8.1.6. NR Band n77 (3700 ~ 3980 MHz)



100 MHz / π/2 BPSK / FULL RB Size



100 MHz / QPSK / FULL RB Size



Spectrum	Analy	zor 1															1.2
Occupied			•												Frequency	/ / 🖓	ŝ.
KEYSI RL	GHT ↔	Input: RF Coupling Align: Au	J: DC	Input Z Corr CC Freq R NFE: A	Corr ef: Int (S)	Atten: 44 dB Preamp: Off µW Path: Sta	ndard	Gate:		Avg	ter Freq Hold: 20 io Std: N) GHz		requency 0000 GHz	Settings	
1 Graph	_		•											Span 200.00 N	41.1~		
Scale/Di	v 10.0					Ref Value 30.	00 di	3m							/ITZ		
Log 20.0 10.0				aha	at a firm on the state	the course of the second		chan din seasonas	an ter mada Kayari	laan, tahaa				CF Step 20.0000			
0.00														Man			
-30.0	Muna Mula	kalenhe-ade		ril							Umer	anonteenphrodom	manutula	Freq Offs 0 Hz	et		
-40.0																	
-60.0	7500					/ideo BW 3.0	000	MI				0-	000 5411-				
#Res BW					#\	/IGeo BVV 3.0	000	VIHZ			Sw	eep 20.0 ms	an 200 MHz s (1001 pts)				
2 Metrics			•														
								Meas	sure Trace		Trace	1					
	Occup	bied Ban	dwidth 96.493	MHz				Total	Power			30.9 dE	3m				
		mit Freq 3andwidt			-669.06 kHz 99.93 MHz			% of x dB	OBW Pow	er		99.00 -26.00				Loca	al
	ר ר]?		8, 2025 :34 AM												

Spectrum Occupied		zer 1	+								Frequency	
REYSI		Input: RF Coupling: DC Align: Auto	Input Z: 50 Ω Corr CCorr Freq Ref: Int (S) NFE: Adaptive	Atten: 44 dB Preamp: Off μW Path: Standard	Trig: Free Run Gate: Off #IF Gain: Low	Avg	er Freq: Hold: 20 o Std: N		GHz		requency 0000 GHz	Settings
1 Graph		•								200.00 I	ИHz	
Scale/Di	iv 10.0	dB		Ref Value 30.00 dl	Зm					CF Step		
Log 20.0										20.0000	00 MHz	
10.0										Auto Mar)	
-10.0										Freq Offs	set	
-30.0 Mark	halvanab	or and the second s	-Mark				holym	had all of growing all a factoria and the second	alisamultime	0 Hz		
-40.0												
-50.0 -60.0												
Center 3	7500 (GHz		#Video BW 3.0000	MHz			Spar	n 200 MHz			
#Res BV					111 IZ		Sw	eep 20.0 ms				
2 Metrics		•							_			
	_				Measure Trace							
	Occup	ied Bandwidth 96.44	1 MHz		Total Power			30.3 dBr	n			
	Transr	nit Freg Error	-601.82 kl	HZ	% of OBW Powe	ər		99.00 %				
		andwidth	99.94 MI		x dB	51		-26.00 di				Local
	າ (Apr 08, 2025 11:37:41 AM									
			10				11		~			

100 MHz / 64QAM / FULL RB Size



Spectrun	n Analyze	r 1 ү	+									Č	Frequenc	y v	尜
		put: RF pupling: DC ign: Auto			Atten: 44 dB Preamp: Off µW Path: Star	Ga	g: Free Run ate: Off ⁻ Gain: Low	Avg	nter Freq g Hold: 2 dio Std: 1) GHz		equency 0000 GHz	Settings	
1 Graph		•										Span 200.00 M	1Hz		
	iv 10.0 d e	3			Ref Value 30.	00 dBm						CF Step			
Log 20.0												20.0000	00 MHz		
10.0				er	and the and a state of the stat		(manakating ang ang ang ang ang ang ang ang ang a	** <u>~</u>				Auto Man		1	
-10.0 -20.0 -30.0	up the area the	protected at the second	-and						harrison	hand and the state of the state	an open son and a state	Freq Offs 0 Hz	et		
-40.0															
-50.0															
Center 3	8.7500 GH V 1.0000		.	#	Video BW 3.0	000 MH	z		Sw	Sp Sp	an 200 MHz s (1001 pts)				
2 Metrics		•													
						N	leasure Trac	æ	Trace	1					
	Occupie	d Bandwidth 96.30	65 MHz			т	otal Power			28.3 dE	βm				
	Transmit x dB Bar	t Freq Error		-640.41 kH 100.0 MH			of OBW Pc dB	wer		99.00 -26.00				Lo	cal
	って			98, 2025 9:48 AM											

100 MHz / 256QAM / FULL RB Size



Spectrum Occupied	BW	•	+										Frequency	V	$\begin{bmatrix} x^1 z \\ z_1 x \end{bmatrix}$
RL ·		Input: RF Coupling: DC Align: Auto	Corr (Freq I	Z: 50 Ω CCorr Ref: Int (S) Adaptive	Atten: 44 dB Preamp: Off μW Path: Stand	Gate		Avg	iter Freq: Hold: 20 lio Std: N		GHz		Frequency 000000 GHz	Settin	igs
1 Graph		•											0 MHz		
Scale/Div	v 10.0 (dB			Ref Value 30.0	0 dBm						CF Ste	in .		
20.0													0000 MHz		
10.0				an Baran and an	in head of a low and a strange pro-	www.and.pedl	w. An an and a second	uner				A	uto		
0.00									Ì			M	an		
00.0	en Haferander	an la la faithean an a	mennen						-	trades and the second	adurante	Freq C 0 Hz	ffset		
-40.0												0112			
-50.0															
-60.0															
Center 3. #Res BW				#	/ideo BW 3.00	00 MHz			Sw	Spa eep 20.0 ms	an 180 MHz ; (1001 pts)				
2 Metrics		•													
	_					Mea			Trace	1					
	Occup	ied Bandwidth 85.0	n 675 MHz			Tota	al Power			32.5 dB	ŝm				
		nit Freq Error		-915.93 kH		% o	f OBW Pow	er		99.00					ocal
	x dB B	andwidth		89.06 MH	Z	x dE	3			-26.00 (βB			Ľ	Local
	<u>う</u> (? Apr 2:2	08, 2025 9:15 PM											

Occupied		+				‡	Frequency	- 7 器
RL RL	GHT Input: RF Coupling: DC Align: Auto	Input Z: 50 Ω Corr CCorr Freq Ref: Int (S) NFE: Adaptive	Atten: 44 dB Preamp: Off µW Path: Standard	Trig: Free Run Gate: Off #IF Gain: Low	Center Freq: 3.745020000 G Avg Hold: 200/200 Radio Std: None	Cen	nter Frequency 45020000 GHz	Settings
1 Graph	•						0.00 MHz	
	iv 10.0 dB		Ref Value 30.00 dl	Bm		CE	Step	
Log 20.0 10.0 0.00			المراجع	aut-Burran ann an Anna an Anna	etarin		.000000 MHz Auto Man	
-10.0 -20.0 -30.0	mounderstand	"Al-p.i.gen			Mikeleroorineerikulirrengi	Free 0 H	q Offset	
-50.0								
	3.74502 GHz V 910.00 kHz	;	#Video BW 3.0000	MHz	Span Sweep 20.0 ms(180 MHz 1001 pts)		
2 Metrics	. v							
	Occupied Bandwid	th		Measure Trace	Trace 1			
		.703 MHz		Total Power	32.0 dBm			
	Transmit Freq Erro x dB Bandwidth	r -971.30 kł 89.07 Mł		% of OBW Powe x dB	er 99.00 % -26.00 dB			Local
	って	1:40:06 PM						
		0			III DR Ciza			

90 MHz / QPSK / FULL RB Size



Spectrun Occupied	n Analyzer 1 d BW	+						•	Frequency	- * 影
	GHT Input: RF ↔→ Coupling: DC Align: Auto	Input Z: 50 Ω Corr CCorr Freq Ref: Int (S) NFE: Adaptive	Atten: 44 dB Preamp: Off µW Path: Standard	Trig: Free Run Gate: Off #IF Gain: Low		req: 3.74502000 I: 200/200 d: None	00 GHz	Center Freq 3.74502000		Settings
1 Graph	•							Span 180.00 MH:	z	
Log 20.0 10.0 0.00	iv 10.0 dB		Ref Value 30.00 dl					CF Step 18.000000 Auto Man	MHz	
-10.0 -20.0 -30.0 -40.0 -50.0	an a					¹ พักว่าไปให้สุปาสมีการการเป	lergedenskaligeredensk for	Freq Offset 0 Hz		
	9.74502 GHz V 910.00 kHz		#Video BW 3.0000	MHz		Sj Sweep 20.0 m	oan 180 MHz ns (1001 pts)			
2 Metrics				Measure Trace	Tra	ce 1				
	Occupied Bandwidth 85.6	94 MHz		Total Power		31.0 c	IBm			
	Transmit Freq Error x dB Bandwidth	-937.09 kl 89.18 Ml		% of OBW Power x dB	er	99.0 -26.00				Local
	2 6 1	Apr 08, 2025 1:52:25 PM								

