



**RF SAFETY
LAB**

A NEXT GENERATION
TEST LABORATORY™

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PART 0 RF EXPOSURE REPORT

FCC ID:	A3LSMS942JPN
Model (s):	SC-51G, SCG36
Device Type:	Portable Handset
Report Issue Date:	December 12, 2025

Samsung Electronics Co., Ltd.

129, Samsung-ro, Yeongtong-gu,
Suwon-si, Gyeonggi-do, 16677, Rep.
of Korea

Certification

The measurement evaluations presented in this report are based on the maximum performance of the tested device(s), which has been shown to be capable of compliance for localized specific absorption rate (SAR) for uncontrolled environment/ general population exposure federal limits in 47CFR § 1.1310 and has been tested in accordance with the measurement procedures specified within this report.

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Steve Liu
President



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1. DUT Specifics

1.1. Device under Test

The device under test is a wireless device, incorporating the technologies listed in Part 1 RF Exposure report. This device uses the Qualcomm® Gen2 Smart Transmit feature to control and manage transmitting at all times for WWAN/WLAN/BT operations. Additionally, this device support NFC/WPC technologies, but the output power of these modes are not controlled by the Smart Transmit algorithm.

RF Exposure Part 1 report in this report refers to report SN: 2025.043.01

1.2. Time-Averaging Algorithm for RF Exposure Compliance

This device is enabled with the Qualcomm® Smart Transmit Gen2 feature. This feature implements a time-averaging algorithm in real time to control and manage transmitting power and ensure the time-averaged RF exposure is in compliance with FCC requirements all the time.

This Part 0 report shows SAR characterization of Smart Transmit enabled radios. Characterization is achieved by determining P_{limit} for those radios that corresponds to the exposure design targets after accounting for all device design related uncertainty. The SAR characterization is denoted as SAR Char in this report.

1.3. Nomenclature

Technology	Term	Description
Sub6 WWAN/WLAN/BT	P_{limit}	Power level that corresponds to the exposure design target (<i>SAR_design_target</i>) after accounting for all device design related uncertainties
	P_{max}	Maximum tune-up output power
	<i>SAR_design_target</i>	Target SAR level < FCC SAR limit after accounting for all device design related uncertainties
	<i>SAR Char</i>	Table containing P_{limit} for all technologies and bands



2. SAR Characterization

2.1. DSI and SAR Determination

This device uses different Device State Index (DSI) to configure different time averaged power levels based on certain exposure scenarios. Depending on the detection scheme implemented in the smartphone, the worst-case SAR was determined by measurements for the relevant exposure conditions for that DSI. Detailed descriptions of the detection mechanisms are included in the operational description.

When 1g SAR and 10g SAR exposure comparison is needed, the worst-case was determined from SAR normalized to 1g or 10g SAR limit.

The device state index (DSI) conditions used in Table 3-1 represent different exposure scenarios.

Table 2-1

Scenario	Description	SAR Test Cases
Head (DSI = 1)	_ Device positioned next to ear _ Receiver Active	Head SAR per KDB Publication 648474 D04
Body-worn (DSI = 0)	_ Device being used with a body-worn accessory	Body-worn SAR per KDB Publication 648474 D04
Hotspot (DSI = 0)	_ Device transmits in hotspot mode near body _ Hotspot Mode Active	Hotspot SAR per KDB Publication 941225 D06
Phablet (DSI = 0)	_ Device is held to hand	Phablet SAR per KDB Publication 648474 D04 & KDB Publication 616217 D04

2.2. SAR design Target

SAR_design_target is determined by ensuring that it is less than FCC SAR limit after accounting for total device designed related uncertainties specified by the manufacturer.

Table 2-2

SAR_design_target			
$SAR_design_target < SAR_regulatory_limit \times 10^{\frac{-Total\ Uncertainty}{10}}$			
1g SAR		10g SAR	
Total Uncertainty	1.0 dB	Total Uncertainty	1.0 dB
SAR_regulatory_limit	1.6 W/kg	SAR_regulatory_limit	4.0 W/kg
SAR_design_target	1.0 W/kg	SAR_design_target	2.5 W/kg

2.3. SAR Char

SAR test results corresponding to P_{max} for each antenna/technology/band/DSI can be found in Part 1 report and SAR results section in this report.

