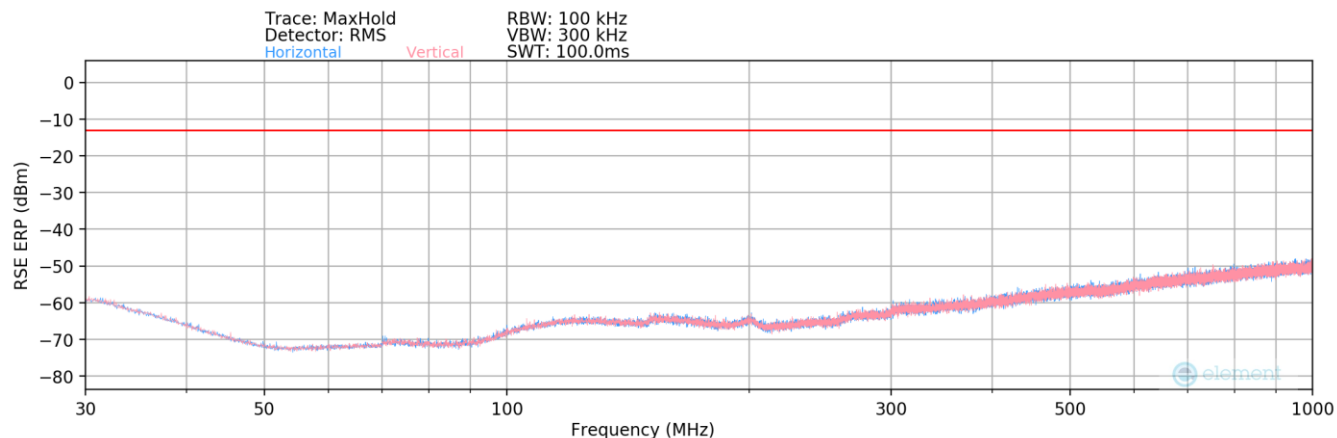


## NR Band n66 – ANT A



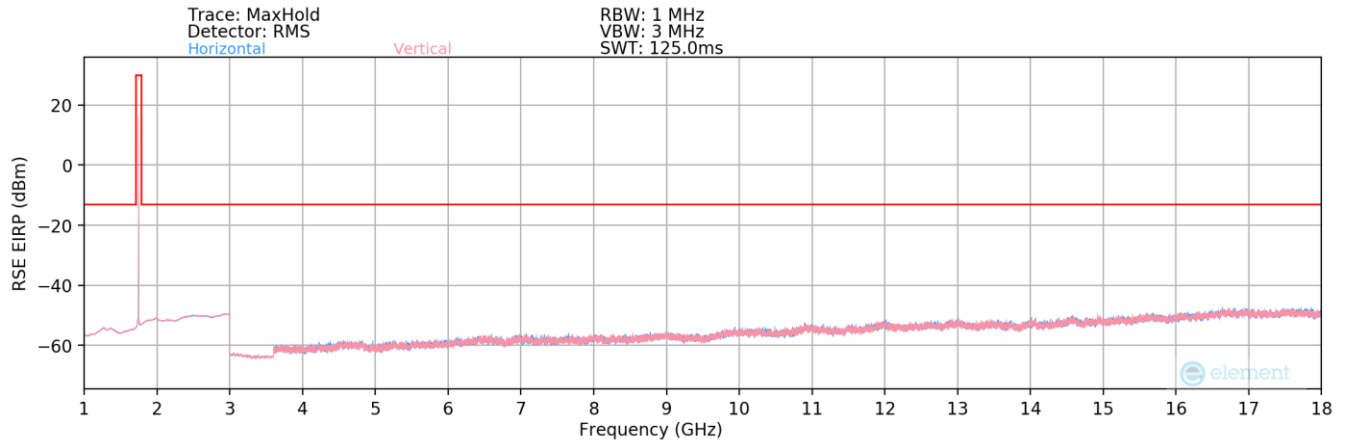
Plot 7-397. Radiated Spurious Plot 30MHz – 1GHz (NR Band n66) – Closed

Bandwidth (MHz):	40
Frequency (MHz):	1760
RB / Offset:	1 / 108
Mode:	Stand Alone

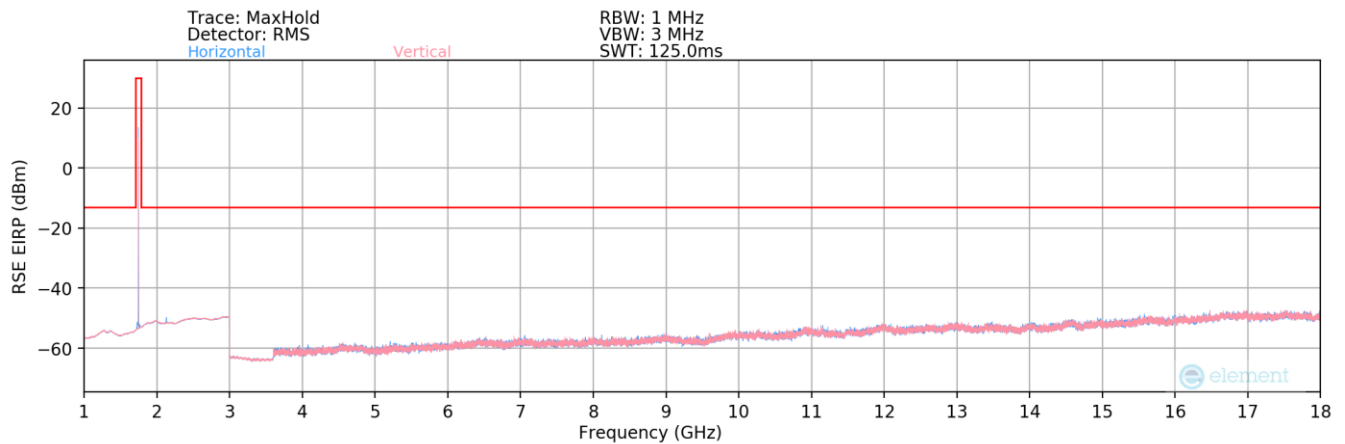
Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	ERP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
440.00	H	-	-	-86.92	24.26	44.34	-53.07	-13.00	-40.07
586.67	H	-	-	-83.42	26.75	50.33	-47.08	-13.00	-34.08
880.00	H	-	-	-82.65	30.43	54.78	-42.63	-13.00	-29.63

Table 7-58. Radiated Spurious Data 30MHz – 1GHz (NR Band n66) – Closed

FCC ID: A3LSMF721U	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2204080051-04.A3L	Test Dates: 4/8/2022 - 6/23/2022	EUT Type: Portable Handset	Page 248 of 275



**Plot 7-398. Radiated Spurious Plot (NR Band n66) – Closed**



**Plot 7-399. Radiated Spurious Plot (NR Band n66) – Open**

Bandwidth (MHz):	40
Frequency (MHz):	1730
RB / Offset:	1 / 108
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]
3460.00	H	-	-	-77.80	2.77	31.97	-63.29	-13.00	-50.29
5190.00	H	-	-	-79.26	5.23	32.97	-62.29	-13.00	-49.29
6920.00	H	-	-	-79.03	7.73	35.70	-59.56	-13.00	-46.56

**Table 7-59. Radiated Spurious Data (NR Band n66 – Low Channel)**

FCC ID: A3LSMF721U	PART 27 MEASUREMENT REPORT			Approved by: Technical Manager
Test Report S/N: 1M2204080051-04.A3L	Test Dates: 4/8/2022 - 6/23/2022	EUT Type: Portable Handset		Page 249 of 275

Bandwidth (MHz):	40
Frequency (MHz):	1745
RB / Offset:	1 / 108
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]
3490.00	H	-	-	-77.76	2.69	31.93	-63.33	-13.00	-50.33
5235.00	H	-	-	-79.16	5.03	32.87	-62.39	-13.00	-49.39
6980.00	H	-	-	-79.18	7.16	34.98	-60.28	-13.00	-47.28

**Table 7-60. Radiated Spurious Data (NR Band n66 – Mid Channel)**

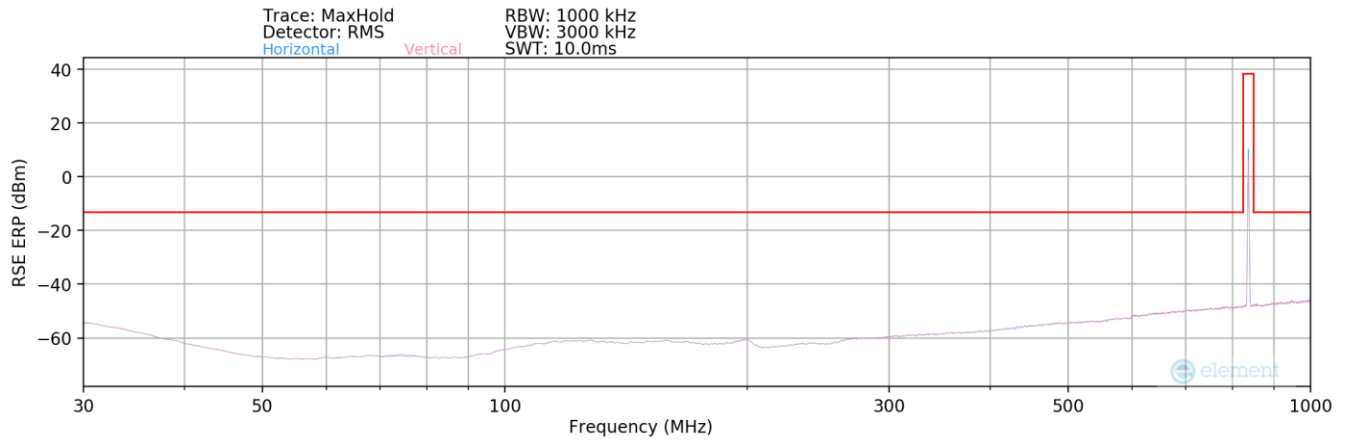
Bandwidth (MHz):	40
Frequency (MHz):	1760
RB / Offset:	1 / 108
Mode:	Stand Alone

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]
3520.00	H	-	-	-77.41	2.47	32.06	-63.20	-13.00	-50.20
5280.00	H	-	-	-79.02	5.00	32.98	-62.28	-13.00	-49.28
7040.00	H	-	-	-79.30	7.20	34.90	-60.36	-13.00	-47.36

**Table 7-61. Radiated Spurious Data (NR Band n66 – High Channel)**

FCC ID: A3LSMF721U	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2204080051-04.A3L	Test Dates: 4/8/2022 - 6/23/2022	EUT Type: Portable Handset	Page 250 of 275

