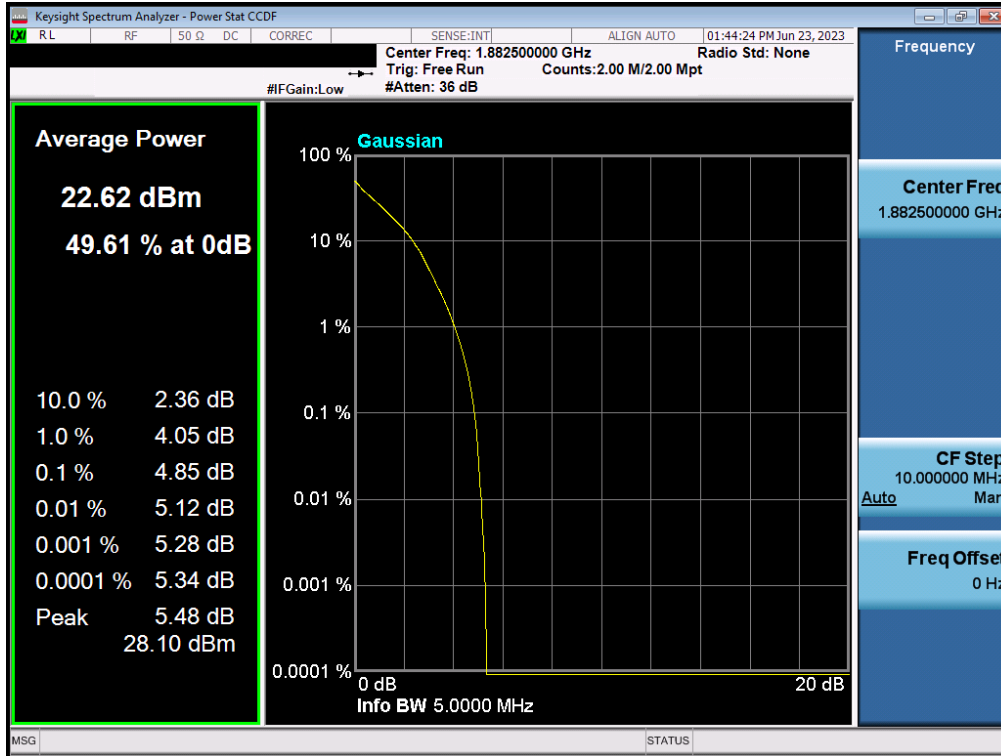
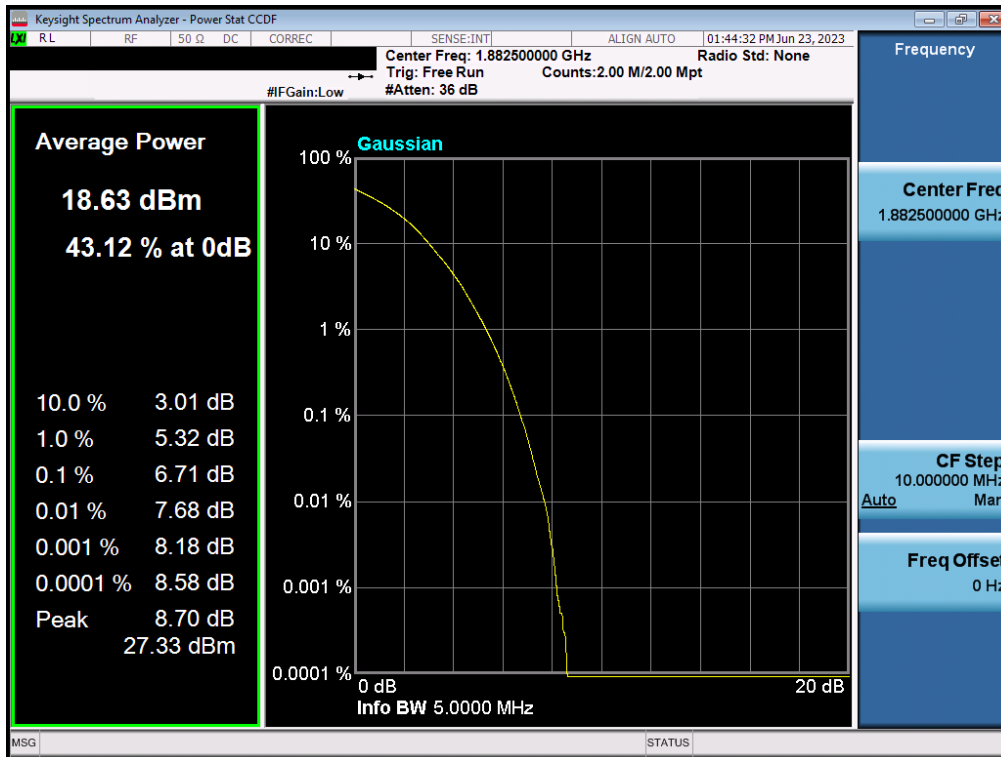


### LTE Band 25/2 – Ant A



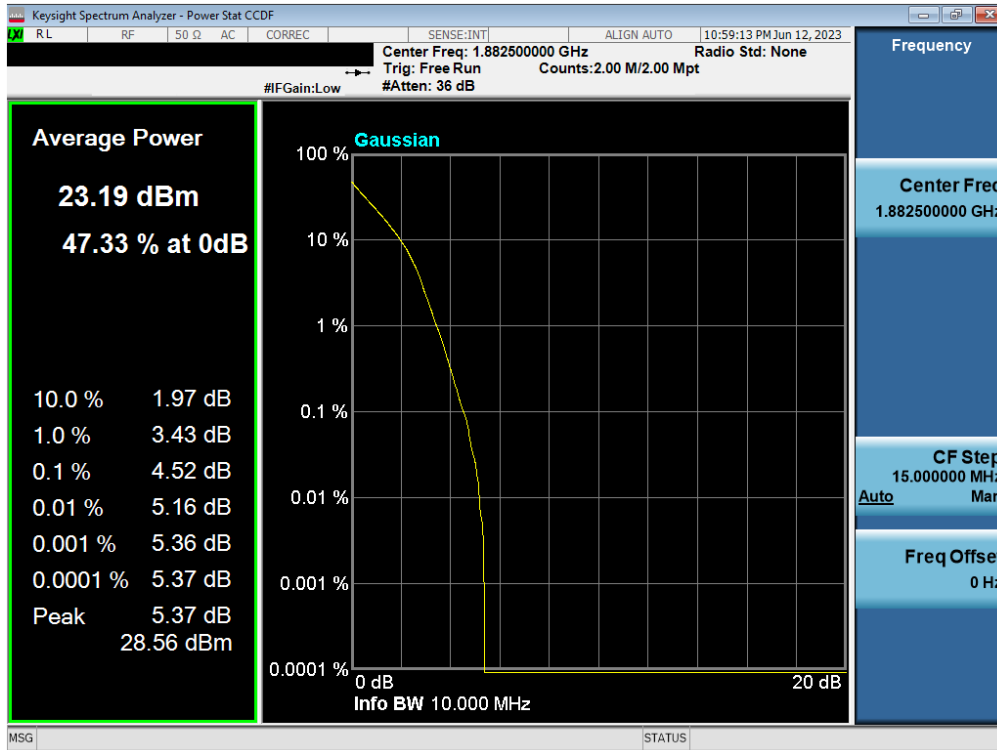
Plot 7-123. PAR Plot (LTE Band 25/2 - 5MHz QPSK - Full RB - Ant A)



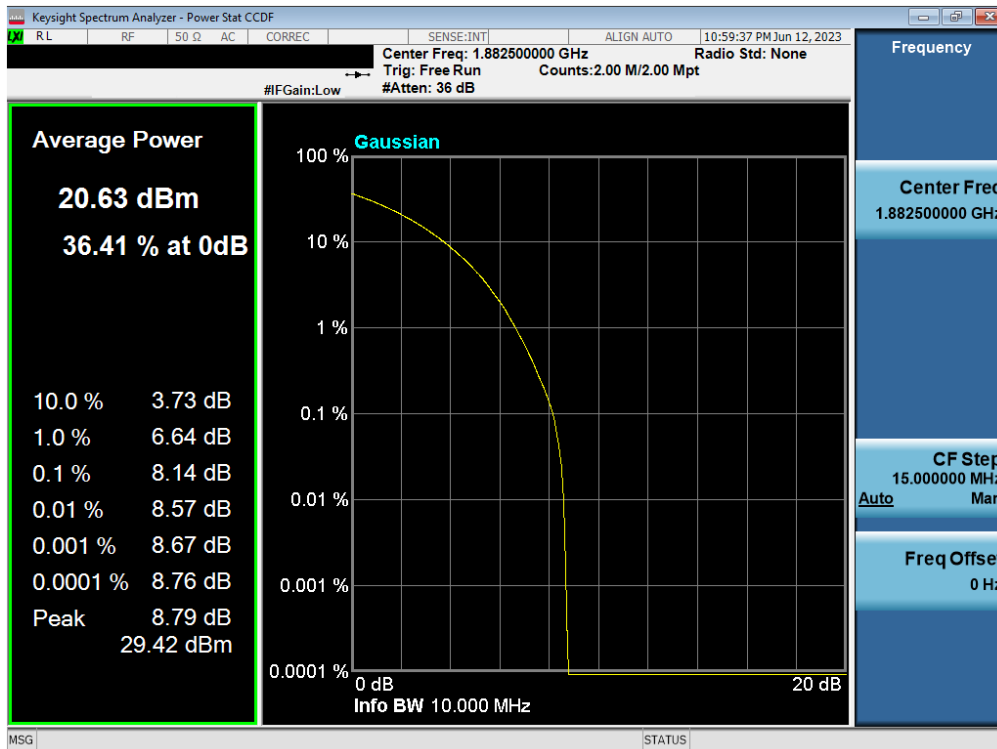
Plot 7-124. PAR Plot (LTE Band 25/2 - 5MHz 256-QAM - Full RB - Ant A)

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NR Band n25/2 – Ant A

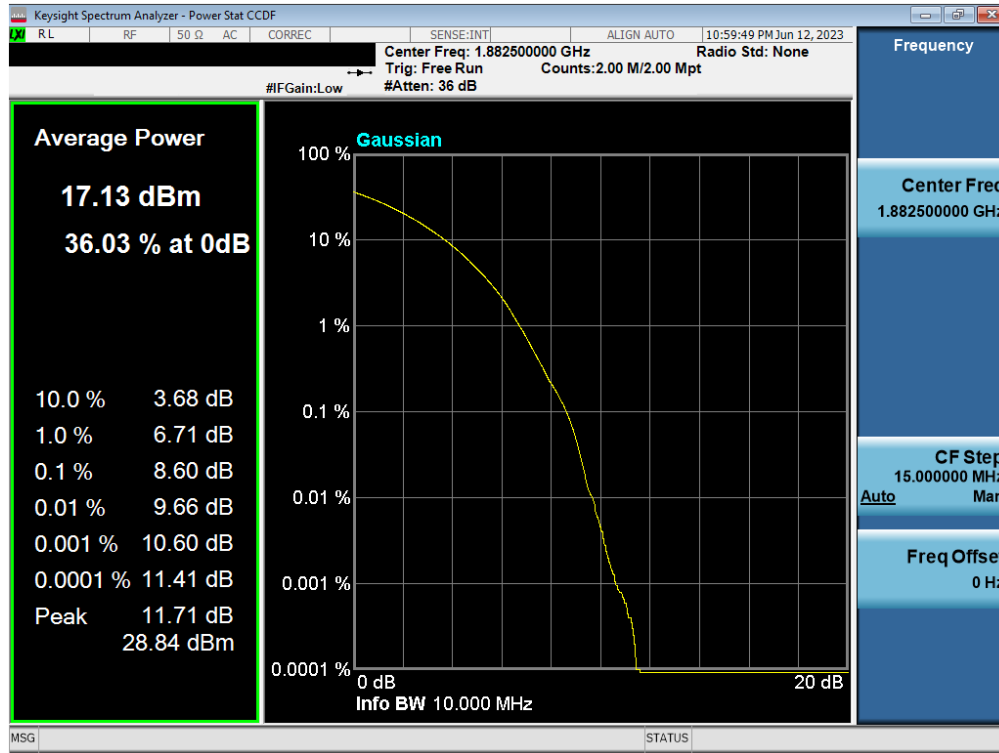


Plot 7-125. PAR Plot (NR Band n25/2 - 10.0MHz DFT-s-OFDM BPSK - Full RB - ANT A)



Plot 7-126. PAR Plot (NR Band n25/2 - 10.0MHz CP-OFDM QPSK - Full RB - ANT A)

FCC ID: A3LSMS711U	PART 24 MEASUREMENT REPORT		Approved by: Technical Manager
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Plot 7-127. PAR Plot (NR Band n25/2 - 10.0MHz CP-OFDM 256-QAM - Full RB - ANT A)

