



Appendix A

RF Test Data for BLE (Conducted Measurement)

Product Name: Smart Watch

Test Model: TS29

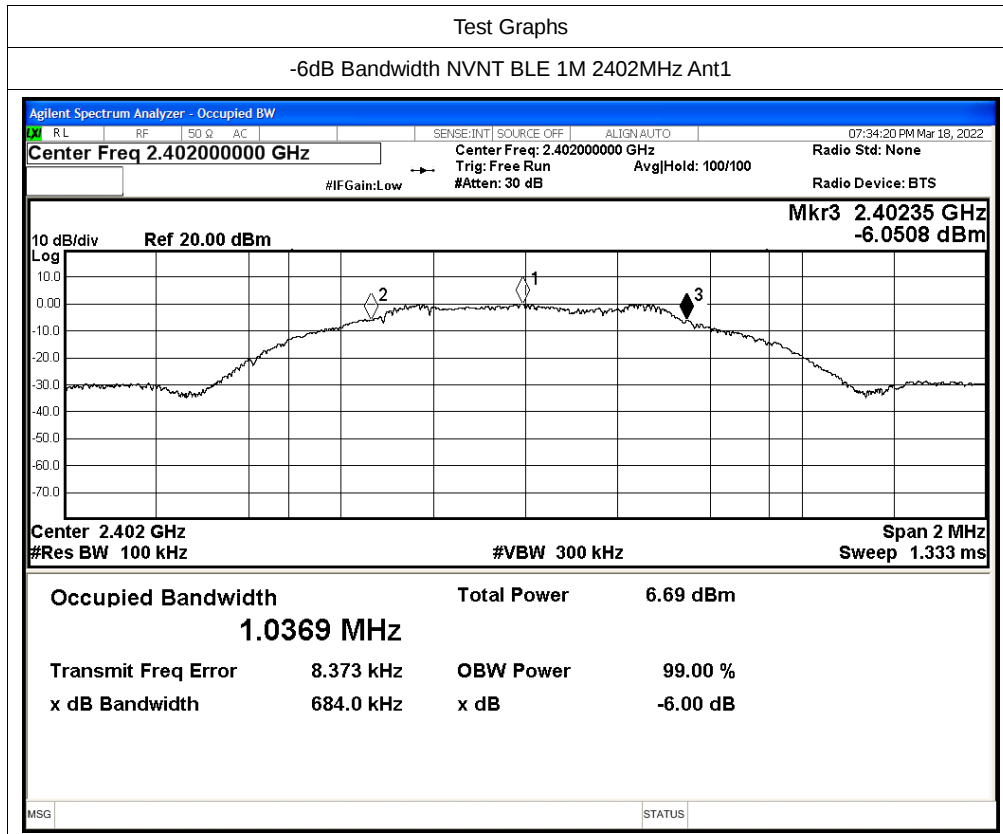
Environmental Conditions

Temperature:	21.1 ° C
Relative Humidity:	52.2%
ATM Pressure:	100.0 kPa
Test Engineer:	Ling. Zhu
Supervised by:	Lihua



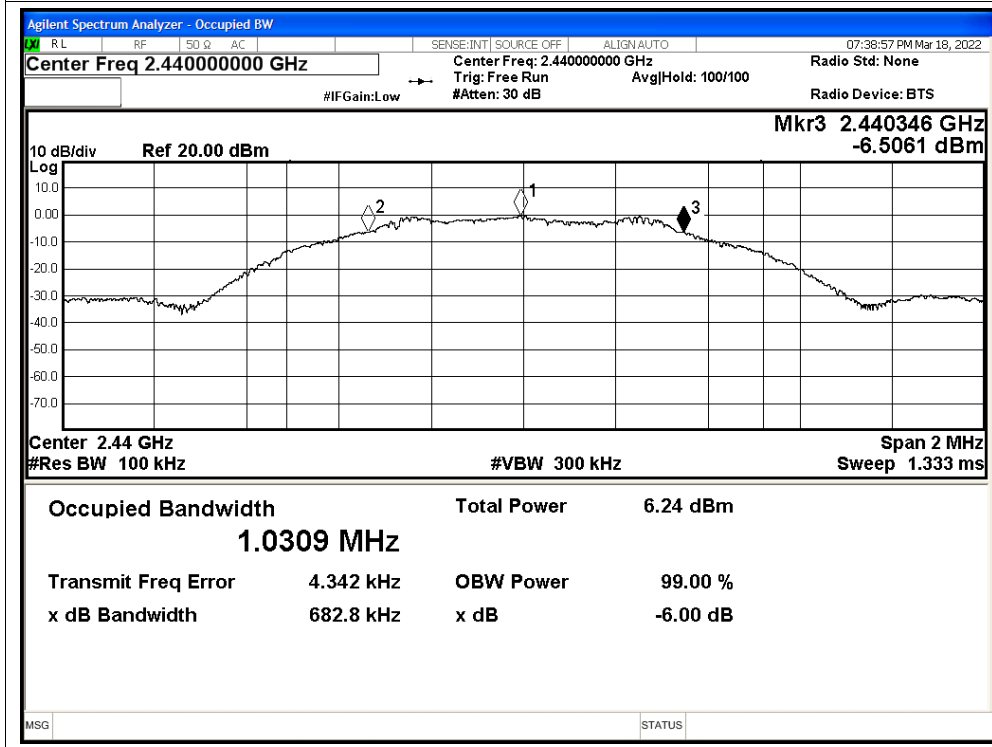
A.1 6dB Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	6 dB Bandwidth (MHz)	Limit 6 dB Bandwidth (MHz)	Verdict
NVNT	BLE 1M	2402	Ant1	0.684	0.5	Pass
NVNT	BLE 1M	2440	Ant1	0.683	0.5	Pass
NVNT	BLE 1M	2480	Ant1	0.697	0.5	Pass

