14	<44.77
10	793.0		49	23.90	25.64	<44.77
10	793.0	50	0	23.35	25.09	<44.77
Note: The ERP (dBm) = Output Power (dBm) + Antenna Gain (dBi) - 2.15						

Channel Bandwidth (MHz)	Frequency (MHz)	RB Size	RB Offset	Output Power (dBm)	ERP (dBm)	Limit (dBm)
16QAM						
5	790.5	1	0	22.68	24.42	<44.77
5	793.0			23.18	24.92	<44.77
5	795.5			23.15	24.89	<44.77
5	790.5	1	12	23.13	24.87	<44.77
5	793.0			23.64	25.38	<44.77
5	795.5			23.45	25.19	<44.77
5	790.5	1	24	22.45	24.19	<44.77
5	793.0			22.89	24.63	<44.77
5	795.5			22.68	24.42	<44.77
5	790.5	25	0	22.44	24.18	<44.77
5	793.0			22.07	23.81	<44.77
5	795.5			22.23	23.97	<44.77
10	793.0	1	0	22.70	24.44	<44.77
10	793.0		24	23.00	24.74	<44.77
10	793.0		49	22.62	24.36	<44.77
10	793.0	50	0	22.21	23.95	<44.77
Note: The ERP (dBm) = Output Power (dBm) + Antenna Gain (dBi) - 2.15						

Channel Bandwidth (MHz)	Frequency (MHz)	RB Size	RB Offset	Output Power (dBm)	ERP (dBm)	Limit (dBm)
64QAM						
5	790.5	1	0	22.16	23.90	<44.77
5	793.0			22.46	24.20	<44.77
5	795.5			22.44	24.18	<44.77
5	790.5	1	12	22.69	24.43	<44.77
5	793.0			22.65	24.39	<44.77
5	795.5			22.64	24.38	<44.77
5	790.5	1	24	22.38	24.12	<44.77
5	793.0			22.11	23.85	<44.77
5	795.5			22.43	24.17	<44.77
5	790.5	25	0	21.27	23.01	<44.77
5	793.0			21.11	22.85	<44.77
5	795.5			21.33	23.07	<44.77
10	793.0	1	0	22.32	24.06	<44.77
10	793.0		24	22.74	24.48	<44.77
10	793.0		49	21.67	23.41	<44.77
10	793.0	50	0	21.26	23.00	<44.77
Note: The ERP (dBm) = Output Power (dBm) + Antenna Gain (dBi) - 2.15						

