

#### Test Data

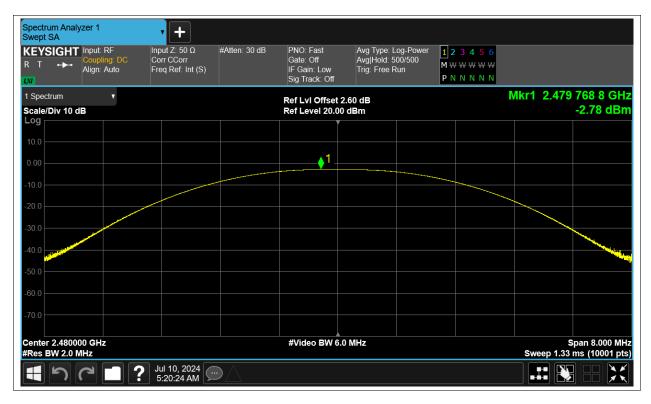
# **Maximum Conducted Output Power**

Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	BLE	2402	ANT13	-3.149	30	Pass
NVNT	BLE	2442	ANT13	-2.381	30	Pass
NVNT	BLE	2480	ANT13	-2.778	30	Pass



			Test Gra					
		Power	NVNT BLE 24	402MHz AN	T13			
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: Fast Gate: Off IF Gain: Low Sig Track: Off	Avg Type: L Avg Hold: 5 Trig: Free F	600/500 M ₩	3 4 5 6 + + + + + + + + + + + + + + + + + + +		
1 Spectrum v			Ref LvI Offset	2.56 dB			Mkr1 2.402	
Scale/Div 10 dB Log			Ref Level 20.0	0 dBm				-3.15 dBm
10.0								
0.00				1				
-10.0								
-20.0								
-30.0								
-40.0								and the second designed in the second designed designed in the second designed designed in the second designed designed designed in the second designed design
-50.0								
-60.0								
-70.0								
Center 2.402000 GHz #Res BW 2.0 MHz			#Video BW 6	.0 MHz				Span 8.000 MHz ms (10001 pts)
	Jul 10, 2024							
	• 5.15.20 Alvi							
	• 5.15.20 AM		NVNT BLE 24	442MHz AN	T13			
Spectrum Analyzer 1	• 3.13.20 AM [2		NVNT BLE 24	442MHz AN	T13			
Spectrum Analyzer 1 Swept SA KEYSIGHT Input: RF	<b>Γ</b> Input Z: 50 Ω		PNO: Fast	Avg Type: L	Log-Power 12	3456		
Spectrum Analyzer 1 Swept SA	• +	Power			.og-Power 12 00/500 M ₩	3 4 5 6 ₩₩₩₩ N N N N		
Spectrum Analyzer 1 Swept SA KEYSIGHT Input: RF R T + Align: Auto I Spectrum Scale/Div 10 dB	Linput Z: 50 Ω Corr CCorr	Power	PNO: Fast Gate: Off IF Gain: Low	Avg Type: L Avg Hold: 5 Trig: Free F 2.58 dB	.og-Power 12 00/500 M ₩	₩₩₩₩ NNNN		
Spectrum Analyzer 1 Swept SA KEYSIGHT R T ↔ Align: Auto Log Scale/Div 10 dB	Linput Z: 50 Ω Corr CCorr	Power	PNO: Fast Gate: Off IF Gain: Low Sig Track: Off Ref LvI Offset	Avg Type: L Avg Hold: 5 Trig: Free F 2.58 dB	.og-Power 12 00/500 M ₩	₩₩₩₩ NNNN		214 4 GHz
Spectrum Analyzer 1 Swept SA KEYSIGHT Input: RF R T Ispectrum Scale/Div 10 dB Log 10.0	Linput Z: 50 Ω Corr CCorr	Power	PNO: Fast Gate: Off IF Gain: Low Sig Track: Off Ref LvI Offset	Avg Type: L Avg Hold: 5 Trig: Free F 2.58 dB 0 dBm	.og-Power 12 00/500 M ₩	₩₩₩₩ NNNN		214 4 GHz
Spectrum Analyzer 1 Swept SA KEYSIGHT R T ↔ Align: Auto Log Scale/Div 10 dB	Linput Z: 50 Ω Corr CCorr	Power	PNO: Fast Gate: Off IF Gain: Low Sig Track: Off Ref LvI Offset	Avg Type: L Avg Hold: 5 Trig: Free F 2.58 dB	.og-Power 12 00/500 M ₩	₩₩₩₩ NNNN		214 4 GHz
Spectrum Analyzer 1 Swept SA KEYSIGHT Input: RF R T Ispectrum Scale/Div 10 dB Log 10.0	Linput Z: 50 Ω Corr CCorr	Power	PNO: Fast Gate: Off IF Gain: Low Sig Track: Off Ref LvI Offset	Avg Type: L Avg Hold: 5 Trig: Free F 2.58 dB 0 dBm	.og-Power 12 00/500 M ₩	₩₩₩₩ NNNN		214 4 GHz
Spectrum Analyzer 1         Swept SA         KEYSIGHT         R T →         Align: Auto         Log         10.0         0.00	Linput Z: 50 Ω Corr CCorr	Power	PNO: Fast Gate: Off IF Gain: Low Sig Track: Off Ref LvI Offset	Avg Type: L Avg Hold: 5 Trig: Free F 2.58 dB 0 dBm	.og-Power 12 00/500 M ₩	₩₩₩₩ NNNN		214 4 GHz
Spectrum Analyzer 1 Swept SA KEYSIGHT Input: RF R T Scale/Div 10 dB Log 1.00 -10.0	Linput Z: 50 Ω Corr CCorr	Power	PNO: Fast Gate: Off IF Gain: Low Sig Track: Off Ref LvI Offset	Avg Type: L Avg Hold: 5 Trig: Free F 2.58 dB 0 dBm	.og-Power 12 00/500 M ₩	₩₩₩₩ NNNN		214 4 GHz
