

	Input: RF Coupling: DC Align: Auto	Input Z: 50 Ω Corr CCorr Freq Ref: Int (S) NFE: Adaptive	#Atten: 10 dB Preamp: Off	PNO: Best Wide Gate: Off IF Gain: Low Sig Track: Off	#Avg Type: Power (R Trig: Free Run	MS <mark>123456</mark> A WW WW W A A A A A A	Center Frequency 2.294000000 GHz	Settings
Spectrum cale/Div 10 dl	B		Ref LvI Offset 27 Ref Level 0.00 dE			96 000 GHz 8.066 dBm	Span 4.00000000 MHz Swept Span Zero Span	
							Full Span	
0.0						DL1-31.00 dBm.	Start Freq 2.292000000 GHz	
0.0						R. 1	Stop Freq 2.296000000 GHz	
0.0							AUTO TUNE	
0.0							CF Step 400.000 kHz	
0.0							Auto Man	
0.0							Freq Offset 0 Hz	
art 2.292000 tes BW 1.0 M			#Video BW 3.0	MHz	Stoj #Sweep ~1.	p 2.296000 GHz .01 s (1001 pts)	X Axis Scale Log Lin	Loc
5		Jun 03, 2024 5:09:01 PM	\mathbb{D}		📎		Signal Track (Span Zoom)	

10 M_Band Edge(2292MHz-2296MHz)_Mid_BPSK_FullRB



KEYSIGHT Input: RF RL +++ Coupling: I Align: Auto		#Atten: 10 dB Preamp: Off 5)	PNO: Best Wide Gate: Off IF Gain: Low Sig Track: Off	#Avg Type: Po Trig: Free Run	wer (RMS <mark>1]2 3 4 5 6</mark> A WW WW W A A A A A A	Center Frequency 2.298000000 GHz Span	
Spectrum v cale/Div 10 dB		Ref LvI Offset 27 Ref Level 0.00 de		Mkr1	2.299 480 GHz -32.550 dBm	4.00000000 MHz Swept Span Zero Span	
						Full Span	
0.0					1	Start Freq 2.296000000 GHz	
10.0						Stop Freq 2.300000000 GHz	
0.0						AUTO TUNE	
0.0						CF Step 400.000 kHz	
0.0						Auto Man	
0.0						Freq Offset 0 Hz	
art 2.296000 GHz Res BW 1.0 MHz		#Video BW 3.0	MHz	#Swe	Stop 2.300000 GHz ep ~1.01 s (1001 pts)		Loc
ット	Jun 03, 2024 5:09:17 PM					Signal Track (Span Zoom)	

10 M_Band Edge(2296MHz-2300MHz)_Mid_BPSK_FullRB



KEYSIGHT सः ••• ज्य	Input: RF Coupling: DC Align: Auto	Input Z: 50 Ω Corr CCorr Freq Ref: Int (S) NFE: Adaptive	#Atten: 10 dB Preamp: Off	PNO: Best Wide Gate: Off IF Gain: Low Sig Track: Off	#Avg Type: Po Trig: Free Rur	n A	2 3 4 5 6 wwwww A A A A A A	Center Frequency 2.302000000 GHz Span	Settings
Spectrum cale/Div 10 d	B		Ref LvI Offset 27 Ref Level 0.00 dE		Mkr1		160 GHz 544 dBm	4.00000000 MHz Swept Span Zero Span	
								Full Span	
30.0						0	L1 -23.00 dBm	Start Freq 2.300000000 GHz	
0.0		1					RMS	Stop Freq 2.304000000 GHz	
50.0								AUTO TUNE	
								CF Step 400.000 kHz	
30.0								Auto Man	
90.0								Freq Offset 0 Hz	
art 2.300000 Res BW 100 k			#Video BW 300	kHz	#Swe		304000 GHz s (1001 pts)	X Axis Scale Log Lin	Loc
15		Jun 03, 2024 5:09:34 PM	ÐA					Signal Track (Span Zoom)	

10 M_Band Edge(2300MHz-2304MHz)_Mid_BPSK_FullRB

Note : We used a narrower RBW in order to increase accuracy.

