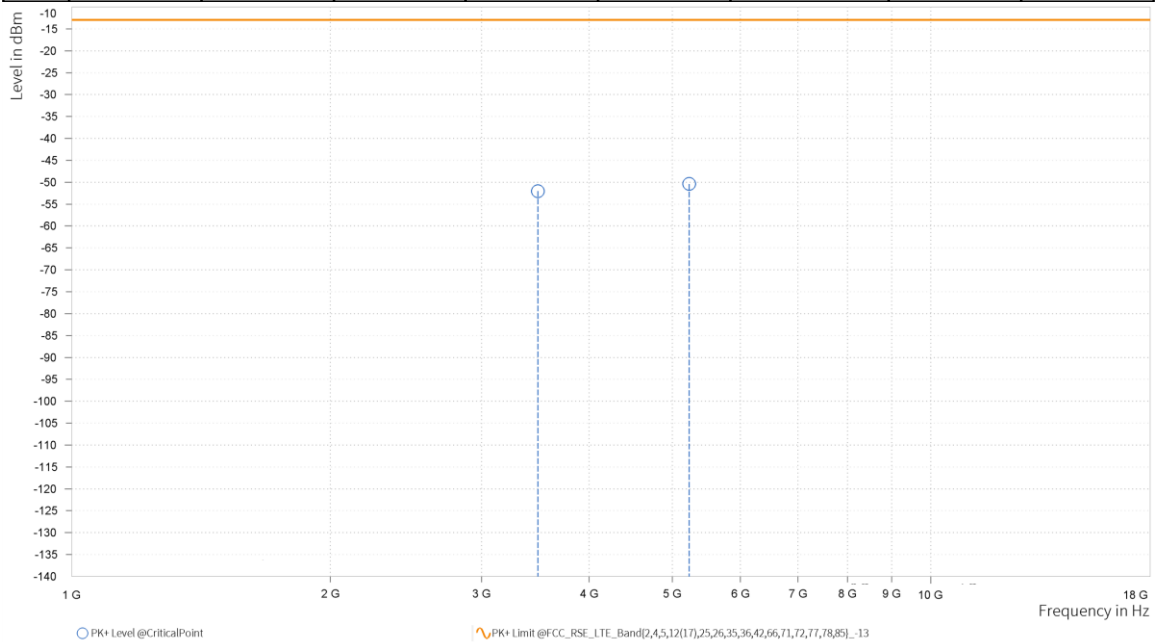




CHANNEL BANDWIDTH	3MHz / QPSK	MODE	TX channel 132322
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	AC 120V 60HZ	TESTED BY	Hanwen Xu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	3,487.300	-52.03	-13.00	39.03	20.48	H	101	1.00
4	5,230.950	-50.40	-13.00	37.40	24.02	H	101	2.00

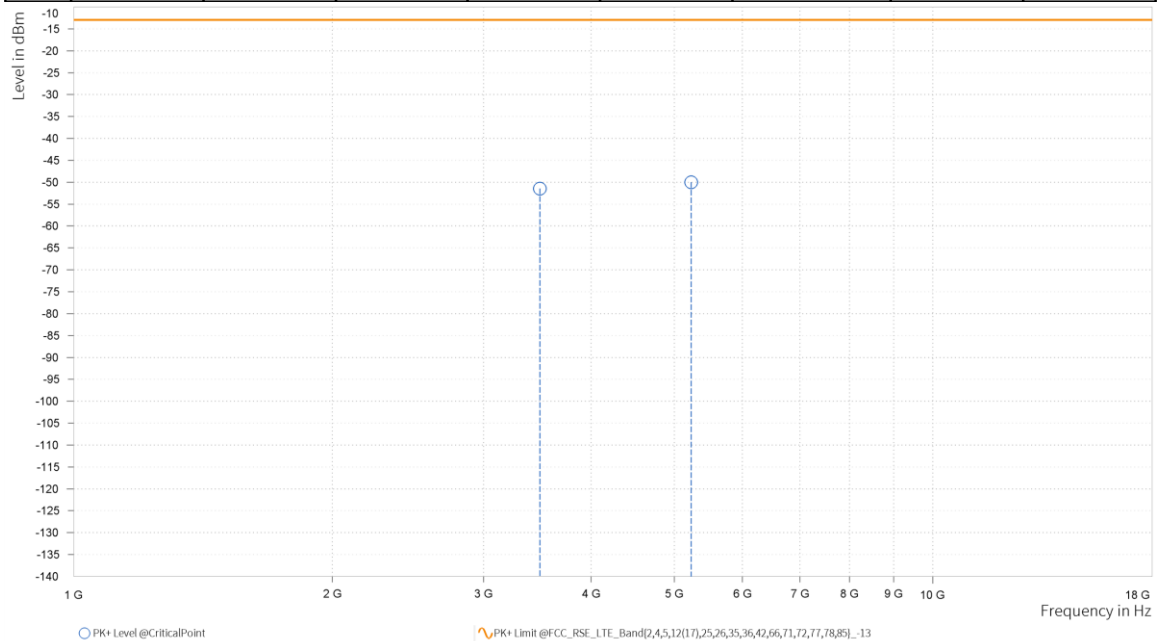




CHANNEL BANDWIDTH	3MHz / QPSK	MODE	TX channel 132322
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	AC 120V 60HZ	TESTED BY	Hanwen Xu

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	3,487.300	-51.45	-13.00	38.45	21.26	V	359.1	1.00
4	5,230.950	-50.00	-13.00	37.00	24.55	V	359.1	2.00

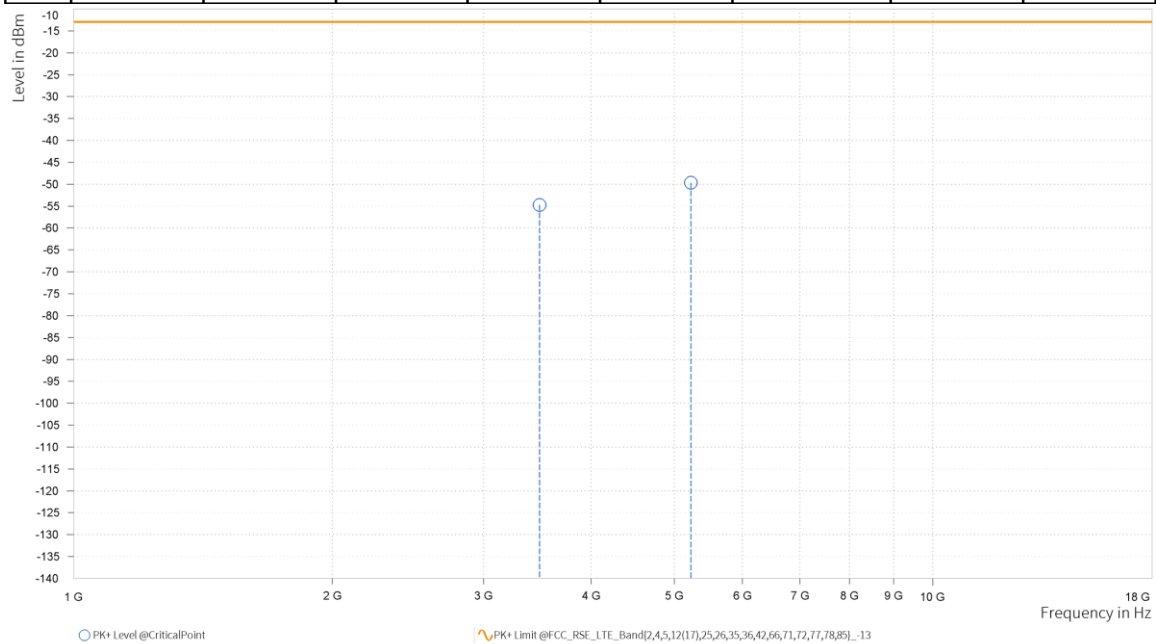




CHANNEL BANDWIDTH	5MHz / QPSK	MODE	TX channel 132322
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	AC 120V 60HZ	TESTED BY	Hanwen Xu
TESTED BY	Hanwen Xu		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	3,485.500	-54.71	-13.00	41.71	20.46	H	233.4	1.00
4	5,228.250	-49.66	-13.00	36.66	24.00	H	102.5	2.00

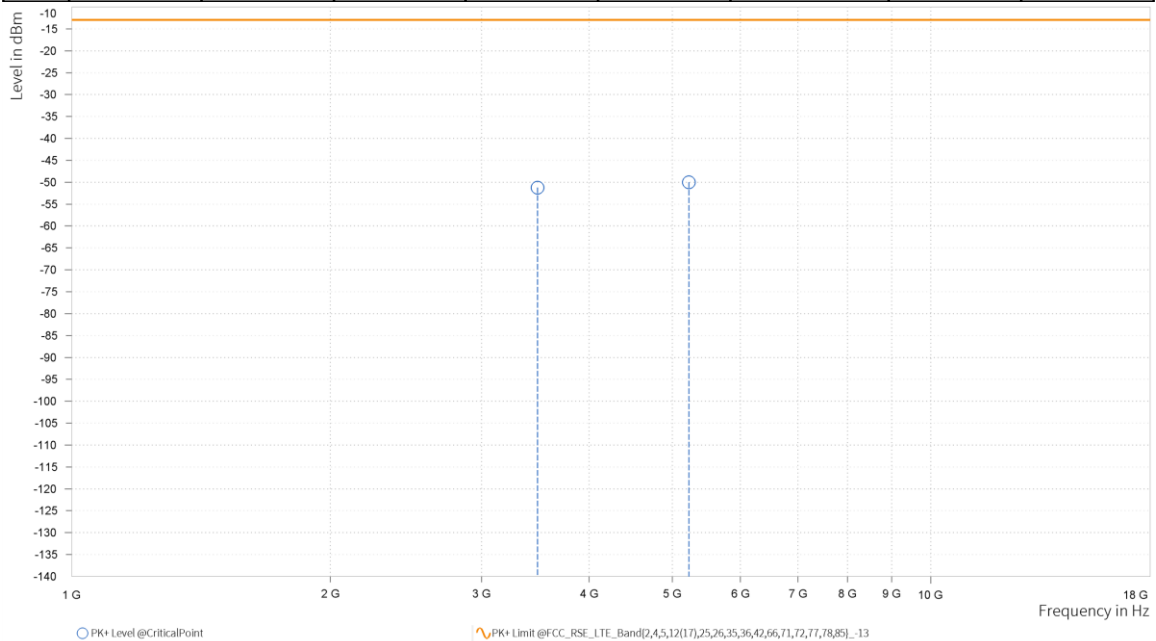




CHANNEL BANDWIDTH	5MHz / QPSK	MODE	TX channel 132322
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	AC 120V 60HZ	TESTED BY	Hanwen Xu

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	3,485.500	-51.24	-13.00	38.24	21.24	V	108.9	1.00
4	5,228.250	-50.00	-13.00	37.00	24.54	V	1	2.00

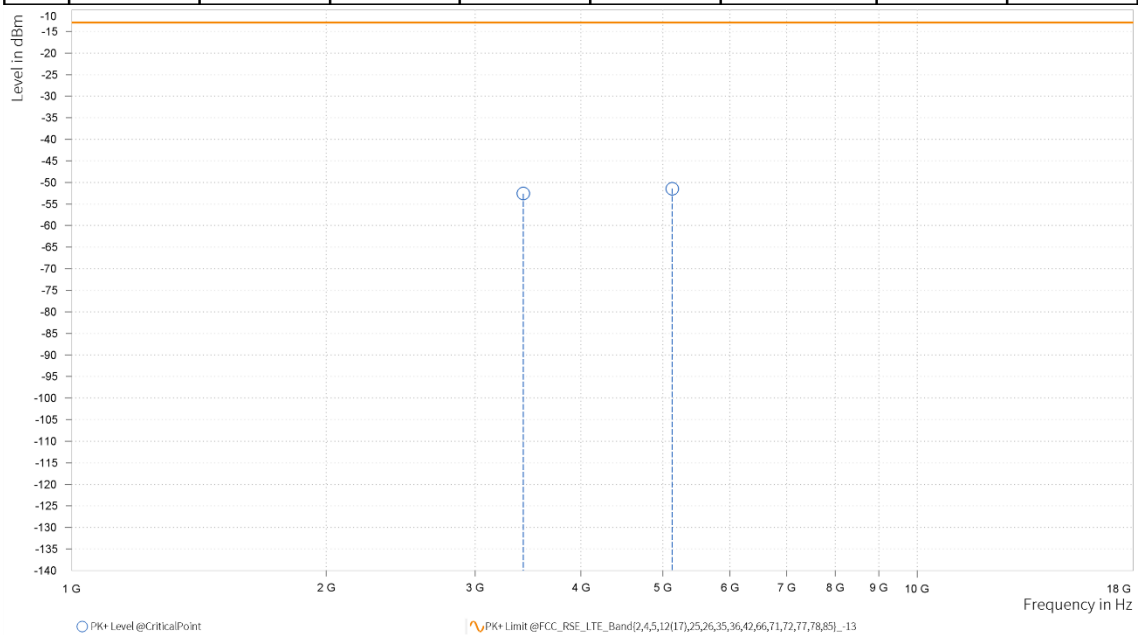




CHANNEL BANDWIDTH	10MHz / QPSK	MODE	TX channel 132022
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	AC 120V 60HZ	TESTED BY	Hanwen Xu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	3,421.000	-52.58	-13.00	39.58	20.53	H	331.8	1.00
4	5,131.500	-51.44	-13.00	38.44	23.56	H	236.2	2.00

