

#### Test Data

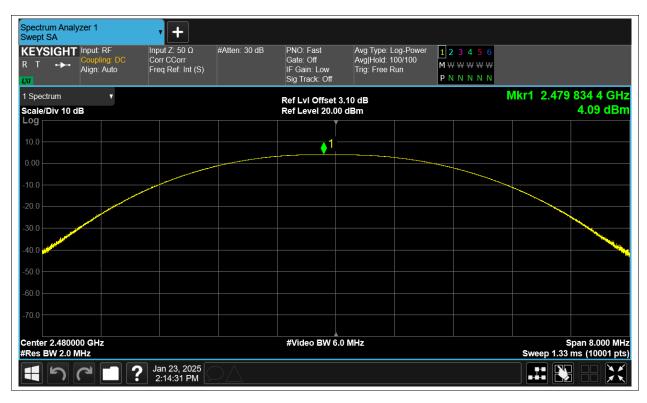
## **Maximum Conducted Output Power**

Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	BLE	2402	Ant1	4.822	30	Pass
NVNT	BLE	2442	Ant1	2.817	30	Pass
NVNT	BLE	2480	Ant1	4.095	30	Pass



			Test Gra	phs				
		Power	NVNT BLE 2	2402MHz Ant1				
Spectrum Analyzer 1 Swept SA	• +							
KEYSIGHT Input: RF R T ↔ Coupling: DC Align: Auto	Input Ζ: 50 Ω # Corr CCorr Freq Ref: Int (S)	#Atten: 30 dB	PNO: Fast Gate: Off IF Gain: Low Sig Track: Off	Avg Type: Log- Avg Hold: 100/ <sup>/</sup> Trig: Free Run	100 M ₩ \	3 <b>4 5 6</b> ₩₩₩₩ N N N N		
1 Spectrum V			Ref LvI Offset				Mkr1 2.402	116 0 GHz 4.82 dBm
Scale/Div 10 dB			Ref Level 20.0	OU dBm				4.02 UBIII
10.0				<b>↓</b> 1				
0.00								
-10.0								
-20.0								
-30.0								and the second s
-50.0								
-60.0								
-70.0								
Center 2.402000 GHz			#Video BW 6	.0 MHz			s	Span 8.000 MHz
	) Jan 23, 2025						Sweep 1.33	ms (10001 pts)
Spectrum Analyzer 1 Swept SA	• +	Power	NVNT BLE 2	2442MHz Ant1				
Spectrum Analyzer 1 Swept SA KEYSIGHT Input: RF R T Coupling: DC Align: Auto		Power #Atten: 30 dB	NVNT BLE 2 PNO: Fast Gate: Off IF Gain: Low Sig Track: Off	2442MHz Ant1 Avg Type: Log- Avg Hold: 100// Trig: Free Run	100 M ₩ ₩	3456 ~~~~~~		
Swept SA KEYSIGHT Input: RF R T  Coupling: DC Align: Auto VV 1 Spectrum y Scale/Div 10 dB	Input Z: 50 Ω # Corr CCorr		PNO: Fast Gate: Off IF Gain: Low	Avg Type: Log- Avg Hold: 100/ Trig: Free Run 3.08 dB	100 M ₩ ₩	₩₩₩₩ N N N N	Mkr1 2.442	2 150 4 GHz 2.82 dBm
Swept SA KEYSIGHT Input: RF Coupling: DC Align: Auto VV 1 Spectrum v Scale/Div 10 dB	Input Z: 50 Ω # Corr CCorr		PNO: Fast Gate: Off IF Gain: Low Sig Track: Off Ref LvI Offset	Avg Type: Log- Avg Hold: 100// Trig: Free Run 3.08 dB 10 dBm	100 M ₩ ₩	₩₩₩₩ N N N N	Mkr1 2.442	
Swept SA KEYSIGHT Input: RF R T  Coupling: DC Align: Auto VV 1 Spectrum y Scale/Div 10 dB	Input Z: 50 Ω # Corr CCorr		PNO: Fast Gate: Off IF Gain: Low Sig Track: Off Ref LvI Offset	Avg Type: Log- Avg Hold: 100/ Trig: Free Run 3.08 dB	100 M ₩ ₩	₩₩₩₩ N N N N	Mkr1 2.442	
Swept SA KEYSIGHT R T Align: Auto CVT 1 Spectrum Scale/Div 10 dB Log 10.0	Input Z: 50 Ω # Corr CCorr		PNO: Fast Gate: Off IF Gain: Low Sig Track: Off Ref LvI Offset	Avg Type: Log- Avg Hold: 100// Trig: Free Run 3.08 dB 10 dBm	100 M ₩ ₩	₩₩₩₩ N N N N	Mkr1 2.442	
Swept SA KEYSIGHT Input: RF Coupling: DC Align: Auto VV 1 Spectrum v Scale/Div 10 dB Log 10.0 0.00	Input Z: 50 Ω # Corr CCorr		PNO: Fast Gate: Off IF Gain: Low Sig Track: Off Ref LvI Offset	Avg Type: Log- Avg Hold: 100// Trig: Free Run 3.08 dB 10 dBm	100 M ₩ ₩	₩₩₩₩ N N N N	Mkr1 2.442	
Swept SA       KEYSIGHT     Input: RF       R     T       Ooupling: DC       Align: Auto       I Spectrum       Scale/Div 10 dB       Log       10.0       0.00       -10.0	Input Z: 50 Ω # Corr CCorr		PNO: Fast Gate: Off IF Gain: Low Sig Track: Off Ref LvI Offset	Avg Type: Log- Avg Hold: 100// Trig: Free Run 3.08 dB 10 dBm	100 M ₩ ₩	₩₩₩₩ N N N N	Mkr1 2.442	
