

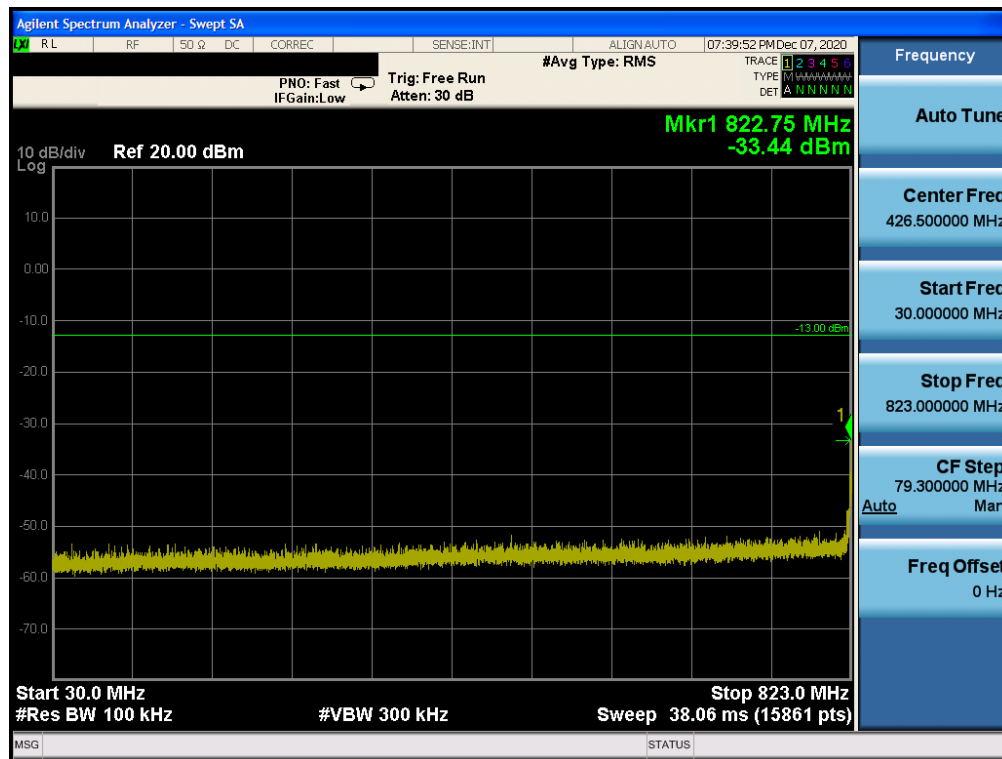


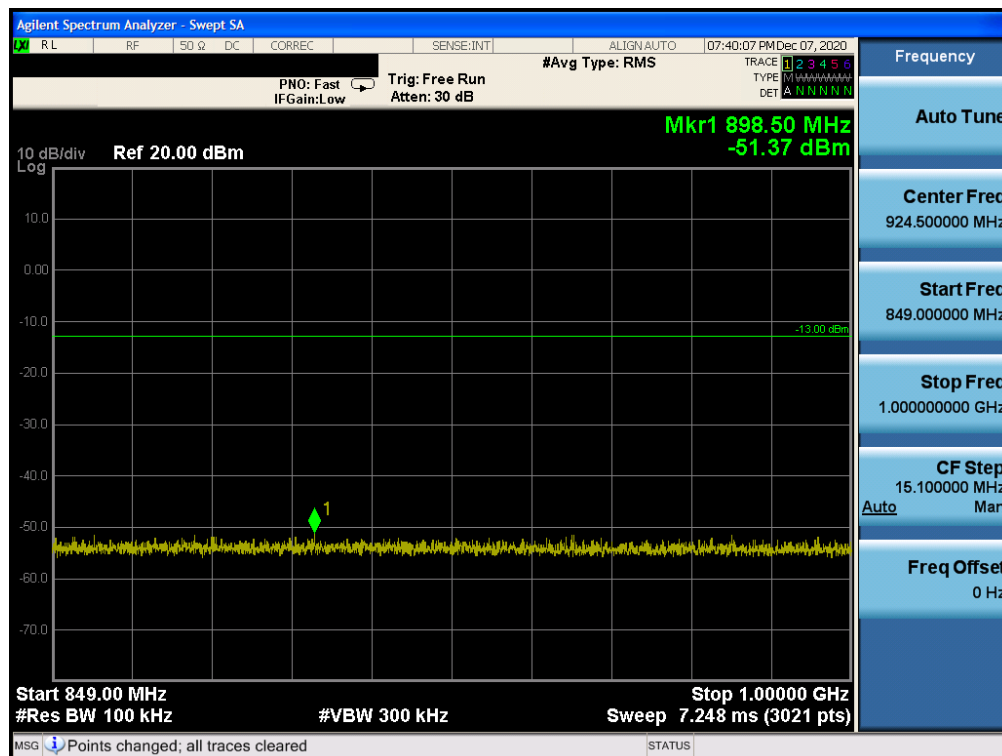
Plot 7-67. CSE (NR Band n5 - 20.0MHz DFT-s-OFDM QPSK - RB Size 1, RB Offset 0 - High Channel)

FCC ID: BCGA2379	 PCTEST Proud to be part of 	PART 22 MEASUREMENT REPORT	Approved by: Quality Manager
Test Report S/N: 1C2101020005-02-R1.BCG	Test Dates: 12/15/2020 - 02/27/2021	EUT Type: Tablet Device	Page 50 of 108

GSM/GPRS Cell

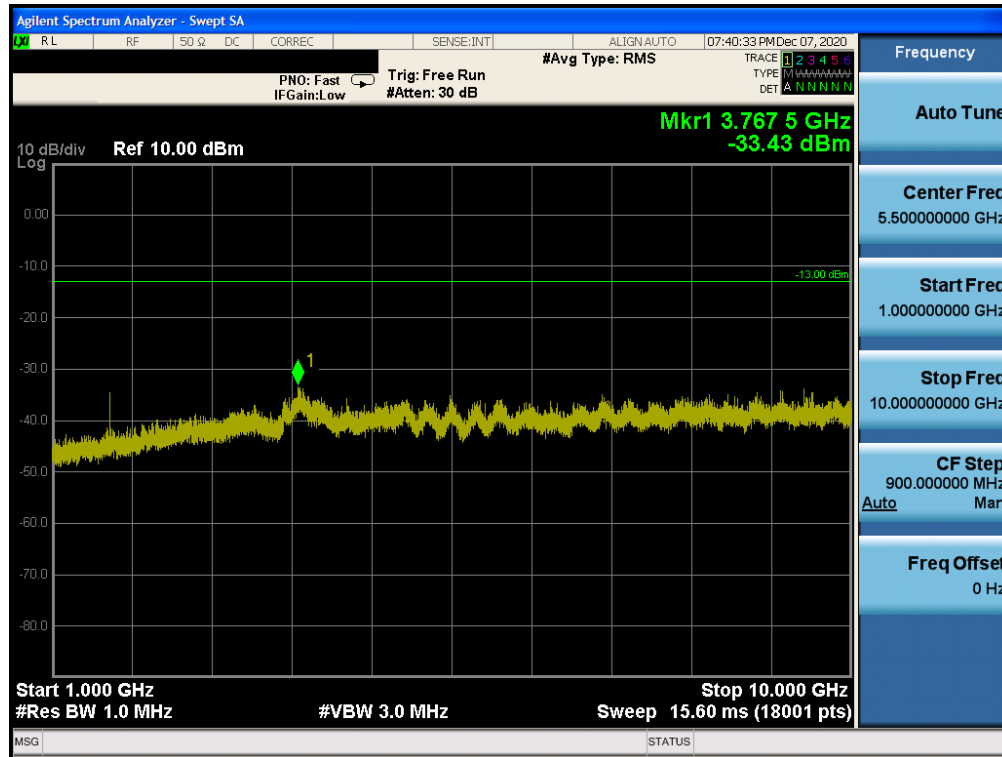


Plot 7-68. CSE (GPRS Ch. 128)

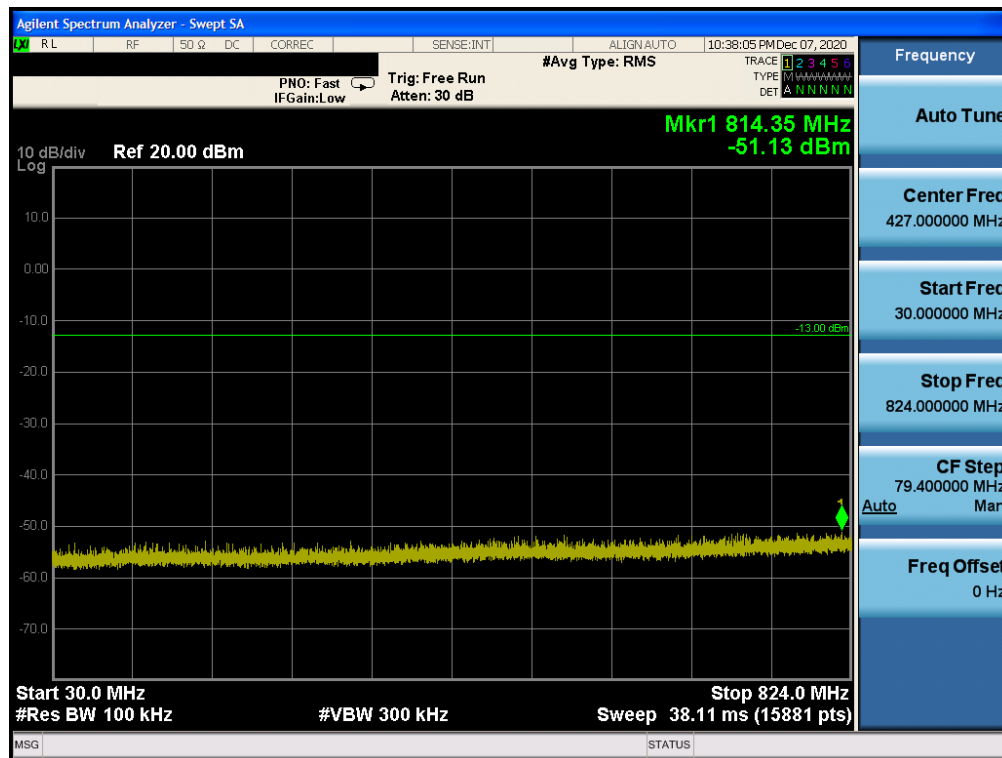


Plot 7-69. CSE (GPRS Ch. 128)

FCC ID: BCGA2379	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	Approved by: Quality Manager
Test Report S/N: 1C2101020005-02-R1.BCG	Test Dates: 12/15/2020 - 02/27/2021	EUT Type: Tablet Device	Page 51 of 108

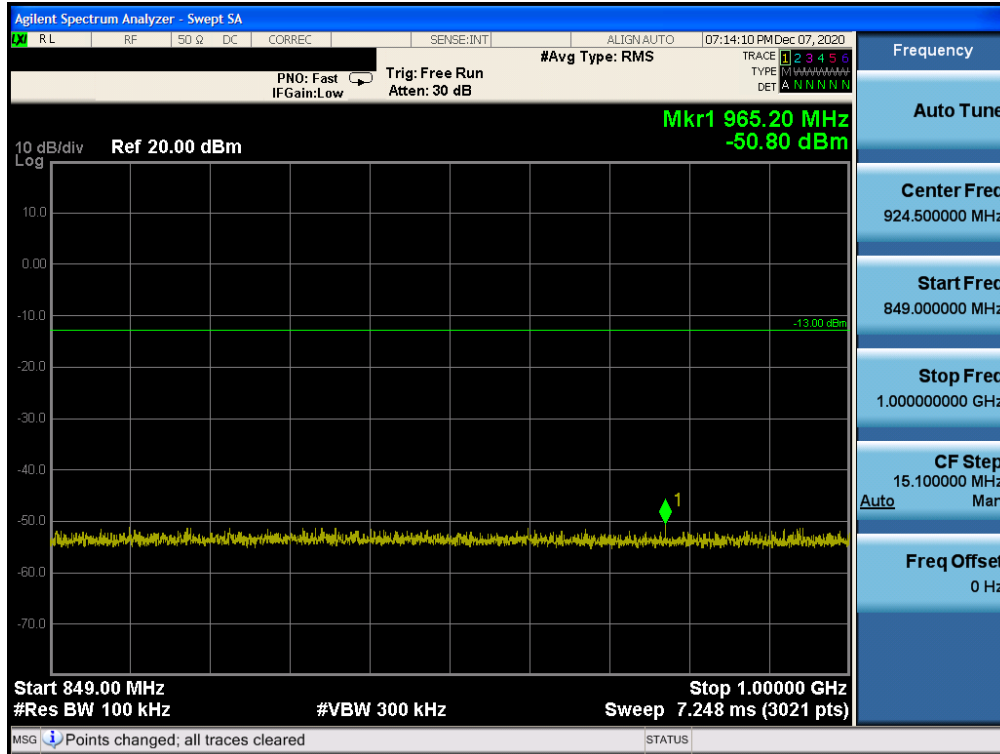


Plot 7-70. CSE (GPRS Ch. 128)

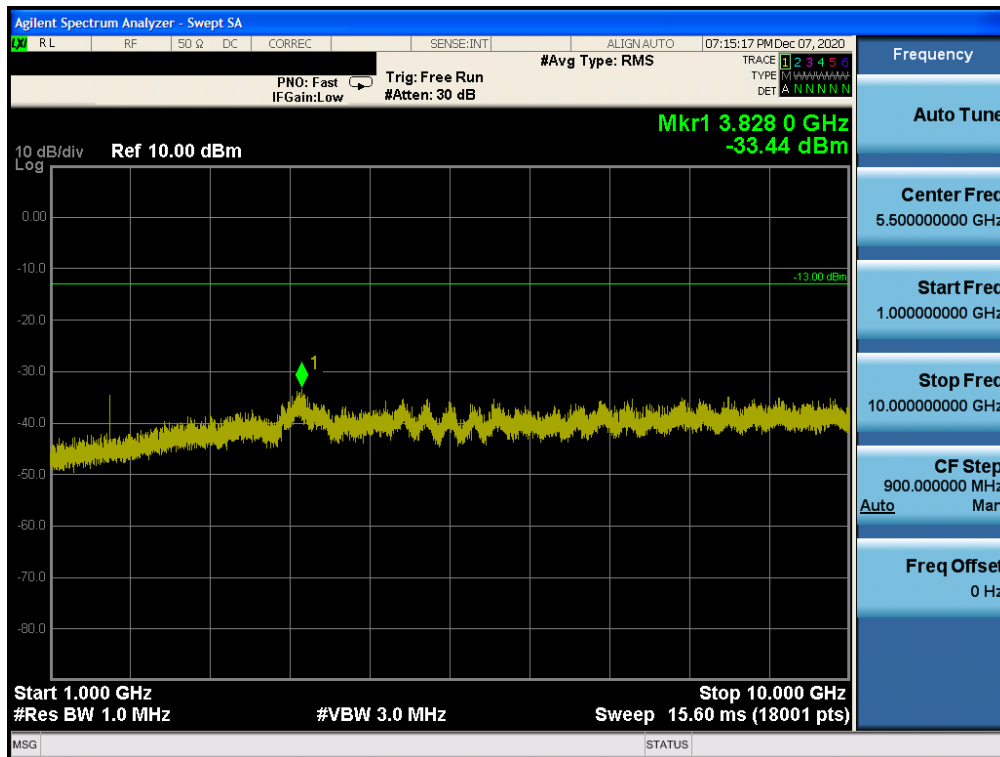


Plot 7-71. CSE (GPRS Ch. 190)

FCC ID: BCGA2379	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	Approved by: Quality Manager
Test Report S/N: 1C2101020005-02-R1.BCG	Test Dates: 12/15/2020 - 02/27/2021	EUT Type: Tablet Device	Page 52 of 108

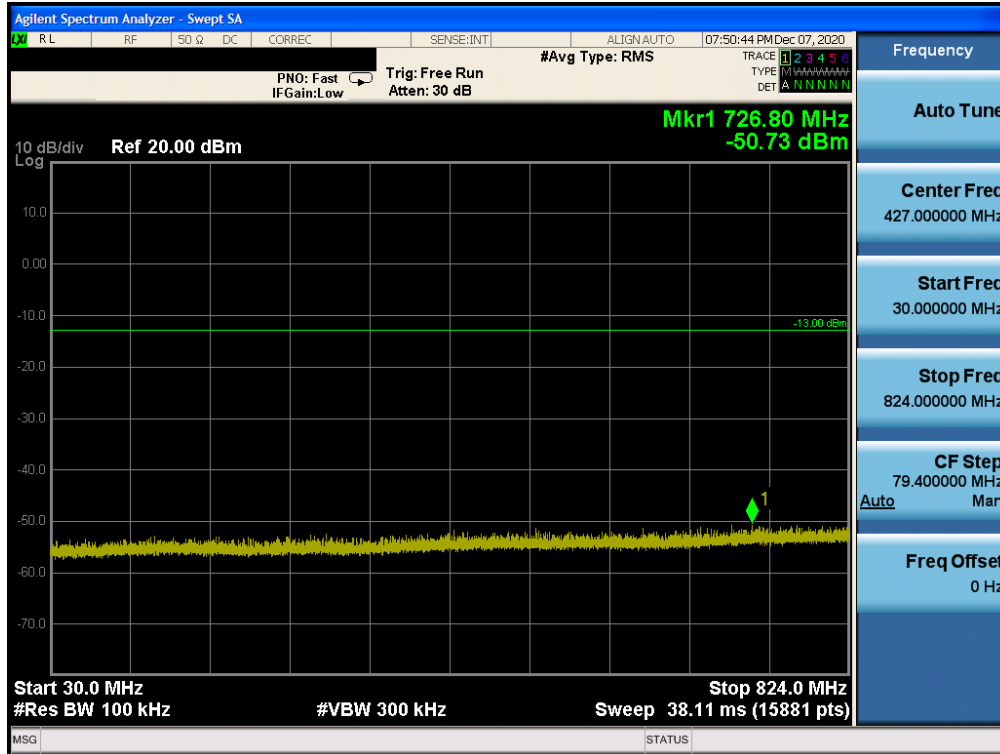


Plot 7-72. CSE (GPRS Ch. 190)

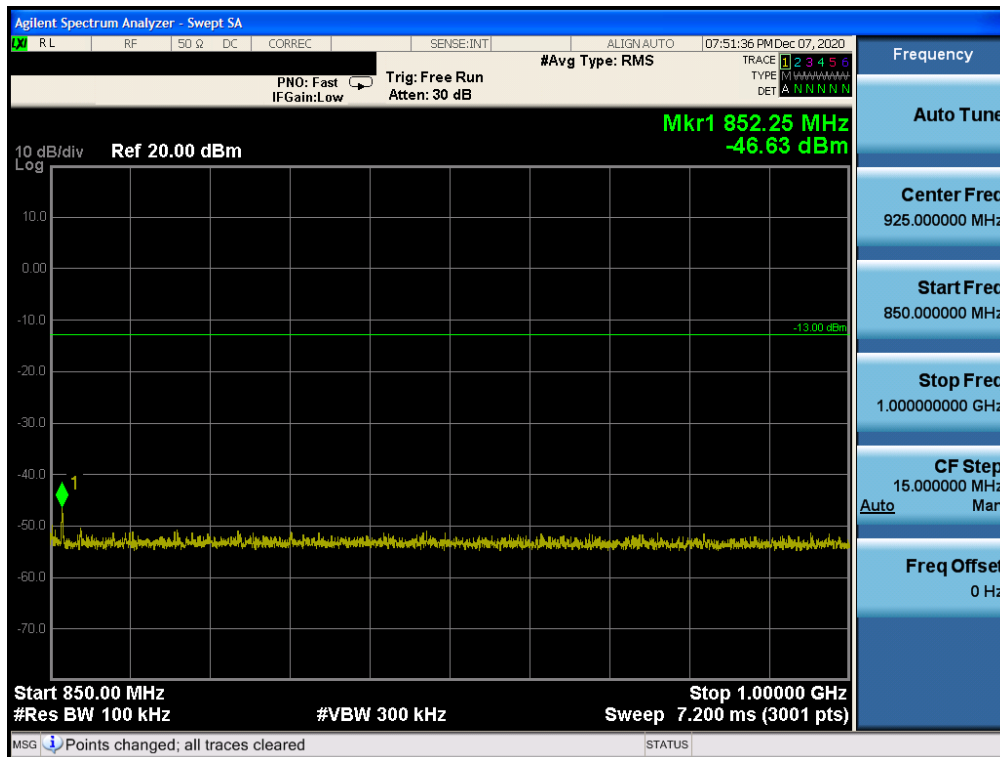


Plot 7-73. CSE (GPRS Ch. 190)

FCC ID: BCGA2379	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	Approved by: Quality Manager
Test Report S/N: 1C2101020005-02-R1.BCG	Test Dates: 12/15/2020 - 02/27/2021	EUT Type: Tablet Device	Page 53 of 108



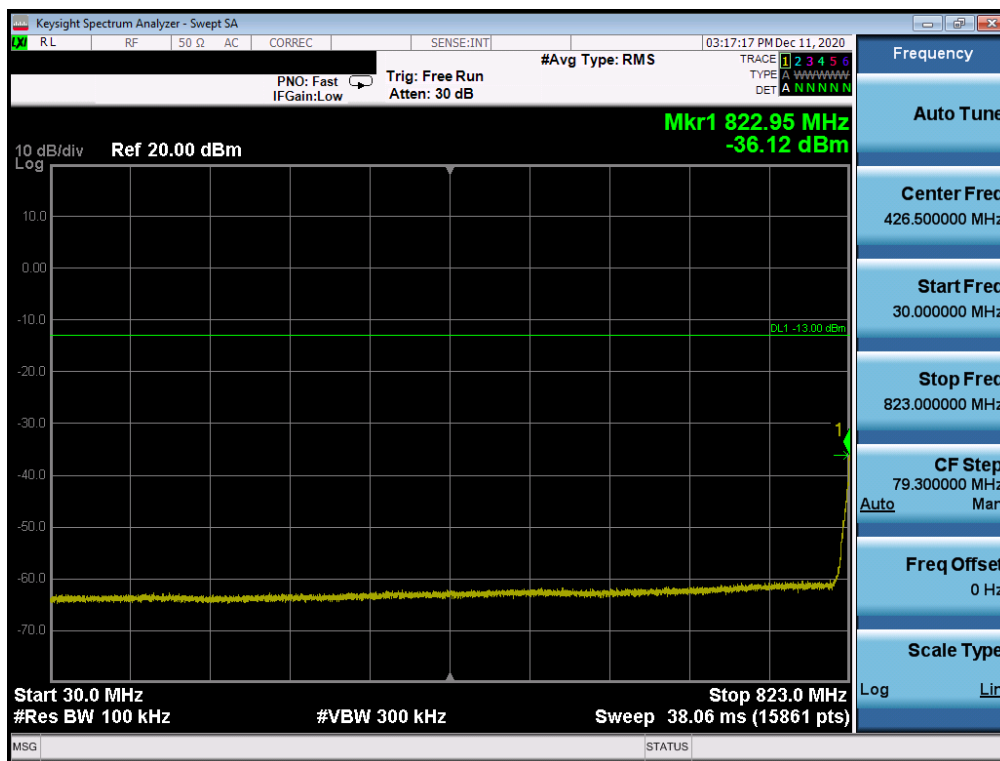
Plot 7-74. CSE (GPRS Ch. 251)



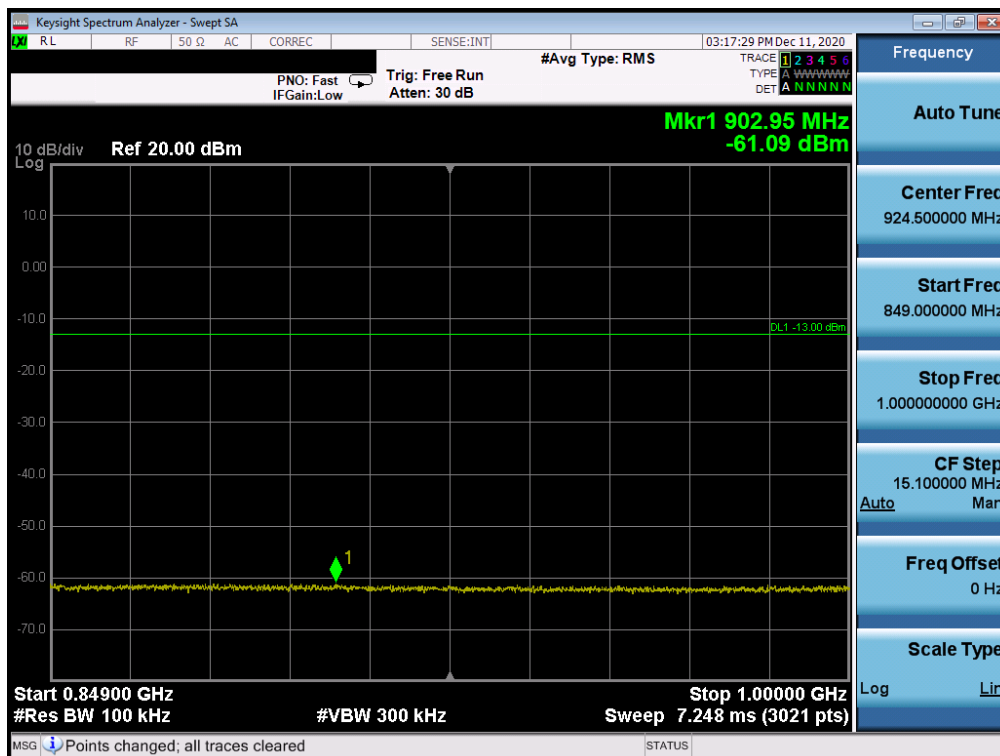
Plot 7-75. CSE (GPRS Ch. 251)

