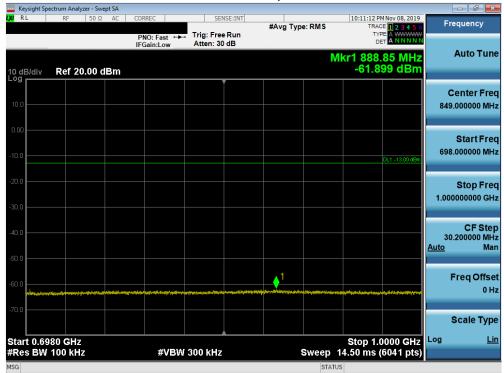


NR Band n71

Keysight Spectrum Analyzer - Swept		CEVINT	10:10:46 PM Nov 08, 2019	
KL   KF   50 52	PNO: Fast Trig: Free IFGain:Low Atten: 30			Frequency
0 dB/div Ref 20.00 dB	Bm		Mkr1 661.95 MHz -53.03 dBm	Auto Tur
10.0				Center Fre 346.000000 Mi
0.0			DL1 -13.00 dBm	Start Fre 30.000000 Mi
20.0				Stop Fre 662.000000 Mi
0.0			1	CF Ste 63.200000 M <u>Auto</u> M
		uga mana ang kana kana kana kana kana kana ka		Freq Offs 0
tart 30.0 MHz			Stop 662.0 MHz	Scale Tyj Log <u>L</u>
Res BW 100 kHz	#VBW 300 kHz	Swe	ep 30.34 ms (12641 pts)	

Plot 7-624. Conducted Spurious Plot (n71 - 20MHz DFT-s-OFDM-QPSK - RB Size 1, RB Offset 1 - Low Channel)



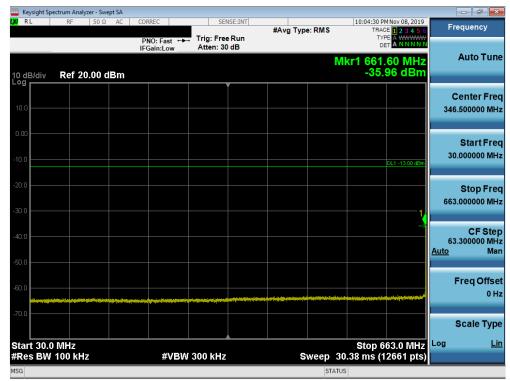
Plot 7-625. Conducted Spurious Plot (n71 - 20MHz DFT-s-OFDM-QPSK - RB Size 1, RB Offset 1 - Low Channel)

FCC ID: A3LSMG986U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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Plot 7-626. Conducted Spurious Plot (n71 - 20MHz DFT-s-OFDM-QPSK - RB Size 1, RB Offset 1 - Low Channel)



Plot 7-627. Conducted Spurious Plot (n71 - 20MHz DFT-s-OFDM-QPSK - RB Size 1, RB Offset 1 - Mid Channel)

FCC ID: A3LSMG986U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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	ctrum Analyzer - Sv									[	
LXIRL	RF 50 S	2 AC	CORREC		ENSE:INT	#Avg Typ	e: RMS	TRAC	MNov 08, 2019	Fr	equency
			PNO: Fast IFGain:Low	Atten: 3				TYF			
							Μ	kr1 883.	15 MHz		Auto Tune
10 dB/div Log	Ref 20.00	dBm						-61.8	54 dBm		
3					Ĭ					c	enter Freq
10.0										849	.000000 MHz
0.00											Start Freq
-10.0									DL1 -13.00 dBm	698	.000000 MHz
-20.0											Stop Freq
-30.0										1.000	0000000 GHz
-40.0										30	CF Step .200000 MHz
50.0										<u>Auto</u>	Man
-50.0											
-60.0						<b>♦</b> <sup>1</sup>				F	req Offset <sup>=</sup> 0 Hz
and the second second	antinet distriction of the loss	and a second	and the state of the	and and a second se	Television Antista	****		and a state of the second	e tel sin el fraighe frai		UHZ
-70.0											Scale Type
Start 0.69 #Res BW			#\/	300 kH:	7		Sween	Stop 1.0 14.50 ms (	0000 GHz	Log	Lin
MSG	TOU KHZ		#VI	599 300 KH.			Sweep		oo4 r pisj		

Plot 7-628. Conducted Spurious Plot (n71 - 20MHz DFT-s-OFDM-QPSK - RB Size 1, RB Offset 1 - Mid Channel)



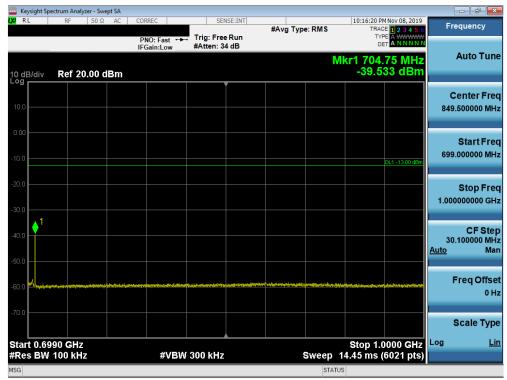
Plot 7-629. Conducted Spurious Plot (n71 - 20MHz DFT-s-OFDM-QPSK - RB Size 1, RB Offset 1 - Mid Channel)

FCC ID: A3LSMG986U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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	ectrum Analyz												
X/RL	RF	50 Ω	AC	CORREC			NSE:INT	#Avg Typ	e: RMS	TRAC	4 Nov 08, 2019 E 1 2 3 4 5 6 E A WWWWW	F	requency
				PNO: F IFGain:I	ast ⊊ ∟ow	Trig: Free Atten: 30				DE	ANNNN		
10 dB/div Log	Ref 20	.00 di	3m						Μ	kr1 662. -60.3	95 MHz 89 dBm		Auto Tune
10.0													Center Freq 5.500000 MHz
0.00													
-10.0											DL1 -13.00 dBm	3(	Start Freq 0.000000 MHz
-20.0													Stop Freq
-30.0												663	3.000000 MHz
-40.0												63 <u>Auto</u>	CF Step 3.300000 MHz Man
-50.0											1		
-60.0			a data sa a at		م. مربق میں میں میں ا	ta ninesti set je oda na data			in het Ge officiality for				Freq Offset 0 Hz
-70.0	and a start of the		عر هر به طلاقه العال	left de la contration	and a Little Store of	and a first of the second s							
													Scale Type
Start 30.0 #Res BW					#VBW	300 kHz		s	weep 3	Stop 6 0.38 ms (1	63.0 MHz 2661 pts)	Log	<u>Lin</u>
MSG									STATU	_			

Plot 7-630. Conducted Spurious Plot (n71 - 20MHz DFT-s-OFDM-QPSK - RB Size 1, RB Offset 1 - High Channel)



Plot 7-631. Conducted Spurious Plot (n71 - 20MHz DFT-s-OFDM-QPSK - RB Size 1, RB Offset 1 - High Channel)

FCC ID: A3LSMG986U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dage 400 of 405
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	ectrum Analyze												
L <mark>XI</mark> RL	RF	50 Ω	AC	CORREC		SEI	NSE:INT	#Avg Ty	pe: RMS		:04 PM Nov 08, 2019 TRACE 1 2 3 4 5 6	F	requency
				PNO: F IFGain:l	ast ↔ .ow	Trig: Free #Atten: 3		•	-				Auto Turo
10 dB/div	Ref 20.0	00 dE	Зm							Mkr1 9. -'	950 5 GHz 40.32 dBm		Auto Tune
10.0													Center Freq 0000000 GHz
0.00													
-10.0												1.00	Start Freq
-20.0											DL1 -13.00 dBm		Oton Enon
-30.0												10.00	Stop Freq
-40.0											1		CF Step
		urter frei	****	~						~~~~		90 <u>Auto</u>	0.000000 MHz Man
-60.0													Freq Offset
-70.0													0 Hz
70.0													Scale Type
Start 1.00 #Res BW				;	≠VBW	3.0 MHz			Sweep	Stop 15.60 m	10.000 GHz s (18001 pts)	Log	<u>Lin</u>
MSG									ST	ATUS			

Plot 7-632. Conducted Spurious Plot (n71 - 20MHz DFT-s-OFDM-QPSK - RB Size 1, RB Offset 1 - High Channel)

FCC ID: A3LSMG986U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dage 400 of 405
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### NR Band n66

	ectrum Anal												- 0
RL	RF	50 <u>Ω</u>	AC	CORREC			ENSE:INT	#Avg Ty	pe:RMS	TR	PM Nov 09, 2019 ACE 1 2 3 4 5 6	Fr	requency
				IFGair	Fast ↔	Atten: 3							
0 dB/div	Ref 2	0.00 d	Bm						N	4 dikr1 1.7	09 0 GHz 321 dBm		Auto Tun
°g							Ĭ						Center Fre
10.0													9.500000 MH
00.00													Start Fre
10.0												30	0.000000 MH
10.0											DL1 -13.00 dBm		
20.0											1		Stop Fre
												1.70	9000000 GI
80.0													
±0.0											1		CF Ste
+U.U												167 <u>Auto</u>	7.900000 MI M
50.0										ويحفظ الترويس ومحالي والم		Auto	IVI.
2.00.00×2.00 <sup>-00</sup>		harran and a start of the start	~~~~~~		Nain krait in the second s								Freq Offs
60.0													01
70.0													
													Scale Typ
										Chan 4	7000 011-		L
tart 0.03 Res BW					#VBW	/ 3.0 MH:	z		Sweep	5top 1 2.239 ms	.7090 GHz (3359 pts)	Log	
SG										TUS			

Plot 7-633. Conducted Spurious Plot (n66 - 20MHz DFT-s-OFDM-QPSK - RB Size 1, RB Offset 1 - Low Channel)



Plot 7-634. Conducted Spurious Plot (n66 - 20MHz DFT-s-OFDM-QPSK - RB Size 1, RB Offset 1 - Low Channel)

FCC ID: A3LSMG986U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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Plot 7-635. Conducted Spurious Plot (n66 - 20MHz DFT-s-OFDM-QPSK - RB Size 1, RB Offset 1 - Low Channel)



Plot 7-636. Conducted Spurious Plot (n66 - 20MHz DFT-s-OFDM-QPSK - RB Size 1, RB Offset 1 - Mid Channel)

FCC ID: A3LSMG986U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dage 411 of 405
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	ctrum Analyzer - Sw	ept SA									
LXI RL	RF 50 Ω	AC (	CORREC	SEI	ISE:INT	#Avg Typ	e RMS		Nov 09, 2019	Fr	equency
			PNO: Fast ↔ IFGain:Low	, Trig: Free Atten: 30				TYF			
10 dB/div Log	Ref 20.00 (	lBm					N	lkr1 9.98 -44.	1 5 GHz 58 dBm		Auto Tune
10.0											Center Freq 0000000 GHz
-10.0									DL1 -13.00 dBm	1.78	Start Freq 0000000 GHz
-20.0										10.00	Stop Freq 0000000 GHz
-40.0									1	822 <u>Auto</u>	CF Step 2.000000 MHz Man
-50.0											Freq Offset 0 Hz
-70.0											Scale Type
Start 1.78 #Res BW			#VBW	/ 3.0 MHz	<u> </u>	s	weep 1	Stop 10 14.25 ms (1	.000 GHz 6441 pts)	Log	<u>Lin</u>

Plot 7-637. Conducted Spurious Plot (n66 - 20MHz DFT-s-OFDM-QPSK - RB Size 1, RB Offset 1 - Mid Channel)



Plot 7-638. Conducted Spurious Plot (n66 - 20MHz DFT-s-OFDM-QPSK - RB Size 1, RB Offset 1 - Mid Channel)

FCC ID: A3LSMG986U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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	ectrum Analyzer - Swep									_	
LX/RL	RF 50 Ω	AC COF	RREC		NSE:INT	#Avg Typ	e: RMS	TRAC	HNov 09, 2019	Fi	requency
10 dB/div Log	Ref 20.00 di	IFO	NO: Fast ↔ Gain:Low	. Trig: Free Atten: 30			M	or 1.66	9 0 GHz 24 dBm		Auto Tune
10.0											Center Freq 0.000000 MHz
-10.0									DL1 -13.00 dBm	30	Start Freq 0.000000 MHz
-20.0										1.71	Stop Freq 0000000 GHz
-40.0									<mark>∢</mark> 1	168 <u>Auto</u>	CF Step 3.000000 MHz Man
-60.0	1994 - 1994 - 1994 - 1994 - 1994 - 1994 - 1994 - 1994 - 1994 - 1994 - 1994 - 1994 - 1994 - 1994 - 1994 - 1994 -		*****	and the product of the state of							Freq Offset 0 Hz
-70.0 Start 0.03	00 CH2							Stop 17	7100 GHz		Scale Type Lin
#Res BW			#VBW	3.0 MHz			Sweep 2	.240 ms (	3361 pts)		-
MSG							STATUS	6			





Plot 7-640. Conducted Spurious Plot (n66 - 20MHz DFT-s-OFDM-QPSK - RB Size 1, RB Offset 1 - High Channel)