Occupied		+					Frequency	宗
	GHT Input: RF Coupling: DC Align: Auto	Input Ζ: 50 Ω Corr CCorr Freq Ref: Int (S) NFE: Adaptive	Atten: 44 dB Preamp: Off µW Path: Standard	Trig: Free Run Gate: Off #IF Gain: Low	Center Freq: 3.9349 Avg Hold: 200/200 Radio Std: None	80000 GHz	Center Frequency 3.934980000 GHz Span	Settings
1 Graph	•						180.00 MHz	
Log 20.0 10.0 -10.0 -20.0 -30.0 -40.0 -50.0 -60.0 Center 3	v 10.0 dB		Ref Value 30.00 dl			Span 180 MHz .0 ms (1001 pts)	CF Step 18.000000 MHz Auto Man Freq Offset 0 Hz	
2 Metrics	v			Measure Trace	Trace 1			
	Occupied Bandwidth 85.6	661 MHz		Total Power).6 dBm		
	Transmit Freq Error x dB Bandwidth	-941.07 kH 89.22 MH		% of OBW Powe x dB		99.00 % 6.00 dB		Local
	n r	3:28:27 PM						

90 MHz / 64QAM / FULL RB Size



Spectrum	Analy	zer 1	• +											t.	Frequency	y v	21/2 21/2
RL		Input: RF Coupling: Align: Auto				Atten: 44 d Preamp: O µW Path: S	ſf	Gate:		Avg	iter Freq Hold: 20 lio Std: N) GHz		equency 0000 GHz	Settir	
1 Graph		•												Span 180.00 M	1Hz		
Scale/Di	v 10.0	dB				Ref Value	30.00 dl	Bm									
20.0 10.0														CF Step 18.00000	00 MHz		
0.00								*******		and and track				Auto Man			
-20.0	به الجميعة	and the second	munand]							manny	al name to be	and any of a syndrometry	Freq Offs 0 Hz	et		
-40.0																	
-50.0 -60.0																	
Center 3 #Res BW				•	#	Video BW	3.0000	MHz			Sw		an 180 MHz s (1001 pts)				
2 Metrics		v											/				
								Meas									
	Occup	bied Band	width 85.737 I	MHz				Total	Power			28.5 dE	Зm				
		mit Freq E 3andwidth			-984.59 kH 89.07 MH			% of x dB	OBW Pow	er		99.00 -26.00					Local
		Sanuwidin			89.07 MF			хuр				-20.00	uв				
	ว (]?	Apr 0 2:16:	8, 2025 :43 PM												

90 MHz / 256QAM / FULL RB Size



Spectrum Occupied	Analyzer 1 BW	+								Frequency	- * 🛞
	GHT Input: RF Coupling: DC Align: Auto	Input Ζ: 50 Ω Corr CCorr Freq Ref: Int (S) NFE: Adaptive	Atten: 44 dB Preamp: Off µW Path: Standard	Trig: Free Run Gate: Off #IF Gain: Low	Avg H	er Freq: lold: 20 o Std: No		GHz	Center Fre 3.939990		Settings
1 Graph	v								Span _160.00 M	Hz	
Scale/Div	/ 10.0 dB		Ref Value 30.00 di	Bm					CF Step		
20.0 10.0 0.00			mal all here and a second of the second	mar Annor	******				16.00000	0 MHz	
-10.0	Land and the second					-	-	روم المراجع وماروم المراجع وم	Man Freq Offse	et	
-30.0 -40.0 -50.0									0 Hz		
-60.0											
	93999 GHz 820.00 kHz	7	Video BW 3.0000	MHZ		Swe	Spa Spaep 20.0 ms	an 160 MHz ; (1001 pts)			
2 Metrics	•										
	Occupied Bandwidth			Measure Trace	·	Trace 1					
		9 MHz		Total Power			32.5 dE	lm			
	Transmit Freq Error x dB Bandwidth	-231.78 k⊦ 80.17 M⊦		% of OBW Pow x dB	er		99.00 -26.00 d				Local
		Apr 08, 2025 5:17:16 PM	\Box								

Spectrum Occupied		zer 1 🗸	+									\$	Frequency	- * 宗
REYSI RL	GHT ·≁·	Input: RF Coupling: DC Align: Auto			Atten: 44 dB Preamp: Off µW Path: Standar	Gate:		Avgl	er Freq Hold: 20 o Std: N		GHz		Frequency 010000 GHz	Settings
1 Graph		•										_160.00) MHz	
Scale/Di	v 10.0	dB			Ref Value 30.00	dBm						CF Ste	n	
Log 20.0 10.0 0.00				فمنغامهما		Alah Madagamata							DOOO MHz ito	
-10.0	let.mentpa-4	Marriel Later Harrison	ulwe						hours	يل ي أم مد الروانيو (معراقها	whenthermon	Freq O 0 Hz		
-40.0 -50.0 -60.0														
Center 3 #Res BW				#	Video BW 3.000) MHz			Sw	Spa eep 20.0 ms	an 160 MHz ; (1001 pts)			
2 Metrics		•												
	Occup	ied Bandwidth				Mea								
	Occup		170 MHz			Tota	l Power			32.0 dB	im			
		nit Freq Error andwidth		-273.24 kH 80.29 MH		% of x dB	f OBW Powe	r		99.00 -26.00 c				Local
	า (:44 PM 🖒										

80 MHz / QPSK / FULL RB Size



Spectrum Occupied		zer 1	+												Frequency	· •	5 ¹ / 715
REYSI RL		Input: RF Coupling: DC Align: Auto	Cor Fre	r CC q Re	orr	Atten: 44 dB Preamp: Off μW Path: Star		Gate:		Avg	er Freq Hold: 2 o Std: N) GHz		Frequency 010000 GHz	Setti	ngs
1 Graph		•													0 MHz		
Scale/Di	v 10.0	dB			5	Ref Value 30.	00 dE	3m						CF Ste	'n		
20.0															ہ۔ 0000 MHz		
10.0 0.00			L I				ord fro Las				\				uto an		
-10.0														Freq O	offset		
-30.0	ang ng n	Anonal Marine	al wellow								الولديناهما	Manaa hay samulu	and and the second	0 Hz			
-40.0																	
-50.0																	
Center 3 #Res BW					#V	/ideo BW 3.0	000 1	MHz			Sw	Spa Spa	an 160 MHz s (1001 pts)				
2 Metrics		•															
								Meas	sure Trace		Trace	1					
	Occup	ied Bandwidi 77	th .202 MHz	2				Total	Power			30.9 dE	ßm				
		nit Freq Erro	r		301.63 kHz				OBW Powe	er		99.00					Local
	хавв	andwidth			80.17 MHz			x dB				-26.00	aв				
	า (, 2025 3 PM												

Spectrum Occupied		1 1	·							\$	Frequency	- * 影
		it: RF pling: DC n: Auto	Input Z: 50 Ω Corr CCorr Freq Ref: Int (S) NFE: Adaptive	Atten: 44 dB Preamp: Off µW Path: Standard	Trig: Free Run Gate: Off #IF Gain: Low	Center Avg Ho Radio	old: 20		GHz		Frequency 10000 GHz	Settings
1 Graph		•								160.00	MHz	
Scale/Div	/ 10.0 dB		_	Ref Value 30.00 d	Bm	_				CF Step		
Log 20.0 10.0 0.00			arthere are an anna	~10. pat (), d. 10. by Ala - a the word for	atten per aparte (para seguina ana ang per peri					16.000 Aut	o MHz	
-10.0							toral A a	ener and the control of the		Ma Freq Off		
-30.0	Jani Jani Luni Alda	inconductory Mid					74LAND 74.A		*****	0 Hz		
-60.0												
	74001 GH		•	#Video BW 3.0000	MHz	•	Sw	Spa eep 20.0 ms	n 160 MHz (1001 pts)			
2 Metrics		T										
	Occupied I	Bandwidth			Measure Trace	Π						
	Cooupied I	77.115	MHz		Total Power			30.5 dBi	m			
	Transmit F x dB Band		-259.83 k 80.23 M		% of OBW Pow x dB	er		99.00 9 -26.00 d				Local
	って	2	Apr 08, 2025 4:30:23 PM		40.414							

80 MHz / 64QAM / FULL RB Size



Spectrum Occupied		zer 1	• +										\$	Frequenc	у	v 🖧
KEYSI RL		Input: RF Coupling: I Align: Auto	OC Col	ut Z: 50 Ω rr CCorr q Ref: Int (S) E: Adaptive	Atten: 44 dB Preamp: Off μW Path: Sta		Gate:		Avg	ter Freq Hold: 2 io Std: N) GHz		requency 10000 GHz	Set	tings
1 Graph		•											160.00	MHz		
Scale/Div	v 10.0 (dB			Ref Value 30	0.00 dE	3m						CF Step			
20.0										1				00 MHz		
10.0				www.unanial.	agalan kapitatan pinana pinana	بالويعيد المادي	mandramout		****	1			Aute			
0.00													Mar			
-20.0										I L			Freq Off:	set	1	
-30.0 - 30 .0	when	with a second	and the second							khuw	ant refer something	her manufacture	0 Hz			
-40.0																
-60.0																
Center 3. #Res BW			•		#Video BW 3.	0000	ИНz			Sw	Spa Spa	an 160 MHz s (1001 pts)				
2 Metrics		v														
							Meas	sure Trace		Trace	1					
	Occupi	ied Bandv	vidth 77.268 MH:	z			Total	Power			28.5 dE	3m				
	Transn	nit Freq E	rror	-216.58 k	Hz		% of	OBW Pow	/er		99.00	%				
		andwidth		80.22 M	Hz		x dB				-26.00	dB				Local
	า (or 08, 2025 :06:30 PM	\square											

