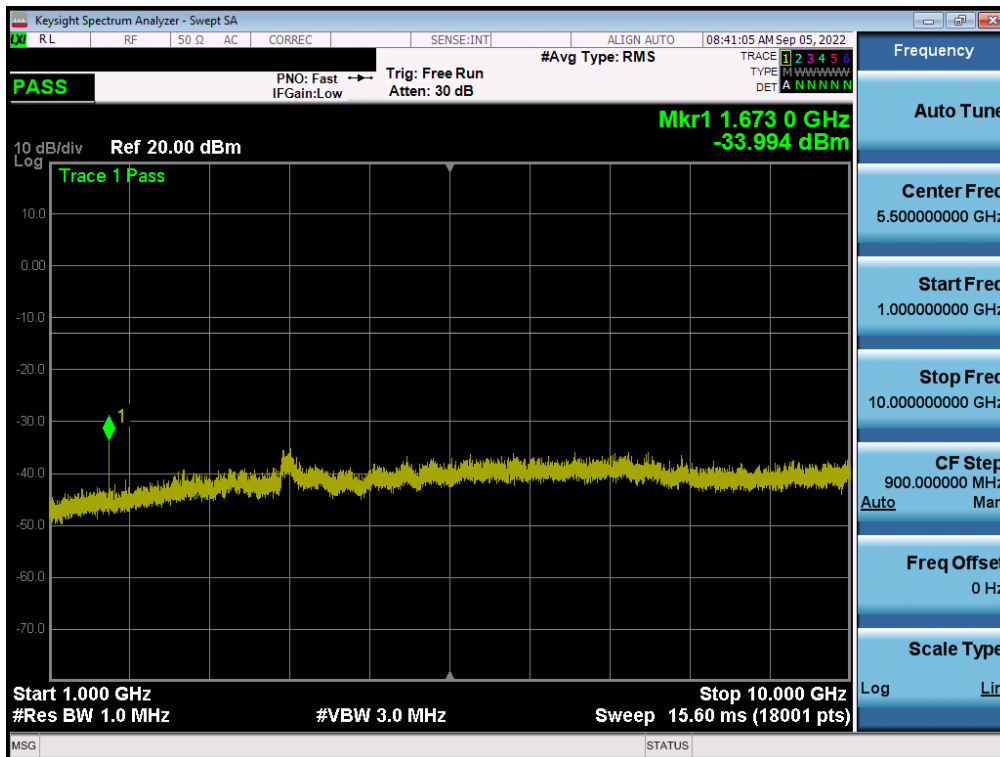
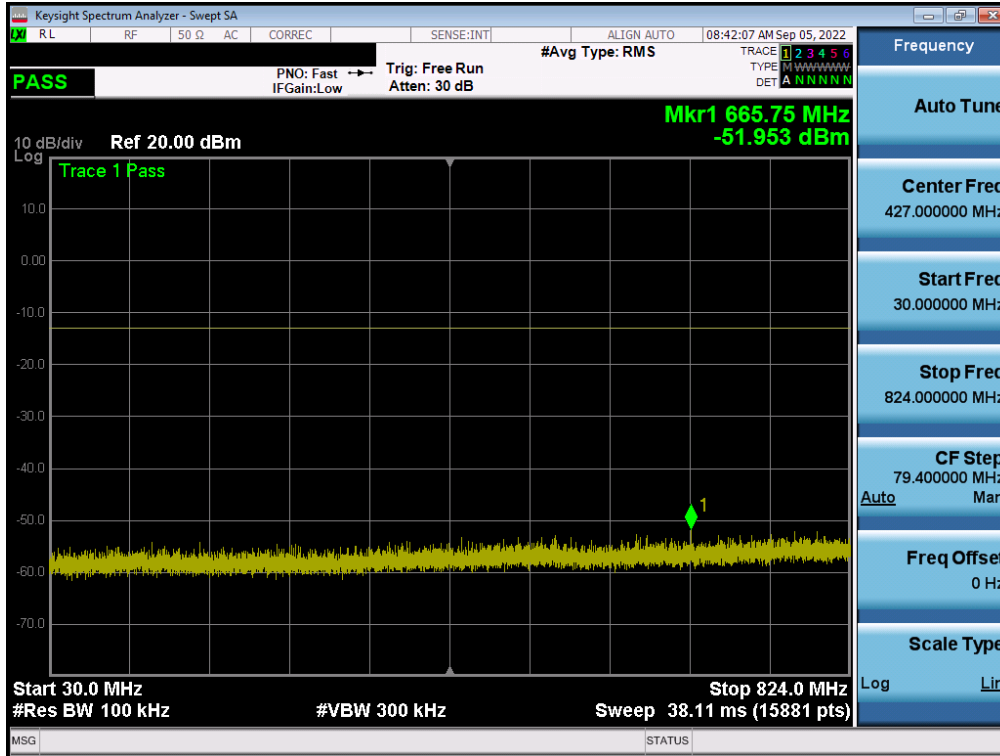


Plot 7-57. Conducted Spurious Plot (GPRS Ch. 190)

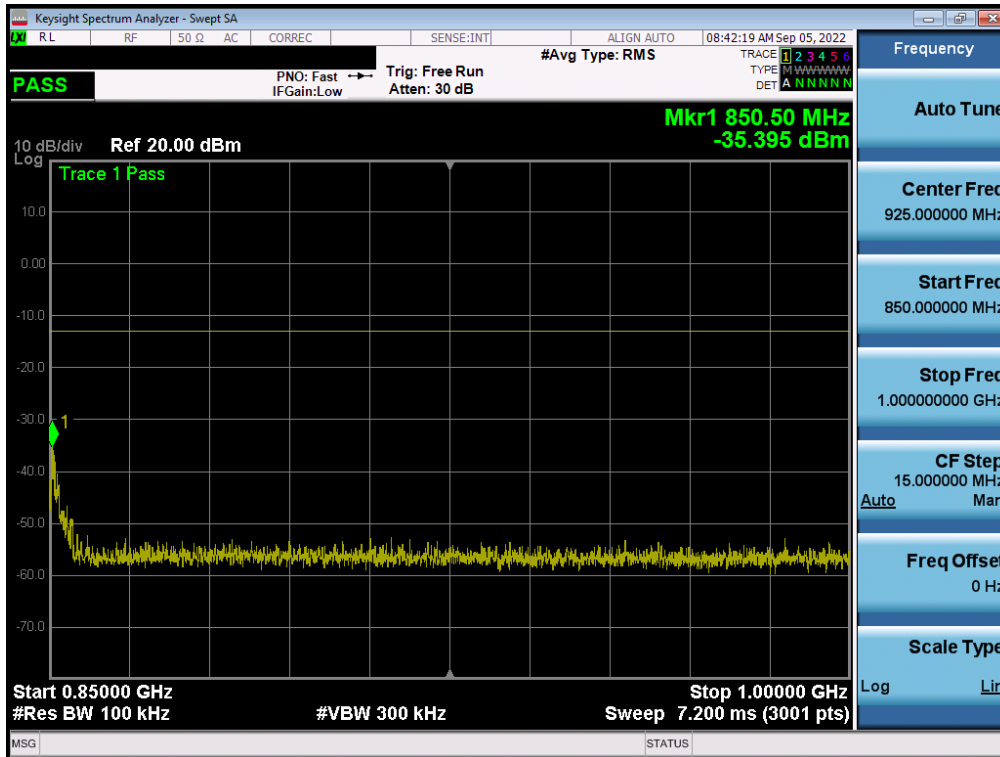


Plot 7-58. Conducted Spurious Plot (GPRS Ch. 190)

FCC ID: A3LSMS916U	PART 22 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2209010097-01.A3L	Test Dates: 9/2/2022 - 11/4/2022	EUT Type: Portable Handset	Page 46 of 101

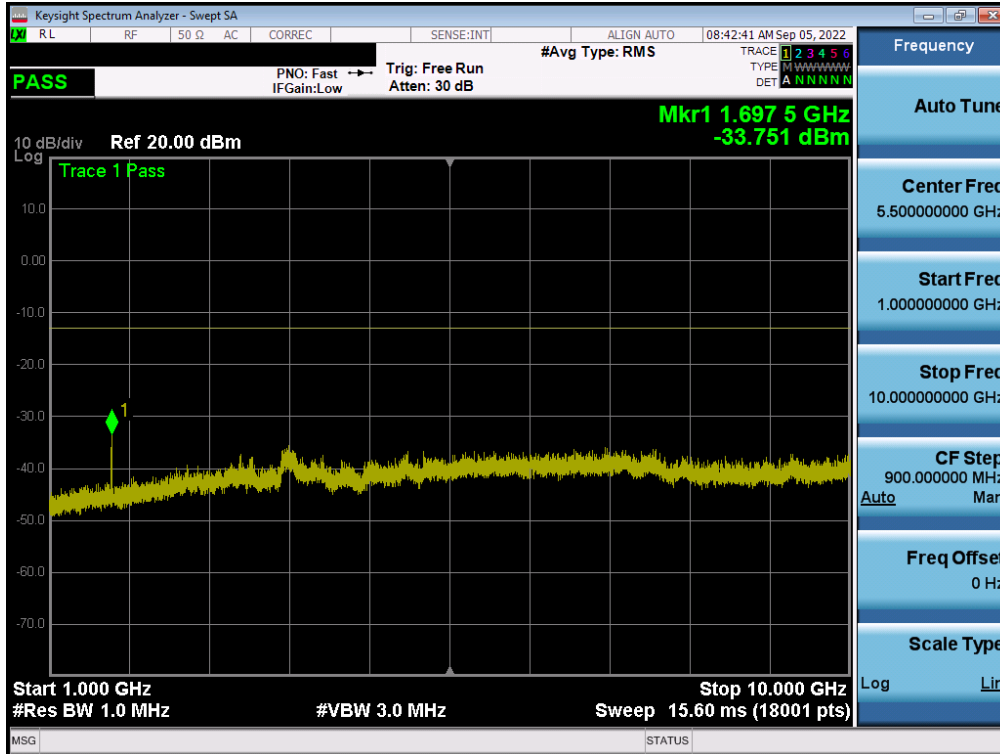


Plot 7-59. Conducted Spurious Plot (GPRS Ch. 251)



Plot 7-60. Conducted Spurious Plot (GPRS Ch. 251)

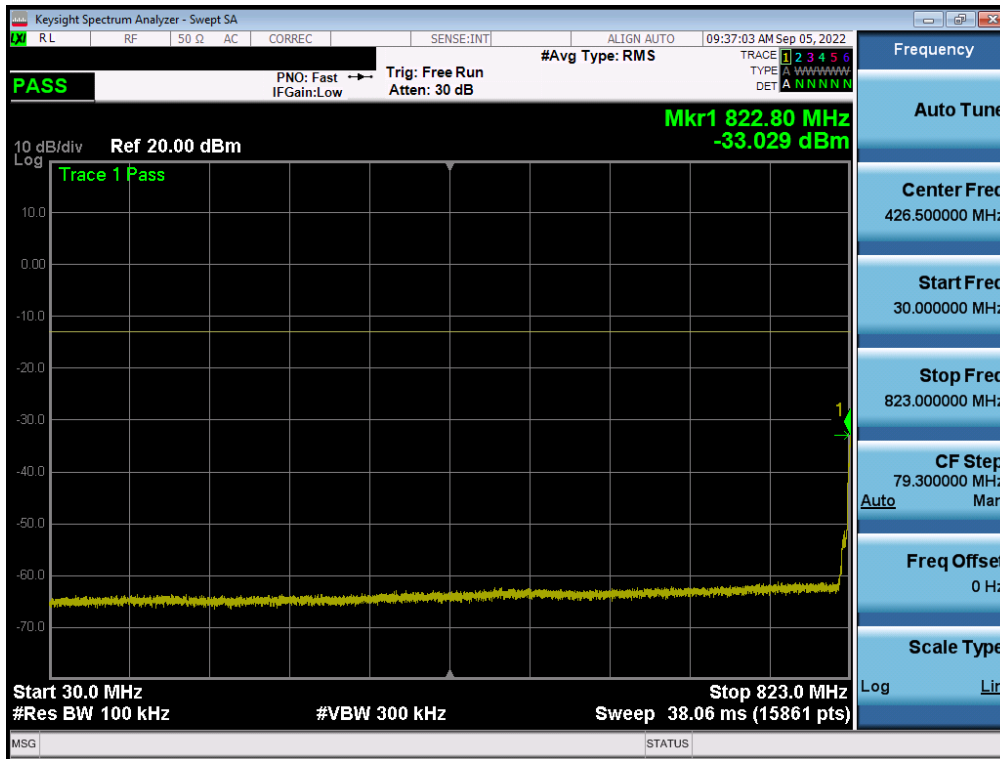
FCC ID: A3LSMS916U	PART 22 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2209010097-01.A3L	Test Dates: 9/2/2022 - 11/4/2022	EUT Type: Portable Handset	Page 47 of 101



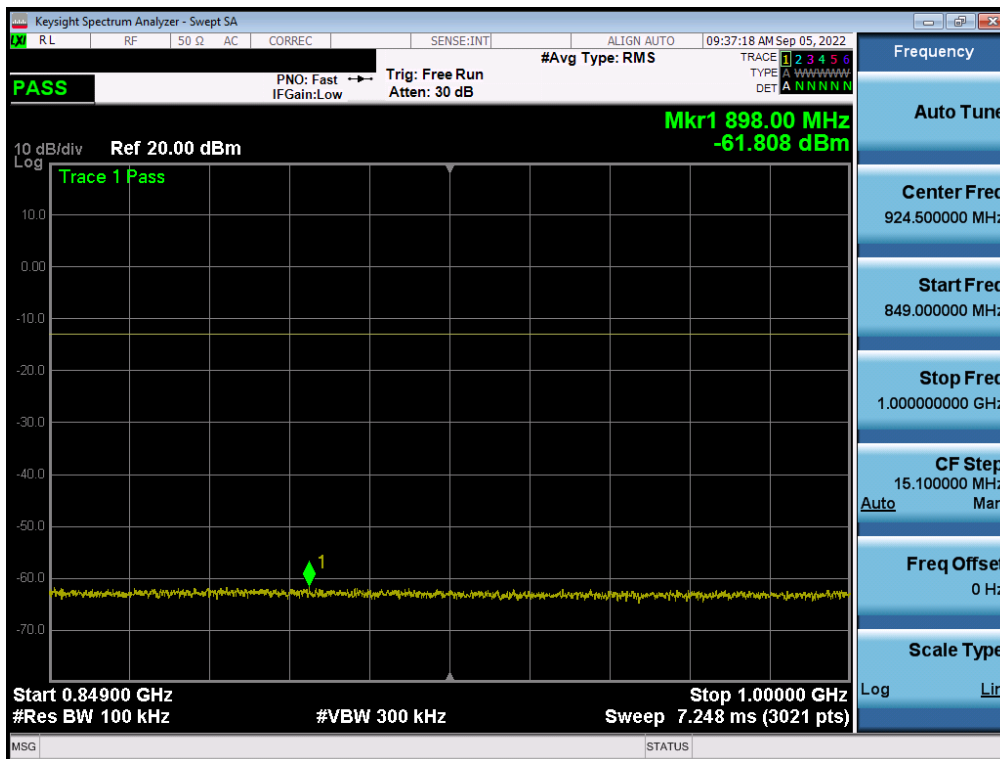
Plot 7-61. Conducted Spurious Plot (GPRS Ch. 251)

