



Appendix B

RF Test Data for BT LE(Conducted Measurement)

Product Name: Hyundai Mini PC

Test Model: HMB10P01

Environmental Conditions

Temperature:	23.8° C
Relative Humidity:	52.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Paddi Chen
Supervised by:	Nick Peng





B.1 -6dB Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	BLE 1M	2402	Ant	0.673	≥ 0.5	Pass
NVNT	BLE 1M	2440	Ant	0.661	≥ 0.5	Pass
NVNT	BLE 1M	2480	Ant	0.653	≥ 0.5	Pass
NVNT	BLE 2M	2402	Ant	1.157	≥ 0.5	Pass
NVNT	BLE 2M	2440	Ant	1.164	≥ 0.5	Pass
NVNT	BLE 2M	2480	Ant	1.154	≥ 0.5	Pass

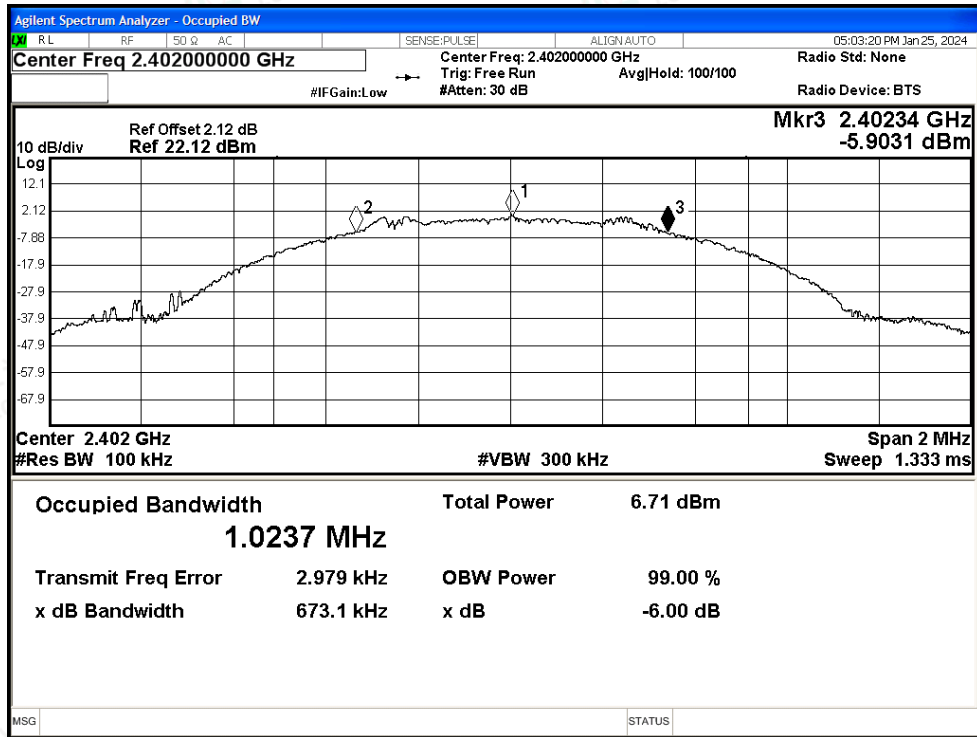


Shenzhen LCS Compliance Testing Laboratory Ltd.
Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China
Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com
Scan code to check authenticity

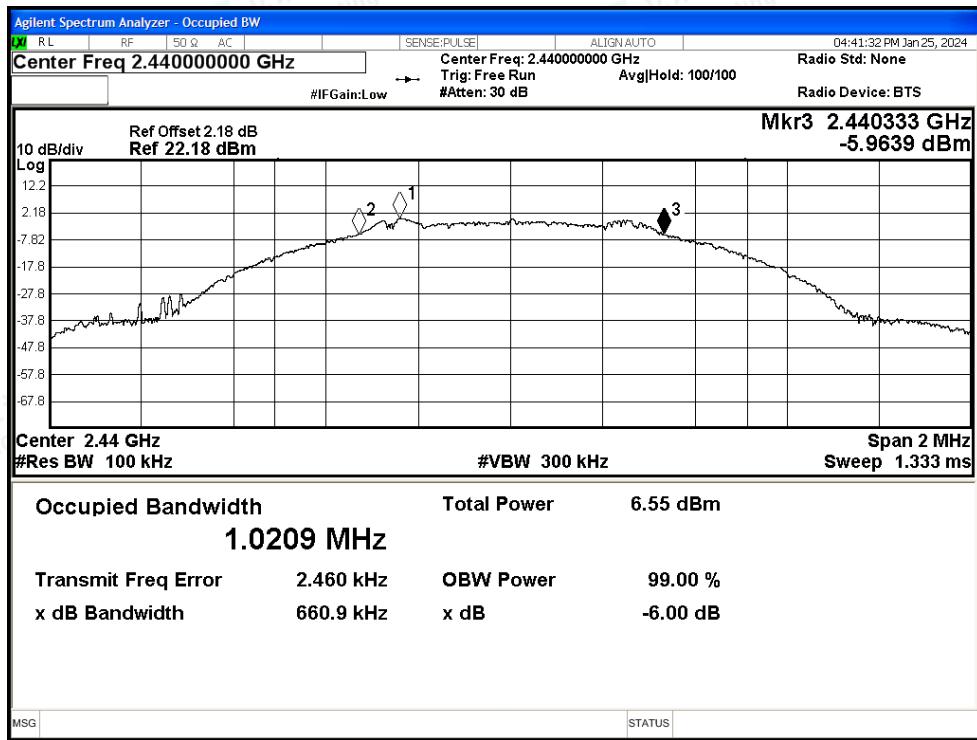


Test Graphs

-6dB Bandwidth NVNT BLE 1M 2402MHz Ant

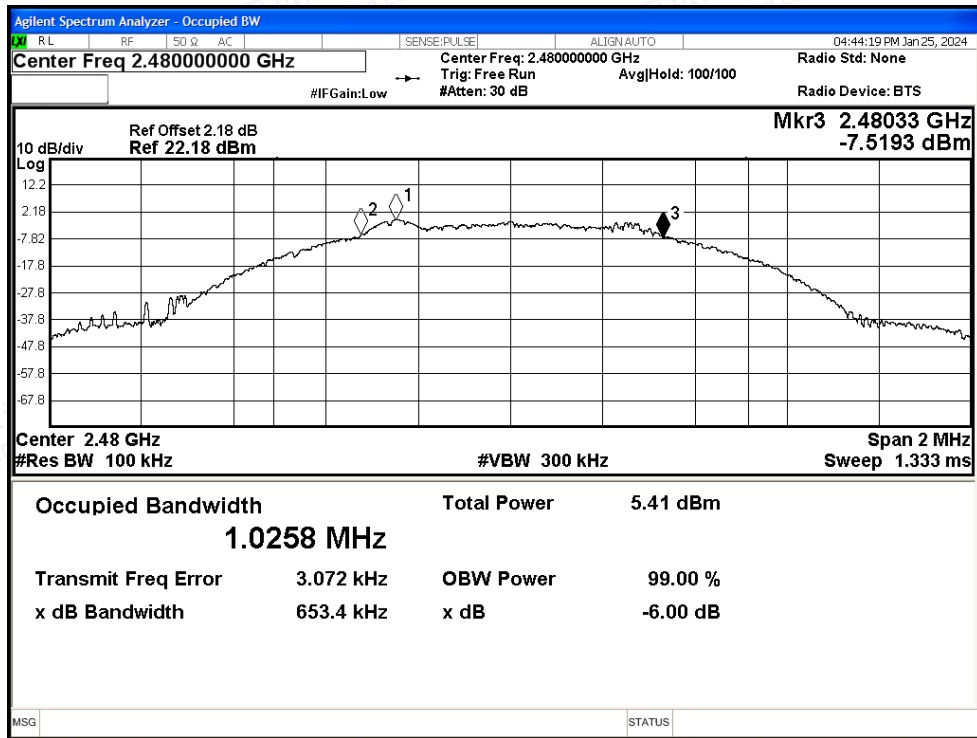


-6dB Bandwidth NVNT BLE 1M 2440MHz Ant

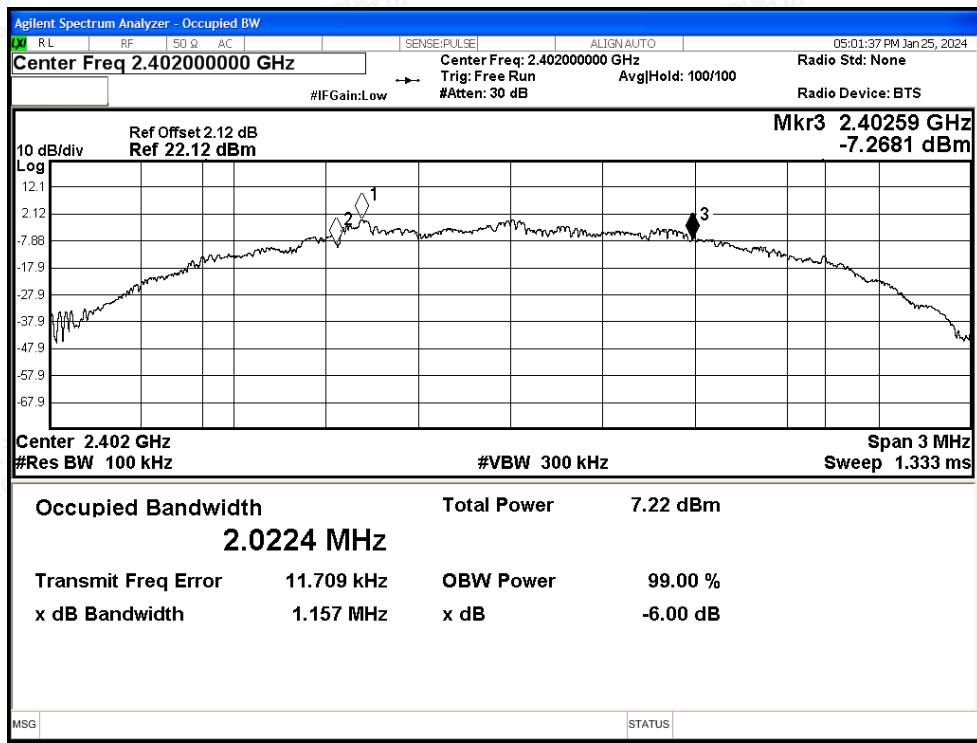




-6dB Bandwidth NVNT BLE 1M 2480MHz Ant

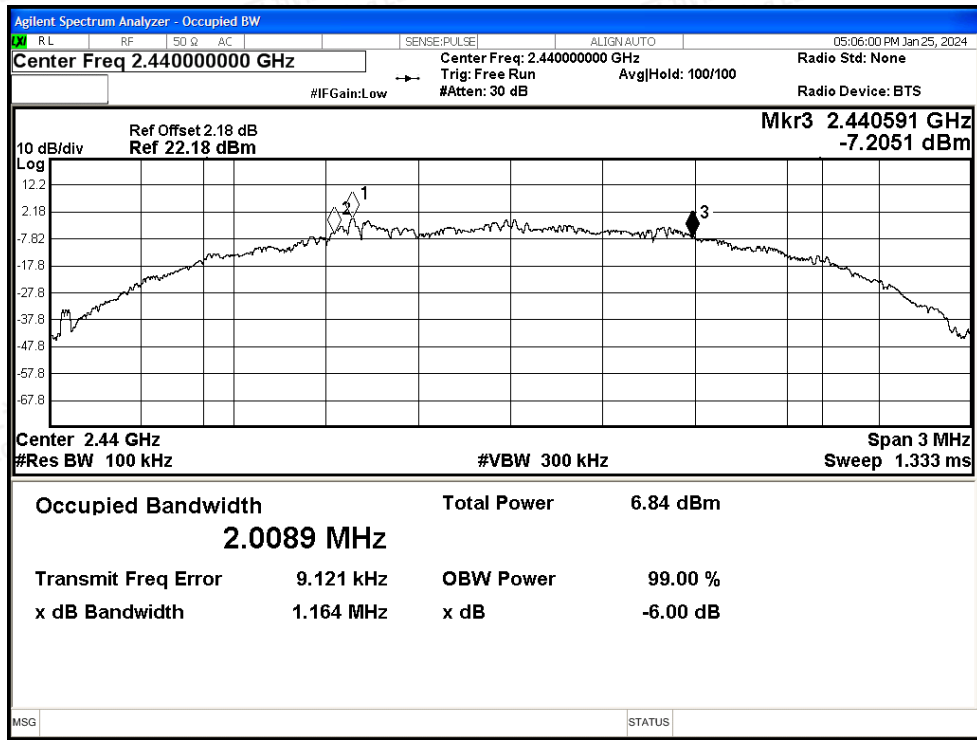


-6dB Bandwidth NVNT BLE 2M 2402MHz Ant

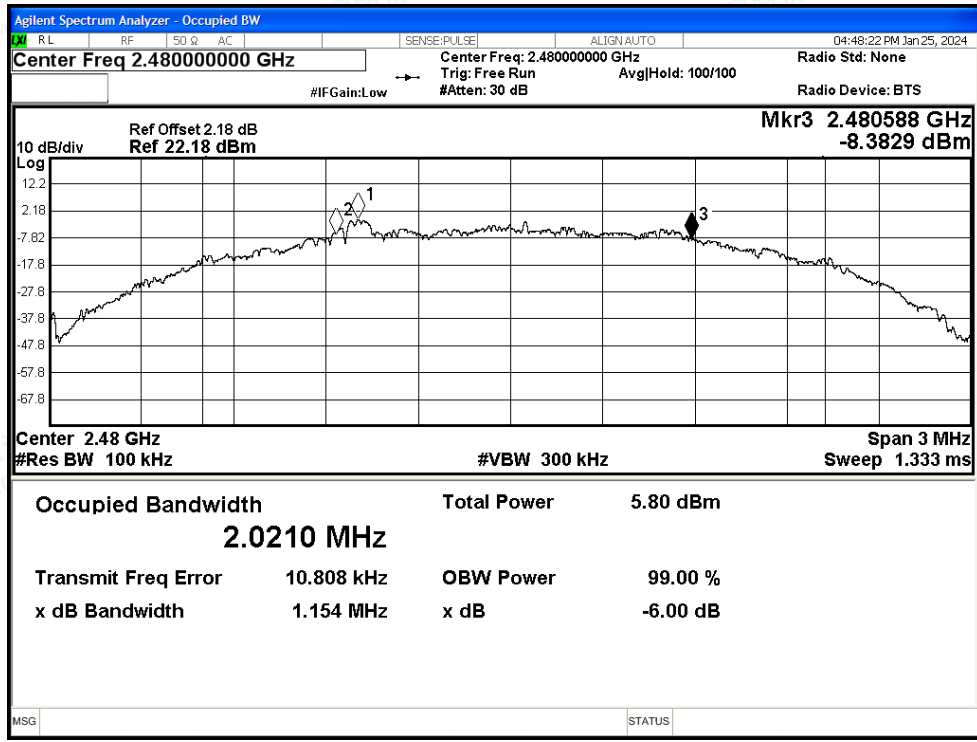




-6dB Bandwidth NVNT BLE 2M 2440MHz Ant



-6dB Bandwidth NVNT BLE 2M 2480MHz Ant





B.2 Maximum Conducted Output Power

Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	BLE 1M	2402	Ant	1	30	Pass
NVNT	BLE 1M	2440	Ant	0.74	30	Pass
NVNT	BLE 1M	2480	Ant	-0.36	30	Pass
NVNT	BLE 2M	2402	Ant	0.86	30	Pass
NVNT	BLE 2M	2440	Ant	0.47	30	Pass
NVNT	BLE 2M	2480	Ant	-0.54	30	Pass

