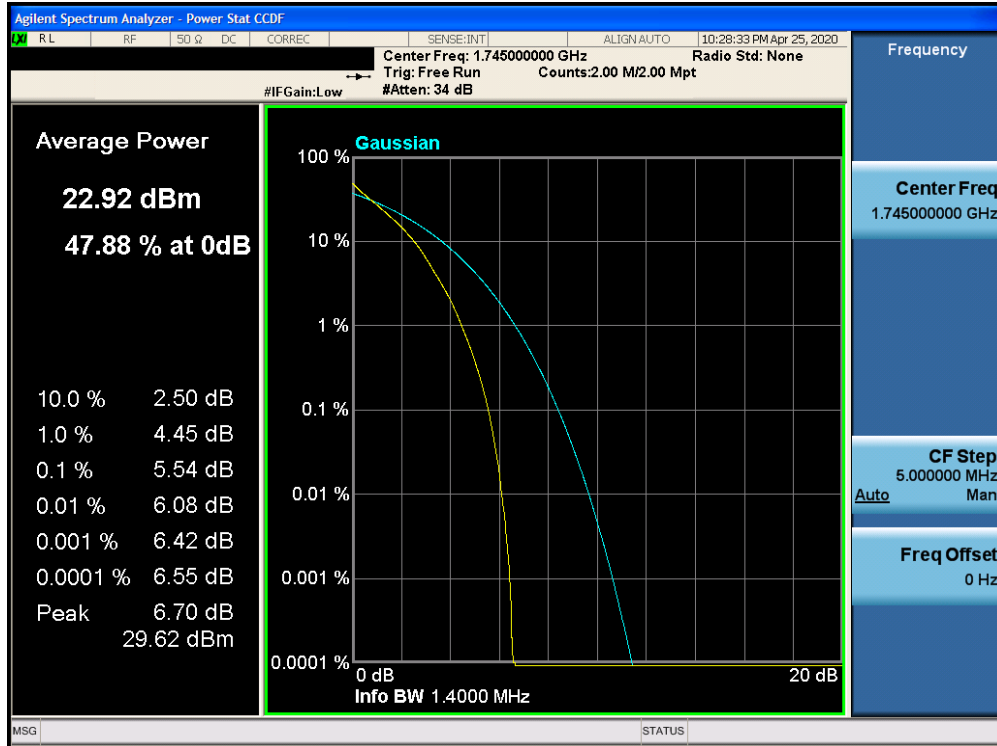
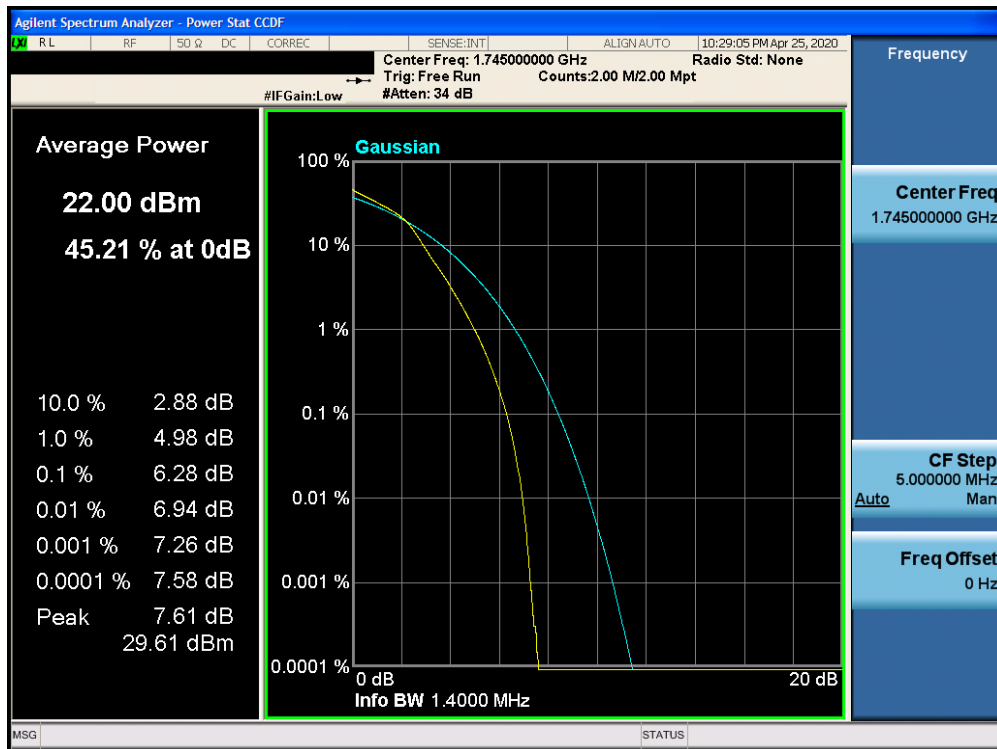


Band 66

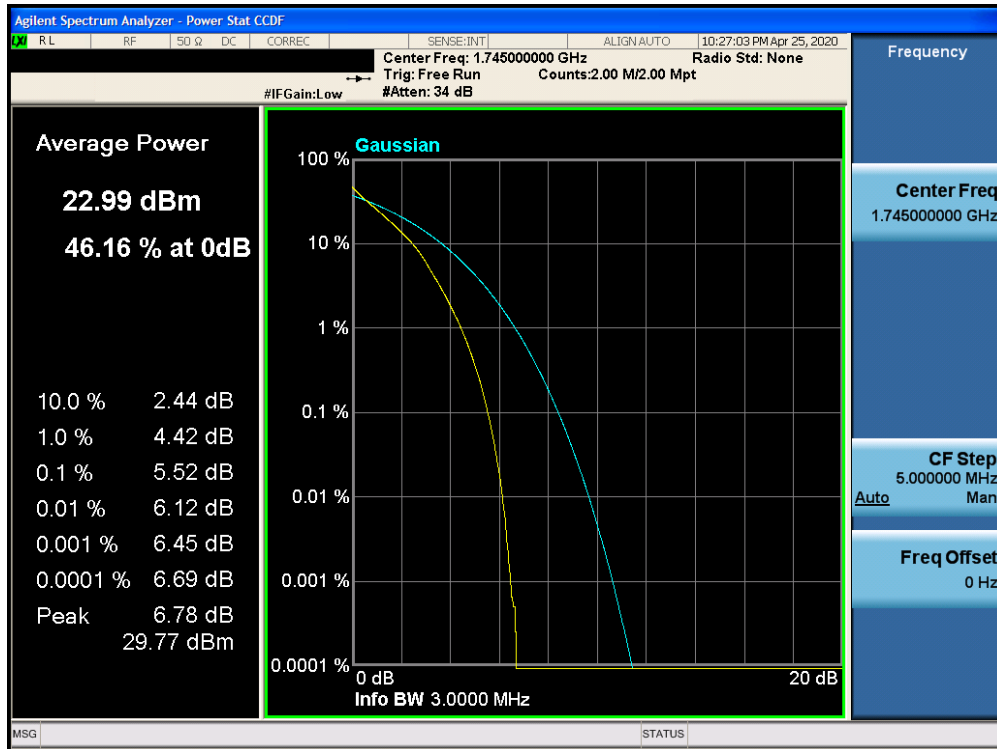


Plot 7-276. PAR Plot (Band 66 - 1.4MHz QPSK - Full RB Configuration)

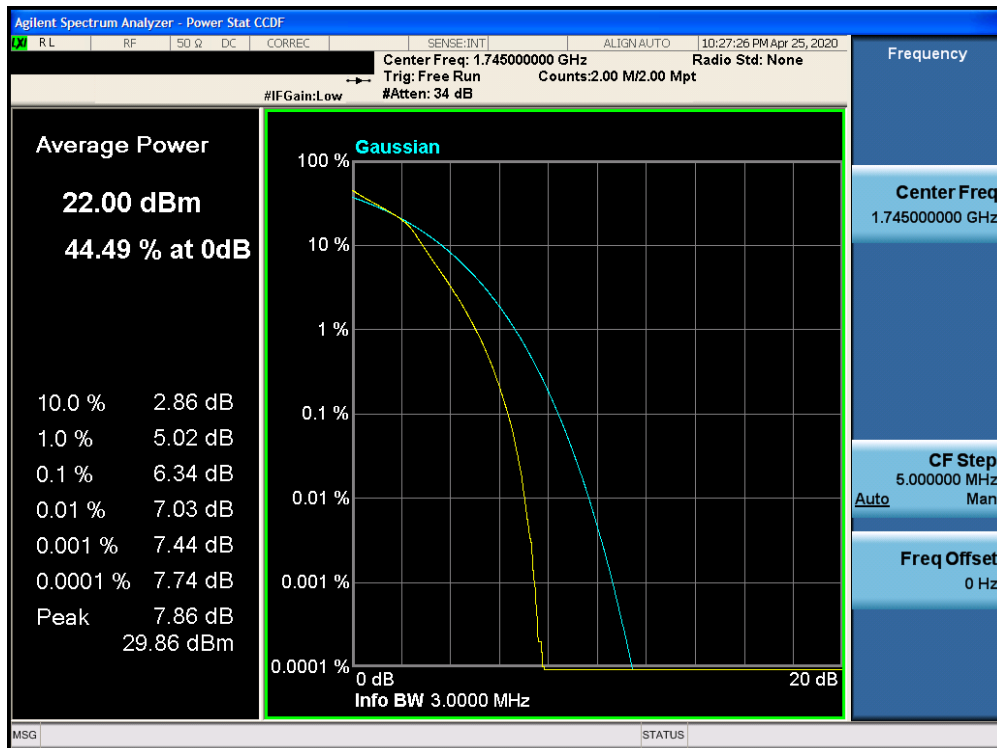


Plot 7-277. PAR Plot (Band 66 - 1.4MHz 16-QAM - Full RB Configuration)

FCC ID: BCG-A2294	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2004270019-03-R1.BCG	Test Dates: 05/01/2020 - 08/01/2020	EUT Type: Watch	Page 170 of 238

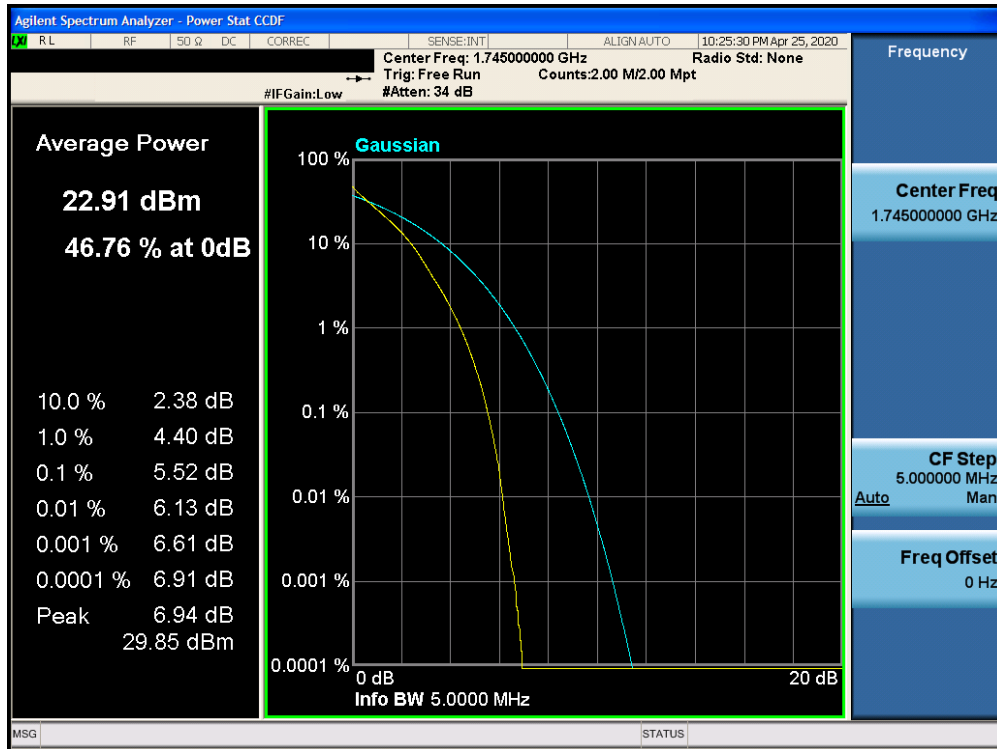


Plot 7-278. PAR Plot (Band 66 - 3.0MHz QPSK - Full RB Configuration)

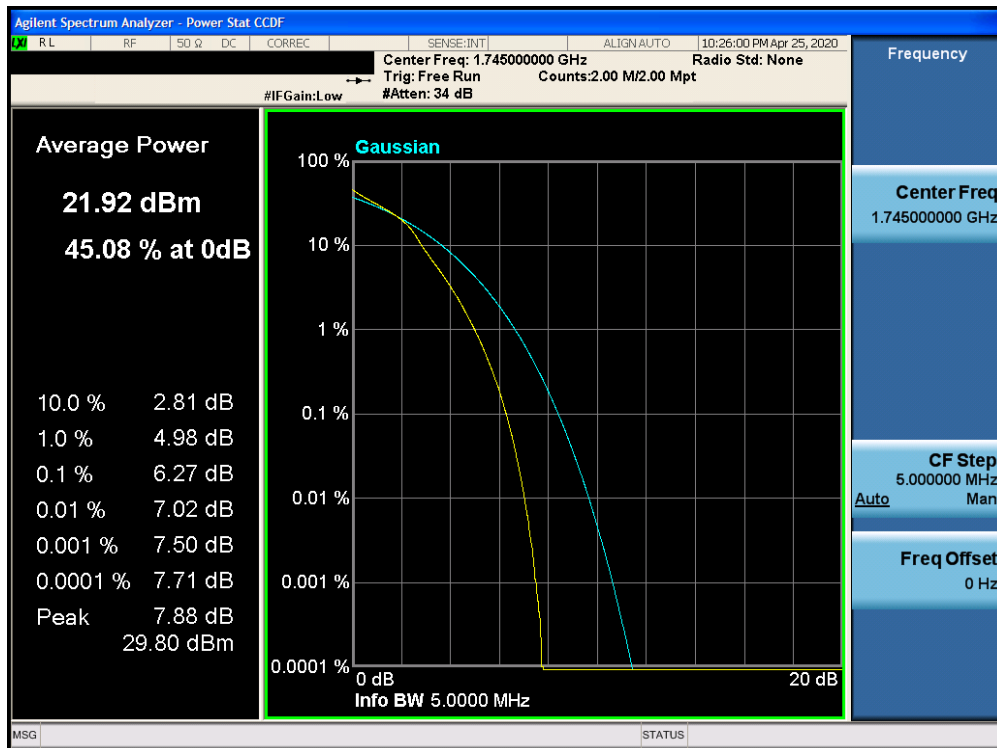


Plot 7-279. PAR Plot (Band 66 - 3.0MHz 16-QAM - Full RB Configuration)

FCC ID: BCG-A2294	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2004270019-03-R1.BCG	Test Dates: 05/01/2020 - 08/01/2020	EUT Type: Watch	Page 171 of 238

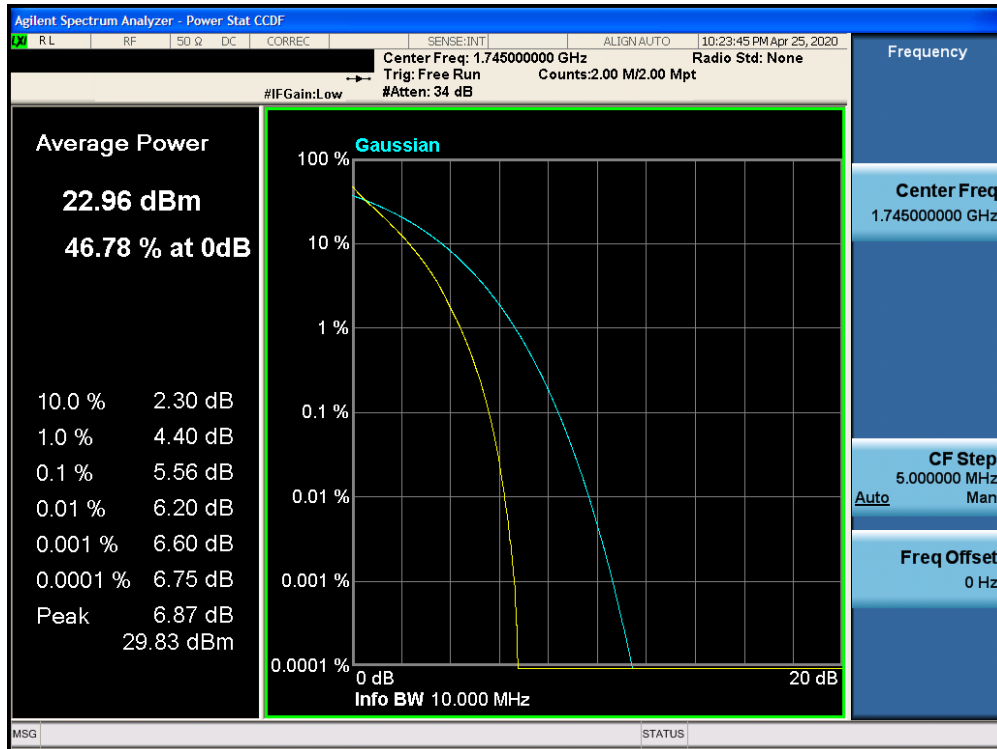


Plot 7-280. PAR Plot (Band 66 - 5.0MHz QPSK - Full RB Configuration)

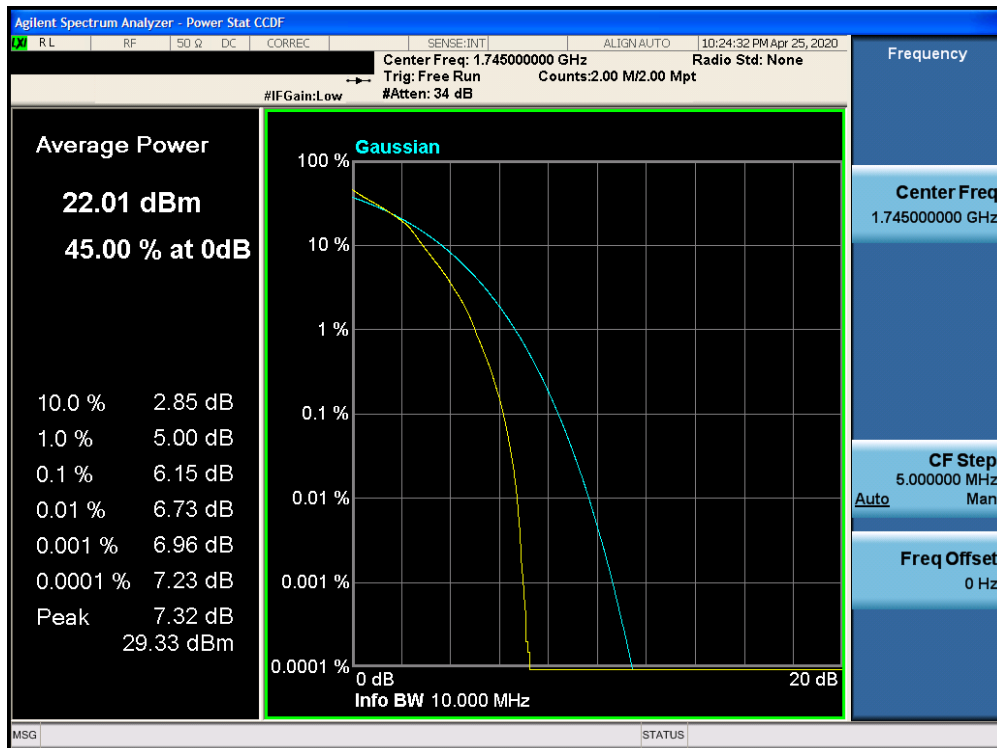


Plot 7-281. PAR Plot (Band 66 - 5.0MHz 16-QAM - Full RB Configuration)

FCC ID: BCG-A2294	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2004270019-03-R1.BCG	Test Dates: 05/01/2020 - 08/01/2020	EUT Type: Watch	Page 172 of 238

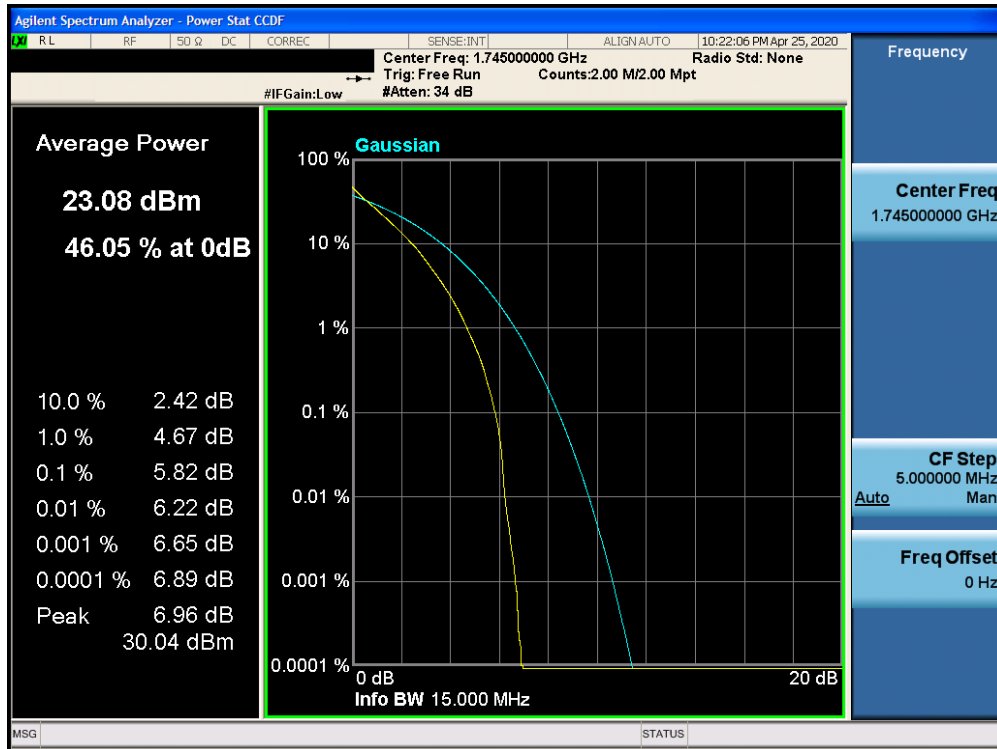


Plot 7-282. PAR Plot (Band 66 - 10.0MHz QPSK - Full RB Configuration)

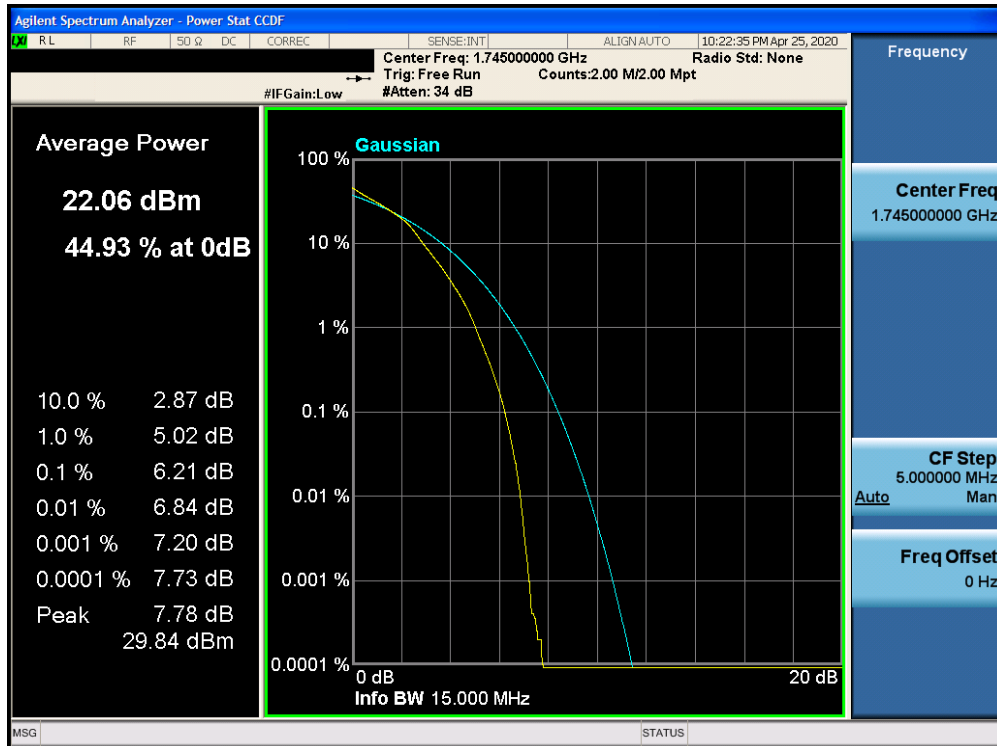


Plot 7-283. PAR Plot (Band 66 - 10.0MHz 16-QAM - Full RB Configuration)

FCC ID: BCG-A2294	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2004270019-03-R1.BCG	Test Dates: 05/01/2020 - 08/01/2020	EUT Type: Watch	Page 173 of 238

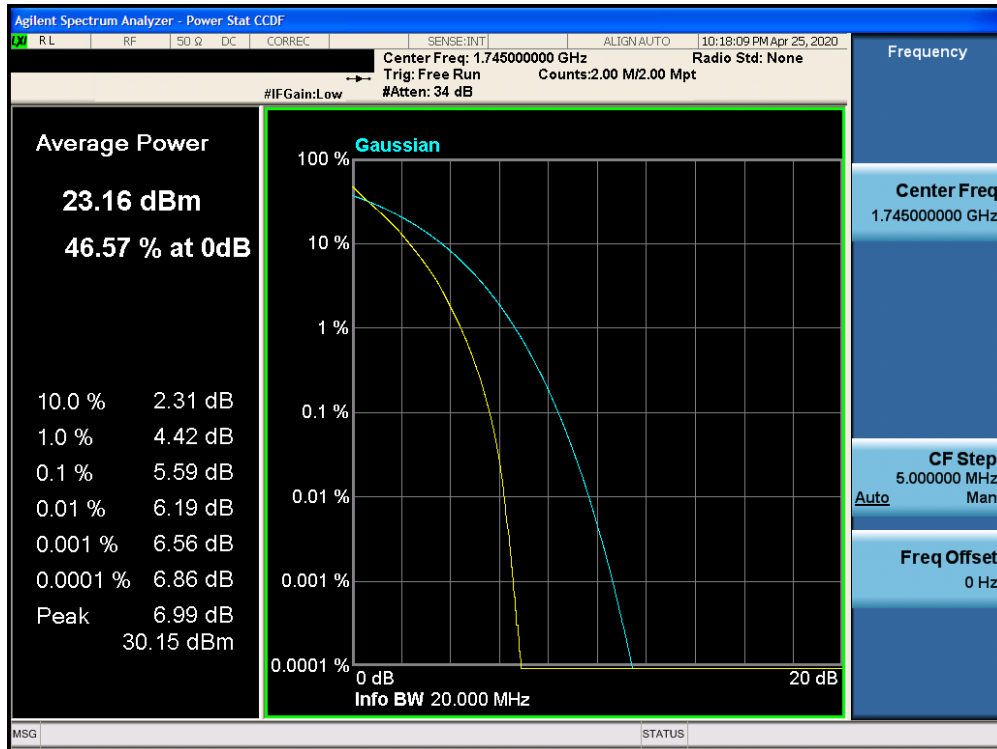


Plot 7-284. PAR Plot (Band 66 - 15.0MHz QPSK - Full RB Configuration)

