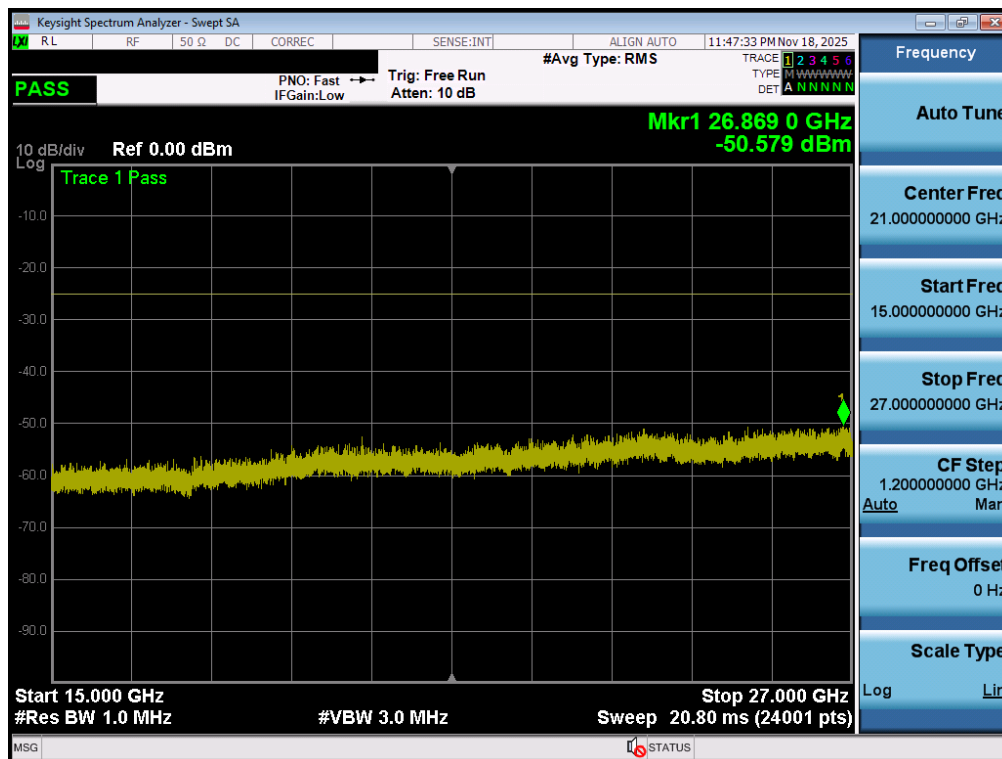
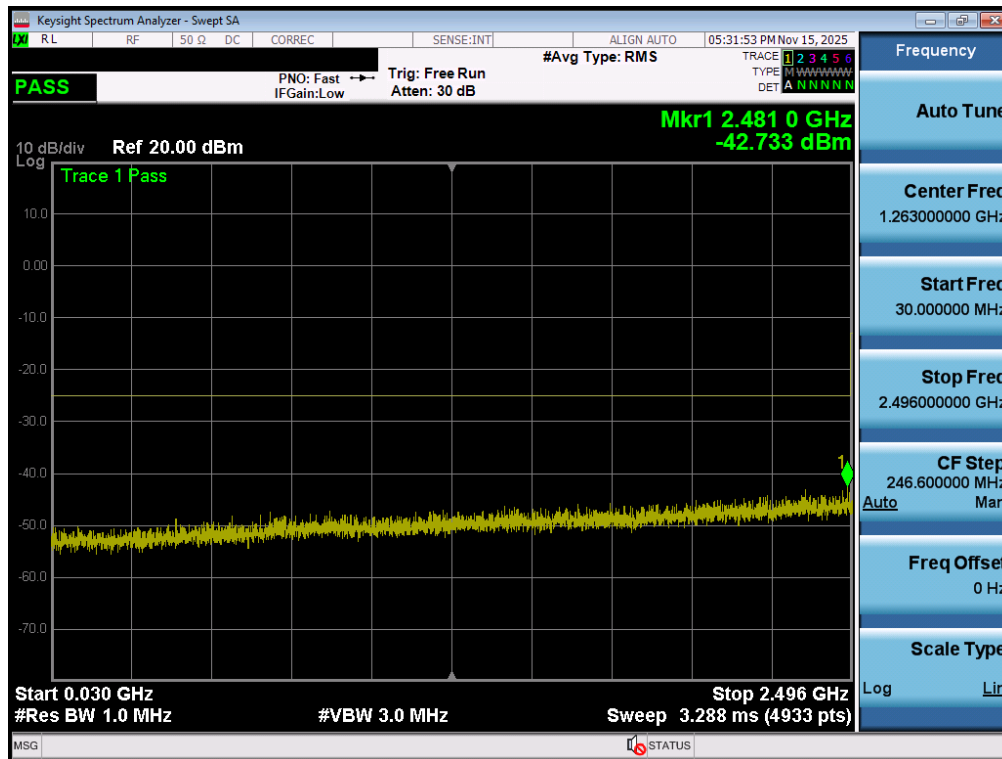




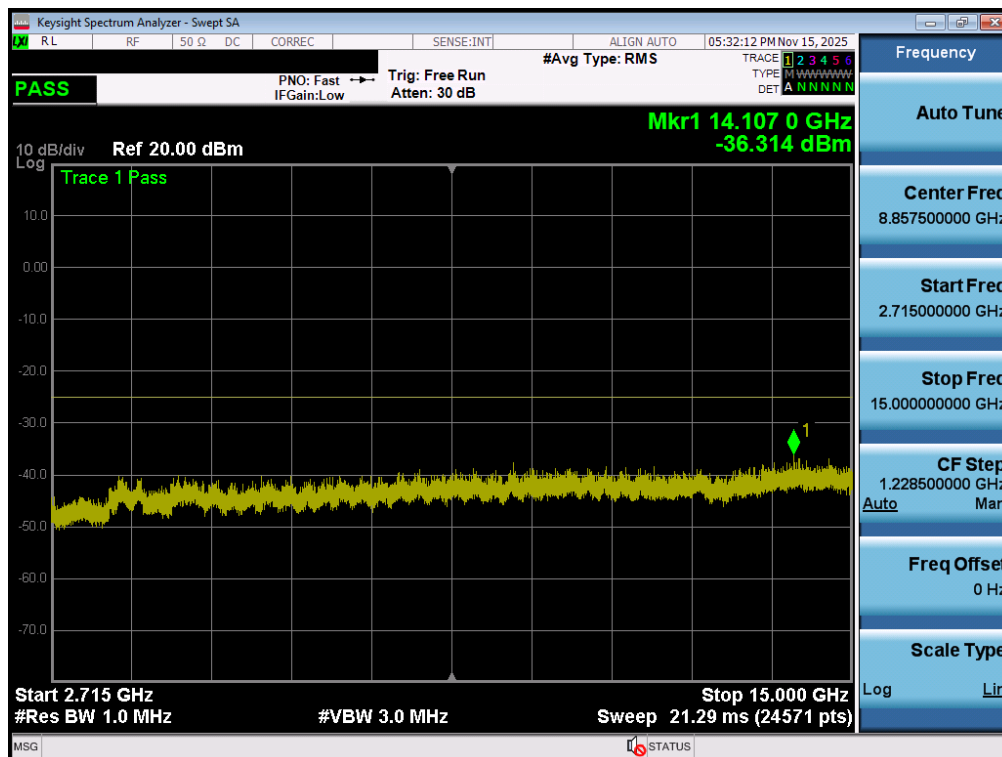
Plot 7-101. Conducted Spurious Plot (LTE Band 41(PC2)- 20MHz QPSK - RB Size 1, RB Offset 50 - Mid Channel - Ant1)

FCC ID: A3LSMS947B	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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LTE Band 41(PC3) – Ant1

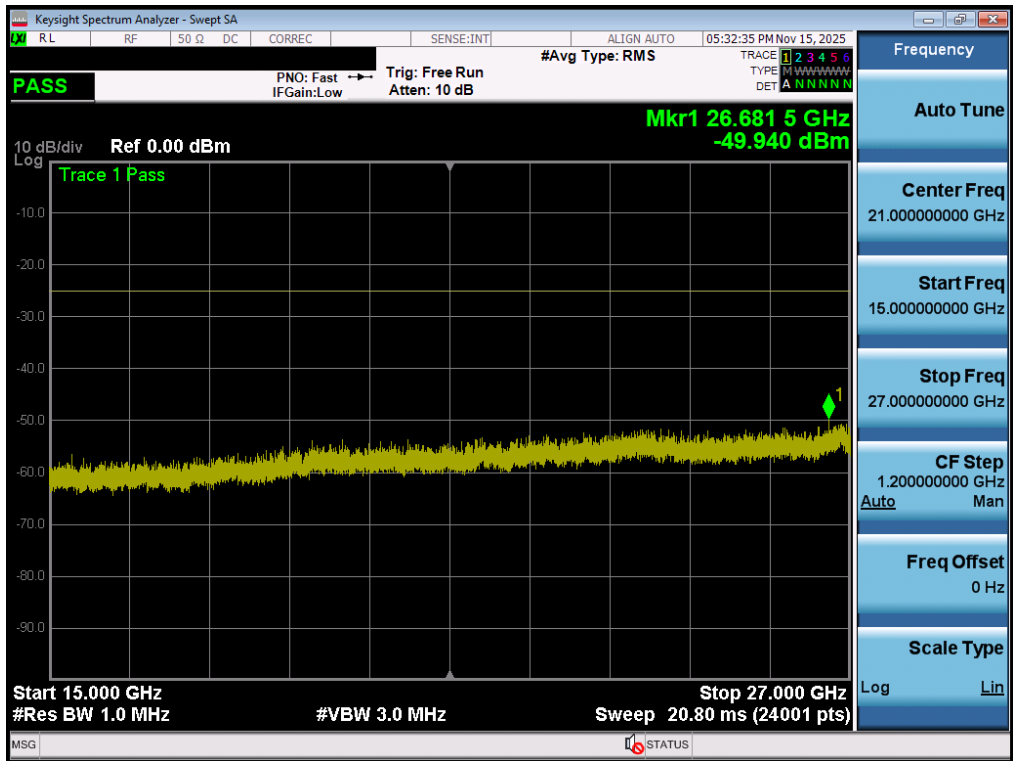


Plot 7-102. Conducted Spurious Plot (LTE Band 41(PC3)- 20MHz QPSK - RB Size 1, RB Offset 50 - High Channel - Ant1)



Plot 7-103. Conducted Spurious Plot (LTE Band 41(PC3)- 20MHz QPSK - RB Size 1, RB Offset 50 - High Channel - Ant1)

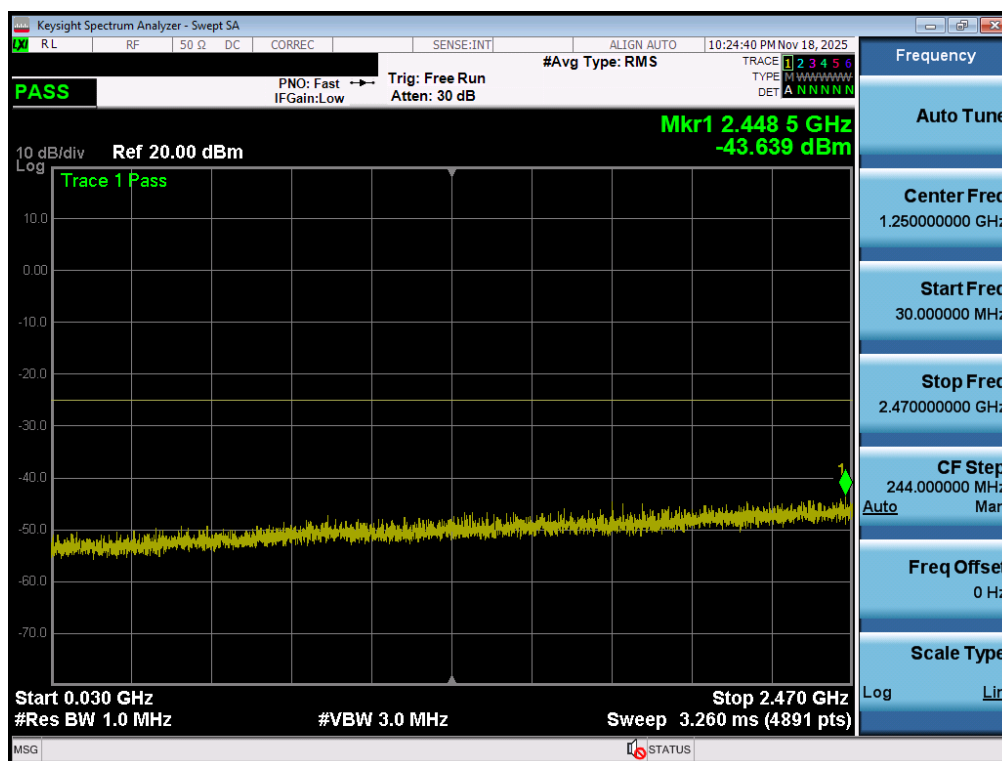
FCC ID: A3LSMS947B	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2508270083-08-R1.A3L	Test Dates: 11/12/2015 – 12/24/2025	EUT Type: Portable Handset	Page 87 of 128



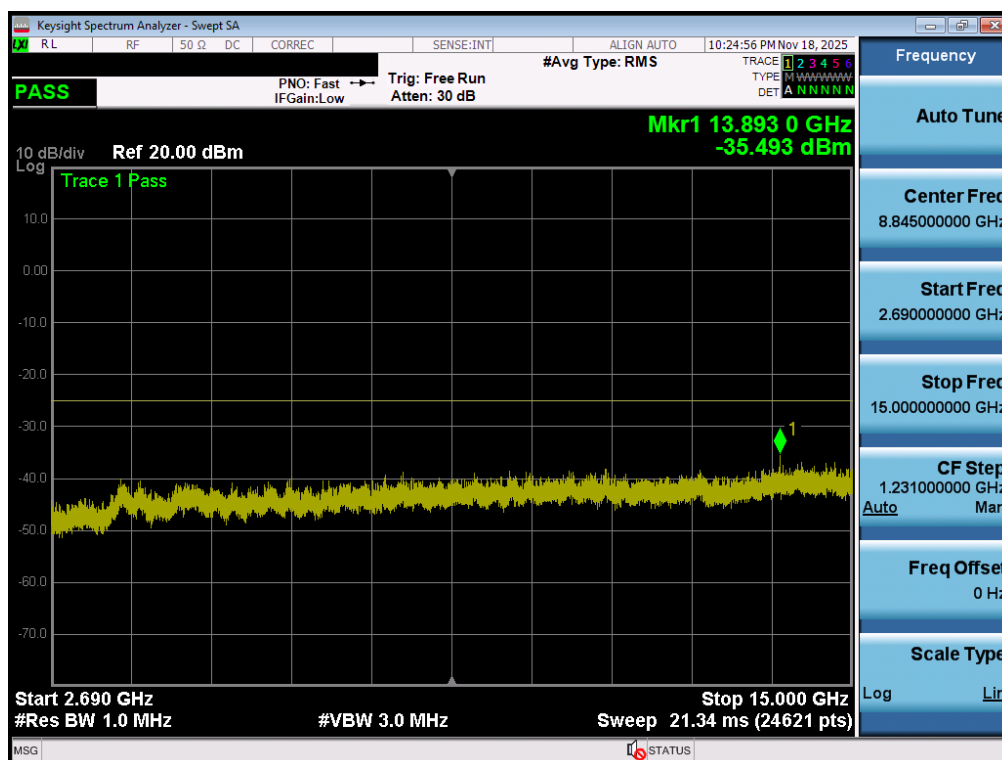
Plot 7-104. Conducted Spurious Plot (LTE Band 41(PC3)- 20MHz QPSK - RB Size 1, RB Offset 50 - High Channel - Ant1)

FCC ID: A3LSMS947B	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2508270083-08-R1.A3L	Test Dates: 11/12/2015 – 12/24/2025	EUT Type: Portable Handset	Page 88 of 128

NR Band n41 – Ant1

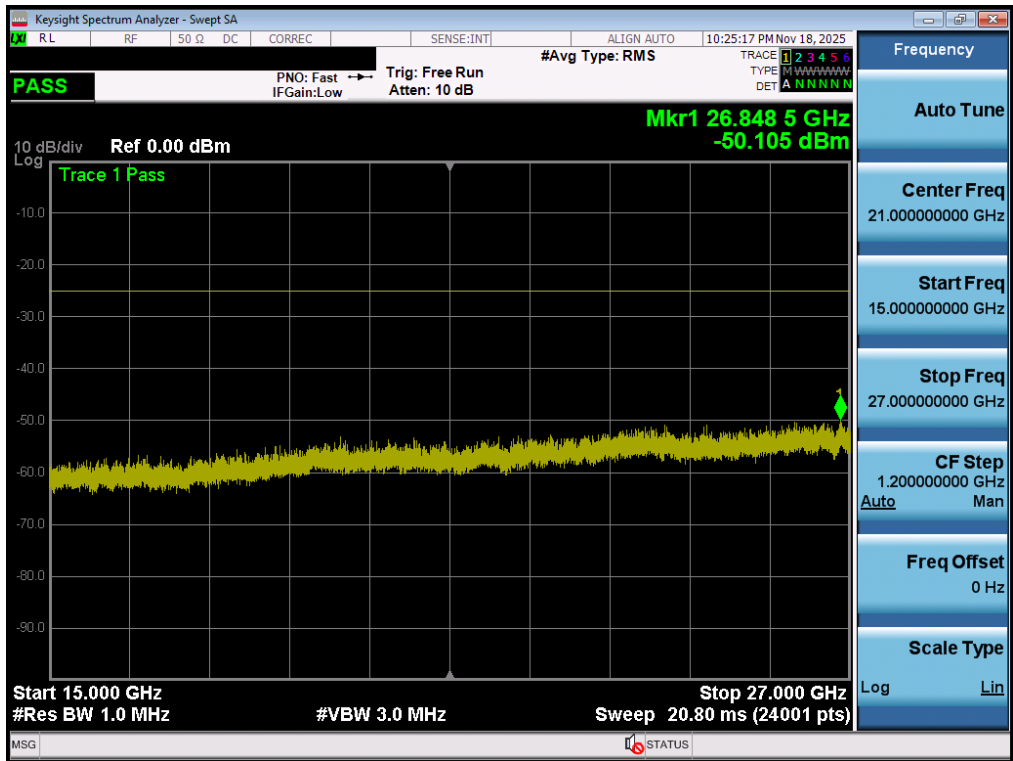


Plot 7-105. Conducted Spurious Plot (NR Band n41 - 100MHz QPSK - RB Size 1, RB Offset 136 - Low Channel Ant1)



Plot 7-106. Conducted Spurious Plot (NR Band n41 - 100MHz QPSK - RB Size 1, RB Offset 136 - Low Channel Ant1)

FCC ID: A3LSMS947B	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2508270083-08-R1.A3L	Test Dates: 11/12/2015 – 12/24/2025	EUT Type: Portable Handset	Page 89 of 128



Plot 7-107. Conducted Spurious Plot (NR Band n41 - 100MHz QPSK - RB Size 1, RB Offset 136 - Low Channel Ant1)

FCC ID: A3LSMS947B	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2508270083-08-R1.A3L	Test Dates: 11/12/2015 – 12/24/2025	EUT Type: Portable Handset	Page 90 of 128

Mode	Bandwidth	Channel	Range [MHz]	Level [dBm]	Limit [dBm]	Margin [dB]
LTE-B41PC2	20MHz	Low	30.0 - 2475.0	-43.50	-25	-18.50
		Low	2690.0 - 15000.0	-36.43	-25	-11.43
		Low	15000.0 - 27000.0	-50.38	-25	-25.38
		Mid	30.0 - 2500.0	-42.98	-25	-17.98
		Mid	2690.0 - 15000.0	-36.19	-25	-11.19
		Mid	15000.0 - 27000.0	-49.79	-25	-24.79
		High	30.0 - 2500.0	-43.35	-25	-18.35
		High	2690.0 - 15000.0	-36.18	-25	-11.18
		High	15000.0 - 27000.0	-49.25	-25	-24.25
LTE-B41PC3	20MHz	Low	30.0 - 2288.0	-42.49	-25	-17.49
		Low	2365.0 - 15000.0	-37.11	-25	-12.11
		Low	15000.0 - 27000.0	-49.87	-25	-24.87
		Mid	30.0 - 2288.0	-43.64	-25	-18.64
		Mid	2570.0 - 15000.0	-36.78	-25	-11.78
		Mid	15000.0 - 27000.0	-49.73	-25	-24.73
		High	30.0 - 2288.0	-43.43	-25	-18.43
		High	2570.0 - 15000.0	-36.12	-25	-11.12
		High	15000.0 - 27000.0	-50.08	-25	-25.08

