

Appendix B

RF Test Data for BT LE (Conducted Measurement)

Product Name: Conference Speakerphone

Test Model: CF08C

Environmental Conditions

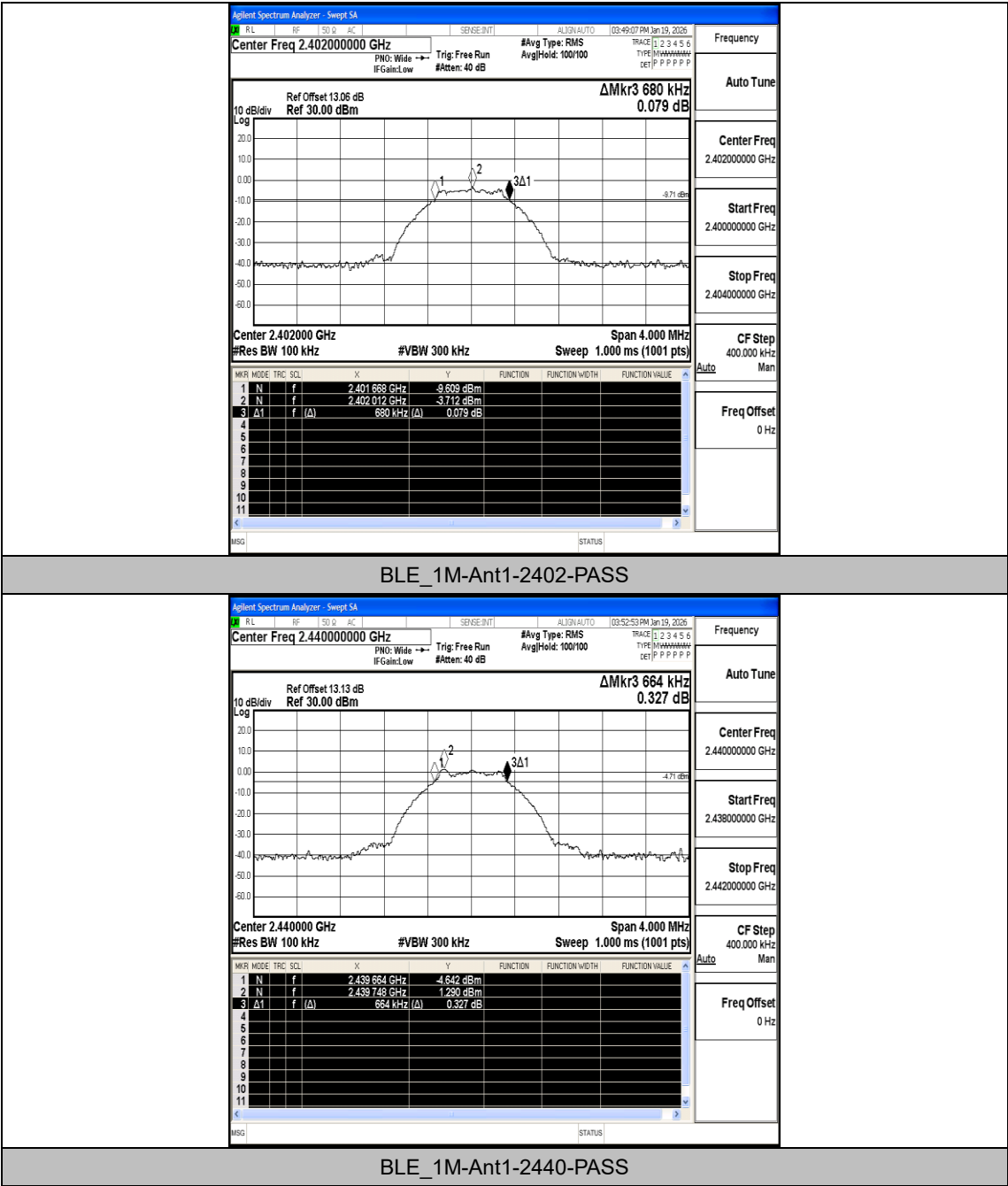
Temperature:	24.1°C
Relative Humidity:	53.5%
ATM Pressure:	100.0 kPa
Test Engineer:	Yan Chen
Supervised by:	Fengliu Tang

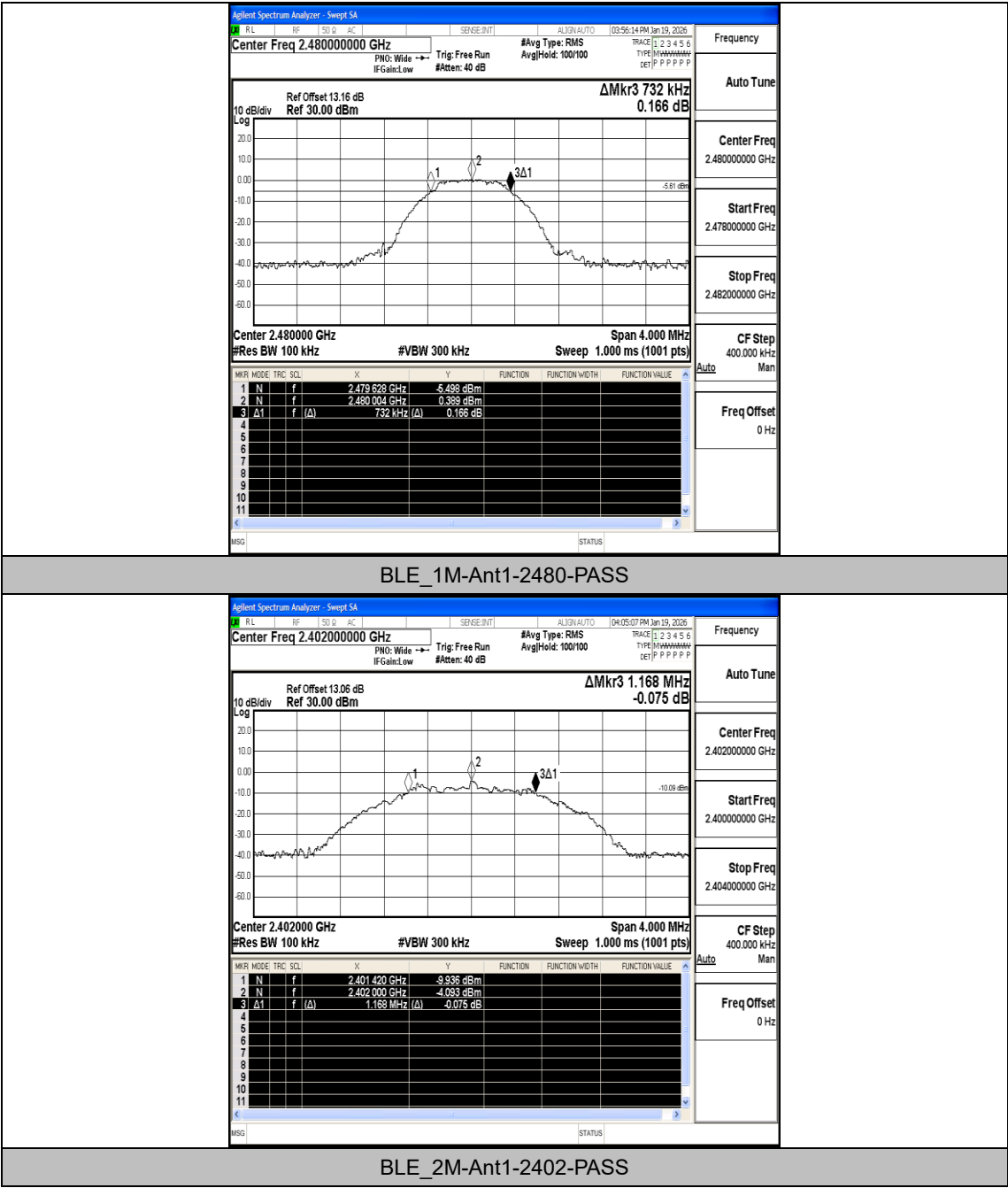
B.1 DTS Bandwidth

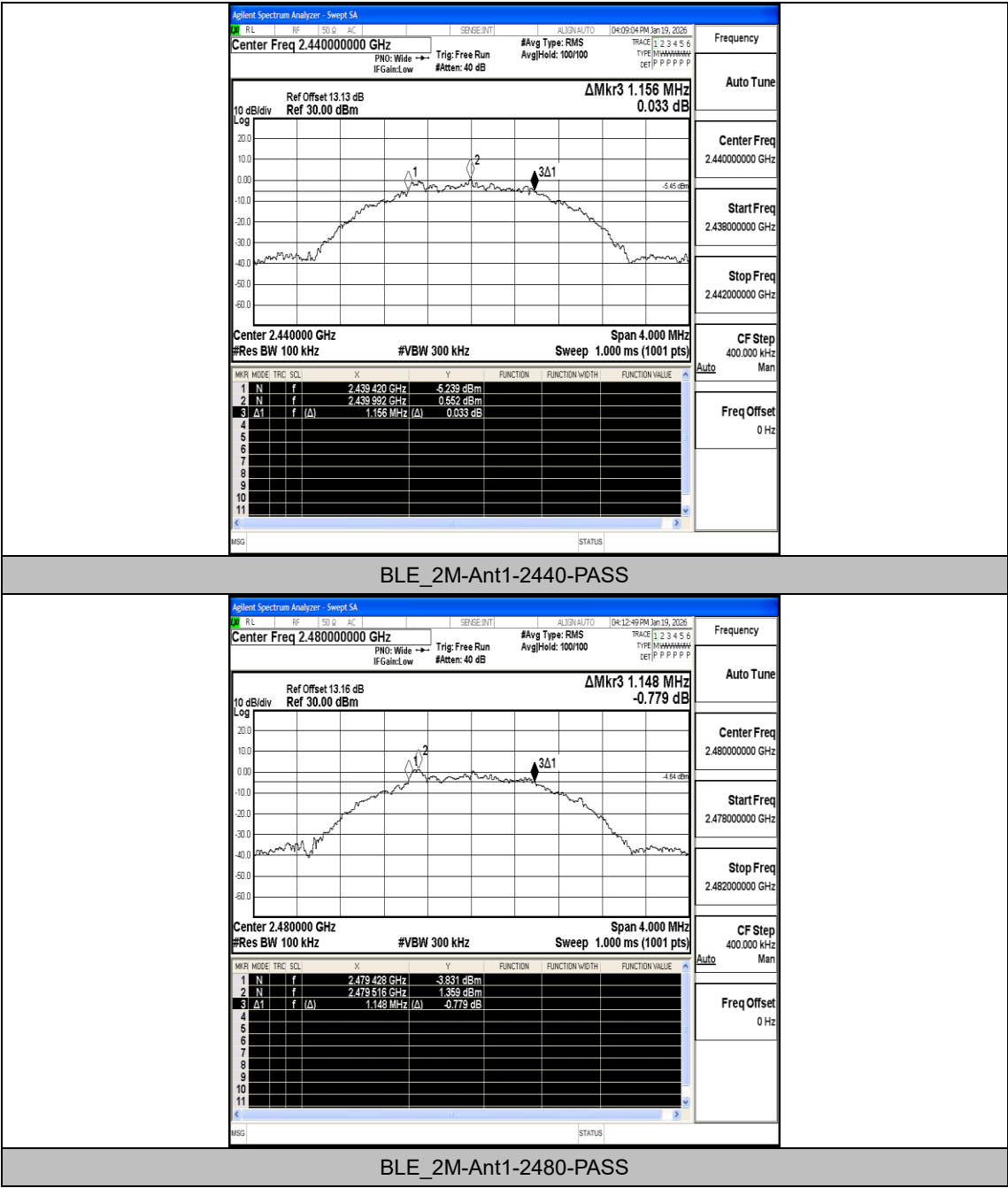
Test Result

TestMode	Antenna	Frequency [MHz]	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit [MHz]	Verdict
BLE_1M	Ant1	2402	0.680	2401.668	2402.348	0.5	PASS
BLE_1M	Ant1	2440	0.664	2439.664	2440.328	0.5	PASS
BLE_1M	Ant1	2480	0.732	2479.628	2480.360	0.5	PASS
BLE_2M	Ant1	2402	1.168	2401.420	2402.588	0.5	PASS
BLE_2M	Ant1	2440	1.156	2439.420	2440.576	0.5	PASS
BLE_2M	Ant1	2480	1.148	2479.428	2480.576	0.5	PASS