Spectrum Analyzer 1 Swept SA KEYSIGHT Input: RF R T → Align: Auto I Spectrum Scale/Div 10 dB Log 10.0 -10.0 -20.0	Linput Z: 50 Ω Corr CCorr	Power	PNO: Fast Gate: Off IF Gain: Low Sig Track: Off Ref LvI Offset	Avg Type: L Avg Hold: 5 Trig: Free F 2.58 dB 0 dBm	.og-Power 12 00/500 M ₩	₩₩₩₩ NNNN		214 4 GHz
Spectrum Analyzer 1 Swept SA KEYSIGHT Input: RF R T + Align: Auto I Spectrum • Scale/Div 10 dB Log 10.0 -20.0 -30.0	Linput Z: 50 Ω Corr CCorr	Power	PNO: Fast Gate: Off IF Gain: Low Sig Track: Off Ref LvI Offset	Avg Type: L Avg Hold: 5 Trig: Free F 2.58 dB 0 dBm	.og-Power 12 00/500 M ₩	₩₩₩₩ NNNN		214 4 GHz
Spectrum Analyzer 1 Swept SA KEYSIGHT Input: RF R T  Scale/Div 10 dB Log 10.0 -10.0 -20.0 -30.0 -40.0 Migni Auto	Linput Z: 50 Ω Corr CCorr	Power	PNO: Fast Gate: Off IF Gain: Low Sig Track: Off Ref LvI Offset	Avg Type: L Avg Hold: 5 Trig: Free F 2.58 dB 0 dBm	.og-Power 12 00/500 M ₩	₩₩₩₩ NNNN		214 4 GHz
Spectrum Analyzer 1           Swept SA           KEYSIGHT         Input: RF           R         T         →           I spectrum         ✓           Scale/Div 10 dB         ✓           Log         ✓           10.0         ✓           -10.0         ✓           -30.0         ✓           -60.0         ✓	Linput Z: 50 Ω Corr CCorr	Power	PNO: Fast Gate: Off IF Gain: Low Sig Track: Off Ref LvI Offset	Avg Type: L Avg Hold: 5 Trig: Free F 2.58 dB 0 dBm	.og-Power 12 00/500 M ₩	₩₩₩₩ NNNN		214 4 GHz
Spectrum Analyzer 1 Swept SA KEYSIGHT Input: RF R T Align: Auto CV 1 Spectrum • Scale/Div 10 dB Log 10.0 -20.0 -30.0 -50.0	Linput Z: 50 Ω Corr CCorr	Power	PNO: Fast Gate: Off IF Gain: Low Sig Track: Off Ref LvI Offset	Avg Type: L Avg Hold: 5 Trig: Free F 2.58 dB 0 dBm	.og-Power 12 00/500 M ₩	₩₩₩₩ NNNN		214 4 GHz
Spectrum Analyzer 1         Swept SA         KEYSIGHT         R T →         Align: Auto         I Spectrum         Scale/Div 10 dB         Log         10.0         -00         -10.0         -20.0         -30.0         -40.0         -40.0         -70.0         Center 2.442000 GHz	Linput Z: 50 Ω Corr CCorr	Power	PNO: Fast Gate: Off IF Gain: Low Sig Track: Off Ref LvI Offset	Avg Type: L Avg Hold: 5 Trig: Free F 2.58 dB 0 dBm	.og-Power 12 00/500 M ₩	₩₩₩₩ NNNN	Mkr1 2.442	214 4 GHz -2.38 dBm
Spectrum Analyzer 1           KEYSIGHT         Input: RF           R         T         →         Auto           I Spectrum         ▼         Scale/Div 10 dB         ■           Log         □         □         □         □           100         □         □         □         □         □           200         □ <th□< td=""><td>Linput Z: 50 Ω Corr CCorr</td><td>Power I</td><td>PNO: Fast Gate: Off IF Gain: Low Sig Track: Off Ref LvI Offset Ref Level 20.0</td><td>Avg Type: L Avg Hold: 5 Trig: Free F 2.58 dB 0 dBm</td><td>.og-Power 12 00/500 M ₩</td><td>₩₩₩₩ NNNN</td><td>Mkr1 2.442</td><td>214 4 GHz -2.38 dBm</td></th□<>	Linput Z: 50 Ω Corr CCorr	Power I	PNO: Fast Gate: Off IF Gain: Low Sig Track: Off Ref LvI Offset Ref Level 20.0	Avg Type: L Avg Hold: 5 Trig: Free F 2.58 dB 0 dBm	.og-Power 12 00/500 M ₩	₩₩₩₩ NNNN	Mkr1 2.442	214 4 GHz -2.38 dBm