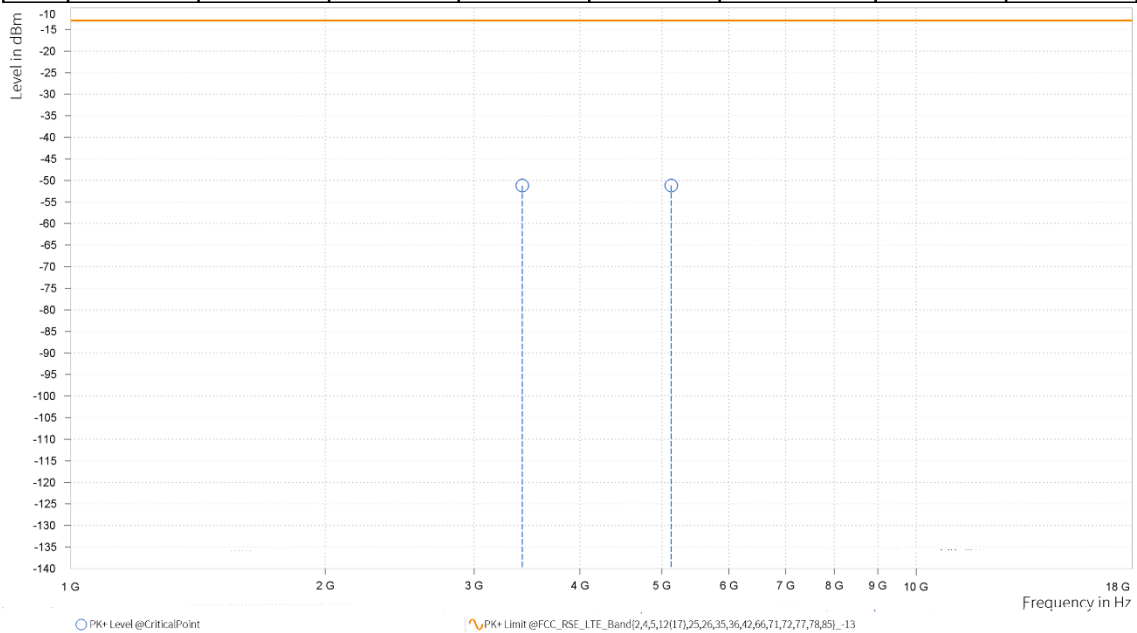




CHANNEL BANDWIDTH	10MHz / QPSK	MODE	TX channel 132022
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	AC 120V 60HZ	TESTED BY	Hanwen Xu

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	3,421.000	-51.19	-13.00	38.19	20.87	V	103.2	1.00
4	5,131.500	-51.15	-13.00	38.15	23.88	V	321.2	2.00



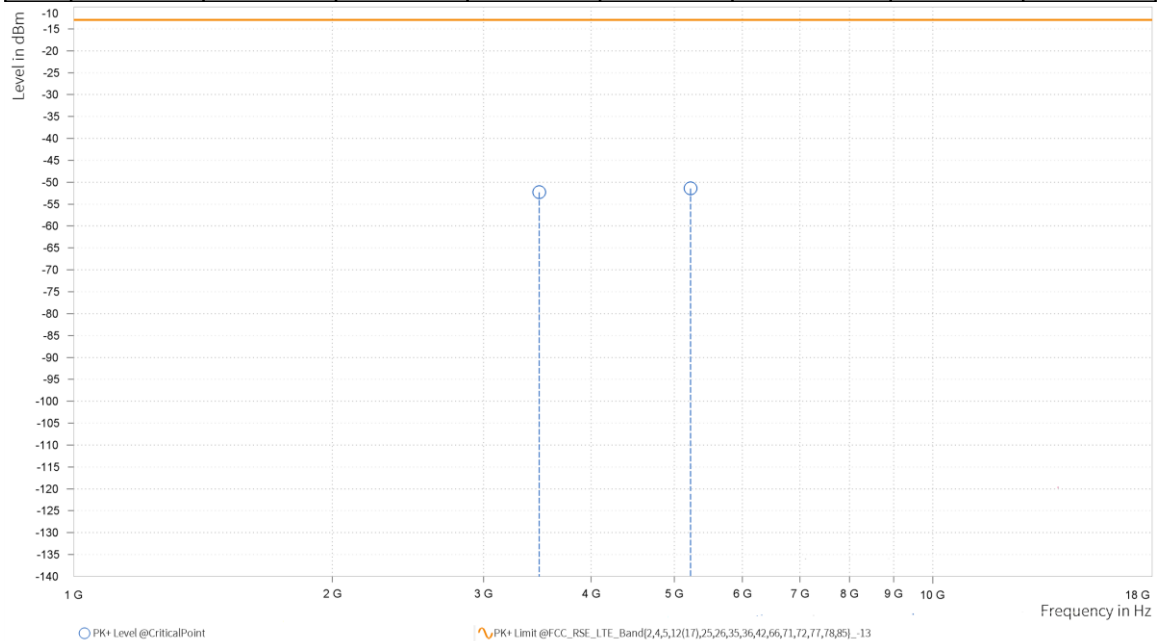


BUREAU VERITAS Test Report No.: PSZ-QBJ2501200112RF04

CHANNEL BANDWIDTH	10MHz / QPSK	MODE	TX channel 132322
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	AC 120V 60HZ	TESTED BY	Hanwen Xu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	3,481.000	-52.28	-13.00	39.28	20.42	H	1	1.00
4	5,221.500	-51.43	-13.00	38.43	23.97	H	165.4	2.00

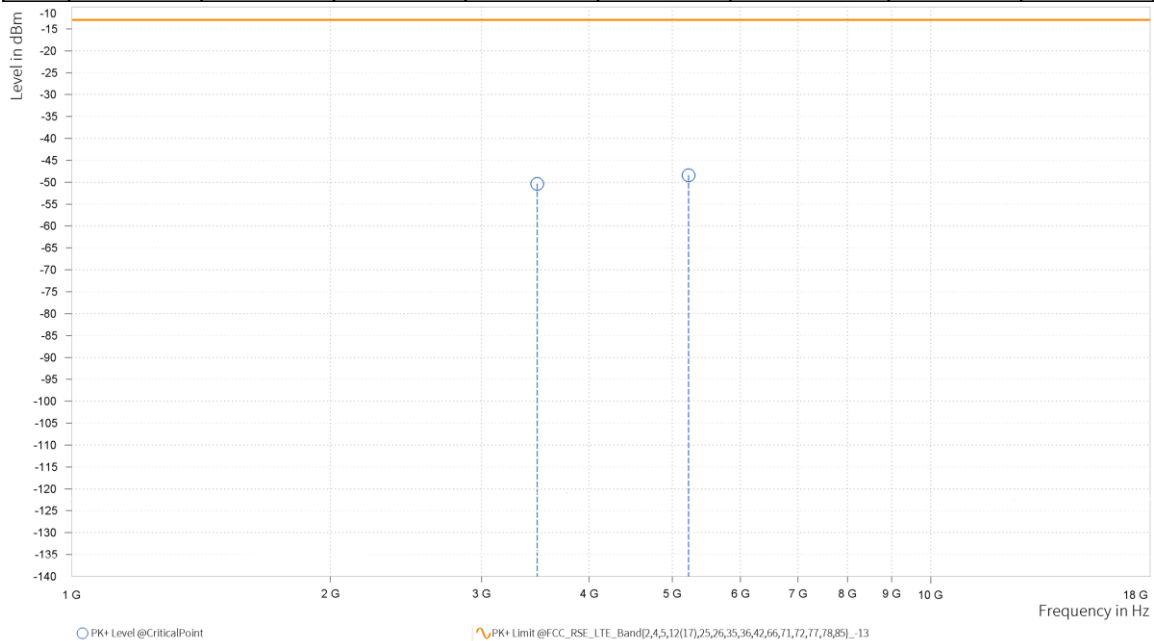




CHANNEL BANDWIDTH	10MHz / QPSK	MODE	TX channel 132322
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	AC 120V 60HZ	TESTED BY	Hanwen Xu

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	3,481.000	-50.35	-13.00	37.35	21.18	V	257.5	1.00
4	5,221.500	-48.40	-13.00	35.40	24.53	V	125.2	2.00

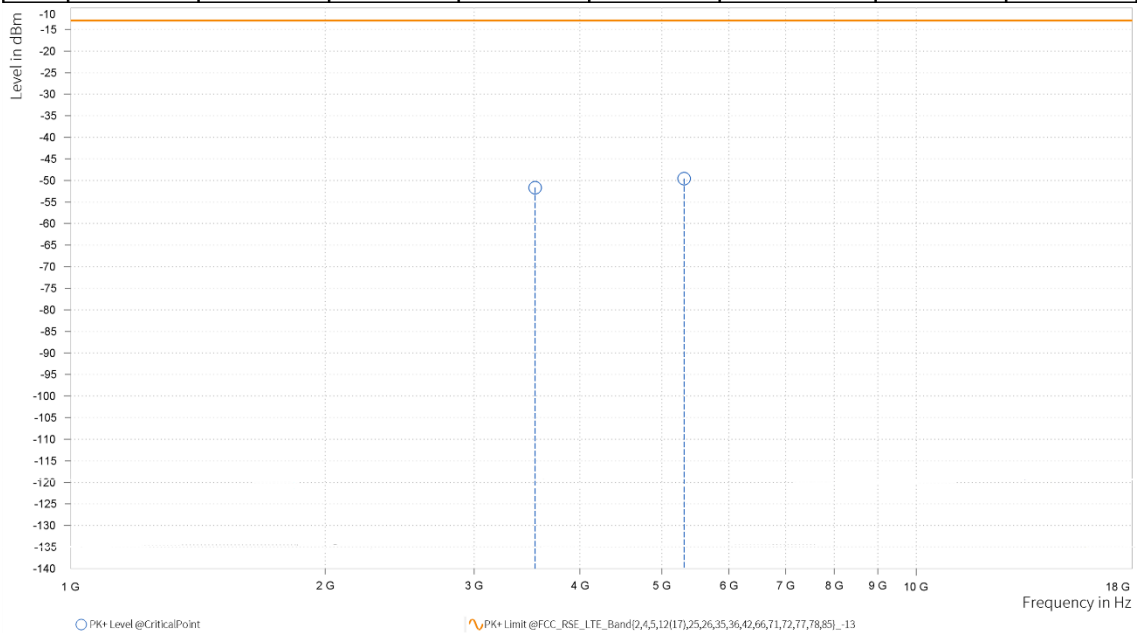




CHANNEL BANDWIDTH	10MHz / QPSK	MODE	TX channel 132622
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	AC 120V 60HZ	TESTED BY	Hanwen Xu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	3,541.000	-51.67	-13.00	38.67	20.70	H	260.3	1.00
4	5,311.500	-49.56	-13.00	36.56	24.17	H	359.1	2.00

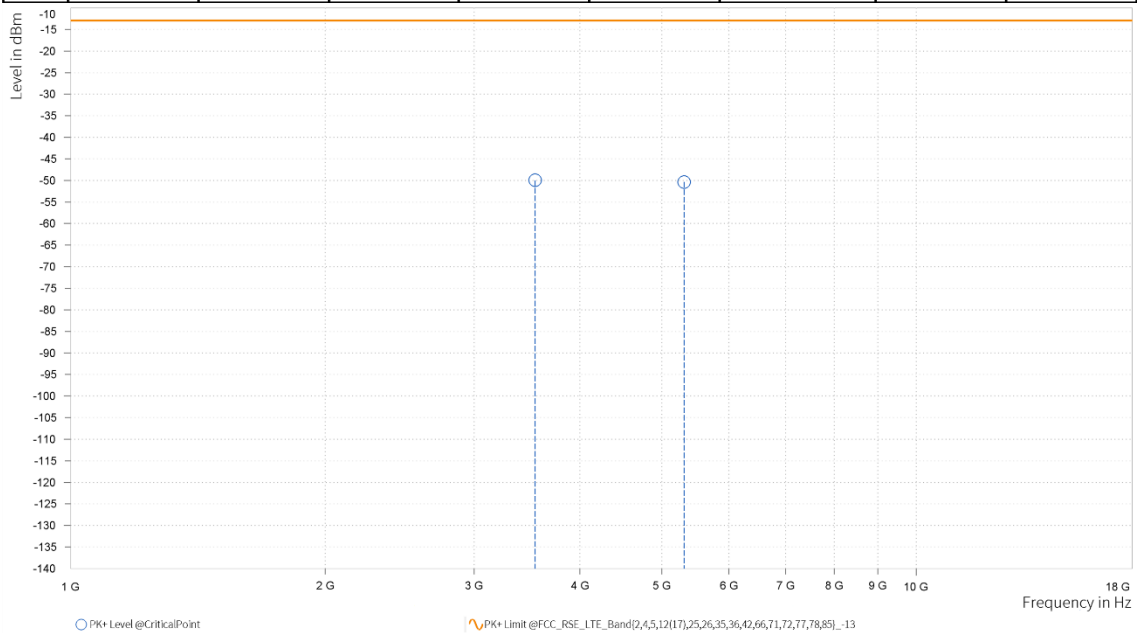




CHANNEL BANDWIDTH	10MHz / QPSK	MODE	TX channel 132622
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	AC 120V 60HZ	TESTED BY	Hanwen Xu

