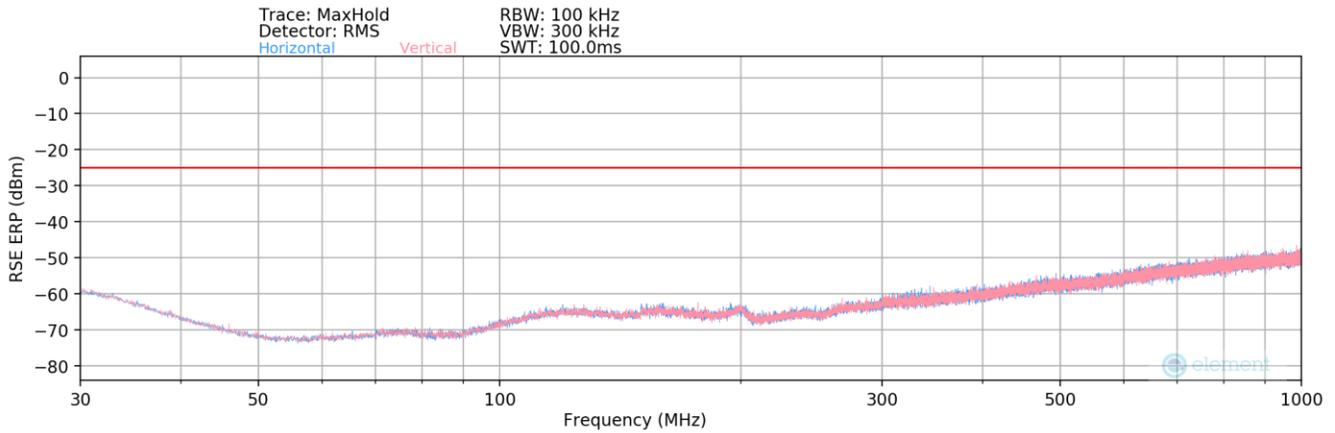
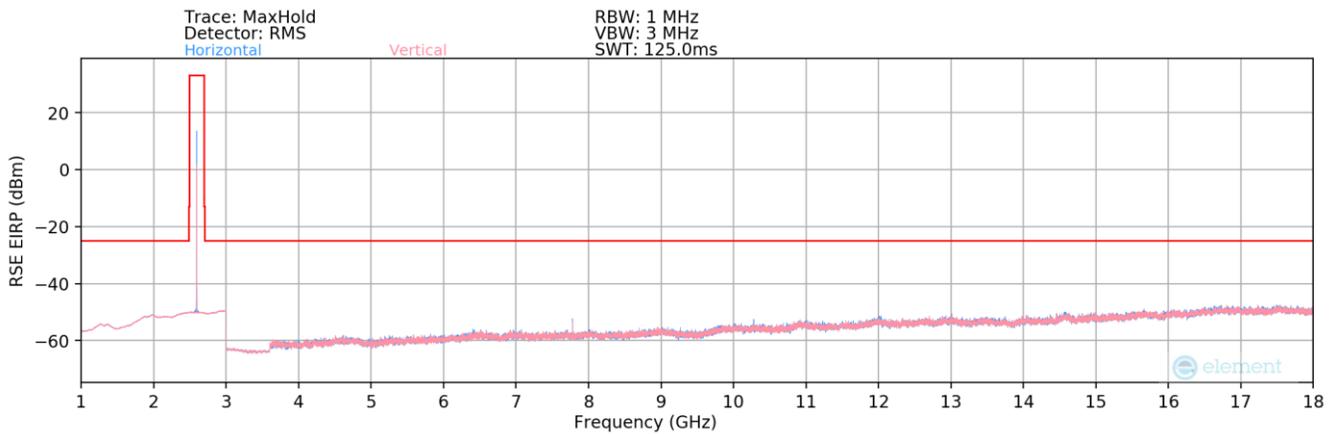