FCC ID: A3LSMG986U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager	
Test Report S/N:	Test Dates:	EUT Type:		Dage 412 of 405	
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	ectrum Analy										- F	×
K RL	RF	50 Ω	AC	PNO: F	ast ↔→		#Avg Ty	pe:RMS		12 PM Nov 16, 2019 TRACE 1 2 3 4 5 6 TYPE A WWWW DET A N N N N N	Frequenc	У
0 dB/div	Ref 20	0.00 dl	Bm					N	lkr1 18.: -3	325 0 GHz 6.14 dBm	Auto 1	Гun
10.0											Center 15.000000000	
0.00										DL1 -13.00 dBm	Start 10.000000000	
20.0									1		Stop   20.000000000	
40.0											CF : 1.000000000 <u>Auto</u>	
60.0											Freq O	offso 0 H
70.0											Scale 1	
tart 10.0 Res BW					#VBW	3.0 MHz		Sweep	Stop 25.33 ms	20.000 GHz (20001 pts)	Log	Li
ISG									ATUS			_

Plot 7-641. Conducted Spurious Plot (n66 - 20MHz DFT-s-OFDM-QPSK - RB Size 1, RB Offset 1 - High Channel)

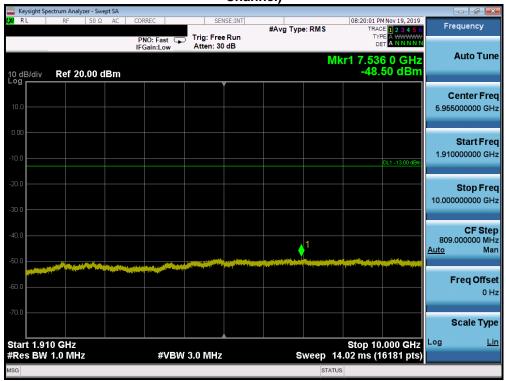
FCC ID: A3LSMG986U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager	
Test Report S/N: Test Dates:		EUT Type:		Dage 414 of 405	
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NR Band n2

Keysight Spectrum Analyzer - Swep					
🗶 RL RF 50 Ω		SENSE:INT #A	vg Type: RMS	08:19:53 PM Nov 19, 2019 TRACE 1 2 3 4 5 6 TYPE A WWWWW	Frequency
10 dB/div Ref 20.00 dl	IFGain:Low Atten:		Mk	r1 1.849 0 GHz -18.92 dBm	Auto Tun
10.0					Center Fre 939.500000 MH
-10.0				DL1 -13.00 d <sup>que</sup> <b>1</b> /	Start Fre 30.000000 M⊦
30.0				<u>_</u>	<b>Stop Fre</b> 1.849000000 GF
40.0					CF Ste 181.900000 MH <u>Auto</u> Ma
	ng manangan kanangan	*********	۵٬۵۵۰٬۵۹۵٬۵۹۵٬۵۹۹٬۹۹۵٬۹۹۹٬۹۹۵٬۹۹۵٬۹۹۵٬۹۹	yaka Mgamir Strain da pilo ya ya na kata nd	Freq Offs 0 F
-70.0 Start 0.0300 GHz #Res BW 1.0 MHz	#VBW 3.0 MI		Swoon-3	Stop 1.8490 GHz 425 ms (3639 pts)	Scale Typ
	#VBW 5.0 MI		Sweep Z.	425 ms (5059 pts)	

Plot 7-642. Conducted Spurious Plot (n2 - 20MHz DFT-s-OFDM-QPSK - RB Size 1, RB Offset 1 - Low Channel)



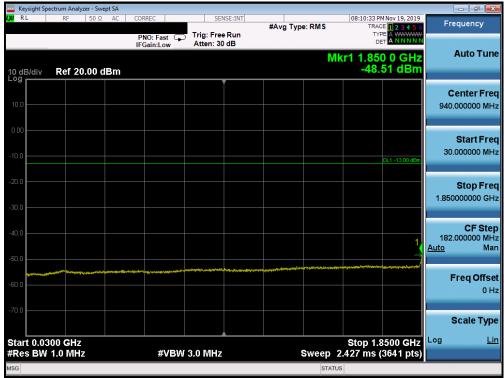
Plot 7-643. Conducted Spurious Plot (n2 - 20MHz DFT-s-OFDM-QPSK - RB Size 1, RB Offset 1 - Low Channel)

FCC ID: A3LSMG986U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Report S/N: Test Dates: EUT Type:			Dage 415 of 405
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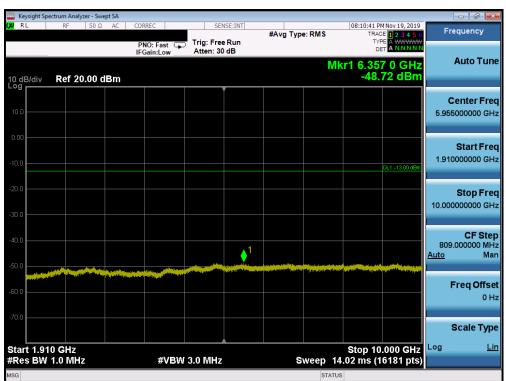
Plot 7-644. Conducted Spurious Plot (n2 - 20MHz DFT-s-OFDM-QPSK - RB Size 1, RB Offset 1 - Low Channel)



Plot 7-645. Conducted Spurious Plot (n2 - 20MHz DFT-s-OFDM-QPSK - RB Size 1, RB Offset 1 - Mid Channel)

FCC ID: A3LSMG986U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager	
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Plot 7-646. Conducted Spurious Plot (n2 - 20MHz DFT-s-OFDM-QPSK - RB Size 1, RB Offset 1 - Mid Channel)



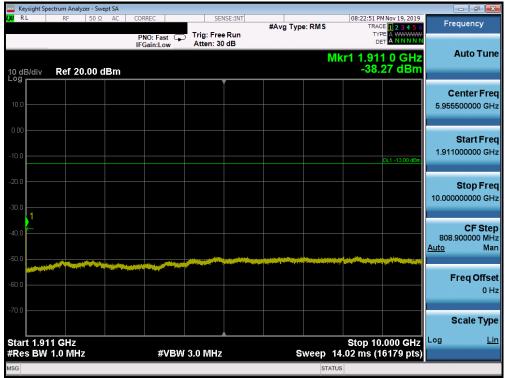
Plot 7-647. Conducted Spurious Plot (n2 - 20MHz DFT-s-OFDM-QPSK - RB Size 1, RB Offset 1 - Mid Channel)

FCC ID: A3LSMG986U		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager	
Test Report S/N:	Test Dates:	EUT Type:	Daga 417 of 405	
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	ectrum Analyzer - Sv										
X/RL	RF 50 Ω	2 AC	CORREC	SEI	NSE:INT	#Avg Typ	e: RMS	TRAC	Nov 19, 2019	Fre	quency
			PNO: Fast G	Trig: Free Atten: 30			м	TYF DE kr1 1.784			Auto Tune
10 dB/div Log	Ref 20.00	dBm						-52.	17 dBm		
10.0											enter Fred 000000 MHz
-10.0									DL1 -13.00 dBm		Start Fred
									0E1 -13.00 GBM		
-20.0											Stop Fred
-30.0											
-40.0									1	182. <u>Auto</u>	CF Step 000000 MH: Mar
and a state of the	Manager and Man		۵٬۶۰۰ کار اور در ورو و و و						0	F	req Offse
-60.0											0 Hi
-70.0											
										S	cale Type
Start 0.03								Stop 1.8	Soo Gilz	Log	Lin
#Res BW	1.0 MHz		#VB	N 3.0 MHz			Sweep :	2.427 ms (	3641 pts)		
ISG							STATU	IS			

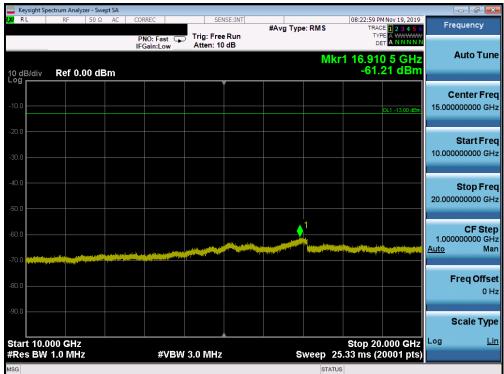
Plot 7-648. Conducted Spurious Plot (n2 - 20MHz DFT-s-OFDM-QPSK - RB Size 1, RB Offset 1 - High Channel)



Plot 7-649. Conducted Spurious Plot (n2 - 20MHz DFT-s-OFDM-QPSK - RB Size 1, RB Offset 1 - High Channel)

FCC ID: A3LSMG986U		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
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Plot 7-650. Conducted Spurious Plot (n2 - 20MHz DFT-s-OFDM-QPSK - RB Size 1, RB Offset 1 - High Channel)

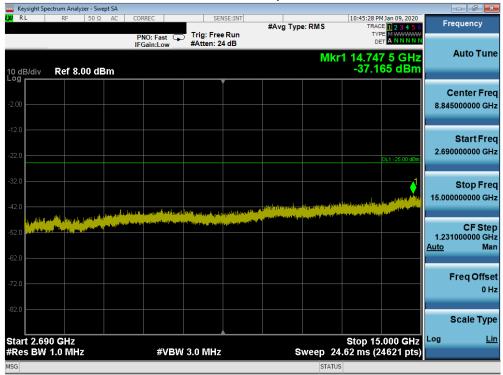
FCC ID: A3LSMG986U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager	
Test Report S/N:	Test Dates:	EUT Type:		Dogo 440 of 405	
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# NR Band n41

	ectrum Analyz											
XI RL	RF	50 Ω	AC	CORREC			Run	#Avg T	ype: RMS	TRA	PM Jan 09, 2020 ACE 1 2 3 4 5 6 YPE M WWWWW	Frequency
10 dB/div	Ref 20	.00 di	3m	PNO: Fa IFGain:L		Atten: 30				/kr1 2.35	54 0 GHz 036 dBm	Auto Tun
10.0												Center Fre 1.252500000 GH
10.00												Start Fre 30.000000 M⊦
30.0											DL1 -25.00 dBm	Stop Fre 2.475000000 GH
40.0			tel an the	and a state of	, il in contra	ple lappins with	pitters also per	<u>المحاجد المناطق في علم</u>	in al datistication			CF Ste 244.500000 MH <u>Auto</u> Ma
60.0												Freq Offs 0 I
70.0	30 GH7									Ston	2.475 GHz	Scale Typ Log <u>L</u>
#Res BW		4		#	¢VBW	3.0 MHz			Sweep	3.260 ms	(4891 pts)	
ISG									STA	TUS		

Plot 7-651. Conducted Spurious Plot (n41 - 100MHz DFT-s-OFDM-QPSK - RB Size 1, RB Offset 1 - Low Channel)



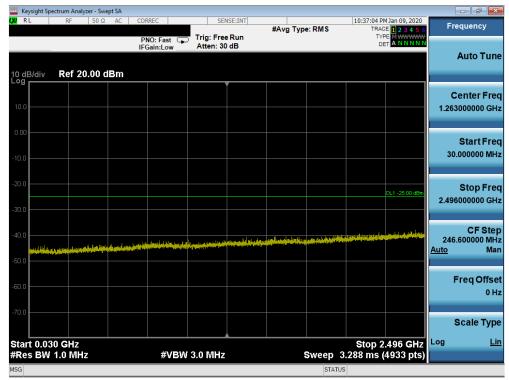
Plot 7-652. Conducted Spurious Plot (n41 - 100MHz DFT-s-OFDM-QPSK - RB Size 1, RB Offset 1 - Low Channel)

FCC ID: A3LSMG986U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager	
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	pectrum Analyzer - Sw										
L <mark>XI</mark> RL	RF 50 Ω	AC COF	RREC	SEI	NSE:INT	#Avg Typ	e: RMS		MJan 09, 2020	F	requency
	_	PI IF(	NO: Fast 🖵 Gain:Low	Trig: Free #Atten: 1			Mk	r1 25.38			Auto Tune
10 dB/div Log	Ref 0.00 dE	3m						-41.	38 dBm		
-10.0											Center Freq 0000000 GHz
-20.0									DL1 -25.00 dBm	15.00	Start Freq
-40.0							Too Date and Looked	1			Stop Freq
-50.0	Mandan Martin Martin	daalaan ya daga	(for the part of the part	enderski belgi berbijs Postarstanijski disetijski	landringgenskanter Andringgenskanter			an instal and a state of the st	hining a stilling or	27.00	0000000 GHz CF Step
-60.0										1.20 <u>Auto</u>	0000000 GHz Man
-80.0											Freq Offset 0 Hz
-90.0											Scale Type
Start 15.0 #Res BW			#VBW	3.0 MHz		s	weep 3	Stop 27 0.40 ms (2	.000 GHz 4001 pts)	Log	<u>Lin</u>
MSG							STATU	IS			

Plot 7-653. Conducted Spurious Plot (n41 - 100MHz DFT-s-OFDM-QPSK - RB Size 1, RB Offset 1 - Low Channel)