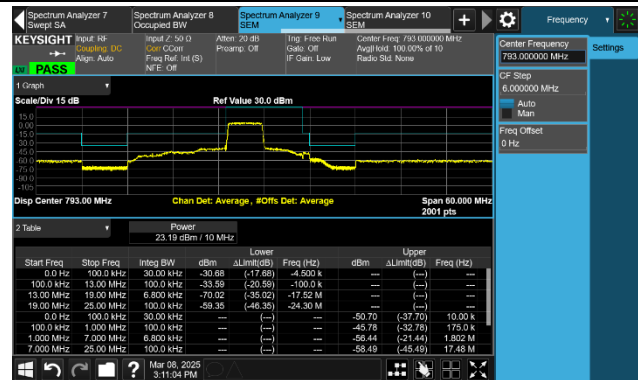
A.4 Conducted Band-Edge Test Result

Test Site	WZ-SR6	Test Engineer	Edith Yu
Test Date	2025-03-08	Test Band	Band 14

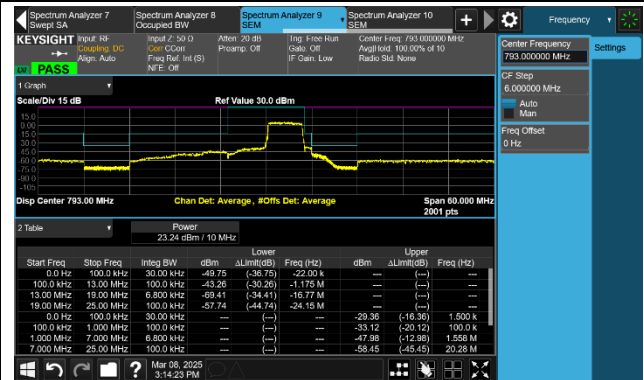


5MHz Channel Bandwidth Full RB

Lower Band Edge

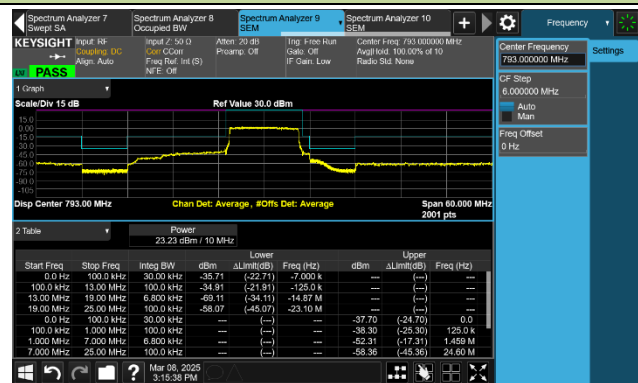


Upper Band Edge



10MHz Channel Bandwidth Full RB

Lower Band Edge & Upper Band Edge



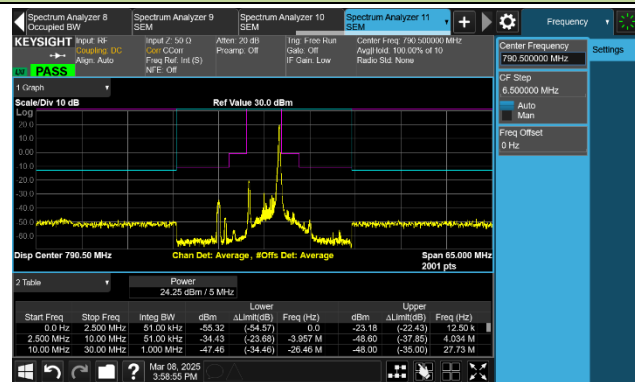
A.5 Emission Mask Test Result

Test Site	WZ-SR6	Test Engineer	Edith Yu
Test Date	2025-03-08	Test Band	Band 14

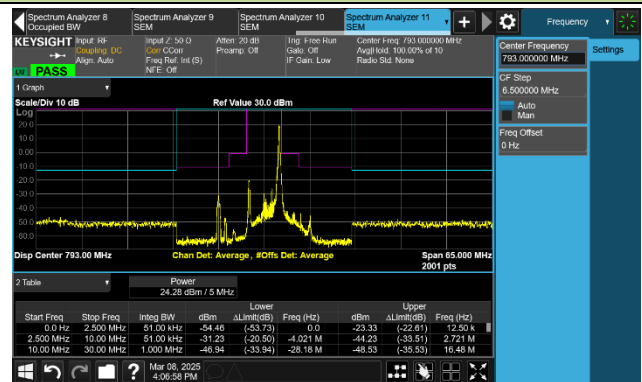


5MHz Channel Bandwidth 1RB@24

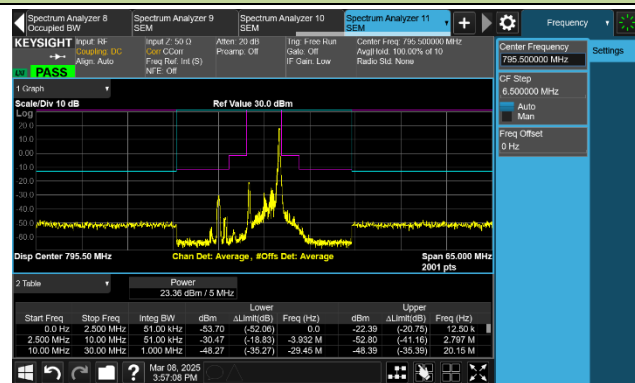
Low Channel



Middle Channel

