

Test Data

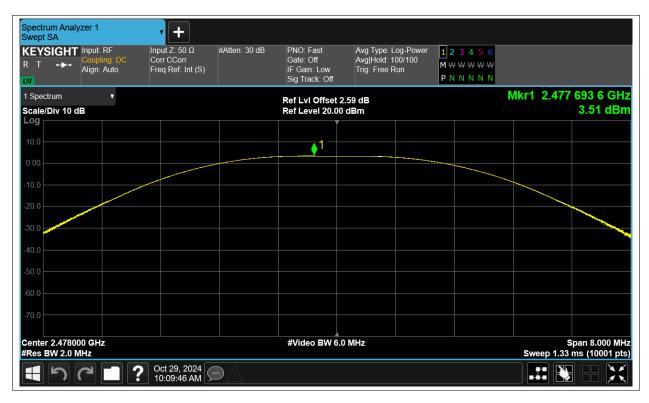
Maximum Conducted Output Power

Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	BLE	2404	Ant1	3.446	30	Pass
NVNT	BLE	2442	Ant1	3.262	30	Pass
NVNT	BLE	2478	Ant1	3.511	30	Pass



			Test Gra			
-		Power	· NVNT BLE 2	404MHz 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-F Avg Hold: 100/1 Trig: Free Run	Power 123456 00 M₩₩₩₩₩₩ PNNNNN	
1 Spectrum v			Ref Lvi Offset	2.57 dB		Mkr1 2.404 321 6 GHz
Scale/Div 10 dB			Ref Level 20.0	0 dBm		3.45 dBm
10.0						
0.00				<u>م</u> ا		
-10.0						
-20.0						
-30.0						
-40.0						
-50.0						
-60.0						
-70.0						
Center 2.404000 GHz			#Video BW 6	.0 MHz		Span 8.000 MHz
#Res BW 2.0 MHz						Sweep 1.33 ms (10001 pts)
エット	Oct 29, 2024					
		Power	· NVNT BLE 2	442MHz Ant1		
Spectrum Analyzer 1 Swept SA	• +	Power	NVNT BLE 2	2442MHz Ant1		
Spectrum Analyzer 1 Swept SA KEYSIGHT Input: RF R T + R T + Align: Auto		Power	PNO: Fast Gate: Off IF Gain: Low Sig Track: Off	2442MHz Ant1 Avg Type: Log-F Avg Hold: 100/11 Trig: Free Run		
Swept SA KEYSIGHT Input: RF R T NT Align: Auto 1 Spectrum ▼ Scale/Div 10 dB	Input Z: 50 Ω Corr CCorr		PNO: Fast Gate: Off IF Gain: Low	Avg Type: Log-F Avg Hold: 100/1 Trig: Free Run 2.58 d B	00 <u>M₩₩₩₩₩</u>	Mkr1 2.441 496 8 GHz
Swept SA KEYSIGHT Input: RF R T Align: Auto VV 1 Spectrum 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-F Avg Hold: 100/1 Trig: Free Run 2.58 d B	00 <u>M₩₩₩₩₩</u>	Mkr1 2.441 496 8 GHz
Swept SA KEYSIGHT Input: RF R T Coupling: DC Align: Auto Val 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-F Avg Hold: 100/1 Trig: Free Run 2.58 d B	00 <u>M₩₩₩₩₩</u>	Mkr1 2.441 496 8 GHz
Swept SA KEYSIGHT Input: RF R T Align: Auto VV 1 Spectrum Scale/Div 10 dB	Input Z: 50 Ω Corr CCorr		PNO: Fast Gate: Off IF Gain: Low Sig Track: Off Ref LvI Offset Ref Level 20.00	Avg Type: Log-F Avg Hold: 100/1 Trig: Free Run 2.58 d B	00 <u>M₩₩₩₩₩</u>	Mkr1 2.441 496 8 GHz
Swept SA KEYSIGHT Input: RF R T Coupling: DC Align: Auto Val 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 Ref Level 20.00	Avg Type: Log-F Avg Hold: 100/1 Trig: Free Run 2.58 d B	00 <u>M₩₩₩₩₩</u>	Mkr1 2.441 496 8 GHz
Swept SA KEYSIGHT R T → Gouping: DC Aign: Auto DV 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 Ref Level 20.00	Avg Type: Log-F Avg Hold: 100/1 Trig: Free Run 2.58 d B	00 <u>M₩₩₩₩₩</u>	
Swept SA KEYSIGHT Input: RF R T Couping: DC Align: Auto LV Scale/Div 10 dB Log 10.0 .000 .10.0	Input Z: 50 Ω Corr CCorr		PNO: Fast Gate: Off IF Gain: Low Sig Track: Off Ref LvI Offset Ref Level 20.00	Avg Type: Log-F Avg Hold: 100/1 Trig: Free Run 2.58 d B	00 <u>M₩₩₩₩₩</u>	Mkr1 2.441 496 8 GHz
Swept SA KEYSIGHT R T Scale/Div 10 dB Cog 10.0 -10.0 -20.0	Input Z: 50 Ω Corr CCorr		PNO: Fast Gate: Off IF Gain: Low Sig Track: Off Ref LvI Offset Ref Level 20.00	Avg Type: Log-F Avg Hold: 100/1 Trig: Free Run 2.58 d B	00 <u>M₩₩₩₩₩</u>	Mkr1 2.441 496 8 GHz
Swept SA KEYSIGHT Input: RF R T +++ Coupling: DC Align: Auto DV 1 Spectrum Scale/Div 10 dB Log 10.0 0.00 -10.0 -20.0 -30.0	Input Z: 50 Ω Corr CCorr		PNO: Fast Gate: Off IF Gain: Low Sig Track: Off Ref LvI Offset Ref Level 20.00	Avg Type: Log-F Avg Hold: 100/1 Trig: Free Run 2.58 d B	00 <u>M₩₩₩₩₩</u>	Mkr1 2.441 496 8 GHz
Swept SA KEYSIGHT Input: RF Coupling: DC Align: Auto DVT Y Scale/Div 10 dB V Log Imput: RF 10.0 Imput: RF -20.0 Imput: RF -30.0 Imput: RF	Input Z: 50 Ω Corr CCorr		PNO: Fast Gate: Off IF Gain: Low Sig Track: Off Ref LvI Offset Ref Level 20.00	Avg Type: Log-F Avg Hold: 100/1 Trig: Free Run 2.58 d B	00 <u>M₩₩₩₩₩</u>	Mkr1 2.441 496 8 GHz
Swept SA Input: RF R T → Coupling: DC Align: Auto IV 1 Spectrum ▼ Scale/Div 10 dB 0 0 0 10.0 0 0 0 0 -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 Ref Level 20.00	Avg Type: Log-F Avg Hold: 100/1 Trig: Free Run 2.58 d B	00 <u>M₩₩₩₩₩</u>	Mkr1 2.441 496 8 GHz
Swept SA Input: RF R T 1 Spectrum V Scale/Div 10 dB Log 10.0 -10.0 -20.0 -30.0 -60.0 -70.0	Input Z: 50 Ω Corr CCorr		PNO: Fast Gate: Off IF Gain: Low Sig Track: Off Ref Level 20.00	Avg Type: Log-F Avg Hold: 100/11 Trig: Free Run 2.58 dB 0 dBm	00 <u>M₩₩₩₩₩</u>	Mkr1 2.441 496 8 GHz 3.26 dBm
Swept SA Input: RF R T T 1 Spectrum V Align: Auto 1 Spectrum V Scale/Div 10 dB 0.00 -10.0	Input Z: 50 Ω Corr CCorr		PNO: Fast Gate: Off IF Gain: Low Sig Track: Off Ref LvI Offset Ref Level 20.00	Avg Type: Log-F Avg Hold: 100/11 Trig: Free Run 2.58 dB 0 dBm	00 <u>M₩₩₩₩₩</u>	Mkr1 2.441 496 8 GHz 3.26 dBm
Swept SA KEYSIGHT Input: RF Coupling: DC Align: Auto INDUT V Scale/Div 10 dB V Log V 10.0 V -10.0 V -20.0 V -30.0 V -60.0 V -70.0 V Center 2.442000 GHz #Res BW 2.0 MHz V	Input Z: 50 Ω Corr CCorr	#Atten: 30 dB	PNO: Fast Gate: Off IF Gain: Low Sig Track: Off Ref Level 20.00	Avg Type: Log-F Avg Hold: 100/11 Trig: Free Run 2.58 dB 0 dBm	00 <u>M₩₩₩₩₩</u>	Mkr1 2.441 496 8 GHz 3.26 dBm







