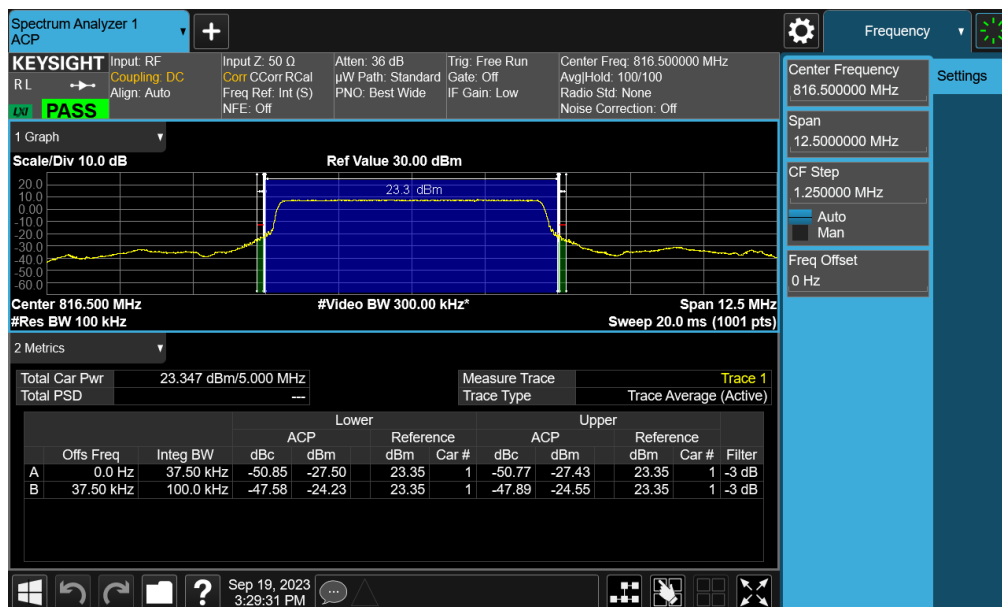
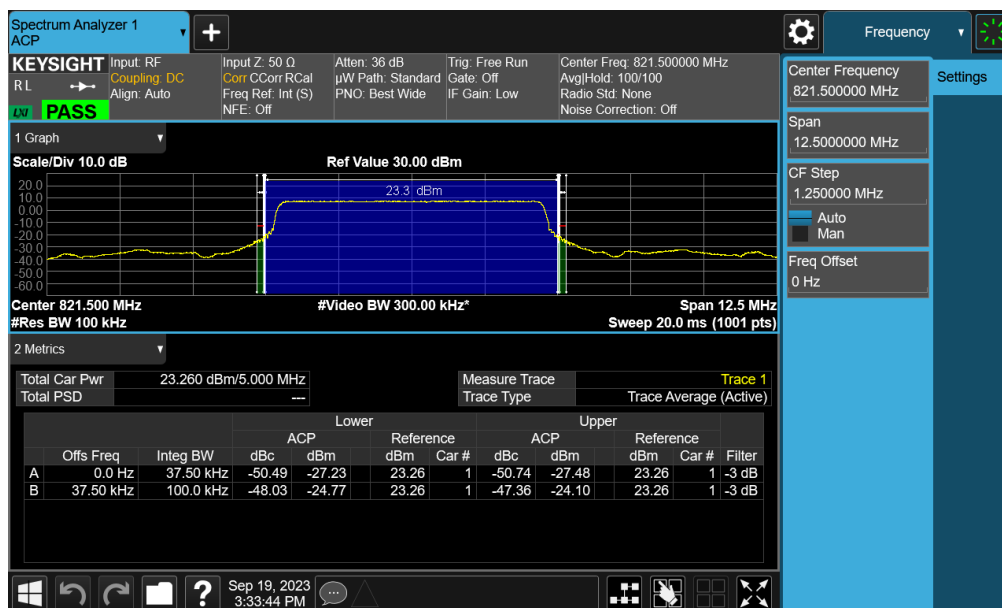


NR Band n26 – Ant A



Plot 7-77. Channel Edge Plot (NR Band n26 - 5MHz BPSK - Low Channel – Ant A)



Plot 7-78. Channel Edge Plot (NR Band n26 - 5MHz BPSK - High Channel – Ant A)

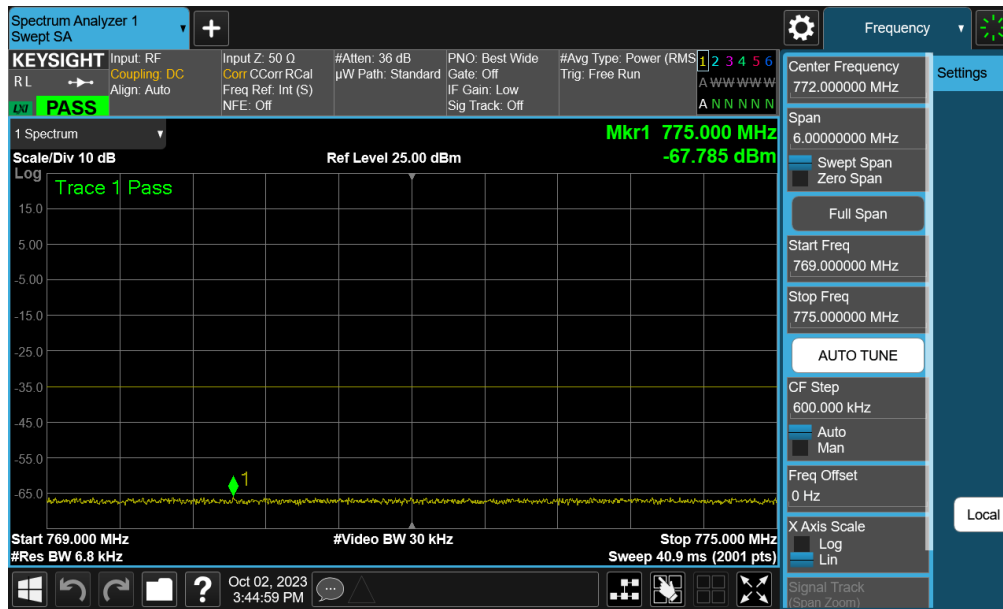
FCC ID: A3LSMS928U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
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Mode	Bandwidth	Channel	Test Case	Level [dBm]	Limit [dBm]	Margin [dB]
LTE-B26	15 MHz	Mid	Band Edge	-35.32	-20	-15.32
	10 MHz	Mid	Band Edge	-33.92	-20	-13.92
	5 MHz	Low	Band Edge	-28.21	-20	-8.21
		High	Band Edge	-27.98	-20	-7.98
	3 MHz	Low	Band Edge	-25.10	-20	-5.10
		High	Band Edge	-24.64	-20	-4.64
	1.4 MHz	Low	Band Edge	-24.15	-20	-4.15
		High	Band Edge	-23.32	-20	-3.32
LTE-B14	10 MHz	Low	Band Edge	-27.57	-13	-14.57
		Low EmMask	Band Edge	-65.59	-35	-30.59
		High	Band Edge	-28.80	-13	-15.80
		High EmMask	Band Edge	-44.66	-35	-9.66
	5 MHz	Low	Band Edge	-21.64	-13	-9.13
		Low EmMask	Band Edge	-67.79	-35	-33.03
		High	Band Edge	-21.69	-13	-8.69
		High EmMask	Band Edge	-44.94	-35	-9.94
NR-n26	20 MHz	Mid	Band Edge	-39.02	-20	-19.02
	15 MHz	Mid	Band Edge	-36.36	-20	-16.36
	10 MHz	Mid	Band Edge	-33.45	-20	-13.45
	5 MHz	Low	Band Edge	-28.54	-20	-8.54
		High	Band Edge	-27.43	-20	-7.43

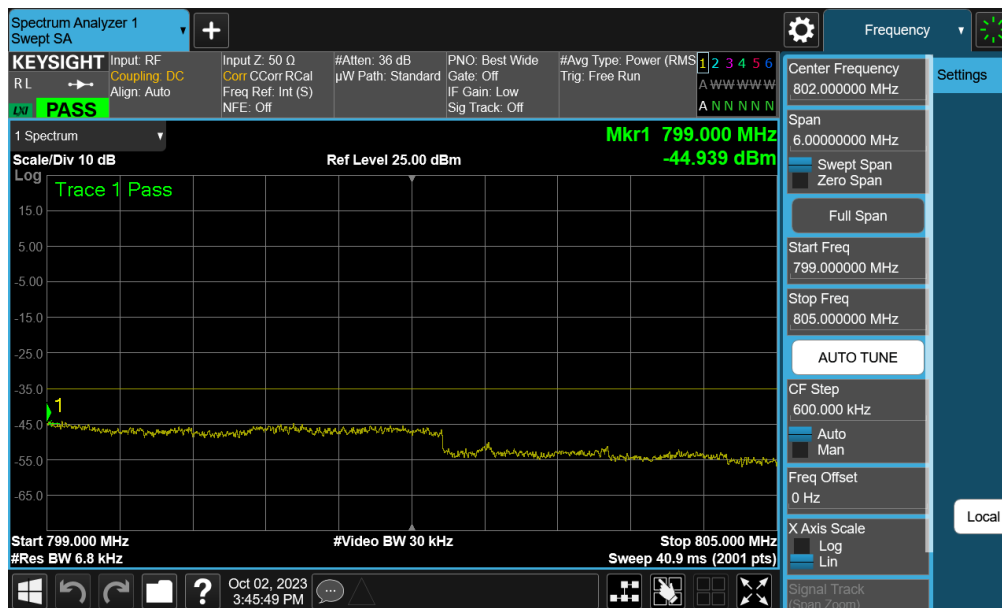
Table 7-13. Band Edge Test Results – Ant E

FCC ID: A3LSMS928U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
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LTE Band 14 – Ant E

