

GSM/GPRS PCS

Spectrum Analyzer 1				Frequency	· • 🚼
L Coupling: DC Co Align: Auto/No RF Fre	out Z: 50 Ω Atten: 30 dB yr CCorr RCal μW Path: Standard eq Ref: Int (S) Έ: Off	PNO: Fast #/ d Gate: Off Ti IF Gain: Low Sig Track: Off	Avg Type: Power (RMS 1 2 3 4 5 6 rig: Free Run A N N N N N	937.500000 MHz	Settings
1 Spectrum			Mkr1 1.824 1 GH	1.0100000000112	
Scale/Div 10 dB	Ref Level 20.00 d	IBm	-40.16 dBn	Swept Span Zero Span	
				Full Span	
10.0				Start Freq 30.000000 MHz	
				Stop Freq 1.845000000 GHz	
40.0				AUTO TUNE	
10.0 50.0 Beelgisteren sitestiken sitestiken son s e	مانيا مين في الله مانا المعالية المان المراجع المانية المانية بالمانية المانية المانية المانية المانية المانية	المأنف وينابع المدينة الموسية المؤمنية المعدم	in the second state of the second state of the second second second second second second second second second s	181.500000 MHz	
60.0				Auto Man	
				Freq Offset 0 Hz	
tart 0.0300 GHz Res BW 1.0 MHz	#Video BW 3.0 N	1Hz	Stop 1.8450 GH Sweep 2.43 ms (3641 pts		
=	lov 02, 2021 9:34:26 AM			Signal Track (Span Zoom)	

Plot 7-25. Conducted Spurious Plot (GPRS Ch. 512)



Plot 7-26. Conducted Spurious Plot (GPRS Ch. 512)

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Input: RF L Input: RF L Align: Auto/No RF PASS	Input Z: 50 Ω Atten: 10 dB Corr CCorr RCal μW Path: Standard Freq Ref: Int (S) NFE: Off	PNO: Fast #Avg Type: Gate: Off Trig: Free F IF Gain: Low Sig Track: Off	Power (RMS 1 2 3 4 5 6 Run MWWWWW A N N N N N	Frequency V Center Frequency 15.00000000 GHz
Spectrum v cale/Div 10 dB	Ref Level 0.00 de			10.0000000 GHz Swept Span Zero Span
Trace 1 Pass				Full Span
	de stand per, en i de y primer and her international internat	al a work of pillow (Ablantic or a start black of a		10.00000000 GHz Stop Freq 20.000000000 GHz AUTO TUNE
				CF Step 1.000000000 GHz Auto Man
0.0 art 10.000 GHz Res BW 1.0 MHz	#Video BW 3.0 M			req Offset 0 Hz (Axis Scale Log Lin

Plot 7-27. Conducted Spurious Plot (GPRS Ch. 512)

LT + Coupling: DC Coupling:	put Z: 50 Ω Atten: 30 dE prr CCorr RCal μW Path: St eq Ref: Int (S) FE: Off	B PNO: Fast tandard Gate: Off IF Gain: Low Sig Track: Off	#Avg Type: Power (RI Trig: Free Run	MS <mark>123456</mark> M WWWWW ANNNNN	Center Frequency 940.000000 MHz	Settings
Spectrum v cale/Div 10 dB	Ref Level 2	0.00 dBm		.848 5 GHz 38.70 dBm	Span 1.82000000 GHz Swept Span Zero Span	
00.00 Trace 1 Pass					Full Span Start Freq	
0.0					30.000000 MHz Stop Freq 1.850000000 GHz	
	. (had see a wear a free free and i start we internate	utoppenentitys/Jaciptist.jópy-beterforcom	1 humatniitysettiniijimantiit	AUTO TUNE CF Step 182.00000 MHz	
0.0					Auto Man Freq Offset	
0.0 art 0.0300 GHz tes BW 1.0 MHz	#Video BW	/ 3.0 MHz		top 1.8500 GHz 3 ms (3641 pts)	0 Hz X Axis Scale	Loca

Plot 7-28. Conducted Spurious Plot (GPRS Ch. 661)

