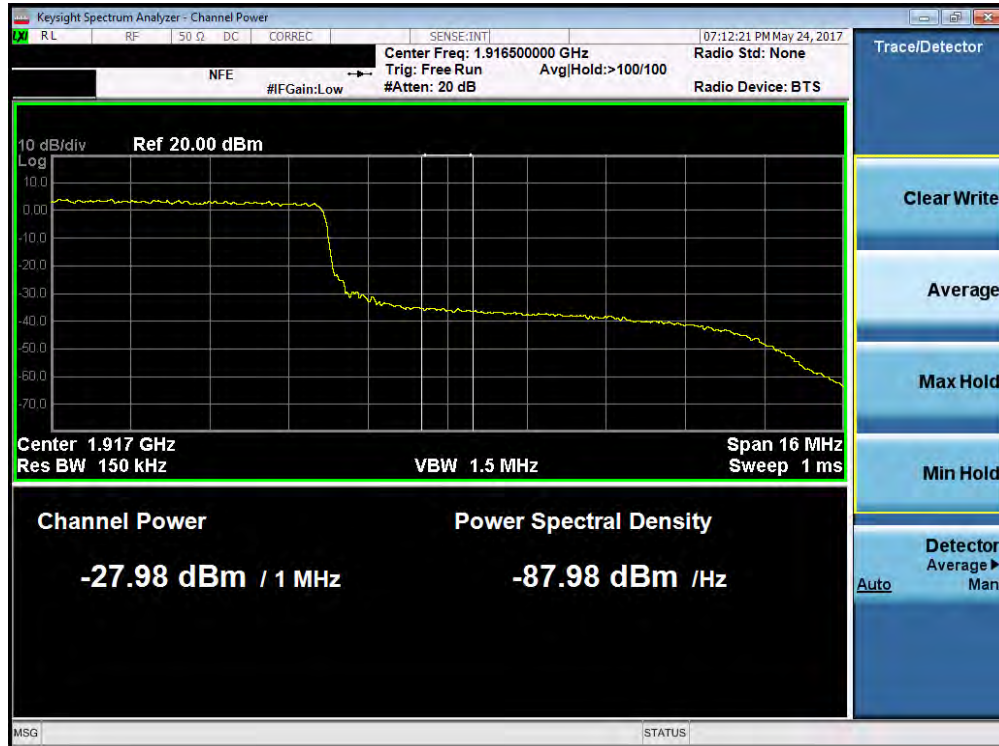
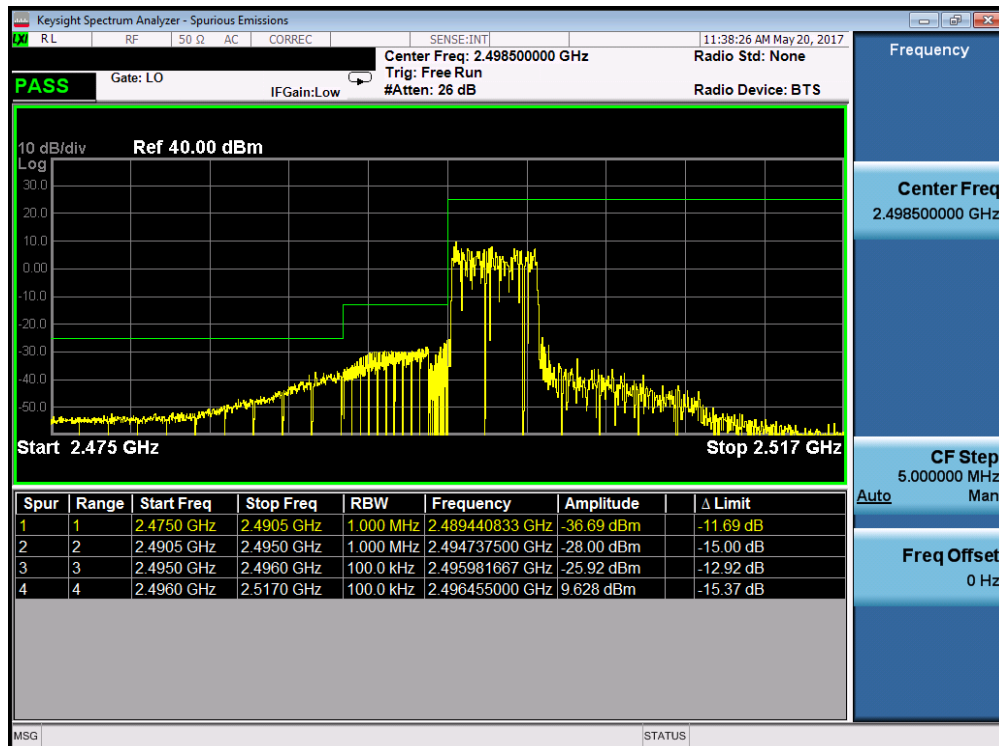


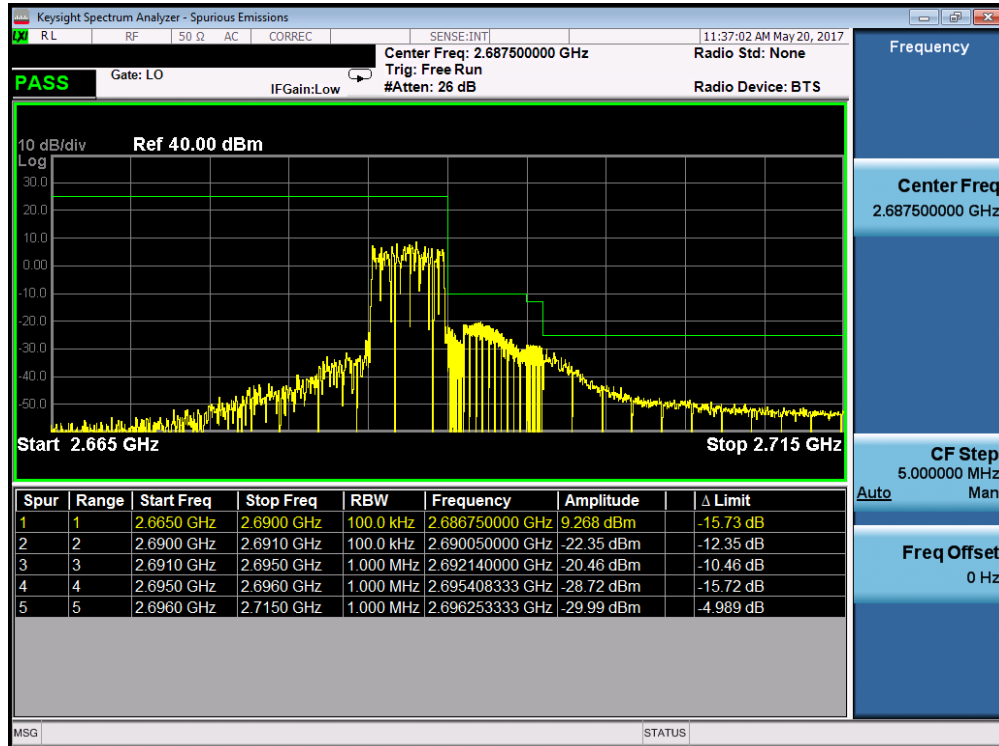


Plot 7-190. Upper Extended Band Edge Plot (Band 25 – 20.0MHz QPSK – RB Size 100)

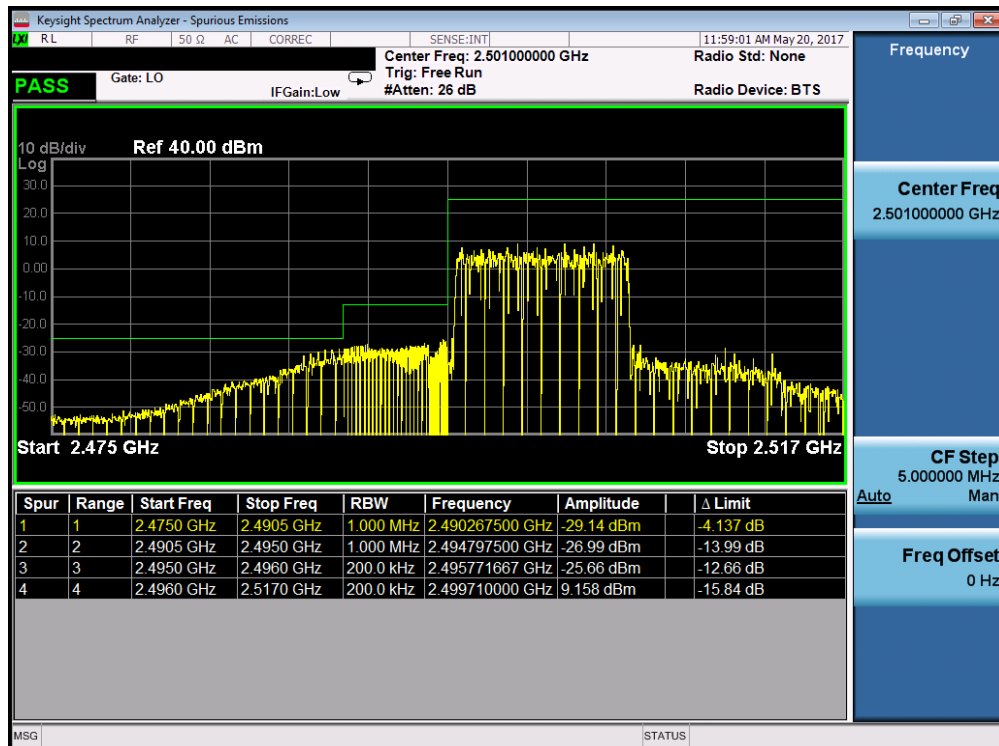


Plot 7-191. Lower ACP Plot (Band 41 – 5.0MHz QPSK – RB Size 25)

FCC ID: A3LSMN950KOR	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1705220173-03.A3L	Test Dates: 5/4 - 7/21/2017	EUT Type: Portable Handset		Page 113 of 163

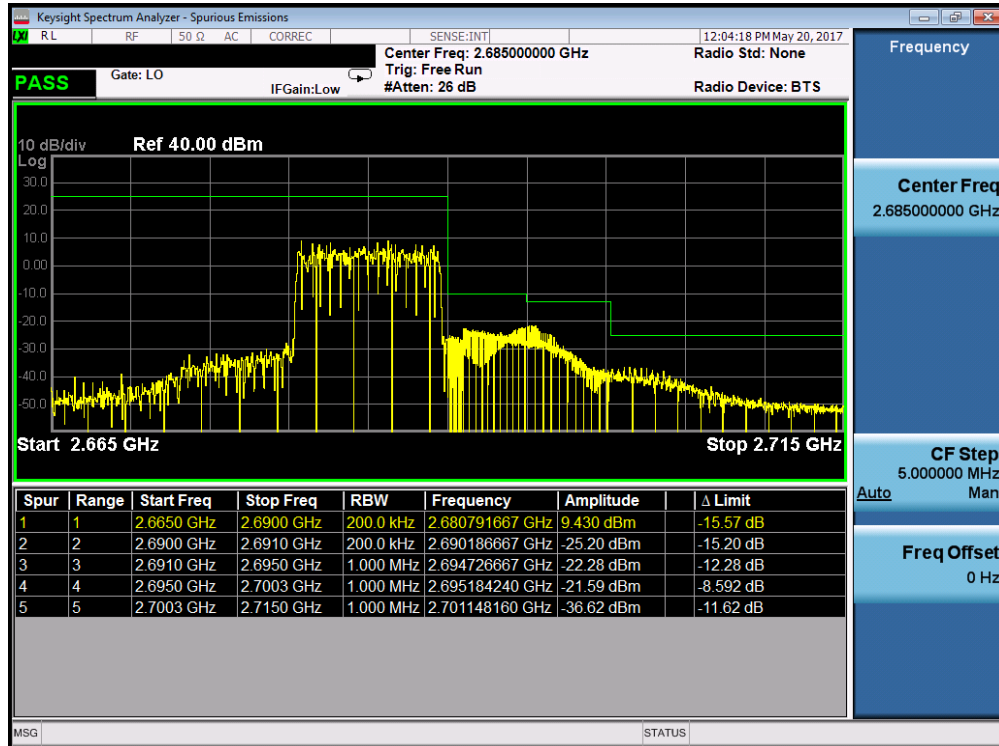


Plot 7-192. Upper ACP Plot (Band 41 – 5.0MHz QPSK – RB Size 25)

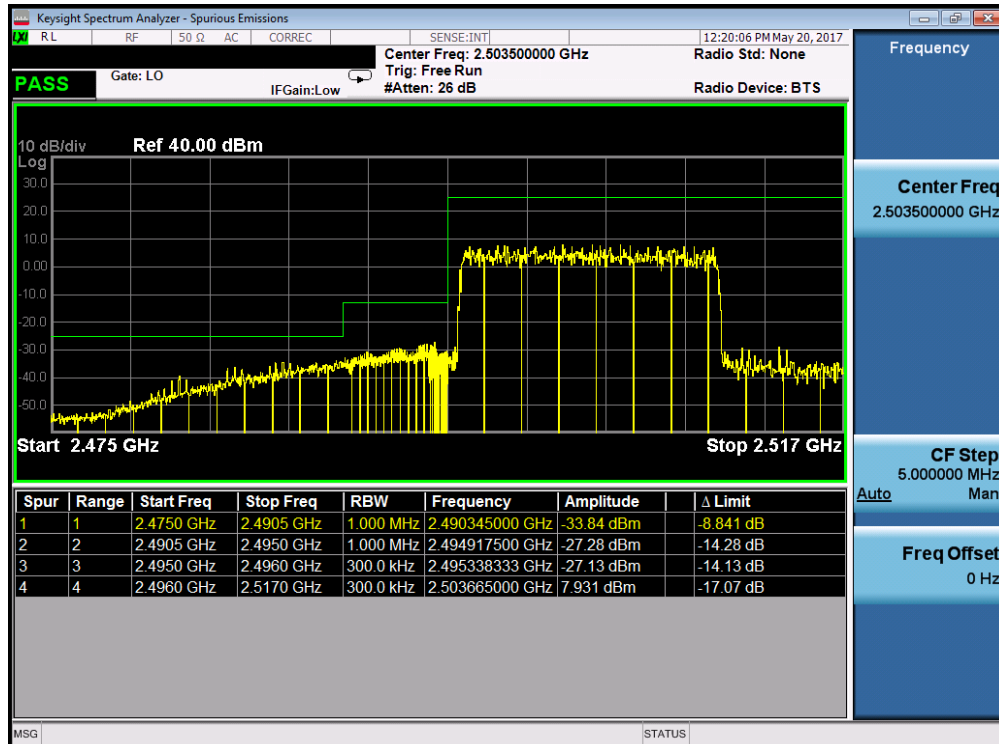


Plot 7-193. Lower ACP Plot (Band 41 – 10.0MHz QPSK – RB Size 50)

FCC ID: A3LSMN950KOR	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)		SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1705220173-03.A3L	Test Dates: 5/4 - 7/21/2017	EUT Type: Portable Handset			Page 114 of 163

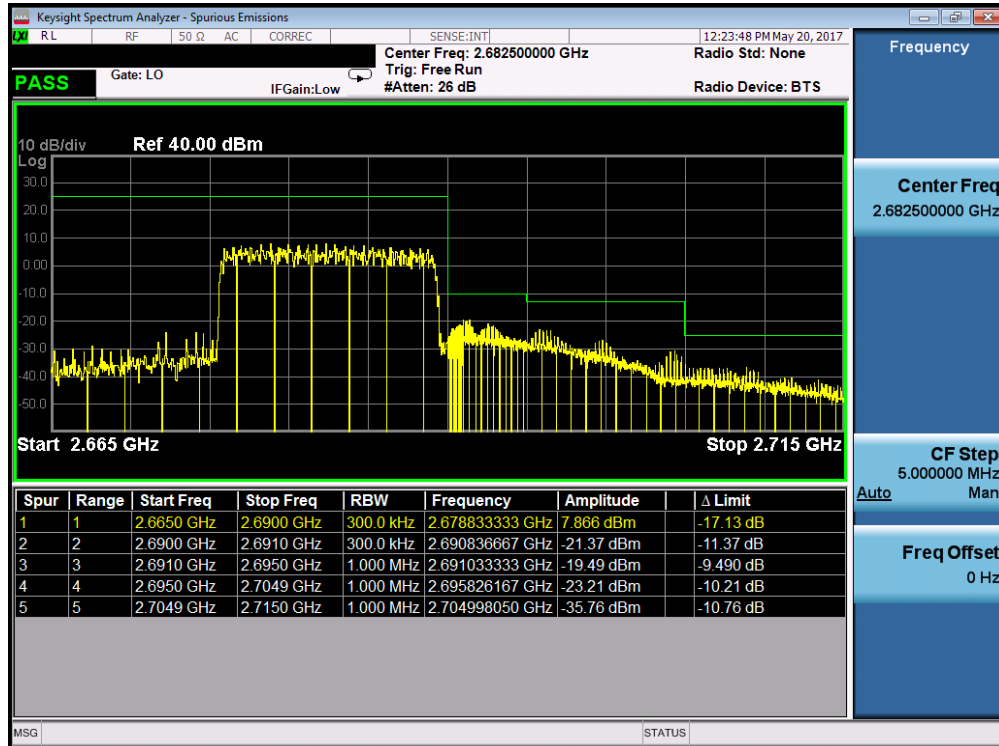


Plot 7-194. Upper ACP Plot (Band 41 – 10.0MHz QPSK – RB Size 50)