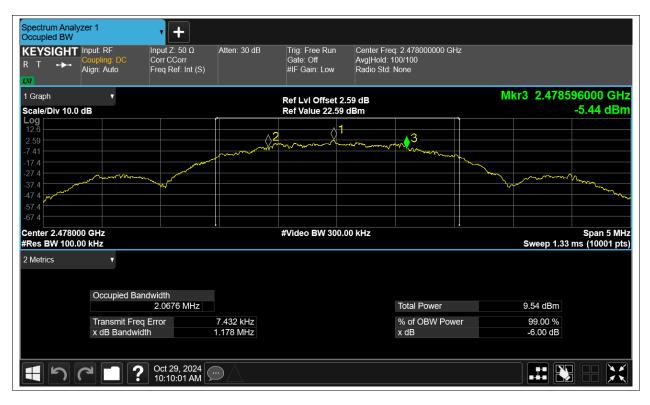
-6dB Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	limit	Verdic
NVNT	BLE	2404	Ant1	1.146	0.5	Pass
NVNT	BLE	2442	Ant1	1.232	0.5	Pass
NVNT	BLE	2478	Ant1	1.178	0.5	Pass











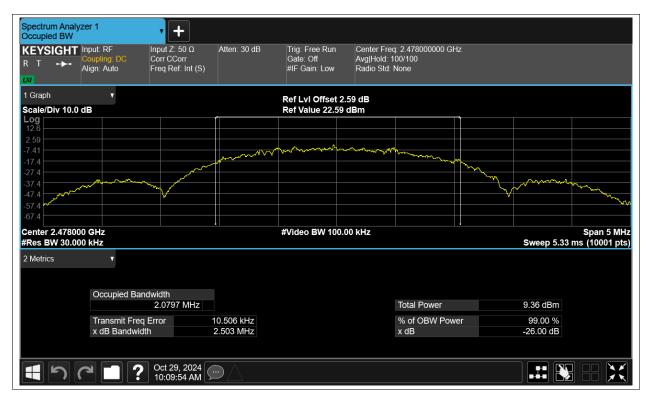
Occupied Channel Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	BLE	2404	Ant1	2.084
NVNT	BLE	2442	Ant1	2.077
NVNT	BLE	2478	Ant1	2.08