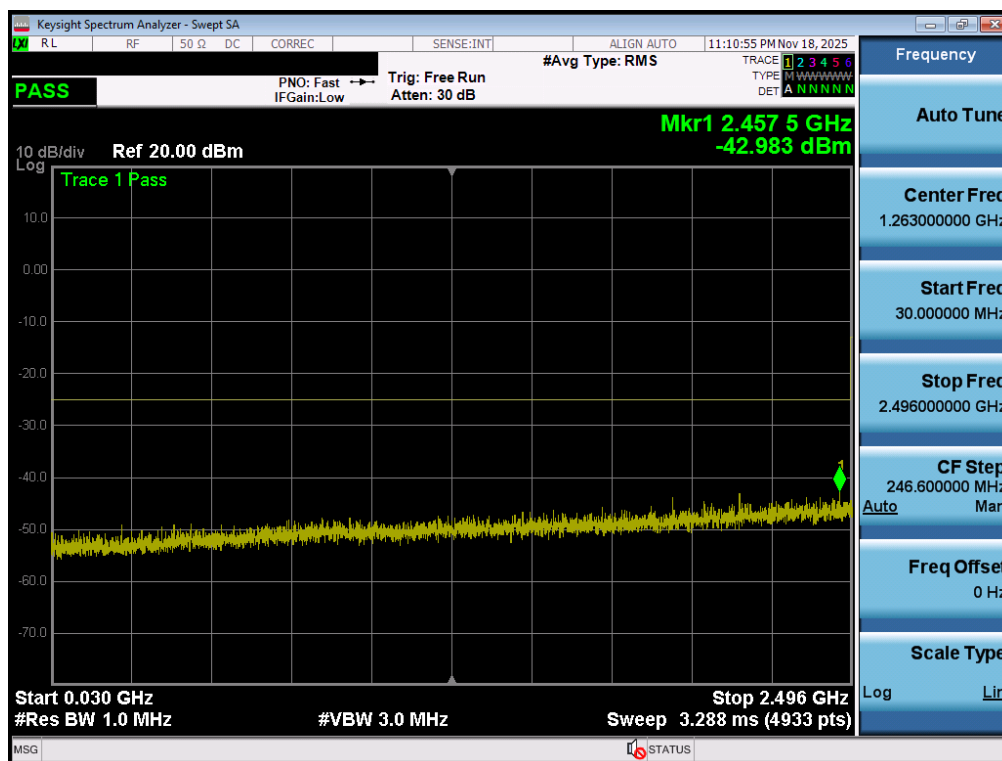
Table 7-20. Conducted Emission Test Results – LTE – Ant 2

Mode	Bandwidth	Channel	Range [MHz]	Level [dBm]	Limit [dBm]	Margin [dB]
NR-n41PC3	100MHz	Low	30.0 - 2288.0	-43.74	-25	-18.74
		Low	2365.0 - 15000.0	-36.18	-25	-11.18
		Low	15000.0 - 27000.0	-49.83	-25	-24.83
		Mid	30.0 - 2288.0	-40.82	-25	-15.82
		Mid	2570.0 - 15000.0	-35.96	-25	-10.96
		Mid	15000.0 - 27000.0	-49.86	-25	-24.86
		High	30.0 - 2288.0	-43.21	-25	-18.21
		High	2570.0 - 15000.0	-36.78	-25	-11.78
		High	15000.0 - 27000.0	-48.16	-25	-23.16

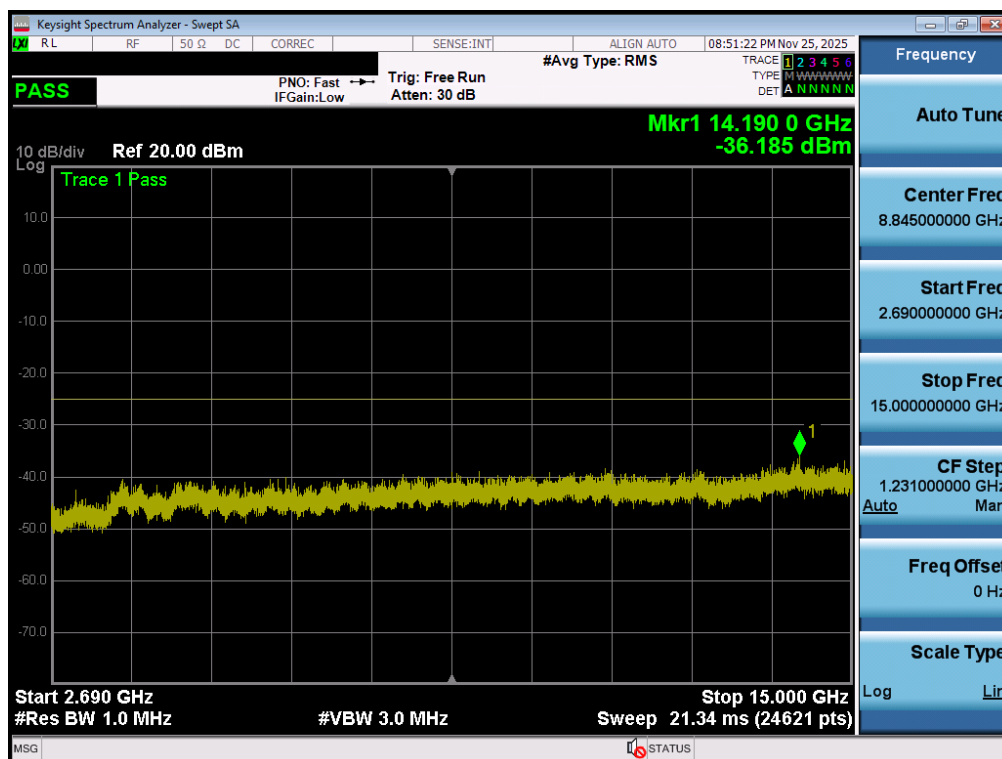
Table 7-21. Conducted Emission Test Results – NR – Ant 2

FCC ID: A3LSMS947B	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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LTE Band 41(PC2) – Ant2

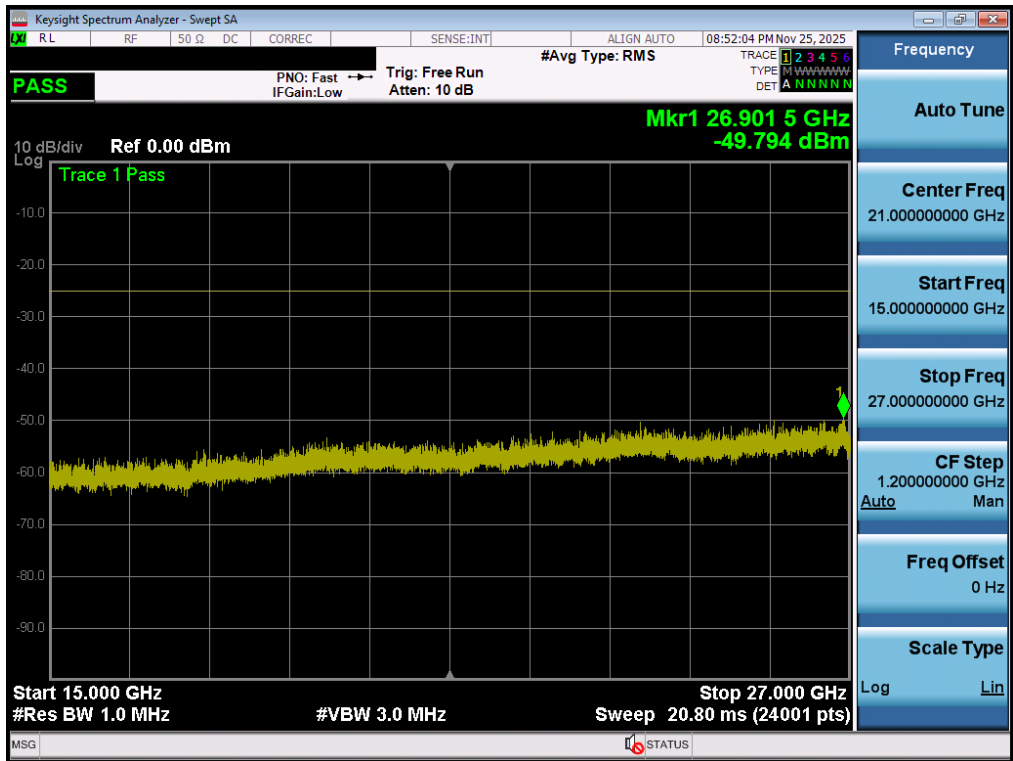


Plot 7-108. Conducted Spurious Plot (LTE Band 41(PC2)- 20MHz QPSK - RB Size 1, RB Offset 50 - Mid Channel – Ant2)



Plot 7-109. Conducted Spurious Plot (LTE Band 41(PC2)- 20MHz QPSK - RB Size 1, RB Offset 50 - Mid Channel – Ant2)

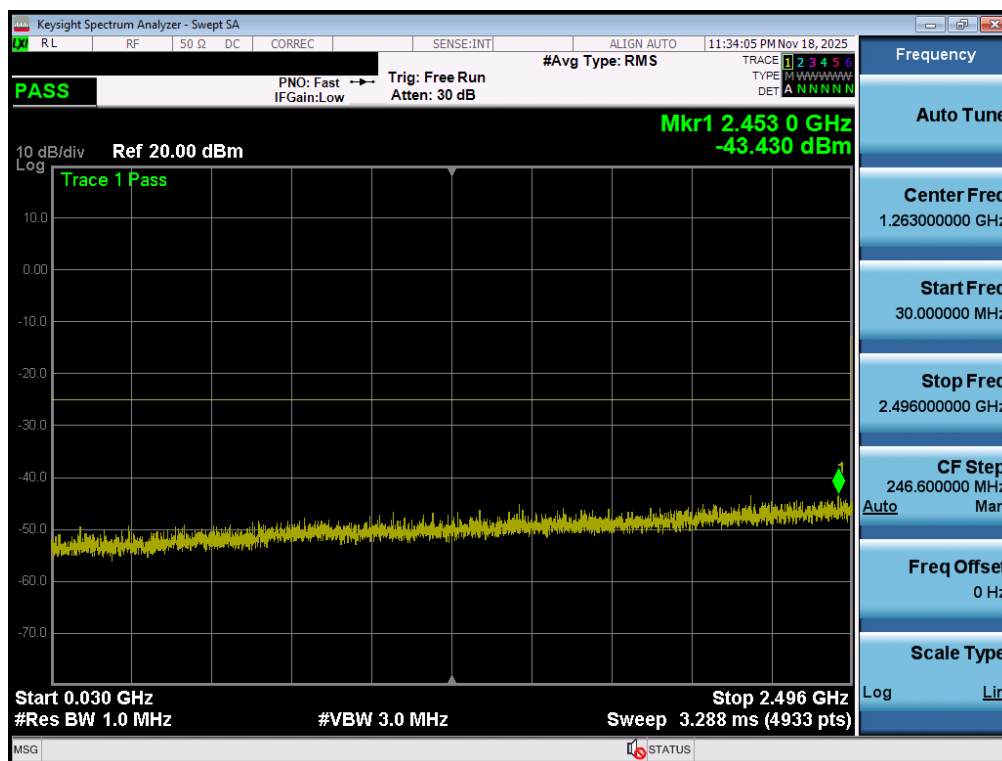
FCC ID: A3LSMS947B	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2508270083-08-R1.A3L	Test Dates: 11/12/2015 – 12/24/2025	EUT Type: Portable Handset	Page 92 of 128



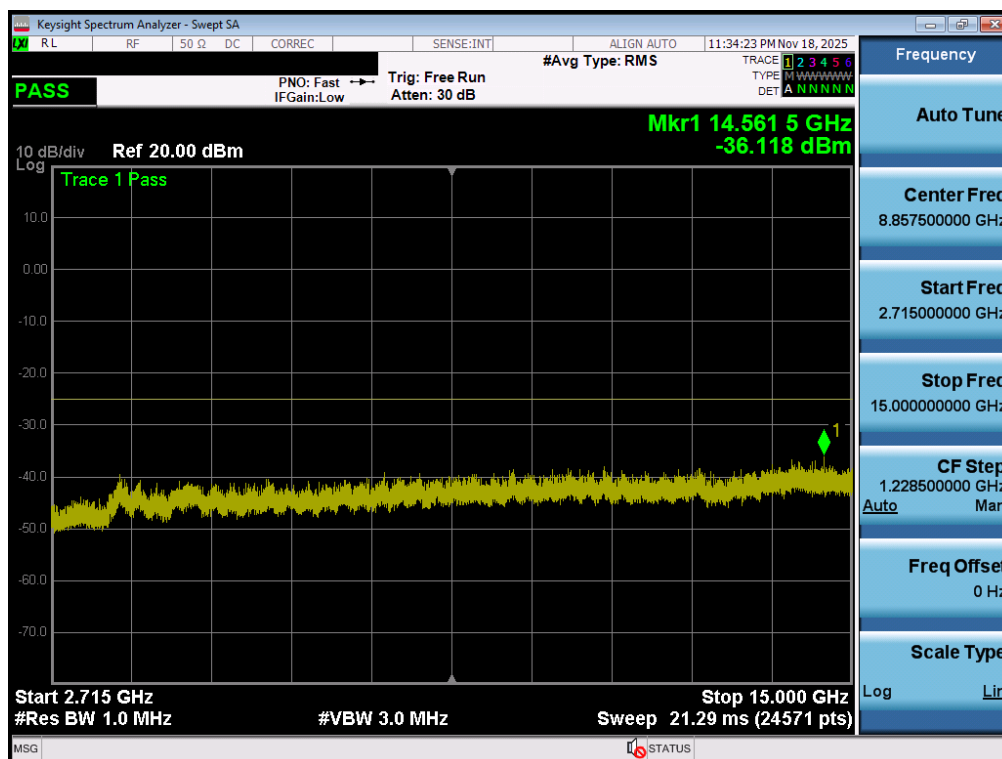
Plot 7-110. Conducted Spurious Plot (LTE Band 41(PC2)- 20MHz QPSK - RB Size 1, RB Offset 50 - Mid Channel – Ant2)

FCC ID: A3LSMS947B	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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LTE Band 41(PC3) – Ant2

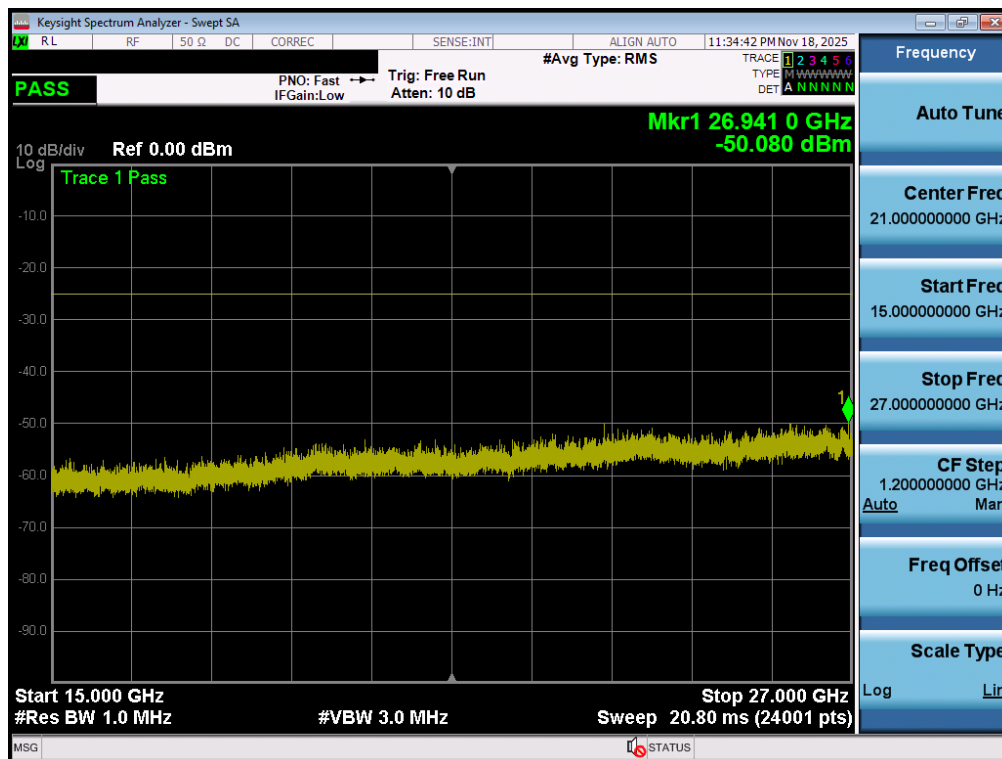


Plot 7-111. Conducted Spurious Plot (LTE Band 41(PC3)- 20MHz QPSK - RB Size 1, RB Offset 50 - High Channel – Ant2)



Plot 7-112. Conducted Spurious Plot (LTE Band 41(PC3)- 20MHz QPSK - RB Size 1, RB Offset 50 - High Channel – Ant2)

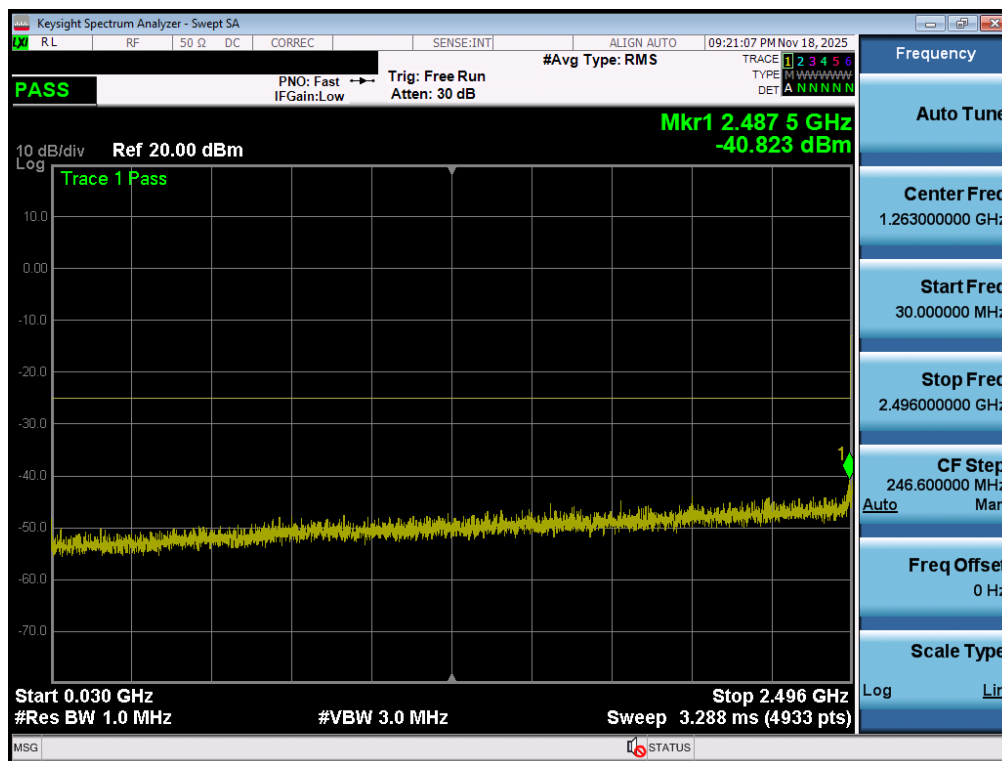
FCC ID: A3LSMS947B	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2508270083-08-R1.A3L	Test Dates: 11/12/2015 – 12/24/2025	EUT Type: Portable Handset	Page 94 of 128



