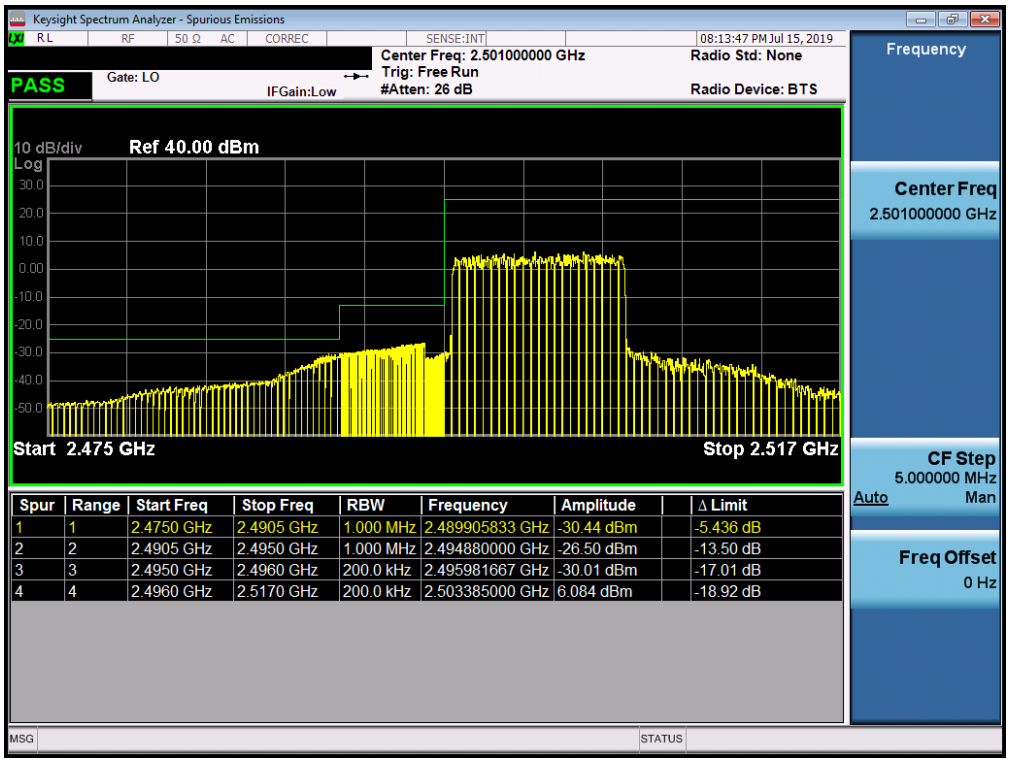
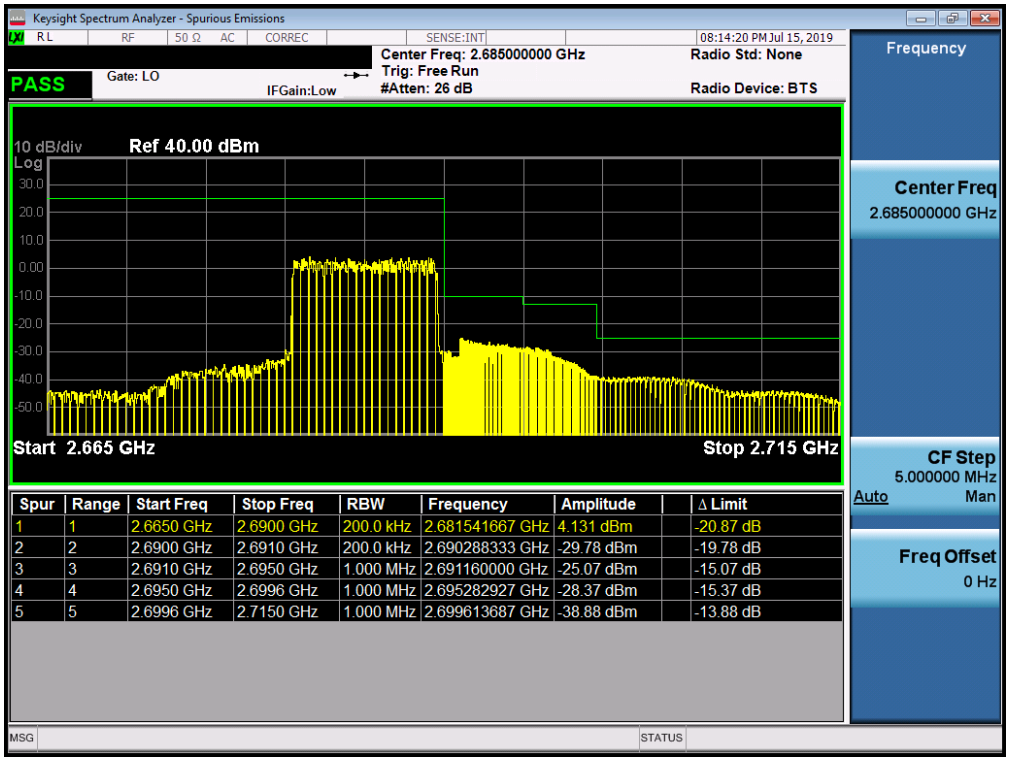


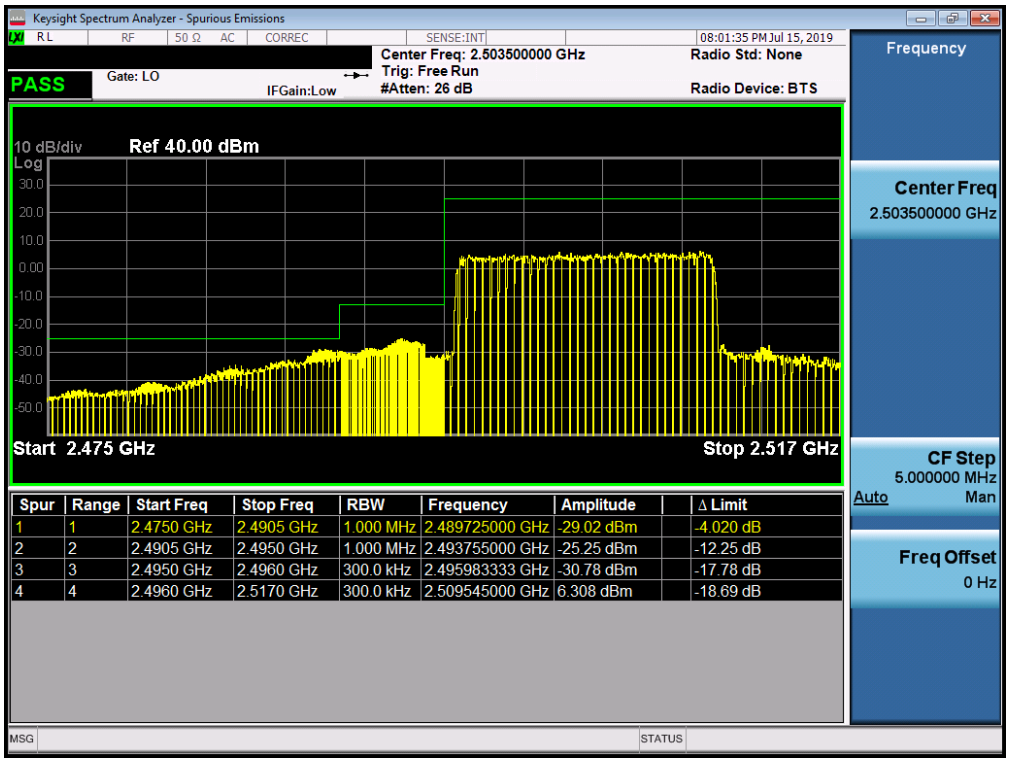
Spur	Range	Start Freq	Stop Freq	RBW	Frequency	Amplitude	Δ Limit
1	1	2.4750 GHz	2.4905 GHz	1.000 MHz	2.489905833 GHz	-30.44 dBm	-5.436 dB
2	2	2.4905 GHz	2.4950 GHz	1.000 MHz	2.494880000 GHz	-26.50 dBm	-13.50 dB
3	3	2.4950 GHz	2.4960 GHz	200.0 kHz	2.495981667 GHz	-30.01 dBm	-17.01 dB
4	4	2.4960 GHz	2.5170 GHz	200.0 kHz	2.503385000 GHz	6.084 dBm	-18.92 dB

Plot 7-271. Lower ACP Plot at 2496 MHz (Band 41 - 10.0MHz QPSK - Full RB Configuration)



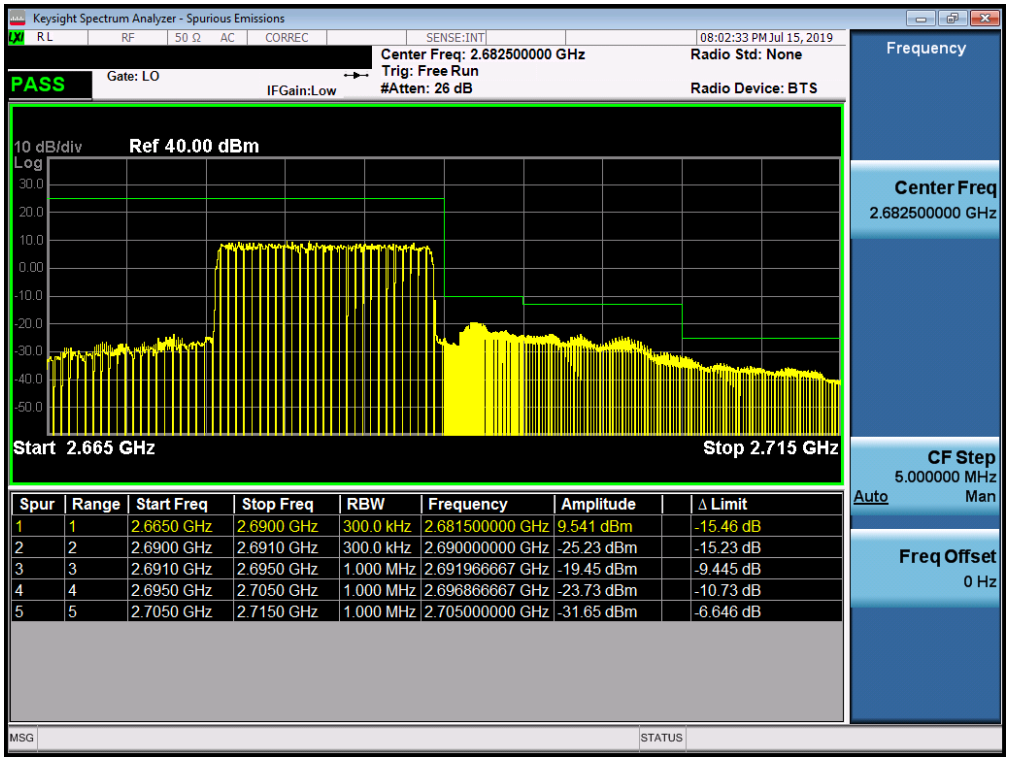
Spur	Range	Start Freq	Stop Freq	RBW	Frequency	Amplitude	Δ Limit
1	1	2.6650 GHz	2.6900 GHz	200.0 kHz	2.681541667 GHz	4.131 dBm	-20.87 dB
2	2	2.6900 GHz	2.6910 GHz	200.0 kHz	2.690288333 GHz	-29.78 dBm	-19.78 dB
3	3	2.6910 GHz	2.6950 GHz	1.000 MHz	2.691160000 GHz	-25.07 dBm	-15.07 dB
4	4	2.6950 GHz	2.6996 GHz	1.000 MHz	2.695282927 GHz	-28.37 dBm	-15.37 dB
5	5	2.6996 GHz	2.7150 GHz	1.000 MHz	2.699613687 GHz	-38.88 dBm	-13.88 dB

Plot 7-272. Upper ACP Plot (Band 41 - 10.0MHz QPSK - Full RB Configuration)



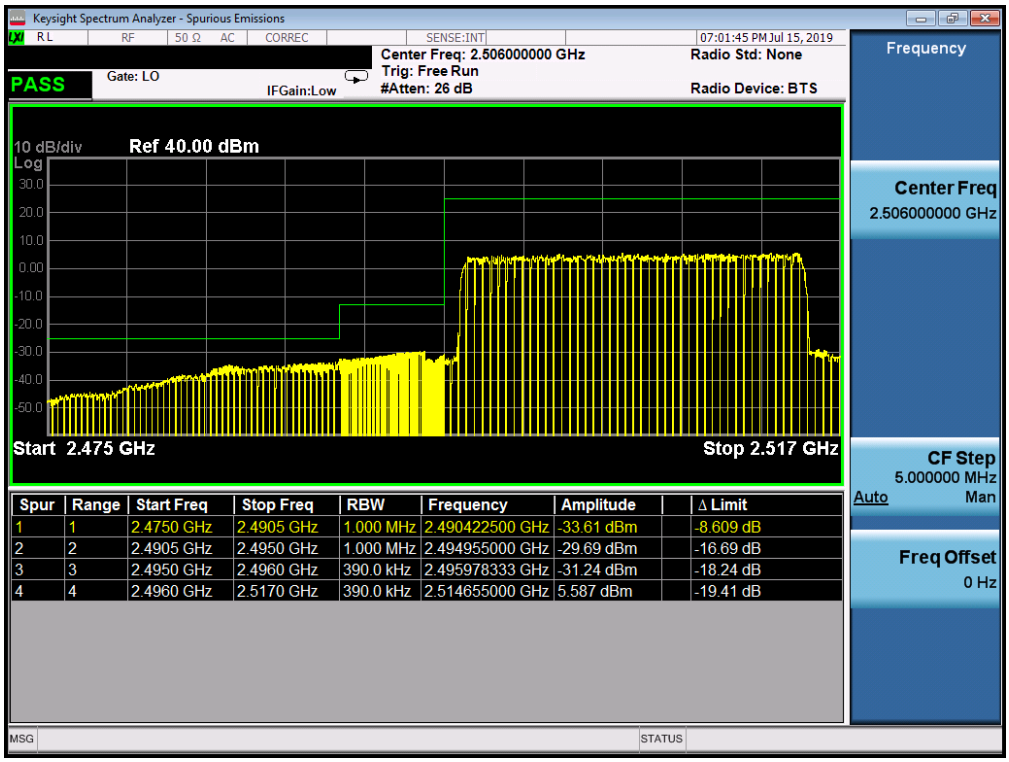
Spur	Range	Start Freq	Stop Freq	RBW	Frequency	Amplitude	Δ Limit
1	1	2.4750 GHz	2.4905 GHz	1.000 MHz	2.489725000 GHz	-29.02 dBm	-4.020 dB
2	2	2.4905 GHz	2.4950 GHz	1.000 MHz	2.493755000 GHz	-25.25 dBm	-12.25 dB
3	3	2.4950 GHz	2.4960 GHz	300.0 kHz	2.495983333 GHz	-30.78 dBm	-17.78 dB
4	4	2.4960 GHz	2.5170 GHz	300.0 kHz	2.509545000 GHz	6.308 dBm	-18.69 dB

Plot 7-273. Lower ACP Plot at 2496 MHz (Band 41 - 15.0MHz QPSK - Full RB Configuration)



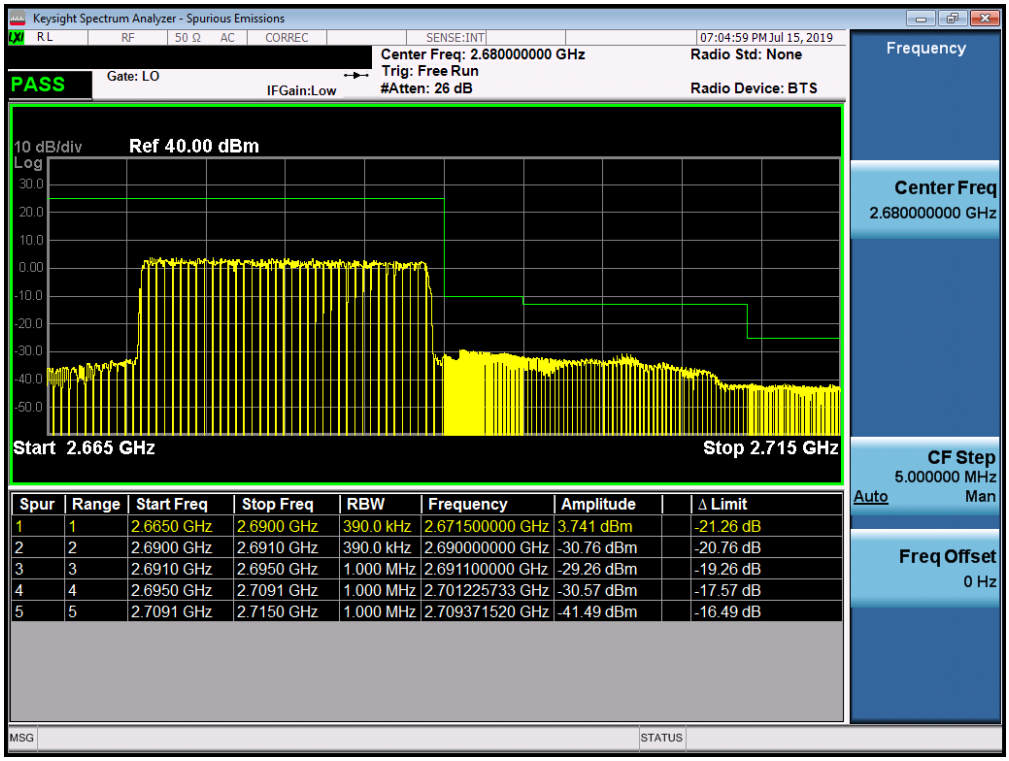
Spur	Range	Start Freq	Stop Freq	RBW	Frequency	Amplitude	Δ Limit
1	1	2.6650 GHz	2.6900 GHz	300.0 kHz	2.681500000 GHz	9.541 dBm	-15.46 dB
2	2	2.6900 GHz	2.6910 GHz	300.0 kHz	2.690000000 GHz	-25.23 dBm	-15.23 dB
3	3	2.6910 GHz	2.6950 GHz	1.000 MHz	2.691966667 GHz	-19.45 dBm	-9.445 dB
4	4	2.6950 GHz	2.7050 GHz	1.000 MHz	2.696866667 GHz	-23.73 dBm	-10.73 dB
5	5	2.7050 GHz	2.7150 GHz	1.000 MHz	2.705000000 GHz	-31.65 dBm	-6.646 dB

Plot 7-274. Upper ACP Plot (Band 41 - 15.0MHz QPSK - Full RB Configuration)



Spur	Range	Start Freq	Stop Freq	RBW	Frequency	Amplitude	Δ Limit
1	1	2.4750 GHz	2.4905 GHz	1.000 MHz	2.490422500 GHz	-33.61 dBm	-8.609 dB
2	2	2.4905 GHz	2.4950 GHz	1.000 MHz	2.494955000 GHz	-29.69 dBm	-16.69 dB
3	3	2.4950 GHz	2.4960 GHz	390.0 kHz	2.495978333 GHz	-31.24 dBm	-18.24 dB
4	4	2.4960 GHz	2.5170 GHz	390.0 kHz	2.514655000 GHz	5.587 dBm	-19.41 dB

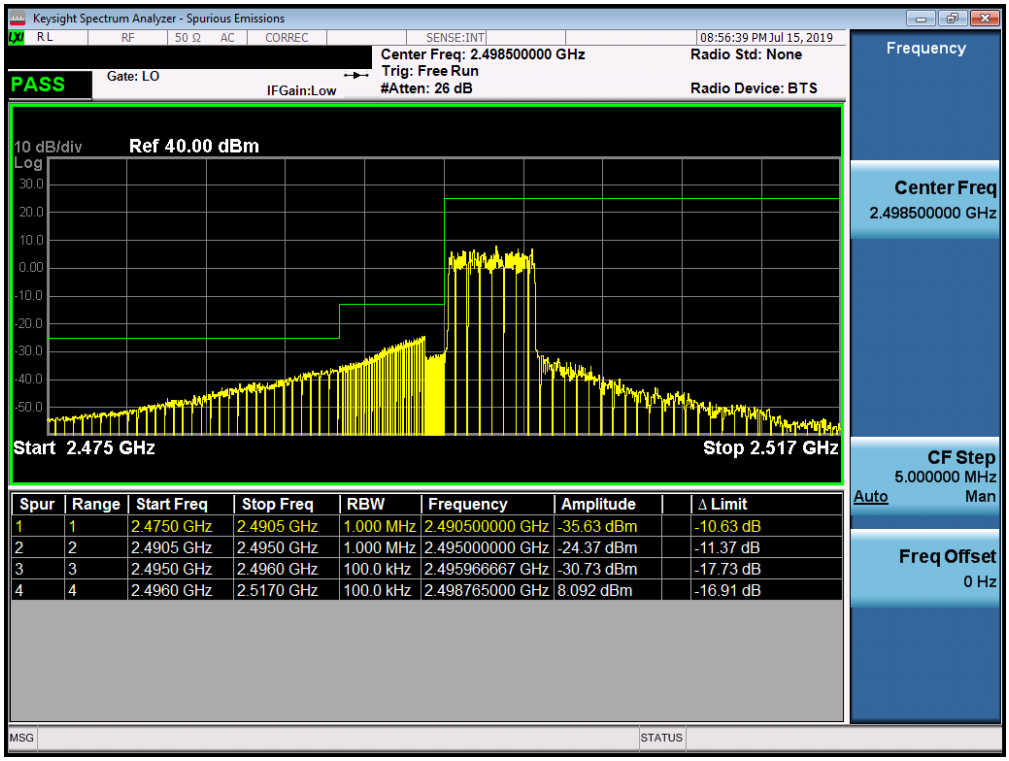
Plot 7-275. Lower ACP Plot at 2496 MHz (Band 41 - 20.0MHz QPSK - Full RB Configuration)



Spur	Range	Start Freq	Stop Freq	RBW	Frequency	Amplitude	Δ Limit
1	1	2.6650 GHz	2.6900 GHz	390.0 kHz	2.671500000 GHz	3.741 dBm	-21.26 dB
2	2	2.6900 GHz	2.6910 GHz	390.0 kHz	2.690000000 GHz	-30.76 dBm	-20.76 dB
3	3	2.6910 GHz	2.6950 GHz	1.000 MHz	2.691100000 GHz	-29.26 dBm	-19.26 dB
4	4	2.6950 GHz	2.7091 GHz	1.000 MHz	2.701225733 GHz	-30.57 dBm	-17.57 dB
5	5	2.7091 GHz	2.7150 GHz	1.000 MHz	2.709371520 GHz	-41.49 dBm	-16.49 dB

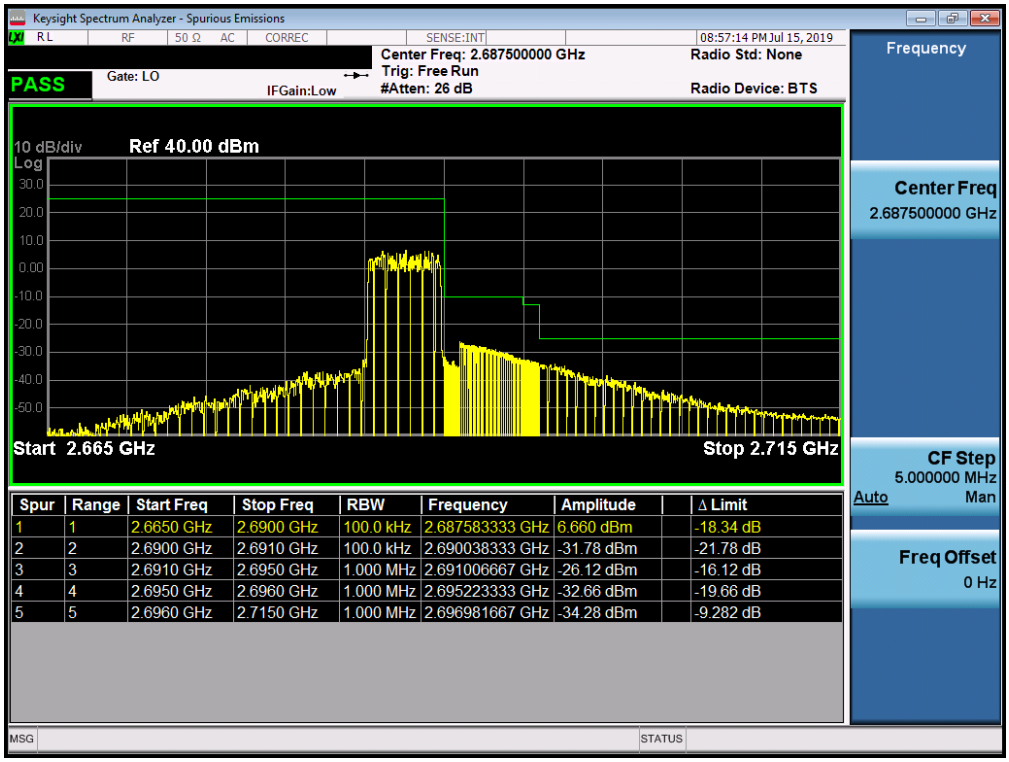
Plot 7-276. Upper ACP Plot (Band 41 - 20.0MHz QPSK - Full RB Configuration)

Band 41(PC3)



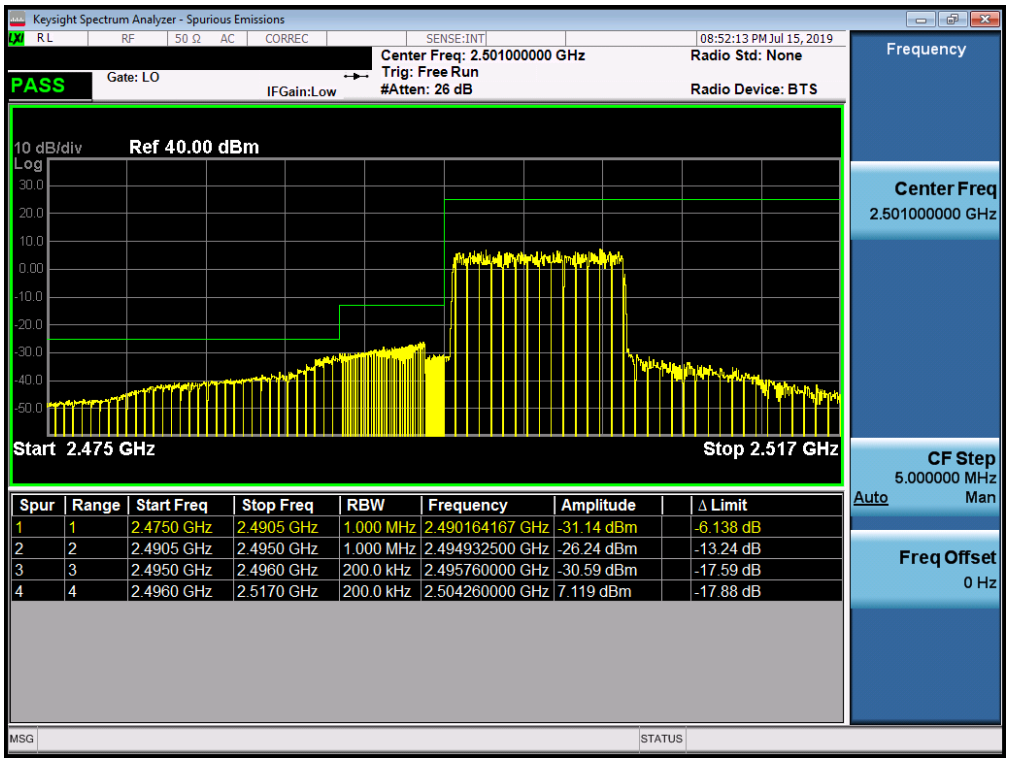
Spur	Range	Start Freq	Stop Freq	RBW	Frequency	Amplitude	Δ Limit
1	1	2.4750 GHz	2.4905 GHz	1.000 MHz	2.490500000 GHz	-35.63 dBm	-10.63 dB
2	2	2.4905 GHz	2.4950 GHz	1.000 MHz	2.495000000 GHz	-24.37 dBm	-11.37 dB
3	3	2.4950 GHz	2.4960 GHz	100.0 kHz	2.495966667 GHz	-30.73 dBm	-17.73 dB
4	4	2.4960 GHz	2.5170 GHz	100.0 kHz	2.498765000 GHz	8.092 dBm	-16.91 dB

Plot 7-277. Lower ACP Plot at 2496 MHz (Band 41 - 5.0MHz QPSK - Full RB Configuration)



