NVLAP LAB CODE 600341-0

TEST REPORT

Applicant:	**Autel Robotics Co., Ltd.**
Address:	**601,701,801,901, Block B1, Nanshan iPark, No. 1001 Xueyuan Avenue, Nanshan District, Shenzhen, Guangdong, 518055, China**
Product Name:	**EVO Max**
FCC ID:	**2AGNTMDX240958B**
Standard(s):	**47 CFR Part 15, Subpart E(15.407) ANSI C63.10-2013 KDB 789033 D02 General U-NII Test Procedures New Rules v02r01**
Report Number:	**SZ1240322-14909E-RF-00G**
Report Date:	**2024/5/29**

The above device has been tested and found compliant with the requirement of the relative standards by Bay Area Compliance Laboratories Corp. (Dongguan).

Reviewed By: Gavin Xu	**Approved By:** Ivan Cao
Title: RF Engineer	Title: EMC Manager

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DOCUMENT REVISION HISTORY

Revision Number	Report Number	Description of Revision	Date of Revision
1.0	SZ1240322-14909E-RF-00G	Original Report	2024/5/29

1. GENERAL INFORMATION

1.1 Product Description for Equipment under Test (EUT)

EUT Name:	EVO Max
EUT Model:	MDX
Operation Frequency:	5150-5250 MHz band: SRD 1.4MHz:5154-5246 MHz SRD 10MHz: 5157-5243MHz SRD 20MHz: 5167-5233MHz 5725-5850 MHz band SRD 1.4MHz: 5728-5847 MHz SRD 10MHz: 5733-5842 MHz SRD 20MHz: 5738-5839 MHz
Maximum Average Output Power (Conducted):	19.76dBm (5150-5250 MHz) 24.63dBm (5725-5850 MHz)
Modulation Type:	QPSK, 16QAM
Rated Input Voltage:	DC 14.88V from battery
Serial Number:	2J8R-1(For RF Conducted test) 2J8R-2(For Radiated spurious emission test)
EUT Received Date:	2024/3/29
EUT Received Status:	Good

1.2 Accessory Information

Accessory Description	Manufacturer	Model	Parameters
Adapter	Shenzhen Esun Power Technology Co., Ltd	MDX120W	Input: 100-240Vac,50/60Hz,3.0A Output: 17Vdc, 7.06A(Main) USB-C:5.0Vdc,3.0A; 9.0Vdc,3.0A;12.0Vdc, 2.5A Total Output Power:120W Max

1.3 Antenna Information Detail▲

Antenna	Manufacturer	Antenna Type	input impedance (Ohm)	Frequency Range	Antenna Gain
Chain 0 (Antenna 0)	Autel Robotics Co., Ltd.	FPC	50	5.15~5.25GHz	0.7dBi
Chain 2 (Antenna 2)		FPC	50		-1.6dBi
Chain 0 (Antenna 0)	Autel Robotics Co., Ltd.	FPC	50	5.725-5.85GHz	0.9dBi
Chain 2 (Antenna 2)		FPC	50		0.8dBi

Note:
The system supports 2T4R.
Per KDB 662911 D01 Multiple Transmitter Output v02r01:

For power measurements:
CDD Mode:
Array Gain = 0 dB (i.e., no array gain) for $N_{ANT} \leq 4$
directional gain=0.7dBi +0dB =0.7dBi for 5.15-5.25GHz
directional gain=0.9dBi +0dB=0.9dBi for 5.725-5.85GHz

For power spectral density (PSD) measurements:
Array Gain = 10 log(N_{ANT}/N_{SS}) dB.
directional gain=0.7dBi +3dB =3.7dBi for 5.15-5.25GHz
directional gain=0.9dBi +3dB =3.9dBi for 5.725-5.85GHz

The design of compliance with §15.203:

☒ Unit uses a permanently attached antenna.

☐ Unit uses a unique coupling to the intentional radiator.

☐ Unit was professionally installed, and installer shall be responsible for verifying that the correct antenna is employed with the unit.

1.4 Equipment Modifications

No modifications are made to the EUT during all test items.

2. SUMMARY OF TEST RESULTS

Standard(s) Section	Test Items	Result
§15.207(a)	AC line conducted emissions	Not applicable
FCC§15.205& §15.209 &§15.407(b)	Radiated Spurious Emissions	Compliant
FCC§15.407(a) (e)	Emission Bandwidth	Compliant
FCC§15.407(a)	Maximum Conducted Output Power	Compliant
FCC§15.407 (a)	Power Spectral Density	Compliant
§15.203	Antenna Requirement	Compliant
Note 1: For AC line conducted emissions, the maximum output power mode and channel was tested. Note 2: For Radiated Spurious Emissions 9kHz~ 1GHz, the maximum output power mode and channel was tested.		

3. DESCRIPTION OF TEST CONFIGURATION

3.1 Operation Frequency Detail

For SRD-5.2GHz band:

1.4MHz Bandwidth Mode:

Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	5154	48	5201
2	5155	49	5202
3	5156	…	…
…	…	…	…
…	…	92	5245
46	5199	93	5246
47	5200	/	/
Per section 15.31(m), the below frequencies were performed the test as below:			

Test Channel	Frequency (MHz)
Lowest	5154
Middle	5201
Highest	5246

10MHz Bandwidth Mode:

Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	5157	45	5201
2	5158	46	5202
3	5159	…	…
…	…	…	…
…	…	86	5242
43	5199	87	5243
44	5200	/	/
Per section 15.31(m), the below frequencies were performed the test as below:			

Test Channel	Frequency (MHz)
Lowest	5157
Middle	5201
Highest	5243

20MHz Bandwidth Mode:

Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	5167	35	5201
2	5168	36	5202
3	5169	…	…
…	…	…	…
…	…	66	5232
33	5199	67	5233
34	5200	/	/
Per section 15.31(m), the below frequencies were performed the test as below:			

Test Channel	Frequency (MHz)
Lowest	5167
Middle	5201
Highest	5233

For SRD-5.8GHz band:
1.4MHz Bandwidth Mode:

Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	5728	61	5788
2	5729	62	5789
3	5730	…	…
…	…	…	…
…	…	118	5845
59	5786	119	5846
60	5787	120	5847
Per section 15.31(m), the below frequencies were performed the test as below:			
Test Channel	**Frequency (MHz)**		
Lowest	5728		
Middle	5789		
Highest	5847		

For SRD-5.8GHz band 10MHz Bandwidth Mode:

Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	5733	56	5788
2	5734	57	5789
3	5735	…	…
…	…	…	…
…	…	108	5840
54	5786	109	5841
55	5787	110	5842
Per section 15.31(m), the below frequencies were performed the test as below:			
Test Channel	**Frequency (MHz)**		
Lowest	5733		
Middle	5789		
Highest	5842		

For SRD-5.8GHz band 20MHz Bandwidth Mode:

Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	5738	52	5789
2	5739	53	5790
3	5740	…	…
…	…	…	…
…	…	100	5837
50	5787	101	5838
51	5788	102	5839
Per section 15.31(m), the below frequencies were performed the test as below:			
Test Channel	**Frequency (MHz)**		
Lowest	5738		
Middle	5790		
Highest	5839		

3.2 EUT Operation Condition

The system was configured for testing in Engineering Mode, which was provided by the manufacturer. The EUT configuration as below:

EUT Exercise Software:	RRTL6.0.0_VCOM

The software was provided by manufacturer. The maximum power was configured as below, that was provided by the manufacturer▲:

5150-5250 MHz Band: QPSK

Test Modes	Test Channels	Test Frequency (MHz)	Data rate	Power Level Setting	
				Chain 0	Chain 2
1.4M	Lowest	5154	120kbps	65	70
	Middle	5201	120kbps	65	70
	Highest	5246	120kbps	65	70
10M	Lowest	5157	19Mbps	65	70
	Middle	5201	19Mbps	65	70
	Highest	5243	19Mbps	65	70
20M	Lowest	5167	38Mbps	65	70
	Middle	5201	38Mbps	65	70
	Highest	5233	38Mbps	65	70

5725-5850 MHz Band: QPSK

Test Modes	Test Channels	Test Frequency (MHz)	Data rate	Power Level Setting	
				Chain 0	Chain 2
1.4M	Lowest	5728	120kbps	30	33
	Middle	5789	120kbps	30	33
	Highest	5847	120kbps	30	33
10M	Lowest	5733	19Mbps	30	33
	Middle	5789	19Mbps	30	33
	Highest	5842	19Mbps	30	33
20M	Lowest	5738	38Mbps	30	33
	Middle	5790	38Mbps	30	33
	Highest	5839	38Mbps	30	33

5150-5250 MHz Band: 16QAM

Test Modes	Test Channels	Test Frequency (MHz)	Data rate	Power Level Setting	
				Chain 0	Chain 2
1.4M	Lowest	5154	120kbps	60	70
	Middle	5201	120kbps	60	70
	Highest	5246	120kbps	60	70
10M	Lowest	5157	19Mbps	60	70
	Middle	5201	19Mbps	60	70
	Highest	5243	19Mbps	60	70
20M	Lowest	5167	38Mbps	60	70
	Highest	5201	38Mbps	60	70
	Middle	5233	38Mbps	60	70

5725-5850 MHz Band: 16QAM					
Test Modes	Test Channels	Test Frequency (MHz)	Data rate	Power Level Setting	
				Chain 0	Chain 2
1.4M	Lowest	5728	120kbps	33	30
	Middle	5789	120kbps	33	30
	Highest	5847	120kbps	33	30
10M	Lowest	5733	19Mbps	33	30
	Middle	5789	19Mbps	33	30
	Highest	5842	19Mbps	33	30
20M	Lowest	5738	38Mbps	33	30
	Highest	5790	38Mbps	33	30
	Middle	5839	38Mbps	33	30

3.3 Support Equipment List and Details

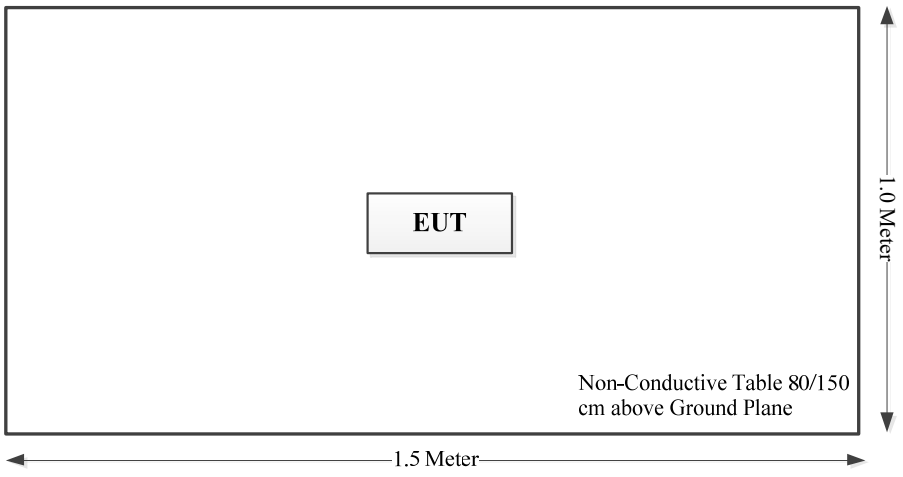
Manufacturer	Description	Model	Serial Number
/	/	/	/

3.4 Support Cable List and Details

Cable Description	Shielding Type	Ferrite Core	Length (m)	From Port	To
/	/	/	/	/	/

3.5 Block Diagram of Test Setup

Radiated Spurious Emissions:



3.6 Test Facility

The Test site used by Bay Area Compliance Laboratories Corp. (Dongguan) to collect test data is located on the No.12, Pulong East 1st Road, Tangxia Town, Dongguan, Guangdong, China.

The lab has been recognized as the FCC accredited lab under the KDB 974614 D01 and is listed in the FCC Public Access Link (PAL) database, FCC Registration No. : 829273, the FCC Designation No. : CN5044.

The lab has been recognized by Innovation, Science and Economic Development Canada to test to Canadian radio equipment requirements, the CAB identifier: CN0022.

3.7 Measurement Uncertainty

Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty. The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor K with the 95% confidence interval.

Parameter	Measurement Uncertainty
Occupied Channel Bandwidth	±5 %
RF output power, conducted	±0.61dB
Power Spectral Density, conducted	±0.61 dB
Unwanted Emissions, radiated	9kHz~30MHz: 3.3dB, 30MHz~200MHz: 4.55 dB, 200MHz~1GHz: 5.92 dB, 1GHz~6GHz: 4.98 dB, 6GHz~18GHz: 5.89 dB, 18GHz~26.5GHz:5.47 dB, 26.5GHz~40GHz:5.63 dB
Unwanted Emissions, conducted	±2.47 dB
Temperature	±1℃
Humidity	±5%
DC and low frequency voltages	±0.4%
Duty Cycle	1%
AC Power Lines Conducted Emission	3.11 dB (150 kHz to 30 MHz)

4. REQUIREMENTS AND TEST PROCEDURES

4.1 AC Line Conducted Emissions

4.1.1 Applicable Standard

FCC§15.207(a).

(a) Except as shown in paragraphs (b) and (c) of this section, for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 kHz to 30 MHz, shall not exceed the limits in the following table, as measured using a 50 μH/50 ohms line impedance stabilization network (LISN). Compliance with the provisions of this paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower limit applies at the boundary between the frequency ranges.

	Conducted limit (dBμV)	
Frequency of emission (MHz)	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

*Decreases with the logarithm of the frequency.

(b) The limit shown in paragraph (a) of this section shall not apply to carrier current systems operating as intentional radiators on frequencies below 30 MHz. In lieu thereof, these carrier current systems shall be subject to the following standards:

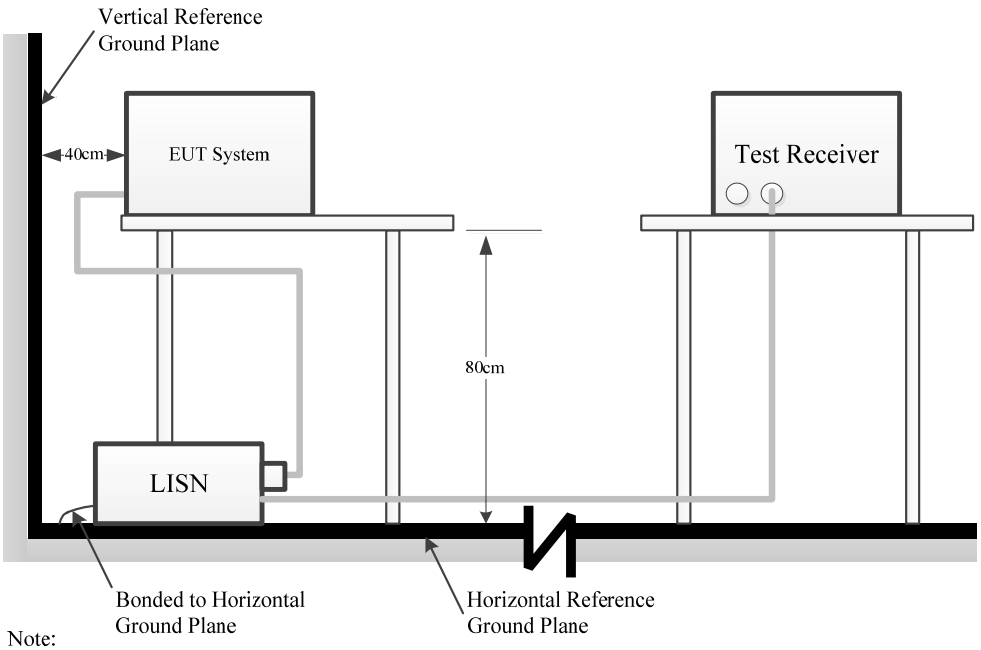
(1) For carrier current system containing their fundamental emission within the frequency band 535-1705 kHz and intended to be received using a standard AM broadcast receiver: no limit on conducted emissions.

(2) For all other carrier current systems: 1000 μV within the frequency band 535-1705 kHz, as measured using a 50 μH/50 ohms LISN.

(3) Carrier current systems operating below 30 MHz are also subject to the radiated emission limits in §15.205, §15.209, §15.221, §15.223, or §15.227, as appropriate.

(c) Measurements to demonstrate compliance with the conducted limits are not required for devices which only employ battery power for operation and which do not operate from the AC power lines or contain provisions for operation while connected to the AC power lines. Devices that include, or make provisions for, the use of battery chargers which permit operating while charging, AC adapters or battery eliminators or that connect to the AC power lines indirectly, obtainig their power through another device which is connected to the AC power lines, shall be tested to demonstrate compliance with the conducted limits.

4.1.2 EUT Setup



Note:
1. Support units were connected to second LISN.
2. Both of LISNs (AMN) 80 cm from EUT and at least 80 cm from other units and oter metal planes support units.

The setup of EUT is according with per ANSI C63.10-2013 measurement procedure. The specification used was with the FCC Part 15.207 limits.

The spacing between the peripherals was 10 cm.

The adapter or EUT was connected to the main LISN with a 120 V/60 Hz AC power source.

4.1.3 EMI Test Receiver Setup

The EMI test receiver was set to investigate the spectrum from 150 kHz to 30 MHz.

During the conducted emission test, the EMI test receiver was set with the following configurations:

Frequency Range	IF B/W
150 kHz – 30 MHz	9 kHz

4.1.4 Test Procedure

The frequency and amplitude of the six highest ac power-line conducted emissions relative to the limit, measured over all the current-carrying conductors of the EUT power cords, and the operating frequency or frequency to which the EUT is tuned (if appropriate), should be reported, unless such emissions are more than 20 dB below the limit. AC power-line conducted emissions measurements are to be separately carried out only on each of the phase ("hot") line(s) and (if used) on the neutral line(s), but not on the ground [protective earth] line(s). If less than six emission frequencies are within 20 dB of the limit, then the noise level of the measuring instrument at representative frequencies should be reported. The specific conductor of the power-line cord for each of the reported emissions should be identified. Measure the six highest emissions with respect to the limit on each current-carrying conductor of each power cord associated with the EUT (but not the power cords of associated or peripheral equipment that are part of the test configuration). Then, report the six highest emissions with respect to the limit from among all the measurements identifying the frequency and specific current-carrying conductor identified with the emission. The six highest emissions should be reported for each of the current-carrying conductors, or the six highest emissions may be reported over all the current-carrying conductors.

4.1.5 Corrected Amplitude & Margin Calculation

The basic equation is as follows:

Result = Reading + Factor
Factor = attenuation caused by cable loss + voltage division factor of AMN

The "**Margin**" column of the following data tables indicates the degree of compliance within the applicable limit. The equation for margin calculation is as follows:

Margin = Limit – Result

4.1.6 Test Result

Please refer to section 5.1.

4.2 Radiation Spurious Emissions

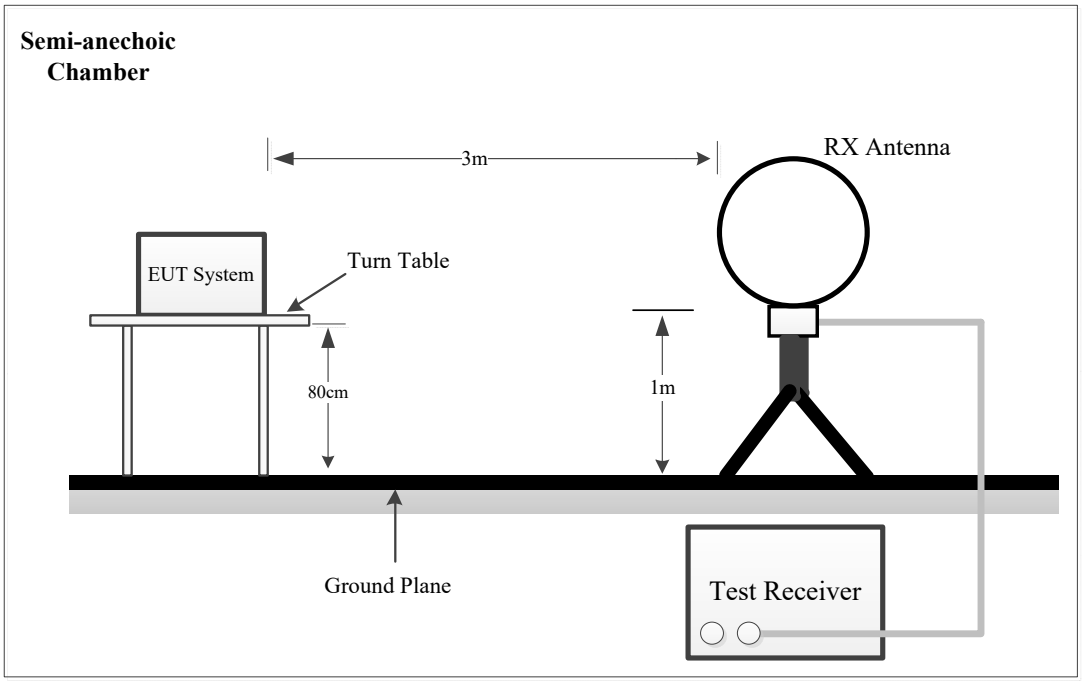
4.2.1 Applicable Standard

FCC §15.407 (b);

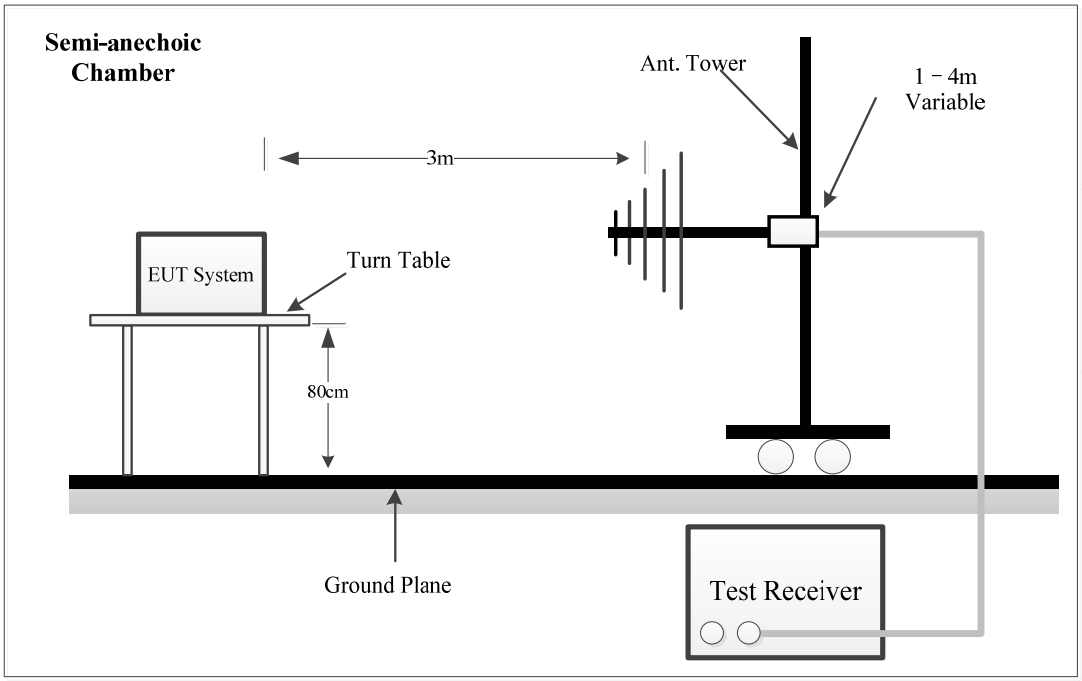
Undesirable emission limits. Except as shown in paragraph (b)(7) of this section, the maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:
(1) For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of – 27 dBm/MHz.
(2) For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of – 27 dBm/MHz.
(3) For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of – 27 dBm/MHz.
(4) For transmitters operating solely in the 5.725-5.850 GHz band:
(i) All emissions shall be limited to a level of – 27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.
(ii) Devices certified before March 2, 2017 with antenna gain greater than 10 dBi may demonstrate compliance with the emission limits in § 15.247(d), but manufacturing, marketing and importing of devices certified under this alternative must cease by March 2, 2018. Devices certified before March 2, 2018 with antenna gain of 10 dBi or less may demonstrate compliance with the emission limits in § 15.247(d), but manufacturing, marketing and importing of devices certified under this alternative must cease before March 2, 2020.
(8) The emission measurements shall be performed using a minimum resolution bandwidth of 1 MHz. A lower resolution bandwidth may be employed near the band edge, when necessary, provided the measured energy is integrated to show the total power over 1 MHz.
(9) Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in § 15.209. Further, any U-NII devices using an AC power line are required to comply also with the conducted limits set forth in § 15.207.
(10) The provisions of § 15.205 apply to intentional radiators operating under this section.
(11) When measuring the emission limits, the nominal carrier frequency shall be adjusted as close to the upper and lower frequency band edges as the design of the equipment permits.
(c) The device shall automatically discontinue transmission in case of either absence of information to transmit or operational failure. These provisions are not intended to preclude the transmission of control or signalling information or the use of repetitive codes used by certain digital technologies to complete frame or burst intervals. Applicants shall include in their application for equipment authorization a description of how this requirement is met.