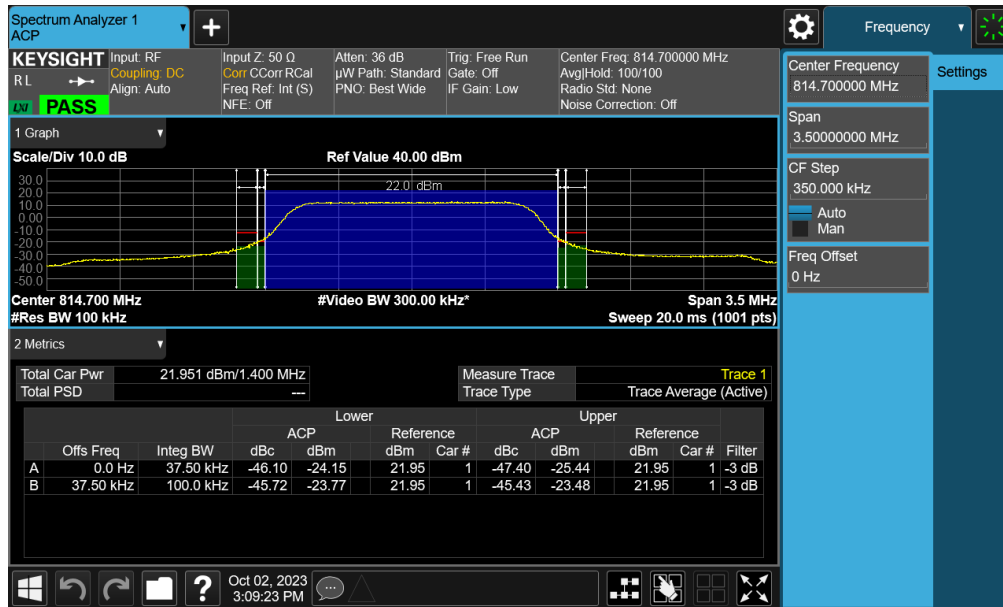


FCC ID: A3LSMS928U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
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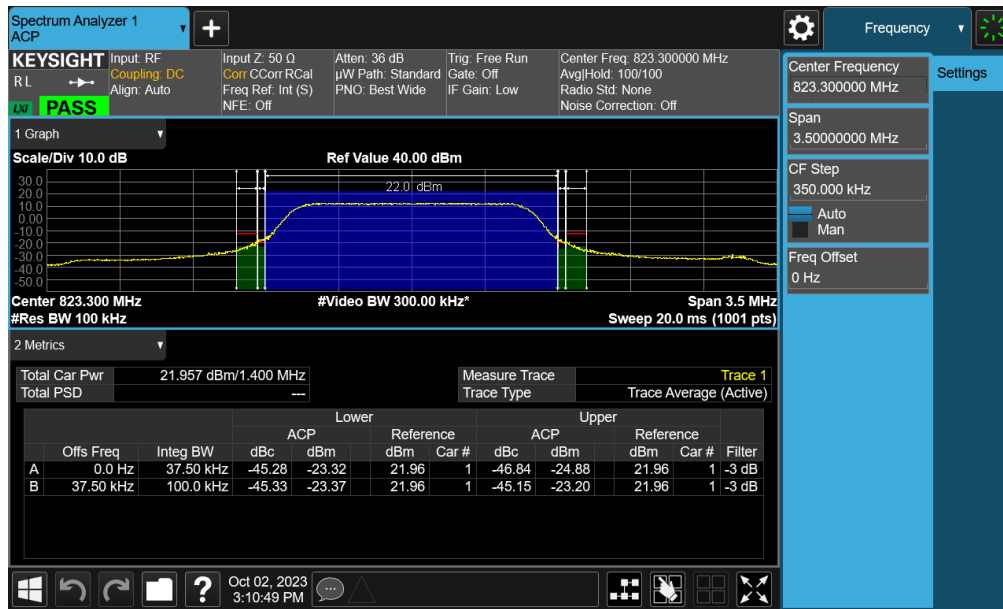


FCC ID: A3LSMS928U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
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LTE Band 26 – Ant E



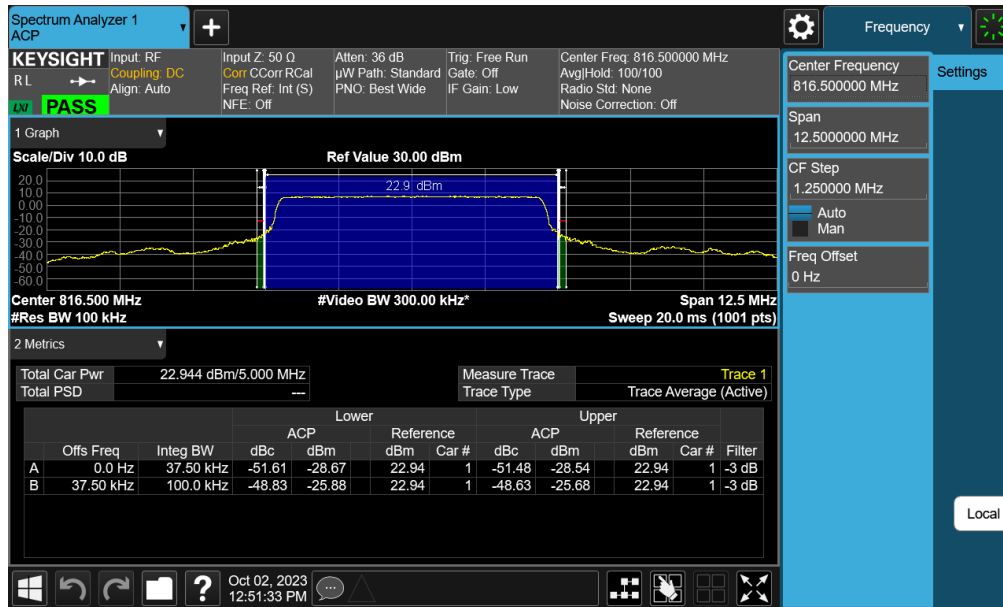
Plot 7-83. Channel Edge Plot (LTE Band 26 - 1.4MHz QPSK - Low Channel – Ant E)



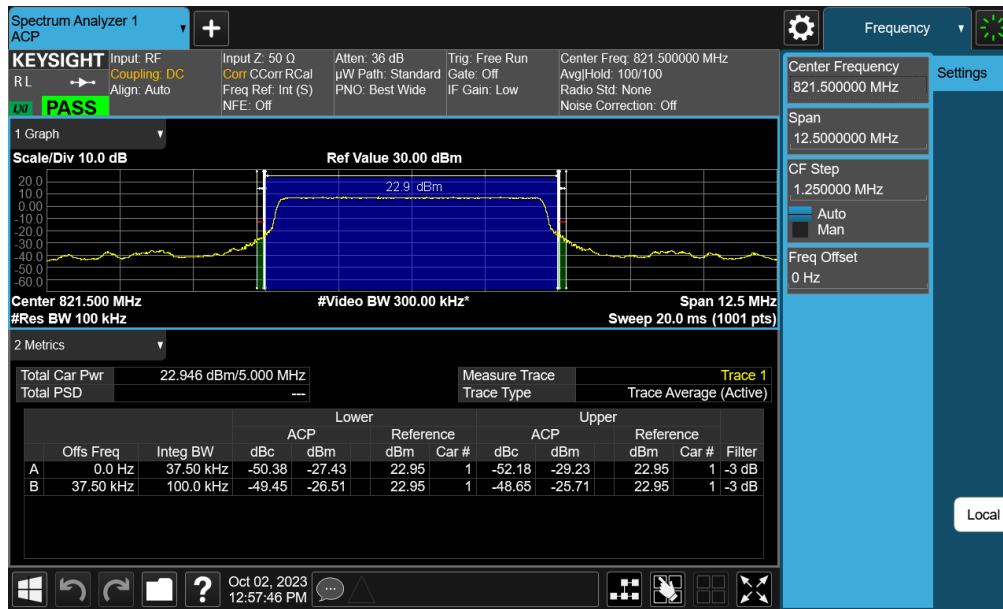
Plot 7-84. Channel Edge Plot (LTE Band 26 - 1.4MHz QPSK - High Channel – Ant E)

FCC ID: A3LSMS928U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
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NR Band n26 – Ant E



Plot 7-85. Channel Edge Plot (NR Band n26 - 5MHz BPSK - Low Channel – Ant E)



Plot 7-86. Channel Edge Plot (NR Band n26 - 5MHz BPSK - High Channel – Ant E)

FCC ID: A3LSMS928U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
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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.
2. RBW = 1 – 5% of the expected OBW
3. VBW $\geq 3 \times$ RBW
4. Span = 1.5 times the OBW
5. No. of sweep points $\geq 2 \times$ span / RBW
6. Detector = RMS
7. Trigger is set to "free run" for signals with continuous operation with the sweep times set to "auto".
8. The integration bandwidth was roughly set equal to the measured OBW of the signal for signals with continuous operation.
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.

