

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	-	-	-77.21	-0.76	29.03	-66.23	-13.00	-53.23
5580.00	H	-	-	-77.38	2.24	31.86	-63.40	-13.00	-50.40
7440.00	H	-	-	-77.88	6.90	36.02	-59.24	-13.00	-46.24

Table 7-39. Radiated Spurious Data Above 1GHz (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	-	-	-76.52	0.14	30.62	-64.64	-13.00	-51.64
5647.50	H	-	-	-77.33	2.45	32.12	-63.14	-13.00	-50.14
7530.00	H	-	-	-77.83	6.65	35.82	-59.44	-13.00	-46.44

Table 7-40. Radiated Spurious Data Above 1GHz (LTE Band 25/2 – Mid Channel – Ant F)

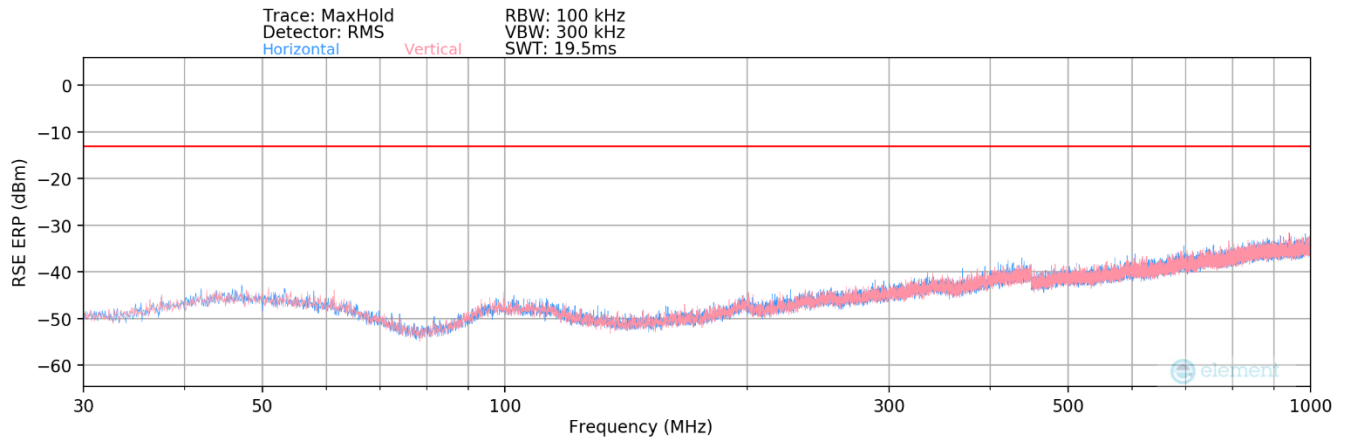
Bandwidth (MHz):	20
Frequency (MHz):	1905
RB / Offset:	1 / 50

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	-	-	-76.11	0.30	31.19	-64.07	-13.00	-51.07
5715.00	H	-	-	-76.82	2.74	32.92	-62.34	-13.00	-49.34
7620.00	H	-	-	-77.23	6.78	36.55	-58.71	-13.00	-45.71

Table 7-41. Radiated Spurious Data Above 1GHz (LTE Band 25/2 – High Channel – Ant F)

FCC ID: A3LSMS928U	PART 24 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2308210092-03.A3L	Test Dates: 9/11/2023 - 10/11/2023	EUT Type: Portable Handset	Page 122 of 130