Calculation = Reading Value + 10 x log(1 MHz/100 kHz) dB = -37.544 dBm + 10 dB = -27.544 dBm



Spectrum Analy Swept SA	yzer 1	+					🛟 Frequ	iency v 🛃
EYSIGHT :L ↔	Input: RF Coupling: DC Align: Auto	Input Z: 50 Ω Corr CCorr Freq Ref: Int (S) NFE: Adaptive	#Atten: 10 dB Preamp: Off	PNO: Best Wide Gate: Off IF Gain: Low Sig Track: Off	#Avg Type: Power Trig: Free Run	r (RMS <mark>1 2 3 4 5 6)</mark> A WW WW W A A A A A A A	Center Frequency 2.304500000 GH	
Spectrum cale/Div 10 d	IB		Ref LvI Offset 27 Ref Level 0.00 dE			.304 992 GHz -27.419 dBm	Span 1.00000000 MHz Swept Span Zero Span	
0.0						DL1 -13 00 dBm	Full Span	
30.0						R.1	Start Freq 2.304000000 GH	z
10.0							Stop Freq 2.305000000 GH	z
							AUTO TUNE	
70.0							CF Step 100.000 kHz	
80.0							Auto Man	
90.0							Freq Offset 0 Hz	
tart 2.304000 Res BW 100			#Video BW 390	kHz		op 2.3050000 GHz p 1.00 s (1001 pts)	X Axis Scale Log Lin	Loca
1	C []	Jun 03, 2024 5:09:51 PM	\square				Signal Track (Span Zoom)	

10 M_Band Edge(2304MHz-2305MHz)_Mid_BPSK_FullRB



EYSIGHT Input RF Coupling DC Align: Auto	Input Ζ: 50 Ω Corr CCorr Freq Ref: Int (S) NFE: Adaptive	#Atten: 10 dB Preamp: Off	PNO: Best Wide Gate: Off IF Gain: Low Sig Track: Off	#Avg Type: Pe Trig: Free Rur	ower (RMS <mark>12345</mark> A WWWW A A A A A A	2.315500000 GHz	Setunds
Spectrum v cale/Div 10 dB		Ref LvI Offset 27 Ref Level 0.00 dE		Mkr1	2.315 011 GH -33.935 dBr	Z 1.00000000 MHz	
).0					DE1 -13.00 dB	Full Span	
.0 1						Start Freq 2.315000000 GHz	2
1.0		••••			RM	Stop Freq 2.316000000 GHz	2
).0						AUTO TUNE	
						CF Step 100.000 kHz	
0.0						Auto Man	
0.0						Freq Offset 0 Hz	
art 2.3150000 GHz es BW 100 kHz		#Video BW 390	kHz	#Sv	Stop 2.3160000 GF veep 1.00 s (1001 pt		Lo
501	Jun 03, 2024 5:10:07 PM					Signal Track	

10 M_Band Edge(2315MHz-2316MHz)_Mid_BPSK_FullRB



EYSIGHT Input RF Coupling: DC Align: Auto	Input Z: 50 Ω Corr CCorr Freq Ref: Int (S) NFE: Adaptive	#Atten: 10 dB Preamp: Off	PNO: Best Wide Gate: Off IF Gain: Low Sig Track: Off	#Avg Type: Po Trig: Free Rur	n	1 2 3 4 5 6 A WW WW W A A A A A A A	Center Frequency 2.318000000 GHz Span	Settings
Spectrum v cale/Div 10 dB		Ref LvI Offset 27 Ref Level 0.00 dE		Mkr1		788 GHz 830 dBm	4.00000000 MHz Swept Span Zero Span	
							Full Span	
0.0						DL1 -23.00 dBm	Start Freq 2.316000000 GHz	
0.0		and the second		↓ 1		RMS	Stop Freq 2.320000000 GHz	
							AUTO TUNE	
							CF Step 400.000 kHz	1
0.0							Auto Man	
0.0							Freq Offset 0 Hz	
art 2.316000 GHz Res BW 100 kHz		#Video BW 300	kHz	#Swe		.320000 GHz s (1001 pts)	X Axis Scale Log Lin	Loca
1 5 C 1	? Jun 03, 2024 5:10:24 PM	ÐA					Signal Track (Span Zoom)	

10 M_Band Edge(2316MHz-2320MHz)_Mid_BPSK_FullRB

Note : We used a narrower RBW in order to increase accuracy.

Calculation = Reading Value + 10 x log(1 MHz/100 kHz) dB = -38.830 dBm + 10 dB = -28.830 dBm



Spectrum Anal Swept SA	yzer 1 🔻	+					Frequer	ncy 🔻 👬
KEYSIGHT RL + → -•	Input: RF Coupling: DC Align: Auto	Input Z: 50 Ω Corr CCorr Freq Ref. Int (S) NFE: Adaptive	#Atten: 10 dB Preamp: Off	PNO: Best Wide Gate: Off IF Gain: Low Sig Track: Off		1 2 3 4 5 6 A WW WW W A A A A A A A	Center Frequency 2.322000000 GHz	Settings
Spectrum cale/Div 10 c	т		Ref LvI Offset 27 Ref Level 0.00 dE		Mkr1 2.320 -31.	000 GHz 033 dBm	Span 4.00000000 MHz Swept Span Zero Span	
							Full Span	
20.0							Start Freq 2.320000000 GHz	
10.0						RMS	Stop Freq 2.324000000 GHz	
							AUTO TUNE	
0.0							CF Step 400.000 kHz	
30.0							Auto Man	
90.0							Freq Offset 0 Hz	Loca
tart 2.320000 Res BW 1.0 M			#Video BW 3.0	MHz	Stop 2. #Sweep ~1.01	324000 GHz s (1001 pts)	X Axis Scale Log Lin	Loca
しょ	C []	Jun 03, 2024 5:10:41 PM	\square				Signal Track (Span Zoom)	

