

Band 13 Frequency Stability Measurements

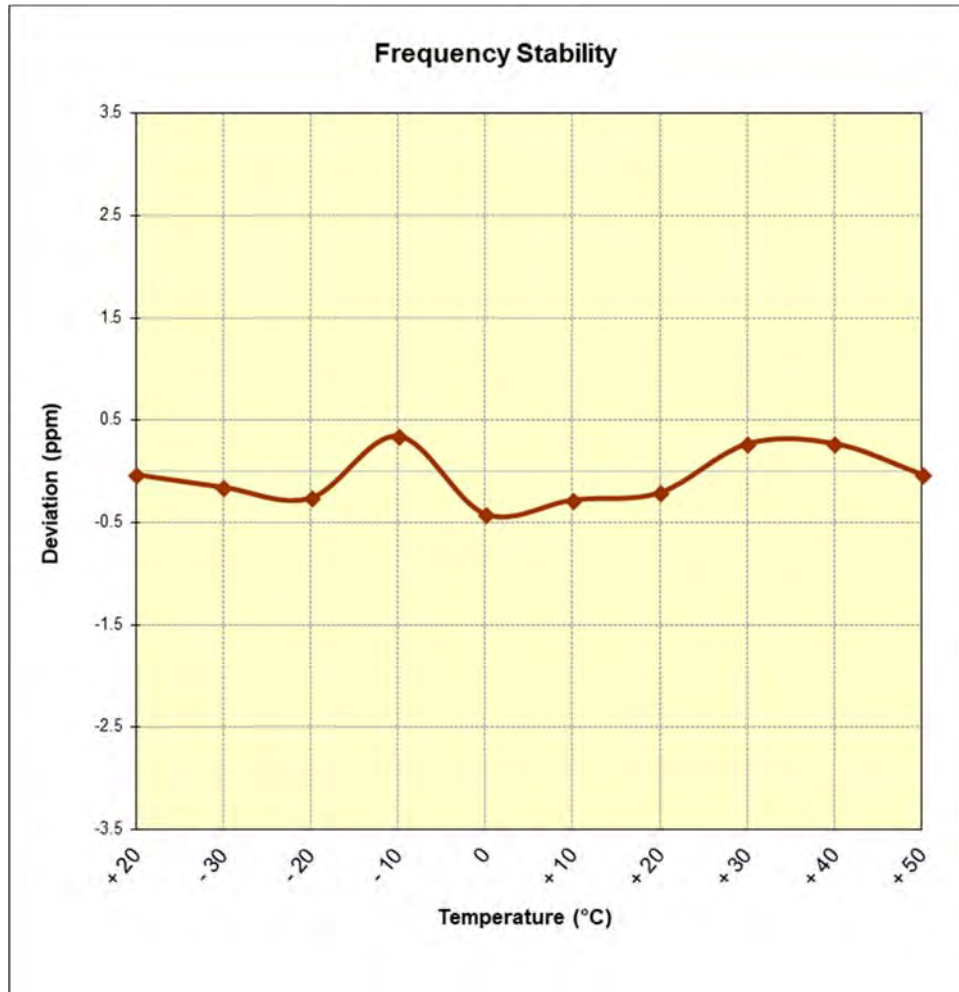


Figure 7-13. Frequency Stability Graph (Band 13)

FCC ID: ZNFV405UA		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1806200130-03-R2.ZNF	Test Dates: 6/20/2018-8/2/2018	EUT Type: Portable Handset		Page 279 of 292

Band 5/26 Frequency Stability Measurements

OPERATING FREQUENCY: 836,500,000 Hz
 CHANNEL: 20525
 REFERENCE VOLTAGE: 4.20 VDC
 DEVIATION LIMIT: ± 0.00025 % or 2.5 ppm