4.2.2 EUT Setup

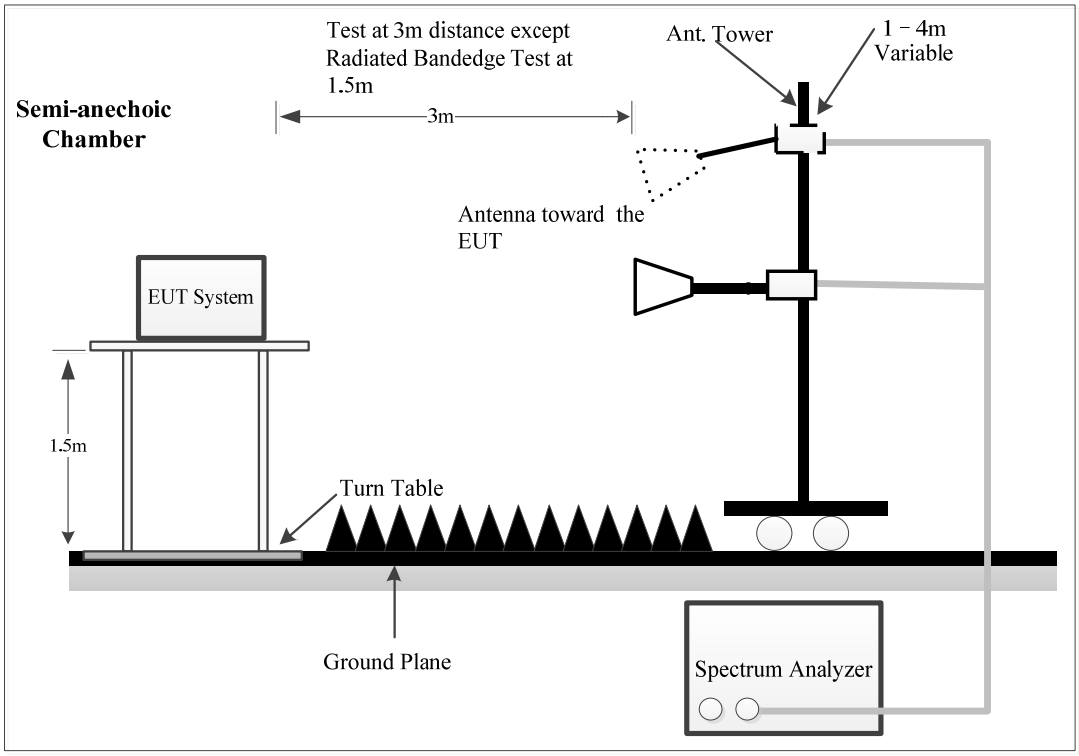
9kHz~30MHz:



30MHz~1GHz:



Above 1GHz:



The radiated emission tests were performed in the semi-anechoic chamber, using the setup accordance with the ANSI C63.10-2013. The specification used was FCC 15.209, FCC 15.407 limits.

The external I/O cables were draped along the test table and formed a bundle 30 to 40 cm long in the middle.

The spacing between the peripherals was 10 cm.

For 9kHz-30MHz test, the lowest height of the magnetic antenna shall be 1 m above the ground and three antenna orientations (parallel, perpendicular, and ground-parallel) shall be measured.

4.2.3 EMI Test Receiver & Spectrum Analyzer Setup

The system was investigated from 9 kHz to 40 GHz.

During the radiated emission test, the EMI test receiver & Spectrum Analyzer Setup were set with the following configurations:

9kHz-1000MHz:

Frequency Range	Measurement	RBW	Video B/W	IF B/W
9 kHz – 150 kHz	QP/AV	200 Hz	1 kHz	200 Hz
150 kHz – 30 MHz	QP/AV	9 kHz	30 kHz	9 kHz
30 MHz – 1000 MHz	PK	100 kHz	300 kHz	/
	QP	/	/	120 kHz

1GHz- 40GHz:

Measurement	Duty cycle	RBW	Video B/W
PK	Any	1MHz	3 MHz
Ave.	>98%	1MHz	10 Hz
	<98%	1MHz	⩾1/T

Note: T is minimum transmission duration

If the maximized peak measured value complies with under the QP/Average limit more than 6dB, then it is unnecessary to perform an QP/Average measurement.

4.2.4 Test Procedure

During the radiated emission test, the adapter was connected to the first AC floor outlet.

Data was recorded in Quasi-peak detection mode for frequency range of 9 kHz -1 GHz, except 9-90 kHz, 110-490 kHz, employing an average detector, peak and Average detection modes for frequencies above 1 GHz.

According to KDB 789033 D02 General UNII Test Procedures New Rules v02r01, emission shall be computed as: E [dBμV/m] = EIRP[dBm] + 95.2, for d = 3 meters.

For Radiated Bandedge test, which was performed at 1.5 m distance, according to C63.10, the test result shall be extrapolated to the specified distance using an extrapolation Factor of 20dB/decade from 3m to 1.5m
Distance extrapolation Factor =20 log (specific distance [3m]/test distance [1.5m]) dB= 6.0dB

All emissions under the average limit and under the noise floor have not recorded in the report.

4.2.5 Corrected Result & Margin Calculation

The basic equation except radiated bandedge test is as follows:

Factor = Antenna Factor + Cable Loss- Amplifier Gain

Result = Reading + Factor

For Radiated Bandedge test:

Factor = Antenna Factor + Cable Loss

Result = Reading + Factor-Distance extrapolation Factor

The "**Margin**" column of the following data tables indicates the degree of compliance within the applicable limit. The equation for margin calculation is as follows:

Margin = Limit – Result

4.2.6 Test Result

Please refer to section 5.2.

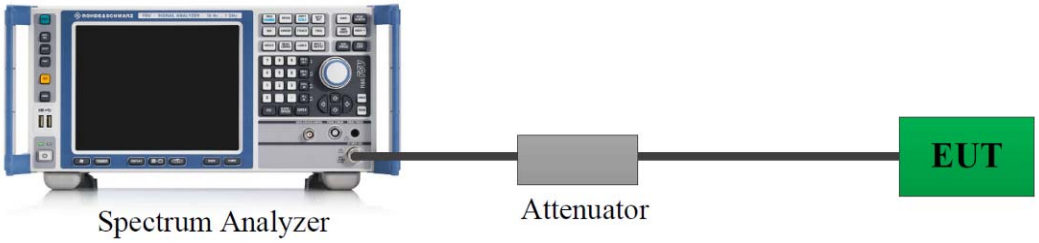
4.3 Emission Bandwidth

4.3.1 Applicable Standard

FCC §15.407 (a),(h)
(h)(2) Radar Detection Function of Dynamic Frequency Selection (DFS). U-NII devices operating with any part of its 26 dB emission bandwidth in the 5.25-5.35 GHz and 5.47-5.725 GHz bands shall employ a DFS radar detection mechanism to detect the presence of radar systems and to avoid co-channel operation with radar systems.

FCC §15.407 (e)
Within the 5.725-5.850 GHz and 5.850-5.895 GHz bands, the minimum 6 dB bandwidth of U-NII devices shall be at least 500 kHz.

4.3.2 EUT Setup



A short RF cable with low cable loss connected to the EUT antenna port, which was provided by manufacturer.

4.3.3 Test Procedure

26dB Emission Bandwidth:

According to ANSI C63.10-2013 Section 12.4.1

a) Set RBW = approximately 1% of the emission bandwidth.
b) Set the VBW > RBW.
c) Detector = peak.
d) Trace mode = max hold
e) Measure the maximum width of the emission that is 26 dB down from the peak of the emission. Compare this with the RBW setting of the instrument. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.

6 dB emission bandwidth:

According to KDB 789033 D02 General UNII Test Procedures New Rules v02r01

a) Set RBW = 100 kHz.
b) Set the video bandwidth (VBW) ≥ 3 RBW.
c) Detector = Peak.
d) Trace mode = max hold.
e) Sweep = auto couple.
f) Allow the trace to stabilize.
g) Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.
Note: The automatic bandwidth measurement capability of a spectrum analyzer or EMI receiver may be employed if it implements the functionality described in this section. For devices that use channel aggregation refer to III.A and III.C for determining emission bandwidth.

99% Occupied Bandwidth:

According to ANSI C63.10-2013 Section 12.4.2&6.9.3

The occupied bandwidth is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers are each equal to 0.5% of the total mean power of the given emission. The following procedure shall be used for measuring 99% power bandwidth:
a) The instrument center frequency is set to the nominal EUT channel center frequency. The frequency span for the spectrum analyzer shall be between 1.5 times and 5.0 times the OBW.
b) The nominal IF filter bandwidth (3 dB RBW) shall be in the range of 1% to 5% of the OBW, and VBW shall be approximately three times the RBW, unless otherwise specified by the applicable requirement.
c) Set the reference level of the instrument as required, keeping the signal from exceeding the maximum input mixer level for linear operation. In general, the peak of the spectral envelope shall be more than [10 log (OBW/RBW)] below the reference level. Specific guidance is given in 4.1.5.2.
d) Step a) through step c) might require iteration to adjust within the specified range.
e) Video averaging is not permitted. Where practical, a sample detection and single sweep mode shall be used. Otherwise, peak detection and max hold mode (until the trace stabilizes) shall be used.
f) Use the 99% power bandwidth function of the instrument (if available) and report the measured bandwidth.
g) If the instrument does not have a 99% power bandwidth function, then the trace data points are recovered and directly summed in linear power terms. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5% of the total is reached; that frequency is recorded as the lower frequency. The process is repeated until 99.5% of the total is reached; that frequency is recorded as the upper frequency. The 99% power bandwidth is the difference between these two frequencies.
h) The occupied bandwidth shall be reported by providing plot(s) of the measuring instrument display; the plot axes and the scale units per division shall be clearly labeled. Tabular data may be reported in addition to the plot(s).

4.3.4 Test Result

Please refer to section 5.3 and section 5.4.

4.4 Maximum Conducted Output Power

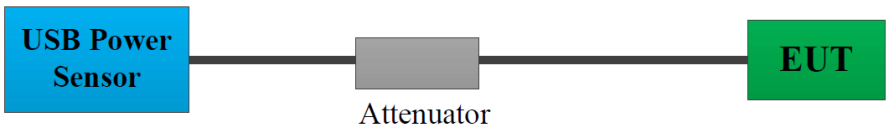
4.4.1 Applicable Standard

FCC §15.407(a) (1)(i)
For an outdoor access point operating in the band 5.15– 5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. The maximum e.i.r.p. at any elevation angle above 30degrees as measured from the horizon must not exceed 125 mW (21 dBm).

FCC §15.407(a) (2)
For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in megahertz. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

FCC §15.407(a) (3)(i)
For the band 5.725-5.850 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

4.4.2 EUT Setup



A short RF cable with low cable loss connected to the EUT antenna port, which was provided by manufacturer. The cable loss of this RF cable was offset into the setting of test equipment, which was provided by manufacturer▲.

4.4.3 Test Procedure

According to ANSI C63.10-2013 Section 12.3.3.1

Method PM-G is measurement using a gated RF average power meter.
Measurements may be performed using a wideband gated RF power meter provided that the gate parameters are adjusted such that the power is measured only when the EUT is transmitting at its maximum power control level. Because the measurement is made only during the ON time of the transmitter, no duty cycle correction factor is required.

4.4.4 Test Result

Please refer to section 5.5.

4.5 Maximum Power Spectral Density

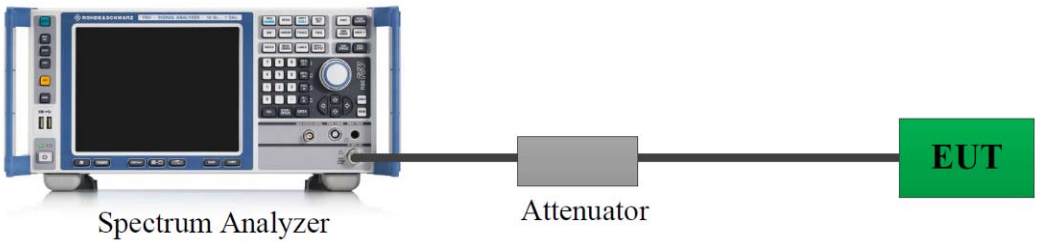
4.5.1 Applicable Standard

FCC §15.407(a) (1)(i)
For an outdoor access point operating in the band 5.15– 5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. The maximum e.i.r.p. at any elevation angle above 30degrees as measured from the horizon must not exceed 125 mW (21 dBm).

FCC §15.407(a) (2)
For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in megahertz. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

FCC §15.407(a) (3)(i)
For the band 5.725-5.850 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

4.5.2 EUT Setup



A short RF cable with low cable loss connected to the EUT antenna port, which was provided by manufacturer.

4.5.3 Test Procedure

According to KDB 789033 D02 General UNII Test Procedures New Rules v02r01

Duty cycle ≥98%

KDB 789033 D02 General UNII Test Procedures New Rules v02r01 Method SA-1 should be applied.

Duty cycle <98%, duty cycle variations are less than ±2%

KDB 789033 D02 General UNII Test Procedures New Rules v02r01 Method SA-2 should be applied.

Duty cycle <98%, duty cycle variations exceed ±2%

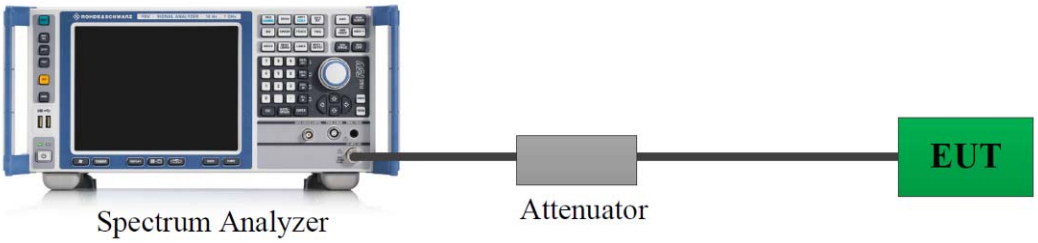
KDB 789033 D02 General UNII Test Procedures New Rules v02r01 Method SA-3 should be applied.

4.5.4 Test Result

Please refer to section 5.6.

4.6 Duty Cycle

4.6.1 EUT Setup



A short RF cable with low cable loss connected to the EUT antenna port, which was provided by manufacturer.

4.6.2 Test Procedure

According to ANSI C63.10-2013 Section 12.2

The zero-span mode on a spectrum analyzer or EMI receiver if the response time and spacing between bins on the sweep are sufficient to permit accurate measurements of the ON and OFF times of the transmitted signal:
1) Set the center frequency of the instrument to the center frequency of the transmission.
2) Set RBW ≥ OBW if possible; otherwise, set RBW to the largest available value.
3) Set VBW ≥ RBW. Set detector = peak or average.
4) The zero-span measurement method shall not be used unless both RBW and VBW are > 50/T and the number of sweep points across duration T exceeds 100. (For example, if VBW and/or RBW are limited to 3 MHz, then the zero-span method of measuring the duty cycle shall not be used if T ≤ 16.7 μs.)

4.6.3 Judgment

Report Only. Please refer to section 5.7.

4.7 Antenna Requirement

4.7.1 Applicable Standard

FCC §15.203

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. This requirement does not apply to carrier current devices or to devices operated under the provisions of §§15.211, 15.213, 15.217, 15.219, 15.221, or §15.236. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with §15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded.

4.7.2 Judgment

Compliant. Please refer to the Antenna Information detail in Section 1.3.

5. Test DATA AND RESULTS

5.1 AC Line Conducted Emissions

Not Applicable, the device was powered by battery when operating.

5.2 Radiation Spurious Emissions

Serial Number:	2J8R-2	Test Date:	Below 1GHz: 2024/5/5 Above 1GHz: 2024/5/10
`	Chamber 10m, Chamber B	Test Mode:	Transmitting
Tester:	Zoo Zou, Nat Zhou	Test Result:	Pass

Environmental Conditions:					
Temperature: (℃)	23.5~24.2	Relative Humidity: %	45~69	ATM Pressure: (kPa)	101.4

Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
9kHz~1000MHz					
EMCO	Passive Loop Antenna	6512	9706-1206	2023/10/21	2026/10/20
Sunol Sciences	Hybrid Antenna	JB3	A060611-1	2023/9/6	2026/9/5
Narda	Coaxial Attenuator	779-6dB	04269	2023/9/6	2026/9/5
Unknown	Coaxial Cable	C-NJNJ-50	C-1000-01	2023/8/1	2024/7/31
Unknown	Coaxial Cable	C-NJNJ-50	C-0400-04	2023/8/1	2024/7/31
Unknown	Coaxial Cable	C-NJNJ-50	C-0530-01	2023/8/1	2024/7/31
Sonoma	Amplifier	310N	185914	2023/8/1	2024/7/31
R&S	EMI Test Receiver	ESCI	101121	2023/10/18	2024/10/17
Farad	Test Software	EZ-EMC	V1.1.4.2	N/A	N/A
Above 1GHz					
ETS-Lindgren	Horn Antenna	3115	000 527 35	2023/9/7	2026/9/6
Ducommun Technologies	Horn Antenna	ARH-4223-02	1007726-02 1304	2023/2/22	2026/2/21
Ducommun Technologies	Horn Antenna	ARH-2823-02	1007726-01 1302	2023/2/22	2026/2/21
Xinhang Macrowave	Coaxial Cable	XH750A-N/J-SMA/J-10M	20231117004 #0001	2023/11/17	2024/11/16
Xinhang Macrowave	Coaxial Cable	XH360A-2.92/J-2.92/J-6M-A	20231208001 #0001	2023/12/11	2024/12/10
AH	Preamplifier	PAM-0118P	469	2023/8/19	2024/8/18
AH	Preamplifier	PAM-1840VH	191	2023/9/7	2024/9/6
R&S	Spectrum Analyzer	FSV40	101944	2023/10/18	2024/10/17
Audix	Test Software	E3	191218 (V9)	N/A	N/A
Sinoscite	Band Rejection Filter	BSF5150-5850MN	0899003	2024/2/21	2025/2/20

** Statement of Traceability: Bay Area Compliance Laboratories Corp. (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).*

Test Data:

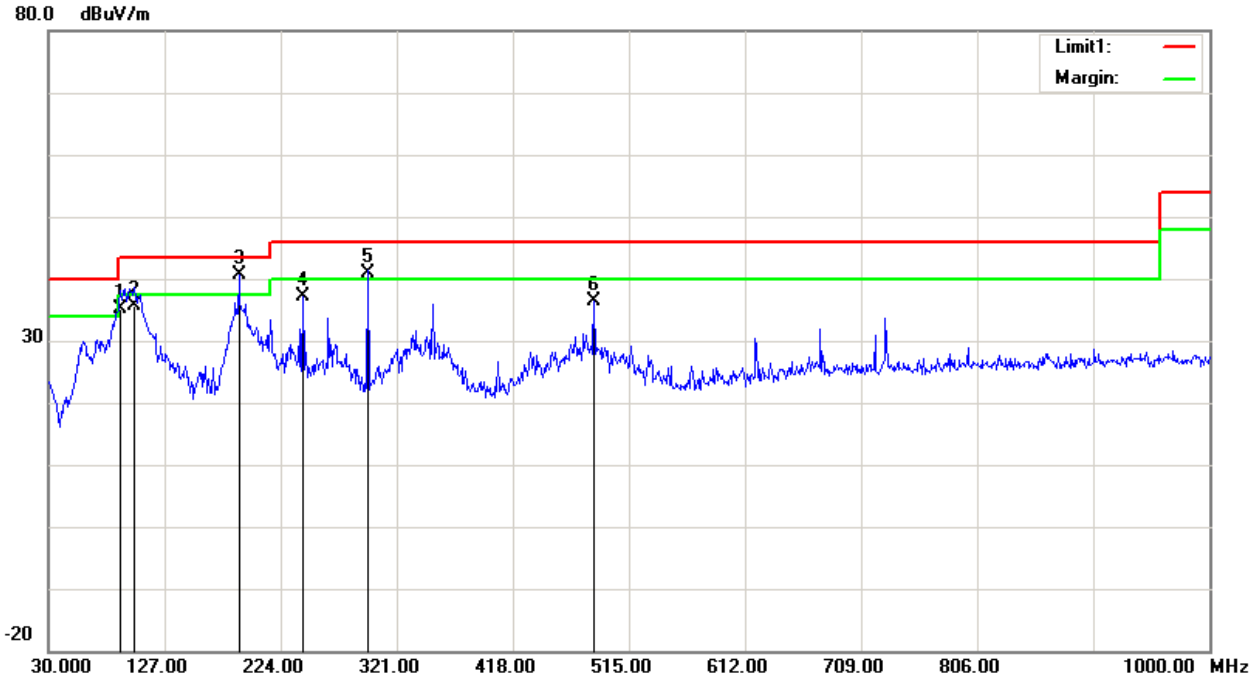
Please refer to the below table and plots.