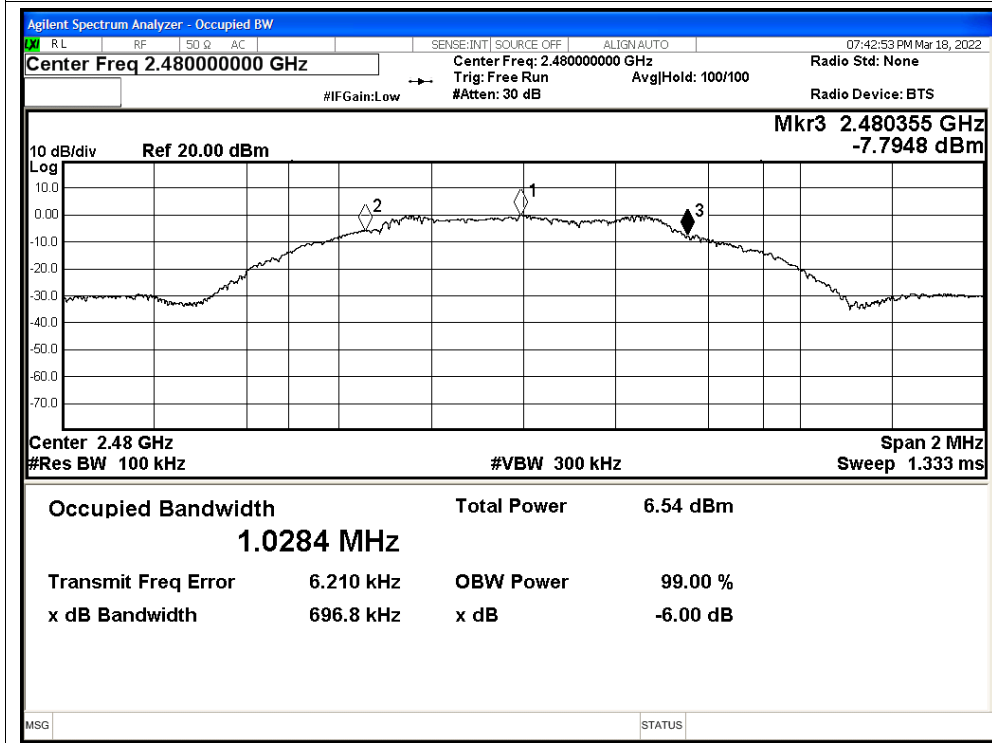


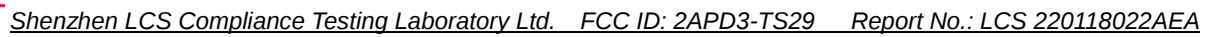


-6dB Bandwidth NVNT BLE 1M 2440MHz Ant1

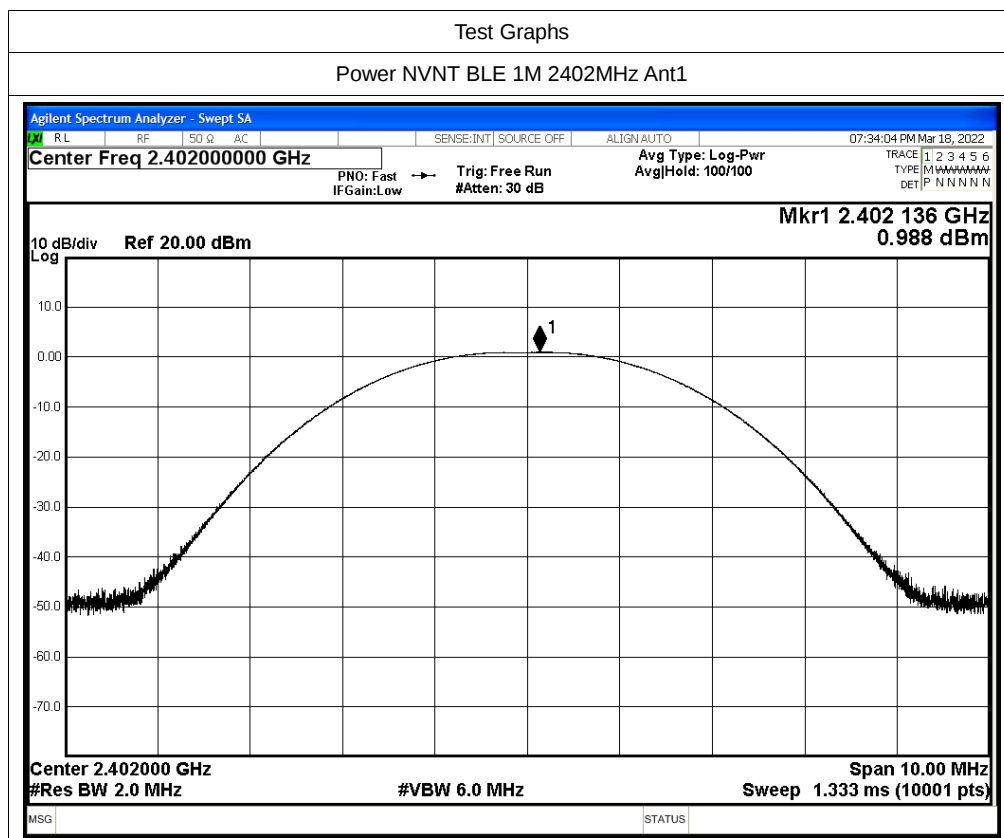


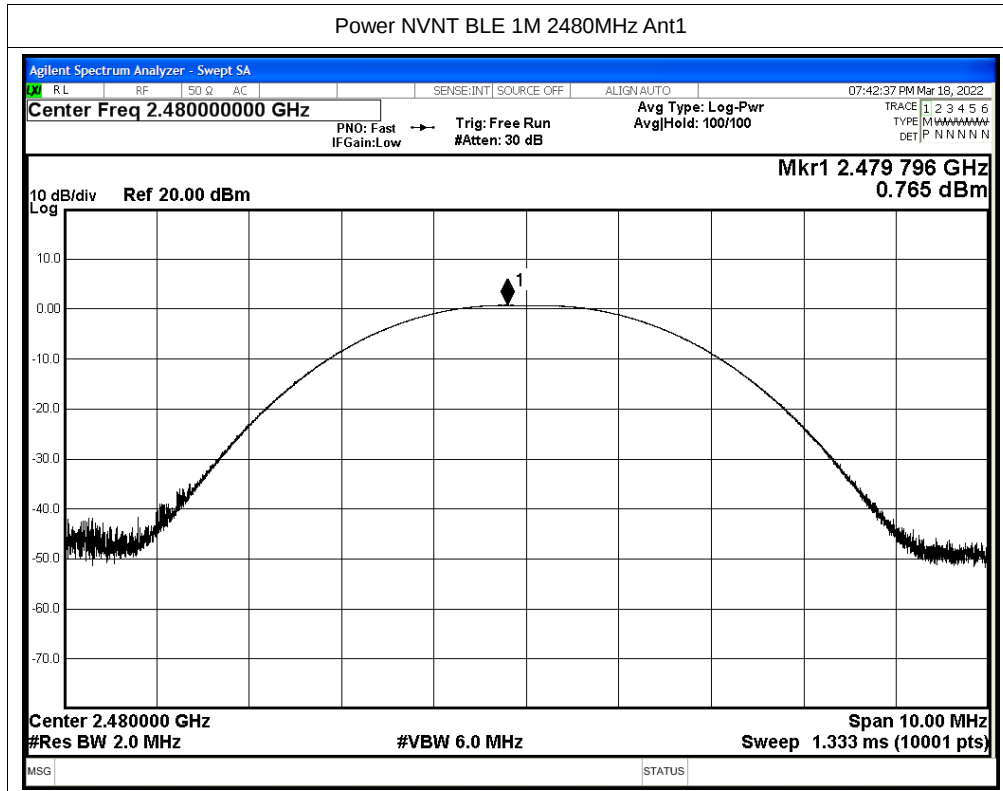
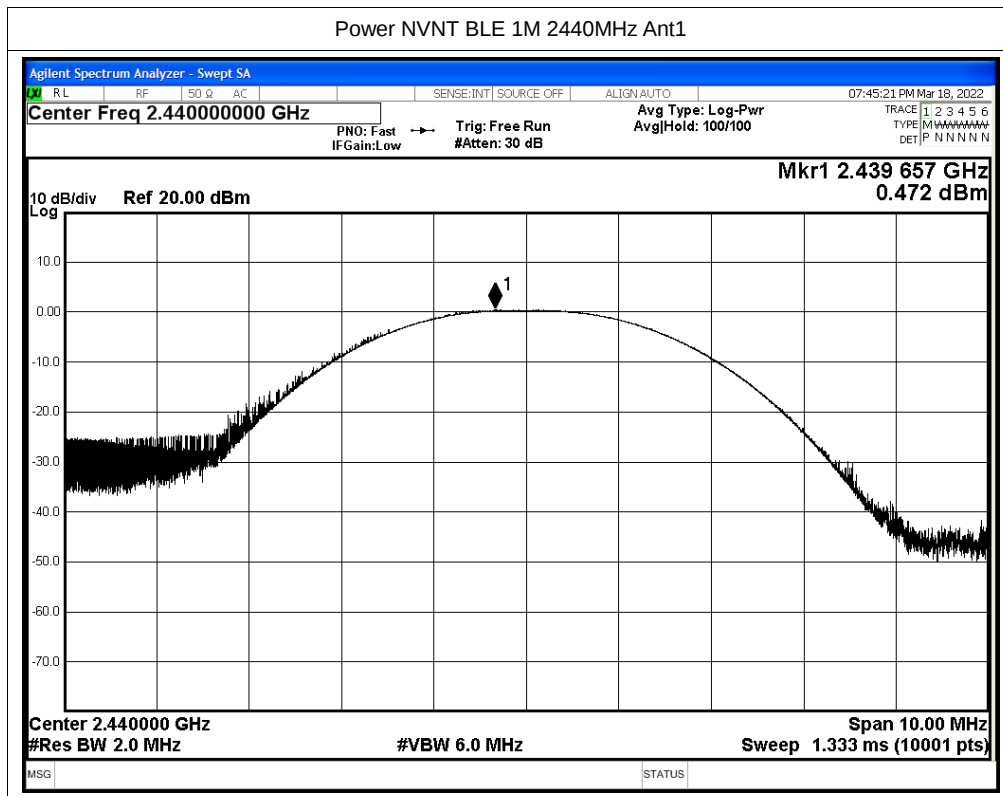
-6dB Bandwidth NVNT BLE 1M 2480MHz Ant1





Condition	Mode	Frequency (MHz)	Antenna	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	BLE 1M	2402	Ant1	0.99	30	Pass
NVNT	BLE 1M	2440	Ant1	0.47	30	Pass
NVNT	BLE 1M	2480	Ant1	0.77	30	Pass