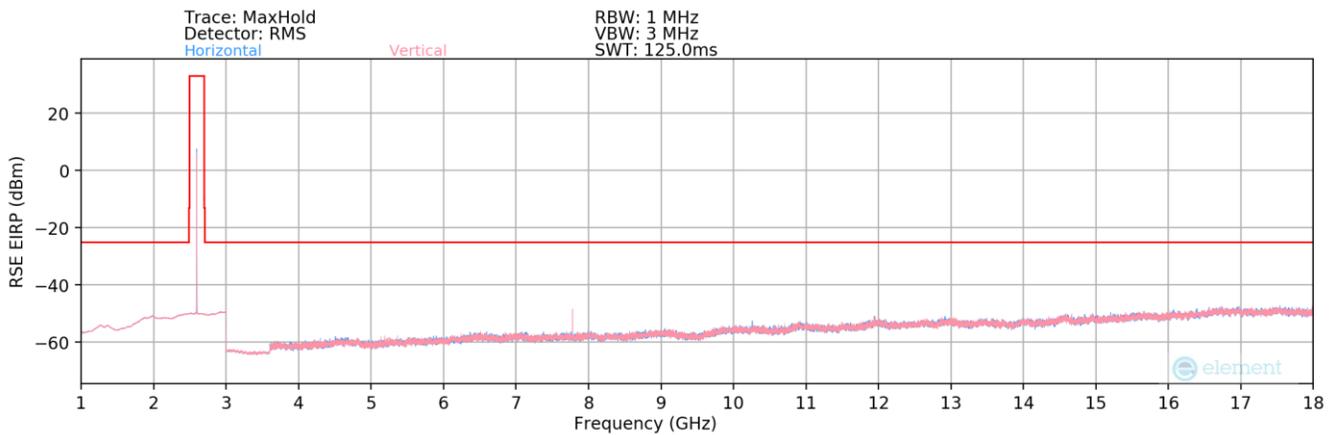
NR Band n41 – Ant E



Plot 7-418. Radiated Spurious Plot <1GHz (NR Band n41 – Ant E) – Half

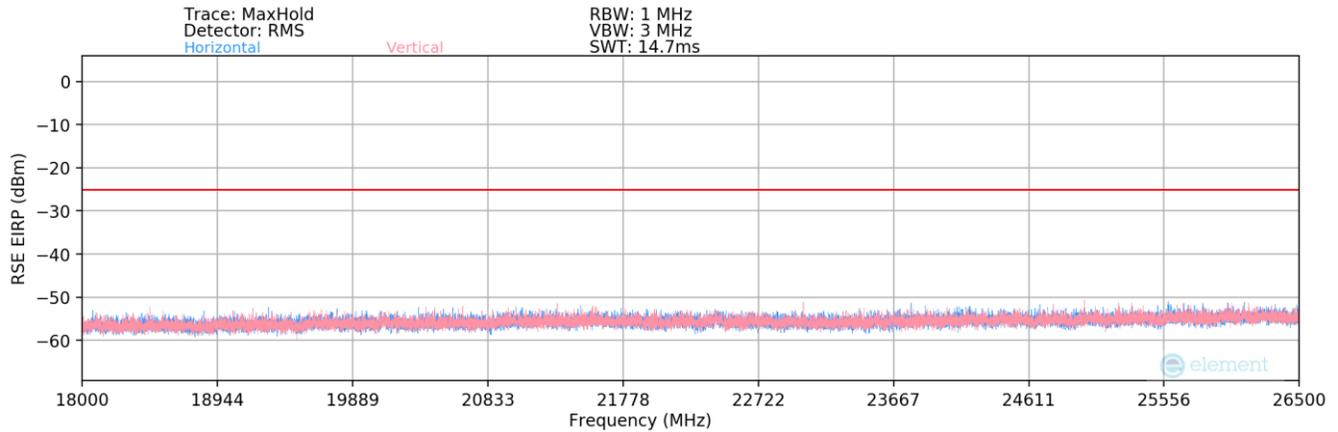


Plot 7-419. Radiated Spurious Plot (NR Band n41 – Ant E) – Open



Plot 7-420. Radiated Spurious Plot (NR Band n41 – Ant E) – Half

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Plot 7-421. Radiated Spurious Plot >18GHz (NR Band n41 – Ant E) – Half

Bandwidth (MHz):	100
Frequency (MHz):	2640.0
RB / Offset:	1 / 136

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]
186.0	V	-	-	-84.11	18.51	41.40	-56.01	-25.00	-31.01

Table 7-70. Radiated Spurious Data <1GHz (NR Band n41 – High Channel – Ant E) – Half

Bandwidth (MHz):	100
Frequency (MHz):	2546.0
RB / Offset:	1 / 136

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]
5092.0	V	-	-	-78.16	4.49	33.33	-61.93	-25.00	-36.93
7638.0	V	125	72	-72.57	7.96	42.39	-52.87	-25.00	-27.87
10184.0	H	-	-	-80.34	11.45	38.11	-57.15	-25.00	-32.15
12730.0	V	-	-	-80.71	14.30	40.59	-54.67	-25.00	-29.67
15276.0	V	-	-	-80.46	16.14	42.68	-52.58	-25.00	-27.58

Table 7-71. Radiated Spurious Data (NR Band n41 – Low Channel – Ant E) – Half

Bandwidth (MHz):	100
Frequency (MHz):	2593.0
RB / Offset:	1 / 136

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]
5186.0	V	-	-	-78.69	5.18	33.49	-61.77	-25.00	-36.77
7779.0	V	131	64	-74.81	7.47	39.66	-55.60	-25.00	-30.60
10372.0	H	-	-	-80.62	11.18	37.56	-57.69	-25.00	-32.69
12965.0	V	-	-	-80.69	14.27	40.58	-54.67	-25.00	-29.67
15558.0	V	-	-	-80.66	16.00	42.34	-52.92	-25.00	-27.92

Table 7-72. Radiated Spurious Data (NR Band n41 – Mid Channel – Ant E) – Half

FCC ID: A3LSMF936U	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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Bandwidth (MHz):	100
Frequency (MHz):	2640.0
RB / Offset:	1 / 136

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]
5280.0	V	-	-	-78.46	5.00	33.54	-61.72	-25.00	-36.72
7920.0	V	130	53	-70.50	8.08	44.58	-50.67	-25.00	-25.67
10560.0	H	-	-	-80.69	11.84	38.15	-57.10	-25.00	-32.10
13200.0	V	-	-	-80.36	13.65	40.29	-54.96	-25.00	-29.96
15840.0	V	-	-	-80.85	17.27	43.42	-51.84	-25.00	-26.84