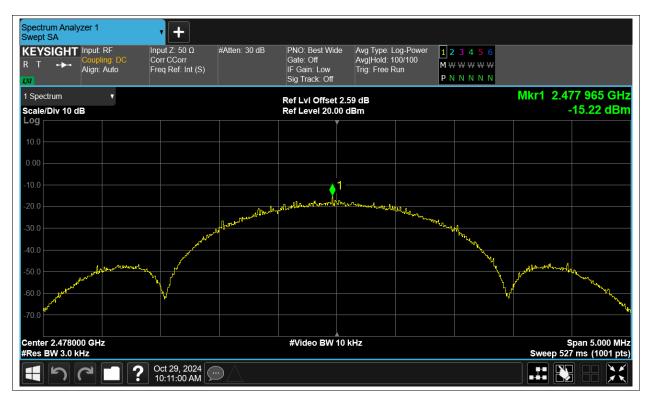
Maximum Power Spectral Density Level

Condition	Mode	Frequency (MHz)	Antenna	Max PSD (dBm)	Limit (dBm)	Verdict
NVNT	BLE	2404	Ant1	-15.34	8	Pass
NVNT	BLE	2442	Ant1	-15.055	8	Pass
NVNT	BLE	2478	Ant1	-15.22	8	Pass



	PS	Test Graphs SD NVNT BLE 2404MHz Ant1	
Spectrum Analyzer 1	• +		
R T Coupling: DC	Input Z: 50 Ω #Atten: 30 dE Corr CCorr Freq Ref: Int (S)	3 PNO: Best Wide Avg Type: Log-f Gate: Off Avg Hold: 100/1 IF Gain: Low Trig: Free Run Sig Track: Off	Power 123456 100 M W W W W P N N N N N
1 Spectrum V		Ref LvI Offset 2.57 dB	Mkr1 2.403 965 GHz
Scale/Div 10 dB		Ref Level 20.00 dBm	-15.34 dBm
10.0			
0.00			
-10.0		1	
-20.0	and the second	will got allow on an in the market when	there are a second s
-30.0	Allower Der Contraction		
-40.0			
-50.0 -60.0 -60.0	M /		
-70.0	V		
Center 2.404000 GHz		#Video BW 10 kHz	Span 5.000 MHz
#Res BW 3.0 kHz	Oct 29, 2024		Sweep 527 ms (1001 pts)
	Oct 29, 2024		
	PS	SD NVNT BLE 2442MHz Ant1	
Spectrum Analyzer 1 Swept SA	P\$	SD NVNT BLE 2442MHz Ant1	
Swept SA KEYSIGHT Input: RF Coupling: DC	Input Z: 50 Ω #Atten: 30 dE Corr CCorr	3 PNO: Best Wide Avg Type: Log-F Gate: Off Avg Hold: 100/1	
Swept SA KEYSIGHT Input: RF Coupling: DC	Γ Input Z: 50 Ω #Atten: 30 dE	3 PNO: Best Wide Avg Type: Log-F	100 M W W W W P N N N N N
Swept SA KEYSIGHT Input: RF Coupling: DC Align: Auto I Spectrum	Input Z: 50 Ω #Atten: 30 dE Corr CCorr	3 PNO: Best Wide Avg Type: Log-F Gate: Off Avg Hold: 100/1 IF Gain: Low Trig: Free Run Sig Track: Off Ref LvI Offset 2.58 dB	100 MWWWWW PNNNN Mkr1 2.441 965 GHz
Swept SA KEYSIGHT R T → Coupling: DC Align: Auto	Input Z: 50 Ω #Atten: 30 dE Corr CCorr	3 PNO: Best Wide Avg Type: Log-1 Gate: Off Avg]Hold: 100/1 IF Gain: Low Trig: Free Run Sig Track: Off	100 M W W W W P N N N N N
Swept SA KEYSIGHT R T ↔ Coupling: DC Align: Auto 1 Spectrum Scale/Div 10 dB	Input Z: 50 Ω #Atten: 30 dE Corr CCorr	3 PNO: Best Wide Avg Type: Log-F Gate: Off Avg Hold: 100/1 IF Gain: Low Trig: Free Run Sig Track: Off Ref LvI Offset 2.58 dB	100 MWWWWW PNNNN Mkr1 2.441 965 GHz
Swept SA KEYSIGHT Input: RF Coupling: DC Align: Auto V Scale/Div 10 dB Log	Input Z: 50 Ω #Atten: 30 dE Corr CCorr	3 PNO: Best Wide Avg Type: Log-F Gate: Off Avg Hold: 100/1 IF Gain: Low Trig: Free Run Sig Track: Off Ref LvI Offset 2.58 dB	100 MWWWWW PNNNN Mkr1 2.441 965 GHz
Swept SA KEYSIGHT Input: RF R T Align: Auto VI 1 Spectrum Scale/Div 10 dB Log 10.0	Input Z: 50 Ω #Atten: 30 dE Corr CCorr	B PNO: Best Wide Avg Type: Log-F Gate: Off Avg Hold: 100/1 IF Gain: Low Trig: Free Run Sig Track: Off Ref Level 20.00 dBm	100 MWWWWW PNNNN Mkr1 2.441 965 GHz
