

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]
1658.0	H	-	-	-76.73	-2.46	27.81	-67.45	-13.00	-54.45
2487.0	H	147	315	-75.47	2.06	33.59	-61.67	-13.00	-48.67
3316.0	H	-	-	-77.26	2.41	32.15	-63.11	-13.00	-50.11
4145.0	H	-	-	-78.11	3.12	32.01	-63.25	-13.00	-50.25
4974.0	H	-	-	-78.80	4.63	32.83	-62.42	-13.00	-49.42

Table 7-19. Radiated Spurious Data (ULCA LTE Band 5 – Low Channel – South - Open)

PCC Bandwidth (MHz):	10
PCC Frequency (MHz):	831.5
PCC RB / Offset:	1 / 49
SCC Bandwidth (MHz):	10
SCC Frequency (MHz):	841.4
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]
1663.0	H	147	133	-75.30	-2.41	29.29	-65.97	-13.00	-52.97
2494.5	H	180	1	-74.71	2.13	34.42	-60.84	-13.00	-47.84
3326.0	H	-	-	-77.24	2.41	32.17	-63.09	-13.00	-50.09
4157.5	H	-	-	-78.36	3.28	31.92	-63.34	-13.00	-50.34
4989.0	H	-	-	-78.81	4.68	32.87	-62.39	-13.00	-49.39

Table 7-20. Radiated Spurious Data (ULCA LTE Band 5 – Mid Channel – South – Open)

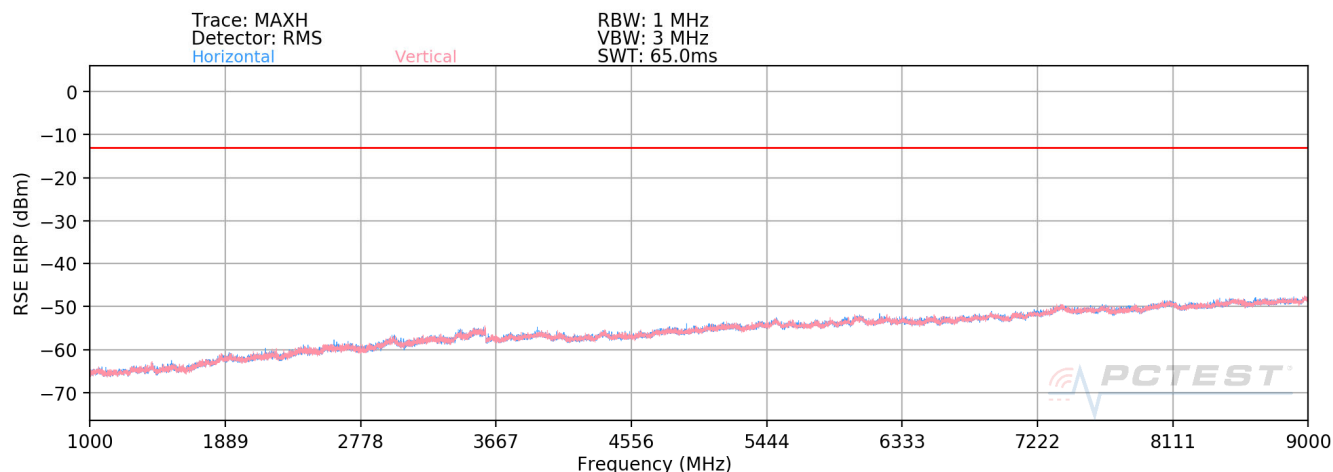
PCC Bandwidth (MHz):	10
PCC Frequency (MHz):	844.0
PCC RB / Offset:	1 / 0
SCC Bandwidth (MHz):	10
SCC Frequency (MHz):	834.1
SCC RB / Offset:	1 / 49

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]
1688.0	H	-	-	-76.55	-1.95	28.50	-66.76	-13.00	-53.76
2532.0	H	182	347	-75.53	2.23	33.70	-61.56	-13.00	-48.56
3376.0	H	-	-	-77.35	2.28	31.93	-63.33	-13.00	-50.33
4220.0	H	-	-	-77.91	3.17	32.26	-63.00	-13.00	-50.00
5064.0	H	-	-	-78.89	5.12	33.23	-62.02	-13.00	-49.02

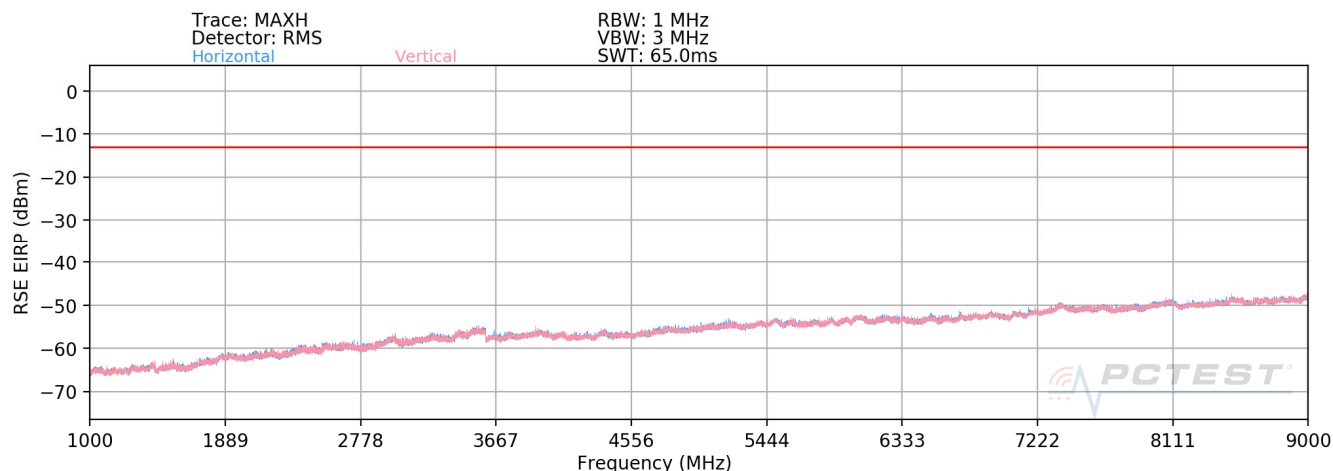
Table 7-21. Radiated Spurious Data (ULCA LTE Band 5 – High Channel – South – Open)

FCC ID: C3K1995	 PCTEST Proud to be part of @element	PART 22 MEASUREMENT REPORT	 Microsoft	Approved by: Technical Manager
Test Report S/N: 1M2105200048-02-R1.C3K	Test Dates: 5/25– 8/10/2021	EUT Type: Portable Handset	Page 85 of 107	

NR Band n5 – North



Plot 7-113. Radiated Spurious Plot (NR Band n5 – North - Open)



Plot 7-114. Radiated Spurious Plot (NR Band n5 – North - Closed)

Bandwidth (MHz):	20
Frequency (MHz):	834.0
RB / Offset:	1 / 53
Mode:	SA

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	124	228	-77.54	-5.47	23.99	-71.27	-13.00	-58.27
2502.0	H	119	201	-77.74	-2.60	26.66	-68.59	-13.00	-55.59
3336.0	H	-	-	-77.94	0.33	29.39	-65.86	-13.00	-52.86
4170.0	H	-	-	-78.52	1.95	30.43	-64.83	-13.00	-51.83
5004.0	H	-	-	-79.56	3.94	31.38	-63.87	-13.00	-50.87

Table 7-22. Radiated Spurious Data (NR Band n5 – Low Channel – North - Open)

FCC ID: C3K1995	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	Microsoft	Approved by: Technical Manager
Test Report S/N: 1M2105200048-02-R1.C3K	Test Dates: 5/25– 8/10/2021	EUT Type: Portable Handset		Page 86 of 107

Bandwidth (MHz):	20
Frequency (MHz):	836.5
RB / Offset:	1 / 53
Mode:	SA

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	H	161	110	-76.72	-5.40	24.88	-70.38	-13.00	-57.38
2509.5	H	-	-	-77.45	-2.54	27.01	-68.25	-13.00	-55.25
3346.0	H	-	-	-77.92	0.30	29.38	-65.87	-13.00	-52.87
4182.5	H	-	-	-78.41	2.02	30.61	-64.65	-13.00	-51.65

Table 7-23. Radiated Spurious Data (NR Band n5 – Mid Channel – North - Open)

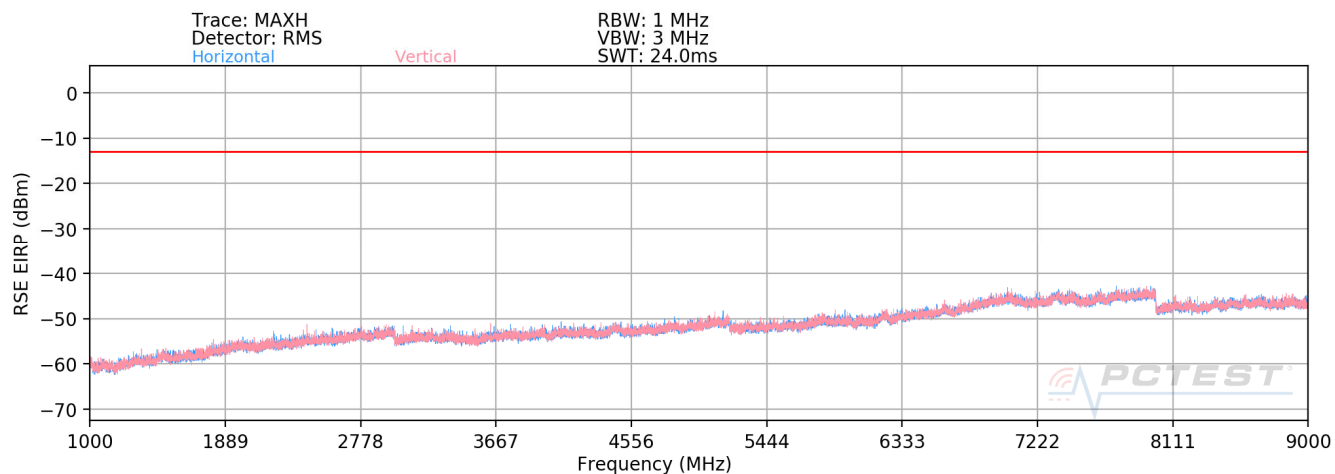
Bandwidth (MHz):	20
Frequency (MHz):	839.0
RB / Offset:	1 / 53
Mode:	SA

