

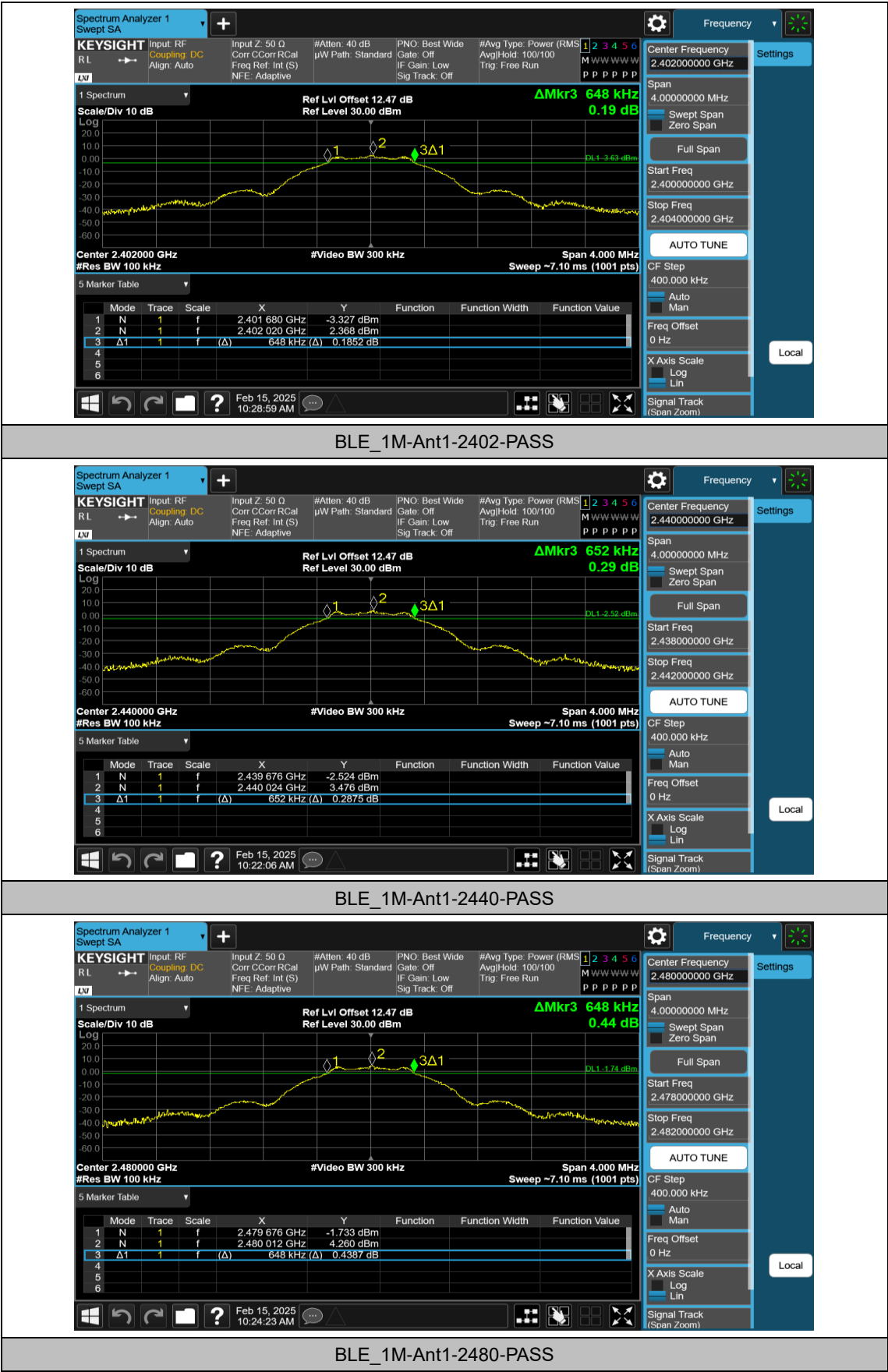
Appendix B of Bluetooth Results

DTS Bandwidth

Test Result

TestMode	Antenna	Frequency[MHz]	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.648	2401.680	2402.328	0.5	PASS
BLE_1M	Ant1	2440	0.652	2439.676	2440.328	0.5	PASS
BLE_1M	Ant1	2480	0.648	2479.676	2480.324	0.5	PASS

Test Graphs



BLE_1M-Ant1-2402-PASS

Spectrum Analyzer 1

Swept SA

KEYSIGHT

Input: RF

Coupling: DC

Align: Auto

Input Z: 50 Ω

Corr: CCorr RCal

Freq Ref: Int (S)

NFE: Adaptive

#Atten: 40 dB

μ W Path: Standard

PNO: Best Wide

Gate: Off

IF Gain: Low

Sig Track: Off

#Avg Type: Power (RMS)

Avg/Hold: 100/100

Trig: Free Run

1 2 3 4 5 6

M W W W W W

P P P P P P

Center Frequency

2.440000000 GHz

Span

4.000000000 MHz

Swept Span

Zero Span

Full Span

Start Freq

2.438000000 GHz

Stop Freq

2.442000000 GHz

AUTO TUNE

CF Step

400.000 kHz

Auto

Man

Freq Offset

0 Hz

X Axis Scale

Log

Lin

Signal Track

(Span Zoom)