FCC ID: A3LSMS916U	PART 22 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2209010097-01.A3L	Test Dates: 9/2/2022 - 11/4/2022	EUT Type: Portable Handset	Page 48 of 101

WCDMA Cell



Plot 7-62. Conducted Spurious Plot (WCDMA Ch. 4132)

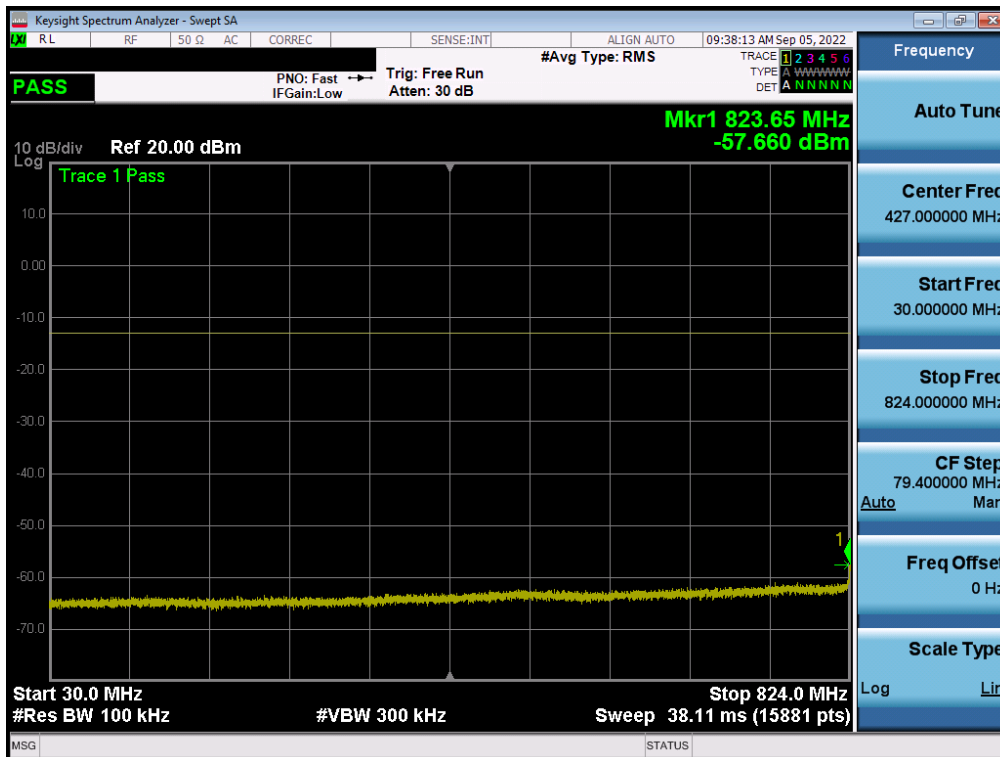


Plot 7-63. Conducted Spurious Plot (WCDMA Ch. 4132)

FCC ID: A3LSMS916U	PART 22 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2209010097-01.A3L	Test Dates: 9/2/2022 - 11/4/2022	EUT Type: Portable Handset	Page 49 of 101

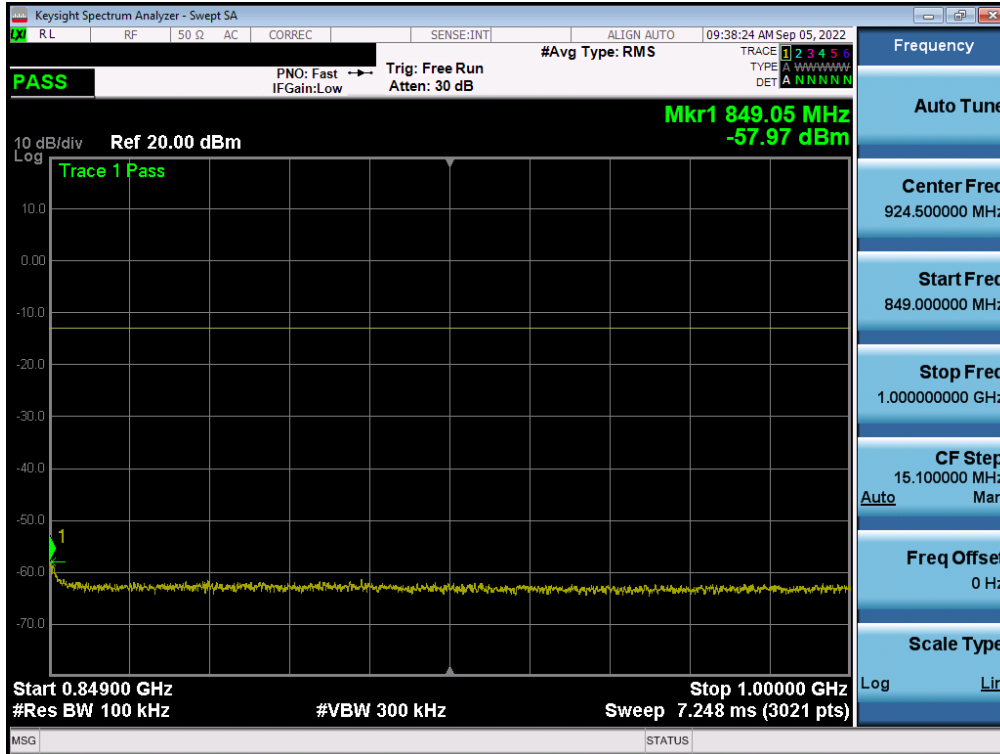


Plot 7-64. Conducted Spurious Plot (WCDMA Ch. 4132)

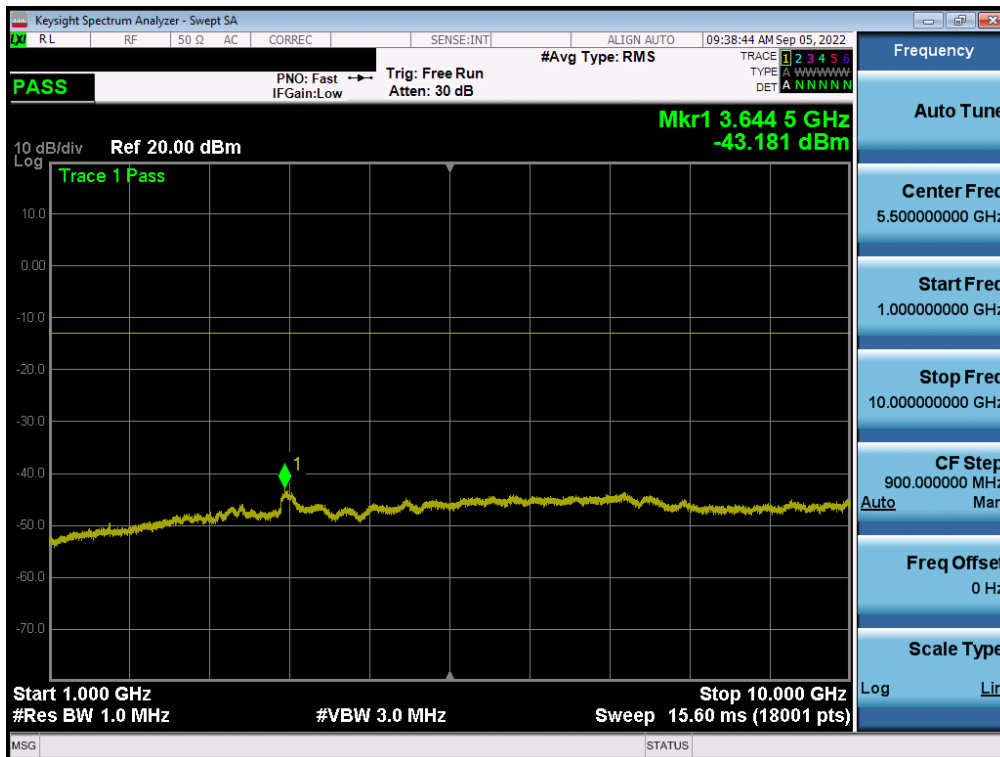


Plot 7-65. Conducted Spurious Plot (WCDMA Ch. 4183)

FCC ID: A3LSMS916U	PART 22 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2209010097-01.A3L	Test Dates: 9/2/2022 - 11/4/2022	EUT Type: Portable Handset	Page 50 of 101

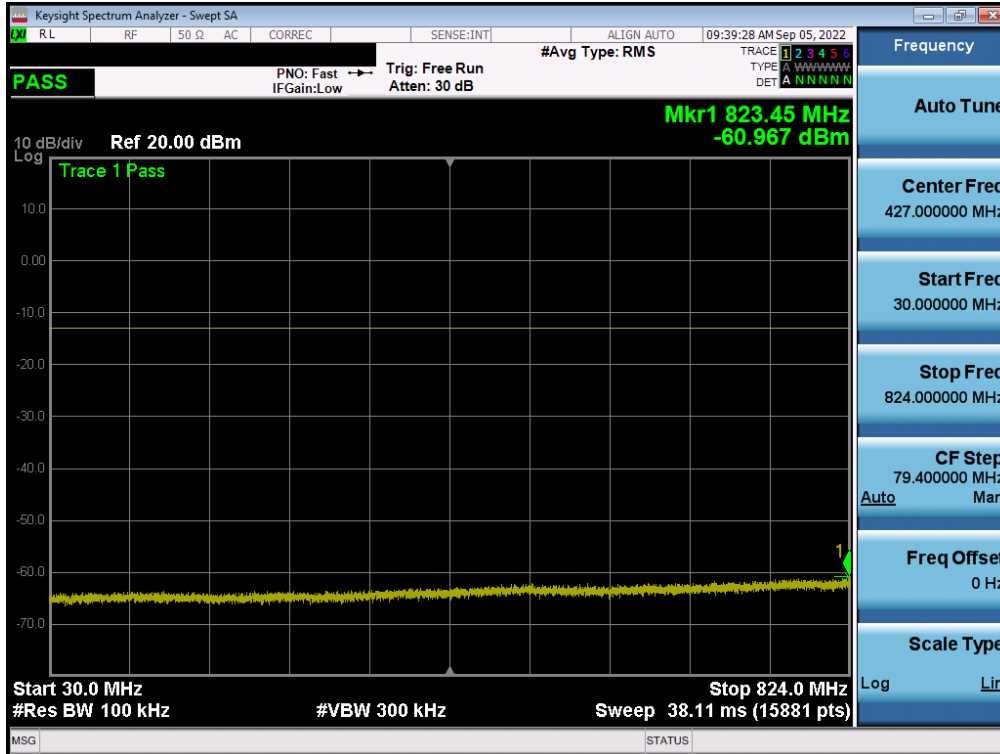


Plot 7-66. Conducted Spurious Plot (WCDMA Ch. 4183)

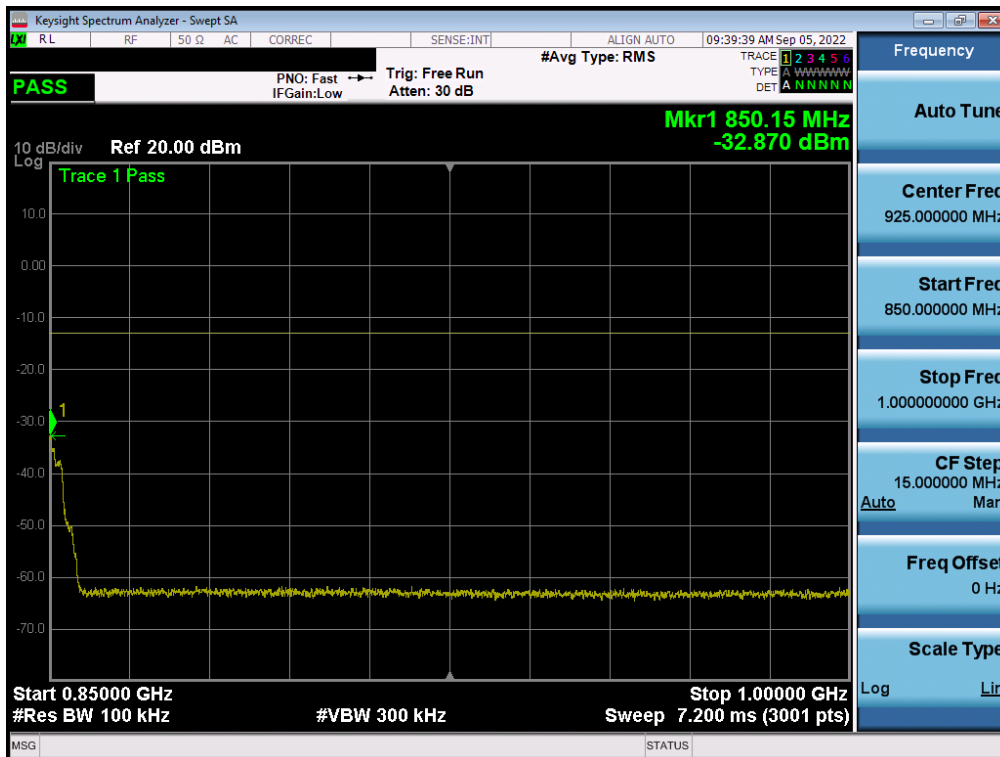


Plot 7-67. Conducted Spurious Plot (WCDMA Ch. 4183)

FCC ID: A3LSMS916U	PART 22 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2209010097-01.A3L	Test Dates: 9/2/2022 - 11/4/2022	EUT Type: Portable Handset	Page 51 of 101



Plot 7-68. Conducted Spurious Plot (WCDMA Ch. 4233)



Plot 7-69. Conducted Spurious Plot (WCDMA Ch. 4233)

FCC ID: A3LSMS916U	PART 22 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2209010097-01.A3L	Test Dates: 9/2/2022 - 11/4/2022	EUT Type: Portable Handset	Page 52 of 101



Plot 7-70. Conducted Spurious Plot (WCDMA Ch. 4233)

FCC ID: A3LSMS916U	PART 22 MEASUREMENT REPORT		Approved by: Technical Manager
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7.5 Band Edge Emissions at Antenna Terminal

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 $43 + 10 \log_{10}(P_{[Watts]})$, where P is the transmitter power in Watts.

