Wistron Neweb Corporation

TEST REPORT

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Radio Spectrum
TEST REPORT

Applicant:	**Wistron Neweb Corporation** **20 Park Avenue II, Hsinchu Science Park, Hsinchu 308, Taiwan**
Product:	**Module**
Model No.:	**UMC-A18QA-V**
Brand Name:	**WNC**
FCC ID:	**NKRA18QA-V**
Test Method/ Standard:	**47 CFR FCC Part 27,** **47 CFR FCC Part 2,** **ANSI/TIA-603-E-2016** **KDB 971168 D01 Power Meas License Digital Systems v03r01**
Test By:	**Intertek Testing Services Taiwan Ltd.,** **Hsinchu Laboratory** **No. 11, Lane 275, Ko-Nan 1 Street, Chia-Tung Li,** **Shiang-Shan District, Hsinchu City, Taiwan**

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Revision History

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180900019TWN-001	Sep. 21, 2018	Original report

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Summary of Test Data

Test Requirement	Applicable Rule	Limit	Result
Conducted Output Power	2.1046	Reporting Only	Pass
Effective Radiated Power (Band 13)	27.50(b)(10)	ERP < 3 Watts	Pass
Effective Isotropic Radiated Power (Band 4)	27.50(d)(4)	EIRP < 1 Watts	Pass
Frequency Stability	2.1055 27.54	< 2.5 ppm / Within frequency range	Pass
Occupied Bandwidth	2.1049 27.53(h)	Reporting Only	Pass
Peak to average ratio	27.50(d)(5)	< 13 dB	Pass
Band Edge Measurements	2.1049 27.53	< 43+10log10(P[Watts])	Pass
Conducted Spurious Emissions	2.1051 27.53	< 43+10log10(P[Watts])	Pass
Radiated Spurious Emissions	2.1053 27.53	< 43+10log10(P[Watts])	Pass

1. General Information

1.1 Identification of the EUT

Product:	Module	
Model No:	UMC-A18QA-V	
Frequency:	LTE Band 4: 1710.7 MHz ~ 1755 MHz LTE Band 13: 777 MHz ~ 787 MHz	
Bandwidth:	1.4MHz / 3MHz / 5MHz / 10MHz / 15MHz / 20MHz (Band 4) 5MHz / 10MHz (Band 13)	
Maximum Output Power to Antenna:	LTE Band 4 : 0.6966 W LTE Band 13 : 0.326588 W	
Modulation:	LTE Band 4:	QPSK, 16QAM
	LTE Band 13:	QPSK, 16QAM
Rated Power:	DC3.4V-4.2V	
Power Cord:	N/A	
Sample Received:	Sep. 04, 2018	
Sample condition:	Workable	
Test Date(s):	Sep. 04, 2018 ~ Sep. 19, 2018	

1.2 Antenna description

Antenna 0

Antenna Gain : 5.3 dBi(Band 4) / 3 dBi(Band 13)
Antenna Type : PIFA antenna
Connector Type : Pogo Pin

1.3 Operation mode

TX-MODE is based on the “CMW500” and the program can select different frequency and modulation.

The signal is maximized through rotation and placement in the three orthogonal axes.

X axis

Y axis

Z axis

After verifying three axes, we found the maximum electromagnetic field was occurred at Z axis. The final test data was executed under this configuration.

With individual verifying, the maximum output power were found out 51 Mbis/s data rate for LTE mode, the final tests were executed under these conditions recorded in this report individually.

1.4 Applied test modes and channels

Test items	LTE Band	Uplink Range (MHz)	Downlink Range (MHz)	Channel	Antenna
Max. Output Power	4	1710 - 1755	2110 - 2155	Low、Mid.、High	Chain0
	13	777 - 787	746 - 756	Low、Mid.、High	Chain0
Peak-to-Average Ratio	4	1710 - 1755	2110 - 2155	Low、Mid.、High	Chain0
	13	777 - 787	746 - 756	Low、Mid.、High	Chain0
26dB and 99% Bandwidth	4	1710 - 1755	2110 - 2155	Low、Mid.、High	Chain0
	13	777 - 787	746 - 756	Low、Mid.、High	Chain0
Conducted Band Edge	4	1710 - 1755	2110 - 2155	Low、High	Chain0
	13	777 - 787	746 - 756	Low、High	Chain0
Conducted Spurious Emission	4	1710 - 1755	2110 - 2155	Low、Mid.、High	Chain0
	13	777 - 787	746 - 756	Low、Mid.、High	Chain0
Frequency Stability	4	1710 - 1755	2110 - 2155	Low、Mid.、High	Chain0
	13	777 - 787	746 - 756	Low、Mid.、High	Chain0
E.I.R.P / E.R.P	4	1710 - 1755	2110 - 2155	Low、Mid.、High	Chain0
	13	777 - 787	746 - 756	Low、Mid.、High	Chain0
Radiated Spurious Emission	4	1710 - 1755	2110 - 2155	Low、Mid.、High	Chain0
	13	777 - 787	746 - 756	Low、Mid.、High	Chain0

1.5 Peripherals equipment

Peripherals	Brand	Model No.	Serial No.	Data cable
Simulator	R&S	CMW500	12478	N/A
DC Power supply	Twintex	TP-1603C	Power005	N/A

2. Output Power Measurement

2.1 Test conditions

Temperature:	20	℃
Relative Humidity:	55	%
Atmospheric Pressure	1008	hPa

2.2 Limit for output power measurement

Fixed, mobile, and portable (hand-held) stations operating in the 1710–1755 MHz band are limited to 1 watt EIRP.
Portable stations (hand-held devices) operating in the 777-787MHz, 776-793 MHz band are limited to 3 watts ERP.

2.3 Test procedure

2.3.1 Conducted power measurement

1. The EUT was established communication with base station simulator and set up to transmit the maximum power.
2. Set the EUT to transmit at low, middle and high channel and record the power level on the base station simulator.

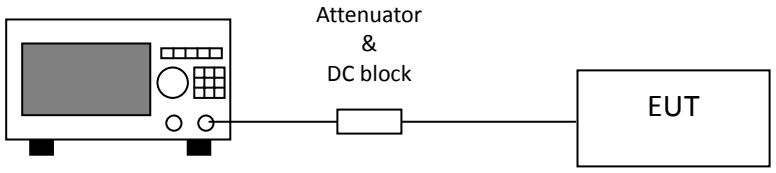
3,According to KDB 412172 D01 Power Approach

ERP/EIRP = $P_T + G_T – L_C$, ERP= EIRP-2.15 ,
where;

P_T=transmitter output power, in dBW, dBm
G_T= gain of the transmitting antenna, in dBi
L_C= signal attenuation in the connecting cable between the transmitter and antenna,in dB.

2.4 Test diagram

2.4.1 Conducted test setup



Base station simulator

2.5 Test results

2.5.1 Conducted output power

Operating Band	Bandwidth (MHz)	Frequency Range	Frequency (MHz)	Modulation method	RB (FDD)	Offset RB	Max. Average Power (dBm)
LTE Band 4	1.4MHz	Low Range	1710.7	QPSK	1	0	22.47
		Low Range	1710.7	QPSK	1	3	22.56
		Low Range	1710.7	QPSK	1	5	22.35
		Low Range	1710.7	QPSK	3	0	22.64
		Low Range	1710.7	QPSK	3	1	22.68
		Low Range	1710.7	QPSK	3	3	22.53
		Low Range	1710.7	QPSK	6	0	21.58
		Mid Range	1732.5	QPSK	1	0	22.61
		Mid Range	1732.5	QPSK	1	3	22.88
		Mid Range	1732.5	QPSK	1	5	22.78
		Mid Range	1732.5	QPSK	3	0	22.54
		Mid Range	1732.5	QPSK	3	1	22.66
		Mid Range	1732.5	QPSK	3	3	22.49
		Mid Range	1732.5	QPSK	6	0	21.47
		High Range	1754.3	QPSK	1	0	22.15
		High Range	1754.3	QPSK	1	3	22.34
		High Range	1754.3	QPSK	1	5	22.78
		High Range	1754.3	QPSK	3	0	22.36
		High Range	1754.3	QPSK	3	1	22.39
		High Range	1754.3	QPSK	3	3	22.46
		High Range	1754.3	QPSK	6	0	21.43
	3MHz	Low Range	1711.5	QPSK	1	0	22.69
		Low Range	1711.5	QPSK	1	8	22.53
		Low Range	1711.5	QPSK	1	14	22.49
		Low Range	1711.5	QPSK	8	0	21.66
		Low Range	1711.5	QPSK	8	4	21.6
		Low Range	1711.5	QPSK	8	7	21.54
		Low Range	1711.5	QPSK	15	0	21.62
		Mid Range	1732.5	QPSK	1	0	22.57
		Mid Range	1732.5	QPSK	1	8	22.43
		Mid Range	1732.5	QPSK	1	14	22.48
		Mid Range	1732.5	QPSK	8	0	21.6
		Mid Range	1732.5	QPSK	8	4	21.6
		Mid Range	1732.5	QPSK	8	7	21.57
		Mid Range	1732.5	QPSK	15	0	21.55
		High Range	1753.5	QPSK	1	0	22.31
		High Range	1753.5	QPSK	1	8	22.32
		High Range	1753.5	QPSK	1	14	22.52
		High Range	1753.5	QPSK	8	0	21.37
		High Range	1753.5	QPSK	8	4	21.43
		High Range	1753.5	QPSK	8	7	21.52
		High Range	1753.5	QPSK	15	0	21.4

Operating Band	Bandwidth (MHz)	Frequency Range	Frequency (MHz)	Modulation method	RB (FDD)	Offset RB	Max. Average Power (dBm)
LTE Band 4	5MHz	Low Range	1712.5	QPSK	1	0	22.5
		Low Range	1712.5	QPSK	1	13	22.43
		Low Range	1712.5	QPSK	1	24	22.4
		Low Range	1712.5	QPSK	12	0	21.67
		Low Range	1712.5	QPSK	12	7	21.55
		Low Range	1712.5	QPSK	12	13	21.51
		Low Range	1712.5	QPSK	25	0	21.47
		Mid Range	1732.5	QPSK	1	0	22.33
		Mid Range	1732.5	QPSK	1	13	22.43
		Mid Range	1732.5	QPSK	1	24	22.5
		Mid Range	1732.5	QPSK	12	0	21.48
		Mid Range	1732.5	QPSK	12	7	21.58
		Mid Range	1732.5	QPSK	12	13	21.65
		Mid Range	1732.5	QPSK	25	0	21.63
		High Range	1752.5	QPSK	1	0	22.47
		High Range	1752.5	QPSK	1	13	22.56
		High Range	1752.5	QPSK	1	24	22.6
		High Range	1752.5	QPSK	12	0	21.41
		High Range	1752.5	QPSK	12	7	21.53
		High Range	1752.5	QPSK	12	13	21.6
		High Range	1752.5	QPSK	25	0	21.5
	10MHz	Low Range	1715	QPSK	1	0	22.43
		Low Range	1715	QPSK	1	25	22.56
		Low Range	1715	QPSK	1	49	22.51
		Low Range	1715	QPSK	25	0	21.48
		Low Range	1715	QPSK	25	12	21.59
		Low Range	1715	QPSK	25	25	21.51
		Low Range	1715	QPSK	50	0	21.41
		Mid Range	1732.5	QPSK	1	0	22.54
		Mid Range	1732.5	QPSK	1	25	22.59
		Mid Range	1732.5	QPSK	1	49	22.45
		Mid Range	1732.5	QPSK	25	0	21.56
		Mid Range	1732.5	QPSK	25	12	21.62
		Mid Range	1732.5	QPSK	25	25	21.61
		Mid Range	1732.5	QPSK	50	0	21.55
		High Range	1750	QPSK	1	0	22.61
		High Range	1750	QPSK	1	25	22.54
		High Range	1750	QPSK	1	49	22.57
		High Range	1750	QPSK	25	0	21.57
		High Range	1750	QPSK	25	12	21.43
		High Range	1750	QPSK	25	25	21.47
		High Range	1750	QPSK	50	0	21.5

Operating Band	Bandwidth (MHz)	Frequency Range	Frequency (MHz)	Modulation method	RB (FDD)	Offset RB	Max. Average Power (dBm)
LTE Band 4	15MHz	Low Range	1717.5	QPSK	1	0	22.26
		Low Range	1717.5	QPSK	1	38	22.52
		Low Range	1717.5	QPSK	1	74	22.45
		Low Range	1717.5	QPSK	36	0	21.43
		Low Range	1717.5	QPSK	36	20	21.6
		Low Range	1717.5	QPSK	36	39	21.56
		Low Range	1717.5	QPSK	75	0	21.5
		Mid Range	1732.5	QPSK	1	0	22.56
		Mid Range	1732.5	QPSK	1	38	22.43
		Mid Range	1732.5	QPSK	1	74	22.49
		Mid Range	1732.5	QPSK	36	0	21.58
		Mid Range	1732.5	QPSK	36	20	21.59
		Mid Range	1732.5	QPSK	36	39	21.65
		Mid Range	1732.5	QPSK	75	0	21.52
		High Range	1747.5	QPSK	1	0	22.6
		High Range	1747.5	QPSK	1	37	22.49
		High Range	1747.5	QPSK	1	74	22.33
		High Range	1747.5	QPSK	36	0	21.57
		High Range	1747.5	QPSK	36	20	21.54
		High Range	1747.5	QPSK	36	39	21.51
		High Range	1747.5	QPSK	75	0	21.46
	20MHz	Low Range	1720	QPSK	1	0	22.31
		Low Range	1720	QPSK	1	50	22.62
		Low Range	1720	QPSK	1	99	22.68
		Low Range	1720	QPSK	50	0	21.42
		Low Range	1720	QPSK	50	24	21.61
		Low Range	1720	QPSK	50	50	21.58
		Low Range	1720	QPSK	100	0	21.48
		Mid Range	1732.5	QPSK	1	0	22.35
		Mid Range	1732.5	QPSK	1	50	22.58
		Mid Range	1732.5	QPSK	1	99	22.27
		Mid Range	1732.5	QPSK	50	0	21.4
		Mid Range	1732.5	QPSK	50	24	21.33
		Mid Range	1732.5	QPSK	50	50	21.47
		Mid Range	1732.5	QPSK	100	0	21.53
		High Range	1745	QPSK	1	0	22.93
		High Range	1745	QPSK	1	50	22.65
		High Range	1745	QPSK	1	99	22.38
		High Range	1745	QPSK	50	0	21.7
		High Range	1745	QPSK	50	24	21.66
		High Range	1745	QPSK	50	50	21.55
		High Range	1745	QPSK	100	0	21.55

Operating Band	Bandwidth (MHz)	Frequency Range	Frequency (MHz)	Modulation method	RB (FDD)	Offset RB	Max. Average Power (dBm)
LTE Band 13	5MHz	Low Range	779.5	QPSK	1	0	23.88
		Low Range	779.5	QPSK	1	13	23.92
		Low Range	779.5	QPSK	1	24	23.64
		Low Range	779.5	QPSK	12	0	22.86
		Low Range	779.5	QPSK	12	7	22.94
		Low Range	779.5	QPSK	12	13	22.82
		Low Range	779.5	QPSK	25	0	22.92
		Mid Range	782	QPSK	1	0	23.86
		Mid Range	782	QPSK	1	13	23.85
		Mid Range	782	QPSK	1	24	23.72
		Mid Range	782	QPSK	12	0	22.99
		Mid Range	782	QPSK	12	7	22.96
		Mid Range	782	QPSK	12	13	22.92
		Mid Range	782	QPSK	25	0	22.9
		High Range	784.5	QPSK	1	0	23.75
		High Range	784.5	QPSK	1	13	23.84
		High Range	784.5	QPSK	1	24	23.82
		High Range	784.5	QPSK	12	0	22.8
		High Range	784.5	QPSK	12	7	22.92
		High Range	784.5	QPSK	12	13	22.89
		High Range	784.5	QPSK	25	0	22.76
	10MHz	L/M/H Range	782	QPSK	1	0	23.75
		L/M/H Range	782	QPSK	1	25	23.86
		L/M/H Range	782	QPSK	1	49	24.29
		L/M/H Range	782	QPSK	25	0	22.92
		L/M/H Range	782	QPSK	25	12	22.95
		L/M/H Range	782	QPSK	25	25	22.91
		L/M/H Range	782	QPSK	50	0	22.95

Operating Band	Bandwidth (MHz)	Frequency Range	Frequency (MHz)	Modulation method	RB(FDD)	Offset RB	Max. Average Power (dBm)
LTE Band 4	1.4MHz	Low Range	1710.7	16-QAM	1	0	21.43
		Low Range	1710.7	16-QAM	1	3	21.54
		Low Range	1710.7	16-QAM	1	5	21.6
		Low Range	1710.7	16-QAM	3	0	21.62
		Low Range	1710.7	16-QAM	3	1	21.73
		Low Range	1710.7	16-QAM	3	3	21.78
		Low Range	1710.7	16-QAM	6	0	20.73
		Mid Range	1732.5	16-QAM	1	0	21.82
		Mid Range	1732.5	16-QAM	1	3	21.89
		Mid Range	1732.5	16-QAM	1	5	21.69
		Mid Range	1732.5	16-QAM	3	0	21.63
		Mid Range	1732.5	16-QAM	3	1	21.7
		Mid Range	1732.5	16-QAM	3	3	21.72
		Mid Range	1732.5	16-QAM	6	0	20.63
		High Range	1754.3	16-QAM	1	0	22.34
		High Range	1754.3	16-QAM	1	3	22.36
		High Range	1754.3	16-QAM	1	5	22.55
		High Range	1754.3	16-QAM	3	0	21.86
		High Range	1754.3	16-QAM	3	1	21.98
		High Range	1754.3	16-QAM	3	3	21.9
		High Range	1754.3	16-QAM	6	0	20.42
	3MHz	Low Range	1711.5	16-QAM	1	0	21.33
		Low Range	1711.5	16-QAM	1	8	21.24
		Low Range	1711.5	16-QAM	1	14	21.54
		Low Range	1711.5	16-QAM	8	0	20.81
		Low Range	1711.5	16-QAM	8	4	20.71
		Low Range	1711.5	16-QAM	8	7	20.53
		Low Range	1711.5	16-QAM	15	0	20.73
		Mid Range	1732.5	16-QAM	1	0	21.79
		Mid Range	1732.5	16-QAM	1	8	21.77
		Mid Range	1732.5	16-QAM	1	14	21.84
		Mid Range	1732.5	16-QAM	8	0	20.76
		Mid Range	1732.5	16-QAM	8	4	20.83
		Mid Range	1732.5	16-QAM	8	7	20.73
		Mid Range	1732.5	16-QAM	15	0	20.58
		High Range	1753.5	16-QAM	1	0	21.73
		High Range	1753.5	16-QAM	1	8	22.03
		High Range	1753.5	16-QAM	1	14	22.22
		High Range	1753.5	16-QAM	8	0	20.8
		High Range	1753.5	16-QAM	8	4	20.88
		High Range	1753.5	16-QAM	8	7	20.9
		High Range	1753.5	16-QAM	15	0	20.57

Operating Band	Bandwidth (MHz)	Frequency Range	Frequency (MHz)	Modulation method	RB(FDD)	Offset RB	Max. Average Power (dBm)
LTE Band 4	5MHz	Low Range	1712.5	16-QAM	1	0	21.51
		Low Range	1712.5	16-QAM	1	13	21.5
		Low Range	1712.5	16-QAM	1	24	21.36
		Low Range	1712.5	16-QAM	12	0	20.63
		Low Range	1712.5	16-QAM	12	7	20.65
		Low Range	1712.5	16-QAM	12	13	20.57
		Low Range	1712.5	16-QAM	25	0	20.65
		Mid Range	1732.5	16-QAM	1	0	20.9
		Mid Range	1732.5	16-QAM	1	13	21.02
		Mid Range	1732.5	16-QAM	1	24	21
		Mid Range	1732.5	16-QAM	12	0	20.46
		Mid Range	1732.5	16-QAM	12	7	20.61
		Mid Range	1732.5	16-QAM	12	13	20.58
		Mid Range	1732.5	16-QAM	25	0	20.85
		High Range	1752.5	16-QAM	1	0	21.9
		High Range	1752.5	16-QAM	1	13	21.95
		High Range	1752.5	16-QAM	1	24	22.03
		High Range	1752.5	16-QAM	12	0	20.46
		High Range	1752.5	16-QAM	12	7	20.49
		High Range	1752.5	16-QAM	12	13	20.52
		High Range	1752.5	16-QAM	25	0	20.65
	10MHz	Low Range	1715	16-QAM	1	0	21.18
		Low Range	1715	16-QAM	1	25	21.3
		Low Range	1715	16-QAM	1	49	21.27
		Low Range	1715	16-QAM	25	0	20.73
		Low Range	1715	16-QAM	25	12	20.88
		Low Range	1715	16-QAM	25	25	20.76
		Low Range	1715	16-QAM	50	0	20.6
		Mid Range	1732.5	16-QAM	1	0	22.04
		Mid Range	1732.5	16-QAM	1	25	22.67
		Mid Range	1732.5	16-QAM	1	49	21.85
		Mid Range	1732.5	16-QAM	25	0	20.73
		Mid Range	1732.5	16-QAM	25	12	20.91
		Mid Range	1732.5	16-QAM	25	25	20.77
		Mid Range	1732.5	16-QAM	50	0	20.67
		High Range	1750	16-QAM	1	0	21.95
		High Range	1750	16-QAM	1	25	22.36
		High Range	1750	16-QAM	1	49	21.94
		High Range	1750	16-QAM	25	0	20.66
		High Range	1750	16-QAM	25	12	21.12
		High Range	1750	16-QAM	25	25	20.67
		High Range	1750	16-QAM	50	0	20.69

Operating Band	Bandwidth (MHz)	Frequency Range	Frequency (MHz)	Modulation method	RB(FDD)	Offset RB	Max. Average Power (dBm)
LTE Band 4	15MHz	Low Range	1717.5	16-QAM	1	0	21.09
		Low Range	1717.5	16-QAM	1	38	21.63
		Low Range	1717.5	16-QAM	1	74	21.75
		Low Range	1717.5	16-QAM	36	0	20.41
		Low Range	1717.5	16-QAM	36	20	20.76
		Low Range	1717.5	16-QAM	36	39	20.55
		Low Range	1717.5	16-QAM	75	0	20.58
		Mid Range	1732.5	16-QAM	1	0	21.92
		Mid Range	1732.5	16-QAM	1	38	22.71
		Mid Range	1732.5	16-QAM	1	74	22.02
		Mid Range	1732.5	16-QAM	36	0	20.48
		Mid Range	1732.5	16-QAM	36	20	21.12
		Mid Range	1732.5	16-QAM	36	39	20.59
		Mid Range	1732.5	16-QAM	75	0	20.58
		High Range	1747.5	16-QAM	1	0	22.16
		High Range	1747.5	16-QAM	1	37	21.75
		High Range	1747.5	16-QAM	1	74	22.02
		High Range	1747.5	16-QAM	36	0	20.91
		High Range	1747.5	16-QAM	36	20	20.74
		High Range	1747.5	16-QAM	36	39	20.56
		High Range	1747.5	16-QAM	75	0	20.67
	20MHz	Low Range	1720	16-QAM	1	0	22.03
		Low Range	1720	16-QAM	1	50	22.32
		Low Range	1720	16-QAM	1	99	22.31
		Low Range	1720	16-QAM	50	0	20.49
		Low Range	1720	16-QAM	50	24	20.71
		Low Range	1720	16-QAM	50	50	20.6
		Low Range	1720	16-QAM	100	0	20.67
		Mid Range	1732.5	16-QAM	1	0	22.08
		Mid Range	1732.5	16-QAM	1	50	22.33
		Mid Range	1732.5	16-QAM	1	99	22.24
		Mid Range	1732.5	16-QAM	50	0	20.64
		Mid Range	1732.5	16-QAM	50	24	20.91
		Mid Range	1732.5	16-QAM	50	50	20.7
		Mid Range	1732.5	16-QAM	100	0	20.58
		High Range	1745	16-QAM	1	0	21.82
		High Range	1745	16-QAM	1	50	21.78
		High Range	1745	16-QAM	1	99	20.93
		High Range	1745	16-QAM	50	0	20.77
		High Range	1745	16-QAM	50	24	20.69
		High Range	1745	16-QAM	50	50	20.57
		High Range	1745	16-QAM	100	0	20.68

Operating Band	Bandwidth (MHz)	Frequency Range	Frequency (MHz)	Modulation method	RB(FDD)	Offset RB	Max. Average Power (dBm)
LTE Band 13	5MHz	Low Range	779.5	16-QAM	1	0	22.5
		Low Range	779.5	16-QAM	1	13	22.62
		Low Range	779.5	16-QAM	1	24	22.56
		Low Range	779.5	16-QAM	12	0	21.97
		Low Range	779.5	16-QAM	12	7	22.01
		Low Range	779.5	16-QAM	12	13	21.87
		Low Range	779.5	16-QAM	25	0	21.88
		Mid Range	782	16-QAM	1	0	22.44
		Mid Range	782	16-QAM	1	13	22.2
		Mid Range	782	16-QAM	1	24	22.07
		Mid Range	782	16-QAM	12	0	21.95
		Mid Range	782	16-QAM	12	7	21.99
		Mid Range	782	16-QAM	12	13	21.94
		Mid Range	782	16-QAM	25	0	22.1
		High Range	784.5	16-QAM	1	0	23.12
		High Range	784.5	16-QAM	1	13	23.24
		High Range	784.5	16-QAM	1	24	23.33
		High Range	784.5	16-QAM	12	0	21.72
		High Range	784.5	16-QAM	12	7	21.78
		High Range	784.5	16-QAM	12	13	21.83
		High Range	784.5	16-QAM	25	0	21.79
	10MHz	L/M/H Range	782	16-QAM	1	0	22.69
		L/M/H Range	782	16-QAM	1	25	23.27
		L/M/H Range	782	16-QAM	1	49	23.07
		L/M/H Range	782	16-QAM	25	0	21.93
		L/M/H Range	782	16-QAM	25	12	22.03
		L/M/H Range	782	16-QAM	25	25	21.92
		L/M/H Range	782	16-QAM	50	0	21.89

2.5.2 Radiated output power

Operating Band	Bandwidth (MHz)	Frequency Range	Frequency (MHz)	Modulation method	RB (FDD)	Offset RB	ERP/EIRP W(Watt)	Limit W(Watt)
LTE Band 4	1.4MHz	Low Range	1710.7	QPSK	1	0	0.6266	1
		Low Range	1710.7	QPSK	1	3	0.6397	1
		Low Range	1710.7	QPSK	1	5	0.6095	1
		Low Range	1710.7	QPSK	3	0	0.6516	1
		Low Range	1710.7	QPSK	3	1	0.6577	1
		Low Range	1710.7	QPSK	3	3	0.6353	1
		Low Range	1710.7	QPSK	6	0	0.5105	1
		Mid Range	1732.5	QPSK	1	0	0.6471	1
		Mid Range	1732.5	QPSK	1	3	0.6887	1
		Mid Range	1732.5	QPSK	1	5	0.6730	1
		Mid Range	1732.5	QPSK	3	0	0.6368	1
		Mid Range	1732.5	QPSK	3	1	0.6546	1
		Mid Range	1732.5	QPSK	3	3	0.6295	1
		Mid Range	1732.5	QPSK	6	0	0.4977	1
		High Range	1754.3	QPSK	1	0	0.5821	1
		High Range	1754.3	QPSK	1	3	0.6081	1
		High Range	1754.3	QPSK	1	5	0.6730	1
		High Range	1754.3	QPSK	3	0	0.6109	1
		High Range	1754.3	QPSK	3	1	0.6152	1
		High Range	1754.3	QPSK	3	3	0.6252	1
		High Range	1754.3	QPSK	6	0	0.4932	1
	3MHz	Low Range	1711.5	QPSK	1	0	0.6592	1
		Low Range	1711.5	QPSK	1	8	0.6353	1
		Low Range	1711.5	QPSK	1	14	0.6295	1
		Low Range	1711.5	QPSK	8	0	0.5200	1
		Low Range	1711.5	QPSK	8	4	0.5129	1
		Low Range	1711.5	QPSK	8	7	0.5058	1
		Low Range	1711.5	QPSK	15	0	0.5152	1
		Mid Range	1732.5	QPSK	1	0	0.6412	1
		Mid Range	1732.5	QPSK	1	8	0.6209	1
		Mid Range	1732.5	QPSK	1	14	0.6281	1
		Mid Range	1732.5	QPSK	8	0	0.5129	1
		Mid Range	1732.5	QPSK	8	4	0.5129	1
		Mid Range	1732.5	QPSK	8	7	0.5093	1
		Mid Range	1732.5	QPSK	15	0	0.5070	1
		High Range	1753.5	QPSK	1	0	0.6039	1
		High Range	1753.5	QPSK	1	8	0.6053	1
		High Range	1753.5	QPSK	1	14	0.6339	1
		High Range	1753.5	QPSK	8	0	0.4864	1
		High Range	1753.5	QPSK	8	4	0.4932	1
		High Range	1753.5	QPSK	8	7	0.5035	1
		High Range	1753.5	QPSK	15	0	0.4898	1