Local

1 Spectrum

Scale/Div 10 dB

Log

Ref Lvl Offset 12.47 dB

Ref Level 30.00 dBm

Δ Mkr3 652 kHz

0.29 dB

OL1 -2.52 dBm

Center 2.440000 GHz

#Res BW 100 kHz

#Video BW 300 kHz

Span 4.000 MHz

Sweep ~7.10 ms (1001 pts)

5 Marker Table

	Mode	Trace	Scale	X	Y	Function	Function Width	Function Value
1	N	1	f	2.439676 GHz	-2.524 dBm			
2	N	1	f	2.440024 GHz	3.476 dBm			
3	Δ 1	1	f	(Δ)	652 kHz (Δ)	0.2875 dB		
4								
5								
6								

Feb 15, 2025

10:22:06 AM

BLE_1M-Ant1-2440-PASS

Spectrum Analyzer 1

Swept SA

KEYSIGHT

Input: RF

Coupling: DC

Align: Auto

Input Z: 50 Ω

Corr: CCorr RCal

Freq Ref: Int (S)

NFE: Adaptive

#Atten: 40 dB

μ W Path: Standard

PNO: Best Wide

Gate: Off

IF Gain: Low

Sig Track: Off

#Avg Type: Power (RMS)

Avg/Hold: 100/100

Trig: Free Run

1 2 3 4 5 6

M W W W W W

P P P P P P

Center Frequency

2.480000000 GHz

Span

4.000000000 MHz

Swept Span

Zero Span

Full Span

Start Freq

2.478000000 GHz

Stop Freq

2.482000000 GHz

AUTO TUNE

CF Step

400.000 kHz

Auto

Man

Freq Offset

0 Hz

X Axis Scale

Log

Lin

Signal Track

(Span Zoom)

Local

1 Spectrum

Scale/Div 10 dB

Log

Ref Lvl Offset 12.47 dB

Ref Level 30.00 dBm

Δ Mkr3 648 kHz

0.44 dB

OL1 -1.74 dBm

Center 2.480000 GHz

#Res BW 100 kHz

#Video BW 300 kHz

Span 4.000 MHz

Sweep ~7.10 ms (1001 pts)

5 Marker Table

	Mode	Trace	Scale	X	Y	Function	Function Width	Function Value
1	N	1	f	2.479676 GHz	-1.733 dBm			
2	N	1	f	2.480012 GHz	4.260 dBm			
3	Δ 1	1	f	(Δ)	648 kHz (Δ)	0.4387 dB		
4								
5								
6								

Feb 15, 2025

10:24:23 AM

BLE_1M-Ant1-2480-PASS

FCC ID:2AV7A-FW06

IC:26039- FW06

Occupied Channel Bandwidth

Test Result

TestMode	Antenna	Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.0853	2401.4638	2402.5491	---	---
BLE_1M	Ant1	2440	1.0886	2439.4605	2440.5491	---	---
BLE_1M	Ant1	2480	1.0875	2479.4603	2480.5478	---	---

