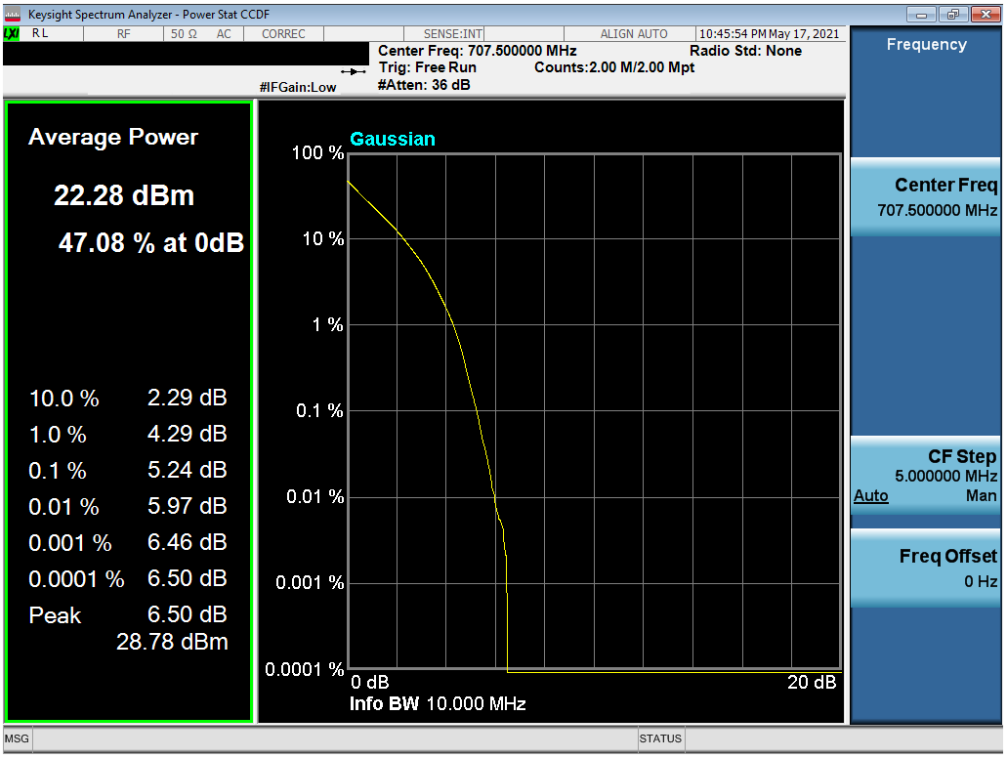
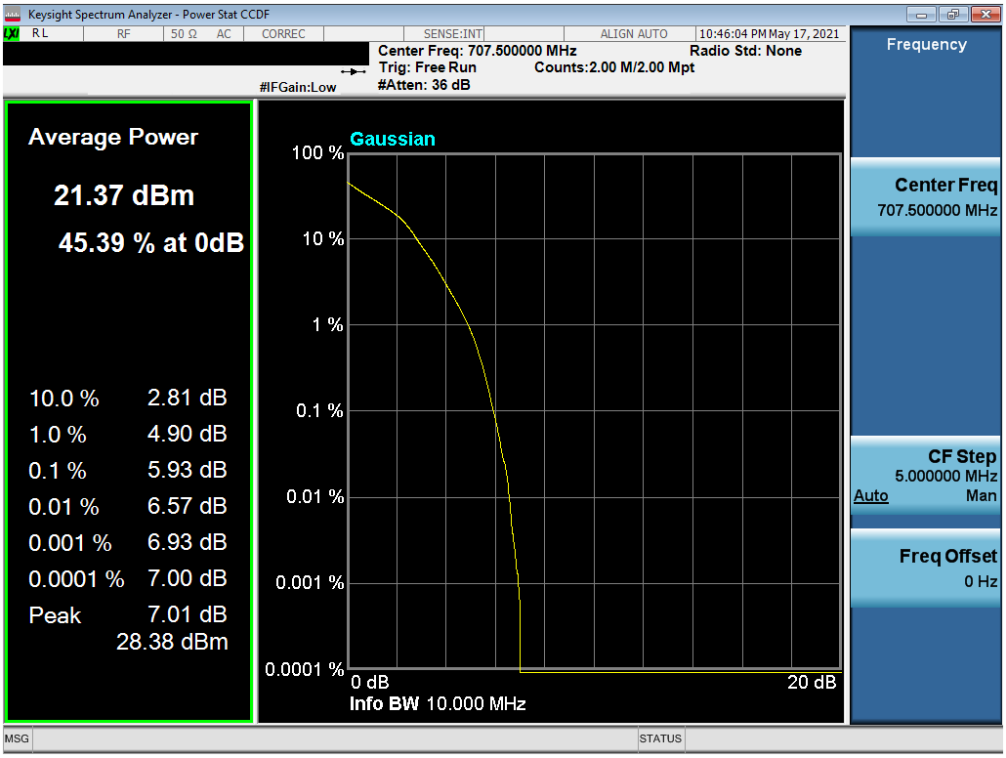
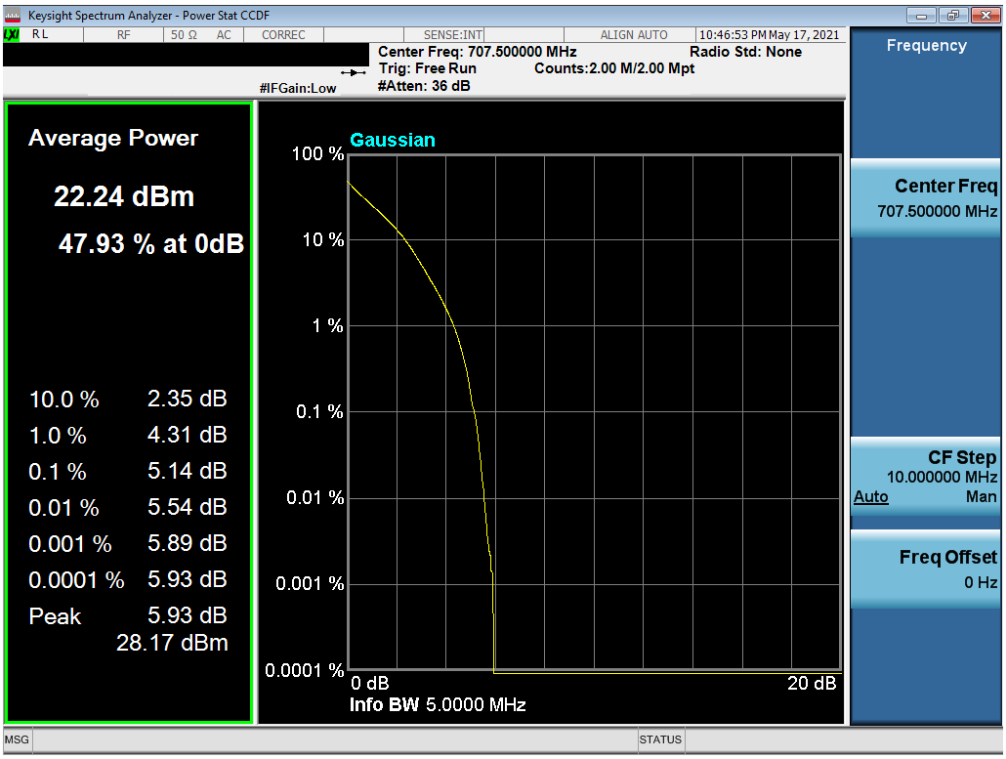
LTE Band 12



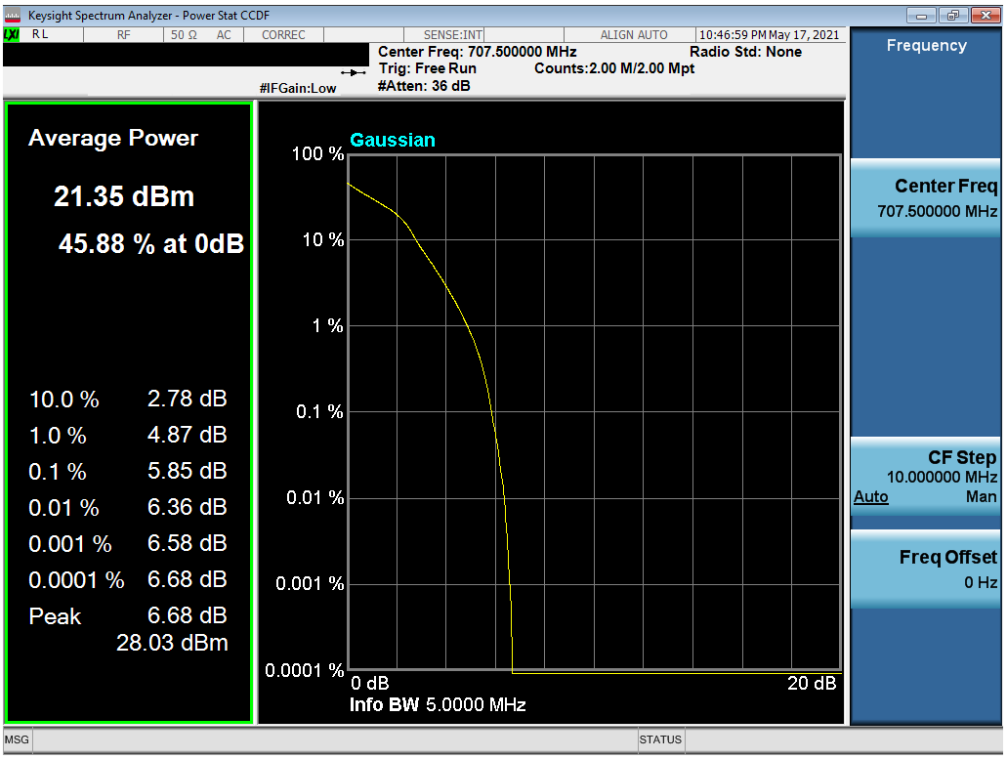
Plot 7-130. PAR Plot (LTE BAND 12 - 10MHz QPSK - Full RB)