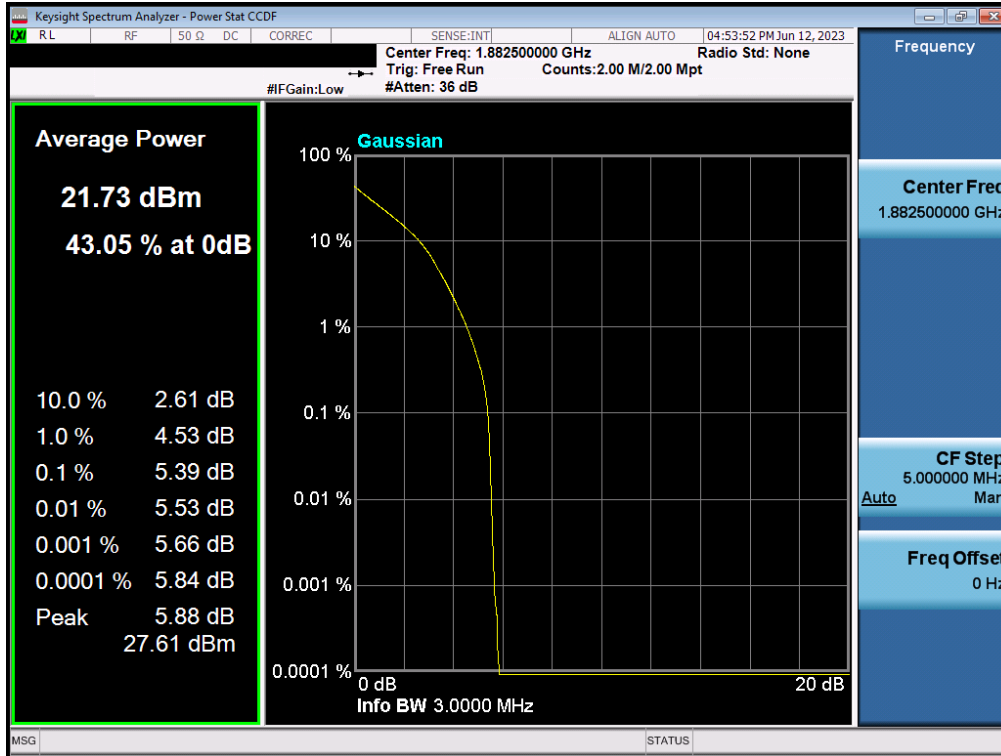
FCC ID: A3LSMS711U	PART 24 MEASUREMENT REPORT		Approved by: Technical Manager
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Mode	Bandwidth	Modulation	Average Power [dBm]	PAR at 0.1% [dB]	PAR Limit [dB]	Margin [dB]
LTE Band 25/2	20MHz	QPSK	21.66	5.60	13	-7.40
		256QAM	17.62	7.05	13	-5.95
	15MHz	QPSK	21.64	5.77	13	-7.23
		256QAM	17.63	7.02	13	-5.98
	10MHz	QPSK	21.78	5.59	13	-7.41
		256QAM	17.81	7.04	13	-5.96
	5MHz	QPSK	21.76	5.50	13	-7.50
		256QAM	17.82	7.05	13	-5.95
	3MHz	QPSK	21.73	5.39	13	-7.61
		256QAM	18.01	7.63	13	-5.37
	1.4MHz	QPSK	21.72	5.41	13	-7.59
		256QAM	17.94	7.54	13	-5.46
NR Band n25	40MHz	$\pi/2$ BPSK	22.78	4.44	13	-8.56
		QPSK	20.25	7.27	13	-5.73
		256QAM	16.74	8.42	13	-4.58
	30MHz	$\pi/2$ BPSK	22.80	4.24	13	-8.76
		QPSK	20.24	7.34	13	-5.66
		256QAM	16.75	8.42	13	-4.58
	25MHz	$\pi/2$ BPSK	22.75	4.27	13	-8.73
		QPSK	20.27	7.16	13	-5.84
		256QAM	16.72	8.53	13	-4.47
NR Band n25/n2	20MHz	$\pi/2$ BPSK	22.76	4.08	13	-8.92
		QPSK	20.20	7.21	13	-5.79
		256QAM	16.72	8.42	13	-4.58
	15MHz	$\pi/2$ BPSK	22.77	4.10	13	-8.90
		QPSK	20.24	7.06	13	-5.94
		256QAM	16.70	8.34	13	-4.66
	10MHz	$\pi/2$ BPSK	22.58	4.18	13	-8.82
		QPSK	19.87	7.05	13	-5.95
		256QAM	16.44	8.59	13	-4.42
5MHz	$\pi/2$ BPSK	22.56	3.85	13	-9.15	
	QPSK	20.03	7.33	13	-5.67	
	256QAM	16.54	8.43	13	-4.57	

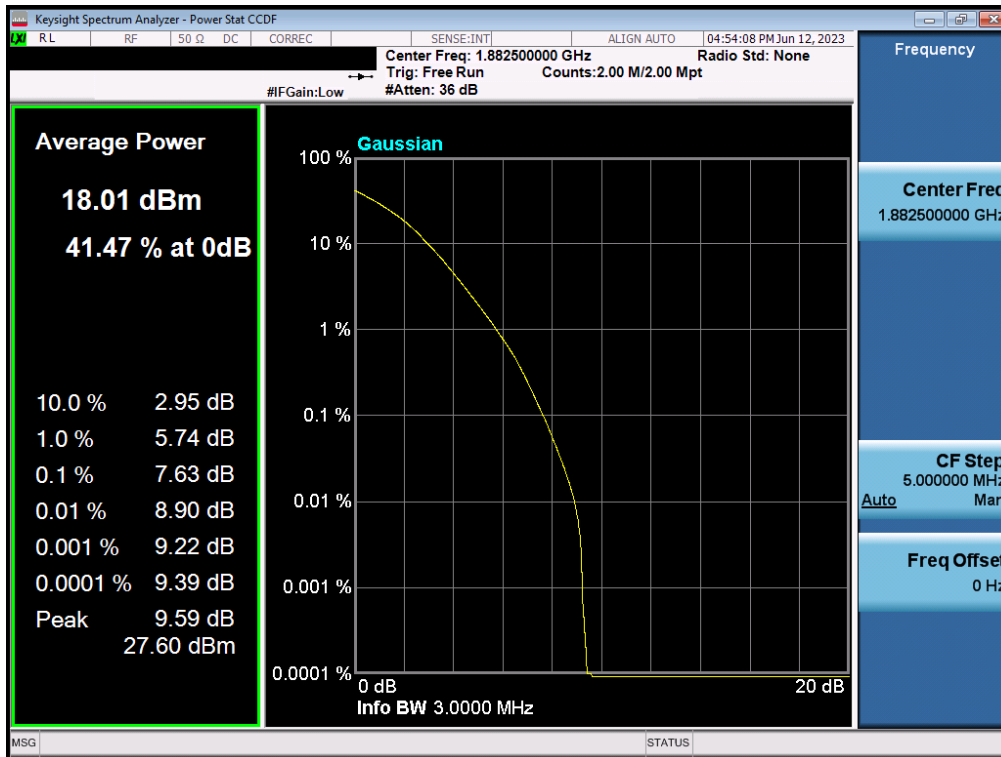
Table 7-15. PAR Test Results– Ant F

FCC ID: A3LSMS711U	PART 24 MEASUREMENT REPORT		Approved by: Technical Manager
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### LTE Band 25/2 – Ant F



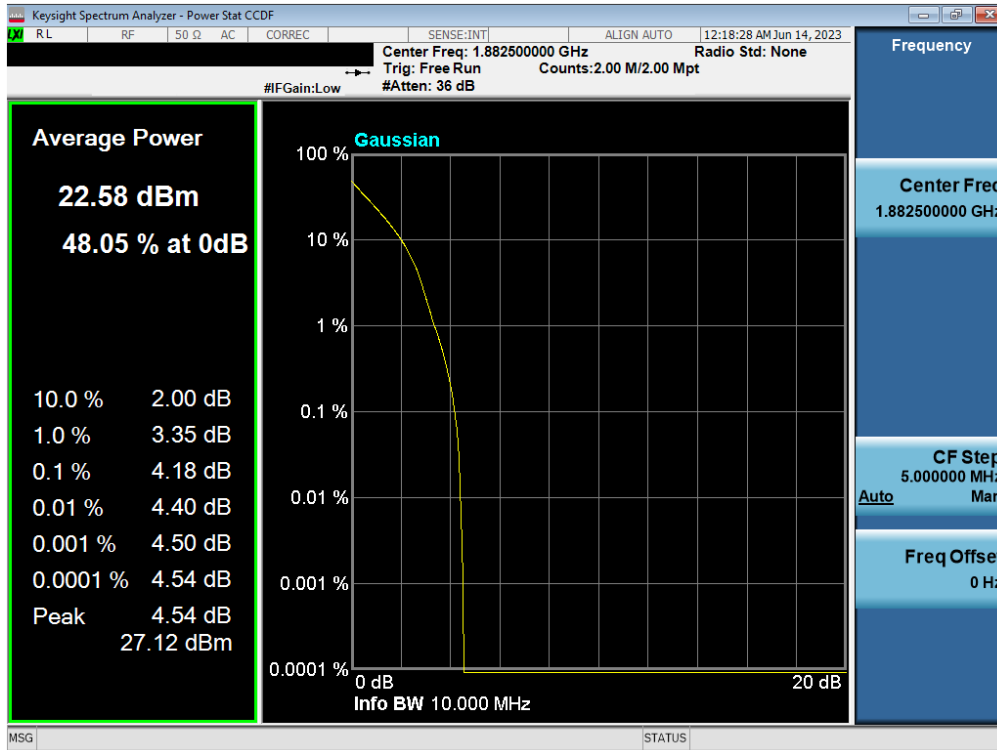
Plot 7-128. PAR Plot (LTE Band 25/2 - 3MHz QPSK - Full RB - Ant F)



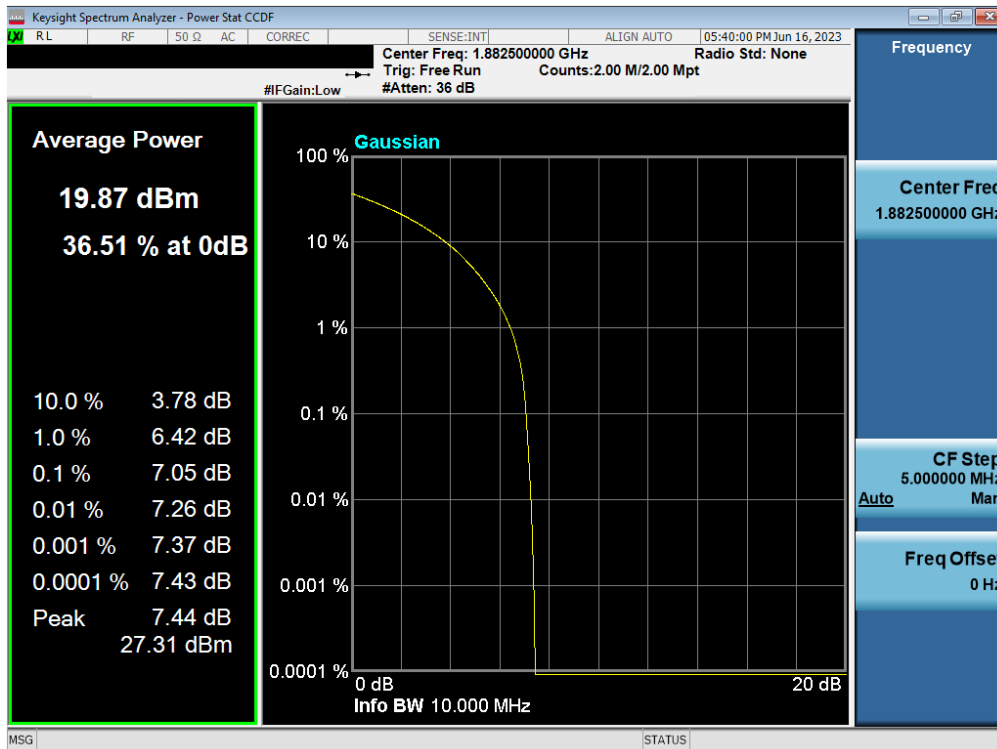
Plot 7-129. PAR Plot (LTE Band 25/2 - 3MHz 256-QAM - Full RB - Ant F)

FCC ID: A3LSMS711U	PART 24 MEASUREMENT REPORT		Approved by: Technical Manager
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NR Band n25/2 – Ant F

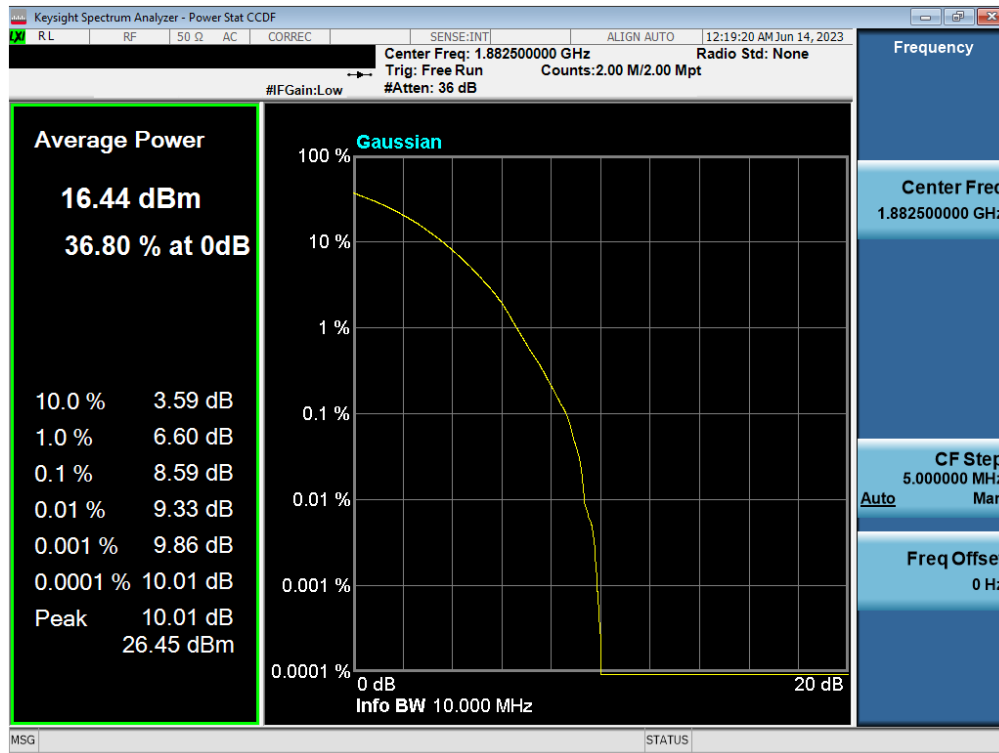


Plot 7-130. PAR Plot (NR Band n25/2 - 10.0MHz DFT-s-OFDM BPSK - Full RB - ANT F)



Plot 7-131. PAR Plot (NR Band n25/2 - 10.0MHz CP-OFDM QPSK - Full RB - ANT F)

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Plot 7-132. PAR Plot (NR Band n25/2 - 10.0MHz CP-OFDM 256-QAM - Full RB - ANT F)

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## 7.7 Radiated Power (EIRP)

### Test Overview

Equivalent Isotropic Radiated Power (EIRP) 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