Plot 7-654. Conducted Spurious Plot (n41 - 100MHz DFT-s-OFDM-QPSK - RB Size 1, RB Offset 1 - Mid Channel)

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	Spectrum Analyz										
L <mark>X/</mark> RL	RF	50 Ω AC	CORREC	SEI	NSE:INT	#Avg Typ	e: RMS		4 Jan 09, 2020	F	requency
	<b>D</b> -6.40		PNO: Fast IFGain:Low	Trig: Free #Atten: 2			Mk	cr1 14.76			Auto Tune
10 dB/div	Ref 10	.00 dBm						-30.			
											Center Freq
0.00										8.84	5000000 GHz
-10.0											Start Freq
-20.0										2.69	0000000 GHz
									DL1 -25.00 dBm		
-30.0									4	15.00	Stop Freq 0000000 GHz
-40.0			Labrana	land a		Little hitting with the	an the second	nal polygy (ny sy had by And polygy (ny sy had by s	A COLORED TO A COLOR		
-50.0 (1911)	war had been	والمقدم والارماني أأتوا وركد			and the second s	a national data data a	Constant States of St	and see of a second second		1.23	CF Step 1000000 GHz
-60.0	and the second secon									<u>Auto</u>	Man
-60.0											
-70.0											Freq Offset 0 Hz
-80.0											
-00.0											Scale Type
Start 2.6	i90 GHz							Stop 15	.000 GHz	Log	Lin
	V 1.0 MHz		#VBW	/ 3.0 MHz		s	weep 2	24.62 ms (2	4621 pts)		
MSG							STAT	US			

Plot 7-655. Conducted Spurious Plot (n41 - 100MHz DFT-s-OFDM-QPSK - RB Size 1, RB Offset 1 - Mid Channel)



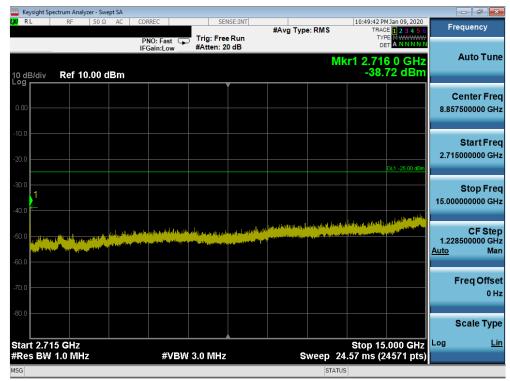
Plot 7-656. Conducted Spurious Plot (n41 - 100MHz DFT-s-OFDM-QPSK - RB Size 1, RB Offset 1 - Mid Channel)

FCC ID: A3LSMG986U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager	
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	ectrum Analyzer - Sw	ept SA									
L <mark>XI</mark> RL	RF 50 Ω	AC CO	RREC	SEI	NSE:INT	#Avg Typ			4 Jan 09, 2020	Fi	requency
			NO: Fast 🕞 Gain:Low	Trig: Free Atten: 30		<i></i> 9.9		TYF DE kr1 2.46			Auto Tune
10 dB/div	Ref 20.00 (	dBm						-38.	85 dBm		
10.0											Center Freq 3000000 GHz
-10.0										3(	Start Freq 0.000000 MHz
-20.0									DL1 -25.00 dBm	2.49	Stop Freq 6000000 GHz
-40.0		an er fille til det				f fitter formeliet		al inglada ing palata		246 <u>Auto</u>	CF Step 5.600000 MHz Man
-50.0											Freq Offset 0 Hz
-70.0											Scale Type
Start 0.03 #Res BW			#VBW	3.0 MHz			Sweep	3.288 ms (	100 0112	Log	Lin

Plot 7-657. Conducted Spurious Plot (n41 - 100MHz DFT-s-OFDM-QPSK - RB Size 1, RB Offset 1 - High Channel)



Plot 7-658. Conducted Spurious Plot (n41 - 100MHz DFT-s-OFDM-QPSK - RB Size 1, RB Offset 1 - High Channel)

FCC ID: A3LSMG986U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager	
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🧱 Keysight Spectrum Analyzer - Swept SA				
XX RL RF 50Ω AC	CORREC SENSE:	#Avg Type: RMS	10:50:38 PM Jan 09, 2020 TRACE 1 2 3 4 5 6	Frequency
	PNO: Fast Trig: Free Ru IFGain:Low #Atten: 10 dE	n		
10 dB/div Ref 0.00 dBm		M	kr1 25.672 0 GHz -41.618 dBm	Auto Tune
-10.0				Center Freq 21.000000000 GHz
-20.0			DL1 -25.00 dBm	Start Freq 15.00000000 GHz
-40.0				Stop Freq 27.00000000 GHz
				CF Step
-60.0				1.200000000 GHz <u>Auto</u> Man
-80.0				Freq Offset 0 Hz
-90.0				Scale Type
Start 15.000 GHz			Stop 27.000 GHz	Log <u>Lin</u>
#Res BW 1.0 MHz	#VBW 3.0 MHz	Sweep	30.40 ms (24001 pts)	

Plot 7-659. Conducted Spurious Plot (n41 - 100MHz DFT-s-OFDM-QPSK - RB Size 1, RB Offset 1 - High Channel)

FCC ID: A3LSMG986U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager	
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## Band Edge Emissions at the Antenna Terminal

All SCS's and Waveforms (CP-OFDM vs DFT-s OFDM) were investigated to determine the worst case configuration. All modes of operation were investigated and the worst case configuration results are reported in this section.

# NR Band n5



Plot 7-660. Lower Band Edge Plot (n5 - 5MHz CP-OFDM-QPSK - Full RB Configuration)

FCC ID: A3LSMG986U		MEASUREMENT REPORT (CERTIFICATION)	UNG	Approved by: Quality Manager	
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Keysight Spectrum Analyzer - Swept SA								[	- 0
KIRL RF 50Ω AC	CORREC		ISE:INT	#Avg Typ	e: RMS	TRAC	4Nov 08, 2019 E 1 2 3 4 5 6	Fr	equency
	PNO: Wide ↔ IFGain:Low	Trig: Free Atten: 36							
10 dB/div Ref 25.00 dBm					Mk	r1 849.0 -25.6	04 MHz 74 dBm		Auto Tune
								C	enter Fre
15.0								849	.000000 MH
5.00	patrologi terapation and a second								
								847	Start Fre .000000 MH
5.00							DL1 -13.00 dBm		
15.0							0L1 -13.00 (1841		Stop Fre
25.0		June 2	1					851	.000000 MH
			-Wyterweiller		hullon	mmmm	mm		CF Ste
35.0									400.000 kH
45.0								<u>Auto</u>	IVIA
55.0								F	Freq Offse
									0 H
65.0									Scale Typ
Center 849.000 MHz #Res BW 100 kHz	#VBW	300 kHz			Sweep_6	Span 4 .667 m <u>s (</u>	.000 MHz 1001 pts)	-	Li
ISG					STATUS				

Plot 7-661. Upper Band Edge Plot (n5 - 5MHz CP-OFDM-QPSK - Full RB Configuration)



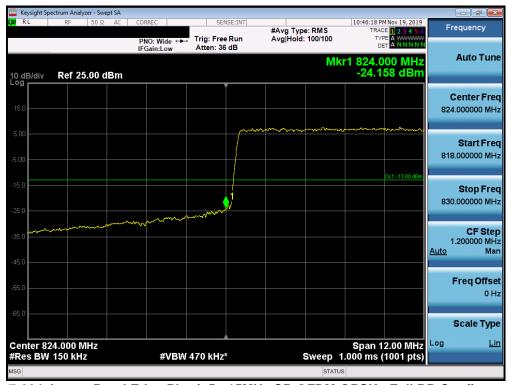
Plot 7-662. Lower Band Edge Plot (n5 - 10MHz CP-OFDM-QPSK - Full RB Configuration)

FCC ID: A3LSMG986U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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									_	
RF 50	Ω AC				#Avg Typ	e: RMS	TRAC	E 1 2 3 4 5 6	Fre	quency
		PNO: Wide	Atten: 36	dB						
Ref 25.00	dBm					Mk	1 849.0 -26.5	00 MHz 83 dBm		Auto Tune
									Ce	enter Fred
									849.0	00000 MHz
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	~~~~~	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~								Start Free
										000000 MHz
								DL1 -13.00 dBm		
				1						<b>Stop Fred</b> 000000 MH;
				~~~~	· · · · · · · · · · · · · · · · · · ·	~~~~~				
							· · · · · · · · · · · · · · · · · · ·		۶ <u>Auto</u>	CF Step 300.000 kH: Mar
									F	req Offse 0 Ha
										U H.
									S	cale Type
							Span 8	21111 000	Log	Lin
00 kHz		#VBW	300 kHz					1001 pts)		
	Ref 25.00	Ref 25.00 dBm	RF         50 Ω         AC         CORREC           PNO: Wide         →           IFGain:Low         →	RF     50 Ω     AC     CORREC     SET       PNO: Wide     Trig: Free     Trig: Free       Ref 25.00 dBm	RF     50 Ω     AC     CORREC     SENSE:INT       PNO: Wide     Trig: Free Run Atten: 36 dB	RF         50 Ω         AC         CORREC         SENSE:INT         #Avg Typ           PNO: Wide         Trig: Free Run         Atten: 36 dB         #Avg Typ           Ref 25.00 dBm         1         1         1         1           1         1         1         1         1         1           1	RF         50 Ω         AC         CORREC         SENSE:INT         #Avg Type: RMS           PNO: Wide         Trig: Free Run Atten: 36 dB         Trig: Free Run Atten: 36 dB         Mkt	RF         50 Ω         AC         CORREC         SENSE:INT         #Avg Type: RMS         Trace           PNO: Wide         Trig: Free Run         #Avg Type: RMS         Trace         Trig: Free Run         Ref 25.00 dBm         -28.5           Act of the rest of t	RF         50 Ω         AC         CORREC         SENSE:INT         10:57:53 PM Nov 19, 2019           PRO: Wide         Trig: Free Run IFGain:Low         Trig: Free Run Atten: 36 dB         #Avg Type: RMS         TRACE         23:45 G           Mkr1 849.000 MHz         -26:583 dBm         -26:583 dBm         -26:583 dBm           0 0 0 MHz         -26:583 dBm         -26:583 dBm         -26:583 dBm           0 0 0 MHz         -26:583 dBm         -26:583 dBm         -26:583 dBm           0 0 0 MHz         -26:583 dBm         -26:583 dBm         -26:583 dBm	RF       50 Ω       AC       CORREC       SENSE:INT       10:57:53 PM Nov 19, 2019         PNO: Wide ↔       Trig: Free Run       Trig: Free Run       Trig: Cell       2.3 3 50         Nikr1       849.000 MHz

Plot 7-663. Upper Band Edge Plot (n5 - 10MHz CP-OFDM-QPSK - Full RB Configuration)



Plot 7-664. Lower Band Edge Plot (n5 - 15MHz CP-OFDM-QPSK - Full RB Configuration)

FCC ID: A3LSMG986U		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
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	pectrum Analyz										
X/RL	RF	50 Ω AC	CORREC		ISE:INT	#Avg Typ	e: RMS	TRAC	Nov 19, 2019	Freque	ncy
			PNO: Wide +++ IFGain:Low	Trig: Free Atten: 36				TYP DE			
10 dB/div Log	Ref 25	.00 dBm					Mk	(r1 849.0 -26.4	00 MHz 25 dBm	Aut	o Tune
15.0										Cent 849.0000	er Free DOO MH:
-5.00										Sta 843.0000	I <b>rt Fre</b> DOO MH
-15.0					1				DL1 -13.00 dBm	Sto 855.0000	<b>р Fre</b> 000 мн
-35.0					~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	mont		Mar Mar	Sun Ange		F Ste 000 MH Ma
-55.0										Freq	<b>Offse</b> 0 H
-65.0											е Тур
	49.000 M V 150 kHz		#VBW	470 kHz			Sweep	Span 1: 1.000 ms (	2.00 MHz 1001 pts)	Log	Li
ASG							STATU				

Plot 7-665. Upper Band Edge Plot (n5 - 15MHz CP-OFDM-QPSK - Full RB Configuration)



Plot 7-666. Lower Band Edge Plot (n5 - 20MHz CP-OFDM-QPSK - Full RB Configuration)

FCC ID: A3LSMG986U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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	ectrum Analyze												
X/RL	RF	50 Ω	AC	CORREC			SE:INT	#Avg Typ	e: RMS	TRAC	MNov 19, 2019 E 1 2 3 4 5 6	Fn	equency
				PNO: Fa	ast ⊶⊶ .ow	Trig: Free Atten: 36							
10 dB/div Log	Ref 25.	00 dE	3m						Mł	(r1 849.0 -26.2	00 MHz 13 dBm		Auto Tune
15.0													enter Freq
5.00		~~~~	<u>~~~~</u> ~~~	<u>~~~</u> ~~~	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~								Start Free
-5.00											DL1 -13.00 dBm	841	.000000 MHz
-25.0							1					857	Stop Fred .000000 MHz
-35.0								Man many	mondown	d and a second s		1 <u>Auto</u>	CF Step 600000 MHz Mar
-45.0											A Color	i	Freq Offse
65.0													0 H: Scale Type
Center 84 #Res BW		Hz			≠vbw	620 kHz			Sweep	Span 1 1.000 ms (	6.00 MHz 1001 pts)	Log	<u>Lir</u>
MSG									STATU				