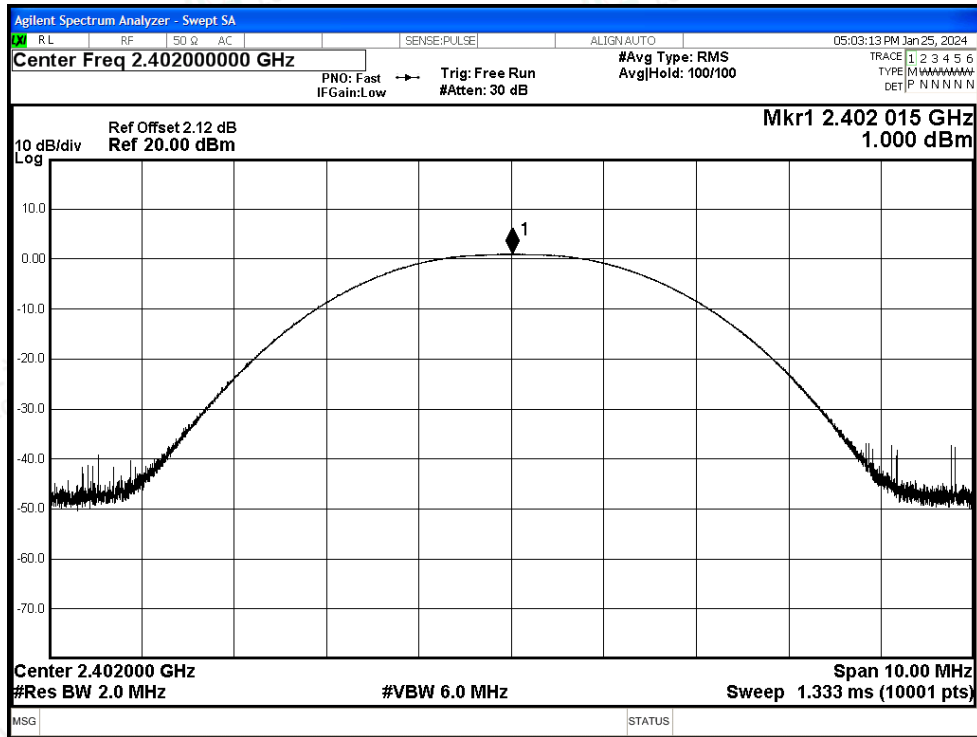


Shenzhen LCS Compliance Testing Laboratory Ltd.
Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China
Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com
Scan code to check authenticity

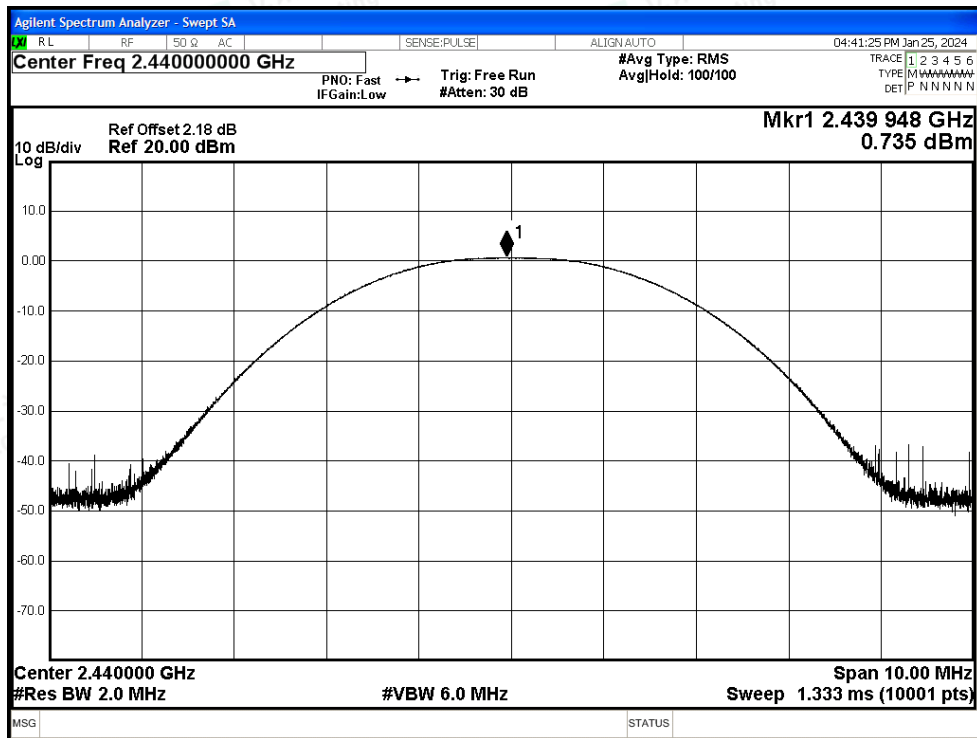


Test Graphs

Power NVNT BLE 1M 2402MHz Ant

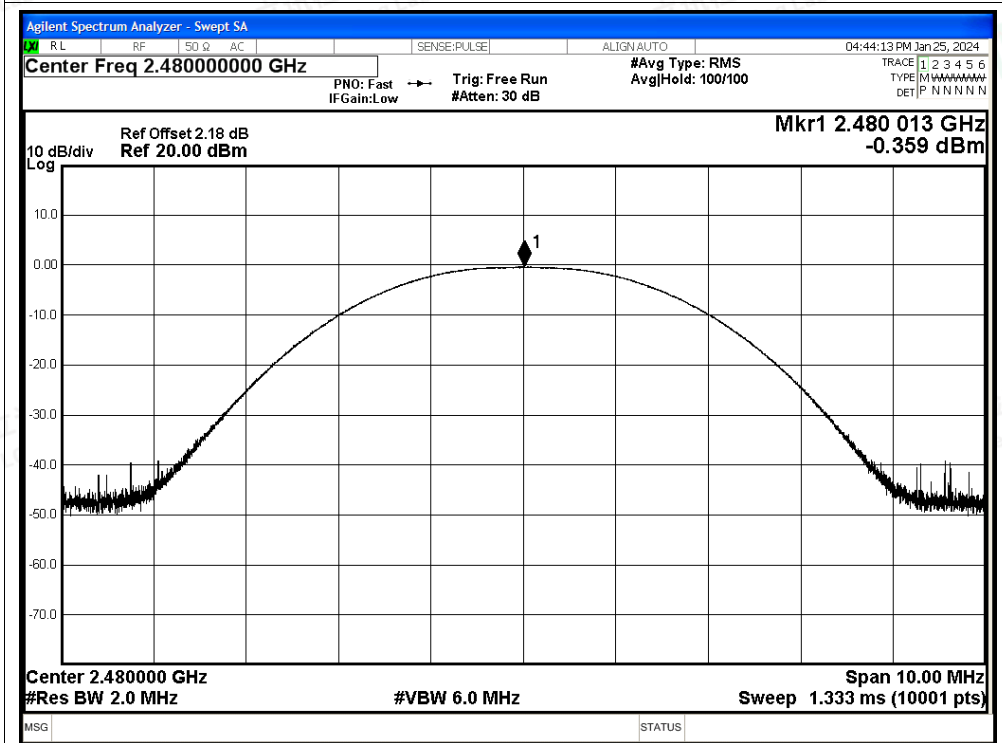


Power NVNT BLE 1M 2440MHz Ant

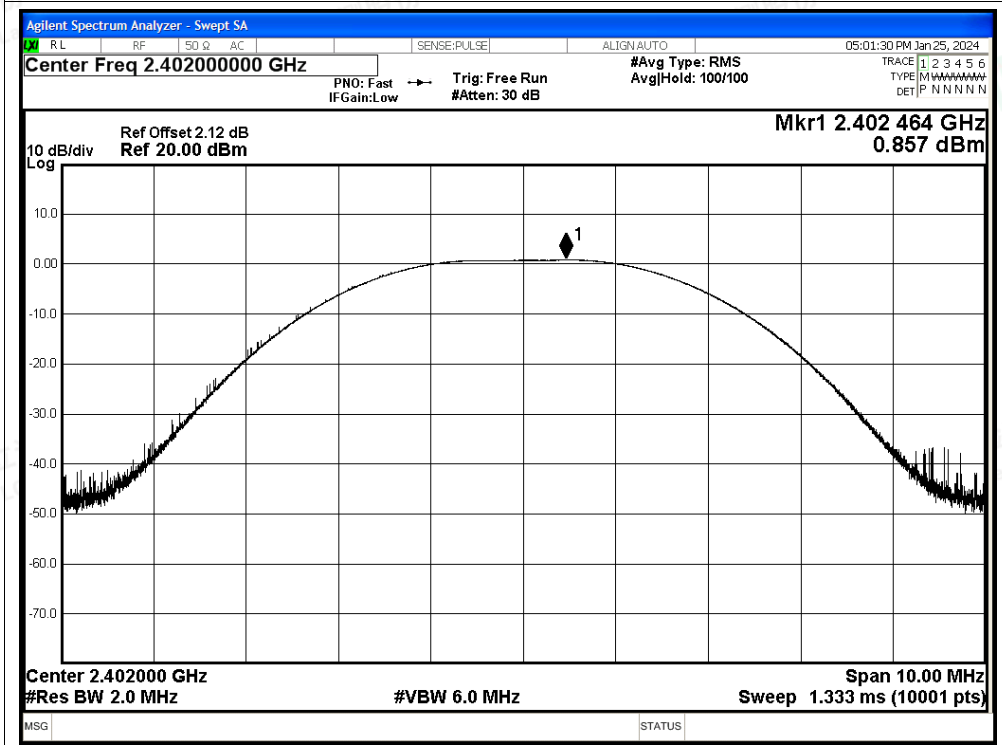




Power NVNT BLE 1M 2480MHz Ant

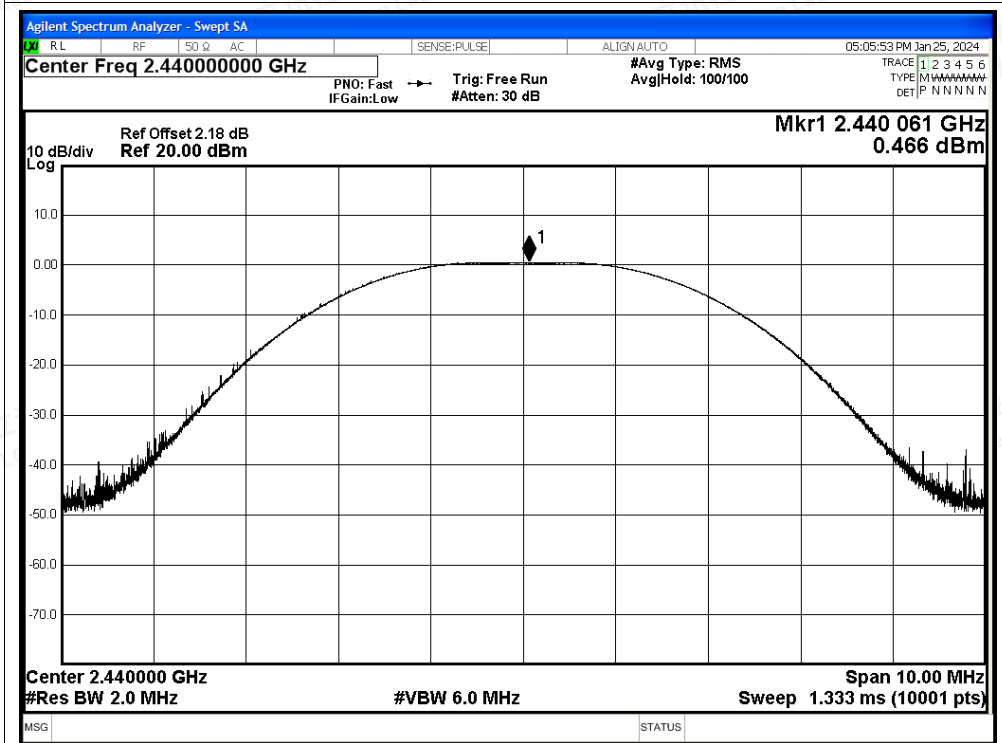


Power NVNT BLE 2M 2402MHz Ant

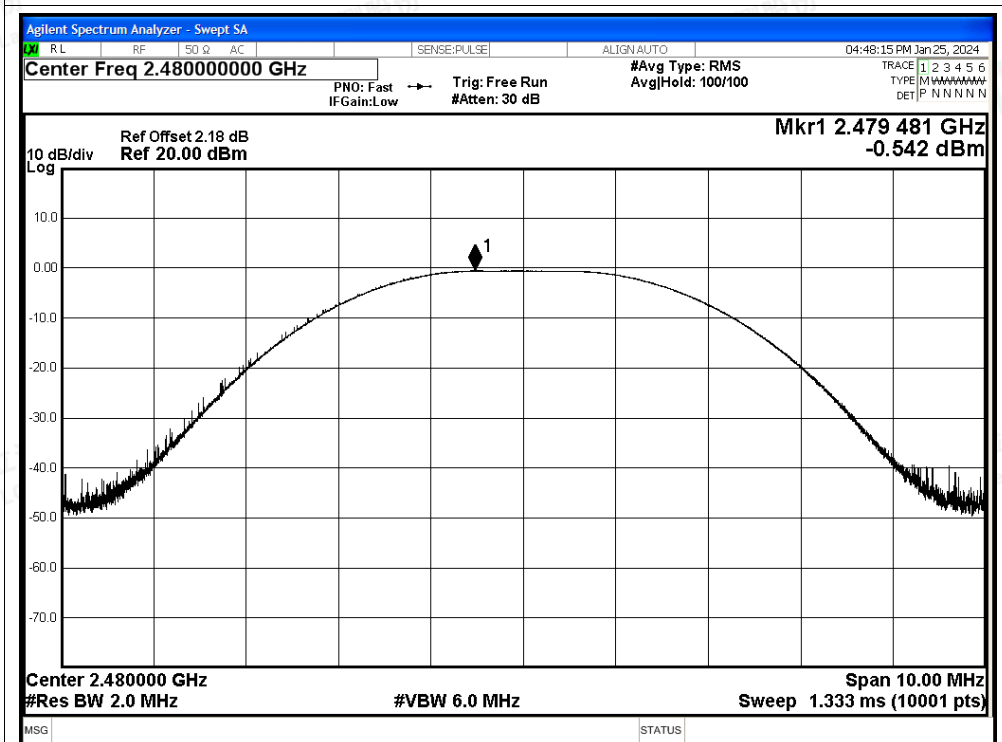




Power NVNT BLE 2M 2440MHz Ant



Power NVNT BLE 2M 2480MHz Ant





B.3 Maximum Power Spectral Density Level

Condition	Mode	Frequency (MHz)	Antenna	Conducted PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
NVNT	BLE 1M	2402	Ant	-15.55	8	Pass
NVNT	BLE 1M	2440	Ant	-15.87	8	Pass
NVNT	BLE 1M	2480	Ant	-16.9	8	Pass
NVNT	BLE 2M	2402	Ant	-18.81	8	Pass
NVNT	BLE 2M	2440	Ant	-19.19	8	Pass
NVNT	BLE 2M	2480	Ant	-20.16	8	Pass

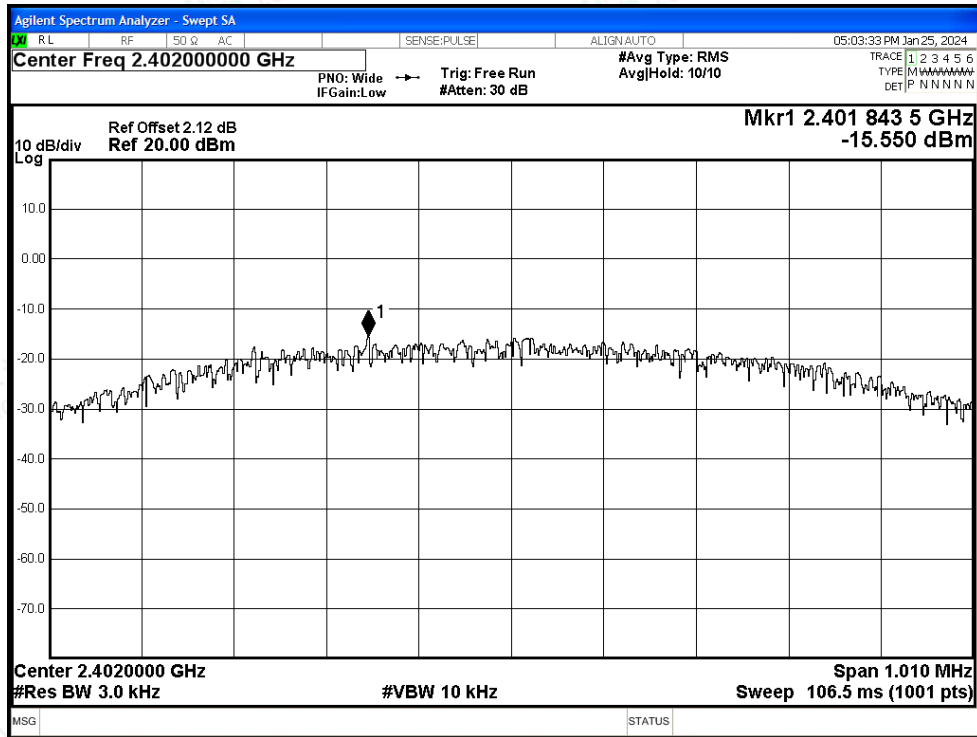


Shenzhen LCS Compliance Testing Laboratory Ltd.
Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China
Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com
Scan code to check authenticity

