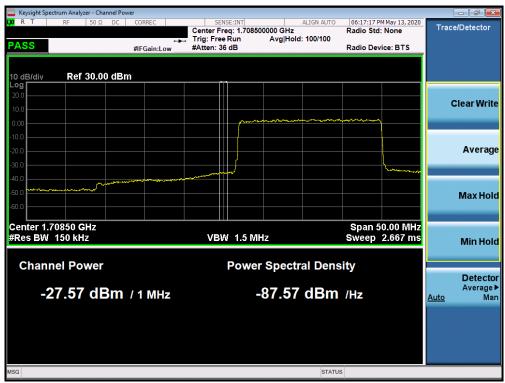




Plot 7-395. Lower Band Edge Plot (n66 - 20MHz DFT-s-OFDM-QPSK - Full RB Configuration)



Plot 7-396. Lower Extended Band Edge Plot (n66 - 20MHz DFT-s-OFDM-QPSK - Full RB Configuration)

FCC ID: A3LSMN986W		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dama 004 of 440
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🔤 Keysight Spectrum Analyzer - Char	nnel Power				
L <mark>X/</mark> RT RF 50Ω	DC CORREC	SENSE:INT Center Freg: 1.78010	ALIGN AUTO	06:18:18 PM May 13, 2020 Radio Std: None	Trace/Detector
	÷+		Avg Hold: 100/100	Radio Std: None	
PASS	#IFGain:Low	#Atten: 36 dB		Radio Device: BTS	
10 dB/div Ref 30.00	dBm				
Log					
20.0					Clear Write
10.0					
0.00	and and a second a second a second	m			
-10.0					
-20.0					Average
-30.0					
-40.0					
-50.0			mannen		Max Hold
-60.0					wax noid
00.0					
Center 1.78010 GHz				Span 50.00 MHz	
#Res BW 100 kHz		VBW 1 MHz		Sweep 6 ms	Min Hold
Channel Power		Power	Spectral Den	sity	
					Detector
-33.61 dB	m / 200 kHz	_	86.62 dBm	/Hz	Average► Auto Man
					Auto
MSG			STATU	JS	

Plot 7-397. Upper Band Edge Plot (n66 - 20MHz DFT-s-OFDM-QPSK - Full RB Configuration)

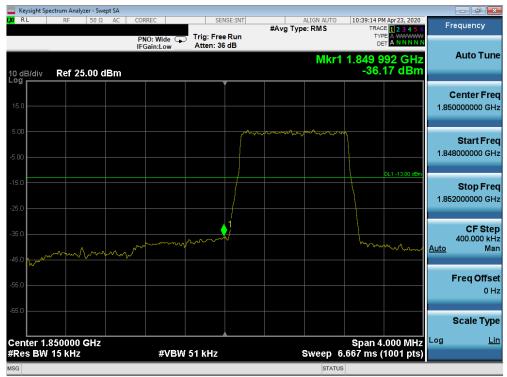


Plot 7-398. Upper Extended Band Edge Plot (n66 - 20MHz DFT-s-OFDM-QPSK - Full RB Configuration)

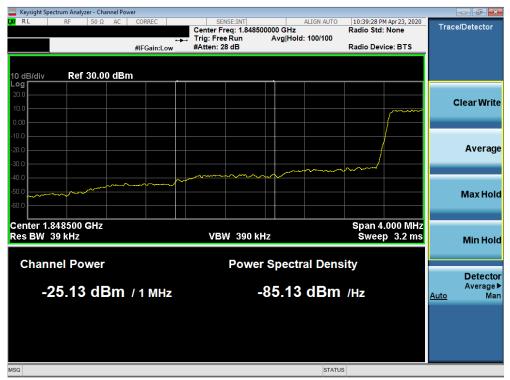
FCC ID: A3LSMN986W	Hout lobe part of B	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager	
Test Report S/N:	Test Dates:	EUT Type:		De ve 005 of 140	
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# Band 25/2



Plot 7-399. Lower Band Edge Plot (Band 25/2 - 1.4MHz QPSK - Full RB Configuration)



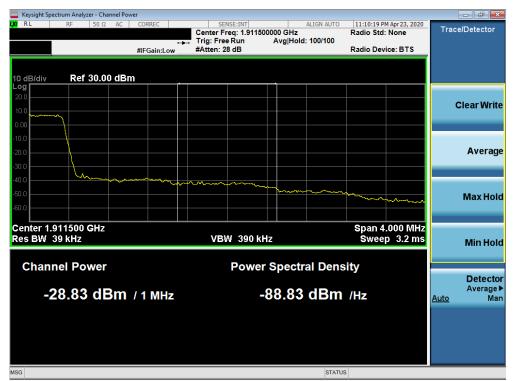
Plot 7-400. Lower Extended Band Edge Plot (Band 25/2 - 1.4MHz QPSK - Full RB Configuration)

FCC ID: A3LSMN986W	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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	Spectrum Analyze												
RL	RF	50 Ω	AC	CORREC PNO: W	ide 🖵	Trig: Fr Atten:		#Avg Ty	ALIGN AUTO	TRA	M Apr 23, 2020 CE 1 2 3 4 5 6 PE A WWWWW ET A N N N N N	F	requency
0 dB/div	Ref 25.	00 d	Bm	IFGallit	.0w	, tuen.			Mkr1	1.910 ( -40.	008 GHz 10 dBm		Auto Tur
5.0													Center Fre 0000000 GI
.00		ſ	~~~~}	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	Mr						DL1 -13.00 dBm	1.90	<b>Start Fr</b> 8000000 G
5.0		/										1.91	<b>Stop Fr</b> 2000000 G
5.0 5.0	<u>M</u>						1	Annan	Why po	-mar America	When a	<u>Auto</u>	<b>CF St</b> 400.000 k M
5.0									v v.				Freq Offs 0
	.910000 0	Hz								Span 4	.000 10112	Log	Scale Tyj L
ces BM	V 16 kHz			-	₽VBW	56 kHz			sweep :	5.667 ms	(1001 pts)		

Plot 7-401. Upper Band Edge Plot (Band 2 - 1.4MHz QPSK - Full RB Configuration)



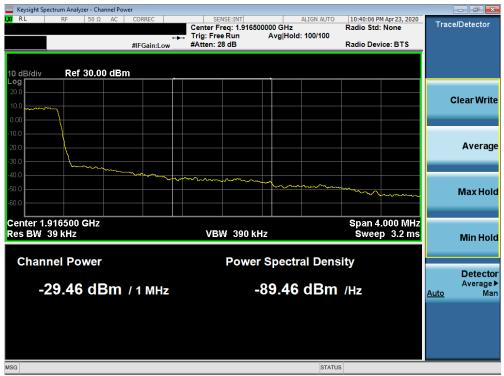
#### Plot 7-402. Upper Extended Band Edge Plot (Band 2 - 1.4MHz QPSK - Full RB Configuration)

FCC ID: A3LSMN986W		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager	
Test Report S/N:	Test Dates:	EUT Type:		Dege 227 of 142	
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Keysight Spectrum Analyzer - Swept SA				- ē <b>-</b> ×-
XIRL RF 50Ω AC		#Avg Type: RI		Frequency
10 dB/div <b>Ref 25.00 dBm</b>	PNO: Wide Trig: Free IFGain:Low Atten: 36	dB	TYPE A WWWWW Det ANNNNN Mkr1 1.915 028 GHz -36.75 dBm	Auto Tune
15.0				Center Freq 1.915000000 GHz
5.00	the second secon		DL1 -13 00 dBm	<b>Start Freq</b> 1.913000000 GHz
-15.0				<b>Stop Freq</b> 1.917000000 GHz
-35.0		1		<b>CF Step</b> 400.000 kHz <u>Auto</u> Man
-55.0				Freq Offset 0 Hz
-65.0				Scale Type
Center 1.915000 GHz #Res BW 15 kHz	#VBW 51 kHz	Swe	Span 4.000 MHz eep   6.667 ms (1001 pts)	Log <u>Lin</u>
MSG			STATUS	

Plot 7-403. Upper Band Edge Plot (Band 25 - 1.4MHz QPSK - Full RB Configuration)



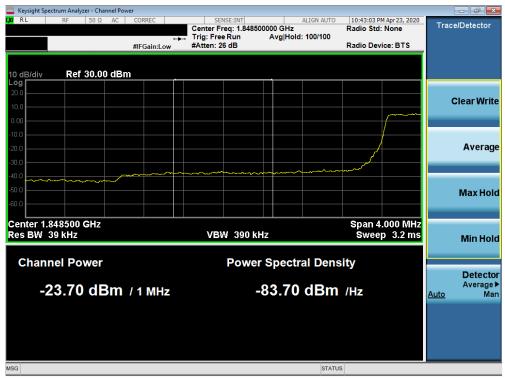
Plot 7-404. Upper Extended Band Edge Plot (Band 25 - 1.4MHz QPSK - Full RB Configuration)

FCC ID: A3LSMN986W		MEASUREMENT REPORT (CERTIFICATION)	AMSUNG	Approved by: Quality Manager	
Test Report S/N:	Test Dates:	EUT Type:		Dama 000 at 140	
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NRRT 1.849 990 GHZ         10 dB/div       Ref 25.00 dBm       -26.33 dBm         150       -26.33 dBm         150       -26.33 dBm         500       -26.33 dBm         -150       -26.33 dBm         -250       -26.33 dBm         -26.33 dBm       -26.33 dBm         -26.30       -26.30 dBm         -26.30 dBm       -26.3		trum Analyzer - Swept SA								
Image: Product of the state is a dB       Det MNNNN         Mkr1 1.849 996 GHz       -26.33 dBm         10 dB/div       Ref 25.00 dBm       -26.33 dBm         150       -26.33 dBm         500       -26.33 dBm         1.85000000       -26.33 dBm         1.85000000       -26.33 dBm         1.85000000       -26.33 dBm         1.85000000       -26.33 dBm         -26.33 dBm       -26.33 dBm         -26.33 d	LXU RL	RF 50 Ω AC					TRAC	E 1 2 3 4 5 6	Fre	quency
150       Center         150       Start I         185000000       Start I         1.85000000       Start I         1.8500000       Start I <t< th=""><th>10 dB/div</th><th>Ref 25.00 dBm</th><th></th><th></th><th></th><th>Mkr1</th><th>DE 1.849 9</th><th>96 GHz</th><th>,</th><th>Auto Tune</th></t<>	10 dB/div	Ref 25.00 dBm				Mkr1	DE 1.849 9	96 GHz	,	Auto Tune
Start         Start           500         0         0         0         1.848000000           150         0         0         0         1.848000000         1.852000000           250         0         0         0         0         1.852000000         1.852000000           350         0	15.0									e <b>nter Freq</b> 000000 GHz
-15.0     1     Stop       -25.0     1     1.85200000       -35.0     -     -       -45.0     -     -       -55.0     -     -       -65.0     - <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td><b>Start Freq</b> 000000 GHz</td></td<>										<b>Start Freq</b> 000000 GHz
					1					<b>Stop Freq</b> 000000 GHz
-55.0 -65.0 -65.0 Center 1.850000 GHz Span 4.000 MHz	~~~~	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	~~~~							<b>CF Step</b> 100.000 kHz Man
Center 1.850000 GHz Span 4.000 MHz									F	r <b>eq Offset</b> 0 Hz
#Res BW 36 KHZ #VBW 130 KHZ Sweep 2.000 ms (1001 pts)	Center 1.8		<i>4</i> 1/D14/			<b>6</b>	Span 4	000 10112		cale Type <u>Lin</u>
NSG STATUS		DO KHZ	#VBW	T30 KHZ			-	root pts)		

Plot 7-405. Lower Band Edge Plot (Band 25/2 - 3.0MHz QPSK - Full RB Configuration)