Plot 7-667. Upper Band Edge Plot (n5 - 20MHz CP-OFDM-QPSK - Full RB Configuration)

FCC ID: A3LSMG986U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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NR Band n71



Plot 7-668. Lower Band Edge Plot (n71 - 5MHz CP-OFDM-QPSK - Full RB Configuration)



Plot 7-669. Upper Band Edge Plot (n71 - 5MHz CP-OFDM-QPSK - Full RB Configuration)

FCC ID: A3LSMG986U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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	ectrum Analyzer -										
LXU RL	RF 5	OΩ AC	CORREC		NSE:INT	#Avg Typ	e: RMS	TRAC	MNov 19, 2019	F	equency
			PNO: Wide 🔸 IFGain:Low	Atten: 36				DE			
10 dB/div Log	Ref 25.0	0 dBm					M	kr1 663.0 -27.6	00 MHz 88 dBm		Auto Tune
											Center Fre
15.0										663	3.000000 MH
5.00					$\int$		~~~~~			0.54	Start Fre
-5.00									DL1 -13.00 dBm	655	9.000000 MH
-15.0											Stop Fre 2.000000 MH
-25.0					1					661	.000000 MH
-35.0	~~~~~	~~~~									CF Ste 800.000 k⊢
45.0										<u>Auto</u>	Ma
55.0											Freq Offs
65.0											0 H
											Scale Typ
	63.000 MH: 100 kHz	Z	#VBW	300 kHz			Sweep	Span 8 1.000 ms (		Log	Li
ASG							STATU				

Plot 7-670. Lower Band Edge Plot (n71 - 10MHz CP-OFDM-QPSK - Full RB Configuration)



Plot 7-671. Upper Band Edge Plot (n71 - 10MHz CP-OFDM-QPSK - Full RB Configuration)

FCC ID: A3LSMG986U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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	pectrum Analyzer -									
X/RL	RF 50	Ω AC	CORREC PNO: Wide ↔			#Avg Typ	e:RMS	TRAC	E 1 2 3 4 5 6 E A WWWW T A N N N N N	Frequency
10 dB/div Log	Ref 25.00	) dBm	IFGain:Low	Atten: 36			M	kr1 663.0		Auto Tun
15.0										Center Fre 663.000000 M⊦
5.00									DL1 -13.00 dBm	Start Fre 657.000000 M⊦
25.0			~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	June	) <sup>1</sup>					Stop Fre 669.000000 MH
35.0 45.0	Mar	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~								CF Ste 1.200000 MH <u>Auto</u> Ma
55.0										Freq Offs 0 H
	63.000 MHz							Span 1	2.00 191112	Scale Typ
	/ 150 kHz		#VBW	470 kHz			Sweep	1.000 ms (	1001 pts)	

Plot 7-672. Lower Band Edge Plot (n71 - 15MHz CP-OFDM-QPSK - Full RB Configuration)



Plot 7-673. Upper Band Edge Plot (n71 - 15MHz CP-OFDM-QPSK - Full RB Configuration)

FCC ID: A3LSMG986U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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	Spectrum Analyze	er - Swept	: SA									_	- đ 론
X/ RL	RF	50 Ω		CORREC PNO: Fa	st 🔸	Trig: Fre		#Avg Typ	e: RMS	TRA	PM Nov 19, 2019 ACE 1 2 3 4 5 6 YPE A WWWWW DET A N N N N N	Frec	uency
I0 dB/div	Ref 25.	00 dE		IFGain:L	ow	Atten: 3	i6 dB		M		000 MHz 026 dBm	A	uto Tun
15.0													nter Fre 00000 M⊦
5.00								and the Associated States of States					Start Fre
25.0					www	ᡔᢞᢦᡐᡗ᠕᠋᠕᠆ᡗ	<b>↓</b> <sup>1</sup>				DL1 -13.00 dBm		<b>Stop Fre</b> 00000 MH
45.0		parma a	~~~									1.6 <u>Auto</u>	CF Ste 00000 MI Ma
55.0	and a second											Fr	req Offs 0 H
	663.000 MI									Span	16.00 MHz	So Log	cale Typ L
Res Bl	V 200 kHz			#	VBW	620 kH	Z		Sweep		(1001 pts)		

Plot 7-674. Lower Band Edge Plot (n71 - 20MHz CP-OFDM-QPSK - Full RB Configuration)



Plot 7-675. Upper Band Edge Plot (n71- 20MHz CP-OFDM-QPSK - Full RB Configuration)

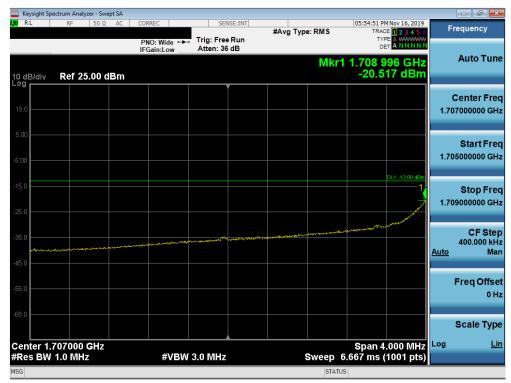
FCC ID: A3LSMG986U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dage 422 of 405
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#### NR Band n66



Plot 7-676. Lower Band Edge Plot (Band n66 - 5.0MHz CP-OFDM- CP-OFDM-QPSK - Full RB Configuration)



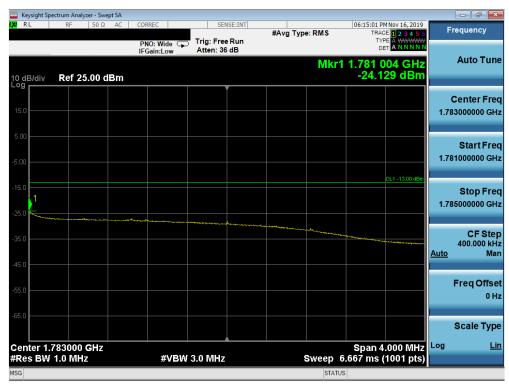
Plot 7-677. Lower Extended Band Edge Plot (Band n66 - 5.0MHz CP-OFDM-QPSK - Full RB Configuration)

FCC ID: A3LSMG986U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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	ectrum Analyzer - Sw									
LXVI RL	RF 50 Ω	AC (	CORREC	SE	NSE:INT	#Avg Typ	e: RMS		MNov 16, 2019	Frequency
			PNO: Wide IFGain:Low	Trig: Fre Atten: 3				TY D		Auto Tune
10 dB/div Log	Ref 25.00 c	iBm					Mk	r1 1.780 -36.5	00 GHz 61 dBm	Auto Tulle
					Ĭ					Center Fred
15.0										1.780000000 GHz
5.00	et man and	howard	Mary Malloger	m						Start Fred
-5.00										1.775000000 GHz
-15.0									DL1 -13.00 dBm	
-13.0				L L						Stop Fred 1.785000000 GHz
-25.0					4					
-35.0					Les Andress .					CF Step 1.000000 MHz
-45.0						Mur month	war	manuan		<u>Auto</u> Man
-55.0									whenham	Freq Offset
-33:8										0 Hz
-65.0										Scale Type
Center 1.	780000 GHz							Span 1	0.00 MHz	Log <u>Lin</u>
#Res BW			#VB	W 220 kHz			Sweep	16.67 ms	(1001 pts)	
MSG							STAT	US		

Plot 7-678. Upper Band Edge Plot (Band n66 - 5.0MHz CP-OFDM-QPSK - Full RB Configuration)



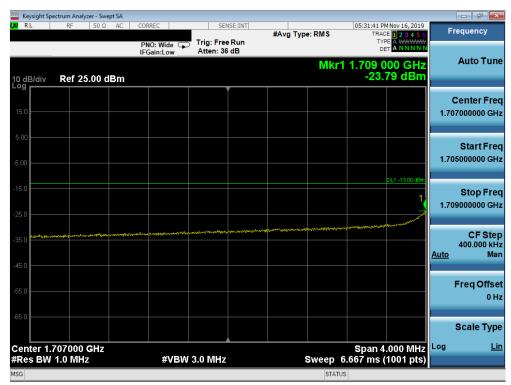
Plot 7-679. Upper Extended Band Edge Plot (Band n66 - 5.0MHz CP-OFDM-QPSK - Full RB Configuration)

FCC ID: A3LSMG986U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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	ectrum Analyzer - Swep									_	
L <mark>XI</mark> RL	RF 50 Ω	AC COF	RREC	SEN	ISE:INT	#Avg Typ	e: RMS		Nov 16, 2019	F	requency
10 dB/div	Ref 25.00 dB	IFO	Ю: Wide ⊂ Gain:Low	Trig: Free Atten: 36		Avg Hold		TYF			Auto Tune
15.0											Center Freq 0000000 GHz
-5.00									DL1 -13.00 dBm	1.70	Start Freq 6000000 GHz
-15.0									UL1 -13,00 dBm	1.71	Stop Freq 4000000 GHz
-35.0	Strand Concerning	n jure og stad og som			<b>)</b>					<u>Auto</u>	CF Step 800.000 kHz Man
-55.0											Freq Offset 0 Hz
-65.0	710000 GHz							Enap 9	.000 MHz		Scale Type <u>Lin</u>
#Res BW			#VBW	430 kHz	5		Sweep	span 8 13.33 ms (	1001 pt <u>s)</u>		200
MSG							STAT				

Plot 7-680. Lower Band Edge Plot (Band n66 - 10.0MHz CP-OFDM-QPSK - Full RB Configuration)



Plot 7-681. Lower Extended Band Edge Plot (Band n66 - 10.0MHz CP-OFDM-QPSK - Full RB Configuration)

FCC ID: A3LSMG986U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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	ectrum Analyzer - Swep										i x
LXI RL	RF 50 Ω	AC COR	REC	SEN	ISE:INT	#Avg Typ	e: RMS	TRAC	MNov 16, 2019 E 1 2 3 4 5 6	Frequen	су
10 dB/div	Ref 25.00 d	IFG	O: Wide ↔ ain:Low	, Trig: Free Atten: 36			Mkr	TY		Auto	Tune
15.0										Center 1.78000000	
5.00	,	and the second	and the second	haven -						Star 1.77600000	t Freq 00 GHz
-15.0									DL1 -13.00 dBm	Stop 1.78400000	o Freq 00 GHz
-35.0				and the second s	og-~/*96.846,745.8	1		******	ang na sa		= Step 00 kHz Man
-55.0										Freq	Offset 0 Hz
-65.0	780000 GHz							Snap 8	.000 MHz	Scale Log	e Type <u>Lin</u>
#Res BW			#VBW	430 kHz			Sweep	13.33 ms (	1001 pts)	-	
MSG							STAT				

Plot 7-682. Upper Band Edge Plot (Band n66 - 10.0MHz CP-OFDM-QPSK - Full RB Configuration)



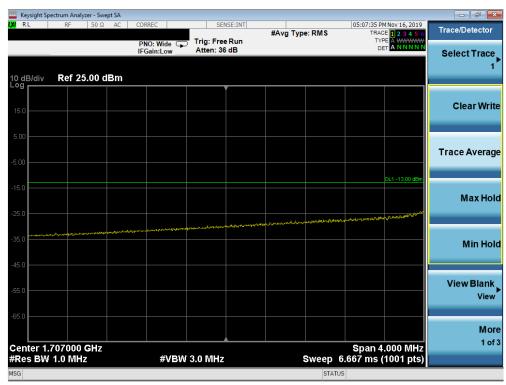
Plot 7-683. Upper Extended Band Edge Plot (Band n66 - 10.0MHz CP-OFDM-QPSK - Full RB Configuration)

FCC ID: A3LSMG986U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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	ectrum Analyzer - Swe										- 0 ×
L <mark>XI</mark> RL	RF 50 Ω	AC CO	RREC	SEI	ISE:INT	#Avg Typ	e: RMS		M Nov 16, 2019	F	requency
			NO: Wide ↔ Gain:Low	Trig: Free Atten: 36				TY D			A
10 dB/div Log	Ref 25.00 c	iBm					Mkı	1 1.710 ( -32.2	000 GHz 20 dBm		Auto Tune
										(	Center Freq
15.0										1.71	0000000 GHz
5.00					Imm	- man - mar	www.		·····		Start Freq
-5.00										1.70	4000000 GHz
45.0									DL1 -13.00 dBm		_
-15.0										1.71	Stop Freq 6000000 GHz
-25.0					1						
-35.0			mann	man and a second	<u>^</u>						CF Step
-45.0	man									<u>Auto</u>	Man
											Freq Offset
-55.0											0 Hz
-65.0											Scale Type
											<u>Lin</u>
Center 1. #Res BW	710000 GHz 180 kHz		#VBW	620 kHz			Sweep	Span 1 1.000 ms	2.00 MHz (1001 pts)	Log	<u></u>
MSG							STAT		(100 pt0)		