## EN-DC – n66 (ANT A)-B5



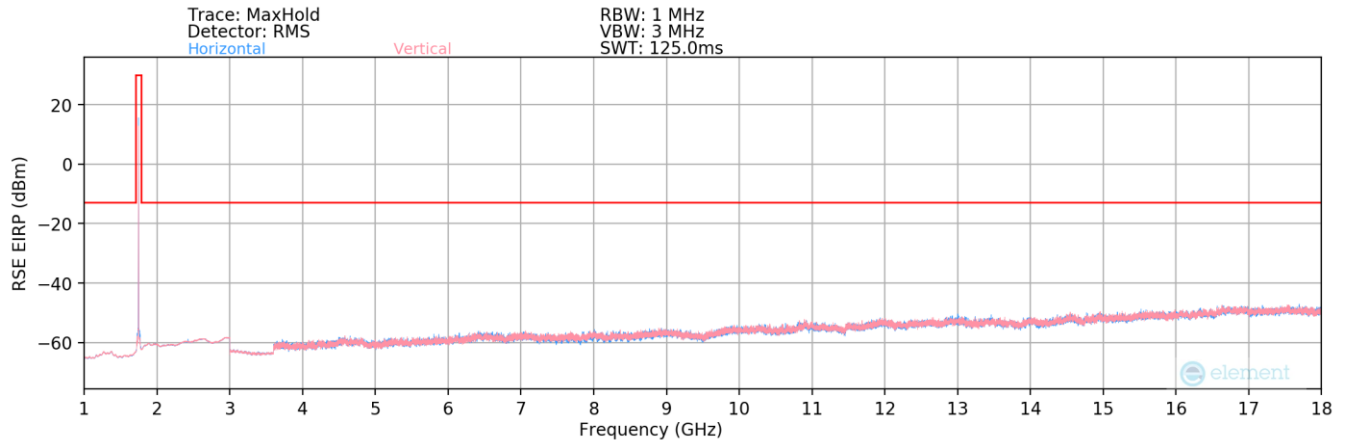
Plot 7-400. Radiated Spurious Plot 30MHz – 1GHz (EN-DC – n66 (ANT A)-B5) – Half Open

Bandwidth (MHz):	40 & 10
Frequency (MHz):	1745 & 836.5
RB / Offset:	1/108 & 1/25
Mode:	EN-DC
Anchor Band:	B5

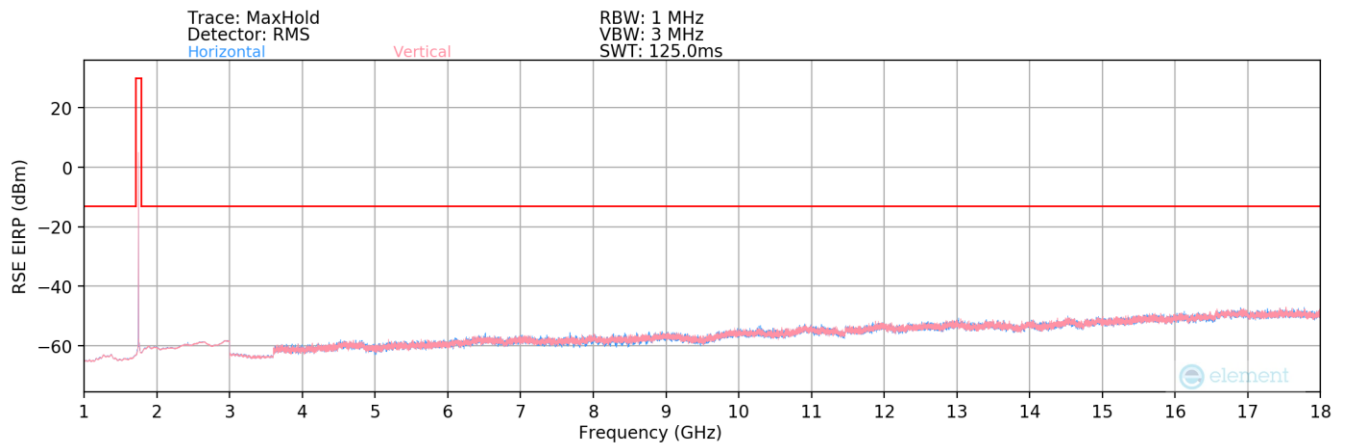
Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	ERP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
216.0	V	-	-	-90.24	17.71	34.47	-62.94	-13.00	-49.94

Table 7-62. Radiated Spurious Data (EN-DC – n66 (ANT A)-B5) – Half Open

FCC ID: A3LSMF721U	PART 27 MEASUREMENT REPORT			Approved by: Technical Manager
Test Report S/N: 1M2204080051-04.A3L	Test Dates: 4/8/2022 - 6/23/2022	EUT Type: Portable Handset		Page 251 of 275



**Plot 7-401. Radiated Spurious Plot (EN-DC – n66 (ANT A)-B5) – Half Open**



**Plot 7-402. Radiated Spurious Plot (EN-DC – n66 (ANT A)-B5) – Open**

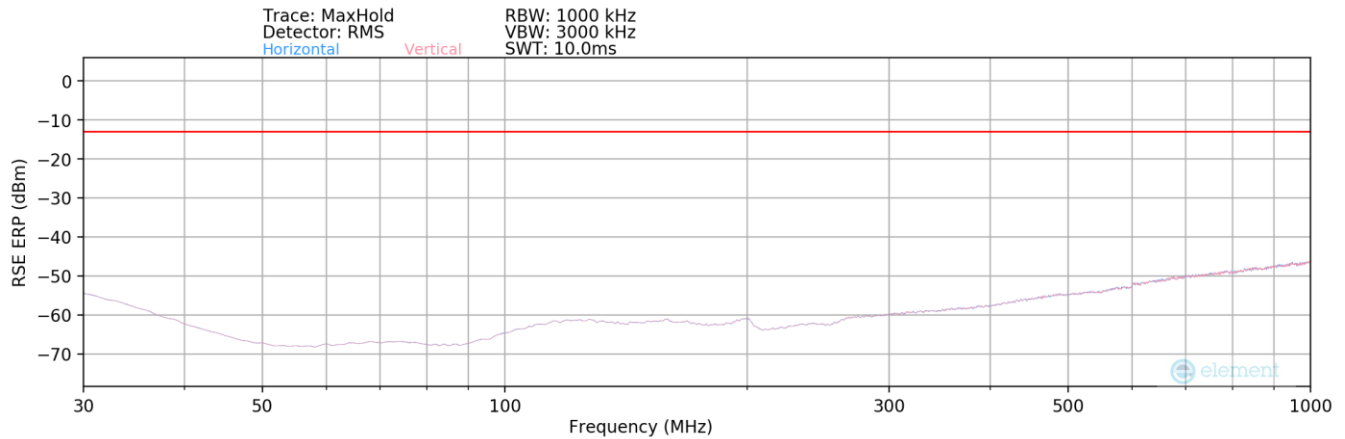
Bandwidth (MHz):	40 & 10
Frequency (MHz):	1745 & 836.5
RB / Offset:	1/108 & 1/25
Mode:	EN-DC
Anchor Band:	B5

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]
3562.0	V	-	-	-77.29	2.36	32.07	-63.19	-13.00	-50.19
4326.5	V	-	-	-78.25	3.40	32.15	-63.10	-13.00	-50.10
5091.0	V	-	-	-79.07	4.49	32.42	-62.83	-13.00	-49.83

**Table 7-63. Radiated Spurious Data (EN-DC – n66 (ANT A)-B5) – Half Open**

FCC ID: A3LSMF721U	PART 27 MEASUREMENT REPORT			Approved by: Technical Manager
Test Report S/N: 1M2204080051-04.A3L	Test Dates: 4/8/2022 - 6/23/2022	EUT Type: Portable Handset		Page 252 of 275

## EN-DC – n66 (ANT A)-B48



**Plot 7-403. Radiated Spurious Plot 30MHz – 1GHz (EN-DC – n66 (ANT A)-B48) – Open**

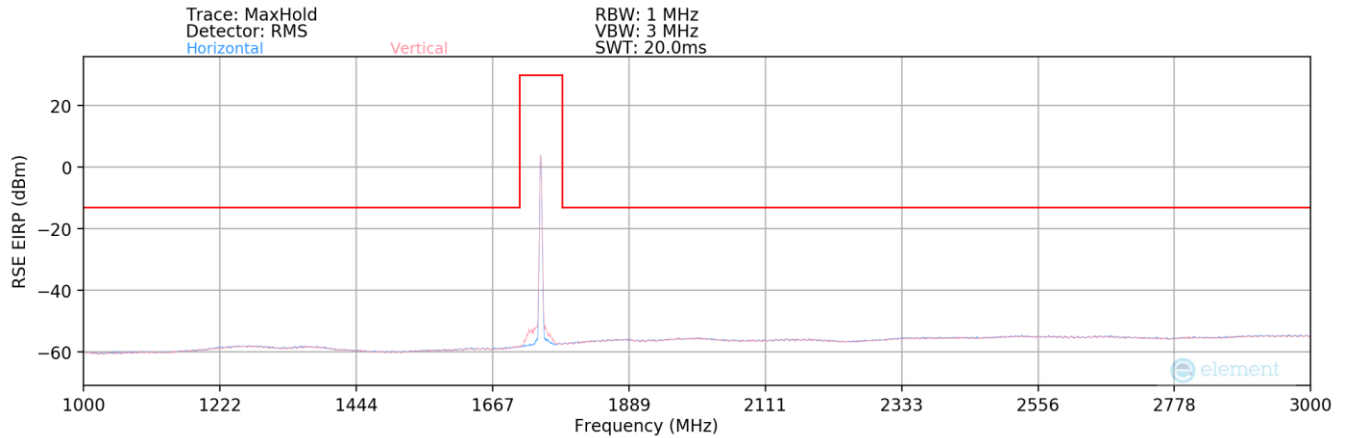
Bandwidth (MHz):	40 & 20
Frequency (MHz):	1745 & 3625
RB / Offset:	1 / 108 & 1 / 50
Mode:	EN-DC
Anchor Band:	B48

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]
135.0	V	-	-	-90.26	20.09	36.83	-60.58	-13.00	-47.58