Test Graphs



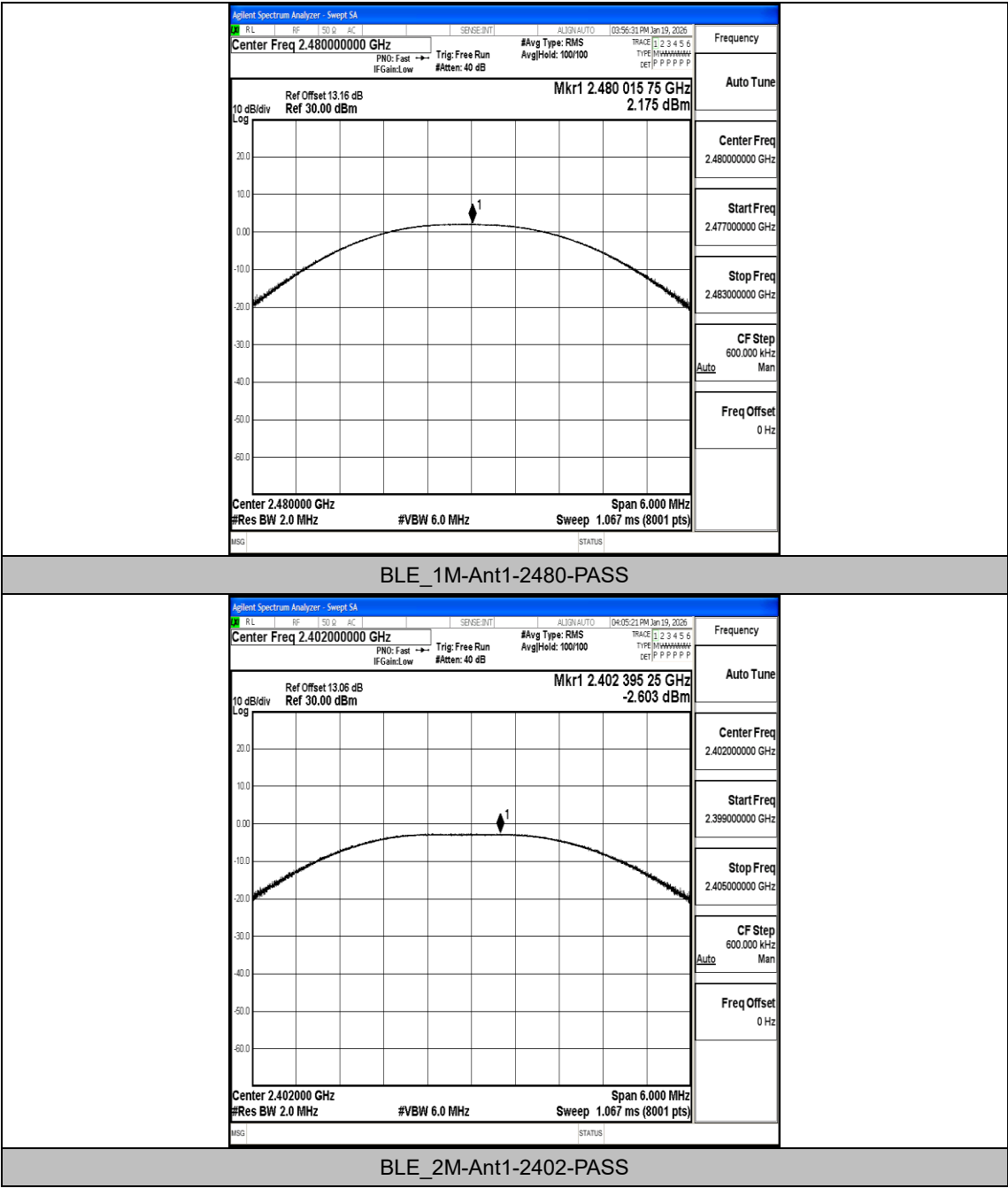


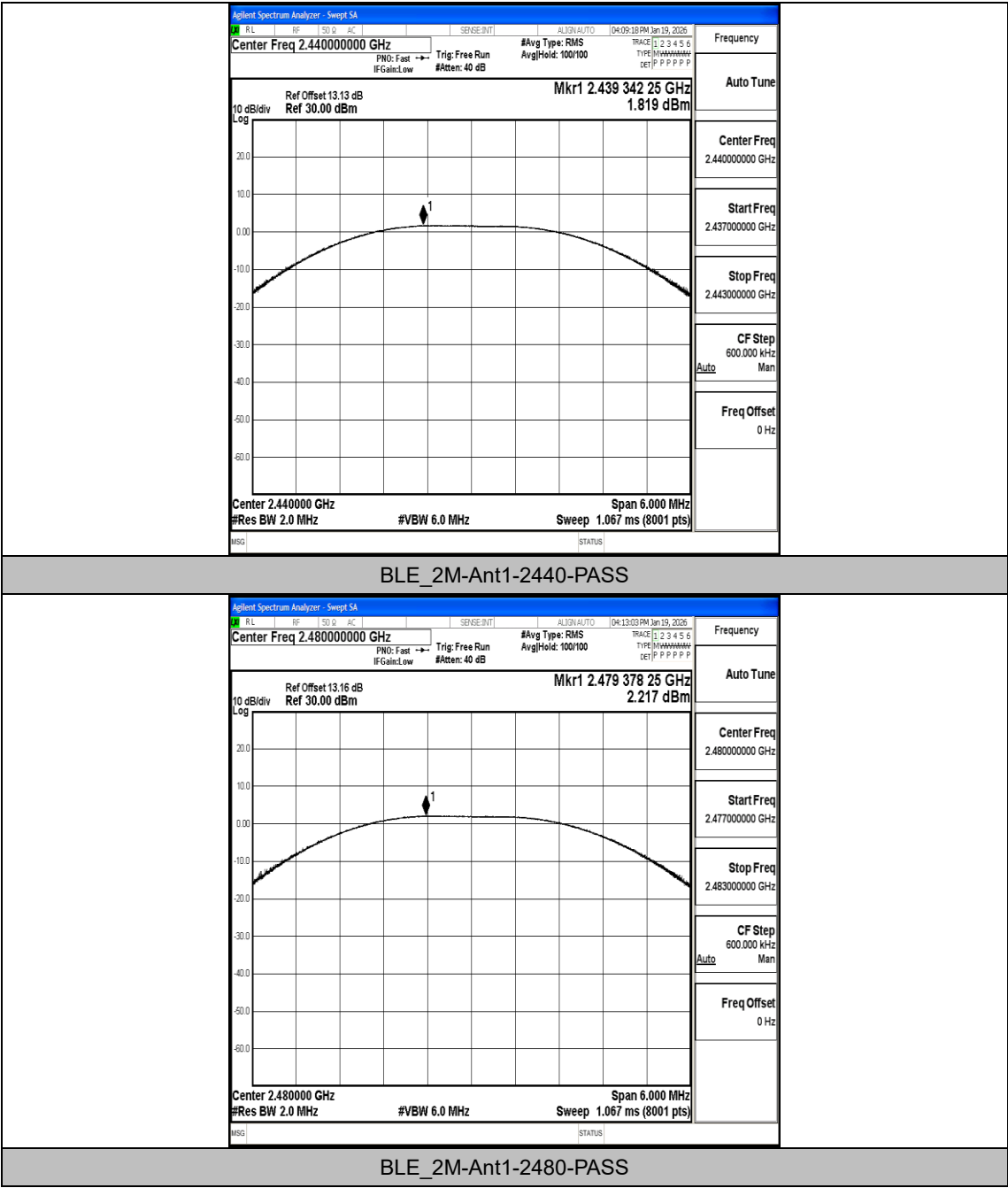


B.2 Maximum Peak conducted output power

Test Result Peak

TestMode	Antenna	Frequency [MHz]	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
BLE_1M	Ant1	2402	-2.47	≤30	PASS
BLE_1M	Ant1	2440	1.84	≤30	PASS
BLE_1M	Ant1	2480	2.18	≤30	PASS
BLE_2M	Ant1	2402	-2.60	≤30	PASS
BLE_2M	Ant1	2440	1.82	≤30	PASS
BLE_2M	Ant1	2480	2.22	≤30	PASS