1) 9kHz~30MHz

QPSK 1.4M 5728MHz was tested. The amplitude of spurious emissions attenuated more than 20 dB below the permissible value is not required to be report.

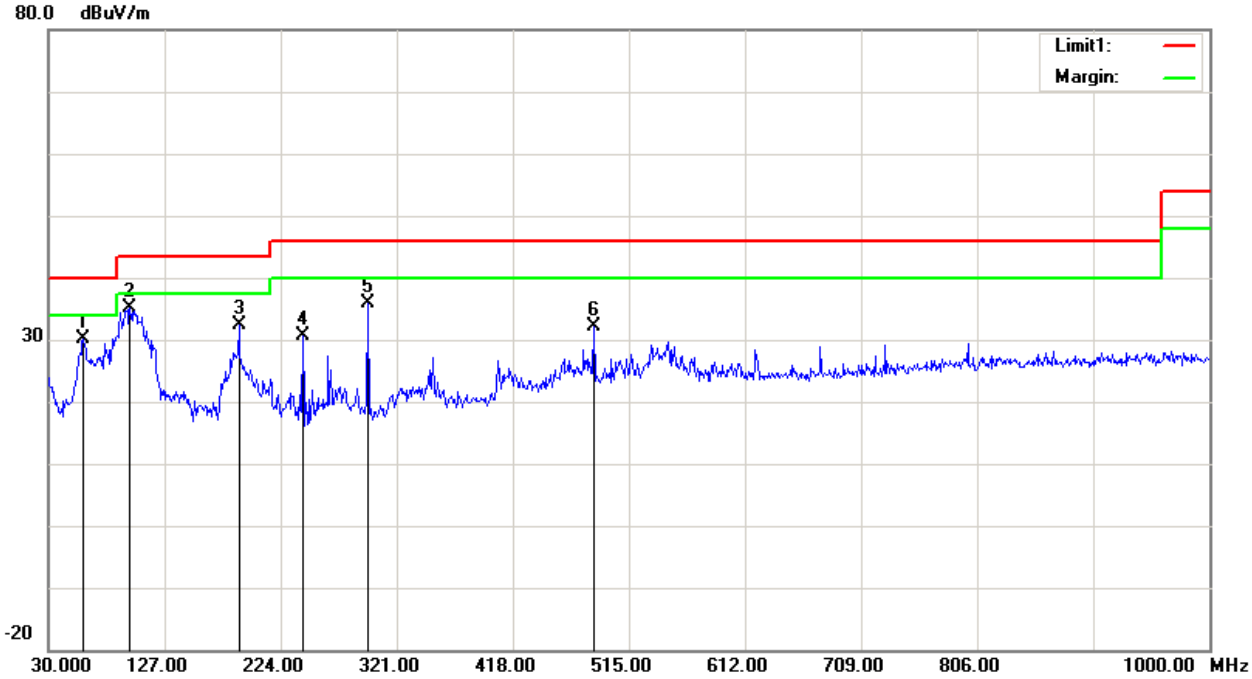
2) 30MHz-1GHz

Project No:	SZ1240322-14909E-RF
Test Engineer:	Zoo Zou
Test Date:	2024-5-5
Polarization:	Horizontal
Test Mode:	Transmitting
Power Source:	QPSK 1.4M 5728MHz



No.	Frequency (MHz)	Reading (dBµV)	Detector	Corrected dB/m	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)
1	90.1400	51.64	QP	-16.54	35.10	43.50	8.40
2	101.7800	49.53	QP	-13.93	35.60	43.50	7.90
3	189.0800	52.79	QP	-12.19	40.60	43.50	2.90
4	242.4300	48.89	peak	-11.67	37.22	46.00	8.78
5	296.7500	50.41	QP	-9.61	40.80	46.00	5.20
6	485.9000	40.81	peak	-4.36	36.45	46.00	9.55

Project No:	SZ1240322-14909E-RF
Test Engineer:	Zoo Zou
Test Date:	2024-5-5
Polarization:	Vertical
Test Mode:	Transmitting
Power Source:	QPSK 1.4M 5728MHz



No.	Frequency (MHz)	Reading (dBµV)	Detector	Corrected dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	59.1000	46.71	peak	-16.70	30.01	40.00	9.99
2	97.9000	50.16	peak	-14.94	35.22	43.50	8.28
3	189.0800	44.48	peak	-12.19	32.29	43.50	11.21
4	242.4300	42.26	peak	-11.67	30.59	46.00	15.41
5	296.7500	45.38	peak	-9.61	35.77	46.00	10.23
6	485.9000	36.61	peak	-4.36	32.25	46.00	13.75

3) 1-40GHz:
The maximum output power mode(QPSK) was tested.
5150-5250 MHz
1.4MHz:

low channel **Frequency 5154 MHz**

Frequency	Reading	Detector	Rx Antenna		Cable loss	Amplifier Gain	Corrected Amplitude	Extrapolation result	Limit	Margin
			Polar	Factor						
MHz	dBµV	PK/QP/AV	H/V	dB/m	dB	dB	dBµV/m	dBµV/m	dBµV/m	dB
5150.00	29.81	PK	H	33.21	1.55	0.00	64.57	58.57	74.00	15.43
5150.00	20.24	AV	H	33.21	1.55	0.00	55.00	49.00	54.00	5.00
5150.00	30.54	PK	V	33.21	1.55	0.00	65.30	59.30	74.00	14.70
5150.00	20.48	AV	V	33.21	1.55	0.00	55.24	49.24	54.00	4.76
10308.00	47.61	PK	H	38.26	3.96	41.99	47.84	47.84	68.20	20.36
10308.00	51.07	PK	V	38.26	3.96	41.99	51.30	51.30	68.20	16.90
15462.00	46.66	PK	H	37.88	5.81	42.86	47.49	47.49	74.00	26.51
15462.00	36.37	AV	H	37.88	5.81	42.86	37.20	37.20	54.00	16.80
15540.00	44.22	PK	V	37.64	5.83	42.87	44.82	44.82	74.00	29.18
15540.00	34.57	AV	V	37.64	5.83	42.87	35.17	35.17	54.00	18.83

middle channel **Frequency 5201 MHz**

Frequency	Reading	Detector	Rx Antenna		Cable loss	Amplifier Gain	Corrected Amplitude	Extrapolation result	Limit	Margin
			Polar	Factor						
MHz	dBµV	PK/QP/AV	H/V	dB/m	dB	dB	dBµV/m	dBµV/m	dBµV/m	dB
10402.00	47.09	PK	H	38.28	4.00	41.88	47.49	47.49	68.20	20.71
10402.00	49.62	PK	V	38.28	4.00	41.88	50.02	50.02	68.20	18.18
15603.00	47.30	PK	H	37.54	5.86	42.80	47.90	47.90	74.00	26.10
15603.00	37.56	AV	H	37.54	5.86	42.80	38.16	38.16	54.00	15.84
15603.00	48.02	PK	V	37.54	5.86	42.80	48.62	48.62	74.00	25.38
15603.00	37.72	AV	V	37.54	5.86	42.80	38.32	38.32	54.00	15.68

high channel **Frequency 5246 MHz**

Frequency	Reading	Detector	Rx Antenna		Cable loss	Amplifier Gain	Corrected Amplitude	Extrapolation result	Limit	Margin
			Polar	Factor						
MHz	dBµV	PK/QP/AV	H/V	dB/m	dB	dB	dBµV/m	dBµV/m	dBµV/m	dB
5350.00	28.53	PK	H	33.49	1.66	0.00	63.68	57.68	74.00	16.32
5350.00	18.36	AV	H	33.49	1.66	0.00	53.51	47.51	54.00	6.49
5350.00	28.24	PK	V	33.49	1.66	0.00	63.39	57.39	74.00	16.61
5350.00	18.36	AV	V	33.49	1.66	0.00	53.51	47.51	54.00	6.49
10492.00	46.94	PK	H	38.30	4.05	41.77	47.52	47.52	68.20	20.68
10492.00	47.29	PK	V	38.30	4.05	41.77	47.87	47.87	68.20	20.33
15738.00	49.14	PK	H	37.32	5.90	42.67	49.69	49.69	74.00	24.31
15738.00	38.59	AV	H	37.32	5.90	42.67	39.14	39.14	54.00	14.86
15738.00	47.10	PK	V	37.32	5.90	42.67	47.65	47.65	68.20	20.55
15738.00	37.26	AV	V	37.32	5.90	42.67	37.81	37.81	48.20	10.39

10MHz

low channel **Frequency 5157 MHz**

Frequency	Reading	Detector	Rx Antenna		Cable loss	Amplifier Gain	Corrected Amplitude	Extrapolation result	Limit	Margin
			Polar	Factor						
MHz	dBµV	PK/QP/AV	H/V	dB/m	dB	dB	dBµV/m	dBµV/m	dBµV/m	dB
5150.00	30.16	PK	H	33.21	1.55	0.00	64.92	58.92	74.00	15.08
5150.00	19.10	AV	H	33.21	1.55	0.00	53.86	47.86	54.00	6.14
5150.00	33.28	PK	V	33.21	1.55	0.00	68.04	62.04	74.00	11.96
5150.00	23.36	AV	V	33.21	1.55	0.00	58.12	52.12	54.00	1.88
10314.00	46.93	PK	H	38.26	3.96	41.98	47.17	47.17	68.20	21.03
10314.00	51.42	PK	V	38.26	3.96	41.98	51.66	51.66	68.20	16.54
15471.00	45.65	PK	H	37.84	5.81	42.87	46.43	46.43	74.00	27.57
15471.00	36.33	AV	H	37.84	5.81	42.87	37.11	37.11	54.00	16.89
15540.00	44.89	PK	V	37.64	5.83	42.87	45.49	45.49	74.00	28.51
15540.00	35.63	AV	V	37.64	5.83	42.87	36.23	36.23	54.00	17.77

middle channel **Frequency 5201 MHz**

Frequency	Reading	Detector	Rx Antenna		Cable loss	Amplifier Gain	Corrected Amplitude	Extrapolation result	Limit	Margin
			Polar	Factor						
MHz	dBµV	PK/QP/AV	H/V	dB/m	dB	dB	dBµV/m	dBµV/m	dBµV/m	dB
10402.00	46.47	PK	H	38.28	4.00	41.88	46.87	46.87	68.20	21.33
10402.00	48.56	PK	V	38.28	4.00	41.88	48.96	48.96	68.20	19.24
15603.00	47.01	PK	H	37.54	5.86	42.80	47.61	47.61	74.00	26.39
15603.00	36.79	AV	H	37.54	5.86	42.80	37.39	37.39	54.00	16.61
15603.00	47.86	PK	V	37.54	5.86	42.80	48.46	48.46	74.00	25.54
15603.00	37.28	AV	V	37.54	5.86	42.80	37.88	37.88	54.00	16.12

high channel **Frequency 5243 MHz**

Frequency	Reading	Detector	Rx Antenna		Cable loss	Amplifier Gain	Corrected Amplitude	Extrapolation result	Limit	Margin
			Polar	Factor						
MHz	dBµV	PK/QP/AV	H/V	dB/m	dB	dB	dBµV/m	dBµV/m	dBµV/m	dB
5350.00	28.46	PK	H	33.49	1.66	0.00	63.61	57.61	74.00	16.39
5350.00	18.44	AV	H	33.49	1.66	0.00	53.59	47.59	54.00	6.41
5350.00	29.71	PK	V	33.49	1.66	0.00	64.86	58.86	74.00	15.14
5350.00	19.63	AV	V	33.49	1.66	0.00	54.78	48.78	54.00	5.22
10486.00	46.15	PK	H	38.30	4.04	41.78	46.71	46.71	68.20	21.49
10486.00	47.37	PK	V	38.30	4.04	41.78	47.93	47.93	68.20	20.27
15729.00	49.09	PK	H	37.33	5.90	42.68	49.64	49.64	74.00	24.36
15729.00	38.24	AV	H	37.33	5.90	42.68	38.79	38.79	54.00	15.21
15729.00	49.30	PK	V	37.33	5.90	42.68	49.85	49.85	68.20	18.35
15729.00	39.45	AV	V	37.33	5.90	42.68	40.00	40.00	48.20	8.20

20MHz

low channel **Frequency 5167 MHz**

Frequency	Reading	Detector	Rx Antenna		Cable loss	Amplifier Gain	Corrected Amplitude	Extrapolation result	Limit	Margin
			Polar	Factor						
MHz	dBµV	PK/QP/AV	H/V	dB/m	dB	dB	dBµV/m	dBµV/m	dBµV/m	dB
5150.00	29.39	PK	H	33.21	1.55	0.00	64.15	58.15	74.00	15.85
5150.00	20.59	AV	H	33.21	1.55	0.00	55.35	49.35	54.00	4.65
5150.00	31.92	PK	V	33.21	1.55	0.00	66.68	60.68	74.00	13.32
5150.00	21.40	AV	V	33.21	1.55	0.00	56.16	50.16	54.00	3.84
10334.00	47.13	PK	H	38.27	3.97	41.96	47.41	47.41	68.20	20.79
10334.00	50.27	PK	V	38.27	3.97	41.96	50.55	50.55	68.20	17.65
15501.00	45.75	PK	H	37.70	5.82	42.91	46.36	46.36	74.00	27.64
15501.00	36.24	AV	H	37.70	5.82	42.91	36.85	36.85	54.00	17.15
15540.00	46.55	PK	V	37.64	5.83	42.87	47.15	47.15	74.00	26.85
15540.00	36.31	AV	V	37.64	5.83	42.87	36.91	36.91	54.00	17.09

middle channel **Frequency 5201 MHz**

Frequency	Reading	Detector	Rx Antenna		Cable loss	Amplifier Gain	Corrected Amplitude	Extrapolation result	Limit	Margin
			Polar	Factor						
MHz	dBµV	PK/QP/AV	H/V	dB/m	dB	dB	dBµV/m	dBµV/m	dBµV/m	dB
10402.00	46.87	PK	H	38.28	4.00	41.88	47.27	47.27	68.20	20.93
10402.00	48.22	PK	V	38.28	4.00	41.88	48.62	48.62	68.20	19.58
15603.00	47.02	PK	H	37.54	5.86	42.80	47.62	47.62	74.00	26.38
15603.00	36.88	AV	H	37.54	5.86	42.80	37.48	37.48	54.00	16.52
15603.00	47.87	PK	V	37.54	5.86	42.80	48.47	48.47	74.00	25.53
15603.00	37.65	AV	V	37.54	5.86	42.80	38.25	38.25	54.00	15.75

high channel **Frequency 5233 MHz**

Frequency	Reading	Detector	Rx Antenna		Cable loss	Amplifier Gain	Corrected Amplitude	Extrapolation result	Limit	Margin
			Polar	Factor						
MHz	dBµV	PK/QP/AV	H/V	dB/m	dB	dB	dBµV/m	dBµV/m	dBµV/m	dB
5350.00	28.24	PK	H	33.49	1.66	0.00	63.39	57.39	74.00	16.61
5350.00	18.32	AV	H	33.49	1.66	0.00	53.47	47.47	54.00	6.53
5350.00	28.94	PK	V	33.49	1.66	0.00	64.09	58.09	74.00	15.91
5350.00	18.25	AV	V	33.49	1.66	0.00	53.40	47.4	54.00	6.60
10466.00	46.25	PK	H	38.29	4.03	41.80	46.77	46.77	68.20	21.43
10466.00	46.90	PK	V	38.29	4.03	41.80	47.42	47.42	68.20	20.78
15699.00	47.05	PK	H	37.38	5.89	42.71	47.61	47.61	74.00	26.39
15699.00	36.89	AV	H	37.38	5.89	42.71	37.45	37.45	54.00	16.55
15699.00	47.17	PK	V	37.38	5.89	42.71	47.73	47.73	68.20	20.47
15699.00	37.31	AV	V	37.38	5.89	42.71	37.87	37.87	48.20	10.33

5725-5850 MHz:
1.4MHz

low channel **Frequency 5728 MHz**

Frequency	Reading	Detector	Rx Antenna		Cable loss	Amplifier Gain	Corrected Amplitude	Extrapolation result	Limit	Margin
			Polar	Factor						
MHz	dBµV	PK/QP/AV	H/V	dB/m	dB	dB	dBµV/m	dBµV/m	dBµV/m	dB
5725.00	49.45	PK	H	33.97	1.84	0.00	85.26	79.26	122.20	42.94
5720.00	30.56	PK	H	33.96	1.84	0.00	66.36	60.36	110.80	50.44
5700.00	30.47	PK	H	33.94	1.83	0.00	66.24	60.24	105.20	44.96
5650.00	30.21	PK	H	33.88	1.81	0.00	65.90	59.9	68.20	8.30
5725.00	56.77	PK	V	33.97	1.84	0.00	92.58	86.58	122.20	35.62
5720.00	32.55	PK	V	33.96	1.84	0.00	68.35	62.35	110.80	48.45
5700.00	30.91	PK	V	33.94	1.83	0.00	66.68	60.68	105.20	44.52
5650.00	29.34	PK	V	33.88	1.81	0.00	65.03	59.03	68.20	9.17
11456.00	44.73	PK	H	38.10	4.53	41.14	46.22	46.22	74.00	27.78
11456.00	35.17	AV	H	38.10	4.53	41.14	36.66	36.66	54.00	17.34
11456.00	54.34	PK	V	38.10	4.53	41.14	55.83	55.83	74.00	18.17
11456.00	45.10	AV	V	38.10	4.53	41.14	46.59	46.59	54.00	7.41
17184.00	44.66	PK	H	39.82	6.33	42.02	48.79	48.79	68.20	19.41
17184.00	42.22	PK	V	39.82	6.33	42.02	46.35	46.35	68.20	21.85

middle channel **Frequency 5789 MHz**

Frequency	Reading	Detector	Rx Antenna		Cable loss	Amplifier Gain	Corrected Amplitude	Extrapolation result	Limit	Margin
			Polar	Factor						
MHz	dBµV	PK/QP/AV	H/V	dB/m	dB	dB	dBµV/m	dBµV/m	dBµV/m	dB
11578.00	45.57	PK	H	38.08	4.58	41.08	47.15	47.15	74.00	26.85
11578.00	35.48	AV	H	38.08	4.58	41.08	37.06	37.06	54.00	16.94
11578.00	45.54	PK	V	38.08	4.58	41.08	47.12	47.12	74.00	26.88
11578.00	35.98	AV	V	38.08	4.58	41.08	37.56	37.56	54.00	16.44
17367.00	47.30	PK	H	40.33	6.42	42.36	51.69	51.69	68.20	16.51
17367.00	48.02	PK	V	40.33	6.42	42.36	52.41	52.41	68.20	15.79

high channel **Frequency 5847 MHz**

Frequency	Reading	Detector	Rx Antenna		Cable loss	Amplifier Gain	Corrected Amplitude	Extrapolation result	Limit	Margin
			Polar	Factor						
MHz	dBµV	PK/QP/AV	H/V	dB/m	dB	dB	dBµV/m	dBµV/m	dBµV/m	dB
5850.00	42.29	PK	H	34.12	1.88	0.00	78.29	72.29	122.20	49.91
5855.00	30.24	PK	H	34.13	1.88	0.00	66.25	60.25	110.80	50.55
5875.00	32.86	PK	H	34.15	1.89	0.00	68.90	62.9	105.20	42.30
5925.00	30.78	PK	H	34.21	1.91	0.00	66.90	60.9	68.20	7.30
5850.00	47.99	PK	V	34.12	1.88	0.00	83.99	77.99	122.20	44.21
5855.00	32.70	PK	V	34.13	1.88	0.00	68.71	62.71	110.80	48.09
5875.00	30.67	PK	V	34.15	1.89	0.00	66.71	60.71	105.20	44.49
5925.00	30.63	PK	V	34.21	1.91	0.00	66.75	60.75	68.20	7.45
11694.00	45.59	PK	H	38.06	4.61	41.07	47.19	47.19	74.00	26.81
11694.00	35.51	AV	H	38.06	4.61	41.07	37.11	37.11	54.00	16.89
11694.00	45.32	PK	V	38.06	4.61	41.07	46.92	46.92	74.00	27.08
11694.00	35.58	AV	V	38.06	4.61	41.07	37.18	37.18	54.00	16.82
17541.00	49.14	PK	H	40.95	6.50	42.57	54.02	54.02	68.20	14.18
17541.00	47.10	PK	V	40.95	6.50	42.57	51.98	51.98	68.20	16.22