Swept SA KEYSIGHT Input: RF R T → Coupling: DC Align: Auto VV Scale/Div 10 dB Log 10.0 .00 .00 .00 .00 .00 .00 .0	Input Z: 50 Ω # Corr CCorr		PNO: Fast Gate: Off IF Gain: Low Sig Track: Off Ref LvI Offset	Avg Type: Log- Avg Hold: 100// Trig: Free Run 3.08 dB 10 dBm	100 M ₩ ₩	₩₩₩₩ N N N N	Mkr1 2.442	
Swept SA           KEYSIGHT         Input: RF           R         T         →         Goupling: DC           Align: Auto         Align: Auto         Scale/Div 10 dB           Log	Input Z: 50 Ω # Corr CCorr		PNO: Fast Gate: Off IF Gain: Low Sig Track: Off Ref LvI Offset	Avg Type: Log- Avg Hold: 100// Trig: Free Run 3.08 dB 10 dBm	100 M ₩ ₩	₩₩₩₩ N N N N	Mkr1 2.442	
Swept SA           KEYSIGHT         Input: RF           R         T         T           I Spectrum         Y           Scale/Div 10 dB         O           0.00         O         O           10.0         O         O           20.0         O         O           -30.0         O         O         O           -60.0         O         O         O	Input Z: 50 Ω # Corr CCorr		PNO: Fast Gate: Off IF Gain: Low Sig Track: Off Ref LvI Offset	Avg Type: Log- Avg Hold: 100// Trig: Free Run 3.08 dB 10 dBm	100 M ₩ ₩	₩₩₩₩ N N N N	Mkr1 2.442	
Swept SA           KEYSIGHT         Input: RF           R         T         →         Coupling: DC Align: Auto           I Spectrum         v           Scale/Div 10 dB         -           Log         -         -           10.0         -         -           .00         -         -           .10.0         -         -           .20.0         -         -           .30.0         -         -           .40.0         -         -	Input Z: 50 Ω # Corr CCorr		PNO: Fast Gate: Off IF Gain: Low Sig Track: Off Ref LvI Offset	Avg Type: Log- Avg Hold: 100// Trig: Free Run 3.08 dB 10 dBm	100 M ₩ ₩	₩₩₩₩ N N N N	Mkr1 2.442	
Swept SA           KEYSIGHT         Input: RF           R         T         T           I Spectrum         Y           Scale/Div 10 dB         O           0.00         O         O           10.0         O         O           20.0         O         O           -30.0         O         O         O           -60.0         O         O         O	Input Z: 50 Ω # Corr CCorr		PNO: Fast Gate: Off IF Gain: Low Sig Track: Off Ref LvI Offset	Avg Type: Log- Avg Hold: 100/ Trig: Free Run 3.08 dB 00 dBm	100 M ₩ ₩	₩₩₩₩ N N N N		
Swept SA           KEYSIGHT         Input: RF           R         T         →         Coupling: DC Align: Auto           Ivr         Ispectrum         v           Scale/Div 10 dB         -         -           10.0         -         -           -10.0         -         -           -20.0         -         -           -30.0         -         -           -60.0         -         -           -70.0         -         -           Center 2.442000 GHz         -	Input Z: 50 Ω Corr CCorr Freq Ref: Int (S)		PNO: Fast Gate: Off IF Gain: Low Sig Track: Off Ref LvI Offset Ref Level 20.0	Avg Type: Log- Avg Hold: 100/ Trig: Free Run 3.08 dB 00 dBm	100 M ₩ ₩	₩₩₩₩ N N N N		2.82 dBm