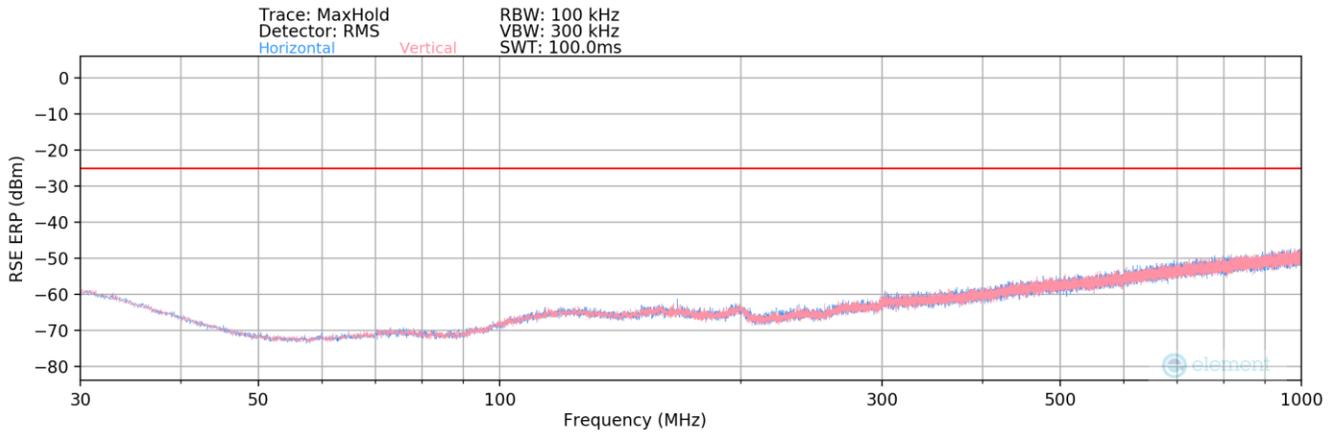
Table 7-73. Radiated Spurious Data (NR Band n41 – High Channel – Ant E) – Half

FCC ID: A3LSMF936U	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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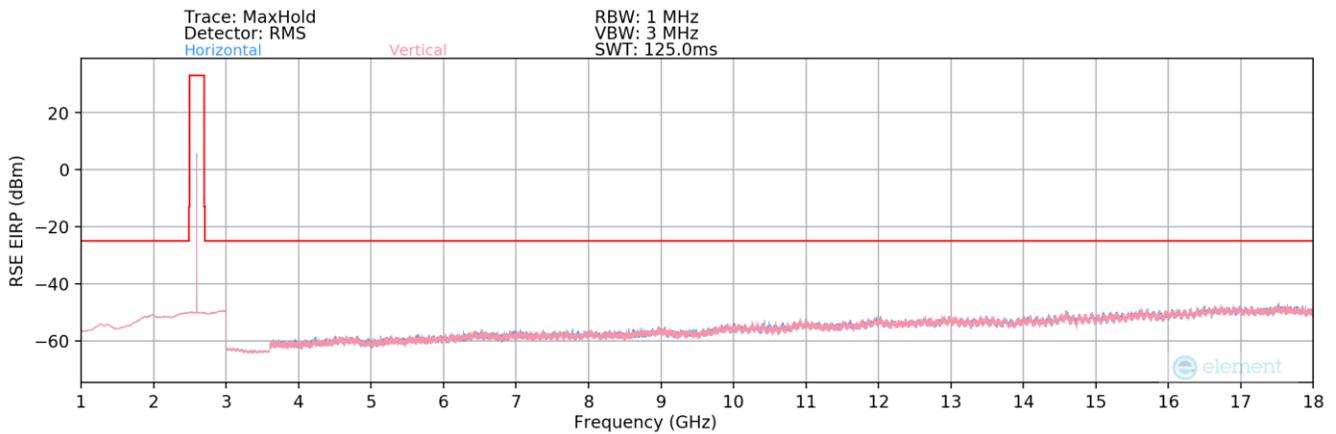
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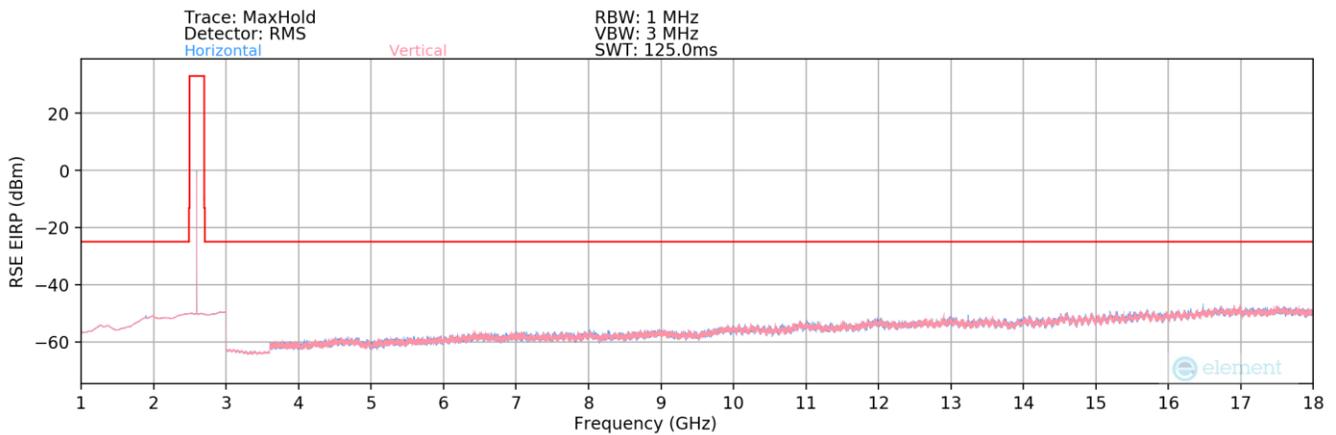
NR Band n41 – Ant C