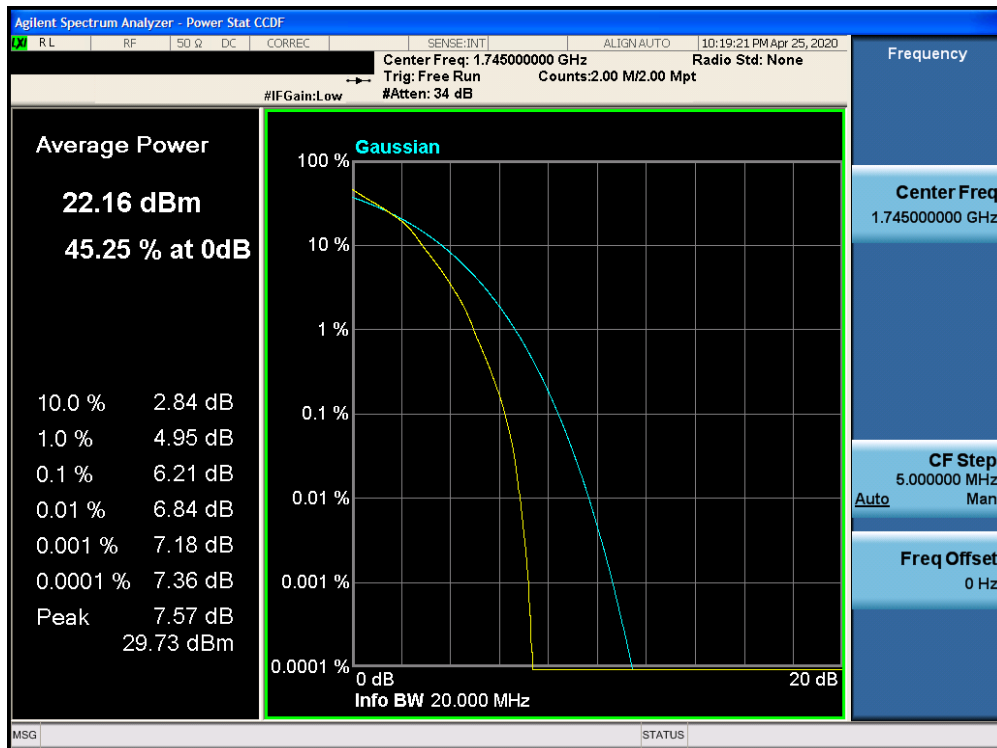


Plot 7-285. PAR Plot (Band 66 - 15.0MHz 16-QAM - Full RB Configuration)

FCC ID: BCG-A2294	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2004270019-03-R1.BCG	Test Dates: 05/01/2020 - 08/01/2020	EUT Type: Watch	Page 174 of 238



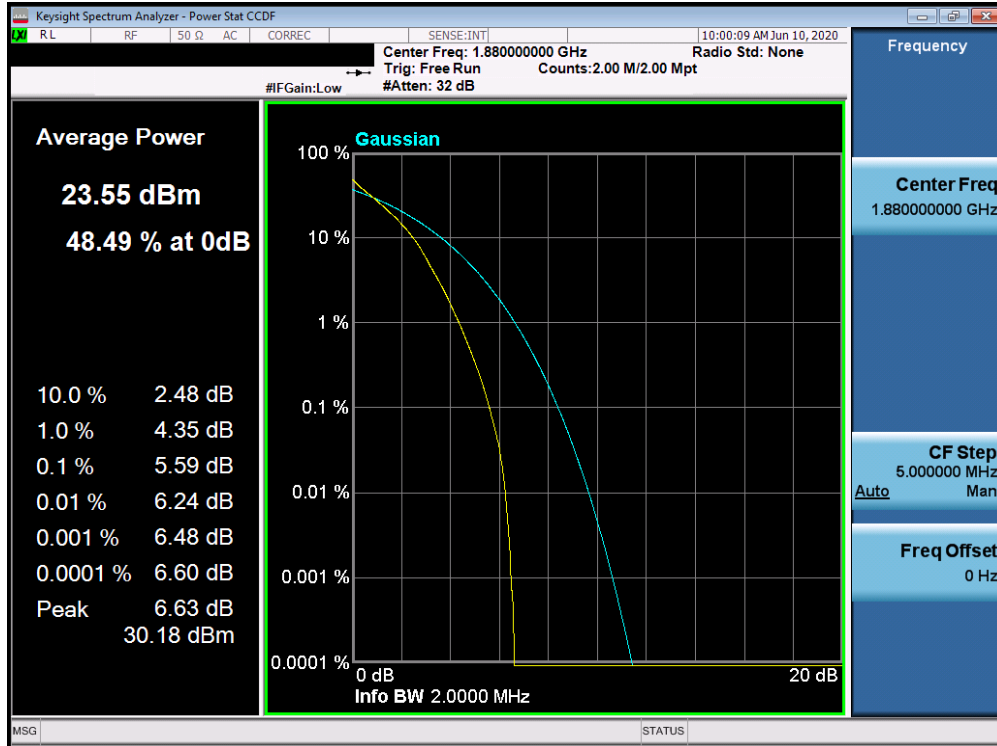
Plot 7-286. PAR Plot (Band 66 - 20.0MHz QPSK - Full RB Configuration)



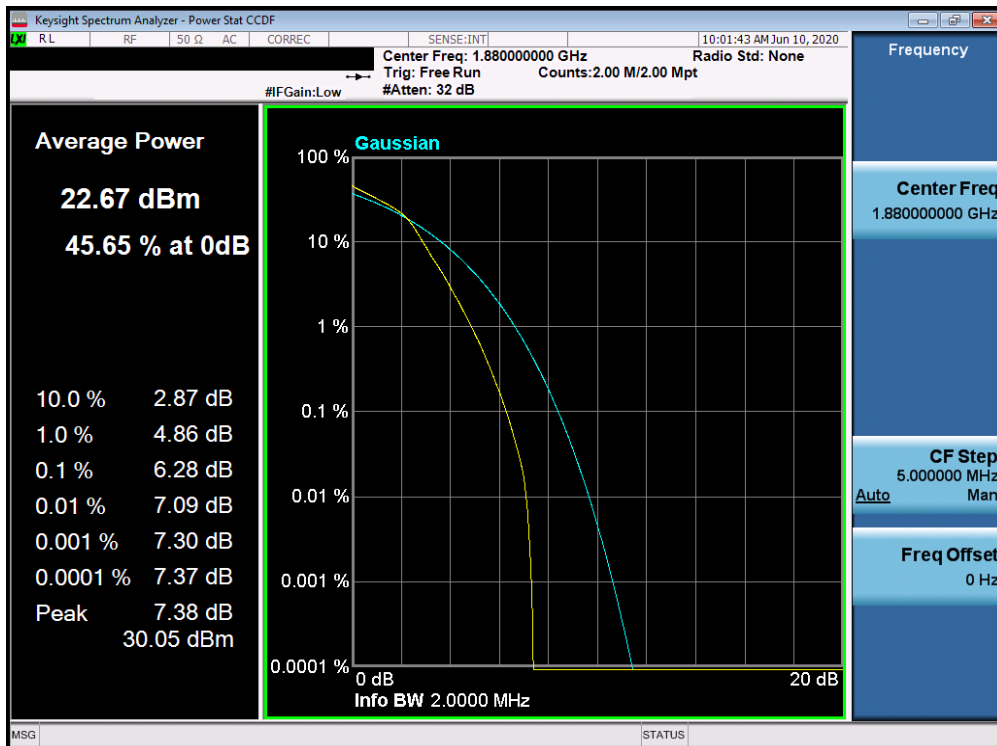
Plot 7-287. PAR Plot (Band 66 - 20.0MHz 16-QAM - Full RB Configuration)

FCC ID: BCG-A2294	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2004270019-03-R1.BCG	Test Dates: 05/01/2020 - 08/01/2020	EUT Type: Watch	Page 175 of 238

Band 2

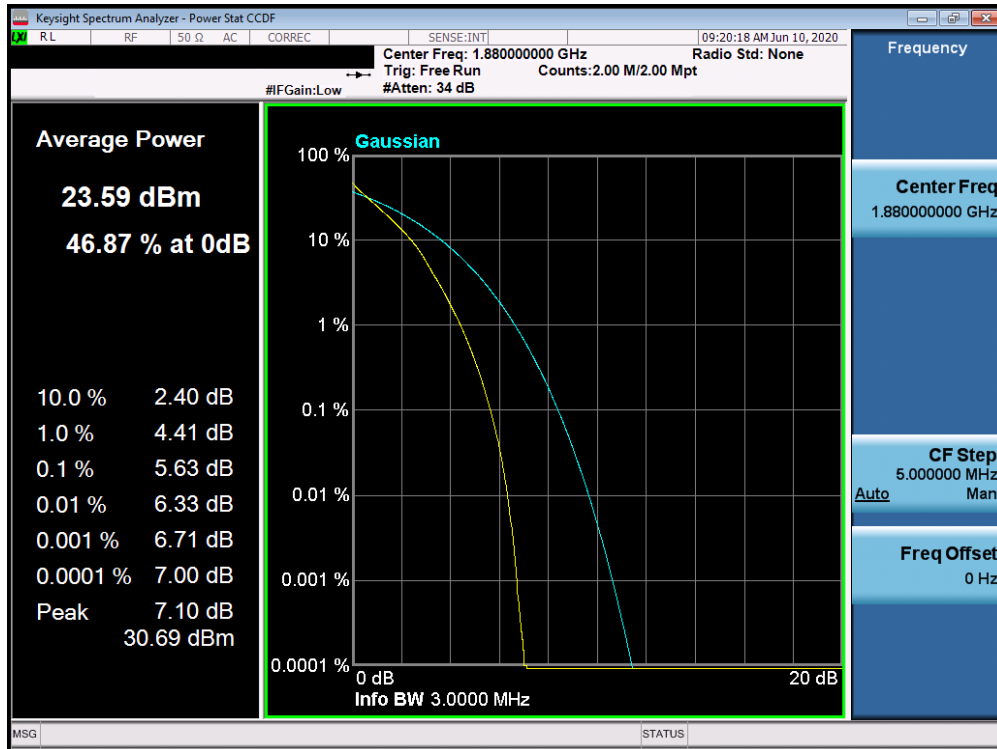


Plot 7-288. PAR Plot (Band 2 - 1.4MHz QPSK - Full RB Configuration)

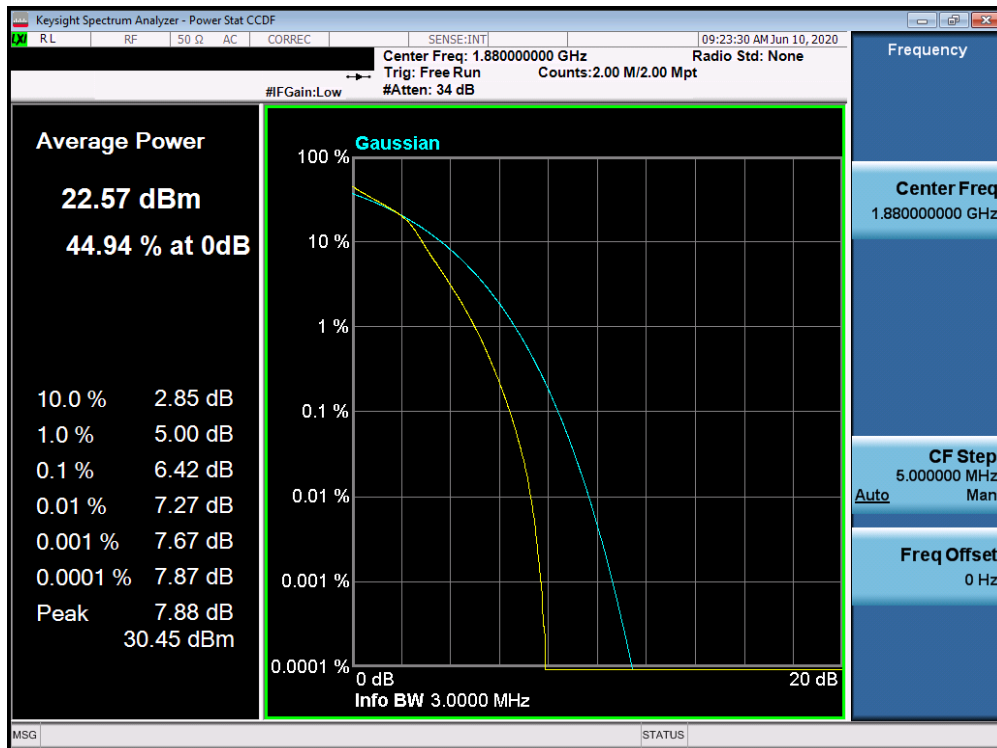


Plot 7-289. PAR Plot (Band 2 - 1.4MHz 16-QAM - Full RB Configuration)

FCC ID: BCG-A2294	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2004270019-03-R1.BCG	Test Dates: 05/01/2020 - 08/01/2020	EUT Type: Watch	Page 176 of 238

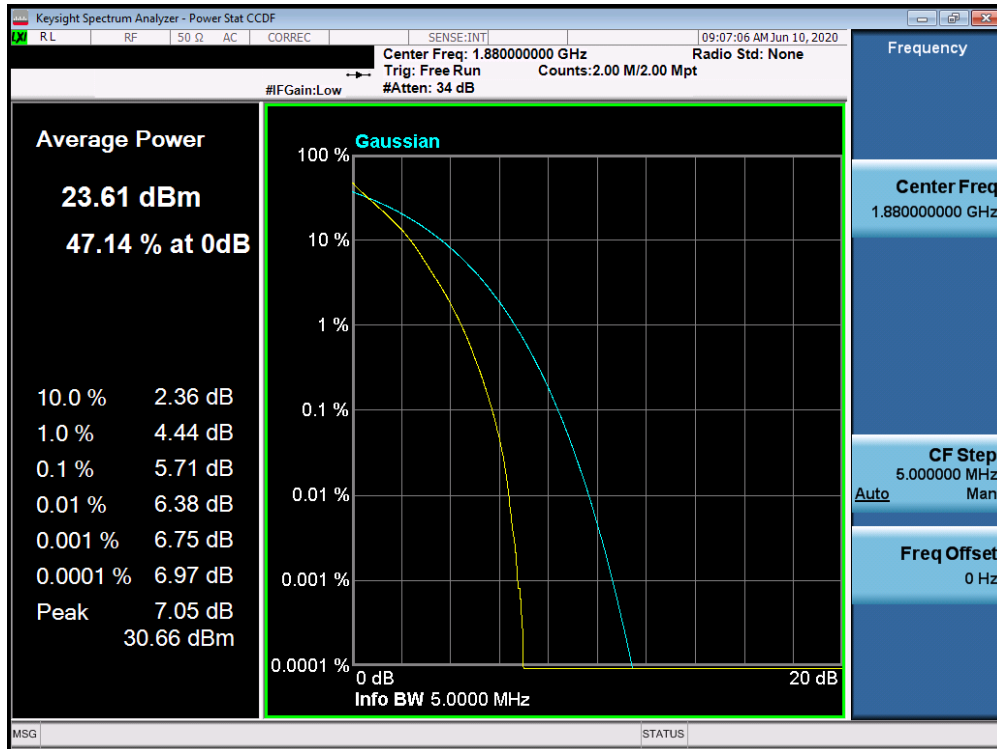


Plot 7-290. PAR Plot (Band 2 - 3.0MHz QPSK - Full RB Configuration)

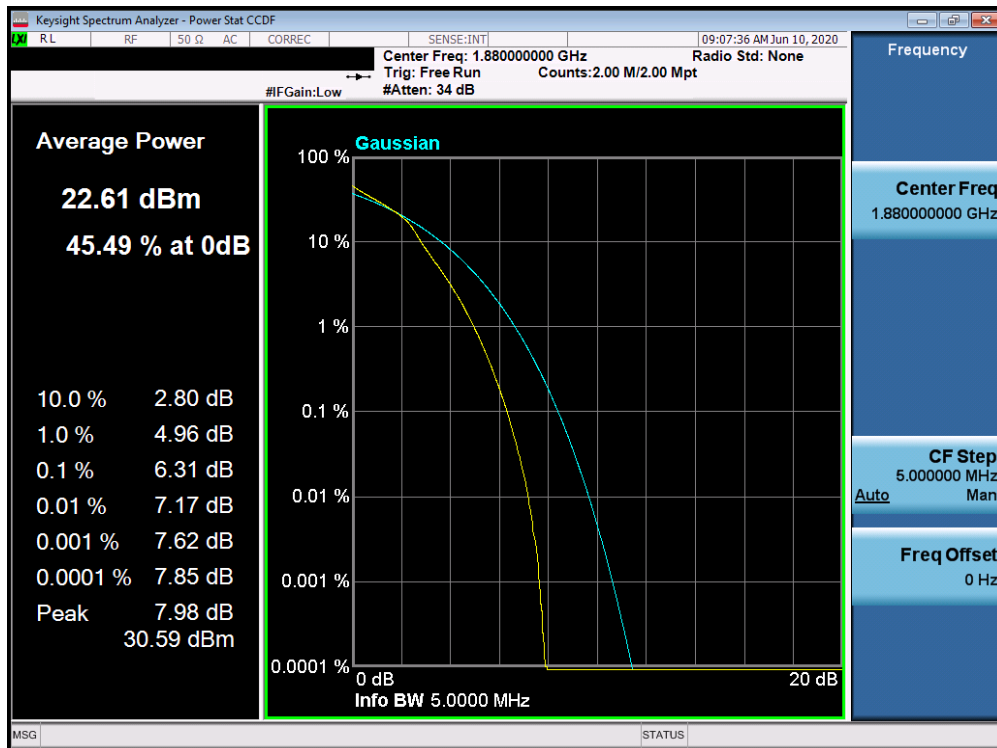


Plot 7-291. PAR Plot (Band 2 - 3.0MHz 16-QAM - Full RB Configuration)

FCC ID: BCG-A2294	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2004270019-03-R1.BCG	Test Dates: 05/01/2020 - 08/01/2020	EUT Type: Watch	Page 177 of 238

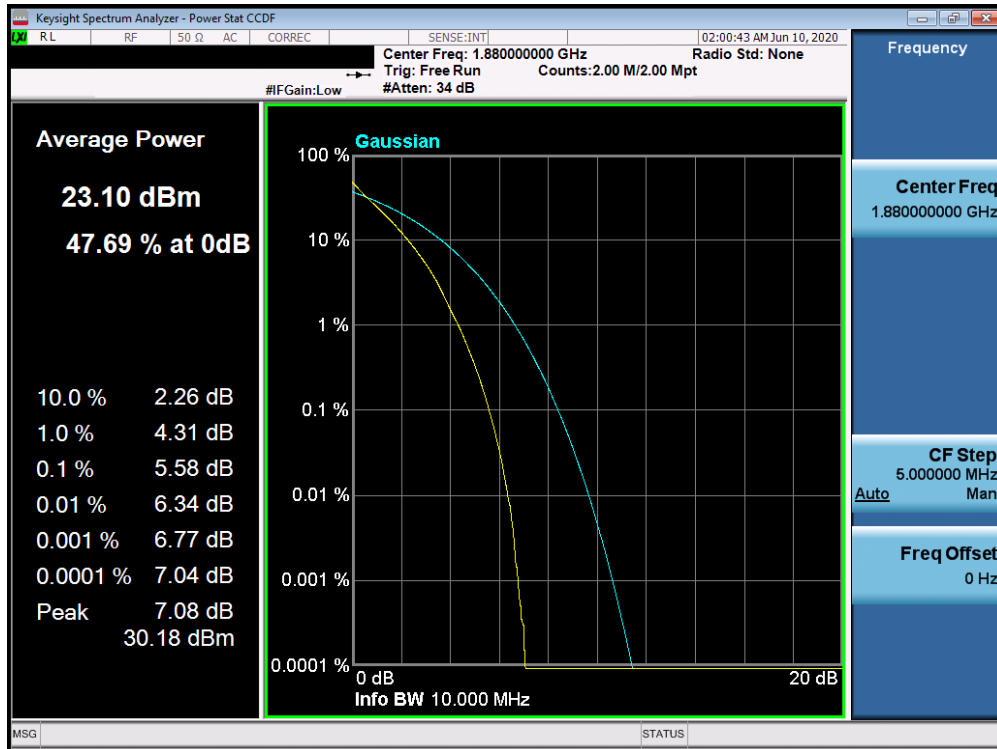


Plot 7-292. PAR Plot (Band 2 - 5.0MHz QPSK - Full RB Configuration)

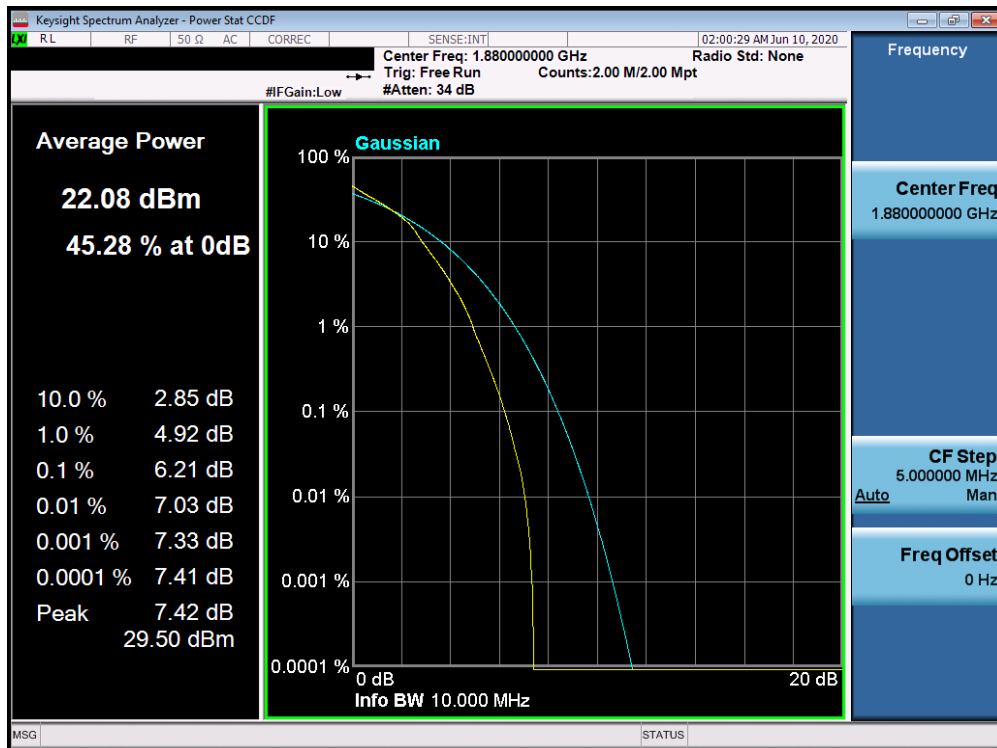


Plot 7-293. PAR Plot (Band 2 - 5.0MHz 16-QAM - Full RB Configuration)

FCC ID: BCG-A2294	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2004270019-03-R1.BCG	Test Dates: 05/01/2020 - 08/01/2020	EUT Type: Watch	Page 178 of 238

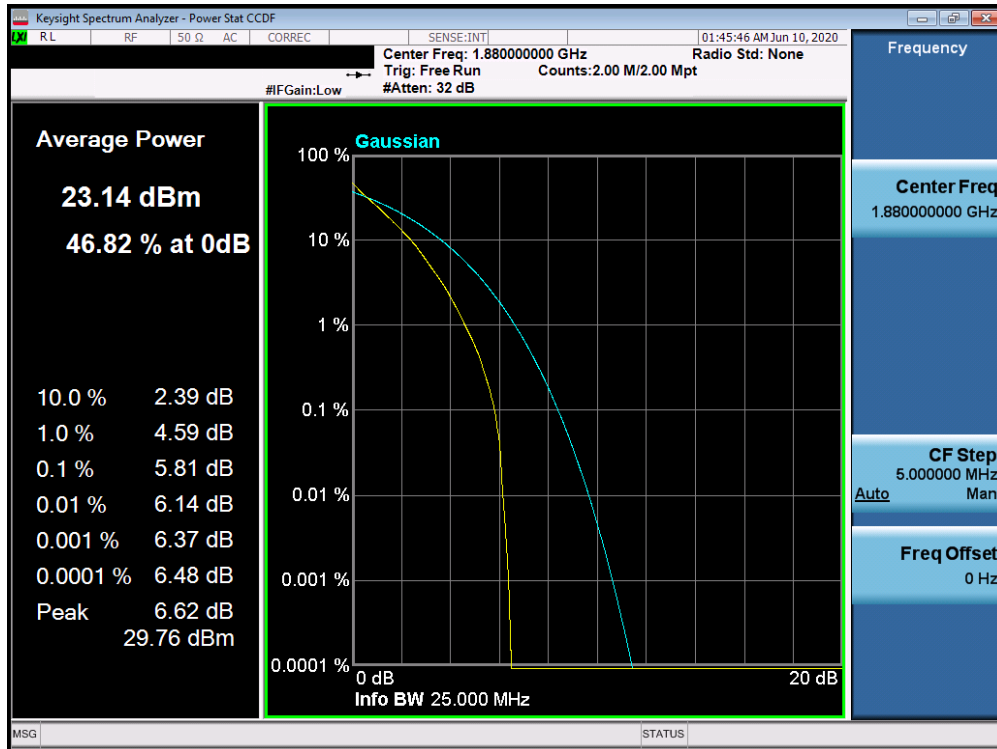


Plot 7-294. PAR Plot (Band 2 - 10.0MHz QPSK - Full RB Configuration)

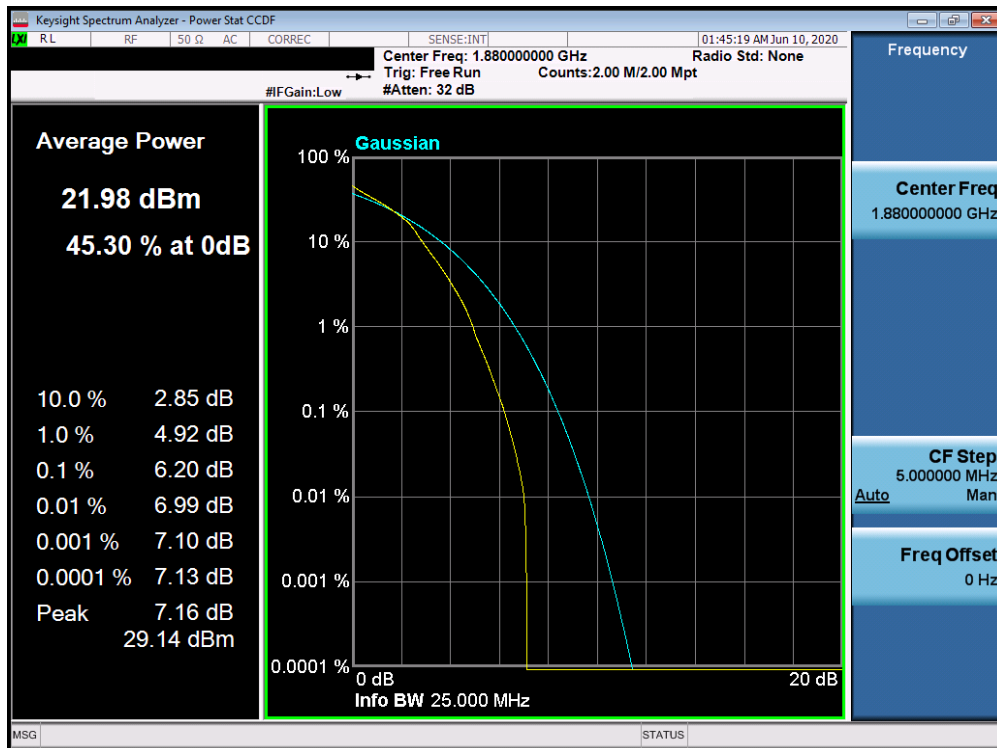


Plot 7-295. PAR Plot (Band 2 - 10.0MHz 16-QAM - Full RB Configuration)

FCC ID: BCG-A2294	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2004270019-03-R1.BCG	Test Dates: 05/01/2020 - 08/01/2020	EUT Type: Watch	Page 179 of 238