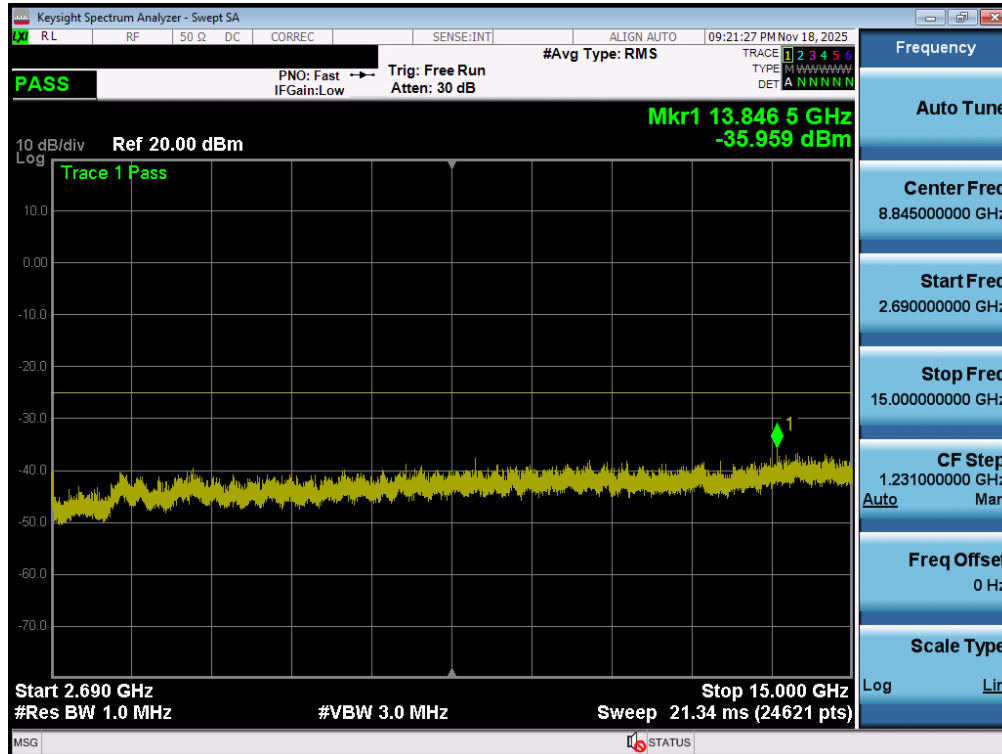
Plot 7-113. Conducted Spurious Plot (LTE Band 41(PC3)- 20MHz QPSK - RB Size 1, RB Offset 50 - High Channel – Ant2)

FCC ID: A3LSMS947B	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2508270083-08-R1.A3L	Test Dates: 11/12/2015 – 12/24/2025	EUT Type: Portable Handset	Page 95 of 128

NR Band n41 – Ant2

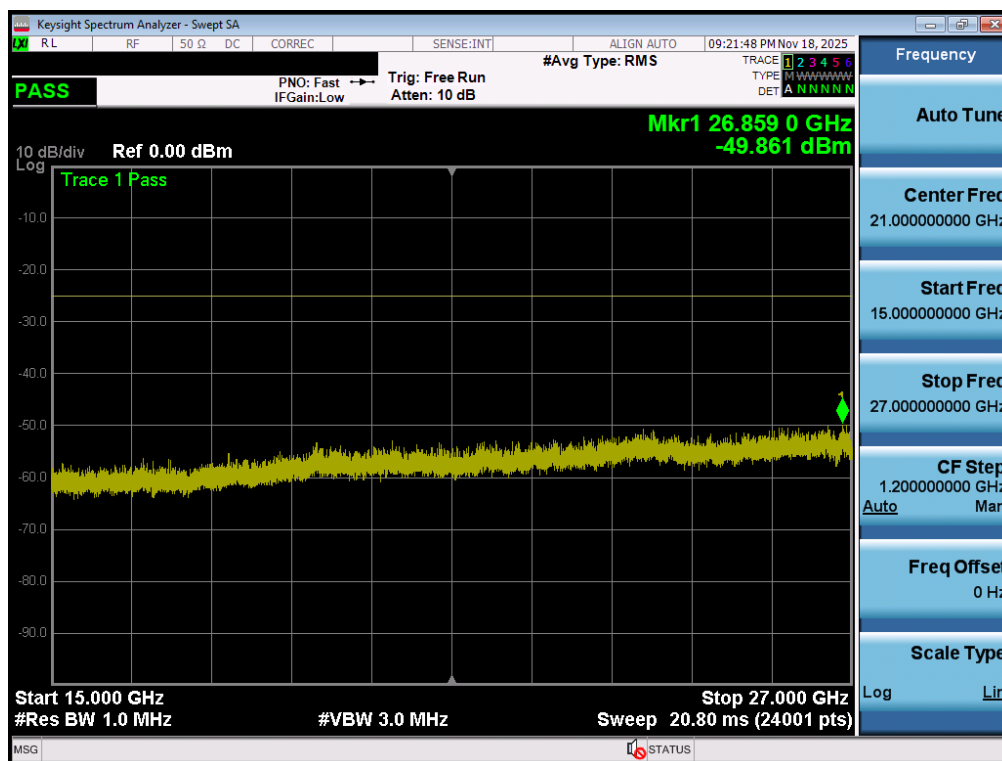


Plot 7-114. Conducted Spurious Plot (NR Band n41 - 100MHz QPSK - RB Size 1, RB Offset 136 - Mid Channel Ant2)



Plot 7-115. Conducted Spurious Plot (NR Band n41 - 100MHz QPSK - RB Size 1, RB Offset 136 – Mid Channel Ant2)

FCC ID: A3LSMS947B	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2508270083-08-R1.A3L	Test Dates: 11/12/2015 – 12/24/2025	EUT Type: Portable Handset	Page 96 of 128



Plot 7-116. Conducted Spurious Plot (NR Band n41 - 100MHz QPSK - RB Size 1, RB Offset 136 - Mid Channel Ant2)

FCC ID: A3LSMS947B	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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7.5 Band Edge Emissions at Antenna Terminal

Test Overview

All out of band emissions are measured with a spectrum analyzer connected to the antenna terminal of the EUT while the EUT is operating at maximum power, and at the appropriate frequencies. All data rates were investigated to determine the worst-case configuration. All modes of operation were investigated and the worst-case configuration results are reported in this section.

The minimum permissible attenuation level for Band 41 is as noted in the Test Notes on the following page.

Test Procedure Used

ANSI C63.26:2015 – Section 5.7.3

Test Settings

1. Start and stop frequency were set such that the band edge would be placed in the center of the plot
2. Span was set large enough so as to capture all out of band emissions near the band edge
3. RBW $\geq$ 1% of the emission bandwidth
4. VBW $\geq$ 3 x RBW
5. Detector = RMS
6. Number of sweep points $\geq$ 2 x Span/RBW
7. Trace mode = trace average for continuous emissions, max hold for pulse emissions
8. Sweep time = auto couple
9. The trace was allowed to stabilize

Test Setup

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

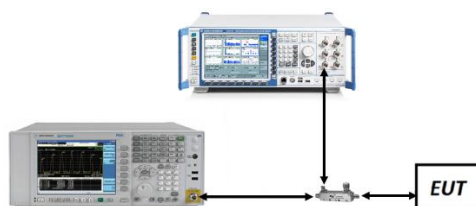


Figure 7-5. Test Instrument & Measurement Setup

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Test Notes

1. Per 27.53(a)(5) in the 1 MHz bands immediately outside and adjacent to the channel blocks at 2305, 2310, 2315, 2320, 2345, 2350, 2355, and 2360 MHz, a resolution bandwidth of at least 1 percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy provided the measured power is integrated over the full required measurement bandwidth (i.e., 1 MHz). The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.
2. Per 27.53(m) for operations in the BRS/EBS bands, the attenuation factor shall be not less than $40 + 10 \log(P)$ dB on all frequencies between the channel edge and 5 megahertz from the channel edge, $43 + 10 \log(P)$ dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and $55 + 10 \log(P)$ dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth. In addition, the attenuation factor shall not be less than $43 + 10 \log(P)$ dB on all frequencies between 2490.5 MHz and 2496 MHz and $55 + 10 \log(P)$ dB at or below 2490.5 MHz.
3. For NR operation, all subcarrier spacings (SCS) and transmission schemes (e.g. CP-OFDM and DFT-s-OFDM) were investigated to determine the worst-case configuration. All modes of operation were investigated and the worst-case configuration results are reported in this section.
4. Only the highest target power SRS-1 antenna for n41 default (Antenna B) are reported for the overall n41 SRS worst case.

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Mode	Bandwidth	Channel	Test Case	Level [dBm]	Limit [dBm]	Margin [dB]
LTE-B41PC2	20MHz	Low	Band Edge	-35.89	-25	-10.89
		High	Band Edge	-38.87	-25	-13.87
	15MHz	Low	Band Edge	-35.79	-25	-10.79
		High	Band Edge	-39.30	-25	-14.30
	10MHz	Low	Band Edge	-36.18	-25	-11.18
		High	Band Edge	-38.43	-25	-13.43
	5MHz	Low	Band Edge	-38.65	-25	-13.65
		High	Band Edge	-38.38	-25	-13.38
LTE-B41PC3	20MHz	Low	Band Edge	-33.49	-25	-8.49
		High	Band Edge	-30.39	-13	-17.39
	15MHz	Low	Band Edge	-33.11	-25	-8.11
		High	Band Edge	-43.84	-25	-18.84
	10MHz	Low	Band Edge	-33.94	-25	-8.94
		High	Band Edge	-42.20	-25	-17.20
	5MHz	Low	Band Edge	-27.58	-13	-14.58
		High	Band Edge	-41.60	-25	-16.60

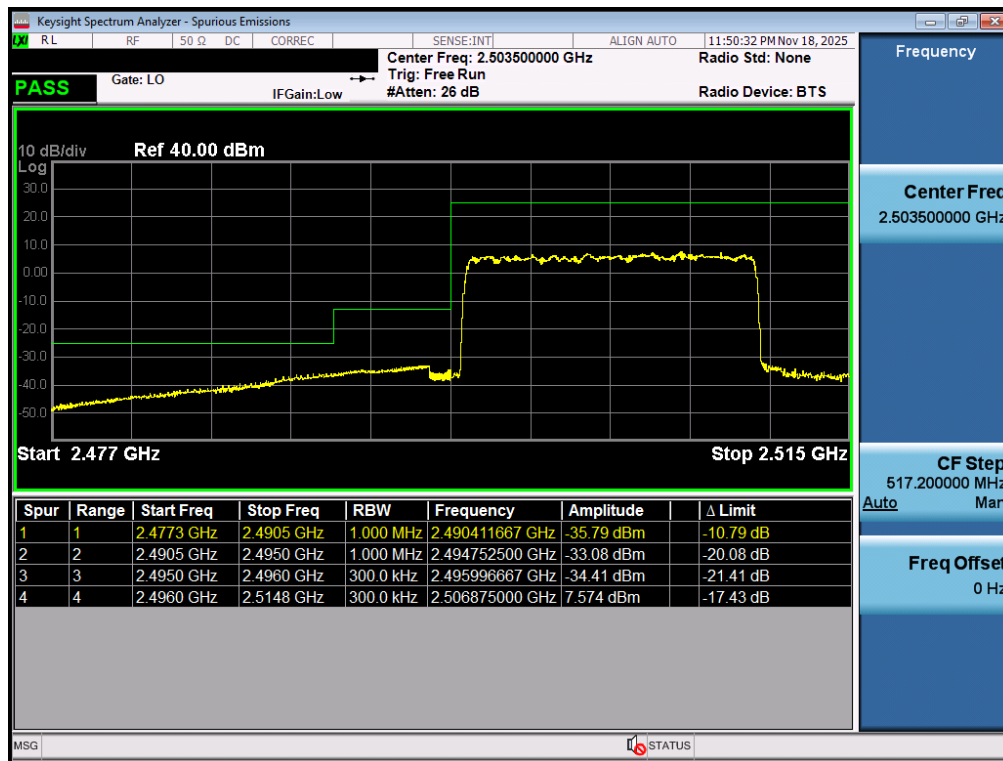
Table 7-22. Conducted Band Edge Test Results – LTE – Ant 1

Mode	Bandwidth	Channel	Test Case	Level [dBm]	Limit [dBm]	Margin [dB]
NR-n41PC3	100MHz	Low	Band Edge	-39.61	-25	-14.61
		High	Band Edge	-29.76	-10	-19.76
	90MHz	Low	Band Edge	-38.87	-25	-13.87
		High	Band Edge	-33.99	-10	-23.99
	80MHz	Low	Band Edge	-38.90	-25	-13.90
		High	Band Edge	-33.86	-10	-23.86
	70MHz	Low	Band Edge	-38.32	-25	-13.32
		High	Band Edge	-35.75	-10	-25.75
	60MHz	Low	Band Edge	-38.39	-25	-13.39
		High	Band Edge	-26.53	-10	-16.53
	50MHz	Low	Band Edge	-36.83	-25	-11.83
		High	Band Edge	-49.27	-25	-24.27
	40MHz	Low	Band Edge	-36.49	-25	-11.49
		High	Band Edge	-44.99	-25	-19.99
	30MHz	Low	Band Edge	-37.41	-25	-12.41
		High	Band Edge	-43.49	-25	-18.49
	20MHz	Low	Band Edge	-35.47	-25	-10.47
		High	Band Edge	-42.15	-25	-17.15
	15MHz	Low	Band Edge	-36.57	-25	-11.57
		High	Band Edge	-30.90	-13	-17.90
	10MHz	Low	Band Edge	-36.88	-25	-11.88
		High	Band Edge	-28.57	-10	-18.57

Table 7-23. Conducted Band Edge Test Results – n41 Ant 1

FCC ID: A3LSMS947B	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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LTE Band 41(PC2) – Ant1



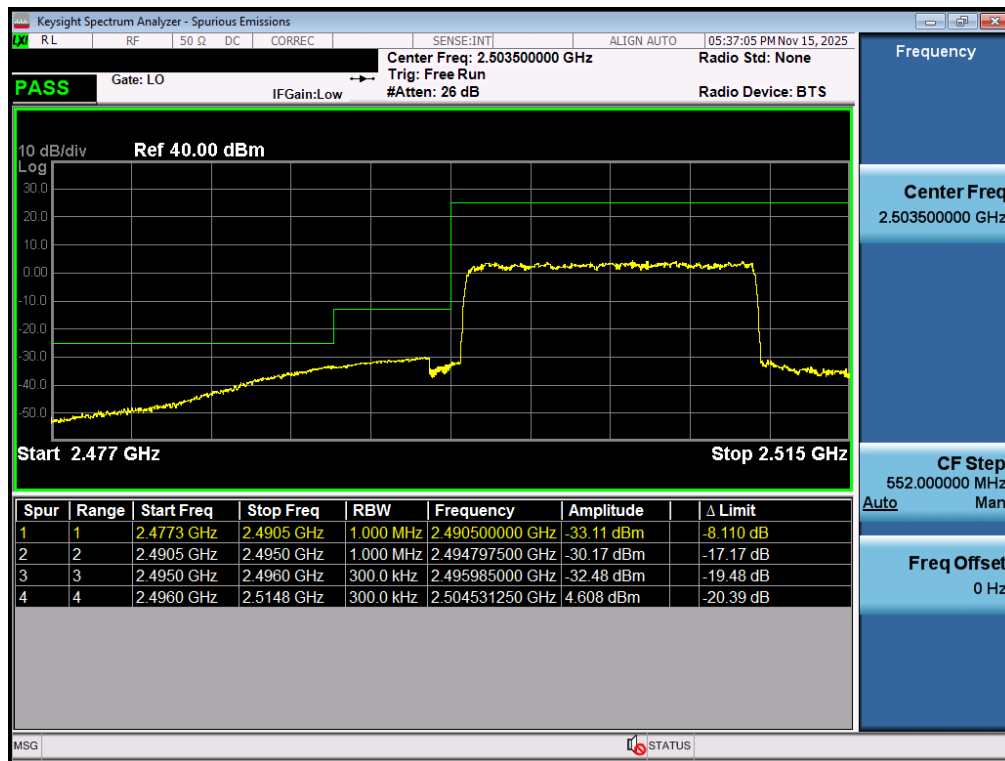
Plot 7-117. Lower ACP Plot (LTE Band 41(PC2) - 15MHz QPSK – Full RB – Ant2)



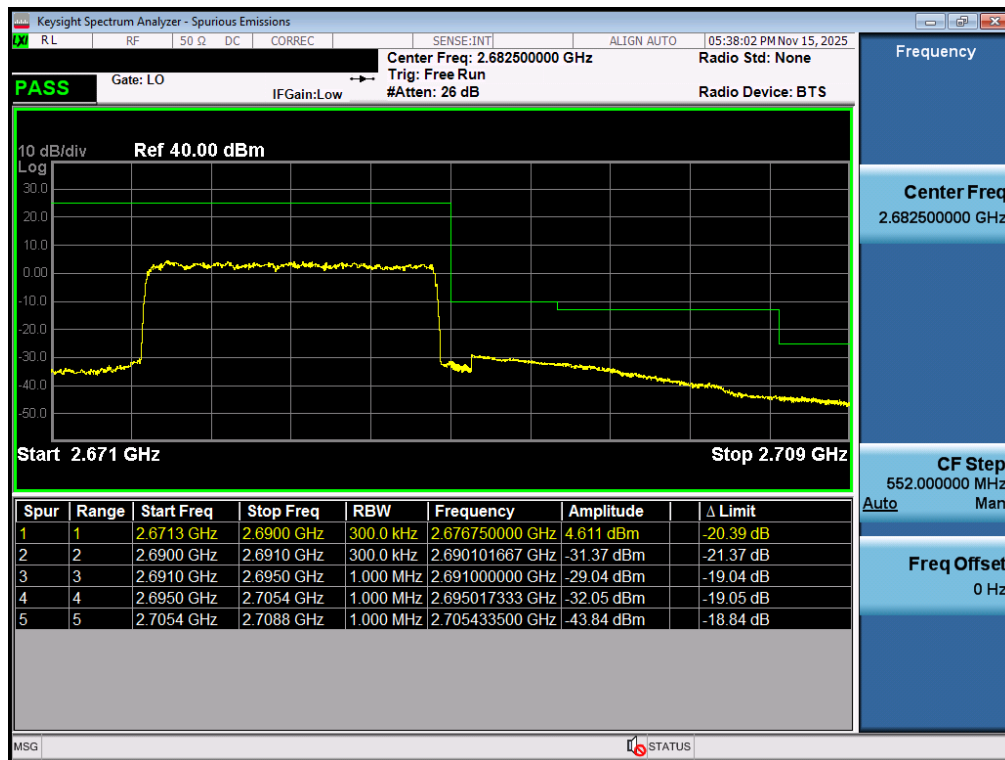
Plot 7-118. Upper ACP Plot (LTE Band 41(PC2) - 15MHz QPSK – Full RB – Ant2)

FCC ID: A3LSMS947B	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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LTE Band 41(PC3) – Ant1



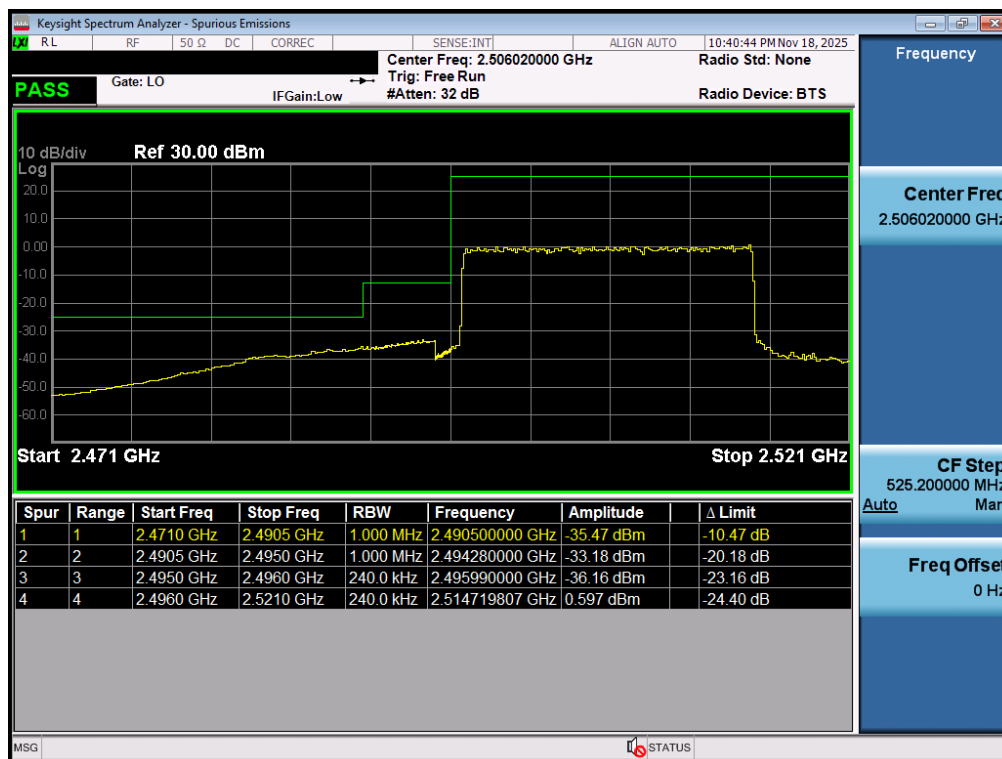
Plot 7-119. Lower ACP Plot (LTE Band 41(PC3) - 15MHz QPSK – Full RB - Ant1)