80 MHz / 256QAM / FULL RB Size



Spectrum A Occupied B		+										Ŭ.	Frequency		2
	HT Input: RF	Input Z: 5 Corr CCo Freq Ref NFE: Ada	orr : Int (S)	Atten: 44 dΒ Preamp: Off μW Path: Star		Gate: (A١	enter Freq. /g Hold: 20 adio Std: N) GHz	Center Fr 3.945000 Span		Settings	
1 Graph	•											3pan 140.00 N	IHz		
Scale/Div ' Log 20.0 10.0 -10.0 -20.0	10.0 dB		R	ef Value 30.	00 dB	im	Ara-21-17-201000					CF Step 14.00000 Auto Man			
-30.0			#V	ideo BW 3.0	000 N	1Hz					an 140 MHz				
#Res BW 6 2 Metrics	v										s (1001 pts)				
0	ccupied Bandwidth 64.222	2 MHz					sure Trace Power		Trace	1 32.3 dE	3m				
	ransmit Freq Error dB Bandwidth		6682 MHz 66.94 MHz			% of x dB	OBW Pow	/er		99.00 -26.00				Loca	al .
<u>+</u> ~		May 05 2:05:0	5, 2025 6 PM												

Spectrun Occupied	n Analy; d BW	zer 1 🔻	+											¢	Frequency	- -
REYSI RL	GHT ·≁·	Input: RF Coupling: DC Align: Off	C Fi	<mark>orr</mark> CC req Re	50 Ω Corr ef: Int (S) daptive	Atten: 44 dB Preamp: Off μW Path: Stand		Gate: (Avg	nter Freq: g Hold: 20 dio Std: N		0 GHz	3.94	er Frequency 5000000 GHz	Settings
1 Graph		•												Spar 140	.00 MHz	
Scale/Di	iv 10.0	dB				Ref Value 30.0	0 dB	m		_				CF S	sten	
Log 20.0 10.0 -10.0 -20.0 -20.0 -30.0 -40.0 -50.0 -60.0 Center 3 #Res BV					#	Video BW 3.00	00 N	1Hz					an 140 MHz s (1001 pts)	14.0	O00000 MHz Auto Man Offset	
2 Metrics		•														
	Occup	ied Bandwidi 64	th .283 M⊦	Ηz					sure Trace Power		Trace	1 31.8 dl	Bm			
		nit Freq Erro andwidth	r	-1	1.6884 MH 67.09 MH			% of x dB	OBW Powe	Г		99.00 -26.00				Local
	า (? '	May 0 2:17:	17 PM 🗅											

70 MHz / QPSK / FULL RB Size



Spectrun Occupied		zer 1	•	+												Frequency	, ·	- 米
RL RL	GHT ·≁·	Input: RI Coupling Align: O	g: DC	Ci Fr	orr C(req Re	: 50 Ω Corr ef: Int (S) .daptive	Atten: 44 dB Preamp: Off µW Path: Star		Gate:		A١	enter Freq /g Hold: 20 adio Std: N		0 GHz	3.7350	Frequency 00000 GHz	Set	tings
1 Graph			•												Span 140.00	MHz		
Scale/Di Log 20.0 10.0 0.00	iv 10.0	dB				- Jahan aya daga da	Ref Value 30.	00 de	3m						Au	1000 MHz to		
-10.0 -20.0 -30.0	yn ferlyf Afr	Balle Caluatory)	haran	endet at								Contraction of the second	b, and the state of the state of the	e nelo desejorende	Ma Freq Of 0 Hz			
-40.0 -50.0 -60.0	72500						/ideo BW 3.0	000						an 140 MHz				
#Res BV						#	ndeo Bw 3.0	0001				Sw		s (1001 pts)				
2 Metrics			•						Meas	sure Trace		Trace	1					
	Occup	ied Ban		73 MF	Ηz				Total	Power			30.8 di	3m				
		mit Freq 3andwid			_	1.6627 MH 66.97 MH			% of x dB	OBW Pow	er		99.00 -26.00					Local
	า (05, 2025 :18 PM												

Spectrun Occupied	n Analyzer 1 d BW	+					Freque	ncy 🔹 🔀
REYSI	GHT Input: RF ↔ Coupling: DC Align: Off	Input Ζ: 50 Ω Corr CCorr Freq Ref: Int (S) NFE: Adaptive	Atten: 44 dB Preamp: Off µW Path: Standard	Trig: Free Run Gate: Off #IF Gain: Low	Center Freq: 3.73500 Avg Hold: 200/200 Radio Std: None	00000 GHz	Center Frequency 3.735000000 GHz Span	Settings
1 Graph	•						140.00 MHz	
	iv 10.0 dB		Ref Value 30.00 dl	Зm			CF Step	-
20.0							14.000000 MHz	
10.0 0.00 -10.0			zðiðhann er pagarðattar Harna, e	Dy dyn ylwyr yf yn defyddin yw dynwydanu y			Auto Man	
-20.0							Freq Offset	
-30.0	y and the states and the second	Magazan Marana Maran			Water Harrison and Water	el-rizhte sonttynstrynskeleljur	0 Hz	
-40.0								
-60.0								
	.73500 GHz V 680.00 kHz	. #	Video BW 3.0000 I	MHz	Sweep 20.0	Span 140 MHz 0 ms (1001 pts)		
2 Metrics	•							
	Occupied Bandwidth			Measure Trace				
		3 MHz		Total Power	30.	.4 dBm		
	Transmit Freq Error x dB Bandwidth	-1.7015 MH 67.02 MH		% of OBW Powe x dB		9.00 % 6.00 dB		Local
	って「	May 05, 2025 1:18:29 PM	$\square \triangle$					
		70						

70 MHz / 64QAM / FULL RB Size



Spectrum	n Analyzer 1 d BW	• +									\$	Frequenc	y T	影
KEYSI RL	GHT Input: RF ← Coupling: D Align: Off		Corr ef: Int (S)	Atten: 44 dB Preamp: Off µW Path: Standa	Gate:		Av	nter Freq: g Hold: 20 idio Std: N		GHz		equency 0000 GHz	Sett	ings
1 Graph	▼										Span .140.00 M	1Hz		
	v 10.0 dB		R	ef Value 30.00	dBm						CF Step			
Log 20.0											14.00000	00 MHz		
10.0 0.00 -10.0			a an	and a second	ang thi provident of the	an a	****				Auto Man			
-20.0		allessand and							~	ant, calmap, windoff, ar	Freq Offs 0 Hz	et		
-40.0							+							
-60.0														
	.94500 GHz V 680.00 kHz		#V	ideo BW 3.000	0 MHz			Swe	Spa eep 20.0 ms	an 140 MHz ; (1001 pts)				
2 Metrics	•													
					Mea	sure Trace		Trace '	1					
	Occupied Bandw	1dtn 54.322 MHz			Total	l Power			28.3 dB	im				
	Transmit Freq Er x dB Bandwidth		1.6436 MHz 66.99 MHz		% of x dB	OBW Pow	er		99.00 -26.00 d					Local
	って	? May 0 2:53:	95, 2025 51 PM											



_															_
Spectrum Occupied	n Analyzer 1 I BW	+											Frequency	•	尝
	GHT Input: RF ← Coupling: DC Align: Auto		Corr	Atten: 44 dB Preamp: Off μW Path: Star		Gate: C		Avg	er Freq Hold: 20 o Std: N		0 GHz	Center Fr 3.949980 Span	equency 0000 GHz	Setti	ings
1 Graph	•											120.00 M	1Hz		
	v 10.0 dB			Ref Value 30.	00 dBr	m						CF Step			
Log 20.0 10.0 0.00			-	- <u> </u>	ومروح الموري إله	n,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	put Audionan ins					12.00000	00 MHz		
-10.0	free means of the makes of the	hturk/							Luli		t langth than the line the	Man Freq Offs 0 Hz	et		
-40.0 -50.0 -60.0															
	.94998 GHz / 620.00 kHz		#\	ideo BW 3.0	000 M	Hz			Sw		oan 120 MHz Is (1001 pts)				
2 Metrics															
	Occupied Bandwidth	1				Meas	ure Trace		Trace	1					
		970 MHz				Total	Power			31.9 d	Bm				
	Transmit Freq Error x dB Bandwidth		-69.132 kHz 60.53 MHz			% of (x dB	OBW Pow	/er		99.00 -26.00					Local
	2 C		8, 2025 :44 PM												

KEYSIGHT Input: RF Input: 2: 50 Ω Atten: 44 dB Trig: Free Run Center Freq: 3 840000000 GHz Center Frequency RL Align: Auto Preamp: Off Gate: Off Avg Hold: 200/200 Radio Std: None Sta40000000 GHz Sta400000000 GHz Sta40000000 GHz	
1 Graph Scale/Div 10.0 dB Ref Value 30.00 dBm CF Step 12.000 MHz 12.000000 MHz 12.000000 MHz Auto Man	Settings
Log 20 0 10.0 0.00 	
200	
-20 0 -30 0 have a second and a second and a second a sec	
-40.0	
-60.0	
Center 3.84000 GHz #Video BW 3.0000 MHz Span 120 MHz #Res BW 620.00 kHz Sweep 20.0 ms (1001 pts)	
2 Metrics v	
Measure Trace 1	
Occupied Bandwidth Total Power 31.5 dBm	
Transmit Freq Error-44.674 kHz% of OBW Power99.00 %x dB Bandwidth60.90 MHzx dB-26.00 dB	Local