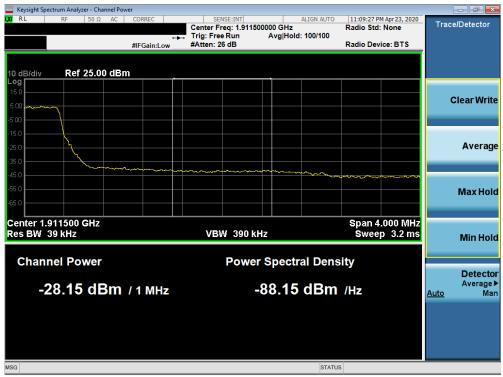
Plot 7-406. Lower Extended Band Edge Plot (Band 25/2 - 3.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMN986W		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager		
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	um Analyzer - Swept SA									- 0 ×
X/RL	RF 50 Ω AC	CORREC		ISE:INT	#Avg Typ	ALIGN AUTO e: RMS	TRAC	Apr 23, 2020	Fre	quency
10 dB/div	Ref 25.00 dBm	PNO: Wide 🖵 IFGain:Low	Atten: 36			Mkr1	DE	00 GHz 39 dBm		Auto Tune
15.0										e <b>nter Freq</b> 000000 GHz
-5.00		·········						DL1 -13.00 dBm		<b>Start Freq</b> 000000 GHz
-15.0			h	1						<b>Stop Freq</b> 000000 GHz
-35.0					~~~~	·			Auto	<b>CF Step</b> 100.000 kHz Man
-55.0									F	r <b>eq Offset</b> 0 Hz
-65.0 Center 1.91	0000 GHz						Span 4	.000 MHz	S Log	cale Type <u>Lin</u>
#Res BW 36		#VBW	130 kHz			Sweep 2	.000 ms (	1001 pts)		
MSG						STATUS	3			

Plot 7-407. Upper Band Edge Plot (Band 2 - 3.0MHz QPSK - Full RB Configuration)



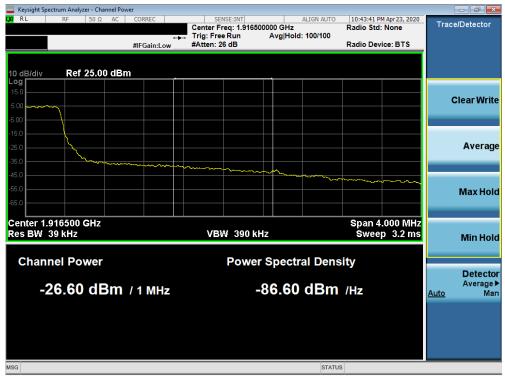
Plot 7-408. Upper Extended Band Edge Plot (Band 2 - 3.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMN986W	How to be part of B	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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	ectrum Analyzer - Swept SA									
X/RL	RF 50 Ω AC	CORREC		SE:INT	#Avg Typ	ALIGN AUTO e: RMS	TRAC	Apr23, 2020 E 1 2 3 4 5 6 E A WWWWW	Fre	quency
10 dB/div Log r	Ref 25.00 dBm	PNO: Wide 🖵 IFGain:Low	Atten: 36			Mkr1	1.915 0 -26.3	T A N N N N N		Auto Tune
15.0										<b>enter Freq</b> 000000 GHz
-5.00								DL1 -13.00 dBm		<b>Start Freq</b> 000000 GHz
-15.0				1						<b>Stop Freq</b> 000000 GHz
-35.0					·····			~~~~~	Auto	<b>CF Step</b> 400.000 kHz Man
-55.0									F	r <b>eq Offset</b> 0 Hz
-65.0	915000 GHz						Span 4		S Log	cale Type Lin
#Res BW		#VBW	130 kHz			Sweep 2	.000 ms (	1001 pts)		
MSG						STATUS	3			

Plot 7-409. Upper Band Edge Plot (Band 25 - 3.0MHz QPSK - Full RB Configuration)



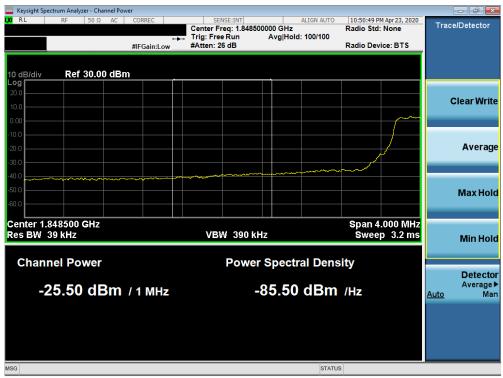
Plot 7-410. Upper Extended Band Edge Plot (Band 25 - 3.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMN986W		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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RL RF 50 Ω AC	CORREC SEN		ALIGN AUTO Type: RMS	10:50:37 PM Apr 23, 2020 TRACE 1 2 3 4 5 6 TYPE A WWWWW	Frequency
0 dB/div Ref 25.00 dBm	IFGain:Low Atten: 36		Mkr1	1.849 992 GHz -29.52 dBm	Auto Tune
15.0					Center Freq 1.850000000 GHz
5.00				DL1 -13.00 dBm	Start Freq 1.848000000 GHz
25.0		1 <sup>1</sup>			<b>Stop Freq</b> 1.852000000 GHz
<sup>35.0</sup>	moranno				CF Step 400.000 kHz <u>Auto</u> Mar
55.0					Freq Offsel 0 Hz
enter 1.850000 GHz Res BW 62 kHz	#VBW 220 kHz			Span 4.000 MHz	Scale Type
RES BW 02 KHZ	#VBW ZZU KHZ		Sweep 2	.000 ms (1001 pts)	

Plot 7-411. Lower Band Edge Plot (Band 25/2 - 5.0MHz QPSK - Full RB Configuration)



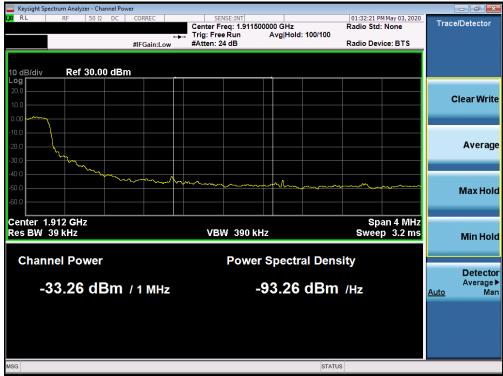
Plot 7-412. Lower Extended Band Edge Plot (Band 25/2 - 5.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMN986W		MEASUREMENT REPORT (CERTIFICATION)	MSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dama 000 at 140
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	ight Spec	trum Analyz												
L <mark>XI</mark> RL		RF	50 Ω	DC	CORREC			SENSE:INT	#Avg Ty	pe: RMS	TRA	M May 03, 2020	F	requency
					PNO: V IFGain	Vide 😱 Low	Trig: F Atten:	ree Run 36 dB		Mki	ı 1 1.910 1	016 GHz .70 dBm		Auto Tune
10 dB Log 15.0	/div	Ref 25	.00 d	Bm							-21			<b>Center Freq</b> 0000000 GHz
5.00	www.wat	anan an surface de	W.	**\* <b>*</b> *\**	<sup>leg</sup> t of length of the state o	eliman	Hora L						1.90	Start Freq 8000000 GHz
-15.0 -								1				DL1 -13.00 dBm	1.91	Stop Freq 2000000 GHz
-35.0 -								Why My Marine	M margane	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	multer	when me have a server	<u>Auto</u>	CF Step 400.000 kHz Mar
-55.0 -														Freq Offse 0 H;
-65.0														Scale Type
		10000 ( 62 kHz	GHz			#VBW	220 kl	Iz		Sweep	Span 4 6.667 ms	4.000 MHz (1001 pts)	Log	Lin
MSG										STA	TUS			

Plot 7-413. Upper Band Edge Plot (Band 2 - 5.0MHz QPSK - Full RB Configuration)



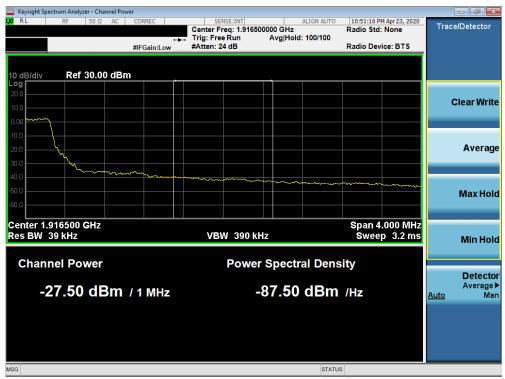
Plot 7-414. Upper Extended Band Edge Plot (Band 2 - 5.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMN986W		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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	ectrum Analyzer - Swept SA									
XV RL	RF 50 Ω AC	CORREC	Trig: Free		#Avg Typ	ALIGN AUTO e: RMS	TRAC	M Apr 23, 2020 CE <b>1 2 3 4 5</b> 6 PE A WWWWW	Fi	requency
10 dB/div Log	Ref 25.00 dBm	IFGain:Low	Atten: 36	dB		Mkr1	1.915 0	000 GHz 77 dBm		Auto Tune
15.0										<b>Center Freq</b> 5000000 GHz
-5.00								DL1 -13.00 dBm	1.91	Start Freq 3000000 GHz
-15.0			- Loo Angle	1					1.91	Stop Freq 7000000 GHz
-35.0				h	~~~~	· · · · · ·	www	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	<u>Auto</u>	CF Step 400.000 kHz Mar
-55.0										Freq Offset 0 Hz
-65.0	915000 GHz						Span 4	.000 MHz	Log	Scale Type <u>Lir</u>
#Res BW		#VBW	220 kHz			Sweep 2	2.000 ms (	1001 pts)		
MSG						STATUS	5			

Plot 7-415. Upper Band Edge Plot (Band 25 - 5.0MHz QPSK - Full RB Configuration)



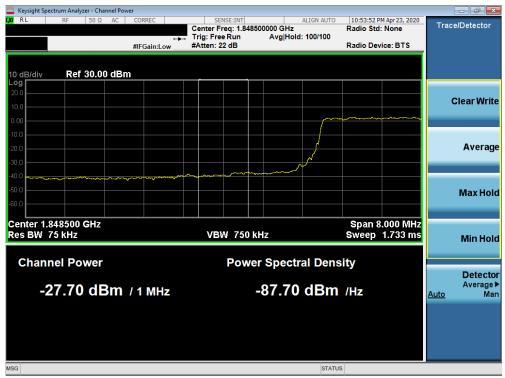
Plot 7-416. Upper Extended Band Edge Plot (Band 25 - 5.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMN986W	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Г Туре:	
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	ectrum Analyzer - Swept SA					
X/RL	RF 50 Ω AC	CORREC	SENSE:INT	ALIGN AUTO #Avg Type: RMS	10:53:46 PM Apr 23, 2020 TRACE 1 2 3 4 5 6	Frequency
10 dB/div	Ref 25.00 dBm	PNO: Wide 😱 IFGain:Low	Trig: Free Run Atten: 36 dB	Mkr	1 1.850 000 GHz -30.67 dBm	Auto Tune
15.0						Center Freq 1.85000000 GHz
-5.00				An an far a front and a far	DL1 -13.00 dBm	<b>Start Freq</b> 1.846000000 GHz
-15.0			1,1			<b>Stop Freq</b> 1.854000000 GHz
-35.0	yeter beer after a start of the	ward and a strategic and a str	- ALL NE STATE AND A STATE AND			CF Step 800.000 kHz <u>Auto</u> Mar
-55.0						Freq Offset 0 Hz
-65.0 Center 1.8	350000 GHz				Span 8.000 MHz	Scale Type
#Res BW		#VBW	430 kHz	Sweep	4.000 ms (1001 pts)	
MSG				STATL	IS	

Plot 7-417. Lower Band Edge Plot (Band 25/2 - 10.0MHz QPSK - Full RB Configuration)