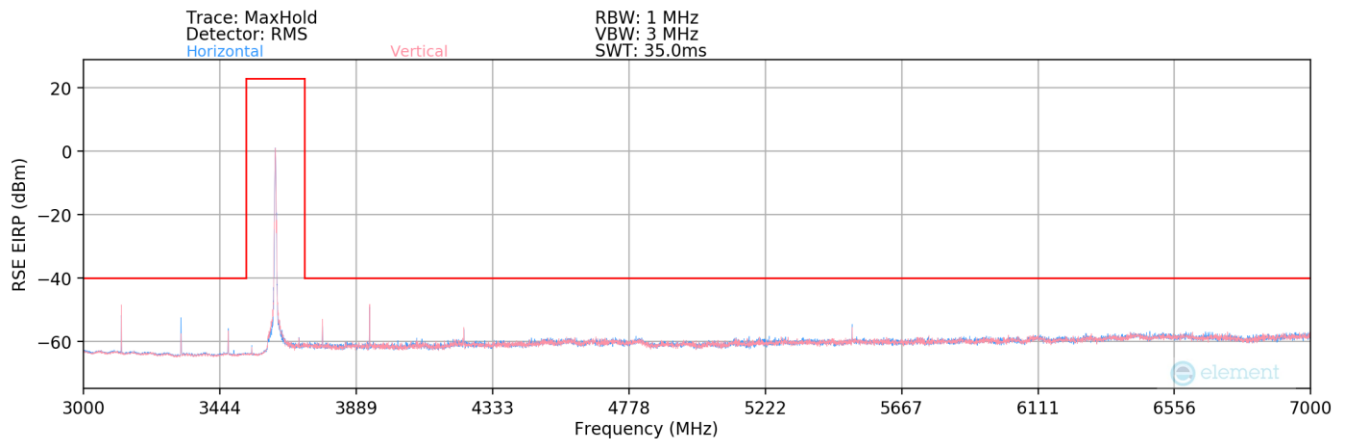
**Table 7-64. Radiated Spurious Data (EN-DC – n66 (ANT A)-B48) – Open**

FCC ID: A3LSMF721U	PART 27 MEASUREMENT REPORT			Approved by: Technical Manager
Test Report S/N: 1M2204080051-04.A3L	Test Dates: 4/8/2022 - 6/23/2022	EUT Type: Portable Handset		Page 253 of 275

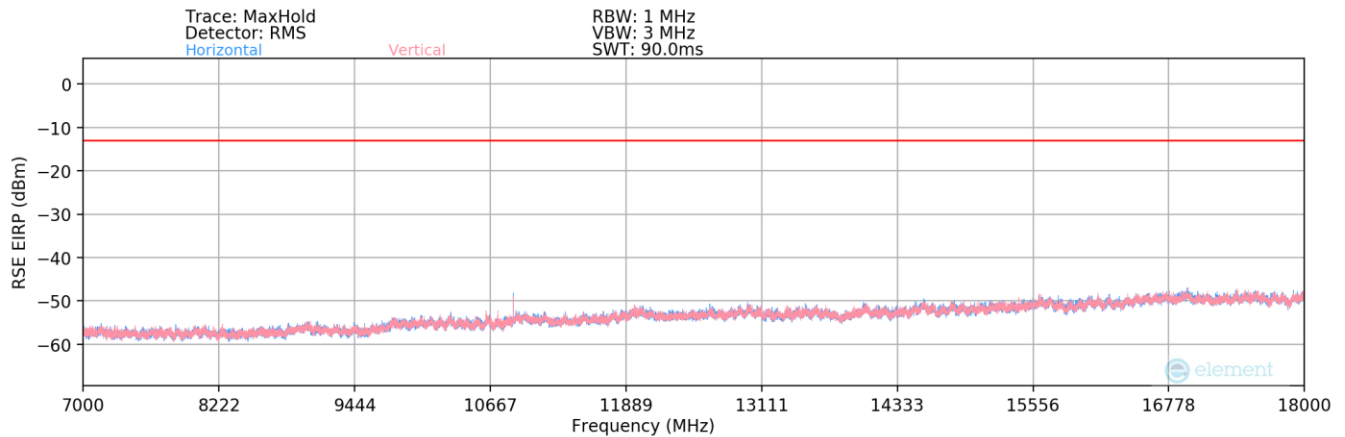
V3.0 1/5/2022



**Plot 7-404. Radiated Spurious Plot (EN-DC – n66 (ANT A)-B48) – Open**

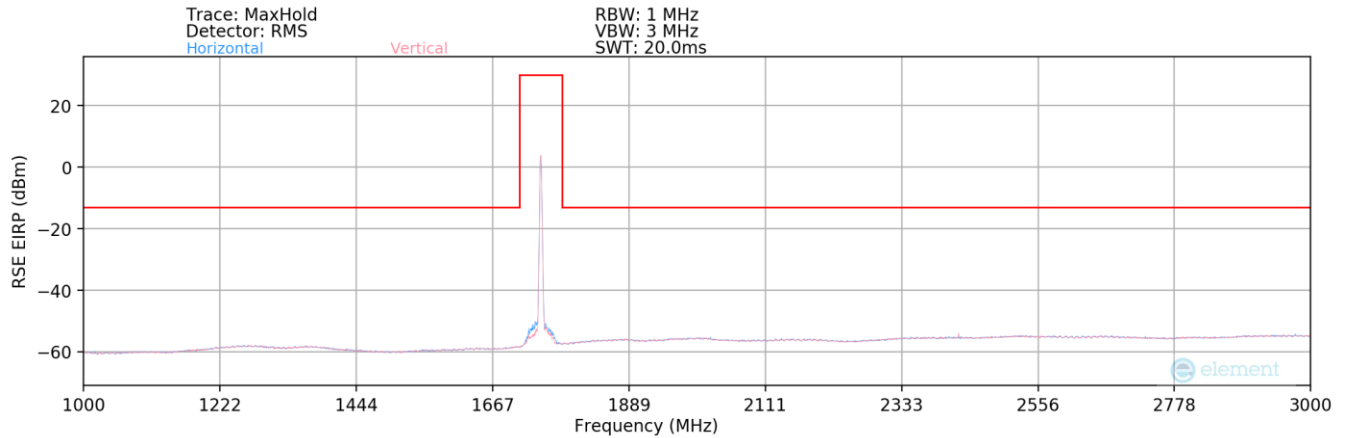


**Plot 7-405. Radiated Spurious Plot (EN-DC – n66 (ANT A)-B48) – Open**

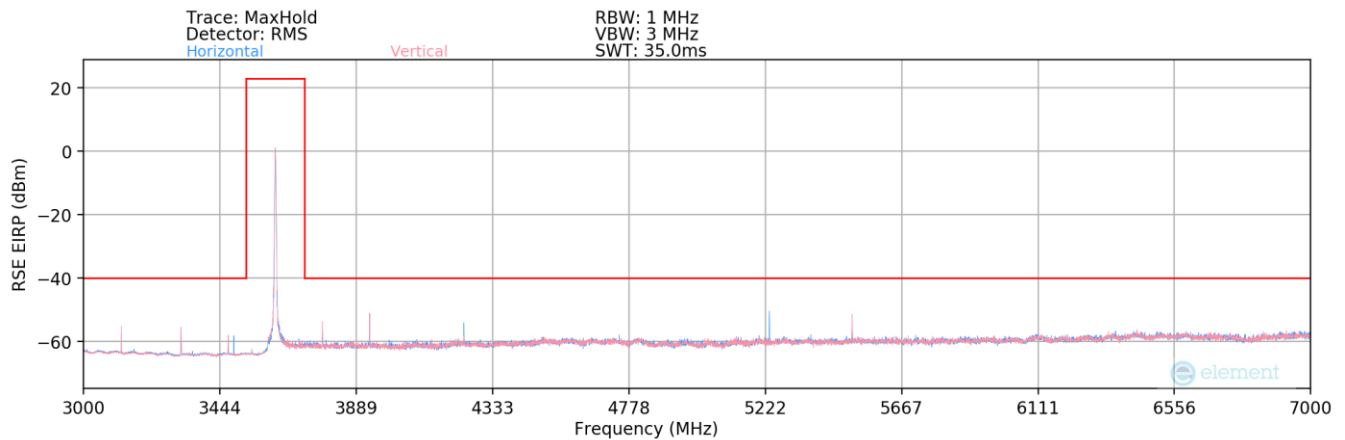


**Plot 7-406. Radiated Spurious Plot (EN-DC – n66 (ANT A)-B48) – Open**

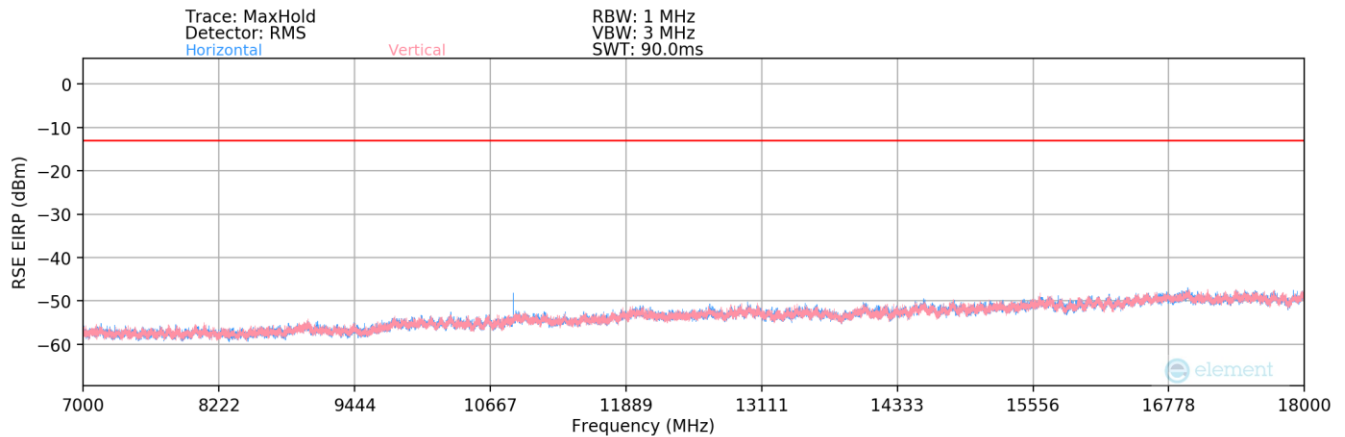
FCC ID: A3LSMF721U	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2204080051-04.A3L	Test Dates: 4/8/2022 - 6/23/2022	EUT Type: Portable Handset	Page 254 of 275



**Plot 7-407. Radiated Spurious Plot (EN-DC – n66 (ANT A)-B48) – Closed**



**Plot 7-408. Radiated Spurious Plot (EN-DC – n66 (ANT A)-B48) – Closed**



**Plot 7-409. Radiated Spurious Plot (EN-DC – n66 (ANT A)-B48) – Closed**

FCC ID: A3LSMF721U	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2204080051-04.A3L	Test Dates: 4/8/2022 - 6/23/2022	EUT Type: Portable Handset	Page 255 of 275



