

		-			ectrum Analyzer - Swept SA	
Frequency	06:34:50 PM Jun 11, 2018 TRACE 2 3 4 5 0 TYPE A WWWWW DET A NNNNN	#Avg Type: RMS	SENSE:INT Trig: Free Run Atten: 30 dB	PNO: Fast	RF 50 Ω AC	XI RL
Auto Tun	1 1.707 5 GHz -47.70 dBm	M	Atten: 30 dB	IFGain:Low	Ref 20.00 dBm	10 dB/div
Center Fre 870.000000 MH						10.0
Start Fre 30.000000 MH	0L1-13 00 dBm					0.00 10.0
Stop Fre 1.710000000 GH						20.0 30.0
CF Ste 168.000000 MH Auto Ma	1	and the second	مين ما الارد المريخ الم			40.0
Freq Offs 0 F					sheet with the second secon	60.0
Scale Typ	Stop 1.7100 GHz 240 ms (3361 pts)	Sweep 2	3.0 MHz	#VBW		Start 0.03
		The STATUS				ISG

Plot 7-136. Conducted Spurious Plot (Band 4 - 5.0MHz QPSK - RB Size 1, RB Offset 0 - High Channel)



Plot 7-137. Conducted Spurious Plot (Band 4 - 5.0MHz QPSK - RB Size 1, RB Offset 0 - High Channel)

FCC ID: A3LSMT837P		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager	
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Plot 7-138. Conducted Spurious Plot (Band 4 - 5.0MHz QPSK - RB Size 1, RB Offset 0 - High Channel)

FCC ID: A3LSMT837P		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager	
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Keysight Spectrum Analyzer - Swept SA				- 4 -
K RF 50Ω AC	PNO: Fast C Trig: Free Ru IFGain:Low Atten: 30 dB	#Avg Type: RMS	06:10:36 PM Jun 11, 2018 TRACE 1 2 3 4 5 6 TYPE A WWWW DET A NNNNN	Frequency
10 dB/div Ref 20.00 dBm	I GUILLOW		lkr1 1.842 5 GHz -33.02 dBm	Auto Tun
19.0				Center Fre 939.000000 MH
10.00			DL1 -13 (0 d5m)	Start Fre 30.000000 MH
20.0				Stop Fre 1.848000000 GH
40.0. 50.0		مى مەرىپىرىكى بىرىكى بىرىك يىرىكى بىرىكى		CF Ste 181.800000 Mi Auto Ma
30.0				Freq Offs 0 F
Start 0.0300 GHz Res BW 1.0 MHz	#VBW 3.0 MHz	Swaan	Stop 1.8480 GHz 2.425 ms (3639 pts)	Scale Typ Log <u>L</u>
ISG	# 4 Day 3.0 WI12	Streep Lostat		<u>}</u>

Plot 7-139. Conducted Spurious Plot (Band 25/2 - 10.0MHz QPSK - RB Size 1, RB Offset 0 - Low Channel)



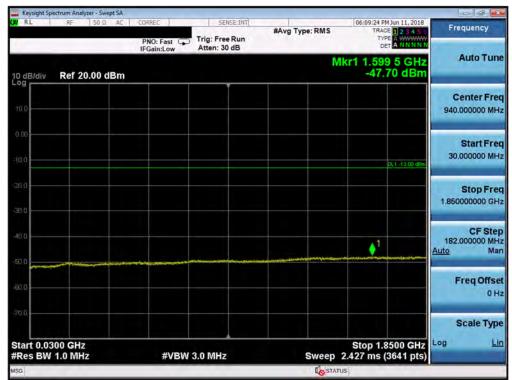
Plot 7-140. Conducted Spurious Plot (Band 25/2 - 10.0MHz QPSK - RB Size 1, RB Offset 0 - Low Channel)

FCC ID: A3LSMT837P		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager	
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Plot 7-141. Conducted Spurious Plot (Band 25/2 - 10.0MHz QPSK - RB Size 1, RB Offset 0 - Low Channel)



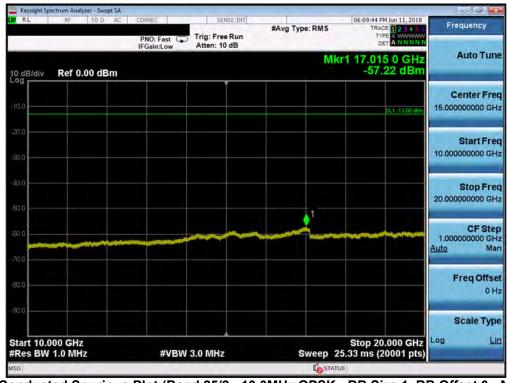
Plot 7-142. Conducted Spurious Plot (Band 25/2 - 10.0MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel)

FCC ID: A3LSMT837P		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager	
Test Report S/N:	Test Dates:	EUT Type:		Dago 90 of 221	
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eysight Spectrum Analyzer - Swept SA L RF 50 Ω AC	CORREC	SENSE:INT		06:09:32 PM Jun 11, 2018	
		g: Free Run ten: 30 dB	#Avg Type: RMS	TYPE A WWWWW DET A NNNNN	Frequency
B/div Ref 20.00 dBm			М	kr1 9.533 5 GHz -43.70 dBm	Auto Tun
					Center Fre 5.955000000 GH
				0L1 -13 00 dBm	Start Fre 1.910000000 GH
					Stop Fre 10.00000000 GH
				1	CF Ste 809.000000 MH Auto Ma
					Freq Offs 0 F
rt 1.910 GHz es BW 1.0 MHz	#VBW 3.0	MHz	Sween 1	Stop 10.000 GHz 4.02 ms (16181 pts)	Scale Typ
			Lo STATI		_

Plot 7-143. Conducted Spurious Plot (Band 25/2 - 10.0MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel)



Plot 7-144. Conducted Spurious Plot (Band 25/2 - 10.0MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel)

FCC ID: A3LSMT837P		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager	
Test Report S/N:	Test Dates:	EUT Type:		Dage 00 of 221	
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- @ ×					pectrum Analyzer - Swept SA	
Frequency	06:11:35 PM Jun 11, 2018 TRACE 2 3 4 5 6 TYPE A WWWWW	#Avg Type: RMS	SENSE:INT	PNO: Fast	RF 50 Ω A	XI RL
Auto Tune	cr1 1.612 5 GHz -47.70 dBm	MI	Atten: 30 dB	IFGain:Low	Ref 20.00 dBn	10 dB/div
Center Fred 940.000000 MH:						100
Start Free 30,000000 MH	CL1 -13 00 dBm					0.00 -10.0
Stop Fre 1.850000000 GH						200
CF Ste 182.000000 MH <u>Auto</u> Ma		مىلىنىدىنىدىنى يىنى يەرىمە بىر ى بىلىنىرىنىدىنى بىر	and a statement of the state of the state			-40,0
Freq Offse 0 H						-60.0
Scale Type Log <u>Li</u> r	Stop 1.8500 GHz 427 ms (3641 pts)	Sweep 2	3.0 MHz	#VBW	300 GHz / 1.0 MHz	Start 0.03
		Co STATU		_		ISG

Plot 7-145. Conducted Spurious Plot (Band 25/2 - 10.0MHz QPSK - RB Size 1, RB Offset 0 - High Channel)



Plot 7-146. Conducted Spurious Plot (Band 25/2 - 10.0MHz QPSK - RB Size 1, RB Offset 0 - High Channel)

FCC ID: A3LSMT837P		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager	
Test Report S/N:	Test Dates:	EUT Type:		Dage 01 of 221	
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Keysight Spectrum Analyze					1	- @ ×
X RL RF	50 Ω AC	PNO: Fast	SENSE:INT Trig: Free Run Atten: 10 dB	#Avg Type: RMS	06:11:59 PM Jun 11, 2018 TRACE 2 3 4 5 0 TYPE A WARNIN DET A NNNNN	Frequency
10 dB/div Ref 0.0	0 dBm	in demicon		Mk	r1 16.983 5 GHz -57.59 dBm	Auto Tune
-og					DL1 -13,00 dBm	Center Free 15.000000000 GH
20.0						Start Fre 10.000000000 GH
40.0 50.0						Stop Fre 20.000000000 GH
80 0 						CF Ste 1.000000000 GH Auto Ma
80.0						Freq Offs 0 F
Start 10.000 GHz #Res BW 1.0 MHz		#VBW	3.0 MHz	Sweep 2	Stop 20.000 GHz 5.33 ms (20001 pts)	Scale Typ Log <u>Li</u>
150				STATU		

Plot 7-147. Conducted Spurious Plot (Band 25/2 - 10.0MHz QPSK - RB Size 1, RB Offset 0 - High Channel)

FCC ID: A3LSMT837P		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager	
Test Report S/N:	Test Dates:	EUT Type:		Dega 02 of 221	
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Band 7

Keysight Spectrum Analyzer - Swept S		C. CONCEAN-			
RL RE 50Ω /	PNO: Fast C	Trig: Free Run Atten: 30 dB	#Avg Type: RMS	06:52:14 PM Jun 11, 2018 TRACE 2 3 4 5 0 TYPE A WANNEN DET A NNNNN	Frequency
0 dB/div Ref 20.00 dB	m		M	kr1 2.426 5 GHz -45.93 dBm	Auto Tun
10.0					Center Free 1.252500000 GH
0.00					Start Fre 30.000000 MH
20.0				Ď., 1 - 25.00 oBm	Stop Fre 2.475000000 GH
10.0		والماسية والمراجع ومدار والمراجع ومدار والمراجع	ng mga ng mg		CF Ste 244.500000 MH Auto Ma
50.0					Freq Offse 0 H
70 0 Start 0.030 GHz				Dian 2 175 OUT	Scale Typ
Res BW 1.0 MHz	#VBW	3.0 MHz	Sweep	Stop 2.475 GHz 3.260 ms (4891 pts)	
SG			STAT		

Plot 7-148. Conducted Spurious Plot (Band 7 - 5.0MHz QPSK - RB Size 1, RB Offset 0 - Low Channel)



Plot 7-149. Conducted Spurious Plot (Band 7 - 5.0MHz QPSK - RB Size 1, RB Offset 0 - Low Channel)

FCC ID: A3LSMT837P		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager	
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Keysight Spectrum Analyzer - Swept SA RL RF 50 Ω AC	CORREC	SENSE:INT		06:52:43 PM Jun 11, 2018	
NE Nº JULE AC	PNO: Fast	Trig: Free Run Atten: 10 dB	#Avg Type: RMS	TRACE 1 2 3 4 5 0 TYPE A WWWW DET A NNNNN	Frequency
0 dB/div Ref 0.00 dBm			Mk	r1 26.992 5 GHz -52.08 dBm	Auto Tuno
10.0					Center Free 21.000000000 GH
30.0				р. 1 -25.00 «Ви	Start Fre 15.000000000 GH
0.0 0.0				1	Stop Fre 27.000000000 GH
					CF Ste 1.200000000 GH Auto Ma
30.0					Freq Offs 0 F
itart 15.000 GHz				0100 21.000 0112	Scale Typ
Res BW 1.0 MHz	#VBW	3.0 MHz	Sweep 3	0.40 ms (24001 pts)	

Plot 7-150. Conducted Spurious Plot (Band 7 - 5.0MHz QPSK - RB Size 1, RB Offset 0 - Low Channel)



Plot 7-151. Conducted Spurious Plot (Band 7 - 5.0MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel)

FCC ID: A3LSMT837P		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager		
Test Report S/N:	Test Dates:	EUT Type:		Dago 04 of 221		
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Plot 7-152. Conducted Spurious Plot (Band 7 - 5.0MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel)



Plot 7-153. Conducted Spurious Plot (Band 2 - 5.0MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel)

FCC ID: A3LSMT837P		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager	
Test Report S/N:	Test Dates:	EUT Type:		Dago 05 of 221	
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Keysight Spectrum Analyzer - Swept Si		the second s	
CA RL RE 50Ω A	PNO: Fast PIC: Sense:INT IFGain:Low Atten: 30 dB	06:53:09 PM Jun 11, 2018 #Avg Type: RMS TRACE 23 4 5 TYPE DET A	Frequency
10 dB/div Ref 20.00 dBr	n	Mkr1 2.490 5 GHz -45.76 dBm	Auto Tune
10.0			Center Fred 1.265000000 GH;
-10.0			Start Free 30.000000 MH
-20.0		0ut -35 00 dbs	Stop Free 2.500000000 GH
40.0			CF Step 247.000000 MH <u>Auto</u> Ma
-60.0			Freq Offse 0 H
8 Start 0.030 GHz #Res BW 1.0 MHz	#VBW 3.0 MHz	Stop 2.500 GHz Sweep 3.293 ms (4941 pts)	Scale Type Log <u>Lit</u>
MSG		To STATUS	

Plot 7-154. Conducted Spurious Plot (Band 7 - 5.0MHz QPSK - RB Size 1, RB Offset 0 - High Channel)



Plot 7-155. Conducted Spurious Plot (Band 7 – 5.0MHz QPSK - RB Size 1, RB Offset 0 - High Channel)