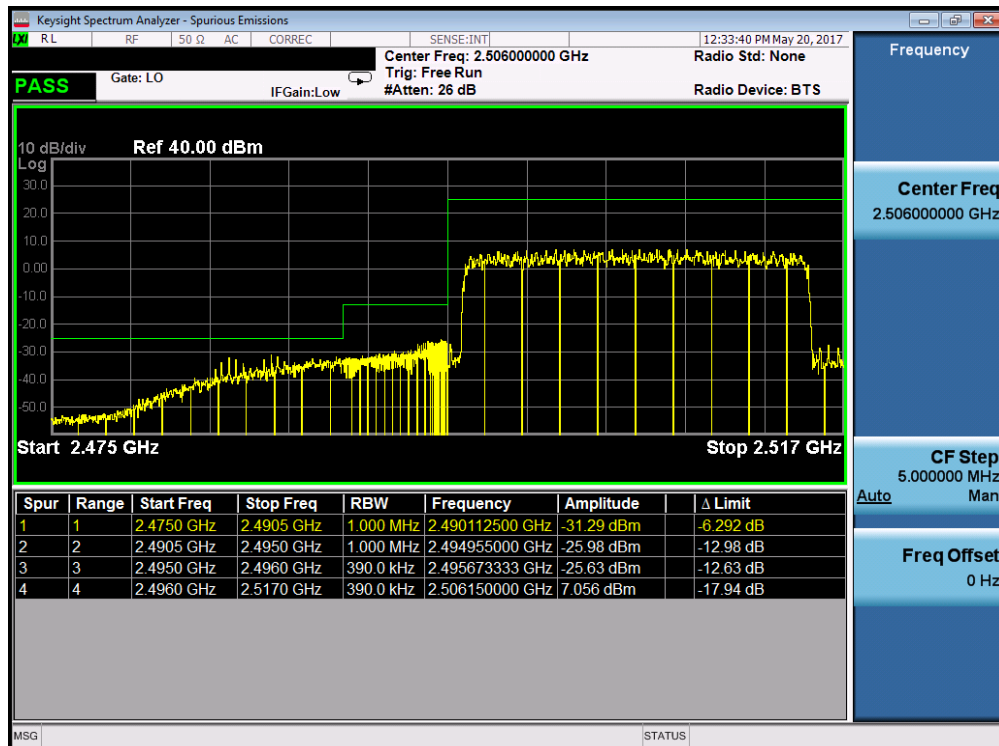


Plot 7-195. Lower ACP Plot (Band 41 – 15.0MHz QPSK – RB Size 75)

FCC ID: A3LSMN950KOR	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1705220173-03.A3L	Test Dates: 5/4 - 7/21/2017	EUT Type: Portable Handset		Page 115 of 163

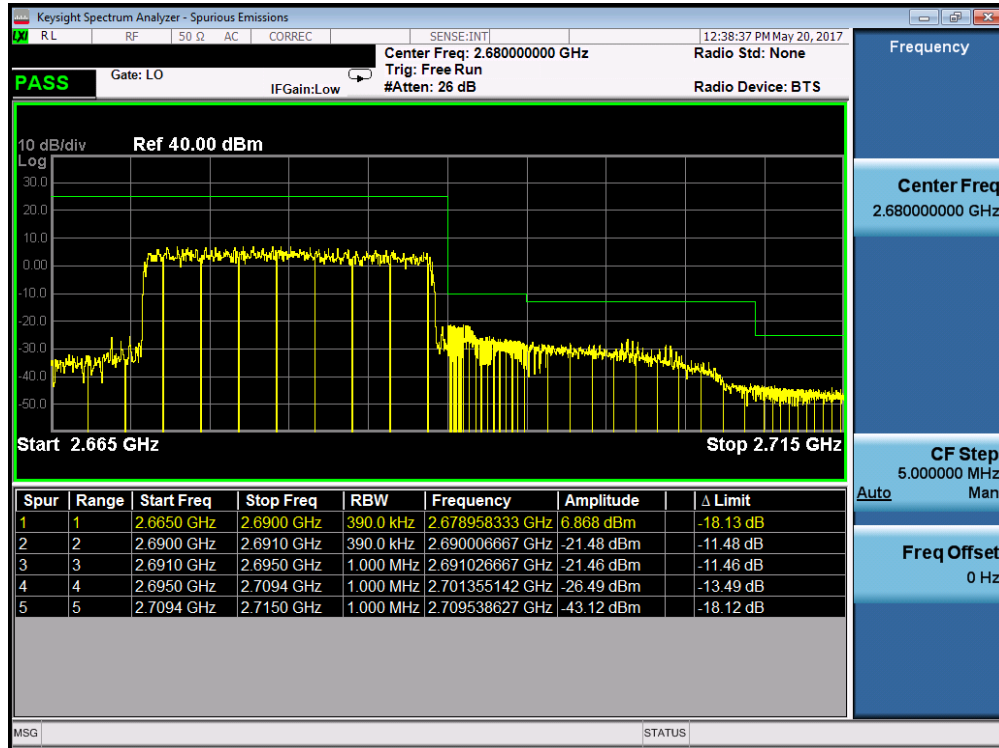


Plot 7-196. Upper ACP Plot (Band 41 – 15.0MHz QPSK – RB Size 75)



Plot 7-197. Lower ACP Plot (Band 41 – 20.0MHz QPSK – RB Size 100)

FCC ID: A3LSMN950KOR	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1705220173-03.A3L	Test Dates: 5/4 - 7/21/2017	EUT Type: Portable Handset		Page 116 of 163



Plot 7-198. Upper ACP Plot (Band 41 – 20.0MHz QPSK – RB Size 100)

FCC ID: A3LSMN950KOR	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1705220173-03.A3L	Test Dates: 5/4 - 7/21/2017	EUT Type: Portable Handset		Page 117 of 163

7.5 Peak-Average Ratio

§24.232(d)

Test Overview

A peak to average ratio measurement is performed at the conducted port of the EUT. The spectrum analyzers Complementary Cumulative Distribution Function (CCDF) measurement profile is used to determine the largest deviation between the average and the peak power of the EUT in a given bandwidth. The CCDF curve shows how much time the peak waveform spends at or above a given average power level. The percent of time the signal spends at or above the level defines the probability for that particular power level.

Test Procedure Used

KDB 971168 D01 v02r02 – Section 5.7.1

Test Settings

1. The signal analyzer's CCDF measurement profile is enabled
2. Frequency = carrier center frequency
3. Measurement BW > Emission bandwidth of signal
4. The signal analyzer was set to collect one million samples to generate the CCDF curve
5. The measurement interval was set depending on the type of signal analyzed. For continuous signals (>98% duty cycle), the measurement interval was set to 1ms. For burst transmissions, the spectrum analyzer is set to use an internal "RF Burst" trigger that is synced with an incoming pulse and the measurement interval is set to less than the duration of the "on time" of one burst to ensure that energy is only captured during a time in which the transmitter is operating at maximum power

Test Setup

The EUT and measurement equipment were set up as shown in the diagram below.

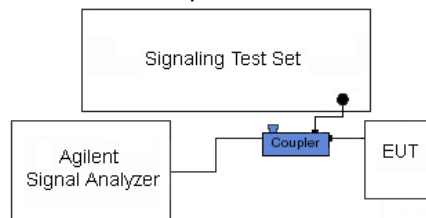
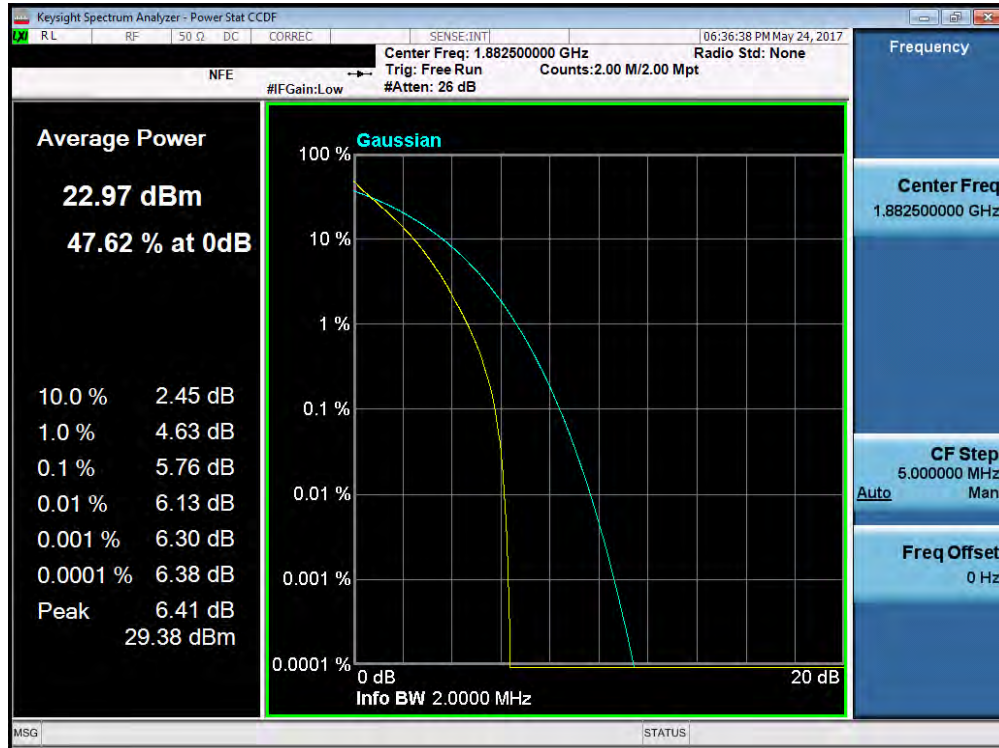


Figure 7-4. Test Instrument & Measurement Setup

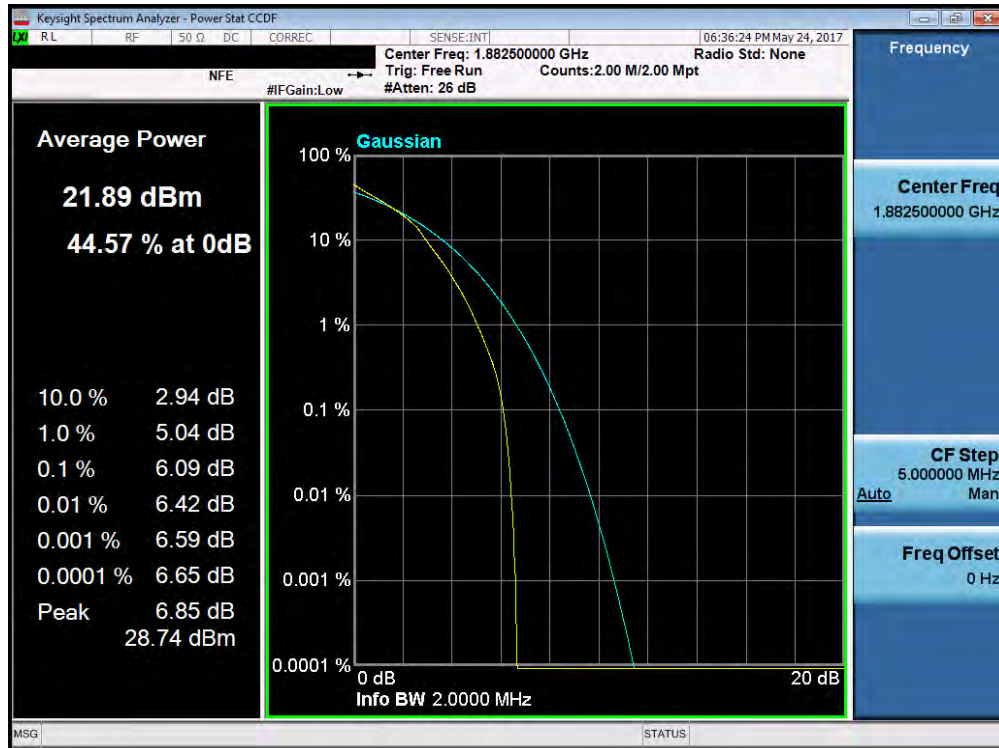
Test Notes

None.

FCC ID: A3LSMN950KOR	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1705220173-03.A3L	Test Dates: 5/4 - 7/21/2017	EUT Type: Portable Handset		Page 118 of 163

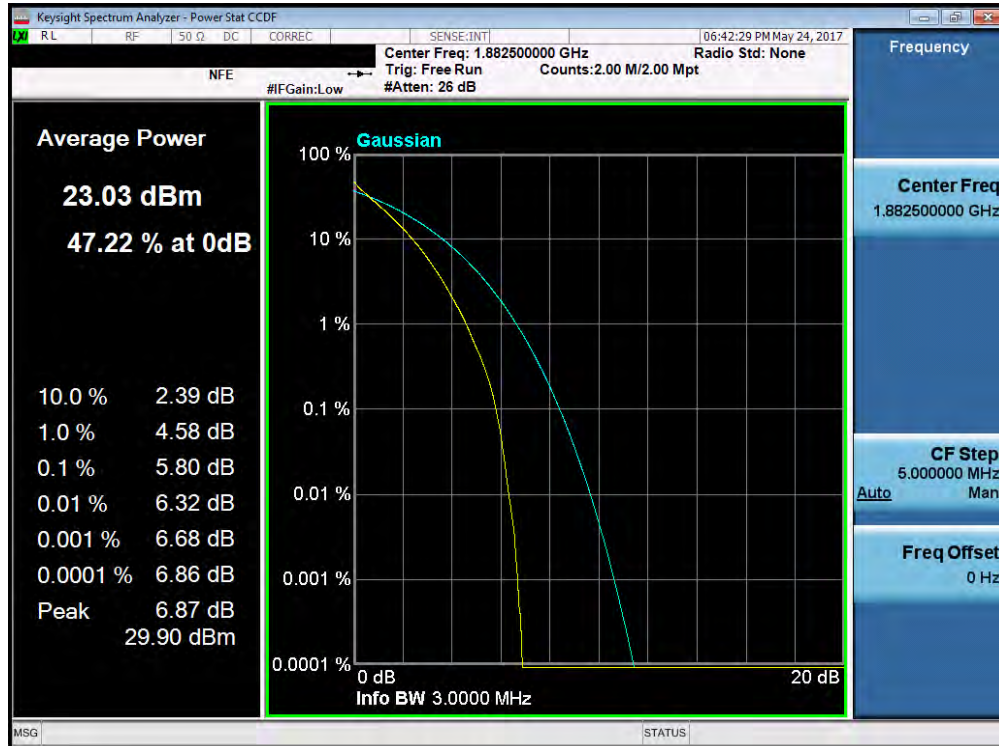


Plot 7-199. PAR Plot (Band 2/25 – 1.4MHz QPSK – RB Size 6)