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	123	330	-77.27	-5.33	24.40	-70.86	-13.00	-57.86
2517.0	H	-	-	-77.41	-2.33	27.26	-67.99	-13.00	-54.99
3356.0	H	-	-	-78.26	0.28	29.02	-66.24	-13.00	-53.24
4195.0	H	-	-	-78.40	1.95	30.55	-64.71	-13.00	-51.71

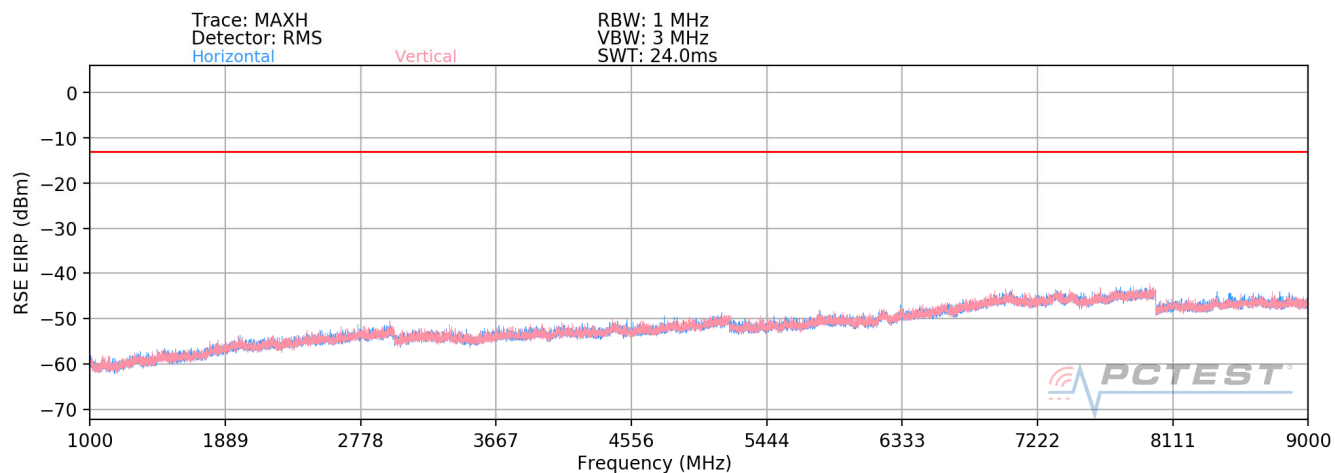
Table 7-24. Radiated Spurious Data (NR Band n5 – High Channel – North - Open)

FCC ID: C3K1995	 PCTEST Proud to be part of 	PART 22 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2105200048-02-R1.C3K	Test Dates: 5/25– 8/10/2021	EUT Type: Portable Handset		Page 87 of 107

NR Band n5 – South



Plot 7-115. Radiated Spurious Plot (NR Band n5 – South - Half)



Plot 7-116. Radiated Spurious Plot (NR Band n5 – South - Open)

Bandwidth (MHz):	20
Frequency (MHz):	834.0
RB / Offset:	1 / 53
Mode:	Standalone

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	-	-	-76.85	-0.35	29.80	-65.46	-13.00	-52.46
2502.0	H	-	-	-77.89	3.50	32.61	-62.65	-13.00	-49.65
3336.0	H	-	-	-78.42	4.95	33.53	-61.73	-13.00	-48.73

Table 7-25. Radiated Spurious Data (NR Band n5 – Low Channel – South - Half)

FCC ID: C3K1995	PCTEST Proud to be part of @element	PART 22 MEASUREMENT REPORT	Microsoft	Approved by: Technical Manager
Test Report S/N: 1M2105200048-02-R1.C3K	Test Dates: 5/25– 8/10/2021	EUT Type: Portable Handset		Page 88 of 107

Bandwidth (MHz):	20
Frequency (MHz):	836.5
RB / Offset:	1 / 53
Mode:	Standalone

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	H	212	179	-76.97	-0.23	29.80	-65.46	-13.00	-52.46
2509.5	H	-	-	-78.26	3.55	32.29	-62.97	-13.00	-49.97
3346.0	H	-	-	-79.73	5.04	32.31	-62.95	-13.00	-49.95
4182.5	H	-	-	-79.07	5.77	33.70	-61.56	-13.00	-48.56

Table 7-26. Radiated Spurious Data (NR Band n5 – Mid Channel – South - Half)

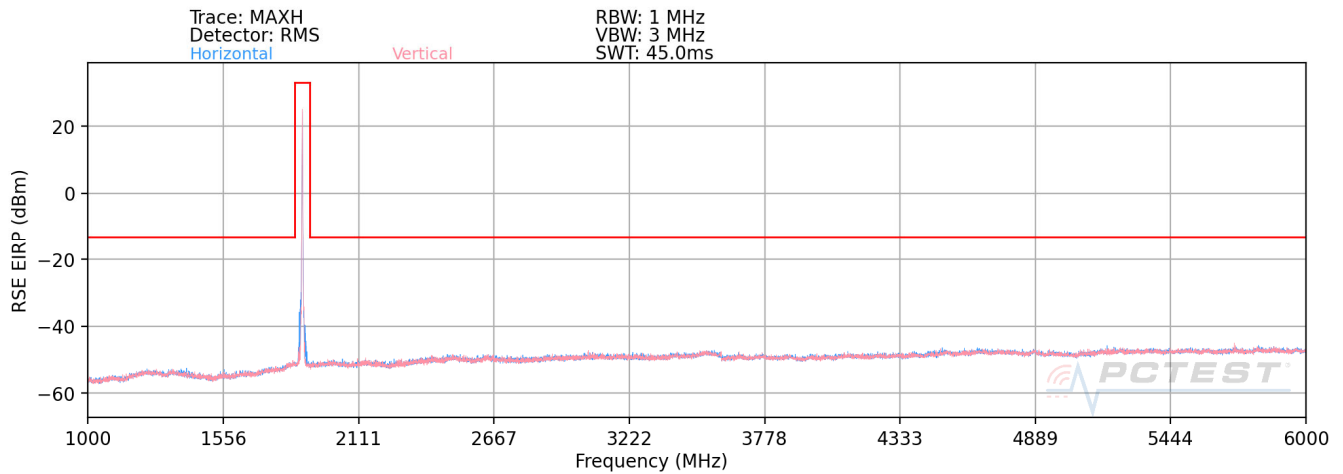
Bandwidth (MHz):	20
Frequency (MHz):	839.0
RB / Offset:	1 / 53
Mode:	Standalone

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	-	-	-77.02	-0.12	29.86	-65.40	-13.00	-52.40
2517.0	H	-	-	-77.74	3.60	32.86	-62.40	-13.00	-49.40
3356.0	H	-	-	-78.33	5.12	33.79	-61.46	-13.00	-48.46

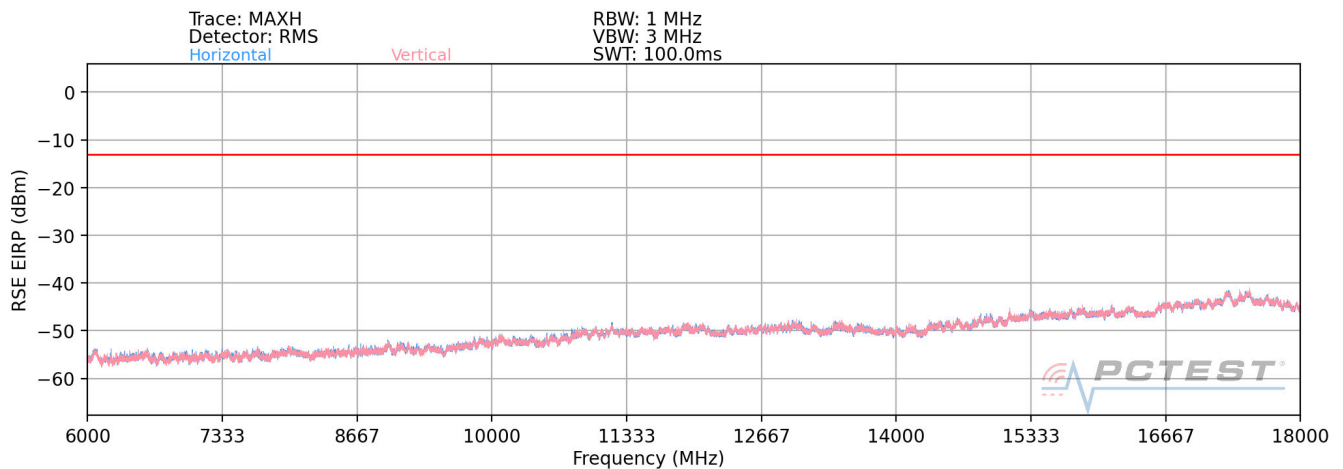
Table 7-27. Radiated Spurious Data (NR Band n5 – High Channel – South - Half)

FCC ID: C3K1995	 PCTEST Proud to be part of 	PART 22 MEASUREMENT REPORT	 Microsoft	Approved by: Technical Manager
Test Report S/N: 1M2105200048-02-R1.C3K	Test Dates: 5/25– 8/10/2021	EUT Type: Portable Handset	Page 89 of 107	

