

Plot 7-264. Radiated Spurious Plot (NR Band n77 (DoD) – Ant D – 26.5-40GHz)

Bandwidth (MHz):	100
Frequency (MHz):	3500.01
RB / Offset:	1 / 136
Mode:	Stand Alone
Anchor Band:	N/A



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]
7000.02	V	283	312	-72.29	7.82	42.53	-52.72	-13.00	-39.72
10500.03	V	-	-	-79.22	11.39	39.17	-56.08	-13.00	-43.08
14000.04	V	312	24	-77.78	14.35	43.57	-51.69	-13.00	-38.69
17500.05	V	-	-	-78.28	17.73	46.45	-48.81	-13.00	-35.81
21000.06	V	150	317	-54.45	2.95	55.50	-49.30	-13.00	-36.30
24500.07	V	-	-	-58.61	3.36	51.75	-53.05	-13.00	-40.05
28000.08	V	-	-	-58.87	3.86	51.99	-52.81	-13.00	-39.81
31500.09	V	-	-	-58.72	6.70	54.98	-49.82	-13.00	-36.82

Table 7-36. Radiated Spurious Data (NR Band n77 (DoD) – Mid Channel – Ant D)

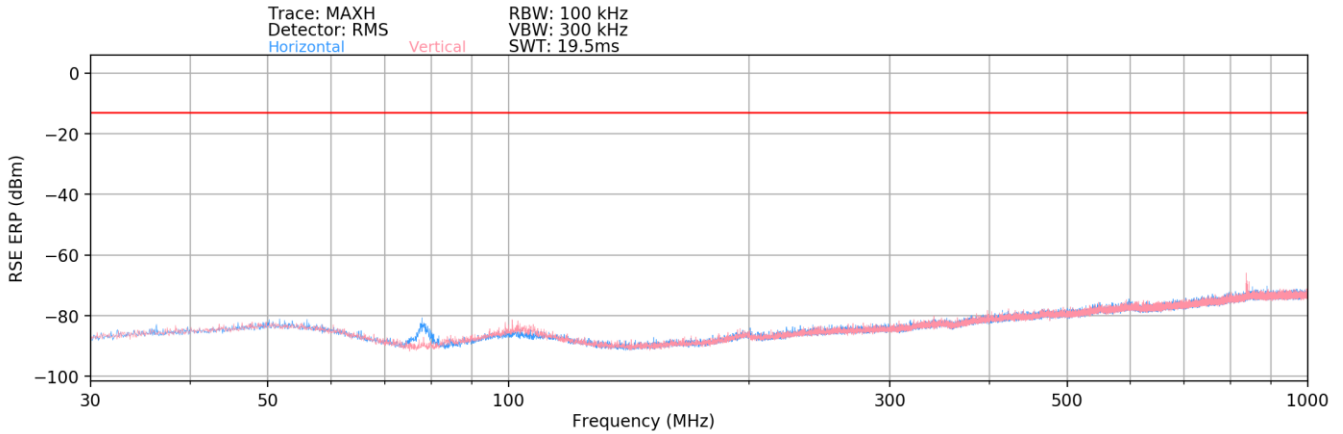
Case:	WPT
Bandwidth (MHz):	100
Frequency (MHz):	3500.01
RB / Offset:	1 / 136
Mode:	Stand Alone
Anchor Band:	N/A

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]
7000.02	V	-	-	-74.29	7.82	40.53	-54.72	-13.00	-41.72
10500.03	V	-	-	-79.21	11.39	39.18	-56.07	-13.00	-43.07
14000.04	V	-	-	-77.58	14.35	43.77	-51.49	-13.00	-38.49
17500.05	V	-	-	-78.14	17.73	46.59	-48.67	-13.00	-35.67

