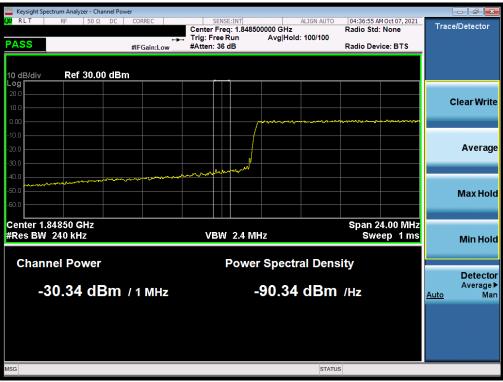


🔤 Keysight Spe	ectrum Analyzer - S	Swept SA									
LXI RLT	RF 50	Ω DC	CORREC	SEN	SE:INT	#Avg Typ	ALIGN AUTO	04:35:28 AM		Fr	equency
PASS			PNO: Wide ↔ IFGain:Low	. Trig: Free #Atten: 36		#Avg iyp		TYPE	1 2 3 4 5 6 A WWWWW A P N N N N		Auto Tune
10 dB/div	Ref 25.00	dBm					Mkr1	1.849 7 -21.9	60 GHz )3 dBm		Autorune
15.0	e 1 Pass										Center Freq 0000000 GHz
-5.00					- Arothing the	and the second	ally down and an address of the	An on the second se	www.eeeeeffigr	1.83	<b>Start Freq</b> 8000000 GHz
-15.0			- Conner Warden	minere for the second	1					1.86	Stop Freq 2000000 GHz
-35.0	montante	wvyvere								Auto	<b>CF Step</b> 2.400000 MHz Man
-55.0											Freq Offset 0 Hz
-65.0											Scale Type
Center 1. #Res BW	35000 GHz 360 kHz		#VBW	1.2 MHz			Sweep 1	Span 24 .000 ms (1	.00 MHz 1001 pts)	Log	Lin
MSG							STATUS	3			

Plot 7-179. Lower Band Edge Plot (NR Band n25 - 30MHz QPSK – Full RB)



Plot 7-180. Extended Lower Band Edge Plot (NR Band n25 - 30MHz QPSK – Full RB)

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Keysight Spectrum Analyzer - Swept SA					
X/RLT RF 50Ω DC	CORREC	SENSE:INT	ALIGN AUTO #Avg Type: RMS	04:39:01 AM Oct 07, 2021 TRACE 1 2 3 4 5 6	Frequency
PASS	PNO: Wide ↔→→ IFGain:Low	Trig: Free Run #Atten: 36 dB	wryg rype. Kino		
10 dB/div Ref 25.00 dBm			Mkr1	1.915 000 GHz -23.840 dBm	Auto Tune
15.0 Trace 1 Pass					Center Freq 1.915000000 GHz
5.00	an a				<b>Start Freq</b> 1.903000000 GHz
-15.0		1 Where Marine			<b>Stop Freq</b> 1.927000000 GHz
-35.0			M. W. M.	Wrong	CF Step 2.400000 MHz <u>Auto</u> Man
-55.0				and the second second	<b>Freq Offset</b> 0 Hz
-65.0					Scale Type
Center 1.91500 GHz #Res BW 360 kHz	#VBW	1.2 MHz	Sweep 1	Span 24.00 MHz .000 ms (1001 pts)	Log <u>Lin</u>
MSG			STATUS		

Plot 7-181. Upper Band Edge Plot (NR Band n25 - 30MHz QPSK - Full RB)



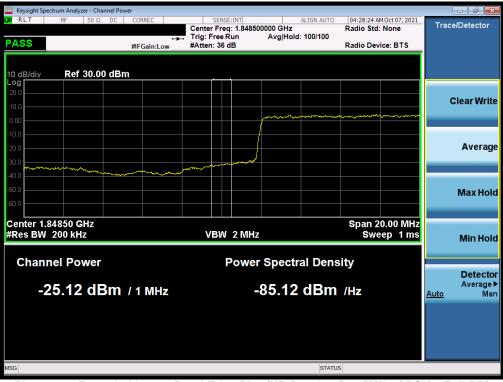
Plot 7-182. Extended Upper Band Edge Plot (NR Band n25 - 30MHz QPSK – Full RB)

FCC ID: A3LSMS906U		PART 24 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager
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	ectrum Analyzer - Sw										
LXI RLT	RF 50 Ω	DC CO	RREC	SEN	NSE:INT	#Avg Typ	ALIGN AUTO		Oct 07, 2021	Fi	requency
PASS			NO: Wide ↔ Gain:Low	. Trig: Free #Atten: 3				TYP DE			A
10 dB/div	Ref 25.00 (	dBm					Mkr	1 1.849 -23.8	88 GHz 32 dBm		Auto Tune
Trac	e 1 Pass			,   ```							Center Freq
15.0										1.85	0000000 GHz
5.00						guymaarstr w	┍┲╓┿╍┶╤╼┰┉╩╼╡	angay and a short of a	ad you want the Case		Start Freq
-5.00										1.84	0000000 GHz
-15.0					ļ						Stop Freq
-25.0				ware way of the stand of the	1					1.86	0000000 GHz
20.0	Monghowshand	- mayon wood	morman	- second							CF Step
-35.0										2 <u>Auto</u>	2.000000 MHz Man
-45.0											Freq Offset
-55.0											0 Hz
-65.0											Scale Type
Center 1. #Res BW	35000 GHz 300 kHz		#VBW	1.0 MHz			Sweep 1	Span 20 ') Span 10. !) Span 20.	0.00 MHz 1001 pts)	LUg	<u>Lin</u>
MSG							STATU	5			

Plot 7-183. Lower Band Edge Plot (NR Band n25 - 25MHz QPSK - Full RB)



Plot 7-184. Extended Lower Band Edge Plot (NR Band n25 - 25MHz QPSK – Full RB)

FCC ID: A3LSMS906U		PART 24 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager
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Keysight Spectrum Ar	alyzer - Swept SA						
LXIRLT RF	50 Ω DC	CORREC	SENSE:INT		ALIGN AUTO	04:30:27 AM Oct 07, 2021	Frequency
PASS		PNO: Wide ↔ IFGain:Low	Trig: Free Run #Atten: 36 dB	#Avg Ty		TRACE 123456 TYPE A WWWW DET A P N N N N	
Log	25.00 dBm				Mkr	1 1.915 04 GHz -24.01 dBm	Auto Tune
15.0	SS						Center Freq 1.915000000 GHz
5.00	ф_flige_gate	an a					<b>Start Freq</b> 1.905000000 GHz
-15.0			1	MUWUL			<b>Stop Freq</b> 1.925000000 GHz
-35.0				Mart Martin Construction	and the second second	What you are and the second	CF Step 2.000000 MHz <u>Auto</u> Man
-55.0						· · · · · · · · · · · · · · · · · · ·	Freq Offset 0 Hz
-65.0							Scale Type
Center 1.91500 #Res BW 300 k		#VBW	1.0 MHz		Sweep 1	Span 20.00 MHz .000 ms (1001 pts)	Log <u>Lin</u>
MSG					STATUS	; ;	

Plot 7-185. Upper Band Edge Plot (NR Band n25 - 25MHz QPSK - Full RB)



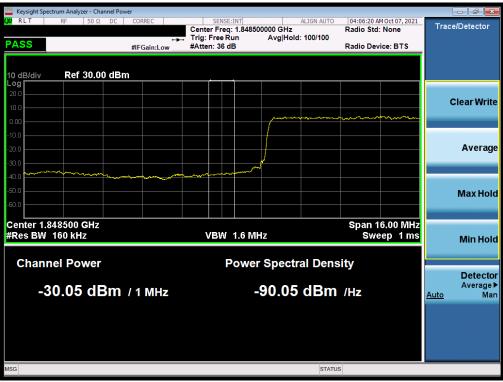
Plot 7-186. Extended Upper Band Edge Plot (NR Band n25 - 25MHz QPSK – Full RB)

