FCC TEST REPORT
FCC ID: 2AWVE0IRISIANVERSAN

Product Name	:	VERSA N
Model Name	:	J80
Brand Name	:	IRISIAN
Report No.	:	PTC20051404901E-FC03

Prepared for

Shanghai Irisian Optronics Technology Co.,Ltd

Floor 8, No. 800, Second West Huanhu Road, Pudong New District, Shanghai

Prepared by

Precise Testing & Certification Corp., Ltd.

Building 1, No.6 Tongxin Road, Dongcheng Street, Dongguan,China

1TEST RESULT CERTIFICATION

Applicant's name	:	Shanghai Irisian Optronics Technology Co.,Ltd
Address	:	Floor 8, No. 800, Second West Huanhu Road, Pudong New District, Shanghai
Manufacture's name	:	Shanghai Irisian Optronics Technology Co.,Ltd
Address	:	Floor 8, No. 800, Second West Huanhu Road, Pudong New District, Shanghai
Product name	:	VERSA N
Model name	:	J80
Standards	:	FCC CFR47 Part 22, Part 24, Part 27
Test procedure	:	ANSI C63.26:2015
Test Date	:	June 10, 2020 to June 28, 2020
Date of Issue	:	July 08, 2020
Test Result	:	Pass

This device described above has been tested by PTC, and the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.
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Test Engineer:

Leo Yang / Engineer

Technical Manager:

Chris Du / Manager

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1 General information

1.1 Feature of equipment under test (EUT)

Product name:	VERSA N
Model name:	J80
Serial model:	--
Operating frequency range:	LTE FDD Band 2: 1850.7 - 1909.3MHz LTE FDD Band 4: 1710.7 - 1754.3MHz LTE FDD Band 5: 824.7 - 848.3MHz
Modulation type:	QPSK,16QAM
Antenna type:	Integral Antenna
Antenna gain:	Band 2 Gain: 2dBi Band 4 Gain: 2dBi Band 5 Gain: 2dBi
Power supply:	DC 12V from adapter
Battery:	N/A
Adapter information:	MODEL: HKA03612030-7K INPUT:AC100-240V 50/60Hz 1A OUTPUT:DC 12V 3A
Hardware Version:	V1.4
Software Version:	N/A

1.2 Test frequency channel

LTE Band	Channel	Channel Bandwidth (MHz)	Channel No.	Frequency (MHz)
LTE Band 2	Low	1.4	18607	1850.7
		3	18615	1851.5
		5	18625	1852.5
		10	18650	1855
		15	18675	1857.5
		20	18700	1860
	Middle	1.4/3/5/10/15/20	18900	1880
	High	1.4	19193	1909.3
		3	19185	1908.5
		5	19175	1907.5
		10	19150	1905
		15	19125	1902.5
		20	19100	1900
LTE Band 4	Low	1.4	19957	1710.7
		3	19965	1711.5
		5	19975	1712.5
		10	20000	1715
		15	20025	1717.5
		20	20050	1720
	Middle	1.4/3/5/10/15/20	20175	1732.5
	High	1.4	20393	1754.3
		3	20385	1753.5
		5	20375	1752.5
		10	20350	1750
		15	20325	1747.5
		20	20300	1745
LTE Band 5	Low	1.4	20247	824.7
		3	20425	826.5
		5	20425	826.5
		10	20450	829.0
	Middle	1.4/3/5/10	20525	836.5
	High	1.4	20643	848.3
		3	20635	847.5
		5	20625	846.5
		10	20600	844.0

1.3 EUT operation mode

LTE band 2	Keep the EUT in data communicating mode on LTE band 2. (LTE band2(1.4MHz), LTE band2(3MHz), LTE band2(5MHz), LTE band2(10MHz), LTE band2(15MHz), LTE band2(20MHz))
LTE band 4	Keep the EUT in data communicating mode on LTE band 4. (LTE band 4(1.4MHz), LTE band 4(3MHz), LTE band 4(5MHz), LTE band 4(10MHz), LTE band 4(15MHz), LTE band 4(20MHz))
LTE band 5	Keep the EUT in data communicating mode on LTE band 5. (LTE band 5(1.4MHz), LTE band 5(3MHz),LTE band5(5MHz), LTE band 5(10MHz)
Note: Only the worst case data were shown in the report.	

1.4 Ancillary equipment list

Equipment	Model	S/N	Manufacturer	Certificate type
Adapter	HKA03612030-7K	/	/	/

2 Summary of test results

Item	FCC Part No.	Description of Test	Result
1	part2.1046 Part 24.232 (c) Part 27.50 (c)(10) Part 27.50 (d)(4) Part 27.50 (h)(2)	RF Output Power	Pass
2	part 22.913(a)(2) part 24.232(c.2) part 27.50(h)(2) part 27.50(b)(10) part 27.50(c)(10) part 27.50(d)(4) part 27.50(a)(3)	Radiated Power (ERP/EIRP)	Pass
3	Part 27.50(d)(5)	Peak-to-Average Ratio	Pass
4	Part 2.1049 Part 24.238(b) Part 27.53(g) Part 27.53(h) Part 27.53(m)	99% and -26 dB Occupied Bandwidth	Pass
5	part 2.1051 part 22.917(a) part 24.238(a) part 24.50(d) part 27.53 (g)(h)	Spurious emissions at antenna terminals	Pass
6	part 2.1051 part 22.917(a) part 24.238(a) part 27.53(c)(2)(4) part 27.53(g) part 27.53(h)	Band edge at antenna terminals	Pass
7	Part 2.1053 Part 24.238 (a) Part 27.53 (g) Part 27.53 (h) Part 27.53(m)	Field strength of spurious radiation measurement	Pass
8	Part 24.235 Part 27.54 Part 2.1055(a)(1)(b) Part 2.1055(d)(2)	Frequency Stability for Temperature &Voltage	Pass

3 Test facilities and accreditations

3.1 Test laboratory

Dongguan Precise Testing & Certification Corp., Ltd.

Address:Building 1, No.6 Tongxin Road, Dongcheng Street, Dongguan,China

FCC Registration Number: 790290

A2LA Certificate No.: 4408.01

IC Registration Number: 12191A-1

3.2 Environmental conditions

Temperature:	15ºC~35ºC
Humidity	20%~75%
Atmospheric pressure	98kPa~101kPa

3.3 Measurement uncertainty

Measurement Uncertainty for a Level of Confidence of 95 %, U=2xUc(y)

Parameter	**Uncertainty**
RF output power, conducted	±1.0dB
Power Spectral Density, conducted	±2.2dB
Radio Frequency	± 1 x 10^{-6}
Bandwidth	± 1.5 x 10^{-6}
Time	±2%
Duty Cycle	±2%
Temperature	±1°C
Humidity	±5%
DC and low frequency voltages	±3%
Conducted Emissions (150kHz~30MHz)	±3.64dB
Radiated Emission(30MHz~1GHz)	±5.03dB
Radiated Emission(1GHz~25GHz)	±4.74dB
Remark: The coverage Factor (k=2), and measurement Uncertainty for a level of Confidence of 95%	

3.4 Test software

Software Name	Manufacturer	Model	Version
LTE	Shenzhen JS tonscend co,.ltd	JS1120-1	2.6.8.0518

4 LIST OF TEST EQUIPMENT

Equipment Name	Manufacturer	Model	Serial No.	Last Cal.	Cal. Interval
EMI Test Receiver	Rohde&schwarz	ESPI7	100314	Sep. 19, 2019	1 Year
TRILOG Broadband Antenna	schwarabeck	VULB 9163	9163-872	Sep. 19, 2019	1 Year
amplifier	Hewlett-Packard	8447D	3113A06150	Sep. 19, 2019	1 Year
Single path vehicle AMN(LISN)	Schwarzbeck	NNBM 8124	01175	Sep. 19, 2019	1 Year
Low noise active vertical monopole antenna	Schwarzbeck	VAMP 9243	#565	Sep. 19, 2019	1 Year
Biconical antenna	Schwarzbeck	BBA 9106	#164	Sep. 19, 2019	1 Year
MXG Vector Signal Generator	Agilent	N5182A	MY49060455	Sep. 19, 2019	1 Year
ESG Series Analog signal generator	Agilent	E4421B	GB40051240	Sep. 19, 2019	1 Year
Thermometer clock humidity monitor	-	HTC-1	/	Sep. 19, 2019	1 Year
Log Periodic Antenna	Schwarzbeck	VUSLP 9111B	#312	Sep. 19, 2019	1 Year
Log Periodic Dipole Array Antenna	ETS-LINDGREN	3148B	00224524	Sep. 19, 2019	1 Year
Amplifier	EMtrace	RP06A	00117	Sep. 19, 2019	1 Year
Comprehensive test instrument	Rohde&schwarz	CMW500	149155	Sep. 19, 2019	1 Year
PXA Signal Analyzer	Agilent	N9030A	MY51350296	Sep. 19, 2019	1 Year
EMI Test Receiver	Rohde&schwarz	ESIB26	100273	Sep. 19, 2019	1 Year
Synthesized Sweeper	Agilent	83752A	3610A01957	Sep. 19, 2019	1 Year
DC Power Supply	Agilent	E3632A	MY40027695	Sep. 19, 2019	1 Year
Artificial mains network	3ctest	LISN J50	ES3911805	Sep. 19, 2019	1 Year
Power amplifier	Space-Dtroniccs	EWLNA0118G-P40	1852001	Sep. 19, 2019	1 Year
Current Probe	SOLAR ELECTRONICS CO.	9207-1	220095-1	Sep. 19, 2019	1 Year
Loop Sensor	SOLAR ELECTRONICS CO.	7334-1	220095-2	Sep. 19, 2019	1 Year
Note: the calibration interval of the above test instruments is 12 or 24 months and the calibrations are traceable to international system unit (SI).					

5 Test result

5.1 RF output power

5.1.1 Limit

For FCC Part 22.913(a)(2):
The ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 Watts.

For FCC Part 24.232(c):
The EIRP of mobile transmitters and auxiliary test transmitters must not exceed 2 Watts.

For FCC Part 27.50(d):
The EIRP of mobile transmitters and auxiliary test transmitters must not exceed 1 Watt.

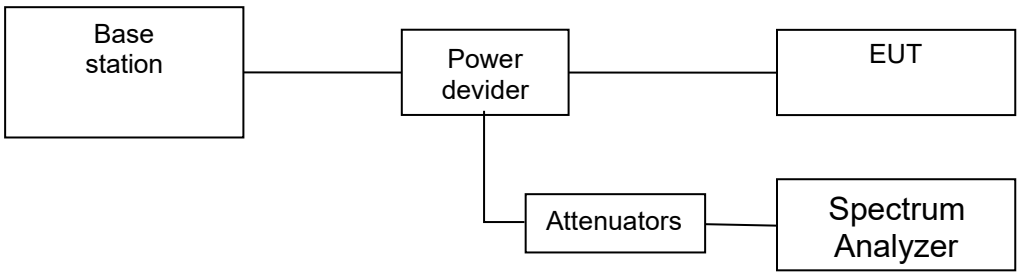
For FCC Part 27.50(c):
The ERP of mobile transmitters and auxiliary test transmitters must not exceed 3 Watts.

For FCC Part 27.50(a)(3):
For mobile and portable stations transmitting in the 2305-2315 MHz band or the 2350-2360 MHz band, the average EIRP must not exceed 50 milliwatts within any 1 megahertz of authorized bandwidth, except that for mobile and portable stations compliant with 3GPP LTE standards or another advanced mobile broadband protocol that avoids concentrating energy at the edge of the operating band the average EIRP must not exceed 250 milliwatts within any 5 megahertz of authorized bandwidth but may exceed 50 milliwatts within any 1 megahertz of authorized bandwidth.

5.1.2 Test procedure

1) The EUT's RF output port was connected to base station.
2) A call is set up by the SS according to the generic call set up procedure.
3) Set EUT at maximum power level through base station by power level command.
4) Measure the maximum output power of EUT at each frequency band and mode by base station.
5) The EUT was set up for the max output power with pseudo random data modulation.
6) These measurements were done at 3 frequencies (bottom, middle and top of operational frequency range) for each bandwidth.

5.1.3 Test setup



5.1.4 Test results

The following table shows the conducted power measured:

Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dBm)	Verdict
Band2	1.4MHz	QPSK	18607	6RB#0	22.37	PASS
Band2	1.4MHz	QPSK	18900	6RB#0	22.94	PASS
Band2	1.4MHz	QPSK	19193	6RB#0	21.95	PASS
Band2	1.4MHz	16QAM	18607	6RB#0	21.90	PASS
Band2	1.4MHz	16QAM	18900	6RB#0	22.20	PASS
Band2	1.4MHz	16QAM	19193	6RB#0	21.32	PASS
Band2	3MHz	QPSK	18615	15RB#0	22.09	PASS
Band2	3MHz	QPSK	18900	15RB#0	22.48	PASS
Band2	3MHz	QPSK	19185	15RB#0	21.67	PASS
Band2	3MHz	16QAM	18615	15RB#0	21.64	PASS
Band2	3MHz	16QAM	18900	15RB#0	21.84	PASS
Band2	3MHz	16QAM	19185	15RB#0	21.10	PASS
Band2	5MHz	QPSK	18625	25RB#0	22.43	PASS
Band2	5MHz	QPSK	18900	25RB#0	22.69	PASS
Band2	5MHz	QPSK	19175	25RB#0	22.13	PASS
Band2	5MHz	16QAM	18625	25RB#0	21.86	PASS
Band2	5MHz	16QAM	18900	25RB#0	21.86	PASS
Band2	5MHz	16QAM	19175	25RB#0	21.28	PASS
Band2	10MHz	QPSK	18650	50RB#0	22.81	PASS
Band2	10MHz	QPSK	18900	50RB#0	22.74	PASS
Band2	10MHz	QPSK	19150	50RB#0	22.50	PASS
Band2	15MHz	QPSK	18675	75RB#0	22.95	PASS
Band2	15MHz	QPSK	18900	75RB#0	22.85	PASS
Band2	15MHz	QPSK	19125	75RB#0	22.67	PASS
Band2	15MHz	16QAM	18675	75RB#0	22.42	PASS
Band2	15MHz	16QAM	18900	75RB#0	22.18	PASS
Band2	15MHz	16QAM	19125	75RB#0	22.01	PASS
Band2	20MHz	QPSK	18700	100RB#0	23.08	PASS
Band2	20MHz	QPSK	18900	100RB#0	23.10	PASS
Band2	20MHz	QPSK	19100	100RB#0	23.07	PASS
Band2	20MHz	16QAM	18700	100RB#0	22.40	PASS
Band2	20MHz	16QAM	18900	100RB#0	22.30	PASS
Band2	20MHz	16QAM	19100	100RB#0	22.28	PASS

Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dBm)	Verdict
Band4	1.4MHz	QPSK	19957	6RB#0	21.17	PASS
Band4	1.4MHz	QPSK	20175	6RB#0	22.72	PASS
Band4	1.4MHz	QPSK	20393	6RB#0	22.59	PASS
Band4	1.4MHz	16QAM	19957	6RB#0	20.51	PASS
Band4	1.4MHz	16QAM	20175	6RB#0	22.14	PASS
Band4	1.4MHz	16QAM	20393	6RB#0	22.29	PASS
Band4	3MHz	QPSK	19965	15RB#0	20.80	PASS
Band4	3MHz	QPSK	20175	15RB#0	22.31	PASS
Band4	3MHz	QPSK	20385	15RB#0	22.38	PASS
Band4	3MHz	16QAM	19965	15RB#0	20.33	PASS
Band4	3MHz	16QAM	20175	15RB#0	21.94	PASS
Band4	3MHz	16QAM	20385	15RB#0	21.79	PASS
Band4	5MHz	QPSK	20175	25RB#0	22.50	PASS
Band4	5MHz	16QAM	19975	25RB#0	21.27	PASS
Band4	5MHz	16QAM	20175	25RB#0	22.71	PASS
Band4	5MHz	16QAM	20375	25RB#0	21.70	PASS
Band4	10MHz	QPSK	20000	50RB#0	21.37	PASS
Band4	10MHz	QPSK	20175	50RB#0	22.51	PASS
Band4	10MHz	QPSK	20350	50RB#0	22.29	PASS
Band4	10MHz	16QAM	20000	50RB#0	20.62	PASS
Band4	10MHz	16QAM	20175	50RB#0	21.94	PASS
Band4	10MHz	16QAM	20350	50RB#0	21.56	PASS
Band4	15MHz	QPSK	20025	75RB#0	21.96	PASS
Band4	15MHz	QPSK	20175	75RB#0	22.53	PASS
Band4	15MHz	QPSK	20325	75RB#0	22.27	PASS
Band4	15MHz	16QAM	20025	75RB#0	21.81	PASS
Band4	15MHz	16QAM	20175	75RB#0	22.02	PASS
Band4	15MHz	16QAM	20325	75RB#0	21.49	PASS
Band4	20MHz	QPSK	20050	100RB#0	22.41	PASS
Band4	20MHz	QPSK	20175	100RB#0	22.52	PASS
Band4	20MHz	QPSK	20300	100RB#0	22.32	PASS
Band4	20MHz	16QAM	20050	100RB#0	21.72	PASS
Band4	20MHz	16QAM	20175	100RB#0	22.05	PASS
Band4	20MHz	16QAM	20300	100RB#0	21.72	PASS

Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dBm)	Verdict
Band5	1.4MHz	QPSK	20407	6RB#0	22.51	PASS
Band5	1.4MHz	QPSK	20525	6RB#0	22.12	PASS
Band5	1.4MHz	QPSK	20643	6RB#0	21.92	PASS
Band5	1.4MHz	16QAM	20407	6RB#0	22.02	PASS
Band5	1.4MHz	16QAM	20525	6RB#0	21.59	PASS
Band5	1.4MHz	16QAM	20643	6RB#0	21.51	PASS
Band5	3MHz	QPSK	20415	15RB#0	22.29	PASS
Band5	3MHz	QPSK	20525	15RB#0	21.89	PASS
Band5	3MHz	QPSK	20635	15RB#0	22.04	PASS
Band5	3MHz	16QAM	20415	15RB#0	22.21	PASS
Band5	3MHz	16QAM	20525	15RB#0	21.49	PASS
Band5	3MHz	16QAM	20635	15RB#0	21.51	PASS
Band5	5MHz	QPSK	20425	25RB#0	22.44	PASS
Band5	5MHz	QPSK	20525	25RB#0	21.98	PASS
Band5	5MHz	QPSK	20625	25RB#0	22.56	PASS
Band5	5MHz	16QAM	20425	25RB#0	22.03	PASS
Band5	5MHz	16QAM	20525	25RB#0	21.62	PASS
Band5	5MHz	16QAM	20625	25RB#0	21.87	PASS
Band5	10MHz	QPSK	20450	50RB#0	22.22	PASS
Band5	10MHz	QPSK	20525	50RB#0	22.32	PASS
Band5	10MHz	QPSK	20600	50RB#0	22.45	PASS
Band5	10MHz	16QAM	20450	50RB#0	21.73	PASS
Band5	10MHz	16QAM	20525	50RB#0	21.90	PASS
Band5	10MHz	16QAM	20600	50RB#0	21.88	PASS

5.2 Radiated Power (ERP/EIRP)

5.2.1 Limit

1) 22.913(a) - The ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 Watts.
2) 27.50 (c) (10) the following power and antenna height requirements apply to stations transmitting in the 698–746 MHz band, the portable stations (hand-held devices) are limited to 3 watts ERP.
3) 27.50 (b)(10) Portable stations (hand-held devices) transmitting in the 746–757 MHz, 758–763 MHz, 776–793 MHz, and 805–806 MHz bands are limited to 3 watts ERP.
4) 27.50 (d)(4) The following power and antenna height requirements apply to stations transmitting in the 1710–1755 MHz and 2110–2155 MHz bands: Fixed, mobile, and portable (hand-held) stations operating in the 1710–1755 MHz band are limited to 1 watt EIRP.
5) 27.50(h) The following power limits shall apply in the BRS and EBS:

   (2) Mobile and other user stations. Mobile stations are limited to 2.0 watts EIRP. All user stations are limited to 2.0 watts transmitter output power.
6) 27.50(a)(3):For mobile and portable stations transmitting in the 2305-2315 MHz band or the 2350-2360 MHz band, the average EIRP must not exceed 50 milliwatts within any 1 megahertz of authorized bandwidth, except that for mobile and portable stations compliant with 3GPP LTE standards or another advanced mobile broadband protocol that avoids concentrating energy at the edge of the operating band the average EIRP must not exceed 250 milliwatts within any 5 megahertz of authorized bandwidth but may exceed 50 milliwatts within any 1 megahertz of authorized bandwidth.

5.2.2 Test procedure

7) The EUT was placed on an non-conductive turntable using a nonconductive support. The radiated emission at the fundamental frequency was measured at 3 m with a test antenna and EMI spectrum analyzer.
8) During the measurement, the EUT was communication with the station. The highest emission was recorded with the rotation of the turntable and the lowering of the test antenna from 4m to 1m. The reading was recorded and the field strength (E in dBuV/m) was calculated.
9) ERP in frequency band below 1GHz were measured using a substitution method. The EUT was replaced by dipole antenna connected, the S.G. output was recorded and ERP was calculated as follows:

   ERP = S.G. output (dBm) + Antenna Gain (dBd) – Cable Loss (dB)

10) EIRP in frequency band above 1GHz were measured using a substitution method. The EUT was replaced by or horn antenna connected, the S.G. output was recorded and EIRP was calculated as follows:

    EIRP = S.G. output (dBm) + Antenna Gain (dBi) – Cable Loss (dB)

11) The worse case was relating to the conducted output power.

5.2.3 Test setup

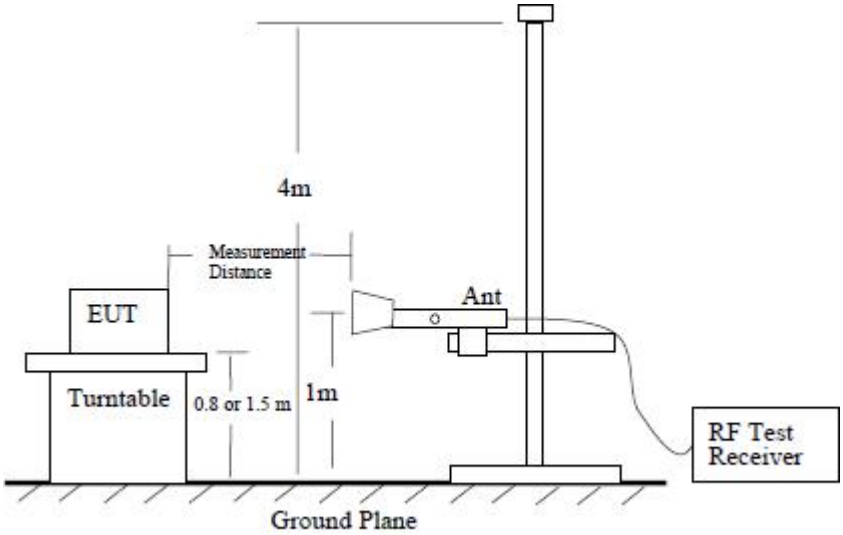


Figure 6—Test site-up for radiated ERP and/or EIRP measurements

5.2.4 Test results

Radiated Spurious Measurement:
LTE Band 2

Radiated Power (EIRP) for Band 2									
Mode	RB/RB SIZE	Frequency	Result						Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
1.4MHz Band QPSK	6/0	1850.7	1.81	3.76	25.24	23.29	213.304	Horizontal	Pass
		1880	1.44	3.91	25.22	22.75	188.365	Horizontal	Pass
		1909.3	1.50	3.93	25.28	22.85	192.752	Horizontal	Pass
1.4MHz Band 16 QAM	6/0	1850.7	1.68	3.76	25.24	23.16	207.014	Horizontal	Pass
		1880	1.79	3.91	25.22	23.10	204.174	Horizontal	Pass
		1909.3	1.64	3.93	25.28	22.99	199.067	Horizontal	Pass
3.0MHz Band QPSK	15/0	1851.5	1.03	3.77	25.23	22.49	177.419	Horizontal	Pass
		1880	1.75	3.91	25.24	23.08	203.236	Horizontal	Pass
		1908.5	1.15	3.94	25.25	22.46	176.198	Horizontal	Pass
3.0MHz Band 16 QAM	15/0	1851.5	1.39	3.77	25.23	22.85	192.752	Horizontal	Pass
		1880	1.20	3.91	25.24	22.53	179.061	Horizontal	Pass
		1908.5	1.52	3.94	25.25	22.83	191.867	Horizontal	Pass
5.0MHz Band QPSK	25/0	1852.5	1.50	3.77	25.31	23.04	201.372	Horizontal	Pass
		1880	1.06	3.91	25.22	22.37	172.584	Horizontal	Pass
		1907.5	1.76	3.94	25.32	23.14	206.063	Horizontal	Pass
5.0MHz Band 16 QAM	25/0	1852.5	1.28	3.77	25.31	22.82	191.426	Horizontal	Pass
		1880	1.96	3.91	25.22	23.27	212.324	Horizontal	Pass
		1907.5	1.67	3.94	25.32	23.05	201.837	Horizontal	Pass
10.0MHz Band QPSK	50/0	1855	1.44	3.79	25.33	22.98	198.609	Horizontal	Pass
		1880	1.67	3.95	25.22	22.94	196.789	Horizontal	Pass
		1905	1.21	3.97	25.19	22.43	174.985	Horizontal	Pass
10.0MHz Band 16 QAM	50/0	1855	1.31	3.79	25.33	22.85	192.752	Horizontal	Pass
		1880	1.72	3.95	25.22	22.99	199.067	Horizontal	Pass
		1905	1.07	3.97	25.19	22.29	169.434	Horizontal	Pass
15.0MHz Band QPSK	75/0	1857.5	1.63	3.79	25.34	23.18	207.970	Horizontal	Pass
		1880	1.41	3.95	25.22	22.68	185.353	Horizontal	Pass
		1902.5	1.94	3.97	25.18	23.15	206.538	Horizontal	Pass

15.0MHz		1857.5	1.47	3.79	25.34	23.02	200.447	Horizontal	Pass
Band 16	75/0	1880	1.28	3.95	25.22	22.55	178.887	Horizontal	Pass
QAM		1902.5	1.04	3.97	25.18	22.25	167.880	Horizontal	Pass
20.0MHz		1860	1.67	3.81	25.35	23.21	209.411	Horizontal	Pass
Band	100/0	1880	1.57	3.96	25.22	22.83	191.867	Horizontal	Pass
QPSK		1900	1.45	4	25.16	22.61	182.390	Horizontal	Pass
20.0MHz		1860	1.05	3.81	25.35	22.59	181.552	Horizontal	Pass
Band 16	100/0	1880	1.74	3.96	25.22	23.00	199.526	Horizontal	Pass
QAM		1900	1.61	4	25.16	22.77	189.234	Horizontal	Pass

Radiated Power (EIRP) for Band 2									
Mode	RB/RB SIZE	Frequency	Result						Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
1.4MHz		1850.7	1.73	3.76	25.24	23.21	209.411	Vertical	Pass
Band	6/0	1880	1.80	3.91	25.22	23.11	204.644	Vertical	Pass
QPSK		1909.3	1.00	3.93	25.28	22.35	171.791	Vertical	Pass
1.4MHz		1850.7	1.05	3.76	25.24	22.53	179.061	Vertical	Pass
Band 16	6/0	1880	1.47	3.91	25.22	22.78	189.671	Vertical	Pass
QAM		1909.3	1.74	3.93	25.28	23.09	203.704	Vertical	Pass
3.0MHz		1851.5	1.15	3.77	25.23	22.61	182.390	Vertical	Pass
Band	15/0	1880	1.09	3.91	25.24	22.42	174.582	Vertical	Pass
QPSK		1908.5	1.65	3.94	25.25	22.96	197.697	Vertical	Pass
3.0MHz		1851.5	1.13	3.77	25.23	22.59	181.552	Vertical	Pass
Band 16	15/0	1880	1.29	3.91	25.24	22.62	182.810	Vertical	Pass
QAM		1908.5	1.07	3.94	25.25	22.38	172.982	Vertical	Pass
5.0MHz		1852.5	1.65	3.77	25.31	23.19	208.449	Vertical	Pass
Band	25/0	1880	1.85	3.91	25.22	23.16	207.014	Vertical	Pass
QPSK		1907.5	1.49	3.94	25.32	22.87	193.642	Vertical	Pass
5.0MHz		1852.5	1.86	3.77	25.31	23.40	218.776	Vertical	Pass
Band 16	25/0	1880	1.73	3.91	25.22	23.04	201.372	Vertical	Pass
QAM		1907.5	1.58	3.94	25.32	22.96	197.697	Vertical	Pass
10.0MHz		1855	1.23	3.79	25.33	22.77	189.234	Vertical	Pass
Band	50/0	1880	1.81	3.95	25.22	23.08	203.236	Vertical	Pass
QPSK		1905	1.53	3.97	25.19	22.75	188.365	Vertical	Pass