FCC ID: BCGA2379	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	Approved by: Quality Manager
Test Report S/N: 1C2101020005-02-R1.BCG	Test Dates: 12/15/2020 - 02/27/2021	EUT Type: Tablet Device	Page 54 of 108

WCDMA Cell

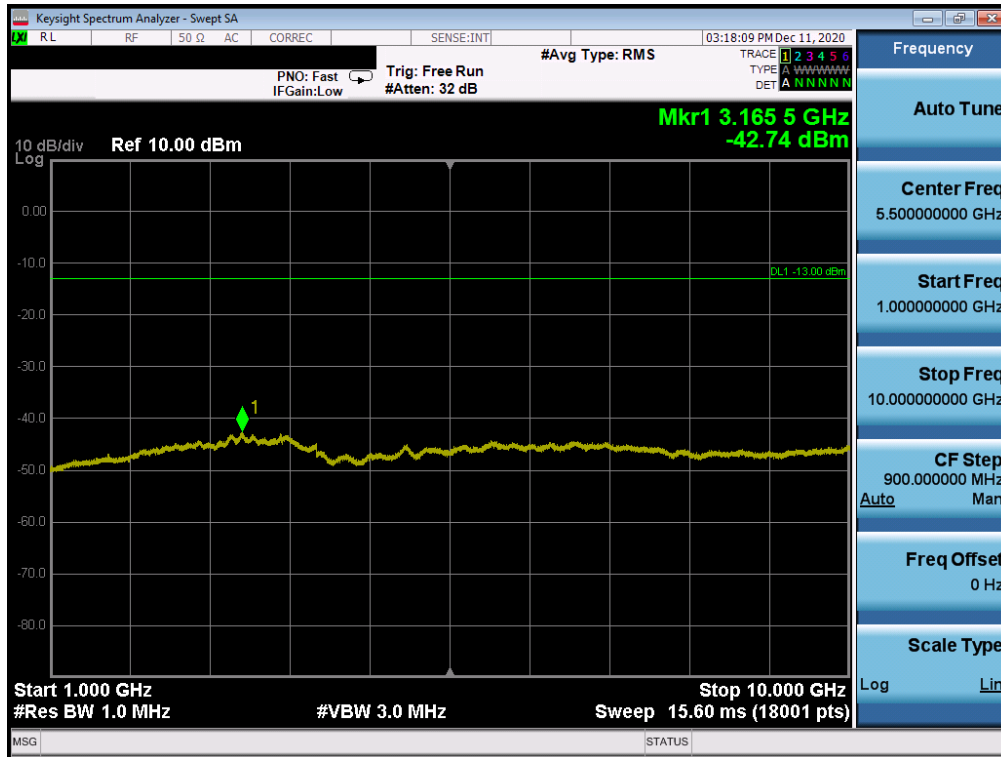


Plot 7-77. CSE (WCDMA Ch. 4132)

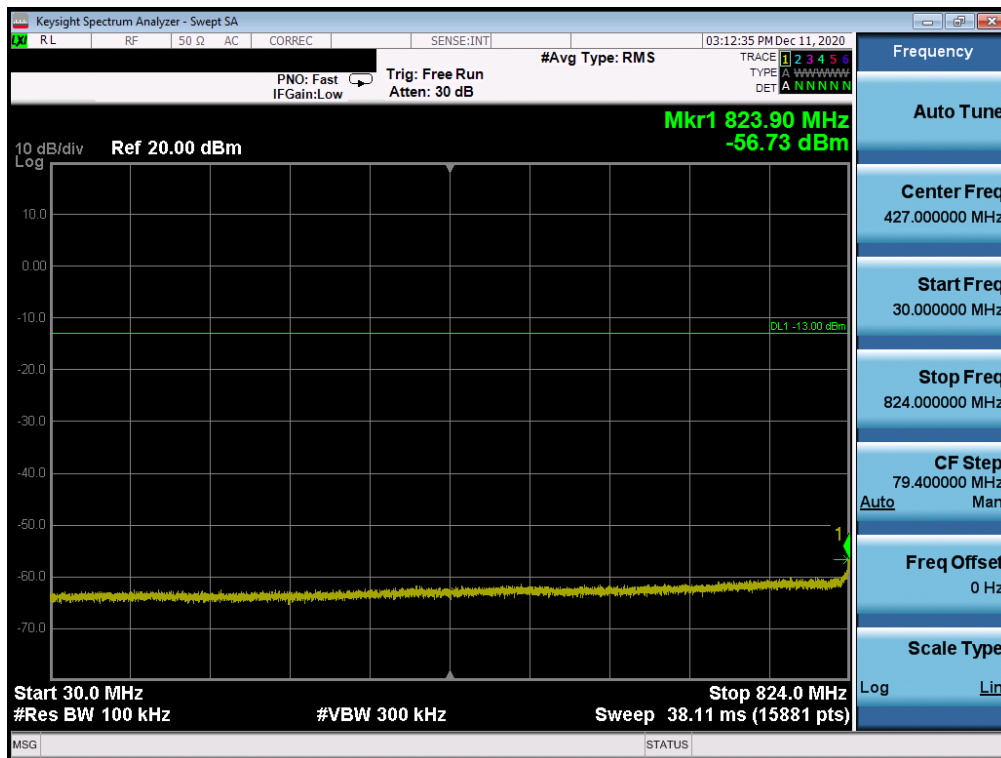


Plot 7-78. CSE (WCDMA Ch. 4132)

FCC ID: BCGA2379	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	Approved by: Quality Manager
Test Report S/N: 1C2101020005-02-R1.BCG	Test Dates: 12/15/2020 - 02/27/2021	EUT Type: Tablet Device	Page 56 of 108

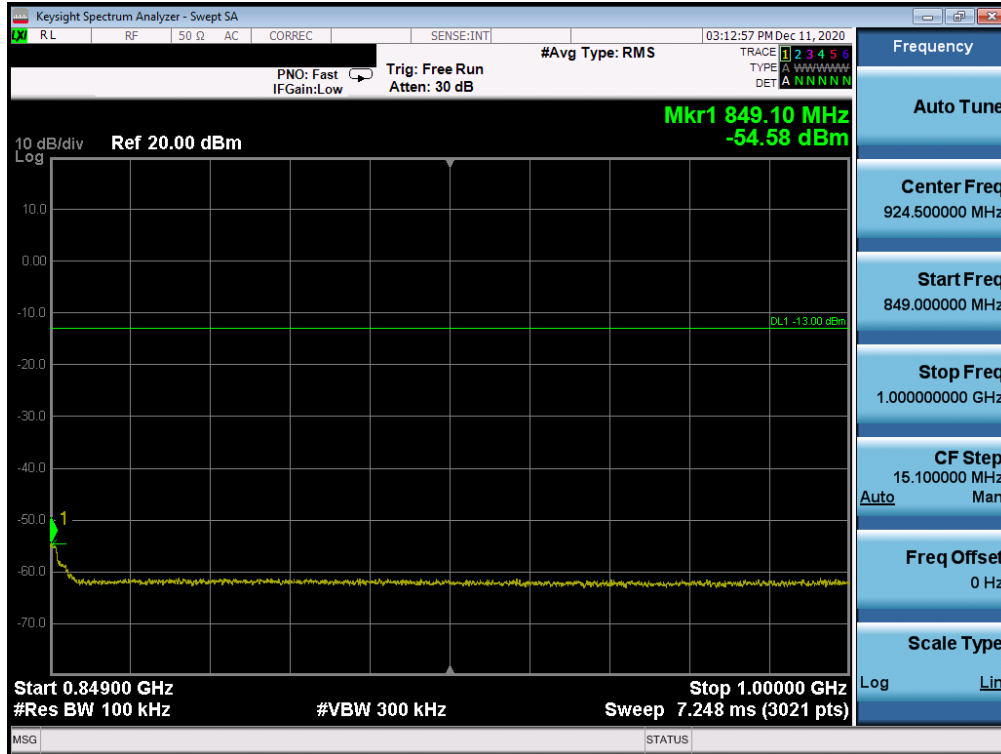


Plot 7-79. CSE (WCDMA Ch. 4132)

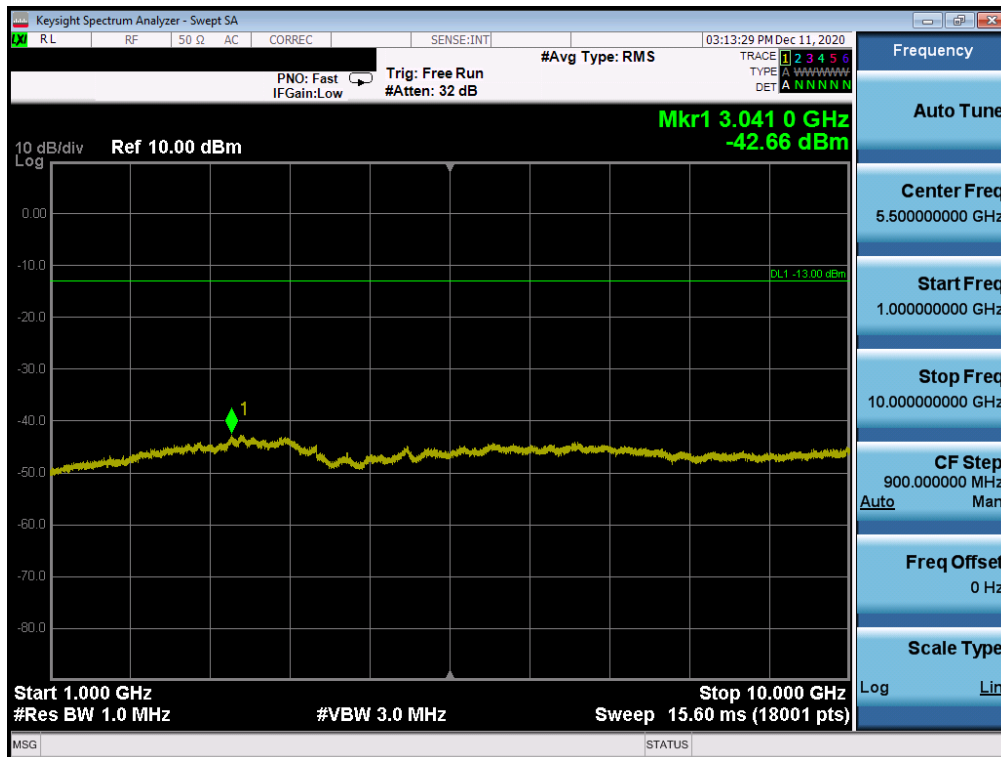


Plot 7-80. CSE (WCDMA Ch. 4183)

FCC ID: BCGA2379	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	Approved by: Quality Manager
Test Report S/N: 1C2101020005-02-R1.BCG	Test Dates: 12/15/2020 - 02/27/2021	EUT Type: Tablet Device	Page 57 of 108

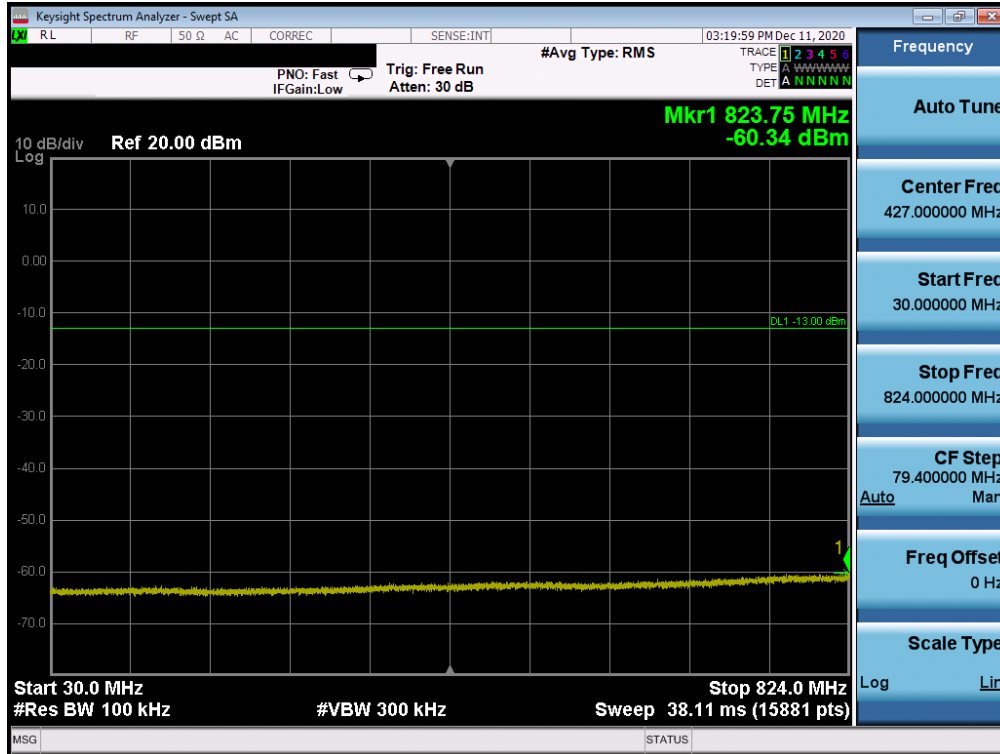


Plot 7-81. CSE (WCDMA Ch. 4183)

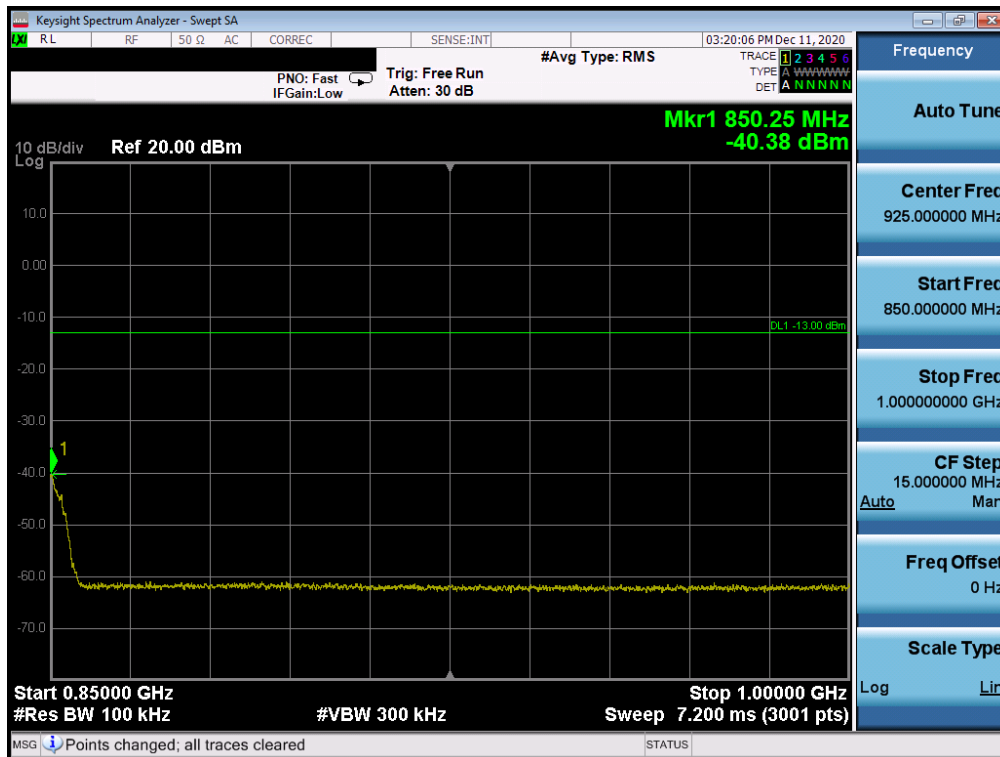


Plot 7-82. CSE (WCDMA Ch. 4183)

FCC ID: BCGA2379	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	Approved by: Quality Manager
Test Report S/N: 1C2101020005-02-R1.BCG	Test Dates: 12/15/2020 - 02/27/2021	EUT Type: Tablet Device	Page 58 of 108

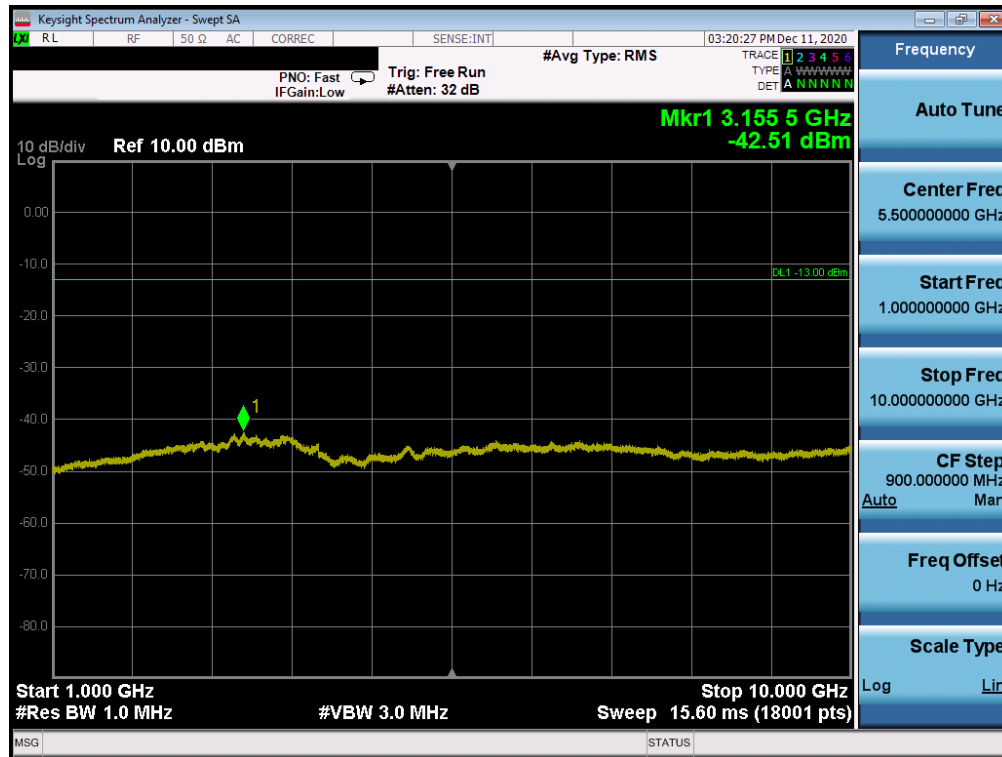


Plot 7-83. CSE (WCDMA Ch. 4233)



Plot 7-84. CSE (WCDMA Ch. 4233)

FCC ID: BCGA2379	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	Approved by: Quality Manager
Test Report S/N: 1C2101020005-02-R1.BCG	Test Dates: 12/15/2020 - 02/27/2021	EUT Type: Tablet Device	Page 59 of 108



Plot 7-85. CSE (WCDMA Ch. 4233)

FCC ID: BCGA2379	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	Approved by: Quality Manager
Test Report S/N: 1C2101020005-02-R1.BCG	Test Dates: 12/15/2020 - 02/27/2021	EUT Type: Tablet Device	Page 60 of 108

7.4 Band Edge Emissions at Antenna Terminal §2.1051, 22.917(a)

Test Overview

All out of band emissions are measured with a spectrum analyzer connected to the antenna terminal of the EUT while the EUT is operating at maximum power, and at the appropriate frequencies. All data rates were investigated to determine the worst case configuration. All modes of operation were investigated and the worst case configuration results are reported in this section.

The minimum permissible attenuation level of any spurious emission is $43 + 10 \log_{10}(P_{\text{Watts}})$, where P is the transmitter power in Watts.

Test Procedure Used

KDB 971168 D01 v03r01 – Section 6.0

Test Settings

1. Start and stop frequency were set such that the band edge would be placed in the center of the plot
2. Span was set large enough so as to capture all out of band emissions near the band edge
3. $RBW \geq 1\%$ of the emission bandwidth
4. $VBW \geq 3 \times RBW$
5. Detector = RMS
6. Number of sweep points $\geq 2 \times \text{Span}/RBW$
7. Trace mode = trace average for continuous emissions, max hold for pulse emissions
8. Sweep time = auto couple
9. The trace was allowed to stabilize

Test Setup

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

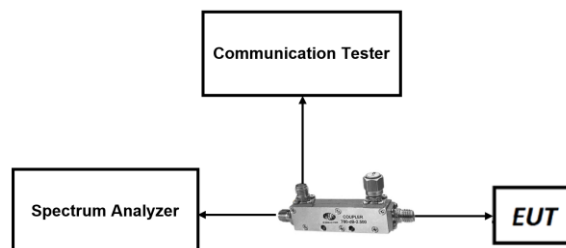



Figure 7-3. Test Instrument & Measurement Setup

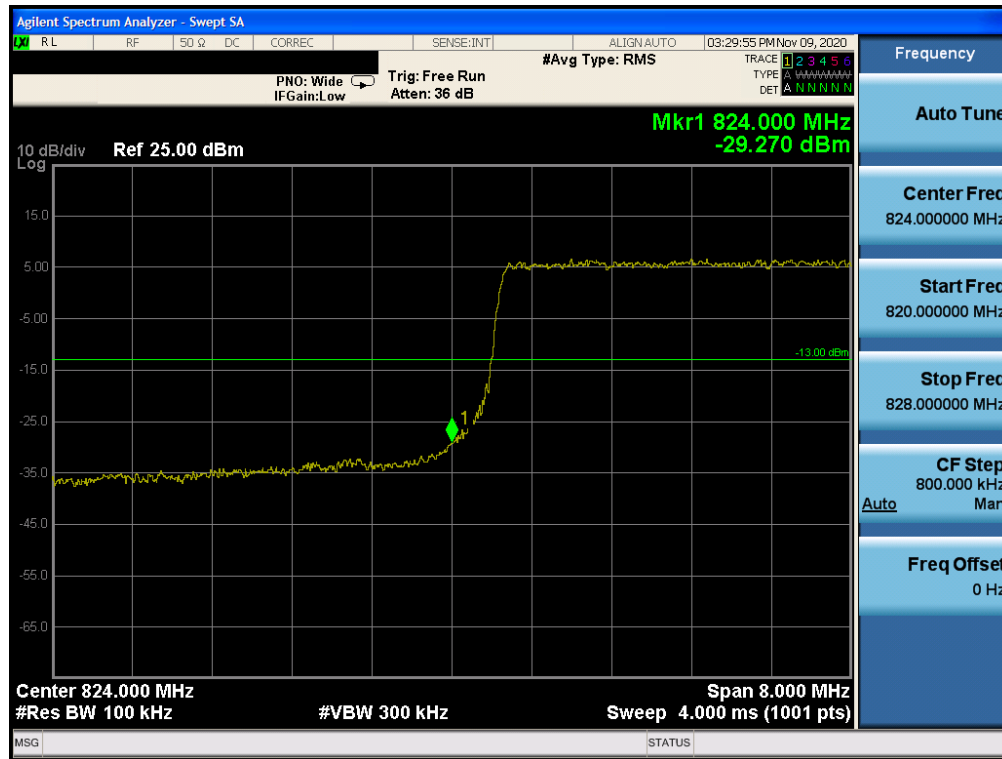
FCC ID: BCGA2379	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	Approved by: Quality Manager
Test Report S/N: 1C2101020005-02-R1.BCG	Test Dates: 12/15/2020 - 02/27/2021	EUT Type: Tablet Device	Page 61 of 108

Test Notes

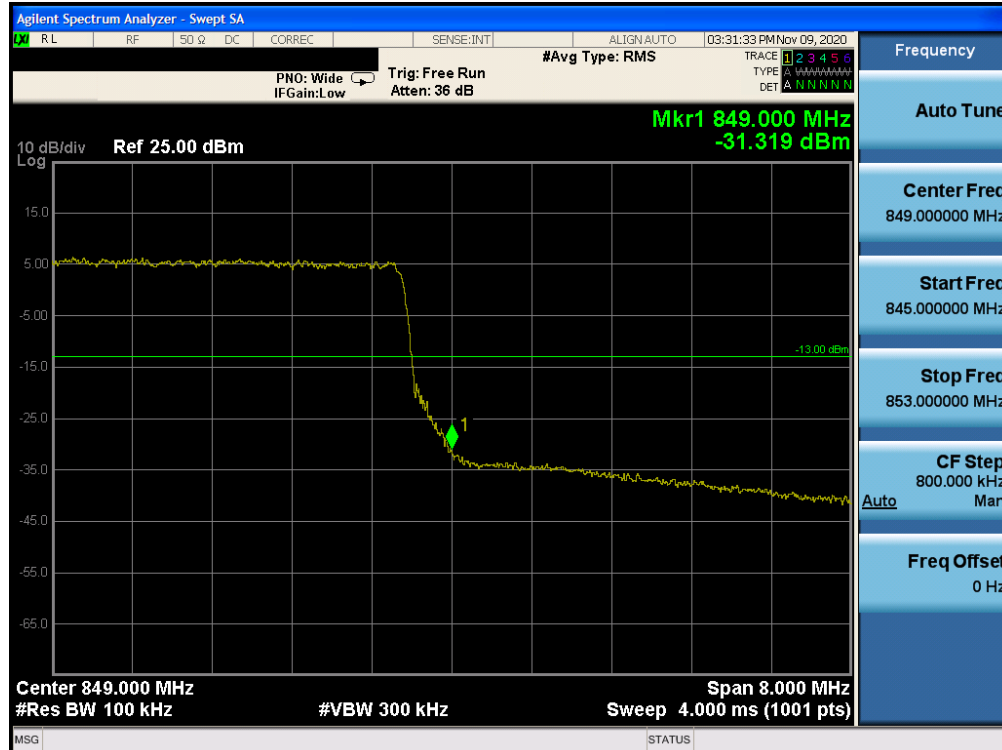
1. Per 22.917(b), in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed to demonstrate compliance with the out-of-band emissions limit. The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emission are attenuated at least 26 dB below the transmitter power.
2. For NR operation, all subcarrier spacings (SCS) and transmission schemes (e.g. CP-OFDM and DFT-s-OFDM) were investigated to determine the worst case configuration. All modes of operation were investigated and the worst case configuration results are reported in this section.