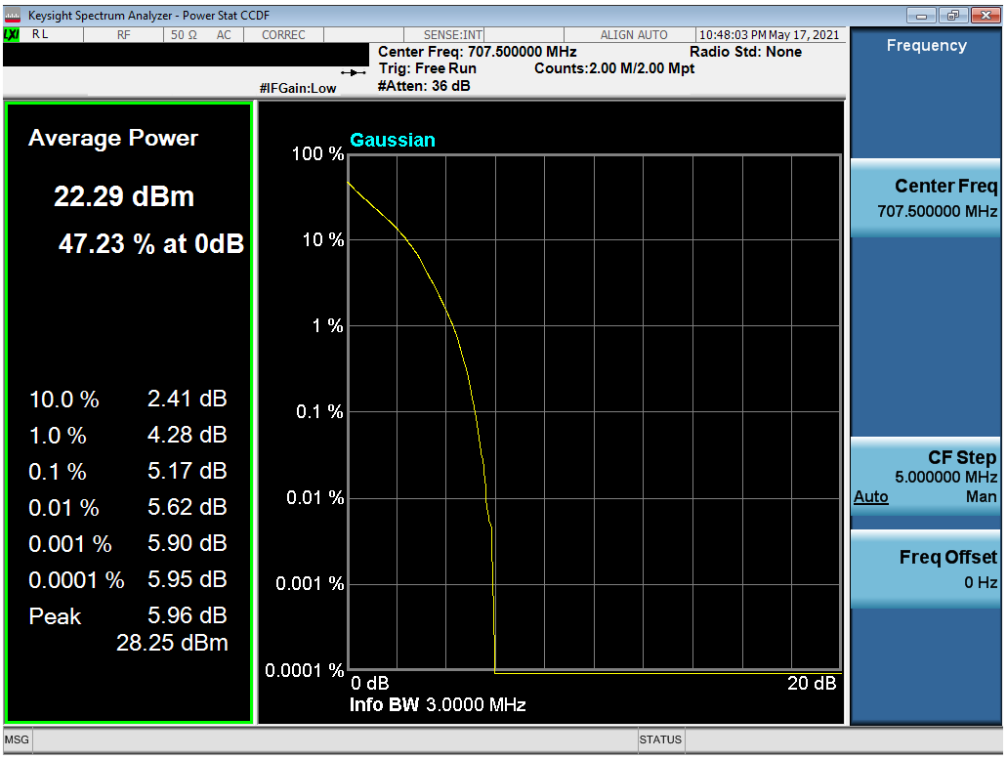
Plot 7-131. PAR Plot (LTE BAND 12 - 10MHz 16-QAM - Full RB)



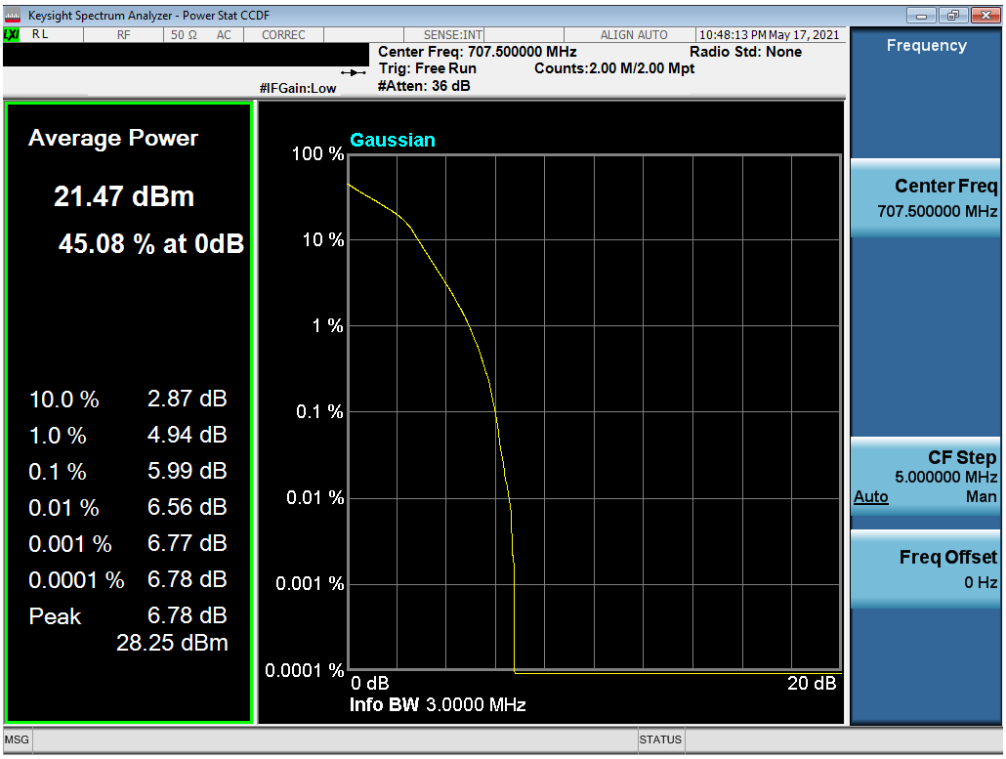
Plot 7-132. PAR Plot (LTE BAND 12 - 5MHz QPSK - Full RB)



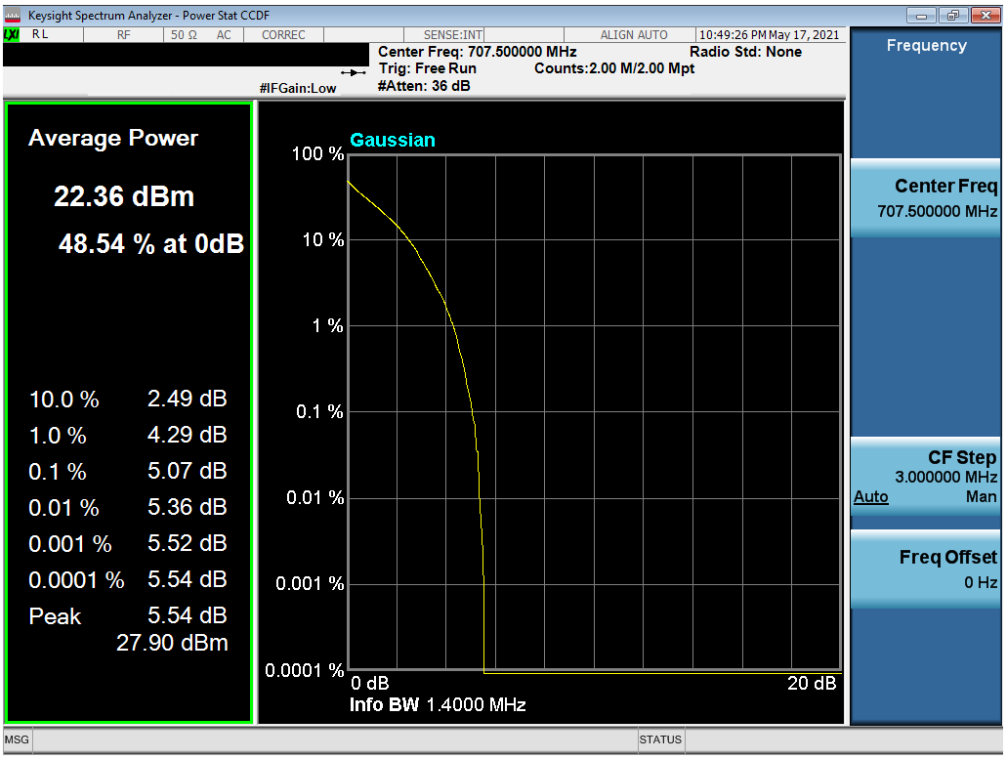
Plot 7-133. PAR Plot (LTE BAND 12 - 5MHz 16-QAM - Full RB)



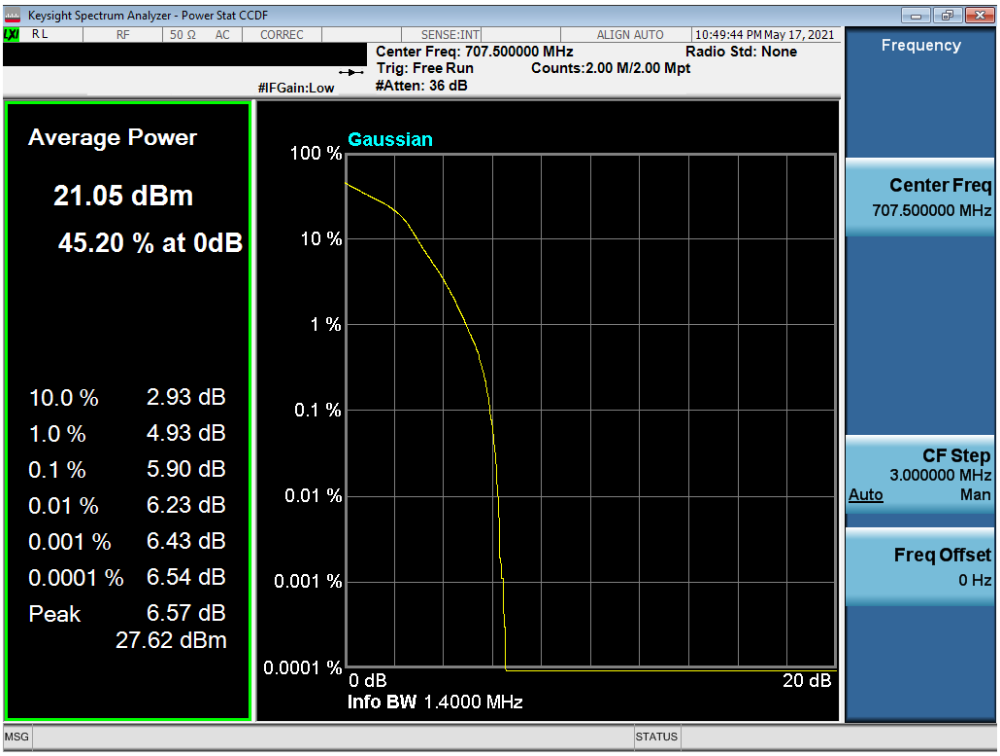
Plot 7-134. PAR Plot (LTE BAND 12 - 3MHz QPSK - Full RB)



