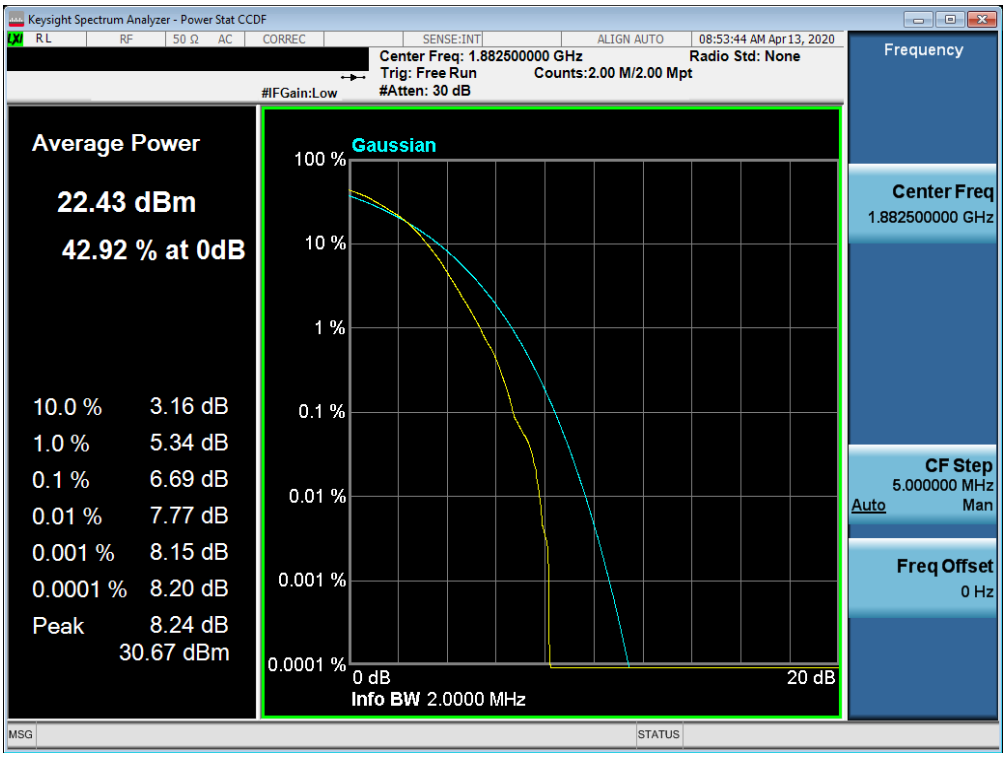
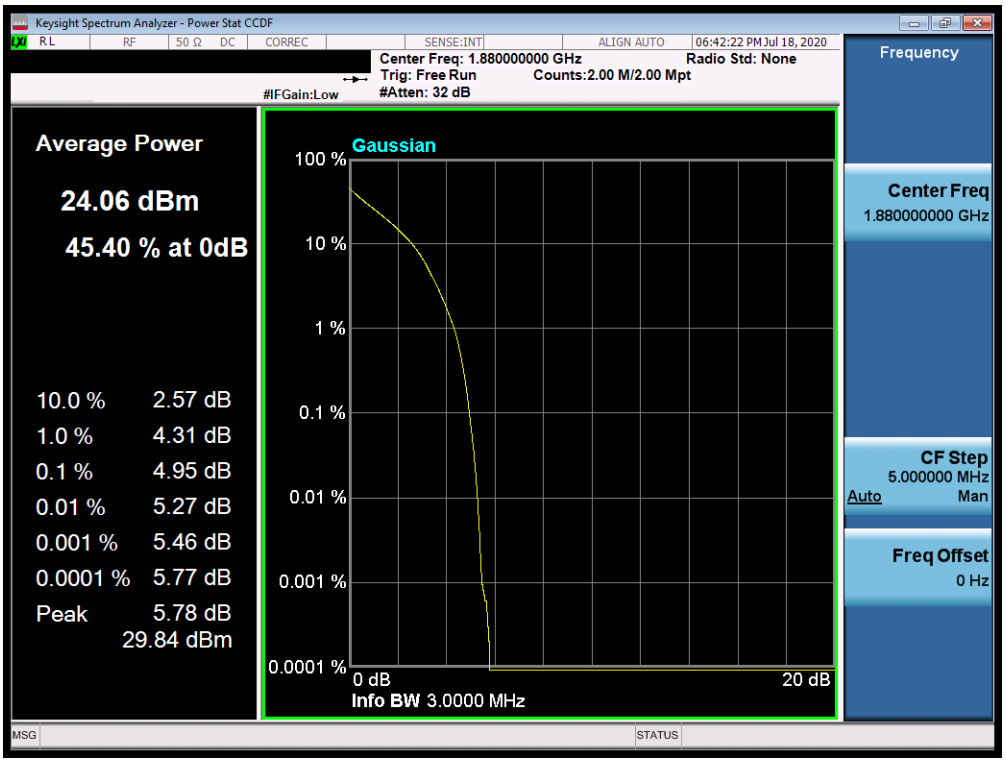


Plot 7-520. PAR Plot (Band 25/2 - 1.4MHz 64-QAM - Full RB Configuration)



Plot 7-521. PAR Plot (Band 25/2 - 3.0MHz QPSK - Full RB Configuration)

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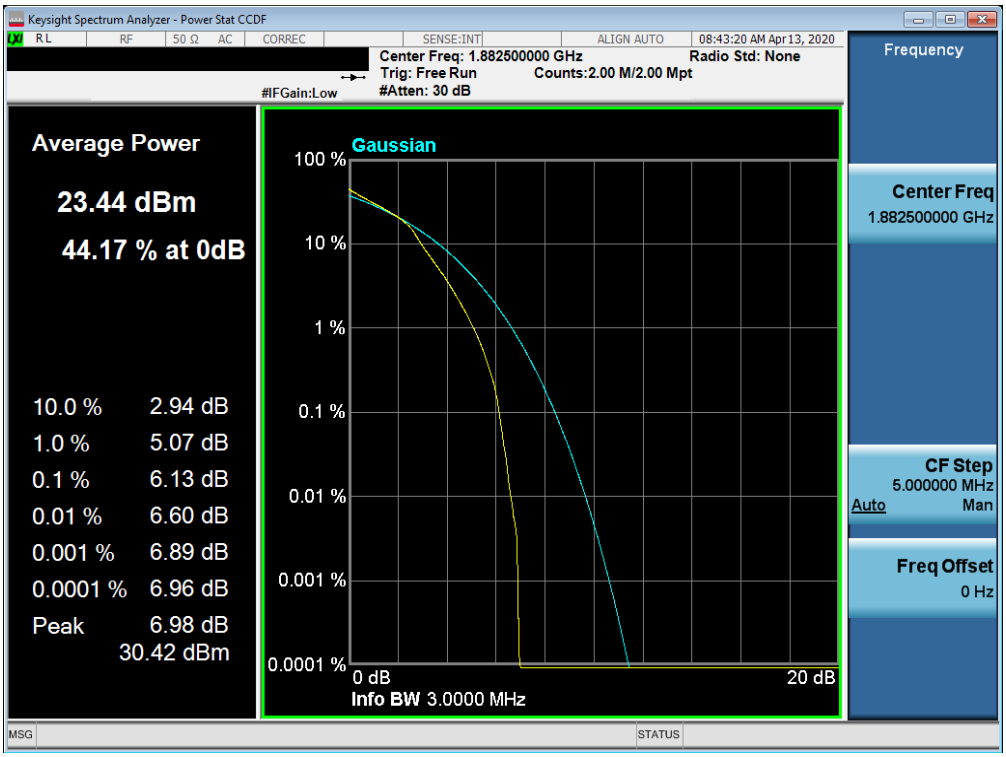
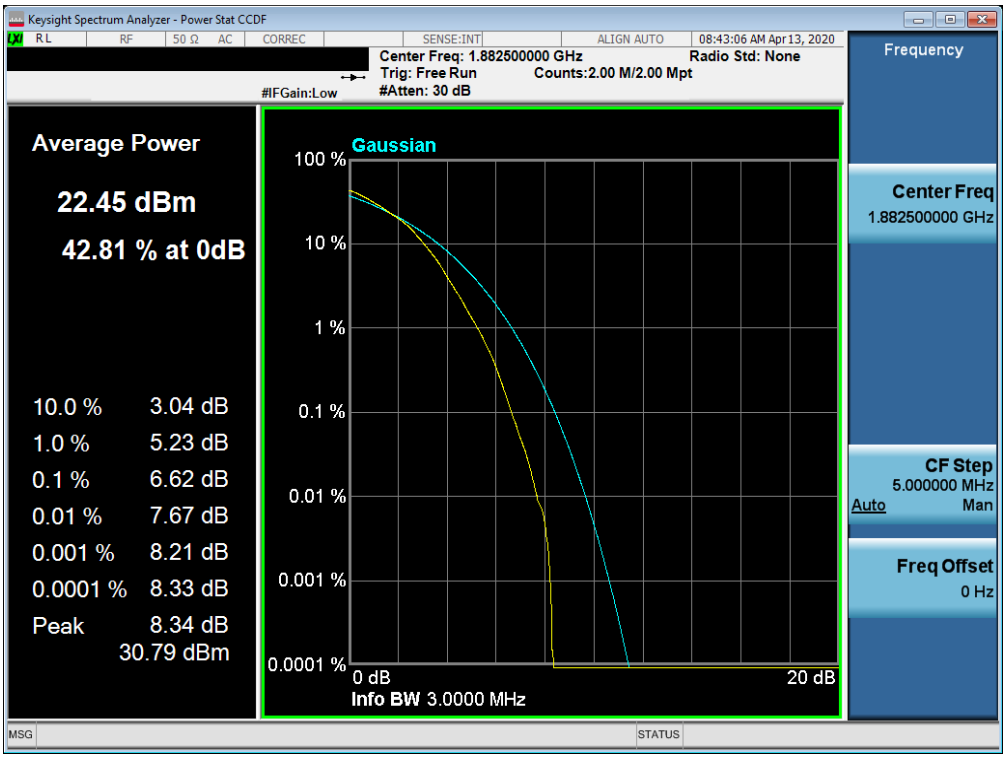


Plot 7-522. PAR Plot (Band 25/2 - 3.0MHz 16-QAM - Full RB Configuration)



Plot 7-523. PAR Plot (Band 25/2 - 3.0MHz 64-QAM - Full RB Configuration)

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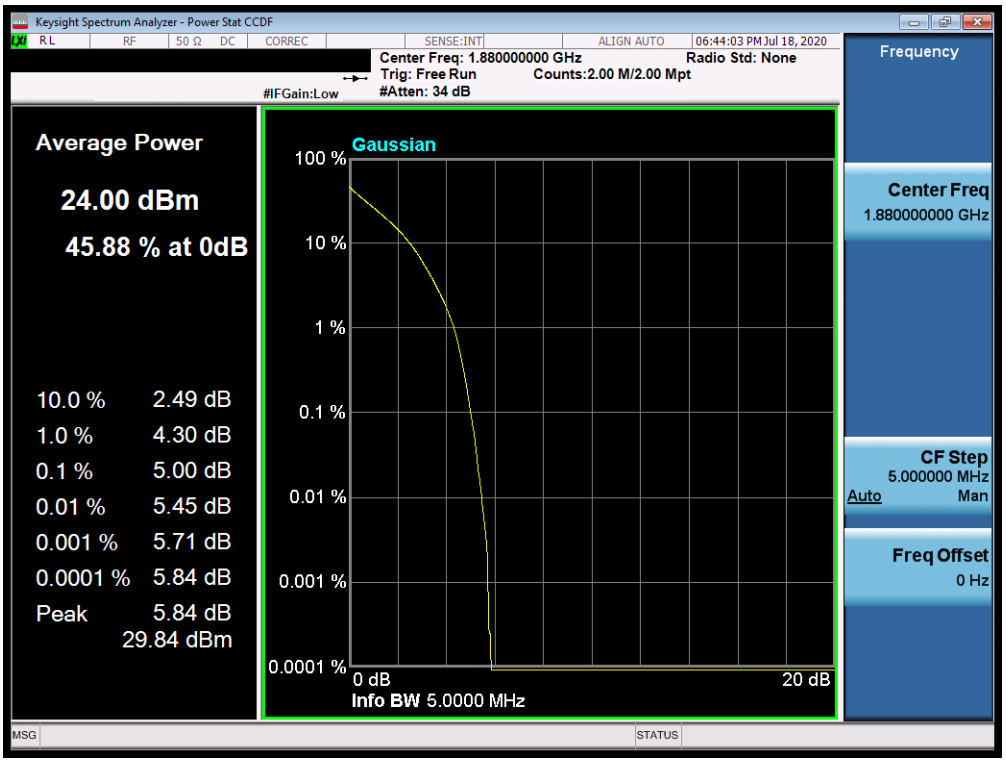
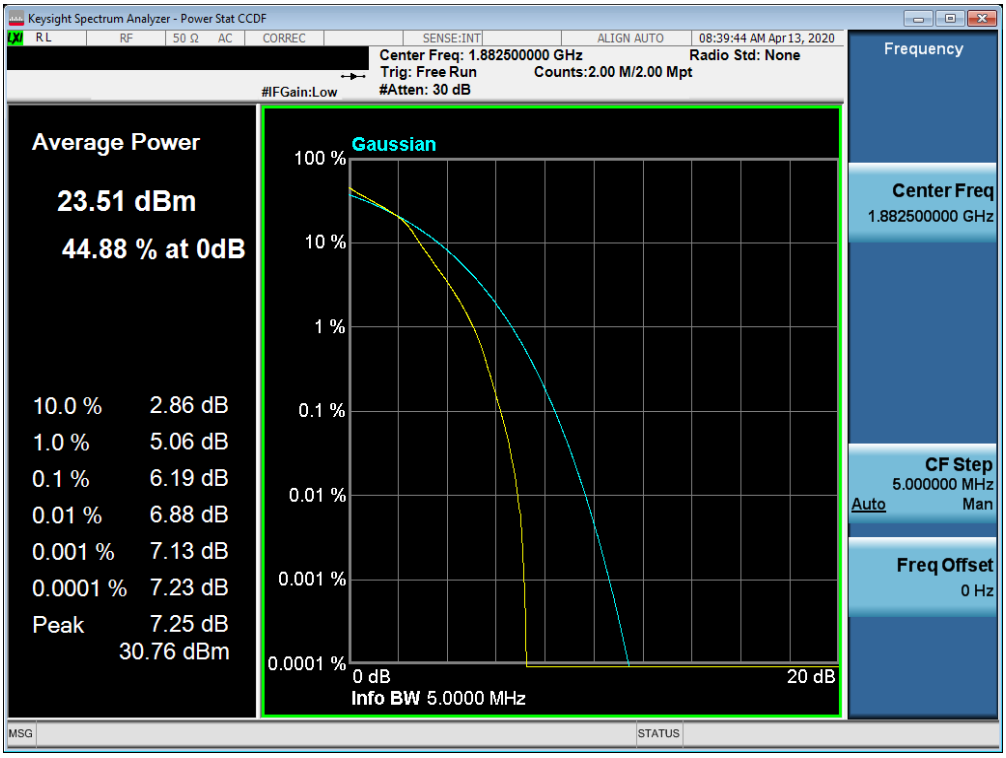


Plot 7-524. PAR Plot (Band 25/2 - 5.0MHz QPSK - Full RB Configuration)



Plot 7-525. PAR Plot (Band 25/2 - 5.0MHz 16-QAM - Full RB Configuration)

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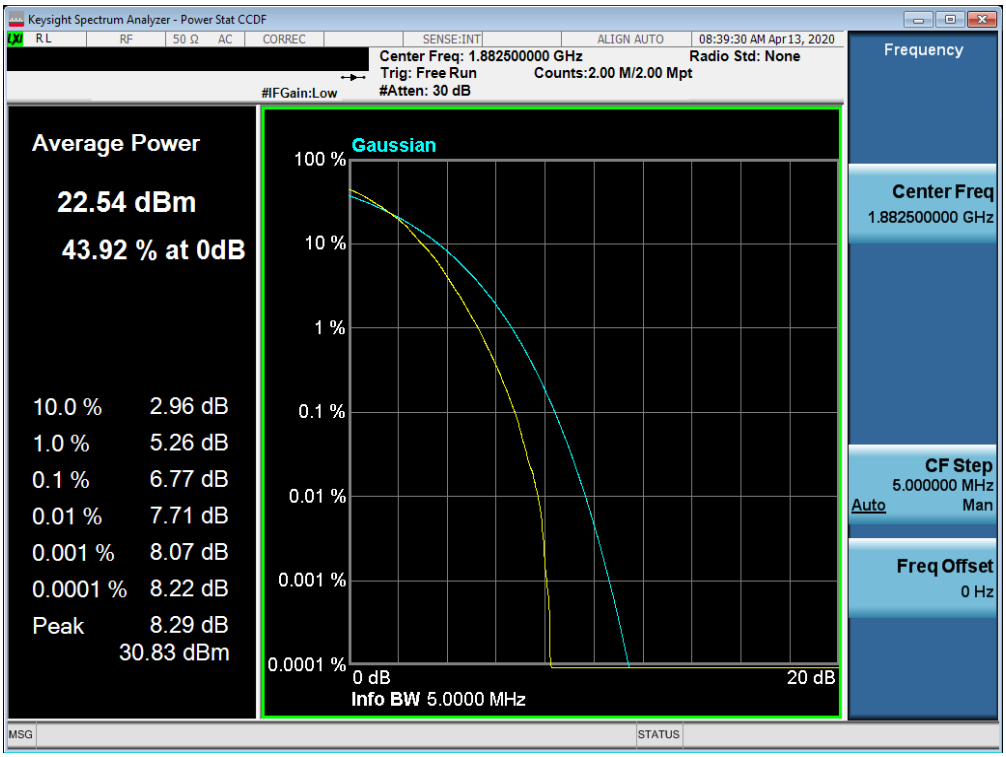
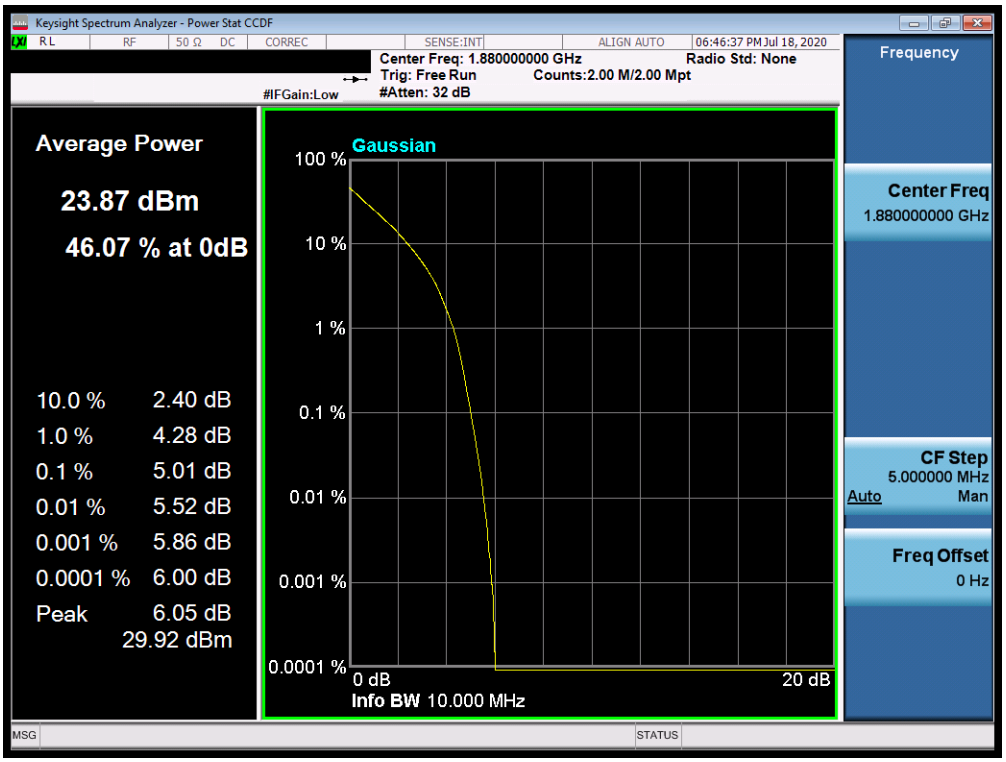


Plot 7-526. PAR Plot (Band 25/2 - 5.0MHz 64-QAM - Full RB Configuration)



Plot 7-527. PAR Plot (Band 25/2 - 10.0MHz QPSK - Full RB Configuration)

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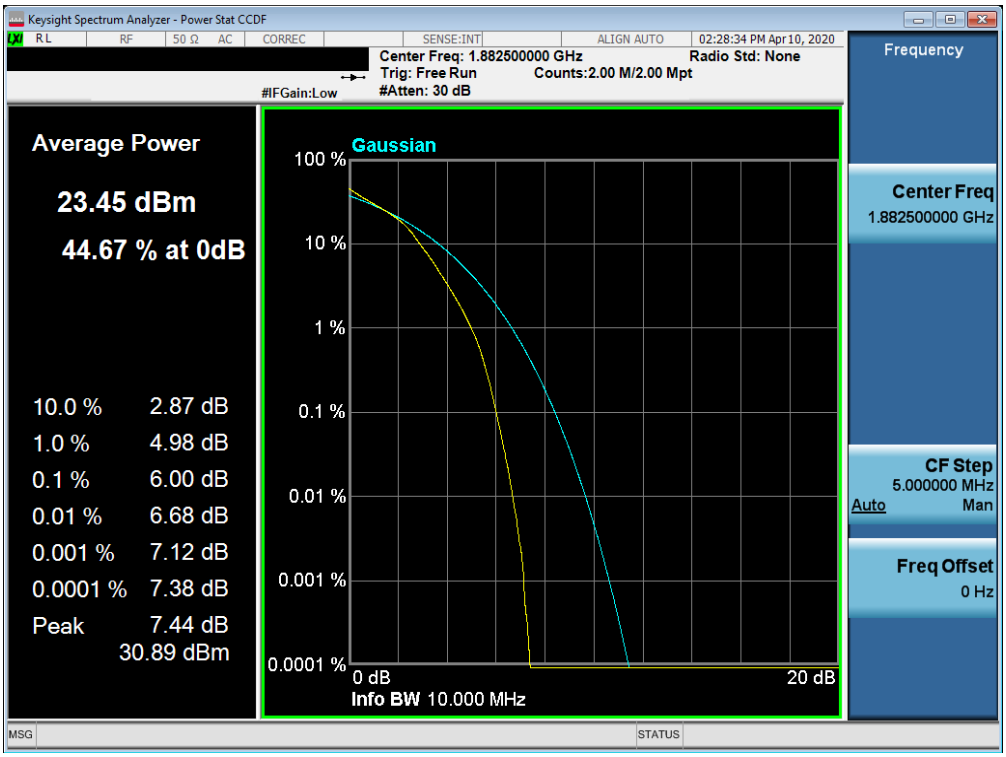
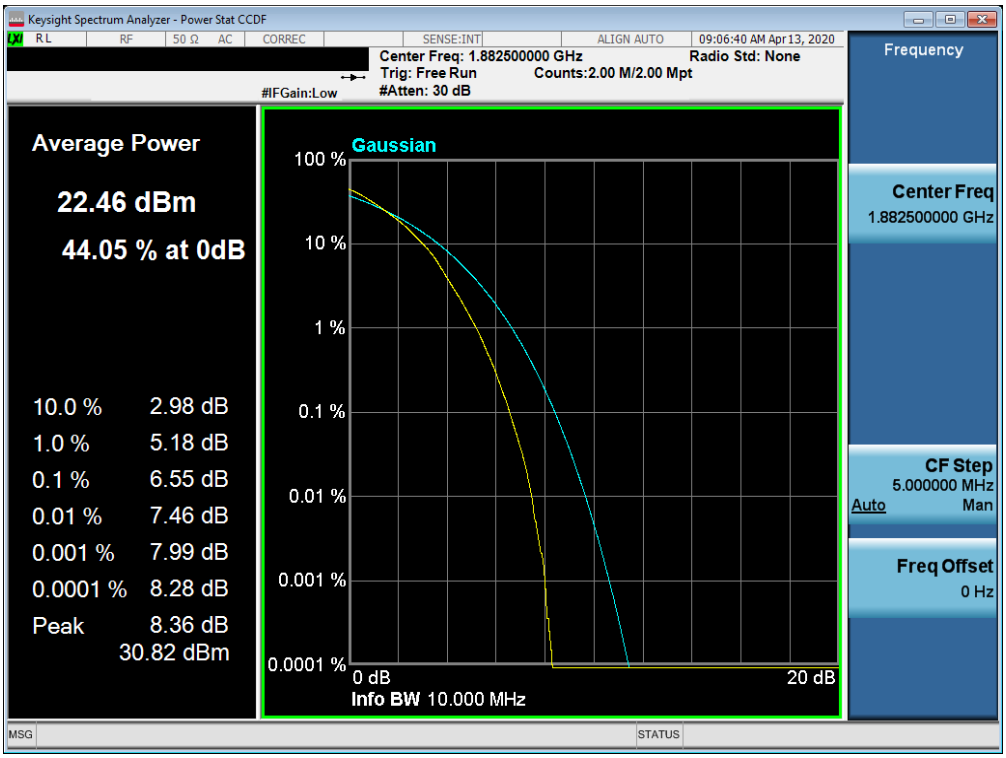


Plot 7-528. PAR Plot (Band 25/2 - 10.0MHz 16-QAM - Full RB Configuration)



Plot 7-529. PAR Plot (Band 25/2 - 10.0MHz 64-QAM - Full RB Configuration)

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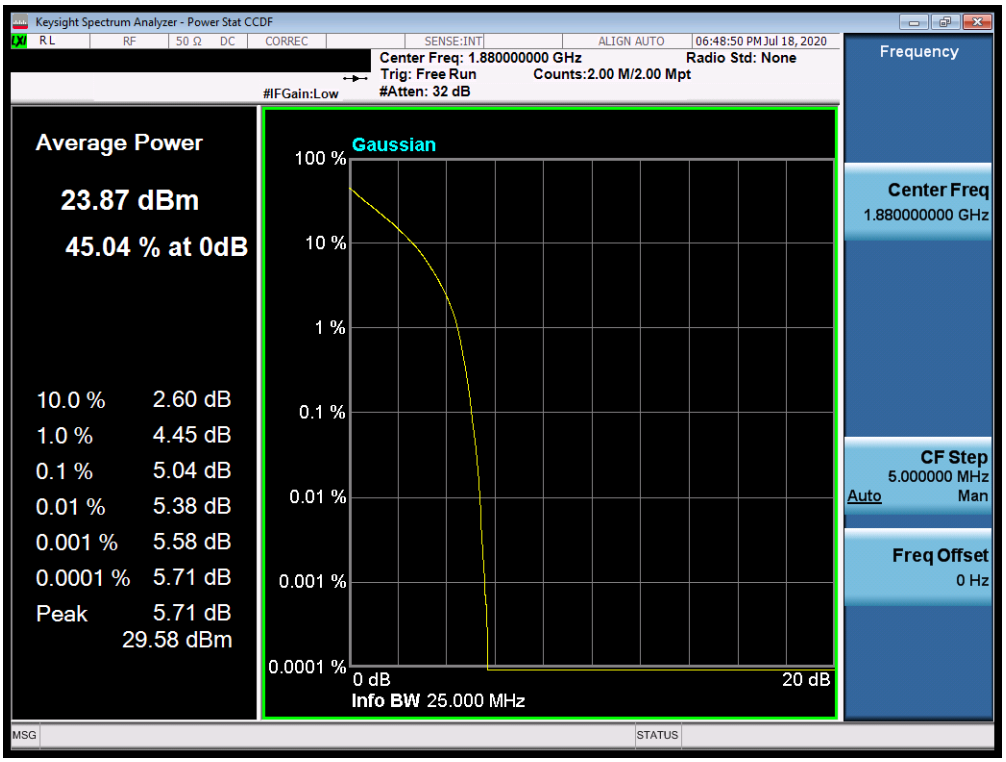
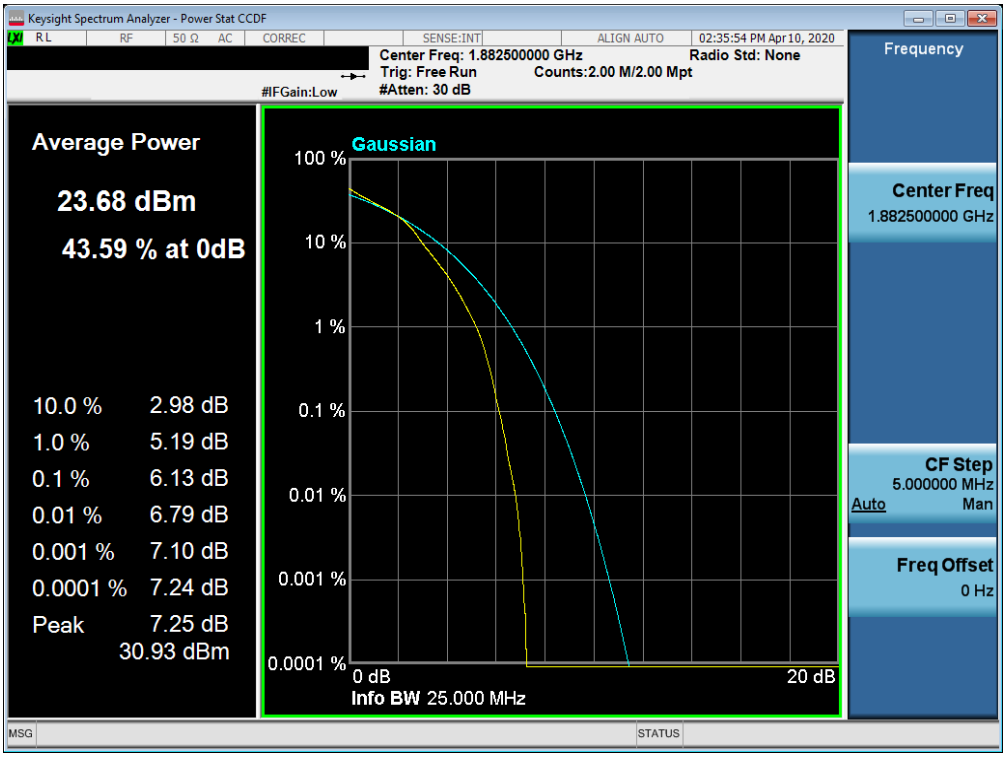


Plot 7-530. PAR Plot (Band 25/2 - 15.0MHz QPSK - Full RB Configuration)



Plot 7-531. PAR Plot (Band 25/2 - 15.0MHz 16-QAM - Full RB Configuration)

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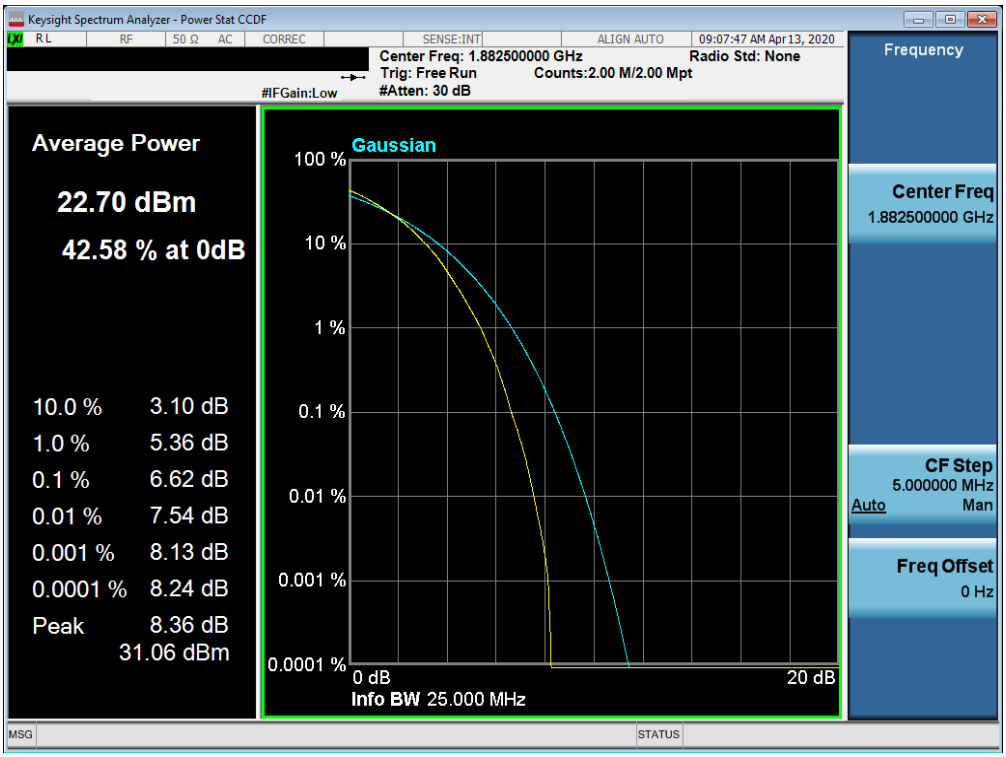
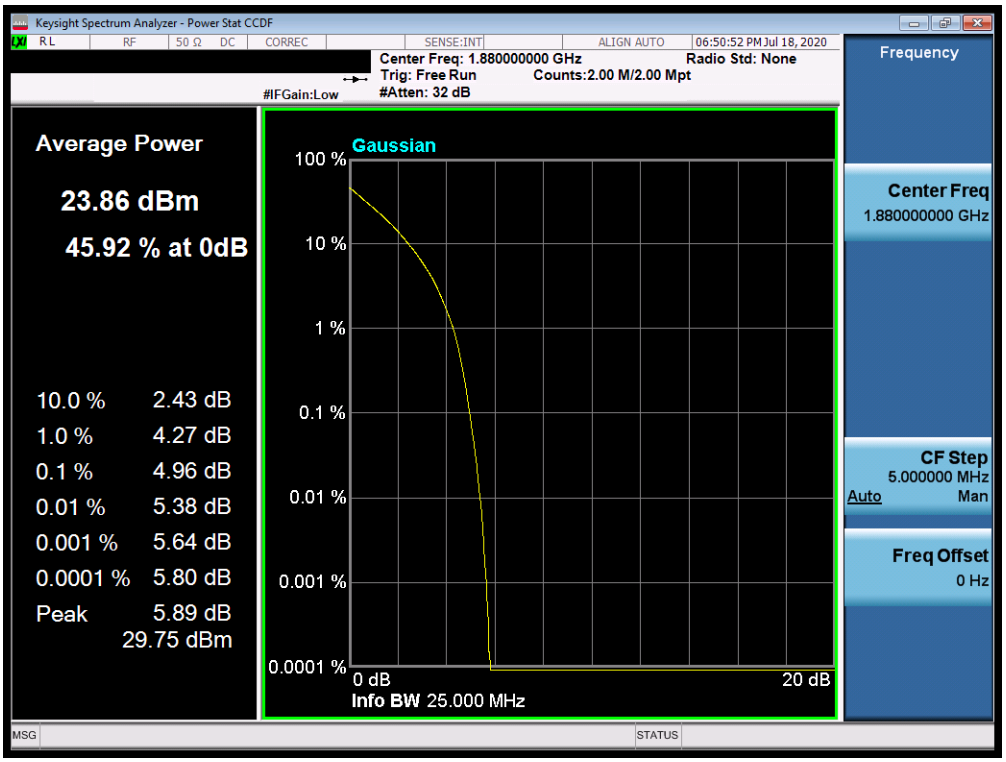