Plot 7-422. Radiated Spurious Plot <1GHz (NR Band n41 – Ant C) – Open

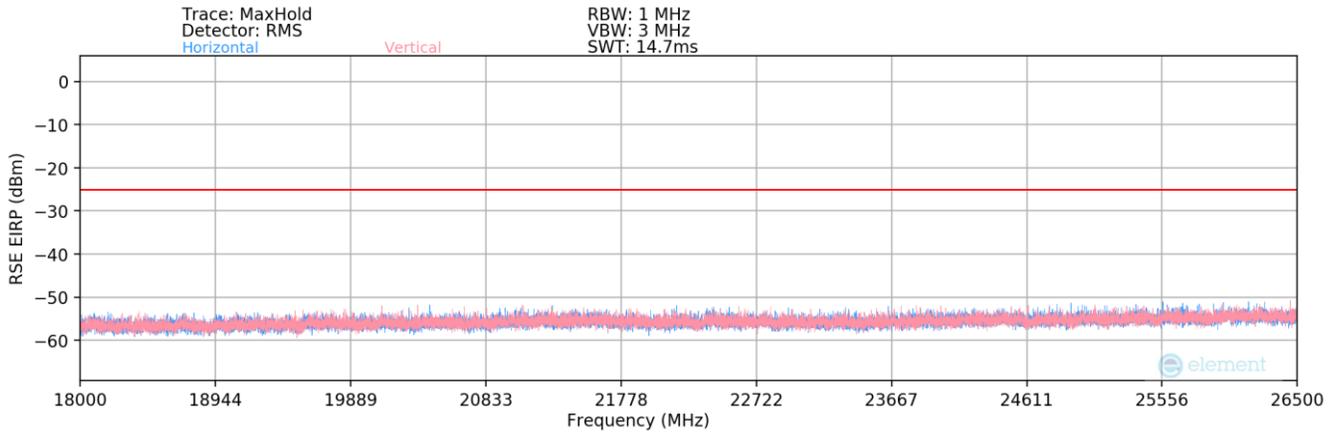


Plot 7-423. Radiated Spurious Plot (NR Band n41 – Ant C) – Open



Plot 7-424. Radiated Spurious Plot (NR Band n41 – Ant C) – Closed

FCC ID: A3LSMF936U	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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Plot 7-425. Radiated Spurious Plot >18GHz (NR Band n41 – Ant C) – Open

Bandwidth (MHz):	100
Frequency (MHz):	2593.0
RB / Offset:	1 / 136

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]
171.5	H	-	-	-84.20	19.28	42.08	-55.32	-25.00	-30.32
300.0	H	-	-	-84.16	21.30	44.14	-53.27	-25.00	-28.27

Table 7-74. Radiated Spurious Data <1GHz (NR Band n41 – Mid Channel – Ant C)

Bandwidth (MHz):	100
Frequency (MHz):	2546.0
RB / Offset:	1 / 136

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]
5092.0	H	-	-	-78.32	4.49	33.17	-62.09	-25.00	-37.09
7638.0	H	-	-	-78.96	7.96	36.00	-59.26	-25.00	-34.26
10184.0	H	-	-	-80.43	11.45	38.02	-57.24	-25.00	-32.24

Table 7-75. Radiated Spurious Data (NR Band n41 – Low Channel – Ant C)

Bandwidth (MHz):	100
Frequency (MHz):	2593.0
RB / Offset:	1 / 136

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]
5186.0	H	-	-	-78.44	5.18	33.74	-61.52	-25.00	-36.52
7779.0	H	-	-	-78.56	7.47	35.91	-59.35	-25.00	-34.35
10372.0	H	-	-	-80.75	11.18	37.43	-57.82	-25.00	-32.82

Table 7-76. Radiated Spurious Data (NR Band n41 – Mid Channel – Ant C)

FCC ID: A3LSMF936U	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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Bandwidth (MHz):	100
Frequency (MHz):	2640.0
RB / Offset:	1 / 136

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]
5280.0	H	-	-	-80.51	5.00	31.49	-63.77	-25.00	-38.77
7920.0	H	-	-	-78.85	8.08	36.23	-59.02	-25.00	-34.02
10560.0	H	-	-	-80.57	11.84	38.27	-56.98	-25.00	-31.98

Table 7-77. Radiated Spurious Data (NR Band n41 – High Channel – Ant C)

FCC ID: A3LSMF936U	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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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.