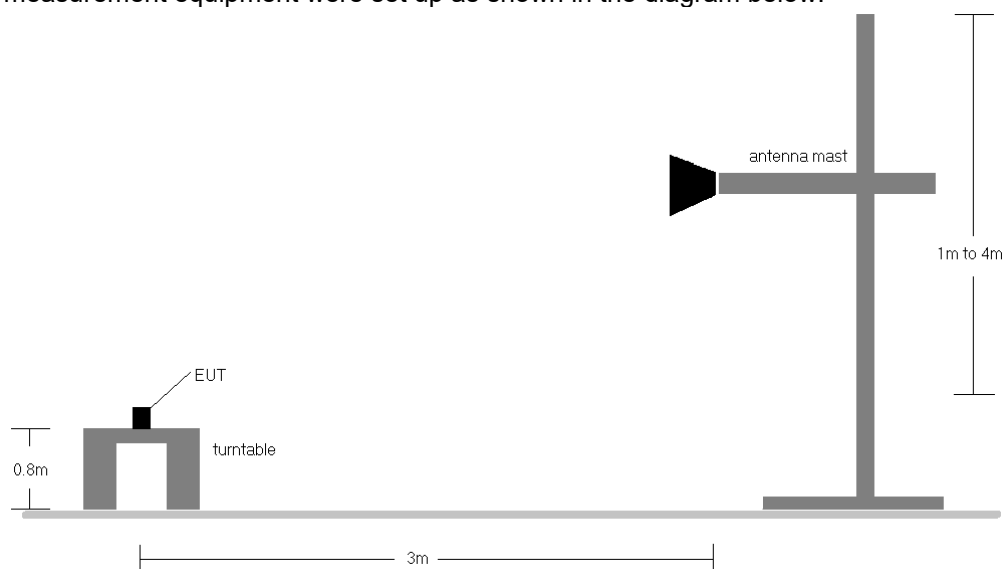


Figure 7-5. Radiated Test Setup <1GHz

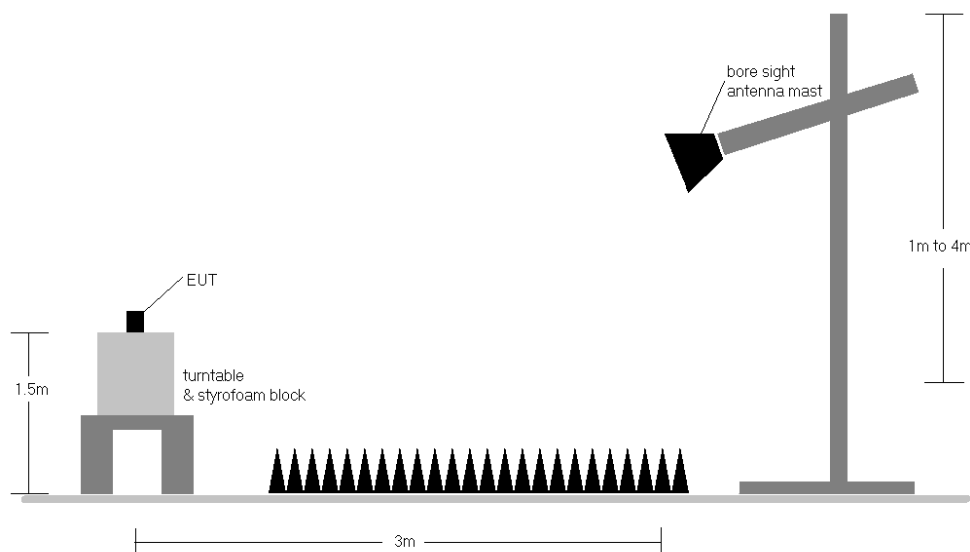


Figure 7-6. Radiated Test Setup > 1GHz

Test Notes

- 1) 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.
- 2) This unit was tested with its standard battery.
- 3) 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]
10 MHz	QPSK	793.00	V	149	132	1.15	1 / 0	22.21	21.21	0.132	34.77	-13.57	23.36	0.217	36.92	-13.57
	16-QAM	793.00	V	149	132	1.15	1 / 0	21.29	20.29	0.107	34.77	-14.49	22.44	0.175	36.92	-14.49
5 MHz	QPSK	790.50	V	149	132	1.15	1 / 12	22.15	21.15	0.130	34.77	-13.62	23.30	0.214	36.92	-13.62
	QPSK	793.00	V	149	132	1.15	1 / 0	22.15	21.14	0.130	34.77	-13.63	23.29	0.213	36.92	-13.63
	QPSK	795.50	V	149	132	1.14	1 / 24	22.19	21.18	0.131	34.77	-13.59	23.33	0.215	36.92	-13.59
	16-QAM	795.50	V	149	132	1.14	1 / 24	21.10	20.09	0.102	34.77	-14.68	22.24	0.168	36.92	-14.68
10 MHz	QPSK (Opposite Pol.)	795.50	H	115	68	1.15	1 / 0	17.66	16.66	0.046	34.77	-18.12	18.81	0.076	36.92	-18.12
	QPSK (WCP)	790.50	V	145	127	1.15	1 / 0	19.36	18.36	0.068	34.77	-16.42	20.51	0.112	36.92	-16.42

Table 7-87. ERP Data (LTE Band 14 – 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]	ERP [dBm]	ERP [Watts]	ERP Limit [dBm]	Margin [dB]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
10 MHz	QPSK	793.00	H	118	244	1.15	1 / 0	19.37	18.37	0.069	34.77	-16.41	20.52	0.113	36.92	-16.41
	16-QAM	793.00	H	118	244	1.15	1 / 0	18.41	17.41	0.055	34.77	-17.37	19.56	0.090	36.92	-17.37
5 MHz	QPSK	790.50	H	118	244	1.15	1 / 0	19.30	18.30	0.068	34.77	-16.47	20.45	0.111	36.92	-16.47
	QPSK	793.00	H	118	244	1.15	1 / 12	19.37	18.36	0.069	34.77	-16.41	20.51	0.113	36.92	-16.41
	QPSK	795.50	H	118	244	1.14	1 / 24	19.27	18.26	0.067	34.77	-16.51	20.41	0.110	36.92	-16.51
	16-QAM	793.00	H	118	244	1.15	1 / 12	18.46	17.46	0.056	34.77	-17.31	19.61	0.091	36.92	-17.31
10 MHz	QPSK (Opposite Pol.)	795.50	V	133	286	1.15	1 / 0	18.73	17.73	0.059	34.77	-17.05	19.88	0.097	36.92	-17.05
	QPSK (WCP)	790.50	H	114	250	1.15	1 / 0	18.66	17.66	0.058	34.77	-17.12	19.81	0.096	36.92	-17.12

Table 7-88. ERP Data (LTE Band 14 – Ant E)

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]
15 MHz	QPSK	821.50	V	138	252	1.24	1 / 74	25.33	24.42	0.277	38.45	-14.03	26.57	0.454	40.61	-14.04
	16-QAM	821.50	V	138	252	1.24	1 / 74	24.32	23.41	0.219	38.45	-15.04	25.56	0.360	40.61	-15.05
10 MHz	QPSK	819.00	V	138	252	1.23	1 / 0	25.46	24.54	0.284	38.45	-13.91	26.69	0.466	40.61	-13.92
	16-QAM	819.00	V	138	252	1.23	1 / 0	24.62	23.70	0.234	38.45	-14.76	25.85	0.384	40.61	-14.76
5 MHz	QPSK	816.50	V	138	252	1.21	1 / 12	25.41	24.47	0.280	38.45	-13.98	26.62	0.459	40.61	-13.99
	QPSK	821.50	V	138	252	1.24	1 / 12	25.33	24.42	0.276	38.45	-14.03	26.57	0.454	40.61	-14.04
	16-QAM	816.50	V	138	252	1.21	1 / 12	24.44	23.50	0.224	38.45	-14.95	25.65	0.367	40.61	-14.96
	QPSK	815.50	V	138	252	1.21	1 / 7	25.50	24.56	0.286	38.45	-13.89	26.71	0.468	40.61	-13.90
3 MHz	QPSK	822.50	V	138	252	1.24	1 / 14	25.29	24.38	0.274	38.45	-14.07	26.53	0.450	40.61	-14.07
	16-QAM	815.50	V	138	252	1.21	1 / 7	24.50	23.56	0.227	38.45	-14.89	25.71	0.372	40.61	-14.90
	QPSK	814.70	V	138	252	1.20	1 / 5	25.32	24.38	0.274	38.45	-14.07	26.53	0.449	40.61	-14.08
	QPSK	823.30	V	138	252	1.25	1 / 5	25.26	24.35	0.272	38.45	-14.10	26.50	0.447	40.61	-14.10
15 MHz	QPSK	814.70	V	138	252	1.20	1 / 5	24.29	23.34	0.216	38.45	-15.11	25.49	0.354	40.61	-15.12
	QPSK (Opposite Pol.)	816.50	H	224	61	1.24	1 / 74	22.73	21.82	0.152	38.45	-16.63	23.97	0.249	40.61	-16.64
	QPSK (WCP)	821.50	V	138	234	1.24	1 / 74	22.19	21.28	0.134	38.45	-17.17	23.43	0.220	40.61	-17.18

Table 7-89. ERP Data (LTE Band 26 – 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]	ERP [dBm]	ERP [Watts]	ERP Limit [dBm]	Margin [dB]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
15 MHz	QPSK	821.50	H	112	242	1.24	1 / 74	20.66	19.75	0.094	38.45	-18.70	21.90	0.155	40.61	-18.71
	16-QAM	821.50	H	112	242	1.24	1 / 74	19.58	18.67	0.074	38.45	-19.78	20.82	0.121	40.61	-19.79
10 MHz	QPSK	819.00	H	112	242	1.23	1 / 0	20.60	19.68	0.093	38.45	-18.78	21.83	0.152	40.61	-18.78
	16-QAM	819.00	H	112	242	1.23	1 / 0	19.52	18.60	0.072	38.45	-19.86	20.75	0.119	40.61	-19.86
5 MHz	QPSK	816.50	H	112	242	1.21	1 / 12	20.70	19.76	0.095	38.45	-18.69	21.91	0.155	40.61	-18.69
	QPSK	821.50	H	112	242	1.24	1 / 12	20.65	19.74	0.094	38.45	-18.71	21.89	0.155	40.61	-18.72
	16-QAM	816.50	H	112	242	1.21	1 / 12	19.60	18.66	0.073	38.45	-19.79	20.81	0.121	40.61	-19.80
	QPSK	815.50	H	112	242	1.21	1 / 7	20.60	19.66	0.093	38.45	-18.79	21.81	0.152	40.61	-18.79
3 MHz	QPSK	822.50	H	112	242	1.24	1 / 7	20.67	19.76	0.095	38.45	-18.69	21.91	0.155	40.61	-18.70
	16-QAM	822.50	H	112	242	1.24	1 / 7	19.46	18.55	0.072	38.45	-19.90	20.70	0.118	40.61	-19.90
	QPSK	814.70	H	112	242	1.20	1 / 3	20.62	19.67	0.093	38.45	-18.78	21.82	0.152	40.61	-18.79
	QPSK	823.30	H	112	242	1.25	1 / 3	20.53	19.63	0.092	38.45	-18.82	21.78	0.151	40.61	-18.83
15 MHz	QPSK	814.70	H	112	242	1.20	1 / 3	19.53	18.59	0.072	38.45	-19.96	20.74	0.119	40.61	-19.97
	QPSK (Opposite Pol.)	816.50	V	138	307	1.24	1 / 74	20.65	19.74	0.094	38.45	-18.71	21.89	0.155	40.61	-18.72
	QPSK (WCP)	821.50	H	115	245	1.24	1 / 74	20.85	19.94	0.099	38.45	-18.51	22.09	0.162	40.61	-18.52

Table 7-90. ERP Data (LTE Band 26 – Ant E)