Plot 7-532. PAR Plot (Band 25/2 - 15.0MHz 64-QAM - Full RB Configuration)



Plot 7-533. PAR Plot (Band 25/2 - 20.0MHz QPSK - Full RB Configuration)

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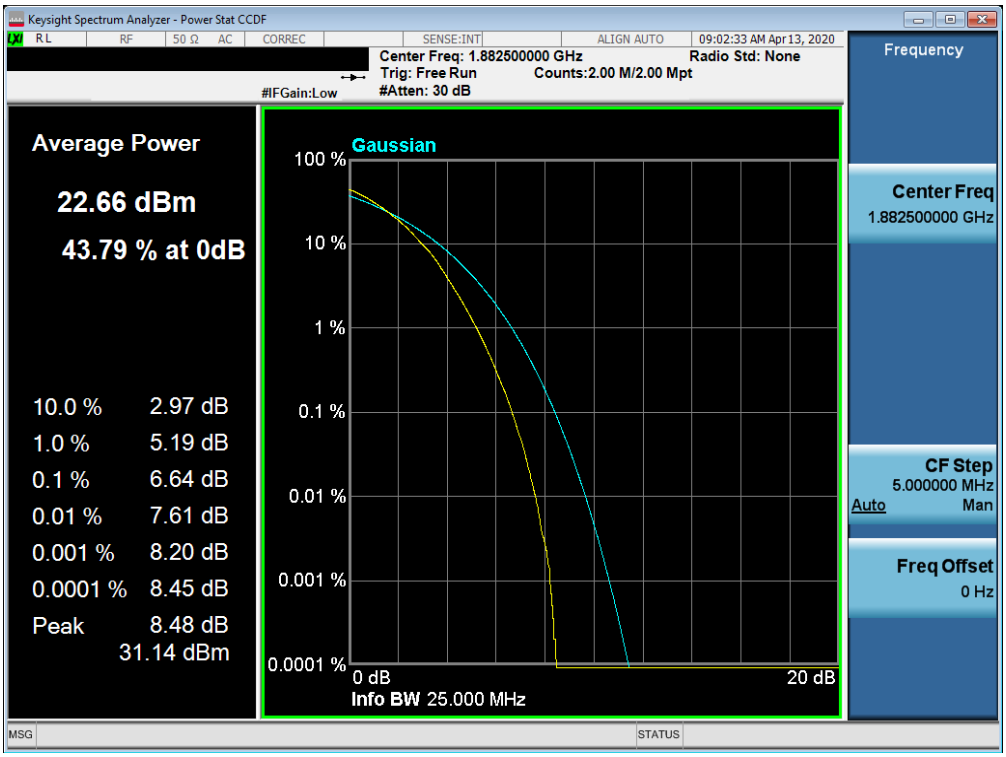

Plot 7-534. PAR Plot (Band 25/2 - 20.0MHz 64-QAM - Full RB Configuration)

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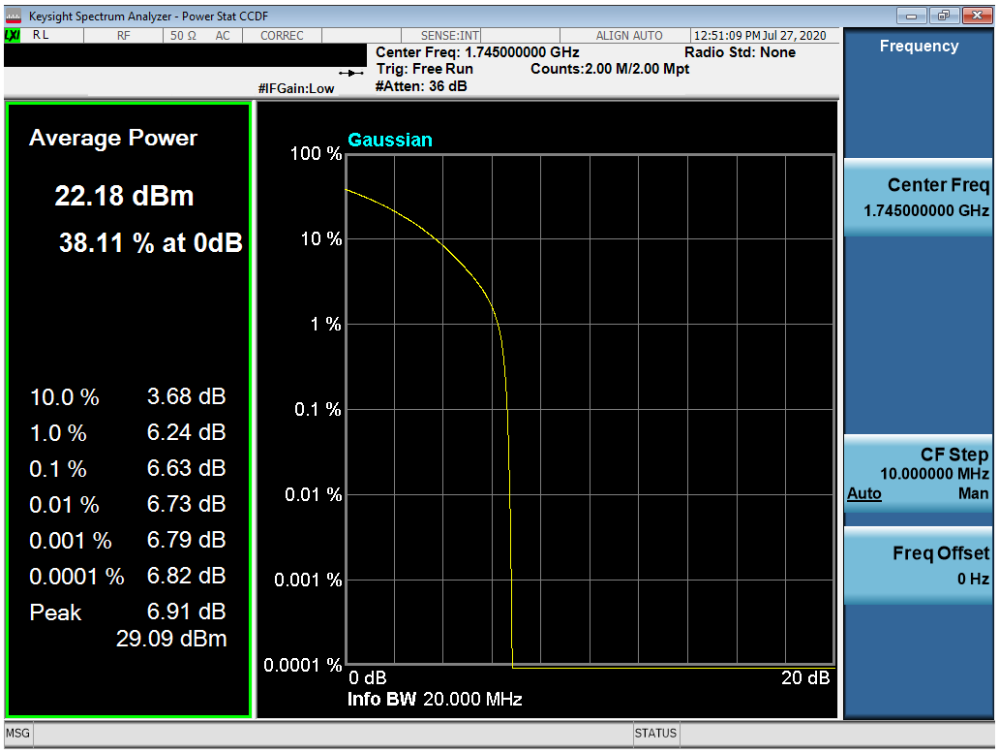
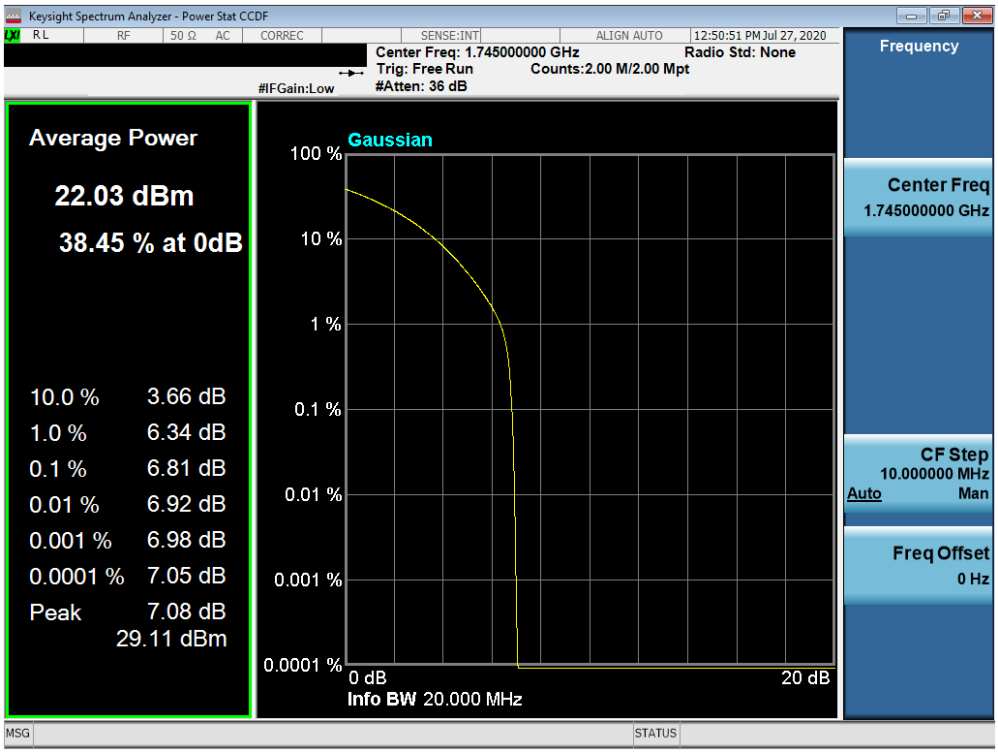


Plot 7-535. PAR Plot (NR n66/4 - 5.0MHz QPSK - Full RB Configuration)



Plot 7-536. PAR Plot (NR n66/4 - 5.0MHz 16-QAM - Full RB Configuration)

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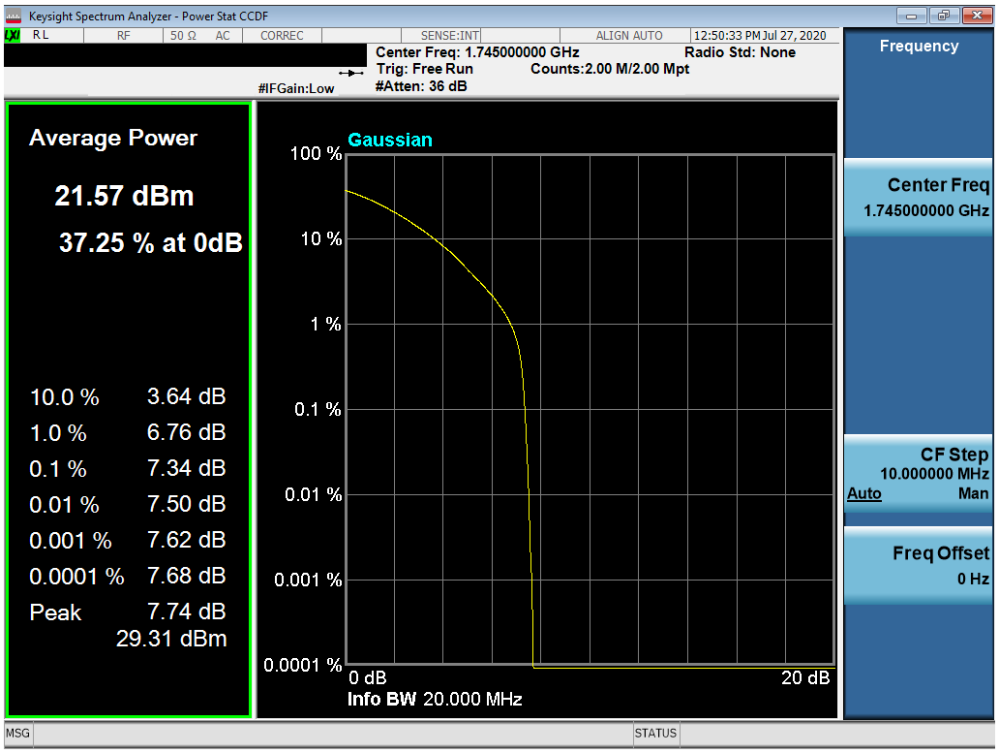
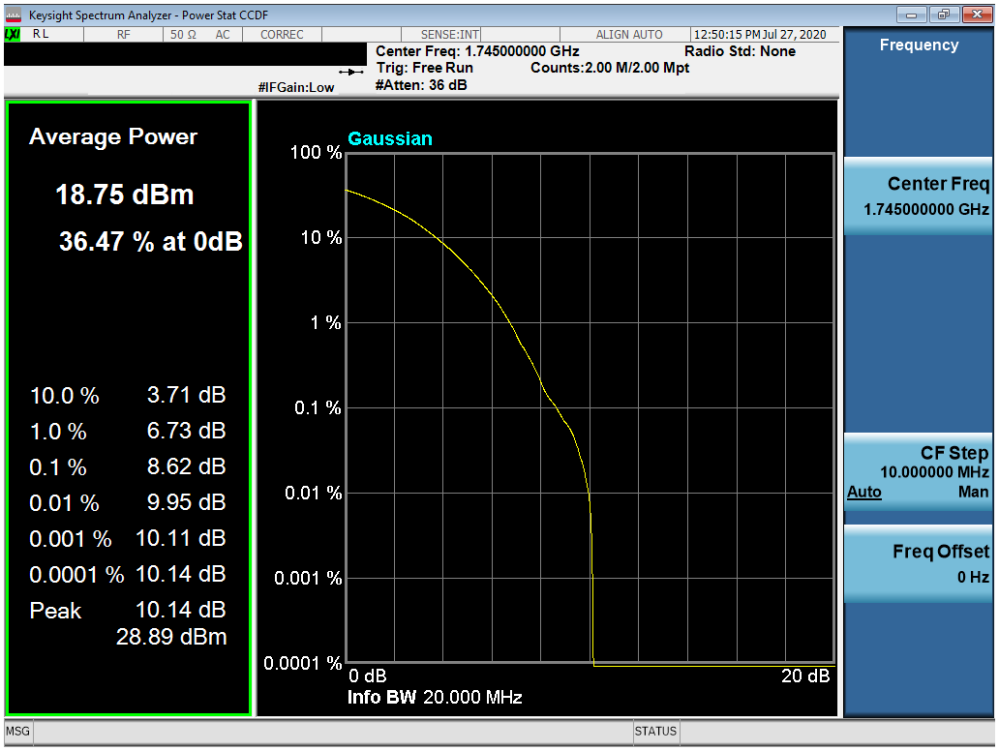


Plot 7-537. PAR Plot (NR n66/4 - 5.0MHz 64-QAM - Full RB Configuration)



Plot 7-538. PAR Plot (NR n66/4 - 5.0MHz 256-QAM - Full RB Configuration)

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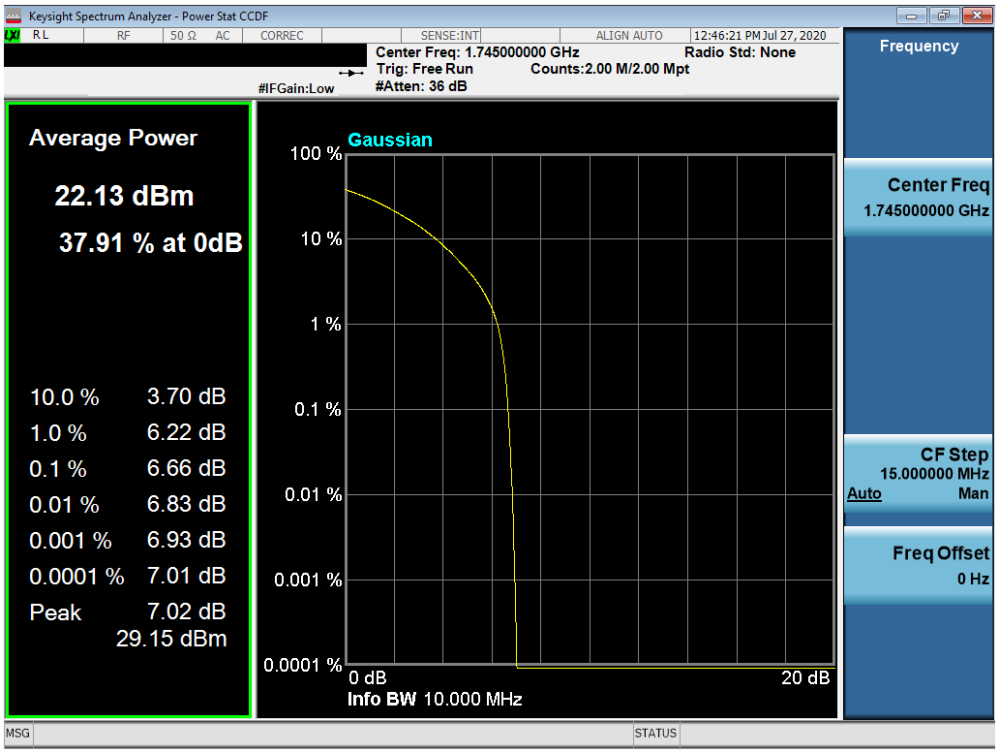
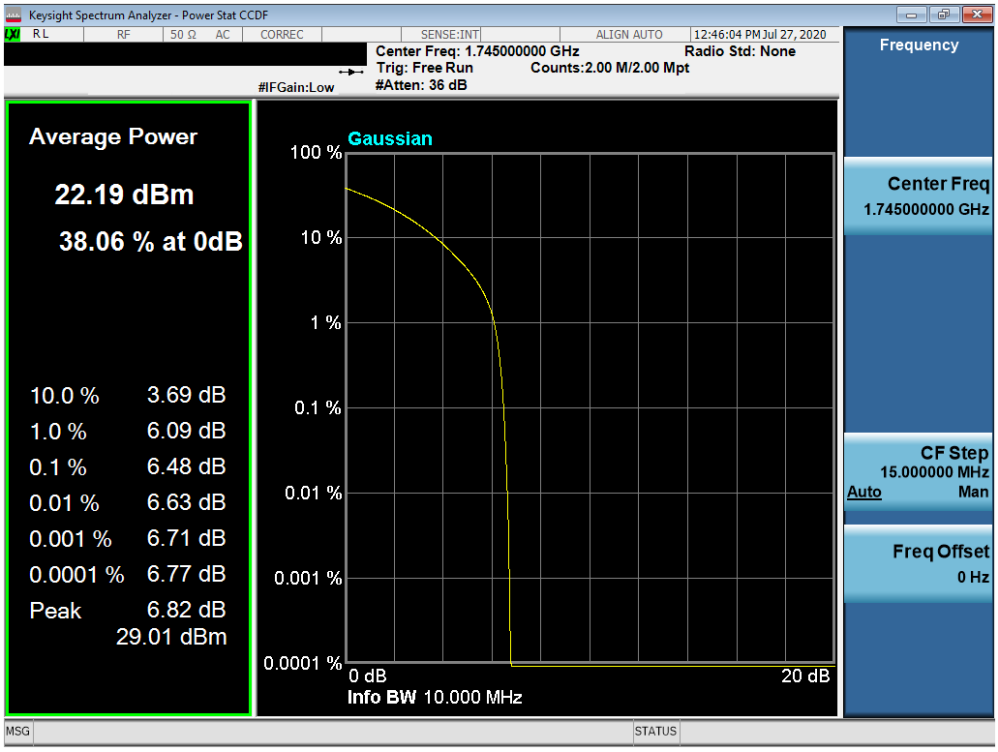


Plot 7-539. PAR Plot (NR n66/4 - 10.0MHz QPSK - Full RB Configuration)



Plot 7-540. PAR Plot (NR n66/4 - 10.0MHz 16-QAM - Full RB Configuration)

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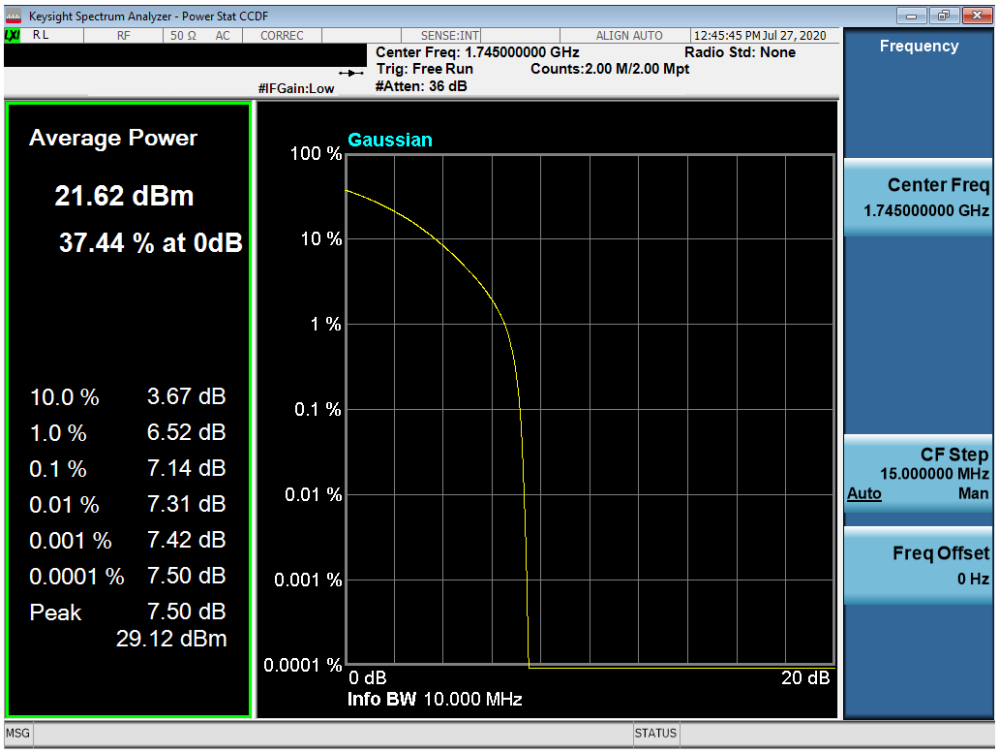
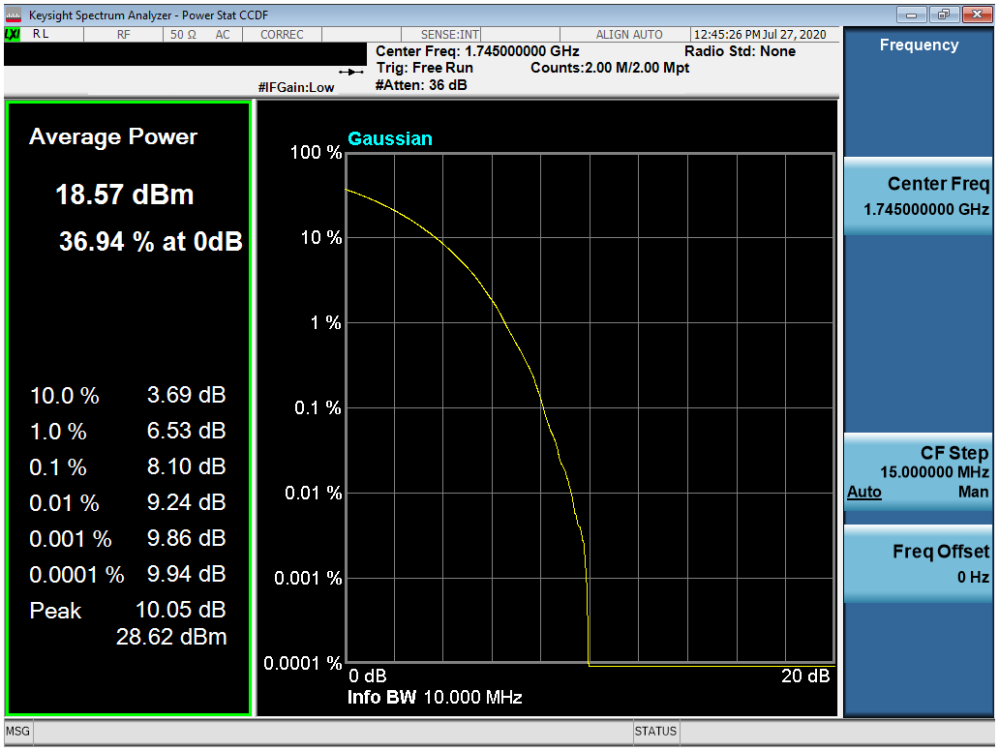


Plot 7-541. PAR Plot (NR n66/4 - 10.0MHz 64-QAM - Full RB Configuration)



Plot 7-542. PAR Plot (NR n66/4 - 10.0MHz 256-QAM - Full RB Configuration)

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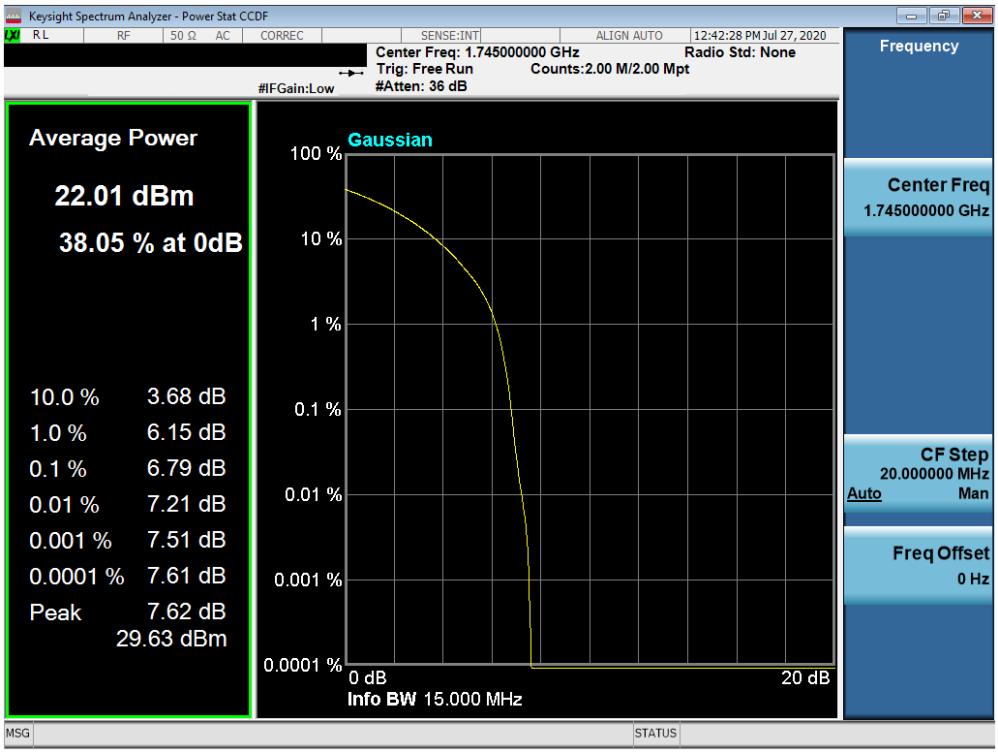
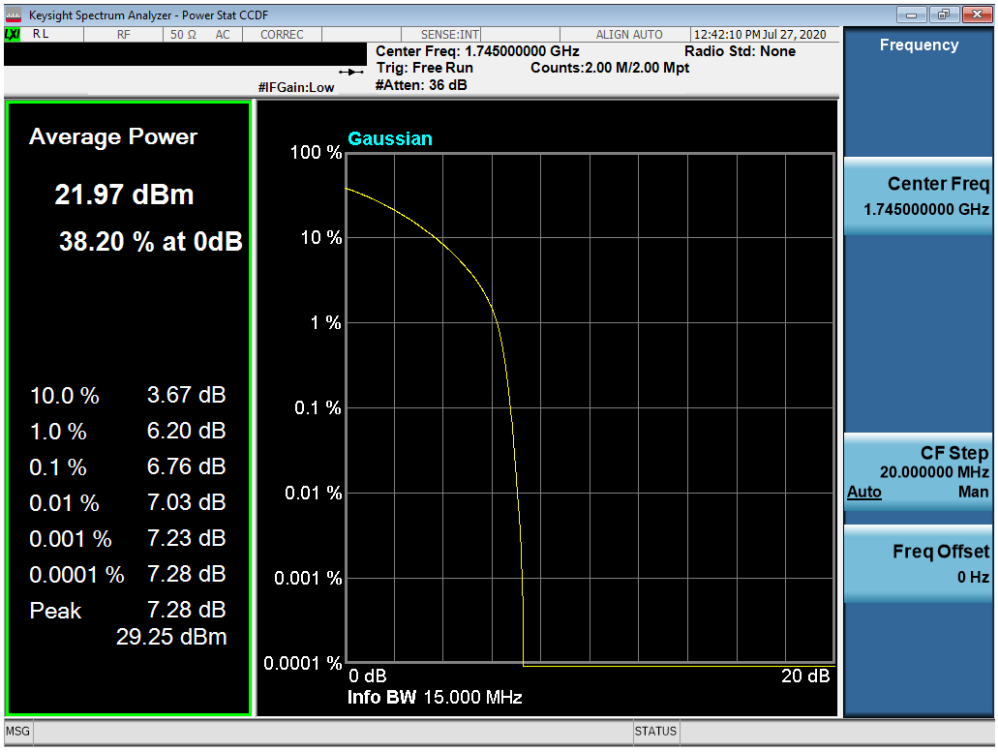


Plot 7-543. PAR Plot (NR n66/4 - 15.0MHz QPSK - Full RB Configuration)



Plot 7-544. PAR Plot (NR n66/4 - 15.0MHz 16-QAM - Full RB Configuration)

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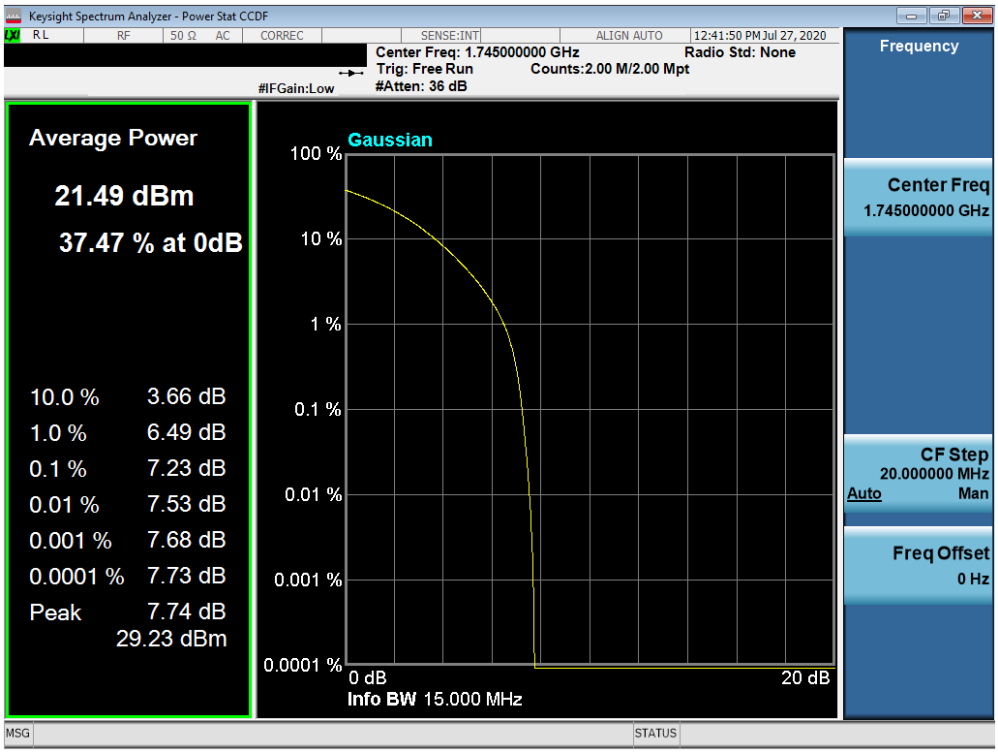
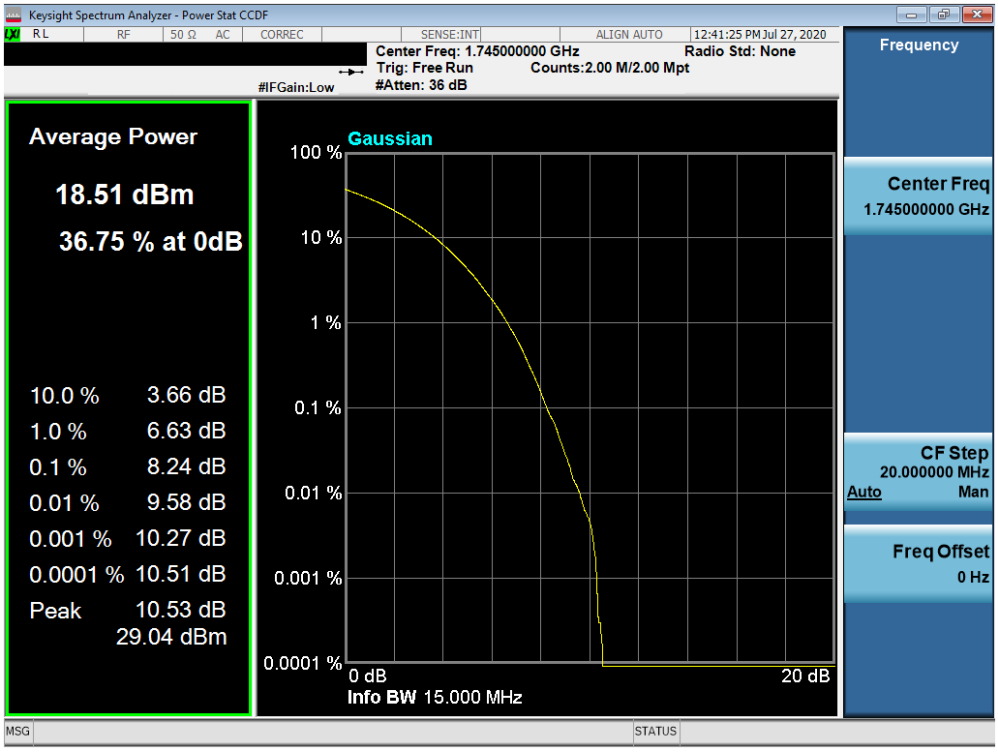


