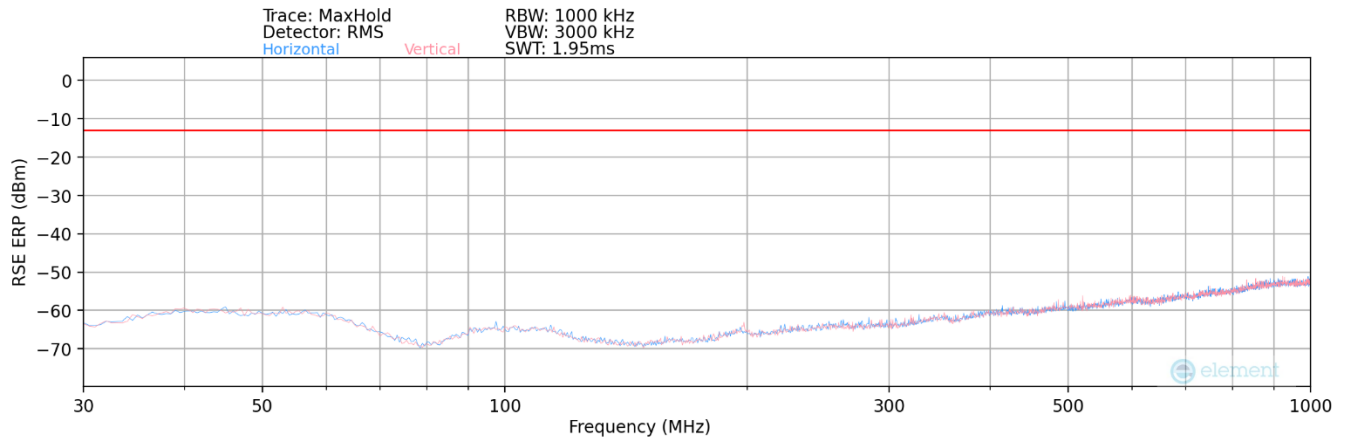
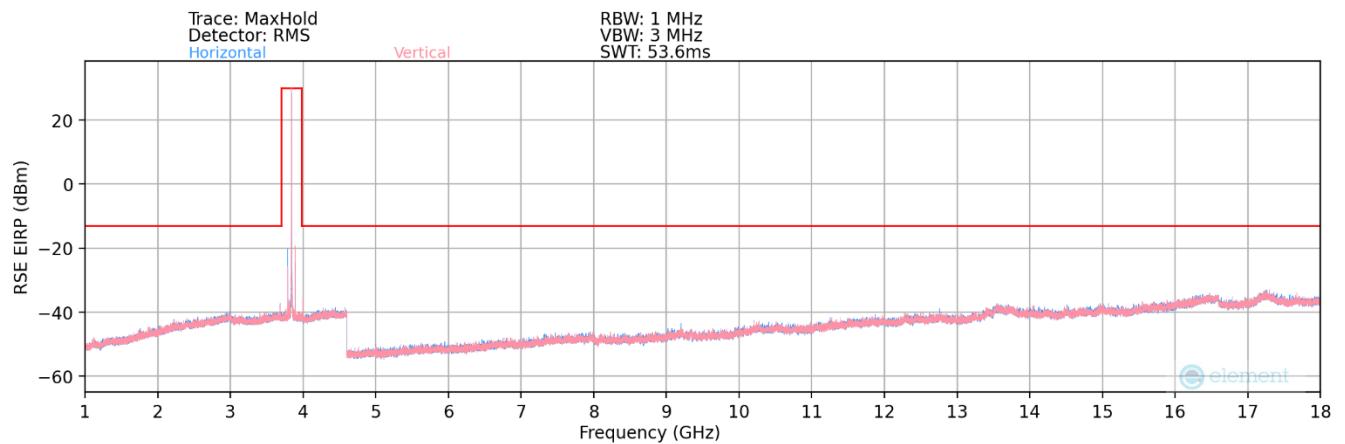