Plot 7-684. Lower Band Edge Plot (Band n66 - 15.0MHz CP-OFDM-QPSK - Full RB Configuration)



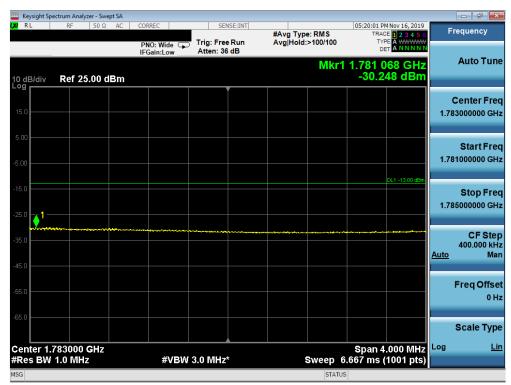
Plot 7-685. Lower Extended Band Edge Plot (Band n66 - 15.0MHz CP-OFDM-QPSK - Full RB Configuration)

FCC ID: A3LSMG986U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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	ctrum Analyzer - Swept S										×
LXVI RL	RF 50 Ω	AC CORRE	C		ISE:INT	#Avg Typ	e: RMS		M Nov 16, 2019	Frequenc	y
10 dB/div	Ref 25.00 dB	IFGai	:Wide 😱 n:Low	Trig: Free Atten: 36			Mkr	□ 1 1.780 0	084 GHz 61 dBm	Auto 1	Гune
15.0										Center 1.78000000	
5.00			San							Start 1.774000000	
-15.0									DL1 -13.00 dBm	Stop 1.786000000	
-35.0				Low	1	Jun Marine	×~~~	mann	1	CF 1.200000 <u>Auto</u>	Step MHz Man
-55.0										Freq O	offset 0 Hz
-65.0								0		Scale <sup>-</sup>	Type <u>Lin</u>
#Res BW	780000 GHz 180 kHz		#VBW	620 kHz			Sweep	Span 1 1.000 ms	2.00 MHz (1001 pts)	9	<u> 1</u>
MSG							STAT				

Plot 7-686. Upper Band Edge Plot (Band n66 - 15.0MHz CP-OFDM-QPSK - Full RB Configuration)



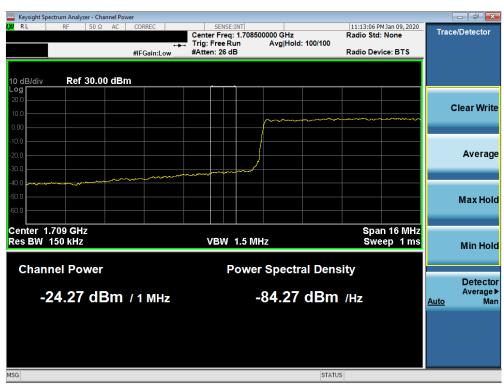
Plot 7-687. Upper Extended Band Edge Plot (Band n66 - 15.0MHz CP-OFDM-QPSK - Full RB Configuration)

FCC ID: A3LSMG986U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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	ectrum Analyzer - Swep									
Contor F	RF   50 Ω req 1.710000		SE	NSE:INT	#Avg Typ	e: RMS		Nov 19, 2019	F	requency
Center F		PNO: Fast	Trig: Fre		Avg Hold		TYP			
		IFGain:Low	Atten: 36	ав		Miler				Auto Tune
	Ref 25.00 dE	2 100				IVIKE	1.710 0	95 dBm		
10 dB/div	Rei 25.00 di	510		•						
										Center Freq
15.0									1.71	0000000 GHz
								and the second		
5.00				- marine	num m					Start Freq
									1 70	2000000 GHz
-5.00									1.1.0	
-15.0								DL1 -13.00 dBm		
-15.0				1						Stop Freq
-25.0				<u>,</u>					1.71	8000000 GHz
			www.							
-35.0	Sman Marcan									CF Step
									Auto	1.600000 MHz Man
-45.0										
-55.0										Freq Offset 0 Hz
										0 112
-65.0										
										Scale Type
Center 1.	710000 GHz			A			Span 1	6.00 MHz	Log	<u>Lin</u>
#Res BW		#VE	W 820 kHz	*		Sweep 1	1.000 ms (	1001 pts)		
MSG						STATU	s			

Plot 7-688. Lower Band Edge Plot (Band n66 - 20.0MHz CP-OFDM-QPSK - Full RB Configuration)



Plot 7-689. Lower Extended Band Edge Plot (Band n66 - 20.0MHz CP-OFDM-QPSK - Full RB Configuration)

FCC ID: A3LSMG986U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager	
Test Report S/N:         Test Dates:           1M1910220166-03.A3L         10/11 - 01/09/2020		EUT Type:		Dama 110 of 105	
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	pectrum Analyzer										×
L <mark>XI</mark> RL	RF	50 Ω AC	CORREC	SE	NSE:INT	#Avg Typ	e: RMS	TRAC	MNov 19, 2019	Frequency	,
	_		PNO: Fast ↔ IFGain:Low	, Trig: Fre Atten: 36				DE		Auto T	une
10 dB/div Log	Ref 25.0	00 dBm					MKM	1.780 0	36 dBm		
					Ĭ					Center F	
15.0										1.780000000	GHz
5.00	when the her and the start of t	Mar - Andrew Contractor	- hours	m						Start F	req
-5.00				$\left  \right\rangle$						1.772000000	GHz
-15.0					4				DL1 -13.00 dBm	Stop F	irea
-25.0				X	1					1.788000000	
-20.0							man	her war	hanna	CF S	tor
-35.0										1.600000	
-45.0											
-55.0										Freq Off	fsei 0 Hz
-65.0											
										Scale T	уре
	.780000 G / 240 kHz	Hz	#\/B\A	/ 820 kHz			Sween		6.00 MHz	Log	Lin
MSG	240 KH2		#000	1 020 KHZ			SWEEP		roor pts)		

Plot 7-690. Upper Band Edge Plot (Band n66 - 20.0MHz CP-OFDM-QPSK - Full RB Configuration)



Plot 7-691. Upper Extended Band Edge Plot (Band n66 - 20.0MHz CP-OFDM-QPSK - Full RB Configuration)

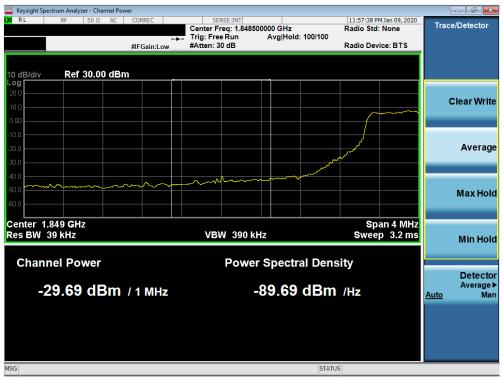
FCC ID: A3LSMG986U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager					
Test Report S/N:	Test Dates:	EUT Type:		Daga 441 of 405					
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## NR Band n2

Keysight Spectrum Analyze							
XV RL RF	50 Ω AC	CORREC	Trig: Free Run	#Avg Type	RMS TRAC	M Nov 19, 2019 DE <b>1 2 3 4 5 6</b> PE A WWWWW ET A N N N N N	Frequency
10 dB/div Ref 25.	00 dBm	IFGain:Low	Atten: 36 dB		Mkr1 1.849 9		Auto Tur
15.0							Center Fre 1.85000000 GF
5.00						DL1 -13.00 dBm	<b>Start Fr</b> 1.848000000 Gi
25.0			لىر1				<b>Stop Fr</b> 1.852000000 G
15.0	~~~~		~~~~~~				CF Sto 400.000 k Auto M
5.0							Freq Offs 0
55.0							Scale Ty
Center 1.850000 G Res BW 62 kHz	Hz	#VBW	220 kHz	s	Span 4 weep 1.333 ms (		_og <u>L</u>

Plot 7-692. Lower Band Edge Plot (Band n2 - 5.0MHz CP-OFDM-QPSK - Full RB Configuration)



Plot 7-693. Lower Extended Band Edge Plot (Band n2 - 5.0MHz CP-OFDM-QPSK - Full RB Configuration)

FCC ID: A3LSMG986U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager								
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Plot 7-694. Upper Band Edge Plot (Band n2 - 5.0MHz CP-OFDM-QPSK - Full RB Configuration)



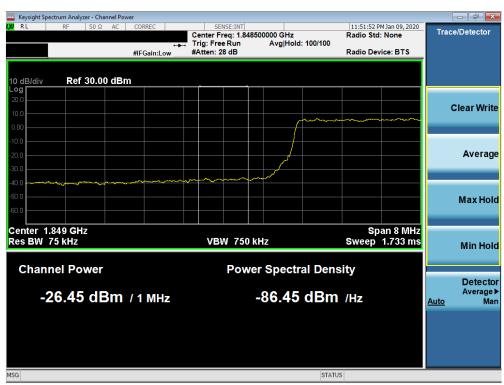
Plot 7-695. Upper Extended Band Edge Plot (Band n2 - 5.0MHz CP-OFDM-QPSK - Full RB Configuration)

FCC ID: A3LSMG986U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager						
Test Report S/N:	Test Dates:	EUT Type:		Daga 442 of 405						
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	pectrum Analyzer										
X/RL	RF	50Ω AC	CORREC	SEN	SE:INT	#Avg Typ	e: RMS		Nov 19, 2019	F	requency
			PNO: Wide 🕞	Trig: Free Atten: 36				TYP			
			IFGain:Low	Atten: 36	ub		Mkr	1.850 0			Auto Tune
10 dB/div	Ref 25.0	)0 dBm					WINI	-32.	68 dBm		
					·						
											Center Fred
15.0										1.85	50000000 GHz
E 00											
5.00					~		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		Start Fred
-5.00					<u> </u>					1.84	16000000 GHz
0.00											
-15.0									DL1 -13.00 dBm		Stop Eron
										1.95	Stop Free 4000000 GHz
-25.0										1.00	400000 GHZ
					1						05.04
-35.0			mmm.	r www							CF Step 800.000 kHz
~~~~	m	······································								<u>Auto</u>	Mar
-45.0											
											Freq Offset
-55.0											0 Hz
-65.0											
											Scale Type
	.850000 G	Hz	#\/D\A				Buyoon	Span 8	.000 MHz	Log	Lin
	120 kHz		#VBW	430 kHz				1.000 ms (	tout pts)		
MSG							STATU	S			

Plot 7-696. Lower Band Edge Plot (Band n2 - 10.0MHz CP-OFDM-QPSK - Full RB Configuration)



Plot 7-697. Lower Extended Band Edge Plot (Band n2 - 10.0MHz CP-OFDM-QPSK - Full RB Configuration)

FCC ID: A3LSMG986U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager						
Test Report S/N:	Test Dates:	EUT Type:		Dage 444 of 405						
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	pectrum Analy												
X/RL	RF	50 Ω	AC	CORREC		SE	NSE:INT	#Avg Ty	pe: RMS	TRAC	MNov 19, 2019	F	requency
				PNO: Wi IFGain:L	ide 🖵	Trig: Fre Atten: 3				TYI	PE A WWWWW A N N N N N		
				IF Galli:L	.0w	Attent	0 UD		Mkr	1 1.910 (	00 GHz		Auto Tune
10 dB/div	Ref 2	5.00 dB	3m							-31.	02 dBm		
- <sup>og</sup>							Ĭ						o
15.0													Center Free 10000000 GH
												1.9	1000000 GH.
5.00	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	~~~~	~~~~	~~~~	~~~~	×-							
													Start Free
-5.00						$\rightarrow$						1.90	06000000 GH:
											DL1 -13.00 dBm		
-15.0													Stop Free
-25.0												1.91	4000000 GH
23.0						M	<b>♦</b> 1						
-35.0								~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~				CF Step 800.000 kH
										- m	- market	Auto	Mar
45.0													
													Freq Offse
-55.0													он:
.65.0													
													Scale Type
												Log	Lir
	.910000 / 120 kH			#	žVRW	430 kHz			Sween	Span 8 1.000 ms (	.000 MHz (1001 nts)	LUg	
ISG	120 NH			"					Sweep		roor pts)		
									UIAI				

Plot 7-698. Upper Band Edge Plot (Band n2 - 10.0MHz CP-OFDM-QPSK - Full RB Configuration)



Plot 7-699. Upper Extended Band Edge Plot (Band n2 - 10.0MHz CP-OFDM-QPSK - Full RB Configuration)

FCC ID: A3LSMG986U		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager							
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	pectrum Analyz		t SA										
🗶 RL	RF	50 Ω	AC	CORREC		SEI	NSE:INT	#Avg Typ	e: RMS	TRAC	MNov 19, 2019	F	requency
				PNO: W IFGain:	/ide 🖵 Low	Trig: Free Atten: 36				TYI DI			Auto Tun
10 dB/div Log	Ref 25	.00 dE	3m						Mkr	1 1.849 9 -30.	988 GHz 25 dBm		Auto Tun
													Center Fre
15.0												1.8	50000000 GH
5.00									man	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	he		Start Fre
5.00												1.84	4000000 GH
15.0											DL1 -13.00 dBm		Stop Fre
-25.0												1.8	56000000 GH
25.0						a monto	)						CF Ste
35.0	- marine			www.	ᠵ᠕ᡔᠬ	1 mart						Auto	CF Ste 1.200000 MF Ma
45.0													
55.0													Freq Offs
65.0													
													Scale Typ
	.850000 ( / 180 kHz				#\/B\\/	620 kHz			Sween	Span 1 1.000 ms (	2.00 MHz	Log	Li
SG					#V D W	020 KH2			Sweep		iour pis)		

Plot 7-700. Lower Band Edge Plot (Band n2 - 15.0MHz CP-OFDM-QPSK - Full RB Configuration)



Plot 7-701. Lower Extended Band Edge Plot (Band n2 - 15.0MHz CP-OFDM-QPSK - Full RB Configuration)

FCC ID: A3LSMG986U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager						
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	pectrum Analy		A									- • ×
KA RL	RF	50 Ω A	AC COR	REC		NSE:INT	#Avg Typ	e: RMS	TRAC	MNov 19, 2019	Fre	equency
	_			IO: Wide 🕞 Gain:Low	Trig: Free Atten: 36			Mkr				Auto Tune
10 dB/div Log	Ref 25	.00 dBr	m						-27.	87 dBm		
											С	enter Fred
15.0											1.910	000000 GHz
5.00												
~~~~	wahar and	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		have may	m						1 90/	Start Fred
-5.00											1.904	000000 GH2
-15.0										DL1 -13.00 dBm		Stop Free
-25.0						1					1.916	000000 GH
-20.0						hima .						
-35.0						*~*~~~	wh when	m		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	1.	CF Step 200000 MH
-45.0											<u>Auto</u>	Mar
											F	req Offse
-55.0												0 Hz
-65.0												
											\$	Scale Type
Center 1.				40 (D14					Span 1	2.00 191112	Log	Lin
#Res BW	180 KHz			#VBW	620 kHz			Sweep	1.000 ms (	1001 pts)		
100								STATE				