#### -6dB Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	limit	Verdic
NVNT	BLE	2402	ANT13	0.659	0.5	Pass
NVNT	BLE	2442	ANT13	0.664	0.5	Pass
NVNT	BLE	2480	ANT13	0.663	0.5	Pass







Öccup	um Analy ied BW			• +	-							
KEY: R T	SIGHT .≁·	Input: F Couplin Align: A	ig: DC	Input Z: 5 Corr CCo Freq Ref:	rr	Atten: 30 dB	Trig: Free Run Gate: Off #IF Gain: Low	Center Fre Avg Hold: Radio Std:		Hz		
1 Grap	h		v				Ref LvI Offset	2.60 dB			Mkr3 2.4803	
	/Div 10.0	dB					Ref Value 22.6	0 dBm				-8.91 dBm
Log 12.6												
2.60						<u>∂</u> 2			3-			
-7.40												
-27.4											- man	
-37.4 -47.4												
-47.4												
-67.4												
	r 2.48000 BW 100.0						#Video BW 300	.00 kHz			Ewoop 4 22	Span 2 MHz ns (10001 pts)
2 Metr			•								Sweep 1.551	ns (10001 pts)
Zivieu	ICS											
		Occ	cupied Ban	dwidth 1.0523					Total Power		3.29 dBm	
		Tro	nomit Frog			2.226 kHz			% of OBW Pov	vor	99.00 %	
			nsmit Freq 3 Bandwid			663.4 kHz			x dB	vei	-6.00 dB	
	5	2	]?	Jul 10, 2 5:20:52	2024 2 AM							



## **Occupied Channel Bandwidth**

Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	BLE	2402	ANT13	1.02
NVNT	BLE	2442	ANT13	1.02
NVNT	BLE	2480	ANT13	1.02







Spectri Occupi	um Analy ied BW	zer 1		• +									
KEYS R T	SIGHT	Input: <mark>Coupli</mark> Align:	ing: DC	Input Ζ: 50 Ω Corr CCorr Freq Ref: Int (S)	Atter	n: 30 dB	Trig: Free Run Gate: Off #IF Gain: Low	Center Fre Avg Hold: <sup>/</sup> Radio Std:		00 GH	Ηz		
1 Grap			•				Ref LvI Offset						
	'Div 10.0	dB					Ref Value 22.60	) dBm					
Log 12.6													
2.60													
-7.40													
-17.4						~~~~~			~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~				
-27.4					-					~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~			
-37.4			~	$\sim$								~~~~	
-47.4			and a second second	$\sim$									
-57.4	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	m										~	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
-67.4													
Center	r 2.48000	0 GHz	2				#Video BW 91.0	000 kHz		•			Span 3 MHz
#Res E	<b>SW 30.00</b>	00 kHz										Sweep 3.33	ms (10001 pts)
2 Metri	cs		v										
		Oc	cupied Ban						Total Dawn			4 47 dDm	
				1.0204 MHz					Total Powe			4.17 dBm	
			ansmit Freq			3 kHz			% of OBW	/ Pow	ver	99.00 %	
		хd	lB Bandwidt	h	1.276	MHz			x dB			-26.00 dB	
	5		<b>•</b> ?	Jul 10, 2024 5:20:39 AM	$\square$	7							