10.0MHz		1855	1.47	3.79	25.33	23.01	199.986	Vertical	Pass
Band 16	50/0	1880	1.87	3.95	25.22	23.14	206.063	Vertical	Pass
QAM		1905	1.68	3.97	25.19	22.90	194.984	Vertical	Pass
15.0MHz		1857.5	1.38	3.79	25.34	22.93	196.336	Vertical	Pass
Band	75/0	1880	1.79	3.95	25.22	23.06	202.302	Vertical	Pass
QPSK		1902.5	1.14	3.97	25.18	22.35	171.791	Vertical	Pass
15.0MHz		1857.5	1.59	3.79	25.34	23.14	206.063	Vertical	Pass
Band 16	75/0	1880	1.08	3.95	25.22	22.35	171.791	Vertical	Pass
QAM		1902.5	1.87	3.97	25.18	23.08	203.236	Vertical	Pass
20.0MHz		1860	1.25	3.81	25.35	22.79	190.108	Vertical	Pass
Band	100/0	1880	1.51	3.96	25.22	22.77	189.234	Vertical	Pass
QPSK		1900	1.42	4	25.16	22.58	181.134	Vertical	Pass
20.0MHz		1860	1.98	3.81	25.35	23.52	224.905	Vertical	Pass
Band 16	100/0	1880	1.59	3.96	25.22	22.85	192.752	Vertical	Pass
QAM		1900	1.74	4	25.16	22.90	194.984	Vertical	Pass

LTE Band 4

Radiated Power (EIRP) for Band 4									
Mode	RB/RB SIZE	Frequency	Result						Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
1.4MHz		1710.7	0.91	3.12	24.58	22.37	172.584	Horizontal	Pass
Band	6/0	1732.5	0.44	3.27	24.61	21.78	150.661	Horizontal	Pass
QPSK		1754.3	0.39	3.29	24.63	21.73	148.936	Horizontal	Pass
1.4MHz		1710.7	0.30	3.12	24.58	21.76	149.968	Horizontal	Pass
Band 16	6/0	1732.5	0.43	3.27	24.61	21.77	150.314	Horizontal	Pass
QAM		1754.3	0.94	3.29	24.63	22.28	169.044	Horizontal	Pass
3.0MHz		1711.5	0.22	3.13	24.61	21.70	147.911	Horizontal	Pass
Band	15/0	1732.5	0.57	3.27	24.61	21.91	155.239	Horizontal	Pass
QPSK		1753.5	0.54	3.3	24.62	21.86	153.462	Horizontal	Pass
3.0MHz		1711.5	0.76	3.13	24.61	22.24	167.494	Horizontal	Pass
Band 16	15/0	1732.5	0.27	3.27	24.61	21.61	144.877	Horizontal	Pass
QAM		1753.5	0.37	3.3	24.62	21.69	147.571	Horizontal	Pass
5.0MHz		1712.5	0.69	3.13	24.63	22.19	165.577	Horizontal	Pass
Band	25/0	1732.5	0.23	3.27	24.61	21.57	143.549	Horizontal	Pass
QPSK		1752.5	0.10	3.3	24.62	21.42	138.676	Horizontal	Pass
5.0MHz	25/0	1712.5	0.13	3.13	24.63	21.63	145.546	Horizontal	Pass

Band 16		1732.5	0.06	3.27	24.61	21.40	138.038	Horizontal	Pass
QAM		1752.5	0.44	3.3	24.62	21.76	149.968	Horizontal	Pass
10.0MHz		1715	0.13	3.15	24.64	21.62	145.211	Horizontal	Pass
Band	50/0	1732.5	0.46	3.31	24.61	21.76	149.968	Horizontal	Pass
QPSK		1750	0.87	3.33	24.59	22.13	163.305	Horizontal	Pass
10.0MHz		1715	0.43	3.15	24.64	21.92	155.597	Horizontal	Pass
Band 16	50/0	1732.5	0.67	3.31	24.61	21.97	157.398	Horizontal	Pass
QAM		1750	0.85	3.33	24.59	22.11	162.555	Horizontal	Pass
15.0MHz		1717.5	0.30	3.15	24.65	21.80	151.356	Horizontal	Pass
Band	75/0	1732.5	0.25	3.31	24.61	21.55	142.889	Horizontal	Pass
QPSK		1747.5	0.47	3.33	24.57	21.71	148.252	Horizontal	Pass
15.0MHz		1717.5	0.90	3.15	24.65	22.40	173.780	Horizontal	Pass
Band 16	75/0	1732.5	0.49	3.31	24.61	21.79	151.008	Horizontal	Pass
QAM		1747.5	0.88	3.33	24.57	22.12	162.930	Horizontal	Pass
20.0MHz		1720	0.35	3.17	24.66	21.84	152.757	Horizontal	Pass
Band	100/0	1732.5	0.29	3.32	24.61	21.58	143.880	Horizontal	Pass
QPSK		1745	0.07	3.36	24.56	21.27	133.968	Horizontal	Pass
20.0MHz		1720	0.37	3.17	24.66	21.86	153.462	Horizontal	Pass
Band 16	100/0	1732.5	0.71	3.32	24.61	22.00	158.489	Horizontal	Pass
QAM		1745	0.77	3.36	24.56	21.97	157.398	Horizontal	Pass

Radiated Power (EIRP) for Band 4									
Mode	RB/RB SIZE	Frequency	Result						Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
1.4MHz		1710.7	0.20	3.12	24.58	21.66	146.555	Vertical	Pass
Band	6/0	1732.5	0.20	3.27	24.61	21.54	142.561	Vertical	Pass
QPSK		1754.3	0.09	3.29	24.63	21.43	138.995	Vertical	Pass
1.4MHz		1710.7	0.65	3.12	24.58	22.11	162.555	Vertical	Pass
Band 16	6/0	1732.5	0.03	3.27	24.61	21.37	137.088	Vertical	Pass
QAM		1754.3	0.88	3.29	24.63	22.22	166.725	Vertical	Pass
3.0MHz		1711.5	0.26	3.13	24.61	21.74	149.279	Vertical	Pass
Band	15/0	1732.5	0.55	3.27	24.61	21.89	154.525	Vertical	Pass
QPSK		1753.5	0.74	3.3	24.62	22.06	160.694	Vertical	Pass
3.0MHz	15/0	1711.5	0.56	3.13	24.61	22.04	159.956	Vertical	Pass
Band 16		1732.5	0.92	3.27	24.61	22.26	168.267	Vertical	Pass

QAM		1753.5	0.82	3.3	24.62	22.14	163.682	Vertical	Pass
5.0MHz		1712.5	0.90	3.13	24.63	22.40	173.780	Vertical	Pass
Band	25/0	1732.5	0.55	3.27	24.61	21.89	154.525	Vertical	Pass
QPSK		1752.5	0.14	3.3	24.62	21.46	139.959	Vertical	Pass
5.0MHz		1712.5	0.25	3.13	24.63	21.75	149.624	Vertical	Pass
Band 16	25/0	1732.5	0.28	3.27	24.61	21.62	145.211	Vertical	Pass
QAM		1752.5	0.18	3.3	24.62	21.50	141.254	Vertical	Pass
10.0MHz		1715	0.67	3.15	24.64	22.16	164.437	Vertical	Pass
Band	50/0	1732.5	0.00	3.31	24.61	21.30	134.896	Vertical	Pass
QPSK		1750	0.15	3.33	24.59	21.41	138.357	Vertical	Pass
10.0MHz		1715	0.08	3.15	24.64	21.57	143.549	Vertical	Pass
Band 16	50/0	1732.5	0.24	3.31	24.61	21.54	142.561	Vertical	Pass
QAM		1750	0.43	3.33	24.59	21.69	147.571	Vertical	Pass
15.0MHz		1717.5	0.63	3.15	24.65	22.13	163.305	Vertical	Pass
Band	75/0	1732.5	0.10	3.31	24.61	21.40	138.038	Vertical	Pass
QPSK		1747.5	0.81	3.33	24.57	22.05	160.325	Vertical	Pass
15.0MHz		1717.5	0.06	3.15	24.65	21.56	143.219	Vertical	Pass
Band 16	75/0	1732.5	0.50	3.31	24.61	21.80	151.356	Vertical	Pass
QAM		1747.5	1.00	3.33	24.57	22.24	167.494	Vertical	Pass
20.0MHz		1720	0.40	3.17	24.66	21.89	154.525	Vertical	Pass
Band	100/0	1732.5	0.40	3.32	24.61	21.69	147.571	Vertical	Pass
QPSK		1745	0.41	3.36	24.56	21.61	144.877	Vertical	Pass
20.0MHz		1720	0.88	3.17	24.66	22.37	172.584	Vertical	Pass
Band 16	100/0	1732.5	0.36	3.32	24.61	21.65	146.218	Vertical	Pass
QAM		1745	0.54	3.36	24.56	21.74	149.279	Vertical	Pass

LTE Band 5

Radiated Power (ERP) for Band 5											
Mode	RB/RB SIZE	Frequency	Result								Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Correction (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP		
1.4MHz Band QPSK	6/0	824.7	7.26	2.01	19.68	2.15	22.78	189.671	Horizontal		Pass
		836.5	7.29	2.01	19.77	2.15	22.90	194.984	Horizontal		Pass
		848.3	7.88	2.02	19.82	2.15	23.53	225.424	Horizontal		Pass
1.4MHz Band 16 QAM	6/0	824.7	7.86	2.01	19.68	2.15	23.38	217.771	Horizontal		Pass
		836.5	7.41	2.01	19.77	2.15	23.02	200.447	Horizontal		Pass
		848.3	7.20	2.02	19.82	2.15	22.85	192.752	Horizontal		Pass
3.0MHz Band QPSK	15/0	825.5	7.10	2.01	19.7	2.15	22.64	183.654	Horizontal		Pass
		836.5	7.76	2.01	19.77	2.15	23.37	217.270	Horizontal		Pass
		847.5	7.68	2.02	19.81	2.15	23.32	214.783	Horizontal		Pass
3.0MHz Band 16 QAM	15/0	825.5	7.43	2.01	19.7	2.15	22.97	198.153	Horizontal		Pass
		836.5	7.03	2.01	19.77	2.15	22.64	183.654	Horizontal		Pass
		847.5	7.23	2.02	19.81	2.15	22.87	193.642	Horizontal		Pass
5.0MHz Band QPSK	25/0	826.5	7.56	2.01	19.71	2.15	23.11	204.644	Horizontal		Pass
		836.5	7.50	2.01	19.77	2.15	23.11	204.644	Horizontal		Pass
		846.5	7.24	2.02	19.79	2.15	22.86	193.197	Horizontal		Pass
5.0MHz Band 16 QAM	25/0	826.5	7.38	2.01	19.71	2.15	22.93	196.336	Horizontal		Pass
		836.5	7.24	2.01	19.77	2.15	22.85	192.752	Horizontal		Pass
		846.5	7.83	2.02	19.79	2.15	23.45	221.309	Horizontal		Pass
10.0MHz Band QPSK	50/0	829	7.97	2.01	19.73	2.15	23.54	225.944	Horizontal		Pass
		836.5	7.80	2.01	19.77	2.15	23.41	219.280	Horizontal		Pass
		844	7.45	2.02	19.78	2.15	23.06	202.302	Horizontal		Pass
10.0MHz Band 16 QAM	50/0	829	7.02	2.01	19.73	2.15	22.59	181.552	Horizontal		Pass
		836.5	7.61	2.01	19.77	2.15	23.22	209.894	Horizontal		Pass
		844	7.04	2.02	19.78	2.15	22.65	184.077	Horizontal		Pass

Radiated Power (ERP) for Band 5										
Mode	RB/RB SIZE	Frequency	Result							Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Correction (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
1.4MHz Band QPSK	6/0	824.7	7.54	2.01	19.68	2.15	23.06	202.302	Vertical	Pass
		836.5	7.45	2.01	19.77	2.15	23.06	202.302	Vertical	Pass
		848.3	7.32	2.02	19.82	2.15	22.97	198.153	Vertical	Pass
1.4MHz Band 16 QAM	6/0	824.7	7.05	2.01	19.68	2.15	22.57	180.717	Vertical	Pass
		836.5	7.55	2.01	19.77	2.15	23.16	207.014	Vertical	Pass
		848.3	7.87	2.02	19.82	2.15	23.52	224.905	Vertical	Pass
3.0MHz Band QPSK	15/0	825.5	7.73	2.01	19.7	2.15	23.27	212.324	Vertical	Pass
		836.5	7.32	2.01	19.77	2.15	22.93	196.336	Vertical	Pass
		847.5	7.88	2.02	19.81	2.15	23.52	224.905	Vertical	Pass
3.0MHz Band 16 QAM	15/0	825.5	7.93	2.01	19.7	2.15	23.47	222.331	Vertical	Pass
		836.5	7.73	2.01	19.77	2.15	23.34	215.774	Vertical	Pass
		847.5	7.42	2.02	19.81	2.15	23.06	202.302	Vertical	Pass
5.0MHz Band QPSK	25/0	826.5	7.96	2.01	19.71	2.15	23.51	224.388	Vertical	Pass
		836.5	7.32	2.01	19.77	2.15	22.93	196.336	Vertical	Pass
		846.5	7.75	2.02	19.79	2.15	23.37	217.270	Vertical	Pass
5.0MHz Band 16 QAM	25/0	826.5	7.84	2.01	19.71	2.15	23.39	218.273	Vertical	Pass
		836.5	7.75	2.01	19.77	2.15	23.36	216.770	Vertical	Pass
		846.5	7.74	2.02	19.79	2.15	23.36	216.770	Vertical	Pass
10.0MHz Band QPSK	50/0	829	7.18	2.01	19.73	2.15	22.75	188.365	Vertical	Pass
		836.5	7.34	2.01	19.77	2.15	22.95	197.242	Vertical	Pass
		844	7.84	2.02	19.78	2.15	23.45	221.309	Vertical	Pass
10.0MHz Band 16 QAM	50/0	829	7.15	2.01	19.73	2.15	22.72	187.068	Vertical	Pass
		836.5	7.77	2.01	19.77	2.15	23.38	217.771	Vertical	Pass
		844	7.37	2.02	19.78	2.15	22.98	198.609	Vertical	Pass

5.3 Peak-to-Average Ratio

5.3.1 Limit

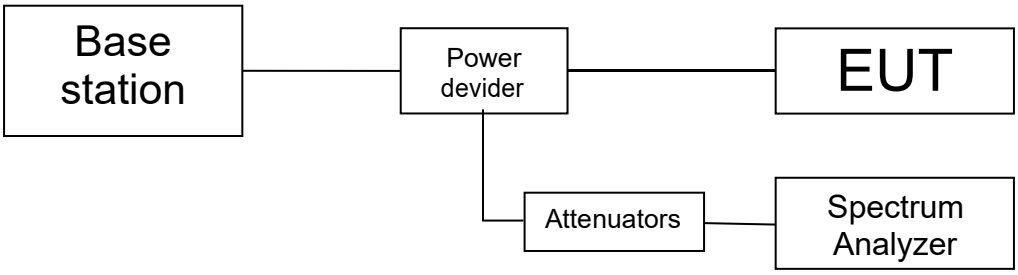
Not exceed 13 dB

5.3.2 Test procedure

FCC: CFR Part 24.232 (d), 27.50(a)
The peak-to-average power ratio (PAPR) of the transmitter output power must not exceed 13 dB. The PAPR measurements should be made using either an instrument with complementary cumulative distribution function (CCDF) capabilities to determine that PAPR will not exceed 13 dB for more than 0.1 percent of the time or other Commission approved procedure. The measurement must be performed using a signal corresponding to the highest PAPR expected during periods of continuous transmission.
According to KDB 971168 5.7.1:

a) Refer to instrument's analyzer instruction manual for details on how to use the power statistics/CCDF function;
b) Set resolution/measurement bandwidth ≥ signal's occupied bandwidth;
c) Set the number of counts to a value that stabilizes the measured CCDF curve;
d) Set the measurement interval to 1 ms
e) Record the maximum PAPR level associated with a probability of 0.1%

5.3.3 Test setup



5.3.4 Test results

Note: All mode has been tested, only worst data (Max. bandwidth, Middle channel) shown in this report.

Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dB)	Limit(dB)	Verdict
Band2	1.4MHz	QPSK	18900	6RB#0	5.38	13	PASS
Band2	1.4MHz	16QAM	18900	6RB#0	8.46	13	PASS
Band2	3MHz	QPSK	18900	15RB#0	5.52	13	PASS
Band2	3MHz	16QAM	18900	15RB#0	5.96	13	PASS
Band2	5MHz	QPSK	18900	25RB#0	5.55	13	PASS
Band2	5MHz	16QAM	18900	25RB#0	5.97	13	PASS
Band2	10MHz	QPSK	18900	50RB#0	5.60	13	PASS
Band2	10MHz	16QAM	18900	50RB#0	7.83	13	PASS
Band2	15MHz	QPSK	18900	75RB#0	5.80	13	PASS
Band2	15MHz	16QAM	18900	75RB#0	6.01	13	PASS
Band2	20MHz	QPSK	18900	100RB#0	5.65	13	PASS
Band2	20MHz	16QAM	18900	100RB#0	5.93	13	PASS

Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dB)	Limit(dB)	Verdict
Band4	1.4MHz	QPSK	20175	6RB#0	8.41	13	PASS
Band4	1.4MHz	16QAM	20175	6RB#0	4.95	13	PASS
Band4	3MHz	QPSK	20175	15RB#0	4.78	13	PASS
Band4	3MHz	16QAM	20175	15RB#0	5.31	13	PASS
Band4	5MHz	QPSK	20175	25RB#0	4.75	13	PASS
Band4	5MHz	16QAM	20175	25RB#0	5.25	13	PASS
Band4	10MHz	QPSK	20175	50RB#0	4.99	13	PASS
Band4	10MHz	16QAM	20175	50RB#0	5.34	13	PASS
Band4	15MHz	QPSK	20175	75RB#0	5.45	13	PASS
Band4	15MHz	16QAM	20175	75RB#0	5.72	13	PASS
Band4	20MHz	QPSK	20175	100RB#0	5.42	13	PASS
Band4	20MHz	16QAM	20175	100RB#0	5.86	13	PASS

Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dB)	Limit(dB)	Verdict
Band5	1.4MHz	QPSK	20525	6RB#0	5.44	13	PASS
Band5	1.4MHz	16QAM	20525	6RB#0	5.38	13	PASS
Band5	3MHz	QPSK	20525	15RB#0	8.42	13	PASS
Band5	3MHz	16QAM	20525	15RB#0	5.50	13	PASS
Band5	5MHz	QPSK	20525	25RB#0	5.38	13	PASS
Band5	5MHz	16QAM	20525	25RB#0	5.47	13	PASS
Band5	10MHz	QPSK	20525	50RB#0	5.45	13	PASS
Band5	10MHz	16QAM	20525	50RB#0	5.48	13	PASS

Test plots

Band2-1.4MHz-16QAM-18900-6RB#0

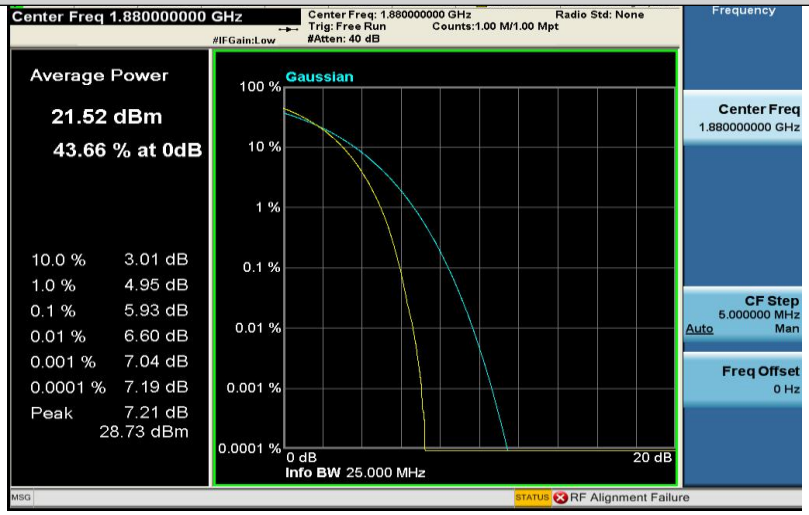
Band2-3MHz-16QAM-18900-15RB#0

Band2-5MHz-16QAM-18900-25RB#0

Band2-10MHz-16QAM-18900-50RB#0

Band2-15MHz-16QAM-18900-75RB#0

Band2-20MHz-16QAM-18900-100RB#0



Band4-1.4MHz-QPSK-20175-6RB#0

Band4-1.4MHz-16QAM-20175-6RB#0

Band4-3MHz-QPSK-20175-15RB#0

Band4-3MHz-16QAM-20175-15RB#0

Band4-5MHz-QPSK-20175-25RB#0

Band4-5MHz-16QAM-20175-25RB#0

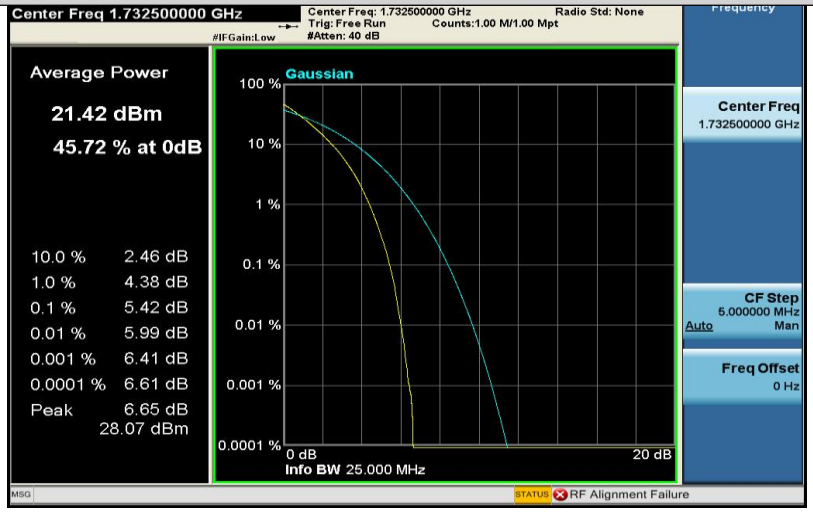
Band4-10MHz-QPSK-20175-50RB#0

Band4-10MHz-16QAM-20175-50RB#0

Band4-15MHz-QPSK-20175-75RB#0

Band4-15MHz-16QAM-20175-75RB#0

Band4-20MHz-QPSK-20175-100RB#0



Band4-20MHz-16QAM-20175-100RB#0

Band5-1.4MHz-QPSK-20525-6RB#0

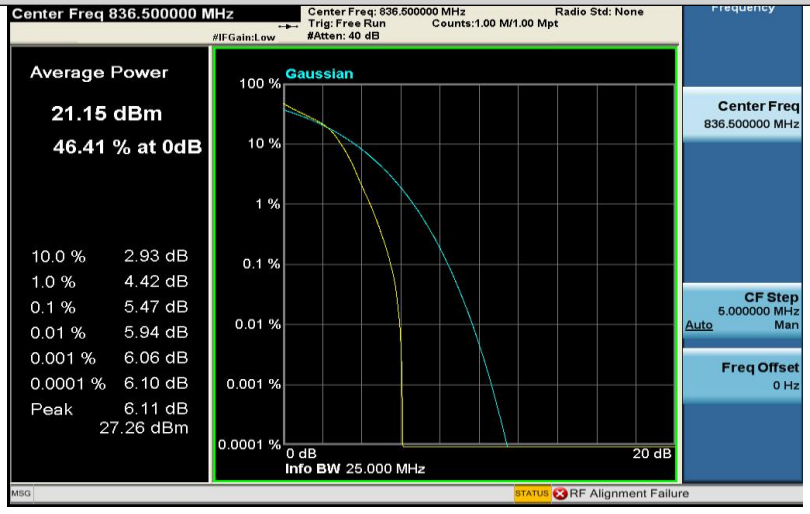
Band5-1.4MHz-16QAM-20525-6RB#0

Band5-3MHz-QPSK-20525-15RB#0

Band5-3MHz-16QAM-20525-15RB#0

Band5-5MHz-QPSK-20525-25RB#0

Band5-5MHz-16QAM-20525-25RB#0



Band5-10MHz-QPSK-20525-50RB#0

Band5-10MHz-16QAM-20525-50RB#0

5.4 99% and -26 dB Occupied Bandwidth

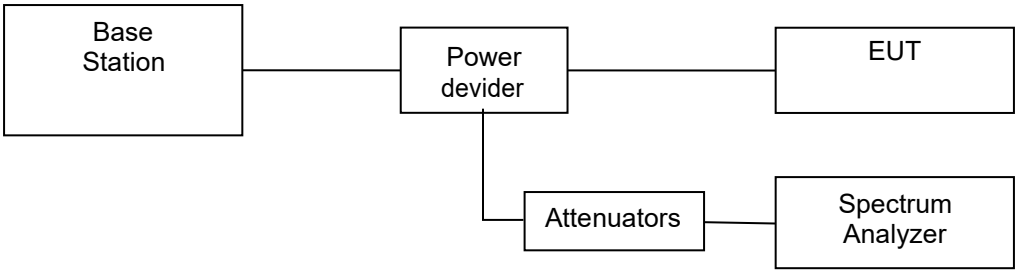
5.4.1 Limit

N/A

5.4.2 Test procedure

1. The EUT' RF output port was connected to Spectrum Analyzer and Base Station via power divider.
2. Spectrum analyzer's occupied bandwidth measure function was used to measure 99% bandwidth and -26dBc bandwidth

5.4.3 Test setup



5.4.4 Test results

Note1: all modes of RB configurations have been tested, and only worst configuration data listed.

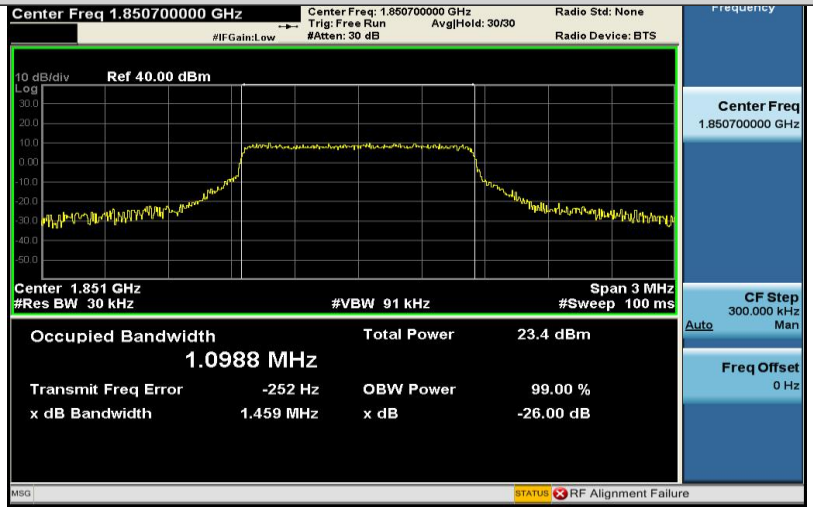
Band	Bandwidth	Modulation	Channel	RB Configuration	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
Band2	1.4MHz	QPSK	18607	6RB#0	1.0970	1.405	PASS
Band2	1.4MHz	QPSK	18900	6RB#0	1.0987	1.420	PASS
Band2	1.4MHz	QPSK	19193	6RB#0	1.0945	1.396	PASS
Band2	1.4MHz	16QAM	18607	6RB#0	1.0988	1.459	PASS
Band2	1.4MHz	16QAM	18900	6RB#0	1.1032	1.416	PASS
Band2	1.4MHz	16QAM	19193	6RB#0	1.1028	1.592	PASS
Band2	3MHz	QPSK	18615	15RB#0	2.6998	2.957	PASS
Band2	3MHz	QPSK	18900	15RB#0	2.7021	2.985	PASS
Band2	3MHz	QPSK	19185	15RB#0	2.7043	2.981	PASS
Band2	3MHz	16QAM	18615	15RB#0	2.6974	2.974	PASS
Band2	3MHz	16QAM	18900	15RB#0	2.7035	2.967	PASS
Band2	3MHz	16QAM	19185	15RB#0	2.7018	2.971	PASS
Band2	5MHz	QPSK	18625	25RB#0	4.5096	5.007	PASS
Band2	5MHz	QPSK	18900	25RB#0	4.5102	5.005	PASS
Band2	5MHz	QPSK	19175	25RB#0	4.5167	4.998	PASS
Band2	5MHz	16QAM	18625	25RB#0	4.5141	5.027	PASS
Band2	5MHz	16QAM	18900	25RB#0	4.5160	5.019	PASS
Band2	5MHz	16QAM	19175	25RB#0	4.5192	5.013	PASS
Band2	10MHz	QPSK	18650	50RB#0	8.9315	9.922	PASS
Band2	10MHz	QPSK	18900	50RB#0	9.0037	9.862	PASS
Band2	10MHz	QPSK	19150	50RB#0	9.0143	9 873	PASS
Band2	10MHz	16QAM	18650	50RB#0	8.9531	9.962	PASS
Band2	10MHz	16QAM	18900	50RB#0	8.9561	9.367	PASS
Band2	10MHz	16QAM	19150	50RB#0	8.9553	9.878	PASS
Band2	15MHz	QPSK	18675	75RB#0	13.505	14.63	PASS
Band2	15MHz	QPSK	18900	75RB#0	13.523	14.71	PASS
Band2	15MHz	QPSK	19125	75RB#0	13.515	14.83	PASS
Band2	15MHz	16QAM	18675	75RB#0	13.491	14.76	PASS
Band2	15MHz	16QAM	18900	75RB#0	13.528	14.57	PASS
Band2	15MHz	16QAM	19125	75RB#0	13.539	15.06	PASS
Band2	20MHz	QPSK	18700	100RB#0	17.958	19.09	PASS
Band2	20MHz	QPSK	18900	100RB#0	18.019	19.05	PASS
Band2	20MHz	QPSK	19100	100RB#0	17.967	19.14	PASS
Band2	20MHz	16QAM	18700	100RB#0	17.957	19.20	PASS
Band2	20MHz	16QAM	18900	100RB#0	18.050	19.05	PASS
Band2	20MHz	16QAM	19100	100RB#0	17.975	19.12	PASS