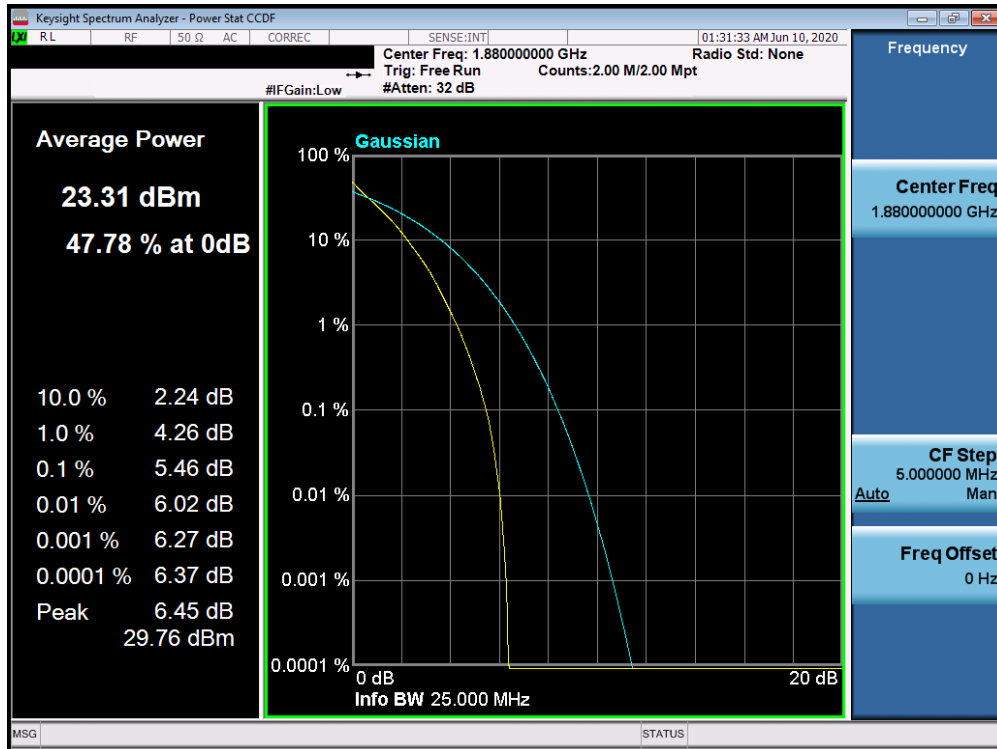


Plot 7-296. PAR Plot (Band 2 - 15.0MHz QPSK - Full RB Configuration)

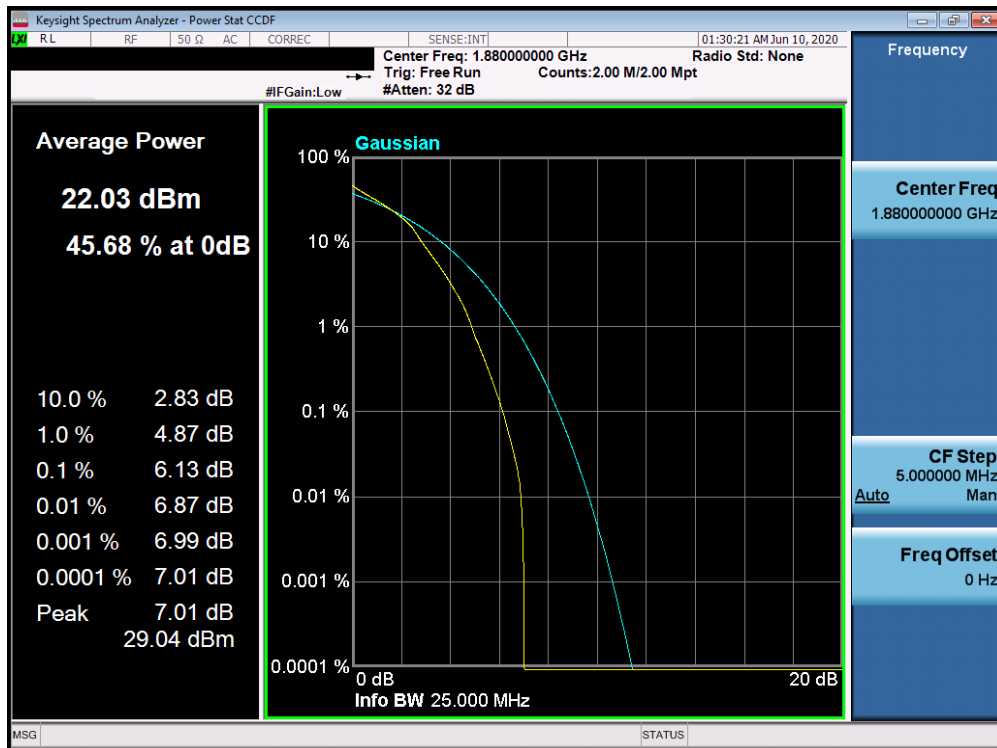


Plot 7-297. PAR Plot (Band 2 - 15.0MHz 16-QAM - Full RB Configuration)

FCC ID: BCG-A2294	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2004270019-03-R1.BCG	Test Dates: 05/01/2020 - 08/01/2020	EUT Type: Watch	Page 180 of 238



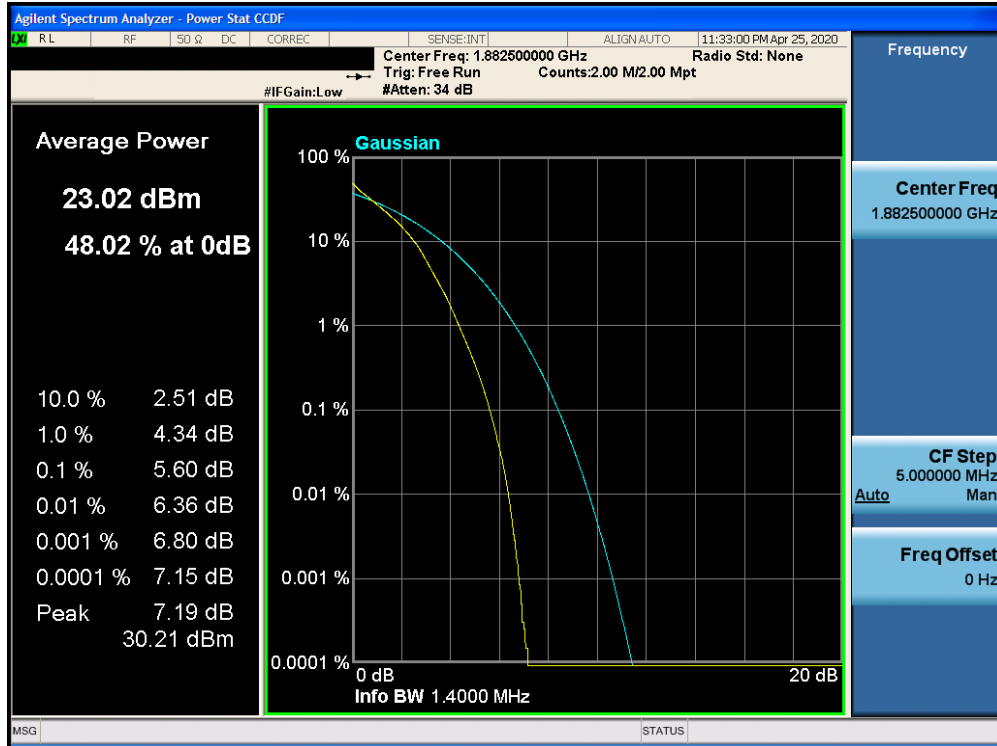
Plot 7-298. PAR Plot (Band 2 - 20.0MHz QPSK - Full RB Configuration)



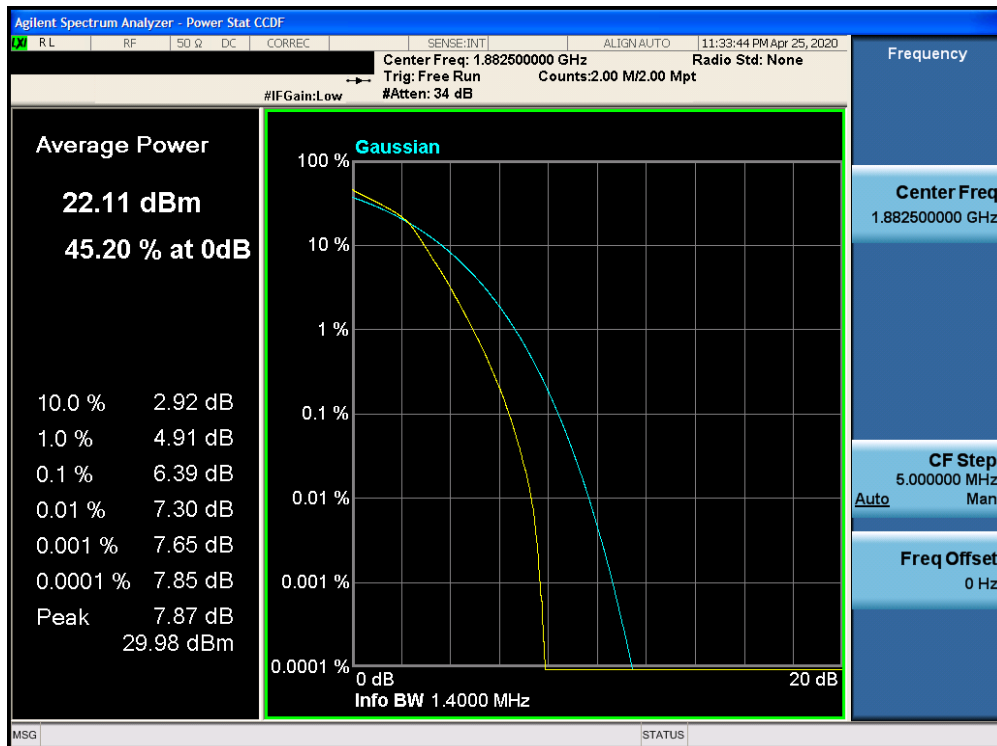
Plot 7-299. PAR Plot (Band 2 - 20.0MHz 16-QAM - Full RB Configuration)

FCC ID: BCG-A2294	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2004270019-03-R1.BCG	Test Dates: 05/01/2020 - 08/01/2020	EUT Type: Watch	Page 181 of 238

Band 25

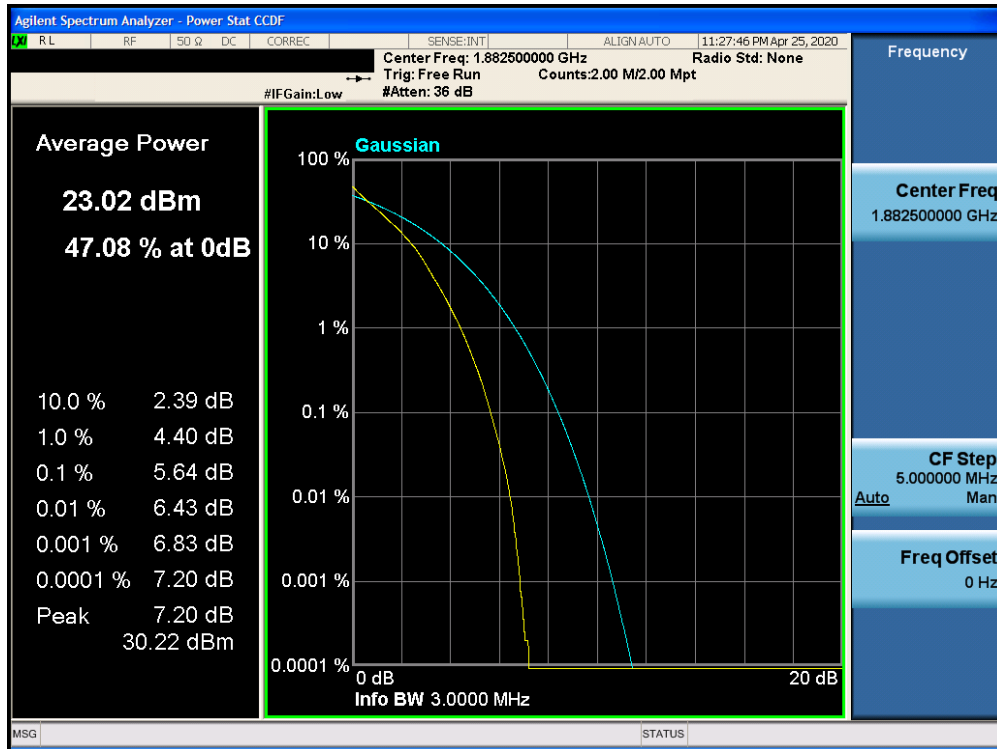


Plot 7-300. PAR Plot (Band 25 - 1.4MHz QPSK - Full RB Configuration)

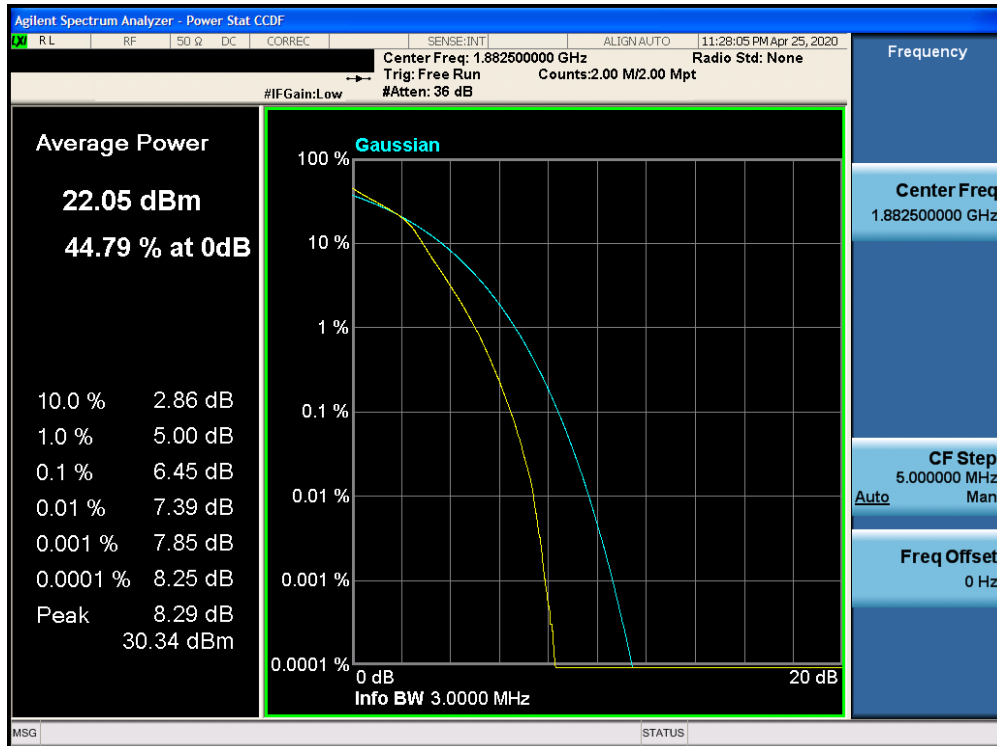


Plot 7-301. PAR Plot (Band 25 - 1.4MHz 16-QAM - Full RB Configuration)

FCC ID: BCG-A2294	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2004270019-03-R1.BCG	Test Dates: 05/01/2020 - 08/01/2020	EUT Type: Watch	Page 182 of 238

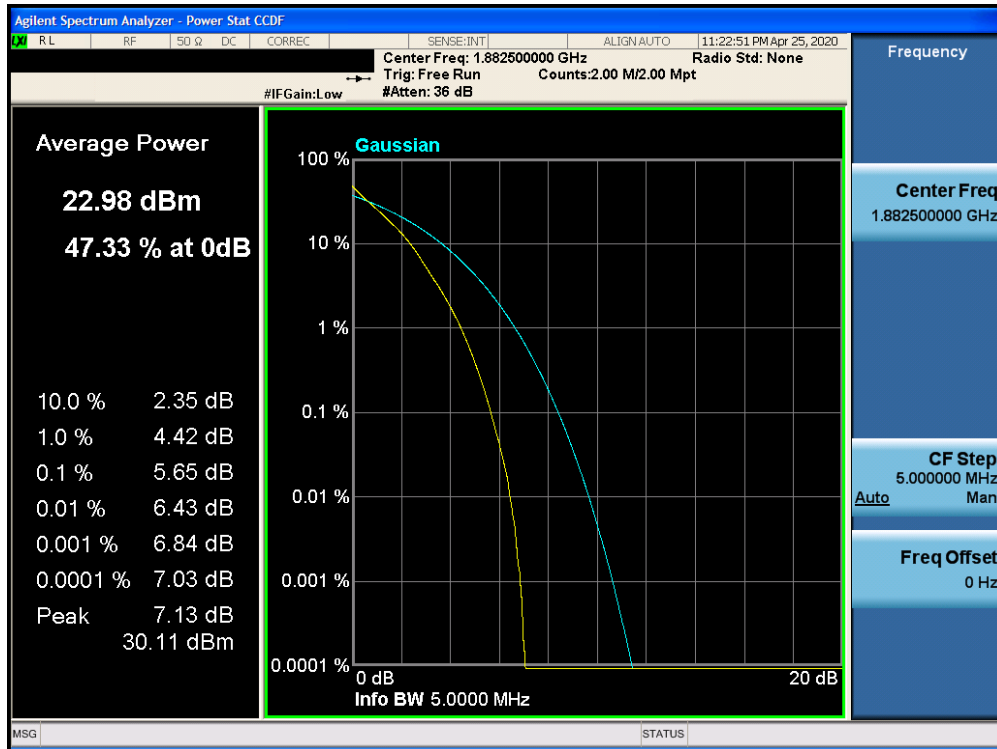


Plot 7-302. PAR Plot (Band 25 - 3.0MHz QPSK - Full RB Configuration)

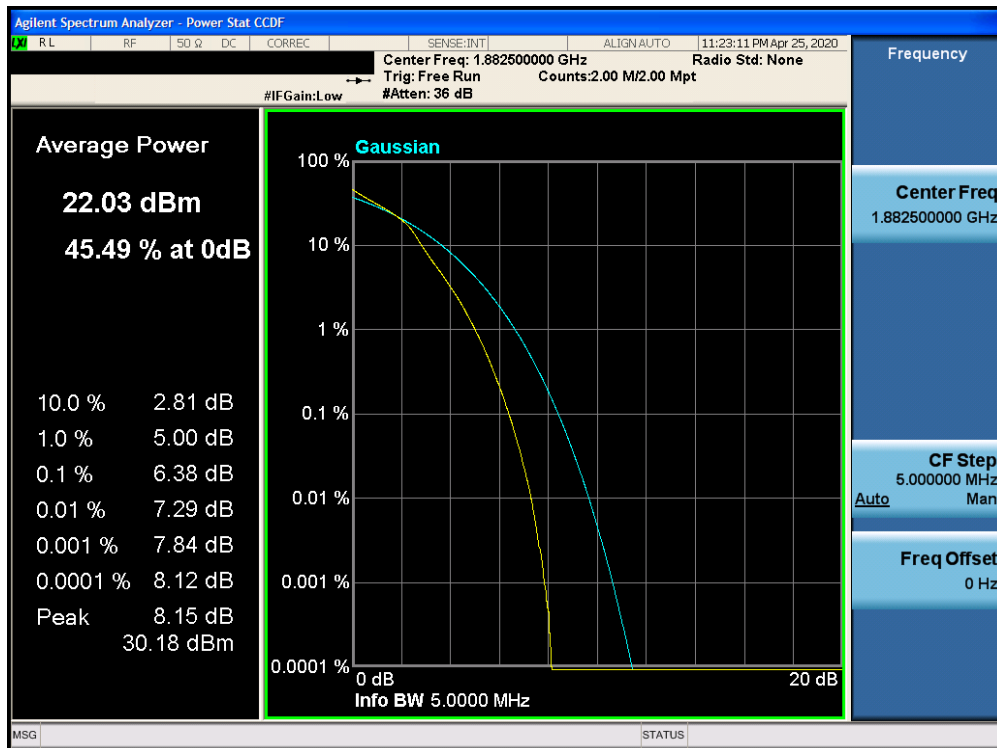


Plot 7-303. PAR Plot (Band 25 - 3.0MHz 16-QAM - Full RB Configuration)

FCC ID: BCG-A2294	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2004270019-03-R1.BCG	Test Dates: 05/01/2020 - 08/01/2020	EUT Type: Watch	Page 183 of 238

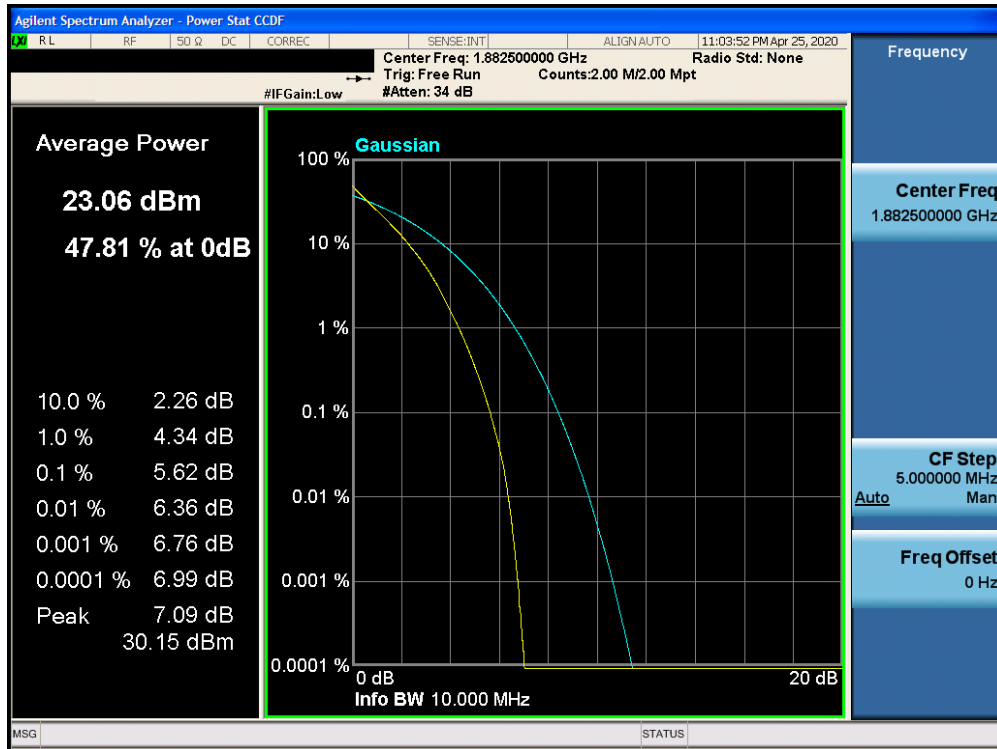


Plot 7-304. PAR Plot (Band 25 - 5.0MHz QPSK - Full RB Configuration)

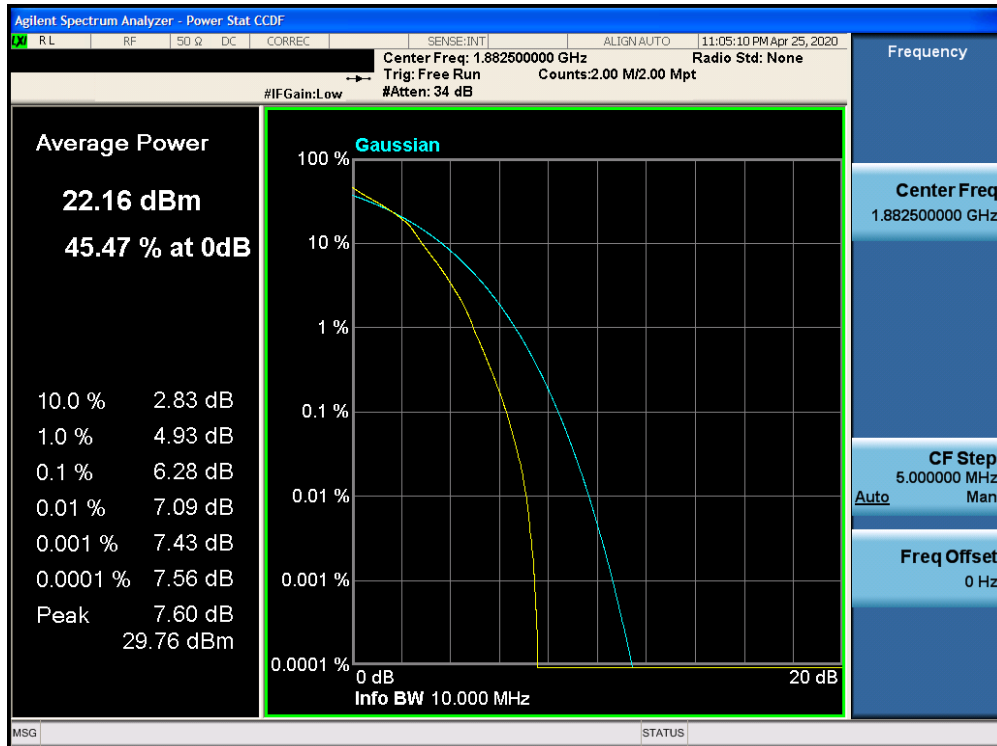


Plot 7-305. PAR Plot (Band 25 - 5.0MHz 16-QAM - Full RB Configuration)

FCC ID: BCG-A2294	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2004270019-03-R1.BCG	Test Dates: 05/01/2020 - 08/01/2020	EUT Type: Watch	Page 184 of 238

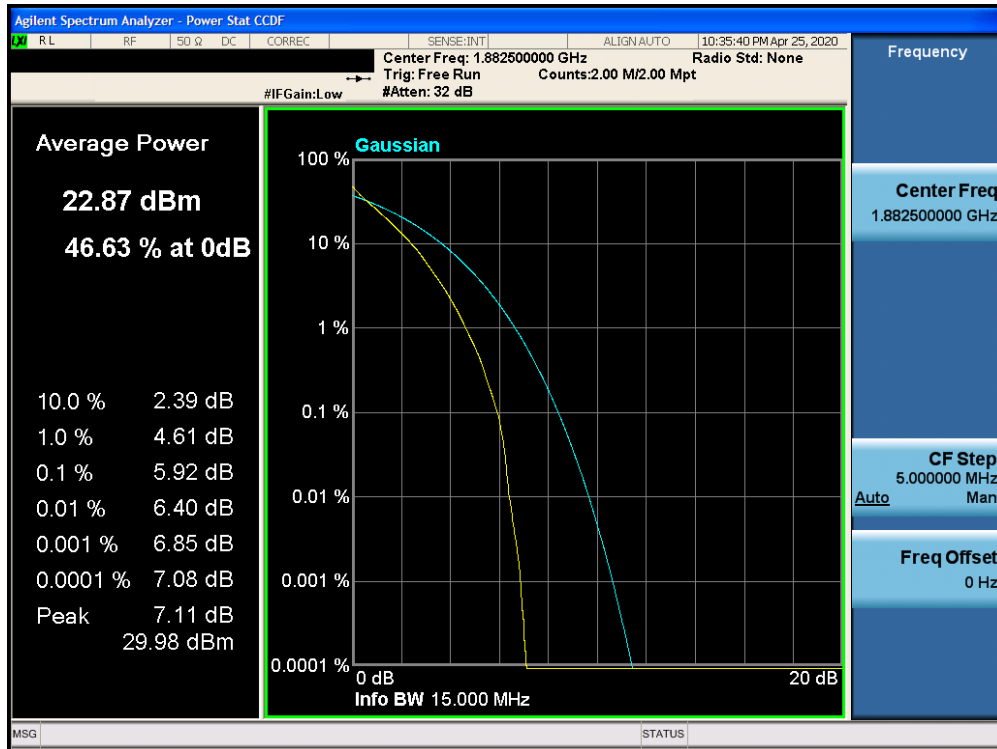


Plot 7-306. PAR Plot (Band 25 - 10.0MHz QPSK - Full RB Configuration)