P_{limit} is calculated by linearly scaling with the measured SAR at the P_{part0} to correspond to the SAR_{design_target} . When $P_{limit} < P_{max}$, P_{part0} was used as P_{limit} in the Smart Transmit EFS. When $P_{limit} > P_{max}$ and $P_{part0} = P_{max}$, calculated P_{limit} was used in the Smart Transmit EFS. All reported SAR obtained from the P_{part0} SAR tests was less than $SAR_{Design_target} + 1$ dB Uncertainty. The final P_{limit} determination for each exposure scenario corresponding to SAR_{design_target} is shown in the below table.

Table 2-3

Device State Index (DSI)	P_{limit} Determination Scenarios
0	The worst-case SAR exposure is determined as maximum SAR normalized to the limit (i.e. lowest P_{limit}) among: 1. Body-worn SAR 2. Hotspot SAR 3. Phablet SAR
1	P_{limit} is calculated based on Head SAR

Notes:

- When $P_{max} < P_{limit}$ EFS, the DUT will operate at a power level up to P_{max}
- All P_{limit} EFS and maximum tune up output power P_{max} levels entered in below Table correspond to average power levels after accounting for duty cycle in the case of TDD, GMSK, or OFDM modulation schemes (e.g. GSM, LTE TDD and WLAN/BT).
- Maximum tune up output power P_{max} is used to configure EUT during RF tune up procedure. The maximum allowed output power is equal to maximum Tune up output power + 1dB device design uncertainty.
- All MIMO P_{max} and P_{limit} are defined per antenna chain



Table 2-4

Exposure Scenario			Maximum Tune-Up Output Power*	Body- worn/ Hotspot/ Phablet	Head
DSI				DSI0	DSI1
Band/Mode	Antenna	Antenna Group	Pmax (dBm)	Plimit (dBm)	Plimit (dBm)
GSM 850	A	AG0	25.3	24.3	28.5
GSM 850	E	AG1	25.3	20.8	20.8
GSM 1900	A	AG0	22.1	18.8	27.1
UMTS Band 5	A	AG0	24.0	24.6	26.1
UMTS Band 5	E	AG1	24.0	21.5	20.0
LTE Band 12	A	AG0	24.0	25.7	28.6
LTE Band 12	E	AG1	24.0	21.0	19.0
LTE Band 13	A	AG0	24.0	26.0	27.5
LTE Band 13	E	AG1	24.0	22.0	21.0
LTE Band 5	A	AG0	24.0	25.4	26.9
LTE Band 5	E	AG1	24.0	21.5	20.0
LTE Band 66	A	AG0	23.5	16.0	25.4
LTE Band 4	A	AG0	23.5	16.0	25.4
LTE Band 2	A	AG0	23.5	17.0	26.3
LTE Band 41	B	AG0	22.0	18.0	32.2
LTE Band 41	F	AG1	22.0	18.5	16.0
NR Band n5	A	AG0	24.0	24.6	26.3
NR Band n5	E	AG1	24.0	23.0	20.0
NR Band n66	A	AG0	23.5	17.0	25.2
NR Band n66	F	AG1	23.5	17.5	16.5
NR Band n41 PC2 Switching	B	AG0	25.5	17.0	19.0
NR Band n41 PC2 Default	F	AG1	25.5	18.5	15.0
2.4 GHz WIFI	G	AG1	19.0	17.0	14.0
2.4 GHz WIFI	I	AG1	19.0	17.0	14.0
2.4 GHz WIFI	MIMO (G&I)	AG1	19.0	17.0	14.0
5 GHz WIFI	E	AG1	17.0	14.0	12.0
5 GHz WIFI	G	AG1	17.0	14.0	12.0
5 GHz WIFI	MIMO (G&E)	AG1	17.0	14.0	12.0
6 GHz WIFI	E	AG1	16.0	8.5	13.0
6 GHz WIFI	G	AG1	16.0	8.5	13.0
6 GHz WIFI	MIMO (G&E)	AG1	16.0	8.5	13.0
2.4 GHz Bluetooth	G	AG1	14.0	20.6	12.4
2.4 GHz Bluetooth	I	AG1	14.0	20.2	12.4
2.4 GHz Bluetooth	MIMO (G&I)	AG1	11.0	18.3	9.4