60 MHZ / QPSK / FULL RB Size



Spectrum Occupied	Analy BW	zer 1 🔻	+											Frequency	y v	- <u>-</u>
KEYSI RL	GHT ⊶⊷	Input: RF Coupling: DC Align: Auto	Corr Frec	t Z: 50 Ω CCorr Ref: Int (S) : Adaptive	Atten: 44 dE Preamp: Of µW Path: S	f	Gate:		Avg	ter Freq Hold: 2 io Std: N		0 GHz		requency 0000 GHz	Sett	ings
1 Graph		•											Span 120.00 N	ЛНz		
Scale/Div Log 20.0 10.0 0.00	v 10.0	dB			Ref Value 3	0.00 d	Bm						CF Step 12.00000			
-10.0 -20.0 -30.0	وت کارل - انگریل	and the solid provided by	pland								ل يوادو کې د وړه وراوو ل	henre souther of the	Man Freq Offs 0 Hz	et		
-50.0 -60.0	73002	2 GHz			#Video BW 3	3.0000	MHz				Sr	oan 120 MHz				
#Res BW										Sw		is (1001 pts)				
2 Metrics		•														
	Occur	ied Bandwidth					Меа	sure Trace		Trace	1					
	00000		96 MHz				Tota	l Power			30.4 d	Bm				
		mit Freq Error Bandwidth		-36.881 k 60.44 M			% of x dB	OBW Pov	ver		99.00 -26.00					Local
	ก			r 08, 2025 45:30 PM												

Spectrum Occupied	n Analy. I BW	zer 1	• +											Frequency	· · · ※
KEYSI RL	GHT ·≁·	Input: RF Coupling: Align: Auto	DC o	Input Z: Corr CC Freq Re NFE: A	orr ef: Int (S)	Atten: 44 dB Preamp: Off µW Path: Star	Gate: (Avg I	er Freq Hold: 20 5 Std: N		0 GHz		Frequency 000000 GHz	Settings
1 Graph		•											120.00) MHz	
Scale/Di Log 20.0 10.0 0.00 -10.0 -20.0 -30.0 -40.0 -50.0 -60.0 Center 3	.84000	GHz	and a state of the			Ref Value 30.						an 120 MHz	CF Ste 12.000 Au Ma Freq O 0 Hz	DOOO MHz uto an	
#Res BW 2 Metrics	620.0	0 kHz								Sw	eep 20.0 m	s (1001 pts)			
	Occup	ied Bandi	width 57.828 M	/H7				sure Trace Power		Trace	1 30.0 di	3m			
		nit Freq E andwidth	Error	-	49.948 kH: 60.67 MH:			OBW Pow	er		99.00 -26.00	9%			Local
	า (]?	Apr 08 7:35:	42 PM 📐				- 1 11						

60 MHz / 64QAM / FULL RB Size

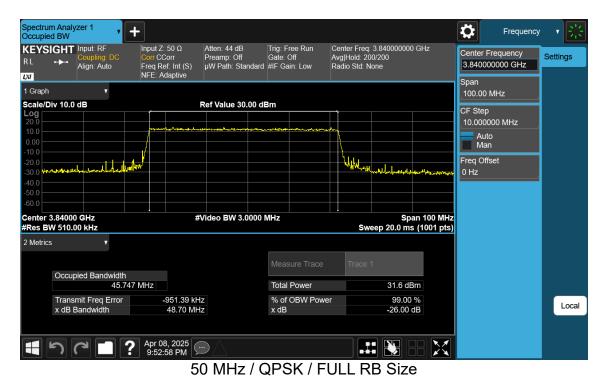


Spectrum	Analyzer 1	•	+								Ö	Frequency	/ •	51/ 215
	GHT Input:	: RF ling: DC : Auto	Input Ζ: 50 Ω Corr CCorr Freq Ref: Int (S) NFE: Adaptive	Atten: 44 dB Preamp: Off µW Path: Standar	Gate:		Avg	ter Freq: Hold: 20 io Std: N) GHz	Center Fro 3.730020 Span		Settir	
1 Graph		•									3pan 120.00 M	IHz		
Scale/Div	v 10.0 dB			Ref Value 30.00	dBm						CF Step			
20.0											12.00000	0 MHz		
10.0 0.00 -10.0				allaman islahlai watar ata da ata ana	terest for a second	and and an	ula toratur.	1			Auto Man			
-20.0	wannasala		JLÍ					Laller	ومحدادا والعامر ويروه	han the state of the	Freq Offse 0 Hz	ət		
-40.0														
-60.0														
	73002 GHz 620.00 kHz		•	#Video BW 3.000) MHz			Sw		an 120 MHz s (1001 pts)				
2 Metrics		•												
					Меа									
	Occupied B		8 MHz		Tota	l Power			28.0 dE	3m				
	Transmit Fr x dB Bandw		-48.141 60.54 M		% of x dE	f OBW Pow 3	ver		99.00 -26.00					Local
	5 (1)		Apr 08, 2025 7:10:03 PM	$\bigcirc \triangle$										

60 MHz / 256QAM / FULL RB Size



Spectrum Occupied		zer 1 🔻	+											₽	Freq	uency	v	21/ 718
REYSIO		Input: RF Coupling: DC Align: Auto	Co Fre			Atten: 44 dB Preamp: Off µW Path: Sta	ndard	Gate: (Av	enter Freq: /g Hold: 20 adio Std: N) GHz		r Frequency 990000 GH		Settir	ngs
1 Graph		•													0 MHz			
Scale/Div	v 10.0 (dB				Ref Value 30.	00 di	Зm		_				CF Ste	en			
20.0															00000 MHz			
10.0 0.00 -10.0					la a ser	*		alaphillith-anadrig							uto 1an			
-20.0 -30.0	mathematic	hunder here									. Westeller	بالموطقا والمحمد	hunderskelpspen	Freq C 0 Hz	Offset			
-40.0																_		
-60.0																		
Center 3. #Res BW					#\	/ideo BW 3.0	0000	MHz	1		Sw		an 100 MHz s (1001 pts)					
2 Metrics		•																
	Occup	ied Bandwidt	th					Meas	sure Trace		Trace	1						
	Occup		.773 MH	z				Total	Power			31.9 dl	Зm					
		nit Freq Erro andwidth	r		391.18 kH: 49.24 MH:			% of x dB	OBW Pow	er		99.00 -26.00						Local
		สานพันเท			49.24 IVIN	2		X UD				-20.00	ub					
	n (? A	pr 08 D:10:4	, 2025 40 PM 🤇													





Spectrum Occupied	Analyzer 1 BW	+											Frequency	•	$\frac{x^{1}x}{x^{1}x}$
	GHT Input: RF Coupling: DC Align: Auto	Con Free	tt Z: 50 Ω CCorr a Ref: Int (S) E: Adaptive	Atten: 44 dB Preamp: Off μW Path: Sta		Gate: (Av	enter Freq g Hold: 20 adio Std: N		0 GHz	Center Fr 3.840000 Span	equency 0000 GHz	Setting	gs
1 Graph	•											3pan 100.00 M	1Hz		
Scale/Div	v 10.0 dB			Ref Value 30	.00 dE	3m									
20.0												CF Step 10.00000	00 MHz		
10.0		Ţ		orbitisteri.americipatoleno	alan aran da a Aran da aran da	an a	and a new first of the	*******				Auto Man			
-10.0 -20.0 -30.0		,JWW							Wedgesol	mounda		Freq Offs 0 Hz	et		
-40.0 -50.0 -60.0															
Center 3.	84000 GHz 510.00 kHz		#	Video BW 3.	0000 N	MHz			Sw		an 100 MHz s (1001 pts)				
2 Metrics	•														
	Occupied Bandwid					Meas	sure Trace		Trace	1					
		5.786 MHz				Total	Power			30.5 dl	Зm				
	Transmit Freq Erro x dB Bandwidth	or	-934.01 kH 48.12 MH			% of x dB	OBW Pow	er		99.00 -26.00				L	.ocal
	A GD DanGwidti i		40.12 101	12		-X UD				-20.00	ub.				
	7 7 7		r 08, 2025 57:16 PM												

50 MHz / 16QAM / FULL RB Size

Spectrum Occupied	Analyzer 1 BW	+						₽	Frequency	· * 絵
	GHT Input: RF Coupling: DC Align: Auto	Input Z: 50 Corr CCorr Freq Ref: I NFE: Adap	Preamp: Of nt (S) µW Path: S		: Free Run e: Off Gain: Low	Center Freq: 3.7 Avg[Hold: 200/2 Radio Std: None	00	Center Freq 3.72501000	-	Settings
1 Graph	•							Span 100.00 MH:	z ,	
Scale/Div Log 20.0 10.0 -10.0 -20.0 -30.0	v 10.0 dB		Ref Value 3	80.00 dBm		or	andalar on all ak in as	CF Step 10.000000 Auto Man Freq Offset 0 Hz	MHz	
-40.0 -50.0 -60.0 Center 3.	72501 GHz / 510.00 kHz		#Video BW 3	3.0000 MHz			Span 100 MHz 2 20.0 ms (1001 pts)			
2 Metrics	▼ 10.00 KH2					Sweep	20.0 ms (1001 pts)	1		
	Occupied Bandwidth 45.7	62 MHz			easure Trace tal Power	Trace 1	29.9 dBm			_
	Transmit Freq Error_ x dB Bandwidth		4.15 kHz .03 MHz	% x c	of OBW Powe IB	er	99.00 % -26.00 dB			Local
		Apr 08, 2 9:23:51		1010						