Test Procedure Used

ANSI C63.26-2015 – Section 5.7.3

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 x RBW
5. Detector = RMS
6. Number of sweep points \geq 2 x 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.

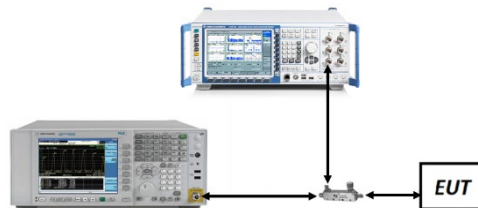


Figure 7-4. Test Instrument & Measurement Setup

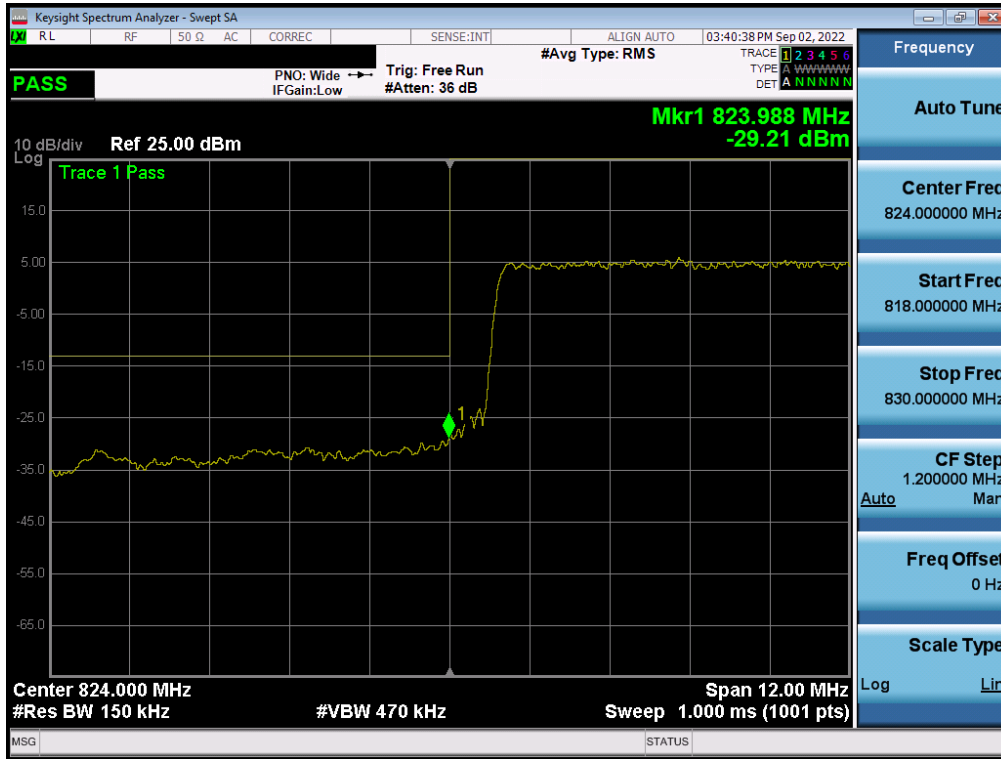
FCC ID: A3LSMS916U	PART 22 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2209010097-01.A3L	Test Dates: 9/2/2022 - 11/4/2022	EUT Type: Portable Handset	Page 54 of 101

Test Notes

1. Per 22.917(b) and RSS-132(5.5), 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: A3LSMS916U	PART 22 MEASUREMENT REPORT		Approved by: Technical Manager
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LTE Band 26/5

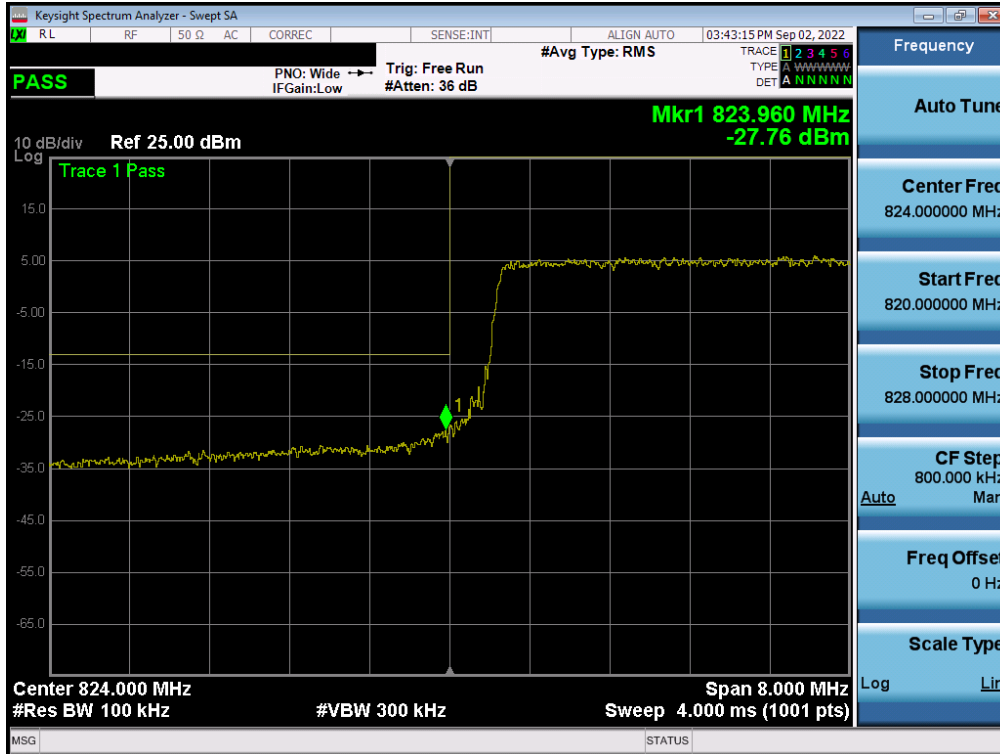


Plot 7-71. Lower Band Edge Plot (LTE Band 26 - 15MHz QPSK – Full RB)

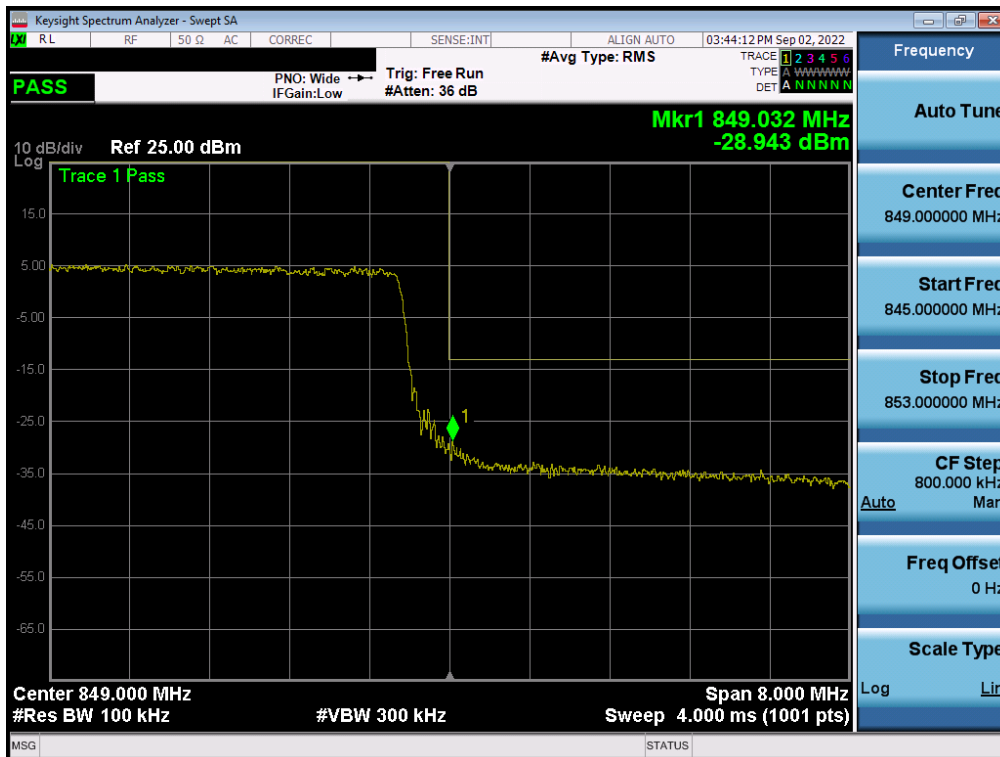


Plot 7-72. Upper Band Edge Plot (LTE Band 26 - 15MHz QPSK – Full RB)

FCC ID: A3LSMS916U	PART 22 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2209010097-01.A3L	Test Dates: 9/2/2022 - 11/4/2022	EUT Type: Portable Handset	Page 56 of 101

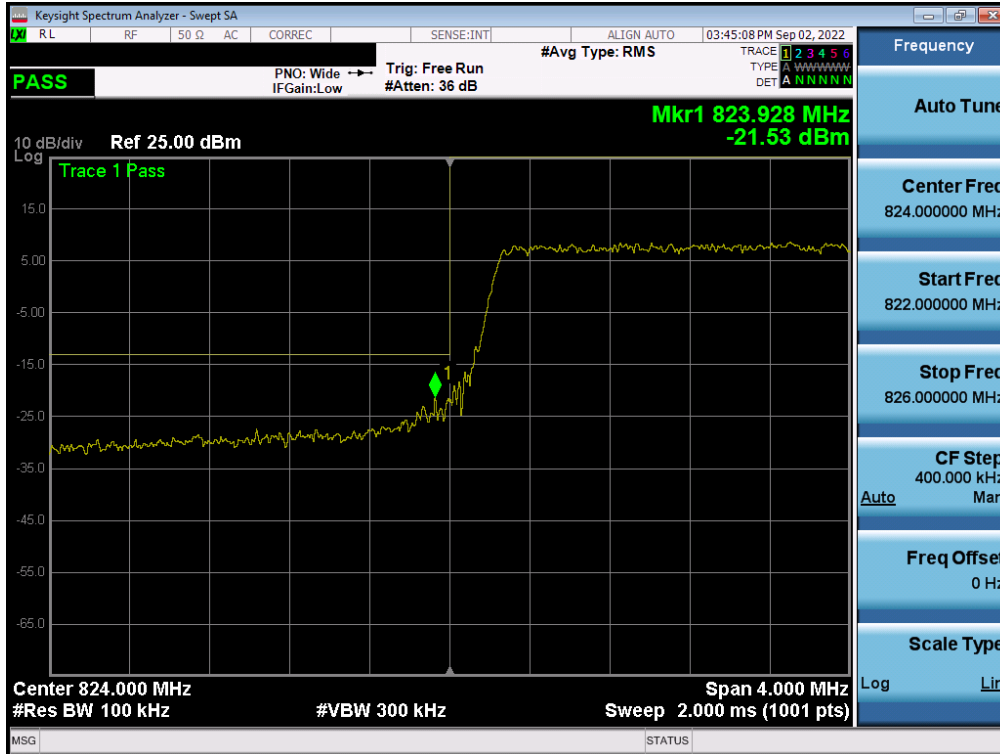


Plot 7-73. Lower Band Edge Plot (LTE Band 26/5 - 10MHz QPSK – Full RB)

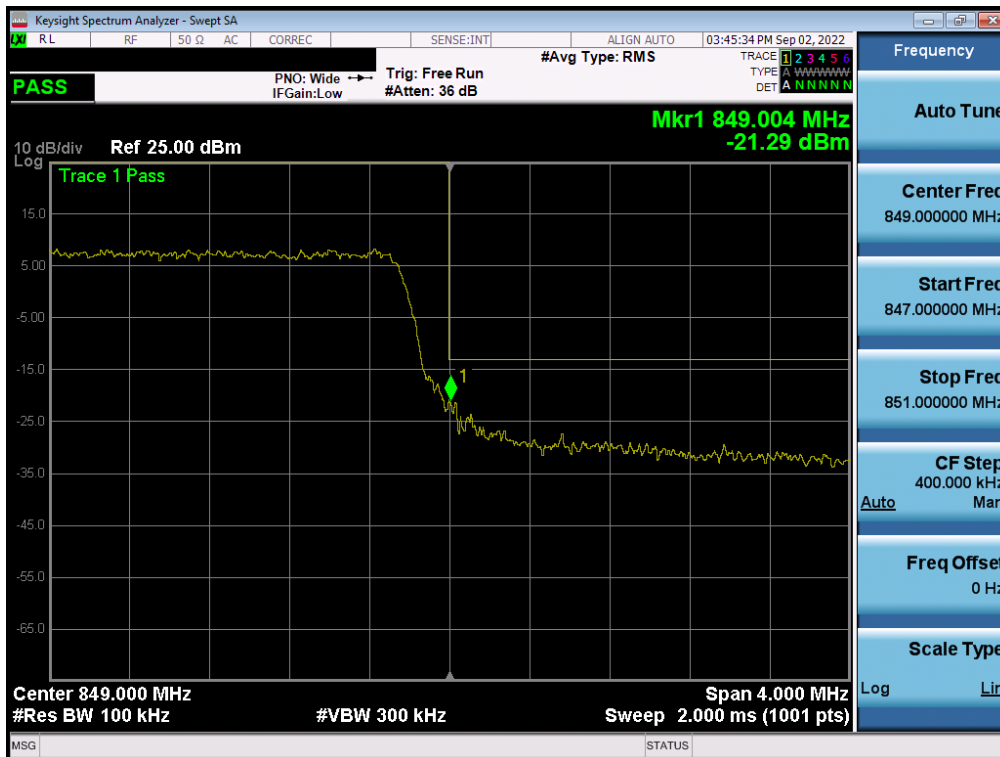


Plot 7-74. Upper Band Edge Plot (LTE Band 26/5 - 10MHz QPSK – Full RB)