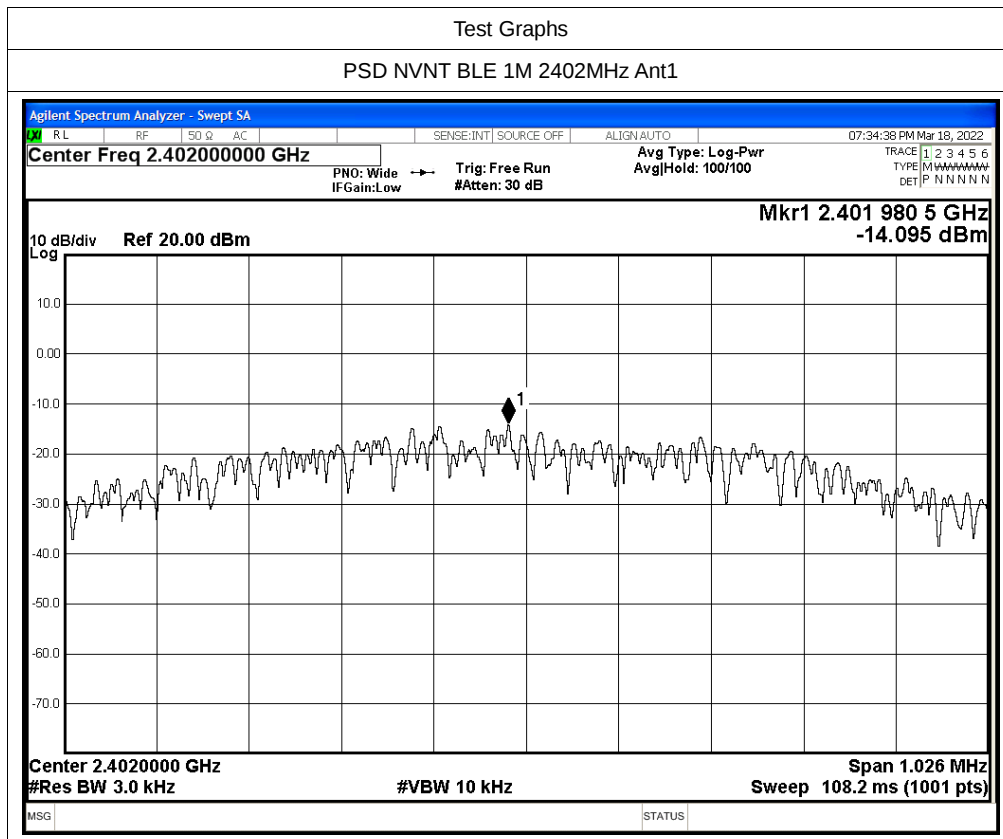


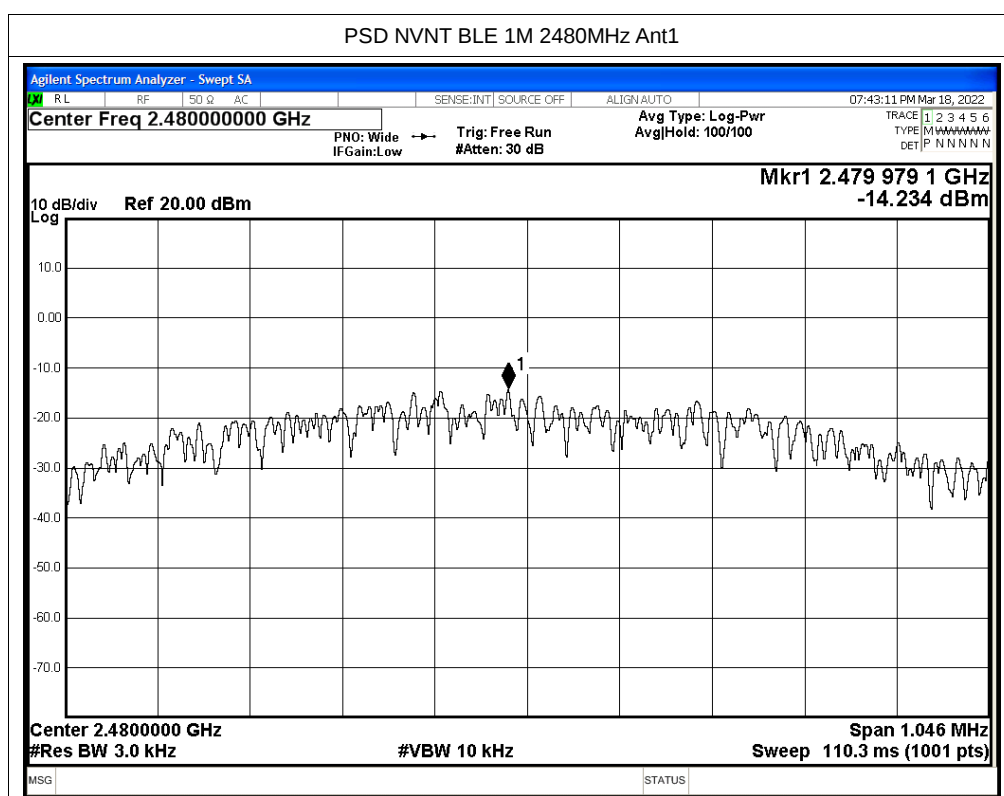
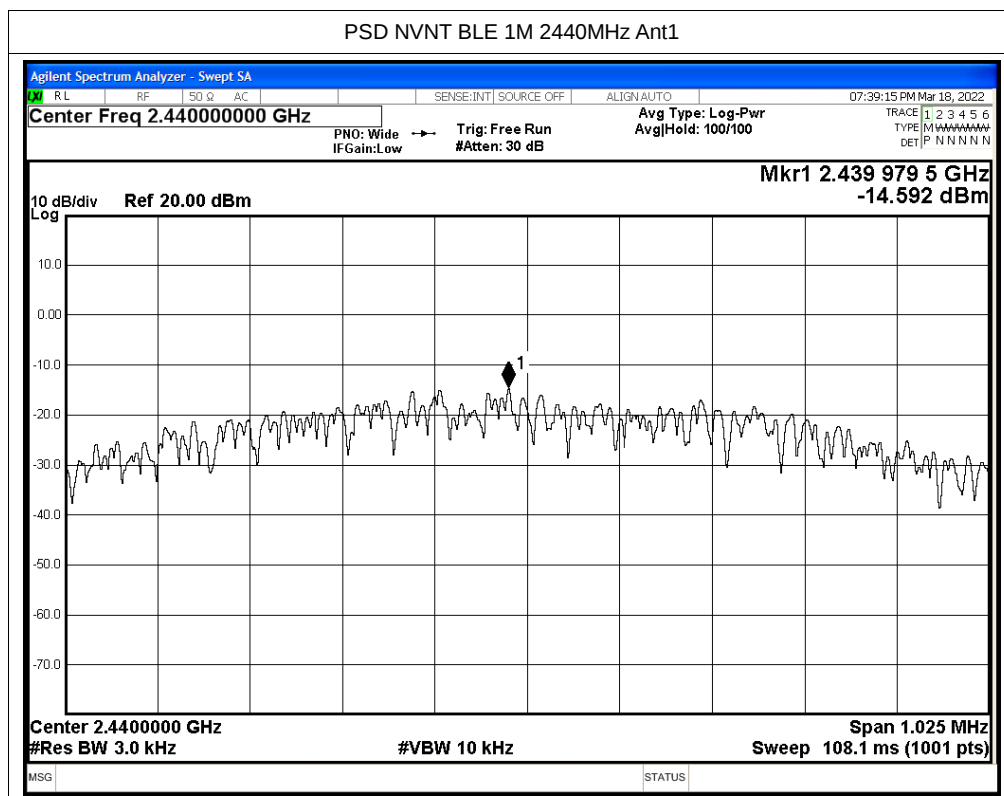
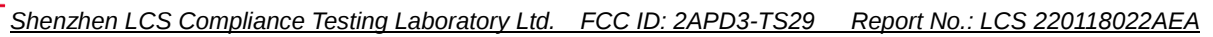




A.3 Maximum Power Spectral Density

Condition	Mode	Frequency (MHz)	Antenna	Conducted PSD (dBm/3kHz)	Duty Factor (dB)	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
NVNT	BLE 1M	2402	Ant1	-14.1	0	-14.1	8	Pass
NVNT	BLE 1M	2440	Ant1	-14.59	0	-14.59	8	Pass
NVNT	BLE 1M	2480	Ant1	-14.23	0	-14.23	8	Pass