FCC ID: A3LSMS906U		PART 24 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager
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🔤 Keysight Spectrum Analyzer - Swept SA 👘					
LXI RLT RF 50Ω DC	CORREC SE	NSE:INT #Ava	ALIGN AUTO	04:03:57 AM Oct 07, 2021 TRACE 1 2 3 4 5 6	Frequency
PASS	PNO: Wide +++ Trig: Fre IFGain:Low #Atten: 3	e Run		DET A PNNNN	A. 4. T
10 dB/div Ref 25.00 dBm			Mkr1	1.849 968 GHz -29.54 dBm	Auto Tune
15.0					Center Freq 1.85000000 GHz
-5.00			hydrer hydr fel	al har all the	<b>Start Freq</b> 1.842000000 GHz
-15.0		1			<b>Stop Freq</b> 1.858000000 GHz
-35.0 -45.0	my man and a start and the				CF Step 1.600000 MHz <u>Auto</u> Man
-55.0					<b>Freq Offset</b> 0 Hz
-65.0					Scale Type
Center 1.850000 GHz #Res BW 240 kHz	#VBW 820 kHz		Sweep 1	Span 16.00 MHz .000 ms (1001 pts)	Log <u>Lin</u>
MSG			STATUS		

Plot 7-187. Lower Band Edge Plot (NR Band n25/2 - 20MHz QPSK - Full RB)



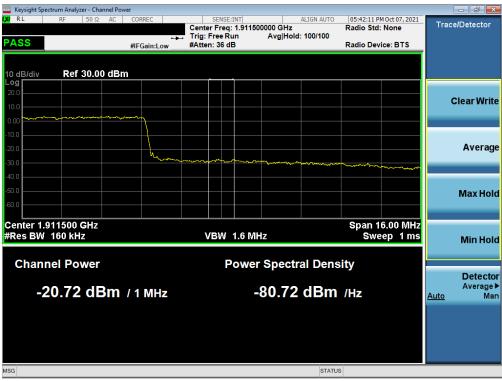
Plot 7-188. Extended Lower Band Edge Plot (NR Band n25/2 - 20MHz QPSK – Full RB)

FCC ID: A3LSMS906U		PART 24 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager
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	pectrum Analy												- 7
RL	RF	50Ω 4	AC CO	ORREC		SEI	ISE:INT	#Avg Tvp	ALIGN AUTO		M Oct 07, 2021	Fre	quency
ASS				PNO: Wi FGain:L	de ⊶⊷ ow	Trig: Free #Atten: 3				TYF De			
dB/div	Ref 25	i.00 dBi	m						Mkr1	1.910 1 -23.	92 GHz 45 dBm		Auto Tur
<sup>rg</sup> Tra	ce 1 Pass											с	enter Fre
5.0												1.910	000000 GI
.00	mmm	han marine	_numuhandar	- m r	www								
													<b>Start Fr</b> 000000 GI
5.0						here and a	<b>∮</b> <sup>1</sup>						<b>Stop Fr</b> 000000 G
5.0						V	har warne and	www.www.	Mar all all and all all all all all all all all all al	monum	h www.		
5.0													CF St 600000 M
5.0												<u>Auto</u>	М
5.0												F	req Offs
													0
5.0												s	cale Ty
enter 1	.910000	GHz								Span 1	6.00 MHz	Log	Ĺ
	240 kH			#	VBW	820 kHz			Sweep 1	.000 ms (	1001 pts)		
G									STATUS	6			

Plot 7-189. Upper Band Edge Plot (NR Band n2 - 20MHz QPSK – Full RB)



Plot 7-190. Extended Upper Band Edge Plot (NR Band n2 - 20MHz QPSK – Full RB)

FCC ID: A3LSMS906U		PART 24 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager
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Keysight Spectrum Analyzer - Swept SA					
XX RLT RF 50Ω DC	CORREC SE	NSE:INT #A.v.a	ALIGN AUTO	04:09:21 AM Oct 07, 2021 TRACE 1 2 3 4 5 6	Frequency
PASS	PNO: Wide ↔ Trig: Fre IFGain:Low #Atten: 3	e Run			
10 dB/div Ref 25.00 dBm			Mkr1	1.915 256 GHz -27.17 dBm	Auto Tune
15.0					Center Freq 1.915000000 GHz
5.00	mannen				<b>Start Freq</b> 1.907000000 GHz
-15.0	Weith Annual Contraction				<b>Stop Freq</b> 1.923000000 GHz
-35.0		and and a second second	appline and	MM Mary Mary	<b>CF Step</b> 1.600000 MHz <u>Auto</u> Man
-55.0					Freq Offset 0 Hz
-65.0					Scale Type
Center 1.915000 GHz #Res BW 240 kHz	#VBW 820 kHz	2	Sweep 1	Span 16.00 MHz .000 ms (1001 pts)	Log <u>Lin</u>
MSG			STATUS		

Plot 7-191. Upper Band Edge Plot (NR Band n25 - 20MHz QPSK - Full RB)



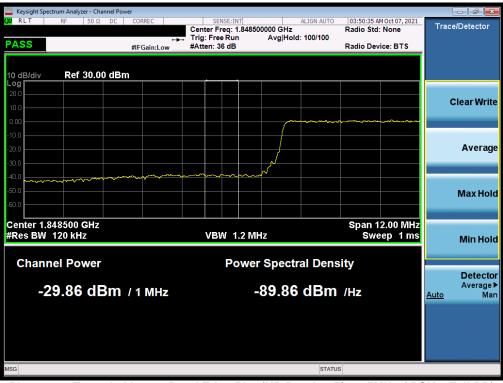
Plot 7-192. Extended Upper Band Edge Plot (NR Band n25 - 20MHz QPSK – Full RB)

FCC ID: A3LSMS906U		PART 24 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager
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Keysight Spectrum Analyzer - Swept	t SA				
LXI RLT RF 50Ω	DC CORREC	SENSE:INT	ALIGN AUTO	03:48:28 AM Oct 07, 2021	Frequency
PASS	PNO: Wide ↔ IFGain:Low	Trig: Free Run #Atten: 36 dB	#Avg Type: RMS	TRACE <b>1 2 3 4 5 6</b> TYPE A WWWW DET <b>A P N N N N</b>	Auto Tune
10 dB/div Ref 25.00 dE	3m		Mkr1	1.850 000 GHz -27.056 dBm	Auto Tune
15.0					Center Freq 1.850000000 GHz
-5.00				and and and a second	<b>Start Freq</b> 1.844000000 GHz
-15.0		1			<b>Stop Freq</b> 1.856000000 GHz
-35.0	angene the for the forman of the formation of the formati				CF Step 1.200000 MHz <u>Auto</u> Man
-55.0					Freq Offset 0 Hz
-65.0					Scale Type
Center 1.850000 GHz #Res BW 180 kHz	#VBW	620 kHz	Sweep 1	Span 12.00 MHz .000 ms (1001 pts)	Log <u>Lin</u>
MSG			STATUS		

Plot 7-193. Lower Band Edge Plot (NR Band n25/2 - 15MHz QPSK - Full RB)



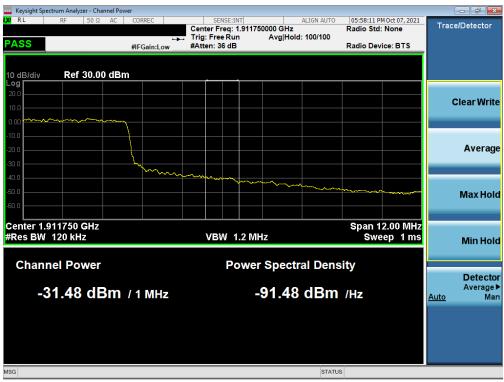
Plot 7-194. Extended Lower Band Edge Plot (NR Band n25/2 - 15MHz QPSK – Full RB)

FCC ID: A3LSMS906U		PART 24 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager
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	ectrum Analy												
RL	RF	50 Ω	AC	CORREC		SEI	NSE:INT	#Avg Typ	ALIGN AUTO		MOct 07, 2021	Fn	equency
ASS				PNO: N IFGain	Wide ↔ :Low	. Trig: Free #Atten: 3				TY			
dB/div	Ref 25	.00 d	Bm						Mkr	1 1.912 2 -21.	32 GHz 27 dBm		Auto Tur
Trac	e 1 Pass						ĺ					C	enter Fre
5.0												1.910	000000 GI
.00	mar mar	~~~~~	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	www.ww	᠁᠕᠕	4							Start Fr
00												1.904	4000000 G
5.0													
						hung	muner .	mann			. AR PARTY AND	1.916	<b>Stop Fr</b> 5000000 G
5.0							<u>~</u> ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	and good and a		Mar Marine	w.		05.04
i.0												1 Auto	CF St .200000 M N
i.o													N
i.o												i	req Offs
													0
												;	Scale Ty
	910000				41/D14	620 KH-			Succes	Span 1	2.00 191112	Log	ļ
tes BW	180 kHz				#VBW	620 kHz			sweep	1.000 ms (	1001 pts)		