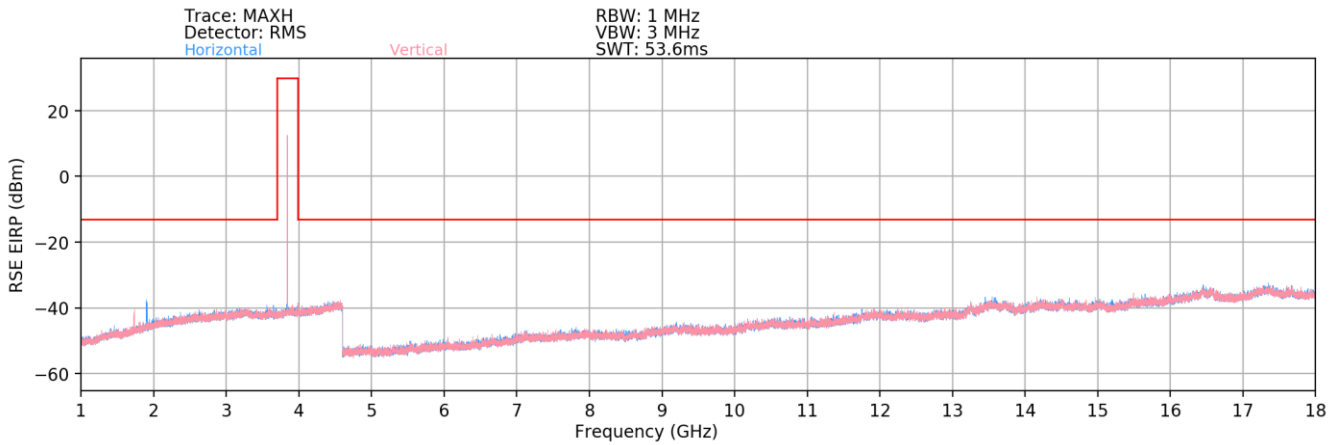
Table 7-37. Radiated Spurious Data with WCP (NR Band n77 (DoD) – Ant D)

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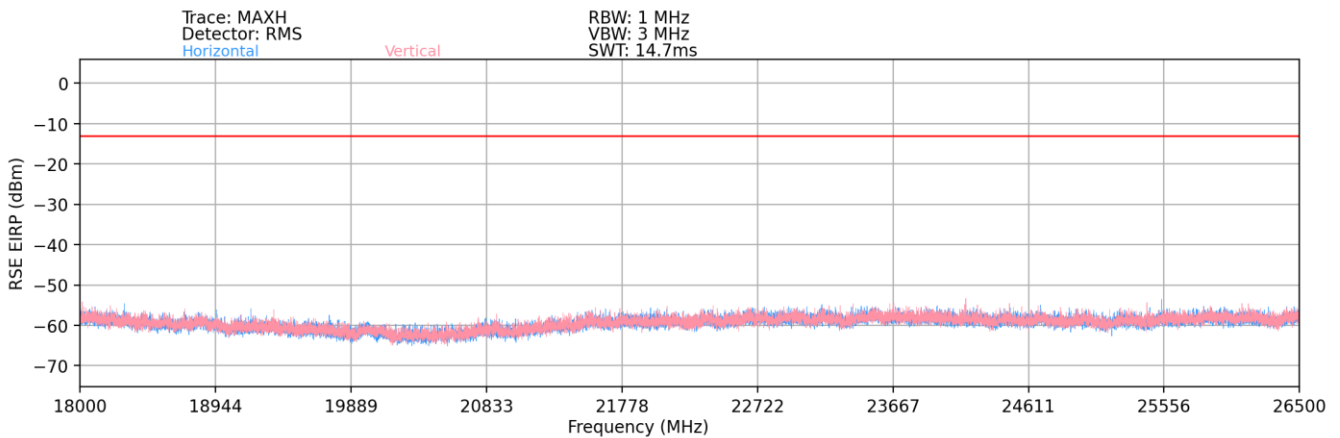
NR Band n77 – C-Band-SRS-4- Ant D



Plot 7-265. Radiated Spurious Plot (NR Band n77 – Ant D -30MHz-1GHz)