Plot 7-545. PAR Plot (NR n66/4 - 15.0MHz 64-QAM - Full RB Configuration)



Plot 7-546. PAR Plot (NR n66/4 - 15.0MHz 256-QAM - Full RB Configuration)

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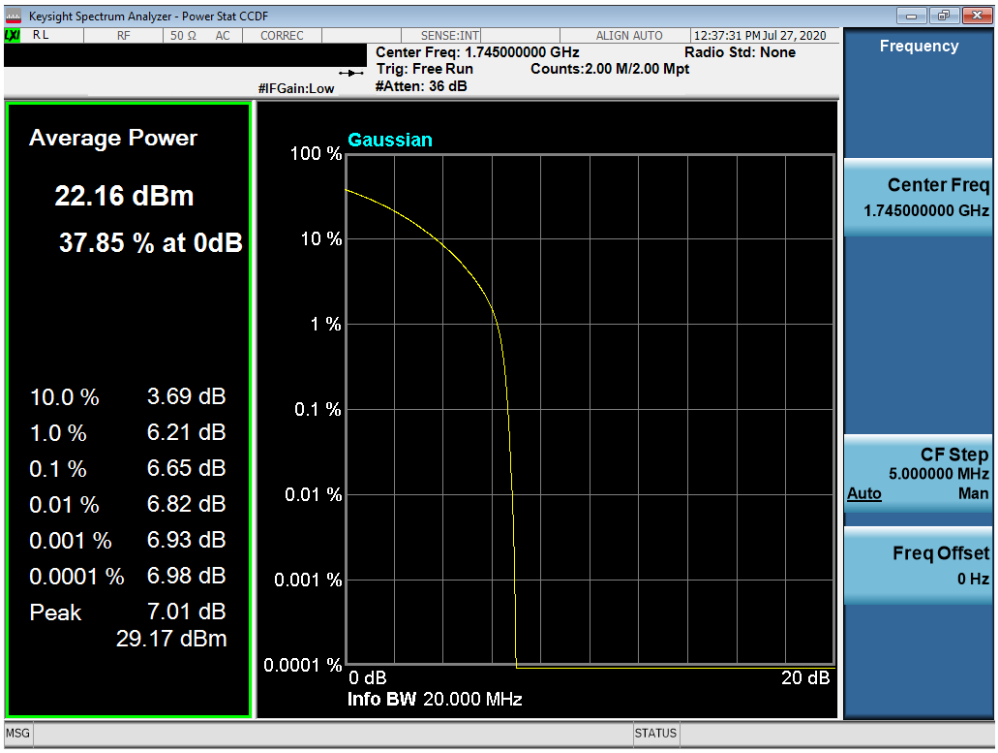
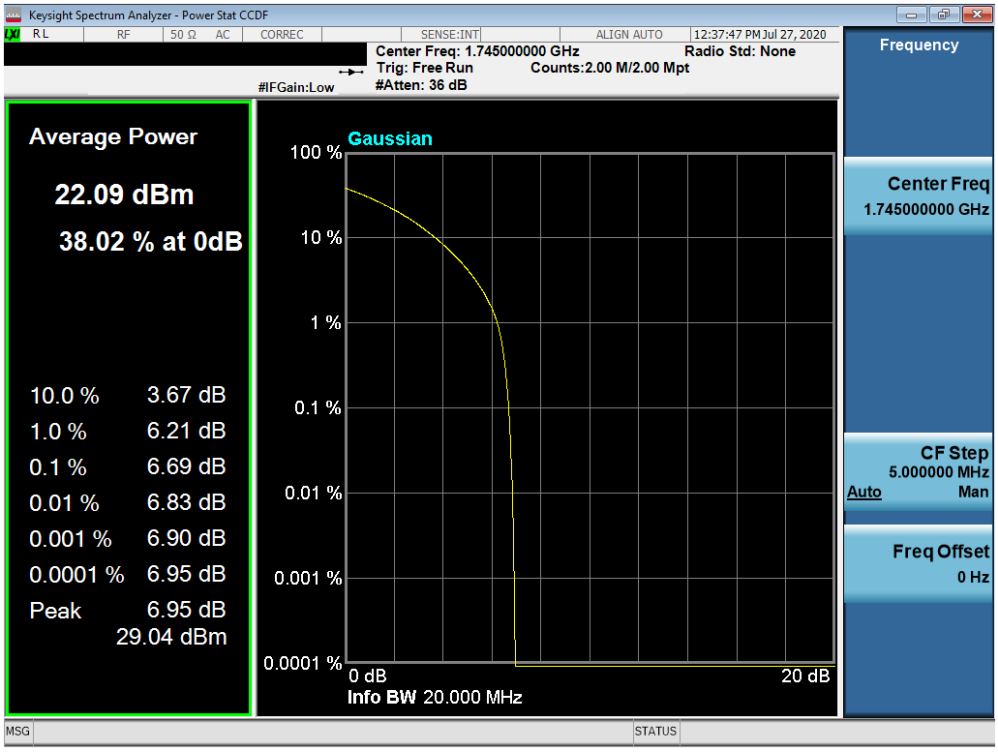


Plot 7-547. PAR Plot (NR n66/4 - 20.0MHz QPSK - Full RB Configuration)



Plot 7-548. PAR Plot (NR n66/4 - 20.0MHz 16-QAM - Full RB Configuration)

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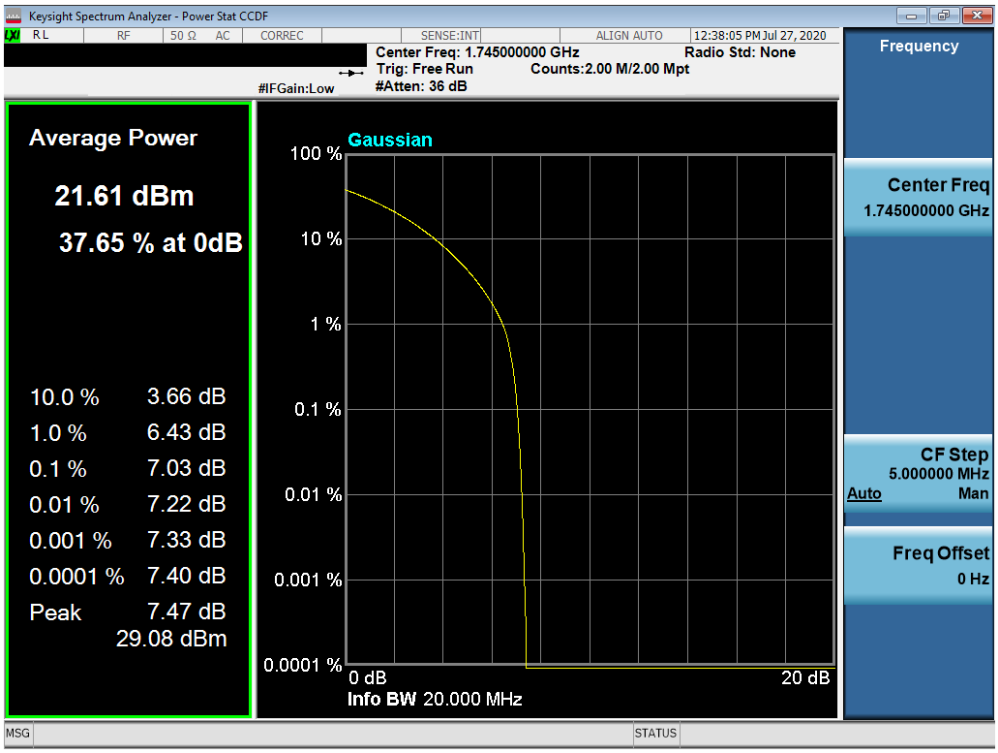
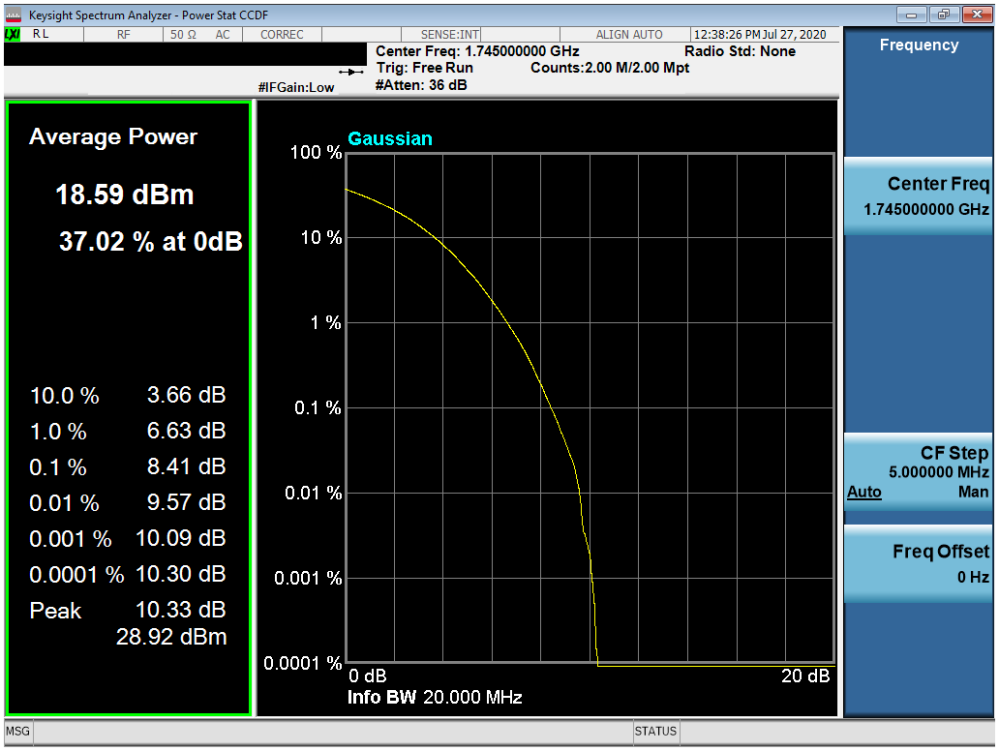


Plot 7-549. PAR Plot (NR n66/4 - 20.0MHz 64-QAM - Full RB Configuration)



Plot 7-550. PAR Plot (NR n66/4 - 20.0MHz 256-QAM - Full RB Configuration)

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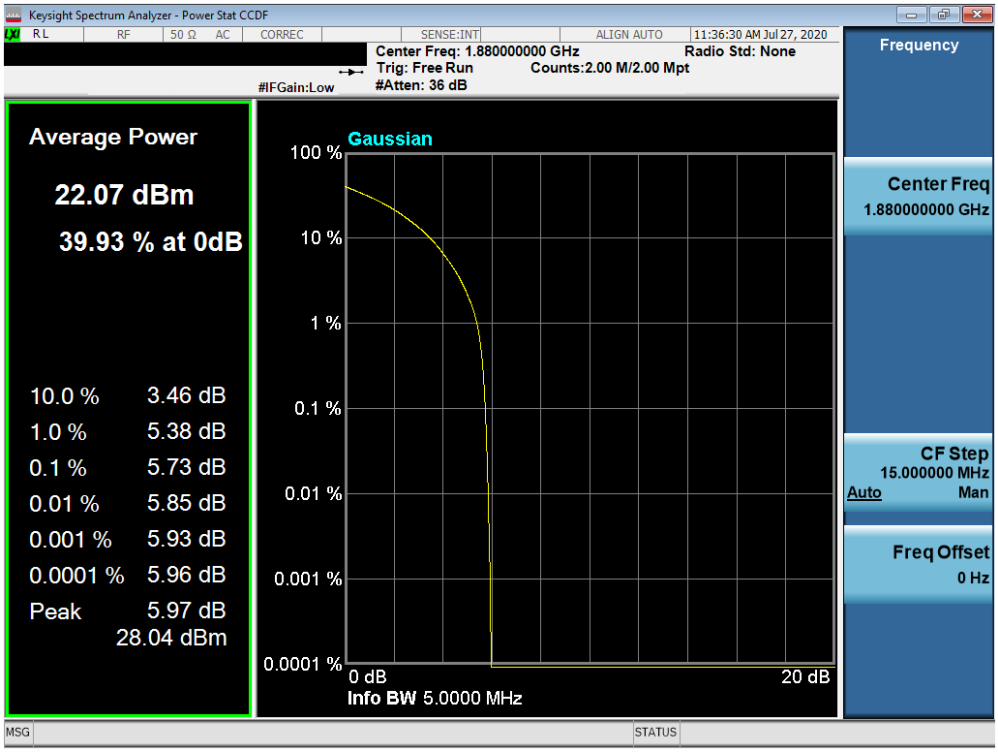
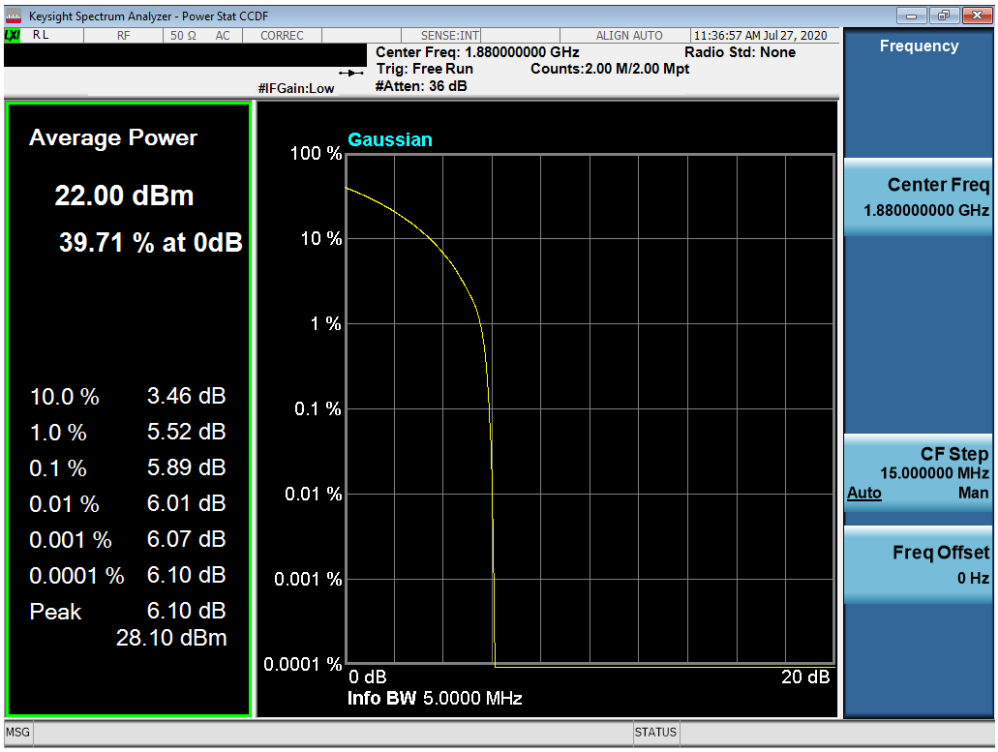


Plot 7-551. PAR Plot (NR n25/2 - 5.0MHz QPSK - Full RB Configuration)



Plot 7-552. PAR Plot (NR n25/2 - 5.0MHz 16-QAM - Full RB Configuration)

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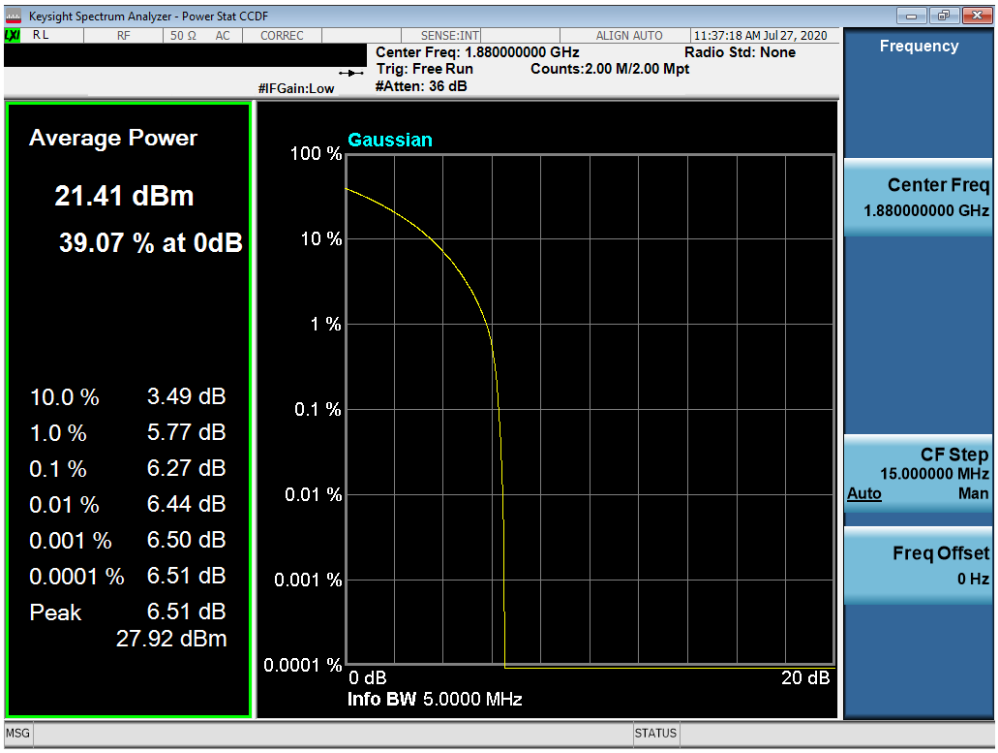
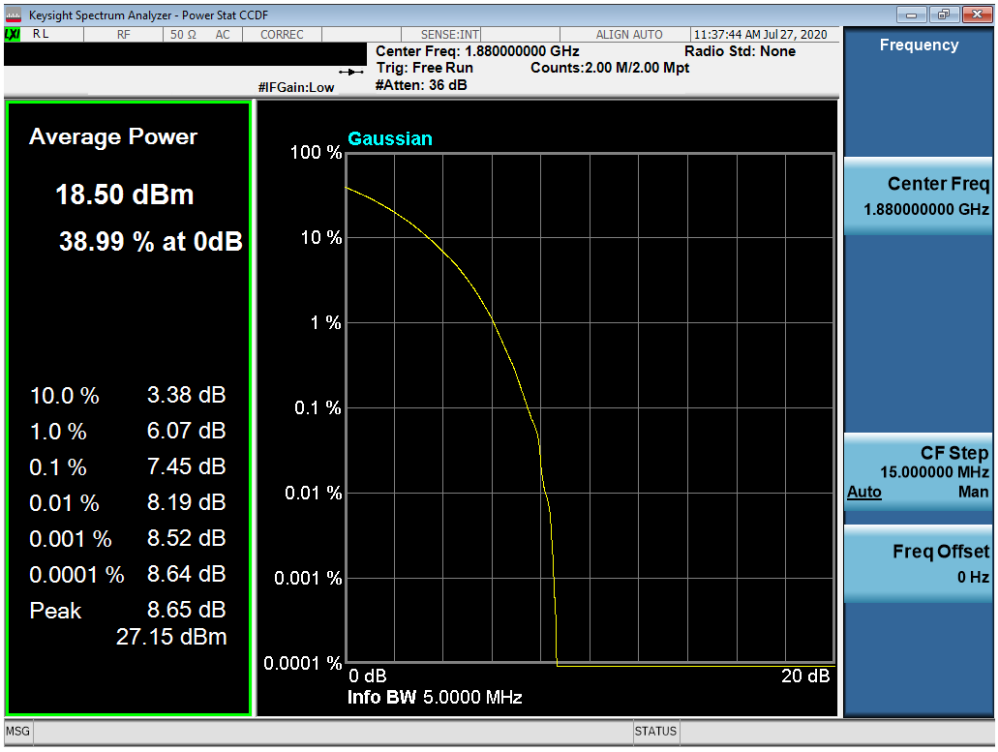


Plot 7-553. PAR Plot (NR n25/2 - 5.0MHz 64-QAM - Full RB Configuration)



Plot 7-554. PAR Plot (NR n25/2 - 5.0MHz 256-QAM - Full RB Configuration)

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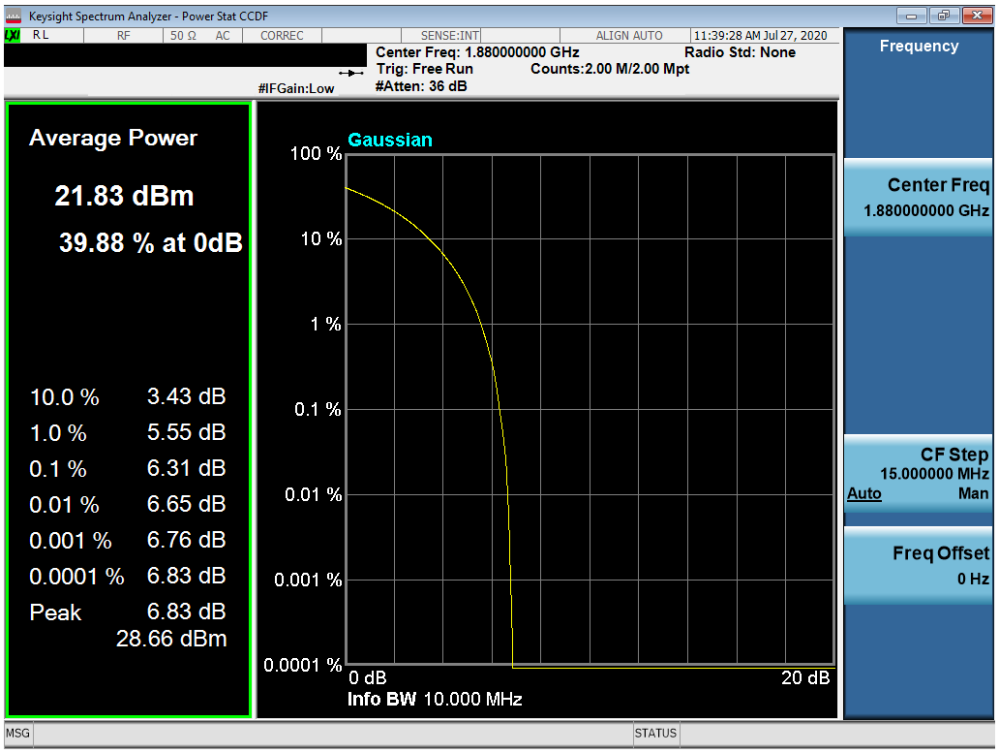
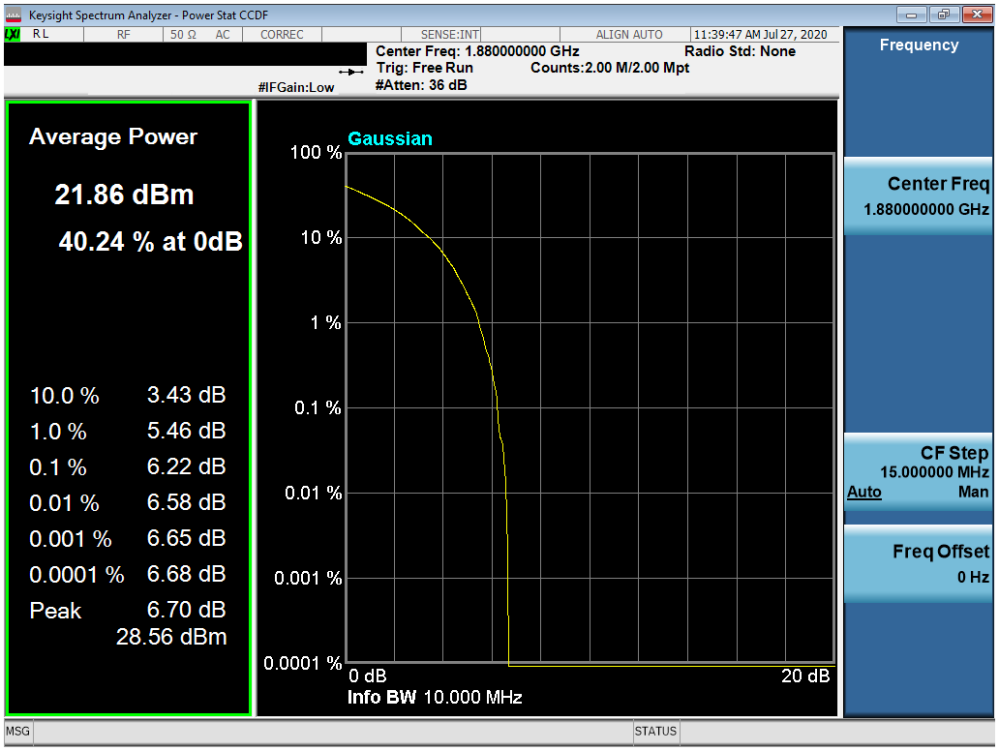


Plot 7-555. PAR Plot (NR n25/2 - 10.0MHz QPSK - Full RB Configuration)



Plot 7-556. PAR Plot (NR n25/2 - 10.0MHz 16-QAM - Full RB Configuration)

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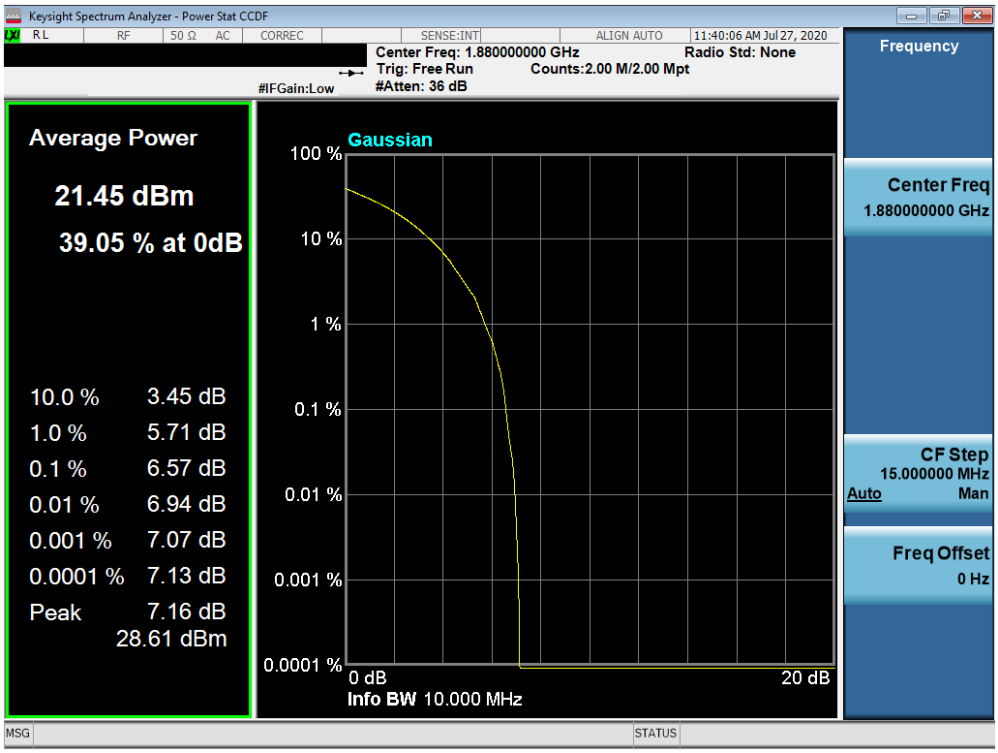
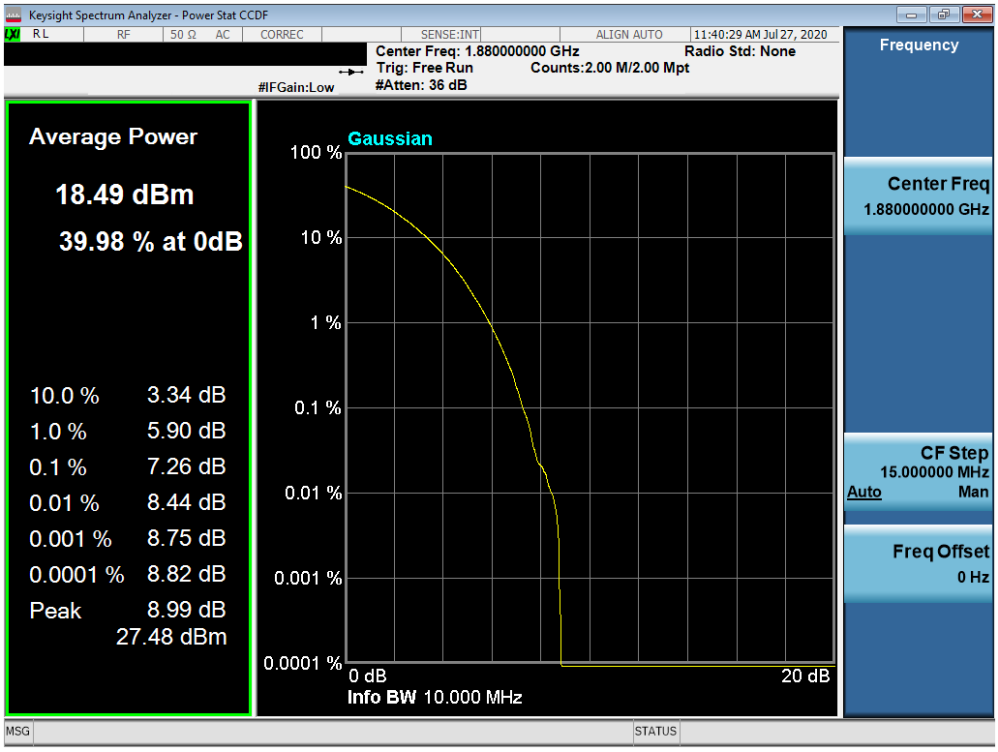


Plot 7-557. PAR Plot (NR n25/2 - 10.0MHz 64-QAM - Full RB Configuration)



Plot 7-558. PAR Plot (NR n25/2 - 10.0MHz 256-QAM - Full RB Configuration)

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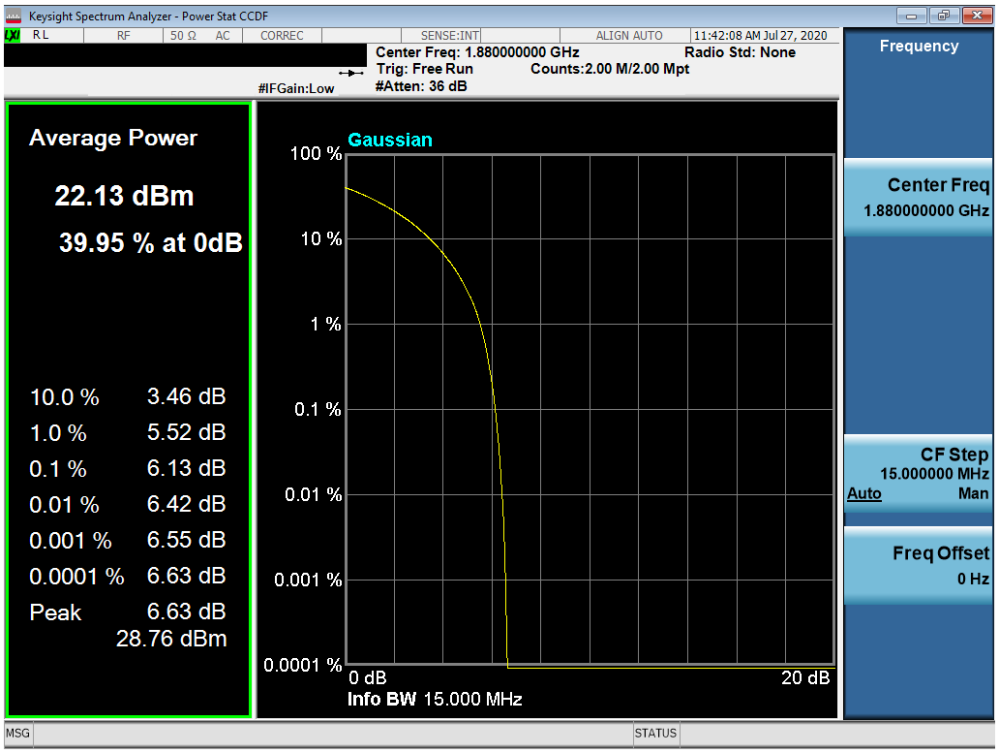
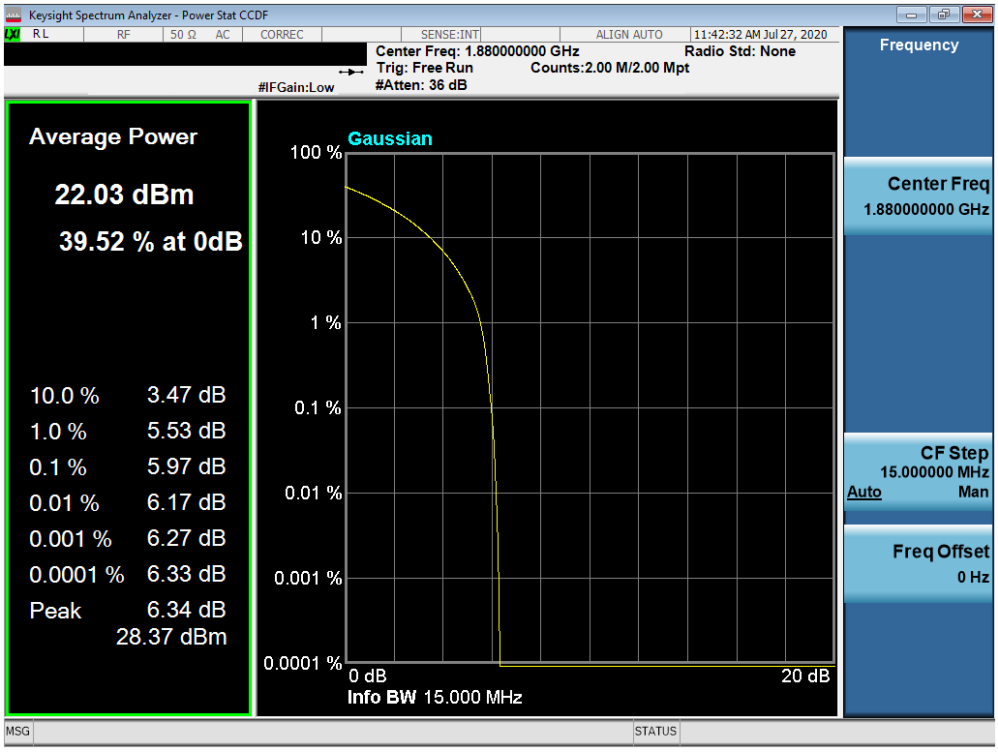