## -6dB Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	limit	Verdic
NVNT	BLE	2402	Ant1	0.668	0.5	Pass
NVNT	BLE	2442	Ant1	0.67	0.5	Pass
NVNT	BLE	2480	Ant1	0.683	0.5	Pass







Spectr Occup	um Analy ied BW	zer 1		• +	•							
KEY: R T	SIGHT	Input: RF Coupling Align: Au	j: DC	Input Z: 50 Corr CCor Freq Ref:		Atten: 30 dB	Trig: Free Run Gate: Off #IF Gain: Low	Center Fre Avg Hold: Radio Std:				
1 Grap	h		•				Ref LvI Offset	3.10 dB		M	kr3 2.48034	
	Div 10.0	dB					Ref Value 23.1	0 dBm				-2.47 dBm
Log 13.1 3.10						2		1	3			
-6.90												
-16.9 -26.9			_									
-26.9												
-46.9												
-56.9												
-66.9												
	r 2.48000 3W 100.0				•		#Video BW 300	).00 kHz		•	Sweep 1.33 n	Span 2 MHz ns (10001 pts)
2 Metri	cs		v									
		Occu	upied Bai									
				1.0433 I	MHz				Total Power		10.4 dBm	
			smit Fred			-1.328 kHz			% of OBW Power		99.00 %	
		x dB	Bandwid	dth		682.7 kHz			x dB		-6.00 dB	
	5		]?	Jan 23, 1 2:14:59	2025 PM							



# **Occupied Channel Bandwidth**

Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	BLE	2402	Ant1	1.037
NVNT	BLE	2442	Ant1	1.037
NVNT	BLE	2480	Ant1	1.035











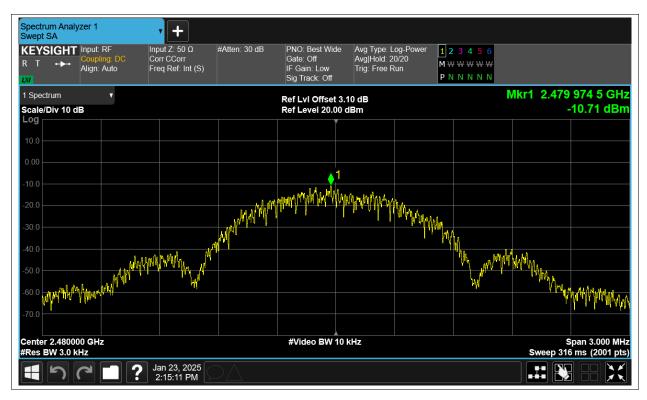
## **Maximum Power Spectral Density Level**