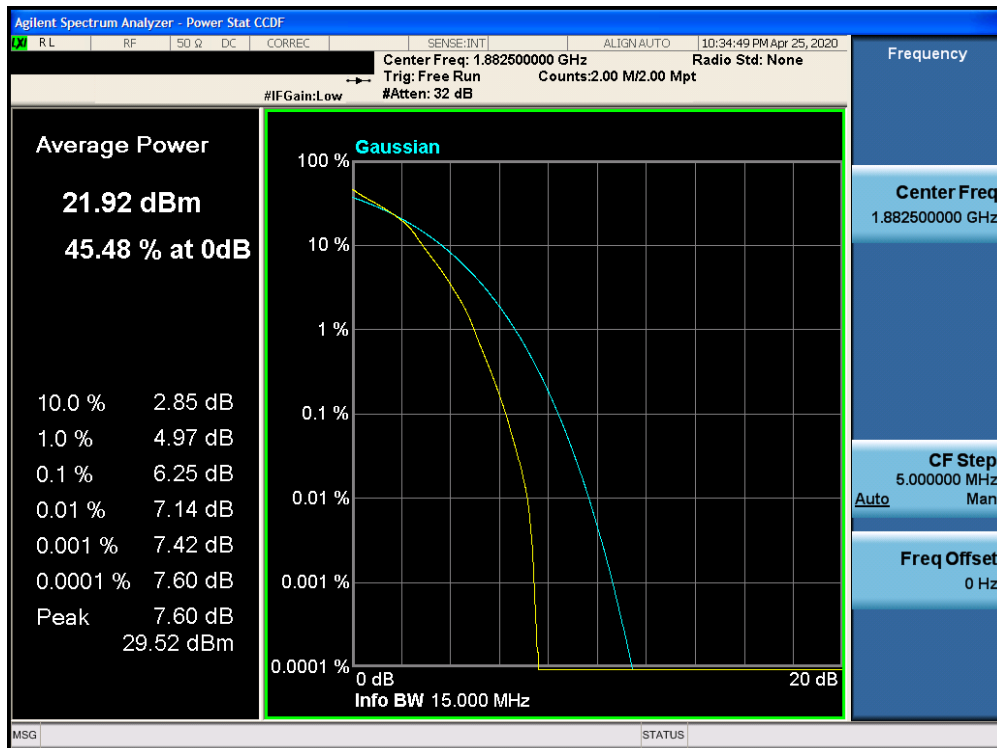


Plot 7-307. PAR Plot (Band 25 - 10.0MHz 16-QAM - Full RB Configuration)

FCC ID: BCG-A2294	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2004270019-03-R1.BCG	Test Dates: 05/01/2020 - 08/01/2020	EUT Type: Watch	Page 185 of 238

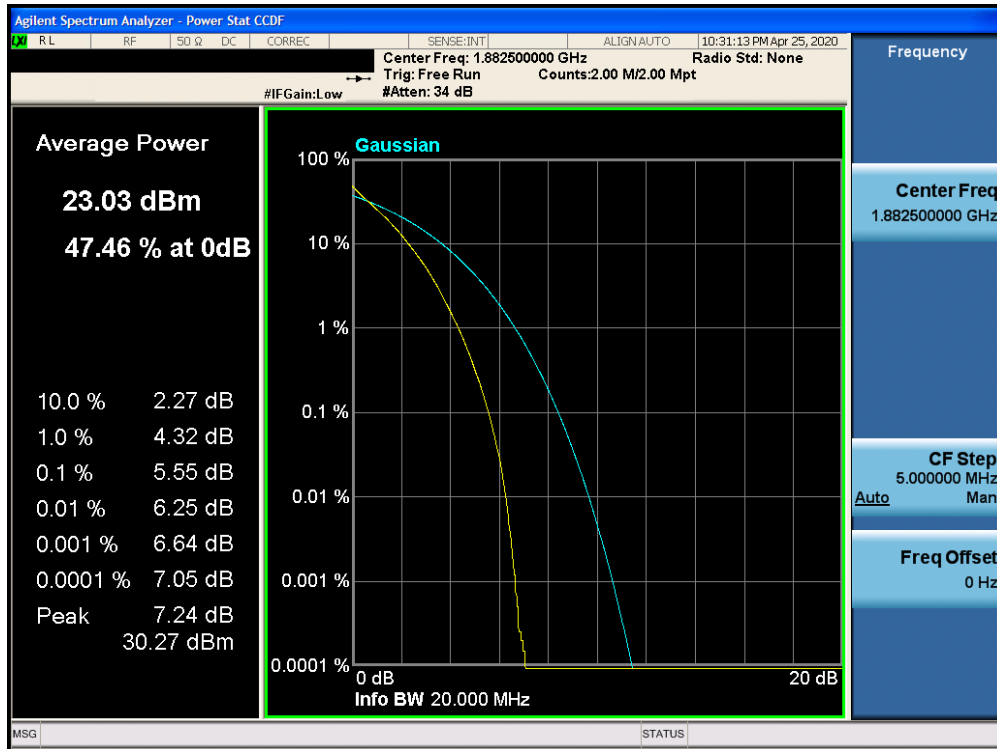


Plot 7-308. PAR Plot (Band 25 - 15.0MHz QPSK - Full RB Configuration)

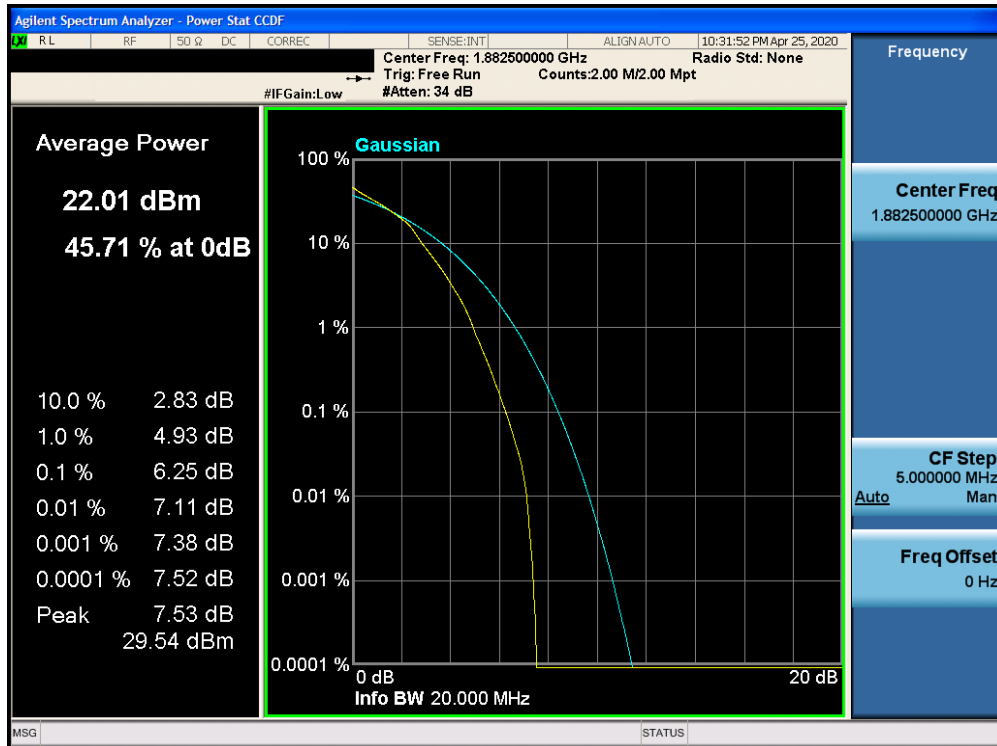


Plot 7-309. PAR Plot (Band 25 - 15.0MHz 16-QAM - Full RB Configuration)

FCC ID: BCG-A2294	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2004270019-03-R1.BCG	Test Dates: 05/01/2020 - 08/01/2020	EUT Type: Watch	Page 186 of 238



Plot 7-310. PAR Plot (Band 25 - 20.0MHz QPSK - Full RB Configuration)



Plot 7-311. PAR Plot (Band 25 - 20.0MHz 16-QAM - Full RB Configuration)

FCC ID: BCG-A2294	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2004270019-03-R1.BCG	Test Dates: 05/01/2020 - 08/01/2020	EUT Type: Watch	Page 187 of 238

7.6 Radiated Power (ERP/EIRP)

Test Overview

Effective Radiated Power (ERP) and Equivalent Isotropic Radiated Power (EIRP) measurements are calculated by adding highest antenna gain to maximum measured conducted output power. 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 C63.26-2015 – Section 5.2.5.5

Test Settings

The relevant equation for determining the ERP or EIRP from the conducted RF output power measured is:

$$\text{ERP/EIRP} = \text{PMeas} - \text{LC} + \text{GT}$$

Where:

ERP/EIRP = effective or equivalent radiated power, respectively (expressed in the same units as PMeas, typically dBW or dBm)

PMeas = measured transmitter output power or PSD, in dBW or dBm

LC = signal attenuation in the connecting cable between the transmitter and antenna in dB

GT = gain of the transmitting antenna, in dBd (ERP) or dBi (EIRP)

Test Setup

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

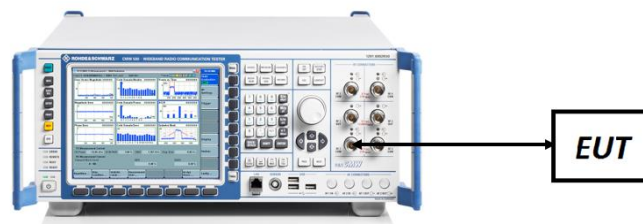


Figure 7-5. ERP/EIRP Measurement Setup

Test Notes

- 1) The EUT was tested in all possible test configurations. The worst case emissions are reported with the EUT 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 Level (dBm) readings in the table were taken with a correction table loaded into the base station simulator. The correction table was used to account for the signal attenuation in the connecting cable between the transmitter and antenna.
- 4) The Ant. Gains (GT) are listed in dBi.
- 5) This device only supports 27RBs or less for 16-QAM uplink.

FCC ID: BCG-A2294	 MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2004270019-03-R1.BCG	Test Dates: 05/01/2020 - 08/01/2020	Page 188 of 238
EUT Type: Watch		

Frequency [MHz]	Channel Bandwidth [MHz]	Mod.	RB Size/Offset	Conducted Power [dBm]	Ant. Gain [dBi]	ERP [dBm]	ERP [mW]	ERP Limit [dBm]	Margin [dB]	EIRP [dBm]	EIRP [mW]	EIRP Limit [dBm]	Margin [dB]
699.70	1.4	QPSK	1 / 5	24.37	-28.90	-6.68	0.215	34.77	-41.45	-4.53	0.352	36.99	-41.52
707.50	1.4	QPSK	1 / 5	24.80	-28.90	-6.25	0.237	34.77	-41.02	-4.10	0.389	36.99	-41.09
715.30	1.4	QPSK	1 / 5	24.79	-28.90	-6.26	0.237	34.77	-41.03	-4.11	0.388	36.99	-41.10
707.50	1.4	16-QAM	1 / 2	24.28	-28.90	-6.77	0.210	34.77	-41.54	-4.62	0.345	36.99	-41.61
700.50	3	QPSK	1 / 7	24.35	-28.90	-6.70	0.214	34.77	-41.47	-4.55	0.351	36.99	-41.54
707.50	3	QPSK	1 / 7	24.82	-28.90	-6.23	0.238	34.77	-41.00	-4.08	0.391	36.99	-41.07
714.50	3	QPSK	1 / 14	24.55	-28.90	-6.50	0.224	34.77	-41.27	-4.35	0.367	36.99	-41.34
707.50	3	16-QAM	1 / 0	24.27	-28.90	-6.78	0.210	34.77	-41.55	-4.63	0.344	36.99	-41.62
701.50	5	QPSK	1 / 24	24.73	-28.90	-6.32	0.233	34.77	-41.09	-4.17	0.383	36.99	-41.16
707.50	5	QPSK	1 / 12	24.98	-28.90	-6.07	0.247	34.77	-40.84	-3.92	0.406	36.99	-40.91
713.50	5	QPSK	1 / 24	24.61	-28.90	-6.44	0.227	34.77	-41.21	-4.29	0.372	36.99	-41.28
707.50	5	16-QAM	1 / 12	24.26	-28.90	-6.79	0.209	34.77	-41.56	-4.64	0.344	36.99	-41.63
704.00	10	QPSK	1 / 49	24.73	-28.90	-6.32	0.233	34.77	-41.09	-4.17	0.383	36.99	-41.16
707.50	10	QPSK	1 / 25	24.87	-28.90	-6.18	0.241	34.77	-40.95	-4.03	0.395	36.99	-41.02
711.00	10	QPSK	1 / 0	24.71	-28.90	-6.34	0.232	34.77	-41.11	-4.19	0.381	36.99	-41.18
707.50	10	16-QAM	1 / 13	24.19	-28.90	-6.86	0.206	34.77	-41.63	-4.71	0.338	36.99	-41.70

Table 7-7. ERP/EIRP Data (Band 12)

Frequency [MHz]	Channel Bandwidth [MHz]	Mod.	RB Size/Offset	Conducted Power [dBm]	Ant. Gain [dBi]	ERP [dBm]	ERP [mW]	ERP Limit [dBm]	Margin [dB]	EIRP [dBm]	EIRP [mW]	EIRP Limit [dBm]	Margin [dB]
706.50	5	QPSK	1 / 12	24.93	-28.90	-6.12	0.244	34.77	-40.89	-3.97	0.401	36.99	-40.96
710.00	5	QPSK	1 / 0	24.96	-28.90	-6.09	0.246	34.77	-40.86	-3.94	0.404	36.99	-40.93
713.50	5	QPSK	1 / 24	24.60	-28.90	-6.45	0.226	34.77	-41.22	-4.30	0.372	36.99	-41.29
710.00	5	16-QAM	1 / 0	24.32	-28.90	-6.73	0.212	34.77	-41.50	-4.58	0.348	36.99	-41.57
709.00	10	QPSK	1 / 25	24.66	-28.90	-6.39	0.230	34.77	-41.16	-4.24	0.377	36.99	-41.23
710.00	10	QPSK	1 / 0	24.79	-28.90	-6.26	0.237	34.77	-41.03	-4.11	0.388	36.99	-41.10
711.00	10	QPSK	1 / 0	24.73	-28.90	-6.32	0.233	34.77	-41.09	-4.17	0.383	36.99	-41.16
710.00	10	16-QAM	1 / 0	24.06	-28.90	-6.99	0.200	34.77	-41.76	-4.84	0.328	36.99	-41.83

Table 7-8. ERP/EIRP Data (Band 17)

FCC ID: BCG-A2294		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2004270019-03-R1.BCG	Test Dates: 05/01/2020 - 08/01/2020	EUT Type: Watch	Page 189 of 238

Frequency [MHz]	Channel Bandwidth [MHz]	Mod.	RB Size/Offset	Conducted Power [dBm]	Ant. Gain [dBi]	ERP [dBm]	ERP [mW]	ERP Limit [dBm]	Margin [dB]	EIRP [dBm]	EIRP [mW]	EIRP Limit [dBm]	Margin [dB]
779.50	5	QPSK	1 / 0	25.00	-26.40	-3.55	0.442	34.77	-38.32	-1.40	0.724	36.99	-38.39
782.00	5	QPSK	1 / 24	24.93	-26.40	-3.62	0.435	34.77	-38.39	-1.47	0.713	36.99	-38.46
784.50	5	QPSK	1 / 24	24.75	-26.40	-3.80	0.417	34.77	-38.57	-1.65	0.684	36.99	-38.64
779.50	5	16-QAM	1 / 12	24.30	-26.40	-4.25	0.376	34.77	-39.02	-2.10	0.617	36.99	-39.09
782.00	10	QPSK	1 / 49	24.89	-26.40	-3.66	0.431	34.77	-38.43	-1.51	0.706	36.99	-38.50
782.00	10	16-QAM	1 / 27	24.43	-26.40	-4.12	0.387	34.77	-38.89	-1.97	0.635	36.99	-38.96

Table 7-9. ERP/EIRP Data (Band 13)

Frequency [MHz]	Channel Bandwidth [MHz]	Mod.	RB Size/Offset	Conducted Power [dBm]	Ant. Gain [dBi]	ERP [dBm]	ERP [mW]	ERP Limit [dBm]	Margin [dB]	EIRP [dBm]	EIRP [mW]	EIRP Limit [dBm]	Margin [dB]
824.70	1.4	QPSK	1 / 0	24.91	-26.10	-3.34	0.463	38.45	-41.79	-1.19	0.760	40.61	-41.80
836.50	1.4	QPSK	1 / 5	25.00	-26.10	-3.25	0.473	38.45	-41.70	-1.10	0.776	40.61	-41.71
848.30	1.4	QPSK	1 / 0	24.99	-26.10	-3.26	0.472	38.45	-41.71	-1.11	0.774	40.61	-41.72
836.50	1.4	16-QAM	1 / 5	24.53	-26.10	-3.72	0.425	38.45	-42.17	-1.57	0.697	40.61	-42.18
825.50	3	QPSK	1 / 7	25.00	-26.10	-3.25	0.473	38.45	-41.70	-1.10	0.776	40.61	-41.71
836.50	3	QPSK	1 / 14	25.00	-26.10	-3.25	0.473	38.45	-41.70	-1.10	0.776	40.61	-41.71
847.50	3	QPSK	1 / 14	24.86	-26.10	-3.39	0.458	38.45	-41.84	-1.24	0.752	40.61	-41.85
825.50	3	16-QAM	1 / 7	24.37	-26.10	-3.88	0.409	38.45	-42.33	-1.73	0.671	40.61	-42.34
826.50	5	QPSK	1 / 24	24.92	-26.10	-3.33	0.465	38.45	-41.78	-1.18	0.762	40.61	-41.79
836.50	5	QPSK	1 / 24	25.00	-26.10	-3.25	0.473	38.45	-41.70	-1.10	0.776	40.61	-41.71
846.50	5	QPSK	1 / 0	24.83	-26.10	-3.42	0.455	38.45	-41.87	-1.27	0.746	40.61	-41.88
836.50	5	16-QAM	1 / 24	24.26	-26.10	-3.99	0.399	38.45	-42.44	-1.84	0.655	40.61	-42.45
829.00	10	QPSK	1 / 49	24.95	-26.10	-3.30	0.468	38.45	-41.75	-1.15	0.767	40.61	-41.76
836.50	10	QPSK	1 / 49	24.99	-26.10	-3.26	0.472	38.45	-41.71	-1.11	0.774	40.61	-41.72
844.00	10	QPSK	1 / 0	25.00	-26.10	-3.25	0.473	38.45	-41.70	-1.10	0.776	40.61	-41.71
844.00	10	16-QAM	1 / 0	24.64	-26.10	-3.61	0.436	38.45	-42.06	-1.46	0.714	40.61	-42.07

Table 7-10. ERP/EIRP Data (Band 5)

FCC ID: BCG-A2294	 MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2004270019-03-R1.BCG	Test Dates: 05/01/2020 - 08/01/2020	EUT Type: Watch
		Page 190 of 238

Frequency [MHz]	Channel Bandwidth [MHz]	Mod.	RB Size/Offset	Conducted Power [dBm]	Ant. Gain [dBi]	ERP [dBm]	ERP [mW]	ERP Limit [dBm]	Margin [dB]	EIRP [dBm]	EIRP [mW]	EIRP Limit [dBm]	Margin [dB]
824.70	1.4	QPSK	1 / 5	24.96	-26.10	-3.29	0.469	38.45	-41.74	-1.14	0.769	40.61	-41.75
836.50	1.4	QPSK	1 / 5	25.00	-26.10	-3.25	0.473	38.45	-41.70	-1.10	0.776	40.61	-41.71
848.30	1.4	QPSK	1 / 5	24.95	-26.10	-3.30	0.468	38.45	-41.75	-1.15	0.767	40.61	-41.76
836.50	1.4	16-QAM	1 / 0	24.48	-26.10	-3.77	0.420	38.45	-42.22	-1.62	0.689	40.61	-42.23
825.50	3	QPSK	1 / 7	24.94	-26.10	-3.31	0.467	38.45	-41.76	-1.16	0.766	40.61	-41.77
836.50	3	QPSK	1 / 14	25.00	-26.10	-3.25	0.473	38.45	-41.70	-1.10	0.776	40.61	-41.71
847.50	3	QPSK	1 / 14	24.77	-26.10	-3.48	0.449	38.45	-41.93	-1.33	0.736	40.61	-41.94
836.50	3	16-QAM	1 / 14	24.43	-26.10	-3.82	0.415	38.45	-42.27	-1.67	0.681	40.61	-42.28
826.50	5	QPSK	1 / 12	24.96	-26.10	-3.29	0.469	38.45	-41.74	-1.14	0.769	40.61	-41.75
836.50	5	QPSK	1 / 24	25.00	-26.10	-3.25	0.473	38.45	-41.70	-1.10	0.776	40.61	-41.71
846.50	5	QPSK	1 / 24	24.77	-26.10	-3.48	0.449	38.45	-41.93	-1.33	0.736	40.61	-41.94
836.50	5	16-QAM	1 / 12	24.31	-26.10	-3.94	0.404	38.45	-42.39	-1.79	0.662	40.61	-42.40
829.00	10	QPSK	1 / 0	24.92	-26.10	-3.33	0.465	38.45	-41.78	-1.18	0.762	40.61	-41.79
836.50	10	QPSK	1 / 49	25.00	-26.10	-3.25	0.473	38.45	-41.70	-1.10	0.776	40.61	-41.71
844.00	10	QPSK	1 / 0	24.98	-26.10	-3.27	0.471	38.45	-41.72	-1.12	0.773	40.61	-41.73
836.50	10	16-QAM	1 / 13	24.42	-26.10	-3.83	0.414	38.45	-42.28	-1.68	0.679	40.61	-42.29

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

FCC ID: BCG-A2294	 MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2004270019-03-R1.BCG	Test Dates: 05/01/2020 - 08/01/2020	EUT Type: Watch
		Page 191 of 238

Frequency [MHz]	Channel Bandwidth [MHz]	Mod.	RB Size/Offset	Conducted Power [dBm]	Ant. Gain [dBi]	EIRP [dBm]	EIRP [mW]	EIRP Limit [dBm]	Margin [dB]
1710.70	1.4	QPSK	1 / 5	23.91	-11.50	12.41	17.418	30.00	-17.59
1732.50	1.4	QPSK	1 / 0	24.00	-11.50	12.50	17.783	30.00	-17.50
1754.30	1.4	QPSK	1 / 5	23.93	-11.50	12.43	17.498	30.00	-17.57
1732.50	1.4	16-QAM	1 / 0	23.60	-11.50	12.10	16.218	30.00	-17.90
1711.50	3	QPSK	1 / 7	23.92	-11.50	12.42	17.458	30.00	-17.58
1732.50	3	QPSK	1 / 0	24.00	-11.50	12.50	17.783	30.00	-17.50
1753.50	3	QPSK	1 / 7	23.77	-11.50	12.27	16.866	30.00	-17.73
1732.50	3	16-QAM	1 / 0	23.59	-11.50	12.09	16.181	30.00	-17.91
1712.50	5	QPSK	1 / 24	23.95	-11.50	12.45	17.579	30.00	-17.55
1732.50	5	QPSK	1 / 24	24.00	-11.50	12.50	17.783	30.00	-17.50
1752.50	5	QPSK	1 / 24	23.75	-11.50	12.25	16.788	30.00	-17.75
1732.50	5	16-QAM	1 / 12	23.40	-11.50	11.90	15.488	30.00	-18.10
1715.00	10	QPSK	1 / 0	23.91	-11.50	12.41	17.418	30.00	-17.59
1732.50	10	QPSK	1 / 25	24.00	-11.50	12.50	17.783	30.00	-17.50
1750.00	10	QPSK	1 / 49	23.79	-11.50	12.29	16.943	30.00	-17.71
1732.50	10	16-QAM	1 / 0	23.60	-11.50	12.10	16.218	30.00	-17.90
1717.50	15	QPSK	1 / 0	24.00	-11.50	12.50	17.783	30.00	-17.50
1732.50	15	QPSK	1 / 36	24.00	-11.50	12.50	17.783	30.00	-17.50
1747.50	15	QPSK	1 / 74	23.78	-11.50	12.28	16.904	30.00	-17.72
1717.50	15	16-QAM	1 / 27	23.06	-11.50	11.56	14.322	30.00	-18.44
1720.00	20	QPSK	1 / 99	24.00	-11.50	12.50	17.783	30.00	-17.50
1732.50	20	QPSK	1 / 50	23.96	-11.50	12.46	17.620	30.00	-17.54
1745.00	20	QPSK	1 / 99	23.97	-11.50	12.47	17.660	30.00	-17.53
1720.00	20	16-QAM	1 / 27	23.40	-11.50	11.90	15.488	30.00	-18.10

Table 7-12. EIRP Data (Band 4)

FCC ID: BCG-A2294	 MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2004270019-03-R1.BCG	Test Dates: 05/01/2020 - 08/01/2020	EUT Type: Watch
		Page 192 of 238

Frequency [MHz]	Channel Bandwidth [MHz]	Mod.	RB Size/Offset	Conducted Power [dBm]	Ant. Gain [dBi]	EIRP [dBm]	EIRP [mW]	EIRP Limit [dBm]	Margin [dB]
1710.70	1.4	QPSK	1 / 0	23.94	-11.50	12.44	17.539	30.00	-17.56
1745.00	1.4	QPSK	1 / 0	23.72	-11.50	12.22	16.672	30.00	-17.78
1779.30	1.4	QPSK	1 / 5	24.00	-11.50	12.50	17.783	30.00	-17.50
1779.30	1.4	16-QAM	1 / 5	23.14	-11.50	11.64	14.588	30.00	-18.36
1711.50	3	QPSK	1 / 7	23.92	-11.50	12.42	17.458	30.00	-17.58
1745.00	3	QPSK	1 / 7	23.73	-11.50	12.23	16.711	30.00	-17.77
1778.50	3	QPSK	1 / 14	23.97	-11.50	12.47	17.660	30.00	-17.53
1778.50	3	16-QAM	1 / 7	23.53	-11.50	12.03	15.959	30.00	-17.97
1712.50	5	QPSK	1 / 0	24.00	-11.50	12.50	17.783	30.00	-17.50
1745.00	5	QPSK	1 / 0	23.94	-11.50	12.44	17.539	30.00	-17.56
1777.50	5	QPSK	1 / 24	23.89	-11.50	12.39	17.338	30.00	-17.61
1712.50	5	16-QAM	1 / 0	23.18	-11.50	11.68	14.723	30.00	-18.32
1715.00	10	QPSK	1 / 0	23.94	-11.50	12.44	17.539	30.00	-17.56
1745.00	10	QPSK	1 / 0	23.87	-11.50	12.37	17.258	30.00	-17.63
1775.00	10	QPSK	1 / 0	24.00	-11.50	12.50	17.783	30.00	-17.50
1775.00	10	16-QAM	1 / 13	23.39	-11.50	11.89	15.453	30.00	-18.11
1717.50	15	QPSK	1 / 0	24.00	-11.50	12.50	17.783	30.00	-17.50
1745.00	15	QPSK	1 / 0	23.91	-11.50	12.41	17.418	30.00	-17.59
1772.50	15	QPSK	1 / 0	24.00	-11.50	12.50	17.783	30.00	-17.50
1717.50	15	16-QAM	1 / 27	23.04	-11.50	11.54	14.256	30.00	-18.46
1720.00	20	QPSK	1 / 99	23.99	-11.50	12.49	17.742	30.00	-17.51
1745.00	20	QPSK	1 / 0	23.96	-11.50	12.46	17.620	30.00	-17.54
1770.00	20	QPSK	1 / 0	24.00	-11.50	12.50	17.783	30.00	-17.50
1770.00	20	16-QAM	1 / 0	23.23	-11.50	11.73	14.894	30.00	-18.27

Table 7-13. EIRP Data (Band 66)

FCC ID: BCG-A2294	 MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2004270019-03-R1.BCG	Test Dates: 05/01/2020 - 08/01/2020	EUT Type: Watch
		Page 193 of 238

