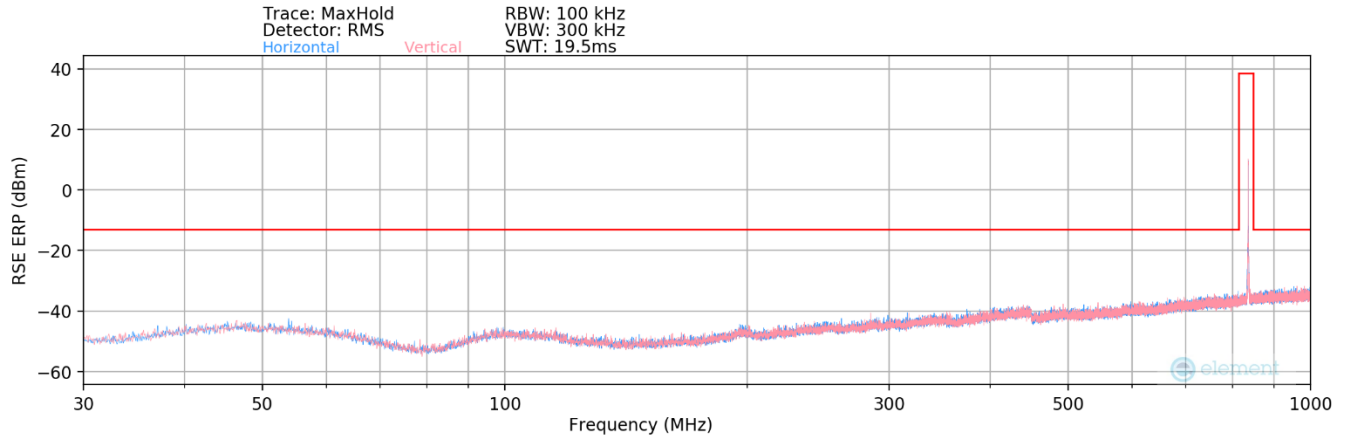


LTE Band 26/5 – Ant E

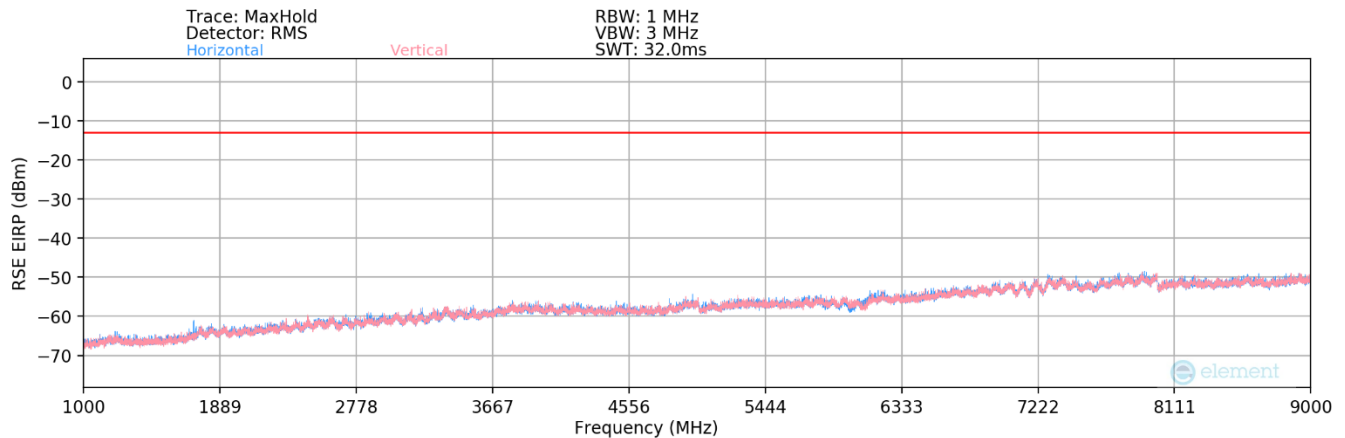


Plot 7-103. Radiated Spurious Plot Below 1GHz (LTE Band 26/5 – Ant E)

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

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	ERP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
886.98	H	-	-	-81.93	26.42	51.49	-45.92	-13.00	-32.92

Table 7-40. Radiated Spurious Data Below 1GHz (LTE Band 26/5 – Ant E)