Band	Bandwidth	Modulation	Channel	RB Configuration	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
Band4	1.4MHz	QPSK	19957	6RB#0	1.0998	1.412	PASS
Band4	1.4MHz	QPSK	20175	6RB#0	1.0971	1.397	PASS
Band4	1.4MHz	QPSK	20393	6RB#0	1.0965	1.419	PASS
Band4	1.4MHz	16QAM	19957	6RB#0	1.0950	1.416	PASS
Band4	1.4MHz	16QAM	20175	6RB#0	1.0971	1.394	PASS
Band4	1.4MHz	16QAM	20393	6RB#0	1.0970	1.403	PASS
Band4	3MHz	QPSK	19965	15RB#0	2.6998	2.963	PASS
Band4	3MHz	QPSK	20175	15RB#0	2.6977	2.956	PASS
Band4	3MHz	QPSK	20385	15RB#0	2.6999	2.956	PASS
Band4	3MHz	16QAM	19965	15RB#0	2.6984	2.968	PASS
Band4	3MHz	16QAM	20175	15RB#0	2.7025	2.965	PASS
Band4	3MHz	16QAM	20385	15RB#0	2.6995	2.971	PASS
Band4	5MHz	QPSK	19975	25RB#0	4.5171	5.025	PASS
Band4	5MHz	QPSK	20175	25RB#0	4.5107	4.990	PASS
Band4	5MHz	QPSK	20375	25RB#0	4.5062	5.005	PASS
Band4	5MHz	16QAM	19975	25RB#0	4.5183	5.005	PASS
Band4	5MHz	16QAM	20175	25RB#0	4.5133	5.027	PASS
Band4	5MHz	16QAM	20375	25RB#0	4.5111	4.986	PASS
Band4	10MHz	QPSK	20000	50RB#0	9.0109	9.806	PASS
Band4	10MHz	QPSK	20175	50RB#0	9.0128	9.774	PASS
Band4	10MHz	QPSK	20350	50RB#0	8.9957	9.755	PASS
Band4	10MHz	16QAM	20000	50RB#0	9.0106	9.820	PASS
Band4	10MHz	16QAM	20175	50RB#0	9.0016	9.779	PASS
Band4	10MHz	16QAM	20350	50RB#0	9.0005	9.825	PASS
Band4	15MHz	QPSK	20025	75RB#0	13.505	14.42	PASS
Band4	15MHz	QPSK	20175	75RB#0	13.498	14.51	PASS
Band4	15MHz	QPSK	20325	75RB#0	13.522	14.53	PASS
Band4	15MHz	16QAM	20025	75RB#0	13.518	14.49	PASS
Band4	15MHz	16QAM	20175	75RB#0	13.493	14.48	PASS
Band4	15MHz	16QAM	20325	75RB#0	13.506	14.48	PASS
Band4	20MHz	QPSK	20050	100RB#0	17.964	19.01	PASS
Band4	20MHz	QPSK	20175	100RB#0	17.971	19.02	PASS
Band4	20MHz	QPSK	20300	100RB#0	18.010	19.05	PASS
Band4	20MHz	16QAM	20050	100RB#0	17.989	18.99	PASS
Band4	20MHz	16QAM	20175	100RB#0	17.983	19.07	PASS
Band4	20MHz	16QAM	20300	100RB#0	18.016	19.09	PASS

Band	Bandwidth	Modulation	Channel	RB Configuration	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
Band5	1.4MHz	QPSK	20407	6RB#0	1.1002	1.420	PASS
Band5	1.4MHz	QPSK	20525	6RB#0	1.0953	1.370	PASS
Band5	1.4MHz	QPSK	20643	6RB#0	1.1028	1.471	PASS
Band5	1.4MHz	16QAM	20407	6RB#0	1.1022	1.460	PASS
Band5	1.4MHz	16QAM	20525	6RB#0	1.1154	2.157	PASS
Band5	1.4MHz	16QAM	20643	6RB#0	1.1051	1.720	PASS
Band5	3MHz	QPSK	20415	15RB#0	2.6965	2.956	PASS
Band5	3MHz	QPSK	20525	15RB#0	2.7018	2.959	PASS
Band5	3MHz	QPSK	20635	15RB#0	2.7048	2.954	PASS
Band5	3MHz	16QAM	20415	15RB#0	2.7035	2.946	PASS
Band5	3MHz	16QAM	20525	15RB#0	2.7110	3.861	PASS
Band5	3MHz	16QAM	20635	15RB#0	2.7025	2.982	PASS
Band5	5MHz	QPSK	20425	25RB#0	4.5123	5.013	PASS
Band5	5MHz	QPSK	20525	25RB#0	4.5129	5.006	PASS
Band5	5MHz	QPSK	20625	25RB#0	4.5058	4.999	PASS
Band5	5MHz	16QAM	20425	25RB#0	4.5159	4.993	PASS
Band5	5MHz	16QAM	20525	25RB#0	4.5298	7.942	PASS
Band5	5MHz	16QAM	20625	25RB#0	4.5180	5.029	PASS
Band5	10MHz	QPSK	20450	50RB#0	8.9952	9.772	PASS
Band5	10MHz	QPSK	20525	50RB#0	9.0140	9.854	PASS
Band5	10MHz	QPSK	20600	50RB#0	8.9848	9.655	PASS
Band5	10MHz	16QAM	20450	50RB#0	8.9896	9.700	PASS
Band5	10MHz	16QAM	20525	50RB#0	9.0424	10.11	PASS
Band5	10MHz	16QAM	20600	50RB#0	8.9790	9.821	PASS

Test plots

Band2-1.4MHz-16QAM-18607-6RB#0-1.0988



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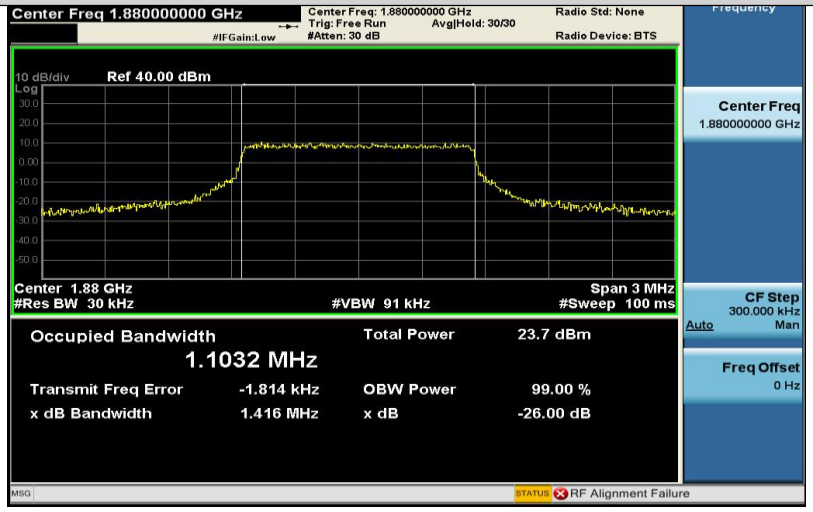
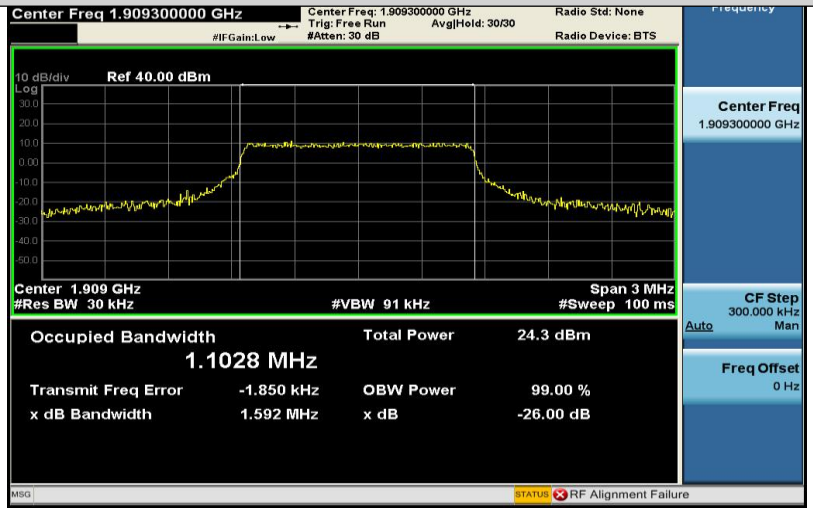


Band2-1.4MHz-16QAM-19193-6RB#0-1.1028



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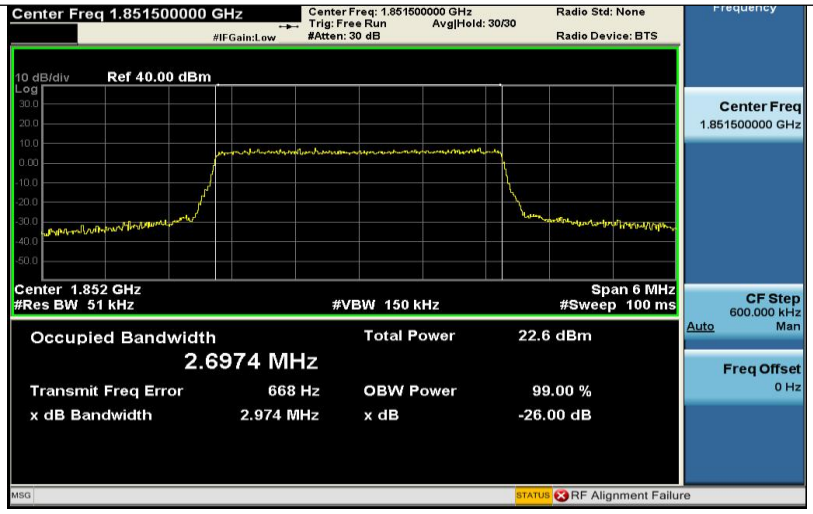
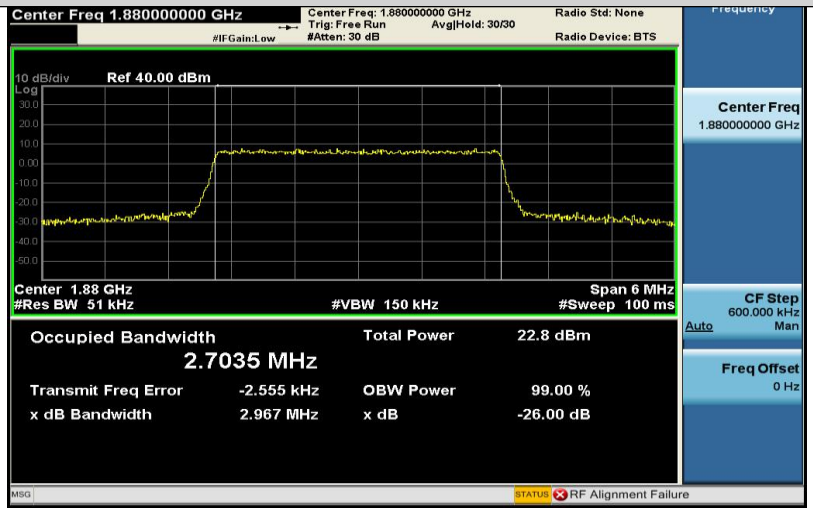


Band2-3MHz-16QAM-18900-15RB#0-2.7035



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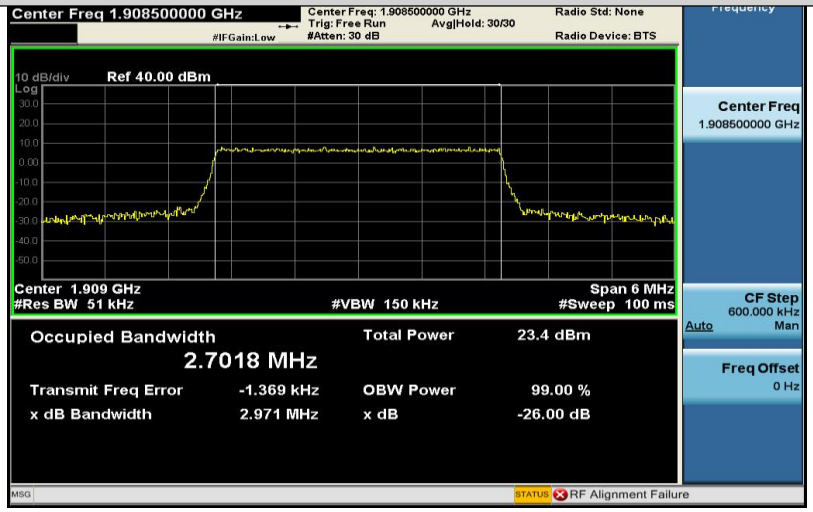