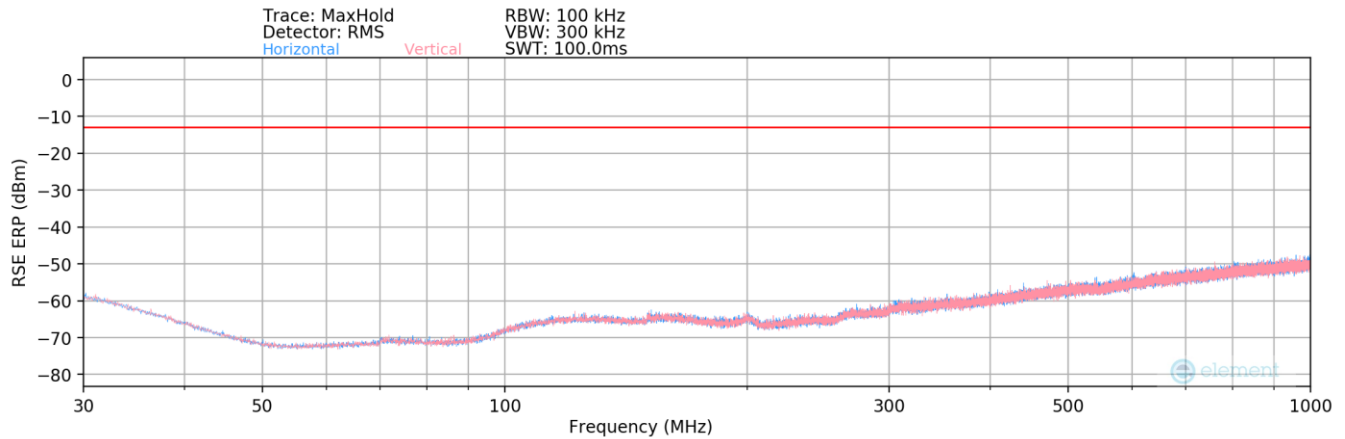
Bandwidth (MHz):	40 & 20
Frequency (MHz):	1745 & 3625
RB / Offset:	1 / 108 & 1 / 50
Mode:	EN-DC
Anchor Band:	B48

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]
3123.4	V	210	122	-70.83	3.17	39.34	-55.92	-13.00	-42.92
3317.9	V	149	44	-69.09	2.44	40.35	-54.91	-13.00	-41.91
3778.8	V	379	88	-67.84	3.09	42.25	-53.01	-13.00	-40.01
3932.5	V	373	99	-61.52	3.06	48.54	-46.72	-13.00	-33.72
5505.0	V	-	-	-78.87	5.18	33.31	-61.95	-13.00	-48.95
11145.0	V	-	-	-81.38	13.03	38.65	-56.61	-13.00	-43.61

**Table 7-65. Radiated Spurious Data (EN-DC – n66 (ANT A)-B48) – Open**

FCC ID: A3LSMF721U	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2204080051-04.A3L	Test Dates: 4/8/2022 - 6/23/2022	EUT Type: Portable Handset	Page 256 of 275

## NR Band n66 – ANT I



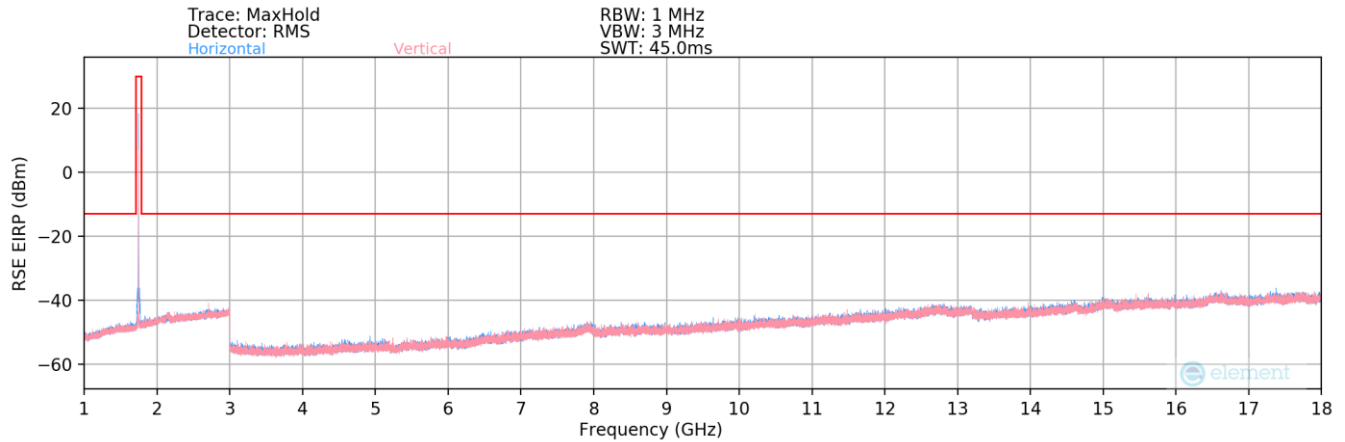
Plot 7-410. Radiated Spurious Plot 30MHz – 1GHz (NR Band n66) – Open

Bandwidth (MHz):	40
Frequency (MHz):	1760
RB / Offset:	1 / 108
Mode:	Stand Alone

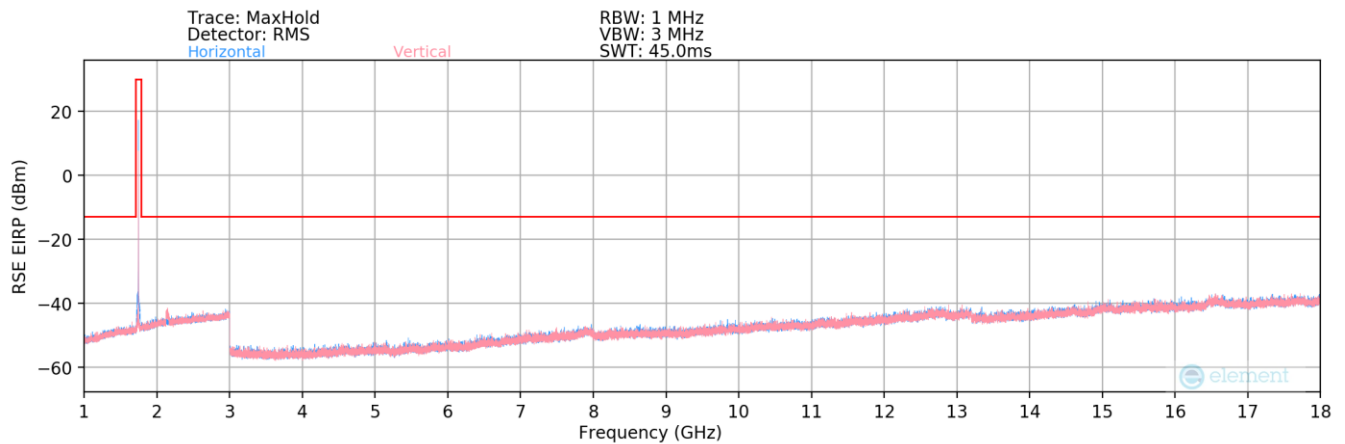
Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	ERP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
440.00	V	-	-	-85.65	24.26	45.61	-51.80	-13.00	-38.80
586.67	V	-	-	-83.98	26.75	49.77	-47.64	-13.00	-34.64
880.00	V	-	-	-82.17	30.43	55.26	-42.15	-13.00	-29.15

Table 7-66. Radiated Spurious Data 30MHz – 1GHz (NR Band n66) – Open

FCC ID: A3LSMF721U	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2204080051-04.A3L	Test Dates: 4/8/2022 - 6/23/2022	EUT Type: Portable Handset	Page 257 of 275



**Plot 7-411. Radiated Spurious Plot (NR Band n66) – Open**



**Plot 7-412. Radiated Spurious Plot (NR Band n66) – Closed**

Bandwidth (MHz):	40
Frequency (MHz):	1730
RB / Offset:	1 / 108
Mode:	SA

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
3460.00	V	-	-	-78.75	5.46	33.71	-61.55	-13.00	-48.55
5190.00	V	-	-	-79.76	7.49	34.73	-60.53	-13.00	-47.53
6920.00	V	-	-	-80.54	11.49	37.95	-57.30	-13.00	-44.30

**Table 7-67. Radiated Spurious Data (NR Band n66 – Low Channel)**

FCC ID: A3LSMF721U	PART 27 MEASUREMENT REPORT			Approved by: Technical Manager
Test Report S/N: 1M2204080051-04.A3L	Test Dates: 4/8/2022 - 6/23/2022	EUT Type: Portable Handset		Page 258 of 275

Bandwidth (MHz):	40
Frequency (MHz):	1745
RB / Offset:	1 / 108
Mode:	SA

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
3490.00	V	-	-	-78.57	5.47	33.90	-61.36	-13.00	-48.36
5235.00	V	-	-	-79.60	7.49	34.89	-60.37	-13.00	-47.37
6980.00	V	-	-	-80.13	11.24	38.11	-57.15	-13.00	-44.15

**Table 7-68. Radiated Spurious Data (NR Band n66 – Mid Channel)**

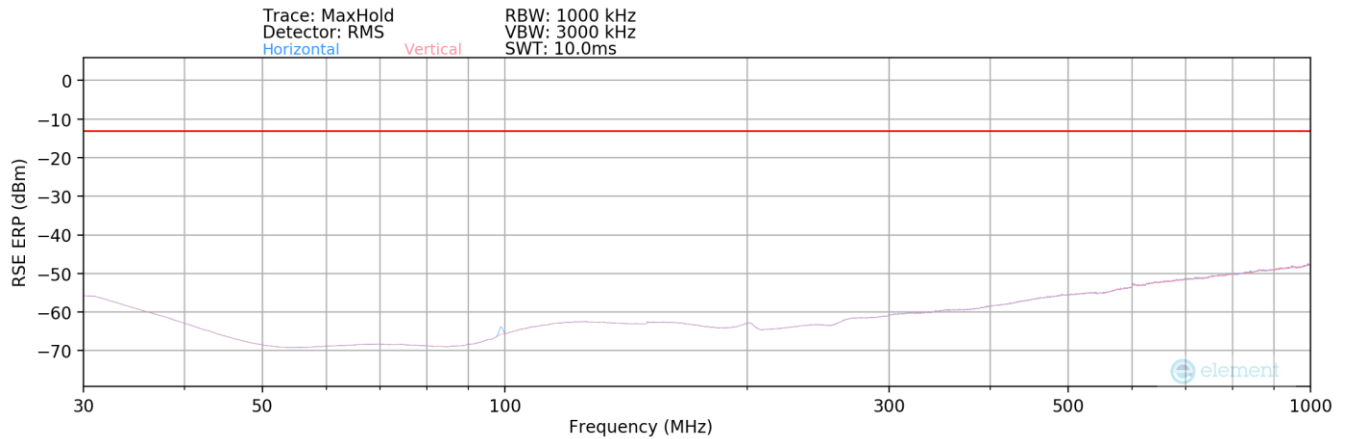
Bandwidth (MHz):	40
Frequency (MHz):	1760
RB / Offset:	1 / 108
Mode:	SA

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
3520.00	V	-	-	-78.44	5.51	34.07	-61.19	-13.00	-48.19
5280.00	V	-	-	-79.91	7.52	34.61	-60.65	-13.00	-47.65
7040.00	V	-	-	-80.19	11.42	38.23	-57.03	-13.00	-44.03

**Table 7-69. Radiated Spurious Data (NR Band n66 – High Channel)**

FCC ID: A3LSMF721U	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2204080051-04.A3L	Test Dates: 4/8/2022 - 6/23/2022	EUT Type: Portable Handset	Page 259 of 275