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

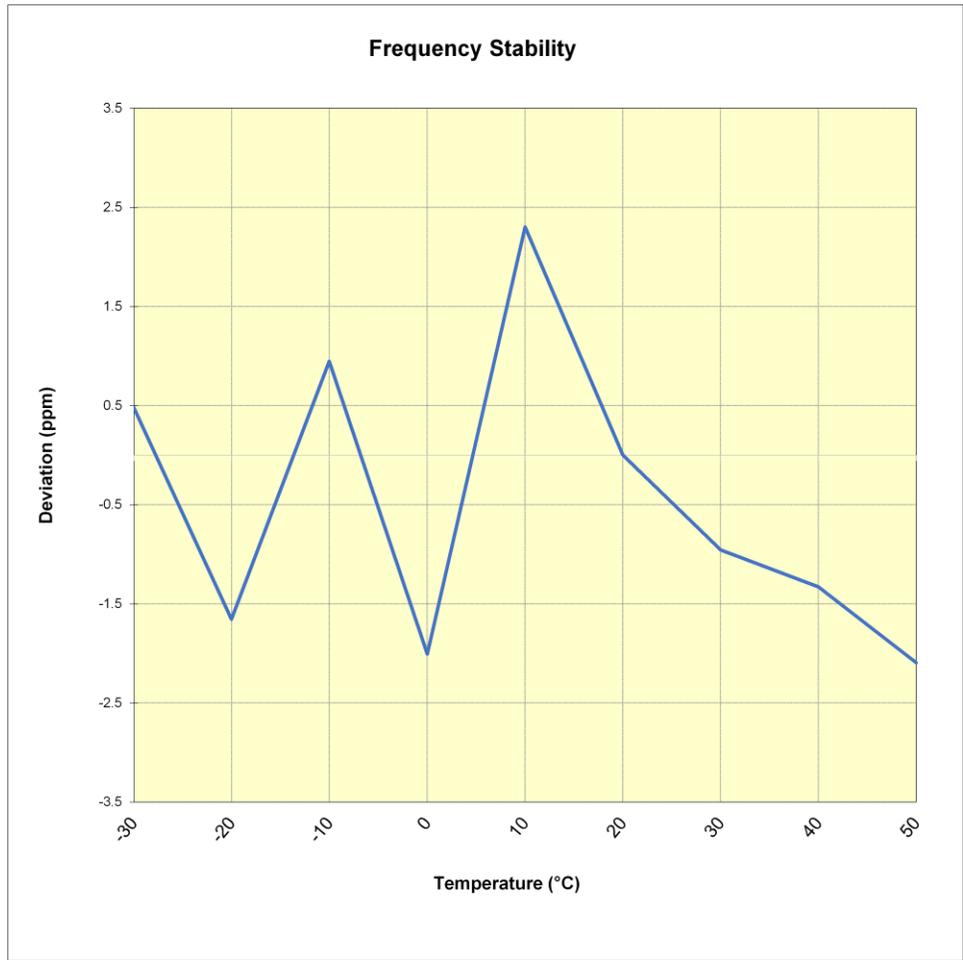
FCC ID: A3LSMF936U	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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LTE Band 30					
Operating Frequency (Hz):		2,310,000,000			
Ref. Voltage (VDC):		4.38			
Voltage (%)	Power (VDC)	Temp (°C)	Frequency (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	4.38	- 30	2,310,062,860	1,118	0.0000484
		- 20	2,310,057,916	-3,826	-0.0001656
		- 10	2,310,063,927	2,185	0.0000946
		0	2,310,057,107	-4,635	-0.0002006
		+ 10	2,310,067,060	5,318	0.0002302
		+ 20 (Ref)	2,310,061,742	0	0.0000000
		+ 30	2,310,059,533	-2,209	-0.0000956
		+ 40	2,310,058,669	-3,073	-0.0001330
		+ 50	2,310,056,901	-4,841	-0.0002096
Battery Endpoint	3.35	+ 20	2,310,064,483	2,741	0.0001187

Table 7-78. LTE Band 30 Frequency Stability Data – Ant B

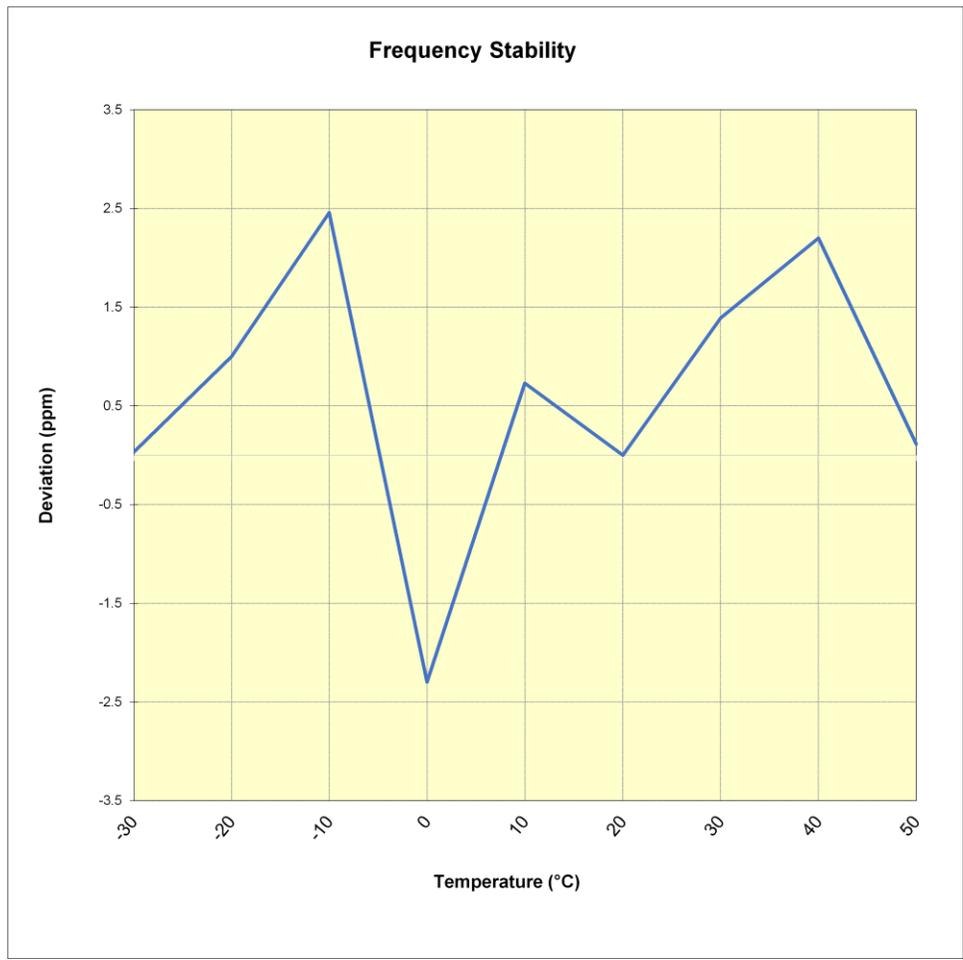


Plot 7-426. LTE Band 30 Frequency Stability Chart – Ant B

FCC ID: A3LSMF936U	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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LTE Band 7					
Operating Frequency (Hz):		2,535,000,000			
Ref. Voltage (VDC):		4.38			
Voltage (%)	Power (VDC)	Temp (°C)	Frequency (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	4.38	- 30	2,535,067,757	78	0.0000031
		- 20	2,535,070,207	2,528	0.0000997
		- 10	2,535,073,906	6,227	0.0002456
		0	2,535,061,855	-5,824	-0.0002297
		+ 10	2,535,069,529	1,850	0.0000730
		+ 20 (Ref)	2,535,067,679	0	0.0000000
		+ 30	2,535,071,206	3,527	0.0001391
		+ 40	2,535,073,256	5,577	0.0002200
		+ 50	2,535,067,966	287	0.0000113
Battery Endpoint	3.35	+ 20	2,535,069,712	2,033	0.0000802