10MHz

low channel **Frequency 5733 MHz**

Frequency	Reading	Detector	Rx Antenna		Cable loss	Amplifier Gain	Corrected Amplitude	Extrapolation result	Limit	Margin
			Polar	Factor						
MHz	dBµV	PK/QP/AV	H/V	dB/m	dB	dB	dBµV/m	dBµV/m	dBµV/m	dB
5725.00	30.69	PK	H	33.97	1.84	0.00	66.50	60.5	122.20	61.70
5720.00	30.40	PK	H	33.96	1.84	0.00	66.20	60.2	110.80	50.60
5700.00	30.45	PK	H	33.94	1.83	0.00	66.22	60.22	105.20	44.98
5650.00	30.73	PK	H	33.88	1.81	0.00	66.42	60.42	68.20	7.78
5725.00	33.46	PK	V	33.97	1.84	0.00	69.27	63.27	122.20	58.93
5720.00	31.27	PK	V	33.96	1.84	0.00	67.07	61.07	110.80	49.73
5700.00	30.92	PK	V	33.94	1.83	0.00	66.69	60.69	105.20	44.51
5650.00	30.26	PK	V	33.88	1.81	0.00	65.95	59.95	68.20	8.25
11466.00	46.10	PK	H	38.10	4.54	41.13	47.61	47.61	74.00	26.39
11466.00	36.79	AV	H	38.10	4.54	41.13	38.30	38.3	54.00	15.70
11466.00	59.54	PK	V	38.10	4.54	41.13	61.05	61.05	74.00	12.95
11466.00	48.50	AV	V	38.10	4.54	41.13	50.01	50.01	54.00	**3.99**
17199.00	45.65	PK	H	39.86	6.33	42.05	49.79	49.79	68.20	18.41
17199.00	44.89	PK	V	39.86	6.33	42.05	49.03	49.03	68.20	19.17

middle channel **Frequency 5789 MHz**

Frequency	Reading	Detector	Rx Antenna		Cable loss	Amplifier Gain	Corrected Amplitude	Extrapolation result	Limit	Margin
			Polar	Factor						
MHz	dBµV	PK/QP/AV	H/V	dB/m	dB	dB	dBµV/m	dBµV/m	dBµV/m	dB
11578.00	46.24	PK	H	38.08	4.58	41.08	47.82	47.82	74.00	26.18
11578.00	36.11	AV	H	38.08	4.58	41.08	37.69	37.69	54.00	16.31
11578.00	46.81	PK	V	38.08	4.58	41.08	48.39	48.39	74.00	25.61
11578.00	36.36	AV	V	38.08	4.58	41.08	37.94	37.94	54.00	16.06
17367.00	47.01	PK	H	40.33	6.42	42.36	51.40	51.4	68.20	16.80
17367.00	47.86	PK	V	40.33	6.42	42.36	52.25	52.25	68.20	15.95

high channel **Frequency 5842 MHz**

Frequency	Reading	Detector	Rx Antenna		Cable loss	Amplifier Gain	Corrected Amplitude	Extrapolation result	Limit	Margin
			Polar	Factor						
MHz	dBµV	PK/QP/AV	H/V	dB/m	dB	dB	dBµV/m	dBµV/m	dBµV/m	dB
5850.00	47.86	PK	H	34.12	1.88	0.00	83.86	77.86	122.20	44.34
5855.00	39.97	PK	H	34.13	1.88	0.00	75.98	69.98	110.80	40.82
5875.00	31.10	PK	H	34.15	1.89	0.00	67.14	61.14	105.20	44.06
5925.00	31.43	PK	H	34.21	1.91	0.00	67.55	61.55	68.20	6.65
5850.00	55.25	PK	V	34.12	1.88	0.00	91.25	85.25	122.20	36.95
5855.00	47.26	PK	V	34.13	1.88	0.00	83.27	77.27	110.80	33.53
5875.00	31.43	PK	V	34.15	1.89	0.00	67.47	61.47	105.20	43.73
5925.00	30.94	PK	V	34.21	1.91	0.00	67.06	61.06	68.20	7.14
11684.00	45.35	PK	H	38.06	4.60	41.07	46.94	46.94	74.00	27.06
11684.00	35.46	AV	H	38.06	4.60	41.07	37.05	37.05	54.00	16.95
11684.00	46.73	PK	V	38.06	4.60	41.07	48.32	48.32	74.00	25.68
11684.00	36.16	AV	V	38.06	4.60	41.07	37.75	37.75	54.00	16.25
17526.00	49.09	PK	H	40.86	6.50	42.58	53.87	53.87	68.20	14.33
17526.00	49.30	PK	V	40.86	6.50	42.58	54.08	54.08	68.20	14.12

20MHz

low channel **Frequency 5738 MHz**

Frequency	Reading	Detector	Rx Antenna		Cable loss	Amplifier Gain	Corrected Amplitude	Extrapolation result	Limit	Margin
			Polar	Factor						
MHz	dBµV	PK/QP/AV	H/V	dB/m	dB	dB	dBµV/m	dBµV/m	dBµV/m	dB
5725.00	31.07	PK	H	33.97	1.84	0.00	66.88	60.88	122.20	61.32
5720.00	31.48	PK	H	33.96	1.84	0.00	67.28	61.28	110.80	49.52
5700.00	30.22	PK	H	33.94	1.83	0.00	65.99	59.99	105.20	45.21
5650.00	30.69	PK	H	33.88	1.81	0.00	66.38	60.38	68.20	7.82
5725.00	30.97	PK	V	33.97	1.84	0.00	66.78	60.78	122.20	61.42
5720.00	30.84	PK	V	33.96	1.84	0.00	66.64	60.64	110.80	50.16
5700.00	30.26	PK	V	33.94	1.83	0.00	66.03	60.03	105.20	45.17
5650.00	29.82	PK	V	33.88	1.81	0.00	65.51	59.51	68.20	8.69
11476.00	45.86	PK	H	38.10	4.54	41.11	47.39	47.39	74.00	26.61
11476.00	35.91	AV	H	38.10	4.54	41.11	37.44	37.44	54.00	16.56
11476.00	59.83	PK	V	38.10	4.54	41.11	61.36	61.36	74.00	12.64
11476.00	48.42	AV	V	38.10	4.54	41.11	49.95	49.95	54.00	4.05
17214.00	45.75	PK	H	39.90	6.34	42.07	49.92	49.92	68.20	18.28
17214.00	46.55	PK	V	39.90	6.34	42.07	50.72	50.72	68.20	17.48

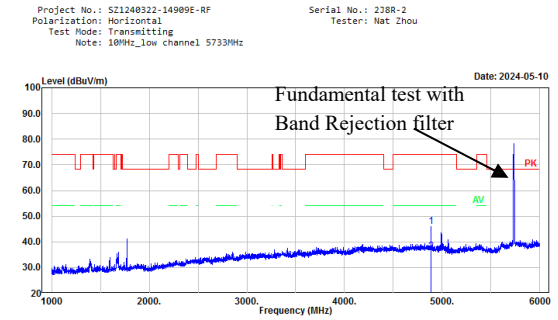
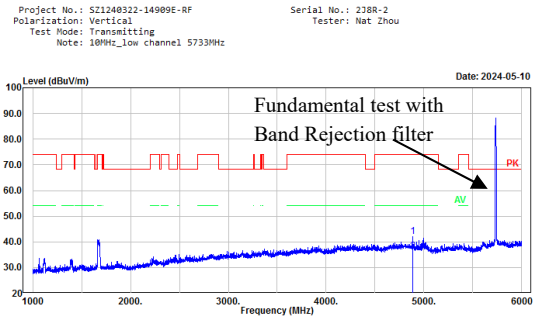
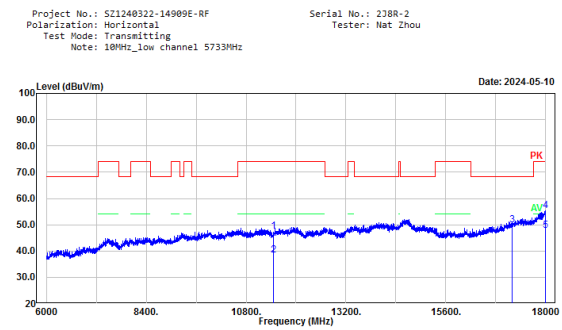
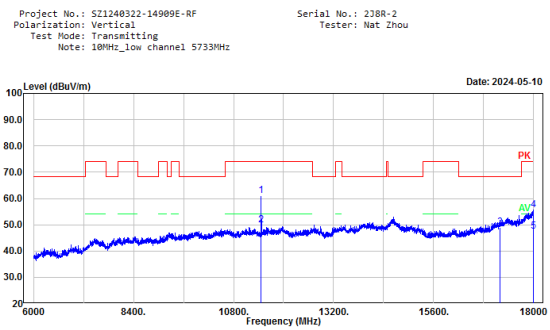
middle channel **Frequency 5790 MHz**

Frequency	Reading	Detector	Rx Antenna		Cable loss	Amplifier Gain	Corrected Amplitude	Extrapolation result	Limit	Margin
			Polar	Factor						
MHz	dBµV	PK/QP/AV	H/V	dB/m	dB	dB	dBµV/m	dBµV/m	dBµV/m	dB
11580.00	45.58	PK	H	38.08	4.58	41.08	47.16	47.16	74.00	26.84
11580.00	35.24	AV	H	38.08	4.58	41.08	36.82	36.82	54.00	17.18
11580.00	46.84	PK	V	38.08	4.58	41.08	48.42	48.42	74.00	25.58
11580.00	36.15	AV	V	38.08	4.58	41.08	37.73	37.73	54.00	16.27
17370.00	47.02	PK	H	40.34	6.42	42.36	51.42	51.42	68.20	16.78
17370.00	47.87	PK	V	40.34	6.42	42.36	52.27	52.27	68.20	15.93

high channel **Frequency 5839 MHz**

Frequency	Reading	Detector	Rx Antenna		Cable loss	Amplifier Gain	Corrected Amplitude	Extrapolation result	Limit	Margin
			Polar	Factor						
MHz	dBµV	PK/QP/AV	H/V	dB/m	dB	dB	dBµV/m	dBµV/m	dBµV/m	dB
5850.00	32.12	PK	H	34.12	1.88	0.00	68.12	62.12	122.20	60.08
5855.00	31.74	PK	H	34.13	1.88	0.00	67.75	61.75	110.80	49.05
5875.00	31.44	PK	H	34.15	1.89	0.00	67.48	61.48	105.20	43.72
5925.00	30.52	PK	H	34.21	1.91	0.00	66.64	60.64	68.20	7.56
5850.00	34.25	PK	V	34.12	1.88	0.00	70.25	64.25	122.20	57.95
5855.00	32.64	PK	V	34.13	1.88	0.00	68.65	62.65	110.80	48.15
5875.00	30.98	PK	V	34.15	1.89	0.00	67.02	61.02	105.20	44.18
5925.00	30.58	PK	V	34.21	1.91	0.00	66.70	60.7	68.20	7.50
11678.00	46.31	PK	H	38.06	4.60	41.07	47.90	47.9	74.00	26.10
11678.00	36.51	AV	H	38.06	4.60	41.07	38.10	38.1	54.00	15.90
11678.00	47.06	PK	V	38.06	4.60	41.07	48.65	48.65	74.00	25.35
11678.00	36.93	AV	V	38.06	4.60	41.07	38.52	38.52	54.00	15.48
17517.00	47.05	PK	H	40.81	6.49	42.59	51.76	51.76	68.20	16.44
17517.00	47.17	PK	V	40.81	6.49	42.59	51.88	51.88	68.20	16.32

Worst Channel Test plots:

10M Low Channel, 5733MHz, Horizontal	10M Low Channel, 5733MHz,Vertical
	
	

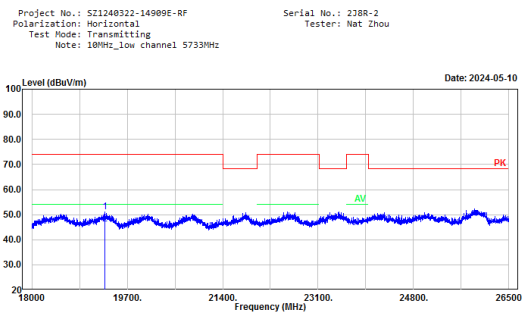
No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	4885.00	55.98	-10.00	45.98	74.00	28.02	Peak
2	4885.00	46.37	-10.00	36.37	54.00	17.63	Average

No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	4885.00	52.11	-10.00	42.11	74.00	31.89	Peak
2	4885.00	46.38	-10.00	36.38	54.00	17.62	Average

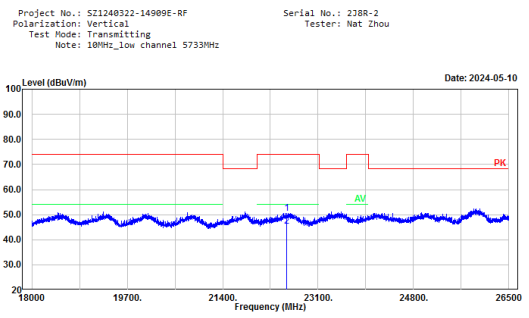
No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	11466.00	46.10	1.51	47.61	74.00	26.39	Peak
2	11466.00	36.79	1.51	38.30	54.00	15.70	Average
3	17199.00	45.65	4.14	49.79	68.20	18.41	Peak
4	17997.60	47.31	8.12	55.43	74.00	18.57	Peak
5	17997.60	39.61	8.12	47.73	54.00	6.27	Average

No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	11466.00	59.54	1.51	61.05	74.00	12.95	Peak
2	11466.00	48.50	1.51	50.01	54.00	3.99	Average
3	17199.00	44.89	4.14	49.03	68.20	19.17	Peak
4	17997.60	47.65	8.12	55.77	74.00	18.23	Peak
5	17997.60	39.26	8.12	47.38	54.00	6.62	Average

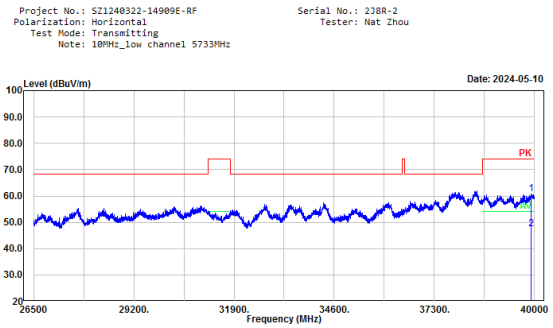
10M Low Channel, 5733MHz,Horizontal	10M Low Channel, 5733MHz,Vertical



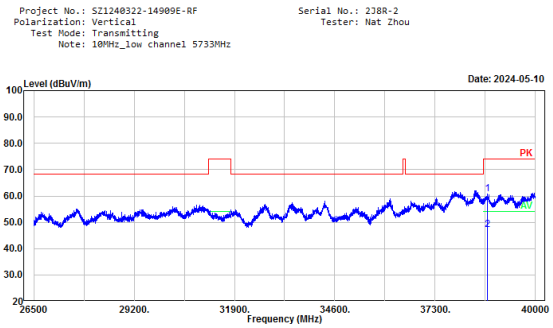
No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	19295.40	45.25	5.99	51.24	74.00	22.76	Peak
2	19295.40	40.38	5.99	46.37	54.00	7.63	Average



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	22545.80	42.67	7.94	50.61	74.00	23.39	Peak
2	22545.80	37.36	7.94	45.30	54.00	8.70	Average

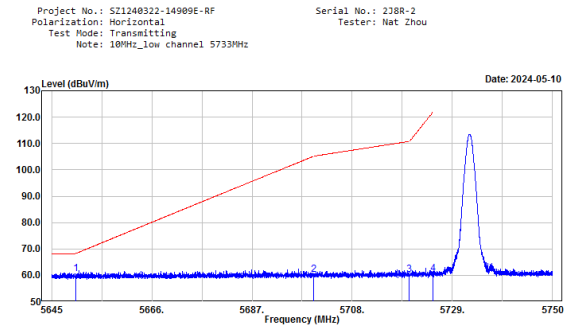


No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	39910.90	43.26	17.42	60.68	74.00	13.32	Peak
2	39910.90	30.11	17.42	47.53	54.00	6.47	Average

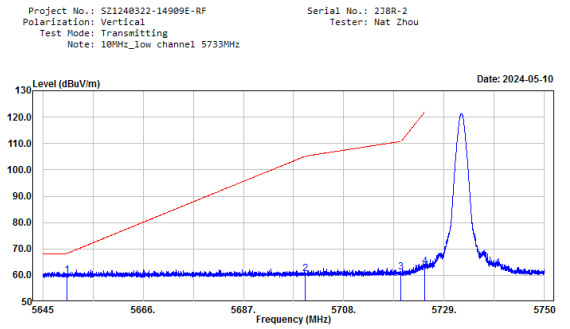


No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	38698.60	43.75	17.02	60.77	74.00	13.23	Peak
2	38698.60	30.24	17.02	47.26	54.00	6.74	Average

10M Low Channel, 5733MHz, Bandedge, Horizontal	10M Low Channel, 5733MHz, Bandedge, Vertical



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	5650.00	30.73	29.69	60.42	68.20	7.78	Peak
2	5700.00	30.45	29.77	60.22	105.20	44.98	Peak
3	5720.00	30.40	29.80	60.20	110.80	50.60	Peak
4	5725.00	30.69	29.81	60.50	122.20	61.70	Peak



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	5650.00	30.26	29.69	59.95	68.20	8.25	Peak
2	5700.00	30.92	29.77	60.69	105.20	44.51	Peak
3	5720.00	31.27	29.80	61.07	110.80	49.73	Peak
4	5725.00	33.46	29.81	63.27	122.20	58.93	Peak

5.3 Emission Bandwidth

Serial No.:	2J8R-1	**Test Date:**	2024/04/19~2024/04/20
Test Site:	RF	**Test Mode:**	Transmitting
Tester:	Jojo Zhou	**Test Result:**	Pass

Environmental Conditions:

Temperature: (°C)	24.6~25.1	**Relative Humidity: (%)**	51~54	**ATM Pressure: (kPa)**	100.2~101.2

Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSV40	101947	2023/10/18	2024/10/17
Eastsheep	Coaxial Attenuator	5W-N-JK-6G-10dB	F-08-EM503	2023/9/10	2024/9/9

** Statement of Traceability: Bay Area Compliance Laboratories Corp. (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).*

5150-5250 MHz:

Test Modes	Modulation	Test Frequency (MHz)	26 dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
1.4M	QPSK	5154	1.220	1.094
		5201	1.250	1.094
		5246	1.268	1.098
	16QAM	5154	1.229	1.090
		5201	1.237	1.098
		5246	1.289	1.098
10M	QPSK	5157	9.551	8.944
		5201	9.580	8.944
		5243	9.580	8.944
	16QAM	5157	9.551	8.944
		5201	9.580	8.944
		5243	9.580	8.944
20M	QPSK	5167	19.334	17.945
		5201	19.392	18.003
		5233	19.334	18.003
	16QAM	5167	19.334	17.945
		5201	19.334	18.003
		5233	19.334	18.003

Note:
Test only was performed at Chain 0.
The 99% Occupied Bandwidth have not fall into the band 5250-5350MHz, please refer to the test plots of 99% Occupied Bandwidth.

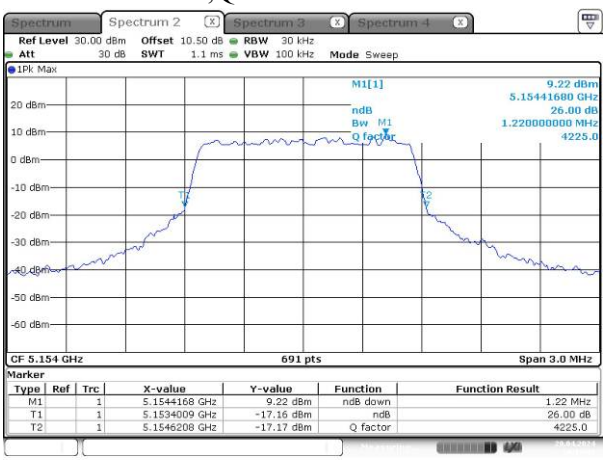
5725-5850 MHz:

Test Modes	Modulation	Test Frequency (MHz)	6 dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
1.4M	QPSK	5728	1.138	1.120
		5789	1.142	1.120
		5847	1.138	1.116
	16QAM	5728	1.142	1.098
		5789	1.142	1.111
		5847	1.142	1.111
10M	QPSK	5733	9.001	8.944
		5789	9.001	8.944
		5842	9.03	8.944
	16QAM	5733	9.001	8.944
		5789	9.001	8.944
		5842	9.001	8.944
20M	QPSK	5738	18.061	18.003
		5790	18.061	18.003
		5839	18.061	18.003
	16QAM	5738	18.061	17.945
		5790	18.061	17.945
		5839	18.061	18.003

Note:
6dB Emission Bandwidth Limit: ⩾0.5 MHz
Test only was performed at Chain 0.
The 99% Occupied Bandwidth have not fall into the band 5470-5725MHz, please refer to the test plots of 99% Occupied Bandwidth.

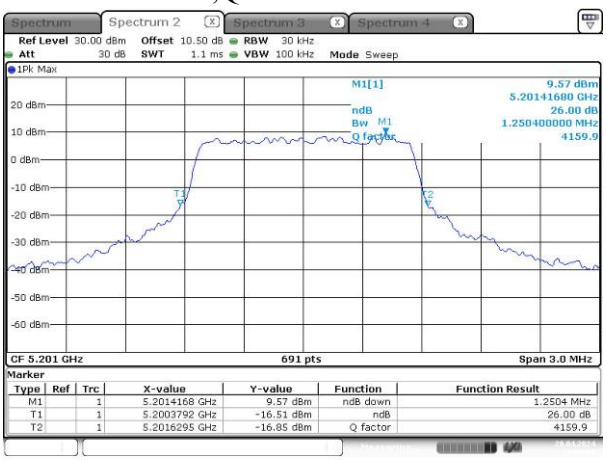
26dB Emission Bandwidth
5150-5250MHz:

1.4MHz,QPSK Lowest Channel



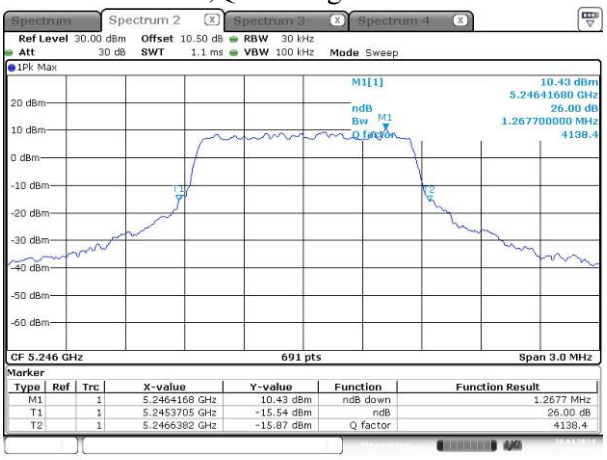
ProjectNo.:SZ1240322-14909E Tester:Jojo Zhou
Date: 20.APR.2024 14:17:47

1.4MHz,QPSK Middle Channel



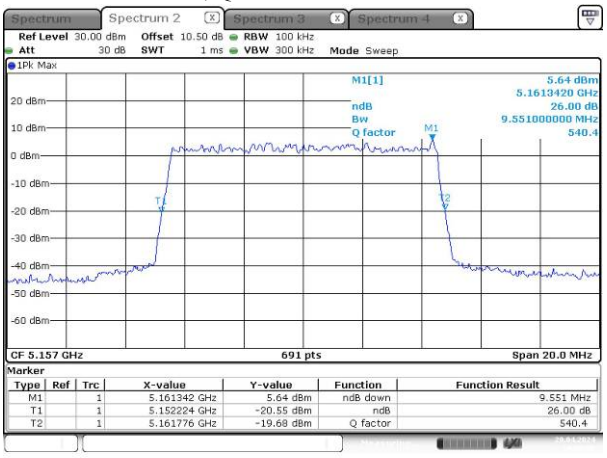
ProjectNo.:SZ1240322-14909E Tester:Jojo Zhou
Date: 20.APR.2024 14:20:41