Condition	Mode	Frequency (MHz)	Antenna	Max PSD (dBm)	Limit (dBm)	Verdict
NVNT	BLE	2402	Ant1	-10.025	8	Pass
NVNT	BLE	2442	Ant1	-12.055	8	Pass
NVNT	BLE	2480	Ant1	-10.713	8	Pass











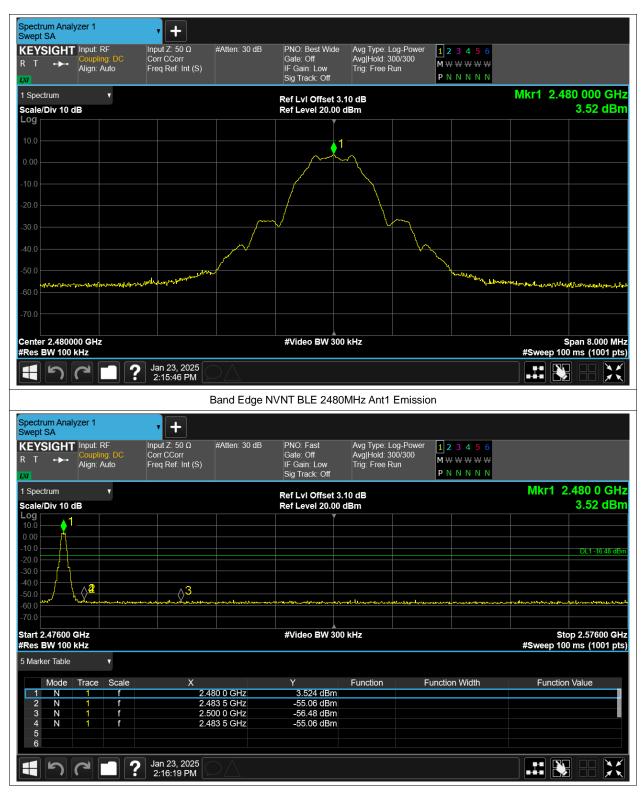
# **Band Edge**

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE	2402	Ant1	-60.71	-20	Pass
NVNT	BLE	2480	Ant1	-58.58	-20	Pass



			Test Grap	hs			
		Band Edge	NVNT BLE 24	402MHz Ant1 R	ef		
Spectrum Analyzer 1 Swept SA	• +						
KEYSIGHT Input: RF R T ↔ Coupling: DC Align: Auto	Input Ζ: 50 Ω Corr CCorr Freq Ref: Int (S)	#Atten: 30 dB	PNO: Best Wide Gate: Off IF Gain: Low Sig Track: Off	Avg Type: Log-Por Avg Hold: 300/300 Trig: Free Run			
1 Spectrum 🔻			Ref LvI Offset 3			Mkr1 2.40	
Scale/Div 10 dB			Ref Level 20.00	dBm			4.20 dBm
10.0			1				
0.00				~			
-10.0							
-20.0							
-30.0			$\checkmark$	L-			
-40.0					$\mathcal{V}_{\mathcal{L}}$		
-50.0					- And the		
-60.0 relation on the main of	WWW-anorthand when the stand and				water a start and a start and a start a	nation of recompleted when	heelarallow obsolute
-70.0							
Center 2.402000 GHz #Res BW 100 kHz			#Video BW 30	) kHz		Sj #Sweep 50.0	pan 8.000 MHz ms (1001 pts)
<b>1</b> 500	<b>?</b> Jan 23, 2025	$\supset \land$					
	2:05:56 PM						
		Band Edge N	VNT BLE 2402	MHz Ant1 Emis	ssion		
Spectrum Analyzer 1 Swept SA	+						
R T	Input Ζ: 50 Ω Corr CCorr	#Atten: 30 dB	PNO: Fast Gate: Off	Avg Type: Log-Pov Avg Hold: 20/20	wer 123456 M <del>WWWW</del> W		
R T + Align: Auto	Freq Ref: Int (S)		IF Gain: Low Sig Track: Off	Trig: Free Run	PNNNN		
1 Spectrum v	F	Ref LvI Offset 3.(	06 dB	Mkr1	2.401 9 GHz		
Scale/Div 10 dB	F	Ref Level 20.00 c	dBm		3.24 dBm		
10.0					<b>1</b>		
-10.0					DL1 -15.80 dBm		
-30.0							
-40.0 -50.0					3 2		
-60.0 +++++++++++++++++++++++++++++++++++	ที่ๆแหน่งไขารใจประหม่งไข่ในเร็งไหน่งไข่ไหน่งไข่ไข่ไข่ไข่ไข่ไข่ไข่ไข่ไข่ไข่ไข่ไข่ไข่ไ		ىرىرىلۇلىرىلۇرە ئې <sup>رىر</sup> ىرىيەتلەر يەتەت يەرەۋەر بىرە	and the second states and the second states in the			
Start 2.30600 GHz		#Video BW 300	kHz		Stop 2.40600 GHz		
#Res BW 100 kHz 5 Marker Table				#Sweep 5	50.0 ms (1001 pts)		
Mode Trace Scale	Х	Y	Function Fu	nction Width	Function Value		
1 N 1 f 2 N 1 f	2.401 9 GHz 2.400 0 GHz	z 3.242 dBn	n				
3 N 1 f 4 N 1 f	2.390 0 GHz 2.319 8 GHz	z -59.74 dBn	n				
5							
	<b>?</b> Jan 23, 2025 2:05:58 PM	$\neg \land$					
	• 2:05:58 PM	Bond Eda					
		Band Edge	INVINT BLE 24	480MHz Ant1 R	ei		