Swept SA KEYSIGHT Input: RF Coupling: DC Align: Auto VV 1 Spectrum V Scale/Div 10 dB Log 10.0 0.00	req Ref: Int (S)	3 PNO: Best Wide Avg Type: Log-F Gate: Off Avg Hold: 100/1 IF Gain: Low Trig: Free Run Sig Track: Off Ref LvI Offset 2.58 dB	100 MWWWWW PNNNN Mkr1 2.441 965 GHz
Swept SA KEYSIGHT Input: RF R T Y Coupling: DC Align: Auto V/ 1 Spectrum Scale/Div 10 dB Log 10.0 -10.0	Input Z: 50 Ω Corr CCorr Freq Ref: Int (S)	3 PNO: Best Wide Avg Type: Log-f Gate: Off Avg Hold: 100/1 IF Gain: Low Trig: Free Run Sig Track: Off Ref Level 20.00 dBm	100 MWWWWW PNNNN Mkr1 2.441 965 GHz
Swept SA KEYSIGHT Input: RF R T Align: Auto DV 1 Spectrum Scale/Div 10 dB Log 10.0 0.00 -10.0 -20.0 -30.0 -40.0	req Ref: Int (S)	3 PNO: Best Wide Avg Type: Log-f Gate: Off Avg Hold: 100/1 IF Gain: Low Trig: Free Run Sig Track: Off Ref Level 20.00 dBm	MWWWWW Mkr1 2.441 965 GHz -15.06 dBm Image: State
Swept SA Input: RF R T Y Coupling: DC Align: Auto I Spectrum V Scale/Div 10 dB Log 10.0 -00 -10.0 -20.0 -30.0	req Ref: Int (S)	3 PNO: Best Wide Avg Type: Log-f Gate: Off Avg Hold: 100/1 IF Gain: Low Trig: Free Run Sig Track: Off Ref Level 20.00 dBm	100 MWWWWW PNNNN Mkr1 2.441 965 GHz
Swept SA KEYSIGHT Input: RF R T Align: Auto 1 Spectrum Scale/Div 10 dB Log 10.0 -10.0 -20.0 -30.0 -40.0 -50.0	req Ref: Int (S)	3 PNO: Best Wide Avg Type: Log-f Gate: Off Avg Hold: 100/1 IF Gain: Low Trig: Free Run Sig Track: Off Ref Level 20.00 dBm	MWWWWW Mkr1 2.441 965 GHz -15.06 dBm Image: State
Swept SA KEYSIGHT Input: RF R T I Spectrum V Scale/Div 10 dB Log 10.0 -00 -10.0 -20.0 -30.0 -40.0 -50.0	req Ref: Int (S)	3 PNO: Best Wide Avg Type: Log-f Gate: Off Avg Hold: 100/1 IF Gain: Low Trig: Free Run Sig Track: Off Ref Level 20.00 dBm	MWWWWW Mkr1 2.441 965 GHz -15.06 dBm Image: State
Swept SA KEYSIGHT Input: RF R T I Spectrum V Scale/Div 10 dB Log 10.0 -000 -10.0 -20.0 -30.0 -60.0 -70.0 Center 2.442000 GHz	req Ref: Int (S)	3 PNO: Best Wide Avg Type: Log-f Gate: Off Avg Hold: 100/1 IF Gain: Low Trig: Free Run Sig Track: Off Ref Level 20.00 dBm	100 MWWWWW PNNNNN Mkr1 2.441 965 GHz -15.06 dBm
Swept SA KEYSIGHT Input: RF Coupling: DC Align: Auto I Spectrum V Scale/Div 10 dB Log Image: Coupling of the second secon	req Ref: Int (S)	B PNO: Best Wide Avg Type: Log-F Gate: Off Avg Hold: 100/1 IF Gain: Low Trig: Free Run Sig Track: Off Ref Level 20.00 dBm	MWWWWW MWWWWW PNNNNN Mkr1 2.441 965 GHz -15.06 dBm Image: State of the state of th