VOLTAGE (%)	POWER (VDC)	TEMP (°C)	FREQUENCY (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	4.20	+ 20 (Ref)	836,500,074	74	0.0000088
100 %		- 30	836,500,005	5	0.0000006
100 %		- 20	836,500,379	379	0.0000453
100 %		- 10	836,499,983	-17	-0.0000020
100 %		0	836,500,068	68	0.0000081
100 %		+ 10	836,500,374	374	0.0000447
100 %		+ 20	836,500,337	337	0.0000403
100 %		+ 30	836,499,840	-160	-0.0000191
100 %		+ 40	836,499,844	-156	-0.0000186
100 %		+ 50	836,499,798	-202	-0.0000241
BATT. ENDPOINT	3.54	+ 20	836,499,876	-124	-0.0000148

Table 7-78. Frequency Stability Data (Band 5/26)

FCC ID: ZNFV405UA	 MEASUREMENT REPORT (CERTIFICATION) 		Approved by: Quality Manager
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Band 5/26 Frequency Stability Measurements

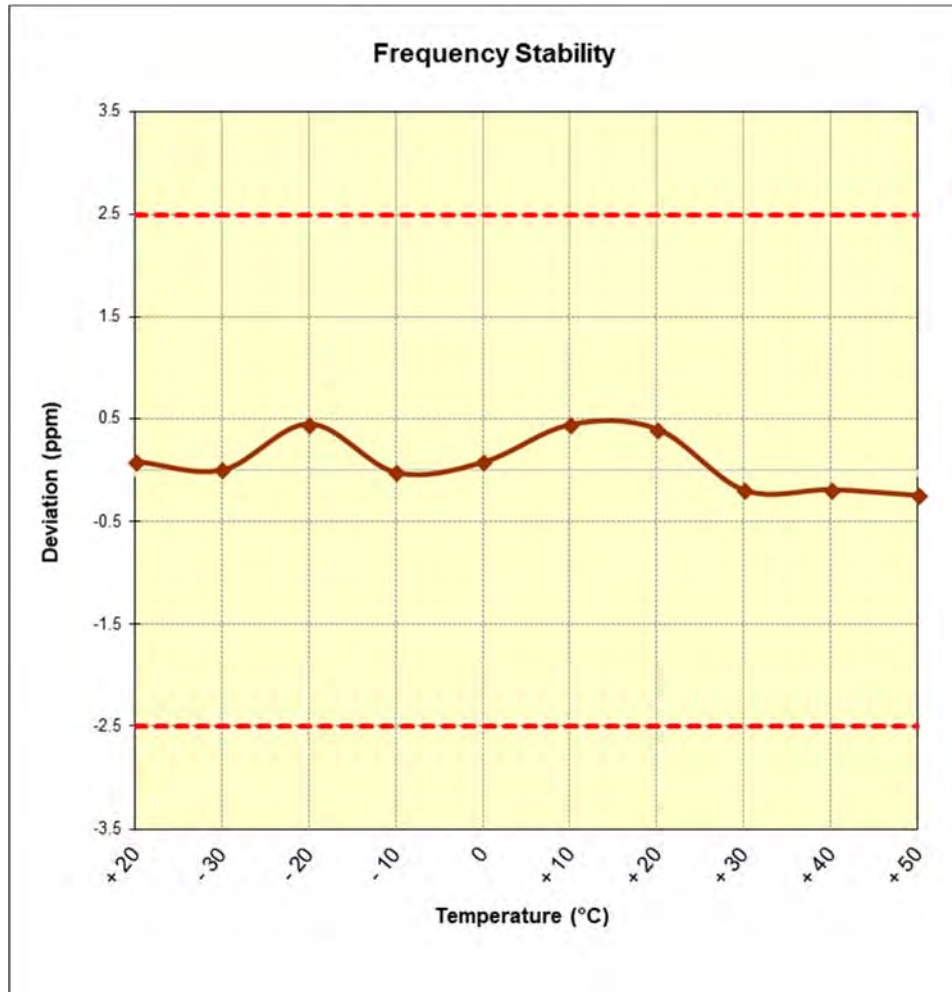


Figure 7-14. Frequency Stability Graph (Band 5/26)