Plot 7-135. PAR Plot (LTE BAND 12 - 3MHz 16-QAM - Full RB)

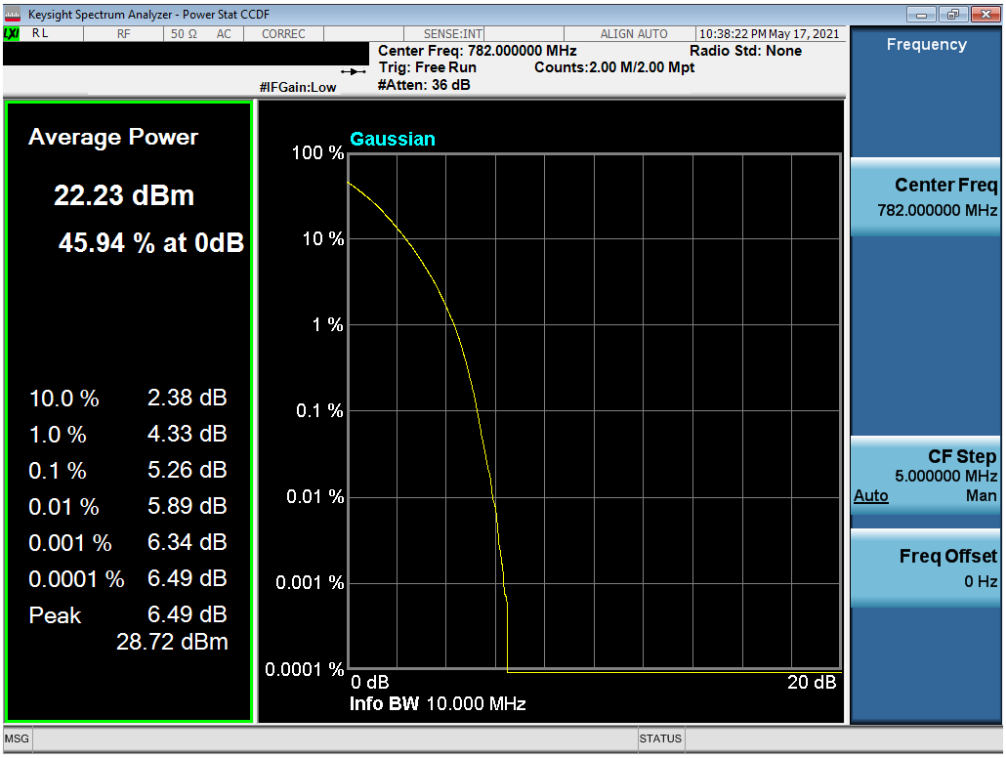


Plot 7-136. PAR Plot (LTE BAND 12 - 1.4MHz QPSK - Full RB)

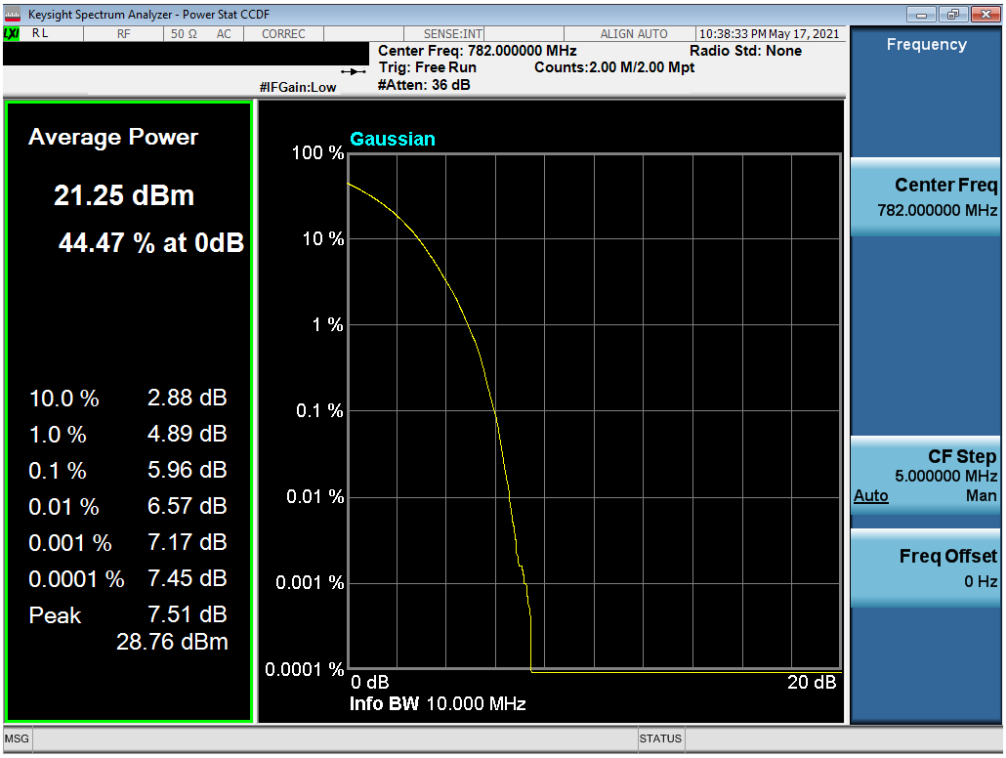


Plot 7-137. PAR Plot (LTE BAND 12 - 1.4MHz 16-QAM - Full RB)