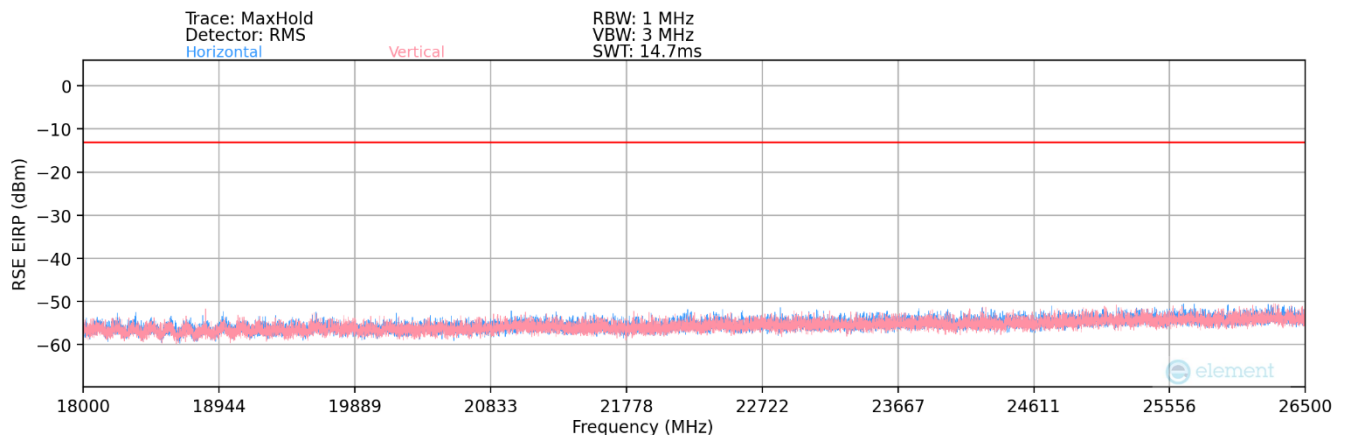
NR Band n77 – C-Band



Plot 7-99. Radiated Spurious Plot (NR Band n77) – C-Band

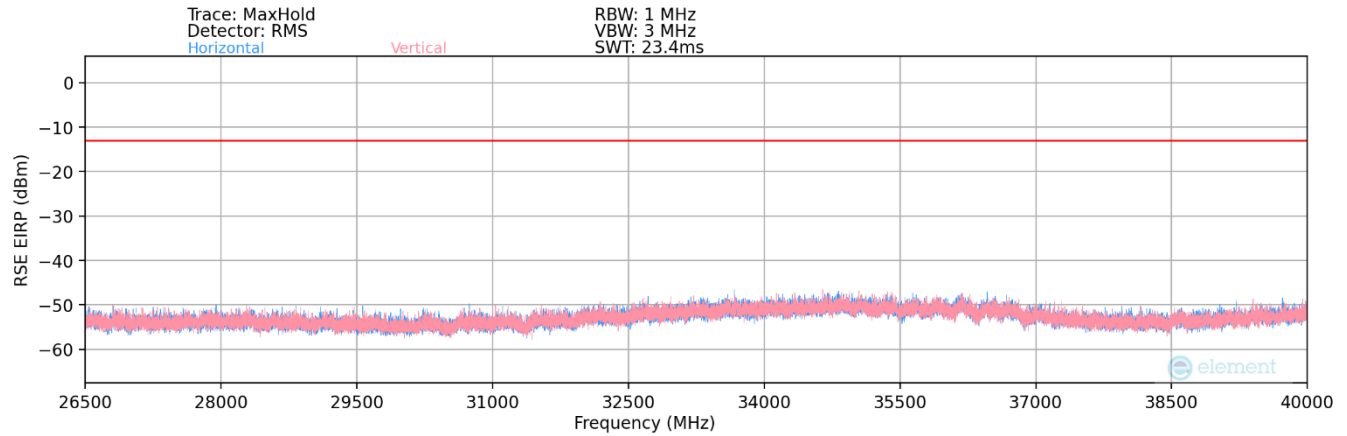


Plot 7-100. Radiated Spurious Plot (NR Band n77) – C-Band



Plot 7-101. Radiated Spurious Plot (NR Band n77) – C-Band

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Plot 7-102. Radiated Spurious Plot (NR Band n77) – C-Band