1.4MHz,QPSK Highest Channel



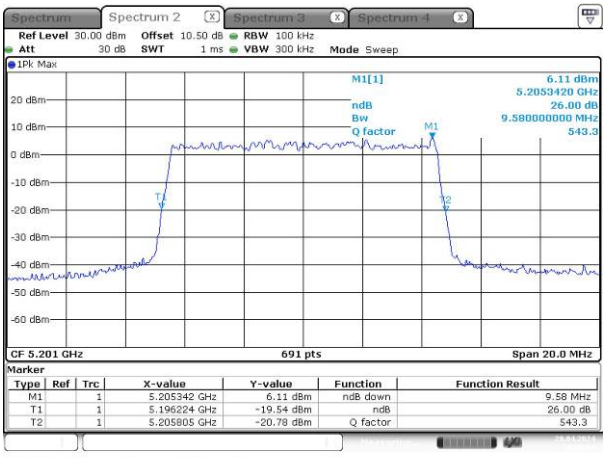
ProjectNo.:SZ1240322-14909E Tester:Jojo Zhou
Date: 20.APR.2024 14:22:53

10MHz,QPSK Lowest Channel



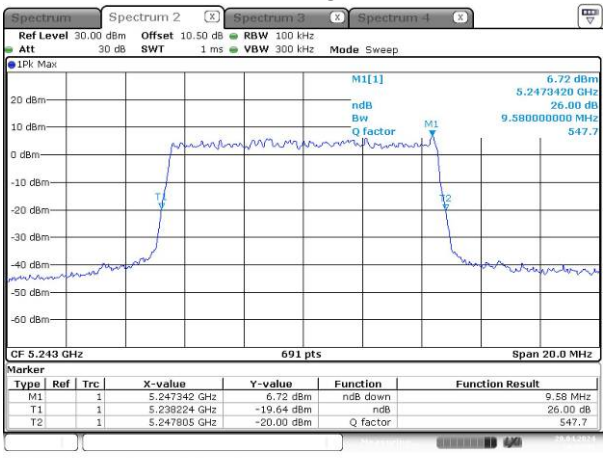
ProjectNo.:SZ1240322-14909E Tester:Jojo Zhou
Date: 20.APR.2024 14:28:06

10MHz,QPSK Middle Channel



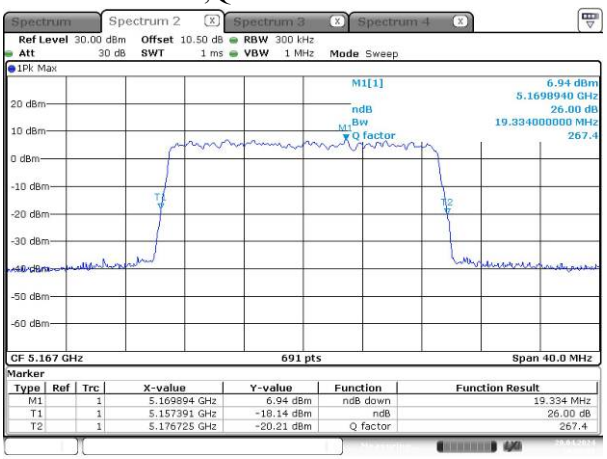
ProjectNo.:SZ1240322-14909E Tester:Jojo Zhou
Date: 20.APR.2024 14:29:54

10MHz,QPSK Highest Channel

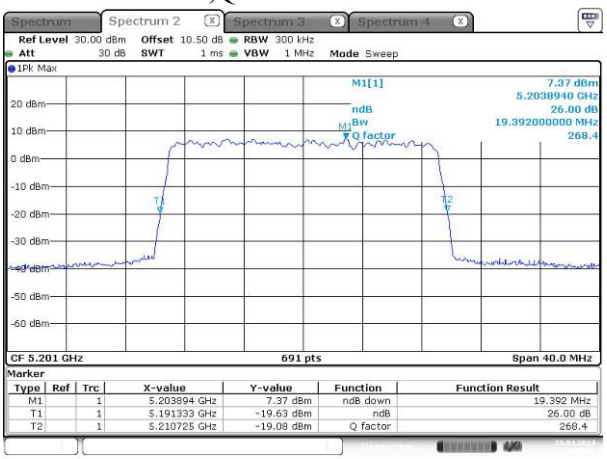


ProjectNo.:SZ1240322-14909E Tester:Jojo Zhou
Date: 20.APR.2024 14:32:40

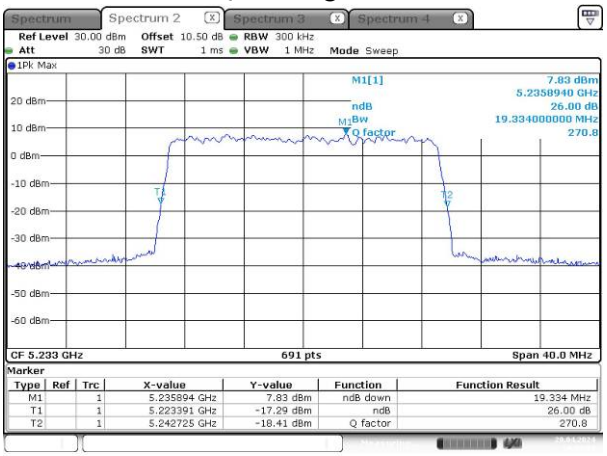
20MHz,QPSK Lowest Channel



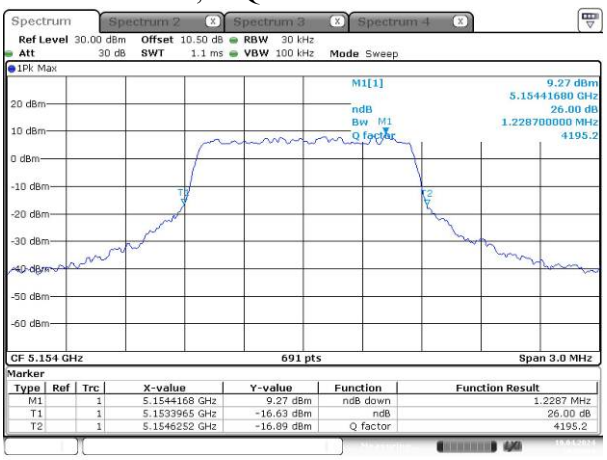
20MHz,QPSK Middle Channel



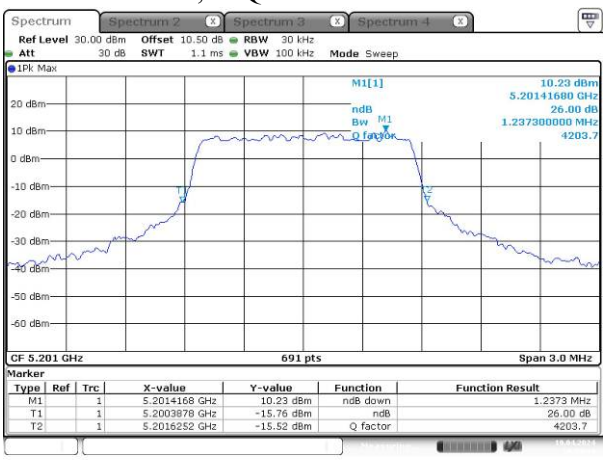
20MHz,QPSK Highest Channel



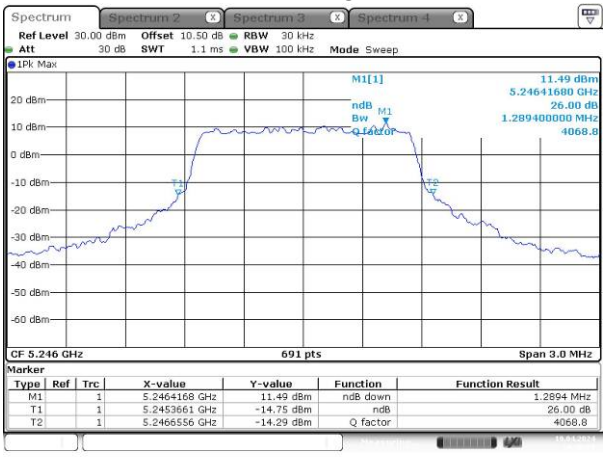
1.4MHz, 16QAM Lowest Channel



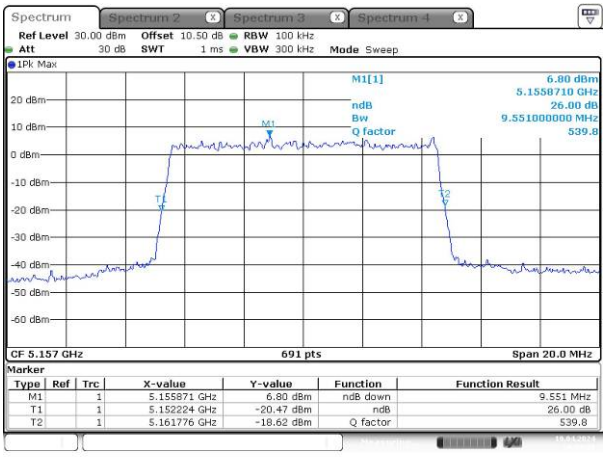
1.4MHz, 16QAM Middle Channel



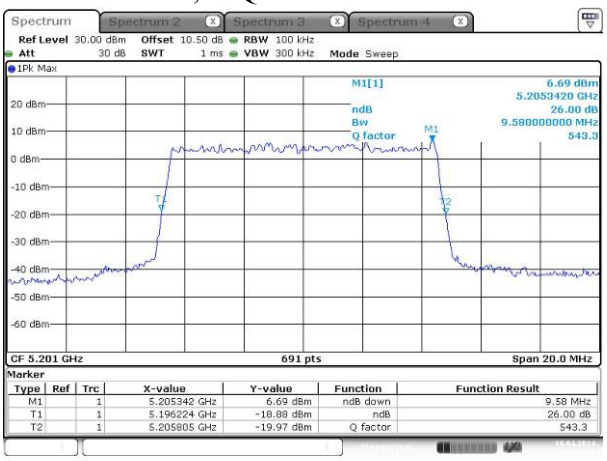
1.4MHz, 16QAM Highest Channel



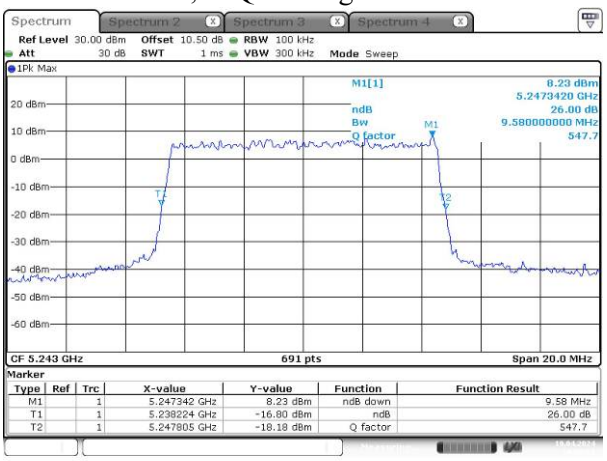
10MHz, 16QAM Lowest Channel



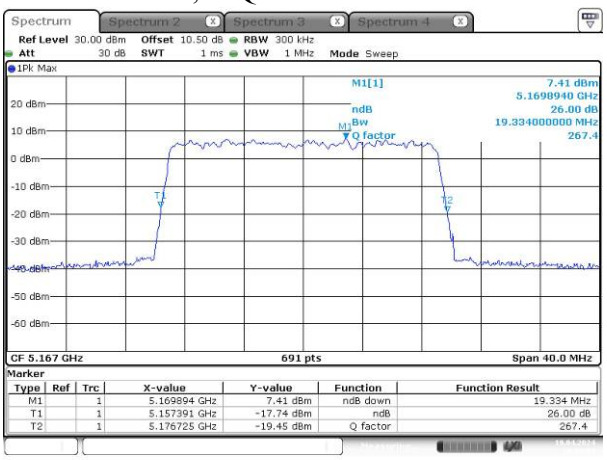
10MHz, 16QAM Middle Channel



10MHz, 16QAM Highest Channel

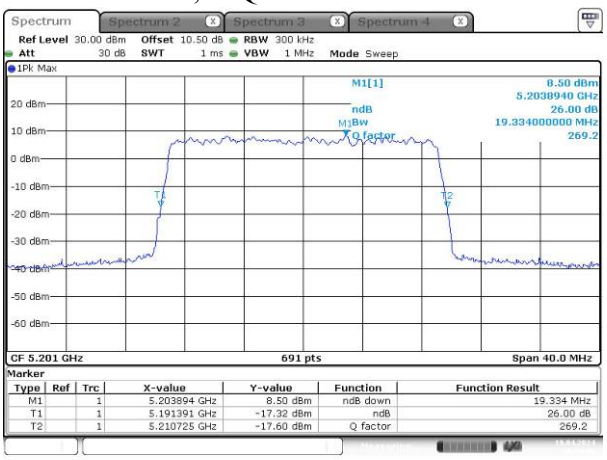


20MHz, 16QAM Lowest Channel



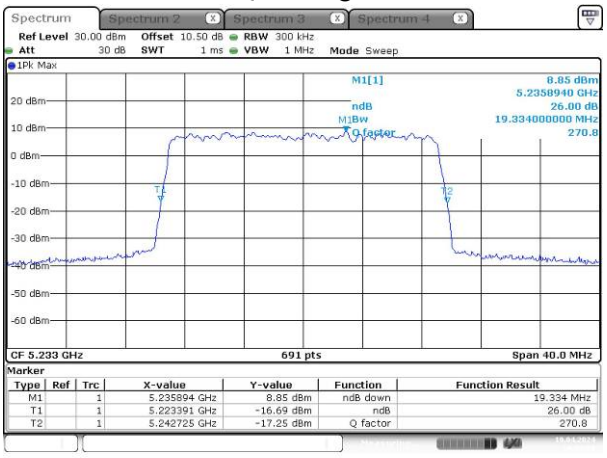
ProjectNo.:SZ1240322-14909E Tester:Jojo Zhou
Date: 19.APR.2024 14:32:24

20MHz, 16QAM Middle Channel



ProjectNo.:SZ1240322-14909E Tester:Jojo Zhou
Date: 19.APR.2024 14:34:40

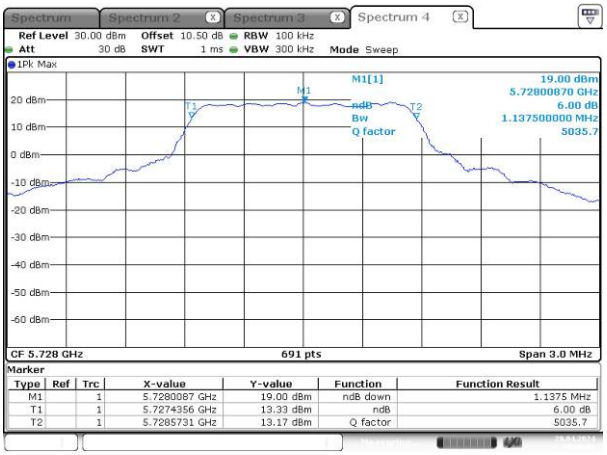
20MHz, 16QAM Highest Channel



ProjectNo.:SZ1240322-14909E Tester:Jojo Zhou
Date: 19.APR.2024 14:37:20

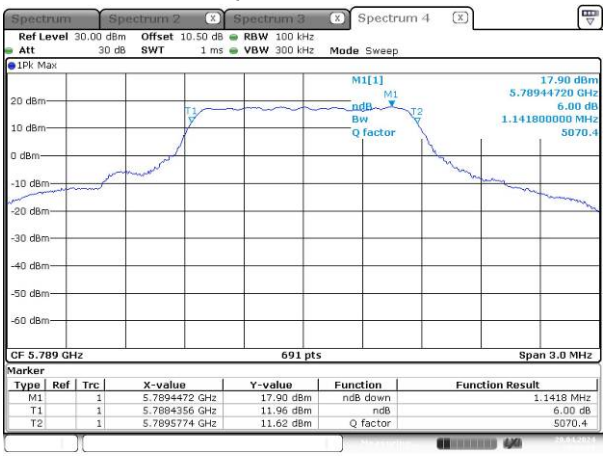
6dB Emission Bandwidth
5725-5850MHz:

1.4MHz,QPSK Lowest Channel



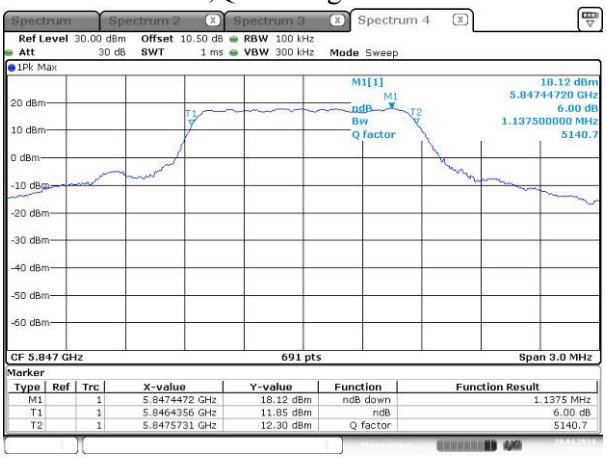
ProjectNo.:SZ1240322-14909E Tester:Jojo Zhou
Date: 20.APR.2024 15:00:36

1.4MHz,QPSK Middle Channel



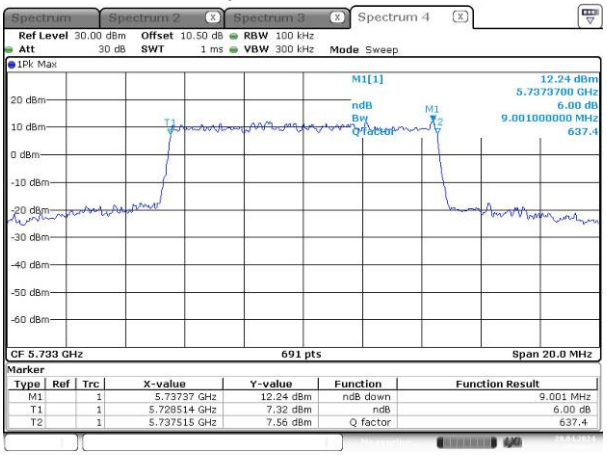
ProjectNo.:SZ1240322-14909E Tester:Jojo Zhou
Date: 20.APR.2024 15:03:25

1.4MHz,QPSK Highest Channel



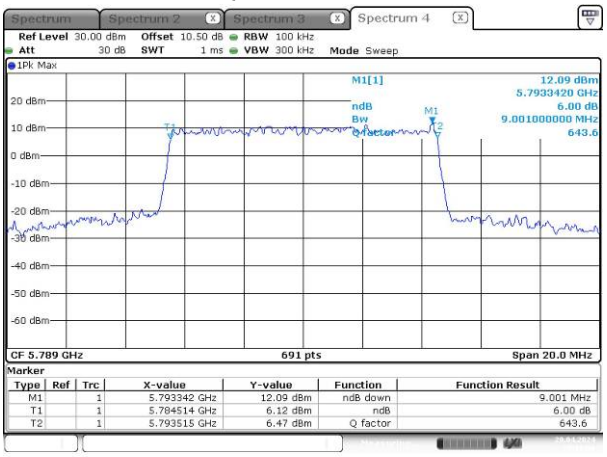
ProjectNo.:SZ1240322-14909E Tester:Jojo Zhou
Date: 20.APR.2024 15:05:13

10MHz,QPSK Lowest Channel



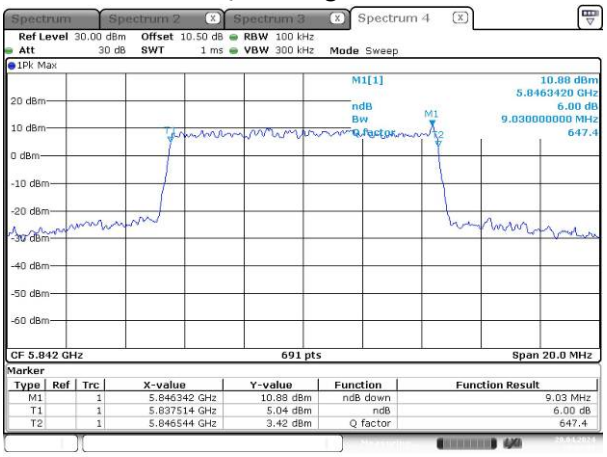
ProjectNo.:SZ1240322-14909E Tester:Jojo Zhou
Date: 20.APR.2024 15:08:42

10MHz,QPSK Middle Channel



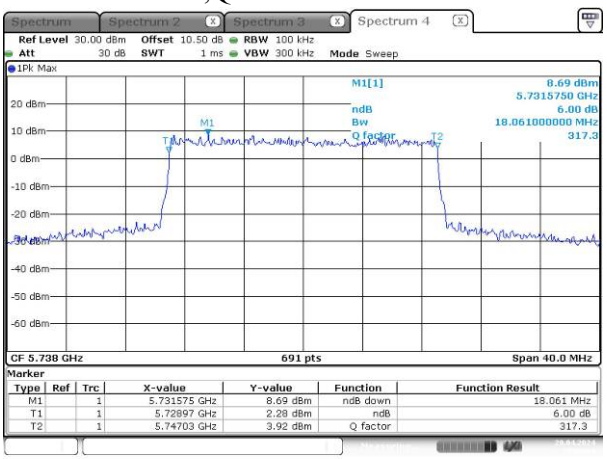
ProjectNo.:SZ1240322-14909E Tester:Jojo Zhou
Date: 20.APR.2024 15:11:00

10MHz,QPSK Highest Channel



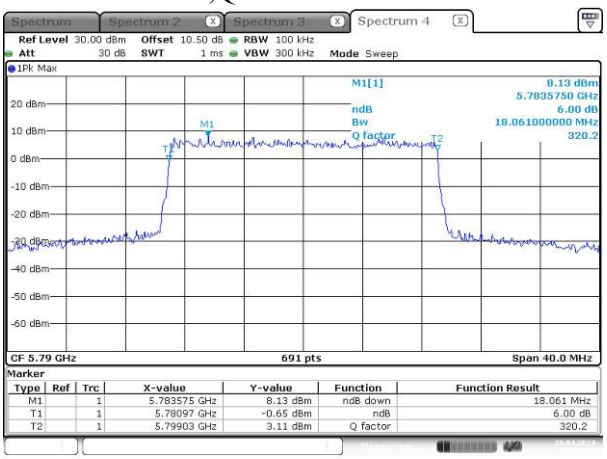
ProjectNo.:SZ1240322-14909E Tester:Jojo Zhou
Date: 20.APR.2024 15:22:05