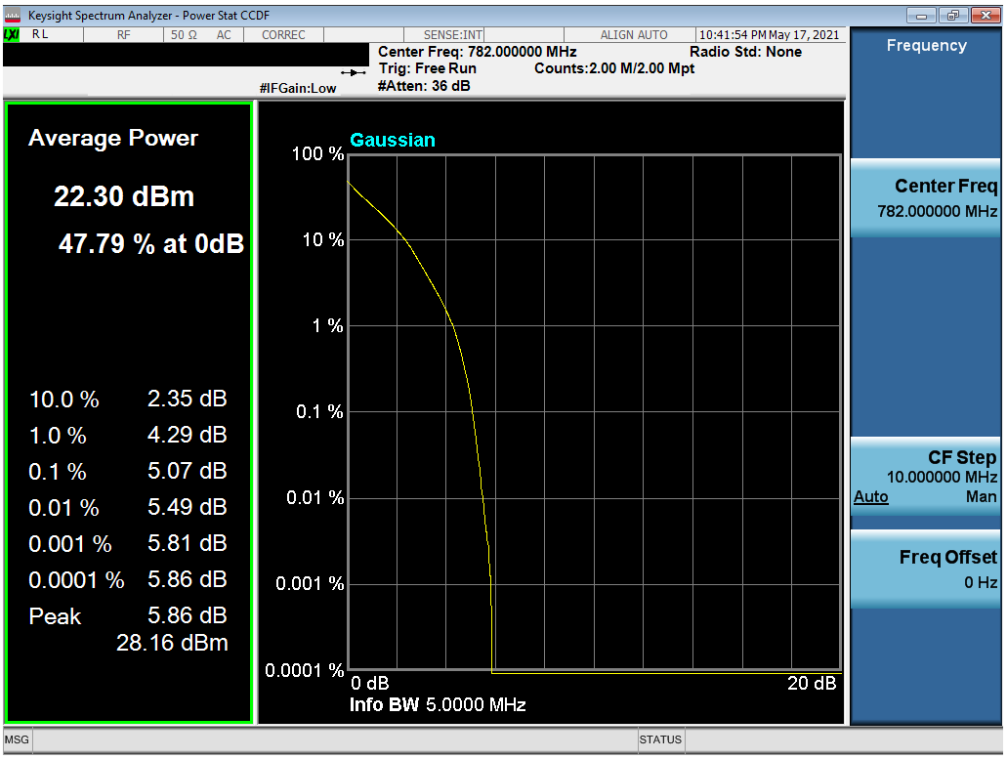
LTE Band 13



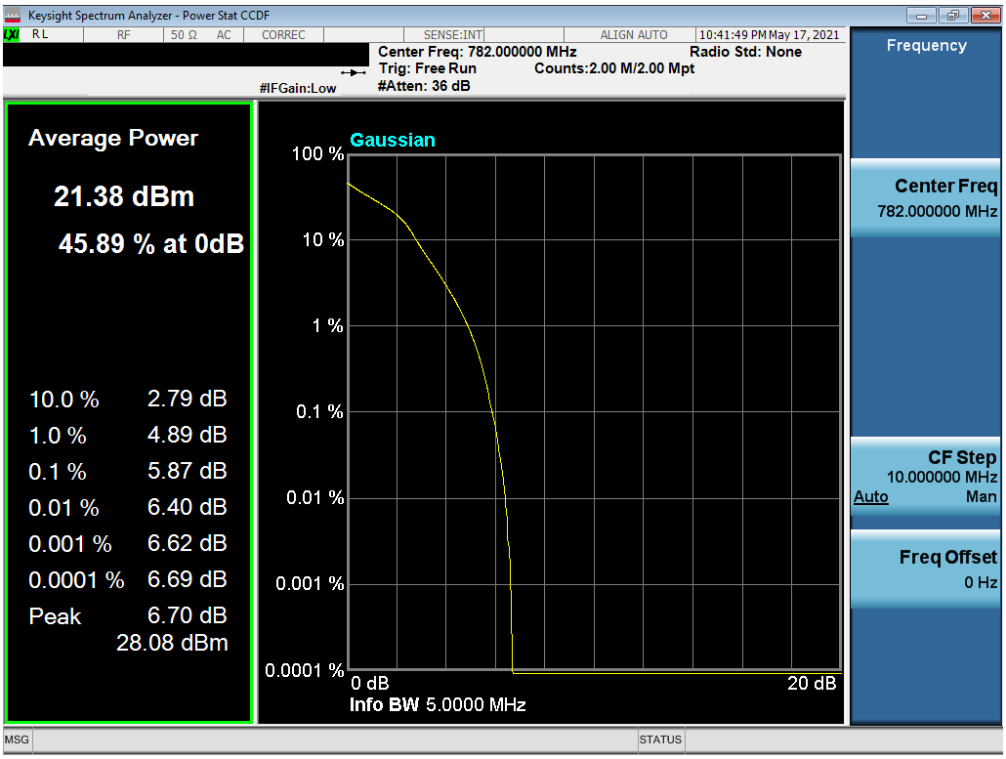
Plot 7-138. PAR Plot (LTE BAND 13 - 10MHz QPSK - Full RB)



Plot 7-139. PAR Plot (LTE BAND 13 - 10MHz 16-QAM - Full RB)

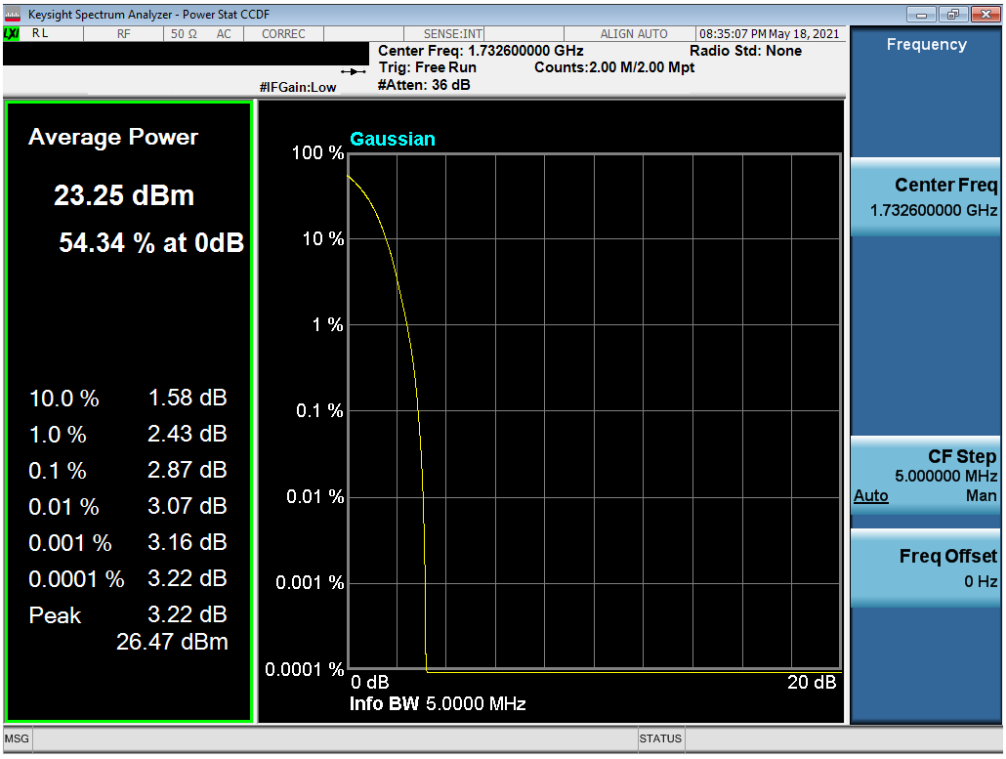


Plot 7-140. PAR Plot (LTE BAND 13 - 5MHz QPSK - Full RB)



Plot 7-141. PAR Plot (LTE BAND 13 - 5MHz 16-QAM - Full RB)

WCDMA AWS



Plot 7-142. PAR Plot (WCDMA, Ch. 1413)

7.7 Radiated Spurious Emissions Measurements

Test Overview

Radiated spurious emissions measurements are performed using the field strength conversion method described in KDB 971168 with the EUT transmitting into an external antenna. Measurements on signals operating below 1GHz are performed using horizontally and vertically 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 maximum power, and at the appropriate frequencies.

Test Procedures Used

KDB 971168 D01 v03r01 – Section 5.8

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.

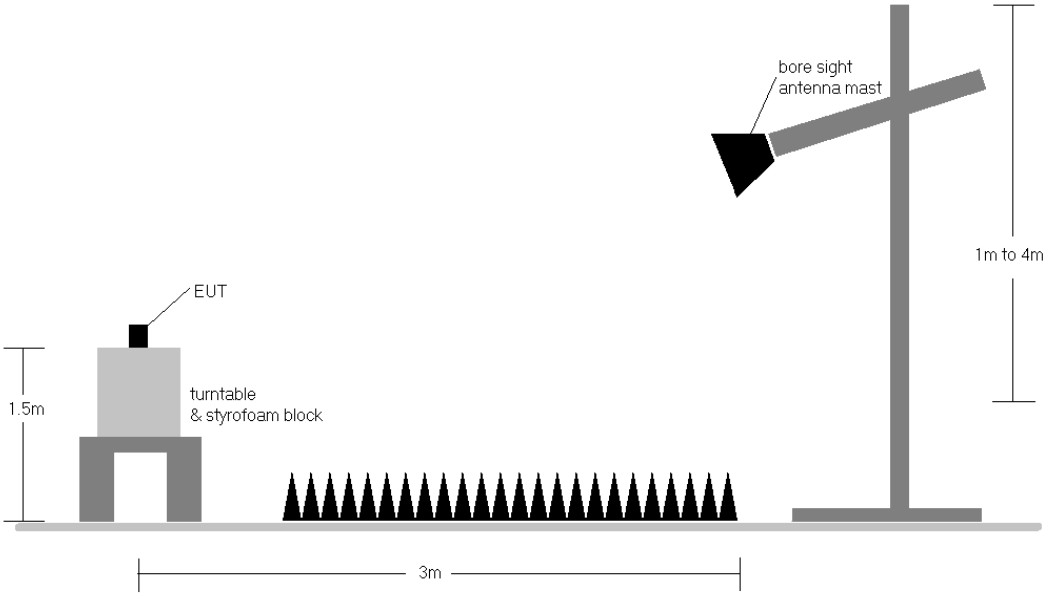


Figure 7-6. Test Instrument & Measurement Setup

Test Notes

1) Field strengths are calculated using the Measurement quantity conversions in KDB 971168 Section 5.8.4.
   b) E(dBµV/m) = Measured amplitude level (dBm) + 107 + Cable Loss (dB) + Antenna Factor (dB/m)
   d) EIRP (dBm) = E(dBµV/m) + 20logD – 104.8; where D is the measurement distance in meters.

2) 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.

3) This unit was tested while powered by an DC power source.

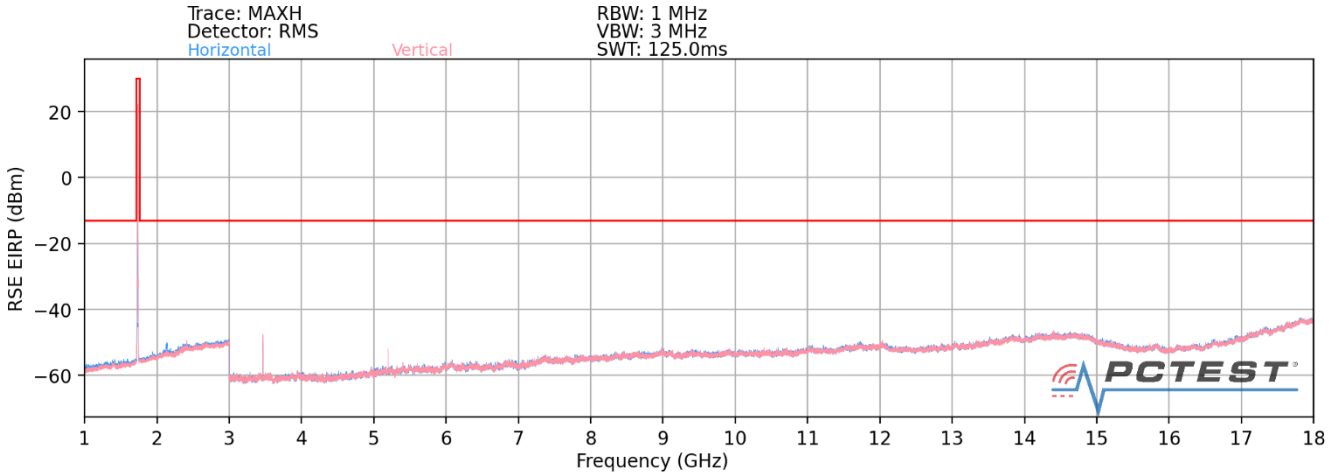
4) The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case setup is reported in the tables below.