Plot 7-195. Upper Band Edge Plot (NR Band n2 - 15MHz QPSK – Full RB)



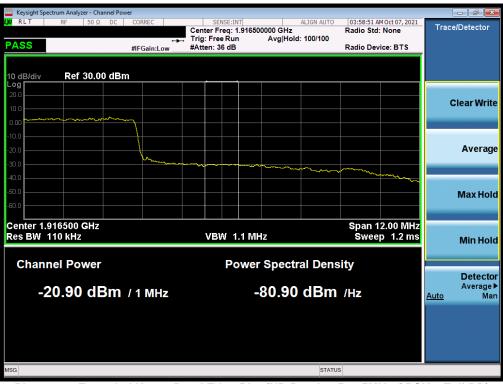
Plot 7-196. Extended Upper Band Edge Plot (NR Band n2 - 15MHz QPSK – Full RB)

FCC ID: A3LSMS906U	PCTEST Proud to be part of @ element	PART 24 MEASUREMENT REPORT	Approved by: Technical Manager
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Keysight Spect	rum Analyzer -	Swept SA									
LXI RLT	RF 50	Ω DC	CORREC	SEN	ISE:INT	#Avg Typ	ALIGN AUTO		M Oct 07, 2021	Fr	equency
PASS			PNO: Wide ++ IFGain:Low	. Trig: Free #Atten: 3		#Avg Typ		TYF			Auto Tune
10 dB/div	Ref 25.00	) dBm					Mkr1	1.916 9 -27.	92 GHz 50 dBm		Auto Tune
15.0 <b>Trace</b>	1 Pass										<b>Center Freq</b> 5000000 GHz
5.00 <del></del>		and the start of the second	www.							1.90	Start Freq 9000000 GHz
-15.0				have a second		<b>↓</b> 1				1.92	Stop Freq 1000000 GHz
-35.0				~~~ 	Markan A		Jan wayan Jama	han an a	w.	1 <u>Auto</u>	<b>CF Step</b> .200000 MHz Man
-55.0											Freq Offset 0 Hz
-65.0											Scale Type
Center 1.9′ #Res BW 1		Z	#VBW	620 kHz			Sweep 1	Span 1 .000 ms (	2.00 MHz 1001 pts)	Log	Lin
MSG							STATUS	6			

Plot 7-197. Upper Band Edge Plot (NR Band n25 - 15MHz QPSK - Full RB)



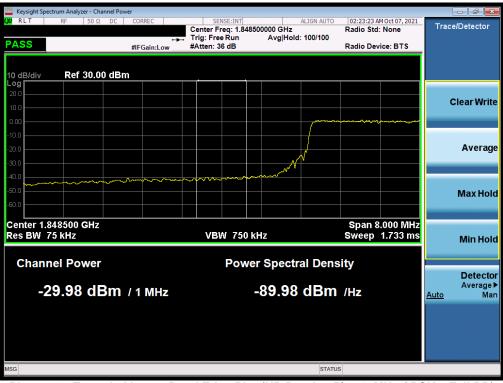
Plot 7-198. Extended Upper Band Edge Plot (NR Band n25 - 15MHz QPSK – Full RB)

FCC ID: A3LSMS906U	PCTEST Proud to be part of @element	PART 24 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager
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Keysight Spectrum Analyzer - Swept SA					
LXX RLT RF 50Ω DC	CORREC S	ENSE:INT	ALIGN AUTO	02:19:46 AM Oct 07, 2021	Frequency
PASS	PNO: Wide ↔ Trig: Fr IFGain:Low #Atten:	ee Run	Type: RMS	TRACE <b>1 2 3 4 5 6</b> TYPE A WWWW DET <b>A P N N N N</b>	Auto Tune
10 dB/div Ref 25.00 dBm	1		Mkr1	1.849 944 GHz -26.07 dBm	Auto Tune
15.0					Center Freq 1.850000000 GHz
-5.00		Marthage and and a	ารที่ปุฬะกุญภาษาณาและกระกร	nternenannen bereinen an der son a	<b>Start Freq</b> 1.846000000 GHz
-15.0					<b>Stop Freq</b> 1.854000000 GHz
-35.0	wind how and the second s				CF Step 800.000 kHz <u>Auto</u> Man
-55.0					Freq Offsel 0 Hz
-65.0					Scale Type
Center 1.850000 GHz #Res BW 120 kHz	#VBW 430 kH	z	Sweep 4.	Span 8.000 MHz 000 ms (1001 pts)	Log <u>Lin</u>
MSG			STATUS		

Plot 7-199. Lower Band Edge Plot (NR Band n25/2 - 10MHz QPSK - Full RB)



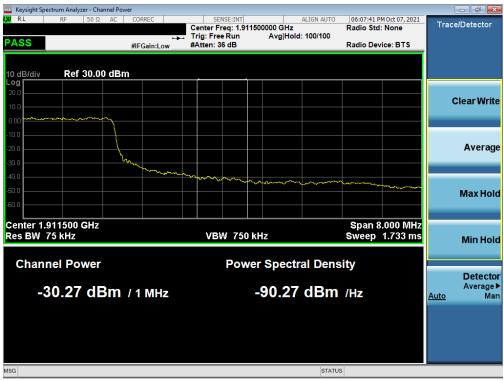
Plot 7-200. Extended Lower Band Edge Plot (NR Band n25/2 - 10MHz QPSK – Full RB)

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	ectrum Analyz												
RL	RF	50 Ω	AC	CORREC		SEI	ISE:INT	#Avg Tv	ALIGN AUTO		M Oct 07, 2021	F	requency
ASS				PNO: Wi IFGain:L		Trig: Free #Atten: 3				TYI Di			
dB/div	Ref 25	.00 dB	₿m						Mkr1	1.910 1 -21.	60 GHz 21 dBm		Auto Tur
<sup>5.0</sup> Trac	e 1 Pass												Center Fre
												1.91	0000000 GI
.00 Y********	ww	rv-vahu~~	₄ <sub>୶</sub> ∻₄≮ <sub>ঀ</sub> ∕Ŀ	ralin mark	M-Marker La	7							Start Fre
.00						 }						1.90	6000000 GI
5.0						ha	<u>_</u> 1						Stop Fr
5.0						and a second water	- Laullew vyro	Murray	man man market	mon	m m man	1.91	4000000 GI
5.0										ψ <b>κ</b>			CF Ste
												<u>Auto</u>	800.000 k M
5.0													Freq Offs
5.0													0
5.0													Coolo Tra
													Scale Ty
	910000 ( 120 kHz			#	¢VB₩	430 kHz			Sweep 4	Span 8 .000 m <u>s (</u>	.000 MHz 1001 pts)	LUg	<u> </u>
G									STATUS				

Plot 7-201. Upper Band Edge Plot (NR Band n2 - 10MHz QPSK – Full RB)



Plot 7-202. Extended Upper Band Edge Plot (NR Band n2 - 10MHz QPSK – Full RB)

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Keysight Spectrum Analyzer - Swept SA					
💢 RLT RF 50Ω DC	CORREC	SENSE:INT	ALIGN AUTO	02:35:08 AM Oct 07, 2021	Frequency
PASS		rig: Free Run Atten: 36 dB	#Avg Type: RMS	TRACE 1 2 3 4 5 6 TYPE A WWWW DET A P N N N N	
10 dB/div Ref 25.00 dBm			Mkr1	1.915 008 GHz -33.31 dBm	Auto Tune
15.0					Center Freq 1.915000000 GHz
5.00					<b>Start Freq</b> 1.911000000 GHz
-15.0					<b>Stop Freq</b> 1.919000000 GHz
-35.0		THUR HANNING	whathe han all have and a	hore the second s	CF Step 800.000 kHz <u>Auto</u> Man
-55.0					<b>Freq Offset</b> 0 Hz
-65.0					Scale Type
Center 1.915000 GHz #Res BW 120 kHz	#VBW 43	0 kHz	Sweep 4	Span 8.000 MHz .000 ms (1001 pts)	Log <u>Lin</u>
MSG			STATU	6	