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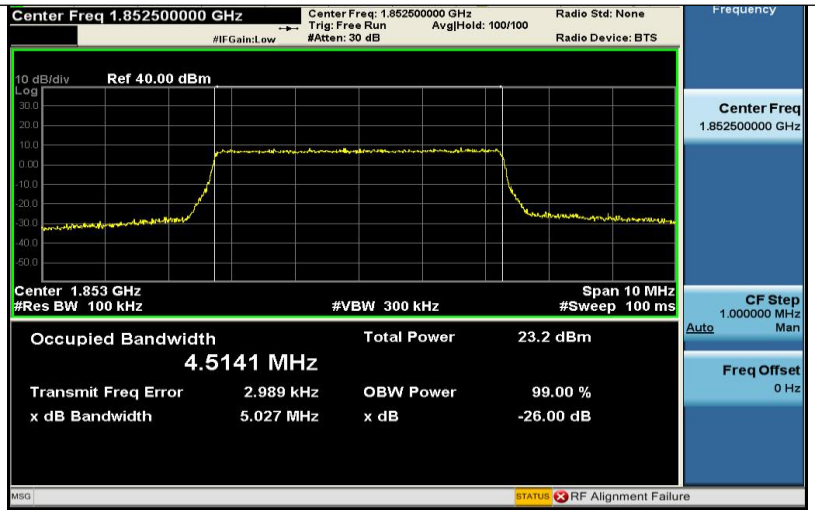
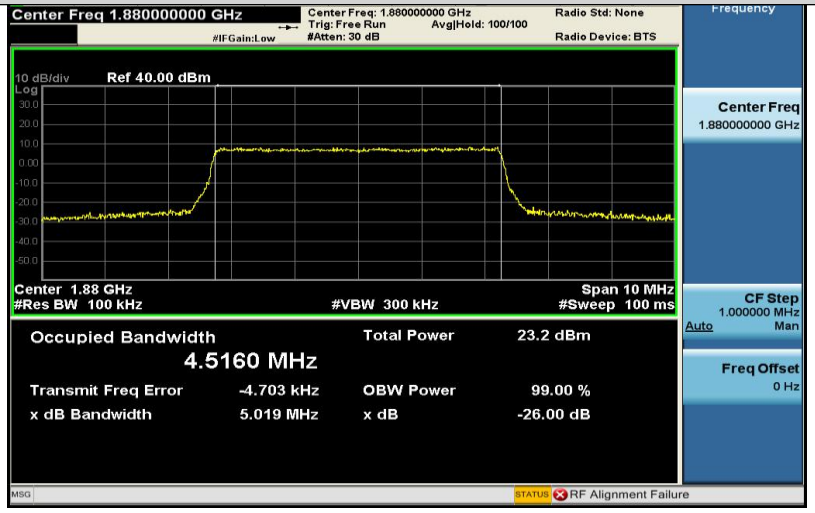
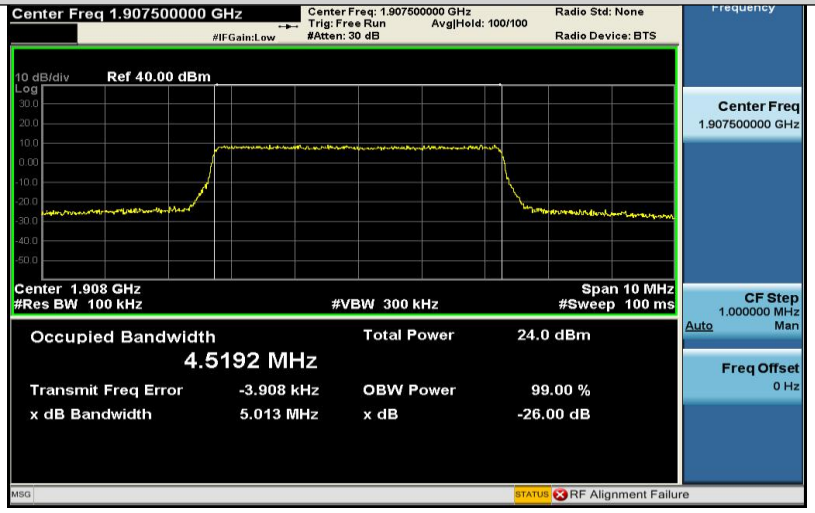


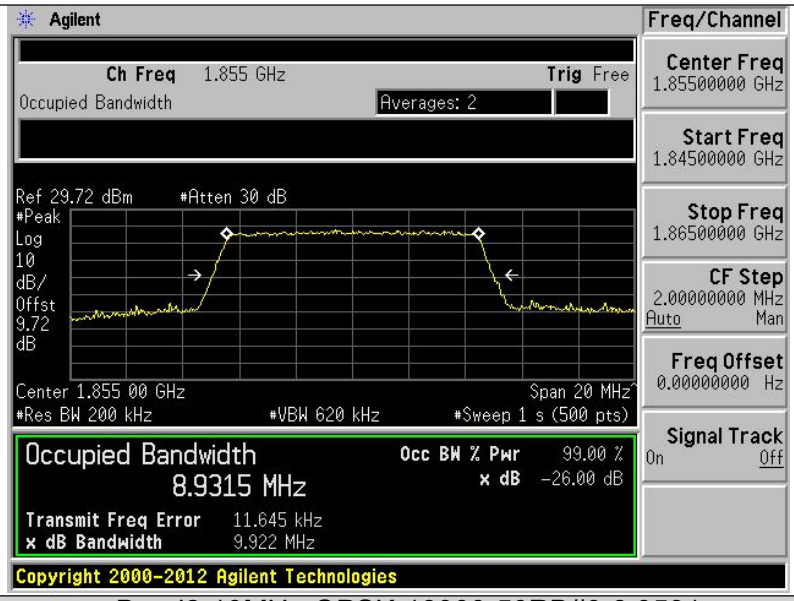
Band2-5MHz-16QAM-18900-25RB#0-4.5160



Band2-5MHz-16QAM-19175-25RB#0-4.5192



Band2-10MHz-QPSK-18650-50RB#0-8.9315



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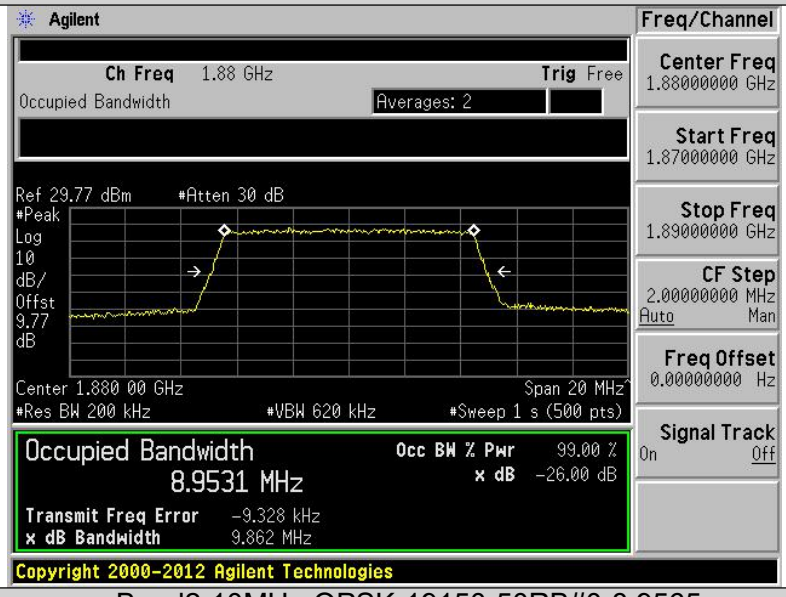
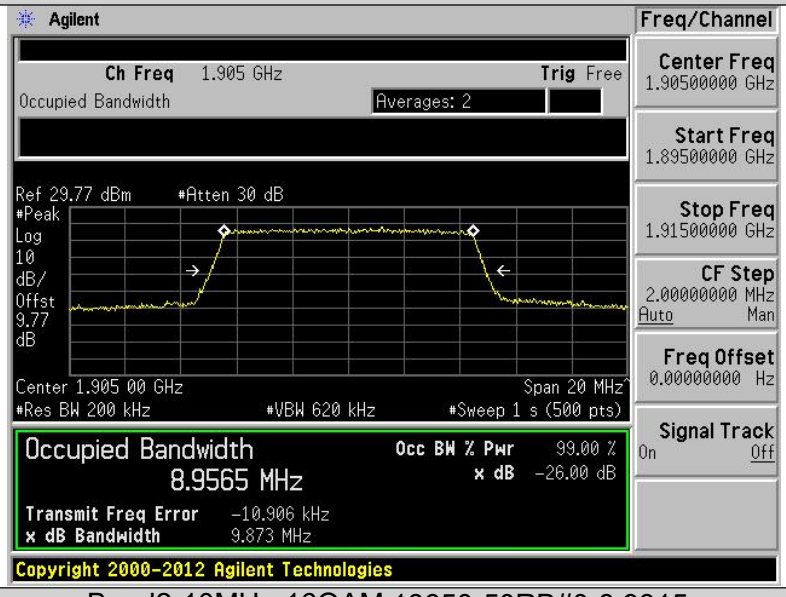


Band2-10MHz-QPSK-19150-50RB#0-8.9565



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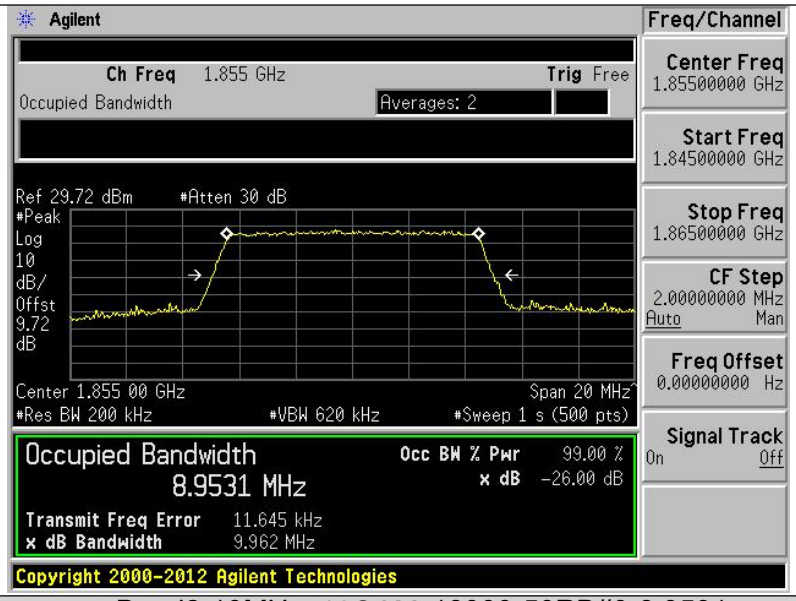
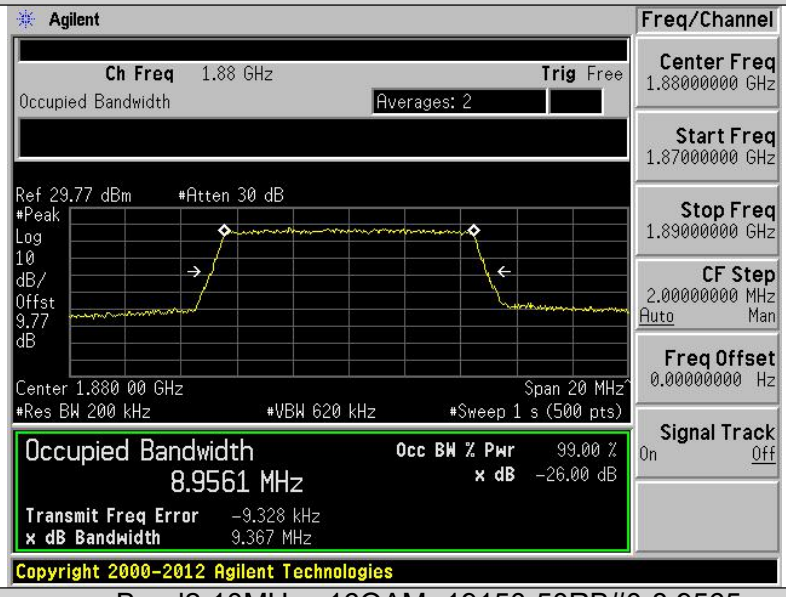
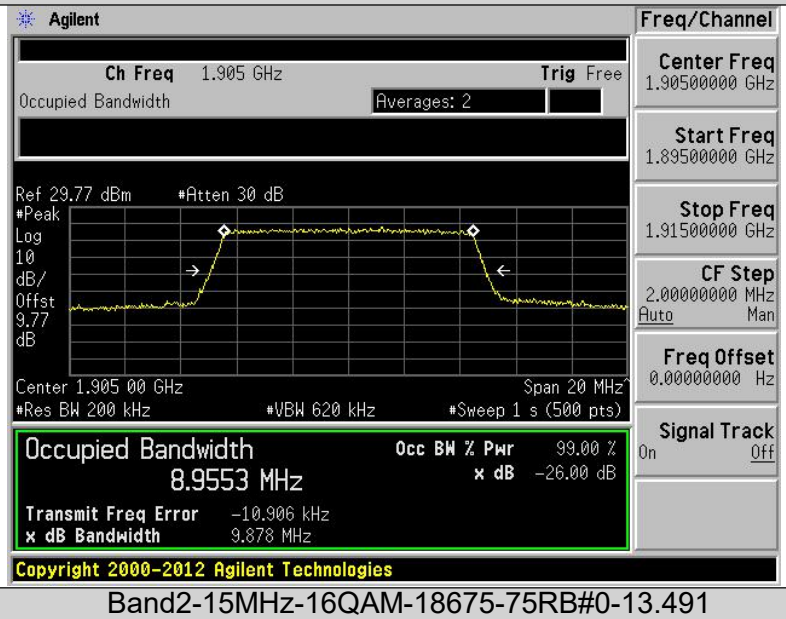