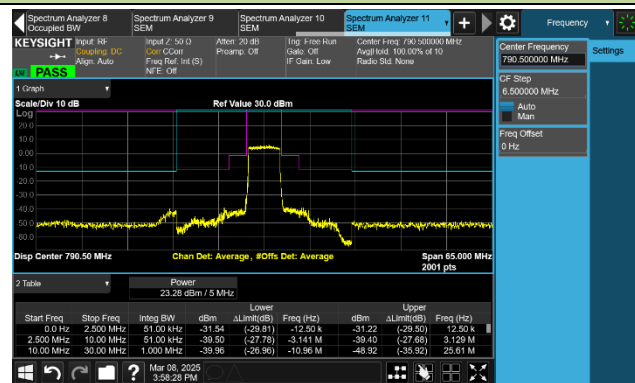


High Channel

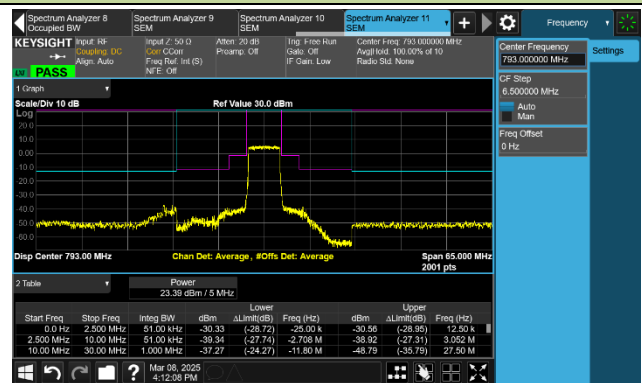


5MHz Channel Bandwidth Full RB

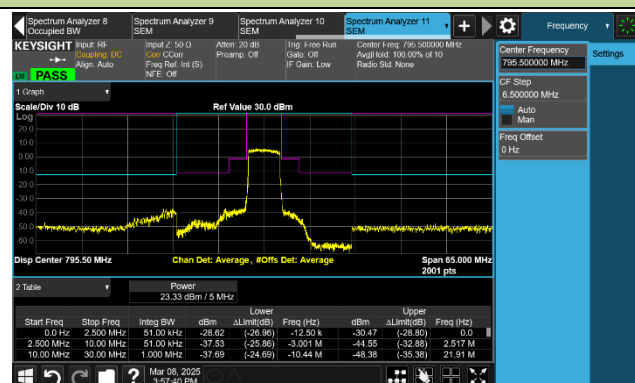
Low Channel



Middle Channel

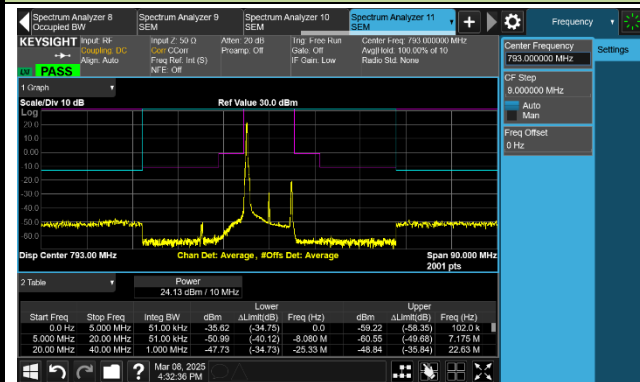


High Channel

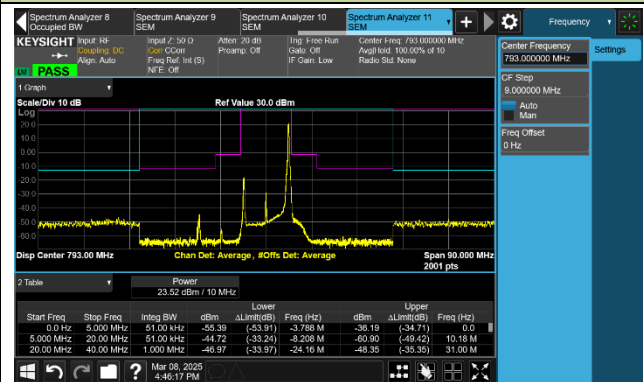


10MHz Channel Bandwidth

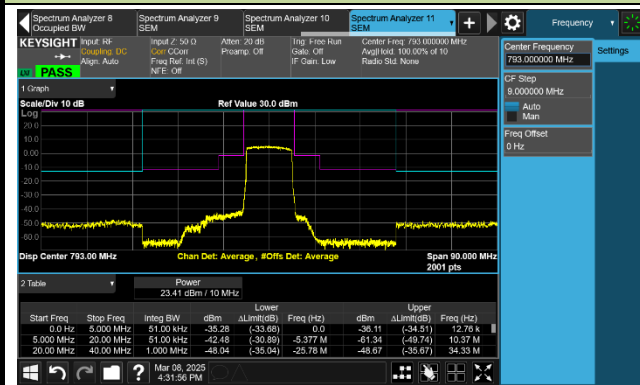
10MHz Channel Bandwidth 1RB@0



10MHz Channel Bandwidth 1RB@49



10MHz Channel Bandwidth Full RB



A.6 Conducted Supurious Emissions Test Result

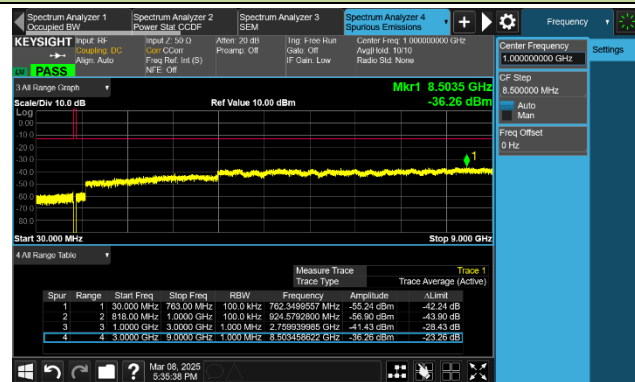
Test Site	WZ-SR6	Test Engineer	Edith Yu
Test Date	2025-03-08	Test Band	Band 14