FCC ID: BCGA2379	 PART 22 MEASUREMENT REPORT		Approved by: Quality Manager
Test Report S/N: 1C2101020005-02-R1.BCG	Test Dates: 12/15/2020 - 02/27/2021	EUT Type: Tablet Device	Page 62 of 108

LTE Band 5

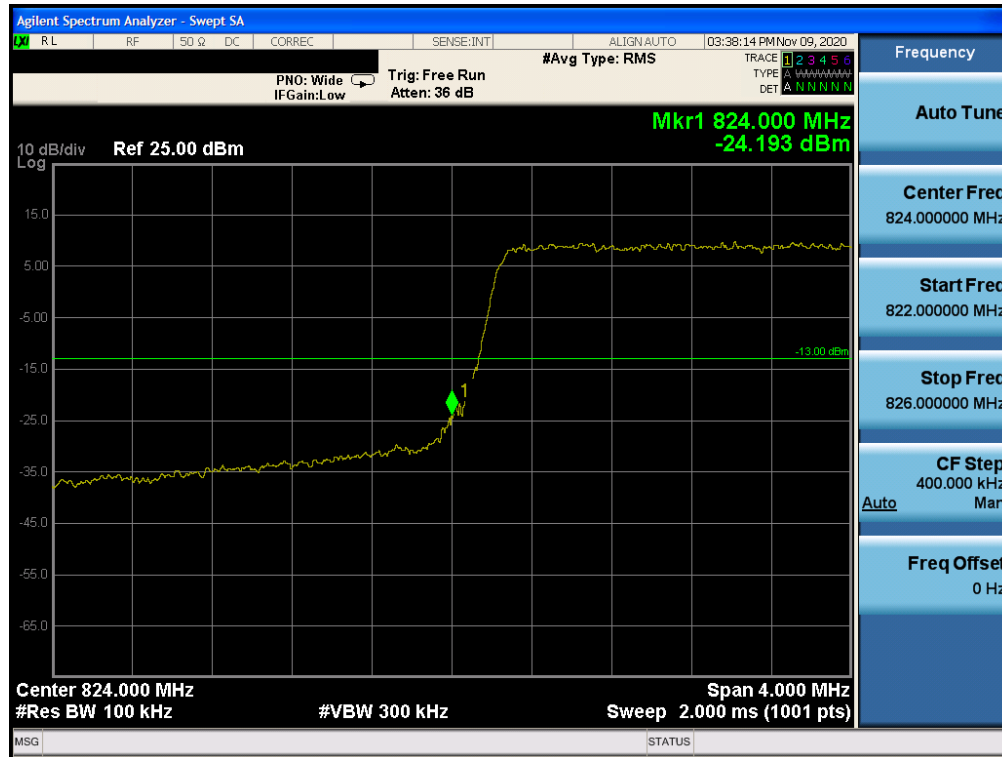


Plot 7-86. Lower Band Edge Plot (LTE Band 5 - 10MHz QPSK – Full RB Configuration)



Plot 7-87. Upper Band Edge Plot (LTE Band 5 - 10MHz QPSK – Full RB Configuration)

FCC ID: BCGA2379	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	Approved by: Quality Manager
Test Report S/N: 1C2101020005-02-R1.BCG	Test Dates: 12/15/2020 - 02/27/2021	EUT Type: Tablet Device	Page 63 of 108

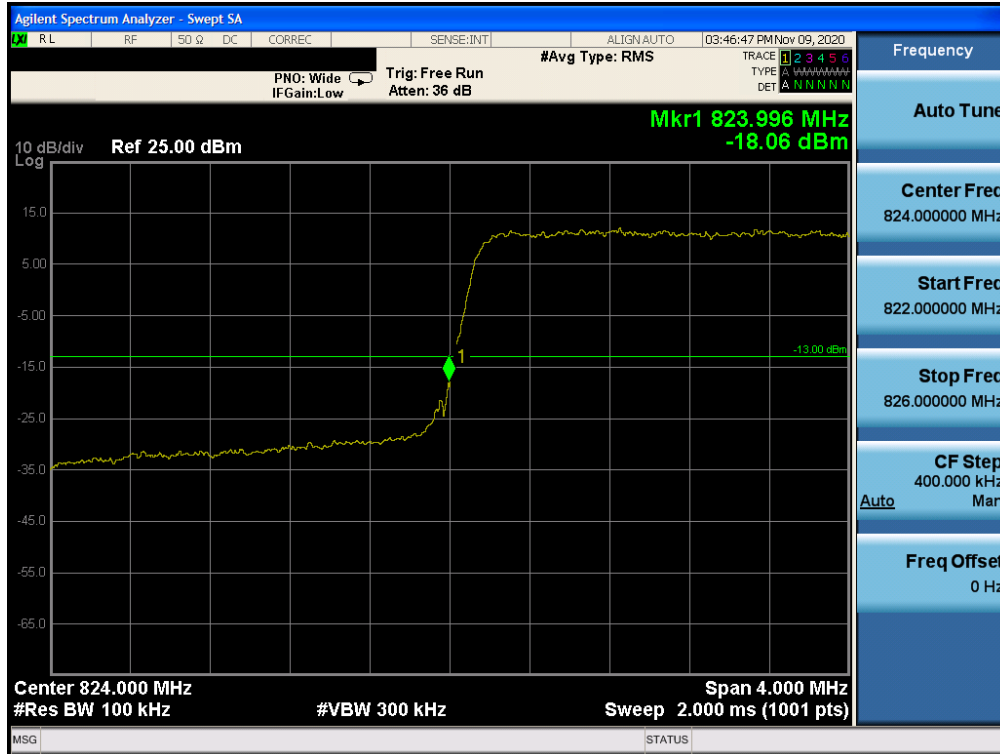


Plot 7-88. Lower Band Edge Plot (LTE Band 5 - 5MHz QPSK – Full RB Configuration)

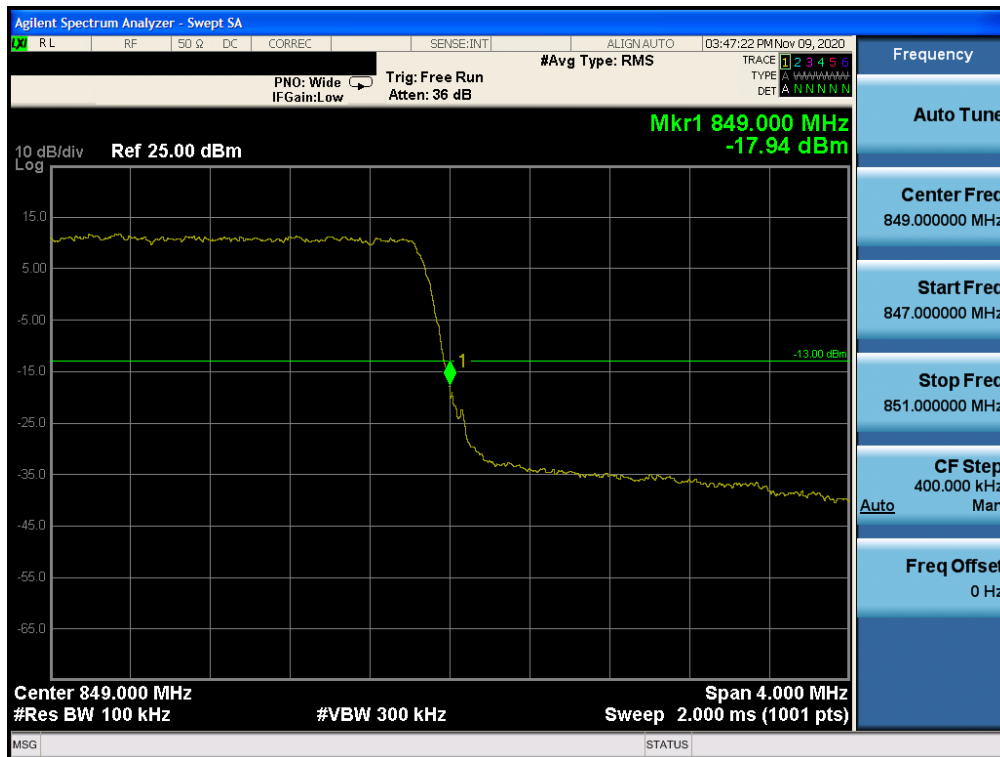


Plot 7-89. Upper Band Edge Plot (LTE Band 5 - 5MHz QPSK – Full RB Configuration)

FCC ID: BCGA2379	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	Approved by: Quality Manager
Test Report S/N: 1C2101020005-02-R1.BCG	Test Dates: 12/15/2020 - 02/27/2021	EUT Type: Tablet Device	Page 64 of 108

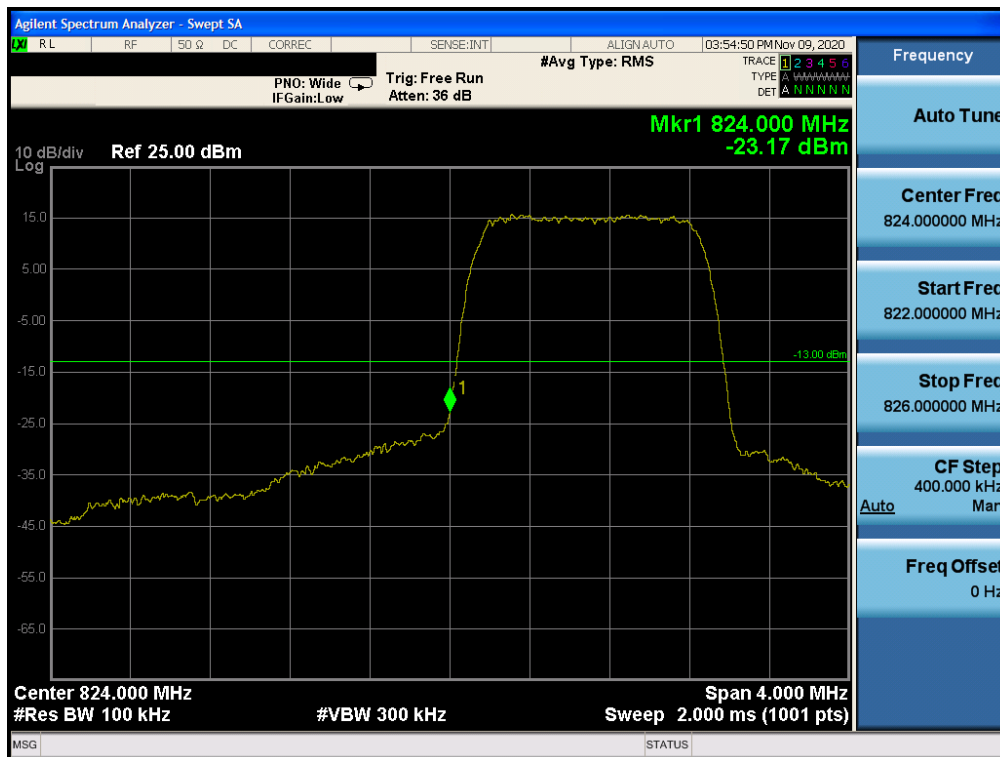


Plot 7-90. Lower Band Edge Plot (LTE Band 5 - 3MHz QPSK – Full RB Configuration)

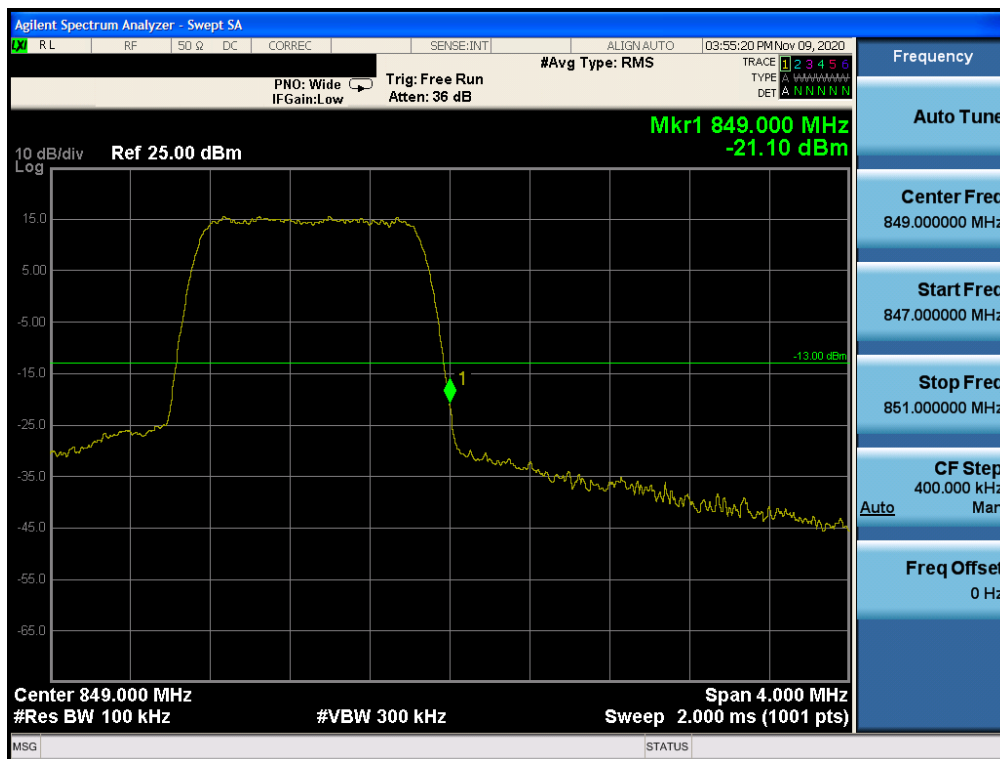


Plot 7-91. Upper Band Edge Plot (LTE Band 5 - 3MHz QPSK – Full RB Configuration)

FCC ID: BCGA2379	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	Approved by: Quality Manager
Test Report S/N: 1C2101020005-02-R1.BCG	Test Dates: 12/15/2020 - 02/27/2021	EUT Type: Tablet Device	Page 65 of 108



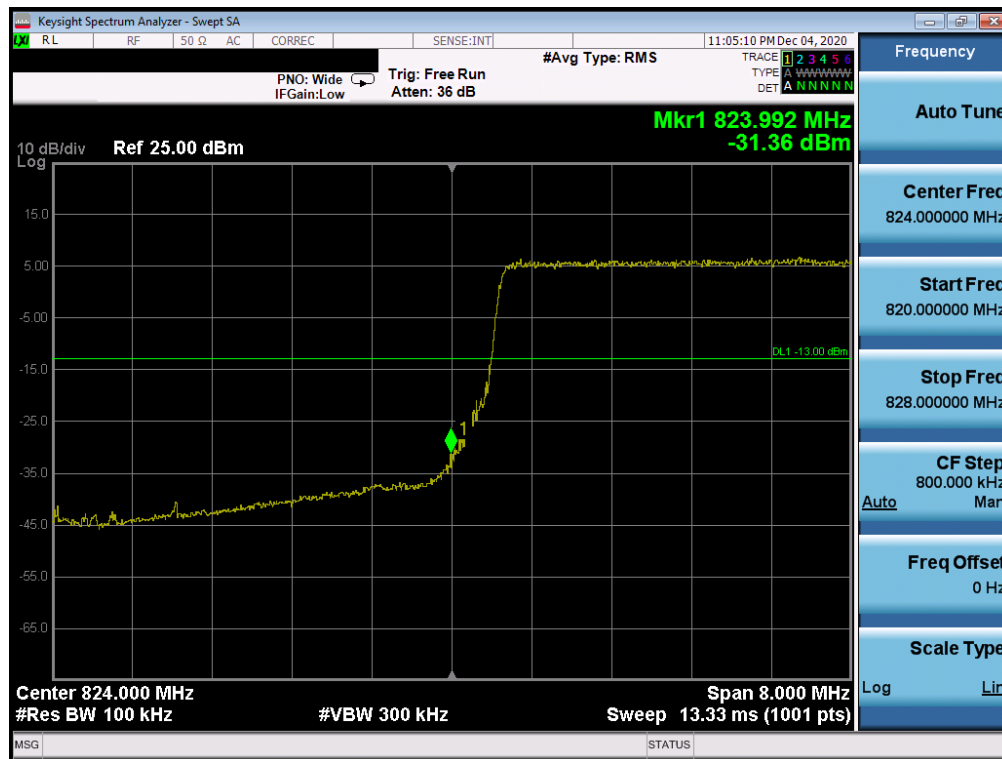
Plot 7-92. Lower Band Edge Plot (LTE Band 5 – 1.4MHz QPSK – Full RB Configuration)



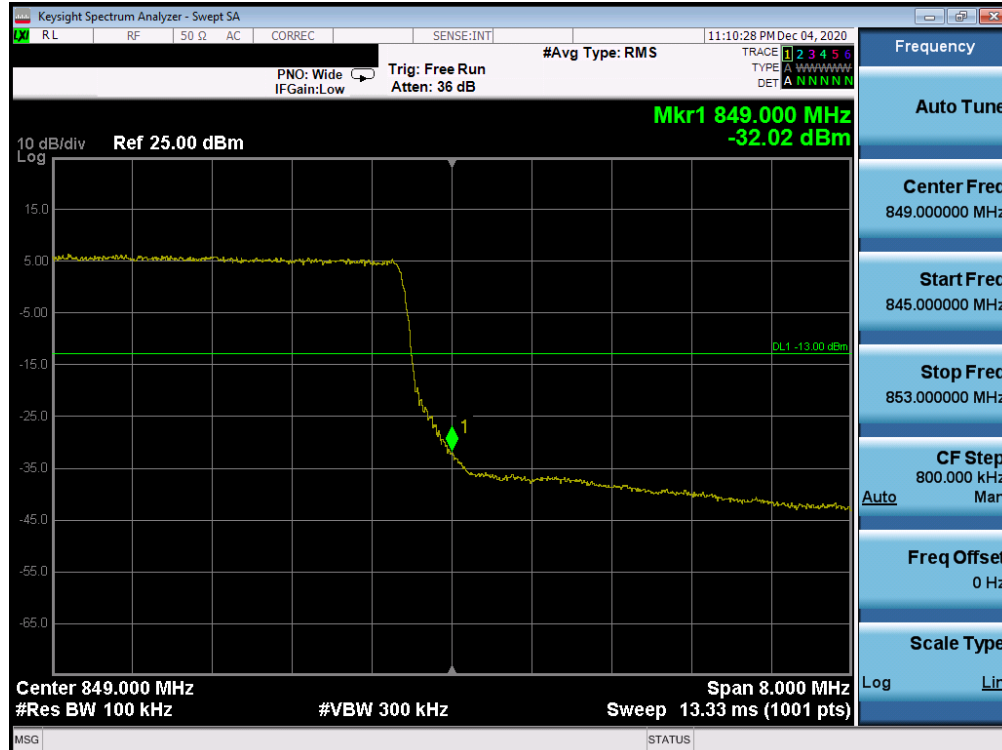
Plot 7-93. Upper Band Edge Plot (LTE Band 5 – 1.4MHz QPSK – Full RB Configuration)

FCC ID: BCGA2379	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	Approved by: Quality Manager
Test Report S/N: 1C2101020005-02-R1.BCG	Test Dates: 12/15/2020 - 02/27/2021	EUT Type: Tablet Device	Page 66 of 108

LTE Band 26/5

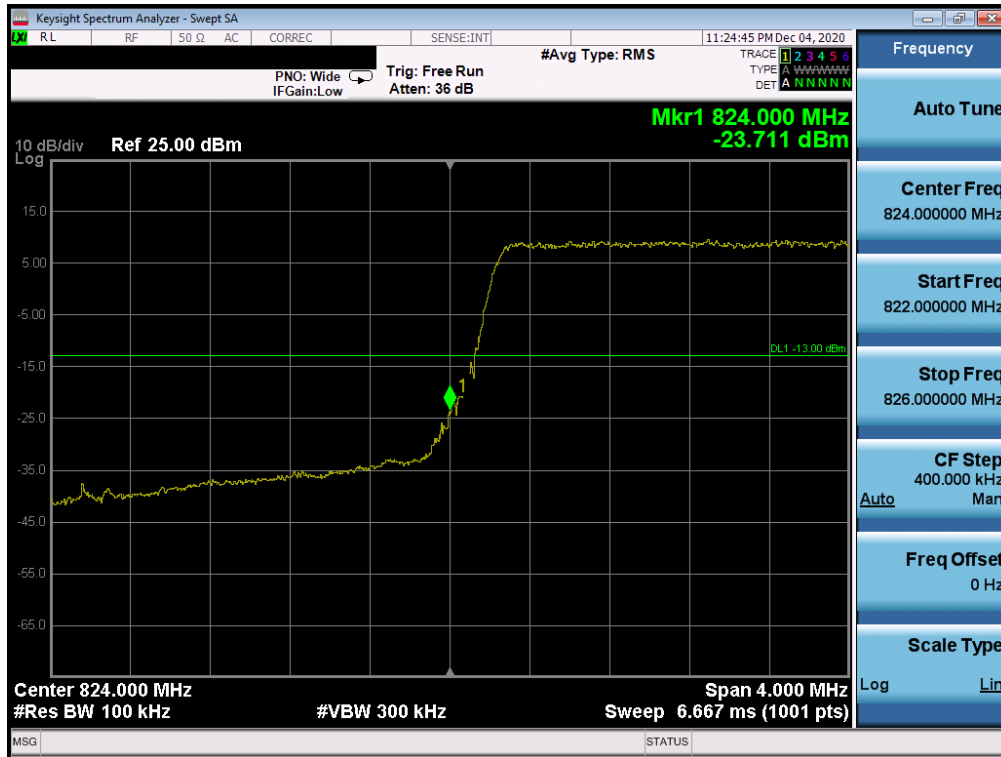


Plot 7-94. Lower Band Edge Plot (LTE Band 26/5 - 10MHz QPSK – Full RB Configuration)



Plot 7-95. Upper Band Edge Plot (LTE Band 26/5 - 10MHz QPSK – Full RB Configuration)

FCC ID: BCGA2379	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	Approved by: Quality Manager
Test Report S/N: 1C2101020005-02-R1.BCG	Test Dates: 12/15/2020 - 02/27/2021	EUT Type: Tablet Device	Page 67 of 108

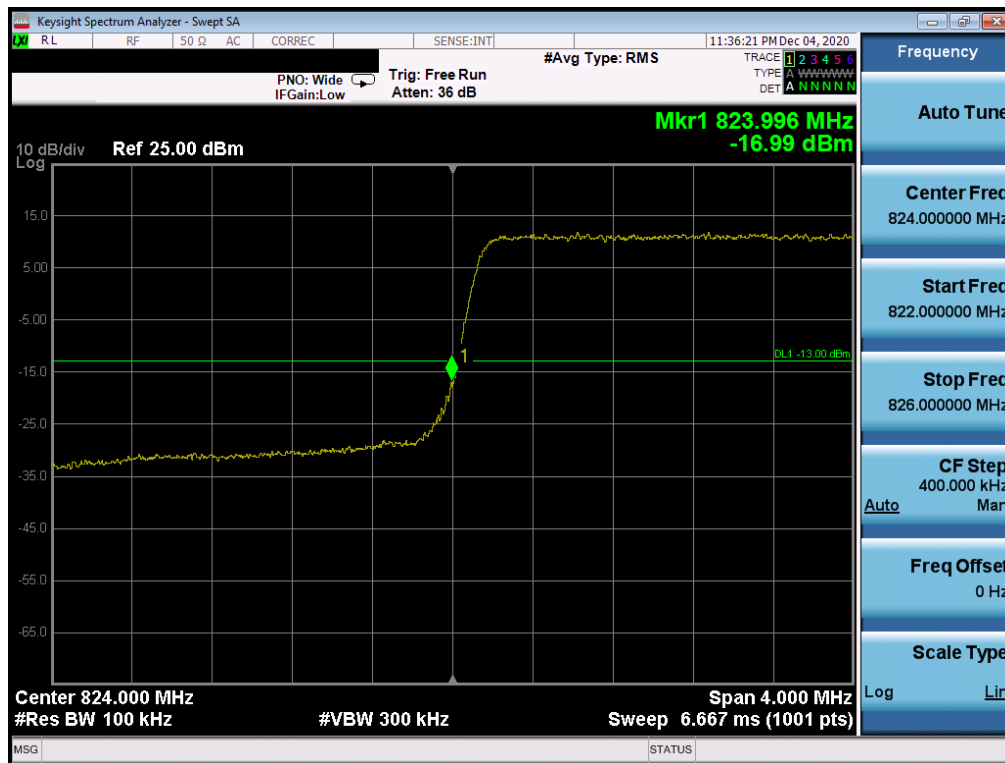


Plot 7-96. Lower Band Edge Plot (LTE Band 26/5 - 5MHz QPSK – Full RB Configuration)