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	3,541.000	-49.95	-13.00	36.95	21.22	V	1	1.00
4	5,311.500	-50.36	-13.00	37.36	24.69	V	358.5	2.00

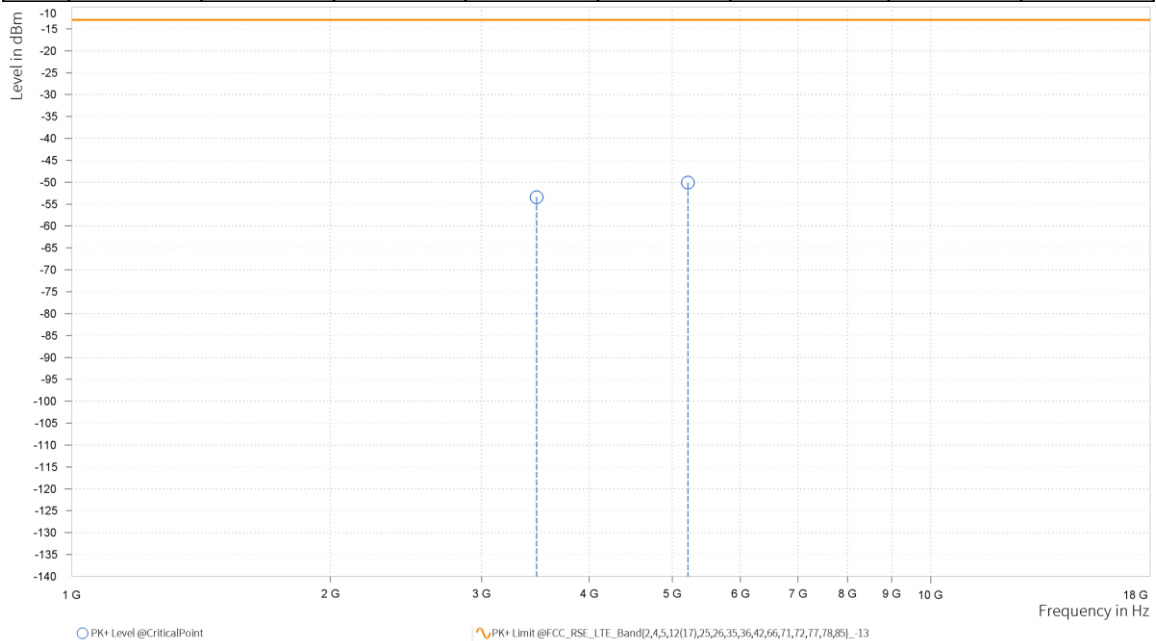




CHANNEL BANDWIDTH	15MHz / QPSK	MODE	TX channel 132322
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	AC 120V 60HZ	TESTED BY	Hanwen Xu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	3,476.500	-53.43	-13.00	40.43	20.39	H	359.1	1.00
4	5,214.750	-50.10	-13.00	37.10	23.93	H	101.8	2.00



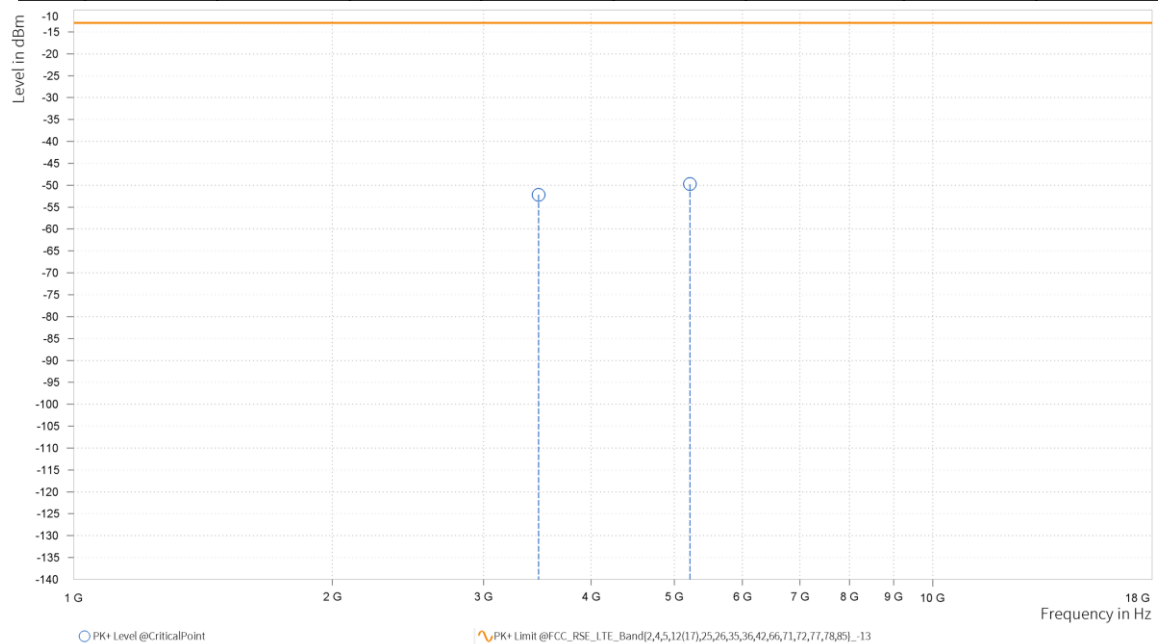


CHANNEL BANDWIDTH	15MHz / QPSK	MODE	TX channel 132322
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	AC 120V 60HZ	TESTED BY	Hanwen Xu

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	3,476.500	-52.16	-13.00	39.16	21.13	V	285.8	1.00
4	5,214.750	-49.73	-13.00	36.73	24.51	V	359	2.00

SS

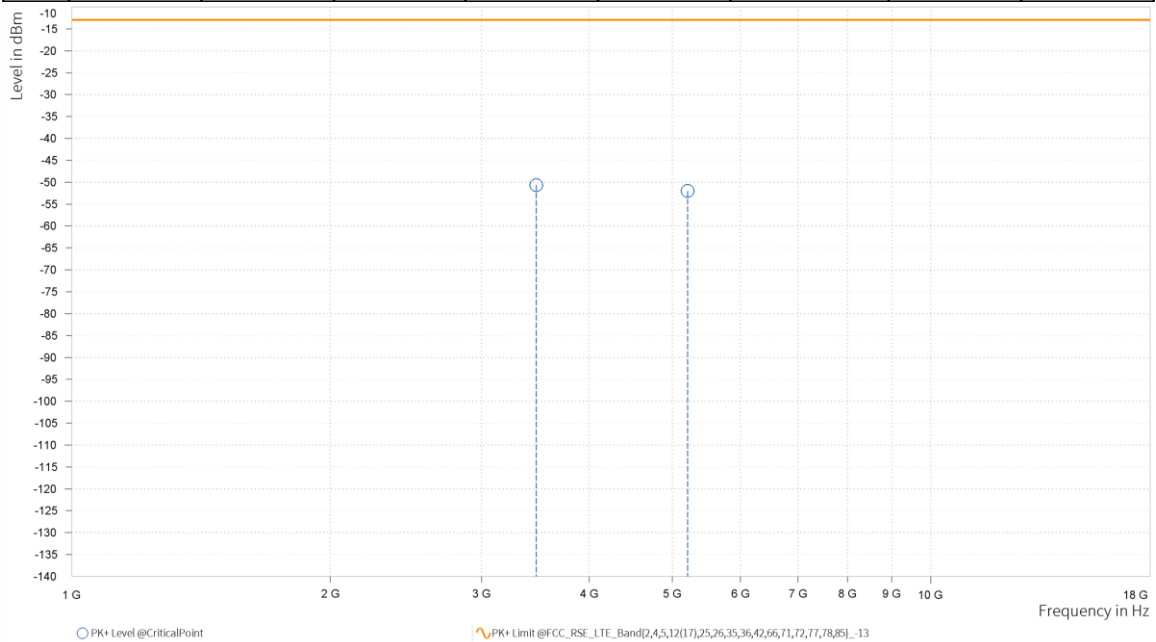




CHANNEL BANDWIDTH	20MHz / QPSK	MODE	TX channel 132322
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	AC 120V 60HZ	TESTED BY	Hanwen Xu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	3,472.000	-50.66	-13.00	37.66	20.35	H	1	1.00
4	5,208.000	-52.01	-13.00	39.01	23.90	H	1	2.00

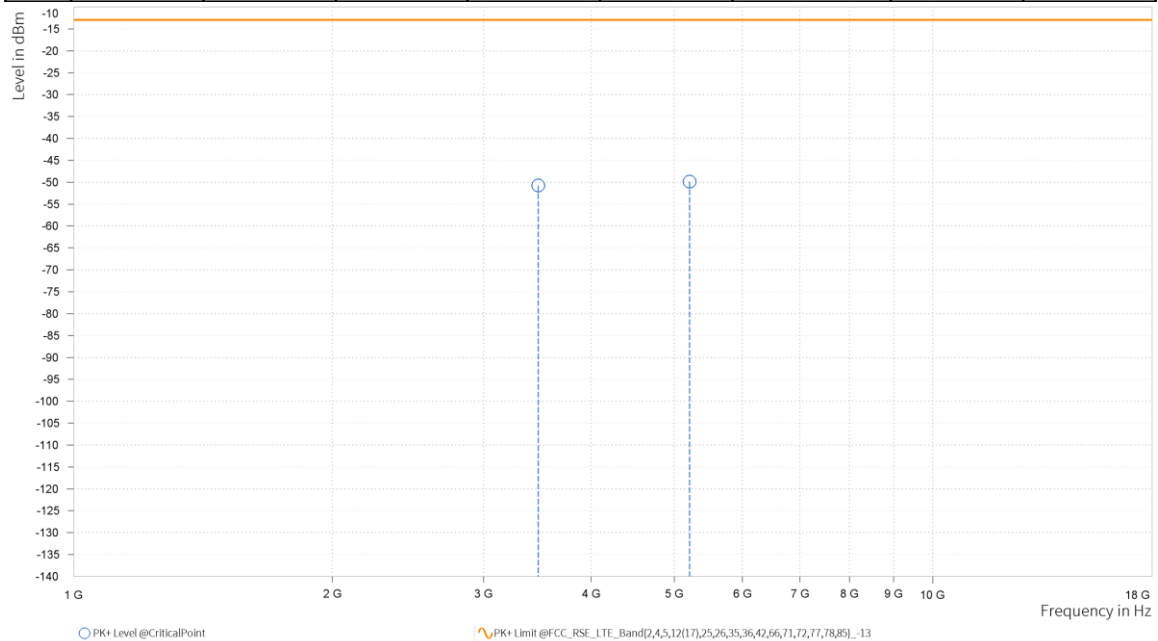




CHANNEL BANDWIDTH	20MHz / QPSK	MODE	TX channel 132322
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	AC 120V 60HZ	TESTED BY	Hanwen Xu

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	3,472.000	-50.78	-13.00	37.78	21.07	V	359.1	1.00
4	5,208.000	-49.89	-13.00	36.89	24.49	V	359.1	2.00

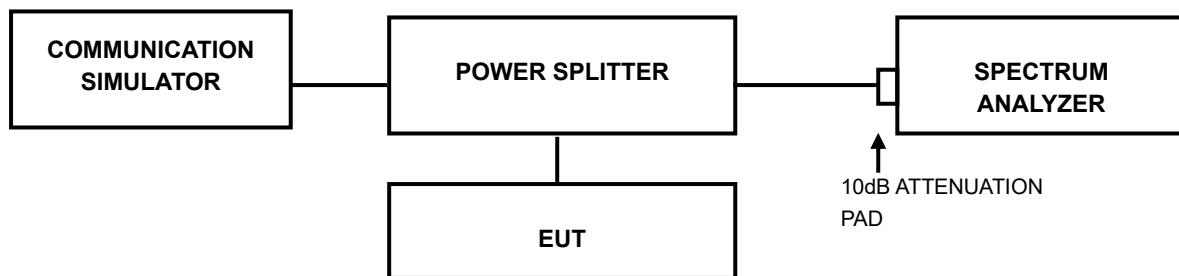


3.7 PEAK TO AVERAGE RATIO

3.7.1 LIMITS OF PEAK TO AVERAGE RATIO MEASUREMENT

In measuring transmissions in this band using an average power technique, the peak to-average ratio (PAR) of the transmission may not exceed 13 dB

3.7.2 TEST SETUP



3.7.3 TEST PROCEDURES

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

3.7.4 TEST RESULTS

Please Refer to Appendix Of this test report.