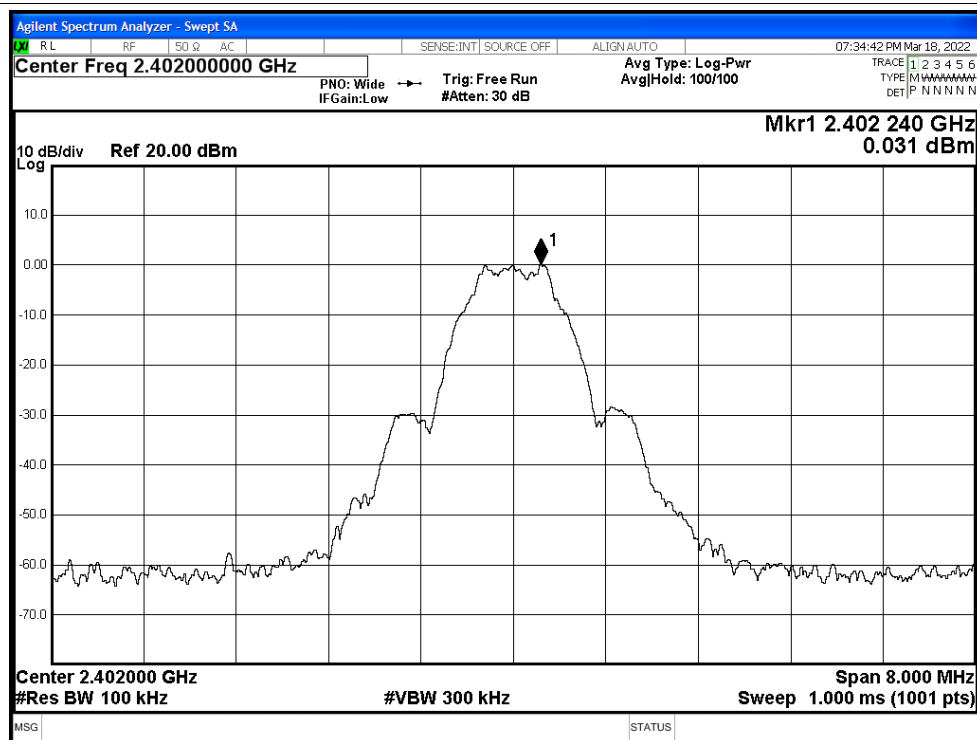


A.4 Band edge measurements

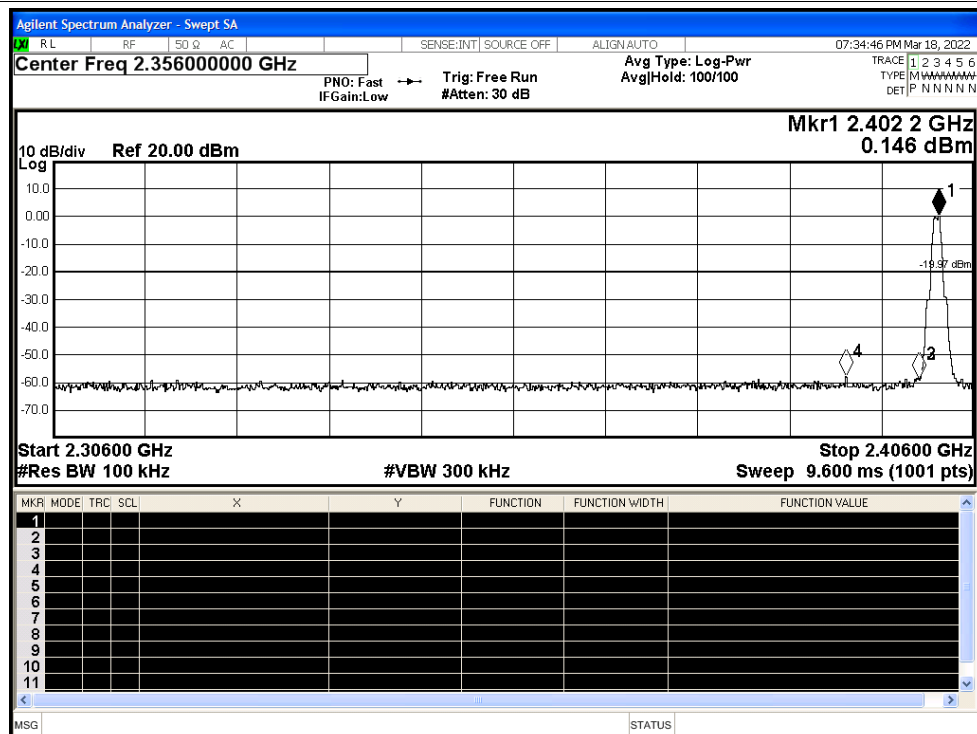
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE 1M	2402	Ant1	-57.7	-20	Pass
NVNT	BLE 1M	2480	Ant1	-58.99	-20	Pass