Plot 7-104. Radiated Spurious Plot Above 1GHz (LTE Band 26/5 – Ant E)

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Bandwidth (MHz):	10
Frequency (MHz):	829
RB / Offset:	1 / 25

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
1658.00	H	-	-	-73.61	-8.88	24.51	-70.75	-13.00	-57.75
2487.00	H	-	-	-74.35	-5.07	27.58	-67.68	-13.00	-54.68
3316.00	H	-	-	-74.52	-1.55	30.93	-64.33	-13.00	-51.33
4145.00	H	-	-	-75.62	-0.05	31.33	-63.92	-13.00	-50.92
4974.00	H	-	-	-74.97	1.29	33.32	-61.94	-13.00	-48.94

Table 7-41. Radiated Spurious Data Above 1GHz (LTE Band 26/5 – Low Channel – Ant E)

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

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
1673.00	H	-	-	-73.59	-8.79	24.62	-70.63	-13.00	-57.63
2509.50	H	-	-	-74.30	-4.88	27.82	-67.44	-13.00	-54.44
3346.00	H	-	-	-74.58	-1.21	31.21	-64.04	-13.00	-51.04
4182.50	H	-	-	-75.55	0.18	31.63	-63.63	-13.00	-50.63
5019.00	H	-	-	-74.93	0.78	32.85	-62.41	-13.00	-49.41

Table 7-42. Radiated Spurious Data Above 1GHz (LTE Band 26/5 – Mid Channel – Ant E)

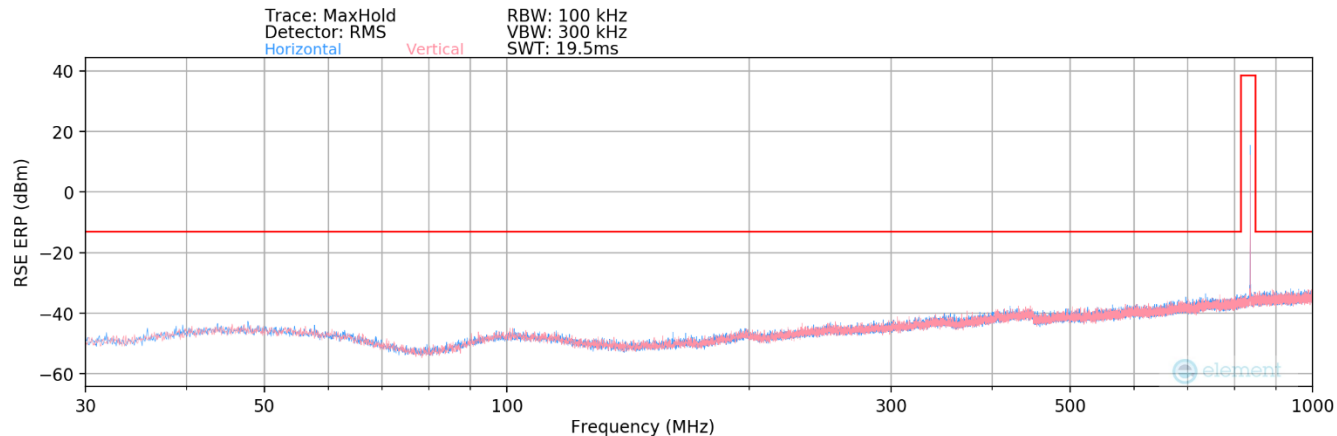
Bandwidth (MHz):	10
Frequency (MHz):	844
RB / Offset:	1 / 25

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
1688.00	H	-	-	-73.74	-8.65	24.61	-70.65	-13.00	-57.65
2532.00	H	-	-	-74.42	-4.69	27.89	-67.37	-13.00	-54.37
3376.00	H	-	-	-74.55	-0.89	31.56	-63.70	-13.00	-50.70
4220.00	H	-	-	-75.62	0.04	31.42	-63.84	-13.00	-50.84
5064.00	H	-	-	-74.86	1.06	33.20	-62.06	-13.00	-49.06

Table 7-43. Radiated Spurious Data Above 1GHz (LTE Band 26/5 – High Channel – Ant E)