FCC ID: A3LSMT837P		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager	
Test Report S/N:	Test Dates:	EUT Type:		Daga 06 of 221	
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Keysight Spectrum Analyzer - Swept SA RL RF 50 Ω A0		SENSE:INT			×
KL NF 50.12 AU	PNO: Fast	Trig: Free Run Atten: 10 dB	#Avg Type: RMS	06:53:34 PM Jun 11, 2018 TRACE 2 3 4 5 0 TYPE A WWWWW DET A NNNNN	Frequency
o dB/div Ref 0.00 dBm			IV	lkr1 26.999 5 GHz -51.97 dBm	Auto Tun
10.0					Center Free 21.000000000 GH
30 0				р́сл -25.00 авн	Start Fre 15.000000000 GH
40.0 50.0				1	Stop Fre 27.000000000 GH
50.0		and the second second second			CF Ste 1.20000000 GF Auto Ma
60.0					Freq Offse 0 H
800 Start 15.000 GHz Res BW 1.0 MHz	#VBW	3.0 MHz	Sweep	Stop 27.000 GHz 30.40 ms (24001 pts)	Scale Typ

Plot 7-156. Conducted Spurious Plot (Band 7 - 5.0MHz QPSK - RB Size 1, RB Offset 0 - High Channel)

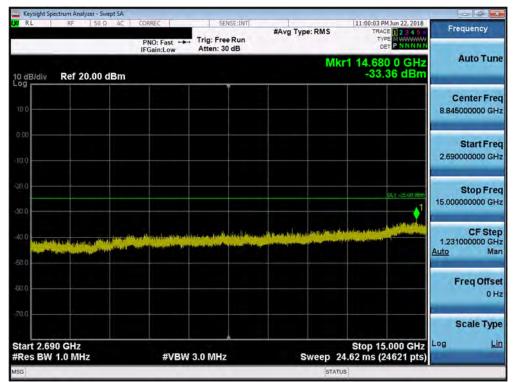
FCC ID: A3LSMT837P		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager	
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Band 41

- 6 -			3 - 2 - 2 - 2 - 2		ctrum Analyzer - Swept SA	
Frequency	10:59:41 PM Jun 22, 2018 TRACE 2 3 4 5 0 TYPE MWWHWW DET P NNNNN	#Avg Type: RMS	Trig: Free Run Atten: 30 dB	PNO: Fast	RF 50 Ω AC	RL
Auto Tune	kr1 2.475 0 GHz -39.77 dBm	M			Ref 20.00 dBm	0 dB/div
Center Fred 1.252500000 GH						i0.0
Start Free 30.000000 MH						0.00 iq.0
Stop Free 2.475000000 GH	041-25.00 mbm					30.0
CF Ster 244.500000 MH Auto Ma	٦ بويريوماليونيا بريانيونيا بريوانيونيا بورانيونيا	ninaana pilipilala kanb	المراجع والمراجع والمراجع والمراجع	the states of th	والمتراوة الإفارية المراجع المراجع المراجع	40.0
Freq Offse 0 H						60,0
Scale Typ	Stop 2.475 GHz 2.608 ms (4891 pts)	Sween	3.0 MHz	#VBW		Start 0.03
		STATU				ISG

Plot 7-157. Conducted Spurious Plot (Band 41 - 5.0MHz QPSK - RB Size 1, RB Offset 0 - Low Channel)



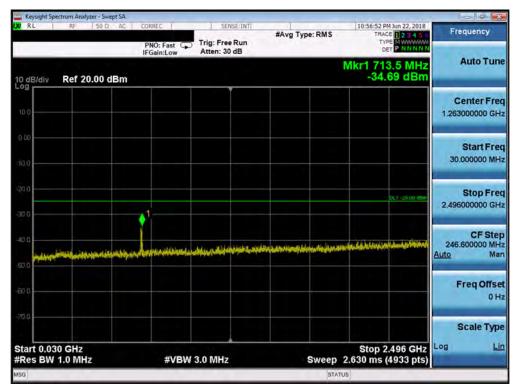
Plot 7-158. Conducted Spurious Plot (Band 41 - 5.0MHz QPSK - RB Size 1, RB Offset 0 - Low Channel)

FCC ID: A3LSMT837P		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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CORREC	SENSE:INT	1	11:00:25 PM Jun 22, 2018	Frequency
PNO: Fast	Trig: Free Run Atten: 10 dB	#Avg Type: RMS	TRACE 1 2 3 4 5 6 TYPE MWWWWW DET P NNNNN	requirey
		Mk	r1 25.583 0 GHz -45.79 dBm	Auto Tune
				Center Fre 21.000000000 GH
			0L1 -25,00 dBm	Start Fre 15.000000000 GH
		an option of the standay		Stop Fre 27.000000000 GH
				CF Ste 1.200000000 GF Auto Ma
				Freq Offs 01
#VBW	3.0 MHz	Sweep 3	Stop 27.000 GHz	Scale Typ
	PNO: Fast	PNO: Fast Trig: Free Run Atten: 10 dB	PNO: Fast Trig: Free Run IFGain:Low Atten: 10 dB Mike Atten: 10 dB	PNO: Fast FGain:Low Trig: Free Run Atten: 10 dB Trig: Area Run Trig: Free Run Atten: 10 dB Construction Mkr1 25.583 0 GHz -45.79 dBm CL1:2500.6m CL1:2500.6m CL1:2500.6m CL1:2500.6m CL1:2500.6m

Plot 7-159. Conducted Spurious Plot (Band 41 - 5.0MHz QPSK - RB Size 1, RB Offset 0 - Low Channel)



Plot 7-160. Conducted Spurious Plot (Band 41 - 5.0MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel)

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Keysight Spectrum Analyzer - Swept SA RL RF 50 Ω AC C	ORREC	SENSE:INT		10:57:28 PM Jun 22, 2018	- 6 ×
		ree Run 30 dB	#Avg Type: RMS	TRACE 1 2 3 4 5 6 TYPE MWWWWW DET P NNNNN	Frequency
0 dB/div Ref 20.00 dBm	Gumesn		M	kr1 14.623 0 GHz -33.47 dBm	Auto Tun
10.0					Center Fre 8.845000000 GH
10.0					Start Fre 2.690000000 GH
20.0				0L1 -25.00 dBm	Stop Fre 15.00000000 GF
	Ren, alle faithean de Annahail I	No a marit			CF Ste 1.231000000 G <u>Auto</u> M
50 Q					Freq Offs 01
700 Start 2.690 GHz Res BW 1.0 MHz	#VBW 3.0 MI			Stop 15.000 GHz 24.62 ms (24621 pts)	Scale Typ Log <u>L</u>

Plot 7-161. Conducted Spurious Plot (Band 41 - 5.0MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel)



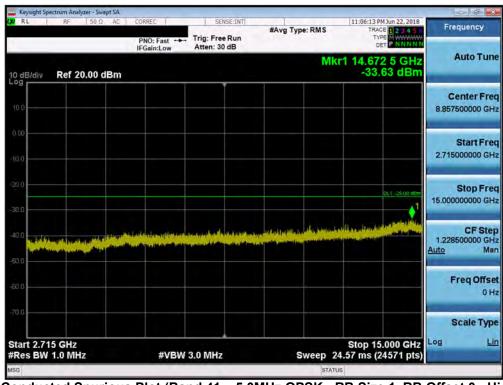
Plot 7-162. Conducted Spurious Plot (Band 41 - 5.0MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel)

FCC ID: A3LSMT837P		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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Keysight Spectrum Analy:	50 Q AC	CORREC	SENSE:INT	1	11:05:53 PM Jun 22, 2018	
	1.00.00	PNO: Fast	Trig: Free Run Atten: 30 dB	#Avg Type: RMS	TRACE 1 2 3 4 5 6 TYPE MUSEUM	Frequency
	.00 dBm	i dament		N	/kr1 2.431 0 GHz -39.27 dBm	Auto Tune
og 100						Center Freq 1.263000000 GHz
α.0						Start Free 30.000000 MHz
ao					CL1 +25.00 dBm	Stop Free 2.496000000 GH:
	المعادرة والمعادية والمعادية	wilige for the second design	للادرامة فرميته والمرجع والمرجع والمراجع والمرجع والمرجع والمرجع والمرجع والمرجع والمرجع والمرجع والمرجع والمرجع	aterioistimentatiiten etertettiite	مىنىغارىمەرمەرلۇلغارلەيدىرىرىنى مەرەلىرىلىرىلىرىلىرىلىرىلىرىلىرىلىرىلىرىل	CF Step 246.600000 MH: <u>Auto</u> Mar
50,0						Freq Offse 0 Hi
	,	#VBW	3.0 MHz	Sweep	Stop 2.496 GHz 2.630 ms (4933 pts)	Scale Type
Start 0.030 GHz #Res BW 1.0 MHz	2	#VBW	3.0 MHz	Sweep	2.630 ms (4933 pts)	Log

Plot 7-163. Conducted Spurious Plot (Band 41 - 5.0MHz QPSK - RB Size 1, RB Offset 0 - High Channel)



Plot 7-164. Conducted Spurious Plot (Band 41 – 5.0MHz QPSK - RB Size 1, RB Offset 0 - High Channel)

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RL RF 50 Ω AC	CORREC	SENSE:INT	1	11:07:06 PM Jun 22, 2018	Frequency
	PNO: Fast	Trig: Free Run Atten: 10 dB	#Avg Type: RMS	TRACE 2 3 4 5 6 TYPE MWWWW DET PNNNNN	rioquerie)
dB/div Ref 0.00 dBm	il Galificon		M	kr1 25.730 0 GHz -45.98 dBm	Auto Tune
9.0					Center Fred 21.000000000 GH;
a,0				0L1 -25.00 dBm	Start Free 15.000000000 GH:
ao			een tilling onlighter dig () ja jalla ja ja ja	1 101 January destilitudes: Lass unitere	Stop Free 27.000000000 GH:
	dada it y litte - stock for				CF Ste 1.200000000 GH Auto Ma
					Freq Offse 0 H
tart 15.000 GHz Res BW 1.0 MHz	#\/B\//	3.0 MHz	Swaan	Stop 27.000 GHz 30.40 ms (24001 pts)	Scale Type

Plot 7-165. Conducted Spurious Plot (Band 41 - 5.0MHz QPSK - RB Size 1, RB Offset 0 - High Channel)

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7.4 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 its maximum duty cycle, 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 of any spurious emission is $43 + \log_{10}(P_{[Watts]})$, where P is the transmitter power in Watts.

The minimum permissible attenuation level for Band 7 and 41 is as noted in the Test Notes on the following page.

Test Procedure Used

KDB 971168 D01 v03r01 - Section 6.0

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 <u>></u> 3 x RBW
- 5. Detector = RMS
- 6. Number of sweep points $\geq 2 \times \text{Span/RBW}$
- 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 7-3. Test Instrument & Measurement Setup

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Test Notes

Per 22.917(b) 24.238(a) 27.53(h) in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed to demonstrate compliance with the out-of-band emissions limit. 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 emission are attenuated at least 26 dB below the transmitter power.

Per 27.53(g) for operations in the 698-746 MHz band, in the 100 kHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least 30 kHz may be employed to demonstrate compliance with the out-of-band emissions limit.

Per 27.53(c)(5) for operations in the 776-788 MHz band, in the 100 kHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least 30 kHz may be employed to demonstrate compliance with the out-of-band emissions limit.

For all plots showing emissions in the 763 – 775MHz and 793 – 805MHz band, the FCC limit per 27.53(c)(4) is 65 + $10\log_{10}(P) = -35dBm$ in a 6.25kHz bandwidth.

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 that $43 + 10 \log (P) dB$ on all frequencies between 2490.5 MHz and 2496 MHz and 55 + 10 log (P) dB at or below 2490.5 MHz.

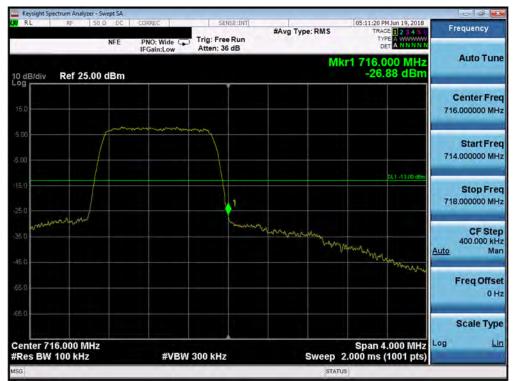
FCC ID: A3LSMT837P		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager	
Test Report S/N:	Test Dates:	EUT Type:		Dega 104 of 221	
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Band 12



Plot 7-166. Lower Band Edge Plot (Band 12 - 1.4MHz QPSK - Full RB Configuration)



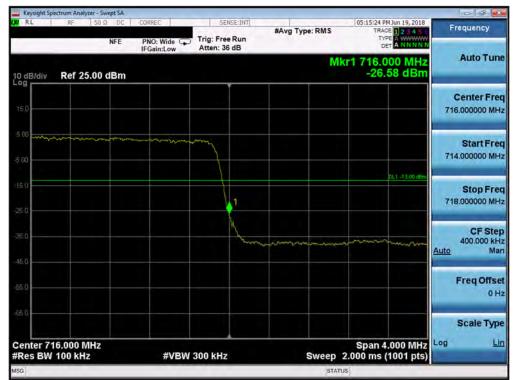
Plot 7-167. Upper Band Edge Plot (Band 12 - 1.4MHz QPSK - Full RB Configuration)

FCC ID: A3LSMT837P		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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RL RF 50 Q DC	CORREC	SENSE:INT	#Avg Type: RMS	05:14:27 PM Jun 19, 2018 TRACE 1 2 3 4 5 0	Frequency
NFE		Trig: Free Run Atten: 36 dB	wavg type. RMS		
0 dB/div Ref 25.00 dBm			N	lkr1 698.000 MHz -35.24 dBm	Auto Tun
15.0					Center Fre 698.000000 MH
5.00				manner	Start Fre 696.000000 MH
25 0				CL1 -13.00 dBm	Stop Fre 700.000000 Mi
150	minum	American Inco			CF Ste 400.000 kł Auto Ma
55.0					Freq Offs 0 F
enter 698.000 MHz				Span 4.000 MHz	Scale Typ
Res BW 100 kHz	#VBW 3	00 kHz	Sweep	2.000 ms (1001 pts)	1. A.