Plot 7-702. Upper Band Edge Plot (Band n2 - 15.0MHz CP-OFDM-QPSK - Full RB Configuration)



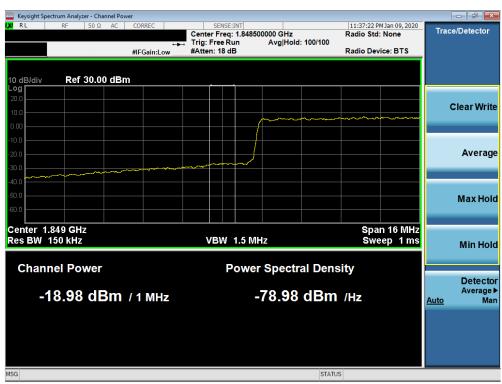
Plot 7-703. Upper Extended Band Edge Plot (Band n2 - 15.0MHz CP-OFDM-QPSK - Full RB Configuration)

FCC ID: A3LSMG986U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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	pectrum Analyze										
X/RL	RF	50 Ω AC	CORREC		NSE:INT	#Avg Typ	e: RMS	TRAC	4Nov 19, 2019 E 1 2 3 4 5 6	F	requency
10 dB/div	Ref 25.	00 dBm	PNO: Fast	Trig: Free Atten: 36			Mkr	1 1.849 9	84 GHz 80 dBm		Auto Tune
- <b>og</b> 15.0											Center Fre 0000000 GH
-5.00						W. m. M. Mar	, or a frank way	mar and a second	1900-1010-1907-1900-10	1.84	<b>Start Fre</b> 2000000 GH
25.0					1				DL1 -13.00 dBm	1.85	<b>Stop Fre</b> 8000000 G⊢
45.0	water	m	water and a control	whenhed						<u>Auto</u>	CF Ste 1.600000 MH Ma
55.0											Freq Offs 0 I
65.0 Center 1.	.850000 G	Hz						Span 1	6.00 MHz	Log	Scale Typ
Res BW	240 kHz		#VB	W 820 kHz			Sweep	1.000 ms (	1001 pts)		
SG							STATU	JS			

Plot 7-704. Lower Band Edge Plot (Band n2 - 20.0MHz CP-OFDM-QPSK - Full RB Configuration)



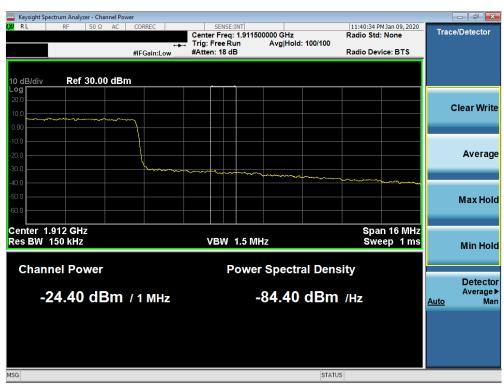
Plot 7-705. Lower Extended Band Edge Plot (Band n2 - 20.0MHz CP-OFDM-QPSK - Full RB Configuration)

FCC ID: A3LSMG986U		MEASUREMENT REPORT (CERTIFICATION)	SUNG	Approved by: Quality Manager
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Plot 7-706. Upper Band Edge Plot (Band n2 - 20.0MHz CP-OFDM-QPSK - Full RB Configuration)



Plot 7-707. Upper Extended Band Edge Plot (Band n2 - 20.0MHz CP-OFDM-QPSK - Full RB Configuration)

FCC ID: A3LSMG986U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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		nalyzer - Spur										
RL	RF	50 Ω	AC	CORREC		Cente	SENSE:INT r Freq: 2.50600000	GHz	09:03:12 Pr Radio Std:	4 Dec 04, 2019	Frequenc	y
					0	Trig: F	ree Run					
ASS				IFGain:L	.ow	#Atter	1: 26 dB		Radio Dev	ice: BTS		
0 dB/div	R	ef 40.00	) dBm									
.og												
30.0											Center	Fre
20.0											2.50600000	) GH
10.0												
0.00												
10.0												
20.0												
30.0							<b>'</b>					
40.0												
50.0		-										
start 2.4	175 GH	z							Stop 2	.517 GHz	CF	Ste
											5.000000	) M⊢
Spur   R	ange   S	tart Freq	St	op Freq	RB	N	Frequency	Amplitude	△ Limit		Auto	Ма
1	2.	4750 GHz	z 2.4	905 GHz	1.00	0 MHz	2.490345000 GHz	-35.08 dBm	-10.08 dB			
2 2	2.	4905 GHz	z 2.4	950 GHz			2.494932500 GHz		-15.95 dB		Freq O	ffs
3 3		4950 GHz		960 GHz			2.495885000 GHz		-16.19 dB		ineq o	0 H
4	2.	4960 GHz	z 2.5	170 GHz	390.	0 kHz	2.506535000 GHz	3.954 dBm	-21.05 dB			01
G									ATUS			_

Plot 7-708. Lower ACP Plot at 2496 MHz (n41 - 20MHz CP-OFDM-QPSK - Full RB Configuration)

ASS		F 50 Ω		Gain:Lov	Trig:	SENSE:INT Freq: 2.680 Free Run n: 26 dB	000000	GHz	09:08:37 F Radio Std Radio Dev		Frequency
0 dB/	div	Ref 40.00	dBm								
30.0											Center Fre 2.680000000 GH
10.0			and a second	And a	***	}					
10.0 - 20.0 - 30.0 -	the second states										
Ľ	2.665 0	Hz							Stop 2	2.715 GHz	CF Ste 5.000000 MH
	Range	Start Freq	Stop	Freg	RBW	Frequency	/	Amplitude	∆ Limit		<u>Auto</u> Ma
Spur	· ·	2.6650 GHz			390.0 kHz	2.6793750	·		-18.60 dE	3	
Spur	1	0.0000.011-	2.691	0 GHz	390.0 kHz	2.69010666	67 GHz	-24.11 dBm	-14.11 dE	3	Freq Offs
	1 2	2.6900 GHz			1.000 MHz	2.69156666	67 GHz	-21.09 dBm	-11.09 dE	3	
	1 2 3	2.6900 GHz 2.6910 GHz	2.695	U GHZ				00.54 10	-9.542 dE	)	0 H
Spur	_					2.69698440	)0 GHz	-22.54 dBm	-9.542 dt	<b>)</b>	
	3	2.6910 GHz	2.709	9 GHz	1.000 MHz			-22.54 dBm -33.85 dBm	-9.542 dE		
	3 4	2.6910 GHz 2.6950 GHz	2.709	9 GHz	1.000 MHz						

Plot 7-709. Upper ACP Plot (n41 - 20MHz CP-OFDM-QPSK - Full RB Configuration)

FCC ID: A3LSMG986U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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	ight Spectrun																	
L <mark>XI</mark> RL	F	RF 50	)Ω A(	C CC	ORREC			SENSE r Freq Free R	: 2.5060	00000	GHz			09:34:01 F adio Std		2019	Ra	nge Table
PASS	5			IF	Gain:L	ow _		n: 26 d					R	adio Dev	ice: BT	s		Rang
																	_	
10 dB/	div	Ref 40	b 00.	Bm													<u>On</u>	C
Log																		
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20.0																	2.49	6000000 GH
10.0																		
0.00						1000	·····			· · · · · · · · · · · · · · · · · · ·	-peglissing							
						Į									$  \rangle$			Stop Fre
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-30.0				and the second second											· · · ·			D DI
-40.0	_																	Res BI 820.00 kH
-50.0																	Auto	020.00 KF
Start	2.475 0	GHz										•		Stop 2	2.537 (	GHz		Video B
																		2.4000 MH
Spur	Range	Start F	rea	Stop	Frea		RBW	Fred	uency		Ampli	itude	/	Limit			Auto	Ma
1	1	2.4750		2.490			.000 MHz			GHz				4.744 dE	3			
2	2	2.4905		2.495			.000 MHz							12.11 dE				iltor Turne
3	3	2.4950	GHz	2.496	0 GHz	8	20.0 kHz	2.495	998333	GHz	-24.79	dBm	-	11.79 dE	3		ſ	ilter Type
4	4	2.4960	GHz	2.537	0 GHz	8	20.0 kHz	2.515	680000	GHz	7.126	dBm	-	17.87 dE	3			Flattop
																		Mo
																		1 of
MSG			_		_	_		_		_		STA	TUS					
						_										_		

Plot 7-710. Lower ACP Plot at 2496 MHz (n41 - 40MHz CP-OFDM-QPSK - Full RB Configuration)



Plot 7-711. Upper ACP Plot (n41 - 40MHz CP-OFDM-QPSK - Full RB Configuration)