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NR Band n26/5 – Ant E

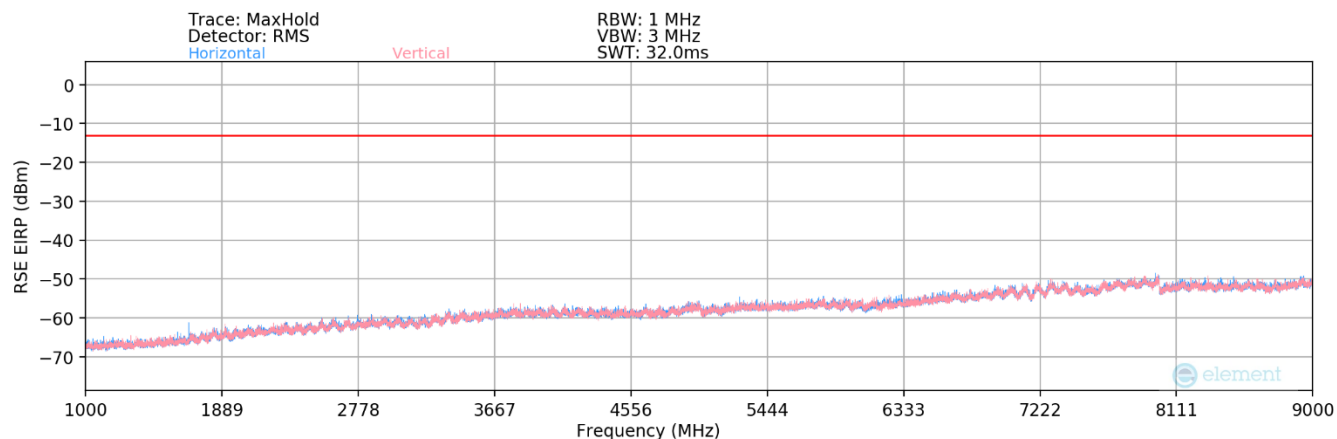


Plot 7-105. Radiated Spurious Plot Below 1GHz (NR Band n26/5 – Ant E)

Bandwidth (MHz):	20
Frequency (MHz):	836.5
RB / Offset:	1/53

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]
870.82	H	117	233	-73.17	30.17	64.00	-33.40	-13.00	-20.40

Table 7-44. Radiated Spurious Data Below 1GHz (NR Band n26/5 – Ant E)



Plot 7-106. Radiated Spurious Plot Above 1GHz (NR Band n26/5 – Ant E)

FCC ID: A3LSMS928U	PART 22 MEASUREMENT REPORT		Approved by: Technical Manager
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Bandwidth (MHz):	20
Frequency (MHz):	834
RB / Offset:	1 / 53

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]
1668.00	H	129	214	-68.34	-8.86	29.80	-65.45	-13.00	-52.45
2502.00	H	-	-	-75.81	-5.38	25.81	-69.45	-13.00	-56.45
3336.00	H	-	-	-76.68	-2.09	28.23	-67.02	-13.00	-54.02
4170.00	H	-	-	-76.47	-0.10	30.43	-64.83	-13.00	-51.83

Table 7-45. Radiated Spurious Data Above 1GHz (NR Band n26/5 – Low Channel – Ant E)

Bandwidth (MHz):	20
Frequency (MHz):	836.5
RB / Offset:	1 / 53

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
1673.00	H	124	215	-68.37	-8.82	29.81	-65.44	-13.00	-52.44
2509.50	H	-	-	-75.49	-5.28	26.23	-69.03	-13.00	-56.03
3346.00	H	-	-	-75.73	-1.97	29.30	-65.96	-13.00	-52.96
4182.50	H	-	-	-77.29	-0.02	29.69	-65.57	-13.00	-52.57

Table 7-46. Radiated Spurious Data Above 1GHz (NR Band n26/5 – Mid Channel – Ant E)

Bandwidth (MHz):	20
Frequency (MHz):	839
RB / Offset:	1 / 53

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]
1678.00	H	125	217	-68.78	-8.76	29.46	-65.80	-13.00	-52.80
2517.00	H	-	-	-75.81	-5.17	26.02	-69.24	-13.00	-56.24
3356.00	H	-	-	-75.35	-1.81	29.84	-65.41	-13.00	-52.41
4195.00	H	-	-	-76.26	-0.06	30.68	-64.58	-13.00	-51.58

Table 7-47. Radiated Spurious Data Above 1GHz (NR Band n26/5 – High Channel – Ant E)

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7.7 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 22 and RSS-132, 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