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3. SAR results

Exposure Condition	Band/Mode	Antenna	DUT SN	Power Drift [dB]	Maximum Duty Cycle [%]	Configure d Duty Cycle [%]	Frequency [MHz]	Channel	Modulation/Configuration	RB/Tone Size or Data Rate [Mbps]	RB/Tone Offset or # of Tx slots, or BW [MHz]	Maximum Allowed Power [dBm]	Measured Conducted Power [dBm]	Maximum Allowed Power 2nd Ant [dBm]	Measured Conducted Power 2nd Ant [dBm]	MPR [dB]	Separation Distance [mm]	Position	Measured 10g SAR [W/kg]	Reported 10g SAR [W/kg]	Part0 Frame Avg P1mit [dBm]	Part0 Overall Frame Avg P1mit [dBm]
Phablet	GSM 850	A	0414M	-0.09	36.1%	36.1%	824.2	128	GPRS, 3 Tx Slots	N/A	3 Tx Slots	30.50	29.00	N/A	N/A	N/A	0	Back	1.230	1.737	27.65	25.01
Phablet	GSM 850	E	0414M	-0.14	48.1%	48.1%	824.2	128	GPRS, 4 Tx Slots	N/A	4 Tx Slots	25.00	23.55	N/A	N/A	N/A	0	Back	0.451	0.630	27.80	22.34
Phablet	GSM 1900	A	0366M	-0.02	48.1%	48.1%	1850.2	512	GPRS, 4 Tx Slots	N/A	4 Tx Slots	23.00	21.24	N/A	N/A	N/A	0	Back	1.140	1.710	21.46	19.79
Phablet	UMTS Band 5	A	0414M	-0.01	100.0%	100.0%	846.6	4233	RMC	N/A	N/A	25.00	23.94	N/A	N/A	N/A	0	Back	1.070	1.366	27.62	24.55
Phablet	UMTS Band 5	E	0414M	-0.03	100.0%	100.0%	826.4	4132	RMC	N/A	N/A	22.50	21.19	N/A	N/A	N/A	0	Back	0.676	0.914	26.86	21.96
Phablet	LTE Band 12	A	0641M	0.02	100.0%	100.0%	707.5	23095	QPSK - 10 MHz	1	0	25.00	23.91	N/A	N/A	0	0	Back	0.758	0.974	29.09	25.69
Phablet	LTE Band 12	E	0414M	-0.01	100.0%	100.0%	707.5	23095	QPSK - 10 MHz	25	0	22.00	21.62	N/A	N/A	0	0	Back	0.375	0.409	29.85	25.36
Phablet	LTE Band 13	A	0641M	-0.03	100.0%	100.0%	782	23230	QPSK - 10 MHz	1	25	25.00	23.47	N/A	N/A	0	0	Back	0.672	0.956	29.17	26.04
Phablet	LTE Band 13	E	0414M	-0.05	100.0%	100.0%	782	23230	QPSK - 10 MHz	1	0	23.00	22.00	N/A	N/A	0	0	Top	0.885	1.114	26.50	22.21
Phablet	LTE Band 5	A	0641M	0.01	100.0%	100.0%	836.5	20525	QPSK - 10 MHz	1	49	25.00	23.92	N/A	N/A	0	0	Back	0.919	1.178	28.26	25.38
Phablet	LTE Band 5	E	0414M	0.07	100.0%	100.0%	836.5	20525	QPSK - 10 MHz	1	49	22.50	21.49	N/A	N/A	0	0	Back	0.780	0.984	26.54	22.42