## EN-DC – n66(ANT I)-B2



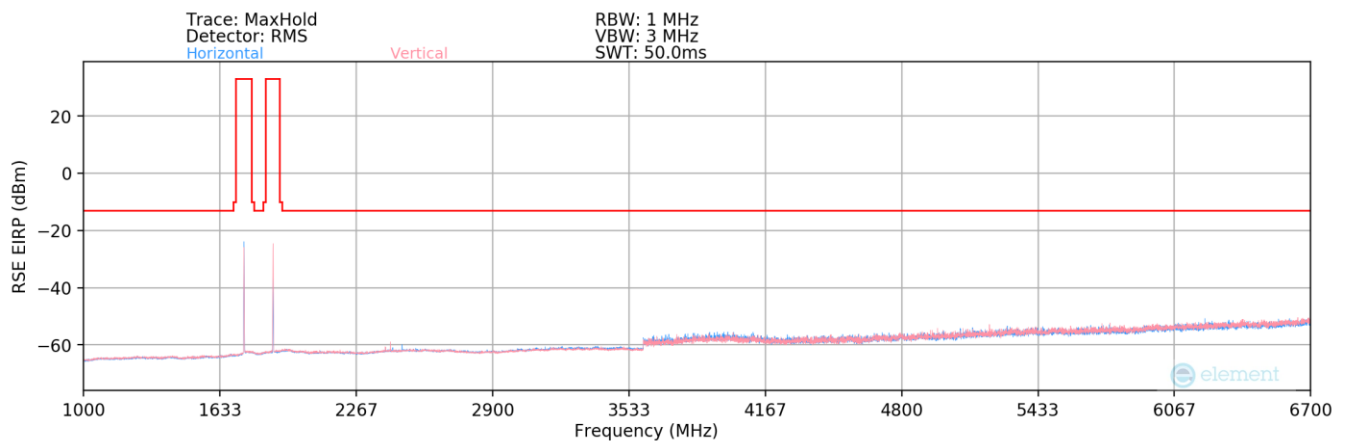
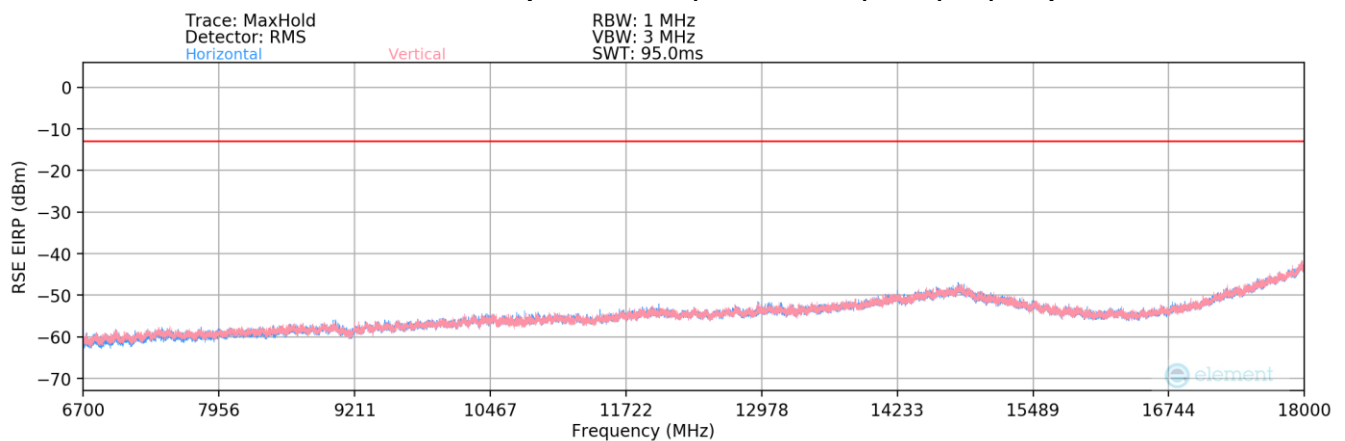
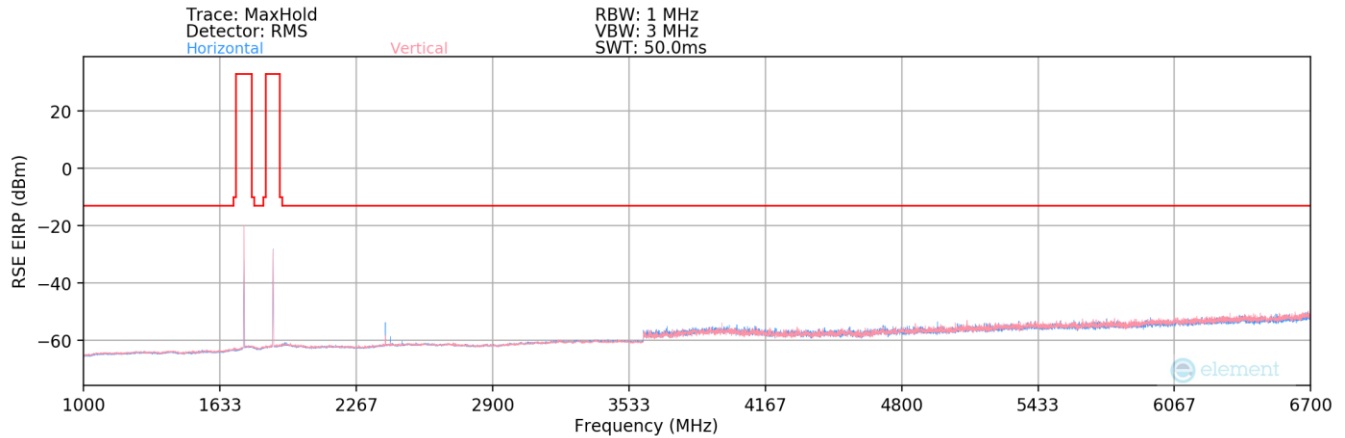
**Plot 7-413. Radiated Spurious Plot 30MHz – 1GHz (EN-DC – n66(ANT I)-B2) – Open**

Bandwidth (MHz):	40 & 20
Frequency (MHz):	1745 & 1880
RB / Offset:	1/108 & 1/50
Mode:	EN-DC
Anchor Band:	B2

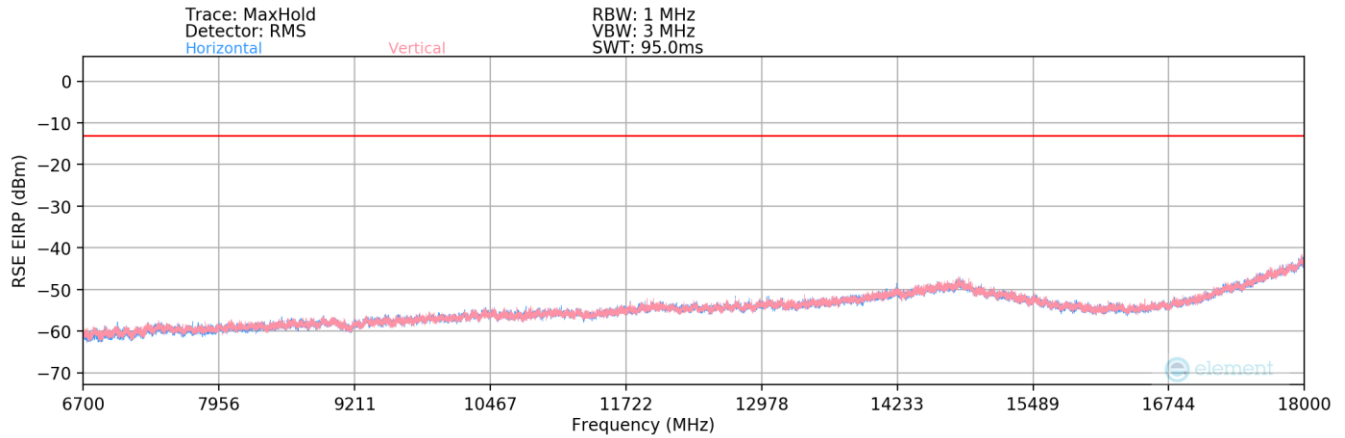
Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	ERP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
99.0	H	161	40	-88.60	16.84	35.24	-62.17	-13.00	-49.17
200.0	H	-	-	-91.77	19.29	34.52	-62.89	-13.00	-49.89

**Table 7-70. Radiated Spurious Data (EN-DC – n66(ANT I)-B2) – Open**

FCC ID: A3LSMF721U	PART 27 MEASUREMENT REPORT			Approved by: Technical Manager
Test Report S/N: 1M2204080051-04.A3L	Test Dates: 4/8/2022 - 6/23/2022	EUT Type: Portable Handset		Page 260 of 275



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Test Report S/N: 1M2204080051-04.A3L	Test Dates: 4/8/2022 - 6/23/2022	EUT Type: Portable Handset	Page 261 of 275



**Plot 7-417. Radiated Spurious Plot (EN-DC – n66(ANT I)-B2) – Closed**

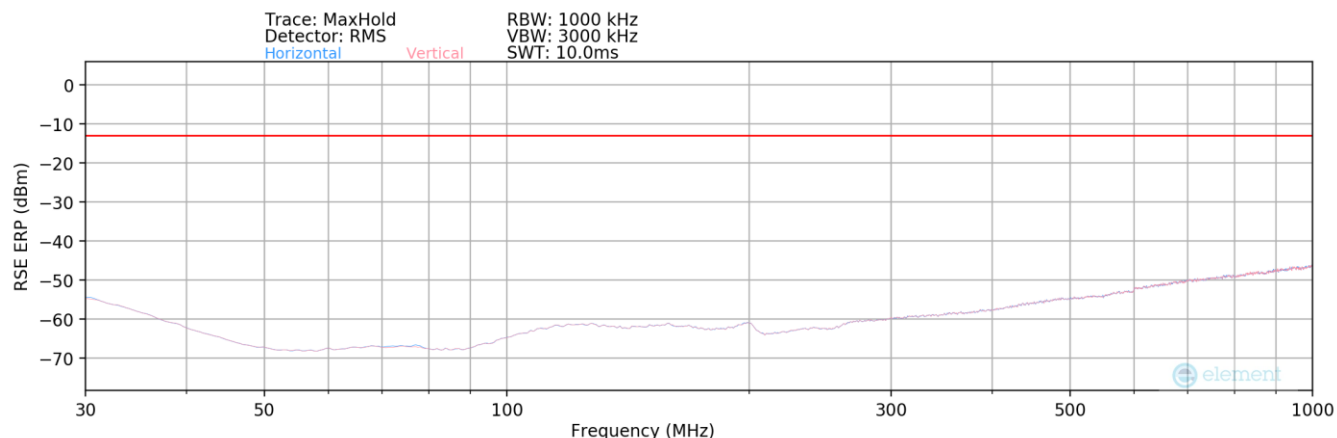
Bandwidth (MHz):	40 & 20
Frequency (MHz):	1745 & 1880
RB / Offset:	1/108 & 1/50
Mode:	EN-DC
Anchor Band:	B2

