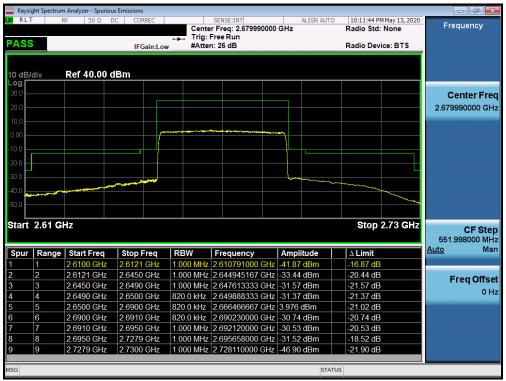


XI RLI	T R	n Analyzer - Spurio F 50 Ω	DC CORREC	+++ Trig:	SENSE:INT r Freq: 2.50602000 Free Run	ALIGN AL	Radio Sto		Frequency
10 dB/		Ref 40.00	IFGain:Low	v #Atte	n: 26 dB		Radio De	vice: BTS	
20.0									Center Fred 2.506020000 GH;
0.00 -10.0									
-20.0 -30.0 -40.0			- And				~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		
50.0 Start	2.456 0	GHz					Stop	2.576 GHz	CF Ste 551.998000 MH
Start			Stop Freg	RBW	Frequency	Amplitude		2.576 GHz	
Start	2.456 C		Stop Freq		Frequency 2.490385000 GH	Amplitude z -36.53 dBm	Stop : Δ Limit		551.998000 MH
Start		Start Freq		1.000 MHz		z -36.53 dBm	∆ Limit	B	551.998000 MH <u>Auto</u> Ma
Start	Range	Start Freq 2.4560 GHz	2.4905 GHz	1.000 MHz 1.000 MHz	2.490385000 GH	z -36.53 dBm z -33.01 dBm	Δ Limit -11.53 d	B B	551.998000 MH <u>Auto</u> Ma Freq Offs
Start Spur	Range	Start Freq 2.4560 GHz 2.4905 GHz	2.4905 GHz 2.4950 GHz	1.000 MHz 1.000 MHz 390.0 kHz	2.490385000 GH 2.494955000 GH	z -36.53 dBm z -33.01 dBm z -33.69 dBm	Δ Limit -11.53 d -20.01 d	B B B B	551.998000 Mł <u>Auto</u> Ma Freq Offs
start Spur	Range 1 2 3	Start Freq 2.4560 GHz 2.4905 GHz 2.4950 GHz	2.4905 GHz 2.4950 GHz 2.4960 GHz	1.000 MHz 1.000 MHz 390.0 kHz 820.0 kHz	2.490385000 GH 2.494955000 GH 2.495863333 GH	z -36.53 dBm z -33.01 dBm z -33.69 dBm z 4.146 dBm	∆ Limit -11.53 d -20.01 d -20.69 d	B B B B B	551.998000 Mł <u>Auto</u> Ma Freq Offs
Start	Range 1 2 3 4 5 6	Start Freq 2.4560 GHz 2.4905 GHz 2.4950 GHz 2.4960 GHz	2.4905 GHz 2.4950 GHz 2.4960 GHz 2.5360 GHz 2.5370 GHz	1.000 MHz 1.000 MHz 390.0 kHz 820.0 kHz 820.0 kHz	2.490385000 GH 2.494955000 GH 2.495863333 GH 2.520000000 GH	z -36.53 dBm z -33.01 dBm z -33.69 dBm z 4.146 dBm z -28.82 dBm	∆ Limit -11.53 d -20.01 d -20.69 d -20.85 d	B B B B B B	551.998000 Mł <u>Auto</u> Ma Freq Offs
Start	Range 1 2 3 4 5 6 7	Start Freq 2.4560 GHz 2.4905 GHz 2.4950 GHz 2.4960 GHz 2.5360 GHz 2.5370 GHz 2.5370 GHz	2.4905 GHz 2.4950 GHz 2.4960 GHz 2.5360 GHz 2.5370 GHz 2.5410 GHz 2.5739 GHz	1.000 MHz 1.000 MHz 390.0 kHz 820.0 kHz 820.0 kHz 1.000 MHz 1.000 MHz	2.490385000 GH 2.494955000 GH 2.495863333 GH 2.520000000 GH 2.536210000 GH 2.537320000 GH 2.541658000 GH	z -36.53 dBm z -33.01 dBm z -33.69 dBm z 4.146 dBm z -28.82 dBm z -29.36 dBm z -30.26 dBm	Δ Limit -11.53 d -20.01 d -20.69 d -20.85 d -18.82 d -19.36 d -17.26 d	B B B B B B B B B	551.998000 MH <u>Auto</u> Ma Freq Offs
**	Range 1 2 3 4 5 6	Start Freq 2.4560 GHz 2.4905 GHz 2.4950 GHz 2.4960 GHz 2.5360 GHz 2.5370 GHz	2.4905 GHz 2.4950 GHz 2.4960 GHz 2.5360 GHz 2.5370 GHz 2.5410 GHz	1.000 MHz 1.000 MHz 390.0 kHz 820.0 kHz 820.0 kHz 1.000 MHz 1.000 MHz	2.490385000 GH 2.494955000 GH 2.495863333 GH 2.520000000 GH 2.536210000 GH 2.537320000 GH	z -36.53 dBm z -33.01 dBm z -33.69 dBm z 4.146 dBm z -28.82 dBm z -29.36 dBm z -30.26 dBm	Δ Limit -11.53 d -20.01 d -20.69 d -20.85 d -18.82 d -19.36 d	B B B B B B B B B	551.998000 MH

Plot 7-596. Lower ACP Plot at 2496 MHz (n41 - 40.0MHz DFT-s-OFDM-QPSK - Full RB Configuration)



Plot 7-597. Upper ACP Plot (Band 41 - 40.0MHz DFT-s-OFDM-QPSK - Full RB Configuration)

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	m Analyzer - Spuriou									p X
	RF 50 Ω E	DC CORREC	Trig:	SENSE:INT er Freq: 2.50602 Free Run		ALIGN AUTO	Radio Std:		Frequenc	сy
PASS		IFGain:Low	, #Atte	n: 26 dB			Radio Devi	ce: BTS		
10 dB/div	Ref 40.00 c	dBm								
Log										
30.0									Center	
20.0									2.50602000	0 GHz
10.0										
0.00										
-10.0										
-20.0										
-30.0										
-40.0		June 1								
-50.0										
to the state of th										
Start 2.446	GHz						Stop 2.	596 GHz	CF	Step
									551.99800	о мніз
Spur Range	Start Freq	Stop Freq	RBW	Frequency	Ampl	itude	∆ Limit		Auto	Man
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		2.494670000			-20.30 dB		FreqC	ffset
3 3	2.4950 GHz	2.4960 GHz		2.495943333			-22.41 dB		Theye	0 Hz
4 4	2.4960 GHz	2.5460 GHz		2.521916667			-20.84 dB			0 112
5 5	2.5460 GHz	2.5510 GHz		2.546925000			-19.72 dB			
6 6	2.5510 GHz	2.5938 GHz		2.554424000			-17.84 dB			
7 7	2.5938 GHz	2.5960 GHz	1.000 MHz	2.593866000	GHz -35.96	dBm	-10.96 dB			
MSG						STATU	s			
							-			

Plot 7-598. Lower ACP Plot at 2496 MHz (n41 - 50.0MHz DFT-s-OFDM-QPSK - Full RB Configuration)



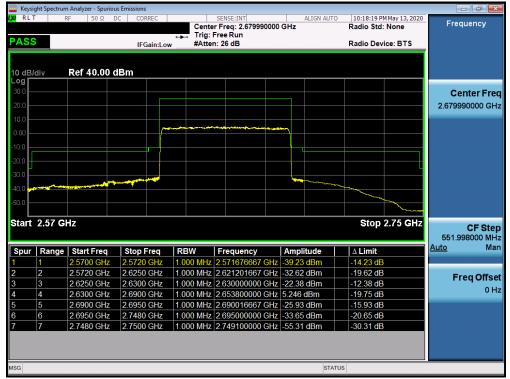
Plot 7-599. Upper ACP Plot (Band 41 - 50.0MHz DFT-s-OFDM-QPSK - Full RB Configuration)