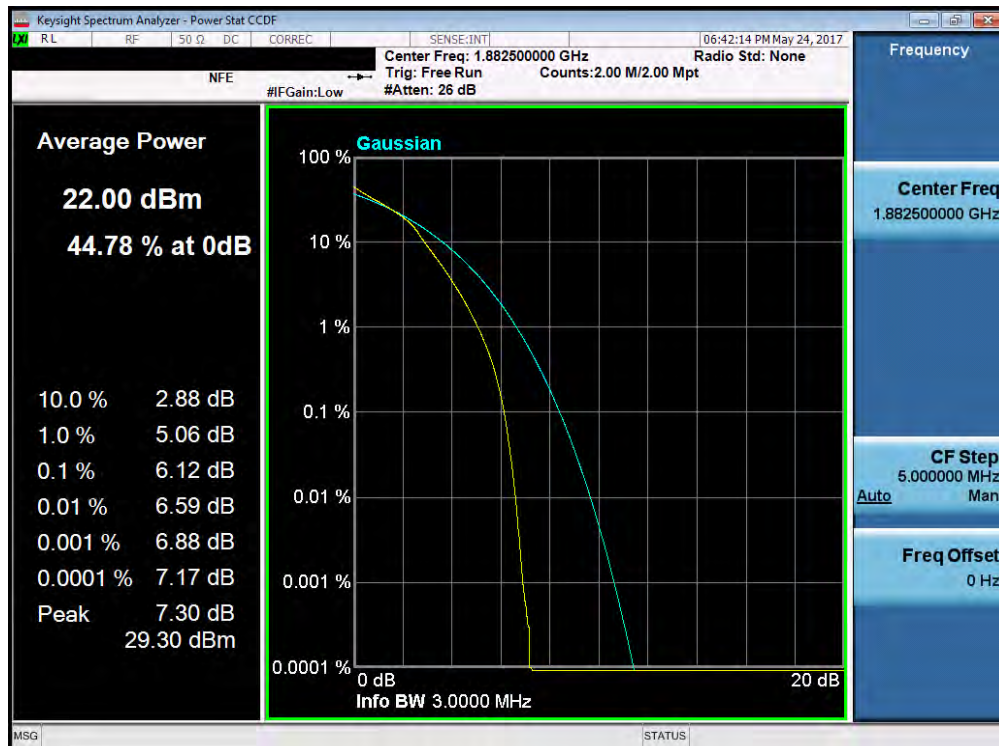


Plot 7-200. PAR Plot (Band 2/25 – 1.4MHz 16-QAM – RB Size 6)

FCC ID: A3LSMN950KOR	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1705220173-03.A3L	Test Dates: 5/4 - 7/21/2017	EUT Type: Portable Handset		Page 119 of 163

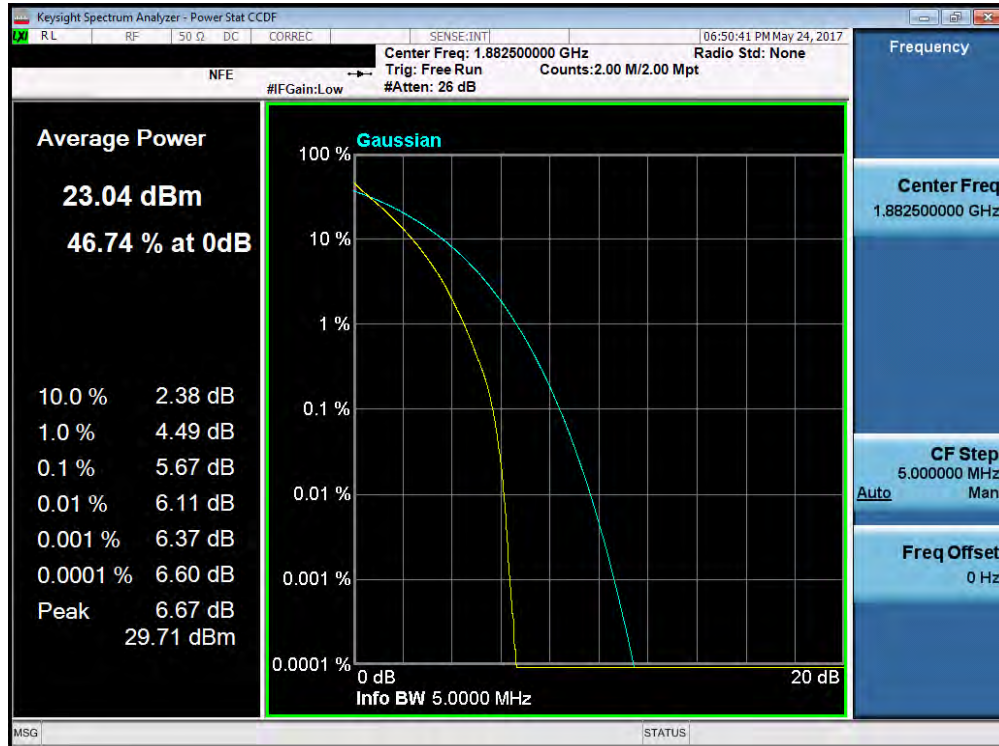


Plot 7-201. PAR Plot (Band 2/25 – 3.0MHz QPSK – RB Size 15)

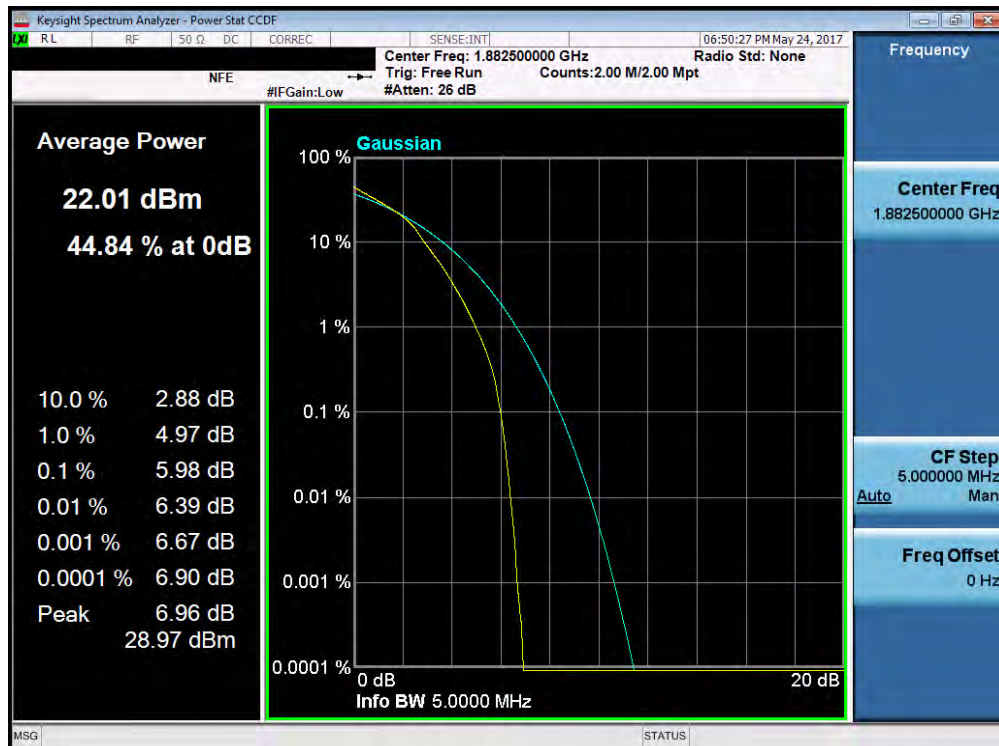


Plot 7-202. PAR Plot (Band 2/25 – 3.0MHz 16-QAM – RB Size 15)

FCC ID: A3LSMN950KOR	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1705220173-03.A3L	Test Dates: 5/4 - 7/21/2017	EUT Type: Portable Handset		Page 120 of 163

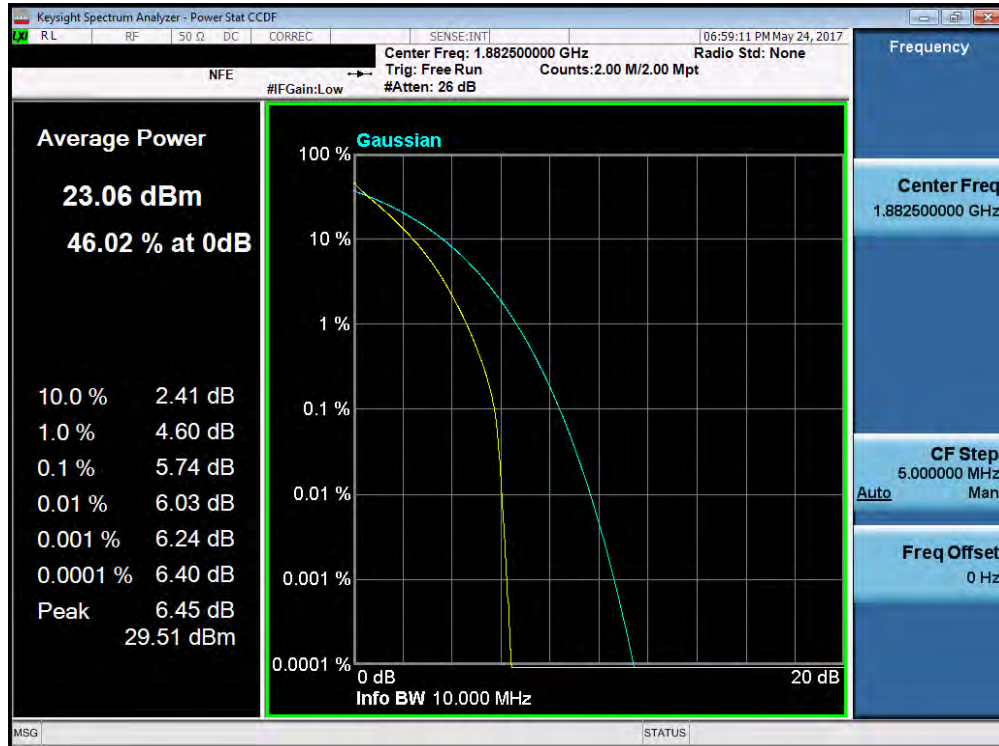


Plot 7-203. PAR Plot (Band 2/25 – 5.0MHz QPSK – RB Size 25)

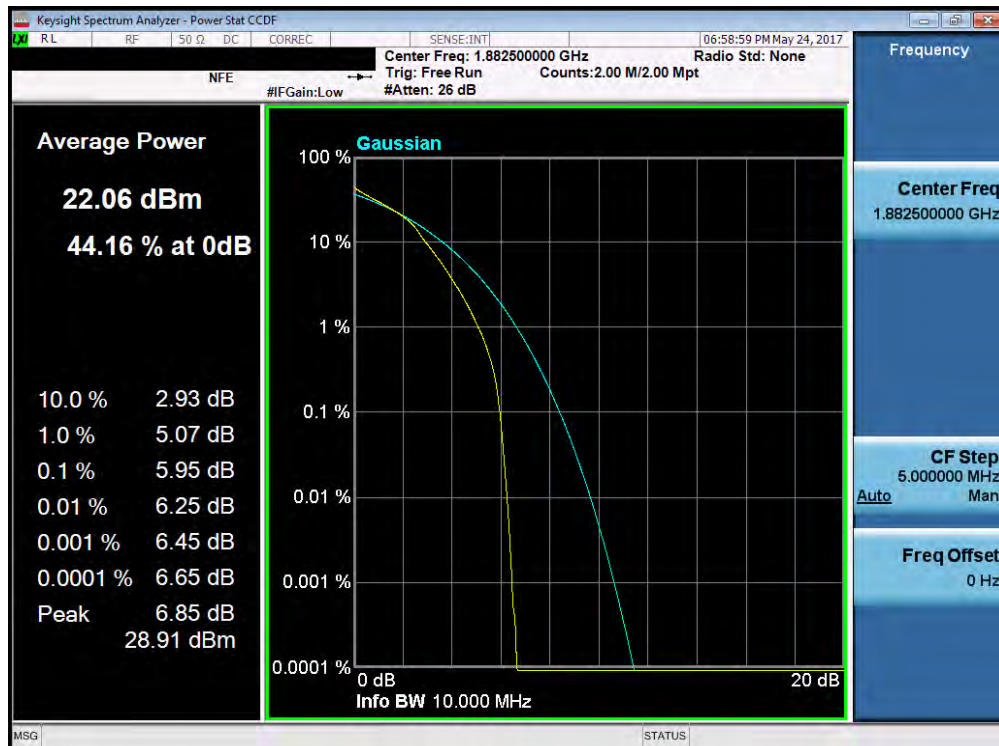


Plot 7-204. PAR Plot (Band 2/25 – 5.0MHz 16-QAM – RB Size 25)

FCC ID: A3LSMN950KOR	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1705220173-03.A3L	Test Dates: 5/4 - 7/21/2017	EUT Type: Portable Handset		Page 121 of 163

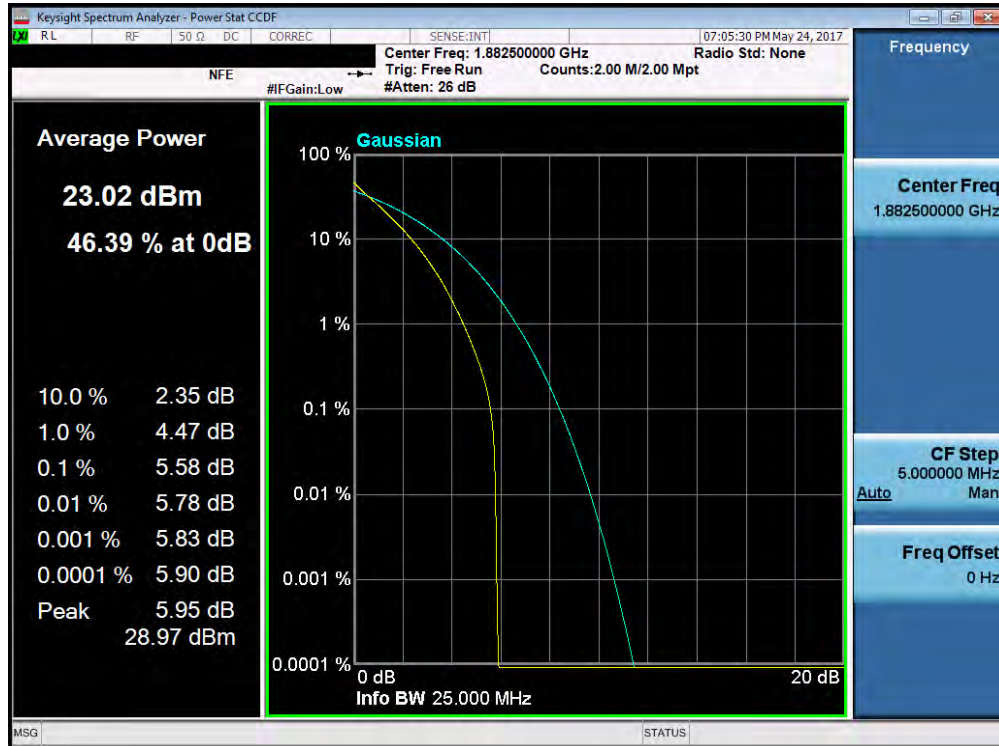


Plot 7-205. PAR Plot (Band 2/25 – 10.0MHz QPSK – RB Size 50)

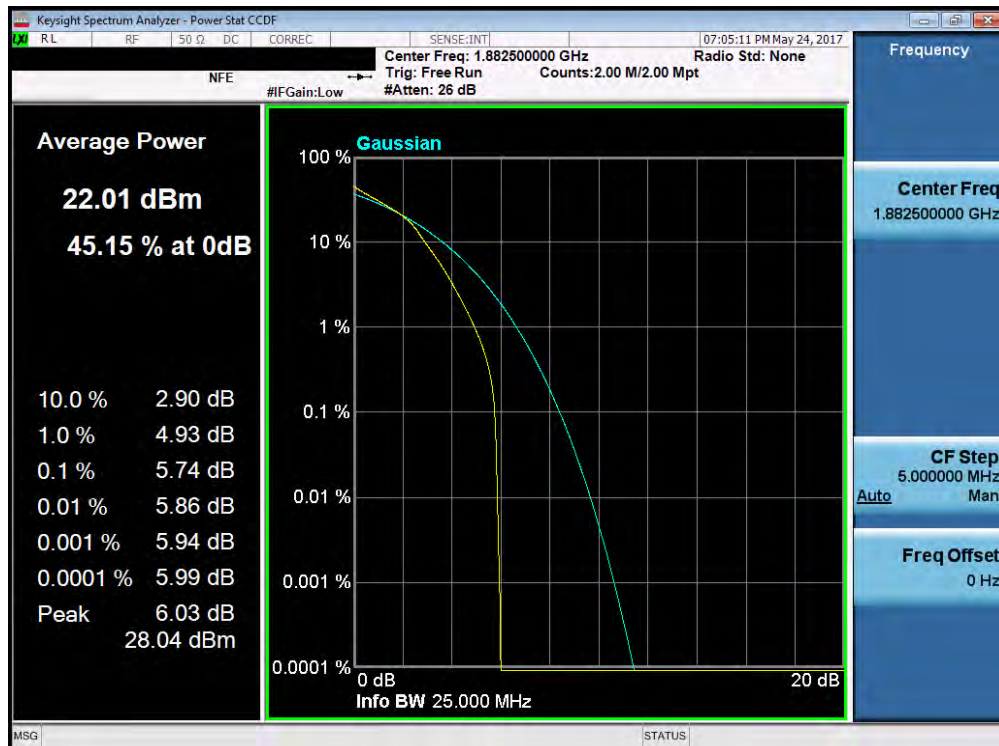


Plot 7-206. PAR Plot (Band 2/25 – 10.0MHz 16-QAM – RB Size 50)