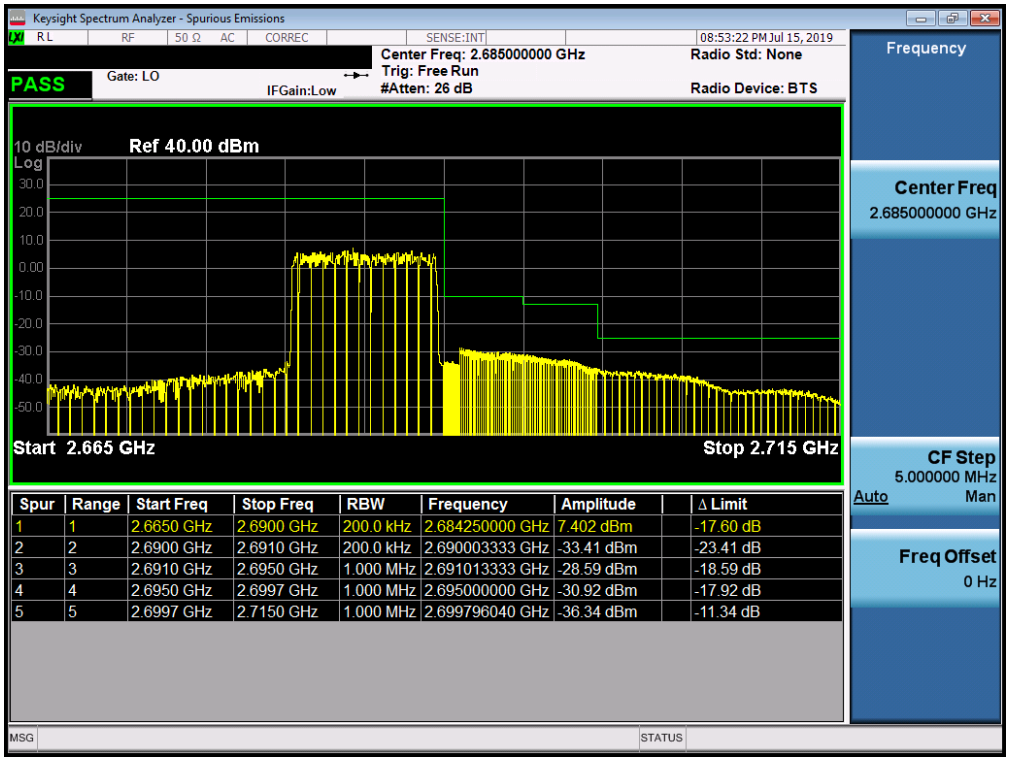
Spur	Range	Start Freq	Stop Freq	RBW	Frequency	Amplitude	Δ Limit
1	1	2.6650 GHz	2.6900 GHz	100.0 kHz	2.687583333 GHz	6.660 dBm	-18.34 dB
2	2	2.6900 GHz	2.6910 GHz	100.0 kHz	2.690038333 GHz	-31.78 dBm	-21.78 dB
3	3	2.6910 GHz	2.6950 GHz	1.000 MHz	2.691006667 GHz	-26.12 dBm	-16.12 dB
4	4	2.6950 GHz	2.6960 GHz	1.000 MHz	2.695223333 GHz	-32.66 dBm	-19.66 dB
5	5	2.6960 GHz	2.7150 GHz	1.000 MHz	2.696981667 GHz	-34.28 dBm	-9.282 dB

Plot 7-278. Upper ACP Plot (Band 41 - 5.0MHz QPSK - Full RB Configuration)



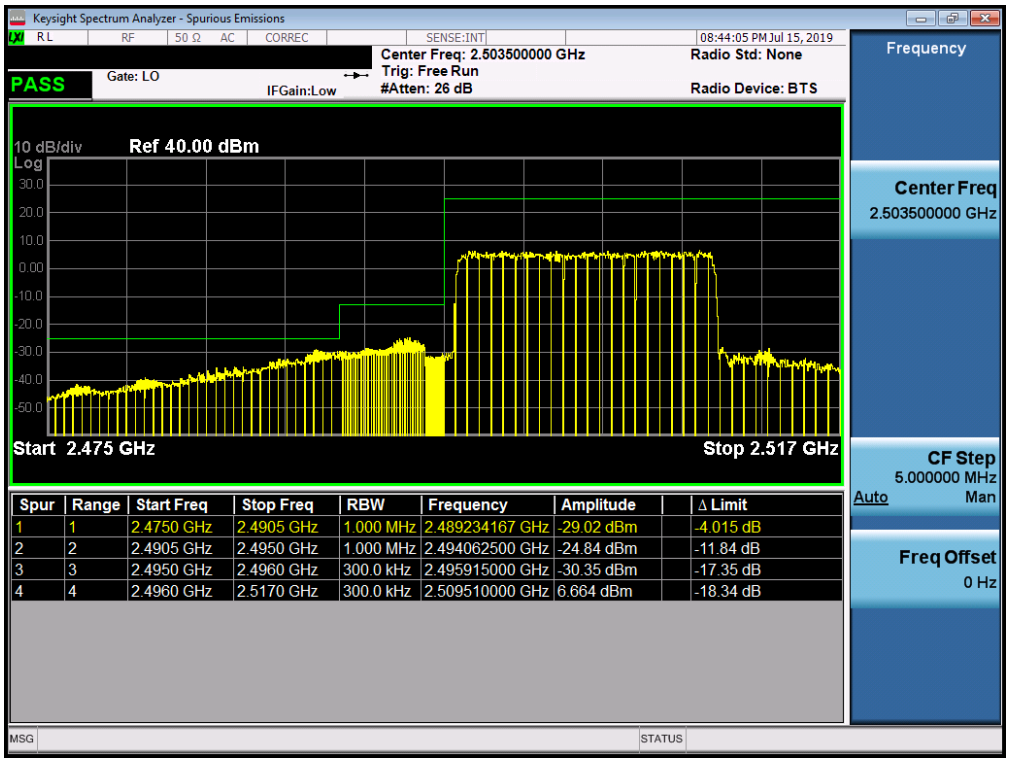
Spur	Range	Start Freq	Stop Freq	RBW	Frequency	Amplitude	Δ Limit
1	1	2.4750 GHz	2.4905 GHz	1.000 MHz	2.490164167 GHz	-31.14 dBm	-6.138 dB
2	2	2.4905 GHz	2.4950 GHz	1.000 MHz	2.494932500 GHz	-26.24 dBm	-13.24 dB
3	3	2.4950 GHz	2.4960 GHz	200.0 kHz	2.495760000 GHz	-30.59 dBm	-17.59 dB
4	4	2.4960 GHz	2.5170 GHz	200.0 kHz	2.504260000 GHz	7.119 dBm	-17.88 dB

Plot 7-279. Lower ACP Plot at 2496 MHz (Band 41 - 10.0MHz QPSK - Full RB Configuration)



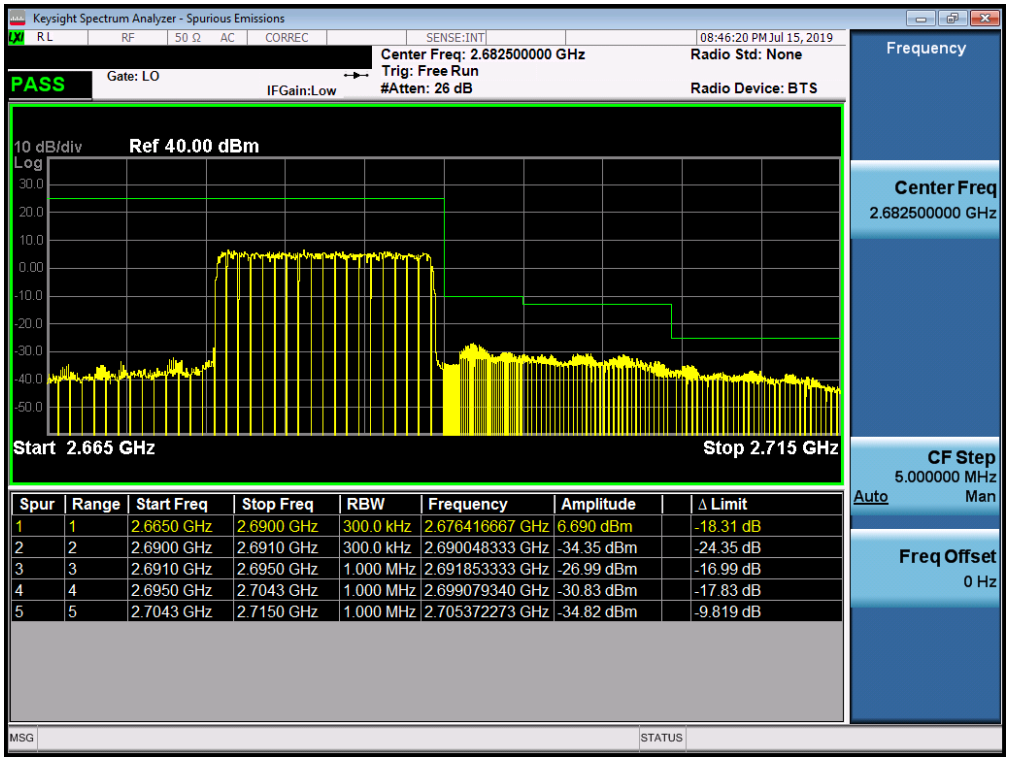
Spur	Range	Start Freq	Stop Freq	RBW	Frequency	Amplitude	Δ Limit
1	1	2.6650 GHz	2.6900 GHz	200.0 kHz	2.684250000 GHz	7.402 dBm	-17.60 dB
2	2	2.6900 GHz	2.6910 GHz	200.0 kHz	2.690003333 GHz	-33.41 dBm	-23.41 dB
3	3	2.6910 GHz	2.6950 GHz	1.000 MHz	2.691013333 GHz	-28.59 dBm	-18.59 dB
4	4	2.6950 GHz	2.6997 GHz	1.000 MHz	2.695000000 GHz	-30.92 dBm	-17.92 dB
5	5	2.6997 GHz	2.7150 GHz	1.000 MHz	2.699796040 GHz	-36.34 dBm	-11.34 dB

Plot 7-280. Upper ACP Plot (Band 41 - 10.0MHz QPSK - Full RB Configuration)



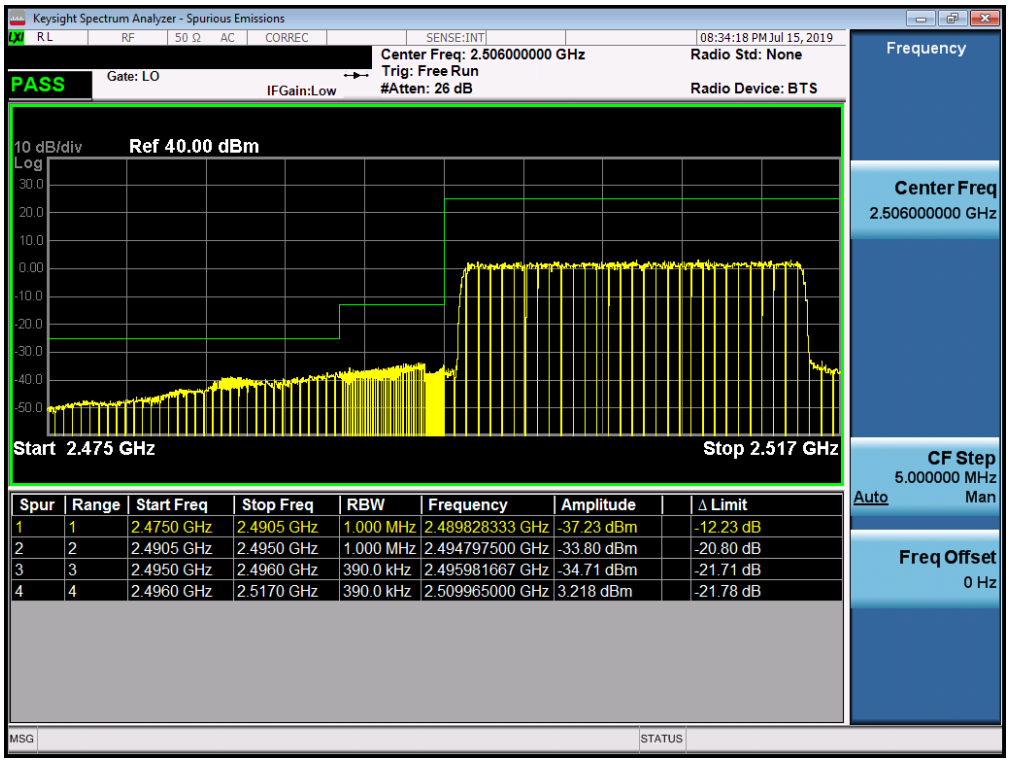
Spur	Range	Start Freq	Stop Freq	RBW	Frequency	Amplitude	Δ Limit
1	1	2.4750 GHz	2.4905 GHz	1.000 MHz	2.489234167 GHz	-29.02 dBm	-4.015 dB
2	2	2.4905 GHz	2.4950 GHz	1.000 MHz	2.494062500 GHz	-24.84 dBm	-11.84 dB
3	3	2.4950 GHz	2.4960 GHz	300.0 kHz	2.495915000 GHz	-30.35 dBm	-17.35 dB
4	4	2.4960 GHz	2.5170 GHz	300.0 kHz	2.509510000 GHz	6.664 dBm	-18.34 dB

Plot 7-281. Lower ACP Plot at 2496 MHz (Band 41 - 15.0MHz QPSK - Full RB Configuration)



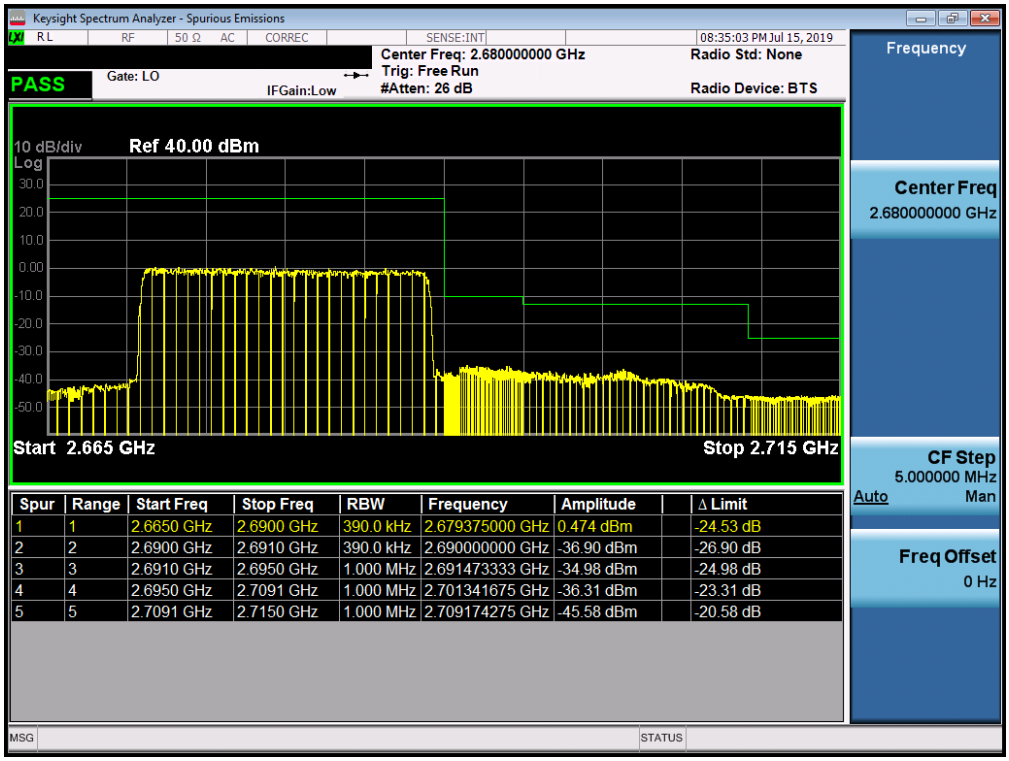
Spur	Range	Start Freq	Stop Freq	RBW	Frequency	Amplitude	Δ Limit
1	1	2.6650 GHz	2.6900 GHz	300.0 kHz	2.676416667 GHz	6.690 dBm	-18.31 dB
2	2	2.6900 GHz	2.6910 GHz	300.0 kHz	2.690048333 GHz	-34.35 dBm	-24.35 dB
3	3	2.6910 GHz	2.6950 GHz	1.000 MHz	2.691853333 GHz	-26.99 dBm	-16.99 dB
4	4	2.6950 GHz	2.7043 GHz	1.000 MHz	2.699079340 GHz	-30.83 dBm	-17.83 dB
5	5	2.7043 GHz	2.7150 GHz	1.000 MHz	2.705372273 GHz	-34.82 dBm	-9.819 dB

Plot 7-282. Upper ACP Plot (Band 41 - 15.0MHz QPSK - Full RB Configuration)



Spur	Range	Start Freq	Stop Freq	RBW	Frequency	Amplitude	Δ Limit
1	1	2.4750 GHz	2.4905 GHz	1.000 MHz	2.489828333 GHz	-37.23 dBm	-12.23 dB
2	2	2.4905 GHz	2.4950 GHz	1.000 MHz	2.494797500 GHz	-33.80 dBm	-20.80 dB
3	3	2.4950 GHz	2.4960 GHz	390.0 kHz	2.495981667 GHz	-34.71 dBm	-21.71 dB
4	4	2.4960 GHz	2.5170 GHz	390.0 kHz	2.509965000 GHz	3.218 dBm	-21.78 dB

Plot 7-283. Lower ACP Plot at 2496 MHz (Band 41 - 20.0MHz QPSK - Full RB Configuration)



Spur	Range	Start Freq	Stop Freq	RBW	Frequency	Amplitude	Δ Limit
1	1	2.6650 GHz	2.6900 GHz	390.0 kHz	2.679375000 GHz	0.474 dBm	-24.53 dB
2	2	2.6900 GHz	2.6910 GHz	390.0 kHz	2.690000000 GHz	-36.90 dBm	-26.90 dB
3	3	2.6910 GHz	2.6950 GHz	1.000 MHz	2.691473333 GHz	-34.98 dBm	-24.98 dB
4	4	2.6950 GHz	2.7091 GHz	1.000 MHz	2.701341675 GHz	-36.31 dBm	-23.31 dB
5	5	2.7091 GHz	2.7150 GHz	1.000 MHz	2.709174275 GHz	-45.58 dBm	-20.58 dB

Plot 7-284. Upper ACP Plot (Band 41 - 20.0MHz QPSK - Full RB Configuration)

7.5 Peak-Average Ratio

Test Overview

A peak to average ratio measurement is performed at the conducted port of the EUT. The spectrum analyzers Complementary Cumulative Distribution Function (CCDF) measurement profile is used to determine the largest deviation between the average and the peak power of the EUT in a given bandwidth. The CCDF curve shows how much time the peak waveform spends at or above a given average power level. The percent of time the signal spends at or above the level defines the probability for that particular power level.

Test Procedure Used

KDB 971168 D01 v03r01 – Section 5.7.1

Test Settings

1. The signal analyzer's CCDF measurement profile is enabled
2. Frequency = carrier center frequency
3. Measurement BW ≥ OBW or specified reference bandwidth
4. The signal analyzer was set to collect one million samples to generate the CCDF curve
5. The measurement interval was set depending on the type of signal analyzed. For continuous signals (>98% duty cycle), the measurement interval was set to 1ms. For burst transmissions, the spectrum analyzer is set to use an internal "RF Burst" trigger that is synced with an incoming pulse and the measurement interval is set to less than the duration of the "on time" of one burst to ensure that energy is only captured during a time in which the transmitter is operating at maximum power

Test Setup

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

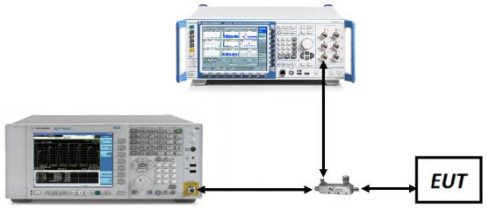
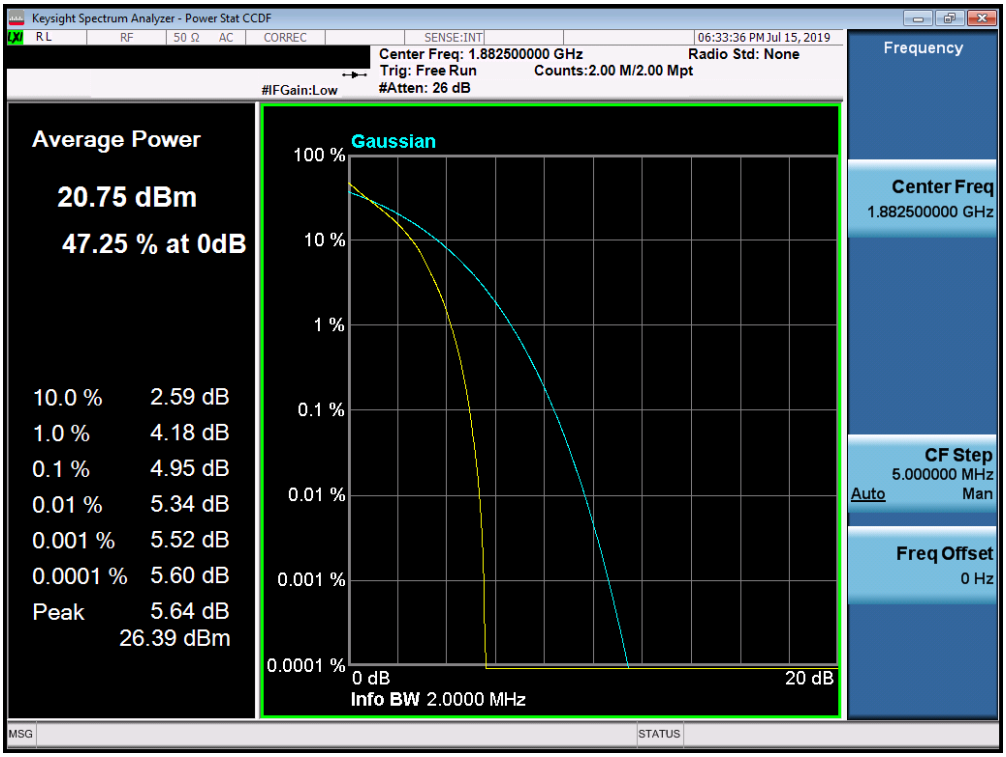


Figure 7-4. Test Instrument & Measurement Setup

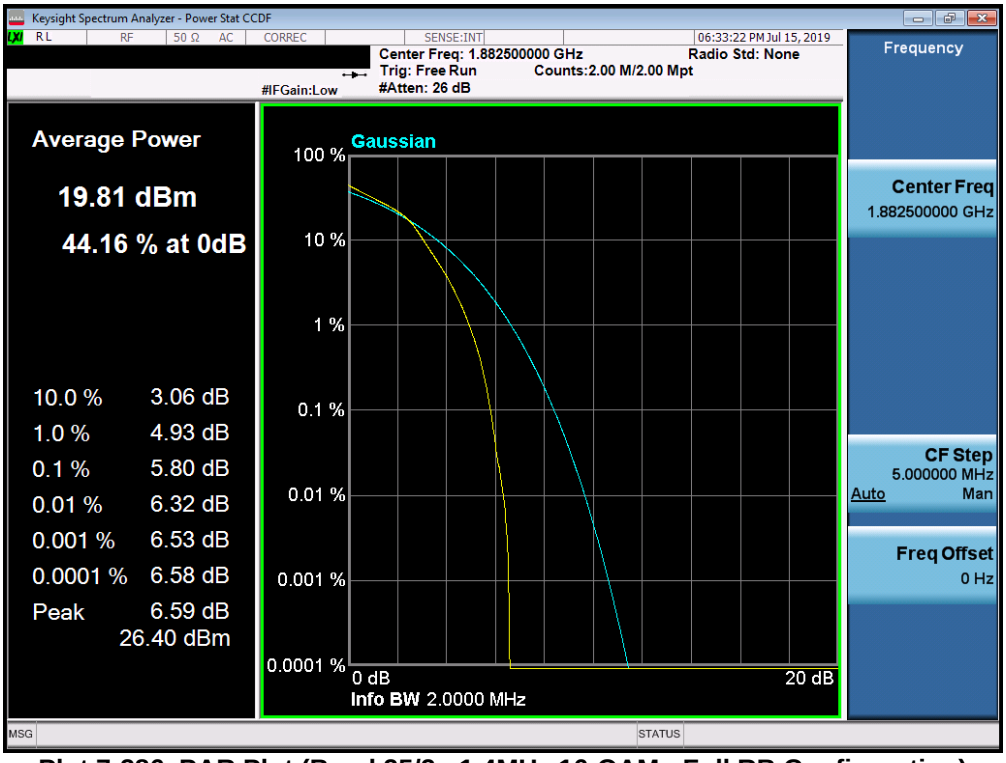
Test Notes

None.

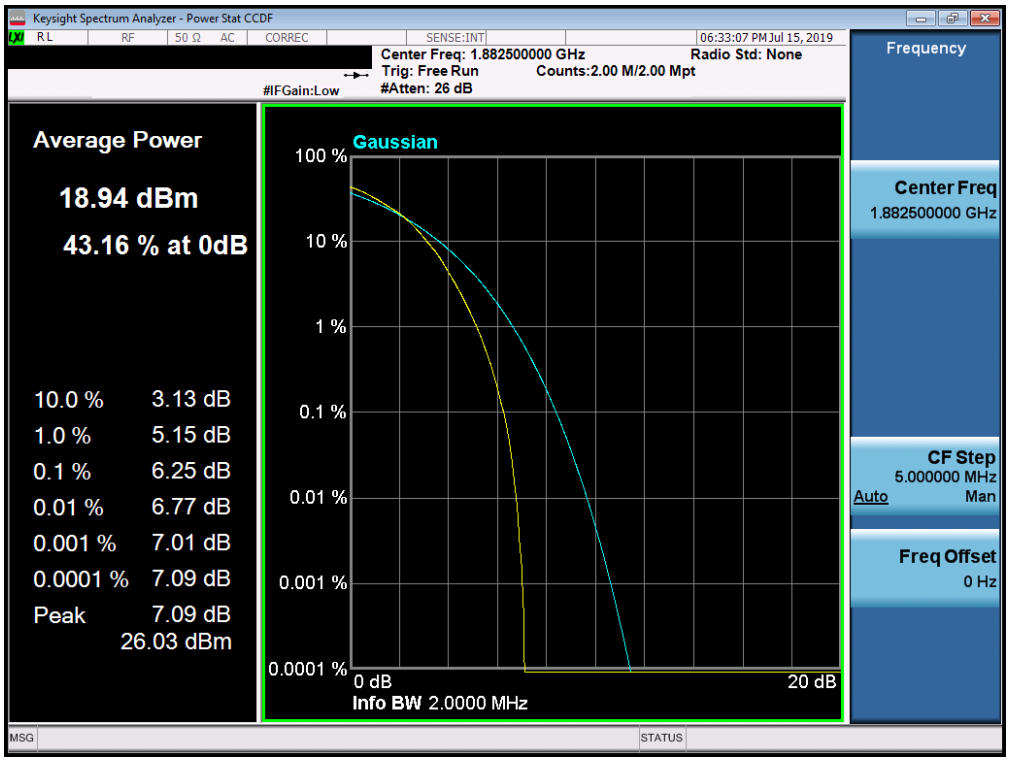
Band 25/2



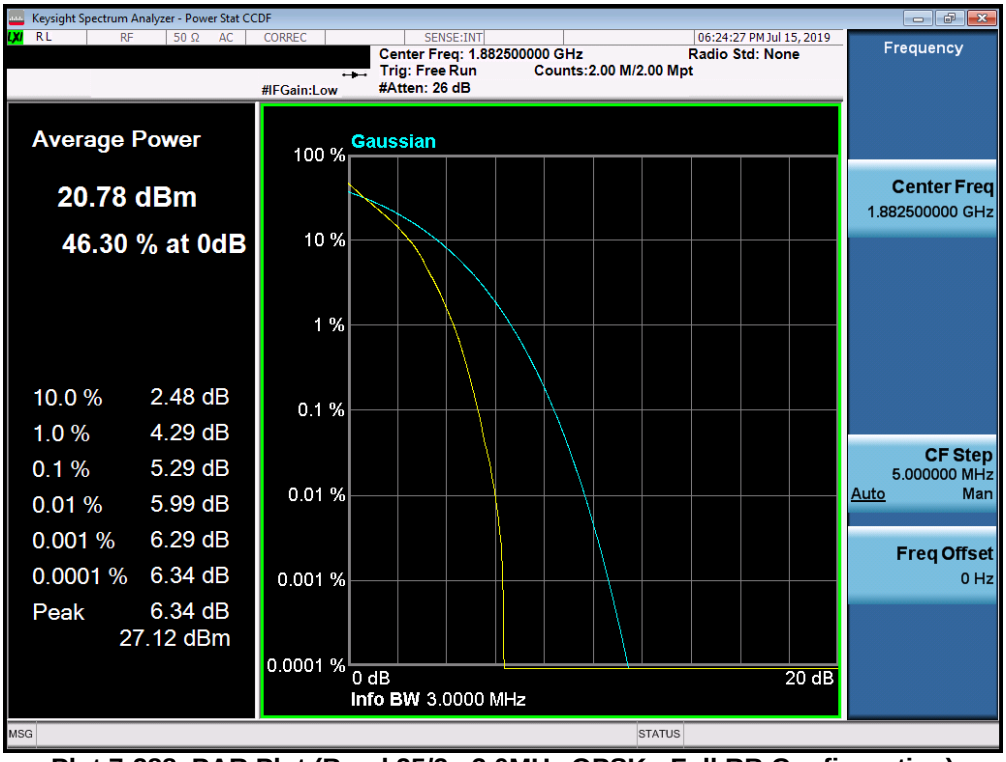
Plot 7-285. PAR Plot (Band 25/2 - 1.4MHz QPSK - Full RB Configuration)