Test Graphs



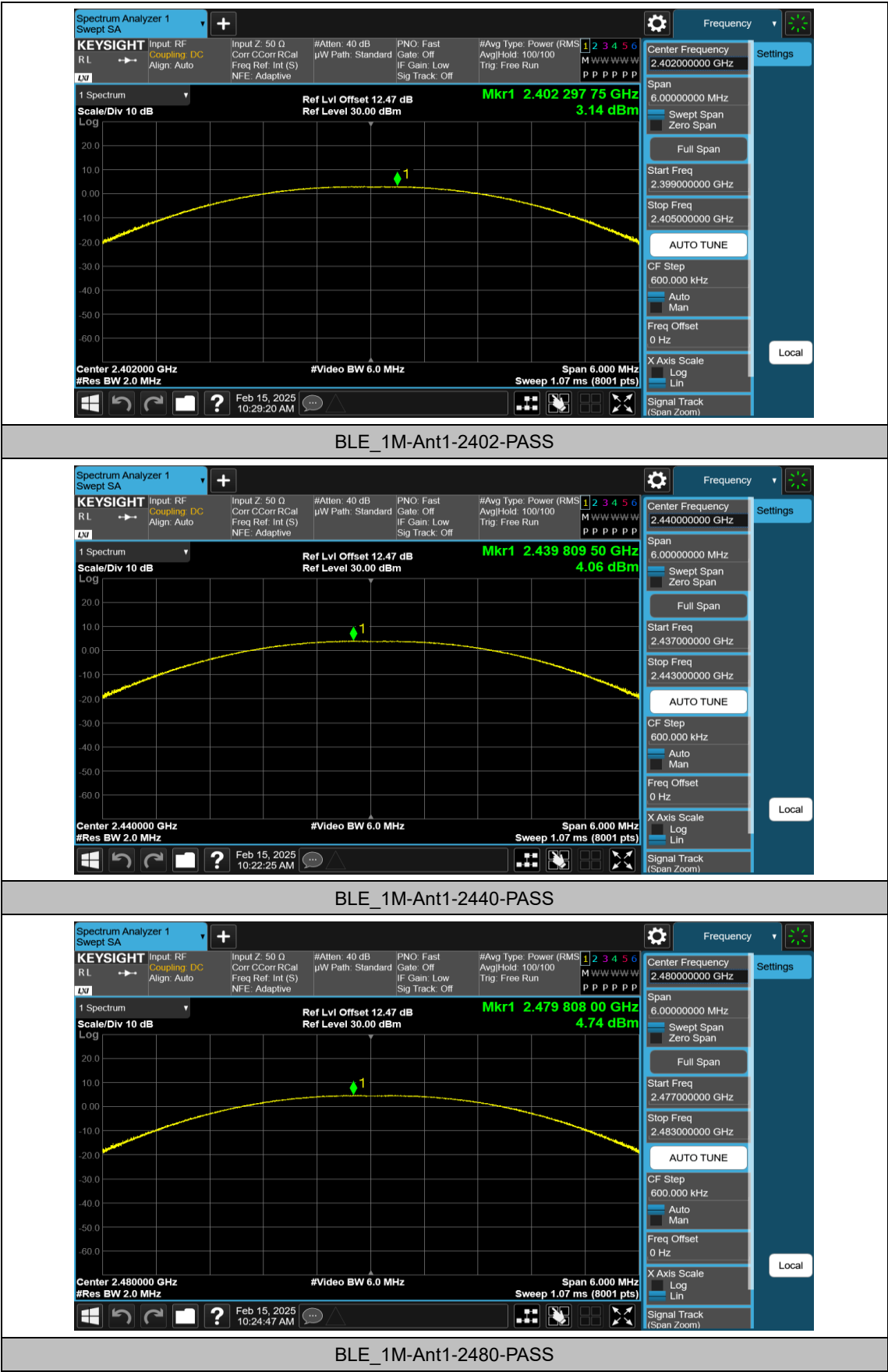
FCC ID: 2AV7A-FW06
IC: 26039- FW06

Maximum conducted output power

Test Result Peak

TestMode	Antenna	Frequency[MHz]	Conducted Peak Power[dBm]	Conducted Limit[dBm]	EIRP[dBm]	EIRP Limit[dBm]	Verdict
BLE_1M	Ant1	2402	3.14	≤30	7.10	≤36	PASS
BLE_1M	Ant1	2440	4.06	≤30	8.02	≤36	PASS
BLE_1M	Ant1	2480	4.74	≤30	8.70	≤36	PASS

Test Graphs Peak



BLE_1M-Ant1-2402-PASS

Spectrum Analyzer 1

Swept SA

KEYSIGHT

Input: RF

Coupling: DC

Align: Auto

Input Z: 50 Ω

Corr: C

Corr: R

Cal: Int (S)

NFE: Adaptive

#Atten: 40 dB

μ W Path: Standard

PNO: Fast

Gate: Off

IF Gain: Low

Sig Track: Off

#Avg Type: Power (RMS)

Avg/Hold: 100/100

Trig: Free Run

1 2 3 4 5 6

M W W W W W

p p p p p p

Center Frequency

2.44000000 GHz

Span

6.00000000 MHz

Start Freq

2.437000000 GHz

Stop Freq

2.443000000 GHz

AUTO TUNE

CF Step

600.000 kHz

Freq Offset

0 Hz

X Axis Scale

Log

Signal Track

(Span Zoom)

Local

1 Spectrum

Scale/Div 10 dB

Log

Ref Lvl Offset 12.47 dB

Ref Level 30.00 dBm

Mkr1 2.439 809 50 GHz

4.06 dBm

Center 2.440000 GHz

#Res BW 2.0 MHz

#Video BW 6.0 MHz

Span 6.000 MHz

Sweep 1.07 ms (8001 pts)

BLE_1M-Ant1-2440-PASS

Spectrum Analyzer 1

Swept SA

KEYSIGHT

Input: RF

Coupling: DC

Align: Auto

Input Z: 50 Ω

Corr: C

Corr: R

Cal: Int (S)

NFE: Adaptive

#Atten: 40 dB

μ W Path: Standard

PNO: Fast

Gate: Off

IF Gain: Low

Sig Track: Off

#Avg Type: Power (RMS)

Avg/Hold: 100/100

Trig: Free Run

1 2 3 4 5 6

M W W W W W

p p p p p p

Center Frequency

2.48000000 GHz

Span

6.00000000 MHz

Start Freq

2.477000000 GHz

Stop Freq

2.483000000 GHz

AUTO TUNE

CF Step

600.000 kHz

Freq Offset

0 Hz

X Axis Scale

Log

Signal Track

(Span Zoom)

Local

1 Spectrum

Scale/Div 10 dB

Log

Ref Lvl Offset 12.47 dB

Ref Level 30.00 dBm

Mkr1 2.479 808 00 GHz

4.74 dBm

Center 2.480000 GHz

#Res BW 2.0 MHz

#Video BW 6.0 MHz

Span 6.000 MHz

Sweep 1.07 ms (8001 pts)