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Spectrum Analyzer 1 Swept SA	÷			Frequency	() 🕄
KEYSIGHT Input: RF Coupling: DC Coupling: DC Align: Auto/No RF Align: Auto/No RF	Input Z: 50 Ω Atten: 30 dB Corr CCorr RCal µW Path: Stand Freq Ref: Int (S) NFE: Off	PNO: Fast lard Gate: Off IF Gain: Low Sig Track: Off	#Avg Type: Power (RMS 1 2 3 4 5 6 Irig: Free Run MWWWW A N N N N N	5.95500000 GHZ	Settings
Spectrum v			Mkr1 9.373 0 GHz	Span 8.09000000 GHz	
og Trace 1 Pass	Ref Level 20.0	0 dBm	-32.89 dBm	Swept Span Zero Span	
				Full Span	
0.00				Start Freq 1.910000000 GHz	
				Stop Freq 10.000000000 GHz	
30.0	ى ئۇرىلىرى رىيى <u>رىيەر يىلەر ئەتلەرتىرى ب</u> ۇر	ى لۇشىر بىغىرى . بىلىر - يىر مەر تىرلىر .		AUTO TUNE	
Second			alar a sana ana ana ana ana ana ana ana ana	CF Step 809.000000 MHz	
50.0				Auto Man	
				Freq Offset 0 Hz	
tart 1.910 GHz Res BW 1.0 MHz	#Video BW 3.) MHz	Stop 10.000 GHz Sweep ~14.9 ms (16181 pts)		Local
? 🗖 רו 🗗	Nov 02, 2021 8:41:13 AM			Signal Track (Span Zoom)	

Plot 7-29. Conducted Spurious Plot (GPRS Ch. 661)

Spectrum Analyzer 1				Frequency	- 1 🔆
RLT + Coupling: DC Cor Align: Auto/No RF Fre	ut Ζ: 50 Ω Atten: 10 dB rr CCorr RCal μW Path: Standard q Ref: Int (S) E: Off	PNO: Fast #Avg Typ Gate: Off Trig: Free IF Gain: Low Sig Track: Off	De: Power (RMS 1 2 3 4 5 6 e Run MWWWW A N N N N N	Center Frequency 15.00000000 GHz	Settings
Spectrum v		Ň	Mkr1 19.533 5 GHz	Span 10.0000000 GHz	
cale/Div 10 dB	Ref Level 0.00 dE	3m	-47.04 dBm	Swept Span Zero Span	
				Full Span	
20.0				Start Freq 10.000000000 GHz	
0.0				Stop Freq 20.00000000 GHz	
0.0	Albi ta da anti Mibi ta da ta ta ta da a si ta da			AUTO TUNE	
0.0 Examples and an	na na serie de la constantina de la const A constant de la constantina de la const			CF Step 1.000000000 GHz	
0.0				Auto Man	
00.0				Freq Offset 0 Hz	
art 10.000 GHz Res BW 1.0 MHz	#Video BW 3.0 M		Stop 20.000 GHz veep ~18.9 ms (20001 pts)	X Axis Scale Log Lin	Local
	ov 02, 2021			Signal Track (Span Zoom)	

Plot 7-30. Conducted Spurious Plot (GPRS Ch. 661)

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EYSIGHT Input: RF Coupling: DC Align: Auto/No RF	Input Z: 50 Ω Atten: 30 dB PNO: Fast Gorr CCorr RCal μW Path: Standard Gate: Off IF Gain: Low Freq Ref. Int (S) Sig Track: Off Sig Track: Off	f M₩₩₩₩₩ f A N N N N N	er Frequency 000000 MHz
Spectrum ▼ ale/Div 10 dB	Ref Level 20.00 dBm	-40.25 dBm 📻 s	000000 GHz Swept Span Zero Span
Trace 1 Pass		Start	Full Span
.0			00000 MHz
			0000000 GHz
	ารกับสารที่เหล่ามีสุขาญเป็นสารแก่ สนาร์กับสีขาง นั่งกับการสารได้เร็า และแก่ กับเร็าสี่มายสารสุขไหนของได้	1 CF St 182.0	tep 000000 MHz
.0			Auto Man Offset
.0		0 Hz	
rt 0.0300 GHz es BW 1.0 MHz	#Video BW 3.0 MHz		Log Lin

Plot 7-31. Conducted Spurious Plot (GPRS Ch. 810)