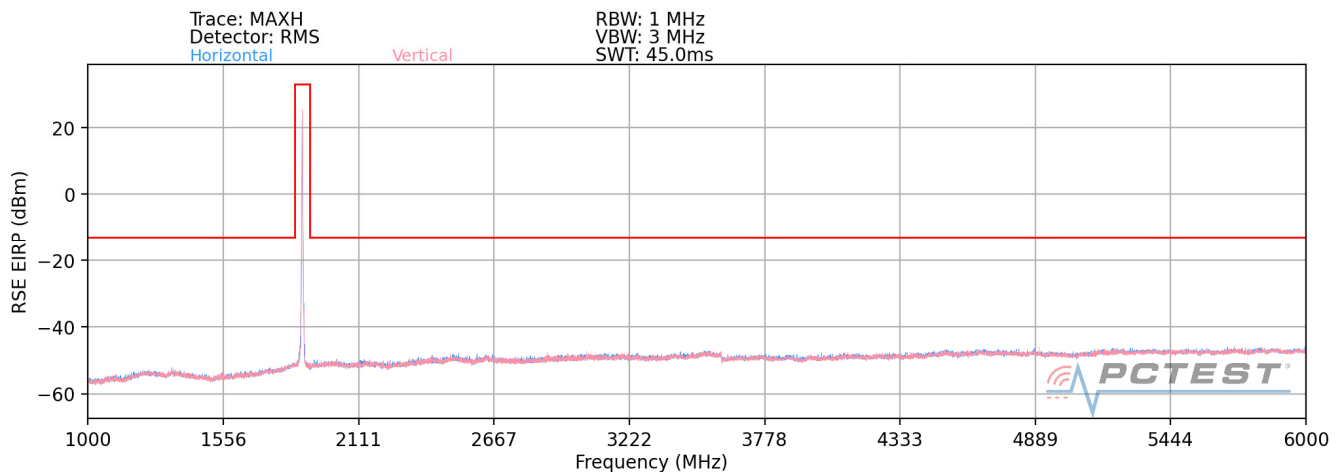
EN-DC NR Band n5 – North & LTE Band 2 – South



Plot 7-117. Radiated Spurious Plot (EN-DC n5 (North) & B2 (South) - 1 – 6 GHz - Open)

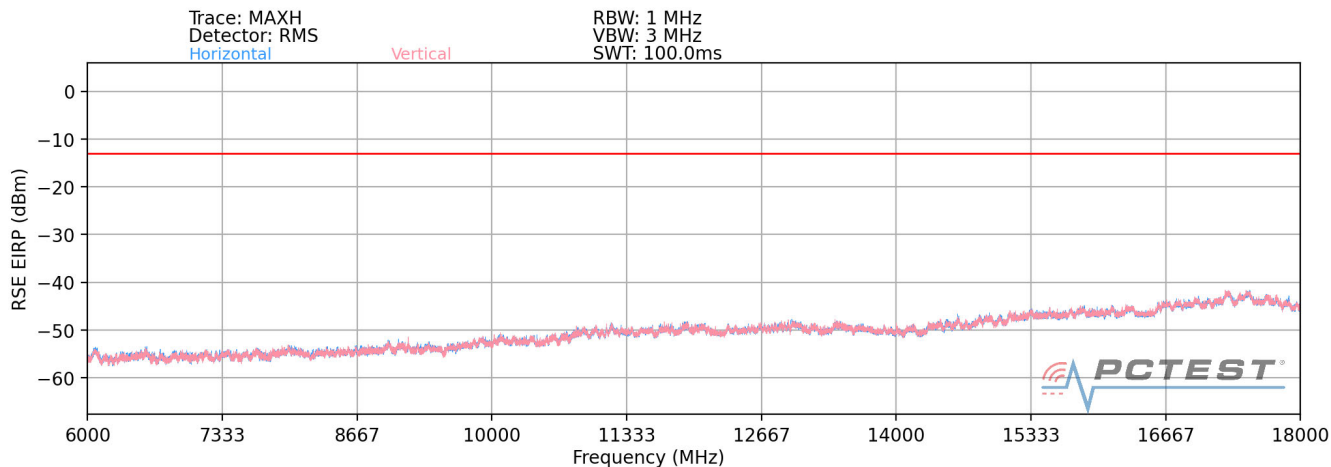


Plot 7-118. Radiated Spurious Plot (EN-DC n5 (North) & B2 (South) - 6 – 18GHz - Open)



Plot 7-119. Radiated Spurious Plot (EN-DC n5 (North) & B2 (South) - 1 – 6 GHz - Closed)

FCC ID: C3K1995	PCTEST Product to be part of	PART 22 MEASUREMENT REPORT	Microsoft	Approved by: Technical Manager
Test Report S/N: 1M2105200048-02-R1.C3K	Test Dates: 5/25– 8/10/2021	EUT Type: Portable Handset		Page 90 of 107



Plot 7-120. Radiated Spurious Plot (EN-DC n5 (North) & B2 (South) - 6 – 18GHz - Closed)

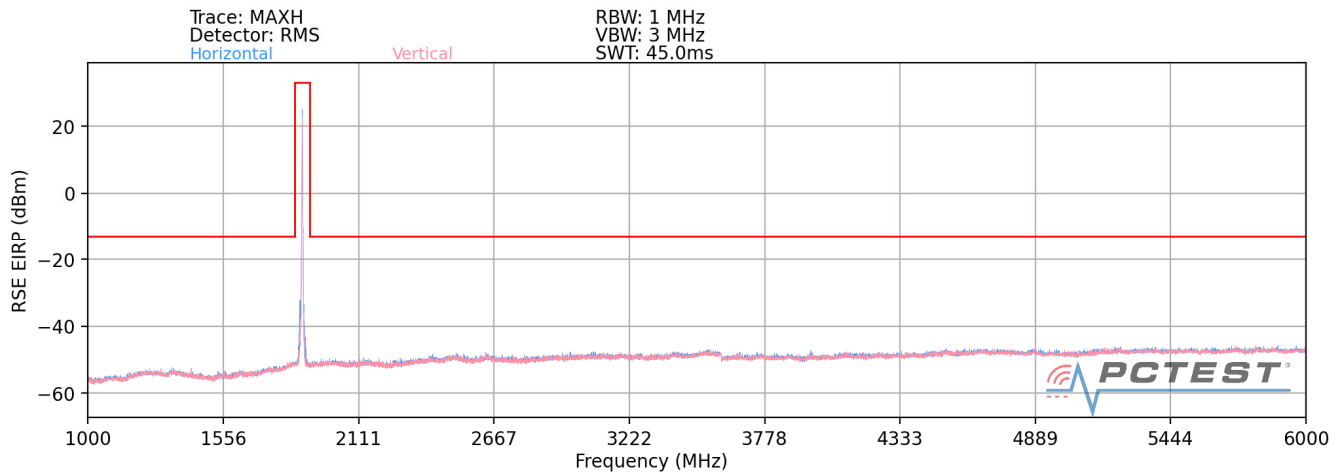
Bandwidth (MHz):	20
Frequency (MHz):	836.5
RB / Offset:	1 / 53
Mode:	EN-DC
Anchor Band:	LTE B2

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]
1250.5	H	-	-	-76.55	6.79	37.24	-58.01	-13.00	-45.01
2294.0	H	-	-	-77.38	9.80	39.42	-55.84	-13.00	-42.84
2923.5	H	-	-	-77.43	11.64	41.21	-54.04	-13.00	-41.04

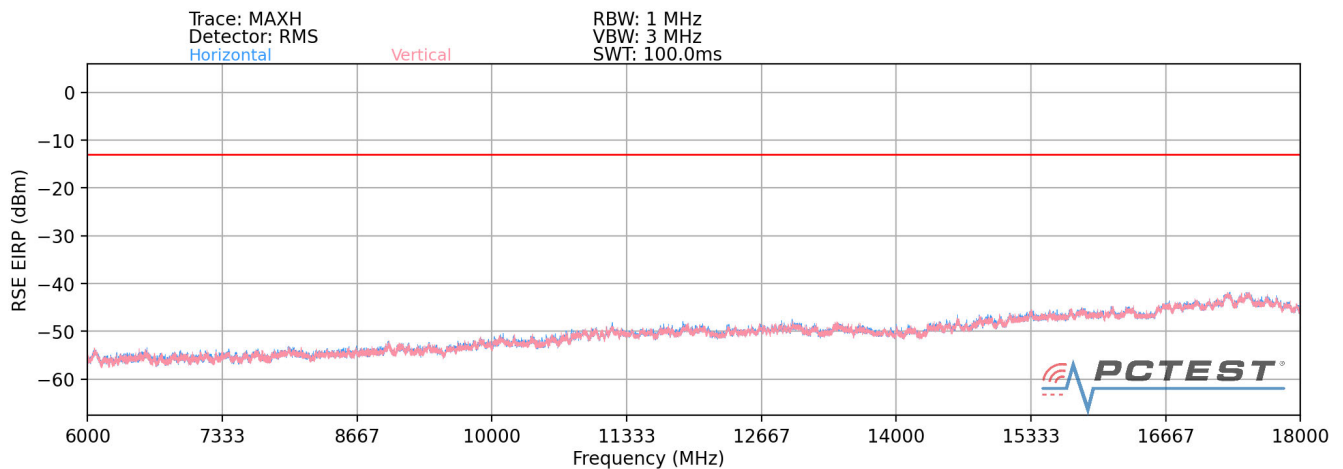
Table 7-28. Radiated Spurious Data (EN-DC n5 (North) – B2 (South) - Open)

FCC ID: C3K1995	 PCTEST Proud to be part of 	PART 22 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2105200048-02-R1.C3K	Test Dates: 5/25– 8/10/2021	EUT Type: Portable Handset	Page 91 of 107	