BLE_1M-Ant1-2480-PASS

FCC ID:2AV7A-FW06

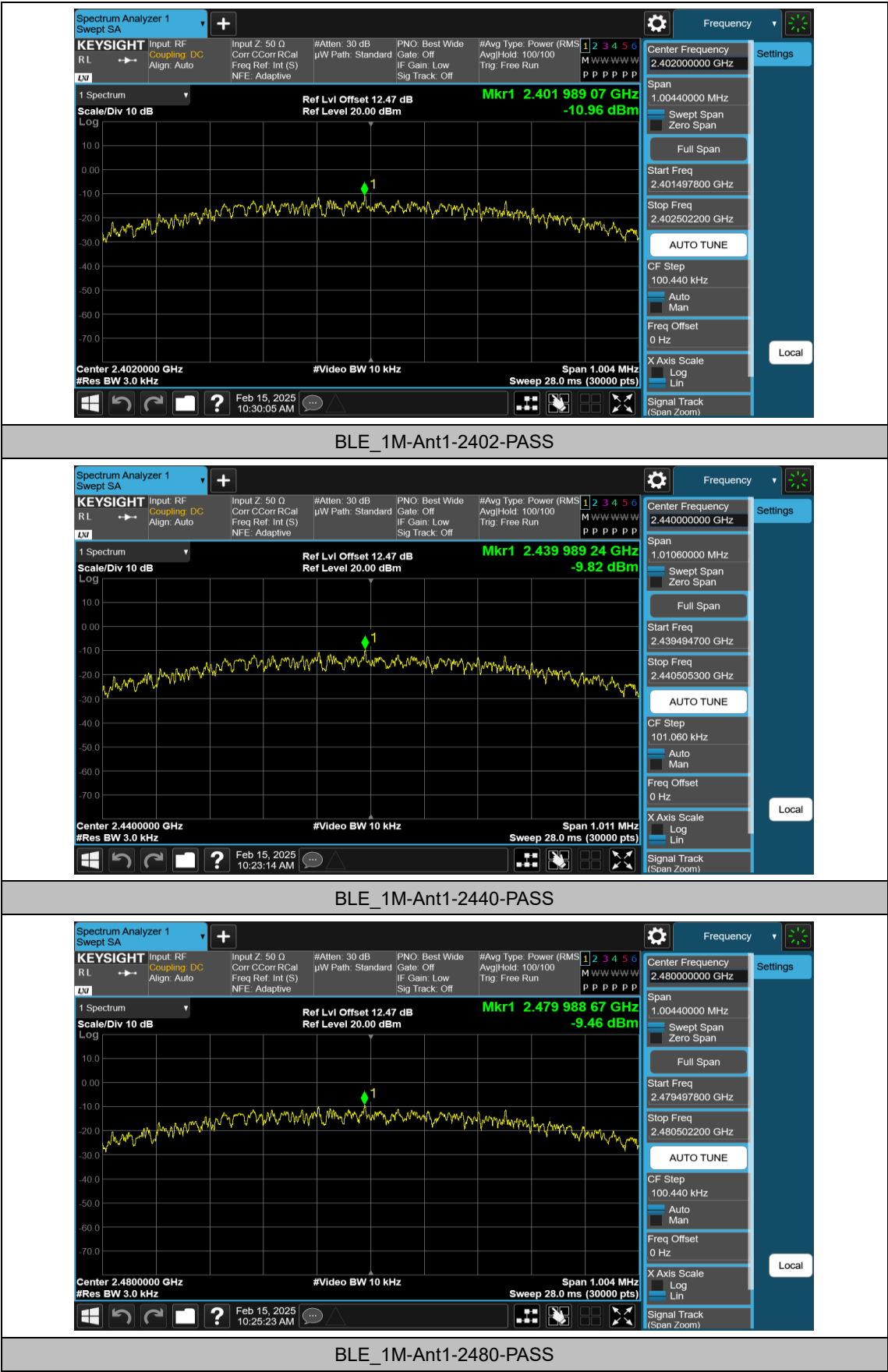
IC:26039- FW06

Maximum power spectral density

Test Result

TestMode	Antenna	Frequency[MHz]	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-10.96	≤8.00	PASS
BLE_1M	Ant1	2440	-9.82	≤8.00	PASS
BLE_1M	Ant1	2480	-9.46	≤8.00	PASS

Test Graphs



BLE_1M-Ant1-2402-PASS

Spectrum Analyzer 1

Swept SA

KEYSIGHT

Input: RF

Coupling: DC

Align: Auto

Input Z: 50 Ω

Corr: C

Corr: R

Cal: Int (S)

NFE: Adaptive

#Atten: 30 dB

μ W Path: Standard

PNO: Best Wide

Gate: Off

IF Gain: Low

Sig Track: Off

#Avg Type: Power (RMS)

Avg/Hold: 100/100

Trig: Free Run

1 2 3 4 5 6

M W W W W W

P P P P P P

Center Frequency

2.44000000 GHz

Span

1.01060000 MHz

Swept Span

Zero Span

Full Span

Start Freq

2.439494700 GHz

Stop Freq

2.440505300 GHz

AUTO TUNE

CF Step

101.060 kHz

Auto

Man

Freq Offset

0 Hz

X Axis Scale

Log

Lin

Signal Track

(Span Zoom)