FCC ID: A3LSMS916U	PART 22 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2209010097-01.A3L	Test Dates: 9/2/2022 - 11/4/2022	EUT Type: Portable Handset	Page 57 of 101

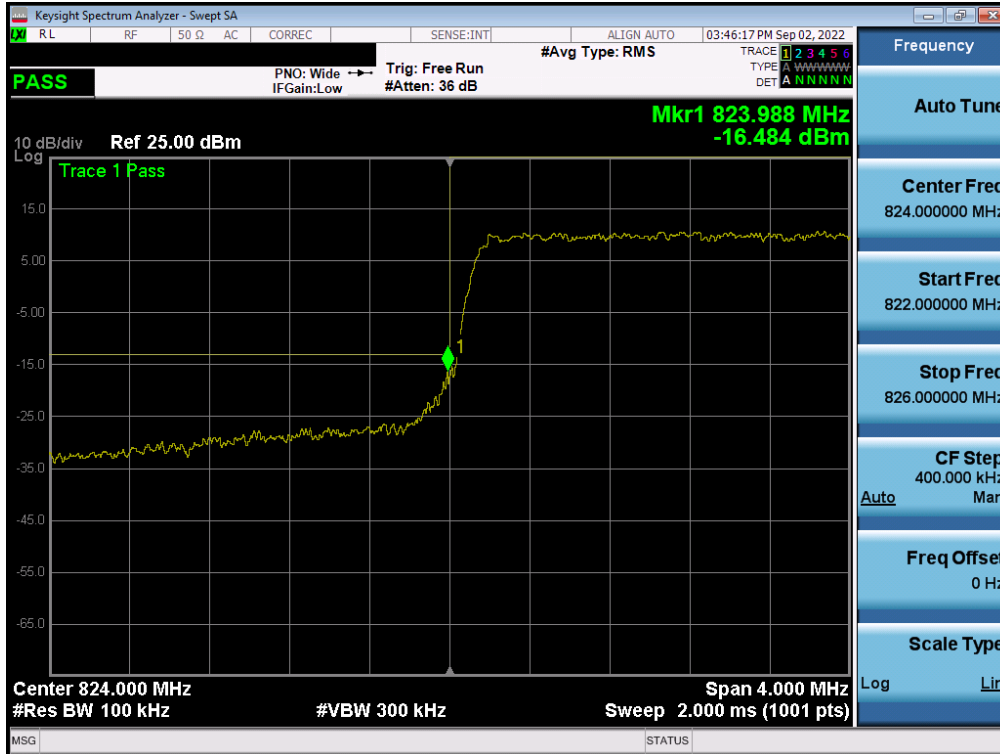


Plot 7-75. Lower Band Edge Plot (LTE Band 26/5 - 5MHz QPSK – Full RB)



Plot 7-76. Upper Band Edge Plot (LTE Band 26/5 - 5MHz QPSK – Full RB)

FCC ID: A3LSMS916U	PART 22 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2209010097-01.A3L	Test Dates: 9/2/2022 - 11/4/2022	EUT Type: Portable Handset	Page 58 of 101

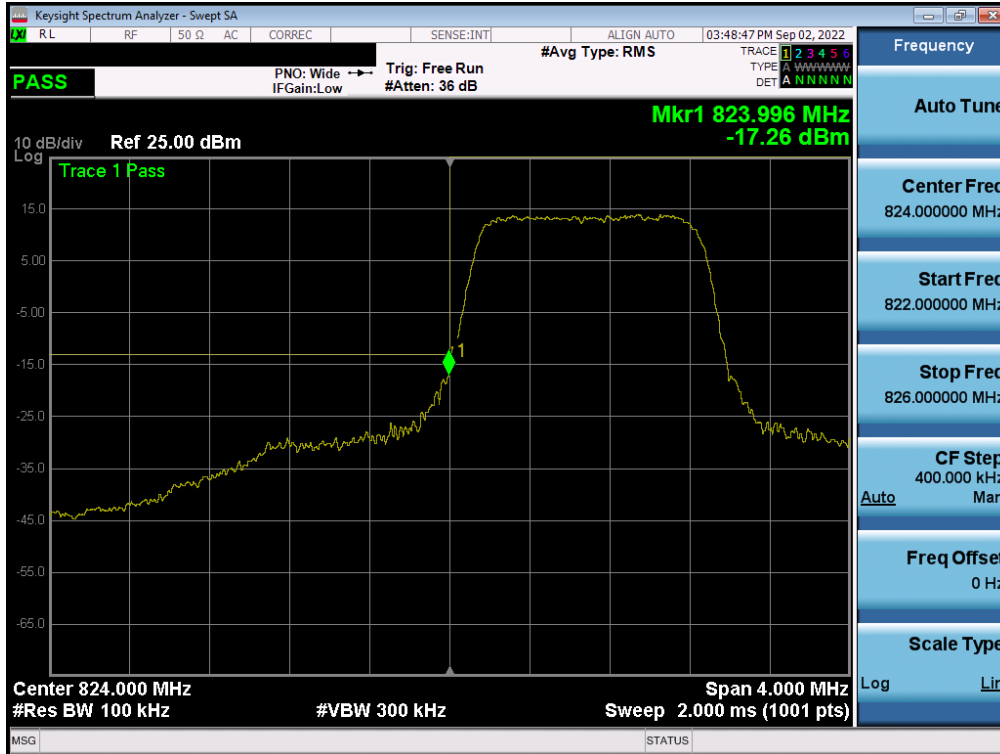


Plot 7-77. Lower Band Edge Plot (LTE Band 26/5 - 3MHz QPSK – Full RB)



Plot 7-78. Upper Band Edge Plot (LTE Band 26/5 - 3MHz QPSK – Full RB)

FCC ID: A3LSMS916U	PART 22 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2209010097-01.A3L	Test Dates: 9/2/2022 - 11/4/2022	EUT Type: Portable Handset	Page 59 of 101



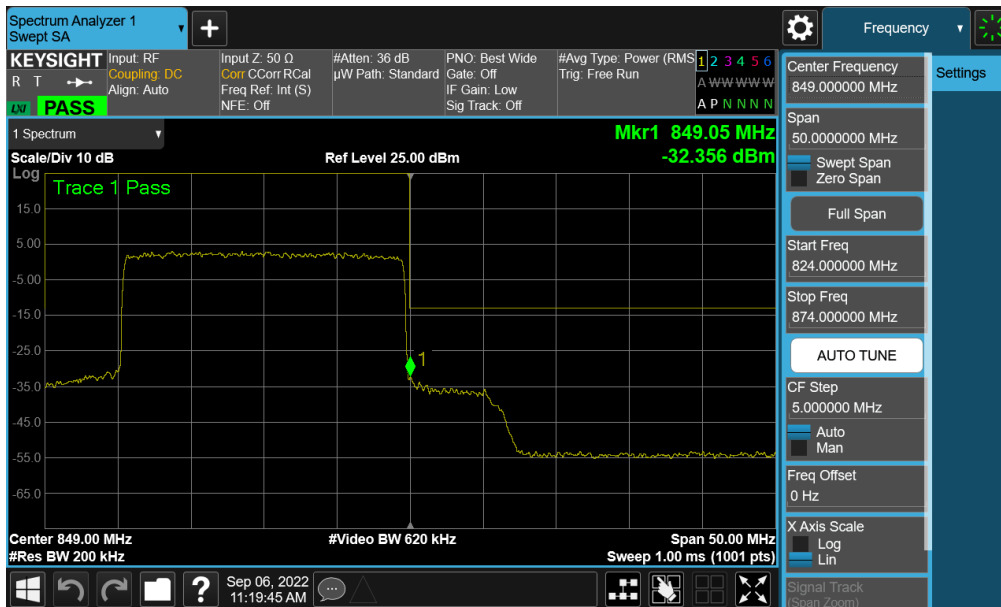
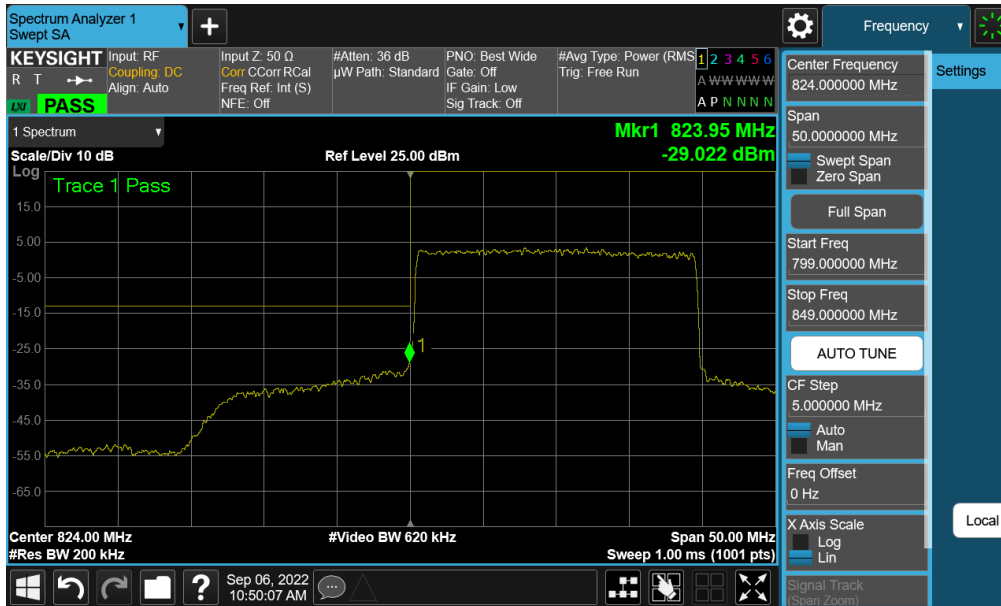
Plot 7-79. Lower Band Edge Plot (LTE Band 26/5 – 1.4MHz QPSK – Full RB)



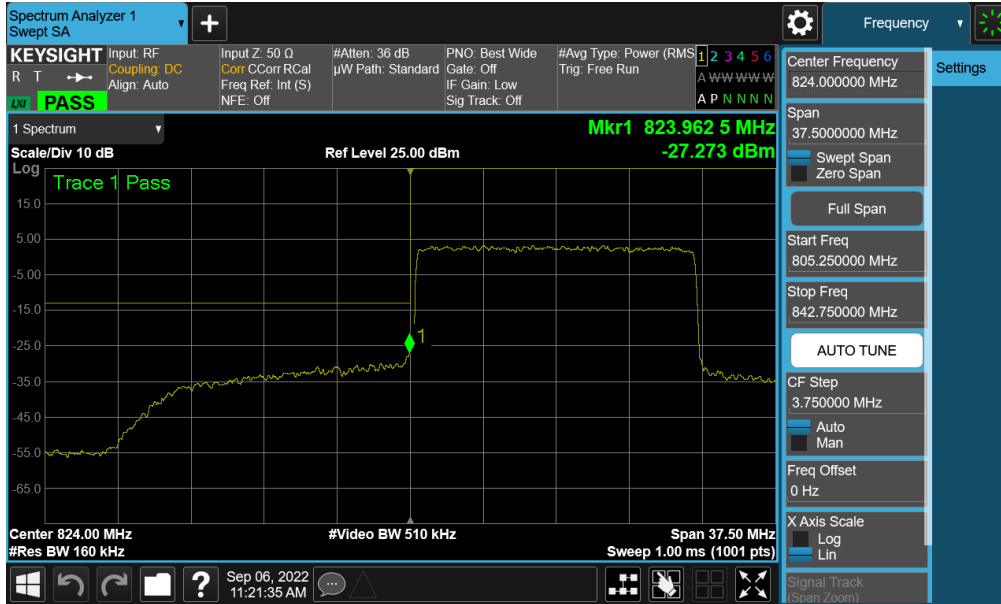
Plot 7-80. Upper Band Edge Plot (LTE Band 26/5 – 1.4MHz QPSK – Full RB)

FCC ID: A3LSMS916U	PART 22 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2209010097-01.A3L	Test Dates: 9/2/2022 - 11/4/2022	EUT Type: Portable Handset	Page 60 of 101

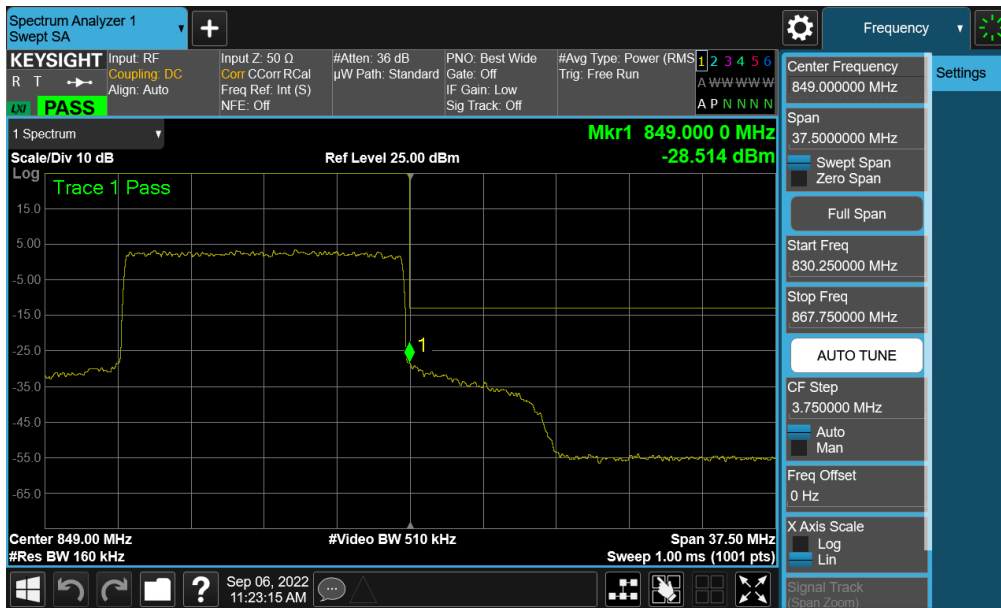
NR Band n5



FCC ID: A3LSMS916U	PART 22 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2209010097-01.A3L	Test Dates: 9/2/2022 - 11/4/2022	EUT Type: Portable Handset	Page 61 of 101