FCC ID: A3LSMN950KOR	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1705220173-03.A3L	Test Dates: 5/4 - 7/21/2017	EUT Type: Portable Handset		Page 122 of 163

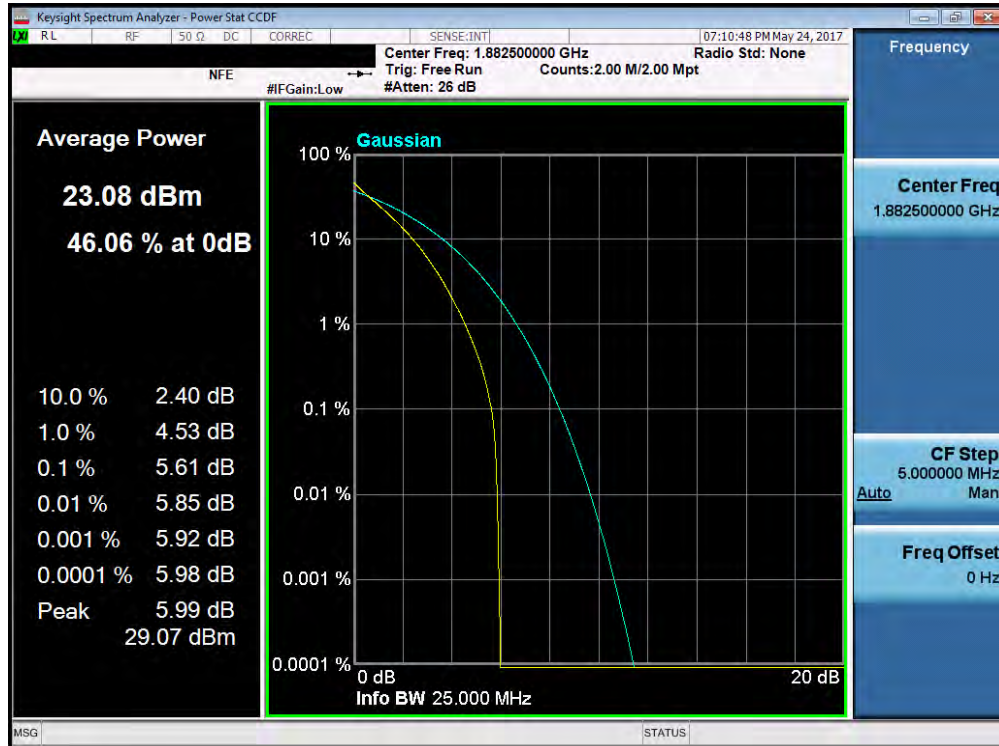


Plot 7-207. PAR Plot (Band 2/25 – 15.0MHz QPSK – RB Size 75)

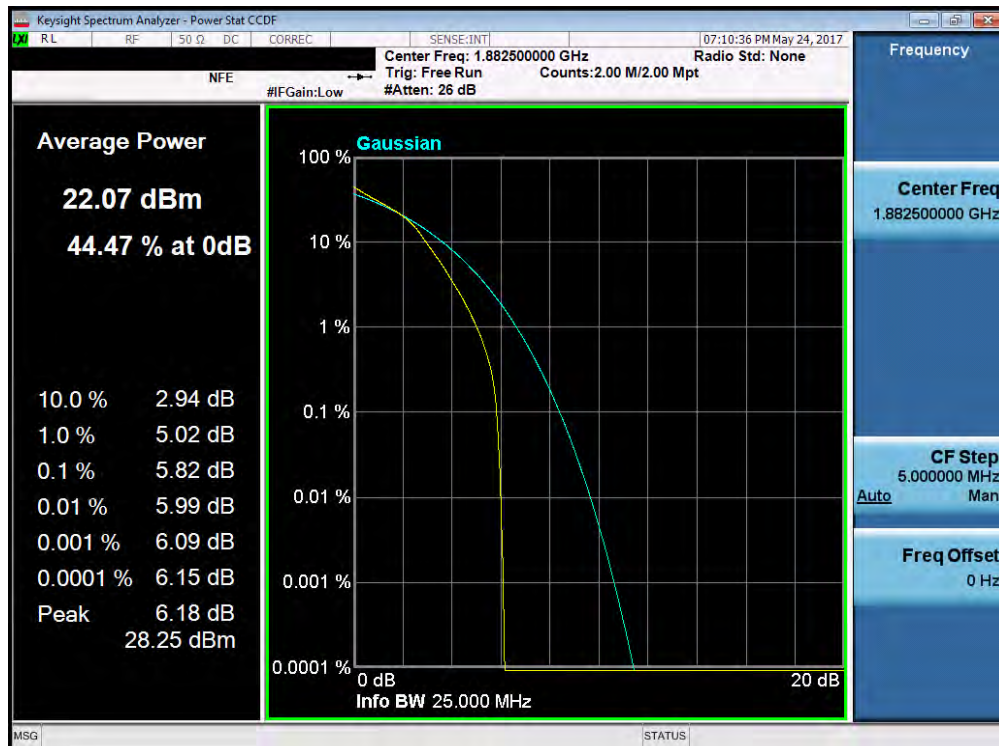


Plot 7-208. PAR Plot (Band 2/25 – 15.0MHz 16-QAM – RB Size 75)

FCC ID: A3LSMN950KOR	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1705220173-03.A3L	Test Dates: 5/4 - 7/21/2017	EUT Type: Portable Handset		Page 123 of 163



Plot 7-209. PAR Plot (Band 2/25 – 20.0MHz QPSK – RB Size 100)



Plot 7-210. PAR Plot (Band 2/25 – 20.0MHz 16-QAM – RB Size 100)

FCC ID: A3LSMN950KOR	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1705220173-03.A3L	Test Dates: 5/4 - 7/21/2017	EUT Type: Portable Handset		Page 124 of 163

7.6 Radiated Power (ERP/EIRP)

§22.913(a.2) §24.232(c.2) §27.50(h.2) §27.50(b.10) §27.50(c.10) §27.50(d.4)

Test Overview

Effective Radiated Power (ERP) and Equivalent Isotropic Radiated Power (EIRP) measurements are performed using the substitution method described in ANSI/TIA-603-D-2010 with the EUT transmitting into an integral antenna. Measurements on signals operating below 1GHz are performed using vertically and horizontally polarized tuned dipole antennas. Measurements on signals operating above 1GHz are performed using vertically and horizontally polarized broadband horn antennas. All measurements are performed as RMS average measurements while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies.

Test Procedures Used

KDB 971168 D01 v02r02 – Section 5.2.1

ANSI/TIA-603-D-2010 – Section 2.2.17

Test Settings

1. Radiated power measurements are performed using the signal analyzer's "channel power" measurement capability for signals with continuous operation. For signals with burst transmission, the signal analyzer's "time domain power" measurement capability is used
2. RBW = 1 – 5% of the expected OBW, not to exceed 1MHz
3. VBW $\geq 3 \times$ RBW
4. Span = 1.5 times the OBW
5. No. of sweep points $\geq 2 \times$ span / RBW
6. Detector = RMS
7. Trigger is set to "free run" for signals with continuous operation with the sweep times set to "auto".
Trigger is set to enable triggering only on full power bursts with the sweep time set less than or equal to the transmission burst duration
8. The integration bandwidth was roughly set equal to the measured OBW of the signal for signals with continuous operation. For signals with burst transmission, the "gating" function was enabled to ensure that measurements are performed during times in which the transmitter is operating at its maximum power
9. Trace mode = trace averaging (RMS) over 100 sweeps
10. The trace was allowed to stabilize

FCC ID: A3LSMN950KOR		FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1705220173-03.A3L	Test Dates: 5/4 - 7/21/2017	EUT Type: Portable Handset		Page 125 of 163

Test Setup

The EUT and measurement equipment were set up as shown in the diagram below.

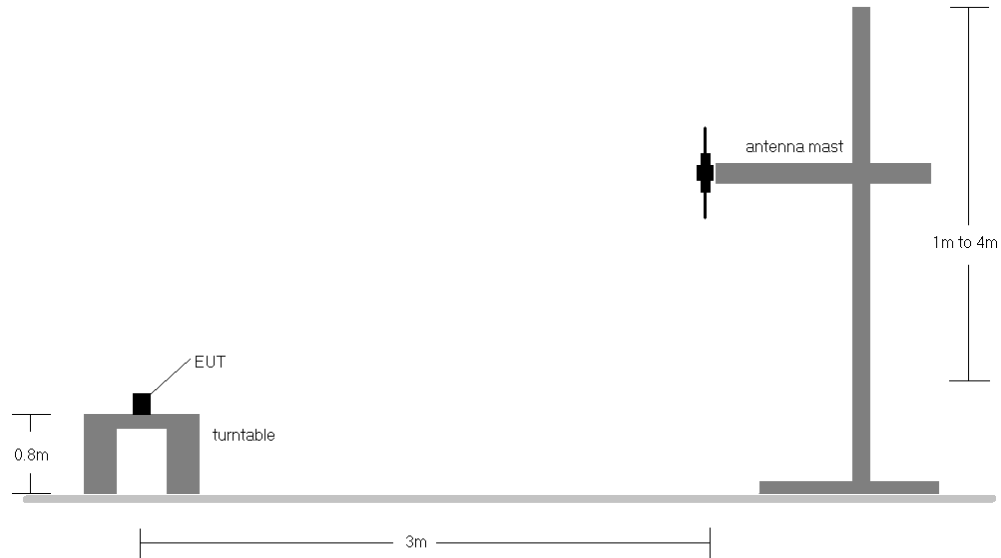


Figure 7-5. Radiated Test Setup <1GHz

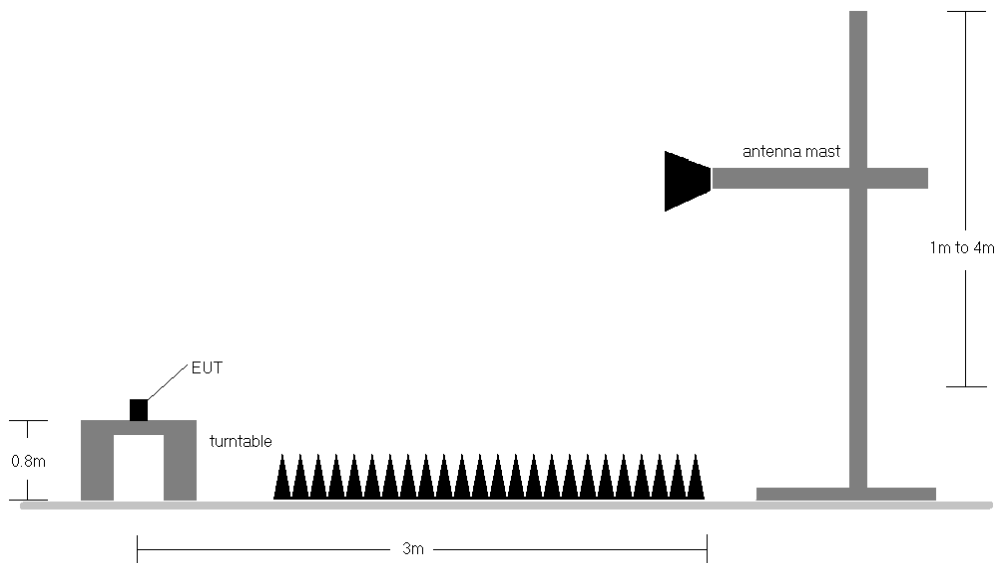


Figure 7-6. Radiated Test Setup >1GHz

Test Notes

- 1) The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case emissions are reported with the EUT positioning, modulations, RB sizes and offsets, and channel bandwidth configurations shown in the tables below.
- 2) This unit was tested with its standard battery.

FCC ID: A3LSMN950KOR	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1705220173-03.A3L	Test Dates: 5/4 - 7/21/2017	EUT Type: Portable Handset		Page 126 of 163

7.6.1 Antenna A 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 [dBd]	ERP [dBm]	ERP Limit [dBm]	Margin [dB]
699.70	1.4	QPSK	H	150	3	1 / 5	13.92	-1.05	12.87	34.77	-21.90
707.50	1.4	QPSK	H	150	0	1 / 0	14.71	-1.02	13.69	34.77	-21.08
715.30	1.4	QPSK	H	150	5	1 / 5	15.61	-0.99	14.62	34.77	-20.15
715.30	1.4	16-QAM	H	150	5	1 / 5	14.60	-0.99	13.61	34.77	-21.16
700.50	3	QPSK	H	150	7	1 / 14	14.43	-1.05	13.38	34.77	-21.39
707.50	3	QPSK	H	150	9	1 / 14	14.88	-1.02	13.86	34.77	-20.91
714.50	3	QPSK	H	150	5	1 / 14	15.56	-0.99	14.57	34.77	-20.20
714.50	3	16-QAM	H	150	5	1 / 14	14.61	-0.99	13.62	34.77	-21.15
715.30	1.4	QPSK	V	150	344	1 / 0	14.60	-0.99	13.61	34.77	-21.16
715.30	1.4 (WCP)	QPSK	H	150	4	1 / 0	15.56	-0.99	14.57	34.77	-20.20

Table 7-2. ERP Data (Band 12)

Frequency [MHz]	Channel Bandwidth [MHz]	Mod.	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	RB Size/Offset	Substitute Level [dBm]	Ant. Gain [dBd]	ERP [dBm]	ERP Limit [dBm]	Margin [dB]
701.50	5	QPSK	H	150	1	1 / 24	14.34	-1.04	13.30	34.77	-21.48
707.50	5	QPSK	H	150	5	1 / 24	14.79	-1.02	13.77	34.77	-21.00
713.50	5	QPSK	H	150	8	1 / 24	15.26	-1.00	14.26	34.77	-20.51
713.50	5	16-QAM	H	150	8	1 / 24	14.29	-1.00	13.29	34.77	-21.48
704.00	10	QPSK	H	150	6	1 / 49	14.79	-1.03	13.76	34.77	-21.01
707.50	10	QPSK	H	150	3	1 / 49	15.12	-1.02	14.10	34.77	-20.67
711.00	10	QPSK	H	150	10	1 / 49	15.51	-1.01	14.50	34.77	-20.27
711.00	10	16-QAM	H	150	10	1 / 49	14.47	-1.01	13.46	34.77	-21.31

Table 7-3. ERP Data (Band 12/17)

Frequency [MHz]	Channel Bandwidth [MHz]	Mod.	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	RB Size/Offset	Substitute Level [dBm]	Ant. Gain [dBd]	ERP [dBm]	ERP Limit [dBm]	Margin [dB]
779.50	5	QPSK	H	150	294	1 / 0	12.96	-0.83	12.13	34.77	-22.64
782.00	5	QPSK	H	150	296	1 / 0	13.01	-0.82	12.19	34.77	-22.58
784.50	5	QPSK	H	150	289	1 / 12	12.50	-0.81	11.69	34.77	-23.08
782.00	5	16-QAM	H	150	296	1 / 0	11.75	-0.82	10.93	34.77	-23.84
782.00	10	QPSK	H	150	287	1 / 0	12.98	-0.82	12.16	34.77	-22.61
782.00	10	16-QAM	H	150	287	1 / 0	11.56	-0.82	10.74	34.77	-24.03
782.00	5	QPSK	V	150	87	1 / 0	11.94	-0.82	11.12	34.77	-23.65
782.00	5 (WCP)	QPSK	H	150	47	1 / 0	12.02	-0.82	11.20	34.77	-23.57

Table 7-4. ERP Data (Band 13)

FCC ID: A3LSMN950KOR	 PCTEST ENGINEERING - PRODUCTIVITY - INK		FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1705220173-03.A3L	Test Dates: 5/4 - 7/21/2017	EUT Type: Portable Handset	Page 127 of 163		