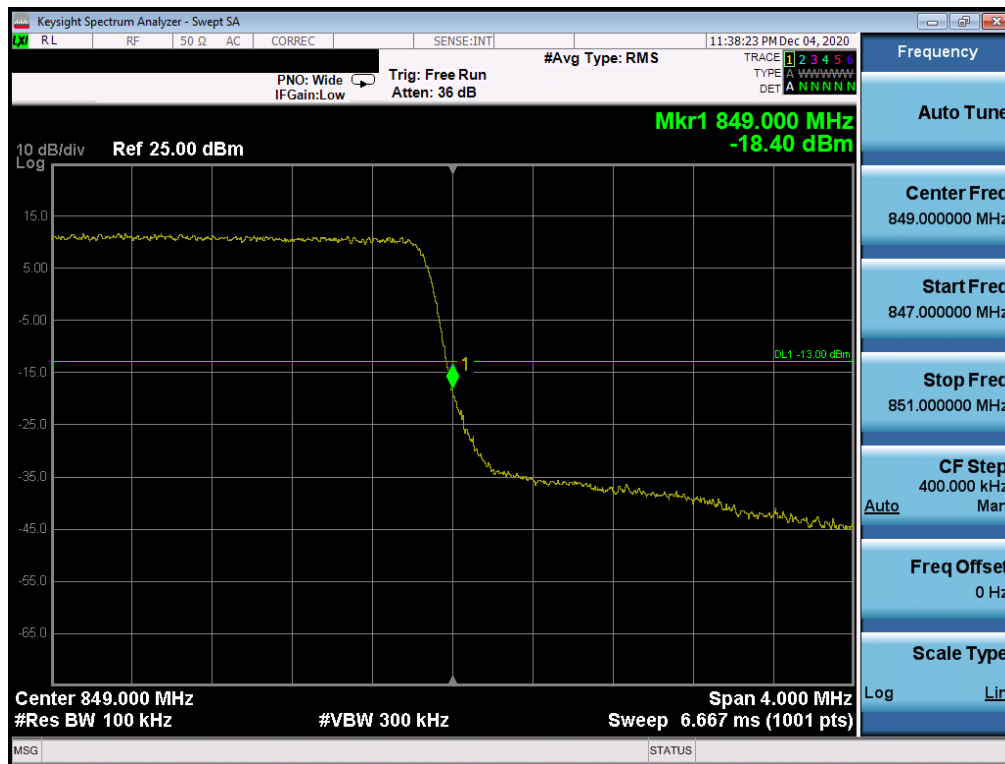


Plot 7-97. Upper Band Edge Plot (LTE Band 26/5 - 5MHz QPSK – Full RB Configuration)

FCC ID: BCGA2379	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	Approved by: Quality Manager
Test Report S/N: 1C2101020005-02-R1.BCG	Test Dates: 12/15/2020 - 02/27/2021	EUT Type: Tablet Device	Page 68 of 108

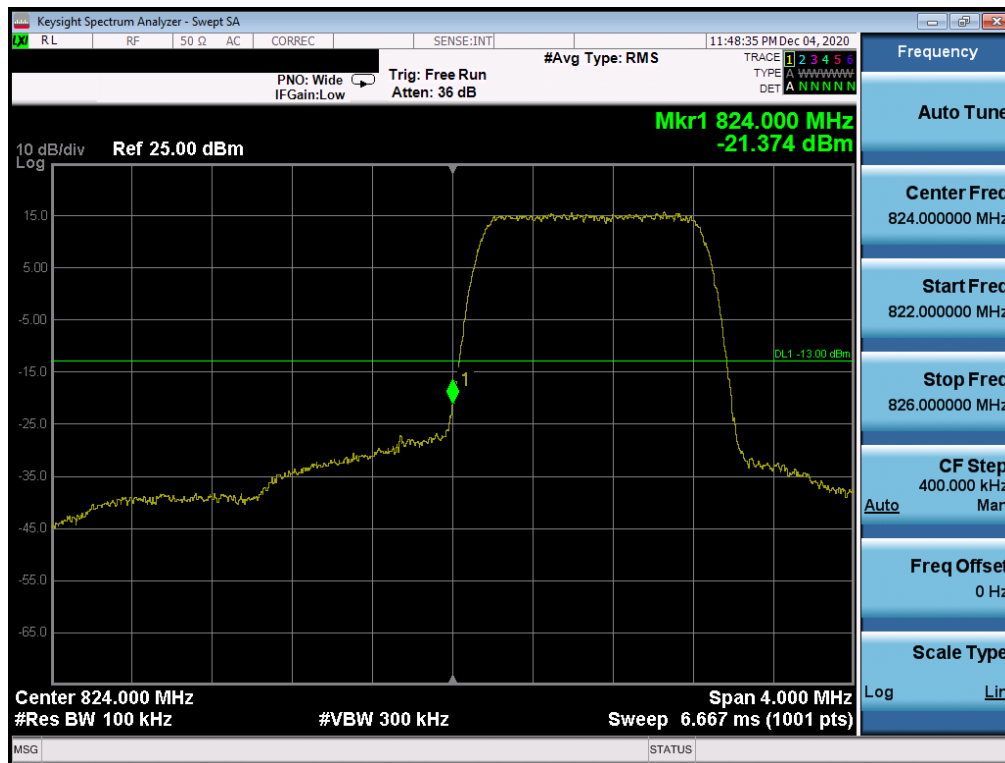


Plot 7-98. Lower Band Edge Plot (LTE Band 26/5 - 3MHz QPSK – Full RB Configuration)

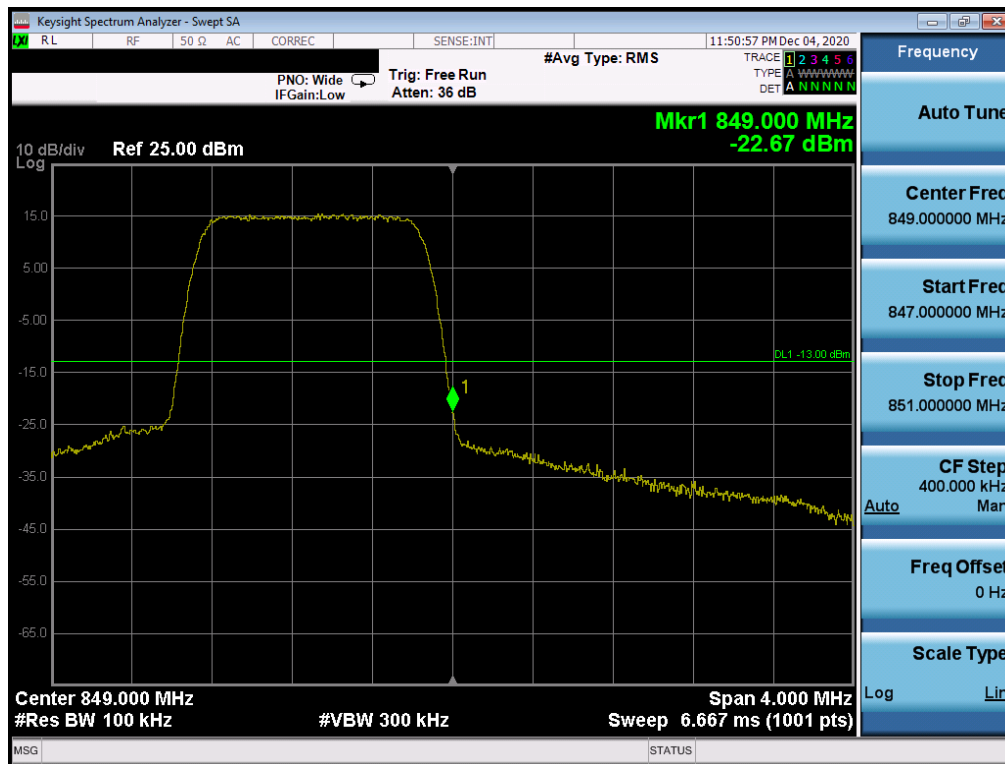


Plot 7-99. Upper Band Edge Plot (LTE Band 26/5 - 3MHz QPSK – Full RB Configuration)

FCC ID: BCGA2379	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	Approved by: Quality Manager
Test Report S/N: 1C2101020005-02-R1.BCG	Test Dates: 12/15/2020 - 02/27/2021	EUT Type: Tablet Device	Page 69 of 108



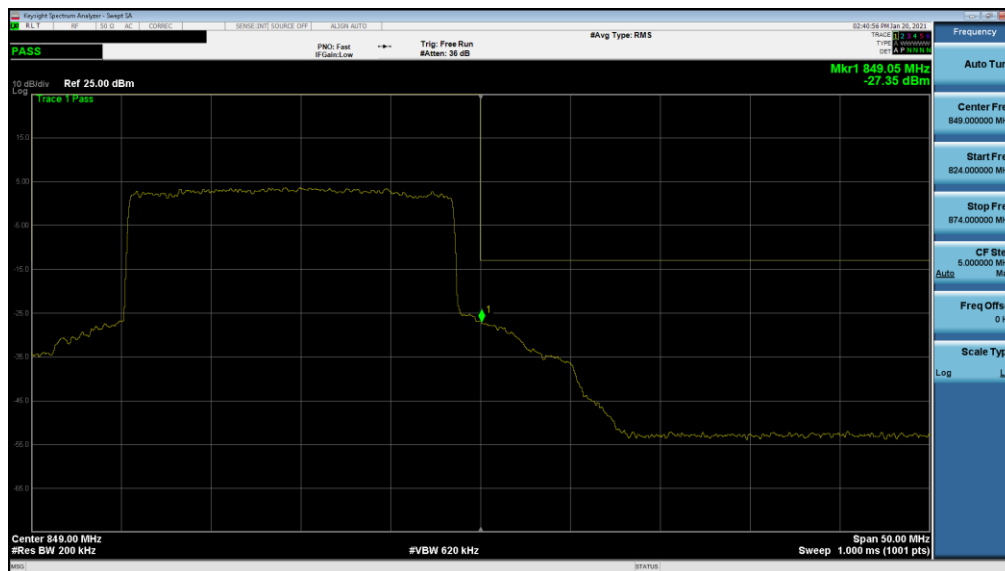
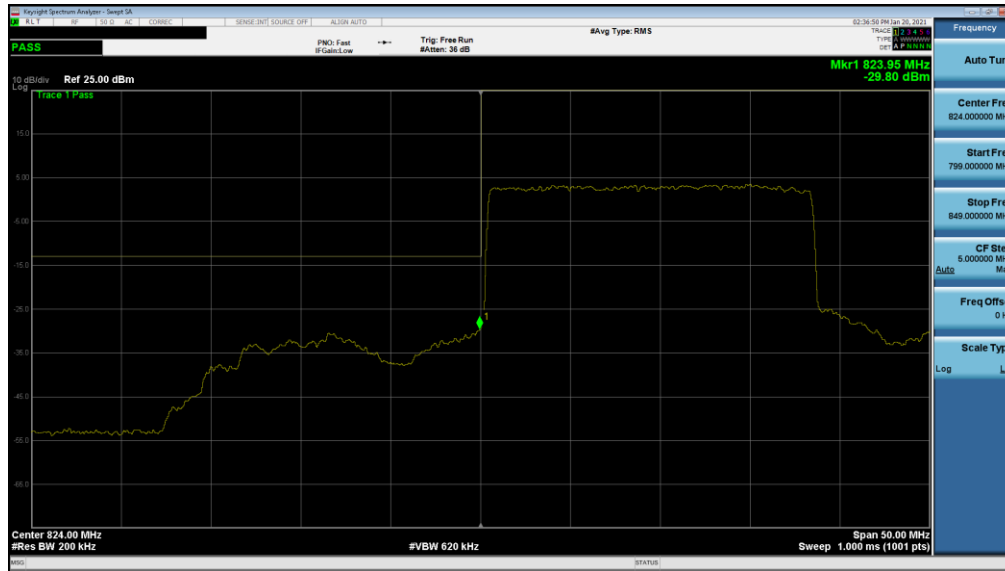
Plot 7-100. Lower Band Edge Plot (LTE Band 26/5 – 1.4MHz QPSK – Full RB Configuration)



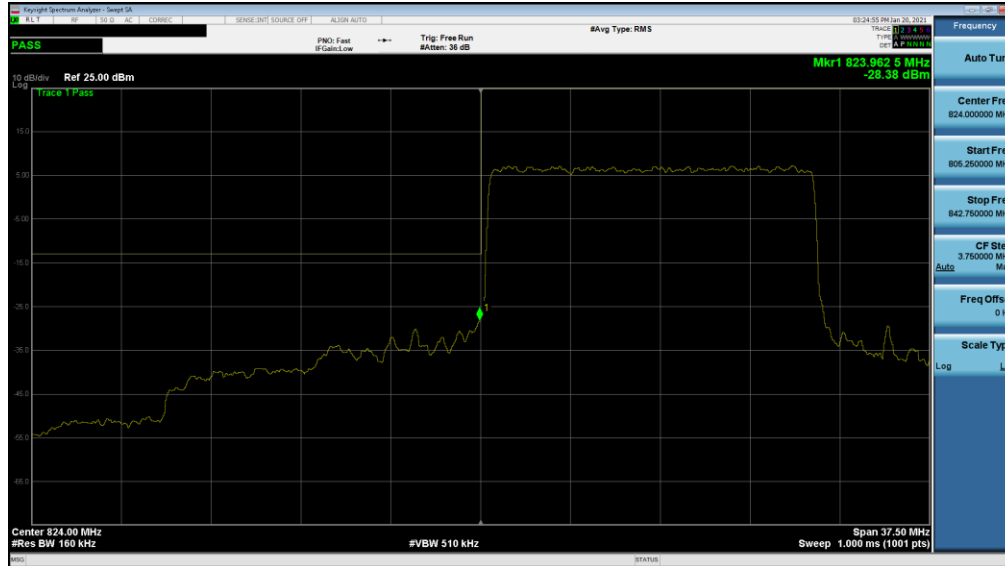
Plot 7-101. Upper Band Edge Plot (LTE Band 26/5 – 1.4MHz QPSK – Full RB Configuration)

FCC ID: BCGA2379	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	Approved by: Quality Manager
Test Report S/N: 1C2101020005-02-R1.BCG	Test Dates: 12/15/2020 - 02/27/2021	EUT Type: Tablet Device	Page 70 of 108

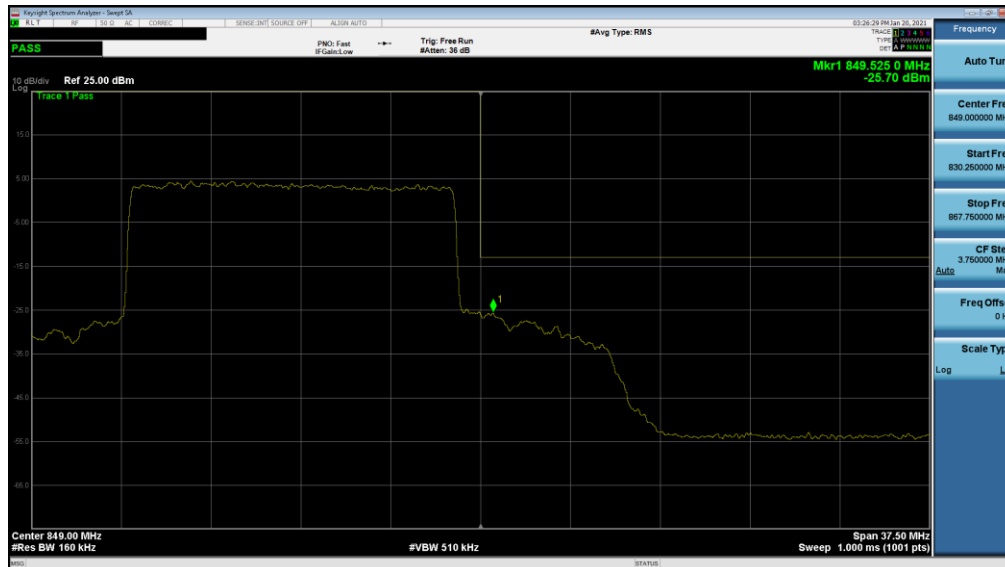
NR Band n5



FCC ID: BCGA2379	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	Approved by: Quality Manager
Test Report S/N: 1C2101020005-02-R1.BCG	Test Dates: 12/15/2020 - 02/27/2021	EUT Type: Tablet Device	Page 71 of 108

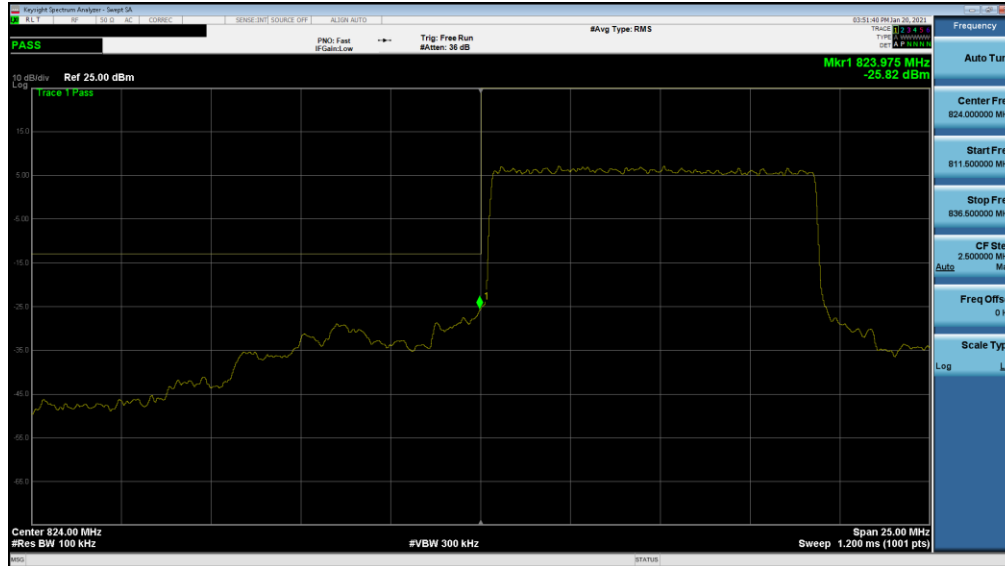


Plot 7-104. Lower Band Edge Plot (NR Band n5 DFT-s-OFDM BPSK– 15.0MHz - Full RB)

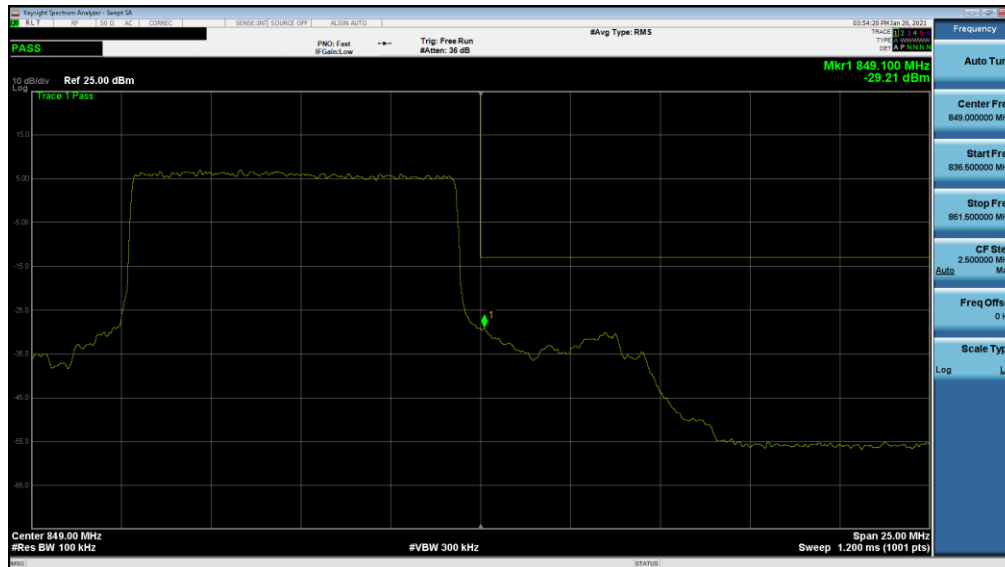


Plot 7-105. Upper Band Edge Plot (NR Band n5 DFT-s-OFDM BPSK– 15.0MHz - Full RB)

FCC ID: BCGA2379	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	Approved by: Quality Manager
Test Report S/N: 1C2101020005-02-R1.BCG	Test Dates: 12/15/2020 - 02/27/2021	EUT Type: Tablet Device	Page 72 of 108

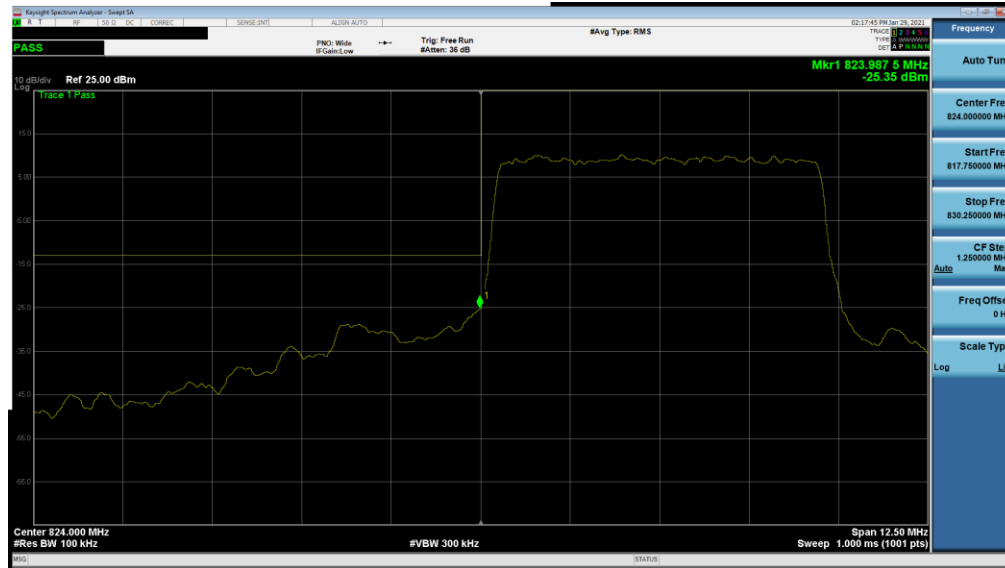


Plot 7-106. Lower Band Edge Plot (NR Band n5 DFT-s-OFDM BPSK– 10.0MHz - Full RB)

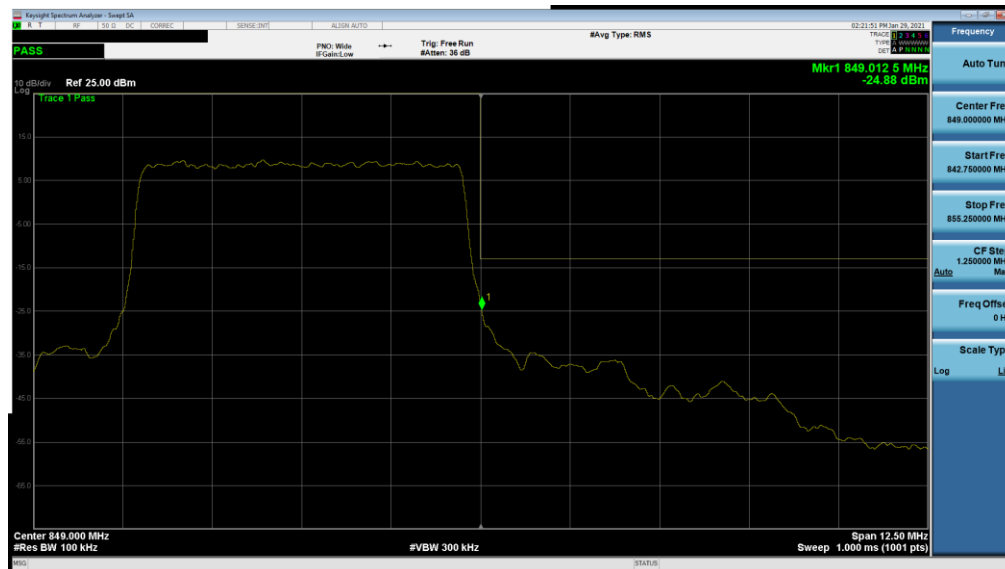


Plot 7-107. Upper Band Edge Plot (NR Band n5 DFT-s-OFDM BPSK– 10.0MHz - Full RB)

FCC ID: BCGA2379	PART 22 MEASUREMENT REPORT		Approved by: Quality Manager
Test Report S/N: 1C2101020005-02-R1.BCG	Test Dates: 12/15/2020 - 02/27/2021	EUT Type: Tablet Device	Page 73 of 108



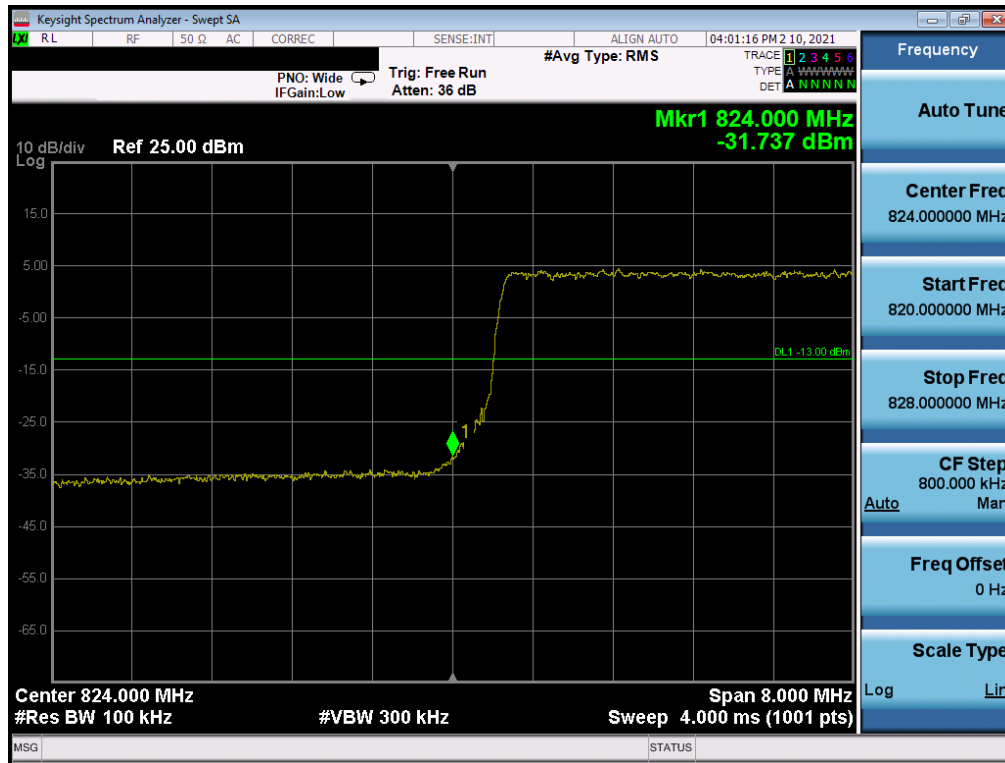
Plot 7-108. Lower Band Edge Plot (NR Band n5 DFT-s-OFDM BPSK- 5.0MHz - Full RB)