Plot 7-83. Lower Band Edge Plot (NR Band n5 – 15.0MHz - Full RB)



Plot 7-84. Upper Band Edge Plot (NR Band n5 – 15.0MHz - Full RB)

FCC ID: A3LSMS916U	PART 22 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2209010097-01.A3L	Test Dates: 9/2/2022 - 11/4/2022	EUT Type: Portable Handset	Page 62 of 101

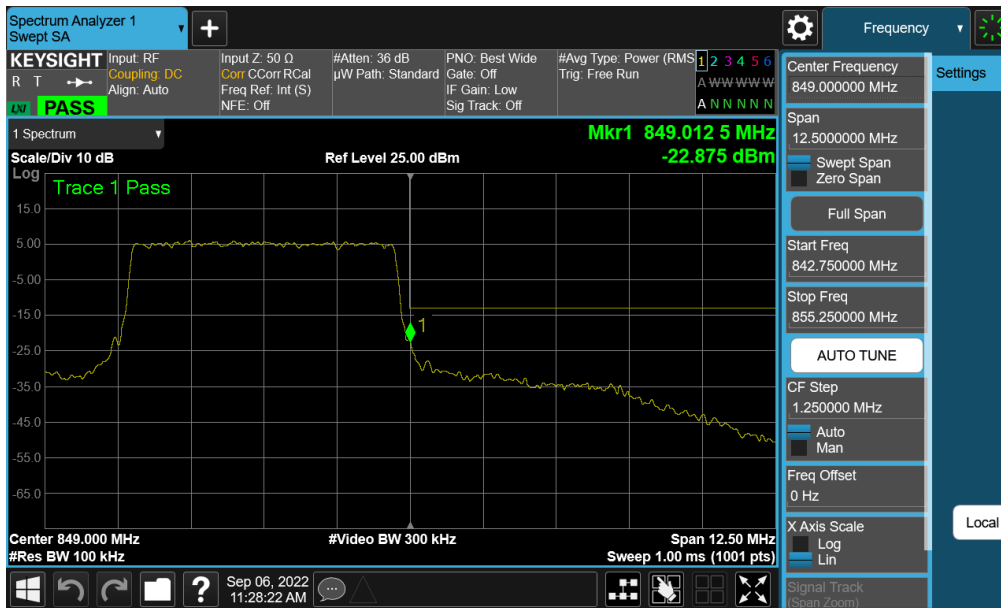
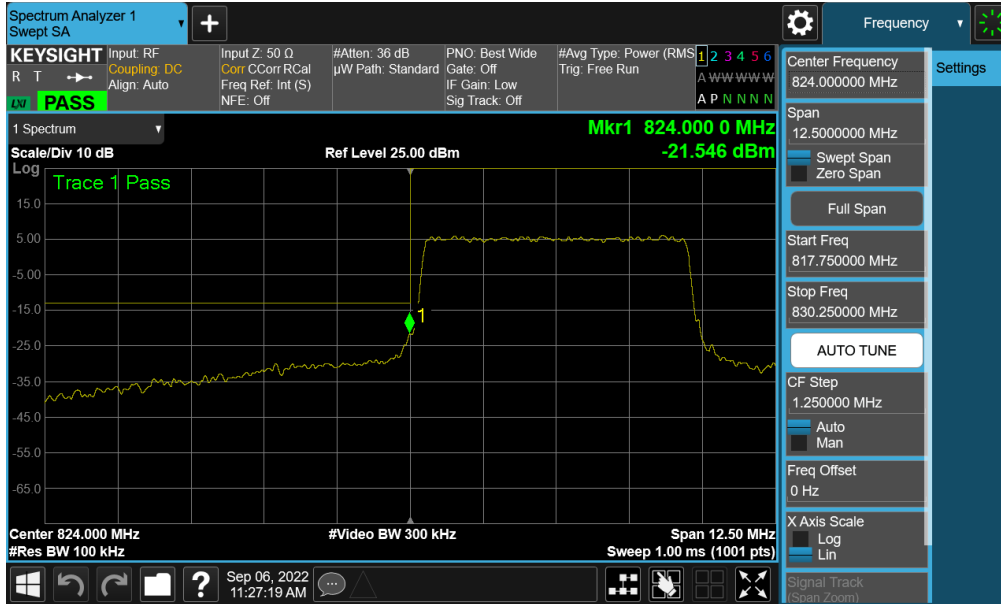


Plot 7-85. Lower Band Edge Plot (NR Band n5 – 10.0MHz - Full RB)



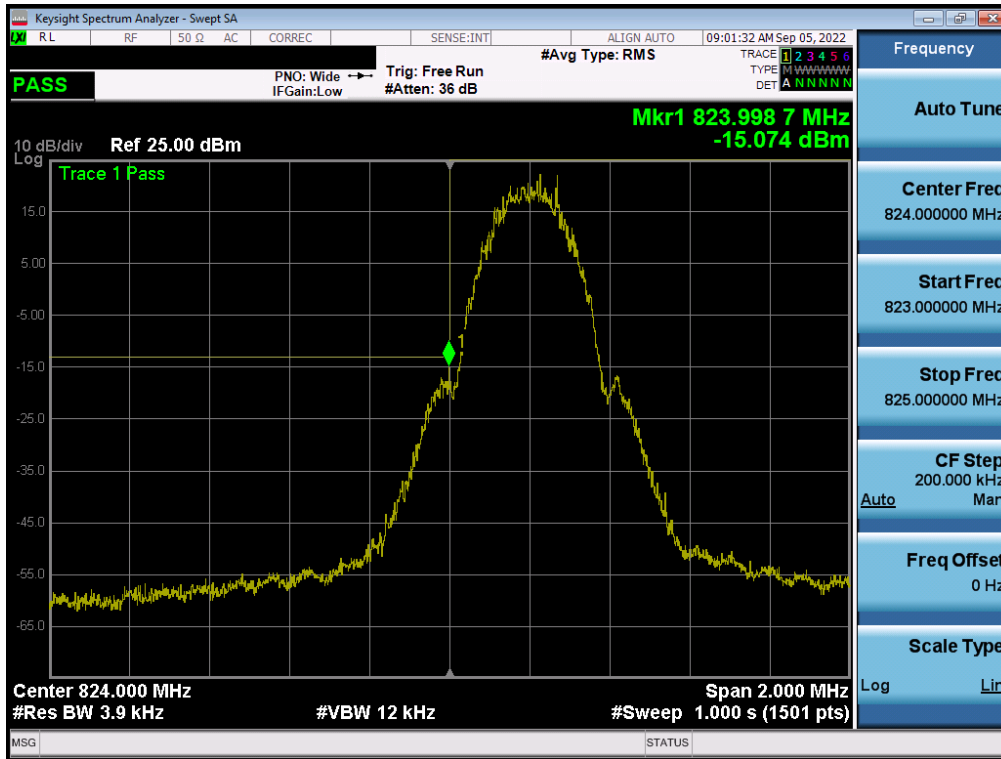
Plot 7-86. Upper Band Edge Plot (NR Band n5 – 10.0MHz - Full RB)

FCC ID: A3LSMS916U	PART 22 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2209010097-01.A3L	Test Dates: 9/2/2022 - 11/4/2022	EUT Type: Portable Handset	Page 63 of 101

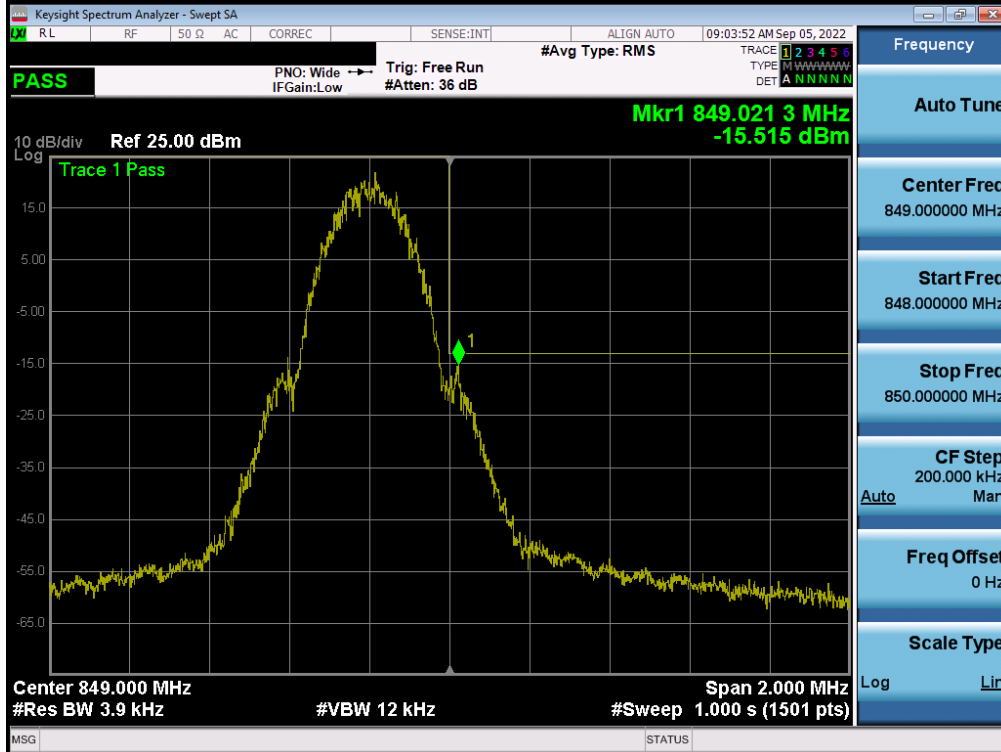


FCC ID: A3LSMS916U	PART 22 MEASUREMENT REPORT		Approved by: Technical Manager
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GSM/GPRS Cell



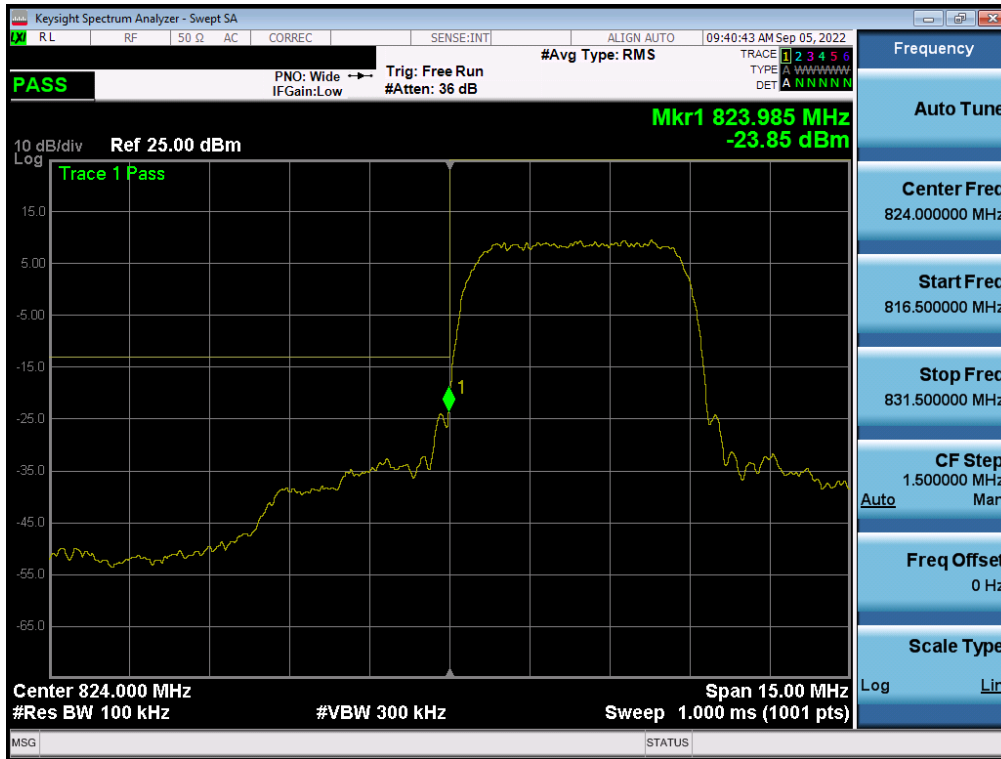
Plot 7-89. Lower Band Edge Plot (GPRS Cell – Ch. 128)



Plot 7-90. Upper Band Edge Plot (GPRS Cell – Ch. 251)

FCC ID: A3LSMS916U	PART 22 MEASUREMENT REPORT		Approved by: Technical Manager
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WCDMA Cell



Plot 7-91. Lower Band Edge Plot (WCDMA Cell – Ch. 4132)



Plot 7-92. Upper Band Edge Plot (WCDMA Cell – Ch. 4233)

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7.6 Radiated Power (ERP)

Test Overview

Effective Radiated Power (ERP) measurements are performed using the substitution method described in ANSI C63.26-2015 with the EUT transmitting into an integral antenna. Measurements are performed using vertically and horizontally polarized broadband horn antennas. All measurements are performed as RMS average measurements while the EUT is operating at maximum power, and at the appropriate frequencies.