FCC ID: A3LSMN986U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Page 329 of 494
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PASS Center Freq: 2.506020000 GHz Radio Std: None Radio Device: BTS 10 dB/div Ref 40.00 dBm Center Freq: 2.506020000 GHz Radio Device: BTS Center Freq: 2.506020000 GHz Center Freq: 2.50602000 GHz Center Freq: 2.50602000 GHz Center Freq: 2.506020000 GHz<		ım Analyzer - Spuriou									×
Ordination Distance of a state freq Name of a state freq Center Freq 0 dB/div Ref 40.00 dBm Image: State freq	X RLT	RF 50 Ω C	OC CORREC	Trig:	er Freq: 2.50602 Free Run	0000 GHz	ALIGN AUTO	Radio Std:	None	Frequency	ſ
Log Image Start Freq Stop Freq RBW Frequency Amplitude Δ Limit 1 1 2.4360 GHz 2.4905 GHz 1.000 MHz 2.490409167 GHz 34.73 dBm 9.725 dB 2 2 2.4960 GHz 2.4905 GHz 1.000 MHz 2.494907500 GHz 32.75 dBm -19.61 dB Freq Offso 3 3 2.4960 GHz 2.560 GHz 1.000 MHz 2.56000000 GHz -32.75 dBm -19.61 dB Freq Offso 5 5 2.5500 GHz 1.000 MHz 2.56000000 GHz -32.75 dBm -19.75 dB 0 H 7 7 2.6140 GHz 2.6140 GHz 2.614000000 GHz -35.83 dBm -10.83 dB 0 H	PASS		IFGain:Lo	w #Atte	n: 26 dB			Radio Devi	ce: BTS		
Log Image Start Freq Stop Freq RBW Frequency Amplitude Δ Limit 1 1 2.4360 GHz 2.4905 GHz 1.000 MHz 2.490409167 GHz 34.73 dBm 9.725 dB 2 2 2.4960 GHz 2.4905 GHz 1.000 MHz 2.494907500 GHz 32.75 dBm -19.61 dB Freq Offso 3 3 2.4960 GHz 2.560 GHz 1.000 MHz 2.56000000 GHz -32.75 dBm -19.61 dB Freq Offso 5 5 2.5500 GHz 1.000 MHz 2.56000000 GHz -32.75 dBm -19.75 dB 0 H 7 7 2.6140 GHz 2.6140 GHz 2.614000000 GHz -35.83 dBm -10.83 dB 0 H											
301 3	10 dB/div	Ref 40.00 c	lBm								
201 2.50602000 GH 101 2.50602000 GH 101 2.50602000 GH 101 2.50602000 GH 101 2.50602000 GH 200 2.5070000 GH 200 2.4905 GHz 2.4905 GHz 2.4905 GHz 2.4950 GHz 2.4950 GHz 2.4950 GHz 2.4950 GHz 2.4950 GHz 2.4950 GHz 2.5560 GHz 2.000 MHz 2.4950 GHz 2.5500 CHz 3 2.4950 GHz 3 2.4950 GHz 3 2.4950 GHz 3 2.4950 GHz 4 2.5560 GHz 5 2.5560 GHz 5 2.5560 GHz 1.000 MHz										Center F	rec
100 100 <td>20.0</td> <td></td>	20.0										
Start 2.436 GHz Stop Freq RBW Frequency Amplitude Δ Limit 1 1 24360 GHz 24905 GHz 2490409167 GHz 34.73 dBm -9.725 dB 2 2 24905 GHz 1.000 MHz 249409167 GHz 32.61 dB -9.725 dB -4.00 Matter Auto Matter Matter Matter -4.00 Matter -4.00 Matter -4.00 Matter -4.00 Matter -4.00										2.506020000	GHZ
Start 2.436 GHz Stop Freq RBW Frequency Amplitude Δ Limit 1 1 2.4360 GHz 2.4905 GHz 1.000 MHz 2.490409167 GHz 34.73 dBm -9.725 dB 2 2.4905 GHz 2.4905 GHz 1.000 MHz 2.490409167 GHz 32.61 dBm -19.61 dB 3 3 2.4950 GHz 2.4905 GHz 1.000 MHz 2.4990986667 GHz 32.75 dBm -19.75 dB 3 3 2.4950 GHz 2.5600 GHz 1.000 MHz 2.495986667 GHz 32.75 dBm -19.10 dB 5 5 2.5600 GHz 2.5600 GHz 1.000 MHz 2.55000000 GHz 5.904 dBm -19.10 dB 6 6 2.5610 GHz 1.000 MHz 2.5625900000 GHz -28.04 dBm -19.10 dB 7 7 2.6140 GHz 2.6140 GHz 1.000 MHz 2.5625900000 GHz -35.83 dBm -10.83 dB				-		-					
200 300 400 500	0.00		/								
30.0 40.0 40.0 50.0 50.0 50.0 Start 2.436 GHz Stop 2.616 GHz Start 2.436 GHz Stop 2.616 GHz 1 2.4360 GHz 2.4905 GHz 1.000 MHz 2.490409167 GHz -34.73 dBm -9.725 dB 2 2.4905 GHz 2.4905 GHz 1.000 MHz 2.49909167 GHz -32.61 dBm -19.61 dB 3 3 2.4950 GHz 2.4905 GHz 2.4950 GHz 2.4950 GHz -32.650 GHz -32.61 dBm -19.61 dB 3 3 2.4950 GHz 2.4950 GHz 2.4950 GHz -32.650 OHz -32.61 dBm -19.61 dB 5 5 2.5560 GHz 1.000 MHz 2.4950 GHz -2.950700000 GHz -32.61 dBm -19.10 dB 5 5 2.5560 GHz 1.000 MHz 2.556000000 GHz -22.49 dBm -12.49 dB 6 6 2.5610 GHz 2.6140 GHz 1.000 MHz 2.614000000 GHz -35.83 dBm -10.83 dB 7 7 2.6140 GHz 2.6160 GHz 1.000 MHz 2.614000000 GHz -35.83 dBm -10.83 dB	-10.0						ų				
40.0 60.0	-20.0										
50.0	-30.0										
Start 2.436 GHz Stop Freq RBW Frequency Amplitude Δ Limit 1 1 2.4360 GHz 2.4905 GHz 1.000 MHz 2.49090167 GHz -34.73 dBm -9.725 dB 2 2 2.4905 GHz 1.000 MHz 2.490409167 GHz -34.73 dBm -9.725 dB 2 2 2.4905 GHz 1.000 MHz 2.494977500 GHz -32.61 dBm -19.61 dB 3 3 2.4950 GHz 2.5560 GHz 2.550700000 GHz 5.904 dBm -19.75 dB 4 4 2.5560 GHz 2.5560 GHz 2.550700000 GHz -22.49 dBm -19.75 dB 5 5 2.5560 GHz 1.000 MHz 2.556000000 GHz -22.49 dBm -12.49 dB 6 6 2.5610	-40.0								U		
Start 2.436 GHz Stop Freq RBW Frequency Amplitude Δ Limit 1 1 2.4360 GHz 2.4905 GHz 1.000 MHz 2.49090167 GHz -34.73 dBm -9.725 dB 2 2 2.4905 GHz 1.000 MHz 2.490409167 GHz -34.73 dBm -9.725 dB 2 2 2.4905 GHz 1.000 MHz 2.494977500 GHz -32.61 dBm -19.61 dB 3 3 2.4950 GHz 2.5560 GHz 2.550700000 GHz 5.904 dBm -19.75 dB 4 4 2.5560 GHz 2.5560 GHz 2.550700000 GHz -22.49 dBm -19.75 dB 5 5 2.5560 GHz 1.000 MHz 2.556000000 GHz -22.49 dBm -12.49 dB 6 6 2.5610	50.0		for a second sec								
Spur Range Start Freq Stop Freq RBW Frequency Amplitude ∆ Limit 1 1 2.4360 GHz 2.4905 GHz 1.000 MHz 2.490409167 GHz -34.73 dBm -9.725 dB 2 2 2.4905 GHz 2.4905 GHz 1.000 MHz 2.494977500 GHz -32.61 dBm -19.61 dB Freq Offse 3 3 2.4950 GHz 2.4950 GHz 2.4950 GHz 2.4950 GHz 2.4950 GHz -10.000 MHz 2.49508667 GHz -32.75 dBm -19.75 dB 01- 4 4 2.4960 GHz 2.5500 GHz 1.000 MHz 2.550700000 GHz 50.40 dBm -19.10 dB 01- 5 5 2.5510 GHz 2.6510 GHz 1.000 MHz 2.55600000 GHz -22.49 dBm -12.49 dB 01- 6 6 2.5610 GHz 2.6140 GHz 1.000 MHz 2.562590000 GHz -35.83 dBm -10.83 dB 01-	-00.0										
Spur Range Start Freq Stop Freq RBW Frequency Amplitude △ Limit △ Limit 1 1 2.4360 GHz 2.4905 GHz 1.000 MHz 2.490409167 GHz -34.73 dBm -9.725 dB -9.	Start 2.436	GHz						Stop 2.	616 GHz		
1 1 2.4360 GHz 2.4905 GHz 1.000 MHz 2.490409167 GHz 34.73 dBm -9.725 dB 2 2 2.4905 GHz 2.4950 GHz 1.000 MHz 2.494977500 GHz -32.61 dBm -19.61 dB 3 3 2.4950 GHz 2.4960 GHz 620.0 kHz 2.495986667 GHz -32.61 dBm -19.61 dB 4 4 2.4960 GHz 2.5560 GHz 1.000 MHz 2.495986667 GHz 5.904 dBm -19.10 dB 5 5 2.5610 GHz 2.6140 OHz 1.000 MHz 2.55600000 GHz -22.49 dBm -12.49 dB 6 6 2.5610 GHz 2.6140 GHz 1.000 MHz 2.562590000 GHz -35.83 dBm -10.83 dB	Saur Dange	Start Erog	Stop Eron	DDW	Frequency	Ame	litude	A Limit			MHz
2 2.4905 GHz 2.4950 GHz 1.000 MHz 2.494977500 GHz -32.61 dBm -19.61 dB 3 3 2.4950 GHz 2.4960 GHz 620.0 kHz 2.495986667 GHz -32.75 dBm -19.75 dB 0 H 4 4 2.4960 GHz 2.5560 GHz 1.000 MHz 2.550700000 GHz 5.904 dBm -19.10 dB 0 H 5 5 2.5560 GHz 2.5610 GHz 1.000 MHz 2.55600000 GHz -22.49 dBm -12.49 dB 6 6 2.5610 GHz 2.6140 GHz 1.000 MHz 2.562590000 GHz -35.83 dBm -10.83 dB											
3 3 2.4950 GHz 2.4960 GHz 620.0 kHz 2.495986667 GHz -32.75 dBm -19.75 dB -19.75 dB 4 4 2.4960 GHz 2.5560 GHz 1.000 MHz 2.550700000 GHz 5.904 dBm -19.10 dB -19.10 dB 5 5 2.5560 GHz 2.5610 GHz 1.000 MHz 2.55600000 GHz -22.49 dBm -12.49 dB 6 6 2.5610 GHz 2.6140 GHz 1.000 MHz 2.562590000 GHz -28.04 dBm -15.04 dB 7 7 2.6140 GHz 2.6160 GHz 1.000 MHz 2.614000000 GHz -35.83 dBm -10.83 dB			_								
4 4 2.4960 GHz 2.5560 GHz 1.000 MHz 2.550700000 GHz 5.904 dBm -19.10 dB 5 5 2.5560 GHz 2.6610 GHz 1.000 MHz 2.55600000 GHz -22.49 dBm -12.49 dB 6 6 2.5610 GHz 2.6140 GHz 1.000 MHz 2.562590000 GHz -28.04 dBm -15.04 dB 7 7 2.6140 GHz 2.6160 GHz 1.000 MHz 2.614000000 GHz -35.83 dBm -10.83 dB											
6 2.5610 GHz 2.6140 GHz 1.000 MHz 2.562590000 GHz -28.04 dBm -15.04 dB 7 7 2.6140 GHz 2.6160 GHz 1.000 MHz 2.614000000 GHz -35.83 dBm -10.83 dB	4 4	2.4960 GHz	2.5560 GHz	1.000 MHz	2.550700000	GHz 5.904	dBm	-19.10 dB			0 Hz
7 7 2.6140 GHz 2.6160 GHz 1.000 MHz 2.614000000 GHz -35.83 dBm -10.83 dB	5 5	2.5560 GHz	2.5610 GHz	1.000 MHz	2.556000000	GHz -22.49	9 dBm	-12.49 dB			
	6 6										
	7 7	2.6140 GHz	2.6160 GHz	1.000 MHz	2.614000000	GHz -35.83	3 dBm	-10.83 dB			
en le tanie											
	ISG						STAT	JS			

Plot 7-600. Lower ACP Plot at 2496 MHz (n41 - 60.0MHz DFT-s-OFDM-QPSK - Full RB Configuration)



Plot 7-601. Upper ACP Plot (Band 41 - 60.0MHz DFT-s-OFDM-QPSK - Full RB Configuration)

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	um Analyzer - Spuriou									×
LXI RLT	RF 50 Ω [CORREC	Trig:	SENSE:INT er Freq: 2.50602 Free Run	0000 GHz	ALIGN AUTO	Radio Std:		Frequency	
PASS		IFGain:Lo	w #Atte	n: 26 dB			Radio Dev	ice: BTS		
10 dB/div	Ref 40.00 (dBm								
Log										
30.0									Center F	
20.0									2.506020000 0	GHz
10.0										
0.00										
-10.0										
-20.0								L L		
-30.0		<mark>/</mark>								
-40.0					· · · · · · · · · · · · · · · · · · ·		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~			
-50.0										