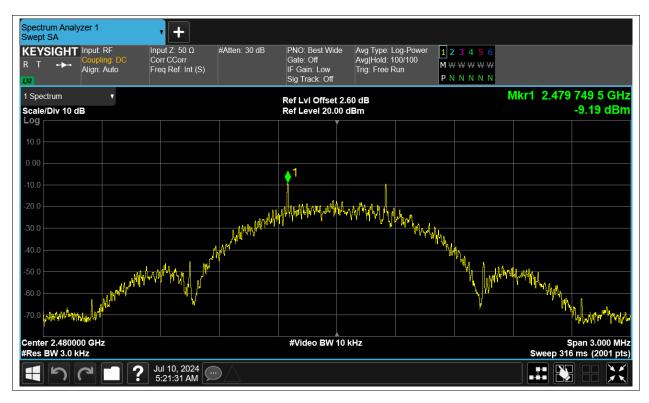
#### **Maximum Power Spectral Density Level**

Condition	Mode	Frequency (MHz)	Antenna	Max PSD (dBm)	Limit (dBm)	Verdict
NVNT	BLE	2402	ANT13	-9.601	8	Pass
NVNT	BLE	2442	ANT13	-8.879	8	Pass
NVNT	BLE	2480	ANT13	-9.194	8	Pass











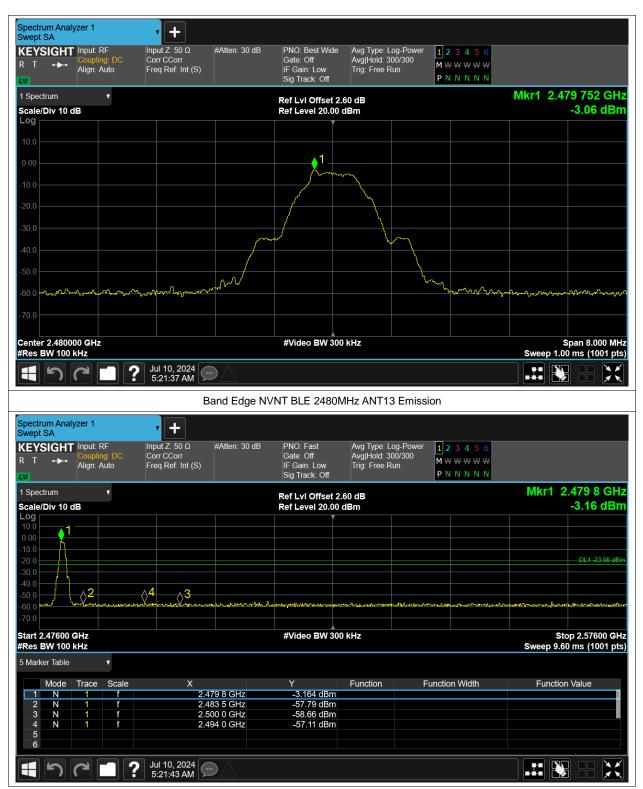
## **Band Edge**

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE	2402	ANT13	-52.54	-20	Pass
NVNT	BLE	2480	ANT13	-54.05	-20	Pass