10 M_Band Edge(2320MHz-2324MHz)_Mid_BPSK_FullRB



KEYSIGHT Input: RF RL ++ Coupling: DC Align: Auto Align: Auto	Input Z: 50 Ω Corr CCorr Freq Ref: Int (S) NFE: Adaptive	#Atten: 10 dB Preamp: Off	PNO: Best Wide Gate: Off IF Gain: Low Sig Track: Off	#Avg Type: Po Trig: Free Run	1 2 3 4 5 6 A WW WW W A A A A A A A	Center Frequency 2.326000000 GHz Span	Settings
Spectrum v cale/Div 10 dB		Ref LvI Offset 27 Ref Level 0.00 dE		Mkr1	008 GHz 765 dBm	4.00000000 MHz Swept Span Zero Span	
0.0						Full Span	
80.0					QL1-31.00 dBm.	Start Freq 2.324000000 GHz	
10.0	······				RMS	Stop Freq 2.328000000 GHz	-
i0.0						AUTO TUNE	
50.0						CF Step 400.000 kHz	
30.0						Auto Man	
90.0						Freq Offset 0 Hz	
art 2.324000 GHz Res BW 1.0 MHz		#Video BW 3.0	MHz	#Swe	328000 GHz s (1001 pts)	X Axis Scale Log Lin	Lot
	2 Jun 03, 2024 5:10:57 PM				X	Signal Track (Span Zoom)	

10 M_Band Edge(2324MHz-2328MHz)_Mid_BPSK_FullRB



R L Auto	Input Z: 50 Ω Corr CCorr Freq Ref: Int (S) NFE: Adaptive	#Atten: 10 dB Preamp: Off	PNO: Best Wide Gate: Off IF Gain: Low Sig Track: Off	#Avg Type: Po Trig: Free Run	wer (RMS <mark>1]2 3 4 5 6</mark> A WW WW W A A A A A A	Center Frequency 2.332500000 GHz Span	Setting
Spectrum v cale/Div 10 dB		Ref LvI Offset 27 Ref Level 0.00 dE		Mkr1	2.328 000 GHz -43.935 dBm	9.00000000 MHz Swept Span Zero Span	
10.0						Full Span	
30.0						Start Freq 2.328000000 GHz	
40.0 1					DL1 -37.00 dBm	Stop Freq 2.337000000 GHz	
50.0						AUTO TUNE	
50.0 70.0			Community and a second second second	-	RMS	CF Step 900.000 kHz	
80.0						Auto Man	
90.0						Freq Offset 0 Hz	
tart 2.328000 GHz Res BW 1.0 MHz		#Video BW 3.0	MHz	#Swe	Stop 2.337000 GHz ep ~1.01 s (1001 pts)		La
4 h C -	? Jun 03, 2024 5:11:15 PM	\square				Signal Track (Span Zoom)	

10 M_Band Edge(2328MHz-2337MHz)_Mid_BPSK_FullRB



KEYSIGHT Input. RL +++ Coupli Align: /	ng: DC	Input Z: 50 Ω Corr CCorr Freq Ref: Int (S) NFE: Adaptive	#Atten: 10 dB Preamp: Off	PNO: Best Wide Gate: Off IF Gain: Low Sig Track: Off	#Avg Type: Po Trig: Free Rur	wer (RMS <mark>1234</mark> A WWW A A A A	vw w	Center Frequency 2.339000000 GHz	Settings
Spectrum cale/Div 10 dB	•		Ref LvI Offset 27. Ref Level 0.00 dE		Mkr1	2.338 444 (-65.653 d		Span 4.00000000 MHz Swept Span Zero Span	
								Full Span	
0.0						DI 1.31.0	0 dBm	Start Freq 2.337000000 GHz	
0.0								Stop Freq 2.341000000 GHz	
0.0								AUTO TUNE	
0.0	·····						RMS	CF Step 400.000 kHz	
							_	Man Man	
0.0								Freq Offset 0 Hz	
art 2.337000 GHz tes BW 1.0 MHz			#Video BW 3.0	MHz	#Swe	Stop 2.341000 ep ~1.01 s (100) GHz 1 pts)	X Axis Scale Log Lin	Loc
50	- ?	Jun 03, 2024 5:11:32 PM	ÐA				X	Signal Track (Span Zoom)	