Frequency [MHz]	Channel Bandwidth [MHz]	Mod.	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	RB Size/Offset	Substitute Level [dBm]	Ant. Gain [dBd]	ERP [dBm]	ERP Limit [dBm]	Margin [dB]
824.70	1.4	QPSK	H	150	1	1 / 5	21.86	-0.65	21.21	38.45	-17.24
836.50	1.4	QPSK	H	150	2	1 / 0	21.09	-0.65	20.44	38.45	-18.01
848.30	1.4	QPSK	H	150	15	1 / 5	20.35	-0.65	19.70	38.45	-18.75
824.70	1.4	16-QAM	H	150	1	1 / 5	20.66	-0.65	20.01	38.45	-18.44
825.50	3	QPSK	H	150	356	1 / 0	21.82	-0.65	21.17	38.45	-17.28
836.50	3	QPSK	H	150	1	1 / 0	21.14	-0.65	20.49	38.45	-17.96
847.50	3	QPSK	H	150	8	1 / 0	20.56	-0.65	19.91	38.45	-18.54
825.50	3	16-QAM	H	150	356	1 / 0	20.66	-0.65	20.01	38.45	-18.44
826.50	5	QPSK	H	150	6	1 / 0	21.94	-0.65	21.29	38.45	-17.16
836.50	5	QPSK	H	150	7	1 / 0	21.14	-0.65	20.49	38.45	-17.96
846.50	5	QPSK	H	150	355	1 / 0	20.60	-0.65	19.95	38.45	-18.50
826.50	5	16-QAM	H	150	6	1 / 0	20.57	-0.65	19.92	38.45	-18.53
829.00	10	QPSK	H	150	355	1 / 0	21.75	-0.65	21.10	38.45	-17.35
836.50	10	QPSK	H	150	0	1 / 0	21.81	-0.65	21.16	38.45	-17.29
844.00	10	QPSK	H	150	2	1 / 0	21.61	-0.65	20.96	38.45	-17.49
844.00	10	16-QAM	H	150	2	1 / 0	20.98	-0.65	20.33	38.45	-18.12
826.50	5	QPSK	V	150	146	1 / 0	19.83	-0.65	19.18	38.45	-19.27
826.50	5 (WCP)	QPSK	H	150	359	1 / 0	21.52	-0.65	20.87	38.45	-17.58

Table 7-5. ERP Data (Band 5/26)

Frequency [MHz]	Channel Bandwidth [MHz]	Mod.	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	RB Size/Offset	Substitute Level [dBm]	Ant. Gain [dBd]	ERP [dBm]	ERP Limit [dBm]	Margin [dB]
831.50	15	QPSK	H	150	344	1 / 0	21.63	-0.65	20.98	38.45	-17.47
836.50	15	QPSK	H	150	341	1 / 0	21.74	-0.65	21.09	38.45	-17.36
841.50	15	QPSK	H	150	341	1 / 0	21.65	-0.65	21.00	38.45	-17.45
836.50	15	16-QAM	H	150	341	1 / 0	20.01	-0.65	19.36	38.45	-19.09

Table 7-6. ERP Data (Band 26)

FCC ID: A3LSMN950KOR	 FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION) 		Approved by: Quality Manager
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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 Limit [dBm]	Margin [dB]
1710.70	1.4	QPSK	V	146	106	1 / 0	11.70	9.44	21.14	30.00	-8.86
1732.50	1.4	QPSK	V	140	103	1 / 0	12.06	9.32	21.38	30.00	-8.62
1754.30	1.4	QPSK	V	140	102	1 / 5	9.97	9.19	19.16	30.00	-10.84
1732.50	1.4	16-QAM	V	140	103	1 / 0	11.03	9.32	20.35	30.00	-9.65
1711.50	3	QPSK	V	146	106	1 / 0	11.75	9.44	21.19	30.00	-8.81
1732.50	3	QPSK	V	140	103	1 / 0	12.11	9.32	21.43	30.00	-8.57
1753.50	3	QPSK	V	140	102	1 / 14	10.07	9.20	19.27	30.00	-10.73
1732.50	3	16-QAM	V	140	103	1 / 0	11.03	9.32	20.35	30.00	-9.65
1712.50	5	QPSK	V	146	106	1 / 0	11.85	9.43	21.28	30.00	-8.72
1732.50	5	QPSK	V	140	103	1 / 0	12.61	9.32	21.93	30.00	-8.07
1752.50	5	QPSK	V	140	102	1 / 0	10.69	9.20	19.89	30.00	-10.11
1732.50	5	16-QAM	V	140	103	1 / 0	11.29	9.32	20.61	30.00	-9.39
1715.00	10	QPSK	V	146	106	1 / 0	11.96	9.42	21.38	30.00	-8.62
1732.50	10	QPSK	V	140	103	1 / 0	12.23	9.32	21.55	30.00	-8.45
1750.00	10	QPSK	V	140	102	1 / 0	10.59	9.22	19.81	30.00	-10.19
1732.50	10	16-QAM	V	140	103	1 / 0	10.98	9.32	20.30	30.00	-9.70
1717.50	15	QPSK	V	146	106	1 / 0	11.92	9.40	21.32	30.00	-8.68
1732.50	15	QPSK	V	140	103	1 / 0	12.13	9.32	21.45	30.00	-8.55
1747.50	15	QPSK	V	140	102	1 / 0	10.62	9.23	19.85	30.00	-10.15
1732.50	15	16-QAM	V	140	103	1 / 0	11.04	9.32	20.36	30.00	-9.64
1720.00	20	QPSK	V	146	106	1 / 0	11.17	9.39	20.56	30.00	-9.44
1732.50	20	QPSK	V	140	103	1 / 0	11.51	9.32	20.83	30.00	-9.17
1745.00	20	QPSK	V	140	102	1 / 0	10.30	9.25	19.55	30.00	-10.45
1745.00	20	16-QAM	V	140	102	1 / 0	9.22	9.25	18.47	30.00	-11.53
1732.50	5	QPSK	H	110	218	1 / 0	10.22	9.32	19.54	30.00	-10.46
1732.50	5 (WCP)	QPSK	H	110	218	1 / 0	9.43	9.32	18.75	30.00	-11.25

Table 7-7. EIRP Data (Band 4)

FCC ID: A3LSMN950KOR		FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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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 Limit [dBm]	Margin [dB]
1850.70	1.4	QPSK	V	150	166	1 / 0	12.54	4.79	17.33	33.01	-15.68
1882.50	1.4	QPSK	V	150	8	1 / 5	12.60	4.85	17.45	33.01	-15.56
1914.30	1.4	QPSK	V	150	11	1 / 0	13.93	4.85	18.78	33.01	-14.23
1914.30	1.4	16-QAM	V	150	11	1 / 0	12.53	4.85	17.38	33.01	-15.63
1851.50	3	QPSK	V	150	165	1 / 0	13.69	4.79	18.48	33.01	-14.53
1882.50	3	QPSK	V	150	13	1 / 0	14.14	4.85	18.99	33.01	-14.02
1913.50	3	QPSK	V	150	158	1 / 0	14.91	4.85	19.76	33.01	-13.25
1913.50	3	16-QAM	V	150	158	1 / 0	13.28	4.85	18.13	33.01	-14.88
1852.50	5	QPSK	V	150	170	1 / 24	14.10	4.79	18.89	33.01	-14.12
1882.50	5	QPSK	V	150	15	1 / 12	15.23	4.85	20.08	33.01	-12.93
1912.50	5	QPSK	V	150	1	1 / 12	15.19	4.85	20.04	33.01	-12.97
1912.50	5	16-QAM	V	150	1	1 / 12	13.36	4.85	18.21	33.01	-14.80
1855.00	10	QPSK	V	150	2	1 / 49	13.65	4.80	18.45	33.01	-14.56
1882.50	10	QPSK	V	150	169	1 / 49	13.35	4.85	18.20	33.01	-14.81
1910.00	10	QPSK	V	150	8	1 / 49	15.26	4.86	20.12	33.01	-12.89
1910.00	10	16-QAM	V	150	8	1 / 49	13.63	4.86	18.49	33.01	-14.52
1857.50	15	QPSK	V	150	10	1 / 36	14.24	4.80	19.04	33.01	-13.97
1882.50	15	QPSK	V	150	7	1 / 0	14.10	4.85	18.95	33.01	-14.06
1907.50	15	QPSK	V	150	2	1 / 74	15.44	4.87	20.31	33.01	-12.70
1907.50	15	16-QAM	V	150	2	1 / 74	13.77	4.87	18.64	33.01	-14.37
1860.00	20	QPSK	V	150	2	1 / 99	13.21	4.81	18.02	33.01	-15.00
1882.50	20	QPSK	V	150	5	1 / 50	13.57	4.85	18.42	33.01	-14.59
1905.00	20	QPSK	V	150	4	1 / 99	15.32	4.87	20.19	33.01	-12.82
1905.00	20	16-QAM	V	150	4	1 / 99	13.80	4.87	18.67	33.01	-14.34
1907.50	15	QPSK	H	150	347	1 / 74	14.96	4.68	19.64	33.01	-13.37
1907.50	15 (WCP)	QPSK	V	150	242	1 / 99	12.82	4.87	17.69	33.01	-15.32

Table 7-8. EIRP Data (Band 2/25)

FCC ID: A3LSMN950KOR	 FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION) 		Approved by: Quality Manager
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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 Limit [dBm]	Margin [dB]
2498.50	5	QPSK	H	135	38	1 / 24	12.43	8.42	20.85	33.01	-12.16
2593.00	5	QPSK	H	124	35	1 / 12	13.75	8.65	22.40	33.01	-10.61
2687.50	5	QPSK	H	144	35	1 / 12	12.17	8.44	20.61	33.01	-12.40
2593.00	5	16-QAM	H	124	35	1 / 12	12.71	8.65	21.36	33.01	-11.65
2501.00	10	QPSK	H	132	26	1 / 25	12.85	8.41	21.26	33.01	-11.75
2593.00	10	QPSK	H	126	30	1 / 25	13.42	8.65	22.07	33.01	-10.94
2685.00	10	QPSK	H	143	40	1 / 25	11.91	8.45	20.36	33.01	-12.65
2593.00	10	16-QAM	H	126	30	1 / 25	12.36	8.65	21.01	33.01	-12.00
2503.50	15	QPSK	H	134	33	1 / 36	12.82	8.42	21.24	33.01	-11.77
2593.00	15	QPSK	H	130	30	1 / 36	13.39	8.65	22.04	33.01	-10.97
2682.50	15	QPSK	H	146	34	1 / 0	12.36	8.46	20.82	33.01	-12.19
2593.00	15	16-QAM	H	130	30	1 / 36	12.31	8.65	20.96	33.01	-12.05
2506.00	20	QPSK	H	133	31	1 / 99	12.79	8.42	21.21	33.01	-11.80
2593.00	20	QPSK	H	125	33	1 / 50	13.26	8.65	21.91	33.01	-11.10
2680.00	20	QPSK	H	124	36	1 / 50	12.14	8.46	20.60	33.01	-12.41
2593.00	20	16-QAM	H	125	33	1 / 50	12.36	8.65	21.01	33.01	-12.00
2593.00	5	QPSK	V	134	87	1 / 24	12.86	8.74	21.60	33.01	-11.41
2593.00	5 (WCP)	QPSK	H	100	254	1 / 24	11.87	8.65	20.52	33.01	-12.49

Table 7-9. EIRP Data (Band 41)

FCC ID: A3LSMN950KOR		FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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7.6.2 Antenna E Radiated Power (ERP)

Frequency [MHz]	Channel Bandwidth [MHz]	Mod.	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	RB Size/Offset	Substitute Level [dBm]	Ant. Gain [dBd]	ERP [dBm]	ERP Limit [dBm]	Margin [dB]
824.70	1.4	QPSK	H	150	359	1 / 0	21.93	-0.65	21.28	38.45	-17.17
836.50	1.4	QPSK	H	150	350	1 / 0	21.44	-0.65	20.79	38.45	-17.66
848.30	1.4	QPSK	H	150	5	1 / 0	21.43	-0.65	20.78	38.45	-17.67
824.70	1.4	16-QAM	H	150	359	1 / 0	20.78	-0.65	20.13	38.45	-18.32
825.50	3	QPSK	H	150	3	1 / 14	22.01	-0.65	21.36	38.45	-17.09
836.50	3	QPSK	H	150	353	1 / 14	21.17	-0.65	20.52	38.45	-17.93
847.50	3	QPSK	H	150	1	1 / 0	21.49	-0.65	20.84	38.45	-17.61
825.50	3	16-QAM	H	150	3	1 / 14	20.90	-0.65	20.25	38.45	-18.20
826.50	5	QPSK	H	150	355	1 / 24	21.85	-0.65	21.20	38.45	-17.25
836.50	5	QPSK	H	150	6	1 / 0	21.25	-0.65	20.60	38.45	-17.85
846.50	5	QPSK	H	150	342	1 / 0	22.18	-0.65	21.53	38.45	-16.92
846.50	5	16-QAM	H	150	342	1 / 0	20.50	-0.65	19.85	38.45	-18.60
829.00	10	QPSK	H	150	356	1 / 49	21.99	-0.65	21.34	38.45	-17.11
836.50	10	QPSK	H	150	358	1 / 0	21.76	-0.65	21.11	38.45	-17.34
844.00	10	QPSK	H	150	352	1 / 0	22.15	-0.65	21.50	38.45	-16.95
844.00	10	16-QAM	H	150	352	1 / 0	20.90	-0.65	20.25	38.45	-18.20
846.50	5	QPSK	V	226	140	1 / 0	18.50	-0.65	17.85	38.45	-20.60
846.50	5 (WCP)	QPSK	H	147	9	1 / 0	21.66	-0.65	21.01	38.45	-17.44

Table 7-10. ERP Data (Band 5)

FCC ID: A3LSMN950KOR		FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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7.7 Radiated Spurious Emissions Measurements

\$2.1053 \$22.917(a) \$24.238(a) \$27.53(c) \$27.53(f) \$27.53(g) \$27.53(h) \$27.53(m)

Test Overview

Radiated spurious emissions measurements are performed using the substitution method described in ANSI/TIA-603-D-2010 with the EUT transmitting into an integral antenna. Measurements on signals operating below 1GHz are performed using vertically and horizontally polarized tuned dipole antennas. Measurements on signals operating above 1GHz are performed using vertically and horizontally polarized broadband horn antennas.

Test Procedures Used

KDB 971168 D01 v02r02 – Section 5.8

ANSI/TIA-603-D-2010 – Section 2.2.12

Test Settings

1. RBW = 100kHz for emissions below 1GHz and 1MHz for emissions above 1GHz
2. VBW $\geq 3 \times$ RBW
3. Span = 1.5 times the OBW
4. No. of sweep points $\geq 2 \times$ span / RBW
5. Detector = RMS
6. Trace mode = Average (Max Hold for pulsed emissions)
7. The trace was allowed to stabilize

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Test Setup

The EUT and measurement equipment were set up as shown in the diagram below.

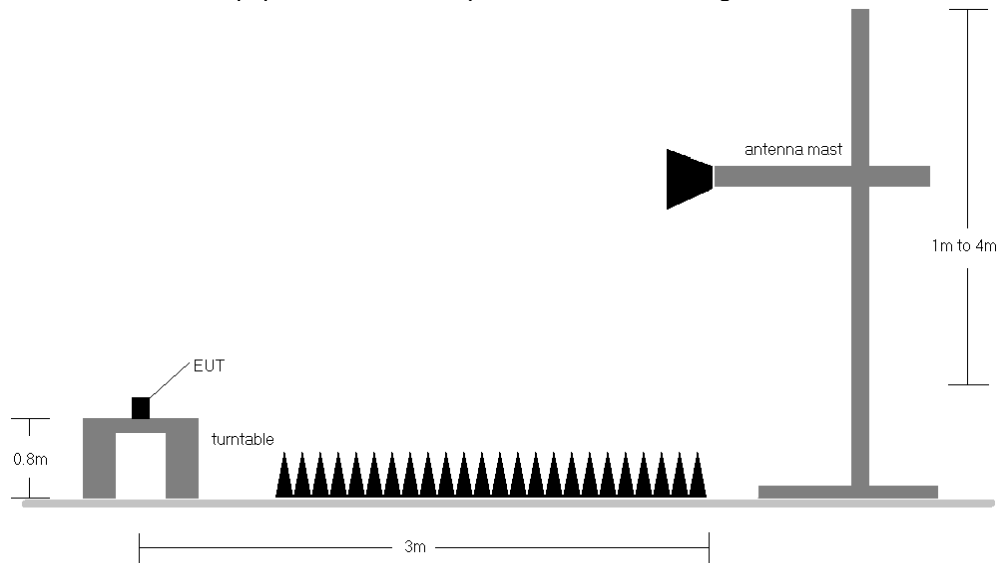


Figure 7-7. Test Instrument & Measurement Setup

Test Notes

- 1) The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case emissions are reported with the EUT positioning, modulations, RB sizes and offsets, and channel bandwidth configurations shown in the tables below.
- 2) This unit was tested with its standard battery.
- 3) The spectrum is measured from 9kHz to the 10th harmonic of the fundamental frequency of the transmitter. The worst-case emissions are reported.
- 4) Emissions below 18GHz were measured at a 3 meter test distance while emissions above 18GHz were measured at a 1 meter test distance with the application of a distance correction factor.
- 5) The "-" shown in the following RSE tables are used to denote a noise floor measurement.