Band Edge

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE	2404	Ant1	-58.15	-20	Pass
NVNT	BLE	2478	Ant1	-59.75	-20	Pass



		Test Graphs		
	Band	Edge NVNT BLE 2404MHz Ant1 F	Ref	
Spectrum Analyzer 1 Swept SA	• +			
KEYSIGHT Input: RF R T Coupling: DC	Input Z: 50 Ω #Atten: 30 Corr CCorr Freq Ref: Int (S)	dB PNO: Best Wide Avg Type: Log-Pc Gate: Off Avg Hold: 100/10 IF Gain: Low Trig: Free Run Sig Track: Off		
1 Spectrum v		Ref LvI Offset 2.57 dB		Mkr1 2.403 968 GHz
Scale/Div 10 dB Log		Ref Level 20.00 dBm		1.23 dBm
10.0				
		1		
0.00		- And many have		
-10.0		m m		
-20.0	/			
-30.0	may		- march	
-40.0			- V m	
-50.0	χ		لا	м <u> </u>
-50.0 -60.0 ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	}			My man and a second and a secon
				۷.
-70.0				
Center 2.404000 GHz #Res BW 100 kHz		#Video BW 300 kHz		Span 8.000 MHz Sweep 1.00 ms (1001 pts)
	Oct 29, 2024			
	10:04:48 AM			
	Band Ede	ge NVNT BLE 2404MHz Ant1 Emi	ssion	
Spectrum Analyzer 1		ge NVNT BLE 2404MHz Ant1 Emi	ssion	
Swept SA KEYSIGHT Input: RF		dB PNO: Fast Avg Type: Log-Pc	wer 123456	
Swept SA KEYSIGHT Input: RF R T Coupling: DC	• +	dB PNO: Fast Avg Type: Log-Pc Gate: Off Avg Hold: 100/10 IF Gain: Low Trig: Free Run	$\begin{array}{c} \text{wer} \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 6 \\ 8 \\ 8 \\ 8 \\ 8 \\ 8 \\ 8 \\ 8 \\ 8$	
Swept SA KEYSIGHT Input: RF R T + Coupling: DC Align: Auto	Input Z: 50 Ω #Atten: 30 Corr CCorr	dB PNO: Fast Avg Type: Log-Pc Gate: Off Avg Hold: 100/10 IF Gain: Low Trig: Free Run Sig Track: Off	wer 123456	Mkr1 2 404 0 CH3
Swept SA KEYSIGHT R T +++ Coupling: DC Align: Auto	Input Z: 50 Ω #Atten: 30 Corr CCorr	dB PNO: Fast Avg Type: Log-Pc Gate: Off Avg Hold: 100/10 IF Gain: Low Trig: Free Run	$\begin{array}{c} \text{wer} \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 6 \\ 8 \\ 8 \\ 8 \\ 8 \\ 8 \\ 8 \\ 8 \\ 8$	Mkr1 2.404 0 GHz 1.30 dBm
Swept SA KEYSIGHT R T Coupling: DC Align: Auto 1 Spectrum	Input Z: 50 Ω #Atten: 30 Corr CCorr	dB PNO: Fast Avg Type: Log-Pc Gate: Off Avg Hold: 100/10 IF Gain: Low Trig: Free Run Sig Track: Off Ref LvI Offset 2.57 dB	$\begin{array}{c} \text{wer} \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 6 \\ 8 \\ 8 \\ 8 \\ 8 \\ 8 \\ 8 \\ 8 \\ 8$	Mkr1 2.404 0 GHz 1.30 dBm
Swept SA KEYSIGHT Input: RF Coupling: DC Align: Auto Scale/Div 10 dB Log 0.00	Input Z: 50 Ω #Atten: 30 Corr CCorr	dB PNO: Fast Avg Type: Log-Pc Gate: Off Avg Hold: 100/10 IF Gain: Low Trig: Free Run Sig Track: Off Ref LvI Offset 2.57 dB	$\begin{array}{c} \text{wer} \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 6 \\ 8 \\ 8 \\ 8 \\ 8 \\ 8 \\ 8 \\ 8 \\ 8$	
Swept SA KEYSIGHT Input: RF R T Imput: RF Align: Auto Align: Auto I Spectrum V Scale/Div 10 dB Imput: RF Log Imput: RF 0.00 Imput: RF	Input Z: 50 Ω #Atten: 30 Corr CCorr	dB PNO: Fast Avg Type: Log-Pc Gate: Off Avg Hold: 100/10 IF Gain: Low Trig: Free Run Sig Track: Off Ref LvI Offset 2.57 dB	$\begin{array}{c} \text{wer} \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 6 \\ 8 \\ 8 \\ 8 \\ 8 \\ 8 \\ 8 \\ 8 \\ 8$	
Swept SA KEYSIGHT Input: RF R T Ispectrum Scale/Div 10 dB Log 0.00 -10.0	Input Z: 50 Ω #Atten: 30 Corr CCorr	dB PNO: Fast Avg Type: Log-Pc Gate: Off Avg Hold: 100/10 IF Gain: Low Trig: Free Run Sig Track: Off Ref LvI Offset 2.57 dB	$\begin{array}{c} \text{wer} \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 6 \\ 8 \\ 8 \\ 8 \\ 8 \\ 8 \\ 8 \\ 8 \\ 8$	1.30 dBm
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	Input Z: 50 Ω #Atten: 30 Corr CCorr	dB PNO: Fast Avg Type: Log-Pc Gate: Off Avg Hold: 100/10 IF Gain: Low Trig: Free Run Sig Track: Off Ref LvI Offset 2.57 dB	$\begin{array}{c} \text{wer} \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 6 \\ 8 \\ 8 \\ 8 \\ 8 \\ 8 \\ 8 \\ 8 \\ 8$	1.30 dBm
Swept SA KEYSIGHT Input: RF R T → Auto I Spectrum ▼ Scale/Div 10 dB U Log 10.0 0.00	Input Z: 50 Ω #Atten: 30 Corr CCorr	dB PNO: Fast Avg Type: Log-Pc Gate: Off Avg Hold: 100/10 IF Gain: Low Trig: Free Run Sig Track: Off Ref LvI Offset 2.57 dB	$\begin{array}{c} \text{wer} \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 6 \\ 8 \\ 8 \\ 8 \\ 8 \\ 8 \\ 8 \\ 8 \\ 8$	1.30 dBm