Start 2.416	GHz						Stop 2	.656 GHz	CF S1 551.998000 M	
Spur Range	e Start Freq	Stop Freq	RBW	Frequency	Amp	litude	∆ Limit		<u>Auto</u> N	Mar
1 1	2.4160 GHz	2.4905 GHz	1.000 MHz	2.490127500	GHz -38.19	dBm	-13.19 dB			
2 2	2.4905 GHz	2.4950 GHz	1.000 MHz	2.493972500	GHz -36.39	dBm	-23.39 dB		Freq Off	col
3 3	2.4950 GHz	2.4960 GHz	820.0 kHz	2.495863333	GHz -36.22	2 dBm	-23.22 dB			
4 4	2.4960 GHz	2.5760 GHz		2.557466667			-20.24 dB		0) Hz
5 5	2.5760 GHz	2.5810 GHz		2.576250000			-24.18 dB			
6 6	2.5810 GHz	2.6541 GHz		2.646790000			-21.58 dB			
7 7	2.6541 GHz	2.6560 GHz	1.000 MHz	2.655297000	GHz -35.43	3 dBm	-10.43 dB			
MSG						STAT	IS			_
						2.7711				_

Plot 7-602. Lower ACP Plot at 2496 MHz (n41 - 80.0MHz DFT-s-OFDM-QPSK - Full RB Configuration)



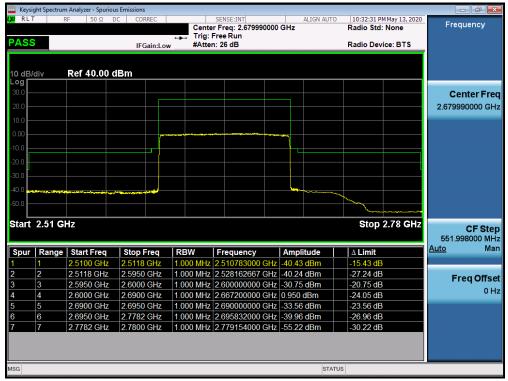
Plot 7-603. Upper ACP Plot (Band 41 - 80.0MHz DFT-s-OFDM-QPSK - Full RB Configuration)

FCC ID: A3LSMN986U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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	ım Analyzer - Spuriou									5 X
LXX RLT	RF 50 Ω D	OC CORREC	Trig:	SENSE:INT er Freq: 2.50602 Free Run	20000 GHz	ALIGN AUTO	Radio Std:		Frequen	су
PASS		IFGain:Low	, #Atte	n: 26 dB			Radio Dev	ice: BTS		
10 dB/div	Ref 40.00 c	dBm								
Log										
30.0									Center	r Fred
20.0									2.50602000	0 GH
10.0										
0.00										
-10.0										
-20.0										
-30.0										
-40.0		مبر								
		por la								
-50.0										
Start 2.406							Stop 2	.676 GHz		
Start 2.400	GHZ						510p 2	.070 GH2	551.99800	
Spur Range	Start Freq	Stop Freq	RBW	Frequency		olitude	∆ Limit		<u>Auto</u>	Mar
1 1	2.4060 GHz	2.4905 GHz		2.490359167			-13.59 dB			
2 2	2.4905 GHz	2.4950 GHz		2.494865000			-23.13 dB		Freq	Offse
3 3	2.4950 GHz	2.4960 GHz		2.495996667			-17.71 dB		i i cqv	0 H:
4 4	2.4960 GHz	2.5860 GHz		2.542050000			-23.53 dB			0 H
5 5	2.5860 GHz	2.5910 GHz		2.586008333			-21.57 dB			
6 6	2.5910 GHz	2.6742 GHz		2.645080000			-21.42 dB			
7 7	2.6742 GHz	2.6760 GHz	1.000 MHz	2.674902000	GHz -35.1	8 dBm	-10.18 dB			
ASG					_	STAT	210			
150						STAT	03			

Plot 7-604. Lower ACP Plot at 2496 MHz (n41 - 90.0MHz DFT-s-OFDM-QPSK - Full RB Configuration)



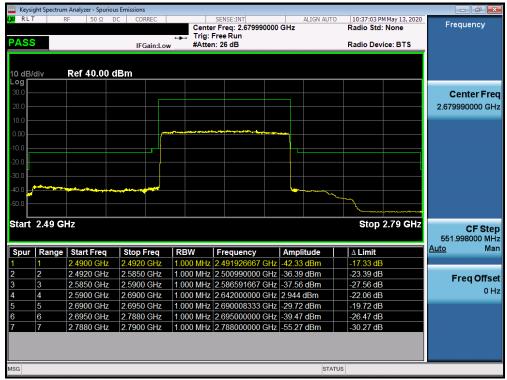
Plot 7-605. Upper ACP Plot (Band 41 - 90.0MHz DFT-s-OFDM-QPSK - Full RB Configuration)

FCC ID: A3LSMN986U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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		Analyzer - Spu															
K, RLT		F 50 Ω	DC	CORREC			SENSE:I r Freq: Free Ru	2.50602	0000	GHz	ALIGN AUT		10:35:46 Radio St			Fr	equency
PASS	5			IFGain:L			n: 26 dE						Radio De	evice: E	BTS		
10 dB/	diu	Ref 40.00	dBm														
		Kei 40.00	Jubin														
30.0																(Center Fred
20.0																2 50	6020000 GH
10.0																2.00	
0.00				1	Constant of the Owner												
-10.0																	
-20.0																	
-30.0															L L		
										-		·					
-40.0				~													
-50.0			/	r													
	els provinción e servi		- and the second														
Start	2.396 (SHz											Stop	2.696	i GHz	EEA	CF Step .998000 MH;
Spur	Range	Start Freq	Sto	p Freq	R	3W	Frequ	iency		Ampl	itude		∆ Limit			Auto	Mar
1	1	2.3960 GH		05 GHz		00 MHz			GHz	-38.05	dBm		-13.05 d	B			
2	2	2.4905 GH	z 2.49	50 GHz	1.0	00 MHz	2.4907	10000	GHz	-36.84	dBm		-23.84 d	В			Freq Offse
3	3	2.4950 GH	z 2.49	60 GHz	: 1.0	00 MHz	2.4960	000000	GHz	-26.15	dBm		-13.15 d	B			•
4	4	2.4960 GH	z 2.59	60 GHz	: 1.0	00 MHz	2.5691	66667	GHz	3.704	dBm		-21.30 d	B			0 H
5	5	2.5960 GH	z 2.60	10 GHz	1.0	00 MHz	2.6004	75000	GHz	-35.01	dBm		-25.01 d	В			
6	6	2.6010 GH	z 2.69	40 GHz	1.0	00 MHz	2.6893	50000	GHz	-33.35	dBm		-20.35 d	В			
7	7	2.6940 GH	z 2.69	60 GHz	1.0	00 MHz	2.6959	00000	GHz	35.57	dBm		-10.57 d	B			
_	_	_									_	_					
//SG											ST/	ATUS					

Plot 7-606. Lower ACP Plot at 2496 MHz (n41 - 100.0MHz DFT-s-OFDM-QPSK - Full RB Configuration)



Plot 7-607. Upper ACP Plot (Band n41 - 100.0MHz DFT-s-OFDM-QPSK - Full RB Configuration)

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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

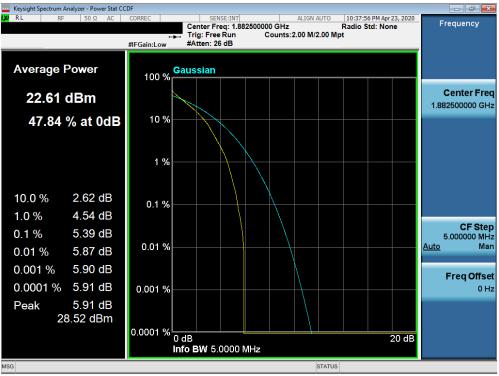
Test Notes

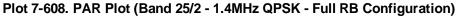
None.

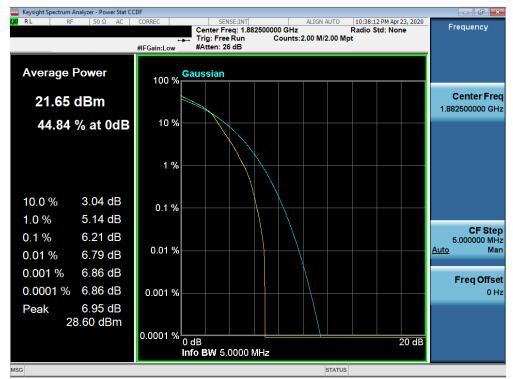
FCC ID: A3LSMN986U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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Band 25/2



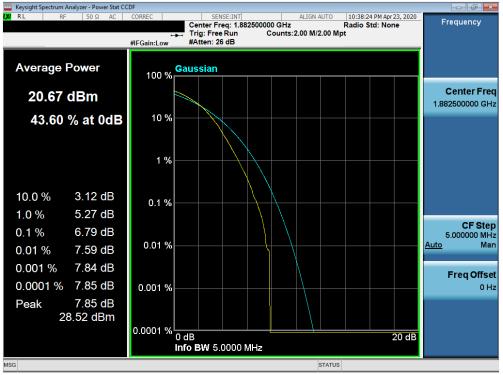




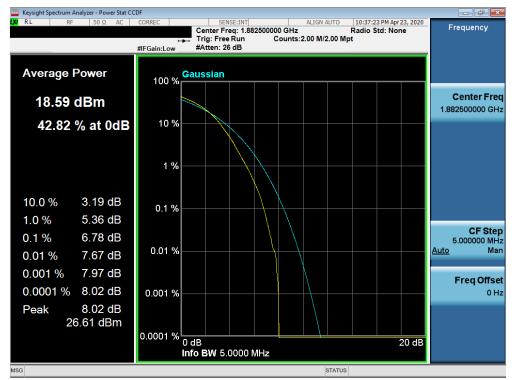
Plot 7-609. PAR Plot (Band 25/2 - 1.4MHz 16-QAM - Full RB Configuration)

FCC ID: A3LSMN986U	PCTEST Mould to be part of @	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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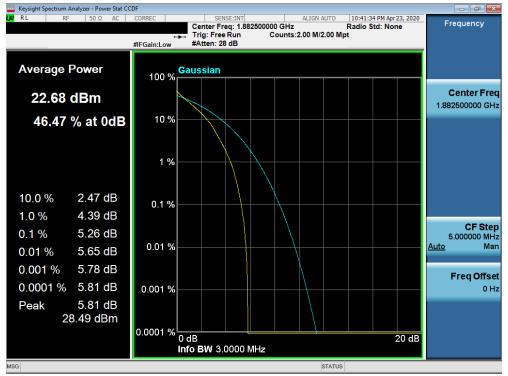




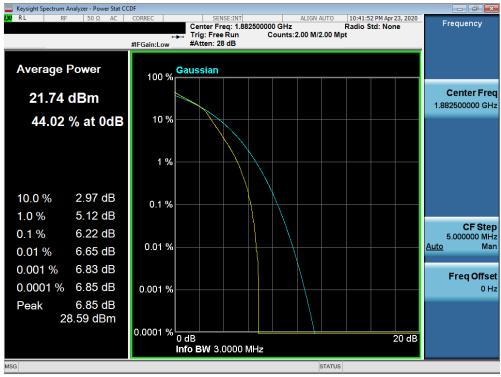
Plot 7-611. PAR Plot (Band 25/2 - 1.4MHz 256-QAM - Full RB Configuration)

FCC ID: A3LSMN986U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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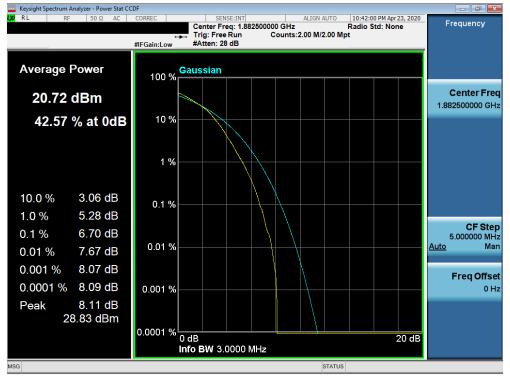