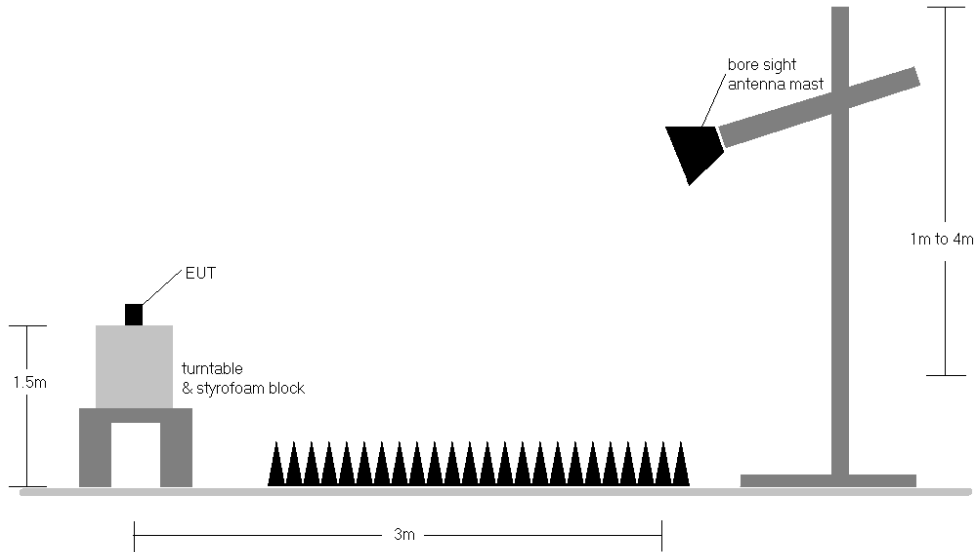
1. Radiated power measurements are performed using the signal analyzer’s “channel power” measurement capability for signals with continuous operation. For signals with burst transmission, the signal analyzer’s “time domain power” measurement capability is used
2. RBW = 1 – 5% of the expected OBW, not 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 7-6. 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”.
- 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]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
20 MHz	QPSK	1860.0	H	106	212	2.79	1 / 99	19.31	22.10	0.162	33.01	-10.91
	QPSK	1882.5	H	142	217	2.65	1 / 99	20.54	<b>23.19</b>	0.208	33.01	-9.82
	QPSK	1905.0	H	143	1211	2.54	1 / 0	19.80	22.34	0.172	33.01	-10.67
	16-QAM	1882.5	H	142	217	2.65	1 / 99	19.63	22.28	0.169	33.01	-10.73
15 MHz	QPSK	1857.5	H	106	212	2.81	1 / 37	19.28	22.09	0.162	33.01	-10.92
	QPSK	1882.5	H	142	217	2.65	1 / 74	20.59	<b>23.24</b>	0.211	33.01	-9.77
	QPSK	1907.5	H	143	1211	2.54	1 / 74	19.74	22.28	0.169	33.01	-10.73
	16-QAM	1882.5	H	142	217	2.65	1 / 37	19.49	22.14	0.164	33.01	-10.87
10 MHz	QPSK	1855.0	H	106	212	2.82	1 / 25	19.44	22.26	0.168	33.01	-10.75
	QPSK	1882.5	H	142	217	2.65	1 / 25	20.58	<b>23.23</b>	0.210	33.01	-9.78
	QPSK	1910.0	H	143	1211	2.55	1 / 25	19.69	22.23	0.167	33.01	-10.78
	16-QAM	1882.5	H	142	217	2.65	1 / 49	19.71	22.36	0.172	33.01	-10.65
5 MHz	QPSK	1852.5	H	106	212	2.84	1 / 12	19.48	22.32	0.171	33.01	-10.69
	QPSK	1882.5	H	142	217	2.65	1 / 24	20.58	<b>23.23</b>	0.210	33.01	-9.78
	QPSK	1912.5	H	143	1211	2.55	1 / 12	19.71	22.26	0.168	33.01	-10.75
	16-QAM	1882.5	H	142	217	2.65	1 / 12	19.78	22.43	0.175	33.01	-10.58
3 MHz	QPSK	1851.5	H	106	212	2.85	1 / 7	19.45	22.29	0.170	33.01	-10.72
	QPSK	1882.5	H	142	217	2.65	1 / 7	20.50	<b>23.15</b>	0.207	33.01	-9.86
	QPSK	1913.5	H	143	1211	2.55	1 / 14	19.62	22.17	0.165	33.01	-10.84
	16-QAM	1882.5	H	142	217	2.65	1 / 7	19.63	22.28	0.169	33.01	-10.73
1.4 MHz	QPSK	1850.7	H	106	212	2.85	1 / 3	19.39	22.24	0.168	33.01	-10.77
	QPSK	1882.5	H	142	217	2.65	1 / 3	20.59	<b>23.24</b>	0.211	33.01	-9.77
	QPSK	1914.3	H	143	1211	2.55	1 / 0	19.70	22.25	0.168	33.01	-10.76
	16-QAM	1882.5	H	142	217	2.65	1 / 0	19.65	22.30	0.170	33.01	-10.71
20 MHz	WCP	1882.5	H	151	219	2.65	1 / 0	19.20	21.85	0.153	33.01	-11.16

Table 7-16. EIRP Data (LTE Band 25/2 – Ant A)

Bandwidth	Mod.	Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Ant. Gain [dBi]	RB Size/Offset	Substitute Level [dBm]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
20 MHz	QPSK	1860.0	H	273	358	2.79	1 / 50	18.08	<b>20.87</b>	0.122	33.01	-12.14
	QPSK	1882.5	H	260	344	2.65	1 / 0	18.17	20.82	0.121	33.01	-12.19
	QPSK	1905.0	H	362	354	2.54	1 / 0	17.08	19.62	0.092	33.01	-13.39
	16-QAM	1860.0	H	273	358	2.79	1 / 50	17.18	19.97	0.099	33.01	-13.04
15 MHz	QPSK	1857.5	H	273	358	2.81	1 / 74	18.08	20.89	0.123	33.01	-12.12
	QPSK	1882.5	H	260	344	2.65	1 / 0	18.33	<b>20.98</b>	0.125	33.01	-12.03
	QPSK	1907.5	H	362	354	2.54	1 / 74	16.96	19.50	0.089	33.01	-13.51
	16-QAM	1857.5	H	273	358	2.81	1 / 74	17.19	20.00	0.100	33.01	-13.01
10 MHz	QPSK	1855.0	H	273	358	2.82	1 / 49	18.14	<b>20.96</b>	0.125	33.01	-12.05
	QPSK	1882.5	H	260	344	2.65	1 / 25	18.14	20.79	0.120	33.01	-12.22
	QPSK	1910.0	H	362	354	2.55	1 / 49	17.17	19.71	0.094	33.01	-13.30
	16-QAM	1882.5	H	260	344	2.65	1 / 0	17.80	20.45	0.111	33.01	-12.56
5 MHz	QPSK	1852.5	H	273	358	2.84	1 / 12	18.19	<b>21.03</b>	0.127	33.01	-11.98
	QPSK	1882.5	H	260	344	2.65	1 / 12	18.19	20.84	0.121	33.01	-12.17
	QPSK	1912.5	H	362	354	2.55	1 / 12	17.18	19.73	0.094	33.01	-13.28
	16-QAM	1882.5	H	260	344	2.65	1 / 12	17.83	20.48	0.112	33.01	-12.53
3 MHz	QPSK	1851.5	H	273	358	2.85	1 / 7	18.09	<b>20.93</b>	0.124	33.01	-12.08
	QPSK	1882.5	H	260	344	2.65	1 / 7	18.13	20.78	0.120	33.01	-12.23
	QPSK	1913.5	H	362	354	2.55	1 / 7	17.21	19.76	0.095	33.01	-13.25
	16-QAM	1882.5	H	260	344	2.65	1 / 7	17.54	20.19	0.104	33.01	-12.82
1.4 MHz	QPSK	1850.7	H	273	358	2.85	1 / 5	18.07	<b>20.92</b>	0.124	33.01	-12.09
	QPSK	1882.5	H	260	344	2.65	1 / 3	18.09	20.74	0.119	33.01	-12.27
	QPSK	1914.3	H	362	354	2.55	1 / 3	17.18	19.73	0.094	33.01	-13.28
	WCP	1860.0	H	163	314	2.79	1 / 99	17.67	20.46	0.111	33.01	-12.55

Table 7-17. EIRP Data (LTE Band 25/2 – Ant F)

FCC ID: A3LSMS711U	PART 24 MEASUREMENT REPORT		Approved by: Technical Manager
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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]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
40 MHz (n25 only)	$\pi/2$ BPSK	1870.0	H	108	228	2.73	1 / 161	19.51	22.24	0.167	33.01	-10.77
	$\pi/2$ BPSK	1882.5	H	101	229	2.65	1 / 108	19.89	22.54	0.179	33.01	-10.47
	$\pi/2$ BPSK	1895.0	H	101	230	2.57	1 / 108	19.76	22.33	0.171	33.01	-10.68
	QPSK	1870.0	H	108	228	2.73	1 / 161	19.45	22.18	0.165	33.01	-10.83
	QPSK	1882.5	H	101	229	2.65	1 / 108	19.90	22.55	0.180	33.01	-10.46
	QPSK	1895.0	H	101	230	2.57	1 / 108	19.75	22.32	0.171	33.01	-10.69
30 MHz (n25 only)	16-QAM	1882.5	H	101	229	2.65	1 / 108	19.00	21.65	0.146	33.01	-11.36
	$\pi/2$ BPSK	1865.0	H	108	228	2.76	1 / 80	19.51	22.27	0.169	33.01	-10.74
	$\pi/2$ BPSK	1882.5	H	101	229	2.65	1 / 40	19.97	22.62	0.183	33.01	-10.39
	$\pi/2$ BPSK	1900.0	H	101	230	2.54	1 / 40	19.82	22.36	0.172	33.01	-10.65
	QPSK	1865.0	H	108	228	2.76	1 / 80	19.47	22.23	0.167	33.01	-10.78
	QPSK	1882.5	H	101	229	2.65	1 / 40	19.92	22.56	0.181	33.01	-10.45
25 MHz (n25 only)	QPSK	1900.0	H	101	230	2.54	1 / 40	19.90	22.44	0.175	33.01	-10.57
	16-QAM	1882.5	H	101	229	2.65	1 / 40	19.13	21.78	0.151	33.01	-11.23
	$\pi/2$ BPSK	1862.5	H	108	228	2.78	1 / 66	19.39	22.16	0.165	33.01	-10.85
	$\pi/2$ BPSK	1882.5	H	101	229	2.65	1 / 99	19.80	22.45	0.176	33.01	-10.56
	$\pi/2$ BPSK	1902.5	H	101	230	2.54	1 / 66	19.68	22.22	0.167	33.01	-10.79
	QPSK	1862.5	H	108	228	2.78	1 / 66	19.39	22.16	0.165	33.01	-10.85
20 MHz	QPSK	1882.5	H	101	229	2.65	1 / 99	19.69	22.33	0.171	33.01	-10.68
	QPSK	1902.5	H	101	230	2.54	1 / 66	19.59	22.13	0.163	33.01	-10.88
	16-QAM	1862.5	H	108	228	2.78	1 / 66	18.59	21.36	0.137	33.01	-11.65
	$\pi/2$ BPSK	1860.0	H	108	228	2.79	1 / 53	19.46	22.26	0.168	33.01	-10.75
	$\pi/2$ BPSK	1882.5	H	101	229	2.65	1 / 26	19.78	22.43	0.175	33.01	-10.58
	$\pi/2$ BPSK	1905.0	H	101	230	2.54	1 / 26	19.64	22.19	0.165	33.01	-10.82
15 MHz	QPSK	1860.0	H	108	228	2.79	1 / 53	19.31	22.10	0.162	33.01	-10.91
	QPSK	1882.5	H	101	229	2.65	1 / 26	19.79	22.44	0.175	33.01	-10.57
	QPSK	1905.0	H	101	230	2.54	1 / 26	19.69	22.23	0.167	33.01	-10.78
	16-QAM	1905.0	H	101	230	2.54	1 / 26	19.04	21.58	0.144	33.01	-11.43
	$\pi/2$ BPSK	1857.5	H	108	228	2.81	1 / 20	19.48	22.29	0.170	33.01	-10.72
	$\pi/2$ BPSK	1882.5	H	101	229	2.65	1 / 20	19.81	22.46	0.176	33.01	-10.55
10 MHz	$\pi/2$ BPSK	1907.5	H	101	230	2.54	1 / 20	19.71	22.25	0.168	33.01	-10.76
	QPSK	1857.5	H	108	228	2.81	1 / 20	19.39	22.20	0.166	33.01	-10.81
	QPSK	1882.5	H	101	229	2.65	1 / 58	19.89	22.54	0.179	33.01	-10.47
	QPSK	1907.5	H	101	230	2.54	1 / 20	19.56	22.11	0.162	33.01	-10.90
	16-QAM	1857.5	H	108	228	2.81	1 / 20	18.76	21.57	0.144	33.01	-11.44
	$\pi/2$ BPSK	1855.0	H	108	228	2.82	1 / 26	19.34	22.16	0.165	33.01	-10.85
5 MHz	$\pi/2$ BPSK	1882.5	H	101	229	2.65	1 / 13	19.76	22.41	0.174	33.01	-10.60
	$\pi/2$ BPSK	1910.0	H	101	230	2.55	1 / 13	19.60	22.15	0.164	33.01	-10.86
	QPSK	1855.0	H	108	228	2.82	1 / 26	19.17	22.00	0.158	33.01	-11.01
	QPSK	1882.5	H	101	229	2.65	1 / 13	19.64	22.29	0.169	33.01	-10.72
	QPSK	1910.0	H	101	230	2.55	1 / 13	19.50	22.05	0.160	33.01	-10.96
	16-QAM	1855.0	H	108	228	2.82	1 / 26	18.72	21.54	0.143	33.01	-11.47
40 MHz	$\pi/2$ BPSK	1852.5	H	108	228	2.84	1 / 18	19.39	22.24	0.167	33.01	-10.77
	$\pi/2$ BPSK	1882.5	H	101	229	2.65	1 / 18	19.91	22.56	0.180	33.01	-10.45
	$\pi/2$ BPSK	1912.5	H	101	230	2.55	1 / 12	19.63	22.17	0.165	33.01	-10.84
	QPSK	1852.5	H	108	228	2.84	1 / 18	19.31	22.15	0.164	33.01	-10.86
	QPSK	1882.5	H	101	229	2.65	1 / 18	19.75	22.40	0.174	33.01	-10.61
	QPSK	1912.5	H	101	230	2.55	1 / 12	19.53	22.08	0.161	33.01	-10.93
40 MHz	16-QAM	1852.5	H	108	228	2.84	1 / 18	18.92	21.76	0.150	33.01	-11.25
	QPSK (CP-OFDM)	1882.5	H	101	229	2.65	1 / 108	17.93	20.58	0.114	33.01	-12.43
	QPSK (WCP)	1882.5	H	100	232	2.65	1 / 108	19.78	22.43	0.175	33.01	-10.58