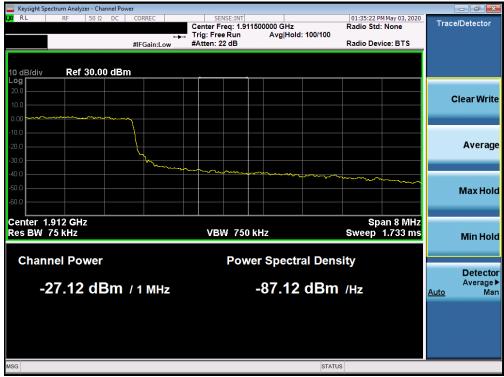
Plot 7-418. Lower Extended Band Edge Plot (Band 25/2 - 10.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMN986W		MEASUREMENT REPORT (CERTIFICATION)	MSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dama 005 at 140
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🤐 Keysight Spectrum Analyzer - Swept SA					
🗶 RL RF 50Ω DC	CORREC	SENSE:INT	#Avg Type: RMS	01:35:15 PM May 03, 2020 TRACE 1 2 3 4 5 6	Frequency
10 dB/div Ref 25.00 dBm		Frig: Free Run Atten: 36 dB	Mkr1	1.910 000 GHz -27.592 dBm	Auto Tune
15.0					Center Freq 1.91000000 GHz
5.00 <del> </del>	weeten and a second and a second s	~~		DL1 -13.00 dBm	<b>Start Freq</b> 1.906000000 GHz
-15.0					<b>Stop Freq</b> 1.914000000 GHz
-35.0		Thylomon	and the second	aline and a second and	CF Step 800.000 kHz <u>Auto</u> Man
-55.0					<b>Freq Offset</b> 0 Hz
-65.0 Center 1.910000 GHz				Span 8.000 MHz	Scale Type
#Res BW 120 kHz	#VBW 43	30 kHz	Sweep 1	3.33 ms (1001 pts)	

Plot 7-419. Upper Band Edge Plot (Band 2 - 10.0MHz QPSK - Full RB Configuration)



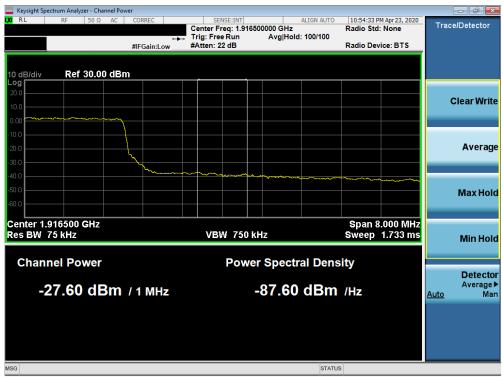
Plot 7-420. Upper Extended Band Edge Plot (Band 2 - 10.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMN986W		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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Keysight Spectrum Analyzer - Swept					
<b>Χ/</b> RL RF 50 Ω		SENSE:INT	ALIGN AUTO #Avg Type: RMS	10:54:24 PM Apr 23, 2020 TRACE 1 2 3 4 5 6 TYPE A WWWWW	Frequency
10 dB/div Ref 25.00 dB	IFGain:Low	Atten: 36 dB	Mkr1	1.915 000 GHz -31.957 dBm	Auto Tune
15.0					Center Freq 1.915000000 GHz
5.00	An and a second s			DL1 -13.00 dBm	Start Freq 1.911000000 GHz
-15.0					<b>Stop Freq</b> 1.919000000 GHz
-35.0		Marine and	Marine Marthan Street Company	and a start a s	CF Step 800.000 kHz <u>Auto</u> Mar
55.0					Freq Offse 0 H;
-65.0 Center 1.915000 GHz				Span 8.000 MHz	Scale Type
#Res BW 120 kHz	#VBW 4	30 kHz	Sweep 4	.000 ms (1001 pts)	
ISG			STATUS	; 	

Plot 7-421. Upper Band Edge Plot (Band 25 - 10.0MHz QPSK - Full RB Configuration)



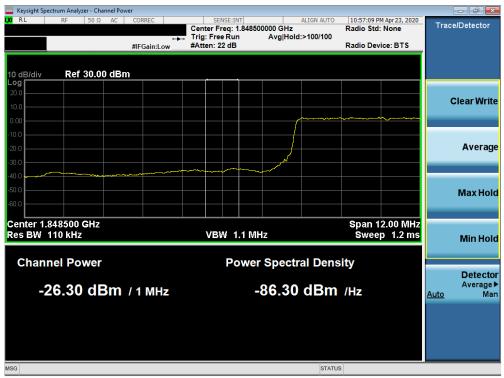
Plot 7-422. Upper Extended Band Edge Plot (Band 25 - 10.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMN986W	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager	
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Keysight Spectrum Analyzer - Swept SA					
C RL RF 50Ω AC	PNO: Wide 🕞 Trig: Free	#Avg Typ Run	e: RMS TRAC	M Apr 23, 2020 CE 1 2 3 4 5 6 PE A WWWWW ET A N N N N N	ency
10 dB/div Ref 25.00 dBm	IFGain:Low Atten: 36	i dB	Mkr1 1.850 ( -31.7		ito Tune
15.0					<b>ter Freq</b> 0000 GHz
5.00			mun hunn		<b>art Freq</b> 0000 GHz
25.0		17		St	op Fred 0000 GHz
45.0	unine and the second				CF Step 0000 MH: Mar
55.0				Fre	<b>q Offse</b> 0 H:
65.0 Center 1.850000 GHz #Res BW 180 kHz	#VBW 620 kHz		Span 1	2.00 MHz Log	ale Type <u>Lin</u>
	#VBW 020 KH2		Sweep 1.000 ms (		

Plot 7-423. Lower Band Edge Plot (Band 25/2 - 15.0MHz QPSK - Full RB Configuration)



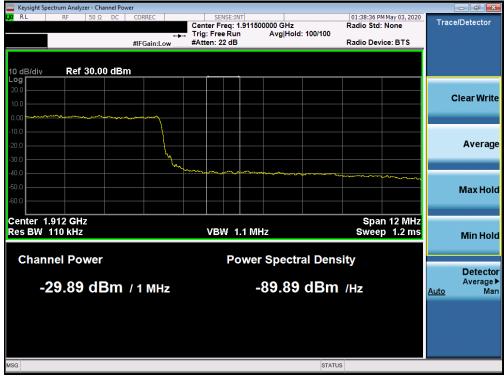
Plot 7-424. Lower Extended Band Edge Plot (Band 25/2 - 15.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMN986W		MEASUREMENT REPORT (CERTIFICATION)	UNG	Approved by: Quality Manager	
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	ectrum Analyz											_	
(XVI RL	RF	50 Ω	DC	CORREC			ENSE:INT	#Avg Ty	pe: RMS	TRA	M May 03, 2020	Fred	luency
				PNO: Wi IFGain:L	de 🖵 ow	Trig: Fr Atten:				TY D			
10 dB/div	Ref 25	.00 dE	3m						Mkr	1 1.910 ( -30.	000 GHz 34 dBm	A	uto Tune
15.0													<b>nter Freq</b> 00000 GHz
5.00		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		www	~~							Start Freq 00000 GHz
-15.0							1				DL1 -13.00 dBm		<b>Stop Freq</b> 00000 GHz
-35.0							Whent	and the second second	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	Junnan	- Contract	1.2 <u>Auto</u>	<b>CF Step</b> 00000 MHz Man
-45.0												Fr	r <b>eq Offset</b> 0 Hz
-65.0													cale Type
Center 1. #Res BW				#	VBW	620 kH	z		Sweep	Span 1 1.000 ms	2.00 MHz (1001 pts)	Log	<u>Lin</u>
MSG									STAT	US			

Plot 7-425. Upper Band Edge Plot (Band 2 - 15.0MHz QPSK - Full RB Configuration)



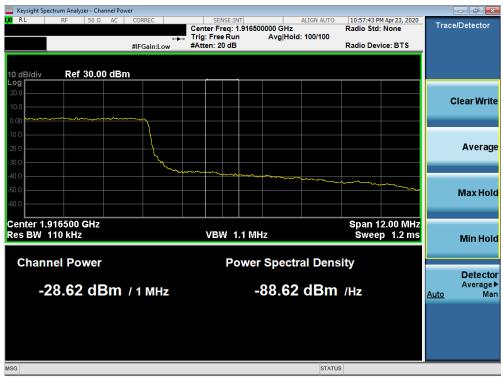
Plot 7-426. Upper Extended Band Edge Plot (Band 2 - 15.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMN986W		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager	
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	C: Wide ain:Low SENSE:INT	ALIGN AUTO #Avg Type: RMS	10:57:36 PM Apr23, 2020 TRACE 12:3456 TYPE A DET ANNNNN 1.915 000 GHz	Frequency
IFG           0 dB/div         Ref 25.00 dBm           5.0		Mkr1		
5.0 .00 .00 .00 5.0			-32.66 dBm	Auto Tune
5.0				Center Freq 1.915000000 GHz
			DL1 -13.00 dBm	Start Fred 1.909000000 GHz
				<b>Stop Fred</b> 1.921000000 GH:
5.0			hann	CF Step 1.200000 MH <u>Auto</u> Mar
5.0				Freq Offse 0 H:
enter 1.915000 GHz			00an 12.00 minz	Scale Type
Res BW 180 kHz	#VBW 620 kHz	Sweep 1	.000 ms (1001 pts)	

Plot 7-427. Upper Band Edge Plot (Band 25 - 15.0MHz QPSK - Full RB Configuration)



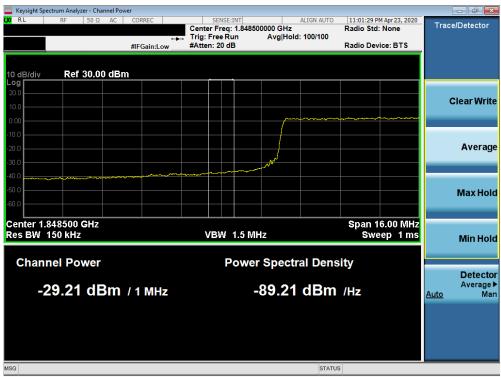
Plot 7-428. Upper Extended Band Edge Plot (Band 25 - 15.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMN986W		MEASUREMENT REPORT (CERTIFICATION)	G	Approved by: Quality Manager	
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	ectrum Analyzer - Swept SA					
X/RL	RF 50 Ω AC	CORREC	SENSE:INT	ALIGN AUTO #Avg Type: RMS	11:01:21 PM Apr 23, 2020 TRACE 1 2 3 4 5 6 TYPE A WWWWW	Frequency
10 dB/div Log	Ref 25.00 dBm	PNO: Wide 🖵 IFGain:Low	Trig: Free Run Atten: 36 dB	Mkr1	1.849 968 GHz -31.94 dBm	Auto Tune
15.0						Center Freq 1.850000000 GHz
-5.00					DL1 -13.00 dBm	Start Freq 1.842000000 GHz
-15.0			1			<b>Stop Freq</b> 1.858000000 GHz
-35.0	man war	Vyanonda Calmanyaya				CF Step 1.600000 MHz <u>Auto</u> Mar
55.0						Freq Offset 0 Hz
	850000 GHz				<b>3</b> 5an 10.00 Minz	Scale Type
#Res BW	240 kHz	#VBW	820 kHz		.000 ms (1001 pts)	
ISG				STATU	5	

Plot 7-429. Lower Band Edge Plot (Band 25/2 - 20.0MHz QPSK - Full RB Configuration)



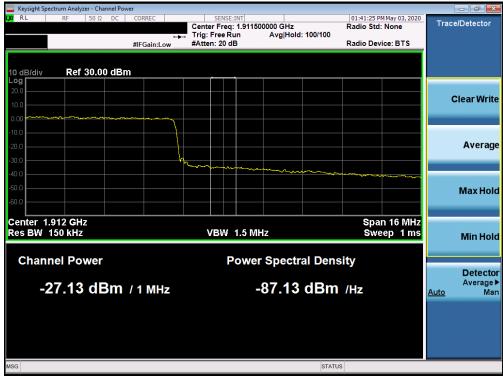
Plot 7-430. Lower Extended Band Edge Plot (Band 25/2 - 20.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMN986W		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager	
Test Report S/N:	Test Dates:	EUT Type:		Dage 244 of 442	
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	ectrum Analyzer - S									_	
LXI RL	RF 50	Ω DC	CORREC		ISE:INT	#Avg Typ	e: RMS	TRA	M May 03, 2020	Free	quency
	<b>D</b> -6.05.00		PNO: Wide 🖵 IFGain:Low	Trig: Free Atten: 36			Mkr1	□ 1.910 (	000 GHz 16 dBm	Å	Auto Tune
10 dB/div Log 15.0	Ref 25.00	авт						-23.			e <b>nter Freq</b> 000000 GHz
-5.00	And provide the second s	~~~~	yn mar an						DL1 -13.00 dBm		Start Freq
-15.0					1						<b>Stop Freq</b> 000000 GHz
-35.0					hours	m	- Marine Contraction	en and a second second	······	1.6 <u>Auto</u>	CF Step 00000 MHz Man
-55.0										F	r <b>eq Offse</b> l 0 Hz
-65.0											cale Type
Center 1. #Res BW	910000 GH: 240 kHz	Z	#VBW	820 kHz			Sweep 1	Span 1 .000 ms (	6.00 MHz (1001 pts)	Log	Lin
MSG							STATUS	3			