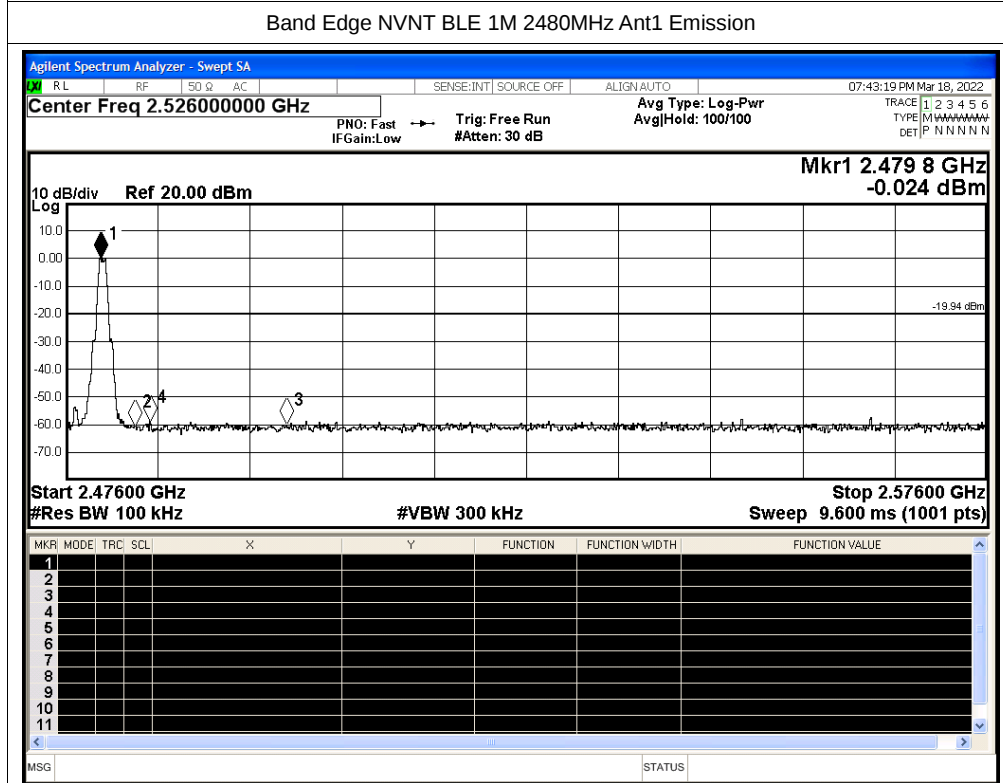
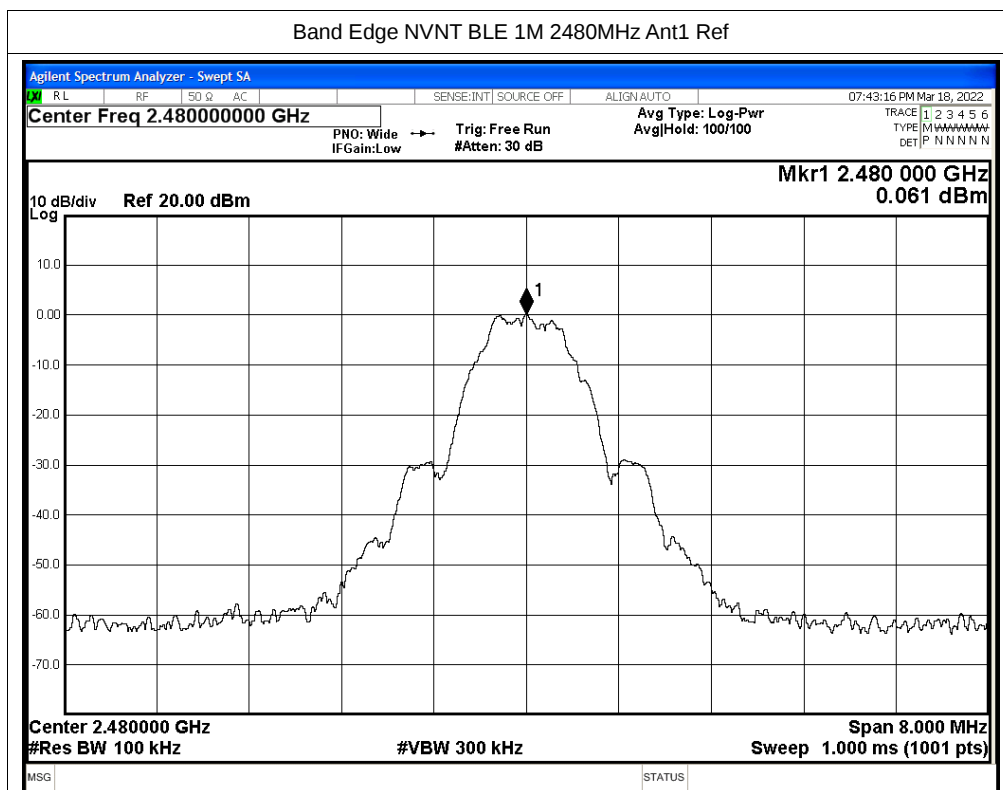
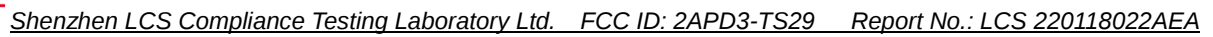