Plot 7-168. Lower Band Edge Plot (Band 12 - 3.0MHz QPSK - Full RB Configuration)



Plot 7-169. Upper Band Edge Plot (Band 12 - 3.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMT837P		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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RL RF 50	NFE	PNO: Wide	SENSE:INT Trig: Free Run Atten: 36 dB	#Avg Type: RI	NS TF	ACE 1 2 3 4 5 0 TYPE A WARNEN	Frequency
10 dB/div Ref 25.00		IFGain:Low	Attent to de		Mkr1 697 -30	.352 MHz 0.82 dBm	Auto Tun
15.0							Center Free 698.000000 MH
5.00 5.00					~~~~		Start Fre 696.000000 MH
25.0						0L1 -13.00 dBm	Stop Fre 700.000000 MF
35.0o		1 minu	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		~		CF Ste 400,000 kł Auto Ma
55 0							Freq Offs 0 F
⇔so Center 698.000 MHz #Res BW 100 kHz		#\/B\A(300 kHz		Span sep 2.000 ms	-1.000 Mill2	Scale Typ

Plot 7-170. Lower Band Edge Plot (Band 12 - 5.0MHz QPSK - Full RB Configuration)



Plot 7-171. Upper Band Edge Plot (Band 12 - 5.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMT837P		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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RL RF	50 Ω DC	CORREC	SENSE:INT	#Avg Type: RMS	05:26:00 PM Jun 19, 2018 TRACE 1 2 3 4 5 0	Frequency
	NFE	PNO: Wide CP	Trig: Free Run Atten: 36 dB		DET A NNNN	
10 dB/div Rei	25.00 dBm			M	kr1 697.856 MHz -25.64 dBm	Auto Tun
15.0						Center Fre 698.000000 MH
5.00					and an and the second	Start Fre 694.000000 MH
15.0			1		0L1 -13.00 dBm	Stop Fre 702.000000 MH
35.0 	and a start of the	and and the second s				CF Ste 800.000 kF Auto Ma
55 0						Freq Offs 01
-66.0						Scale Typ
Center 698.00 #Res BW 200		#VBW	620 kHz	Sweep	Span 8.000 MHz 4.000 ms (1001 pts)	Log L
SG	_	_		STAT		

Plot 7-172. Lower Band Edge Plot (Band 12 - 10.0MHz QPSK - Full RB Configuration)



Plot 7-173. Upper Band Edge Plot (Band 12 - 10.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMT837P		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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Band 13

Keysight Spectrum Analyzer - Swept SA R L RF 50 Ω AC	CORREC	SENSE:INT	and a second second	07:08:51 PM Jun 11, 2018	Frequency
	PNO: Wide IFGain:Low	Trig: Free Run Atten: 36 dB	#Avg Type: RMS	TYPE A WARMAN DET A NNNNN	
dB/div Ref 25.00 dBm			Mk	r1 774.988 MHz -64.49 dBm	Auto Tune
15.0					Center Free 769.000000 MH
					Start Free 763.000000 MH
5.0					Stop Fre 775.000000 MH
15.0				0L1 -05 00 48m	CF Ste 1.200000 MH <u>Auto</u> Ma
i50				1	Freq Offse 0 H
tart 763.000 MHz	an a			Stop 775.000 MHz	Scale Typ
Res BW 6.2 kHz	#VBW	30 kHz	#Sweep	1.000 s (1001 pts)	

Plot 7-174. Lower Emission Mask Edge Plot (Band 13 – 5.0MHz QPSK – Full RB Configuration)



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RL RF 50 Q AC	CORREC	SENSE:INT	#Avg Type: RMS	07:09:08 PM Jun 11, 2018 TRACE 1 2 3 4 5 0	Frequency
	PNO: Wide 😱 IFGain:Low	Trig: Free Run Atten: 36 dB	and the state	TYPE A WWWWWW DET A NNNNN	
0 dB/div Ref 25.00 dBm			M	kr1 787.000 MHz -27.16 dBm	Auto Tur
15.0					Center Fre 787.000000 M
5.00					Start Fr 785.000000 M
50		1		CL1 -13.00 dEm	Stop Fr 789.000000 M
		han	the second se		CF Sto 400.000 k Auto M
5.0					Freq Offs 0
enter 787.000 MHz				Span 4.000 MHz	Scale Ty
Res BW 100 kHz	#VBW :	300 kHz	Sweep	Span 4.000 MHz 1.000 ms (1001 pts)	A

Plot 7-176. Upper Band Edge Plot (Band 13 - 5.0MHz QPSK - Full RB Configuration)



Plot 7-177. Upper Emission Mask Edge Plot (Band 13 – 5.0MHz QPSK – Full RB Configuration)

FCC ID: A3LSMT837P		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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Keysight Spectrum Analyzer - Swep R L RF 50 Ω		SENSE:INT		07:11:22 PM Jun 11, 2018	
N.C. N.C. 30.42	PNO: Wide	Trig: Free Run Atten: 36 dB	#Avg Type: RMS	TRACE 2 3 4 5 0 TYPE A WWWWW DET A NNNNN	Frequency
dB/div Ref 25.00 dB			Mk	r1 775.000 MHz -65.18 dBm	Auto Tun
					Center Fre 769.000000 MH
o o					Start Fre 763.000000 M⊦
a a					Stop Fre 775.000000 MH
o o				DL 1 -35 00 dBm	CF Ste 1.200000 Mi <u>Auto</u> Ma
0				1	Freq Offs 01
art 763.000 MHz es BW 6.2 kHz	#VBW (30 kHz		Stop 775.000 MHz 1.000 s (1001 pts)	Scale Typ Log <u>L</u>
			Lo STATU		

Plot 7-178. Lower Emission Mask Edge Plot (Band 13 – 10.0MHz QPSK – Full RB Configuration)



Plot 7-179. Lower Band Edge Plot (Band 13 - 10.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMT837P		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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Keysight Spectrum Analyzer - Swept SA RL RF 50 Ω AC	CORREC	SENSE:INT		07:11:29 PM Jun 11, 2018	
(PNO: Wide C	Trig: Free Run Atten: 36 dB	#Avg Type: RMS	TRACE 2 3 4 5 0 TYPE A WARMAN DET A NINNIN	Frequency
10 dB/div Ref 25.00 dBm			Mk	r1 787.000 MHz -32.12 dBm	Auto Tun
15,0					Center Fre 787.000000 MH
5 00		γ			Start Fre 783,000000 MF
25.0				01.1 -13.00 dBm	Stop Fre 791.000000 Mi
35.0 45.0		"C'	· ····································		CF Ste 800,000 ki Auto M
55 0					Freq Offs 01
cs.u				Span 8.000 MHz	Scale Typ
Res BW 100 kHz	#VBW	300 kHz	Sweep 1	1.000 ms (1001 pts)	
ISG			Co STATU	S	

Plot 7-180. Upper Band Edge Plot (Band 13 - 10.0MHz QPSK - Full RB Configuration)



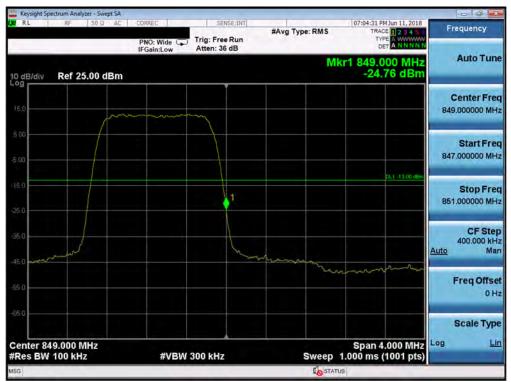
Plot 7-181. Upper Emission Mask Edge Plot (Band 13 - 10.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMT837P		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager	
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Plot 7-182. Lower Band Edge Plot (Band 26/5 - 1.4MHz QPSK - Full RB Configuration)



Plot 7-183. Upper Band Edge Plot (Band 26/5 - 1.4MHz QPSK - Full RB Configuration)

FCC ID: A3LSMT837P		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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24.000 MHz -21.76 dBm	Auto Tun Center Fre
24.000 MHz -21.76 dBm	
	Center Fre
	824.000000 MI
	Start Fr 822,000000 M
0L1 -13.00 dBm	Stop Fr 826,000000 M
E	CF St 400.000 k Auto M
	Freq Offs 0
	Scale Ty
an 4.000 MHz ms (1001 pts)	Log L
	pan 4.000 MHz 9 ms (1001 pts)

Plot 7-184. Lower Band Edge Plot (Band 26/5 - 3.0MHz QPSK - Full RB Configuration)



Plot 7-185. Upper Band Edge Plot (Band 26/5 - 3.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMT837P		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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Frequency	07:01:17 PM Jun 11, 2018		SE:INT	SEN	DRREC	DA AC	RF 50		XI R
Frequency	TRACE 1 2 3 4 5 0 TYPE A WWWWW DET A NNNNN	Nyg Type: RMS	Run dB	Trig: Free Atten: 36	NO: Wide 😱				6
Auto Tun	r1 824.000 MHz -27.57 dBm	Mk) dBm	Ref 25.00	3/div	10 d
Center Fre 824.000000 MH									15.0
Start Fre 822,000000 MR			\int						
Stop Fre 826.000000 Mi	0L1 -13.00 dBm		1						
CF Ste 400.000 k Auto M				$ \rightarrow $					35.0 45.0
Freq Offs 0									
Scale Typ	Span 4.000 MHz .000 ms (1001 pts)	Sweep 1		300 kHz	#VBW :		4.000 MHz 100 kHz		
		Status		500-1K112	WY DVY S		100 1112	5 2 4 4	ISG

Plot 7-186. Lower Band Edge Plot (Band 26/5 - 5.0MHz QPSK - Full RB Configuration)



Plot 7-187. Upper Band Edge Plot (Band 26/5 - 5.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMT837P		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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Keysight Spectrum Analyzer - Swept SA RL RF 50 Ω AC	CORREC	SENSE:INT	the second second	06:57:32 PM Jun 11, 2018	
	PNO: Wide 😱 IFGain:Low	Trig: Free Run Atten: 36 dB	#Avg Type: RMS	TRACE 23456 TYPE A WANNEN	Frequency
10 dB/div Ref 25.00 dBm			Mk	r1 824.000 MHz -36.39 dBm	Auto Tun
15.0					Center Fre 824.000000 MF
5.00					Start Fre 820.000000 MH
15.0				DL1 -13.00 dBm	Stop Fre 828.000000 MH
45.0		1			CF Ste 800.000 ki <u>Auto</u> Mi
65 0					Freq Offs 01
© 0 Center 824.000 MHz #Res BW 100 kHz	#VBW	300 kHz	Sweep	Span 8.000 MHz 1.000 ms (1001 pts)	Scale Typ Log <u>L</u>
so			STATU		

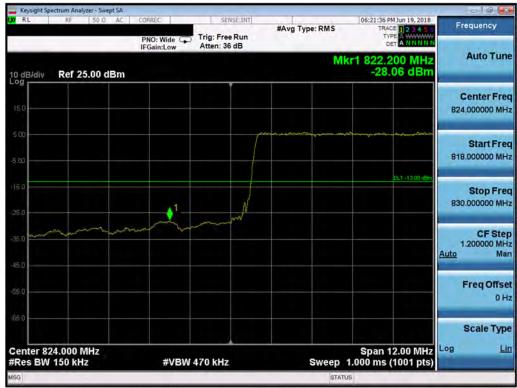
Plot 7-188. Lower Band Edge Plot (Band 26/5 - 10.0MHz QPSK - Full RB Configuration)

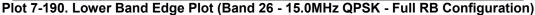


Plot 7-189. Upper Band Edge Plot (Band 26/5 - 10.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMT837P		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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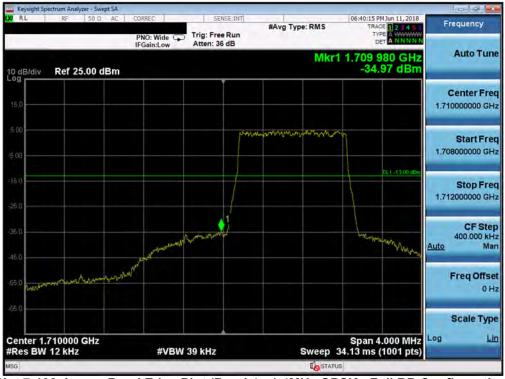