20MHz,QPSK Lowest Channel



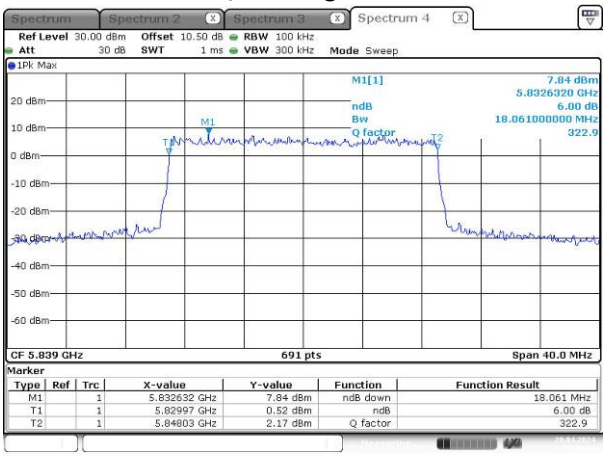
ProjectNo.:SZ1240322-14909E Tester:Jojo Zhou
Date: 20.APR.2024 15:29:44

20MHz,QPSK Middle Channel



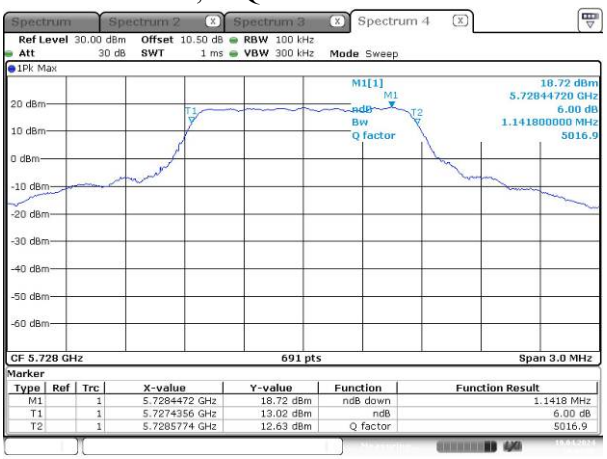
ProjectNo.:SZ1240322-14909E Tester:Jojo Zhou
Date: 20.APR.2024 15:32:14

20MHz,QPSK Highest Channel

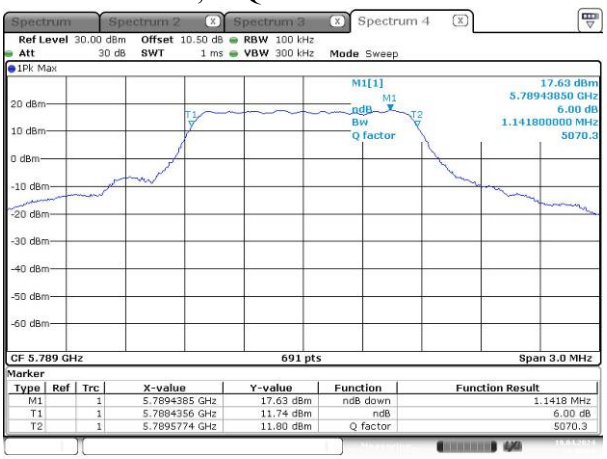


ProjectNo.:SZ1240322-14909E Tester:Jojo Zhou
Date: 20.APR.2024 15:42:13

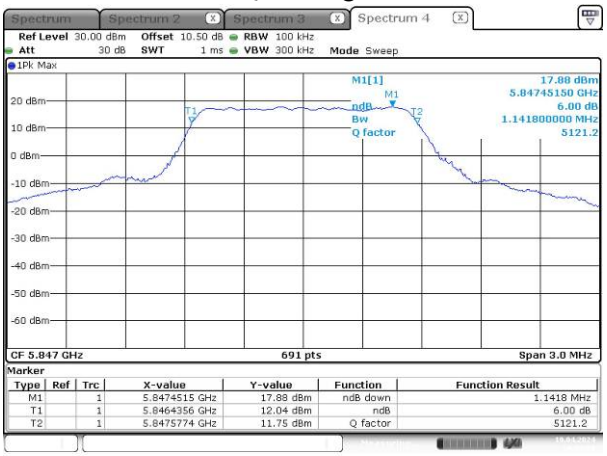
1.4MHz, 16QAM Lowest Channel



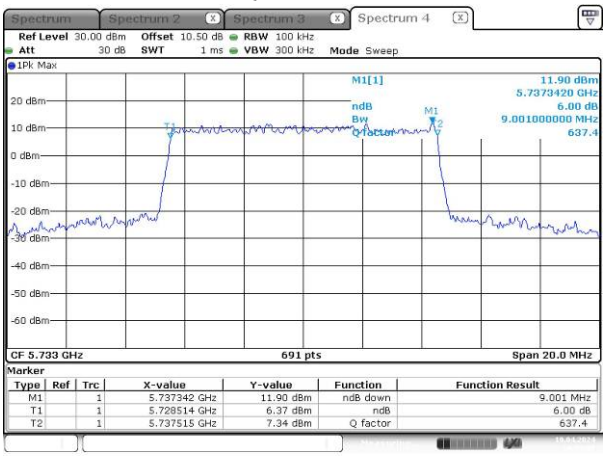
1.4MHz, 16QAM Middle Channel



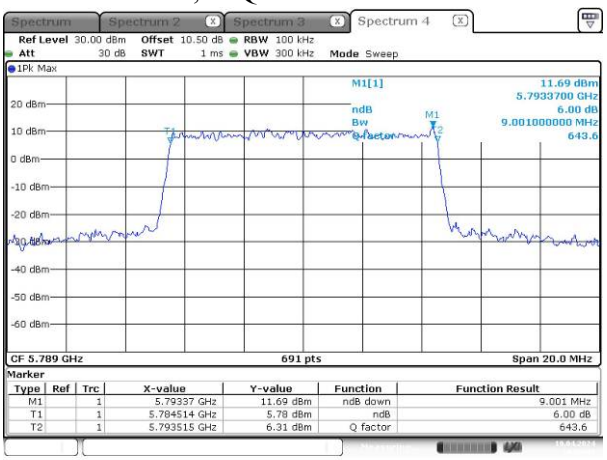
1.4MHz, 16QAM Highest Channel



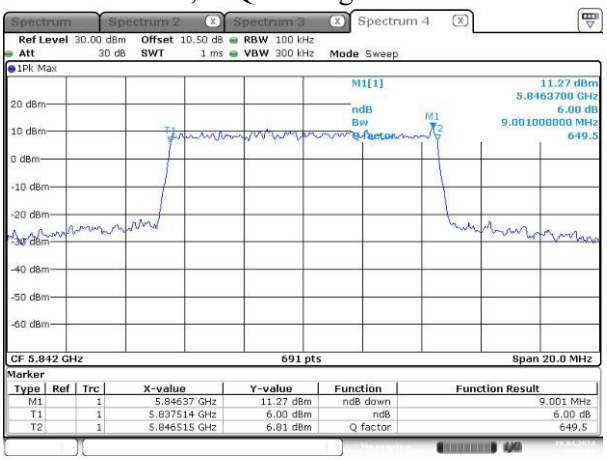
10MHz, 16QAM Lowest Channel



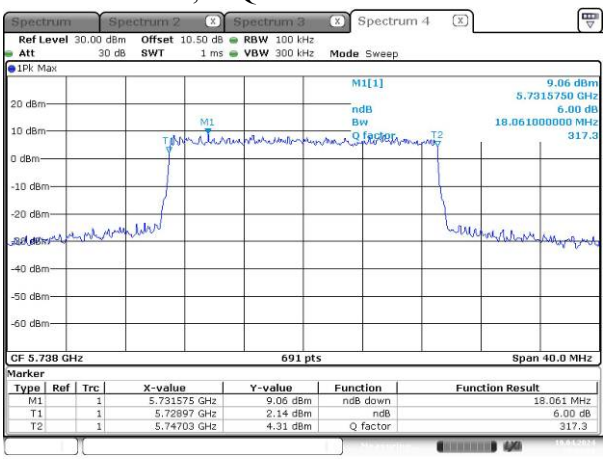
10MHz, 16QAM Middle Channel



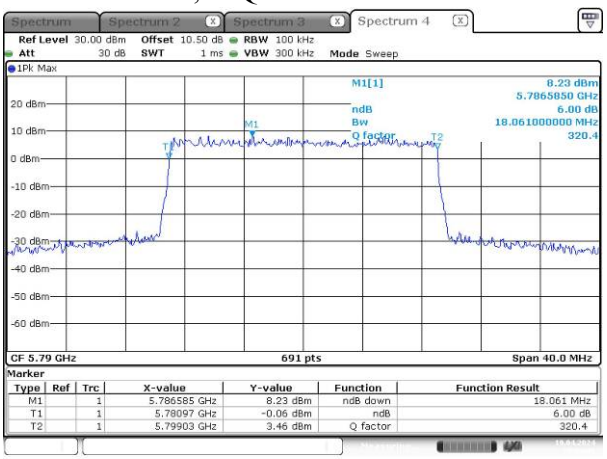
10MHz, 16QAM Highest Channel



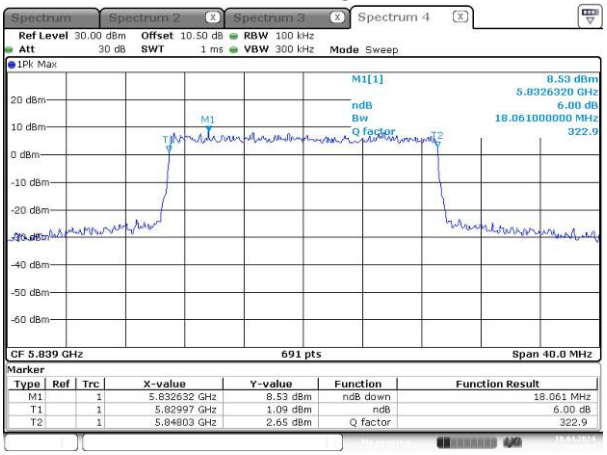
20MHz, 16QAM Lowest Channel



20MHz, 16QAM Middle Channel



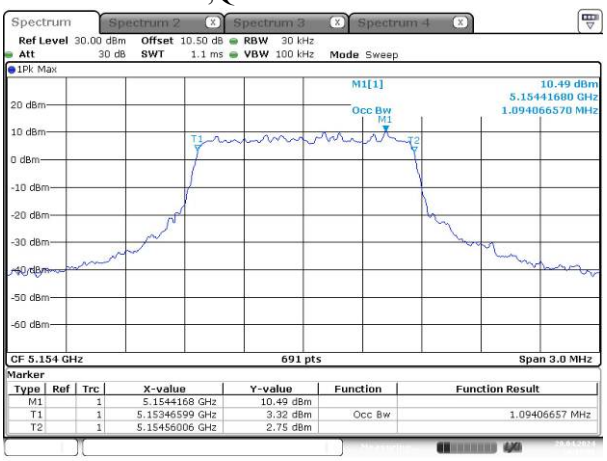
20MHz, 16QAM Highest Channel



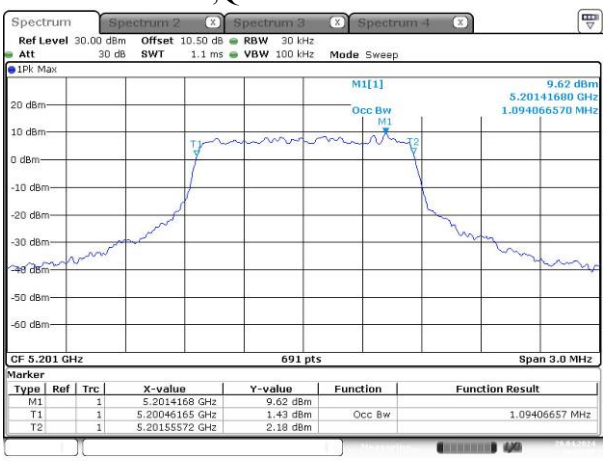
99% Occupied Bandwidth

5150-5250MHz:

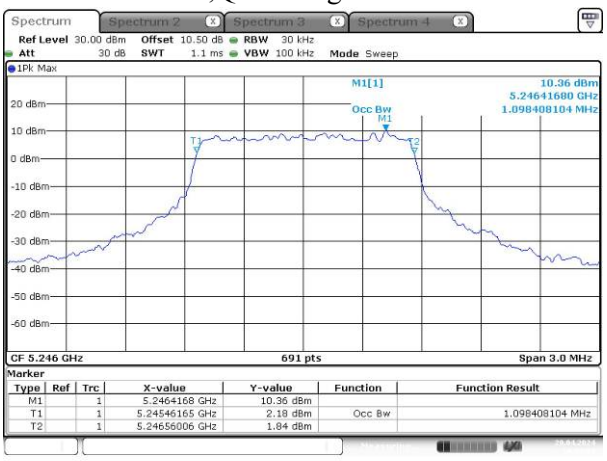
1.4MHz,QPSK Lowest Channel



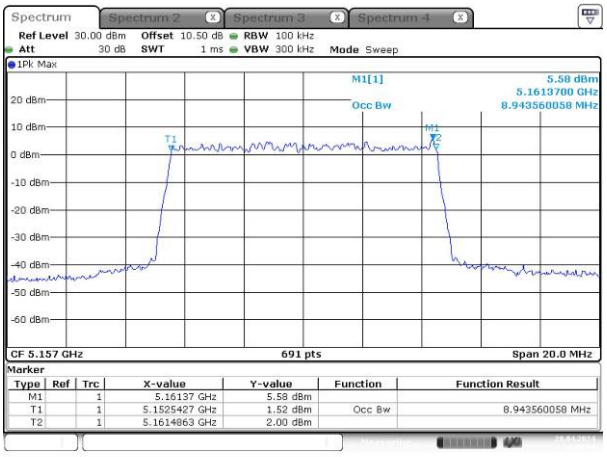
1.4MHz,QPSK Middle Channel



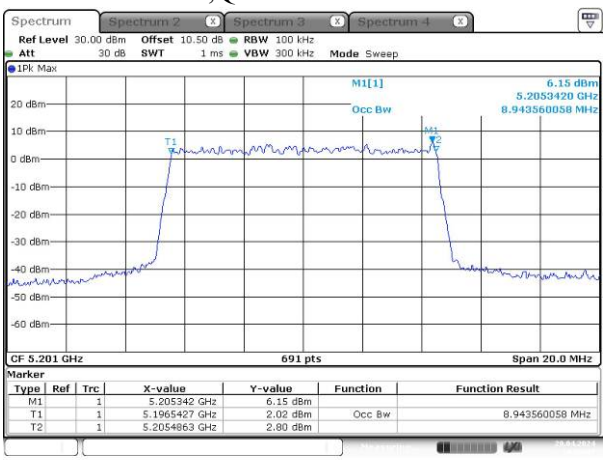
1.4MHz,QPSK Highest Channel



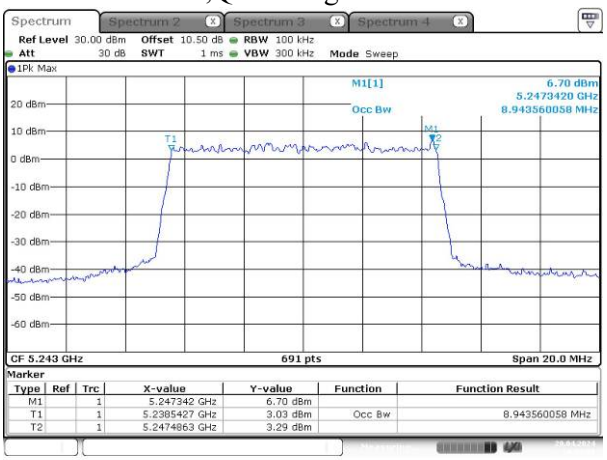
10MHz,QPSK Lowest Channel



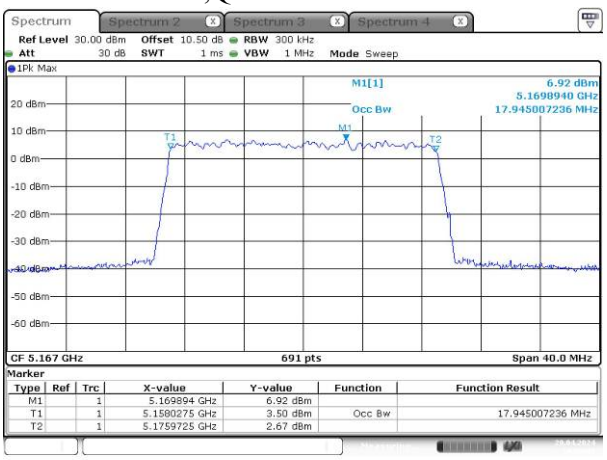
10MHz,QPSK Middle Channel



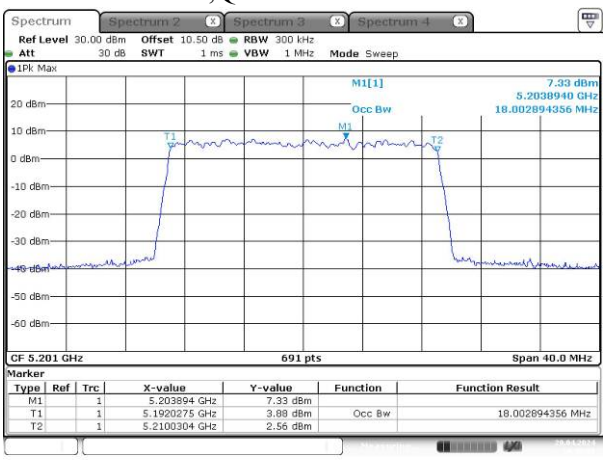
10MHz,QPSK Highest Channel



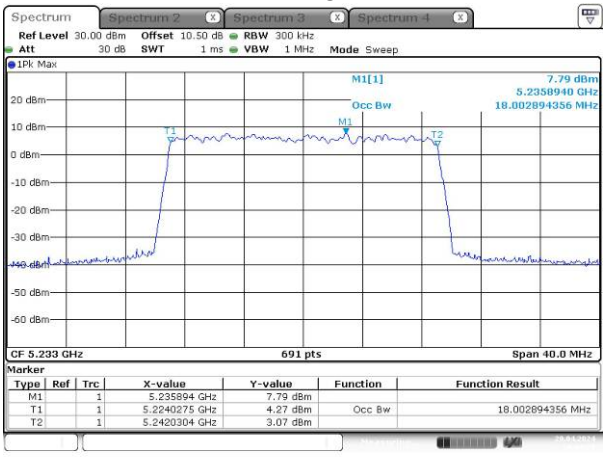
20MHz,QPSK Lowest Channel



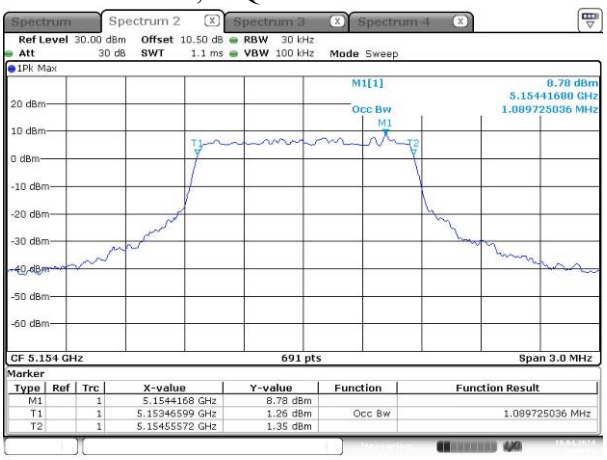
20MHz,QPSK Middle Channel



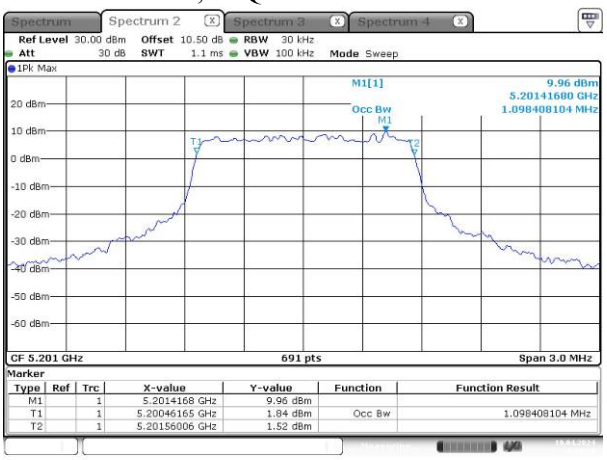
20MHz,QPSK Highest Channel



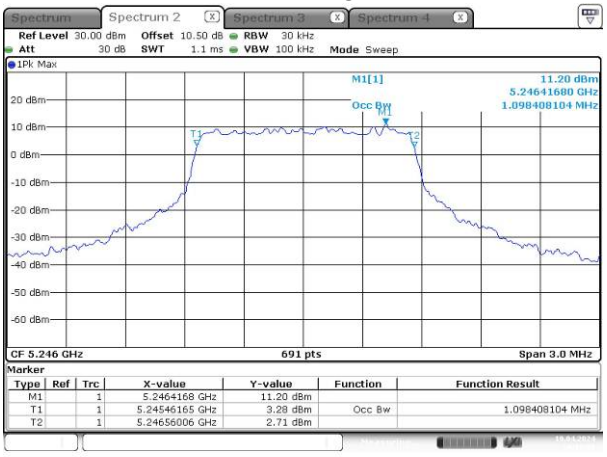
1.4MHz, 16QAM Lowest Channel



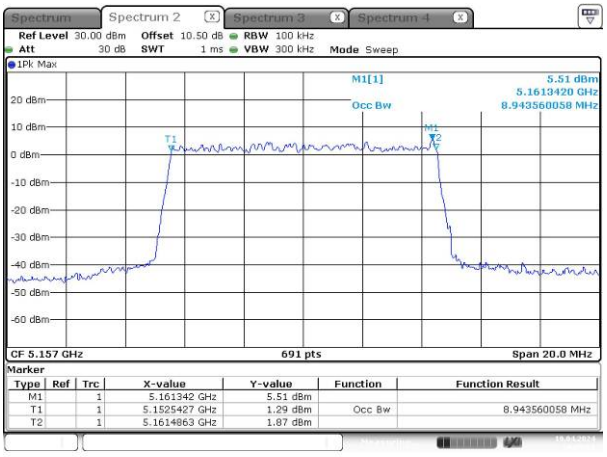
1.4MHz, 16QAM Middle Channel



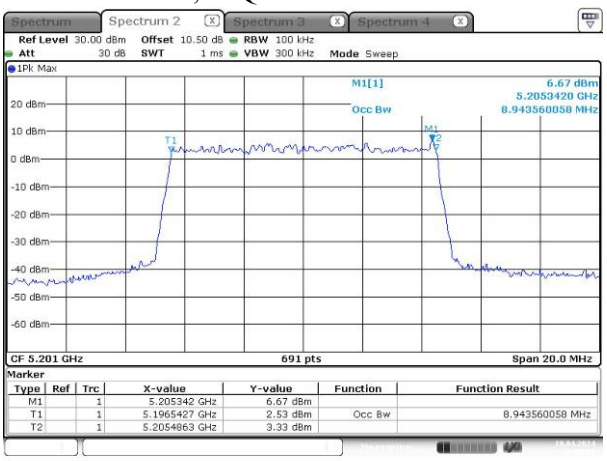
1.4MHz, 16QAM Highest Channel



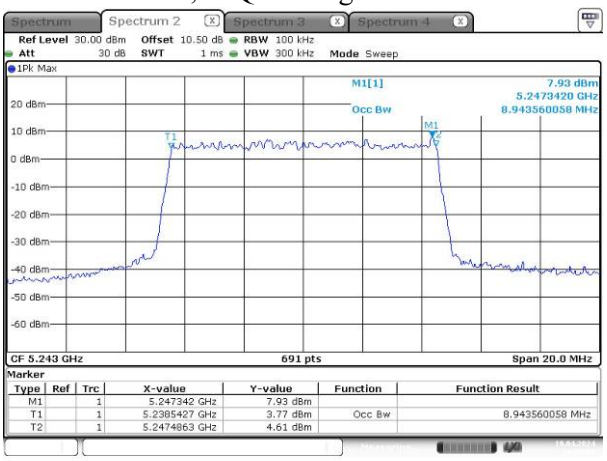
10MHz, 16QAM Lowest Channel



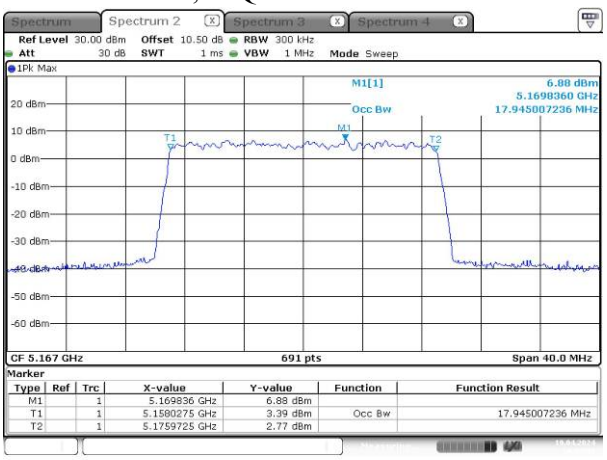
10MHz, 16QAM Middle Channel



10MHz, 16QAM Highest Channel

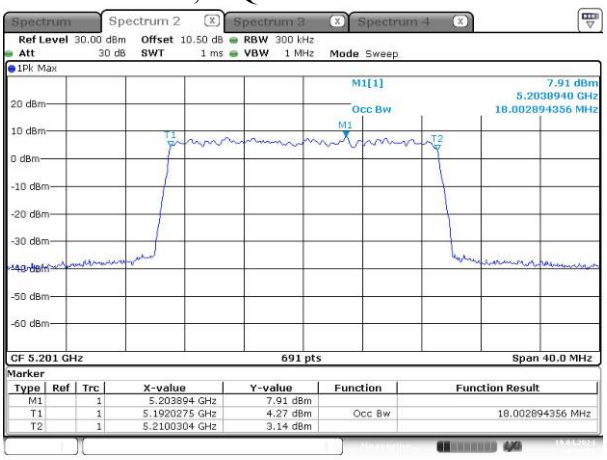


20MHz, 16QAM Lowest Channel



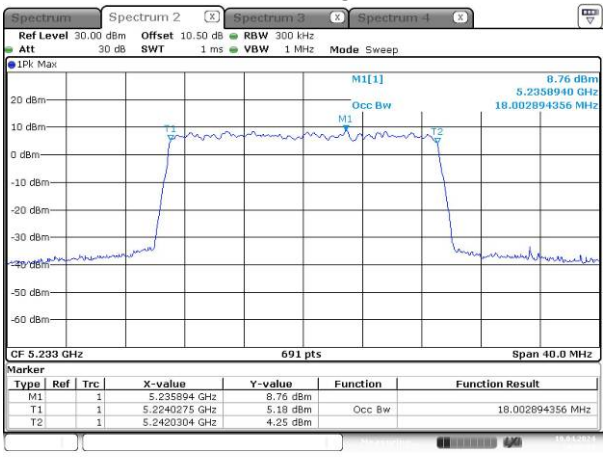
ProjectNo.:SZ1240322-14909E Tester:Jojo Zhou
Date: 19.APR.2024 14:32:46

20MHz, 16QAM Middle Channel



ProjectNo.:SZ1240322-14909E Tester:Jojo Zhou
Date: 19.APR.2024 14:35:20

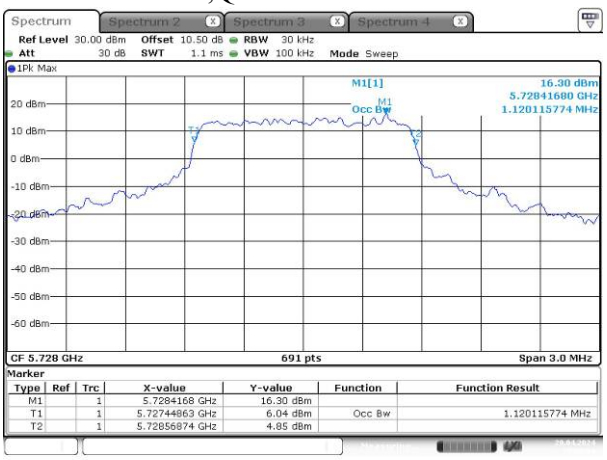
20MHz, 16QAM Highest Channel



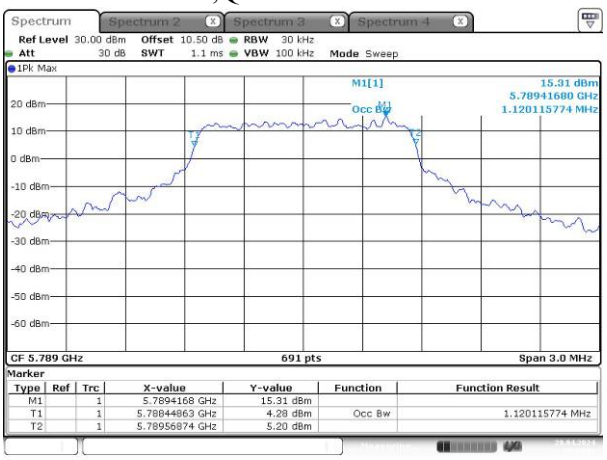
ProjectNo.:SZ1240322-14909E Tester:Jojo Zhou
Date: 19.APR.2024 14:38:13

5725-5850MHz:

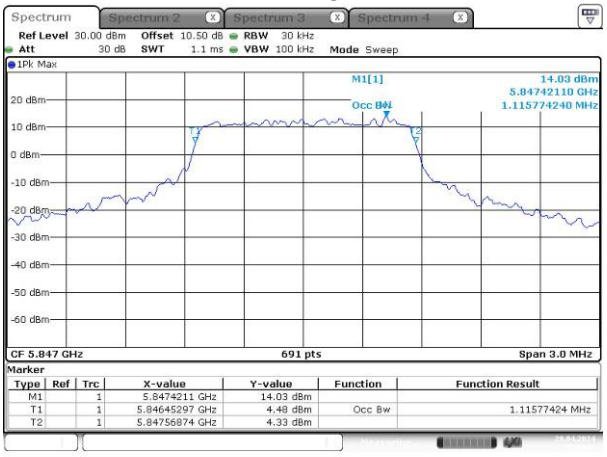
1.4MHz,QPSK Lowest Channel



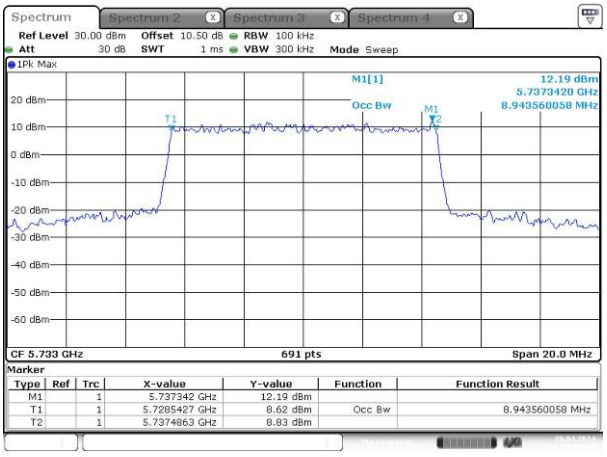
1.4MHz,QPSK Middle Channel



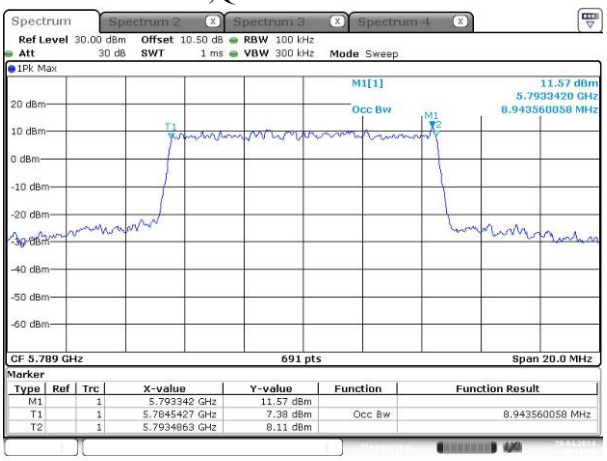
1.4MHz,QPSK Highest Channel



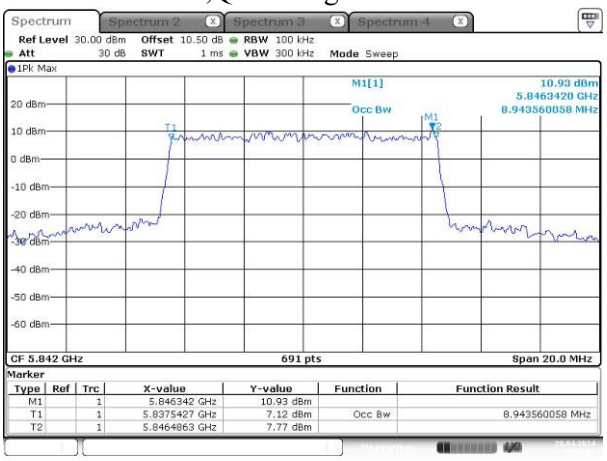
10MHz,QPSK Lowest Channel



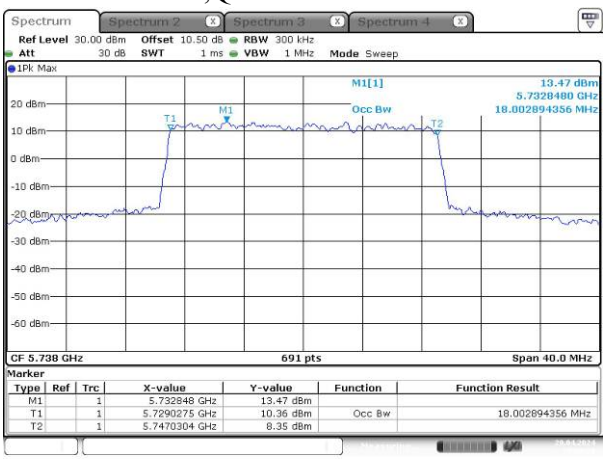
10MHz,QPSK Middle Channel



10MHz,QPSK Highest Channel

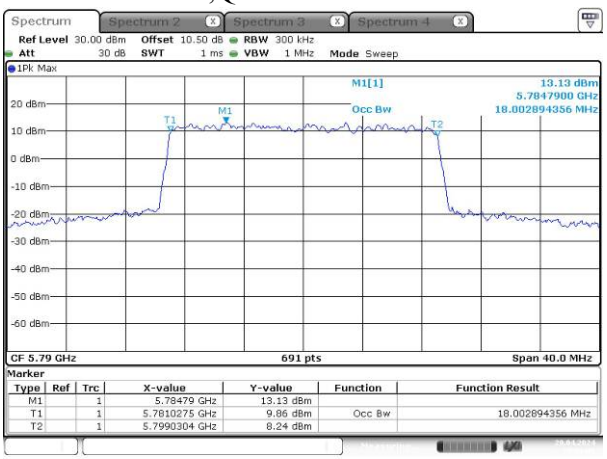


20MHz,QPSK Lowest Channel



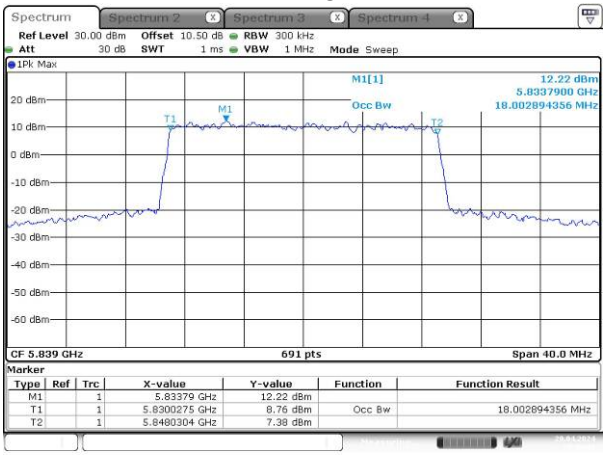
ProjectNo.:SZ1240322-14909E Tester:Jojo Zhou
Date: 20.APR.2024 15:29:28

20MHz,QPSK Middle Channel



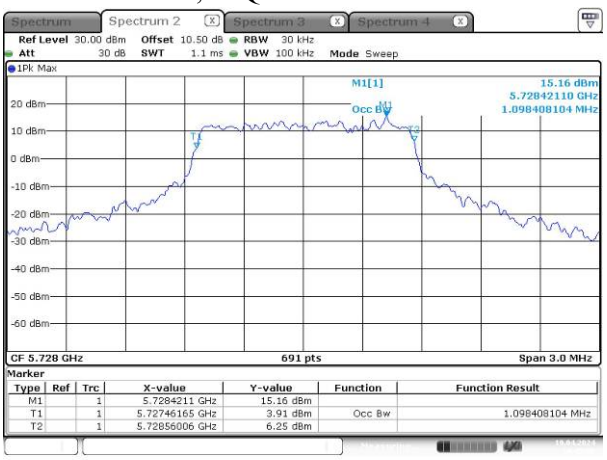
ProjectNo.:SZ1240322-14909E Tester:Jojo Zhou
Date: 20.APR.2024 15:31:40

20MHz,QPSK Highest Channel



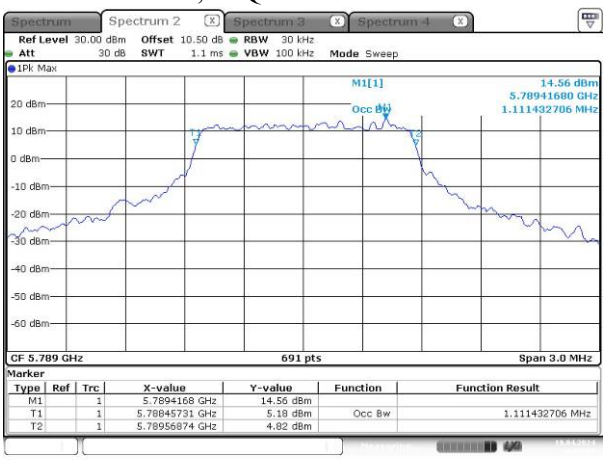
ProjectNo.:SZ1240322-14909E Tester:Jojo Zhou
Date: 20.APR.2024 15:40:46

1.4MHz, 16QAM Lowest Channel



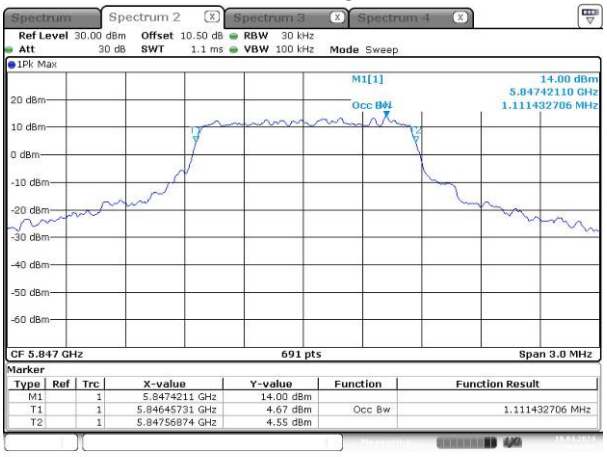
ProjectNo.:SZ1240322-14909E Tester:Jojo Zhou
Date: 19.APR.2024 14:45:06

1.4MHz, 16QAM Middle Channel



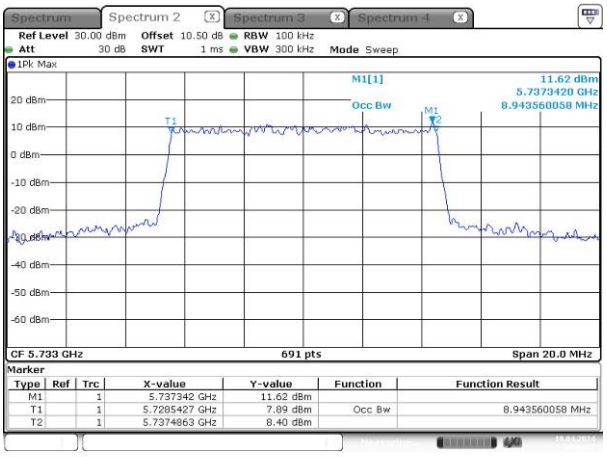
ProjectNo.:SZ1240322-14909E Tester:Jojo Zhou
Date: 19.APR.2024 14:50:14

1.4MHz, 16QAM Highest Channel



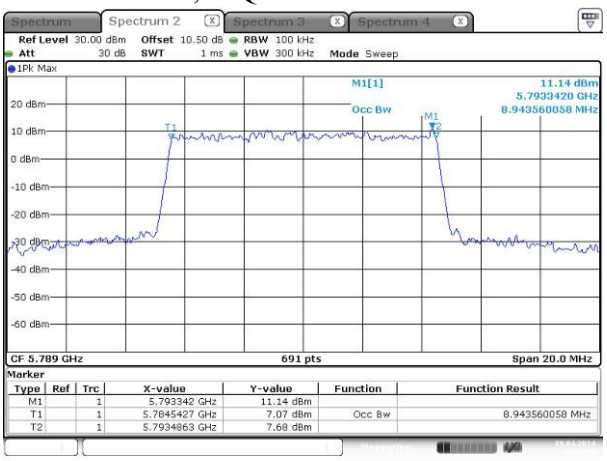
ProjectNo.:SZ1240322-14909E Tester:Jojo Zhou
Date: 19.APR.2024 14:52:46

10MHz, 16QAM Lowest Channel



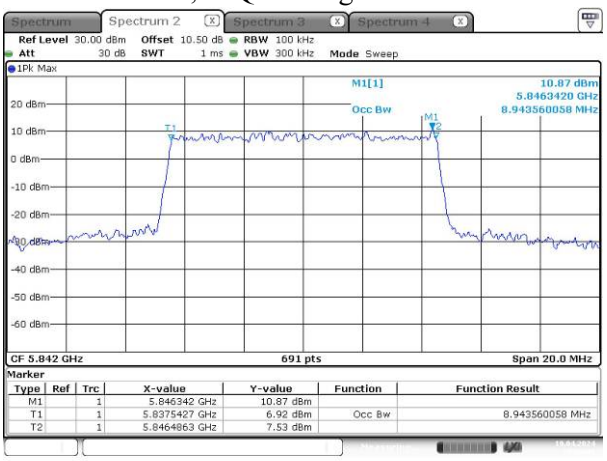
ProjectNo.:SZ1240322-14909E Tester:Jojo Zhou
Date: 19.APR.2024 14:55:57

10MHz, 16QAM Middle Channel



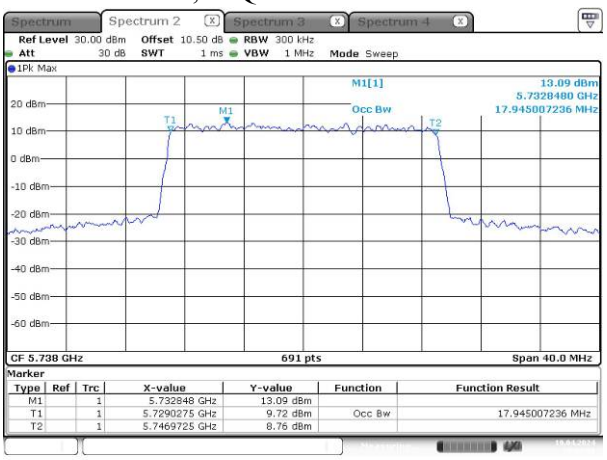
ProjectNo.:SZ1240322-14909E Tester:Jojo Zhou
Date: 19.APR.2024 14:58:27

10MHz, 16QAM Highest Channel



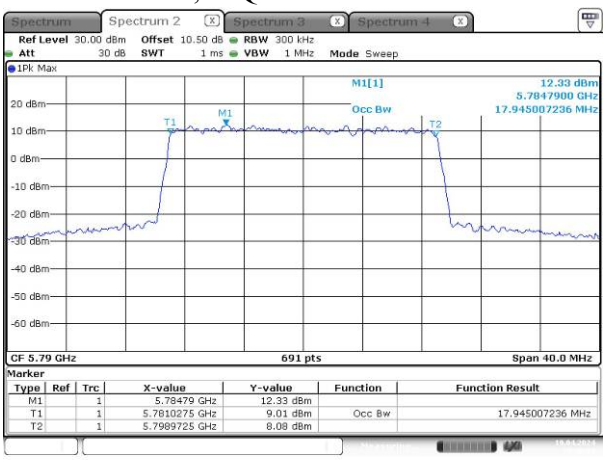
ProjectNo.:SZ1240322-14909E Tester:Jojo Zhou
Date: 19.APR.2024 15:00:40

20MHz, 16QAM Lowest Channel



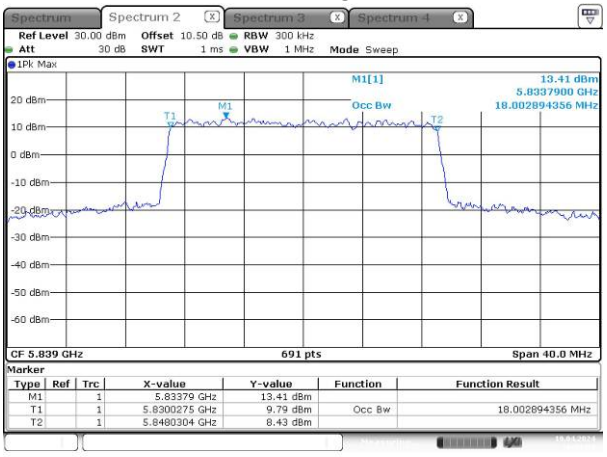
ProjectNo.:SZ1240322-14909E Tester:Jojo Zhou
Date: 19.APR.2024 15:07:50

20MHz, 16QAM Middle Channel



ProjectNo.:SZ1240322-14909E Tester:Jojo Zhou
Date: 19.APR.2024 15:10:24

20MHz, 16QAM Highest Channel



ProjectNo.:SZ1240322-14909E Tester:Jojo Zhou
Date: 19.APR.2024 16:31:54

5.4 Maximum Conducted Output Power

Serial No.:	2J8R-1	Test Date:	2024/04/19~2024/04/20
Test Site:	RF	Test Mode:	Transmitting
Tester:	Jojo Zhou	Test Result:	Pass

Environmental Conditions:

Temperature: (°C)	24.6~25.1	Relative Humidity: (%)	51~54	ATM Pressure: (kPa)	100.2~101.2

Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Agilent	USB Wideband Power Sensor	U2022XA	MY54170006	2023/10/18	2024/10/17
Eastsheep	Coaxial Attenuator	2W-SMA-JK-6G-10dB	F-08-EM505	2023/9/10	2024/9/9

** Statement of Traceability: Bay Area Compliance Laboratories Corp. (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).*

Test Data:

5150-5250 MHz:

Modulation	Test Modes	Test Frequency (MHz)	Max. Conducted Average Output Power (dBm)			
			Chain 0	Chain 2	Total	Limit
QPSK	1.4M	5154	14.84	15.61	18.25	30
		5201	15.51	16.68	19.14	30
		5246	16.18	17.26	**19.76**	30
	10M	5157	14.32	15.12	17.75	30
		5201	14.78	16.08	18.49	30
		5243	15.34	16.81	19.15	30
	20M	5167	15.72	15.26	18.51	30
		5201	14.85	16.21	18.59	30
		5233	15.27	16.78	19.10	30
16QAM	1.4M	5154	14.71	13.52	17.17	30
		5201	16.03	15.33	18.70	30
		5246	17.29	14.46	19.11	30
	10M	5157	14.30	13.38	16.87	30
		5201	15.64	14.96	18.32	30
		5243	16.87	16.12	19.52	30
	20M	5167	15.23	13.72	17.55	30
		5201	16.35	15.06	18.76	30
		5233	17.41	15.98	19.76	30

Note:
The device is a master device when this modes operating.
The Maximum antenna gain is 0.7dBi
The Maximum EIRP=20.46 dBm, meet the requirement of The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm).