FCC ID: ZNFV405UA		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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Band 4/66 Frequency Stability Measurements

OPERATING FREQUENCY: 1,745,000,000 Hz
 CHANNEL: 132322
 REFERENCE VOLTAGE: 4.20 VDC

VOLTAGE (%)	POWER (VDC)	TEMP (°C)	FREQUENCY (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	4.20	+ 20 (Ref)	1,744,999,935	-65	-0.0000037
100 %		- 30	1,744,999,684	-316	-0.0000181
100 %		- 20	1,745,000,004	4	0.0000002
100 %		- 10	1,744,999,906	-94	-0.0000054
100 %		0	1,744,999,876	-124	-0.0000071
100 %		+ 10	1,745,000,015	15	0.0000009
100 %		+ 20	1,745,000,073	73	0.0000042
100 %		+ 30	1,744,999,948	-52	-0.0000030
100 %		+ 40	1,744,999,903	-97	-0.0000056
100 %		+ 50	1,745,000,221	221	0.0000127
BATT. ENDPOINT	3.54	+ 20	1,744,999,785	-215	-0.0000123

Table 7-79. Frequency Stability Data (Band 4/66)

Note:

Based on the results of the frequency stability test at the center channel the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency deviation noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

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Band 4/66 Frequency Stability Measurements