Test Procedures Used

ANSI C63.26-2015 – Section 5.2.4.4

Test Settings

1. Radiated power measurements are performed using the signal analyzer’s “channel power” measurement capability for signals with continuous operation. For signals with burst transmission, the signal analyzer’s “time domain power” measurement capability is used.
2. RBW = 1 – 5% of the expected OBW, not to exceed 1MHz
3. VBW \geq 3 x RBW
4. Span = 1.5 times the OBW
5. No. of sweep points \geq 2 x span / RBW
6. Detector = RMS
7. Trigger is set to “free run” for signals with continuous operation with the sweep times set to “auto”. Trigger is set to enable triggering only on full power bursts with the sweep time set less than or equal to the transmission burst duration.
8. The integration bandwidth was roughly set equal to the measured OBW of the signal for signals with continuous operation. For signals with burst transmission, the “gating” function was enabled to ensure that measurements are performed during times in which the transmitter is operating at its maximum power.
9. Trace mode = trace averaging (RMS) over 100 sweeps
10. The trace was allowed to stabilize.

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Test Setup

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

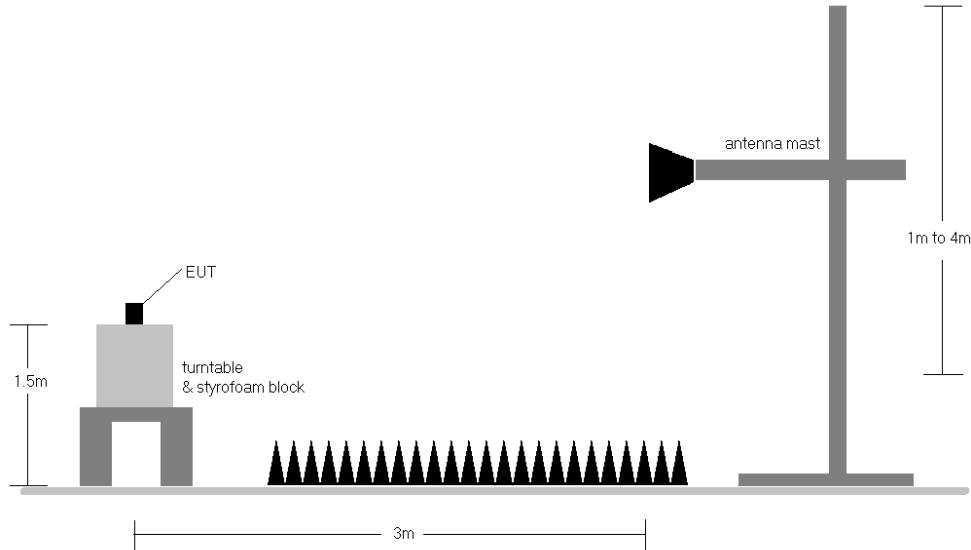


Figure 7-5. Radiated Test Setup < 1GHz

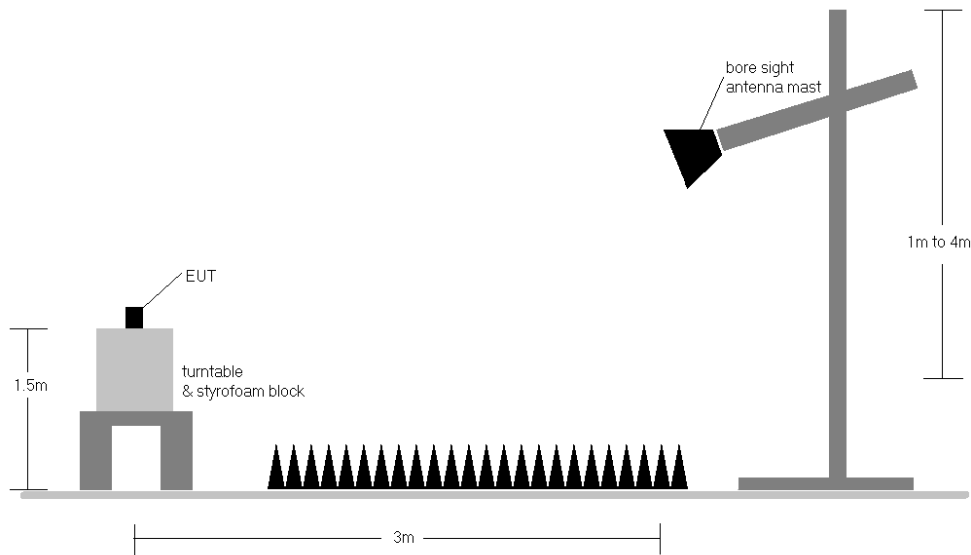


Figure 7-6. Radiated Test Setup > 1GHz

Test Notes

- 1) This device employs GSM, GPRS, and EDGE capabilities. The EUT was tested under all configurations and the highest powers are reported in GPRS mode while transmitting with one slot active.
- 2) This device employs UMTS technology with WCDMA (AMR/RMC) and HSDPA capabilities. The EUT was tested under all configurations and the highest powers are reported in WCDMA mode with HSDPA Inactive at 12.2 kbps RMC and TPC bits all set to "1".

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- 3) 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.
- 4) This unit was tested with its standard battery.
- 5) 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.

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Bandwidth	Mod.	Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Ant. Gain [dBi]	RB Size/Offset	Substitute Level [dBm]	ERP [dBm]	ERP [Watts]	ERP Limit [dBm]	Margin [dB]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
15MHz (Band 26 only)	QPSK	831.5	V	156	251	1.29	1 / 0	22.05	21.19	0.131	38.45	-17.26	23.34	0.216	40.61	-17.27
	QPSK	836.5	V	137	274	1.31	1 / 37	21.57	20.73	0.118	38.45	-17.72	22.88	0.194	40.61	-17.73
	QPSK	841.5	V	143	255	1.33	1 / 0	21.63	20.81	0.121	38.45	-17.64	22.96	0.198	40.61	-17.64
	16-QAM	831.5	V	156	251	1.29	1 / 0	21.08	20.22	0.105	38.45	-18.23	22.37	0.172	40.61	-18.24
10 MHz	QPSK	829.0	V	156	251	1.27	1 / 25	22.18	21.31	0.135	38.45	-17.14	23.46	0.222	40.61	-17.15
	QPSK	836.5	V	137	274	1.31	1 / 0	21.74	20.90	0.123	38.45	-17.55	23.05	0.202	40.61	-17.56
	QPSK	844.0	V	143	255	1.35	1 / 49	21.81	21.01	0.126	38.45	-17.45	23.16	0.207	40.61	-17.45
	16-QAM	829.0	V	156	251	1.27	1 / 25	21.07	20.19	0.104	38.45	-18.26	22.34	0.171	40.61	-18.27
5 MHz	QPSK	826.5	V	156	251	1.26	1 / 12	22.18	21.29	0.135	38.45	-17.16	23.44	0.221	40.61	-17.16
	QPSK	836.5	V	137	274	1.31	1 / 24	21.83	20.99	0.126	38.45	-17.46	23.14	0.206	40.61	-17.47
	QPSK	846.5	V	143	255	1.36	1 / 0	21.79	21.00	0.126	38.45	-17.45	23.15	0.207	40.61	-17.45
	16-QAM	826.5	V	156	251	1.26	1 / 12	21.22	20.33	0.108	38.45	-18.12	22.48	0.177	40.61	-18.13
3 MHz	QPSK	825.5	V	156	251	1.26	1 / 14	22.19	21.29	0.135	38.45	-17.16	23.44	0.221	40.61	-17.16
	QPSK	836.5	V	137	274	1.31	1 / 0	21.75	20.91	0.123	38.45	-17.55	23.06	0.202	40.61	-17.55
	QPSK	847.5	V	143	255	1.36	1 / 0	21.71	20.93	0.124	38.45	-17.52	23.08	0.203	40.61	-17.53
	16-QAM	825.5	V	156	251	1.26	1 / 14	21.21	20.31	0.107	38.45	-18.14	22.46	0.176	40.61	-18.14
1.4 MHz	QPSK	824.7	V	156	251	1.25	1 / 3	22.11	21.21	0.132	38.45	-17.24	23.36	0.217	40.61	-17.25
	QPSK	836.5	V	137	274	1.31	1 / 3	21.76	20.92	0.124	38.45	-17.53	23.07	0.203	40.61	-17.53
	QPSK	848.3	V	143	255	1.37	1 / 3	21.67	20.89	0.123	38.45	-17.56	23.04	0.201	40.61	-17.57
	16-QAM	824.7	V	156	251	1.25	1 / 5	21.13	20.23	0.106	38.45	-18.22	22.38	0.173	40.61	-18.22
10MHz	QPSK (Opposite Pol.)	829.0	H	217	299	1.27	1 / 25	16.63	15.75	0.038	38.45	-22.70	17.90	0.062	40.61	-22.71
	QPSK (WCP)	829.0	V	137	325	1.27	1 / 25	17.38	16.50	0.045	38.45	-21.95	18.65	0.073	40.61	-21.96

Table 7-8. ERP Data (LTE Band 26/5)

Bandwidth	Mod.	Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Ant. Gain [dBi]	RB Size/Offset	Substitute Level [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	V	140	253	6.15	1 / 79	16.06	20.06	0.101	38.45	-18.39	22.21	0.166	40.61	-18.39
	π/2 BPSK	836.5	V	143	258	6.18	1 / 79	16.12	20.15	0.103	38.45	-18.30	22.30	0.170	40.61	-18.31
	π/2 BPSK	839.0	V	146	259	6.30	1 / 53	16.02	20.17	0.104	38.45	-18.28	22.32	0.171	40.61	-18.28
	QPSK	834.0	V	140	253	6.15	1 / 79	16.20	20.20	0.105	38.45	-18.25	22.35	0.172	40.61	-18.25
	QPSK	836.5	V	143	258	6.18	1 / 79	15.91	19.94	0.099	38.45	-18.51	22.09	0.162	40.61	-18.52
	QPSK	839.0	V	146	259	6.30	1 / 53	15.95	19.10	0.102	38.45	-18.35	22.25	0.168	40.61	-18.35
15 MHz	16-QAM	839.0	V	146	259	6.30	1 / 53	15.15	19.30	0.085	38.45	-19.15	21.45	0.140	40.61	-19.15
	π/2 BPSK	831.5	V	140	253	1.29	1 / 20	21.10	20.23	0.105	38.45	-18.22	22.38	0.173	40.61	-18.22
	π/2 BPSK	836.5	V	143	258	1.31	1 / 58	21.03	20.19	0.105	38.45	-18.26	22.34	0.171	40.61	-18.27
	π/2 BPSK	841.5	V	146	259	1.33	1 / 58	21.05	20.23	0.105	38.45	-18.22	22.38	0.173	40.61	-18.23
	QPSK	831.5	V	140	253	1.29	1 / 20	21.18	20.31	0.108	38.45	-18.14	22.46	0.176	40.61	-18.14
	QPSK	836.5	V	143	258	1.31	1 / 39	20.68	19.84	0.096	38.45	-18.61	21.99	0.158	40.61	-18.62
10 MHz	QPSK	841.5	V	146	259	1.33	1 / 20	20.93	20.11	0.103	38.45	-18.34	22.26	0.168	40.61	-18.35
	16-QAM	831.5	V	140	253	1.29	1 / 58	20.11	19.25	0.084	38.45	-19.20	21.40	0.138	40.61	-19.21
	π/2 BPSK	829.0	V	140	253	1.27	1 / 38	21.03	20.16	0.104	38.45	-18.29	22.31	0.170	40.61	-18.30
	π/2 BPSK	836.5	V	143	258	1.31	1 / 26	20.81	19.97	0.099	38.45	-18.48	22.12	0.163	40.61	-18.49
	π/2 BPSK	844.0	V	146	259	1.35	1 / 26	20.90	20.10	0.102	38.45	-18.35	22.25	0.168	40.61	-18.36
	QPSK	829.0	V	140	253	1.27	1 / 38	20.91	20.03	0.101	38.45	-18.42	22.18	0.165	40.61	-18.43
5 MHz	QPSK	836.5	V	143	258	1.31	1 / 26	20.65	19.81	0.096	38.45	-18.64	21.96	0.157	40.61	-18.65
	QPSK	844.0	V	146	259	1.35	1 / 26	20.68	19.88	0.097	38.45	-18.58	22.03	0.159	40.61	-18.58
	16-QAM	836.5	V	143	258	1.31	1 / 38	19.68	18.84	0.077	38.45	-19.61	20.99	0.126	40.61	-19.61
	π/2 BPSK	829.0	V	140	253	1.26	1 / 6	20.89	20.00	0.100	38.45	-18.45	22.15	0.164	40.61	-18.46
	π/2 BPSK	836.5	V	143	258	1.31	1 / 18	20.80	19.96	0.099	38.45	-18.49	22.11	0.162	40.61	-18.50
	π/2 BPSK	844.0	V	146	259	1.36	1 / 18	20.87	20.08	0.102	38.45	-18.37	22.23	0.167	40.61	-18.38
20 MHz	QPSK	829.0	V	140	253	1.26	1 / 6	20.83	19.94	0.099	38.45	-18.51	22.09	0.162	40.61	-18.52
	QPSK	836.5	V	143	258	1.31	1 / 18	20.53	19.69	0.093	38.45	-18.76	21.84	0.153	40.61	-18.77
	QPSK	844.0	V	146	259	1.36	1 / 6	20.71	19.91	0.098	38.45	-18.54	22.06	0.161	40.61	-18.54
	16-QAM	844.0	V	146	259	1.36	1 / 18	19.84	19.04	0.080	38.45	-19.41	21.19	0.132	40.61	-19.41
	QPSK (CP-OFDM)	834.0	V	140	253	6.15	1/53	14.51	18.51	0.071	38.45	-19.94	20.66	0.116	40.61	-19.94
	QPSK (Opposite Pol.)	834.0	H	221	284	6.65	1/53	14.52	19.02	0.080	38.45	-19.43	21.17	0.131	40.61	-19.43
	QPSK (WCP)	834.0	V	140	253	6.15	1/79	7.19	11.19	0.013	38.45	-27.26	13.34	0.022	40.61	-27.26

Table 7-93. ERP Data (NR Band n26/5)