Operating Band	Bandwidth (MHz)	Frequency Range	Frequency (MHz)	Modulation method	RB (FDD)	Offset RB	ERP/EIRP W(Watt)	Limit W(Watt)
LTE Band 4	5MHz	Low Range	1712.5	QPSK	1	0	0.6310	1
		Low Range	1712.5	QPSK	1	13	0.6209	1
		Low Range	1712.5	QPSK	1	24	0.6166	1
		Low Range	1712.5	QPSK	12	0	0.5212	1
		Low Range	1712.5	QPSK	12	7	0.5070	1
		Low Range	1712.5	QPSK	12	13	0.5023	1
		Low Range	1712.5	QPSK	25	0	0.4977	1
		Mid Range	1732.5	QPSK	1	0	0.6067	1
		Mid Range	1732.5	QPSK	1	13	0.6209	1
		Mid Range	1732.5	QPSK	1	24	0.6310	1
		Mid Range	1732.5	QPSK	12	0	0.4989	1
		Mid Range	1732.5	QPSK	12	7	0.5105	1
		Mid Range	1732.5	QPSK	12	13	0.5188	1
		Mid Range	1732.5	QPSK	25	0	0.5164	1
		High Range	1752.5	QPSK	1	0	0.6266	1
		High Range	1752.5	QPSK	1	13	0.6397	1
		High Range	1752.5	QPSK	1	24	0.6457	1
		High Range	1752.5	QPSK	12	0	0.4909	1
		High Range	1752.5	QPSK	12	7	0.5047	1
		High Range	1752.5	QPSK	12	13	0.5129	1
		High Range	1752.5	QPSK	25	0	0.5012	1
	10MHz	Low Range	1715	QPSK	1	0	0.6209	1
		Low Range	1715	QPSK	1	25	0.6397	1
		Low Range	1715	QPSK	1	49	0.6324	1
		Low Range	1715	QPSK	25	0	0.4989	1
		Low Range	1715	QPSK	25	12	0.5117	1
		Low Range	1715	QPSK	25	25	0.5023	1
		Low Range	1715	QPSK	50	0	0.4909	1
		Mid Range	1732.5	QPSK	1	0	0.6368	1
		Mid Range	1732.5	QPSK	1	25	0.6442	1
		Mid Range	1732.5	QPSK	1	49	0.6237	1
		Mid Range	1732.5	QPSK	25	0	0.5082	1
		Mid Range	1732.5	QPSK	25	12	0.5152	1
		Mid Range	1732.5	QPSK	25	25	0.5140	1
		Mid Range	1732.5	QPSK	50	0	0.5070	1
		High Range	1750	QPSK	1	0	0.6471	1
		High Range	1750	QPSK	1	25	0.6368	1
		High Range	1750	QPSK	1	49	0.6412	1
		High Range	1750	QPSK	25	0	0.5093	1
		High Range	1750	QPSK	25	12	0.4932	1
		High Range	1750	QPSK	25	25	0.4977	1
		High Range	1750	QPSK	50	0	0.5012	1

Operating Band	Bandwidth (MHz)	Frequency Range	Frequency (MHz)	Modulation method	RB (FDD)	Offset RB	ERP/EIRP W(Watt)	Limit W(Watt)
LTE Band 4	15MHz	Low Range	1717.5	QPSK	1	0	0.5970	1
		Low Range	1717.5	QPSK	1	38	0.6339	1
		Low Range	1717.5	QPSK	1	74	0.6237	1
		Low Range	1717.5	QPSK	36	0	0.4932	1
		Low Range	1717.5	QPSK	36	20	0.5129	1
		Low Range	1717.5	QPSK	36	39	0.5082	1
		Low Range	1717.5	QPSK	75	0	0.5012	1
		Mid Range	1732.5	QPSK	1	0	0.6397	1
		Mid Range	1732.5	QPSK	1	38	0.6209	1
		Mid Range	1732.5	QPSK	1	74	0.6295	1
		Mid Range	1732.5	QPSK	36	0	0.5105	1
		Mid Range	1732.5	QPSK	36	20	0.5117	1
		Mid Range	1732.5	QPSK	36	39	0.5188	1
		Mid Range	1732.5	QPSK	75	0	0.5035	1
		High Range	1747.5	QPSK	1	0	0.6457	1
		High Range	1747.5	QPSK	1	37	0.6295	1
		High Range	1747.5	QPSK	1	74	0.6067	1
		High Range	1747.5	QPSK	36	0	0.5093	1
		High Range	1747.5	QPSK	36	20	0.5058	1
		High Range	1747.5	QPSK	36	39	0.5023	1
		High Range	1747.5	QPSK	75	0	0.4966	1
	20MHz	Low Range	1720	QPSK	1	0	0.6039	1
		Low Range	1720	QPSK	1	50	0.6486	1
		Low Range	1720	QPSK	1	99	0.6577	1
		Low Range	1720	QPSK	50	0	0.4920	1
		Low Range	1720	QPSK	50	24	0.5140	1
		Low Range	1720	QPSK	50	50	0.5105	1
		Low Range	1720	QPSK	100	0	0.4989	1
		Mid Range	1732.5	QPSK	1	0	0.6095	1
		Mid Range	1732.5	QPSK	1	50	0.6427	1
		Mid Range	1732.5	QPSK	1	99	0.5984	1
		Mid Range	1732.5	QPSK	50	0	0.4898	1
		Mid Range	1732.5	QPSK	50	24	0.4819	1
		Mid Range	1732.5	QPSK	50	50	0.4977	1
		Mid Range	1732.5	QPSK	100	0	0.5047	1
		High Range	1745	QPSK	1	0	0.6966	1
		High Range	1745	QPSK	1	50	0.6531	1
		High Range	1745	QPSK	1	99	0.6138	1
		High Range	1745	QPSK	50	0	0.5248	1
		High Range	1745	QPSK	50	24	0.5200	1
		High Range	1745	QPSK	50	50	0.5070	1
		High Range	1745	QPSK	100	0	0.5070	1

Operating Band	Bandwidth (MHz)	Frequency Range	Frequency (MHz)	Modulation method	RB (FDD)	Offset RB	ERP/EIRP W(Watt)	Limit W(Watt)
LTE Band 13	5MHz	Low Range	779.5	QPSK	1	0	0.2972	3
		Low Range	779.5	QPSK	1	13	0.2999	3
		Low Range	779.5	QPSK	1	24	0.2812	3
		Low Range	779.5	QPSK	12	0	0.2350	3
		Low Range	779.5	QPSK	12	7	0.2393	3
		Low Range	779.5	QPSK	12	13	0.2328	3
		Low Range	779.5	QPSK	25	0	0.2382	3
		Mid Range	782	QPSK	1	0	0.2958	3
		Mid Range	782	QPSK	1	13	0.2951	3
		Mid Range	782	QPSK	1	24	0.2864	3
		Mid Range	782	QPSK	12	0	0.2421	3
		Mid Range	782	QPSK	12	7	0.2404	3
		Mid Range	782	QPSK	12	13	0.2382	3
		Mid Range	782	QPSK	25	0	0.2371	3
		High Range	784.5	QPSK	1	0	0.2884	3
		High Range	784.5	QPSK	1	13	0.2944	3
		High Range	784.5	QPSK	1	24	0.2931	3
		High Range	784.5	QPSK	12	0	0.2317	3
		High Range	784.5	QPSK	12	7	0.2382	3
		High Range	784.5	QPSK	12	13	0.2366	3
		High Range	784.5	QPSK	25	0	0.2296	3
	10MHz	L/M/H Range	782	QPSK	1	0	0.2884	3
		L/M/H Range	782	QPSK	1	25	0.2958	3
		L/M/H Range	782	QPSK	1	49	0.3266	3
		L/M/H Range	782	QPSK	25	0	0.2382	3
		L/M/H Range	782	QPSK	25	12	0.2399	3
		L/M/H Range	782	QPSK	25	25	0.2377	3
		L/M/H Range	782	QPSK	50	0	0.2399	3

Operating Band	Bandwidth (MHz)	Frequency Range	Frequency (MHz)	Modulation method	RB (FDD)	Offset RB	ERP/EIRP W(Watt)	Limit W(Watt)
LTE Band 4	1.4MHz	Low Range	1710.7	16-QAM	1	0	0.4932	1
		Low Range	1710.7	16-QAM	1	3	0.5058	1
		Low Range	1710.7	16-QAM	1	5	0.5129	1
		Low Range	1710.7	16-QAM	3	0	0.5152	1
		Low Range	1710.7	16-QAM	3	1	0.5284	1
		Low Range	1710.7	16-QAM	3	3	0.5346	1
		Low Range	1710.7	16-QAM	6	0	0.4198	1
		Mid Range	1732.5	16-QAM	1	0	0.5395	1
		Mid Range	1732.5	16-QAM	1	3	0.5483	1
		Mid Range	1732.5	16-QAM	1	5	0.5236	1
		Mid Range	1732.5	16-QAM	3	0	0.5164	1
		Mid Range	1732.5	16-QAM	3	1	0.5248	1
		Mid Range	1732.5	16-QAM	3	3	0.5272	1
		Mid Range	1732.5	16-QAM	6	0	0.4102	1
		High Range	1754.3	16-QAM	1	0	0.6081	1
		High Range	1754.3	16-QAM	1	3	0.6109	1
		High Range	1754.3	16-QAM	1	5	0.6383	1
		High Range	1754.3	16-QAM	3	0	0.5445	1
		High Range	1754.3	16-QAM	3	1	0.5598	1
		High Range	1754.3	16-QAM	3	3	0.5495	1
		High Range	1754.3	16-QAM	6	0	0.3908	1
	3MHz	Low Range	1711.5	16-QAM	1	0	0.4819	1
		Low Range	1711.5	16-QAM	1	8	0.4721	1
		Low Range	1711.5	16-QAM	1	14	0.5058	1
		Low Range	1711.5	16-QAM	8	0	0.4276	1
		Low Range	1711.5	16-QAM	8	4	0.4178	1
		Low Range	1711.5	16-QAM	8	7	0.4009	1
		Low Range	1711.5	16-QAM	15	0	0.4198	1
		Mid Range	1732.5	16-QAM	1	0	0.5358	1
		Mid Range	1732.5	16-QAM	1	8	0.5333	1
		Mid Range	1732.5	16-QAM	1	14	0.5420	1
		Mid Range	1732.5	16-QAM	8	0	0.4227	1
		Mid Range	1732.5	16-QAM	8	4	0.4295	1
		Mid Range	1732.5	16-QAM	8	7	0.4198	1
		Mid Range	1732.5	16-QAM	15	0	0.4055	1
		High Range	1753.5	16-QAM	1	0	0.5284	1
		High Range	1753.5	16-QAM	1	8	0.5662	1
		High Range	1753.5	16-QAM	1	14	0.5916	1
		High Range	1753.5	16-QAM	8	0	0.4266	1
		High Range	1753.5	16-QAM	8	4	0.4345	1
		High Range	1753.5	16-QAM	8	7	0.4365	1
		High Range	1753.5	16-QAM	15	0	0.4046	1

Operating Band	Bandwidth (MHz)	Frequency Range	Frequency (MHz)	Modulation method	RB (FDD)	Offset RB	ERP/EIRP W(Watt)	Limit W(Watt)
LTE Band 4	5MHz	Low Range	1712.5	16-QAM	1	0	0.5023	1
		Low Range	1712.5	16-QAM	1	13	0.5012	1
		Low Range	1712.5	16-QAM	1	24	0.4853	1
		Low Range	1712.5	16-QAM	12	0	0.4102	1
		Low Range	1712.5	16-QAM	12	7	0.4121	1
		Low Range	1712.5	16-QAM	12	13	0.4046	1
		Low Range	1712.5	16-QAM	25	0	0.4121	1
		Mid Range	1732.5	16-QAM	1	0	0.4365	1
		Mid Range	1732.5	16-QAM	1	13	0.4487	1
		Mid Range	1732.5	16-QAM	1	24	0.4467	1
		Mid Range	1732.5	16-QAM	12	0	0.3945	1
		Mid Range	1732.5	16-QAM	12	7	0.4083	1
		Mid Range	1732.5	16-QAM	12	13	0.4055	1
		Mid Range	1732.5	16-QAM	25	0	0.4315	1
		High Range	1752.5	16-QAM	1	0	0.5495	1
		High Range	1752.5	16-QAM	1	13	0.5559	1
		High Range	1752.5	16-QAM	1	24	0.5662	1
		High Range	1752.5	16-QAM	12	0	0.3945	1
		High Range	1752.5	16-QAM	12	7	0.3972	1
		High Range	1752.5	16-QAM	12	13	0.3999	1
		High Range	1752.5	16-QAM	25	0	0.4121	1
	10MHz	Low Range	1715	16-QAM	1	0	0.4656	1
		Low Range	1715	16-QAM	1	25	0.4786	1
		Low Range	1715	16-QAM	1	49	0.4753	1
		Low Range	1715	16-QAM	25	0	0.4198	1
		Low Range	1715	16-QAM	25	12	0.4345	1
		Low Range	1715	16-QAM	25	25	0.4227	1
		Low Range	1715	16-QAM	50	0	0.4074	1
		Mid Range	1732.5	16-QAM	1	0	0.5675	1
		Mid Range	1732.5	16-QAM	1	25	0.6561	1
		Mid Range	1732.5	16-QAM	1	49	0.5433	1
		Mid Range	1732.5	16-QAM	25	0	0.4198	1
		Mid Range	1732.5	16-QAM	25	12	0.4375	1
		Mid Range	1732.5	16-QAM	25	25	0.4236	1
		Mid Range	1732.5	16-QAM	50	0	0.4140	1
		High Range	1750	16-QAM	1	0	0.5559	1
		High Range	1750	16-QAM	1	25	0.6109	1
		High Range	1750	16-QAM	1	49	0.5546	1
		High Range	1750	16-QAM	25	0	0.4130	1
		High Range	1750	16-QAM	25	12	0.4592	1
		High Range	1750	16-QAM	25	25	0.4140	1
		High Range	1750	16-QAM	50	0	0.4159	1

Operating Band	Bandwidth (MHz)	Frequency Range	Frequency (MHz)	Modulation method	RB (FDD)	Offset RB	ERP/EIRP W(Watt)	Limit W(Watt)
LTE Band 4	15MHz	Low Range	1717.5	16-QAM	1	0	0.4560	1
		Low Range	1717.5	16-QAM	1	38	0.5164	1
		Low Range	1717.5	16-QAM	1	74	0.5309	1
		Low Range	1717.5	16-QAM	36	0	0.3899	1
		Low Range	1717.5	16-QAM	36	20	0.4227	1
		Low Range	1717.5	16-QAM	36	39	0.4027	1
		Low Range	1717.5	16-QAM	75	0	0.4055	1
		Mid Range	1732.5	16-QAM	1	0	0.5521	1
		Mid Range	1732.5	16-QAM	1	38	0.6622	1
		Mid Range	1732.5	16-QAM	1	74	0.5649	1
		Mid Range	1732.5	16-QAM	36	0	0.3963	1
		Mid Range	1732.5	16-QAM	36	20	0.4592	1
		Mid Range	1732.5	16-QAM	36	39	0.4064	1
		Mid Range	1732.5	16-QAM	75	0	0.4055	1
		High Range	1747.5	16-QAM	1	0	0.5834	1
		High Range	1747.5	16-QAM	1	37	0.5309	1
		High Range	1747.5	16-QAM	1	74	0.5649	1
		High Range	1747.5	16-QAM	36	0	0.4375	1
		High Range	1747.5	16-QAM	36	20	0.4207	1
		High Range	1747.5	16-QAM	36	39	0.4036	1
		High Range	1747.5	16-QAM	75	0	0.4140	1
	20MHz	Low Range	1720	16-QAM	1	0	0.5662	1
		Low Range	1720	16-QAM	1	50	0.6053	1
		Low Range	1720	16-QAM	1	99	0.6039	1
		Low Range	1720	16-QAM	50	0	0.3972	1
		Low Range	1720	16-QAM	50	24	0.4178	1
		Low Range	1720	16-QAM	50	50	0.4074	1
		Low Range	1720	16-QAM	100	0	0.4140	1
		Mid Range	1732.5	16-QAM	1	0	0.5728	1
		Mid Range	1732.5	16-QAM	1	50	0.6067	1
		Mid Range	1732.5	16-QAM	1	99	0.5943	1
		Mid Range	1732.5	16-QAM	50	0	0.4111	1
		Mid Range	1732.5	16-QAM	50	24	0.4375	1
		Mid Range	1732.5	16-QAM	50	50	0.4169	1
		Mid Range	1732.5	16-QAM	100	0	0.4055	1
		High Range	1745	16-QAM	1	0	0.5395	1
		High Range	1745	16-QAM	1	50	0.5346	1
		High Range	1745	16-QAM	1	99	0.4395	1
		High Range	1745	16-QAM	50	0	0.4236	1
		High Range	1745	16-QAM	50	24	0.4159	1
		High Range	1745	16-QAM	50	50	0.4046	1
		High Range	1745	16-QAM	100	0	0.4150	1

Operating Band	Bandwidth (MHz)	Frequency Range	Frequency (MHz)	Modulation method	RB (FDD)	Offset RB	ERP/EIRP W(Watt)	Limit W(Watt)
LTE Band 13	5MHz	Low Range	779.5	16-QAM	1	0	0.2163	3
		Low Range	779.5	16-QAM	1	13	0.2223	3
		Low Range	779.5	16-QAM	1	24	0.2193	3
		Low Range	779.5	16-QAM	12	0	0.1914	3
		Low Range	779.5	16-QAM	12	7	0.1932	3
		Low Range	779.5	16-QAM	12	13	0.1871	3
		Low Range	779.5	16-QAM	25	0	0.1875	3
		Mid Range	782	16-QAM	1	0	0.2133	3
		Mid Range	782	16-QAM	1	13	0.2018	3
		Mid Range	782	16-QAM	1	24	0.1959	3
		Mid Range	782	16-QAM	12	0	0.1905	3
		Mid Range	782	16-QAM	12	7	0.1923	3
		Mid Range	782	16-QAM	12	13	0.1901	3
		Mid Range	782	16-QAM	25	0	0.1972	3
		High Range	784.5	16-QAM	1	0	0.2495	3
		High Range	784.5	16-QAM	1	13	0.2564	3
		High Range	784.5	16-QAM	1	24	0.2618	3
		High Range	784.5	16-QAM	12	0	0.1807	3
		High Range	784.5	16-QAM	12	7	0.1832	3
		High Range	784.5	16-QAM	12	13	0.1854	3
		High Range	784.5	16-QAM	25	0	0.1837	3
	10MHz	L/M/H Range	782	16-QAM	1	0	0.2259	3
		L/M/H Range	782	16-QAM	1	25	0.2582	3
		L/M/H Range	782	16-QAM	1	49	0.2466	3
		L/M/H Range	782	16-QAM	25	0	0.1897	3
		L/M/H Range	782	16-QAM	25	12	0.1941	3
		L/M/H Range	782	16-QAM	25	25	0.1892	3
		L/M/H Range	782	16-QAM	50	0	0.1879	3

3. Frequency Stability

3.1 Test conditions

Temperature:	-30~50	℃
Relative Humidity:	55	%
Atmospheric Pressure	1008	hPa

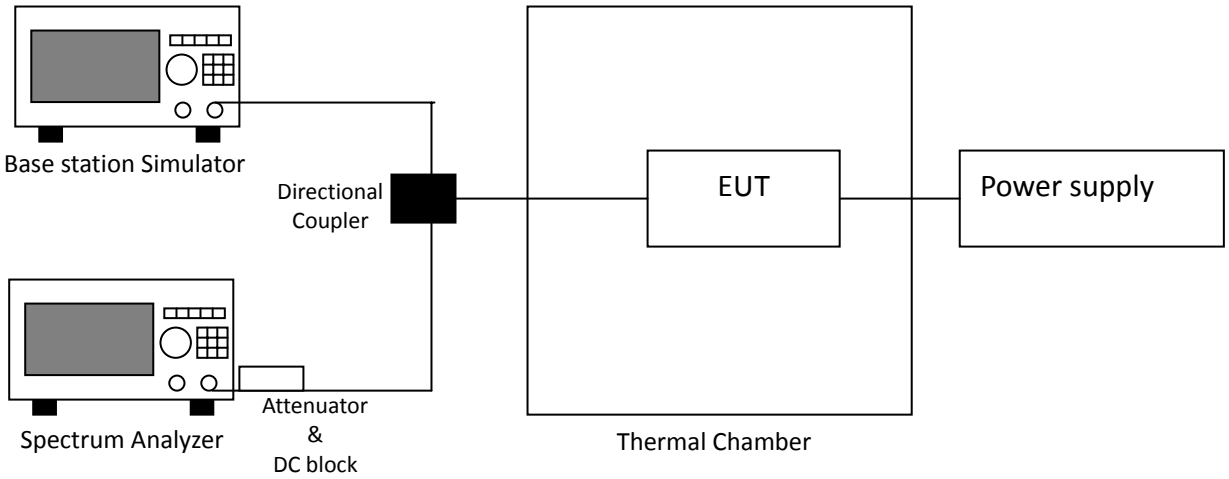
3.2 Limit for frequency stability

The frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation.

3.3 Test procedure

1. The EUT was placed inside the environmental test chamber and powered by nominal AC voltage.
2. Turn the EUT on and couple its output to a spectrum analyzer and Base station Simulator.
3. Turn the EUT off and set the chamber to the highest temperature specified.
4. Allow sufficient time for the temperature of the chamber to stabilize, turn the EUT on and measure the operating frequency.
5. Repeat step 2 and 3 with the temperature chamber set to the specific temperature. The temperature is decreased by 10 degrees, allowed to stabilize, and then the measurement is repeated. This is repeated until -30℃ is reached.
6. The test chamber was allowed to stabilize at +20degree C for minimum of 30 minutes. The supply voltage was then adjusted on the EUT from 85% to 115% and the frequency record

3.4 Test diagram



3.5 Test results

Operating Band	BW (MHz)	Modulation method	RB (FDD)	Offset RB	Voltage (Vdc)	Temp. (℃)	RB Pos/ Start RB	Test Freq. (MHz)	Delta Frequency Stability	Unit	Limit	Test result
LTE Band 4	20	QPSK	100	0	3.8	-30	Low Range	1720.9	1.870	Hz	< ±2.5 ppm	Pass
									0.001	PPM		
							Mid Range	1731.3	-0.400	Hz		Pass
									0.000	PPM		
							High Range	1746.9	-2.980	Hz		Pass
									-0.002	PPM		
	20	QPSK	100	0	3.8	-20	Low Range	1720.9	3.320	Hz		Pass
									0.002	PPM		
							Mid Range	1731.3	1.490	Hz		Pass
									0.001	PPM		
							High Range	1746.9	-3.100	Hz		Pass
									-0.002	PPM		
	20	QPSK	100	0	3.8	-10	Low Range	1720.9	1.140	Hz		Pass
									0.001	PPM		
							Mid Range	1731.3	1.140	Hz		Pass
									0.001	PPM		
							High Range	1746.9	-3.000	Hz		Pass
									-0.002	PPM		
	20	QPSK	100	0	3.8	0	Low Range	1720.9	1.950	Hz		Pass
									0.001	PPM		
							Mid Range	1731.3	0.440	Hz		Pass
									0.000	PPM		
							High Range	1746.9	-4.020	Hz		Pass
									-0.002	PPM		
	20	QPSK	100	0	3.8	10	Low Range	1720.9	1.990	Hz		Pass
									0.001	PPM		
							Mid Range	1731.3	0.990	Hz		Pass
									0.001	PPM		
							High Range	1746.9	-3.130	Hz		Pass
									-0.002	PPM		
	20	QPSK	100	0	3.8	20	Low Range	1720.9	1.870	Hz		Pass
									0.001	PPM		
							Mid Range	1731.3	1.700	Hz		Pass
									0.001	PPM		
							High Range	1746.9	-3.090	Hz		Pass
									-0.002	PPM		

Operating Band	BW (MHz)	Modulation method	RB (FDD)	Offset RB	Voltage (Vdc)	Temp. (℃)	RB Pos/ Start RB	Test Freq. (MHz)	Delta Frequency Stability	Unit	Limit	Test result
LTE Band 4	20	QPSK	100	0	3.8	30	Low Range	1720.9	1.700	Hz	< ±2.5 ppm	Pass
									0.001	PPM		
							Mid Range	1731.3	0.460	Hz		Pass
									0.000	PPM		
							High Range	1746.9	-3.390	Hz		Pass
									-0.002	PPM		
	20	QPSK	100	0	3.8	40	Low Range	1720.9	2.920	Hz		Pass
									0.002	PPM		
							Mid Range	1731.3	0.060	Hz		Pass
									0.000	PPM		
							High Range	1746.9	3.320	Hz		Pass
									0.002	PPM		
	20	QPSK	100	0	3.8	50	Low Range	1720.9	1.950	Hz		Pass
									0.001	PPM		
							Mid Range	1731.3	1.230	Hz		Pass
									0.001	PPM		
							High Range	1746.9	-5.110	Hz		Pass
									-0.003	PPM		
	20	QPSK	100	0	4.37	20	Low Range	1720.9	3.220	Hz		Pass
									0.002	PPM		
							Mid Range	1731.3	1.260	Hz		Pass
									0.001	PPM		
							High Range	1746.9	-3.220	Hz		Pass
									-0.002	PPM		
	20	QPSK	100	0	3.23	20	Low Range	1720.9	2.220	Hz		Pass
									0.001	PPM		
							Mid Range	1731.3	0.570	Hz		Pass
									0.000	PPM		
							High Range	1746.9	-2.820	Hz		Pass
									-0.002	PPM		
	20	16-QAM	100	0	3.8	-30	Low Range	1720.9	2.550	Hz		Pass
									0.001	PPM		
							Mid Range	1731.3	1.480	Hz		Pass
									0.001	PPM		
							High Range	1746.9	-3.500	Hz		Pass
									-0.002	PPM		

Operating Band	BW (MHz)	Modulation method	RB (FDD)	Offset RB	Voltage (Vdc)	Temp. (℃)	RB Pos/ Start RB	Test Freq. (MHz)	Delta Frequency Stability	Unit	Limit	Test result
LTE Band 4	20	16-QAM	100	0	3.8	-20	Low Range	1720.9	1.320	Hz	< ±2.5 ppm	Pass
									0.001	PPM		
							Mid Range	1731.3	-0.660	Hz		Pass
									0.000	PPM		
							High Range	1746.9	-2.700	Hz		Pass
									-0.002	PPM		
	20	16-QAM	100	0	3.8	-10	Low Range	1720.9	1.460	Hz		Pass
									0.001	PPM		
							Mid Range	1731.3	0.230	Hz		Pass
									0.000	PPM		
							High Range	1746.9	-2.620	Hz		Pass
									-0.001	PPM		
	20	16-QAM	100	0	3.8	0	Low Range	1720.9	1.360	Hz		Pass
									0.001	PPM		
							Mid Range	1731.3	1.830	Hz		Pass
									0.001	PPM		
							High Range	1746.9	-3.760	Hz		Pass
									-0.002	PPM		
	20	16-QAM	100	0	3.8	10	Low Range	1720.9	1.340	Hz		Pass
									0.001	PPM		
							Mid Range	1731.3	1.730	Hz		Pass
									0.001	PPM		
							High Range	1746.9	-3.450	Hz		Pass
									-0.002	PPM		
	20	16-QAM	100	0	3.8	20	Low Range	1720.9	0.570	Hz		Pass
									0.000	PPM		
							Mid Range	1731.3	0.630	Hz		Pass
									0.000	PPM		
							High Range	1746.9	-3.130	Hz		Pass
									-0.002	PPM		
	20	16-QAM	100	0	3.8	30	Low Range	1720.9	0.890	Hz		Pass
									0.001	PPM		
							Mid Range	1731.3	0.790	Hz		Pass
									0.000	PPM		
							High Range	1746.9	-1.820	Hz		Pass
									-0.001	PPM		

Operating Band	BW (MHz)	Modulation method	RB (FDD)	Offset RB	Voltage (Vdc)	Temp. (℃)	RB Pos/ Start RB	Test Freq. (MHz)	Delta Frequency Stability	Unit	Limit	Test result
LTE Band 4	20	16-QAM	100	0	3.8	40	Low Range	1720.9	2.620	Hz	< ±2.5 ppm	Pass
									0.002	PPM		
							Mid Range	1731.3	0.760	Hz		Pass
									0.000	PPM		
							High Range	1746.9	-3.580	Hz		Pass
									-0.002	PPM		
	20	16-QAM	100	0	3.8	50	Low Range	1720.9	1.340	Hz		Pass
									0.001	PPM		
							Mid Range	1731.3	1.440	Hz		Pass
									0.001	PPM		
							High Range	1746.9	-2.480	Hz		Pass
									-0.001	PPM		
	20	16-QAM	100	0	4.37	20	Low Range	1720.9	1.830	Hz		Pass
									0.001	PPM		
							Mid Range	1731.3	0.940	Hz		Pass
									0.001	PPM		
							High Range	1746.9	-2.760	Hz		Pass
									-0.002	PPM		
	20	16-QAM	100	0	3.23	20	Low Range	1720.9	1.240	Hz		Pass
									0.001	PPM		
							Mid Range	1731.3	1.920	Hz		Pass
									0.001	PPM		
							High Range	1746.9	-2.470	Hz		Pass
									-0.001	PPM		

Operating Band	BW (MHz)	Modulation method	RB (FDD)	Offset RB	Voltage (Vdc)	Temp. (℃)	RB Pos/ Start RB	Test Freq. (MHz)	Delta Frequency Stability	Unit	Limit	Test result
LTE Band 13	5	QPSK	25	0	3.8	-30	Low Range	780.8	4.430	Hz	< ±2.5 ppm	Pass
									0.006	PPM		
							Mid Range	781.8	-0.300	Hz		Pass
									0.000	PPM		
							High Range	782.4	3.860	Hz		Pass
									0.005	PPM		
	5	QPSK	25	0	3.8	-20	Low Range	780.8	-1.700	Hz		Pass
									-0.002	PPM		
							Mid Range	781.8	-1.000	Hz		Pass
									-0.001	PPM		
							High Range	782.4	-0.570	Hz		Pass
									-0.001	PPM		
	5	QPSK	25	0	3.8	-10	Low Range	780.8	-1.850	Hz		Pass
									-0.002	PPM		
							Mid Range	781.8	-0.560	Hz		Pass
									-0.001	PPM		
							High Range	782.4	-0.440	Hz		Pass
									-0.001	PPM		
	5	QPSK	25	0	3.8	0	Low Range	780.8	-1.530	Hz		Pass
									-0.002	PPM		
							Mid Range	781.8	-0.540	Hz		Pass
									-0.001	PPM		
							High Range	782.4	0.630	Hz		Pass
									0.001	PPM		
	5	QPSK	25	0	3.8	10	Low Range	780.8	-2.060	Hz		Pass
									-0.003	PPM		
							Mid Range	781.8	-0.340	Hz		Pass
									0.000	PPM		
							High Range	782.4	-0.430	Hz		Pass
									-0.001	PPM		
	5	QPSK	25	0	3.8	20	Low Range	780.8	-0.770	Hz		Pass
									-0.001	PPM		
							Mid Range	781.8	0.760	Hz		Pass
									0.001	PPM		
							High Range	782.4	0.600	Hz		Pass
									0.001	PPM		