Plot 7-431. Upper Band Edge Plot (Band 2 - 20.0MHz QPSK - Full RB Configuration)



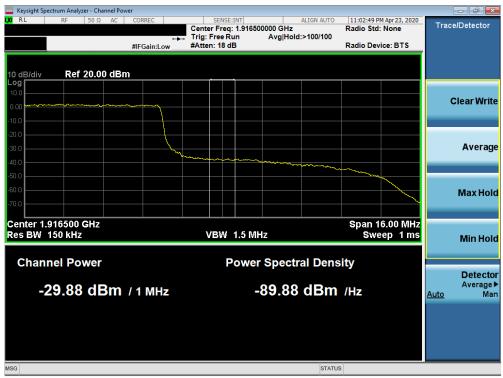
Plot 7-432. Upper Extended Band Edge Plot (Band 2 - 20.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMN986W		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager	
Test Report S/N:	Test Dates:	EUT Type:		Dega 242 of 442	
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Keysight Spectrum Analyzer - Swept SA					
XIRL RF 50Ω AC			ALIGN AUTO Type: RMS	11:02:43 PM Apr 23, 2020 TRACE 1 2 3 4 5 6 TYPE A WWWWW	Frequency
10 dB/div <b>Ref 25.00 dBm</b>	PNO: Wide Trig: Fre IFGain:Low Atten: 3		Mkr1 1	I.915 080 GHz -33.26 dBm	Auto Tune
15.0					Center Freq 1.915000000 GHz
5.00				DL1 -13.00 dBm	Start Freq 1.907000000 GHz
-15.0					<b>Stop Fred</b> 1.923000000 GHz
-35.0	%	W. and and marked	manne	un un and and and and and and and and and an	CF Step 1.600000 MHz <u>Auto</u> Mar
55.0					Freq Offse 0 H;
				Open 16 00 Mile	Scale Type
Center 1.915000 GHz #Res BW 240 kHz	#VBW 820 kHz	2	Sweep 1.0	Span 16.00 MHz 100 ms (1001 pts)	
//SG			STATUS		

Plot 7-433. Upper Band Edge Plot (Band 25 - 20.0MHz QPSK - Full RB Configuration)



Plot 7-434. Upper Extended Band Edge Plot (Band 25 - 20.0MHz QPSK - Full RB Configuration)

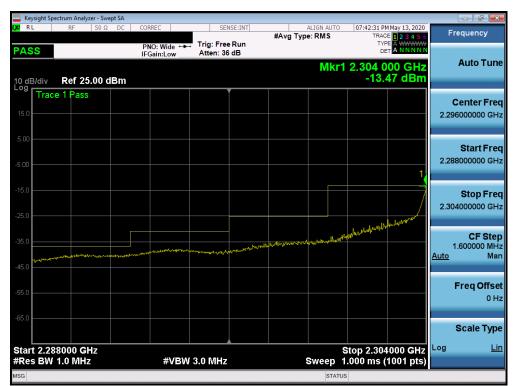
FCC ID: A3LSMN986W		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		D
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## Band 30



Plot 7-435. Lower Band Edge Plot (Band 30 - 5.0MHz QPSK - Full RB Configuration)



Plot 7-436. Lower Extended Band Edge Plot (Band 30 - 5.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMN986W		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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🤤 Keysight Spectrum Analyzer - Swept SA 👘					
LX RL RF 50Ω DC	CORREC	SENSE:INT	ALIGN AUTO #Avg Type: RMS	07:43:04 PM May 13, 2020 TRACE 1 2 3 4 5 6	Frequency
10 dB/div <b>Ref 25.00 dBm</b>	PNO: Wide 😱 IFGain:Low	Trig: Free Run Atten: 36 dB	Mkr	1 2.315 03 GHz -28.48 dBm	Auto Tune
15.0					Center Freq 2.315000000 GHz
5.00	general and and a second s			DL1 -13.00 dBm	<b>Start Freq</b> 2.310000000 GHz
-15.0		1			<b>Stop Freq</b> 2.320000000 GHz
-35.0		Brown and a second	ware provident of the second	Werman and a second and	CF Step 1.000000 MHz <u>Auto</u> Man
-55.0					<b>Freq Offset</b> 0 Hz
-65.0 Center 2.315000 GHz				Span 10.00 MHz	Scale Type
#Res BW 62 kHz	#VBW 2	220 kHz	Sweep 5	.000 ms (1001 pts)	
MSG			STATUS		

Plot 7-437. Upper Band Edge Plot (Band 30 - 5.0MHz QPSK - Full RB Configuration)



Plot 7-438. Upper Extended Band Edge Plot (Band 30 - 5.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMN986W	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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🔤 Keysight Spectrum Analyzer - Swept SA 🚽					
<b>LX/</b> RL RF 50Ω DC	CORREC SET	NSE:INT #Avg Ty		:54 PM May 13, 2020 TRACE 1 2 3 4 5 6	Frequency
10 dB/div Ref 25.00 dBm	PNO: Wide Trig: Free IFGain:Low Atten: 36		Mkr1 2.30	4 992 GHz 29.73 dBm	Auto Tune
15.0					Center Fred 2.305000000 GHz
-5.00				DL1 -13.00 dBm	<b>Start Fred</b> 2.301000000 GH;
-15.0		1.00		DET -13.00 dBm	<b>Stop Fred</b> 2.309000000 GH;
-35.0	and a fact of the second and a se				CF Stej 800.000 kH Auto Ma
-55.0					Freq Offse 0 H
-65.0 Center 2.305000 GHz			Spa		Scale Type
#Res BW 120 kHz	#VBW 430 kHz		Sweep 4.000 n	ns (1001 pts)	
MSG			STATUS		

Plot 7-439. Lower Band Edge Plot (Band 30 - 10.0MHz QPSK - Full RB Configuration)



Plot 7-440. Lower Extended Band Edge Plot (Band 30 - 10.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMN986W		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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🤤 Keysight Spectrum Analyzer - Swept SA 👘				
XX RL RF 50Ω DC	CORREC SENSE	#Avg Type: RN	IS TRACE 1 2 3 4 5 6	Frequency
10 dB/div Ref 25.00 dBm	PNO: Wide Trig: Free R IFGain:Low Atten: 36 db		Mkr1 2.315 00 GHz -30.01 dBm	Auto Tune
15.0				Center Freq 2.315000000 GHz
5.00	and an and a second		DL1 -13.00 dBm	Start Fred 2.310000000 GHz
-15.0				<b>Stop Freq</b> 2.320000000 GHz
-35.0		and the second of the second o	Martin and a second	CF Step 1.000000 MH <u>Auto</u> Mar
-55.0				Freq Offse 0 H
-65.0 Center 2.315000 GHz			Span 10.00 MHz	Scale Type
#Res BW 120 kHz	#VBW 430 kHz	Swe	ep 5.000 ms (1001 pts)	
MSG			STATUS	

Plot 7-441. Upper Band Edge Plot (Band 30 - 10.0MHz QPSK - Full RB Configuration)

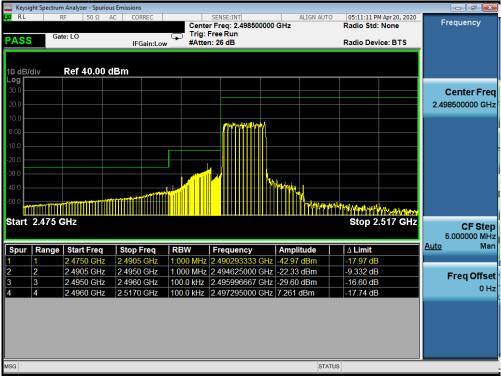


Plot 7-442. Upper Extended Band Edge Plot (Band 30 - 10.0MHz QPSK - Full RB Configuration)

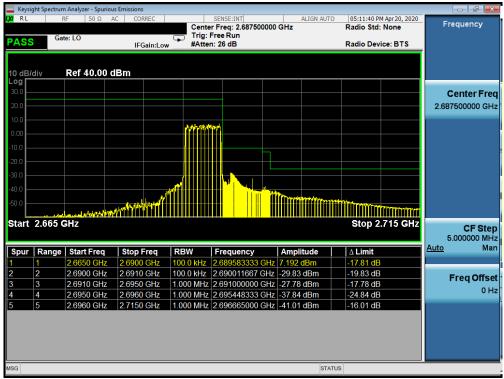
FCC ID: A3LSMN986W	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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# Band 41 PC3



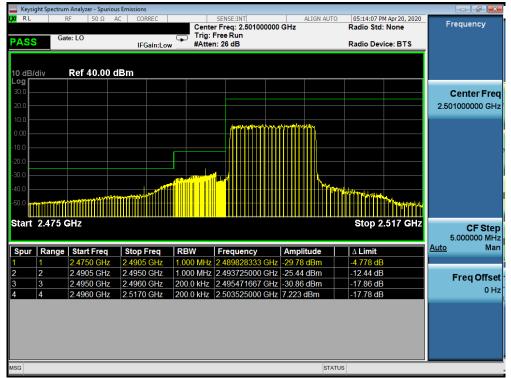
Plot 7-443. Lower ACP Plot at 2496 MHz (Band 41 PC3- 5.0MHz QPSK - Full RB Configuration)



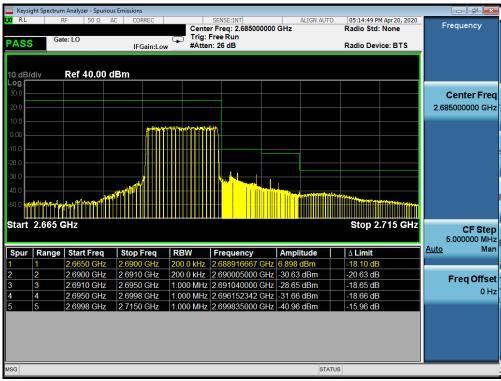
Plot 7-444. Upper ACP Plot (Band 41 PC3- 5.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMN986W	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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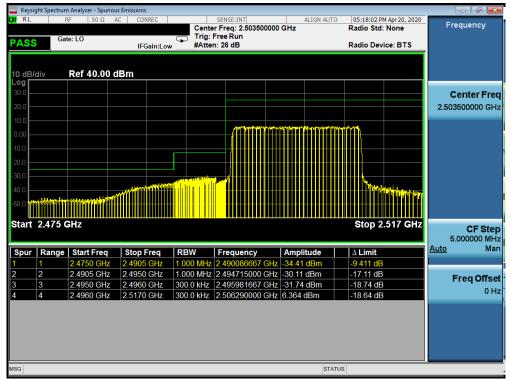
Plot 7-445. Lower ACP Plot at 2496 MHz (Band 41 PC3- 10.0MHz QPSK - Full RB Configuration)