Table 7-18. EIRP Data (NR Band n25/2 – Ant A)

FCC ID: A3LSMS711U	PART 24 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M230426006-06.A3L	Test Dates: 5/24/2023 - 7/31/2023	EUT Type: Portable Handset	Page 107 of 130

Bandwidth	Mod.	Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Ant. Gain [dBi]	RB Size/Offset	Substitute Level [dBm]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
40 MHz (n25 only)	$\pi/2$ BPSK	1870.0	H	257	350	2.73	1 / 108	18.28	<b>21.01</b>	0.126	33.01	-12.00
	$\pi/2$ BPSK	1882.5	H	260	245	2.65	1 / 108	18.28	20.93	0.124	33.01	-12.08
	$\pi/2$ BPSK	1895.0	H	258	349	2.57	1 / 108	18.18	20.75	0.119	33.01	-12.26
	QPSK	1870.0	H	257	350	2.73	1 / 108	18.27	21.00	0.126	33.01	-12.01
	QPSK	1882.5	H	260	245	2.65	1 / 108	18.28	20.93	0.124	33.01	-12.08
	QPSK	1895.0	H	258	349	2.57	1 / 108	18.14	20.71	0.118	33.01	-12.30
30 MHz (n25 only)	16-QAM	1870.0	H	257	350	2.73	1 / 108	17.31	20.04	0.101	33.01	-12.97
	$\pi/2$ BPSK	1865.0	H	257	350	2.76	1 / 119	18.30	<b>21.06</b>	0.128	33.01	-11.95
	$\pi/2$ BPSK	1882.5	H	260	245	2.65	1 / 80	18.29	20.94	0.124	33.01	-12.07
	$\pi/2$ BPSK	1900.0	H	258	349	2.54	1 / 40	18.26	20.80	0.120	33.01	-12.21
	QPSK	1865.0	H	257	350	2.76	1 / 119	18.29	21.05	0.127	33.01	-11.96
	QPSK	1882.5	H	260	245	2.65	1 / 80	18.29	20.93	0.124	33.01	-12.08
25 MHz (n25 only)	QPSK	1900.0	H	258	349	2.54	1 / 40	18.17	20.71	0.118	33.01	-12.30
	16-QAM	1865.0	H	257	350	2.76	1 / 119	17.31	20.08	0.102	33.01	-12.93
	$\pi/2$ BPSK	1862.5	H	257	350	2.78	1 / 99	18.29	21.06	0.128	33.01	-11.95
	$\pi/2$ BPSK	1882.5	H	260	245	2.65	1 / 66	18.27	20.92	0.124	33.01	-12.09
	$\pi/2$ BPSK	1902.5	H	258	349	2.54	1 / 33	18.06	20.61	0.115	33.01	-12.41
	QPSK	1862.5	H	257	350	2.78	1 / 131	18.29	<b>21.07</b>	0.128	33.01	-11.94
20 MHz	QPSK	1882.5	H	260	245	2.65	1 / 66	18.25	20.90	0.123	33.01	-12.11
	QPSK	1902.5	H	258	349	2.54	1 / 33	17.92	20.46	0.111	33.01	-12.55
	16-QAM	1862.5	H	257	350	2.78	1 / 99	17.33	20.11	0.103	33.01	-12.90
	$\pi/2$ BPSK	1860.0	H	257	350	2.79	1 / 53	18.21	<b>21.00</b>	0.126	33.01	-12.01
	$\pi/2$ BPSK	1882.5	H	260	245	2.65	1 / 26	18.24	20.89	0.123	33.01	-12.12
	$\pi/2$ BPSK	1905.0	H	258	349	2.54	1 / 79	17.89	20.43	0.110	33.01	-12.58
15 MHz	QPSK	1860.0	H	257	350	2.79	1 / 53	18.20	20.99	0.126	33.01	-12.02
	QPSK	1882.5	H	260	245	2.65	1 / 26	18.16	20.81	0.121	33.01	-12.20
	QPSK	1905.0	H	258	349	2.54	1 / 79	17.72	20.26	0.106	33.01	-12.75
	16-QAM	1860.0	H	257	350	2.79	1 / 53	17.40	20.20	0.105	33.01	-12.81
	$\pi/2$ BPSK	1857.5	H	257	350	2.81	1 / 58	18.19	<b>21.00</b>	0.126	33.01	-12.01
	$\pi/2$ BPSK	1882.5	H	260	245	2.65	1 / 20	18.29	20.94	0.124	33.01	-12.07
10 MHz	$\pi/2$ BPSK	1907.5	H	258	349	2.54	1 / 58	17.91	20.46	0.111	33.01	-12.55
	QPSK	1857.5	H	257	350	2.81	1 / 58	18.12	20.93	0.124	33.01	-12.08
	QPSK	1882.5	H	260	245	2.65	1 / 20	18.24	20.89	0.123	33.01	-12.12
	QPSK	1907.5	H	258	349	2.54	1 / 58	17.68	20.22	0.105	33.01	-12.79
	16-QAM	1857.5	H	257	350	2.81	1 / 58	17.05	19.86	0.097	33.01	-13.15
	$\pi/2$ BPSK	1855.0	H	257	350	2.82	1 / 38	17.82	20.65	0.116	33.01	-12.36
5 MHz	$\pi/2$ BPSK	1882.5	H	260	245	2.65	1 / 26	18.16	<b>20.80</b>	0.120	33.01	-12.21
	$\pi/2$ BPSK	1910.0	H	258	349	2.55	1 / 38	17.79	20.34	0.108	33.01	-12.67
	QPSK	1855.0	H	257	350	2.82	1 / 38	17.67	20.49	0.112	33.01	-12.52
	QPSK	1882.5	H	260	245	2.65	1 / 26	17.93	20.57	0.114	33.01	-12.44
	QPSK	1910.0	H	258	349	2.55	1 / 38	17.66	20.20	0.105	33.01	-12.81
	16-QAM	1855.0	H	257	350	2.82	1 / 38	17.07	19.89	0.098	33.01	-13.12
40 MHz	$\pi/2$ BPSK	1852.5	H	257	350	2.84	1 / 6	17.89	20.73	0.118	33.01	-12.28
	$\pi/2$ BPSK	1882.5	H	260	245	2.65	1 / 6	18.14	<b>20.79</b>	0.120	33.01	-12.22
	$\pi/2$ BPSK	1912.5	H	258	349	2.55	1 / 18	17.91	20.46	0.111	33.01	-12.55
	QPSK	1852.5	H	257	350	2.84	1 / 6	17.91	20.75	0.119	33.01	-12.26
	QPSK	1882.5	H	260	245	2.65	1 / 6	18.11	20.76	0.119	33.01	-12.25
	QPSK	1912.5	H	258	349	2.55	1 / 18	17.57	20.12	0.103	33.01	-12.89
40 MHz	16-QAM	1852.5	H	257	350	2.84	1 / 6	17.04	19.88	0.097	33.01	-13.13
	QPSK (CP-OFDM)	1870.0	H	242	351	2.73	1/1	16.12	18.85	0.077	33.01	-14.16
	QPSK (WCP)	1870.0	H	100	333	2.73	1 / 1	18.20	20.93	0.124	33.01	-12.08

Table 7-19. EIRP Data (NR Band n25/2 – Ant F)

Frequency [MHz]	Mode	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Substitute Level [dBm]	Ant. Gain [dBi]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
1850.20	GSM1900	H	154.00	212.00	23.79	2.86	26.65	0.462	33.01	-6.36
1880.00	GSM1900	H	100.00	216.00	24.85	2.67	27.52	0.564	33.01	-5.50
1909.80	GSM1900	H	148.00	242.00	25.30	2.55	<b>27.85</b>	<b>0.609</b>	33.01	-5.16
1909.80	EDGE1900	H	148.00	242.00	20.95	2.67	<b>23.62</b>	0.230	33.01	-9.40
1909.80	GSM1900 (WCP)	V	393.00	240.00	24.01	2.67	26.68	0.465	33.01	-6.34

Table 7-20. EIRP Data (GPRS PCS – Ant A)

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Frequency [MHz]	Mode	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Substitute Level [dBm]	Ant. Gain [dBi]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
1852.40	WCDMA1900	H	156.00	220.00	19.39	2.84	22.23	0.167	33.01	-10.78
1880.00	WCDMA1900	H	156.00	217.00	20.18	2.67	<b>22.85</b>	<b>0.193</b>	33.01	-10.17
1907.60	WCDMA1900	H	187.00	211.00	17.76	2.54	20.30	0.107	33.01	-12.71
1880.00	WCDMA1900 (WCP)	H	150.00	216.00	18.71	2.67	21.38	0.137	33.01	-11.64

**Table 7-21. EIRP Data (WCDMA PCS – Ant A)**

FCC ID: A3LSMS711U	PART 24 MEASUREMENT REPORT		Approved by: Technical Manager
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## 7.8 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

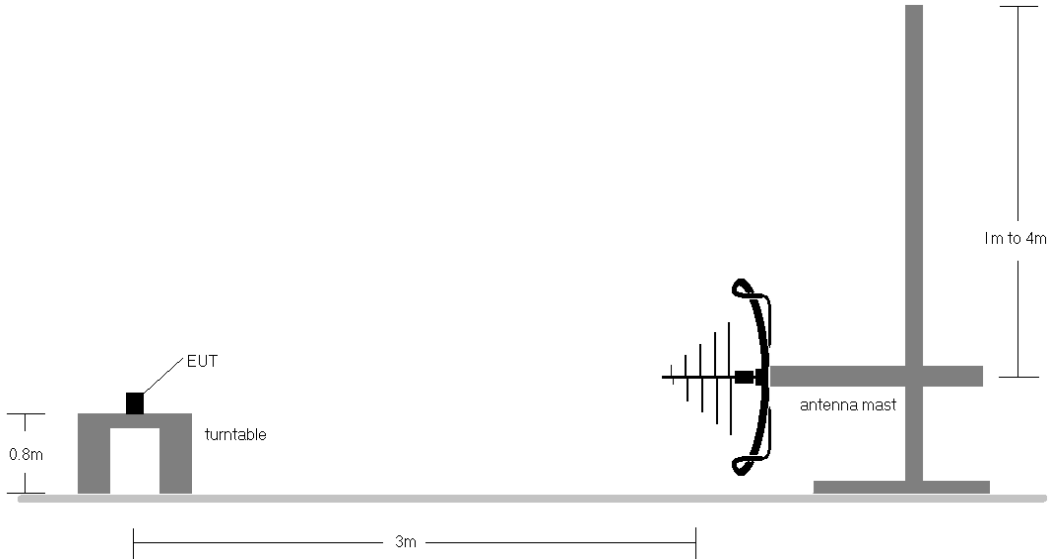
### Test Settings

1. RBW = 100kHz for emissions below 1GHz and 1MHz for emissions above 1GHz
2. VBW  $\geq$  3 x RBW
3. Span = 1.5 times the OBW
4. No. of sweep points  $\geq$  2 x span / RBW
5. Detector = RMS
6. Trace mode = Average (Max Hold for pulsed emissions)
7. The trace was allowed to stabilize

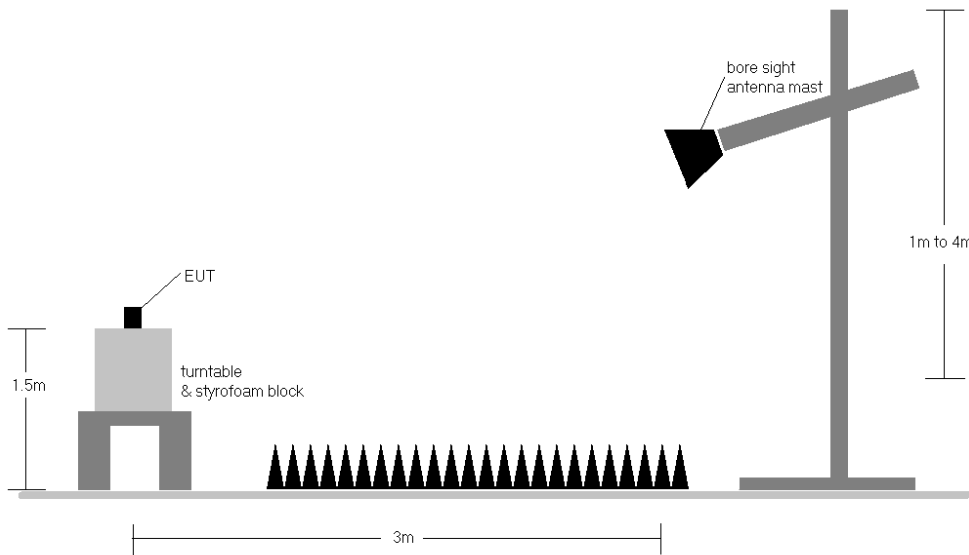
FCC ID: A3LSMS711U	PART 24 MEASUREMENT REPORT		Approved by: Technical Manager
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**Test Setup**