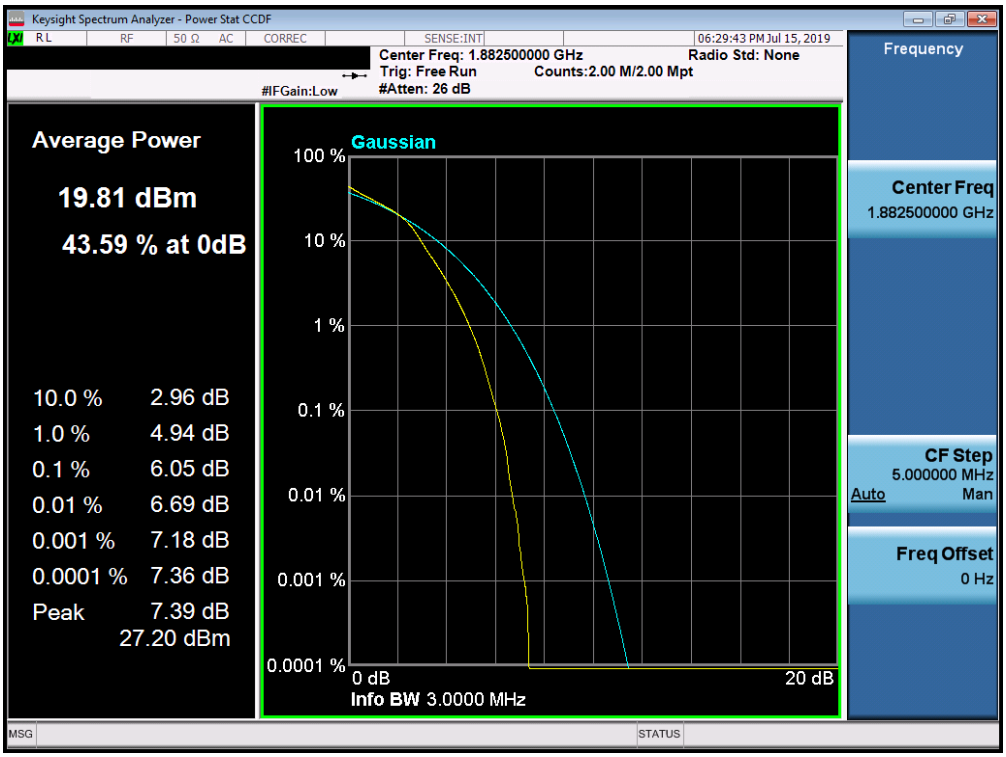
Plot 7-286. PAR Plot (Band 25/2 - 1.4MHz 16-QAM - Full RB Configuration)



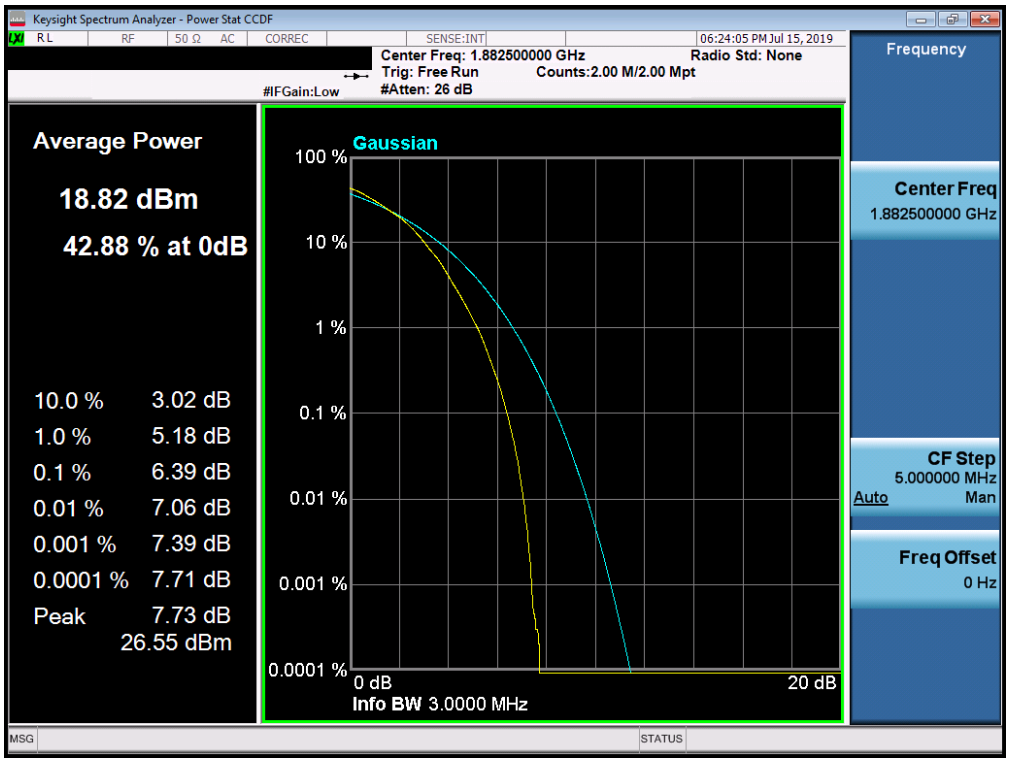
Plot 7-287. PAR Plot (Band 25/2 - 1.4MHz 64-QAM - Full RB Configuration)



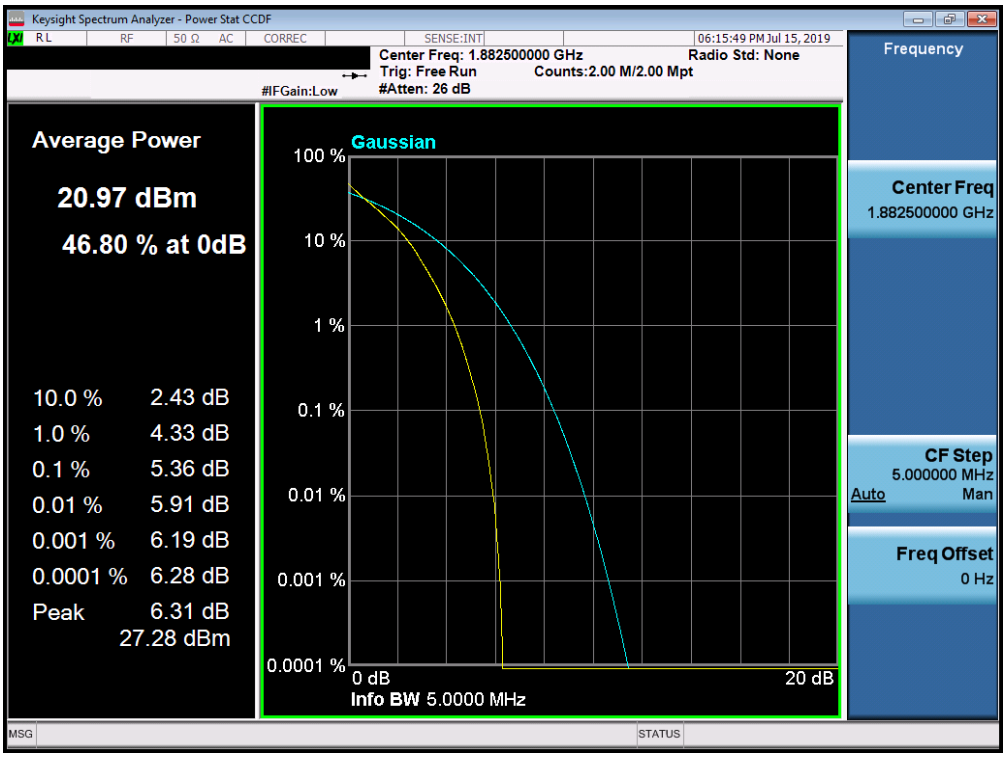
Plot 7-288. PAR Plot (Band 25/2 - 3.0MHz QPSK - Full RB Configuration)



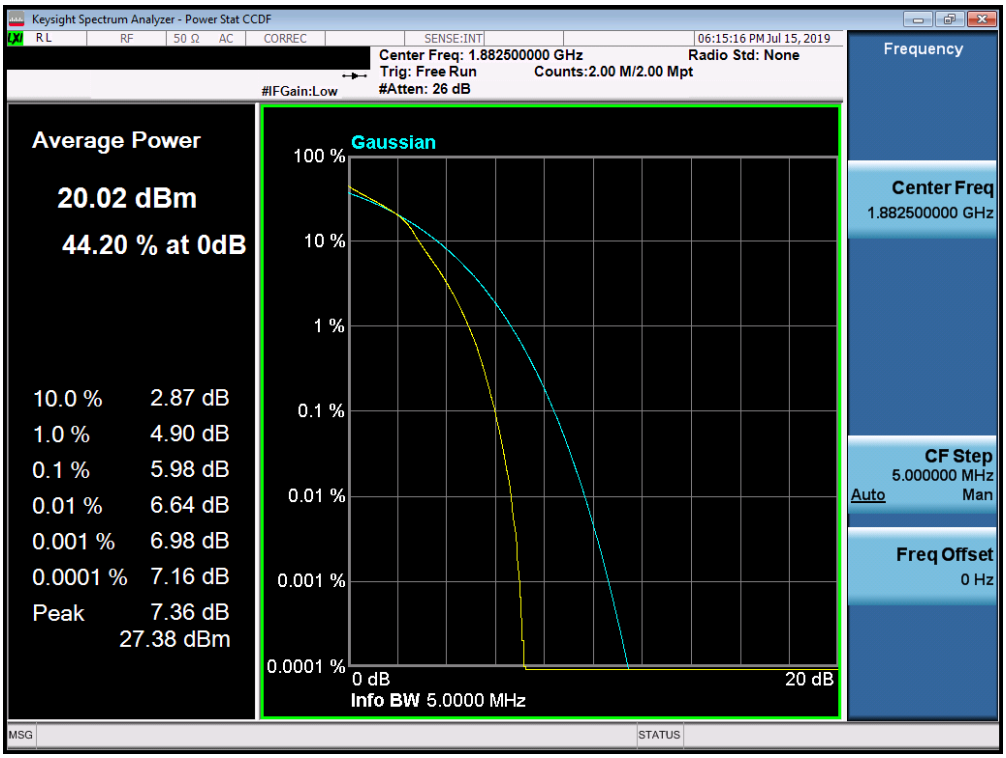
Plot 7-289. PAR Plot (Band 25/2 - 3.0MHz 16-QAM - Full RB Configuration)



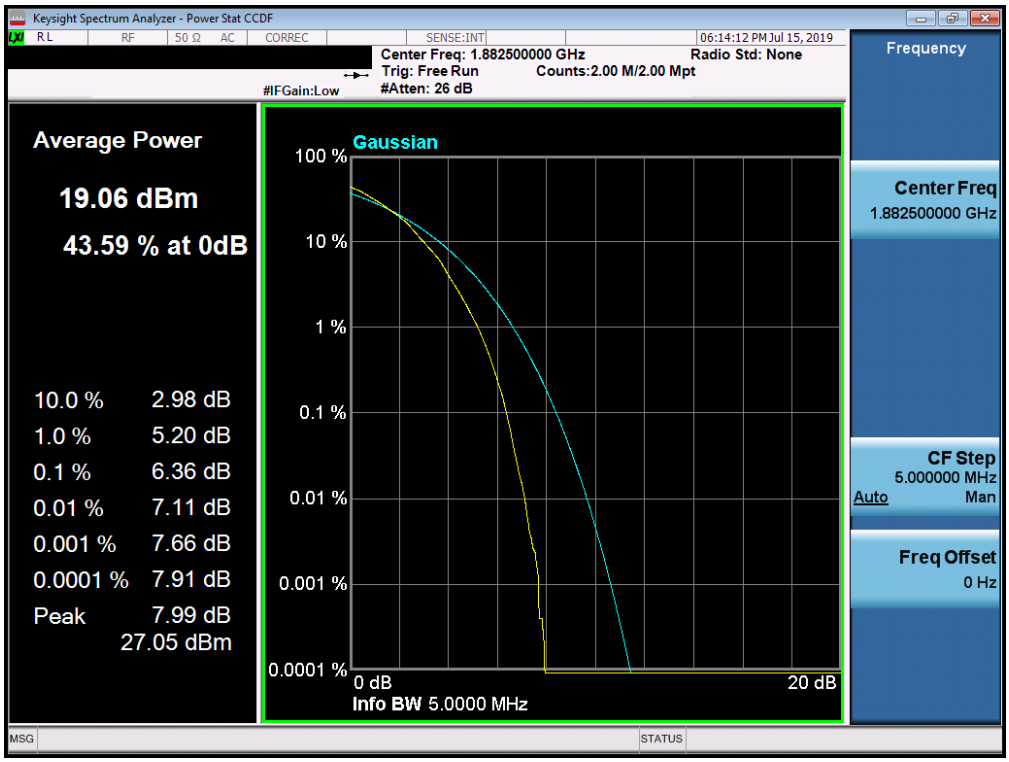
Plot 7-290. PAR Plot (Band 25/2 – 3.0MHz 64-QAM - Full RB Configuration)



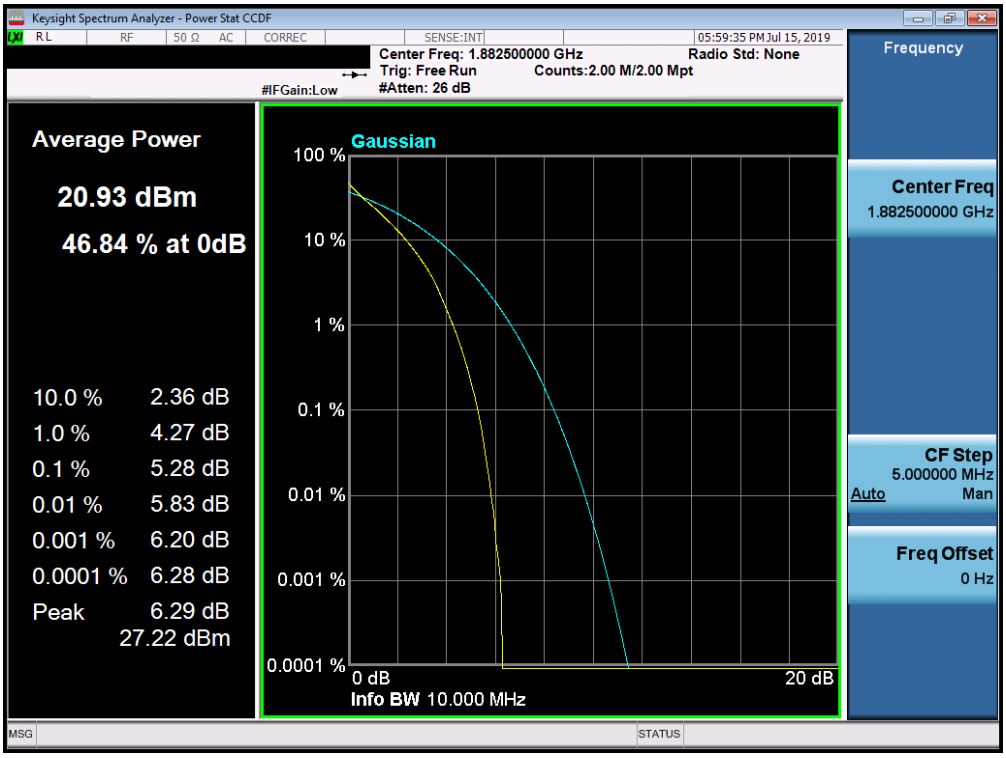
Plot 7-291. PAR Plot (Band 25/2 - 5.0MHz QPSK - Full RB Configuration)



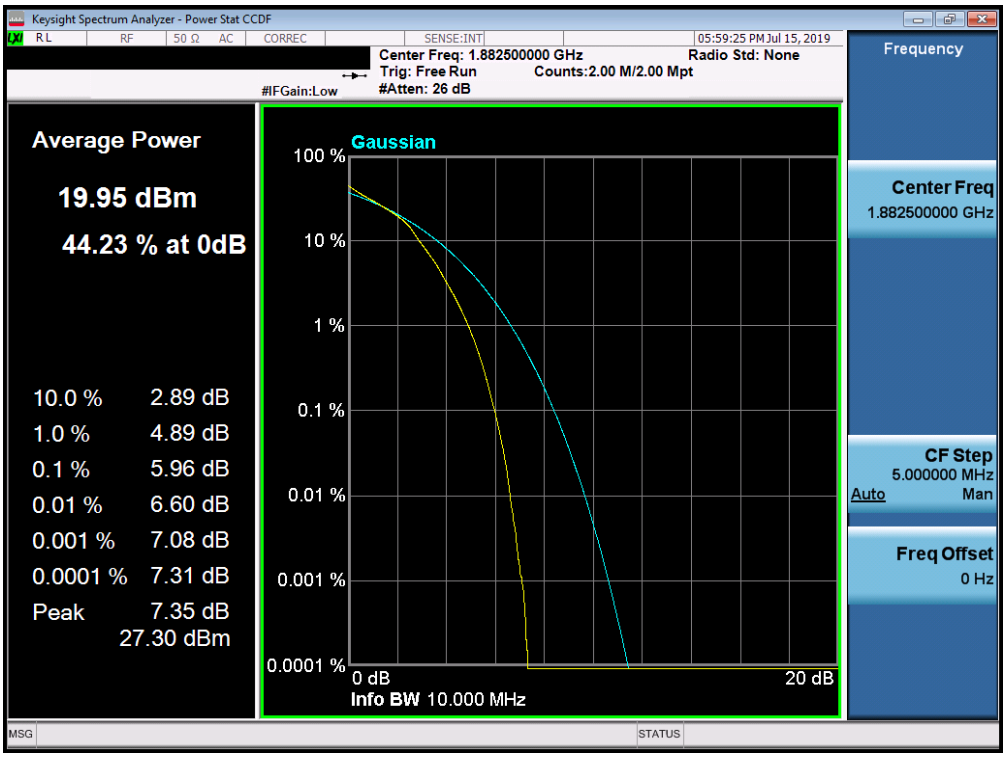
Plot 7-292. PAR Plot (Band 25/2 - 5.0MHz 16-QAM - Full RB Configuration)



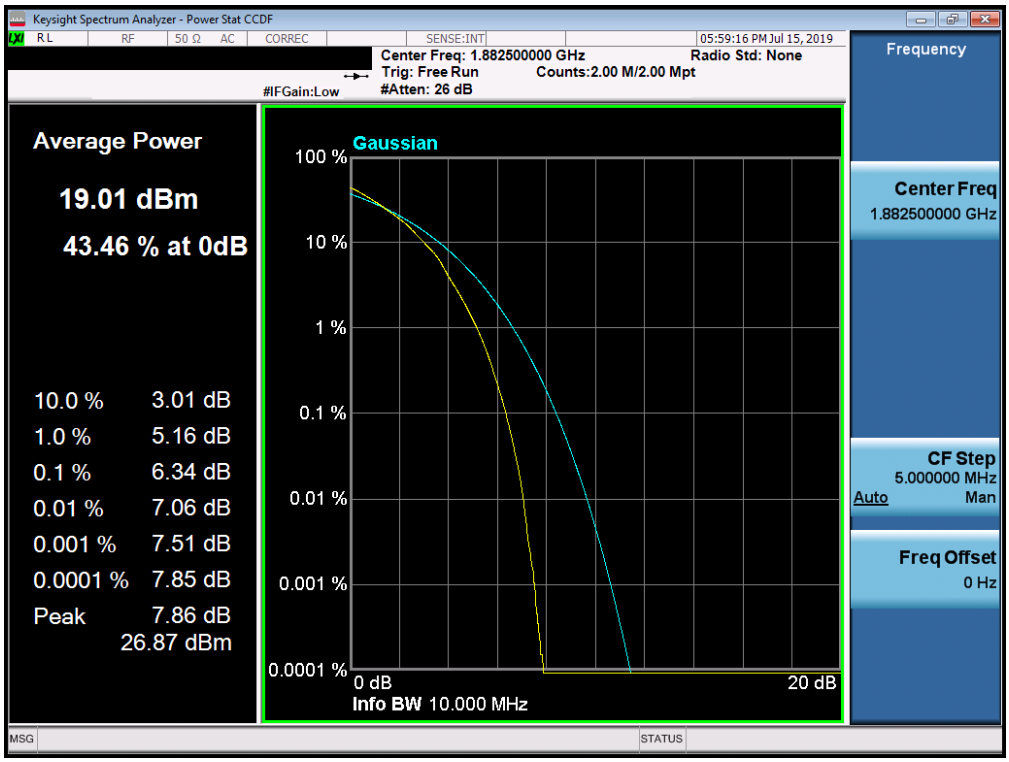
Plot 7-293. PAR Plot (Band 25/2 – 5.0MHz 64-QAM - Full RB Configuration)



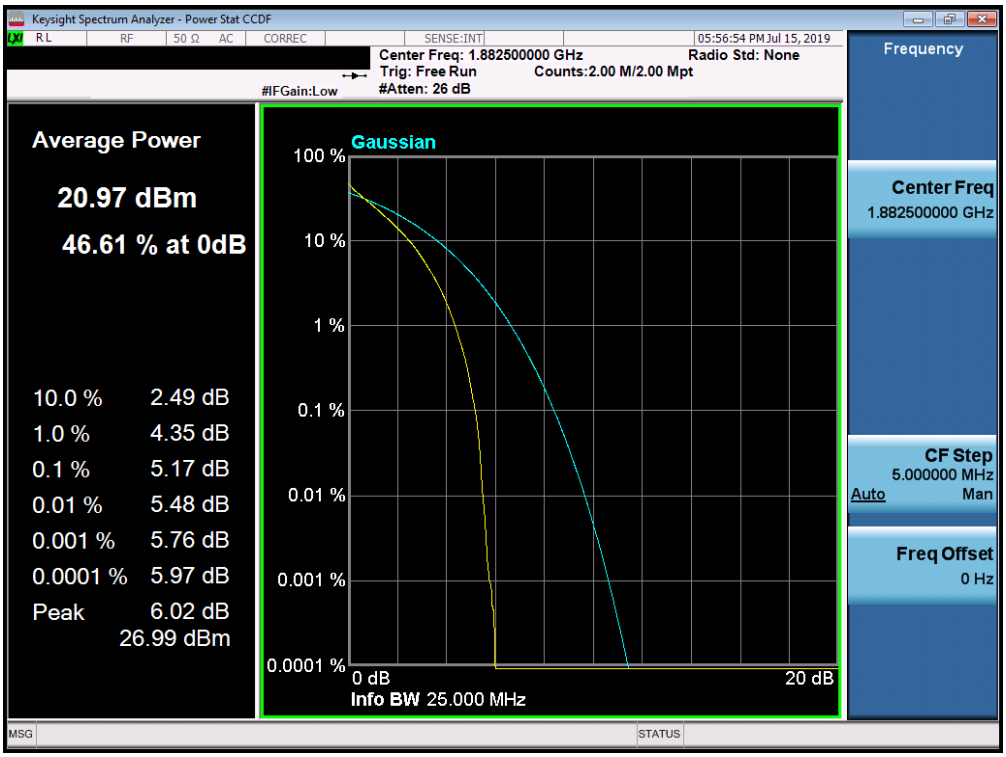
Plot 7-294. PAR Plot (Band 25/2 - 10.0MHz QPSK - Full RB Configuration)



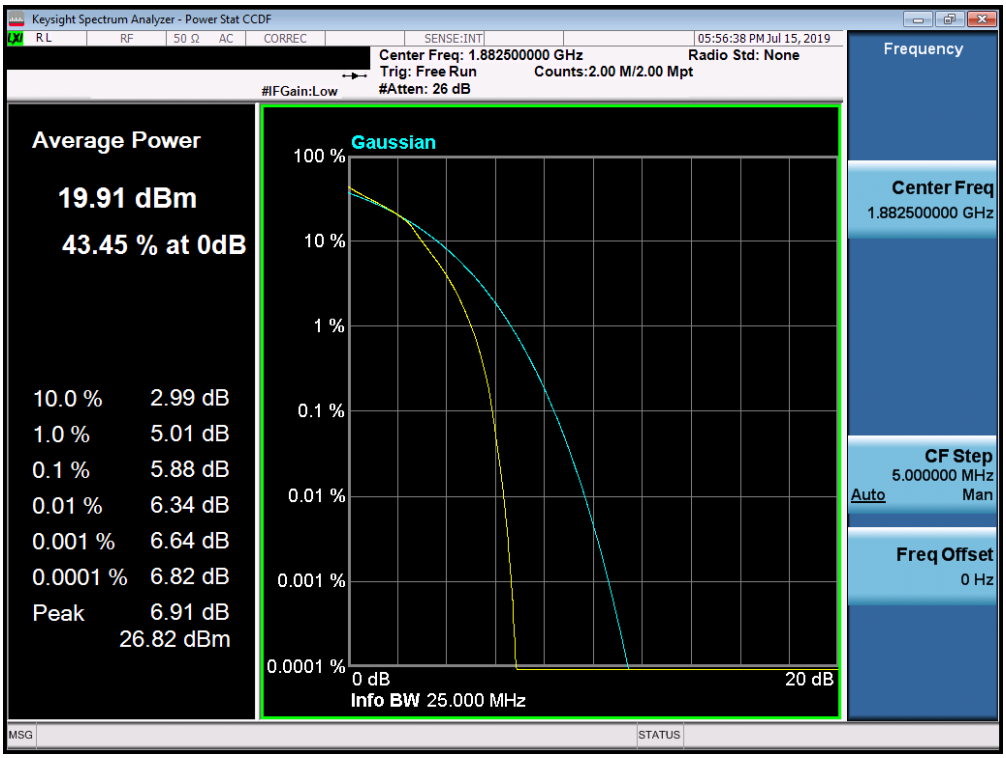
Plot 7-295. PAR Plot (Band 25/2 - 10.0MHz 16-QAM - Full RB Configuration)



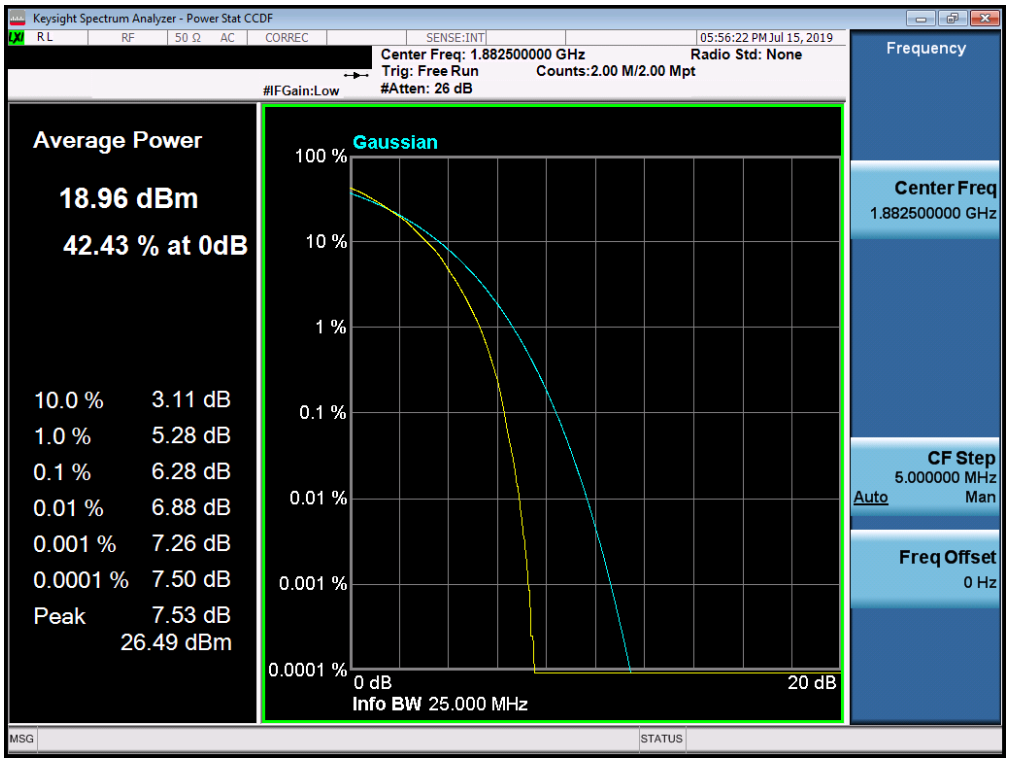
Plot 7-296. PAR Plot (Band 25/2 – 10.0MHz 64-QAM - Full RB Configuration)