Plot 7-559. PAR Plot (NR n25/2 - 15.0MHz QPSK - Full RB Configuration)



Plot 7-560. PAR Plot (NR n25/2 - 15.0MHz 16-QAM - Full RB Configuration)

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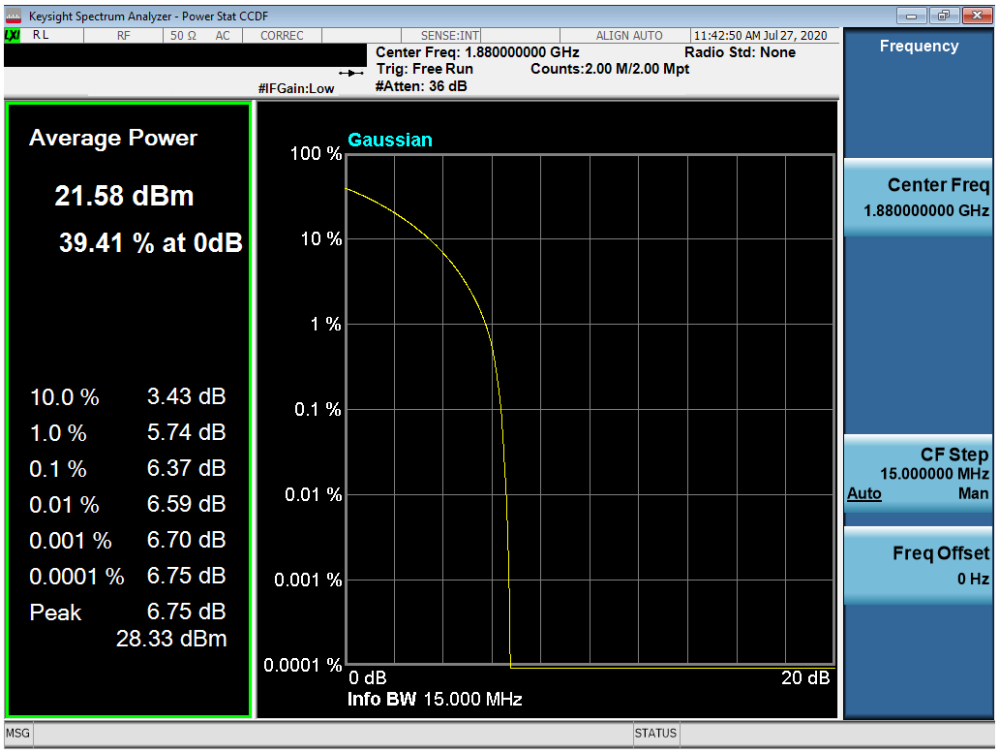
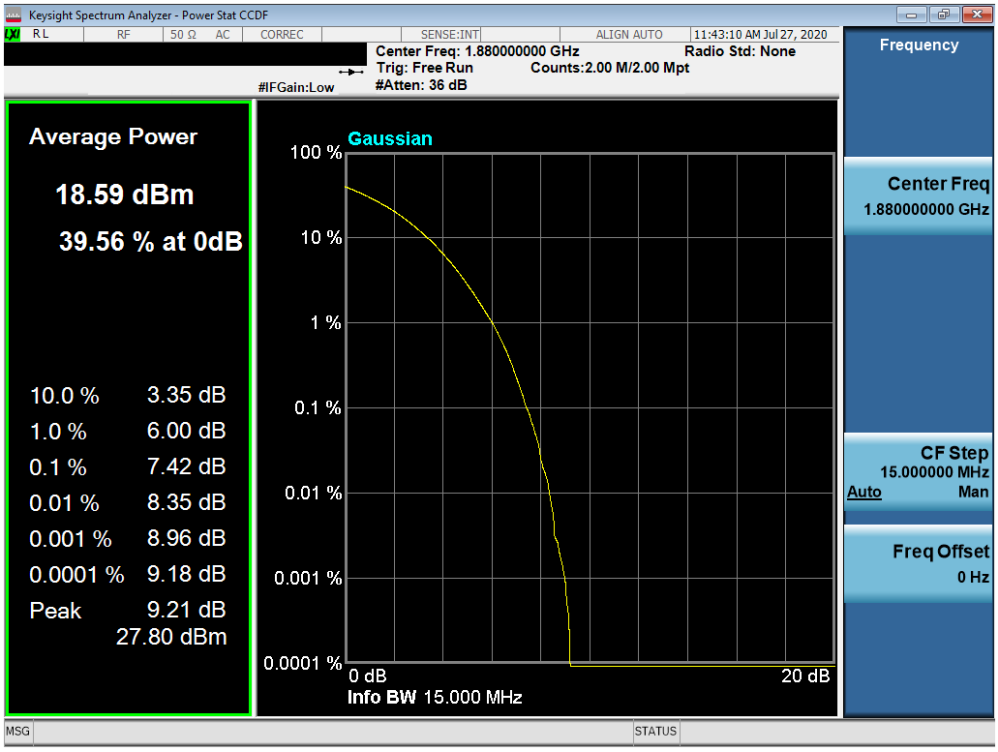


Plot 7-561. PAR Plot (NR n25/2 - 15.0MHz 64-QAM - Full RB Configuration)



Plot 7-562. PAR Plot (NR n25/2 - 15.0MHz 256-QAM - Full RB Configuration)

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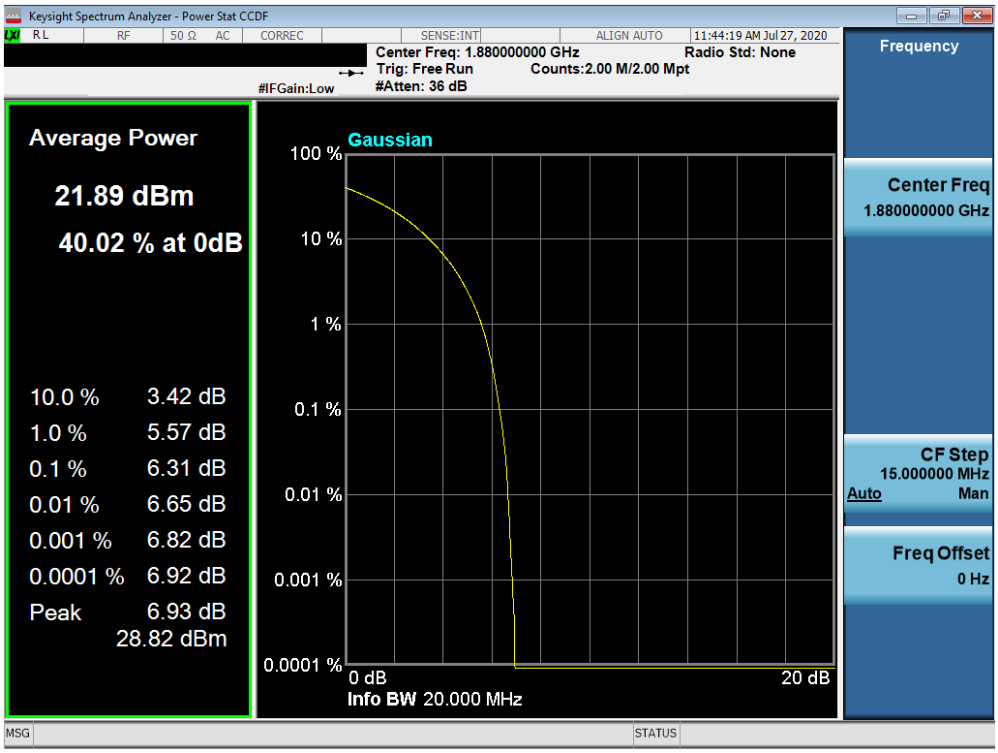
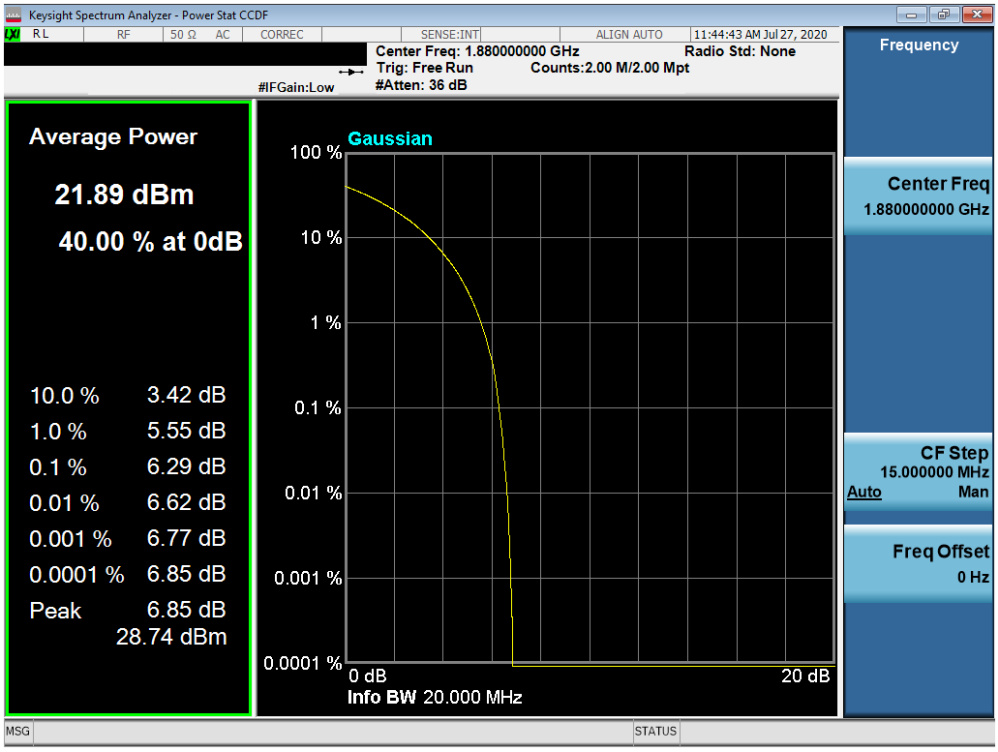


Plot 7-563. PAR Plot (NR n25/2 - 20.0MHz QPSK - Full RB Configuration)



Plot 7-564. PAR Plot (NR n25/2 - 20.0MHz 16-QAM - Full RB Configuration)

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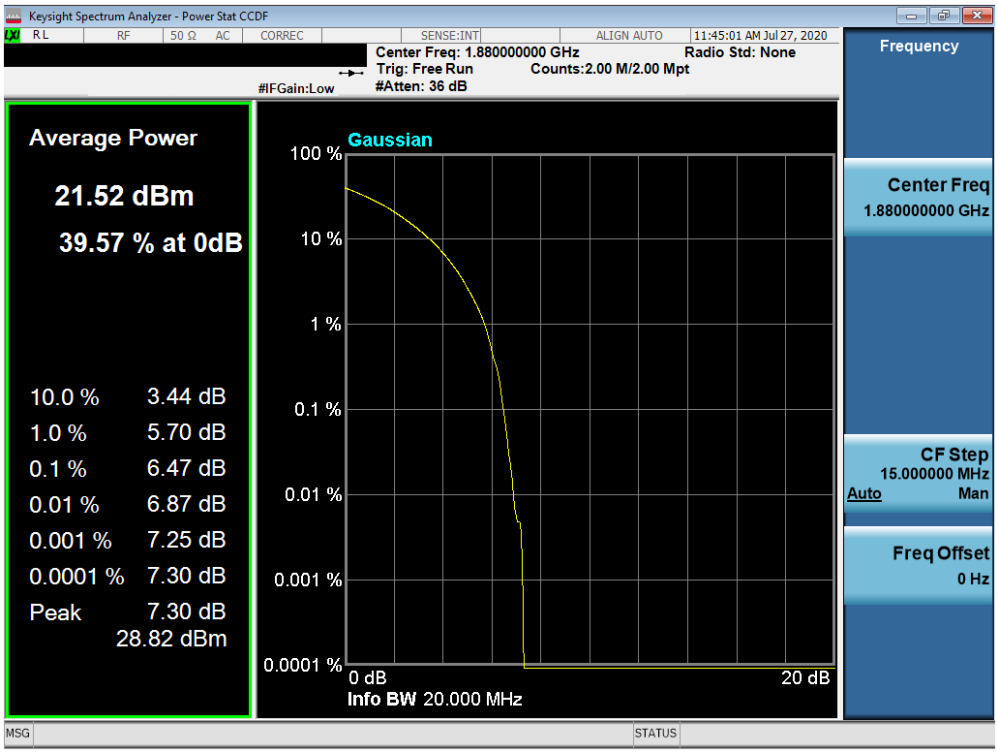
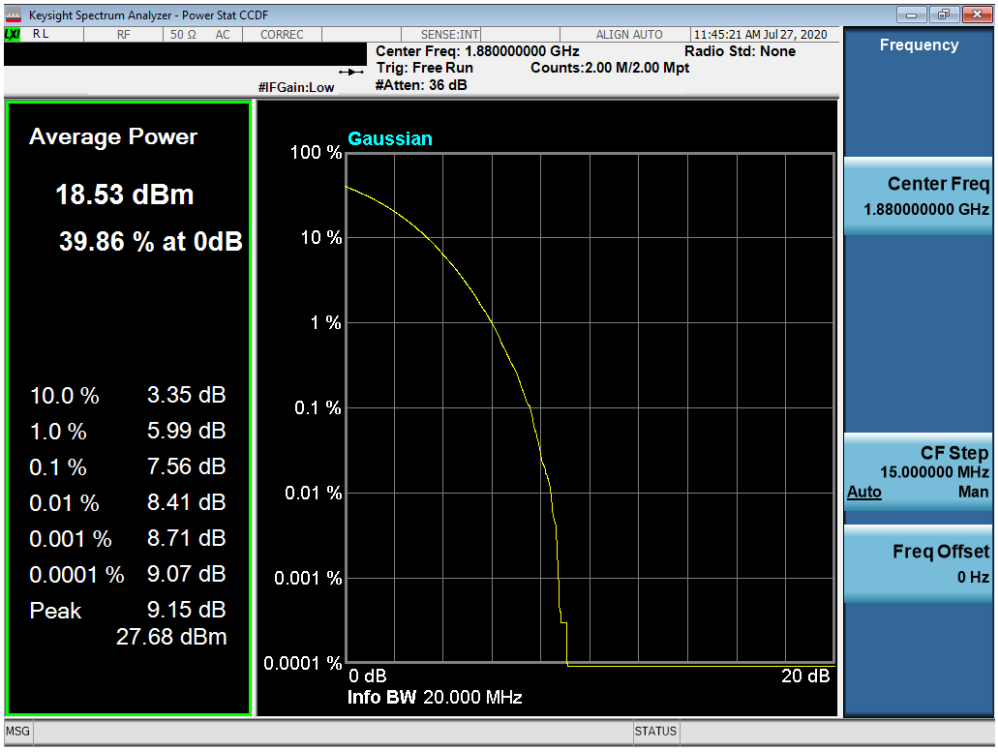


Plot 7-565. PAR Plot (NR n25/2 - 20.0MHz 64-QAM - Full RB Configuration)



Plot 7-566. PAR Plot (NR n25/2 - 20.0MHz 256-QAM - Full RB Configuration)

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7.6 Additional Maximum Power Reduction (A-MPR)

§2.1046

Test Overview

A-MPR is implemented in this device when operating at Power Class 2 in LTE Band 41 per the A-MPR specification in 3GPP TS 36.101. The conducted powers are shown herein to cover the different A-MPR levels specified in the standard. Measurement equipment was set up with triggering/gating on the spectrum analyzer such that powers were measured only during the on-time of the signal.

Test Procedure Used

KDB 971168 D01 v03r01 – Section 5.2.2

Test Settings

1. Span = 2 x OBW to 3 x OBW
2. RBW = 1% to 5% of the OBW
3. Number of measurement points in sweep ≥ 2 x span / RBW
4. Sweep = auto-couple (less than transmission burst duration)
5. Detector = RMS (power)
6. Trigger was set to enable power measurements only on full power bursts
7. Trace was allowed to stabilize
8. Spectrum analyzer's "Channel Power" function was used to compute the power by integrating the spectrum across the OBW of the signal

Test Setup

The EUT and measurement equipment were set up as shown in the diagram below.

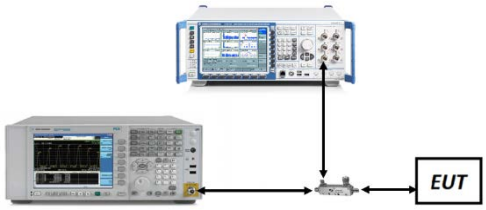

Figure 7-5. Test Instrument & Measurement Setup

Test Notes

None.

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NR Band n41 Widest Bandwidth								
BW	**Modulation**	**RB Size**	**RB Offset**	**Low Channel [MHz]**	**Measured Conducted Power [dBm]**	**A-MPR' [dB]**	**MPR [dB]**	**A-MPR = Max(MPR, AMPR') [dB]**
100	DFT-s-OFDM π/2 BPSK	1	68	2546	22.06	3.5	0	3.5
		1	137	2546	27.53	0	0	0
		1	204	2546	21.29	0	0	0
		135	0	2546	21.27	3.5	0	3.5
		135	69	2546	21.38	3.5	0	3.5
		135	138	2546	21.34	0	0	0
		270	0	2546	21.35	3.5	0	3.5
	DFT-s-OFDM QPSK	1	68	2546	21.16	4	0	4
		1	137	2546	21.3	0	0	0
		1	204	2546	21.31	0	0	0
		135	0	2546	21.28	4	1	4
		135	69	2546	21.31	4	0	4
		135	138	2546	21.2	0	1	1
		270	0	2546	21.28	4	1	4
	DFT-s-OFDM 16QAM	1	68	2546	21.44	4	1	4
		270	0	2546	21.3	4	2	4
	DFT-s-OFDM 64QAM	1	68	2546	20.67	4.5	2.5	4.5
		270	0	2546	21.18	4	2.5	4
	DFT-s-OFDM 256QAM	1	68	2546	19.26	6	4.5	6
		270	0	2546	20.82	4.5	4.5	4.5
	CP-OFDM QPSK	1	68	2546	19.96	5.5	1.5	5.5
		273	0	2546	20.77	5.5	3	5.5

Table 7-3. A-MPR Conducted Power Measurements

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7.7 Uplink Carrier Aggregation

§27.53(m)

Test Overview

The EUT is set up to transmit two contiguous LTE channels. The power level of both carriers and the various conducted spurious and harmonic frequencies is measured by means of a calibrated spectrum analyzer. The spectrum is scanned from the lowest frequency generated in the equipment up to a frequency including its 10th harmonic. All out of band emissions are measured with a spectrum analyzer connected to the antenna terminal of the EUT while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies. All data rates were investigated to determine the worst case configuration. All modes of operation were investigated and the worst case configuration results are reported in this section.

Test Procedure Used

KDB 971168 D01 v03r01 – Section 6.0

Test Settings

1. Start frequency was set to 30MHz and stop frequency was set to at least 10 * the fundamental frequency (separated into at least two plots per channel)
2. Detector = RMS
3. Trace mode = trace average for continuous emissions, max hold for pulse emissions
4. Sweep time = auto couple
5. The trace was allowed to stabilize
6. Please see test notes below for RBW and VBW settings

Test Setup

The EUT and measurement equipment were set up as shown in the diagram below.

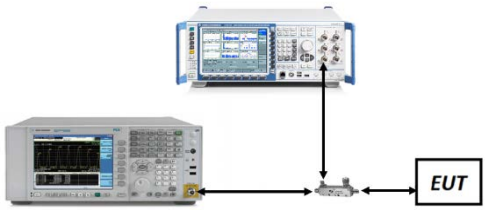

Figure 7-6. Test Instrument & Measurement Setup

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Test Notes

1. Conducted power and spurious emissions measurements were evaluated for the two contiguous channels using various combinations of RB size, RB offset, modulation, and channel bandwidth. Channel bandwidth data is shown in the tables below based only on the channel bandwidths that were supported in this device. The worst case (highest) powers were found while operating with QPSK modulation, as shown in Table 7-7 and 7-8 below, with both carriers set to transmit using 1RB.

2. Compliance with the applicable limits is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater for frequencies less than 1 GHz and 1 MHz or greater for frequencies greater than 1 GHz. However, in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

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Uplink CA Configuration 41C

PCC						SCC						
Channel	Frequency [MHz]	BW [MHz]	Mod.	RB Size	RB Offset	Channel	Frequency [MHz]	BW [MHz]	Mod.	RB Size	RB Offset	ULCA Tx.Power (dBm)
39750	2506.0	20	QPSK	1	99	39948	2525.8	20	QPSK	1	0	25.50
40620	2593.0	20	QPSK	1	99	40818	2612.8	20	QPSK	1	0	25.97
41490	2680.0	20	QPSK	1	0	41292	2660.2	20	QPSK	1	99	25.66

Table 7-4. Conducted Powers (B41 – Left Carrier: RB Size 1 Offset Max Right Carrier: RB Size 1 Offset 0)

PCC						SCC						
Channel	Frequency [MHz]	BW [MHz]	Mod.	RB Size	RB Offset	Channel	Frequency [MHz]	BW [MHz]	Mod.	RB Size	RB Offset	ULCA Tx.Power (dBm)
39650	2496.0	20	QPSK	100	0	39948	2525.8	20	QPSK	100	0	23.47
39650	2496.0	20	16-QAM	100	0	39948	2525.8	20	16-QAM	100	0	22.36
39650	2496.0	20	64-QAM	100	0	39948	2525.8	20	64-QAM	100	0	20.12

Table 7-5. Conducted Powers (B41 with Various Combinations for 20MHz Channel Bandwidth)

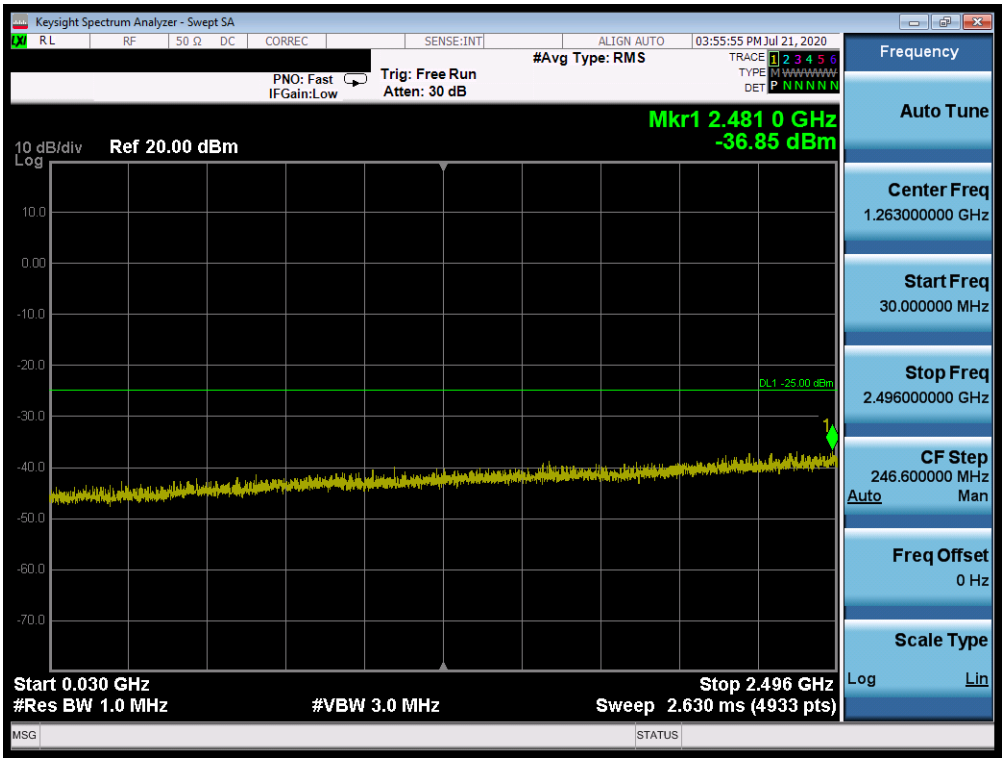

Table 7-567. Conducted Spurious Plot (Band 41 – 20.0MHz QPSK – Left Carrier 1/99 Right Carrier 1/0 – Mid Channel)

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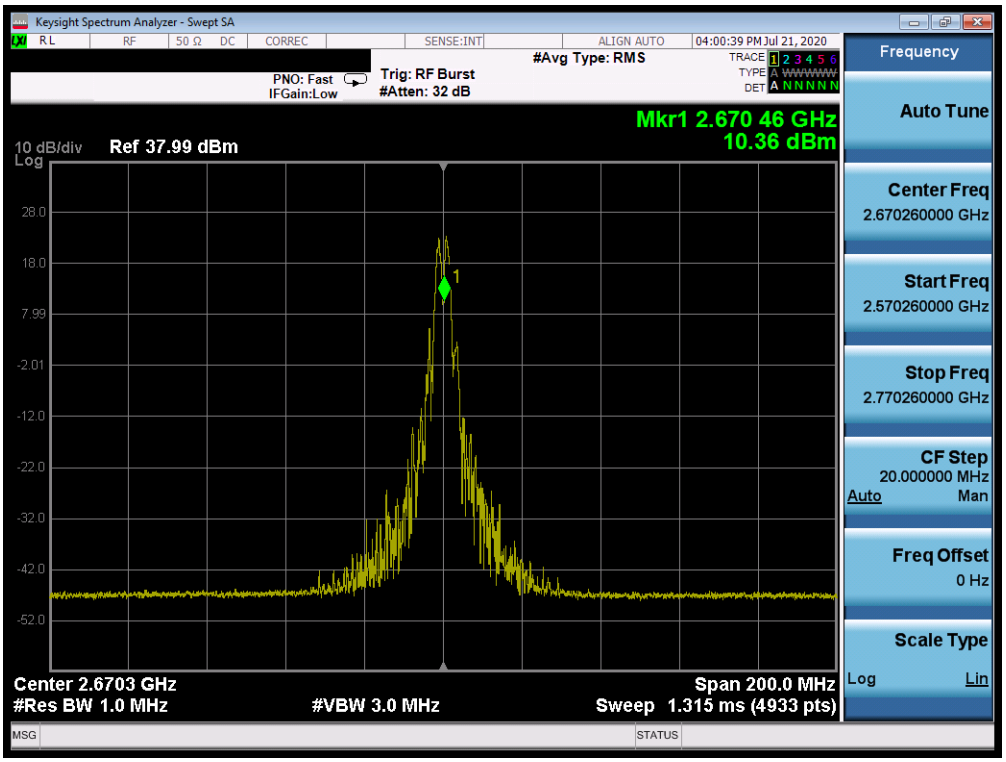

Table 7-568. Conducted Spurious Plot (Band 41 – 20.0MHz QPSK – Left Carrier 1/99 Right Carrier 1/0 – Mid Channel)

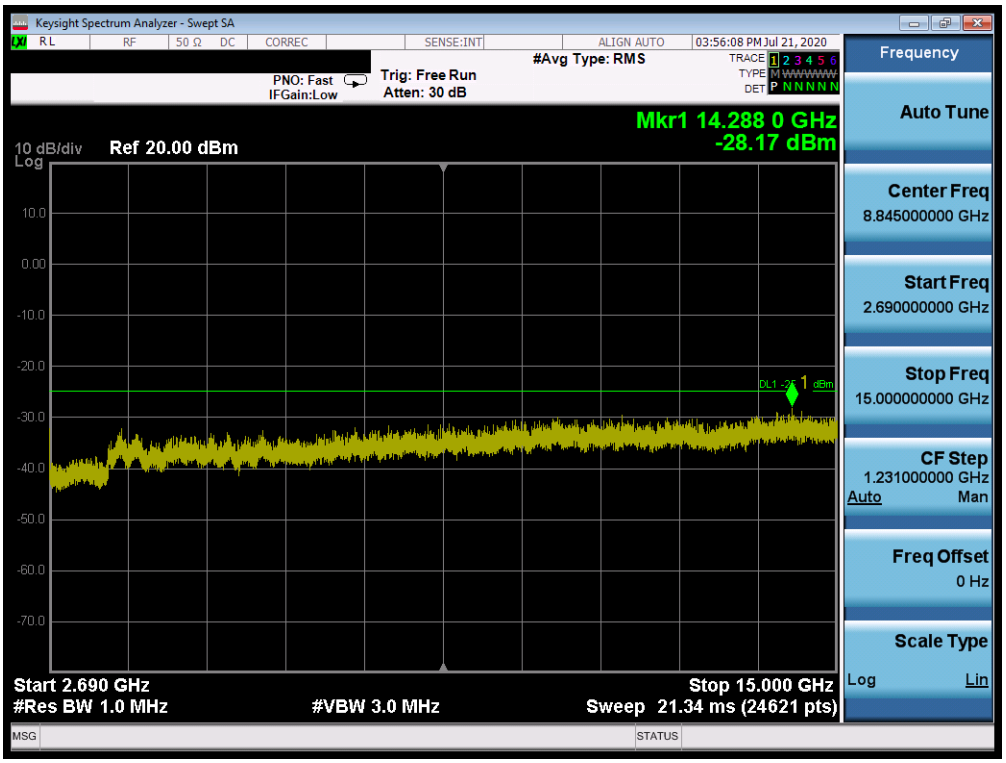

Table 7-569. Conducted Spurious Plot (Band 41 – 20.0MHz QPSK – Left Carrier 1/99 Right Carrier 1/0 – Mid Channel)

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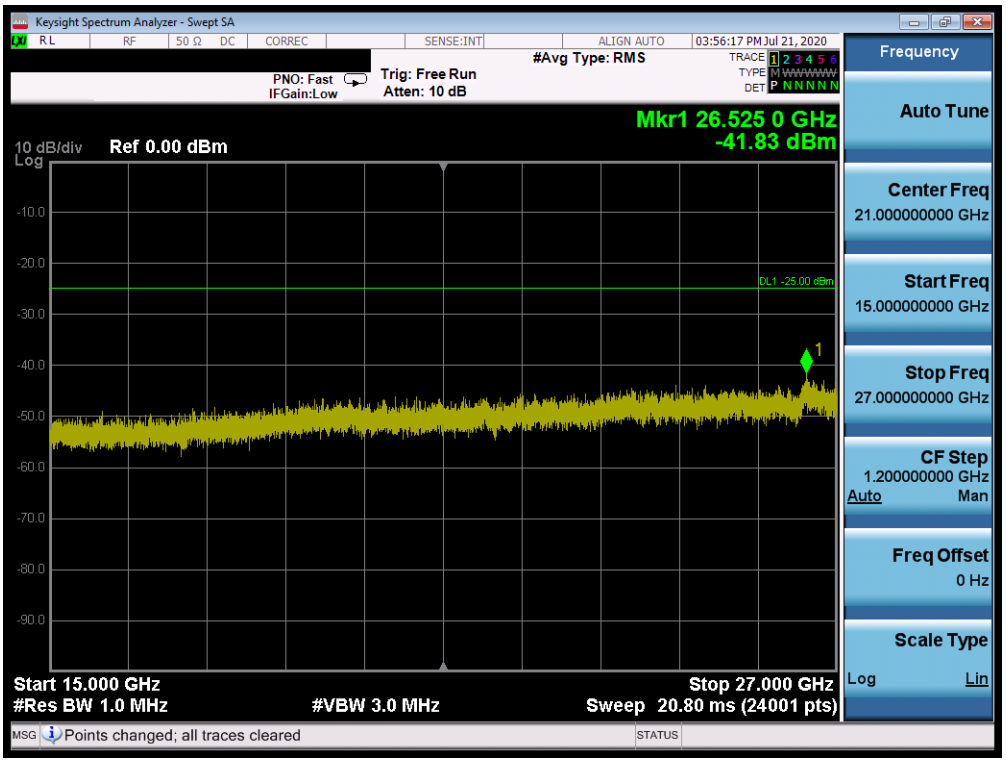

Table 7-570. Conducted Spurious Plot (Band 41 – 20.0MHz QPSK – Left Carrier 1/99 Right Carrier 1/0 – Mid Channel)