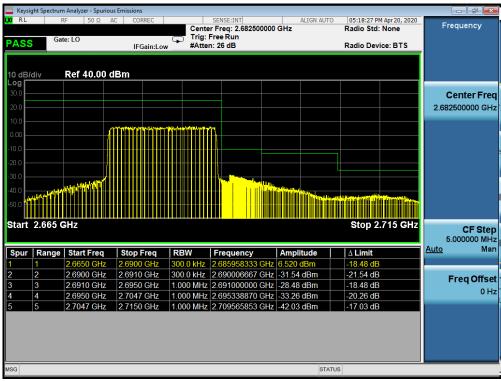
Plot 7-446. Upper ACP Plot (Band 41 PC3- 10.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMN986W	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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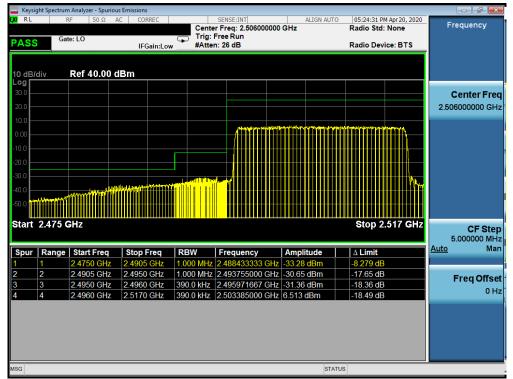
Plot 7-447. Lower ACP Plot at 2496 MHz (Band 41 PC3- 15.0MHz QPSK - Full RB Configuration)



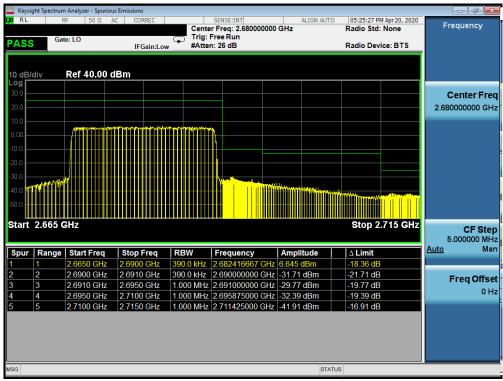
Plot 7-448. Upper ACP Plot (Band 41 PC3- 15.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMN986W		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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Plot 7-449. Lower ACP Plot at 2496 MHz (Band 41 PC3 - 20.0MHz QPSK - Full RB Configuration)



Plot 7-450. Upper ACP Plot (Band 41 PC3 - 20.0MHz QPSK - Full RB Configuration)

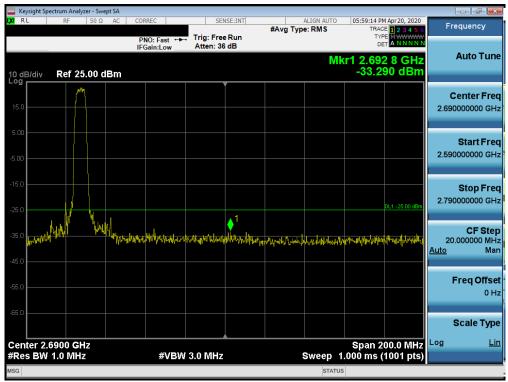
FCC ID: A3LSMN986W		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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## Band 38

Keysight Spectrum Analyz	er - Swept SA 50 Ω AC	CORREC	SENSE:INT			00.00.00	4420 2020	
KL RF	JU Ω AC	PNO: Fast ↔		#Avg Type	ALIGN AUTO ALIGN AUTO	TRAC	M Apr 20, 2020 E 1 2 3 4 5 6 PE M WWWWW	Frequency
10 dB/div Ref 25	.00 dBm	IFGain:Low	Atten: 36 dB		Mk	r1 2.49	3 8 GHz 39 dBm	Auto Tu
15.0								<b>Center Fr</b> 2.496000000 G
5.00								Start Fr 2.396000000 G
25.0							0 <mark>.1 -25.00 dBm</mark>	Stop Fi 2.596000000 G
35.0 <mark>/4/////////////////////////////////</mark>	phlory.a.www.widy.Hila	the mathematical fragments	1 14494944410411041141141414441144	ymphrandid y cymrad	gAlam Alandah	plallape <sup>d</sup>	William	CF St 20.000000 M <u>Auto</u> M
56.0								Freq Off 0
65.0								Scale Ty
Center 2.4960 GH Res BW 1.0 MHz		#VBV	V 3.0 MHz	ş	Sweep 1	Span 2 .000 ms (	00.0 MHz 1001 pts)	Log
SG					STATUS			

Plot 7-451. Lower Band Edge Plot (Band 38 - 5.0MHz QPSK - Full RB Configuration)



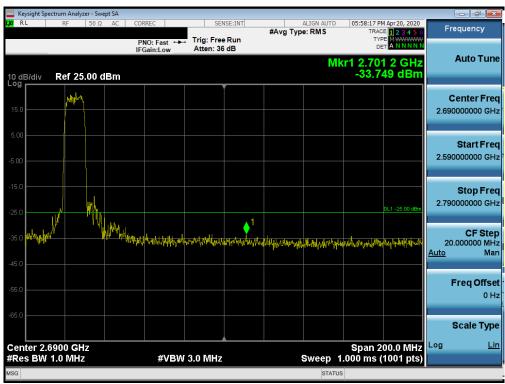
Plot 7-452. Upper Band Edge Plot (Band 38 - 5.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMN986W	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager	
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🔤 Keysight Spectrum Analyzer - Swept SA				
LX RF 50Ω AC		EE:INT ALIGN A #Avg Type: RMS	TRACE 1 2 3 4 5 6	Frequency
10 dB/div <b>Ref 25.00 dBm</b>	PNO: Fast Trig: Free I IFGain:Low Atten: 36 d		Mkr1 2.444 6 GHz -32.545 dBm	Auto Tune
15.0			1990 mg	Center Freq 2.496000000 GHz
-5.00				Start Freq 2.396000000 GHz
-15.0			DL1+25.00 dBm	<b>Stop Fred</b> 2.596000000 GHz
-35.0	Lindrations.Landrationaria.Lindration	halfrangalhanyinalahananyalanyi	wheelper and a second	CF Step 20.000000 MH: <u>Auto</u> Mar
-55.0				Freq Offse 0 Hi
-65.0 Center 2.4960 GHz	#1/D14/ 2 0 B4U-		Span 200.0 Minz	Scale Type
#Res BW 1.0 MHz	#VBW 3.0 MHz		p 1.000 ms (1001 pts)	

Plot 7-453. Lower Band Edge Plot (Band 38 - 10.0MHz QPSK - Full RB Configuration)



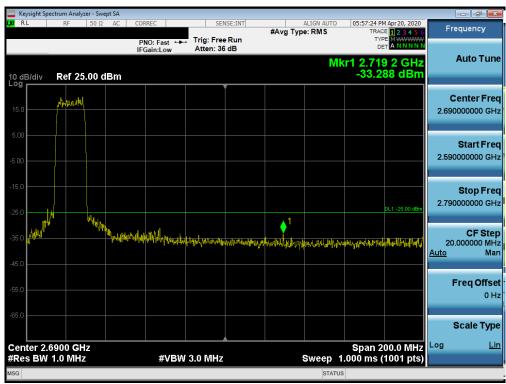
Plot 7-454. Upper Band Edge Plot (Band 38 - 10.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMN986W	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager	
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Nikri 2.490 0 GHz       Center Free         -34.825 dBm       -34.825 dBm         150       -34.825 dBm         500       -34.825 dBm <th>Keysight Spectrum Analyzer - Swept</th> <th></th> <th></th> <th></th> <th></th> <th>- F ×</th>	Keysight Spectrum Analyzer - Swept					- F ×
Atten: 36 dB Mkr1 2.490 0 GHz -34.825 dBm Center Free 2.49600000 GHz Center Free 2.99600000 GHz CF Step Center 2.4960 GHz Free Offse OHz Scale Type Free SW 1.0 MHz #VBW 3.0 MHz Sweep 1.000 ms (1001 pts)	X RL RF 50Ω				TRACE 1 2 3 4 5 6	Frequency
15.0       Center Freq 2.49600000 GH2         15.0       Start Freq 2.39600000 GH2         15.0       Start Freq 2.59600000 GH2         15.0	10 dB/div Ref 25.00 dB	IFGain:Low		Mł	cr1 2.490 0 GHz	Auto Tune
500       Start Free         500       Start Free         150       Start Free         250       Start Free </td <td>15.0</td> <td></td> <td></td> <td></td> <td>rit of July 14</td> <td>Center Fred 2.496000000 GH:</td>	15.0				rit of July 14	Center Fred 2.496000000 GH:
25.0 20.0 20.0	5.00					Start Free 2.396000000 GH:
20.000000 MHz Auto Mar Freq Offse 0 H Center 2.4960 GHz KRes BW 1.0 MHz #VBW 3.0 MHz Sweep 1.000 ms (1001 pts)	-15.0				DL1 -25 00 dBm	Stop Fred 2.596000000 GH;
550       Image: Constraint of the second seco	35.0 <mark>พี่ผู้พูลสมาราชสุทธิ์ (144)ได้สา</mark>	()HHAMMAD AND AND AND AND AND AND AND AND AND A	nitriihhhuufurihhdypewalleeba			20.000000 MH
Center 2.4960 GHz Res BW 1.0 MHz #VBW 3.0 MHz Sweep 1.000 ms (1001 pts)	55.0					•
	Center 2.4960 GHz				opun 200.0 minz	
		#VBW	3.0 MHz			

Plot 7-455. Lower Band Edge Plot (Band 38 - 15.0MHz QPSK - Full RB Configuration)



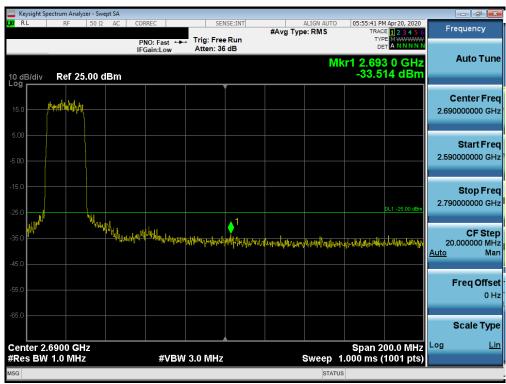
Plot 7-456. Upper Band Edge Plot (Band 38 - 15.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMN986W	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager	
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Keysight Spectrum Analyzer - Swept SA					
RL RF 50Ω AC			ALIGN AUTO	06:03:55 PM Apr 20, 2020 TRACE 1 2 3 4 5 6	Frequency
0 dB/div Ref 25.00 dBm	PNO: Fast ↔ Trig: F IFGain:Low Atten:	ree Run 36 dB	Mk	r1 2.490 0 GHz -35.288 dBm	Auto Tune
15.0				profestitustory	Center Fred 2.496000000 GH:
5.00					Start Free 2.396000000 GH
25.0				DL1 -25.00 @8m	<b>Stop Fre</b> 2.596000000 GH
35.0 Inymawia,104104140/201040414	Jacol Mangaratan Mangaratan Mangaratan	1 unud sylphonethylendet	lational web richtabations <sup>ach</sup> l	and Wa	CF Stej 20.000000 MH <u>Auto</u> Ma
55.0					Freq Offse 0 H
66.0 Center 2.4960 GHz				opun 200.0 minz	Scale Type Log <u>Li</u>
Res BW 1.0 MHz	#VBW 3.0 MI	IZ	Sweep 1.	000 ms (1001 pts)	

Plot 7-457. Lower Band Edge Plot (Band 38 - 20.0MHz QPSK - Full RB Configuration)

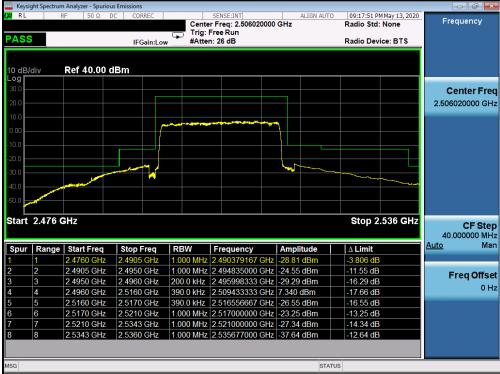


Plot 7-458. Upper Band Edge Plot (Band 38 - 20.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMN986W		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager	
Test Report S/N:	Test Dates:	EUT Type:		Dogo 255 of 442	
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## NR Band n41



Plot 7-459. Lower ACP Plot at 2496 MHz (n41 - 20.0MHz DFT-s-OFDM-QPSK - Full RB Configuration)



Plot 7-460. Upper ACP Plot (Band 41 - 20.0MHz DFT-s-OFDM-QPSK - Full RB Configuration)