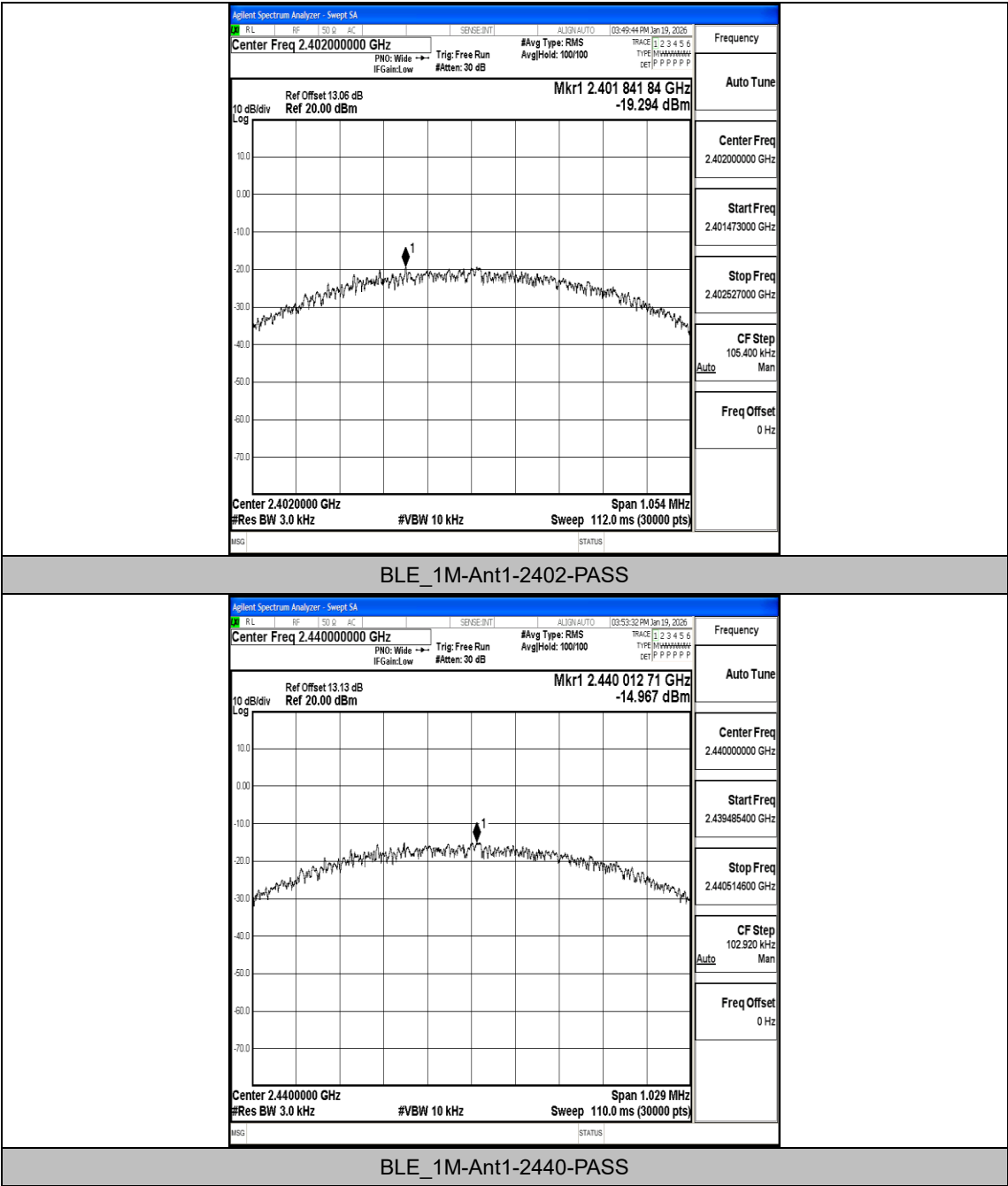


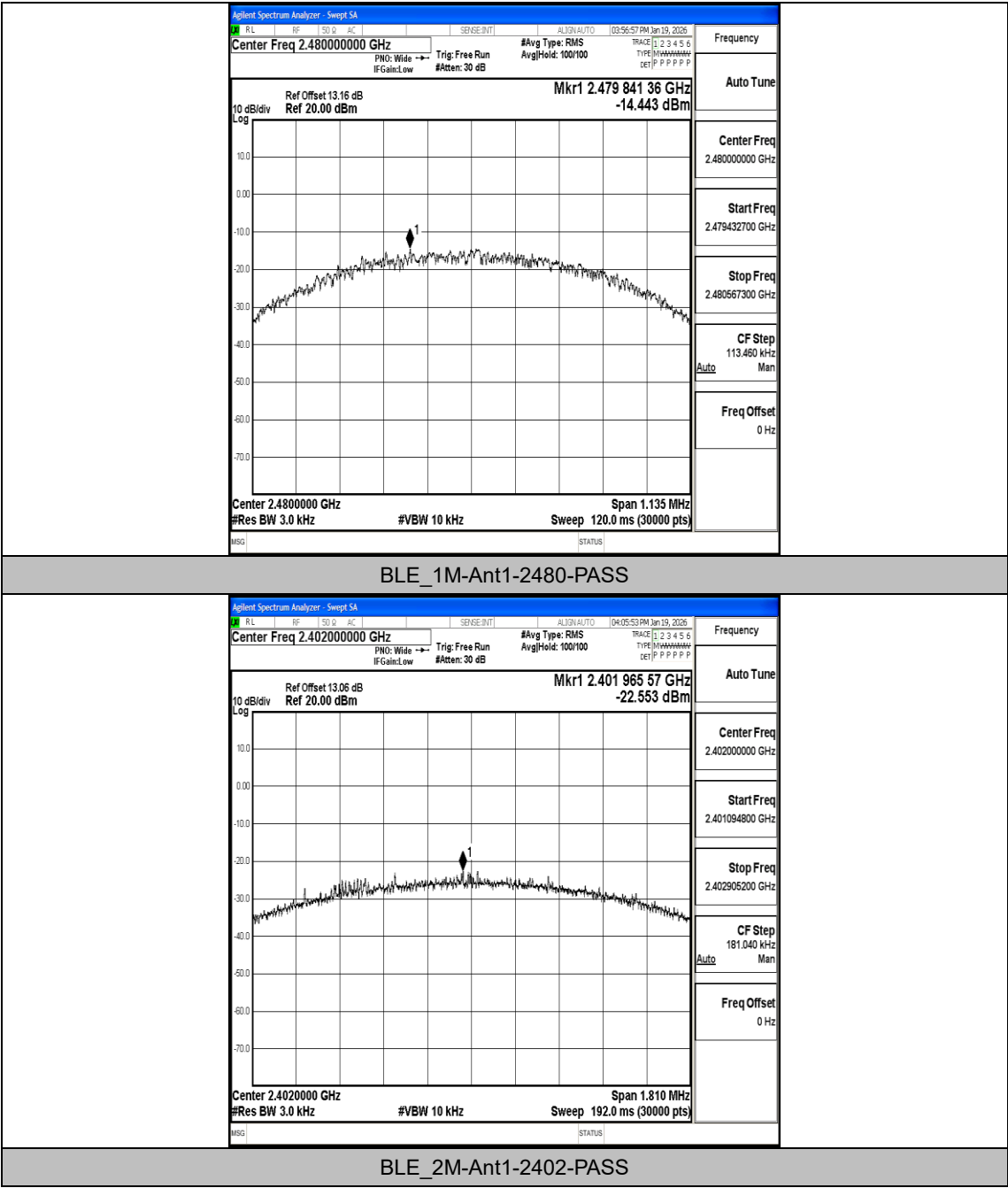
B.3 Maximum power spectral density

Test Result

TestMode	Antenna	Frequency [MHz]	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-19.29	≤8.00	PASS
BLE_1M	Ant1	2440	-14.97	≤8.00	PASS
BLE_1M	Ant1	2480	-14.44	≤8.00	PASS
BLE_2M	Ant1	2402	-22.55	≤8.00	PASS
BLE_2M	Ant1	2440	-18.14	≤8.00	PASS
BLE_2M	Ant1	2480	-17.60	≤8.00	PASS

Test Graphs





Agilent Spectrum Analyzer - Swept SA

RL

RF

SO

AC

SENSE:INT

ALIGN:AUTO

04:05:53 PM Jan 19, 2025

Center Freq 2.402000000 GHz

PN0: Wide

IF Gain: Low

Trig: Free Run

#Atten: 30 dB

#Avg Type: RMS

Avg/Hold: 100/100

TRACE 1 2 3 4 5 6

TYPE: [M] [W] [W] [W] [W] [W]

DEF: [P] [P] [P] [P] [P] [P]

Frequency

Auto Tune

Center Freq
2.402000000 GHz

Start Freq
2.401094800 GHz

Stop Freq
2.402905200 GHz

CF Step
181.040 kHz
Auto Man

Freq Offset
0 Hz

Ref Offset 13.06 dB

Ref 20.00 dBm

Mkr1 2.401 965 57 GHz
-22.553 dBm

10 dB/div

Log

Center 2.4020000 GHz

#Res BW 3.0 kHz

#VBW 10 kHz

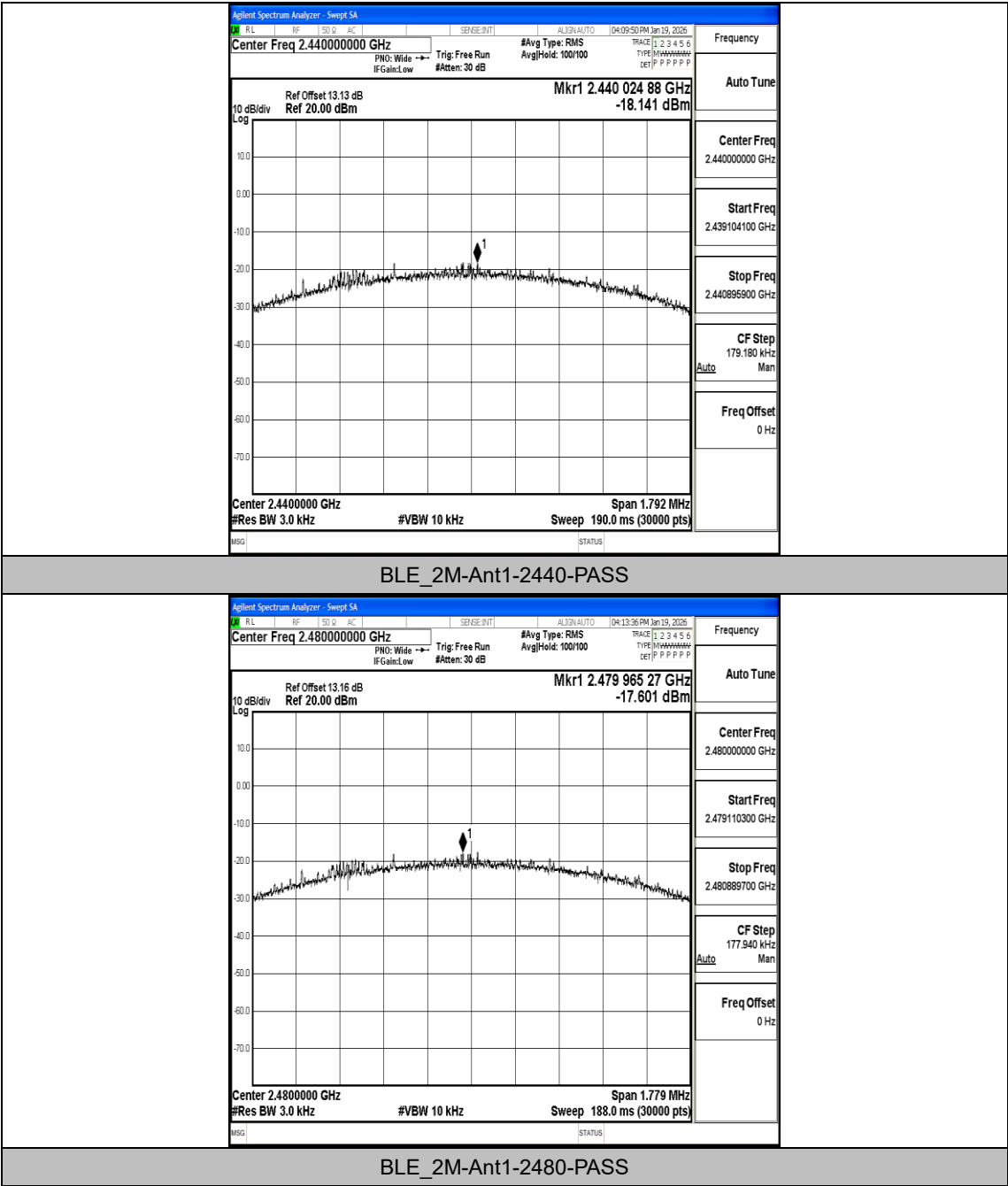
Sweep 192.0 ms (30000 pts)