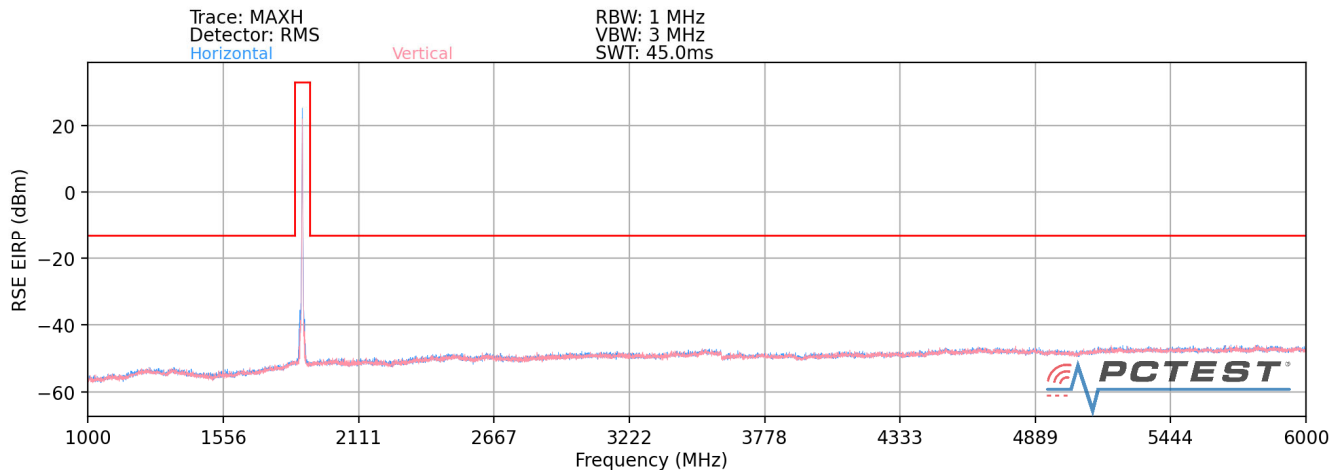
EN-DC NR Band n5 – South & LTE Band 2 – North



Plot 7-121. Radiated Spurious Plot (EN-DC n5 (South) & B2 (North) - 1 – 6 GHz - Half)

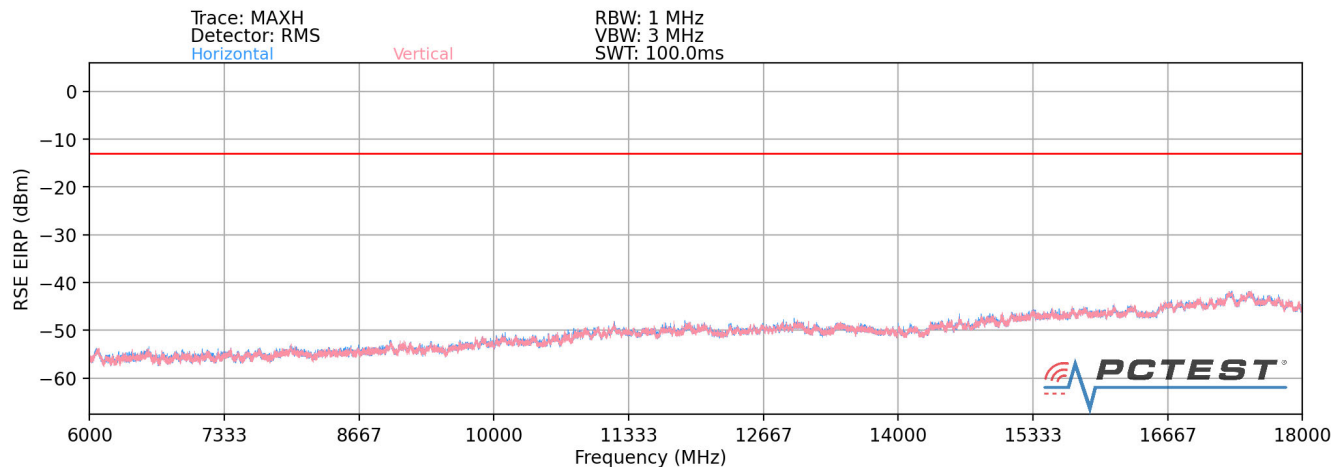


Plot 7-122. Radiated Spurious Plot (EN-DC n5 (South) & B2 (North) – 6 – 18 GHz - Half)



Plot 7-123. Radiated Spurious Plot (EN-DC n5 (South) & B2 (North) - 1 – 6 GHz - Open)

FCC ID: C3K1995	PCTEST Product to be part of	PART 22 MEASUREMENT REPORT	Microsoft	Approved by: Technical Manager
Test Report S/N: 1M2105200048-02-R1.C3K	Test Dates: 5/25– 8/10/2021	EUT Type: Portable Handset		Page 92 of 107



Plot 7-124. Radiated Spurious Plot (EN-DC n5 (South) & B2 (North) – 6 – 18 GHz - Open)

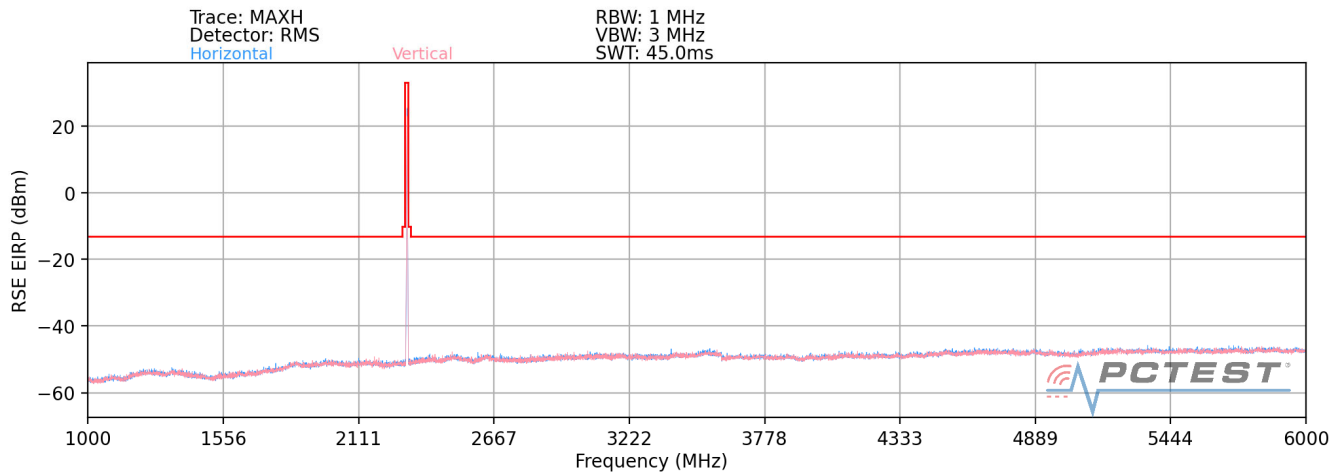
Bandwidth (MHz):	20
Frequency (MHz):	836.5
RB / Offset:	1 / 53
Mode:	EN-DC
Anchor Band:	LTE B2

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]
1250.5	H	-	-	-76.46	6.79	37.33	-57.92	-13.00	-44.92
2294.0	H	-	-	-77.35	9.80	39.45	-55.81	-13.00	-42.81
2923.5	H	-	-	-77.55	11.64	41.09	-54.16	-13.00	-41.16

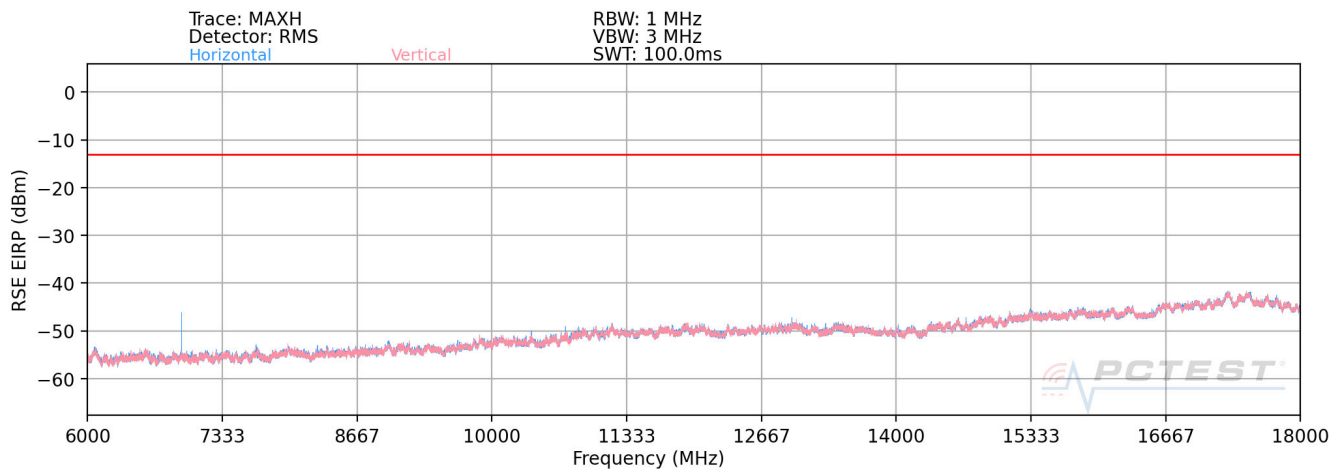
Table 7-29. Radiated Spurious Data (EN-DC n5 (South) – B2 (North) - Half)

FCC ID: C3K1995	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	Microsoft	Approved by: Technical Manager
Test Report S/N: 1M2105200048-02-R1.C3K	Test Dates: 5/25– 8/10/2021	EUT Type: Portable Handset		Page 93 of 107