FCC ID: A3LSMN986W		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager	
Test Report S/N:	Test Dates:	EUT Type:		Daga 256 of 442	
1M2004170066-03.A3L	4/17 - 6/22/2020	ortable Handset		Page 256 of 443	
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ASS	RF	Analyzer - Spurio 50 Ω		Trig:	SENSE:INT r Freq: 2.50602000 Free Run n: 26 dB	ALIGN AUT 10 GHz	TO 10:12:43 PM Radio Std: Radio Devi		Frequency
10 dB/div	v	Ref 40.00	dBm						
- <b>og</b> 30.0 20.0 10.0									Center Fred 2.506020000 GH:
0.00									
20.0 30.0 40.0									
50.0	456 G	H7					Stop 2	576 GHz	
		Start Freq	Stop Freq	RBW	Frequency	Amplitude	∆ Limit		<b>CF Stej</b> 551.998000 MH <u>Auto</u> Mai
		2.4560 GHz	2.4905 GHz		2.490385000 GH		-11.53 dB		
2 2		2.4905 GHz			2.494955000 GH		-20.01 dB		
3 3		2.4950 GHz			2.495863333 GH		-20.69 dB		Freq Offse
4 4		2.4960 GHz		_	2.520000000 GH	_	-20.85 dB		он
5 5		2.5360 GHz	2.5370 GHz		2.536210000 GH		-18.82 dB		
	;	2.5370 GHz	2.5410 GHz	1.000 MHz	2.537320000 GH	z -29.36 dBm	-19.36 dB		
6 6			2.5739 GHz	1 000 MHz	2.541658000 GH	z -30.26 dBm	-17.26 dB		
		2.5410 GHz	2.5759 662						
6 6		2.5410 GHz 2.5739 GHz	2.5760 GHz		2.574467000 GH	z -36.19 dBm	-11.19 dB		

Plot 7-461. Lower ACP Plot at 2496 MHz (n41 - 40.0MHz DFT-s-OFDM-QPSK - Full RB Configuration)



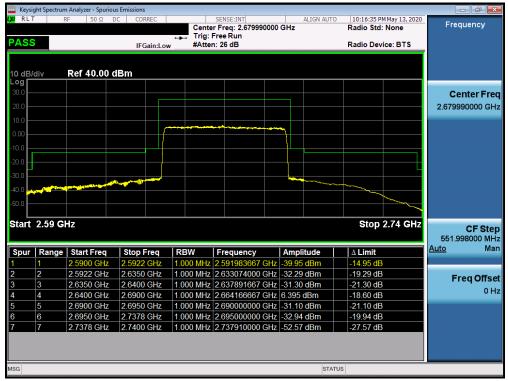
Plot 7-462. Upper ACP Plot (Band 41 - 40.0MHz DFT-s-OFDM-QPSK - Full RB Configuration)

FCC ID: A3LSMN986W	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager	
Test Report S/N:	Test Dates:	EUT Type:		Dege 257 of 442	
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		n Analyzer - Spuri				-		- # <b>*</b>
XI <mark>RL</mark>	T F	RF 50 Ω	DC CORREC		SENSE:INT Freq: 2.50602000 Free Run	ALIGN AUTO	10:14:01 PM May 13, 2020 Radio Std: None	Frequency
PAS	8		IFGain:Lov		n: 26 dB		Radio Device: BTS	
10 dB	(div	Ref 40.00	dBm					
Log		1001 40.00						
30.0								Center Fre
20.0								2.506020000 GH
10.0								
0.00								
10.0								
20.0								
30.0								
-40.0			كاستهر				~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	
			man					
-50.0								
Etart	2.446 0	*U-7					Stop 2.596 GHz	
Start	2.440 (	9112					Stop 2.390 GHZ	CF Ste 551.998000 MH
Spur	Range	Start Freq	Stop Freq	RBW	Frequency	Amplitude	∆ Limit	<u>Auto</u> Ma
1	1	2.4460 GHz	2.4905 GHz	1.000 MHz	2.490425833 GHz	-36.07 dBm	-11.07 dB	
2	2	2.4905 GHz	2.4950 GHz	1.000 MHz	2.494670000 GHz	-33.30 dBm	-20.30 dB	Freq Offse
3	3	2.4950 GHz			2.495943333 GHz		-22.41 dB	0 H
4	4	2.4960 GHz			2.521916667 GHz		-20.84 dB	UF
5	5	2.5460 GHz			2.546925000 GHz		-19.72 dB	
6		2.5510 GHz		_	2.554424000 GHz		-17.84 dB	
7	7	2.5938 GHz	2.5960 GHz	1.000 MHz	2.593866000 GHz	-35.96 dBm	-10.96 dB	
SG						STAT	10	

Plot 7-463. Lower ACP Plot at 2496 MHz (n41 - 50.0MHz DFT-s-OFDM-QPSK - Full RB Configuration)



Plot 7-464. Upper ACP Plot (Band 41 - 50.0MHz DFT-s-OFDM-QPSK - Full RB Configuration)

FCC ID: A3LSMN986W	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dega 259 of 142
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RL'		n Analyzer - Spuriou RF 50 Ω [			SENSE:INT	ALIGN	AUTO 10:10:25 D	M May 13, 2020	
N KL		VF   JU 32 I	DC CORREC		er Freq: 2.50602000		Radio Std		Frequency
PAS	2		150 1 1		Free Run n: 26 dB		Radio Dev		
			IFGain:Lov	v #Atte	n: 26 dB		Radio Dev	ICe: DI S	
10 dB	/div	Ref 40.00 (	dBm						
-og [ ann [									
30.0									Center Fre
20.0									2.506020000 GH
10.0									
0.00									
10.0									
20.0									
30.0 🗖									
40.0			and the second s					ί	
			prod .						
-50.0			/						
Ľ	0.400.0						<u></u>	646 <b>O</b> U-	
start	2.436 Q	<b>∍</b> ⊓2					Stop 2	.616 GHz	CF Ste 551.998000 MH
Spur	Range	Start Freq	Stop Freq	RBW	Frequency	Amplitude	∆ Limit		<u>Auto</u> Ma
	1	2.4360 GHz	2.4905 GHz	1.000 MHz	2.490409167 GH	z -34.73 dBm	-9.725 dB		
		2.4000 0112	2.1000 0112						
1 2		2.4905 GHz	2.4950 GHz	1.000 MHz	2.494977500 GH		-19.61 dB		Fred Offs
	2 3				2.494977500 GH 2.495986667 GH	z -32.61 dBm			
3 4	2 3 4	2.4905 GHz	2.4950 GHz	620.0 kHz		z -32.61 dBm z -32.75 dBm	-19.61 dB		
3 4	2 3 4 5	2.4905 GHz 2.4950 GHz	2.4950 GHz 2.4960 GHz	620.0 kHz 1.000 MHz	2.495986667 GH	z -32.61 dBm z -32.75 dBm z 5.904 dBm	-19.61 dB -19.75 dB		
3 4 5 6	2 3 4 5	2.4905 GHz 2.4950 GHz 2.4960 GHz	2.4950 GHz 2.4960 GHz 2.5560 GHz	620.0 kHz 1.000 MHz 1.000 MHz	2.495986667 GH 2.550700000 GH	z -32.61 dBm z -32.75 dBm z 5.904 dBm z -22.49 dBm	-19.61 dB -19.75 dB -19.10 dB		
3 4 5 6	2 3 4 5	2.4905 GHz 2.4950 GHz 2.4960 GHz 2.5560 GHz	2.4950 GHz 2.4960 GHz 2.5560 GHz 2.5610 GHz	620.0 kHz 1.000 MHz 1.000 MHz 1.000 MHz	2.495986667 GH 2.550700000 GH 2.556000000 GH	z -32.61 dBm z -32.75 dBm z 5.904 dBm z -22.49 dBm z -28.04 dBm	-19.61 dB -19.75 dB -19.10 dB -12.49 dB		
1 2 3 4 5 6 7	2 3 4 5 6	2.4905 GHz 2.4950 GHz 2.4960 GHz 2.5560 GHz 2.5610 GHz	2.4950 GHz 2.4960 GHz 2.5560 GHz 2.5610 GHz 2.6140 GHz	620.0 kHz 1.000 MHz 1.000 MHz 1.000 MHz	2.495986667 GH 2.550700000 GH 2.556000000 GH 2.562590000 GH	z -32.61 dBm z -32.75 dBm z 5.904 dBm z -22.49 dBm z -28.04 dBm	-19.61 dB -19.75 dB -19.10 dB -12.49 dB -15.04 dB		Freq Offse 0 ⊢
3 4 5 6	2 3 4 5 6	2.4905 GHz 2.4950 GHz 2.4960 GHz 2.5560 GHz 2.5610 GHz	2.4950 GHz 2.4960 GHz 2.5560 GHz 2.5610 GHz 2.6140 GHz	620.0 kHz 1.000 MHz 1.000 MHz 1.000 MHz	2.495986667 GH 2.550700000 GH 2.556000000 GH 2.562590000 GH	z -32.61 dBm z -32.75 dBm z 5.904 dBm z -22.49 dBm z -28.04 dBm	-19.61 dB -19.75 dB -19.10 dB -12.49 dB -15.04 dB		
; 	2 3 4 5 6	2.4905 GHz 2.4950 GHz 2.4960 GHz 2.5560 GHz 2.5610 GHz	2.4950 GHz 2.4960 GHz 2.5560 GHz 2.5610 GHz 2.6140 GHz	620.0 kHz 1.000 MHz 1.000 MHz 1.000 MHz	2.495986667 GH 2.550700000 GH 2.556000000 GH 2.562590000 GH	z -32.61 dBm z -32.75 dBm z 5.904 dBm z -22.49 dBm z -28.04 dBm z -35.83 dBm	-19.61 dB -19.75 dB -19.10 dB -12.49 dB -15.04 dB		

Plot 7-465. Lower ACP Plot at 2496 MHz (n41 - 60.0MHz DFT-s-OFDM-QPSK - Full RB Configuration)



Plot 7-466. Upper ACP Plot (Band 41 - 60.0MHz DFT-s-OFDM-QPSK - Full RB Configuration)

FCC ID: A3LSMN986W		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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		Analyzer - Spur										
XI RL'		F 50 Ω	DC C	ORREC		SENSE:INT er Freq: 2.5060 Free Run	020000	GHz	ALIGN AUTO		PM May 13, 2020 td: None	Frequency
PAS	5		1	FGain:Lo	w #Atte	n: 26 dB				Radio D	evice: BTS	
10 dB	diu	Ref 40.00	dBm									
		Kei 40.00	, abiii									
30.0												Center Free
20.0												2.506020000 GH
10.0												2.000020000 011
							-	~				
0.00												
-10.0												
-20.0												
											4	
-30.0								· • •				
-40.0												
-50.0				~								
~			arman -									
Start	2.416 C	Hz								Stop	2.656 GHz	CF Stej 551.998000 MH
Spur	Range	Start Freq	Stop	Freq	RBW	Frequency		Ampl	itude	∆ Limit		<u>Auto</u> Ma
1	1	2.4160 GHz	z 2.490	05 GHz	1.000 MHz	2.49012750	0 GHz	38.19	dBm	-13.19 (	dΒ	
2	2	2.4905 GHz	2.49	50 GHz	1.000 MHz	2.49397250	0 GHz	36.39	dBm	-23.39 (	dB	Freq Offse
3	3	2.4950 GHz	2.496	60 GHz	820.0 kHz	2.49586333	3 GHz	36.22	dBm	-23.22 (	dΒ	
4	4	2.4960 GHz	2.576	60 GHz	1.000 MHz	2.55746666	7 GHz	4.764	dBm	-20.24 (	dΒ	0 Н
5	5	2.5760 GHz	2.58	10 GHz	1.000 MHz	2.57625000	0 GHz	34.18	dBm	-24.18 (	dΒ	
-	6	2.5810 GHz		41 GHz		2.64679000				-21.58 (		
	7	2.6541 GHz	2 656	60 GHz	1.000 MHz	2.65529700	0 GHz	35.43	dBm	-10.43 (	lΒ	
6 7	1	2.0011 011										
	1		2.00									