Span 1.810 MHz

MSG

STATUS

BLE_2M-Ant1-2402-PASS

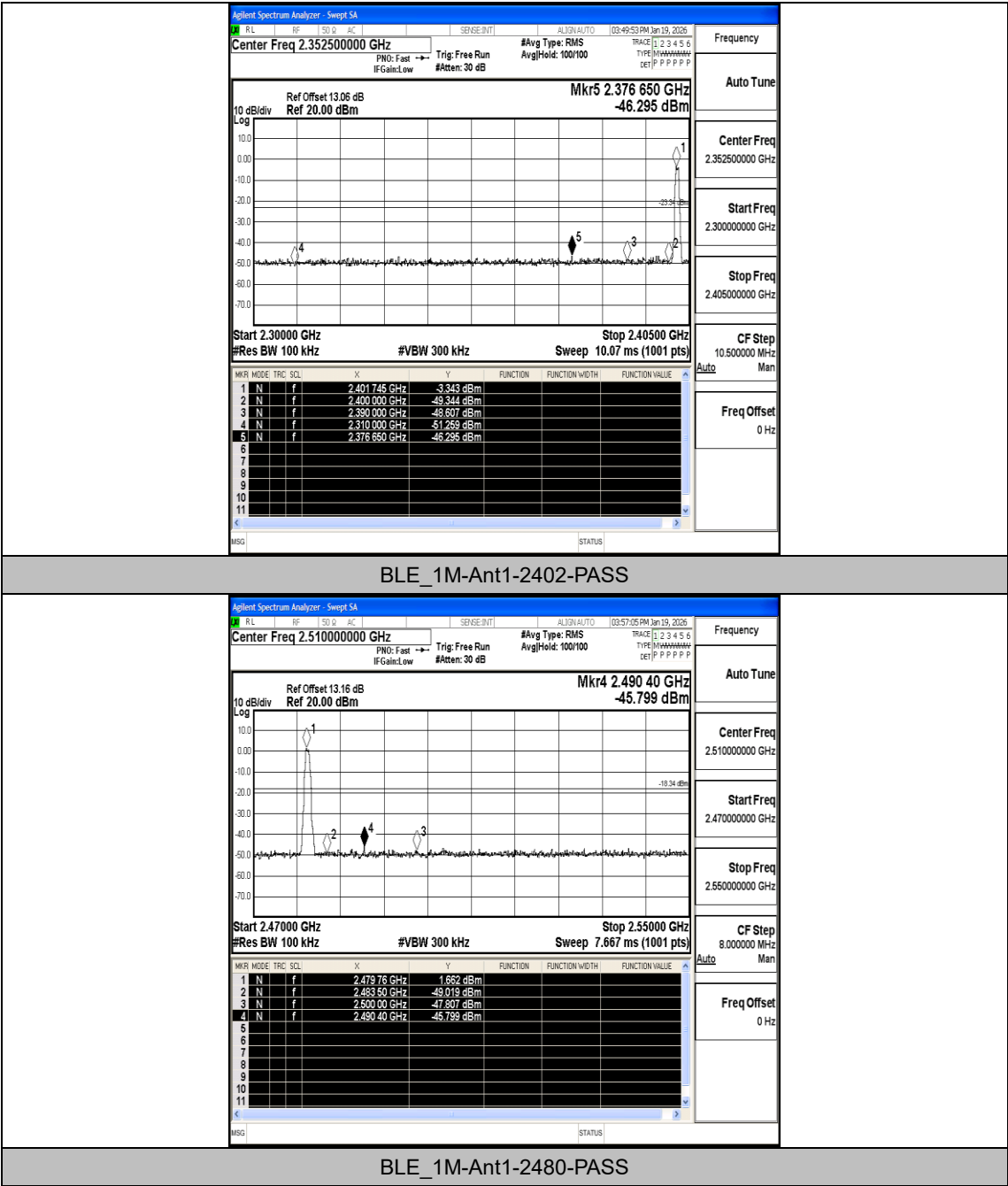


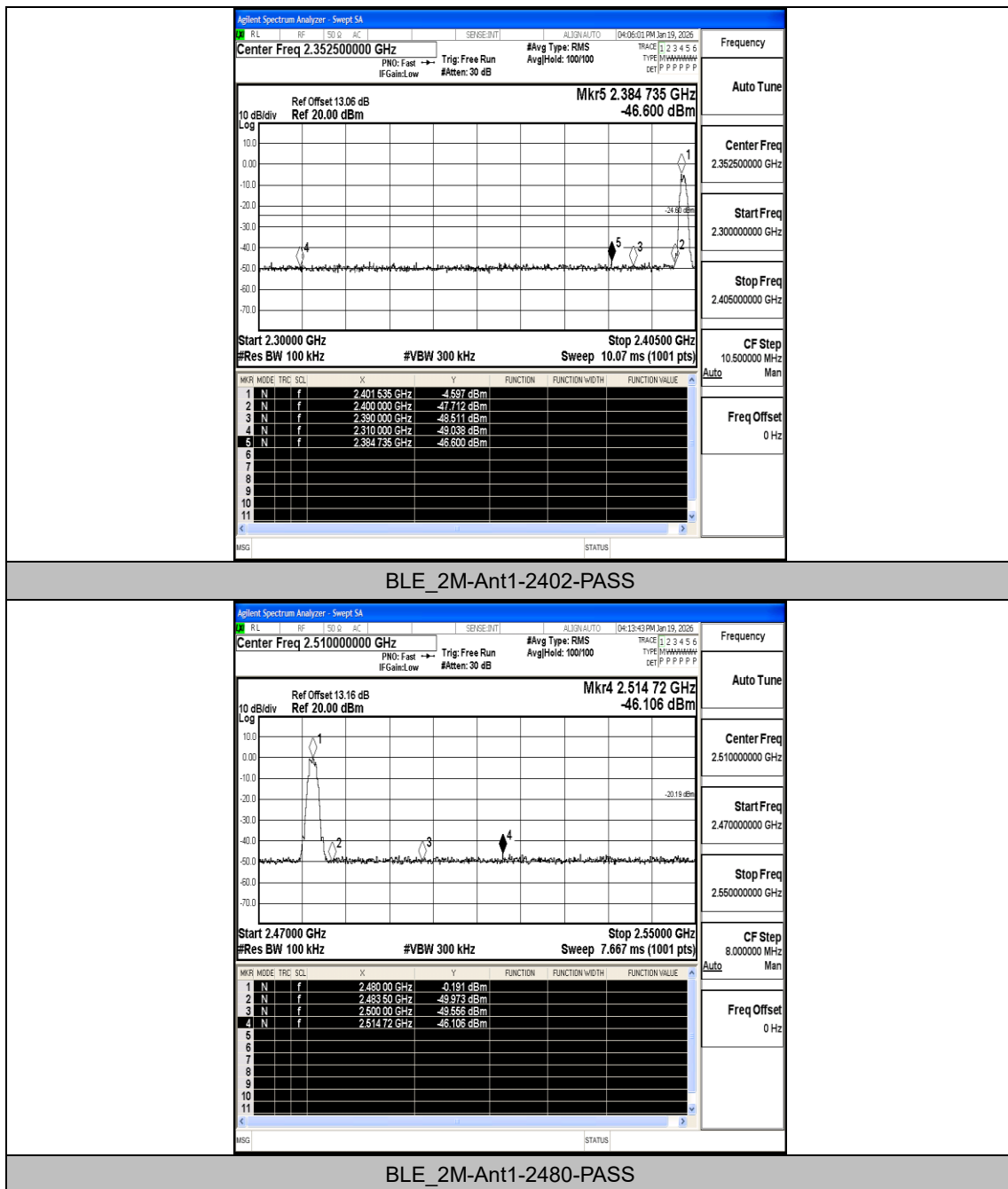
B.4 Band edge measurements

Test Result

TestMode	Antenna	ChName	Frequency [MHz]	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	-3.34	-46.3	≤ -23.34	PASS
BLE_1M	Ant1	High	2480	1.66	-45.8	≤ -18.34	PASS
BLE_2M	Ant1	Low	2402	-4.60	-46.6	≤ -24.6	PASS
BLE_2M	Ant1	High	2480	-0.19	-46.11	≤ -20.19	PASS