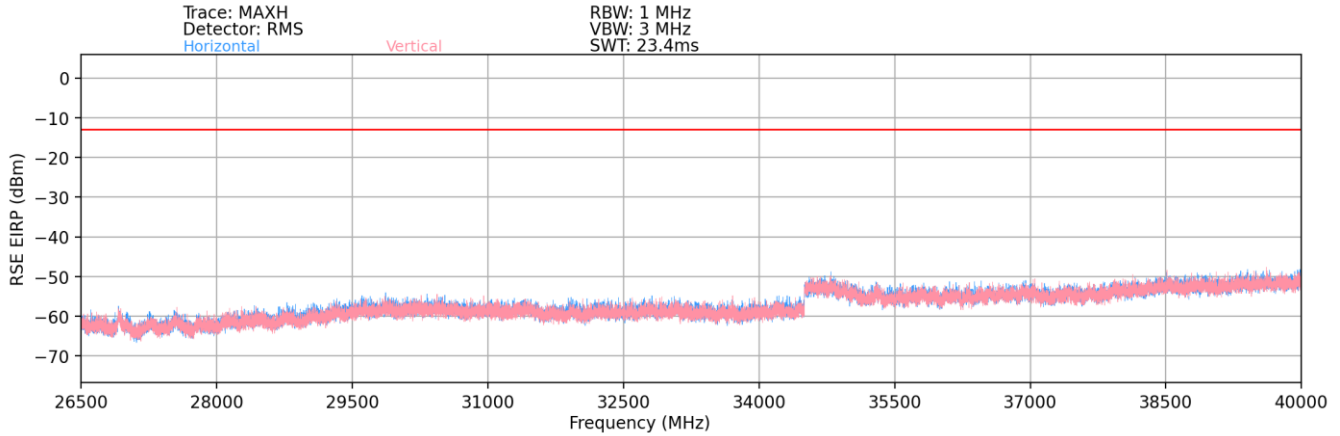


Plot 7-266. Radiated Spurious Plot (NR Band n77 – Ant D -1-18GHz)



Plot 7-267. Radiated Spurious Plot (NR Band n77 – Ant D -18-26.5GHz)

FCC ID: A3LSMS906E	PCTEST Proud to be part of element	PART 27 MEASUREMENT REPORT CLASS II PERMISSIVE CHANGE	SAMSUNG	Approved by: Technical Manager
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Plot 7-268. Radiated Spurious Plot (NR Band n77 – Ant D -26.5-40GHz)

Bandwidth (MHz):	100
Frequency (MHz):	3750.00
RB / Offset:	1 / 136
Mode:	Stand Alone
Anchor Band:	N/A



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]
7500.00	V	290	160	-74.87	8.35	40.48	-54.78	-13.00	-41.78
11250.00	V	373	148	-69.85	12.39	49.54	-45.72	-13.00	-32.72
15000.00	V	245	170	-75.50	15.39	46.89	-48.37	-13.00	-35.37
18750.00	V	-	-	-57.83	-8.27	40.90	-63.90	-13.00	-50.90
22500.00	V	-	-	-58.36	-6.55	42.09	-62.71	-13.00	-49.71
26250.00	V	-	-	-58.41	-5.66	42.94	-61.86	-13.00	-48.86

Table 7-38. Radiated Spurious Data (NR Band n77 – Low Channel – Ant D)

Bandwidth (MHz):	100
Frequency (MHz):	3840.00
RB / Offset:	1 / 136
Mode:	Stand Alone
Anchor Band:	N/A

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]
7680.00	V	235	162	-73.50	7.53	41.03	-54.23	-13.00	-41.23
11520.00	V	-	-	-79.41	12.86	40.45	-54.81	-13.00	-41.81
15360.00	V	153	157	-76.97	15.97	46.00	-49.26	-13.00	-36.26
19200.00	V	-	-	-57.31	-7.81	41.87	-62.93	-13.00	-49.93
23040.00	V	-	-	-57.46	-6.58	42.96	-61.84	-13.00	-48.84
26880.00	V	-	-	-58.58	3.98	52.41	-52.39	-13.00	-39.39