			Test Graph	าร		
		Band Edge	NVNT BLE 240	02MHz ANT13 Re	əf	
Spectrum Analyzer 1 Swept SA	<b>•</b> +					
KEYSIGHT     Input: RF       R     T       QUI     Align: Auto	Input Z: 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 V			Ref LvI Offset 2.			Mkr1 2.401 760 GHz
Scale/Div 10 dB			Ref Level 20.00	dBm		-3.55 dBm
10.0						
0.00			1			
-10.0			j.	~		
-20.0						
-30.0				$\mathbf{X}$		
			and the second se	han .		
-40.0				\		
-50.0		mar		1	m	
-60.0 Contrage of the second	ᡔᠬᡧᡊᡎᠵᠧᡔ᠆ᠬ᠇ᡘᡃᡢ᠁	~			- And	Mushar Martana haran
-70.0						
Center 2.402000 GHz			#Video BW 300	) kHz		Span 8.000 MHz
#Res BW 100 kHz						Sweep 1.00 ms (1001 pts)
1 C L ?	Jul 10, 2024 5:16:37 AM	$\supset \land$				
	3.10.37 AW					
	0.10.07 AN		NT BLE 2402N	/Hz ANT13 Emis	sion	
Spectrum Analyzer 1	Ba		NT BLE 2402N	/Hz ANT13 Emis	sion	
Swept SA	0.10.07 AN		PNO: Fast	/Hz ANT13 Emis Avg Type: Log-Powe		
Spectrum Analyzer 1 Swept SA KEYSIGHT Input: RF R T ++ Coupling: DC Align: Auto	Bi	and Edge NV	PNO: Fast Gate: Off IF Gain: Low		1 2 3 4 5 6 M ₩ ₩ ₩ ₩ ₩	
Swept SA KEYSIGHT Input: RF R T + Coupling: DC Align: Auto	B: Input Z: 50 Ω Corr CCorr	and Edge NV	PNO: Fast Gate: Off IF Gain: Low Sig Track: Off	Avg Type: Log-Powe Avg Hold: 300/300 Trig: Free Run	1 2 3 4 5 6	
Swept SA       KEYSIGHT       R T       Align: Auto	B: Input Z: 50 Ω Corr CCorr	and Edge NV	PNO: Fast Gate: Off IF Gain: Low	Avg Type: Log-Powe Avg Hold: 300/300 Trig: Free Run 56 dB	1 2 3 4 5 6 M ₩ ₩ ₩ ₩ ₩	Mkr1 2.402 0 GHz -4.02 dBm
Swept SA       KEYSIGHT       Input: RF       Coupling: DC       Align: Auto       1 Spectrum	B: Input Z: 50 Ω Corr CCorr	and Edge NV	PNO: Fast Gate: Off IF Gain: Low Sig Track: Off Ref LvI Offset 2.	Avg Type: Log-Powe Avg Hold: 300/300 Trig: Free Run 56 dB	1 2 3 4 5 6 M ₩ ₩ ₩ ₩ ₩	Mkr1 2.402 0 GHz
Swept SA       KEYSIGHT     Input: RF       R     T       I     Coupling: DC       Align: Auto       Scale/Div 10 dB       Log       10.0	B: Input Z: 50 Ω Corr CCorr	and Edge NV	PNO: Fast Gate: Off IF Gain: Low Sig Track: Off Ref LvI Offset 2.	Avg Type: Log-Powe Avg Hold: 300/300 Trig: Free Run 56 dB	1 2 3 4 5 6 M ₩ ₩ ₩ ₩ ₩	Mkr1 2.402 0 GHz
Swept SA           KEYSIGHT         Input: RF           R         T         T           1 Spectrum         T           Scale/Div 10 dB         100           10.0         0.00           -10.0         0.00	B: Input Z: 50 Ω Corr CCorr	and Edge NV	PNO: Fast Gate: Off IF Gain: Low Sig Track: Off Ref LvI Offset 2.	Avg Type: Log-Powe Avg Hold: 300/300 Trig: Free Run 56 dB	1 2 3 4 5 6 M ₩ ₩ ₩ ₩ ₩	Mkr1 2.402 0 GHz
Swept SA           KEYSIGHT         Input: RF           R         T         →→         Coupling: DC Align: Auto           I         Spectrum         ▼           Scale/Div 10 dB         ■         ■           10.0         ■         ■           -10.0         ■         ■           -20.0         ■         ■           -40.0         ■         ■	B: Input Z: 50 Ω Corr CCorr	#Atten: 30 dB	PNO: Fast Gate: Off IF Gain: Low Sig Track: Off Ref LvI Offset 2.	Avg Type: Log-Powe Avg Hold: 300/300 Trig: Free Run 56 dB	1 2 3 4 5 6 M ₩ ₩ ₩ ₩ ₩	Mkr1 2.402 0 GHz -4.02 dBm
Swept SA           KEYSIGHT         Input: RF           R         T         →         Aign: Auto           Ixv         Scale/Div 10 dB         V           Scale/Div 10 dB         0         0         0           0.00         0         0         0         0           -100         -20.0	B: Input Z: 50 Ω Corr CCorr	and Edge NV	PNO: Fast Gate: Off IF Gain: Low Sig Track: Off Ref LvI Offset 2.	Avg Type: Log-Powe Avg Hold: 300/300 Trig: Free Run 56 dB	1 2 3 4 5 6 M ₩ ₩ ₩ ₩ ₩	Mkr1 2.402 0 GHz
Swept SA           KEYSIGHT         Input: RF           R         T         →         Goupling: DC Align: Auto           I         Spectrum         ▼           Scale/Div 10 dB             10.0             -20.0              -30.0              -40.0	B: Input Z: 50 Ω Corr CCorr	#Atten: 30 dB	PNO: Fast Gate: Off IF Gain: Low Sig Track: Off Ref LvI Offset 2.	Avg Type: Log-Powe Avg Hold: 300/300 Trig: Free Run 56 dB	1 2 3 4 5 6 M ₩ ₩ ₩ ₩ ₩	Mkr1 2.402 0 GHz -4.02 dBm