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

6) 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.

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

LTE BAND 4



Plot 7-143. Radiated Spurious Plot (LTE BAND 4)

Bandwidth (MHz):	20
Frequency (MHz):	1720.0
RB / Offset:	1 / 50

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]
3440.0	V	187	284	-59.14	1.68	49.54	-45.72	-13.00	-32.72
5160.0	V	253	272	-64.39	4.96	47.57	-47.69	-13.00	-34.69
6880.0	V	318	263	-78.86	8.27	36.41	-58.85	-13.00	-45.85
8600.0	V	325	22	-78.68	11.42	39.74	-55.52	-13.00	-42.52
10320.0	V	241	153	-72.92	11.40	45.48	-49.78	-13.00	-36.78
12040.0	V	-	-	-81.05	14.65	40.60	-54.65	-13.00	-41.65
13760.0	V	285	293	-77.18	16.31	46.13	-49.13	-13.00	-36.13
15480.0	V	-	-	-81.64	13.75	39.11	-56.15	-13.00	-43.15

Table 7-7. Radiated Spurious Data (LTE BAND 4 – Low Channel)

Bandwidth (MHz):	20
Frequency (MHz):	1732.5
RB / Offset:	1 / 50

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]
3465.0	V	169	235	-62.83	1.19	45.36	-49.89	-13.00	-36.89
5197.5	V	256	334	-67.95	5.15	44.20	-51.06	-13.00	-38.06
6930.0	V	-	-	-79.60	7.38	34.78	-60.48	-13.00	-47.48
8662.5	V	356	19	-78.42	11.07	39.65	-55.61	-13.00	-42.61
10395.0	V	268	132	-73.52	12.17	45.65	-49.60	-13.00	-36.60
12127.5	V	-	-	-81.95	13.40	38.45	-56.81	-13.00	-43.81
13860.0	V	293	114	-78.43	16.89	45.46	-49.79	-13.00	-36.79
15592.5	V	-	-	-80.95	13.50	39.55	-55.70	-13.00	-42.70

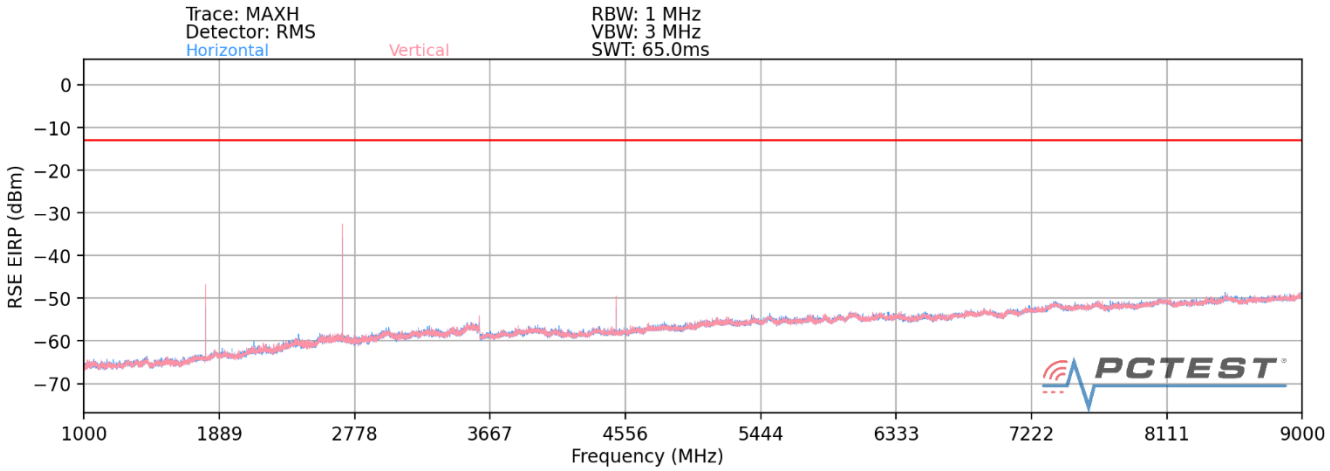
Table 7-8. Radiated Spurious Data (LTE BAND 4 – Mid Channel)

Bandwidth (MHz):	20
Frequency (MHz):	1745.0
RB / Offset:	1 / 50

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]
3490.00	V	164	279	-59.84	1.27	48.43	-46.82	-13.00	-33.82
5235.00	V	294	367	-61.32	4.93	50.61	-44.64	-13.00	-31.64
6980.00	V	273	29	-78.90	6.82	34.92	-60.34	-13.00	-47.34
8725.00	V	318	243	-78.66	10.67	39.01	-56.25	-13.00	-43.25
10470.00	V	291	355	-73.09	11.92	45.83	-49.43	-13.00	-36.43
12215.00	V	-	-	-81.24	13.65	39.41	-55.85	-13.00	-42.85
13960.00	V	291	291	-77.22	16.16	45.94	-49.32	-13.00	-36.32
15705.00	V	234	266	-80.10	13.85	40.75	-54.50	-13.00	-41.50

Table 7-9. Radiated Spurious Data (LTE BAND 4 – High Channel)

LTE BAND 8



Plot 7-144. Radiated Spurious Plot (LTE BAND 8)

Bandwidth (MHz):	1.4
Frequency (MHz):	898.2
RB / Offset:	1 / 3

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]
1796.4	V	318	239	-54.30	-4.45	48.25	-47.01	-13.00	-34.01
2694.6	V	182	282	-44.84	-1.17	60.99	-34.27	-13.00	-21.27
3592.8	V	169	287	-68.10	1.09	39.99	-55.27	-13.00	-42.27
4491.0	V	129	234	-65.38	2.55	44.17	-51.09	-13.00	-38.09
5389.2	V	-	-	-78.49	5.44	33.95	-61.31	-13.00	-48.31
6287.4	V	396	133	-77.05	6.24	36.19	-59.07	-13.00	-46.07
7185.6	V	-	-	-79.99	8.39	35.40	-59.86	-13.00	-46.86
8083.8	V	-	-	-80.21	10.66	37.45	-57.80	-13.00	-44.80

Table 7-10. Radiated Spurious Data (LTE BAND 8 – Low Channel)

Bandwidth (MHz):	1.4
Frequency (MHz):	899.0
RB / Offset:	1 / 3

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]
1798.0	V	318	237	-54.08	-4.42	48.50	-46.76	-13.00	-33.76
2697.0	V	183	280	-43.89	-1.19	61.92	-33.33	-13.00	-20.33
3596.0	V	198	287	-68.06	1.18	40.12	-55.13	-13.00	-42.13
4495.0	V	145	232	-64.56	2.53	44.97	-50.29	-13.00	-37.29
5394.0	V	391	280	-78.09	5.43	34.34	-60.91	-13.00	-47.91
6293.0	V	-	-	-78.36	6.16	34.80	-60.46	-13.00	-47.46
7192.0	V	-	-	-79.72	8.38	35.66	-59.59	-13.00	-46.59

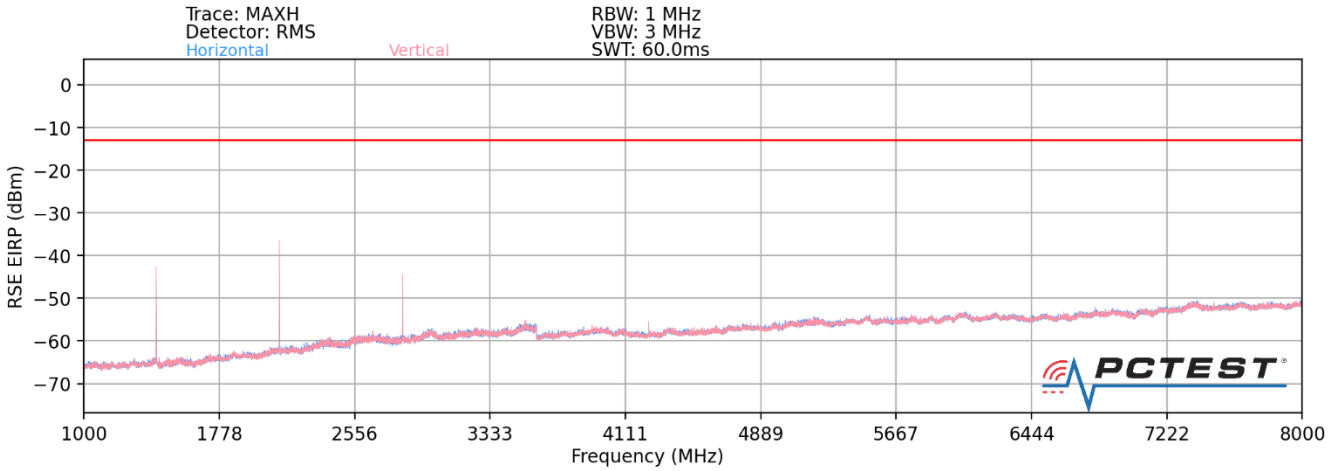
Table 7-11. Radiated Spurious Data (LTE BAND 8 – Mid Channel)

Bandwidth (MHz):	1.4
Frequency (MHz):	899.8
RB / Offset:	1 / 3

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]
1799.60	V	320	236	-53.95	-4.39	48.66	-46.60	-13.00	-33.60
2699.40	V	179	283	-44.23	-1.20	61.57	-33.69	-13.00	-20.69
3599.20	V	200	291	-68.34	1.28	39.94	-55.32	-13.00	-42.32
4499.00	V	127	233	-64.73	2.51	44.78	-50.48	-13.00	-37.48
5398.80	V	-	-	-78.24	5.43	34.19	-61.07	-13.00	-48.07
6298.60	V	-	-	-78.52	6.08	34.56	-60.70	-13.00	-47.70