Plot 7-467. Lower ACP Plot at 2496 MHz (n41 - 80.0MHz DFT-s-OFDM-QPSK - Full RB Configuration)



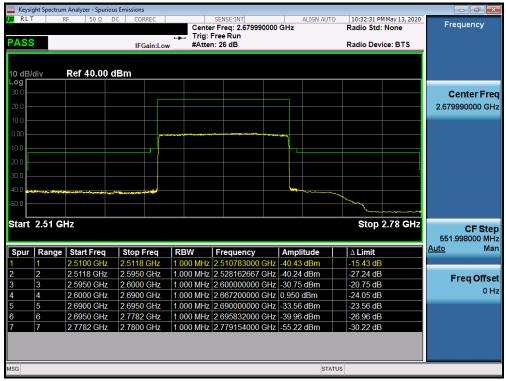
Plot 7-468. Upper ACP Plot (Band 41 - 80.0MHz DFT-s-OFDM-QPSK - Full RB Configuration)

FCC ID: A3LSMN986W	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager	
Test Report S/N:	st Report S/N: Test Dates: EUT Type:			Page 260 of 443	
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		n Analyzer - Spurio						
X/ RL1		RF 50 Ω I	DC CORREC		SENSE:INT r Freq: 2.50602000 Free Run	ALIGN AUTO	20 10:33:54 PM May 13, 20 Radio Std: None	Frequency
PASS	5		IFGain:Lov		n: 26 dB		Radio Device: BTS	
10 dB/	telio.	Ref 40.00 (	lBm					
	GIV	1(0) 40.00						
30.0								Center Free
20.0								2.506020000 GH
10.0								
0.00			· · · · · · · · · · · · · · · · · · ·					
-10.0								
-20.0								
-30.0								
						**		
-40.0								
-50.0								
<u>*</u> *		· · · · ·						
Start	2.406 0	GHZ					Stop 2.676 GH	Z CF Ste
								551.998000 MH
Spur	Range	Start Freq	Stop Freq	RBW	Frequency	Amplitude	∆ Limit	551.998000 MH
Spur 1		Start Freq 2.4060 GHz	Stop Freq 2.4905 GHz		Frequency 2.490359167 GHz		∆ Limit -13.59 dB	551.998000 MH
1 2	1 2			1.000 MHz		-38.59 dBm		551.998000 MH <u>Auto</u> Ma
1 2 3	1 2 3	2.4060 GHz 2.4905 GHz 2.4950 GHz	2.4905 GHz 2.4950 GHz 2.4960 GHz	1.000 MHz 1.000 MHz 910.0 kHz	2.490359167 GHz 2.494865000 GHz 2.495996667 GHz	-38.59 dBm -36.13 dBm -30.71 dBm	-13.59 dB -23.13 dB -17.71 dB	551.998000 MH Auto Ma Freq Offse
1 2 3 4	1 2 3 4	2.4060 GHz 2.4905 GHz 2.4950 GHz 2.4960 GHz	2.4905 GHz 2.4950 GHz 2.4960 GHz 2.5860 GHz	1.000 MHz           1.000 MHz           910.0 KHz           1.000 MHz	2.490359167 GHz 2.494865000 GHz 2.495996667 GHz 2.542050000 GHz	-38.59 dBm -36.13 dBm -30.71 dBm 1.466 dBm	-13.59 dB -23.13 dB -17.71 dB -23.53 dB	551.998000 MH Auto Ma Freq Offse
1 2 3 4 5	1 2 3 4 5	2.4060 GHz 2.4905 GHz 2.4950 GHz 2.4960 GHz 2.5860 GHz	2.4905 GHz 2.4950 GHz 2.4960 GHz 2.5860 GHz 2.5910 GHz	1.000 MHz           1.000 MHz           910.0 kHz           1.000 MHz           1.000 MHz           1.000 MHz	2.490359167 GHz 2.494865000 GHz 2.495996667 GHz 2.542050000 GHz 2.586008333 GHz	-38.59 dBm -36.13 dBm -30.71 dBm 1.466 dBm -31.57 dBm	-13.59 dB -23.13 dB -17.71 dB -23.53 dB -21.57 dB	551.998000 MH Auto Ma Freq Offse
1 2 3 4 5 6	1 2 3 4 5 6	2.4060 GHz 2.4905 GHz 2.4950 GHz 2.4960 GHz 2.5860 GHz 2.5910 GHz	2.4905 GHz 2.4950 GHz 2.4960 GHz 2.5860 GHz 2.5910 GHz 2.6742 GHz	1.000 MHz           1.000 MHz           910.0 KHz           1.000 MHz           1.000 MHz           1.000 MHz           1.000 MHz           1.000 MHz	2.490359167 GHz 2.494865000 GHz 2.495996667 GHz 2.542050000 GHz 2.586008333 GHz 2.645080000 GHz	-38.59 dBm -36.13 dBm -30.71 dBm 1.466 dBm -31.57 dBm -34.42 dBm	-13.59 dB -23.13 dB -17.71 dB -23.53 dB -21.57 dB -21.42 dB	551.998000 MH
1 2 3 4 5 6	1 2 3 4 5 6	2.4060 GHz 2.4905 GHz 2.4950 GHz 2.4960 GHz 2.5860 GHz	2.4905 GHz 2.4950 GHz 2.4960 GHz 2.5860 GHz 2.5910 GHz	1.000 MHz           1.000 MHz           910.0 KHz           1.000 MHz           1.000 MHz           1.000 MHz           1.000 MHz           1.000 MHz	2.490359167 GHz 2.494865000 GHz 2.495996667 GHz 2.542050000 GHz 2.586008333 GHz	-38.59 dBm -36.13 dBm -30.71 dBm 1.466 dBm -31.57 dBm -34.42 dBm	-13.59 dB -23.13 dB -17.71 dB -23.53 dB -21.57 dB	551.998000 MH Auto Ma Freq Offse
<b>Spur</b> 1 2 3 4 5 6 7	1 2 3 4 5 6	2.4060 GHz 2.4905 GHz 2.4950 GHz 2.4960 GHz 2.5860 GHz 2.5910 GHz	2.4905 GHz 2.4950 GHz 2.4960 GHz 2.5860 GHz 2.5910 GHz 2.6742 GHz	1.000 MHz           1.000 MHz           910.0 KHz           1.000 MHz           1.000 MHz           1.000 MHz           1.000 MHz           1.000 MHz	2.490359167 GHz 2.494865000 GHz 2.495996667 GHz 2.542050000 GHz 2.586008333 GHz 2.645080000 GHz	-38.59 dBm -36.13 dBm -30.71 dBm 1.466 dBm -31.57 dBm -34.42 dBm	-13.59 dB -23.13 dB -17.71 dB -23.53 dB -21.57 dB -21.42 dB	551.998000 MH Auto Ma Freq Offse

Plot 7-469. Lower ACP Plot at 2496 MHz (n41 - 90.0MHz DFT-s-OFDM-QPSK - Full RB Configuration)



Plot 7-470. Upper ACP Plot (Band 41 - 90.0MHz DFT-s-OFDM-QPSK - Full RB Configuration)

FCC ID: A3LSMN986W	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager	
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		Analyzer - Sp															
X/ RL1	T F	F 50 Ω	DC DC	COR	REC			r Fre	SE:INT eq: 2.50602	20000	GHz	ALIGN AU	ТО	10:35:46 P Radio Std	M May 13, 2020 : None		Frequency
PASS	5			IFG	ain:Lo		#Atte							Radio Dev	vice: BTS		
10 dB/	·	Ref 40.0	o de														
Log		Kei 40.0															
30.0																	Center Free
20.0																2.	506020000 GH
10.0																	
0.00																	
-10.0																	
-20.0																	
-30.0					_								~				
-40.0				~													
-50.0																	
Ctort	2.396 C	×U-,												Stop 7	.696 GHz		
Start	2.390 0	PΠZ												Stop 2	.090 GHZ		CF Step 51.998000 MH
Spur	Range	Start Fre	q	Stop F	req	RE			quency		Ampl			∆ Limit		Auto	<u>o</u> Mar
1	1	2.3960 G		2.4905					90342500					-13.05 dE			
2	2	2.4905 GI		2.4950					90710000					-23.84 dE			Freq Offse
3	3	2.4950 GI		2.4960					96000000					-13.15 dE			0 H
4	4	2.4960 GI		2.5960					69166667					-21.30 dE			011
5	5	2.5960 GI		2.6010					00475000					-25.01 dE			
6 7	6 7	2.6010 GI 2.6940 GI		2.6940 2.6960					39350000 95900000				-	-20.35 dE			
· · · ·	<b>1</b>	2.0040 GI	12 2		onz	1.0				Oriz	-00.01	dDill		-10.07 GL			
ISG												ST	ATUS				

Plot 7-471. Lower ACP Plot at 2496 MHz (n41 - 100.0MHz DFT-s-OFDM-QPSK - Full RB Configuration)



Plot 7-472. Upper ACP Plot (Band n41 - 100.0MHz DFT-s-OFDM-QPSK - Full RB Configuration)

FCC ID: A3LSMN986W	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager	
Test Report S/N:	Test Dates:	Test Dates: EUT Type:		Dama 000 at 440	
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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 ≥ OBW or specified reference bandwidth
- 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.

#### Test Setup

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



Figure 7-4. Test Instrument & Measurement Setup

## Test Notes

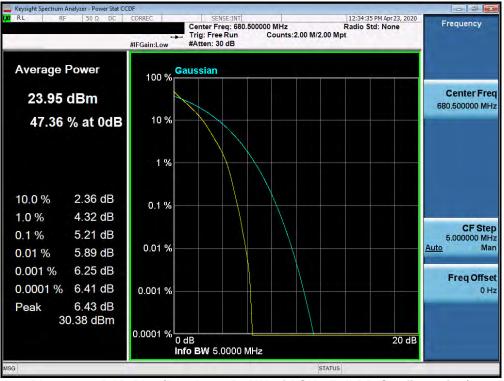
None.

FCC ID: A3LSMN986W	PCTEST Yout libby part of B	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager				
Test Report S/N:	Test Dates:	EUT Type:		Dogo 202 of 442				
1M2004170066-03.A3L	4/17 - 6/22/2020	Portable Handset		Page 263 of 443				
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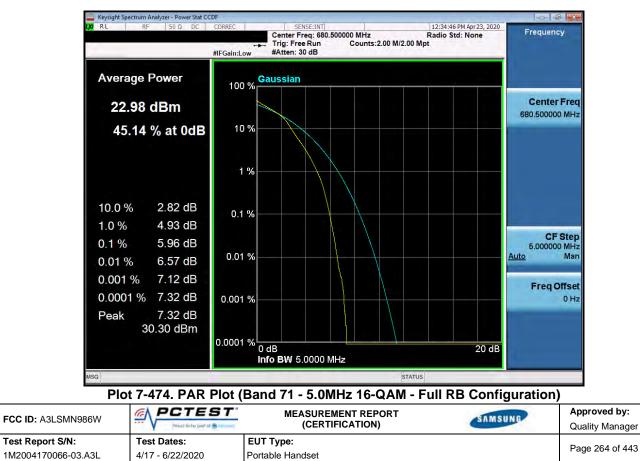


# Band 71

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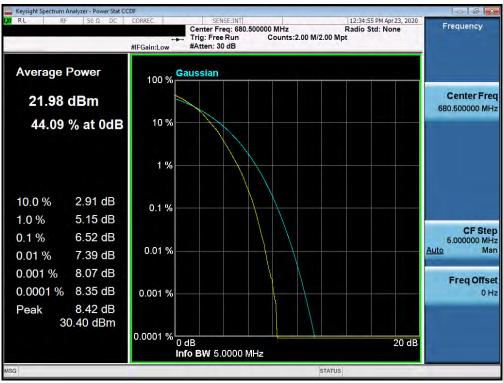