NR Band n25/2 – Ant F

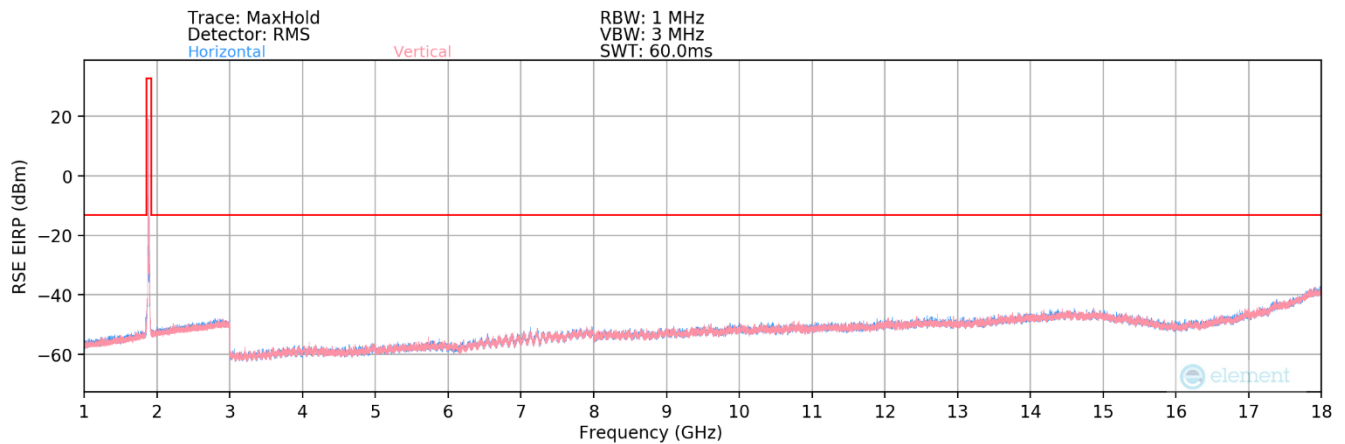


Plot 7-149. Radiated Spurious Plot Below 1GHz (NR Band n25/2 – Ant F)

Bandwidth (MHz):	40
Frequency (MHz):	1882.5
RB / Offset:	1/108

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]
978.35	H	-	-	-81.97	30.98	56.01	-41.39	-13.00	-28.39

Table 7-42. Radiated Spurious Data Below 1GHz (NR Band n25/2 – Ant F)



Plot 7-150. Radiated Spurious Plot Above 1GHz (NR Band n25/2 – Ant F)

FCC ID: A3LSMS928U	PART 24 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2308210092-03.A3L	Test Dates: 9/11/2023 - 10/11/2023	EUT Type: Portable Handset	Page 123 of 130

Bandwidth (MHz):	40
Frequency (MHz):	1870
RB / Offset:	1 / 108

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]
3740.00	H	-	-	-75.69	-0.28	31.03	-64.22	-13.00	-51.22
5610.00	H	-	-	-76.52	2.95	33.43	-61.83	-13.00	-48.83
7480.00	H	-	-	-77.51	7.12	36.61	-58.65	-13.00	-45.65

Table 7-43. Radiated Spurious Data Above 1GHz (NR Band n25/2 – Low Channel – Ant F)

Bandwidth (MHz):	40
Frequency (MHz):	1882.5
RB / Offset:	1 / 108

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	-	-	-76.53	0.12	30.59	-64.67	-13.00	-51.67
5647.50	H	-	-	-77.25	2.87	32.62	-62.63	-13.00	-49.63
7530.00	H	-	-	-77.90	6.88	35.98	-59.28	-13.00	-46.28

Table 7-44. Radiated Spurious Data Above 1GHz (NR Band n25/2 – Mid Channel – Ant F)

Bandwidth (MHz):	40
Frequency (MHz):	1895
RB / Offset:	1 / 108

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]
3790.00	H	-	-	-75.91	0.22	31.31	-63.95	-13.00	-50.95
5685.00	H	-	-	-76.54	3.03	33.49	-61.76	-13.00	-48.76
7580.00	H	-	-	-77.65	7.16	36.51	-58.75	-13.00	-45.75

Table 7-45. Radiated Spurious Data Above 1GHz (NR Band n25/2 – High Channel – Ant F)

FCC ID: A3LSMS928U	PART 24 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2308210092-03.A3L	Test Dates: 9/11/2023 - 10/11/2023	EUT Type: Portable Handset	Page 124 of 130

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

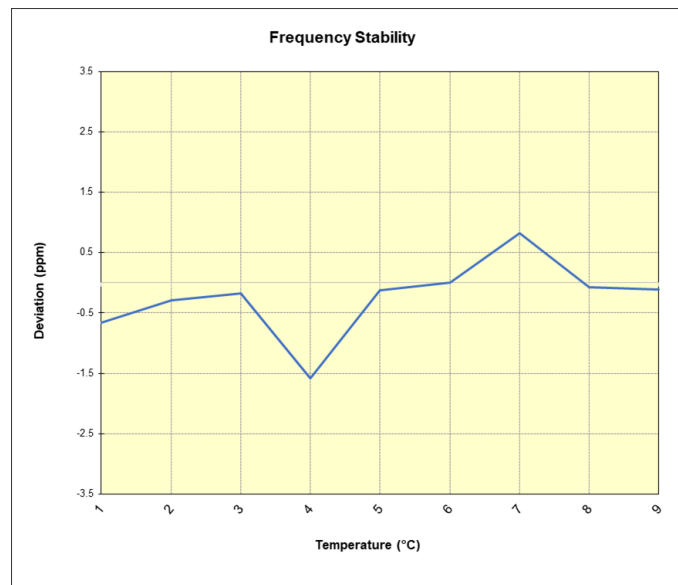
None

FCC ID: A3LSMS928U	PART 24 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2308210092-03.A3L	Test Dates: 9/11/2023 - 10/11/2023	EUT Type: Portable Handset	Page 125 of 130