Table 7-12. Radiated Spurious Data (LTE BAND 8 – High Channel)

LTE Band 12



Plot 7-145. Radiated Spurious Plot (LTE Band 12)

Bandwidth (MHz):	10
Frequency (MHz):	704.0
RB / Offset:	1 / 25

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]
1408.0	V	173	131	-55.17	-5.28	46.55	-48.70	-13.00	-35.70
2112.0	V	122	245	-60.13	-2.79	44.08	-51.17	-13.00	-38.17
2816.0	V	115	136	-61.24	-1.67	44.09	-51.17	-13.00	-38.17
3520.0	V	117	161	-76.09	1.49	32.40	-62.86	-13.00	-49.86
4224.0	V	116	324	-76.44	1.83	32.39	-62.87	-13.00	-49.87
4928.0	V	391	189	-78.38	3.59	32.21	-63.05	-13.00	-50.05
5632.0	V	-	-	-79.00	5.54	33.54	-61.72	-13.00	-48.72
6336.0	V	-	-	-79.38	6.86	34.48	-60.78	-13.00	-47.78

Table 7-13. Radiated Spurious Data (LTE Band 12 – Low Channel)

Bandwidth (MHz):	10
Frequency (MHz):	707.5
RB / Offset:	1 / 25

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]
1415.0	V	174	135	-51.11	-5.29	50.60	-44.65	-13.00	-31.65
2122.5	V	156	247	-46.74	-2.98	57.28	-37.98	-13.00	-24.98
2830.0	V	125	138	-58.50	-1.25	47.25	-48.01	-13.00	-35.01
3537.5	V	198	271	-75.15	1.57	33.42	-61.84	-13.00	-48.84
4245.0	V	172	325	-75.24	1.93	33.69	-61.57	-13.00	-48.57
4952.5	V	387	121	-75.64	3.66	35.02	-60.24	-13.00	-47.24
5660.0	V	-	-	-78.77	5.28	33.51	-61.75	-13.00	-48.75
6367.5	V	-	-	-78.67	6.24	34.57	-60.68	-13.00	-47.68

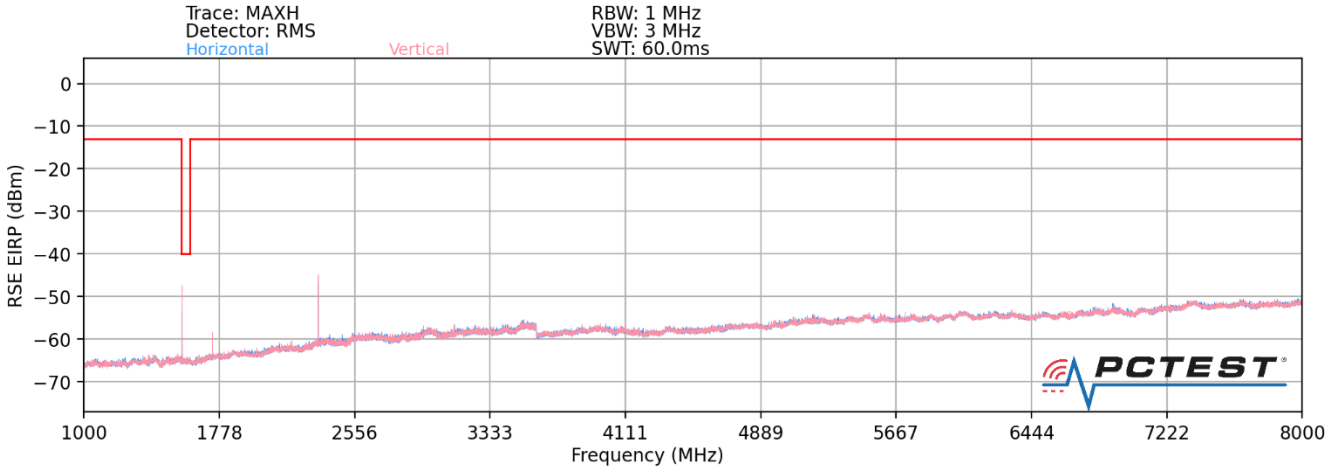
Table 7-14. Radiated Spurious Data (LTE Band 12 – Mid Channel)

Bandwidth (MHz):	10
Frequency (MHz):	711.0
RB / Offset:	1 / 25

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]
1422.0	V	161	136	-51.44	-5.66	49.90	-45.36	-13.00	-32.36
2133.0	V	223	257	-51.23	-3.22	52.55	-42.71	-13.00	-29.71
2844.0	V	134	137	-63.74	-1.17	42.09	-53.17	-13.00	-40.17
3555.0	V	198	274	-77.11	1.43	31.32	-63.93	-13.00	-50.93
4266.0	V	301	274	-75.19	2.13	33.94	-61.32	-13.00	-48.32
4977.0	V	371	127	-77.18	3.76	33.58	-61.68	-13.00	-48.68
5688.0	V	-	-	-78.44	5.22	33.78	-61.48	-13.00	-48.48
6399.0	V	-	-	-78.64	5.93	34.29	-60.97	-13.00	-47.97

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

LTE Band 13



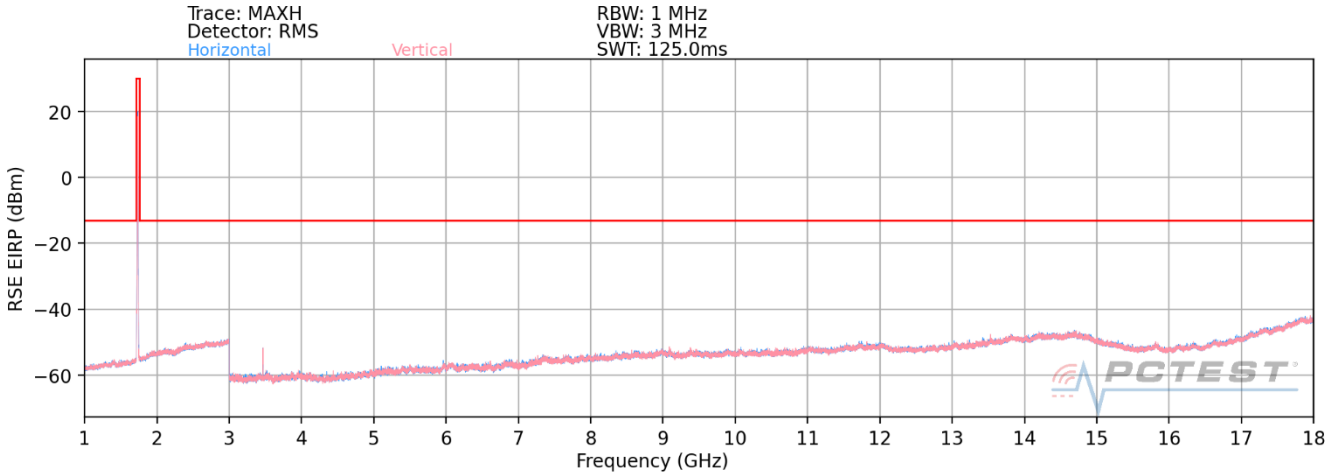
Plot 7-146. Radiated Spurious Plot (LTE Band 13)

Bandwidth (MHz):	10
Frequency (MHz):	782.0
RB / Offset:	1 / 25

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]
1564.0	V	155	221	-53.55	-5.62	47.83	-47.43	-40.00	-7.43
2346.0	V	160	219	-54.31	-2.43	50.26	-45.00	-13.00	-32.00
3128.0	V	398	352	-67.39	-0.05	39.56	-55.69	-13.00	-42.69
3910.0	V	374	126	-75.02	2.72	34.70	-60.56	-13.00	-47.56
4692.0	V	355	255	-76.43	2.86	33.43	-61.83	-13.00	-48.83
5474.0	V	-	-	-79.31	5.71	33.40	-61.85	-13.00	-48.85
6256.0	V	-	-	-79.53	6.60	34.07	-61.19	-13.00	-48.19

Table 7-16. Radiated Spurious Data (LTE Band 13 – Mid Channel)

WCDMA AWS



Plot 7-147. Radiated Spurious Plot (WCDMA AWS)

Mode:	WCDMA RMC
Channel:	1312
Frequency (MHz):	1712.4

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]
3424.8	H	400	279	-62.81	1.93	46.12	-49.13	-13.00	-36.13
5137.2	H	341	58	-71.65	4.72	40.07	-55.19	-13.00	-42.19
6849.6	H	-	-	-80.37	8.19	34.82	-60.44	-13.00	-47.44
8562.0	H	-	-	-79.83	10.66	37.83	-57.43	-13.00	-44.43

7-17. Radiated Spurious Data (WCDMA AWS – Low Channel)

Mode:	WCDMA RMC
Channel:	1413
Frequency (MHz):	1732.6

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]
3465.2	H	394	298	-62.27	1.19	45.92	-49.34	-13.00	-36.34
5197.8	H	331	67	-74.43	5.15	37.72	-57.54	-13.00	-44.54
6930.4	H	-	-	-79.72	7.36	34.64	-60.61	-13.00	-47.61
8663.0	H	-	-	-80.24	11.06	37.82	-57.44	-13.00	-44.44

Table 7-18. Radiated Spurious Data (WCDMA AWS – Mid Channel)