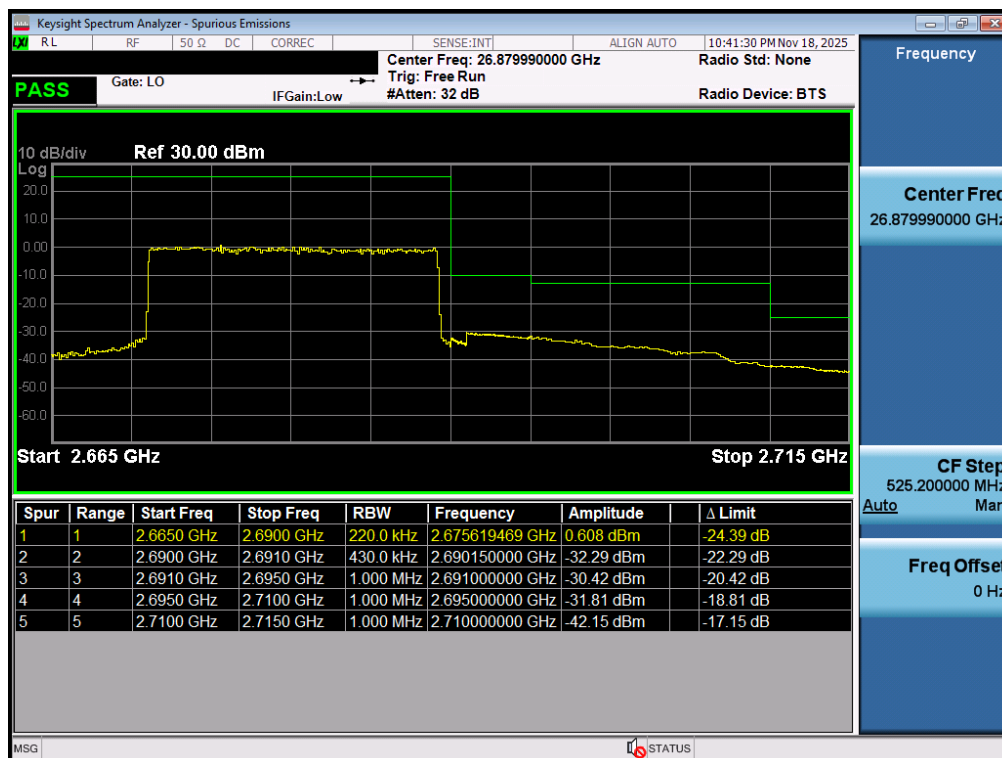
Plot 7-120. Upper ACP Plot (LTE Band 41(PC3) - 15MHz QPSK – Full RB - Ant1)

FCC ID: A3LSMS947B	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2508270083-08-R1.A3L	Test Dates: 11/12/2015 – 12/24/2025	EUT Type: Portable Handset	Page 102 of 128

NR Band n41 – Ant1



Plot 7-121. Lower ACP Plot (NR Band n41PC3 - 20MHz CP-OFDM-QPSK – Full RB - Ant1)



Plot 7-122. Upper ACP Plot (NR Band n41PC3 - 20MHz CP-OFDM-QPSK – Full RB - Ant1)

FCC ID: A3LSMS947B	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2508270083-08-R1.A3L	Test Dates: 11/12/2015 – 12/24/2025	EUT Type: Portable Handset	Page 103 of 128

Mode	Bandwidth	Channel	Test Case	Level [dBm]	Limit [dBm]	Margin [dB]
LTE-B41PC2	20MHz	Low	Band Edge	-28.06	-25	-3.06
		High	Band Edge	-22.31	-13	-9.31
	15MHz	Low	Band Edge	-28.23	-25	-3.23
		High	Band Edge	-21.61	-13	-8.61
	10MHz	Low	Band Edge	-29.63	-25	-4.63
		High	Band Edge	-17.36	-10	-7.36
	5MHz	Low	Band Edge	-22.55	-13	-9.55
		High	Band Edge	-17.72	-10	-7.72
LTE-B41PC3	20MHz	Low	Band Edge	-29.36	-25	-4.36
		High	Band Edge	-24.13	-13	-11.13
	15MHz	Low	Band Edge	-30.00	-25	-5.00
		High	Band Edge	-23.94	-13	-10.94
	10MHz	Low	Band Edge	-30.59	-25	-5.59
		High	Band Edge	-19.84	-10	-9.84
	5MHz	Low	Band Edge	-37.57	-25	-12.57
		High	Band Edge	-18.98	-10	-8.98

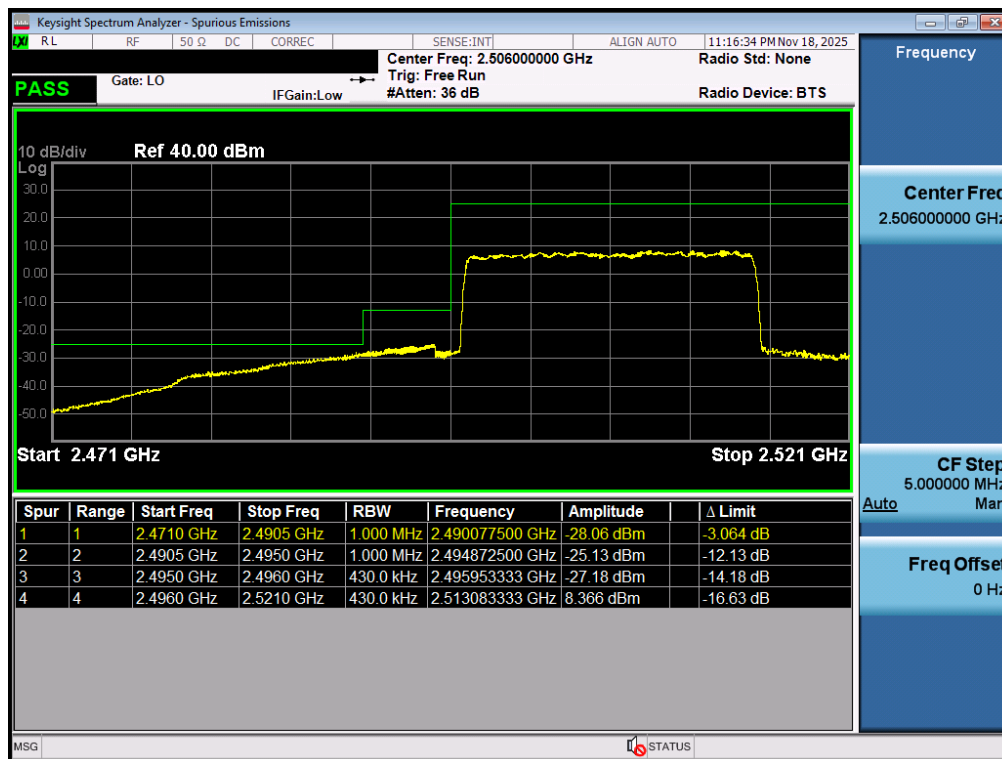
Table 7-24. Conducted Band Edge Test Results – LTE – Ant 2

Mode	Bandwidth	Channel	Test Case	Level [dBm]	Limit [dBm]	Margin [dB]
NR-n41PC3	100MHz	Low	Band Edge	-38.42	-25	-13.42
		High	Band Edge	-31.75	-10	-21.75
	90MHz	Low	Band Edge	-38.12	-25	-13.12
		High	Band Edge	-39.89	-13	-26.89
	80MHz	Low	Band Edge	-39.01	-25	-14.01
		High	Band Edge	-35.01	-10	-25.01
	70MHz	Low	Band Edge	-39.21	-25	-14.21
		High	Band Edge	-38.30	-13	-25.30
	60MHz	Low	Band Edge	-38.67	-25	-13.67
		High	Band Edge	-25.97	-10	-15.97
	50MHz	Low	Band Edge	-38.25	-25	-13.25
		High	Band Edge	-49.33	-25	-24.33
	40MHz	Low	Band Edge	-34.28	-25	-9.28
		High	Band Edge	-44.61	-25	-19.61
	30MHz	Low	Band Edge	-35.16	-25	-10.16
		High	Band Edge	-42.59	-25	-17.59
	20MHz	Low	Band Edge	-32.44	-25	-7.44
		High	Band Edge	-27.57	-13	-14.57
	15MHz	Low	Band Edge	-32.99	-25	-7.99
		High	Band Edge	-27.16	-13	-14.16
	10MHz	Low	Band Edge	-34.66	-25	-9.66
		High	Band Edge	-23.43	-10	-13.43

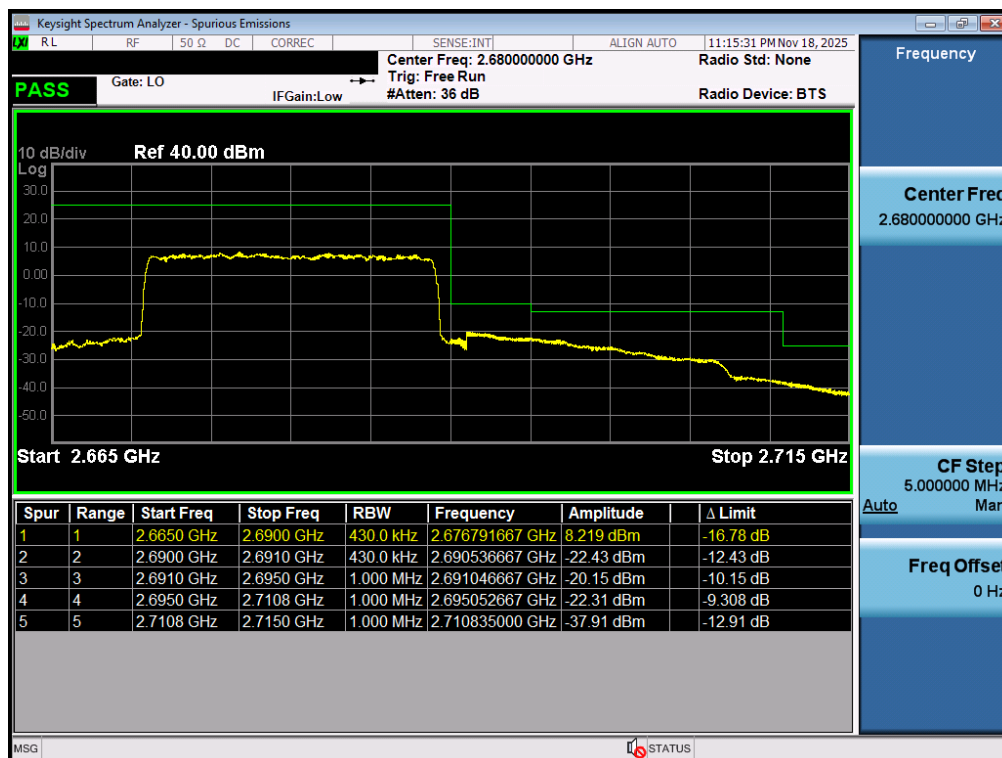
Table 7-25. Conducted Band Edge Test Results – NR – Ant 2

FCC ID: A3LSMS947B	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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LTE Band 41(PC2) – Ant2



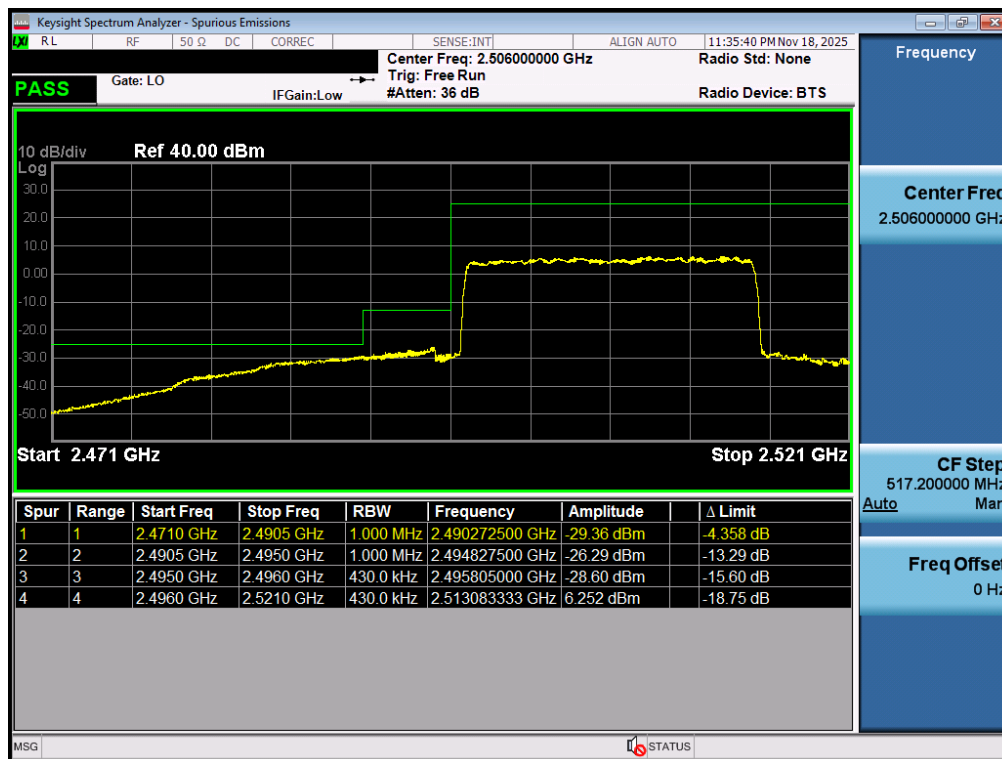
Plot 7-123. Lower ACP Plot (LTE Band 41(PC2) - 20MHz QPSK – Full RB - Ant2)



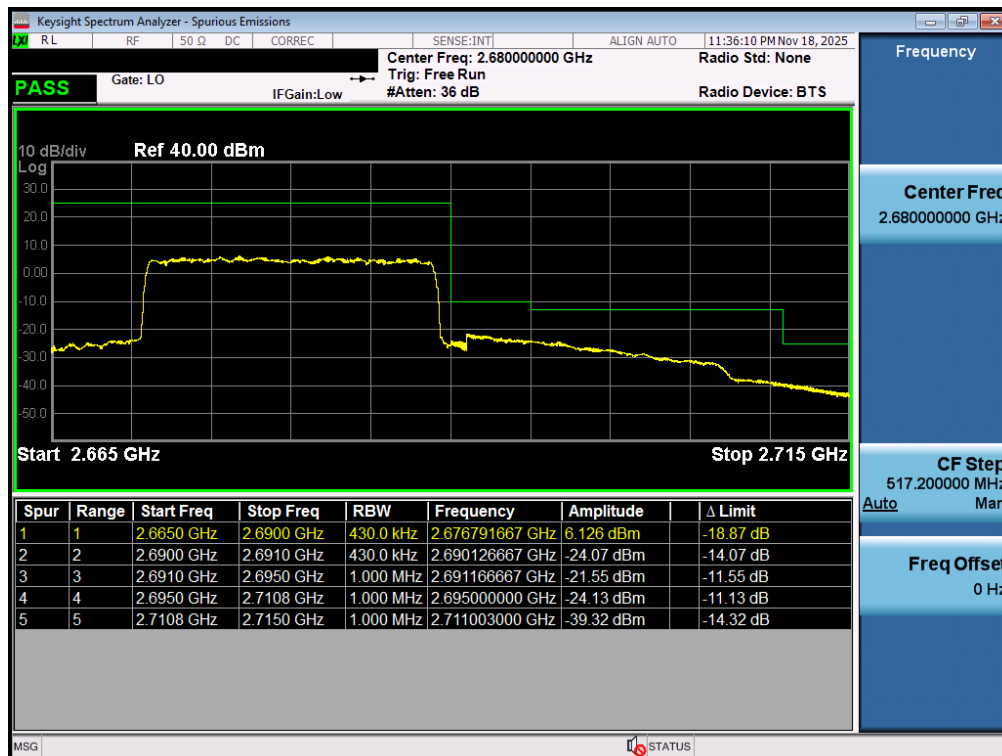
Plot 7-124. Upper ACP Plot (LTE Band 41(PC2) - 20MHz QPSK – Full RB - Ant2)

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LTE Band 41(PC3) – Ant2



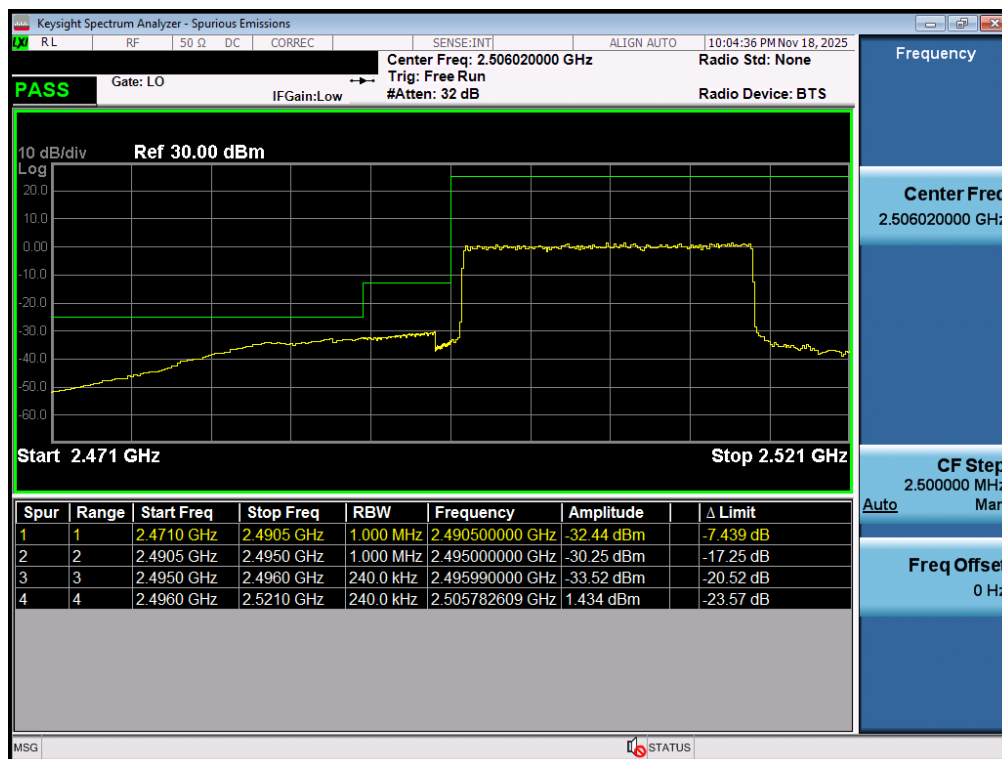
Plot 7-125. Lower ACP Plot (LTE Band 41(PC3) - 20MHz QPSK – Full RB - Ant2)



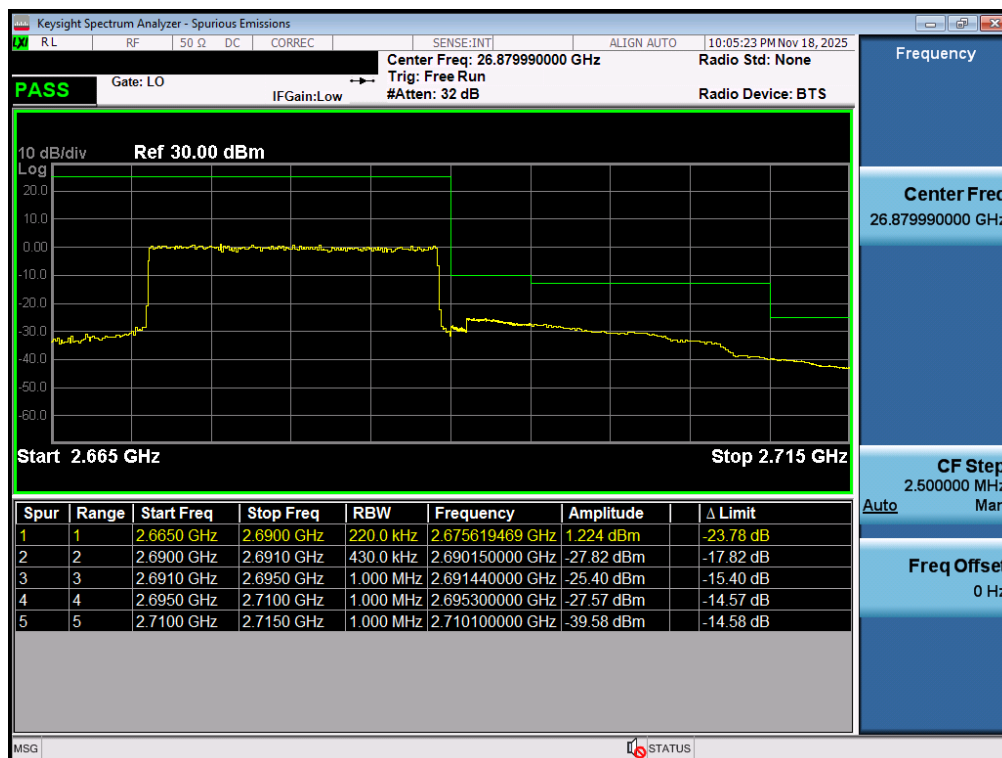
Plot 7-126. Upper ACP Plot (LTE Band 41(PC3) - 20MHz QPSK – Full RB - Ant2)

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NR Band n41 – Ant2



Plot 7-127. Lower ACP Plot (NR Band n41PC3 - 20MHz CP-OFDM-QPSK – Full RB – Ant2)



Plot 7-128. Upper ACP Plot (NR Band n41PC3 - 20MHz CP-OFDM-QPSK – Full RB – Ant2)

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7.6 Radiated Power (EIRP)

Test Overview

Equivalent Isotropic Radiated Power (EIRP) measurements are performed using the substitution method described in ANSI C63.26:2015 with the EUT transmitting into an integral antenna. Measurements are performed using vertically and horizontally polarized broadband horn antennas. All measurements are performed as RMS average measurements while the EUT is operating at maximum power, and at the appropriate frequencies.