Test Graphs



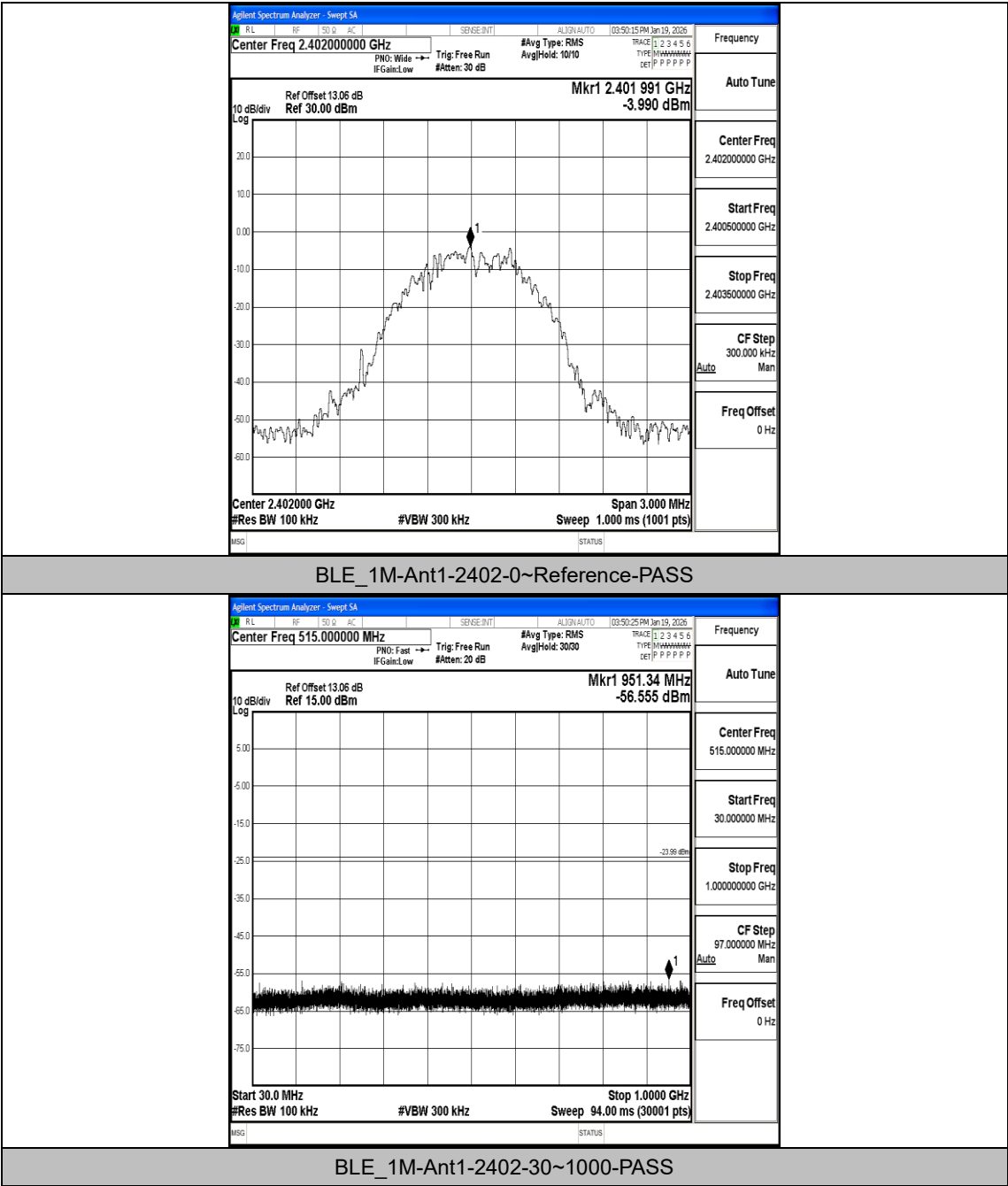


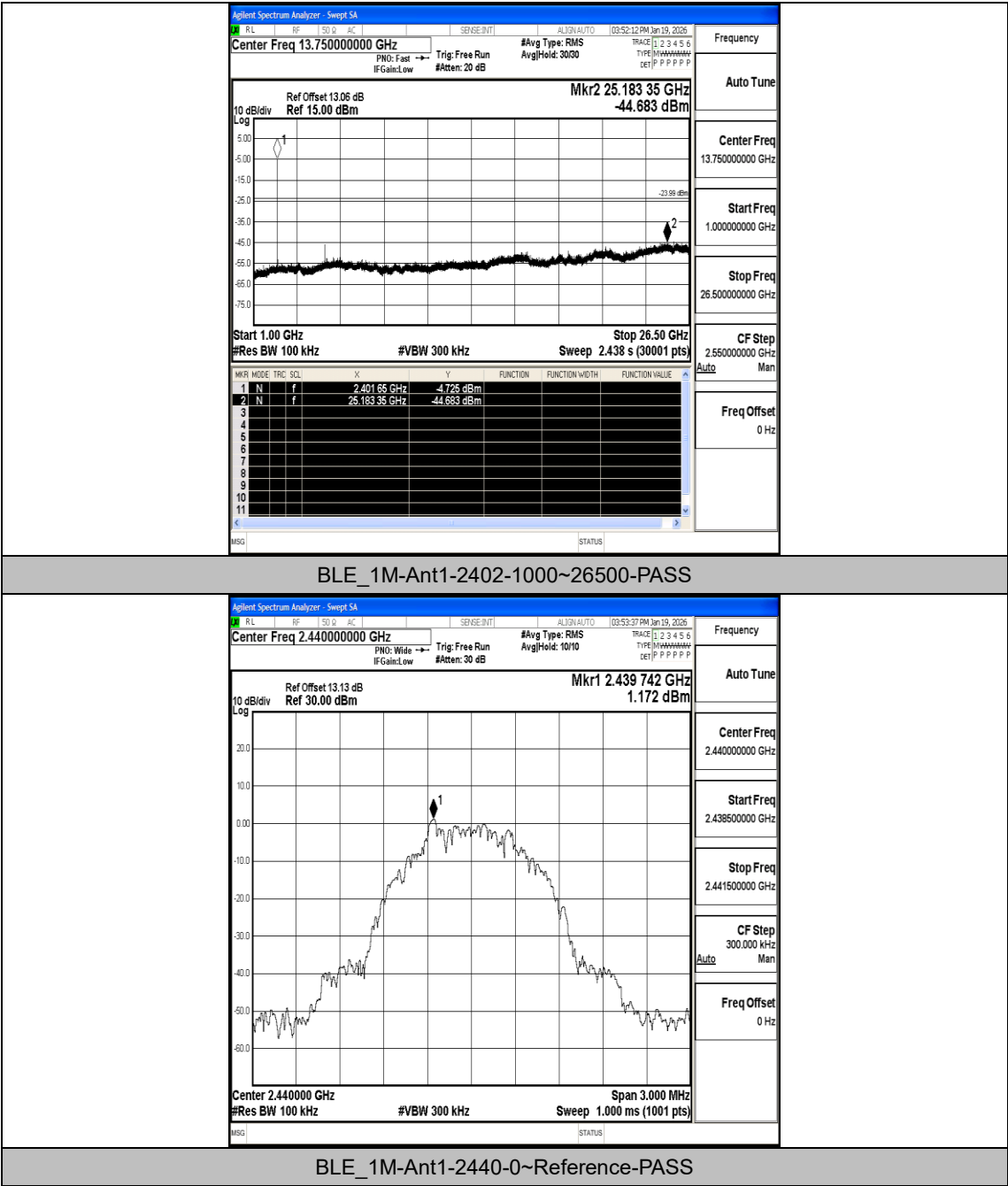
B.5 Conducted Spurious Emission

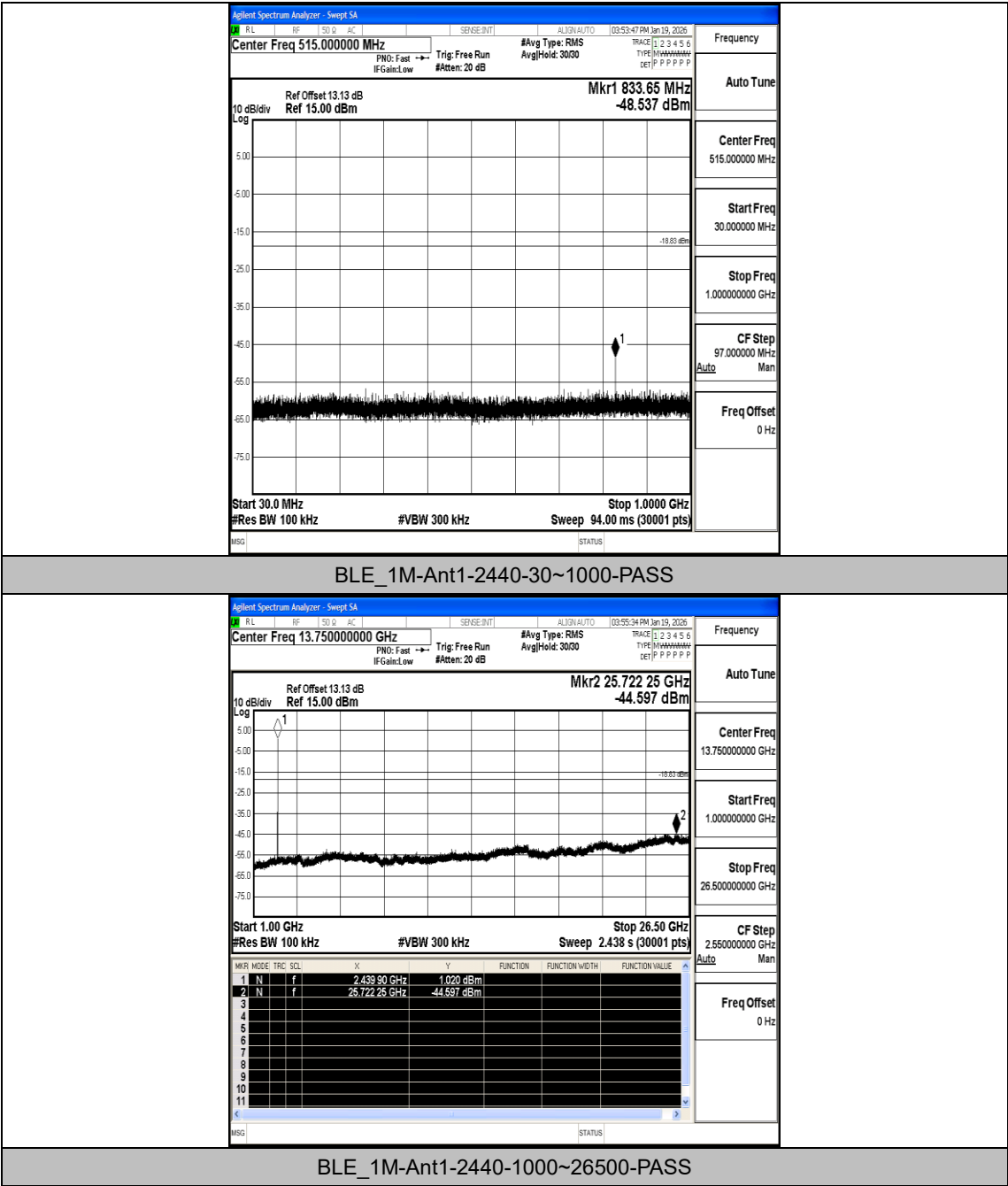
Test Result

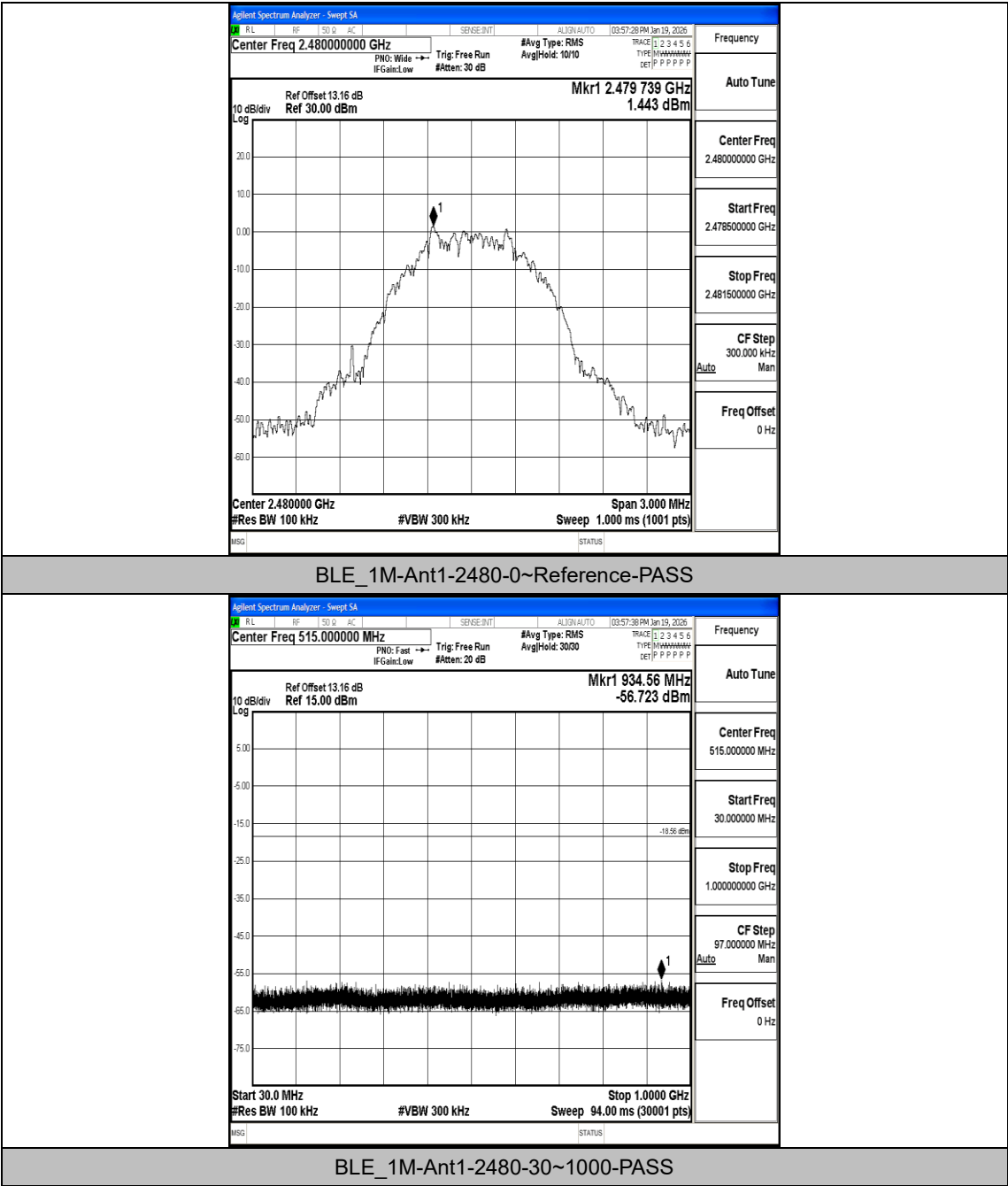
TestMode	Antenna	Frequency [MHz]	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	0~Reference	-3.99	-3.99	---	PASS
BLE_1M	Ant1	2402	30~1000	-3.99	-56.56	≤-23.99	PASS
BLE_1M	Ant1	2402	1000~26500	-3.99	-44.68	≤-23.99	PASS
BLE_1M	Ant1	2440	0~Reference	1.17	1.17	---	PASS
BLE_1M	Ant1	2440	30~1000	1.17	-48.54	≤-18.83	PASS
BLE_1M	Ant1	2440	1000~26500	1.17	-44.6	≤-18.83	PASS
BLE_1M	Ant1	2480	0~Reference	1.44	1.44	---	PASS
BLE_1M	Ant1	2480	30~1000	1.44	-56.72	≤-18.56	PASS
BLE_1M	Ant1	2480	1000~26500	1.44	-44.32	≤-18.56	PASS
BLE_2M	Ant1	2402	0~Reference	-5.51	-5.51	---	PASS
BLE_2M	Ant1	2402	30~1000	-5.51	-56.36	≤-25.51	PASS
BLE_2M	Ant1	2402	1000~26500	-5.51	-44.18	≤-25.51	PASS
BLE_2M	Ant1	2440	0~Reference	-0.80	-0.80	---	PASS
BLE_2M	Ant1	2440	30~1000	-0.80	-55.77	≤-20.8	PASS
BLE_2M	Ant1	2440	1000~26500	-0.80	-44.48	≤-20.8	PASS
BLE_2M	Ant1	2480	0~Reference	0.24	0.24	---	PASS
BLE_2M	Ant1	2480	30~1000	0.24	-55.82	≤-19.76	PASS
BLE_2M	Ant1	2480	1000~26500	0.24	-43.64	≤-19.76	PASS