Mode:	WCDMA RMC
Channel:	1513
Frequency (MHz):	1752.6

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]
3505.2	H	145	359	-65.23	1.60	43.37	-51.89	-13.00	-38.89
5257.8	H	282	71	-69.28	4.78	42.50	-52.75	-13.00	-39.75
7010.4	H	-	-	-79.26	6.75	34.49	-60.76	-13.00	-47.76
8763.0	H	-	-	-79.68	10.58	37.90	-57.35	-13.00	-44.35

Table 7-19. Radiated Spurious Data (WCDMA AWS – Mid 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 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

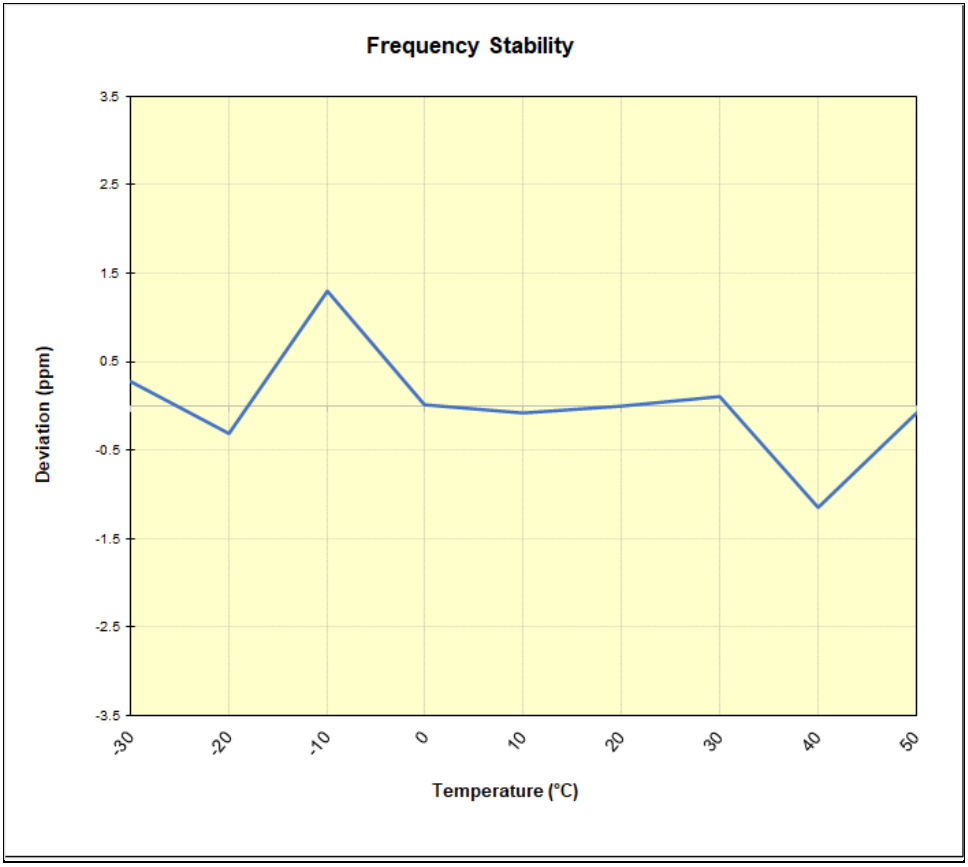
Frequency Stability / Temperature Variation

LTE Band 4

Operating Frequency (Hz):	1,732,500,000
Ref. Voltage (VDC):	3.80

Voltage (%)	Power (VDC)	Temp (°C)	Frequency (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	3.80	- 30	1,732,501,711	470	0.0000271
		- 20	1,732,500,718	-523	-0.0000302
		- 10	1,732,503,489	2,248	0.0001297
		0	1,732,501,260	19	0.0000011
		+ 10	1,732,501,097	-144	-0.0000083
		+ 20 (Ref)	1,732,501,241	0	0.0000000
		+ 30	1,732,501,440	199	0.0000115
		+ 40	1,732,499,245	-1,996	-0.0001152
		+ 50	1,732,501,097	-144	-0.0000083
85 %	3.20	+ 20	1,732,502,165	924	0.0000533
115 %	4.40	+ 20	1,732,503,205	1,963	0.0001133

Table 7-20. LTE BAND 4 Frequency Stability Data



Plot 7-148. LTE BAND 4 Frequency Stability Chart

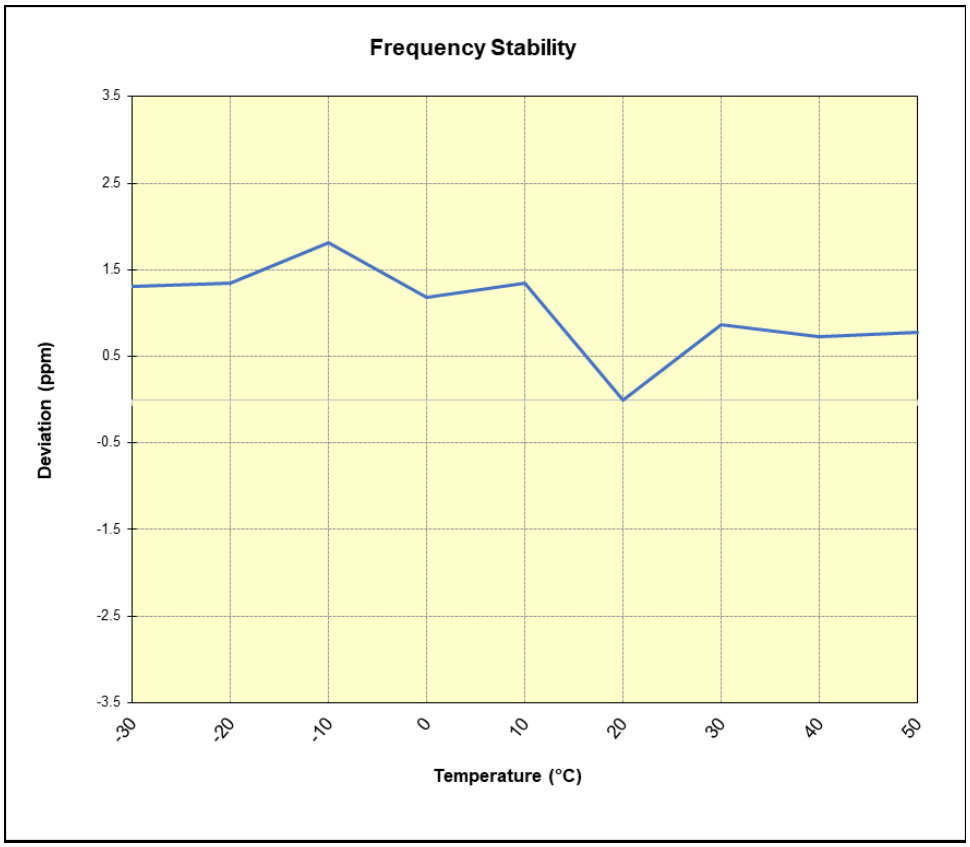
Frequency Stability / Temperature Variation

LTE Band 8

Operating Frequency (Hz):	899,000,000
Ref. Voltage (VDC):	3.80

Voltage (%)	Power (VDC)	Temp (°C)	Frequency (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	3.80	- 30	899,001,097	1,177	0.0001309
		- 20	899,001,133	1,213	0.0001350
		- 10	899,001,548	1,628	0.0001811
		0	899,000,981	1,062	0.0001181
		+ 10	899,001,131	1,211	0.0001347
		+ 20 (Ref)	898,999,920	0	0.0000000
		+ 30	899,000,702	783	0.0000871
		+ 40	899,000,575	655	0.0000729
		+ 50	899,000,617	697	0.0000776
85 %	3.20	+ 20	898,999,914	-6	-0.0000006
115 %	4.40	+ 20	898,999,527	-393	-0.0000437

Table 7-21. LTE Band 8 Frequency Stability Data



Plot 7-149. LTE Band 8 Frequency Stability Chart

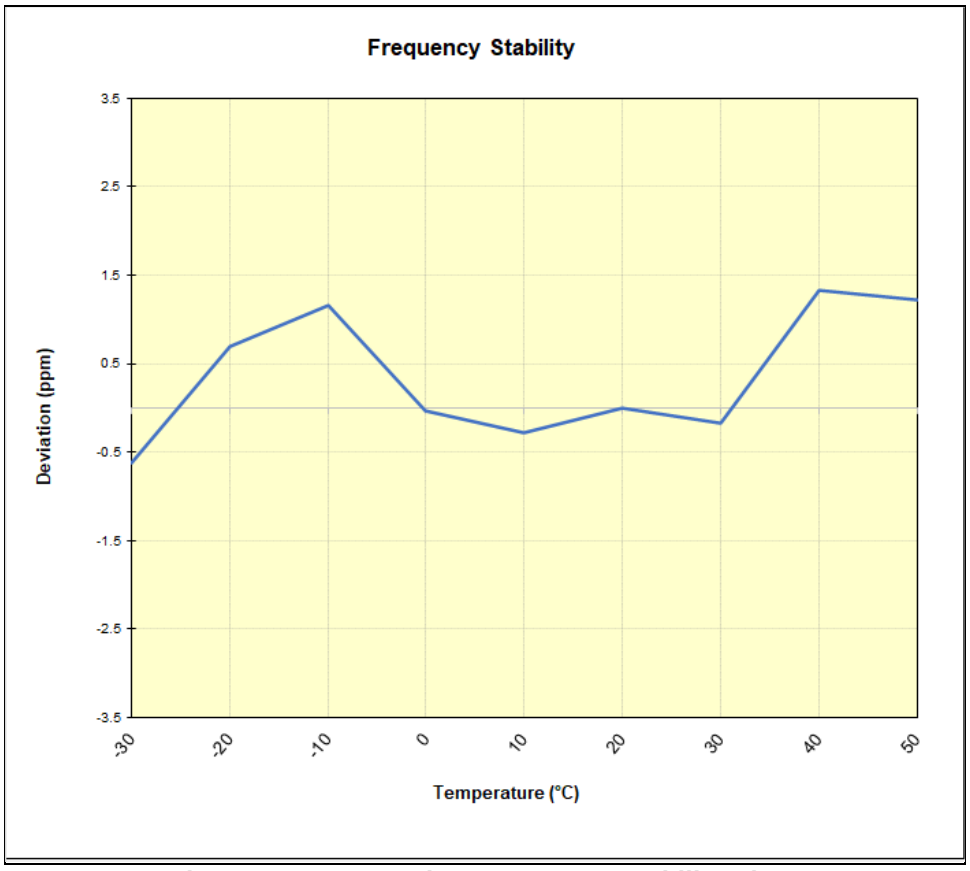
Frequency Stability / Temperature Variation