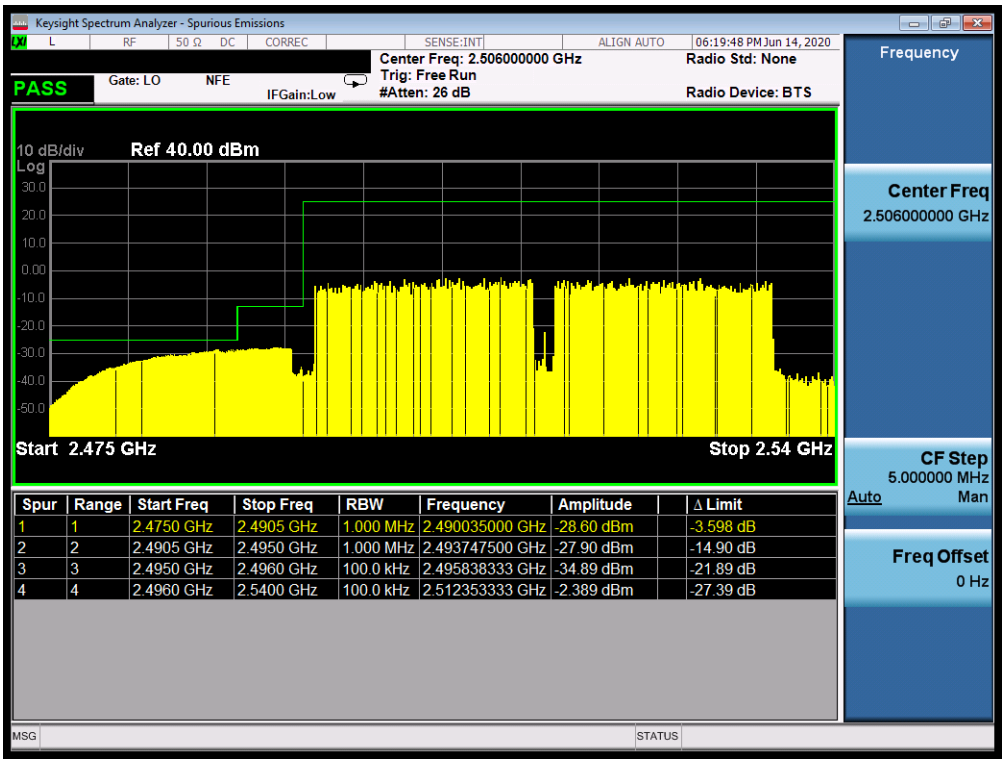

Table 7-571. Lower ACP Plot (Band 41 QPSK – Left Carrier:20 MHz Right Carrier:20 MHz – Full RB)

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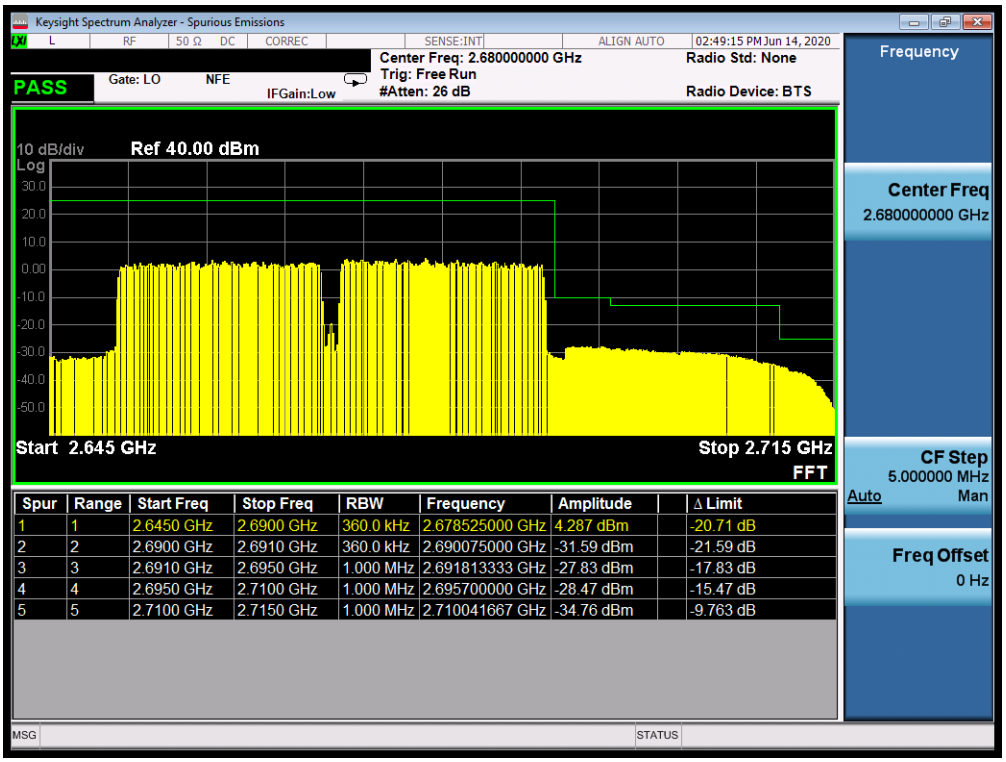

Spur	Range	Start Freq	Stop Freq	RBW	Frequency	Amplitude	Δ Limit
1	1	2.6450 GHz	2.6900 GHz	360.0 kHz	2.678525000 GHz	4.287 dBm	-20.71 dB
2	2	2.6900 GHz	2.6910 GHz	360.0 kHz	2.690075000 GHz	-31.59 dBm	-21.59 dB
3	3	2.6910 GHz	2.6950 GHz	1.000 MHz	2.691813333 GHz	-27.83 dBm	-17.83 dB
4	4	2.6950 GHz	2.7100 GHz	1.000 MHz	2.695700000 GHz	-28.47 dBm	-15.47 dB
5	5	2.7100 GHz	2.7150 GHz	1.000 MHz	2.710041667 GHz	-34.76 dBm	-9.763 dB

Table 7-572. Upper ACP Plot (Band 41 QPSK – Left Carrier:20 MHz Right Carrier:20 MHz – Full RB)

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7.8 Additional Maximum Power Reduction (A-MPR)

§2.1046

Test Overview

A-MPR is implemented in this device when operating at Power Class 2 in LTE Band 41 per the A-MPR specification in 3GPP TS 36.101. The conducted powers are shown herein to cover the different A-MPR levels specified in the standard. Measurement equipment was set up with triggering/gating on the spectrum analyzer such that powers were measured only during the on-time of the signal.

Test Procedure Used

KDB 971168 D01 v03r01 – Section 5.2.2

Test Settings

9. Span = 2 x OBW to 3 x OBW
10. RBW = 1% to 5% of the OBW
11. Number of measurement points in sweep ≥ 2 x span / RBW
12. Sweep = auto-couple (less than transmission burst duration)
13. Detector = RMS (power)
14. Trigger was set to enable power measurements only on full power bursts
15. Trace was allowed to stabilize
16. Spectrum analyzer's "Channel Power" function was used to compute the power by integrating the spectrum across the OBW of the signal

Test Setup

The EUT and measurement equipment were set up as shown in the diagram below.

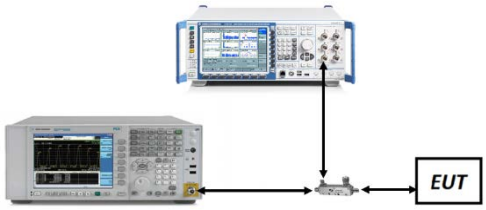

Figure 7-7. Test Instrument & Measurement Setup

Test Notes

None.

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Test Case	NS	MCC	MNC	Channel BW [MHz]	Channel Number	Channel Frequency [MHz]	Modulation	RB Size	RB Offset	MPR [dB]	A-MPR [dB]	A-MPR [dB]	Measured Power [dBm]
13	01	312	530	20	39750	2506	QPSK	1	0	0	≤ 5	5	23.42
							16-QAM	1	0	≤ 1		5	22.12
							64-QAM	1	0	≤ 2		5	21.00
14				20	39750	2506	QPSK	20	0	0	≤ 2	2	23.27
							16-QAM	20	0	≤ 1		2	23.08
							64-QAM	20	0	≤ 2		2	22.08
15				20	39750	2506	QPSK	100	0	0	≤ 4	4	21.47
							16-QAM	100	0	≤ 1		4	20.16
							64-QAM	100	0	≤ 2		4	19.43
16				20	39750	2506	QPSK	75	24	0	≤ 3	3	22.84
							16-QAM	75	24	≤ 1		3	21.87
							64-QAM	75	24	≤ 2		3	20.81
17				20	39750	2506	QPSK	1	77	0	0	0	26.56
							16-QAM	1	77	≤ 1		0	27.32
							64-QAM	1	77	≤ 2		0	24.3
18	01	311	490	20	39750	2506	QPSK	1	0	0	≤ 3	3	22.21
							16-QAM			≤ 1		3	20.9
							64-QAM			≤ 2		3	19.82
19	01	001	01	20	39750	2506	QPSK	1	0	0	0	0	28.29
							16-QAM			≤ 1		0	27.31
							64-QAM			≤ 2		0	26.23

Table 7-6. A-MPR Conducted Power Measurements

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7.9 Radiated Power (ERP/EIRP)

Test Overview

Effective Radiated Power (ERP) and Equivalent Isotropic Radiated Power (EIRP) measurements are performed using the substitution method described in ANSI/TIA-603-E-2016 with the EUT transmitting into an integral antenna. Measurements on signals operating below 1GHz are performed using vertically and horizontally polarized tuned dipole antennas. Measurements on signals operating above 1GHz are performed using vertically and horizontally polarized broadband horn antennas. All measurements are performed as RMS average measurements while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies.

Test Procedures Used

KDB 971168 D01 v03r01 – Section 5.2.1

ANSI/TIA-603-E-2016 – Section 2.2.17

Test Settings

1. Radiated power measurements are performed using the signal analyzer's "channel power" measurement capability for signals with continuous operation.
2. RBW = 1 – 5% of the expected OBW, not to exceed 1MHz
3. VBW ≥ 3 x RBW
4. Span = 1.5 times the OBW
5. No. of sweep points ≥ 2 x span / RBW
6. Detector = RMS
7. Trigger is set to "free run" for signals with continuous operation with the sweep times set to "auto".
8. The integration bandwidth was roughly set equal to the measured OBW of the signal for signals with continuous operation.
9. Trace mode = trace averaging (RMS) over 100 sweeps
10. The trace was allowed to stabilize

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Test Setup

The EUT and measurement equipment were set up as shown in the diagram below.

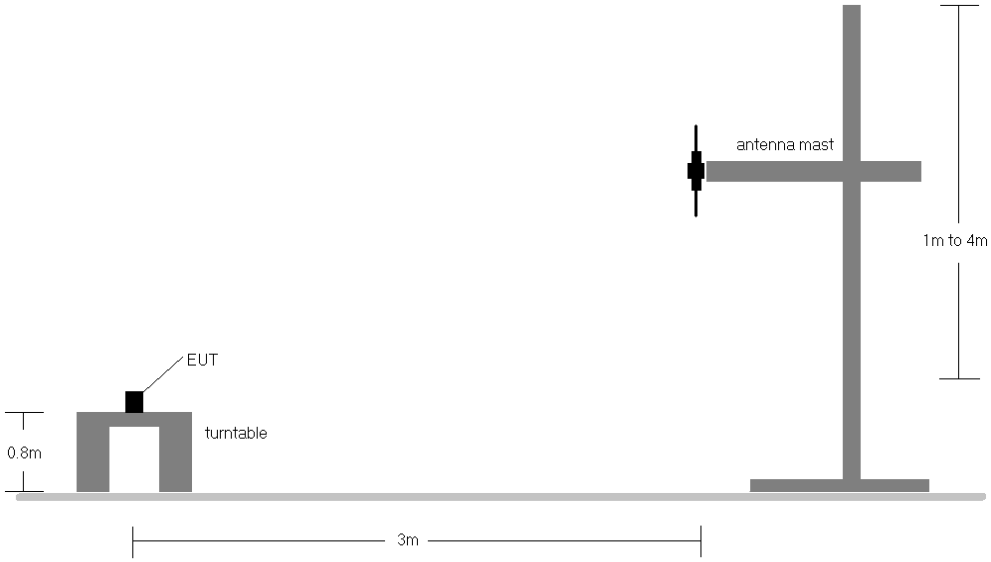

Figure 7-8. Radiated Test Setup <1GHz

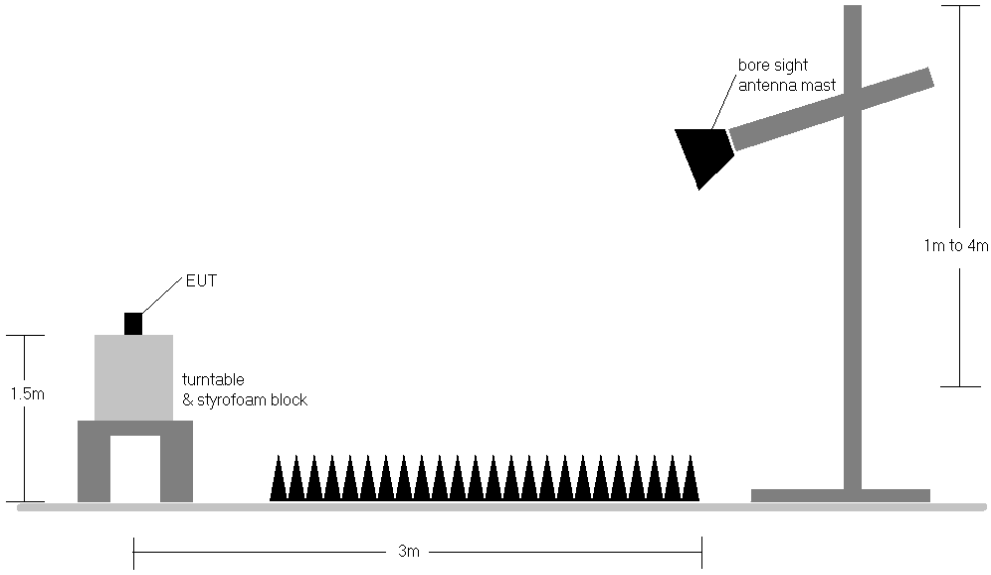

Figure 7-9. Radiated Test Setup >1GHz

Test Notes

1) The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case emissions are reported with the EUT positioning, modulations, RB sizes and offsets, and channel bandwidth configurations shown in the tables below.

2) This unit was tested with its standard battery.

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Frequency [MHz]	Channel Bandwidth [MHz]	Mod.	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	RB Size/Offset	Substitute Level [dBm]	Ant. Gain [dBi]	ERP [dBm]	ERP [Watts]	ERP Limit [dBm]	Margin [dB]
665.50	5	QPSK	H	191	128	1 / 24	13.29	2.99	14.14	0.026	34.77	-20.63
680.50	5	QPSK	H	117	187	1 / 24	13.93	3.19	14.97	0.031	34.77	-19.81
695.50	5	QPSK	H	175	138	1 / 24	14.19	3.38	**15.41**	0.035	34.77	-19.36
695.50	5	16-QAM	H	175	138	1 / 24	12.06	3.38	**13.28**	0.021	34.77	-21.49
680.50	5	64-QAM	H	117	187	1 / 24	11.54	3.19	**12.58**	0.018	34.77	-22.20
668.00	10	QPSK	H	191	128	1 / 49	13.37	3.02	14.25	0.027	34.77	-20.52
680.50	10	QPSK	H	117	187	1 / 49	14.18	3.19	15.22	0.033	34.77	-19.56
693.00	10	QPSK	H	175	138	1 / 49	14.39	3.34	**15.58**	**0.036**	34.77	-19.19
693.00	10	16-QAM	H	175	138	1 / 49	12.21	3.34	**13.40**	0.022	34.77	-21.37
680.50	10	64-QAM	H	117	187	1 / 49	11.68	3.19	**12.72**	0.019	34.77	-22.06
670.50	15	QPSK	H	191	128	1 / 74	13.30	3.06	14.21	0.026	34.77	-20.56
680.50	15	QPSK	H	117	187	1 / 74	14.09	3.19	15.13	0.033	34.77	-19.65
690.50	15	QPSK	H	175	138	1 / 74	14.37	3.31	**15.53**	0.036	34.77	-19.24
690.50	15	16-QAM	H	175	138	1 / 74	12.23	3.31	**13.39**	0.022	34.77	-21.38
680.50	15	64-QAM	H	117	187	1 / 74	11.63	3.19	**12.67**	0.018	34.77	-22.11
673.00	20	QPSK	H	191	128	1 / 99	13.33	3.09	14.27	0.027	34.77	-20.50
680.50	20	QPSK	H	117	187	1 / 99	14.14	3.19	15.18	0.033	34.77	-19.60
688.00	20	QPSK	H	175	138	1 / 99	14.39	3.28	**15.52**	0.036	34.77	-19.25
680.50	20	16-QAM	H	117	187	1 / 99	12.48	3.19	**13.52**	0.022	34.77	-21.26
680.50	20	64-QAM	H	117	187	1 / 99	11.64	3.19	**12.68**	0.019	34.77	-22.10
693.00	10	QPSK	V	141	66	1 / 49	13.63	3.28	14.76	0.030	34.77	-20.01
693.00	20 (Camera)	QPSK	H	134	127	1 / 49	12.27	3.28	13.40	**0.022**	34.77	-21.37
693.00	10 (WCP)	QPSK	H	122	124	1 / 49	10.57	3.28	11.70	0.015	34.77	-23.07

Table 7-7. ERP Data (Band 71)

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Bandwidth	Mod.	Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Ant. Gain [dBi]	RB Size/Offset	Substitute Level [dBm]	ERP [dBm]	ERP [Watts]	ERP Limit [dBm]	Margin [dB]
20 MHz	π/2 BPSK	673.0	H	154	94	3.70	1 / 50	14.36	15.91	0.039	34.77	-18.86
		680.5	H	172	87	3.70	1 / 50	14.39	**15.94**	0.039	34.77	-18.83
		688.0	H	134	34	3.70	1 / 50	14.15	15.70	0.037	34.77	-19.07
	QPSK	673.0	H	154	94	3.70	1 / 50	13.82	15.37	0.034	34.77	-19.40
		680.5	H	172	87	3.70	1 / 50	13.78	15.33	0.034	34.77	-19.44
		688.0	H	134	34	3.70	1 / 50	13.97	**15.52**	0.036	34.77	-19.25
	16-QAM	680.5	H	172	87	3.70	1 / 50	13.16	**14.71**	0.030	34.77	-20.06
	64-QAM	680.5	H	172	87	3.70	1 / 50	13.15	**14.70**	0.030	34.77	-20.07
	256-QAM	680.5	H	172	87	3.70	1 / 50	11.15	**12.70**	0.019	34.77	-22.07
15 MHz	π/2 BPSK	670.5	H	155	92	3.70	1 / 50	13.83	**15.38**	0.035	34.77	-19.39
		680.5	H	143	61	3.70	1 / 50	14.05	**15.60**	0.036	34.77	-19.17
		690.5	H	141	40	3.70	1 / 50	13.92	**15.47**	0.035	34.77	-19.30
	QPSK	670.5	H	155	92	3.70	1 / 50	13.15	**14.70**	0.030	34.77	-20.07
		680.5	H	143	61	3.70	1 / 50	13.25	**14.80**	0.030	34.77	-19.97
		690.5	H	141	40	3.70	1 / 50	13.27	**14.82**	0.030	34.77	-19.95
	16-QAM	680.5	H	143	61	3.70	1 / 50	12.94	**14.49**	0.028	34.77	-20.28
	64-QAM	680.5	H	143	61	3.70	1 / 50	12.28	13.83	0.024	34.77	-20.94
	256-QAM	680.5	H	143	61	3.70	1 / 50	10.35	11.90	0.015	34.77	-22.87
10 MHz	π/2 BPSK	668.0	H	148	101	3.70	1 / 50	13.81	**15.36**	0.034	34.77	-19.41
		680.5	H	162	216	3.70	1 / 50	13.95	**15.50**	0.035	34.77	-19.27
		693.0	H	131	218	3.70	1 / 50	14.04	**15.59**	0.036	34.77	-19.18
	QPSK	668.0	H	148	101	3.70	1 / 50	13.07	**14.62**	0.029	34.77	-20.15
		680.5	H	162	216	3.70	1 / 50	13.18	**14.73**	0.030	34.77	-20.04
		693.0	H	131	218	3.70	1 / 50	13.25	**14.80**	0.030	34.77	-19.97
	16-QAM	680.5	H	162	216	3.70	1 / 50	12.92	**14.47**	0.028	34.77	-20.30
	64-QAM	680.5	H	162	216	3.70	1 / 50	12.25	13.80	0.024	34.77	-20.97
	256-QAM	680.5	H	162	216	3.70	1 / 50	10.27	11.82	0.015	34.77	-22.95
5 MHz	π/2 BPSK	665.5	H	142	127	3.70	1 / 50	13.84	**15.39**	0.035	34.77	-19.38
		680.5	H	160	210	3.70	1 / 50	13.94	**15.49**	0.035	34.77	-19.28
		695.5	H	137	213	3.70	1 / 50	13.90	**15.45**	0.035	34.77	-19.32
	QPSK	665.5	H	142	127	3.70	1 / 50	13.15	**14.70**	0.030	34.77	-20.07
		680.5	H	160	210	3.70	1 / 50	13.17	**14.72**	0.030	34.77	-20.05
		695.5	H	137	213	3.70	1 / 50	13.18	**14.73**	0.030	34.77	-20.04
	16-QAM	680.5	H	160	210	3.70	1 / 50	12.74	**14.29**	0.027	34.77	-20.48
	64-QAM	680.5	H	160	210	3.70	1 / 50	12.22	13.77	0.024	34.77	-21.00
	256-QAM	680.5	H	160	210	3.70	1 / 50	10.25	11.80	0.015	34.77	-22.97
20 MHz	QPSK (CP-OFDM)	680.5	H	154	144	3.70	1 / 50	12.13	**13.68**	0.023	34.77	-21.09
	QPSK (Opposite Pol.)	680.5	V	182	158	3.70	1 / 50	11.63	13.18	0.021	34.77	-21.59
	BPSK (Camera)	680.5	H	174	164	3.70	1 / 50	11.75	13.30	0.021	34.77	-21.47
	BPSK (Open)	680.5	H	164	221	3.70	1 / 50	11.70	13.25	0.021	34.77	-21.52
	BPSK (WCP)	680.5	H	178	168	3.70	1 / 50	7.12	8.67	0.007	34.77	-26.10

Table 7-8. ERP Data (Band n71)

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Frequency [MHz]	Channel Bandwidth [MHz]	Mod.	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	RB Size/Offset	Substitute Level [dBm]	Ant. Gain [dBi]	ERP [dBm]	ERP [Watts]	ERP Limit [dBm]	Margin [dB]
699.70	1.4	QPSK	V	144	250	1 / 0	14.56	4.56	16.97	0.050	34.77	-17.80
707.50	1.4	QPSK	V	149	259	1 / 0	14.39	4.62	16.86	0.049	34.77	-17.91
715.30	1.4	QPSK	V	100	264	1 / 0	14.43	4.72	**17.00**	0.050	34.77	-17.77
715.30	1.4	16-QAM	V	100	264	1 / 0	13.32	4.72	**15.89**	0.039	34.77	-18.88
699.70	1.4	64-QAM	V	144	250	1 / 0	11.86	4.56	14.27	0.027	34.77	-20.50
700.50	3	QPSK	V	144	250	1 / 0	14.63	4.59	**17.07**	0.051	34.77	-17.70
707.50	3	QPSK	V	149	259	1 / 0	14.47	4.62	16.94	0.049	34.77	-17.83
714.50	3	QPSK	V	100	264	1 / 0	14.50	4.71	17.06	0.051	34.77	-17.71
714.50	3	16-QAM	V	100	264	1 / 0	13.44	4.71	**16.00**	0.040	34.77	-18.77
700.50	3	64-QAM	V	144	250	1 / 0	11.90	4.59	14.34	0.027	34.77	-20.43
701.50	5	QPSK	V	144	250	1 / 0	14.59	4.60	**17.04**	0.051	34.77	-17.73
707.50	5	QPSK	V	149	259	1 / 0	14.51	4.62	16.98	0.050	34.77	-17.79
713.50	5	QPSK	V	100	264	1 / 0	14.48	4.70	17.03	0.050	34.77	-17.74
713.50	5	16-QAM	V	100	264	1 / 0	13.46	4.70	**16.01**	0.040	34.77	-18.76
701.50	5	64-QAM	V	144	250	1 / 0	12.00	4.60	**14.45**	0.028	34.77	-20.32
704.00	10	QPSK	V	144	250	1 / 0	14.76	4.58	**17.19**	**0.052**	34.77	-17.58
707.50	10	QPSK	V	149	259	1 / 0	14.47	4.62	16.94	0.049	34.77	-17.83
711.00	10	QPSK	V	100	264	1 / 0	14.55	4.67	17.07	0.051	34.77	-17.70
711.00	10	16-QAM	V	100	264	1 / 0	13.53	4.67	**16.05**	0.040	34.77	-18.72
707.50	10	64-QAM	V	149	259	1 / 0	11.79	4.62	**14.26**	0.027	34.77	-20.51
704.00	10	QPSK	H	202	322	1 / 0	12.27	4.58	14.70	0.030	34.77	-20.07
704.00	10 (WCP)	QPSK	V	138	178	1 / 0	10.10	4.58	12.53	0.018	34.77	-22.24
704.00	10 (Camera)	QPSK	V	140	162	1 / 0	14.67	4.58	17.10	**0.051**	34.77	-17.67

Table 7-9. ERP Data (Band 12/17)

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Frequency [MHz]	Channel Bandwidth [MHz]	Mod.	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	RB Size/Offset	Substitute Level [dBm]	Ant. Gain [dBi]	ERP [dBm]	ERP [Watts]	ERP Limit [dBm]	Margin [dB]
779.50	5	QPSK	V	131	105	1 / 24	11.05	5.77	14.67	0.029	34.77	-20.11
782.00	5	QPSK	V	132	105	1 / 24	10.99	5.79	14.63	0.029	34.77	-20.14
784.50	5	QPSK	V	131	106	1 / 24	11.08	5.82	**14.75**	0.030	34.77	-20.02
784.50	5	16-QAM	V	131	106	1 / 24	10.05	5.82	**13.72**	0.024	34.77	-21.05
784.50	5	64-QAM	V	131	106	1 / 24	9.09	5.82	**12.76**	0.019	34.77	-22.01
782.00	10	QPSK	V	131	107	1 / 49	11.21	5.79	**14.85**	**0.031**	34.77	-19.92
782.00	10	16-QAM	V	131	107	1 / 49	9.62	5.79	**13.26**	0.021	34.77	-21.51
782.00	10	64-QAM	V	131	107	1 / 49	8.62	5.79	**12.26**	0.017	34.77	-22.51
782.00	10	QPSK	H	150	356	1 / 49	10.08	5.79	13.72	0.024	34.77	-21.05
782.00	10 (WCP)	QPSK	V	160	259	1 / 49	8.09	5.79	11.73	0.015	34.77	-23.04
782.00	10 (Camera)	QPSK	V	160	259	1 / 49	10.25	5.79	13.89	**0.025**	34.77	-20.88

Table 7-10. ERP Data (Band 13)

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Frequency [MHz]	Channel Bandwidth [MHz]	Mod.	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	RB Size/Offset	Substitute Level [dBm]	Ant. Gain [dBi]	ERP [dBm]	ERP [Watts]	ERP Limit [dBm]	Margin [dB]
824.70	1.4	QPSK	H	201	125	1 / 0	9.61	6.76	14.21	0.026	38.45	-24.24
836.50	1.4	QPSK	H	141	122	1 / 0	10.67	6.68	15.20	0.033	38.45	-23.26
848.30	1.4	QPSK	H	139	121	1 / 0	10.97	6.70	**15.52**	0.036	38.45	-22.93
836.50	1.4	16-QAM	H	141	122	1 / 0	8.76	6.68	**13.29**	0.021	38.45	-25.17
836.50	1.4	64-QAM	H	141	122	1 / 0	8.10	6.68	**12.63**	0.018	38.45	-25.83
825.50	3	QPSK	H	201	125	1 / 0	9.59	6.76	14.20	0.026	38.45	-24.25
836.50	3	QPSK	H	141	122	1 / 0	10.60	6.68	15.13	0.033	38.45	-23.33
847.50	3	QPSK	H	139	121	1 / 0	11.16	6.69	**15.70**	**0.037**	38.45	-22.75
836.50	3	16-QAM	H	141	122	1 / 0	8.75	6.68	**13.28**	0.021	38.45	-25.18
836.50	3	64-QAM	H	141	122	1 / 0	8.15	6.68	**12.68**	0.019	38.45	-25.78
826.50	5	QPSK	H	201	125	1 / 0	9.49	6.77	14.11	0.026	38.45	-24.34
836.50	5	QPSK	H	141	122	1 / 0	10.71	6.68	15.24	0.033	38.45	-23.22
846.50	5	QPSK	H	139	121	1 / 0	11.14	6.68	**15.68**	0.037	38.45	-22.77
846.50	5	16-QAM	H	139	121	1 / 0	8.86	6.68	**13.40**	0.022	38.45	-25.05
836.50	5	64-QAM	H	141	122	1 / 0	8.09	6.68	**12.62**	0.018	38.45	-25.84
829.00	10	QPSK	H	201	125	1 / 0	9.44	6.80	14.09	0.026	38.45	-24.36
836.50	10	QPSK	H	141	122	1 / 0	10.58	6.68	15.10	0.032	38.45	-23.35
844.00	10	QPSK	H	139	121	1 / 0	10.95	6.66	**15.46**	0.035	38.45	-22.99
829.00	10	16-QAM	H	201	125	1 / 0	8.69	6.80	**13.34**	0.022	38.45	-25.11
836.50	10	64-QAM	H	141	122	1 / 0	8.12	6.68	**12.64**	0.018	38.45	-25.81
847.50	3	QPSK	V	203	124	1 / 0	10.33	6.69	14.87	0.031	38.45	-23.58
847.50	3 (Camera)	QPSK	H	307	133	1 / 0	9.45	6.69	13.99	**0.025**	38.45	-24.46
847.50	3 (WCP)	QPSK	H	151	125	1 / 0	6.24	6.69	10.78	0.012	38.45	-27.67

Table 7-11. ERP Data (Band 26/5)

Frequency [MHz]	Channel Bandwidth [MHz]	Mod.	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	RB Size/Offset	Substitute Level [dBm]	Ant. Gain [dBi]	ERP [dBm]	ERP [Watts]	ERP Limit [dBm]	Margin [dB]
831.50	15	QPSK	H	201	125	1 / 74	10.57	6.73	**15.15**	0.033	38.45	-23.30
836.50	15	QPSK	H	141	122	1 / 0	10.53	6.68	15.06	0.032	38.45	-23.39
841.50	15	QPSK	H	139	121	1 / 0	10.27	6.63	14.75	0.030	38.45	-23.70
831.50	15	16-QAM	H	201	125	1 / 0	9.68	6.73	**14.26**	0.027	38.45	-24.19
836.50	15	64-QAM	H	141	122	1 / 0	7.61	6.68	**12.14**	0.016	38.45	-26.31

Table 7-12. ERP Data (Band 26)

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Bandwidth	Mod.	Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Ant. Gain [dBi]	RB Size/Offset	Substitute Level [dBm]	ERP [dBm]	ERP [Watts]	ERP Limit [dBm]	Margin [dB]
20 MHz	π/2 BPSK	834.0	H	247	241	6.76	1 / 0	10.28	14.89	0.031	38.45	-23.56
		836.5	H	218	201	6.76	1 / 0	10.84	**15.45**	0.035	38.45	-23.00
		839.0	H	354	214	6.76	1 / 0	10.18	14.79	0.030	38.45	-23.66
	QPSK	834.0	H	247	241	6.76	1 / 0	10.01	14.62	0.029	38.45	-23.83
		836.5	H	218	201	6.76	1 / 0	9.61	14.22	0.026	38.45	-24.23
		839.0	H	354	214	6.76	1 / 0	10.44	**15.05**	0.032	38.45	-23.40
	16-QAM	836.5	H	218	201	6.76	1 / 0	9.30	**13.91**	0.025	38.45	-24.54
	64-QAM	836.5	H	218	201	6.70	1 / 0	8.54	**13.09**	0.020	38.45	-25.36
	256-QAM	836.5	H	218	201	6.70	1 / 0	6.74	**11.29**	0.013	38.45	-27.16
15 MHz	π/2 BPSK	831.5	H	247	241	0.00	1 / 0	17.28	15.13	0.033	38.45	-23.32
		836.5	H	218	201	6.76	1 / 0	10.66	**15.27**	0.034	38.45	-23.18
		841.5	H	354	214	6.76	1 / 0	10.12	14.73	0.030	38.45	-23.72
	QPSK	836.5	H	218	201	6.76	1 / 0	9.69	14.30	0.027	38.45	-24.15
	16-QAM	836.5	H	218	201	6.76	1 / 0	9.27	**13.88**	0.024	38.45	-24.57
	64-QAM	836.5	H	218	201	6.70	1 / 0	8.43	**12.98**	0.020	38.45	-25.47
	256-QAM	836.5	H	218	201	6.70	1 / 0	6.66	**11.21**	0.013	38.45	-27.24
10 MHz	π/2 BPSK	829.0	H	247	241	0.00	1 / 0	17.17	15.02	0.032	38.45	-23.43
		836.5	H	218	201	6.76	1 / 0	10.68	**15.29**	0.034	38.45	-23.16
		844.0	H	354	214	6.76	1 / 0	10.14	14.75	0.030	38.45	-23.70
	QPSK	836.5	H	218	201	6.76	1 / 0	9.69	14.30	0.027	38.45	-24.15
	16-QAM	836.5	H	218	201	6.76	1 / 0	9.03	**13.64**	0.023	38.45	-24.81
	64-QAM	836.5	H	218	201	6.70	1 / 0	8.13	**12.68**	0.019	38.45	-25.77
	256-QAM	836.5	H	218	201	6.70	1 / 0	6.39	**10.94**	0.012	38.45	-27.51
5 MHz	π/2 BPSK	829.0	H	247	241	0.00	1 / 0	17.14	14.99	0.032	38.45	-23.46
		836.5	H	218	201	6.76	1 / 0	10.74	**15.35**	0.034	38.45	-23.10
		844.0	H	354	214	6.76	1 / 0	9.92	14.53	0.028	38.45	-23.92
	QPSK	836.5	H	218	201	6.76	1 / 0	9.68	14.29	0.027	38.45	-24.16
	16-QAM	836.5	H	218	201	6.76	1 / 0	9.24	**13.85**	0.024	38.45	-24.60
	64-QAM	836.5	H	218	201	6.70	1 / 0	8.44	**12.99**	0.020	38.45	-25.46
	256-QAM	836.5	H	218	201	6.70	1 / 0	6.64	**11.19**	0.013	38.45	-27.26
20 MHz	QPSK (CP-OFDM)	836.5	H	241	240	6.76	1 / 0	8.84	**13.45**	0.022	38.45	-25.00
	QPSK (Opposite Pol.)	836.5	V	253	310	6.76	1 / 0	10.67	15.28	0.034	38.45	-23.17
	BPSK (Open)	836.5	H	255	301	6.76	1 / 0	10.35	14.96	0.031	38.45	-23.49
	BPSK (Camera)	836.5	H	201	241	6.76	1 / 0	9.96	14.57	0.029	38.45	-23.88
	BPSK (WCP)	836.5	H	134	244	6.76	1 / 0	8.61	13.22	0.021	38.45	-25.23