50 MHz / 64QAM / FULL RB Size



Spectrum	n Analyzer 1	Ţ	+										₽	Frequency	, .	- ※
	GHT Input:	ing: DC	Corr Freq	Z: 50 Ω CCorr Ref: Int (S) Adaptive	Atten: 44 dB Preamp: Off μW Path: Sta		Gate: (A٧	enter Freq g Hold: 2 adio Std: 1		0 GHz	Center Fr 3.954990	equency 0000 GHz	Set	tings
1 Graph		v											Span 100.00 M	1Hz		
	v 10.0 dB				Ref Value 30	.00 dB	m						CF Step			
Log 20.0 10.0				and rouge on Martin									10.00000			
0.00										{			Man			
-20.0	manali	when	u/							J.	and the second	nt-strater over the strate	Freq Offs 0 Hz	et		
-40.0									-							
-50.0																
Center 3	.95499 GHz / 510.00 kHz	2	i	#	Video BW 3.0	0000 N	IHz			Sw		oan 100 MHz s (1001 pts)				
2 Metrics		v														
	Occupied Ba	op dy vidth					Meas	sure Trace		Trace	1					
			44 MHz				Total	Power			28.0 d	Bm				
	Transmit Fre x dB Bandw			-891.61 kH 48.12 MH			% of x dB	OBW Pow	er		99.00 -26.00					Local
	って		Apr 11:0	08, 2025 00:04 PM												

50 MHz / 256QAM / FULL RB Size



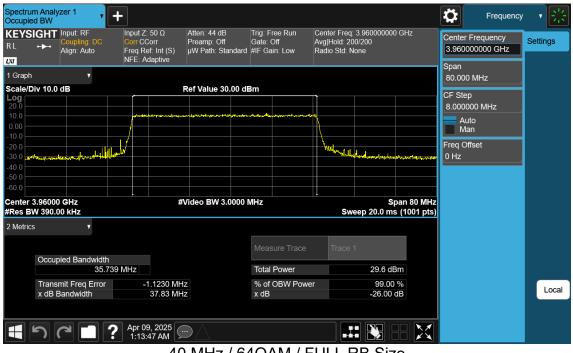
Occupied		• +					‡	Frequency	· · · 宗
	GHT Input: RF Coupling: DC Align: Auto	Input Z: 50 Ω Corr CCorr Freq Ref: Int (S) NFE: Adaptive	Atten: 44 dB Preamp: Off µW Path: Standard	Trig: Free Run Gate: Off #IF Gain: Low	Center Freq: 3.8400 Avg Hold: 200/200 Radio Std: None	000000 GHz	Center Free 3.8400000	<u> </u>	Settings
1 Graph	•						Span _80.000 M⊦	łz ,	
Log 20.0 10.0 -10.0 -20.0 -30.0 -40.0 -50.0 -60.0	v 10.0 dB		Ref Value 30.00 d			Span 80 MHz	CF Step 8.000000 I Auto Man Freq Offset 0 Hz		
#Res BV	V 390.00 kHz		#VIUE0 BW 5.0000		Sweep 20	0.0 ms (1001 pts)			
2 Metrics	Occupied Bandwid	dth 5.754 MHz		Measure Trace Total Power	Trace 1	1.8 dBm			
	Transmit Freq Erro x dB Bandwidth	or -1.0891 M 37.85 M		% of OBW Powe x dB		99.00 % 26.00 dB			Local
	ってし	Apr 09, 2025 12:14:50 AM	$\bigcirc \triangle$						



40 MHz / QPSK / FULL RB Size



Spectrun Occupied	n Analyzer 1 d BW	+									Frequency	- • 影
KEYSI RL	GHT Input: RF Coupling: DC Align: Auto	Input Z: 50 Corr CCor Freq Ref: NFE: Ada	r Pream Int (S) µW Pa		Trig: Free R Gate: Off #IF Gain: Lo	Av	enter Freq: g Hold: 20 adio Std: N) GHz	Center Fre 3.720000 Span		Settings
1 Graph	•									80.000 M	Hz	
Log 20.0 10.0 -10.0 -20.0	iv 10.0 dB		Ref Va	lue 30.00 dl	3m	~.ushovs.lav	hildsandy	Magnerator		CF Step 8.000000 Auto Man Freq Offse 0 Hz		
-50.0 -60.0 Center 3	3.72000 GHz V 390.00 kHz		#Video	BW 3.0000 I	MHz		Sw		pan 80 MHz s (1001 pts)			
2 Metrics	•											
	Occupied Bandwidt 35.	h 739 MHz			Measure [*]		Trace	1 30.1 dE	3m			
	Transmit Freq Error x dB Bandwidth		438 MHz 7.82 MHz		% of OBV x dB	/ Power		99.00 -26.00				Local
	2 7	? Apr 08, 2 11:37:25	2025 5 PM 💬 🔿	2								



40 MHz / 64QAM / FULL RB Size

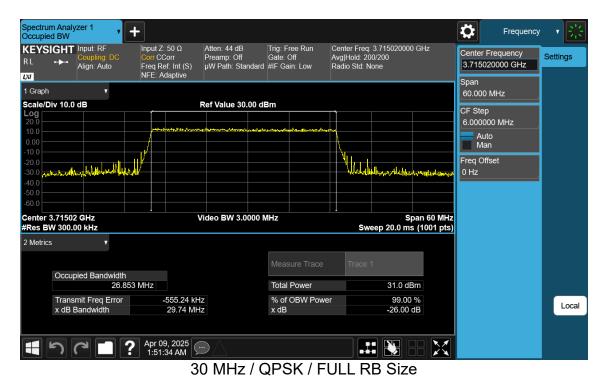


Spectrum	Analyze	er 1 ,	+												Č	Frequenc	v	, <u>14</u>
Cccupied KEYSIC RL		nput: RF oupling: DC lign: Auto	: Ci Fr	orr CC req Re	: 50 Ω Corr ef: Int (S) daptive	Atten: 44 Preamp: µW Path:	Off	Gate:		Av	nter Freq: g Hold: 20 idio Std: N		000 G	Hz		Frequency 00000 GHz		tings
1 Graph		•													80.000	MHz		
Scale/Div	v 10.0 di	В				Ref Value	e 30.00 d	Bm							CF Step			
20.0				[8.0000			
10.0 0.00 -10.0					Toget Works and a	telegal filogal filos − Aparty f	44-128 4 11/2mm	-lata man		***					Aut Ma			
-20.0											Mar and a				Freq Off	'set	1	
-30.0 -40.0	handrogeneren	topores about	Alen fell V								White Aller	aran da yaran baran	naanh	nt for the later of	0 Hz			
-40.0																		
-60.0																		
Center 3. #Res BW					#	Video BW	V 3.0000	MHz			Sw	eep 20.0		n 80 MHz 1001 pts)				
2 Metrics		•																
								Meas			Trace	1						
	Occupie	d Bandwic 35	ith 5.757 M⊦	Ηz				Total	Power			27.8	dBm]				
	Transmi	it Freq Erro	ог	-1	1.0873 MF	z		% of	OBW Pow	/er		99.	.00 %					Land
	x dB Ba	ndwidth			37.83 MH	Iz		x dB				-26.0	00 dB					Local
	<u>ה</u>		? !	Apr 09 12:32	9, 2025 :15 AM	$\Box \triangle$								X				

40 MHz / 256QAM / FULL RB Size



Spectrum Occupied		zer 1	• +]										Frequency	/ •	
RL		Input: RF Coupling: I Align: Auto	DC (Corr C(Freq R	:: 50 Ω Corr ef: Int (S) \daptive	Atten: 44 dB Preamp: Off µW Path: Stan	Ga	g: Free Run ate: Off ⁼ Gain: Low		Center Freq Avg Hold: 20 Radio Std: N) GHz		r Frequency 980000 GHz	Sett	ings
1 Graph		v												0 MHz		
Scale/Di	v 10.0	dB				Ref Value 30.0	0 dBm						CF Ste	'n		
Log 20.0 10.0 0.00				1		lana fue apoptada an	1994 ay - 1984 - 19	hten haden fred	and a gran	~			6.000	000 MHz uto lan		
-10.0 -20.0	nulalla	L. L	ւհՈՒ							VIII.	Mallelensk	alask Marco and and a				
-40.0 -50.0 -60.0																
Center 3 #Res BV					V	ideo BW 3.00	00 MH;	Z		Sw		pan 60 MHz s (1001 pts)				
2 Metrics		v														
	Occur	ied Bandv	width				N	leasure Tra	ice	Trace	1					
	Occup		26.847 N	IHz			Т	otal Power			31.7 di	Зm				
		mit Freq E Bandwidth	rror		-573.13 kH: 28.68 MH:			of OBW F dB	ower		99.00 -26.00					Local
	า (?	Apr 0 3:03	9, 2025 :35 AM											





