



MEASUREMENT REPORT
LTE

Applicant Name:
Samsung Electronics Co., Ltd.
129, Samsung-ro,
Yeongtong-gu, Suwon-si
Gyeonggi-do, 16677, Korea


Date of Testing:
5/26 - 7/3/2018
Test Site/Location:
PCTEST Lab. Columbia, MD, USA
Test Report Serial No.:
1M1806290138-02.A3L

FCC ID:	A3LSMN960U
APPLICANT:	Samsung Electronics Co., Ltd.

Application Type: Class II Permissive Change
Model: SM-N960U
Additional Model(s): SM-N960U1, SM-N960W, SM-N960XU
EUT Type: Portable Handset
FCC Classification: PCS Licensed Transmitter Held to Ear (PCE)
FCC Rule Part(s): 27
Test Procedure(s): ANSI C63.26-2015, ANSI/TIA-603-E-2016, KDB 971168 D01 v03r01, KDB 648474 D03 v01r04

This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in §2.947. Test results reported herein relate only to the item(s) tested.

I attest to the accuracy of data. All measurements reported herein were performed by me or were made under my supervision and are correct to the best of my knowledge and belief. I assume full responsibility for the completeness of these measurements and vouch for the qualifications of all persons taking them.


Randy Ortanez
President



FCC ID: A3LSMN960U	 MEASUREMENT REPORT (CLASS II PERMISSIVE CHANGE)		Approved by: Quality Manager
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1.1 Radiated Power (ERP/EIRP)

Frequency [MHz]	Channel Bandwidth [MHz]	Mod.	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	RB Size/Offset	Substitute Level [dBm]	Ant. Gain [dBi]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
2310.00	10	QPSK	V	150	315	1 / 0	15.97	5.74	21.71	0.148	23.98	-2.27

Table 1-1. EIRP Data (Band 30 – Antenna A)

Frequency [MHz]	Channel Bandwidth [MHz]	Mod.	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	RB Size/Offset	Substitute Level [dBm]	Ant. Gain [dBi]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
2310.00	10	QPSK	V	150	246	1 / 0	16.05	5.74	21.79	0.151	23.98	-2.19

Table 1-2. EIRP Data (Band 30 – Antenna B)

Frequency [MHz]	Channel Bandwidth [MHz]	Mod.	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	RB Size/Offset	Substitute Level [dBm]	Ant. Gain [dBi]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
2610.00	20	QPSK	H	150	222	1 / 0	15.62	6.14	21.77	0.150	33.01	-11.24

Table 1-3. EIRP Data (Band 38)

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1.2 Radiated Spurious Emissions Measurements

Band 30 – Antenna A

OPERATING FREQUENCY: 2310.00 MHz
 CHANNEL: 27710
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 10.0 MHz
 DISTANCE: 3 meters
 LIMIT: -40 dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
4620.00	H	150	55	-64.99	8.10	-56.90	-16.9
6930.00	H	150	290	-54.61	8.67	-45.94	-5.9
9240.00	H	150	31	-57.70	9.89	-47.81	-7.8
11550.00	H	-	-	-59.27	9.12	-50.15	-10.2
13860.00	H	-	-	-58.48	9.45	-49.03	-9.0

Table 1-4. Radiated Spurious Data (Band 30 – Mid Channel)

OPERATING FREQUENCY: 2310.00 MHz
 CHANNEL: 27710
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 10.0 MHz
 DISTANCE: 3 meters
 LIMIT: -40 dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
4620.00	H	150	5	-65.39	8.10	-57.30	-17.3
6930.00	H	150	96	-58.25	8.67	-49.58	-9.6
9240.00	H	150	58	-60.45	9.89	-50.56	-10.6
11550.00	H	-	-	-59.20	9.12	-50.08	-10.1
13860.00	H	-	-	-58.18	9.45	-48.73	-8.7

Table 1-5. Radiated Spurious Data with WCP (Band 30 – Mid Channel)

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Band 30 – Antenna B

OPERATING FREQUENCY: 2310.00 MHz
 CHANNEL: 27710
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 10.0 MHz
 DISTANCE: 3 meters
 LIMIT: -40 dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
4620.00	V	-	-	-66.61	8.10	-58.51	-18.5
6930.00	V	150	269	-58.24	8.67	-49.57	-9.6
9240.00	V	150	309	-54.97	9.89	-45.08	-5.1
11550.00	V	-	-	-59.79	9.12	-50.67	-10.7
13860.00	V	-	-	-58.91	9.45	-49.47	-9.5

Table 1-6. Radiated Spurious Data (Band 30 – Mid Channel)

OPERATING FREQUENCY: 2310.00 MHz
 CHANNEL: 27710
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 10.0 MHz
 DISTANCE: 3 meters
 LIMIT: -40 dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
4620.00	H	-	-	-66.30	8.10	-58.20	-18.2
6930.00	H	150	104	-59.27	8.67	-50.60	-10.6
9240.00	H	150	58	-58.40	9.89	-48.50	-8.5
11550.00	H	-	-	-58.97	9.12	-49.86	-9.9
13860.00	H	-	-	-57.78	9.45	-48.33	-8.3

Table 1-7. Radiated Spurious Data with WCP (Band 30 – Mid Channel)

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OPERATING FREQUENCY: 2610.00 MHz
 CHANNEL: 38150
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 20.0 MHz
 DISTANCE: 3 meters
 LIMIT: -25 dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
5220.00	V	150	73	-64.74	8.44	-56.30	-31.3
7830.00	V	150	86	-42.43	8.82	-33.62	-8.6
10440.00	V	150	272	-59.05	9.77	-49.28	-24.3
13050.00	V	-	-	-56.94	9.22	-47.72	-22.7
15660.00	V	-	-	-55.85	9.03	-46.82	-21.8

Table 1-8. Radiated Spurious Data (Band 38 – High Channel)

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