## **Conducted RF Spurious Emission**

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE	2402	Ant1	-53.94	-20	Pass
NVNT	BLE	2442	Ant1	-52.09	-20	Pass
NVNT	BLE	2480	Ant1	-53.01	-20	Pass



			Test Graph	าร			
		Tx. Spuriou	us NVNT BLE 2	402MHz Ant1 Ref			
Spectrum Analyzer 1 Swept SA	• +						
KEYSIGHT Input: RF R T + Align: Auto	Input Ζ: 50 Ω Corr CCorr Freq Ref: Int (S)	#Atten: 30 dB	PNO: Best Wide Gate: Off IF Gain: Low Sig Track: Off	Avg Type: Log-Power Avg Hold: 300/300 Trig: Free Run	1 2 3 4 5 6 M ₩ ₩ ₩ ₩ ₩ P N N N N N		
1 Spectrum 🔻			Ref LvI Offset 3.			Mkr1 2.401	
Scale/Div 10 dB			Ref Level 20.00	dBm			4.21 dBm
10.0			1				
0.00							
-10.0							
-30.0							- And the second
-40.0							
-50.0							
-60.0							
-70.0							
Center 2.4020000 GHz #Res BW 100 kHz			#Video BW 300	) kHz		Sweep 1.00	5pan 1.500 MHz 0 ms (1001 pts)
	Jan 23, 2025 2:06:04 PM						
		23					
	Т	x. Spurious l	NVNT BLE 2402	2MHz Ant1 Emissi	ion		
Spectrum Analyzer 1		x. Spurious l	NVNT BLE 2402	2MHz Ant1 Emissi	ion		
Swept SA KEYSIGHT Input: RF Coupling: DC	<b>Γ</b>	<b>x. Spurious I</b> #Atten: 30 dB	PNO: Fast	Avg Type: Log-Power	123456		
Swept SA	• +						
Swept SA       KEYSIGHT       R T       Align: Auto       I Spectrum	Input Z: 50 Ω Corr CCorr		PNO: Fast Gate: Off IF Gain: Low Sig Track: Off Ref LvI Offset 3.	Avg Type: Log-Power Avg]Hold: 5/5 Trig: Free Run 06 dB	<b>1</b> 2 3 4 5 6 M ₩ ₩ ₩ ₩ ₩	Mkr1	2.402 GHz
Swept SA KEYSIGHT Input: RF R T + Align: Auto	Input Z: 50 Ω Corr CCorr		PNO: Fast Gate: Off IF Gain: Low Sig Track: Off	Avg Type: Log-Power Avg]Hold: 5/5 Trig: Free Run 06 dB	<b>1</b> 2 3 4 5 6 M ₩ ₩ ₩ ₩ ₩	Mkr1	2.402 GHz 3.02 dBm
Swept SA KEYSIGHT R T → Coupling: DC Align: Auto 1 Spectrum Scale/Div 10 dB 100 10.0 0.00 -10.0	Input Z: 50 Ω Corr CCorr		PNO: Fast Gate: Off IF Gain: Low Sig Track: Off Ref LvI Offset 3.	Avg Type: Log-Power Avg]Hold: 5/5 Trig: Free Run 06 dB	<b>1</b> 2 3 4 5 6 M ₩ ₩ ₩ ₩ ₩	Mkr1	
Swept SA           KEYSIGHT           R         T           I         Spectrum           Scale/Div 10 dB           Log           100           -100           -300	Input Z: 50 Ω Corr CCorr		PNO: Fast Gate: Off IF Gain: Low Sig Track: Off Ref LvI Offset 3.	Avg Type: Log-Power Avg]Hold: 5/5 Trig: Free Run 06 dB	<b>1</b> 2 3 4 5 6 M ₩ ₩ ₩ ₩ ₩	Mkr1	3.02 dBm