Plot 7-203. Upper Band Edge Plot (NR Band n25 - 10MHz QPSK - Full RB)



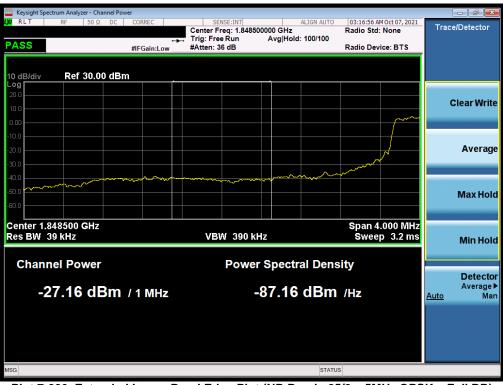
Plot 7-204. Extended Upper Band Edge Plot (NR Band n25 - 10MHz QPSK – Full RB)

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Keysight Spectrum Analyzer - Swept SA					
💢 RLT RF 50Ω DC	CORREC	SENSE:INT	ALIGN AUTO	03:15:12 AM Oct 07, 2021	Frequency
PASS	PNO: Wide ↔ → IFGain:Low	Trig: Free Run #Atten: 36 dB	#Avg Type: RMS	TRACE 1 2 3 4 5 6 TYPE A WWWW DET A P NNNN	Auto Tune
10 dB/div Ref 25.00 dBm			Mkr1	1.849 992 GHz -24.78 dBm	Auto Tune
15.0					Center Freq 1.85000000 GHz
-5.00			- Marina - M Marina - Marina - Ma		<b>Start Freq</b> 1.848000000 GHz
-15.0		1			<b>Stop Freq</b> 1.852000000 GHz
-35.0	mpmmm				CF Step 400.000 kHz <u>Auto</u> Man
-55.0					Freq Offset 0 Hz
-65.0					Scale Type
Center 1.850000 GHz #Res BW 62 kHz	#VBW :	220 kHz	Sweep 2	Span 4.000 MHz .000 ms (1001 pts)	Log <u>Lin</u>
MSG			STATUS		

Plot 7-205. Lower Band Edge Plot (NR Band n25/2 – 5MHz QPSK – Full RB)



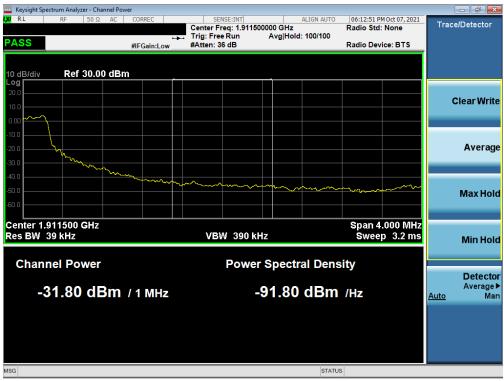
Plot 7-206. Extended Lower Band Edge Plot (NR Band n25/2 – 5MHz QPSK – Full RB)

FCC ID: A3LSMS906U	PCTEST Proad to be part of @elessed	PART 24 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager
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	ectrum Analy											_	
RL	RF	50 Ω	AC	CORREC		SEI	NSE:INT	#Avg Typ	ALIGN AUTO		M Oct 07, 2021	F	requency
ASS				PNO: W IFGain:L		Trig: Free #Atten: 3		• ,.		TYI Di			
0 dB/div	Ref 25	.00 dE	3m						Mkr1	1.910 4 -19.	40 GHz 59 dBm		Auto Tun
<sup>og</sup> Trac	e 1 Pass												Center Fre
5.0												1.91	0000000 GH
i.00 🛹		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	~~~ <u>^</u> ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	$\sim$	~~~~	~~~~							Start Fre
.00												1.90	8000000 GH
													_
15.0						h	www					1.91	Stop Fre 2000000 GH
:5.0								, , , , , , , , , , , , , , , , , , ,	$\sim$	www.	$\sim \sim \sim$		
5.0													CF Ste 400.000 kH
15.0												<u>Auto</u>	Ma
i5.0													Freq Offse
0.0													0 H
i5.0													Scale Typ
enter 1.	91000	GH7								Snan 4	.000 MHz	Log	
Res BW		enz		#	¢VB₩	220 kHz			Sweep 2		(1001 pts)		
G									STATUS				

Plot 7-207. Upper Band Edge Plot (NR Band n2 – 5MHz QPSK – Full RB)



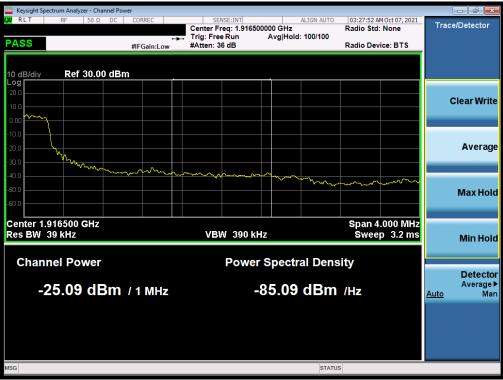
Plot 7-208. Extended Upper Band Edge Plot (NR Band n2 – 5MHz QPSK – Full RB)

FCC ID: A3LSMS906U		PART 24 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager
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🔤 Keysight Spectrum Analyzer - Swept SA									
X RLT RF 50Ω DC	CORREC	SENSE	:INT	#Avg Typ	ALIGN AUTO		HOct 07, 2021	F	requency
PASS	PNO: Wide ↔ IFGain:Low	Trig: Free F #Atten: 36 d		#/ <b>/</b> 8/1/P		TYP			
10 dB/div Ref 25.00 dBm					Mkr1		04 GHz 17 dBm		Auto Tune
15.0									<b>Center Freq</b> 5000000 GHz
5.00 <b></b> -5.00	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	~						1.91	Start Freq 3000000 GHz
-15.0			1					1.91	Stop Freq 7000000 GHz
-35.0		v	and the second s	m	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	mm	Same and the second sec	<u>Auto</u>	<b>CF Step</b> 400.000 kHz Man
-55.0									Freq Offset 0 Hz
-65.0									Scale Type
Center 1.915000 GHz #Res BW 62 kHz	#VBW	220 kHz			Sweep 2	Span 4 .000 ms (	.000 MHz 1001 pts)	Log	<u>Lin</u>
MSG					STATUS				

Plot 7-209. Upper Band Edge Plot (NR Band n25 – 5MHz QPSK – Full RB)

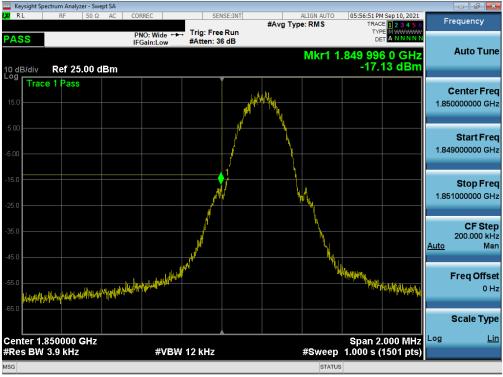


Plot 7-210. Extended Upper Band Edge Plot (NR Band n25 – 5MHz QPSK – Full RB)

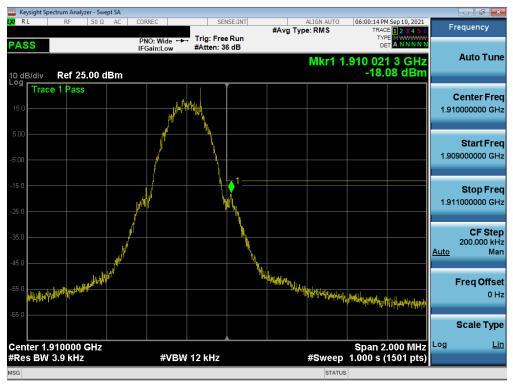
FCC ID: A3LSMS906U		PART 24 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager
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# **GSM/GPRS PCS**



Plot 7-211. Lower Band Edge Plot (GPRS PCS - Ch. 512)