Spectrum Analyzer 1					Frequency	· · · · · · · · · · · · · · · · · · ·
L Coupling: DC Cou	but Z: 50 Ω Atten: 30 dB vr CCorr RCal μW Path: Standard eq Ref: Int (S) E: Off	PNO: Fast #Av Gate: Off Trig IF Gain: Low Sig Track: Off		23456 \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	Center Frequency 5.957500000 GHz	Settings
1 Spectrum 🔹		,	Mkr1 9.980	0 GHz	Span 8.08500000 GHz	
cole/Div 10 dB	Ref Level 20.00 dl	Bm	-33.2	26 dBm	Swept Span Zero Span	
10.0					Full Span	
0.00					Start Freq 1.915000000 GHz	
20.0					Stop Freq 10.000000000 GHz	
30.0		and the test of the file		1	AUTO TUNE	
			and the second		CF Step 808.500000 MHz	
50.0					Auto Man	
					Freq Offset 0 Hz	
tart 1.915 GHz Res BW 1.0 MHz	#Video BW 3.0 M	Hz	Stop 10 Sweep ~14.9 ms (1	0.000 GHz I6181 pts)	X Axis Scale Log Lin	
1 7 7 7 ? `	lov 02, 2021 9:44:37 AM				Signal Track (Span Zoom)	

Plot 7-32. Conducted Spurious Plot (GPRS Ch. 810)

FCC ID: A3LSMS906E	Potest (Contents	PART 24 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager
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L Coupling: DC Align: Auto/No RF	Input Ζ: 50 Ω Atten: 10 dB Corr CCorr RCal μW Path: Standa Freq Ref: Int (S) NFE: Off	PNO: Fast ard Gate: Off IF Gain: Low Sig Track: Off		WWWW 15.00000000 GHz	Settings
Spectrum v			Mkr1 19.519	10.000000 CH IE	
cale/Div 10 dB . ^{og} Trace 1 Pass	Ref Level 0.00 c	dBm	-46.8	9 dBm Swept Span Zero Span	
				Full Span	
20.0				Start Freq 10.000000000 GHz	
40.0				Stop Freq 20.00000000 GHz	
	e Hilley ratio di bayanta e	a tarkana mana di kana ang pangan kana kani kani kani kani kani kani ka		AUTO TUNE	
70.0				CF Step 1.000000000 GHz Auto	
				Man	
				Freq Offset 0 Hz	
tart 10.000 GHz Res BW 1.0 MHz	#Video BW 3.0	MHz	Stop 20. Sweep ~18.9 ms (20		

Plot 7-33. Conducted Spurious Plot (GPRS Ch. 810)

FCC ID: A3LSMS906E	PCTEST Proad to be part of @wikement	PART 24 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager
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WCDMA PCS

L T + Coupling: DC Align: Auto		uW Path: Standard	PNO: Fast Gate: Off IF Gain: Low Sig Track: Off	#Avg Type: Power Trig: Free Run	(RMS <mark>123456</mark> A WWWWW ANNNNN	Center Frequency 937.500000 MHz Span	Settings
Spectrum v cale/Div 10 dB	R	ef Level 20.00 dE	3m		1.845 0 GHz -35.832 dBm	1.81500000 GHz	
Trace 1 Pass						Full Span	
00						Start Freq 30.000000 MHz	
						Stop Freq 1.845000000 GHz	
					<u> </u>	AUTO TUNE	
				Jacobia and a constant		CF Step 181.500000 MHz	
0.0	An an Talanta Alaka Ang Kanana Ang					Auto Man Freq Offset	
						0 Hz	Loca
art 0.0300 GHz es BW 1.0 MHz	#	Video BW 3.0 Mł	łz	Sweep 2	Stop 1.8450 GHz 2.43 ms (3641 pts)	Log	Loo

Plot 7-34. Conducted Spurious Plot (WCDMA Ch. 9262)



Plot 7-35. Conducted Spurious Plot (WCDMA Ch. 9262)

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EYSIGHT Input: RF T +++ Coupling: DC Align: Auto		10 dB PNO: Fast ath: Standard Gate: Off IF Gain: Low Sig Track: Off		3 4 5 6 Center Frequency 15.00000000 GHz Span
Spectrum v ale/Div 10 dB	Ref Lo	evel 0.00 dBm	Mkr1 19.495 -54.34	5 GHz 10.000000 GHz
Trace 1 Pass				Full Span
0.0				10.00000000 GHz Stop Freq
0.0				20.00000000 GHz AUTO TUNE
D.0 D.0				CF Step 1.000000000 GHz
				Man Freq Offset 0 Hz
art 10.000 GHz es BW 1.0 MHz	#Vide	o BW 3.0 MHz	Stop 20. Sweep ~18.9 ms (20	.000 GHz