Swept SA KEYSIGHT Input: RF R T Coupling: DC Align: Auto V Scale/Div 10 dB V Scale/Div 10 dB V 1.00 0 0 10.0 0 0 20.0 0 0 0 30.0 0 0 0 0 60.0	Input Z: 50 Ω #Atten: 30 Corr CCorr	dB PNO: Fast Avg Type: Log-Pc Gate: Off Avg Hold: 100/10 IF Gain: Low Trig: Free Run Sig Track: Off Ref LvI Offset 2.57 dB	$\begin{array}{c} \text{wer} \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 6 \\ 8 \\ 8 \\ 8 \\ 8 \\ 8 \\ 8 \\ 8 \\ 8$	1.30 dBm
Swept SA KEYSIGHT Input: RF R T → Coupling: DC Align: Auto I Spectrum ▼ Scale/Div 10 dB ■ ■ Log ■ ■ 10.0 ■ ■ ■ 20.0 ■ ■ ■ ■ 30.0 ■	Input Z: 50 Ω #Atten: 30 Corr CCorr	dB PNO: Fast Avg Type: Log-Pc Gate: Off Avg Hold: 100/10 IF Gain: Low Trig: Free Run Sig Track: Off Ref LvI Offset 2.57 dB Ref Level 20.00 dBm	$\begin{array}{c} \text{wer} \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 6 \\ 8 \\ 8 \\ 8 \\ 8 \\ 8 \\ 8 \\ 8 \\ 8$	1.30 dBm
Swept SA KEYSIGHT Input: RF R T T I Spectrum V Scale/Div 10 dB V Log 100 100 0.00 100 100 100	Input Z: 50 Ω Corr CCorr Freq Ref: Int (S) #Atten: 30	dB PNO: Fast Avg Type: Log-Pc Gate: Off Avg Hold: 100/10 IF Gain: Low Trig: Free Run Sig Track: Off Ref Level 20.00 dBm	wer 1 2 3 4 5 6 M W	1.30 dBm
Swept SA KEYSIGHT Input: RF R T → I Spectrum ▼ Scale/Div 10 dB ■ Log ■ ■ 10.0 ■ ■ 0.00 ■ ■ -10.0 ■ ■ -20.0 ■ ■ -30.0 ■ ■ -40.0 ■ ■ -50.0 ■ ■ -70.0 ■ ■ Start 2.30800 GHz ▼ ■ Mode Trace Scale 1 N 1 f	Y + Input Z: 50 Ω Corr CCorr Freq Ref: Int (S) #Atten: 30	dB PNO: Fast Gate: Off AvgType: Log-Pc AvgHold: 100/10 IF Gain: Low Trig: Free Run Sig Track: Off Ref Level 20.00 dBm 400 dBm	$\begin{array}{c} \text{wer} \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 6 \\ 8 \\ 8 \\ 8 \\ 8 \\ 8 \\ 8 \\ 8 \\ 8$	1.30 dBm
Swept SA KEYSIGHT Input: RF R T → Align: Auto 1 Spectrum ▼ Scale/Div 10 dB O Log 1 0 0 0 0.00 0 0 0 0 0.00 0 0 0 0 20.0 30.0 0 0 0 0	Input Z: 50 Ω Corr CCorr #Atten: 30 Freq Ref: Int (S) # Input Z: 50 Ω Freq Ref: Int (S) Image: Corr CCorr Image: Corr CCorr Image: Corr CCorr Image: Corr Corr Image: Corr Corr Image: Corr Corr Image: Corr Corr Image: Corr Corr Image: Corr Corr Image: Corr Corr Image: Corr Image: Corr Corr Image: Corr Image: Corr Imag	dB PNO: Fast Avg Type: Log-Pc Gate: Off Avg Hold: 100/10 IF Gain: Low Trig: Free Run Sig Track: Off Ref Level 20.00 dBm * Video BW 300 kHz Y Function 1.300 dBm - 57.89 dBm - 60.15 dBm	wer 1 2 3 4 5 6 M W	1.30 dBm
Swept SA KEYSIGHT Input: RF R T → Coupling: DC Align: Auto I Spectrum ▼ Scale/Div 10 dB ■ Log ■ ■ 10.0 ■ ■ 20.0 ■ ■ 30.0 ■ ■ -70.0 ■ ■ Start 2.30800 GHz #Res BW 100 kHz ▼ 5 Marker Table ▼ Mode Trace Scale 1 1 f 3 1 f 4 N 1 f	x 2.404 0 GHz 2.400 0 GHz	dB PNO: Fast Avg Type: Log-Pc Gate: Off Avg Hold: 100/10 IF Gain: Low Trig: Free Run Sig Track: Off Ref Level 20.00 dBm #Video BW 300 kHz #Video BW 300 kHz	wer 1 2 3 4 5 6 M W	1.30 dBm
Swept SA KEYSIGHT Input: RF R T → Coupling: DC Align: Auto 1 Spectrum ▼ Scale/Div 10 dB □ Log □ □ 10.0 □ □ 20.0 □ □ 30.0 □ □ 40.0 □ □ 500 □ □ Start 2.30800 GHz #Res BW 100 kHz S 5 Marker Table ▼ Mode Trace Scale 1 1 f 3 1 f 4 1 f 5 □ □	Input Z: 50 Ω Corr CCorr #Atten: 30 Freq Ref: Int (S) # Input Z: 50 Ω Freq Ref: Int (S) Image: Corr CCorr Image: Corr CCorr Image: Corr CCorr Image: Corr Corr Image: Corr Corr Image: C	dB PNO: Fast Avg Type: Log-Pc Gate: Off Avg Hold: 100/10 IF Gain: Low Trig: Free Run Sig Track: Off Ref Level 20.00 dBm * Video BW 300 kHz Y Function 1.300 dBm - 57.89 dBm - 60.15 dBm	wer 1 2 3 4 5 6 M W	1.30 dBm
Swept SA KEYSIGHT Input: RF R T → Coupling: DC Align: Auto I Spectrum ▼ Scale/Div 10 dB ■ Log ■ ■ 10.0 ■ ■ 20.0 ■ ■ 30.0 ■ ■ -70.0 ■ ■ Start 2.30800 GHz #Res BW 100 kHz ▼ 5 Marker Table ▼ Mode Trace Scale 1 1 f 3 1 f 4 N 1 f	Input Z: 50 Ω Corr CCorr #Atten: 30 Freq Ref: Int (S) #Atten: 30 Input Z: 50 Ω Corr CCorr Imput Z: 50 Ω Imput Z: 50 Ω X Imput Z: 50 Ω Imput Z: 50 Ω X Imput Z: 50 Ω Imput Z: 50 Ω X Imput Z: 50 Ω Imput Z: 50 Ω Que Z: 404 0 GHz Imput Z: 390 0 GHz Imput Z: 389 0 GHz Oct 29, 2024 Imput Z: 50 AM	dB PNO: Fast Avg Type: Log-Pc Gate: Off Avg Hold: 100/10 IF Gain: Low Trig: Free Run Sig Track: Off Ref Level 20.00 dBm * Video BW 300 kHz Y Function 1.300 dBm - 57.89 dBm - 60.15 dBm	I 2 3 4 5 6 M W	1.30 dBm