Table 7-13. ERP Data (Band n5)

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Frequency [MHz]	Channel Bandwidth [MHz]	Mod.	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	RB Size/Offset	Substitute Level [dBm]	Ant. Gain [dBi]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
1710.70	1.4	QPSK	V	147	39	1 / 5	12.26	9.38	21.64	0.146	30.00	-8.36
1745.00	1.4	QPSK	V	146	368	1 / 5	12.54	9.14	21.68	0.147	30.00	-8.32
1779.30	1.4	QPSK	V	147	39	1 / 5	12.62	9.20	**21.82**	0.152	30.00	-8.18
1779.30	1.4	16-QAM	V	147	39	1 / 5	11.94	9.20	**21.14**	0.130	30.00	-8.86
1745.00	1.4	64-QAM	V	146	368	1 / 5	11.51	9.14	**20.65**	0.116	30.00	-9.35
1711.50	3	QPSK	V	147	39	1 / 14	12.30	9.37	21.67	0.147	30.00	-8.33
1745.00	3	QPSK	V	146	368	1 / 14	12.50	9.14	21.64	0.146	30.00	-8.36
1778.50	3	QPSK	V	147	39	1 / 14	12.68	9.20	**21.88**	0.154	30.00	-8.12
1745.00	3	16-QAM	V	146	368	1 / 14	12.88	9.14	**22.02**	**0.159**	30.00	-7.98
1778.50	3	64-QAM	V	147	39	1 / 14	12.81	9.20	**22.01**	0.159	30.00	-7.99
1712.50	5	QPSK	V	147	39	1 / 24	11.86	9.37	**21.23**	0.133	30.00	-8.77
1745.00	5	QPSK	V	146	368	1 / 24	11.87	9.14	21.01	0.126	30.00	-8.99
1777.50	5	QPSK	V	147	39	1 / 24	11.69	9.19	20.88	0.123	30.00	-9.12
1777.50	5	16-QAM	V	147	39	1 / 24	11.01	9.19	**20.20**	0.105	30.00	-9.80
1745.00	5	64-QAM	V	146	368	1 / 24	10.58	9.14	**19.72**	0.094	30.00	-10.28
1715.00	10	QPSK	V	147	39	1 / 49	11.86	9.35	**21.21**	0.132	30.00	-8.79
1745.00	10	QPSK	V	146	368	1 / 49	11.87	9.14	21.01	0.126	30.00	-8.99
1775.00	10	QPSK	V	147	39	1 / 49	11.69	9.18	20.87	0.122	30.00	-9.13
1775.00	10	16-QAM	V	147	39	1 / 49	11.01	9.18	**20.19**	0.105	30.00	-9.81
1745.00	10	64-QAM	V	146	368	1 / 49	10.58	9.14	**19.72**	0.094	30.00	-10.28
1717.50	15	QPSK	V	147	39	1 / 74	11.86	9.33	**21.19**	0.132	30.00	-8.81
1745.00	15	QPSK	V	146	368	1 / 74	11.87	9.14	21.01	0.126	30.00	-8.99
1772.50	15	QPSK	V	147	39	1 / 74	11.69	9.18	20.87	0.122	30.00	-9.13
1772.50	15	16-QAM	V	147	39	1 / 74	11.01	9.18	**20.19**	0.104	30.00	-9.81
1745.00	15	64-QAM	V	146	368	1 / 74	10.58	9.14	**19.72**	0.094	30.00	-10.28
1720.00	20	QPSK	V	147	39	1 / 99	11.92	9.31	21.23	0.133	30.00	-8.77
1745.00	20	QPSK	V	146	368	100 / 0	12.67	9.14	**21.81**	0.152	30.00	-8.19
1770.00	20	QPSK	V	147	39	1 / 99	11.74	9.17	20.91	0.123	30.00	-9.09
1720.00	20	16-QAM	V	147	39	1 / 99	11.13	9.31	**20.44**	0.111	30.00	-9.56
1720.00	20	64-QAM	V	147	39	1 / 99	10.12	9.31	**19.43**	0.088	30.00	-10.57
1745.00	3	16-QAM	H	144	164	1 / 14	12.08	9.14	21.22	0.132	30.00	-8.78
1745.00	3 (WCP)	16-QAM	V	132	43	1 / 14	7.39	9.14	16.53	0.045	30.00	-13.47
1745.00	20 (Camera)	16-QAM	V	151	58	1 / 14	9.50	9.14	18.64	**0.073**	30.00	-11.36

Table 7-14. EIRP Data (Band 66/4)

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Bandwidth	Mod.	Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Ant. Gain [dBi]	RB Size/Offset	Substitute Level [dBm]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
20 MHz	π/2 BPSK	1720.0	H	140	351	9.31	1 / 50	12.30	21.61	0.145	30.00	-8.39
		1745.0	H	152	348	9.31	1 / 50	12.37	**21.68**	0.147	30.00	-8.32
		1770.0	H	147	234	9.31	1 / 50	12.32	21.63	0.146	30.00	-8.37
	QPSK	1720.0	H	140	351	9.31	1 / 50	12.20	21.51	0.142	30.00	-8.49
		1745.0	H	152	348	9.31	1 / 50	12.10	21.41	0.138	30.00	-8.59
		1770.0	H	147	234	9.31	1 / 50	12.29	**21.60**	0.145	30.00	-8.40
	16-QAM	1745.0	H	152	348	9.31	1 / 50	11.20	**20.51**	0.112	30.00	-9.49
	64-QAM	1745.0	H	152	348	9.31	1 / 50	9.10	**18.41**	0.069	30.00	-11.59
	256-QAM	1745.0	H	152	348	9.31	1 / 50	7.30	**16.61**	0.046	30.00	-13.39
15 MHz	π/2 BPSK	1717.5	H	137	355	9.31	1 / 50	12.22	**21.53**	0.142	30.00	-8.47
		1745.0	H	145	340	9.31	1 / 50	12.10	21.41	0.138	30.00	-8.59
		1772.5	H	140	230	9.31	1 / 50	12.07	21.38	0.137	30.00	-8.62
	QPSK	1717.5	H	137	355	9.31	1 / 50	11.93	**21.24**	0.133	30.00	-8.76
		1745.0	H	145	340	9.31	1 / 50	11.39	20.70	0.117	30.00	-9.30
		1772.5	H	140	230	9.31	1 / 50	11.83	21.14	0.130	30.00	-8.86
	16-QAM	1745.0	H	145	340	9.31	1 / 50	10.97	**20.28**	0.107	30.00	-9.72
	64-QAM	1745.0	H	145	340	9.31	1 / 50	9.10	**18.41**	0.069	30.00	-11.59
	256-QAM	1745.0	H	145	340	9.31	1 / 50	7.87	**17.18**	0.052	30.00	-12.82
10 MHz	π/2 BPSK	1715.0	H	140	257	9.31	1 / 50	12.29	**21.60**	0.145	30.00	-8.40
		1745.0	H	137	261	9.31	1 / 50	12.09	21.40	0.138	30.00	-8.60
		1775.0	H	135	270	9.31	1 / 50	11.91	21.22	0.132	30.00	-8.78
	QPSK	1715.0	H	140	257	9.31	1 / 50	11.89	21.20	0.132	30.00	-8.80
		1745.0	H	137	261	9.31	1 / 50	11.51	20.82	0.121	30.00	-9.18
		1775.0	H	135	270	9.31	1 / 50	11.92	**21.23**	0.133	30.00	-8.77
	16-QAM	1745.0	H	137	261	9.31	1 / 50	10.72	**20.03**	0.101	30.00	-9.97
	64-QAM	1745.0	H	137	261	9.31	1 / 50	8.97	**18.28**	0.067	30.00	-11.72
	256-QAM	1745.0	H	137	261	9.31	1 / 50	7.66	**16.97**	0.050	30.00	-13.03
5 MHz	π/2 BPSK	1712.5	H	148	250	9.31	1 / 50	12.20	**21.51**	0.142	30.00	-8.49
		1745.0	H	157	237	9.31	1 / 50	12.07	21.38	0.137	30.00	-8.62
		1777.5	H	153	255	9.31	1 / 50	11.92	21.23	0.133	30.00	-8.77
	QPSK	1712.5	H	148	250	9.31	1 / 50	12.13	21.44	0.139	30.00	-8.56
		1745.0	H	157	237	9.31	1 / 50	11.80	21.11	0.129	30.00	-8.89
		1777.5	H	153	255	9.31	1 / 50	12.14	**21.45**	0.140	30.00	-8.55
	16-QAM	1745.0	H	157	237	9.31	1 / 50	10.94	**20.25**	0.106	30.00	-9.75
	64-QAM	1745.0	H	157	237	9.31	1 / 50	9.04	**18.35**	0.068	30.00	-11.65
	256-QAM	1745.0	H	157	237	9.31	1 / 50	6.80	16.11	0.041	30.00	-13.89
20 MHz	QPSK (CP-OFDM)	1745.0	H	174	220	9.31	1 / 50	10.60	19.91	0.098	30.00	-10.09
	QPSK (Opposite Pol.)	1745.0	V	182	231	9.31	1 / 50	11.43	**20.74**	0.119	30.00	-9.26
	BPSK (Open)	1745.0	H	176	346	9.31	1 / 50	10.52	19.83	0.096	30.00	-10.17
	BPSK (WCP)	1745.0	H	161	164	9.31	1 / 50	5.72	15.03	0.032	30.00	-14.97
	BPSK (Camera)	1745.0	H	137	357	9.31	1 / 50	8.75	18.06	0.064	30.00	-11.94

Table 7-15. EIRP Data (Band n66)

Frequency [MHz]	Channel Bandwidth [MHz]	Mod.	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	RB Size/Offset	Substitute Level [dBm]	Ant. Gain [dBi]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
1720.00	20	QPSK	H	138	275	1 / 50	11.30	9.41	20.71	0.118	30.00	-9.29
1745.00	20	QPSK	H	138	275	1 / 50	11.85	9.26	**21.11**	**0.129**	30.00	-8.89
1770.00	20	QPSK	H	150	230	1 / 50	10.61	9.27	19.88	0.097	30.00	-10.12
1745.00	20	16-QAM	H	138	275	1 / 50	11.58	9.26	**20.84**	0.121	30.00	-9.16
1745.00	20	64-QAM	H	138	275	1 / 50	9.65	9.26	**18.91**	0.078	30.00	-11.09

Table 7-16. EIRP Data (Band 66A-12A)

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Frequency [MHz]	Channel Bandwidth [MHz]	Mod.	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	RB Size/Offset	Substitute Level [dBm]	Ant. Gain [dBi]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
1850.70	1.4	QPSK	H	251	247	1 / 5	12.33	9.90	**22.23**	0.167	33.01	-10.78
1882.50	1.4	QPSK	H	110	100	1 / 5	12.29	9.90	22.19	0.166	33.01	-10.82
1914.30	1.4	QPSK	H	102	245	1 / 5	12.25	9.90	22.15	0.164	33.01	-10.86
1882.50	1.4	16-QAM	H	110	100	1 / 5	11.26	9.90	**21.16**	0.131	33.01	-11.85
1882.50	1.4	64-QAM	H	110	100	1 / 5	10.10	9.90	**20.00**	0.100	33.01	-13.01
1851.50	3	QPSK	H	371	251	1 / 14	12.34	9.90	**22.24**	0.167	33.01	-10.77
1882.50	3	QPSK	H	109	105	1 / 14	12.17	9.90	22.07	0.161	33.01	-10.94
1913.50	3	QPSK	H	104	248	1 / 14	12.06	9.90	21.96	0.157	33.01	-11.05
1882.50	3	16-QAM	H	141	110	1 / 14	11.12	9.90	**21.02**	0.126	33.01	-11.99
1882.50	3	64-QAM	H	141	110	1 / 14	9.96	9.90	**19.86**	0.097	33.01	-13.15
1852.50	5	QPSK	H	264	254	1 / 24	12.35	9.90	**22.25**	**0.168**	33.01	-10.76
1882.50	5	QPSK	H	112	107	1 / 24	12.21	9.90	22.11	0.163	33.01	-10.90
1912.50	5	QPSK	H	141	241	1 / 24	12.24	9.90	22.14	0.164	33.01	-10.87
1882.50	5	16-QAM	H	112	107	1 / 24	11.31	9.90	**21.21**	0.132	33.01	-11.80
1882.50	5	64-QAM	H	112	107	1 / 24	10.05	9.90	**19.95**	0.099	33.01	-13.06
1855.00	10	QPSK	H	350	230	1 / 49	12.26	9.90	22.16	0.164	33.01	-10.85
1882.50	10	QPSK	H	124	210	1 / 49	12.32	9.90	**22.22**	0.167	33.01	-10.79
1910.00	10	QPSK	H	135	212	1 / 49	12.07	9.90	21.97	0.157	33.01	-11.04
1882.50	10	16-QAM	H	124	210	1 / 49	11.06	9.90	**20.96**	0.125	33.01	-12.05
1882.50	10	64-QAM	H	124	210	1 / 49	9.78	9.90	**19.68**	0.093	33.01	-13.33
1857.50	15	QPSK	H	341	246	1 / 74	12.28	9.90	**22.18**	0.165	33.01	-10.83
1882.50	15	QPSK	H	131	112	1 / 74	12.18	9.90	22.08	0.161	33.01	-10.93
1907.50	15	QPSK	H	117	241	1 / 74	11.93	9.90	21.83	0.152	33.01	-11.18
1882.50	15	16-QAM	H	131	112	1 / 74	10.85	9.90	**20.75**	0.119	33.01	-12.26
1882.50	15	64-QAM	H	131	112	1 / 74	9.82	9.90	**19.72**	0.094	33.01	-13.29
1860.00	20	QPSK	H	371	251	1 / 0	11.51	9.90	21.41	0.138	33.01	-11.60
1882.50	20	QPSK	H	109	105	1 / 99	12.33	9.90	**22.23**	0.167	33.01	-10.78
1905.00	20	QPSK	H	104	248	1 / 0	11.73	9.90	21.63	0.146	33.01	-11.38
1882.50	20	16-QAM	H	109	105	1 / 99	11.66	9.90	**21.56**	0.143	33.01	-11.45
1882.50	20	64-QAM	H	109	105	1 / 99	10.71	9.90	**20.61**	0.115	33.01	-12.40
1852.50	5	QPSK	V	166	123	1 / 24	12.23	9.90	22.13	0.163	33.01	-10.88
1852.50	5 (WCP)	QPSK	H	151	137	1 / 24	12.02	9.90	21.92	0.156	33.01	-11.09

Table 7-17. EIRP Data (Band 25/2)

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Bandwidth	Mod.	Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Ant. Gain [dBi]	RB Size/Offset	Substitute Level [dBm]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
20 MHz	π/2 BPSK	1860.0	H	134	164	9.90	1 / 0	11.57	21.47	0.140	33.01	-11.54
		1880.0	H	146	167	9.90	1 / 0	11.77	**21.67**	0.147	33.01	-11.34
		1900.0	H	157	124	9.90	1 / 0	11.33	21.23	0.133	33.01	-11.78
	QPSK	1860.0	H	134	164	9.90	1 / 0	11.58	21.48	0.141	33.01	-11.53
		1880.0	H	146	167	9.90	1 / 0	11.74	**21.64**	0.146	33.01	-11.37
		1900.0	H	157	124	9.90	1 / 0	10.94	20.84	0.121	33.01	-12.17
	16-QAM	1880.0	H	146	167	9.90	1 / 0	10.05	**19.95**	0.099	33.01	-13.06
	64-QAM	1880.0	H	146	167	9.90	1 / 0	8.33	**18.23**	0.067	33.01	-14.78
	256-QAM	1880.0	H	146	167	9.90	1 / 0	6.23	**16.13**	0.041	33.01	-16.88
15 MHz	π/2 BPSK	1857.5	H	140	132	9.90	1 / 0	11.75	21.65	0.146	33.01	-11.36
		1880.0	H	134	155	9.90	1 / 0	12.00	**21.90**	0.155	33.01	-11.11
		1902.5	H	157	137	9.90	1 / 0	11.71	21.61	0.145	33.01	-11.40
	QPSK	1857.5	H	140	132	9.90	1 / 0	11.71	21.61	0.145	33.01	-11.40
		1880.0	H	134	155	9.90	1 / 0	12.51	**22.41**	0.174	33.01	-10.60
		1902.5	H	157	137	9.90	1 / 0	11.82	21.72	0.149	33.01	-11.29
	16-QAM	1880.0	H	134	155	9.90	1 / 0	9.13	**19.03**	0.080	33.01	-13.98
	64-QAM	1880.0	H	134	155	9.90	1 / 0	8.25	**18.15**	0.065	33.01	-14.86
	256-QAM	1880.0	H	134	155	9.90	1 / 0	6.17	**16.07**	0.040	33.01	-16.94
10 MHz	π/2 BPSK	1855.0	H	151	127	9.90	1 / 0	11.81	21.71	0.148	33.01	-11.30
		1880.0	H	145	135	9.90	1 / 0	12.06	**21.96**	0.157	33.01	-11.05
		1905.0	H	163	155	9.90	1 / 0	11.87	21.77	0.150	33.01	-11.24
	QPSK	1855.0	H	151	127	9.90	1 / 0	11.77	21.67	0.147	33.01	-11.34
		1880.0	H	145	135	9.90	1 / 0	12.61	**22.51**	0.178	33.01	-10.50
		1905.0	H	163	155	9.90	1 / 0	11.83	21.73	0.149	33.01	-11.28
	16-QAM	1880.0	H	145	135	9.90	1 / 0	9.20	**19.10**	0.081	33.01	-13.91
	64-QAM	1880.0	H	145	135	9.90	1 / 0	8.37	**18.27**	0.067	33.01	-14.74
	256-QAM	1880.0	H	145	135	9.90	1 / 0	6.26	**16.16**	0.041	33.01	-16.85
5 MHz	π/2 BPSK	1852.5	H	148	122	9.90	1 / 0	11.77	21.67	0.147	33.01	-11.34
		1880.0	H	130	134	9.90	1 / 0	12.04	**21.94**	0.156	33.01	-11.07
		1907.5	H	162	141	9.90	1 / 0	11.79	21.69	0.148	33.01	-11.32
	QPSK	1852.5	H	148	122	9.90	1 / 0	11.81	21.71	0.148	33.01	-11.30
		1880.0	H	130	134	9.90	1 / 0	12.50	**22.40**	0.174	33.01	-10.61
		1907.5	H	162	141	9.90	1 / 0	11.98	21.88	0.154	33.01	-11.13
	16-QAM	1880.0	H	130	134	9.90	1 / 0	9.14	**19.04**	0.080	33.01	-13.97
	64-QAM	1880.0	H	130	134	9.90	1 / 0	8.29	**18.19**	0.066	33.01	-14.82
	256-QAM	1880.0	H	130	134	9.90	1 / 0	6.17	16.07	0.040	33.01	-16.94
20 MHz	QPSK (CP-OFDM)	1880.0	H	124	214	9.90	1 / 0	8.90	18.80	0.076	33.01	-14.21
	BPSK (Opposite Pol.)	1880.0	V	102	12	9.90	1 / 0	5.86	15.76	0.038	33.01	-17.25
	BPSK (Closed)	1880.0	H	147	356	9.90	1 / 0	10.67	**20.57**	0.114	33.01	-12.44
	BPSK (WCP)	1880.0	H	180	318	9.90	1 / 0	6.62	16.52	0.045	33.01	-16.49
	BPSK (Camera)	1880.0	H	114	241	9.90	1 / 0	11.59	21.49	0.141	33.01	-11.52

Table 7-18. EIRP Data (Band n25/2)

Frequency [MHz]	Channel Bandwidth [MHz]	Mod.	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	RB Size/Offset	Substitute Level [dBm]	Ant. Gain [dBi]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
1860.00	20	QPSK	H	100	24	1 / 99	10.58	9.64	20.22	0.105	33.01	-12.79
1882.50	20	QPSK	H	100	16	1 / 99	11.87	9.96	**21.83**	**0.152**	33.01	-11.18
1905.00	20	QPSK	H	100	24	1 / 99	11.46	10.24	21.70	0.148	33.01	-11.31
1882.50	20	16-QAM	H	100	16	1 / 99	11.76	9.96	**21.72**	0.149	33.01	-11.29
1882.50	20	64-QAM	H	100	16	1 / 99	10.78	9.96	**20.74**	0.119	33.01	-12.27

Table 7-19. EIRP Data (Band 2A-12A)

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Frequency [MHz]	Channel Bandwidth [MHz]	Mod.	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	RB Size/Offset	Substitute Level [dBm]	Ant. Gain [dBi]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
2498.50	5	QPSK	V	153	135	1 / 24	15.42	9.59	**25.01**	0.317	33.01	-8.00
2593.00	5	QPSK	V	214	140	1 / 24	14.17	9.59	23.76	0.238	33.01	-9.25
2687.50	5	QPSK	V	221	134	1 / 24	14.75	9.59	24.34	0.272	33.01	-8.67
2593.00	5	16-QAM	V	214	140	1 / 24	10.04	9.59	**19.63**	0.092	33.01	-13.38
2593.00	5	64-QAM	V	214	140	1 / 24	9.02	9.59	**18.61**	0.073	33.01	-14.40
2501.00	10	QPSK	V	152	120	1 / 49	15.31	9.59	**24.90**	0.309	33.01	-8.11
2593.00	10	QPSK	V	220	135	1 / 49	14.17	9.59	23.76	0.238	33.01	-9.25
2685.00	10	QPSK	V	241	120	1 / 49	14.81	9.59	24.40	0.275	33.01	-8.61
2593.00	10	16-QAM	V	220	135	1 / 49	9.56	9.59	**19.15**	0.082	33.01	-13.86
2593.00	10	64-QAM	V	220	135	1 / 49	9.09	9.59	**18.68**	0.074	33.01	-14.33
2503.50	15	QPSK	V	167	141	1 / 74	15.34	9.59	**24.93**	0.311	33.01	-8.08
2593.00	15	QPSK	V	170	152	1 / 74	13.71	9.59	23.30	0.214	33.01	-9.71
2682.50	15	QPSK	V	152	160	1 / 74	14.86	9.59	24.45	0.279	33.01	-8.56
2593.00	15	16-QAM	V	170	152	1 / 74	9.53	9.59	**19.12**	0.082	33.01	-13.89
2593.00	15	64-QAM	V	170	152	1 / 74	8.12	9.59	**17.71**	0.059	33.01	-15.30
2506.00	20	QPSK	V	143	135	1 / 99	15.36	9.59	24.95	0.313	33.01	-8.06
2593.00	20	QPSK	V	151	0	1 / 0	15.46	9.59	**25.05**	**0.320**	33.01	-7.96
2680.00	20	QPSK	V	164	16	1 / 99	14.91	9.59	24.50	0.282	33.01	-8.51
2510.00	20	16-QAM	V	153	135	1 / 99	10.18	9.59	**19.77**	0.095	33.01	-13.24
2510.00	20	64-QAM	V	153	135	1 / 99	9.23	9.59	**18.82**	0.076	33.01	-14.19
2593.00	20	QPSK	H	216	140	1 / 0	13.48	9.59	23.07	0.203	33.01	-9.94
2593.00	20 (WCP)	QPSK	H	255	137	1 / 0	12.95	9.59	22.54	0.179	33.01	-10.47

Table 7-20. EIRP Data (Band 41)

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Bandwidth	Mod.	Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Ant. Gain [dBi]	RB Size/Offset	Substitute Level [dBm]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
100 MHz	π/2 BPSK	2546.0	H	114	142	9.61	1 / 0	15.45	25.06	0.321	33.01	-7.95
		2593.0	H	102	180	9.61	1 / 0	15.57	**25.18**	0.330	33.01	-7.83
		2640.0	H	124	132	9.61	1 / 0	14.49	24.10	0.257	33.01	-8.91
	QPSK	2546.0	H	114	142	9.61	1 / 0	15.35	24.96	0.313	33.01	-8.05
		2640.0	H	124	132	9.61	1 / 0	15.38	**24.99**	0.316	33.01	-8.02
	16-QAM	2593.0	H	102	180	9.61	1 / 0	14.56	**24.17**	0.261	33.01	-8.84
	64-QAM	2593.0	H	102	180	9.61	1 / 0	12.58	**22.19**	0.166	33.01	-10.82
	256-QAM	2593.0	H	102	180	9.61	1 / 0	10.49	**20.10**	0.102	33.01	-12.91
90 MHz	π/2 BPSK	2541.0	H	114	142	9.61	1 / 0	15.68	**25.29**	0.338	33.01	-7.72
		2593.0	H	102	180	9.61	1 / 0	15.91	**25.52**	0.356	33.01	-7.49
		2645.0	H	124	132	9.61	1 / 0	15.88	**25.49**	0.354	33.01	-7.52
	QPSK	2541.0	H	114	142	9.61	1 / 0	15.71	**25.32**	0.340	33.01	-7.69
		2593.0	H	102	180	9.61	1 / 0	15.71	**25.32**	0.340	33.01	-7.69
		2645.0	H	124	132	9.61	1 / 0	15.35	**24.96**	0.313	33.01	-8.05
	16-QAM	2593.0	H	102	180	9.61	1 / 0	15.04	**24.65**	0.292	33.01	-8.36
	64-QAM	2593.0	H	102	180	9.61	1 / 0	11.36	**20.97**	0.125	33.01	-12.04
	256-QAM	2593.0	H	102	180	9.61	1 / 0	9.50	**19.11**	0.081	33.01	-13.90
80 MHz	π/2 BPSK	2536.0	H	114	142	9.61	1 / 0	15.76	25.37	0.344	33.01	-7.64
		2593.0	H	102	180	9.61	1 / 0	15.81	25.42	0.348	33.01	-7.59
		2650.0	H	124	132	9.61	1 / 0	15.87	**25.48**	0.353	33.01	-7.53
	QPSK	2536.0	H	114	142	9.61	1 / 0	15.51	**25.12**	0.325	33.01	-7.89
		2593.0	H	102	180	9.61	1 / 0	15.49	25.10	0.324	33.01	-7.91
		2650.0	H	124	132	9.61	1 / 0	15.32	24.93	0.311	33.01	-8.08
	16-QAM	2593.0	H	102	180	9.61	1 / 0	14.84	**24.45**	0.279	33.01	-8.56
	64-QAM	2593.0	H	102	180	9.61	1 / 0	11.32	**20.93**	0.124	33.01	-12.08
	256-QAM	2593.0	H	102	180	9.61	1 / 0	9.21	**18.82**	0.076	33.01	-14.19
60 MHz	π/2 BPSK	2526.0	H	114	142	9.61	1 / 0	15.63	25.24	0.334	33.01	-7.77
		2593.0	H	102	180	9.61	1 / 0	15.75	**25.36**	0.344	33.01	-7.65
		2660.0	H	124	132	9.61	1 / 0	15.57	25.18	0.330	33.01	-7.83
	QPSK	2526.0	H	114	142	9.61	1 / 0	15.46	**25.07**	0.321	33.01	-7.94
		2593.0	H	102	180	9.61	1 / 0	15.43	25.04	0.319	33.01	-7.97
		2660.0	H	124	132	9.61	1 / 0	15.31	24.92	0.310	33.01	-8.09
	16-QAM	2593.0	H	102	180	9.61	1 / 0	14.74	**24.35**	0.272	33.01	-8.66
	64-QAM	2593.0	H	102	180	9.61	1 / 0	10.33	**19.94**	0.099	33.01	-13.07
	256-QAM	2593.0	H	102	180	9.61	1 / 0	9.08	**18.69**	0.074	33.01	-14.32
50 MHz	π/2 BPSK	2521.0	H	114	142	9.61	1 / 0	15.62	25.23	0.333	33.01	-7.78
		2593.0	H	102	180	9.61	1 / 0	15.68	**25.29**	0.338	33.01	-7.72
		2665.0	H	124	132	9.61	1 / 0	15.47	25.08	0.322	33.01	-7.93
	QPSK	2521.0	H	114	142	9.61	1 / 0	15.32	24.93	0.311	33.01	-8.08
		2593.0	H	102	180	9.61	1 / 0	15.34	24.95	0.313	33.01	-8.06
		2665.0	H	124	132	9.61	1 / 0	15.35	**24.96**	0.313	33.01	-8.05
	16-QAM	2593.0	H	102	180	9.61	1 / 0	14.59	**24.20**	0.263	33.01	-8.81
	64-QAM	2593.0	H	102	180	9.61	1 / 0	11.30	**20.91**	0.123	33.01	-12.10
	256-QAM	2593.0	H	102	180	9.61	1 / 0	9.31	**18.92**	0.078	33.01	-14.09
40 MHz	π/2 BPSK	2516.0	H	114	142	9.61	1 / 0	15.94	25.55	0.359	33.01	-7.46
		2593.0	H	102	180	9.61	1 / 0	16.03	**25.64**	0.366	33.01	-7.37
		2670.0	H	124	132	9.61	1 / 0	15.90	25.51	0.356	33.01	-7.50
	QPSK	2516.0	H	114	142	9.61	1 / 0	15.59	25.20	0.331	33.01	-7.81
		2593.0	H	102	180	9.61	1 / 0	15.71	**25.32**	0.340	33.01	-7.69
		2670.0	H	124	132	9.61	1 / 0	15.63	25.24	0.334	33.01	-7.77
	16-QAM	2593.0	H	102	180	9.61	1 / 0	14.84	**24.45**	0.279	33.01	-8.56
	64-QAM	2593.0	H	102	180	9.61	1 / 0	11.32	**20.93**	0.124	33.01	-12.08
	256-QAM	2593.0	H	102	180	9.61	1 / 0	9.21	**18.82**	0.076	33.01	-14.19
20 MHz	π/2 BPSK	2506.0	H	114	142	9.61	1 / 0	15.82	**25.43**	0.349	33.01	-7.58
		2593.0	H	102	180	9.61	1 / 0	15.76	25.37	0.344	33.01	-7.64
		2680.0	H	124	132	9.61	1 / 0	15.70	25.31	0.340	33.01	-7.70
	QPSK	2506.0	H	114	142	9.61	1 / 0	15.55	25.16	0.328	33.01	-7.85
		2593.0	H	102	180	9.61	1 / 0	15.56	**25.17**	0.329	33.01	-7.84
		2680.0	H	124	132	9.61	1 / 0	15.45	25.06	0.321	33.01	-7.95
	16-QAM	2593.0	H	102	180	9.61	1 / 0	14.92	**24.53**	0.284	33.01	-8.48
	64-QAM	2593.0	H	102	180	9.61	1 / 0	11.19	**20.80**	0.120	33.01	-12.21
	256-QAM	2593.0	H	102	180	9.61	1 / 0	9.50	**19.11**	0.081	33.01	-13.90
100 MHz	QPSK (CP-OFDM)	2593.0	H	103	132	9.61	1 / 0	12.18	21.79	0.151	33.01	-11.22
	BPSK (Closed)	2593.0	H	112	131	9.61	1 / 0	13.38	22.99	0.199	33.01	-10.02
	BPSK (Camera)	2593.0	H	120	140	9.61	1 / 0	15.24	24.85	0.305	33.01	-8.16
	BPSK (WCP)	2593.0	H	124	153	9.61	1 / 0	11.67	21.28	0.134	33.01	-11.73
	QPSK (Opposite Pol.)	2593.0	V	127	120	9.61	1 / 0	12.81	22.42	0.175	33.01	-10.59

Table 7-21. EIRP Data (Band n41)

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7.10 Radiated Spurious Emissions Measurements

Test Overview

Radiated spurious emissions measurements are performed using the substitution method described in ANSI/TIA-603-E-2016 with the EUT transmitting into an integral antenna. Measurements on signals operating below 1GHz are performed using vertically and horizontally polarized tuned dipole antennas. Measurements on signals operating above 1GHz are performed using vertically and horizontally polarized broadband horn antennas.

Test Procedures Used

KDB 971168 D01 v03r01 – Section 5.8

ANSI/TIA-603-E-2016 – Section 2.2.12

Test Settings

1. RBW = 100kHz for emissions below 1GHz and 1MHz for emissions above 1GHz
2. VBW ≥ 3 x RBW
3. Span = 1.5 times the OBW
4. No. of sweep points ≥ 2 x span / RBW
5. Detector = RMS
6. Trace mode = Average (Max Hold for pulsed emissions)
7. The trace was allowed to stabilize

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Test Setup

The EUT and measurement equipment were set up as shown in the diagram below.