Local

1 Spectrum

Scale/Div 10 dB

Log

Ref Lvl Offset 12.47 dB

Ref Level 20.00 dBm

Mkr1 2.439 989 24 GHz

-9.82 dBm

Center 2.4400000 GHz

#Res BW 3.0 kHz

#Video BW 10 kHz

Span 1.011 MHz

Sweep 28.0 ms (30000 pts)

Feb 15, 2025 10:23:14 AM

BLE_1M-Ant1-2440-PASS

Spectrum Analyzer 1

Swept SA

KEYSIGHT

Input: RF

Coupling: DC

Align: Auto

Input Z: 50 Ω

Corr: C

Corr: R

Cal: Int (S)

NFE: Adaptive

#Atten: 30 dB

μ W Path: Standard

PNO: Best Wide

Gate: Off

IF Gain: Low

Sig Track: Off

#Avg Type: Power (RMS)

Avg/Hold: 100/100

Trig: Free Run

1 2 3 4 5 6

M W W W W W

P P P P P P

Center Frequency

2.48000000 GHz

Span

1.00440000 MHz

Swept Span

Zero Span

Full Span

Start Freq

2.479497800 GHz

Stop Freq

2.480502200 GHz

AUTO TUNE

CF Step

100.440 kHz

Auto

Man

Freq Offset

0 Hz

X Axis Scale

Log

Lin

Signal Track

(Span Zoom)

Local

1 Spectrum

Scale/Div 10 dB

Log

Ref Lvl Offset 12.47 dB

Ref Level 20.00 dBm

Mkr1 2.479 988 67 GHz

-9.46 dBm

Center 2.4800000 GHz

#Res BW 3.0 kHz

#Video BW 10 kHz

Span 1.004 MHz

Sweep 28.0 ms (30000 pts)