FCC ID: A3LSMN950KOR	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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7.7.1 Antenna A Radiated Spurious Emissions Measurements

OPERATING FREQUENCY: 699.70 MHz
 CHANNEL: 23017
 MEASURED OUTPUT POWER: 12.87 dBm = 0.019 W
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 1.4 MHz
 DISTANCE: 3 meters
 LIMIT: $43 + 10 \log_{10}(W) =$ 25.87 dBc

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBd]	Spurious Emission Level [dBm]	[dBc]
1399.40	H	159	269	-70.45	5.57	-64.88	77.7
2099.10	H	170	262	-68.50	6.65	-61.85	74.7
2798.80	H	-	-	-72.69	7.92	-64.77	77.6

Table 7-11. Radiated Spurious Data (Band 12 – Low Channel)

OPERATING FREQUENCY: 707.50 MHz
 CHANNEL: 23095
 MEASURED OUTPUT POWER: 13.69 dBm = 0.023 W
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 1.4 MHz
 DISTANCE: 3 meters
 LIMIT: $43 + 10 \log_{10}(W) =$ 26.69 dBc

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBd]	Spurious Emission Level [dBm]	[dBc]
1415.00	H	111	269	-70.95	5.69	-65.26	79.0
2122.50	H	117	258	-68.32	6.75	-61.58	75.3
2830.00	H	-	-	-71.94	7.90	-64.04	77.7

Table 7-12. Radiated Spurious Data (Band 12/17 – Mid Channel)

FCC ID: A3LSMN950KOR		FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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OPERATING FREQUENCY: 715.30 MHz
 CHANNEL: 23173
 MEASURED OUTPUT POWER: 14.62 dBm = 0.029 W
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 1.4 MHz
 DISTANCE: 3 meters
 LIMIT: $43 + 10 \log_{10}(W) =$ 27.62 dBc

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBd]	Spurious Emission Level [dBm]	[dBc]
1430.60	H	112	267	-70.15	5.82	-64.34	79.0
2145.90	H	126	265	-65.45	6.84	-58.61	73.2
2861.20	H	-	-	-72.14	7.87	-64.27	78.9

Table 7-13. Radiated Spurious Data (Band 12/17 – High Channel)

OPERATING FREQUENCY: 715.30 MHz
 CHANNEL: 23173
 MEASURED OUTPUT POWER: 14.57 dBm = 0.029 W
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 1.4 MHz
 DISTANCE: 3 meters
 LIMIT: $43 + 10 \log_{10}(W) =$ 27.57 dBc

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBd]	Spurious Emission Level [dBm]	[dBc]
1430.60	H	155	272	-72.25	5.82	-66.44	81.0
2145.90	H	250	257	-69.04	6.84	-62.20	76.8
2861.20	H	-	-	-74.21	7.87	-66.34	80.9

Table 7-14. Radiated Spurious Data with WCP (Band 12/17 – High Channel)

FCC ID: A3LSMN950KOR		FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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OPERATING FREQUENCY: 779.50 MHz
 CHANNEL: 23205
 MEASURED OUTPUT POWER: 12.13 dBm = 0.016 W
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 5.0 MHz
 DISTANCE: 3 meters
 LIMIT: $43 + 10 \log_{10}(W) =$ 25.13 dBc

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBd]	Spurious Emission Level [dBm]	[dBc]
2338.50	V	193	313	-72.42	7.31	-65.11	77.2
3118.00	V	195	11	-71.28	7.20	-64.08	76.2
3897.50	V	-	-	-69.79	7.20	-62.59	74.7

Table 7-15. Radiated Spurious Data (Band 13 – Low Channel)

OPERATING FREQUENCY: 782.00 MHz
 CHANNEL: 23230
 MEASURED OUTPUT POWER: 12.19 dBm = 0.017 W
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 5.0 MHz
 DISTANCE: 3 meters
 LIMIT: $43 + 10 \log_{10}(W) =$ 25.19 dBc

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBd]	Spurious Emission Level [dBm]	[dBc]
2346.00	V	198	317	-69.67	7.28	-62.39	74.6
3128.00	V	194	3	-66.20	7.19	-59.01	71.2
3910.00	V	-	-	-67.30	7.23	-60.07	72.3

Table 7-16. Radiated Spurious Data (Band 13 – Mid Channel)

FCC ID: A3LSMN950KOR		FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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OPERATING FREQUENCY: 784.50 MHz
 CHANNEL: 23255
 MEASURED OUTPUT POWER: 11.69 dBm = 0.015 W
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 5.0 MHz
 DISTANCE: 3 meters
 LIMIT: $43 + 10 \log_{10}(W) =$ 24.69 dBc

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBd]	Spurious Emission Level [dBm]	[dBc]
2353.50	V	110	310	-70.69	7.25	-63.44	75.1
3138.00	V	110	2	-67.66	7.19	-60.48	72.2
3922.50	V	-	-	-67.26	7.27	-59.99	71.7

Table 7-17. Radiated Spurious Data (Band 13 – High Channel)

MODULATION SIGNAL: QPSK
 BANDWIDTH: 5.00 MHz
 DISTANCE: 3 meters
 NARROWBAND EMISSION LIMIT: -50 dBm
 WIDEBAND EMISSION LIMIT: -40 dBm/MHz

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBd]	Spurious Emission Level [dBm]	Margin [dB]
1559.00	V	208	297	-73.35	6.48	-66.87	-26.9
1564.00	V	213	300	-73.31	6.50	-66.81	-26.8
1569.00	V	110	294	-73.07	6.52	-66.55	-26.6

Table 7-18. Radiated Spurious Data (Band 13 – 1559-1610MHz Band)

FCC ID: A3LSMN950KOR		FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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OPERATING FREQUENCY: 782.00 MHz
 CHANNEL: 23230
 MEASURED OUTPUT POWER: 11.20 dBm = 0.013 W
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 5.0 MHz
 DISTANCE: 3 meters
 LIMIT: $43 + 10 \log_{10}(W) =$ 24.20 dBc

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBd]	Spurious Emission Level [dBm]	[dBc]
2346.00	H	110	253	-69.67	7.33	-62.34	74.5
3128.00	H	110	183	-67.64	7.20	-60.44	72.6
3910.00	H	-	-	-67.58	7.34	-60.24	72.4

Table 7-19. Radiated Spurious Data with WCP (Band 13 – Mid Channel)

OPERATING FREQUENCY: 826.50 MHz
 CHANNEL: 20425
 MEASURED OUTPUT POWER: 21.29 dBm = 0.135 W
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 5.0 MHz
 DISTANCE: 3 meters
 LIMIT: $43 + 10 \log_{10}(W) =$ 34.29 dBc

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBd]	Spurious Emission Level [dBm]	[dBc]
1653.00	V	150	331	-71.66	6.74	-64.92	86.2
2479.50	V	254	167	-70.61	7.54	-63.07	84.4
3306.00	V	-	-	-69.32	7.50	-61.82	83.1

Table 7-20. Radiated Spurious Data (Band 5/26 – Low Channel)

FCC ID: A3LSMN950KOR		FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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OPERATING FREQUENCY: 836.50 MHz
 CHANNEL: 20525
 MEASURED OUTPUT POWER: 20.49 dBm = 0.112 W
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 5.0 MHz
 DISTANCE: 3 meters
 LIMIT: $43 + 10 \log_{10}(W) =$ 33.49 dBc

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBd]	Spurious Emission Level [dBm]	[dBc]
1673.00	V	145	325	-72.83	6.77	-66.06	86.6
2509.50	V	110	27	-70.84	7.65	-63.19	83.7
3346.00	V	131	335	-70.25	7.53	-62.72	83.2
4182.50	V	-	-	-68.46	8.23	-60.23	80.7

Table 7-21. Radiated Spurious Data (Band 5/26 – Mid Channel)

OPERATING FREQUENCY: 846.50 MHz
 CHANNEL: 20625
 MEASURED OUTPUT POWER: 19.95 dBm = 0.099 W
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 5.0 MHz
 DISTANCE: 3 meters
 LIMIT: $43 + 10 \log_{10}(W) =$ 32.95 dBc

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBd]	Spurious Emission Level [dBm]	[dBc]
1693.00	V	139	341	-71.70	6.79	-64.90	84.9
2539.50	V	114	116	-72.02	7.62	-64.40	84.4
3386.00	V	-	-	-68.95	7.55	-61.40	81.4

Table 7-22. Radiated Spurious Data (Band 5/26 – High Channel)

FCC ID: A3LSMN950KOR		FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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OPERATING FREQUENCY: 826.50 MHz
 CHANNEL: 20425
 MEASURED OUTPUT POWER: 20.87 dBm = 0.122 W
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 5.0 MHz
 DISTANCE: 3 meters
 LIMIT: $43 + 10 \log_{10}(W) =$ 33.87 dBc

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBd]	Spurious Emission Level [dBm]	[dBc]
1653.00	V	225	140	-74.53	6.74	-67.79	88.7
2479.50	V	-	-	-73.10	7.54	-65.56	86.4
3306.00	V	-	-	-68.98	7.50	-61.48	82.3

Table 7-23. Radiated Spurious Data with WCP (Band 5/26 – Low Channel)

OPERATING FREQUENCY: 1712.50 MHz
 CHANNEL: 19975
 MEASURED OUTPUT POWER: 21.28 dBm = 0.134 W
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 5.0 MHz
 DISTANCE: 3 meters
 LIMIT: $43 + 10 \log_{10}(W) =$ 34.28 dBc

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]	[dBc]
3425.00	V	-	-	-64.53	9.77	-54.77	76.1
5137.50	V	-	-	-65.28	10.72	-54.56	75.8
6850.00	V	-	-	-59.31	11.67	-47.64	68.9
8562.50	V	-	-	-55.50	11.05	-44.45	65.7
10275.00	V	145	35	-53.88	12.35	-41.54	62.8
11987.50	V	-	-	-54.75	12.68	-42.07	63.4
13700.00	V	158	10	-48.96	11.95	-37.02	58.3
15412.50	V	-	-	-57.51	15.63	-41.87	63.2

Table 7-24. Radiated Spurious Data (Band 4 – Low Channel)

FCC ID: A3LSMN950KOR		FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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OPERATING FREQUENCY: 1732.50 MHz
 CHANNEL: 20175
 MEASURED OUTPUT POWER: 21.93 dBm = 0.156 W
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 5.0 MHz
 DISTANCE: 3 meters
 LIMIT: $43 + 10 \log_{10}(W) =$ 34.93 dBc

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]	[dBc]
3465.00	V	221	331	-62.35	9.85	-52.50	74.4
5197.50	V	-	-	-62.31	10.59	-51.72	73.6
6930.00	V	-	-	-59.13	11.76	-47.37	69.3
8662.50	V	-	-	-55.37	10.97	-44.40	66.3
10395.00	V	144	40	-49.71	12.59	-37.12	59.0
12127.50	V	-	-	-56.37	12.99	-43.38	65.3
13860.00	V	156	7	-42.86	11.88	-30.99	52.9

Table 7-25. Radiated Spurious Data (Band 4 – Mid Channel)

OPERATING FREQUENCY: 1752.50 MHz
 CHANNEL: 20375
 MEASURED OUTPUT POWER: 19.89 dBm = 0.098 W
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 5.0 MHz
 DISTANCE: 3 meters
 LIMIT: $43 + 10 \log_{10}(W) =$ 32.89 dBc

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]	[dBc]
3505.00	V	-	-	-63.58	9.92	-53.66	73.6
5257.50	V	-	-	-64.94	10.65	-54.29	74.2
7010.00	V	-	-	-58.95	11.78	-47.17	67.1
8762.50	V	-	-	-55.16	10.97	-44.19	64.1
10515.00	V	149	11	-49.45	12.67	-36.78	56.7
12267.50	V	-	-	-55.30	13.24	-42.06	61.9
14020.00	V	153	10	-43.48	11.62	-31.87	51.8
15772.50	V	-	-	-58.92	16.51	-42.41	62.3

Table 7-26. Radiated Spurious Data (Band 4 – High Channel)

FCC ID: A3LSMN950KOR		FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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OPERATING FREQUENCY: 1732.50 MHz
 CHANNEL: 20175
 MEASURED OUTPUT POWER: 18.75 dBm = 0.075 W
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 5.0 MHz
 DISTANCE: 3 meters
 LIMIT: $43 + 10 \log_{10}(W) =$ 31.75 dBc

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]	[dBc]
3465.00	H	204	2	-63.24	9.85	-53.39	72.1
5197.50	H	-	-	-65.12	10.59	-54.53	73.3
6930.00	H	-	-	-59.80	11.76	-48.04	66.8
8662.50	H	-	-	-55.34	10.97	-44.37	63.1
10395.00	H	135	104	-54.96	12.59	-42.37	61.1
12127.50	H	-	-	-56.42	12.99	-43.43	62.2
13860.00	H	-	-	-50.77	11.88	-38.90	57.6

Table 7-27. Radiated Spurious Data with WCP (Band 4 - Mid Channel)

OPERATING FREQUENCY: 1857.50 MHz
 CHANNEL: 26115
 MEASURED OUTPUT POWER: 19.04 dBm = 0.080 W
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 15.0 MHz
 DISTANCE: 3 meters
 LIMIT: $43 + 10 \log_{10}(W) =$ 32.04 dBc

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]	[dBc]
3715.00	H	193	52	-63.27	9.49	-53.78	72.8
5572.50	H	-	-	-67.43	11.08	-56.35	75.4
7430.00	H	-	-	-59.87	10.98	-48.89	67.9
9287.50	H	110	73	-54.43	11.54	-42.89	61.9
11145.00	H	113	60	-55.52	12.79	-42.74	61.8
13002.50	H	-	-	-55.07	13.34	-41.73	60.8

Table 7-28. Radiated Spurious Data (Band 2/25 – Low Channel)

FCC ID: A3LSMN950KOR		FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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OPERATING FREQUENCY: 1882.50 MHz
 CHANNEL: 26365
 MEASURED OUTPUT POWER: 18.95 dBm = 0.079 W
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 15.0 MHz
 DISTANCE: 3 meters
 LIMIT: $43 + 10 \log_{10}(W) =$ 31.95 dBc

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]	[dBc]
3765.00	H	163	354	-65.44	9.37	-56.07	75.0
5647.50	H	-	-	-67.63	11.23	-56.40	75.3
7530.00	H	-	-	-58.98	11.13	-47.85	66.8
9412.50	H	115	57	-56.12	11.55	-44.56	63.5
11295.00	H	-	-	-57.65	12.77	-44.88	63.8

Table 7-29. Radiated Spurious Data (Band 2/25 – Mid Channel)

OPERATING FREQUENCY: 1907.50 MHz
 CHANNEL: 26615
 MEASURED OUTPUT POWER: 20.31 dBm = 0.107 W
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 15.0 MHz
 DISTANCE: 3 meters
 LIMIT: $43 + 10 \log_{10}(W) =$ 33.31 dBc

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]	[dBc]
3815.00	H	137	43	-63.57	9.32	-54.25	74.6
5722.50	H	-	-	-67.04	11.35	-55.70	76.0
7630.00	H	-	-	-58.98	11.32	-47.66	68.0
9537.50	H	115	65	-52.45	11.75	-40.70	61.0
11445.00	H	-	-	-56.90	12.70	-44.20	64.5

Table 7-30. Radiated Spurious Data (Band 25 – High Channel)