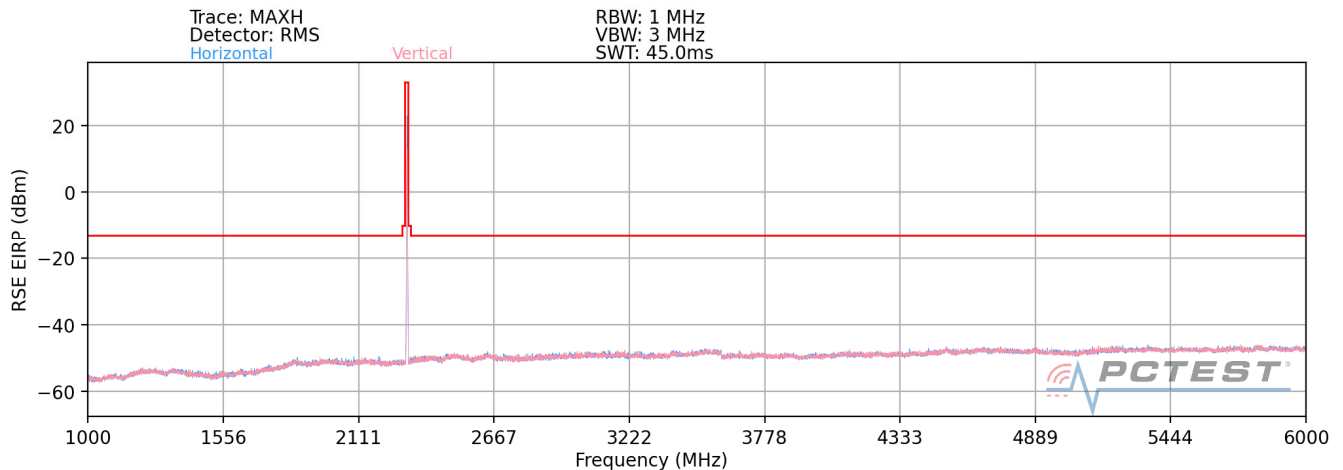
EN-DC NR Band n5 – North & LTE Band 30 – South



Plot 7-125. Radiated Spurious Plot (EN-DC n5 (North) & B30 (South) - 1 – 6 GHz - Open)

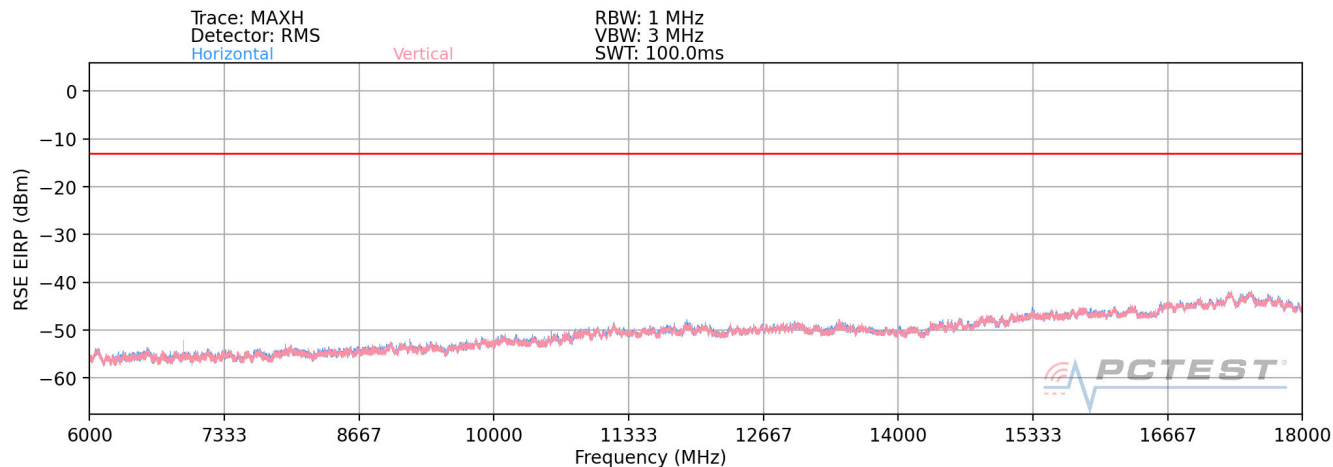


Plot 7-126. Radiated Spurious Plot (EN-DC n5 (North) & B30 (South) - 6 – 18 GHz - Open)



Plot 7-127. Radiated Spurious Plot (EN-DC n5 (North) & B30 (South) - 1 – 6 GHz - Closed)

FCC ID: C3K1995	PCTEST Product to be part of	PART 22 MEASUREMENT REPORT	Microsoft	Approved by: Technical Manager
Test Report S/N: 1M2105200048-02-R1.C3K	Test Dates: 5/25– 8/10/2021	EUT Type: Portable Handset		Page 94 of 107



Plot 7-128. Radiated Spurious Plot (EN-DC n5 (North) & B30 (South) - 6 – 18 GHz - Closed)

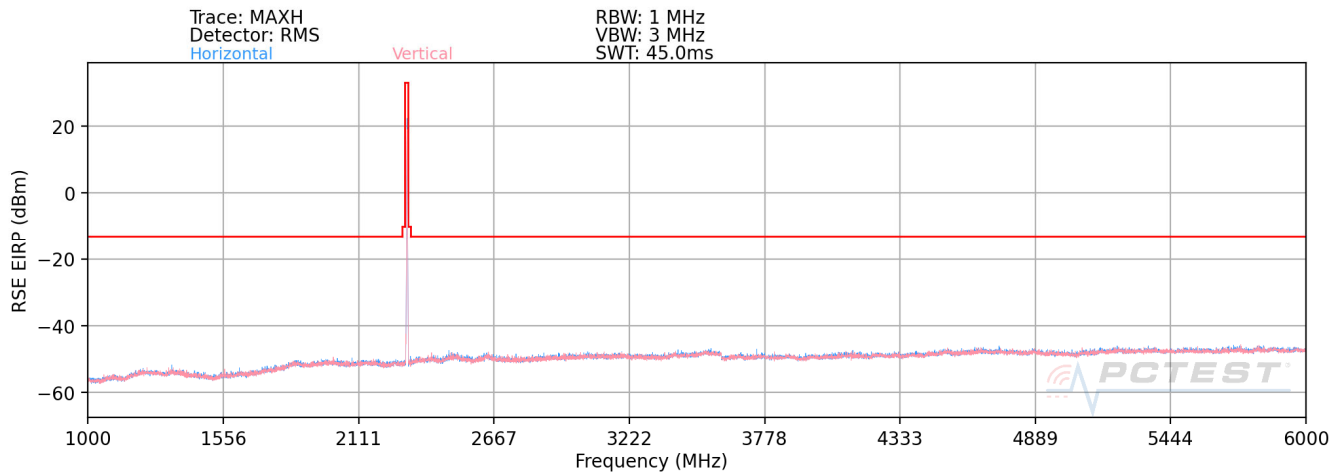
Bandwidth (MHz):	20
Frequency (MHz):	836.5
RB / Offset:	1 / 53
Mode:	EN-DC
Anchor Band:	LTE B30

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]
2110.5	H	-	-	-80.36	9.66	36.30	-58.96	-13.00	-45.96
3584.0	H	-	-	-77.58	12.11	41.53	-53.73	-13.00	-40.73
3783.5	H	178	37	-76.71	12.75	43.04	-52.21	-13.00	-39.21
6531.0	H	-	-	-79.85	7.48	34.63	-60.63	-13.00	-47.63
6930.5	H	147	88	-67.12	7.57	47.45	-47.80	-13.00	-34.80
8004.5	H	-	-	-80.59	8.97	35.38	-59.88	-13.00	-46.88

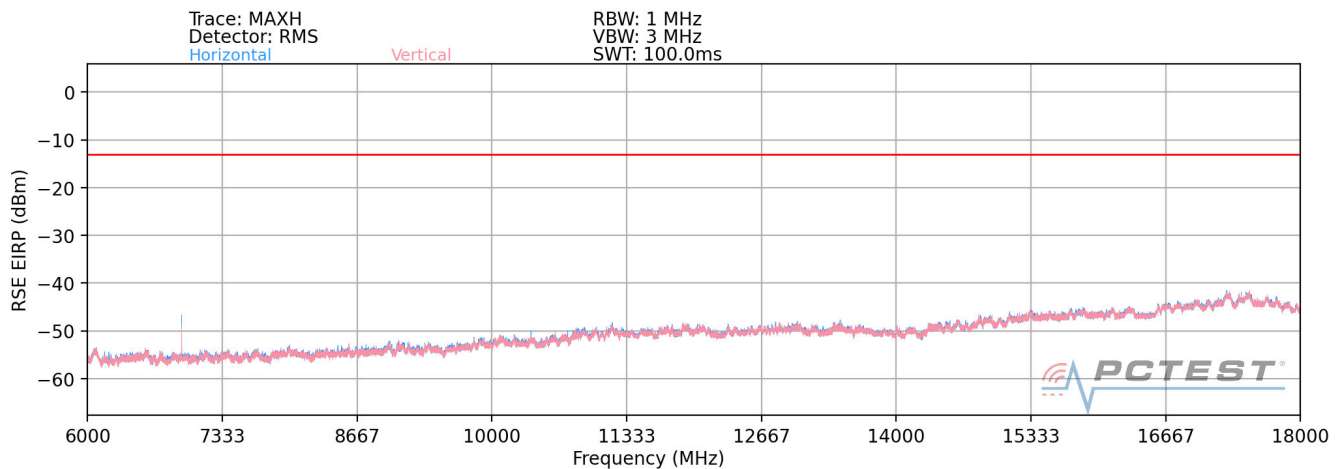
Table 7-30. Radiated Spurious Data (EN-DC n5 (North) – B30 (South) - Open)

FCC ID: C3K1995	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	Microsoft	Approved by: Technical Manager
Test Report S/N: 1M2105200048-02-R1.C3K	Test Dates: 5/25– 8/10/2021	EUT Type: Portable Handset		Page 95 of 107