Bandwidth (MHz):	100
Frequency (MHz):	3750.00
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]
98.50	V	-	-	-62.47	-13.63	30.90	-66.51	-13.00	-53.51
508.58	V	-	-	-67.92	-6.50	32.58	-64.83	-13.00	-51.83

Table 7-23. Radiated Spurious Data (NR Band n77) – C-Band

Bandwidth (MHz):	100
Frequency (MHz):	3750.00
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]
7500.00	V	-	-	-72.48	15.93	50.45	-44.81	-13.00	-31.81
11250.00	V	-	-	-74.20	21.40	54.20	-41.06	-13.00	-28.06
15000.00	V	102	343	-72.37	26.41	61.04	-34.22	-13.00	-21.22
18750.00	V	-	-	-53.88	1.17	54.29	-50.51	-13.00	-37.51
22500.00	V	-	-	-55.16	3.45	55.29	-49.51	-13.00	-36.51
26250.00	V	-	-	-55.32	4.95	56.64	-48.16	-13.00	-35.16

Table 7-24. Radiated Spurious Data (NR Band n77 – Low Channel) – C-Band

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Bandwidth (MHz):	100
Frequency (MHz):	3840.00
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]
7680.00	V	184	29	-72.21	15.87	50.66	-44.59	-13.00	-31.59
11520.00	V	-	-	-74.14	22.36	55.22	-40.04	-13.00	-27.04
15360.00	V	184	330	-74.26	27.56	60.30	-34.95	-13.00	-21.95
19200.00	V	-	-	-54.08	1.64	54.56	-50.24	-13.00	-37.24
23040.00	V	-	-	-55.41	3.59	55.18	-49.62	-13.00	-36.62
26880.00	V	-	-	-55.25	5.12	56.88	-47.92	-13.00	-34.92

Table 7-25. Radiated Spurious Data (NR Band n77 – Mid Channel) – C-Band

Bandwidth (MHz):	100
Frequency (MHz):	3930.00
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]
7860.00	V	108	31	-72.00	16.02	51.02	-44.24	-13.00	-31.24
11790.00	V	-	-	-74.38	21.49	54.11	-41.14	-13.00	-28.14
15720.00	V	-	-	-75.35	28.48	60.13	-35.13	-13.00	-22.13
19650.00	V	-	-	-54.36	1.89	54.53	-50.27	-13.00	-37.27
23580.00	V	-	-	-55.29	3.98	55.69	-49.11	-13.00	-36.11
27510.00	V	-	-	-55.45	4.95	56.50	-48.30	-13.00	-35.30

Table 7-26. Radiated Spurious Data (NR Band n77 – High Channel) – C-Band

Case:	w/ Wireless Charging Pad
Bandwidth (MHz):	100
Frequency (MHz):	3750.00
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]
7500.00	V	-	-	-72.96	15.93	49.97	-45.29	-13.00	-32.29
11250.00	V	-	-	-74.04	21.40	54.36	-40.90	-13.00	-27.90
15000.00	V	-	-	-74.87	26.41	58.54	-36.72	-13.00	-23.72

Table 7-27. Radiated Spurious Data (NR Band n77) – C-Band – with WCP

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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 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.