FCC ID: A3LSMN950KOR		FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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OPERATING FREQUENCY: 1907.50 MHz
 CHANNEL: 26615
 MEASURED OUTPUT POWER: 17.69 dBm = 0.059 W
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 15.0 MHz
 DISTANCE: 3 meters
 LIMIT: $43 + 10 \log_{10}(W)$ = 30.69 dBc

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]	[dBc]
3815.00	H	196	35	-64.39	9.32	-55.07	72.8
5722.50	H	-	-	-67.11	11.35	-55.77	73.5
7630.00	H	-	-	-59.02	11.32	-47.70	65.4
9537.50	H	-	-	-57.25	11.75	-45.50	63.2

Table 7-31. Radiated Spurious Data with WCP (Band 25 – High Channel)

OPERATING FREQUENCY: 2498.50 MHz
 CHANNEL: 39675
 MEASURED OUTPUT POWER: 20.85 dBm = 0.122 W
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 5.0 MHz
 DISTANCE: 3 meters
 LIMIT: $55 + 10 \log_{10}(W)$ = 45.85 dBc

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]	[dBc]
4997.00	H	116	33	-65.43	10.93	-54.50	75.3
7495.50	H	128	56	-52.11	11.05	-41.06	61.9
9994.00	H	118	56	-43.05	12.06	-30.99	51.8
12492.50	H	113	67	-51.67	13.51	-38.16	59.0
14991.00	H	112	352	-50.98	13.32	-37.66	58.5
17489.50	H	-	-	-48.30	11.79	-36.51	57.4

Table 7-32. Radiated Spurious Data (Band 41 – Low Channel)

FCC ID: A3LSMN950KOR		FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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OPERATING FREQUENCY: 2593.00 MHz
 CHANNEL: 40620
 MEASURED OUTPUT POWER: 22.40 dBm = 0.174 W
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 5.0 MHz
 DISTANCE: 3 meters
 LIMIT: $55 + 10 \log_{10}(W)$ 47.40 dBc

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]	[dBc]
5186.00	H	141	215	-64.34	10.75	-53.59	76.0
7779.00	H	126	56	-52.22	11.40	-40.83	63.2
10372.00	H	100	62	-42.72	12.59	-30.13	52.5
12965.00	H	113	37	-50.79	13.37	-37.42	59.8
15558.00	H	112	290	-54.51	16.18	-38.32	60.7
18151.00	H	100	261	-58.38	15.31	-43.07	65.5
20744.00	H	100	349	-58.55	16.26	-42.29	64.7
23337.00	H	100	329	-60.56	16.99	-43.57	66.0
25930.00	H	100	-	-67.62	17.74	-49.88	72.3

Table 7-33. Radiated Spurious Data (Band 41 – Mid Channel)

OPERATING FREQUENCY: 2687.50 MHz
 CHANNEL: 41565
 MEASURED OUTPUT POWER: 20.61 dBm = 0.115 W
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 5.0 MHz
 DISTANCE: 3 meters
 LIMIT: $55 + 10 \log_{10}(W)$ 45.61 dBc

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]	[dBc]
5375.00	H	212	152	-64.92	10.76	-54.16	74.8
8062.50	H	115	40	-49.53	11.15	-38.38	59.0
10750.00	H	119	330	-48.35	12.81	-35.53	56.1
13437.50	H	-	-	-52.40	12.50	-39.90	60.5
16125.00	H	-	-	-56.20	16.54	-39.67	60.3

Table 7-34. Radiated Spurious Data (Band 41 – High Channel)

FCC ID: A3LSMN950KOR		FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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OPERATING FREQUENCY: 2593.00 MHz
 CHANNEL: 40620.00
 MEASURED OUTPUT POWER: 20.52 dBm = 0.113 W
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 5.00 MHz
 DISTANCE: 3.00 meters
 LIMIT: $55 + 10 \log_{10}(W)$ 45.52 dBc

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]	[dBc]
5186.00	H	147	206	-63.45	10.76	-52.69	73.2
7779.00	H	151	188	-53.44	11.15	-42.29	62.8
10372.00	H	133	102	-51.18	12.81	-38.37	58.9
12965.00	H	153	1	-50.14	12.50	-37.64	58.2
15558.00	H	133	95	-54.86	16.54	-38.33	58.8
18151.00	H	100	83	-61.65	15.31	-46.34	66.9
20744.00	H	100	160	-66.26	16.26	-50.00	70.5
23337.00	H	100	164	-67.20	16.99	-50.21	70.7
25930.00	H	100	-	-67.62	17.74	-49.88	70.4

Table 7-35. Radiated Spurious Data with WCP (Band 41 – Mid Channel)

FCC ID: A3LSMN950KOR		FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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7.7.2 Antenna E Radiated Spurious Emissions Measurements

OPERATING FREQUENCY: 826.50 MHz
 CHANNEL: 20425
 MEASURED OUTPUT POWER: 21.20 dBm = 0.132 W
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 5.0 MHz
 DISTANCE: 3 meters
 LIMIT: $43 + 10 \log_{10}(W) =$ 34.20 dBc

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBd]	Spurious Emission Level [dBm]	[dBc]
1653.00	V	148	326	-71.98	6.74	-65.24	86.4
2479.50	V	-	-	-72.15	7.54	-64.61	85.8

Table 7-36. Radiated Spurious Data (Band 5 – Low Channel)

OPERATING FREQUENCY: 836.50 MHz
 CHANNEL: 20525
 MEASURED OUTPUT POWER: 20.60 dBm = 0.115 W
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 5.0 MHz
 DISTANCE: 3 meters
 LIMIT: $43 + 10 \log_{10}(W) =$ 33.60 dBc

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBd]	Spurious Emission Level [dBm]	[dBc]
1673.00	V	147	334	-73.22	6.77	-66.45	87.1
2509.50	V	-	-	-72.54	7.65	-64.89	85.5

Table 7-37. Radiated Spurious Data (Band 5 – Mid Channel)

FCC ID: A3LSMN950KOR		FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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OPERATING FREQUENCY: 846.50 MHz
 CHANNEL: 20625
 MEASURED OUTPUT POWER: 21.53 dBm = 0.142 W
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 5.0 MHz
 DISTANCE: 3 meters
 LIMIT: $43 + 10 \log_{10} (W) =$ 34.53 dBc

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBd]	Spurious Emission Level [dBm]	[dBc]
1693.00	V	138	336	-72.96	7.53	-65.43	87.0
2539.50	V	-	-	-72.36	7.62	-64.74	86.3

Table 7-38. Radiated Spurious Data (Band 5 – High Channel)

OPERATING FREQUENCY: 846.50 MHz
 CHANNEL: 20625
 MEASURED OUTPUT POWER: 21.01 dBm = 0.126 W
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 5.0 MHz
 DISTANCE: 3 meters
 LIMIT: $43 + 10 \log_{10} (W) =$ 34.01 dBc

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBd]	Spurious Emission Level [dBm]	[dBc]
1693.00	V	288	110	-74.61	6.79	-67.81	88.8
2519.50	V	-	-	-72.65	7.64	-65.01	86.0

Table 7-39. Radiated Spurious Data with WCP (Band 5 – High Channel)

FCC ID: A3LSMN950KOR		FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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7.8 Frequency Stability / Temperature Variation

\$2.1055 \$22.355 \$24.235 \$27.54

Test Overview and Limit

Frequency stability testing is performed in accordance with the guidelines of ANSI/TIA-603-D-2010. 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 22, the frequency stability of the transmitter shall be maintained within $\pm 0.00025\%$ (± 2.5 ppm) of the center frequency. For Part 24 and Part 27, the frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

Test Procedure Used

ANSI/TIA-603-D-2010

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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Band 12/17 Frequency Stability Measurements

\$2.1055 \$27.54

OPERATING FREQUENCY: 707,500,000 Hz
 CHANNEL: 23790
 REFERENCE VOLTAGE: 3.85 VDC

VOLTAGE (%)	POWER (VDC)	TEMP (°C)	FREQUENCY (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	3.85	+ 20 (Ref)	707,499,882	-118	-0.0000167
100 %		- 30	707,500,256	256	0.0000362
100 %		- 20	707,499,968	-32	-0.0000045
100 %		- 10	707,500,463	463	0.0000654
100 %		0	707,500,017	17	0.0000024
100 %		+ 10	707,500,016	16	0.0000023
100 %		+ 20	707,500,431	431	0.0000609
100 %		+ 30	707,500,129	129	0.0000182
100 %		+ 40	707,500,107	107	0.0000151
100 %		+ 50	707,500,222	222	0.0000314
BATT. ENDPOINT	3.45	+ 20	707,500,202	202	0.0000286

Table 7-40. Frequency Stability Data (Band 12/17)

FCC ID: A3LSMN950KOR		FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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Band 12/17 Frequency Stability Measurements

§2.1055 §27.54

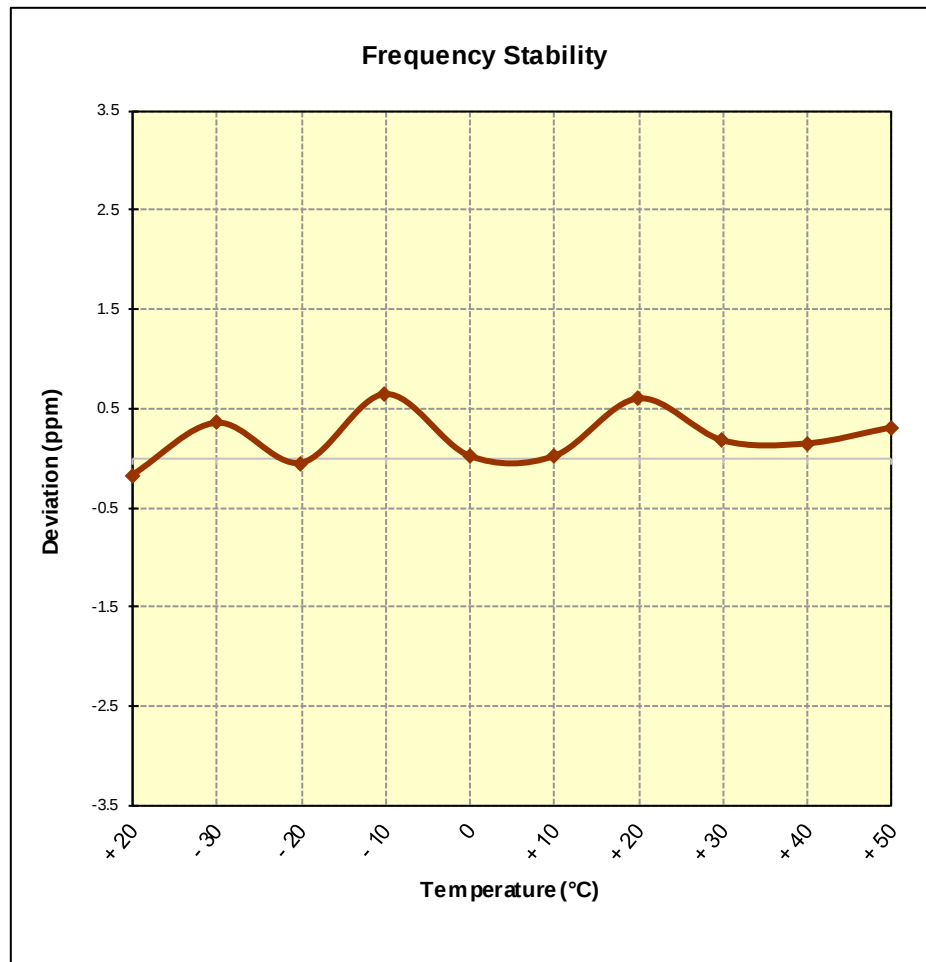


Figure 7-8. Frequency Stability Graph (Band 12/17)

FCC ID: A3LSMN950KOR		FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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Band 13 Frequency Stability Measurements

§2.1055 §27.54

OPERATING FREQUENCY: 782,000,000 Hz
 CHANNEL: 23230
 REFERENCE VOLTAGE: 3.85 VDC

VOLTAGE (%)	POWER (VDC)	TEMP (°C)	FREQUENCY (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	3.85	+ 20 (Ref)	782,000,143	143	0.0000183
100 %		- 30	781,999,955	-45	-0.0000058
100 %		- 20	781,999,969	-31	-0.0000040
100 %		- 10	782,000,022	22	0.0000028
100 %		0	781,999,993	-7	-0.0000009
100 %		+ 10	782,000,072	72	0.0000092
100 %		+ 20	781,999,683	-317	-0.0000405
100 %		+ 30	781,999,923	-77	-0.0000098
100 %		+ 40	782,000,175	175	0.0000224
100 %		+ 50	782,000,091	91	0.0000116
BATT. ENDPOINT	3.45	+ 20	781,999,983	-17	-0.0000022

Table 7-41. Frequency Stability Data (Band 13)

FCC ID: A3LSMN950KOR		FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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Band 13 Frequency Stability Measurements

§2.1055 §27.54

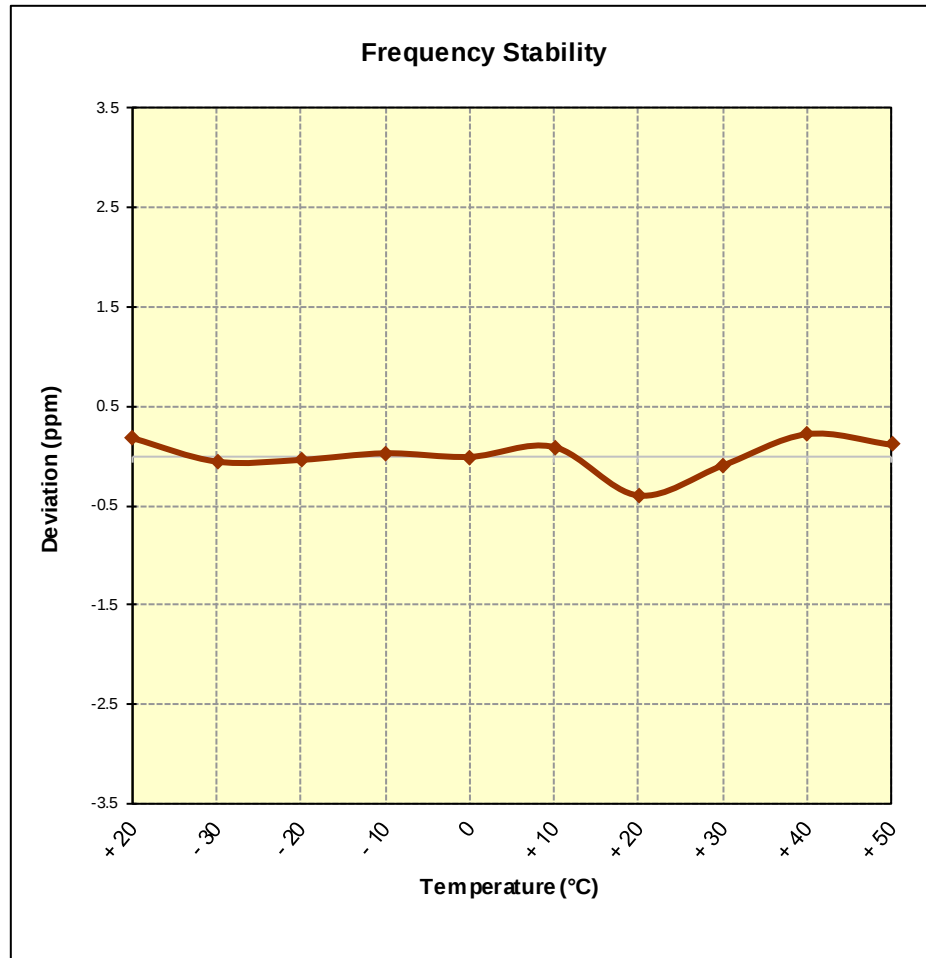


Figure 7-9. Frequency Stability Graph (Band 13)

FCC ID: A3LSMN950KOR		FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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Band 5/26 Frequency Stability Measurements

§2.1055 §22.355

OPERATING FREQUENCY: 836,500,000 Hz

CHANNEL: 20525

REFERENCE VOLTAGE: 3.85 VDC

DEVIATION LIMIT: ± 0.00025 % or 2.5 ppm

VOLTAGE (%)	POWER (VDC)	TEMP (°C)	FREQUENCY (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	3.85	+ 20 (Ref)	836,500,016	16	0.0000019
100 %		- 30	836,500,108	108	0.0000129
100 %		- 20	836,499,966	-34	-0.0000041
100 %		- 10	836,500,096	96	0.0000115
100 %		0	836,499,925	-75	-0.0000090
100 %		+ 10	836,500,406	406	0.0000485
100 %		+ 20	836,500,401	401	0.0000479
100 %		+ 30	836,500,009	9	0.0000011
100 %		+ 40	836,499,803	-197	-0.0000236
100 %		+ 50	836,500,139	139	0.0000166
BATT. ENDPOINT	3.45	+ 20	836,499,804	-196	-0.0000234