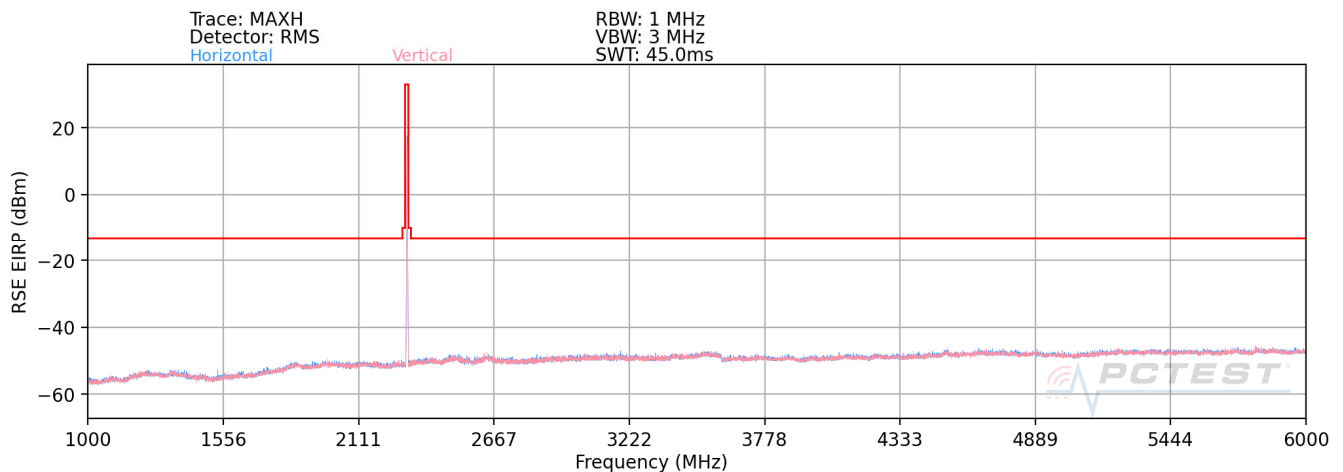
EN-DC NR Band n5 – South & LTE Band 30 – North



Plot 7-129. Radiated Spurious Plot (EN-DC n5 (South) & B30 (North) - 1 – 6 GHz - Open)

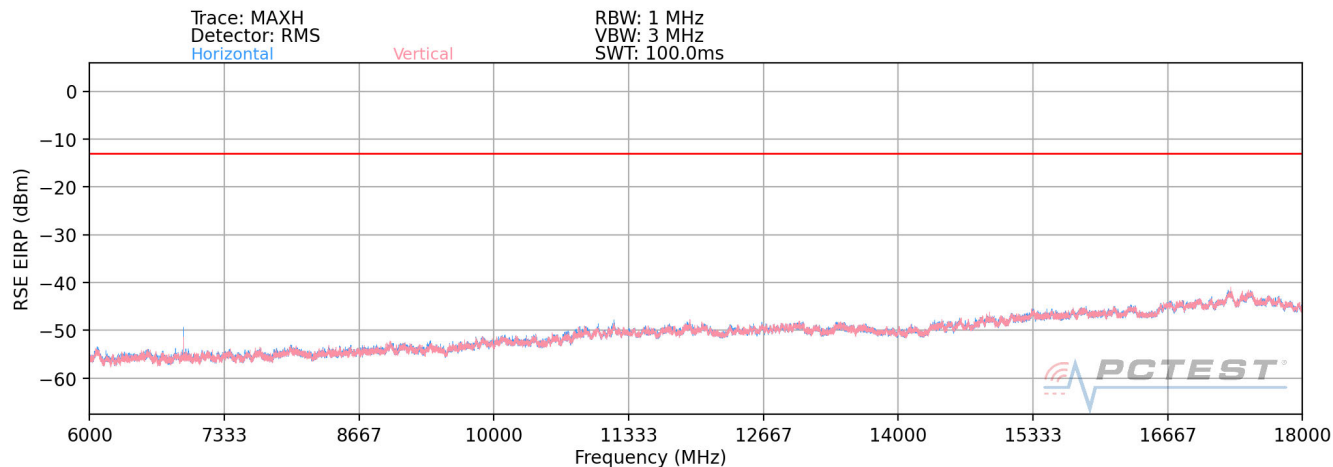


Plot 7-130. Radiated Spurious Plot (EN-DC n5 (South) & B30 (North) - 6 – 18 GHz - Open)



Plot 7-131. Radiated Spurious Plot (EN-DC n5 (South) & B30 (North) - 1 – 6 GHz - Closed)

FCC ID: C3K1995	 PCTEST Proud to be part of 	PART 22 MEASUREMENT REPORT	 Microsoft	Approved by: Technical Manager
Test Report S/N: 1M2105200048-02-R1.C3K	Test Dates: 5/25– 8/10/2021	EUT Type: Portable Handset		Page 96 of 107



Plot 7-132. Radiated Spurious Plot (EN-DC n5 (South) & B30 (North) - 6 – 18 GHz - Closed)

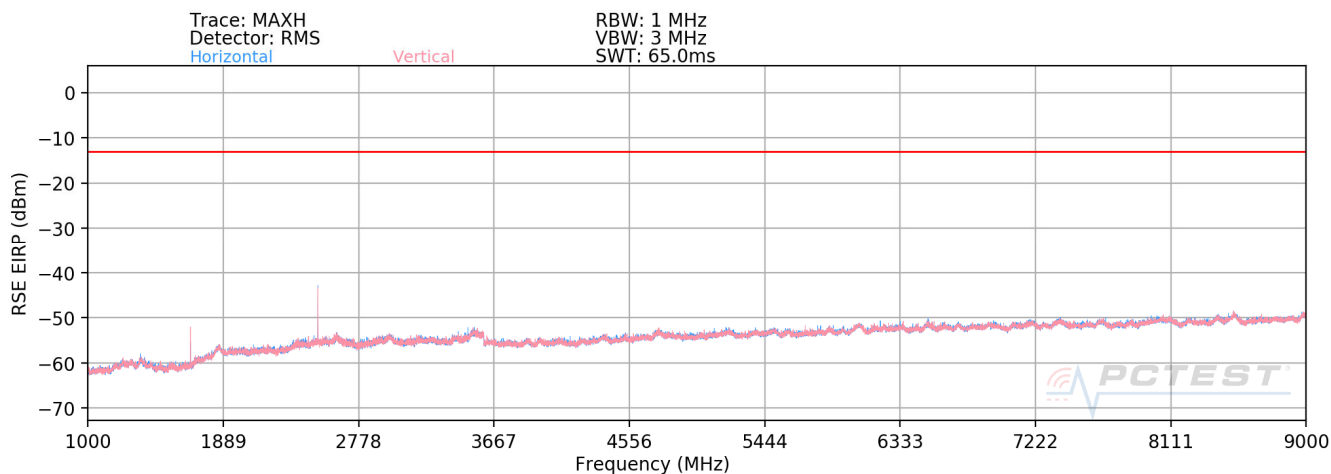
Bandwidth (MHz):	20
Frequency (MHz):	836.5
RB / Offset:	1 / 53
Mode:	EN-DC
Anchor Band:	LTE B30

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]
2110.5	H	-	-	-80.15	9.66	36.51	-58.75	-13.00	-45.75
3584.0	H	-	-	-77.36	12.11	41.75	-53.51	-13.00	-40.51
3783.5	H	400	5	-77.34	12.75	42.41	-52.84	-13.00	-39.84
6531.0	H	-	-	-79.93	7.48	34.55	-60.71	-13.00	-47.71
6930.5	H	175	7	-62.73	7.57	51.84	-43.41	-13.00	-30.41
8004.5	H	-	-	-80.64	8.97	35.33	-59.93	-13.00	-46.93

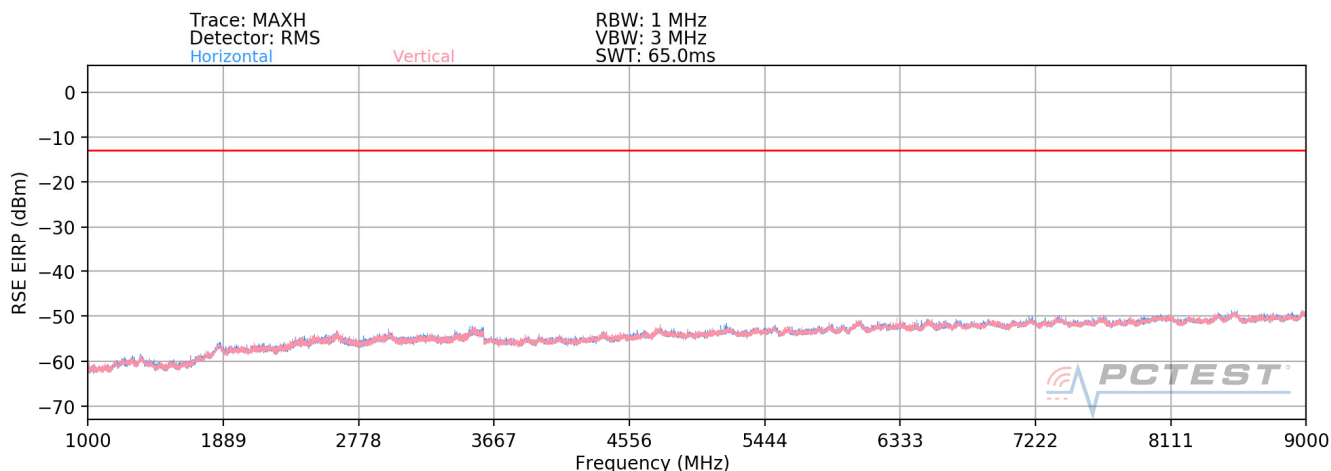
Table 7-31. Radiated Spurious Data (EN-DC n5 (South) – B30 (North) - Open)

FCC ID: C3K1995	 PCTEST Proud to be part of 	PART 22 MEASUREMENT REPORT	 Microsoft	Approved by: Technical Manager
Test Report S/N: 1M2105200048-02-R1.C3K	Test Dates: 5/25– 8/10/2021	EUT Type: Portable Handset		Page 97 of 107