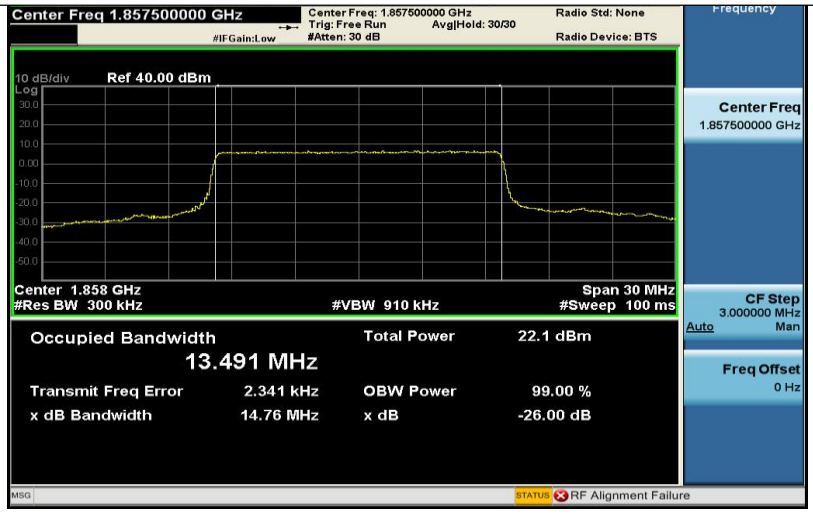
Band2-10MHz-16QAM-18900-50RB#0-8.9531



Band2-10MHz -16QAM- 19150-50RB#0-8.9565



Band2-15MHz-16QAM-18675-75RB#0-13.491



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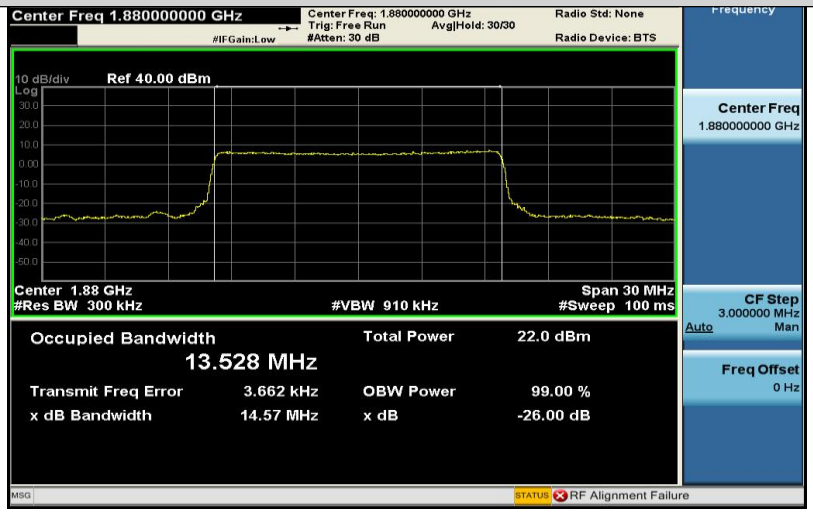
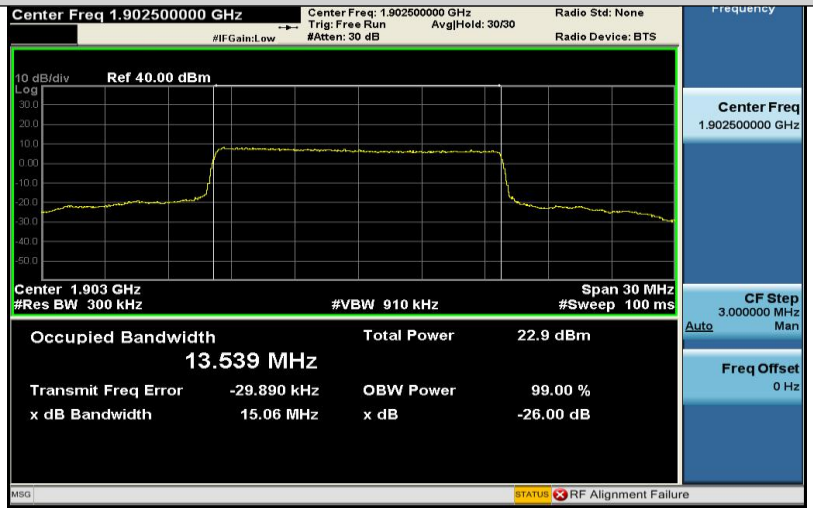
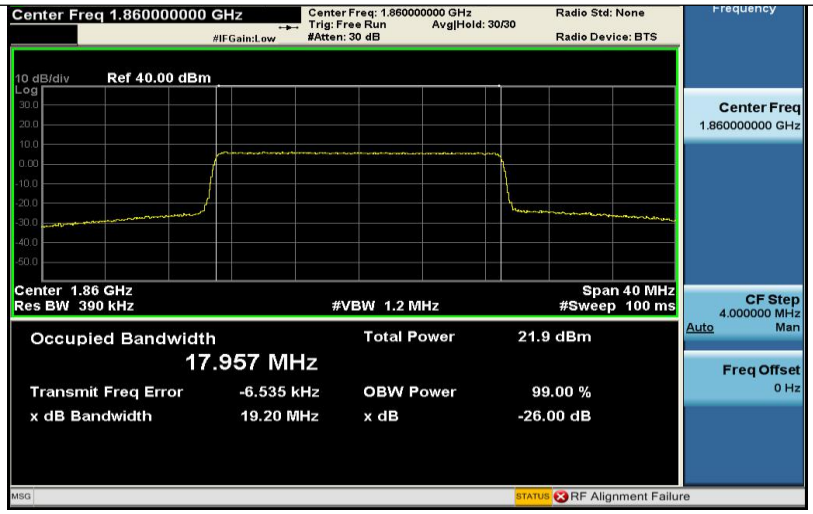