FCC ID: A3LSMS928U	MEASUREMENT REPORT (CERTIFICATION)			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]	ERP [dBm]	ERP [Watts]	ERP Limit [dBm]	Margin [dB]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
20 MHz	$\pi/2$ BPSK	824.00	V	158	114	1.25	1 / 53	21.72	20.82	0.121	38.45	-17.63	22.97	0.198	40.61	-17.63
	QPSK	824.00	V	158	114	1.25	1 / 1	21.66	20.76	0.119	38.45	-17.69	22.91	0.196	40.61	-17.69
	16-QAM	824.00	V	158	114	1.25	1 / 53	20.68	19.78	0.095	38.45	-18.67	21.93	0.156	40.61	-18.67
15 MHz	$\pi/2$ BPSK	821.50	V	158	114	1.24	1 / 77	21.70	20.79	0.120	38.45	-17.66	22.94	0.197	40.61	-17.67
	QPSK	821.50	V	158	114	1.24	1 / 77	21.64	20.73	0.118	38.45	-17.72	22.88	0.194	40.61	-17.73
	16-QAM	821.50	V	158	114	1.24	1 / 77	20.66	19.75	0.094	38.45	-18.70	21.90	0.155	40.61	-18.71
10 MHz	$\pi/2$ BPSK	819.00	V	158	114	1.23	1 / 50	21.68	20.76	0.119	38.45	-17.70	22.91	0.195	40.61	-17.70
	QPSK	819.00	V	158	114	1.23	1 / 50	21.61	20.69	0.117	38.45	-17.77	22.84	0.192	40.61	-17.77
	16-QAM	819.00	V	158	114	1.23	1 / 50	20.63	19.71	0.093	38.45	-18.75	21.86	0.153	40.61	-18.75
5 MHz	$\pi/2$ BPSK	816.50	V	158	114	1.21	1 / 1	22.01	21.07	0.128	38.45	-17.38	23.22	0.210	40.61	-17.39
	$\pi/2$ BPSK	821.50	V	158	114	1.24	1 / 12	21.76	20.84	0.121	38.45	-17.61	22.99	0.199	40.61	-17.61
	QPSK	816.50	V	158	114	1.21	1 / 1	21.90	20.96	0.125	38.45	-17.49	23.11	0.205	40.61	-17.49
	QPSK	821.50	V	158	114	1.24	1 / 1	21.57	20.66	0.116	38.45	-17.79	22.81	0.191	40.61	-17.80
20 MHz	16-QAM	816.50	V	158	114	1.21	1 / 1	20.87	19.93	0.098	38.45	-18.52	22.08	0.162	40.61	-18.52
	QPSK (CP-OFDM)	824.00	V	158	132	1.25	1 / 53	18.62	17.72	0.059	38.45	-20.73	19.87	0.097	40.61	-20.74
	QPSK (Opp. Pol.)	824.00	H	124	73	1.25	1 / 53	17.93	17.03	0.050	38.45	-21.42	19.18	0.083	40.61	-21.43
	QPSK (WCP)	824.00	V	154	128	1.25	1 / 53	18.56	17.66	0.058	38.45	-20.79	19.81	0.096	40.61	-20.80

Table 7-91. ERP Data (NR Band n26 – 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]	ERP [dBm]	ERP [Watts]	ERP Limit [dBm]	Margin [dB]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
20 MHz	$\pi/2$ BPSK	824.00	H	158	110	1.25	1 / 53	21.00	20.10	0.102	38.45	-18.35	22.25	0.168	40.61	-18.36
	QPSK	824.00	H	158	110	1.25	1 / 53	20.91	20.01	0.100	38.45	-18.44	22.16	0.164	40.61	-18.45
	16-QAM	824.00	H	158	110	1.25	1 / 53	19.85	18.95	0.079	38.45	-19.50	21.10	0.129	40.61	-19.51
15 MHz	$\pi/2$ BPSK	821.50	H	158	110	1.24	1 / 77	20.95	20.04	0.101	38.45	-18.41	22.19	0.165	40.61	-18.42
	QPSK	821.50	H	158	110	1.24	1 / 77	20.73	19.82	0.096	38.45	-18.63	21.97	0.157	40.61	-18.64
	16-QAM	821.50	H	158	110	1.24	1 / 77	19.93	19.02	0.080	38.45	-19.43	21.17	0.131	40.61	-19.44
10 MHz	$\pi/2$ BPSK	819.00	H	158	110	1.23	1 / 1	20.97	20.04	0.101	38.45	-18.41	22.19	0.166	40.61	-18.41
	QPSK	819.00	H	158	110	1.23	1 / 1	20.82	19.90	0.098	38.45	-18.56	22.05	0.160	40.61	-18.56
	16-QAM	819.00	H	158	110	1.23	1 / 1	19.99	19.07	0.081	38.45	-19.38	21.22	0.132	40.61	-19.39
5 MHz	$\pi/2$ BPSK	816.50	H	158	110	1.21	1 / 39	20.98	20.04	0.101	38.45	-18.41	22.19	0.166	40.61	-18.42
	$\pi/2$ BPSK	821.50	H	158	110	1.24	1 / 1	20.97	20.06	0.101	38.45	-18.39	22.21	0.166	40.61	-18.40
	QPSK	816.50	H	158	110	1.21	1 / 77	20.77	19.83	0.096	38.45	-18.62	21.98	0.158	40.61	-18.62
	QPSK	821.50	H	158	110	1.24	1 / 39	20.84	19.93	0.098	38.45	-18.52	22.08	0.161	40.61	-18.53
20 MHz	16-QAM	821.50	H	158	110	1.24	1 / 39	20.00	19.09	0.081	38.45	-19.36	21.24	0.133	40.61	-19.37
	QPSK (CP-OFDM)	824.00	H	158	110	1.23	1 / 53	19.27	18.35	0.068	38.45	-20.11	20.50	0.112	40.61	-20.11
	QPSK (Opp. Pol.)	824.00	V	132	306	1.23	1 / 53	16.99	16.07	0.040	38.45	-22.39	18.22	0.066	40.61	-22.39
	QPSK (WCP)	824.00	H	164	118	1.23	1 / 53	20.01	19.09	0.081	38.45	-19.37	21.24	0.133	40.61	-19.37

Table 7-92. ERP Data (NR Band n26 – Ant E)

FCC ID: A3LSMS928U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2308210092-07.A3L	Test Dates: 9/11/2023 - 10/11/2023	EUT Type: Portable Handset	Page 76 of 96

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

FCC ID: A3LSMS928U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
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Test Setup