4 INFORMATION ON THE TESTING LABORATORIES

We, Huarui 7layers High Technology (Suzhou) Co., Ltd. ,were founded in 2020 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are accredited and approved according to ISO/IEC 17025.

Huarui 7Layers High Technology (Suzhou) Co., Ltd.

Lab Address:

Tower N, Innovation Center, 88 Zuyi Road, High-tech District, Suzhou City, Anhui Province

Accredited Test Lab Cert 6613.01

If you have any comments, please feel free to contact us at the following:

Suzhou EMC/RF Lab:

Tel: +86 (0557) 368 1008



5 MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB

No any modifications are made to the EUT by the lab during the test.



6 Appendix

LTE BAND41(INCLUDING LTE BAND38)

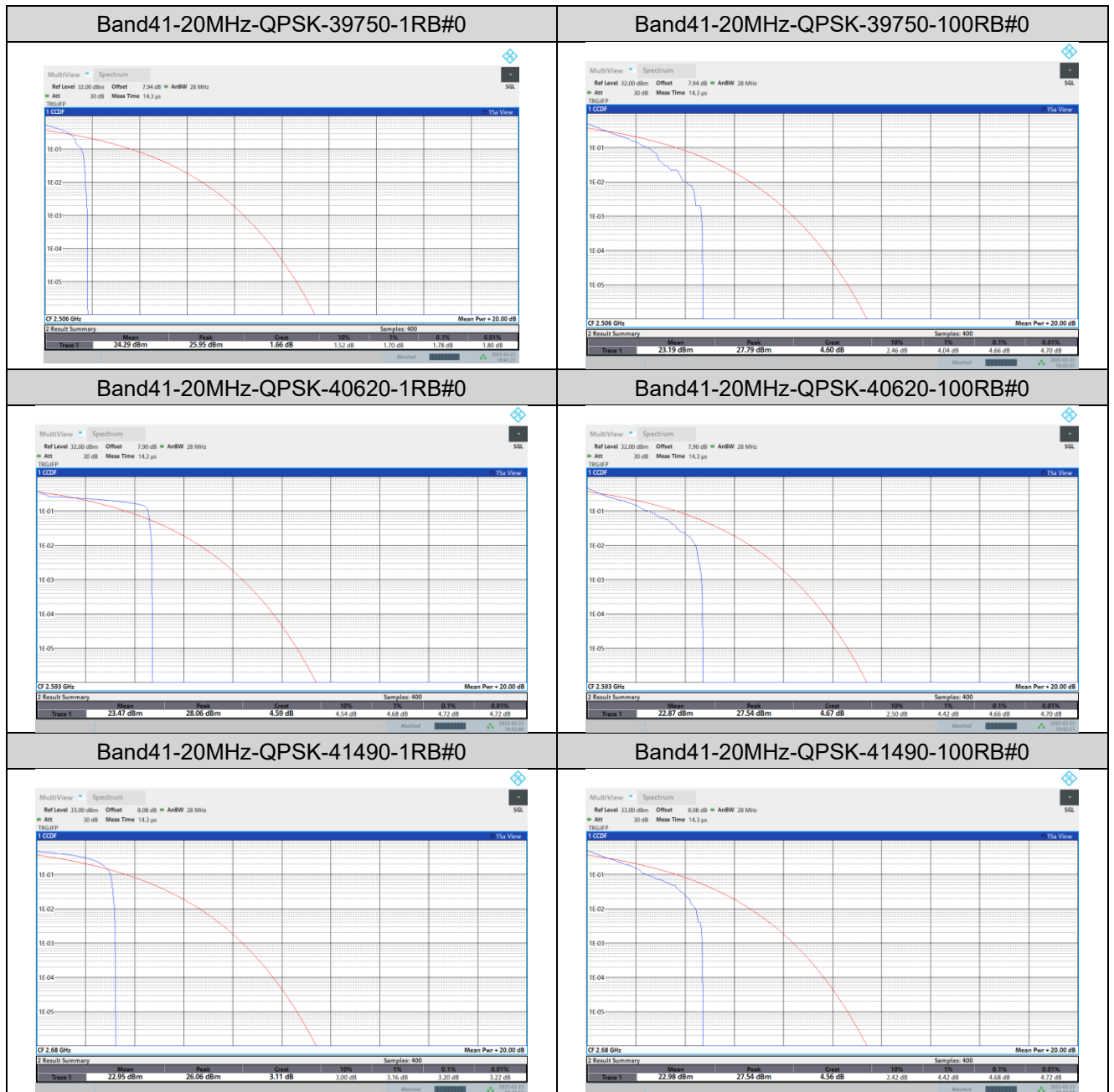
PEAK-TO-AVERAGE RATIO(CCDF)

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dB)	Limit(dB)	Verdict
Band41	20MHz	QPSK	39750	1RB#0	1.78	13	PASS
Band41	20MHz	QPSK	39750	100RB#0	4.66	13	PASS
Band41	20MHz	QPSK	40620	1RB#0	4.72	13	PASS
Band41	20MHz	QPSK	40620	100RB#0	4.66	13	PASS
Band41	20MHz	QPSK	41490	1RB#0	3.20	13	PASS
Band41	20MHz	QPSK	41490	100RB#0	4.68	13	PASS



Test Graphs





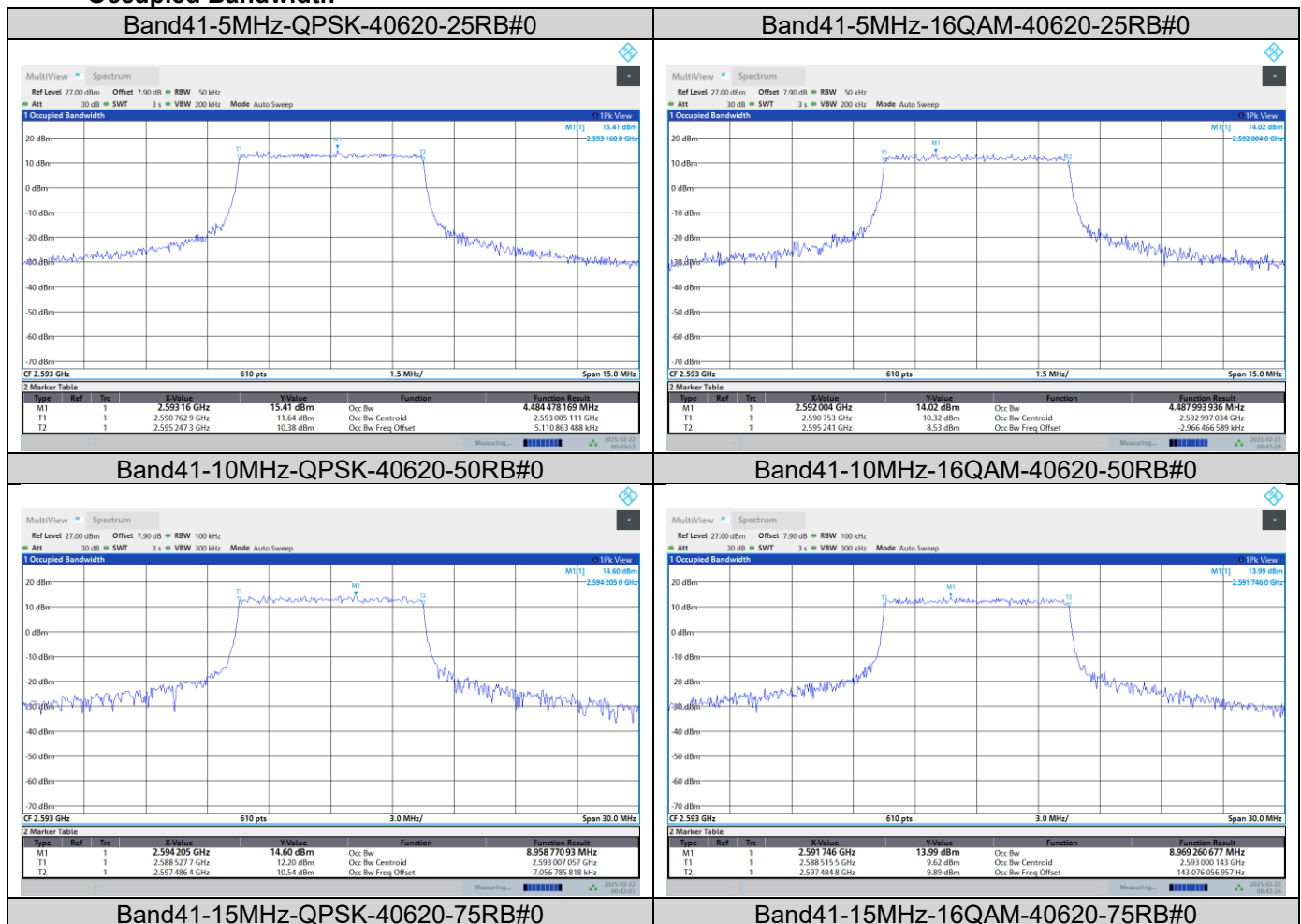
26DB BANDWIDTH AND OCCUPIED BANDWIDTH

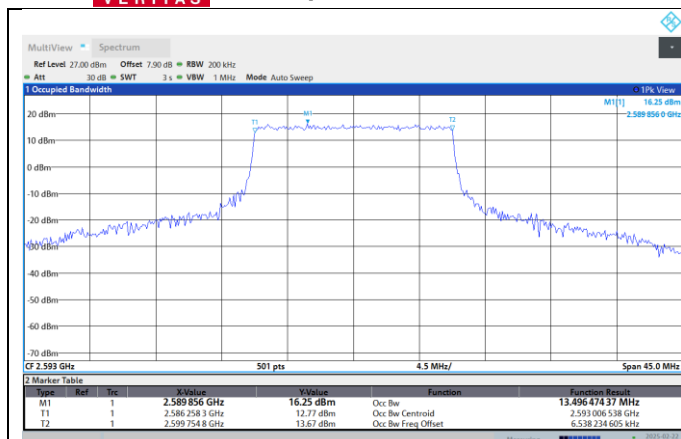
Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
Band41	5MHz	QPSK	40620	25RB#0	4.484	4.90	PASS
Band41	5MHz	16QAM	40620	25RB#0	4.488	4.95	PASS
Band41	10MHz	QPSK	40620	50RB#0	8.959	9.77	PASS
Band41	10MHz	16QAM	40620	50RB#0	8.969	9.74	PASS
Band41	15MHz	QPSK	40620	75RB#0	13.496	14.65	PASS
Band41	15MHz	16QAM	40620	75RB#0	13.557	14.79	PASS
Band41	20MHz	QPSK	40620	100RB#0	17.947	19.24	PASS
Band41	20MHz	16QAM	40620	100RB#0	17.923	19.36	PASS