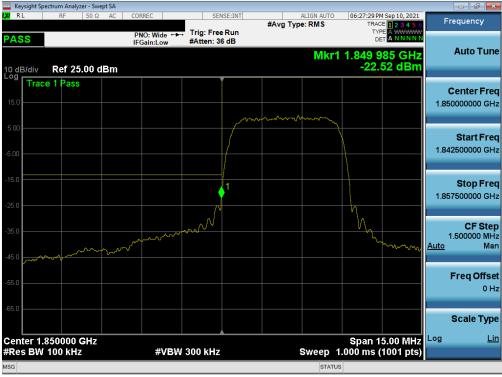
Plot 7-212. Upper Band Edge Plot (GPRS PCS – Ch. 810)

FCC ID: A3LSMS906U		PART 24 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager	
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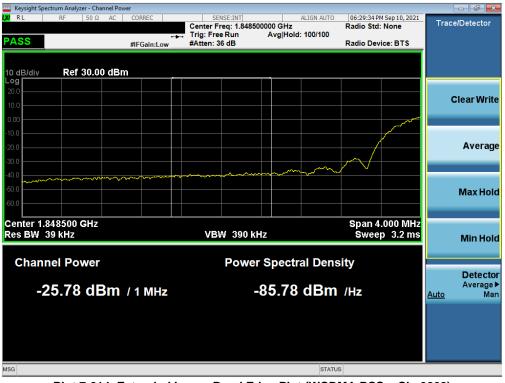
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## WCDMA PCS



Plot 7-213. Lower Band Edge Plot (WCDMA PCS - Ch. 9262)



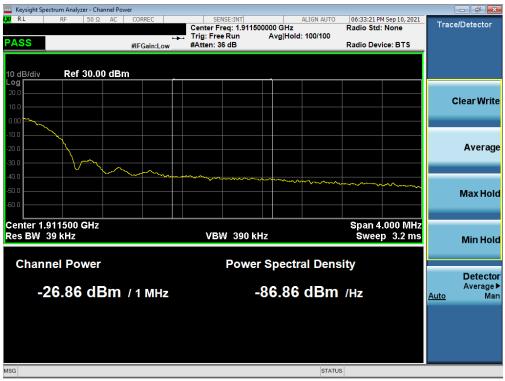
#### Plot 7-214. Extended Lower Band Edge Plot (WCDMA PCS - Ch. 9262)

FCC ID: A3LSMS906U		PART 24 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager	
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	Spectrum Analyz												
RL ASS	RF	50 Ω	AC	PNO: V	/ide ↔			#Avg Typ	ALIGN AUTO	TRAC	M Sep 10, 2021 CE 1 2 3 4 5 6 PE A WWWWW ET A N N N N N	Fr	equency
dB/div	Ref 25.	00 d	IBm	IFGain:	LOW	#Attent			Mkr1	1.910 (	000 GHz 06 dBm		Auto Tun
<sup>5.0</sup> Tra	ce 1 Pass			~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~							Center Fre
00												1.90	<b>Start Fr</b> 2500000 Gi
5.0							1					1.91	<b>Stop Fr</b> 7500000 G
5.0	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	/							·····	Anna		Auto <sup>1</sup>	CF Sto 1.500000 M M
5.0											www.		Freq Offs 0
enter 1	.910000 C	Hz								Span 1	5.00 MHz		Scale Tyj
	V 100 kHz				#VBW	300 kHz			Sweep	.000 ms	(1001 pts)		
3									STATU				

Plot 7-215. Upper Band Edge Plot (WCDMA PCS - Ch. 9538)



Plot 7-216. Extended Upper Band Edge Plot (WCDMA PCS - Ch. 9538)

FCC ID: A3LSMS906U		PART 24 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager
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## 7.6 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. For burst transmissions, the spectrum analyzer is set to use an internal "RF Burst" trigger that is synced with an incoming pulse and the measurement interval is set to less than the duration of the "on time" of one burst to ensure that energy is only captured during a time in which the transmitter is operating at maximum power

### Test Setup

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



Figure 7-5. Test Instrument & Measurement Setup

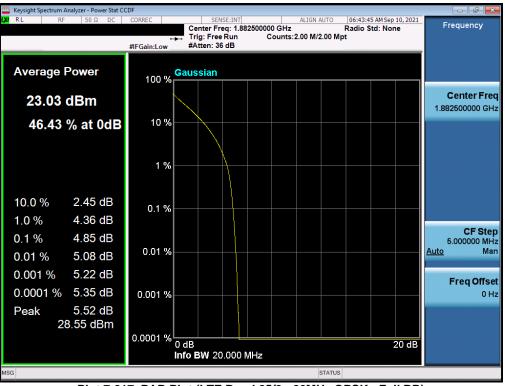
### Test Notes

Among the PAR measurements for 16QAM, 64QAM, and 256QAM, it was determined that 256QAM exhibited the highest PAR.

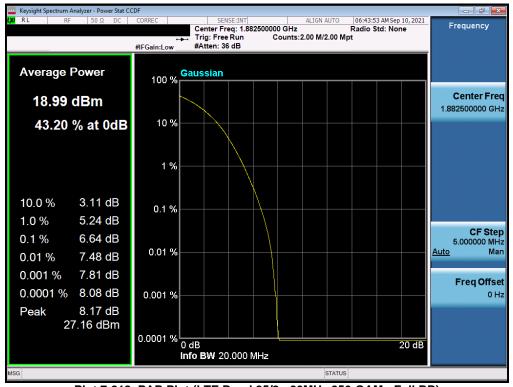
FCC ID: A3LSMS906U		PART 24 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager
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# LTE Band 25/2





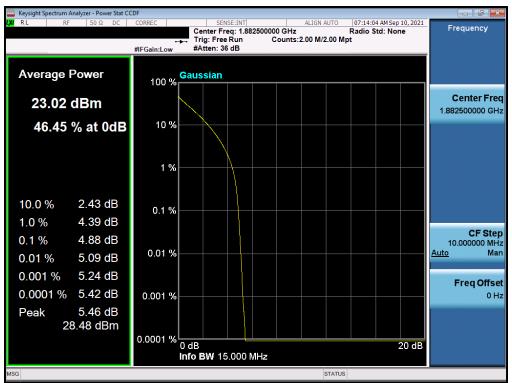


#### Plot 7-218. PAR Plot (LTE Band 25/2 - 20MHz 256-QAM - Full RB)

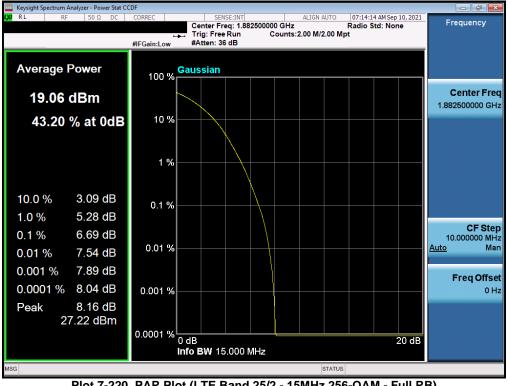
FCC ID: A3LSMS906U		PART 24 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager
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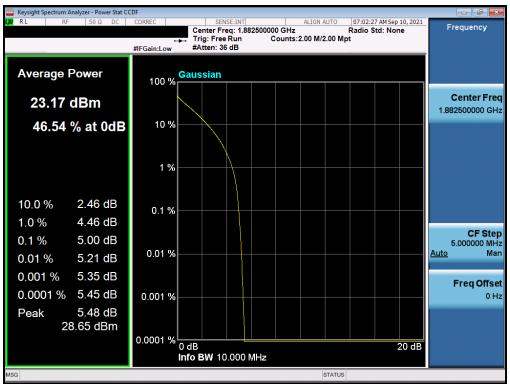




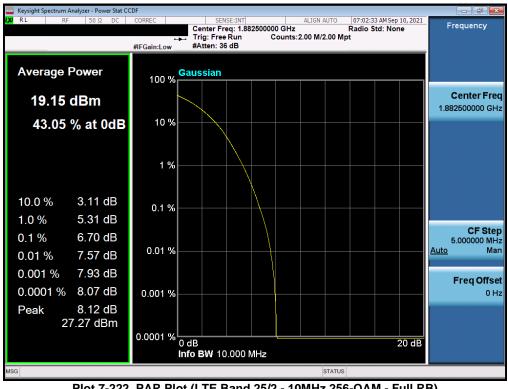
Plot 7-220. PAR Plot (LTE Band 25/2 - 15MHz 256-QAM - Full RB)