FCC ID: A3LSMG986U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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X/RL	R	F 50 Ω	rious Emission AC CO	ORREC		SENSE:INT r Freq: 2.506000 Free Run	0000 GHz		09:43:14 P Radio Std	MDec 04, 2019 : <b>None</b>	Frequency
PASS	<b>S</b>		IF	FGain:Lo	-	1: 26 dB			Radio Dev	vice: BTS	
10 dB/c	div	Ref 40.00	) dBm								
Log 30.0											Center Fre
20.0											2.506000000 GH
											2.506000000 GH
10.0					and the street of the second			langer an William Streemen		-	
0.00				1							
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-30.0				1						hannes	
-40.0											
40.0											
-50.0											
	2.475 0	Hz							Stop 2	.547 GHz	CF Ste
Start										.547 GHz	CF Ste 5.00000 MH
	Range	Start Freq		Freq	RBW	Frequency	Amplitu		∆ Limit		
Start Spur	Range	Start Freq 2.4750 GH	z 2.490	5 GHz	1.000 MHz	2.490345000	GHz -33.52 dB	Bm	∆ Limit -8.523 dE	3	5.000000 MH
Start Spur 1 2	Range	<b>Start Freq</b> 2.4750 GH 2.4905 GH	z 2.490 z 2.495	05 GHz 50 GHz	1.000 MHz 1.000 MHz	2.490345000 ( 2.494872500 (	GHz <mark>-33.52 de</mark> GHz -30.08 de	Bm Bm	∆ Limit -8.523 dE -17.08 dE	3 3	5.000000 MH <u>Auto</u> Ma
Start Spur 1 2 3	Range 1 2 3	<b>Start Freq</b> 2.4750 GH; 2.4905 GH; 2.4950 GH;	z 2.490 z 2.495 z 2.496	05 GHz 50 GHz 50 GHz	1.000 MHz 1.000 MHz 1.000 MHz	2.490345000 ( 2.494872500 ( 2.496000000 (	GHz -33.52 de GHz -30.08 de GHz -28.58 de	<mark>Bm</mark> Bm Bm	Δ Limit -8.523 dE -17.08 dE -15.58 dE	3 3 3 3	5.000000 MH
Start Spur	Range	<b>Start Freq</b> 2.4750 GH 2.4905 GH	z 2.490 z 2.495 z 2.496	05 GHz 50 GHz	1.000 MHz 1.000 MHz 1.000 MHz	2.490345000 ( 2.494872500 (	GHz -33.52 de GHz -30.08 de GHz -28.58 de	<mark>Bm</mark> Bm Bm	∆ Limit -8.523 dE -17.08 dE	3 3 3 3	5.000000 MH <u>Auto</u> Ma Freq Offs
Start Spur	Range 1 2 3	<b>Start Freq</b> 2.4750 GH; 2.4905 GH; 2.4950 GH;	z 2.490 z 2.495 z 2.496	05 GHz 50 GHz 50 GHz	1.000 MHz 1.000 MHz 1.000 MHz	2.490345000 ( 2.494872500 ( 2.496000000 (	GHz -33.52 de GHz -30.08 de GHz -28.58 de	<mark>Bm</mark> Bm Bm	Δ Limit -8.523 dE -17.08 dE -15.58 dE	3 3 3 3	5.000000 MH <u>Auto</u> Ma <b>Freq Offs</b> e
Start Spur 1 2 3	Range 1 2 3	<b>Start Freq</b> 2.4750 GH; 2.4905 GH; 2.4950 GH;	z 2.490 z 2.495 z 2.496	05 GHz 50 GHz 50 GHz	1.000 MHz 1.000 MHz 1.000 MHz	2.490345000 ( 2.494872500 ( 2.496000000 (	GHz -33.52 de GHz -30.08 de GHz -28.58 de	<mark>Bm</mark> Bm Bm	Δ Limit -8.523 dE -17.08 dE -15.58 dE	3 3 3 3	5.000000 MH <u>Auto</u> Ma <b>Freq Offs</b> e
Start Spur	Range 1 2 3	<b>Start Freq</b> 2.4750 GH; 2.4905 GH; 2.4950 GH;	z 2.490 z 2.495 z 2.496	05 GHz 50 GHz 50 GHz	1.000 MHz 1.000 MHz 1.000 MHz	2.490345000 ( 2.494872500 ( 2.496000000 (	GHz -33.52 de GHz -30.08 de GHz -28.58 de	<mark>Bm</mark> Bm Bm	Δ Limit -8.523 dE -17.08 dE -15.58 dE	3 3 3 3	5.000000 MH <u>Auto</u> Ma Freq Offso
Start	Range 1 2 3	<b>Start Freq</b> 2.4750 GH; 2.4905 GH; 2.4950 GH;	z 2.490 z 2.495 z 2.496	05 GHz 50 GHz 50 GHz	1.000 MHz 1.000 MHz 1.000 MHz	2.490345000 ( 2.494872500 ( 2.496000000 (	GHz -33.52 de GHz -30.08 de GHz -28.58 de	<mark>Bm</mark> Bm Bm	Δ Limit -8.523 dE -17.08 dE -15.58 dE	3 3 3 3	5.000000 MH <u>Auto</u> Ma Freq Offs

Plot 7-712. Lower ACP Plot at 2496 MHz (n41 - 50MHz CP-OFDM-QPSK - Full RB Configuration)



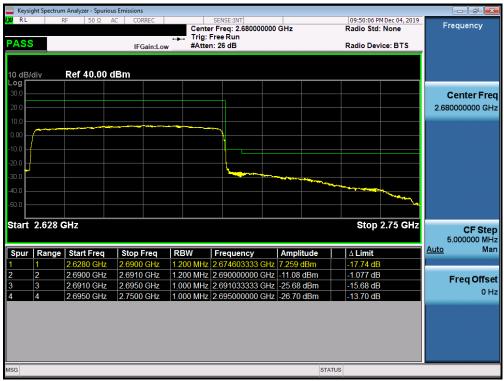
Plot 7-713. Upper ACP Plot (n41 - 50MHz CP-OFDM-QPSK - Full RB Configuration)

FCC ID: A3LSMG986U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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	ctrum Analyzer - Spurio							
RL	RF 50 Ω	AC CORREC	Cente	SENSE:INT Freq: 2.50600000	CH7	09:46:26 PM Radio Std:	Dec 04, 2019	Frequency
				Free Run	0112	Radio Stu.	None	
ASS		IFGain:Lov	w #Atte	n: 26 dB		Radio Devi	ce: BTS	
0 dB/div	Ref 40.00	dBm						
og								
0.0								Center Fr
0.0								2.506000000 G
0.0								
				······································	**************************************		water and the second	
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tart 247	75 GHz					Ston 2	558 GHz	
tart 2.47	75 GHz					Stop 2.	558 GHz	
	75 GHz	Stop Freq	RBW	Frequency	Amplitude	Stop 2.	558 GHz	5.000000 M
		Stop Freq		Frequency 2.490474167 GHz			558 GHz	CF Ste 5.000000 MI <u>Auto</u> M
1	nge   Start Freq		1.000 MHz		-33.11 dBm	∆ Limit	558 GHz	5.000000 M <u>Auto</u> M
Spur Rar	nge Start Freq 2.4750 GHz	2.4905 GHz	1.000 MHz 1.000 MHz 1.200 MHz	2.490474167 GHz	-33.11 dBm -29.57 dBm -24.59 dBm	∆ Limit -8.109 dB	558 GHz	5.000000 M

Plot 7-714. Lower ACP Plot at 2496 MHz (n41 - 60MHz CP-OFDM-QPSK - Full RB Configuration)



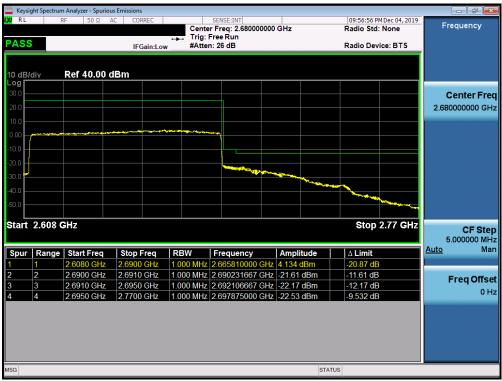
Plot 7-715. Upper ACP Plot (n41 - 60MHz CP-OFDM-QPSK - Full RB Configuration)

FCC ID: A3LSMG986U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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		n Analyzer - Spuri						
L <mark>XI</mark> RL	P	F 50 Ω	AC CORREC		SENSE:INT er Freq: 2.5060000 Free Run	00 GHz	09:59:36 PM Dec 04, 2019 Radio Std: None	Frequency
PAS	S		IFGain:Lo		en: 26 dB		Radio Device: BTS	_
10 dB. Log <b>Г</b>	/div	Ref 40.00	dBm					
30.0 20.0								Center Freq 2.506000000 GHz
10.0 - 0.00 - -10.0 -								
-20.0 -30.0								
-40.0 - -50.0 -								
Start	2.475 0	SHz					Stop 2.517 GHz	5.000000 MH
Spur	Range	Start Freq	Stop Freq	RBW	Frequency	Amplitude	∆ Limit	Auto Mar
1	1	2.4750 GHz	2.4905 GHz	1.000 MHz	2.490448333 GH	Iz -35.22 dBm	-10.22 dB	
2	2	2.4905 GHz	2.4950 GHz	1.000 MHz	2.494992500 GH	Iz -31.64 dBm	-18.64 dB	Freq Offset
3	3	2.4950 GHz	2.4960 GHz	1.000 MHz	2.495986667 GH	Iz -31.09 dBm	-18.09 dB	
4	4	2.4960 GHz	2.5170 GHz	1.000 MHz	2.513255000 GH	Iz 2.116 dBm	-22.88 dB	0 H:
MSG						STA	ITUS	

Plot 7-716. Lower ACP Plot at 2496 MHz (n41 - 80MHz CP-OFDM-QPSK - Full RB Configuration)



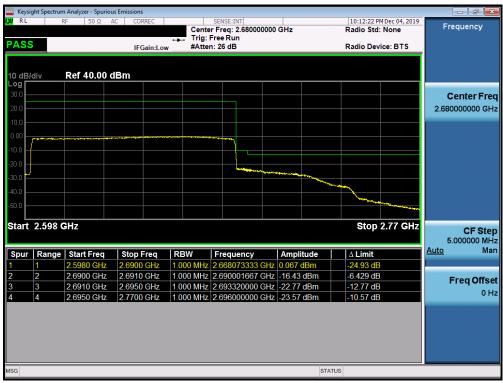
Plot 7-717. Upper ACP Plot (n41 - 80MHz CP-OFDM-QPSK - Full RB Configuration)

FCC ID: A3LSMG986U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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X/RL		F 50 Ω	rious Emission	ORREC	1	SENSE:INT			10:09:5	2 PM Dec 04, 2019	
						r Freq: 2.5060	00000 GHz	:	Radio S	itd: None	Frequency
PASS	8		IF	FGain:Lo	-	Free Run n: 26 dB			Radio D	Device: BTS	
10 dB/	(din	Ref 40.00	dBm								
	aiv	Kel 40.00	JUDIII								
30.0											Center Fre
20.0											2.506000000 GH
10.0											
0.00											
										www.weekstoweekstoweekstoweekstoweekstoweekstoweekstoweekstoweekstoweekstoweekstoweekstoweekstoweekstoweekstow	
-10.0											
-20.0			1								
-30.0											
-40.0											
	<i>,</i>										
50.0	1										
-50.0 🖊	/										
Ľ	2.475 0	Hz							Stop	2.578 GHz	
Ľ	2.475 0	Hz							Stop	) 2.578 GHz	CF Ste 5.000000 MH
Ľ		GHZ Start Freq	Stop	Freq	RBW	Frequency	An	plitude	Stop		<b>CF Stej</b> 5.00000 MH <u>Auto</u> Ma
Start				Freq 05 GHz		Frequency 2.490370833				t	5.000000 MH
Start	Range 1	Start Freq	z 2.490		1.000 MHz		3 GHz -26	96 dBm	∆ Limi	it dB	5.000000 MH <u>Auto</u> Ma
Start Spur 1 2 3	Range 1 2 3	Start Freq 2.4750 GHz	z 2.490 z 2.495	5 GHz	1.000 MHz 1.000 MHz	2.490370833	3 GHz -26 ) GHz -23	96 dBm 65 dBm	Δ Limi	it dB dB	5.000000 MH <u>Auto</u> Ma Freq Offse
Start Spur 1 2	Range	Start Freq 2.4750 GHz 2.4905 GHz	z 2.490 z 2.495 z 2.496	05 GHz 50 GHz	1.000 MHz 1.000 MHz 1.000 MHz	2.490370833 2.493440000	3 GHz -26 ) GHz -23 ) GHz -22	96 dBm 65 dBm 79 dBm	Δ Limi -1.956 -10.65	it dB dB dB	5.000000 MH <u>Auto</u> Ma Freq Offse
Start Spur 1 2 3	Range 1 2 3	<b>Start Freq</b> 2.4750 GHz 2.4905 GHz 2.4950 GHz	z 2.490 z 2.495 z 2.496	05 GHz 50 GHz 50 GHz	1.000 MHz 1.000 MHz 1.000 MHz	2.490370833 2.493440000 2.495595000	3 GHz -26 ) GHz -23 ) GHz -22	96 dBm 65 dBm 79 dBm	∆ Limi -1.956 -10.65 -9.791	it dB dB dB	5.000000 MH <u>Auto</u> Ma
Start Spur 1 2 3	Range 1 2 3	<b>Start Freq</b> 2.4750 GHz 2.4905 GHz 2.4950 GHz	z 2.490 z 2.495 z 2.496	05 GHz 50 GHz 50 GHz	1.000 MHz 1.000 MHz 1.000 MHz	2.490370833 2.493440000 2.495595000	3 GHz -26 ) GHz -23 ) GHz -22	96 dBm 65 dBm 79 dBm	∆ Limi -1.956 -10.65 -9.791	it dB dB dB	5.000000 MH <u>Auto</u> Ma Freq Offse
Start Spur 1 2 3	Range 1 2 3	<b>Start Freq</b> 2.4750 GHz 2.4905 GHz 2.4950 GHz	z 2.490 z 2.495 z 2.496	05 GHz 50 GHz 50 GHz	1.000 MHz 1.000 MHz 1.000 MHz	2.490370833 2.493440000 2.495595000	3 GHz -26 ) GHz -23 ) GHz -22	96 dBm 65 dBm 79 dBm	∆ Limi -1.956 -10.65 -9.791	it dB dB dB	5.000000 MH <u>Auto</u> Ma Freq Offse
Start Spur 1 2 3	Range 1 2 3	<b>Start Freq</b> 2.4750 GHz 2.4905 GHz 2.4950 GHz	z 2.490 z 2.495 z 2.496	05 GHz 50 GHz 50 GHz	1.000 MHz 1.000 MHz 1.000 MHz	2.490370833 2.493440000 2.495595000	3 GHz -26 ) GHz -23 ) GHz -22	96 dBm 65 dBm 79 dBm	∆ Limi -1.956 -10.65 -9.791	it dB dB dB	5.000000 MH <u>Auto</u> Ma Freq Offse
Start Spur 1 2 3	Range 1 2 3	<b>Start Freq</b> 2.4750 GHz 2.4905 GHz 2.4950 GHz	z 2.490 z 2.495 z 2.496	05 GHz 50 GHz 50 GHz	1.000 MHz 1.000 MHz 1.000 MHz	2.490370833 2.493440000 2.495595000	3 GHz -26 ) GHz -23 ) GHz -22	96 dBm 65 dBm 79 dBm	∆ Limi -1.956 -10.65 -9.791	it dB dB dB	5.000000 MH <u>Auto</u> Ma Freq Offse