Spectrum Anal Occupied BW	yzer 1 🔻	+								Frequency	崇
KEYSIGHT RL +>-+	Input: RF Coupling: DC Align: Auto	Cor Fre	ut Z: 50 Ω r CCorr q Ref: Int (S) Ξ: Adaptive	Atten: 44 dB Preamp: Off μW Path: Standa	Trig: Free Run Gate: Off rd #IF Gain: Low	Center Freq Avg Hold: 20 Radio Std: N		GHz	Center Fre		Settings
1 Graph	•								Span _60.000 №	IHz	
Scale/Div 10.0 Log 20.0 10.0 0.00) dB		Jongenstering Mathematical	Ref Value 30.00	dBm				CF Step 6.000000 Auto Man) MHz	
-10.0 -20.0 -30.0 -40.0 -50.0 -60.0	ndahada di kana kanal	u, h i					ush	Wayardafilynu,	Freq Offse 0 Hz	et	
Center 3.8400 #Res BW 300.				Video BW 3.000) MHz	Sw	Spa veep 20.0 ms	an 60 MHz (1001 pts)			
2 Metrics	•							_			
Occu	pied Bandwidth 26.1	ו 795 MHz	2		Measure Trac	æ Trace	1 30.1 dBr	n			
	smit Freq Error Bandwidth		-561.57 kł 28.75 Mł		% of OBW Pc x dB	ower	99.00 % -26.00 di				Local
<u>ま</u> ち		? Ap	or 09, 2025 50:00 AM								

Spectrum Occupied	BW	· · · ·	+						*	Frequency	- * 器
KEYSIC RL ·	Co	ut: RF upling: DC gn: Auto	<mark>Corr</mark> C Freq F		Atten: 44 dB Preamp: Off μW Path: Standard	Trig: Free Run Gate: Off #IF Gain: Low	Center Freq: 3.84000000 G Avg Hold: 200/200 Radio Std: None		Center Freq 3.84000000 Span		Settings
1 Graph		•							60.000 MH	z ,	
Scale/Div	/ 10.0 dB				Ref Value 30.00 di	Bm			CF Step		
Log 20.0 10.0									6.000000 M	/Hz	
0.00			/						Man		
-20.0 -30.0 Ltoks	Jurah Haran		h land				Mahan the hole and a star		Freq Offset 0 Hz		
-40.0											
-60.0											
Center 3. #Res BW			•	V	ideo BW 3.0000 N	ЛНz	↓ Spal Sweep 20.0 ms(n 60 MHz 1001 pts)			
2 Metrics		•									
	Occupied	Bandwidth				Measure Trace					
	occupica		829 MHz			Total Power	29.6 dBm				
	Transmit x dB Ban	Freq Error dwidth		-560.32 kHz 28.59 MHz		% of OBW Powe x dB	er 99.00 % -26.00 dB				Local
	<u>ה</u>		? Apr (09, 2025							
			• 2:54	26 AM							

30 MHz / 64QAM / FULL RB Size



Spectrum Occupied		zer 1	•	+												₽	Frequency	ý	v (<u>*</u> */
KEYSIO RL ·	GHT	Input: RF Coupling Align: Au	: DC	Co Fr	orr Co eq R	:: 50 Ω Corr ef: Int (S) \daptive	Prea	n: 44 dB imp: Off Path: Stai		Gate:		A	enter Freq: vg Hold: 20 adio Std: N		00 GHz		Frequency 00000 GHz	Set	tings
1 Graph		,	7													60.000	MHz		
Scale/Div	v 10.0	dB					Ref V	alue 30.	00 dE	ßm						CF Step			
20.0 10.0					-	e	an san	path catherines	an the same	المحدامه		 1				6.00000	00 MHz		
0.00					/								\			Mai			
-20.0	utationsta	mmuntat	n la h		╞								L. Mallad	vi. Albanendi	18to-willinghradi forcigite	Freq Off 0 Hz	set		
-40.0																			
-60.0																			
Center 3. #Res BW					•		Video	BW 3.0	000 N	IHz			Sw		Span 60 MH ns (1001 pts				
2 Metrics			•																
	Occup	ied Ban	dwidth							Meas	sure Trace		Trace	1					
	Occup			' 322 M⊦	lz					Total	Power			27.8 d	IBm				
		nit Freq andwidt				-548.56 kl 28.67 Mi				% of x dB	OBW Pow	rer		99.0 -26.00					Local
	ר ו			? ′	opr 0 2:58	9, 2025 :48 AM													

30 MHz / 256QAM / FULL RB Size

Spectrun Occupied	n Analy d BW	zer 1	Ţ	+											\$	Fre	quency	v	
	GHT ↔	Input: R Couplin Align: A	g: DC	Cor Fre	r CC q Re	50 Ω Corr ef: Int (S) daptive	Atten: 44 d Preamp: O µW Path: S	ff	Gate:		Avg	ter Freq: Hold: 20 o Std: N		0 GHz		Frequen 90000 G	·	Setti	ngs
<i>L</i> yø 1 Graph			v	NE	E. A	daplive									Span 40.000) MHz			
Scale/Di Log 20.0 10.0 -10.0 -20.0 -30.0 -40.0 -50.0 -60.0 Center 3	alat-dt	₽ <u></u>		م مرابلانه		,	Ref Value 3					` \		pan 40 MHz	CF Ste 4.0000 Au Freq O 0 Hz	000 MHz ito an			
#Res BV 2 Metrics		0 kHz	V									Sw	eep 20.0 m	s (1001 pts)					
	Occup	ied Bar		n 883 MHz	z					sure Trace Power		Trace	1 31.6 d	Bm					
		mit Frec Bandwic			-	189.54 kH 19.39 MH			% of x dB	OBW Pow	er		99.00 -26.00						Local
	ک (7		? ^{Ap} 5	or 09 :30:	9, 2025 56 AM	\mathbb{D}												

20 MHz / $\pi/2$ BPSK / FULL RB Size

Spectrum Occupied		r 1 🔻	+											Ö	Frequency	- * *
KEYSIC		but: RF bupling: DC ign: Auto	Cor Free	ut Z: 5 r CCoi q Ref: E: Ada	rr Int (S)	Atten: 44 dB Preamp: Off µW Path: Stand	Gat	: Free F e: Off Gain: L		Avg	iter Freq: Hold: 20 lio Std: N		00 GHz	Center I 3.9699	Frequency 90000 GHz	Settings
1 Graph		۲			_									Span _40.000	MHz	
Scale/Div Log 20.0 10.0 -10.0 -20.0 -30.0 -40.0 -50.0 -60.0			ار مرکز		R	ef Value 30.0					v.	ilash <u>ita</u> kila	allete statistica	CF Step 4.0000 Aut Ma Freq Off 0 Hz	00 MHz to n	
Center 3. #Res BW					#V	ideo BW 3.00	00 MHz				Sw		Span 40 MHz ns (1001 pts)			
2 Metrics	Occupiec	▼ d Bandwidtl	h				M	easure	Trace		Trace ²	1				
		17.	899 MHz		04.19 kHz			tal Pow	/er V Powei	_		31.1 c 99.0				
	x dB Ban	Freq Error			9.61 MHz		% X (vPowei			-26.00				Local
) (? Ap 5:	or 09, 43:40	2025 0 AM											

20 MHz / QPSK / FULL RB Size



Spectrum Ana Occupied BW	lyzer 1	+										Frequency	, ı	~ ※
KEYSIGHT RL ↔	Input: RF Coupling: DC Align: Auto	Coupling: DC Corr CCorr			Atten: 44 dB Trig: Free Run Preamp: Off Gate: Off µW Path: Standard #IF Gain: Low				: 3.7100100 00/200 None	00 GHz	Center Frequency 3.710010000 GHz		Sett	lings
1 Graph	·										Span 40.000 M	1Hz		
Scale/Div 10. Log 20.0 10.0 0.00 -10.0 -20.0	0 dB		anganal yan cu a ya	Ref Value 30.00	dBm						CF Step 4.000000 Auto Man Freq Offse			
-30.0 -40.0 -50.0 -60.0								<u>Ч</u> ,,,,,,		หล่างหมู่ใบมูลพาง	0 Hz			
Center 3.7100 #Res BW 200			#	Video BW 3.000	UMHZ			Sw		Span 40 MHz ns (1001 pts)				
2 Metrics	T				Maaa	sure Trace		Trace	4					
Occu	upied Bandwidth 17.8	93 MHz				Power		Trace	29.7 (iBm				
	smit Freq Error Bandwidth	Hz Hz				r 99.00 % -26.00 dB						Local		
۲			9, 2025 06 AM											

Spectrum Analyzer 1 V +													Frequency	· · 😤
KEYS RL		put: RF oupling: DC lign: Auto	Corr Fred	t Z: 50 Ω CCorr Ref: Int (S) : Adaptive	Atten: 44 dB Preamp: Off µW Path: Standar	Gate:	Trig: Free Run Gate: Off #IF Gain: Low		Center Freq: 3.710010000 Avg Hold: 200/200 Radio Std: None		0 GHz	3.7100	Frequency 10000 GHz	Settings
1 Graph	1	v										Span _40.000	MHz	
					Ref Value 30.00 d	Ref Value 30.00 dBm								
20.0												CF Step 4.0000	, 00 MHz	
10.0 0.00					an a			•••••				Au Ma		
-20.0	utetral Meda	and stilled	م مرابط						L. W.	hu dhi a cal abi	untava Antalitana	Freq Of 0 Hz	fset	
-40.0	ALTERNA PROVIDENT	Autor at at a								a free of the first	in the second should be a set			
-50.0 -60.0														
						W 3.0000 MHz Span 40 M Sweep 20.0 ms (1001 p								
2 Metric	s	٣												
	Occupie	d Bondwidt	h			Meas	sure Trace		Trace	1				
	Occupie	d Bandwidt 17.	n 893 MHz	Total Power			29.2 dBm			Зm				
	Transmit Freq Error-185.23 kHx dB Bandwidth19.68 MH				% of x dB	OBW Pow	/er	r 99.00 % -26.00 dB					Local	
	5			r 09, 2025 43:31 AM										
20 MHz / 64QAM / FULL RB Size														