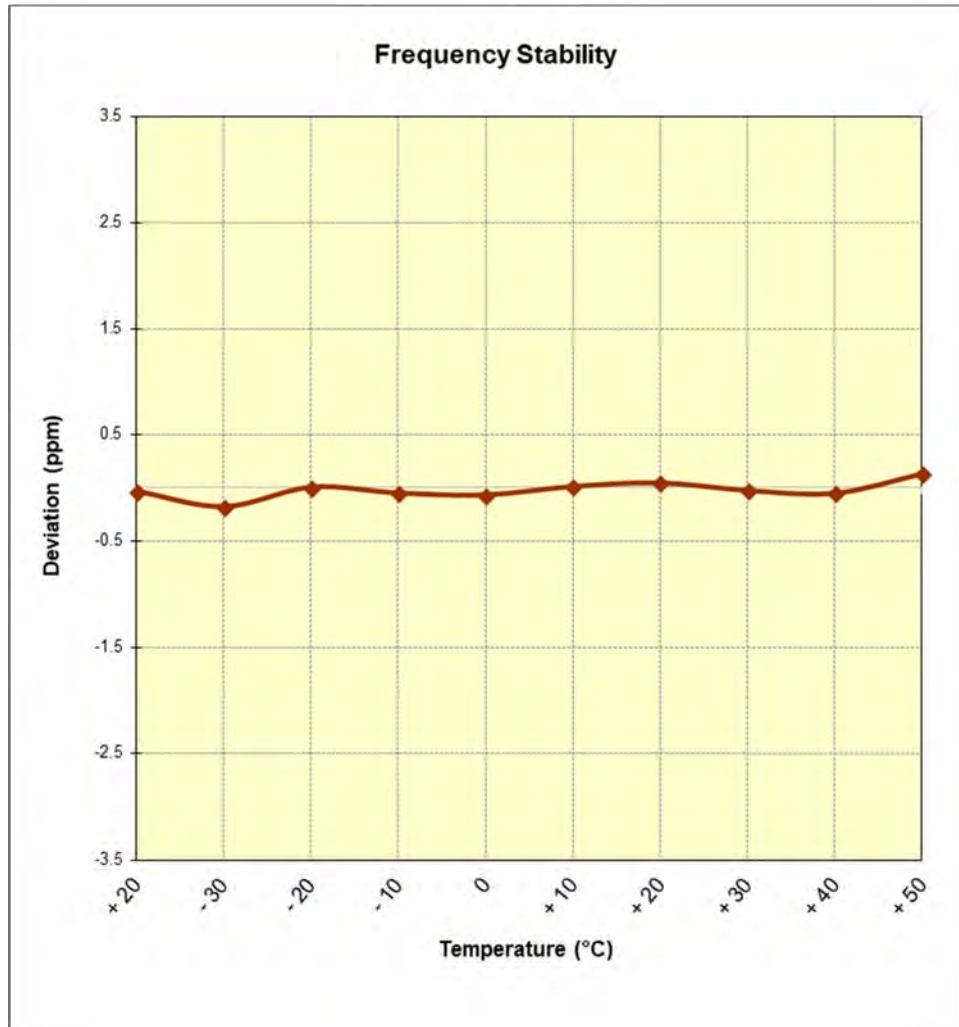


Figure 7-15. Frequency Stability Graph (Band 4/66)

FCC ID: ZNFV405UA		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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Band 2/25 Frequency Stability Measurements

OPERATING FREQUENCY: 1,882,500,000 Hz

CHANNEL: 26365

REFERENCE VOLTAGE: 4.20 VDC

VOLTAGE (%)	POWER (VDC)	TEMP (°C)	FREQUENCY (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	4.20	+ 20 (Ref)	1,882,500,276	276	0.0000147
100 %		- 30	1,882,499,889	-111	-0.0000059
100 %		- 20	1,882,499,555	-445	-0.0000236
100 %		- 10	1,882,499,715	-285	-0.0000151
100 %		0	1,882,499,936	-64	-0.0000034
100 %		+ 10	1,882,500,218	218	0.0000116
100 %		+ 20	1,882,499,853	-147	-0.0000078
100 %		+ 30	1,882,500,028	28	0.0000015
100 %		+ 40	1,882,500,250	250	0.0000133
100 %		+ 50	1,882,500,117	117	0.0000062
BATT. ENDPOINT		3.54	+ 20	1,882,500,060	60

Table 7-80. Frequency Stability Data (Band 2/25)

Note:

Based on the results of the frequency stability test at the center channel the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency deviation noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

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Band 2/25 Frequency Stability Measurements