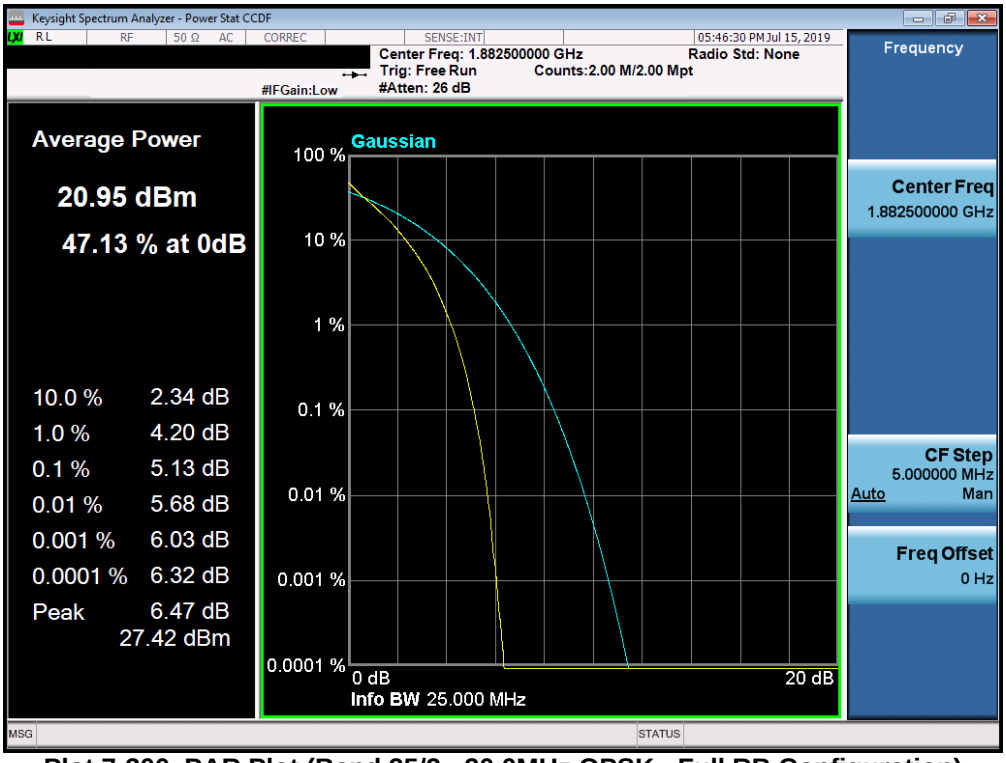
Plot 7-297. PAR Plot (Band 25/2 - 15.0MHz QPSK - Full RB Configuration)



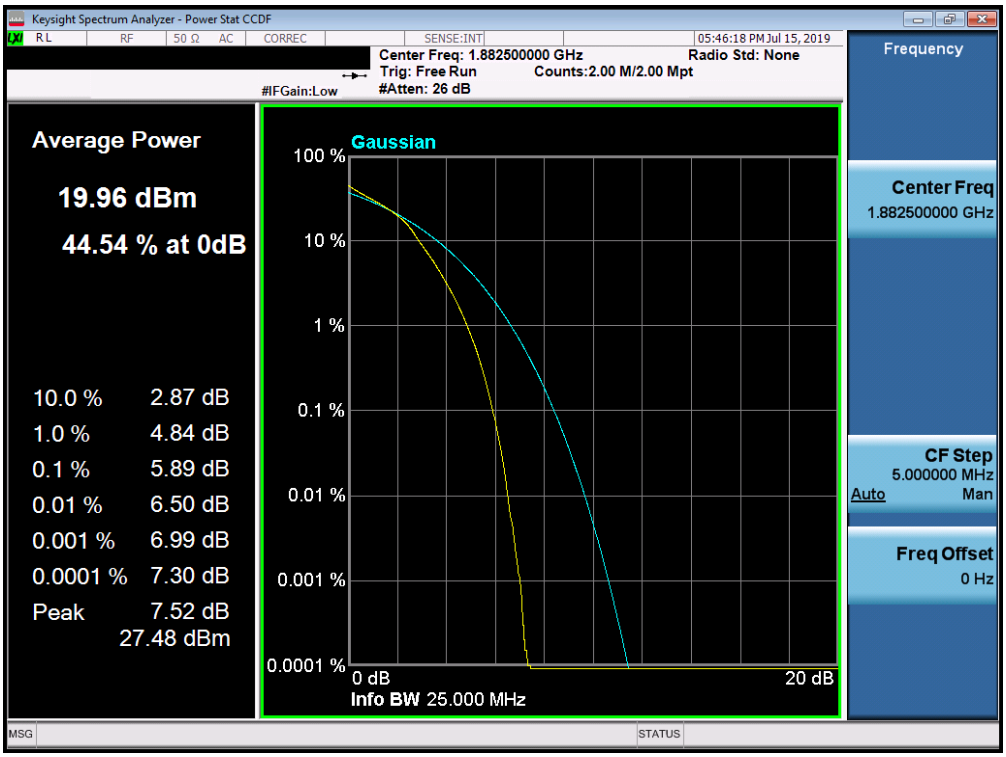
Plot 7-298. PAR Plot (Band 25/2 - 15.0MHz 16-QAM - Full RB Configuration)



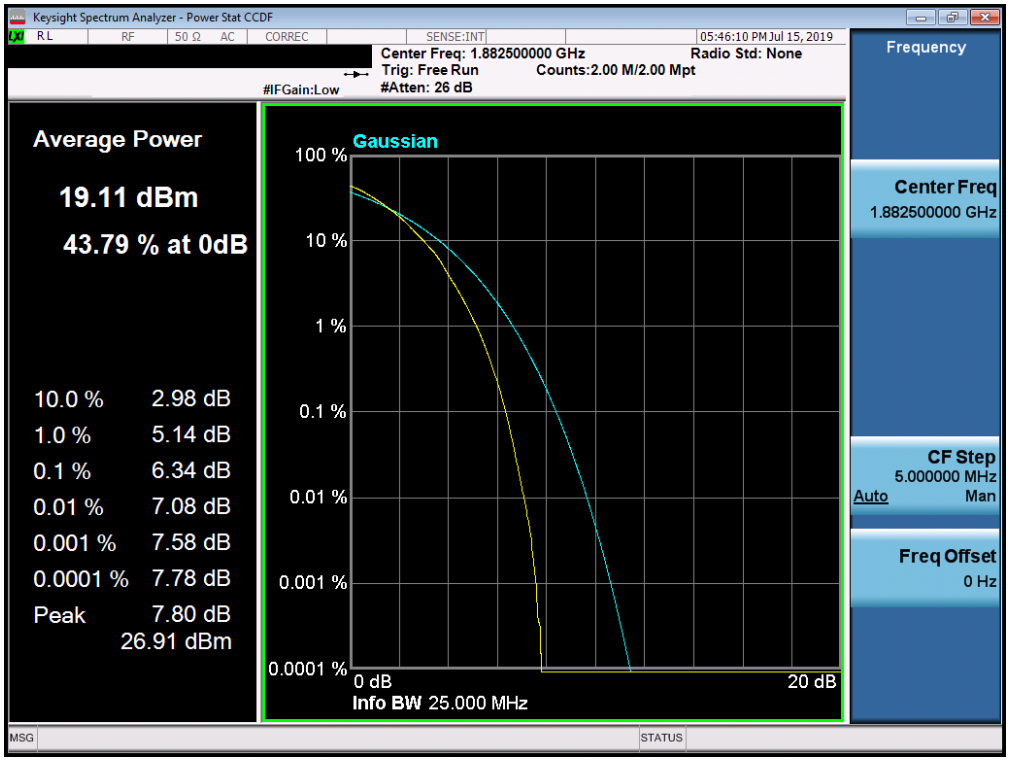
Plot 7-299. PAR Plot (Band 25/2 – 15.0MHz 64-QAM - Full RB Configuration)



Plot 7-300. PAR Plot (Band 25/2 - 20.0MHz QPSK - Full RB Configuration)

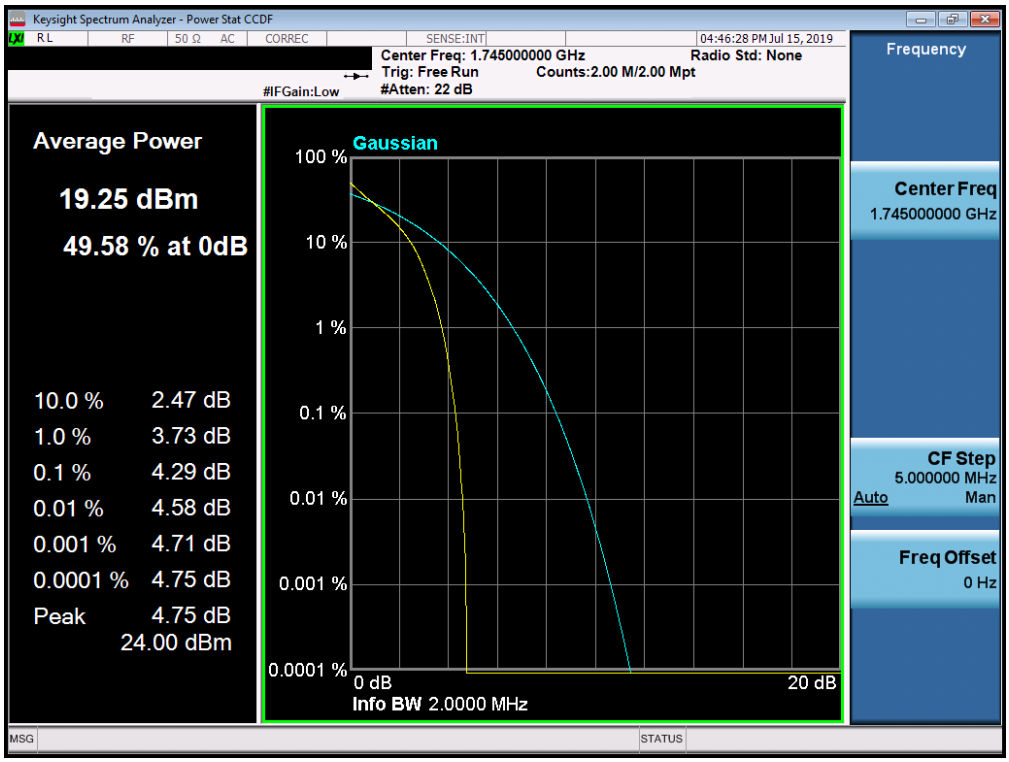


Plot 7-301. PAR Plot (Band 25/2 - 20.0MHz 16-QAM - Full RB Configuration)

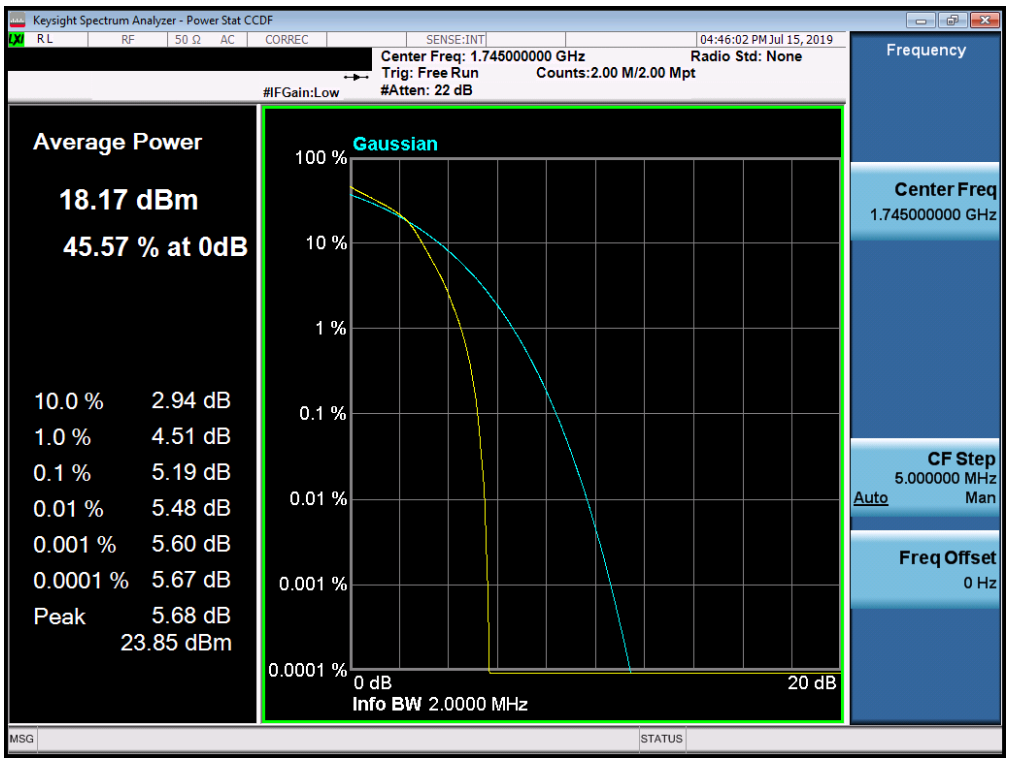


Plot 7-302. PAR Plot (Band 25/2 – 20.0MHz 64-QAM - Full RB Configuration)

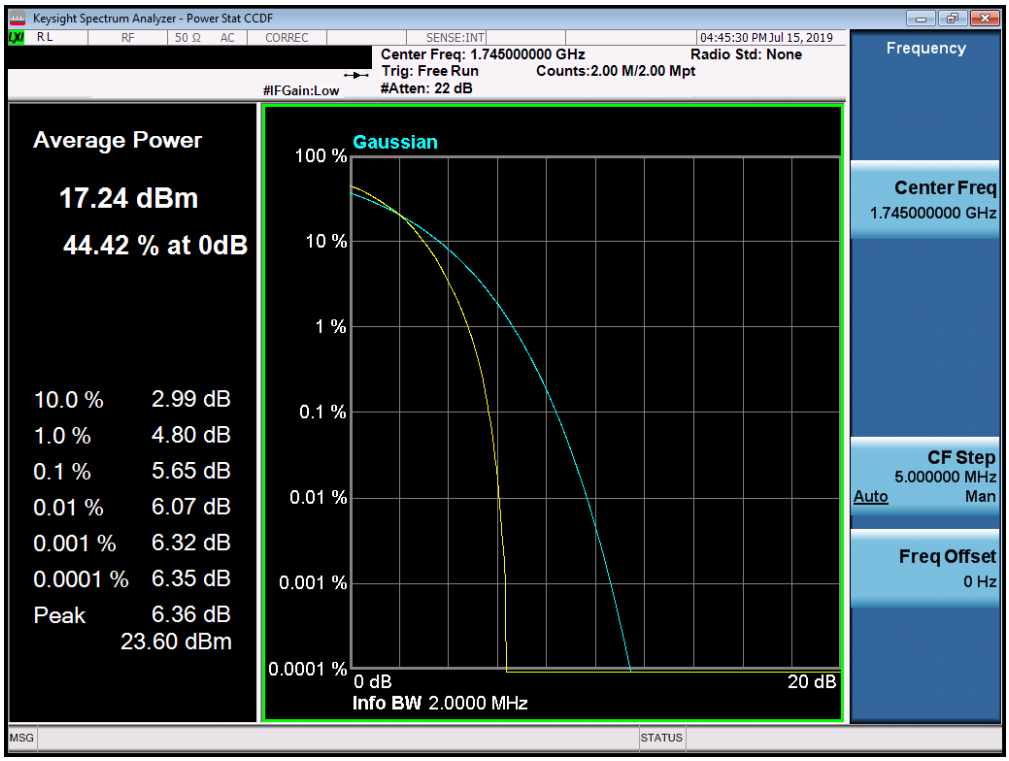
Band 66/4



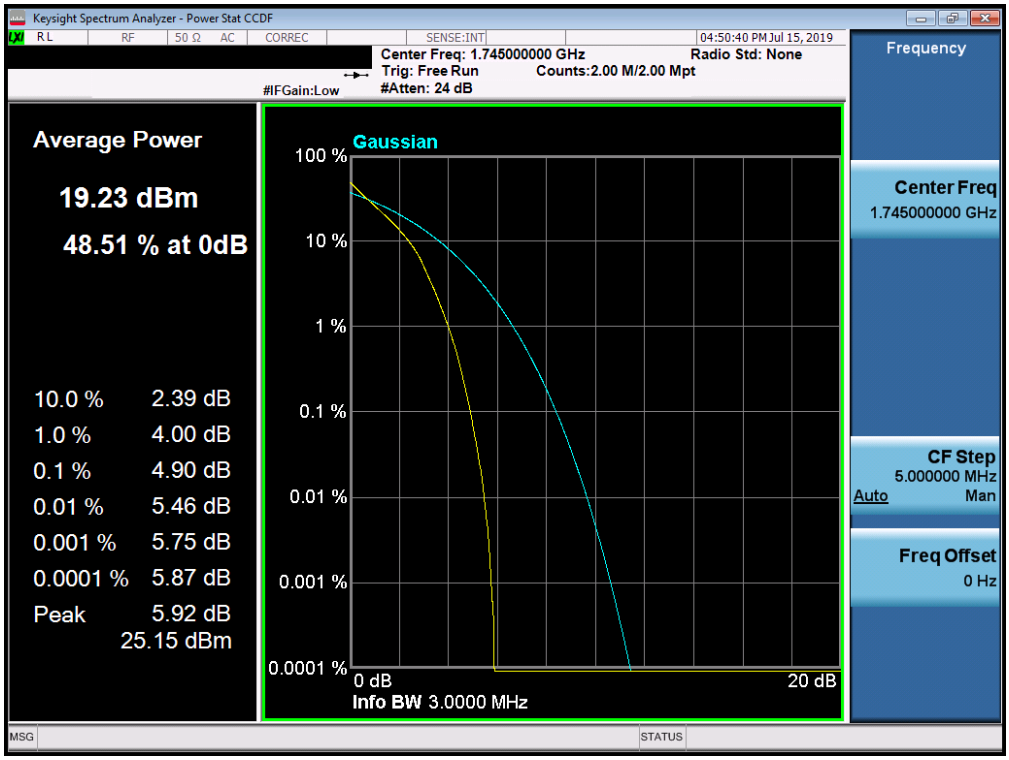
Plot 7-303. PAR Plot (Band 66/4 - 1.4MHz QPSK - Full RB Configuration)



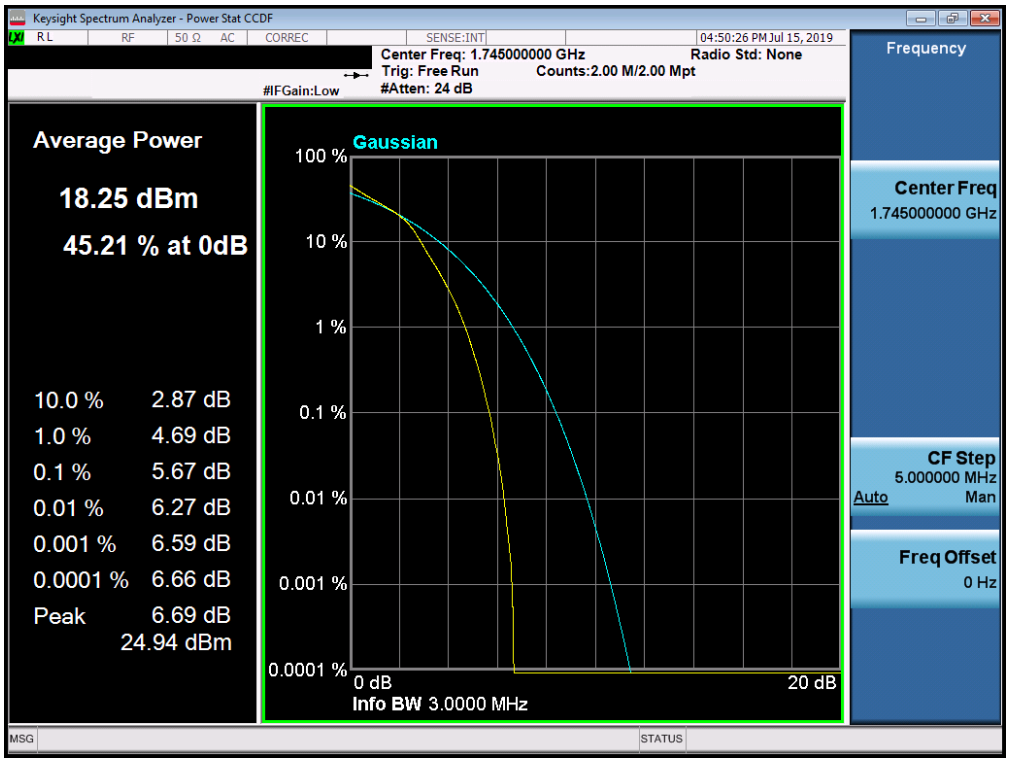
Plot 7-304. PAR Plot (Band 66/4 - 1.4MHz 16-QAM - Full RB Configuration)



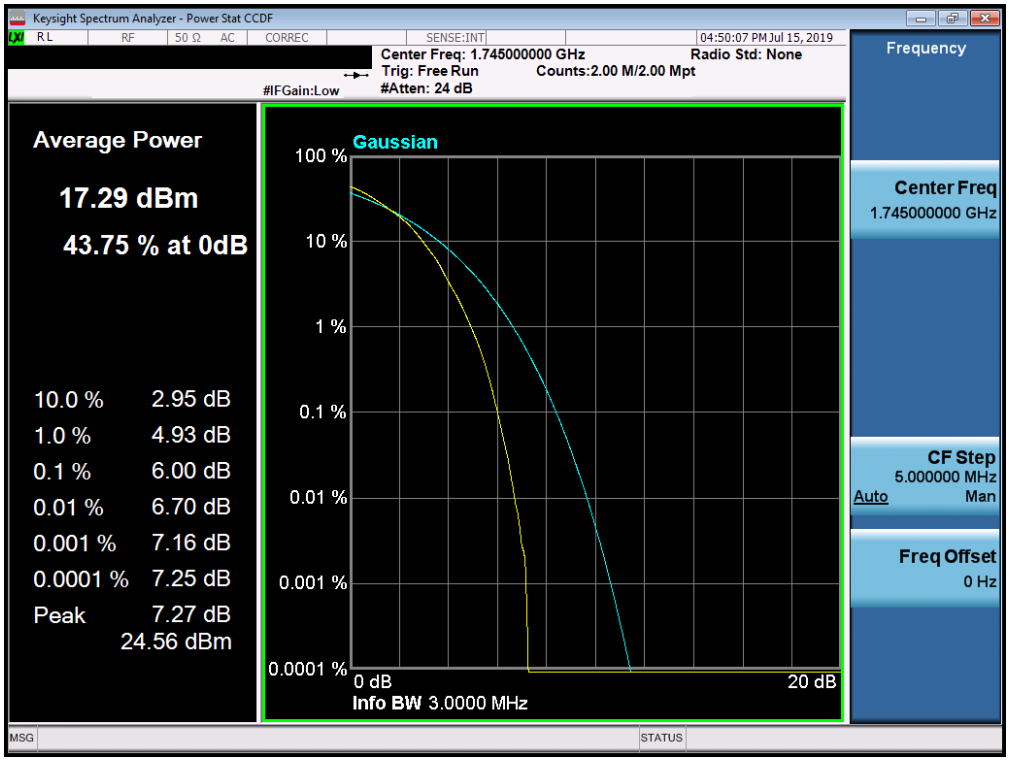
Plot 7-305. PAR Plot (Band 66/4 - 1.4MHz 64-QAM - Full RB Configuration)



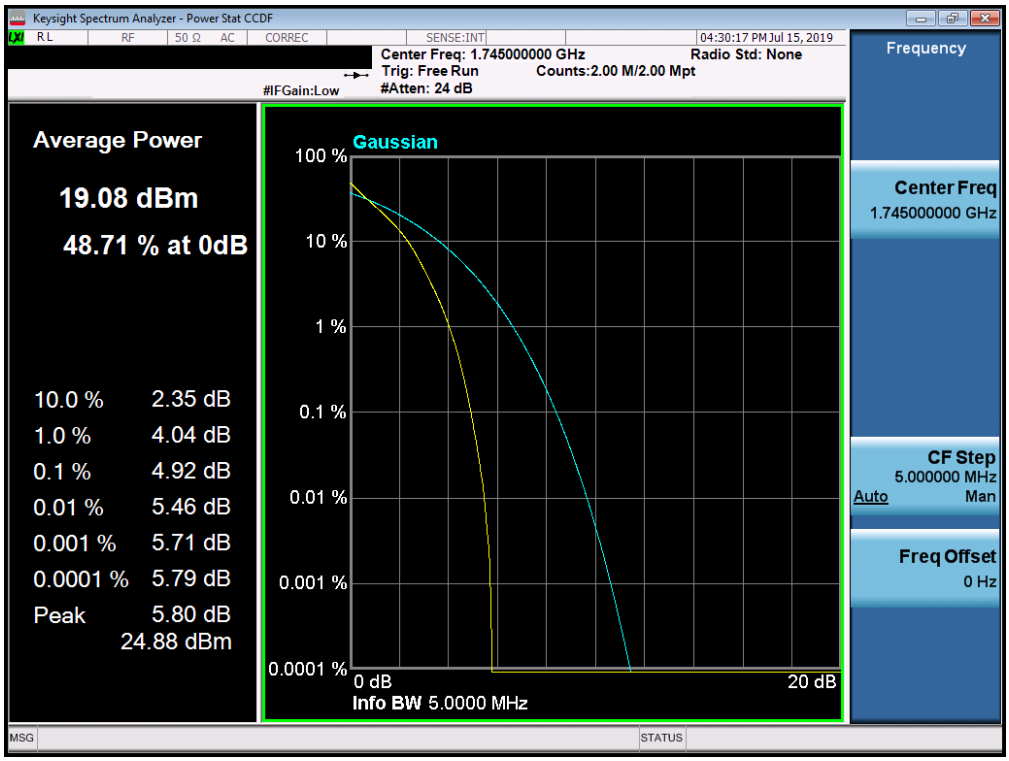
Plot 7-306. PAR Plot (Band 66/4 - 3.0MHz QPSK - Full RB Configuration)



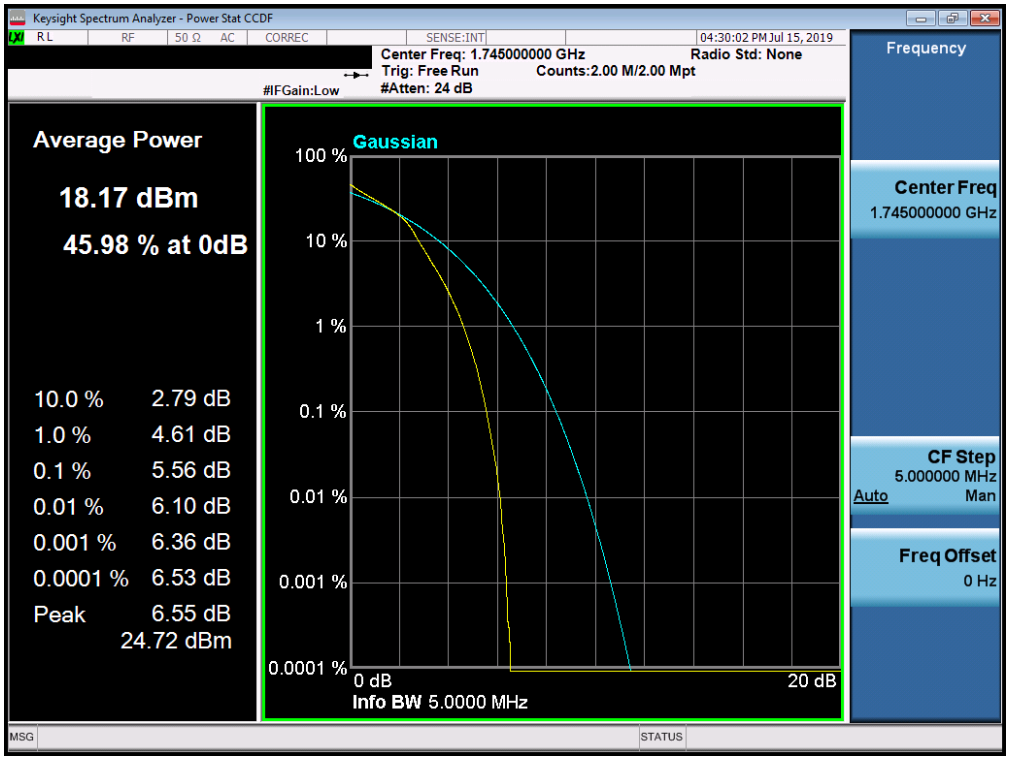
Plot 7-307. PAR Plot (Band 66/4 - 3.0MHz 16-QAM - Full RB Configuration)