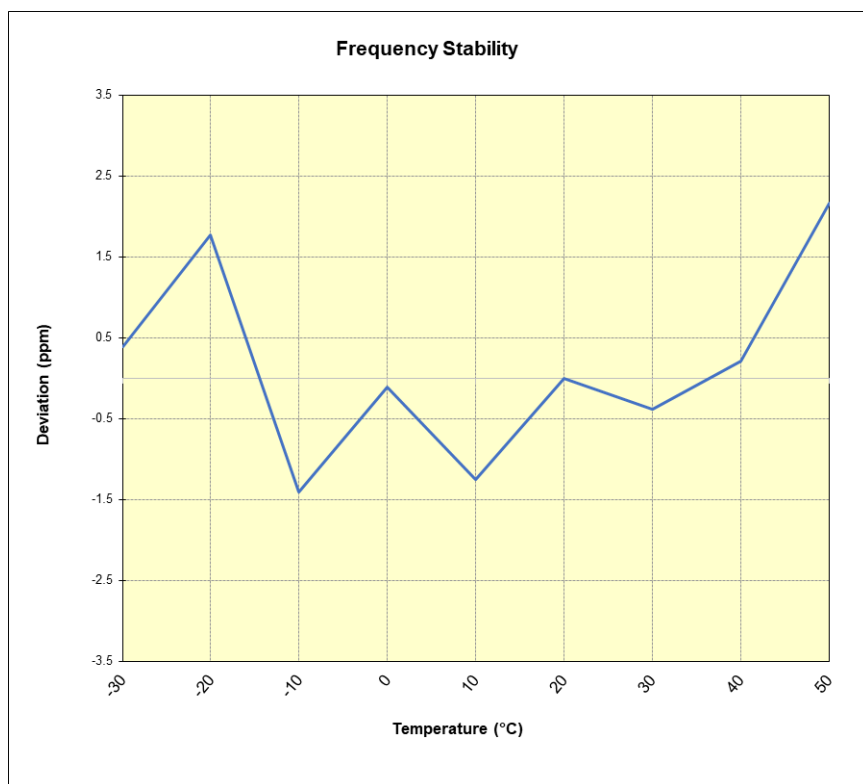
Test Notes

None

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NR Band n77					
		Operating Frequency (Hz):		3,840,000,000	
		Ref. Voltage (VDC):		4.464	
Voltage (%)	Power (VDC)	Temp (°C)	Frequency (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	4.464	- 30	3,841,097,887	1,509	0.0000393
		- 20	3,841,103,207	6,829	0.0001778
		- 10	3,841,090,964	-5,414	-0.0001409
		0	3,841,095,950	-428	-0.0000111
		+ 10	3,841,091,591	-4,787	-0.0001246
		+ 20 (Ref)	3,841,096,378	0	0.0000000
		+ 30	3,841,094,932	-1,446	-0.0000376
		+ 40	3,841,097,218	840	0.0000219
		+ 50	3,841,104,706	8,328	0.0002168
Battery Endpoint	3.682	+ 20	3,841,093,583	-2,795	-0.0000728

Table 7-28. NR Band n77 Frequency Stability Data



Plot 7-103. NR Band n77 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: A3LSMS948B** complies with all the requirements of Part 27 of the FCC rules. The data referenced from **FCC ID: A3LSMS948U** (Model SM-S948U) included in this report have been reviewed and are deemed acceptable to support the compliance of **FCC ID: A3LSMS948B**.

FCC ID: A3LSMS948B	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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9.0 APPENDIX A – DATA REFERENCING RESULTS

Overview

The spot-check data presented in this section was measured on the variant model following the guidance of the FCC's Data Referencing guidance in KDB 484596 D01 v03. Each spot-check test on the EUT was performed using the same procedure and setting that were used to perform the test on the corresponding reference device. For the worst-case RSE data, the measurement is determined by an actual emission and not by noise floor.

All test cases were performed to verify the variant EUT is still in compliance with the spot-checked results to the reference device and was performed using the guidance of ANSI C63.26-2015.