Band Edge NVNT BLE 1M 2402MHz Ant1 Ref



Band Edge NVNT BLE 1M 2402MHz Ant1 Emission





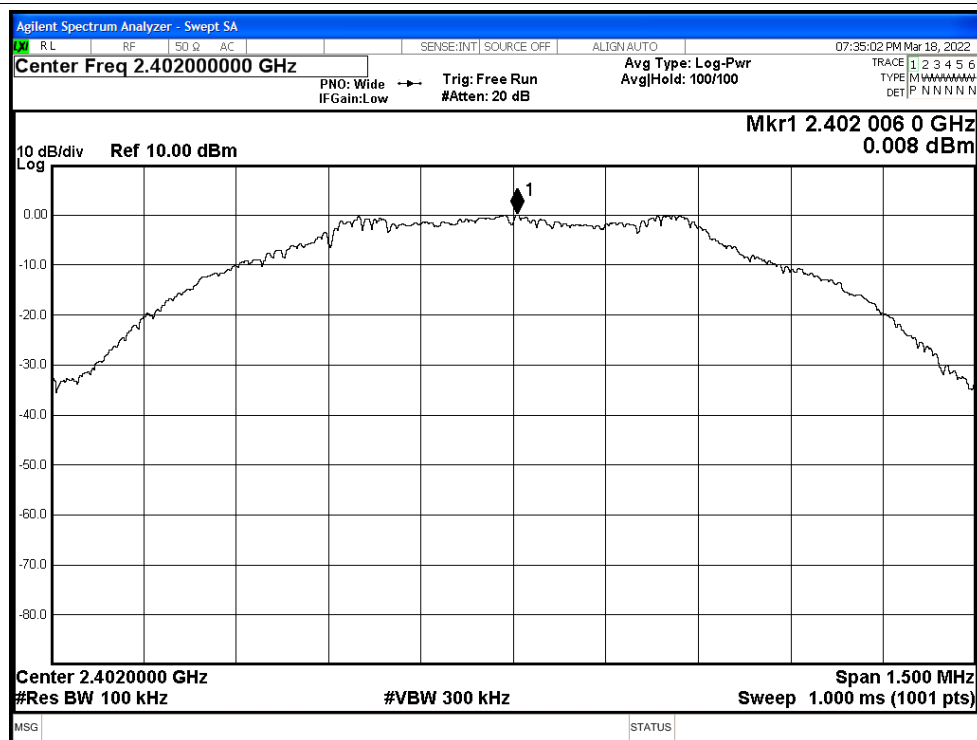


A.5 Conducted Spurious Emission

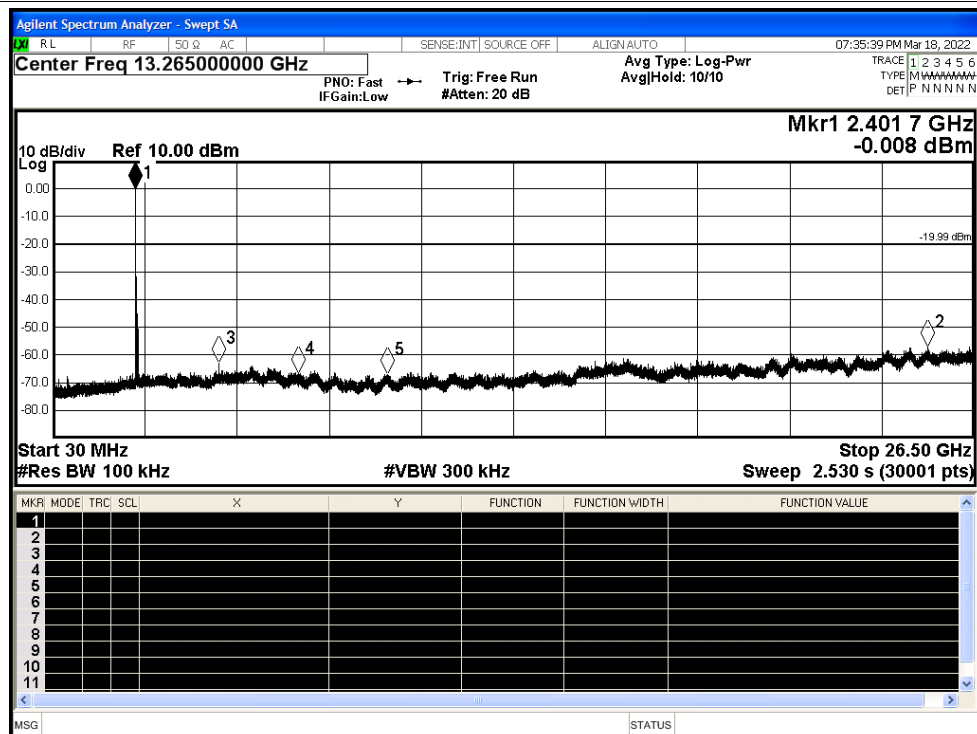
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE 1M	2402	Ant1	-56.95	-20	Pass
NVNT	BLE 1M	2480	Ant1	-56.95	-20	Pass

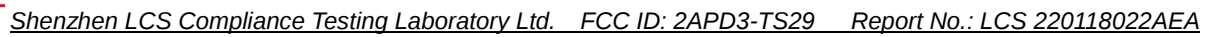


Tx. Spurious NVNT BLE 1M 2402MHz Ant1 Ref



Tx. Spurious NVNT BLE 1M 2402MHz Ant1 Emission





Tx. Spurious NVNT BLE 1M 2480MHz Ant1 Ref

Agilent Spectrum Analyzer - Swept SA

Center Freq 2.480000000 GHz

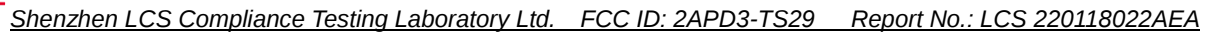
10 dB/div Ref 10.00 dBm

Mkr1 2.479 997 0 GHz -0.121 dBm

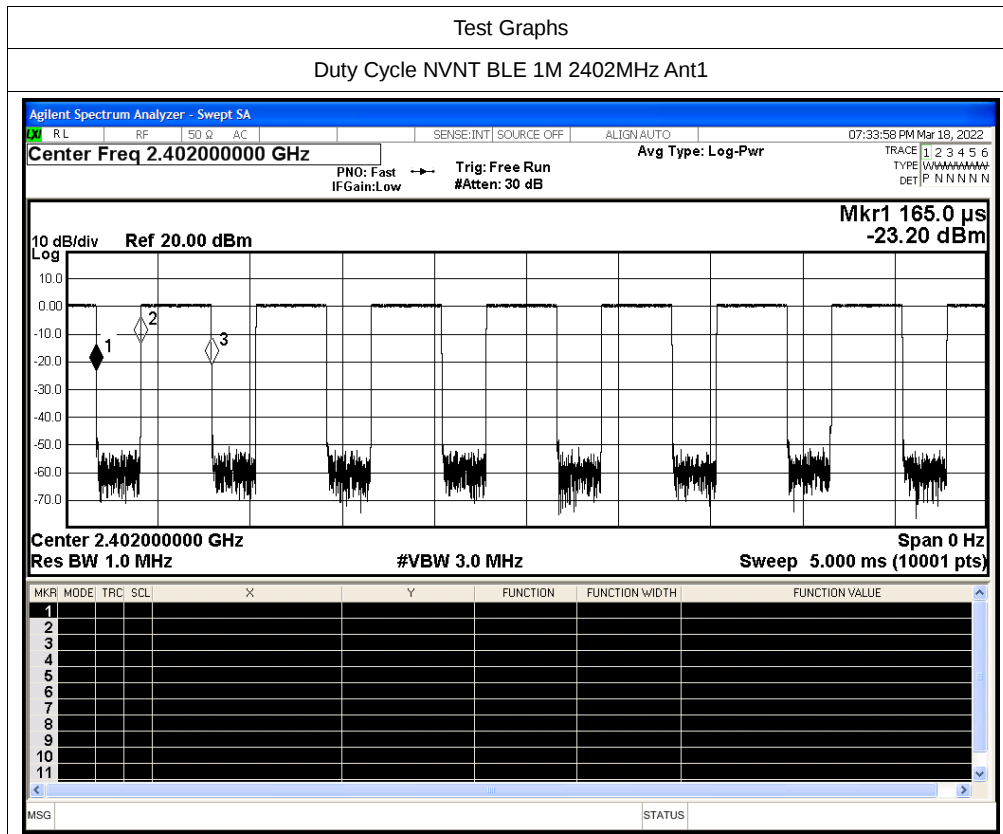
Center 2.4800000 GHz #Res BW 100 kHz #VBW 300 kHz Span 1.500 MHz Sweep 1.000 ms (1001 pts)