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
2420.0	H	400	200	-74.42	4.84	37.42	-57.84	-13.00	-44.84
3625.0	H	-	-	-76.06	8.75	39.69	-55.57	-13.00	-42.57
4965.0	H	-	-	-76.98	11.13	41.15	-54.11	-13.00	-41.11
5505.0	H	-	-	-77.30	12.75	42.45	-52.81	-13.00	-39.81

**Table 7-71. Radiated Spurious Data (EN-DC – n66(ANT I)-B2) – Open**

FCC ID: A3LSMF721U	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2204080051-04.A3L	Test Dates: 4/8/2022 - 6/23/2022	EUT Type: Portable Handset	Page 262 of 275

## EN-DC – n66(ANT I)-B30



Plot 7-418. Radiated Spurious Plot 30MHz – 1GHz (EN-DC – n66(ANT I)-B30) – Open

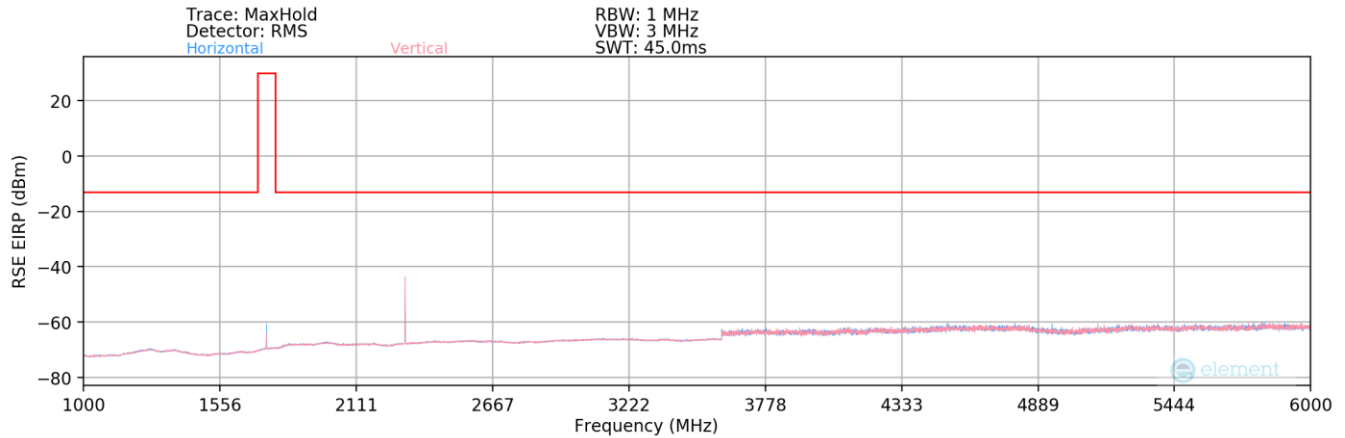
Bandwidth (MHz):	40 & 10
Frequency (MHz):	1745 & 2310
RB / Offset:	1 / 108 & 1 / 26
Mode:	EN-DC
Anchor Band:	B30

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]
615.0	H	-	-	-90.39	26.95	43.56	-53.85	-13.00	-40.85

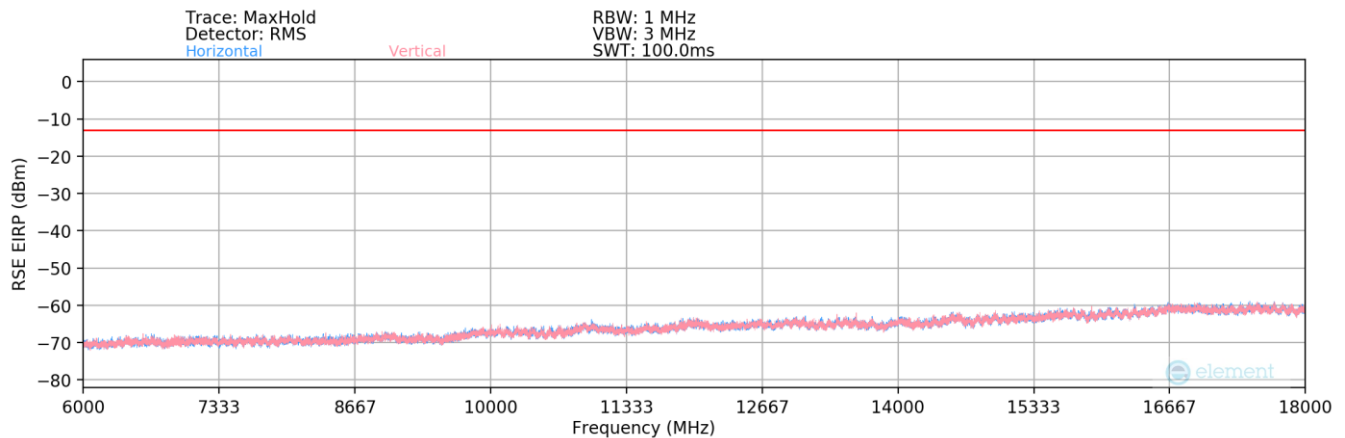
Table 7-72. Radiated Spurious Data (EN-DC – n66(ANT I)-B30) – Open

FCC ID: A3LSMF721U	PART 27 MEASUREMENT REPORT			Approved by: Technical Manager
Test Report S/N: 1M2204080051-04.A3L	Test Dates: 4/8/2022 - 6/23/2022	EUT Type: Portable Handset		Page 263 of 275

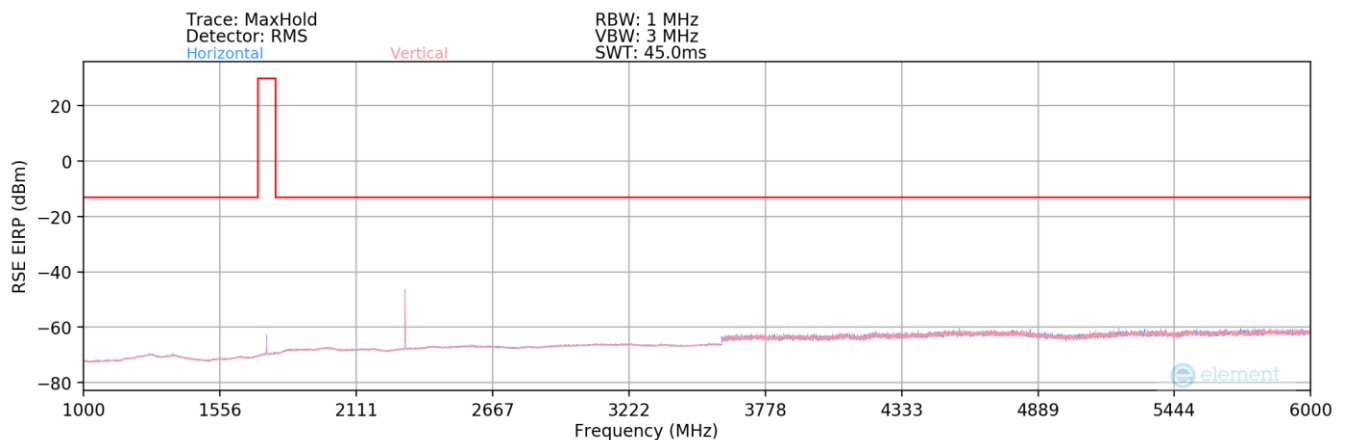




**Plot 7-419. Radiated Spurious Plot (EN-DC – n66(ANT I)-B30) – Open**

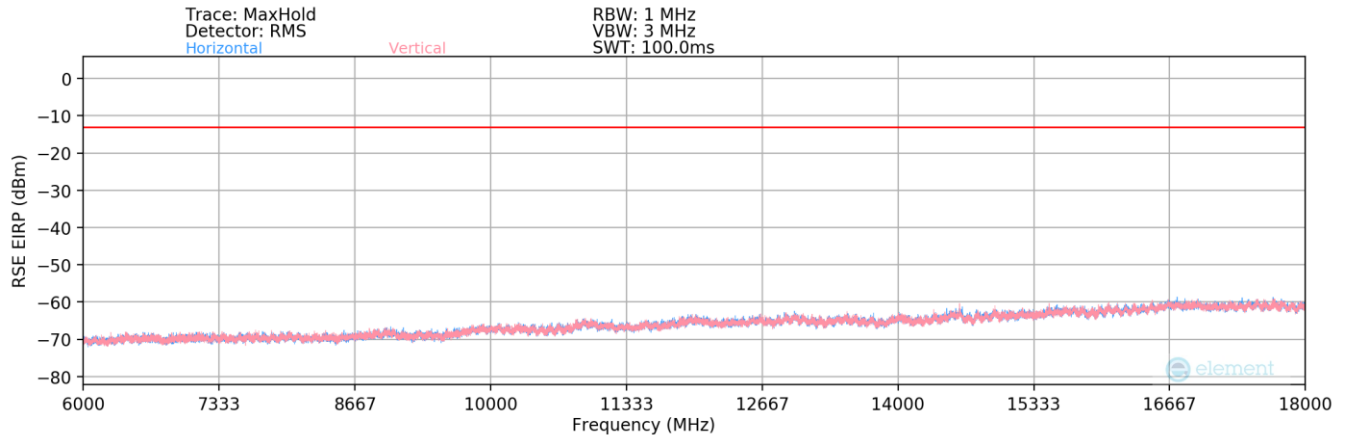


**Plot 7-420. Radiated Spurious Plot (EN-DC – n66(ANT I)-B30) – Open**



**Plot 7-421. Radiated Spurious Plot (EN-DC – n66(ANT I)-B30) – Closed**

FCC ID: A3LSMF721U	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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**Plot 7-422. Radiated Spurious Plot (EN-DC – n66(ANT I)-B30) – Closed**

Bandwidth (MHz):	40 & 10
Frequency (MHz):	1745 & 2310
RB / Offset:	1 / 108 & 1 / 26
Mode:	EN-DC
Anchor Band:	B30

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
1180.0	H	-	-	-76.49	6.08	36.59	-58.67	-13.00	-45.67
2875.0	H	-	-	-77.81	12.15	41.34	-53.92	-13.00	-40.92
3440.0	H	-	-	-77.68	12.12	41.44	-53.82	-13.00	-40.82

**Table 7-73. Radiated Spurious Data (EN-DC – n66(ANT I)-B30) – Open**

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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 27, 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