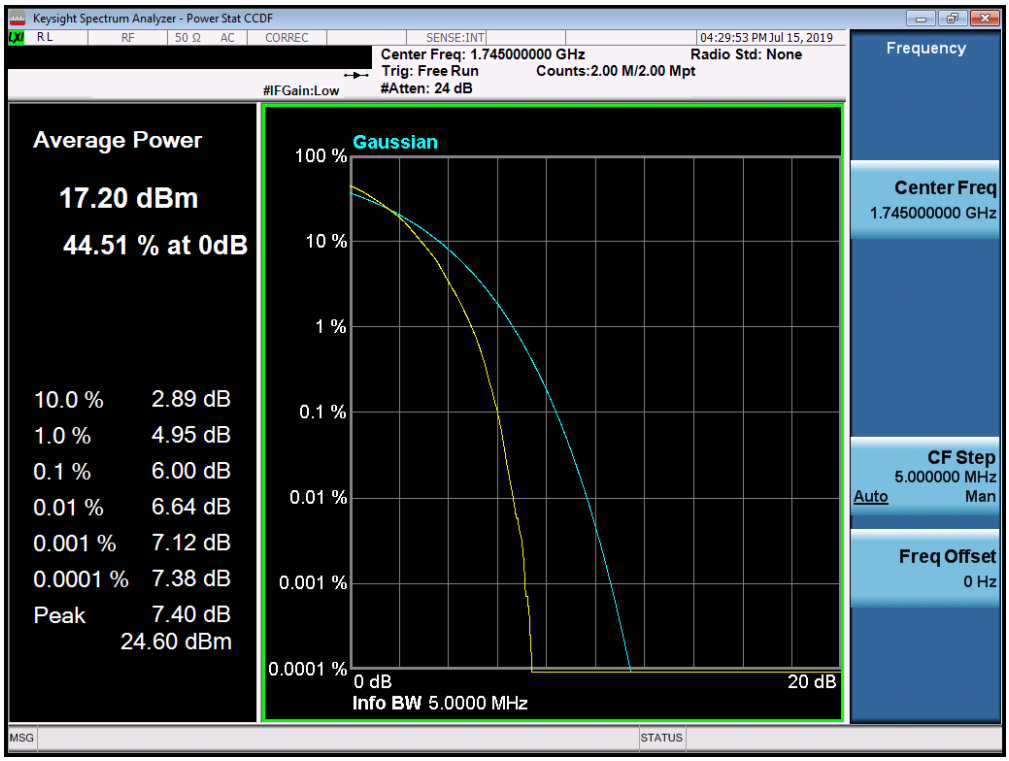
Plot 7-308. PAR Plot (Band 66/4 - 3.0MHz 64-QAM - Full RB Configuration)



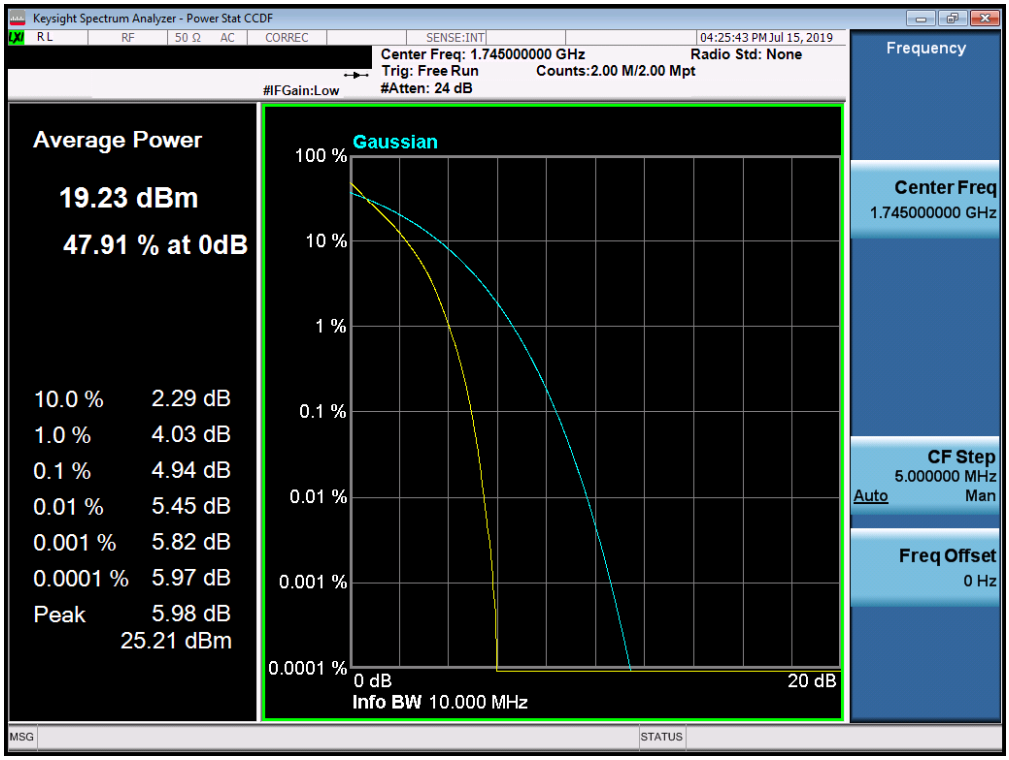
Plot 7-309. PAR Plot (Band 66/4 - 5.0MHz QPSK - Full RB Configuration)



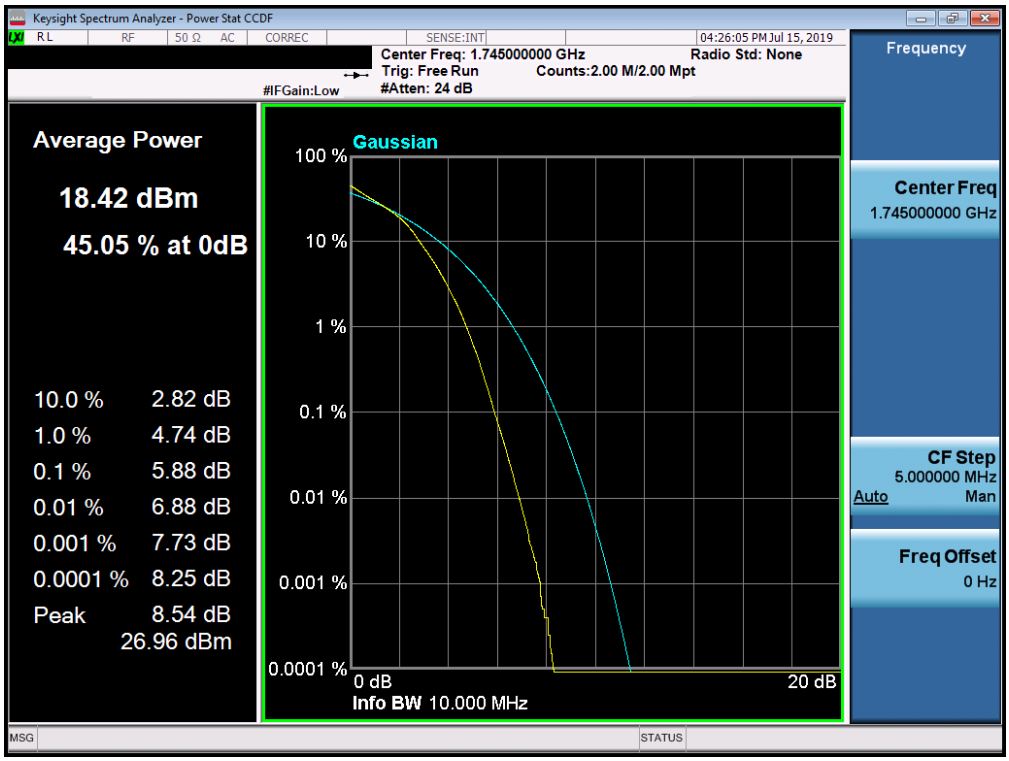
Plot 7-310. PAR Plot (Band 66/4 - 5.0MHz 16-QAM - Full RB Configuration)



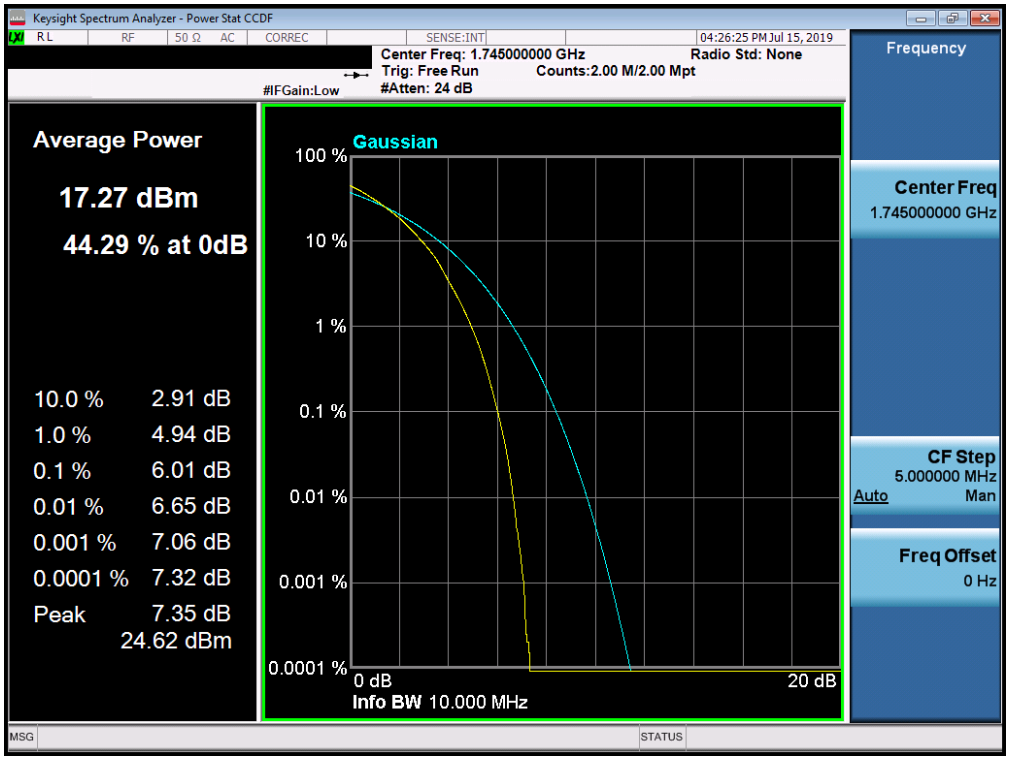
Plot 7-311. PAR Plot (Band 66/4 - 5.0MHz 64-QAM - Full RB Configuration)



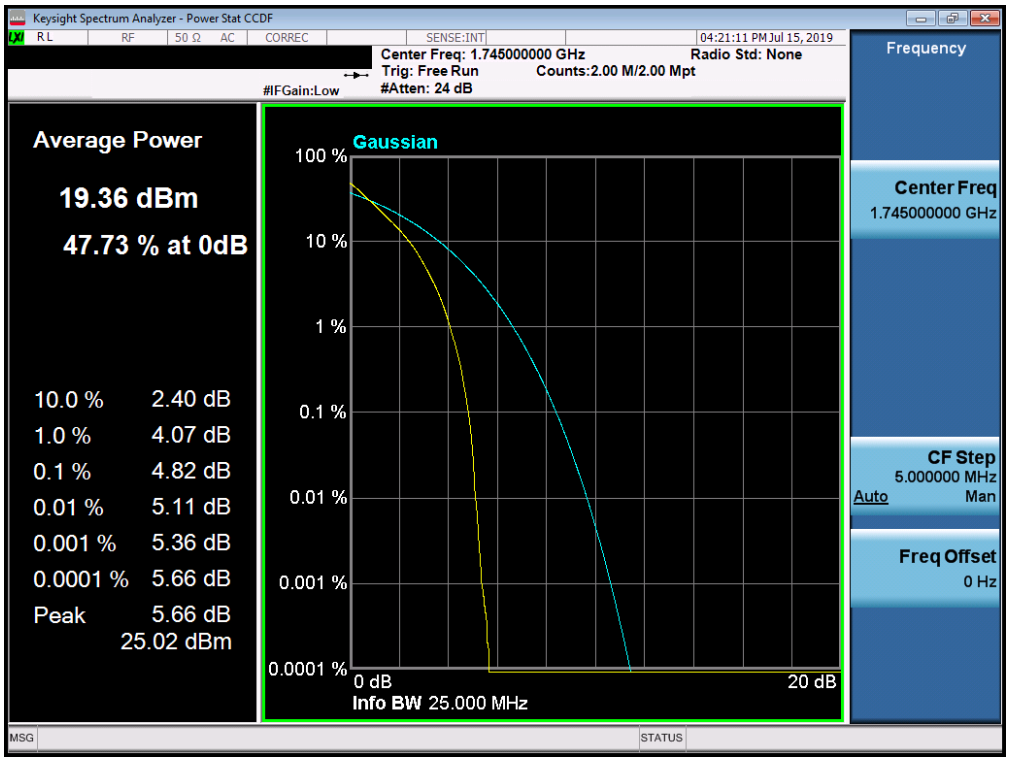
Plot 7-312. PAR Plot (Band 66/4 - 10.0MHz QPSK - Full RB Configuration)



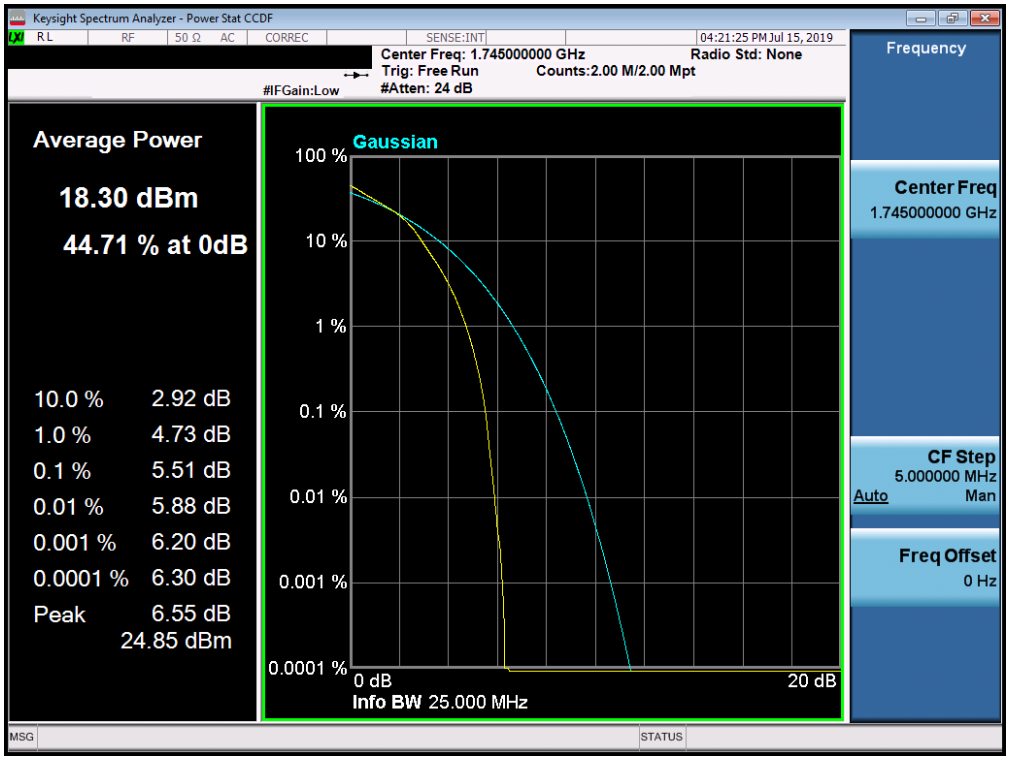
Plot 7-313. PAR Plot (Band 66/4 - 10.0MHz 16-QAM - Full RB Configuration)



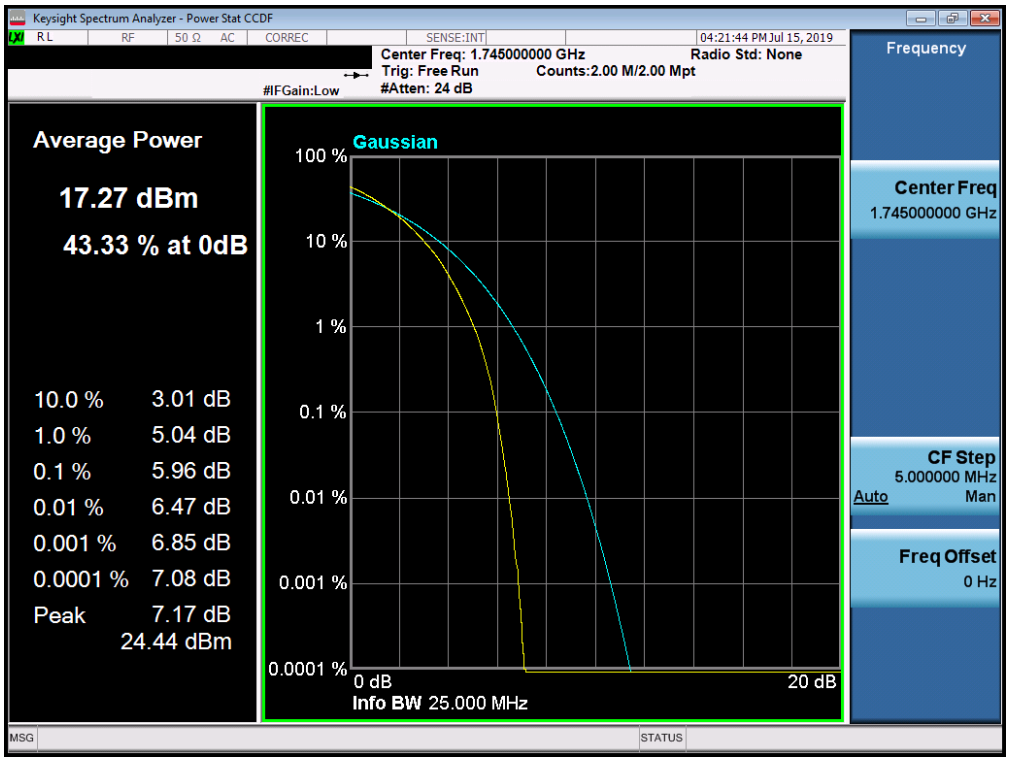
Plot 7-314. PAR Plot (Band 66/4 - 10.0MHz 64-QAM - Full RB Configuration)



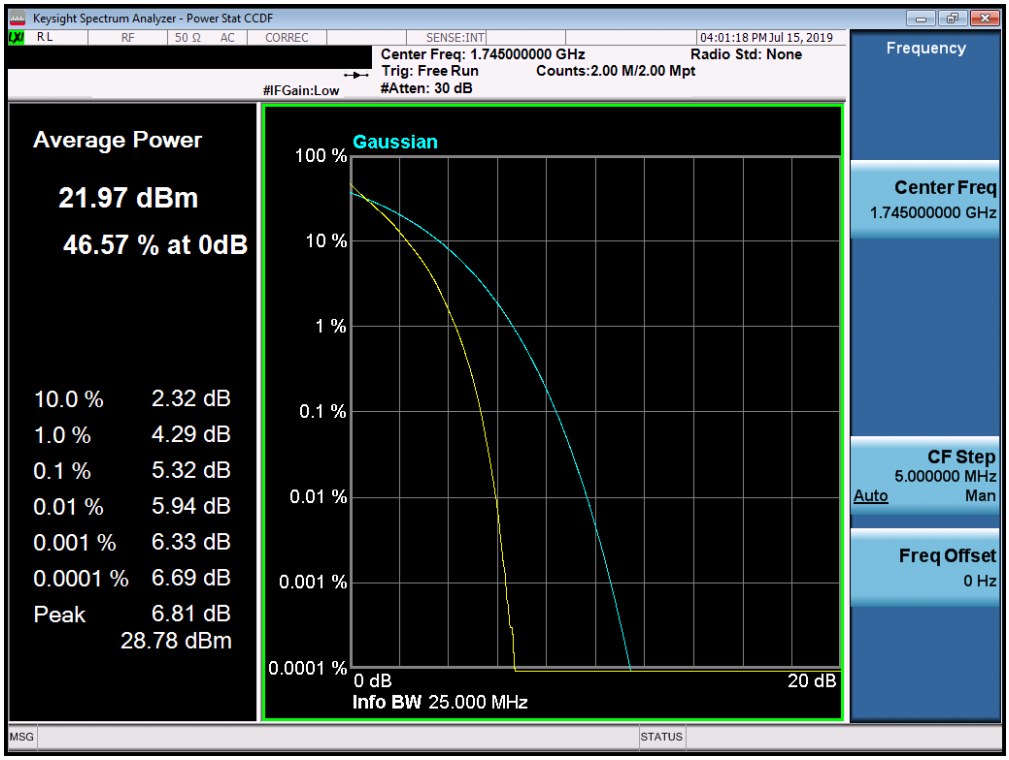
Plot 7-315. PAR Plot (Band 66/4 - 15.0MHz QPSK - Full RB Configuration)



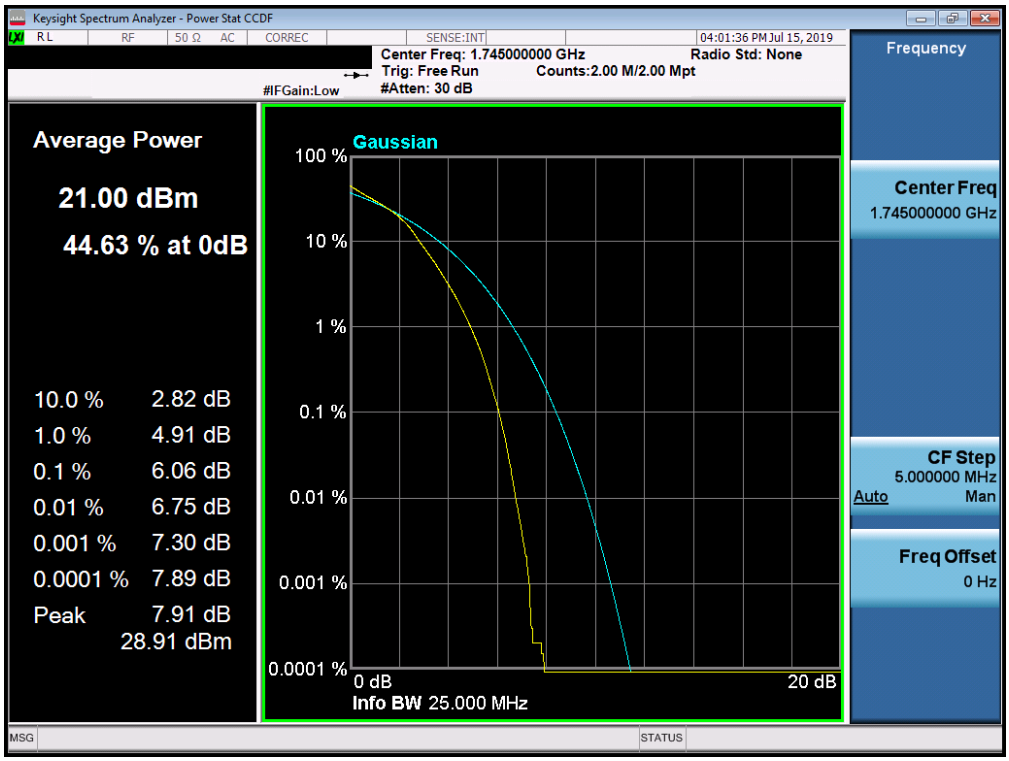
Plot 7-316. PAR Plot (Band 66/4 - 15.0MHz 16-QAM - Full RB Configuration)



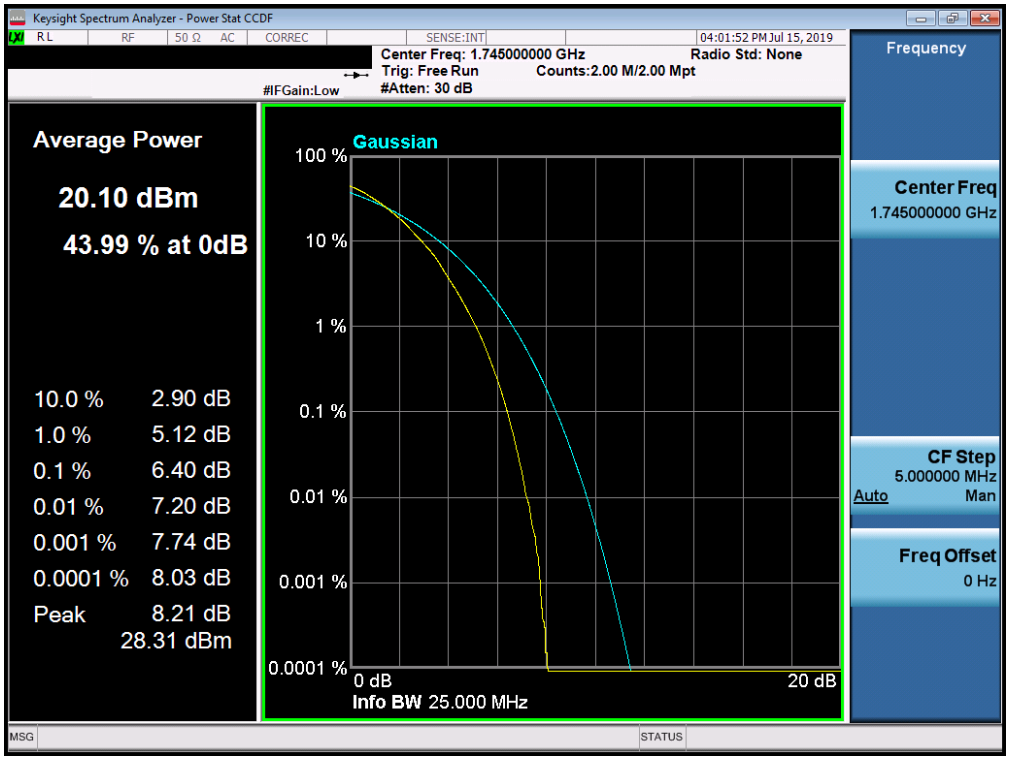
Plot 7-317. PAR Plot (Band 66/4 - 15.0MHz 64-QAM - Full RB Configuration)



Plot 7-318. PAR Plot (Band 66/4 - 20.0MHz QPSK - Full RB Configuration)



Plot 7-319. PAR Plot (Band 66/4 - 20.0MHz 16-QAM - Full RB Configuration)



Plot 7-320. PAR Plot (Band 66/4 - 20.0MHz 64-QAM - Full RB Configuration)

7.6 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. For signals with burst transmission, the signal analyzer's "time domain power" measurement capability is used
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". Trigger is set to enable triggering only on full power bursts with the sweep time set less than or equal to the transmission burst duration
8. The integration bandwidth was roughly set equal to the measured OBW of the signal for signals with continuous operation. For signals with burst transmission, the "gating" function was enabled to ensure that measurements are performed during times in which the transmitter is operating at its maximum power
9. Trace mode = trace averaging (RMS) over 100 sweeps
10. The trace was allowed to stabilize

Test Setup

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

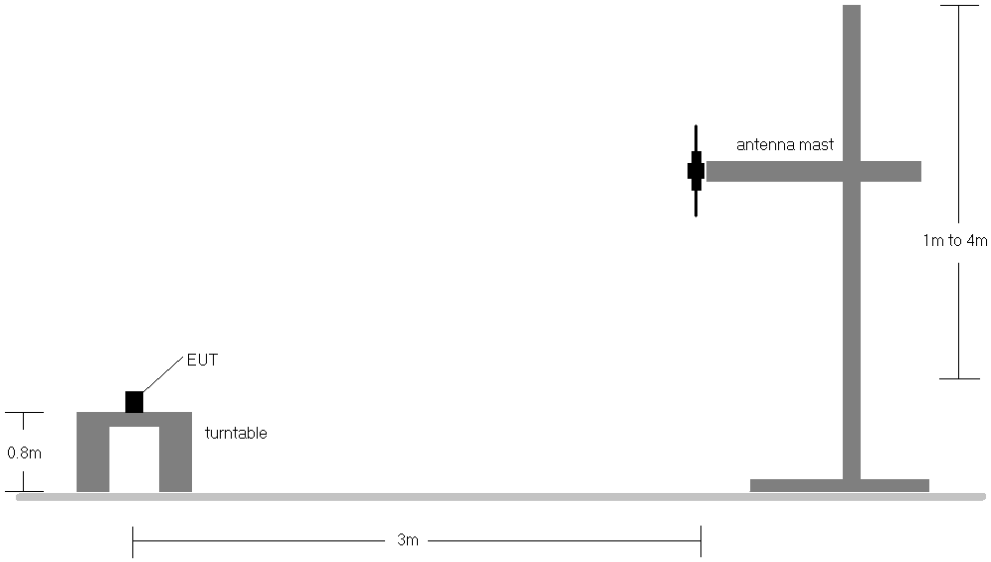


Figure 7-5. Radiated Test Setup <1GHz

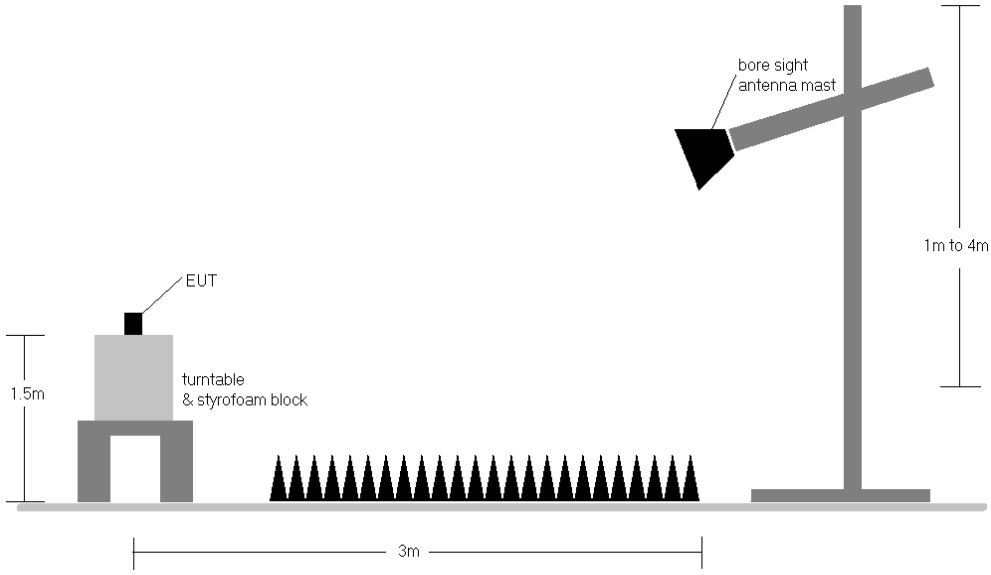


Figure 7-6. Radiated Test Setup >1GHz

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.