FCC ID: A3LSMS906U	PCTEST* Proud to be part of @element	PART 24 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager
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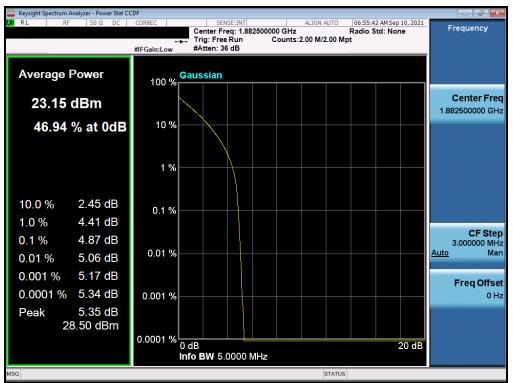




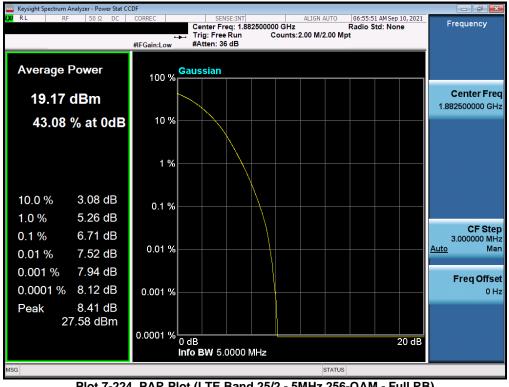
Plot 7-222. PAR Plot (LTE Band 25/2 - 10MHz 256-QAM - Full RB)

FCC ID: A3LSMS906U	POINTEST. Proud to be part of @element	PART 24 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager
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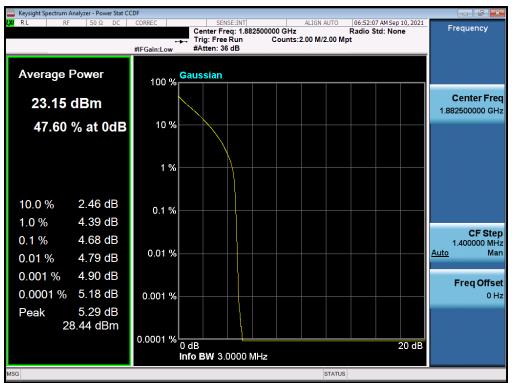




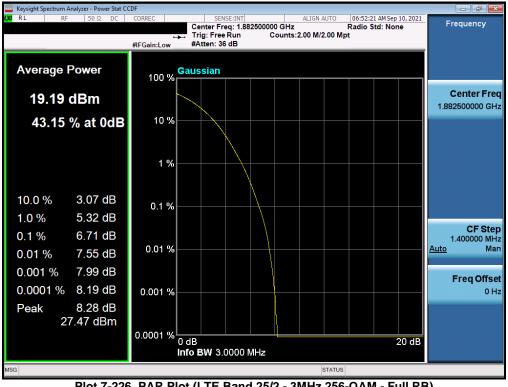
Plot 7-224. PAR Plot (LTE Band 25/2 - 5MHz 256-QAM - Full RB)

FCC ID: A3LSMS906U	PCTEST. Proud to be part of @element	PART 24 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager
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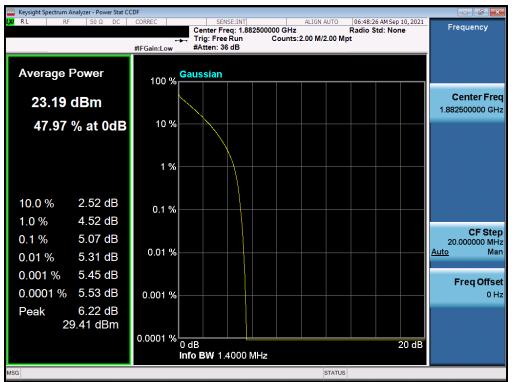


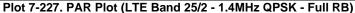


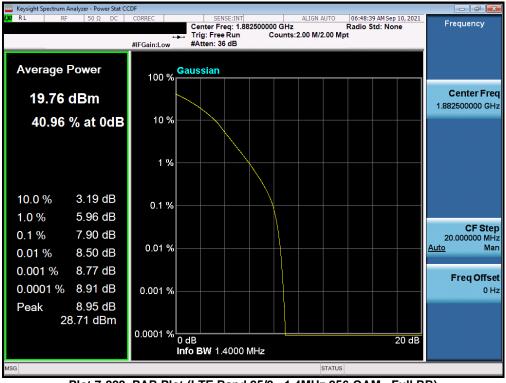
Plot 7-226. PAR Plot (LTE Band 25/2 - 3MHz 256-QAM - Full RB)

FCC ID: A3LSMS906U		PART 24 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager
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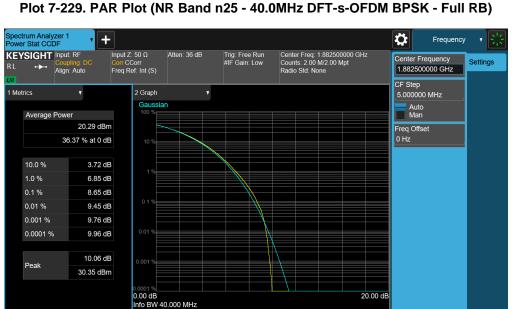
Plot 7-228. PAR Plot (LTE Band 25/2 - 1.4MHz 256-QAM - Full RB)

FCC ID: A3LSMS906U	POLIEST Proud to be part of @wieneest	PART 24 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:		Dage 120 of 102
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# NR Band n25/2 – Ant A





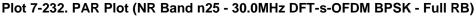
FCC ID: A3LSMS906U		PART 24 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager
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Plot 7-231. PAR Plot (NR Band n25 - 40.0MHz CP-OFDM 256-QAM - Full RB)





FCC ID: A3LSMS906U	PCTEST Proud to be part of Selenceri	PART 24 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager
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Plot 7-233. PAR Plot (NR Band n25 - 30.0MHz CP-OFDM QPSK - Full RB)



Plot 7-234. PAR Plot (NR Band n25 - 30.0MHz CP-OFDM 256-QAM - Full RB)

FCC ID: A3LSMS906U		PART 24 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager
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Plot 7-235. PAR Plot (NR Band n25 - 25.0MHz DFT-s-OFDM BPSK - Full RB)



Plot 7-236. PAR Plot (NR Band n25 - 25.0MHz CP-OFDM QPSK - Full RB)

FCC ID: A3LSMS906U		PART 24 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager
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Plot 7-237. PAR Plot (NR Band n25 - 25MHz CP-OFDM 256-QAM - Full RB)



Plot 7-238. PAR Plot (NR Band n25/2 - 20.0MHz DFT-s-OFDM BPSK - Full RB)

FCC ID: A3LSMS906U		PART 24 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager
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Plot 7-239. PAR Plot (NR Band n25/2 - 20.0MHz CP-OFDM QPSK - Full RB)



Plot 7-240. PAR Plot (NR Band n25/2 - 20.0MHz CP-OFDM 256-QAM - Full RB)

FCC ID: A3LSMS906U		PART 24 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager	
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Plot 7-241. PAR Plot (NR Band n25/2 - 15.0MHz DFT-s-OFDM BPSK - Full RB)



Plot 7-242. PAR Plot (NR Band n25/2 - 15.0MHz CP-OFDM QPSK - Full RB)

FCC ID: A3LSMS906U		PART 24 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager
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Plot 7-243. PAR Plot (NR Band n25/2 - 15.0MHz CP-OFDM 256-QAM - Full RB)



Plot 7-244. PAR Plot (NR Band n25/2 - 10.0MHz DFT-s-OFDM BPSK - Full RB)

FCC ID: A3LSMS906U		PART 24 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager	
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Plot 7-245. PAR Plot (NR Band n25/2 - 10.0MHz CP-OFDM QPSK - Full RB)



Plot 7-246. PAR Plot (NR Band n25/2 - 10.0MHz CP-OFDM 256-QAM - Full RB)

FCC ID: A3LSMS906U		PART 24 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager
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Plot 7-247. PAR Plot (NR Band n25/2 - 5.0MHz DFT-s-OFDM BPSK - Full RB)