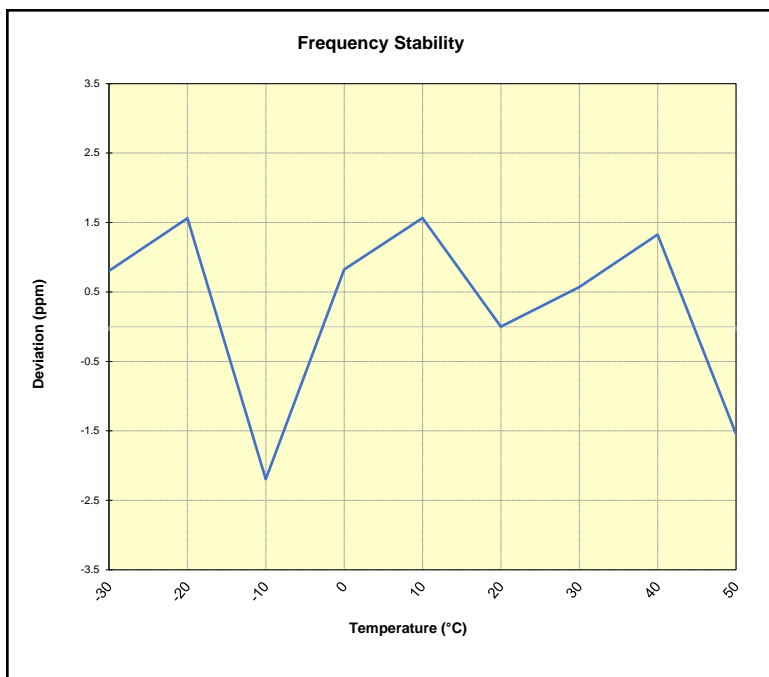
FCC ID: A3LSMF721U	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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## Frequency Stability / Temperature Variation

LTE Band 71					
		Operating Frequency (Hz):		680,500,000	
		Ref. Voltage (VDC):		4.39	
		Deviation Limit:		± 0.00025% or 2.5 ppm	
Voltage (%)	Power (VDC)	Temp (°C)	Frequency (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	4.39	- 30	680,592,446	548	0.0000805
		- 20	680,592,960	1,062	0.0001560
		- 10	680,590,405	-1,493	-0.0002194
		0	680,592,459	561	0.0000824
		+ 10	680,592,962	1,064	0.0001563
		+ 20 (Ref)	680,591,898	0	0.0000000
		+ 30	680,592,287	388	0.0000571
		+ 40	680,592,802	904	0.0001328
		+ 50	680,590,850	-1,048	-0.0001540
Battery Endpoint	3.54	+ 20	680,592,000	102	0.0000149

Table 7-74. LTE Band 71 Frequency Stability Data



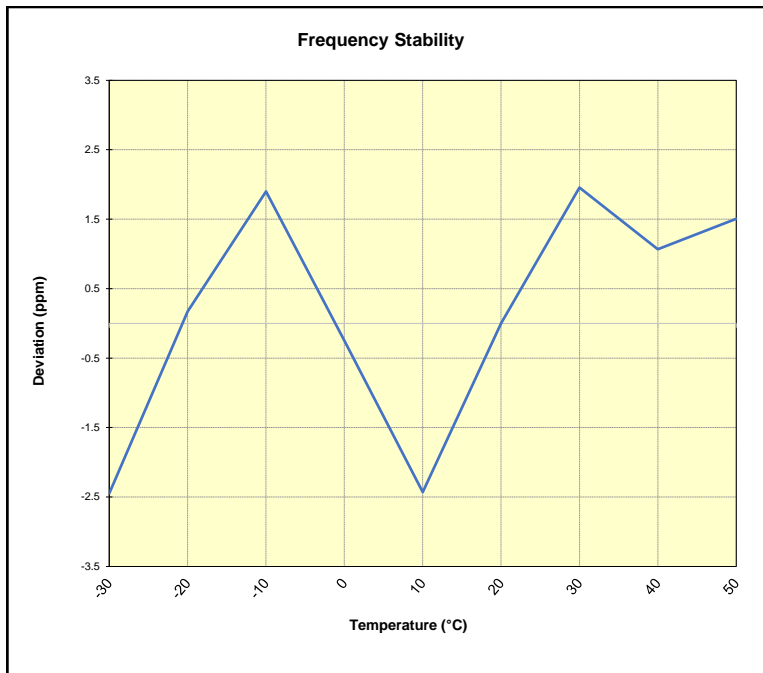
Plot 7-423. LTE Band 71 Frequency Stability Chart

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## Frequency Stability / Temperature Variation

LTE Band 12					
Operating Frequency (Hz):			707,500,000		
Ref. Voltage (VDC):			4.39		
Deviation Limit:			± 0.00025% or 2.5 ppm		
Voltage (%)	Power (VDC)	Temp (°C)	Frequency (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	4.39	- 30	707,588,748	-1,731	-0.0002446
		- 20	707,590,600	121	0.0000171
		- 10	707,591,823	1,344	0.0001900
		0	707,590,302	-177	-0.0000250
		+ 10	707,588,759	-1,720	-0.0002430
		+ 20 (Ref)	707,590,479	0	0.0000000
		+ 30	707,591,863	1,384	0.0001956
		+ 40	707,591,234	755	0.0001066
Battery Endpoint	3.54	+ 50	707,591,545	1,066	0.0001506
		+ 20	707,588,368	-2,111	-0.0002984

**Table 7-75. LTE Band 12 Frequency Stability Data**



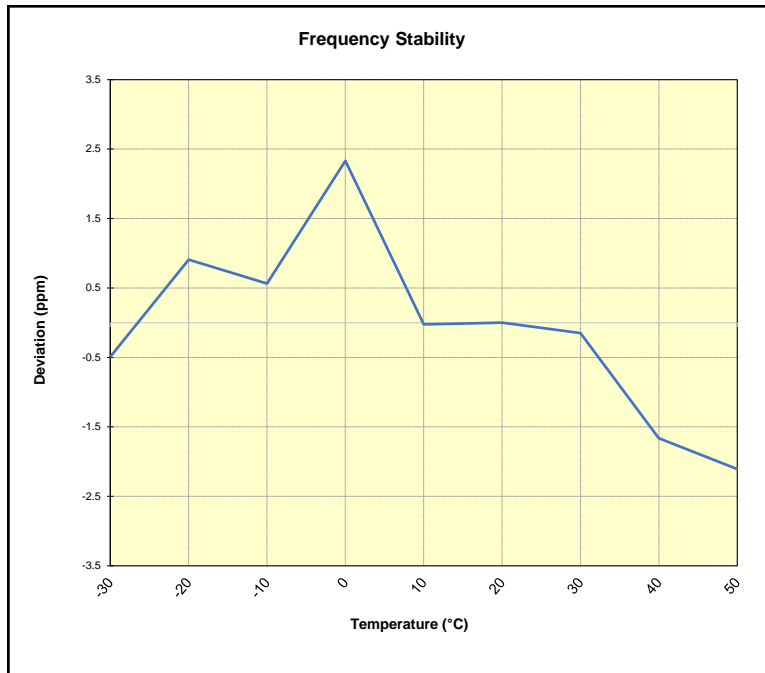
**Plot 7-424. LTE Band 12 Frequency Stability Chart**

FCC ID: A3LSMF721U	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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## Frequency Stability / Temperature Variation

LTE Band 13					
			Operating Frequency (Hz): 782,000,000		
			Ref. Voltage (VDC): 4.39		
			Deviation Limit: $\pm 0.00025\%$ or 2.5 ppm		
Voltage (%)	Power (VDC)	Temp (°C)	Frequency (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	4.39	- 30	782,084,505	-384	-0.0000491
		- 20	782,085,599	709	0.0000907
		- 10	782,085,330	441	0.0000564
		0	782,086,714	1,824	0.0002332
		+ 10	782,084,872	-18	-0.0000023
		+ 20 (Ref)	782,084,890	0	0.0000000
		+ 30	782,084,772	-117	-0.0000150
		+ 40	782,083,590	-1,300	-0.0001662
Battery Endpoint	3.54	+ 50	782,083,240	-1,649	-0.0002109
		+ 20	782,084,611	-279	-0.0000357

Table 7-76. LTE Band 13 Frequency Stability Data



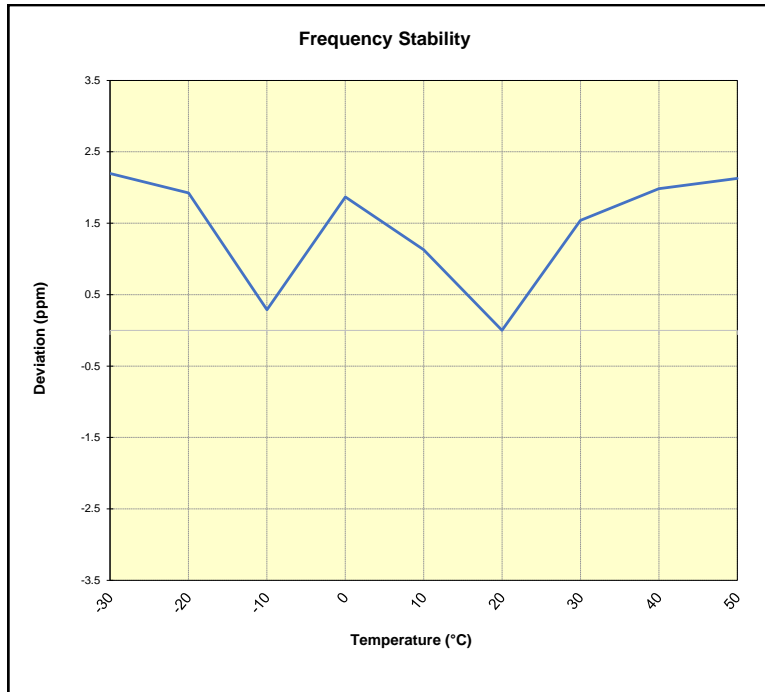
Plot 7-425. LTE Band 13 Frequency Stability Chart

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## Frequency Stability / Temperature Variation

NR Band n71					
		Operating Frequency (Hz):		680,500,000	
		Ref. Voltage (VDC):		4.39	
		Deviation Limit:		± 0.00025% or 2.5 ppm	
Voltage (%)	Power (VDC)	Temp (°C)	Frequency (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	4.39	- 30	680,581,556	1,495	0.0002196
		- 20	680,581,372	1,310	0.0001926
		- 10	680,580,258	196	0.0000289
		0	680,581,332	1,271	0.0001867
		+ 10	680,580,831	770	0.0001131
		+ 20 (Ref)	680,580,061	0	0.0000000
		+ 30	680,581,108	1,047	0.0001538
		+ 40	680,581,411	1,350	0.0001984
		+ 50	680,581,510	1,449	0.0002129
Battery Endpoint	3.54	+ 20	680,580,223	161	0.0000237