5725-5850 MHz:

Modulation	Test Modes	Test Frequency (MHz)	Max. Conducted Average Output Power (dBm)			
			Chain 0	Chain 2	Total	Limit
QPSK	1.4M	5728	21.87	21.36	**24.63**	30
		5789	20.79	21.88	24.38	30
		5847	20.46	21.52	24.03	30
	10M	5733	21.25	20.96	24.12	30
		5789	20.16	21.33	23.79	30
		5842	20.01	21.43	23.79	30
	20M	5738	21.11	21.05	24.09	30
		5790	20.35	21.43	23.93	30
		5839	20.06	21.56	23.88	30
16QAM	1.4M	5728	21.18	20.47	23.85	30
		5789	20.24	20.65	23.46	30
		5847	20.28	21.23	23.79	30
	10M	5733	21.09	20.13	23.65	30
		5789	20.67	20.60	23.65	30
		5842	19.98	20.56	23.29	30
	20M	5738	21.03	20.26	23.67	30
		5790	20.48	20.71	23.61	30
		5839	20.06	20.68	23.39	30
Note: The Maximum antenna gain is 0.9dBi						

5.5 Maximum power spectral density

Serial No.:	2J8R-1	**Test Date:**	2024/04/19~2024/04/20
Test Site:	RF	**Test Mode:**	Transmitting
Tester:	Jojo Zhou	**Test Result:**	Pass

Environmental Conditions:

Temperature: (°C)	24.6~25.1	**Relative Humidity: (%)**	51~54	**ATM Pressure: (kPa)**	100.2~101.2

Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSV40	101947	2023/10/18	2024/10/17
Eastsheep	Coaxial Attenuator	5W-N-JK-6G-10dB	F-08-EM503	2023/09/10	2024/09/09

** Statement of Traceability: Bay Area Compliance Laboratories Corp. (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).*

Test Data:

5150-5250 MHz:

Modulation	Test Modes	Test Frequency (MHz)	Maximum Power Spectral Density (dBm/MHz)			
			Chain 0	Chain 2	Total	Limit
QPSK	1.4M	5154	13.51	13.89	16.71	17
		5201	13.60	14.16	16.90	17
		5246	13.80	14.08	16.95	17
	10M	5157	5.10	5.51	8.32	17
		5201	5.64	6.72	9.22	17
		5243	6.10	7.24	9.72	17
	20M	5167	2.23	2.88	5.58	17
		5201	2.50	3.48	6.03	17
		5233	2.88	4.46	6.75	17
16QAM	1.4M	5154	13.04	14.13	16.63	17
		5201	13.27	14.25	16.80	17
		5246	13.26	14.18	16.75	17
	10M	5157	5.01	6.19	8.65	17
		5201	5.95	7.59	9.86	17
		5243	7.52	8.00	10.78	17
	20M	5167	2.24	3.69	6.04	17
		5201	3.12	4.19	6.70	17
		5233	3.92	4.74	7.36	17

Note:
The Maximum antenna gain is 0.7dBi
The device is a master device when this modes operating.
Method SA-1 in KDB 789033 D02 General UNII Test Procedures New Rules v02r01was used for PSD test.

5725-5850 MHz:

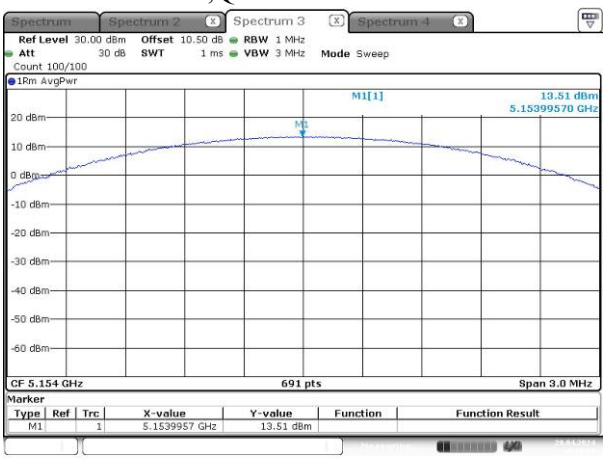
Modulation	Test Modes	Test Frequency (MHz)	Maximum Power Spectral Density (dBm/500kHz)			
			Chain 0	Chain 2	Total	Limit
QPSK	1.4M	5728	18.14	16.91	20.58	30
		5789	17.05	17.66	20.38	30
		5847	16.53	18.14	20.42	30
	10M	5733	9.29	7.82	11.63	30
		5789	8.15	8.65	11.42	30
		5842	7.35	8.89	11.20	30
	20M	5738	5.79	4.81	8.34	30
		5790	5.26	5.56	8.42	30
		5839	4.46	5.80	8.19	30
16QAM	1.4M	5728	17.48	18.97	21.30	30
		5789	16.77	18.86	20.95	30
		5847	16.58	18.63	20.74	30
	10M	5733	8.36	9.98	12.26	30
		5789	7.84	9.73	11.90	30
		5842	7.59	9.62	11.73	30
	20M	5738	5.36	6.81	9.16	30
		5790	4.90	6.75	8.93	30
		5839	5.28	6.57	8.98	30

Note:
The Maximum antenna gain is 0.9dBi
Method SA-1 in KDB 789033 D02 General UNII Test Procedures New Rules v02r01was used for PSD test.

5150-5250MHz:

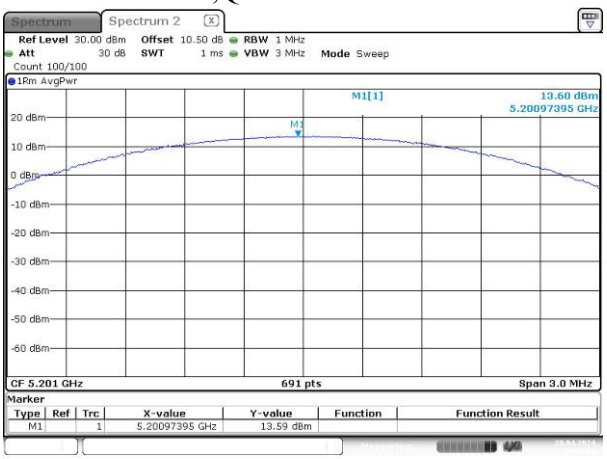
Chain 0

1.4MHz,QPSK Lowest Channel



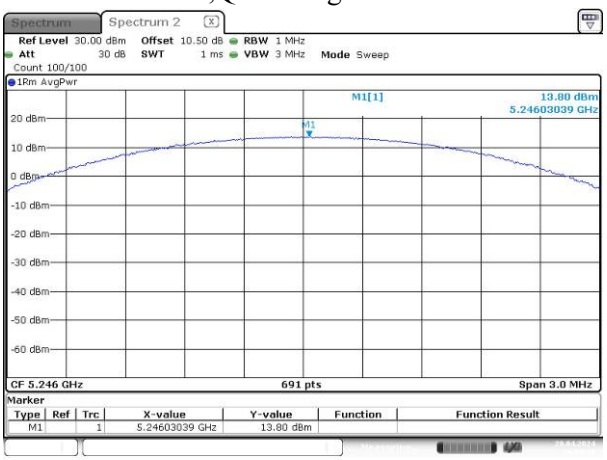
ProjectNo.:SZ1240322-14909E Tester:Jojo Zhou
Date: 20.APR.2024 14:18:24

1.4MHz,QPSK Middle Channel



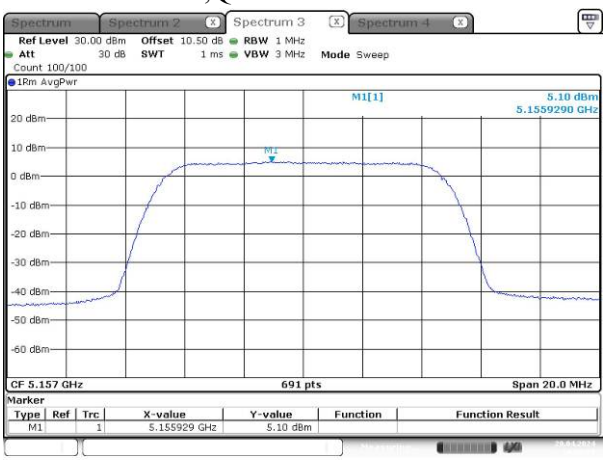
ProjectNo.:SZ1240322-14909E Tester:Jojo Zhou
Date: 20.APR.2024 14:20:13

1.4MHz,QPSK Highest Channel



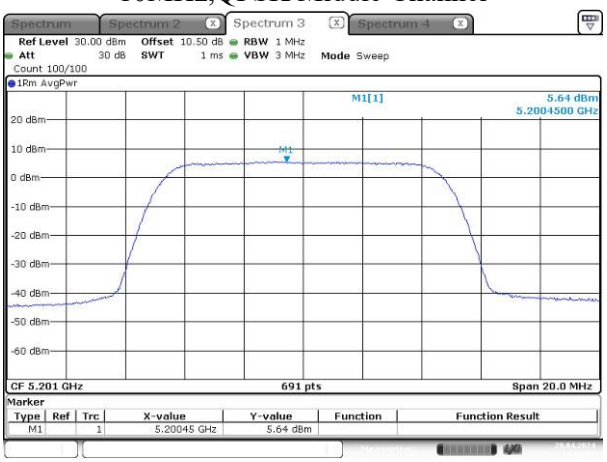
ProjectNo.:SZ1240322-14909E Tester:Jojo Zhou
Date: 20.APR.2024 14:24:10

10MHz,QPSK Lowest Channel



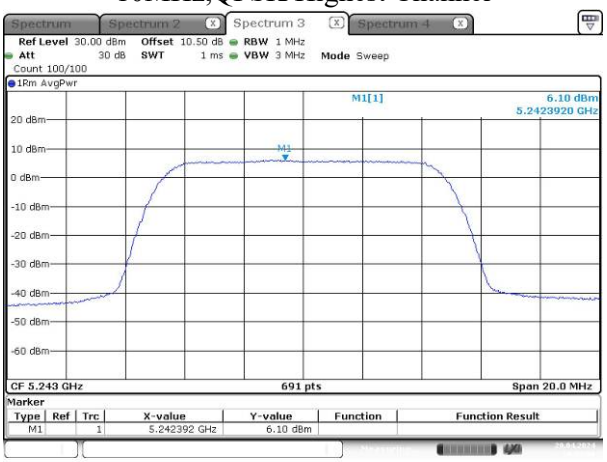
ProjectNo.:SZ1240322-14909E Tester:Jojo Zhou
Date: 20.APR.2024 14:28:20

10MHz,QPSK Middle Channel



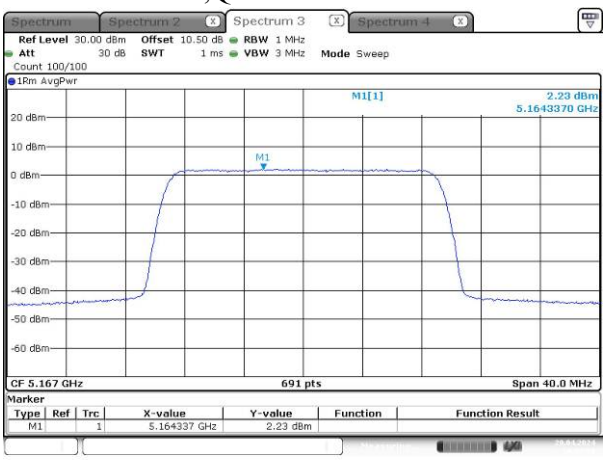
ProjectNo.:SZ1240322-14909E Tester:Jojo Zhou
Date: 20.APR.2024 14:31:05

10MHz,QPSK Highest Channel



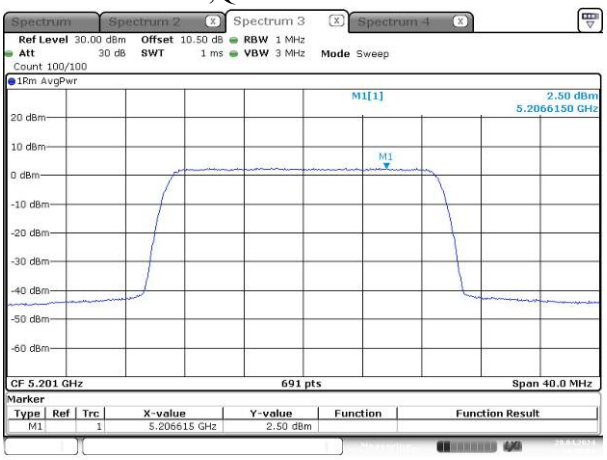
ProjectNo.:SZ1240322-14909E Tester:Jojo Zhou
Date: 20.APR.2024 14:34:00

20MHz,QPSK Lowest Channel



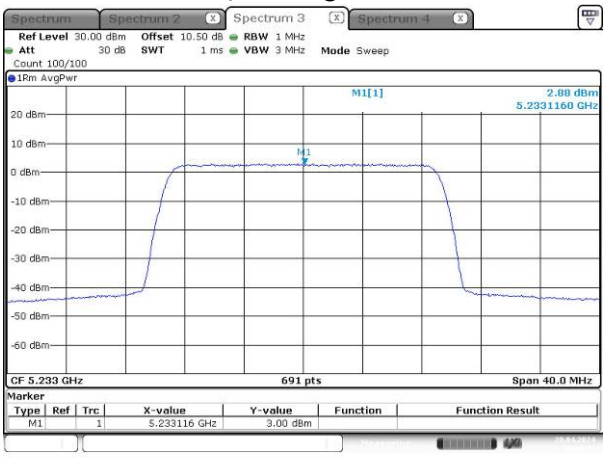
ProjectNo.:SZ1240322-14909E Tester:Jojo Zhou
Date: 20.APR.2024 14:37:11

20MHz,QPSK Middle Channel



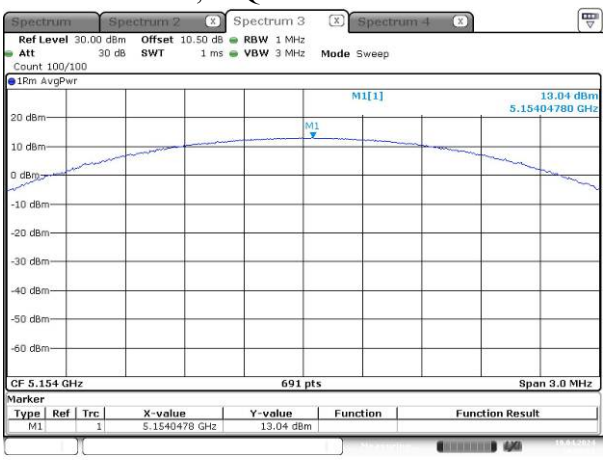
ProjectNo.:SZ1240322-14909E Tester:Jojo Zhou
Date: 20.APR.2024 14:41:54

20MHz,QPSK Highest Channel



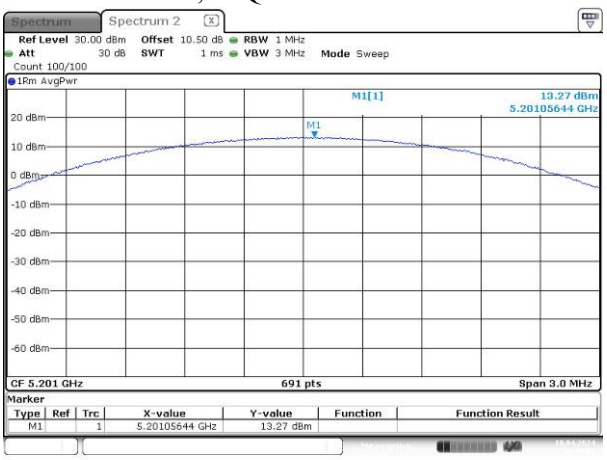
ProjectNo.:SZ1240322-14909E Tester:Jojo Zhou
Date: 20.APR.2024 14:44:40

1.4MHz, 16QAM Lowest Channel



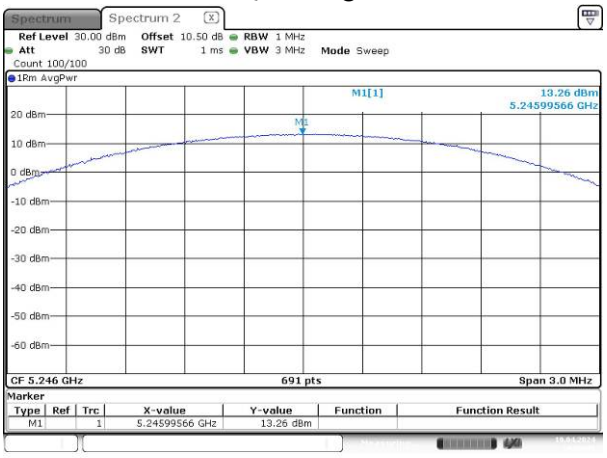
ProjectNo.:SZ1240322-14909E Tester:Jojo Zhou
Date: 19.APR.2024 14:08:12

1.4MHz, 16QAM Middle Channel



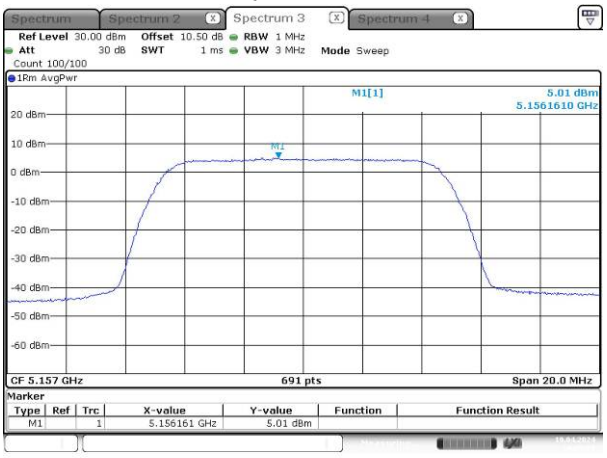
ProjectNo.:SZ1240322-14909E Tester:Jojo Zhou
Date: 19.APR.2024 14:15:10

1.4MHz, 16QAM Highest Channel



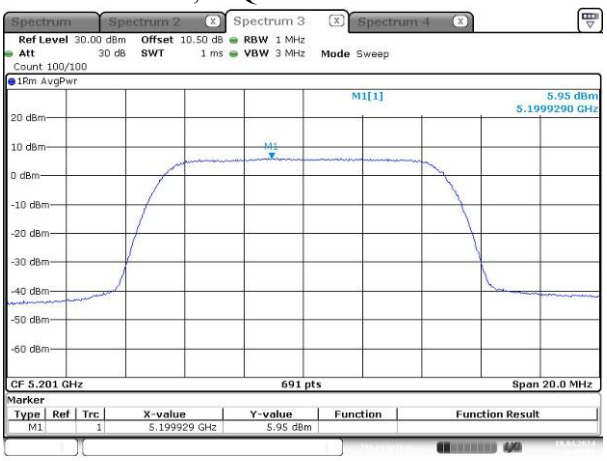
ProjectNo.:SZ1240322-14909E Tester:Jojo Zhou
Date: 19.APR.2024 14:20:40

10MHz, 16QAM Lowest Channel



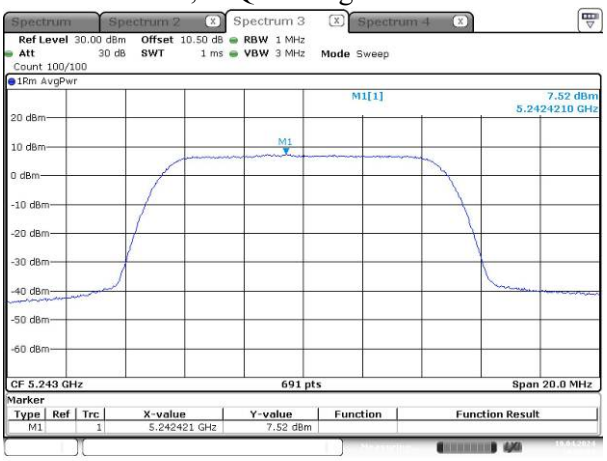
ProjectNo.:SZ1240322-14909E Tester:Jojo Zhou
Date: 19.APR.2024 14:25:27

10MHz, 16QAM Middle Channel



ProjectNo.:SZ1240322-14909E Tester:Jojo Zhou
Date: 19.APR.2024 14:27:40

10MHz, 16QAM Highest Channel



ProjectNo.:SZ1240322-14909E Tester:Jojo Zhou
Date: 19.APR.2024 14:29:53