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

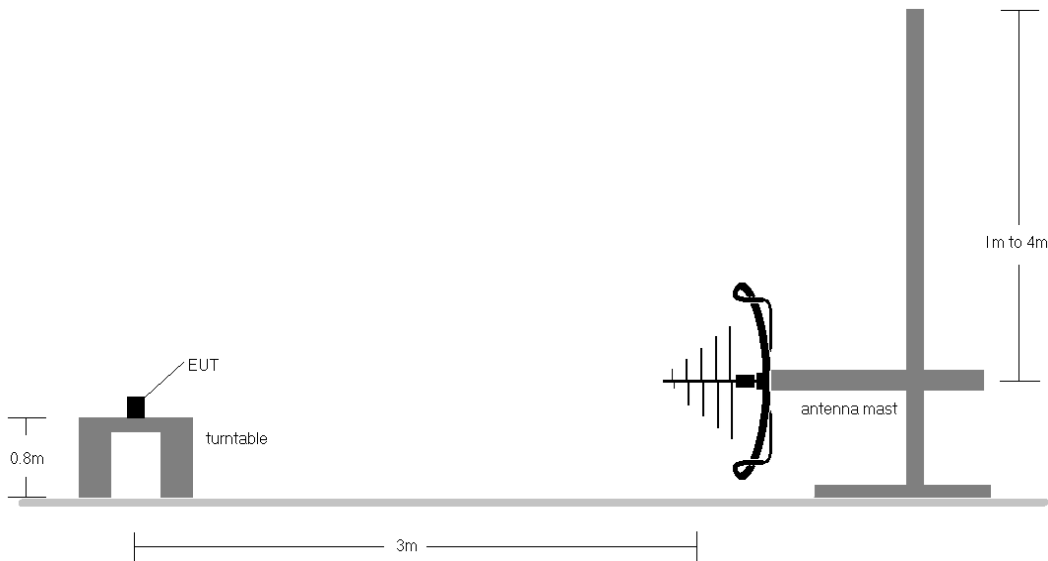


Figure 7-7. Test Instrument & Measurement Setup < 1GHz

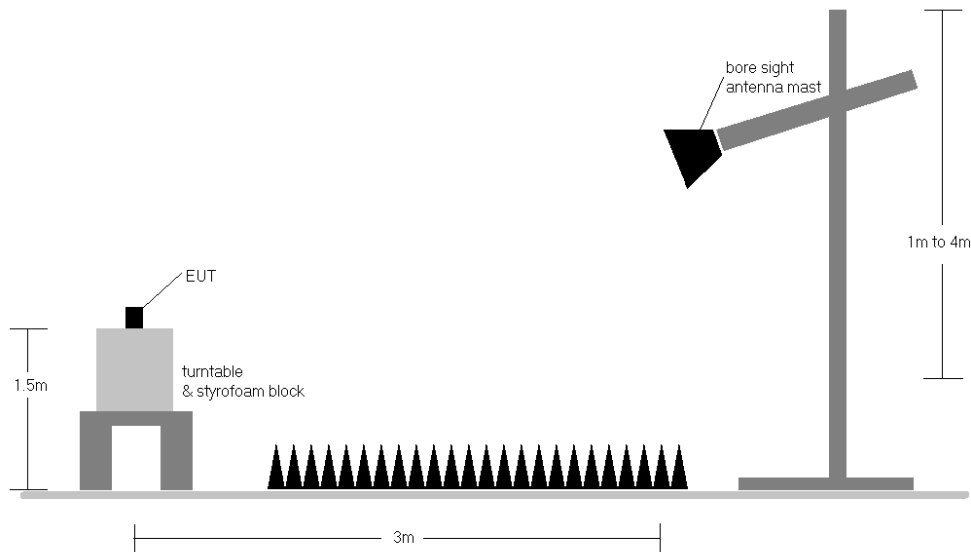


Figure 7-8. Test Instrument & Measurement Setup >1 GHz

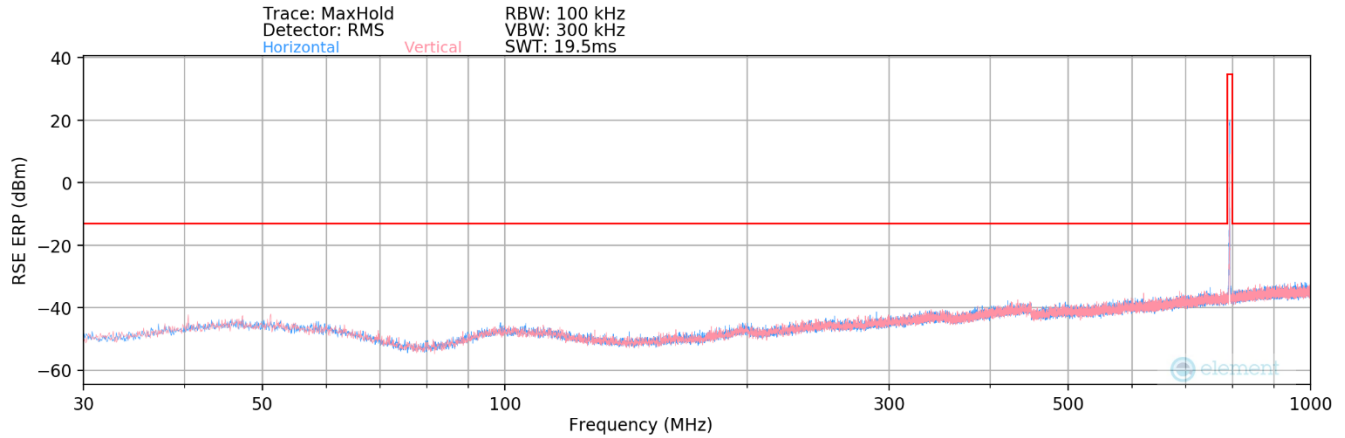
FCC ID: A3LSMS928U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2308210092-07.A3L	Test Dates: 9/11/2023 - 10/11/2023	EUT Type: Portable Handset	Page 78 of 96

Test Notes

- 1) Field strengths are calculated using the Measurement quantity conversions in ANSI C63.26-2015 Section 5.2.7:
 - a) $E(\text{dB}\mu\text{V/m}) = \text{Measured amplitude level (dBm)} + 107 + \text{Cable Loss (dB)} + \text{Antenna Factor (dB/m)}$
 - b) $\text{EIRP (dBm)} = E(\text{dB}\mu\text{V/m}) + 20\log D - 104.8$; where D is the measurement distance in meters.
- 2) 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.
- 3) This unit was tested with its standard battery.
- 4) The spectrum is measured from 9kHz to the 10th harmonic of the fundamental frequency of the transmitter. The worst-case emissions are reported.
- 5) 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.
- 6) The "-" shown in the following RSE tables are used to denote a noise floor measurement.
- 7) 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: A3LSMS928U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
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LTE Band 14 – Ant A

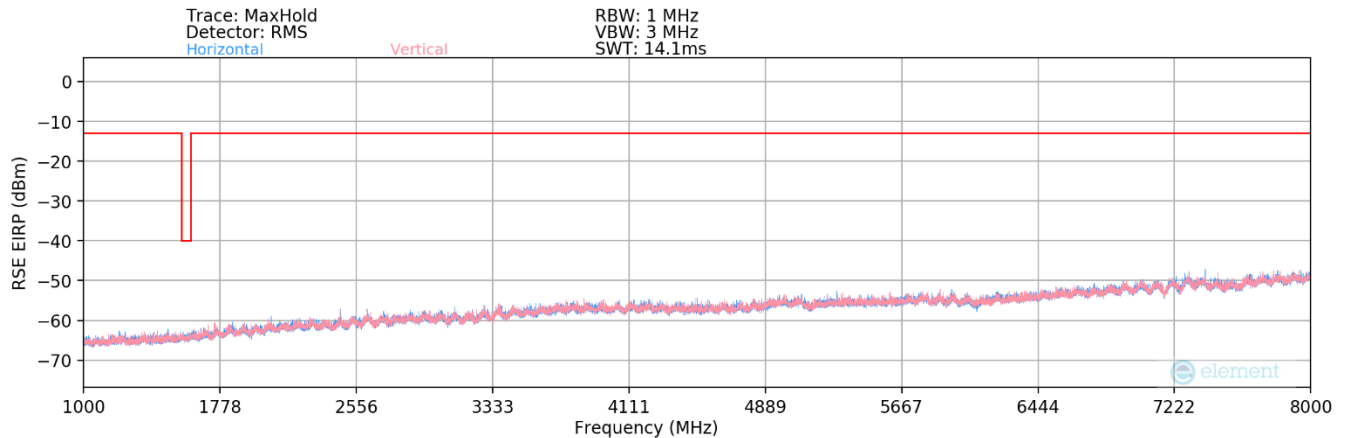


Plot 7-93. Radiated Spurious Plot Below 1GHz (LTE Band 14 – Ant A)

Bandwidth (MHz):	10
Frequency (MHz):	793
RB Config (Size / 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]	ERP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
975.23	H	-	-	-82.07	30.98	55.91	-41.50	-13.00	-28.50

Table 7-14. Radiated Spurious Data Below 1GHz (LTE Band 14 – Ant A)



Plot 7-94. Radiated Spurious Plot Above 1GHz (LTE Band 14 – Ant A)

FCC ID: A3LSMS928U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2308210092-07.A3L	Test Dates: 9/11/2023 - 10/11/2023	EUT Type: Portable Handset	Page 80 of 96

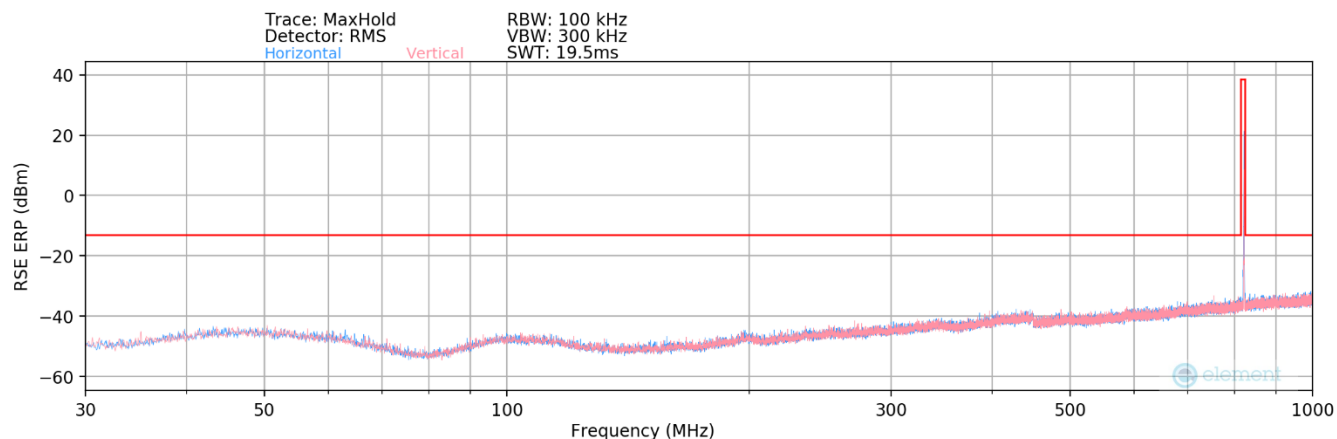
Bandwidth (MHz):	10
Frequency (MHz):	793
RB Config (Size / Offset):	1 / 25

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]
1586.00	H	-	-	-75.09	-9.26	22.65	-72.61	-40.00	-32.61
2379.00	H	-	-	-75.29	-5.49	26.22	-69.04	-13.00	-56.04
3172.00	H	-	-	-75.43	-3.01	28.56	-66.70	-13.00	-53.70

Table 7-15. Radiated Spurious Data Above 1GHz (LTE Band 14 – Mid Channel – Ant A)

FCC ID: A3LSMS928U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2308210092-07.A3L	Test Dates: 9/11/2023 - 10/11/2023	EUT Type: Portable Handset	Page 81 of 96

LTE Band 26 – Ant A

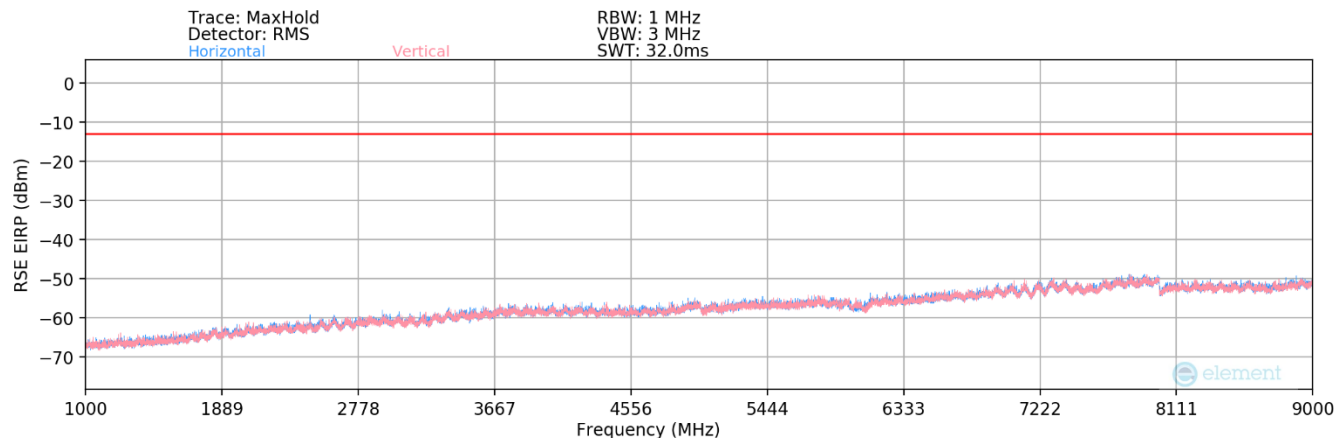


Plot 7-95. Radiated Spurious Plot Below 1GHz (LTE Band 26 – Ant A)