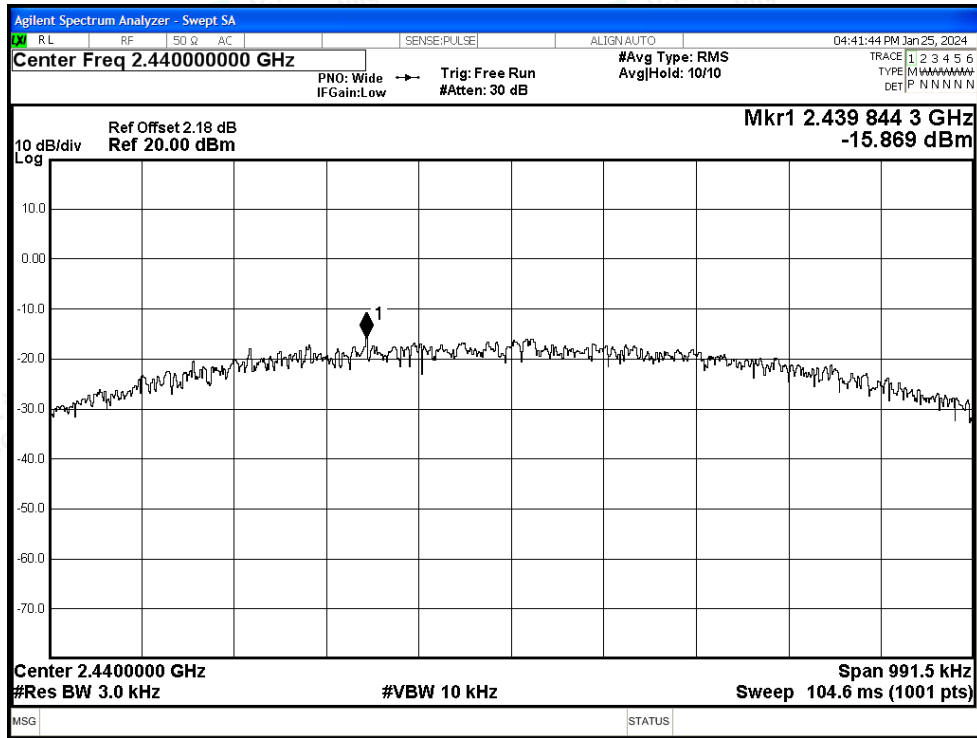


Test Graphs

PSD NVNT BLE 1M 2402MHz Ant

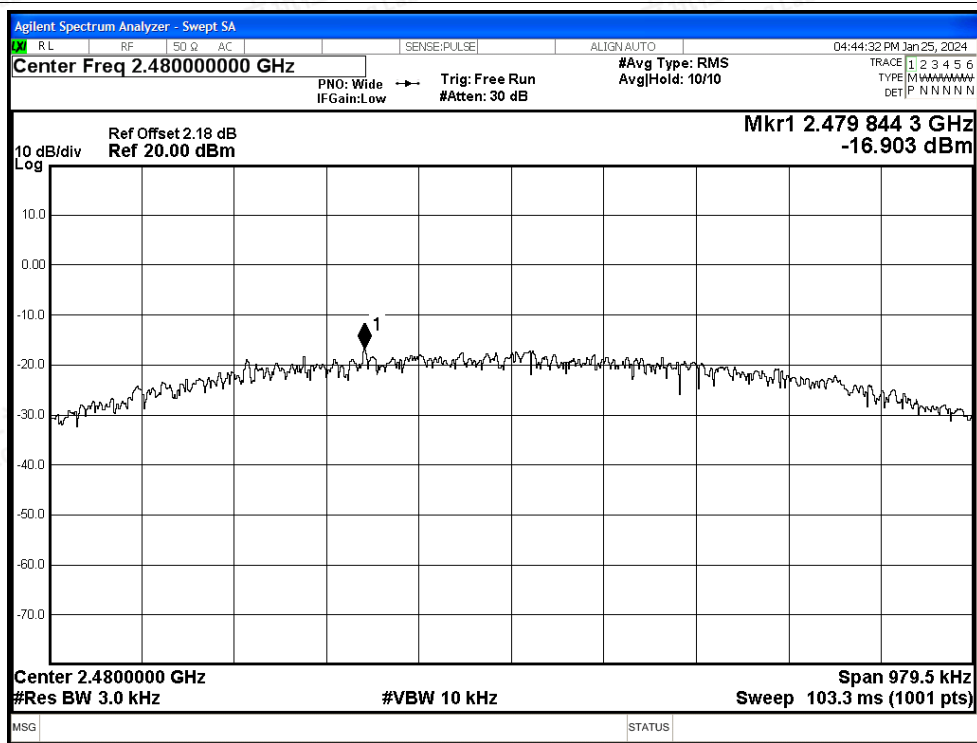


PSD NVNT BLE 1M 2440MHz Ant

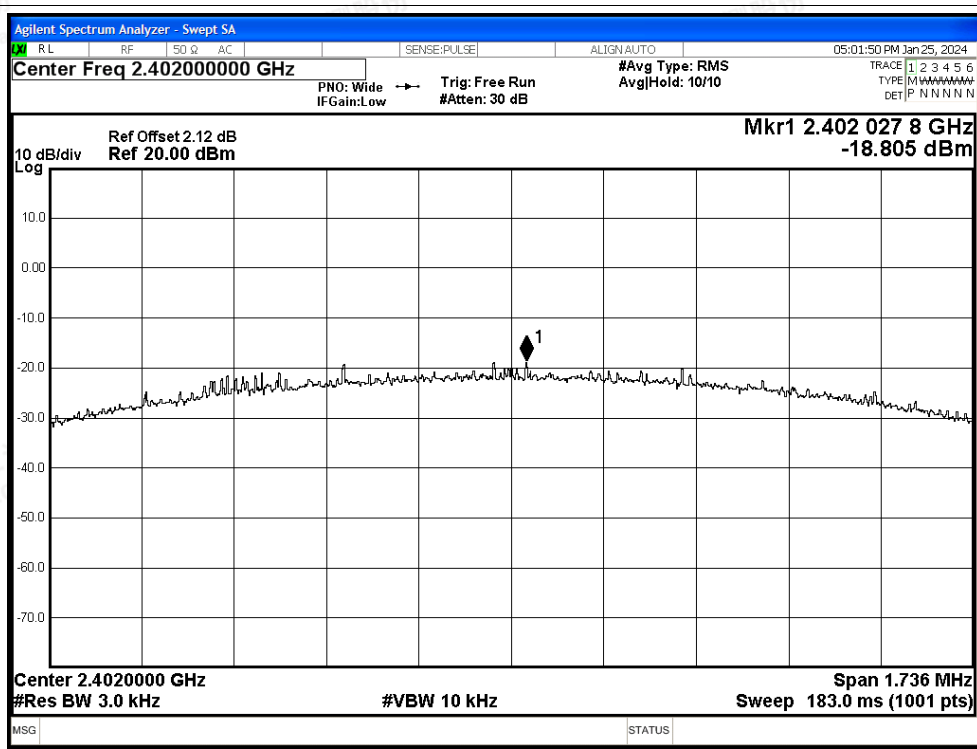




PSD NVNT BLE 1M 2480MHz Ant

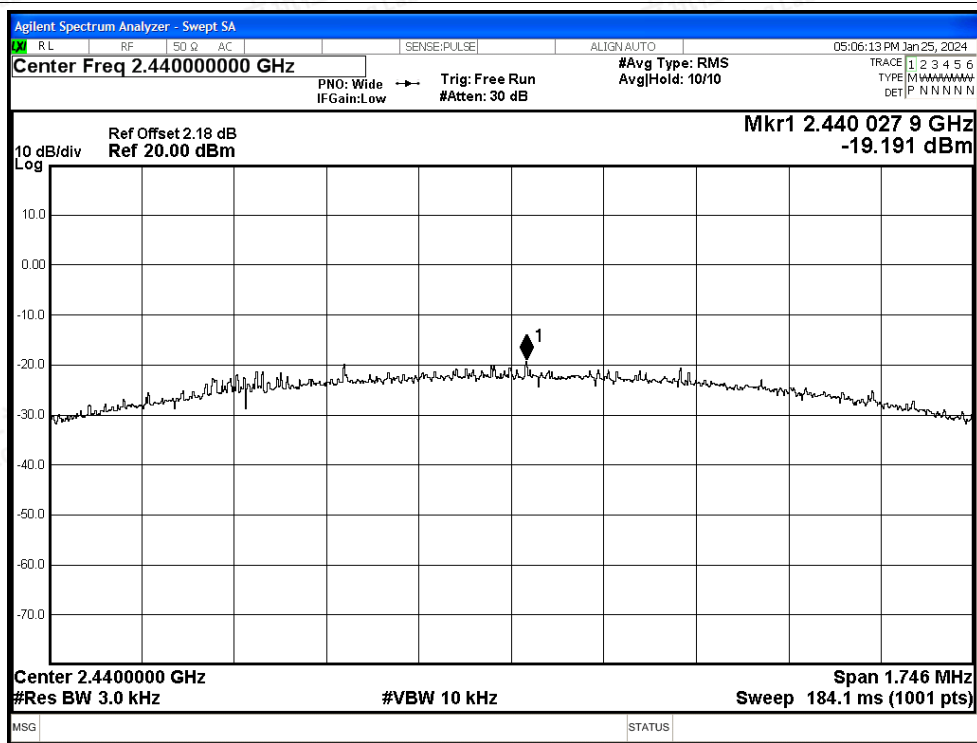


PSD NVNT BLE 2M 2402MHz Ant

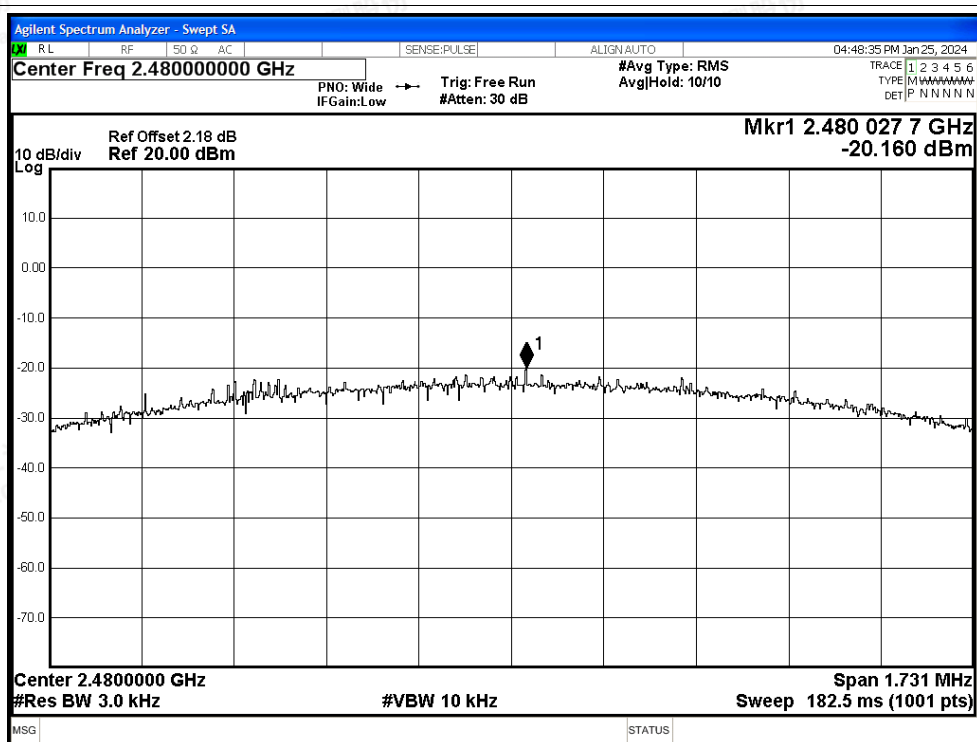




PSD NVNT BLE 2M 2440MHz Ant



PSD NVNT BLE 2M 2480MHz Ant





B.4 Band Edge

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE 1M	2402	Ant	-57.2	-20	Pass
NVNT	BLE 1M	2480	Ant	-55.49	-20	Pass
NVNT	BLE 2M	2402	Ant	-44.43	-20	Pass
NVNT	BLE 2M	2480	Ant	-55.18	-20	Pass

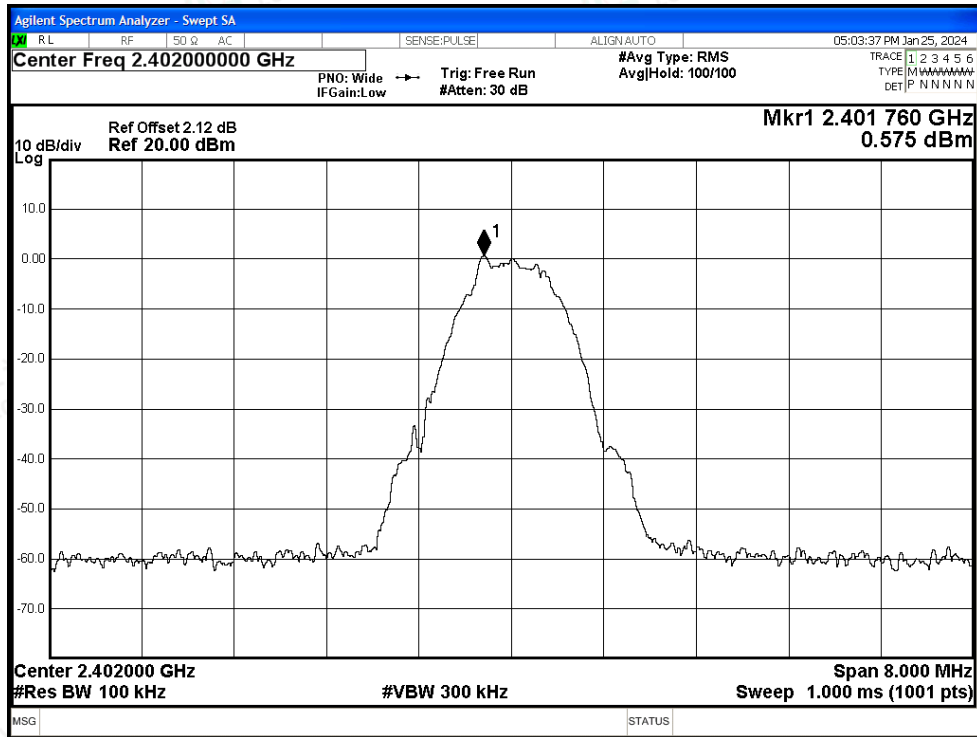


Shenzhen LCS Compliance Testing Laboratory Ltd.
Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China
Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com
Scan code to check authenticity