Test Procedures Used

ANSI C63.26:2015 – Section 5.2.4.4

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.

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Test Setup

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

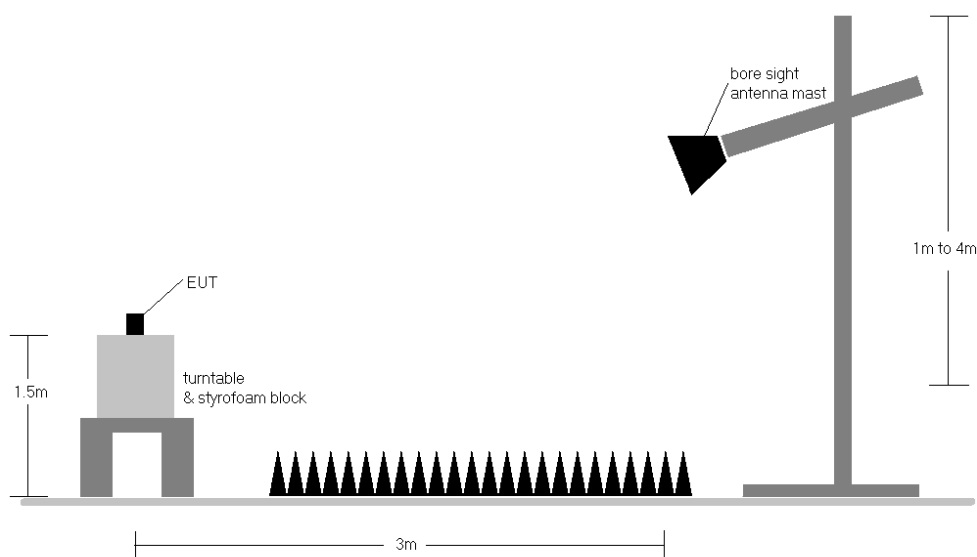


Figure 7-6. Radiated Test Setup >1GHz

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.
- 3) For NR operation, all subcarrier spacings (SCS) and transmission schemes (e.g. CP-OFDM and DFT-s-OFDM) were investigated to determine the worst-case configuration. All modes of operation were investigated and the worst-case configuration results are reported in this section.
- 4) Only the highest target power SRS-1 antenna for n41 default (Antenna B) are reported for the overall n41 SRS worst case.

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Bandwidth	Mod.	Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Ant. Gain [dBi]	RB Size/Offset	Substitute Level [dBm]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
20 MHz	QPSK	2506.0	V	143	146	4.15	1 / 0	20.36	24.51	0.282	33.01	-8.50
	QPSK	2593.0	V	112	148	4.14	1 / 0	21.40	25.54	0.358	33.01	-7.47
	QPSK	2680.0	V	108	235	4.49	1 / 0	20.68	25.17	0.329	33.01	-7.84
	16-QAM	2506.0	V	143	146	4.15	1 / 0	20.45	24.60	0.288	33.01	-8.41
	16-QAM	2593.0	V	112	148	4.14	1 / 0	21.39	25.53	0.358	33.01	-7.48
15 MHz	16-QAM	2680.0	V	108	235	4.49	1 / 0	20.68	25.17	0.329	33.01	-7.84
	QPSK	2503.5	V	143	146	4.15	75 / 0	20.33	24.48	0.280	33.01	-8.53
	QPSK	2593.0	V	112	148	4.14	75 / 0	21.39	25.53	0.358	33.01	-7.48
	QPSK	2682.5	V	108	235	4.50	75 / 0	20.64	25.13	0.326	33.01	-7.88
	16-QAM	2503.5	V	143	146	4.15	1 / 0	20.41	24.56	0.286	33.01	-8.45
10 MHz	16-QAM	2593.0	V	112	148	4.14	1 / 0	21.37	25.51	0.356	33.01	-7.50
	16-QAM	2682.5	V	108	235	4.50	1 / 0	20.63	25.12	0.325	33.01	-7.89
	QPSK	2501.0	V	143	146	4.15	50 / 0	20.34	24.49	0.281	33.01	-8.52
	QPSK	2593.0	V	112	148	4.14	1 / 25	21.39	25.53	0.358	33.01	-7.48
	QPSK	2685.0	V	108	235	4.50	50 / 0	20.61	25.11	0.324	33.01	-7.90
5 MHz	16-QAM	2501.0	V	143	146	4.15	1 / 25	20.42	24.57	0.286	33.01	-8.44
	16-QAM	2593.0	V	112	148	4.14	1 / 25	21.38	25.52	0.357	33.01	-7.49
	16-QAM	2685.0	V	108	235	4.50	1 / 25	20.61	25.11	0.324	33.01	-7.90
	QPSK	2498.5	V	143	146	4.14	1 / 12	20.41	24.55	0.285	33.01	-8.46
	QPSK	2593.0	V	112	148	4.14	1 / 12	21.44	25.58	0.362	33.01	-7.43
20 MHz	QPSK	2687.5	V	108	235	4.50	1 / 12	20.65	25.15	0.327	33.01	-7.86
	16-QAM	2498.5	V	143	146	4.14	1 / 12	20.50	24.64	0.291	33.01	-8.37
	16-QAM	2593.0	V	112	148	4.14	1 / 12	21.39	25.53	0.358	33.01	-7.48
	16-QAM	2687.5	V	108	235	4.50	1 / 12	20.62	25.12	0.325	33.01	-7.89
20 MHz	Opposite Pol.	2593.0	H	146	321	4.15	1/0	18.67	22.82	0.191	33.01	-10.19
	WCP	2593.0	V	120	139	4.15	1/0	19.70	23.85	0.243	33.01	-9.16

Table 7-26. EIRP Data (LTE Band 41(PC2)) – Ant1

Bandwidth	Mod.	Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Ant. Gain [dBi]	RB Size/Offset	Substitute Level [dBm]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
20 MHz	QPSK	2506.0	H	197	316	4.17	1 / 50	17.88	22.05	0.160	33.01	-10.96
	QPSK	2593.0	H	190	320	4.00	1 / 50	16.17	20.17	0.104	33.01	-12.84
	QPSK	2680.0	H	200	311	4.50	1 / 50	16.37	20.87	0.122	33.01	-12.14
	16-QAM	2506.0	H	197	316	4.17	1 / 50	16.70	20.87	0.122	33.01	-12.14
15 MHz	QPSK	2503.5	H	197	316	4.17	1 / 74	17.86	22.03	0.160	33.01	-10.98
	QPSK	2593.0	H	190	320	4.00	1 / 0	16.14	20.14	0.103	33.01	-12.87
	QPSK	2682.5	H	200	311	4.51	1 / 0	16.32	20.83	0.121	33.01	-12.18
	16-QAM	2503.5	H	197	316	4.17	1 / 0	16.70	20.87	0.122	33.01	-12.14
10 MHz	QPSK	2501.0	H	197	316	4.17	1 / 25	17.87	22.04	0.160	33.01	-10.97
	QPSK	2593.0	H	190	320	4.00	1 / 25	16.17	20.17	0.104	33.01	-12.84
	QPSK	2685.0	H	200	311	4.52	1 / 25	16.41	20.93	0.124	33.01	-12.08
	16-QAM	2501.0	H	197	316	4.17	1 / 0	16.69	20.86	0.122	33.01	-12.15
5 MHz	QPSK	2498.5	H	197	316	4.16	1 / 12	17.94	22.10	0.162	33.01	-10.91
	QPSK	2593.0	H	190	320	4.00	1 / 12	16.20	20.20	0.105	33.01	-12.81
	QPSK	2687.5	H	200	311	4.53	1 / 12	16.41	20.94	0.124	33.01	-12.07
	16-QAM	2498.5	H	197	316	4.16	1 / 12	16.82	20.98	0.125	33.01	-12.03
20 MHz	Opposite Pol.	2506.0	V	339	55	4.49	1/50	15.30	19.79	0.095	33.01	-13.22
	WCP	2506.0	H	194	322	4.50	1/50	15.15	19.65	0.092	33.01	-13.36

Table 7-27. EIRP Data (LTE Band 41(PC3)) – Ant1

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Bandwidth	Mod.	Frequency [MHz]	Ant. Pol. [H/V]	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 MHz	$\pi/2$ BPSK	2546.01	H	128	325	4.19	1 / 136	17.50	21.69	0.148	33.01	-11.32
	$\pi/2$ BPSK	2592.99	H	143	319	4.00	1 / 271	18.22	22.22	0.167	33.01	-10.79
	$\pi/2$ BPSK	2640.00	H	108	31	4.31	1 / 271	18.62	22.93	0.196	33.01	-10.08
	QPSK	2546.01	H	128	325	4.19	1 / 271	16.88	21.07	0.128	33.01	-11.94
	QPSK	2592.99	H	143	319	4.00	1 / 271	17.82	21.82	0.152	33.01	-11.19
	QPSK	2640.00	H	108	31	4.31	1 / 271	18.25	22.56	0.180	33.01	-10.45
90 MHz	16-QAM	2640.00	H	108	31	4.31	1 / 271	18.18	22.49	0.178	33.01	-10.52
	$\pi/2$ BPSK	2541.00	H	128	325	4.19	1 / 243	17.53	21.72	0.149	33.01	-11.29
	$\pi/2$ BPSK	2592.99	H	143	319	4.00	1 / 243	18.28	22.28	0.169	33.01	-10.73
	$\pi/2$ BPSK	2644.98	H	108	31	4.36	1 / 243	18.60	22.95	0.197	33.01	-10.06
	QPSK	2541.00	H	128	325	4.19	1 / 243	16.92	21.11	0.129	33.01	-11.90
	QPSK	2592.99	H	143	319	4.00	1 / 243	17.79	21.79	0.151	33.01	-11.22
80 MHz	QPSK	2644.98	H	108	31	4.36	1 / 243	18.27	22.62	0.183	33.01	-10.39
	16-QAM	2644.98	H	108	31	4.36	1 / 243	18.17	22.52	0.179	33.01	-10.49
	$\pi/2$ BPSK	2536.02	H	128	325	4.19	1 / 1	17.40	21.59	0.144	33.01	-11.42
	$\pi/2$ BPSK	2592.99	H	143	319	4.00	1 / 108	18.20	22.20	0.166	33.01	-10.81
	$\pi/2$ BPSK	2649.99	H	108	31	4.40	1 / 215	18.58	22.98	0.199	33.01	-10.03
	QPSK	2536.02	H	128	325	4.19	1 / 1	16.79	20.98	0.125	33.01	-12.03
70 MHz	QPSK	2592.99	H	143	319	4.00	1 / 108	17.71	21.71	0.148	33.01	-11.30
	QPSK	2649.99	H	108	31	4.40	1 / 215	18.21	22.61	0.183	33.01	-10.40
	16-QAM	2649.99	H	108	31	4.40	1 / 215	18.23	22.63	0.183	33.01	-10.38
	$\pi/2$ BPSK	2531.01	H	128	325	4.18	1 / 1	17.60	21.78	0.151	33.01	-11.23
	$\pi/2$ BPSK	2592.99	H	143	319	4.00	1 / 94	18.16	22.16	0.164	33.01	-10.85
	$\pi/2$ BPSK	2655.00	H	108	31	4.42	1 / 187	18.40	22.81	0.191	33.01	-10.20
60 MHz	QPSK	2531.01	H	128	325	4.18	1 / 1	16.93	21.11	0.129	33.01	-11.90
	QPSK	2592.99	H	143	319	4.00	1 / 1	17.70	21.70	0.148	33.01	-11.31
	QPSK	2655.00	H	108	31	4.42	1 / 187	18.03	22.44	0.176	33.01	-10.57
	16-QAM	2655.00	H	108	31	4.42	1 / 187	18.01	22.42	0.175	33.01	-10.59
	$\pi/2$ BPSK	2526.00	H	128	325	4.18	1 / 1	17.51	21.69	0.148	33.01	-11.32
	$\pi/2$ BPSK	2592.99	H	143	319	4.00	1 / 81	18.15	22.15	0.164	33.01	-10.86
50 MHz	$\pi/2$ BPSK	2659.98	H	108	31	4.43	1 / 160	18.32	22.75	0.188	33.01	-10.26
	QPSK	2526.00	H	128	325	4.18	1 / 1	16.87	21.05	0.127	33.01	-11.96
	QPSK	2592.99	H	143	319	4.00	1 / 81	17.73	21.73	0.149	33.01	-11.28
	QPSK	2659.98	H	108	31	4.43	1 / 160	17.98	22.41	0.174	33.01	-10.60
	16-QAM	2659.98	H	108	31	4.43	1 / 160	17.98	22.41	0.174	33.01	-10.60
	$\pi/2$ BPSK	2521.02	H	128	325	4.18	1 / 1	17.55	21.73	0.149	33.01	-11.28
40 MHz	$\pi/2$ BPSK	2592.99	H	143	319	4.00	1 / 66	18.15	22.15	0.164	33.01	-10.86
	$\pi/2$ BPSK	2664.99	H	108	31	4.45	1 / 1	18.32	22.77	0.189	33.01	-10.24
	QPSK	2521.02	H	128	325	4.18	1 / 1	16.92	21.10	0.129	33.01	-11.91
	QPSK	2592.99	H	143	319	4.00	1 / 66	17.68	21.68	0.147	33.01	-11.33
	QPSK	2664.99	H	108	31	4.45	1 / 131	17.98	22.43	0.175	33.01	-10.58
	16-QAM	2664.99	H	108	31	4.45	1 / 1	17.90	22.35	0.172	33.01	-10.66
30 MHz	$\pi/2$ BPSK	2516.01	H	128	325	4.18	1 / 1	17.45	21.63	0.146	33.01	-11.38
	$\pi/2$ BPSK	2592.99	H	143	319	4.00	1 / 53	18.15	22.15	0.164	33.01	-10.86
	$\pi/2$ BPSK	2670.00	H	108	31	4.47	1 / 104	18.29	22.75	0.188	33.01	-10.26
	QPSK	2516.01	H	128	325	4.18	1 / 1	16.80	20.98	0.125	33.01	-12.03
	QPSK	2592.99	H	143	319	4.00	1 / 53	17.70	21.70	0.148	33.01	-11.31
	QPSK	2670.00	H	108	31	4.47	1 / 104	17.92	22.38	0.173	33.01	-10.63
20 MHz	16-QAM	2670.00	H	108	31	4.47	1 / 104	17.90	22.36	0.172	33.01	-10.65
	$\pi/2$ BPSK	2511.00	H	128	325	4.18	1 / 1	17.51	21.68	0.147	33.01	-11.33
	$\pi/2$ BPSK	2592.99	H	143	319	4.00	1 / 39	18.17	22.17	0.165	33.01	-10.84
	$\pi/2$ BPSK	2674.98	H	108	31	4.48	1 / 1	18.31	22.79	0.190	33.01	-10.22
	QPSK	2511.00	H	128	325	4.18	1 / 1	16.88	21.05	0.127	33.01	-11.96
	QPSK	2592.99	H	143	319	4.00	1 / 39	17.70	21.70	0.148	33.01	-11.31
15 MHz	QPSK	2674.98	H	108	31	4.48	1 / 39	17.98	22.46	0.176	33.01	-10.55
	16-QAM	2674.98	H	108	31	4.48	1 / 1	17.96	22.44	0.176	33.01	-10.57
	$\pi/2$ BPSK	2506.02	H	128	325	4.17	1 / 1	17.41	21.58	0.144	33.01	-11.43
	$\pi/2$ BPSK	2592.99	H	143	319	4.00	1 / 49	18.15	22.15	0.164	33.01	-10.86
	$\pi/2$ BPSK	2679.99	H	108	31	4.50	1 / 25	18.27	22.77	0.189	33.01	-10.24
	QPSK	2506.02	H	128	325	4.17	1 / 25	16.75	20.92	0.124	33.01	-12.09
10 MHz	QPSK	2592.99	H	143	319	4.00	1 / 49	17.68	21.68	0.147	33.01	-11.33
	QPSK	2679.99	H	108	31	4.50	1 / 25	17.84	22.34	0.172	33.01	-10.67
	16-QAM	2679.99	H	108	31	4.50	1 / 25	17.86	22.36	0.172	33.01	-10.65
	$\pi/2$ BPSK	2503.50	H	128	325	4.17	1 / 1	17.52	21.69	0.148	33.01	-11.32
	$\pi/2$ BPSK	2592.99	H	143	319	4.00	1 / 36	18.17	22.17	0.165	33.01	-10.84
	$\pi/2$ BPSK	2682.50	H	108	31	4.51	1 / 19	18.21	22.72	0.187	33.01	-10.29
100 MHz	QPSK	2503.50	H	128	325	4.17	1 / 1	16.90	21.07	0.128	33.01	-11.94
	QPSK	2592.99	H	143	319	4.00	1 / 36	17.72	21.72	0.149	33.01	-11.29
	QPSK	2682.50	H	108	31	4.51	1 / 19	17.90	22.41	0.174	33.01	-10.60
	16-QAM	2682.50	H	108	31	4.51	1 / 19	17.81	22.32	0.171	33.01	-10.69
	$\pi/2$ BPSK	2501.00	H	128	325	4.17	1 / 12	17.49	21.66	0.147	33.01	-11.35
	$\pi/2$ BPSK	2592.99	H	143	319	4.00	1 / 22	18.16	22.16	0.164	33.01	-10.85
100 MHz	$\pi/2$ BPSK	2685.00	H	108	31	4.52	1 / 12	18.13	22.65	0.184	33.01	-10.36
	QPSK	2501.00	H	128	325	4.17	1 / 12	16.89	21.06	0.128	33.01	-11.95
	QPSK	2592.99	H	143	319	4.00	1 / 22	17.70	21.70	0.148	33.01	-11.31
	QPSK	2685.00	H	108	31	4.52	1 / 1	17.72	22.24	0.168	33.01	-10.77
	16-QAM	2685.00	H	108	31	4.52	1 / 1	17.68	22.20	0.166	33.01	-10.81
	QPSK (CP-OFDM)	2640.00	H	108	31	4.31	1 / 271	16.99	21.30	0.135	33.01	-11.71
	QPSK (WCP)	2640.00	H	205	326	4.31	1 / 136	16.23	20.54	0.113	33.01	-12.47

Table 7-28. EIRP Data (NR Band n41 (PC3)) – Ant1

FCC ID: A3LSMS947B	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2508270083-08-R1.A3L	Test Dates: 11/12/2015 – 12/24/2025	EUT Type: Portable Handset	Page 111 of 128