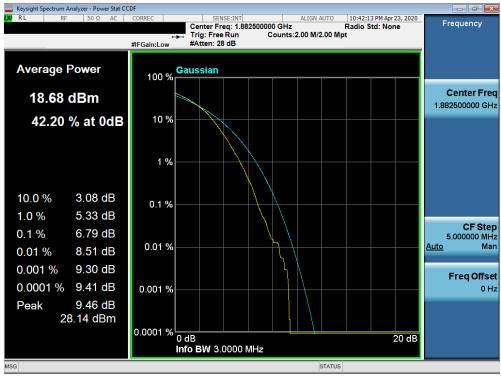
Plot 7-613. PAR Plot (Band 25/2 - 3.0MHz 16-QAM - Full RB Configuration)

FCC ID: A3LSMN986U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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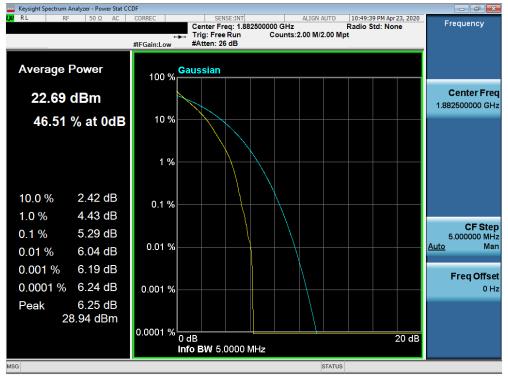
Plot 7-614. PAR Plot (Band 25/2 - 3.0MHz 64-QAM - Full RB Configuration)



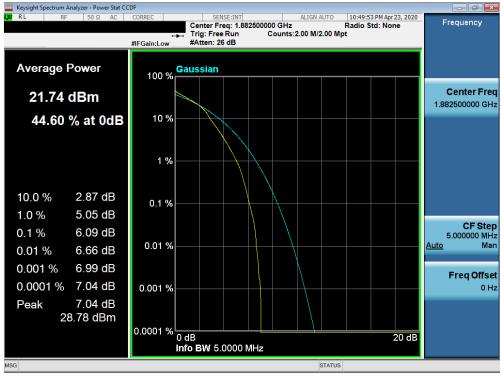
Plot 7-615. PAR Plot (Band 25/2 - 3.0MHz 256-QAM - Full RB Configuration)

FCC ID: A3LSMN986U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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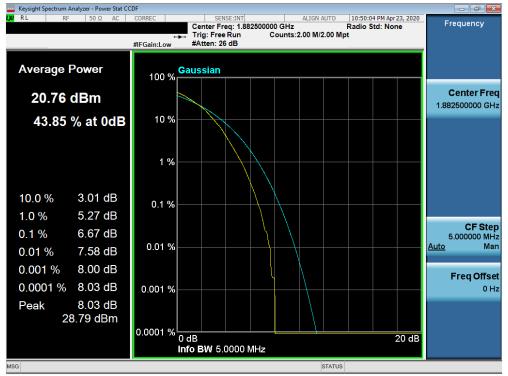




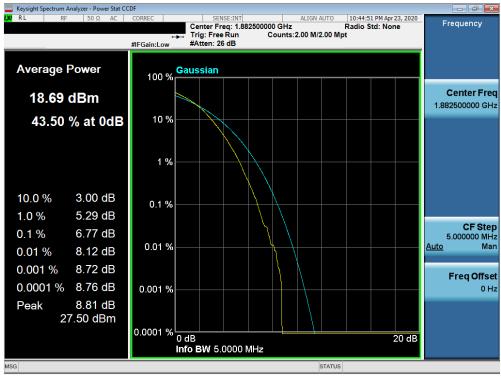
Plot 7-617. PAR Plot (Band 25/2 - 5.0MHz 16-QAM - Full RB Configuration)

FCC ID: A3LSMN986U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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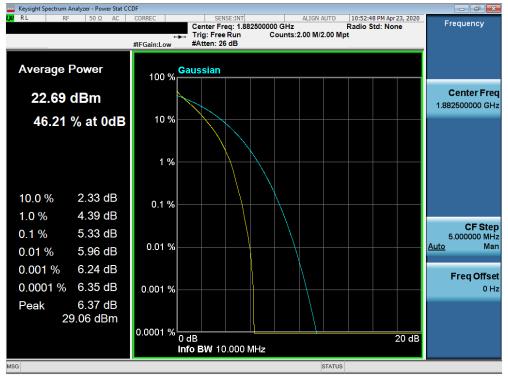
Plot 7-618. PAR Plot (Band 25/2 - 5.0MHz 64-QAM - Full RB Configuration)



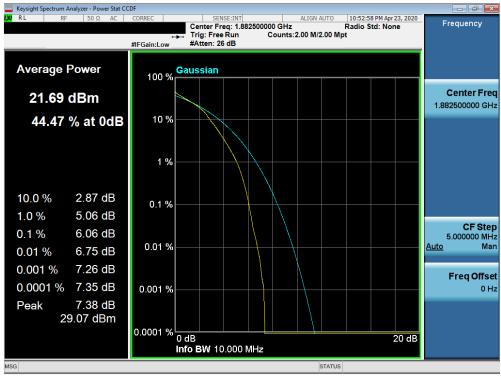
Plot 7-619. PAR Plot (Band 25/2 - 5.0MHz 256-QAM - Full RB Configuration)

FCC ID: A3LSMN986U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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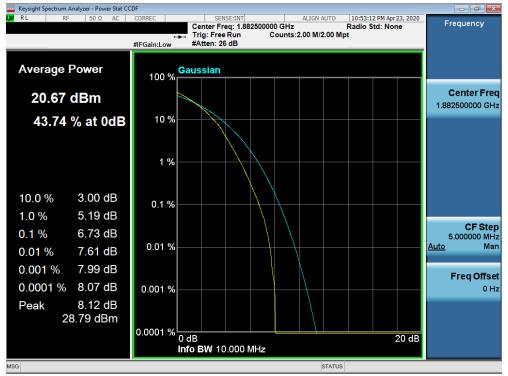
Plot 7-620. PAR Plot (Band 25/2 - 10.0MHz QPSK - Full RB Configuration)



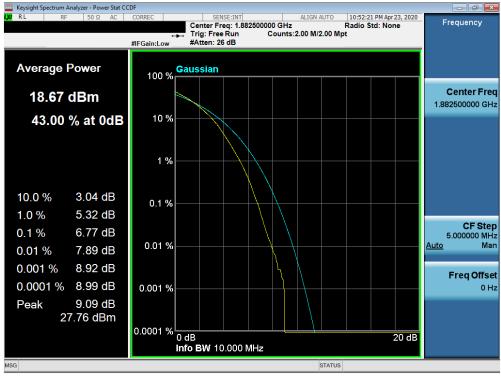
Plot 7-621. PAR Plot (Band 25/2 - 10.0MHz 16-QAM - Full RB Configuration)

FCC ID: A3LSMN986U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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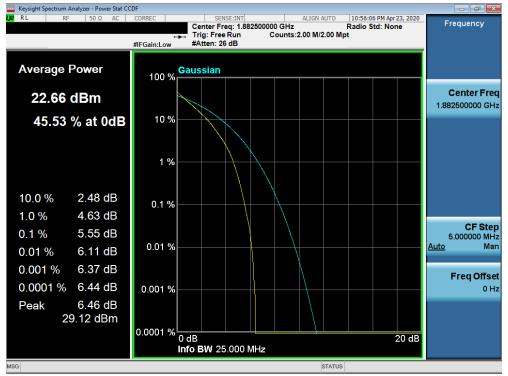
Plot 7-622. PAR Plot (Band 25/2 - 10.0MHz 64-QAM - Full RB Configuration)



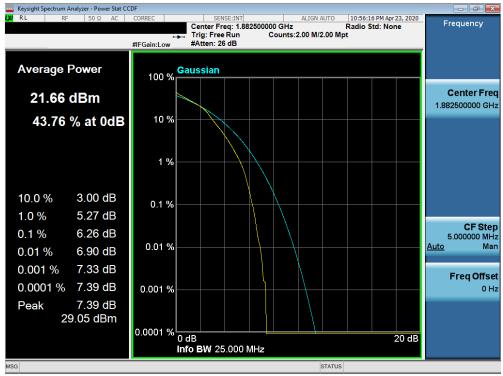
Plot 7-623. PAR Plot (Band 25/2 - 10.0MHz 256-QAM - Full RB Configuration)

FCC ID: A3LSMN986U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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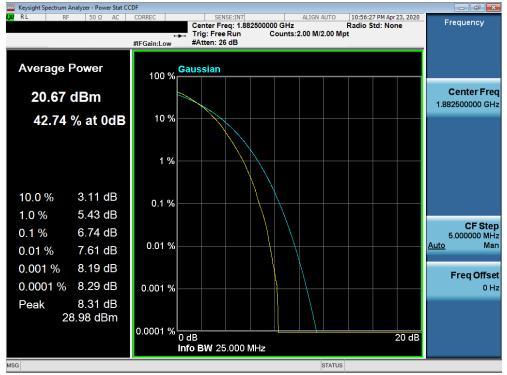
Plot 7-624. PAR Plot (Band 25/2 - 15.0MHz QPSK - Full RB Configuration)



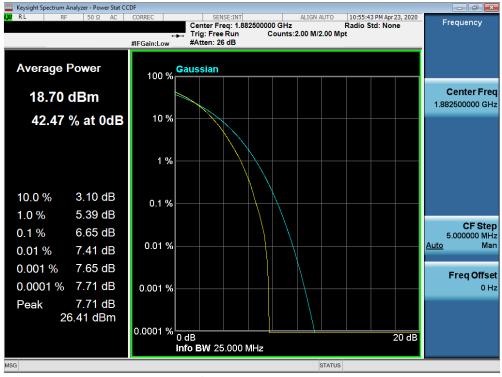
Plot 7-625. PAR Plot (Band 25/2 - 15.0MHz 16-QAM - Full RB Configuration)

FCC ID: A3LSMN986U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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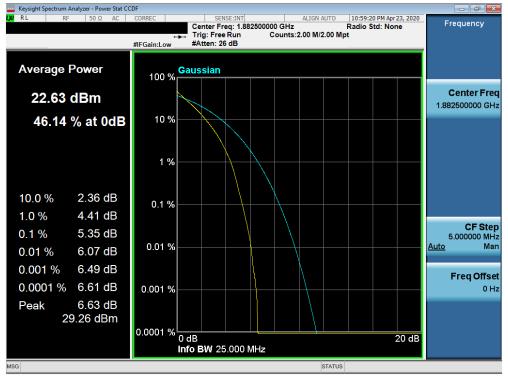
Plot 7-626. PAR Plot (Band 25/2 - 15.0MHz 64-QAM - Full RB Configuration)