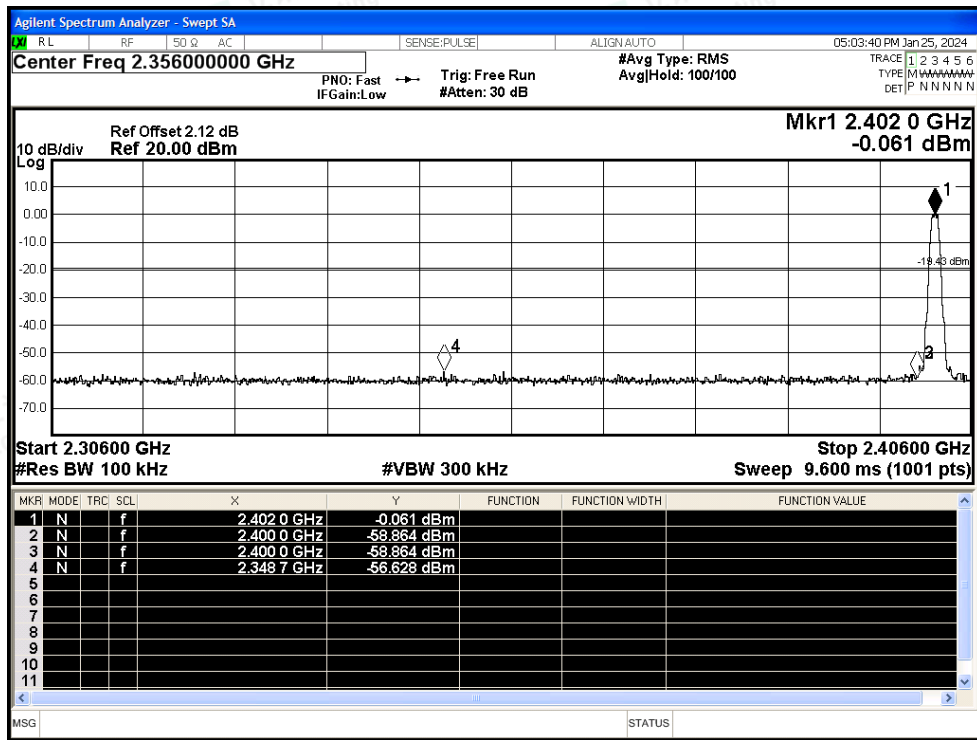


Test Graphs

Band Edge NVNT BLE 1M 2402MHz Ant Ref

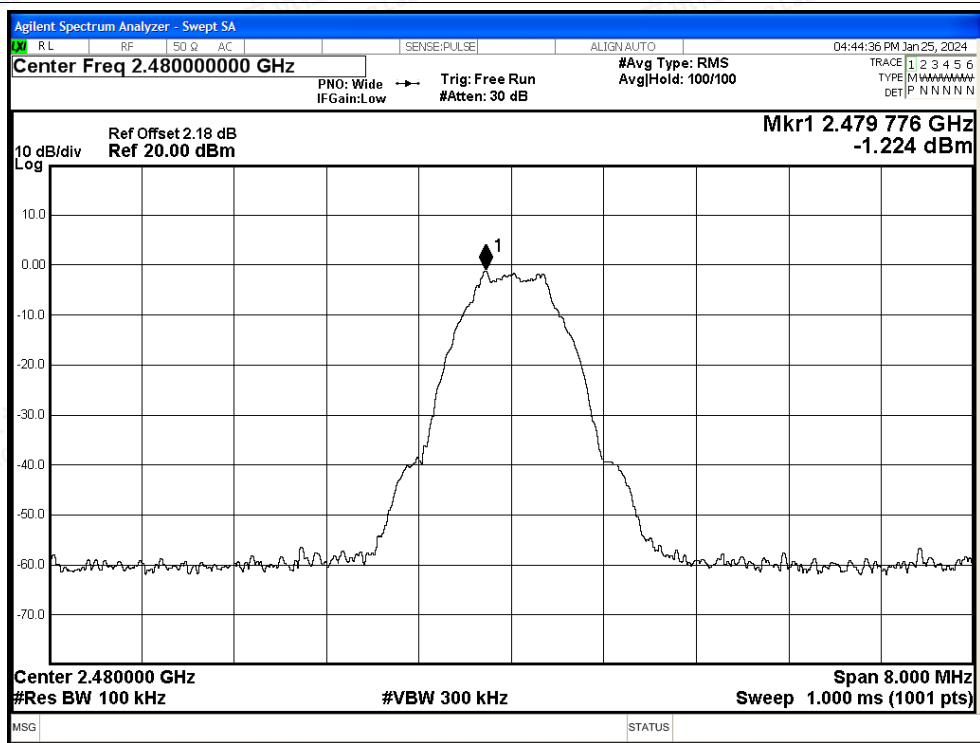


Band Edge NVNT BLE 1M 2402MHz Ant Emission

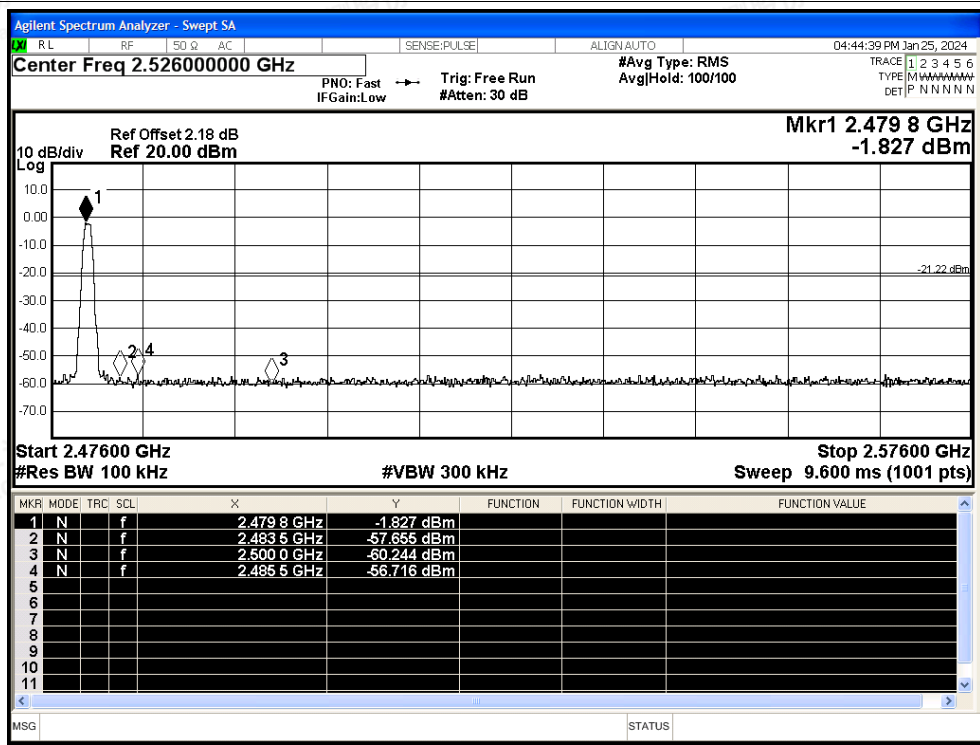




Band Edge NVNT BLE 1M 2480MHz Ant Ref

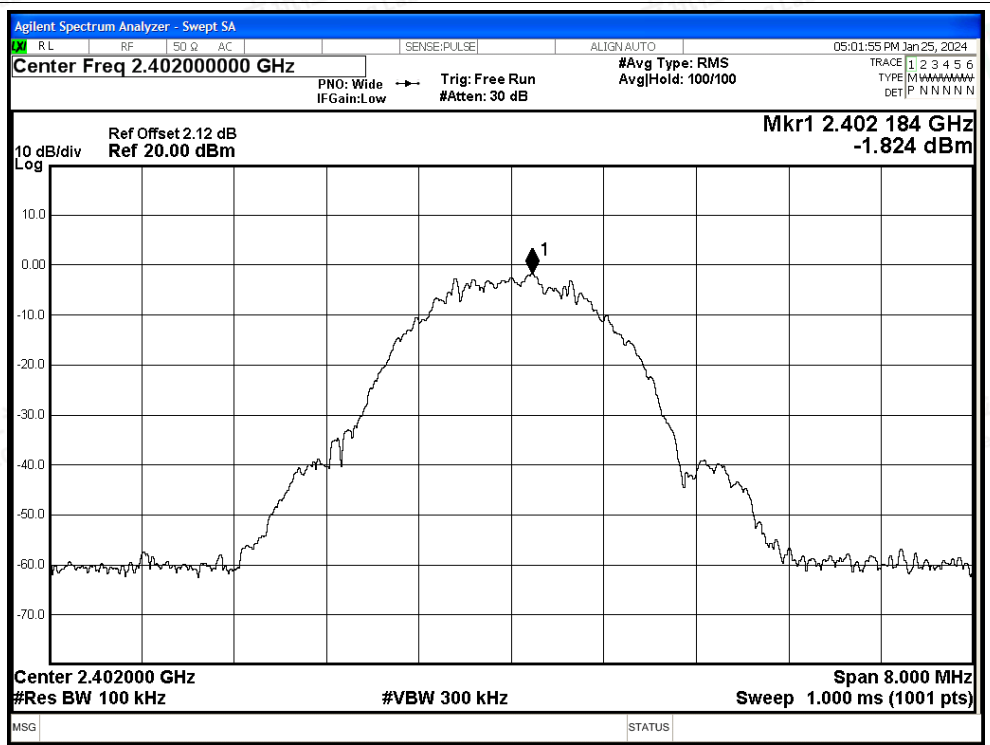


Band Edge NVNT BLE 1M 2480MHz Ant Emission

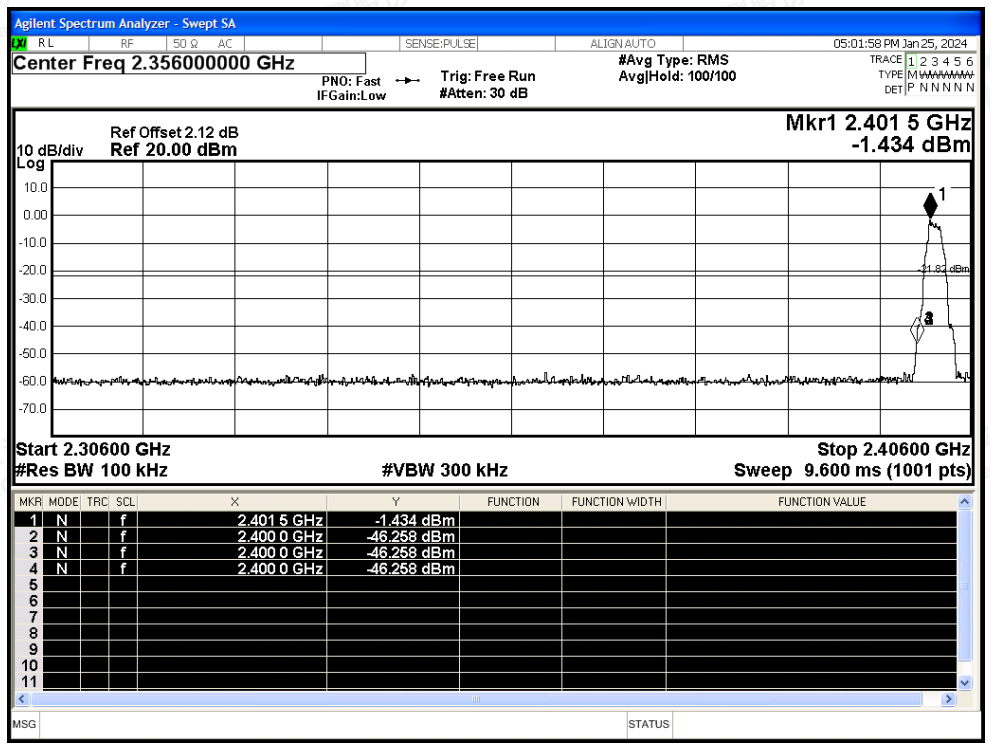




Band Edge NVNT BLE 2M 2402MHz Ant Ref

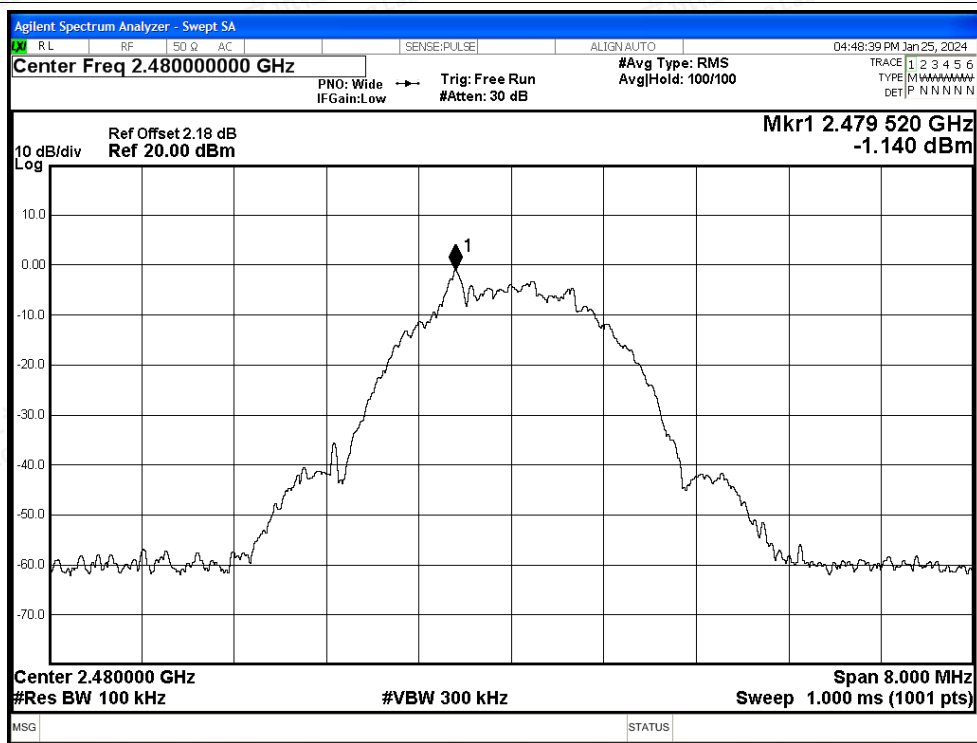


Band Edge NVNT BLE 2M 2402MHz Ant Emission

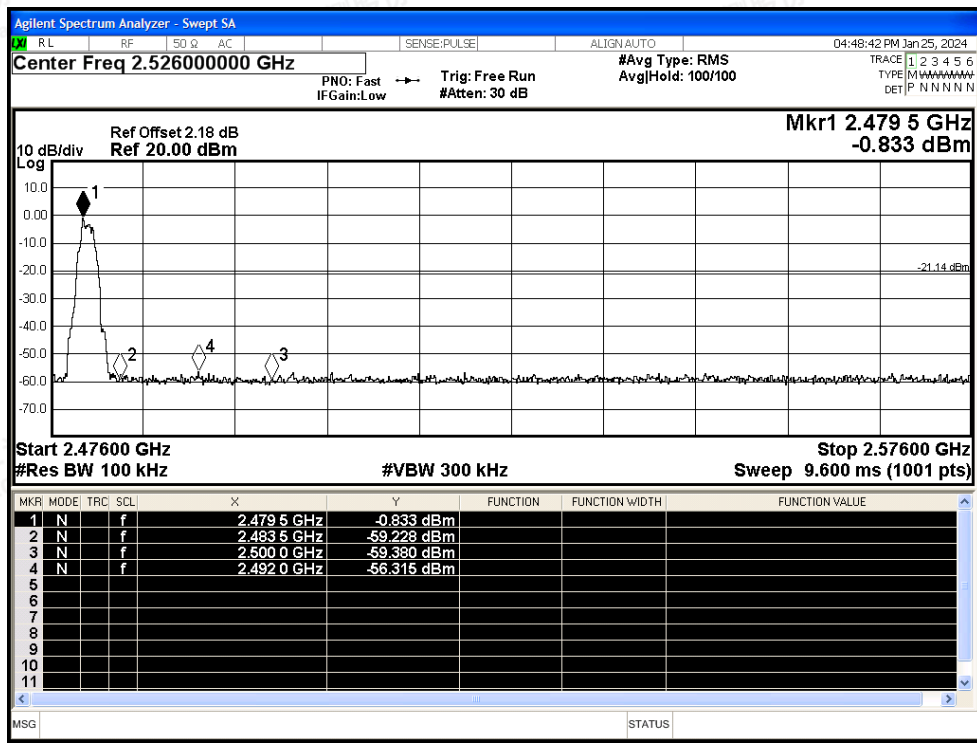




Band Edge NVNT BLE 2M 2480MHz Ant Ref



Band Edge NVNT BLE 2M 2480MHz Ant Emission





B.5 Conducted RF Spurious Emission

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE 1M	2402	Ant	-56.19	-20	Pass
NVNT	BLE 1M	2440	Ant	-55.35	-20	Pass
NVNT	BLE 1M	2480	Ant	-54.29	-20	Pass
NVNT	BLE 2M	2402	Ant	-55.26	-20	Pass
NVNT	BLE 2M	2440	Ant	-54.59	-20	Pass
NVNT	BLE 2M	2480	Ant	-54.52	-20	Pass