LTE Band 25/2

LTE Band 25/2					
Operating Frequency (Hz):			1,882,500,000		
Ref. Voltage (VDC):			4.27		
Voltage (%)	Power (VDC)	Temp (°C)	Frequency (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	4.27	- 30	1,888,255,554	-1,254	-0.0000664
		- 20	1,888,256,261	-547	-0.0000290
		- 10	1,888,256,472	-336	-0.0000178
		0	1,888,253,821	-2,987	-0.0001582
		+ 10	1,888,256,561	-247	-0.0000131
		+ 20 (Ref)	1,888,256,808	0	0.0000000
		+ 30	1,888,258,355	1,547	0.0000819
		+ 40	1,888,256,667	-141	-0.0000075
		+ 50	1,888,256,597	-211	-0.0000112
Battery Endpoint	3.68	+ 20	1,888,256,955	147	0.0000078

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



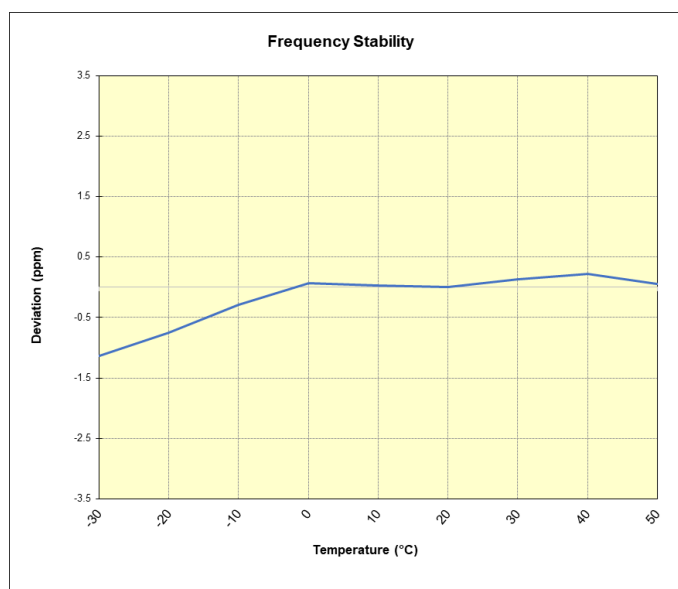
Plot 7-151. LTE Band 25/2 Frequency Stability Chart

FCC ID: A3LSMS928U	PART 24 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2308210092-03.A3L	Test Dates: 9/11/2023 - 10/11/2023	EUT Type: Portable Handset	Page 126 of 130

NR Band n25/2

NR Band n25/2					
Operating Frequency (Hz):			1,882,500,000		
Ref. Voltage (VDC):			4.27		
Voltage (%)	Power (VDC)	Temp (°C)	Frequency (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	4.27	- 30	1,882,583,006	-2,141	-0.0001137
		- 20	1,882,583,725	-1,422	-0.0000755
		- 10	1,882,584,600	-547	-0.0000291
		0	1,882,585,268	121	0.0000064
		+ 10	1,882,585,206	59	0.0000031
		+ 20 (Ref)	1,882,585,147	0	0.0000000
		+ 30	1,882,585,386	239	0.0000127
		+ 40	1,882,585,557	410	0.0000218
		+ 50	1,882,585,247	100	0.0000053
Battery Endpoint	3.68	+ 20	1,882,585,235	88	0.0000047

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



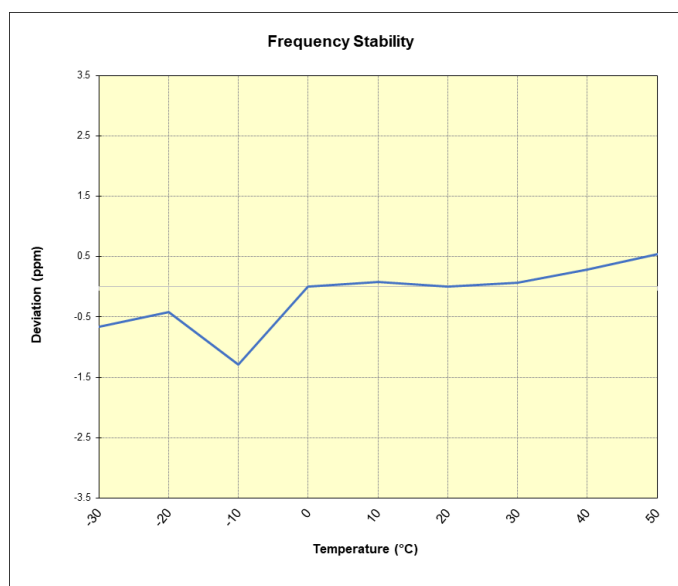
Plot 7-152. NR Band n25/2 Frequency Stability Chart