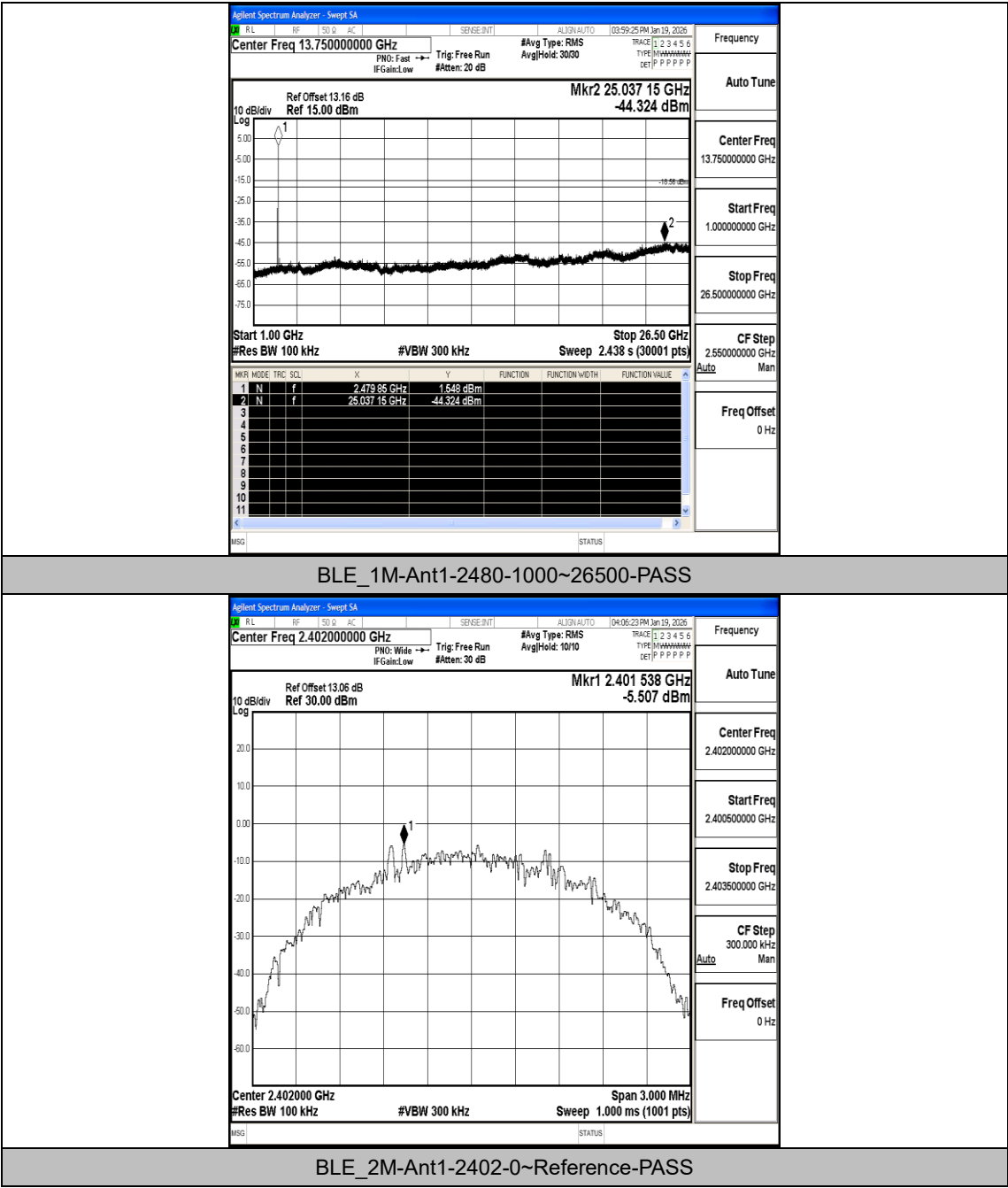
Test Graphs

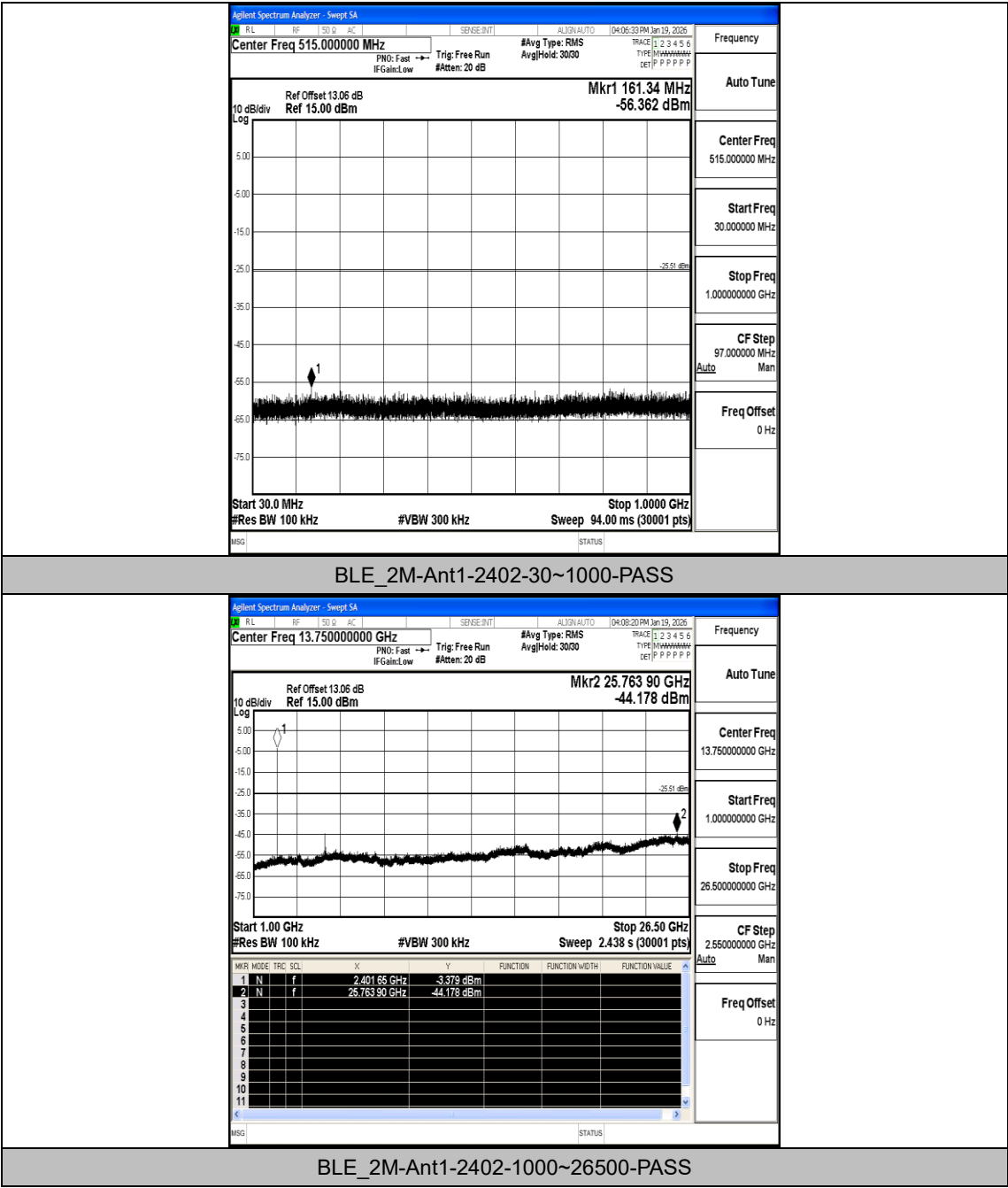


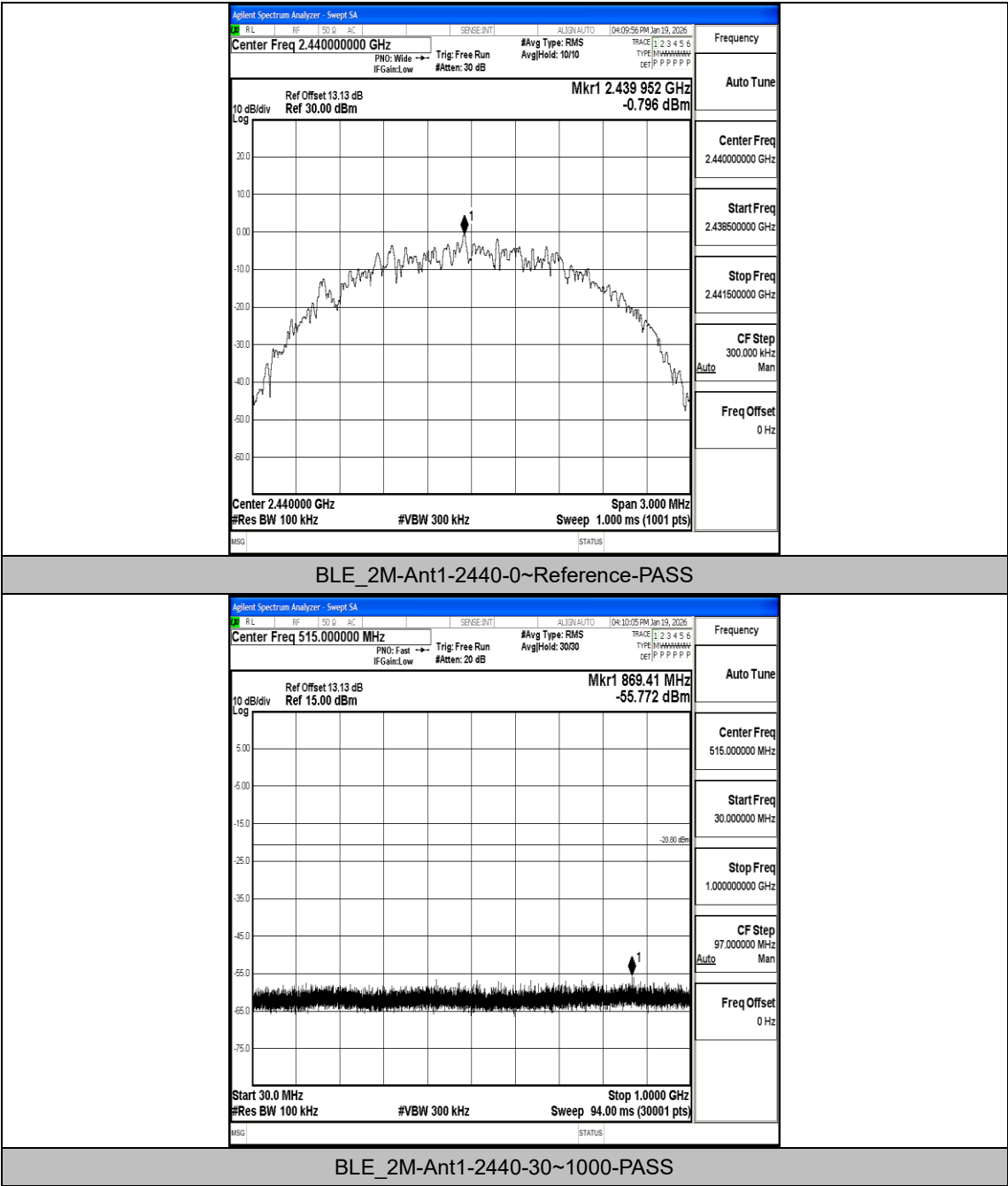


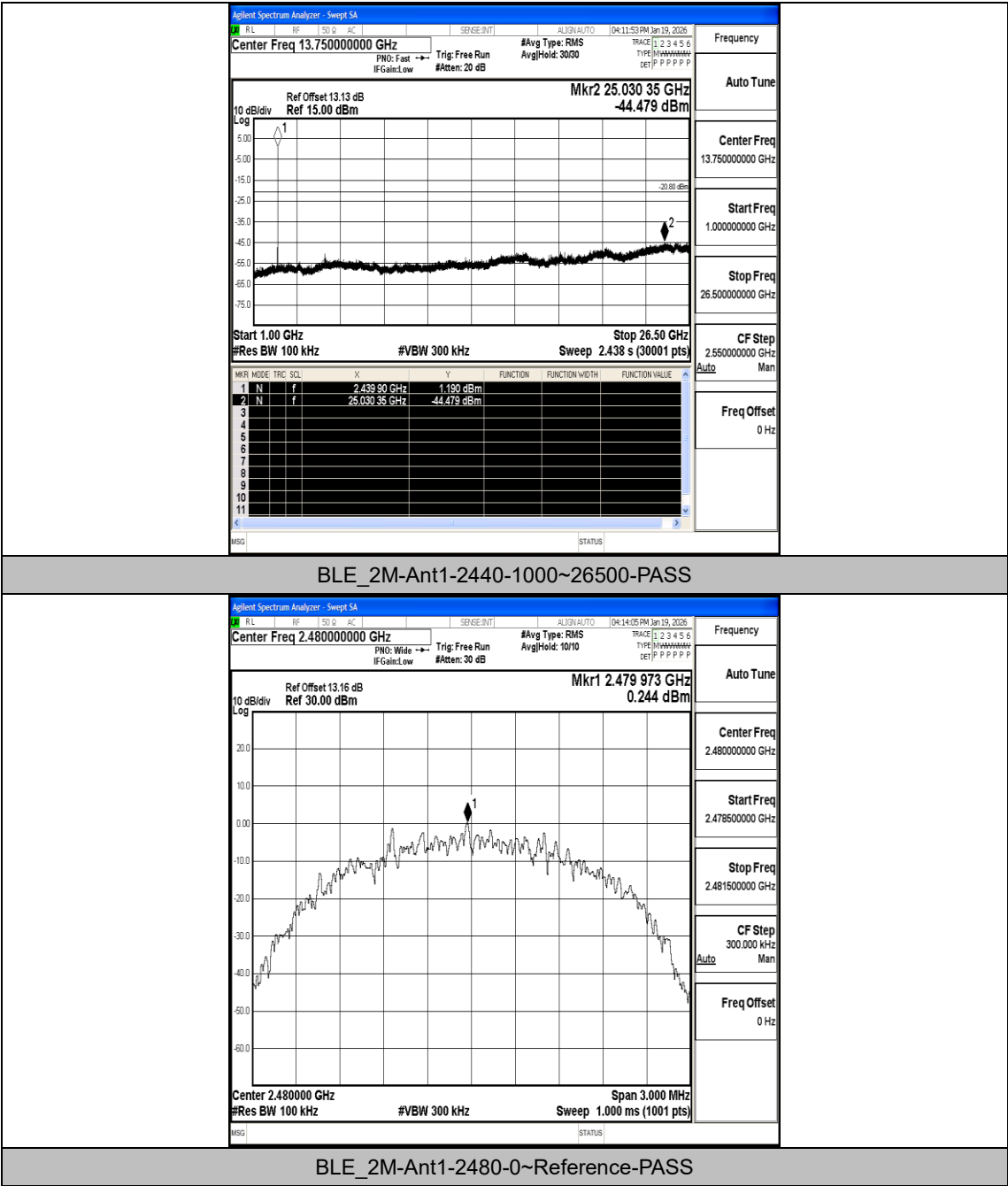


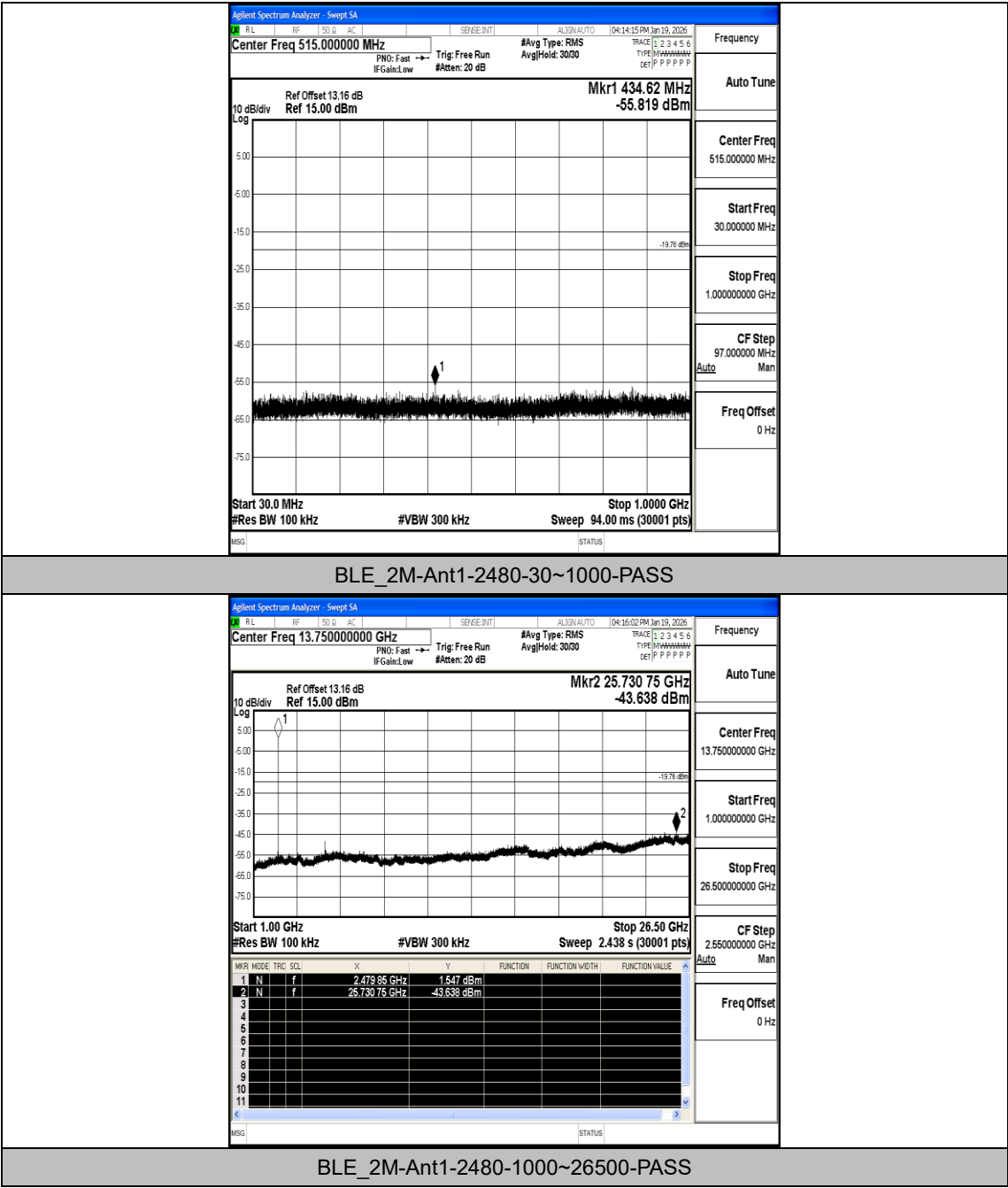










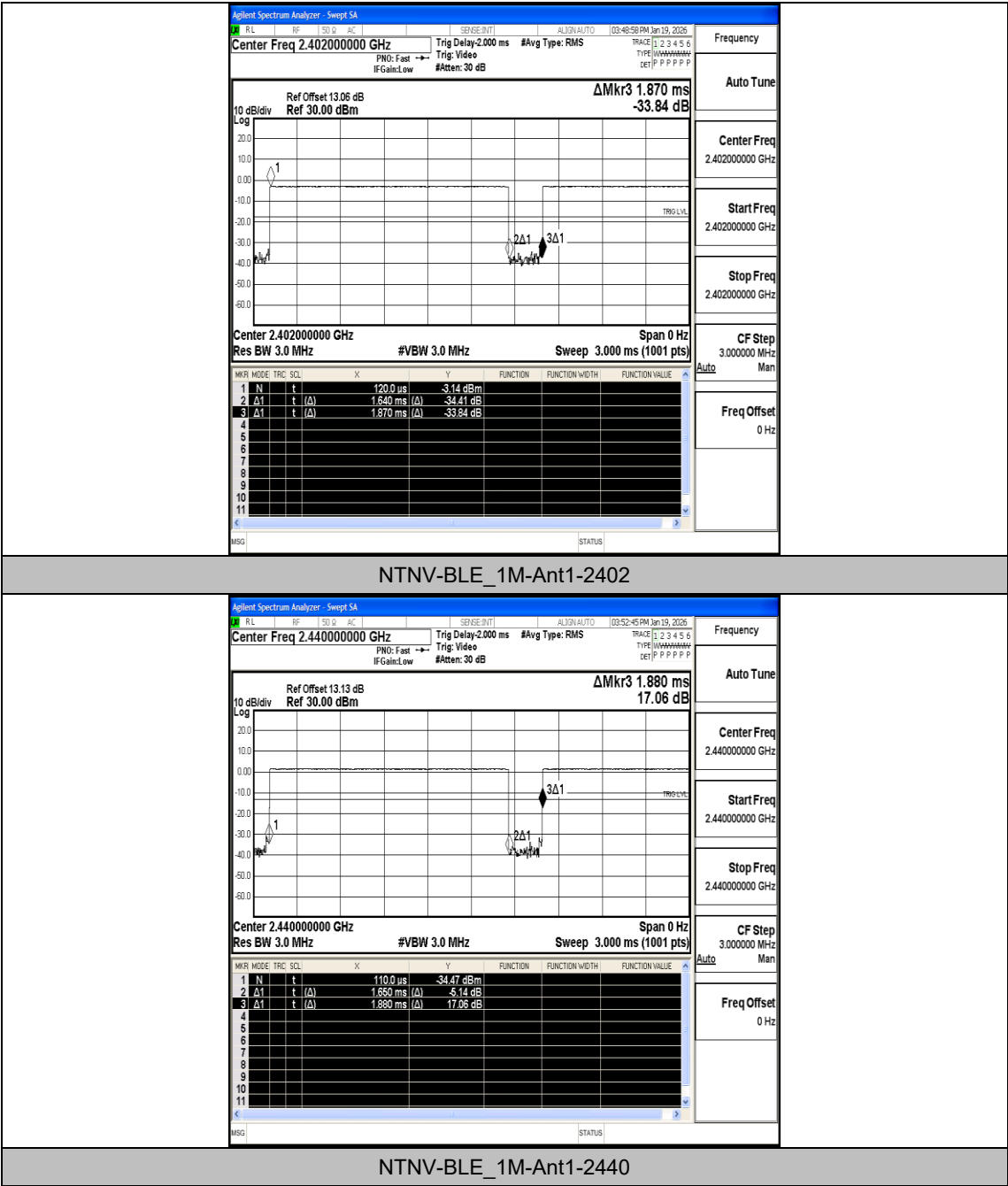


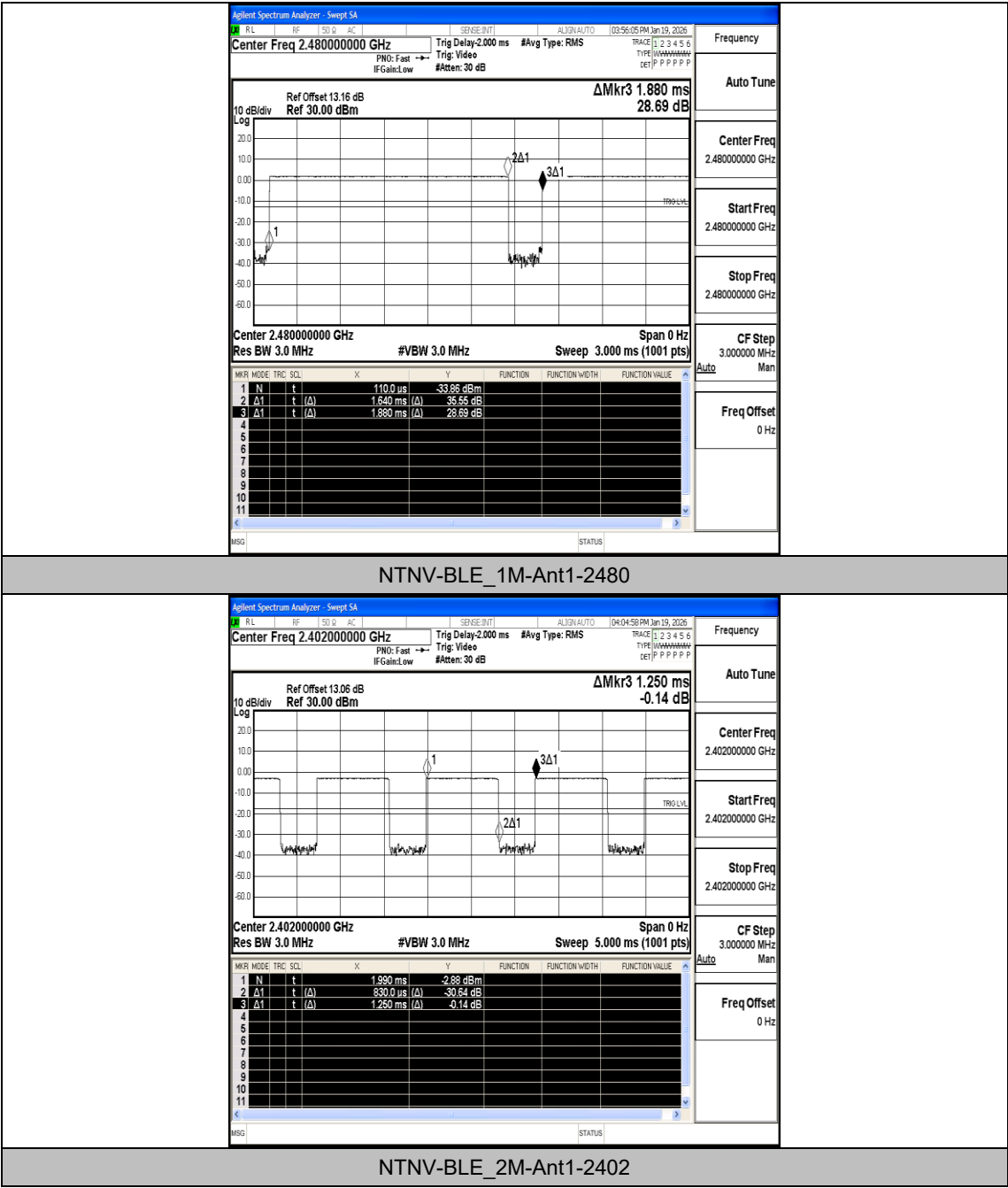
B.6 Duty Cycle

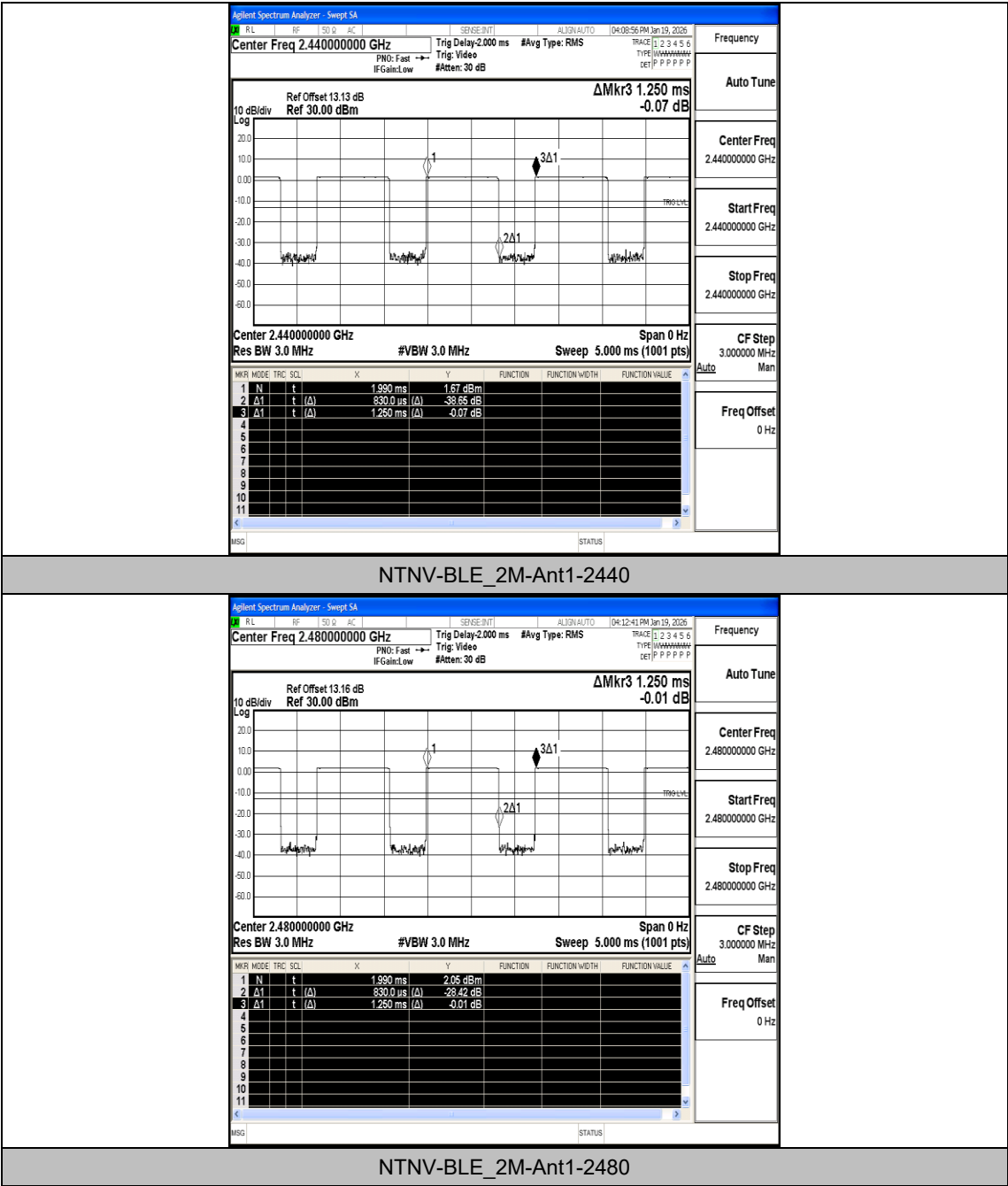
Test Result

TestMode	Antenna	Frequency [MHz]	ON Time [ms]	Period [ms]	Duty Cycle [%]	Duty Cycle Factor[dB]
BLE_1M	Ant1	2402	1.64	1.87	87.70	0.57
BLE_1M	Ant1	2440	1.65	1.88	87.77	0.57
BLE_1M	Ant1	2480	1.64	1.88	87.23	0.59
BLE_2M	Ant1	2402	0.83	1.25	66.40	1.78
BLE_2M	Ant1	2440	0.83	1.25	66.40	1.78
BLE_2M	Ant1	2480	0.83	1.25	66.40	1.78

Test Graphs







NTNV-BLE_2M-Ant1-2480

B.7 Emissions in Restricted Bands

Test Result