Table 7-39. Radiated Spurious Data (NR Band n77 – Mid Channel – Ant D)

FCC ID: A3LSMS906E	 PCTEST Proud to be part of element	PART 27 MEASUREMENT REPORT CLASS II PERMISSIVE CHANGE		Approved by: Technical Manager
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Bandwidth (MHz):	100
Frequency (MHz):	3930.00
RB / Offset:	1 / 136
Mode:	Stand Alone
Anchor Band:	N/A



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]
7860.00	V	292	150	-75.11	8.10	39.99	-55.27	-13.00	-42.27
11790.00	V	371	152	-70.67	13.19	49.52	-45.74	-13.00	-32.74
15720.00	V	248	171	-75.35	17.00	48.65	-46.60	-13.00	-33.60
19650.00	V	-	-	-57.54	-7.38	42.08	-62.72	-13.00	-49.72
23580.00	V	-	-	-58.27	-6.59	42.14	-62.66	-13.00	-49.66
27510.00	V	-	-	-58.57	4.37	52.80	-52.00	-13.00	-39.00

Table 7-40. Radiated Spurious Data (NR Band n77 – High Channel – Ant D)

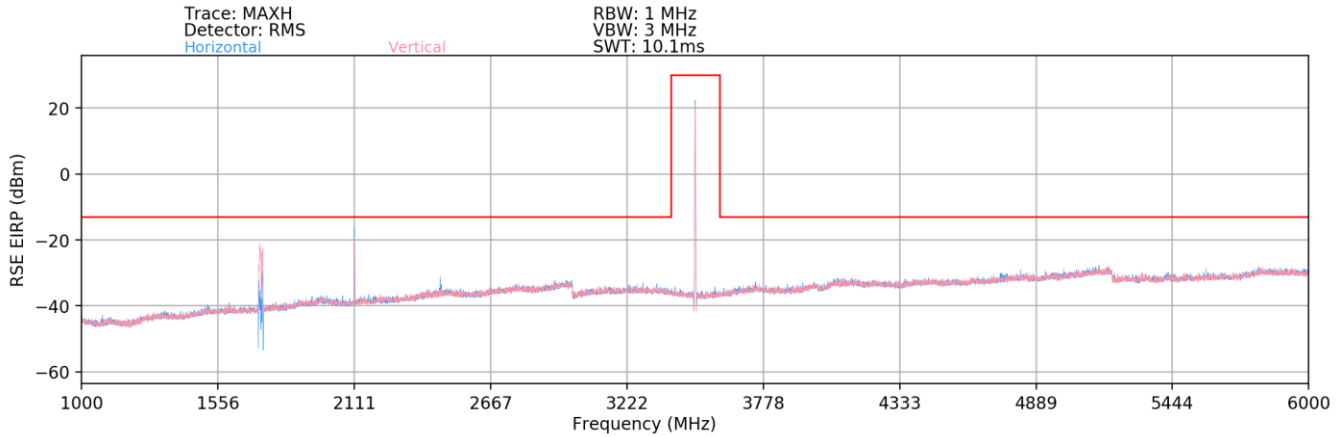
Case:	WCP
Bandwidth (MHz):	100
Frequency (MHz):	3750.0
RB / Offset:	1 / 136
Mode:	Stand Alone
Anchor Band:	N/A

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]
7500.00	V	142	284	-77.23	8.35	38.12	-57.14	-13.00	-44.14
11250.00	V	150	12	-72.92	12.39	46.47	-48.79	-13.00	-35.79
15000.00	V	-	-	-80.23	15.39	42.16	-53.10	-13.00	-40.10
18750.00	V	-	-	-58.14	-8.27	40.59	-64.21	-13.00	-51.21
22500.00	V	-	-	-57.43	-6.55	43.02	-61.78	-13.00	-48.78
26250.00	V	-	-	-58.60	-5.66	42.74	-62.06	-13.00	-49.06