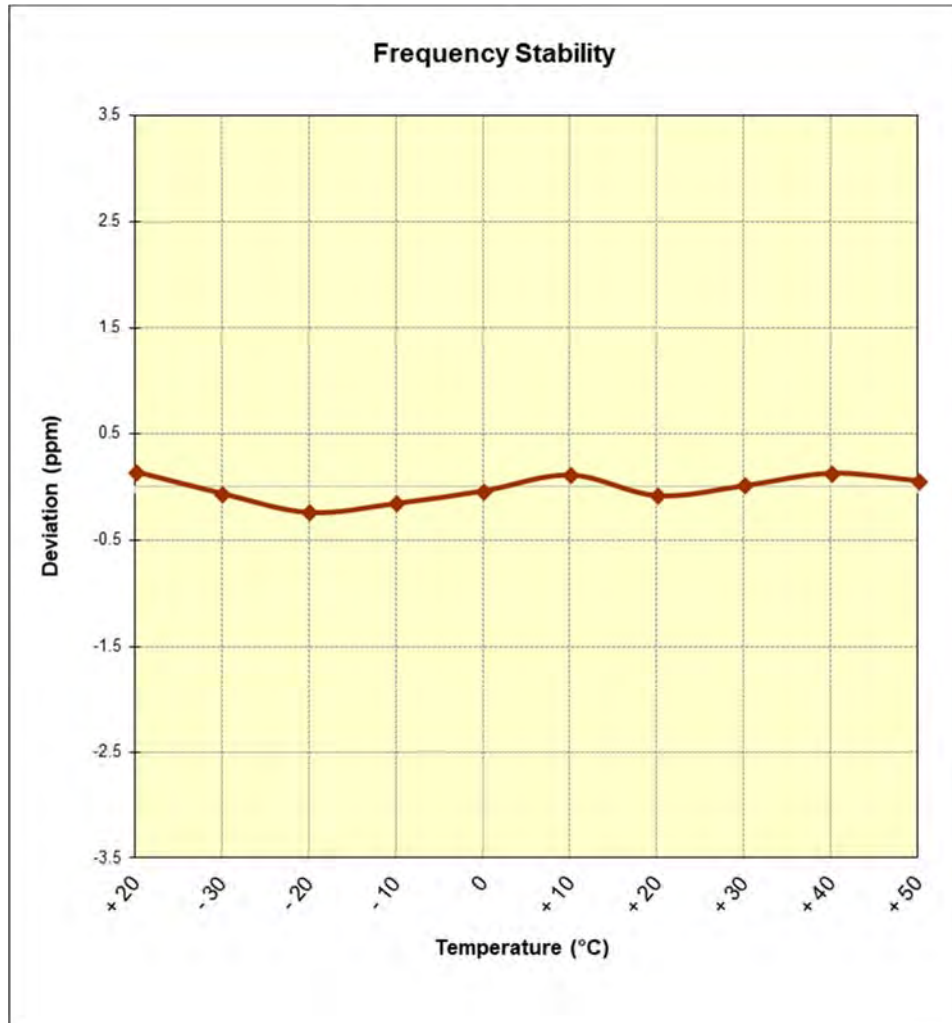


Figure 7-16. Frequency Stability Graph (Band 2/25)

FCC ID: ZNFV405UA		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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Band 30 Frequency Stability Measurements

OPERATING FREQUENCY: 2,310,000,000 Hz
 CHANNEL: 27710
 REFERENCE VOLTAGE: 4.20 VDC

VOLTAGE (%)	POWER (VDC)	TEMP (°C)	FREQUENCY (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	4.20	+ 20 (Ref)	2,309,999,993	-7	-0.0000003
100 %		- 30	2,310,000,326	326	0.0000141
100 %		- 20	2,309,999,674	-326	-0.0000141
100 %		- 10	2,310,000,341	341	0.0000148
100 %		0	2,310,000,014	14	0.0000006
100 %		+ 10	2,310,000,014	14	0.0000006
100 %		+ 20	2,310,000,179	179	0.0000077
100 %		+ 30	2,310,000,259	259	0.0000112
100 %		+ 40	2,310,000,088	88	0.0000038
100 %		+ 50	2,310,000,013	13	0.0000006
BATT. ENDPOINT	3.54	+ 20	2,310,000,213	213	0.0000092

Table 7-81. Frequency Stability Data (Band 30)

Note:

Based on the results of the frequency stability test at the center channel the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency deviation noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

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Band 30 Frequency Stability Measurements