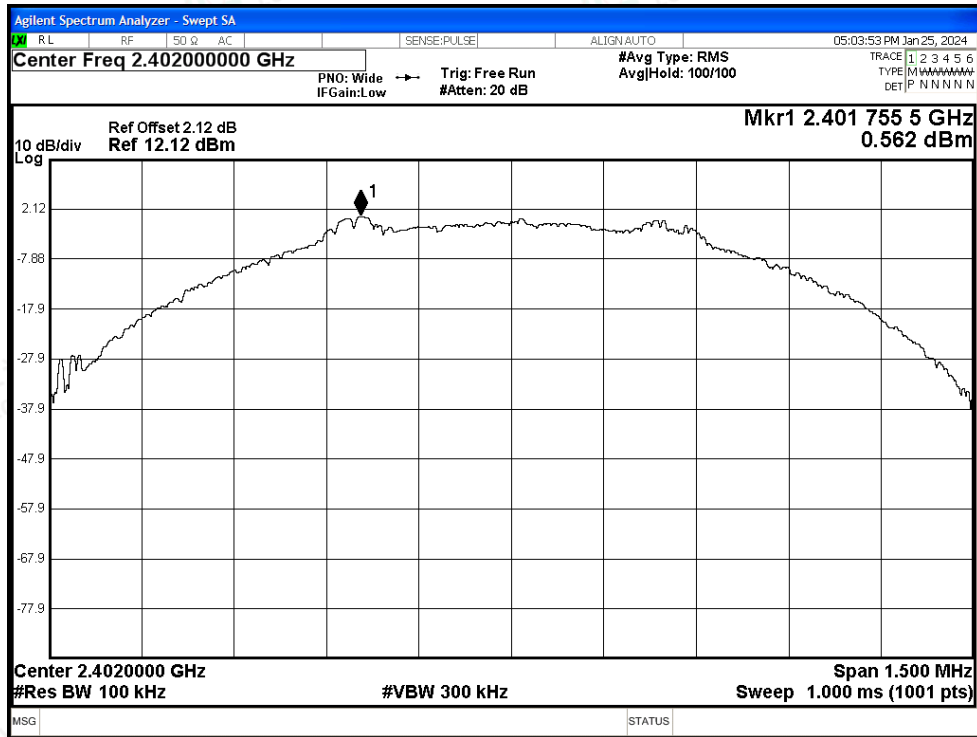


Shenzhen LCS Compliance Testing Laboratory Ltd.
Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China
Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com
Scan code to check authenticity