Conducted RF Spurious Emission

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE	2404	Ant1	-50.63	-20	Pass
NVNT	BLE	2442	Ant1	-51.29	-20	Pass
NVNT	BLE	2478	Ant1	-51.03	-20	Pass



			Test Graph			
		Tx. Spurious	s NVNT BLE 2	404MHz Ant1 Re	ef	
Spectrum Analyzer 1 Swept SA	• +					
KEYSIGHT Input: RF R T + Coupling: DC 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-Powe Avg Hold: 100/100 Trig: Free Run	er 123456 MWWWWW PNNNNN	
1 Spectrum v			Ref LvI Offset 2.	57 dB		Mkr1 2.403 979 GHz
Scale/Div 10 dB			Ref Level 20.00	dBm		2.41 dBm
10.0						
0.00					<u>م</u>	
-10.0	w	V. W		m Mar	1 marine and the second	
-20.0						www.What
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-30.0						
-40.0						
-50.0						
-60.0						
-70.0						
Center 2.404000 GHz			#Video BW 300	) kHz		Span 3.000 MHz
#Res BW 100 kHz						Sweep 1.00 ms (1001 pts)
	Oct 29, 2024 10:04:56 AM	$\rightarrow \land$				
		. Spurious N	VNT BLE 240	4MHz Ant1 Emis	sion	
Spectrum Analyzer 1	T>	<. Spurious N	VNT BLE 240	4MHz Ant1 Emis	sion	
Swept SA	T)	K. Spurious N #Atten: 30 dB	VNT BLE 240	4MHz Ant1 Emis		
	T)	·	PNO: Fast Gate: Off IF Gain: Low		er 123456 M₩₩₩₩₩₩	
Swept SA KEYSIGHT Input: RF R T  Coupling: DC Align: Auto	T> T+ Input Z: 50 Ω Corr CCorr	·	PNO: Fast Gate: Off IF Gain: Low Sig Track: Off	Avg Type: Log-Powe Avg Hold: 10/10 Trig: Free Run	er 123456	
Swept SA       KEYSIGHT       Input: RF       Coupling: DC       Align: Auto	T> T+ Input Z: 50 Ω Corr CCorr	·	PNO: Fast Gate: Off IF Gain: Low	Avg Type: Log-Powe Avg Hold: 10/10 Trig: Free Run 57 dB	er 123456 M₩₩₩₩₩₩	Mkr1 2.412 GHz 0.85 dBm
Swept SA KEYSIGHT R T  Coupling: DC Align: Auto 1 Spectrum	T> T+ Input Z: 50 Ω Corr CCorr	·	PNO: Fast Gate: Off IF Gain: Low Sig Track: Off Ref Lvl Offset 2.	Avg Type: Log-Powe Avg Hold: 10/10 Trig: Free Run 57 dB	er 123456 M₩₩₩₩₩₩	Mkr1 2.412 GHz
Swept SA KEYSIGHT Input: RF R T  Align: Auto I Spectrum Scale/Div 10 dB Log 0.00	T> T+ Input Z: 50 Ω Corr CCorr	·	PNO: Fast Gate: Off IF Gain: Low Sig Track: Off Ref Lvl Offset 2.	Avg Type: Log-Powe Avg Hold: 10/10 Trig: Free Run 57 dB	er 123456 M₩₩₩₩₩₩	Mkr1 2.412 GHz 0.85 dBm
Sivept SA KEYSIGHT Input: RF R T  Align: Auto CV 1 Spectrum  Scale/Div 10 dB Log 10.0 -20.0	T> T+ Input Z: 50 Ω Corr CCorr	·	PNO: Fast Gate: Off IF Gain: Low Sig Track: Off Ref Lvl Offset 2.	Avg Type: Log-Powe Avg Hold: 10/10 Trig: Free Run 57 dB	er 123456 M₩₩₩₩₩₩	Mkr1 2.412 GHz
Swept SA           KEYSIGHT         Input: RF           R         T         Coupling: DC           Align: Auto         V           Scale/Div 10 dB         V           Scale/Div 10 dB         1           200         1         0	T Input Z: 50 Ω Corr CCorr Freq Ref: Int (S)	#Atten: 30 dB	PNO: Fast Gate: Off IF Gain: Low Sig Track: Off Ref Lvl Offset 2.	Avg Type: Log-Powe Avg Hold: 10/10 Trig: Free Run 57 dB	er 123456 M₩₩₩₩₩₩	Mkr1 2.412 GHz 0.85 dBm
Swept SA           KEYSIGHT         Input: RF           R         T         →         Coupling: DC Align: Auto           I         Spectrum         ▼           Scale/Div 10 dB         ↓         ↓           100         ↓         ↓           10.0         ↓         ↓           -20.0         ↓         ↓	T> T+ Input Z: 50 Ω Corr CCorr	#Atten: 30 dB	PNO: Fast Gate: Off IF Gain: Low Sig Track: Off Ref Lvl Offset 2.	Avg Type: Log-Powe Avg Hold: 10/10 Trig: Free Run 57 dB	er 123456 M₩₩₩₩₩₩	Mkr1 2.412 GHz 0.85 dBm
Swept SA           KEYSIGHT         Input: RF           R         T         Coupling: DC Align: Auto           I         Spectrum         V           Scale/Div 10 dB         0         0           100         1         0         1           30.0         0         0         0         0           40.0	T 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	Avg Type: Log-Powe Avg Hold: 10/10 Trig: Free Run 57 dB dBm	er 123456 M₩₩₩₩₩₩	Mkr1 2.412 GHz 0.85 dBm
Swept SA           KEYSIGHT         Input: RF           R         T         Coupling: DC           Align: Auto         V           Scale/Div 10 dB         v           Scale/Div 10 dB         0           10.0         1           -30.0         40.0           -60.0	T Input Z: 50 Ω Corr CCorr Freq Ref: Int (S)	#Atten: 30 dB	PNO: Fast Gate: Off IF Gain: Low Sig Track: Off Ref Lvl Offset 2.	Avg Type: Log-Powe Avg Hold: 10/10 Trig: Free Run 57 dB dBm	er 123456 M₩₩₩₩₩₩	Mkr1 2.412 GHz 0.85 dBm