TestMode	Antenna	ChName	Frequency [MHz]	Detector	Freq [MHz]	Result [dBm]	Limit [dBm]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
BLE_1M	Ant1	Low	2402	Peak	2390.000	-37.9	≤-21.20	57.30	≤74	PASS
BLE_1M	Ant1	Low	2402	Peak	2310.000	-39.02	≤-21.20	56.18	≤74	PASS
BLE_1M	Ant1	Low	2402	Peak	2381.480	-34.06	≤-21.20	61.14	≤74	PASS
BLE_1M	Ant1	Low	2402	AV	2390.000	-45.65	≤-41.20	49.55	≤54	PASS
BLE_1M	Ant1	Low	2402	AV	2310.000	-46.26	≤-41.20	48.94	≤54	PASS
BLE_1M	Ant1	Low	2402	AV	2387.045	-45.14	≤-41.20	50.06	≤54	PASS
BLE_1M	Ant1	High	2480	Peak	2483.500	-35.8	≤-21.20	59.40	≤74	PASS
BLE_1M	Ant1	High	2480	Peak	2500.000	-38.44	≤-21.20	56.76	≤74	PASS
BLE_1M	Ant1	High	2480	Peak	2484.960	-35.04	≤-21.20	60.16	≤74	PASS
BLE_1M	Ant1	High	2480	AV	2483.500	-45.62	≤-41.20	49.58	≤54	PASS
BLE_1M	Ant1	High	2480	AV	2500.000	-46.14	≤-41.20	49.06	≤54	PASS
BLE_1M	Ant1	High	2480	AV	2485.520	-45.4	≤-41.20	49.80	≤54	PASS