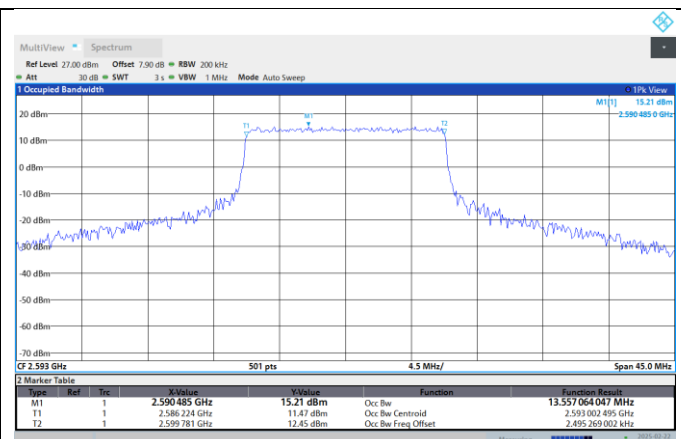
Test Graphs

Occupied Bandwidth

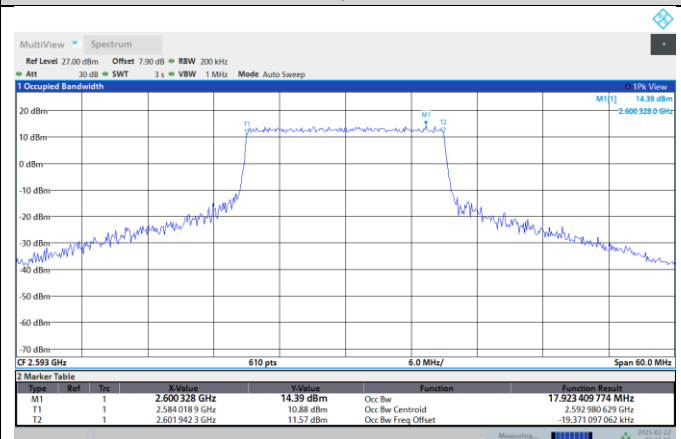
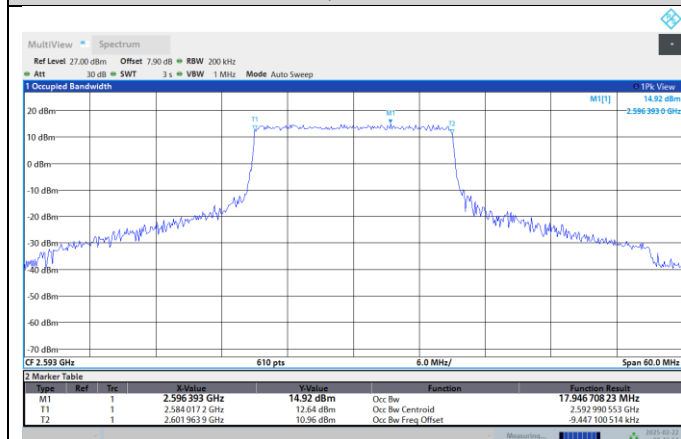




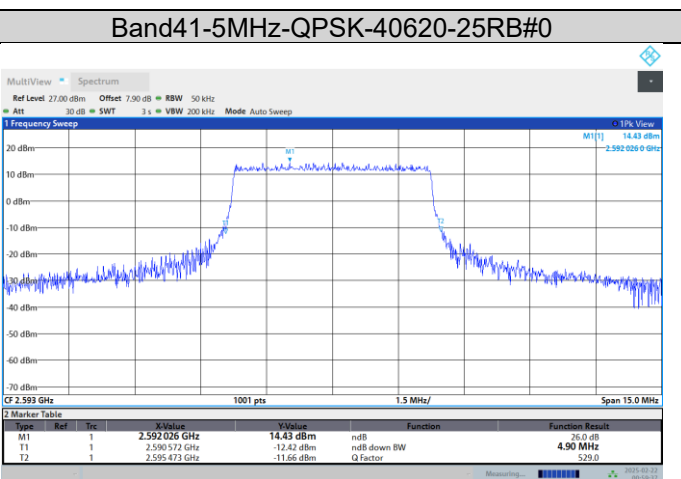
Band41-20MHz-QPSK-40620-100RB#0



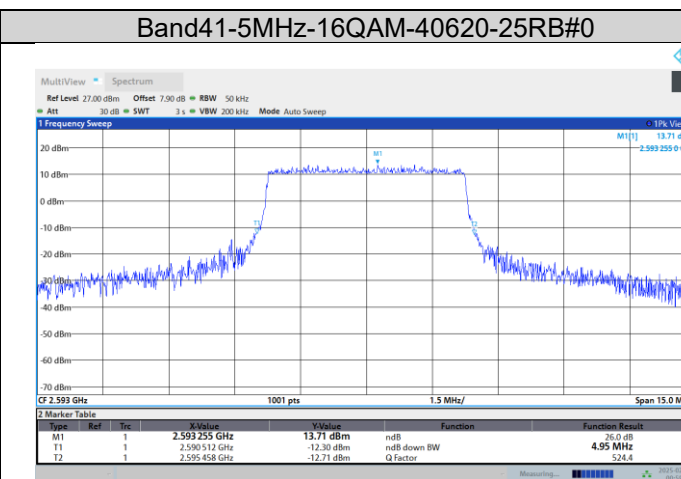
Band41-20MHz-16QAM-40620-100RB#0



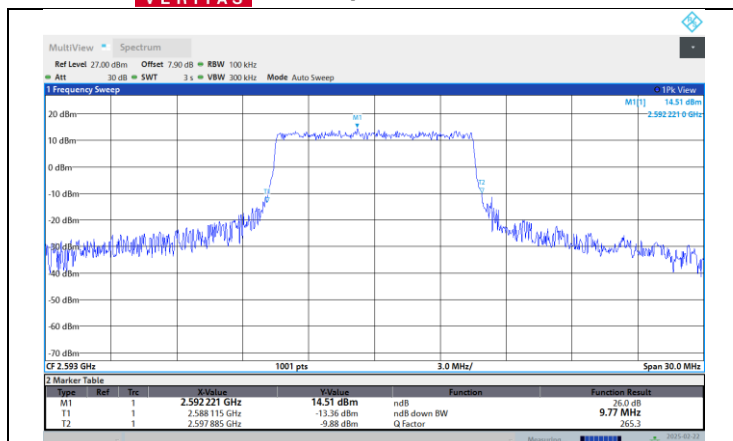
26dB Bandwidth



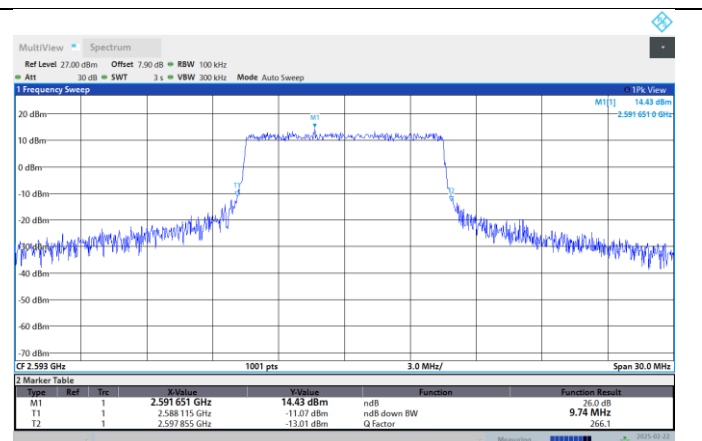
Band41-10MHz-QPSK-40620-50RB#0



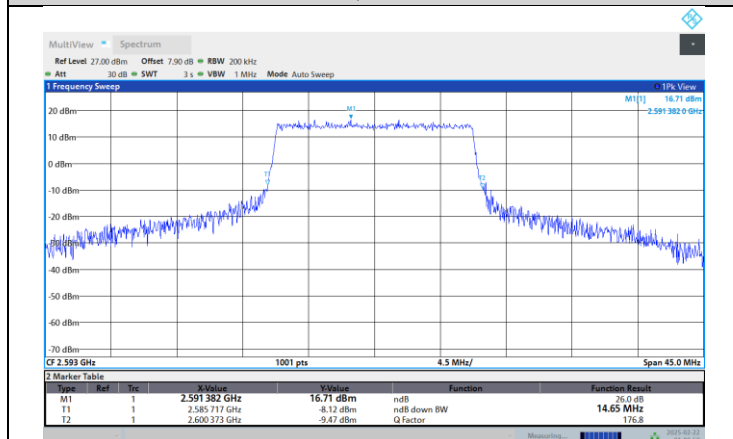
Band41-10MHz-16QAM-40620-50RB#0



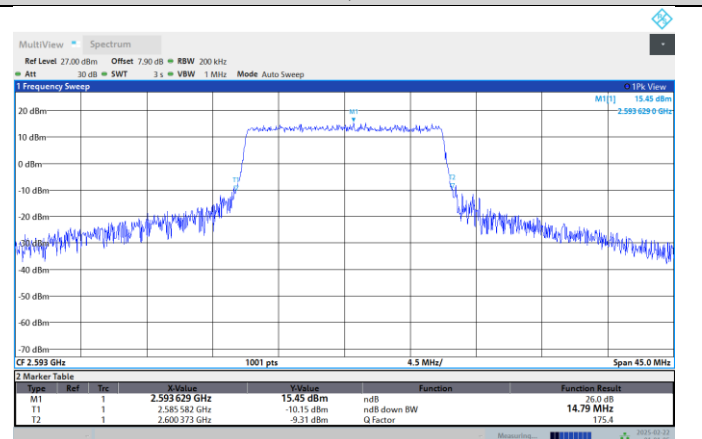
Band41-15MHz-QPSK-40620-75RB#0



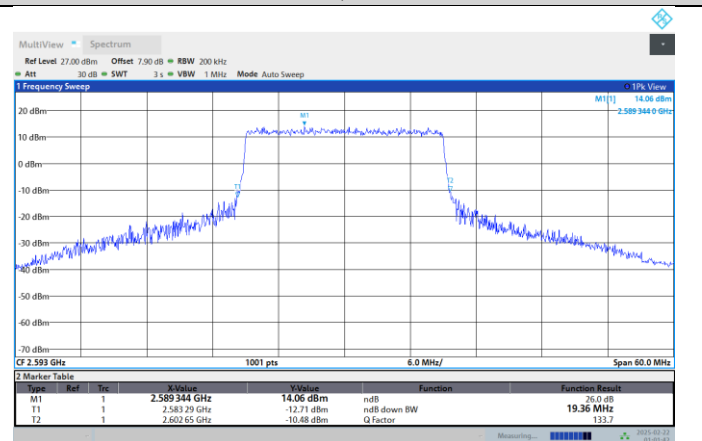
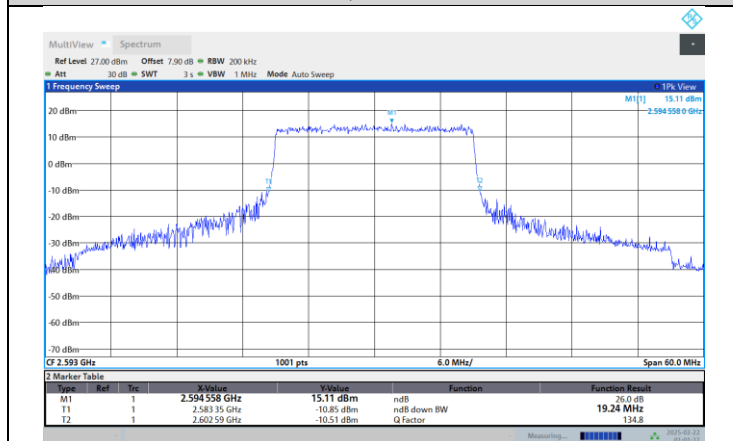
Band41-15MHz-16QAM-40620-75RB#0



Band41-20MHz-QPSK-40620-100RB#0



Band41-20MHz-16QAM-40620-100RB#0





Band Edge

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dBm)	Verdict
Band41	5MHz	QPSK	39675	1RB#0	See Graph	PASS
Band41	5MHz	QPSK	39675	25RB#0	See Graph	PASS
Band41	5MHz	QPSK	41565	1RB#24	See Graph	PASS
Band41	5MHz	QPSK	41565	25RB#0	See Graph	PASS
Band41	5MHz	16QAM	39675	1RB#0	See Graph	PASS
Band41	5MHz	16QAM	39675	25RB#0	See Graph	PASS
Band41	5MHz	16QAM	41565	1RB#24	See Graph	PASS
Band41	5MHz	16QAM	41565	25RB#0	See Graph	PASS
Band41	5MHz	64QAM	39675	1RB#0	See Graph	PASS
Band41	5MHz	64QAM	39675	25RB#0	See Graph	PASS
Band41	5MHz	64QAM	41565	1RB#24	See Graph	PASS
Band41	5MHz	64QAM	41565	25RB#0	See Graph	PASS
Band41	5MHz	256QAM	39675	1RB#0	See Graph	PASS
Band41	5MHz	256QAM	39675	25RB#0	See Graph	PASS
Band41	5MHz	256QAM	41565	1RB#24	See Graph	PASS
Band41	5MHz	256QAM	41565	25RB#0	See Graph	PASS
Band41	10MHz	QPSK	39700	1RB#0	See Graph	PASS
Band41	10MHz	QPSK	39700	50RB#0	See Graph	PASS
Band41	10MHz	QPSK	41540	1RB#49	See Graph	PASS
Band41	10MHz	QPSK	41540	50RB#0	See Graph	PASS
Band41	10MHz	16QAM	39700	1RB#0	See Graph	PASS
Band41	10MHz	16QAM	39700	50RB#0	See Graph	PASS
Band41	10MHz	16QAM	41540	1RB#49	See Graph	PASS
Band41	10MHz	16QAM	41540	50RB#0	See Graph	PASS
Band41	10MHz	64QAM	39700	1RB#0	See Graph	PASS
Band41	10MHz	64QAM	39700	50RB#0	See Graph	PASS
Band41	10MHz	64QAM	41540	1RB#49	See Graph	PASS
Band41	10MHz	64QAM	41540	50RB#0	See Graph	PASS
Band41	10MHz	256QAM	39700	1RB#0	See Graph	PASS
Band41	10MHz	256QAM	39700	50RB#0	See Graph	PASS
Band41	10MHz	256QAM	41540	1RB#49	See Graph	PASS
Band41	10MHz	256QAM	41540	50RB#0	See Graph	PASS
Band41	15MHz	QPSK	39725	1RB#0	See Graph	PASS
Band41	15MHz	QPSK	39725	75RB#0	See Graph	PASS
Band41	15MHz	QPSK	41515	1RB#74	See Graph	PASS
Band41	15MHz	QPSK	41515	75RB#0	See Graph	PASS
Band41	15MHz	16QAM	39725	1RB#0	See Graph	PASS
Band41	15MHz	16QAM	39725	75RB#0	See Graph	PASS
Band41	15MHz	16QAM	41515	1RB#74	See Graph	PASS
Band41	15MHz	16QAM	41515	75RB#0	See Graph	PASS
Band41	15MHz	64QAM	39725	1RB#0	See Graph	PASS
Band41	15MHz	64QAM	39725	75RB#0	See Graph	PASS
Band41	15MHz	64QAM	41515	1RB#74	See Graph	PASS
Band41	15MHz	64QAM	41515	75RB#0	See Graph	PASS
Band41	15MHz	256QAM	39725	1RB#0	See Graph	PASS
Band41	15MHz	256QAM	39725	75RB#0	See Graph	PASS
Band41	15MHz	256QAM	41515	1RB#74	See Graph	PASS