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 >1 GHz**

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**Test Notes**

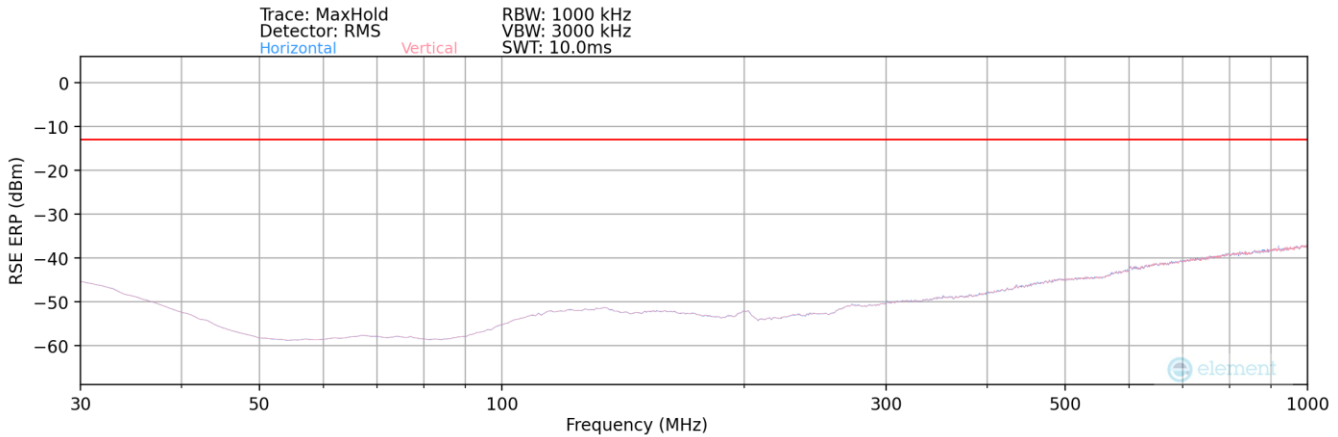
- 1) Field strengths are calculated using the Measurement quantity conversions in ANSI C63.26-2015 Section 5.2.7:
  - a)  $E(\text{dB}\mu\text{V}/\text{m}) = \text{Measured amplitude level (dBm)} + 107 + \text{Cable Loss (dB)} + \text{Antenna Factor (dB/m)}$
  - d)  $\text{EIRP (dBm)} = E(\text{dB}\mu\text{V}/\text{m}) + 20\log D - 104.8$ ; 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) 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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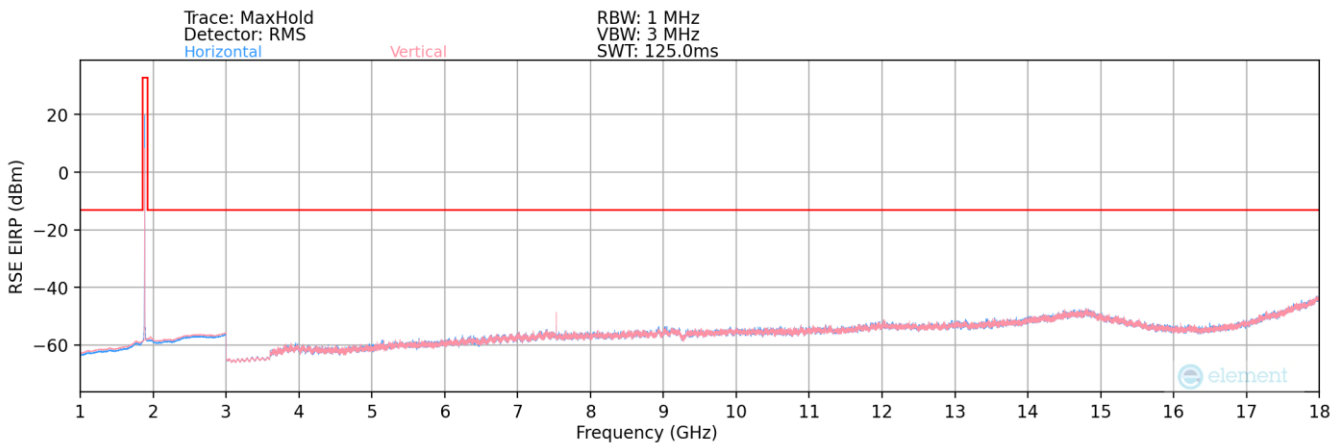




## LTE Band 25/2 – Ant A



**Plot 7-133. Radiated Spurious Plot (LTE Band 25/2 - Ant A - Below 1GHz)**



**Plot 7-134. Radiated Spurious Plot (LTE Band 25/2 - Ant A)**

Bandwidth (MHz):	20
Frequency (MHz):	1882.5
RB / Offset:	1 / 50

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	ERP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
116.98	V	-	-	-85.38	20.23	41.85	-55.55	-13.00	-42.55
214.90	V	-	-	-85.29	17.81	39.52	-57.88	-13.00	-44.88
498.95	V	-	-	-85.18	25.72	47.54	-49.86	-13.00	-36.86

**Table 7-22. Radiated Spurious Data (LTE Band 25/2 -- Ant A - Below 1GHz)**

FCC ID: A3LSMS711U	PART 24 MEASUREMENT REPORT		Approved by: Technical Manager
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Bandwidth (MHz):	20
Frequency (MHz):	1860
RB / Offset:	1 / 50

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
3720.00	V	107	71	-73.07	-2.56	31.37	-63.88	-13.00	-50.88
5580.00	V	107	354	-71.55	0.24	35.69	-59.57	-13.00	-46.57
7440.00	V	254	54	-73.65	4.36	37.71	-57.55	-13.00	-44.55
9300.00	V	-	-	-77.88	7.08	36.20	-59.06	-13.00	-46.06
11160.00	V	-	-	-77.69	8.09	37.40	-57.85	-13.00	-44.85
13020.00	V	-	-	-77.68	10.25	39.57	-55.68	-13.00	-42.68

**Table 7-23. Radiated Spurious Data (LTE Band 25/2 – Low Channel - Ant A)**

Bandwidth (MHz):	20
Frequency (MHz):	1882.5
RB / Offset:	1 / 50

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
3765.00	V	-	-	-74.44	-1.71	30.85	-64.41	-13.00	-51.41
5647.50	V	107	349	-71.42	0.34	35.92	-59.34	-13.00	-46.34
7530.00	V	194	51	-70.17	3.95	40.78	-54.48	-13.00	-41.48
9412.50	V	-	-	-77.19	6.68	36.49	-58.77	-13.00	-45.77
11295.00	V	-	-	-77.62	8.64	38.02	-57.23	-13.00	-44.23
13177.50	V	-	-	-77.96	10.15	39.19	-56.07	-13.00	-43.07

**Table 7-24. Radiated Spurious Data (LTE Band 25/2 – Mid Channel - Ant A)**

Bandwidth (MHz):	20
Frequency (MHz):	1905
RB / Offset:	1 / 50

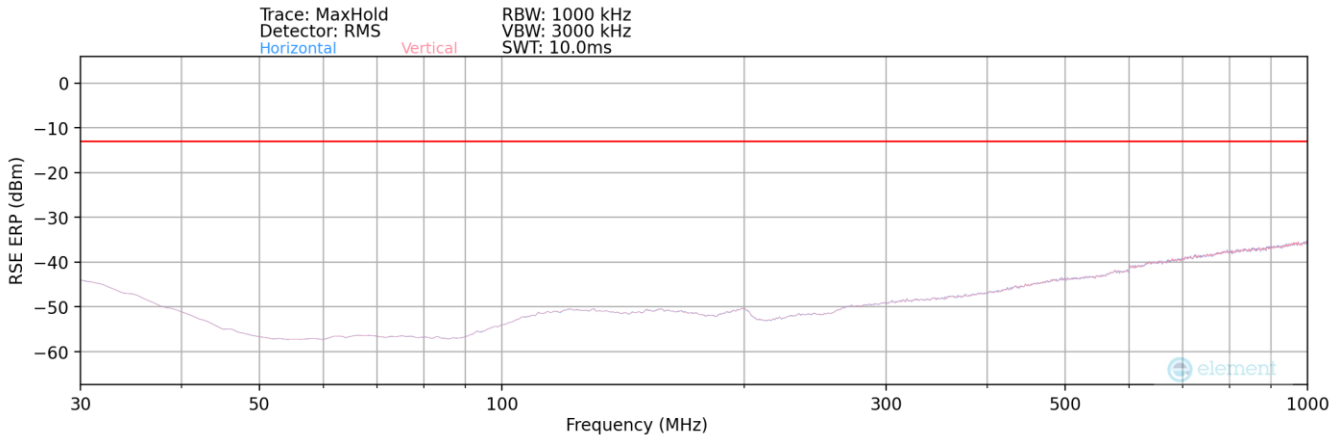
Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
3810.00	V	111	346	-73.29	-1.48	32.23	-63.03	-13.00	-50.03
5715.00	V	131	4	-69.55	0.58	38.03	-57.23	-13.00	-44.23
7620.00	V	257	52	-72.53	4.54	39.01	-56.25	-13.00	-43.25
9525.00	V	-	-	-77.23	6.89	36.66	-58.60	-13.00	-45.60
11430.00	V	-	-	-78.10	8.24	37.14	-58.12	-13.00	-45.12
13335.00	V	-	-	-77.58	10.26	39.68	-55.58	-13.00	-42.58

**Table 7-25. Radiated Spurious Data (LTE Band 25/2 – High Channel - Ant A)**

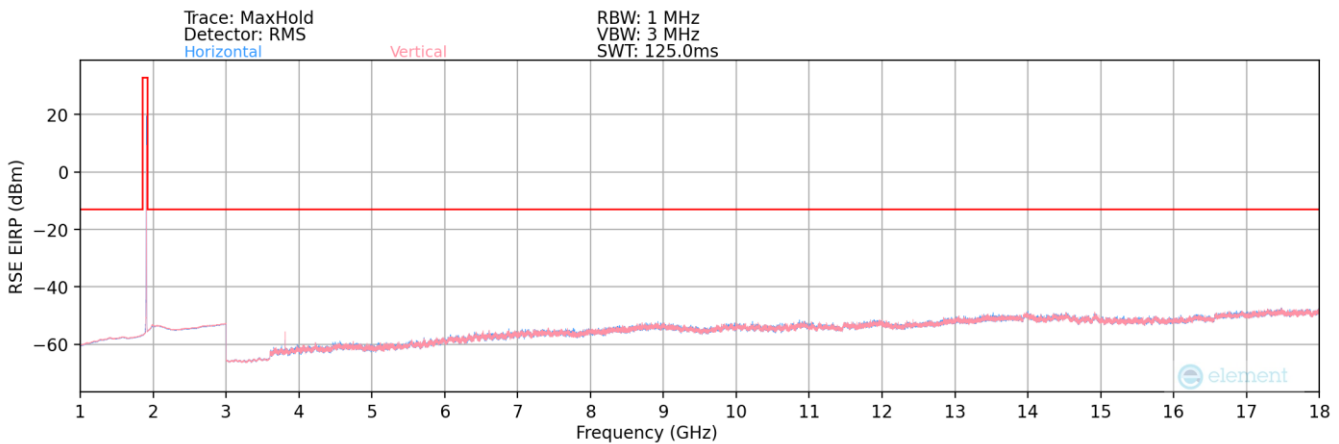
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## LTE Band 25/2 – Ant F



**Plot 7-135. Radiated Spurious Plot Below 1GHz (LTE Band 25/2 – Ant F – Below 1GHz)**



**Plot 7-136. Radiated Spurious Plot (LTE Band 25/2 – Ant F)**

Bandwidth (MHz):	20
Frequency (MHz):	1905
RB / Offset:	1 / 50

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	ERP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
199.20	H	-	-	-82.88	20.08	44.20	-53.21	-13.00	-40.21

**Table 7-26. Radiated Spurious Data (LTE Band 25/2 -- Ant F – Below 1GHz)**

FCC ID: A3LSMS711U	PART 24 MEASUREMENT REPORT		Approved by: Technical Manager
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Bandwidth (MHz):	20
Frequency (MHz):	1860
RB / Offset:	1 / 50

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
3720.00	H	148.00	63.00	-68.64	0.98	39.34	-55.92	-13.00	-42.92
5580.00	H	114.00	52.00	-74.98	4.02	36.04	-59.22	-13.00	-46.22
7440.00	H	-	-	-79.63	8.74	36.11	-59.15	-13.00	-46.15
9300.00	H	-	-	-80.16	11.02	37.86	-57.39	-13.00	-44.39
11160.00	H	-	-	-81.04	11.93	37.89	-57.37	-13.00	-44.37

Table 7-27. Radiated Spurious Data (LTE Band 25/2 – Low Channel - Ant F)

Bandwidth (MHz):	20
Frequency (MHz):	1882.5
RB / Offset:	1 / 50

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
3765.00	H	147.00	63.00	-70.37	0.94	37.57	-57.68	-13.00	-44.68
5647.50	H	110.00	50.00	-73.51	4.26	37.75	-57.51	-13.00	-44.51
7530.00	H	-	-	-79.96	9.00	36.04	-59.22	-13.00	-46.22
9412.50	H	-	-	-81.06	11.72	37.66	-57.59	-13.00	-44.59
11295.00	H	-	-	-81.57	12.37	37.80	-57.46	-13.00	-44.46

Table 7-28. Radiated Spurious Data (LTE Band 25/2 – Mid Channel - Ant F)

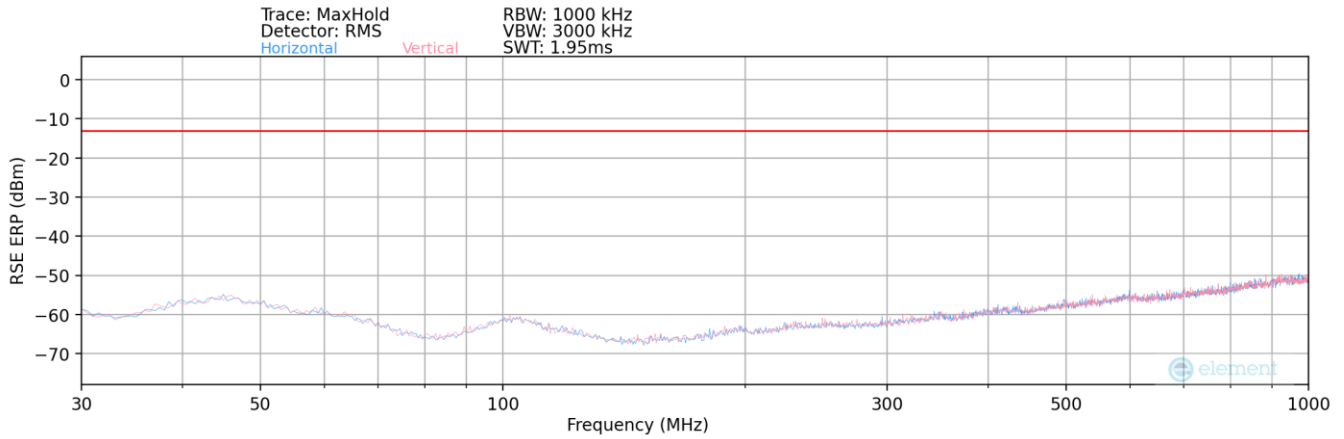
Bandwidth (MHz):	20
Frequency (MHz):	1905
RB / Offset:	1 / 50

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
3810.00	H	140.00	71.00	-67.88	0.97	40.09	-55.17	-13.00	-42.17
5715.00	H	111.00	46.00	-76.22	4.35	35.13	-60.12	-13.00	-47.12
7620.00	H	-	-	-80.05	9.26	36.21	-59.05	-13.00	-46.05
9525.00	H	-	-	-81.62	11.46	36.84	-58.42	-13.00	-45.42
11430.00	H	-	-	-81.89	12.55	37.66	-57.60	-13.00	-44.60