10 M_Band Edge(2337MHz-2341MHz)_Mid_BPSK_FullRB



KEYSIGHT Input: RF RL +++ Coupling: DC Align: Auto	Input Z: 50 Ω Corr CCorr Freq Ref. Int (S) NFE: Adaptive	#Atten: 10 dB Preamp: Off	PNO: Best Wide Gate: Off IF Gain: Low Sig Track: Off	#Avg Type: Po Trig: Free Rur	ower (RMS <mark>123456</mark> A WWWW A A A A A A	2.343000000 GHZ	Settings
Spectrum v cale/Div 10 dB		Ref LvI Offset 27 Ref Level 0.00 dE		Mkr1	2.344 572 GHz -65.684 dBm	4.00000000 MHz	
						Full Span	
80.0						Start Freq 2.341000000 GHz	
						Stop Freq 2.345000000 GHz	
50.0						AUTO TUNE	
70.0	· · · · · · · · · · · · · · · · · · ·				1 RMS	CF Step 400.000 kHz	
80.0						Auto Man	
90.0						Freq Offset 0 Hz	
tart 2.341000 GHz Res BW 1.0 MHz		#Video BW 3.0	MHz	#Swe	Stop 2.345000 GH: eep ~1.01 s (1001 pts		Loo
1500	? Jun 03, 2024 5:11:49 PM					Signal Track (Span Zoom)	

10 M_Band Edge(2341MHz-2345MHz)_Mid_BPSK_FullRB



EYSIGHT Input: RF L + Align: Auto	Input Z: 50 Ω Corr CCorr Freq Ref: Int (S) NFE: Adaptive	#Atten: 10 dB Preamp: Off	PNO: Best Wide Gate: Off IF Gain: Low Sig Track: Off	#Avg Type: Power (Trig: Free Run	RMS <mark>123456</mark> A WW WW W A A A A A A A	Center Frequency 2.355000000 GHz	Settings
Spectrum v cale/Div 10 dB		Ref LvI Offset 27. Ref Level 0.00 dE			.354 72 GHz 64.220 dBm	Span 20.0000000 MHz Swept Span Zero Span	
0.0					DE1 -13.00 dBm	Full Span	
0.0						Start Freq 2.345000000 GHz	
0.0						Stop Freq 2.365000000 GHz	
0.0						AUTO TUNE	
0.0		· · · · · · · · · · · · · · · · · · ·	8,8 m al an al Anal an	······	RMS	CF Step 2.000000 MHz Auto	
						Man Freq Offset	
0.0 tart 2.34500 GHz		#Video BW 3.0	MHz	s	top 2.36500 GHz	0 Hz X Axis Scale Log	Loc
Res BW 1.0 MHz	Jun 03, 2024 5:12:05 PM				1.00 s (1001 pts)	Lin	

10 M_Band Edge(2345MHz-2365MHz)_Mid_BPSK_FullRB



KEYSIGHT Input RF Coupling: D Align: Auto	Input Z: 50 Ω Corr CCorr Freq Ref. Int (S) NFE: Adaptive	#Atten: 10 dB Preamp: Off	PNO: Best Wide Gate: Off IF Gain: Low Sig Track: Off	#Avg Type: Power (RMS123456 Trig: Free Run A A A A A A		Center Frequency 2.382500000 GHz Span	
Spectrum v cale/Div 10 dB		Ref LvI Offset 27 Ref Level 0.00 dE		Mkr1	2.374 625 GHz -65.711 dBm	35.0000000 MHz Swept Span Zero Span	
						Full Span	
0.0						Start Freq 2.365000000 GHz	
					DL1 -40.00 dBm	Stop Freq 2.400000000 GHz	
60.0						AUTO TUNE	
0.0	↓1				RMS	CF Step 3.500000 MHz	
80.0						Auto Man	
90.0						Freq Offset 0 Hz	
art 2.36500 GHz #Video BW 3.0 MHz Res BW 1.0 MHz			MHz	Stop 2.40000 GHz #Sweep 1.00 s (1001 pts)		X Axis Scale Log Lin	Lo
500	C [] ? Jun 03, 2024					Signal Track (Span Zoom)	

10 M_Band Edge(2365MHz-2400MHz)_Mid_BPSK_FullRB



13. ANNEX A_ TEST SETUP PHOTO

Please refer to test setup photo file no. as follows;

No.	Description
1	HCT-RF-2407-FC031-P