Plot 7-718. Lower ACP Plot at 2496 MHz (n41 - 90MHz CP-OFDM-QPSK - Full RB Configuration)



Plot 7-719. Upper ACP Plot (n41 - 90MHz CP-OFDM-QPSK - Full RB Configuration)

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			irious Emis											
X	R	F 50 Ω	DC	CORREC				SE:INT			LIGN AUTO		PM Nov 27, 2019	Frequency
						Trig:		eq: 25.00500 Run			100/100	Radio St	a: None	
PASS				IFGain:		#Atte						Radio D	evice: BTS	
		B-6 40 0												
10 dB/d Log	vik	Ref 40.0	0 dBm											
30.0														Center Fre
20.0														25.005000000 GH
10.0							+							
0.00								Janaman		*****			*****	
-10.0														
							- 1							
-20.0							1							
-30.0							┛							
-40.0		-		and the second										
5000														
-50.0	and the second													
	2.475 G	Hz										Stop	2.517 GHz	CF Ste
Start 3			1 Sto	op Fred	1	RBW	Fre	equency		Amplit	ude	Stop		<b>CF Ste</b> 4.99900000 GH <u>Auto</u> Ma
Start 3	Range		· · ·	op Frec 905 GH				equency 89285833 (		Amplit				4.999000000 GH
Start 2	Range 1	Start Free	z 2.4		z 1	.000 MHz	2.4		GHz 🗔	34.28 0	dBm	∆ Limit	IB	4.999000000 GH <u>Auto</u> Ma
Start 2	Range 1 2	Start Fred 2.4750 GH	z 2.4 z 2.4	905 GH	z 1 z 1	.000 MHz .000 MHz	2.4 2.4	89285833 (	GHz -: GHz -:	34.28 ( 33.53 (	dBm dBm	∆ Limit	<mark>IB</mark> IB	4.999000000 GH <u>Auto</u> Ma Freq Offse
Start 2 Spur 1 2 3	Range 1 2 3	<b>Start Fred</b> 2.4750 GH 2.4905 GH	z 2.49 z 2.49 z 2.49	905 GH 950 GH	z  1  z  1  z  1	.000 MHz .000 MHz .000 MHz	2.4 2.4 2.4	89285833 ( 94100000 (	<mark>GHz</mark> -: GHz -: GHz -:	34.28 c 33.53 c 14.49 c	dBm dBm dBm	Δ Limit -9.279 c -20.53 c	<mark>iB</mark> IB IB	4.999000000 GH <u>Auto</u> Ma
Start 2 Spur 1 2 3	Range 1 2 3	<b>Start Fred</b> 2.4750 GH 2.4905 GH 2.4950 GH	z 2.49 z 2.49 z 2.49	9 <mark>05 GH</mark> 950 GH 960 GH	z  1  z  1  z  1	.000 MHz .000 MHz .000 MHz	2.4 2.4 2.4	89285833 ( 94100000 ( 96000000 (	<mark>GHz</mark> -: GHz -: GHz -:	34.28 c 33.53 c 14.49 c	dBm dBm dBm	Δ Limit -9.279 c -20.53 c -39.49 c	<mark>iB</mark> IB IB	4.999000000 GH <u>Auto</u> Ma Freq Offse

Plot 7-720. Lower ACP Plot at 2496 MHz (n41 - 100MHz CP-OFDM-QPSK - Full RB Configuration)



Plot 7-721. Upper ACP Plot (n41 - 100MHz CP-OFDM-QPSK - Full RB Configuration)

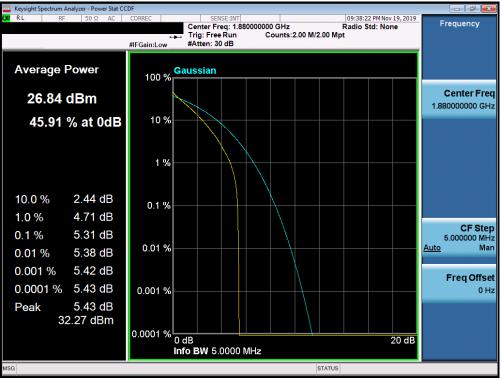
FCC ID: A3LSMG986U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager		
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## Peak-to-Average Ratio

All SCS's and Waveforms (CP-OFDM vs DFT-s OFDM) were investigated to determine the worst case configuration. All modes of operation were investigated and the worst case configuration results are reported in this section.

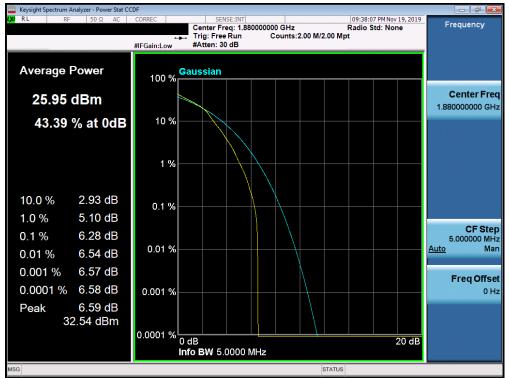
## NR Band n2



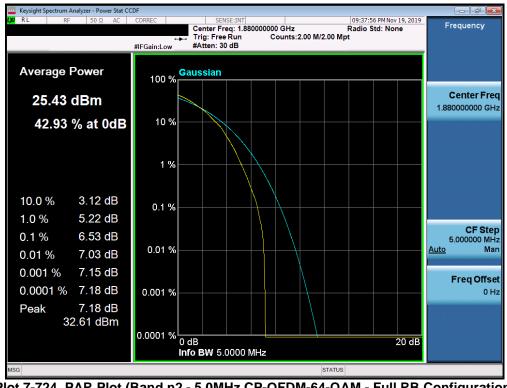
Plot 7-722. PAR Plot (Band n2 - 5.0MHz CP-OFDM-QPSK - Full RB Configuration)

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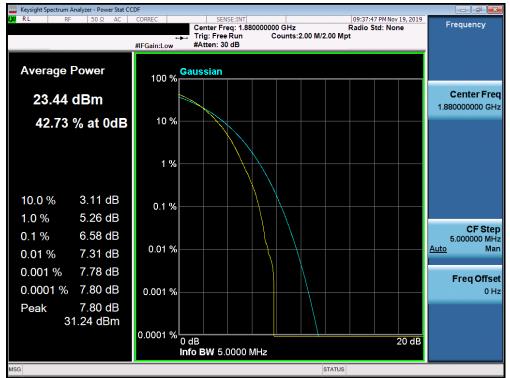
Plot 7-723. PAR Plot (Band n2 - 5.0MHz CP-OFDM-16-QAM - Full RB Configuration)



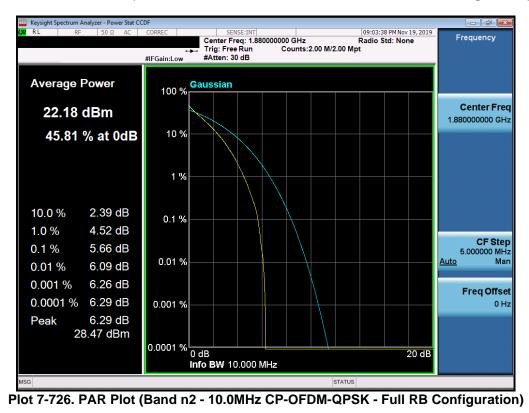
Plot 7-724. PAR Plot (Band n2 - 5.0MHz CP-OFDM-64-QAM - Full RB Configuration)

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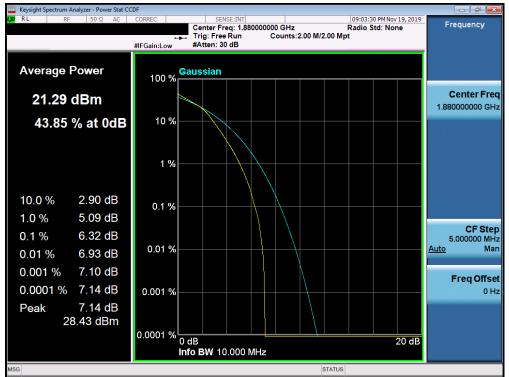


Plot 7-725. PAR Plot (Band n2 - 5.0MHz CP-OFDM- 256-QAM - Full RB Configuration)

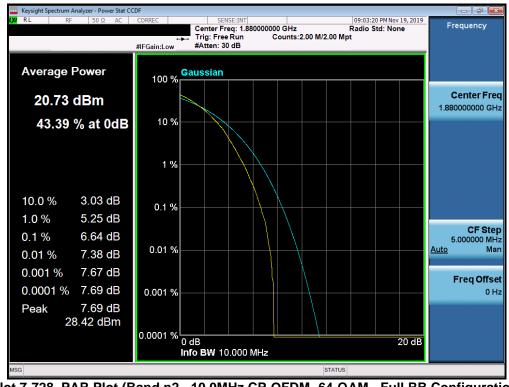


PCTEST MEASUREMENT REPORT Approved by: SAMSUNG FCC ID: A3LSMG986U (CERTIFICATION) **Quality Manager** Test Report S/N: Test Dates: EUT Type: Page 459 of 495 1M1910220166-03.A3L 10/11 - 01/09/2020 Portable Handset © 2020 PCTEST Engineering Laboratory, Inc. V 9.0 02/01/2019





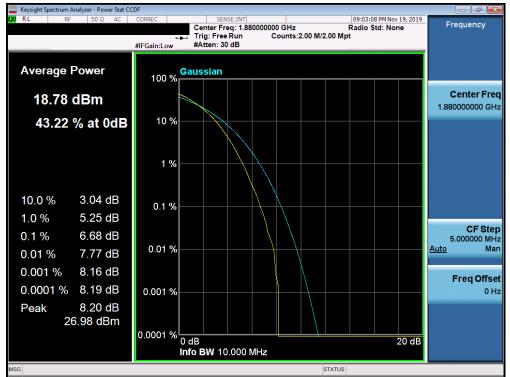
Plot 7-727. PAR Plot (Band n2 - 10.0MHz CP-OFDM-16-QAM - Full RB Configuration)



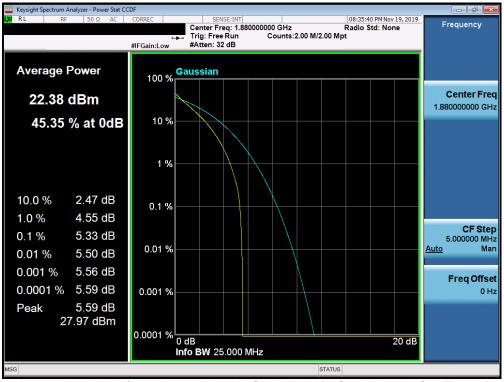
Plot 7-728. PAR Plot (Band n2 - 10.0MHz CP-OFDM- 64-QAM - Full RB Configuration)

FCC ID: A3LSMG986U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager		
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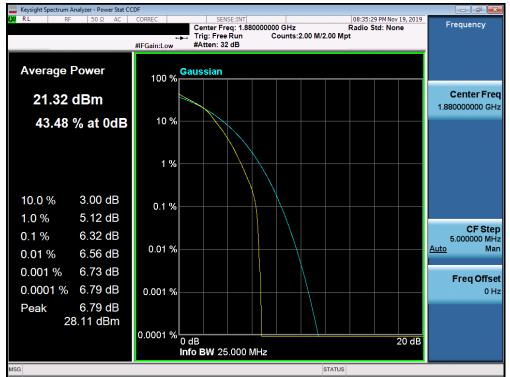
Plot 7-729. PAR Plot (Band n2 - 10.0MHz CP-OFDM - 256-QAM - Full RB Configuration)



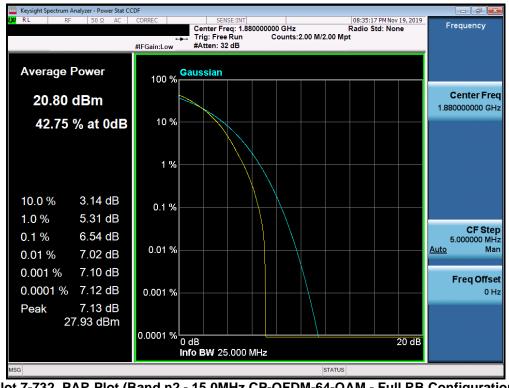
Plot 7-730. PAR Plot (Band n2 - 15.0MHz CP-OFDM-QPSK - Full RB Configuration)

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Plot 7-731. PAR Plot (Band n2 - 15.0MHz CP-OFDM -16-QAM - Full RB Configuration)



Plot 7-732. PAR Plot (Band n2 - 15.0MHz CP-OFDM-64-QAM - Full RB Configuration)

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