Table 7-42. Frequency Stability Data (Band 5/26)

FCC ID: A3LSMN950KOR		FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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Band 5/26 Frequency Stability Measurements
§2.1055 §22.355

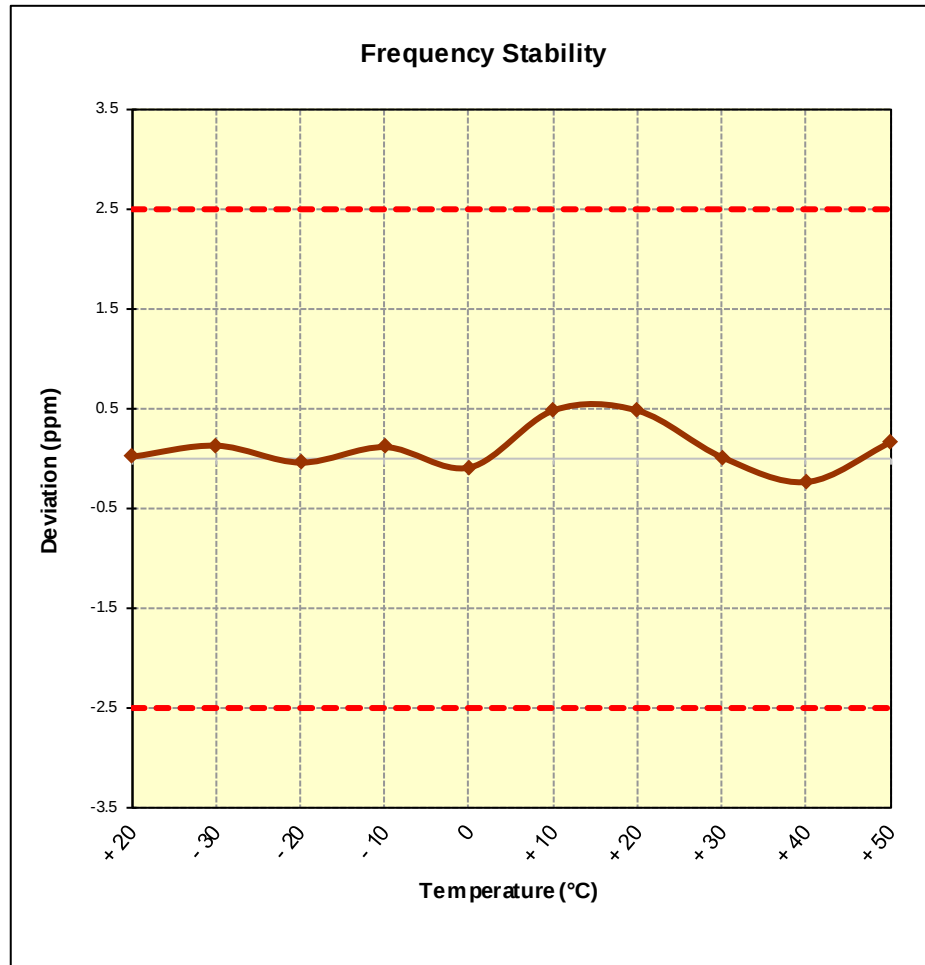


Figure 7-10. Frequency Stability Graph (Band 5/26)

FCC ID: A3LSMN950KOR		FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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Band 4 Frequency Stability Measurements

\$2.1055 \$27.54

OPERATING FREQUENCY: 1,732,500,000 Hz
 CHANNEL: 20175
 REFERENCE VOLTAGE: 3.85 VDC

VOLTAGE (%)	POWER (VDC)	TEMP (°C)	FREQUENCY (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	3.85	+ 20 (Ref)	1,732,500,006	6	0.0000003
100 %		- 30	1,732,500,089	89	0.0000051
100 %		- 20	1,732,499,982	-18	-0.0000010
100 %		- 10	1,732,499,790	-210	-0.0000121
100 %		0	1,732,500,322	322	0.0000186
100 %		+ 10	1,732,500,333	333	0.0000192
100 %		+ 20	1,732,500,090	90	0.0000052
100 %		+ 30	1,732,500,013	13	0.0000008
100 %		+ 40	1,732,500,057	57	0.0000033
100 %		+ 50	1,732,500,067	67	0.0000039
BATT. ENDPOINT	3.45	+ 20	1,732,500,036	36	0.0000021

Table 7-43. Frequency Stability Data (Band 4)

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 Frequency Stability Measurements

§2.1055 §§27.54

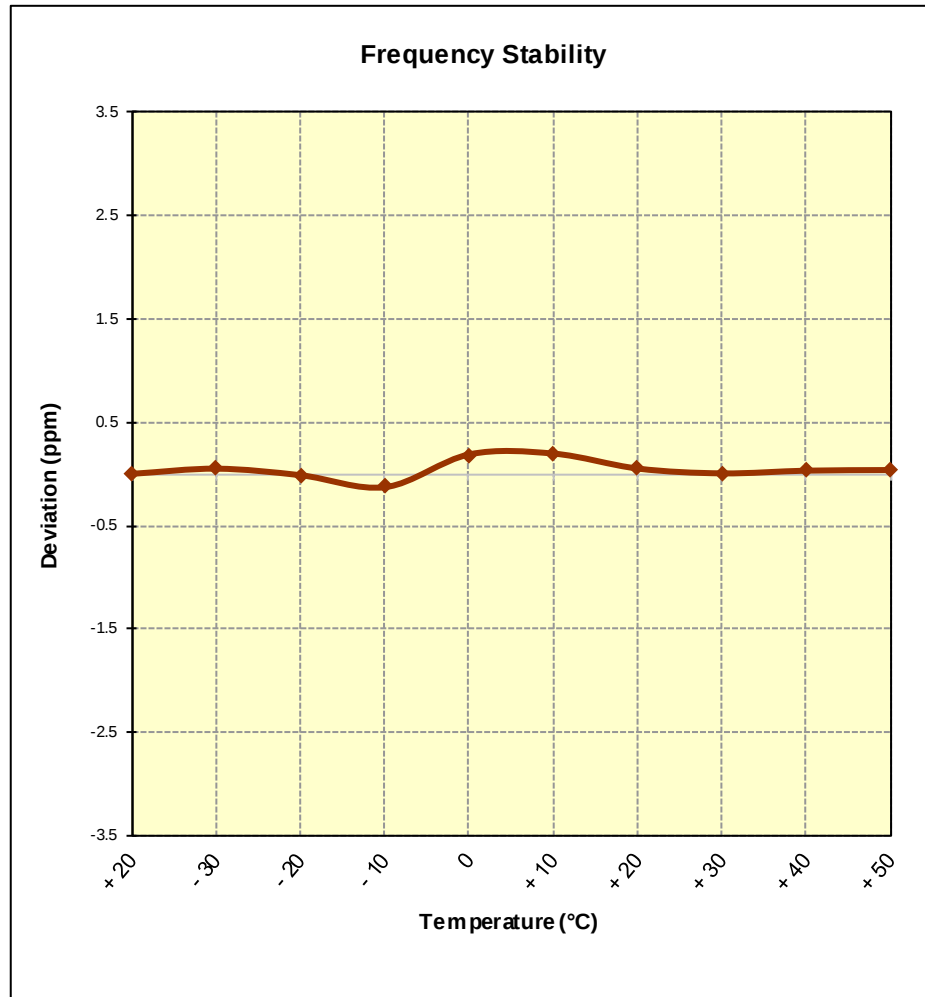


Figure 7-11. Frequency Stability Graph (Band 4)

FCC ID: A3LSMN950KOR		FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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Band 2/25 Frequency Stability Measurements

§2.1055 §24.235

OPERATING FREQUENCY: 1,882,500,000 Hz
 CHANNEL: 26365
 REFERENCE VOLTAGE: 3.85 VDC

VOLTAGE (%)	POWER (VDC)	TEMP (°C)	FREQUENCY (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	3.85	+ 20 (Ref)	1,882,499,861	-139	-0.0000074
100 %		- 30	1,882,500,203	203	0.0000108
100 %		- 20	1,882,499,690	-310	-0.0000165
100 %		- 10	1,882,499,811	-189	-0.0000100
100 %		0	1,882,499,998	-2	-0.0000001
100 %		+ 10	1,882,499,729	-271	-0.0000144
100 %		+ 20	1,882,500,106	106	0.0000056
100 %		+ 30	1,882,499,985	-15	-0.0000008
100 %		+ 40	1,882,500,141	141	0.0000075
100 %		+ 50	1,882,500,176	176	0.0000093
BATT. ENDPOINT	3.45	+ 20	1,882,499,782	-218	-0.0000116

Table 7-44. 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.

FCC ID: A3LSMN950KOR		FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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Band 2/25 Frequency Stability Measurements

§2.1055 §24.235

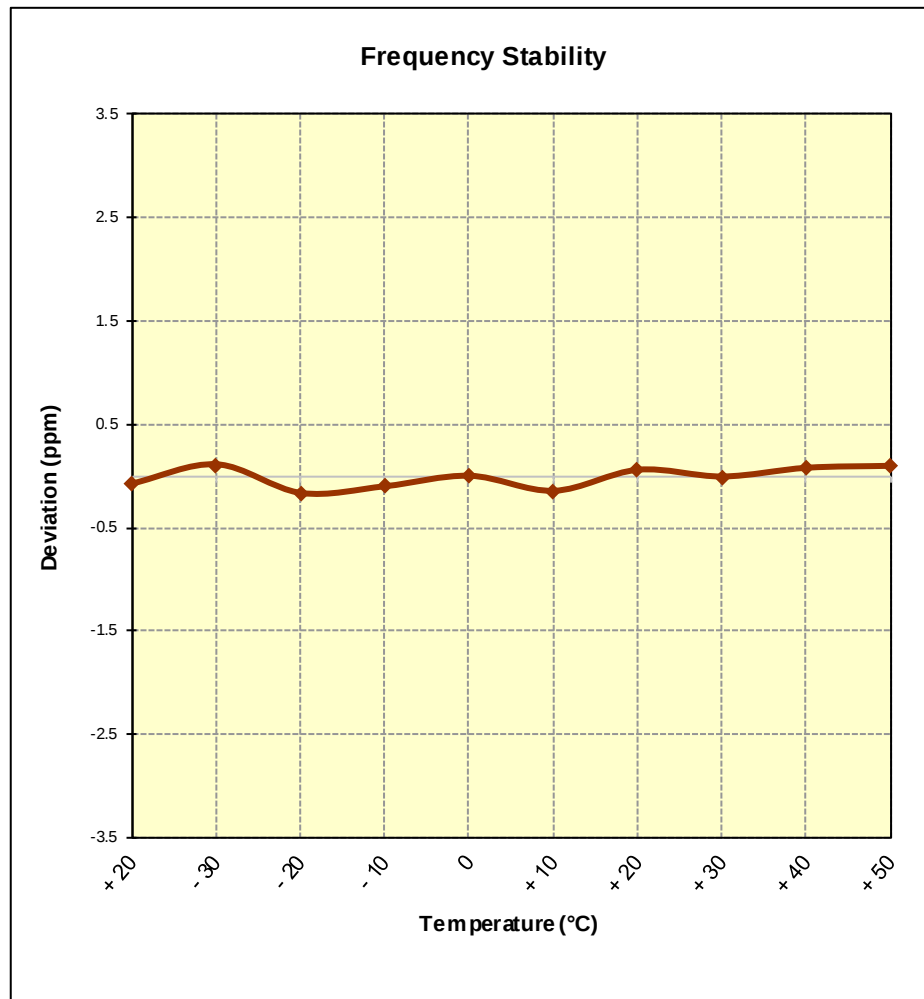


Figure 7-12. Frequency Stability Graph (Band 2/25)

FCC ID: A3LSMN950KOR	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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Band 41 Frequency Stability Measurements

\$2.1055 \$27.54

OPERATING FREQUENCY: 2,593,000,000 Hz
 CHANNEL: 40620
 REFERENCE VOLTAGE: 3.85 VDC

VOLTAGE (%)	POWER (VDC)	TEMP (°C)	FREQUENCY (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	3.85	+ 20 (Ref)	2,592,999,888	-112	-0.0000043
100 %		- 30	2,592,999,850	-150	-0.0000058
100 %		- 20	2,592,999,804	-196	-0.0000076
100 %		- 10	2,592,999,959	-41	-0.0000016
100 %		0	2,592,999,807	-193	-0.0000074
100 %		+ 10	2,593,000,050	50	0.0000019
100 %		+ 20	2,592,999,991	-9	-0.0000003
100 %		+ 30	2,593,000,042	42	0.0000016
100 %		+ 40	2,592,999,676	-324	-0.0000125
100 %		+ 50	2,592,999,995	-5	-0.0000002
BATT. ENDPOINT	3.45	+ 20	2,592,999,884	-116	-0.0000045

Table 7-45. 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.

FCC ID: A3LSMN950KOR		FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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Band 41 Frequency Stability Measurements

§2.1055 §27.54

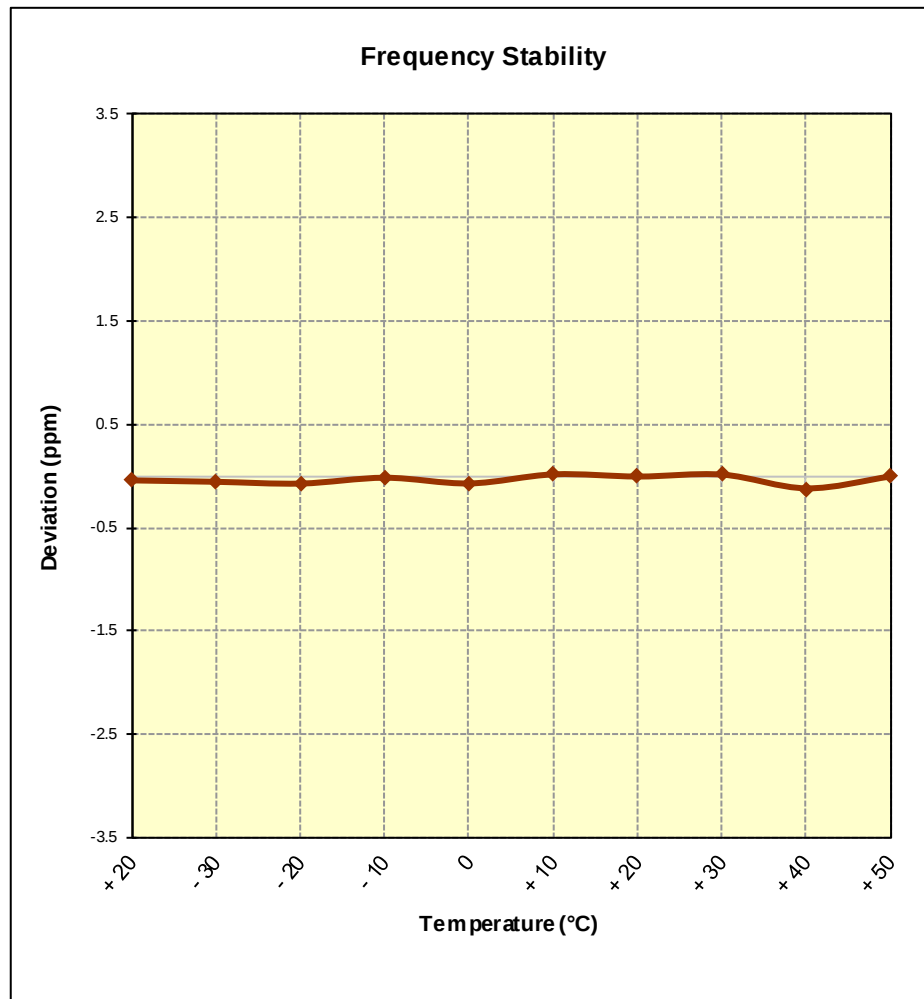


Figure 7-13. Frequency Stability Graph (Band 41)

FCC ID: A3LSMN950KOR	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	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 **Samsung Portable Handset FCC ID: A3LSMN950KOR** complies with all the requirements of Parts 22, 24, & 27 of the FCC rules for LTE operation only.

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