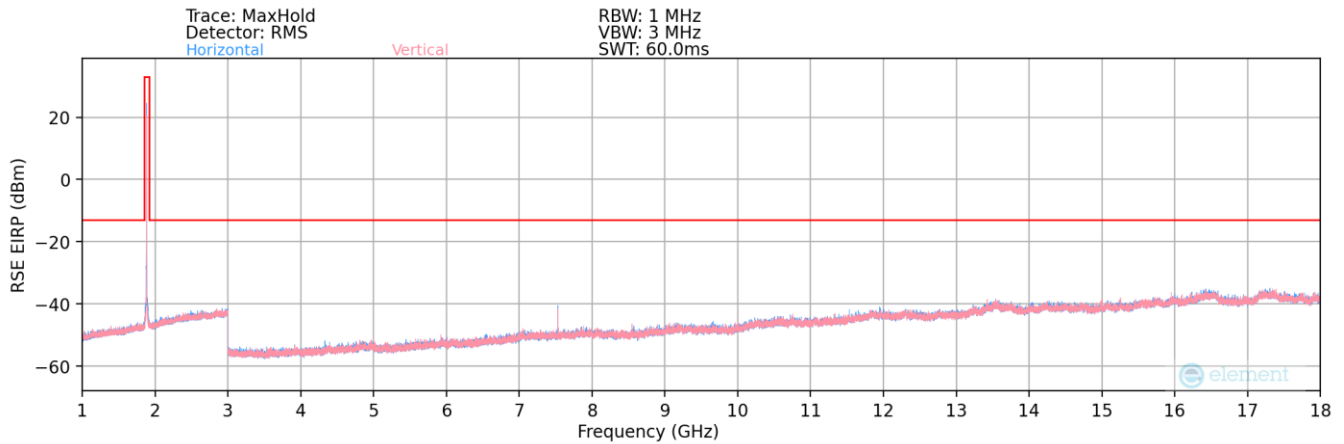
Table 7-29. Radiated Spurious Data (LTE Band 25/2 – High Channel - Ant F)

FCC ID: A3LSMS711U	PART 24 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M230426006-06.A3L	Test Dates: 5/24/2023 - 7/31/2023	EUT Type: Portable Handset	Page 116 of 130

# NR Band n25/2 – Ant A



**Plot 7-137. Radiated Spurious Plot (NR Band n25/2 - Ant A - Below 1GHz)**



**Plot 7-138. Radiated Spurious Plot (NR Band n25/2 - Ant A)**

Bandwidth (MHz):	20
Frequency (MHz):	1905
RB / Offset:	1 / 53
Mode:	Stand Alone

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]
434.23	H	-	-	-74.94	-5.13	26.93	-68.32	-13.00	-55.32

**Table 7-30. Radiated Spurious Data (NR Band n25/2 - Ant A – Below 1GHz)**

FCC ID: A3LSMS711U	PART 24 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M230426006-06.A3L	Test Dates: 5/24/2023 - 7/31/2023	EUT Type: Portable Handset	Page 117 of 130



Bandwidth (MHz):	20
Frequency (MHz):	1860
RB / Offset:	1 / 53
Mode:	Stand Alone

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]
3720.00	H	214	225	-77.07	0.98	30.91	-64.35	-13.00	-51.35
5580.00	H	340	4	-75.49	4.02	35.53	-59.73	-13.00	-46.73
7440.00	H	232	29	-70.78	8.74	44.96	-50.30	-13.00	-37.30
9300.00	H	-	-	-80.14	11.02	37.88	-57.37	-13.00	-44.37
11160.00	H	-	-	-81.88	11.93	37.05	-58.21	-13.00	-45.21
13020.00	H	-	-	-81.07	14.54	40.47	-54.79	-13.00	-41.79

**Table 7-31. Radiated Spurious Data (NR Band n25/2 – Low Channel - Ant A)**

Bandwidth (MHz):	20
Frequency (MHz):	1882.5
RB / Offset:	1 / 53
Mode:	Stand Alone

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]
3765.00	H	208	218	-75.83	0.94	32.11	-63.14	-13.00	-50.14
5647.50	H	197	14	-75.30	4.26	35.96	-59.30	-13.00	-46.30
7530.00	H	236	34	-71.12	9.00	44.88	-50.38	-13.00	-37.38
9412.50	H	-	-	-81.51	11.72	37.21	-58.04	-13.00	-45.04
11295.00	H	-	-	-81.71	12.37	37.66	-57.60	-13.00	-44.60
13177.50	H	-	-	-81.68	14.39	39.71	-55.55	-13.00	-42.55

**Table 7-32. Radiated Spurious Data (NR Band n25/2 – Mid Channel - Ant A)**

Bandwidth (MHz):	20
Frequency (MHz):	1905
RB / Offset:	1 / 53
Mode:	Stand Alone

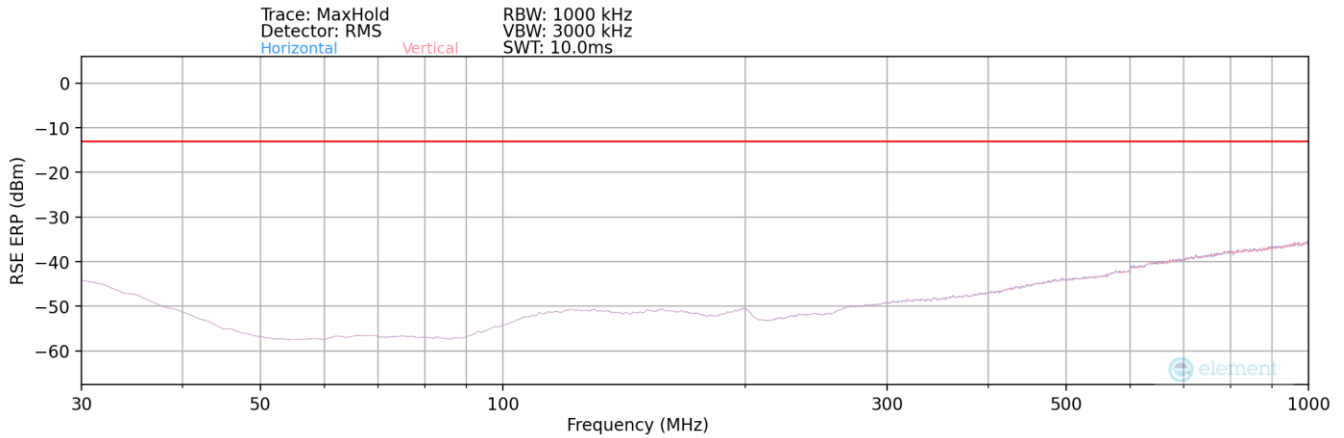
Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
3810.00	H	228	325	-73.50	0.97	34.47	-60.79	-13.00	-47.79
5715.00	H	181	16	-73.04	4.35	38.31	-56.94	-13.00	-43.94
7620.00	H	303	41	-70.89	9.26	45.37	-49.89	-13.00	-36.89
9525.00	H	-	-	-81.49	11.46	36.97	-58.29	-13.00	-45.29
11430.00	H	-	-	-82.02	12.55	37.53	-57.73	-13.00	-44.73
13335.00	H	-	-	-81.83	14.67	39.84	-55.42	-13.00	-42.42

**Table 7-33. Radiated Spurious Data (NR Band n25/2 – High Channel - Ant A)**

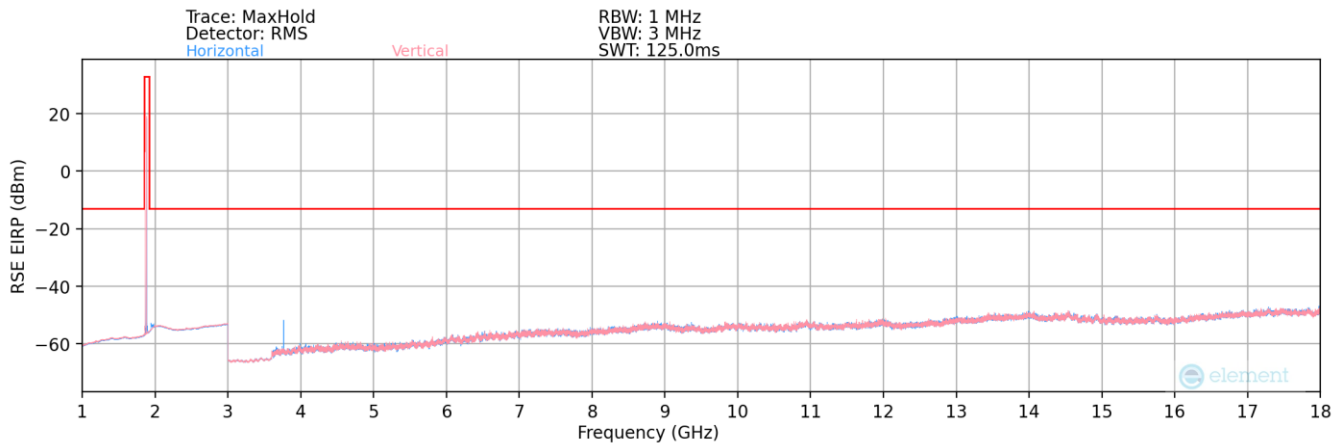
FCC ID: A3LSMS711U	PART 24 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M230426006-06.A3L	Test Dates: 5/24/2023 - 7/31/2023	EUT Type: Portable Handset	Page 118 of 130



## NR Band n25/2 – Ant F



**Plot 7-139. Radiated Spurious Plot (NR Band n25/2 - Ant F – Below 1GHz)**



**Plot 7-140. Radiated Spurious Plot (NR Band n25/2 - Ant F)**

<b>Bandwidth (MHz):</b>	20
<b>Frequency (MHz):</b>	1882.5
<b>RB / Offset:</b>	1 / 53
<b>Mode:</b>	Stand Alone

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	ERP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
989.60	H	-	-	-89.12	32.04	49.92	-47.49	-13.00	-34.49

**Table 7-34. Radiated Spurious Data (NR Band n25/2 - Ant F – Below 1GHz)**

<b>FCC ID:</b> A3LSMS711U	<b>PART 24 MEASUREMENT REPORT</b>		<b>Approved by:</b> Technical Manager
<b>Test Report S/N:</b> 1M230426006-06.A3L	<b>Test Dates:</b> 5/24/2023 - 7/31/2023	<b>EUT Type:</b> Portable Handset	Page 119 of 130



<b>Bandwidth (MHz):</b>	20
<b>Frequency (MHz):</b>	1860
<b>RB / Offset:</b>	1 / 53
<b>Mode:</b>	Stand Alone

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]
3720.00	H	220.00	330.00	-63.47	0.98	44.51	-50.75	-13.00	-37.75
5580.00	H	179.00	59.00	-78.38	4.02	32.64	-62.62	-13.00	-49.62
7440.00	H	167.00	90.00	-78.97	8.74	36.77	-58.49	-13.00	-45.49
9300.00	H	-	-	-80.21	11.02	37.81	-57.44	-13.00	-44.44
11160.00	H	-	-	-81.03	11.93	37.90	-57.36	-13.00	-44.36
13020.00	H	-	-	-81.67	14.54	39.87	-55.39	-13.00	-42.39

**Table 7-35. Radiated Spurious Data (NR Band n25/2 – Low Channel - Ant F)**

<b>Bandwidth (MHz):</b>	20
<b>Frequency (MHz):</b>	1882.5
<b>RB / Offset:</b>	1 / 53
<b>Mode:</b>	Stand Alone

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]
3765.00	H	187.00	337.00	-65.92	0.94	42.02	-53.23	-13.00	-40.23
5647.50	H	169.00	80.00	-78.28	4.26	32.98	-62.28	-13.00	-49.28
7530.00	H	197.00	250.00	-77.00	9.00	39.00	-56.26	-13.00	-43.26
9412.50	H	-	-	-81.59	11.72	37.13	-58.12	-13.00	-45.12
11295.00	H	-	-	-81.73	12.37	37.64	-57.62	-13.00	-44.62
13177.50	H	-	-	-81.86	14.39	39.53	-55.73	-13.00	-42.73

**Table 7-36. Radiated Spurious Data (NR Band n25/2 – Mid Channel - Ant F)**

<b>Bandwidth (MHz):</b>	20
<b>Frequency (MHz):</b>	1905
<b>RB / Offset:</b>	1 / 53
<b>Mode:</b>	Stand Alone

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]
3810.00	H	207.00	341.00	-64.25	0.97	43.72	-51.54	-13.00	-38.54
5715.00	H	145.00	73.00	-77.71	4.35	33.64	-61.61	-13.00	-48.61
7620.00	H	147.00	69.00	-78.15	9.26	38.11	-57.15	-13.00	-44.15
9525.00	H	-	-	-81.53	11.46	36.93	-58.33	-13.00	-45.33
11430.00	H	-	-	-82.06	12.55	37.49	-57.77	-13.00	-44.77
13335.00	H	-	-	-81.80	14.67	39.87	-55.39	-13.00	-42.39

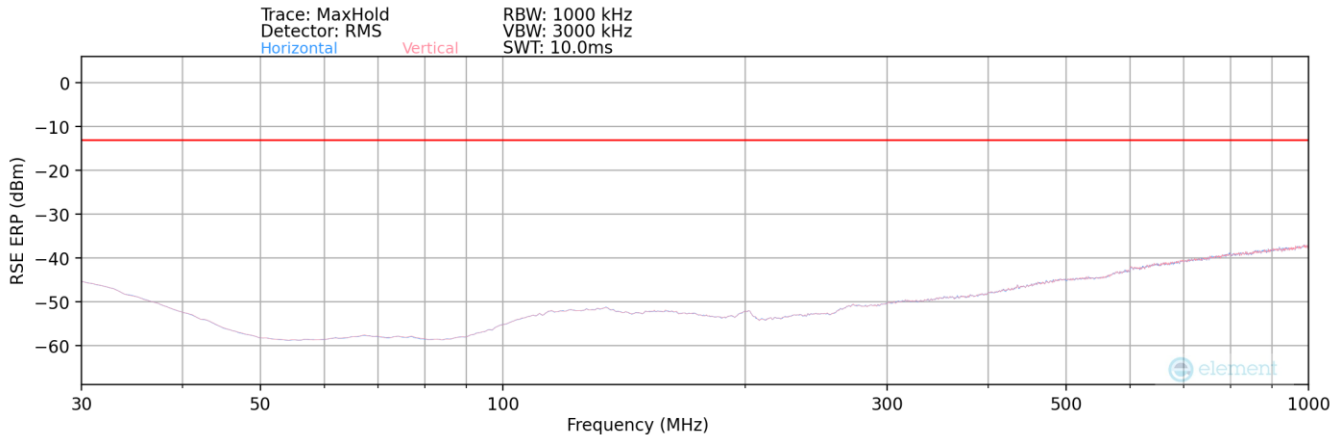
**Table 7-37. Radiated Spurious Data (NR Band n25/2 – High Channel - Ant F)**