Plot 7-248. PAR Plot (NR Band n25/2 - 5.0MHz CP-OFDM QPSK - Full RB)

FCC ID: A3LSMS906U		PART 24 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager	
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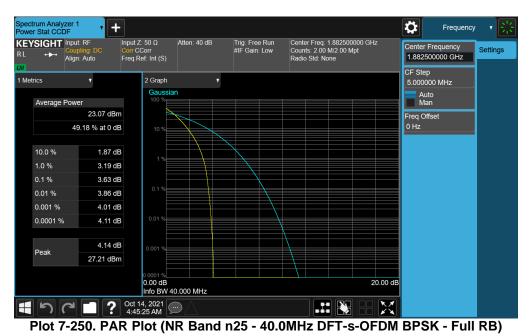


Plot 7-249. PAR Plot (NR Band n25/2 - 5.0MHz CP-OFDM 256-QAM - Full RB)

FCC ID: A3LSMS906U		PART 24 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager
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Plot 7-251. PAR Plot (NR Band n25 - 40.0MHz CP-OFDM QPSK - Full RB)

FCC ID: A3LSMS906U		PART 24 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager	
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Plot 7-252. PAR Plot (NR Band n25 - 40.0MHz CP-OFDM 256-QAM - Full RB)



Plot 7-253. PAR Plot (NR Band n25 - 30.0MHz DFT-s-OFDM BPSK - Full RB)

FCC ID: A3LSMS906U	PCTEST Proud to be part of @ element	PART 24 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager
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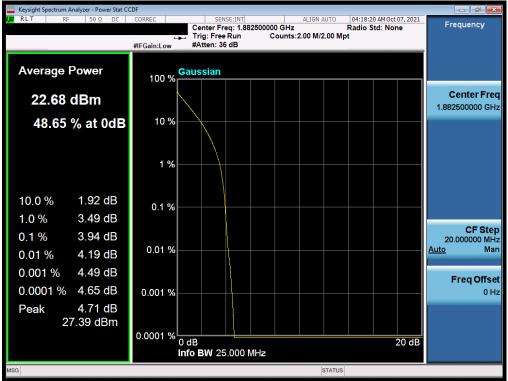
Plot 7-254. PAR Plot (NR Band n25 - 30.0MHz CP-OFDM QPSK - Full RB)

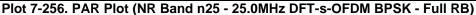


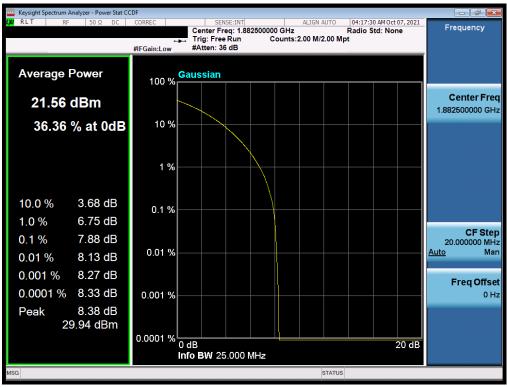
Plot 7-255. PAR Plot (NR Band n25 - 30.0MHz CP-OFDM 256-QAM - Full RB)

FCC ID: A3LSMS906U		PART 24 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager
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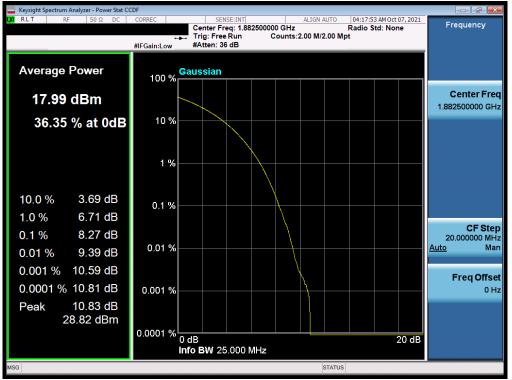


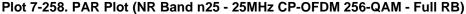


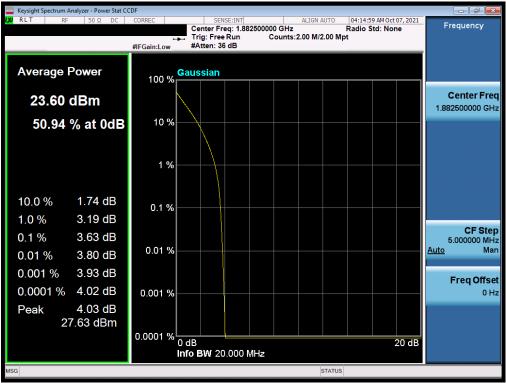
Plot 7-257. PAR Plot (NR Band n25 - 25.0MHz CP-OFDM QPSK - Full RB)

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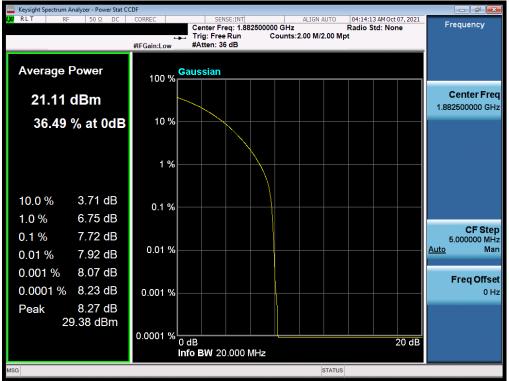


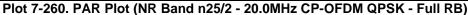


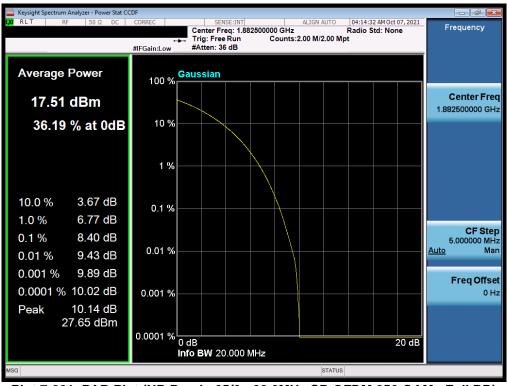
Plot 7-259. PAR Plot (NR Band n25/2 - 20.0MHz DFT-s-OFDM BPSK - Full RB)

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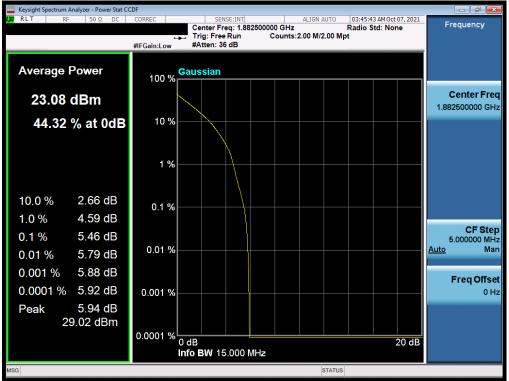


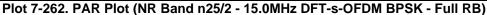


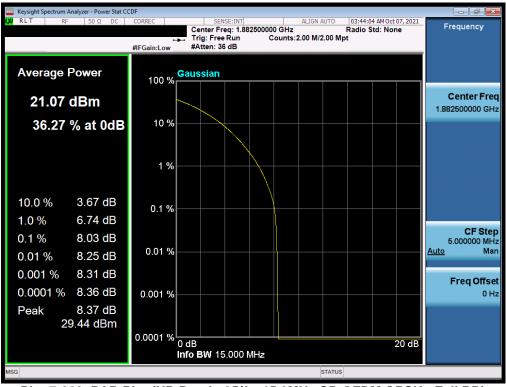
Plot 7-261. PAR Plot (NR Band n25/2 - 20.0MHz CP-OFDM 256-QAM - Full RB)

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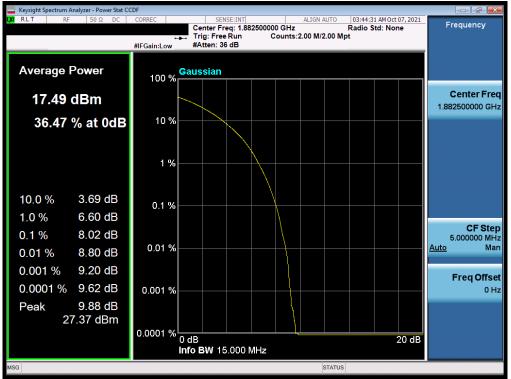