Channel Bandwidth (MHz)	Frequency (MHz)	Frequency Range (MHz)	Max Spurious Emissions (dBm)	Limit (dBm)	Result
5	790.5	30 ~ 9000	-36.26	≤ -13.00	Pass
		1559 ~ 1610	-53.43	≤ -40.00	Pass
5	793.0	30 ~ 9000	-36.12	≤ -13.00	Pass
		1559 ~ 1610	-52.91	≤ -40.00	Pass
5	795.5	30 ~ 9000	-36.41	≤ -13.00	Pass
		1559 ~ 1610	-52.60	≤ -40.00	Pass
10	793.0	30 ~ 9000	-36.35	≤ -13.00	Pass
		1559 ~ 1610	-53.33	≤ -40.00	Pass

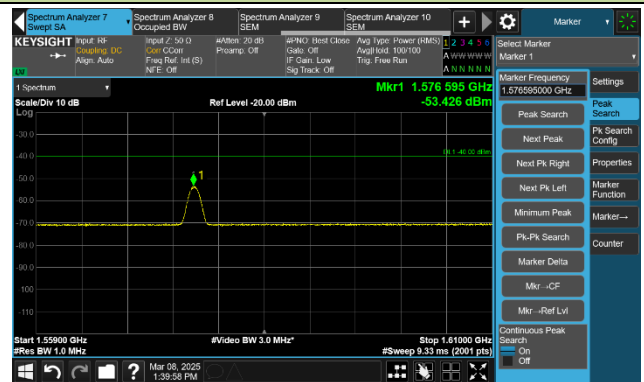
Note: The amplitude of Conducted Spurious emissions (frequency range from 9 kHz to 30 MHz) is that proximity to ambient noise, which is also attenuated more than 20 dB below the permissible value. Therefore, the data is not presented in the report.