Plot 7-191. Upper Band Edge Plot (Band 26 - 15.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMT837P		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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Band 4



Plot 7-192. Lower Band Edge Plot (Band 4 - 1.4MHz QPSK - Full RB Configuration)



Plot 7-193. Lower Extended Band Edge Plot (Band 4 - 1.4MHz QPSK - Full RB Configuration)

FCC ID: A3LSMT837P		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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RL	rectrum Analyzer - Swep RF 50 Ω		SENSE:INT	#Avg Type: RMS	06:45:48 PM Jun 11, 2018 TRACE 1 2 3 4 5 0	Frequency
		PNO: Wide (IFGain:Low	Trig: Free Run Atten: 36 dB	#Avg Type: RMS	TYPE A WWWWW DET A NNNNN	
0 dB/div	Ref 25.00 dl	Bm		Mkr	1 1.755 000 GHz -36.54 dBm	Auto Tur
15.0						Center Fre 1.755000000 GH
5.00 5.00		and the second	ht and a second			Start Fro 1.753000000 G
5.0					CL1 -13.00 dBm	Stop Fro 1.757000000 G
15.0 4	weyward		1 Marine	Manhawaren Jales d	and the for the second of the	CF Ste 400.000 kl Auto M
5.0					and a set of the Market Market was	Freq Offs 01
enter 1. Res BW	755000 GHz 15 kHz	#VB	W 43 kHz	Sweep	Span 4.000 MHz 22.07 ms (1001 pts)	Scale Tyj Log <u>L</u>
so				Lo STAT		

Plot 7-194. Upper Band Edge Plot (Band 4 - 1.4MHz QPSK - Full RB Configuration)



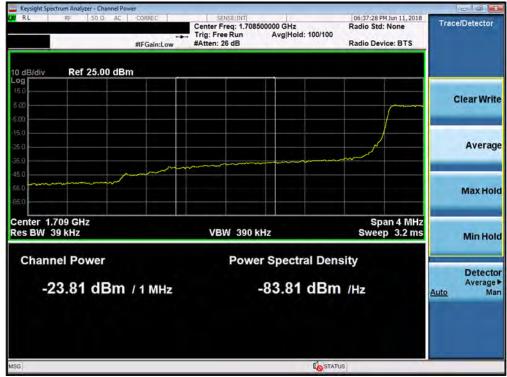
Plot 7-195. Upper Extended Band Edge Plot (Band 4 - 1.4MHz QPSK - Full RB Configuration)

FCC ID: A3LSMT837P		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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RL RF 50 Ω A	C CORREC	SENSE:INT		06:37:23 PM Jun 11, 2018	
	PNO: Wide 😱 IFGain:Low	Trig: Free Run Atten: 36 dB	#Avg Type: RMS	TRACE 2 3 4 5 6 TYPE A WWWWW DET A NNNN	Frequency
0 dB/div Ref 25.00 dBn	n		Mkr	1 1.710 000 GHz -26.70 dBm	Auto Tun
15,0					Center Fre 1.710000000 GF
5.00			waynaan		Start Fre 1.708000000 GF
150 350		1		DL1 -13 00 dBm	Stop Fre 1.712000000 Gi
35.0 		mont			CF Ste 400.000 ki Auto M
50					Freq Offs 01
Center 1.710000 GHz Res BW 30 kHz	#VBW	91 kHz	Sweep	Span 4.000 MHz 5.533 ms (1001 pts)	Scale Typ
so			STATU		

Plot 7-196. Lower Band Edge Plot (Band 4 - 3.0MHz QPSK - Full RB Configuration)



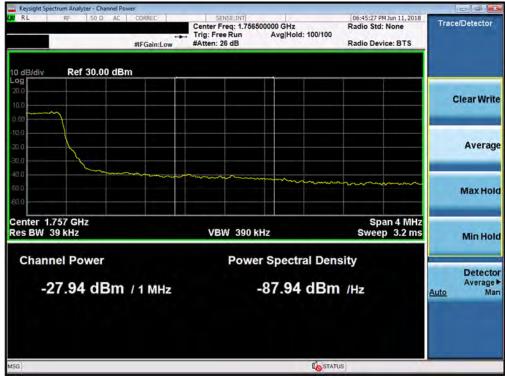
Plot 7-197. Lower Extended Band Edge Plot (Band 4 - 3.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMT837P		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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Keysight Spectrum Analyzer - Swept SA RL RF 50 Ω AC		SENSE:INT		06:45:23 PM Jun 11, 2018	
NE Nº 3032 AU	PNO: Wide	Trig: Free Run Atten: 36 dB	#Avg Type: RMS	TRACE 2 2 3 4 5 0 TYPE A WWWW DET A NNNNN	Frequency
10 dB/div Ref 25.00 dBm -28.46 dBm					
15.0					Center Fre 1.755000000 GH
5 00 mm	m	m			Start Fre 1.753000000 GF
25.0				CL1 -13.00 dBm	Stop Fre
45.0		ha	man	mergen many	CF Ste 400.000 ki Auto Ma
55 0					Freq Offs 01
© 0 Center 1.755000 GHz #Res BW 30 kHz	#VBW	91 kHz	Sweep	Span 4.000 MHz 5.533 ms (1001 pts)	Scale Typ Log <u>L</u>
150			Lo STAT		-

Plot 7-198. Upper Band Edge Plot (Band 4 - 3.0MHz QPSK - Full RB Configuration)



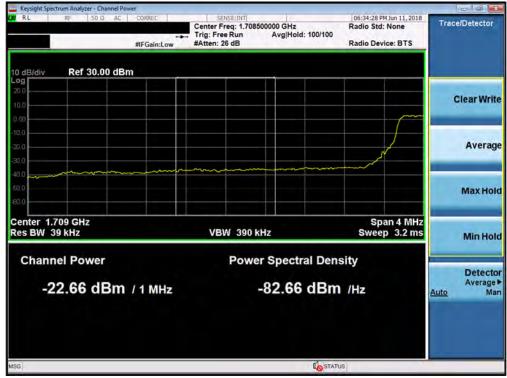
Plot 7-199. Upper Extended Band Edge Plot (Band 4 - 3.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMT837P		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager	
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Keysight Spectrum Analyzer - Swept SA RL RF 50 Ω AC	CORREC	SENSE:INT		06:34:16 PM Jun 11, 2018	
	PNO: Wide G	Trig: Free Run Atten: 36 dB	#Avg Type: RMS	TRACE 23450 TYPE A WWWWW DET A NNNNN	Frequency
10 dB/div Ref 25.00 dBm			Mkr	1 1.710 000 GHz -29.01 dBm	Auto Tun
15.0					Center Fre 1.710000000 GH
5.00		\int		w	Start Fre 1.708000000 GH
25.0		1		CL1 -13.00 dBm	Stop Fre 1.712000000 GH
15.0					CF Ste 400.000 ki Auto M
55 0					Freq Offs 01
∞ 0 Center 1.710000 GHz #Res BW 51 kHz	#\/B\W	160 kHz	Sween	Span 4.000 MHz 1.933 ms (1001 pts)	Scale Typ Log <u>L</u>
ISG		NGO MIL	SWEED		

Plot 7-200. Lower Band Edge Plot (Band 4 - 5.0MHz QPSK - Full RB Configuration)



Plot 7-201. Lower Extended Band Edge Plot (Band 4 - 5.0MHz QPSK - Full RB Configuration)

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Keysight Spectrum Analyzer - Swept SA RL RF 50 Ω AC		SENSE:INT		06:44:50 PM Jun 11, 2018	Frequency
	PNO: Wide 😱 IFGain:Low	Trig: Free Run Atten: 36 dB	#Avg Type: RMS	TRACE 23450 TYPE A WWWWW DET A NNNNN	
0 dB/div Ref 25.00 dBm			Mkr	1 1.755 000 GHz -28.29 dBm	Auto Tun
15.0					Center Fre 1.755000000 GH
5.00 	~~~~~				Start Fre 1.753000000 GF
15.0		T		DL1 -13.00 dBm	Stop Fre 1.757000000 Gi
15.0		5	un min	······································	CF Ste 400.000 kl Auto M
56 0					Freq Offs 01
© 0 Center 1.755000 GHz #Res BW 51 kHz	#VBW *		Swaan	Span 4.000 MHz 1.933 ms (1001 pts)	Scale Typ
SO SO ST KILZ	#4044	100 KH2	Sweep		

Plot 7-202. Upper Band Edge Plot (Band 4 - 5.0MHz QPSK - Full RB Configuration)



Plot 7-203. Upper Extended Band Edge Plot (Band 4 - 5.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMT837P		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dega 102 of 001
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RL RF 50Ω AC	CORREC	SENSE:INT		06:31:22 PM Jun 11, 2018	Frequency
	PNO: Wide C	Trig: Free Run Atten: 36 dB	#Avg Type: RMS	TRACE 2 3 4 5 6 TYPE A WWWWWW DET A NNNNN	
10 dB/div Ref 25.00 dBm			Mkr	1.710 000 GHz -33.81 dBm	Auto Tune
15.0					Center Free 1.710000000 GH
5.00		ſ			Start Free 1.706000000 GH
25.0				DL1 /13.00 dBm	Stop Free 1.714000000 GH
35.0	nimm	~~~~~ ¹			CF Stej 800.000 kH <u>Auto</u> Ma
55 0					Freq Offse 0 H
©5.0 Center 1.710000 GHz #Res BW 100 kHz	#\/D\\	300 kHz		Span 8.000 MHz 1.000 ms (1001 pts)	Scale Typ
ISG	# V D V V	500 KH2	SWEEP		-

Plot 7-204. Lower Band Edge Plot (Band 4 - 10.0MHz QPSK - Full RB Configuration)



Plot 7-205. Lower Extended Band Edge Plot (Band 4 - 10.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMT837P		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dage 124 of 221
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RL RF 50 Q AC	CORREC	SENSE:INT		06:44:09 PM Jun 11, 2018	Concernance of the
	PNO: Wide C	Trig: Free Run Atten: 36 dB	#Avg Type: RMS	TYPE A WWWWWW DET A NNNNN	Frequency
10 dB/div Ref 25.00 dBm			Mk	r1 1.755 000 GHz -30.18 dBm	Auto Tun
-og 15.0					Center Fre 1.755000000 GH
5.00		7			Start Fre 1.751000000 GH
25.0				CL1 -13 00 dBm	Stop Fre 1.759000000 GH
35.0		horas		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	CF Ste 800.000 ki Auto Ma
55 0					Freq Offs 01
© 0 Center 1.755000 GHz #Res BW 100 kHz	#\/B)//	300 kHz	Sweet	Span 8.000 MHz 1.000 ms (1001 pts)	Scale Typ Log <u>L</u>
ISG	#VDVV	500 KH2	Sweep Lost		

Plot 7-206. Upper Band Edge Plot (Band 4 - 10.0MHz QPSK - Full RB Configuration)



Plot 7-207. Upper Extended Band Edge Plot (Band 4 - 10.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMT837P		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Daga 125 of 221
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RL RF 50Ω	AC CORREC	SENSE:INT		06:29:43 PM Jun 11, 2018	- and a second second
	PNO: Wide C	Trig: Free Run Atten: 36 dB	#Avg Type: RMS	TRACE 23450 TYPE A WWWWW DET A NNNNN	Frequency
0 dB/div Ref 25.00 dl	Зm		Mkr	1 1.709 964 GHz -31.31 dBm	Auto Tun
15.0					Center Fre 1.710000000 GH
5.00				an a	Start Fre 1.704000000 GF
25.0		12		0L1 -13.00 dBm	Stop Fre 1.716000000 GH
35.0	~				CF Ste 1.200000 MI <u>Auto</u> M
55 0					Freq Offs 01
Center 1.710000 GHz Res BW 150 kHz	#VBW	470 kHz	Sween	Span 12.00 MHz 1.000 ms (1001 pts)	Scale Typ Log <u>L</u>
so	"VDV4		Costan.		