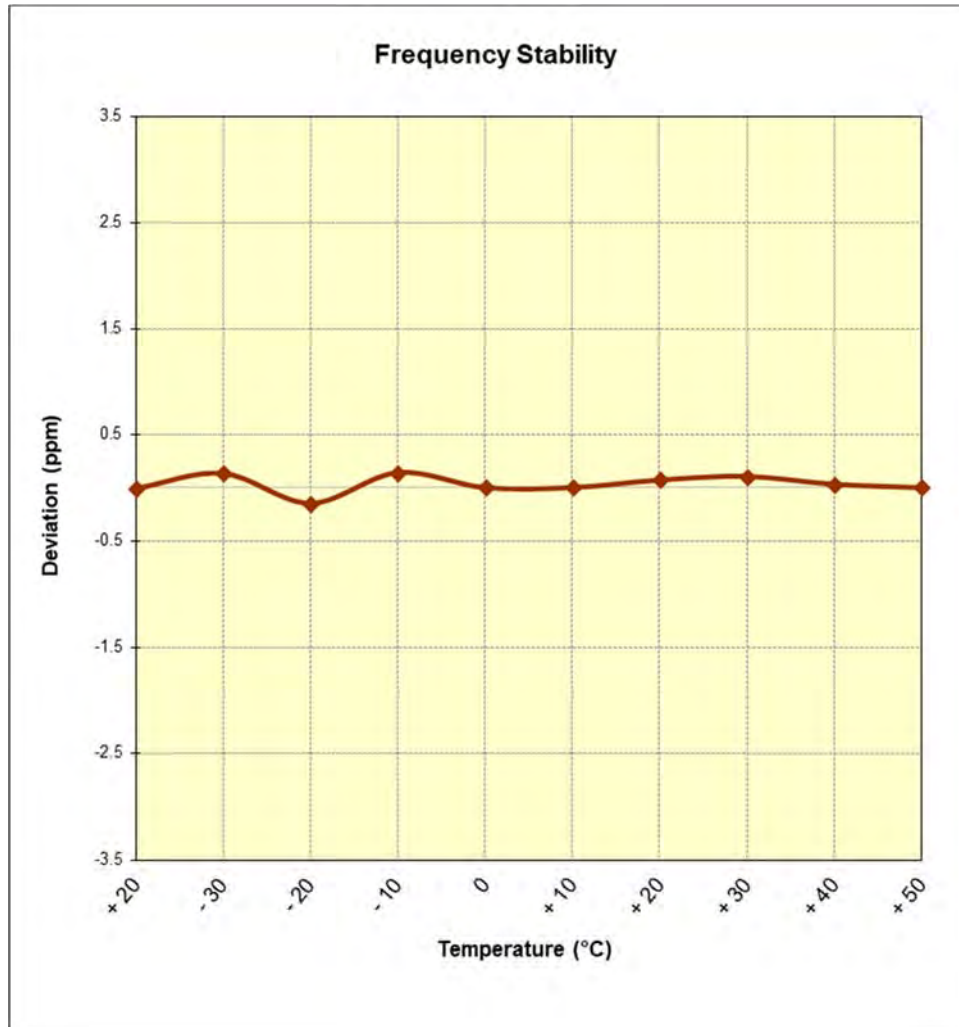


Figure 7-17. Frequency Stability Graph (Band 30)

FCC ID: ZNFV405UA		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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Band 7 Frequency Stability Measurements

OPERATING FREQUENCY: 2,535,000,000 Hz
 CHANNEL: 21100
 REFERENCE VOLTAGE: 4.20 VDC

VOLTAGE (%)	POWER (VDC)	TEMP (°C)	FREQUENCY (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	4.20	+ 20 (Ref)	2,535,000,240	240	0.0000095
100 %		- 30	2,534,999,771	-229	-0.0000090
100 %		- 20	2,534,999,943	-57	-0.0000022
100 %		- 10	2,535,000,054	54	0.0000021
100 %		0	2,535,000,118	118	0.0000047
100 %		+ 10	2,534,999,903	-97	-0.0000038
100 %		+ 20	2,535,000,320	320	0.0000126
100 %		+ 30	2,534,999,829	-171	-0.0000067
100 %		+ 40	2,534,999,931	-69	-0.0000027
100 %		+ 50	2,534,999,959	-41	-0.0000016
BATT. ENDPOINT	3.54	+ 20	2,534,999,992	-8	-0.0000003

Table 7-82. Frequency Stability Data (Band 7)

Note:

Based on the results of the frequency stability test at the center channel the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency deviation noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

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Band 7 Frequency Stability Measurements