5MHz Channel Bandwidth

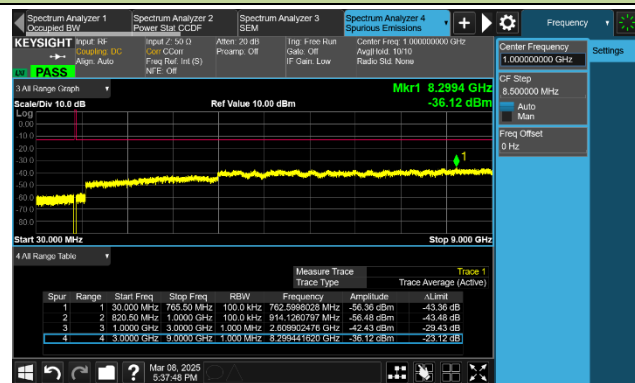
Low Channel



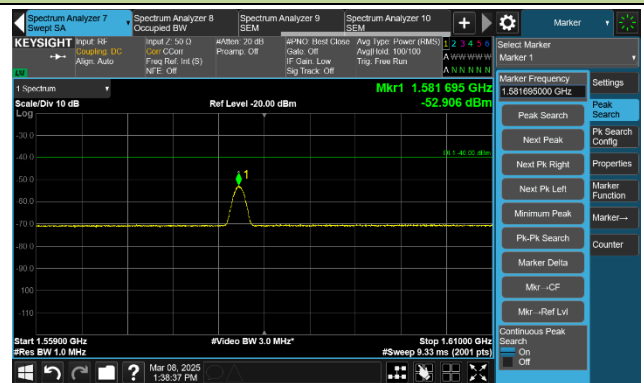
1559 - 1610MHz



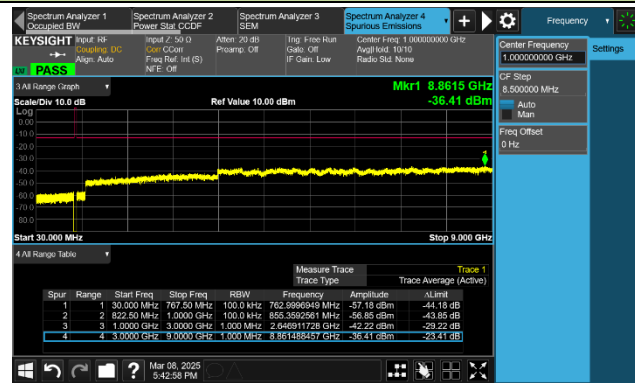
Middle Channel



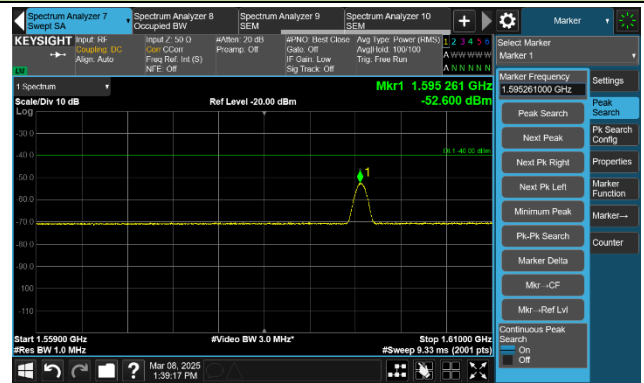
1559 - 1610MHz



High Channel

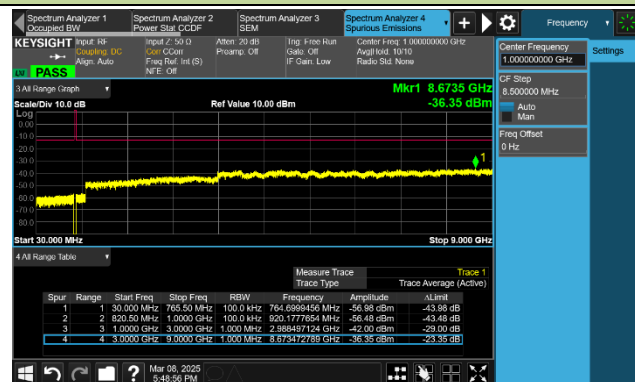


1559 - 1610MHz

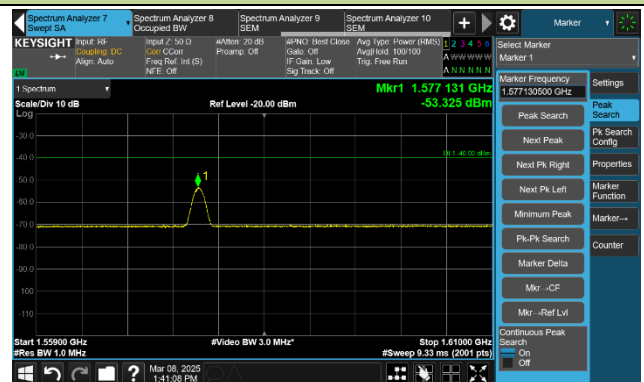


10MHz Channel Bandwidth

Middle Channel



1559 - 1610MHz



A.7 Radiated Spurious Emissions Test Result

Test Site	WZ-AC1	Test Engineer	Lucas Wang
Test Date	2025-02-13 ~ 2025-03-13	Test Band	Band 14

Frequency (MHz)	Reading Level (dBμV)	Factor (dB/m)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
Low Channel							
171.717	5.4	18.1	23.5	82.3	-58.8	Quasi-peak	Horizontal
928.705	-4.2	30.7	26.5	82.3	-55.8	Quasi-peak	Horizontal
62.301	9.5	17.9	27.4	82.3	-54.9	Quasi-peak	Vertical
956.932	-4.3	30.8	26.5	82.3	-55.8	Quasi-peak	Vertical
1577.600	48.6	-6.0	42.6	55.3	-12.7	Peak	Horizontal
8780.000	35.6	11.4	47.0	82.3	-35.3	Peak	Horizontal
1577.600	46.9	-6.0	40.9	55.3	-14.4	Peak	Vertical
2365.600	44.8	-2.4	42.4	82.3	-39.9	Peak	Vertical
Middle Channel							
217.501	6.5	15.1	21.6	82.3	-60.7	Quasi-peak	Horizontal
977.690	-3.9	31.2	27.3	82.3	-55.0	Quasi-peak	Horizontal
62.010	8.5	18.0	26.5	82.3	-55.8	Quasi-peak	Vertical
919.199	-4.0	30.5	26.5	82.3	-55.8	Quasi-peak	Vertical