Phablet	LTE Band 66	A	0374M	-0.01	100.0%	100.0%	1770	132572	QPSK - 20 MHz	50	25	17.00	16.13	N/A	N/A	0	0	Back	0.696	0.850	21.68	18.93
Phablet	LTE Band 2	A	0366M	-0.11	100.0%	100.0%	1860	18700	QPSK - 20 MHz	50	25	18.00	17.38	N/A	N/A	0	0	Back	0.779	0.899	22.44	20.00
Phablet	LTE Band 41	B	0400M	-0.01	63.3%	63.3%	2506	39750	QPSK - 20 MHz	100	0	21.00	20.71	N/A	N/A	0	0	Back	1.540	1.646	20.82	20.59
Phablet	LTE Band 41	F	2302M	-0.10	63.3%	63.3%	2549.5	40185	QPSK - 20 MHz	50	50	21.50	21.29	N/A	N/A	0	0	Back	1.540	1.616	21.40	19.15
Phablet	NR Band n5	A	0414M	-0.01	100.0%	100.0%	836.5	167300	DFT-s-OFDM QPSK, 20 MHz	50	28	25.00	23.25	N/A	N/A	0	0	Back	1.100	1.546	26.81	24.63
Phablet	NR Band n5	E	0400M	0.03	100.0%	100.0%	836.5	167300	DFT-s-OFDM QPSK, 20 MHz	50	56	24.00	22.18	N/A	N/A	0	0	Back	0.441	0.671	29.71	25.31
Phablet	NR Band n66	A	0400M	0.09	100.0%	100.0%	1745	349000	DFT-s-OFDM QPSK, 45 MHz	1	240	18.00	17.39	N/A	N/A	0	0	Back	0.928	1.068	21.69	18.36
Phablet	NR Band n66	F	0374M	0.00	100.0%	100.0%	1745	349000	DFT-s-OFDM QPSK, 45 MHz	1	1	18.50	17.26	N/A	N/A	0	0	Front	0.780	1.038	22.31	19.71
Phablet	NR Band n41 PC2 Switching	B	0400M	-0.03	100.0%	100.0%	2592.99	518598	DFT-s-OFDM QPSK, 100 MHz	135	0	18.00	17.36	N/A	N/A	0	0	Back	1.220	1.414	20.47	18.72
Phablet	NR Band n41 PC2 Default	F	0369M	0.00	100.0%	100.0%	2592.99	518598	DFT-s-OFDM QPSK, 100 MHz	1	271	19.50	18.28	N/A	N/A	0	0	Back	1.550	2.053	20.35	20.35
Phablet	2.4 GHz WiFi	G	2865M	0.01	100.0%	97.7%	2437	6	IEEE 802.11b - 22 MHz	1	22	18.00	17.54	N/A	N/A	0	0	Back	0.896	1.020	21.89	20.03
Phablet	2.4 GHz WiFi	I	2861M	-0.01	100.0%	98.4%	2412	1	IEEE 802.11b - 22 MHz	1	22	18.00	17.35	N/A	N/A	0	0	Front	0.708	0.835	22.76	21.94
Phablet	2.4 GHz WiFi	MIMO (G&I)	2861M	0.02	100.0%	89.0%	2462	11	IEEE 802.11n - 20 MHz	13	20	18.00	17.23	18.00	17.30	N/A	0	Back	1.110	1.489	20.24	18.06
Phablet	2.4 GHz Bluetooth	G	2865M	-0.04	79.0%	75.6%	2441	39	FHSS	N/A	N/A	16.00	15.63	N/A	N/A	N/A	0	Back	0.424	0.482	22.12	20.56