Plot 7-208. Lower Band Edge Plot (Band 4 - 15.0MHz QPSK - Full RB Configuration)



Plot 7-209. Lower Extended Band Edge Plot (Band 4 - 15.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMT837P		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Daga 126 of 221
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RL RF 50 Q AC	CORREC	SENSE:INT		06:43:36 PM Jun 11, 2018	- Constanting
	PNO: Wide 🖵 IFGain:Low	Trig: Free Run Atten: 36 dB	#Avg Type: RMS	TRACE 23450 TYPE A WWWWW DET A NNNN	Frequency
0 dB/div Ref 25.00 dBm			Mk	r1 1.755 000 GHz -30.80 dBm	Auto Tun
15.0					Center Fre 1.755000000 GH
5 00	mm	7			Start Fre 1.749000000 GF
15.0				DL1 -13.00 dBm	Stop Fre 1.761000000 G
45.0			menter	min min	CF Ste 1.200000 Mi Auto Mi
55 0					Freq Offs 01
Center 1.755000 GHz				Span 12.00 MHz	Scale Typ Log <u>L</u>
Res BW 150 kHz	#VBW	470 kHz	Sweep	1.000 ms (1001 pts)	

Plot 7-210. Upper Band Edge Plot (Band 4 - 15.0MHz QPSK - Full RB Configuration)



Plot 7-211. Upper Extended Band Edge Plot (Band 4 - 15.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMT837P		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dage 107 of 001
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RL RF 50Ω A0	CORREC	SENSE:INT		06:26:48 PM Jun 11, 2018	Firstering
	PNO: Fast 😱 IFGain:Low	Trig: Free Run Atten: 36 dB	#Avg Type: RMS	TRACE 2 3 4 5 6 TYPE A WWWWW DET A NNNN	Frequency
IO dB/div Ref 25.00 dBn	n		Mkr	1 1.709 936 GHz -24.97 dBm	Auto Tun
15,0					Center Fre 1.710000000 GH
5.00		\int	and a second and a s	ann an ann ann ann ann ann ann ann ann	Start Fre 1.702000000 GH
150 250		1		0L1 -13.00 dBm	Stop Fre 1.718000000 GH
35.0	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~				CF Ste 1.600000 MH Auto Ma
55 0					Freq Offs 01
©5 0 Center 1.710000 GHz #Res BW 200 kHz	#VBW	620 kHz	Sweep	Span 16.00 MHz 1.000 ms (1001 pts)	Scale Typ
so			Lo STATI		

Plot 7-212. Lower Band Edge Plot (Band 4 - 20.0MHz QPSK - Full RB Configuration)



Plot 7-213. Lower Extended Band Edge Plot (Band 4 - 20.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMT837P		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dage 100 of 001
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Keysight Spectrum Analyzer - Swept SA RL RF 50 Ω AC	CORREC	SENSE:INT		06:43:00 PM Jun 11, 2018	
	PNO: Fast 😱 IFGain:Low	Trig: Free Run Atten: 36 dB	#Avg Type: RMS	TRACE 23456 TYPE A WWWW DET A NNNNN	Frequency
0 dB/div Ref 25.00 dBm			Mkr	1 1.755 016 GHz -27.61 dBm	Auto Tun
15.0					Center Fre 1.755000000 GH
5 00	~~~~	7			Start Fre 1.747000000 GH
15.0 25.0		1		CL1 -13.00 dBm	Stop Fre 1.763000000 GH
35.0 45.0			mmm	non mana	CF Ste 1.600000 Mi Auto Mi
56 0					Freq Offs 0 F
66.0 Center 1.755000 GHz				Span 16.00 MHz 1.000 ms (1001 pts)	Scale Typ
Res BW 200 kHz	#VBW	620 kHz	Sweep	1.000 ms (1001 pts)	1999 - Contra 19

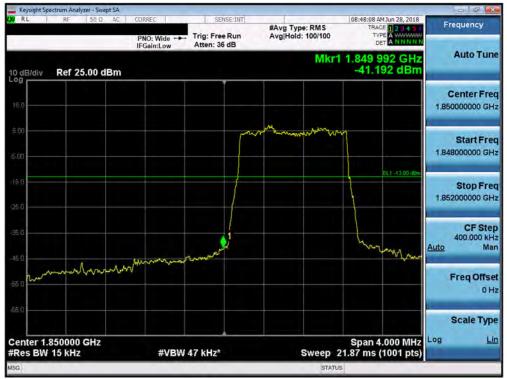
Plot 7-214. Upper Band Edge Plot (Band 4 - 20.0MHz QPSK - Full RB Configuration)



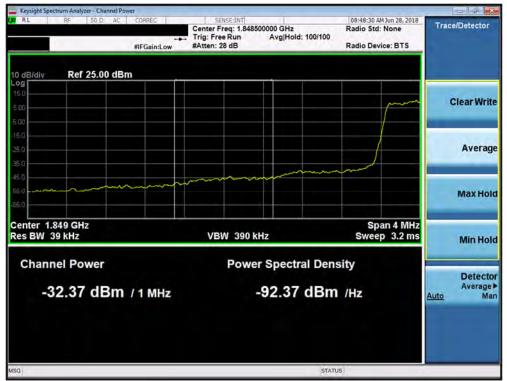
Plot 7-215. Upper Extended Band Edge Plot (Band 4 - 20.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMT837P		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager	
Test Report S/N:	Test Dates:	EUT Type:		Dage 100 of 201	
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Plot 7-216. Lower Band Edge Plot (Band 2 – 1.4MHz QPSK - Full RB Configuration)



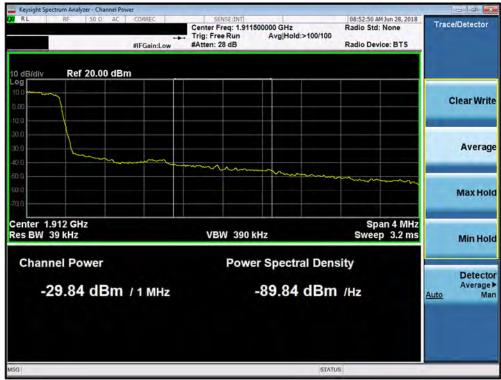
Plot 7-217. Lower Extended Band Edge Plot (Band 2 – 1.4MHz QPSK - Full RB Configuration)

FCC ID: A3LSMT837P		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager		
Test Report S/N:	Test Dates:	EUT Type:		Dage 120 of 221		
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Keysight Spectrum Analyzer - Swept SA RL RF 50 Ω AC	CORREC	SENSE:INT	and the second	08:52:31 AM Jun 28, 2018	Frequency
	PNO: Wide 😱	Trig: Free Run Atten: 36 dB	#Avg Type: RMS	TYPE A WWWWWW DET A NNNNN	Frequency
0 dB/div Ref 25.00 dBm			Mkr	1 1.910 000 GHz -37.35 dBm	Auto Tun
15.0					Center Fre 1.910000000 GH
5.00 5.00	Hard Hard Carles	wh			Start Fre 1.908000000 GH
25.0				DL1 -13.00 cBm	Stop Fre 1.912000000 GH
150 Brown mar and		1 Thomas and	al marking marking		CF Ste 400.000 kF Auto Ma
55.0				malarisana	Freq Offs 0 F
65 0 Center 1.910000 GHz				Span 4.000 Minz	Scale Typ
Res BW 15 kHz	#VBW	47 kHz	Sweep	21.87 ms (1001 pts)	

Plot 7-218. Upper Band Edge Plot (Band 2 – 1.4MHz QPSK - Full RB Configuration)



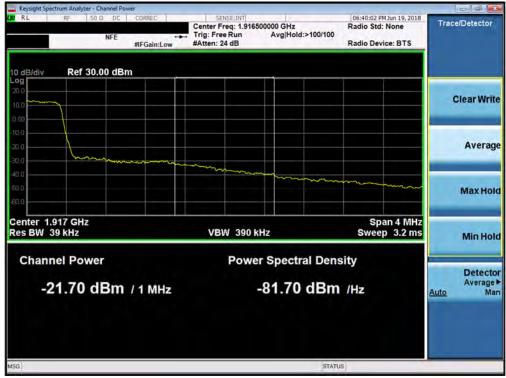
Plot 7-219. Upper Extended Band Edge Plot (Band 2 – 1.4MHz QPSK - Full RB Configuration)

FCC ID: A3LSMT837P		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager	
Test Report S/N:	Test Dates:	EUT Type:		Page 131 of 221	
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0 2018 PCTEST Engineering Laboratory, Inc. V 8.1 05/10/2018					



Keysight Spectrum Analyzer - Swept SA RL RF 50 Ω DC	CORREC	SENSE:INT		06:39:56 PM Jun 19, 2018	
NFE	PNO: Wide 😱 IFGain:Low	Trig: Free Run Atten: 36 dB	#Avg Type: RMS	TYPE A WWWWWW DET A NNNNN	Frequency
10 dB/div Ref 25.00 dBm			Mkr	1 1.915 040 GHz -26.20 dBm	Auto Tun
100	v	m			Center Fre 1.915000000 GH
5.00					Start Fre 1.913000000 GH
15 0		1		DL1 -13.00 dBm	Stop Fre 1.917000000 GH
35.0 45.0		Winn	ummen m	m	CF Ste 400.000 kH Auto Ma
65 D					Freq Offs 0 H
© 0 Center 1.915000 GHz				Span 4.000 MHz	Scale Typ
Res BW 51 kHz	#VBW	160 kHz	Sweep	2.000 ms (1001 pts)	
Res BW 51 kHz	#VBW	160 kHz	Sweep		

Plot 7-220. Upper Band Edge Plot (Band 25 - 1.4MHz QPSK - Full RB Configuration)



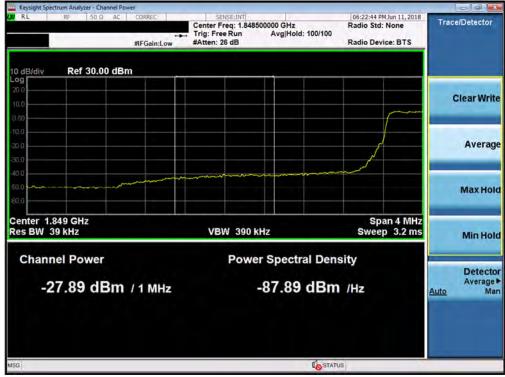
Plot 7-221. Upper Extended Band Edge Plot (Band 25 - 1.4MHz QPSK - Full RB Configuration)

FCC ID: A3LSMT837P		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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RL RF 50 Ω A	C CORREC	SENSE:INT		06:22:38 PM Jun 11, 2018	Harrison Cont
	PNO: Wide 🖵 IFGain:Low	Trig: Free Run Atten: 36 dB	#Avg Type: RMS	TRACE 2 3 4 5 6 TYPE A WANNEN DET A NNNNN	Frequency
10 dB/div Ref 25.00 dBr	n		Mkr	1 1.849 984 GHz -29.23 dBm	Auto Tun
15.0					Center Fre 1.85000000 GF
5.00			r	and a second and a second and a second and a second second second second second second second second second se	Start Fre 1.848000000 GF
15.0		1		DL1 -13.00 dBm	Stop Fre 1.852000000 GH
35.0 45.0		~~~~			CF Ste 400,000 ki <u>Auto</u> Ma
55 0					Freq Offs 0 F
ce u Center 1.850000 GHz #Res BW 30 kHz	#VBW	01 1/47	Swaan	Span 4.000 MHz 5.533 ms (1001 pts)	Scale Typ
ISG	#4044	51 KHZ	Sweep State		-

Plot 7-222. Lower Band Edge Plot (Band 2 - 3.0MHz QPSK - Full RB Configuration)



Plot 7-223. Lower Extended Band Edge Plot (Band 2 - 3.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMT837P		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dega 122 of 221
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Keysight Spectrum Analyzer - Swept SA RL RF 50 Ω A		SENSE:INT		06:23:01 PM Jun 11, 2018	
	PNO: Wide 😱 IFGain:Low	Trig: Free Run Atten: 36 dB	#Avg Type: RMS	TRACE 2 3 4 5 0 TYPE A WWWWW DET A NNNNN	Frequency
0 dB/div Ref 25.00 dBn	n		Mkr	1 1.910 020 GHz -26.79 dBm	Auto Tun
15,0					Center Fre 1.910000000 GH
5.00 mmm, kurrana	mm	~~~			Start Fre 1.908000000 GH
150 350		1		DL1 -13 00 dBm	Stop Fre 1.912000000 GH
15.0		June		and which which a second	CF Ste 400.000 ki Auto Ma
55 0					Freq Offs 01
Center 1.910000 GHz Res BW 30 kHz	#VBW	91 kHz	Sweep	Span 4.000 MHz 5.533 ms (1001 pts)	Scale Typ Log <u>L</u>
so			STAT		

Plot 7-224. Upper Band Edge Plot (Band 2 - 3.0MHz QPSK - Full RB Configuration)



Plot 7-225. Upper Extended Band Edge Plot (Band 2 - 3.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMT837P		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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in 19, 2018	
23450 ANNNNN	Frequency
0 GHz 4 dBm	Auto Tun
	Center Fre
1.9	Start Fre
1 -13.00 dBm 1.9	Stop Fre
Auto	CF Ste 400.000 kF Ma
	Freq Offs 0 F
00 MHz Log	Scale Typ
0	0 MHz 01 pts)

Plot 7-226. Upper Band Edge Plot (Band 25 - 3.0MHz QPSK - Full RB Configuration)