Operating Band	BW (MHz)	Modulation method	RB (FDD)	Offset RB	Voltage (Vdc)	Temp. (℃)	RB Pos/ Start RB	Test Freq. (MHz)	Delta Frequency Stability	Unit	Limit	Test result
LTE Band 13	5	QPSK	25	0	3.8	30	Low Range	780.8	0.900	Hz	< ±2.5 ppm	Pass
									0.001	PPM		
							Mid Range	781.8	-0.430	Hz		Pass
									-0.001	PPM		
							High Range	782.4	-0.590	Hz		Pass
									-0.001	PPM		
	5	QPSK	25	0	3.8	40	Low Range	780.8	-1.340	Hz		Pass
									-0.002	PPM		
							Mid Range	781.8	-0.590	Hz		Pass
									-0.001	PPM		
							High Range	782.4	-0.210	Hz		Pass
									0.000	PPM		
	5	QPSK	25	0	3.8	50	Low Range	780.8	-1.770	Hz		Pass
									-0.002	PPM		
							Mid Range	781.8	0.160	Hz		Pass
									0.000	PPM		
							High Range	782.4	-0.290	Hz		Pass
									0.000	PPM		
	5	QPSK	25	0	4.37	20	Low Range	780.8	-1.530	Hz		Pass
									-0.002	PPM		
							Mid Range	781.8	-0.940	Hz		Pass
									-0.001	PPM		
							High Range	782.4	-0.620	Hz		Pass
									-0.001	PPM		
	5	QPSK	25	0	3.23	20	Low Range	780.8	-1.870	Hz		Pass
									-0.002	PPM		
							Mid Range	781.8	-1.230	Hz		Pass
									-0.002	PPM		
							High Range	782.4	-0.740	Hz		Pass
									-0.001	PPM		
	5	16-QAM	25	0	3.8	-30	Low Range	780.8	-2.230	Hz		Pass
									-0.003	PPM		
							Mid Range	781.8	-1.330	Hz		Pass
									-0.002	PPM		
							High Range	782.4	-0.710	Hz		Pass
									-0.001	PPM		

Operating Band	BW (MHz)	Modulation method	RB (FDD)	Offset RB	Voltage (Vdc)	Temp. (℃)	RB Pos/ Start RB	Test Freq. (MHz)	Delta Frequency Stability	Unit	Limit	Test result
LTE Band 13	5	16-QAM	25	0	3.8	-20	Low Range	780.8	-1.620	Hz	< ±2.5 ppm	Pass
									-0.002	PPM		
							Mid Range	781.8	-2.130	Hz		Pass
									-0.003	PPM		
							High Range	782.4	-0.110	Hz		Pass
									0.000	PPM		
	5	16-QAM	25	0	3.8	-10	Low Range	780.8	-2.350	Hz		Pass
									-0.003	PPM		
							Mid Range	781.8	-1.090	Hz		Pass
									-0.001	PPM		
							High Range	782.4	0.060	Hz		Pass
									0.000	PPM		
	5	16-QAM	25	0	3.8	0	Low Range	780.8	-1.100	Hz		Pass
									-0.001	PPM		
							Mid Range	781.8	-0.940	Hz		Pass
									-0.001	PPM		
							High Range	782.4	-0.290	Hz		Pass
									0.000	PPM		
	5	16-QAM	25	0	3.8	10	Low Range	780.8	-1.130	Hz		Pass
									-0.001	PPM		
							Mid Range	781.8	-0.830	Hz		Pass
									-0.001	PPM		
							High Range	782.4	0.860	Hz		Pass
									0.001	PPM		
	5	16-QAM	25	0	3.8	20	Low Range	780.8	-1.230	Hz		Pass
									-0.002	PPM		
							Mid Range	781.8	-0.340	Hz		Pass
									0.000	PPM		
							High Range	782.4	0.900	Hz		Pass
									0.001	PPM		
	5	16-QAM	25	0	3.8	30	Low Range	780.8	-2.050	Hz		Pass
									-0.003	PPM		
							Mid Range	781.8	-0.430	Hz		Pass
									-0.001	PPM		
							High Range	782.4	0.200	Hz		Pass
									0.000	PPM		

Operating Band	BW (MHz)	Modulation method	RB (FDD)	Offset RB	Voltage (Vdc)	Temp. (℃)	RB Pos/ Start RB	Test Freq. (MHz)	Delta Frequency Stability	Unit	Limit	Test result
LTE Band 13	5	16-QAM	25	0	3.8	40	Low Range	780.8	-1.900	Hz	< ±2.5 ppm	Pass
									-0.002	PPM		
							Mid Range	781.8	-0.790	Hz		Pass
									-0.001	PPM		
							High Range	782.4	0.470	Hz		Pass
									0.001	PPM		
	5	16-QAM	25	0	3.8	50	Low Range	780.8	-2.160	Hz		Pass
									-0.003	PPM		
							Mid Range	781.8	-1.060	Hz		Pass
									-0.001	PPM		
							High Range	782.4	0.390	Hz		Pass
									0.000	PPM		
	5	16-QAM	25	0	4.37	20	Low Range	780.8	-1.060	Hz		Pass
									-0.001	PPM		
							Mid Range	781.8	0.470	Hz		Pass
									0.001	PPM		
							High Range	782.4	1.070	Hz		Pass
									0.001	PPM		
	5	16-QAM	25	0	3.23	20	Low Range	780.8	-1.830	Hz		Pass
									-0.002	PPM		
							Mid Range	781.8	-1.470	Hz		Pass
									-0.002	PPM		
							High Range	782.4	1.260	Hz		Pass
									0.002	PPM		

4. Occupied Bandwidth Measurement

4.1 Test conditions

Temperature:	20	℃
Relative Humidity:	55	%
Atmospheric Pressure	1008	hPa

4.2 Limit for minimum occupied bandwidth

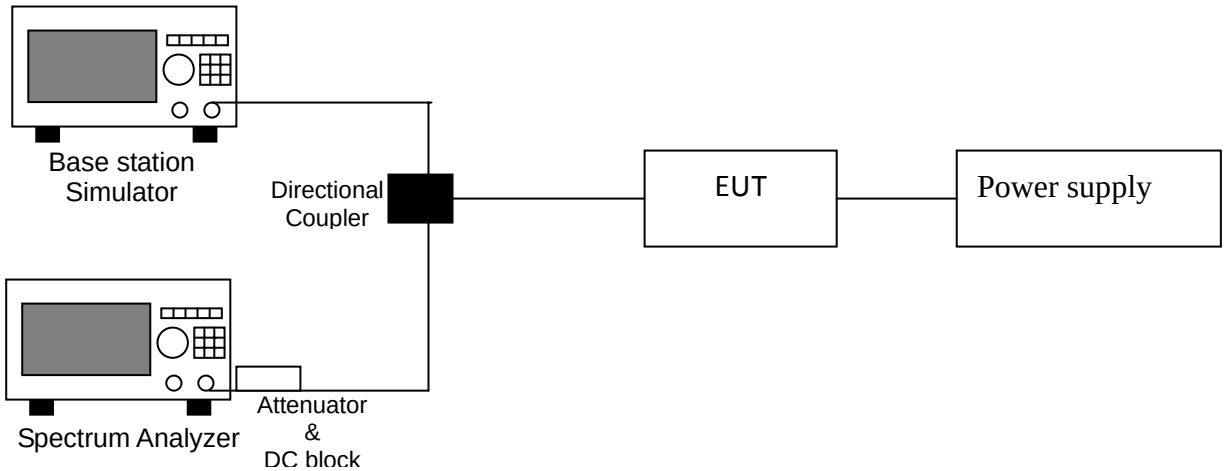
The occupied bandwidth (OBW), that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 percent of the total mean power radiated by a given emission,

4.4 Test procedure

1. The conducted occupied bandwidth test used the directional coupler via EUT RF power connector between Base station Simulator and spectrum analyzer.

2. Use OBW measurement function of Spectrum analyzer to measure 99 % Occupied bandwidth.

4.5 Test diagram

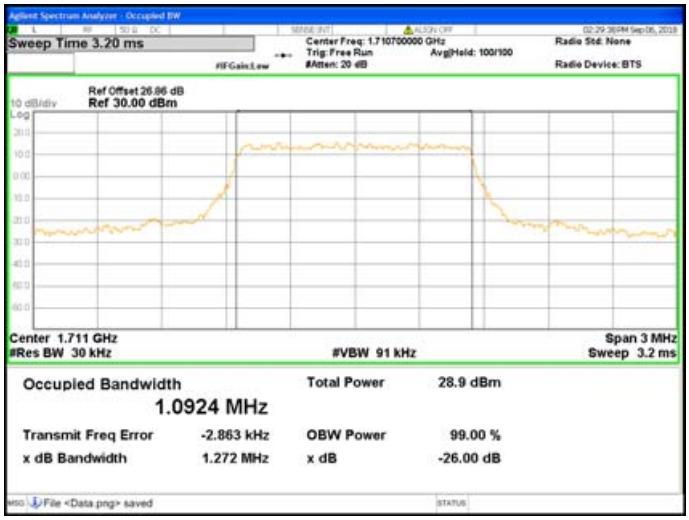


4.6 Test results

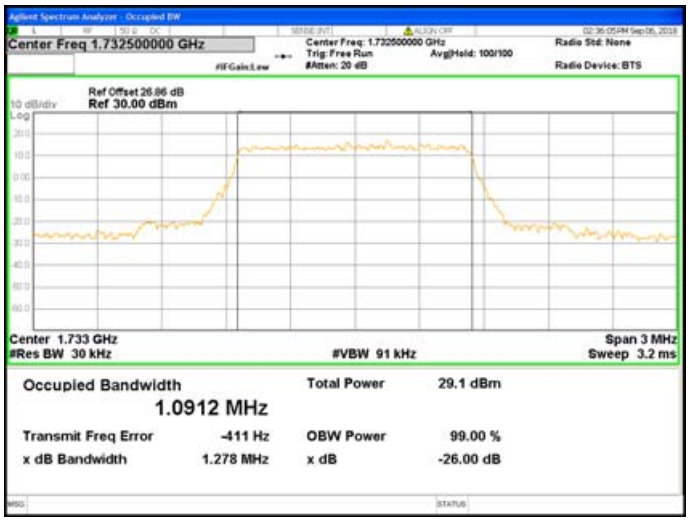
Operating Band	Bandwidth (MHz)	Frequency Range	Frequency (MHz)	Modulation method	RB (FDD)	Offset RB	OBW (MHz)	Test Plot
LTE Band 4	1.4MHz	Low Range	1710.7	QPSK	6	0	1.0924	1
		Mid Range	1732.5		6	0	1.0912	2
		High Range	1754.3		6	0	1.0937	3
	3MHz	Low Range	1711.5		15	0	2.6808	4
		Mid Range	1732.5		15	0	2.6847	5
		High Range	1753.5		15	0	2.6885	6
	5MHz	Low Range	1712.5		25	0	4.4595	7
		Mid Range	1732.5		25	0	4.4718	8
		High Range	1752.5		25	0	4.4601	9
	10MHz	Low Range	1715		50	0	8.9244	10
		Mid Range	1732.5		50	0	8.9514	11
		High Range	1750		50	0	8.9184	12
	15MHz	Low Range	1717.5		75	0	13.394	13
		Mid Range	1732.5		75	0	13.409	14
		High Range	1747.5		75	0	13.388	15
	20MHz	Low Range	1720		100	0	17.837	16
		Mid Range	1732.5		100	0	17.819	17
		High Range	1745		100	0	17.808	18
	1.4MHz	Low Range	1710.7	16-QAM	6	0	1.0967	19
		Mid Range	1732.5		6	0	1.104	20
		High Range	1754.3		6	0	1.0901	21
	3MHz	Low Range	1711.5		15	0	2.6847	22
		Mid Range	1732.5		15	0	2.6867	23
		High Range	1753.5		15	0	2.6884	24
	5MHz	Low Range	1712.5		25	0	4.4704	25
		Mid Range	1732.5		25	0	4.4692	26
		High Range	1752.5		25	0	4.4723	27
	10MHz	Low Range	1715		50	0	8.9353	28
		Mid Range	1732.5		50	0	8.9629	29
		High Range	1750		50	0	8.9279	30
	15MHz	Low Range	1717.5		75	0	13.386	31
		Mid Range	1732.5		75	0	13.387	32
		High Range	1747.5		75	0	13.37	33
	20MHz	Low Range	1720		100	0	17.865	34
		Mid Range	1732.5		100	0	17.84	35
		High Range	1745		100	0	17.796	36

Operating Band	Bandwidth (MHz)	Frequency Range	Frequency (MHz)	Modulation method	RB (FDD)	Offset RB	OBW (MHz)	Test Plot
LTE Band 13	5MHz	Low Range	779.5	QPSK	25	0	4.4701	37
		Mid Range	782		25	0	4.4582	38
		High Range	784.5		25	0	4.4803	39
	10MHz	Low Range	782		50	0	8.9276	40
		Mid Range						
		High Range						
	5MHz	Low Range	779.5	16-QAM	25	0	4.4594	41
		Mid Range	782		25	0	4.4536	42
		High Range	784.5		25	0	4.4769	43
	10MHz	Low Range	782		50	0	8.9206	44
		Mid Range						
		High Range						