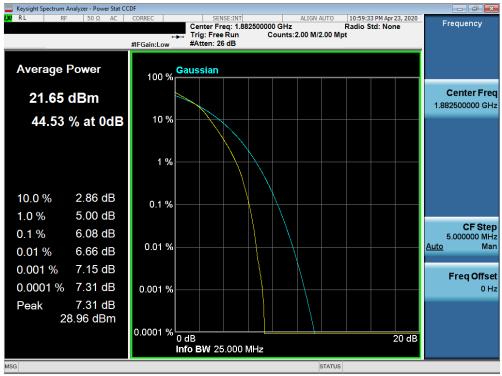
Plot 7-627. PAR Plot (Band 25/2 - 15.0MHz 256-QAM - Full RB Configuration)

FCC ID: A3LSMN986U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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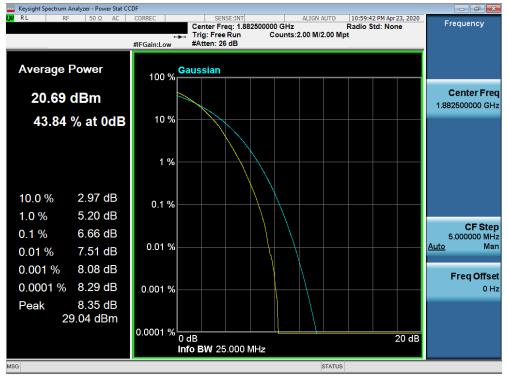




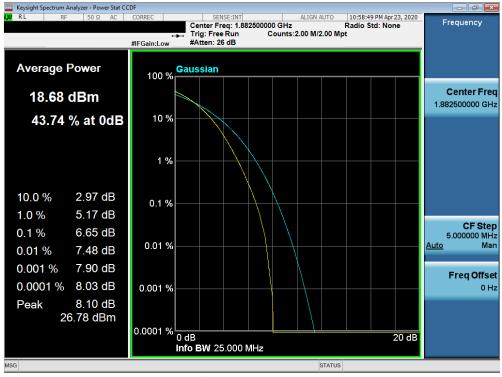
Plot 7-629. PAR Plot (Band 25/2 - 20.0MHz 16-QAM - Full RB Configuration)

FCC ID: A3LSMN986U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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Plot 7-630. PAR Plot (Band 25/2 - 20.0MHz 64-QAM - Full RB Configuration)

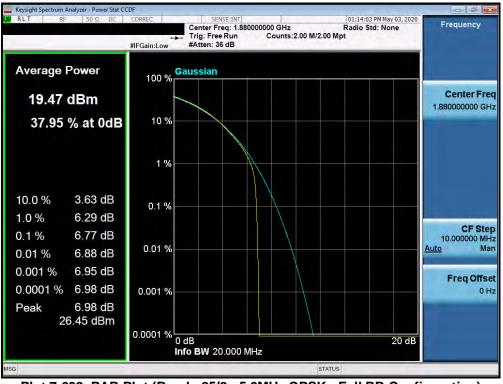


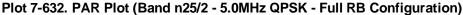
Plot 7-631. PAR Plot (Band 25/2 - 20.0MHz 256-QAM - Full RB Configuration)

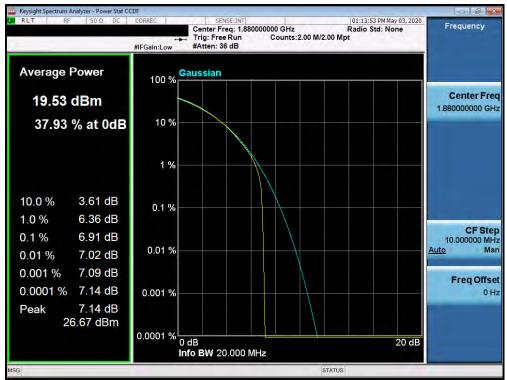
FCC ID: A3LSMN986U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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NR Band n25/2





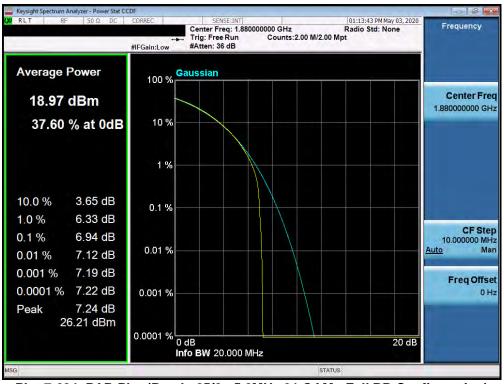


Plot 7-633. PAR Plot (Band n25/2 - 5.0MHz 16-QAM - Full RB Configuration)

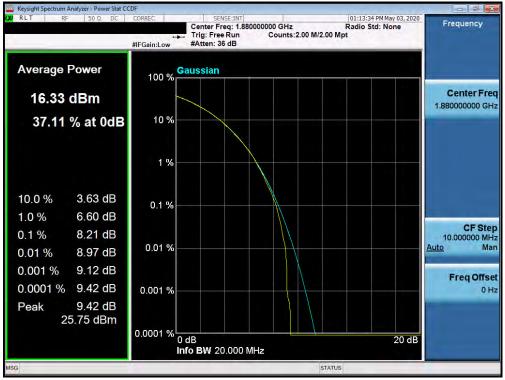
FCC ID: A3LSMN986U	PCTEST Mould biby part of B	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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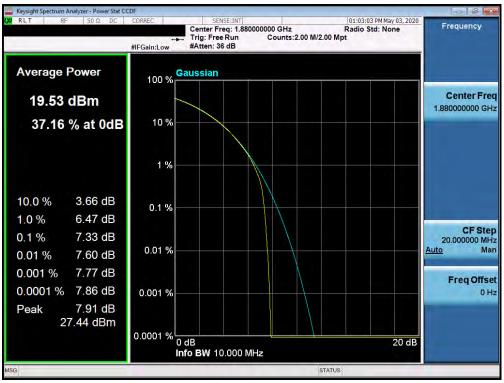
Plot 7-634. PAR Plot (Band n25/2 - 5.0MHz 64-QAM - Full RB Configuration)

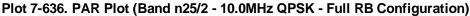


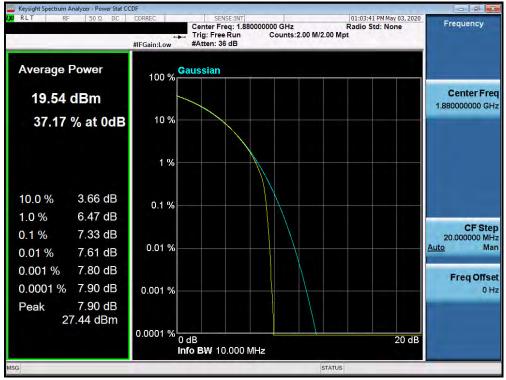
Plot 7-635. PAR Plot (Band n25/2 - 5.0MHz 256-QAM - Full RB Configuration)

FCC ID: A3LSMN986U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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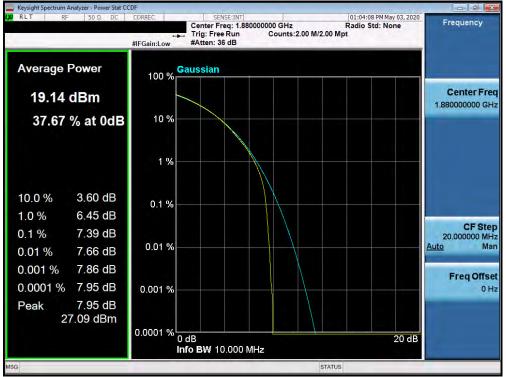




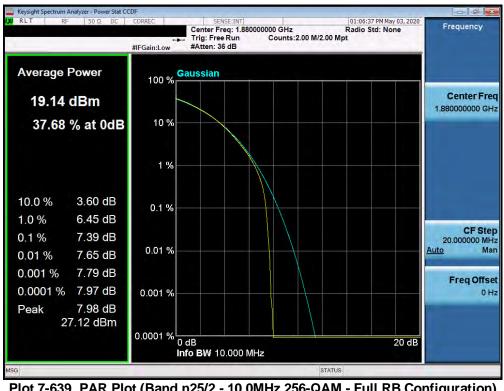
Plot 7-637. PAR Plot (Band n25/2 - 10.0MHz 16-QAM - Full RB Configuration)

FCC ID: A3LSMN986U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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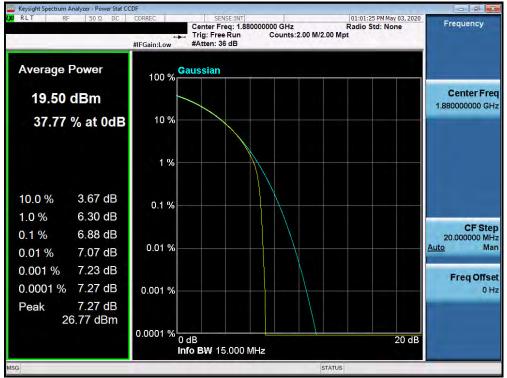


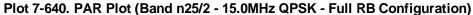


Plot 7-639. PAR Plot (Band n25/2 - 10.0MHz 256-QAM - Full RB Configuration)

FCC ID: A3LSMN986U		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
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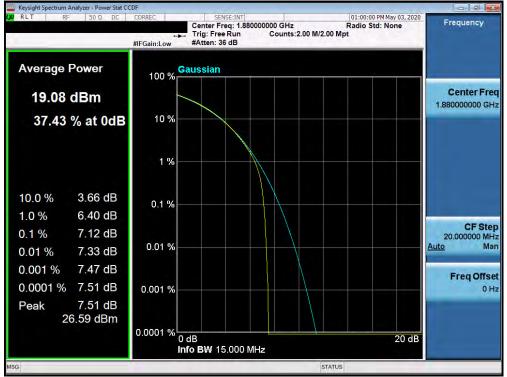




Plot 7-641. PAR Plot (Band n25/2 - 15.0MHz 16-QAM - Full RB Configuration)

FCC ID: A3LSMN986U		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
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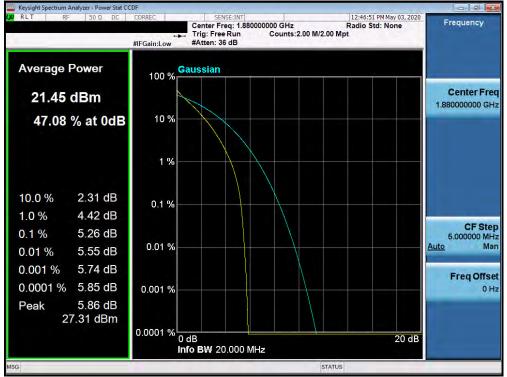




Plot 7-643. PAR Plot (Band n25/2 - 15.0MHz 256-QAM - Full RB Configuration)

FCC ID: A3LSMN986U		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
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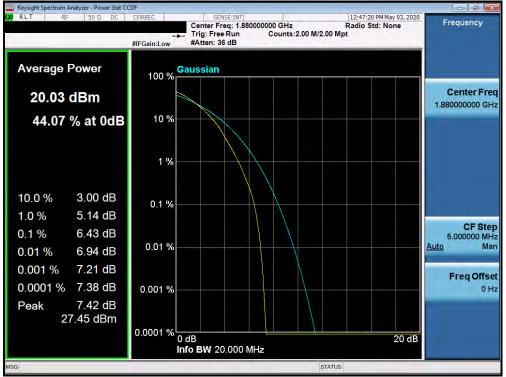