Spectrum		zer 1	•	+										₽	Frequenc	у	• 絵
KEYSI RL	GHT ↔	Input: Rf Coupling Align: Au	J: DC	Cor Fre	ut Z: 50 Ω r CCorr q Ref: Int (\$ Ξ: Adaptive	Prea	n: 44 dB mp: Off Path: Stand	Gate:		Av	enter Freq: g Hold: 20 adio Std: N		00 GHz	Center Fr 3.840000 Span	equency 0000 GHz	Set	tings
1 Graph			v											40.000 N	ЛНz		
Scale/Di	v 10.0	dB				Ref V	alue 30.00) dBm						CF Step			
Log 20.0 10.0 -10.0 -20.0							patt-mar Alexand Hunda	hilbitaturantika	rrangen Jakan / Yayar / C	*****				4.000000 Auto Man			
-30.0	eren far	hodootten	ilhadday	HIN.Y						+	- Juckt	Murshangh	Humphrandha	0 Hz			
-40.0 -50.0 -60.0																	
Center 3.84000 GHz #Vi #Res BW 200.00 kHz					#Video	BW 3.00	00 MHz			Sw		5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5					
2 Metrics			v														
	Occup	ied Ban		1 398 MHz	,				sure Trace		Trace	1 27.4 d	Bm				
	Transi	nit Freq		00 1411 12	-187.12	kHz			f OBW Pow	/er		99.00					
x dB Bandwidth 19.36 MH							-26.00							Local			
	า (? ^{Ap} 5	or 09, 2025 26:08 AM	; ;											