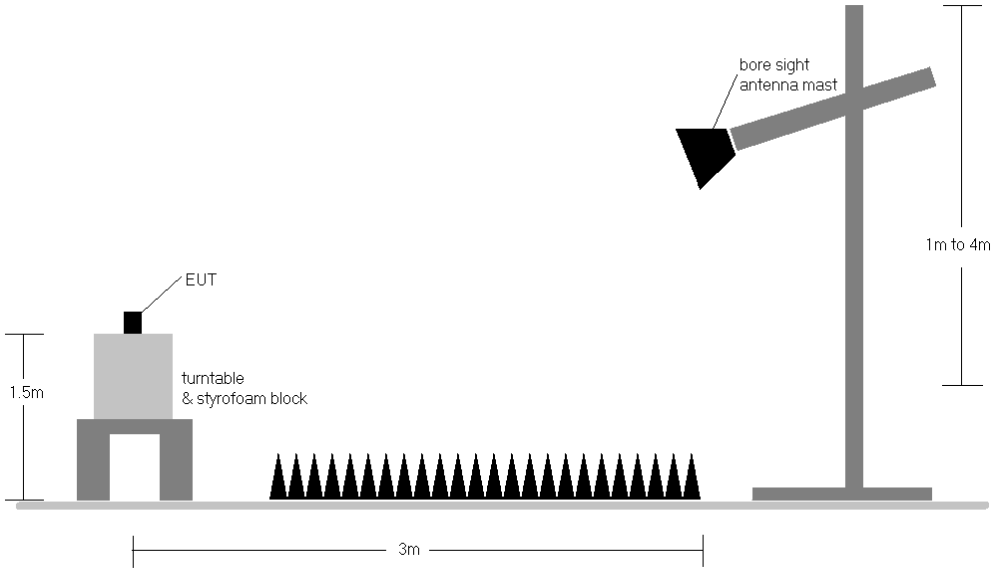

Figure 7-10. Test Instrument & Measurement Setup

Test Notes

1) The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case emissions are reported with the EUT positioning, modulations, RB sizes and offsets, and channel bandwidth configurations shown in the tables below.

2) This unit was tested with its standard battery.

3) The spectrum is measured from 9kHz to the 10th harmonic of the fundamental frequency of the transmitter. The worst-case emissions are reported.

4) Emissions below 18GHz were measured at a 3 meter test distance while emissions above 18GHz were measured at a 1 meter test distance with the application of a distance correction factor.

5) The "-" shown in the following RSE tables are used to denote a noise floor measurement.

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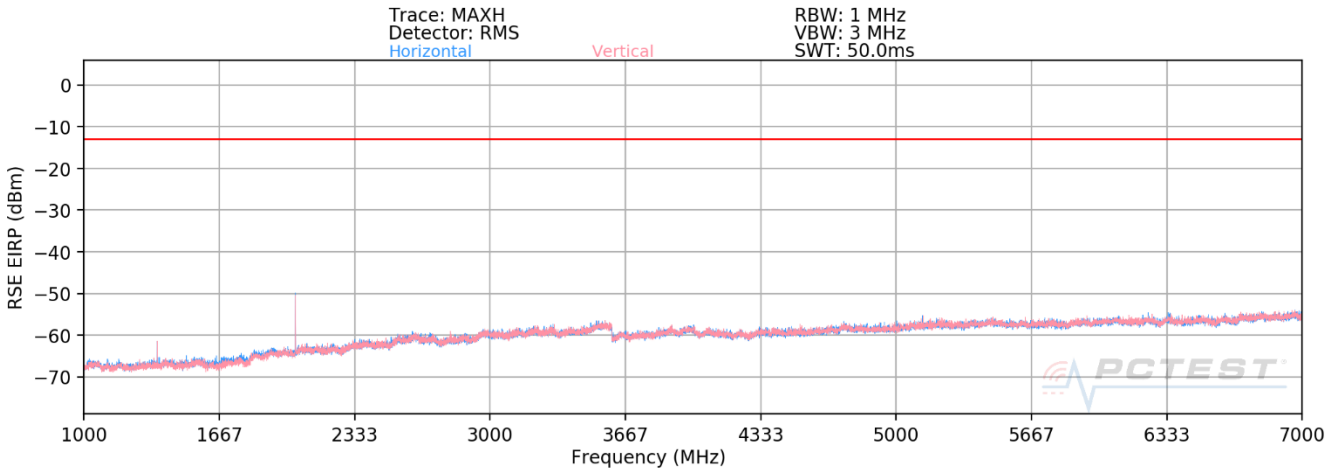
Band 71



Plot 7-573. Radiated Spurious Plot above 1GHz (Band 71)

OPERATING FREQUENCY:	673.00	MHz
CHANNEL:	133222	
MODULATION SIGNAL:	QPSK	
BANDWIDTH:	20.0	MHz
DISTANCE:	3	meters
LIMIT:	-13	dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
1346.00	H	124	170	-74.29	7.92	-66.37	-53.4
2019.00	H	130	120	-65.45	8.86	-56.58	-43.6
2692.00	H	-	-	-75.15	9.63	-65.52	-52.5
3365.00	H	-	-	-73.79	9.48	-64.31	-51.3

Table 7-22. Radiated Spurious Data (Band 71 – Low Channel)

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OPERATING FREQUENCY:	680.50	MHz
CHANNEL:	133297	
MODULATION SIGNAL:	QPSK	
BANDWIDTH:	20.0	MHz
DISTANCE:	3	meters
LIMIT:	-13	dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
1361.00	H	112	187	-75.33	7.93	-67.40	-54.4
2041.50	H	112	116	-67.28	8.98	-58.30	-45.3
2722.00	H	-	-	-76.85	9.77	-67.07	-54.1
3402.50	H	-	-	-74.77	9.57	-65.20	-52.2

Table 7-23. Radiated Spurious Data (Band 71 – Mid Channel)

OPERATING FREQUENCY:	688.00	MHz
CHANNEL:	133372	
MODULATION SIGNAL:	QPSK	
BANDWIDTH:	20.0	MHz
DISTANCE:	3	meters
LIMIT:	-13	dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
1376.00	H	110	187	-74.31	7.91	-66.40	-53.4
2064.00	H	134	116	-68.08	9.05	-59.03	-46.0
2752.00	H	-	-	-75.96	9.92	-66.04	-53.0
3440.00	H	-	-	-74.23	9.65	-64.58	-51.6

Table 7-24. Radiated Spurious Data (Band 71 – High Channel)

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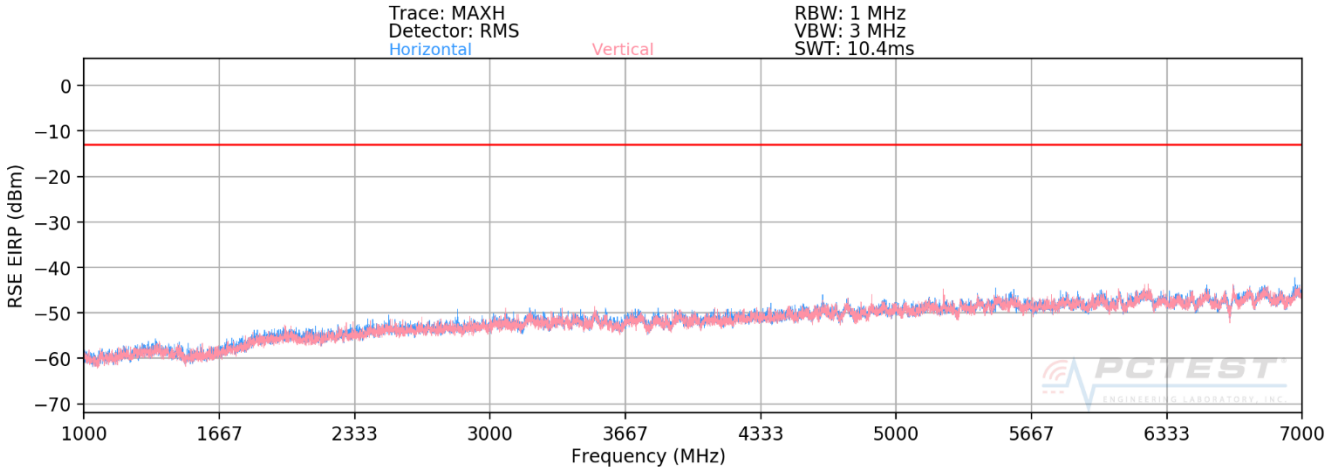
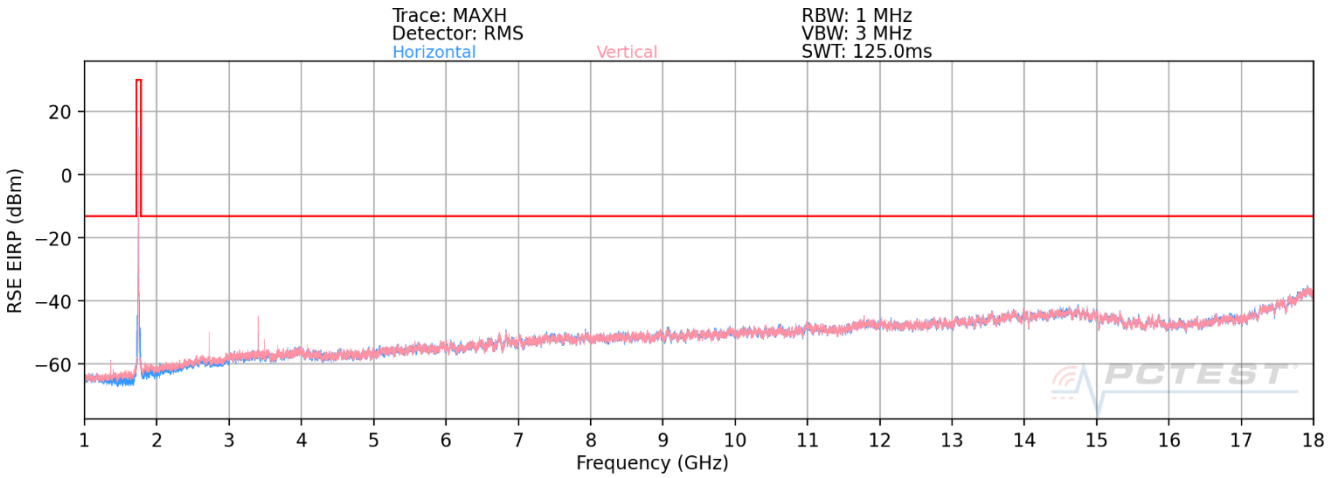
Band n71



Plot 7-574. Radiated Spurious Plot above 1GHz (n71)



Plot 7-575. Radiated Spurious Plot above 1GHz (n71 + B66)

Bandwidth (MHz):	20
Frequency (MHz):	673.0

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
1346.0	V	154	215	-75.82	-4.02	27.16	-68.10	-13.00	-55.10
2019.0	V	301	231	-73.33	-2.14	31.53	-63.73	-13.00	-50.73
2692.0	V	-	-	-77.68	-0.19	29.13	-66.13	-13.00	-53.13
3365.0	V	-	-	-77.98	2.15	31.17	-64.08	-13.00	-51.08

Table 7-25. Radiated Spurious Data (n71 – Low Channel)

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Bandwidth (MHz):	20
Frequency (MHz):	680.5

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
1361.0	V	154	234	-75.93	-5.02	26.05	-69.21	-13.00	-56.21
2041.5	V	362	316	-73.12	-1.59	32.29	-62.97	-13.00	-49.97
2722.0	V	-	-	-77.63	-0.31	29.06	-66.19	-13.00	-53.19
3402.5	V	-	-	-77.10	2.17	32.07	-63.19	-13.00	-50.19

Table 7-26. Radiated Spurious Data (n71 – Mid Channel)

Bandwidth (MHz):	20
Frequency (MHz):	688.0

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
1376.0	V	144	201	-75.88	-3.95	27.17	-68.09	-13.00	-55.09
2064.0	V	321	224	-73.02	-2.30	31.68	-63.58	-13.00	-50.58
2752.0	V	-	-	-77.55	-0.67	28.78	-66.48	-13.00	-53.48
3440.0	V	-	-	-77.81	1.87	31.06	-64.20	-13.00	-51.20

Table 7-27. Radiated Spurious Data (n71 – High Channel)

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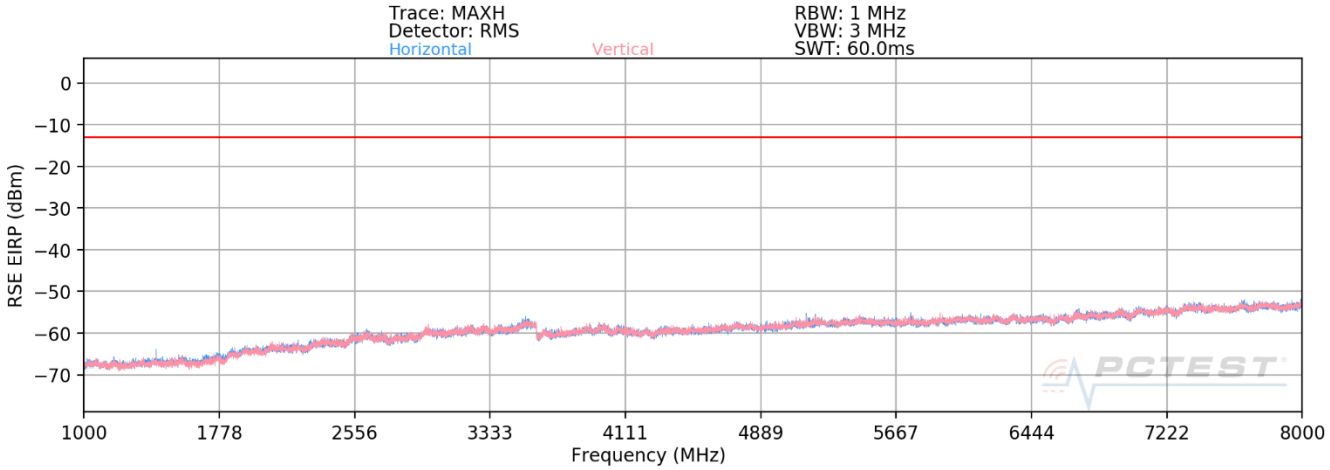
Band 12/17



Plot 7-576. Radiated Spurious Plot above 1GHz (Band 12)

OPERATING FREQUENCY:	704.00	MHz
CHANNEL:	23060	
MODULATION SIGNAL:	QPSK	
BANDWIDTH:	10.0	MHz
DISTANCE:	3	meters
LIMIT:	-13	dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
1408.00	H	178	51	-79.29	7.99	-71.29	-58.3
2112.00	H	123	61	-77.66	9.11	-68.55	-55.6
2816.00	H	-	-	-78.52	10.11	-68.41	-55.4
3520.00	H	-	-	-74.98	9.73	-65.25	-52.3

Table 7-28. Radiated Spurious Data (Band 12/17 – Low Channel)

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OPERATING FREQUENCY:	707.50	MHz
CHANNEL:	23095	
MODULATION SIGNAL:	QPSK	
BANDWIDTH:	10.0	MHz
DISTANCE:	3	meters
LIMIT:	-13	dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
1415.00	H	346	226	-78.01	8.09	-69.92	-56.9
2122.50	H	400	155	-78.67	9.11	-69.56	-56.6
2830.00	H	-	-	-78.98	10.14	-68.84	-55.8
3537.50	H	-	-	-74.77	9.76	-65.01	-52.0

Table 7-29. Radiated Spurious Data (Band 12/17 – Mid Channel)

OPERATING FREQUENCY:	711.00	MHz
CHANNEL:	23130	
MODULATION SIGNAL:	QPSK	
BANDWIDTH:	10.0	MHz
DISTANCE:	3	meters
LIMIT:	-13	dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
1422.00	H	394	310	-80.23	8.18	-72.05	-59.0
2133.00	H	397	58	-78.96	9.11	-69.85	-56.8
2844.00	H	-	-	-78.58	10.17	-68.40	-55.4
3555.00	H	-	-	-75.13	9.80	-65.33	-52.3

Table 7-30. Radiated Spurious Data (Band 12/17 – High Channel)

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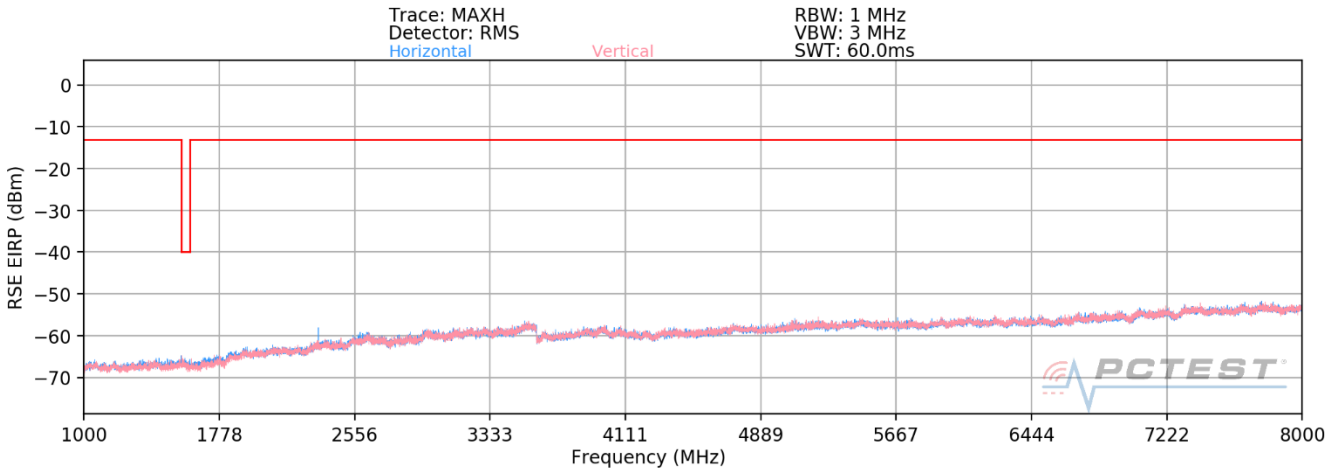
Band 13



Plot 7-577. Radiated Spurious Plot above 1GHz (Band 13)

OPERATING FREQUENCY:	782.00	MHz
CHANNEL:	23230	
MODULATION SIGNAL:	QPSK	
BANDWIDTH:	10.0	MHz
DISTANCE:	3	meters
LIMIT:	-13	dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
2346.00	H	162	73	-75.34	9.44	-65.91	-52.9
3128.00	H	-	-	-74.62	9.48	-65.14	-52.1
3910.00	H	-	-	-70.95	9.26	-61.69	-48.7

Table 7-31. Radiated Spurious Data (Band 13 – Mid Channel)

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MODULATION SIGNAL:	QPSK	
BANDWIDTH:	10.00	MHz
DISTANCE:	3	meters
NARROWBAND EMISSION LIMIT:	-50	dBm
WIDEBAND EMISSION LIMIT:	-40	dBm/MHz

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
1564.00	H	123	154	-73.42	8.74	-64.68	-24.7

Table 7-32. Radiated Spurious Data (Band 13 – 1559-1610MHz Band)

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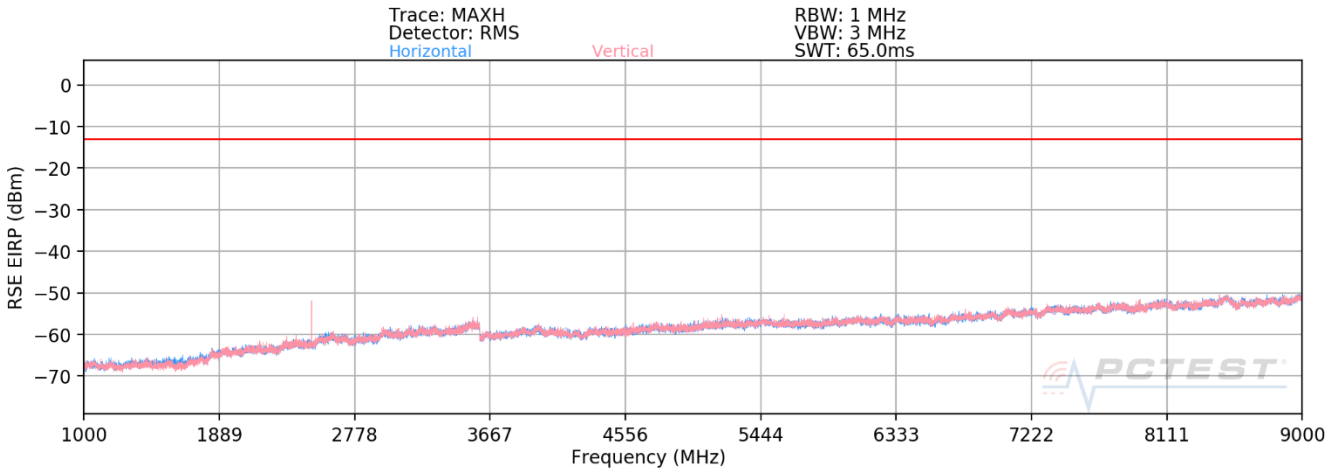
Band 26/5



Plot 7-578. Radiated Spurious Plot above 1GHz (Band 26)

OPERATING FREQUENCY:	829.00	MHz
CHANNEL:	20450	
MODULATION SIGNAL:	QPSK	
BANDWIDTH:	10.0	MHz
DISTANCE:	3	meters
LIMIT:	-13	dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
1658.00	H	400	193	-76.99	8.88	-68.11	-55.1
2487.00	H	281	7	-73.73	9.23	-64.50	-51.5
3316.00	H	-	-	-73.35	9.43	-63.92	-50.9

Table 7-33. Radiated Spurious Data (Band 26/5 – Low Channel)

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OPERATING FREQUENCY:	836.50	MHz
CHANNEL:	20525	
MODULATION SIGNAL:	QPSK	
BANDWIDTH:	10.0	MHz
DISTANCE:	3	meters
LIMIT:	-13	dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
1673.00	H	400	14	-77.93	8.78	-69.15	-56.2
2509.50	H	216	17	-73.67	9.27	-64.40	-51.4
3346.00	H	-	-	-74.06	9.44	-64.62	-51.6

Table 7-34. Radiated Spurious Data (Band 26/5 – Mid Channel)

OPERATING FREQUENCY:	844.00	MHz
CHANNEL:	20600	
MODULATION SIGNAL:	QPSK	
BANDWIDTH:	10.0	MHz
DISTANCE:	3	meters
LIMIT:	-13	dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
1688.00	H	351	16	-76.62	8.68	-67.94	-54.9
2532.00	H	224	34	-72.61	9.28	-63.34	-50.3
3376.00	H	-	-	-74.19	9.50	-64.69	-51.7

Table 7-35. Radiated Spurious Data (Band 26/5 – High Channel)

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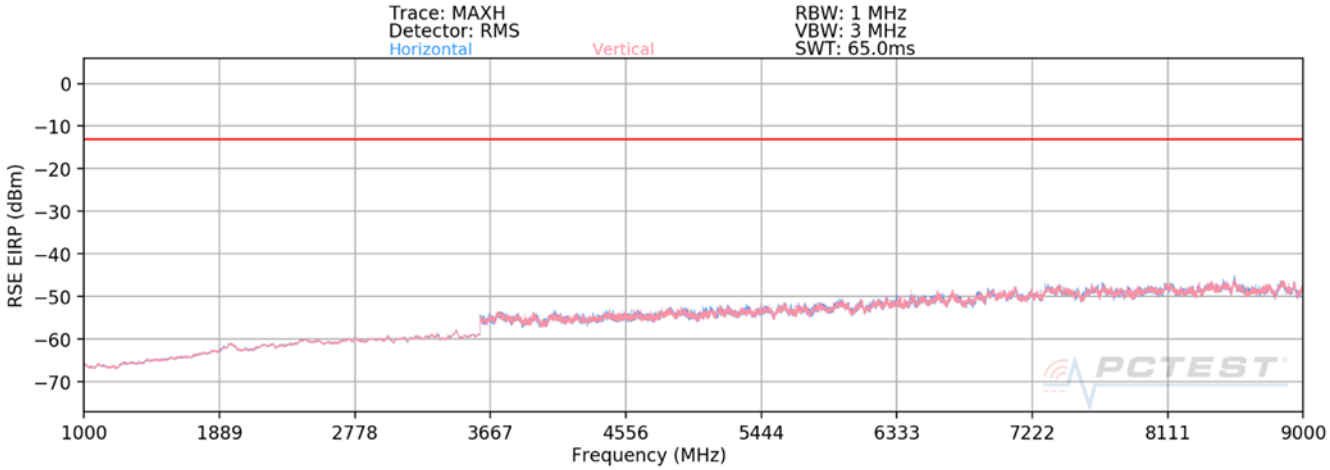
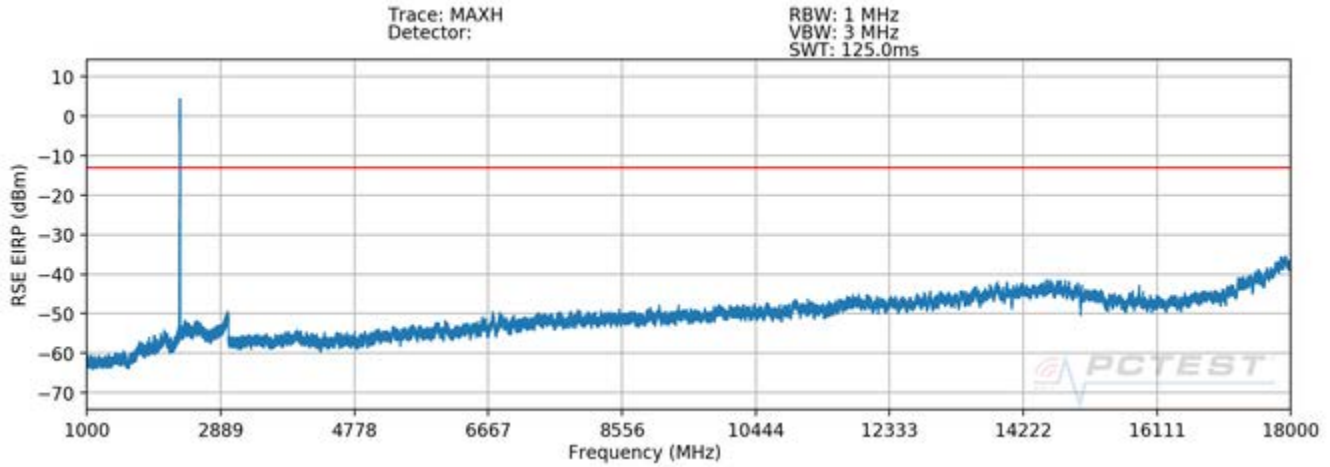
Band n5



Plot 7-579. Radiated Spurious Plot above 1GHz (Band n5)



Plot 7-580. Radiated Spurious Plot above 1GHz (Band n5 + B66)

Bandwidth (MHz):	20
Frequency (MHz):	834.0

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
1668.0	V	-	-	-77.85	-3.72	25.43	-69.83	-13.00	-56.83
2502.0	V	125	17	-68.32	-1.32	37.36	-57.89	-13.00	-44.89
3336.0	V	-	-	-78.80	2.16	30.36	-64.89	-13.00	-51.89
4170.0	V	-	-	-80.01	2.87	29.86	-65.40	-13.00	-52.40

Table 7-36. Radiated Spurious Data (Band n5 – Low Channel)

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Bandwidth (MHz):	20
Frequency (MHz):	836.5

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
1673.0	V	-	-	-77.79	-3.35	25.86	-69.40	-13.00	-56.40
2509.5	V	111	14	-65.08	-1.23	40.69	-54.56	-13.00	-41.56
3346.0	V	-	-	-78.45	2.19	30.74	-64.52	-13.00	-51.52
4182.5	V	-	-	-79.05	3.07	31.02	-64.24	-13.00	-51.24

Table 7-37. Radiated Spurious Data (Band n5 – Mid Channel)

Bandwidth (MHz):	20
Frequency (MHz):	839.0

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
1678.0	V	-	-	-77.87	-2.98	26.15	-69.11	-13.00	-56.11
2517.0	V	125	17	-65.11	-1.08	40.81	-54.45	-13.00	-41.45
3356.0	V	-	-	-78.88	2.34	30.46	-64.80	-13.00	-51.80
4195.0	V	-	-	-79.99	3.00	30.01	-65.25	-13.00	-52.25

Table 7-38. Radiated Spurious Data (Band n5 – High Channel)

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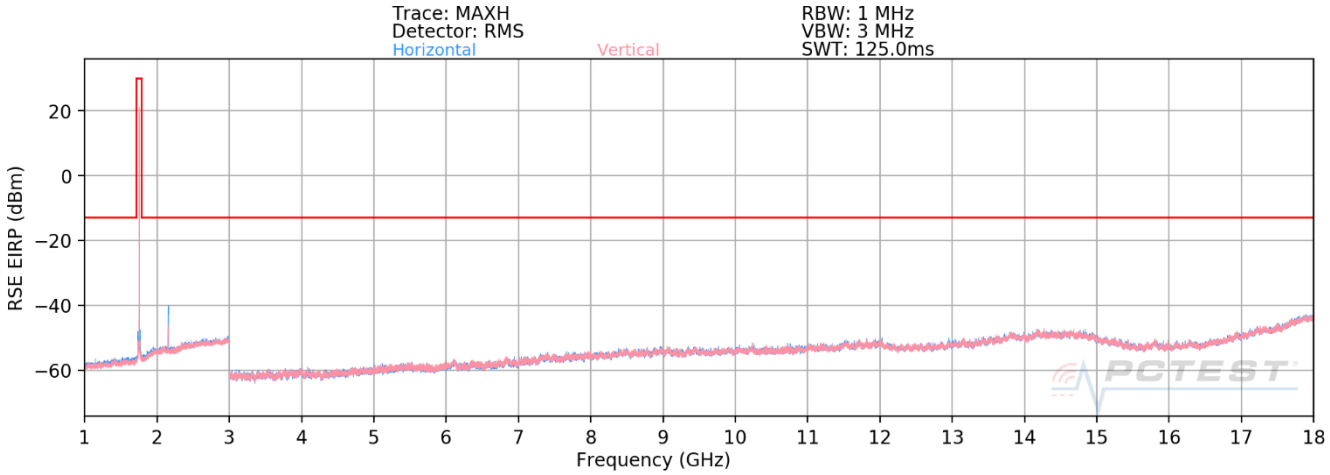
Band 66/4



Plot 7-581. Radiated Spurious Plot above 1GHz (Band 66/4)

OPERATING FREQUENCY:	1717.50	MHz
CHANNEL:	132072	
MODULATION SIGNAL:	QPSK	
BANDWIDTH:	20.0	MHz
DISTANCE:	3	meters
LIMIT:	-13	dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
3435.00	H	-	-	-68.61	9.64	-58.97	-46.0
5152.50	H	-	-	-68.02	11.04	-56.99	-44.0
6870.00	H	-	-	-63.25	10.97	-52.28	-39.3

Table 7-39. Radiated Spurious Data (Band 66/4 – Low Channel)

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OPERATING FREQUENCY:	1745.00	MHz
CHANNEL:	132322	
MODULATION SIGNAL:	QPSK	
BANDWIDTH:	15.0	MHz
DISTANCE:	3	meters
LIMIT:	-13	dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
3490.00	H	-	-	-69.17	9.70	-59.47	-46.5
5235.00	H	-	-	-68.10	11.08	-57.01	-44.0
6980.00	H	-	-	-64.91	11.04	-53.87	-40.9

Table 7-40. Radiated Spurious Data (Band 66/4 – Mid Channel)

OPERATING FREQUENCY:	1772.50	MHz
CHANNEL:	132572	
MODULATION SIGNAL:	QPSK	
BANDWIDTH:	15.0	MHz
DISTANCE:	3	meters
LIMIT:	-13	dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
3545.00	H	-	-	-69.22	9.77	-59.45	-46.4
5317.50	H	-	-	-68.54	11.13	-57.41	-44.4
7090.00	H	-	-	-64.82	11.08	-53.73	-40.7

Table 7-41. Radiated Spurious Data (Band 66/4 – High Channel)