Feb 15, 2025 10:25:23 AM

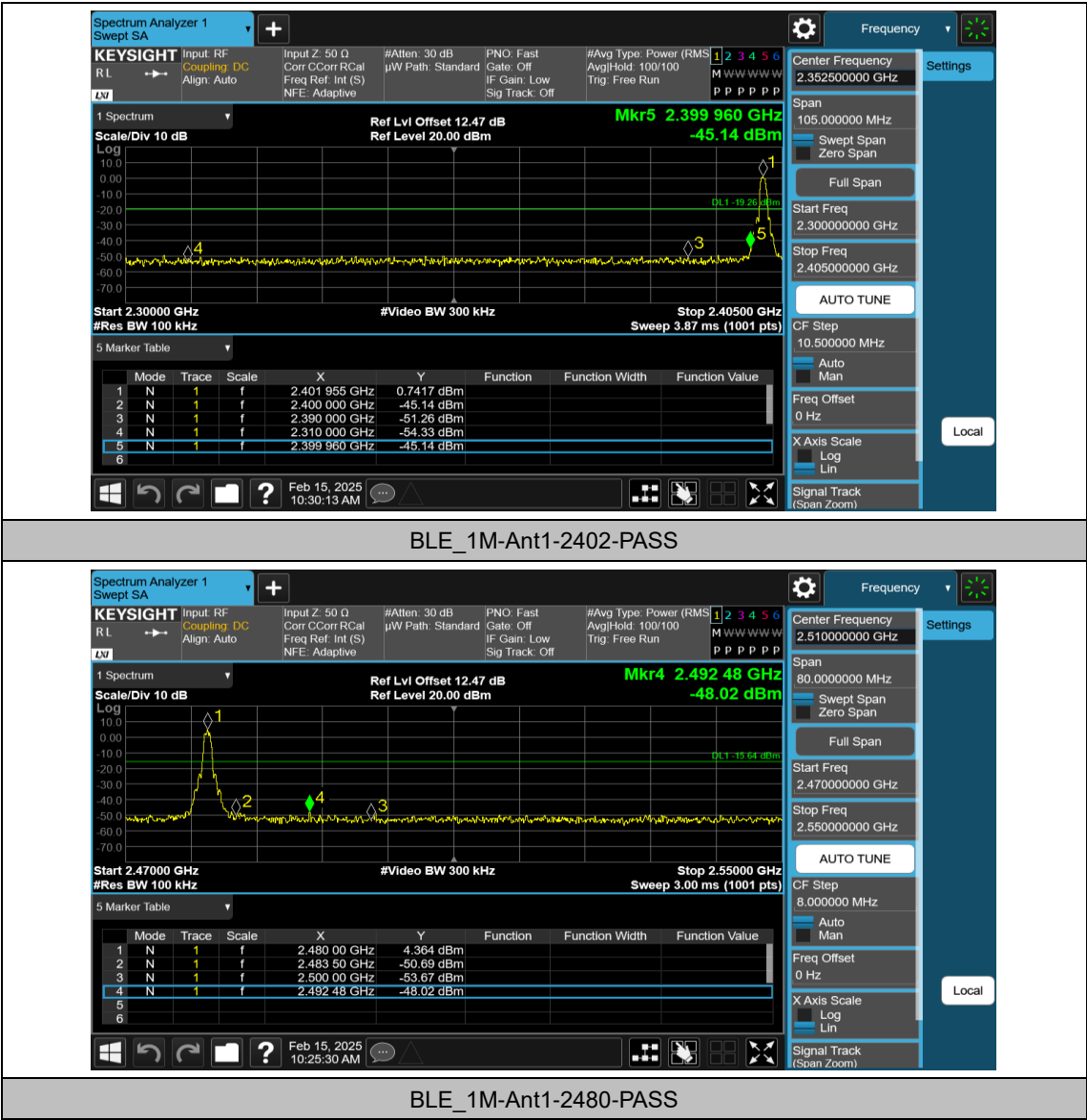
BLE_1M-Ant1-2480-PASS

Band edge measurements

Test Result

TestMode	Antenna	ChName	Frequency [MHz]	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	0.74	-45.14	≤-19.26	PASS
BLE_1M	Ant1	High	2480	4.36	-48.02	≤-15.64	PASS

Test Graphs



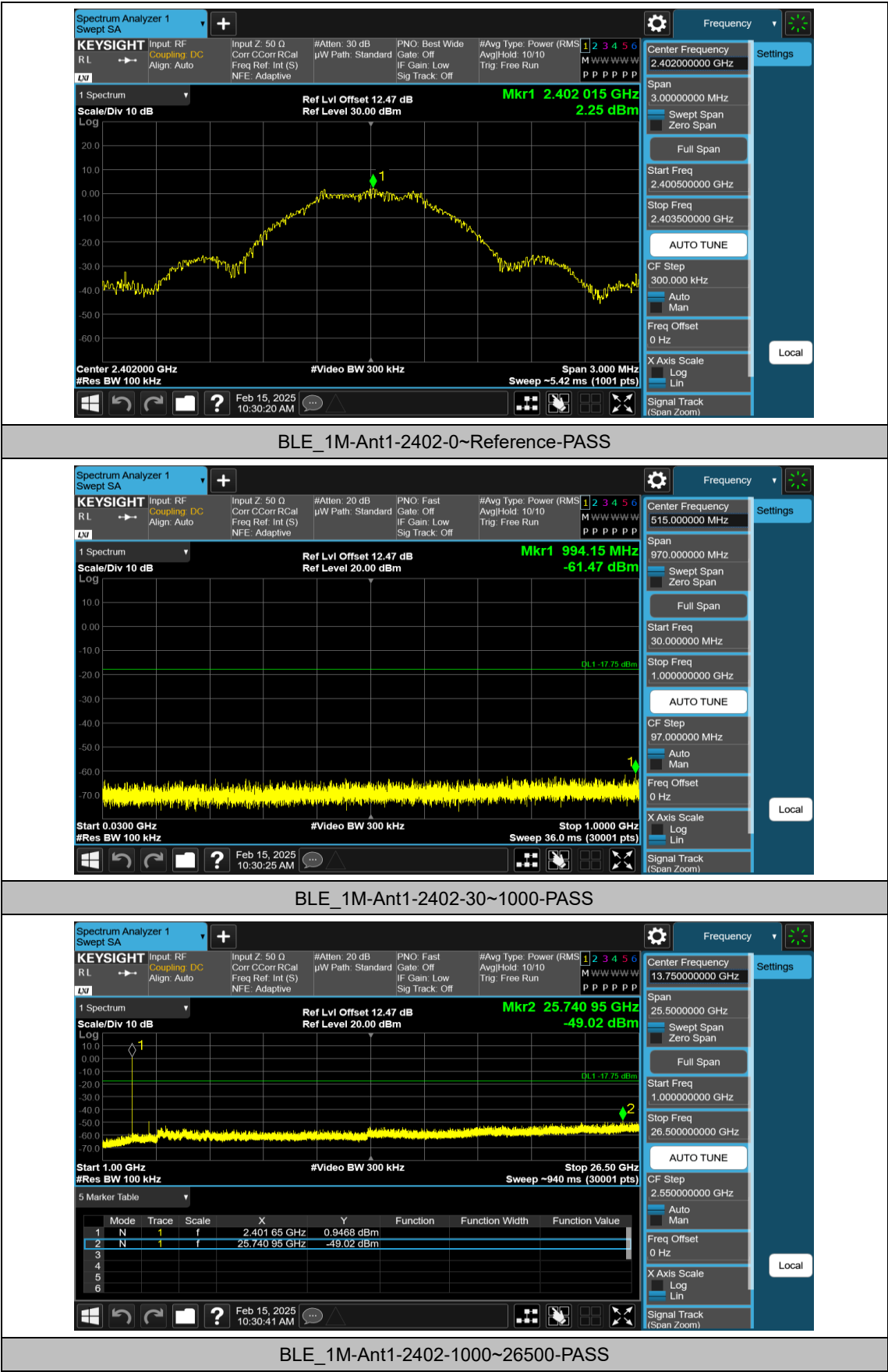
FCC ID: 2AV7A-FW06
IC: 26039- FW06

Conducted Spurious Emission

Test Result

TestMode	Antenna	Frequency [MHz]	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	0~Reference	2.25	2.25	---	PASS
BLE_1M	Ant1	2402	30~1000	2.25	-61.47	≤-17.75	PASS
BLE_1M	Ant1	2402	1000~26500	2.25	-49.02	≤-17.75	PASS
BLE_1M	Ant1	2440	0~Reference	2.95	2.95	---	PASS
BLE_1M	Ant1	2440	30~1000	2.95	-61.98	≤-17.05	PASS
BLE_1M	Ant1	2440	1000~26500	2.95	-50.02	≤-17.05	PASS
BLE_1M	Ant1	2480	0~Reference	4.05	4.05	---	PASS
BLE_1M	Ant1	2480	30~1000	4.05	-61.84	≤-15.95	PASS
BLE_1M	Ant1	2480	1000~26500	4.05	-49.62	≤-15.95	PASS