4. Equipment List

Manufacturer	Model	Description	Serial Number	Calibration Date	Calibration Due	CRT
Amplifier Research	155480A01	RF Broadband Amplifier (4 - 8 GHz)	0554807			✓
Amplifier Research	551G4	RF Broadband Amplifier (800 MHz - 4.2 GHz)	351258			✓
Anritsu	MG3691B	Anritsu MG3691B Signal Generator	54014	3/10/24	3/10/26	
Anritsu	MA24118A	Microwave USB Power Sensor (10MHz - 18 GHz)	2123431	1/13/2025	1/13/2026	
Anritsu	MA24118A	Microwave USB Power Sensor (10MHz - 18 GHz)	2123500	1/13/2025	1/13/2026	
Rohde & Schwarz	NRPS	Power Sensor 10 MHz - 8 GHz	114184	3/10/25	3/10/26	
Rohde & Schwarz	NRPS	Power Sensor 10 MHz - 8 GHz	114183	3/10/25	3/10/26	
Rohde & Schwarz	NRPS	Power Sensor 10 MHz - 8 GHz	114943	6/10/25	6/10/26	
Anritsu	MT8800A	MT8800A Radio Communication Test Station	6262261936	8/21/2025	8/21/2027	
Anritsu	5820E	Vector Network Analyzer	2340226	11/30/2023	11/30/2025	
Rohde & Schwarz	ZN120	Vector Network Analyzer	101202	9/12/2024	9/12/2026	
Control Company	4040	Ambient Thermometer	230581662	7/17/2025	7/17/2027	
Control Company	4040	Ambient Thermometer	230581657	7/17/2025	7/17/2027	
Control Company	4040	Ambient Thermometer	230581656	7/17/2025	7/17/2027	
Control Company	4352	Long Stem Liquid Thermometer	230662112	4/23/2025	4/23/2027	
Control Company	4352	Long Stem Liquid Thermometer	230662223	4/23/2025	4/23/2027	
Control Company	4352	Long Stem Liquid Thermometer	230662291	4/23/2025	4/23/2027	
Micro Coax	UR200A-0-0240-30x30	SMA Male RF Test Cable (DC - 18 GHz)	-			✓
Mini-Circuits	BW-N20W20+	20dB RF Fixed Attenuator (DC - 18 GHz)	-			✓
Mini-Circuits	BW-N20W20+	20dB RF Fixed Attenuator (DC - 18 GHz)	-			✓
Mini-Circuits	BW-S3W2+	3dB RF Fixed Attenuator (DC - 18 GHz)	-			✓
Mini-Circuits	BW-S3W2+	3dB RF Fixed Attenuator (DC - 18 GHz)	-			✓
Mini-Circuits	CB1-4FT-SMA/NM+	Precision Test Cable SMA/N (DC - 18 GHz)	3318			✓
Mini-Circuits	CB1-4FT-SMA/NM+	Precision Test Cable SMA/N (DC - 18 GHz)	3335			✓
Mini-Circuits	CB1-4FT-SMA/NM+	Precision Test Cable SMA/N (DC - 18 GHz)	3329			✓
Mini-Circuits	NF-9F50+	RF Adapter N Male to SMA Female (DC - 18 GHz)	-			✓
Mini-Circuits	VLF-8400+	Coaxial Low Pass Filter (DC - 8.4 GHz)	-			✓
Mini-Circuits	VLF-6000+	Coaxial Low Pass Filter (DC - 6 GHz)	-			✓
Mini-Circuits	VLF-3000+	Coaxial Low Pass Filter (DC - 3 GHz)	-			✓
Mini-Circuits	VLF-1000+	Coaxial Low Pass Filter (DC - 1 GHz)	-			✓
Mitutoyo	CD-4"AX	Digital Caliper	82243217	8/28/2025	8/28/2027	
Narda	24785-20	20 dB SMA Fixed Attenuator (DC - 4.0 GHz)	-			✓
Narda	4226-20 (26733)	20 dB SMA Directional Coupler (0.5 - 18 GHz)	0301			✓
Rohde & Schwarz	SMCV100B	R&S SMCV100B Vector Signal Generator (VSG)	103882	12/21/2023	12/19/2025	
Rohde & Schwarz	CMW500	CMW500 Radio Communication Test Station	1201.0002K50-167386-ef	1/12/2024	1/12/2026	
SPEAG	10 GHz System Verification Source	10 GHz System Verification Source	1074	9/15/2025	9/15/2026	
SPEAG	CLA3	13 MHz System Validation Source	1041	10/11/24	10/11/26	
SPEAG	D1750V2	1750 MHz System Validation Dipole	1205	10/11/2023	10/11/26	