<b>FCC ID:</b> A3LSMS711U	<b>PART 24 MEASUREMENT REPORT</b>		<b>Approved by:</b> Technical Manager
<b>Test Report S/N:</b> 1M230426006-06.A3L	<b>Test Dates:</b> 5/24/2023 - 7/31/2023	<b>EUT Type:</b> Portable Handset	Page 120 of 130

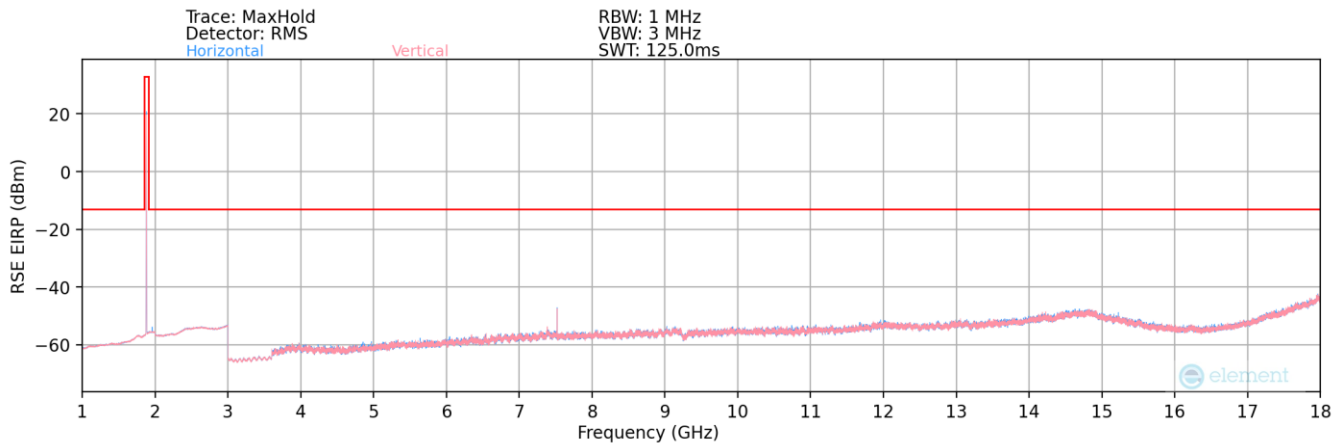




## GSM/GPRS PCS – Ant A



**Plot 7-141. Radiated Spurious Plot (GPRS PCS - Ant A – Below 1GHz)**



**Plot 7-142. Radiated Spurious Plot (GPRS PCS - Ant A)**

<b>Mode:</b>	GPRS 1 Tx Slot
<b>Channel:</b>	661
<b>Frequency (MHz):</b>	1880

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	ERP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
56.36	H	-	-	-82.61	13.96	38.35	-59.06	-13.00	-46.06
164.50	H	-	-	-82.65	19.34	43.69	-53.72	-13.00	-40.72
237.33	H	-	-	-82.58	18.40	42.82	-54.59	-13.00	-41.59
607.53	H	-	-	-82.75	27.11	51.36	-46.05	-13.00	-33.05

**Table 7-38. Radiated Spurious Data (GPRS PCS - Ant A – Below 1GHz)**

<b>FCC ID:</b> A3LSMS711U	<b>PART 24 MEASUREMENT REPORT</b>		<b>Approved by:</b> Technical Manager
<b>Test Report S/N:</b> 1M230426006-06.A3L	<b>Test Dates:</b> 5/24/2023 - 7/31/2023	<b>EUT Type:</b> Portable Handset	Page 121 of 130

Mode:	GPRS 1 Tx Slot
Channel:	512
Frequency (MHz):	1850.2

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dB $\mu$ V/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
3700.40	H	197	353	-70.08	-33.46	3.46	-91.80	-13.00	-78.80
5550.60	H	139	28	-69.51	0.11	37.60	-57.66	-13.00	-44.66
7400.80	H	146	69	-61.59	4.82	50.23	-45.03	-13.00	-32.03
9251.00	H	-	-	-76.05	6.82	37.77	-57.49	-13.00	-44.49
11101.20	H	-	-	-75.83	8.11	39.28	-55.98	-13.00	-42.98
12951.40	H	-	-	-75.27	10.22	41.95	-53.31	-13.00	-40.31

**Table 7-39. Radiated Spurious Data (GPRS PCS – Low Channel - Ant A)**

Mode:	GPRS 1 Tx Slot
Channel:	661
Frequency (MHz):	1880

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dB $\mu$ V/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
3760.00	H	131	350	-69.33	-1.83	35.84	-59.41	-13.00	-46.41
5640.00	H	136	278	-69.00	0.25	38.25	-57.01	-13.00	-44.01
7520.00	H	168	63	-60.05	3.89	50.84	-44.42	-13.00	-31.42
9400.00	H	-	-	-75.41	6.80	38.39	-56.87	-13.00	-43.87
11280.00	H	-	-	-75.70	8.46	39.76	-55.50	-13.00	-42.50
13160.00	H	-	-	-75.98	10.36	41.38	-53.88	-13.00	-40.88

**Table 7-40. Radiated Spurious Data (GPRS PCS – Mid Channel - Ant A)**

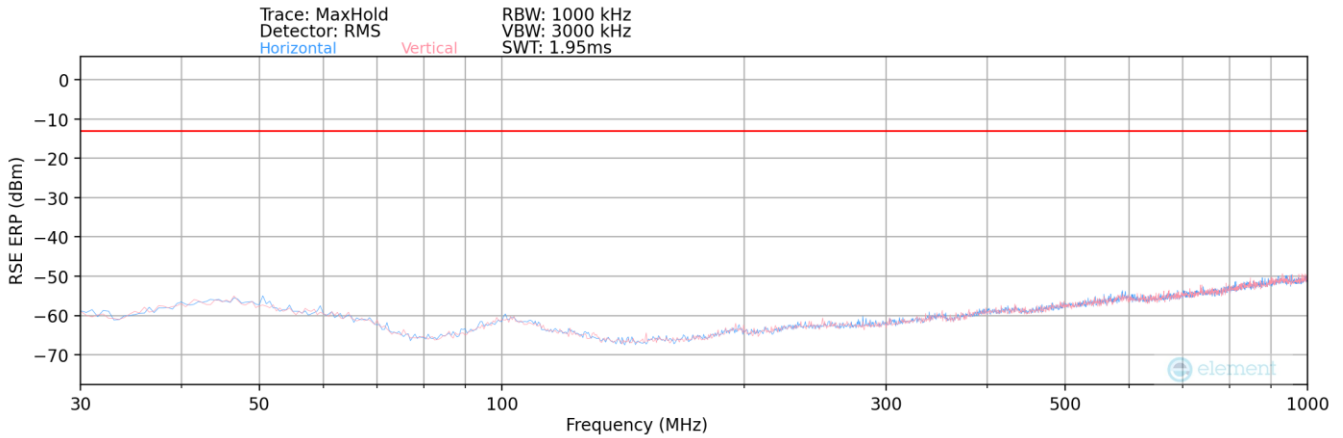
Mode:	GPRS 1 Tx Slot
Channel:	810
Frequency (MHz):	1909.8

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dB $\mu$ V/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
3819.60	H	117	350	-66.08	-1.40	39.52	-55.73	-13.00	-42.73
5729.40	H	150	346	-66.20	0.52	41.32	-53.94	-13.00	-40.94
7639.20	H	158	70	-60.55	4.45	50.90	-44.36	-13.00	-31.36
9549.00	H	-	-	-75.10	6.88	38.78	-56.48	-13.00	-43.48
11458.80	H	-	-	-75.90	8.74	39.84	-55.42	-13.00	-42.42
13368.60	H	-	-	-75.35	10.20	41.85	-53.41	-13.00	-40.41

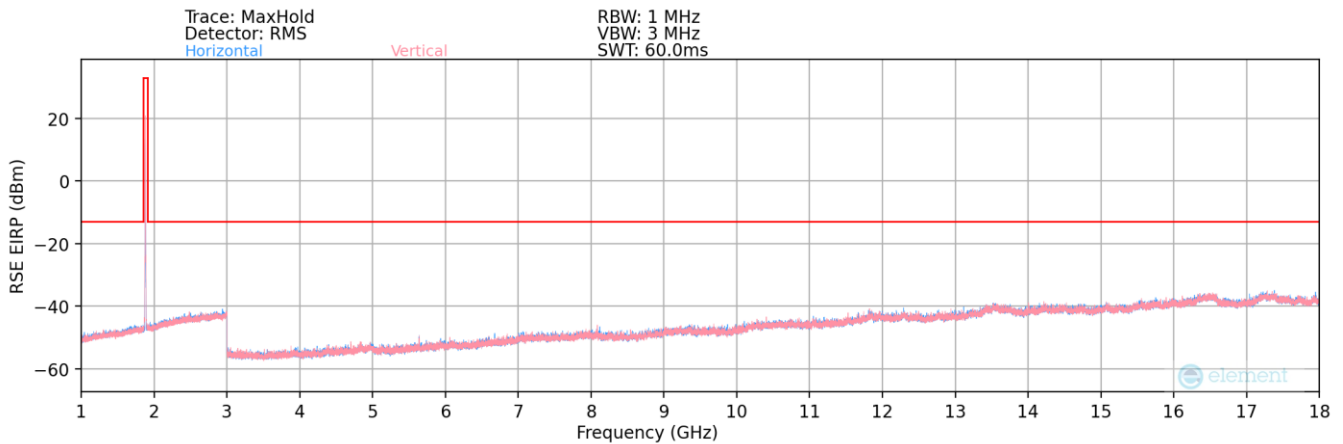
**Table 7-41. Radiated Spurious Data (GPRS PCS – High Channel - Ant A)**

FCC ID: A3LSMS711U	PART 24 MEASUREMENT REPORT		Approved by: Technical Manager
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### WCDMA PCS – Ant A



**Plot 7-143. Radiated Spurious Plot (WCDMA PCS - Ant A – Below 1GHz)**



**Plot 7-144. Radiated Spurious Plot (WCDMA PCS - Ant A)**

<b>Mode:</b>	WCDMA RMC
<b>Channel:</b>	9538
<b>Frequency (MHz):</b>	1907.6

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	ERP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
677.53	H	-	-	-76.73	0.92	31.19	-66.22	-13.00	-53.22

**Table 7-42. Radiated Spurious Data (WCDMA PCS - Ant A – Below 1GHz)**

<b>FCC ID:</b> A3LSMS711U	<b>PART 24 MEASUREMENT REPORT</b>		<b>Approved by:</b> Technical Manager
<b>Test Report S/N:</b> 1M230426006-06.A3L	<b>Test Dates:</b> 5/24/2023 - 7/31/2023	<b>EUT Type:</b> Portable Handset	Page 123 of 130

Mode:	WCDMA RMC
Channel:	9262
Frequency (MHz):	1852.4

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]
3704.80	H	-	-	-80.23	7.37	34.14	-61.12	-13.00	-48.12
5557.20	H	163	71	-77.03	11.21	41.18	-54.08	-13.00	-41.08
7409.60	H	272	349	-80.39	14.93	41.54	-53.72	-13.00	-40.72
9262.00	H	-	-	-82.81	17.27	41.46	-53.79	-13.00	-40.79
11114.40	H	-	-	-83.91	20.61	43.70	-51.56	-13.00	-38.56
12966.80	H	-	-	-84.43	24.10	46.67	-48.59	-13.00	-35.59

**Table 7-43. Radiated Spurious Data (WCDMA PCS – Low Channel - Ant A)**

Mode:	WCDMA RMC
Channel:	9400
Frequency (MHz):	1880

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]
3760.00	H	-	-	-80.32	7.58	34.26	-61.00	-13.00	-48.00
5640.00	H	232	72	-77.05	11.31	41.26	-54.00	-13.00	-41.00
7520.00	H	-	-	-82.40	15.46	40.06	-55.19	-13.00	-42.19
9400.00	H	-	-	-83.41	17.69	41.28	-53.97	-13.00	-40.97
11280.00	H	-	-	-83.91	21.11	44.20	-51.06	-13.00	-38.06

**Table 7-44. Radiated Spurious Data (WCDMA PCS – Mid Channel - Ant A)**

Mode:	WCDMA RMC
Channel:	9538
Frequency (MHz):	1907.6

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]
3815.20	H	-	-	-80.07	7.76	34.69	-60.57	-13.00	-47.57
5722.80	H	225	76	-75.38	11.40	43.02	-52.23	-13.00	-39.23
7630.40	H	259	353	-81.36	15.67	41.31	-53.94	-13.00	-40.94
9538.00	H	-	-	-83.61	17.90	41.29	-53.97	-13.00	-40.97
11445.60	H	-	-	-83.86	21.07	44.21	-51.05	-13.00	-38.05
13353.20	H	-	-	-84.44	24.13	46.69	-48.57	-13.00	-35.57

**Table 7-45. Radiated Spurious Data (WCDMA PCS – High Channel - Ant A)**

FCC ID: A3LSMS711U	PART 24 MEASUREMENT REPORT		Approved by: Technical Manager
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## 7.9 Frequency Stability / Temperature Variation

### Test Overview and Limit

Frequency stability testing is performed in accordance with the guidelines of ANSI C63.26-2015. 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 24, the frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.***