Sivept SA           KEYSIGHT         Input: RF           R         T         →         Coupling: DC Align: Auto           I         Spectrum         v           Scale/Div 10 dB         v           Log         0         0           10.0         0         0         0           -20.0	B: Input Z: 50 Ω Corr CCorr	#Atten: 30 dB	PNO: Fast Gate: Off IF Gain: Low Sig Track: Off Ref LvI Offset 2.	Avg Type: Log-Power Avg Hold: 300/300 Trig: Free Run 56 dB dBm	1 2 3 4 5 6 M ₩ ₩ ₩ ₩ ₩	Mkr1 2.402 0 GHz -4.02 dBm
Swept SA           KEYSIGHT         Input: RF           R         T         →         Goupling: DC Align: Auto           I         Spectrum         v           Scale/Div 10 dB         0         0           10.0         0         0           -20.0         -         -           -30.0         -         -           -40.0         -         -           -50.0         -         -           -70.0         -         -           Start 2.30600 GHz         -         -	B: Input Z: 50 Ω Corr CCorr	#Atten: 30 dB	PNO: Fast Gate: Off IF Gain: Low Sig Track: Off Ref LvI Offset 2. Ref Level 20.00	Avg Type: Log-Power Avg Hold: 300/300 Trig: Free Run 56 dB dBm	1 2 3 4 5 6 M ₩ ₩ ₩ ₩ ₩	Mkr1 2.402 0 GHz -4.02 dBm
Sivept SA           KEYSIGHT         Input: RF           R         T         →→         Coupling: DC           I Spectrum         ▼         Scale/Div 10 dB         ▼           Scale/Div 10 dB         ■         ■         ■           Log         □         □         ■         ■           30.0         □         □         ■	Billingut Z: 50 Ω Corr CCorr Freq Ref: Int (S)	#Atten: 30 dB	PNO: Fast Gate: Off IF Gain: Low Sig Track: Off Ref Level 20.000	Avg Type: Log-Power Avg Hold: 300/300 Trig: Free Run 56 dB dBm	1 2 3 4 5 6 M ₩ ₩ ₩ ₩ ₩	Mkr1 2.402 0 GHz -4.02 dBm
Swept SA           KEYSIGHT         Input: RF           R         T         →         Goupling: DC Align: Auto           I         Spectrum         v           Scale/Div 10 dB         0         0           Log         0         0         0           10.0         0         0         0         0           -20.0         -30.0         -40.0	Balance Freq Ref: Int (S) X X 2.44 2.44 2.44 2.44	#Atten: 30 dB	PNO: Fast Gate: Off IF Gain: Low Sig Track: Off Ref Level 20.00 (	Avg Type: Log-Power Avg Hold: 300/300 Trig: Free Run 56 dB dBm		Mkr1 2.402 0 GHz -4.02 dBm 0L1 2 dBm
Swept SA           KEYSIGHT         Input: RF           R         T         →→         Gouping: DC           Align: Auto         Align: Auto           I Spectrum         ▼           Scale/Div 10 dB	Billingut Z: 50 Ω Corr CCorr Freq Ref: Int (S)	#Atten: 30 dB	PNO: Fast Gate: Off IF Gain: Low Sig Track: Off Ref Level 20.00 ( Ref Level 20.00 ( Wideo BW 300 Y -4.021 dBm	Avg Type: Log-Power Avg Hold: 300/300 Trig: Free Run 56 dB dBm		Mkr1 2.402 0 GHz -4.02 dBm 0L1 2 dBm
Swept SA           KEYSIGHT         Input: RF           R         T         Imput: RF           Coupling: DC         Align: Auto           I Spectrum         Imput: RF           Scale/Div 10 dB         Imput: RF           Log         Imput: RF           0.00         Imput: RF	Billingut Z: 50 Ω Corr CCorr Freq Ref: Int (S)	and Edge NV #Atten: 30 dB	PNO: Fast Gate: Off IF Gain: Low Sig Track: Off Ref Level 20.00 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	Avg Type: Log-Power Avg Hold: 300/300 Trig: Free Run 56 dB dBm		Mkr1 2.402 0 GHz -4.02 dBm DL1 2/ dBm DL1 2/ dBm OL1 2/ dBm Stop 2.40600 GHz Sweep 9.60 ms (1001 pts)
Swept SA           KEYSIGHT         Input: RF           R         T         →→         Coupling: DC Align: Auto           I         Spectrum         ▼           Scale/Div 10 dB         ✓           Log         □         □           10.0         □         □           20.0         □         □           30.0         □         □           40.0         □         □           50.0         □         □           Start 2.30600 GHz         #Res BW 100 kHz           5 Marker Table         ▼           Mode         Trace         Scale           1         1         f           4         N         1         f	Billingut Z: 50 Ω Corr CCorr Freq Ref: Int (S)	and Edge NV #Atten: 30 dB	PNO: Fast Gate: Off IF Gain: Low Sig Track: Off Ref Level 20.00 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	Avg Type: Log-Power Avg Hold: 300/300 Trig: Free Run 56 dB dBm		Mkr1 2.402 0 GHz -4.02 dBm 0L1 2 dBm