Swept SA           KEYSIGHT         Input: RF           R         T         →           1 Spectrum         ✓           Scale/Div 10 dB         ✓           100         →         1           -20.0         →         1           -30.0         →         →	Input Z: 50 Ω Corr CCorr Freq Ref: Int (S)		PNO: Fast Gate: Off IF Gain: Low Sig Track: Off Ref LvI Offset 3. Ref Level 20.00	Avg Type: Log-Power Avg]Hold: 5/5 Trig: Free Run 06 dB	<b>1</b> 2 3 4 5 6 M ₩ ₩ ₩ ₩ ₩	Mkr1	3.02 dBm
Swept SA           KEYSIGHT         Input: RF           R         T         →         Align: Auto           INV         V         Scale/Div 10 dB         V           Scale/Div 10 dB         1         0         1           100         0         0         0         0           -200         -200         -200         -200         -200	Input Z: 50 Ω Corr CCorr Freq Ref: Int (S)	#Atten: 30 dB	PNO: Fast Gate: Off IF Gain: Low Sig Track: Off Ref LvI Offset 3. Ref Level 20.00	Avg Type: Log-Power Avg]Hold: 5/5 Trig: Free Run 06 dB	<b>1</b> 2 3 4 5 6 M ₩ ₩ ₩ ₩ ₩	ne LL theorem is a finite strategy of the stra	3.02 dBm
Swept SA           KEYSIGHT         Input: RF           R         T            I Spectrum         Imput: RF           Scale/Div 10 dB         Imput: RF           100   -	Input Z: 50 Ω Corr CCorr Freq Ref: Int (S)	#Atten: 30 dB	PNO: Fast Gate: Off IF Gain: Low Sig Track: Off Ref LvI Offset 3. Ref Level 20.00	Avg Type: Log-Power Avg Hold: 5/5 Trig: Free Run 06 dB dBm	<b>1</b> 2 3 4 5 6 M ₩ ₩ ₩ ₩ ₩		3.02 dBm
Swept SA           KEYSIGHT         Input: RF           R         T         Provide the second s	Input Z: 50 Ω Corr CCorr Freq Ref: Int (S)	#Atten: 30 dB	PNO: Fast Gate: Off IF Gain: Low Sig Track: Off Ref LvI Offset 3. Ref Level 20.000	Avg Type: Log-Power Avg Hold: 5/5 Trig: Free Run 06 dB dBm	<b>1</b> 2 3 4 5 6 M ₩ ₩ ₩ ₩ ₩		3.02 dBm
Swept SA           KEYSIGHT         Input: RF           R         T         →         Auto           I         Spectrum         ▼           Scale/Div 10 dB         ■         ■           Log         1         ■         ■           100         ●         ●         ●         ●           200         ●         ●         ●         ●           200         ●         ●         ●         ●           200         ●         ●         ●         ●           300         ●         ●         ●         ●           300         ● <td>Linput Z: 50 Ω Corr CCorr Freq Ref. Int (S)</td> <td>#Atten: 30 dB</td> <td>PNO: Fast Gate: Off IF Gain: Low Sig Track: Off Ref