Frequency [MHz]	Channel Bandwidth [MHz]	Mod.	RB Size/Offset	Conducted Power [dBm]	Ant. Gain [dBi]	EIRP [dBm]	EIRP [mW]	EIRP Limit [dBm]	Margin [dB]
1850.70	1.4	QPSK	1 / 0	23.76	-11.60	12.16	16.444	33.01	-20.85
1880.00	1.4	QPSK	1 / 0	23.83	-11.60	12.23	16.711	33.01	-20.78
1909.30	1.4	QPSK	1 / 5	23.67	-11.60	12.07	16.106	33.01	-20.94
1880.00	1.4	16-QAM	1 / 5	23.37	-11.60	11.77	15.031	33.01	-21.24
1851.50	3	QPSK	1 / 7	23.75	-11.60	12.15	16.406	33.01	-20.86
1880.00	3	QPSK	1 / 0	23.78	-11.60	12.18	16.520	33.01	-20.83
1908.50	3	QPSK	1 / 0	23.47	-11.60	11.87	15.382	33.01	-21.14
1880.00	3	16-QAM	1 / 14	23.26	-11.60	11.66	14.655	33.01	-21.35
1852.50	5	QPSK	1 / 0	23.92	-11.60	12.32	17.061	33.01	-20.69
1880.00	5	QPSK	1 / 0	24.00	-11.60	12.40	17.378	33.01	-20.61
1907.50	5	QPSK	1 / 0	23.62	-11.60	12.02	15.922	33.01	-20.99
1880.00	5	16-QAM	1 / 0	23.39	-11.60	11.79	15.101	33.01	-21.22
1855.00	10	QPSK	1 / 0	23.76	-11.60	12.16	16.444	33.01	-20.85
1880.00	10	QPSK	1 / 0	23.91	-11.60	12.31	17.022	33.01	-20.70
1905.00	10	QPSK	1 / 0	23.83	-11.60	12.23	16.711	33.01	-20.78
1880.00	10	16-QAM	1 / 13	23.36	-11.60	11.76	14.997	33.01	-21.25
1857.50	15	QPSK	1 / 74	23.99	-11.60	12.39	17.338	33.01	-20.62
1880.00	15	QPSK	1 / 0	23.93	-11.60	12.33	17.100	33.01	-20.68
1902.50	15	QPSK	1 / 0	23.81	-11.60	12.21	16.634	33.01	-20.80
1857.50	15	16-QAM	1 / 0	23.06	-11.60	11.46	13.996	33.01	-21.55
1860.00	20	QPSK	1 / 99	24.00	-11.60	12.40	17.378	33.01	-20.61
1880.00	20	QPSK	1 / 0	23.83	-11.60	12.23	16.711	33.01	-20.78
1900.00	20	QPSK	1 / 50	23.97	-11.60	12.37	17.258	33.01	-20.64
1860.00	20	16-QAM	1 / 27	23.28	-11.60	11.68	14.723	33.01	-21.33

Table 7-14. EIRP Data (Band 2)

FCC ID: BCG-A2294	 MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2004270019-03-R1.BCG	Test Dates: 05/01/2020 - 08/01/2020	EUT Type: Watch
		Page 194 of 238

Frequency [MHz]	Channel Bandwidth [MHz]	Mod.	RB Size/Offset	Conducted Power [dBm]	Ant. Gain [dBi]	EIRP [dBm]	EIRP [mW]	EIRP Limit [dBm]	Margin [dB]
1850.70	1.4	QPSK	1 / 0	23.74	-11.60	12.14	16.368	33.01	-20.87
1882.50	1.4	QPSK	1 / 0	23.70	-11.60	12.10	16.218	33.01	-20.91
1914.30	1.4	QPSK	1 / 2	23.98	-11.60	12.38	17.298	33.01	-20.63
1914.30	1.4	16-QAM	1 / 0	23.13	-11.60	11.53	14.223	33.01	-21.48
1851.50	3	QPSK	1 / 0	23.71	-11.60	12.11	16.255	33.01	-20.90
1882.50	3	QPSK	1 / 7	23.70	-11.60	12.10	16.218	33.01	-20.91
1913.50	3	QPSK	1 / 7	23.79	-11.60	12.19	16.558	33.01	-20.82
1913.50	3	16-QAM	1 / 14	23.33	-11.60	11.73	14.894	33.01	-21.28
1852.50	5	QPSK	1 / 0	23.95	-11.60	12.35	17.179	33.01	-20.66
1882.50	5	QPSK	1 / 0	23.94	-11.60	12.34	17.140	33.01	-20.67
1912.50	5	QPSK	1 / 24	23.84	-11.60	12.24	16.749	33.01	-20.77
1852.50	5	16-QAM	1 / 0	23.36	-11.60	11.76	14.997	33.01	-21.25
1855.00	10	QPSK	1 / 0	23.78	-11.60	12.18	16.520	33.01	-20.83
1882.50	10	QPSK	1 / 0	23.92	-11.60	12.32	17.061	33.01	-20.69
1910.00	10	QPSK	1 / 49	23.79	-11.60	12.19	16.558	33.01	-20.82
1882.50	10	16-QAM	1 / 0	23.27	-11.60	11.67	14.689	33.01	-21.34
1857.50	15	QPSK	1 / 0	23.98	-11.60	12.38	17.298	33.01	-20.63
1882.50	15	QPSK	1 / 0	23.85	-11.60	12.25	16.788	33.01	-20.76
1907.50	15	QPSK	1 / 74	23.82	-11.60	12.22	16.672	33.01	-20.79
1857.50	15	16-QAM	1 / 0	23.07	-11.60	11.47	14.028	33.01	-21.54
1860.00	20	QPSK	1 / 99	23.92	-11.60	12.32	17.061	33.01	-20.69
1882.50	20	QPSK	1 / 0	23.88	-11.60	12.28	16.904	33.01	-20.73
1905.00	20	QPSK	1 / 99	24.00	-11.60	12.40	17.378	33.01	-20.61
1905.00	20	16-QAM	1 / 0	23.39	-11.60	11.79	15.101	33.01	-21.22

Table 7-15. EIRP Data (Band 25)

FCC ID: BCG-A2294	 MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1C2004270019-03-R1.BCG	Test Dates: 05/01/2020 - 08/01/2020	EUT Type: Watch	Page 195 of 238

Frequency [MHz]	Channel Bandwidth [MHz]	Mod.	RB Size/Offset	Conducted Power [dBm]	Ant. Gain [dBi]	EIRP [dBm]	EIRP [mW]	EIRP Limit [dBm]	Margin [dB]
2502.50	5	QPSK	1 / 0	23.50	-2.80	20.70	117.490	33.01	-12.31
2535.00	5	QPSK	1 / 0	23.23	-2.80	20.43	110.408	33.01	-12.58
2567.50	5	QPSK	1 / 0	23.10	-2.80	20.30	107.152	33.01	-12.71
2502.50	5	16-QAM	1 / 0	22.80	-2.80	20.00	100.000	33.01	-13.01
2505.00	10	QPSK	1 / 0	23.50	-2.80	20.70	117.490	33.01	-12.31
2535.00	10	QPSK	1 / 49	23.44	-2.80	20.64	115.878	33.01	-12.37
2565.00	10	QPSK	1 / 49	23.26	-2.80	20.46	111.173	33.01	-12.55
2505.00	10	16-QAM	1 / 0	22.86	-2.80	20.06	101.391	33.01	-12.95
2507.50	15	QPSK	1 / 0	23.50	-2.80	20.70	117.490	33.01	-12.31
2535.00	15	QPSK	1 / 74	23.38	-2.80	20.58	114.288	33.01	-12.43
2562.50	15	QPSK	1 / 0	23.43	-2.80	20.63	115.611	33.01	-12.38
2507.50	15	16-QAM	1 / 0	22.43	-2.80	19.63	91.833	33.01	-13.38
2510.00	20	QPSK	1 / 0	23.50	-2.80	20.70	117.490	33.01	-12.31
2535.00	20	QPSK	1 / 0	23.48	-2.80	20.68	116.950	33.01	-12.33
2560.00	20	QPSK	1 / 99	23.39	-2.80	20.59	114.551	33.01	-12.42
2510.00	20	16-QAM	1 / 0	22.72	-2.80	19.92	98.175	33.01	-13.09

Table 7-16. EIRP Data (Band 7)

FCC ID: BCG-A2294		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2004270019-03-R1.BCG	Test Dates: 05/01/2020 - 08/01/2020	EUT Type: Watch	Page 196 of 238

Frequency [MHz]	Channel Bandwidth [MHz]	Mod.	RB Size/Offset	Conducted Power [dBm]	Ant. Gain [dBi]	EIRP [dBm]	EIRP [mW]	EIRP Limit [dBm]	Margin [dB]
2498.50	5	QPSK	1 / 24	23.49	-2.80	20.69	117.220	33.01	-12.32
2593.00	5	QPSK	1 / 24	23.23	-2.80	20.43	110.408	33.01	-12.58
2687.50	5	QPSK	1 / 24	23.45	-2.80	20.65	116.145	33.01	-12.36
2687.50	5	16-QAM	1 / 24	22.69	-2.80	19.89	97.499	33.01	-13.12
2501.00	10	QPSK	1 / 25	23.35	-2.80	20.55	113.501	33.01	-12.46
2593.00	10	QPSK	1 / 49	23.15	-2.80	20.35	108.393	33.01	-12.66
2685.00	10	QPSK	1 / 0	23.28	-2.80	20.48	111.686	33.01	-12.53
2501.00	10	16-QAM	1 / 0	22.47	-2.80	19.67	92.683	33.01	-13.34
2503.50	15	QPSK	1 / 0	23.35	-2.80	20.55	113.501	33.01	-12.46
2593.00	15	QPSK	1 / 74	23.17	-2.80	20.37	108.893	33.01	-12.64
2682.50	15	QPSK	1 / 0	23.29	-2.80	20.49	111.944	33.01	-12.52
2682.50	15	16-QAM	1 / 0	22.28	-2.80	19.48	88.716	33.01	-13.53
2506.00	20	QPSK	1 / 0	23.50	-2.80	20.70	117.490	33.01	-12.31
2593.00	20	QPSK	1 / 99	23.32	-2.80	20.52	112.720	33.01	-12.49
2680.00	20	QPSK	1 / 50	23.31	-2.80	20.51	112.460	33.01	-12.50
2506.00	20	16-QAM	1 / 0	22.42	-2.80	19.62	91.622	33.01	-13.39

Table 7-17. EIRP Data (Band 41)

FCC ID: BCG-A2294	 PCTEST Proud to be part of 	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2004270019-03-R1.BCG	Test Dates: 05/01/2020 - 08/01/2020	EUT Type: Watch	Page 197 of 238

7.7 Radiated Spurious Emissions

Test Overview

Radiated spurious emissions measurements are performed using the substitution method described in ANSI C63.26-2015 and 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 C63.26-2015

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 $\geq 3 \times$ RBW
3. Span = 1.5 times the OBW
4. No. of sweep points $\geq 2 \times$ span / RBW
5. Detector = RMS
6. Trace mode = Average (Max Hold for pulsed emissions)
7. The trace was allowed to stabilize

FCC ID: BCG-A2294	 PCTEST Proud to be part of 	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2004270019-03-R1.BCG	Test Dates: 05/01/2020 - 08/01/2020	EUT Type: Watch	Page 198 of 238

Test Setup

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

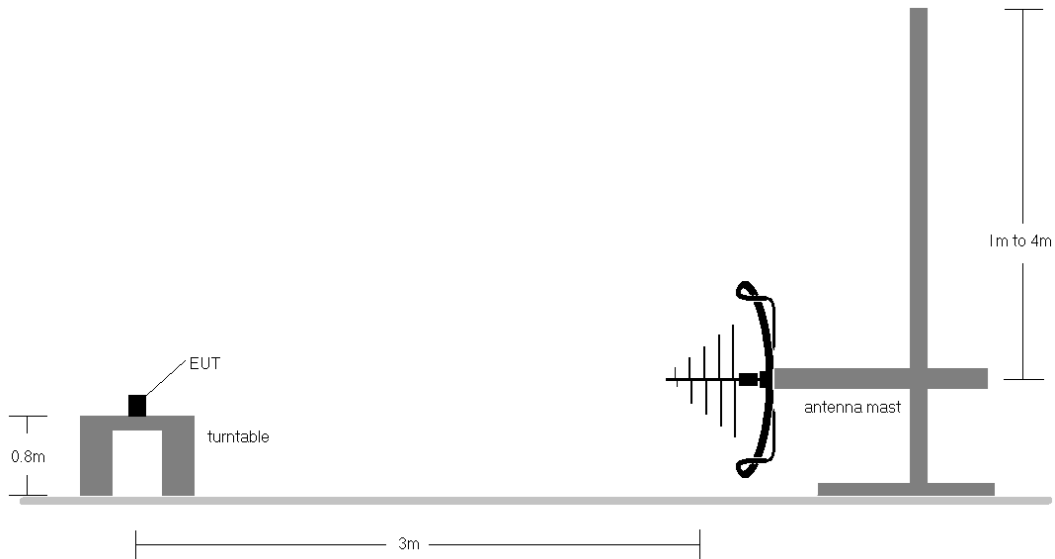


Figure 7-6. Radiated Measurement Setup < 1GHz

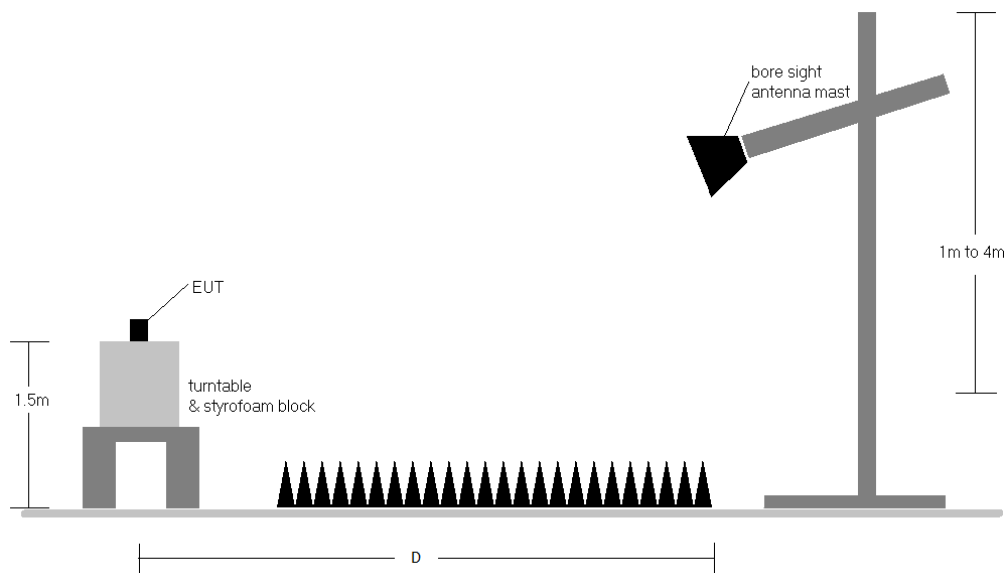


Figure 7-7. Radiated Measurement Setup > 1GHz

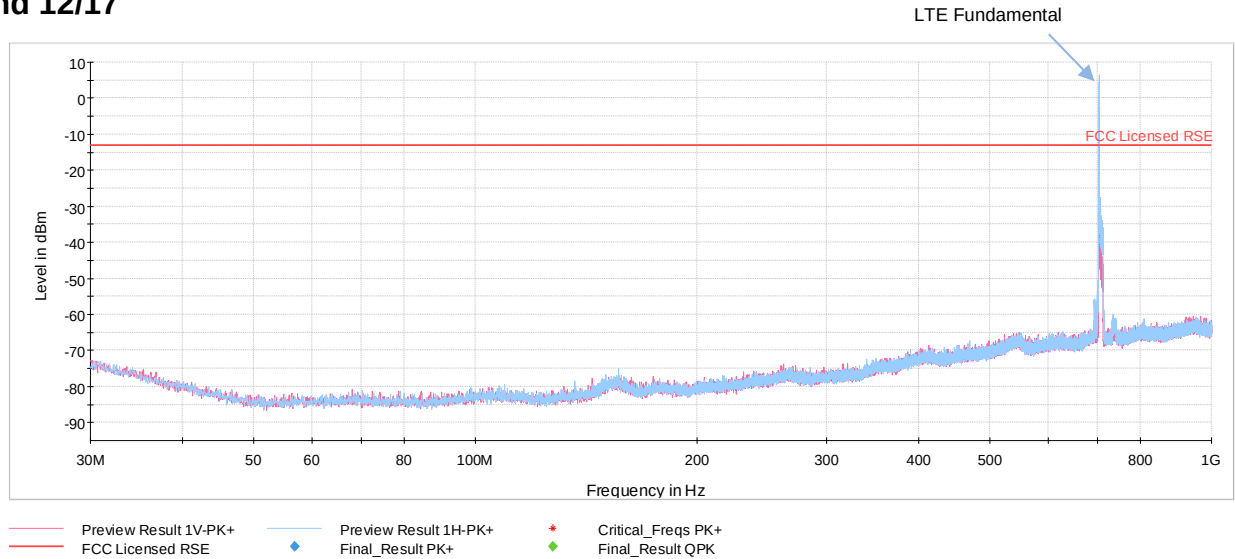
FCC ID: BCG-A2294	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2004270019-03-R1.BCG	Test Dates: 05/01/2020 - 08/01/2020	EUT Type: Watch	Page 199 of 238

Test Notes

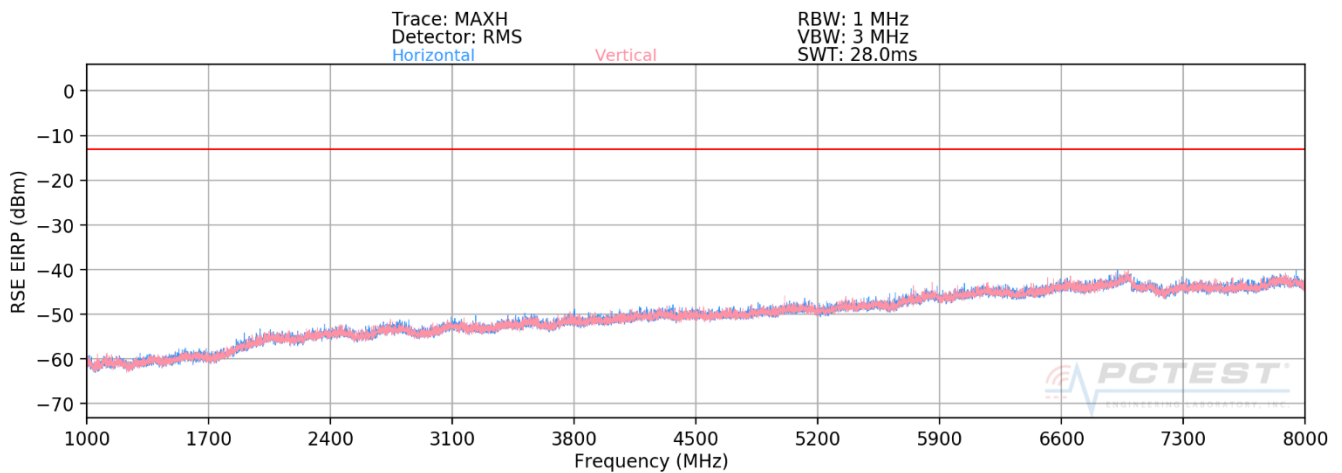
- 1) The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case emissions are reported with modulations, offsets and channel bandwidth configurations in this section. QPSK/10MHz/1RB was found and reported as worst case configuration for low bands and QPSK/20MHz/1RB was found and reported as worst case configuration for mid/high bands.
- 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) D is the measurement test distance and emissions 1-18GHz were measured at a 3 meters 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.
- 6) Below 1GHz pre-scan plot shows no significant emissions.
- 7) The intermodulation emissions were tested against the less stringent limit across all rule parts applicable to simultaneous transmitters.

FCC ID: BCG-A2294	 MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2004270019-03-R1.BCG	Test Dates: 05/01/2020 - 08/01/2020	EUT Type: Watch
		Page 200 of 238

Band 12/17



Plot 7-312. Radiated Spurious Emissions below 1GHz (Band 12/17)



Plot 7-313. Radiated Spurious Emissions above 1GHz (Band 12/17)

FCC ID: BCG-A2294	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2004270019-03-R1.BCG	Test Dates: 05/01/2020 - 08/01/2020	EUT Type: Watch	Page 201 of 238

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

Frequency [MHz]	Ant. Pol. [H/V]	Positioner Azimuth [degree]	Turntable Azimuth [degree]	EIRP Level at Sub Ant Port [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
1408.00	V	149	74	-70.81	3.20	-67.61	-54.6
2112.00	V	45	186	-65.49	3.13	-62.37	-49.4
2816.00	V	-	-	-67.11	5.31	-61.79	-48.8
3520.00	V	-	-	-67.91	6.80	-61.10	-48.1
4224.00	V	-	-	-68.69	8.03	-60.66	-47.7

Table 7-18. Radiated Spurious Data (Band 12/17 – Low Channel)

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

Frequency [MHz]	Ant. Pol. [H/V]	Positioner Azimuth [degree]	Turntable Azimuth [degree]	EIRP Level at Sub Ant Port [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
1415.00	V	81	263	-66.86	3.26	-63.60	-50.6
2122.50	V	290	216	-65.44	3.18	-62.26	-49.3
2830.00	V	-	-	-66.85	5.30	-61.55	-48.5
3537.50	V	-	-	-68.29	6.80	-61.50	-48.5
4245.00	V	-	-	-68.54	8.05	-60.48	-47.5

Table 7-19. Radiated Spurious Data (Band 12/17 – Mid Channel)

FCC ID: BCG-A2294	 MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2004270019-03-R1.BCG	Test Dates: 05/01/2020 - 08/01/2020	EUT Type: Watch
		Page 202 of 238

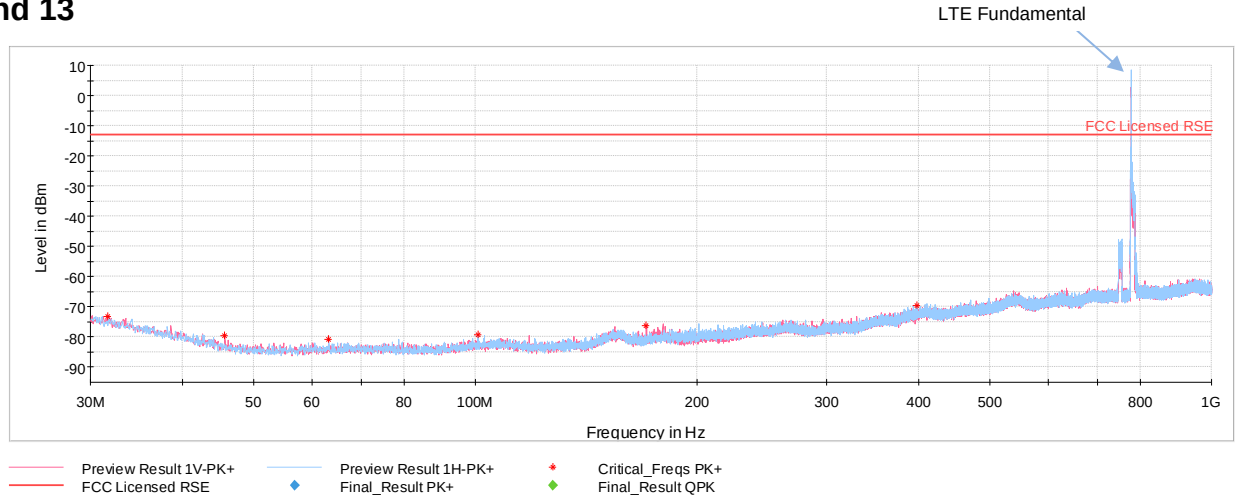
OPERATING FREQUENCY: 711.00 MHz
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 10.0 MHz
 DISTANCE: 3 meters
 LIMIT: -13 dBm

Frequency [MHz]	Ant. Pol. [H/V]	Positioner Azimuth [degree]	Turntable Azimuth [degree]	EIRP Level at Sub Ant Port [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
1422.00	V	-	-	-71.11	3.35	-67.76	-54.8
2133.00	V	220	241	-65.01	3.23	-61.78	-48.8
2844.00	V	-	-	-67.35	5.37	-61.98	-49.0
3555.00	V	-	-	-67.85	6.81	-61.04	-48.0
4266.00	V	-	-	-68.68	8.05	-60.63	-47.6

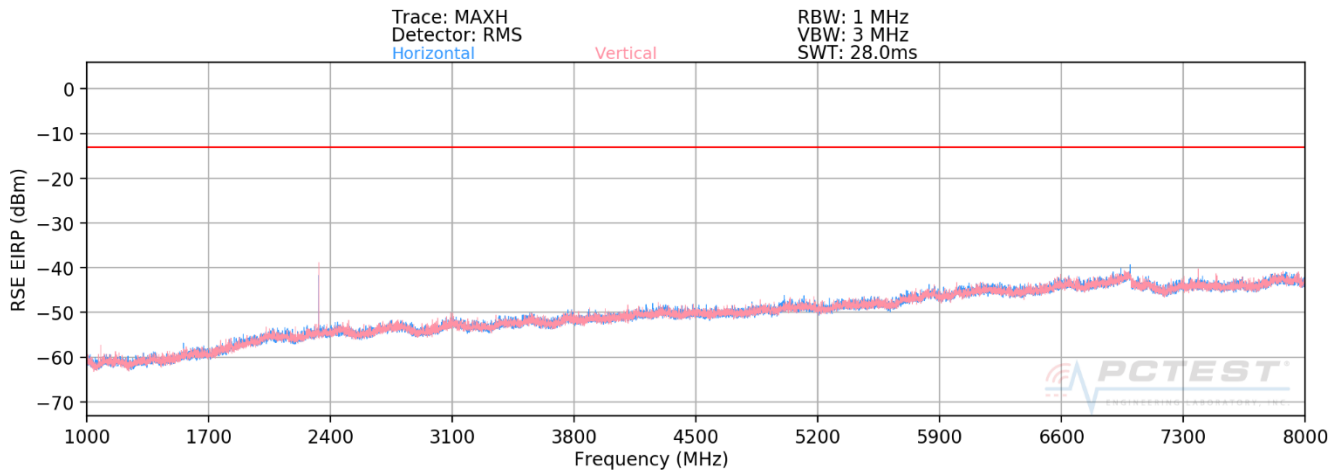
Table 7-20. Radiated Spurious Data (Band 12/17 – High Channel)

FCC ID: BCG-A2294	 PCTEST Proud to be part of 	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2004270019-03-R1.BCG	Test Dates: 05/01/2020 - 08/01/2020	EUT Type: Watch	Page 203 of 238

Band 13



Plot 7-314. Radiated Spurious Emissions below 1GHz (Band 13)



Plot 7-315. Radiated Spurious Emissions above 1GHz (Band 13)

FCC ID: BCG-A2294	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2004270019-03-R1.BCG	Test Dates: 05/01/2020 - 08/01/2020	EUT Type: Watch	Page 204 of 238

OPERATING FREQUENCY: 779.50 MHz
MODULATION SIGNAL: QPSK
BANDWIDTH: 5.0 MHz
DISTANCE: 3 meters
LIMIT: -13 dBm

Frequency [MHz]	Ant. Pol. [H/V]	Positioner Azimuth [degree]	Turntable Azimuth [degree]	EIRP Level at Sub Ant Port [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
2338.50	V	161	268	-62.85	3.95	-58.90	-45.9
3118.00	V	-	-	-67.78	6.09	-61.69	-48.7
3897.50	V	312	8	-68.49	7.65	-60.84	-47.8
4677.00	V	-	-	-68.70	8.55	-60.16	-47.2
5456.50	V	-	-	-68.06	9.23	-58.83	-45.8

Table 7-21. Radiated Spurious Data (Band 13 – Low Channel)

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

Frequency [MHz]	Ant. Pol. [H/V]	Positioner Azimuth [degree]	Turntable Azimuth [degree]	EIRP Level at Sub Ant Port [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
2346.00	V	187	245	-38.15	3.97	-34.18	-21.2
3128.00	V	207	101	-67.91	6.13	-61.78	-48.8
3910.00	V	18	157	-58.16	7.67	-50.49	-37.5
4692.00	V	-	-	-68.57	8.57	-60.00	-47.0
5474.00	V	54	248	-65.39	9.23	-56.16	-43.2