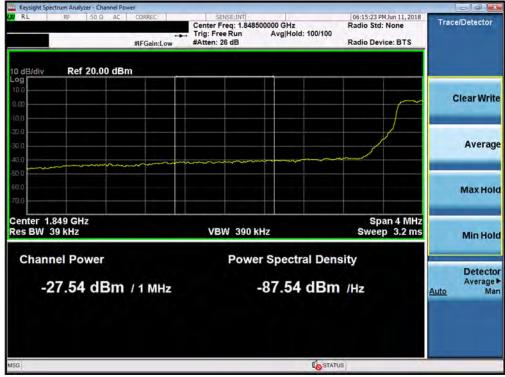
Plot 7-227. Upper Extended Band Edge Plot (Band 25 - 3.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMT837P		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dega 125 of 221
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Keysight Spectrum Analyzer - Swept SA RL RF 50 Ω AC	CORREC	SENSE:INT		06:15:10 PM Jun 11, 2018	
(PNO: Wide 😱	Trig: Free Run Atten: 36 dB	#Avg Type: RMS	TRACE 12345.0 TYPE A WWWWW DET A NNNN	Frequency
10 dB/div Ref 25.00 dBm			Mkr	1 1.850 000 GHz -30.40 dBm	Auto Tun
15.0					Center Fre 1.850000000 GH
5.00			~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		Start Fre 1.848000000 GF
15.0				DL1 -13.00 dBm	Stop Fre 1.852000000 GH
35.0 		~~			CF Ste 400.000 ki <u>Auto</u> Mi
56 0					Freq Offs 01
∞ 0 Center 1.850000 GHz #Res BW 51 kHz	#VBW	160 kHz	Sween	Span 4.000 MHz 1.933 ms (1001 pts)	Scale Typ Log <u>L</u>
sa			Co STATI		

Plot 7-228. Lower Band Edge Plot (Band 2 - 5.0MHz QPSK - Full RB Configuration)



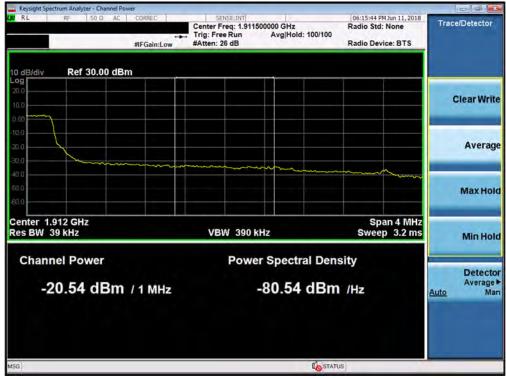
Plot 7-229. Lower Extended Band Edge Plot (Band 2 - 5.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMT837P		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dega 126 of 221
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Keysight Spectrum Analyzer - Swept SA RL RF 50 Ω AC		SENSE:INT		06:15:39 PM Jun 11, 2018	- 6 ×
	PNO: Wide G	Trig: Free Run Atten: 36 dB	#Avg Type: RMS	TRACE 23450 TYPE A WWWWW DET A NNNN	Frequency
10 dB/div Ref 25.00 dBm			Mkr	1 1.910 000 GHz -27.26 dBm	Auto Tun
15.0					Center Fre 1.910000000 GH
5.00	~~~~~	γ			Start Fre 1.908000000 GH
150		1		CL1 -13.00 dBm	Stop Fre 1.912000000 GF
15.0				·····	CF Ste 400,000 ki Auto Mi
55 0					Freq Offs 0 I
65.0 Center 1.910000 GHz #Res BW 51 kHz	#VBW	160 kHz	Sweep	Span 4.000 MHz 1.933 ms (1001 pts)	Scale Typ Log <u>L</u>
so			Lo STAT		

Plot 7-230. Upper Band Edge Plot (Band 2 - 5.0MHz QPSK - Full RB Configuration)



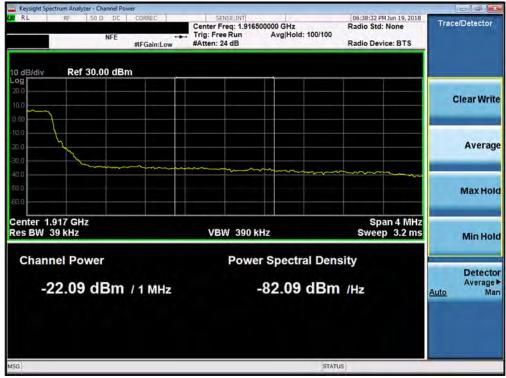
Plot 7-231. Upper Extended Band Edge Plot (Band 2 - 5.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMT837P		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dage 127 of 221
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Keysight Spectrum Analyzer - Swept SA RL RF 50 Ω DC	CORREC	SENSE:INT		06:38:26 PM Jun 19, 2018	
NFE	PNO: Wide C	Trig: Free Run Atten: 36 dB	#Avg Type: RMS	TRACE 2 3 4 5 6 TYPE A WWWWW DET A NNNNN	Frequency
10 dB/div Ref 25.00 dBm			Mkr	1 1.915 000 GHz -26.16 dBm	Auto Tuni
15.0	m				Center Fre 1.915000000 GH
500	0				Start Fre 1.913000000 GH
i50 350		1		GL1 -13.00 dBm	Stop Fre 1.917000000 GH
45.0		hours -			CF Ste 400.000 kH Auto Ma
55 0					Freq Offs 0 H
©5 0 Center 1.915000 GHz #Res BW 51 kHz	#\/B\M	160 kHz	Swaan	Span 4.000 MHz 2.000 ms (1001 pts)	Scale Typ Log Li
SG	# 4 D V 4	TOO KI12	Stat		

Plot 7-232. Upper Band Edge Plot (Band 25 - 5.0MHz QPSK - Full RB Configuration)



Plot 7-233. Upper Extended Band Edge Plot (Band 25 - 5.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMT837P		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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RL RF 50 Q AC	CORREC	SENSE:INT		06:11:08 PM Jun 11, 2018	Carlos and the
	PNO: Wide 😱 IFGain:Low	Trig: Free Run Atten: 36 dB	#Avg Type: RMS	TRACE 23450 TYPE A WWWWW DET A NNNNN	Frequency
10 dB/div Ref 25.00 dBm			Mkr	1 1.850 000 GHz -31.55 dBm	Auto Tun
15.0					Center Fre 1.850000000 GH
5.00		ſ			Start Fre 1.846000000 GH
15 0 25 0				CL1 -13.00 dBm	Stop Fre 1.854000000 GH
35.0 45.0	manne				CF Ste 800.000 kF Auto Ma
550					Freq Offs 0 F
Center 1.850000 GHz #Res BW 100 kHz	#\/B\M	300 kHz	Sween	Span 8.000 MHz 1.000 ms (1001 pts)	Scale Typ Log <u>Li</u>
ISG		o o o mine	Lo STATI		

Plot 7-234. Lower Band Edge Plot (Band 2 - 10.0MHz QPSK - Full RB Configuration)



Plot 7-235. Lower Extended Band Edge Plot (Band 2 - 10.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMT837P		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager	
Test Report S/N:	Test Dates:	EUT Type:		Dage 120 of 221	
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Keysight Spectrum Analyzer - Swept SA RL RF 50 Ω AC	CORREC	SENSE:INT		06:12:17 PM Jun 11, 2018	Frequency
	PNO: Wide 😱 IFGain:Low	Trig: Free Run Atten: 36 dB	#Avg Type: RMS	TRACE 23450 TYPE A WWWWW DET A NNNNN	
dB/div Ref 25.00 dBm			Mkr	1 1.910 056 GHz -29.41 dBm	Auto Tuni
5.0					Center Fre 1.910000000 GH
.00					Start Fre 1.906000000 GH
50		1		CL1 -13.00 dBm	Stop Fre 1.914000000 GH
5.0		- Maria			CF Ste 800.000 kH Auto Ma
50					Freq Offs 0 F
enter 1.910000 GHz				Span 8.000 MHz	Scale Typ
Res BW 100 kHz	#VBW	300 kHz	Sweep	1.000 ms (1001 pts)	-

Plot 7-236. Upper Band Edge Plot (Band 2 - 10.0MHz QPSK - Full RB Configuration)



Plot 7-237. Upper Extended Band Edge Plot (Band 2 - 10.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMT837P		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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RL RF 50	DC DC	CORREC	SENSE:INT		06:35:13 PM Jun 19, 2018	Carlos and the
	NFE	PNO: Wide C	Trig: Free Run Atten: 36 dB	#Avg Type: RMS	TYPE A WWWWW DET A NNNNN	Frequency
0 dB/div Ref 25.00) dBm			Mki	1 1.915 040 GHz -32.16 dBm	Auto Tun
15.0						Center Fre 1.915000000 GH
5.00	mar	and a second and a second s	~~~			Start Fre 1.911000000 GF
25.0			1.		DL1 -13.00 dBm	Stop Fre 1.919000000 GF
35.0			- when a second	mananterin	mannen	CF Ste 800.000 kF Auto Ma
55 0						Freq Offs 0 F
©50 Center 1.915000 GH #Res BW 51 kHz	Iz	#) (B) #	160 kHz		Span 8.000 MHz 4.000 ms (1001 pts)	Scale Typ Log <u>L</u>
SG		#VDVV	100 KH2	Sweep		

Plot 7-238. Upper Band Edge Plot (Band 25 - 10.0MHz QPSK - Full RB Configuration)



Plot 7-239. Upper Extended Band Edge Plot (Band 25 - 10.0MHz QPSK - Full RB Configuration)

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Keysight Spectrum Analyzer - Swept SA Ν RF 50 Ω AC	CORREC	SENSE:INT		06:07:31 PM Jun 11, 2018	
	PNO: Wide C	Trig: Free Run Atten: 36 dB	#Avg Type: RMS	TRACE 2345 6 TYPE A WWWW DET A NNNNN	Frequency
10 dB/div Ref 25.00 dBm			Mkr	1 1.849 988 GHz -29.31 dBm	Auto Tun
i5,0					Center Fre 1.85000000 GH
5 00 5 00			ware and the second sec		Start Fre 1.844000000 GF
15.0		1		DL1 -13 00 dBm	Stop Fre 1.856000000 GH
45.0	~~~~~				CF Ste 1.200000 MF Auto Ma
55 0					Freq Offs 0 F
^{≪5.0} Center 1.850000 GHz #Res BW 150 kHz	#\/B\M	470 kHz	Swaan	Span 12.00 MHz 1.000 ms (1001 pts)	Scale Typ
ISG	#V DVV	47 0 KH2	Sweep		-

Plot 7-240. Lower Band Edge Plot (Band 2 - 15.0MHz QPSK - Full RB Configuration)



Plot 7-241. Lower Extended Band Edge Plot (Band 2 - 15.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMT837P		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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RL RF	50 Q AC	CORREC	SENSE:INT		06:07:56 PM Jun 11, 2018	and the second second
		PNO: Wide C	Trig: Free Run Atten: 36 dB	#Avg Type: R	AS TRACE 2345 TYPE A DET A NNNN	
10 dB/div Ref	25.00 dBm				Wkr1 1.912 748 GHz -31.27 dBm	Auto Tun
15.0						Center Fre 1.910000000 GH
5,00	~~ <u>*</u> ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	mm	7			Start Fre 1.904000000 GF
15.0					CL1-13.00 dBe	Stop Fre 1.916000000 GH
35.0			Ymm		, www.www.www.	CF Ste 1.200000 MH Auto Ma
55.0						Freq Offs 0 F
center 1.91000					Span 12.00 MHz	Scale Typ
Res BW 150 k	Hz	#VBW	470 kHz		ep 1.000 ms (1001 pts	

Plot 7-242. Upper Band Edge Plot (Band 2 - 15.0MHz QPSK - Full RB Configuration)



Plot 7-243. Upper Extended Band Edge Plot (Band 2 - 15.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMT837P		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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RL RF 50 Q DC	CORREC	SENSE:INT		06:34:21 PM Jun	
NFE	PNO: Wide 😱	Trig: Free Run Atten: 36 dB	#Avg Type: RM	S TRACE	Frequency
0 dB/div Ref 25.00 dBm				/kr1 1.915 540 -30.62	GHz Auto Tun dBm
15.0					Center Fre 1.915000000 GH
5.00 5.00	mmmmm	7			Start Fre 1.909000000 GH
25.0				DL1 -	13 00 den Stop Fre 1.921000000 GH
45.0		hand	min	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	CF Ste 1.200000 MF Auto Ma
55 0					Freq Offs 0 F
Center 1.915000 GHz	#\/D\M	160 kHz		Span 12.0 ep 1.933 ms (100	Scale Typ 0 MHz ^{Log} L
Res BW 51 KHZ	#VBW	160 KHZ	Swe	status	n pts)

Plot 7-244. Upper Band Edge Plot (Band 25 - 15.0MHz QPSK - Full RB Configuration)



Plot 7-245. Upper Extended Band Edge Plot (Band 25 - 15.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMT837P		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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RL RF 50 Q AC	CORREC	SENSE:INT		06:05:28 PM Jun 11, 2018	Frequency
	PNO: Fast 😱 IFGain:Low	Trig: Free Run Atten: 36 dB	#Avg Type: RMS	TRACE 23450 TYPE A WWWWW DET A NNNN	
0 dB/div Ref 25.00 dBm			Mkr	1 1.850 000 GHz -27.28 dBm	Auto Tun
15.0					Center Fre 1.85000000 GH
5.00		ſ			Start Fre 1.842000000 GF
15.0		1		CL1 -13.00 dBm	Stop Fre 1.858000000 GH
35.0	Malana				CF Ste 1.600000 MF Auto Ma
55 0					Freq Offs 01
65.0 Center 1.850000 GHz Res BW 200 KHz	#\/\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	620 kHz	Sween.	Span 16.00 MHz 1.000 ms (1001 pts)	Scale Typ
	#VBW	020 KH2	Sweep	1.000 ms (1001 pts)	

Plot 7-246. Lower Band Edge Plot (Band 2 - 20.0MHz QPSK - Full RB Configuration)