Bandwidth	Mod.	Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Ant. Gain [dBi]	RB Size/Offset	Substitute Level [dBm]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
20 MHz	QPSK	2506.0	V	127	275	4.15	1 / 0	19.04	23.19	0.208	33.01	-9.82
	QPSK	2593.0	V	127	278	4.14	1 / 99	19.27	23.41	0.219	33.01	-9.60
	QPSK	2680.0	V	120	266	4.49	1 / 99	17.40	21.89	0.155	33.01	-11.12
	16-QAM	2506.0	V	127	275	4.15	1 / 0	18.98	23.13	0.206	33.01	-9.88
	16-QAM	2593.0	V	127	278	4.14	1 / 99	19.23	23.37	0.217	33.01	-9.64
15 MHz	16-QAM	2680.0	V	120	266	4.49	1 / 99	17.46	21.95	0.157	33.01	-11.06
	QPSK	2503.5	V	127	275	4.15	75 / 0	18.96	23.11	0.205	33.01	-9.90
	QPSK	2593.0	V	127	278	4.14	75 / 0	19.25	23.39	0.218	33.01	-9.62
	QPSK	2682.5	V	120	266	4.50	75 / 0	17.37	21.86	0.154	33.01	-11.15
	16-QAM	2503.5	V	127	275	4.15	1 / 74	18.99	23.14	0.206	33.01	-9.87
10 MHz	16-QAM	2593.0	V	127	278	4.14	1 / 0	19.21	23.35	0.216	33.01	-9.66
	16-QAM	2682.5	V	120	266	4.50	1 / 0	17.44	21.93	0.156	33.01	-11.08
	QPSK	2501.0	V	127	275	4.15	50 / 0	19.00	23.15	0.206	33.01	-9.86
	QPSK	2593.0	V	127	278	4.14	50 / 0	19.25	23.39	0.218	33.01	-9.62
	QPSK	2685.0	V	120	266	4.50	50 / 0	17.37	21.87	0.154	33.01	-11.14
5 MHz	16-QAM	2501.0	V	127	275	4.15	1 / 49	18.90	23.05	0.202	33.01	-9.96
	16-QAM	2593.0	V	127	278	4.14	1 / 0	19.16	23.30	0.214	33.01	-9.71
	16-QAM	2685.0	V	120	266	4.50	1 / 0	17.43	21.93	0.156	33.01	-11.08
	QPSK	2498.5	V	127	275	4.14	25 / 0	18.95	23.09	0.204	33.01	-9.92
	QPSK	2593.0	V	127	278	4.14	25 / 0	19.23	23.37	0.217	33.01	-9.64
20 MHz	QPSK	2687.5	V	120	266	4.50	25 / 0	17.33	21.83	0.152	33.01	-11.18
	16-QAM	2498.5	V	127	275	4.14	1 / 24	18.95	23.09	0.204	33.01	-9.92
	16-QAM	2593.0	V	127	278	4.14	1 / 0	19.18	23.32	0.215	33.01	-9.69
	16-QAM	2687.5	V	120	266	4.50	1 / 0	17.45	21.95	0.157	33.01	-11.06
20 MHz	Opposite Pol.	2593.0	H	149	178	4.14	1/99	17.26	21.40	0.138	33.01	-11.61
	WCP	2593.0	V	133	302	4.14	1/0	15.52	19.66	0.093	33.01	-13.35

Table 7-29. EIRP Data (LTE Band 41(PC2)) – Ant2

Bandwidth	Mod.	Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Ant. Gain [dBi]	RB Size/Offset	Substitute Level [dBm]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
20 MHz	QPSK	2506.0	H	156	217	4.17	1 / 99	17.13	21.30	0.135	33.01	-11.71
	QPSK	2593.0	H	156	225	4.00	1 / 0	15.29	19.29	0.085	33.01	-13.72
	QPSK	2680.0	H	201	221	4.50	1 / 99	14.40	18.90	0.078	33.01	-14.11
	16-QAM	2506.0	H	156	217	4.17	1 / 99	16.09	20.26	0.106	33.01	-12.75
15 MHz	QPSK	2503.5	H	156	217	4.17	1 / 74	17.13	21.30	0.135	33.01	-11.71
	QPSK	2593.0	H	156	225	4.00	1 / 0	15.26	19.26	0.084	33.01	-13.75
	QPSK	2682.5	H	201	221	4.51	1 / 0	14.36	18.87	0.077	33.01	-14.14
	16-QAM	2503.5	H	156	217	4.17	1 / 74	16.10	20.27	0.107	33.01	-12.74
10 MHz	QPSK	2501.0	H	156	217	4.17	1 / 49	17.12	21.29	0.135	33.01	-11.72
	QPSK	2593.0	H	156	225	4.00	1 / 0	15.25	19.25	0.084	33.01	-13.76
	QPSK	2685.0	H	201	221	4.52	1 / 0	14.37	18.89	0.077	33.01	-14.12
	16-QAM	2501.0	H	156	217	4.17	1 / 49	16.11	20.28	0.107	33.01	-12.73
5 MHz	QPSK	2498.5	H	156	217	4.16	1 / 12	17.13	21.29	0.135	33.01	-11.72
	QPSK	2593.0	H	156	225	4.00	1 / 12	15.24	19.24	0.084	33.01	-13.77
	QPSK	2687.5	H	201	221	4.53	1 / 12	14.34	18.87	0.077	33.01	-14.14
	16-QAM	2498.5	H	156	217	4.16	1 / 12	16.20	20.36	0.109	33.01	-12.65
20 MHz	Opposite Pol.	2506.0	V	169	260	4.15	1/0	16.11	20.26	0.106	33.01	-12.75
	WCP	2506.0	H	194	212	4.17	1/99	14.60	18.77	0.075	33.01	-14.24

Table 7-30. EIRP Data (LTE Band 41(PC3)) – Ant2

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Bandwidth	Mod.	Frequency [MHz]	Ant. Pol. [H/V]	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 MHz	11/2 BPSK	2546.01	H	127	231	4.19	1 / 271	17.59	21.78	0.151	33.01	-11.23
	11/2 BPSK	2592.99	H	156	13	4.00	1 / 271	17.84	21.84	0.153	33.01	-11.17
	11/2 BPSK	2640.00	H	143	193	4.31	1 / 271	19.14	23.45	0.221	33.01	-9.56
	QPSK	2546.01	H	127	231	4.19	1 / 271	16.94	21.13	0.130	33.01	-11.88
	QPSK	2592.99	H	156	13	4.00	1 / 271	17.58	21.58	0.144	33.01	-11.43
	QPSK	2640.00	H	143	193	4.31	1 / 271	18.84	23.15	0.207	33.01	-9.86
90 MHz	16-QAM	2640.00	H	143	193	4.31	1 / 271	18.79	23.10	0.204	33.01	-9.91
	11/2 BPSK	2541.00	H	127	231	4.19	1 / 122	17.66	21.85	0.153	33.01	-11.16
	11/2 BPSK	2592.99	H	156	13	4.00	1 / 1	17.87	21.87	0.154	33.01	-11.14
	11/2 BPSK	2644.98	H	143	193	4.36	1 / 243	19.31	23.66	0.232	33.01	-9.35
	QPSK	2541.00	H	127	231	4.19	1 / 243	17.07	21.26	0.134	33.01	-11.75
	QPSK	2592.99	H	156	13	4.00	1 / 1	17.59	21.59	0.144	33.01	-11.42
80 MHz	QPSK	2644.98	H	143	193	4.36	1 / 243	18.96	23.31	0.214	33.01	-9.70
	16-QAM	2644.98	H	143	193	4.36	1 / 243	18.97	23.32	0.215	33.01	-9.69
	11/2 BPSK	2536.02	H	127	231	4.19	1 / 1	17.57	21.76	0.150	33.01	-11.25
	11/2 BPSK	2592.99	H	156	13	4.00	1 / 1	17.87	21.87	0.154	33.01	-11.14
	11/2 BPSK	2649.99	H	143	193	4.40	1 / 215	19.12	23.52	0.225	33.01	-9.49
	QPSK	2536.02	H	127	231	4.19	1 / 1	16.96	21.15	0.130	33.01	-11.86
70 MHz	QPSK	2592.99	H	156	13	4.00	1 / 1	17.61	21.61	0.145	33.01	-11.40
	QPSK	2649.99	H	143	193	4.40	1 / 215	18.78	23.18	0.208	33.01	-9.83
	16-QAM	2649.99	H	143	193	4.40	1 / 215	18.79	23.19	0.209	33.01	-9.82
	11/2 BPSK	2531.01	H	127	231	4.18	1 / 1	17.64	21.82	0.152	33.01	-11.19
	11/2 BPSK	2592.99	H	156	13	4.00	1 / 1	17.94	21.94	0.156	33.01	-11.07
	11/2 BPSK	2655.00	H	143	193	4.42	1 / 1	18.99	23.40	0.219	33.01	-9.61
60 MHz	QPSK	2531.01	H	127	231	4.18	1 / 1	17.03	21.21	0.132	33.01	-11.80
	QPSK	2592.99	H	156	13	4.00	1 / 1	17.70	21.70	0.148	33.01	-11.31
	QPSK	2655.00	H	143	193	4.42	1 / 1	18.67	23.08	0.203	33.01	-9.93
	16-QAM	2655.00	H	143	193	4.42	1 / 1	18.65	23.06	0.202	33.01	-9.95
	11/2 BPSK	2526.00	H	127	231	4.18	1 / 1	17.64	21.82	0.152	33.01	-11.19
	11/2 BPSK	2592.99	H	156	13	4.00	1 / 1	17.85	21.85	0.153	33.01	-11.16
50 MHz	11/2 BPSK	2659.98	H	143	193	4.43	1 / 160	18.99	23.42	0.220	33.01	-9.59
	QPSK	2526.00	H	127	231	4.18	1 / 1	17.01	21.19	0.132	33.01	-11.82
	QPSK	2592.99	H	156	13	4.00	1 / 1	17.57	21.57	0.144	33.01	-11.44
	QPSK	2659.98	H	143	193	4.43	1 / 160	18.65	23.08	0.203	33.01	-9.93
	16-QAM	2659.98	H	143	193	4.43	1 / 160	18.69	23.12	0.205	33.01	-9.89
	11/2 BPSK	2521.02	H	127	231	4.18	1 / 131	17.59	21.77	0.150	33.01	-11.24
40 MHz	11/2 BPSK	2592.99	H	156	13	4.00	1 / 66	17.76	21.76	0.150	33.01	-11.25
	11/2 BPSK	2664.99	H	143	193	4.45	1 / 131	19.00	23.45	0.221	33.01	-9.56
	QPSK	2521.02	H	127	231	4.18	1 / 131	17.03	21.21	0.132	33.01	-11.80
	QPSK	2592.99	H	156	13	4.00	1 / 66	17.49	21.49	0.141	33.01	-11.52
	QPSK	2664.99	H	143	193	4.45	1 / 131	18.66	23.11	0.205	33.01	-9.90
	16-QAM	2664.99	H	143	193	4.45	1 / 131	18.66	23.11	0.205	33.01	-9.90
30 MHz	11/2 BPSK	2516.01	H	127	231	4.18	1 / 1	17.52	21.70	0.148	33.01	-11.31
	11/2 BPSK	2592.99	H	156	13	4.00	1 / 53	17.77	21.77	0.150	33.01	-11.24
	11/2 BPSK	2670.00	H	143	193	4.47	1 / 1	18.90	23.36	0.217	33.01	-9.65
	QPSK	2516.01	H	127	231	4.18	1 / 1	16.89	21.07	0.128	33.01	-11.94
	QPSK	2592.99	H	156	13	4.00	1 / 53	17.51	21.51	0.142	33.01	-11.50
	QPSK	2670.00	H	143	193	4.47	1 / 1	18.57	23.03	0.201	33.01	-9.98
20 MHz	16-QAM	2670.00	H	143	193	4.47	1 / 104	18.56	23.02	0.201	33.01	-9.99
	11/2 BPSK	2511.00	H	127	231	4.18	1 / 1	17.50	21.67	0.147	33.01	-11.34
	11/2 BPSK	2592.99	H	156	13	4.00	1 / 39	17.76	21.76	0.150	33.01	-11.25
	11/2 BPSK	2674.98	H	143	193	4.48	1 / 76	18.93	23.41	0.219	33.01	-9.60
	QPSK	2511.00	H	127	231	4.18	1 / 1	16.88	21.05	0.127	33.01	-11.96
	QPSK	2592.99	H	156	13	4.00	1 / 39	17.51	21.51	0.142	33.01	-11.50
15 MHz	QPSK	2674.98	H	143	193	4.48	1 / 76	18.60	23.08	0.203	33.01	-9.93
	16-QAM	2674.98	H	143	193	4.48	1 / 76	18.64	23.12	0.205	33.01	-9.89
	11/2 BPSK	2506.02	H	127	231	4.17	1 / 25	17.51	21.68	0.147	33.01	-11.33
	11/2 BPSK	2592.99	H	156	13	4.00	1 / 25	17.75	21.75	0.150	33.01	-11.26
	11/2 BPSK	2679.99	H	143	193	4.50	1 / 25	18.88	23.38	0.218	33.01	-9.63
	QPSK	2506.02	H	127	231	4.17	1 / 25	16.90	21.07	0.128	33.01	-11.94
10 MHz	QPSK	2592.99	H	156	13	4.00	1 / 1	17.48	21.48	0.141	33.01	-11.53
	QPSK	2679.99	H	143	193	4.50	1 / 49	18.47	22.97	0.198	33.01	-10.04
	16-QAM	2679.99	H	143	193	4.50	1 / 25	18.49	22.99	0.199	33.01	-10.02
	11/2 BPSK	2503.50	H	127	231	4.17	1 / 36	17.50	21.67	0.147	33.01	-11.34
	11/2 BPSK	2592.99	H	156	13	4.00	1 / 19	17.74	21.74	0.149	33.01	-11.27
	11/2 BPSK	2682.50	H	143	193	4.51	1 / 19	18.90	23.41	0.219	33.01	-9.60
5 MHz	QPSK	2503.50	H	127	231	4.17	1 / 19	16.93	21.10	0.129	33.01	-11.91
	QPSK	2592.99	H	156	13	4.00	1 / 19	17.48	21.48	0.141	33.01	-11.53
	QPSK	2682.50	H	143	193	4.51	1 / 36	18.53	23.04	0.202	33.01	-9.97
	16-QAM	2682.50	H	143	193	4.51	1 / 36	18.58	23.09	0.204	33.01	-9.92
	11/2 BPSK	2501.00	H	127	231	4.17	1 / 12	17.58	21.75	0.150	33.01	-11.26
	11/2 BPSK	2592.99	H	156	13	4.00	1 / 22	17.81	21.81	0.152	33.01	-11.20
100 MHz	11/2 BPSK	2685.00	H	143	193	4.52	1 / 12	18.87	23.39	0.218	33.01	-9.62
	QPSK	2501.00	H	127	231	4.17	1 / 12	16.97	21.14	0.130	33.01	-11.87
	QPSK	2592.99	H	156	13	4.00	1 / 12	17.56	21.56	0.143	33.01	-11.45
	QPSK	2685.00	H	143	193	4.52	1 / 1	18.47	22.99	0.199	33.01	-10.02
	16-QAM	2685.00	H	143	193	4.52	1 / 1	18.49	23.01	0.200	33.01	-10.00
	QPSK (CP-OFDM)	2640.00	H	143	193	4.31	1 / 271	17.72	22.03	0.160	33.01	-10.98
100 MHz	QPSK (WCP)	2640.00	H	112	200	4.31	1 / 271	16.74	21.05	0.127	33.01	-11.96

Table 7-31. EIRP Data (NR Band n41 (PC3)) – Ant2

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7.7 Radiated Spurious Emissions Measurements

Test Overview

Radiated spurious emissions measurements are performed using the field strength conversion method described in ANSI C63.26:2015 with the EUT transmitting into an integral antenna. Measurements on signals operating below 1GHz are performed using hybrid (biconical/log) antennas. Measurements on signals operating above 1GHz are performed using vertically and horizontally polarized broadband horn antennas. All measurements are performed as RMS measurements while the EUT is operating at maximum power, and at the appropriate frequencies.

Test Procedures Used

ANSI C63.26:2015 – Section 5.5.4

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.

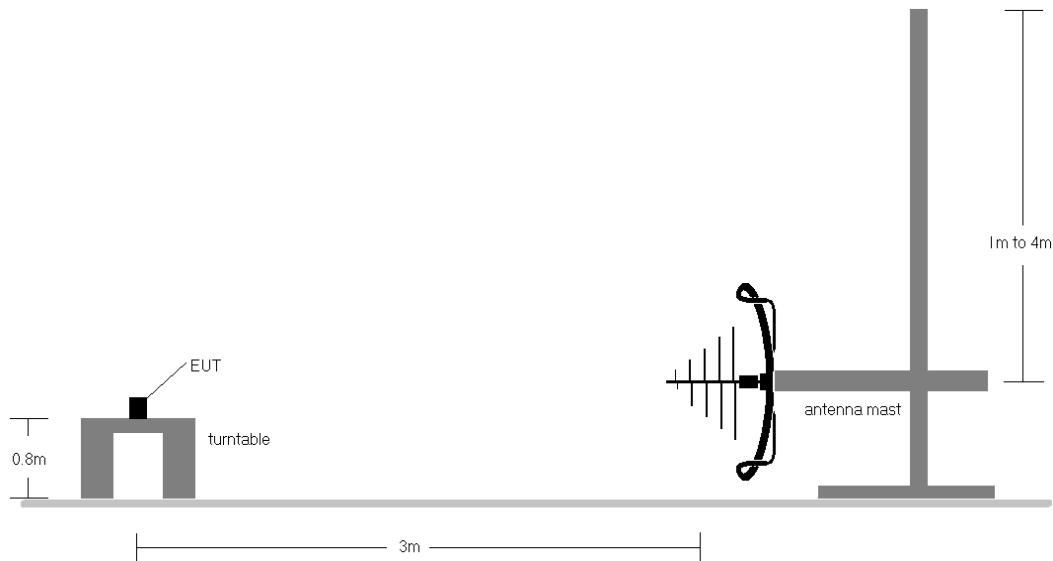


Figure 7-7. Test Instrument & Measurement Setup < 1GHz

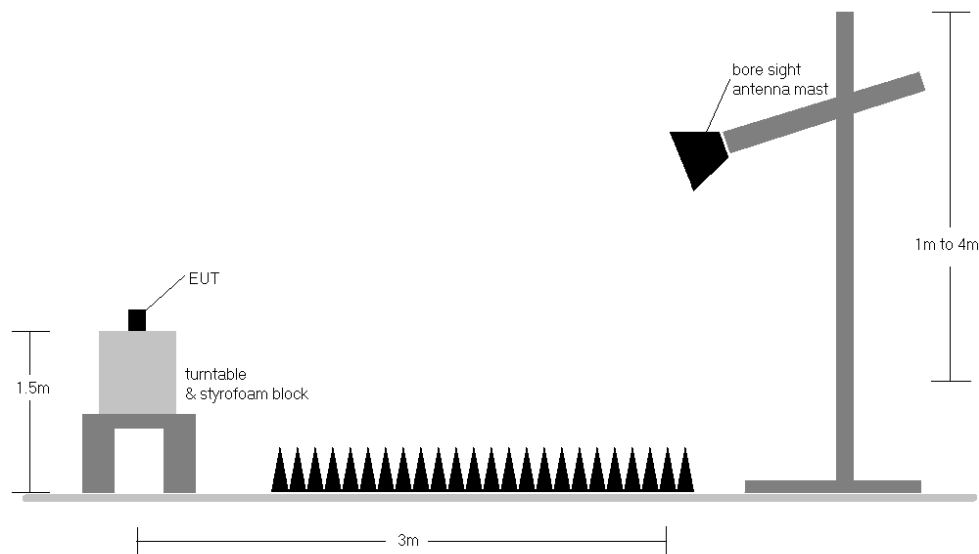


Figure 7-8. Test Instrument & Measurement Setup >1 GHz

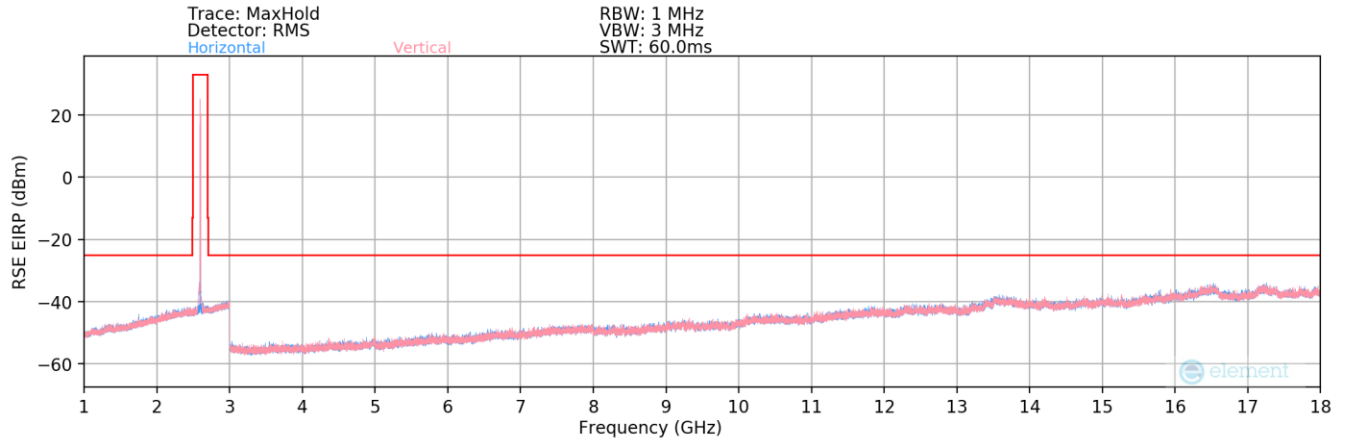
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Test Notes