Test Graphs



BLE_1M-Ant1-2402-0~Reference-PASS

Spectrum Analyzer 1

Swept SA

KEYSIGHT

Input: RF

Coupling: DC

Align: Auto

Input Z: 50 Ω

Corr: CCorr RCal

Freq Ref: Int (S)

NFE: Adaptive

#Atten: 20 dB

μ W Path: Standard

Gate: Off

IF Gain: Low

Sig Track: Off

PNO: Fast

#Avg Type: Power (RMS)

Avg/Hold: 10/10

Trig: Free Run

1 2 3 4 5 6

M W W W W W

P P P P P P

Center Frequency

515.000000 MHz

Span

970.000000 MHz

Swept Span

Zero Span

Full Span

Start Freq

30.0000000 MHz

Stop Freq

1.000000000 GHz

AUTO TUNE

CF Step

97.0000000 MHz

Auto

Man

Freq Offset

0 Hz

X Axis Scale

Log

Lin

Signal Track

(Span Zoom)

Local

1 Spectrum

Scale/Div 10 dB

Log

Ref Lvl Offset 12.47 dB

Ref Level 20.00 dBm

Mkr1 994.15 MHz

-61.47 dBm

Start 0.0300 GHz

#Res BW 100 kHz

#Video BW 300 kHz

Stop 1.0000 GHz

Sweep 36.0 ms (30001 pts)

Feb 15, 2025 10:30:25 AM

BLE_1M-Ant1-2402-30~1000-PASS

Spectrum Analyzer 1

Swept SA

KEYSIGHT

Input: RF

Coupling: DC

Align: Auto

Input Z: 50 Ω

Corr: CCorr RCal

Freq Ref: Int (S)

NFE: Adaptive

#Atten: 20 dB

μ W Path: Standard

Gate: Off

IF Gain: Low

Sig Track: Off

PNO: Fast

#Avg Type: Power (RMS)

Avg/Hold: 10/10

Trig: Free Run

1 2 3 4 5 6

M W W W W W

P P P P P P

Center Frequency

13.750000000 GHz

Span

25.50000000 GHz

Swept Span

Zero Span

Full Span

Start Freq

1.000000000 GHz

Stop Freq

26.500000000 GHz

AUTO TUNE

CF Step

2.550000000 GHz

Auto

Man

Freq Offset

0 Hz

X Axis Scale

Log

Lin

Signal Track

(Span Zoom)