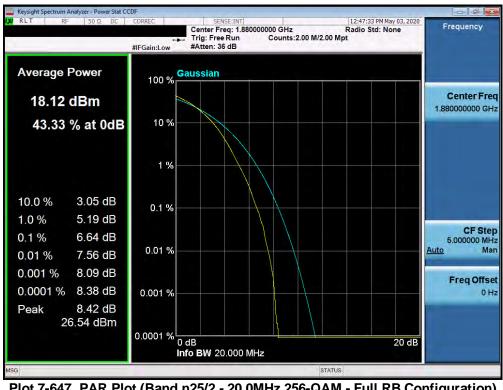
Plot 7-645. PAR Plot (Band n25/2 - 20.0MHz 16-QAM - Full RB Configuration)

FCC ID: A3LSMN986U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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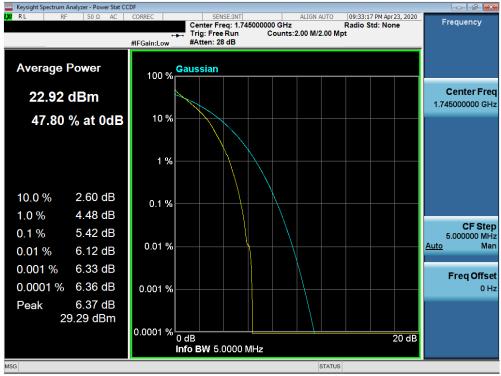


Plot 7-647. PAR Plot (Band n25/2 - 20.0MHz 256-QAM - Full RB Configuration)

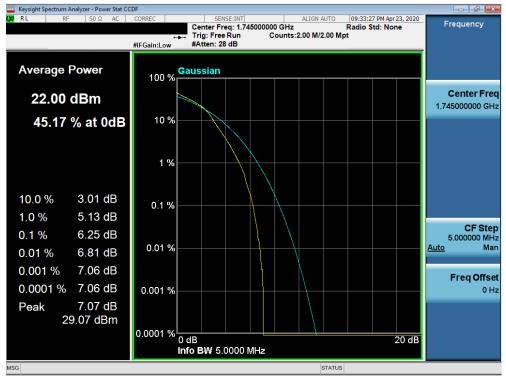
FCC ID: A3LSMN986U		MEASUREMENT REPORT (CERTIFICATION)	NSUNG	Approved by: Quality Manager
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Band 66/4



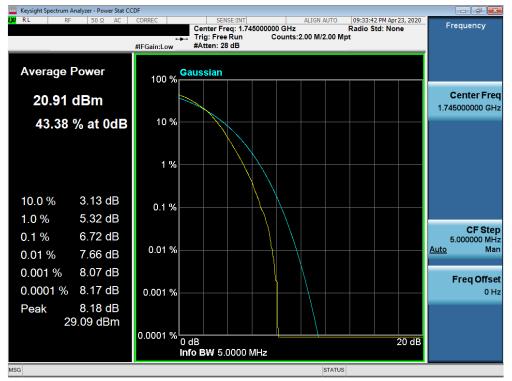
Plot 7-648. PAR Plot (Band 66/4 - 1.4MHz QPSK - Full RB Configuration)



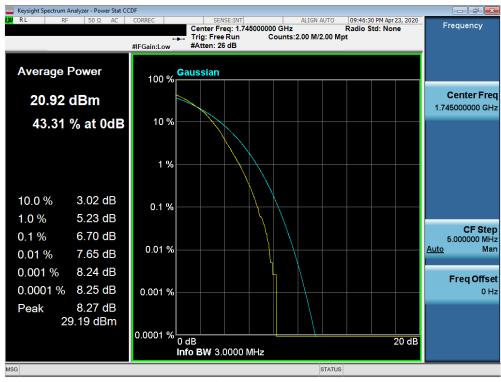
Plot 7-649. PAR Plot (Band 66/4 - 1.4MHz 16-QAM - Full RB Configuration)

FCC ID: A3LSMN986U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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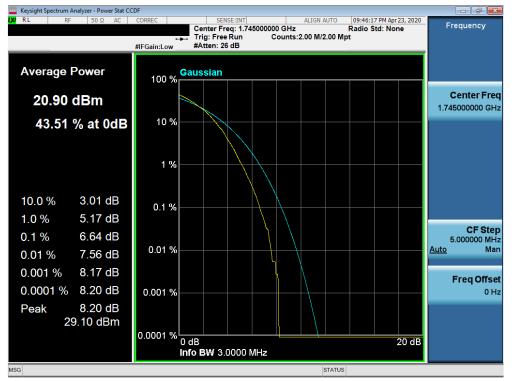




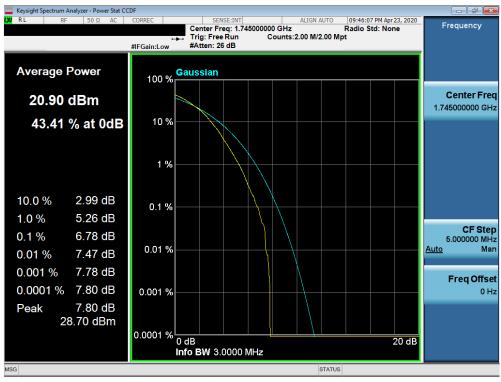
Plot 7-651. PAR Plot (Band 66/4 - 3.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMN986U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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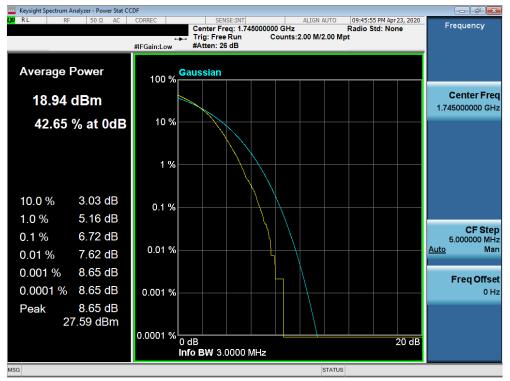




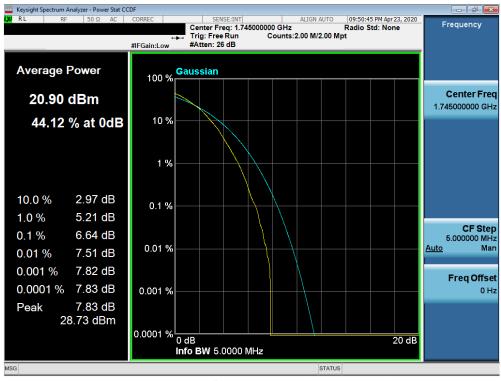
Plot 7-653. PAR Plot (Band 66/4 - 3.0MHz 64-QAM - Full RB Configuration)

FCC ID: A3LSMN986U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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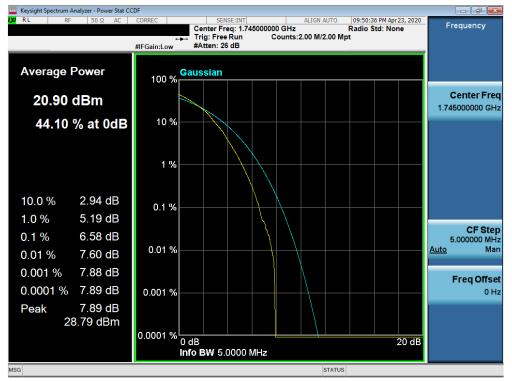




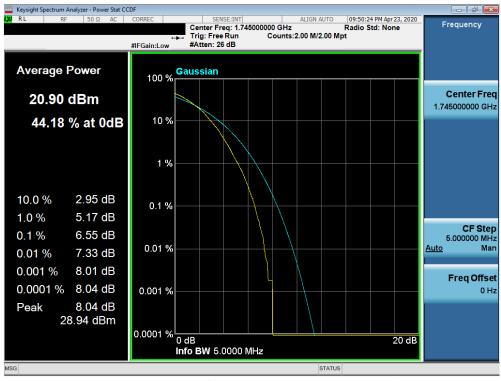
Plot 7-655. PAR Plot (Band 66/4 - 5.0MHz QPSK - Full RB Configuration)

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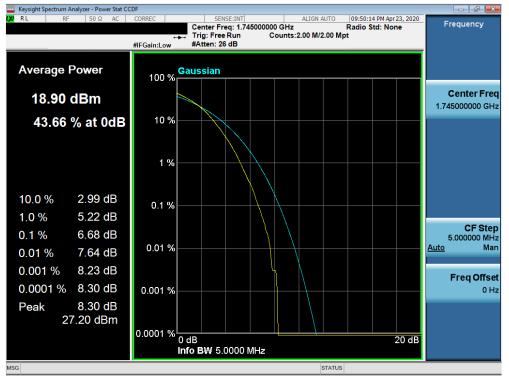




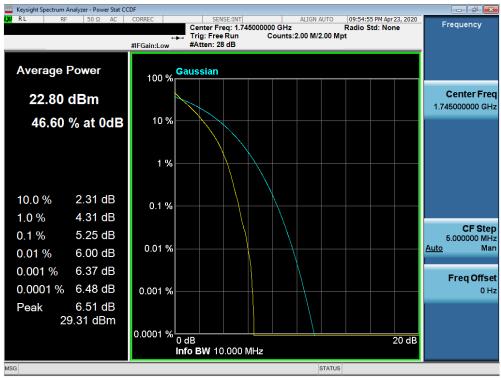
Plot 7-657. PAR Plot (Band 66/4 - 5.0MHz 64-QAM - Full RB Configuration)

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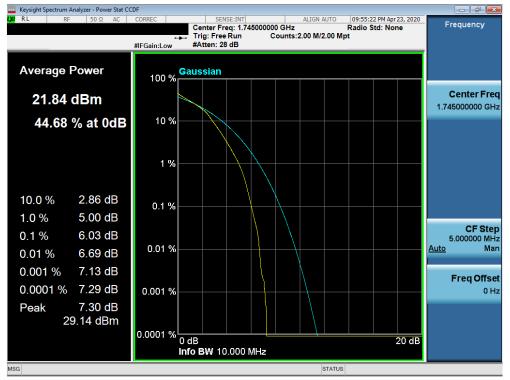




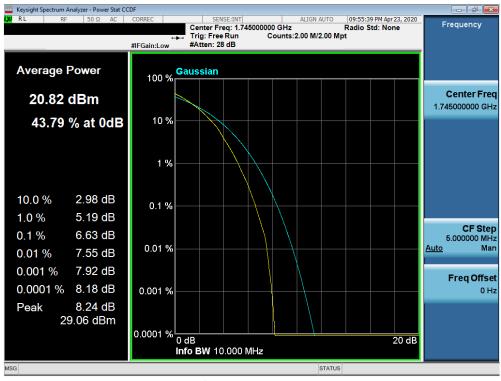
Plot 7-659. PAR Plot (Band 66/4 - 10.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMN986U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager	
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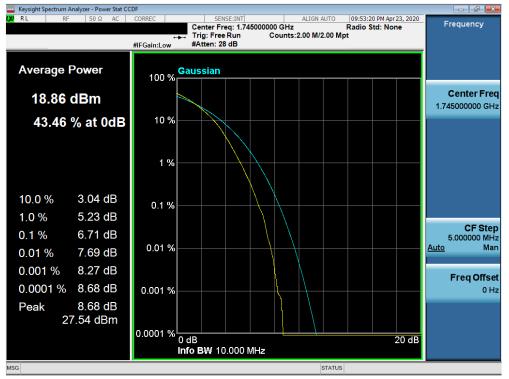