Table 7-79. LTE Band 7 Frequency Stability Data – Ant B

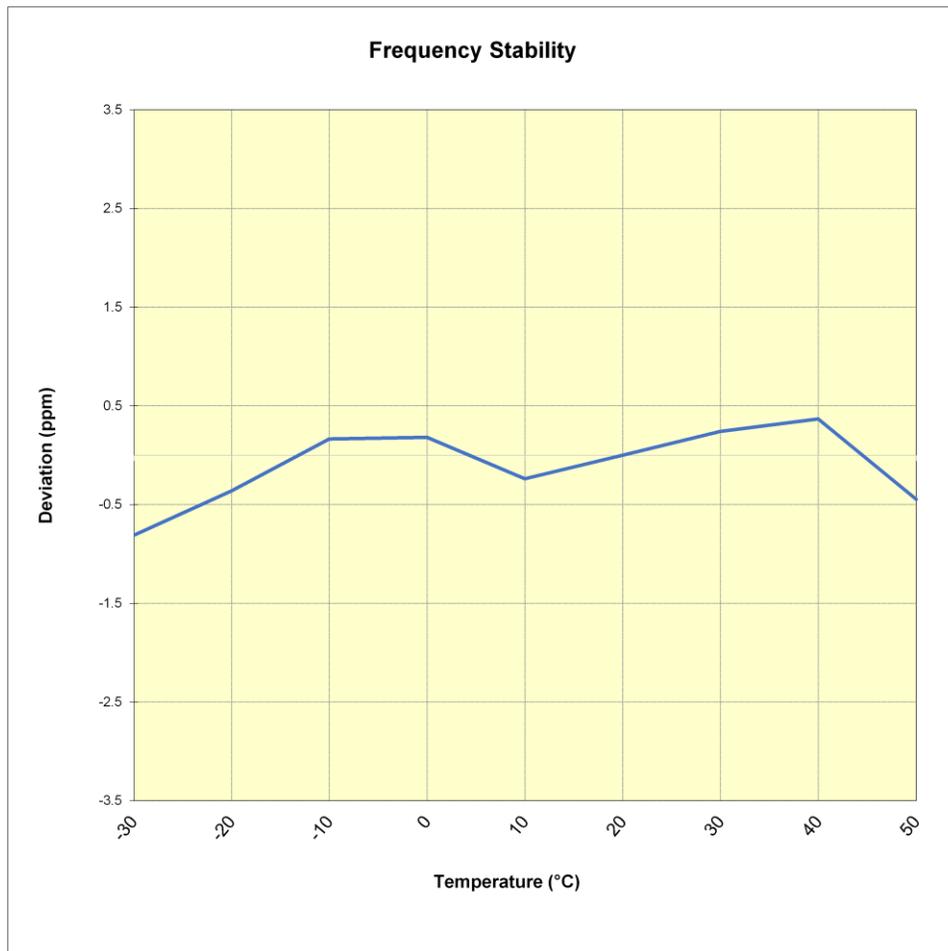


Plot 7-427. LTE Band 7 Frequency Stability Chart – Ant B

FCC ID: A3LSMF936U	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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LTE Band 41/38					
		Operating Frequency (Hz):		2,593,000,000	
		Ref. Voltage (VDC):		4.38	
Voltage (%)	Power (VDC)	Temp (°C)	Frequency (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	4.38	- 30	2,593,017,165	-2,102	-0.0000811
		- 20	2,593,018,326	-941	-0.0000363
		- 10	2,593,019,696	429	0.0000165
		0	2,593,019,740	473	0.0000182
		+ 10	2,593,018,651	-616	-0.0000238
		+ 20 (Ref)	2,593,019,267	0	0.0000000
		+ 30	2,593,019,896	629	0.0000243
		+ 40	2,593,020,219	952	0.0000367
		+ 50	2,593,018,108	-1,159	-0.0000447
Battery Endpoint	3.35	+ 20	2,593,017,740	-1,527	-0.0000589