20 MHz / 256QAM / FULL RB Size

8.2. PEAK TO AVERAGE RATIO

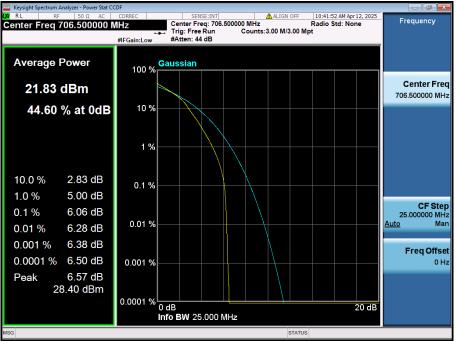
8.2.1. NR Band n12



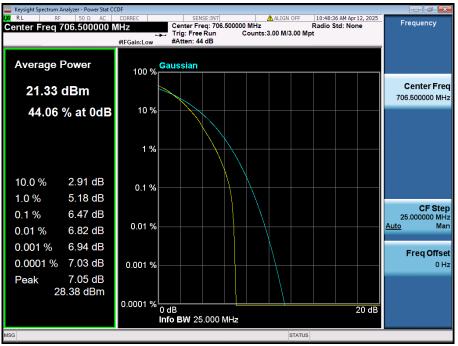


15 MHz / QPSK / FULL RB Size



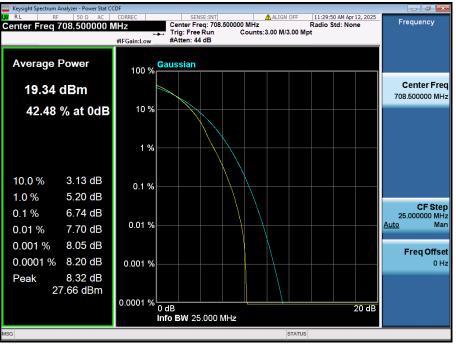






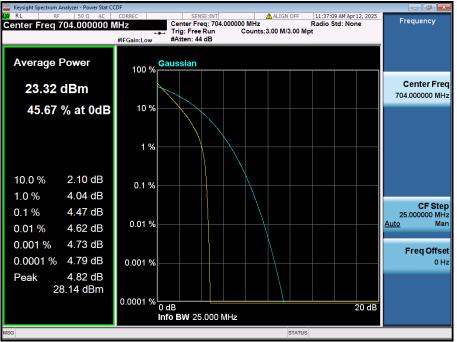
15 MHz / 64QAM / FULL RB Size



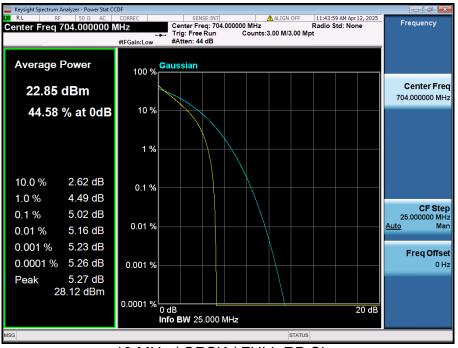


15 MHz / 256QAM / FULL RB Size



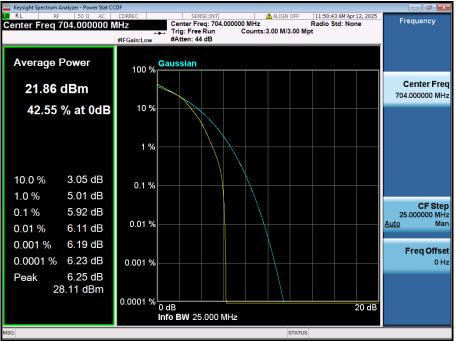




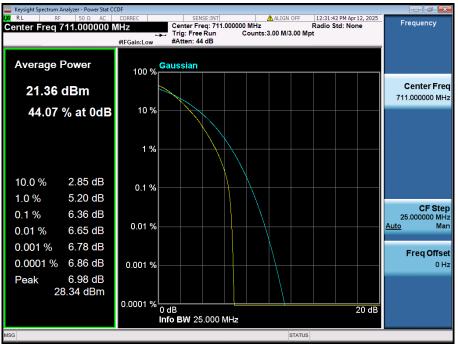


10 MHz / QPSK / FULL RB Size



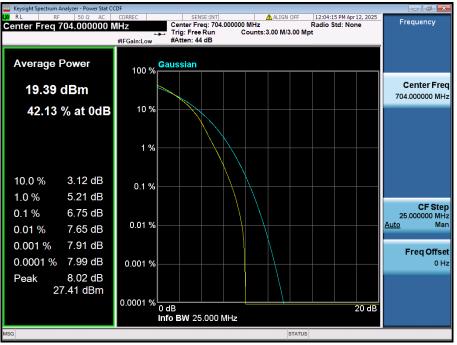






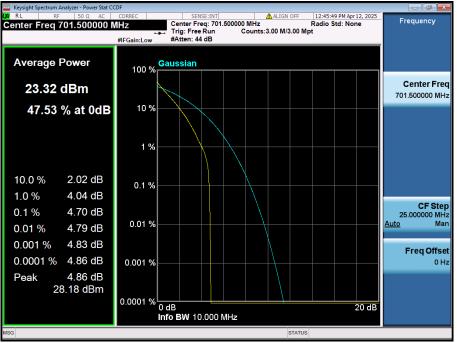
10 MHz / 64QAM / FULL RB Size



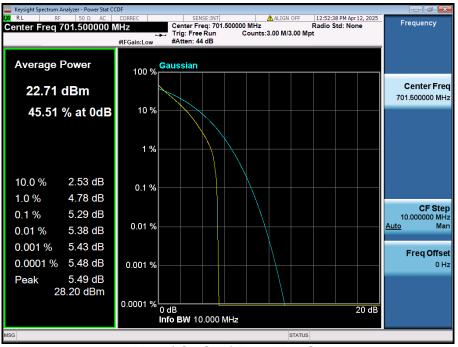


10 MHz / 256QAM / FULL RB Size



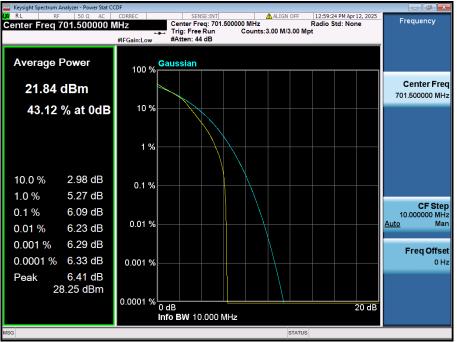


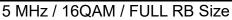


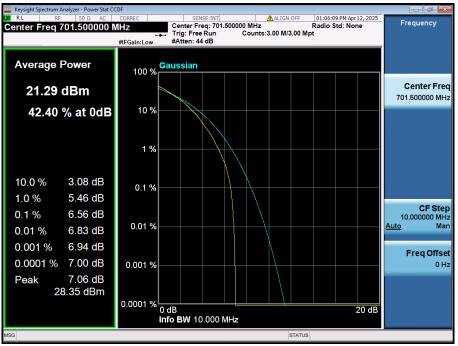


5 MHz / QPSK / FULL RB Size



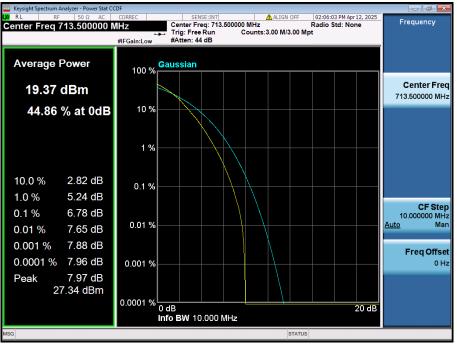






5 MHz / 64QAM / FULL RB Size







8.2.2. NR Band n5

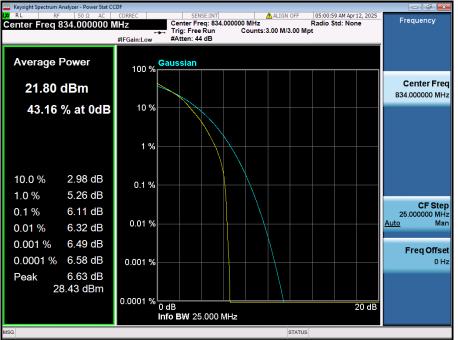


20 MHz / π /2 BPSK / FULL RB Size

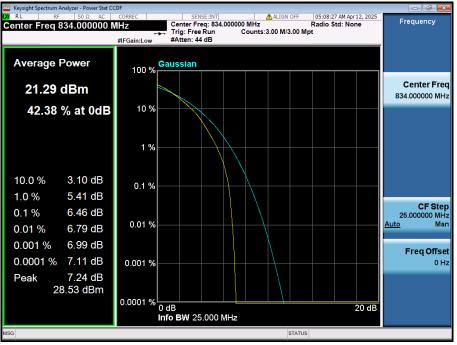


20 MHz / QPSK / FULL RB Size



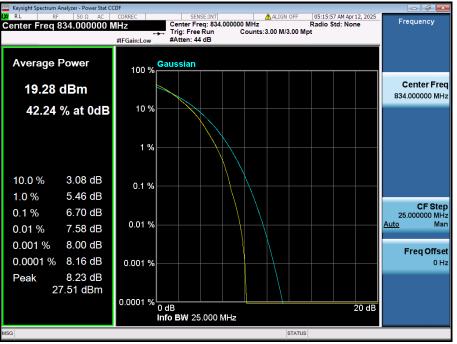






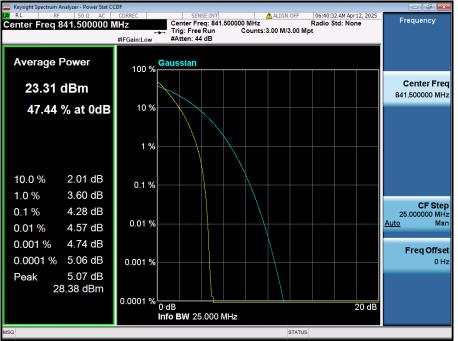
20 MHz / 64QAM / FULL RB Size





20 MHz / 256QAM / FULL RB Size



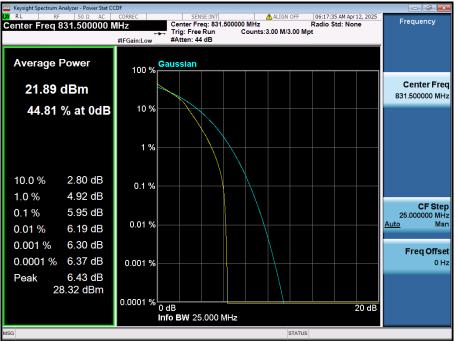




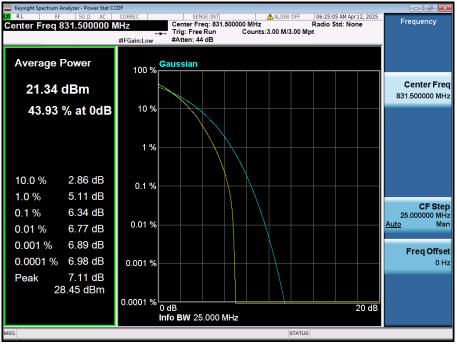


15 MHz / QPSK / FULL RB Size



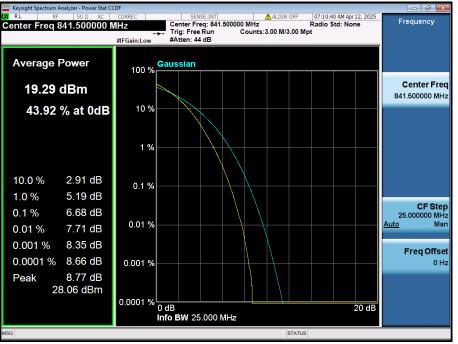






15 MHz / 64QAM / FULL RB Size



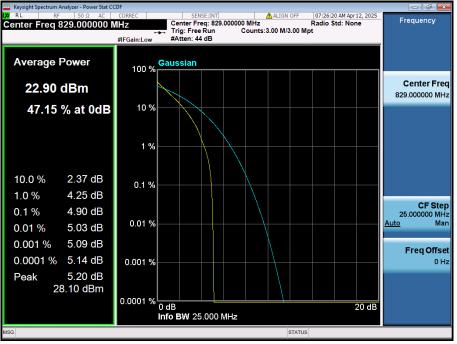


15 MHz / 256QAM / FULL RB Size



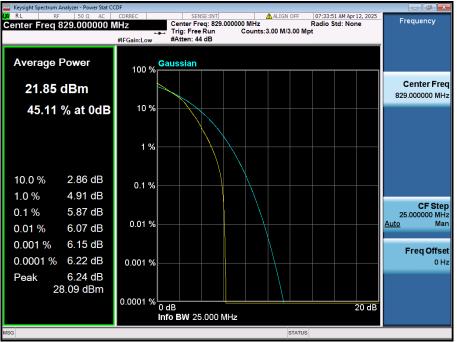




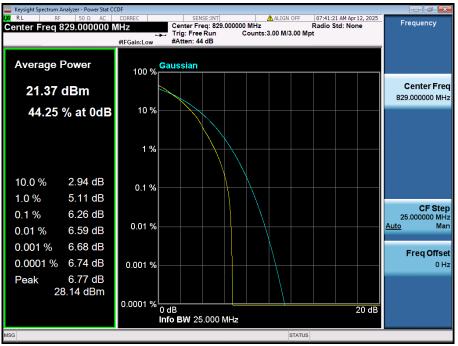


10 MHz / QPSK / FULL RB Size



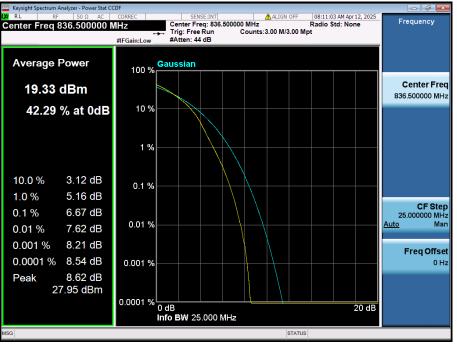






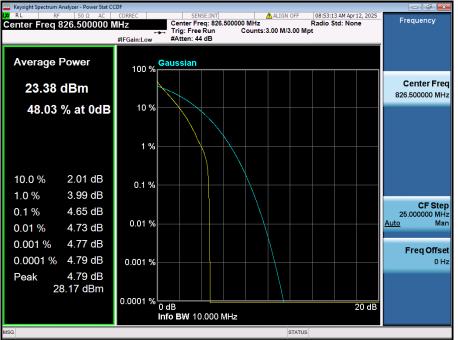
10 MHz / 64QAM / FULL RB Size



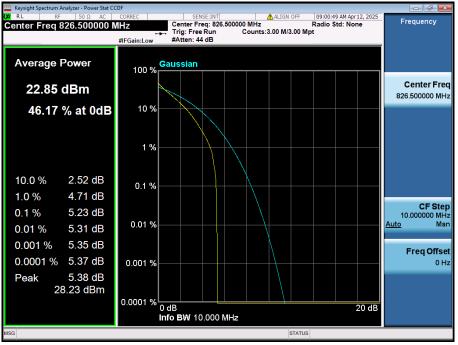


10 MHz / 256QAM / FULL RB Size



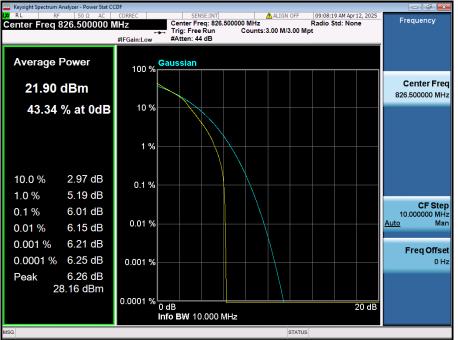


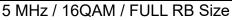


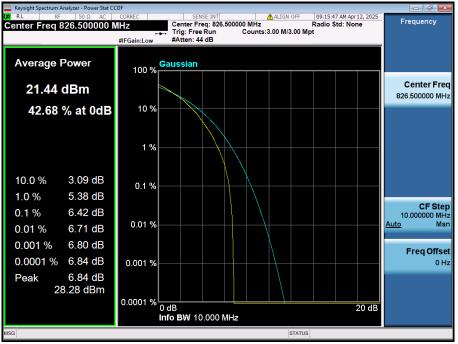


5 MHz / QPSK / FULL RB Size



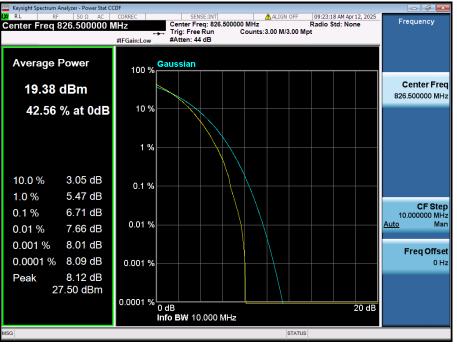






5 MHz / 64QAM / FULL RB Size





5 MHz / 256QAM / FULL RB Size