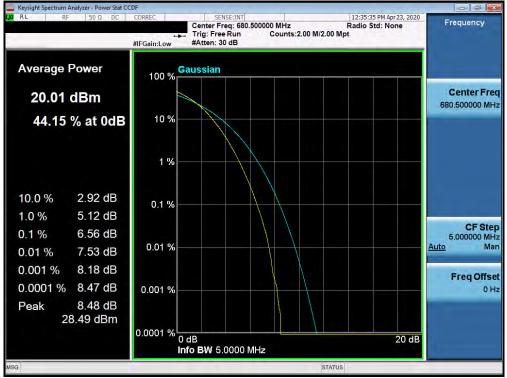


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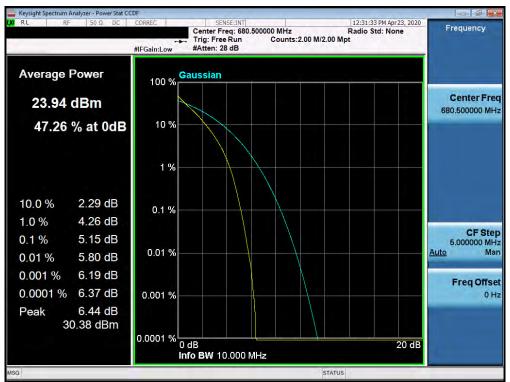
Plot 7-475. PAR Plot (Band 71 - 5.0MHz 64-QAM - Full RB Configuration)



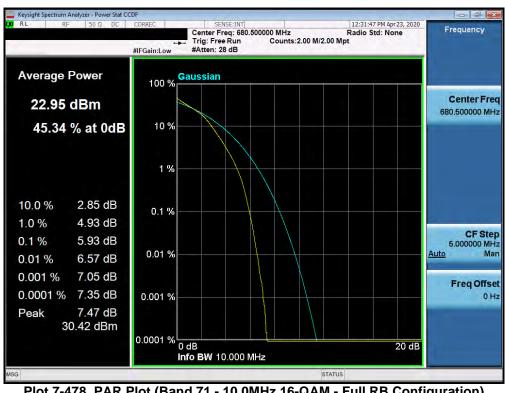
Plot 7-476. PAR Plot (Band 71 - 5.0MHz 256-QAM - Full RB Configuration)

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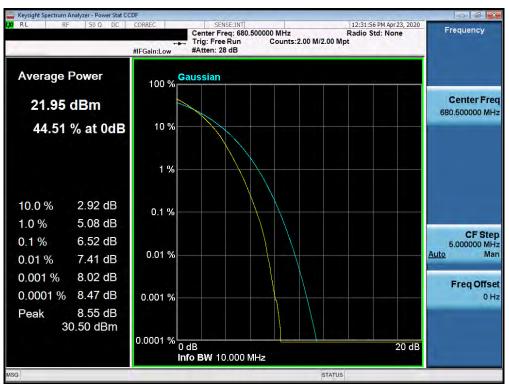




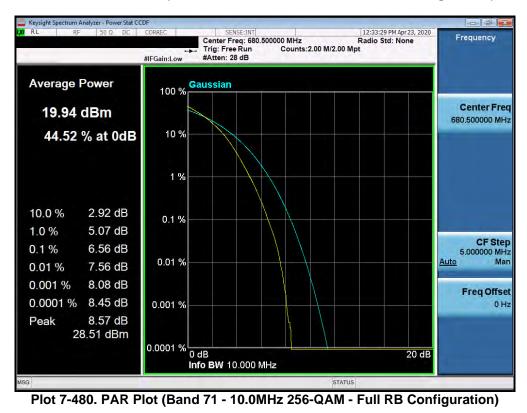
Plot 7-478. PAR Plot (Band 71 - 10.0MHz 16-QAM - Full RB Configuration)

FCC ID: A3LSMN986W		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
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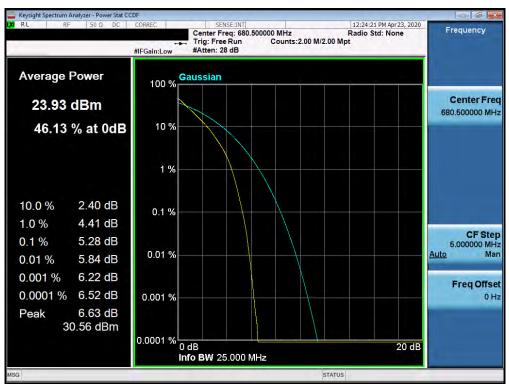




PCTEST Approved by: (ce MEASUREMENT REPORT SAMSUNG FCC ID: A3LSMN986W (CERTIFICATION) **Quality Manager** Test Report S/N: Test Dates: EUT Type: Page 267 of 443 4/17 - 6/22/2020 Portable Handset

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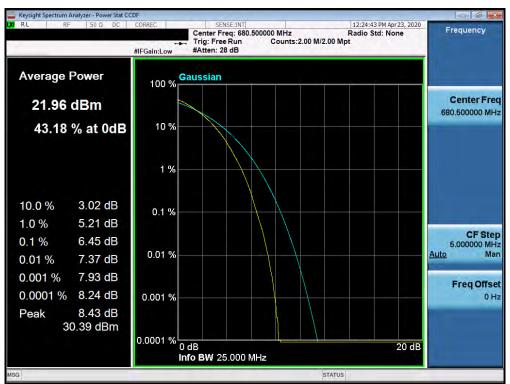




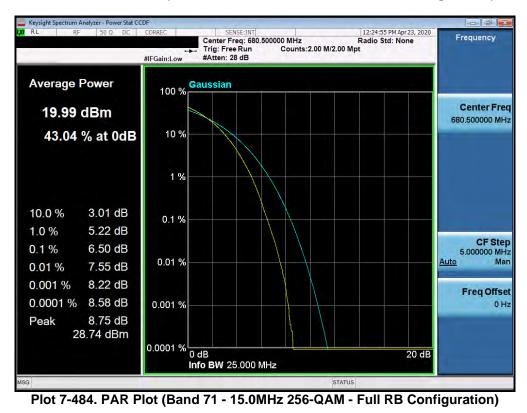


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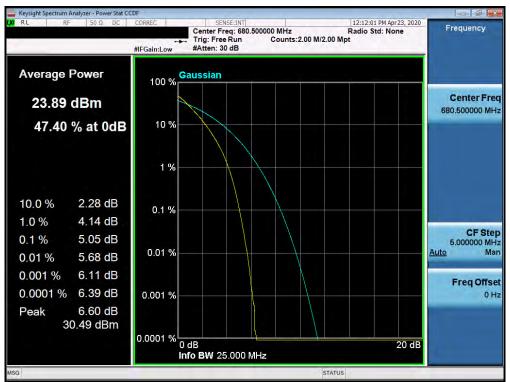




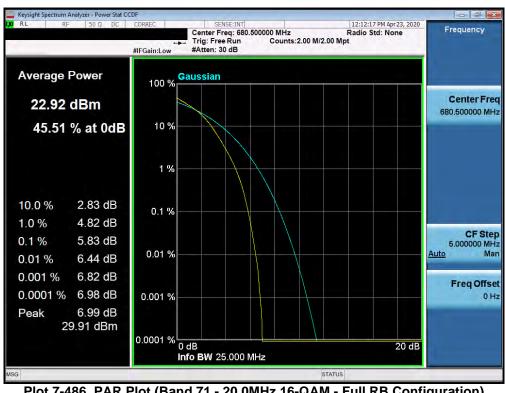


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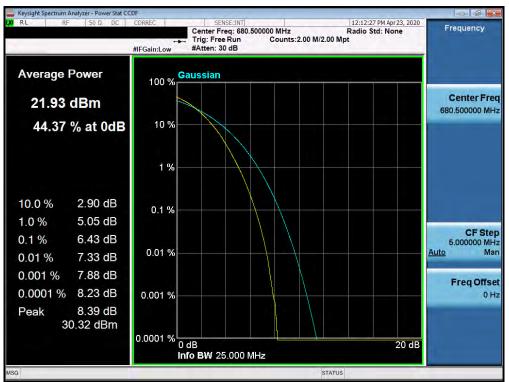




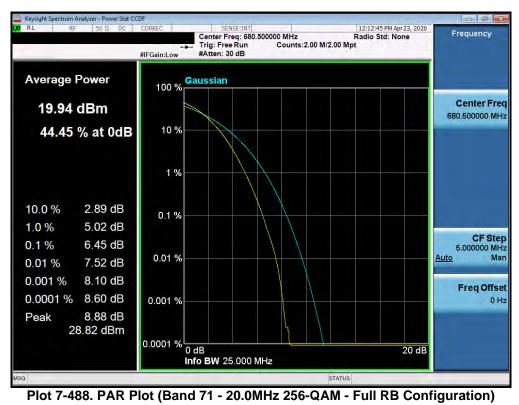
Plot 7-486. PAR Plot (Band 71 - 20.0MHz 16-QAM - Full RB Configuration)

FCC ID: A3LSMN986W		MEASUREMENT REPORT (CERTIFICATION)	G	Approved by: Quality Manager	
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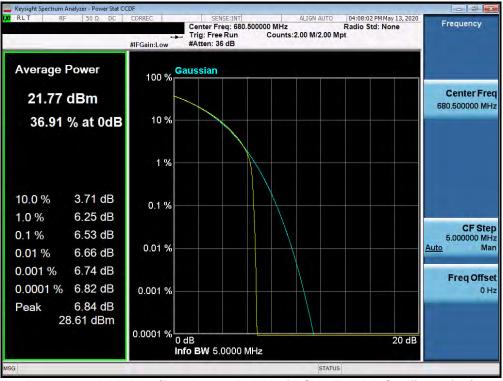




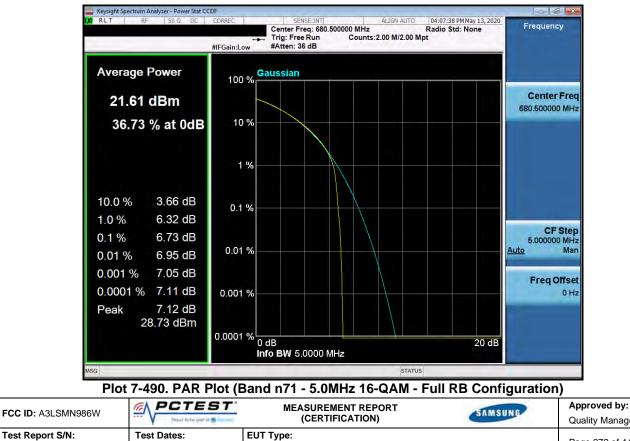
FCC ID: A3LSMN986W		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
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# Band n71





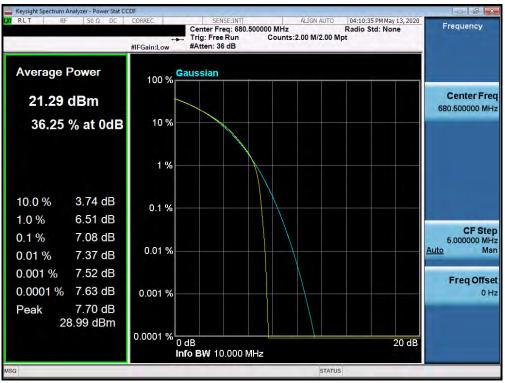


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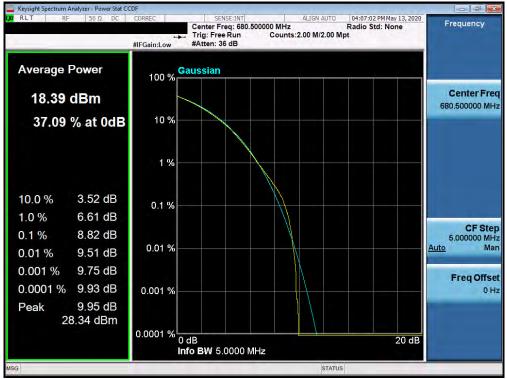
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Plot 7-491. PAR Plot (Band n71 - 5.0MHz 64-QAM - Full RB Configuration)



Plot 7-492. PAR Plot (Band n71 - 5.0MHz 256-QAM - Full RB Configuration)

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Test Report S/N:	Test Dates:	EUT Type:		Dage 272 of 442	
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