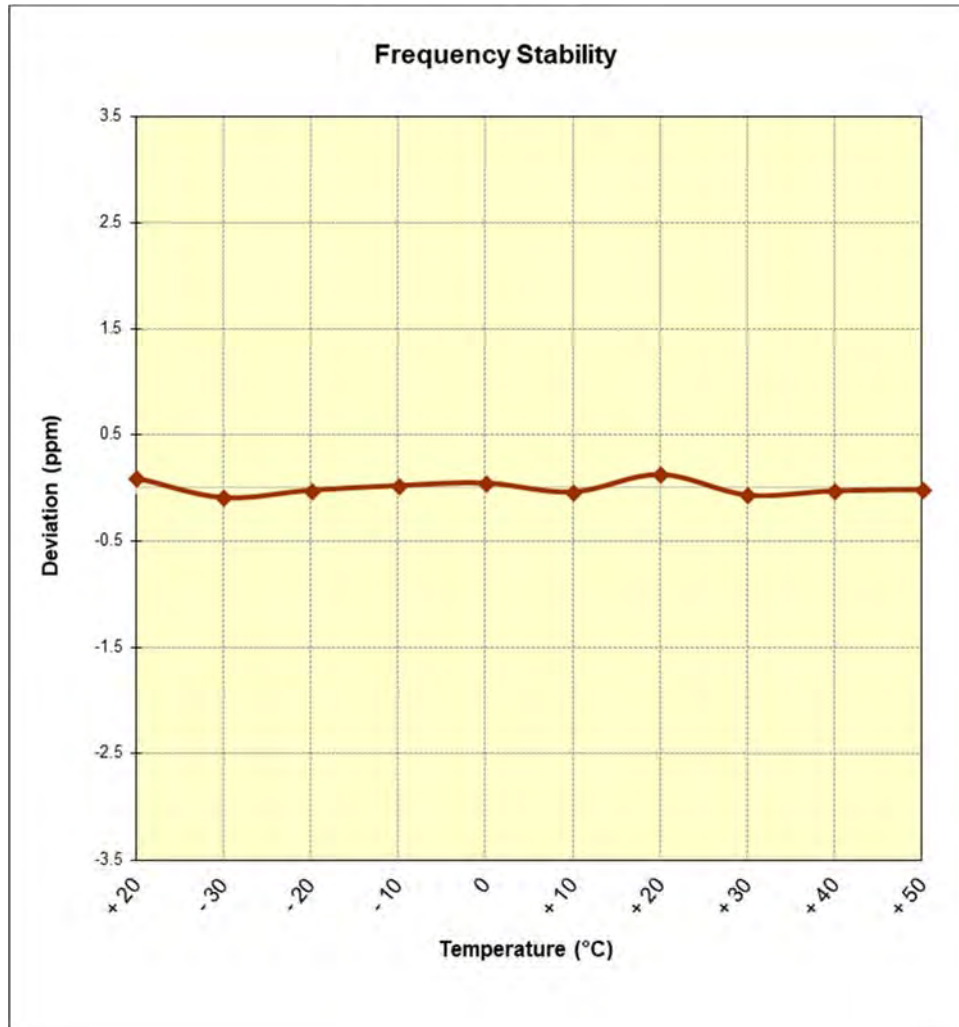


Figure 7-18. Frequency Stability Graph (Band 7)

FCC ID: ZNFV405UA		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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Band 41 Frequency Stability Measurements

OPERATING FREQUENCY: 2,593,000,000 Hz
 CHANNEL: 40620
 REFERENCE VOLTAGE: 4.20 VDC

VOLTAGE (%)	POWER (VDC)	TEMP (°C)	FREQUENCY (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	4.20	+ 20 (Ref)	2,593,000,024	24	0.0000009
100 %		- 30	2,592,999,972	-28	-0.0000011
100 %		- 20	2,593,000,025	25	0.0000010
100 %		- 10	2,592,999,968	-32	-0.0000012
100 %		0	2,592,999,805	-195	-0.0000075
100 %		+ 10	2,592,999,710	-290	-0.0000112
100 %		+ 20	2,592,999,688	-312	-0.0000120
100 %		+ 30	2,592,999,684	-316	-0.0000122
100 %		+ 40	2,593,000,083	83	0.0000032
100 %		+ 50	2,593,000,484	484	0.0000187
BATT. ENDPOINT	3.54	+ 20	2,592,999,865	-135	-0.0000052