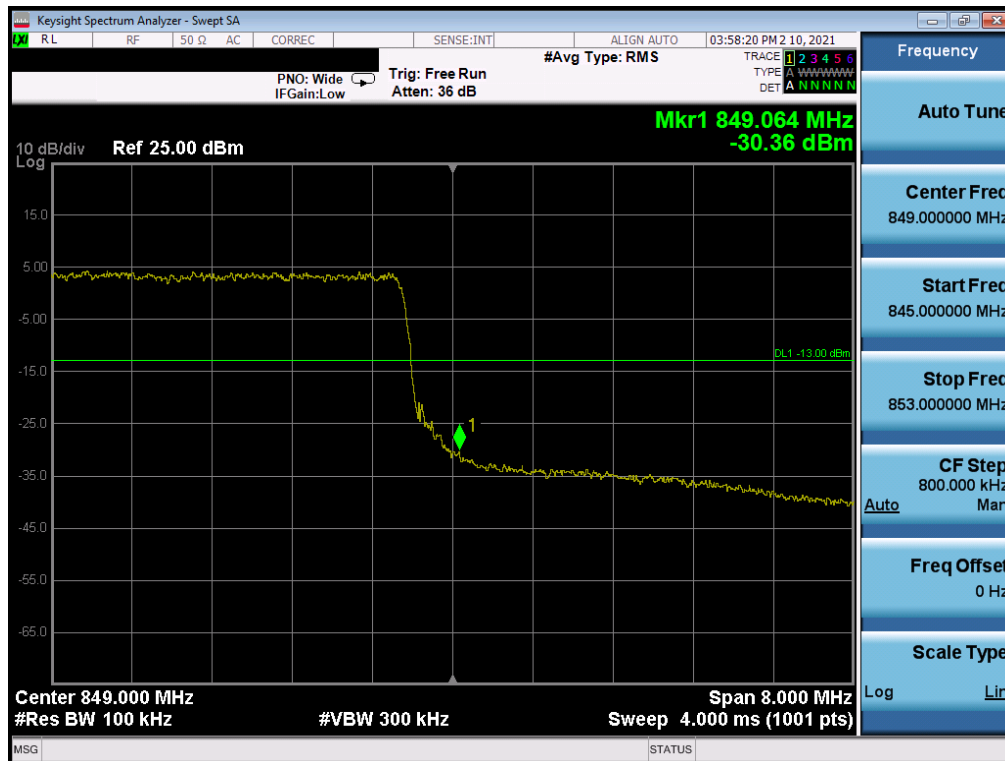
Plot 7-109. Upper Band Edge Plot (NR Band n5 DFT-s-OFDM BPSK- 5.0MHz - Full RB)

FCC ID: BCGA2379	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	Approved by: Quality Manager
Test Report S/N: 1C2101020005-02-R1.BCG	Test Dates: 12/15/2020 - 02/27/2021	EUT Type: Tablet Device	Page 74 of 108

ULCA - LTE Band 5



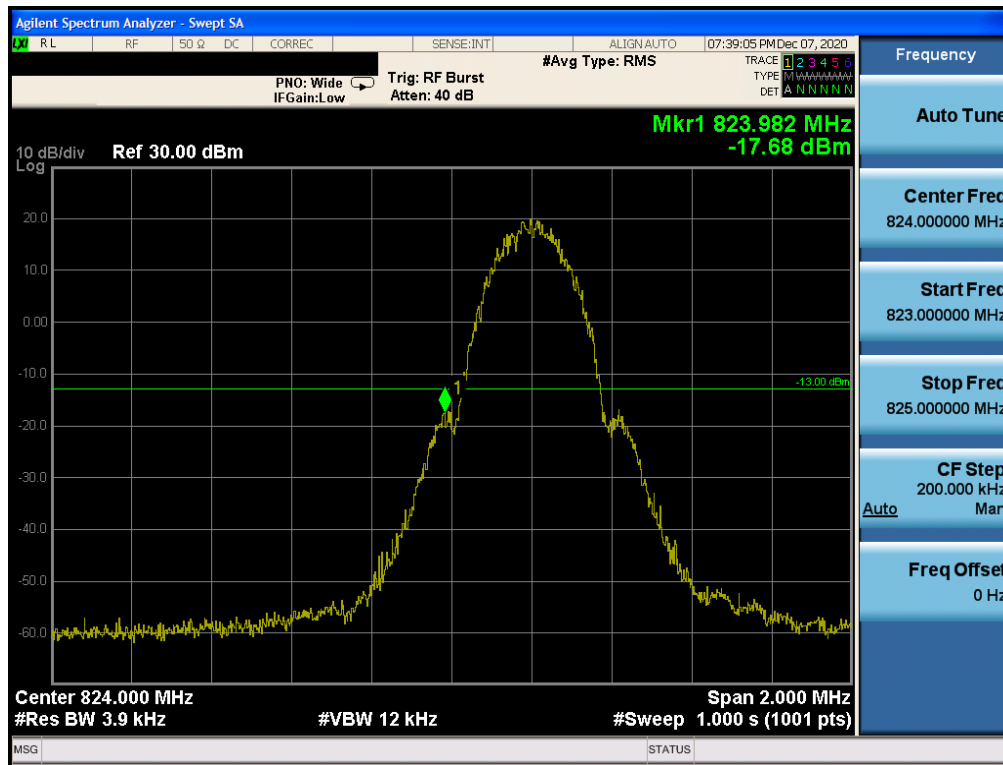
Plot 7-110. Lower BE Plot (ULCA LTE Band 5 - (10 + 10)MHz QPSK – Full RB Configuration)



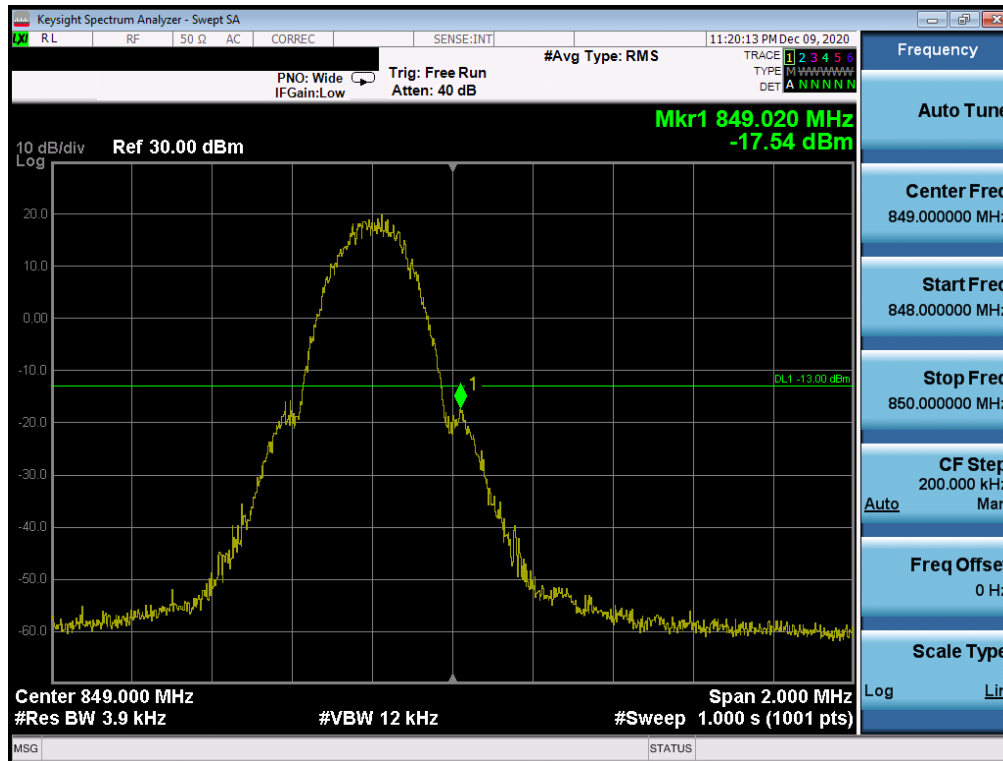
Plot 7-111. Upper BE Plot (ULCA LTE Band 5 - (10 + 10)MHz QPSK – Full RB Configuration)

FCC ID: BCGA2379	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	Approved by: Quality Manager
Test Report S/N: 1C2101020005-02-R1.BCG	Test Dates: 12/15/2020 - 02/27/2021	EUT Type: Tablet Device	Page 75 of 108

GSM/GPRS Cell



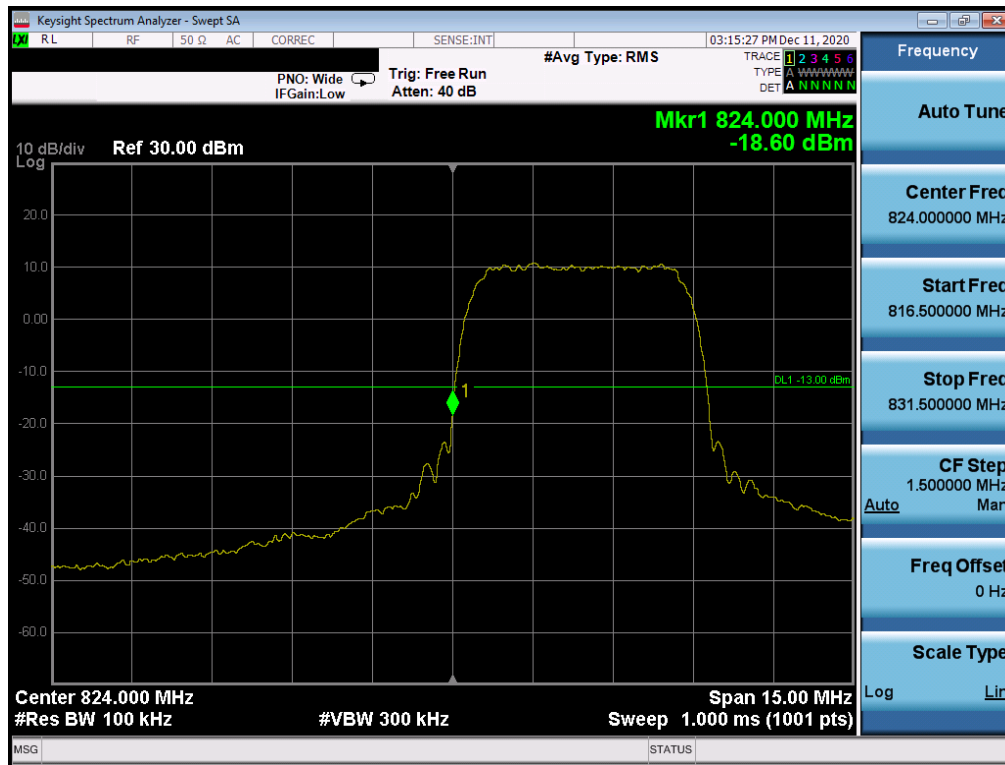
Plot 7-112. Lower Band Edge Plot (GPRS Cell – Ch. 128)



Plot 7-113. Upper Band Edge Plot (GPRS Cell – Ch. 251)

FCC ID: BCGA2379	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	Approved by: Quality Manager
Test Report S/N: 1C2101020005-02-R1.BCG	Test Dates: 12/15/2020 - 02/27/2021	EUT Type: Tablet Device	Page 76 of 108

WCDMA Cell



Plot 7-114. Lower Band Edge Plot (WCDMA Cell – Ch. 4132)



Plot 7-115. Upper Band Edge Plot (WCDMA Cell – Ch. 4233)

FCC ID: BCGA2379	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	Approved by: Quality Manager
Test Report S/N: 1C2101020005-02-R1.BCG	Test Dates: 12/15/2020 - 02/27/2021	EUT Type: Tablet Device	Page 77 of 108

7.5 Radiated Power (ERP/EIRP)

§22.913(a)(5)

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.

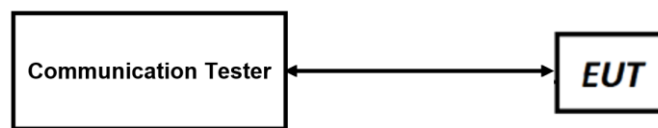



Figure 7-4. ERP/EIRP Measurement Setup

FCC ID: BCGA2379	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	Approved by: Quality Manager
Test Report S/N: 1C2101020005-02-R1.BCG	Test Dates: 12/15/2020 - 02/27/2021	EUT Type: Tablet Device	Page 78 of 108

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. Uplink carrier aggregation for LTE B5 is only supported in this EUT while operating in Power Class 3.
5. Conducted power measurements were evaluated for the two contiguous channels using various combinations of RB size, RB offset, modulation, and channel bandwidth. Channel bandwidth data is shown in the tables below based only on the channel bandwidths that were supported in this device.
6. The Ant. Gains (GT) are listed in dBi.

FCC ID: BCGA2379	 PART 22 MEASUREMENT REPORT		Approved by: Quality Manager
Test Report S/N: 1C2101020005-02-R1.BCG	Test Dates: 12/15/2020 - 02/27/2021	EUT Type: Tablet Device	Page 79 of 108

7.5.1 Antenna 3 – ERP/EIRP

LTE Band 5


Bandwidth	Mod.	Frequency [MHz]	Ant. Gain [dBi]	RB Size/Offset	Conducted Power [dBm]	ERP [dBm]	ERP [Watts]	ERP Limit [dBm]	Margin [dB]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
10 MHz	QPSK	829.0	-3.10	1 / 25	25.70	20.45	0.111	38.45	-18.00	22.60	0.182	40.61	-18.01
		836.5	-3.10	1 / 25	25.61	20.36	0.109	38.45	-18.09	22.51	0.178	40.61	-18.10
		844.0	-3.10	1 / 49	25.68	20.43	0.110	38.45	-18.02	22.58	0.181	40.61	-18.03
	16-QAM	829.0	-3.10	1 / 25	24.89	19.64	0.092	38.45	-18.81	21.79	0.151	40.61	-18.82
	64-QAM	829.0	-3.10	1 / 25	24.17	18.92	0.078	38.45	-19.53	21.07	0.128	40.61	-19.54
5 MHz	QPSK	844.0	-3.10	1 / 0	21.54	16.29	0.043	38.45	-22.16	18.44	0.070	40.61	-22.17
		829.0	-3.10	1 / 12	25.70	20.45	0.111	38.45	-18.00	22.60	0.182	40.61	-18.01
		836.5	-3.10	1 / 0	25.63	20.38	0.109	38.45	-18.07	22.53	0.179	40.61	-18.08
	16-QAM	844.0	-3.10	1 / 0	25.68	20.43	0.110	38.45	-18.02	22.58	0.181	40.61	-18.03
	64-QAM	836.5	-3.10	1 / 12	24.98	19.73	0.094	38.45	-18.72	21.88	0.154	40.61	-18.73
3 MHz	QPSK	836.5	-3.10	1 / 12	24.51	19.26	0.084	38.45	-19.19	21.41	0.138	40.61	-19.20
		829.0	-3.10	1 / 12	21.50	16.25	0.042	38.45	-22.20	18.40	0.069	40.61	-22.21
		844.0	-3.10	1 / 7	25.70	20.45	0.111	38.45	-18.00	22.60	0.182	40.61	-18.01
	16-QAM	836.5	-3.10	1 / 7	25.61	20.36	0.109	38.45	-18.09	22.51	0.178	40.61	-18.10
	64-QAM	844.0	-3.10	1 / 0	25.69	20.44	0.111	38.45	-18.01	22.59	0.182	40.61	-18.02
1.4 MHz	QPSK	836.5	-3.10	1 / 7	25.08	19.83	0.096	38.45	-18.62	21.98	0.158	40.61	-18.63
		836.5	-3.10	1 / 7	24.44	19.19	0.083	38.45	-19.26	21.34	0.136	40.61	-19.27
		844.0	-3.10	1 / 7	21.59	16.34	0.043	38.45	-22.11	18.49	0.071	40.61	-22.12
	16-QAM	829.0	-3.10	1 / 5	25.70	20.45	0.111	38.45	-18.00	22.60	0.182	40.61	-18.01
	64-QAM	836.5	-3.10	1 / 3	25.70	20.45	0.111	38.45	-18.00	22.60	0.182	40.61	-18.01
1.4 MHz	QPSK	844.0	-3.10	1 / 0	25.70	20.45	0.111	38.45	-18.00	22.60	0.182	40.61	-18.01
		836.5	-3.10	1 / 3	25.10	19.85	0.097	38.45	-18.60	22.00	0.158	40.61	-18.61
		836.5	-3.10	1 / 3	24.51	19.26	0.084	38.45	-19.19	21.41	0.138	40.61	-19.20
	16-QAM	836.5	-3.10	1 / 0	21.40	16.15	0.041	38.45	-22.30	18.30	0.068	40.61	-22.31
	64-QAM	836.5	-3.10	1 / 0	21.40	16.15	0.041	38.45	-22.30	18.30	0.068	40.61	-22.31

Table 7-2. ERP/EIRP Data (LTE Band 5)

LTE Band 26

Bandwidth	Mod.	Frequency [MHz]	Ant. Gain [dBi]	RB Size/Offset	Conducted Power [dBm]	ERP [dBm]	ERP [Watts]	ERP Limit [dBm]	Margin [dB]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
10 MHz	QPSK	829.0	-3.10	1 / 0	25.60	20.35	0.108	38.45	-18.10	22.50	0.178	40.61	-18.11
		836.5	-3.10	1 / 25	25.70	20.45	0.111	38.45	-18.00	22.60	0.182	40.61	-18.01
		844.0	-3.10	1 / 25	25.68	20.43	0.110	38.45	-18.02	22.58	0.181	40.61	-18.03
	16-QAM	836.5	-3.10	1 / 25	25.16	19.91	0.098	38.45	-18.54	22.06	0.161	40.61	-18.55
	64-QAM	844.0	-3.10	1 / 0	23.98	18.73	0.075	38.45	-19.72	20.88	0.122	40.61	-19.73
5 MHz	QPSK	844.0	-3.10	1 / 0	20.62	15.37	0.034	38.45	-23.08	17.52	0.056	40.61	-23.09
		826.5	-3.10	1 / 0	25.65	20.40	0.110	38.45	-18.05	22.55	0.180	40.61	-18.06
		836.5	-3.10	1 / 24	25.70	20.45	0.111	38.45	-18.00	22.60	0.182	40.61	-18.01
	16-QAM	846.5	-3.10	1 / 12	25.52	20.27	0.106	38.45	-18.18	22.42	0.175	40.61	-18.19
	64-QAM	836.5	-3.10	1 / 24	25.32	20.07	0.102	38.45	-18.38	22.22	0.167	40.61	-18.39
3 MHz	QPSK	826.5	-3.10	1 / 24	24.17	18.92	0.078	38.45	-19.53	21.07	0.128	40.61	-19.54
		826.5	-3.10	25 / 0	20.55	15.30	0.034	38.45	-23.15	17.45	0.056	40.61	-23.16
		825.5	-3.10	1 / 0	25.70	20.45	0.111	38.45	-18.00	22.60	0.182	40.61	-18.01
	16-QAM	836.5	-3.10	1 / 14	25.69	20.44	0.111	38.45	-18.01	22.59	0.182	40.61	-18.02
	64-QAM	847.5	-3.10	1 / 7	25.60	20.35	0.108	38.45	-18.10	22.50	0.178	40.61	-18.11
1.4 MHz	QPSK	836.5	-3.10	1 / 0	25.12	19.87	0.097	38.45	-18.58	22.02	0.159	40.61	-18.59
		825.5	-3.10	1 / 7	23.95	18.70	0.074	38.45	-19.75	20.85	0.122	40.61	-19.76
		847.5	-3.10	1 / 7	20.61	15.36	0.034	38.45	-23.09	17.51	0.056	40.61	-23.10
	16-QAM	824.7	-3.10	1 / 0	25.57	20.32	0.108	38.45	-18.13	22.47	0.177	40.61	-18.14
	64-QAM	836.5	-3.10	1 / 0	25.54	20.29	0.107	38.45	-18.16	22.44	0.175	40.61	-18.17
1.4 MHz	QPSK	848.3	-3.10	1 / 0	25.70	20.45	0.111	38.45	-18.00	22.60	0.182	40.61	-18.01
		836.5	-3.10	1 / 0	25.03	19.78	0.095	38.45	-18.67	21.93	0.156	40.61	-18.68
		848.3	-3.10	1 / 0	23.92	18.67	0.074	38.45	-19.78	20.82	0.121	40.61	-19.79
	16-QAM	824.7	-3.10	6 / 0	20.50	15.25	0.033	38.45	-23.20	17.40	0.055	40.61	-23.21
	64-QAM	824.7	-3.10	6 / 0	20.50	15.25	0.033	38.45	-23.20	17.40	0.055	40.61	-23.21


Table 7-3. ERP/EIRP Data (LTE Band 26)

FCC ID: BCGA2379	 PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	Approved by: Quality Manager
Test Report S/N: 1C2101020005-02-R1.BCG	Test Dates: 12/15/2020 - 02/27/2021	EUT Type: Tablet Device	Page 80 of 108

NR Band n5

Bandwidth	Mod.	Frequency [MHz]	Ant. Gain [dBi]	RB Size/Offset	Conducted Power [dBm]	ERP [dBm]	ERP [Watts]	ERP Limit [dBm]	Margin [dB]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
20 MHz	π/2 BPSK	834.0	-3.10	1 / 1	25.70	20.45	0.111	38.45	-18.00	22.60	0.182	40.61	-18.01
		836.5	-3.10	1 / 1	25.70	20.45	0.111	38.45	-18.00	22.60	0.182	40.61	-18.01
		839.0	-3.10	1 / 1	25.67	20.42	0.110	38.45	-18.03	22.57	0.181	40.61	-18.04
	QPSK	834.0	-3.10	1 / 50	25.17	19.92	0.098	38.45	-18.53	22.07	0.161	40.61	-18.54
		836.5	-3.10	1 / 1	25.39	20.14	0.103	38.45	-18.31	22.29	0.169	40.61	-18.32
		839.0	-3.10	1 / 1	25.66	20.41	0.110	38.45	-18.04	22.56	0.180	40.61	-18.04
	16-QAM	836.5	-3.10	1 / 50	24.55	19.30	0.085	38.45	-19.16	21.45	0.139	40.61	-19.16
	64-QAM	834.0	-3.10	100 / 0	22.95	17.70	0.059	38.45	-20.75	19.85	0.097	40.61	-20.76
15 MHz	π/2 BPSK	834.0	-3.10	1 / 1	21.57	16.32	0.043	38.45	-22.13	18.47	0.070	40.61	-22.14
		831.5	-3.10	1 / 1	25.70	20.45	0.111	38.45	-18.00	22.60	0.182	40.61	-18.01
		836.5	-3.10	1 / 1	25.69	20.44	0.111	38.45	-18.01	22.59	0.182	40.61	-18.02
	QPSK	841.5	-3.10	1 / 1	25.35	20.10	0.102	38.45	-18.35	22.25	0.168	40.61	-18.36
		831.5	-3.10	1 / 73	25.38	20.13	0.103	38.45	-18.32	22.28	0.169	40.61	-18.33
		836.5	-3.10	1 / 1	25.69	20.44	0.111	38.45	-18.01	22.59	0.182	40.61	-18.02
	16-QAM	831.5	-3.10	1 / 73	24.95	19.70	0.093	38.45	-18.75	21.85	0.153	40.61	-18.75
	64-QAM	831.5	-3.10	1 / 73	23.27	18.02	0.063	38.45	-20.43	20.17	0.104	40.61	-20.44
10 MHz	π/2 BPSK	836.5	-3.10	1 / 73	21.38	16.13	0.041	38.45	-22.32	18.28	0.067	40.61	-22.33
		829.0	-3.10	1 / 48	25.58	20.33	0.108	38.45	-18.12	22.48	0.177	40.61	-18.13
		836.5	-3.10	1 / 1	25.52	20.27	0.106	38.45	-18.18	22.42	0.175	40.61	-18.18
	QPSK	844.0	-3.10	1 / 48	25.46	20.21	0.105	38.45	-18.24	22.36	0.172	40.61	-18.25
		829.0	-3.10	1 / 25	25.51	20.26	0.106	38.45	-18.19	22.41	0.174	40.61	-18.20
		836.5	-3.10	1 / 48	25.58	20.33	0.108	38.45	-18.12	22.48	0.177	40.61	-18.13
	16-QAM	844.0	-3.10	1 / 25	25.34	20.09	0.102	38.45	-18.36	22.24	0.167	40.61	-18.37
	64-QAM	836.5	-3.10	1 / 1	24.81	19.56	0.090	38.45	-18.89	21.71	0.148	40.61	-18.90
5 MHz	π/2 BPSK	836.5	-3.10	1 / 25	23.22	17.97	0.063	38.45	-20.48	20.12	0.103	40.61	-20.49
		836.5	-3.10	1 / 1	21.41	16.16	0.041	38.45	-22.29	18.31	0.068	40.61	-22.29
		829.0	-3.10	1 / 1	25.56	20.31	0.107	38.45	-18.14	22.46	0.176	40.61	-18.15
	QPSK	836.5	-3.10	1 / 1	25.64	20.39	0.109	38.45	-18.06	22.54	0.179	40.61	-18.07
		844.0	-3.10	1 / 12	25.70	20.45	0.111	38.45	-18.00	22.60	0.182	40.61	-18.01
		829.0	-3.10	1 / 12	25.56	20.31	0.107	38.45	-18.14	22.46	0.176	40.61	-18.14
	16-QAM	836.5	-3.10	1 / 1	25.56	20.31	0.108	38.45	-18.14	22.46	0.176	40.61	-18.14
	64-QAM	844.0	-3.10	1 / 23	25.13	19.88	0.097	38.45	-18.57	22.03	0.160	40.61	-18.57
5 MHz	QPSK	829.0	-3.10	1 / 23	24.68	19.43	0.088	38.45	-19.02	21.58	0.144	40.61	-19.03
		829.0	-3.10	1 / 1	23.37	18.12	0.065	38.45	-20.33	20.27	0.106	40.61	-20.34
	256-QAM	829.0	-3.10	1 / 1	21.62	16.37	0.043	38.45	-22.08	18.52	0.071	40.61	-22.09