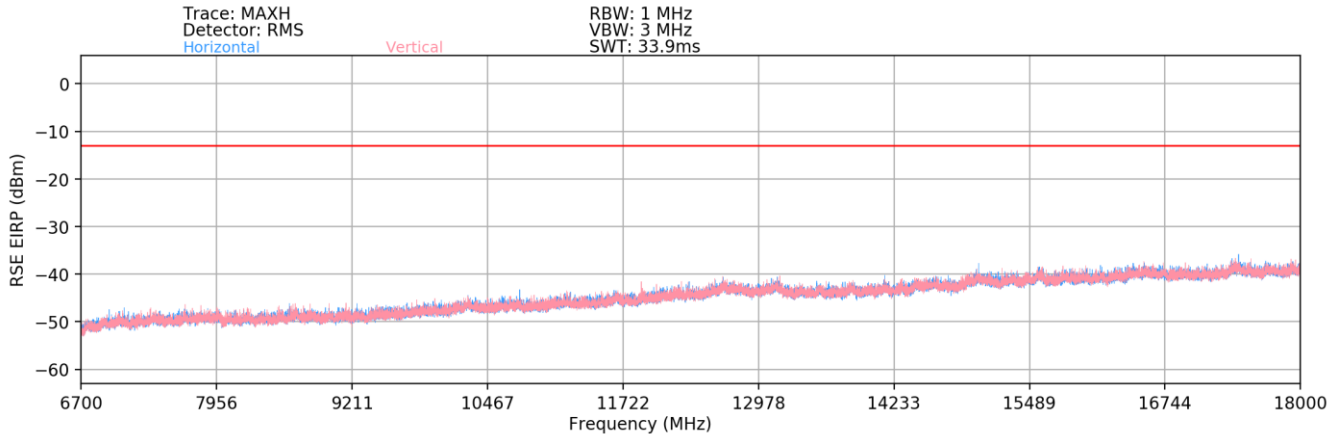
Table 7-41. Radiated Spurious Data with WCP (NR Band n77 – Ant D)

FCC ID: A3LSMS906E	 PCTEST Proud to be part of element	PART 27 MEASUREMENT REPORT CLASS II PERMISSIVE CHANGE		Approved by: Technical Manager
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EN-DC: NR Band n77 – Band 12



Plot 7-269. Radiated Spurious Plot (EN-DC: n77 -Band 12 -1-6GHz)





Plot 7-270. Radiated Spurious Plot (EN-DC: n77 -Band 12 -6-18GHz)

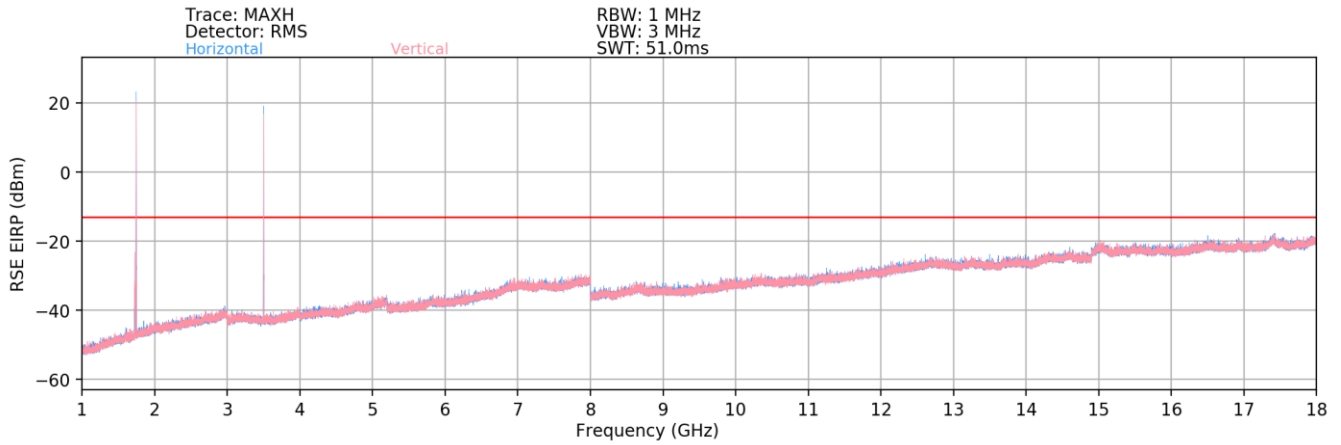
Case:	EN-DC
Bandwidth (MHz):	10 / 100
Frequency (MHz):	704 / 3500.01
RB / Offset:	1 / 25 & 1 / 136
Mode:	EN-DC
Anchor Band:	B12