Table 7-83. Frequency Stability Data (Band 41)

Note:

Based on the results of the frequency stability test at the center channel the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency deviation noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

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Band 41 Frequency Stability Measurements

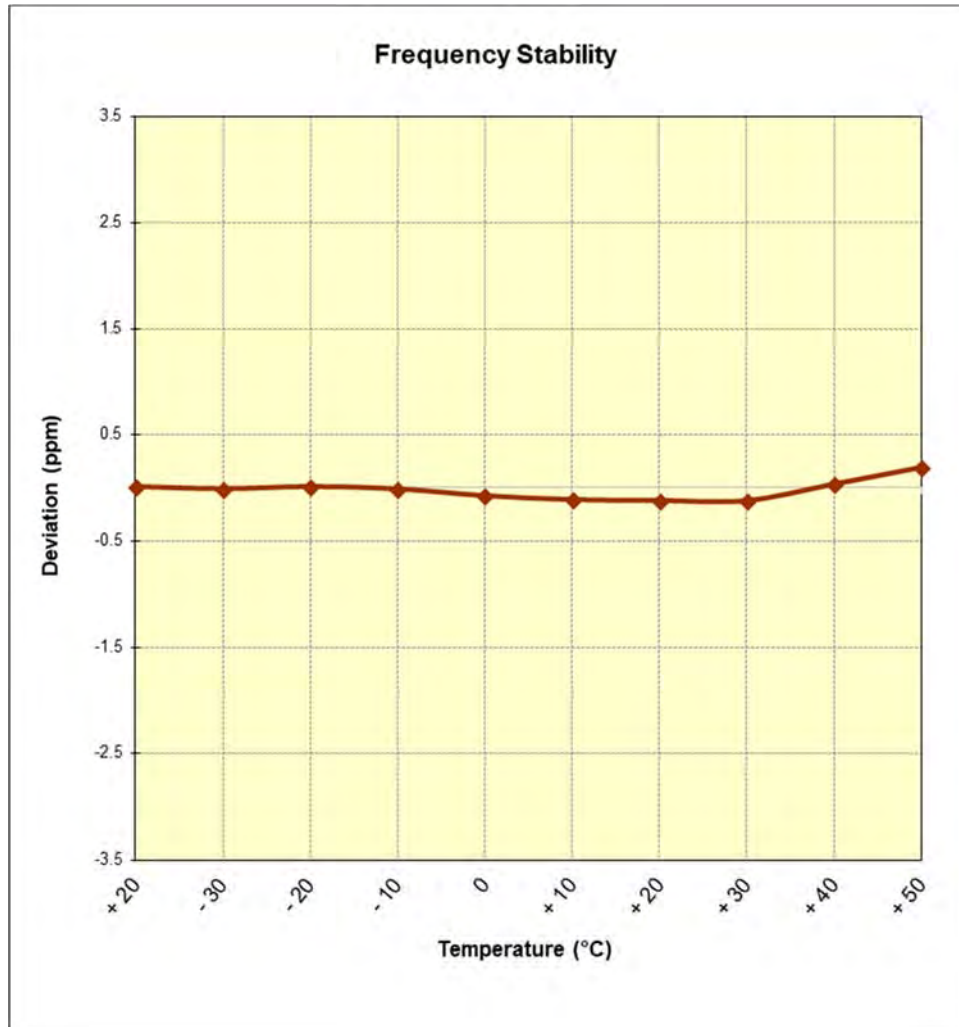


Figure 7-19. Frequency Stability Graph (Band 41)

FCC ID: ZNFV405UA		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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8.0 CONCLUSION

The data collected relate only to the item(s) tested and show that the **LG Portable Handset FCC ID: ZNFV405UA** complies with all the requirements of Part 22, 24, & 27 of the FCC Rules for LTE operation only.

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