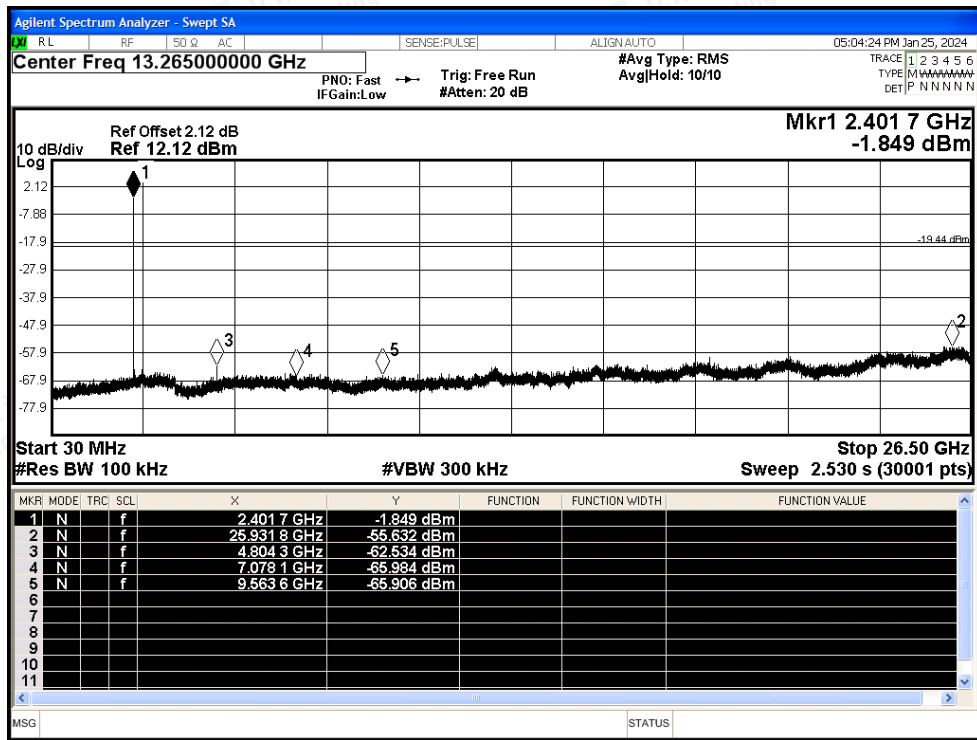


Test Graphs

Tx. Spurious NVNT BLE 1M 2402MHz Ant Ref

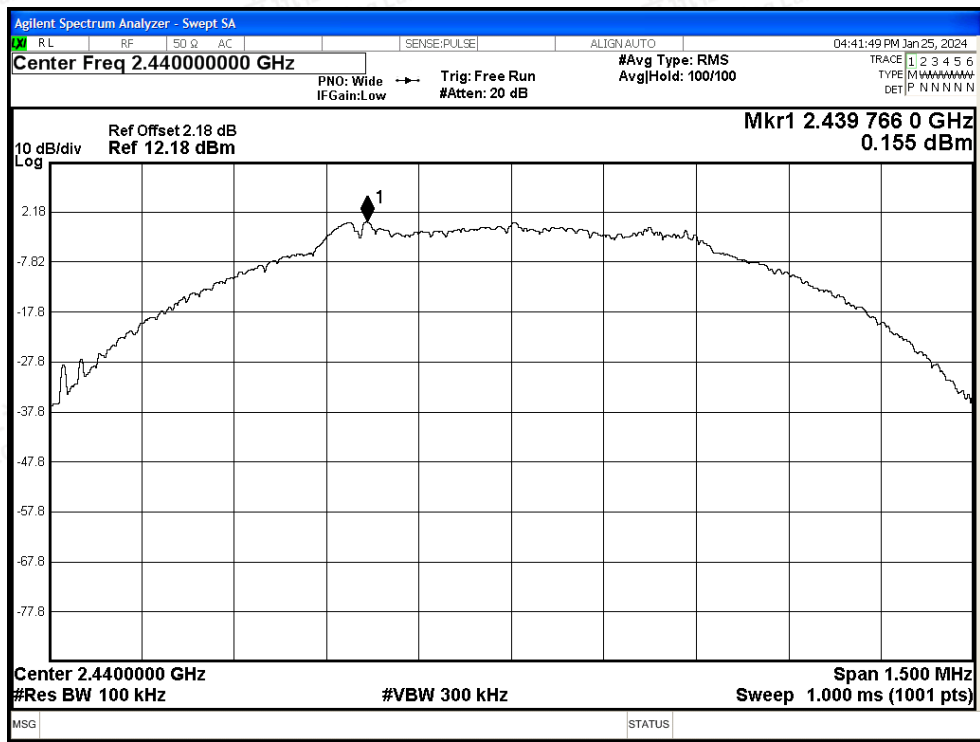


Tx. Spurious NVNT BLE 1M 2402MHz Ant Emission

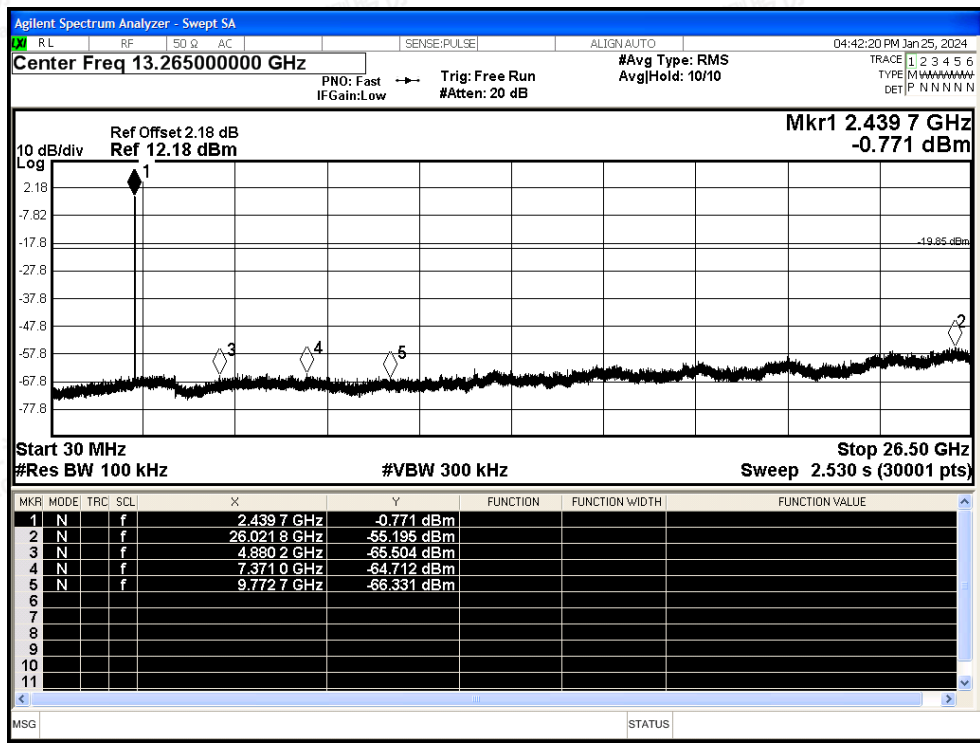




Tx. Spurious NVNT BLE 1M 2440MHz Ant Ref

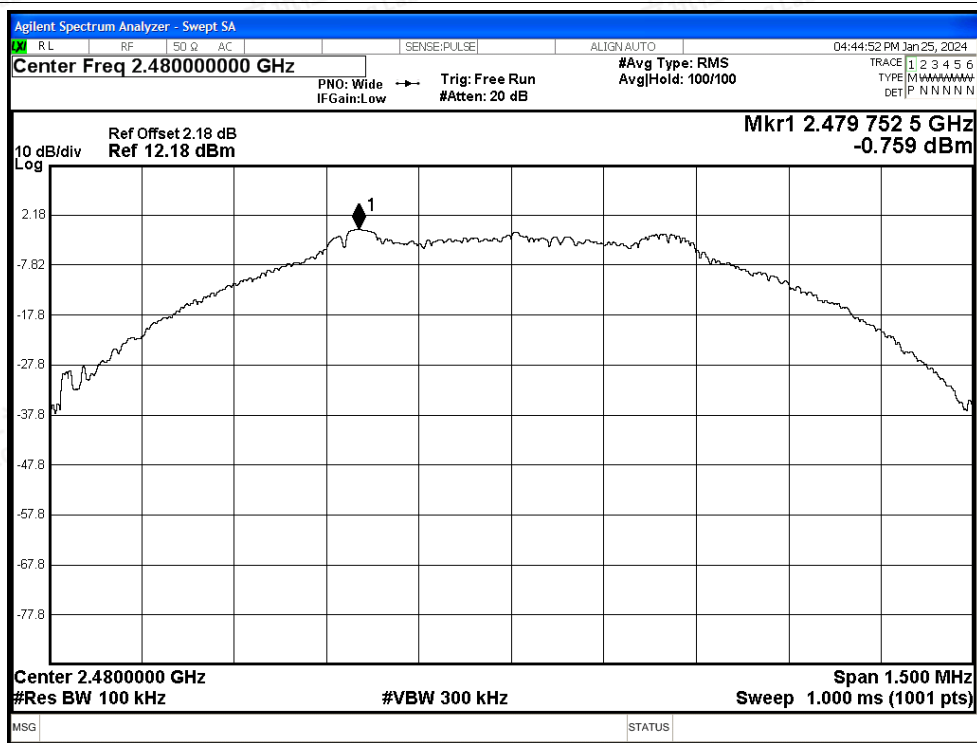


Tx. Spurious NVNT BLE 1M 2440MHz Ant Emission

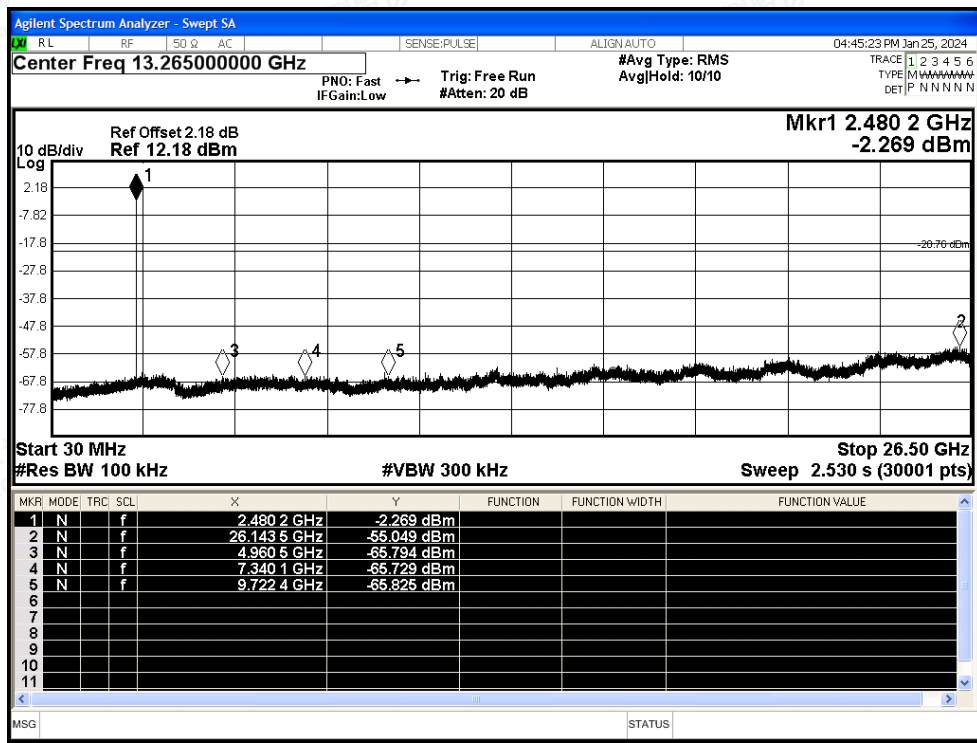




Tx. Spurious NVNT BLE 1M 2480MHz Ant Ref

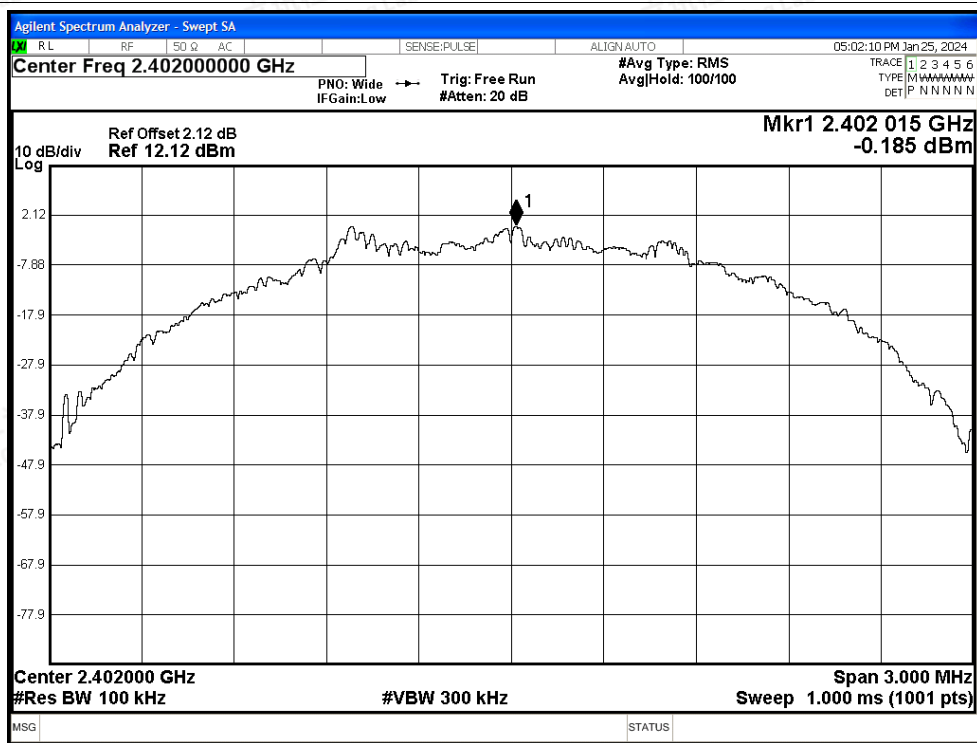


Tx. Spurious NVNT BLE 1M 2480MHz Ant Emission

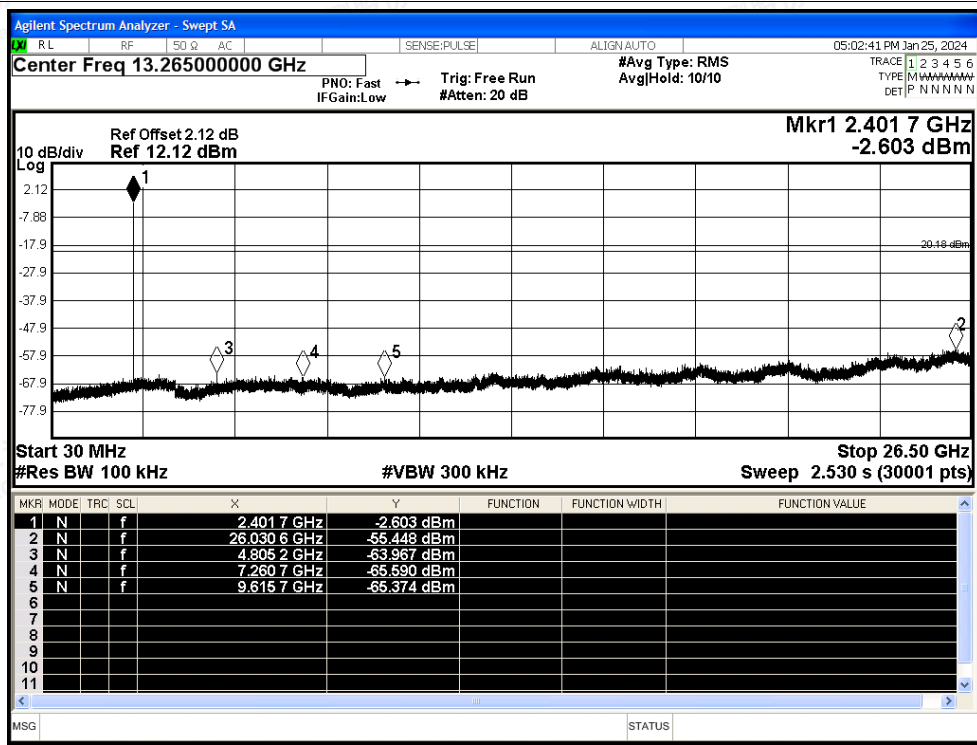




Tx. Spurious NVNT BLE 2M 2402MHz Ant Ref

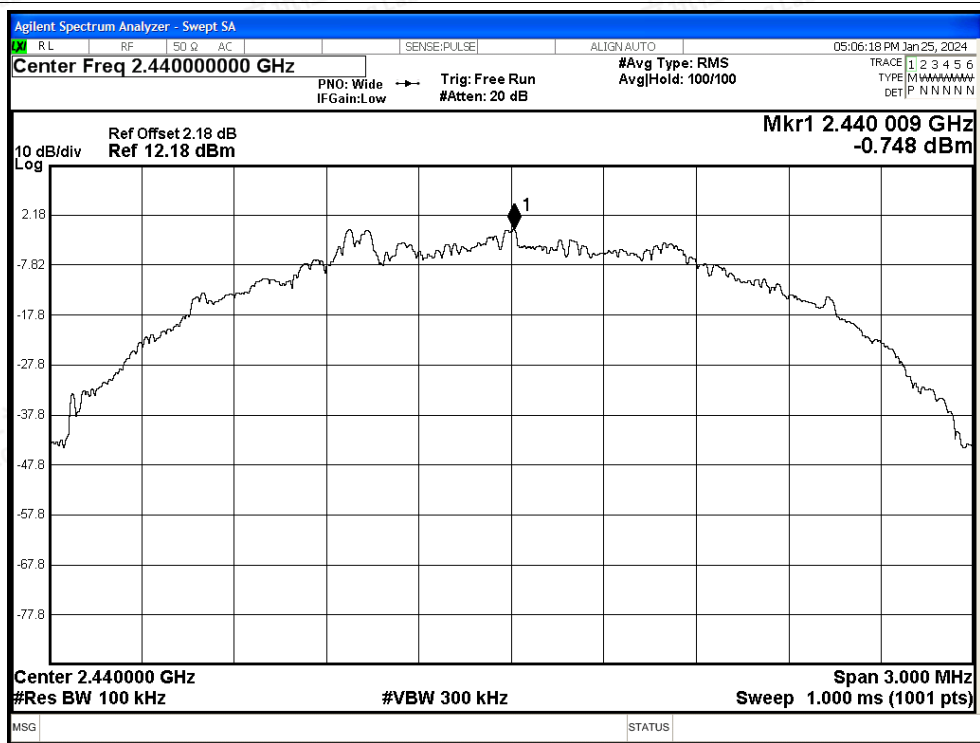


Tx. Spurious NVNT BLE 2M 2402MHz Ant Emission

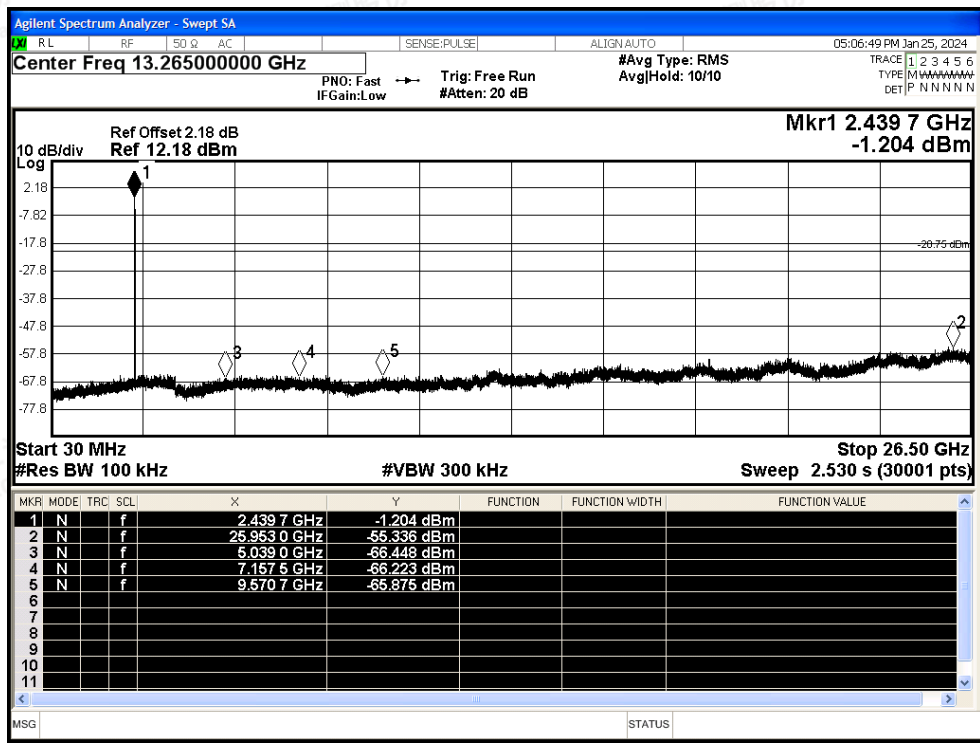




Tx. Spurious NVNT BLE 2M 2440MHz Ant Ref

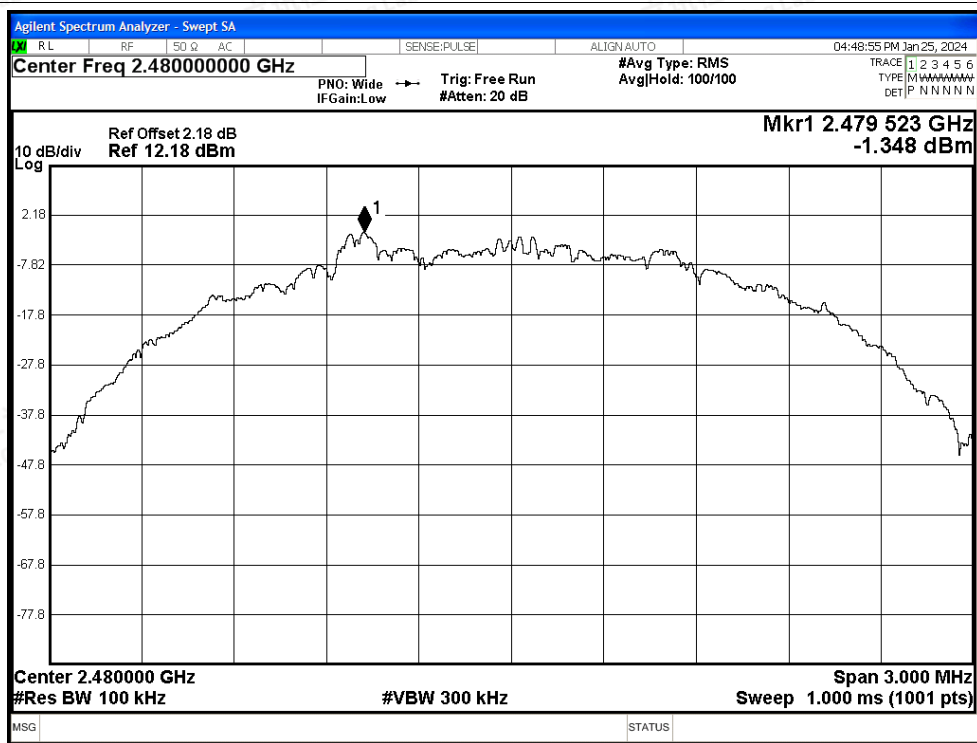


Tx. Spurious NVNT BLE 2M 2440MHz Ant Emission

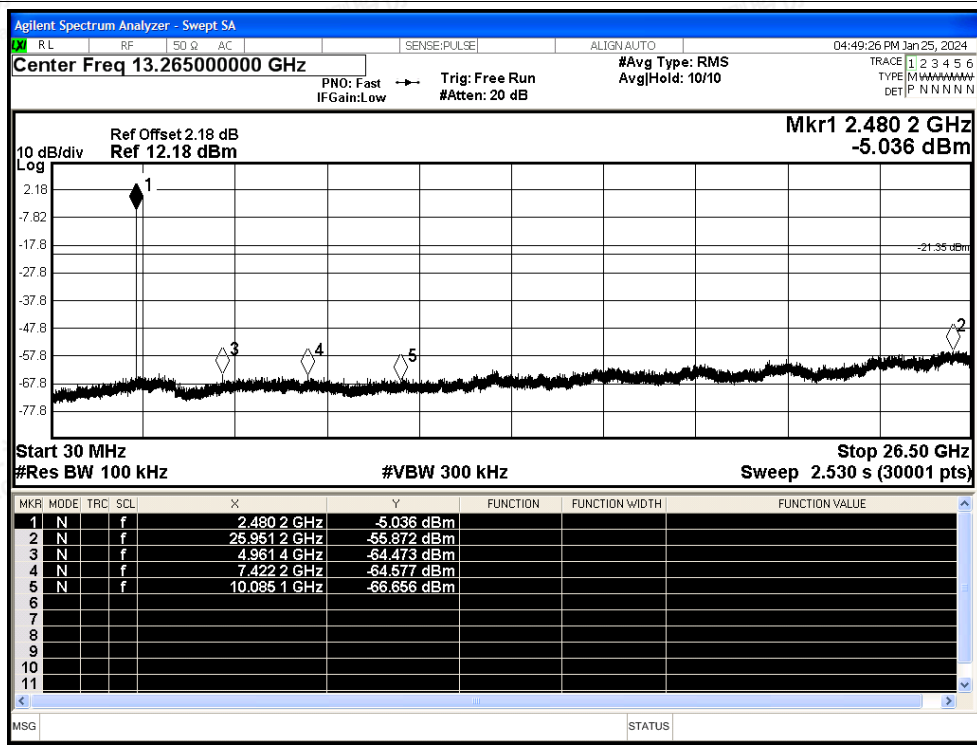




Tx. Spurious NVNT BLE 2M 2480MHz Ant Ref



Tx. Spurious NVNT BLE 2M 2480MHz Ant Emission





B.6 Duty Cycle

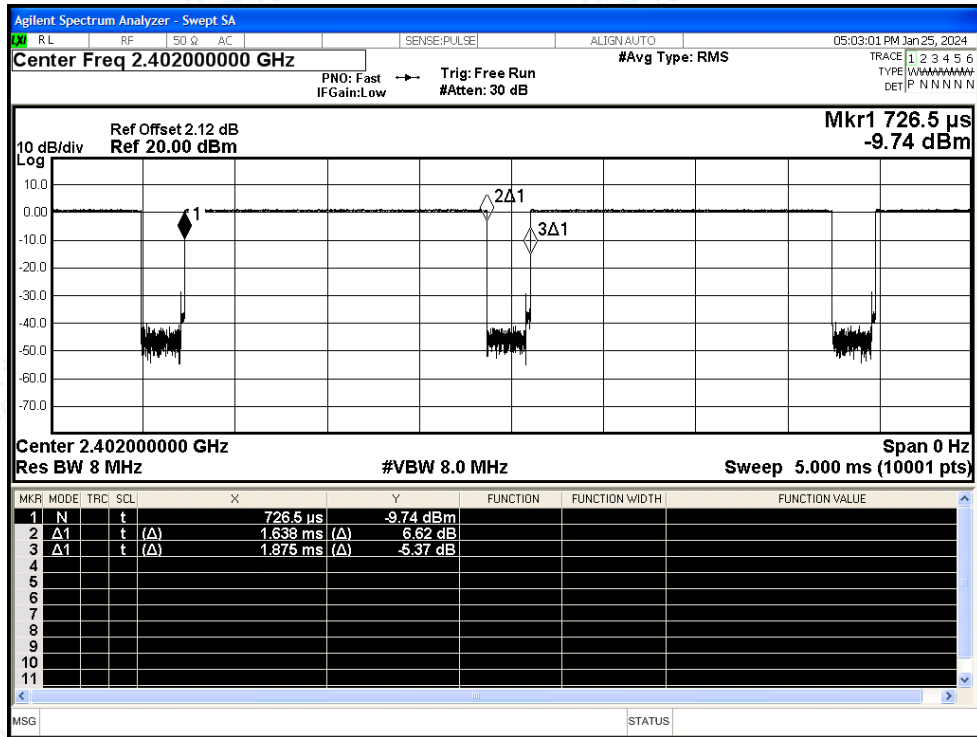
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	BLE 1M	2402	Ant	87.36	0.59	0.61
NVNT	BLE 1M	2440	Ant	87.39	0.59	0.61
NVNT	BLE 1M	2480	Ant	87.39	0.59	0.61
NVNT	BLE 2M	2402	Ant	65.96	1.81	1.21
NVNT	BLE 2M	2440	Ant	65.92	1.81	1.21
NVNT	BLE 2M	2480	Ant	65.93	1.81	1.21