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]
2092.01	V	151	159	-61.27	11.38	57.11	-38.15	-13.00	-25.15
4888.02	V	-	-	-70.36	16.67	53.31	-41.95	-13.00	-28.95
6296.02	V	-	-	-70.76	19.54	55.78	-39.48	-13.00	-26.48
7684.03	V	-	-	-71.07	22.83	58.76	-46.04	-13.00	-33.04
9092.03	V	-	-	-71.59	24.07	59.48	-45.32	-13.00	-32.32

Table 7-42. Radiated Spurious Data (EN-DC: n77 -Band 12)

FCC ID: A3LSMS906E		PART 27 MEASUREMENT REPORT CLASS II PERMISSIVE CHANGE		Approved by: Technical Manager
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EN-DC: NR Band n77 – Band 66/4





Plot 7-271. Radiated Spurious Plot (EN-DC: n77 -Band 66/4 -1-18GHz)

Case:	EN-DC
Bandwidth (MHz):	20 / 100
Frequency (MHz):	1745 / 3500.01
RB / Offset:	1/50 & 1/136
Mode:	EN-DC
Anchor Band:	66

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]
1765.00	V	159	41	-69.66	9.55	46.89	-48.37	-13.00	-35.37
3520.03	V	-	-	-69.60	14.77	52.17	-43.09	-13.00	-30.09
5255.00	V	-	-	-70.25	17.74	54.49	-40.77	-13.00	-27.77
5275.00	V	-	-	-69.16	17.64	55.48	-49.32	-13.00	-36.32

Table 7-43. Radiated Spurious Data (EN-DC: n77 -Band 66/4)

FCC ID: A3LSMS906E		PART 27 MEASUREMENT REPORT CLASS II PERMISSIVE CHANGE		Approved by: Technical Manager
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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/TIA-603-E-2016. 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.

Test Procedure Used

ANSI/TIA-603-E-2016

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.