Table 7-22. Radiated Spurious Data (Band 13 – Mid Channel)

FCC ID: BCG-A2294	 PCTEST Proud to be part of 	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2004270019-03-R1.BCG	Test Dates: 05/01/2020 - 08/01/2020	EUT Type: Watch	Page 205 of 238

OPERATING FREQUENCY: 784.50 MHz

MODULATION SIGNAL: QPSK

BANDWIDTH: 5.0 MHz

DISTANCE: 3 meters

LIMIT: -13 dBm

Frequency [MHz]	Ant. Pol. [H/V]	Positioner Azimuth [degree]	Turntable Azimuth [degree]	EIRP Level at Sub Ant Port [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
2353.50	V	14	147	-52.21	3.94	-48.27	-35.3
3138.00	V	-	-	-67.99	6.17	-61.82	-48.8
3922.50	V	-	-	-68.88	7.69	-61.19	-48.2
4707.00	V	-	-	-68.66	8.59	-60.07	-47.1

Table 7-23. Radiated Spurious Data (Band 13 – High Channel)

MODULATION SIGNAL: QPSK

BANDWIDTH: 5.00 MHz

DISTANCE: 3 meters

NARROWBAND EMISSION LIMIT: -50 dBm

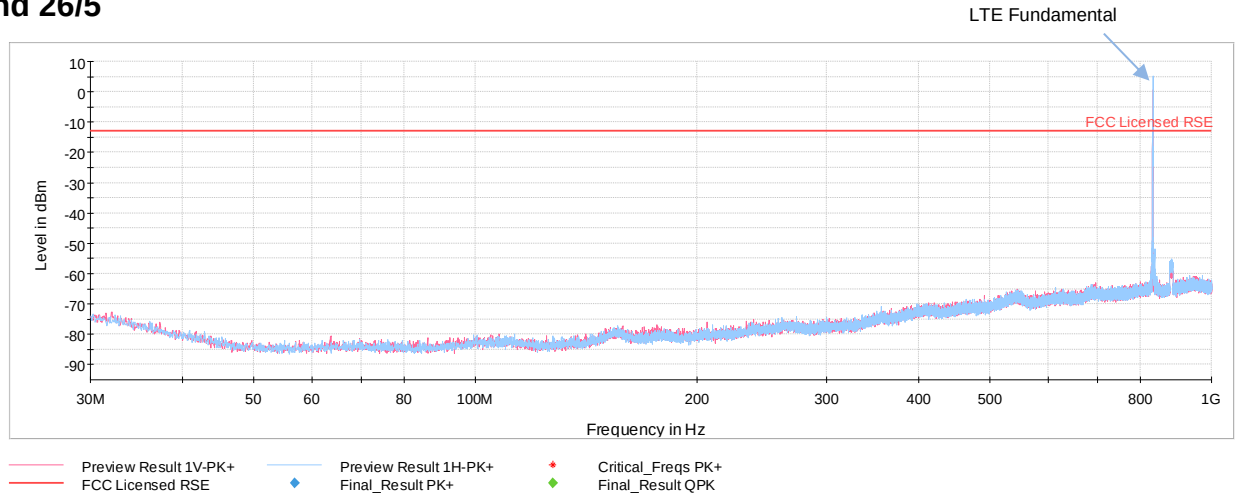
WIDEBAND EMISSION LIMIT: -40 dBm/MHz

Frequency [MHz]	Ant. Pol. [H/V]	Positioner Azimuth [degree]	Turntable Azimuth [degree]	EIRP Level at Sub Ant Port [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
1559.00	V	121	18	-70.70	3.73	-66.97	-27.0
1564.00	V	370	104	-61.01	3.71	-57.30	-17.3
1569.00	V	48	129	-70.42	3.68	-66.74	-26.7

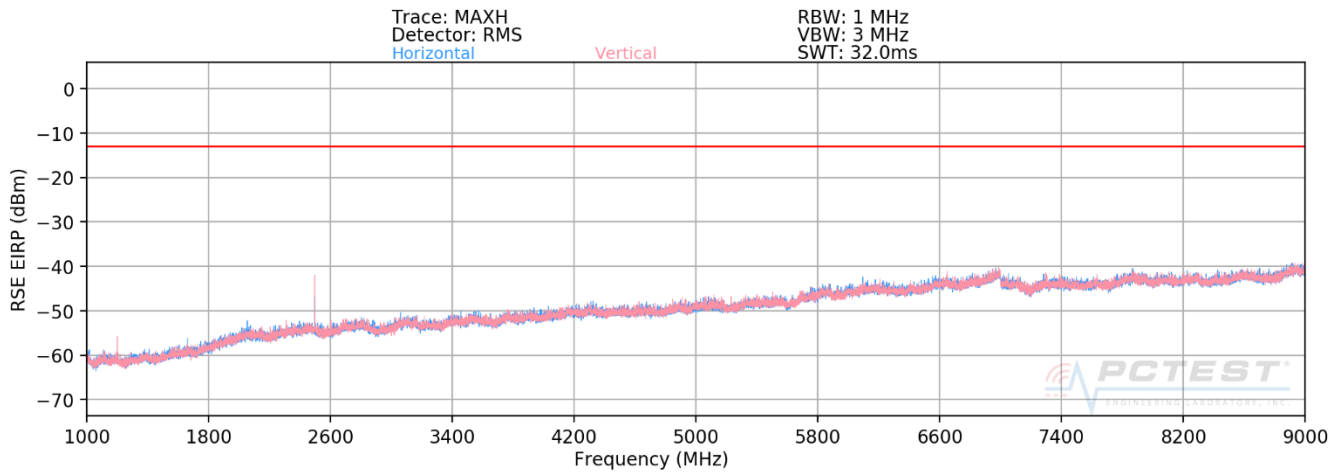
Table 7-24. Radiated Spurious Data (Band 13 – 1559-1610MHz Band)

FCC ID: BCG-A2294	 PCTEST Proud to be part of 	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2004270019-03-R1.BCG	Test Dates: 05/01/2020 - 08/01/2020	EUT Type: Watch	Page 206 of 238

Band 26/5



Plot 7-316. Radiated Spurious Emissions below 1GHz (Band 26/5)



Plot 7-317. Radiated Spurious Emissions above 1GHz (Band 26/5)

FCC ID: BCG-A2294		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2004270019-03-R1.BCG	Test Dates: 05/01/2020 - 08/01/2020	EUT Type: Watch	Page 207 of 238

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

Frequency [MHz]	Ant. Pol. [H/V]	Positioner Azimuth [degree]	Turntable Azimuth [degree]	EIRP Level at Sub Ant Port [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
1658.00	V	-	-	-71.39	3.80	-67.58	-54.6
2487.00	V	33	74	-61.38	4.34	-57.04	-44.0
3316.00	V	-	-	-68.50	6.51	-61.99	-49.0
4145.00	V	-	-	-68.42	7.88	-60.54	-47.5
4974.00	V	-	-	-68.14	8.83	-59.30	-46.3

Table 7-25. Radiated Spurious Data (Band 26/5 – Low Channel)

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

Frequency [MHz]	Ant. Pol. [H/V]	Positioner Azimuth [degree]	Turntable Azimuth [degree]	EIRP Level at Sub Ant Port [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
1673.00	V	66	270	-65.13	3.69	-61.43	-48.4
2509.50	V	26	68	-53.31	4.20	-49.12	-36.1
3346.00	V	-	-	-68.07	6.55	-61.51	-48.5
4182.50	V	-	-	-68.11	7.97	-60.14	-47.1
5019.00	V	-	-	-68.09	8.86	-59.23	-46.2

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

FCC ID: BCG-A2294	 PCTEST Proud to be part of 	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2004270019-03-R1.BCG	Test Dates: 05/01/2020 - 08/01/2020	EUT Type: Watch	Page 208 of 238

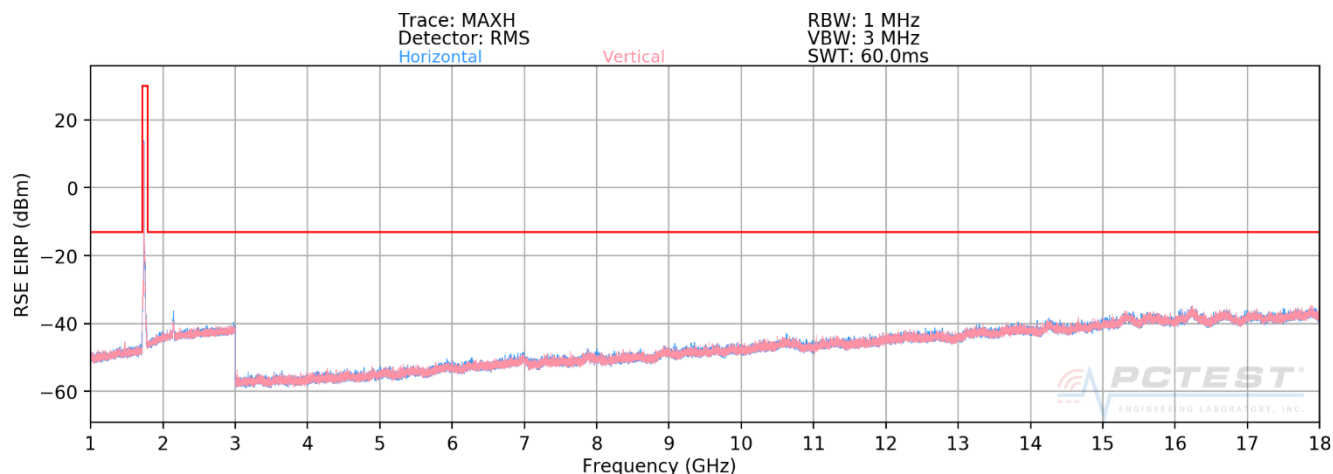
OPERATING FREQUENCY: 844.00 MHz
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 10.0 MHz
 DISTANCE: 3 meters
 LIMIT: -13 dBm

Frequency [MHz]	Ant. Pol. [H/V]	Positioner Azimuth [degree]	Turntable Azimuth [degree]	EIRP Level at Sub Ant Port [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
1688.00	V	249	249	-70.12	3.70	-66.42	-53.4
2532.00	V	56	187	-52.97	4.36	-48.61	-35.6
3376.00	V	-	-	-67.77	6.60	-61.18	-48.2
4220.00	V	-	-	-68.54	8.03	-60.51	-47.5
5064.00	V	-	-	-68.67	8.93	-59.74	-46.7

Table 7-27. Radiated Spurious Data (Band 26/5 – High Channel)

FCC ID: BCG-A2294	 PCTEST Proud to be part of 	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2004270019-03-R1.BCG	Test Dates: 05/01/2020 - 08/01/2020	EUT Type: Watch	Page 209 of 238

Band 66/4



Plot 7-318. Radiated Spurious Emissions above 1GHz (Band 66/4)

OPERATING FREQUENCY: 1720.00 MHz
MODULATION SIGNAL: QPSK
BANDWIDTH: 20.0 MHz
DISTANCE: 3 meters
LIMIT: -13 dBm

Frequency [MHz]	Ant. Pol. [H/V]	Positioner Azimuth [degree]	Turntable Azimuth [degree]	EIRP Level at Sub Ant Port [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
3440.00	V	-	-	-69.19	6.69	-62.50	-49.5
5160.00	V	-	-	-69.14	9.08	-60.06	-47.1
6880.00	V	-	-	-66.23	9.54	-56.68	-43.7

Table 7-28. Radiated Spurious Data (Band 66/4 – Low Channel)

FCC ID: BCG-A2294	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1C2004270019-03-R1.BCG	Test Dates: 05/01/2020 - 08/01/2020	EUT Type: Watch		Page 210 of 238

OPERATING FREQUENCY: 1745.00 MHz
MODULATION SIGNAL: QPSK
BANDWIDTH: 20.0 MHz
DISTANCE: 3 meters
LIMIT: -13 dBm

Frequency [MHz]	Ant. Pol. [H/V]	Positioner Azimuth [degree]	Turntable Azimuth [degree]	EIRP Level at Sub Ant Port [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
3490.00	V	-	-	-69.55	6.79	-62.77	-49.8
5235.00	V	-	-	-69.65	9.16	-60.49	-47.5
6980.00	V	-	-	-65.47	9.49	-55.98	-43.0

Table 7-29. Radiated Spurious Data (Band 66/4 – Mid Channel)

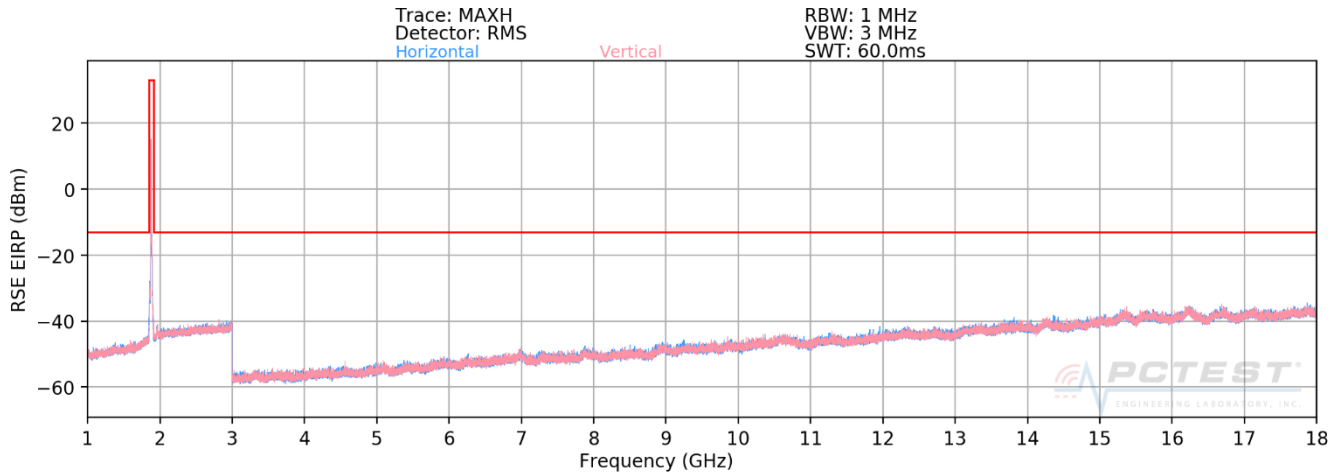
OPERATING FREQUENCY: 1770.00 MHz
MODULATION SIGNAL: QPSK
BANDWIDTH: 20.0 MHz
DISTANCE: 3 meters
LIMIT: -13 dBm

Frequency [MHz]	Ant. Pol. [H/V]	Positioner Azimuth [degree]	Turntable Azimuth [degree]	EIRP Level at Sub Ant Port [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
3540.00	V	-	-	-68.91	6.80	-62.11	-49.1
5310.00	V	341	141	-63.29	9.11	-54.17	-41.2
7080.00	V	-	-	-67.57	9.46	-58.12	-45.1
8850.00	V	-	-	-61.23	9.58	-51.65	-38.6

Table 7-30. Radiated Spurious Data (Band 66/4 – High Channel)

FCC ID: BCG-A2294	 PCTEST Proud to be part of 	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2004270019-03-R1.BCG	Test Dates: 05/01/2020 - 08/01/2020	EUT Type: Watch	Page 211 of 238

Band 25/2



Plot 7-319. Radiated Spurious Emissions above 1GHz (Band 25/2)

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

Frequency [MHz]	Ant. Pol. [H/V]	Positioner Azimuth [degree]	Turntable Azimuth [degree]	EIRP Level at Sub Ant Port [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
3720.00	V	-	-	-69.69	7.29	-62.40	-49.4
5580.00	V	-	-	-68.92	9.37	-59.55	-46.6
7440.00	V	-	-	-66.56	9.44	-57.12	-44.1

Table 7-31. Radiated Spurious Data (Band 25/2 – Low Channel)

FCC ID: BCG-A2294	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2004270019-03-R1.BCG	Test Dates: 05/01/2020 - 08/01/2020	EUT Type: Watch	Page 212 of 238

OPERATING FREQUENCY: 1882.50 MHz

MODULATION SIGNAL: QPSK

BANDWIDTH: 20.0 MHz

DISTANCE: 3 meters

LIMIT: -13 dBm

Frequency [MHz]	Ant. Pol. [H/V]	Positioner Azimuth [degree]	Turntable Azimuth [degree]	EIRP Level at Sub Ant Port [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
3765.00	V	-	-	-69.12	7.30	-61.82	-48.8
5647.50	V	-	-	-69.63	9.37	-60.26	-47.3
7530.00	V	-	-	-66.66	9.44	-57.21	-44.2

Table 7-32. Radiated Spurious Data (Band 25/2 – Mid Channel)

OPERATING FREQUENCY: 1905.00 MHz

MODULATION SIGNAL: QPSK

BANDWIDTH: 20.0 MHz

DISTANCE: 3 meters

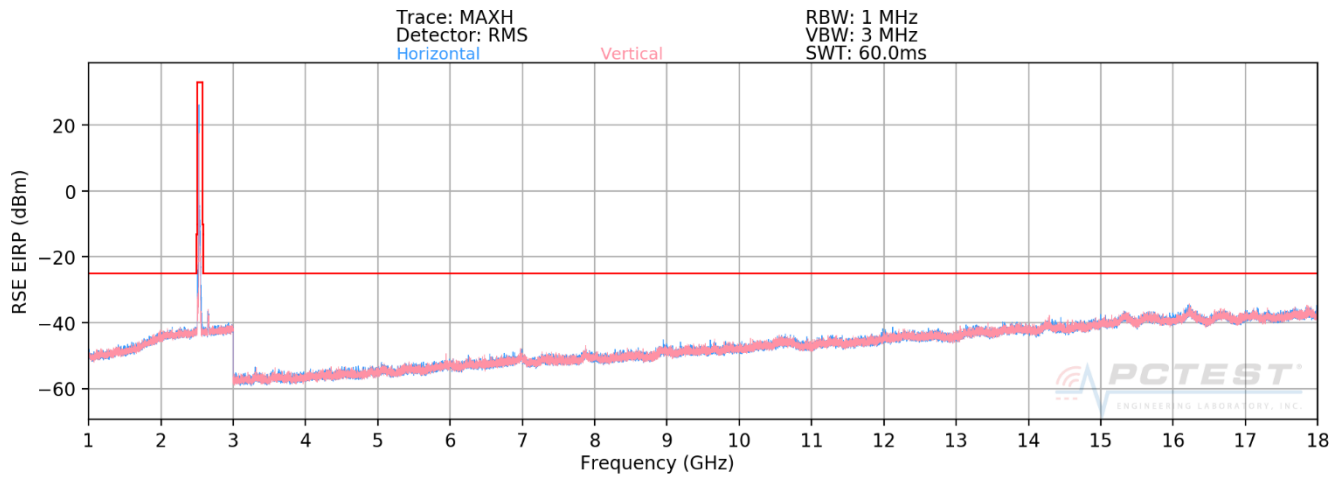
LIMIT: -13 dBm

Frequency [MHz]	Ant. Pol. [H/V]	Positioner Azimuth [degree]	Turntable Azimuth [degree]	EIRP Level at Sub Ant Port [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
3810.00	V	-	-	-68.88	7.37	-61.50	-48.5
5715.00	V	-	-	-69.00	9.38	-59.62	-46.6
7620.00	V	-	-	-66.30	9.38	-56.92	-43.9

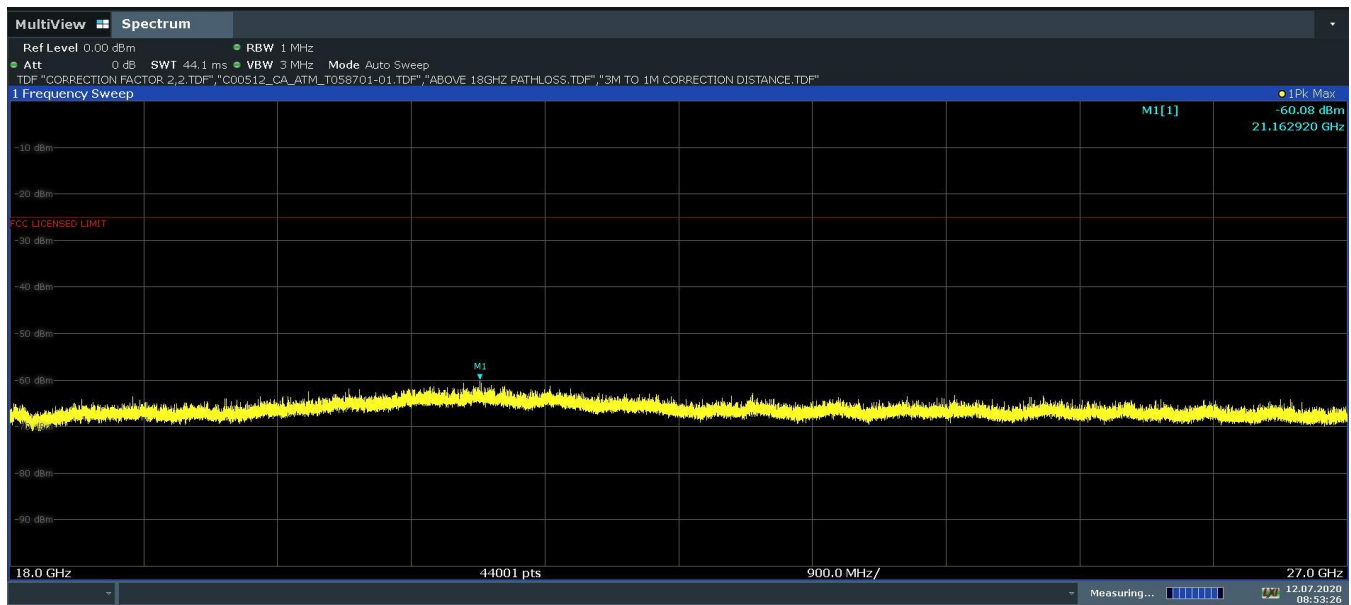
Table 7-33. Radiated Spurious Data (Band 25/2 – High Channel)

FCC ID: BCG-A2294	 PCTEST Proud to be part of 	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2004270019-03-R1.BCG	Test Dates: 05/01/2020 - 08/01/2020	EUT Type: Watch	Page 213 of 238

Band 7

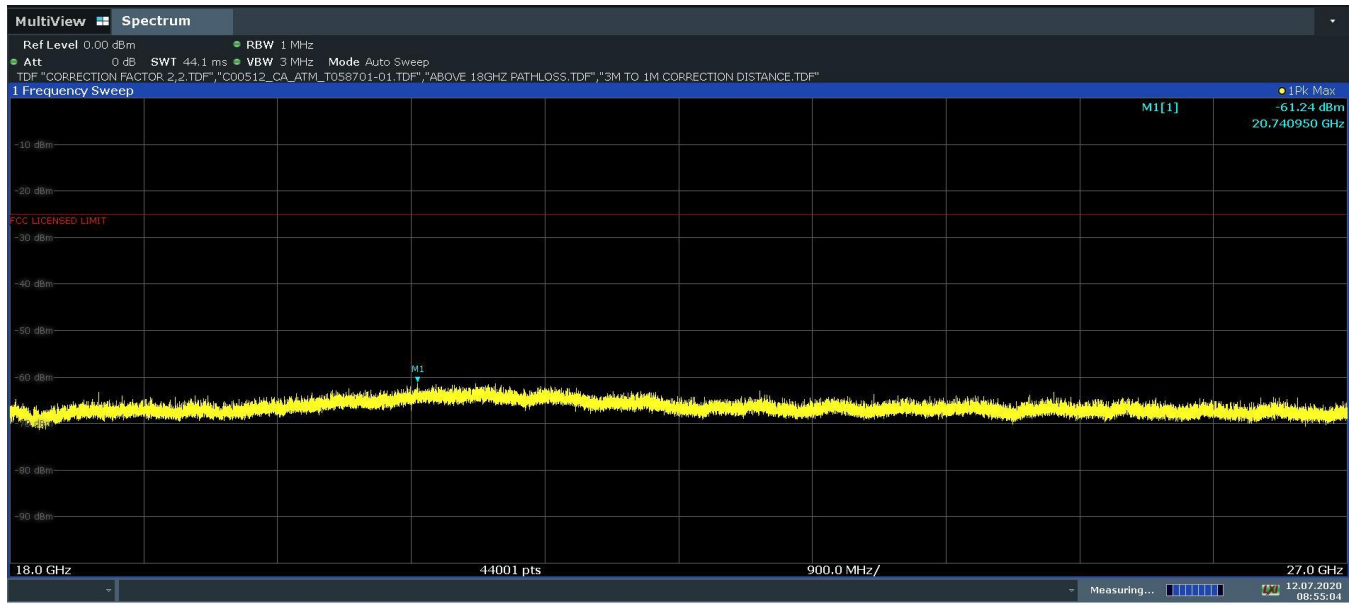


Plot 7-320. Radiated Spurious Emissions 1GHz - 18GHz (Band 7)



Plot 7-321. Radiated Spurious Emissions 18GHz – 27GHz (Band 7, Pol. H)

FCC ID: BCG-A2294	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2004270019-03-R1.BCG	Test Dates: 05/01/2020 - 08/01/2020	EUT Type: Watch	Page 214 of 238



08:55:05 12.07.2020

Plot 7-322. Radiated Spurious Emissions 18GHz – 27GHz (Band 7, Pol. V)

OPERATING FREQUENCY: 2510.00 MHz
MODULATION SIGNAL: QPSK
BANDWIDTH: 20.0 MHz
DISTANCE: 3 meters
LIMIT: -25 dBm

Frequency [MHz]	Ant. Pol. [H/V]	Positioner Azimuth [degree]	Turntable Azimuth [degree]	EIRP Level at Sub Ant Port [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
5020.00	V	352	239	-65.11	8.86	-56.25	-31.2
7530.00	V	-	-	-65.93	9.44	-56.48	-31.5
10040.00	V	-	-	-62.17	9.55	-52.61	-27.6
12550.00	V	-	-	-58.76	9.30	-49.45	-24.5

Table 7-34. Radiated Spurious Data (Band 7 – Low Channel)

FCC ID: BCG-A2294	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2004270019-03-R1.BCG	Test Dates: 05/01/2020 - 08/01/2020	EUT Type: Watch	Page 215 of 238

OPERATING FREQUENCY: 2535.00 MHz

MODULATION SIGNAL: QPSK

BANDWIDTH: 20.0 MHz

DISTANCE: 3 meters

LIMIT: -25 dBm

Frequency [MHz]	Ant. Pol. [H/V]	Positioner Azimuth [degree]	Turntable Azimuth [degree]	EIRP Level at Sub Ant Port [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
5070.00	H	161	-8	-67.44	8.94	-58.50	-33.5
7605.00	H	14	276	-63.40	9.37	-54.03	-29.0
10140.00	H	-	-	-61.67	9.59	-52.08	-27.1
12675.00	H	-	-	-58.07	9.27	-48.80	-23.8
15210.00	H	-	-	-54.30	8.98	-45.32	-20.3

Table 7-35. Radiated Spurious Data (Band 7 – Mid Channel)