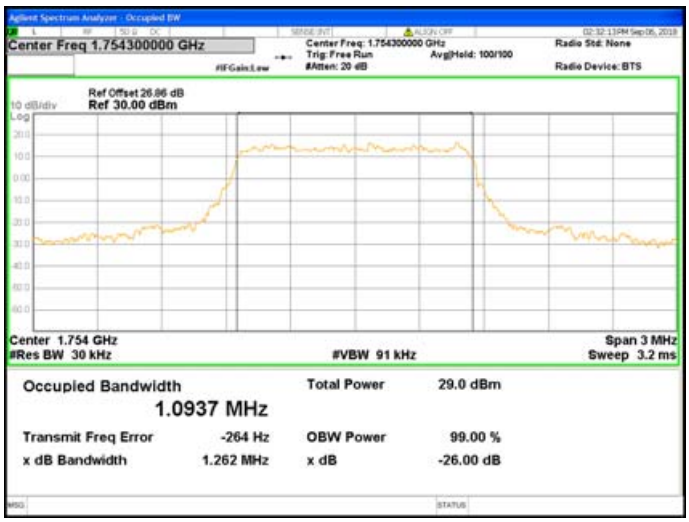
OBW 01-1.4 MHz-1710.7-QPSK



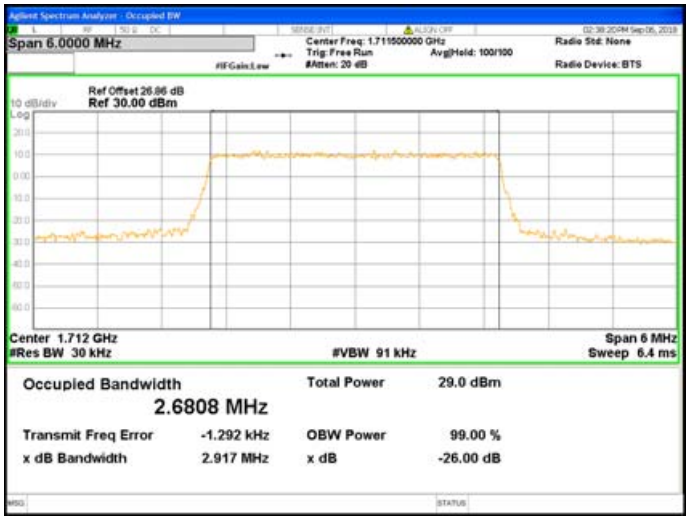
OBW 02-1.4 MHz-1732.5-QPSK



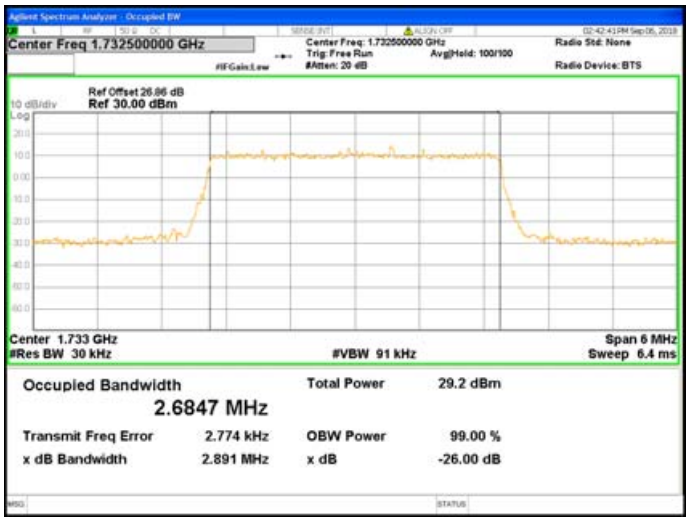
OBW 03-1.4 MHz-1754.3-QPSK



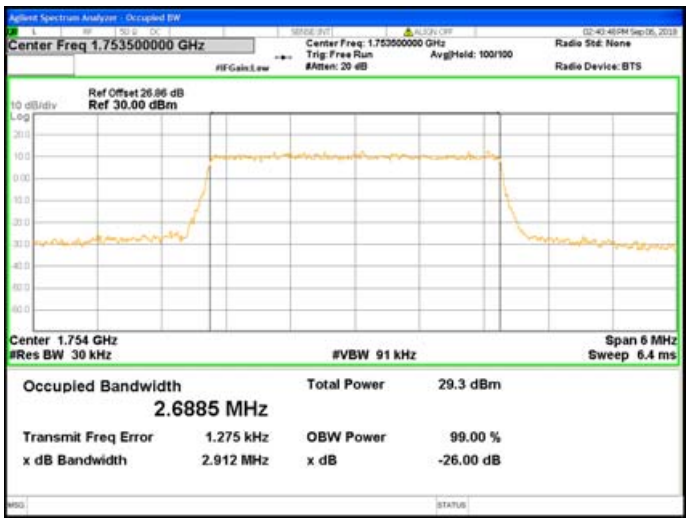
OBW 04-3 MHz-1711.5-QPSK



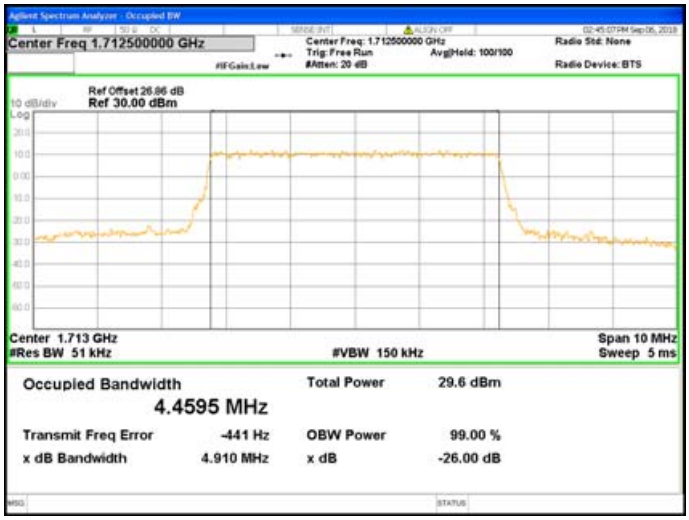
OBW 05-3 MHz-1732.5-QPSK



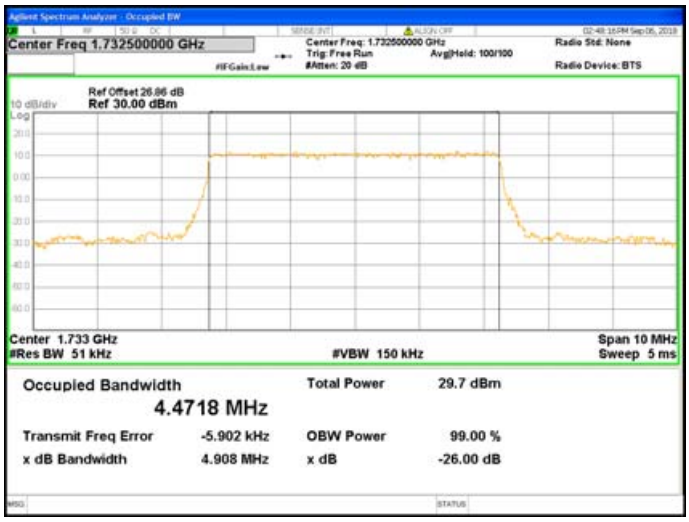
OBW 06-3 MHz-1753.5-QPSK



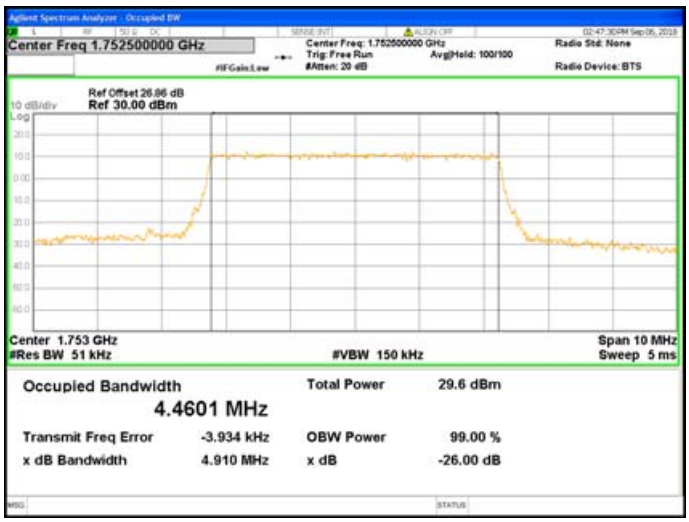
OBW 07-5 MHz-1712.5-QPSK



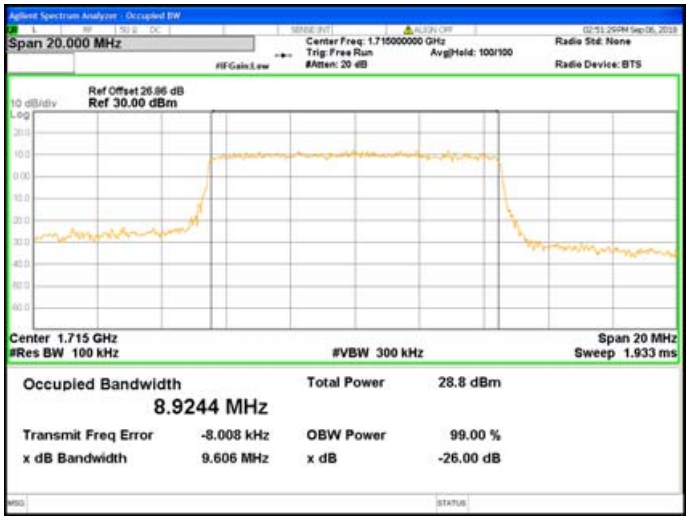
OBW 08-5 MHz-1732.5-QPSK



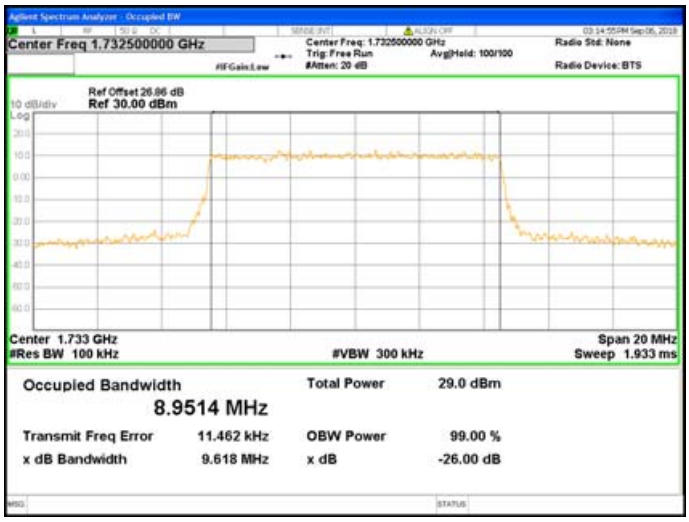
OBW 09-5 MHz-1752.5-QPSK



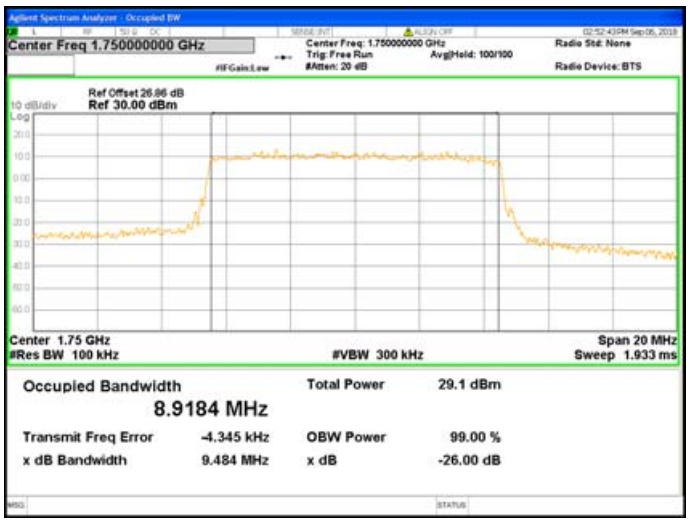
OBW 10-10 MHz-1715-QPSK



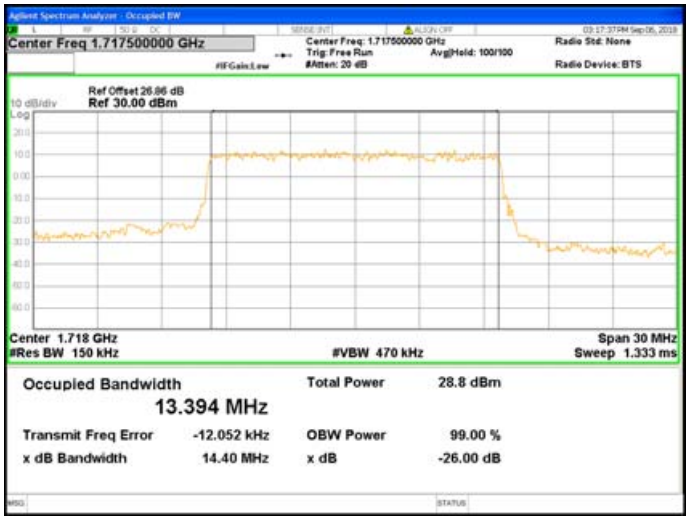
OBW 11-10 MHz-1732.5-QPSK



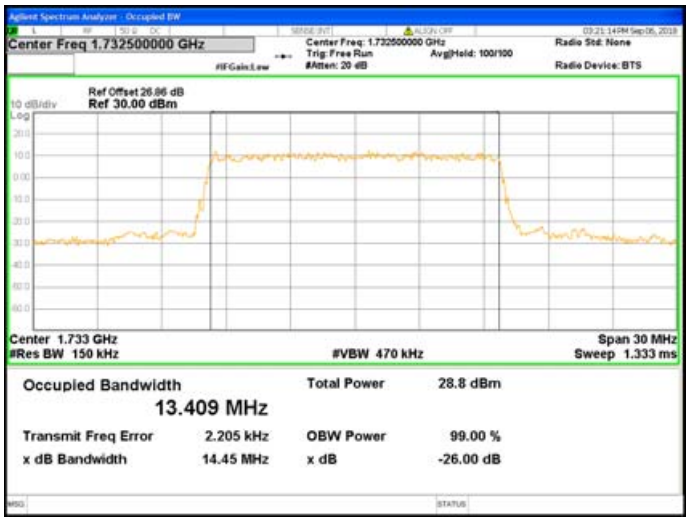
OBW 12-10 MHz-1750-QPSK



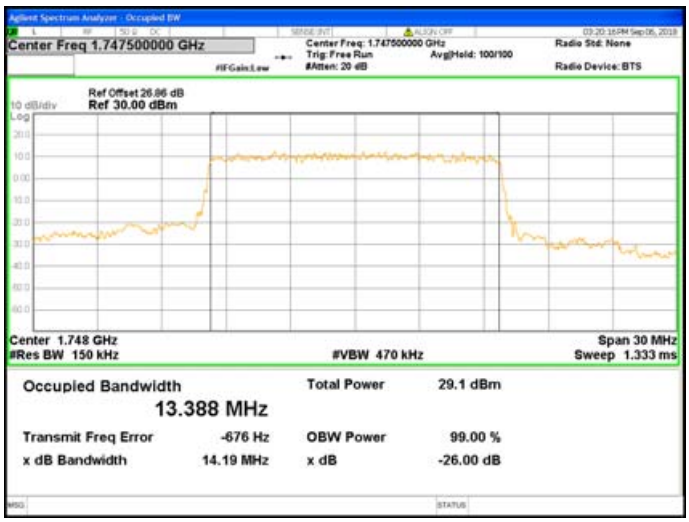
OBW 13-15 MHz-1717.5-QPSK



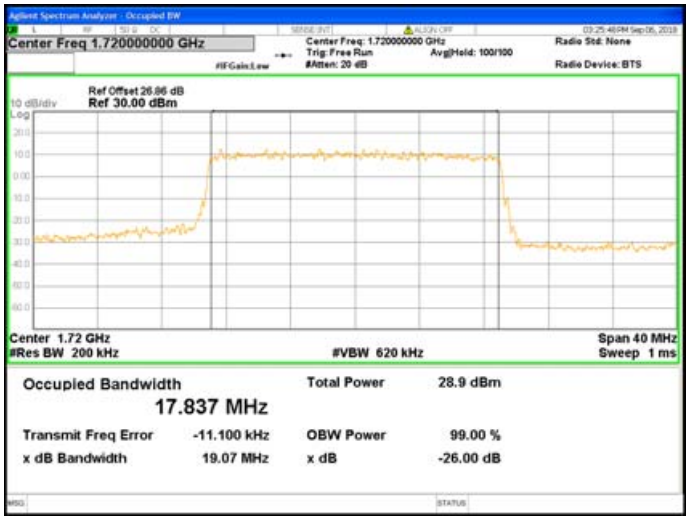
OBW 14-15 MHz-1732.5-QPSK



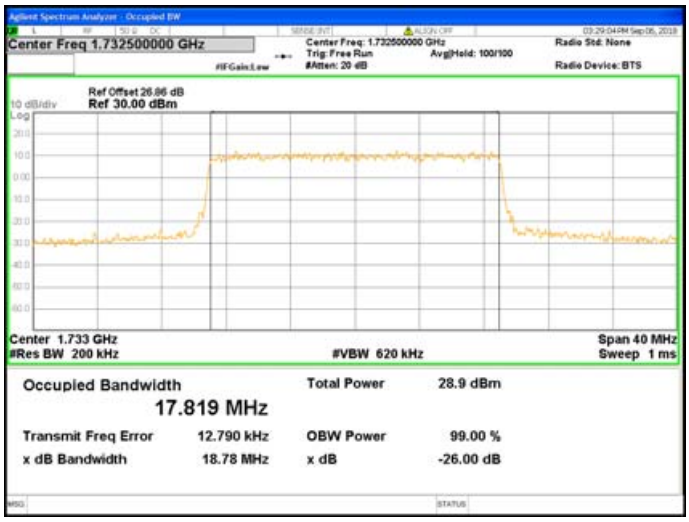
OBW 15-15 MHz-1747.5-QPSK



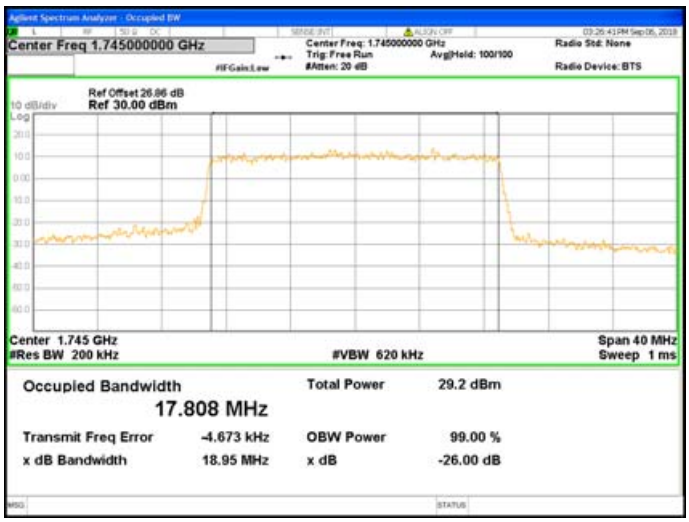
OBW 16-20 MHz-1720-QPSK



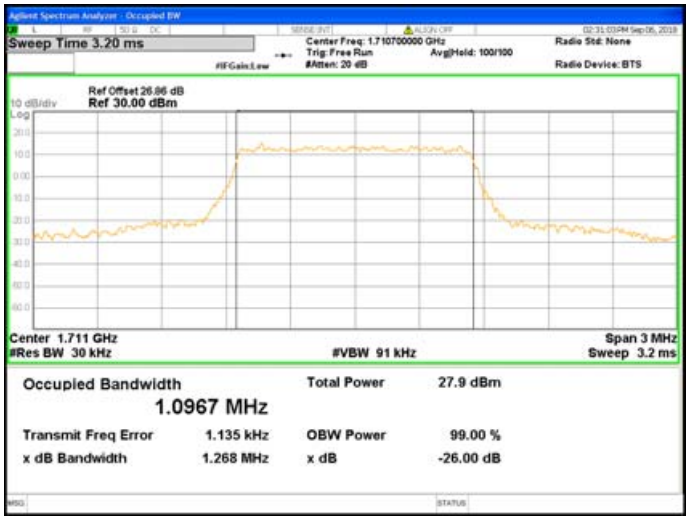
OBW 17-20 MHz-1732.5-QPSK



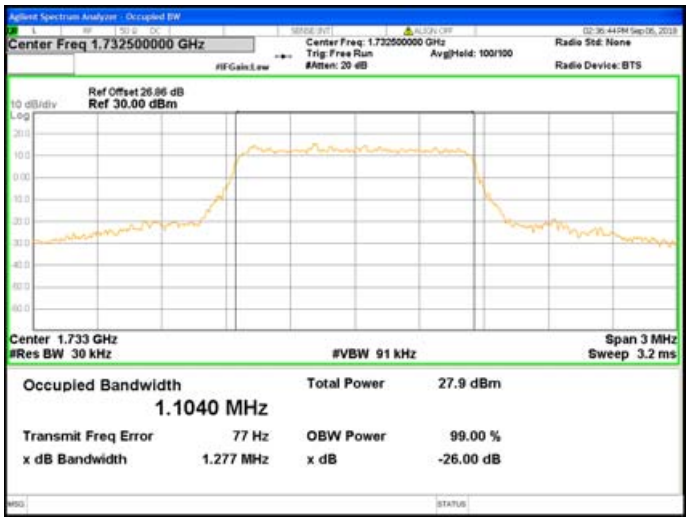
OBW 18-20 MHz-1745-QPSK



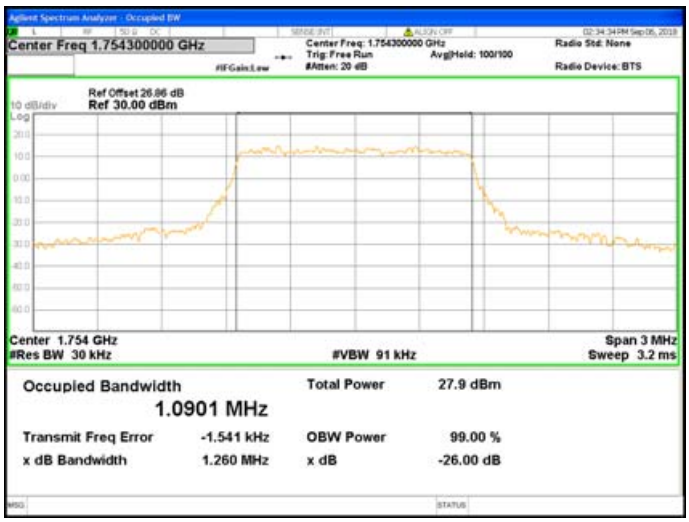
OBW 19-1.4 MHz-1710.7-16QAM



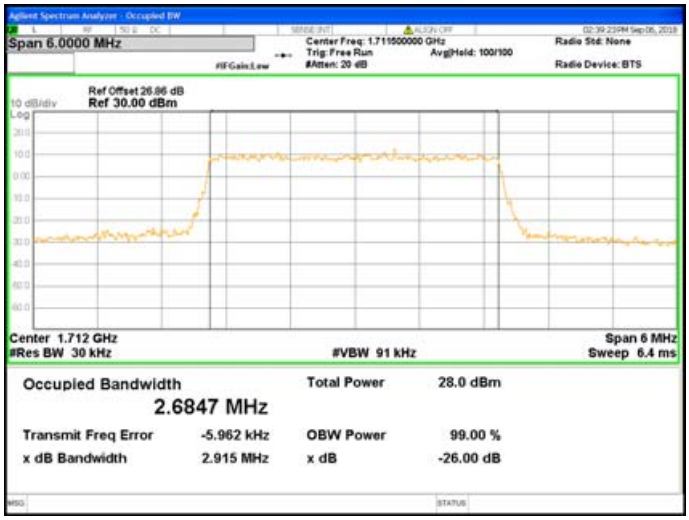
OBW 20-1.4 MHz-1732.5-16QAM



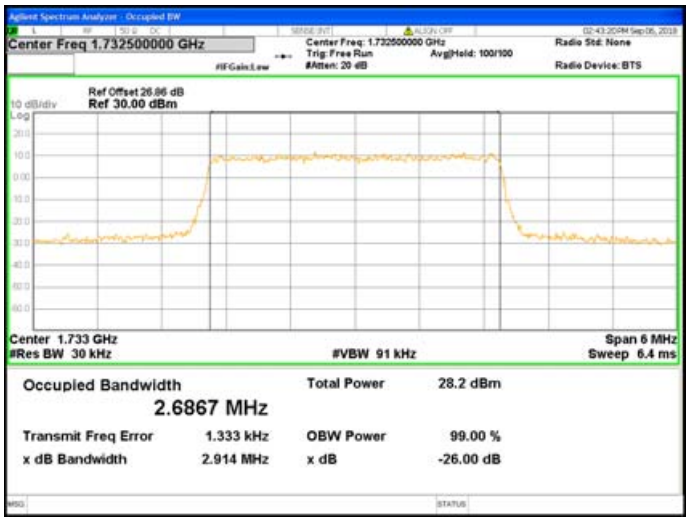
OBW 21-1.4 MHz-1754.3-16QAM



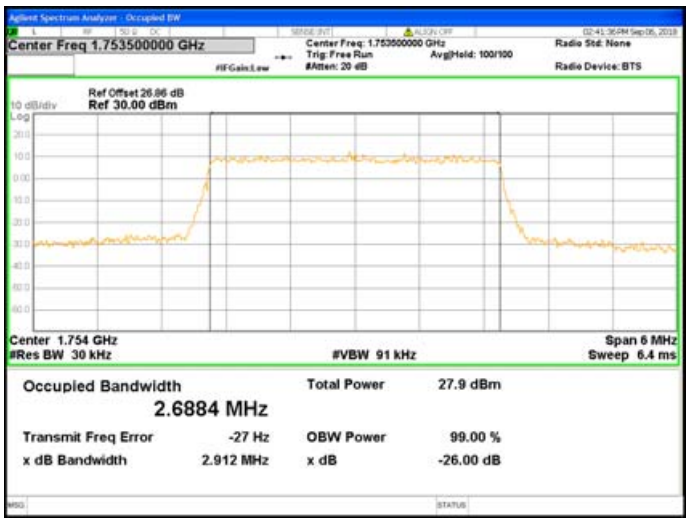
OBW 22-3 MHz-1711.5-16QAM



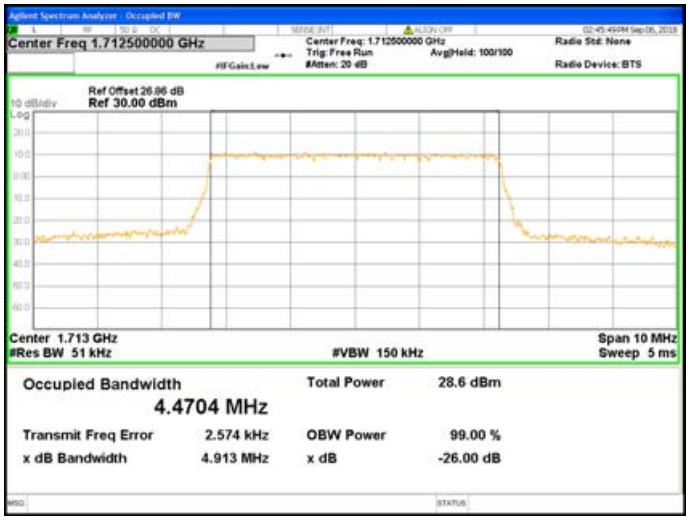
OBW 23-3 MHz-1732.5-16QAM



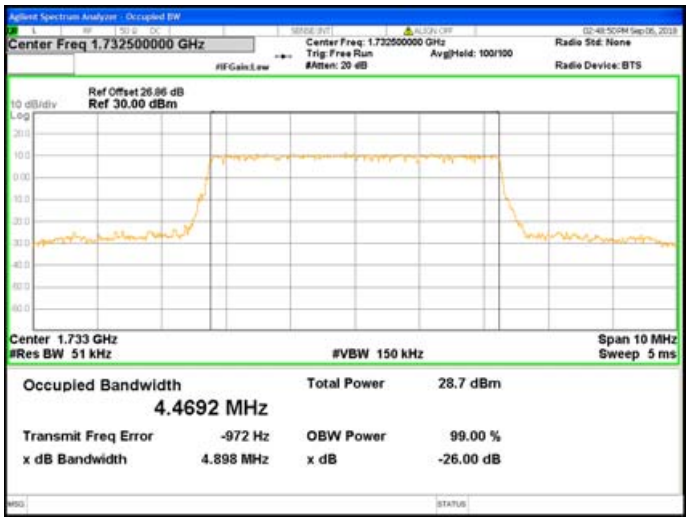
OBW 24-3 MHz-1753.5-16QAM



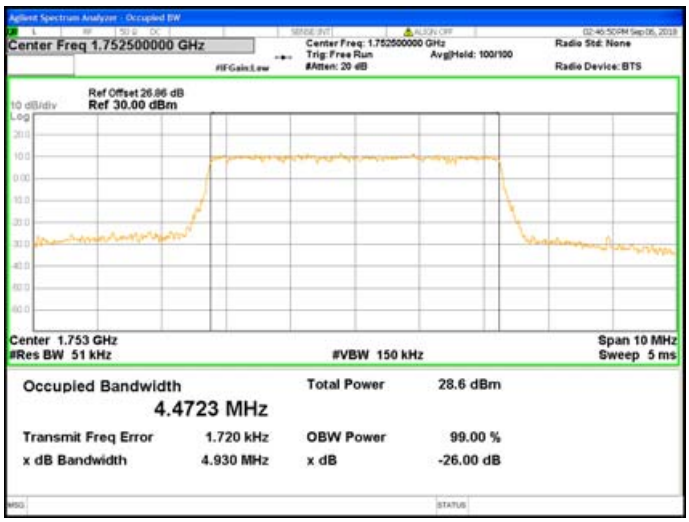
OBW 25-5 MHz-1712.5-16QAM



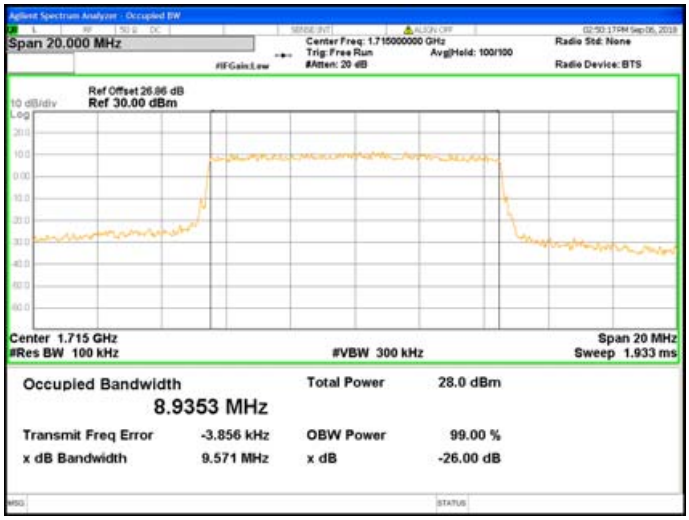
OBW 26-5 MHz-1732.5-16QAM



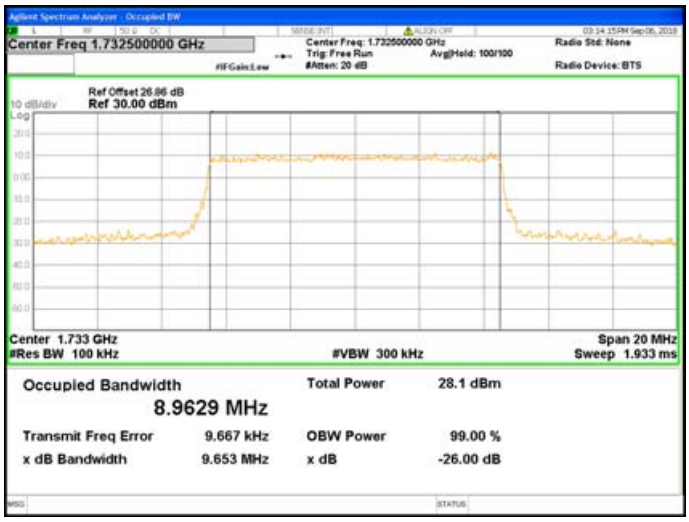
OBW 27-5 MHz-1752.5-16QAM



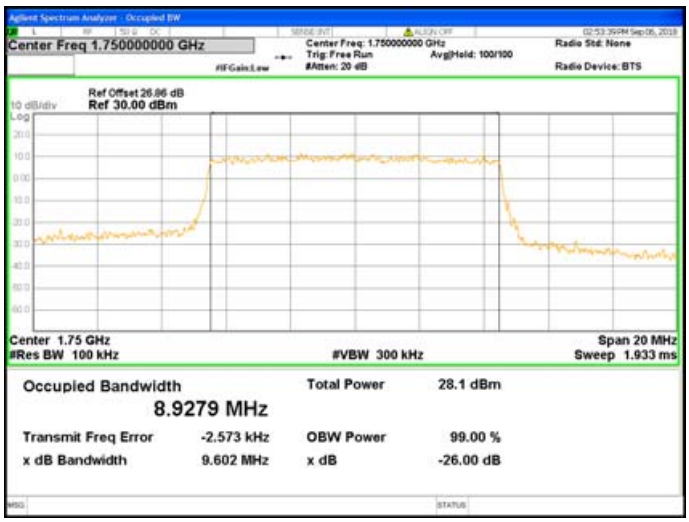
OBW 28-10 MHz-1715-16QAM



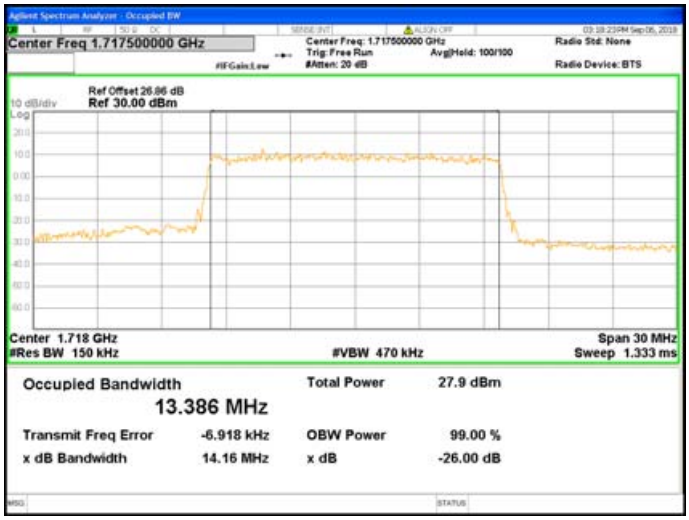
OBW 29-10 MHz-1732.5-16QAM



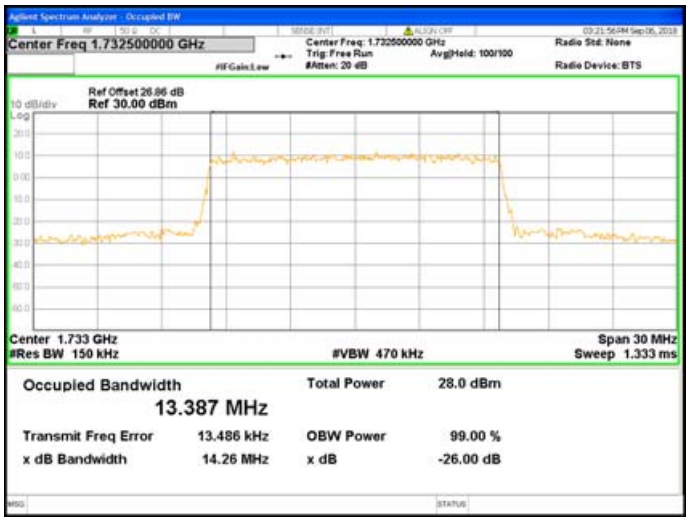
OBW 30-10 MHz-1750-16QAM



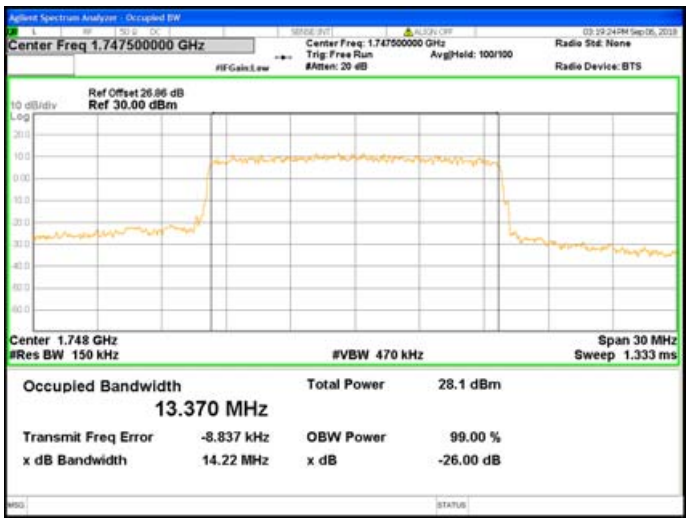
OBW 31-15 MHz-1717.5-16QAM



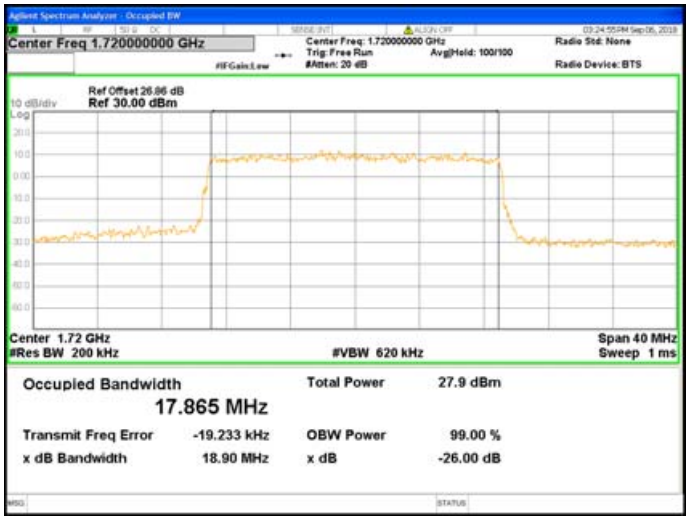
OBW 32-15 MHz-1732.5-16QAM



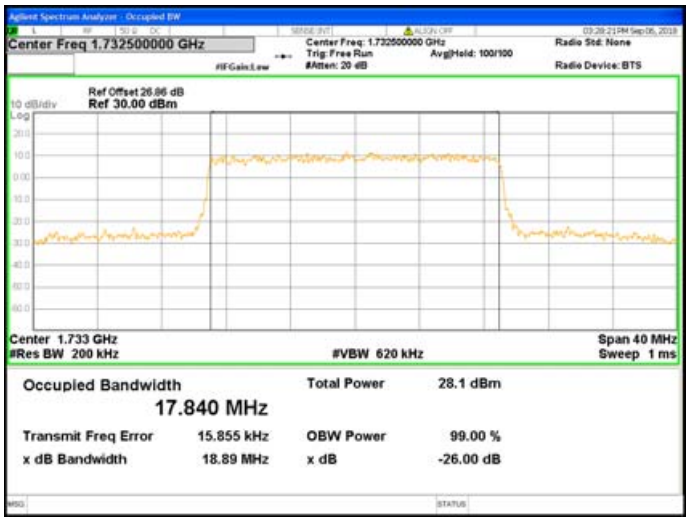
OBW 33-15 MHz-1747.5-16QAM



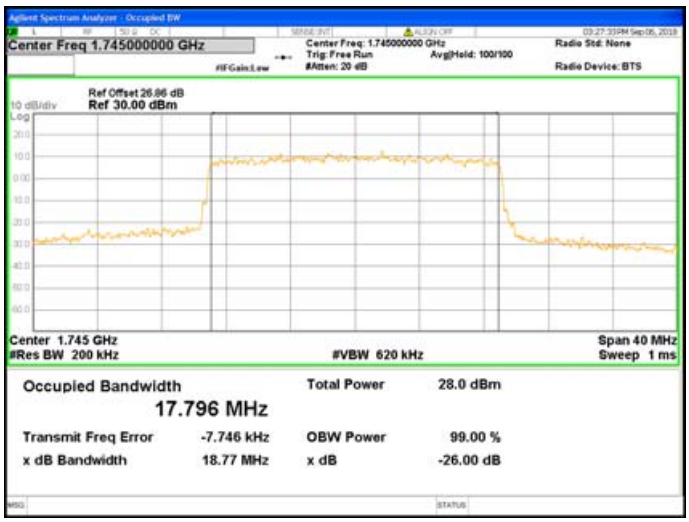
OBW 34-20 MHz-1720-16QAM



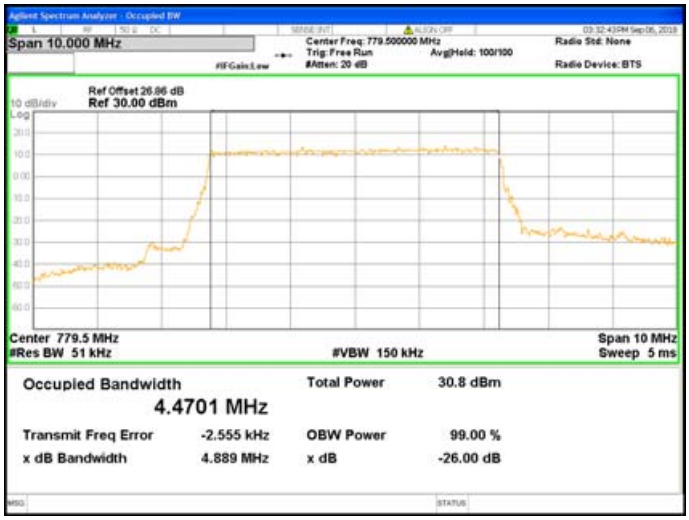
OBW 35-20 MHz-1732.5-16QAM



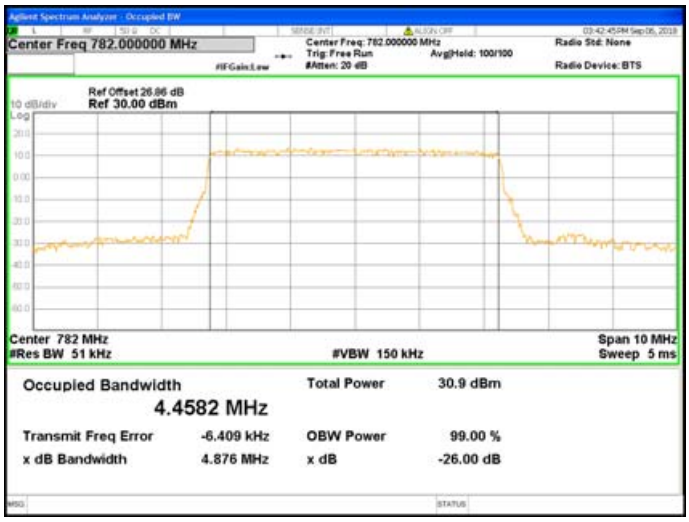
OBW 36-20 MHz-1745-16QAM



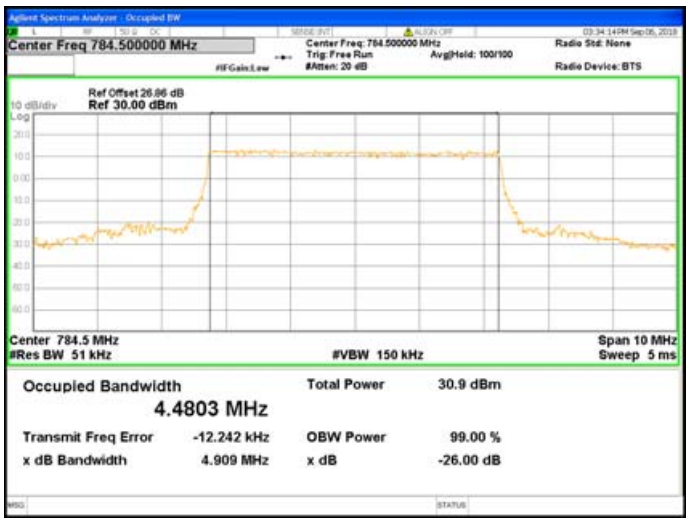
OBW 37-5 MHz-779.5-QPSK



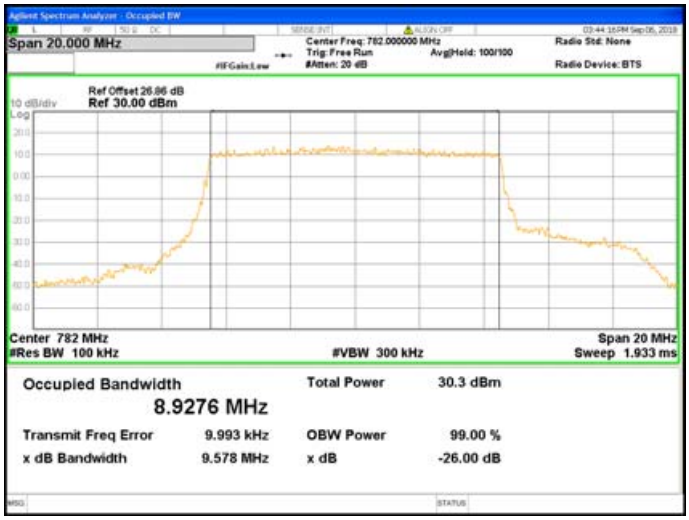
OBW 38-5 MHz-782-QPSK



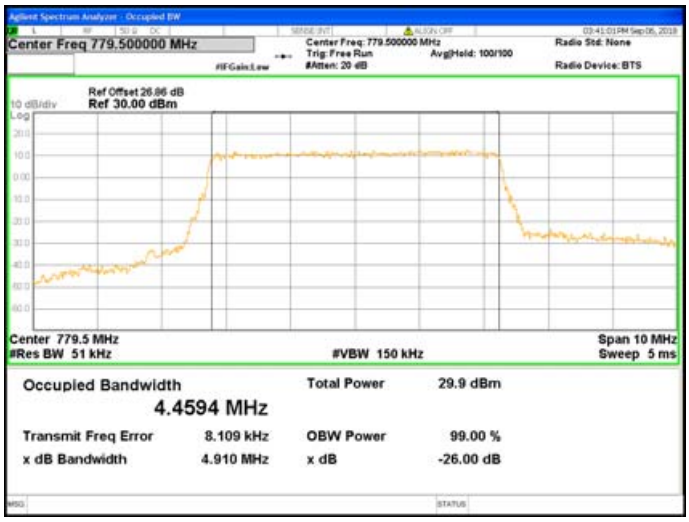
OBW 39-5 MHz-784.5-QPSK



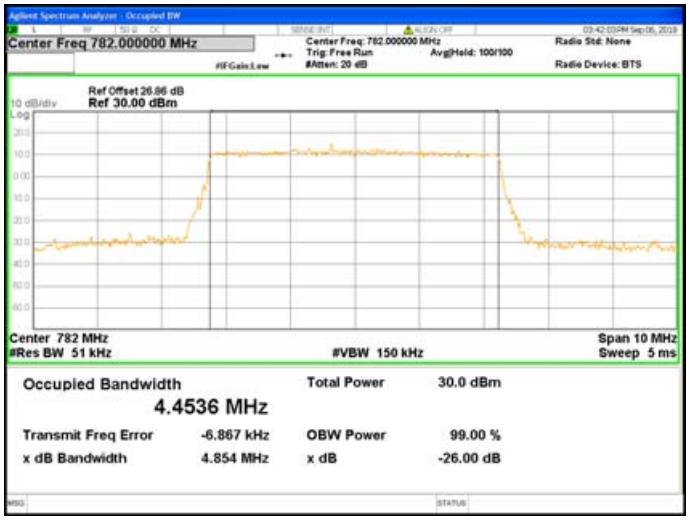
OBW 40-10 MHz-782-QPSK



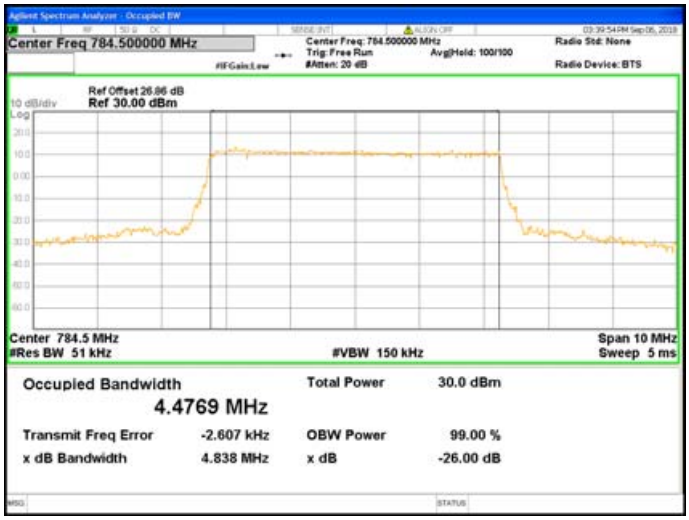
OBW 41-5 MHz-779.5-16QAM



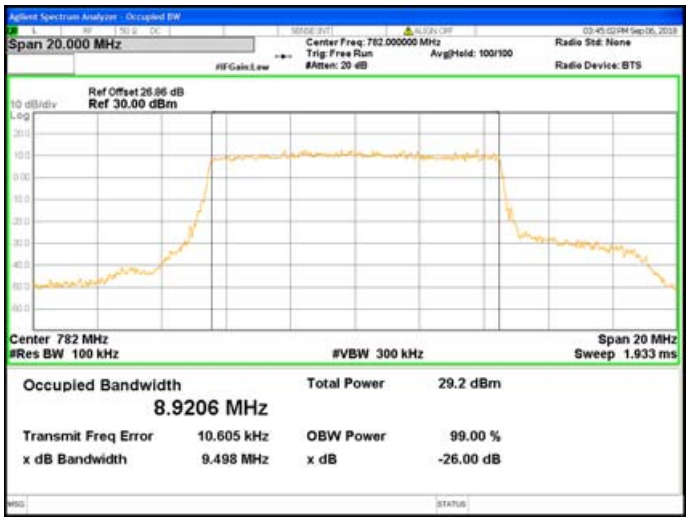
OBW 42-5 MHz-782-16QAM



OBW 43-5 MHz-784.5-16QAM



OBW 44-10 MHz-782-16QAM



5. Peak Excursion to Average Ratio

5.1 Test conditions

Temperature:	20	℃
Relative Humidity:	55	%
Atmospheric Pressure	1008	hPa

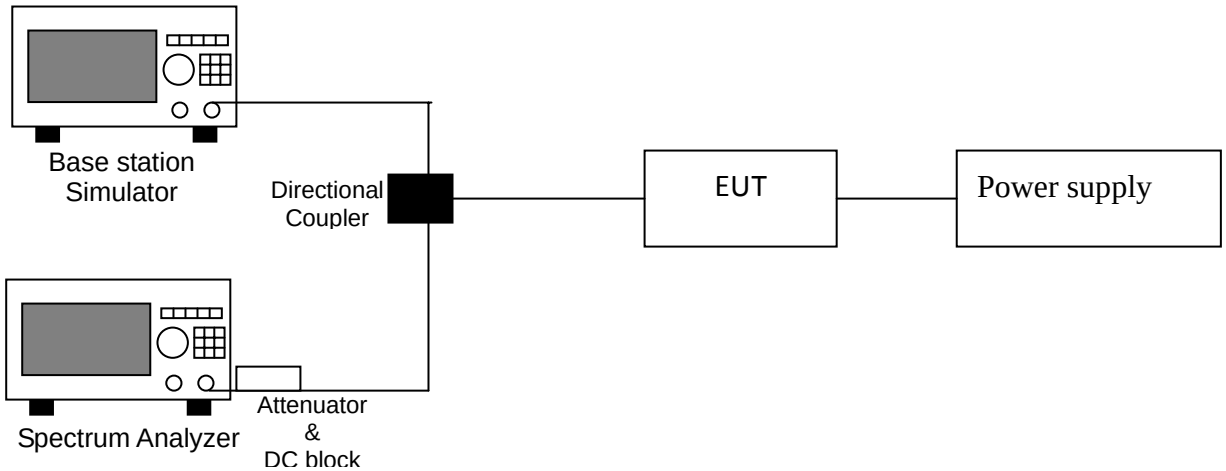
5.2 Limit for peak excursion to average ratio

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

5.3 Test procedure

1. Set resolution/measurement bandwidth ≥ 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%.

5.4 Test diagram



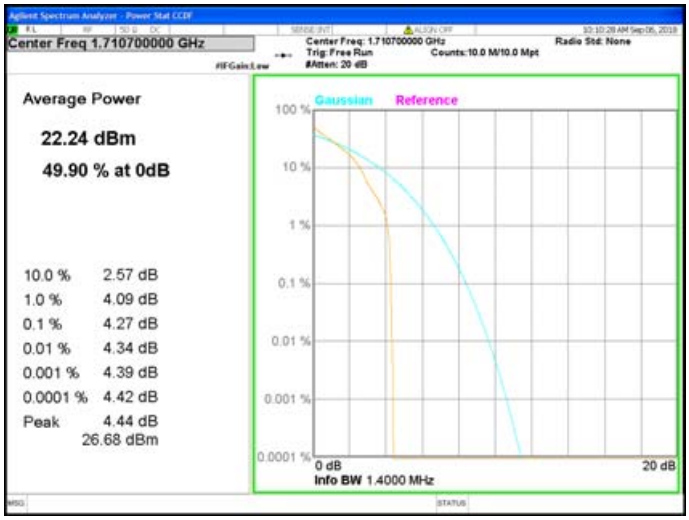
5.5 Test results

Operating Band	Bandwidth (MHz)	Frequency Range	Frequency (MHz)	Modulation method	RB (FDD)	PAPR (dB)	Limit (dB)	Test Plot