BLE_2M	Ant1	Low	2402	Peak	2390.000	-38.93	≤-21.20	56.27	≤74	PASS
BLE_2M	Ant1	Low	2402	Peak	2310.000	-38.19	≤-21.20	57.01	≤74	PASS
BLE_2M	Ant1	Low	2402	Peak	2314.280	-35.12	≤-21.20	60.08	≤74	PASS
BLE_2M	Ant1	Low	2402	AV	2390.000	-45.97	≤-41.20	49.23	≤54	PASS
BLE_2M	Ant1	Low	2402	AV	2310.000	-46.71	≤-41.20	48.49	≤54	PASS
BLE_2M	Ant1	Low	2402	AV	2380.640	-45.52	≤-41.20	49.68	≤54	PASS
BLE_2M	Ant1	High	2480	Peak	2483.500	-38.77	≤-21.20	56.43	≤74	PASS
BLE_2M	Ant1	High	2480	Peak	2500.000	-38.76	≤-21.20	56.44	≤74	PASS
BLE_2M	Ant1	High	2480	Peak	2490.080	-35.3	≤-21.20	59.90	≤74	PASS
BLE_2M	Ant1	High	2480	AV	2483.500	-46.02	≤-41.20	49.18	≤54	PASS
BLE_2M	Ant1	High	2480	AV	2500.000	-45.71	≤-41.20	49.49	≤54	PASS
BLE_2M	Ant1	High	2480	AV	2492.320	-45.21	≤-41.20	49.99	≤54	PASS

Note:

1. The Antenna Gain is compensated in the graph.
2. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.

Test Graphs