Plot 7-36. Conducted Spurious Plot (WCDMA Ch. 9262)

wept SA KEYSIGHT Input: RF RLT → Align: Auto xr	Input Ζ: 50 Ω Corr CCorr RCal Freq Ref: Int (S) NFE: Off	Atten: 30 dB µW Path: Standard	PNO: Fast Gate: Off IF Gain: Low Sig Track: Off	#Avg Type: Pov Trig: Free Run	ver (RMS <mark>123456</mark> A WW WW W A N N N N N	Center Frequency 940.000000 MHz	Settings
Spectrum v cale/Div 10 dB		Ref Level 20.00 dl	Зm	Mkr	1 1.762 5 GHz -49.381 dBm	Span 1.82000000 GHz Swept Span Zero Span	
Trace 1 Pass						Full Span	
0.0						30.000000 MHz Stop Freq 1.850000000 GHz	
						AUTO TUNE	
0.0	۵۰۰۵۵ زیر من مدیر مورد و رواند روانده و مدیر و روانده و مدیر و رواند و رواند و رواند و رواند و رواند و رواند و مورد و رواند و ر	naini daadhaa aheyyaanadhiyaadhaa nagaqa	4+4,~~~,	م	↓ 1	CF Step 182.000000 MHz Auto	4.
						Man Freq Offset 0 Hz	
art 0.0300 GHz Res BW 1.0 MHz		#Video BW 3.0 M	Hz	Swee	Stop 1.8500 GHz p 2.43 ms (3641 pts)		Loca
	Nov 01, 2021 5:51:57 PM					Signal Track (Span Zoom)	

Plot 7-37. Conducted Spurious Plot (WCDMA Ch. 9400)

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pectrum Analyzer 1 wept SA EYSIGHT Input: RF Coupling: DC Align: Auto Ø	Γ Input Z: 50 Ω Atten: 30 dB PNO: Fast Corr CCorr RCal μW Path: Standard Gate: Off Freq Ref: Int (S) IF Gain: Lor NFE: Off Sig Track C	
Spectrum v cale/Div 10 dB	Ref Level 20.00 dBm	Mkr1 9.986 0 GHz -41.295 dBm Swept Span
Trace 1 Pass		Full Span Start Freq
0.0		1.91000000 GHz Stop Freq 10.00000000 GHz
0.0	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	AUTO TUNE CF Step 809.000000 MHz
0.0		Auto Man Freq Offset 0 Hz
art 1.910 GHz Res BW 1.0 MHz	#Video BW 3.0 MHz	Stop 10.000 GHz Sweep ~14.9 ms (16181 pts)

Plot 7-38. Conducted Spurious Plot (WCDMA Ch. 9400)



Plot 7-39. Conducted Spurious Plot (WCDMA Ch. 9400)

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LT + Coupling: DC Align: Auto	nput Z: 50 Ω Atten: 30 dB Corr CCorr RCal μW Path: Standar Freq Ref: Int (S) NFE: Off	PNO: Fast #Avg Type d Gate: Off Trig: Free IF Gain: Low Sig Track: Off	: Power (RMS <mark>123456</mark> Run A WW WW W A N N N N N	Center Frequency 940.000000 MHz Span
Spectrum v cale/Div 10 dB	Ref Level 20.00 c		Mkr1 1.842 0 GHz -48.878 dBm	1.82000000 GHz
¹ Trace 1 Pass 0.0				Full Span
0.0				30.000000 MHz Stop Freq 1.850000000 GHz
0.0				AUTO TUNE
0.0 0.0 parage production of the second	28-28-29-29-29-29-29-29-29-29-29-29-29-29-29-	and the second standing of the second standing of the second second second second second second second second s	<u>1</u>	CF Step 182.000000 MHz Auto Man
0.0				Freq Offset 0 Hz
art 0.0300 GHz tes BW 1.0 MHz	#Video BW 3.0 M		Stop 1.8500 GHz weep 2.43 ms (3641 pts)	X Axis Scale

Plot 7-40. Conducted Spurious Plot (WCDMA Ch. 9538)



Plot 7-41. Conducted Spurious Plot (WCDMA Ch. 9538)