Table 7-77. NR Band n71 Frequency Stability Data



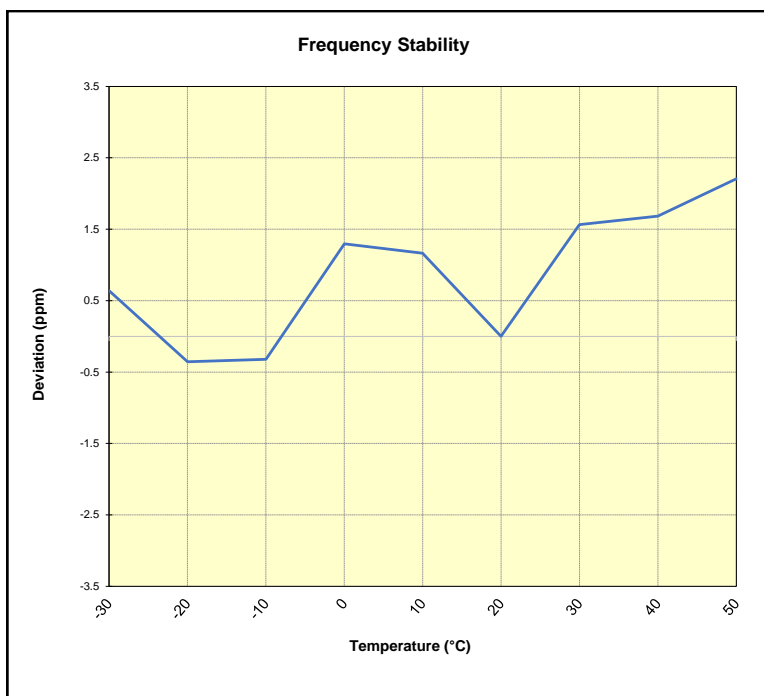
Plot 7-426. NR Band n71 Frequency Stability Chart

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## Frequency Stability / Temperature Variation

NR Band n12					
		Operating Frequency (Hz):		707,500,000	
		Ref. Voltage (VDC):		4.39	
		Deviation Limit:		± 0.00025% or 2.5 ppm	
Voltage (%)	Power (VDC)	Temp (°C)	Frequency (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	4.39	- 30	707,489,725	451	0.0000637
		- 20	707,489,023	-251	-0.0000355
		- 10	707,489,048	-227	-0.0000321
		0	707,490,192	918	0.0001297
		+ 10	707,490,099	824	0.0001165
		+ 20 (Ref)	707,489,275	0	0.0000000
		+ 30	707,490,381	1,107	0.0001564
		+ 40	707,490,465	1,190	0.0001682
Battery Endpoint	3.54	+ 20	707,490,202	928	0.0001311

Table 7-78. NR Band n12 Frequency Stability Data



Plot 7-427. NR Band n12 Frequency Stability Chart

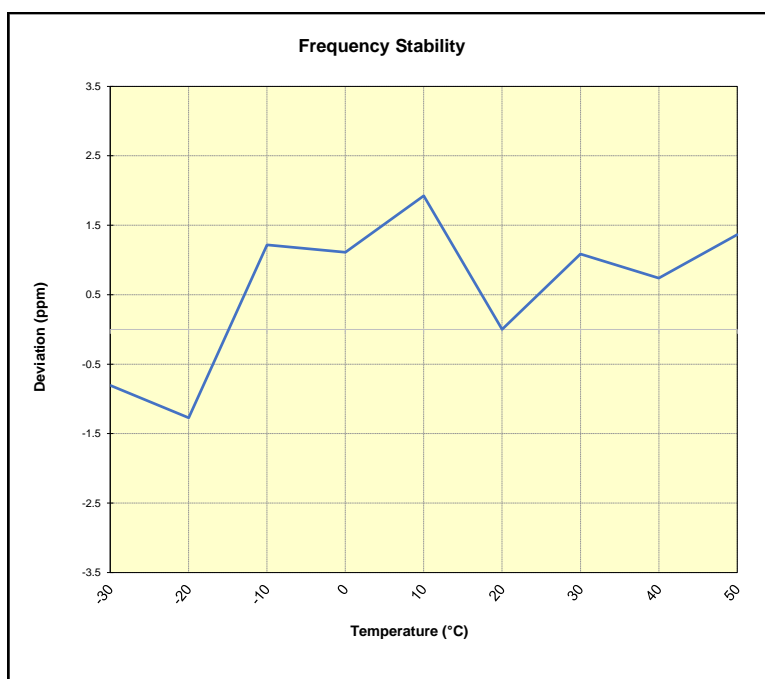
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## Frequency Stability / Temperature Variation

WCDMA AWS					
		Operating Frequency (Hz):		1,732,600,000	
		Ref. Voltage (VDC):		4.39	
		Deviation Limit:		± 0.00025% or 2.5 ppm	
Voltage (%)	Power (VDC)	Temp (°C)	Frequency (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	4.39	- 30	1,732,618,377	-1,399	-0.0000807
		- 20	1,732,617,573	-2,202	-0.0001271
		- 10	1,732,621,887	2,112	0.0001219
		0	1,732,621,699	1,923	0.0001110
		+ 10	1,732,623,110	3,334	0.0001924
		+ 20 (Ref)	1,732,619,776	0	0.0000000
		+ 30	1,732,621,658	1,882	0.0001086
		+ 40	1,732,621,056	1,280	0.0000739
		+ 50	1,732,622,139	2,363	0.0001364
Battery Endpoint	3.54	+ 20	1,732,619,663	-113	-0.0000065

Table 7-79. WCDMA AWS Frequency Stability Data



Plot 7-428. WCDMA AWS Frequency Stability Chart

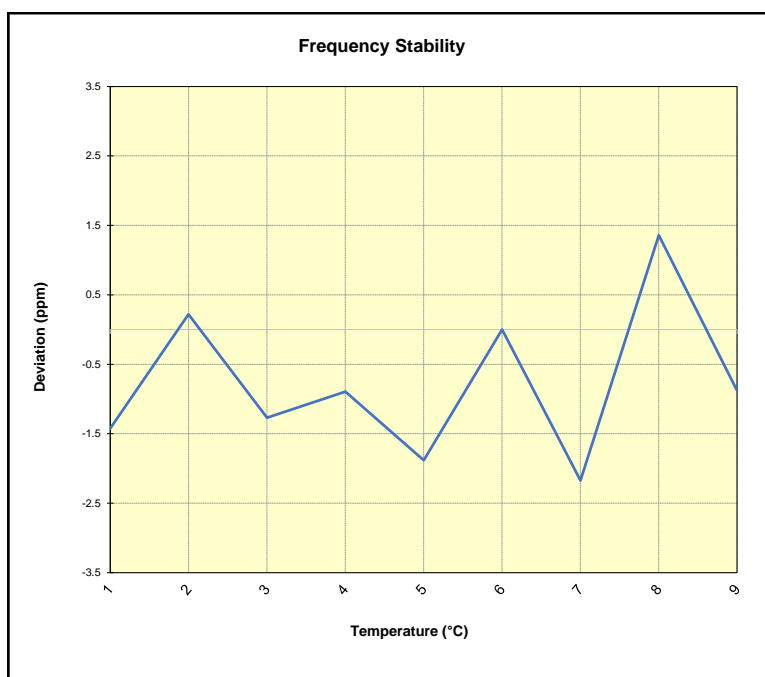
FCC ID: A3LSMF721U	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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## Frequency Stability / Temperature Variation

LTE Band 66/4					
		Operating Frequency (Hz):		1,745,000,000	
		Ref. Voltage (VDC):		4.39	
		Deviation Limit:		± 0.00025% or 2.5 ppm	
Voltage (%)	Power (VDC)	Temp (°C)	Frequency (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	4.39	- 30	1,745,081,373	-2,486	-0.0001425
		- 20	1,745,084,244	384	0.0000220
		- 10	1,745,081,643	-2,216	-0.0001270
		0	1,745,082,298	-1,561	-0.0000895
		+ 10	1,745,080,576	-3,284	-0.0001882
		+ 20 (Ref)	1,745,083,859	0	0.0000000
		+ 30	1,745,080,069	-3,790	-0.0002172
		+ 40	1,745,086,228	2,369	0.0001357
		+ 50	1,745,082,320	-1,539	-0.0000882
Battery Endpoint	3.54	+ 20	1,745,085,857	1,998	0.0001145

Table 7-80. LTE Band 66/4 Frequency Stability Data



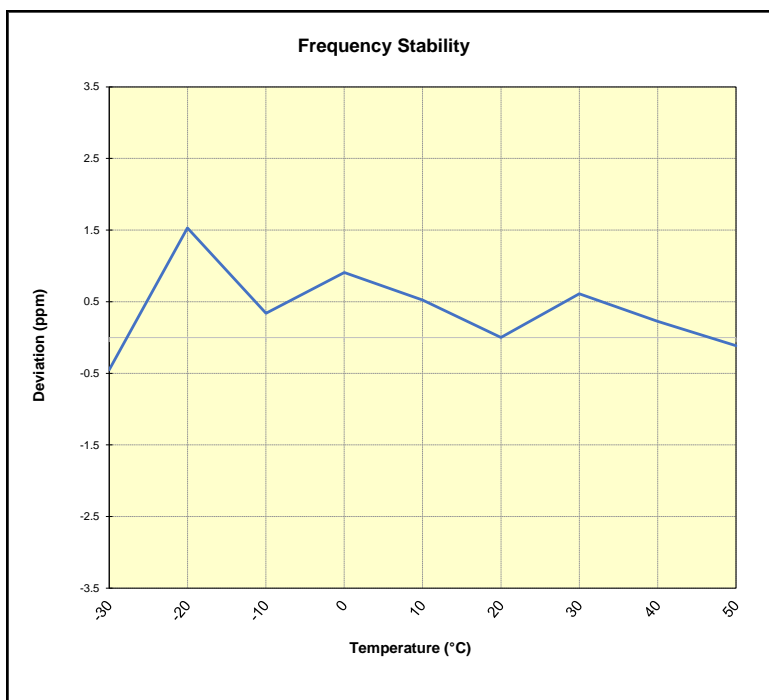
Plot 7-429. LTE Band 66/4 Frequency Stability Chart

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## Frequency Stability / Temperature Variation

NR Band n66					
		Operating Frequency (Hz):		1,745,000,000	
		Ref. Voltage (VDC):		4.39	
		Deviation Limit:		± 0.00025% or 2.5 ppm	
Voltage (%)	Power (VDC)	Temp (°C)	Frequency (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	4.39	- 30	1,745,079,513	-788	-0.0000452
		- 20	1,745,082,973	2,671	0.0001531
		- 10	1,745,080,891	590	0.0000338
		0	1,745,081,885	1,584	0.0000908
		+ 10	1,745,081,217	915	0.0000524
		+ 20 (Ref)	1,745,080,301	0	0.0000000
		+ 30	1,745,081,370	1,068	0.0000612
		+ 40	1,745,080,696	394	0.0000226
		+ 50	1,745,080,100	-201	-0.0000115
Battery Endpoint	3.54	+ 20	1,745,080,788	487	0.0000279

Table 7-81. NR Band n66 Frequency Stability Data



Plot 7-430. NR Band n66 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: A3LSMF721U** complies with all the requirements of Part 27 of the FCC rules.

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