### Test Procedure Used

ANSI C63.26-2015 – Section 5.6

### 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

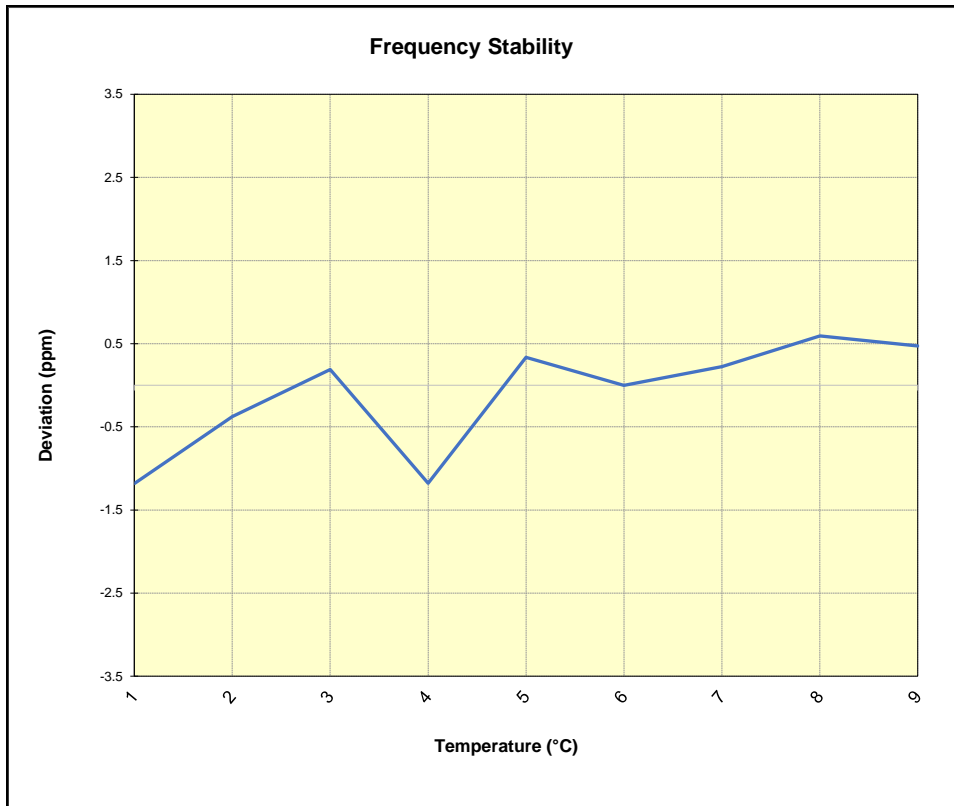
None

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LTE Band 25/2

LTE Band 25/2					
Operating Frequency (Hz):		1,882,500,000			
Ref. Voltage (VDC):		4.43			
Voltage (%)	Power (VDC)	Temp (°C)	Frequency (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	4.43	- 30	1,882,886,026	-2,223	-0.0001181
		- 20	1,882,887,537	-711	-0.0000378
		- 10	1,882,888,608	359	0.0000191
		0	1,882,886,030	-2,219	-0.0001178
		+ 10	1,882,888,884	635	0.0000337
		+ 20 (Ref)	1,882,888,249	0	0.0000000
		+ 30	1,882,888,671	422	0.0000224
		+ 40	1,882,889,365	1,116	0.0000593
Battery Endpoint	3.27	+ 20	1,882,888,200	-49	-0.0000026

Table 7-46. LTE Band 25/2 Frequency Stability Data



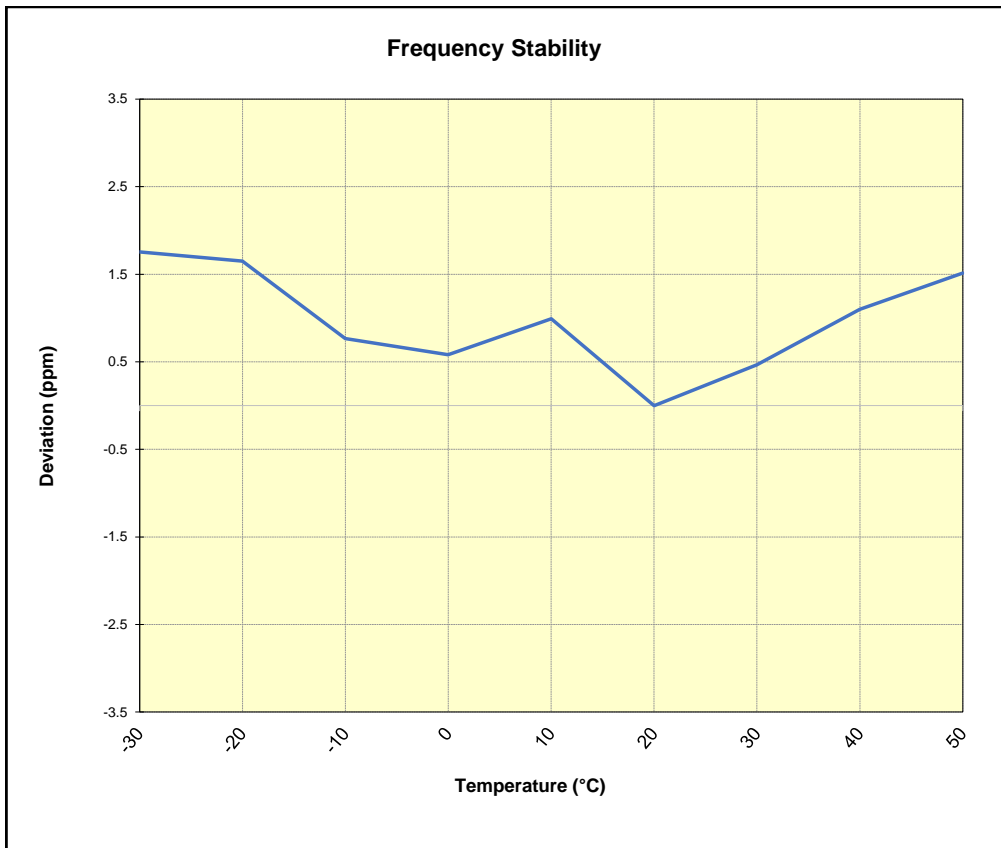
Plot 7-145. LTE Band 25/2 Frequency Stability Chart

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NR Band n25/2

NR Band n25/2					
		Operating Frequency (Hz):		1,882,500,000	
		Ref. Voltage (VDC):		4.43	
Voltage (%)	Power (VDC)	Temp (°C)	Frequency (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	4.43	- 30	1,882,603,678	3,305	0.0001756
		- 20	1,882,603,482	3,109	0.0001651
		- 10	1,882,601,814	1,441	0.0000765
		0	1,882,601,465	1,092	0.0000580
		+ 10	1,882,602,240	1,867	0.0000992
		+ 20 (Ref)	1,882,600,373	0	0.0000000
		+ 30	1,882,601,251	878	0.0000467
		+ 40	1,882,602,444	2,071	0.0001100
Battery Endpoint	3.27	+ 20	1,882,600,300	-73	-0.0000039

Table 7-47. NR Band n25/2 Frequency Stability Data



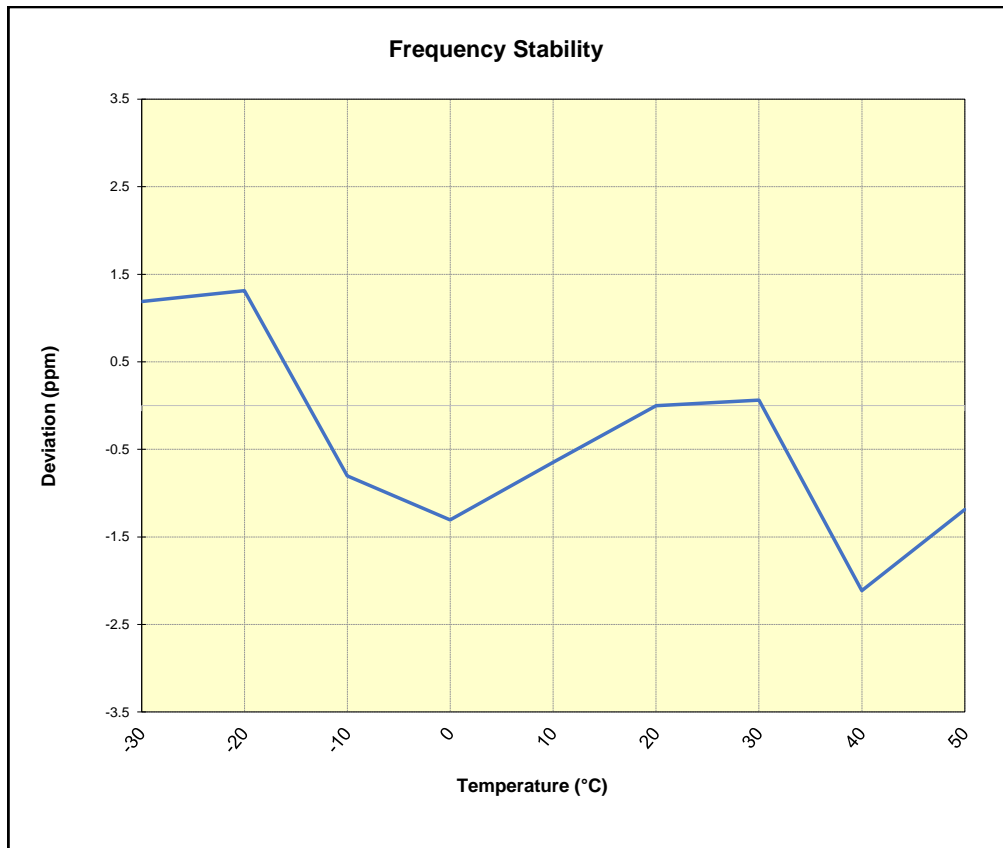
Plot 7-146. NR Band n25/2 Frequency Stability Chart

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**GSM/GPRS PCS**

<b>GSM/GPRS PCS</b>					
Operating Frequency (Hz):		1,880,000,000			
Ref. Voltage (VDC):		4.43			
Voltage (%)	Power (VDC)	Temp (°C)	Frequency (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	4.43	- 30	1,880,224,542	2,233	0.0001188
		- 20	1,880,224,775	2,467	0.0001312
		- 10	1,880,220,799	-1,509	-0.0000803
		0	1,880,219,852	-2,457	-0.0001307
		+ 10	1,880,221,093	-1,215	-0.0000646
		+ 20 (Ref)	1,880,222,308	0	0.0000000
		+ 30	1,880,222,427	118	0.0000063
		+ 40	1,880,218,337	-3,971	-0.0002112
Battery Endpoint	3.27	+ 20	1,880,222,300	-8	-0.0000005

**Table 7-48. GSM/GPRS PCS Frequency Stability Data**



**Plot 7-147. GSM/GPRS PCS Frequency Stability Chart**

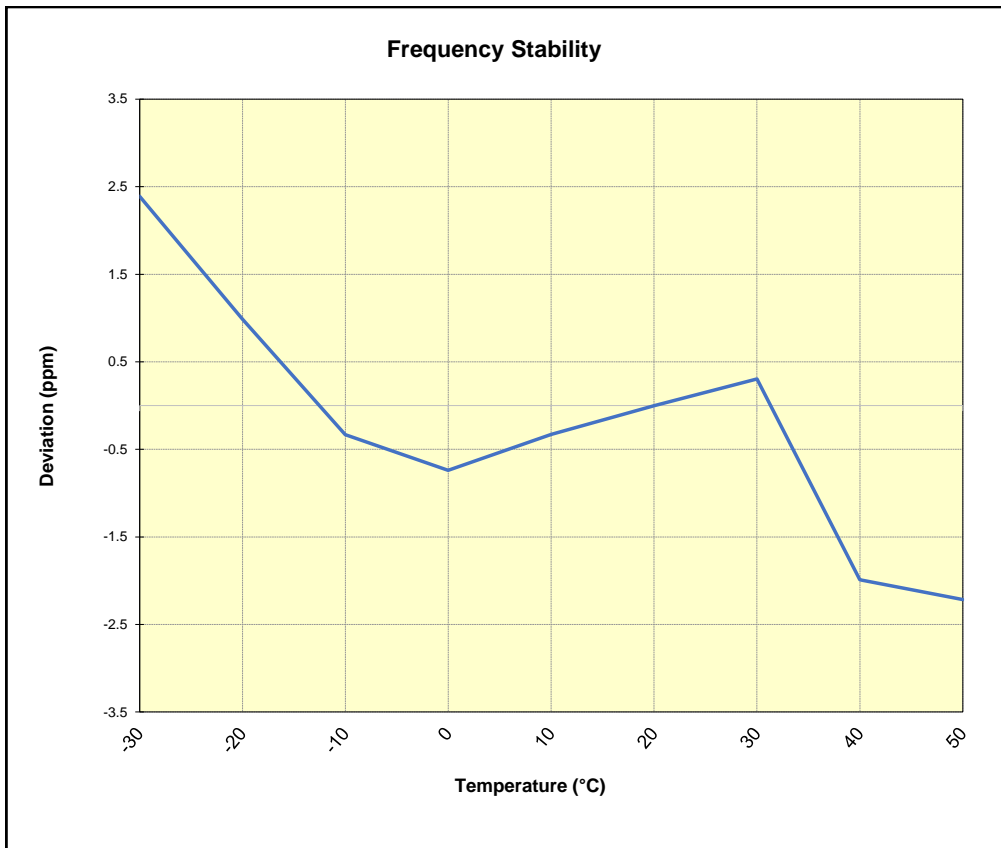
<b>FCC ID:</b> A3LSMS711U	<b>PART 24 MEASUREMENT REPORT</b>		<b>Approved by:</b> Technical Manager
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**WCDMA PCS**

<b>WCDMA PCS</b>					
Operating Frequency (Hz):		1,880,000,000			
Ref. Voltage (VDC):		4.43			
Voltage (%)	Power (VDC)	Temp (°C)	Frequency (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	4.43	- 30	1,880,226,800	4,495	0.0002391
		- 20	1,880,224,164	1,860	0.0000989
		- 10	1,880,221,677	-627	-0.0000333
		0	1,880,220,914	-1,390	-0.0000739
		+ 10	1,880,221,685	-619	-0.0000329
		+ 20 (Ref)	1,880,222,304	0	0.0000000
		+ 30	1,880,222,877	572	0.0000304
		+ 40	1,880,218,565	-3,739	-0.0001989
Battery Endpoint	3.27	+ 20	1,880,222,350	46	0.0000024

**Table 7-49. WCDMA PCS Frequency Stability Data**



**Plot 7-148. WCDMA PCS Frequency Stability Chart**

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## 8.0 CONCLUSION

The data collected relate only to the item(s) tested and show that the **Samsung Portable Handset FCC ID: A3LSMS711U** complies with all the requirements of Part 24 of the FCC rules.

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