LvI Offset 3. Ref Level 20.00 ( #Video BW 300) #Video BW 300</td> <td>Avg Type: Log-Power Avg Hold: 5/5 Trig: Free Run 06 dB dBm</td> <td><b>1</b> 2 3 4 5 6 M ₩ ₩ ₩ ₩ ₩</td> <td></td> <td>3.02 dBm</td>	Linput Z: 50 Ω Corr CCorr Freq Ref. Int (S)	#Atten: 30 dB	PNO: Fast Gate: Off IF Gain: Low Sig Track: Off Ref LvI Offset 3. Ref Level 20.00 ( #Video BW 300) #Video BW 300	Avg Type: Log-Power Avg Hold: 5/5 Trig: Free Run 06 dB dBm	<b>1</b> 2 3 4 5 6 M ₩ ₩ ₩ ₩ ₩		3.02 dBm
Swept SA KEYSIGHT R T Coupling: DC Align: Auto I Spectrum Scale/Div 10 dB Log 100 -100 -200 -30.0 -400 -50.0 -50.0 -50.0 -50.0 -50.0 -70.0 Start 30 MHz #Res BW 100 kHz 5 Marker Table Mode Trace Scale	Linput Z: 50 Ω Corr CCorr Freq Ref: Int (S)	#Atten: 30 dB	PNO: Fast Gate: Off IF Gain: Low Sig Track: Off Ref LvI Offset 3. Ref Level 20.00 0 #Video BW 300 ¥Video BW 300 Y 3.017 dBm -52.66 dBm -54.75 dBm	Avg Type: Log-Power Avg Hold: 5/5 Trig: Free Run 06 dB dBm		Sweep ~2.	3.02 dBm
Swept SA           KEYSIGHT         Input: RF           R         T            Ispectrum         V           Scale/Div 10 dB            Log         1            100             Scale/Div 10 dB             200             -30.0             -40.0             -50.0             -70.0             Start 30 MHz             #Res BW 100 kHz             5 Marker Table             Mode         Trace         Scale           1         1         1         1	LINPUT Z: 50 Ω Corr CCorr Freq Ref: Int (S)	#Atten: 30 dB	PNO: Fast Gate: Off IF Gain: Low Sig Track: Off Ref LvI Offset 3. Ref Level 20.00 0 #Video BW 300 #Video BW 300	Avg Type: Log-Power Avg Hold: 5/5 Trig: Free Run 06 dB dBm		Sweep ~2.	3.02 dBm
Swept SA           KEYSIGHT         Input: RF           R         T         →         Auto           I         Spectrum         ▼           Scale/Div 10 dB         ▼         Scale/Div 10 dB           Log         1         −         1         −           100         ●         0         ●         1         −           200         ●         0         ●         1         ●           200         ●         ●         0         ●         <	LINPUT Z: 50 Ω Corr CCorr Freq Ref: Int (S)	#Atten: 30 dB	PNO: Fast Gate: Off IF Gain: Low Sig Track: Off Ref LvI Offset 3. Ref Level 20.00 #Video BW 300 #Video BW 300 Y 3.017 dBm -52.66 dBm -54.75 dBm -53.72 dBm	Avg Type: Log-Power Avg Hold: 5/5 Trig: Free Run 06 dB dBm		Sweep ~2.	3.02 dBm