Frequency [MHz]	Mode	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Substitute Level [dBm]	Ant. Gain [dBi]	ERP [dBm]	ERP [Watts]	ERP Limit [dBm]	Margin [dB]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
824.20	GSM850	V	152.00	284.00	30.13	1.25	29.23	0.838	38.45	-9.22	31.38	1.374	40.61	-9.23
836.60	GSM850	V	177.00	265.00	27.31	1.31	26.47	0.444	38.45	-11.98	28.62	0.728	40.61	-11.99
848.80	GSM850	V	130.00	279.00	28.17	1.37	27.39	0.548	38.45	-11.06	29.54	0.899	40.61	-11.07
824.20	GSM850	H	227.00	284.00	25.75	1.25	24.85	0.306	38.45	-13.60	27.00	0.501	40.61	-13.61
824.20	EDGE850	V	152.00	284.00	24.80	1.25	23.90	0.246	38.45	-14.55	26.05	0.403	40.61	-14.56
824.20	GSM850 (WCP)	V	141.00	255.00	23.56	1.25	22.66	0.185	38.45	-15.79	24.81	0.303	40.61	-15.80

Table 7-9. ERP Data (GPRS Cell)

Frequency [MHz]	Mode	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Substitute Level [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	V	139.00	254.00	22.24	1.26	21.35	0.137	38.45	-17.10	23.50	0.224	40.61	-17.11
836.60	WCDMA850	V	131.00	252.00	21.05	1.31	20.21	0.105	38.45	-18.24	22.36	0.172	40.61	-18.25
846.60	WCDMA850	V	137.00	251.00	21.01	1.36	20.22	0.105	38.45	-18.23	22.37	0.173	40.61	-18.24
826.40	WCDMA850	H	226.00	277.00	17.54	1.26	16.65	0.046	38.45	-21.80	18.80	0.076	40.61	-21.81
826.40	WCDMA850 (WCP)	V	142.00	280.00	17.04	1.26	16.15	0.041	38.45	-22.30	18.30	0.068	40.61	-22.31

Table 7-10. ERP Data (WCDMA Cell)

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7.7 Radiated Spurious Emissions Measurements

Test Overview

Radiated spurious emissions measurements are performed using the field strength conversion method described in ANSI C63.26-2015 with the EUT transmitting into an integral antenna. Measurements on signals operating below 1GHz are performed using hybrid (biconical/log) antennas. Measurements on signals operating above 1GHz are performed using vertically and horizontally polarized broadband horn antennas. All measurements are performed as RMS measurements while the EUT is operating at maximum power, and at the appropriate frequencies.

Test Procedures Used

ANSI C63.26-2015 – Section 5.5.4

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

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Test Setup

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

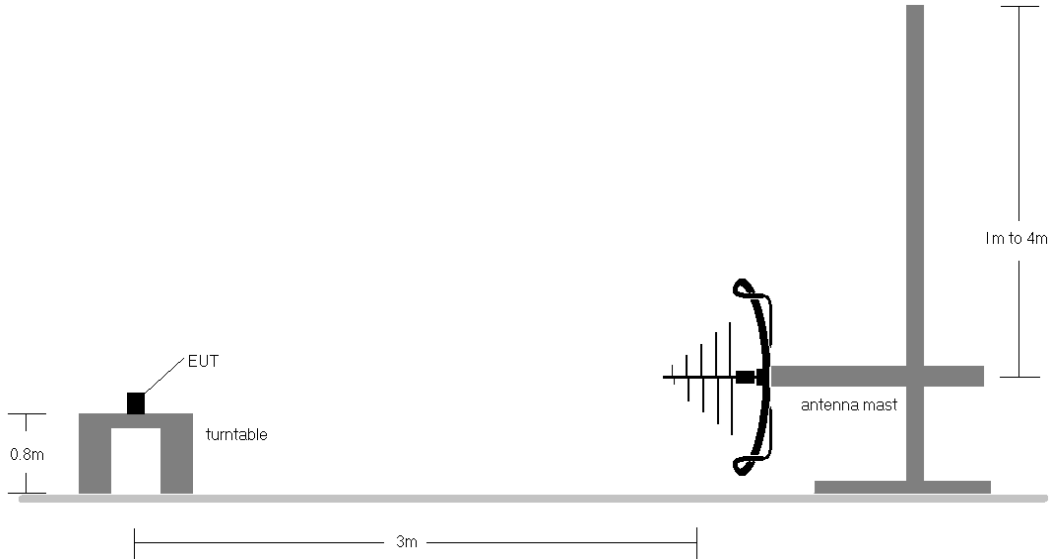


Figure 7-7. Test Instrument & Measurement Setup < 1GHz

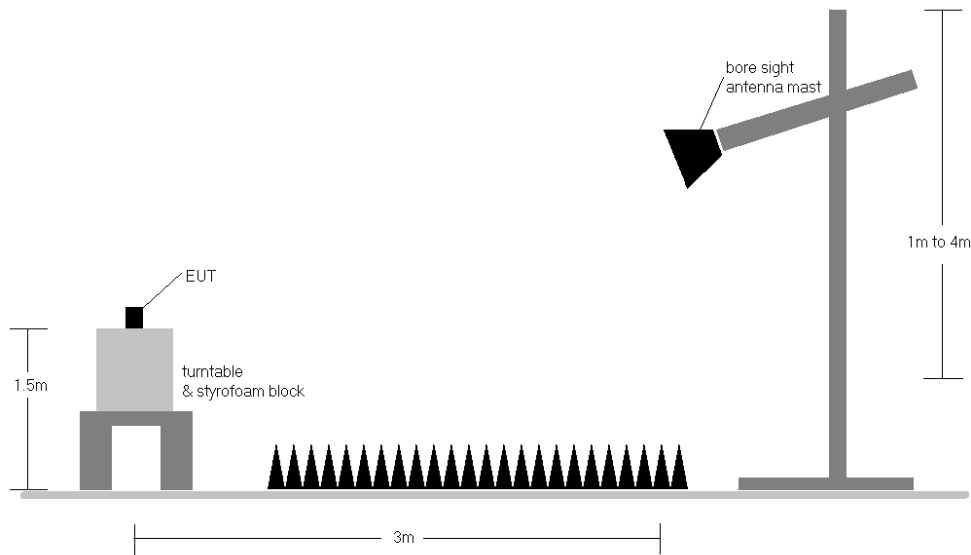


Figure 7-8. Test Instrument & Measurement Setup > 1GHz

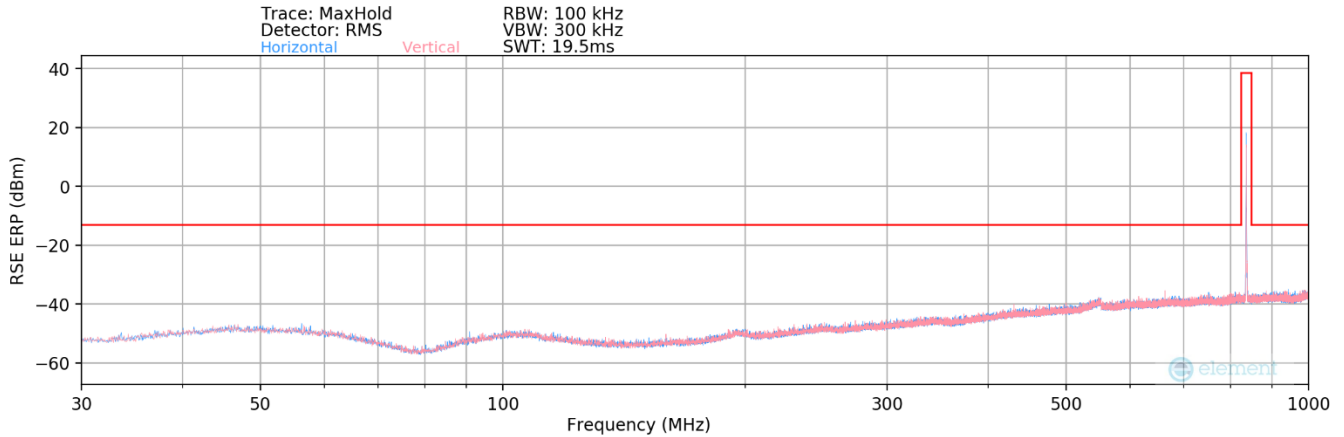
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Test Notes

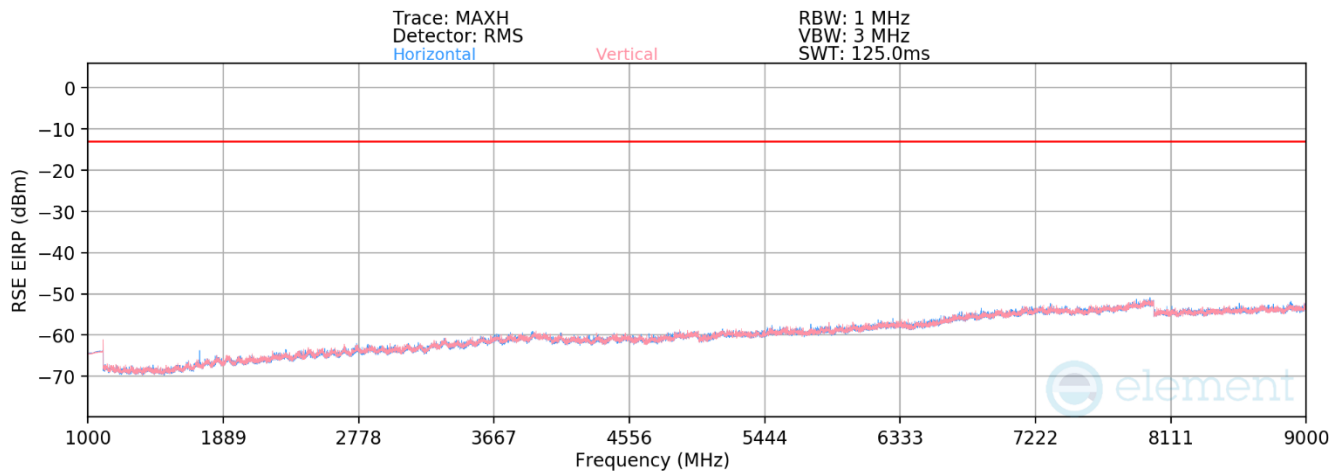
- 1) Field strengths are calculated using the Measurement quantity conversions in ANSI C63.26-2015 Section 5.2.7:
 - a) $E(\text{dB}\mu\text{V}/\text{m}) = \text{Measured amplitude level (dBm)} + 107 + \text{Cable Loss (dB)} + \text{Antenna Factor (dB/m)}$
 - b) $\text{EIRP (dBm)} = E(\text{dB}\mu\text{V}/\text{m}) + 20\log D - 104.8$; 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 are 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 powers are 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) Emissions below 18GHz were measured at a 3-meter test distance while emissions above 18GHz were measured at a 1-meter test distance with the application of a distance correction factor.
- 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 emissions shown in this section are measured while operating in EN-DC mode with Sub 6GHz NR carrier as well as an LTE carrier (anchor). Spurious emissions from the NR carrier device are subject to the rules under which the NR carrier operates. Spurious emissions caused by the LTE carrier must meet the requirements of the rules under which the LTE carrier operates.

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LTE Band 26/5



Plot 7-94. Radiated Spurious Plot (LTE Band 26/5 – Below 1GHz)



Plot 7-95. Radiated Spurious Plot (LTE Band 26/5 – Above 1GHz)

Bandwidth (MHz):	10
Frequency (MHz):	836.5
RB / Offset:	1 / 25

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
457.04	V	-	-	-79.20	17.92	45.72	-49.53	-13.00	-36.53
551.95	V	-	-	-78.83	19.77	47.94	-47.32	-13.00	-34.32
919.65	V	-	-	-80.64	25.24	51.60	-43.66	-13.00	-30.66

Table 7-11. Radiated Spurious Data (LTE Band 26/5 – Below 1GHz)

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Bandwidth (MHz):	10
Frequency (MHz):	829
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]
1658.00	V	129	321	-71.75	-7.67	27.58	-67.68	-13.00	-54.68
2487.00	V	112	314	-75.62	-4.23	27.15	-68.11	-13.00	-55.11
3316.00	V	-	-	-76.66	-0.82	29.52	-65.74	-13.00	-52.74
4145.00	V	-	-	-77.77	0.75	29.98	-65.27	-13.00	-52.27
4974.00	V	-	-	-77.54	1.57	31.03	-64.23	-13.00	-51.23
5803.00	V	-	-	-78.83	4.09	32.26	-63.00	-13.00	-50.00

Table 7-12. Radiated Spurious Data (LTE Band 26/5 – Low Channel)

Bandwidth (MHz):	10
Frequency (MHz):	836.5
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]
1673.00	V	113	345	-72.88	-7.63	26.49	-68.76	-13.00	-55.76
2509.50	V	108	316	-75.55	-4.17	27.28	-67.98	-13.00	-54.98
3346.00	V	-	-	-76.09	-0.95	29.96	-65.29	-13.00	-52.29
4182.50	V	-	-	-76.94	0.38	30.44	-64.81	-13.00	-51.81
5019.00	V	-	-	-77.52	1.28	30.76	-64.49	-13.00	-51.49
5855.50	V	-	-	-78.82	4.36	32.54	-62.71	-13.00	-49.71

Table 7-13. Radiated Spurious Data (LTE Band 26/5 – Mid Channel)

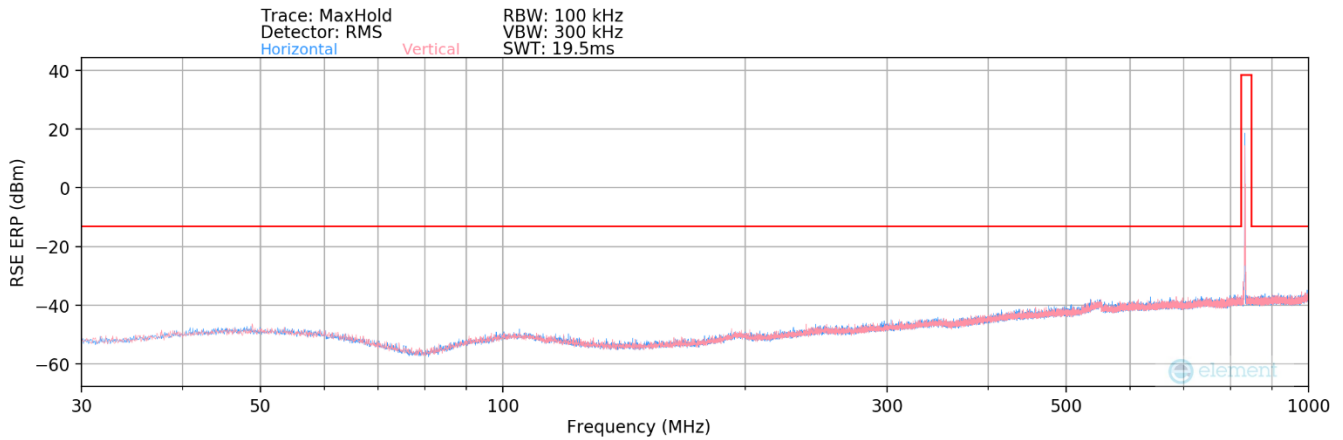
Bandwidth (MHz):	10
Frequency (MHz):	844
RB / Offset:	1 / 0