Table 7-4. ERP/EIRP Data (NR Band n5 – DFT-s-OFDM)

FCC ID: BCGA2379	 PCTEST® Proud to be part of element	PART 22 MEASUREMENT REPORT	Approved by: Quality Manager
Test Report S/N: 1C2101020005-02-R1.BCG	Test Dates: 12/15/2020 - 02/27/2021	EUT Type: Tablet Device	Page 81 of 108

ULCA Band 5

Power State	Band	Bandwidth (PCC + SCC)	PCC				SCC					ULCA Tx. Conducted Power [dBm]	Ant. Gain [dBi]	ERP [dBm]	ERP [Watts]	ERP Limit [dBm]	Margin [dB]	EIRP [dBm]	EIRP [Watts]	ERP Limit [dBm]	Margin [dB]	
			Modulation	UL Channel	UL Frequency	UL # RB	UL RB Offset	Modulation	UL Channel	UL Frequency	UL # RB											UL RB Offset
Max	LTE B5	10MHz + 10MHz	QPSK	20450	829.0	1	49	QPSK	20549	838.9	1	0	25.70	-3.10	20.45	0.111	38.45	-18.00	22.60	0.182	40.61	-18.01
				20475	831.5	1	49		20574	841.4	1	0	25.35	-3.10	20.10	0.102	38.45	-18.35	22.25	0.168	40.61	-18.36
				20600	844.0	1	0		20501	834.1	1	49	25.45	-3.10	20.20	0.105	38.45	-18.25	22.35	0.172	40.61	-18.26
			QPSK	20450	829	50	0	QPSK	20549	838.9	50	0	24.42	-3.10	19.17	0.083	38.45	-19.28	21.32	0.136	40.61	-19.29
			16-QAM	20450	829	50	0	16-QAM	20549	838.9	50	0	23.04	-3.10	17.79	0.060	38.45	-20.66	19.94	0.099	40.61	-20.67
			64-QAM	20450	829	50	0	64-QAM	20549	838.9	50	0	22.96	-3.10	17.71	0.059	38.45	-20.74	19.86	0.097	40.61	-20.75
			256-QAM	20450	829	50	0	256-QAM	20549	838.9	50	0	21.40	-3.10	16.15	0.041	38.45	-22.30	18.30	0.068	40.61	-22.31

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

GPRS Cell


Frequency [MHz]	Mode	Conducted Power [dBm]	Ant. Gain [dBi]	ERP [dBm]	ERP [Watts]	ERP Limit [dBm]	Margin [dB]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
824.20	GPRS850	32.59	-3.10	27.34	0.542	38.45	-11.11	29.49	0.889	40.61	-11.12
836.60	GPRS850	32.73	-3.10	27.48	0.560	38.45	-10.97	29.63	0.918	40.61	-10.98
848.80	GPRS850	32.56	-3.10	27.31	0.538	38.45	-11.14	29.46	0.883	40.61	-11.15
836.60	EDGE850	26.81	-3.10	21.56	0.143	38.45	-16.89	23.71	0.235	40.61	-16.90

Table 7-6. ERP/EIRP Data (GPRS Cell)

WCDMA Cell

Frequency [MHz]	Mode	Conducted Power [dBm]	Ant. Gain [dBi]	ERP [dBm]	ERP [Watts]	ERP Limit [dBm]	Margin [dB]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
826.40	WCDMA850	25.13	-3.10	19.88	0.097	38.45	-18.57	22.03	0.160	40.61	-18.58
836.60	WCDMA850	25.20	-3.10	19.95	0.099	38.45	-18.50	22.10	0.162	40.61	-18.51
846.60	WCDMA850	25.10	-3.10	19.85	0.097	38.45	-18.60	22.00	0.158	40.61	-18.61

Table 7-7. ERP/EIRP Data (WCDMA Cell)

FCC ID: BCGA2379	 PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	Approved by: Quality Manager
Test Report S/N: 1C2101020005-02-R1.BCG	Test Dates: 12/15/2020 - 02/27/2021	EUT Type: Tablet Device	Page 82 of 108

7.5.2 Antenna 1 – ERP/EIRP

LTE Band 5


Bandwidth	Mod.	Frequency [MHz]	Ant. Gain [dBi]	RB Size/Offset	Conducted Power [dBm]	ERP [dBm]	ERP [Watts]	ERP Limit [dBm]	Margin [dB]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
10 MHz	QPSK	829.0	-2.50	1 / 25	23.90	19.25	0.084	38.45	-19.20	21.40	0.138	40.61	-19.21
		836.5	-2.50	1 / 25	23.75	19.10	0.081	38.45	-19.35	21.25	0.133	40.61	-19.36
		844.0	-2.50	1 / 25	23.83	19.18	0.083	38.45	-19.27	21.33	0.136	40.61	-19.28
	16-QAM	829.0	-2.50	1 / 25	23.42	18.77	0.075	38.45	-19.68	20.92	0.124	40.61	-19.69
	64-QAM	836.5	-2.50	1 / 0	22.30	17.65	0.058	38.45	-20.80	19.80	0.095	40.61	-20.81
5 MHz	QPSK	829.0	-2.50	50 / 0	19.13	14.48	0.028	38.45	-23.97	16.63	0.046	40.61	-23.98
		829.0	-2.50	1 / 12	23.88	19.23	0.084	38.45	-19.22	21.38	0.137	40.61	-19.23
		836.5	-2.50	1 / 0	23.68	19.03	0.080	38.45	-19.42	21.18	0.131	40.61	-19.43
	16-QAM	844.0	-2.50	1 / 12	23.90	19.25	0.084	38.45	-19.20	21.40	0.138	40.61	-19.21
	64-QAM	829.0	-2.50	1 / 12	23.56	18.91	0.078	38.45	-19.54	21.06	0.128	40.61	-19.55
3 MHz	QPSK	829.0	-2.50	1 / 12	22.44	17.79	0.060	38.45	-20.66	19.94	0.099	40.61	-20.67
		829.0	-2.50	25 / 0	19.13	14.48	0.028	38.45	-23.97	16.63	0.046	40.61	-23.98
		829.0	-2.50	1 / 0	23.90	19.25	0.084	38.45	-19.20	21.40	0.138	40.61	-19.21
	16-QAM	836.5	-2.50	15 / 0	23.62	18.97	0.079	38.45	-19.48	21.12	0.129	40.61	-19.49
	64-QAM	844.0	-2.50	1 / 14	23.75	19.10	0.081	38.45	-19.35	21.25	0.133	40.61	-19.36
1.4 MHz	QPSK	829.0	-2.50	1 / 7	23.32	18.67	0.074	38.45	-19.78	20.82	0.121	40.61	-19.79
		829.0	-2.50	1 / 7	22.11	17.46	0.056	38.45	-20.99	19.61	0.091	40.61	-21.00
		829.0	-2.50	15 / 0	19.12	14.47	0.028	38.45	-23.98	16.62	0.046	40.61	-23.99
	16-QAM	829.0	-2.50	1 / 0	23.90	19.25	0.084	38.45	-19.20	21.40	0.138	40.61	-19.21
	64-QAM	836.5	-2.50	1 / 0	23.62	18.97	0.079	38.45	-19.48	21.12	0.129	40.61	-19.49
1.4 MHz	QPSK	844.0	-2.50	1 / 5	23.75	19.10	0.081	38.45	-19.35	21.25	0.133	40.61	-19.36
		829.0	-2.50	1 / 0	23.48	18.83	0.076	38.45	-19.62	20.98	0.125	40.61	-19.63
		829.0	-2.50	1 / 0	22.28	17.63	0.058	38.45	-20.82	19.78	0.095	40.61	-20.83
	16-QAM	829.0	-2.50	6 / 0	19.34	14.69	0.029	38.45	-23.76	16.84	0.048	40.61	-23.77
	64-QAM	829.0	-2.50	6 / 0	19.34	14.69	0.029	38.45	-23.76	16.84	0.048	40.61	-23.77

Table 7-8. ERP/EIRP Data (LTE Band 5)

LTE Band 26

Bandwidth	Mod.	Frequency [MHz]	Ant. Gain [dBi]	RB Size/Offset	Conducted Power [dBm]	ERP [dBm]	ERP [Watts]	ERP Limit [dBm]	Margin [dB]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
10 MHz	QPSK	829.0	-2.50	1 / 0	23.76	19.11	0.081	38.45	-19.34	21.26	0.134	40.61	-19.35
		836.5	-2.50	1 / 25	23.90	19.25	0.084	38.45	-19.20	21.40	0.138	40.61	-19.21
		844.0	-2.50	1 / 25	23.87	19.22	0.084	38.45	-19.23	21.37	0.137	40.61	-19.24
	16-QAM	836.5	-2.50	1 / 0	23.34	18.69	0.074	38.45	-19.76	20.84	0.121	40.61	-19.77
	64-QAM	836.5	-2.50	1 / 25	22.50	17.85	0.061	38.45	-20.60	20.00	0.100	40.61	-20.61
5 MHz	QPSK	844.0	-2.50	1 / 25	18.53	13.88	0.024	38.45	-24.57	16.03	0.040	40.61	-24.58
		826.5	-2.50	1 / 24	23.88	19.23	0.084	38.45	-19.22	21.38	0.137	40.61	-19.23
		836.5	-2.50	1 / 0	23.90	19.25	0.084	38.45	-19.20	21.40	0.138	40.61	-19.21
	16-QAM	846.5	-2.50	1 / 12	23.72	19.07	0.081	38.45	-19.38	21.22	0.132	40.61	-19.39
	64-QAM	836.5	-2.50	1 / 24	23.51	18.86	0.077	38.45	-19.59	21.01	0.126	40.61	-19.60
3 MHz	QPSK	836.5	-2.50	1 / 24	22.68	18.03	0.064	38.45	-20.42	20.18	0.104	40.61	-20.43
		826.5	-2.50	25 / 0	18.47	13.82	0.024	38.45	-24.63	15.97	0.040	40.61	-24.64
		825.5	-2.50	1 / 0	23.90	19.25	0.084	38.45	-19.20	21.40	0.138	40.61	-19.21
	16-QAM	836.5	-2.50	1 / 0	23.83	19.18	0.083	38.45	-19.27	21.33	0.136	40.61	-19.28
	64-QAM	847.5	-2.50	1 / 7	23.81	19.16	0.082	38.45	-19.29	21.31	0.135	40.61	-19.30
1.4 MHz	QPSK	836.5	-2.50	1 / 0	23.28	18.63	0.073	38.45	-19.82	20.78	0.120	40.61	-19.83
		836.5	-2.50	1 / 14	22.47	17.82	0.061	38.45	-20.63	19.97	0.099	40.61	-20.64
		847.5	-2.50	1 / 7	18.53	13.88	0.024	38.45	-24.57	16.03	0.040	40.61	-24.58
	16-QAM	824.7	-2.50	1 / 0	23.77	19.12	0.082	38.45	-19.33	21.27	0.134	40.61	-19.34
	64-QAM	836.5	-2.50	1 / 0	23.79	19.14	0.082	38.45	-19.31	21.29	0.135	40.61	-19.32
1.4 MHz	QPSK	848.3	-2.50	1 / 0	23.90	19.25	0.084	38.45	-19.20	21.40	0.138	40.61	-19.21
		836.5	-2.50	1 / 0	23.28	18.63	0.073	38.45	-19.82	20.78	0.120	40.61	-19.83
		836.5	-2.50	1 / 0	22.51	17.86	0.061	38.45	-20.59	20.01	0.100	40.61	-20.60
1.4 MHz	256-QAM	824.7	-2.50	6 / 0	18.44	13.79	0.024	38.45	-24.66	15.94	0.039	40.61	-24.67


Table 7-9. ERP/EIRP Data (LTE Band 26)

FCC ID: BCGA2379	 PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	Approved by: Quality Manager
Test Report S/N: 1C2101020005-02-R1.BCG	Test Dates: 12/15/2020 - 02/27/2021	EUT Type: Tablet Device	Page 83 of 108

NR Band n5

Bandwidth	Mod.	Frequency [MHz]	Ant. Gain [dBi]	RB Size/Offset	Conducted Power [dBm]	ERP [dBm]	ERP [Watts]	ERP Limit [dBm]	Margin [dB]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
20 MHz	π/2 BPSK	834.0	-2.50	1 / 1	23.64	18.99	0.079	38.45	-19.46	21.14	0.130	40.61	-19.47
		836.5	-2.50	1 / 1	23.75	19.10	0.081	38.45	-19.36	21.25	0.133	40.61	-19.36
		839.0	-2.50	1 / 1	23.90	19.25	0.084	38.45	-19.20	21.40	0.138	40.61	-19.21
	QPSK	834.0	-2.50	1 / 50	23.59	18.94	0.078	38.45	-19.51	21.09	0.129	40.61	-19.52
		836.5	-2.50	1 / 98	23.78	19.13	0.082	38.45	-19.32	21.28	0.134	40.61	-19.33
		839.0	-2.50	1 / 1	23.59	18.94	0.078	38.45	-19.51	21.09	0.128	40.61	-19.52
	16-QAM	834.0	-2.50	1 / 1	23.21	18.56	0.072	38.45	-19.89	20.71	0.118	40.61	-19.90
	64-QAM	836.5	-2.50	1 / 98	21.58	16.93	0.049	38.45	-21.52	19.08	0.081	40.61	-21.52
15 MHz	π/2 BPSK	836.5	-2.50	1 / 1	19.53	14.88	0.031	38.45	-23.57	17.03	0.051	40.61	-23.57
		834.0	-2.50	1 / 75	23.68	19.03	0.080	38.45	-19.42	21.18	0.131	40.61	-19.42
		836.5	-2.50	1 / 75	23.84	19.19	0.083	38.45	-19.26	21.34	0.136	40.61	-19.26
	QPSK	839.0	-2.50	1 / 73	23.79	19.14	0.082	38.45	-19.32	21.29	0.134	40.61	-19.32
		834.0	-2.50	1 / 73	23.90	19.25	0.084	38.45	-19.20	21.40	0.138	40.61	-19.21
		836.5	-2.50	1 / 75	23.80	19.15	0.082	38.45	-19.30	21.30	0.135	40.61	-19.30
	16-QAM	839.0	-2.50	1 / 1	23.71	19.06	0.080	38.45	-19.39	21.21	0.132	40.61	-19.40
	64-QAM	836.5	-2.50	1 / 73	23.06	18.41	0.069	38.45	-20.04	20.56	0.114	40.61	-20.04
10 MHz	π/2 BPSK	839.0	-2.50	1 / 75	21.53	16.88	0.049	38.45	-21.57	19.03	0.080	40.61	-21.58
		834.0	-2.50	1 / 75	19.97	15.32	0.034	38.45	-23.13	17.47	0.056	40.61	-23.14
		836.5	-2.50	1 / 48	23.90	19.25	0.084	38.45	-19.20	21.40	0.138	40.61	-19.21
	QPSK	836.5	-2.50	1 / 1	23.70	19.05	0.080	38.45	-19.40	21.20	0.132	40.61	-19.41
		839.0	-2.50	1 / 25	23.78	19.13	0.082	38.45	-19.32	21.28	0.134	40.61	-19.33
		834.0	-2.50	1 / 1	23.74	19.09	0.081	38.45	-19.36	21.24	0.133	40.61	-19.36
	16-QAM	836.5	-2.50	1 / 1	23.79	19.14	0.082	38.45	-19.31	21.29	0.135	40.61	-19.32
	64-QAM	839.0	-2.50	1 / 25	23.71	19.06	0.081	38.45	-19.39	21.21	0.132	40.61	-19.40
5 MHz	π/2 BPSK	834.0	-2.50	1 / 25	22.93	18.28	0.067	38.45	-20.17	20.43	0.110	40.61	-20.18
		836.5	-2.50	1 / 25	21.63	16.98	0.050	38.45	-21.47	19.13	0.082	40.61	-21.47
		844.0	-2.50	1 / 25	19.57	14.92	0.031	38.45	-23.53	17.07	0.051	40.61	-23.54
	QPSK	834.0	-2.50	1 / 1	23.90	19.25	0.084	38.45	-19.20	21.40	0.138	40.61	-19.21
		836.5	-2.50	1 / 1	23.75	19.10	0.081	38.45	-19.35	21.25	0.133	40.61	-19.36
		839.0	-2.50	1 / 12	23.86	19.21	0.083	38.45	-19.24	21.36	0.137	40.61	-19.25
	16-QAM	834.0	-2.50	1 / 1	23.85	19.20	0.083	38.45	-19.25	21.35	0.137	40.61	-19.26
		836.5	-2.50	1 / 1	23.77	19.12	0.082	38.45	-19.33	21.27	0.134	40.61	-19.34
		839.0	-2.50	1 / 12	23.69	19.04	0.080	38.45	-19.41	21.19	0.132	40.61	-19.42
	64-QAM	836.5	-2.50	1 / 12	22.87	18.22	0.066	38.45	-20.23	20.37	0.109	40.61	-20.23
	256-QAM	834.0	-2.50	1 / 23	21.73	17.08	0.051	38.45	-21.37	19.23	0.084	40.61	-21.38
		834.0	-2.50	1 / 12	19.58	14.93	0.031	38.45	-23.53	17.08	0.051	40.61	-23.53

Table 7-10. ERP/EIRP Data (NR Band n5 – DFTs-OFDM)

FCC ID: BCGA2379	 PART 22 MEASUREMENT REPORT		Approved by: Quality Manager
Test Report S/N: 1C2101020005-02-R1.BCG	Test Dates: 12/15/2020 - 02/27/2021	EUT Type: Tablet Device	Page 84 of 108

ULCA Band 5

Power State	Band	Bandwidth (PCC + SCC)	PCC					SCC					ULCATx Conducted Power [dBm]	Ant. Gain [dBi]	ERP [dBm]	ERP [Watts]	ERP Limit [dBm]	Margin [dB]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
			Modulation	UL Channel	UL Frequency	UL # RB	UL RB Offset	Modulation	UL Channel	UL Frequency	UL # RB	UL RB Offset										
Max	LTE B5	10MHz + 10MHz	QPSK	20450	829.0	1	49	QPSK	20549	838.9	1	0	23.90	-2.50	19.25	0.084	38.45	-19.20	21.40	0.138	40.61	-19.21
				20475	831.5	1	49		20574	841.4	1	0	23.89	-2.50	19.24	0.084	38.45	-19.21	21.39	0.138	40.61	-19.22
				20600	844.0	1	0		20501	834.1	1	49	23.50	-2.50	18.85	0.077	38.45	-19.60	21.00	0.126	40.61	-19.61
				QPSK	20450	829	50		0	QPSK	20549	838.9	50	0	21.52	-2.50	16.87	0.049	38.45	-21.58	19.02	0.080
			16-QAM	20450	829	50	0	16-QAM	20549	838.9	50	0	20.55	-2.50	15.90	0.039	38.45	-22.55	18.05	0.064	40.61	-22.56
			64-QAM	20450	829	50	0	64-QAM	20549	838.9	50	0	20.56	-2.50	15.91	0.039	38.45	-22.54	18.06	0.064	40.61	-22.55
			256-QAM	20450	829	50	0	256-QAM	20549	838.9	50	0	18.62	-2.50	13.97	0.025	38.45	-24.48	16.12	0.041	40.61	-24.49

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

GPRS Cell


Frequency [MHz]	Mode	Conducted Power [dBm]	Ant. Gain [dBi]	ERP [dBm]	ERP [Watts]	ERP Limit [dBm]	Margin [dB]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
824.20	GPRS850	31.14	-2.50	26.49	0.446	38.45	-11.96	28.64	0.731	40.61	-11.97
836.60	GPRS850	31.28	-2.50	26.63	0.460	38.45	-11.82	28.78	0.755	40.61	-11.83
848.80	GPRS850	30.93	-2.50	26.28	0.425	38.45	-12.17	28.43	0.697	40.61	-12.18
836.60	EDGE850	25.44	-2.50	20.79	0.120	38.45	-17.66	22.94	0.197	40.61	-17.67

Table 7-12. ERP/EIRP Data (GPRS Cell)

WCDMA Cell

Frequency [MHz]	Mode	Conducted Power [dBm]	Ant. Gain [dBi]	ERP [dBm]	ERP [Watts]	ERP Limit [dBm]	Margin [dB]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
826.40	WCDMA850	23.67	-2.50	19.02	0.080	38.45	-19.43	21.17	0.131	40.61	-19.44
836.60	WCDMA850	23.69	-2.50	19.04	0.080	38.45	-19.41	21.19	0.132	40.61	-19.42
846.60	WCDMA850	23.63	-2.50	18.98	0.079	38.45	-19.47	21.13	0.130	40.61	-19.48

Table 7-13. ERP/EIRP Data (WCDMA Cell)

FCC ID: BCGA2379	 PCTEST [®] Proud to be part of element	PART 22 MEASUREMENT REPORT	Approved by: Quality Manager
Test Report S/N: 1C2101020005-02-R1.BCG	Test Dates: 12/15/2020 - 02/27/2021	EUT Type: Tablet Device	Page 85 of 108

7.6 Radiated Spurious Emissions

§2.1053, 22.917(a)

Test Overview


Radiated spurious emissions measurements are performed using the field strength conversion method described in KDB 971168 with the EUT transmitting into an integral 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 $\geq 3 \times$ 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: BCGA2379	 PART 22 MEASUREMENT REPORT		Approved by: Quality Manager
Test Report S/N: 1C2101020005-02-R1.BCG	Test Dates: 12/15/2020 - 02/27/2021	EUT Type: Tablet Device	Page 86 of 108

Test Setup

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

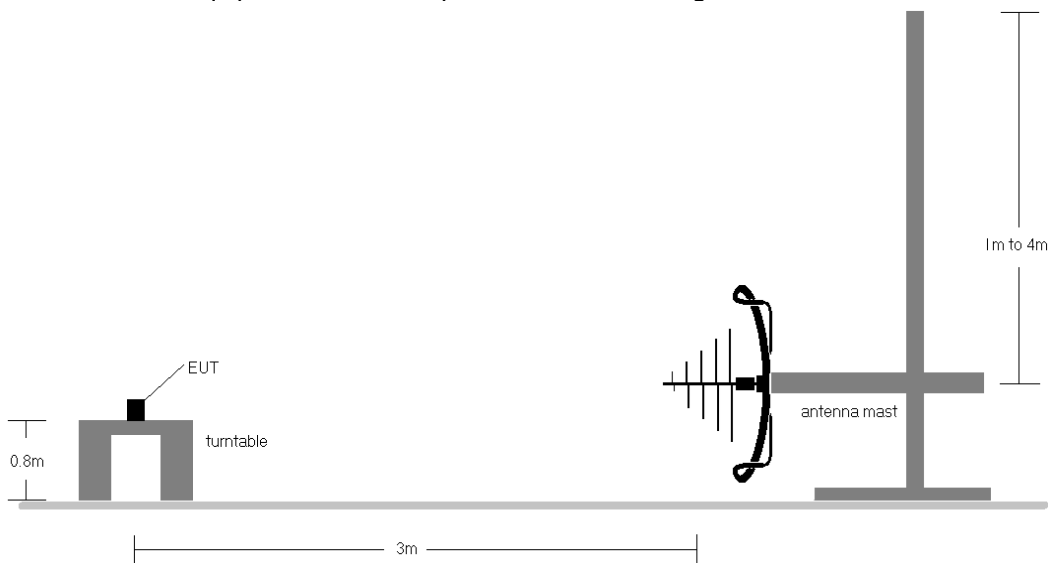


Figure 7-5. Test Instrument & Measurement Setup < 1GHz

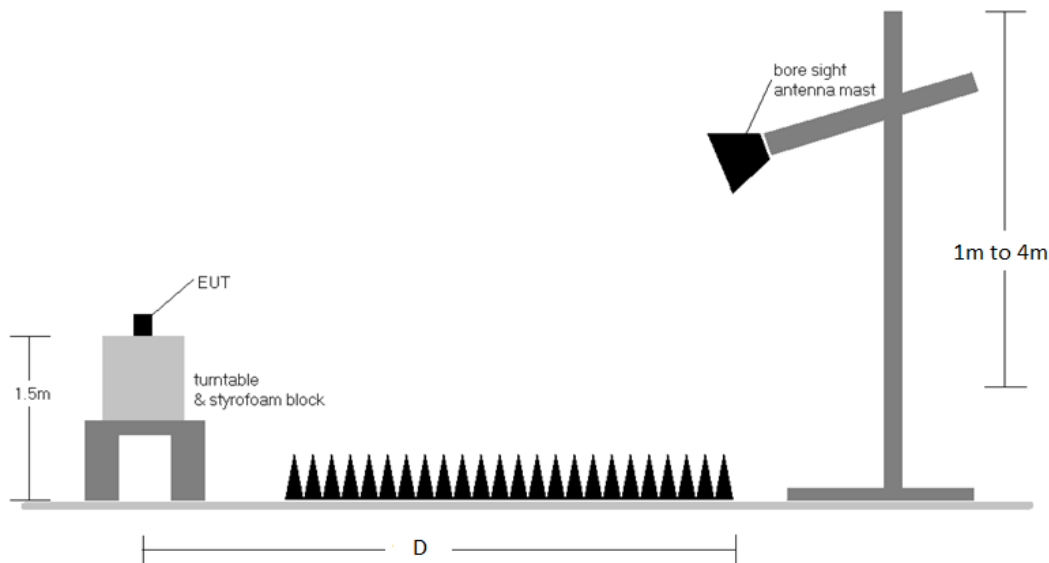



Figure 7-6. Test Instrument & Measurement Setup >1 GHz

FCC ID: BCGA2379	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	Approved by: Quality Manager
Test Report S/N: 1C2101020005-02-R1.BCG	Test Dates: 12/15/2020 - 02/27/2021	EUT Type: Tablet Device	Page 87 of 108