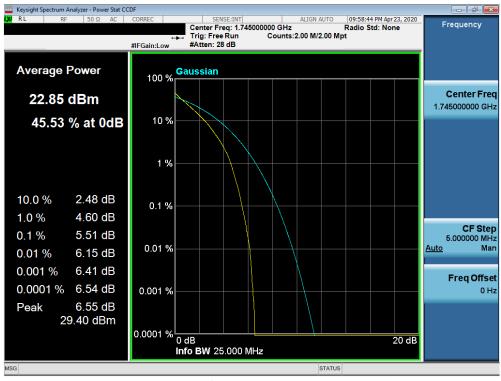
Plot 7-661. PAR Plot (Band 66/4 - 10.0MHz 64-QAM - Full RB Configuration)

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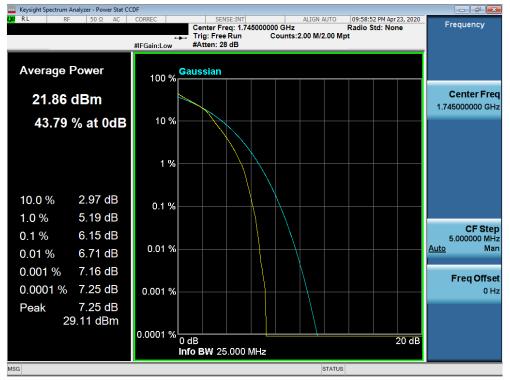




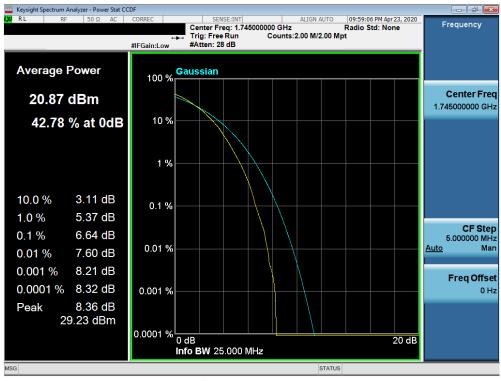
Plot 7-663. PAR Plot (Band 66/4 - 15.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMN986U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager	
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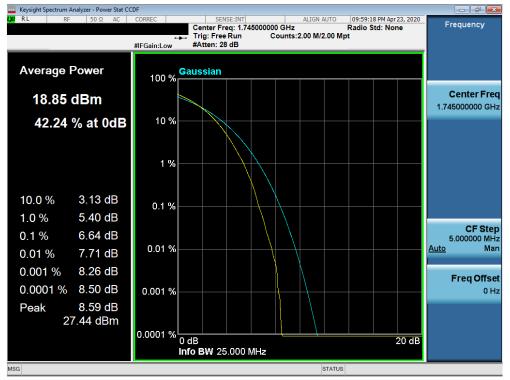




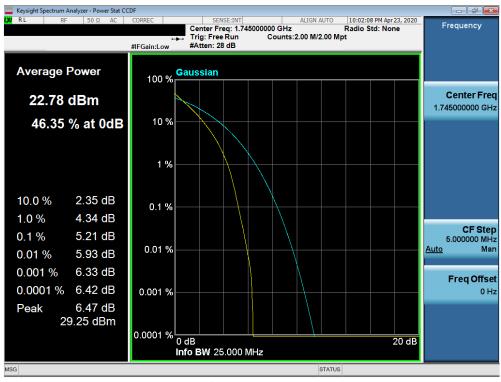
Plot 7-665. PAR Plot (Band 66/4 - 15.0MHz 64-QAM - Full RB Configuration)

FCC ID: A3LSMN986U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager	
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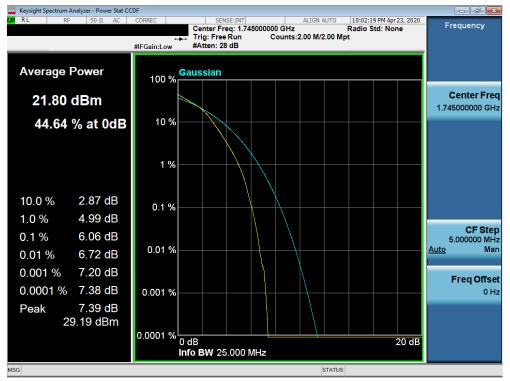




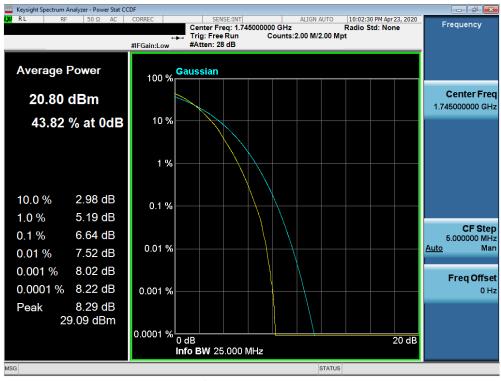
Plot 7-667. PAR Plot (Band 66/4 - 20.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMN986U		MEASUREMENT REPORT (CERTIFICATION)	MSUNG	Approved by: Quality Manager
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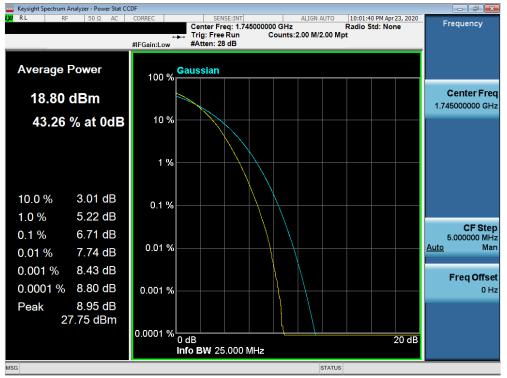




Plot 7-669. PAR Plot (Band 66/4 - 20.0MHz 64-QAM - Full RB Configuration)

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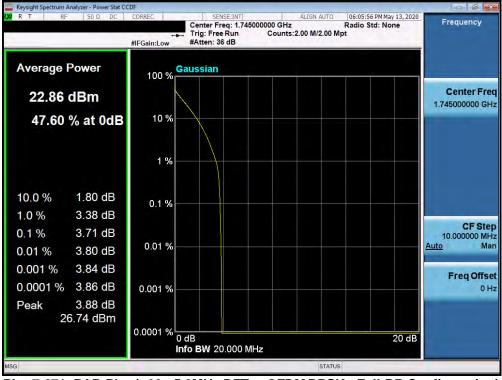


Plot 7-670. PAR Plot (Band 66/4 - 20.0MHz 256-QAM - Full RB Configuration)

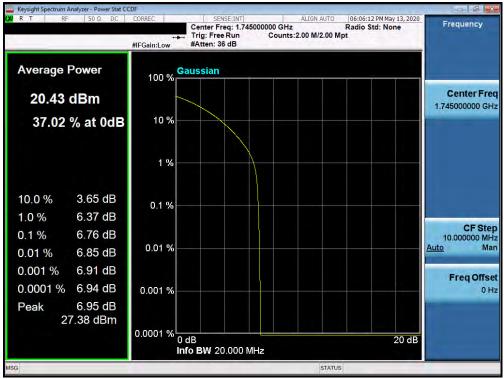
FCC ID: A3LSMN986U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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NR Band n66



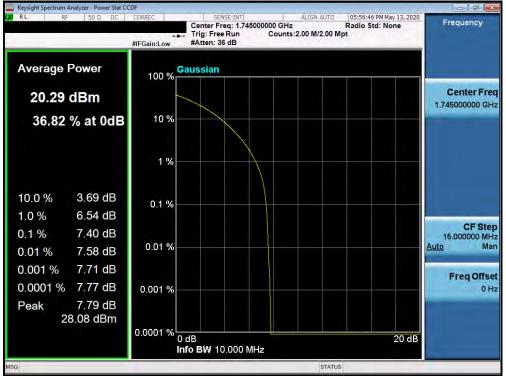




Plot 7-672. PAR Plot (n66 - 5.0MHz CP-OFDM-QPSK - Full RB Configuration)

FCC ID: A3LSMN986U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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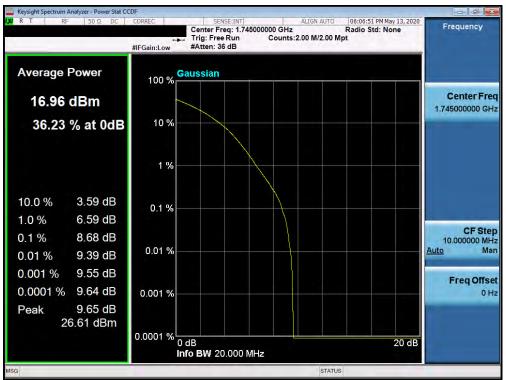


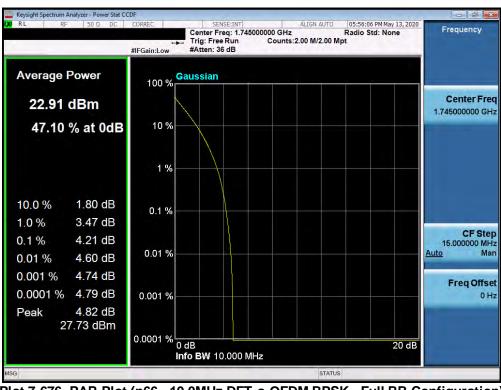
Plot 7-673. PAR Plot (n66 - 5.0MHz CP-OFDM-16-QAM - Full RB Configuration)

Plot 7-674. PAR Plot (n66 - 5.0MHz CP-OFDM-64-QAM - Full RB Configuration)

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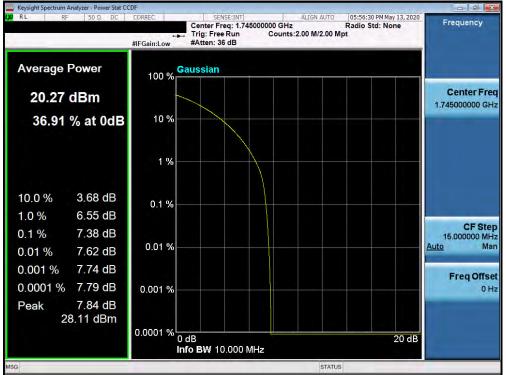


Plot 7-675. PAR Plot (n66 - 5.0MHz CP-OFDM-256-QAM - Full RB Configuration)

Plot 7-676. PAR Plot (n66 - 10.0MHz DFT-s-OFDM BPSK - Full RB Configuration)