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]
1688.00	V	120	316	-73.85	-7.50	25.65	-69.61	-13.00	-56.61
2532.00	V	108	287	-71.16	-4.17	31.67	-63.59	-13.00	-50.59
3376.00	V	-	-	-76.96	-1.05	28.99	-66.26	-13.00	-53.26
4220.00	V	-	-	-77.15	0.51	30.36	-64.90	-13.00	-51.90
5064.00	V	-	-	-77.63	1.63	31.00	-64.26	-13.00	-51.26
5908.00	V	-	-	-79.24	4.07	31.83	-63.42	-13.00	-50.42

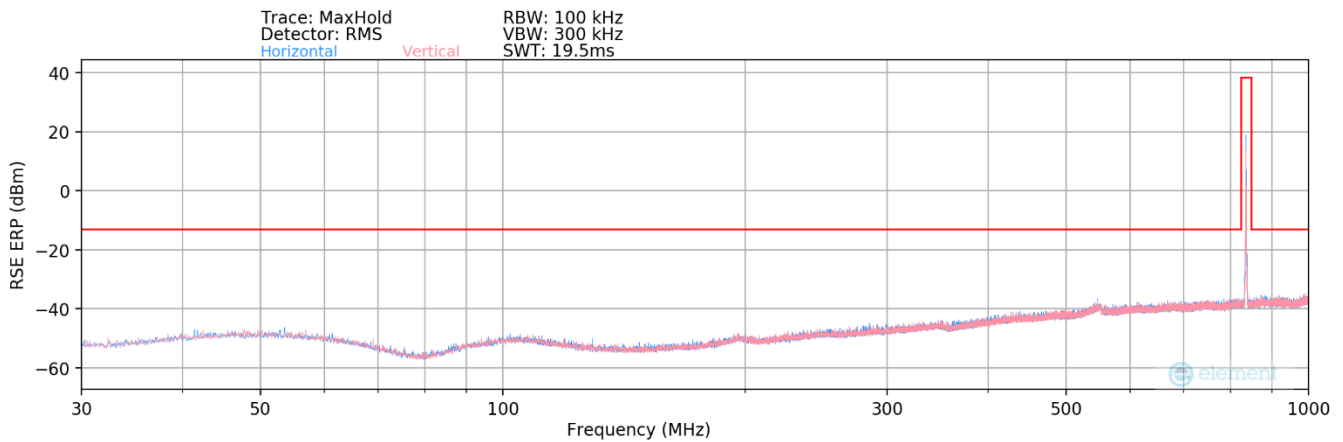
Table 7-14. Radiated Spurious Data (LTE Band 26/5 – High Channel)

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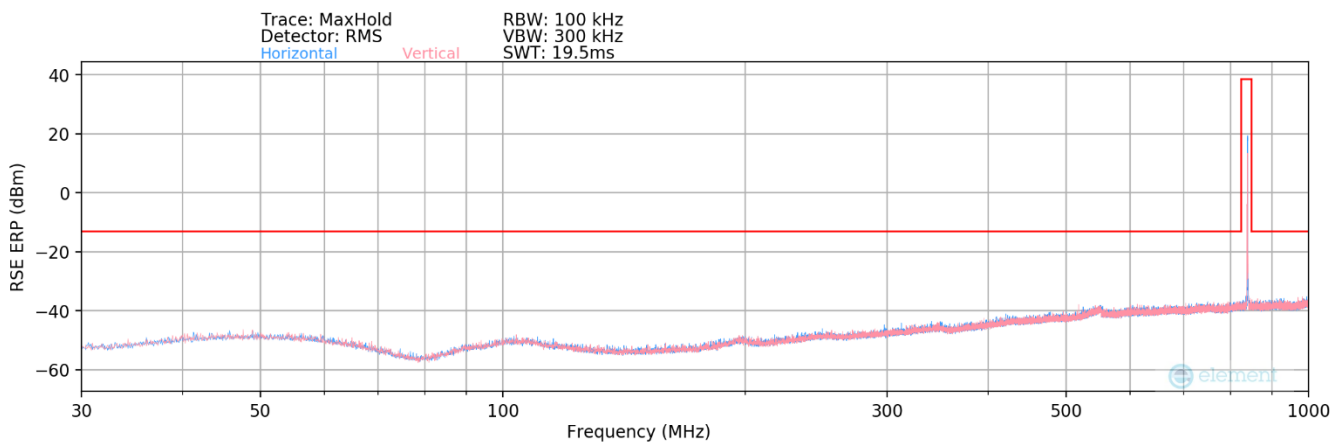
ULCA LTE Band 5



Plot 7-96. Radiated Spurious Plot (ULCA LTE Band 5 – Low Channel – Below 1GHz)

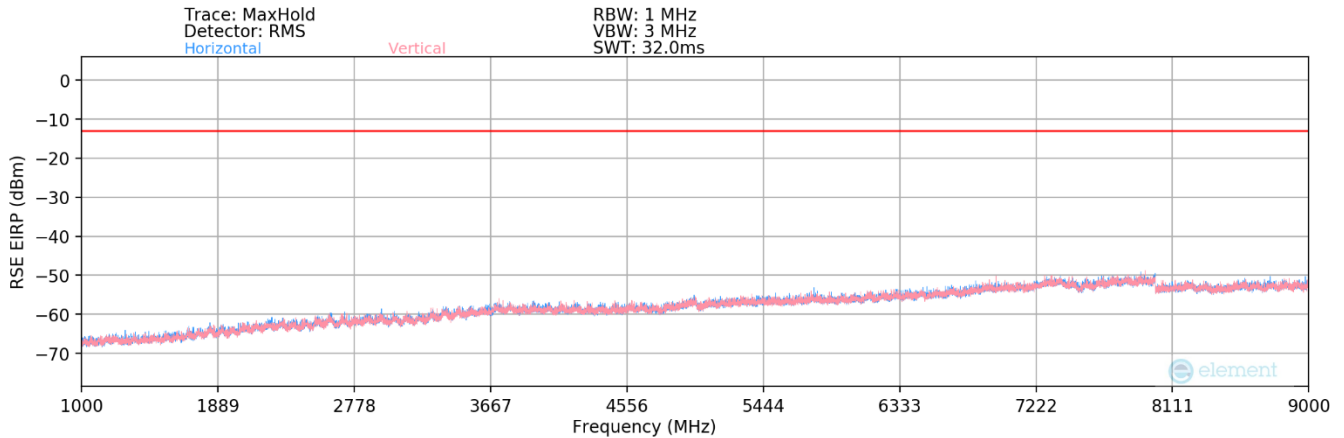


Plot 7-97. Radiated Spurious Plot (ULCA LTE Band 5 – Mid Channel – Below 1GHz)

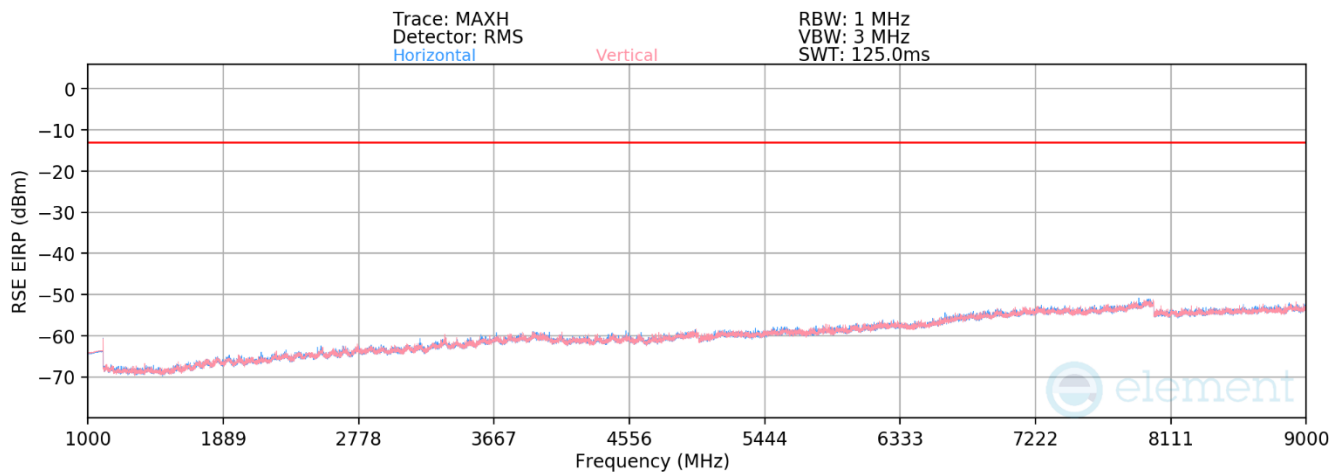


Plot 7-98. Radiated Spurious Plot (ULCA LTE Band 5 – High Channel – Below 1GHz)

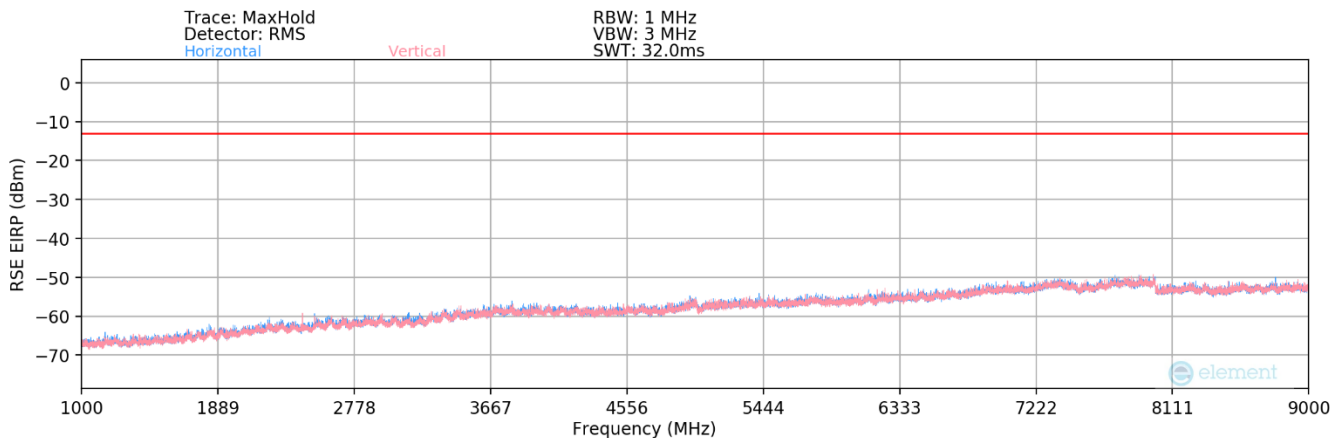
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Plot 7-99. Radiated Spurious Plot (ULCA LTE Band 5 – Low Channel – Above 1GHz)



Plot 7-100. Radiated Spurious Plot (ULCA LTE Band 5 – Mid Channel – Above 1GHz)



Plot 7-101. Radiated Spurious Plot (ULCA LTE Band 5 – High Channel – Above 1GHz)

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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]
452.81	H	-	-	-79.32	17.91	45.59	-49.66	-13.00	-36.66
552.25	H	-	-	-79.08	19.78	47.70	-47.55	-13.00	-34.55
854.87	H	-	-	-80.77	24.63	50.86	-44.40	-13.00	-31.40

Table 7-15. Radiated Spurious Data (ULCA LTE Band 5 – Below 1GHz)

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]
1658.00	H	400	10	-74.34	-7.69	24.97	-70.29	-13.00	-57.29
2487.00	H	-	-	-76.36	-4.28	26.36	-68.90	-13.00	-55.90
3316.00	H	-	-	-76.59	-0.82	29.59	-65.67	-13.00	-52.67
4145.00	H	-	-	-77.38	0.76	30.38	-64.87	-13.00	-51.87
4974.00	H	-	-	-77.05	1.42	31.37	-63.88	-13.00	-50.88

Table 7-16. Radiated Spurious Data (ULCA LTE Band 5 – Low Channel)

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]
1663.00	H	400	351	-75.02	-7.67	24.31	-70.95	-13.00	-57.95
2494.50	H	400	9	-75.57	-4.23	27.20	-68.06	-13.00	-55.06
3326.00	H	-	-	-76.34	-0.82	29.84	-65.42	-13.00	-52.42
4157.50	H	-	-	-77.17	0.75	30.58	-64.67	-13.00	-51.67
4989.00	H	-	-	-76.98	1.57	31.59	-63.67	-13.00	-50.67
5820.50	H	-	-	-78.07	4.09	33.02	-62.24	-13.00	-49.24

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

FCC ID: A3LSMS916U	PART 22 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2209010097-01.A3L	Test Dates: 9/2/2022 - 11/4/2022	EUT Type: Portable Handset	Page 78 of 101



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]
1688.00	H	-	-	-75.28	-7.43	24.29	-70.96	-13.00	-57.96
2532.00	H	-	-	-75.08	-4.15	27.77	-67.48	-13.00	-54.48
3376.00	H	-	-	-76.89	-0.94	29.17	-66.09	-13.00	-53.09
4220.00	H	-	-	-77.09	0.57	30.48	-64.78	-13.00	-51.78
5064.00	H	-	-	-77.05	1.70	31.65	-63.61	-13.00	-50.61

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

FCC ID: A3LSMS916U	PART 22 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2209010097-01.A3L	Test Dates: 9/2/2022 - 11/4/2022	EUT Type: Portable Handset	Page 79 of 101