LTE Band 4	1.4MHz	Low Range	1710.7	QPSK	1	4.44	<13	1
		Low Range	1710.7		6	5.73	<13	2
	3MHz	Low Range	1711.5		1	4.5	<13	3
		Low Range	1711.5		15	5.82	<13	4
	5MHz	Low Range	1712.5		1	4.46	<13	5
		Low Range	1712.5		25	6.34	<13	6
	10MHz	Low Range	1715		1	4.37	<13	7
		Low Range	1715		50	6.37	<13	8
	15MHz	Low Range	1717.5		1	4.53	<13	9
		Low Range	1717.5		75	5.84	<13	10
	20MHz	Low Range	1720		1	4.3	<13	11
		Low Range	1720		100	6.35	<13	12
	1.4MHz	Low Range	1710.7	16-QAM	1	5.39	<13	13
		Low Range	1710.7		6	6.68	<13	14
	3MHz	Low Range	1711.5		1	5.52	<13	15
		Low Range	1711.5		15	7.17	<13	16
	5MHz	Low Range	1712.5		1	5.08	<13	17
		Low Range	1712.5		25	7.01	<13	18
	10MHz	Low Range	1715		1	5.34	<13	19
		Low Range	1715		50	7.14	<13	20
	15MHz	Low Range	1717.5		1	5.48	<13	21
		Low Range	1717.5		75	6.86	<13	22
	20MHz	Low Range	1720		1	5.31	<13	23
		Low Range	1720		100	7.39	<13	24
	1.4MHz	Mid Range	1732.5	QPSK	1	4.83	<13	25
		Mid Range	1732.5		6	5.84	<13	26
	3MHz	Mid Range	1732.5		1	4.9	<13	27
		Mid Range	1732.5		15	6.4	<13	28
	5MHz	Mid Range	1732.5		1	4.79	<13	29
		Mid Range	1732.5		25	6.2	<13	30
	10MHz	Mid Range	1732.5		1	4.99	<13	31
		Mid Range	1732.5		50	6.67	<13	32
	15MHz	Mid Range	1732.5		1	4.64	<13	33
		Mid Range	1732.5		75	6.19	<13	34
	20MHz	Mid Range	1732.5		1	4.66	<13	35
		Mid Range	1732.5		100	6.71	<13	36

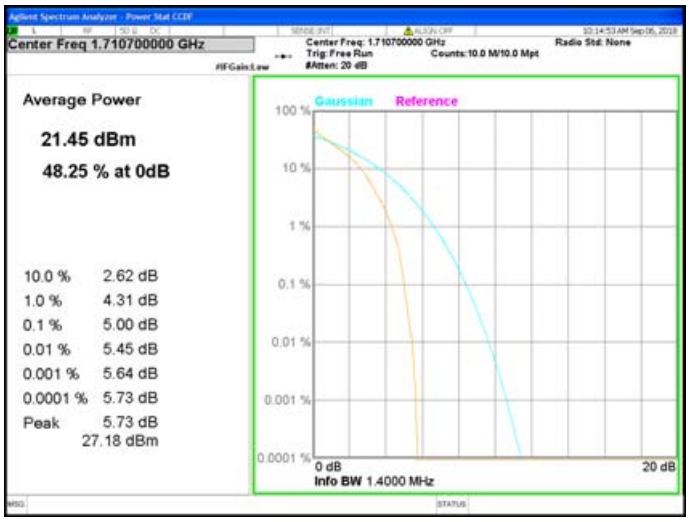
Operating Band	Bandwidth (MHz)	Frequency Range	Frequency (MHz)	Modulation method	RB (FDD)	PAPR (dB)	Limit (dB)	Test Plot
LTE Band 4	1.4MHz	Mid Range	1732.5	16-QAM	1	5.75	<13	37
		Mid Range	1732.5		6	7	<13	38
	3MHz	Mid Range	1732.5		1	5.87	<13	39
		Mid Range	1732.5		15	7.34	<13	40
	5MHz	Mid Range	1732.5		1	5.73	<13	41
		Mid Range	1732.5		25	7.32	<13	42
	10MHz	Mid Range	1732.5		1	5.73	<13	43
		Mid Range	1732.5		50	7.42	<13	44
	15MHz	Mid Range	1732.5		1	5.49	<13	45
		Mid Range	1732.5		75	7.04	<13	46
	20MHz	Mid Range	1732.5		1	5.49	<13	47
		Mid Range	1732.5		100	7.47	<13	48
	1.4MHz	High Range	1754.3	QPSK	1	4.55	<13	49
		High Range	1754.3		6	5.97	<13	50
	3MHz	High Range	1753.5		1	4.49	<13	51
		High Range	1753.5		15	6.26	<13	52
	5MHz	High Range	1752.5		1	4.42	<13	53
		High Range	1752.5		25	6.37	<13	54
	10MHz	High Range	1750		1	4.41	<13	55
		High Range	1750		50	6.25	<13	56
	15MHz	High Range	1747.5		1	4.35	<13	57
		High Range	1747.5		75	5.87	<13	58
	20MHz	High Range	1745		1	4.62	<13	59
		High Range	1745		100	6.31	<13	60
	1.4MHz	High Range	1754.3	16-QAM	1	5.39	<13	61
		High Range	1754.3		6	6.86	<13	62
	3MHz	High Range	1753.5		1	5.4	<13	63
		High Range	1753.5		15	6.94	<13	64
	5MHz	High Range	1752.5		1	5.15	<13	65
		High Range	1752.5		25	7.2	<13	66
	10MHz	High Range	1750		1	5.48	<13	67
		High Range	1750		50	6.95	<13	68
	15MHz	High Range	1747.5		1	5.24	<13	69
		High Range	1747.5		75	6.77	<13	70
	20MHz	High Range	1745		1	5.68	<13	71
		High Range	1745		100	7.15	<13	72

Operating Band	Bandwidth (MHz)	Frequency Range	Frequency (MHz)	Modulation method	RB (FDD)	PAPR (dB)	Limit (dB)	Test Plot
LTE Band 13	5MHz	Low Range	779.5	QPSK	1	3.76	<13	73
		Low Range	779.5		25	5.81	<13	74
		Low Range	779.5	16-QAM	1	4.6	<13	75
		Low Range	779.5		25	6.96	<13	76
		Mid Range	782	QPSK	1	4.57	<13	77
		Mid Range	782		25	6.04	<13	78
		Mid Range	782	16-QAM	1	5.66	<13	79
		Mid Range	782		25	6.97	<13	80
		High Range	784.5	QPSK	1	4.23	<13	81
		High Range	784.5		25	6.56	<13	82
		High Range	784.5	16-QAM	1	4.95	<13	83
		High Range	784.5		25	7.23	<13	84
	10MHz	L/M/H Range	782	QPSK	1	4.06	<13	85
		L/M/H Range	782		50	6.48	<13	86
		L/M/H Range	782	16-QAM	1	5.03	<13	87
		L/M/H Range	782		50	7.33	<13	88