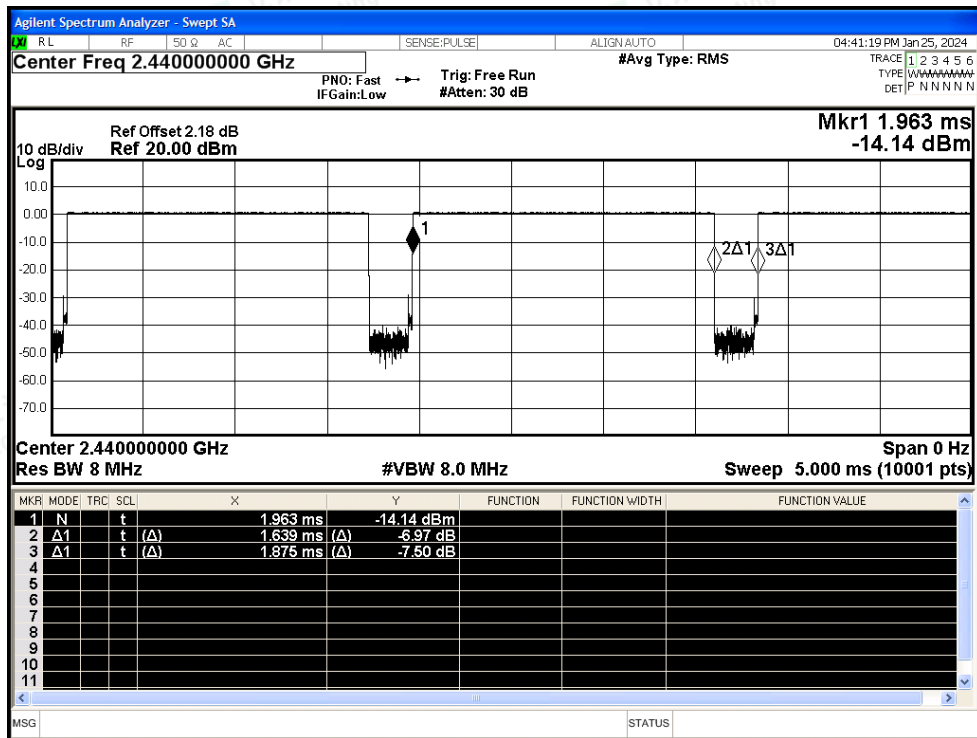


Test Graphs

Duty Cycle NVNT BLE 1M 2402MHz Ant

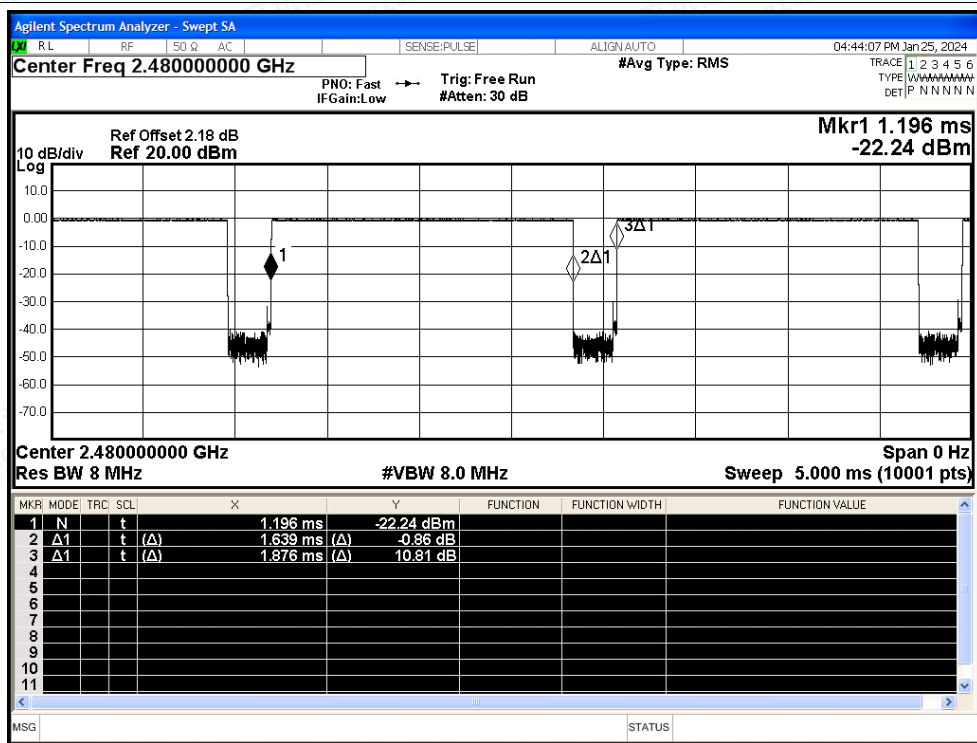


Duty Cycle NVNT BLE 1M 2440MHz Ant

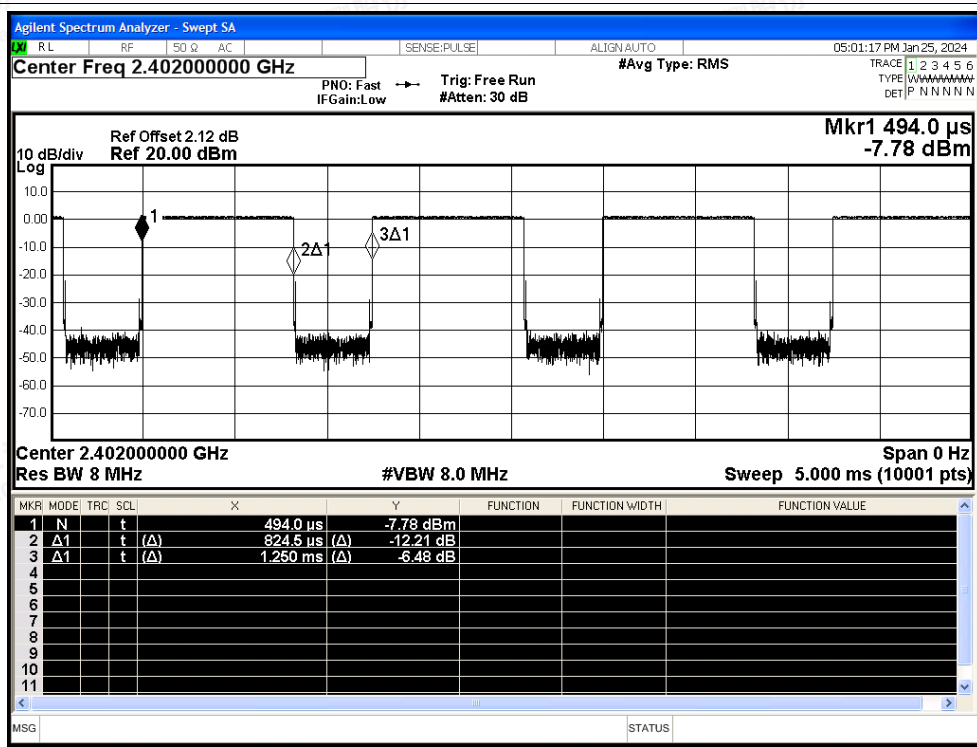




Duty Cycle NVNT BLE 1M 2480MHz Ant

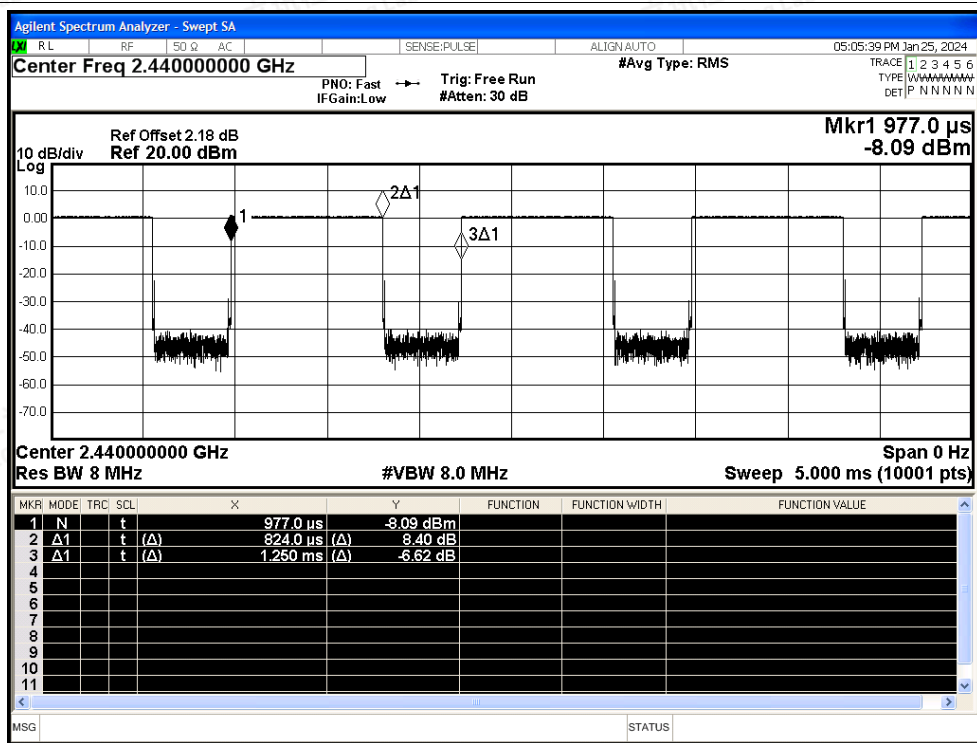


Duty Cycle NVNT BLE 2M 2402MHz Ant

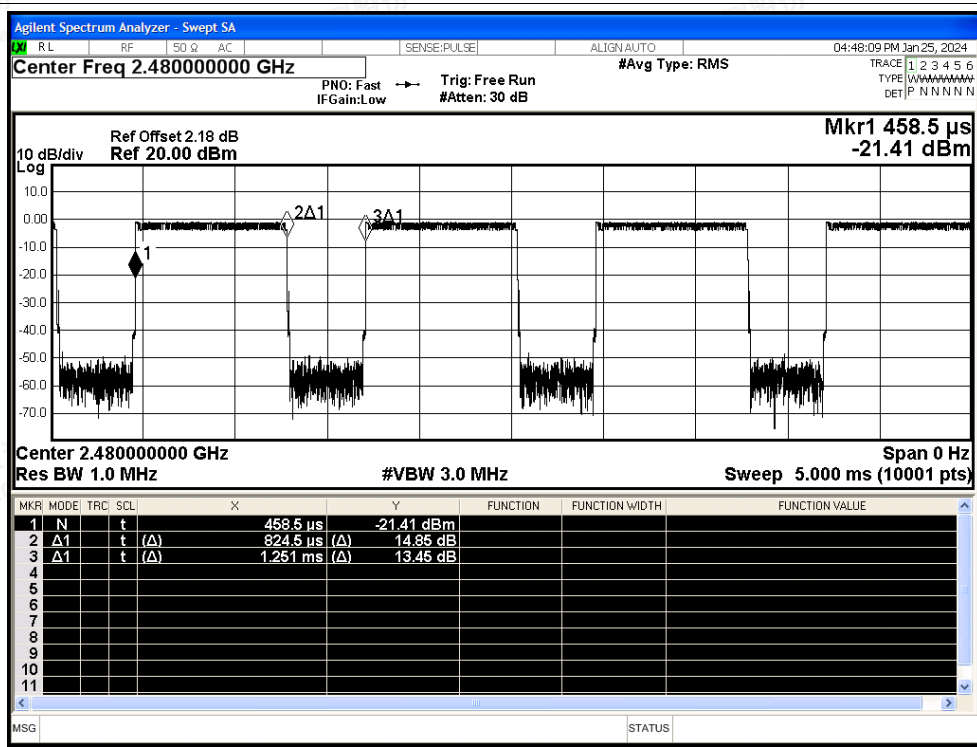




Duty Cycle NVNT BLE 2M 2440MHz Ant



Duty Cycle NVNT BLE 2M 2480MHz Ant





B.7 Restrict Band

Condition	Mode	Frequency (MHz)	Antenna	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	Duty Factor (dB)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	BLE 1M	2402	Ant	2310	-49.62	2	-	47.64	Peak	74	Pass
NVNT	BLE 1M	2402	Ant	2310	-58.89	2	0.59	38.96	Average	54	Pass
NVNT	BLE 1M	2402	Ant	2349.264	-47.21	2	-	50.05	Peak	74	Pass
NVNT	BLE 1M	2402	Ant	2357.52	-57.51	2	0.59	40.34	Average	54	Pass
NVNT	BLE 1M	2402	Ant	2390	-49.7	2	-	47.56	Peak	74	Pass
NVNT	BLE 1M	2402	Ant	2390	-58.29	2	0.59	39.56	Average	54	Pass
NVNT	BLE 1M	2480	Ant	2483.5	-50.44	2	-	46.82	Peak	74	Pass
NVNT	BLE 1M	2480	Ant	2483.5	-57.89	2	0.59	39.96	Average	54	Pass
NVNT	BLE 1M	2480	Ant	2483.896	-43.35	2	-	53.91	Peak	74	Pass
NVNT	BLE 1M	2480	Ant	2483.68	-57.15	2	0.59	40.7	Average	54	Pass
NVNT	BLE 1M	2480	Ant	2500	-48.82	2	-	48.44	Peak	74	Pass
NVNT	BLE 1M	2480	Ant	2500	-58	2	0.59	39.85	Average	54	Pass
NVNT	BLE 2M	2402	Ant	2310	-50.05	2	-	47.21	Peak	74	Pass
NVNT	BLE 2M	2402	Ant	2310	-58.51	2	1.81	40.56	Average	54	Pass
NVNT	BLE 2M	2402	Ant	2386.128	-46.46	2	-	50.8	Peak	74	Pass
NVNT	BLE 2M	2402	Ant	2375.952	-57.51	2	1.81	41.56	Average	54	Pass
NVNT	BLE 2M	2402	Ant	2390	-49.52	2	-	47.74	Peak	74	Pass
NVNT	BLE 2M	2402	Ant	2390	-58.58	2	1.81	40.49	Average	54	Pass
NVNT	BLE 2M	2480	Ant	2483.5	-48.35	2	-	48.91	Peak	74	Pass
NVNT	BLE 2M	2480	Ant	2483.5	-56.93	2	1.81	42.14	Average	54	Pass
NVNT	BLE 2M	2480	Ant	2484.184	-43.38	2	-	53.88	Peak	74	Pass
NVNT	BLE 2M	2480	Ant	2484.328	-56.88	2	1.81	42.19	Average	54	Pass
NVNT	BLE 2M	2480	Ant	2500	-50.3	2	-	46.96	Peak	74	Pass
NVNT	BLE 2M	2480	Ant	2500	-58.35	2	1.81	40.72	Average	54	Pass