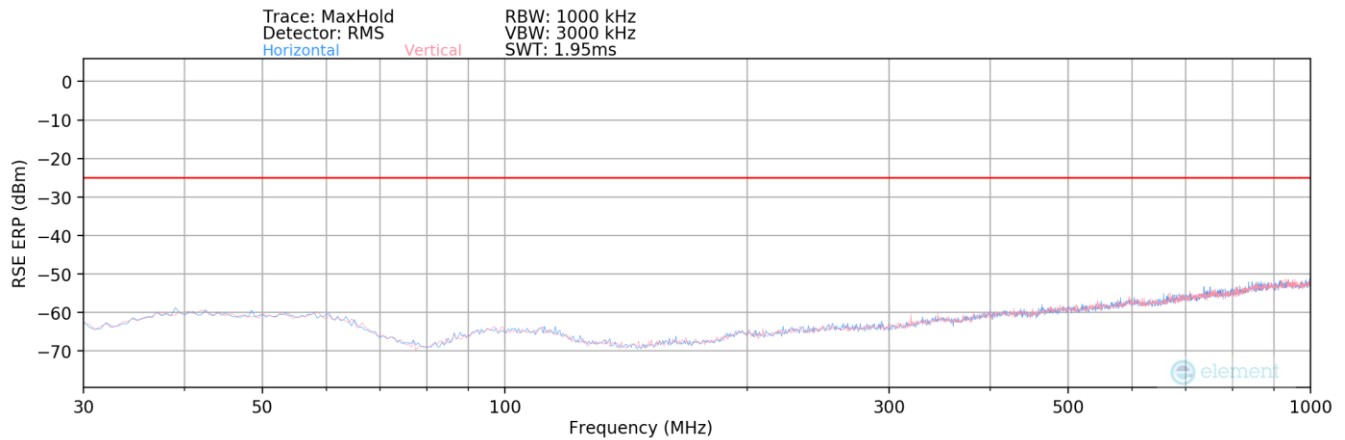
- 1) Field strengths are calculated using the Measurement quantity conversions in ANSI C63.26:2015 Section 5.2.7:
 - a) $E(\text{dB}\mu\text{V/m}) = \text{Measured amplitude level (dBm)} + 107 + \text{Cable Loss (dB)} + \text{Antenna Factor (dB/m)}$
 - b) $\text{EIRP (dBm)} = E(\text{dB}\mu\text{V/m}) + 20\log D - 104.8$; where D is the measurement distance in meters.
- 2) 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.
- 3) This unit was tested with its standard battery.
- 4) The spectrum is measured from 9kHz to the 10th harmonic of the fundamental frequency of the transmitter. The worst-case emissions are reported.
- 5) 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.
- 6) The "-" shown in the following RSE tables are used to denote a noise floor measurement.
- 7) For NR operation, all subcarrier spacings (SCS) and transmission schemes (e.g. CP-OFDM and DFT-s-OFDM) were investigated to determine the worst case configuration. All modes of operation were investigated and the worst case configuration results are reported in this section.
- 8) Spurious emission in EN-DC Operating mode with Sub 6GHz NR carrier as well as an LTE carrier (anchor) has been checked and was found to not to be the worst case. Spurious emissions from the NR carrier device are subject to the rules under which the NR carrier operates. Spurious emissions caused by the LTE carrier must meet the requirements of the rules under which the LTE carrier operates.
- 9) Only the highest target power SRS-1 antenna for n41 default (Antenna B) are reported for the overall n41 SRS worst case.

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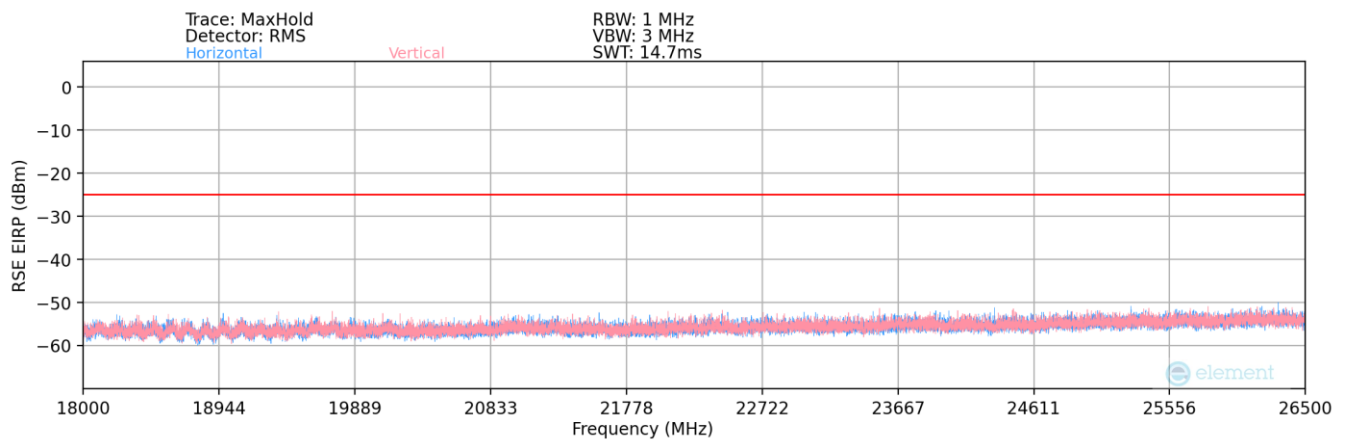
LTE Band 41 (PC2)– Ant1



Plot 7-129. Radiated Spurious Plot (LTE Band 41(PC2)) – Ant1



Plot 7-130. Radiated Spurious Plot (LTE Band 41(PC2)) – Ant1



Plot 7-131. Radiated Spurious Plot (LTE Band 41(PC2)) – Ant1

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Bandwidth (MHz):	20
Frequency (MHz):	2593.0
RB / Offset:	1 / 50

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]
77.00	V	-	-	-67.27	-18.16	21.57	-75.84	-25.00	-50.84
200.00	V	-	-	-72.63	-13.40	20.97	-76.44	-25.00	-51.44
317.00	V	-	-	-74.31	-10.55	22.14	-75.26	-25.00	-50.26

Table 7-32. Radiated Spurious Data (LTE Band 41(PC2)) – Ant1

Bandwidth (MHz):	20
Frequency (MHz):	2506.0
RB / Offset:	1 / 50

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]
5012.00	V	-	-	-80.73	10.12	36.39	-58.87	-25.00	-33.87
7518.00	V	-	-	-82.15	15.55	40.40	-54.86	-25.00	-29.86
10024.00	V	-	-	-83.14	18.98	42.84	-52.42	-25.00	-27.42

Table 7-33. Radiated Spurious Data (LTE Band 41(PC2)– Low Channel) – Ant1

Bandwidth (MHz):	20
Frequency (MHz):	2593.0
RB / Offset:	1 / 50

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]
5186.00	V	-	-	-80.80	10.38	36.58	-58.68	-25.00	-33.68
7779.00	V	-	-	-81.88	15.44	40.56	-54.69	-25.00	-29.69
10372.00	V	-	-	-82.84	19.53	43.69	-51.57	-25.00	-26.57

Table 7-34. Radiated Spurious Data (LTE Band 41(PC2)– Mid Channel) – Ant1

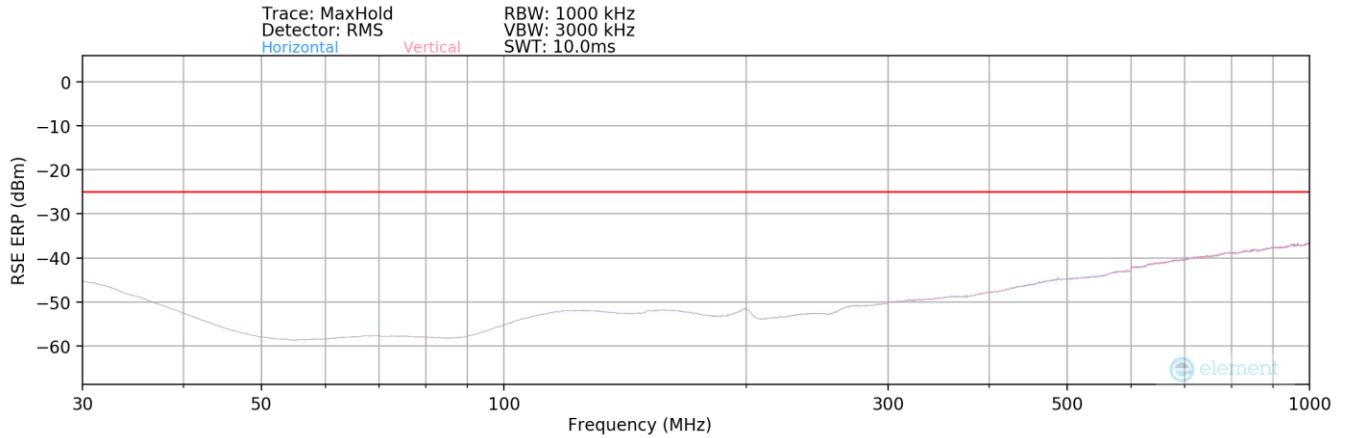
Bandwidth (MHz):	20
Frequency (MHz):	2680.0
RB / Offset:	1 / 50

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]
5360.00	V	-	-	-80.76	10.79	37.03	-58.23	-25.00	-33.23
8040.00	V	-	-	-82.51	16.08	40.57	-54.69	-25.00	-29.69
10720.00	V	-	-	-82.72	20.23	44.51	-50.74	-25.00	-25.74

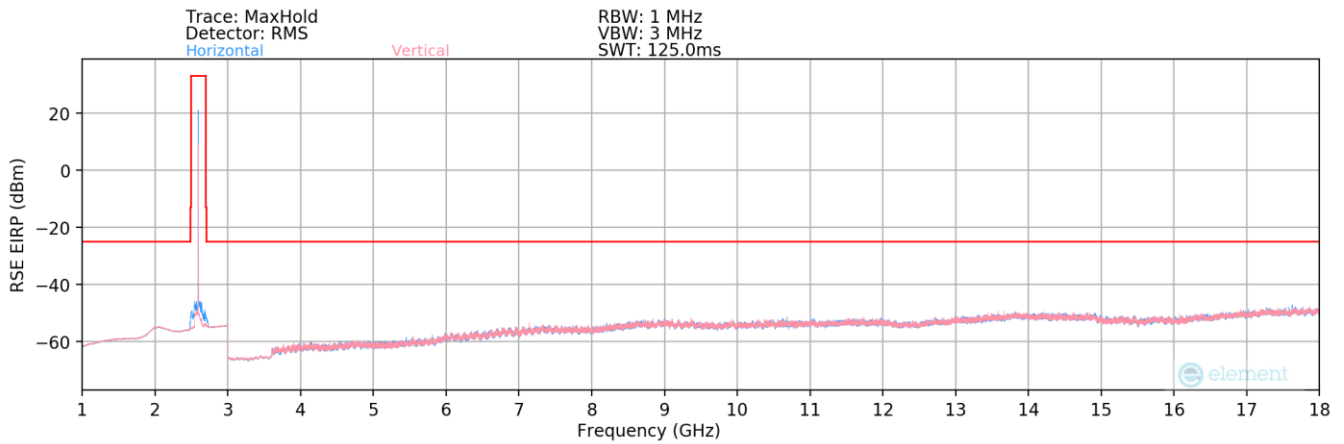
Table 7-35. Radiated Spurious Data (LTE Band 41(PC2)– High Channel) – Ant1

FCC ID: A3LSMS947B	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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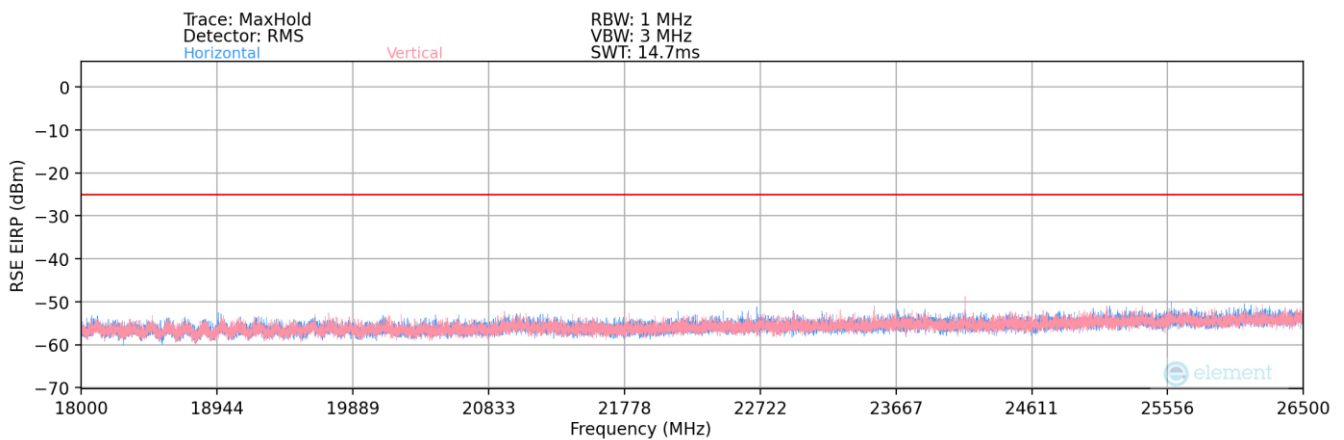
NR Band n41(PC3) – Ant1



Plot 7-132. Radiated Spurious Plot (NR Band n41(PC3) – Ant1)



Plot 7-133. Radiated Spurious Plot (NR Band n41(PC3) – Ant1)



Plot 7-134. Radiated Spurious Plot NR Band n41(PC3) – Ant1

FCC ID: A3LSMS947B	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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Bandwidth (MHz):	100
Frequency (MHz):	2592.99
RB / Offset:	1 / 136
Mode:	Stand Alone

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]
485.00	H	-	-	-101.25	25.73	31.48	-65.93	-25.00	-40.93

Table 7-36. Radiated Spurious Data (NR Band n41(PC3) – Ant1

Bandwidth (MHz):	100
Frequency (MHz):	2546.01
RB / Offset:	1 / 136
Mode:	Stand Alone

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]
5092.02	V	-	-	-76.82	3.17	33.35	-61.91	-25.00	-36.91
7638.03	V	-	-	-77.90	9.72	38.82	-56.44	-25.00	-31.44
10184.04	V	-	-	-78.36	12.49	41.13	-54.13	-25.00	-29.13

Table 7-37. Radiated Spurious Data (NR Band n41(PC3) – Low Channel) – Ant1

Bandwidth (MHz):	100
Frequency (MHz):	2592.99
RB / Offset:	1 / 136
Mode:	Stand Alone

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]
5185.98	V	-	-	-76.10	3.36	34.26	-60.99	-25.00	-35.99
7778.97	V	-	-	-76.79	8.63	38.84	-56.42	-25.00	-31.42
10371.96	V	-	-	-78.79	12.21	40.42	-54.83	-25.00	-29.83

Table 7-38. Radiated Spurious Data (NR Band n41(PC3) – Mid Channel) – Ant1

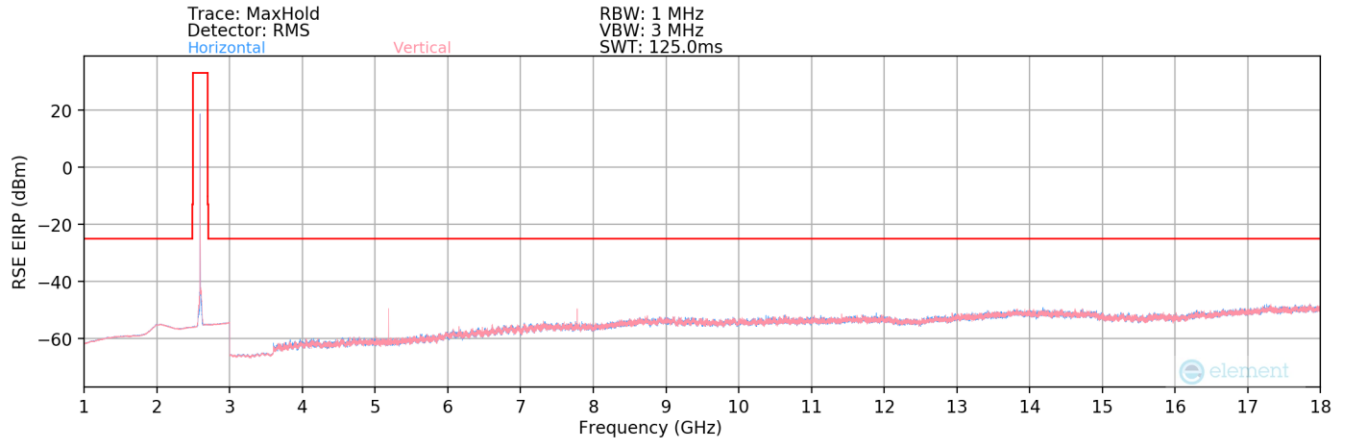
Bandwidth (MHz):	100
Frequency (MHz):	2640.00
RB / Offset:	1 / 136
Mode:	Stand Alone

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]
5280.00	V	-	-	-76.71	3.28	33.57	-61.69	-25.00	-36.69
7920.00	V	-	-	-78.10	9.67	38.57	-56.69	-25.00	-31.69
10560.00	V	-	-	-78.83	12.67	40.84	-54.41	-25.00	-29.41

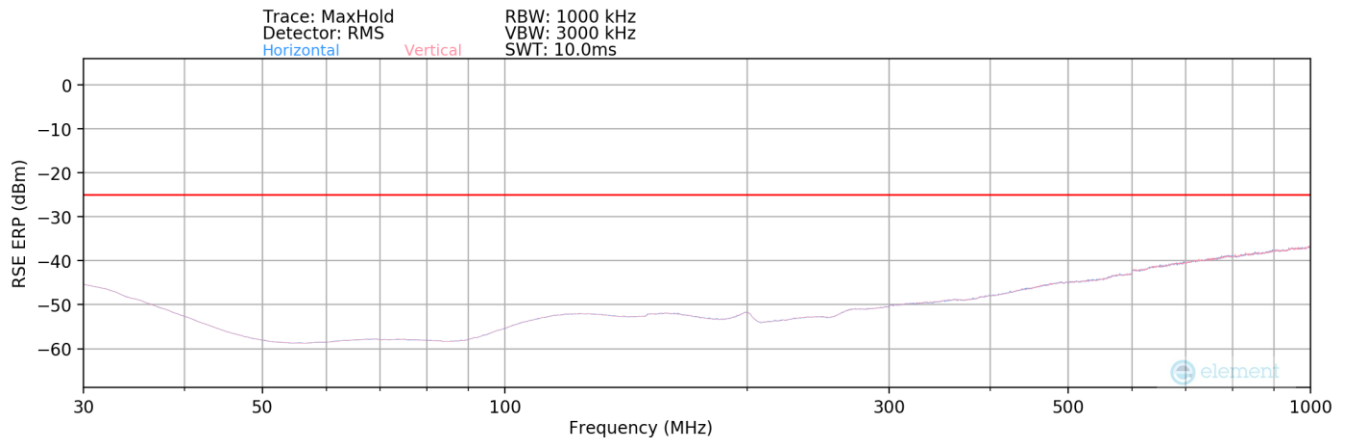
Table 7-39. Radiated Spurious Data (NR Band n41(PC3) – High Channel) – Ant1