OPERATING FREQUENCY: 2560.00 MHz

MODULATION SIGNAL: QPSK

BANDWIDTH: 20.0 MHz

DISTANCE: 3 meters

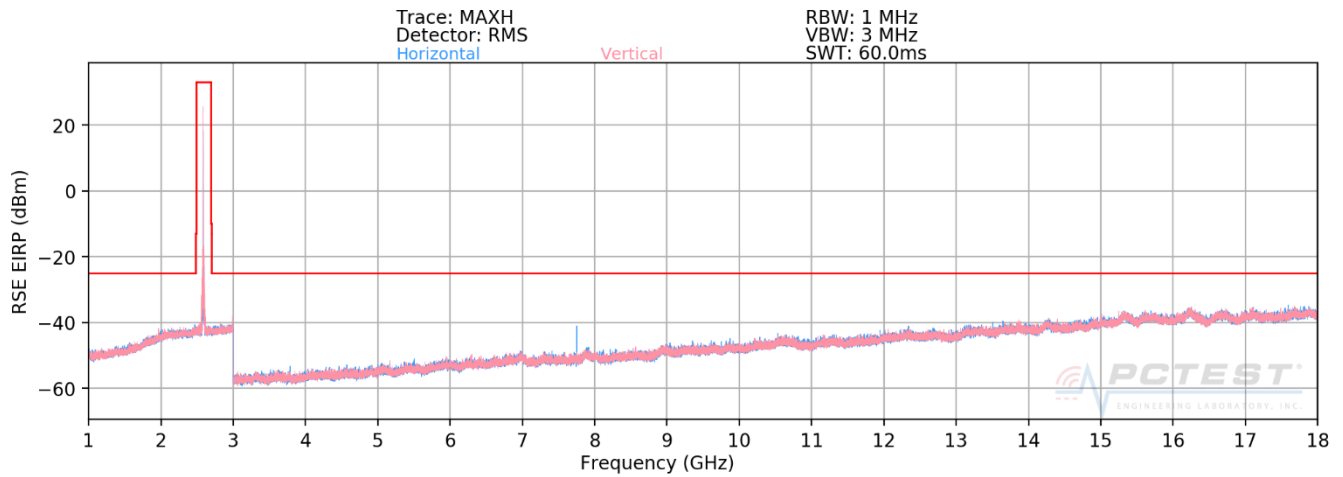
LIMIT: -25 dBm

Frequency [MHz]	Ant. Pol. [H/V]	Positioner Azimuth [degree]	Turntable Azimuth [degree]	EIRP Level at Sub Ant Port [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
5120.00	H	3	202	-64.74	9.01	-55.73	-30.7
7680.00	H	14	29	-64.48	9.40	-55.07	-30.1
10240.00	H	-	-	-61.72	9.56	-52.16	-27.2
12800.00	H	-	-	-58.14	9.28	-48.85	-23.9
15360.00	H	-	-	-51.74	8.86	-42.88	-17.9

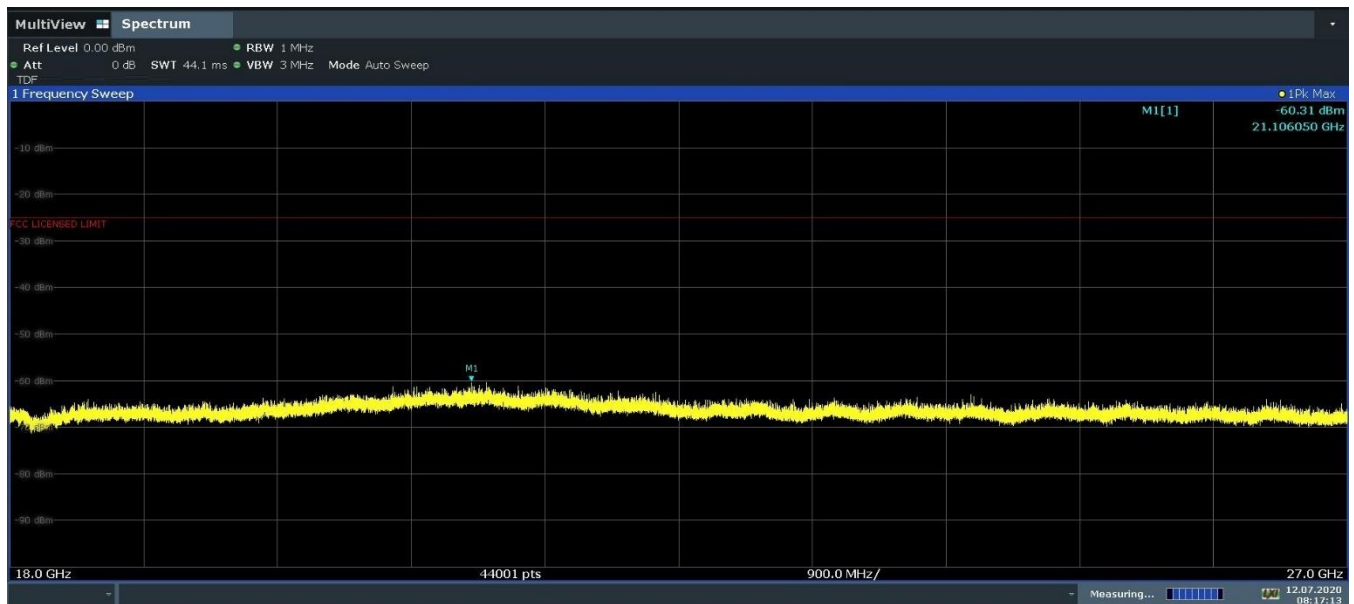
Table 7-36. Radiated Spurious Data (Band 7 – High Channel)

FCC ID: BCG-A2294	 PCTEST Proud to be part of 	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2004270019-03-R1.BCG	Test Dates: 05/01/2020 - 08/01/2020	EUT Type: Watch	Page 216 of 238

Band 41



Plot 7-323. Radiated Spurious Emissionss 1GHz - 18GHz (Band 41)



08:17:14 12.07.2020

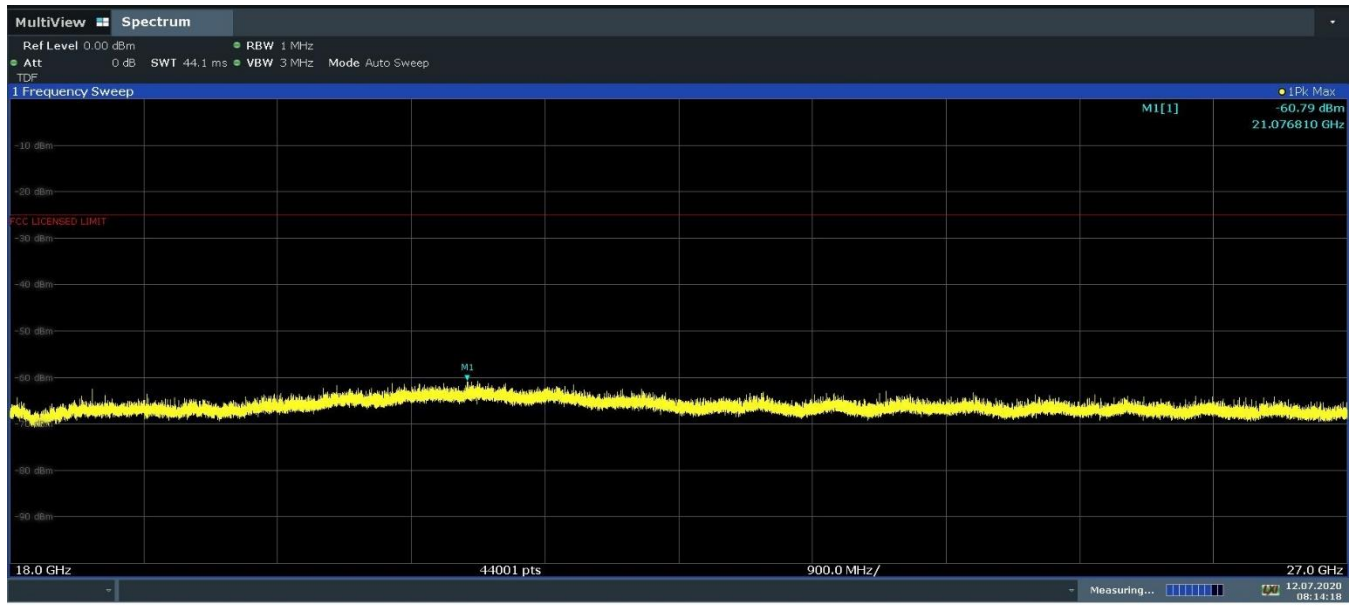
Plot 7-324. Radiated Spurious Emissions 18GHz – 27GHz (Band 41, Pol. H)

FCC ID: BCG-A2294	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2004270019-03-R1.BCG	Test Dates: 05/01/2020 - 08/01/2020	EUT Type: Watch	Page 217 of 238

© 2020 PCTEST

V 10.1 02/01/2020

All rights reserved. Unless otherwise specified, no part of this report may be reproduced or utilized in any part, form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from PCTEST. If you have any questions about this international copyright or have an enquiry about obtaining additional rights to this report or assembly of contents thereof, please contact INFO@PCTEST.COM.



08:14:18 12.07.2020

Plot 7-325. Radiated Spurious Emissions 18GHz – 27GHz (Band 41, Pol. V)

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

Frequency [MHz]	Ant. Pol. [H/V]	Positioner Azimuth [degree]	Turntable Azimuth [degree]	EIRP Level at Sub Ant Port [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
5012.00	H	150	275	-59.11	8.86	-50.24	-25.2
7518.00	H	150	247	-59.75	9.44	-50.31	-25.3
10024.00	H	-	-	-57.20	9.55	-47.65	-22.6
12530.00	H	-	-	-53.33	9.30	-44.03	-19.0

Table 7-37. Radiated Spurious Data (Band 41 – Low Channel)

FCC ID: BCG-A2294	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2004270019-03-R1.BCG	Test Dates: 05/01/2020 - 08/01/2020	EUT Type: Watch	Page 218 of 238

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

Frequency [MHz]	Ant. Pol. [H/V]	Positioner Azimuth [degree]	Turntable Azimuth [degree]	EIRP Level at Sub Ant Port [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
5186.00	H	-4	111	-57.21	9.13	-48.08	-23.1
7779.00	H	51	293	-56.35	9.38	-46.98	-22.0
10372.00	H	-	-	-55.83	9.52	-46.31	-21.3
12965.00	H	-	-	-53.72	9.17	-44.56	-19.6

Table 7-38. 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]	Positioner Azimuth [degree]	Turntable Azimuth [degree]	EIRP Level at Sub Ant Port [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
5360.00	H	14	-9	-58.71	9.13	-49.58	-24.6
8040.00	H	301	249	-58.53	9.41	-49.12	-24.1
10720.00	H	-	-	-53.53	9.49	-44.04	-19.0
13400.00	H	-	-	-50.12	9.03	-41.09	-16.1

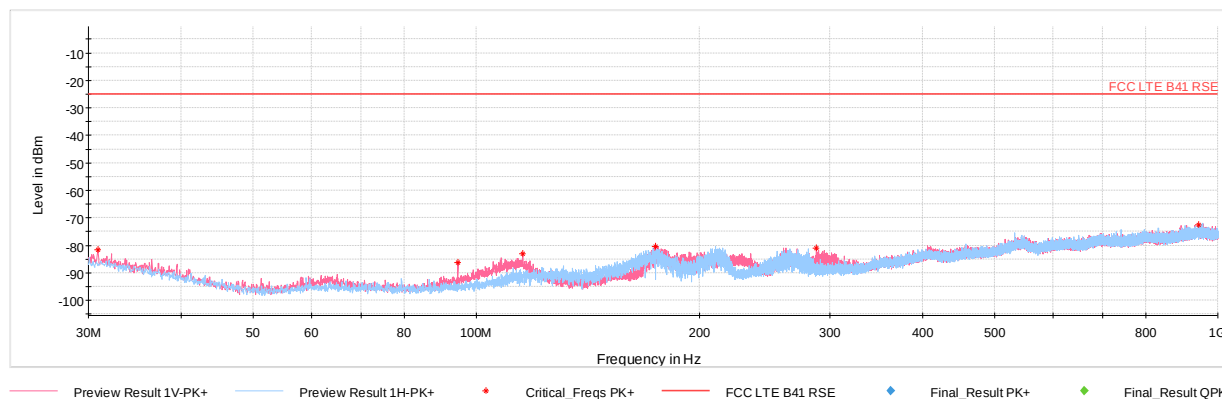
Table 7-39. Radiated Spurious Data (Band 41 – High Channel)

FCC ID: BCG-A2294		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1C2004270019-03-R1.BCG	Test Dates: 05/01/2020 - 08/01/2020	EUT Type: Watch		Page 219 of 238

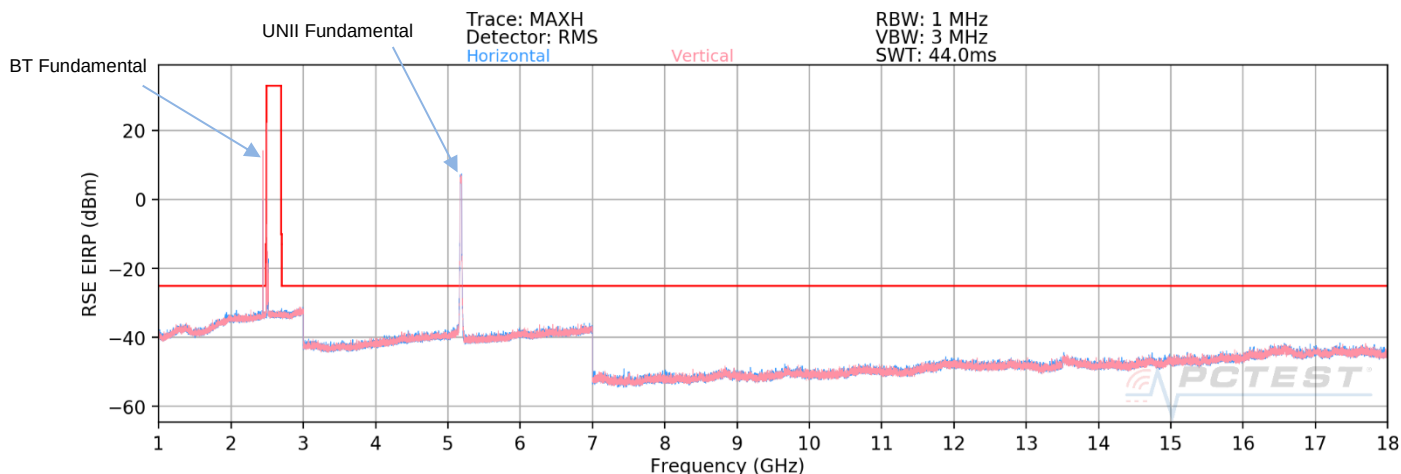
7.7.1 Simultaneous Tx Radiated Spurious Emissions Measurements

Description	Bluetooth	LTE (Band 41)	UNII
Antenna	FCM	FCM	FCM
Channel	39	39750	36
Operating Frequency (MHz)	2441	2506	5180
Mode/Modulation	GFSK/ePA	QPSK/1RB/20MHz	802.11n

Table 7-40. Worst Case Simultaneous Transmission Configuration



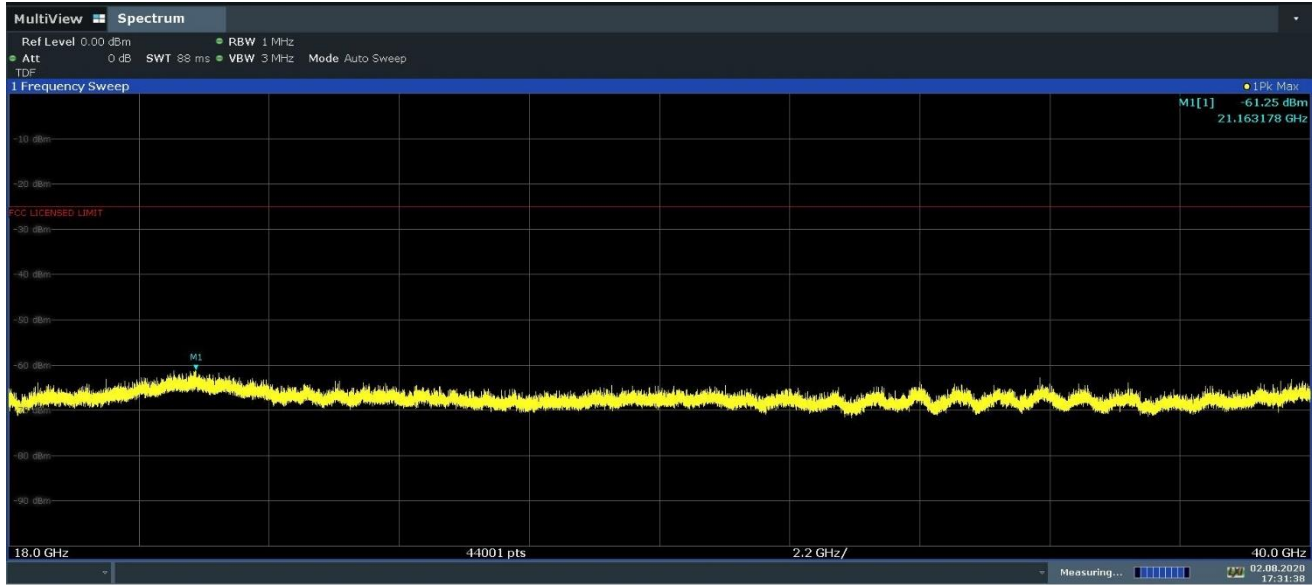
Plot 7-326. Radiated Spurious Emissions – Simultaneous Transmission 30MHz – 1GHz



Plot 7-327. Radiated Spurious Emissions - Simultaneous Transmission 1-18GHz

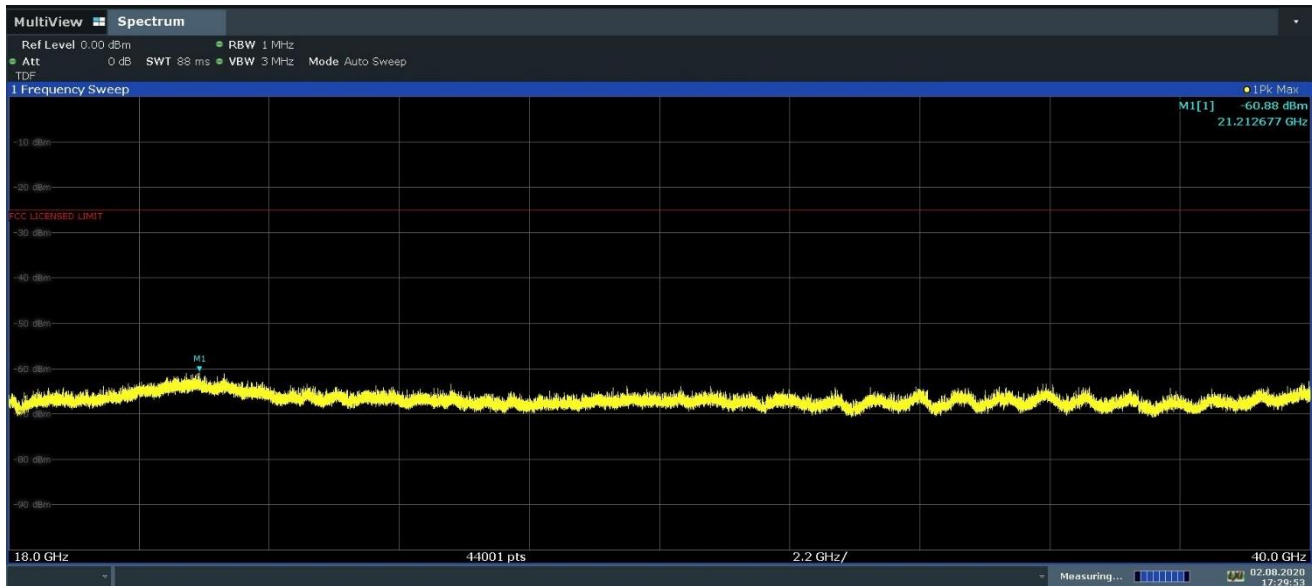
Note: Only the LTE B41 limit was shown in the plot above. The 2 other fundamentals are BT and UNII.

FCC ID: BCG-A2294	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2004270019-03-R1.BCG	Test Dates: 05/01/2020 - 08/01/2020	EUT Type: Watch	Page 220 of 238



17:31:39 02.08.2020

Plot 7-328. Radiated Spurious Emissions - Simultaneous Transmission 18GHz-40GHz Pol. H



17:29:54 02.08.2020

Plot 7-329. Radiated Spurious Emissions - Simultaneous Transmission 18GHz-40GHz Pol. V

FCC ID: BCG-A2294	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2004270019-03-R1.BCG	Test Dates: 05/01/2020 - 08/01/2020	EUT Type: Watch	Page 221 of 238

© 2020 PCTEST

V 10.1 02/01/2020

All rights reserved. Unless otherwise specified, no part of this report may be reproduced or utilized in any part, form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from PCTEST. If you have any questions about this international copyright or have an enquiry about obtaining additional rights to this report or assembly of contents thereof, please contact INFO@PCTEST.COM.

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
4882.00	Avg	V	-	-	-80.04	16.15	43.11	53.98	-10.86
4882.00	Peak	V	-	-	-68.30	16.15	54.85	73.98	-19.12
7323.00	Avg	V	-	-	-83.73	13.56	36.83	53.98	-17.15
7323.00	Peak	V	-	-	-72.61	13.56	47.95	73.98	-26.03
12205.00	Avg	V	-	-	-84.67	19.77	42.10	53.98	-11.88
12205.00	Peak	V	-	-	-73.03	19.77	53.74	73.98	-20.24
10360.00	Avg	V	-	-	-85.97	17.80	38.83	53.98	-35.15
10360.00	Peak	V	-	-	-74.11	17.80	50.69	73.98	-23.29
15540.00	Avg	V	-	-	-86.48	22.33	42.85	53.98	-31.13
15540.00	Peak	V	-	-	-75.00	22.33	54.33	73.98	-19.65

Table 7-41. BT and UNII Harmonics Emissions Measurements in Simultaneous Transmission Mode

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	EIRP Level At Sub Ant Port [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
5012.00	Avg	V	-	-	-52.89	10.02	-42.87	-25.0	-17.87
7518.00	Avg	V	-	-	-58.27	12.00	-46.27	-25.0	-21.27
10024.00	Avg	V	-	-	-56.73	13.04	-43.69	-25.0	-18.69
12530.00	Avg	V	-	-	-57.65	13.22	-44.43	-25.0	-19.43
2385.00	Avg	V	139	167	-41.98	6.16	-35.82	-25.0	-10.82

Table 7-42. LTE Harmonics and Intermodulations Emissions Measurements in Simultaneous Transmission Mode

FCC ID: BCG-A2294	 Proud to be part of 	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2004270019-03-R1.BCG	Test Dates: 05/01/2020 - 08/01/2020	EUT Type: Watch	Page 222 of 238

7.8 Frequency Stability / Temperature Variation

Test Overview and Limit

Frequency stability testing is performed in accordance with the guidelines of ANSI C63.26-2015 and 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 $\pm 0.00025\%$ (± 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

TIA-603-E-2016

ANSI C63.26-2015

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 wideband radio communication tester with the EUT placed inside an environmental chamber.

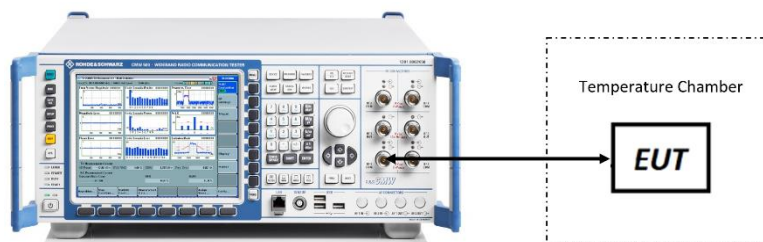


Figure 7-8. Test Instrument & Measurement Setup

Test Notes

None

FCC ID: BCG-A2294	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2004270019-03-R1.BCG	Test Dates: 05/01/2020 - 08/01/2020	EUT Type: Watch	Page 223 of 238

Band 12/17 Frequency Stability Measurements

OPERATING FREQUENCY: 707,500,000 Hz
CHANNEL: 23790
REFERENCE VOLTAGE: 3.80 VDC

VOLTAGE (%)	POWER (VDC)	TEMP (°C)	FREQUENCY (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	3.80	- 30	707,500,001	1.3	0.0000002
100 %		- 20	707,500,001	1.2	0.0000002
100 %		- 10	707,500,001	1.1	0.0000002
100 %		0	707,500,001	0.6	0.0000001
100 %		+ 10	707,500,001	1.5	0.0000002
100 %		+ 20	707,500,001	1.2	0.0000002
100 %		+ 30	707,500,001	1.3	0.0000002
100 %		+ 40	707,500,001	1.2	0.0000002
100 %		+ 50	707,500,001	1.0	0.0000001
BATT. ENDPOINT	3.40	+ 20	707,500,001	1.0	0.0000001

Table 7-43. Frequency Stability Data (Band 12/17 – 10MHz QPSK – Full RB Configuration)

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.

FCC ID: BCG-A2294		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2004270019-03-R1.BCG	Test Dates: 05/01/2020 - 08/01/2020	EUT Type: Watch	Page 224 of 238

Band 12/17 Frequency Stability Measurements

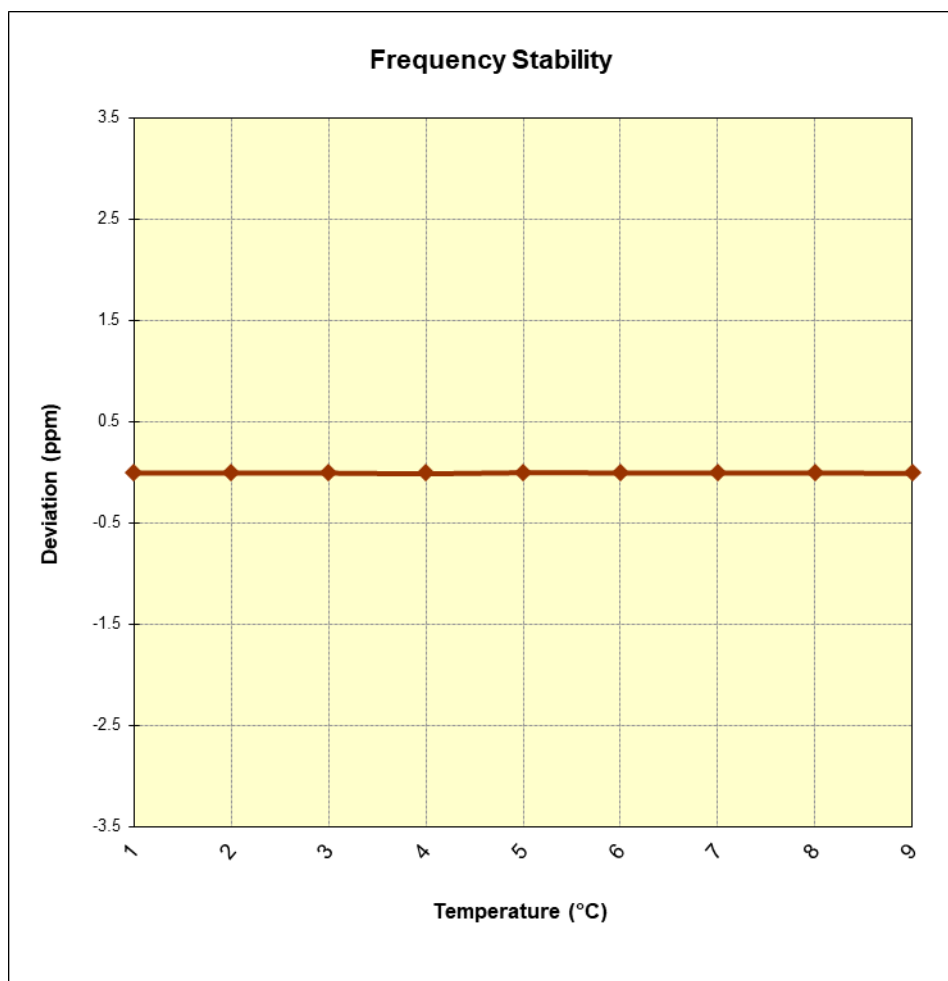


Figure 7-9. Frequency Stability Graph (Band 12/17 – 10MHz QPSK – Full RB Configuration)

FCC ID: BCG-A2294	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2004270019-03-R1.BCG	Test Dates: 05/01/2020 - 08/01/2020	EUT Type: Watch	Page 225 of 238

Band 13 Frequency Stability Measurements

OPERATING FREQUENCY: 782,000,000 Hz
CHANNEL: 23230
REFERENCE VOLTAGE: 3.80 VDC

VOLTAGE (%)	POWER (VDC)	TEMP (°C)	FREQUENCY (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	3.80	- 30	782,000,002	1.8	0.0000002
100 %		- 20	782,000,002	1.9	0.0000002
100 %		- 10	782,000,002	1.7	0.0000002
100 %		0	782,000,001	1.3	0.0000002
100 %		+ 10	782,000,001	1.3	0.0000002
100 %		+ 20	782,000,002	1.6	0.0000002
100 %		+ 30	782,000,002	1.6	0.0000002
100 %		+ 40	782,000,002	1.6	0.0000002
100 %		+ 50	782,000,002	2.3	0.0000003
BATT. ENDPOINT	3.40	+ 20	782,000,001	1.0	0.0000001

Table 7-44. Frequency Stability Data (Band 13 – 10MHz QPSK – Full RB Configuration)

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.