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	166	177	1 / 0	14.40	2.90	15.15	0.033	34.77	-19.62
680.50	5	QPSK	H	171	182	1 / 0	14.44	3.20	**15.49**	0.035	34.77	-19.28
695.50	5	QPSK	H	164	184	1 / 0	14.18	3.30	15.33	0.034	34.77	-19.44
680.50	5	16-QAM	H	171	182	1 / 0	13.59	3.20	**14.64**	0.029	34.77	-20.13
680.50	5	64-QAM	H	171	182	1 / 0	12.29	3.20	**13.34**	0.022	34.77	-21.43
668.00	10	QPSK	H	166	181	1 / 0	14.43	2.90	15.18	0.033	34.77	-19.59
680.50	10	QPSK	H	165	177	1 / 0	14.57	3.20	**15.62**	**0.036**	34.77	-19.15
693.00	10	QPSK	H	161	179	1 / 0	14.22	3.30	15.37	0.034	34.77	-19.40
680.50	10	16-QAM	H	165	177	1 / 0	13.65	3.20	**14.70**	0.030	34.77	-20.07
680.50	10	64-QAM	H	165	177	1 / 0	12.37	3.20	**13.42**	0.022	34.77	-21.35
670.50	15	QPSK	H	167	184	1 / 0	14.06	3.00	14.91	0.031	34.77	-19.86
680.50	15	QPSK	H	166	171	1 / 0	14.54	3.20	**15.59**	0.036	34.77	-19.18
690.50	15	QPSK	H	165	188	1 / 0	14.22	3.30	15.37	0.034	34.77	-19.40
680.50	15	16-QAM	H	166	171	1 / 0	13.65	3.20	**14.70**	0.030	34.77	-20.07
680.50	15	64-QAM	H	166	171	1 / 0	12.36	3.20	**13.41**	0.022	34.77	-21.36
673.00	20	QPSK	H	168	185	1 / 99	14.16	3.10	15.11	0.032	34.77	-19.66
680.50	20	QPSK	H	169	176	1 / 0	14.52	3.20	**15.57**	0.036	34.77	-19.20
688.00	20	QPSK	H	166	185	1 / 99	14.33	3.30	15.48	0.035	34.77	-19.29
680.50	20	16-QAM	H	169	176	1 / 0	13.37	3.20	**14.42**	0.028	34.77	-20.35
680.50	20	64-QAM	H	169	176	1 / 0	12.25	3.20	**13.30**	0.021	34.77	-21.47
680.50	10	QPSK	V	146	194	1 / 0	12.66	3.20	13.71	0.023	34.77	-21.06

Table 7-3. ERP Data (Band 71)

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]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
699.70	1.4	QPSK	H	180	45	1 / 0	16.52	3.40	17.77	0.060	34.77	-17.00	19.92	0.098	36.99	-17.07
707.50	1.4	QPSK	H	191	100	1 / 0	16.57	3.65	18.07	0.064	34.77	-16.70	20.22	0.105	36.99	-16.77
715.30	1.4	QPSK	H	291	91	1 / 0	16.56	3.70	**18.11**	0.065	34.77	-16.66	**20.26**	0.106	36.99	-16.73
707.50	1.4	16-QAM	H	191	100	1 / 0	15.72	3.65	**17.22**	0.053	34.77	-17.55	**19.37**	0.086	36.99	-17.62
707.50	1.4	64-QAM	H	191	100	1 / 0	14.75	3.65	**16.25**	0.042	34.77	-18.52	**18.40**	0.069	36.99	-18.59
700.50	3	QPSK	H	200	45	1 / 0	16.70	3.40	17.95	0.062	34.77	-16.82	20.10	0.102	36.99	-16.89
707.50	3	QPSK	H	171	78	1 / 0	16.80	3.65	18.30	0.068	34.77	-16.47	20.45	0.111	36.99	-16.54
714.50	3	QPSK	H	330	81	1 / 0	16.76	3.70	**18.31**	**0.068**	34.77	-16.46	**20.46**	**0.111**	36.99	-16.53
707.50	3	16-QAM	H	171	78	1 / 0	15.95	3.65	**17.45**	0.056	34.77	-17.32	**19.60**	0.091	36.99	-17.39
707.50	3	64-QAM	H	171	78	1 / 0	14.97	3.65	**16.47**	0.044	34.77	-18.30	**18.62**	0.073	36.99	-18.37
701.50	5	QPSK	H	168	41	1 / 0	16.65	3.40	17.90	0.062	34.77	-16.87	20.05	0.101	36.99	-16.94
707.50	5	QPSK	H	184	97	1 / 0	16.78	3.65	**18.28**	0.067	34.77	-16.49	**20.43**	0.110	36.99	-16.56
713.50	5	QPSK	H	284	88	1 / 0	16.66	3.70	18.21	0.066	34.77	-16.56	20.36	0.109	36.99	-16.63
707.50	5	16-QAM	H	184	97	1 / 0	15.87	3.65	**17.37**	0.055	34.77	-17.40	**19.52**	0.090	36.99	-17.47
707.50	5	64-QAM	H	184	97	1 / 0	14.92	3.65	**16.42**	0.044	34.77	-18.35	**18.57**	0.072	36.99	-18.42
704.00	10	QPSK	H	182	31	1 / 0	16.73	3.50	18.08	0.064	34.77	-16.69	20.23	0.105	36.99	-16.76
707.50	10	QPSK	H	182	90	1 / 0	16.75	3.65	**18.25**	0.067	34.77	-16.52	**20.40**	0.110	36.99	-16.59
711.00	10	QPSK	H	310	102	1 / 0	16.50	3.70	18.05	0.064	34.77	-16.72	20.20	0.105	36.99	-16.79
707.50	10	16-QAM	H	182	90	1 / 0	15.92	3.65	**17.42**	0.055	34.77	-17.35	**19.57**	0.091	36.99	-17.42
707.50	10	64-QAM	H	182	90	1 / 0	14.95	3.65	**16.45**	0.044	34.77	-18.32	**18.60**	0.072	36.99	-18.39
714.50	3	QPSK	V	141	159	1 / 0	12.42	3.70	13.97	0.025	34.77	-20.80	16.12	0.041	36.99	-20.87

Table 7-4. ERP Data (Band 12)

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]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
779.50	5	QPSK	H	257	289	1 / 24	14.60	5.80	18.25	0.067	34.77	-16.52	20.40	0.110	36.99	-16.59
782.00	5	QPSK	H	243	285	1 / 24	14.79	5.80	18.44	0.070	34.77	-16.33	20.59	0.115	36.99	-16.40
784.50	5	QPSK	H	242	286	1 / 24	14.70	5.90	**18.45**	0.070	34.77	-16.32	**20.60**	0.115	36.99	-16.39
782.00	5	16-QAM	H	243	285	1 / 24	13.96	5.80	**17.61**	0.058	34.77	-17.16	**19.76**	0.095	36.99	-17.23
782.00	5	64-QAM	H	243	285	1 / 24	13.02	5.80	**16.67**	0.046	34.77	-18.10	**18.82**	0.076	36.99	-18.17
782.00	10	QPSK	H	245	277	1 / 49	14.94	5.80	**18.59**	**0.072**	34.77	-16.18	**20.74**	**0.119**	36.99	-16.25
782.00	10	16-QAM	H	245	277	1 / 49	14.01	5.80	**17.66**	0.058	34.77	-17.11	**19.81**	0.096	36.99	-17.18
782.00	10	64-QAM	H	245	277	1 / 49	13.07	5.80	**16.72**	0.047	34.77	-18.05	**18.87**	0.077	36.99	-18.12
782.00	10	QPSK	V	155	226	1 / 49	14.91	5.80	18.56	0.072	34.77	-16.21	20.71	0.118	36.99	-16.28

Table 7-5. ERP Data (Band 13)

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]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
824.70	1.4	QPSK	H	120	279	1 / 0	15.43	6.70	19.98	0.100	38.45	-18.47	22.13	0.163	40.61	-18.48
836.50	1.4	QPSK	H	210	284	1 / 0	15.45	6.70	20.00	0.100	38.45	-18.45	22.15	0.164	40.61	-18.46
848.30	1.4	QPSK	H	199	276	1 / 0	15.57	6.70	**20.12**	0.103	38.45	-18.33	**22.27**	0.169	40.61	-18.34
824.70	1.4	16-QAM	H	120	279	1 / 0	14.60	6.70	**19.15**	0.082	38.45	-19.30	**21.30**	0.135	40.61	-19.31
824.70	1.4	64-QAM	H	120	279	1 / 0	13.58	6.70	**18.13**	0.065	38.45	-20.32	**20.28**	0.107	40.61	-20.33
825.50	3	QPSK	H	113	280	1 / 0	15.49	6.70	20.04	0.101	38.45	-18.41	22.19	0.166	40.61	-18.42
836.50	3	QPSK	H	211	279	1 / 0	15.53	6.70	20.08	0.102	38.45	-18.37	22.23	0.167	40.61	-18.38
847.50	3	QPSK	H	204	284	1 / 0	15.65	6.65	**20.15**	0.104	38.45	-18.30	**22.30**	**0.170**	40.61	-18.31
825.50	3	16-QAM	H	113	280	1 / 0	14.61	6.70	**19.16**	0.082	38.45	-19.29	**21.31**	0.135	40.61	-19.30
825.50	3	64-QAM	H	113	280	1 / 0	13.61	6.70	**18.16**	0.065	38.45	-20.29	**20.31**	0.107	40.61	-20.30
826.50	5	QPSK	H	108	279	1 / 0	15.39	6.70	19.94	0.099	38.45	-18.51	22.09	0.162	40.61	-18.52
836.50	5	QPSK	H	204	288	1 / 0	15.41	6.70	19.96	0.099	38.45	-18.49	22.11	0.163	40.61	-18.50
846.50	5	QPSK	H	199	294	1 / 0	15.54	6.60	**19.99**	0.100	38.45	-18.46	**22.14**	0.164	40.61	-18.47
826.50	5	16-QAM	H	108	279	1 / 0	14.57	6.70	**19.12**	0.082	38.45	-19.33	**21.27**	0.134	40.61	-19.34
826.50	5	64-QAM	H	108	279	1 / 0	13.56	6.70	**18.11**	0.065	38.45	-20.34	**20.26**	0.106	40.61	-20.35
829.00	10	QPSK	H	111	284	1 / 0	15.46	6.70	20.01	0.100	38.45	-18.44	22.16	0.164	40.61	-18.45
836.50	10	QPSK	H	198	291	1 / 0	15.43	6.70	19.98	0.100	38.45	-18.47	22.13	0.163	40.61	-18.48
844.00	10	QPSK	H	204	284	1 / 0	15.58	6.60	**20.03**	0.101	38.45	-18.42	**22.18**	0.165	40.61	-18.43
829.00	10	16-QAM	H	111	284	1 / 0	14.60	6.70	**19.15**	0.082	38.45	-19.30	**21.30**	0.135	40.61	-19.31
829.00	10	64-QAM	H	111	284	1 / 0	13.58	6.70	**18.13**	0.065	38.45	-20.32	**20.28**	0.107	40.61	-20.33
847.50	3	QPSK	V	182	303	1 / 0	8.10	6.65	12.60	0.018	38.45	-25.85	14.75	0.030	40.61	-25.86

Table 7-6. 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]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
831.50	15	QPSK	H	104	294	1 / 0	15.40	6.70	**19.95**	0.099	38.45	-18.50	**22.10**	0.162	40.61	-18.51
836.50	15	QPSK	H	205	283	1 / 0	15.27	6.70	19.82	0.096	38.45	-18.63	21.97	0.157	40.61	-18.64
841.50	15	QPSK	H	196	287	1 / 0	15.07	6.60	19.52	0.090	38.45	-18.93	21.67	0.147	40.61	-18.94
831.50	15	16-QAM	H	104	294	1 / 0	14.52	6.70	**19.07**	0.081	38.45	-19.38	**21.22**	0.132	40.61	-19.39
831.50	15	64-QAM	H	104	294	1 / 0	13.57	6.70	**18.12**	0.065	38.45	-20.33	**20.27**	0.106	40.61	-20.34

Table 7-7. ERP Data (Band 26)

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	H	115	33	1 / 0	11.61	9.44	21.05	0.127	30.00	-8.95
1745.00	1.4	QPSK	H	117	21	1 / 5	15.16	9.23	**24.39**	0.275	30.00	-5.61
1779.30	1.4	QPSK	H	101	18	1 / 0	12.65	9.26	21.91	0.155	30.00	-8.09
1745.00	1.4	16-QAM	H	117	11	1 / 5	13.64	9.23	**22.87**	0.194	30.00	-7.13
1745.00	1.4	64-QAM	H	117	23	1 / 5	10.02	9.23	**19.25**	0.084	30.00	-10.75
1711.50	3	QPSK	H	104	10	1 / 0	11.73	9.44	21.17	0.131	30.00	-8.83
1745.00	3	QPSK	H	108	8	1 / 14	15.11	9.23	**24.34**	0.272	30.00	-5.66
1778.50	3	QPSK	H	122	17	1 / 0	12.75	9.26	22.01	0.159	30.00	-7.99
1745.00	3	16-QAM	H	108	22	1 / 14	14.25	9.23	**23.48**	0.223	30.00	-6.52
1745.00	3	64-QAM	H	108	27	1 / 14	11.29	9.23	**20.52**	0.113	30.00	-9.48
1712.50	5	QPSK	H	104	11	1 / 0	11.65	9.43	21.08	0.128	30.00	-8.92
1745.00	5	QPSK	H	109	24	1 / 24	15.09	9.23	**24.32**	0.270	30.00	-5.68
1777.50	5	QPSK	H	110	18	1 / 0	12.62	9.26	21.88	0.154	30.00	-8.12
1745.00	5	16-QAM	H	109	24	1 / 24	13.98	9.23	**23.21**	0.209	30.00	-6.79
1745.00	5	64-QAM	H	109	24	1 / 24	10.77	9.23	**20.00**	0.100	30.00	-10.00
1715.00	10	QPSK	H	112	15	1 / 0	11.84	9.42	21.26	0.134	30.00	-8.74
1745.00	10	QPSK	H	100	17	1 / 49	15.19	9.23	**24.42**	0.277	30.00	-5.58
1775.00	10	QPSK	H	104	23	1 / 0	12.86	9.25	22.11	0.163	30.00	-7.89
1745.00	10	16-QAM	H	100	17	1 / 49	14.17	9.23	**23.40**	0.219	30.00	-6.60
1745.00	10	64-QAM	H	100	17	1 / 49	11.05	9.23	**20.28**	0.107	30.00	-9.72
1717.50	15	QPSK	H	110	22	1 / 0	14.86	9.40	24.26	0.267	30.00	-5.74
1745.00	15	QPSK	H	105	18	1 / 74	15.24	9.23	**24.47**	0.280	30.00	-5.53
1772.50	15	QPSK	H	107	7	1 / 0	13.70	9.25	22.95	0.197	30.00	-7.05
1745.00	15	16-QAM	H	105	18	1 / 74	14.20	9.23	**23.43**	0.220	30.00	-6.57
1745.00	15	64-QAM	H	105	18	1 / 74	13.71	9.23	**22.94**	0.197	30.00	-7.06
1720.00	20	QPSK	H	100	16	1 / 0	14.90	9.38	24.28	0.268	30.00	-5.72
1745.00	20	QPSK	H	100	15	1 / 99	15.26	9.23	**24.49**	**0.281**	30.00	-5.51
1770.00	20	QPSK	H	100	20	1 / 0	13.79	9.24	23.03	0.201	30.00	-6.97
1745.00	20	16-QAM	H	100	15	1 / 99	14.26	9.23	**23.49**	0.223	30.00	-6.51
1745.00	20	64-QAM	H	100	15	1 / 99	13.24	9.23	**22.47**	0.177	30.00	-7.53
1745.00	20	QPSK	V	230	72	1 / 99	12.02	9.23	21.25	0.133	30.00	-8.75

Table 7-8. EIRP Data (Band 66/4)

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	105	20	1 / 0	13.55	9.48	23.03	0.201	33.01	-9.98
1882.50	1.4	QPSK	H	110	204	1 / 0	15.07	9.94	**25.01**	0.317	33.01	-8.01
1914.30	1.4	QPSK	H	117	19	1 / 0	13.03	10.29	23.32	0.215	33.01	-9.69
1882.50	1.4	16-QAM	H	110	204	1 / 0	14.02	9.94	23.96	0.249	33.01	-9.06
1882.50	1.4	64-QAM	H	110	204	1 / 0	12.98	9.94	22.92	0.196	33.01	-10.10
1851.50	3	QPSK	H	104	17	1 / 0	13.60	9.50	23.10	0.204	33.01	-9.91
1882.50	3	QPSK	H	108	197	1 / 0	15.11	9.94	**25.05**	0.320	33.01	-7.97
1913.50	3	QPSK	H	112	15	1 / 0	13.10	10.29	23.39	0.218	33.01	-9.63
1882.50	3	16-QAM	H	108	197	1 / 0	14.04	9.94	23.98	0.250	33.01	-9.04
1882.50	3	64-QAM	H	108	197	1 / 0	12.98	9.94	22.92	0.196	33.01	-10.10
1852.50	5	QPSK	H	103	14	1 / 0	13.53	9.51	23.04	0.201	33.01	-9.97
1882.50	5	QPSK	H	104	191	1 / 0	15.02	9.94	**24.96**	0.313	33.01	-8.06
1912.50	5	QPSK	H	107	10	1 / 0	13.01	10.28	23.29	0.213	33.01	-9.72
1882.50	5	16-QAM	H	104	191	1 / 0	13.96	9.94	23.90	0.245	33.01	-9.12
1882.50	5	64-QAM	H	104	191	1 / 0	12.90	9.94	22.84	0.192	33.01	-10.18
1855.00	10	QPSK	H	100	19	1 / 0	13.58	9.55	23.13	0.205	33.01	-9.88
1882.50	10	QPSK	H	110	204	1 / 0	15.05	9.94	**24.99**	0.315	33.01	-8.03
1910.00	10	QPSK	H	105	14	1 / 0	13.05	10.26	23.31	0.214	33.01	-9.70
1882.50	10	16-QAM	H	110	204	1 / 0	13.97	9.94	23.91	0.246	33.01	-9.11
1882.50	10	64-QAM	H	110	204	1 / 0	12.95	9.94	22.89	0.194	33.01	-10.13
1857.50	15	QPSK	H	102	28	1 / 0	13.57	9.58	23.15	0.207	33.01	-9.86
1882.50	15	QPSK	H	103	200	1 / 0	14.99	9.94	**24.93**	0.311	33.01	-8.09
1907.50	15	QPSK	H	107	17	1 / 0	13.10	10.24	23.34	0.216	33.01	-9.67
1882.50	15	16-QAM	H	103	200	1 / 0	14.10	9.94	24.04	0.253	33.01	-8.98
1882.50	15	64-QAM	H	103	200	1 / 0	12.89	9.94	22.83	0.192	33.01	-10.19
1860.00	20	QPSK	H	100	23	1 / 0	13.73	9.62	23.35	0.216	33.01	-9.66
1882.50	20	QPSK	H	108	193	1 / 0	15.10	9.94	**25.04**	0.319	33.01	-7.98
1905.00	20	QPSK	H	100	6	1 / 0	12.95	10.22	23.17	0.207	33.01	-9.84
1882.50	20	16-QAM	H	108	193	1 / 0	14.10	9.94	**24.04**	0.253	33.01	-8.98
1882.50	20	64-QAM	H	108	193	1 / 0	12.96	9.94	**22.90**	0.195	33.01	-10.12
1914.30	1	16-QAM	V	105	61	6 / 0	14.98	10.29	25.27	0.337	33.01	-7.74

Table 7-9. EIRP Data (Band 25/2)

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]
2498.50	5	QPSK	H	181	310	1 / 0	14.79	9.43	24.22	0.264	33.01	-8.79
2593.00	5	QPSK	H	150	223	1 / 0	16.25	9.55	25.80	0.381	33.01	-7.21
2687.50	5	QPSK	H	133	29	1 / 24	16.91	9.82	**26.73**	0.471	33.01	-6.28
2687.50	5	16-QAM	H	133	29	1 / 24	15.50	9.82	**25.32**	0.340	33.01	-7.69
2687.50	5	64-QAM	H	133	29	1 / 24	15.01	9.82	**24.83**	0.304	33.01	-8.18
2501.00	10	QPSK	H	201	301	1 / 0	14.98	9.43	24.41	0.276	33.01	-8.60
2593.00	10	QPSK	H	156	254	1 / 0	16.10	9.55	25.65	0.368	33.01	-7.36
2685.00	10	QPSK	H	131	30	1 / 49	17.06	9.82	**26.88**	0.488	33.01	-6.13
2685.00	10	16-QAM	H	131	30	1 / 49	15.66	9.82	**25.48**	0.354	33.01	-7.53
2685.00	10	64-QAM	H	131	30	1 / 49	15.20	9.82	**25.02**	0.318	33.01	-7.99
2503.50	15	QPSK	H	178	327	1 / 0	14.80	9.43	24.23	0.265	33.01	-8.78
2593.00	15	QPSK	H	128	241	1 / 0	16.10	9.55	25.65	0.368	33.01	-7.36
2682.50	15	QPSK	H	141	37	1 / 74	17.06	9.83	**26.89**	**0.489**	33.01	-6.12
2682.50	15	16-QAM	H	141	37	1 / 74	15.59	9.83	**25.42**	0.348	33.01	-7.59
2682.50	15	64-QAM	H	141	37	1 / 74	15.13	9.83	**24.96**	0.313	33.01	-8.05
2506.00	20	QPSK	H	192	323	1 / 0	14.65	9.42	24.07	0.256	33.01	-8.94
2593.00	20	QPSK	H	148	235	1 / 0	16.15	9.55	25.70	0.372	33.01	-7.31
2680.00	20	QPSK	H	123	34	1 / 99	16.49	9.83	**26.32**	0.429	33.01	-6.69
2680.00	20	16-QAM	H	123	34	1 / 99	15.21	9.83	**25.04**	0.320	33.01	-7.97
2680.00	20	64-QAM	H	123	34	1 / 99	14.85	9.83	**24.68**	0.294	33.01	-8.33
2682.50	15	QPSK	V	141	297	1 / 74	13.47	9.68	23.15	0.207	33.01	-9.86

Table 7-10. EIRP Data (Band 41 – PC2)

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	H	110	331	1 / 24	11.73	9.43	21.16	0.131	33.01	-11.85
2593.00	5	QPSK	H	109	28	1 / 0	14.45	9.55	**24.00**	0.251	33.01	-9.01
2687.50	5	QPSK	H	100	18	1 / 0	13.60	9.82	23.42	0.220	33.01	-9.59
2593.00	5	16-QAM	H	109	28	1 / 0	13.40	9.55	**22.95**	0.197	33.01	-10.06
2593.00	5	64-QAM	H	109	28	1 / 0	12.80	9.55	**22.35**	0.172	33.01	-10.66
2501.00	10	QPSK	H	116	318	1 / 49	11.80	9.43	21.23	0.133	33.01	-11.78
2593.00	10	QPSK	H	112	30	1 / 0	14.61	9.55	**24.16**	**0.261**	33.01	-8.85
2685.00	10	QPSK	H	108	24	1 / 0	13.73	9.82	23.55	0.227	33.01	-9.46
2593.00	10	16-QAM	H	112	30	1 / 0	13.54	9.55	**23.09**	0.204	33.01	-9.92
2593.00	10	64-QAM	H	112	30	1 / 0	12.97	9.55	**22.52**	0.179	33.01	-10.49
2503.50	15	QPSK	H	120	340	1 / 74	11.79	9.43	21.22	0.132	33.01	-11.79
2593.00	15	QPSK	H	106	24	1 / 0	14.56	9.55	**24.11**	0.258	33.01	-8.90
2682.50	15	QPSK	H	104	29	1 / 0	13.69	9.83	23.52	0.225	33.01	-9.49
2593.00	15	16-QAM	H	106	24	1 / 0	13.54	9.55	**23.09**	0.204	33.01	-9.92
2593.00	15	64-QAM	H	106	24	1 / 0	12.94	9.55	**22.49**	0.178	33.01	-10.52
2506.00	20	QPSK	H	124	338	1 / 99	11.93	9.42	21.35	0.137	33.01	-11.66
2593.00	20	QPSK	H	104	36	1 / 0	14.57	9.55	**24.12**	0.258	33.01	-8.89
2680.00	20	QPSK	H	102	38	1 / 0	13.82	9.83	23.65	0.232	33.01	-9.36
2593.00	20	16-QAM	H	104	36	1 / 0	13.51	9.55	**23.06**	0.202	33.01	-9.95
2593.00	20	64-QAM	H	104	36	1 / 0	12.88	9.55	**22.43**	0.175	33.01	-10.58
2593.00	10	QPSK	V	100	290	1 / 0	9.18	9.55	18.73	0.075	33.01	-14.28

Table 7-11. EIRP Data (Band 41 – PC3)

7.7 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

Test Setup

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

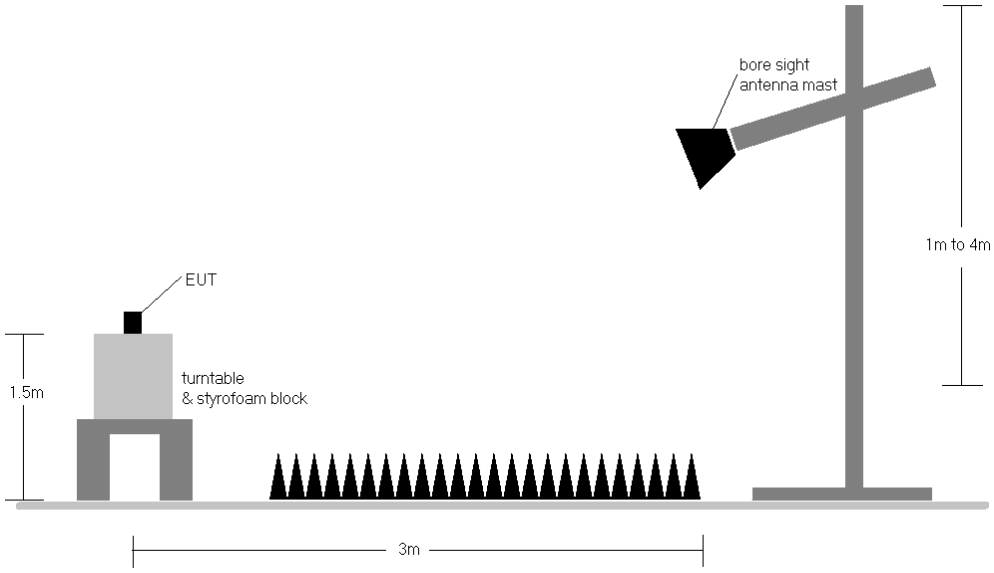


Figure 7-7. Test Instrument & Measurement Setup

Test Notes

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.