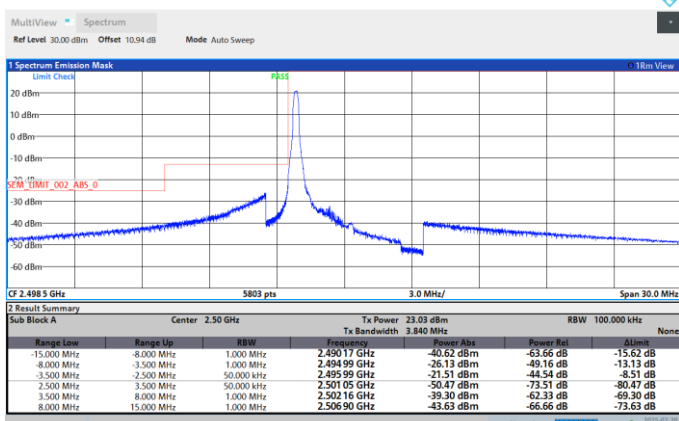


Test Report No.: PSZ-QBJ2501200112RF04

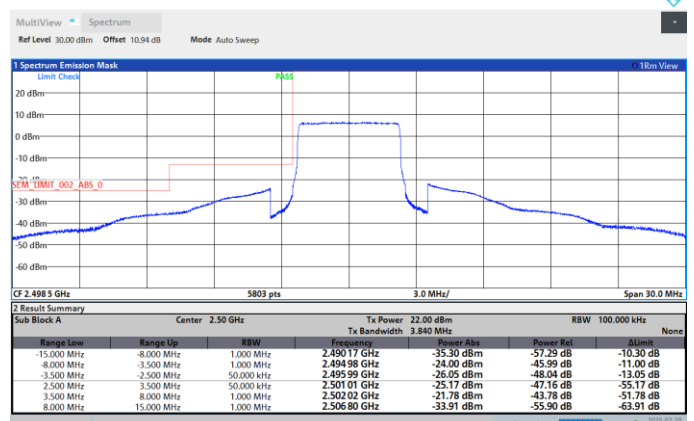
Band41	15MHz	256QAM	41515	75RB#0	See Graph	PASS
Band41	20MHz	QPSK	39750	1RB#0	See Graph	PASS
Band41	20MHz	QPSK	39750	100RB#0	See Graph	PASS
Band41	20MHz	QPSK	41490	1RB#99	See Graph	PASS
Band41	20MHz	QPSK	41490	100RB#0	See Graph	PASS
Band41	20MHz	16QAM	39750	1RB#0	See Graph	PASS
Band41	20MHz	16QAM	39750	100RB#0	See Graph	PASS
Band41	20MHz	16QAM	41490	1RB#99	See Graph	PASS
Band41	20MHz	16QAM	41490	100RB#0	See Graph	PASS
Band41	20MHz	64QAM	39750	1RB#0	See Graph	PASS
Band41	20MHz	64QAM	39750	100RB#0	See Graph	PASS
Band41	20MHz	64QAM	41490	1RB#99	See Graph	PASS
Band41	20MHz	64QAM	41490	100RB#0	See Graph	PASS
Band41	20MHz	256QAM	39750	1RB#0	See Graph	PASS
Band41	20MHz	256QAM	39750	100RB#0	See Graph	PASS
Band41	20MHz	256QAM	41490	1RB#99	See Graph	PASS
Band41	20MHz	256QAM	41490	100RB#0	See Graph	PASS

Test Graphs

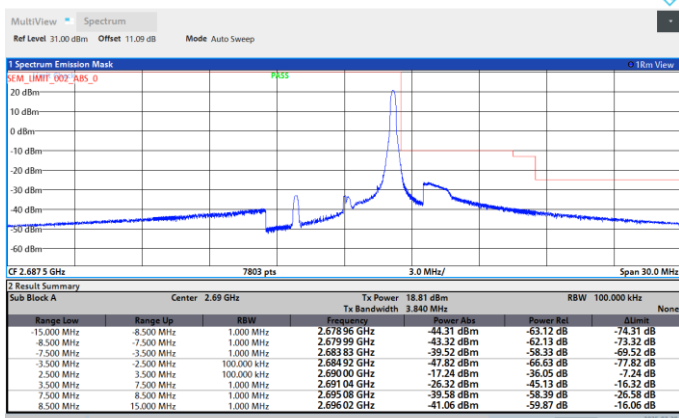
Band41-5MHz-QPSK-39675-1RB#0



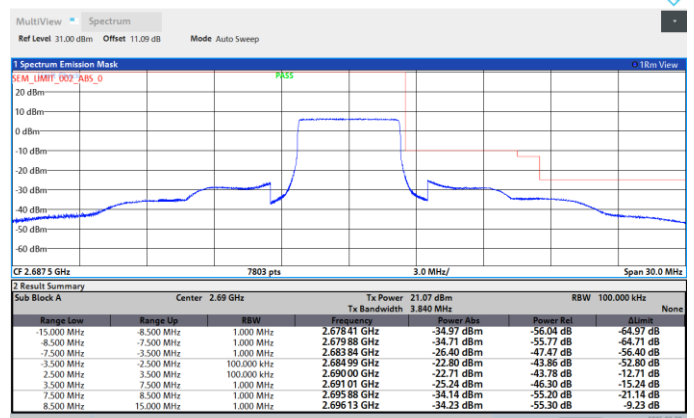
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Band41-5MHz-QPSK-41565-1RB#24



Band41-5MHz-QPSK-41565-25RB#0



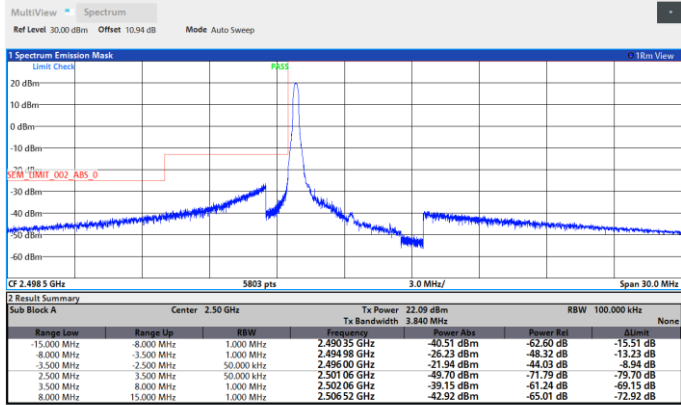
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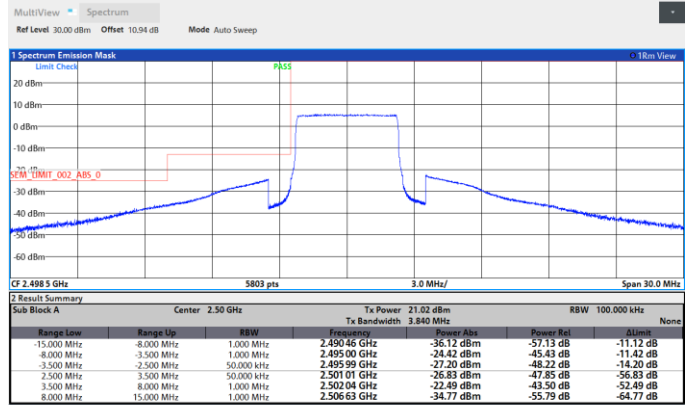
Huarui 7layers High Technology
(Suzhou) Co., Ltd.

Tower N, Innovation Center, 88 Zuyi Road, High-tech District,
Suzhou City, Anhui Province