## **Conducted RF Spurious Emission**

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE	2402	ANT13	-46.62	-20	Pass
NVNT	BLE	2442	ANT13	-46.69	-20	Pass
NVNT	BLE	2480	ANT13	-46.03	-20	Pass



			Test Graph				
		Tx. Spurious	S NVNT BLE 24	02MHz ANT13 Re	f		
Spectrum Analyzer 1 Swept SA	<b>•</b> +						
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 <del>W W W W W</del> P N N N N N		
1 Spectrum V			Ref LvI Offset 2.			Mkr1 2.401 757 0 0	
Scale/Div 10 dB Log			Ref Level 20.00 o	dBm		-3.54 d	вm
10.0							
0.00		11					
-10.0					margan and a second		
-20.0	~~~~~						
-30.0							
-40.0							N. M. W
-50.0							
-60.0							
-70.0							
Center 2.4020000 GHz #Res BW 100 kHz			#Video BW 300	kHz		Span 1.500 Sweep 1.00 ms (1001	
1 1 2 2	Jul 10, 2024 . 5:16:49 AM	$\supset \bigtriangleup$					
	Tx	. Spurious N	VNT BLE 2402	MHz ANT13 Emiss	sion		
Spectrum Analyzer 1		. Spurious N	VNT BLE 2402	MHz ANT13 Emiss	sion		
Swept SA KEYSIGHT Input: RF	Tx • • • • • • • • •	#Atten: 30 dB	VNT BLE 2402	MHz ANT13 Emiss			
Swept SA       KEYSIGHT       R T       Align: Auto	• +	·	PNO: Fast Gate: Off IF Gain: Low		<b>1</b> 23456 M₩₩₩₩₩₩₩		
Swept SA       KEYSIGHT       Input: RF       Coupling: DC       Align: Auto	Input Ζ: 50 Ω Corr CCorr	·	PNO: Fast Gate: Off IF Gain: Low Sig Track: Off	Avg Type: Log-Power Avg Hold: 10/10 Trig: Free Run	123456	Mkr1 2.402 (	GHz
Swept SA KEYSIGHT R T → Align: Auto NV 1 Spectrum V Scale/Div 10 dB	Input Ζ: 50 Ω Corr CCorr	·	PNO: Fast Gate: Off IF Gain: Low	Avg Type: Log-Power Avg Hold: 10/10 Trig: Free Run 56 dB	<b>1</b> 23456 M₩₩₩₩₩₩₩	Mkr1 2.402 0 -5.55 d	
Swept SA       KEYSIGHT       R       T       →       I Spectrum       Scale/Div 10 dB       Log       10.0	Input Ζ: 50 Ω Corr CCorr	·	PNO: Fast Gate: Off IF Gain: Low Sig Track: Off Ref Lvl Offset 2.3	Avg Type: Log-Power Avg Hold: 10/10 Trig: Free Run 56 dB	<b>1</b> 23456 M₩₩₩₩₩₩₩		
Swept SA KEYSIGHT R T XV 1 Spectrum Scale/Div 10 dB Log 0.00 -10.0	Input Ζ: 50 Ω Corr CCorr	·	PNO: Fast Gate: Off IF Gain: Low Sig Track: Off Ref Lvl Offset 2.3	Avg Type: Log-Power Avg Hold: 10/10 Trig: Free Run 56 dB	<b>1</b> 23456 M₩₩₩₩₩₩₩	-5.55 d	IBm
Swept SA           KEYSIGHT         Input: RF           R         T         →→           I Spectrum         V           Scale/Div 10 dB         1           Log         1           10.0         1           -10.0         -30.0	Input Ζ: 50 Ω Corr CCorr	·	PNO: Fast Gate: Off IF Gain: Low Sig Track: Off Ref Lvl Offset 2.3	Avg Type: Log-Power Avg Hold: 10/10 Trig: Free Run 56 dB	<b>1</b> 23456 M₩₩₩₩₩₩₩	-5.55 d	IBm
Swept SA KEYSIGHT Input: RF R T Align: Auto I Spectrum V Scale/Div 10 dB Log 10.0 -10.0 -20.0	Input Ζ: 50 Ω Corr CCorr	#Atten: 30 dB	PNO: Fast Gate: Off IF Gain: Low Sig Track: Off Ref LvI Offset 2.3 Ref Level 20.00 o	Avg Type: Log-Power Avg Hold: 10/10 Trig: Free Run 56 dB	<b>1</b> 23456 M₩₩₩₩₩₩₩	-5.55 d	IBm
Swept SA           KEYSIGHT         Input: RF           R         T         →→           Ispectrum         V           Scale/Div 10 dB         0           10.0         1           -10.0         1           -30.0         -40.0           -60.0	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 2.3 Ref Level 20.00 o	Avg Type: Log-Power Avg Hold: 10/10 Trig: Free Run 56 dB	<b>1</b> 23456 M₩₩₩₩₩₩₩	-5.55 d	IBm
Swept SA         KEYSIGHT       Input: RF         R       T       →→         I Spectrum       V         Scale/Div 10 dB       V         Log       1         10.0       1         -10.0       1         -30.0       -40.0         -50.0       -40.0         -50.0       -50.0         -70.0       -50.0         Start 30 MHz	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 2.3 Ref Level 20.00 o	Avg Type: Log-Power Avg Hold: 10/10 Trig: Free Run 56 dB JBm	<b>1</b> 23456 M₩₩₩₩₩₩₩	-5.55 d	IBm <sup>i4 dBm</sup> 5