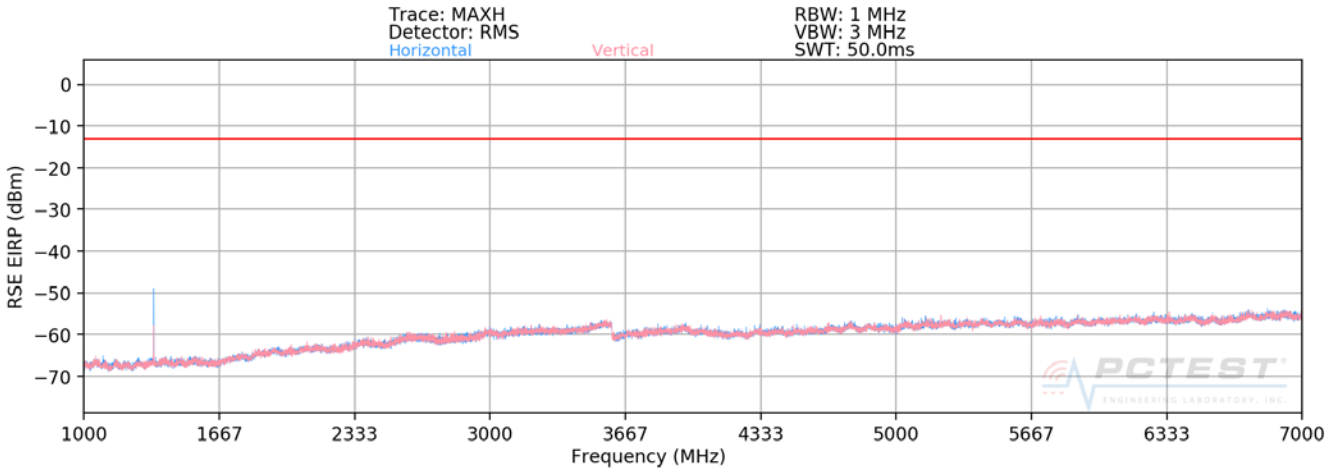
2) This unit was tested with its standard battery.

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.

Band 71



Plot 7-321. Radiated Spurious Plot above 1GHz (Band 71)

OPERATING FREQUENCY:	673.00	MHz
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	260	281	-60.20	7.47	-52.73	-39.7
2019.00	H	257	295	-79.62	8.68	-70.94	-57.9
2692.00	H	117	245	-79.09	9.99	-69.10	-56.1
3365.00	H	-	-	-78.37	9.66	-68.71	-55.7
4038.00	H	-	-	-77.49	9.84	-67.64	-54.6

Table 7-12. Radiated Spurious Data (Band 71 – Low Channel)

OPERATING FREQUENCY:	680.50	MHz
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	116	307	-58.30	7.48	-50.81	-37.8
2041.50	H	125	296	-73.90	8.76	-65.14	-52.1
2722.00	H	140	311	-79.99	10.08	-69.91	-56.9
3402.50	H	-	-	-78.54	9.80	-68.74	-55.7
4083.00	H	-	-	-77.94	10.05	-67.88	-54.9

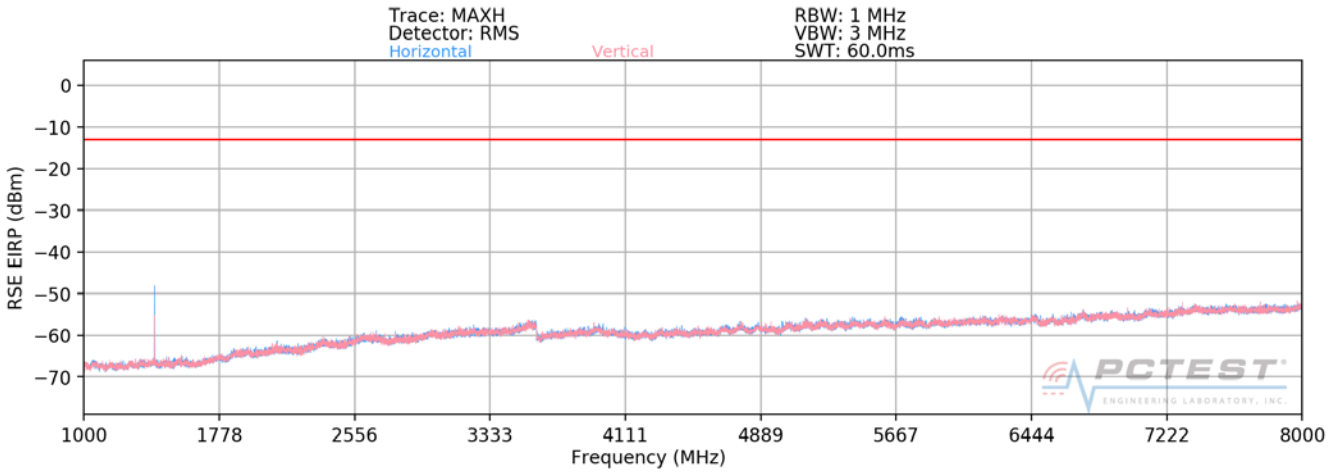
Table 7-13. Radiated Spurious Data (Band 71 – Mid Channel)

OPERATING FREQUENCY:	688.00	MHz
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	112	297	-60.12	7.46	-52.66	-39.7
2064.00	H	124	312	-75.16	8.80	-66.35	-53.4
2752.00	H	131	27	-78.55	10.17	-68.38	-55.4
3440.00	H	-	-	-78.35	9.84	-68.51	-55.5
4128.00	H	-	-	-78.51	10.18	-68.33	-55.3

Table 7-14. Radiated Spurious Data (Band 71 – High Channel)

Band 12



Plot 7-322. Radiated Spurious Plot above 1GHz (Band 12)

OPERATING FREQUENCY:	700.50	MHz
MODULATION SIGNAL:	QPSK	
BANDWIDTH:	3.0	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]
1401.00	H	203	275	-62.69	7.45	-55.24	-42.2
2101.50	H	198	290	-75.29	8.84	-66.46	-53.5
2802.00	H	204	283	-79.91	10.14	-69.77	-56.8
3502.50	H	-	-	-78.33	9.92	-68.40	-55.4
4203.00	H	-	-	-78.61	10.42	-68.19	-55.2

Table 7-15. Radiated Spurious Data (Band 12 – Low Channel)

OPERATING FREQUENCY:	707.50	MHz
MODULATION SIGNAL:	QPSK	
BANDWIDTH:	3.0	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	162	297	-56.49	7.63	-48.86	-35.9
2122.50	H	160	312	-71.82	8.86	-62.96	-50.0
2830.00	H	148	317	-79.11	10.10	-69.02	-56.0
3537.50	H	-	-	-77.64	9.90	-67.75	-54.7
4245.00	H	-	-	-78.42	10.58	-67.84	-54.8

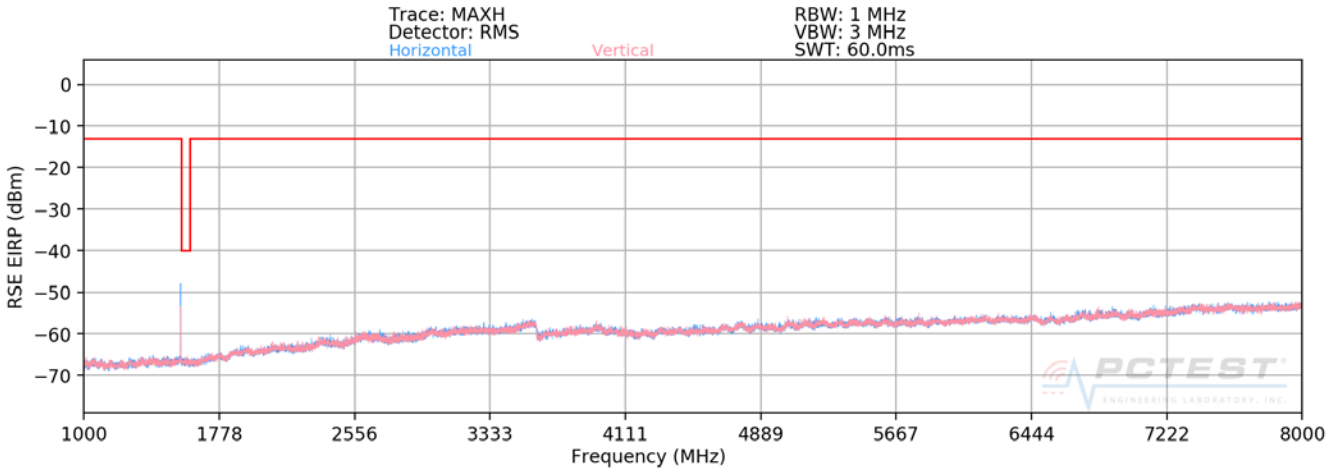
Table 7-16. Radiated Spurious Data (Band 12 – Mid Channel)

OPERATING FREQUENCY:	714.50	MHz
MODULATION SIGNAL:	QPSK	
BANDWIDTH:	3.0	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]
1429.00	H	164	301	-56.24	7.81	-48.42	-35.4
2143.50	H	156	314	-72.49	8.88	-63.61	-50.6
2858.00	H	150	329	-79.33	10.04	-69.29	-56.3
3572.50	H	-	-	-77.40	9.93	-67.48	-54.5
4287.00	H	-	-	-78.42	10.71	-67.71	-54.7

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

Band 13



Plot 7-323. Radiated Spurious Plot above 1GHz (Band 13)

OPERATING FREQUENCY:	782.00	MHz
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	123	321	-75.74	9.43	-66.31	-53.3
3128.00	H	130	323	-75.79	9.34	-66.44	-53.4
3910.00	H	-	-	-76.44	9.37	-67.07	-54.1
4692.00	H	-	-	-77.71	10.93	-66.78	-53.8

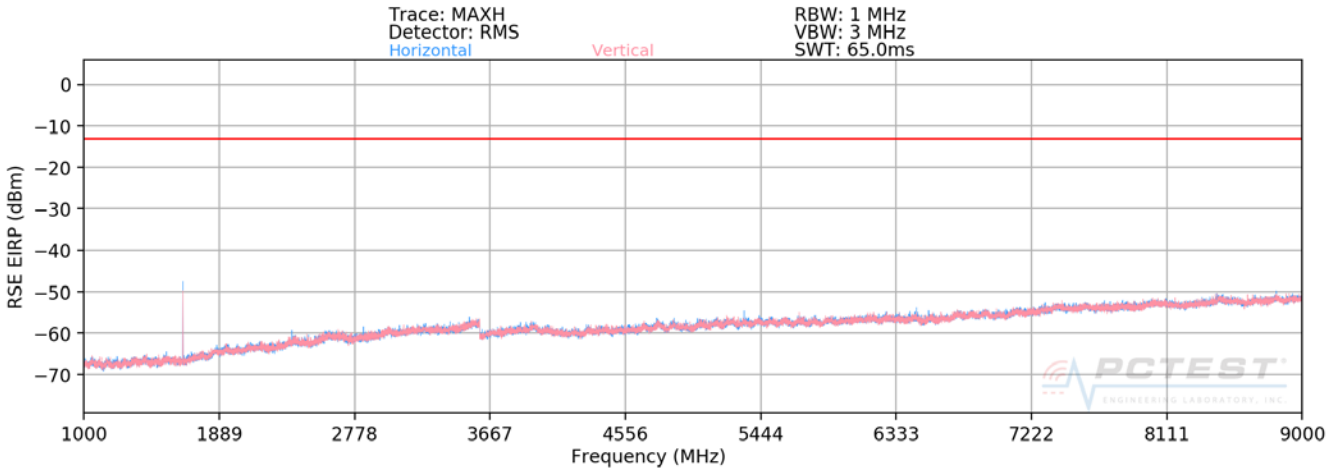
Table 7-18. Radiated Spurious Data (Band 13 – Mid Channel)

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	125	315	-57.83	8.53	-49.30	-9.3

Table 7-19. Radiated Spurious Data (Band 13 – 1559-1610MHz Band)

Band 26/5



Plot 7-324. Radiated Spurious Plot above 1GHz (Band 26/5)

OPERATING FREQUENCY:	825.50	MHz
MODULATION SIGNAL:	QPSK	
BANDWIDTH:	3.0	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]
1651.00	H	164	317	-56.22	8.95	-47.28	-34.3
2476.50	H	129	328	-72.37	9.66	-62.71	-49.7
3302.00	H	142	324	-76.54	9.58	-66.96	-54.0
4127.50	H	-	-	-78.03	10.18	-67.85	-54.8
4953.00	H	-	-	-77.45	10.92	-66.53	-53.5

Table 7-20. Radiated Spurious Data (Band 26/5 – Low Channel)

OPERATING FREQUENCY:	836.50	MHz
MODULATION SIGNAL:	QPSK	
BANDWIDTH:	3.0	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	153	329	-57.53	8.95	-48.58	-35.6
2509.50	H	116	322	-71.87	9.75	-62.11	-49.1
3346.00	H	122	331	-74.53	9.60	-64.92	-51.9
4182.50	H	-	-	-78.23	10.34	-67.89	-54.9
5019.00	H	-	-	-77.07	10.88	-66.19	-53.2

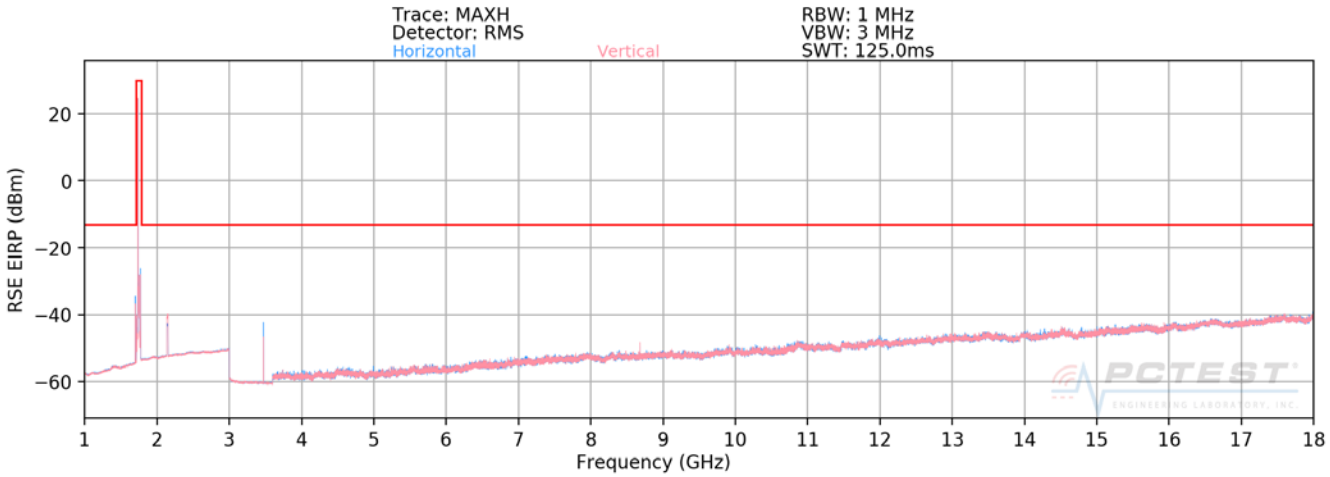
Table 7-21. Radiated Spurious Data (Band 26/5 – Mid Channel)

OPERATING FREQUENCY:	847.50	MHz
MODULATION SIGNAL:	QPSK	
BANDWIDTH:	3.0	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]
1695.00	H	149	321	-55.78	8.95	-46.83	-33.8
2542.50	H	164	327	-72.81	9.74	-63.06	-50.1
3390.00	H	177	342	-76.21	9.76	-66.45	-53.4
4237.50	H	-	-	-78.62	10.55	-68.07	-55.1
5085.00	H	-	-	-77.31	10.71	-66.60	-53.6

Table 7-22. Radiated Spurious Data (Band 26/5 – High Channel)

Band 66/4



Plot 7-325. Radiated Spurious Plot above 1GHz (Band 66/4)

OPERATING FREQUENCY:	1850.70	MHz
MODULATION SIGNAL:	QPSK	
BANDWIDTH:	1.4	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]
3701.40	V	-	-	-68.25	6.89	-61.36	-48.4
5552.10	V	-	-	-68.61	9.02	-59.59	-46.6

Table 7-23. Radiated Spurious Data (Band 66/4 – Low Channel)

OPERATING FREQUENCY:	1882.50	MHz
MODULATION SIGNAL:	QPSK	
BANDWIDTH:	1.4	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	V	-	-	-68.28	6.94	-61.34	-48.3
5647.50	V	314	341	-67.13	9.17	-57.97	-45.0
7530.00	V	-	-	-63.28	9.31	-53.98	-41.0
9412.50	V	-	-	-60.34	9.50	-50.83	-37.8

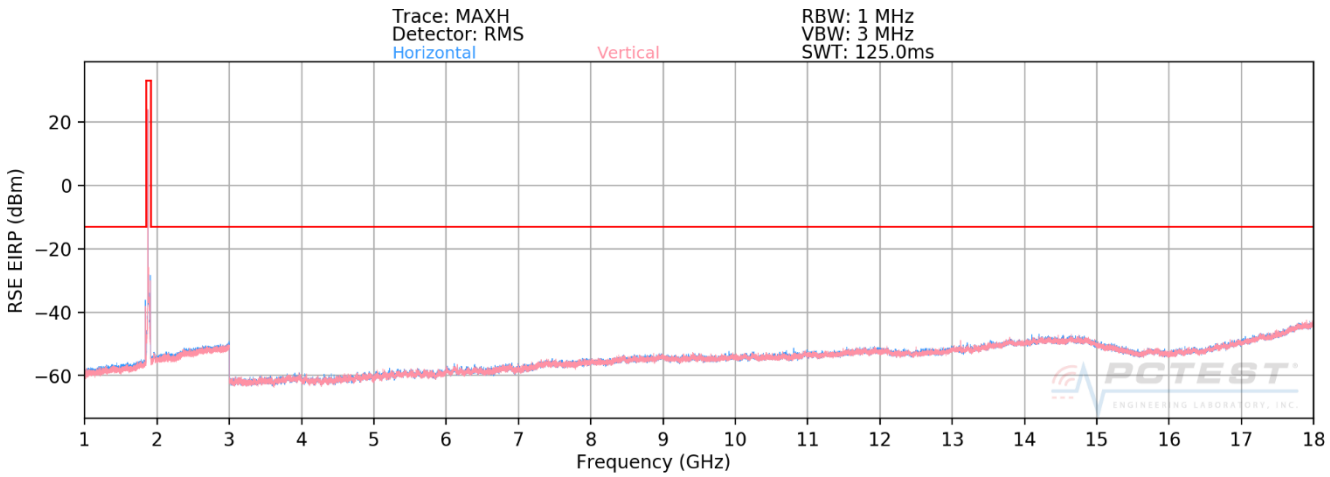
Table 7-24. Radiated Spurious Data (Band 66/4 – Mid Channel)

OPERATING FREQUENCY:	1914.30	MHz
MODULATION SIGNAL:	QPSK	
BANDWIDTH:	1.4	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]
3828.60	V	-	-	-68.22	7.15	-61.08	-48.1
5742.90	V	113	342	-64.58	9.03	-55.56	-42.6
7657.20	V	-	-	-65.22	9.30	-55.92	-42.9
9571.50	V	-	-	-63.55	9.45	-54.10	-41.1

Table 7-25. Radiated Spurious Data (Band 66/4 – High Channel)

Band 25/2



Plot 7-326. Radiated Spurious Plot above 1GHz (Band 25/2)

OPERATING FREQUENCY:	1850.70	MHz
MODULATION SIGNAL:	QPSK	
BANDWIDTH:	1.4	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]
3701.40	V	-	-	-68.25	6.89	-61.36	-48.4
5552.10	V	-	-	-68.61	9.02	-59.59	-46.6

Table 7-26. Radiated Spurious Data (Band 25/2 – Low Channel)

OPERATING FREQUENCY:	1882.50	MHz
MODULATION SIGNAL:	QPSK	
BANDWIDTH:	1.4	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	V	-	-	-68.28	6.94	-61.34	-48.3
5647.50	V	314	341	-67.13	9.17	-57.97	-45.0
7530.00	V	-	-	-63.28	9.31	-53.98	-41.0
9412.50	V	-	-	-60.34	9.50	-50.83	-37.8

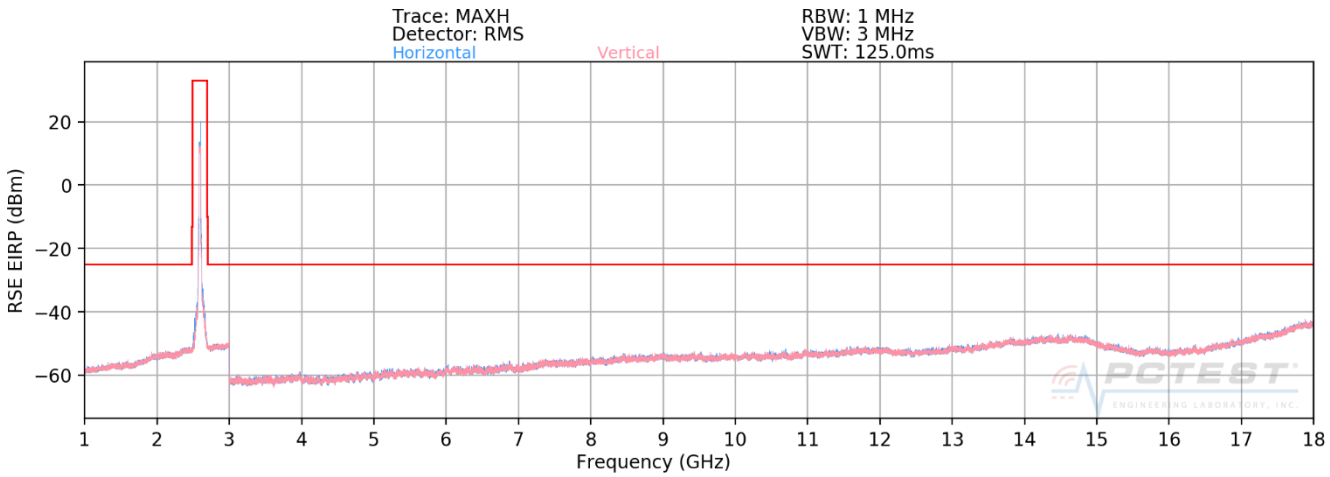
Table 7-27. Radiated Spurious Data (Band 25/2 – Mid Channel)

OPERATING FREQUENCY:	1914.30	MHz
MODULATION SIGNAL:	QPSK	
BANDWIDTH:	1.4	MHz
DISTANCE:	3	meters
LIMIT:	-13	dBm

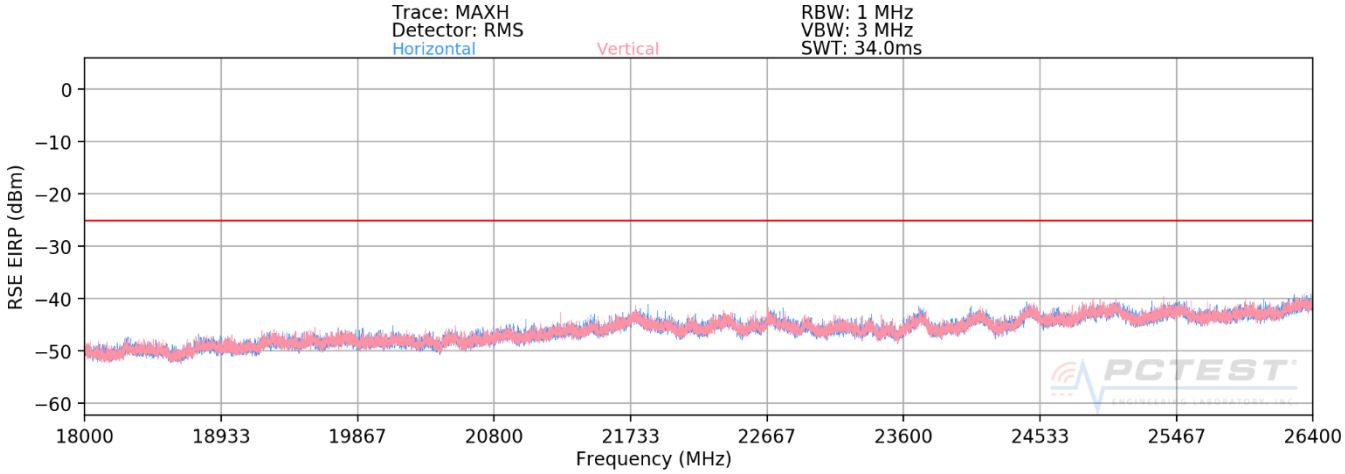
Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
3828.60	V	-	-	-68.22	7.15	-61.08	-48.1
5742.90	V	113	342	-64.58	9.03	-55.56	-42.6
7657.20	V	-	-	-65.22	9.30	-55.92	-42.9
9571.50	V	-	-	-63.55	9.45	-54.10	-41.1

Table 7-28. Radiated Spurious Data (Band 25/2 – High Channel)

Band 41



Plot 7-327. Radiated Spurious Plot 1GHz - 18GHz (Band 41)



Plot 7-328. Radiated Spurious Plot 18GHz – 26.5GHz (Band 41)

OPERATING FREQUENCY:	2506.00	MHz
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	104	232	-43.68	8.75	-34.93	-9.9
7518.00	H	119	220	-56.98	9.32	-47.67	-22.7
10024.00	H	-	-	-54.98	9.80	-45.18	-20.2
12530.00	H	169	64	-39.32	8.87	-30.45	-5.5
15036.00	H	-	-	-46.96	8.84	-38.11	-13.1
17542.00	H	-	-	-40.80	7.81	-32.98	-8.0

Table 7-29. Radiated Spurious Data (Band 41 – Low Channel)

OPERATING FREQUENCY:	2593.00	MHz
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	108	312	-40.81	9.03	-31.78	-6.8
7779.00	H	104	104	-53.62	9.29	-44.33	-19.3
10372.00	H	-	-	-53.45	9.50	-43.95	-18.9
12965.00	H	292	290	-41.43	8.75	-32.67	-7.7
15558.00	H	-	-	-46.18	8.47	-37.71	-12.7

Table 7-30. Radiated Spurious Data (Band 41 – Mid Channel)

OPERATING FREQUENCY:	2680.00	MHz
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	110	311	-43.17	8.99	-34.18	-9.2
8040.00	H	101	316	-52.35	9.35	-42.99	-18.0
10720.00	H	-	-	-53.04	9.39	-43.64	-18.6
13400.00	H	278	347	-37.60	8.67	-28.93	-3.9
16080.00	H	-	-	-45.28	8.46	-36.82	-11.8

Table 7-31. Radiated Spurious Data (Band 41 – High Channel)

7.8 Frequency Stability / Temperature Variation

Test Overview and Limit

Frequency stability testing is performed in accordance with the guidelines of ANSI/TIA-603-E-2016. The frequency stability of the transmitter is measured by:

a.) **Temperature:** The temperature is varied from -30°C to +50°C in 10°C increments using an environmental chamber.

b.) **Primary Supply Voltage:** The primary supply voltage is varied from 85% to 115% of the nominal value for non hand-carried battery and AC powered equipment. For hand-carried, battery-powered equipment, primary supply voltage is reduced to the battery operating end point which shall be specified by the manufacturer.

For Part 22, the frequency stability of the transmitter shall be maintained within ±0.00025% (±2.5 ppm) of the center frequency. For Part 24, Part 27, the frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

Test Procedure Used

ANSI/TIA-603-E-2016

Test Settings

1. The carrier frequency of the transmitter is measured at room temperature (20°C to provide a reference).
2. The equipment is turned on in a "standby" condition for fifteen minutes before applying power to the transmitter. Measurement of the carrier frequency of the transmitter is made within one minute after applying power to the transmitter.
3. Frequency measurements are made at 10°C intervals ranging from -30°C to +50°C. A period of at least one half-hour is provided to allow stabilization of the equipment at each temperature level.

Test Setup

The EUT was connected via an RF cable to a spectrum analyzer with the EUT placed inside an environmental chamber.