Table 7-80. LTE Band 41(PC2) Frequency Stability Data – Ant B

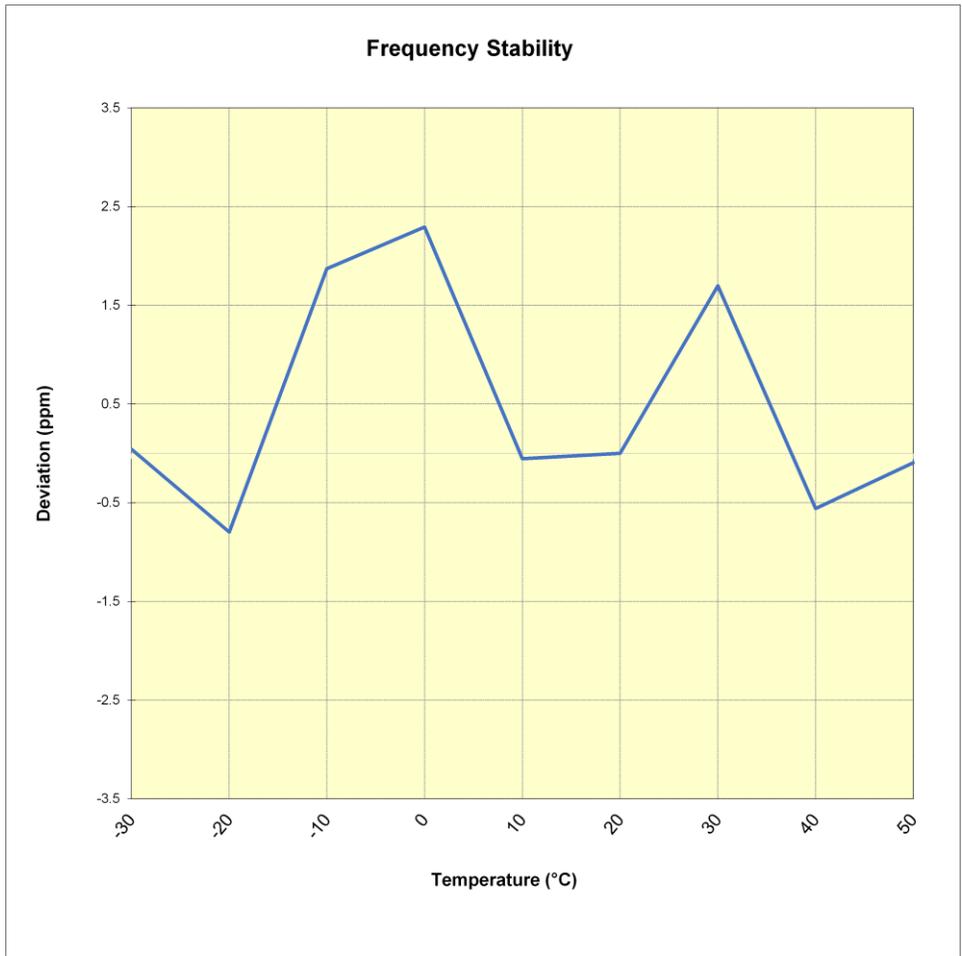


Plot 7-428. LTE Band 41(PC2) Frequency Stability Chart – Ant B

FCC ID: A3LSMF936U	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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NR Band n30					
Operating Frequency (Hz):		2,310,000,000			
Ref. Voltage (VDC):		4.38			
Voltage (%)	Power (VDC)	Temp (°C)	Frequency (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	4.38	- 30	2,310,086,180	99	0.0000043
		- 20	2,310,084,241	-1,840	-0.0000797
		- 10	2,310,090,400	4,319	0.0001870
		0	2,310,091,376	5,295	0.0002292
		+ 10	2,310,085,957	-124	-0.0000054
		+ 20 (Ref)	2,310,086,081	0	0.0000000
		+ 30	2,310,090,000	3,919	0.0001696
		+ 40	2,310,084,789	-1,292	-0.0000559
		+ 50	2,310,085,862	-219	-0.0000095
Battery Endpoint	3.35	+ 20	2,310,081,712	-4,369	-0.0001891