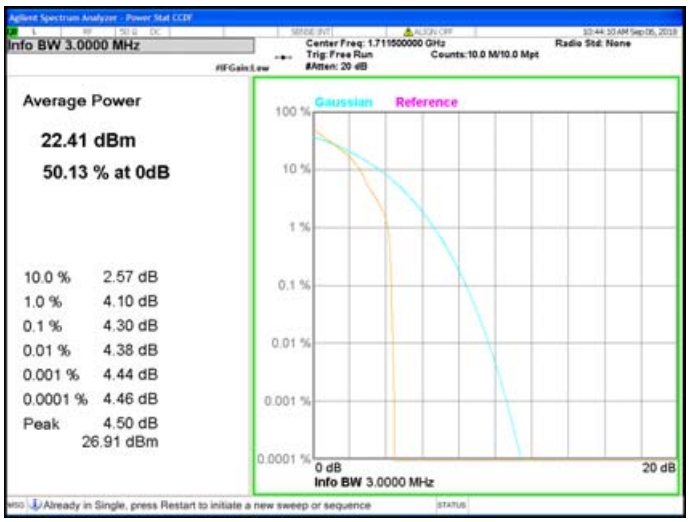
PAR 01-1.4 MHz-1 RB-1710.7-QPSK



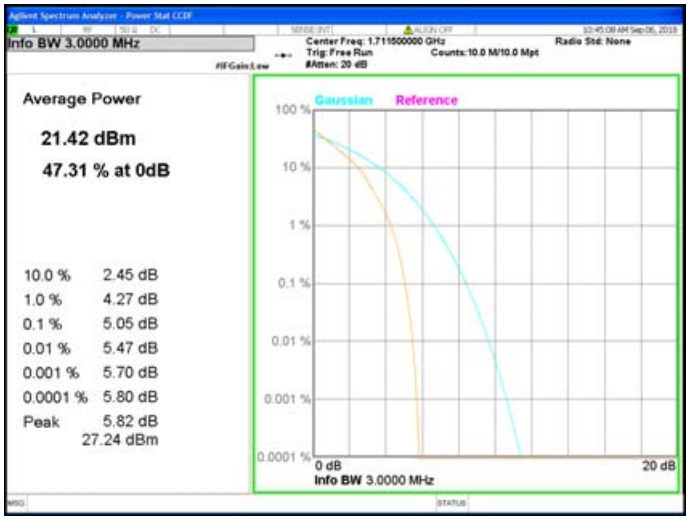
PAR 02-1.4 MHz-6 RB-1710.7-QPSK



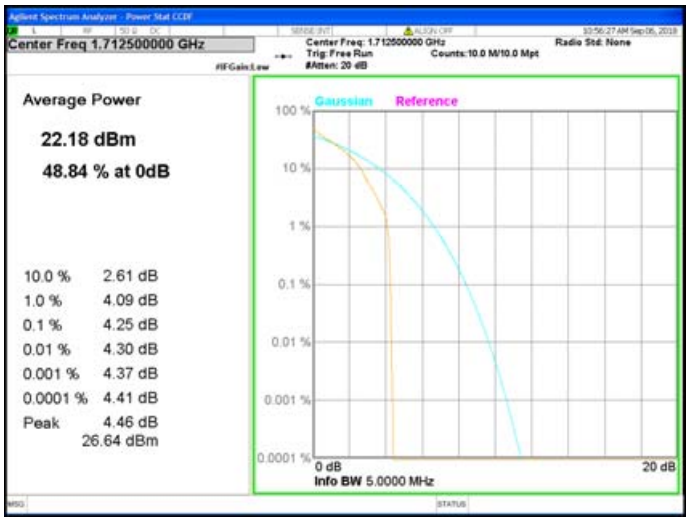
PAR 03-3 MHz-1 RB-1711.5-QPSK



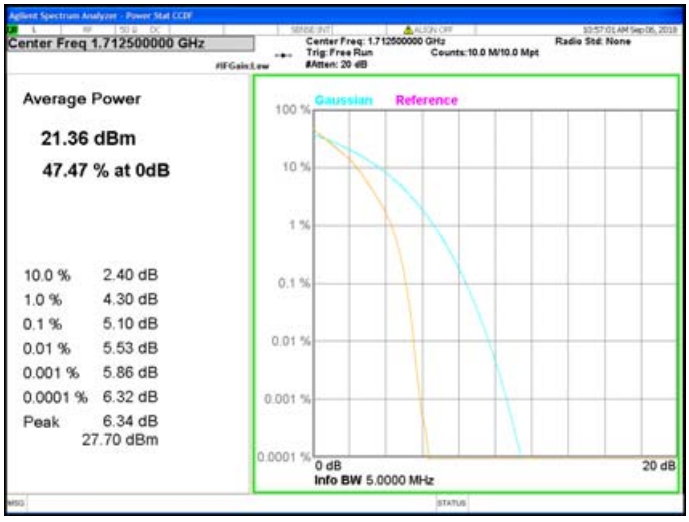
PAR 04-3 MHz-15 RB-1711.5-QPSK



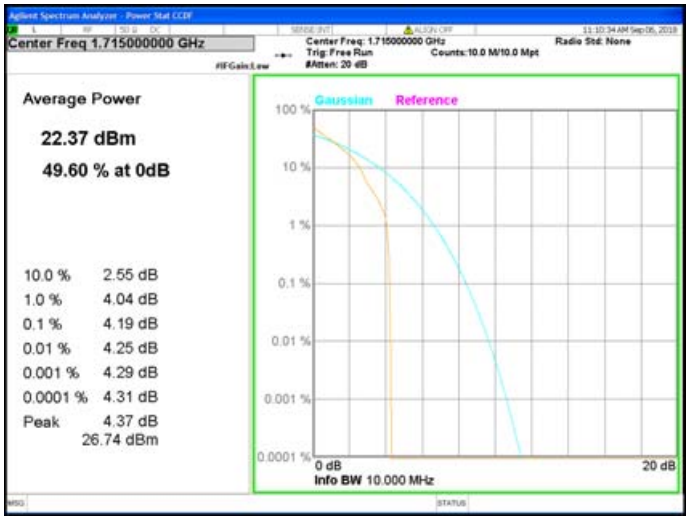
PAR 05-5 MHz-1 RB-1712.5-QPSK



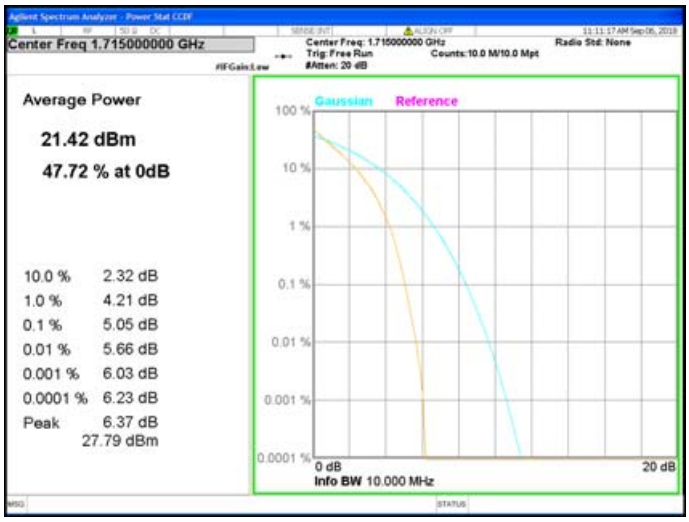
PAR 06-5 MHz-25 RB-1712.5-QPSK



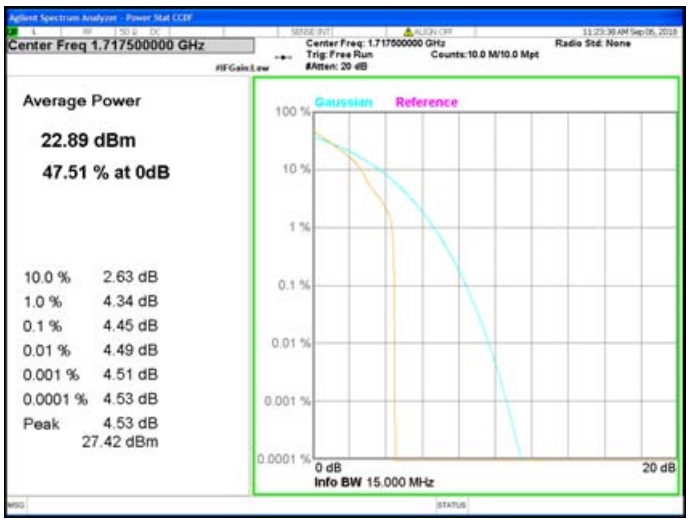
PAR 07-10 MHz-1 RB-1715-QPSK



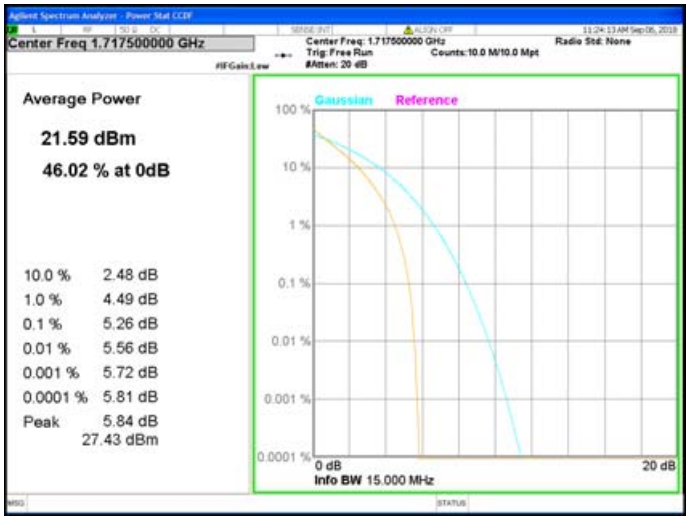
PAR 08-10 MHz-50 RB-1715-QPSK



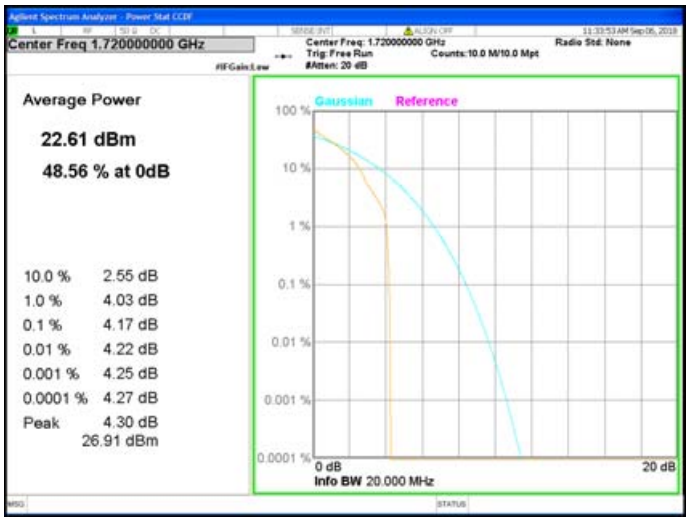
PAR 09-15 MHz-1 RB-1717.5-QPSK



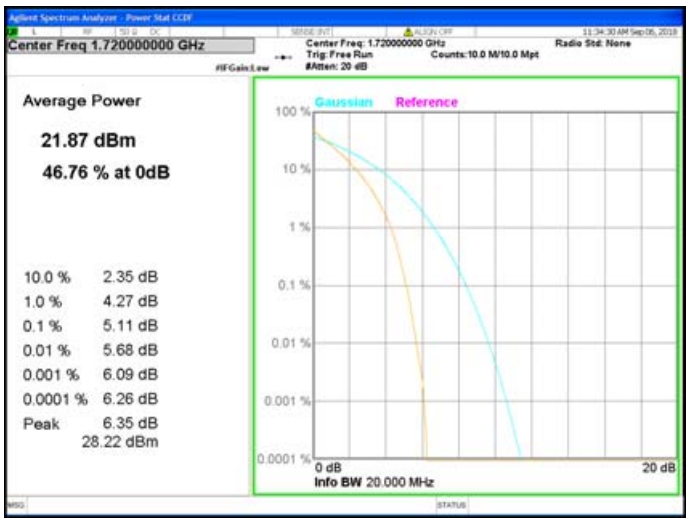
PAR 10-15 MHz-75 RB-1717.5-QPSK



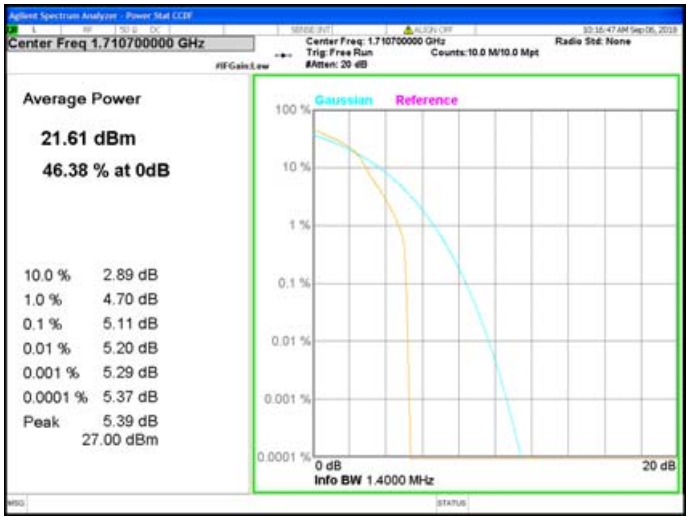
PAR 11-20 MHz-1 RB-1720-QPSK



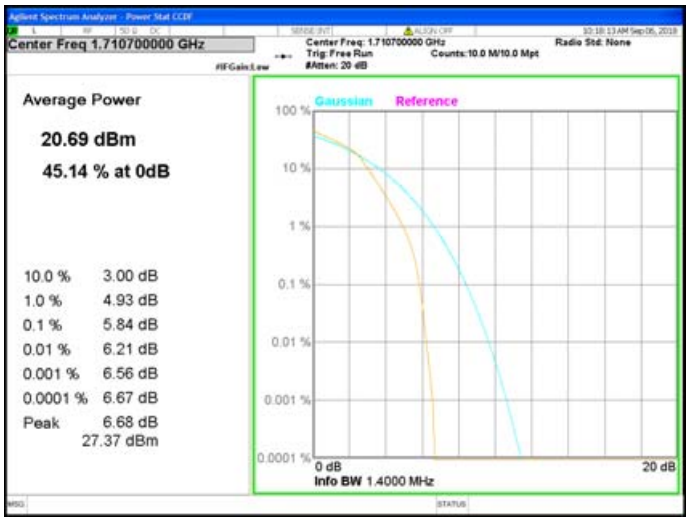
PAR 12-20 MHz-100 RB-1720-QPSK



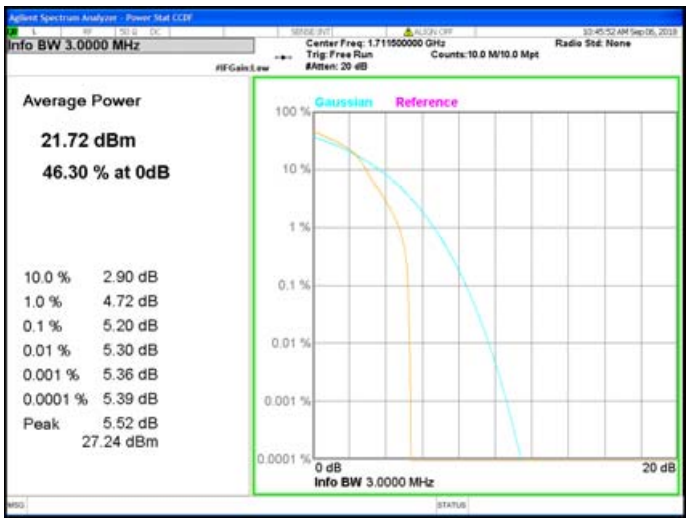
PAR 13-1.4 MHz-1 RB-1710.7-16QAM



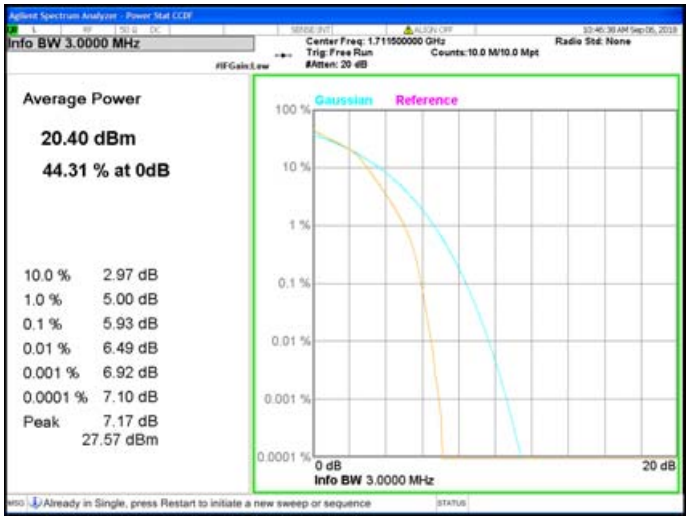
PAR 14-1.4 MHz-6 RB-1710.7-16QAM



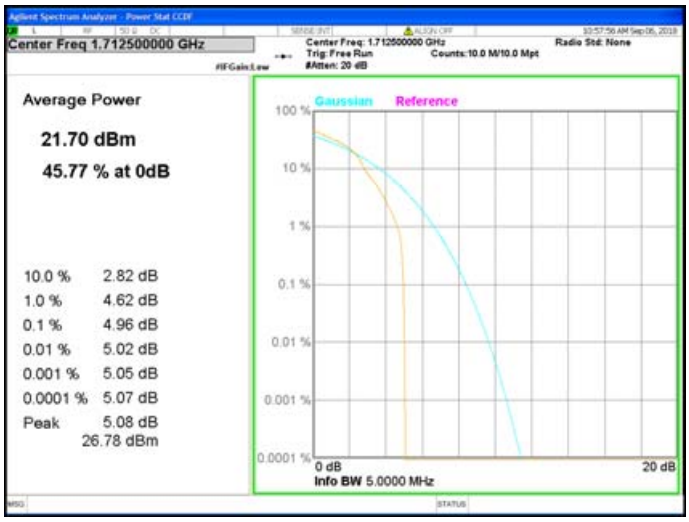
PAR 15-3 MHz-1 RB-1711.5-16QAM



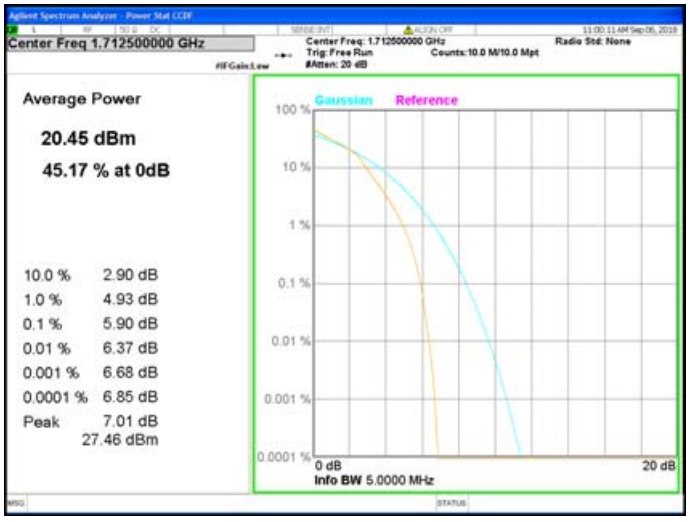
PAR 16-3 MHz-15 RB-1711.5-16QAM



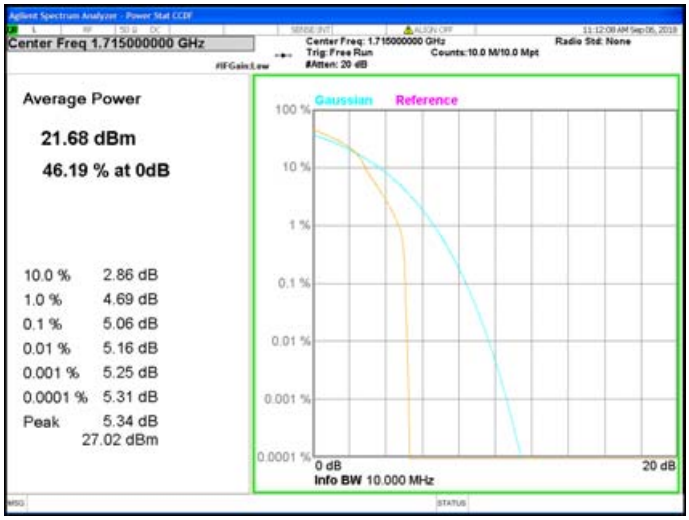
PAR 17-5 MHz-1 RB-1712.5-16QAM



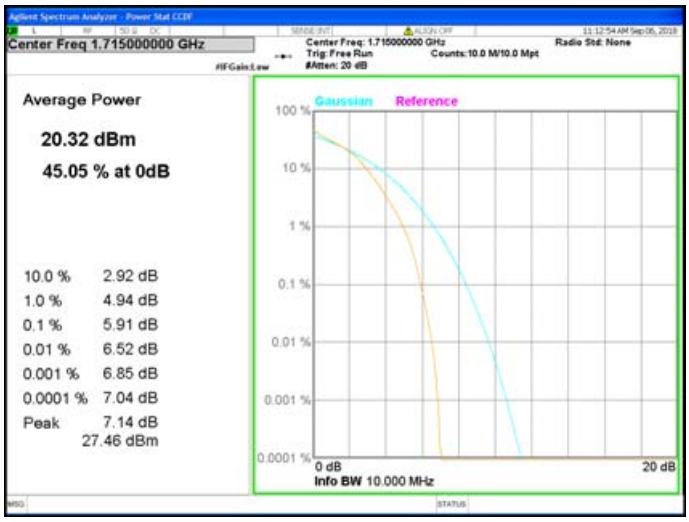
PAR 18-5 MHz-25 RB-1712.5-16QAM



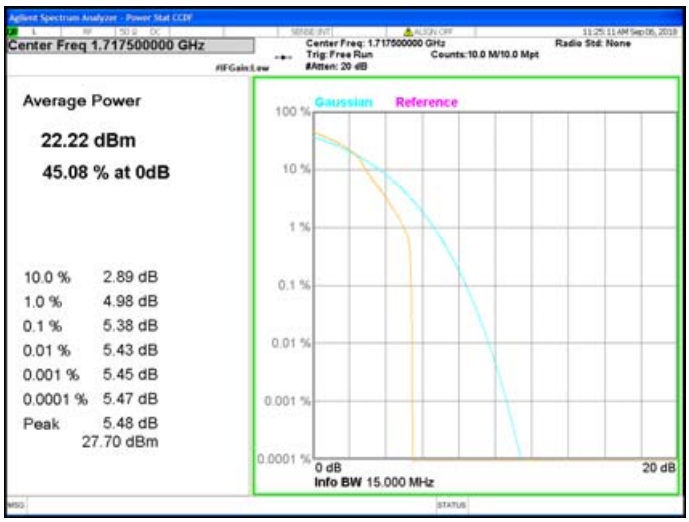
PAR 19-10 MHz-1 RB-1715-16QAM



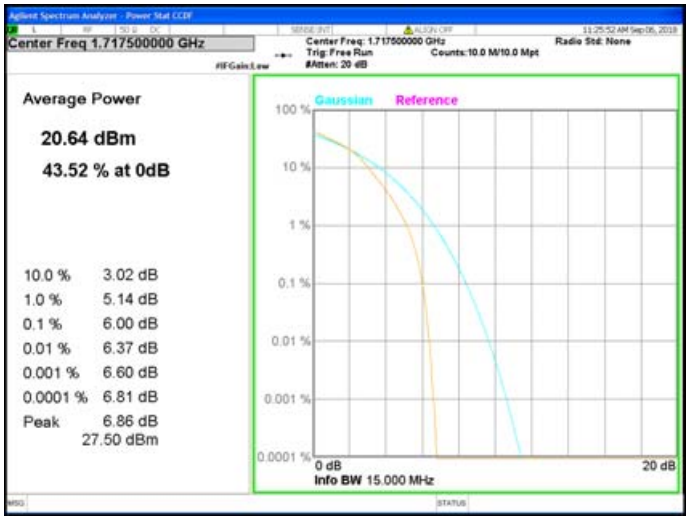
PAR 20-10 MHz-50 RB-1715-16QAM



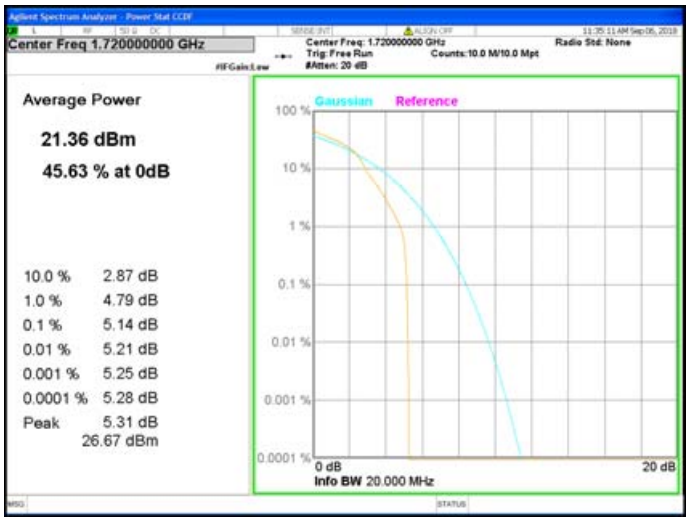
PAR 21-15 MHz-1 RB-1717.5-16QAM



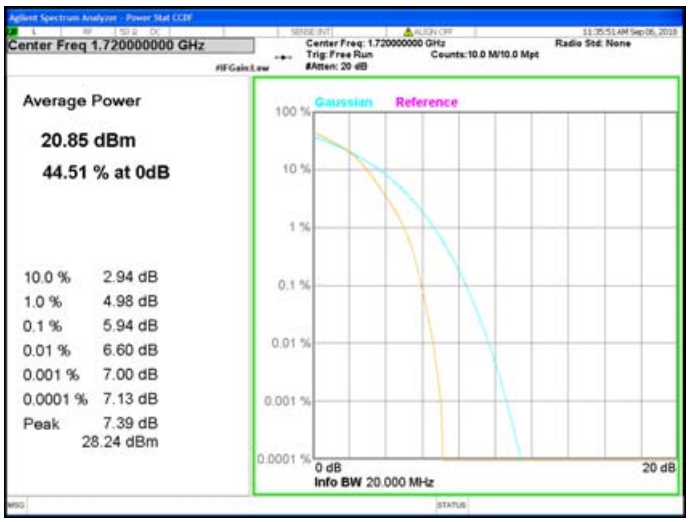
PAR 22-15 MHz-75 RB-1717.5-16QAM



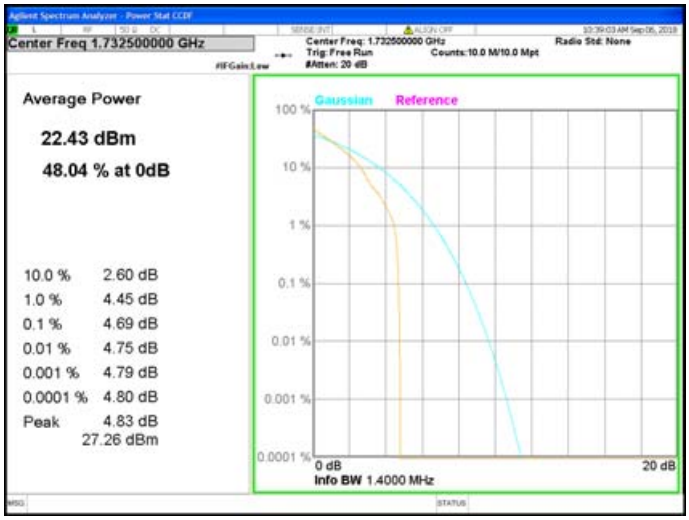
PAR 23-20 MHz-1 RB-1720-16QAM



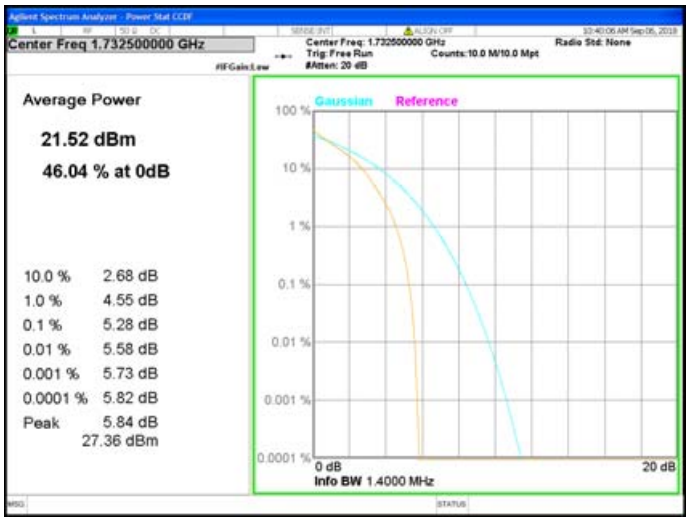
PAR 24-20 MHz-100 RB-1720-16QAM



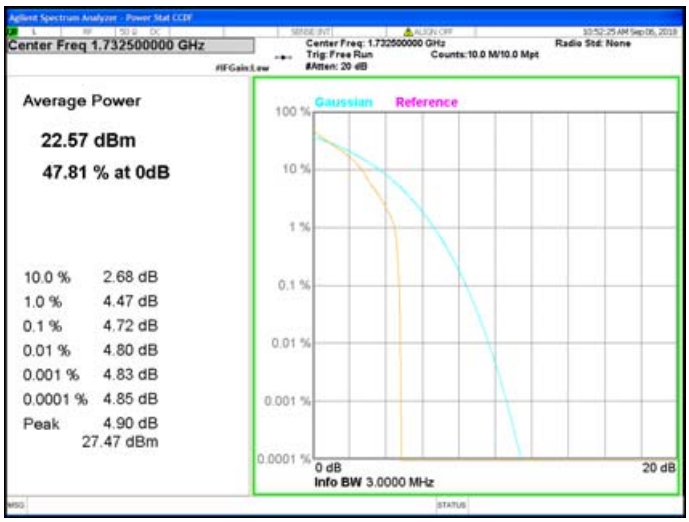
PAR 25-1.4 MHz-1 RB-1732.5-QPSK



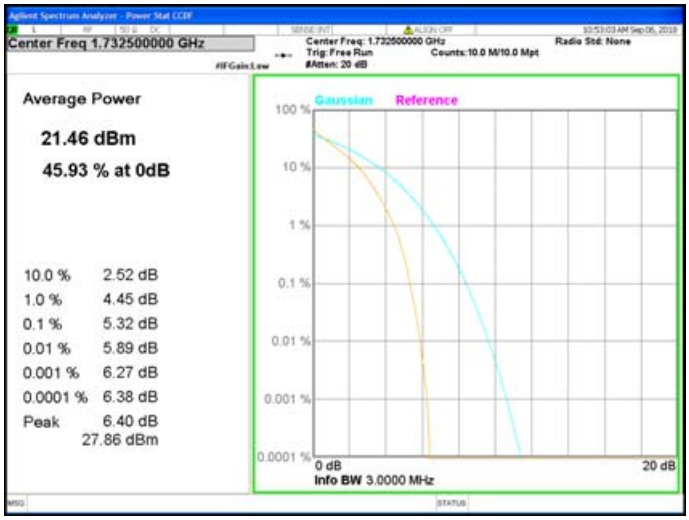
PAR 26-1.4 MHz-6 RB-1732.5-QPSK



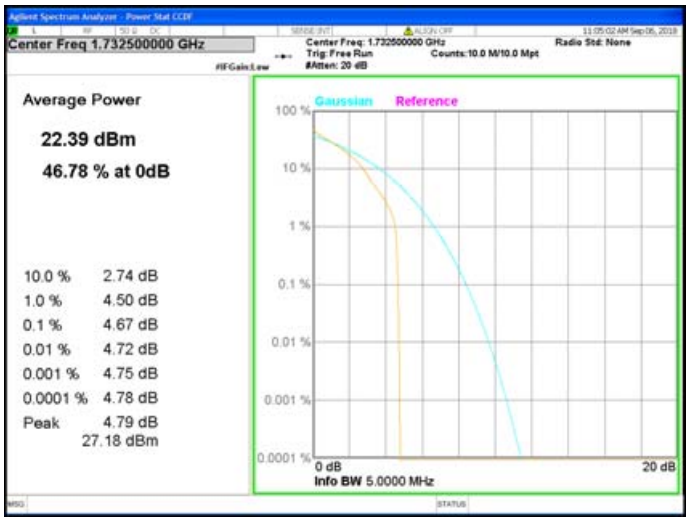
PAR 27-3 MHz-1 RB-1732.5-QPSK



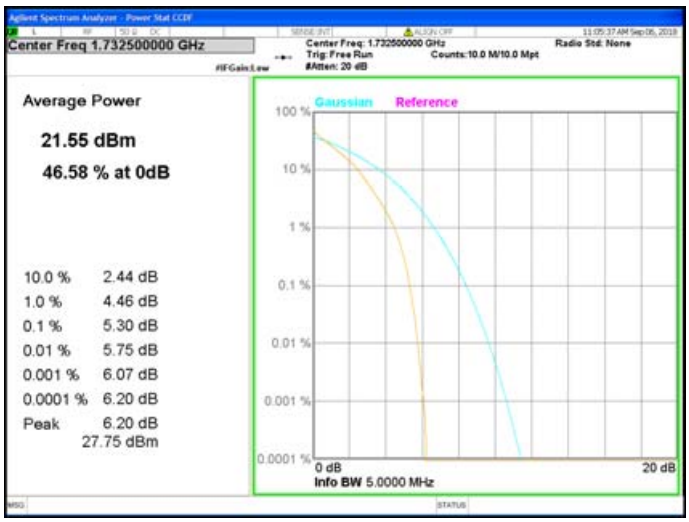
PAR 28-3 MHz-15 RB-1732.5-QPSK



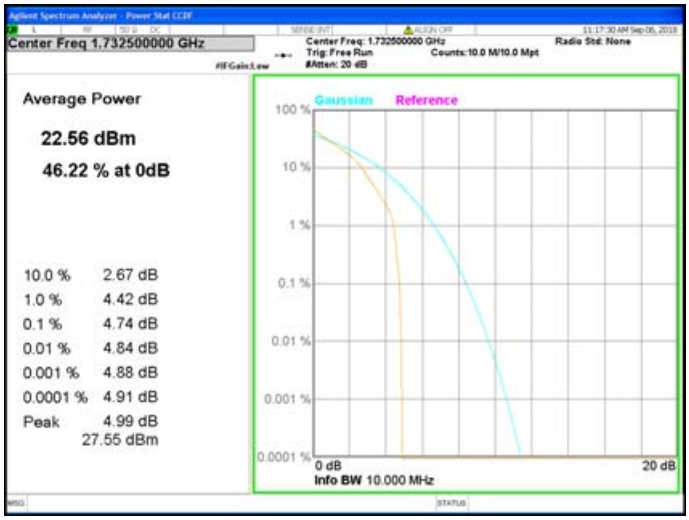