GSM/GPRS Cell – South



Plot 7-133. Radiated Spurious Plot (GPRS Cell - Closed)



Plot 7-134. Radiated Spurious Plot (GPRS Cell - Half)

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	185	352	-60.14	-2.58	44.28	-50.97	-13.00	-37.97
2472.6	H	124	47	-58.16	1.99	50.83	-44.43	-13.00	-31.43
3296.8	H	389	139	-72.55	2.47	36.92	-58.33	-13.00	-45.33
4121.0	H	-	-	-75.46	3.44	34.98	-60.28	-13.00	-47.28
4945.2	H	-	-	-76.27	4.95	35.68	-59.58	-13.00	-46.58
5769.4	H	-	-	-76.01	6.15	37.14	-58.12	-13.00	-45.12
6593.6	H	205	15	-75.13	7.10	38.97	-56.29	-13.00	-43.29
7417.8	H	-	-	-77.76	8.24	37.48	-57.78	-13.00	-44.78

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

FCC ID: C3K1995	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	Microsoft	Approved by: Technical Manager
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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	257	307	-59.45	-2.27	45.28	-49.97	-13.00	-36.97
2509.8	H	148	122	-56.81	2.22	52.41	-42.84	-13.00	-29.84
3346.4	H	379	30	-69.73	2.42	39.69	-55.57	-13.00	-42.57
4183.0	H	126	329	-73.15	3.46	37.31	-57.95	-13.00	-44.95
5019.6	H	-	-	-76.70	5.32	35.62	-59.64	-13.00	-46.64
5856.2	H	-	-	-77.35	6.66	36.31	-58.95	-13.00	-45.95
6692.8	H	245	56	-75.38	7.23	38.85	-56.41	-13.00	-43.41
7529.4	H	-	-	-77.66	7.87	37.21	-58.05	-13.00	-45.05

Table 7-33. Radiated Spurious Data (GPRS Cell – Mid Channel - Closed)

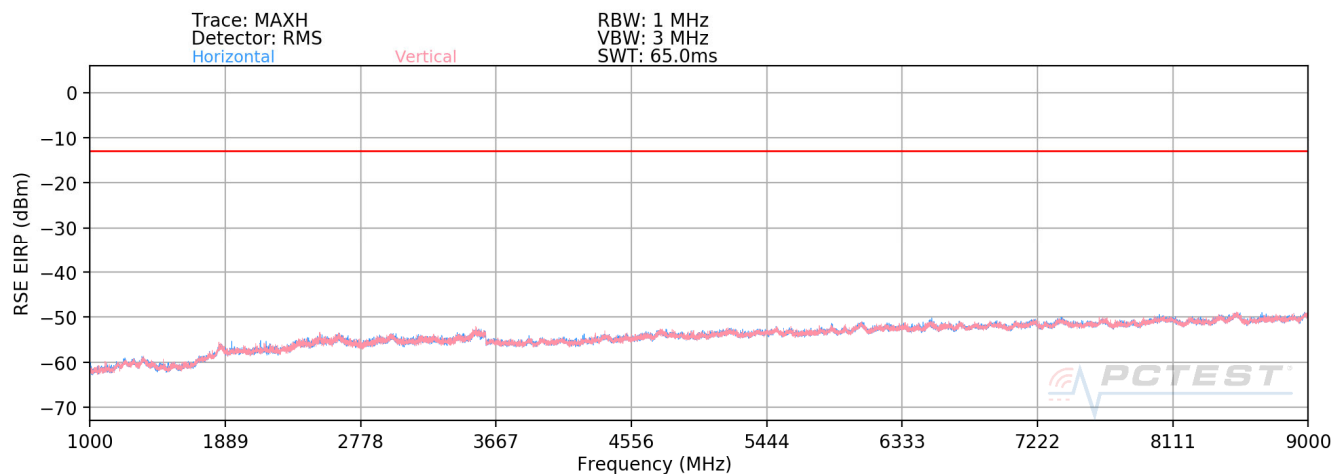
Mode:	GPRS 1 Tx Slot
Channel:	251
Frequency (MHz):	848.8

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	146	348	-60.08	-1.68	45.24	-50.02	-13.00	-37.02
2546.4	H	152	46	-53.18	2.45	56.27	-38.99	-13.00	-25.99
3395.2	H	323	32	-70.43	2.39	38.96	-56.30	-13.00	-43.30
4244.0	H	362	359	-66.77	3.67	43.90	-51.35	-13.00	-38.35
5092.8	H	-	-	-76.42	5.43	36.01	-59.25	-13.00	-46.25
5941.6	H	-	-	-77.39	6.52	36.13	-59.13	-13.00	-46.13
6790.4	H	-	-	-77.29	7.48	37.19	-58.06	-13.00	-45.06
7639.2	H	-	-	-78.03	8.81	37.78	-57.48	-13.00	-44.48

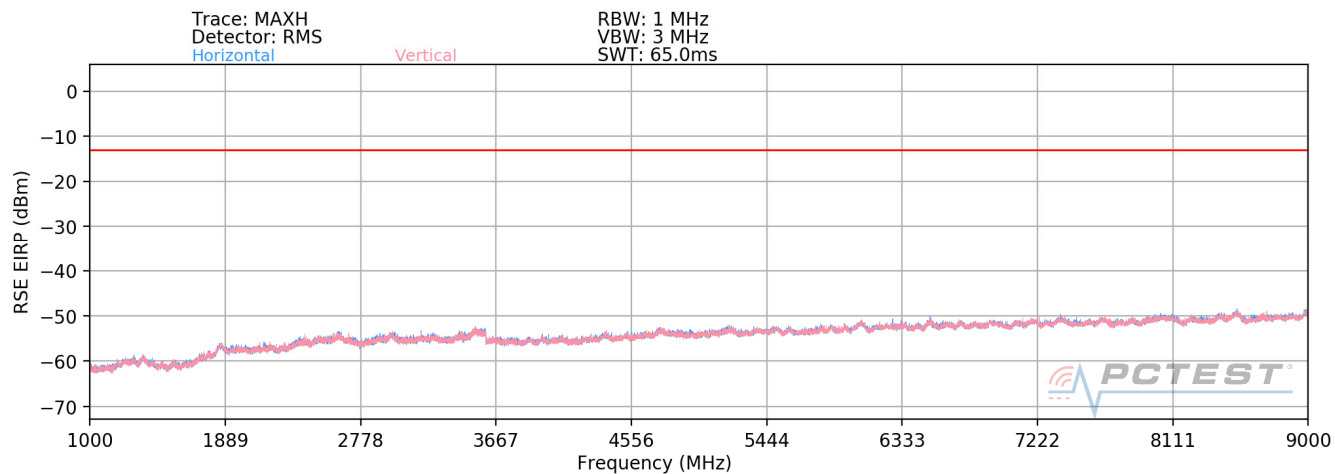
Table 7-34. Radiated Spurious Data (GPRS Cell – High Channel - Closed)

FCC ID: C3K1995	 PCTEST Proud to be part of 	PART 22 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2105200048-02-R1.C3K	Test Dates: 5/25– 8/10/2021	EUT Type: Portable Handset	Page 99 of 107	

WCDMA Cell – South



Plot 7-135. Radiated Spurious Plot (WCDMA Cell - Closed)



Plot 7-136. Radiated Spurious Plot (WCDMA Cell - Half)

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	H	-	-	-77.15	-2.52	27.33	-67.93	-13.00	-54.93
2479.2	H	163	347	-75.30	2.03	33.73	-61.53	-13.00	-48.53
3305.6	H	-	-	-78.04	2.42	31.38	-63.88	-13.00	-50.88
4132.0	H	-	-	-78.35	3.25	31.90	-63.36	-13.00	-50.36

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

FCC ID: C3K1995	PCTEST Product to be part of	PART 22 MEASUREMENT REPORT	Microsoft	Approved by: Technical Manager
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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	H	-	-	-77.20	-2.27	27.53	-67.72	-13.00	-54.72
2509.8	H	127	150	-76.24	2.22	32.98	-62.27	-13.00	-49.27
3346.4	H	-	-	-77.99	2.42	31.43	-63.83	-13.00	-50.83
4183.0	H	-	-	-78.49	3.46	31.97	-63.29	-13.00	-50.29

Table 7-36. Radiated Spurious Data (WCDMA Cell – Mid Channel - Closed)

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	H	320	13	-76.64	-1.82	28.54	-66.71	-13.00	-53.71
2539.8	H	314	143	-77.62	2.33	31.71	-63.55	-13.00	-50.55
3386.4	H	-	-	-77.82	2.32	31.50	-63.75	-13.00	-50.75
4233.0	H	-	-	-78.03	3.38	32.35	-62.91	-13.00	-49.91

Table 7-37. Radiated Spurious Data (WCDMA Cell – High Channel - Closed)

FCC ID: C3K1995	 PCTEST Proud to be part of 	PART 22 MEASUREMENT REPORT		Approved by: Technical Manager
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7.8 Frequency Stability / Temperature Variation

Test Overview and Limit

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

- a.) **Temperature:** The temperature is varied from -30°C to +50°C in 10°C increments using an environmental chamber.
- b.) **Primary Supply Voltage:** The primary supply voltage is varied from 85% to 115% of the nominal value for non hand-carried battery and AC powered equipment. For hand-carried, battery-powered equipment, primary supply voltage is reduced to the battery operating end point which shall be specified by the manufacturer.

For Part 22 and RSS-132, the frequency stability of the transmitter shall be maintained within $\pm 0.00025\%$ (± 2.5 ppm) of the center frequency.