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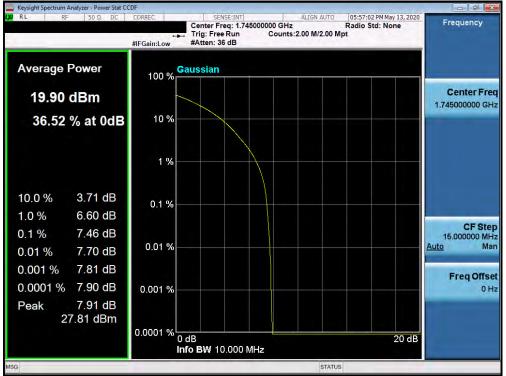


Plot 7-677. PAR Plot (n66 - 10.0MHz CP-OFDM-QPSK - Full RB Configuration)

Plot 7-678. PAR Plot (n66 - 10.0MHz CP-OFDM-16-QAM - Full RB Configuration)

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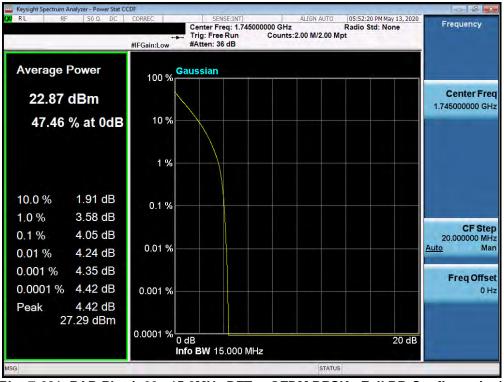


Plot 7-679. PAR Plot (n66 - 10.0MHz CP-OFDM-64-QAM - Full RB Configuration)

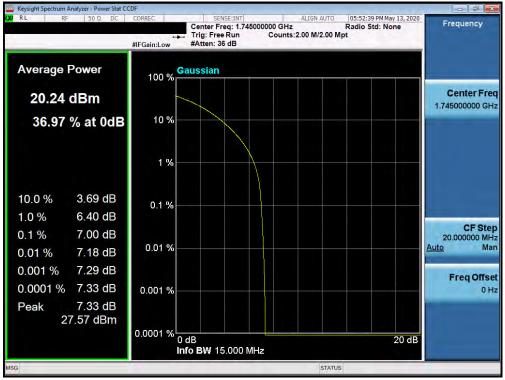
Plot 7-680. PAR Plot (n66 - 10.0MHz CP-OFDM-256-QAM - Full RB Configuration)

FCC ID: A3LSMN986U		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
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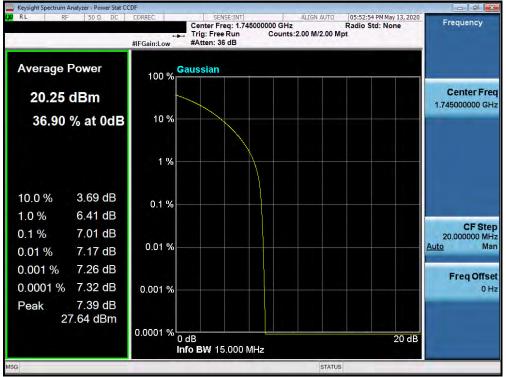


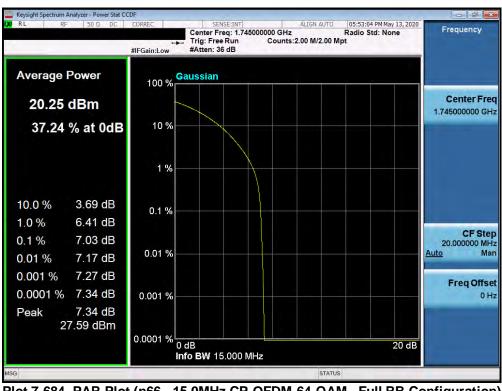


Plot 7-682. PAR Plot (n66 - 15.0MHz CP-OFDM-QPSK - Full RB Configuration)

FCC ID: A3LSMN986U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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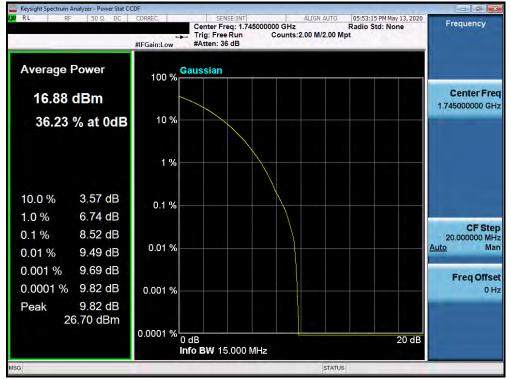


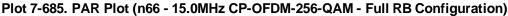
Plot 7-683. PAR Plot (n66 - 15.0MHz CP-OFDM-16-QAM - Full RB Configuration)

Plot 7-684. PAR Plot (n66 - 15.0MHz CP-OFDM-64-QAM - Full RB Configuration)

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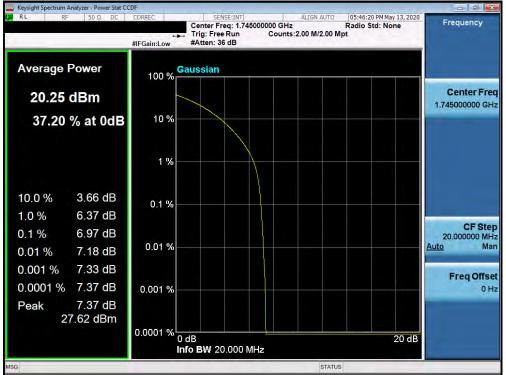




Plot 7-686. PAR Plot (n66 - 20.0MHz DFT-s-OFDM BPSK - Full RB Configuration)

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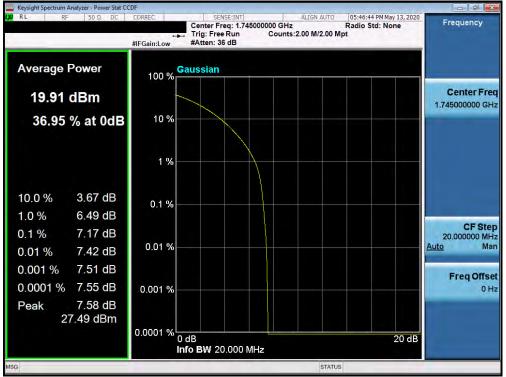


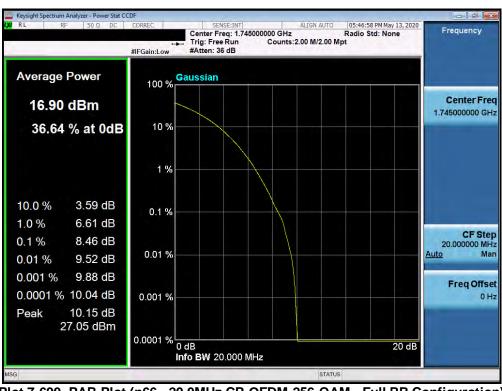
Plot 7-687. PAR Plot (n66 - 20.0MHz CP-OFDM-QPSK - Full RB Configuration)

Plot 7-688. PAR Plot (n66 - 20.0MHz CP-OFDM-16-QAM - Full RB Configuration)

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Plot 7-689. PAR Plot (n66 - 20.0MHz CP-OFDM-64-QAM - Full RB Configuration)

Plot 7-690. PAR Plot (n66 - 20.0MHz CP-OFDM-256-QAM - Full RB Configuration)

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7.6 Uplink Carrier Aggregation §27.53(m)

Test Overview

The EUT is set up to transmit two contiguous LTE channels. The power level of both carriers and the various conducted spurious and harmonic frequencies is measured by means of a calibrated spectrum analyzer. The spectrum is scanned from the lowest frequency generated in the equipment up to a frequency including its 10th harmonic. 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.

For Band 38/the minimum permissible attenuation level of any spurious emission is $55 + 10 \log_{10}(P_{[Watts]})$.

Test Procedure Used

KDB 971168 D01 v03r01 - Section 6.0

Test Settings

- 1. Start frequency was set to 30MHz and stop frequency was set to at least 10 * the fundamental frequency (separated into at least two plots per channel)
- 2. Detector = RMS
- 3. Trace mode = trace average for continuous emissions, max hold for pulse emissions
- 4. Sweep time = auto couple
- 5. The trace was allowed to stabilize
- 6. Please see test notes below for RBW and VBW settings

Test Setup

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



Figure 7-5. Test Instrument & Measurement Setup

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Test Notes

- Conducted power and spurious emissions measurements were evaluated for the two contiguous channels using various combinations of RB size, RB offset, modulation, and channel bandwidth. Channel bandwidth data is shown in the tables below based only on the channel bandwidths that were supported in this device. The worst case (highest) powers were found while operating with QPSK modulation, as shown in Table 7-503 and 7-504 below, with both carriers set to transmit using 1RB.
- 2. Compliance with the applicable limits is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater for frequencies less than 1 GHz and 1 MHz or greater for frequencies greater than 1 GHz. However, 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.

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Uplink CA Configuration 5B

PCC					SCC							
Channe I	Frequency [MHz]	BW [MHz]	Mod.	RB Size	RB Offset	Channe I	Frequency [MHz]	BW [MHz]	Mod.	RB Size	RB Offset	ULCA Tx.Power (dBm)
20450	829.0	10	QPSK	1	49	20549	838.9	10	QPSK	1	0	25.33
20525	836.5	10	QPSK	1	49	20597	843.7	5	QPSK	1	0	25.21
20600	844.0	10	QPSK	1	0	20501	834.1	10	QPSK	1	49	24.94

Table 7-3. Conducted Powers (B5 – PCC/SCC: RB Size 1)

PCC								SCC				
Channe I	Frequency [MHz]	BW [MHz]	Mod.	RB Size	RB Offset	Channe I	Frequency [MHz]	BW [MHz]	Mod.	RB Size	RB Offset	ULCA Tx.Power (dBm)
20450	829.0	10	QPSK	50	0	20549	838.9	10	QPSK	50	0	23.49
20450	829.0	10	16-QAM	50	0	20549	838.9	10	16-QAM	50	0	22.54
20450	829.0	10	64-QAM	50	0	20549	838.9	10	64-QAM	50	0	21.99
20450	829.0	10	256-QAM	50	0	20549	838.9	10	256-QAM	50	0	20.49

 Table 7-4. Conducted Powers (B5 with Various Combinations for 10MHz Channel Bandwidth)



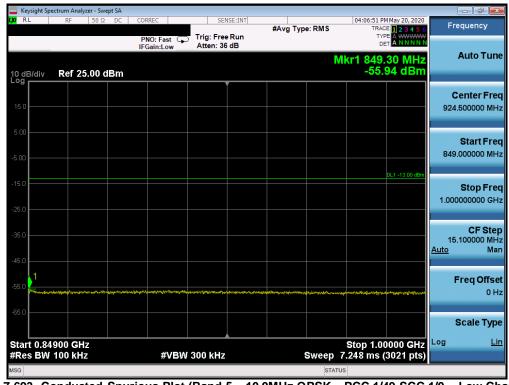
Plot 7-691. Conducted Spurious Plot (Band 5 - 10.0MHz QPSK - PCC 1/49 SCC 1/0 - Low Channel)

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Plot 7-692. Conducted Spurious Plot (Band 5 - 10.0MHz QPSK - PCC 1/49 SCC 1/0 - Low Channel)



Plot 7-693. Conducted Spurious Plot (Band 5 - 10.0MHz QPSK - PCC 1/49 SCC 1/0 - Low Channel)

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