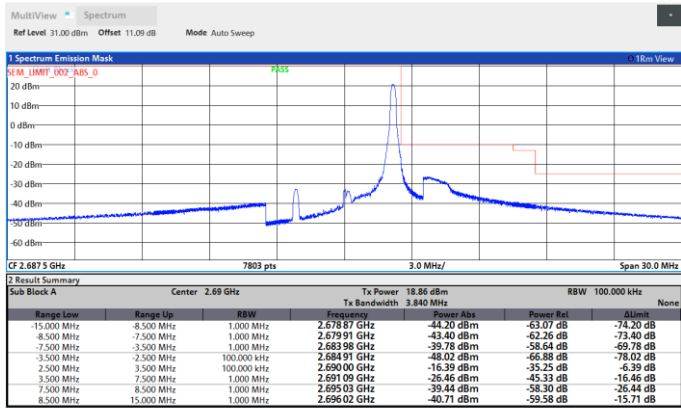
Tel: +86 (0557)
368 1008



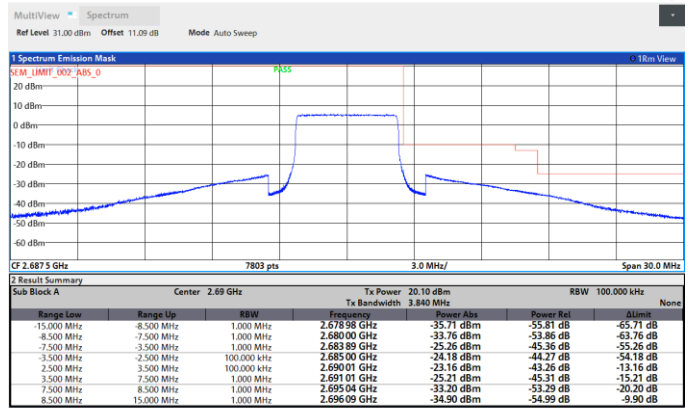
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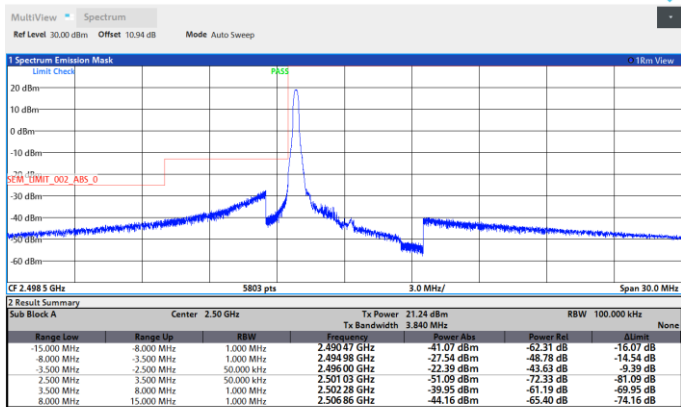
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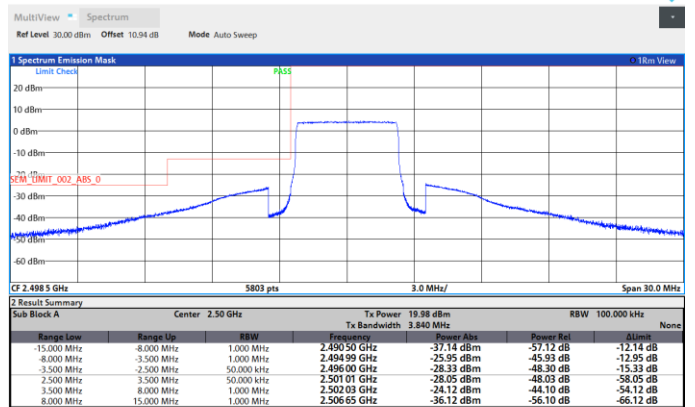
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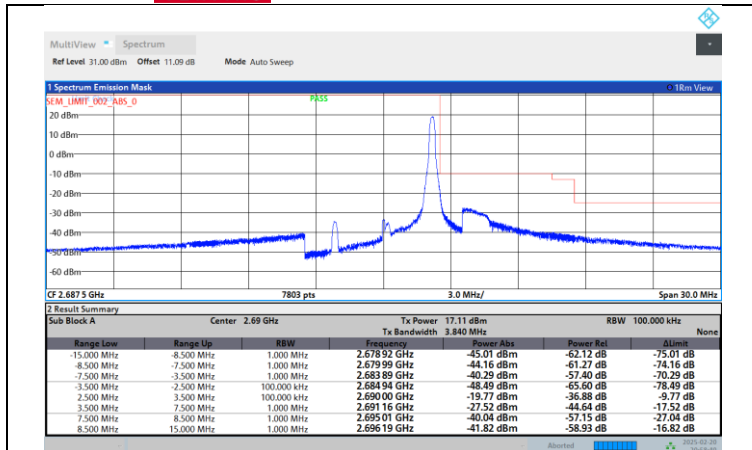
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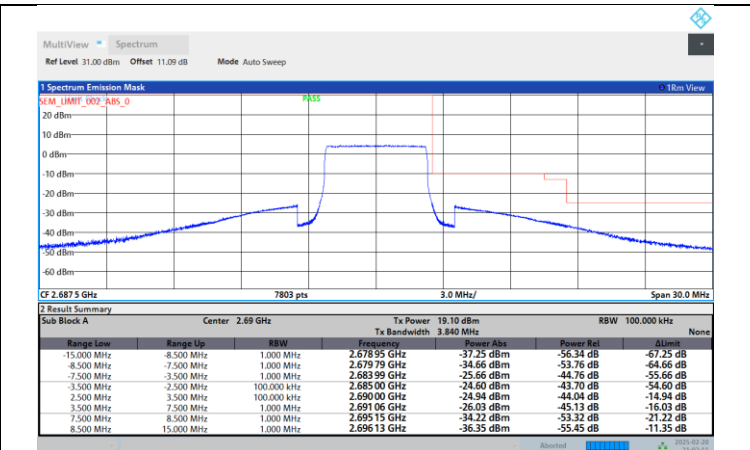
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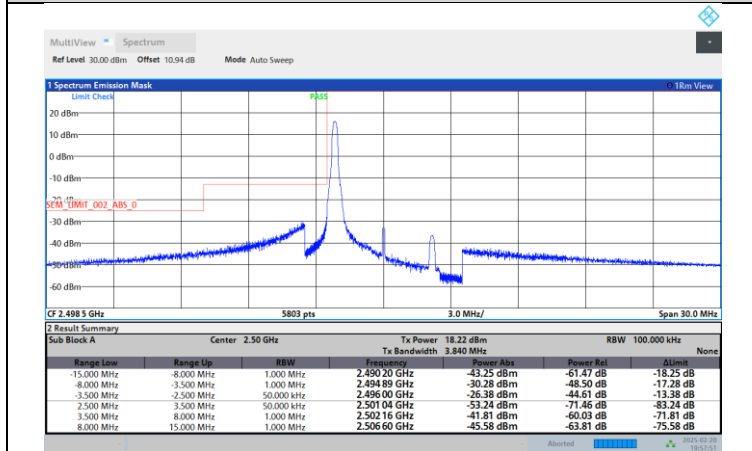
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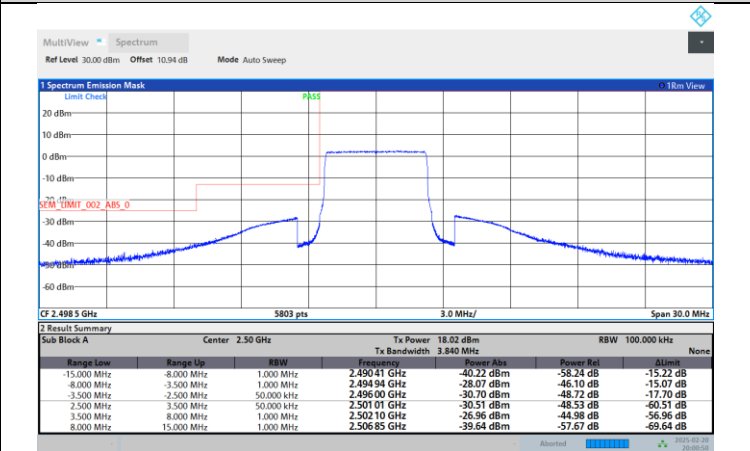
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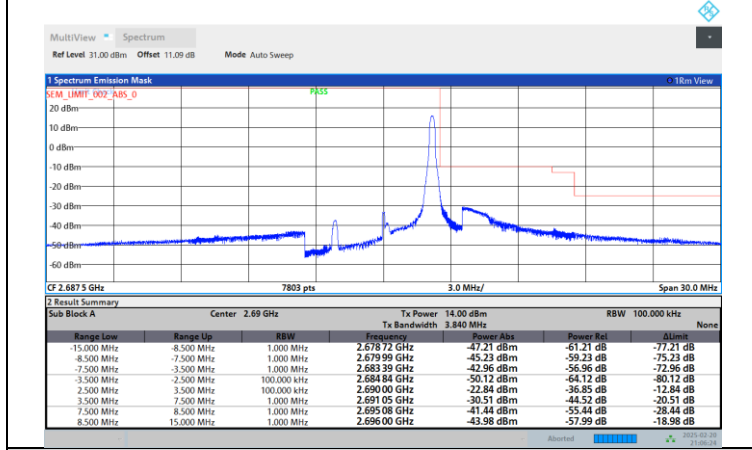
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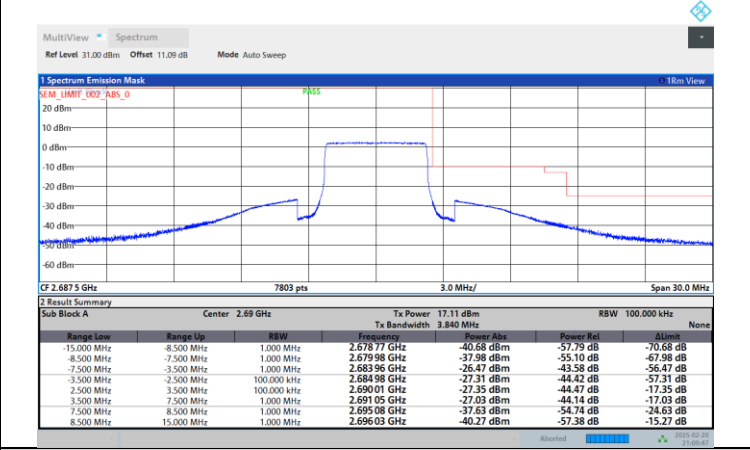
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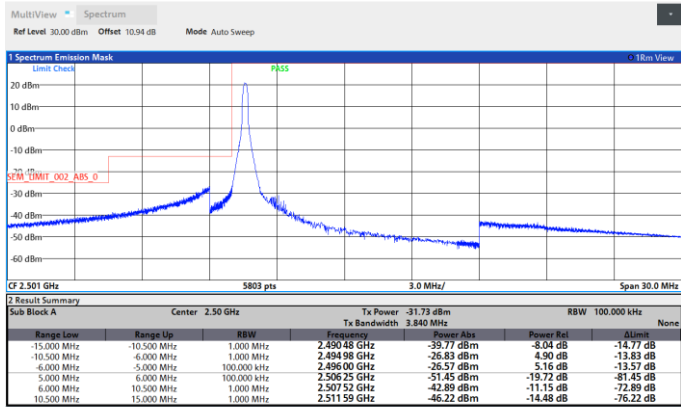
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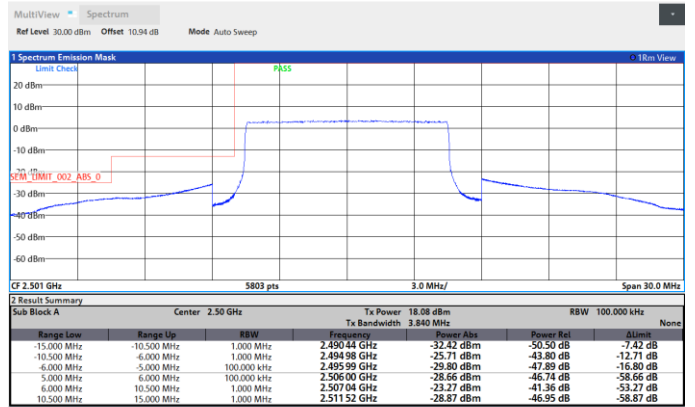
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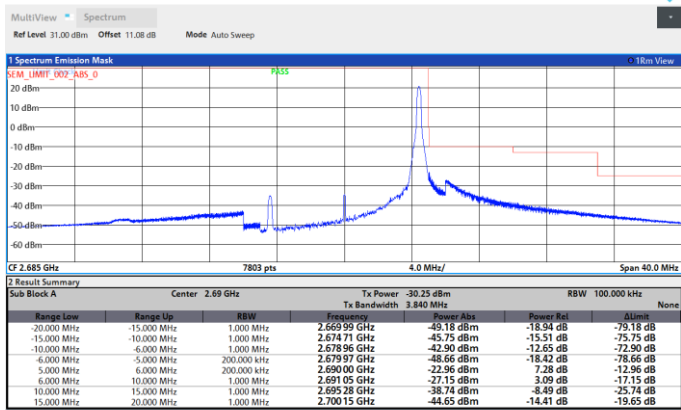
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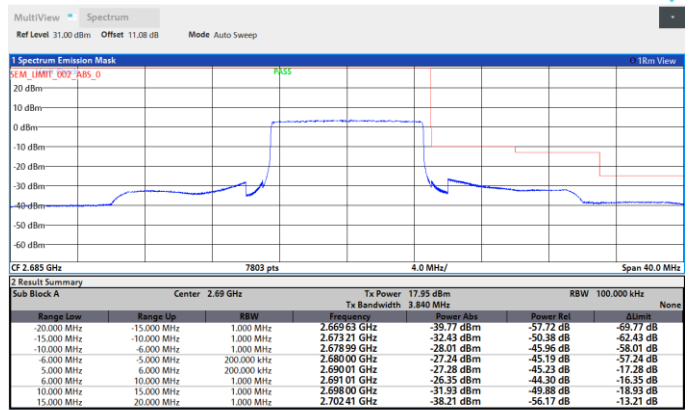
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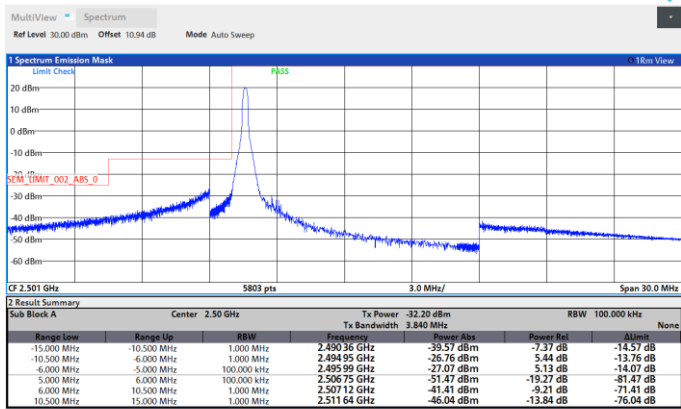