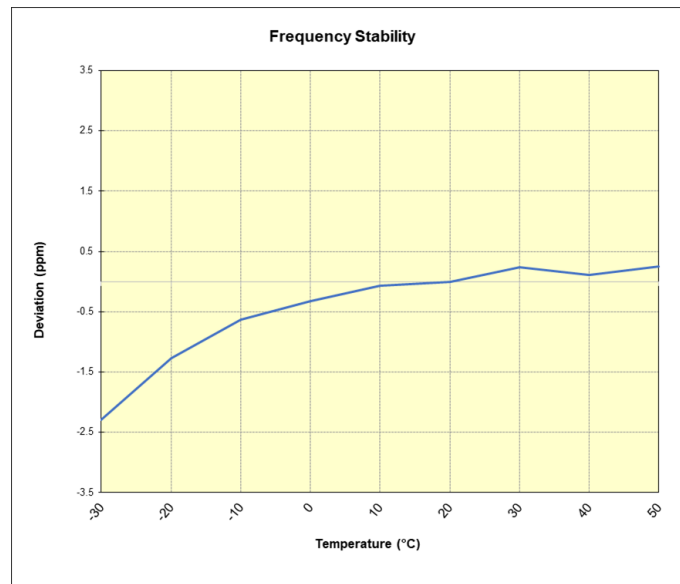
None

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GSM/GPRS Cell

GSM/GPRS Cellular					
		Operating Frequency (Hz):		836,600,000	
		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	836,040,667	-1,921	-0.0002298
		- 20	836,041,527	-1,061	-0.0001269
		- 10	836,042,062	-526	-0.0000629
		0	836,042,314	-274	-0.0000328
		+ 10	836,042,536	-52	-0.0000062
		+ 20 (Ref)	836,042,588	0	0.0000000
		+ 30	836,042,789	201	0.0000240
		+ 40	836,042,677	89	0.0000106
		+ 50	836,042,802	214	0.0000256
Battery Endpoint	3.68	+ 20	836,043,586	998	0.0001194

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



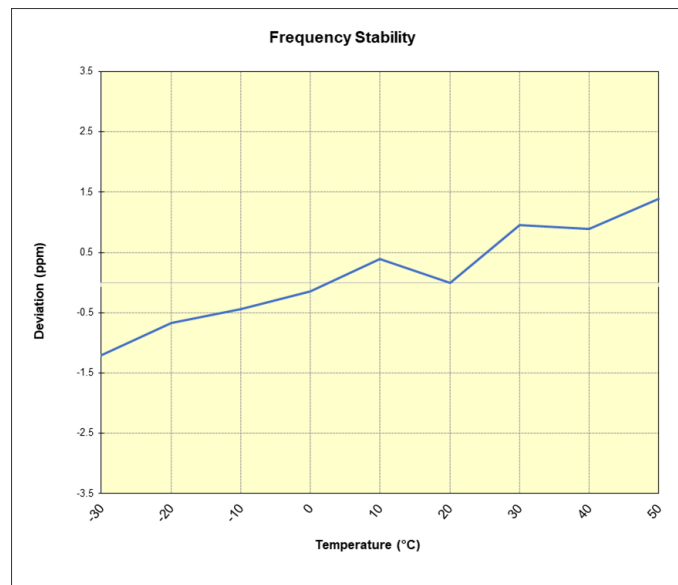
Plot 7-107. GSM/GPRS Cell Frequency Stability Chart

FCC ID: A3LSMS928U	PART 22 MEASUREMENT REPORT		Approved by: Technical Manager
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WCDMA Cell

WCDMA Cellular					
		Operating Frequency (Hz):		836,600,000	
		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	836,613,218	-1,004	-0.0001200
		- 20	836,613,666	-556	-0.0000665
		- 10	836,613,853	-369	-0.0000441
		0	836,614,100	-122	-0.0000146
		+ 10	836,614,550	328	0.0000392
		+ 20 (Ref)	836,614,222	0	0.0000000
		+ 30	836,615,023	801	0.0000957
		+ 40	836,614,967	745	0.0000890
		+ 50	836,615,380	1,158	0.0001384
Battery Endpoint	3.68	+ 20	836,612,122	-2,100	-0.0002510