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L T + Coupling: DC Align: Auto	Input Z: 50 Ω Atten: 10 Corr CCorr RCal μW Path Freq Ref: Int (S) NFE: Off	dB PNO: Fast Standard Gate: Off IF Gain: Low Sig Track: Off	#Avg Type: Powe Trig: Free Run	er (RMS <mark>123456</mark> A WWWWW A N N N N N	Center Frequency 15.000000000 GHz Span	Settings
Spectrum v cale/Div 10 dB	Ref Leve	el 0.00 dBm	Mkr1	19.498 0 GHz -54.332 dBm	10.0000000 GHz	
Trace 1 Pass					Zero Span	
10.0					Full Span	
30.0					Start Freq 10.000000000 GHz	
40.0					Stop Freq 20.000000000 GHz	
				● ¹	AUTO TUNE	
70.0	20 ¹⁰ 100-01/000-000-				CF Step 1.000000000 GHz	
30.0					Auto Man	
					Freq Offset 0 Hz	
tart 10.000 GHz Res BW 1.0 MHz	#Video E	BW 3.0 MHz	Sweep ~1	Stop 20.000 GHz 18.9 ms (20001 pts)		

Plot 7-42. Conducted Spurious Plot (WCDMA Ch. 9538)

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7.4 Band Edge Emissions at Antenna Terminal

Test Overview

All out of band emissions are measured with a spectrum analyzer connected to the antenna terminal of the EUT while the EUT is operating at maximum power, and at the appropriate frequencies. All data rates were investigated to determine the worst case configuration. All modes of operation were investigated and the worst case configuration results are reported in this section.

The minimum permissible attenuation level of any spurious emission is $43 + 10 \log_{10}(P_{[Watts]})$, where P is the transmitter power in Watts.

Test Procedure Used

KDB 971168 D01 v03r01 - Section 6.0

Test Settings

- 1. Start and stop frequency were set such that the band edge would be placed in the center of the plot
- 2. Span was set large enough so as to capture all out of band emissions near the band edge
- 3. RBW \geq 1% of the emission bandwidth
- 4. VBW \geq 3 x RBW
- 5. Detector = RMS
- 6. Number of sweep points $\geq 2 \times \text{Span/RBW}$
- 7. Trace mode = trace average for continuous emissions, max hold for pulse emissions
- 8. Sweep time = auto couple
- 9. The trace was allowed to stabilize

Test Setup

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



Figure 7-3. Test Instrument & Measurement Setup

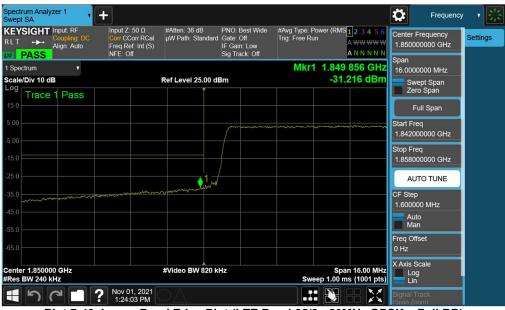
Test Notes

Per 24.238(a) and RSS-133(6.5), in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed to demonstrate compliance with the out-of-band emissions limit. The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emission are attenuated at least 26 dB below the transmitter power.

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LTE Band 25/2



Plot 7-43. Lower Band Edge Plot (LTE Band 25/2 - 20MHz QPSK - Full RB)

Spectrum Analyzer 1	+			Frequency	- 7 蒜
KEYSIGHT Input: RF R L T ↔ Align: Auto	Input Z: 50 Ω #Atten: 3 Corr CCorr RCal μW Path: Freq Ref: Int (S) NFE: Off	6 dB PNO: Fast Standard Gate: Off IF Gain: Low Sig Track: Off	#Avg Type: Power (RMS 1 2 3 4 5 6 A WW WW A N N N N N	Center Frequency 1.847000000 GHz	Settings
1 Spectrum v Scale/Div 10 dB	Ref Leve	25.00 dBm	Mkr1 1.849 000 GHz -26.753 dBm	Span 4.00000000 MHz Swept Span	
Log Trace 1 Pass				Zero Span Full Span	
5.00				Start Freq 1.845000000 GHz	
-5.00				Stop Freq 1.849000000 GHz	
and and many the second s	and the second			AUTO TUNE	
-35.0				CF Step 400.000 kHz	
-55.0				Man Freq Offset	
-65.0 Center 1.847000 GHz	#Video E	SW 3.0 MHz	Span 4.000 MHz	0 Hz X Axis Scale Log	
#Res BW 1.0 MHz	Nov 01, 2021 1:24:24 PM		Sweep 1.00 ms (1001 pts)	Lin Signal Track (Span Zoom)	