Plot 7-247. Lower Extended Band Edge Plot (Band 2 - 20.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMT837P		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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Keysight Spectrum Analyzer - Swe RL RF 50 Ω		SENSE:INT	1	06:06:10 PM Jun 11, 2018	
	PNO: Fast 😱 IFGain:Low	Trig: Free Run Atten: 36 dB	#Avg Type: RMS	TRACE 23456 TYPE A WWWWW DET A NNNNN	Frequency
10 dB/div Ref 25.00 d	Bm		Mkr	1 1.910 000 GHz -27.43 dBm	Auto Tun
- og 15.0					Center Fre 1.910000000 GH
5.00	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	γ			Start Fre 1.902000000 GH
25.0		1		CL1 -13.00 dBm	Stop Fre 1.918000000 GH
35.0			and the second sec	hanningan	CF Ste 1.600000 MH Auto Mi
55 0					Freq Offs 0 F
es.0 Center 1.910000 GHz #Res BW 200 kHz	#VBW (\$20 kHz	Swaan	Span 16.00 MHz 1.000 ms (1001 pts)	Scale Typ
ISG	#VBVV	20 KHZ	Sweep		

Plot 7-248. Upper Band Edge Plot (Band 2 - 20.0MHz QPSK - Full RB Configuration)



Plot 7-249. Upper Extended Band Edge Plot (Band 2 - 20.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMT837P		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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RL	RF	50 Q DC	CORREC	SENSE:INT			17 PM Jun 19, 2018	Provincia.
C		NFE	PNO: Wide G	Trig: Free Run Atten: 36 dB	#Avg Type: F	RMS	TYPE A WANNIN N	Frequency
10 dB/div	Ref 25.	00 dBm				Mkr1 1.91	5 000 GHz 3.49 dBm	Auto Tun
15.0								Center Fre 1.915000000 GH
5.00	i marina	mm	www.www	~				Start Fre 1.907000000 GH
15 0 25 0							CL1 -13.00 dBm	Stop Fre 1.923000000 GF
35.0				h 1	mmm	man		CF Ste 1.600000 MH Auto Ma
55.0							- mark	Freq Offs 0 F
Center 1.		Hz	#VBV	V 160 kHz	Sw	Spar veep 2.533 m	n 16.00 MHz	Scale Typ Log <u>L</u>
Res BW	51 kHz		#VBV	V 160 kHz	Sv	status	s (1001 pts)	

Plot 7-250. Upper Band Edge Plot (Band 25 - 20.0MHz QPSK - Full RB Configuration)

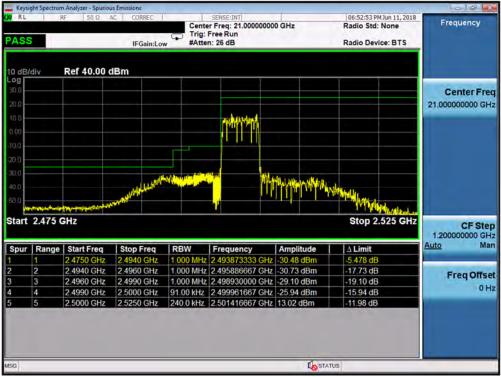
RL RF 50Ω DC	CORREC	SENSE:INT		06:33:30 PM Jun 19, 2018	and the second second
NFE	PNO: Wide	Trig: Free Run Atten: 36 dB	#Avg Type: RMS	TRACE 2 3 4 5 6 TYPE A WWWW DET A NNNNN	Frequency
0 dB/div Ref 25.00 dBm			Mkr	1 1.916 088 GHz -22.51 dBm	Auto Tune
15.0					Center Free 1.918000000 GH
5.00 5.00					Start Fre 1.916000000 GH
150 250	-		an and a second and a second at the	DL1 +13.00 dBm	Stop Fre 1.920000000 GH
45.0					CF Ste 400.000 kH Auto Ma
65.0					Freq Offse 0 H
65.0					Scale Typ
Center 1.918000 GHz #Res BW 1.0 MHz	#VBW :	3.0 MHz	Sweep	Span 4.000 MHz 2.000 ms (1001 pts)	Log <u>Li</u>

Plot 7-251. Upper Extended Band Edge Plot (Band 25 - 20.0MHz QPSK - Full RB Configuration)

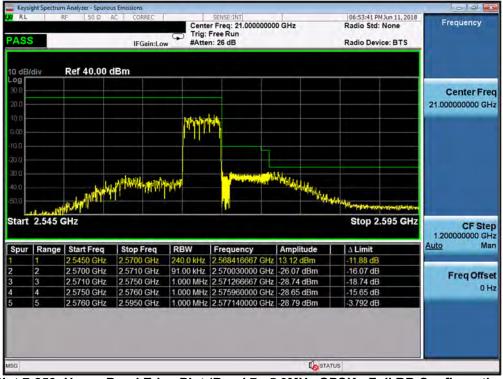
FCC ID: A3LSMT837P		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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Band 7



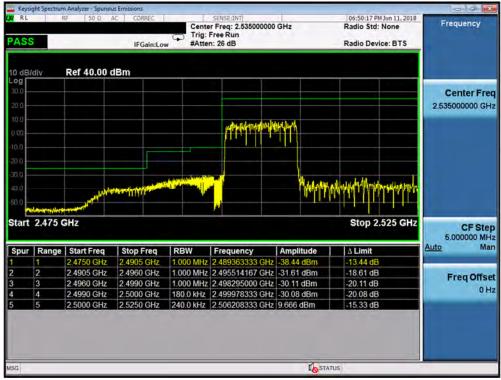
Plot 7-252. Lower Band Edge Plot (Band 7 - 5.0MHz QPSK - Full RB Configuration)



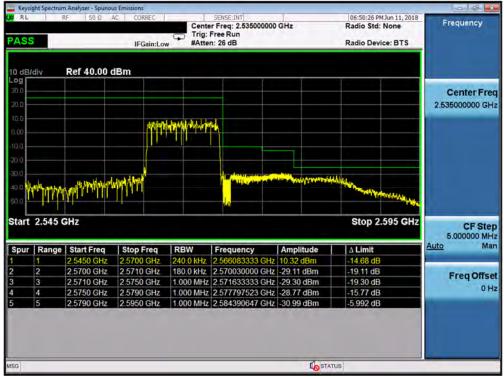
Plot 7-253. Upper Band Edge Plot (Band 7 - 5.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMT837P		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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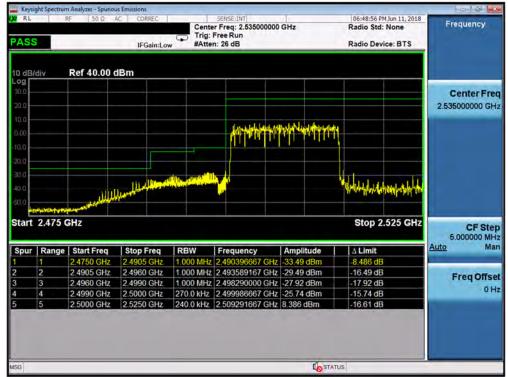
Plot 7-254. Lower Band Edge Plot (Band 7 - 10.0MHz QPSK - Full RB Configuration)



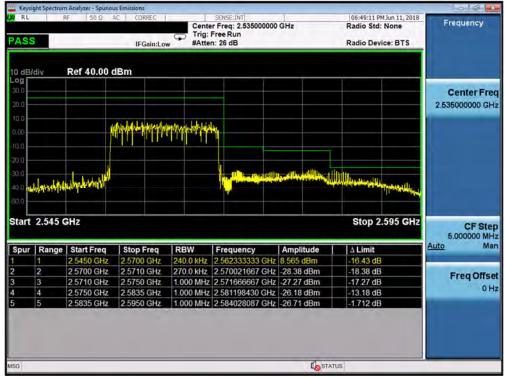
Plot 7-255. Upper Band Edge Plot (Band 7 - 10.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMT837P		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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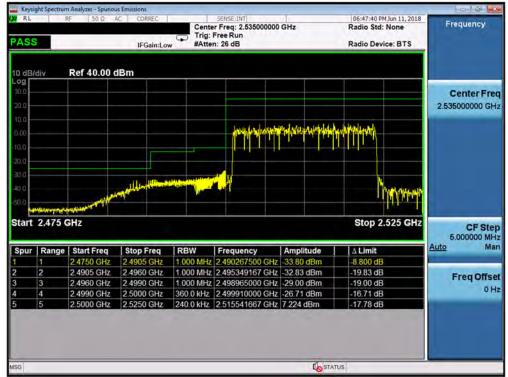
Plot 7-256. Lower Band Edge Plot (Band 7 - 15.0MHz QPSK - Full RB Configuration)



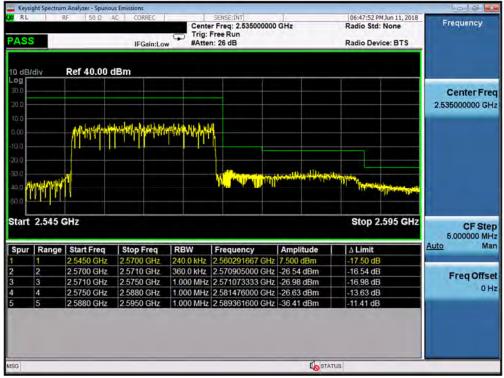
Plot 7-257. Upper Band Edge Plot (Band 7 - 15.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMT837P		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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Plot 7-258. Lower Band Edge Plot (Band 7 - 20.0MHz QPSK - Full RB Configuration)

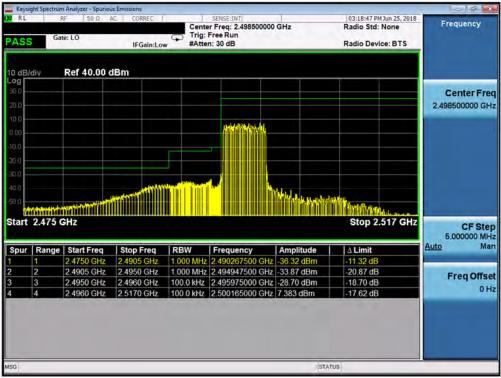


Plot 7-259. Upper Band Edge Plot (Band 7 - 20.0MHz QPSK - Full RB Configuration)

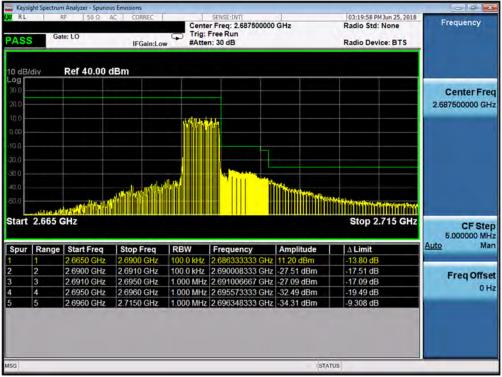
FCC ID: A3LSMT837P		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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Band 41



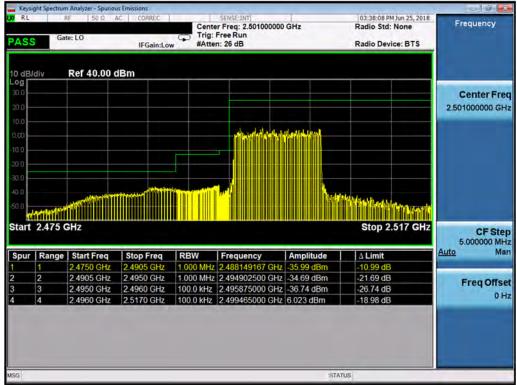
Plot 7-260. Lower ACP Plot at 2496 MHz (Band 41 - 5.0MHz QPSK - RB Size 25)

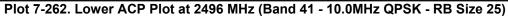


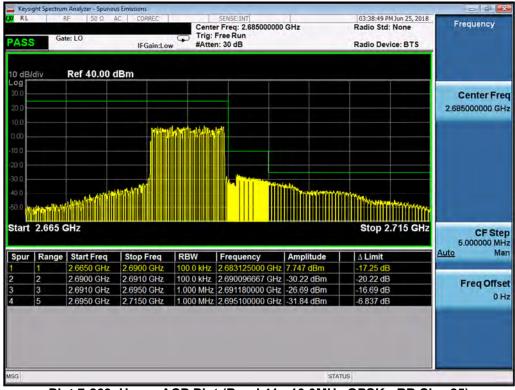
Plot 7-261. Upper ACP Plot (Band 41 - 5.0MHz QPSK - RB Size 25)

FCC ID: A3LSMT837P		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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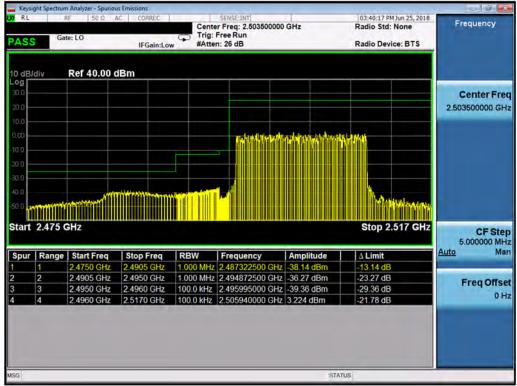