Table 7-49. WCDMA Cell Frequency Stability Data



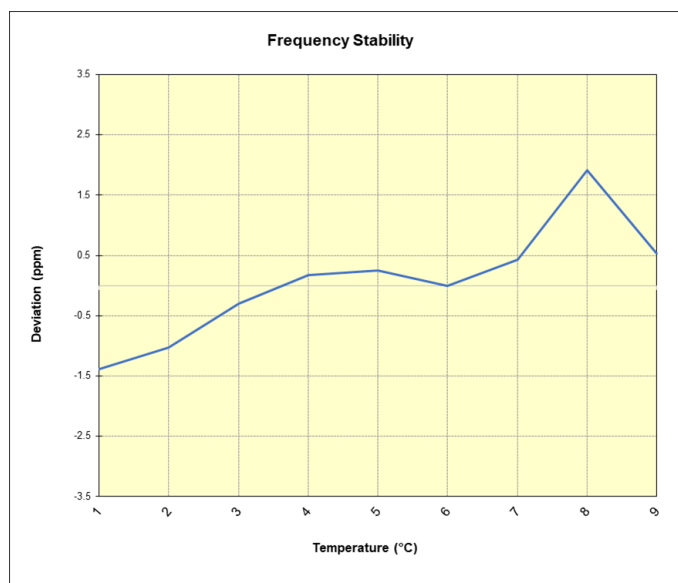
Plot 7-108. WCDMA Cell Frequency Stability Chart

FCC ID: A3LSMS928U	PART 22 MEASUREMENT REPORT		Approved by: Technical Manager
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LTE Band 26/5

LTE Band 26/5					
		Operating Frequency (Hz):		836,500,000	
		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	831,574,081	-1,147	-0.0001379
		- 20	831,574,371	-857	-0.0001031
		- 10	831,574,981	-247	-0.0000297
		0	831,575,370	142	0.0000171
		+ 10	831,575,437	209	0.0000251
		+ 20 (Ref)	831,575,228	0	0.0000000
		+ 30	831,575,582	354	0.0000426
		+ 40	831,576,825	1,597	0.0001920
		+ 50	831,575,672	444	0.0000534
Battery Endpoint	3.68	+ 20	831,575,575	347	0.0000417

Table 7-50. LTE Band 26/5 Frequency Stability Data



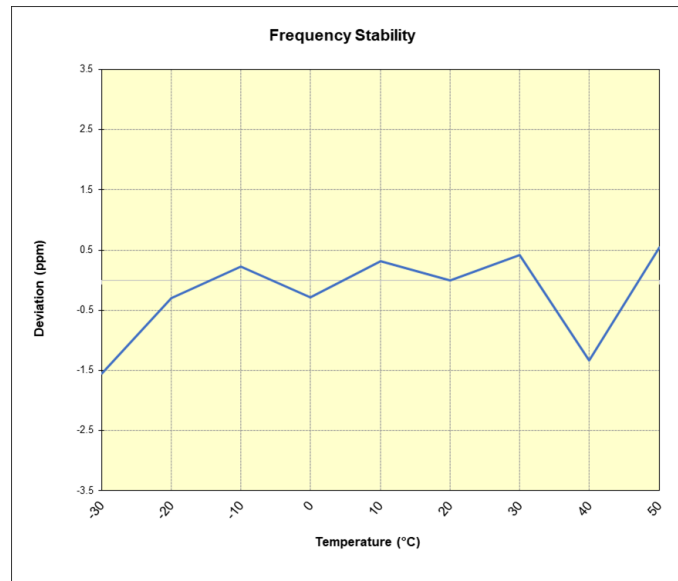
Plot 7-109. LTE Band 26/5 Frequency Stability Chart

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NR Band n26/5

NR Band n26/5					
		Operating Frequency (Hz):		836,500,000	
		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	836,500,124	-1,298	-0.0001552
		- 20	836,501,176	-246	-0.0000294
		- 10	836,501,609	187	0.0000224
		0	836,501,186	-236	-0.0000282
		+ 10	836,501,688	266	0.0000318
		+ 20 (Ref)	836,501,422	0	0.0000000
		+ 30	836,501,770	348	0.0000416
		+ 40	836,500,311	-1,111	-0.0001328
		+ 50	836,501,879	457	0.0000546
Battery Endpoint	3.68	+ 20	836,502,418	996	0.0001191

Table 7-51. NR Band n26/5 Frequency Stability Data



Plot 7-110. NR Band n26/5 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: A3LSMS928U** complies with all the requirements of Part 22 of the FCC rules.

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