PAR 29-5 MHz-1 RB-1732.5-QPSK



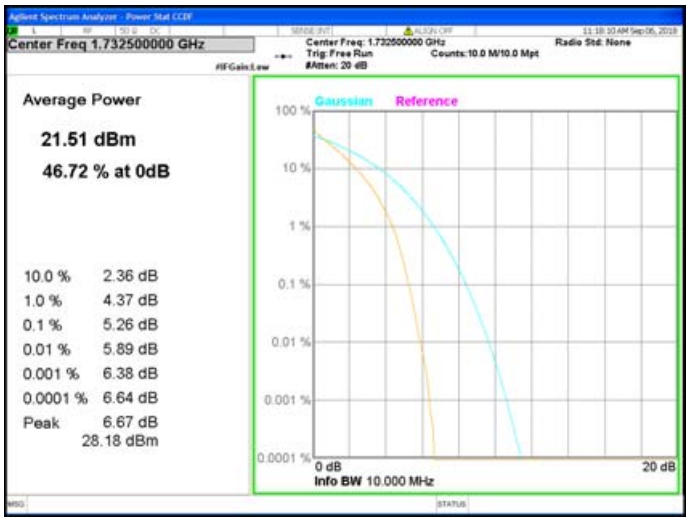
PAR 30-5 MHz-25 RB-1732.5-QPSK



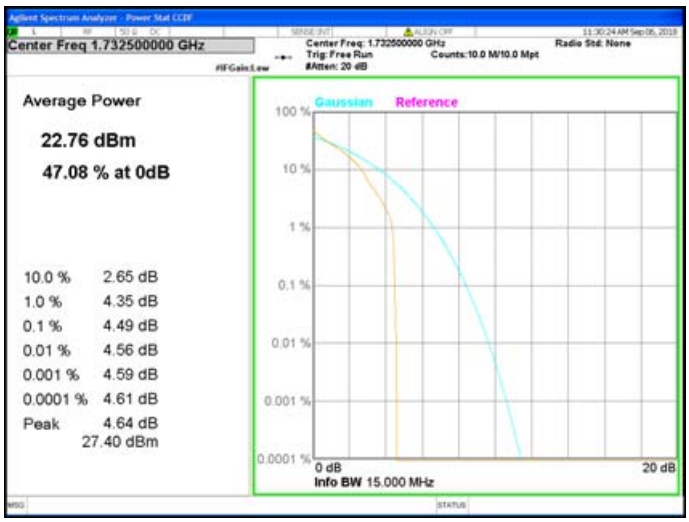
PAR 31-10 MHz-1 RB-1732.5-QPSK



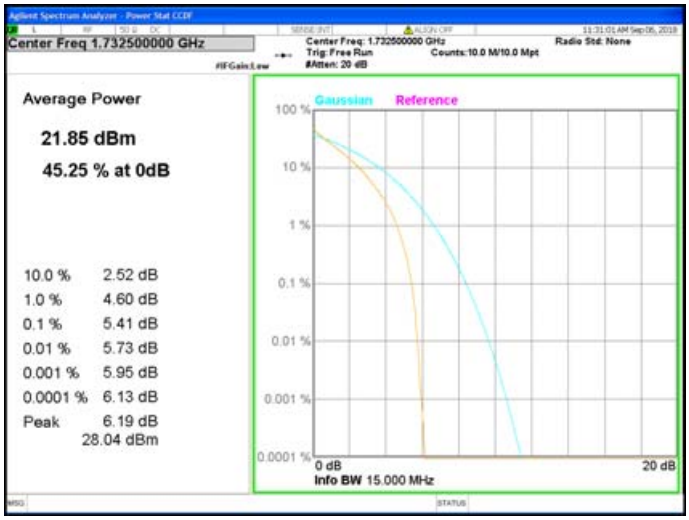
PAR 32-10 MHz-50 RB-1732.5-QPSK



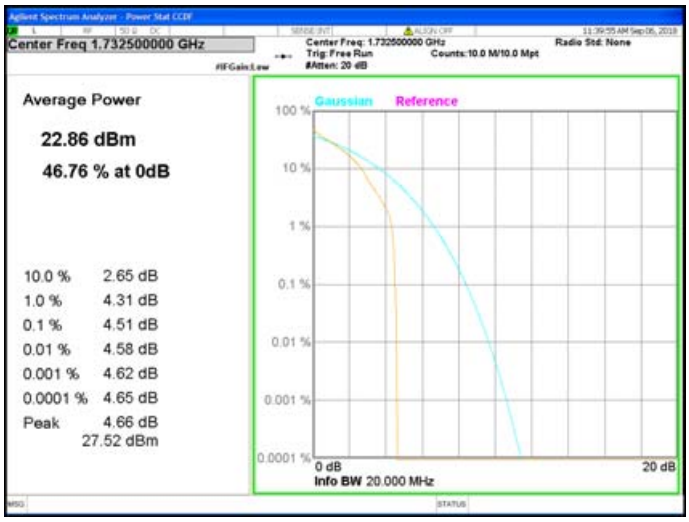
PAR 33-15 MHz-1 RB-1732.5-QPSK



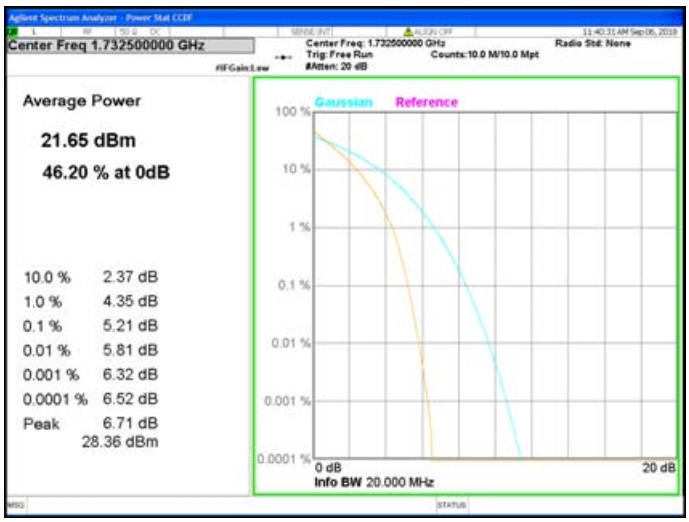
PAR 34-15 MHz-75 RB-1732.5-QPSK



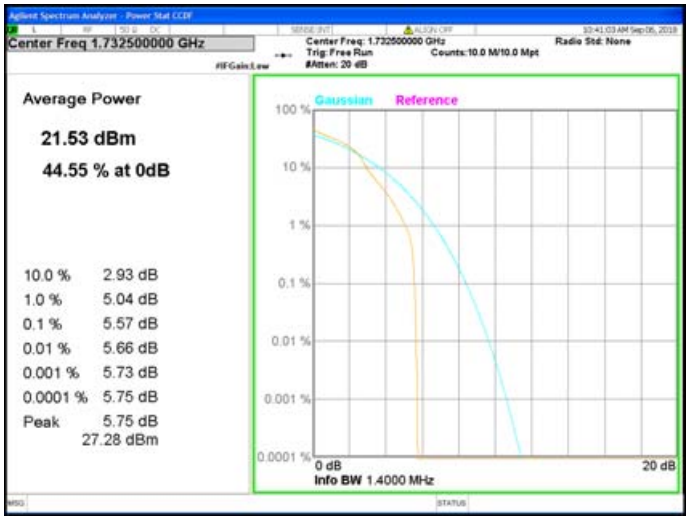
PAR 35-20 MHz-1 RB-1732.5-QPSK



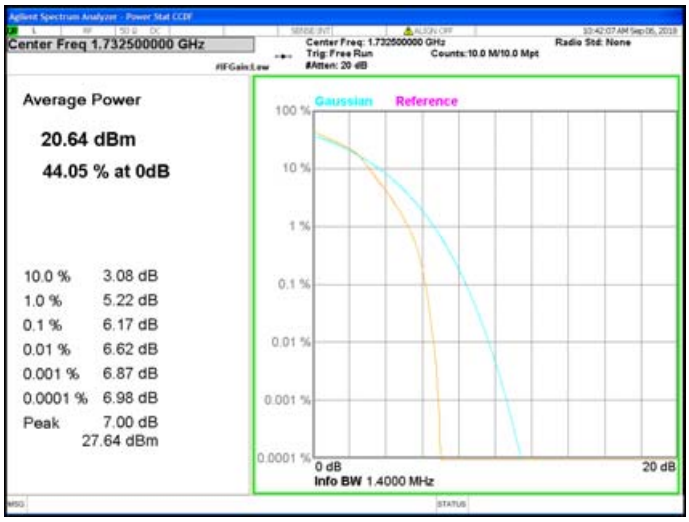
PAR 36-20 MHz-100 RB-1732.5-QPSK



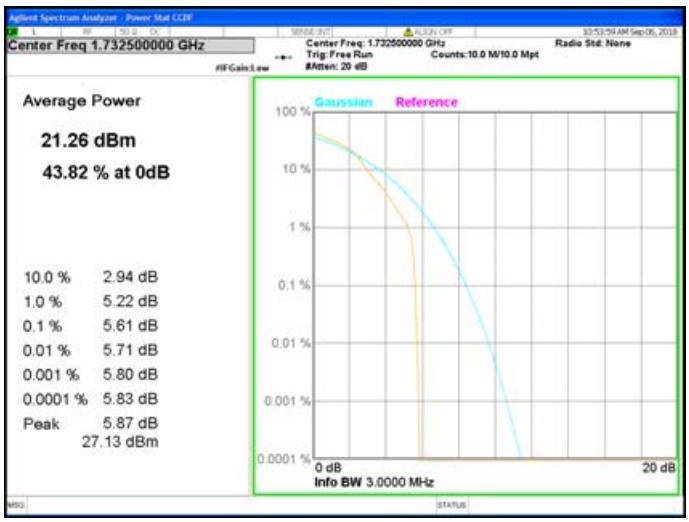
PAR 37-1.4 MHz-1 RB-1732.5-16QAM



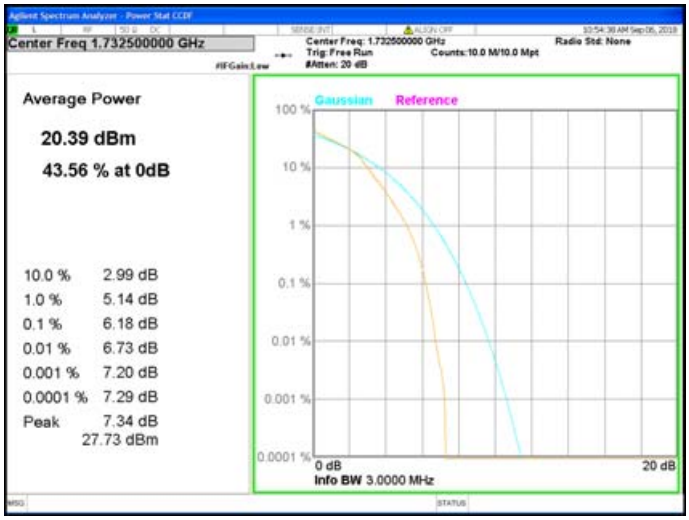
PAR 38-1.4 MHz-6 RB-1732.5-16QAM



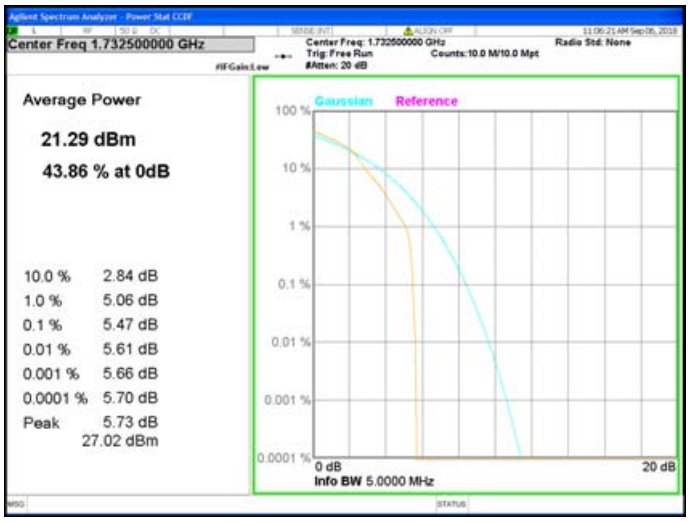
PAR 39-3 MHz-1 RB-1732.5-16QAM



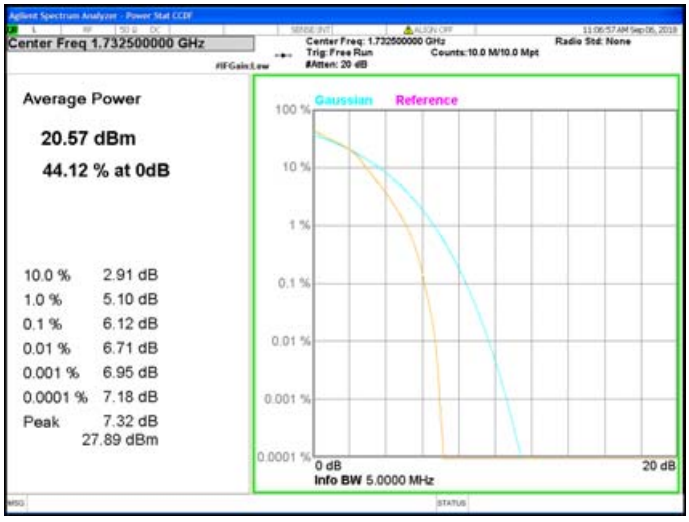
PAR 40-3 MHz-15 RB-1732.5-16QAM



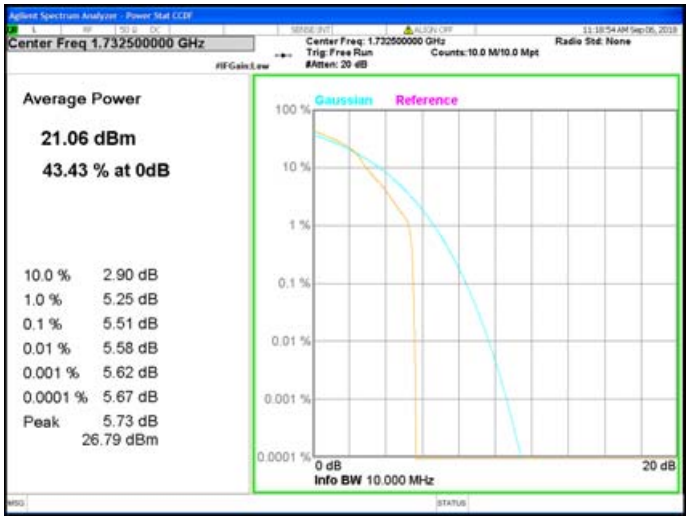
PAR 41-5 MHz-1 RB-1732.5-16QAM



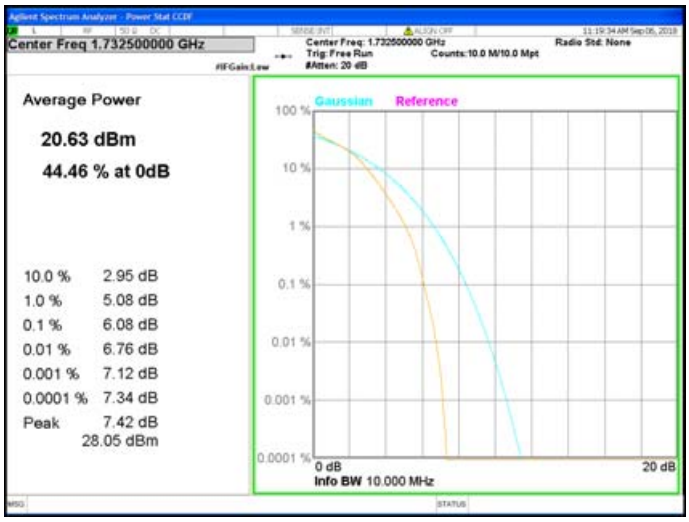
PAR 42-5 MHz-25 RB-1732.5-16QAM



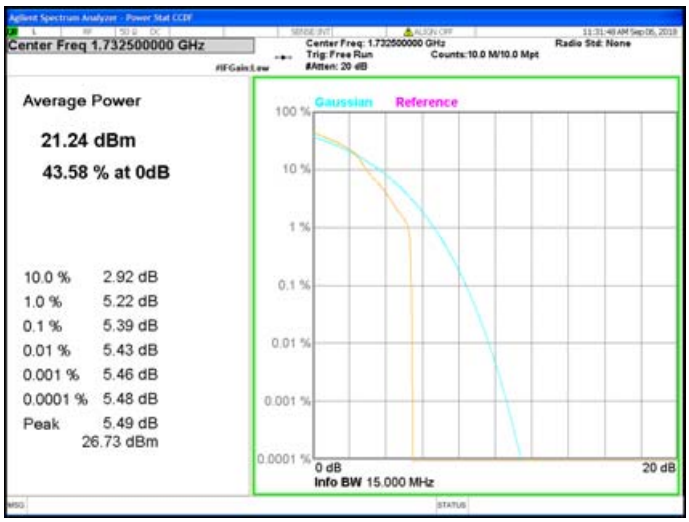
PAR 43-10 MHz-1 RB-1732.5-16QAM



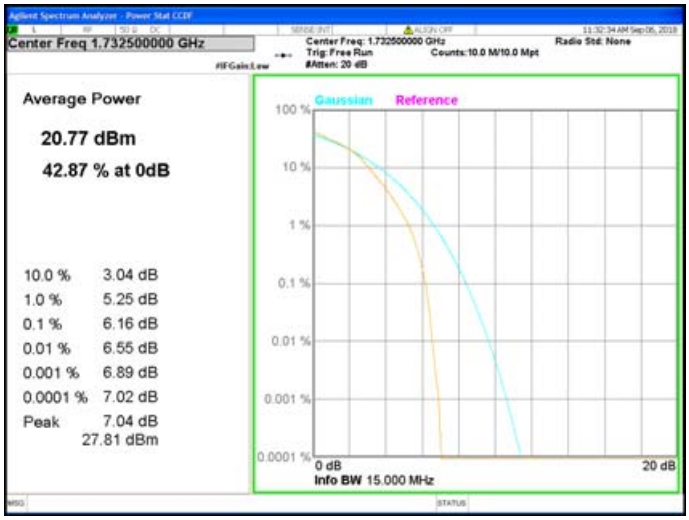
PAR 44-10 MHz-50 RB-1732.5-16QAM



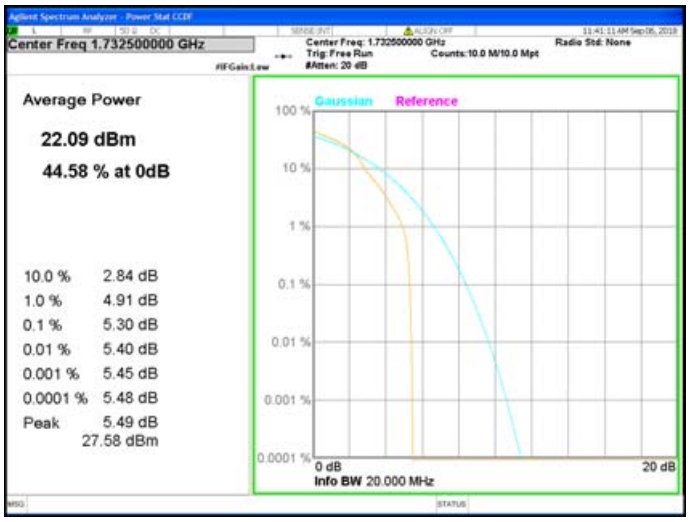
PAR 45-15 MHz-1 RB-1732.5-16QAM



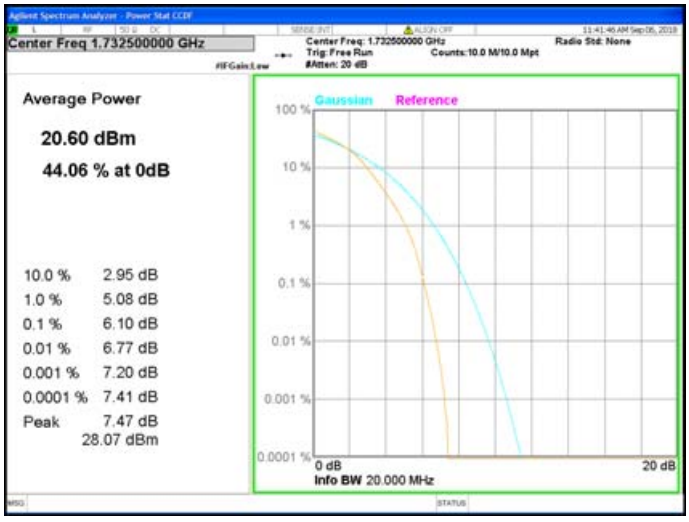
PAR 46-15 MHz-75 RB-1732.5-16QAM



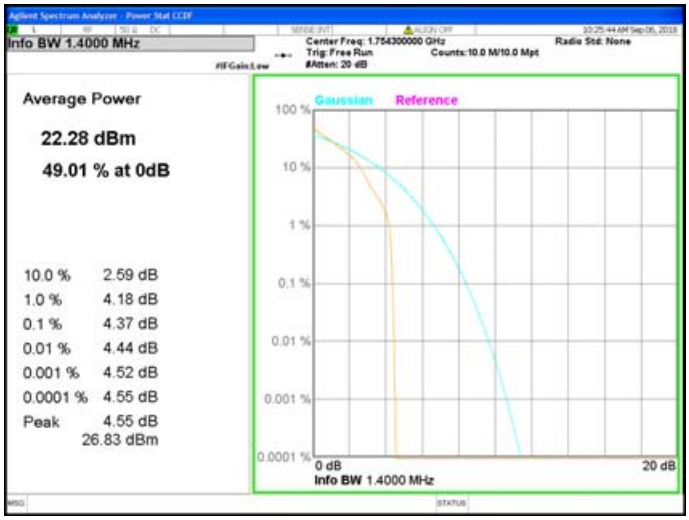
PAR 47-20 MHz-1 RB-1732.5-16QAM



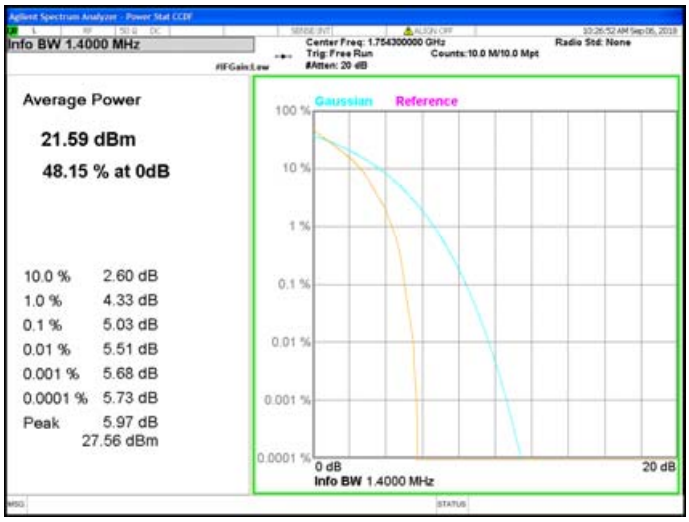
PAR 48-20 MHz-100 RB-1732.5-16QAM



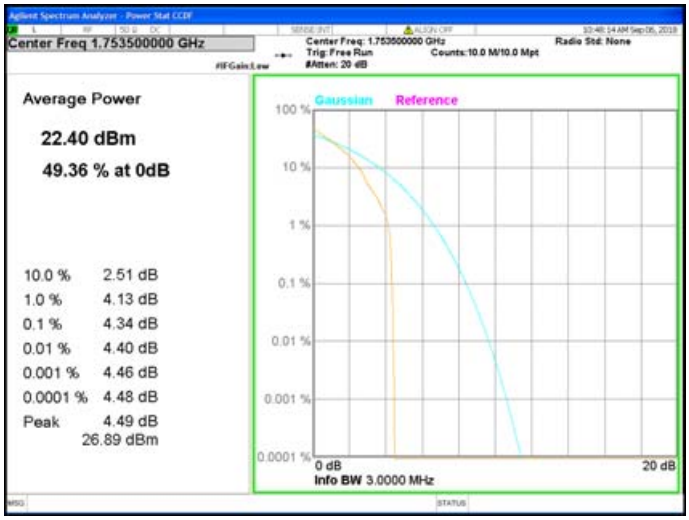
PAR 49-1.4 MHz-1 RB-1754.3-QPSK



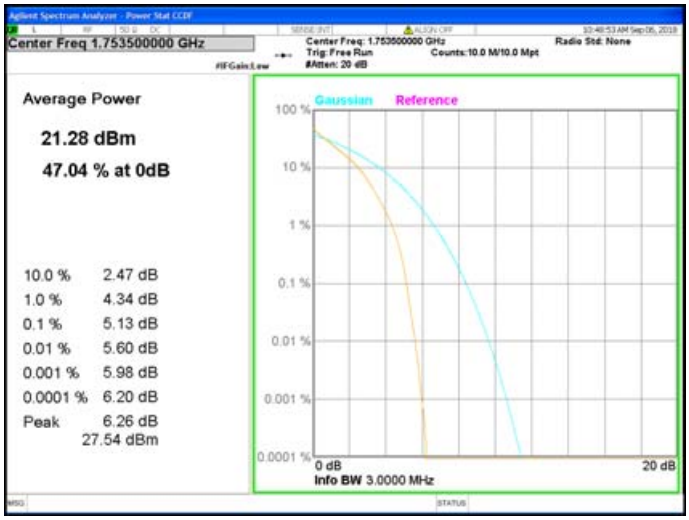
PAR 50-1.4 MHz-6 RB-1754.3-QPSK



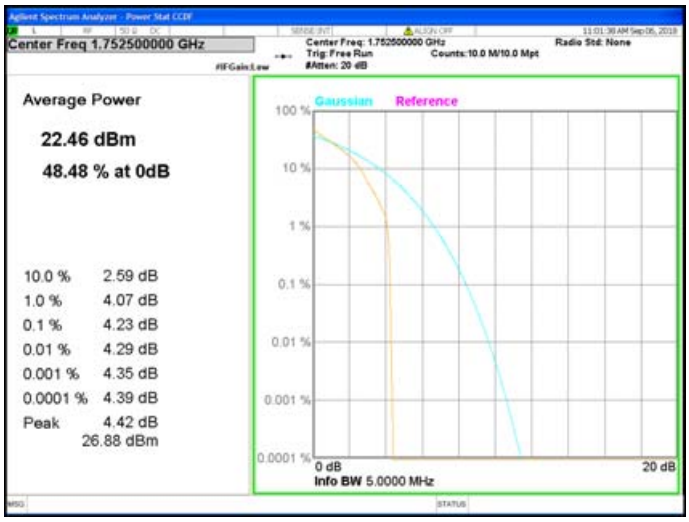
PAR 51-3 MHz-1 RB-1753.5-QPSK



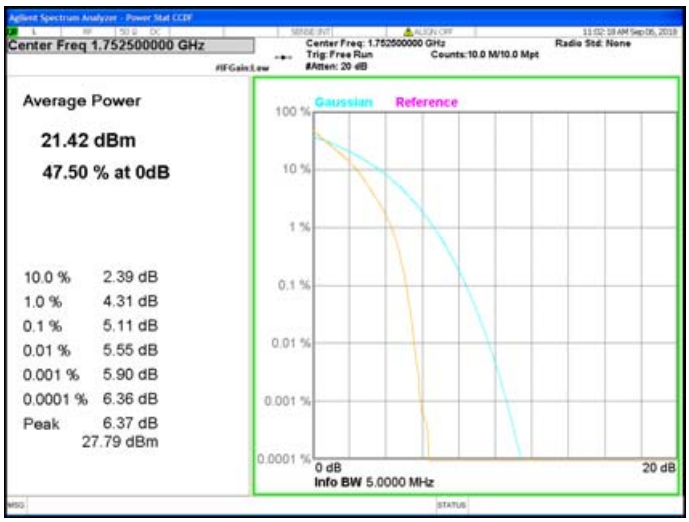
PAR 52-3 MHz-15 RB-1753.5-QPSK



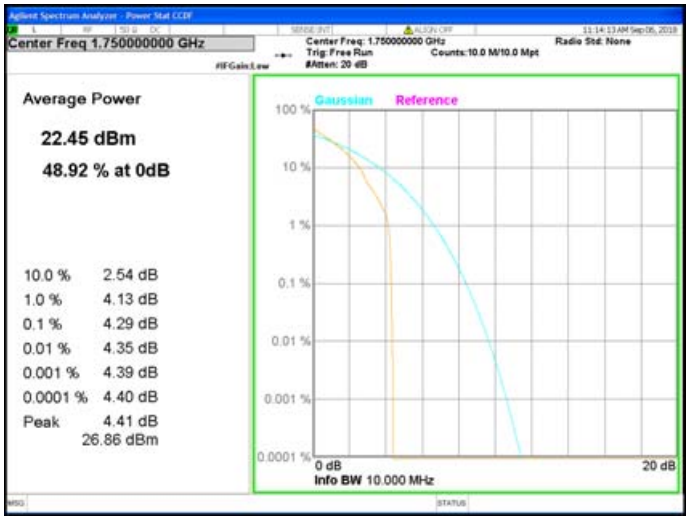
PAR 53-5 MHz-1 RB-1752.5-QPSK



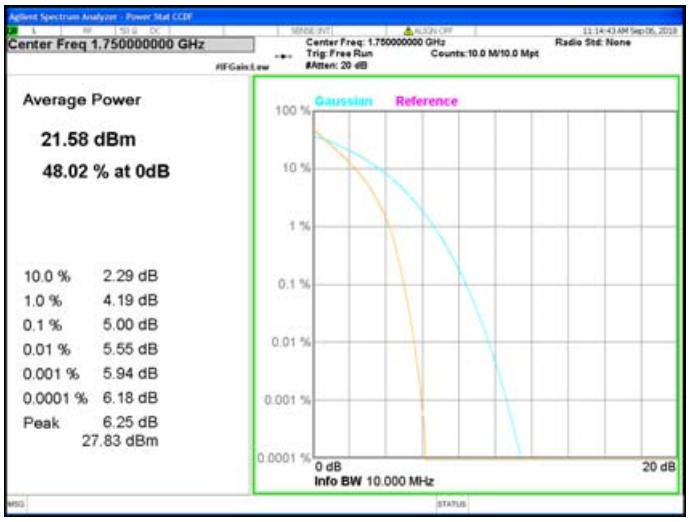
PAR 54-5 MHz-25 RB-1752.5-QPSK



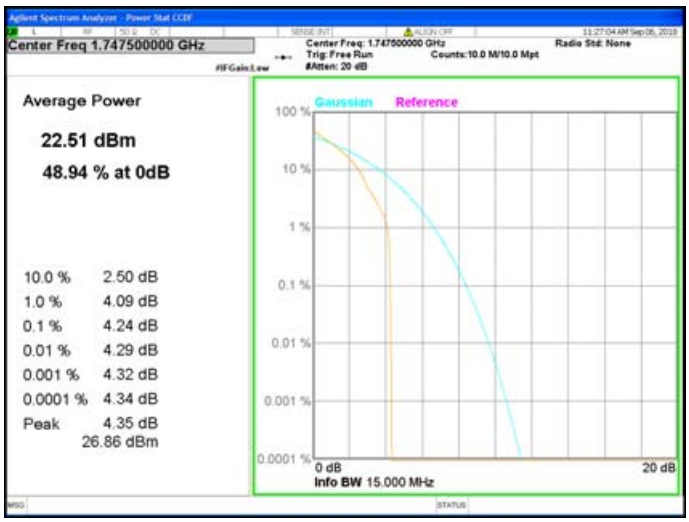
PAR 55-10 MHz-1 RB-1750-QPSK



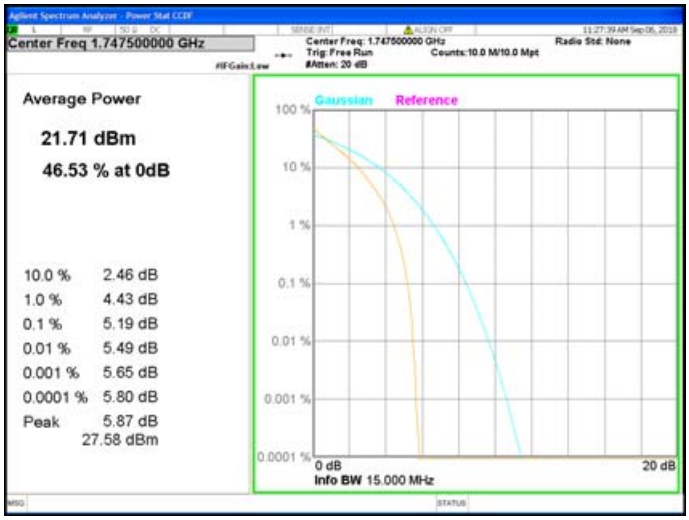
PAR 56-10 MHz-50 RB-1750-QPSK



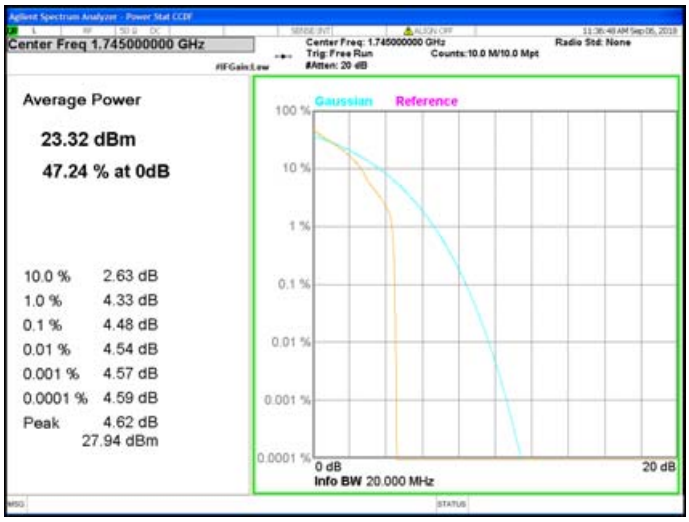
PAR 57-15 MHz-1 RB-1747.5-QPSK