Swept SA           KEYSIGHT         Input: RF           R         T         Coupling: DC           Align: Auto         V           Scale/Div 10 dB         V           Scale/Div 10 dB         V           30.0	T 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	Avg Type: Log-Powe Avg Hold: 10/10 Trig: Free Run 57 dB dBm	er 123456 M₩₩₩₩₩₩	Mkr1 2.412 GHz 0.85 dBm
Swept SA           KEYSIGHT         Input: RF           R         T         Coupling: DC Align: Auto           I Spectrum         v           Scale/Div 10 dB         0           Log         1         0           100         1         0           -00         1         0           -00         1         0           -00         1         0           -00         1         0           -00         1         0           -00         1         0           -00         1         0           -00         -0         1           -00         -0         -0           -00         -0         -0           -00         -0         -0           -00         -0         -0           -00         -0         -0           -00         -0         -0           -00         -0         -0           -00         -0         -0           Start 30 MHz         -0         -0           Mode         Trace         Scale	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 20.000	Avg Type: Log-Powe Avg Hold: 10/10 Trig: Free Run 57 dB dBm	er 123456 M₩₩₩₩₩₩	Mkr1 2.412 GHz 0.85 dBm
Swept SA           KEYSIGHT         Input: RF           R         T         Coupling: DC           Align: Auto         V           Scale/Div 10 dB         v           Scale/Div 10 dB         v           100         1           100         1           200         1           300         1           40.0         1           50.0         1           60.0         1           770.0         1           Start 30 MHz         #Res BW 100 kHz           5 Marker Table         v           Mode         Trace         Scale           1         1         1	T 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 # #Video BW 300 Y 0.8510 dBm -53.19 dBm	Avg Type: Log-Powe Avg Hold: 10/10 Trig: Free Run 57 dB dBm	er 1 2 3 4 5 6 M W W W W W P N N N N N 	Mkr1 2.412 GHz 0.85 dBm DL1-1759 dBm DL1-1759 dBm Stop 26.50 GHz Sweep ~2.57 s (1001 pts)
Swept SA           KEYSIGHT         Input: RF           R         T         Coupling: DC Align: Auto           I Spectrum         v           Scale/Div 10 dB         0           Log         1         0           10.0         1         0           -20.0         -30.0         -40.0	T 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 20.000 #Video BW 300 #Video BW 300 V 0.8510 dBm -53.19 dBm -53.44 dBm	Avg Type: Log-Powe Avg Hold: 10/10 Trig: Free Run 57 dB dBm	er 1 2 3 4 5 6 M W W W W W P N N N N N 	Mkr1 2.412 GHz 0.85 dBm DL1-1759 dBm DL1-1759 dBm Stop 26.50 GHz Sweep ~2.57 s (1001 pts)
Sivept SA           KEYSIGHT         Input: RF           R         T         Coupling: DC Align: Auto           I Spectrum         V           Scale/Div 10 dB         0           Log         1         0           100         1         0	T 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 #Video BW 300 Y 0.8510 dBm -53.19 dBm -54.68 dBm	Avg Type: Log-Powe Avg Hold: 10/10 Trig: Free Run 57 dB dBm	er 1 2 3 4 5 6 M W W W W W P N N N N N 	Mkr1 2.412 GHz 0.85 dBm DL1-17.59 dBm
Swept SA           KEYSIGHT         Input: RF           R         T         Coupling: DC Align: Auto           1         Spectrum         v           Scale/Div 10 dB         outo           Log         1         outo           100         1         outo           200         1         outo           30.0         1         0           -70.0	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 20.000 #Video BW 300 #Video BW 300 V 0.8510 dBm -53.19 dBm -53.44 dBm	Avg Type: Log-Powe Avg Hold: 10/10 Trig: Free Run 57 dB dBm	er 1 2 3 4 5 6 M W W W W W P N N N N N 	Mkr1 2.412 GHz 0.85 dBm DL1-17.59 dBm