Table 7-81. NR Band n30 Frequency Stability Data – Ant B

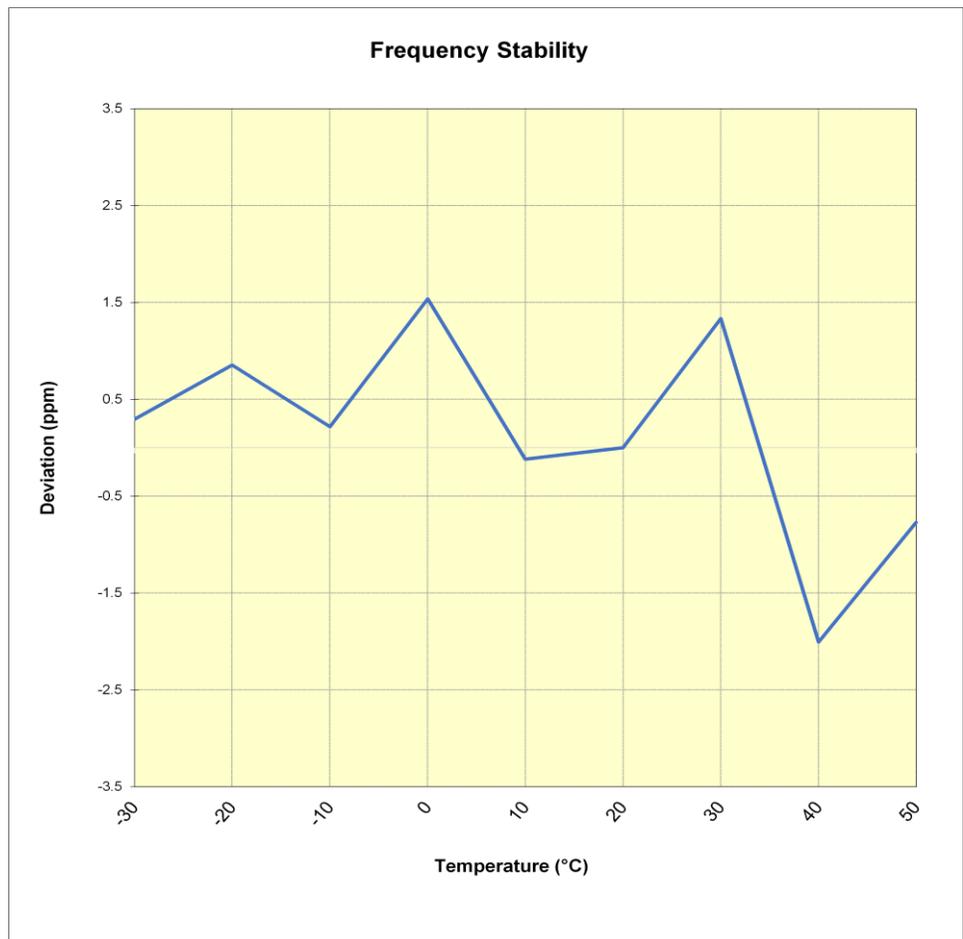


Plot 7-429. NR Band n30 Frequency Stability Chart – Ant B

FCC ID: A3LSMF936U	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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NR Band n7					
Operating Frequency (Hz):		2,535,000,000			
Ref. Voltage (VDC):		4.38			
Voltage (%)	Power (VDC)	Temp (°C)	Frequency (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	4.38	- 30	2,535,078,815	744	0.0000293
		- 20	2,535,080,234	2,163	0.0000853
		- 10	2,535,078,620	549	0.0000217
		0	2,535,081,968	3,897	0.0001537
		+ 10	2,535,077,772	-299	-0.0000118
		+ 20 (Ref)	2,535,078,071	0	0.0000000
		+ 30	2,535,081,452	3,381	0.0001334
		+ 40	2,535,072,987	-5,084	-0.0002005
		+ 50	2,535,076,119	-1,952	-0.0000770
Battery Endpoint	3.35	+ 20	2,535,079,091	1,020	0.0000402

Table 7-82. NR Band n7 Frequency Stability Data – Ant B

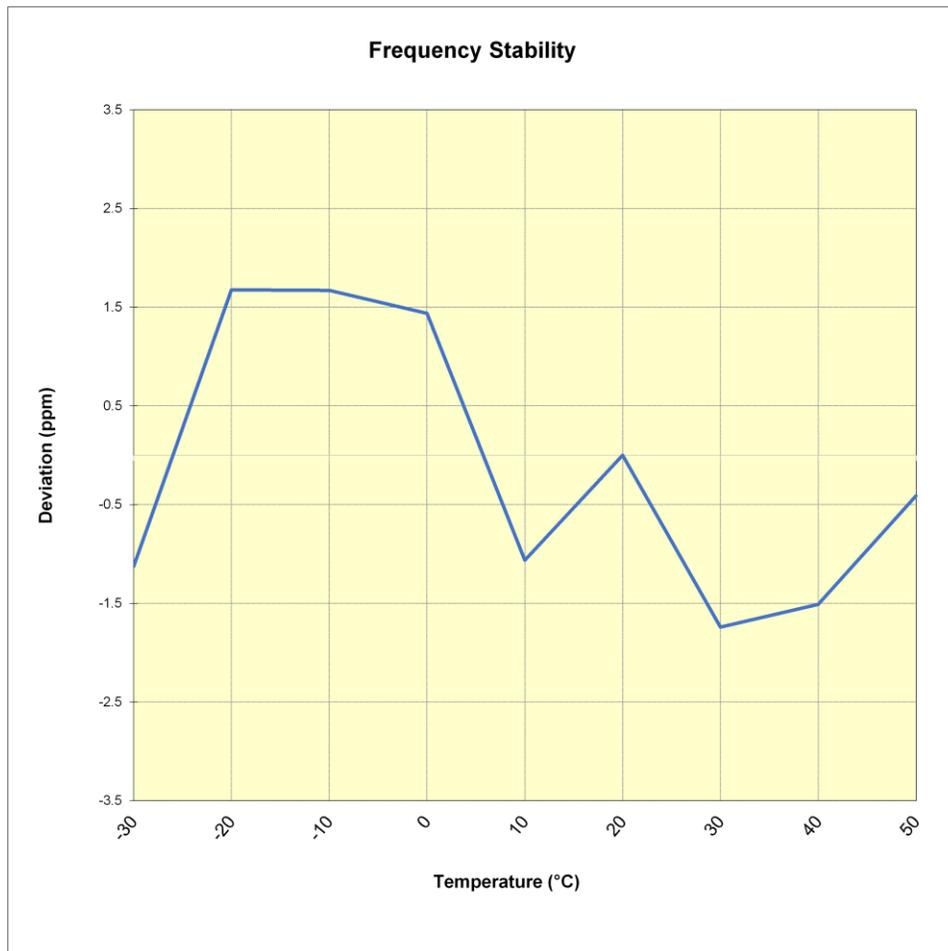


Plot 7-430. NR Band n7 Frequency Stability Chart – Ant B

FCC ID: A3LSMF936U	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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NR Band n41					
Operating Frequency (Hz):		2,593,000,000			
Ref. Voltage (VDC):		4.38			
Voltage (%)	Power (VDC)	Temp (°C)	Frequency (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	4.38	- 30	2,592,954,347	-2,918	-0.0001125
		- 20	2,592,961,614	4,349	0.0001677
		- 10	2,592,961,595	4,330	0.0001670
		0	2,592,960,991	3,726	0.0001437
		+ 10	2,592,954,509	-2,756	-0.0001063
		+ 20 (Ref)	2,592,957,265	0	0.0000000
		+ 30	2,592,952,754	-4,511	-0.0001740
		+ 40	2,592,953,351	-3,914	-0.0001509
		+ 50	2,592,956,197	-1,068	-0.0000412
Battery Endpoint	3.35	+ 20	2,592,959,180	1,915	0.0000739

Table 7-83. NR Band n41 Frequency Stability Data – Ant F



Plot 7-431. NR Band n41 Frequency Stability Chart – Ant F

FCC ID: A3LSMF936U	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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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: A3LSMF936U** complies with all the requirements of Part 27 of the FCC rules.

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