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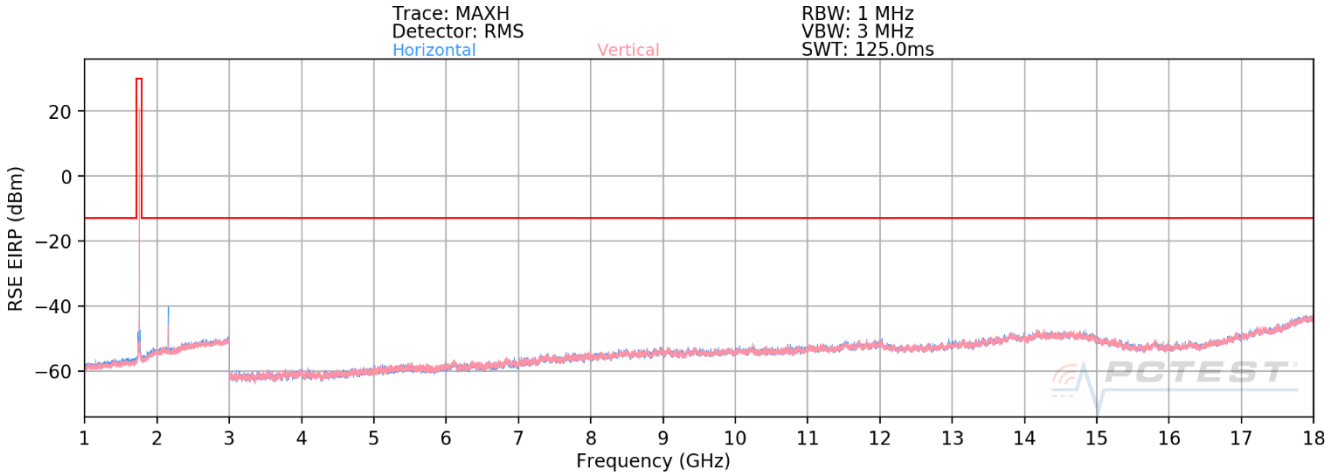
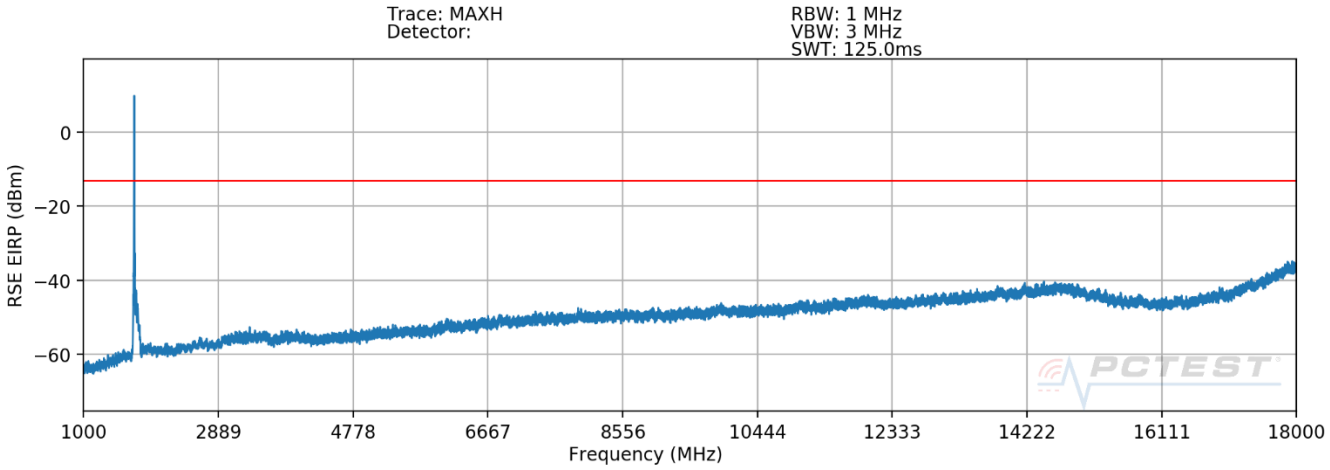
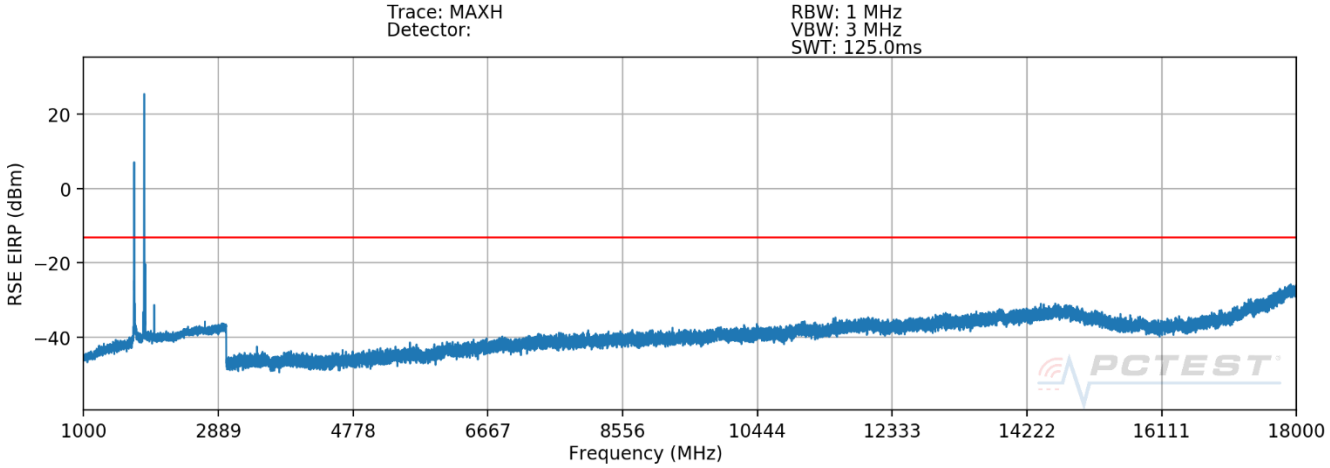
NR Band n66



Plot 7-582. Radiated Spurious Plot above 1GHz (Band n66)



Plot 7-583. Radiated Spurious Plot above 1GHz (Band n66 + B12)



Plot 7-584. Radiated Spurious Plot above 1GHz (Band n66 + B2)

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Bandwidth (MHz):	20
Frequency (MHz):	1717.5

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
3435.0	H	-	-	-78.18	3.53	32.35	-62.91	-13.00	-49.91
5152.5	H	-	-	-78.04	6.08	35.04	-60.21	-13.00	-47.21

Table 7-42. Radiated Spurious Data (n66 – Low Channel)

Bandwidth (MHz):	20
Frequency (MHz):	1745.0

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
3490.0	H	-	-	-75.10	3.39	35.29	-59.97	-13.00	-46.97
5235.0	H	-	-	-78.26	5.97	34.71	-60.55	-13.00	-47.55

Table 7-43. Radiated Spurious Data (n66 – Mid Channel)

Bandwidth (MHz):	20
Frequency (MHz):	1772.5

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
3545.0	H	-	-	-75.02	3.76	35.74	-59.52	-13.00	-46.52
5317.5	H	-	-	-78.34	6.01	34.67	-60.59	-13.00	-47.59

Table 7-44. Radiated Spurious Data (n66 – High Channel)

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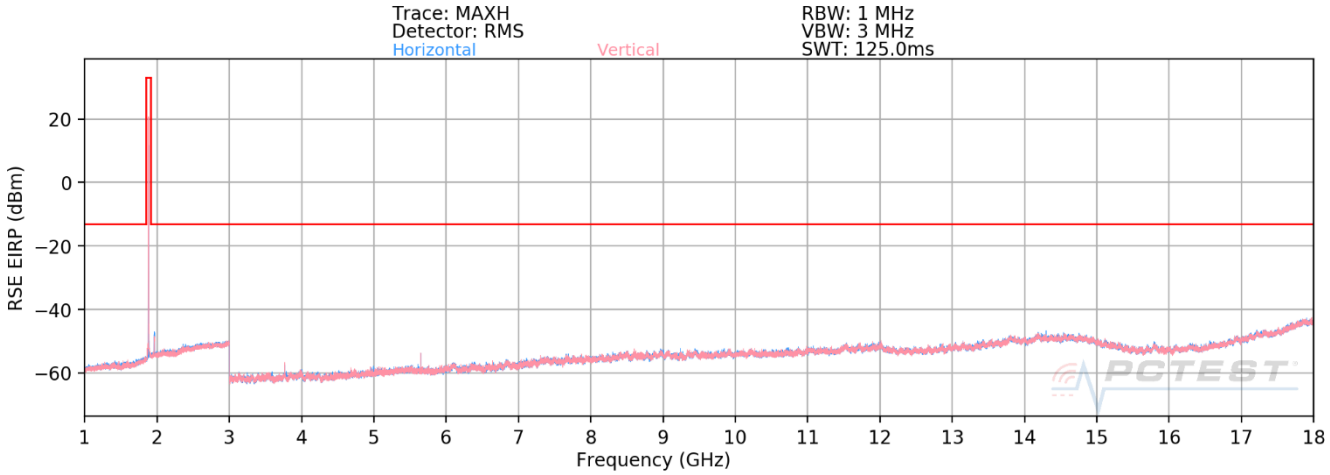
Band 25/2



Plot 7-585. Radiated Spurious Plot above 1GHz (Band 25/2)

OPERATING FREQUENCY:	1860.00	MHz
CHANNEL:	26140	
MODULATION SIGNAL:	QPSK	
BANDWIDTH:	20.0	MHz
DISTANCE:	3	meters
LIMIT:	-13	dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
3720.00	H	344	225	-62.28	9.77	-52.51	-39.5
5580.00	H	356	312	-61.56	11.21	-50.34	-37.3
7440.00	H	-	-	-63.26	10.94	-52.33	-39.3
9300.00	H	-	-	-63.32	12.37	-50.95	-37.9

Table 7-45. Radiated Spurious Data (Band 25/2 – Low Channel)

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OPERATING FREQUENCY:	1882.50	MHz
CHANNEL:	26365	
MODULATION SIGNAL:	QPSK	
BANDWIDTH:	20.0	MHz
DISTANCE:	3	meters
LIMIT:	-13	dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
3765.00	H	398	219	-62.26	9.55	-52.71	-39.7
5647.50	H	400	127	-62.55	11.32	-51.23	-38.2
7530.00	H	-	-	-63.68	11.09	-52.58	-39.6
9412.50	H	-	-	-62.63	12.31	-50.32	-37.3

Table 7-46. Radiated Spurious Data (Band 25/2 – Mid Channel)

OPERATING FREQUENCY:	1905.00	MHz
CHANNEL:	26590	
MODULATION SIGNAL:	QPSK	
BANDWIDTH:	20.0	MHz
DISTANCE:	3	meters
LIMIT:	-13	dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
3810.00	H	351	220	-61.54	9.29	-52.25	-39.2
5715.00	H	400	127	-62.04	11.39	-50.65	-37.7
7620.00	H	-	-	-63.69	11.31	-52.38	-39.4
9525.00	H	-	-	-62.56	12.38	-50.17	-37.2

Table 7-47. Radiated Spurious Data (Band 25/2 – High Channel)

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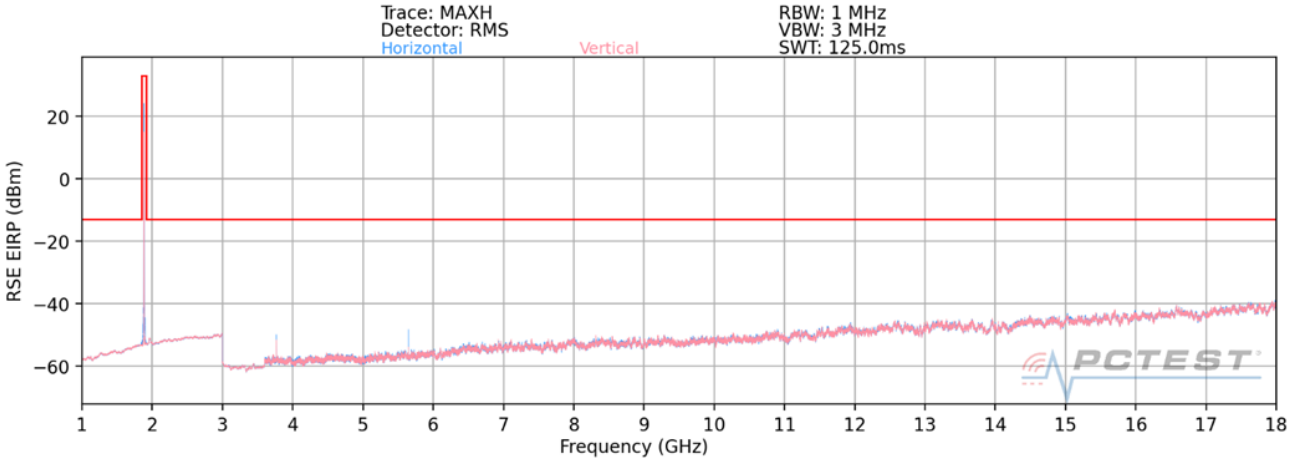
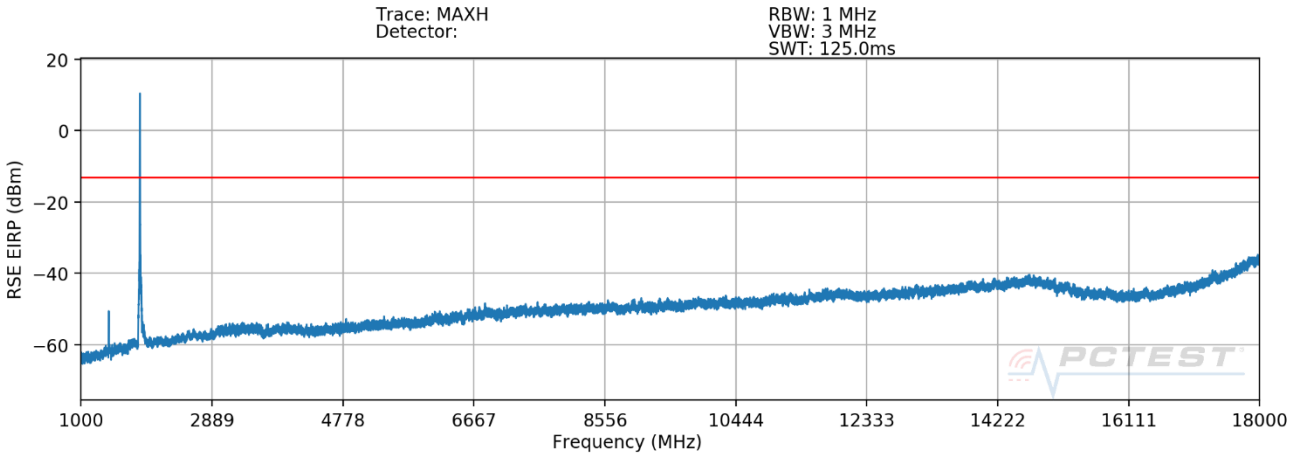
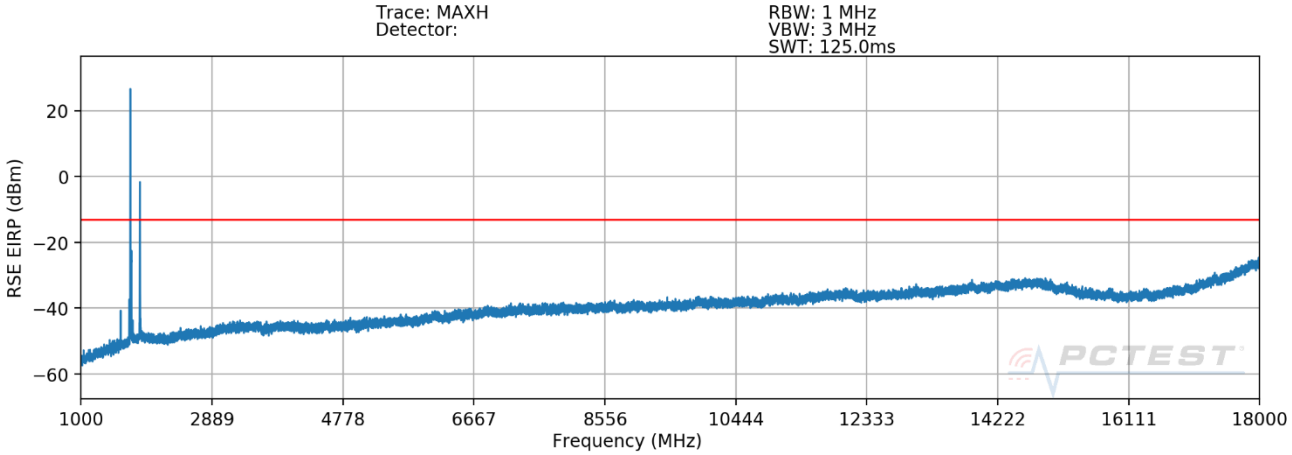
NR Band n25/2



Plot 7-586. Radiated Spurious Plot above 1GHz (n25/2 Standalone)



Plot 7-587. Radiated Spurious Plot above 1GHz (n2+ Anchor B12 EN-DC)



Plot 7-588. Radiated Spurious Plot above 1GHz (n2+ Anchor B66 EN-DC)

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Bandwidth (MHz):	20
Frequency (MHz):	1860.0

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
3720.0	H	-	-	-78.25	3.53	32.28	-62.98	-13.00	-49.98
5580.0	H	-	-	-78.35	6.08	34.73	-60.52	-13.00	-47.52

Table 7-48. Radiated Spurious Data (n25/2 – Low Channel)

Bandwidth (MHz):	20
Frequency (MHz):	1880.0

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
3760.0	H	-	-	-77.10	3.39	33.29	-61.97	-13.00	-48.97
5640.0	H	-	-	-77.25	5.97	35.72	-59.54	-13.00	-46.54

Table 7-49. Radiated Spurious Data (n25/2 – Mid Channel)

Bandwidth (MHz):	20
Frequency (MHz):	1915.0

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
3830.0	H	-	-	-72.35	3.76	38.41	-56.85	-13.00	-43.85
5745.0	H	-	-	-77.88	6.01	35.13	-60.13	-13.00	-47.13

Table 7-50. Radiated Spurious Data (n25/2 – High Channel)

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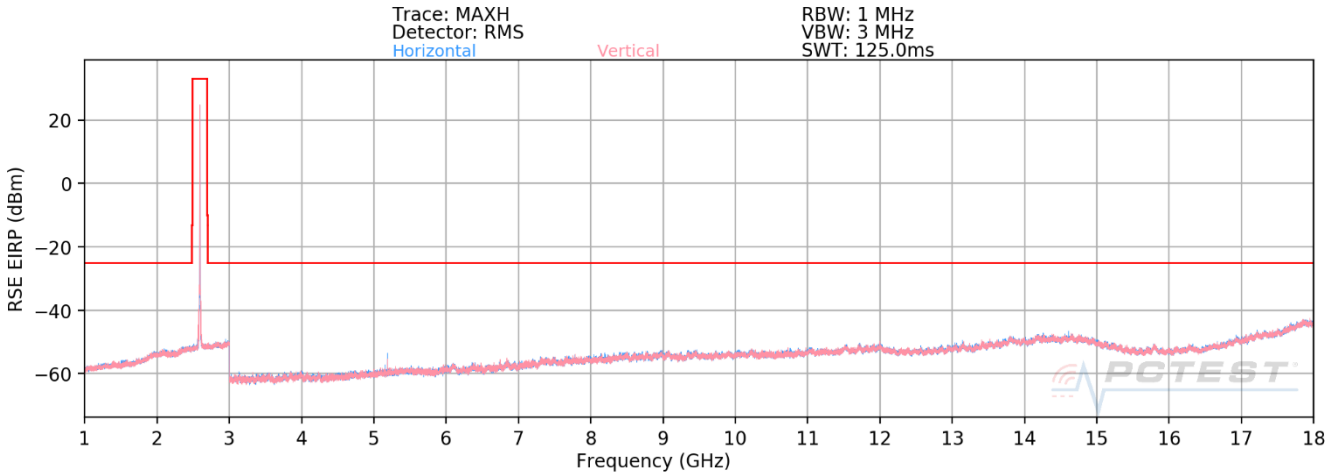
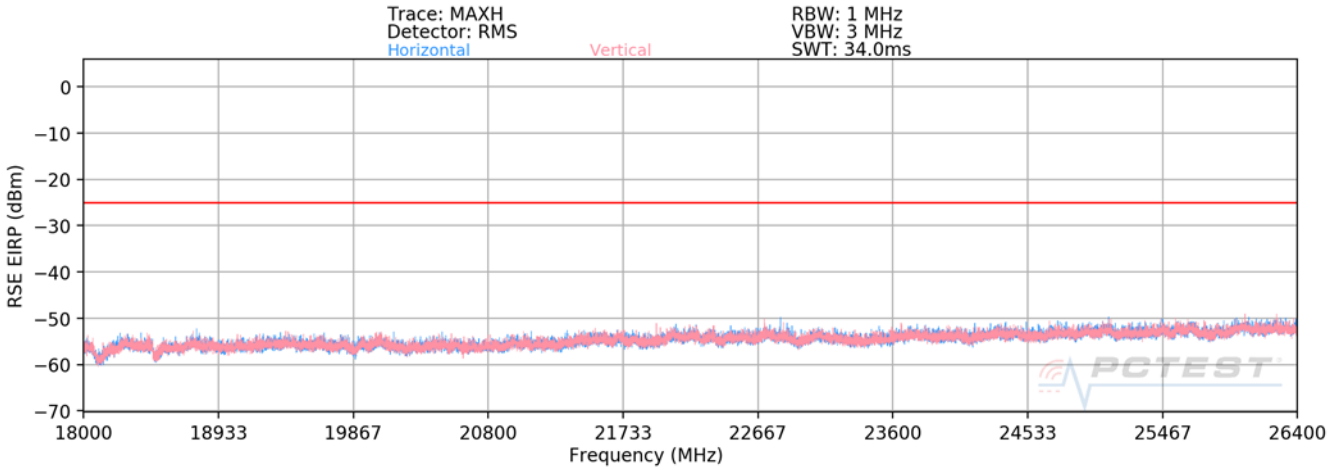
Band 41



Plot 7-589. Radiated Spurious Plot above 1GHz (Band 41)



Plot 7-590. Radiated Spurious Plot 18GHz – 26.5GHz (Band 41)

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OPERATING FREQUENCY:	2506.00	MHz
CHANNEL:	39750	
MODULATION SIGNAL:	QPSK	
BANDWIDTH:	20.0	MHz
DISTANCE:	3	meters
LIMIT:	-25	dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
5012.00	H	-	-	-67.65	11.39	-56.26	-31.3
7518.00	H	-	-	-62.57	11.08	-51.50	-26.5

Table 7-51. Radiated Spurious Data (Band 41 – Low Channel)

OPERATING FREQUENCY:	2593.00	MHz
CHANNEL:	40620	
MODULATION SIGNAL:	QPSK	
BANDWIDTH:	20.0	MHz
DISTANCE:	3	meters
LIMIT:	-25	dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
5186.00	H	-	-	-64.98	11.02	-53.96	-29.0
7779.00	H	-	-	-63.12	11.49	-51.63	-26.6
10372.00	H	-	-	-61.52	12.66	-48.86	-23.9

Table 7-52. Radiated Spurious Data (Band 41 – Mid Channel)

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OPERATING FREQUENCY:	2680.00	MHz
CHANNEL:	41490	
MODULATION SIGNAL:	QPSK	
BANDWIDTH:	20.0	MHz
DISTANCE:	3	meters
LIMIT:	-25	dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
5360.00	H	188	231	-65.76	11.15	-54.61	-29.6
8040.00	H	-	-	-61.83	11.42	-50.41	-25.4

Table 7-53. Radiated Spurious Data (Band 41 – High Channel)

OPERATING FREQUENCY:	2593.00	MHz
CHANNEL:	40620	
MODULATION SIGNAL:	QPSK	
BANDWIDTH:	20.0	MHz
DISTANCE:	3	meters
LIMIT:	-25	dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
5186.00	H	-	-	-65.59	11.02	-54.57	-29.6
7779.00	H	-	-	-62.83	11.49	-51.34	-26.3

Table 7-54. Radiated Spurious Data with WCP (Band 41 – Mid Channel)

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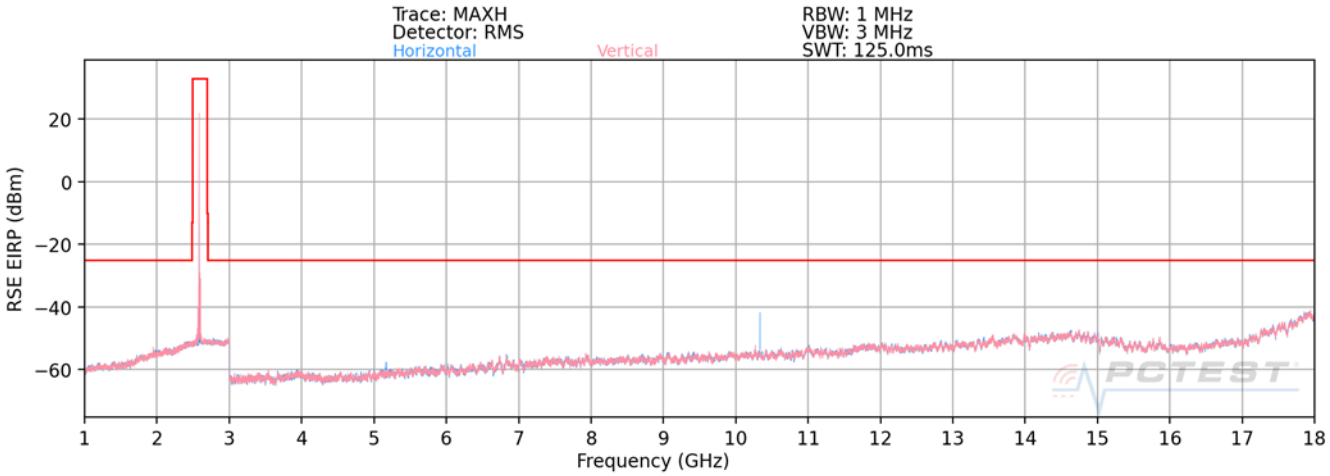
Band n41



Plot 7-591. Radiated Spurious Plot above 1GHz (n41 Standalone)

Bandwidth (MHz):	100
Frequency (MHz):	2546.0

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
5092.0	V	166	241	-62.40	16.60	61.20	-43.60	-25.00	-18.60
7638.0	V	237	291	-70.54	21.19	57.65	-47.15	-25.00	-22.15
10184.0	V	130	246	-70.11	25.34	62.23	-42.57	-25.00	-17.57
12730.0	V	-	-	-74.35	29.10	61.75	-43.05	-25.00	-18.05

Table 7-55. Radiated Spurious Data (Band n41 – Low Channel)

Bandwidth (MHz):	100
Frequency (MHz):	2593.0

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
5186.0	V	383	315	-64.55	16.89	59.34	-45.46	-25.00	-20.46
7779.0	V	232	291	-70.89	20.92	57.03	-47.77	-25.00	-22.77
10372.0	V	165	348	-71.89	25.55	60.66	-44.14	-25.00	-19.14
12965.0	V	-	-	-73.88	28.94	62.06	-42.74	-25.00	-17.74

Table 7-56. Radiated Spurious Data (Band n41 – Mid Channel)

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Bandwidth (MHz):	100
Frequency (MHz):	2640.0

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
5280.0	V	281	320	-64.50	16.24	58.74	-46.06	-25.00	-21.06
7920.0	V	255	254	-70.85	22.13	58.28	-46.52	-25.00	-21.52
10560.0	V	164	357	-70.25	26.06	62.81	-41.99	-25.00	-16.99
13200.0	V	-	-	-73.44	29.29	62.85	-41.95	-25.00	-16.95

Table 7-57. Radiated Spurious Data (Band n41 – High Channel)

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7.11 Uplink Carrier Aggregation Radiated Measurements

§2.1053,

Test Overview

Radiated spurious emissions measurements are performed using the substitution method described in ANSI/TIA-603-D-2010 with the EUT transmitting into an integral antenna. Measurements on signals operating below 1GHz are performed using vertically and horizontally polarized tuned dipole antennas. Measurements on signals operating above 1GHz are performed using vertically and horizontally polarized broadband horn antennas. All measurements are performed as peak measurements while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies.

Test Procedures Used

KDB 971168 D01 v02r02 – Section 5.8

ANSI/TIA-603-D-2010 – Section 2.2.12

Test Settings

1. RBW = 100kHz for emissions below 1GHz and 1MHz for emissions above 1GHz
2. VBW ≥ 3 x RBW
3. No. of sweep points ≥ 2 x span / RBW
4. Detector = RMS
5. Trace mode = trace average for continuous emissions, max hold for pulse emissions
6. The trace was allowed to stabilize

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Test Setup

The EUT and measurement equipment were set up as shown in the diagram below.

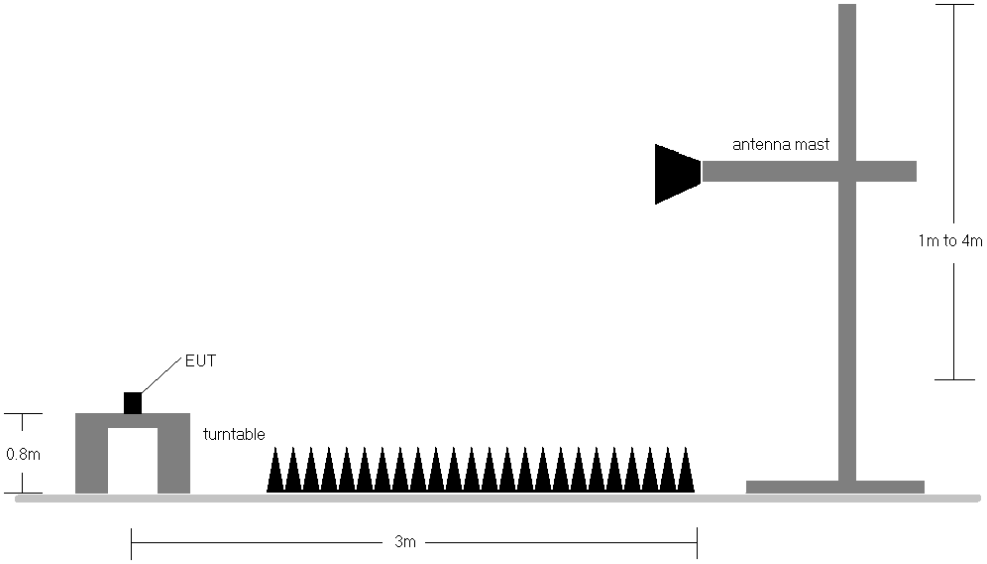

Figure 7-11. Test Instrument & Measurement Setup

Test Notes

1) The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case emissions are reported with the EUT positioning, modulations, RB sizes and offsets, and channel bandwidth configurations shown in the tables below.

2) This unit was tested with its standard battery.

3) Radiated spurious emissions measurements were evaluated for the two contiguous channels using various combinations of RB size, RB offset, modulation, and channel bandwidth. The worst case (highest) emissions were found while operating with QPSK modulation with both carriers set to transmit using 1RB.

4) The spectrum is measured from 9kHz to the 10th harmonic of the fundamental frequency of the transmitter. The worst-case emissions are reported.

5) Emissions below 18GHz were measured at a 3 meter test distance while emissions above 18GHz were measured at a 1 meter test distance with the application of a distance correction factor.

6) No significant emissions were found as a result of two uplink carriers operating contiguously.

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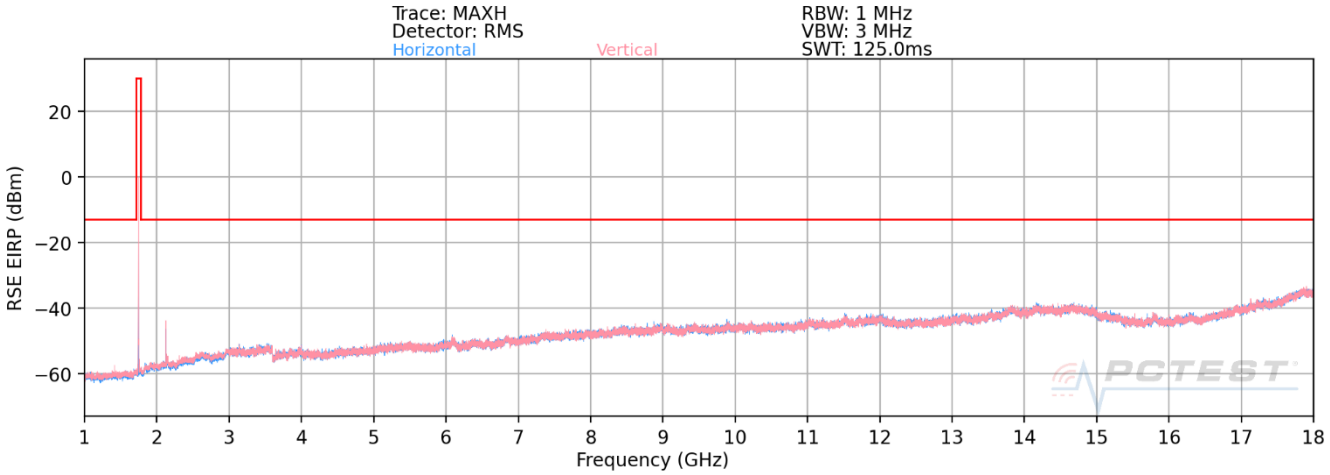
Inter-band Uplink CA 12A-66A



Plot 7-592. Radiated Spurious Plot 1GHz - 18GHz (ULCA 12A-66A)

OPERATING FREQUENCY (PCC):	1720.00	MHz
OPERATING FREQUENCY (SCC):	704.00	MHz
MODULATION SIGNAL:	QPSK	
BANDWIDTH:	20 + 10	MHz
DISTANCE:	3	meters
LIMIT:	-13	dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
1408.00	H	-	-	-72.78	7.99	-64.78	-51.8
2112.00	H	-	-	-70.95	9.11	-61.84	-48.8
3440.00	H	124	103	-60.87	9.65	-51.22	-38.2
5160.00	H	-	-	-63.74	11.03	-52.71	-39.7

Table 7-58. Radiated Spurious Data (ULCA 12A-66A – Low Channel)

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OPERATING FREQUENCY (PCC):	1745.00	MHz
OPERATING FREQUENCY (SCC):	707.50	MHz
MODULATION SIGNAL:	QPSK	
BANDWIDTH:	20 + 10	MHz
DISTANCE:	3	meters
LIMIT:	-13	dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
1415.00	H	391	118	-72.50	8.09	-64.41	-51.4
2122.50	H	-	-	-78.81	9.11	-69.70	-56.7
2830.00	H	-	-	-78.62	10.14	-68.48	-55.5
3490.00	H	170	109	-59.04	9.70	-49.35	-36.3
5235.00	H	-	-	-71.72	11.08	-60.63	-47.6
6980.00	H	-	-	-68.14	11.04	-57.09	-44.1

Table 7-59. Radiated Spurious Data (ULCA 12A-66A – Mid Channel)

OPERATING FREQUENCY (PCC):	1770.00	MHz
OPERATING FREQUENCY (SCC):	711.00	MHz
MODULATION SIGNAL:	QPSK	
BANDWIDTH:	20 + 10	MHz
DISTANCE:	3	meters
LIMIT:	-13	dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
3540.00	H	-	-	-55.74	9.76	-45.98	-33.0
5310.00	H	-	-	-64.80	11.12	-53.68	-40.7
7080.00	H	-	-	-60.78	11.08	-49.69	-36.7
8850.00	H	-	-	-56.42	12.01	-44.41	-31.4
10620.00	H	-	-	-53.69	12.81	-40.88	-27.9

Table 7-60. Radiated Spurious Data (ULCA 12A-66A – High Channel)

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