Test Procedure Used

ANSI/TIA-603-E-2016

Test Settings

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

Test Setup

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

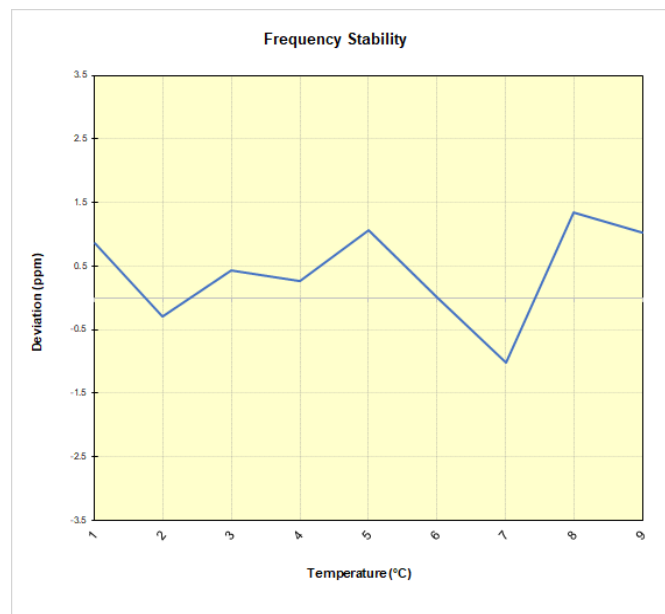
Test Notes

None

FCC ID: C3K1995	 PCTEST Product to be part of @element	PART 22 MEASUREMENT REPORT	 Microsoft	Approved by: Technical Manager
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LTE Band 26/5					
Operating Frequency (Hz):		836,500,000			
Ref. Voltage (VDC):		4.24			
Deviation Limit:		± 0.00025% or 2.5 ppm			
Voltage (%)	Power (VDC)	Temp (°C)	Frequency (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	4.24	-30	836,489,372	724	3.3330602
		-20	836,487,379	-290	-3.333269
		-10	836,487,880	379	3.3330428
		0	836,487,872	224	3.3330388
		+10	836,488,220	668	3.3331372
		+20 (Ref)	836,487,628	0	0.0000000
		+30	836,486,774	-854	-3.3331321
		+40	836,488,728	1,121	3.3331252
		+50	836,488,497	869	3.3331327
Battery Endpoint	2.73	-20	836,488,640	1,318	3.3331217

Table 7-38. LTE Band 26/5 Frequency Stability Data



Plot 7-137. LTE Band 26/5 Frequency Stability Chart

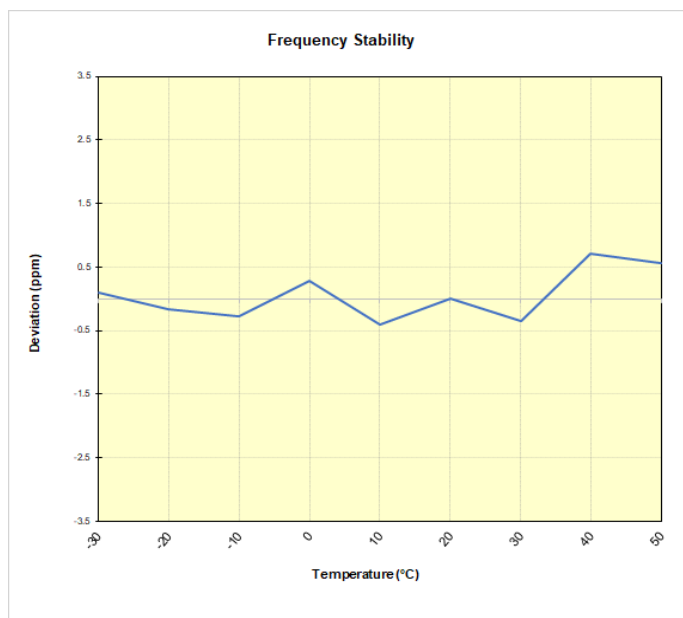
FCC ID: C3K1995	 PCTEST Proud to be part of 	PART 22 MEASUREMENT REPORT	 Microsoft	Approved by: Technical Manager
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NR Band n5

Operating Frequency (Hz):	836,500,000
Ref. Voltage (VDC):	4.24
Deviation Limit:	± 0.00025% or 2.5 ppm

Voltage (%)	Power (VDC)	Temp (°C)	Frequency (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	4.24	- 30	827,041,111	76	0.0000092
		- 20	827,040,907	-128	-0.0000155
		- 10	827,040,803	-232	-0.0000281
		0	827,041,271	236	0.0000285
		+ 10	827,040,695	-340	-0.0000411
		+ 20 (Ref)	827,041,035	0	0.0000000
		+ 30	827,040,740	-295	-0.0000357
		+ 40	827,041,628	593	0.0000717
Battery Endpoint	3.70	+ 50	827,041,498	463	0.0000560
		+ 20	827,040,699	-336	-0.0000407

Table 7-39. NR Band n5 Frequency Stability Data



Plot 7-138. NR Band n5 Frequency Stability Chart

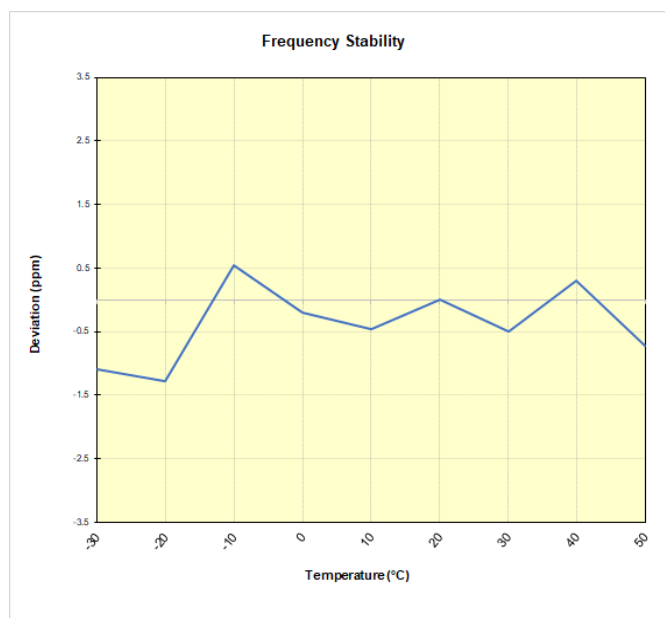
FCC ID: C3K1995	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	Microsoft	Approved by: Technical Manager
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GSM/GPRS Cellular

Operating Frequency (Hz):	836,600,000
Ref. Voltage (VDC):	4.24
Deviation Limit:	± 0.00025% or 2.5 ppm

Voltage (%)	Power (VDC)	Temp (°C)	Frequency (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	4.24	- 30	836,599,100	-911	-0.0001089
		- 20	836,598,942	-1,069	-0.0001278
		- 10	836,600,470	459	0.0000549
		0	836,599,846	-165	-0.0000198
		+ 10	836,599,626	-385	-0.0000460
		+ 20 (Ref)	836,600,011	0	0.0000000
		+ 30	836,599,593	-418	-0.0000500
		+ 40	836,600,262	252	0.0000301
		+ 50	836,599,409	-602	-0.0000719
Battery Endpoint	3.70	+ 20	836,599,751	-260	-0.0000311

Table 7-40. GSM/GPRS Cell Frequency Stability Data



Plot 7-139. GSM/GPRS Cell Frequency Stability Chart

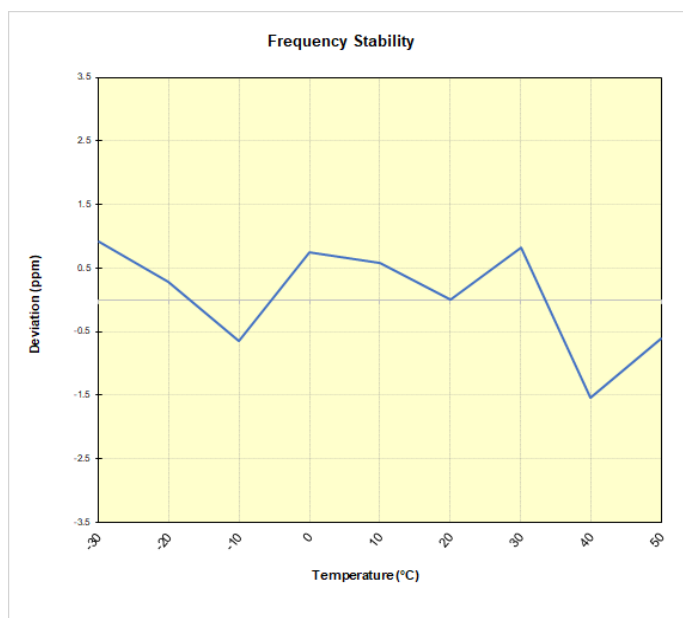
FCC ID: C3K1995	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	Microsoft	Approved by: Technical Manager
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WCDMA Cellular

Operating Frequency (Hz):	836,600,000
Ref. Voltage (VDC):	4.24
Deviation Limit:	± 0.00025% or 2.5 ppm

Voltage (%)	Power (VDC)	Temp (°C)	Frequency (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	4.24	- 30	836,600,694	764	0.0000913
		- 20	836,600,165	234	0.0000280
		- 10	836,599,383	-547	-0.0000654
		0	836,600,557	627	0.0000749
		+ 10	836,600,413	483	0.0000577
		+ 20 (Ref)	836,599,930	0	0.0000000
		+ 30	836,600,615	684	0.0000818
		+ 40	836,598,642	-1,288	-0.0001540
		+ 50	836,599,426	-505	-0.0000603
Battery Endpoint	3.70	+ 20	836,600,475	544	0.0000651

Table 7-41. WCDMA Cell Frequency Stability Data



Plot 7-140. WCDMA Cell Frequency Stability Chart

FCC ID: C3K1995	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	Microsoft	Approved by: Technical Manager
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8.0 CONCLUSION

The data collected relate only to the item(s) tested and show that the **Microsoft Corporation Portable Handset** **FCC ID: C3K1995** complies with all the requirements of Part 22 of the FCC rules.

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