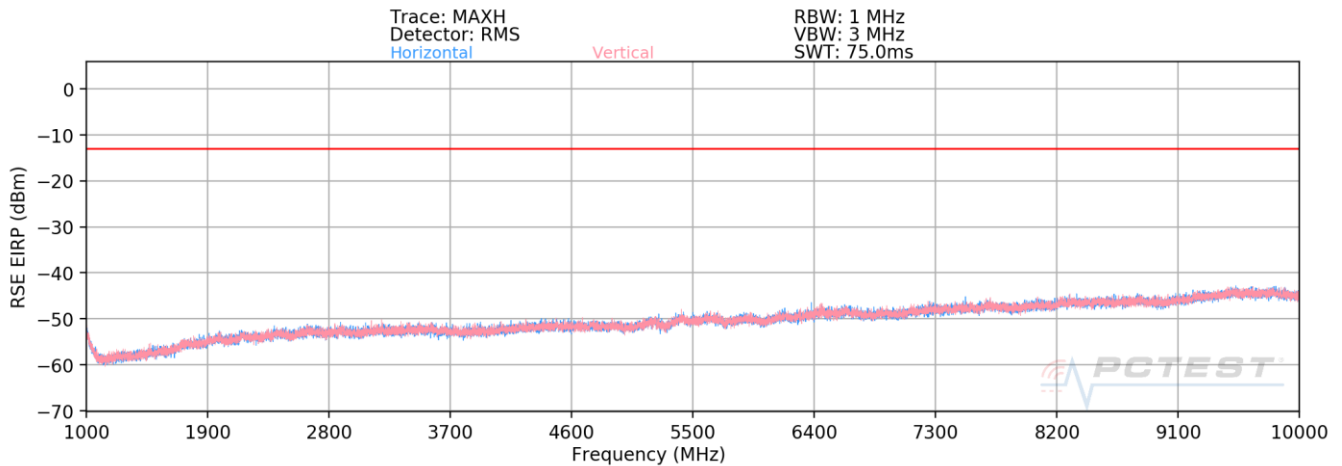
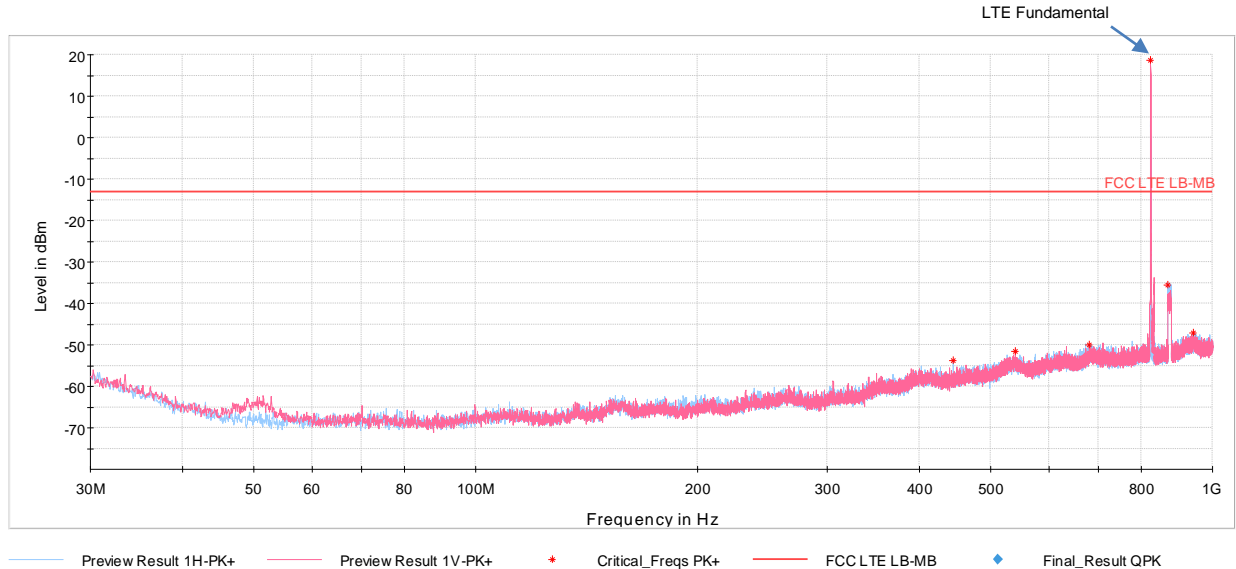
Test Notes

- 1) Field strengths are calculated using the Measurement quantity conversions in KDB 971168 Section 5.8.4.
 - b) $E(\text{dB}\mu\text{V/m}) = \text{Measured amplitude level (dBm)} + 107 + \text{Cable Loss (dB)} + \text{Antenna Factor (dB/m)}$
 - d) $\text{EIRP (dBm)} = E(\text{dB}\mu\text{V/m}) + 20\log D - 104.8$; where D is the measurement distance in meters.
- 2) This device employs GSM, GPRS, and EDGE capabilities. The EUT was tested under all configurations and the highest powers is reported in GPRS mode while transmitting with one slot active.
- 3) This device employs UMTS technology with WCDMA (AMR/RMC) and HSDPA capabilities. The EUT was tested under all configurations and the highest power is reported in WCDMA mode with HSDPA Inactive at 12.2 kbps RMC and TPC bits all set to "1".
- 4) 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.
- 5) This unit was tested with its standard battery.
- 6) The spectrum is measured from 9kHz to the 10th harmonic of the fundamental frequency of the transmitter. The worst-case emissions are reported.
- 7) 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.
- 8) The "-" shown in the following RSE tables are used to denote a noise floor measurement.
- 9) ULCA spurious emissions measurements were evaluated for the two contiguous channels using various combinations of RB size, RB offset, modulation, and channel bandwidth. Channel bandwidth data is shown in the tables below based only on the channel bandwidths that were supported in this device.
- 10) For NR operation, all subcarrier spacings (SCS) and transmission schemes (e.g. CP-OFDM and DFT-s-OFDM) were investigated to determine the worst case configuration. All modes of operation were investigated and the worst case configuration results are reported in this section.
- 11) Spurious emission in EN-DC Operating mode with Sub 6GHz NR carrier as well as an LTE carrier (anchor) has been included in this section. Spurious emissions from the NR and LTE carriers are subject to their own respective limits.

FCC ID: BCGA2379	 PART 22 MEASUREMENT REPORT		Approved by: Quality Manager
Test Report S/N: 1C2101020005-02-R1.BCG	Test Dates: 12/15/2020 - 02/27/2021	EUT Type: Tablet Device	Page 88 of 108

7.6.1 Antenna 3 – Radiated Spurious Emission Measurements

LTE Band 26/5



FCC ID: BCGA2379	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	Approved by: Quality Manager
Test Report S/N: 1C2101020005-02-R1.BCG	Test Dates: 12/15/2020 - 02/27/2021	EUT Type: Tablet Device	Page 89 of 108

Bandwidth (MHz):	10
Frequency (MHz):	829.0
RB / Offset:	1 / 37

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]
1658.0	-	-	-	-76.49	2.76	33.27	-61.99	-13.00	-48.99
2487.0	-	-	-	-77.44	7.90	37.46	-57.80	-13.00	-44.80
3316.0	-	-	-	-77.74	11.96	41.22	-54.04	-13.00	-41.04

Table 7-14. Radiated Spurious Data (LTE Band 26/5 – Low Channel)

Bandwidth (MHz):	10
Frequency (MHz):	836.5
RB / Offset:	1 / 37



Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
1673.0	-	-	-	-77.16	-0.47	29.37	-65.89	-13.00	-52.89
2509.5	-	-	-	-77.75	2.85	32.10	-63.16	-13.00	-50.16
3346.0	-	-	-	-77.90	4.15	33.25	-62.01	-13.00	-49.01

Table 7-15. Radiated Spurious Data (LTE Band 26/5 – Mid Channel)

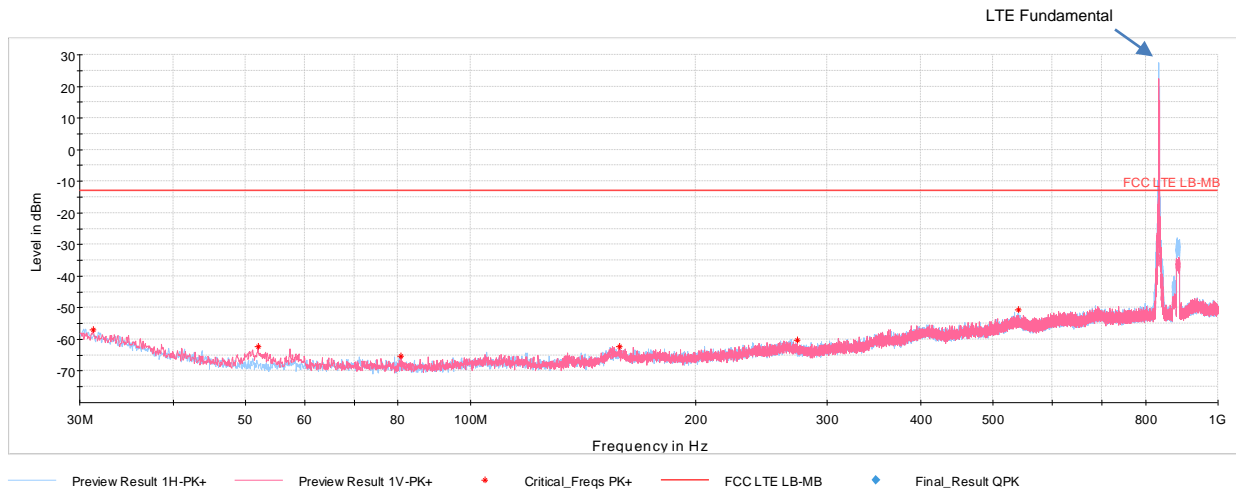
Bandwidth (MHz):	10
Frequency (MHz):	844.0
RB / Offset:	1 / 37

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]
1688.00	-	-	-	-76.88	-0.07	30.05	-65.21	-13.00	-52.21
2532.00	H	293	299	-76.71	2.79	33.08	-62.18	-13.00	-49.18
3376.00	-	-	-	-77.98	4.39	33.41	-61.85	-13.00	-48.85
4220.00	-	-	-	-78.93	5.71	33.78	-61.48	-13.00	-48.48
5064.00	-	-	-	-79.92	6.35	33.43	-61.83	-13.00	-48.83

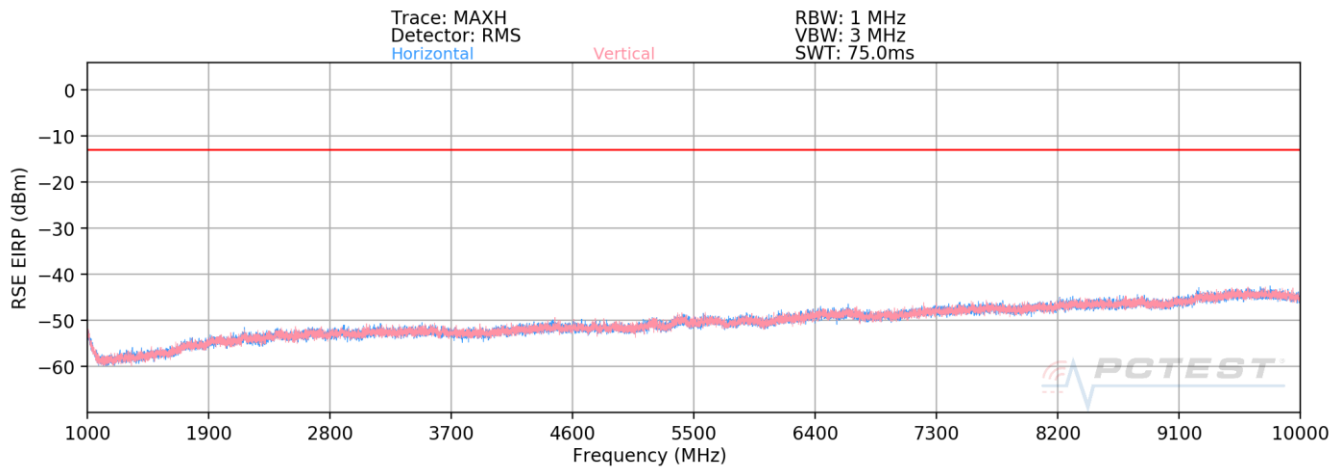
Table 7-16. Radiated Spurious Data (LTE Band 26/5 – High Channel)

FCC ID: BCGA2379	 PCTEST Proud to be part of  element	PART 22 MEASUREMENT REPORT	Approved by: Quality Manager
Test Report S/N: 1C2101020005-02-R1.BCG	Test Dates: 12/15/2020 - 02/27/2021	EUT Type: Tablet Device	Page 90 of 108

ULCA LTE Band 5



Plot 7-118. Radiated Spurious Emission below 1GHz (ULCA LTE Band 5)



Plot 7-119. Radiated Spurious Emission above 1GHz (ULCA LTE Band 5)

FCC ID: BCGA2379	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT		Approved by: Quality Manager
Test Report S/N: 1C2101020005-02-R1.BCG	Test Dates: 12/15/2020 - 02/27/2021	EUT Type: Tablet Device		Page 91 of 108

PCC Bandwidth (MHz):	10
PCC Frequency (MHz):	829.0
PCC RB / Offset:	1 / 49
SCC Bandwidth (MHz):	10
SCC Frequency (MHz):	838.9
SCC RB / Offset:	1 / 0


Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
1668.0	H	-	-	-76.91	-0.54	29.55	-65.71	-13.00	-52.71
2502.0	H	-	-	-77.42	2.91	32.49	-62.76	-13.00	-49.76
3336.0	H	-	-	-77.81	4.07	33.26	-61.99	-13.00	-48.99

Table 7-17. Radiated Spurious Data (ULCA LTE Band 5 – Low Channel)

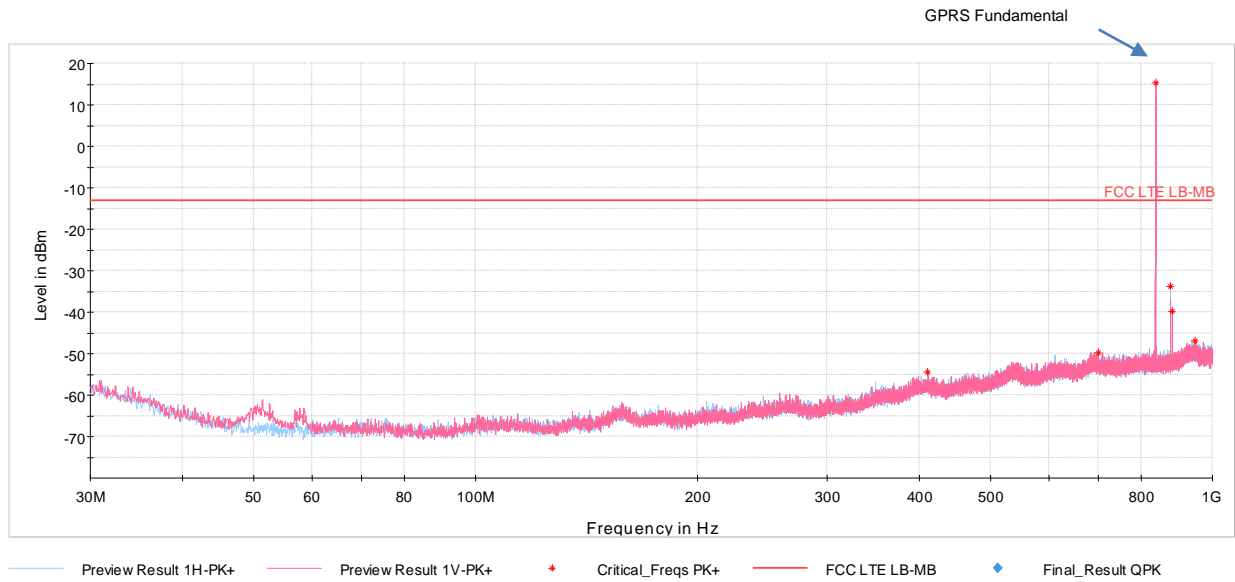
PCC Bandwidth (MHz):	10
PCC Frequency (MHz):	844.0
PCC RB / Offset:	1 / 0
SCC Bandwidth (MHz):	10
SCC Frequency (MHz):	834.1
SCC RB / Offset:	1 / 49

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
1678.0	H	-	-	-76.93	-0.08	29.99	-65.26	-13.00	-52.26
2517.0	H	-	-	-77.51	2.80	32.29	-62.97	-13.00	-49.97
3356.0	H	-	-	-78.15	4.39	33.24	-62.01	-13.00	-49.01

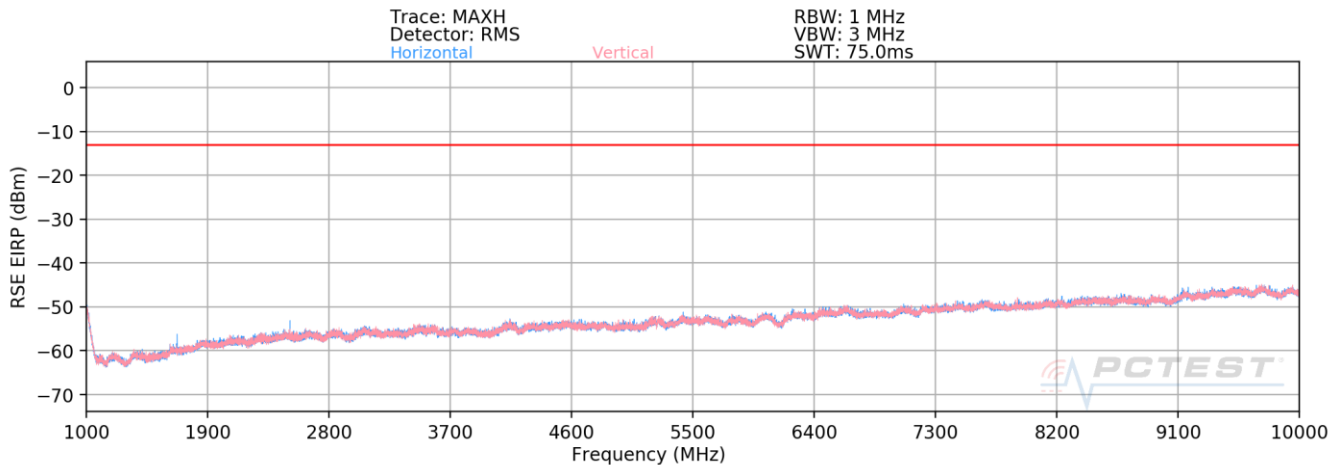
Table 7-18. Radiated Spurious Data (ULCA LTE Band 5 – High Channel)

FCC ID: BCGA2379	 PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	Approved by: Quality Manager
Test Report S/N: 1C2101020005-02-R1.BCG	Test Dates: 12/15/2020 - 02/27/2021	EUT Type: Tablet Device	Page 92 of 108

GSM/GPRS Cell



Plot 7-120. Radiated Spurious Emission below 1GHz (GPRS Cell)



Plot 7-121. Radiated Spurious Emission above 1GHz (GPRS Cell)

FCC ID: BCGA2379	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	Approved by: Quality Manager
Test Report S/N: 1C2101020005-02-R1.BCG	Test Dates: 12/15/2020 - 02/27/2021	EUT Type: Tablet Device	Page 93 of 108

Mode:	GPRS 1 Tx Slot
Channel:	128
Frequency (MHz):	824.2

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]
1648.4	H	187	131	-66.34	-0.69	39.97	-55.29	-13.00	-42.29
2472.6	H	318	112	-64.42	3.15	45.73	-49.52	-13.00	-36.52
3296.8	-	-	-	-77.32	4.01	33.69	-61.57	-13.00	-48.57
4121.0	-	-	-	-75.66	5.01	36.35	-58.91	-13.00	-45.91
4945.2	-	-	-	-72.89	6.52	40.63	-54.62	-13.00	-41.62

Table 7-19. Radiated Spurious Data (GPRS Cell – Low Channel)

Mode:	GPRS 1 Tx Slot
Channel:	190
Frequency (MHz):	836.6


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]
1673.2	H	142	168	-65.90	-0.47	40.63	-54.63	-13.00	-41.63
2509.8	H	321	262	-68.01	2.85	41.84	-53.42	-13.00	-40.42
3346.4	-	-	-	-76.93	4.16	34.23	-61.03	-13.00	-48.03
4183.0	-	-	-	-75.65	5.31	36.66	-58.60	-13.00	-45.60
5019.6	-	-	-	-72.71	6.40	40.69	-54.56	-13.00	-41.56

Table 7-20. Radiated Spurious Data (GPRS Cell – Mid Channel)

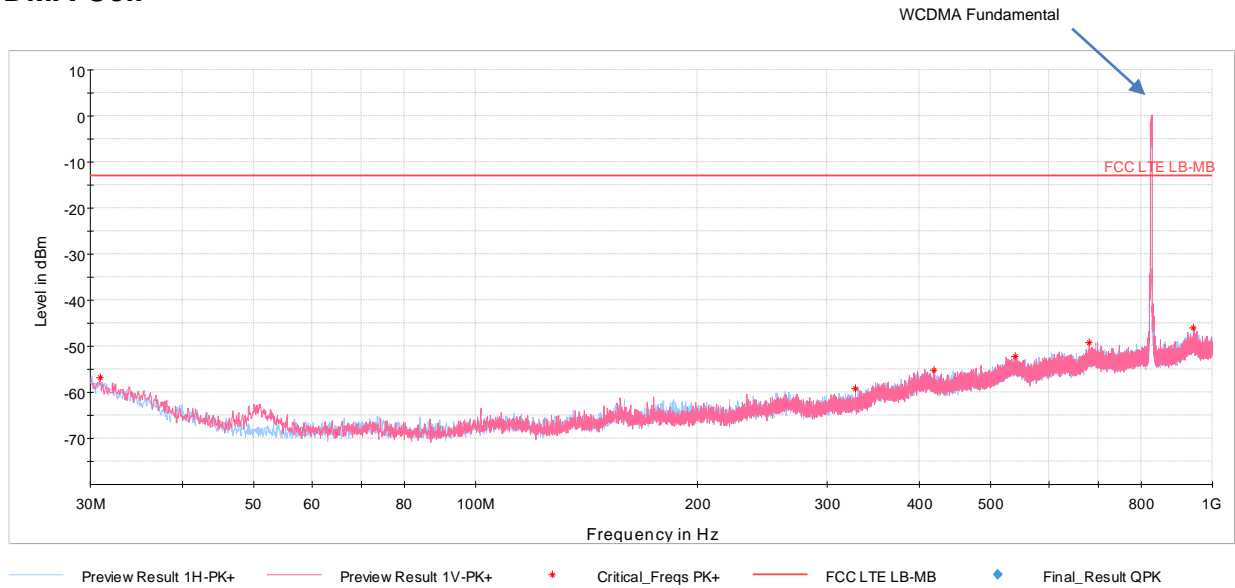
Mode:	GPRS 1 Tx Slot
Channel:	251
Frequency (MHz):	848.8

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]
1697.6	H	114	115	-67.94	0.36	39.42	-55.84	-13.00	-42.84
2546.4	H	289	152	-69.39	2.81	40.42	-54.83	-13.00	-41.83
3395.2	-	-	-	-77.92	4.48	33.56	-61.69	-13.00	-48.69
4244.0	-	-	-	-76.42	5.43	36.01	-59.25	-13.00	-46.25
5092.8	-	-	-	-72.83	6.68	40.85	-54.40	-13.00	-41.40