FCC ID: BCG-A2294		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2004270019-03-R1.BCG	Test Dates: 05/01/2020 - 08/01/2020	EUT Type: Watch	Page 226 of 238

Band 13 Frequency Stability Measurements

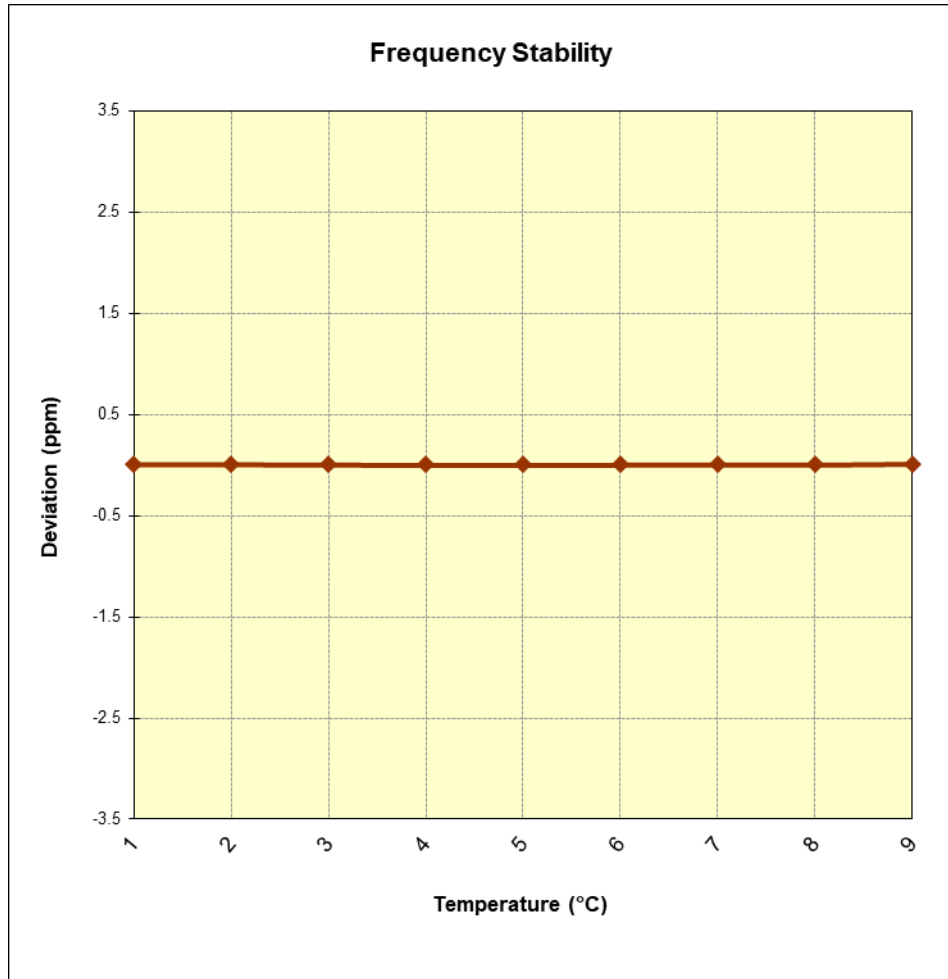


Figure 7-10. Frequency Stability Graph (Band 13 – 10MHz QPSK – Full RB Configuration)

FCC ID: BCG-A2294	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2004270019-03-R1.BCG	Test Dates: 05/01/2020 - 08/01/2020	EUT Type: Watch	Page 227 of 238

Band 26/5 Frequency Stability Measurements

OPERATING FREQUENCY: 836,500,000 Hz
 CHANNEL: 26915
 REFERENCE VOLTAGE: 3.80 VDC
 DEVIATION LIMIT: ± 0.00025 % or 2.5 ppm

VOLTAGE (%)	POWER (VDC)	TEMP (°C)	FREQUENCY (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	3.80	- 30	836,500,001	1.0	0.00000012
100 %		- 20	836,500,001	1.0	0.00000011
100 %		- 10	836,500,001	0.7	0.00000008
100 %		0	836,500,001	0.8	0.00000009
100 %		+ 10	836,500,001	1.1	0.00000013
100 %		+ 20	836,500,000	0.3	0.00000004
100 %		+ 30	836,500,001	0.6	0.00000008
100 %		+ 40	836,500,001	0.7	0.00000008
100 %		+ 50	836,500,001	1.0	0.00000012
BATT. ENDPOINT	3.40	+ 20	836,500,001	1.0	0.00000012

Table 7-45. Frequency Stability Data (Band 26/5 – 10MHz QPSK – Full RB Configuration)

FCC ID: BCG-A2294	 MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2004270019-03-R1.BCG	Test Dates: 05/01/2020 - 08/01/2020	EUT Type: Watch
		Page 228 of 238

Band 26/5 Frequency Stability Measurements

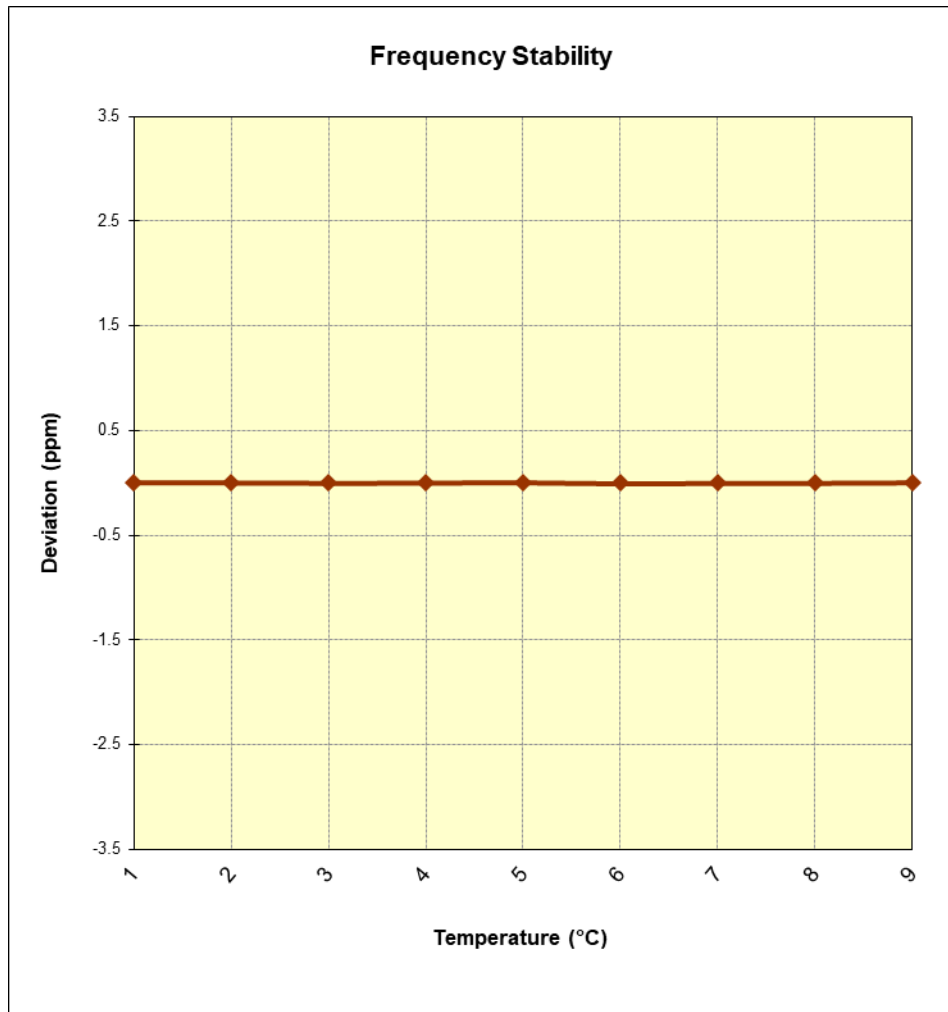


Figure 7-11. Frequency Stability Graph (Band 26/5 – 10MHz QPSK – Full RB Configuration)

FCC ID: BCG-A2294	 PCTEST Proud to be part of 	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2004270019-03-R1.BCG	Test Dates: 05/01/2020 - 08/01/2020	EUT Type: Watch	Page 229 of 238

Band 66/4 Frequency Stability Measurements

OPERATING FREQUENCY: 1,745,000,000 Hz
CHANNEL: 132322
REFERENCE VOLTAGE: 3.80 VDC

VOLTAGE (%)	POWER (VDC)	TEMP (°C)	FREQUENCY (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	3.80	- 30	1,744,999,999	-1.2	-0.00000007
100 %		- 20	1,744,999,999	-0.8	-0.00000004
100 %		- 10	1,744,999,999	-1.3	-0.00000007
100 %		0	1,744,999,999	-1.2	-0.00000007
100 %		+ 10	1,744,999,999	-0.7	-0.00000004
100 %		+ 20	1,744,999,999	-0.6	-0.00000004
100 %		+ 30	1,744,999,999	-1.5	-0.00000008
100 %		+ 40	1,744,999,999	-1.1	-0.00000006
100 %		+ 50	1,744,999,999	-1.3	-0.00000007
BATT. ENDPOINT	3.40	+ 20	1,744,999,999	-1.3	-0.00000007

Table 7-46. Frequency Stability Data (Band 66/4 – 20MHz QPSK – Full RB Configuration)

FCC ID: BCG-A2294	 MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2004270019-03-R1.BCG	Test Dates: 05/01/2020 - 08/01/2020	EUT Type: Watch
		Page 230 of 238

Band 66/4 Frequency Stability Measurements

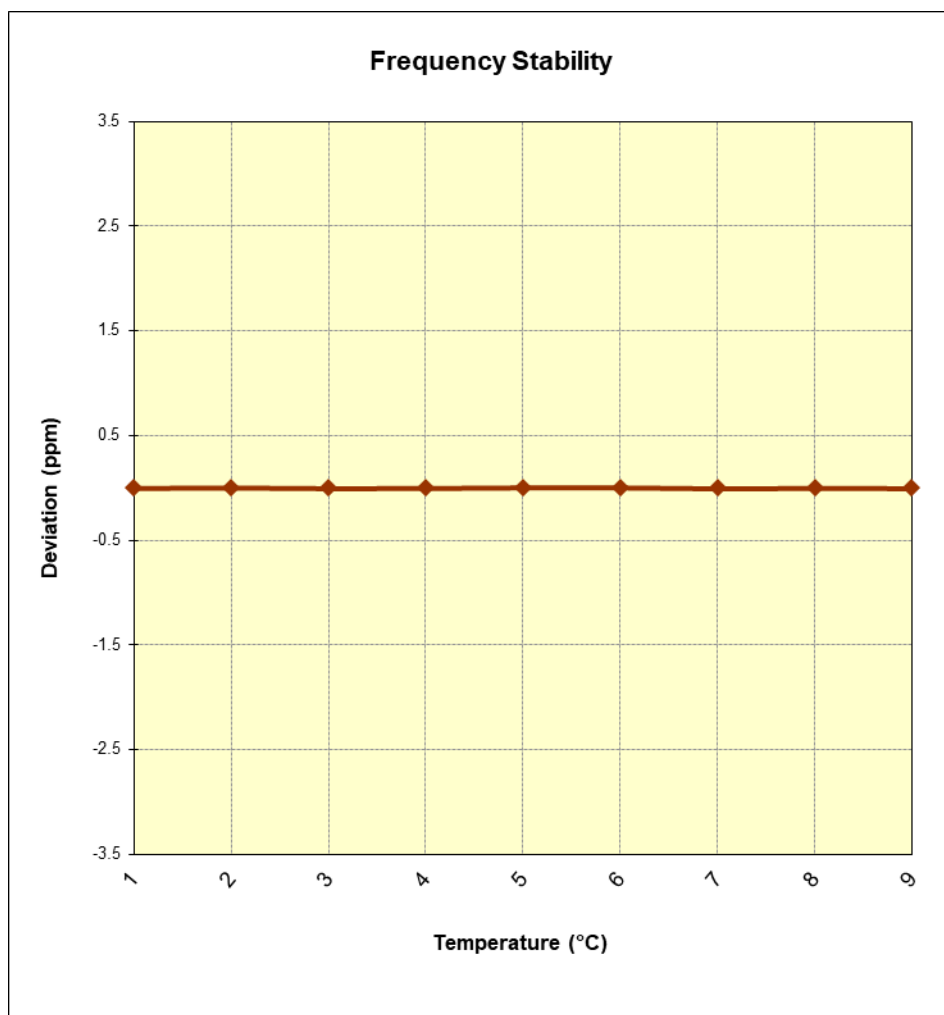


Figure 7-12. Frequency Stability Graph (Band 66/4 – 20MHz QPSK – Full RB Configuration)

FCC ID: BCG-A2294	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2004270019-03-R1.BCG	Test Dates: 05/01/2020 - 08/01/2020	EUT Type: Watch	Page 231 of 238

Band 25/2 Frequency Stability Measurements

OPERATING FREQUENCY: 1,882,500,000 Hz

CHANNEL: 26365

REFERENCE VOLTAGE: 3.80 VDC

DEVIATION LIMIT: ± 0.00025 % or 2.5 ppm

VOLTAGE (%)	POWER (VDC)	TEMP (°C)	FREQUENCY (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	3.80	- 30	1,882,499,999	-1.0	-0.00000005
100 %		- 20	1,882,500,001	0.9	0.00000005
100 %		- 10	1,882,499,999	-1.2	-0.00000006
100 %		0	1,882,500,001	1.2	0.00000006
100 %		+ 10	1,882,500,001	0.9	0.00000005
100 %		+ 20	1,882,499,999	-1.3	-0.00000007
100 %		+ 30	1,882,499,999	-1.3	-0.00000007
100 %		+ 40	1,882,499,999	-1.0	-0.00000005
100 %		+ 50	1,882,500,001	0.9	0.00000005
BATT. ENDPOINT	3.40	+ 20	1,882,500,001	0.9	0.00000005

Table 7-47. Frequency Stability Data (Band 25/2 – 20MHz QPSK – Full RB Configuration)

FCC ID: BCG-A2294	 PCTEST Proud to be part of 	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2004270019-03-R1.BCG	Test Dates: 05/01/2020 - 08/01/2020	EUT Type: Watch	Page 232 of 238

Band 25/2 Frequency Stability Measurements

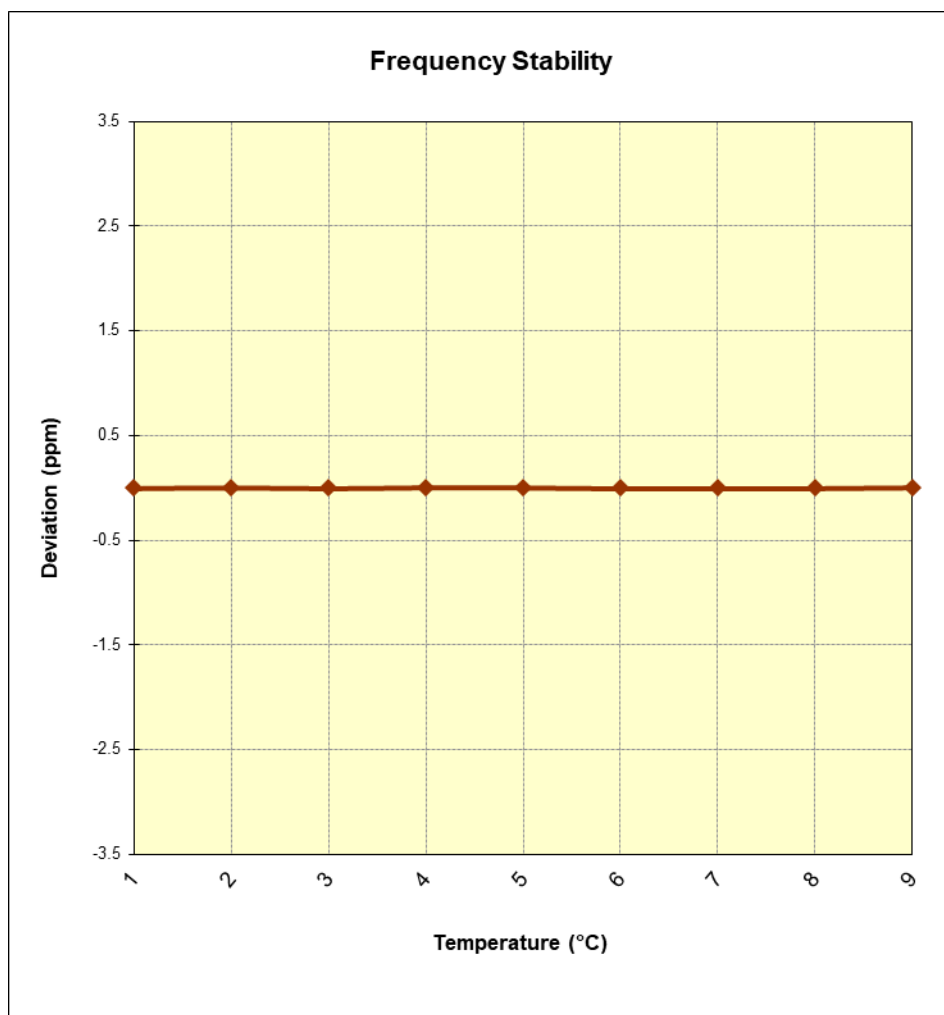


Figure 7-13. Frequency Stability Graph (Band 25/2 – 20MHz QPSK – Full RB Configuration)

FCC ID: BCG-A2294	 PCTEST Proud to be part of 	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2004270019-03-R1.BCG	Test Dates: 05/01/2020 - 08/01/2020	EUT Type: Watch	Page 233 of 238

Band 7 Frequency Stability Measurements

OPERATING FREQUENCY: 2,535,000,000 Hz
CHANNEL: 21100
REFERENCE VOLTAGE: 3.80 VDC

VOLTAGE (%)	POWER (VDC)	TEMP (°C)	FREQUENCY (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	3.80	- 30	2,535,000,004	4.1	0.0000002
100 %		- 20	2,535,000,005	4.8	0.0000002
100 %		- 10	2,535,000,005	4.7	0.0000002
100 %		0	2,535,000,006	6.1	0.0000002
100 %		+ 10	2,535,000,006	6.1	0.0000002
100 %		+ 20	2,535,000,005	4.5	0.0000002
100 %		+ 30	2,535,000,002	1.9	0.0000001
100 %		+ 40	2,535,000,004	3.9	0.0000002
100 %		+ 50	2,535,000,003	2.9	0.0000001
BATT. ENDPOINT	3.40	+ 20	2,535,000,003	2.9	0.0000001

Table 7-48. Frequency Stability Data (Band 7 – 20MHz QPSK – Full RB Configuration)

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.

FCC ID: BCG-A2294	 MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2004270019-03-R1.BCG	Test Dates: 05/01/2020 - 08/01/2020	EUT Type: Watch
		Page 234 of 238

Band 7 Frequency Stability Measurements

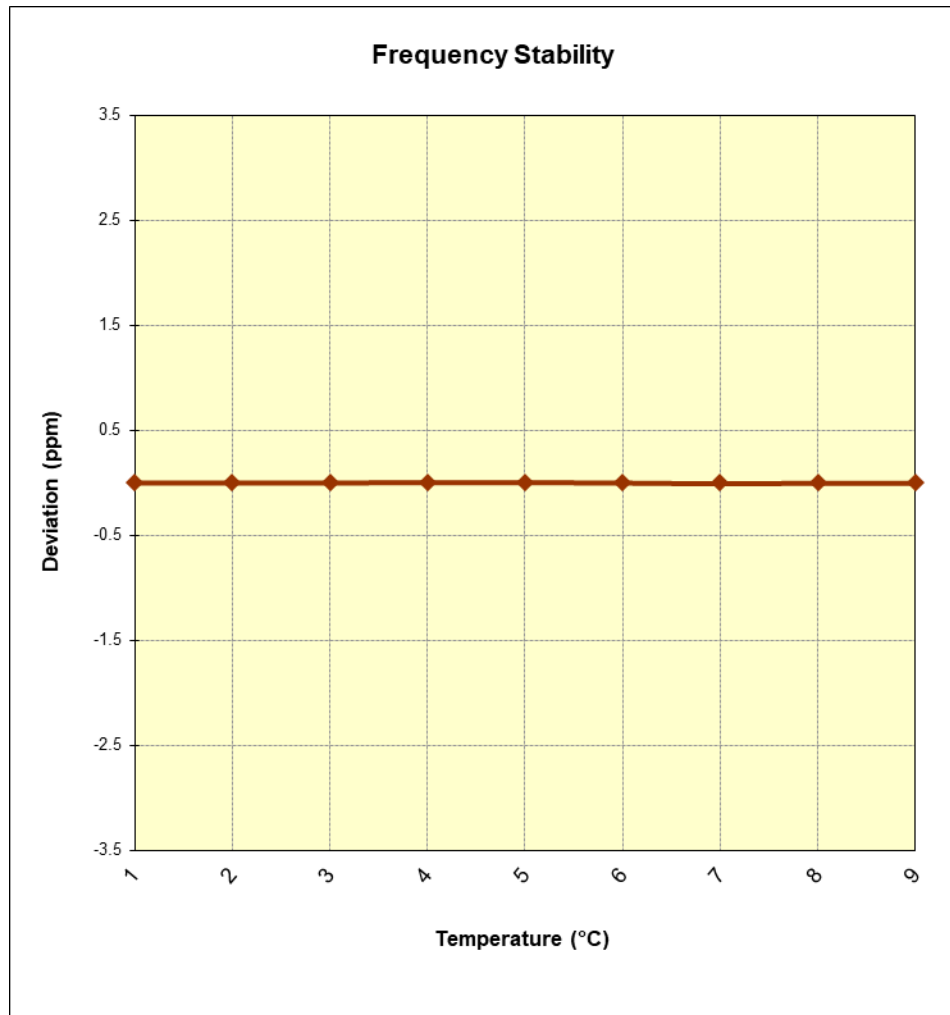


Figure 7-14. Frequency Stability Graph (Band 7 – 20MHz QPSK – Full RB Configuration)

FCC ID: BCG-A2294	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2004270019-03-R1.BCG	Test Dates: 05/01/2020 - 08/01/2020	EUT Type: Watch	Page 235 of 238

Band 41 Frequency Stability Measurements

OPERATING FREQUENCY: 2,593,000,000 Hz
CHANNEL: 40620
REFERENCE VOLTAGE: 3.80 VDC

VOLTAGE (%)	POWER (VDC)	TEMP (°C)	FREQUENCY (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	3.80	- 30	2,593,000,007	6.8	0.00000026
100 %		- 20	2,593,000,008	7.7	0.00000030
100 %		- 10	2,593,000,008	7.7	0.00000030
100 %		0	2,593,000,010	10.1	0.00000039
100 %		+ 10	2,593,000,010	9.7	0.00000038
100 %		+ 20	2,593,000,009	8.6	0.00000033
100 %		+ 30	2,593,000,009	8.6	0.00000033
100 %		+ 40	2,593,000,008	8.4	0.00000032
100 %		+ 50	2,593,000,007	7.0	0.00000027
BATT. ENDPOINT	3.40	+ 20	2,592,999,999	-1.1	-0.00000004

Table 7-49. Frequency Stability Data (Band 41 – 20MHz QPSK – Full RB Configuration)

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.

FCC ID: BCG-A2294	 MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1C2004270019-03-R1.BCG	Test Dates: 05/01/2020 - 08/01/2020	EUT Type: Watch	Page 236 of 238

Band 41 Frequency Stability Measurements

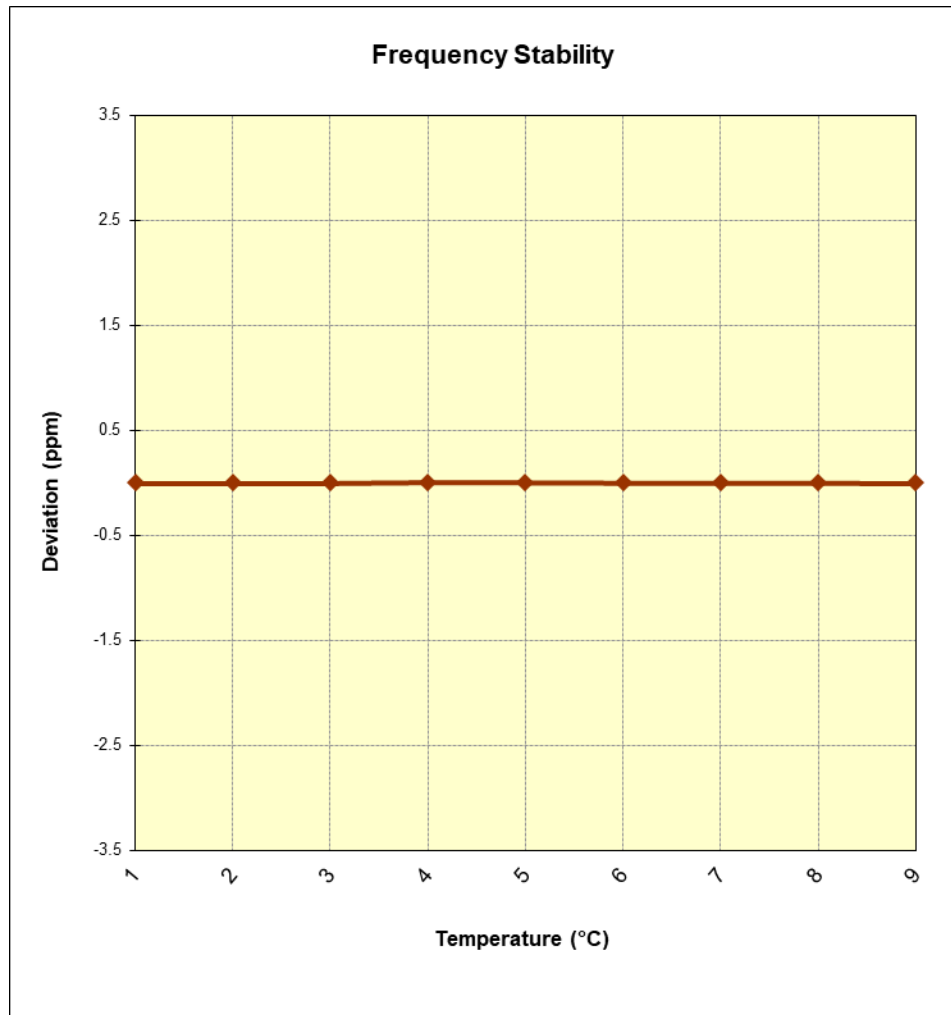


Figure 7-15. Frequency Stability Graph (Band 41 – 20MHz QPSK – Full RB Configuration)

FCC ID: BCG-A2294	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2004270019-03-R1.BCG	Test Dates: 05/01/2020 - 08/01/2020	EUT Type: Watch	Page 237 of 238

8.0 CONCLUSION

The data collected relate only to the item(s) tested and show that the **Apple Watch FCC ID: BCG-A2294** complies with all the requirements of Part 22, 24, & 27 of the FCC Rules for LTE operation only.

FCC ID: BCG-A2294	 PCTEST Proud to be part of  element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2004270019-03-R1.BCG	Test Dates: 05/01/2020 - 08/01/2020	EUT Type: Watch	Page 238 of 238