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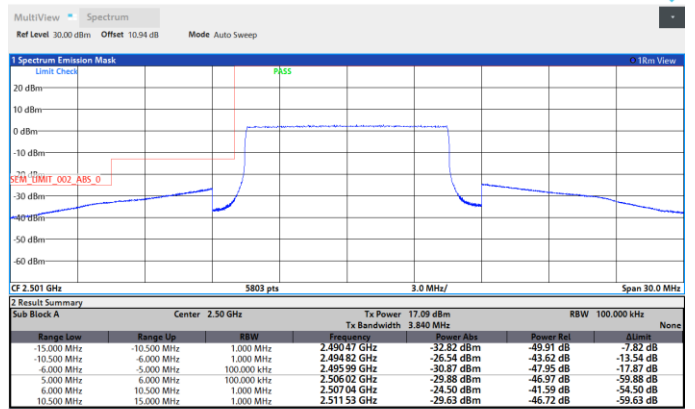
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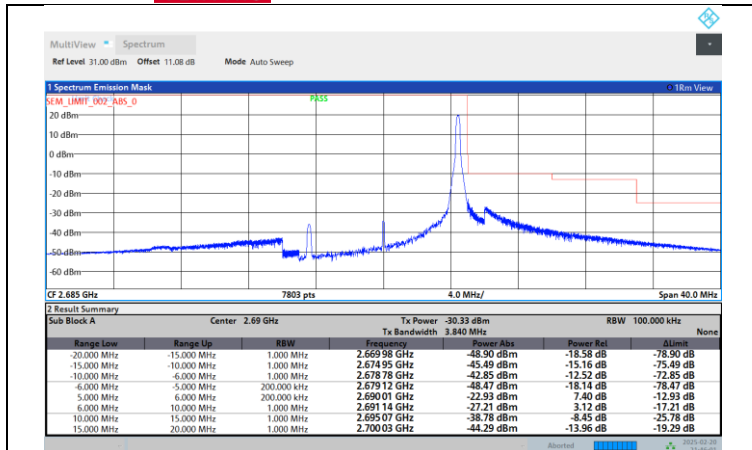
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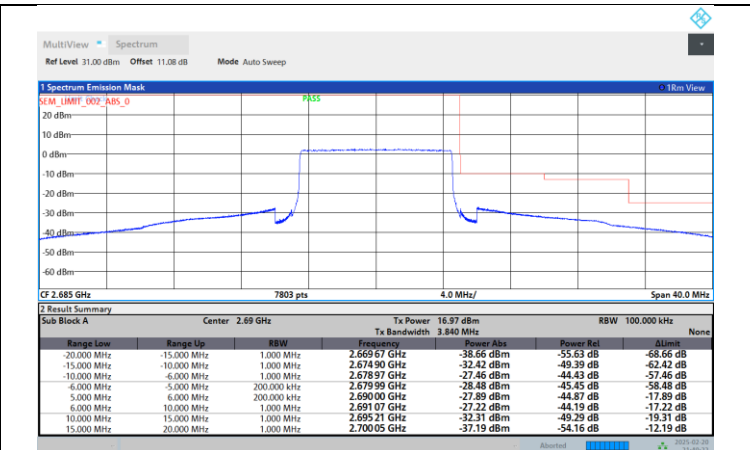
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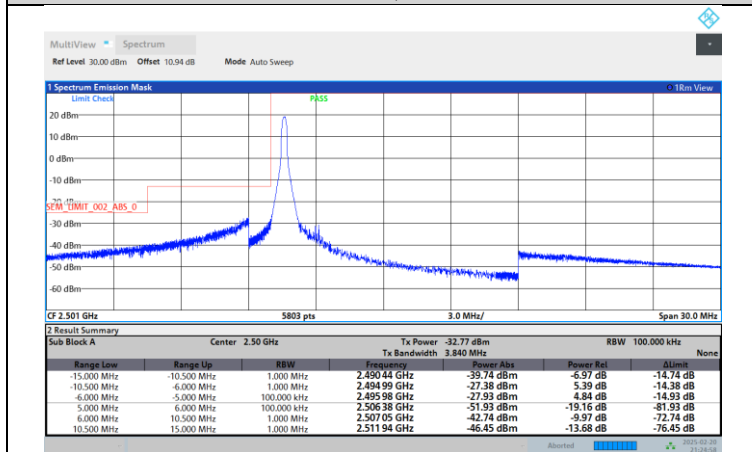
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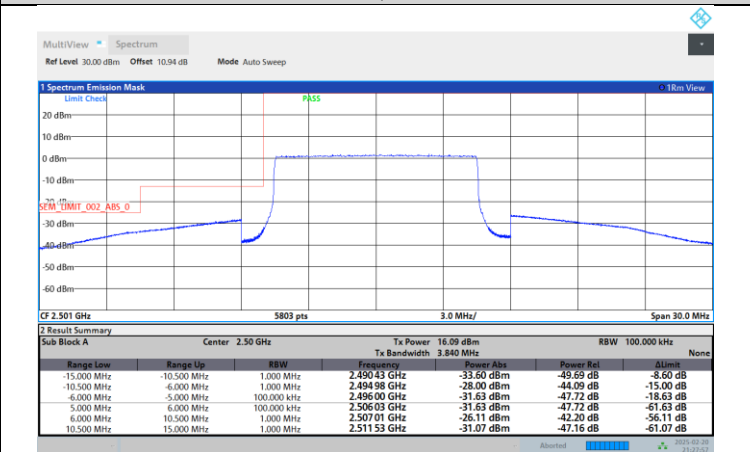
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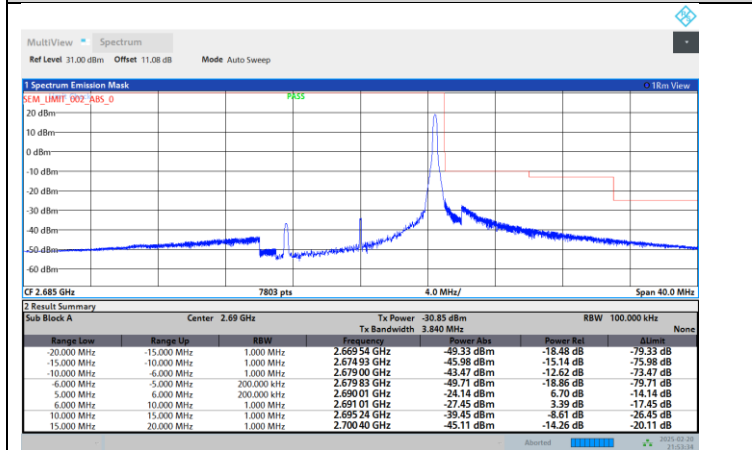
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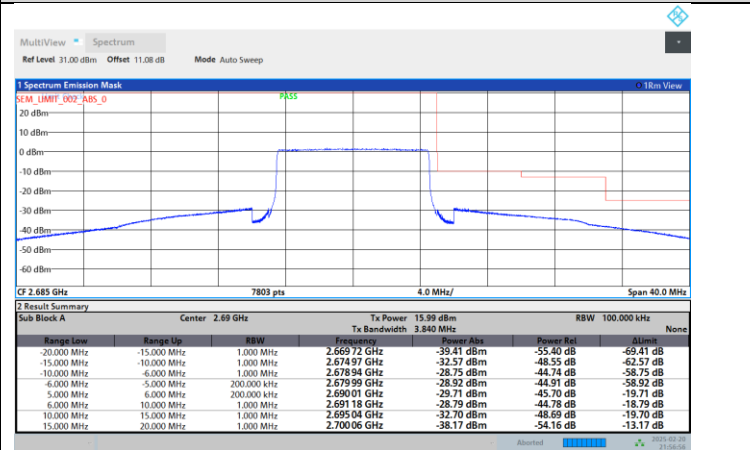
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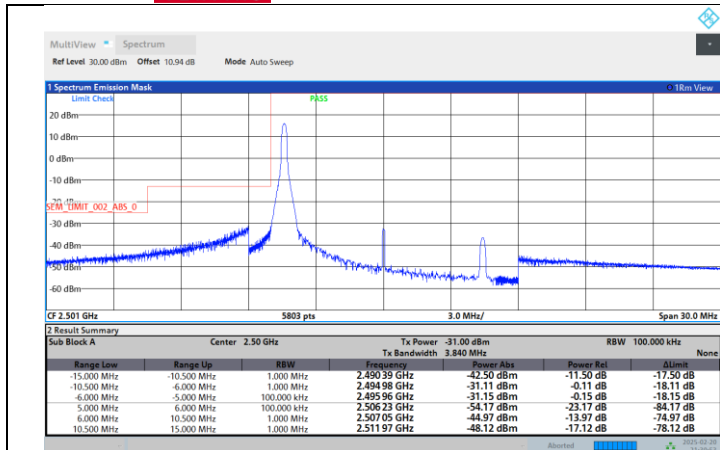
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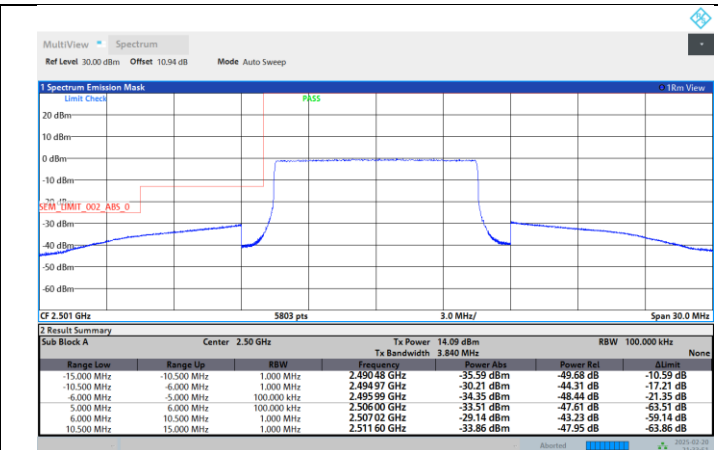
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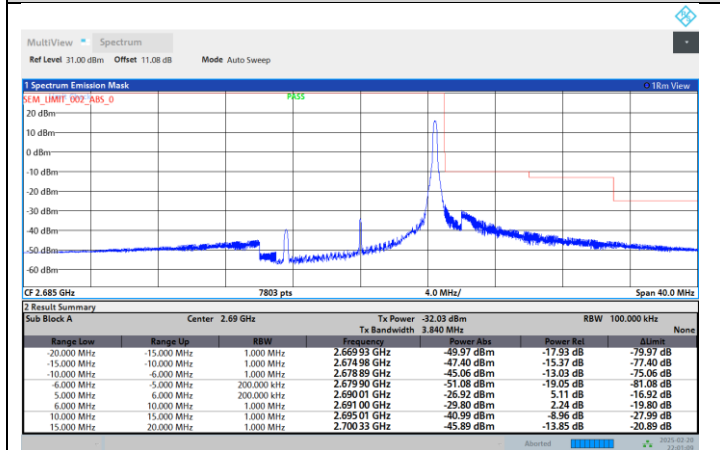
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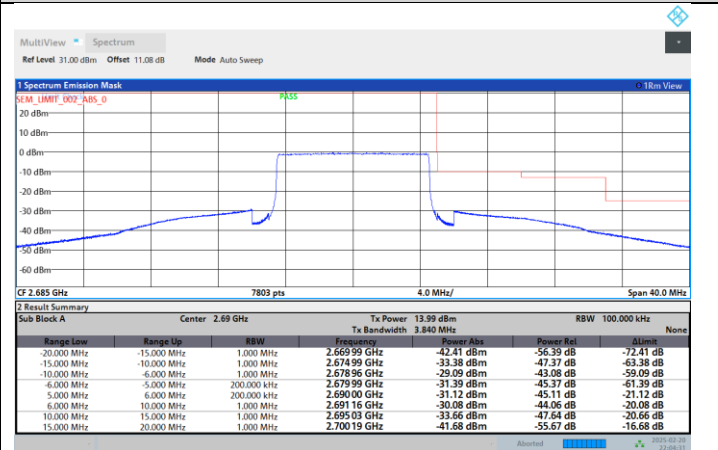
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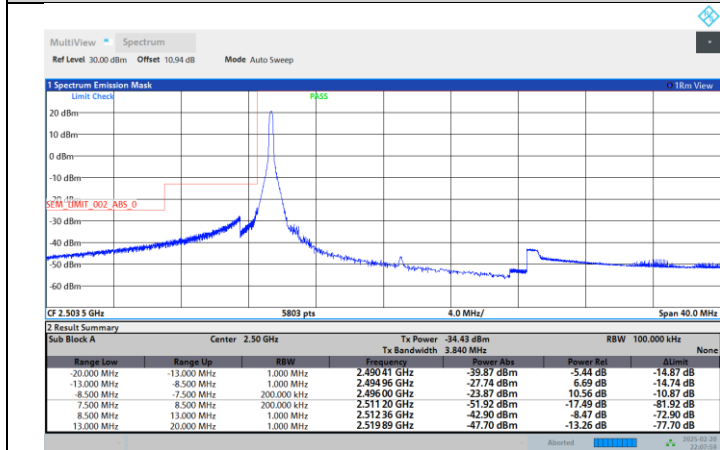
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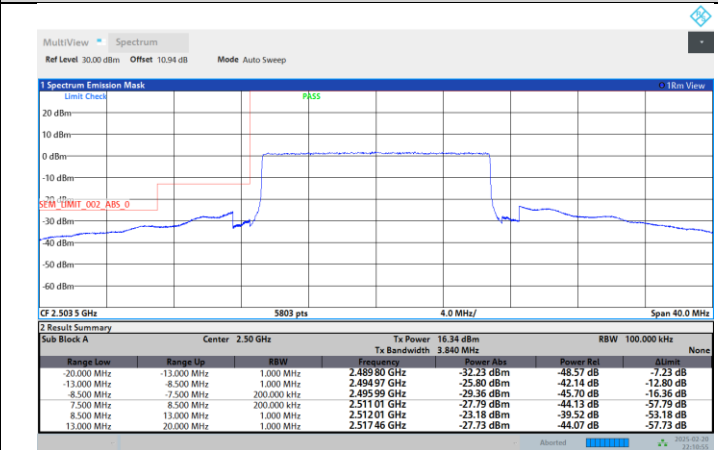
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Band41-15MHz-QPSK-39725-75RB#0



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