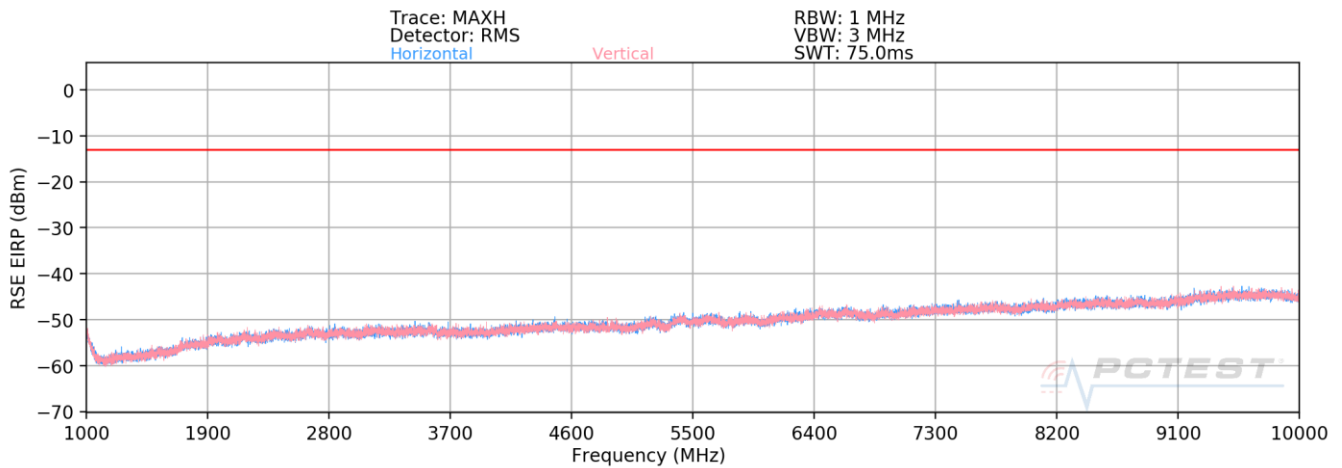
Table 7-21. Radiated Spurious Data (GPRS Cell – High Channel)

FCC ID: BCGA2379	 PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	Approved by: Quality Manager
Test Report S/N: 1C2101020005-02-R1.BCG	Test Dates: 12/15/2020 - 02/27/2021	EUT Type: Tablet Device	Page 94 of 108

WCDMA Cell



Plot 7-122. Radiated Spurious Emission (WCDMA Cell)



Plot 7-123. Radiated Spurious Emission above 1GHz (WCDMA Cell)

FCC ID: BCGA2379	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	Approved by: Quality Manager
Test Report S/N: 1C2101020005-02-R1.BCG	Test Dates: 12/15/2020 - 02/27/2021	EUT Type: Tablet Device	Page 95 of 108

Mode:	WCDMA RMC
Channel:	4132
Frequency (MHz):	826.4

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]
1652.8	-	-	-	-76.29	-0.59	30.12	-65.14	-13.00	-52.14
2479.2	H	138	103	-76.27	3.21	33.94	-61.32	-13.00	-48.32
3305.6	-	-	-	-79.85	4.04	31.19	-64.06	-13.00	-51.06
4132.0	-	-	-	-78.87	4.81	32.94	-62.31	-13.00	-49.31
4958.4	-	-	-	-76.22	6.42	37.20	-58.05	-13.00	-45.05

Table 7-22. Radiated Spurious Data (WCDMA Cell – Low Channel)

Mode:	WCDMA RMC
Channel:	4183
Frequency (MHz):	836.6


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]
1673.2	-	-	-	-78.68	-0.47	27.85	-67.41	-13.00	-54.41
2509.8	-	-	-	-75.97	2.85	33.88	-61.38	-13.00	-48.38
3346.4	-	-	-	-76.23	4.16	34.93	-60.33	-13.00	-47.33

Table 7-23. Radiated Spurious Data (WCDMA Cell – Mid Channel)

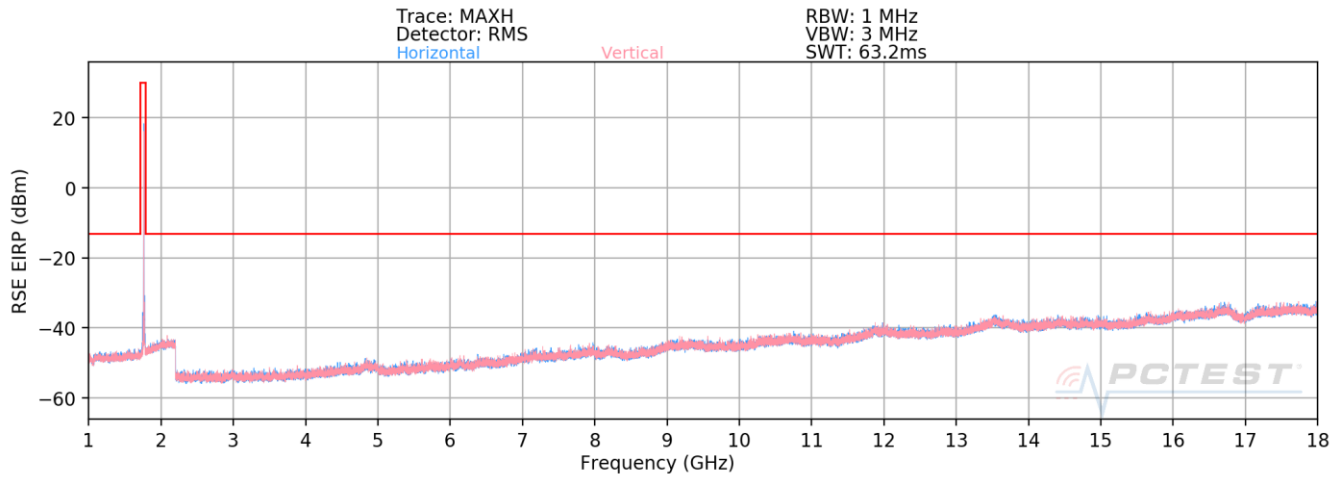
Mode:	WCDMA RMC
Channel:	4233
Frequency (MHz):	846.6

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]
1693.2	-	-	-	-78.73	0.16	28.43	-66.83	-13.00	-53.83
2539.8	-	-	-	-75.71	2.87	34.16	-61.10	-13.00	-48.10
3386.4	-	-	-	-76.08	4.41	35.33	-59.93	-13.00	-46.93

Table 7-24. Radiated Spurious Data (WCDMA Cell – High Channel)

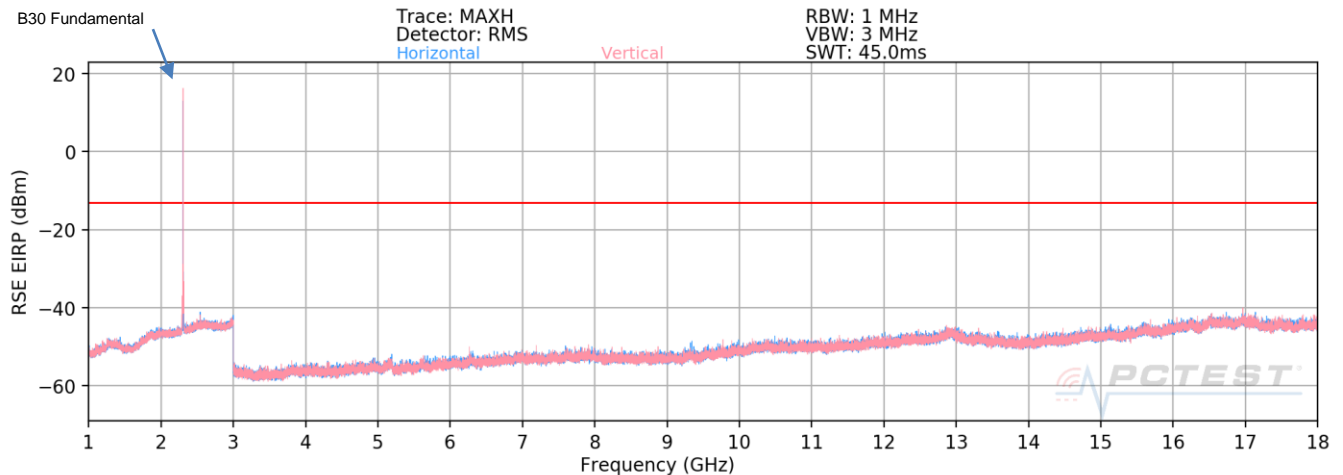
FCC ID: BCGA2379	 PCTEST <small>Proud to be part of element</small>	PART 22 MEASUREMENT REPORT	Approved by: Quality Manager
Test Report S/N: 1C2101020005-02-R1.BCG	Test Dates: 12/15/2020 - 02/27/2021	EUT Type: Tablet Device	Page 96 of 108

EN-DC – n5 + LTE Band 66



Plot 7-124. Radiated Spurious Emission 1GHz – 18GHz (NR Band n5 + Anchor LTE Band 66 – EN-DC)

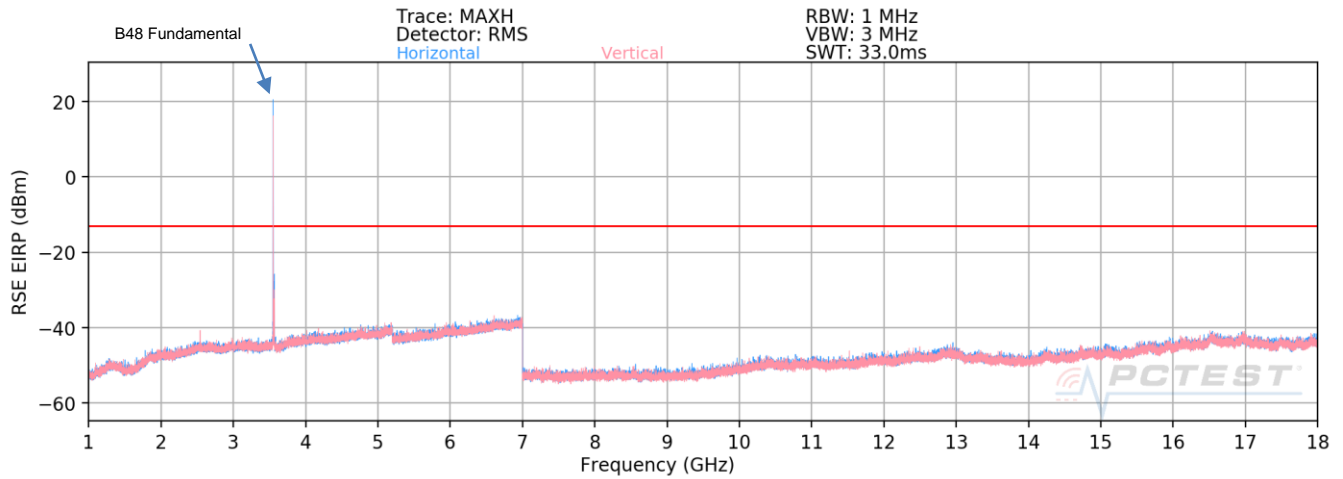
EN-DC – n5 + LTE Band 30



Plot 7-125. Radiated Spurious Emission 1GHz – 18GHz (NR Band n5 + Anchor LTE Band 30 – EN-DC)

FCC ID: BCGA2379	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT		Approved by: Quality Manager
Test Report S/N: 1C2101020005-02-R1.BCG	Test Dates: 12/15/2020 - 02/27/2021	EUT Type: Tablet Device		Page 97 of 108

EN-DC – n5 + LTE Band 48



Plot 7-126. Radiated Spurious Emission 1GHz – 18GHz (NR Band n5 + Anchor LTE Band 48 – EN-DC)

FCC ID: BCGA2379	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	Approved by: Quality Manager
Test Report S/N: 1C2101020005-02-R1.BCG	Test Dates: 12/15/2020 - 02/27/2021	EUT Type: Tablet Device	Page 98 of 108

7.6.2 Antenna 1 – Radiated Spurious Emission Measurements

LTE Band 26/5

Bandwidth (MHz):	10
Frequency (MHz):	829.0
RB / Offset:	1 / 37

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]
1658.0	H	150	170	-77.73	-0.54	28.73	-66.53	-13.00	-53.53
2487.0	H	187	60	-70.53	2.91	39.38	-55.87	-13.00	-42.87
3316.0	-	-	-	-77.58	4.07	33.49	-61.76	-13.00	-48.76
4145.0	-	-	-	-77.65	5.07	34.42	-60.84	-13.00	-47.84
4974.0	-	-	-	-78.82	6.36	34.54	-60.72	-13.00	-47.72

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

Bandwidth (MHz):	10
Frequency (MHz):	836.5
RB / Offset:	1 / 37


Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
1673.0	-	-	-	-79.61	-0.48	26.91	-68.34	-13.00	-55.34
2509.5	V	383	263	-67.86	2.85	41.99	-53.27	-13.00	-40.27
3346.0	-	-	-	-77.66	4.15	33.49	-61.77	-13.00	-48.77
4182.5	-	-	-	-75.99	5.29	36.30	-58.95	-13.00	-45.95
5019.0	-	-	-	-77.60	6.41	35.81	-59.45	-13.00	-46.45

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

Bandwidth (MHz):	10
Frequency (MHz):	844.0
RB / Offset:	1 / 37

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]
1688.00	-	-	-	-76.85	-0.08	30.07	-65.18	-13.00	-52.18
2532.00	V	338	225	-77.26	2.80	32.54	-62.72	-13.00	-49.72
3376.00	-	-	-	-78.09	4.39	33.30	-61.95	-13.00	-48.95
4220.00	-	-	-	-79.05	5.71	33.66	-61.60	-13.00	-48.60
5064.00	-	-	-	-80.04	6.35	33.31	-61.94	-13.00	-48.94

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

FCC ID: BCGA2379	 PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	Approved by: Quality Manager
Test Report S/N: 1C2101020005-02-R1.BCG	Test Dates: 12/15/2020 - 02/27/2021	EUT Type: Tablet Device	Page 99 of 108

ULCA LTE Band 5

PCC Bandwidth (MHz):	10
PCC Frequency (MHz):	829.0
PCC RB / Offset:	1 / 49
SCC Bandwidth (MHz):	10
SCC Frequency (MHz):	838.9
SCC RB / Offset:	1 / 0


Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
1668.0	H	338	171	-75.96	-0.54	30.50	-64.76	-13.00	-51.76
2502.0	-	-	-	-77.49	2.91	32.42	-62.83	-13.00	-49.83
3336.0	-	-	-	-77.81	4.07	33.26	-61.99	-13.00	-48.99
4170.0	-	-	-	-79.04	5.07	33.03	-62.23	-13.00	-49.23

Table 7-28. Radiated Spurious Data (ULCA LTE Band 5 – Low Channel)

PCC Bandwidth (MHz):	10
PCC Frequency (MHz):	844.0
PCC RB / Offset:	1 / 0
SCC Bandwidth (MHz):	10
SCC Frequency (MHz):	834.1
SCC RB / Offset:	1 / 49

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
1678.0	-	-	-	-76.84	-0.08	30.08	-65.17	-13.00	-52.17
2517.0	-	-	-	-77.56	2.80	32.24	-63.02	-13.00	-50.02
3356.0	-	-	-	-78.11	4.39	33.28	-61.97	-13.00	-48.97

Table 7-29. Radiated Spurious Data (ULCA LTE Band 5 – High Channel)

FCC ID: BCGA2379	 PCTEST <small>Proud to be part of element</small>	PART 22 MEASUREMENT REPORT	Approved by: Quality Manager
Test Report S/N: 1C2101020005-02-R1.BCG	Test Dates: 12/15/2020 - 02/27/2021	EUT Type: Tablet Device	Page 100 of 108

GSM/GPRS Cell

Mode:	GPRS 1 Tx Slot
Channel:	128
Frequency (MHz):	824.2

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]
1648.4	H	163	134	-67.99	-0.69	38.32	-56.94	-13.00	-43.94
2472.6	V	268	97	-71.94	3.15	38.21	-57.04	-13.00	-44.04
3296.8	-	-	-	-77.17	4.01	33.84	-61.42	-13.00	-48.42
4121.0	-	-	-	-76.28	5.01	35.73	-59.53	-13.00	-46.53
4945.2	-	-	-	-73.47	6.52	40.05	-55.20	-13.00	-42.20

Table 7-30. Radiated Spurious Data (GPRS Cell – Low Channel)

Mode:	GPRS 1 Tx Slot
Channel:	190
Frequency (MHz):	836.6


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]
1673.2	H	305	168	-69.95	-0.47	36.58	-58.68	-13.00	-45.68
2509.8	V	171	222	-70.15	2.85	39.70	-55.56	-13.00	-42.56
3346.4	-	-	-	-77.02	4.16	34.14	-61.12	-13.00	-48.12
4183.0	-	-	-	-76.09	5.31	36.22	-59.04	-13.00	-46.04
5019.6	-	-	-	-72.90	6.40	40.50	-54.75	-13.00	-41.75

Table 7-31. Radiated Spurious Data (GPRS Cell – Mid Channel)

Mode:	GPRS 1 Tx Slot
Channel:	251
Frequency (MHz):	848.8

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]
1697.6	H	126	174	-65.41	0.36	41.95	-53.31	-13.00	-40.31
2546.4	H	187	54	-69.78	2.81	40.03	-55.22	-13.00	-42.22
3395.2	-	-	-	-75.00	4.48	36.48	-58.77	-13.00	-45.77
4244.0	-	-	-	-72.93	5.43	39.50	-55.76	-13.00	-42.76
5092.8	-	-	-	-70.52	6.68	43.16	-52.09	-13.00	-39.09

Table 7-32. Radiated Spurious Data (GPRS Cell – High Channel)

FCC ID: BCGA2379	 PART 22 MEASUREMENT REPORT	Approved by: Quality Manager
Test Report S/N: 1C2101020005-02-R1.BCG	Test Dates: 12/15/2020 - 02/27/2021	EUT Type: Tablet Device
		Page 101 of 108

WCDMA Cell

Mode:	WCDMA RMC
Channel:	4132
Frequency (MHz):	826.4

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]
1652.8	-	-	-	-78.96	-0.59	27.45	-67.81	-13.00	-54.81
2479.2	V	400	302	-76.23	3.21	33.98	-61.28	-13.00	-48.28
3305.6	-	-	-	-79.78	4.04	31.26	-63.99	-13.00	-50.99
4132.0	-	-	-	-78.80	4.81	33.01	-62.24	-13.00	-49.24
4958.4	-	-	-	-76.32	6.42	37.10	-58.15	-13.00	-45.15

Table 7-33. Radiated Spurious Data (WCDMA Cell – Low Channel)

Mode:	WCDMA RMC
Channel:	4183
Frequency (MHz):	836.6


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]
1673.2	-	-	-	-78.93	-0.47	27.60	-67.66	-13.00	-54.66
2509.8	-	-	-	-75.97	2.85	33.88	-61.38	-13.00	-48.38
3346.4	-	-	-	-76.16	4.16	35.00	-60.26	-13.00	-47.26

Table 7-34. Radiated Spurious Data (WCDMA Cell – Mid Channel)

Mode:	WCDMA RMC
Channel:	4233
Frequency (MHz):	846.6

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]
1693.2	-	-	-	-78.74	0.16	28.42	-66.84	-13.00	-53.84
2539.8	-	-	-	-75.71	2.87	34.16	-61.10	-13.00	-48.10
3386.4	-	-	-	-76.10	4.41	35.31	-59.95	-13.00	-46.95

Table 7-35. Radiated Spurious Data (WCDMA Cell – High Channel)

FCC ID: BCGA2379	 PART 22 MEASUREMENT REPORT	Approved by: Quality Manager
Test Report S/N: 1C2101020005-02-R1.BCG	Test Dates: 12/15/2020 - 02/27/2021	EUT Type: Tablet Device
		Page 102 of 108

7.7 Frequency Tolerance / Temperature Variation

§2.1055, 22.355

Test Overview and Limit

Frequency Tolerance testing is performed in accordance with the guidelines of ANSI C63.26-2015 and TIA-603-E-2016. All port were tested and only the worst case data were reported. The Frequency Tolerance 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 Tolerance of the transmitter shall be maintained within $\pm 0.00025\%$ (± 2.5 ppm) of the center frequency.

Test Procedure Used

ANSI C63.26 2015

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

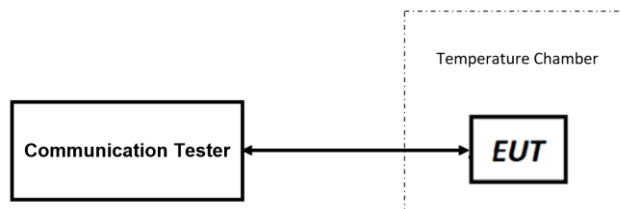


Figure 7-7. Test Instrument & Measurement Setup

Test Notes


1. All port were tested and only the worst case data were reported.
2. Only the worst-case NR bands with a wider bandwidth compared to LTE have been tested and reported. NR bands that have similar bandwidths as LTE is covered by the LTE bands.

FCC ID: BCGA2379	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	Approved by: Quality Manager
Test Report S/N: 1C2101020005-02-R1.BCG	Test Dates: 12/15/2020 - 02/27/2021	EUT Type: Tablet Device	Page 103 of 108

Frequency Tolerance / Temperature Variation

LTE Band 26/5					
		Operating Frequency (Hz):		836,500,000	
		Ref. Voltage (VDC):		3.80	
		Deviation Limit:		± 0.00025% or 2.5 ppm	
Voltage (%)	Power (VDC)	Temp (°C)	Frequency (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	3.80	- 30	836,499,999	-1	-0.0000001
		- 20	836,499,992	-8	-0.0000009
		- 10	836,500,002	2	0.0000002
		0	836,500,003	3	0.0000004
		+ 10	836,499,998	-2	-0.0000002
		+ 20	836,499,999	-1	-0.0000001
		+ 30	836,499,997	-3	-0.0000004
		+ 40	836,499,996	-4	-0.0000005
		+ 50	836,500,003	3	0.0000003
Battery Endpoint	3.23	+ 20	836,500,003	3	0.0000004


Table 7-36. LTE Band 26/5 Frequency Tolerance Data

FCC ID: BCGA2379	 PART 22 MEASUREMENT REPORT		Approved by: Quality Manager
Test Report S/N: 1C2101020005-02-R1.BCG	Test Dates: 12/15/2020 - 02/27/2021	EUT Type: Tablet Device	Page 104 of 108

Frequency Tolerance / Temperature Variation

NR Band n5					
		Operating Frequency (Hz):		836,500,000	
		Ref. Voltage (VDC):		3.80	
		Deviation Limit:		± 0.00025% or 2.5 ppm	
Voltage (%)	Power (VDC)	Temp (°C)	Frequency (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	3.80	- 30	836,499,862	138	0.0000165
		- 20	836,500,169	-169	-0.0000202
		- 10	836,499,816	184	0.0000220
		0	836,500,004	-4	-0.0000005
		+ 10	836,499,788	212	0.0000253
		+ 20	836,500,194	-194	-0.0000232
		+ 30	836,499,995	5	0.0000006
		+ 40	836,500,179	-179	-0.0000214
		+ 50	836,499,943	57	0.0000068
Battery Endpoint	3.23	+ 20	836,500,102	-102	-0.0000122


Table 7-37. NR Band n5 Frequency Tolerance Data

FCC ID: BCGA2379	 PART 22 MEASUREMENT REPORT		Approved by: Quality Manager
Test Report S/N: 1C2101020005-02-R1.BCG	Test Dates: 12/15/2020 - 02/27/2021	EUT Type: Tablet Device	Page 105 of 108

Frequency Tolerance / Temperature Variation

GSM/GPRS Cellular					
		Operating Frequency (Hz):		836,600,000	
		Ref. Voltage (VDC):		3.80	
		Deviation Limit:		± 0.00025% or 2.5 ppm	
Voltage (%)	Power (VDC)	Temp (°C)	Frequency (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	3.80	- 30	836,599,999	-1	-0.0000001
		- 20	836,599,992	-8	-0.0000009
		- 10	836,600,002	2	0.0000002
		0	836,600,003	3	0.0000004
		+ 10	836,599,998	-2	-0.0000002
		+ 20	836,599,999	-1	-0.0000001
		+ 30	836,599,997	-3	-0.0000004
		+ 40	836,599,996	-4	-0.0000005
		+ 50	836,600,003	3	0.0000003
Battery Endpoint	3.23	+ 20	836,600,003	3	0.0000004


Table 7-38. GSM/GPRS Cell Frequency Tolerance Data

FCC ID: BCGA2379	 PART 22 MEASUREMENT REPORT		Approved by: Quality Manager
Test Report S/N: 1C2101020005-02-R1.BCG	Test Dates: 12/15/2020 - 02/27/2021	EUT Type: Tablet Device	Page 106 of 108

Frequency Tolerance / Temperature Variation



WCDMA Cellular					
		Operating Frequency (Hz):		836,600,000	
		Ref. Voltage (VDC):		3.80	
		Deviation Limit:		± 0.00025% or 2.5 ppm	
Voltage (%)	Power (VDC)	Temp (°C)	Frequency (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	3.80	- 30	836,599,999	-1	-0.0000001
		- 20	836,599,992	-8	-0.0000009
		- 10	836,600,002	2	0.0000002
		0	836,600,003	3	0.0000004
		+ 10	836,599,998	-2	-0.0000002
		+ 20	836,599,999	-1	-0.0000001
		+ 30	836,599,997	-3	-0.0000004
		+ 40	836,599,996	-4	-0.0000005
		+ 50	836,600,003	3	0.0000003
Battery Endpoint	3.23	+ 20	836,600,003	3	0.0000004

Table 7-39. WCDMA Cell Frequency Tolerance Data

FCC ID: BCGA2379	 PART 22 MEASUREMENT REPORT		Approved by: Quality Manager
Test Report S/N: 1C2101020005-02-R1.BCG	Test Dates: 12/15/2020 - 02/27/2021	EUT Type: Tablet Device	Page 107 of 108

8.0 CONCLUSION

The data collected relate only to the item(s) tested and show that the Apple **Tablet Device** **FCC ID: BCGA2379** complies with all the requirements of Part 22 of the FCC rules.

FCC ID: BCGA2379	 PCTEST Proud to be part of  element	PART 22 MEASUREMENT REPORT	Approved by: Quality Manager
Test Report S/N: 1C2101020005-02-R1.BCG	Test Dates: 12/15/2020 - 02/27/2021	EUT Type: Tablet Device	Page 108 of 108