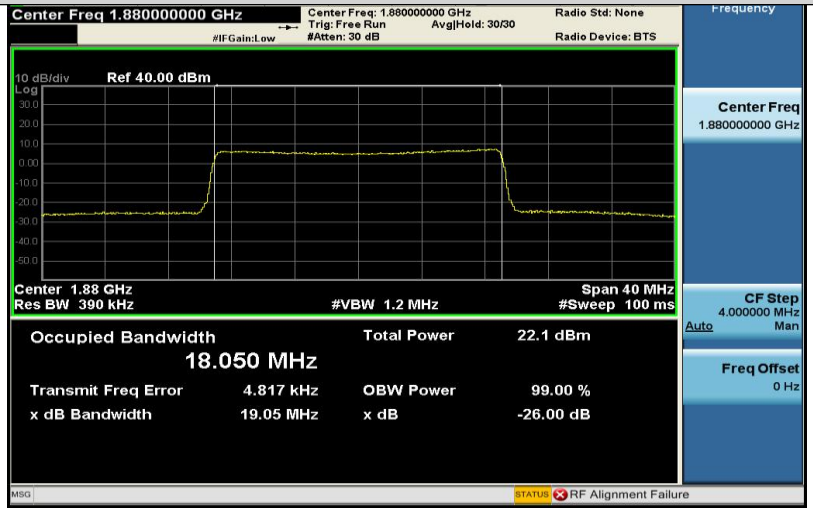
Band2-15MHz-16QAM-19125-75RB#0-13.539



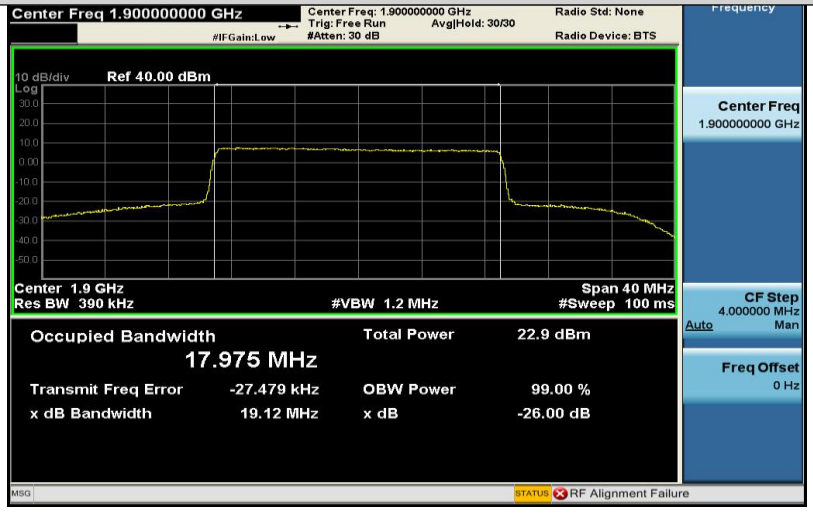
Band2-20MHz-16QAM-18700-100RB#0-17.957



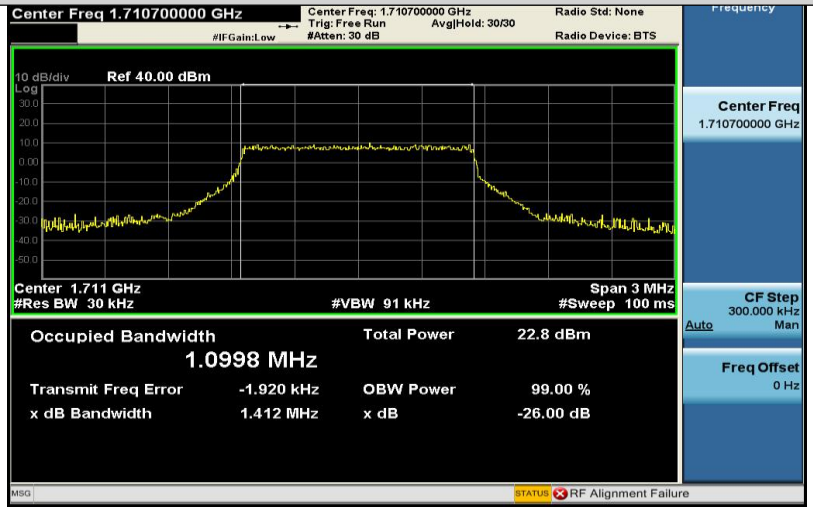
Band2-20MHz-16QAM-18900-100RB#0-18.050



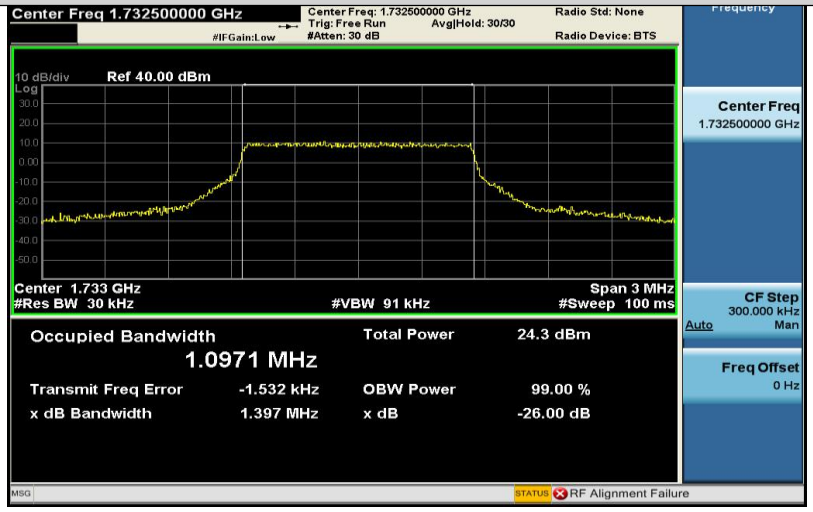
Band2-20MHz-16QAM-19100-100RB#0-17.975



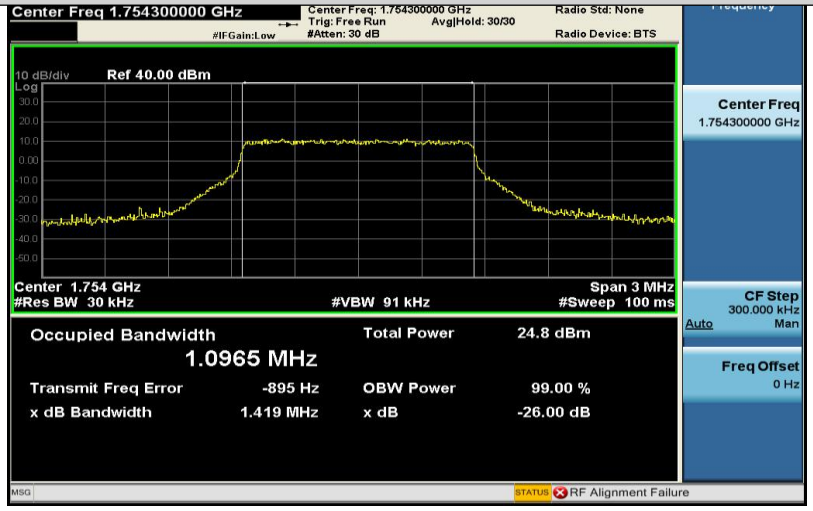
Band4-1.4MHz-QPSK-19957-6RB#0-1.0998



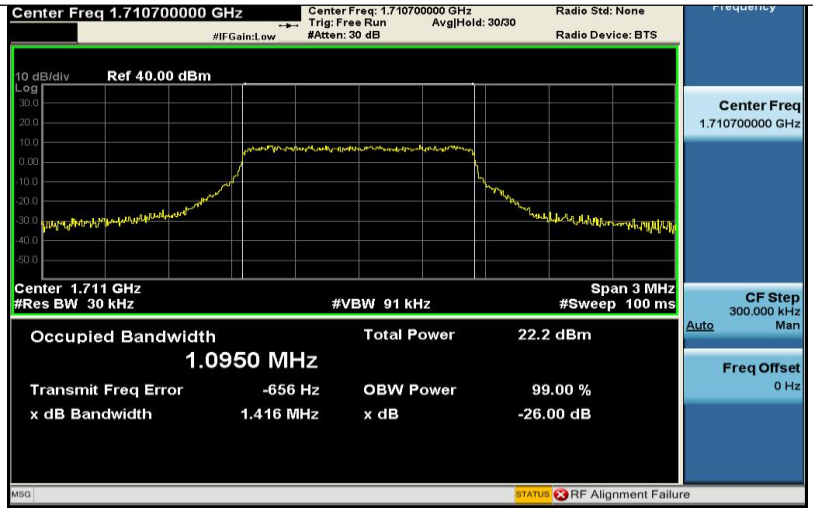
Band4-1.4MHz-QPSK-20175-6RB#0-1.0971



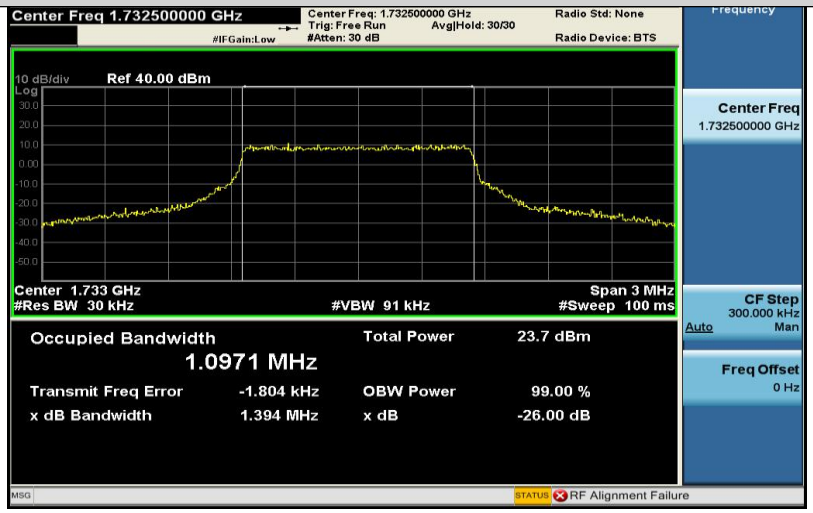
Band4-1.4MHz-QPSK-20393-6RB#0-1.0965



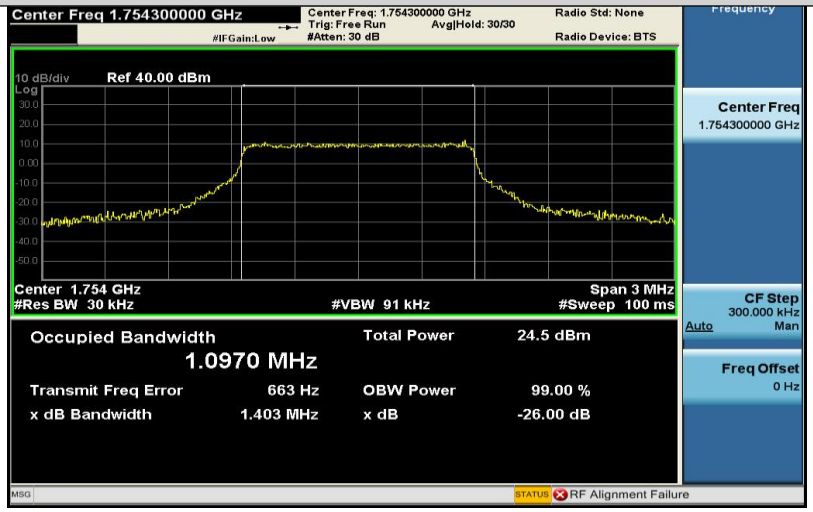
Band4-1.4MHz-16QAM-19957-6RB#0-1.0950



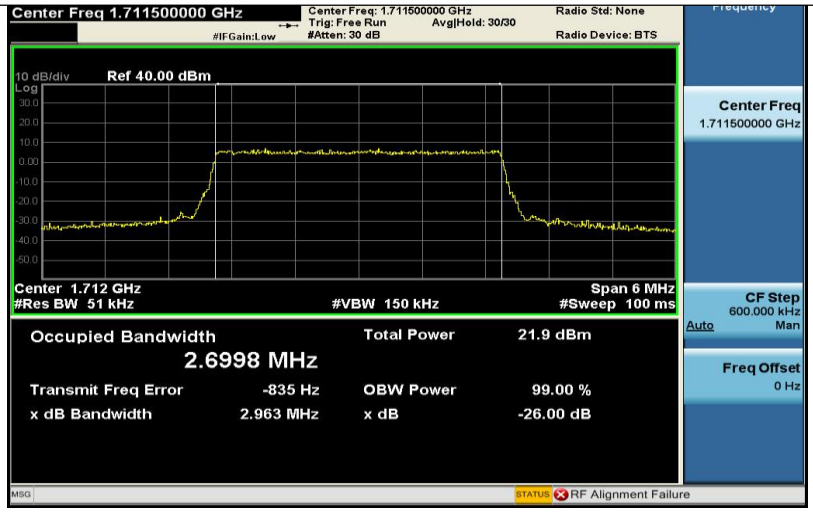
Band4-1.4MHz-16QAM-20175-6RB#0-1.0971



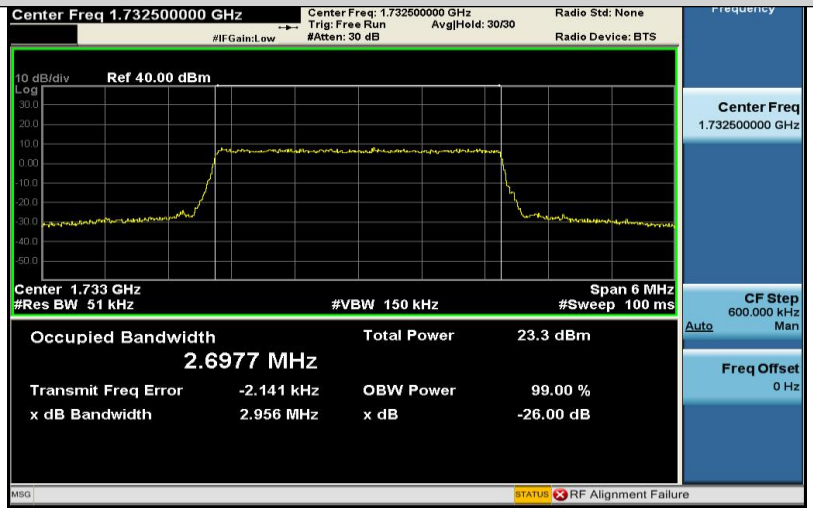
Band4-1.4MHz-16QAM-20393-6RB#0-1.0970



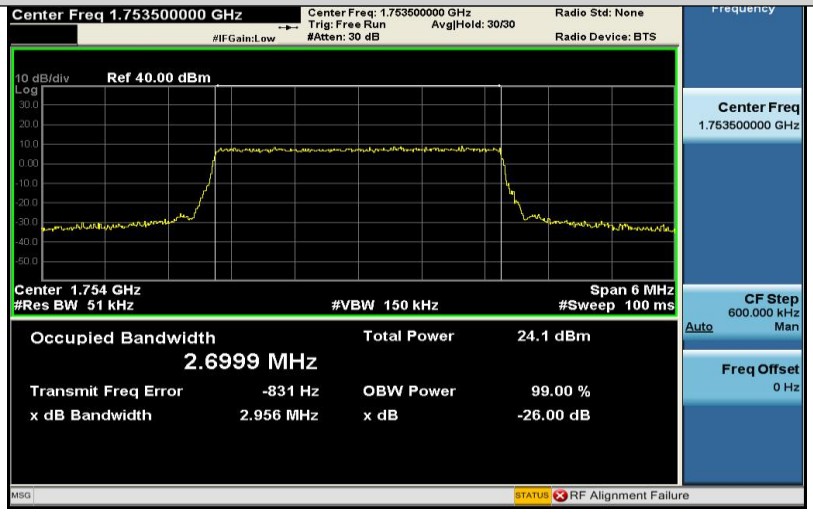
Band4-3MHz-QPSK-19965-15RB#0-2.6998



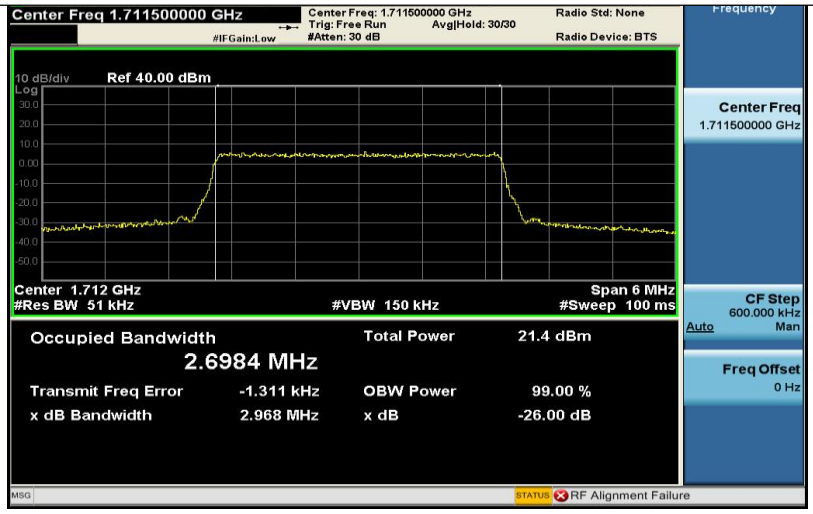
Band4-3MHz-QPSK-20175-15RB#0-2.6977



Band4-3MHz-QPSK-20385-15RB#0-2.6999



Band4-3MHz-16QAM-19965-15RB#0-2.6984



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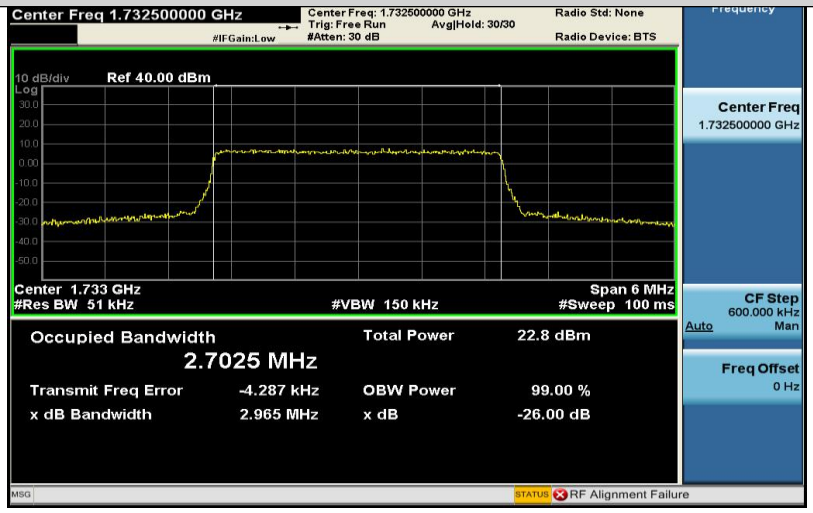
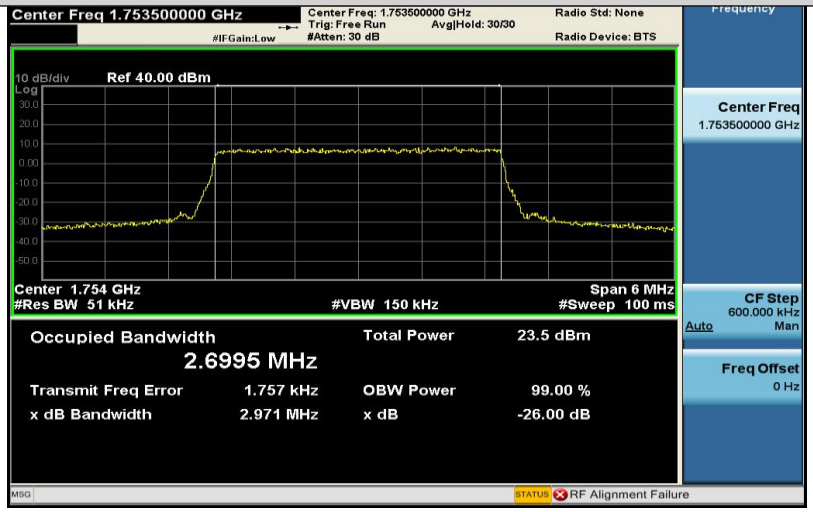
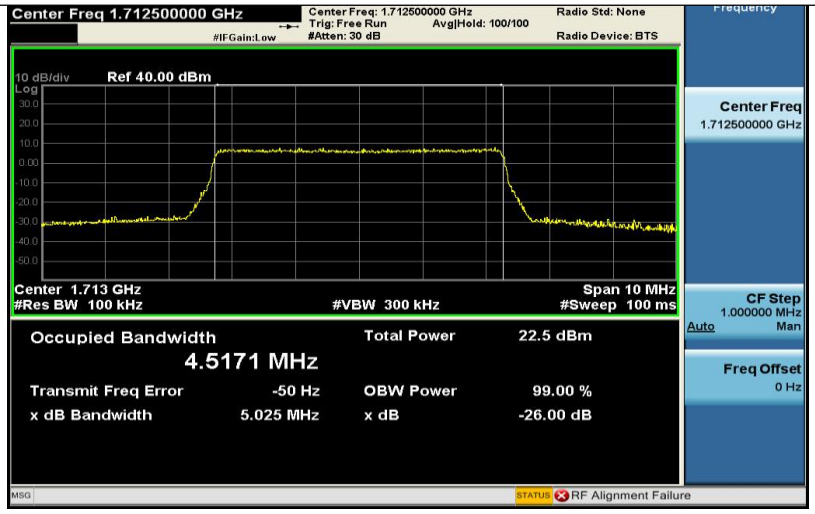


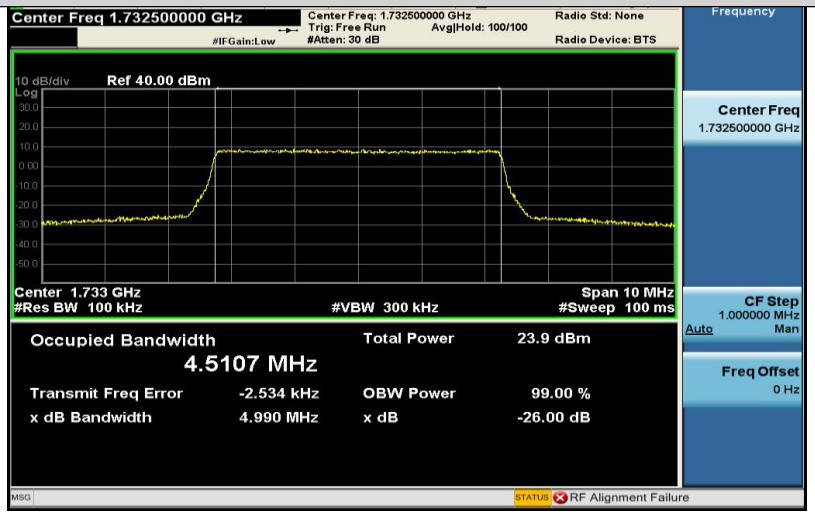
Band4-3MHz-16QAM-20385-15RB#0-2.6995



Band4-5MHz-QPSK-19975-25RB#0-4.5171



Band4-5MHz-QPSK-20175-25RB#0-4.5107



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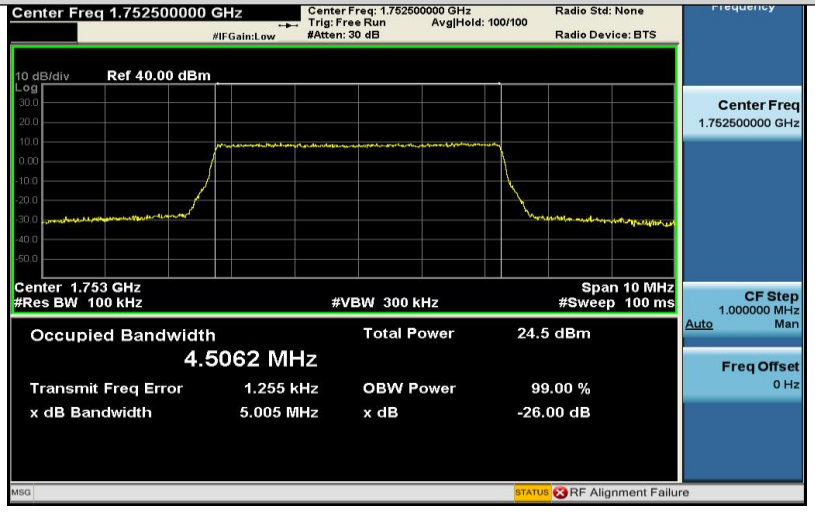

Band4-5MHz-16QAM-19975-25RB#0-4.5183