Plot 7-44. Extended Lower Band Edge Plot (LTE Band 25/2 - 20MHz QPSK - Full RB)

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EYSIGHT Input: RF L T +++ Coupling: DC Align: Auto		#Atten: 36 dB IW Path: Standard IF Gain: Low Sig Track: Off	#Avg Type: Power (RMS123456 Trig: Free Run A WWWW A N N N N N	Center Frequency 1.910000000 GHz
Spectrum v cale/Div 10 dB	R	ef Level 25.00 dBm	Mkr1 1.910 080 GHz -30.022 dBm	16.0000000 MHz
Trace 1 Pass	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~			Full Span
				1.902000000 GHz Stop Freq 1.918000000 GHz
		1-	man man and a second	AUTO TUNE CF Step
				1.600000 MHz Auto Man
5.0	#	Video BW 820 kHz	Span 16.00 MH	Freq Offset 0 Hz X Axis Scale

Plot 7-45. Upper Band Edge Plot (LTE Band 2 - 20MHz QPSK – Full RB)

L T + Coupling: DC Align: Auto	Input Z: 50 Ω #Atten: 36 dB Corr CCorr RCal μW Path: Standard Freq Ref: Int (S) NFE: Off	PNO: Fast # I Gate: Off T IF Gain: Low Sig Track: Off	Avg Type: Power (RMS 1 2 3 4 5 6 rig: Free Run A WW WW W A N N N N N	1.913000000 GHz
Spectrum v cale/Div 10 dB	Ref Level 25.00 d	Bm	Mkr1 1.911 368 GH -25.508 dBn	4.00000000 MHz
⁵ Trace 1 Pass 				Full Span
5.0				1.911000000 GHz Stop Freq 1.915000000 GHz
5.0	quantizationtal film interry search and demonstration and an I particular	Lanorman ware weeks on	ant for any for a second se	AUTO TUNE
				400.000 kHz Auto Man
				Freq Offset 0 Hz
enter 1.913000 GHz tes BW 1.0 MHz	#Video BW 3.0 M	IHz	Span 4.000 MH Sweep 1.00 ms (1001 pts	

Plot 7-46. Extended Upper Band Edge Plot (LTE Band 2 - 20MHz QPSK – Full RB)

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KEYSIGHT Input: RF RLT Coupling: DC Align: Auto Align: Auto	Input Z: 50 Ω Corr CCorr RCal Freq Ref: Int (S) NFE: Off	#Atten: 36 dB PNO: Best Wi µW Path: Standard Gate: Off IF Gain: Low Sig Track: Off	Trig: Free Run	Center Frequency 1.915000000 GHz Span
Spectrum v cale/Div 10 dB		Ref Level 25.00 dBm	Mkr1 1.915 000 GH; -31.011 dBm	16.0000000 MHz
5.0 5.0				Full Span
5.00	mmmm	min l		Start Freq 1.907000000 GHz Stop Freq
		- <u>1</u>		1.923000000 GHz
		"Marine marine	man man and the second	CF Step 1.600000 MHz
				Auto Man
				Freq Offset 0 Hz
enter 1.915000 GHz Res BW 240 kHz		#Video BW 820 kHz	Span 16.00 MH Sweep 1.00 ms (1001 pts	

Plot 7-47. Upper Band Edge Plot (LTE Band 25 - 20MHz QPSK – Full RB)

		Gate: Off Trig: Free Rui IF Gain: Low Sig Track: Off	A WW WW W A N N N N N	Center Frequency 1.918000000 GHz Span	Settings
Spectrum v cale/Div 10 dB	Ref Level 25.00 dB		1.916 000 GHz -25.577 dBm	4.00000000 MHz Swept Span Zero Span	
5.0 Trace 1 Pass				Full Span Start Freq	
5.0				1.916000000 GHz Stop Freq 1.920000000 GHz	
5.0		freesenses and a second and a second	hard a start and a start and a start a	AUTO TUNE CF Step	
				400.000 kHz Auto Man	
5.0	#Video BW 3.0 MH			Freq Offset 0 Hz X Axis Scale	Loca

Plot 7-48. Extended Upper Band Edge Plot (LTE Band 25 - 20MHz QPSK – Full RB)