LTE Band 12

Operating Frequency (Hz):	707,500,000
Ref. Voltage (VDC):	3.80

Voltage (%)	Power (VDC)	Temp (°C)	Frequency (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	3.80	- 30	707,496,282	-443	-0.0000626
		- 20	707,497,215	489	0.0000692
		- 10	707,497,541	816	0.0001154
		0	707,496,706	-19	-0.0000027
		+ 10	707,496,532	-193	-0.0000273
		+ 20 (Ref)	707,496,725	0	0.0000000
		+ 30	707,496,603	-122	-0.0000173
		+ 40	707,497,672	947	0.0001339
		+ 50	707,497,593	868	0.0001227
85 %	3.20	+ 20	707,495,621	-1,104	-0.0001561
115 %	4.40	+ 20	707,496,303	-422	-0.0000596

Table 7-22. LTE Band 12 Frequency Stability Data



Plot 7-150. LTE Band 12 Frequency Stability Chart

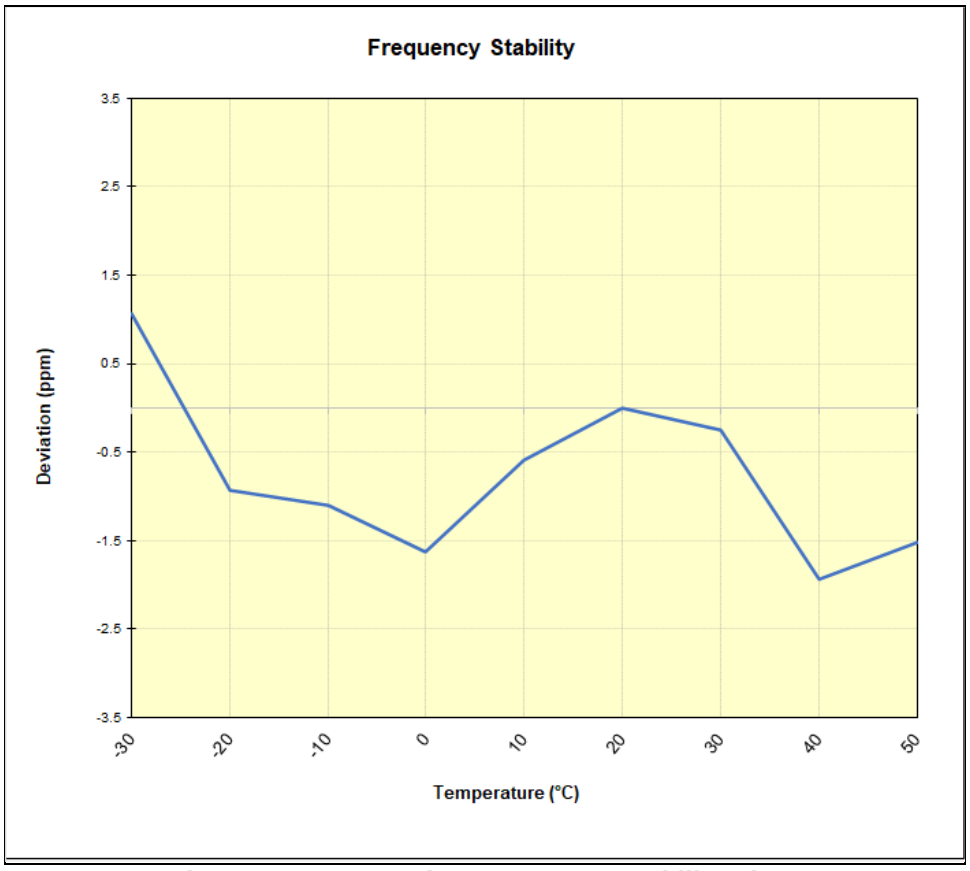
Frequency Stability / Temperature Variation

LTE Band 13

Operating Frequency (Hz):	782,000,000
Ref. Voltage (VDC):	3.80

Voltage (%)	Power (VDC)	Temp (°C)	Frequency (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	3.80	- 30	782,008,372	836	0.0001069
		- 20	782,006,814	-722	-0.0000923
		- 10	782,006,673	-862	-0.0001103
		0	782,006,263	-1,272	-0.0001627
		+ 10	782,007,077	-458	-0.0000586
		+ 20 (Ref)	782,007,535	0	0.0000000
		+ 30	782,007,344	-192	-0.0000245
		+ 40	782,006,021	-1,515	-0.0001937
		+ 50	782,006,354	-1,182	-0.0001511
85 %	3.20	+ 20	782,006,936	-600	-0.0000767
115 %	4.40	+ 20	782,006,900	-636	-0.0000813

Table 7-23. LTE Band 13 Frequency Stability Data



Plot 7-151. LTE Band 13 Frequency Stability Chart

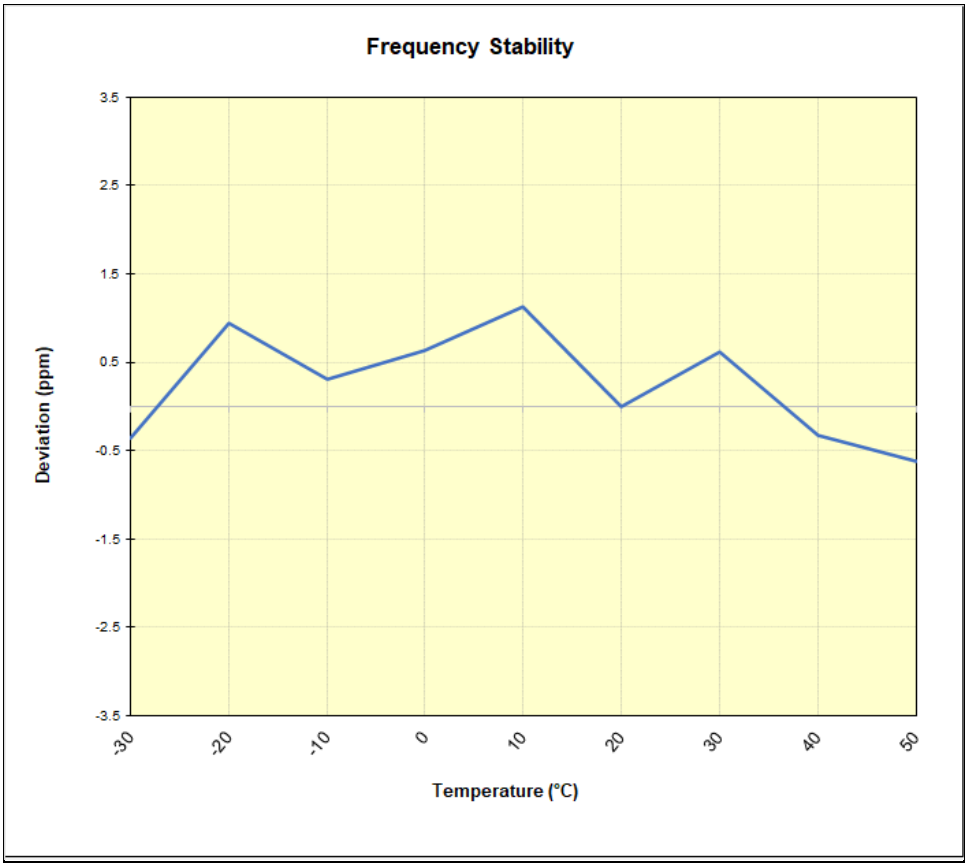
Frequency Stability / Temperature Variation

WCDMA AWS

Operating Frequency (Hz):	1,732,600,000
Ref. Voltage (VDC):	3.80

Voltage (%)	Power (VDC)	Temp (°C)	Frequency (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	3.80	- 30	1,732,604,287	-618	-0.0000357
		- 20	1,732,606,549	1,644	0.0000949
		- 10	1,732,605,447	542	0.0000313
		0	1,732,605,992	1,087	0.0000627
		+ 10	1,732,606,871	1,966	0.0001134
		+ 20 (Ref)	1,732,604,905	0	0.0000000
		+ 30	1,732,605,974	1,069	0.0000617
		+ 40	1,732,604,343	-562	-0.0000324
		+ 50	1,732,603,845	-1,060	-0.0000612
85 %	3.20	+ 20	1,732,603,989	-917	-0.0000529
115 %	4.40	+ 20	1,732,605,697	792	0.0000457

Table 7-24. WCDMA AWS Frequency Stability Data



Plot 7-152. WCDMA AWS Frequency Stability Chart

8.0 CONCLUSION

The data collected relate only to the item(s) tested and show that the **Telit Communications S.p.A Data Terminal Module FCC ID: RI7LE910CXWWX**. complies with all the requirements of Part 27 of the FCC rules.