Bandwidth (MHz):	15
Frequency (MHz):	821.5
RB Config (Size / Offset):	1 / 37

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	ERP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
958.90	H	-	-	-81.98	30.67	55.69	-41.72	-13.00	-28.72

Table 7-16. Radiated Spurious Data Below 1GHz (LTE Band 26 – Ant A)



Plot 7-96. Radiated Spurious Plot Above 1GHz (LTE Band 26 – Ant A)

FCC ID: A3LSMS928U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2308210092-07.A3L	Test Dates: 9/11/2023 - 10/11/2023	EUT Type: Portable Handset	Page 82 of 96

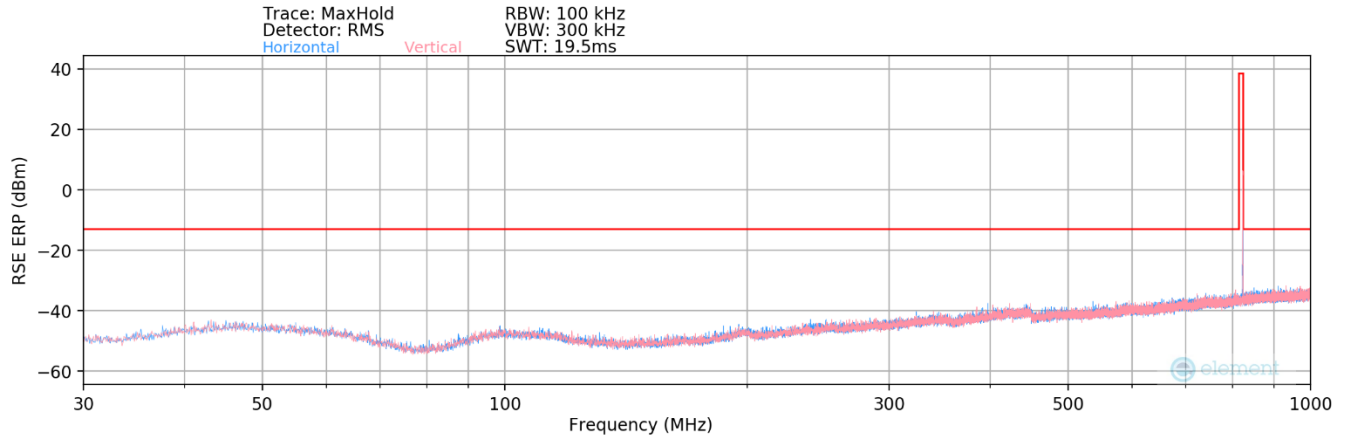
Bandwidth (MHz):	15
Frequency (MHz):	821.5
RB Config (Size / Offset):	1 / 37

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
1643.00	H	-	-	-74.93	-9.20	22.87	-72.39	-13.00	-59.39
2464.50	H	-	-	-75.49	-5.35	26.16	-69.09	-13.00	-56.09
3286.00	H	-	-	-75.50	-2.26	29.24	-66.02	-13.00	-53.02

Table 7-17. Radiated Spurious Data Above 1GHz (LTE Band 26 – Mid Channel – Ant A)

FCC ID: A3LSMS928U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2308210092-07.A3L	Test Dates: 9/11/2023 - 10/11/2023	EUT Type: Portable Handset	Page 83 of 96

NR Band n26 – Ant A

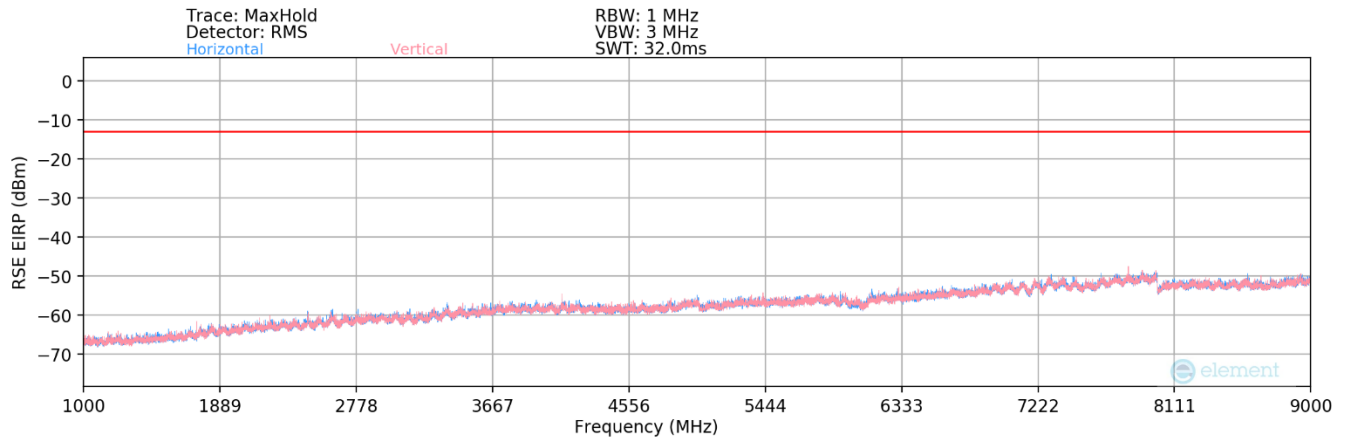


Plot 7-97. Radiated Spurious Plot Below 1GHz (NR Band n26 – Ant A)

Bandwidth (MHz):	20
Frequency (MHz):	824
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]
957.38	H	-	-	-81.25	30.67	56.42	-40.99	-13.00	-27.99

Table 7-18. Radiated Spurious Data Below 1GHz (NR Band n26 – Ant A)



Plot 7-98. Radiated Spurious Plot Above 1GHz (NR Band n26 – Ant A)

FCC ID: A3LSMS928U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2308210092-07.A3L	Test Dates: 9/11/2023 - 10/11/2023	EUT Type: Portable Handset	Page 84 of 96

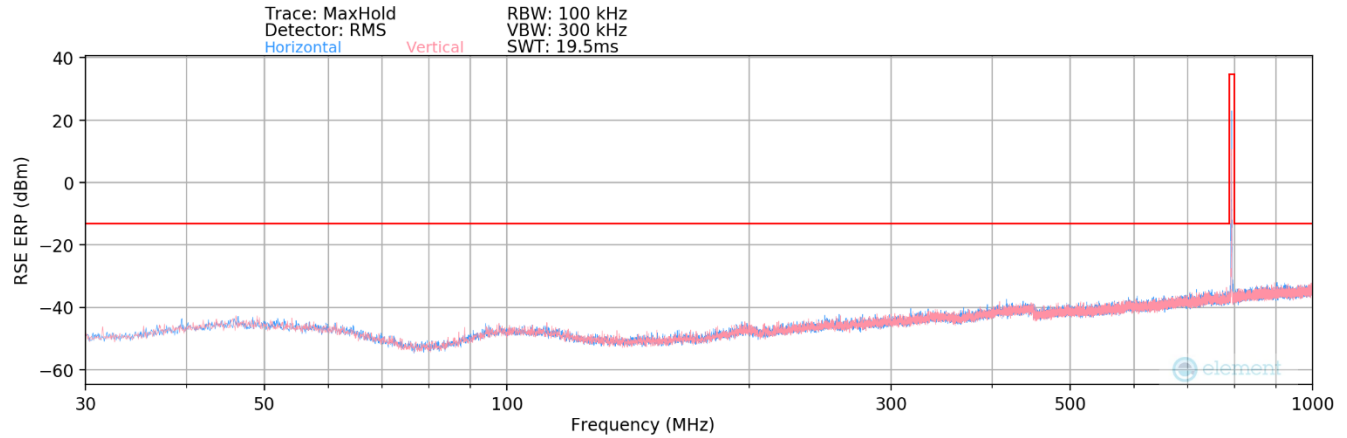
Bandwidth (MHz):	20
Frequency (MHz):	824
RB / Offset:	1 / 50

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]
1648.00	H	-	-	-71.25	-8.94	26.81	-68.45	-13.00	-55.45
2472.00	H	-	-	-71.24	-5.57	30.19	-65.07	-13.00	-52.07
3296.00	H	-	-	-72.22	-2.38	32.40	-62.86	-13.00	-49.86
4120.00	H	125	299	-67.39	-0.25	39.36	-55.90	-13.00	-42.90
4944.00	H	-	-	-73.18	1.16	34.98	-60.28	-13.00	-47.28
5768.00	H	-	-	-73.87	3.32	36.45	-58.81	-13.00	-45.81
6592.00	H	-	-	-73.85	4.44	37.59	-57.67	-13.00	-44.67

Table 7-19. Radiated Spurious Data Above 1GHz (NR Band n26 – Mid Channel – Ant A)

FCC ID: A3LSMS928U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2308210092-07.A3L	Test Dates: 9/11/2023 - 10/11/2023	EUT Type: Portable Handset	Page 85 of 96

LTE Band 14 – Ant E

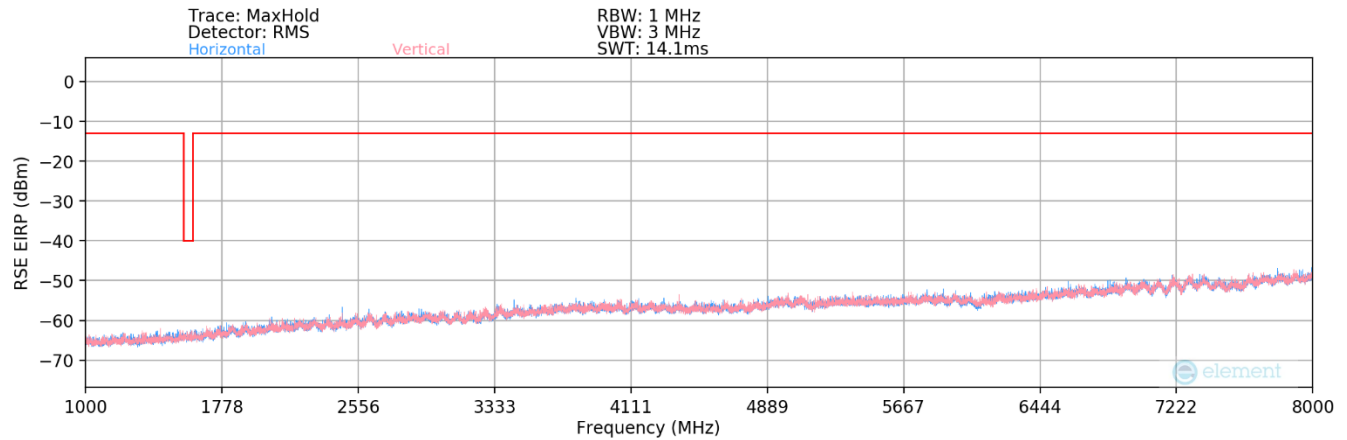


Plot 7-99. Radiated Spurious Plot Below 1GHz (LTE Band 14 – Ant E)