SPEAG	D1900V2	1900 MHz System Validation Dipole	5652	10/6/2023	10/6/26	
SPEAG	D1400V2	1450 MHz System Validation Dipole	1112	11/25/2024	11/25/26	
SPEAG	D1600V2	1600 MHz System Validation Dipole	1215	11/15/2024	11/15/26	
SPEAG	D1600V2	1600 MHz System Validation Dipole	1396	11/15/2024	11/15/2026	
SPEAG	D6.5GHzV2	6.5GHz System Validation Dipole	1304	11/14/2024	11/14/2026	
SPEAG	D750V3	750 MHz System Validation Dipole	1235	10/11/2023	10/11/2026	
SPEAG	D835V2	835 MHz System Validation Dipole	44911	10/9/2023	10/9/2026	
SPEAG	DA64p	Data Acquisition Electronics with Integ. Power	1843	7/30/2025	7/30/2026	
SPEAG	DA64p	Data Acquisition Electronics with Integ. Power	1844	11/6/2025	11/6/2026	
SPEAG	DA64p	Data Acquisition Electronics with Integ. Power	1905	4/25/2025	4/25/2026	
SPEAG	DA64p	Data Acquisition Electronics with Integ. Power	1862	1/16/25	1/16/2026	
SPEAG	DA64p	Data Acquisition Electronics with Integ. Power	1809	9/15/25	9/15/2026	
SPEAG	DAK-12	DAK-12 Dielectric Probe	1194	10/10/2025	10/10/2026	
SPEAG	DAK-3.5	DAK-3.5 Dielectric Probe	1349	8/5/2025	8/5/2026	
SPEAG	EK30V4	SAR Measurement Probe	7872	8/8/2025	8/8/2026	
SPEAG	EK30V4	SAR Measurement Probe	7867	12/10/2024	12/10/2025	
SPEAG	EK30V4	SAR Measurement Probe	7869	5/5/2025	5/5/2026	
SPEAG	EK30V4	SAR Measurement Probe	7836	9/15/2025	9/15/2026	
SPEAG	EK30V4	SAR Measurement Probe	7853	11/7/24	11/7/2025	
SPEAG	EK30V4	SAR Measurement Probe	7853	11/7/25	11/7/2026	
SPEAG	EUMMWV4	mmWave Measurement Probe	9800	9/13/2025	9/13/2026	
SPEAG	Powersource1	Signal Generator	4341	1/9/2025	1/9/2026	
Anritsu	MT8820C	Radio Communication Test Station	6201342024			
Anritsu	MT8820C	Radio Communication Test Station	6201179629			
Anritsu	MT8820C	Radio Communication Test Station	6201342019			
SPEAG	SE UMS 171 E	NAIA Modulation and Interference Analyzer	1814			
SPEAG	SE UMS 171 E	NAIA Modulation and Interference Analyzer	1817			
SPEAG	SE UMS 171 EA	NAIA Modulation and Interference Analyzer	1820			
SPEAG	SE UMS 171 EA	NAIA Modulation and Interference Analyzer	1815			
SPEAG	SE UMS 176 C	ANT Wideband Communication Antenna	1579			
SPEAG	SE UMS 176 C	ANT Wideband Communication Antenna	1601			
SPEAG	SE UMS 176 C	ANT Wideband Communication Antenna	1610			
SPEAG	SE UMS 176 C	ANT Wideband Communication Antenna	1590			

✓Note: Components calibrated before testing. Prior to testing, the measurement paths containing a cable, attenuator, coupler or filter were connected to a calibrated source (i.e. a signal generator, power sensor, or VNA) to determine the losses of the measurement path. The power meter offset was then adjusted to compensate for the measurement system losses. This level offset is stored within the power meter before measurements are made. This calibration verification procedure applies to the system verification and output power measurements. The calibrated reading is then taken directly from the power meter after compensation of the losses for all final power measurements.