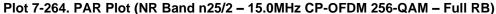


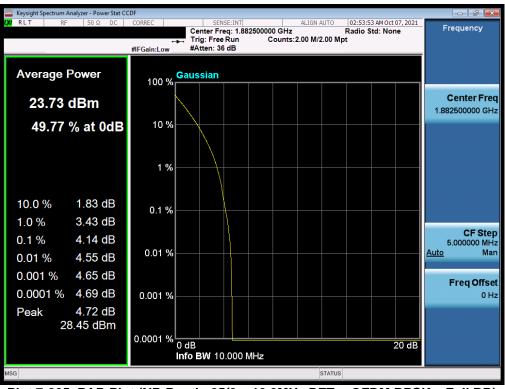
Plot 7-263. PAR Plot (NR Band n25/2 - 15.0MHz CP-OFDM QPSK - Full RB)

FCC ID: A3LSMS906U		PART 24 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager
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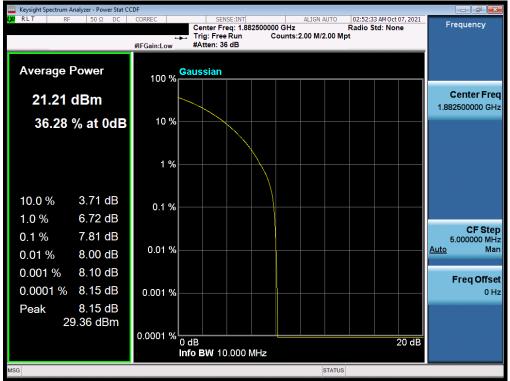


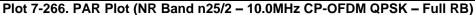


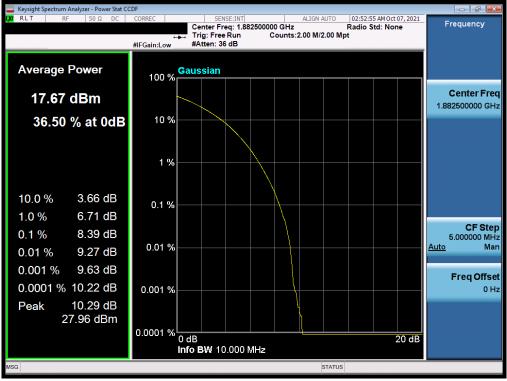
Plot 7-265. PAR Plot (NR Band n25/2 – 10.0MHz DFT-s-OFDM BPSK – Full RB)

FCC ID: A3LSMS906U		PART 24 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager
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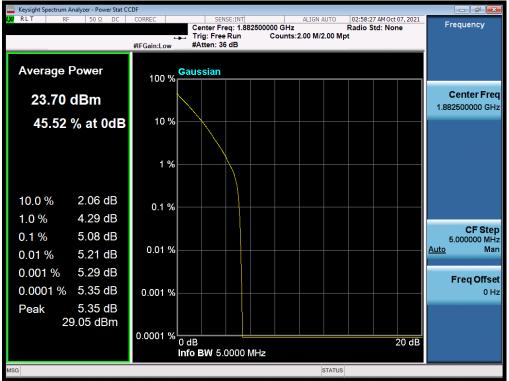


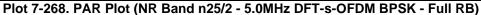


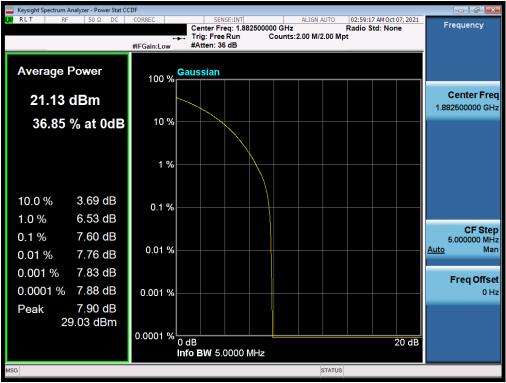
Plot 7-267. PAR Plot (NR Band n25/2 - 10.0MHz CP-OFDM 256-QAM - Full RB)

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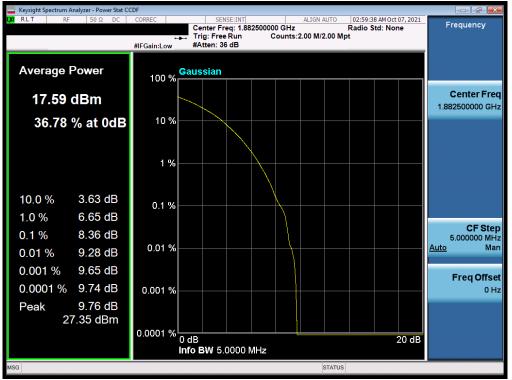




Plot 7-269. PAR Plot (NR Band n25/2 - 5.0MHz CP-OFDM QPSK - Full RB)

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Plot 7-270. PAR Plot (NR Band n25/2 - 5.0MHz CP-OFDM 256-QAM - Full RB)

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## **GSM/GPRS PCS**







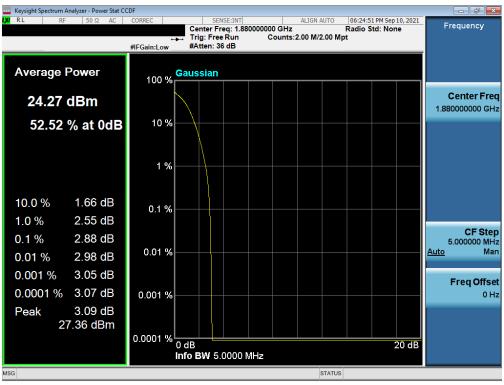
Plot 7-272. PAR Plot (EDGE, Ch. 661)

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## WCDMA PCS



Plot 7-273. PAR Plot (WCDMA, Ch. 9400)

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# 7.7 Radiated Power (ERP/EIRP)

### Test Overview

Effective Radiated Power (ERP) and Equivalent Isotropic Radiated Power (EIRP) measurements are performed using the substitution method described in ANSI/TIA-603-E-2016 with the EUT transmitting into an integral antenna. Measurements on signals operating below 1GHz are performed using vertically and horizontally polarized tuned dipole antennas. Measurements on signals operating above 1GHz are performed using vertically and horizontally and horizontally polarized broadband horn antennas. All measurements are performed as RMS average measurements while the EUT is operating at maximum power, and at the appropriate frequencies.

### Test Procedures Used

KDB 971168 D01 v03r01 - Section 5.2.1

ANSI/TIA-603-E-2016 - Section 2.2.17

#### Test Settings

- Radiated power measurements are performed using the signal analyzer's "channel power" measurement capability for signals with continuous operation. For signals with burst transmission, the signal analyzer's "time domain power" measurement capability is used
- 2. RBW = 1 5% of the expected OBW, not to exceed 1MHz
- 3. VBW  $\geq$  3 x RBW
- 4. Span = 1.5 times the OBW
- 5. No. of sweep points  $\geq 2 \times \text{span} / \text{RBW}$
- 6. Detector = RMS
- 7. Trigger is set to "free run" for signals with continuous operation with the sweep times set to "auto". Trigger is set to enable triggering only on full power bursts with the sweep time set less than or equal to the transmission burst duration
- 8. The integration bandwidth was roughly set equal to the measured OBW of the signal for signals with continuous operation. For signals with burst transmission, the "gating" function was enabled to ensure that measurements are performed during times in which the transmitter is operating at its maximum power
- 9. Trace mode = trace averaging (RMS) over 100 sweeps
- 10. The trace was allowed to stabilize

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### Test Setup

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

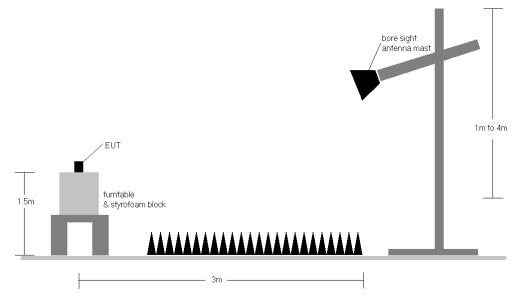


Figure 7-6. Radiated Test Setup >1GHz

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