Bandwidth (MHz):	10
Frequency (MHz):	793
RB Config (Size / 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]	ERP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
981.35	H	-	-	-82.01	30.98	55.97	-41.43	-13.00	-28.43

Table 7-20. Radiated Spurious Data Below 1GHz (LTE Band 14 – Ant E)



Plot 7-100. Radiated Spurious Plot Above 1GHz (LTE Band 14 – Ant E)

FCC ID: A3LSMS928U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2308210092-07.A3L	Test Dates: 9/11/2023 - 10/11/2023	EUT Type: Portable Handset	Page 86 of 96

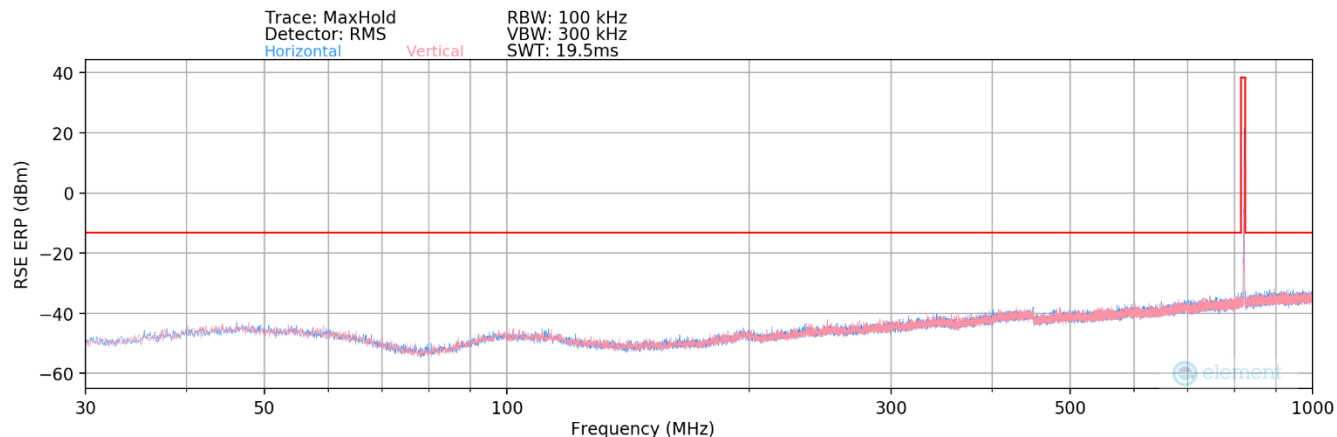
Bandwidth (MHz):	10
Frequency (MHz):	793
RB Config (Size / Offset):	1 / 25

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]
1586.00	H	-	-	-74.64	-9.26	23.10	-72.16	-40.00	-32.16
2379.00	H	-	-	-74.71	-5.49	26.80	-68.46	-13.00	-55.46
3172.00	H	-	-	-75.21	-3.01	28.78	-66.48	-13.00	-53.48

Table 7-21. Radiated Spurious Data Above 1GHz (LTE Band 14 – Mid Channel – Ant E)

FCC ID: A3LSMS928U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2308210092-07.A3L	Test Dates: 9/11/2023 - 10/11/2023	EUT Type: Portable Handset	Page 87 of 96

LTE Band 26 – Ant E

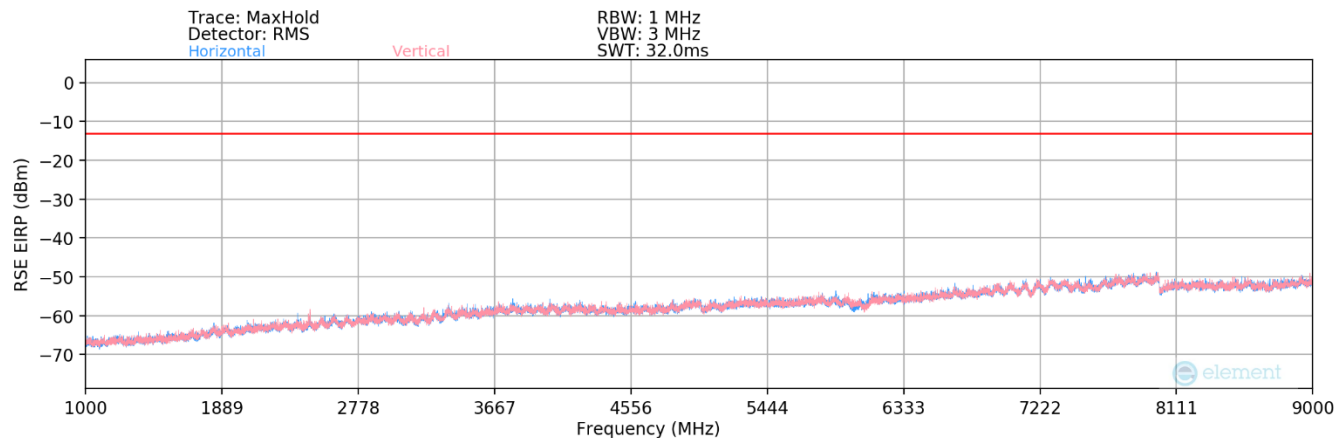


Plot 7-101. Radiated Spurious Plot Below 1GHz (LTE Band 26 – Ant E)

Bandwidth (MHz):	10
Frequency (MHz):	821.5
RB Config (Size / 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]	ERP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
985.55	H	-	-	-81.33	31.00	56.67	-40.74	-13.00	-27.74

Table 7-22. Radiated Spurious Data Below 1GHz (LTE Band 26 – Ant E)



Plot 7-102. Radiated Spurious Plot Above 1GHz (LTE Band 26 – Ant E)

FCC ID: A3LSMS928U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2308210092-07.A3L	Test Dates: 9/11/2023 - 10/11/2023	EUT Type: Portable Handset	Page 88 of 96

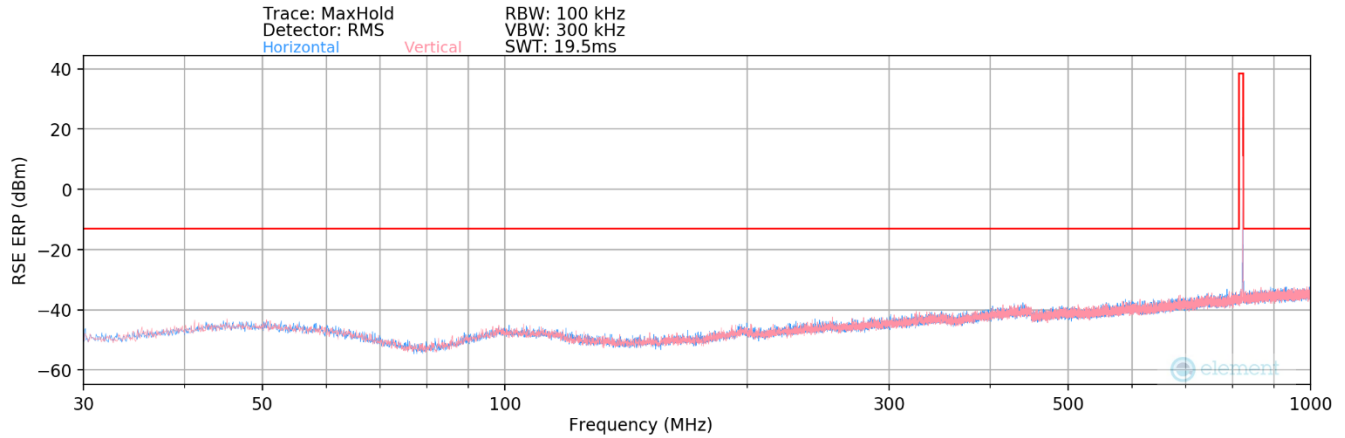
Bandwidth (MHz):	10
Frequency (MHz):	821.5
RB Config (Size / Offset):	1 / 25

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]
1643.00	H	-	-	-74.64	-9.20	23.16	-72.10	-13.00	-59.10
2464.50	H	-	-	-75.49	-5.35	26.16	-69.09	-13.00	-56.09
3286.00	H	-	-	-75.52	-2.26	29.22	-66.04	-13.00	-53.04

Table 7-23. Radiated Spurious Data Above 1GHz (LTE Band 26 – Mid Channel – Ant E)

FCC ID: A3LSMS928U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2308210092-07.A3L	Test Dates: 9/11/2023 - 10/11/2023	EUT Type: Portable Handset	Page 89 of 96

NR Band n26 – Ant E

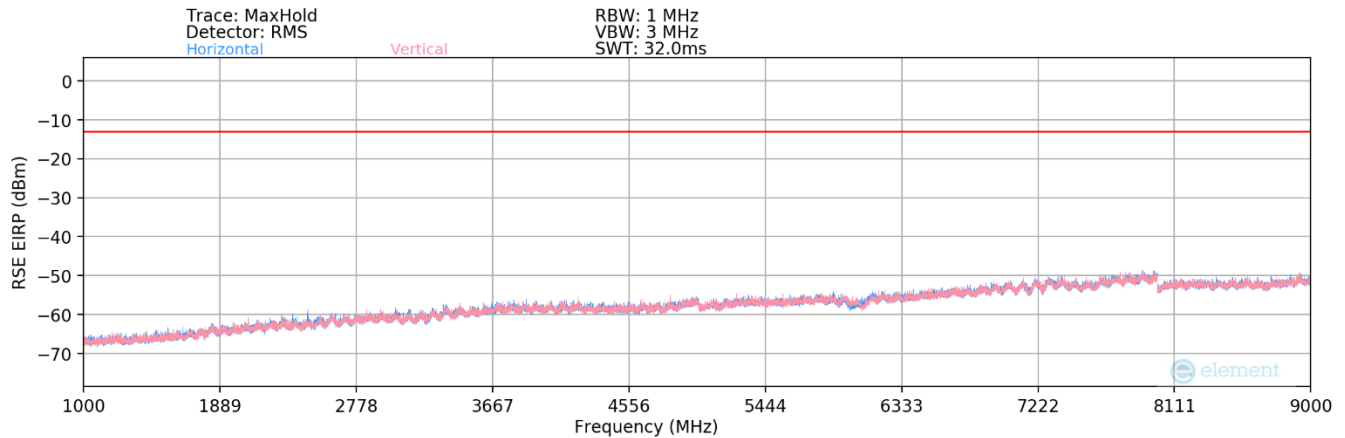


Plot 7-103. Radiated Spurious Plot Below 1GHz (NR Band n26 – Ant E)