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L T + Coupling: DC Align: Auto	Input Z: 50 Ω #Atten: 36 dB Corr CCorr RCal μW Path: Standard Freq Ref: Int (S) NFE: Off	PNO: Best Wide #Avg Type I Gate: Off Trig: Free I IF Gain: Low Sig Track: Off	: Power (RMS <mark>1</mark> 23456 Run A WW WW W A N N N N N	Center Frequency 1.850000000 GHz
Spectrum v cale/Div 10 dB	Ref Level 25.00 d		r1 1.849 820 GHz -30.575 dBm	12.0000000 MHz
5.0 Trace 1 Pass				Full Span Start Freq
5.0				1.844000000 GHz Stop Freq 1.856000000 GHz
5.0				AUTO TUNE CF Step 1,200000 MHz
				Auto Man Freq Offset
5.0 enter 1.850000 GHz tes BW 180 KHz	#Video BW 620 k		Span 12.00 MHz weep 1.00 ms (1001 pts)	0 Hz X Axis Scale

Plot 7-49. Lower Band Edge Plot (LTE Band 25/2 - 15MHz QPSK - Full RB)

L T + Coupling: DC Align: Auto F	Input Z: 50 Ω #Atten: 36 dB Corr CCorr RCal μW Path: Standa Freq Ref: Int (S) NFE: Off	PNO: Fast #Avg Tyr rd Gate: Off Trig: Fre IF Gain: Low Sig Track: Off	De: Power (RMS <mark>1</mark> 23456 e Run A WWWW A N N N N N	1.847000000 GHz	ettings
Spectrum v cale/Div 10 dB	Ref Level 25.00		kr1 1.849 000 GHz -24.150 dBm	4.00000000 MHz	
5.0 Trace 1 Pass				Full Span Start Freq 1.845000000 GHz	
5.0			1,	1.84900000 GHz	
5.0 5.0	aurenander erenden er	nahalan kurun belangun panakar minangun panakar	n an fan yn	AUTO TUNE CF Step 400.000 kHz	
				Auto Man Freq Offset 0 Hz	
nter 1.847000 GHz es BW 1.0 MHz	#Video BW 3.0		Span 4.000 MH: Sweep 1.00 ms (1001 pts		Loca

Plot 7-50. Extended Lower Band Edge Plot (LTE Band 25/2 - 15MHz QPSK – Full RB)

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EYSIGHT Input: RF L T + Align: Auto	Input Z: 50 Ω #Atten: 36 dB Corr CCorr RCal μW Path: Standard Freq Ref: Int (S) NFE: Off	PNO: Best Wide #Avg T Gate: Off Trig: Fr IF Gain: Low Sig Track: Off	ype: Power (RMS <mark>123456</mark> ee Run A WWWW A N N N N N	Center Frequency 1.910000000 GHz Span	Settings
Spectrum v cale/Div 10 dB	Ref Level 25.00 di		Akr1 1.911 836 GHz -28.873 dBm	12.0000000 MHz	
Trace 1 Pass				Full Span	
00				Start Freq 1.904000000 GHz Stop Freq	
		1		1.916000000 GHz	
	· · · · · · · · · · · · · · · · · · ·		www.werenautorenautorenautorenautorenautorenautorenautorenautorenautorenautorenautorenautorenautorenautorenauto	CF Step 1.200000 MHz	
				Auto Man	
				Freq Offset 0 Hz X Axis Scale	Loc
nter 1.910000 GHz es BW 180 kHz	#Video BW 620 k	Hz	Span 12.00 MH Sweep 1.00 ms (1001 pts	Log	

Plot 7-51. Upper Band Edge Plot (LTE Band 2 - 15MHz QPSK – Full RB)

EYSIGHT Input: RF L T +++ Coupling: DC Align: Auto	Input Z: 50 Ω #Atten: 36 dB Corr CCorr RCal μW Path: Standard Freq Ref: Int (S) NFE: Off	PNO: Fast #Avg Type: Po I Gate: Off Trig: Free Run IF Gain: Low Sig Track: Off	ower (RMS <mark>123456</mark> n A WW WW W A N N N N N	Center Frequency 1.913000000 GHz	Settings
Spectrum v cale/Div 10 dB	Ref Level 25.00 d		1.911 000 GHz -24.305 dBm	Span 4.00000000 MHz Swept Span Zero Span	
5.0 .00				Full Span Start Freq	
5.0				1.911000000 GHz Stop Freq 1.915000000 GHz	
5.0	and a construction of large pro-above and which are by the low of the second	the frank and the grower of the the state of	~\$^~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	AUTO TUNE CF Step	
				400.000 kHz Auto Man	
5.0	#Video BW 3.0 N		Span 4.000 MHz	Freq Offset 0 Hz X Axis Scale	Loca