1588.800	42.8	-6.0	36.8	55.3	-18.5	Peak	Horizontal
5078.400	36.6	4.0	40.6	82.3	-41.7	Peak	Horizontal
1589.600	42.1	-6.0	36.1	55.3	-19.2	Peak	Vertical
4960.000	37.1	3.7	40.8	82.3	-41.5	Peak	Vertical
High Channel							
398.406	3.5	21.2	24.7	82.3	-57.6	Quasi-peak	Horizontal
922.885	-4.0	30.6	26.6	82.3	-55.7	Quasi-peak	Horizontal
62.301	7.9	17.9	25.8	82.3	-56.5	Quasi-peak	Vertical
938.211	-4.7	30.7	26.0	82.3	-56.3	Quasi-peak	Vertical
1587.200	46.0	-6.0	40.0	55.3	-15.3	Peak	Horizontal
2380.800	43.0	-2.4	40.6	82.3	-41.7	Peak	Horizontal
1587.200	43.5	-6.0	37.5	55.3	-17.8	Peak	Vertical
2380.800	42.9	-2.4	40.5	82.3	-41.8	Peak	Vertical

Note 1: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m)

Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m).

Note 2: The peak-detection value will always be equal to or greater than the average-detection value. As a result, the peak-detection value measured by spectrum analyzer shall represent the worst-case result.

Note 3: The amplitude of Radiated transmitter spurious emissions (Frequency range from 9 kHz to 30 MHz and above 18 GHz) is that proximity to ambient noise, which is also attenuated more than 20 dB below the permissible value. Therefore, the data is not presented in the report.

Appendix B - Test Setup Photograph

Refer to "R25S1009034-UT" file.

Appendix C - EUT Photograph

Refer to "R25S1009034-UE" file.

The End