Test Notes

None

Band 71 Frequency Stability Measurements

OPERATING FREQUENCY:	680,500,000	Hz
CHANNEL:	133297	
REFERENCE VOLTAGE:	4.32	VDC

VOLTAGE (%)	POWER (VDC)	TEMP (°C)	FREQUENCY (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	4.32	- 30	680,500,143	143	0.0000210
100 %		- 20	680,500,089	89	0.0000131
100 %		- 10	680,500,118	118	0.0000173
100 %		0	680,500,012	12	0.0000018
100 %		+ 10	680,500,153	153	0.0000225
100 %		+ 20	680,500,006	6	0.0000009
100 %		+ 30	680,500,038	38	0.0000056
100 %		+ 40	680,500,048	48	0.0000071
100 %		+ 50	680,500,020	20	0.0000029
BATT. ENDPOINT	2.85	+ 20	680,500,227	227	0.0000334

Table 7-32. Frequency Stability Data (Band 71)

Note:

Based on the results of the frequency stability test at the center channel the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency deviation noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

Band 71 Frequency Stability Measurements

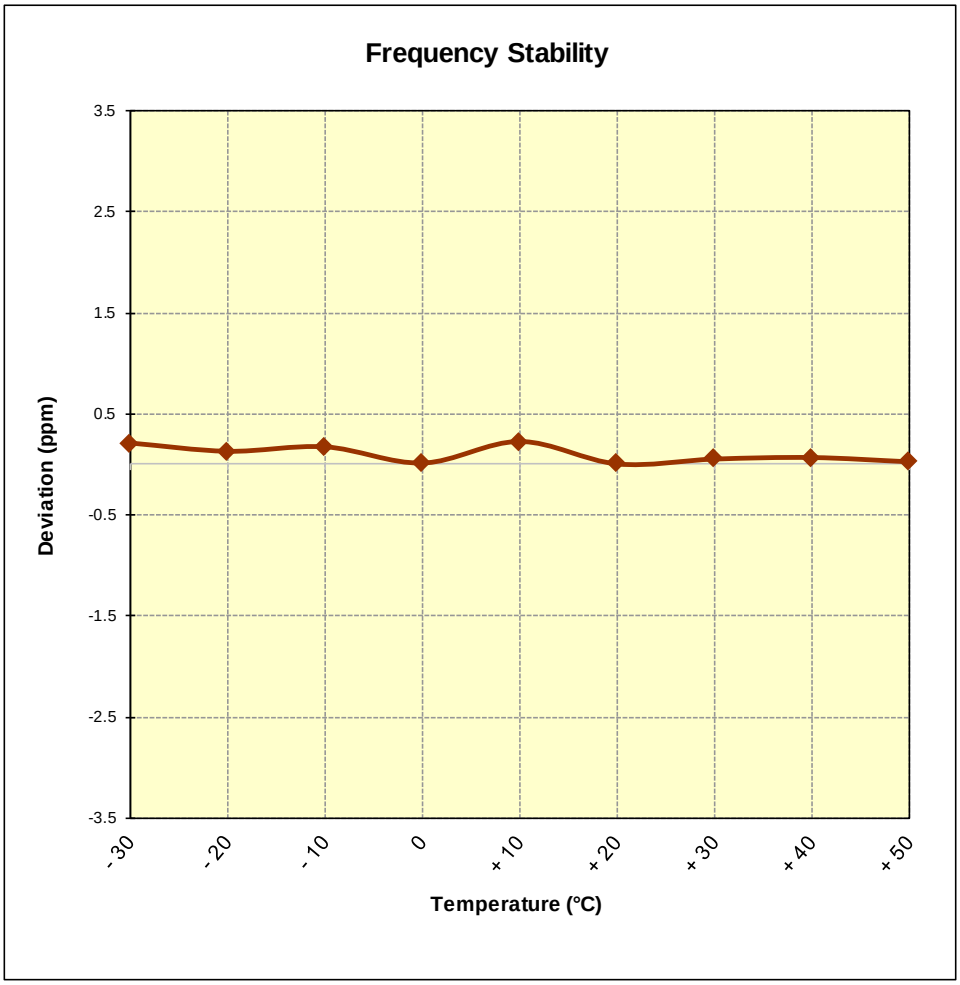


Figure 7-8. Frequency Stability Graph (Band 71)

Band 12 Frequency Stability Measurements

OPERATING FREQUENCY:	707,500,000	Hz
CHANNEL:	23790	
REFERENCE VOLTAGE:	4.32	VDC

VOLTAGE (%)	POWER (VDC)	TEMP (°C)	FREQUENCY (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	4.32	- 30	707,499,832	-168	-0.0000237
100 %		- 20	707,499,918	-82	-0.0000116
100 %		- 10	707,499,552	-448	-0.0000633
100 %		0	707,499,927	-73	-0.0000103
100 %		+ 10	707,500,346	346	0.0000489
100 %		+ 20	707,499,997	-3	-0.0000004
100 %		+ 30	707,499,866	-134	-0.0000189
100 %		+ 40	707,500,088	88	0.0000124
100 %		+ 50	707,499,754	-246	-0.0000348
BATT. ENDPOINT	2.85	+ 20	707,499,890	-110	-0.0000155

Table 7-33. Frequency Stability Data (Band 12)

Note:

Based on the results of the frequency stability test at the center channel the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency deviation noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

Band 12 Frequency Stability Measurements

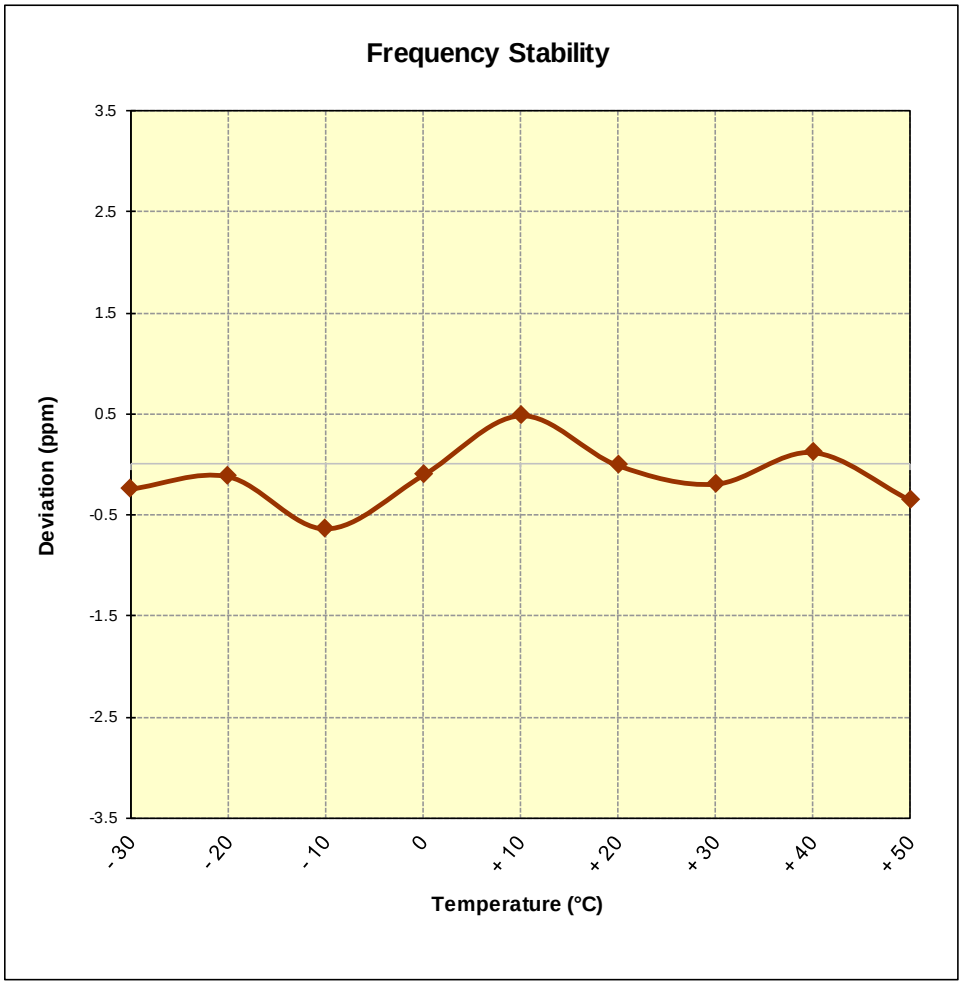


Figure 7-9. Frequency Stability Graph (Band 12)

Band 13 Frequency Stability Measurements

OPERATING FREQUENCY:	782,000,000	Hz
CHANNEL:	23230	
REFERENCE VOLTAGE:	3.85	VDC

VOLTAGE (%)	POWER (VDC)	TEMP (°C)	FREQUENCY (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	3.85	- 30	782,000,119	119	0.0000152
100 %		- 20	782,000,073	73	0.0000093
100 %		- 10	782,000,038	38	0.0000049
100 %		0	782,000,065	65	0.0000083
100 %		+ 10	781,999,939	-61	-0.0000078
100 %		+ 20	782,000,037	37	0.0000047
100 %		+ 30	782,000,026	26	0.0000033
100 %		+ 40	781,999,940	-60	-0.0000077
100 %		+ 50	782,000,203	203	0.0000260
BATT. ENDPOINT	2.85	+ 20	781,999,955	-45	-0.0000058

Table 7-34. Frequency Stability Data (Band 13)

Note:

Based on the results of the frequency stability test at the center channel the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency deviation noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

Band 13 Frequency Stability Measurements

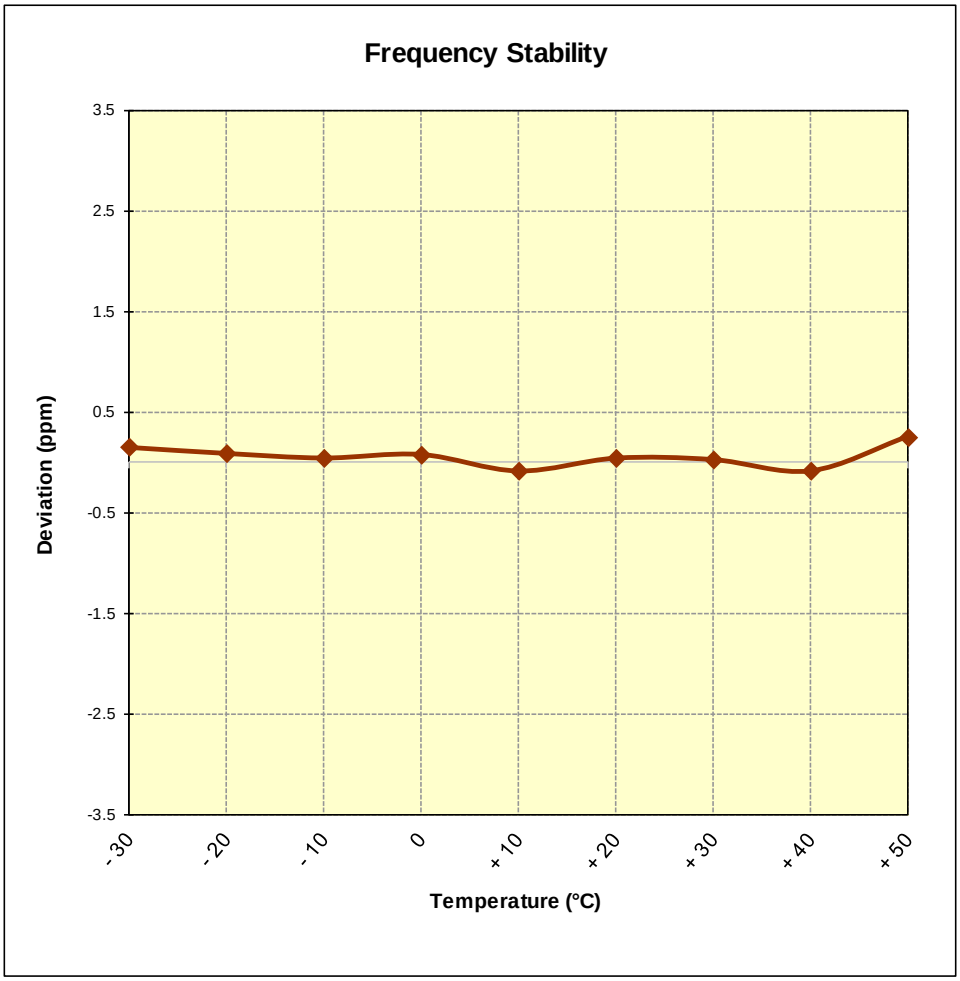


Figure 7-10. Frequency Stability Graph (Band 13)

Band 26/5 Frequency Stability Measurements

OPERATING FREQUENCY:	836,500,000	Hz
CHANNEL:	20525	
REFERENCE VOLTAGE:	4.32	VDC

VOLTAGE (%)	POWER (VDC)	TEMP (°C)	FREQUENCY (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	4.32	- 30	836,500,043	43	0.0000051
100 %		- 20	836,499,946	-54	-0.0000065
100 %		- 10	836,499,922	-78	-0.0000093
100 %		0	836,500,238	238	0.0000285
100 %		+ 10	836,499,772	-228	-0.0000273
100 %		+ 20	836,500,223	223	0.0000267
100 %		+ 30	836,500,040	40	0.0000048
100 %		+ 40	836,500,130	130	0.0000155
100 %		+ 50	836,500,152	152	0.0000182
BATT. ENDPOINT	2.85	+ 20	836,499,981	-19	-0.0000023

Table 7-35. Frequency Stability Data (Band 26/5)

Band 26/5 Frequency Stability Measurements

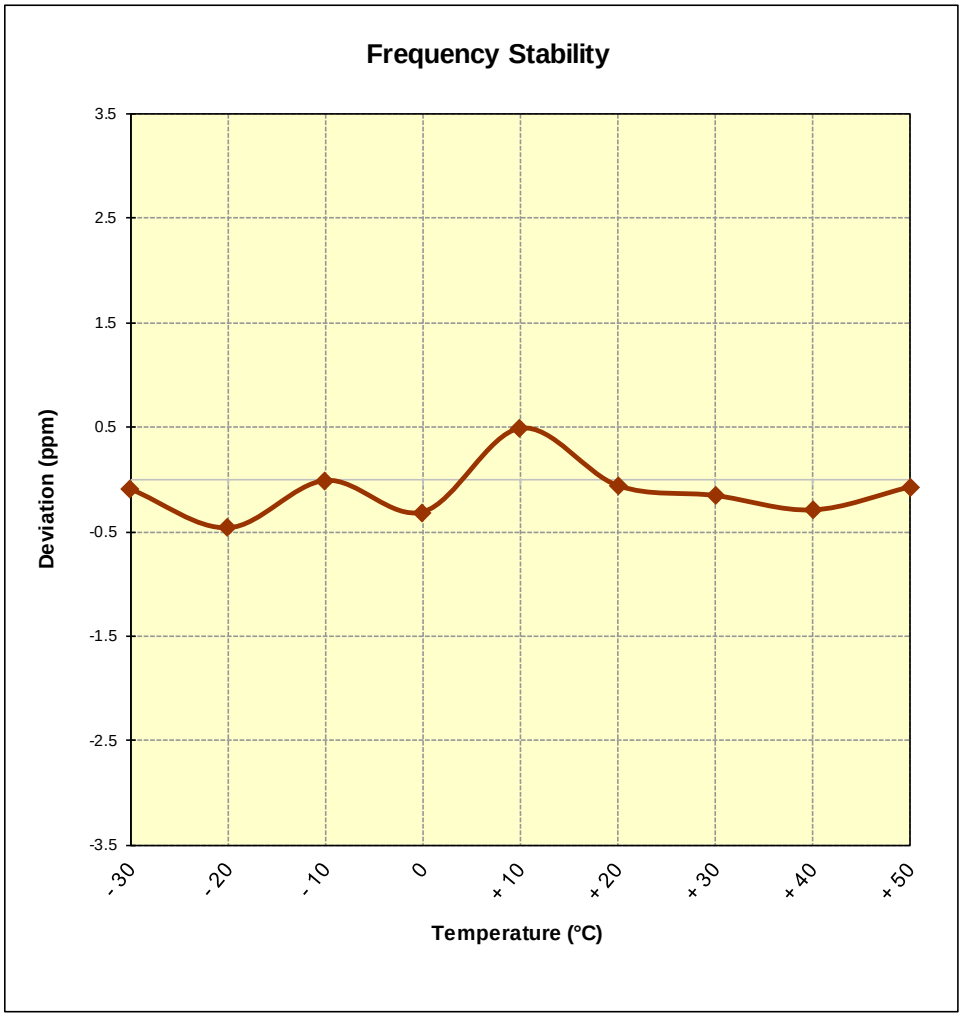


Figure 7-11. Frequency Stability Graph (Band 26/5)

Band 66/4 Frequency Stability Measurements

OPERATING FREQUENCY:	1,745,000,000	Hz
CHANNEL:	132322	
REFERENCE VOLTAGE:	4.32	VDC

VOLTAGE (%)	POWER (VDC)	TEMP (°C)	FREQUENCY (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	4.32	- 30	1,745,000,382	382	0.0000219
100 %		- 20	1,745,000,238	238	0.0000136
100 %		- 10	1,744,999,725	-275	-0.0000158
100 %		0	1,744,999,704	-296	-0.0000170
100 %		+ 10	1,744,999,935	-65	-0.0000037
100 %		+ 20	1,745,000,239	239	0.0000137
100 %		+ 30	1,745,000,083	83	0.0000048
100 %		+ 40	1,744,999,971	-29	-0.0000017
100 %		+ 50	1,745,000,037	37	0.0000021
BATT. ENDPOINT	2.85	+ 20	1,745,000,009	9	0.0000005

Table 7-36. Frequency Stability Data (Band 66/4)

Note:

Based on the results of the frequency stability test at the center channel the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency deviation noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

Band 66/4 Frequency Stability Measurements

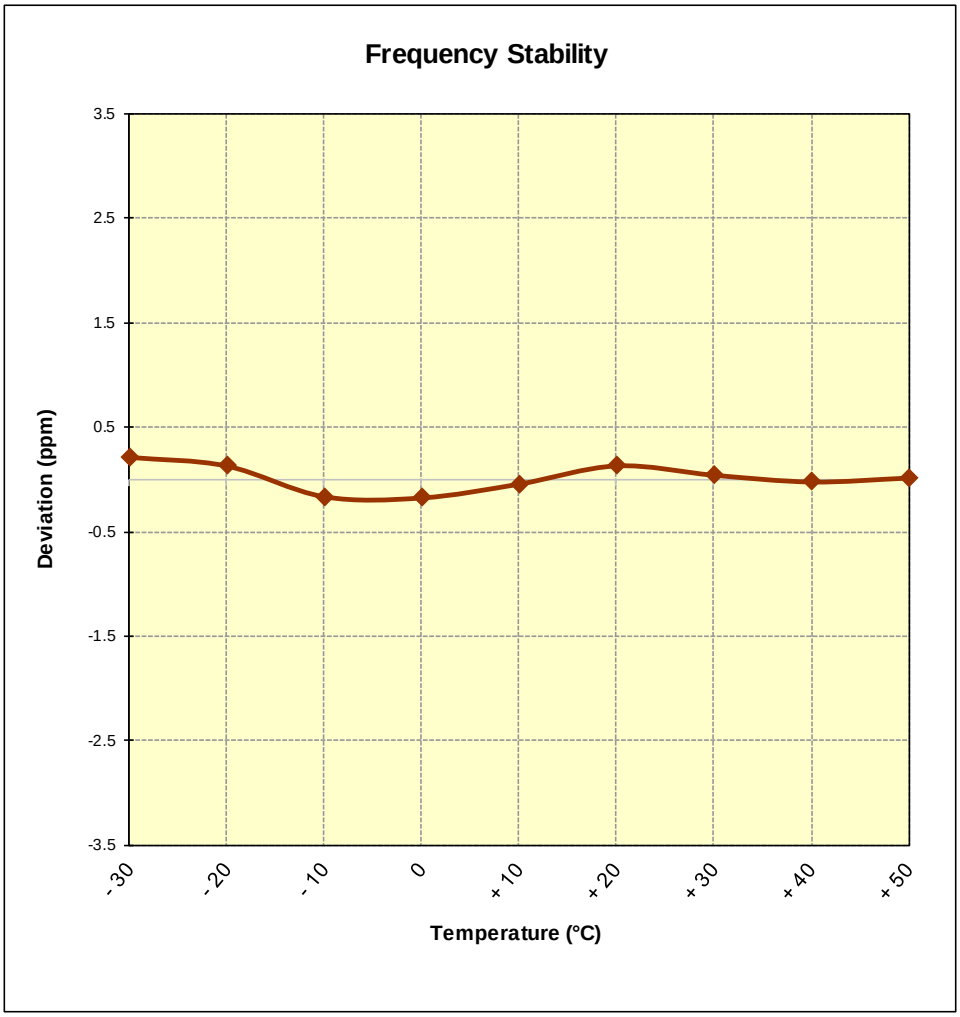


Figure 7-12. Frequency Stability Graph (Band 66/4)

Band 25/2 Frequency Stability Measurements

OPERATING FREQUENCY:	1,882,500,000	Hz
CHANNEL:	26365	
REFERENCE VOLTAGE:	4.32	VDC

VOLTAGE (%)	POWER (VDC)	TEMP (°C)	FREQUENCY (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	4.32	- 30	1,882,499,824	-176	-0.0000093
100 %		- 20	1,882,500,175	175	0.0000093
100 %		- 10	1,882,499,922	-78	-0.0000041
100 %		0	1,882,499,981	-19	-0.0000010
100 %		+ 10	1,882,499,704	-296	-0.0000157
100 %		+ 20	1,882,499,710	-290	-0.0000154
100 %		+ 30	1,882,500,005	5	0.0000003
100 %		+ 40	1,882,499,857	-143	-0.0000076
100 %		+ 50	1,882,500,037	37	0.0000020
BATT. ENDPOINT	2.85	+ 20	1,882,500,086	86	0.0000046

Table 7-37. Frequency Stability Data (Band 25/2)

Band 25/2 Frequency Stability Measurements

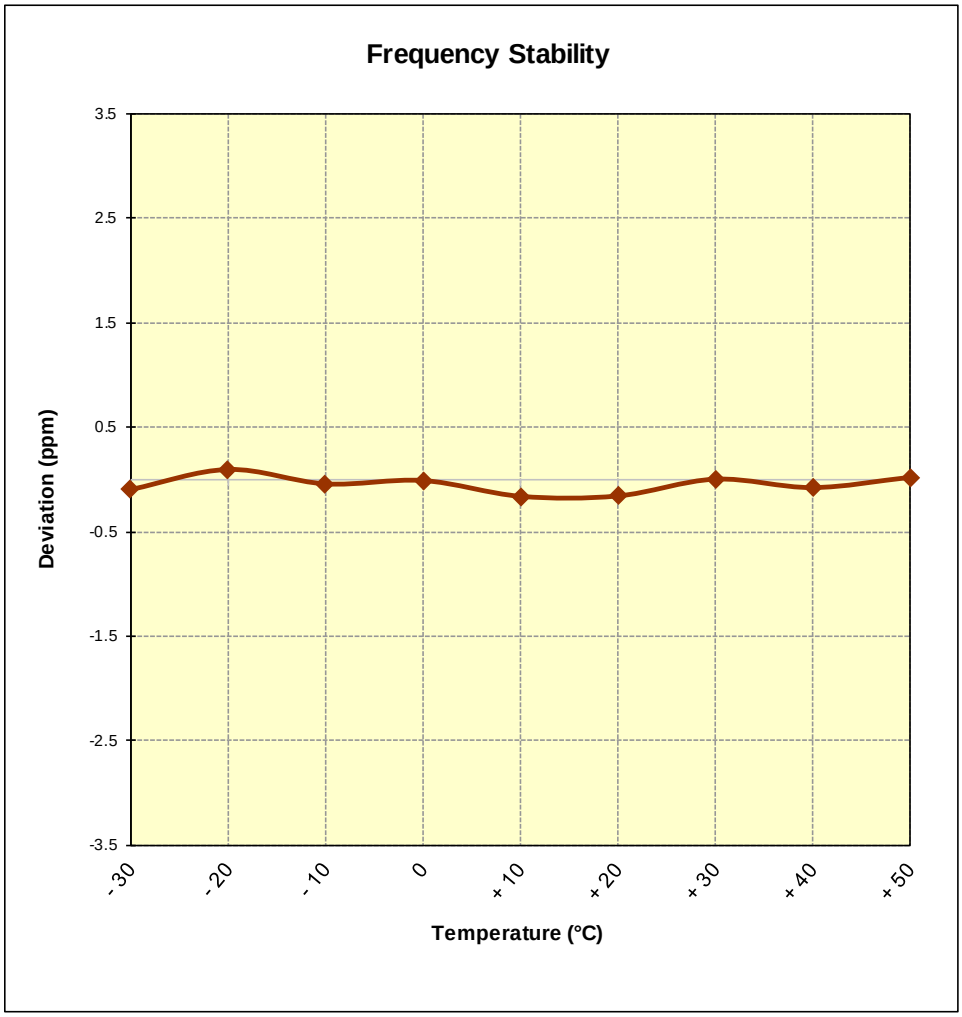


Figure 7-13. Frequency Stability Graph (Band 25/2)

Band 41 Frequency Stability Measurements

OPERATING FREQUENCY:	2,593,000,000	Hz
CHANNEL:	40620	
REFERENCE VOLTAGE:	4.32	VDC

VOLTAGE (%)	POWER (VDC)	TEMP (°C)	FREQUENCY (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	4.32	- 30	2,593,000,095	95	0.0000037
100 %		- 20	2,592,999,938	-62	-0.0000024
100 %		- 10	2,592,999,909	-91	-0.0000035
100 %		0	2,592,999,866	-134	-0.0000052
100 %		+ 10	2,592,999,542	-458	-0.0000177
100 %		+ 20	2,592,999,769	-231	-0.0000089
100 %		+ 30	2,592,999,864	-136	-0.0000052
100 %		+ 40	2,593,000,054	54	0.0000021
100 %		+ 50	2,592,999,969	-31	-0.0000012
BATT. ENDPOINT	2.85	+ 20	2,592,999,930	-70	-0.0000027

Table 7-38. Frequency Stability Data (Band 41)

Note:

Based on the results of the frequency stability test at the center channel the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency deviation noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

Band 41 Frequency Stability Measurements

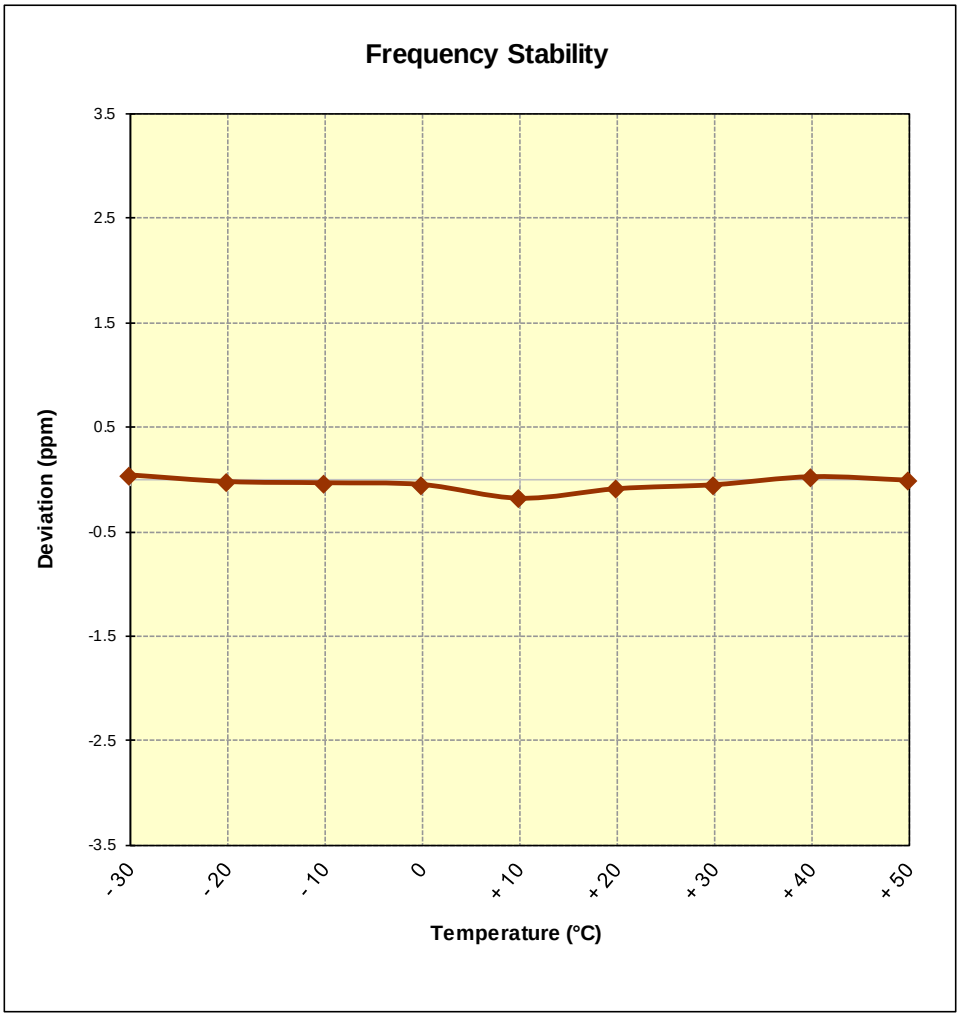


Figure 7-14. Frequency Stability Graph (Band 41)

8.0 CONCLUSION

The data collected relate only to the item(s) tested and show that the **LG Portable Handset FCC ID: ZNFX320PM** complies with all the requirements of Part 22, 24, & 27 of the FCC Rules for LTE operation only.