Bandwidth (MHz):	20
Frequency (MHz):	824
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]
864.72	H	-	-	-80.94	30.15	56.21	-41.20	-13.00	-28.20

Table 7-24. Radiated Spurious Data Below 1GHz (NR Band n26 – Ant E)



Plot 7-104. Radiated Spurious Plot Above 1GHz (NR Band n26 – Ant E)

FCC ID: A3LSMS928U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2308210092-07.A3L	Test Dates: 9/11/2023 - 10/11/2023	EUT Type: Portable Handset	Page 90 of 96

Bandwidth (MHz):	20
Frequency (MHz):	824
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]
1648.00	H	165	207	-67.91	-8.94	30.15	-65.11	-13.00	-52.11
2472.00	H	-	-	-72.26	-5.57	29.17	-66.09	-13.00	-53.09
3296.00	H	-	-	-72.53	-2.38	32.09	-63.17	-13.00	-50.17
4120.00	H	164	201	-72.24	-0.25	34.51	-60.75	-13.00	-47.75
4944.00	H	-	-	-74.42	1.16	33.74	-61.52	-13.00	-48.52
5768.00	H	-	-	-74.62	3.32	35.70	-59.56	-13.00	-46.56
6592.00	H	-	-	-74.85	4.44	36.59	-58.67	-13.00	-45.67

Table 7-25. Radiated Spurious Data Above 1GHz (NR Band n26 – Mid Channel – Ant E)

FCC ID: A3LSMS928U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2308210092-07.A3L	Test Dates: 9/11/2023 - 10/11/2023	EUT Type: Portable Handset	Page 91 of 96

7.8 Frequency Stability / Temperature Variation

Test Overview and Limit

Frequency stability testing is performed in accordance with the guidelines of ANSI C63.26-2015. 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.

The frequency stability of the transmitter shall be maintained within $\pm 0.00025\%$ (± 2.5 ppm) of the center frequency.

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

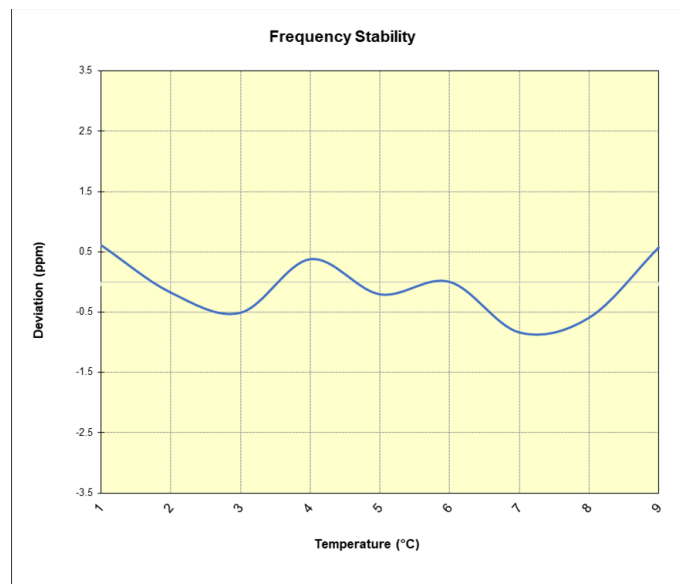
None

FCC ID: A3LSMS928U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
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LTE Band 14

LTE Band 14					
		Operating Frequency (Hz):		793,000,000	
		Ref. Voltage (VDC):		4.27	
Voltage (%)	Power (VDC)	Temp (°C)	Frequency (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	4.27	- 30	793,000,131	483	0.0000609
		- 20	792,999,508	-141	-0.0000178
		- 10	792,999,242	-407	-0.0000513
		0	792,999,947	299	0.0000377
		+ 10	792,999,485	-164	-0.0000207
		+ 20 (Ref)	792,999,649	0	0.0000000
		+ 30	792,998,983	-666	-0.0000840
		+ 40	792,999,175	-473	-0.0000597
		+ 50	793,000,101	452	0.0000570
Battery Endpoint	3.68	+ 20	792,999,723	74	0.0000093

Table 7-26. LTE Band 14 Frequency Stability Data



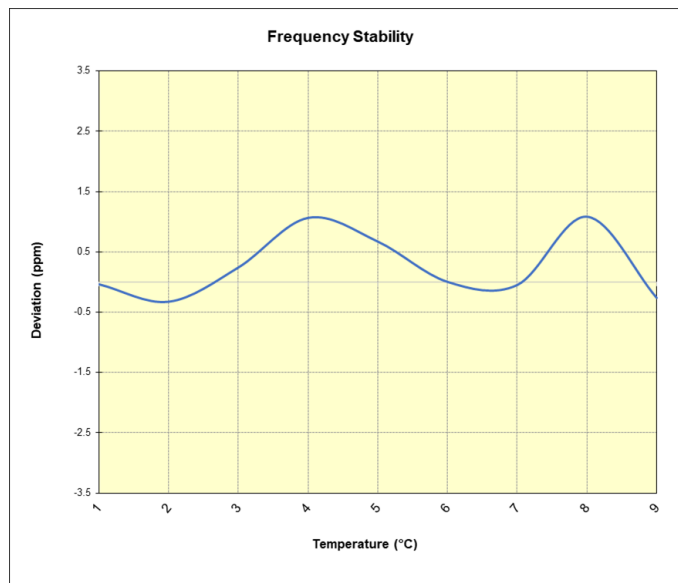
Plot 7-105. LTE Band 14 Frequency Stability Chart

FCC ID: A3LSMS928U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
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LTE Band 26

LTE Band 26					
		Operating Frequency (Hz):		821,500,000	
		Ref. Voltage (VDC):		4.27	
		Deviation Limit:		± 0.00025% or 2.5 ppm	
Voltage (%)	Power (VDC)	Temp (°C)	Frequency (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	4.27	- 30	821,499,052	-33	-0.0000040
		- 20	821,498,814	-270	-0.0000329
		- 10	821,499,282	197	0.0000240
		0	821,499,958	873	0.0001063
		+ 10	821,499,634	549	0.0000669
		+ 20 (Ref)	821,499,084	0	0.0000000
		+ 30	821,499,042	-43	-0.0000052
		+ 40	821,499,973	889	0.0001082
		+ 50	821,498,866	-219	-0.0000266
Battery Endpoint	3.68	+ 20	821,498,773	-311	-0.0000379

Table 7-27. LTE Band 26 Frequency Stability Data



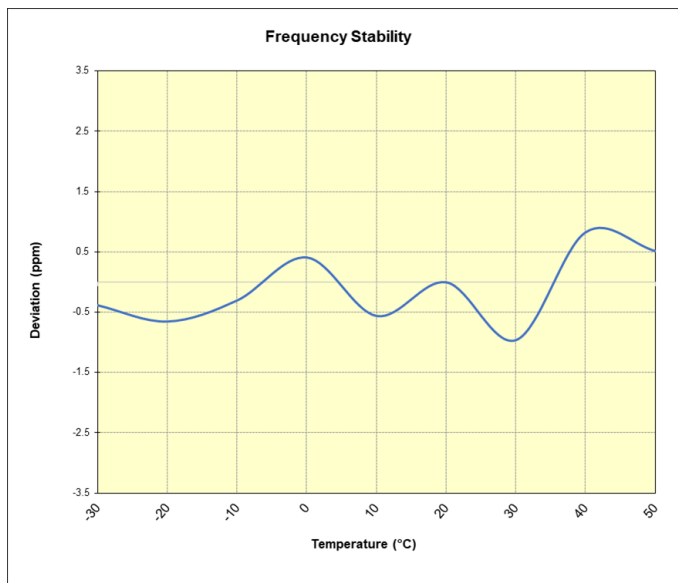
Plot 7-106. LTE Band 26 Frequency Stability Chart

FCC ID: A3LSMS928U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2308210092-07.A3L	Test Dates: 9/11/2023 - 10/11/2023	EUT Type: Portable Handset	Page 94 of 96

NR Band n26

NR Band n26					
		Operating Frequency (Hz):		821,500,000	
		Ref. Voltage (VDC):		4.27	
		Deviation Limit:		± 0.00025% or 2.5 ppm	
Voltage (%)	Power (VDC)	Temp (°C)	Frequency (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	4.27	- 30	821,493,539	-313	-0.0000381
		- 20	821,493,318	-533	-0.0000649
		- 10	821,493,606	-246	-0.0000300
		0	821,494,190	339	0.0000412
		+ 10	821,493,393	-458	-0.0000558
		+ 20 (Ref)	821,493,852	0	0.0000000
		+ 30	821,493,066	-786	-0.0000957
		+ 40	821,494,534	682	0.0000830
		+ 50	821,494,277	425	0.0000517
Battery Endpoint	3.68	+ 20	821,493,071	-780	-0.0000950

Table 7-28. NR Band n26 Frequency Stability Data



Plot 7-107. NR Band n26 Frequency Stability Chart

FCC ID: A3LSMS928U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2308210092-07.A3L	Test Dates: 9/11/2023 - 10/11/2023	EUT Type: Portable Handset	Page 95 of 96

8.0 CONCLUSION

The data collected relate only to the item(s) tested and show that the **Samsung Portable Handset FCC ID: A3LSMS928U** complies with all the requirements of Parts 22(H) and 90 of the FCC rules.

FCC ID: A3LSMS928U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2308210092-07.A3L	Test Dates: 9/11/2023 - 10/11/2023	EUT Type: Portable Handset	Page 96 of 96