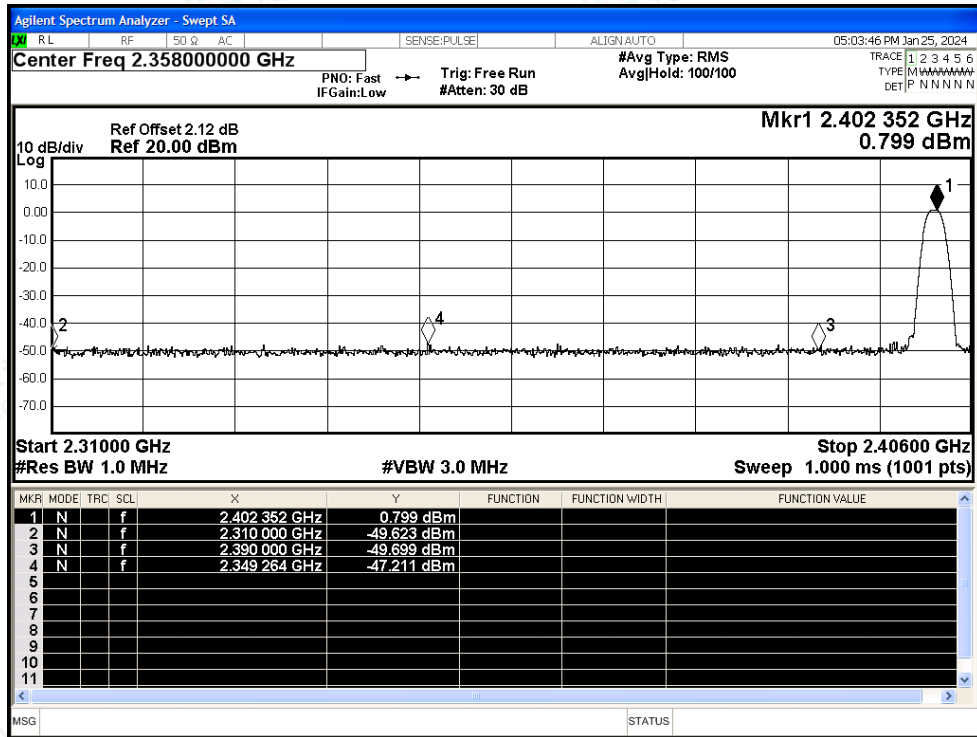


Shenzhen LCS Compliance Testing Laboratory Ltd.
 Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China
 Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com
 Scan code to check authenticity

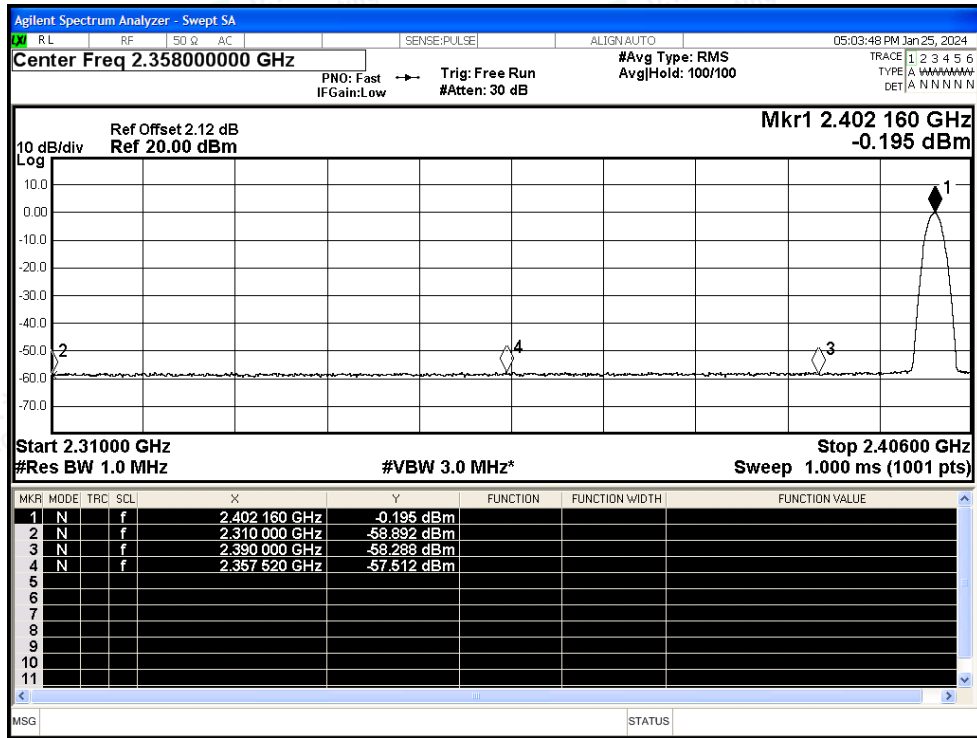


Test Graphs

Restrict Band NVNT BLE 1M 2402MHz Ant Peak

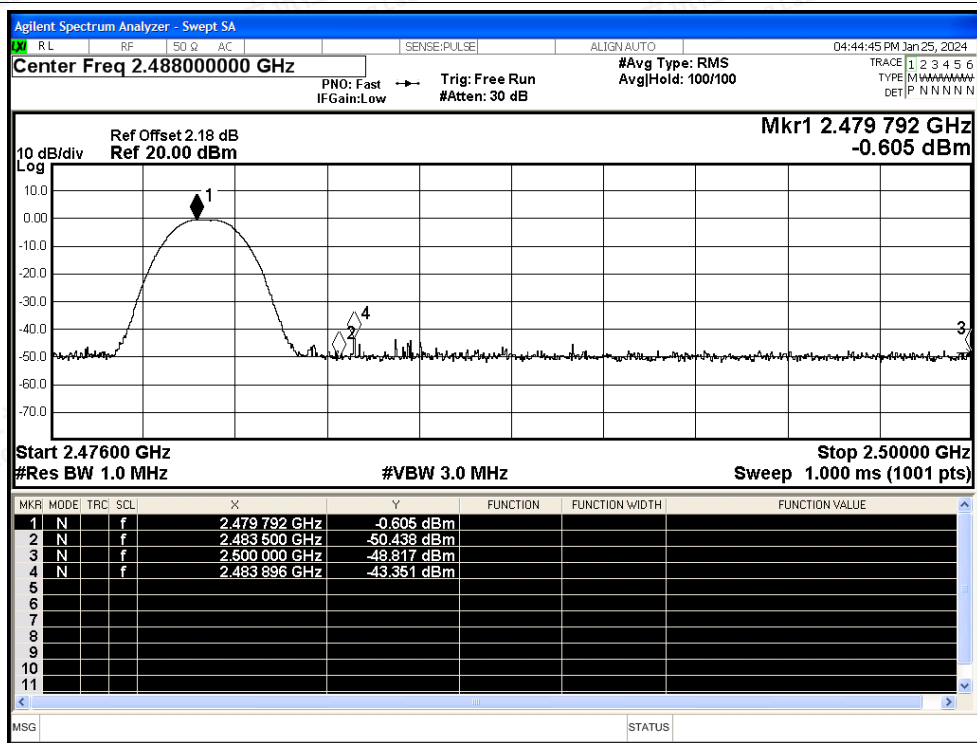


Restrict Band NVNT BLE 1M 2402MHz Ant Average

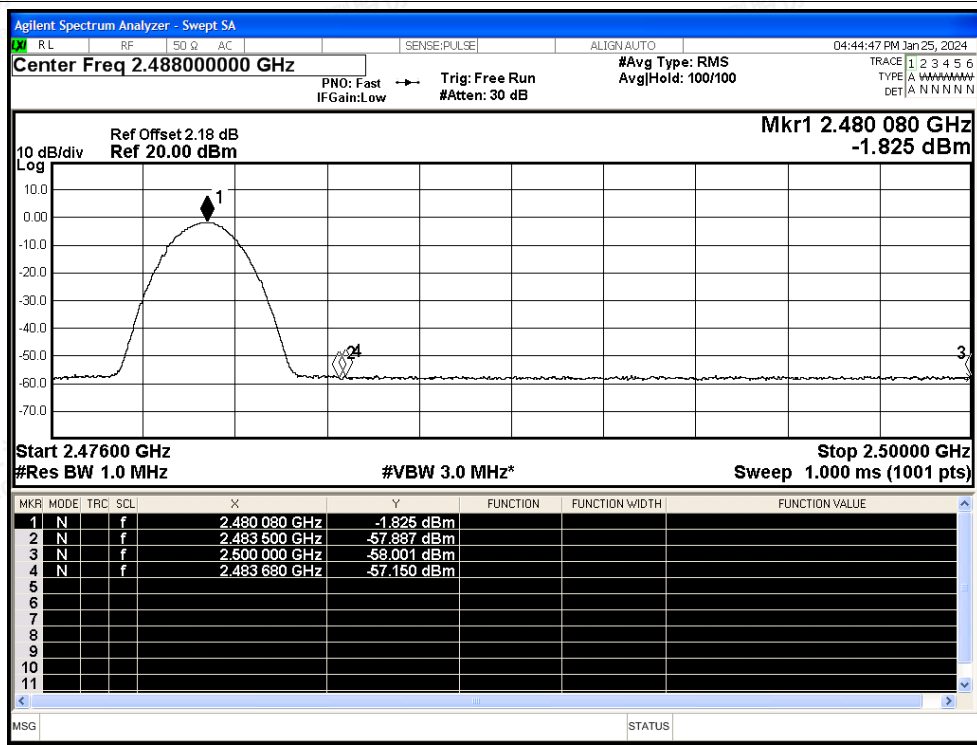




Restrict Band NVNT BLE 1M 2480MHz Ant Peak

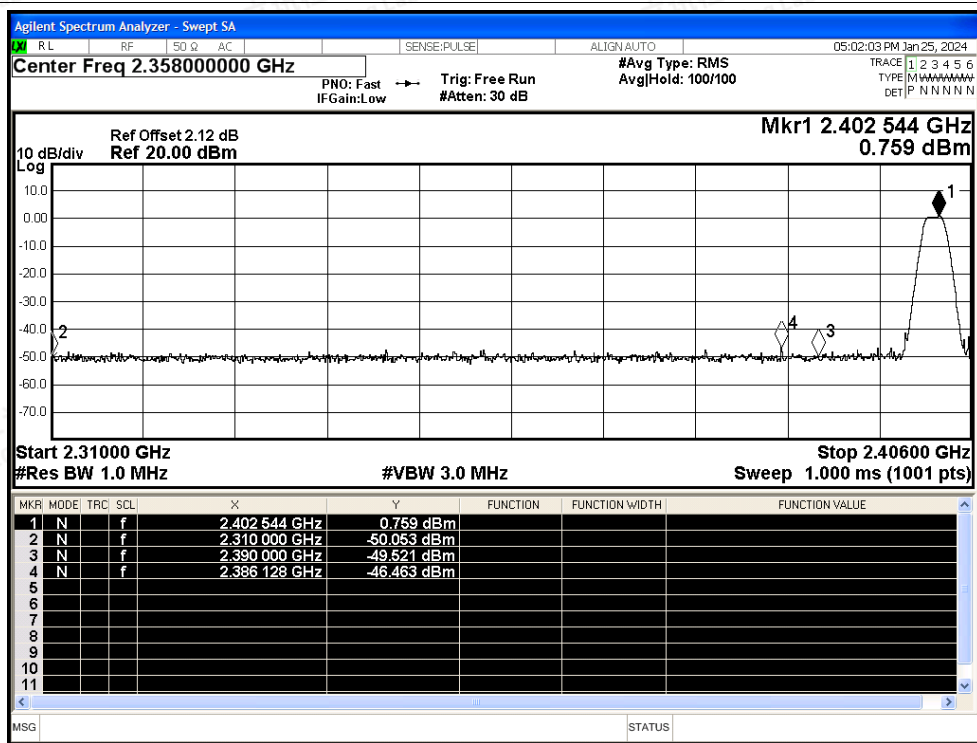


Restrict Band NVNT BLE 1M 2480MHz Ant Average

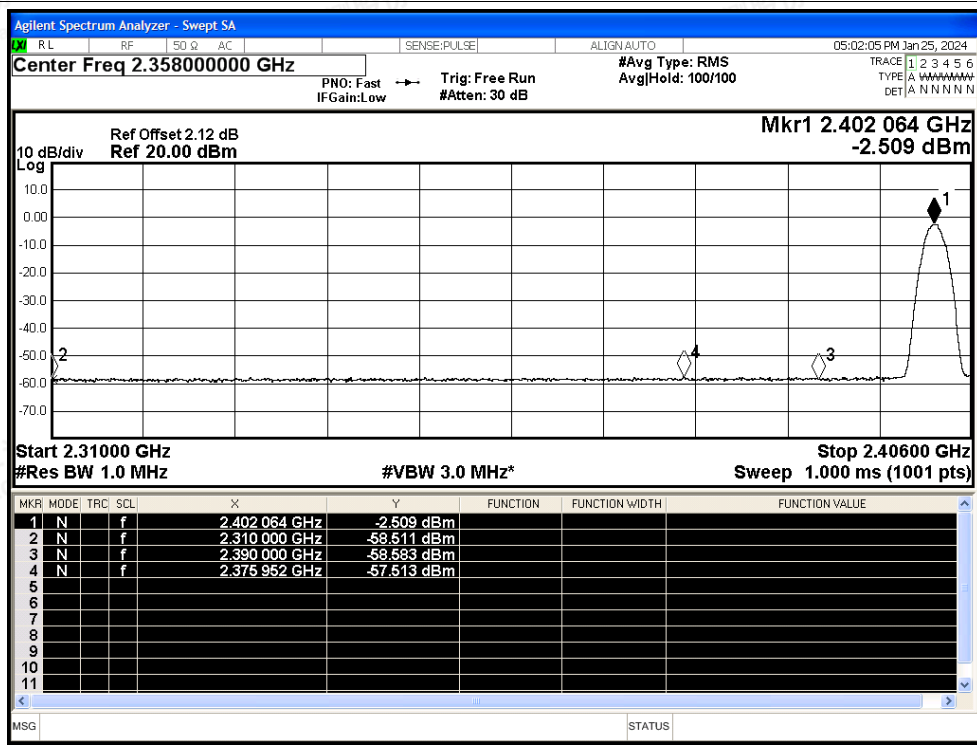




Restrict Band NVNT BLE 2M 2402MHz Ant Peak

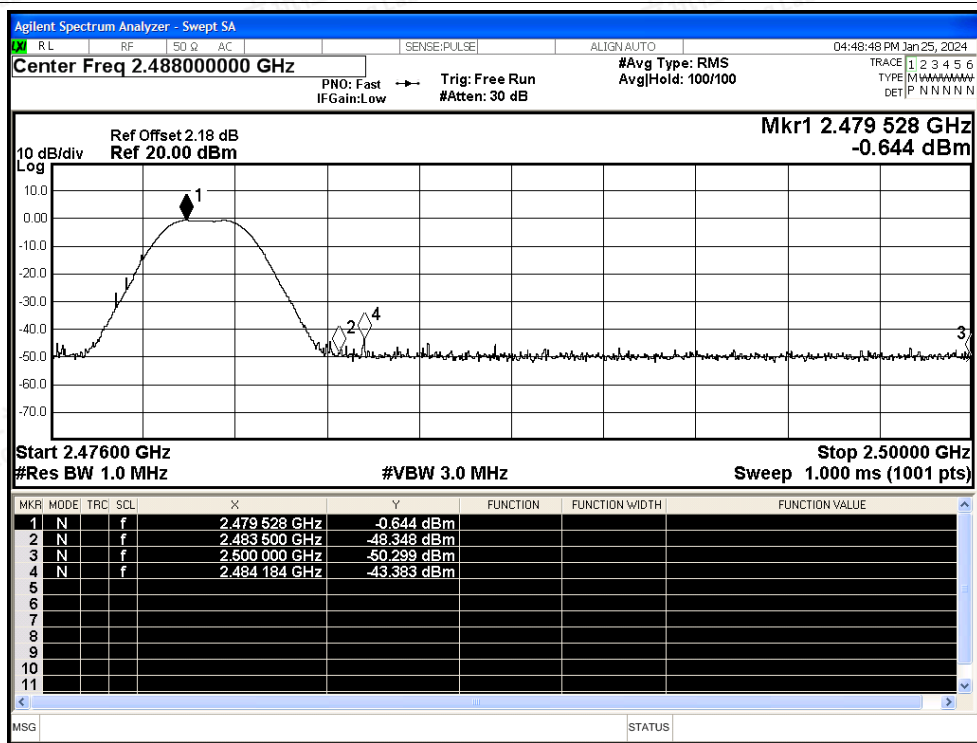


Restrict Band NVNT BLE 2M 2402MHz Ant Average





Restrict Band NVNT BLE 2M 2480MHz Ant Peak



Restrict Band NVNT BLE 2M 2480MHz Ant Average