Plot 7-52. Extended Upper Band Edge Plot (LTE Band 2 - 15MHz QPSK – Full RB)

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EYSIGHT Input: RF Coupling: DC Align: Auto	Input Ζ: 50 Ω Corr CCorr RCal Freq Ref: Int (S) NFE: Off	µW Path: Standard Gate: IF Gai	Off Trig: Free Rur	wer (RMS <mark>1</mark> 23456 A WWWWW A N N N N N	Center Frequency 1.915000000 GHz Span	Setting
Spectrum v cale/Div 10 dB		Ref Level 25.00 dBm	Mkr1	1.915 024 GHz -30.394 dBm	12.0000000 MHz Swept Span Zero Span	
5.0 Trace 1 Pass					Full Span	
.00	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	~~~			Start Freq 1.909000000 GHz	
					Stop Freq 1.921000000 GHz	
		tun 1			AUTO TUNE	
5.0				~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	CF Step 1.200000 MHz	
					Auto Man Freg Offset	
					0 Hz	
enter 1.915000 GHz Res BW 180 kHz		#Video BW 620 kHz	Swe	Span 12.00 MHz ep 1.00 ms (1001 pts)	X Axis Scale Log Lin	

Plot 7-53. Upper Band Edge Plot (LTE Band 25 - 15MHz QPSK – Full RB)

KEYSIGHT Input: RF Coupling: DC Align: Auto M PASS		µW Path: Standard	PNO: Fast Gate: Off IF Gain: Low Sig Track: Off	#Avg Type: Po Trig: Free Run	wer (RMS <mark>123456</mark> A WWWW A N N N N N	1.91000000 GHZ	Settings
Spectrum v cale/Div 10 dB	R	tef Level 25.00 dE	3m	Mkr1	1.916 476 GHz -24.243 dBm	Swept Span	
5.0 Trace 1 Pass						Zero Span Full Span	
						Start Freq 1.916000000 GHz Stop Freg	
5.0						1.920000000 GHz	
		and and a state of the state of	An	and the second second	Murten Ansantosa (jun Murdingurantens	CF Step 400.000 kHz	
						Auto Man	
						Freq Offset 0 Hz X Axis Scale	Loca
enter 1.918000 GHz Res BW 1.0 MHz	#	≠Video BW 3.0 Mł	łz	Swee	Span 4.000 MHz ep 1.00 ms (1001 pts)	Log	2002

Plot 7-54. Extended Upper Band Edge Plot (LTE Band 25 - 15MHz QPSK – Full RB)

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LT + Coupling: DC Align: Auto	Input Z: 50 0 #Atten: 36 dB PNO: Best Wid Corr CCorr RCal Freq Ref: Int (S) NFE: Off IS Int (S)	e #Avg Type: Power (RMS 1 2 3 4 5 6 Trig: Free Run A WW WW A N N N N N	Center Frequency 1.850000000 GHz Span
Spectrum v cale/Div 10 dB	Ref Level 25.00 dBm	Mkr1 1.849 992 GHz -29.974 dBm	8.00000000 MHz
5.0 Trace 1 Pass			Full Span Start Freq
5.0			1.846000000 GHz Stop Freq 1.854000000 GHz
	1 ×		AUTO TUNE CF Step 800.000 kHz
5.0			Auto Man Freq Offset
5.0 enter 1.850000 GHz Res BW 120 KHz	#Video BW 430 kHz	Span 8.000 MHz Sweep 1.00 ms (1001 pts)	

Plot 7-55. Lower Band Edge Plot (LTE Band 25/2 - 10MHz QPSK - Full RB)

GHz dBm Two Span Swept Span Two Span
Full Span
Start Freq 1.845000000 GHz Stop Freq
1.849000000 GHz AUTO TUNE
CF Step 400.000 kHz
Auto Man Freq Offset
0 Hz X Axis Scale

Plot 7-56. Extended Lower Band Edge Plot (LTE Band 25/2 - 10MHz QPSK – Full RB)

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