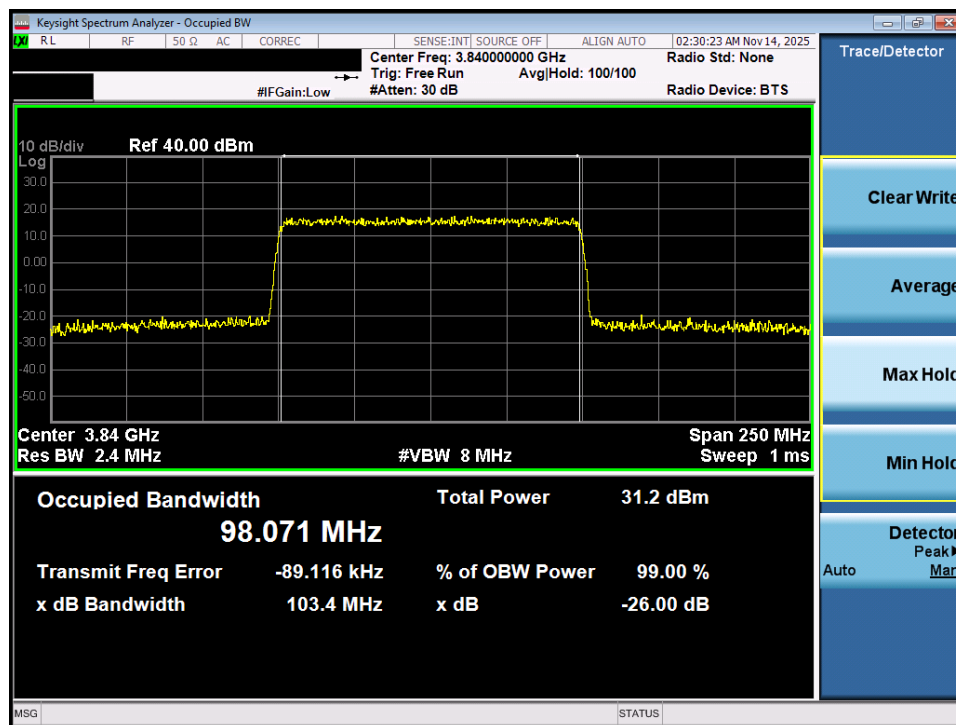
Notes

1. Each spot check test on the EUT was performed using the same procedure and setting that were used to perform the test on the corresponding reference device.

Conducted Spot-Checks – SM-S948B/DS

Bandwidth	Modulation	Channel	Frequency [MHz]	RB Size/Offset	Conducted Power [dBm]
10	$\pi/2$ BPSK	656000	3840.00	1 / 136	26.65

Table 9-1. Conducted Output Power Measurements (Spot-check) – NR Band n77 Ant 1



Plot 9-1. Occupied Bandwidth (Spot-check) - NR Band n77 (Spot-check)

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Radiated Spot-Checks – SM-S948B/DS

Bandwidth	Mod.	Frequency [MHz]	Ant. Pol. [H/V]	EUT Pol.	Antenna Height [cm]	Turntable Azimuth [degree]	Ant. Gain [dBi]	RB Size/Offset	Substitute Level [dBm]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
100	QPSK	3840.00	H	Z	195	330	7.15	1 / 1	17.37	24.52	0.283	30.00	-5.48

Table 9-2. EIRP Measurements (Spot-check) – NR Band n77 – Ant 1

Bandwidth (MHz):	100
Frequency (MHz):	3840.00
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]
15360.00	V	171	340	-71.30	14.26	49.96	-45.30	-13.00	-32.30

Table 9-3. Radiated Spurious Measurements (Spot-check) – NR Band n77 – Ant 1

Results

FCC Rules	Test Item	Test Case	Units	Limit	Reference Model: SM-S948U	Variant Model: SM-S948B	Deviation (dB)	Max Deviation (dB)	Pass/Fail
27	Conducted Output Power	Mid Ch. 656000, 100MHz, BPSK, Ant F	dBm	N/A	26.98	26.65	-0.33	1	PASS
	Occupied Bandwidth	Mid Ch. 656000, 100MHz, QPSK, Ant F	MHz	N/A	98.03	98.07	0.04	N/A	PASS
	EIRP	Mid Ch. 656000, 100MHz, QPSK, Ant F	dBm	30	26.90	24.52	-2.38	3	PASS
	RSE	Mid Ch. 656000, 100MHz, QPSK, 15000MHz, Ant F	dBm	-13	-45.65	-45.30	0.35	3	PASS

Table 9-4. Summary of Spot-checks – NR Band n77 – Ant 1

- END OF TEST REPORT -

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