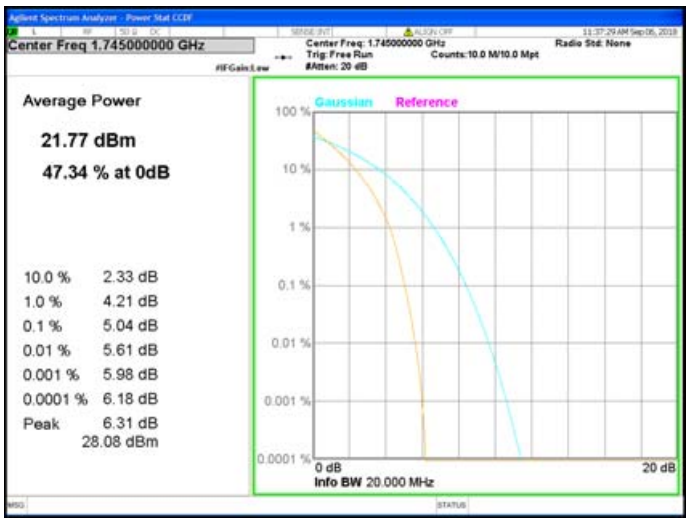
PAR 58-15 MHz-75 RB-1747.5-QPSK



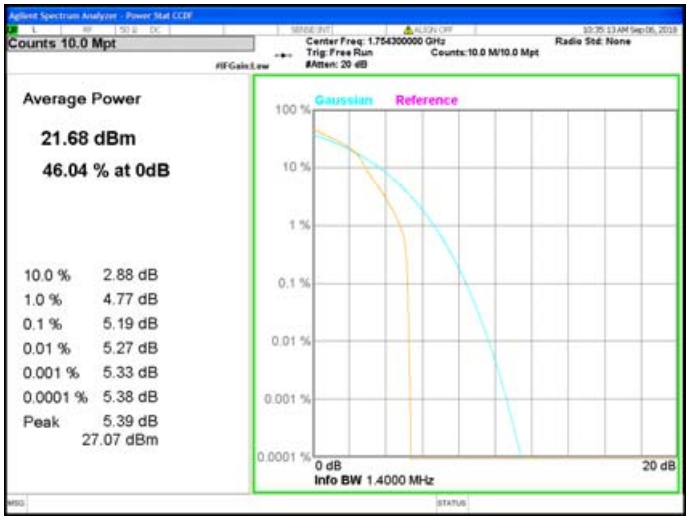
PAR 59-20 MHz-1 RB-1745-QPSK



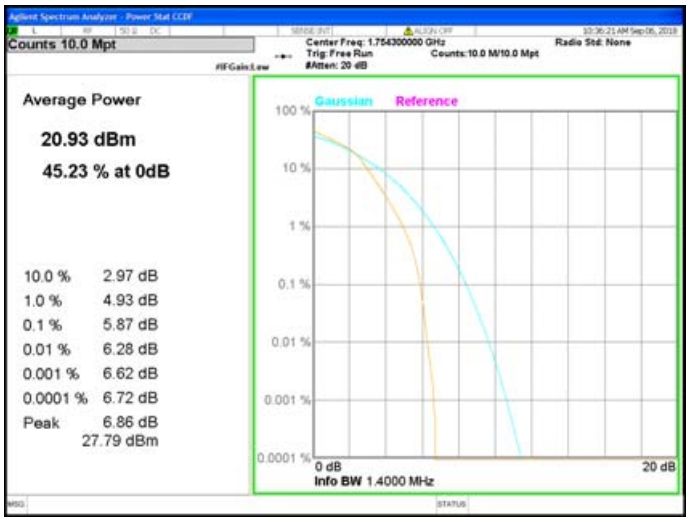
PAR 60-20 MHz-100 RB-1745-QPSK



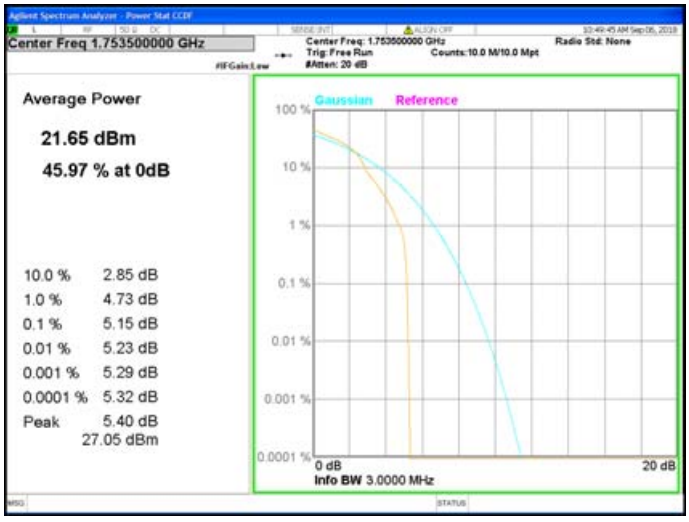
PAR 61-1.4 MHz-1 RB-1754.3-16QAM



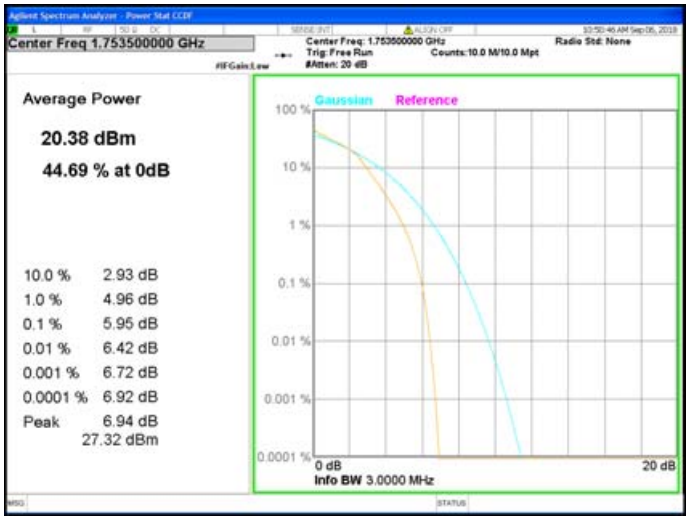
PAR 62-1.4 MHz-6 RB-1754.3-16QAM



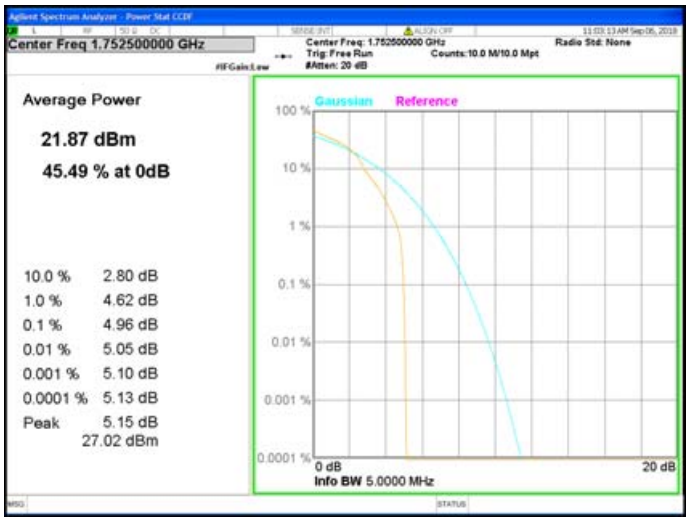
PAR 63-3 MHz-1 RB-1753.5-16QAM



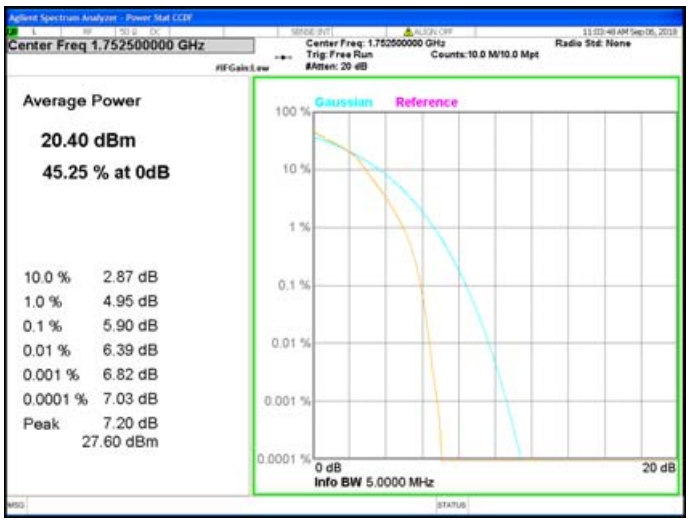
PAR 64-3 MHz-15 RB-1753.5-16QAM



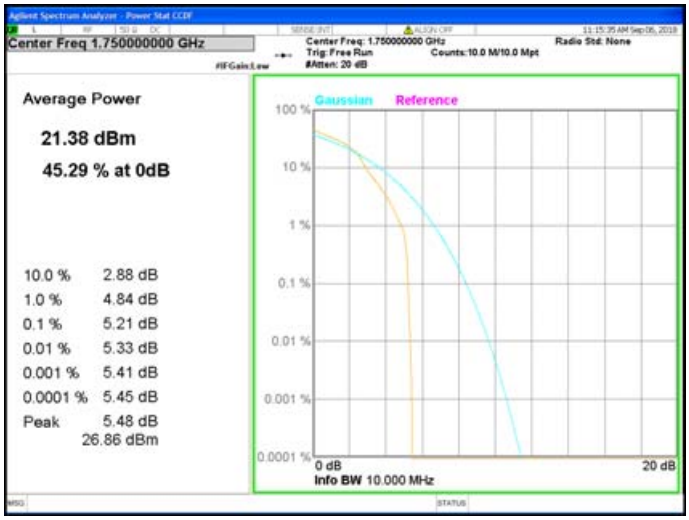
PAR 65-5 MHz-1 RB-1752.5-16QAM



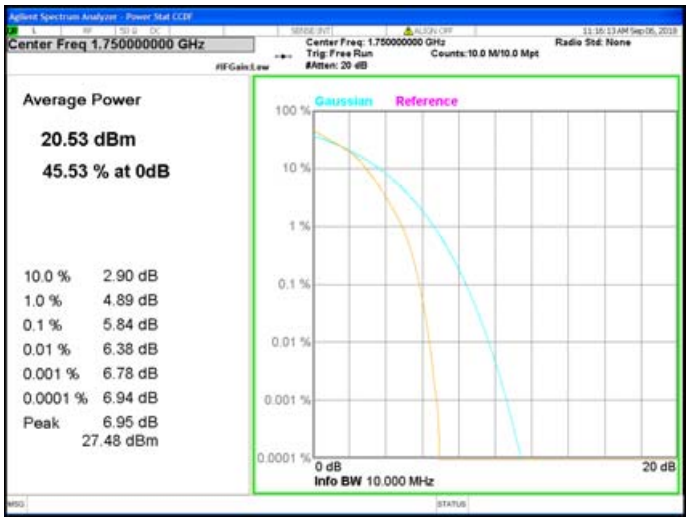
PAR 66-5 MHz-25 RB-1752.5-16QAM



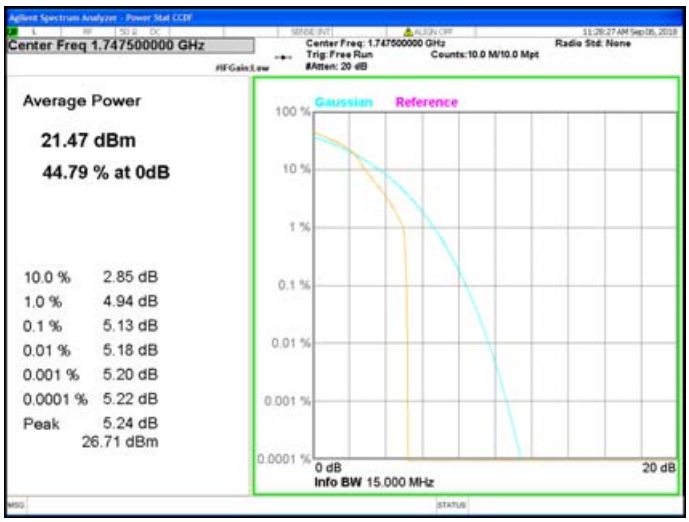
PAR 67-10 MHz-1 RB-1750-16QAM



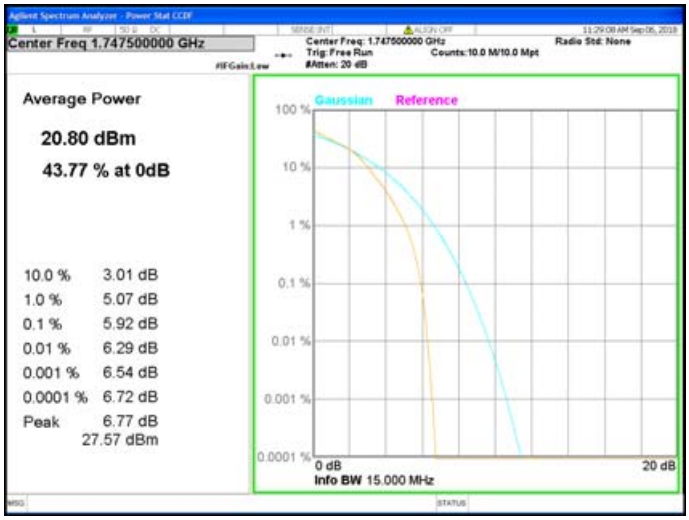
PAR 68-10 MHz-50 RB-1750-16QAM



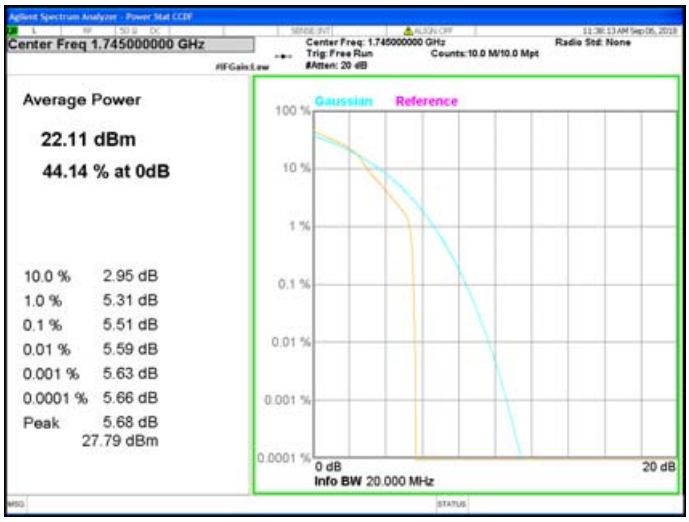
PAR 69-15 MHz-1 RB-1747.5-16QAM



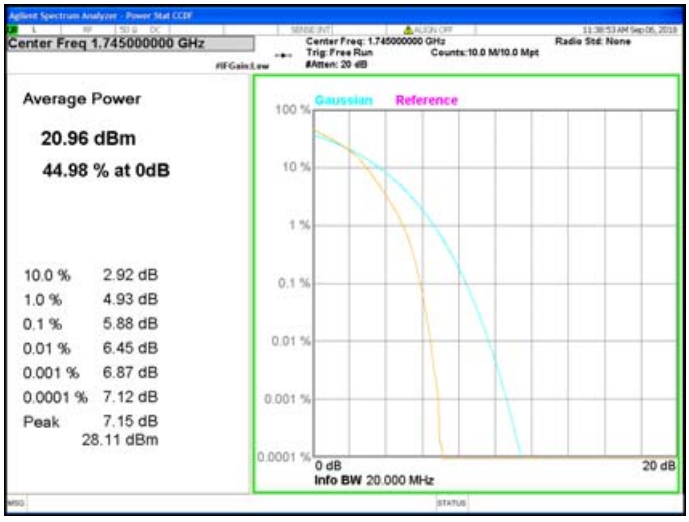
PAR 70-15 MHz-75 RB-1747.5-16QAM



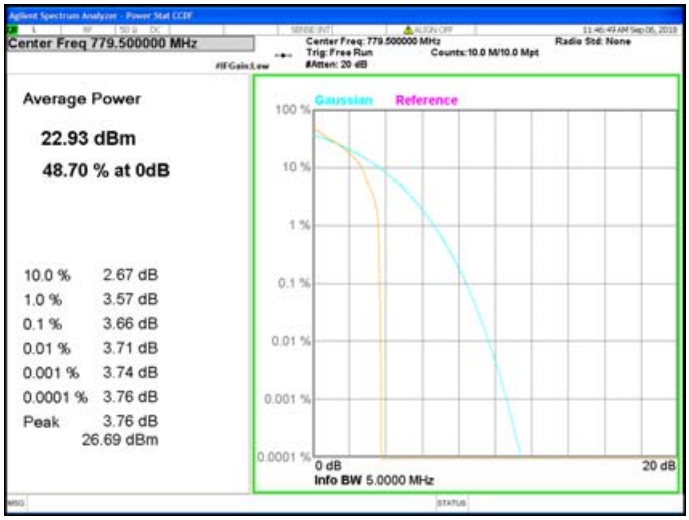
PAR 71-20 MHz-1 RB-1745-16QAM



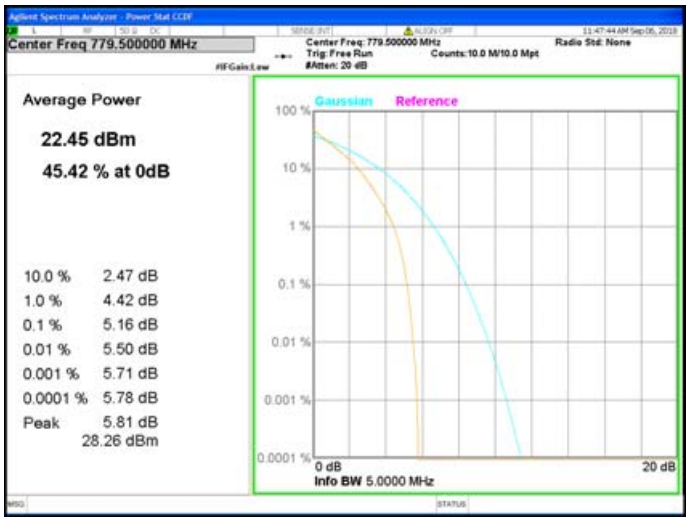
PAR 72-20 MHz-100 RB-1745-16QAM



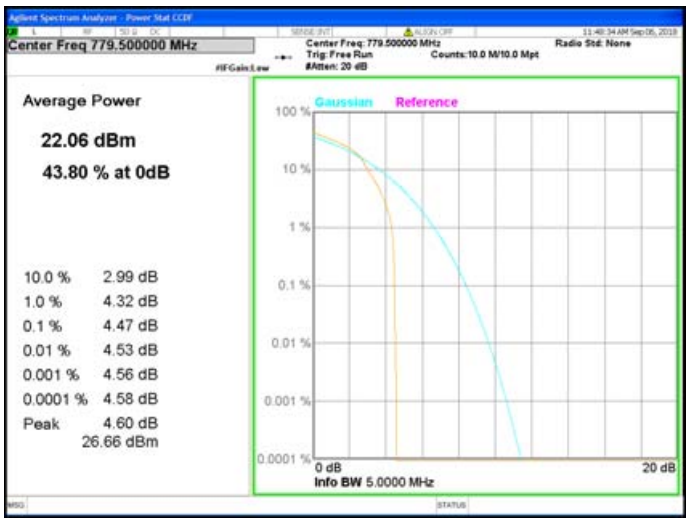
PAR 73-5 MHz-1 RB-779.5-QPSK



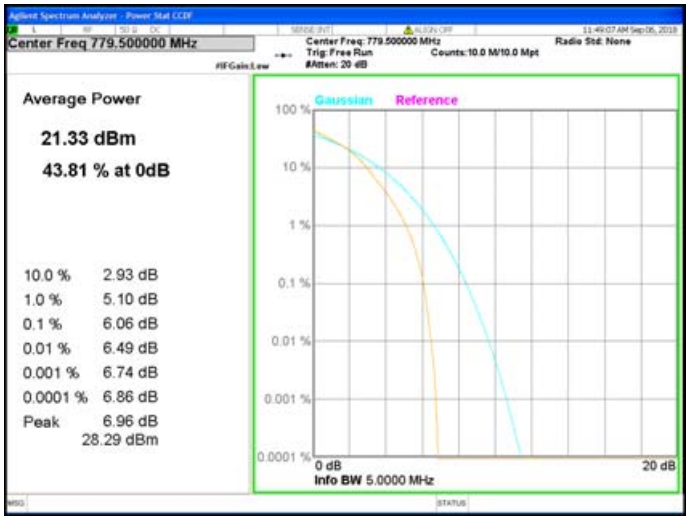
PAR 74-5 MHz-25 RB-779.5-QPSK



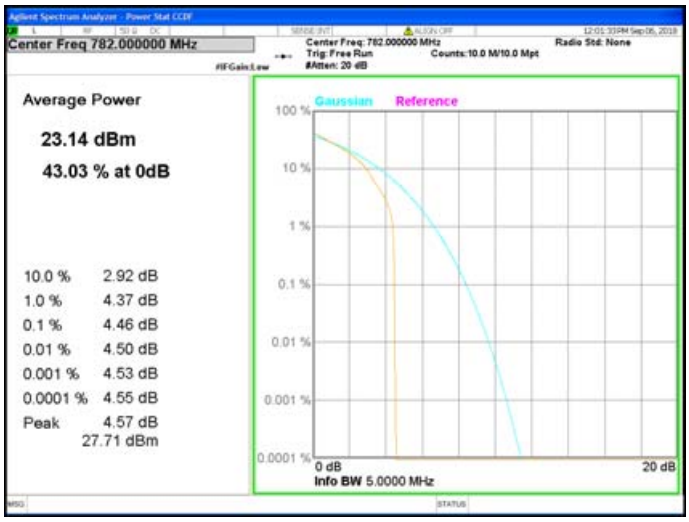
PAR 75-5 MHz-1 RB-779.5-16QAM



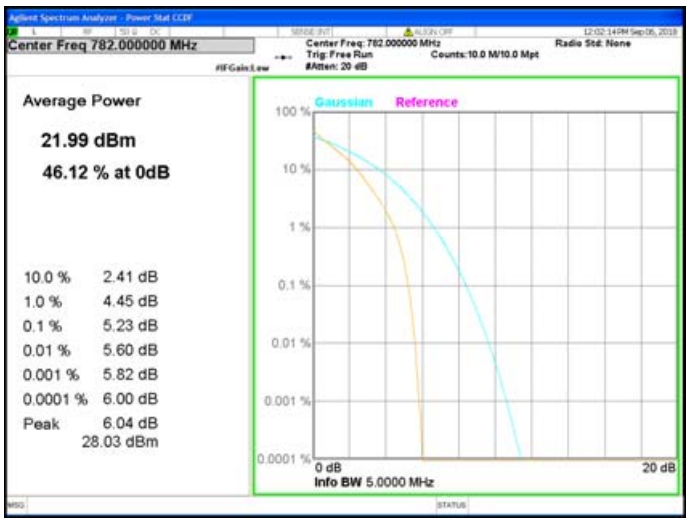
PAR 76-5 MHz-25 RB-779.5-16QAM



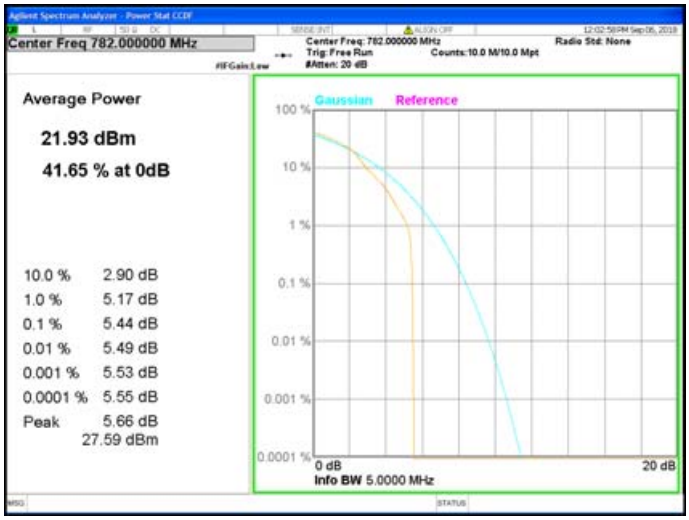
PAR 77-5 MHz-1 RB-782-QPSK



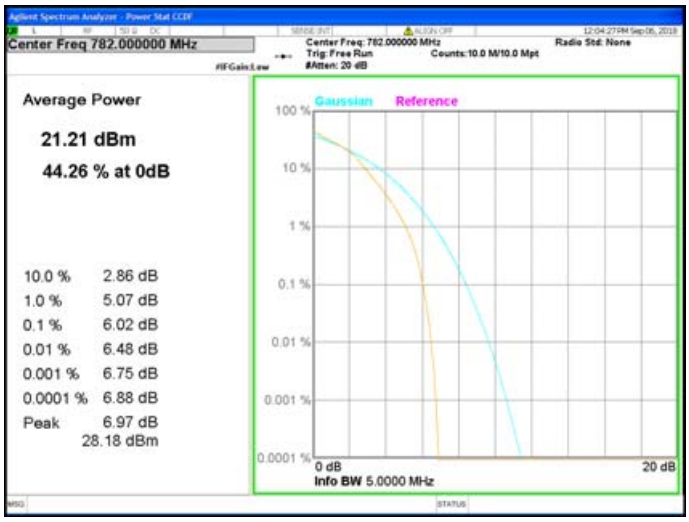
PAR 78-5 MHz-25 RB-782-QPSK



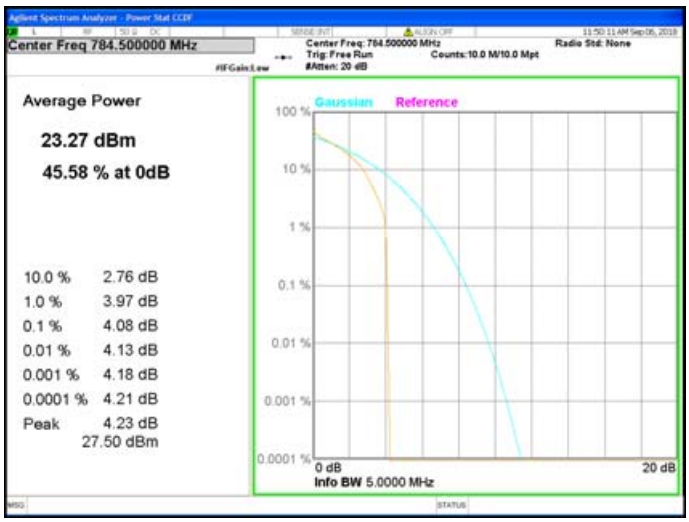
PAR 79-5 MHz-1 RB-782-16QAM



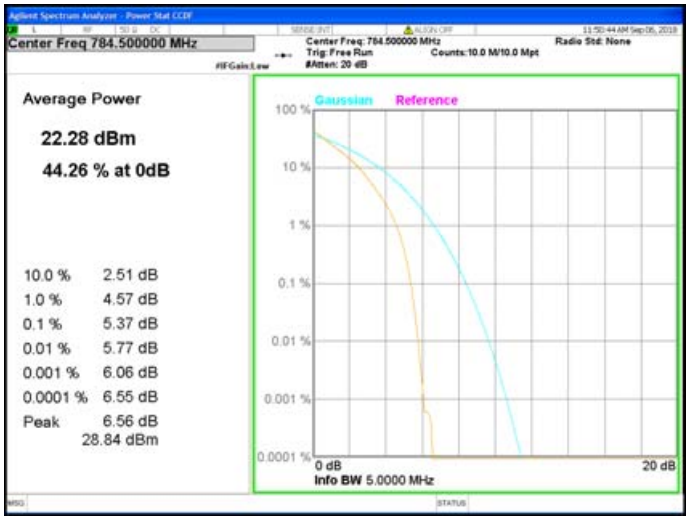
PAR 80-5 MHz-25 RB-782-16QAM



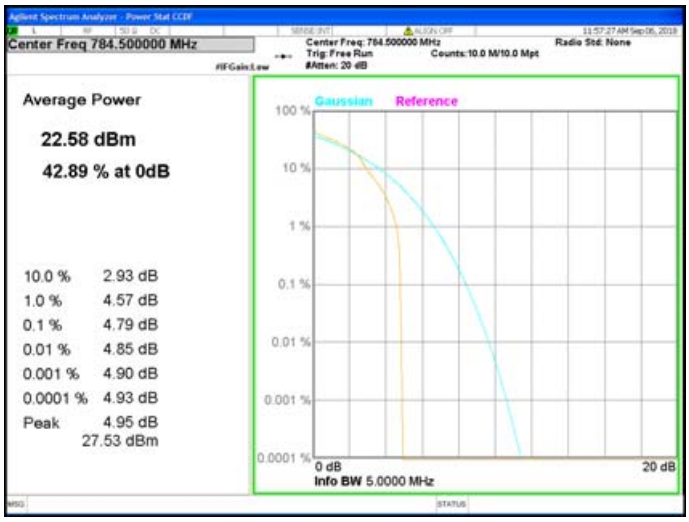
PAR 81-5 MHz-1 RB-784.5-QPSK



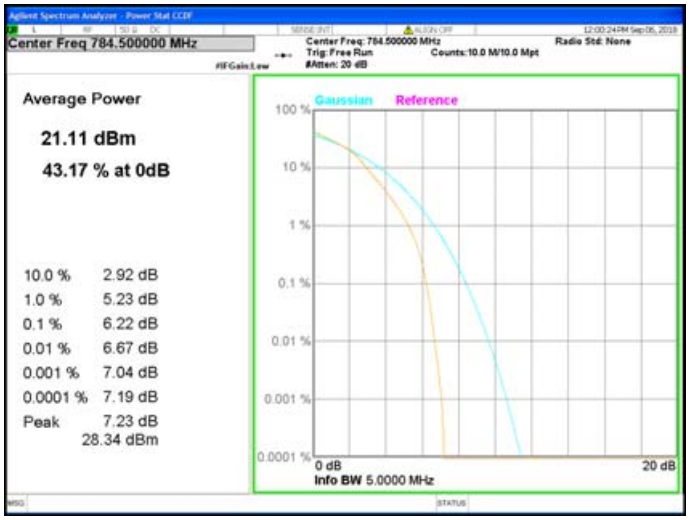
PAR 82-5 MHz-25 RB-784.5-QPSK



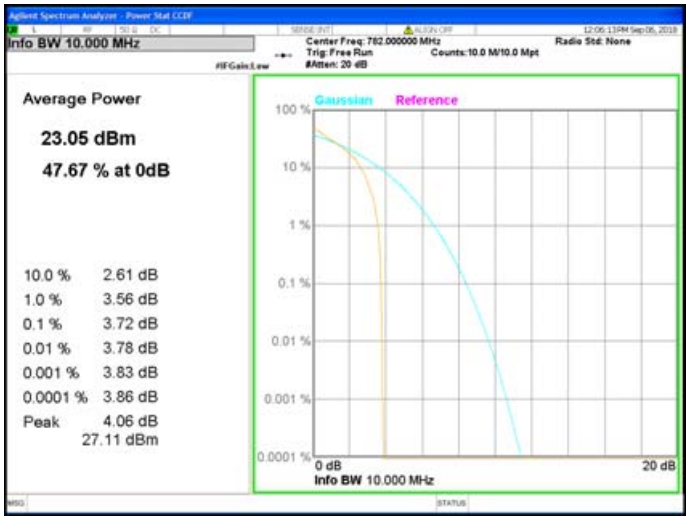
PAR 83-5 MHz-1 RB-784.5-16QAM



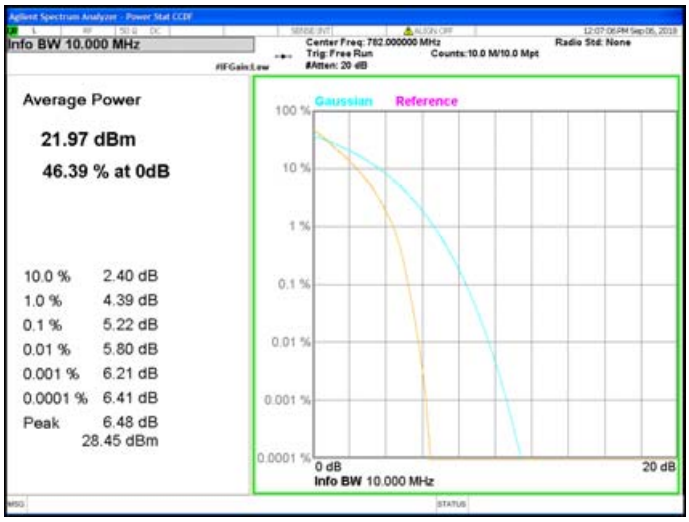
PAR 84-5 MHz-25 RB-784.5-16QAM



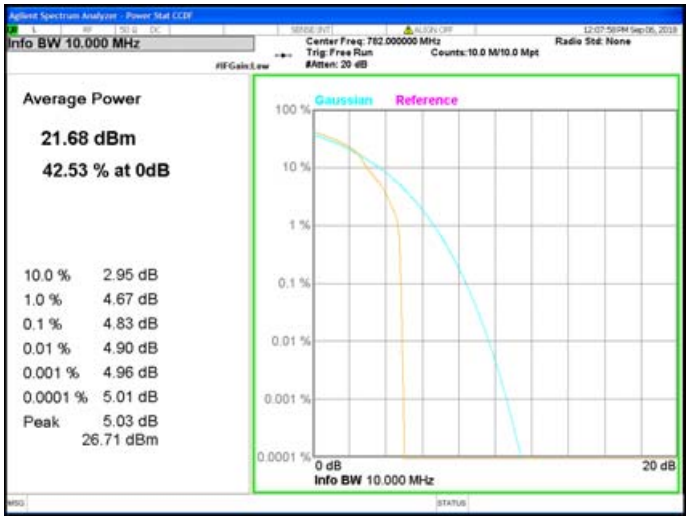
PAR 85-10 MHz-1 RB-782-QPSK



PAR 86-10 MHz-50 RB-782-QPSK



PAR 87-10 MHz-1 RB-782-16QAM



PAR 88-10 MHz-50 RB-782-16QAM