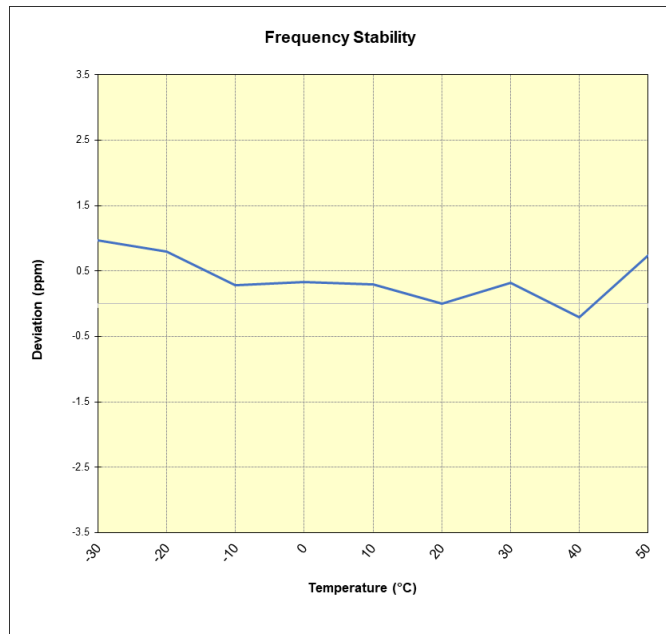
Test Notes

None

FCC ID: A3LSMS906E	 PCTEST Proud to be part of element	PART 27 MEASUREMENT REPORT CLASS II PERMISSIVE CHANGE		Approved by: Technical Manager
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NR Band n77 DoD					
Operating Frequency (Hz):		3,500,000,000			
Ref. Voltage (VDC):		4.39			
Voltage (%)	Power (VDC)	Temp (°C)	Frequency (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	4.39	- 30	3,499,992,215	3,416	0.0000976
		- 20	3,499,991,587	2,787	0.0000796
		- 10	3,499,989,782	983	0.0000281
		0	3,499,989,986	1,187	0.0000339
		+ 10	3,499,989,848	1,048	0.0000299
		+ 20 (Ref)	3,499,988,799	0	0.0000000
		+ 30	3,499,989,922	1,122	0.0000321
		+ 40	3,499,988,098	-702	-0.0000201
Battery Endpoint	3.80	+ 20	3,499,988,444	-355	-0.0000101

Table 7-44. NR Band n77 (DoD) Frequency Stability Data

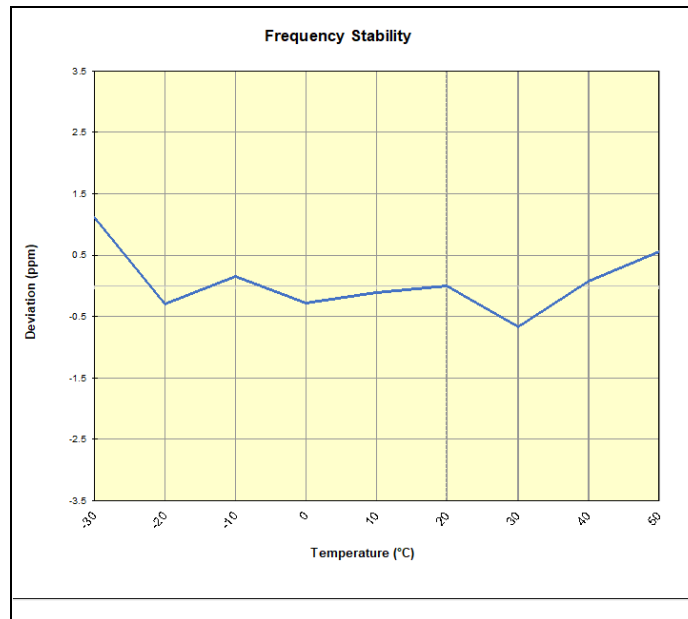


Plot 7-272. NR Band n77 (DoD) Frequency Stability Chart

FCC ID: A3LSMS906E	PCTEST Proud to be part of element	PART 27 MEASUREMENT REPORT CLASS II PERMISSIVE CHANGE	SAMSUNG	Approved by: Technical Manager
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NR Band n77 C-Band					
Operating Frequency (Hz):		3,840,000,000			
Ref. Voltage (VDC):		4.39			
Voltage (%)	Power (VDC)	Temp (°C)	Frequency (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	4.39	- 30	3,839,983,757	4,253	0.0001107
		- 20	3,839,978,370	-1,134	-0.0000295
		- 10	3,839,980,072	568	0.0000148
		0	3,839,978,429	-1,075	-0.0000280
		+ 10	3,839,979,116	-388	-0.0000101
		+ 20 (Ref)	3,839,979,504	0	0.0000000
		+ 30	3,839,976,955	-2,548	-0.0000664
		+ 40	3,839,979,797	293	0.0000076
Battery Endpoint	3.80	+ 20	3,839,975,436	-4,068	-0.0001059

Table 7-45. NR Band n77 (C-Band) Frequency Stability Data





Plot 7-273. NR Band n77 (C-Band) Frequency Stability Chart

FCC ID: A3LSMS906E	PCTEST Proud to be part of element	PART 27 MEASUREMENT REPORT CLASS II PERMISSIVE CHANGE		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: A3LSMS906E** complies with all the requirements of Part 27 of the FCC rules.

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