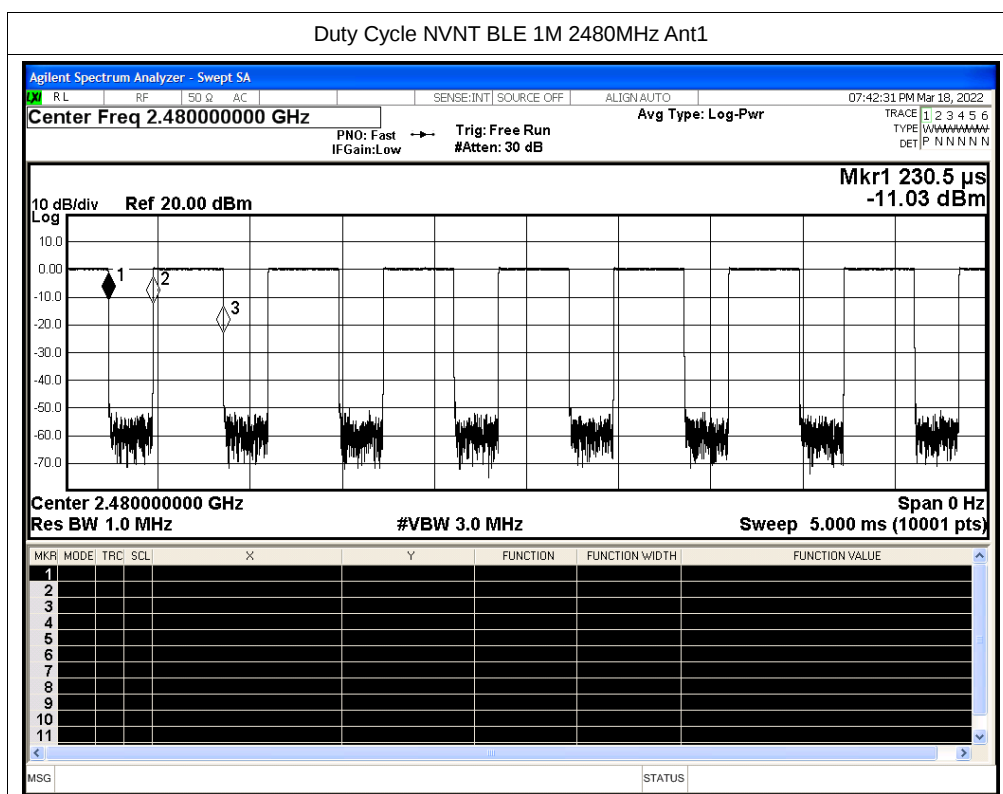
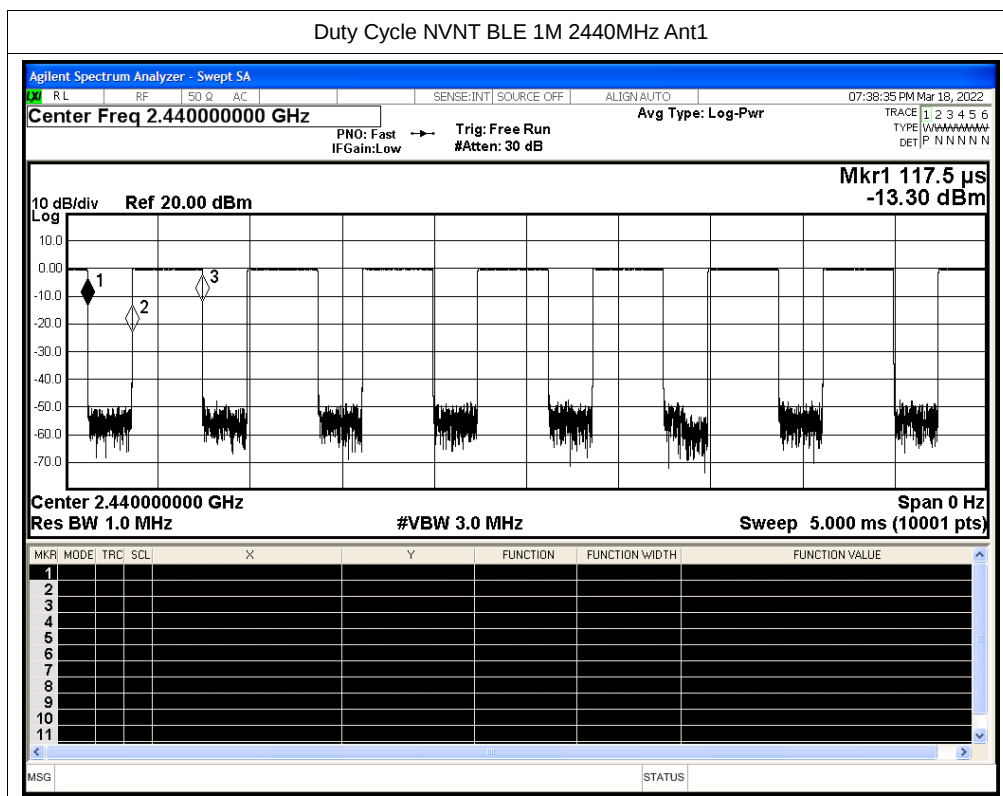
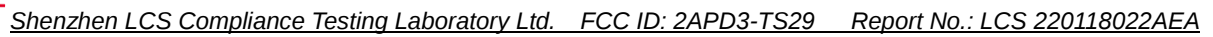
The screenshot displays a spectrum analyzer interface. The main plot shows a signal with a peak at 2.479997 GHz, marked with a diamond and the number 1. The y-axis is labeled '10 dB/div Log' and ranges from -80.0 to 0.0. The x-axis is labeled 'Center 2.4800000 GHz' and ranges from 2.4785 to 2.4815 GHz. The plot shows a broad signal with a sharp peak at the marked frequency. The top status bar includes various settings: 'RL', 'RF', '50 Ω', 'AC', 'SENSE:INT', 'SOURCE OFF', 'ALIGN:AUTO', and a timestamp '07:43:33 PM Mar 18, 2022'. The bottom status bar includes 'MSG', 'STATUS', and other parameters like 'PNO: Wide', 'IFGain:Low', 'Trig: Free Run', '#Atten: 20 dB', 'Avg Type: Log-Pwr', 'AvgHold: 100/100', 'TRACE 1', 'TYPE M', and 'DET P'.

[illegible]



Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	BLE 1M	2402	Ant1	61.44	2.12	2.6
NVNT	BLE 1M	2440	Ant1	61.44	2.12	2.6
NVNT	BLE 1M	2480	Ant1	61.39	2.12	2.6







A.7 Emissions in Restricted Bands

Condition	Mode	Frequency (MHz)	Antenna	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	BLE 1M	2402	Ant1	2310	-53.16	2	44.1	Peak	74	Pass
NVNT	BLE 1M	2402	Ant1	2310	-60.91	2	36.35	Average	54	Pass
NVNT	BLE 1M	2402	Ant1	2366.448	-48.84	2	48.42	Peak	74	Pass
NVNT	BLE 1M	2402	Ant1	2382	-60.22	2	37.04	Average	54	Pass
NVNT	BLE 1M	2402	Ant1	2390	-52.14	2	45.12	Peak	74	Pass
NVNT	BLE 1M	2402	Ant1	2390	-60.6	2	36.66	Average	54	Pass
NVNT	BLE 1M	2480	Ant1	2483.5	-52.03	2	45.23	Peak	74	Pass
NVNT	BLE 1M	2480	Ant1	2483.5	-60.55	2	36.71	Average	54	Pass
NVNT	BLE 1M	2480	Ant1	2496.064	-48.6	2	48.66	Peak	74	Pass
NVNT	BLE 1M	2480	Ant1	2483.584	-60.07	2	37.19	Average	54	Pass
NVNT	BLE 1M	2480	Ant1	2500	-51.12	2	46.14	Peak	74	Pass
NVNT	BLE 1M	2480	Ant1	2500	-60.9	2	36.36	Average	54	Pass



Restrict Band NVNT BLE 1M 2402MHz Ant1 Peak