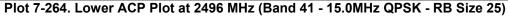


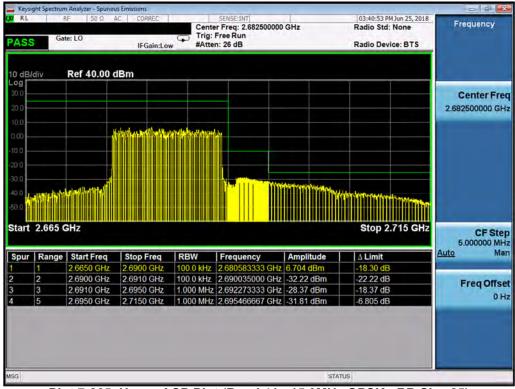
Plot 7-263. Upper ACP Plot (Band 41 - 10.0MHz QPSK - RB Size 25)

FCC ID: A3LSMT837P		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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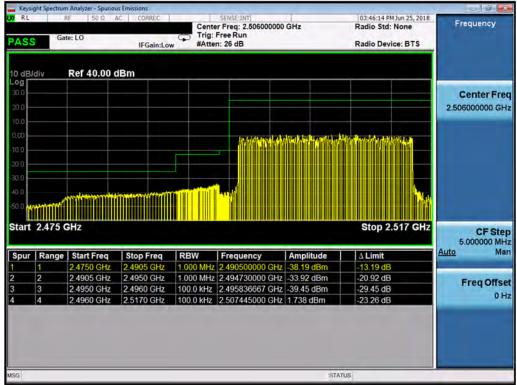


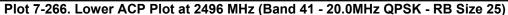


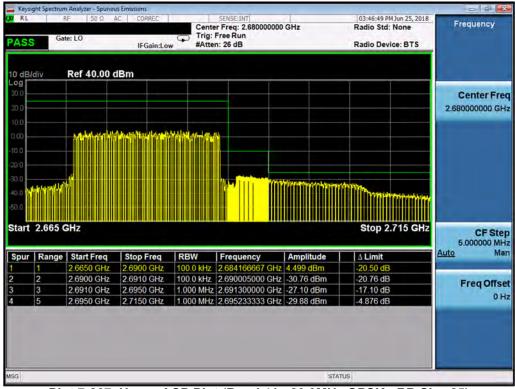
Plot 7-265. Upper ACP Plot (Band 41 - 15.0MHz QPSK - RB Size 25)

FCC ID: A3LSMT837P		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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Plot 7-267. Upper ACP Plot (Band 41 - 20.0MHz QPSK - RB Size 25)

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7.5 Peak-Average Ratio

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 v03r01 - 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.



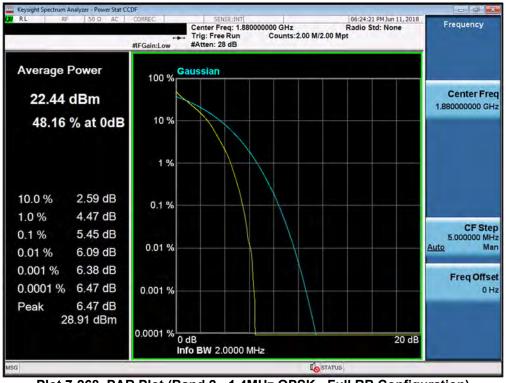
Figure 7-4. Test Instrument & Measurement Setup

Test Notes

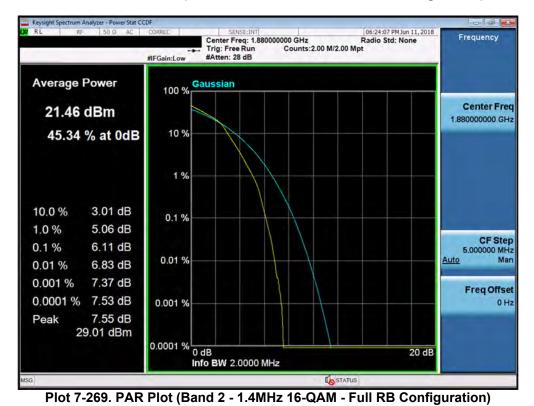
None.

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Plot 7-268. PAR Plot (Band 2 - 1.4MHz QPSK - Full RB Configuration)

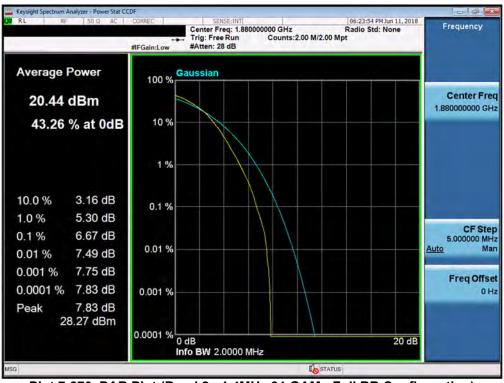


Approved by: PCTEST MEASUREMENT REPORT SAMSUNG FCC ID: A3LSMT837P (CERTIFICATION) Quality Manager EUT Type: Test Report S/N: Test Dates: Page 157 of 221 Portable Tablet

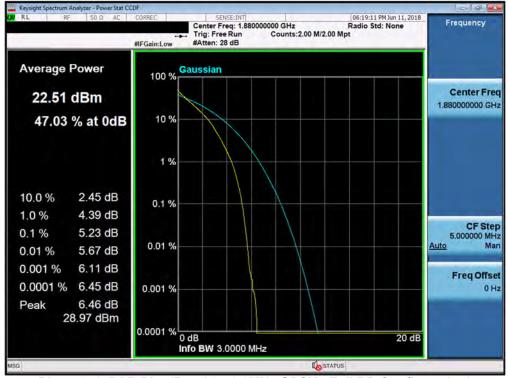
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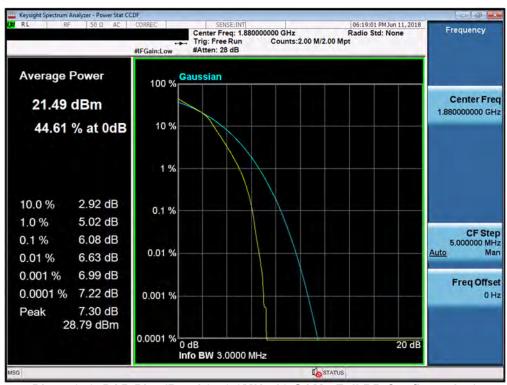
Plot 7-270. PAR Plot (Band 2 - 1.4MHz 64-QAM - Full RB Configuration)



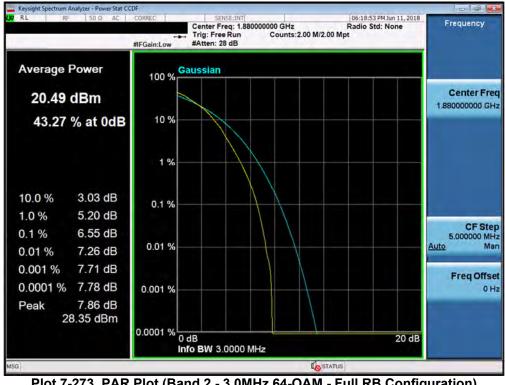
Plot 7-271. PAR Plot (Band 2 - 3.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMT837P		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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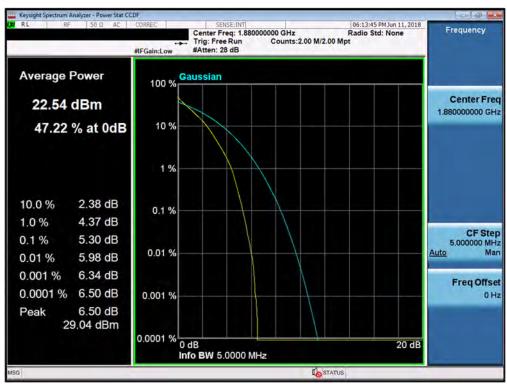




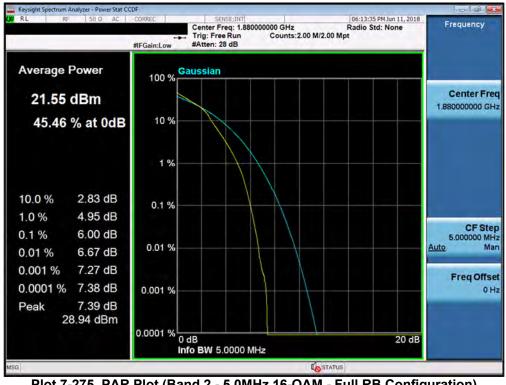
Plot 7-273. PAR Plot (Band 2 - 3.0MHz 64-QAM - Full RB Configuration)

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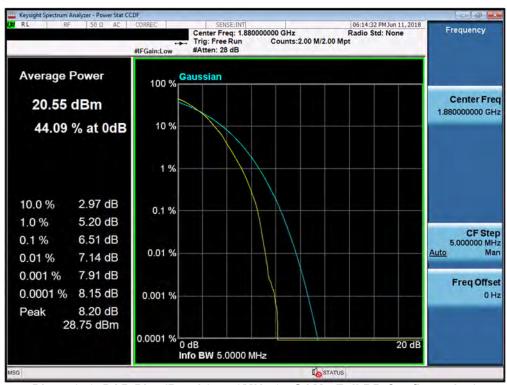
Plot 7-274. PAR Plot (Band 2 - 5.0MHz QPSK - Full RB Configuration)



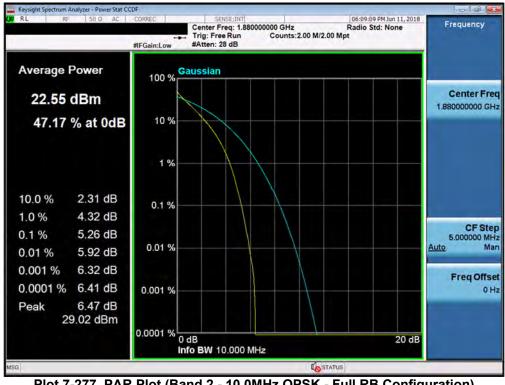
Plot 7-275. PAR Plot (Band 2 - 5.0MHz 16-QAM - Full RB Configuration)

FCC ID: A3LSMT837P		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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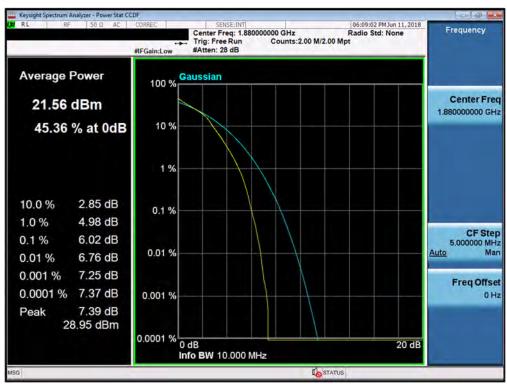




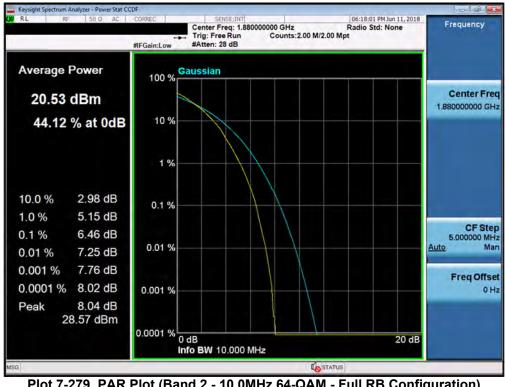


FCC ID: A3LSMT837P		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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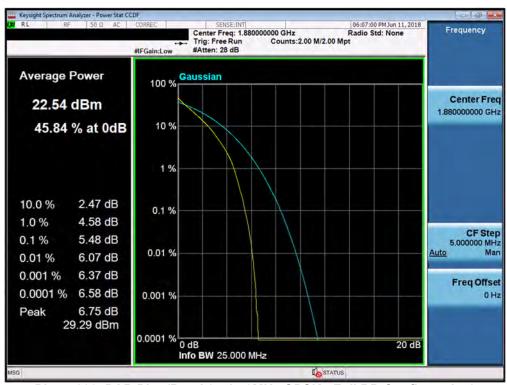
Plot 7-278. PAR Plot (Band 2 - 10.0MHz 16-QAM - Full RB Configuration)



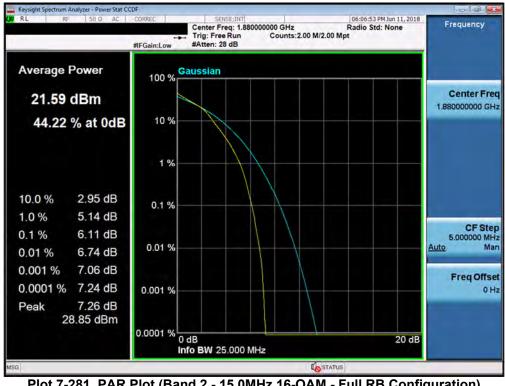
Plot 7-279. PAR Plot (Band 2 - 10.0MHz 64-QAM - Full RB Configuration)

FCC ID: A3LSMT837P		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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Plot 7-281. PAR Plot (Band 2 - 15.0MHz 16-QAM - Full RB Configuration)

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