FCC ID: A3LSMS947B	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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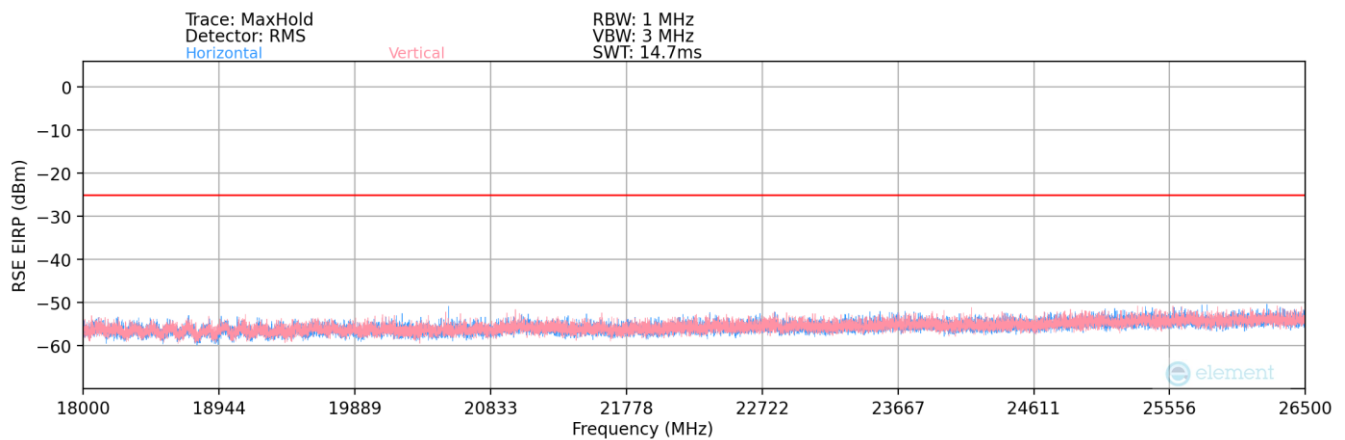
LTE Band 41(PC2)– Ant2



Plot 7-135. Radiated Spurious Plot (LTE Band 41(PC2)) – Ant2



Plot 7-136. Radiated Spurious Plot (LTE Band 41(PC2)) – Ant2



Plot 7-137. Radiated Spurious Plot (LTE Band 41(PC2)) – Ant2

FCC ID: A3LSMS947B	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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Bandwidth (MHz):	20
Frequency (MHz):	2593.0
RB / Offset:	1 / 50

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]
425.00	H	-	-	-98.91	24.15	32.24	-65.17	-25.00	-40.17

Table 7-40. Radiated Spurious Data (LTE Band 41(PC2) – Ant2

Bandwidth (MHz):	20
Frequency (MHz):	2506.0
RB / Offset:	1 / 50

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]
5012.00	H	122	318	-66.94	3.01	43.07	-52.19	-25.00	-27.19
7518.00	H	261	3	-76.58	9.31	39.73	-55.53	-25.00	-30.53
10024.00	H	247	36	-74.59	11.51	43.92	-51.34	-25.00	-26.34
12530.00	H	-	-	-79.41	13.23	40.82	-54.44	-25.00	-29.44
15036.00	H	-	-	-79.54	14.22	41.68	-53.58	-25.00	-28.58
17542.00	H	-	-	-79.06	16.76	44.70	-50.55	-25.00	-25.55

Table 7-41. Radiated Spurious Data (LTE Band 41(PC2) – Low Channel) – Ant2

Bandwidth (MHz):	20
Frequency (MHz):	2593.0
RB / Offset:	1 / 50

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]
5186.00	H	352	5	-61.07	3.36	49.29	-45.96	-25.00	-20.96
7779.00	H	135	295	-72.85	8.63	42.78	-52.48	-25.00	-27.48
10372.00	H	333	12	-71.25	12.21	47.96	-47.29	-25.00	-22.29
12965.00	H	-	-	-79.82	14.39	41.57	-53.69	-25.00	-28.69
15558.00	H	-	-	-78.79	13.63	41.84	-53.42	-25.00	-28.42
18151.00	H	-	-	-58.16	1.04	49.88	-54.92	-25.00	-29.92
20744.00	H	150	25	-56.91	2.50	52.59	-52.21	-25.00	-27.21
23337.00	H	-	-	-58.20	3.75	52.55	-52.25	-25.00	-27.25

Table 7-42. Radiated Spurious Data (LTE Band 41(PC2) – Mid Channel) – Ant2

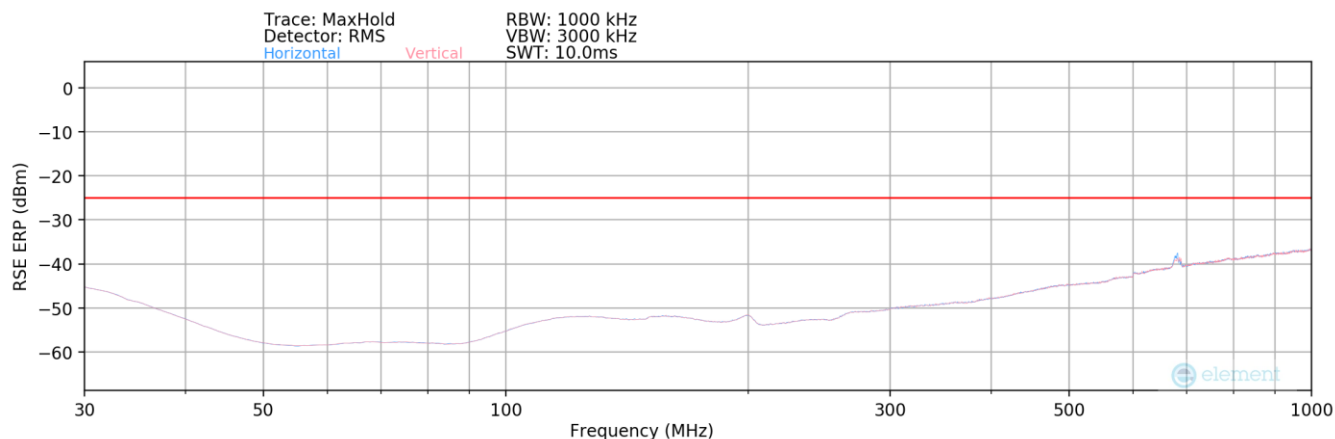
Bandwidth (MHz):	20
Frequency (MHz):	2680.0
RB / Offset:	1 / 50

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]
5360.00	H	129	47	-59.11	3.38	51.27	-43.99	-25.00	-18.99
8040.00	H	144	27	-70.73	9.46	45.73	-49.52	-25.00	-24.52
10720.00	H	398	28	-72.22	12.84	47.62	-47.63	-25.00	-22.63
13400.00	H	-	-	-79.21	14.92	42.71	-52.54	-25.00	-27.54
16080.00	H	-	-	-79.35	14.15	41.80	-53.46	-25.00	-28.46
18760.00	H	-	-	-57.39	1.15	50.76	-54.04	-25.00	-29.04

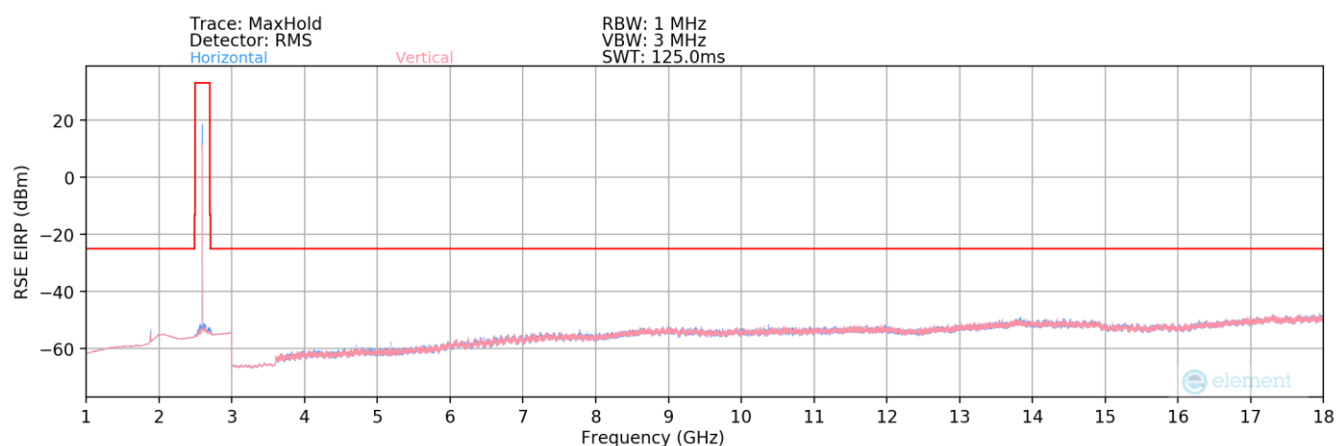
Table 7-43. Radiated Spurious Data (LTE Band 41(PC2) – High Channel) – Ant2

FCC ID: A3LSMS947B	PART 27 MEASUREMENT REPORT			Approved by: Technical Manager
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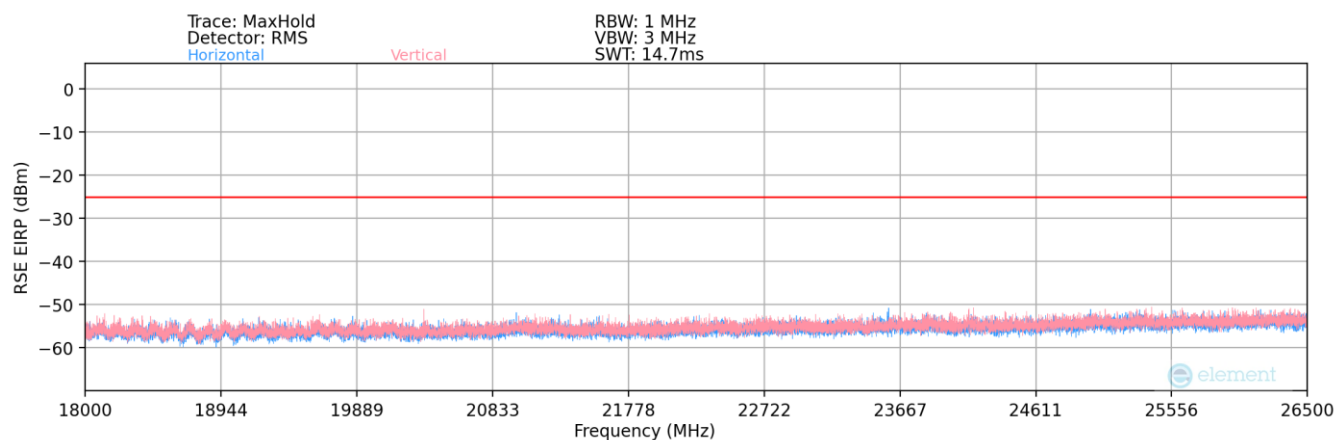
NR Band n41(PC3) – Ant2



Plot 7-138. Radiated Spurious Plot (NR Band n41(PC3) – Ant2)



Plot 7-139. Radiated Spurious Plot (NR Band n41(PC3) – Ant2)



Plot 7-140. Radiated Spurious Plot NR Band n41(PC3) – Ant2

FCC ID: A3LSMS947B	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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Bandwidth (MHz):	100
Frequency (MHz):	2592.99
RB / Offset:	1 / 136
Mode:	Stand Alone

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]
685.00	H	399	126	-84.40	28.70	51.30	-46.10	-25.00	-21.10

Table 7-44. Radiated Spurious Data (NR Band n41(PC3) – Ant2

Bandwidth (MHz):	100
Frequency (MHz):	2546.01
RB / Offset:	1 / 136
Mode:	Stand Alone

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]
5092.02	H	126	331	-66.32	3.17	43.85	-51.41	-25.00	-26.41
7638.03	H	273	294	-71.64	9.72	45.08	-50.18	-25.00	-25.18
10184.04	H	398	28	-76.44	12.49	43.05	-52.21	-25.00	-27.21
12730.05	H	-	-	-78.91	13.59	41.68	-53.57	-25.00	-28.57
15276.06	H	-	-	-78.95	14.37	42.42	-52.84	-25.00	-27.84
17822.07	H	-	-	-79.79	17.89	45.10	-50.16	-25.00	-25.16

Table 7-45. Radiated Spurious Data (NR Band n41(PC3) – Low Channel) – Ant2

Bandwidth (MHz):	100
Frequency (MHz):	2592.99
RB / Offset:	1 / 136
Mode:	Stand Alone

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]
5185.98	H	329	313	-65.69	3.36	44.67	-50.58	-25.00	-25.58
7778.97	H	233	310	-74.60	8.63	41.03	-54.23	-25.00	-29.23
10371.96	H	348	24	-73.18	12.21	46.03	-49.22	-25.00	-24.22
12964.95	H	-	-	-79.68	14.39	41.71	-53.55	-25.00	-28.55
15557.94	H	-	-	-78.83	13.63	41.80	-53.46	-25.00	-28.46

Table 7-46. Radiated Spurious Data (NR Band n41(PC3) – Mid Channel) – Ant2

Bandwidth (MHz):	100
Frequency (MHz):	2640.00
RB / Offset:	1 / 136
Mode:	Stand Alone

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]
5280.00	H	137	55	-64.45	3.28	45.83	-49.43	-25.00	-24.43
7920.00	H	380	342	-74.85	9.67	41.82	-53.44	-25.00	-28.44
10560.00	H	400	323	-71.91	12.67	47.76	-47.49	-25.00	-22.49
13200.00	H	-	-	-79.67	14.94	42.27	-52.99	-25.00	-27.99
15840.00	H	-	-	-79.31	14.75	42.44	-52.82	-25.00	-27.82

Table 7-47. Radiated Spurious Data (NR Band n41(PC3) – High Channel) – Ant2

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7.8 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

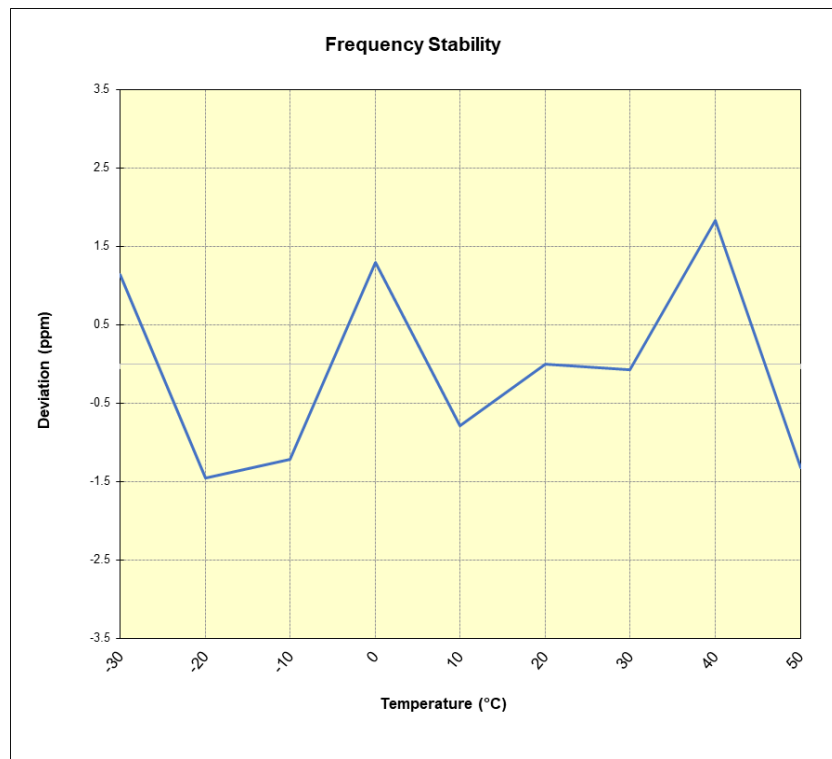
None

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LTE Band 41

<table><tr><td colspan="2">Operating Frequency (Hz):</td><td colspan="4">2,593,000,000</td></tr><tr><td colspan="2">Ref. Voltage (VDC):</td><td colspan="4">4.400</td></tr></table>						Operating Frequency (Hz):		2,593,000,000				Ref. Voltage (VDC):		4.400			
Operating Frequency (Hz):		2,593,000,000															
Ref. Voltage (VDC):		4.400															
Voltage (%)	Power (VDC)	Temp (°C)	Frequency (Hz)	Freq. Dev. (Hz)	Deviation (%)												
100 %	4.400	- 30	2,593,098,985	2,979	0.0001149												
		- 20	2,593,092,230	-3,776	-0.0001456												
		- 10	2,593,092,870	-3,136	-0.0001209												
		0	2,593,099,377	3,371	0.0001300												
		+ 10	2,593,093,968	-2,038	-0.0000786												
		+ 20 (Ref)	2,593,096,006	0	0.0000000												
		+ 30	2,593,095,810	-196	-0.0000076												
		+ 40	2,593,100,749	4,743	0.0001829												
		+ 50	2,593,092,578	-3,428	-0.0001322												
Battery Endpoint	3.690	+ 20	2,593,092,437	-3,569	-0.0001376												

Table 7-48. LTE Band 41(PC3) Frequency Stability Data



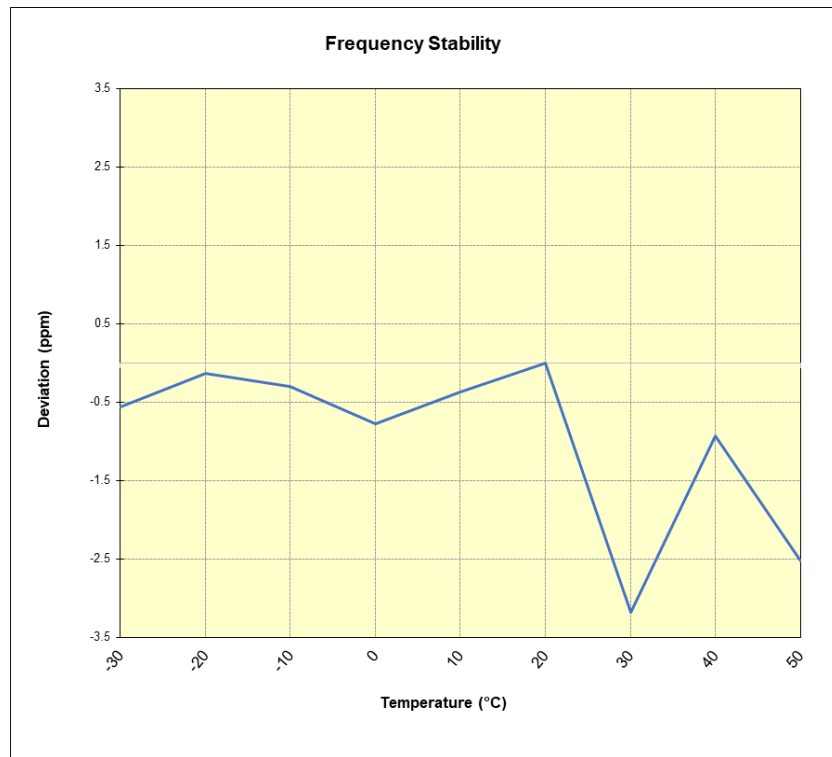
Plot 7-141. LTE Band 41(PC3) Frequency Stability Chart

FCC ID: A3LSMS947B	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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NR Band n41

<table><tr><td>Operating Frequency (Hz):</td><td colspan="5">2,593,000,000</td></tr><tr><td>Ref. Voltage (VDC):</td><td colspan="5">4.400</td></tr></table>						Operating Frequency (Hz):	2,593,000,000					Ref. Voltage (VDC):	4.400				
Operating Frequency (Hz):	2,593,000,000																
Ref. Voltage (VDC):	4.400																
Voltage (%)	Power (VDC)	Temp (°C)	Frequency (Hz)	Freq. Dev. (Hz)	Deviation (%)												
100 %	4.400	- 30	2,593,174,632	-1,439	-0.0000555												
		- 20	2,593,175,730	-341	-0.0000131												
		- 10	2,593,175,302	-769	-0.0000297												
		0	2,593,174,058	-2,013	-0.0000776												
		+ 10	2,593,175,132	-939	-0.0000362												
		+ 20 (Ref)	2,593,176,071	0	0.0000000												
		+ 30	2,593,167,836	-8,235	-0.0003176												
		+ 40	2,593,173,678	-2,393	-0.0000923												
		+ 50	2,593,169,536	-6,535	-0.0002520												
Battery Endpoint	3.690	+ 20	2,593,174,416	-1,655	-0.0000638												

Table 7-49. NR Band n41 Frequency Stability Data



Plot 7-142. NR Band n41 Frequency Stability Chart

FCC ID: A3LSMS947B	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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8.0 CONCLUSION

The data collected relate only to the item(s) tested and show that the **Samsung Portable Handset FCC ID: A3LSMS947B** complies with all the requirements of Part 27 of the FCC rules.

- END OF TEST REPORT -

FCC ID: A3LSMS947B	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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