Swept SA           KEYSIGHT         Input: RF: Coupling: DC Align: Auto           I         Spectrum           Scale/Div 10 dB         V           Scale/Div 10 dB         1           -00         -1           -100         -1           -300         -40.0           -50.0	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 2.0 Ref Level 20.00 of	Avg Type: Log-Power Avg Hold: 10/10 Trig: Free Run 56 dB JBm	<b>1</b> 23456 M₩₩₩₩₩₩₩	-5.55 d	IBm <sup>i4 dBm</sup> 5
Swept SA KEYSIGHT R T → Align: Auto I Spectrum V Scale/Div 10 dB Log 10.0 -10.0 -20.0 -30.0 -40.0 -50.0	Input Z: 50 Ω Corr CCorr Freq Ref: Int (S)	#Atten: 30 dB	PNO: Fast Gate: Off IF Gain: Low Sig Track: Off Ref Level 20.00 of Ref Level 20.00 of #Video BW 300	Avg Type: Log-Power Avg Hold: 10/10 Trig: Free Run 56 dB 1Bm	1 2 3 4 5 6 M W W W W W P N N N N N 	-5.55 d	IBm <sup>34 dBm</sup> 5 
Swept SA         KEYSIGHT       Input: RF         R       T       →→         I Spectrum       V         1 Spectrum       V         Scale/Div 10 dB       V         Log       1         100       1         -200       -         -300       -         -600       -         -70.0       -         Start 30 MHz       *         #Res BW 100 kHz       5         5 Marker Table       V         Mode       Trace         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 Level 20:000 4 #Video BW 300	Avg Type: Log-Power Avg Hold: 10/10 Trig: Free Run 56 dB 1Bm	<b>1</b> 23456 M₩₩₩₩₩₩₩	-5.55 d	IBm <sup>i4 dBm</sup> 5
Swept SA           KEYSIGHT         Input: RF           R         T         Coupling: DC           Align: Auto         Input: RF           I Spectrum         V           Scale/Div 10 dB         Input: RF           Log         Input: RF           100         Input: RF           Scale/Div 10 dB         Input: RF           Start 30 MHz         Input: RF           Mode         Trace         Scale           Mode         Trace         Scale           Input: RF         Input: RF         Input: RF	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 2.: Ref Level 20.00 of #Video BW 300 Y -5.553 dBm -53.53 dBm -55.07 dBm	Avg Type: Log-Power Avg Hold: 10/10 Trig: Free Run 56 dB 1Bm	1 2 3 4 5 6 M W W W W W P N N N N N 	-5.55 d	IBm <sup>34 dBm</sup> 5 
Swept SA           KEYSIGHT R T         Input: RF Coupling: DC Align: Auto           1 Spectrum         •           Scale/Div 10 dB         •           Log 10.0         •           0.0         •           0.0         •           0.0         •           0.0         •           0.0         •           0.0         •           0.0         •           0.0         •           0.0         •           0.0         •           0.0         •           0.0         •           0.0         •           •         •           •         •           •         •           •         •           •         •           •         •           •         •           •         •           •         •           •         •           •         •           •         •           •         •           •         •           •         •           •         •           <	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 2.3 Ref Level 20.00 d #Video BW 300	Avg Type: Log-Power Avg Hold: 10/10 Trig: Free Run 56 dB 1Bm	1 2 3 4 5 6 M W W W W W P N N N N N 	-5.55 d	IBm <sup>i4 dBm</sup> 5
Swept SA           KEYSIGHT R T → Coupling: DC Align: Auto           I Spectrum           1 Spectrum           Scale/Div 10 dB           Log           100           -100           -300           -40.0           -50.0           -70.0           Start 30 MHz           #Res BW 100 kHz           5 Marker Table           V           Mode           1 N           1 Trace           Scale           1 N           1 Trace           1 N           1 Trace           1 N           1 Trace           1 N           1 Trace           1 N           1 T           1 N	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 2.3 Ref Level 20.00 of #Video BW 300 *Video BW 300 *Video BW 300	Avg Type: Log-Power Avg Hold: 10/10 Trig: Free Run 56 dB 1Bm	1 2 3 4 5 6 M W W W W W P N N N N N 	-5.55 d	IBm <sup>i4 dBm</sup> 5