FCC ID: A3LSMS928U	PART 24 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2308210092-03.A3L	Test Dates: 9/11/2023 - 10/11/2023	EUT Type: Portable Handset	Page 127 of 130

GSM/GPRS PCS

GSM/GPRS PCS					
		Operating Frequency (Hz):		1,880,000,000	
		Ref. Voltage (VDC):		4.27	
Voltage (%)	Power (VDC)	Temp (°C)	Frequency (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	4.27	- 30	1,880,013,497	-1,255	-0.0000668
		- 20	1,880,013,963	-789	-0.0000420
		- 10	1,880,012,337	-2,415	-0.0001285
		0	1,880,014,762	10	0.0000005
		+ 10	1,880,014,893	141	0.0000075
		+ 20 (Ref)	1,880,014,752	0	0.0000000
		+ 30	1,880,014,875	123	0.0000065
		+ 40	1,880,015,293	541	0.0000288
		+ 50	1,880,015,757	1,005	0.0000535
Battery Endpoint	3.68	+ 20	1,880,015,537	785	0.0000418

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



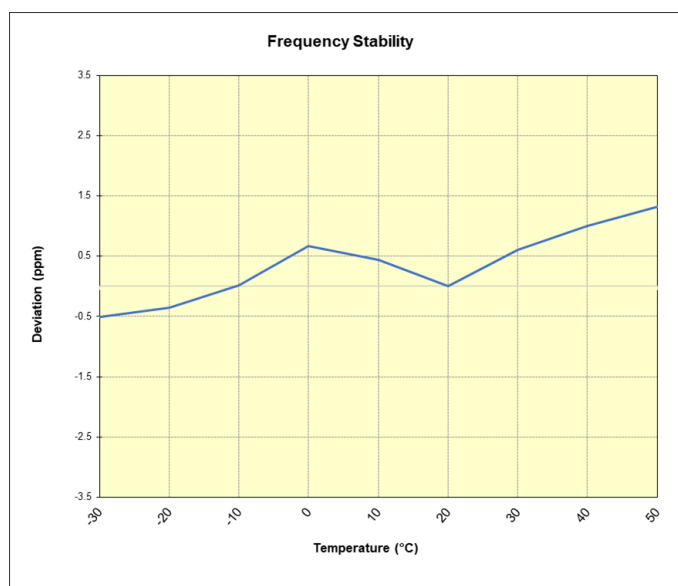
Plot 7-153. GSM/GPRS PCS Frequency Stability Chart

FCC ID: A3LSMS928U	PART 24 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2308210092-03.A3L	Test Dates: 9/11/2023 - 10/11/2023	EUT Type: Portable Handset	Page 128 of 130

WCDMA PCS

WCDMA PCS					
		Operating Frequency (Hz):		1,880,000,000	
		Ref. Voltage (VDC):		4.27	
Voltage (%)	Power (VDC)	Temp (°C)	Frequency (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	4.27	- 30	1,880,040,259	-963	-0.0000512
		- 20	1,880,040,558	-664	-0.0000353
		- 10	1,880,041,247	25	0.0000013
		0	1,880,042,489	1,267	0.0000674
		+ 10	1,880,042,047	825	0.0000439
		+ 20 (Ref)	1,880,041,222	0	0.0000000
		+ 30	1,880,042,369	1,147	0.0000610
		+ 40	1,880,043,110	1,888	0.0001004
		+ 50	1,880,043,699	2,477	0.0001318
Battery Endpoint	3.68	+ 20	1,880,042,658	1,436	0.0000764

Table 7-49. WCDMA PCS Frequency Stability Data



Plot 7-154. WCDMA PCS Frequency Stability Chart

FCC ID: A3LSMS928U	PART 24 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2308210092-03.A3L	Test Dates: 9/11/2023 - 10/11/2023	EUT Type: Portable Handset	Page 129 of 130

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 Part 24 of the FCC rules.

FCC ID: A3LSMS928U	PART 24 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2308210092-03.A3L	Test Dates: 9/11/2023 - 10/11/2023	EUT Type: Portable Handset	Page 130 of 130