Local

1 Spectrum

Scale/Div 10 dB

Log

Ref Lvl Offset 12.47 dB

Ref Level 20.00 dBm

Mkr2 25.740 95 GHz

-49.02 dBm

Start 1.00 GHz

#Res BW 100 kHz

#Video BW 300 kHz

Stop 26.50 GHz

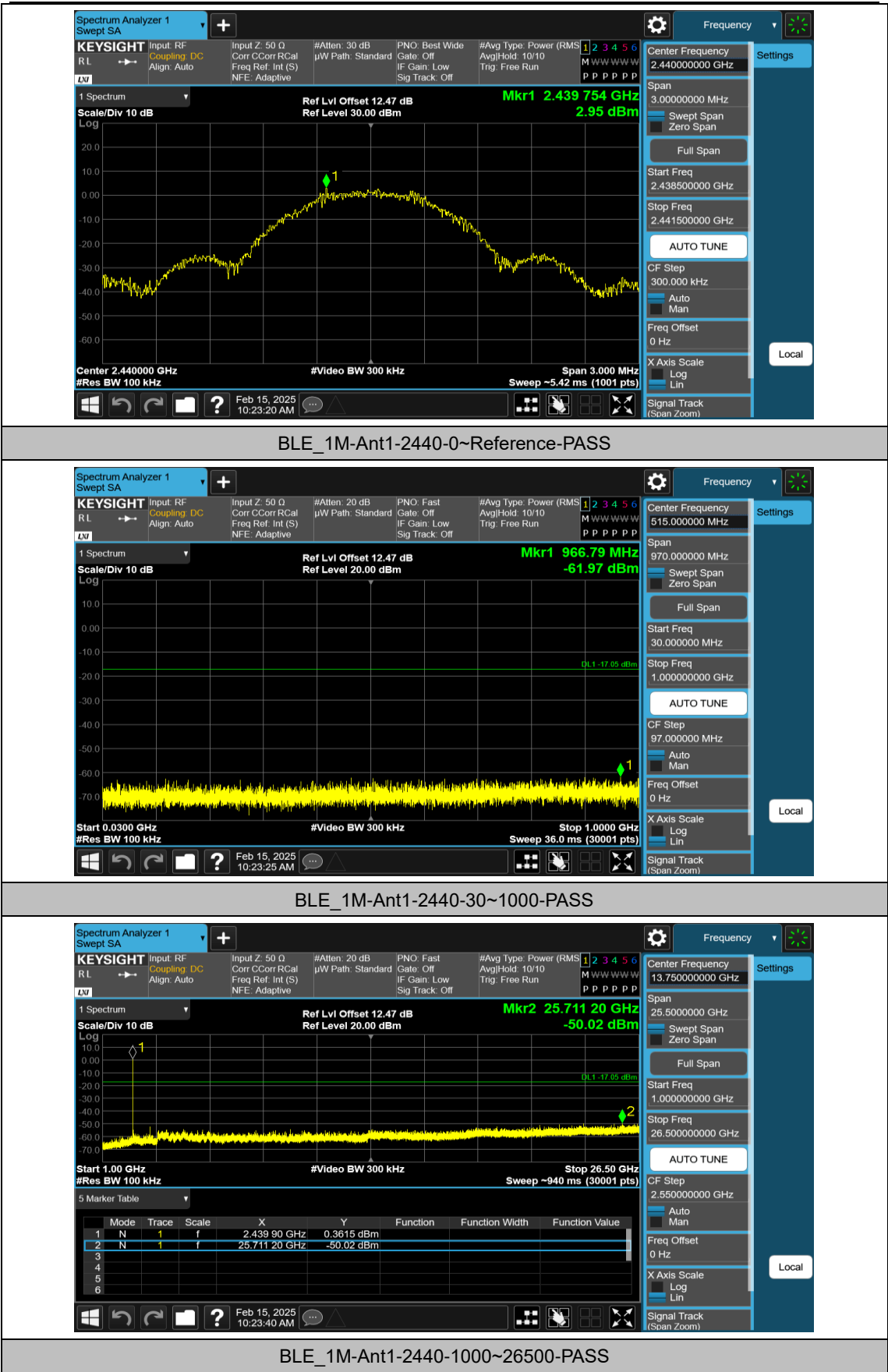
Sweep ~940 ms (30001 pts)

Feb 15, 2025 10:30:41 AM

5 Marker Table

Mode	Trace	Scale	X	Y	Function	Function Width	Function Value
1	N	1	f	2.401 65 GHz	0.9468 dBm		
2	N	1	f	25.740 95 GHz	-49.02 dBm		
3							
4							
5							
6							

BLE_1M-Ant1-2402-1000~26500-PASS



BLE_1M-Ant1-2440-0~Reference-PASS

Spectrum Analyzer 1

Swept SA

KEYSIGHT

Input: RF

Coupling: DC

Align: Auto

Input Z: 50 Ω

Corr: C

Corr: R

Cal: Int (S)

NFE: Adaptive

#Atten: 20 dB

μ W Path: Standard

Gate: Off

IF Gain: Low

Sig Track: Off

PNO: Fast

#Avg Type: Power (RMS)

Avg/Hold: 10/10

Trig: Free Run

1 2 3 4 5 6

M W W W W W

P P P P P P

Center Frequency

515.000000 MHz

Span

970.000000 MHz

Swept Span

Zero Span

Full Span

Start Freq

30.0000000 MHz

Stop Freq

1.000000000 GHz

AUTO TUNE

CF Step

97.0000000 MHz

Auto

Man

Freq Offset

0 Hz

X Axis Scale

Log

Lin

Signal Track

(Span Zoom)

Local

1 Spectrum

Scale/Div 10 dB

Ref Lvl Offset 12.47 dB

Ref Level 20.00 dBm

Mkr1 966.79 MHz

-61.97 dBm

Start 0.0300 GHz

#Res BW 100 kHz

#Video BW 300 kHz

Stop 1.0000 GHz

Sweep 36.0 ms (30001 pts)

Feb 15, 2025

10:23:25 AM

BLE_1M-Ant1-2440-30~1000-PASS

Spectrum Analyzer 1

Swept SA

KEYSIGHT

Input: RF

Coupling: DC

Align: Auto

Input Z: 50 Ω

Corr: C

Corr: R

Cal: Int (S)

NFE: Adaptive

#Atten: 20 dB

μ W Path: Standard

Gate: Off

IF Gain: Low

Sig Track: Off

PNO: Fast

#Avg Type: Power (RMS)

Avg/Hold: 10/10

Trig: Free Run

1 2 3 4 5 6

M W W W W W

P P P P P P

Center Frequency

13.750000000 GHz

Span

25.50000000 GHz

Swept Span

Zero Span

Full Span

Start Freq

1.000000000 GHz

Stop Freq

26.500000000 GHz

AUTO TUNE

CF Step

2.550000000 GHz

Auto

Man

Freq Offset

0 Hz

X Axis Scale

Log

Lin

Signal Track

(Span Zoom)

Local

1 Spectrum

Scale/Div 10 dB

Ref Lvl Offset 12.47 dB

Ref Level 20.00 dBm

Mkr2 25.711 20 GHz

-50.02 dBm

Start 1.00 GHz

#Res BW 100 kHz

#Video BW 300 kHz

Stop 26.50 GHz

Sweep ~940 ms (30001 pts)

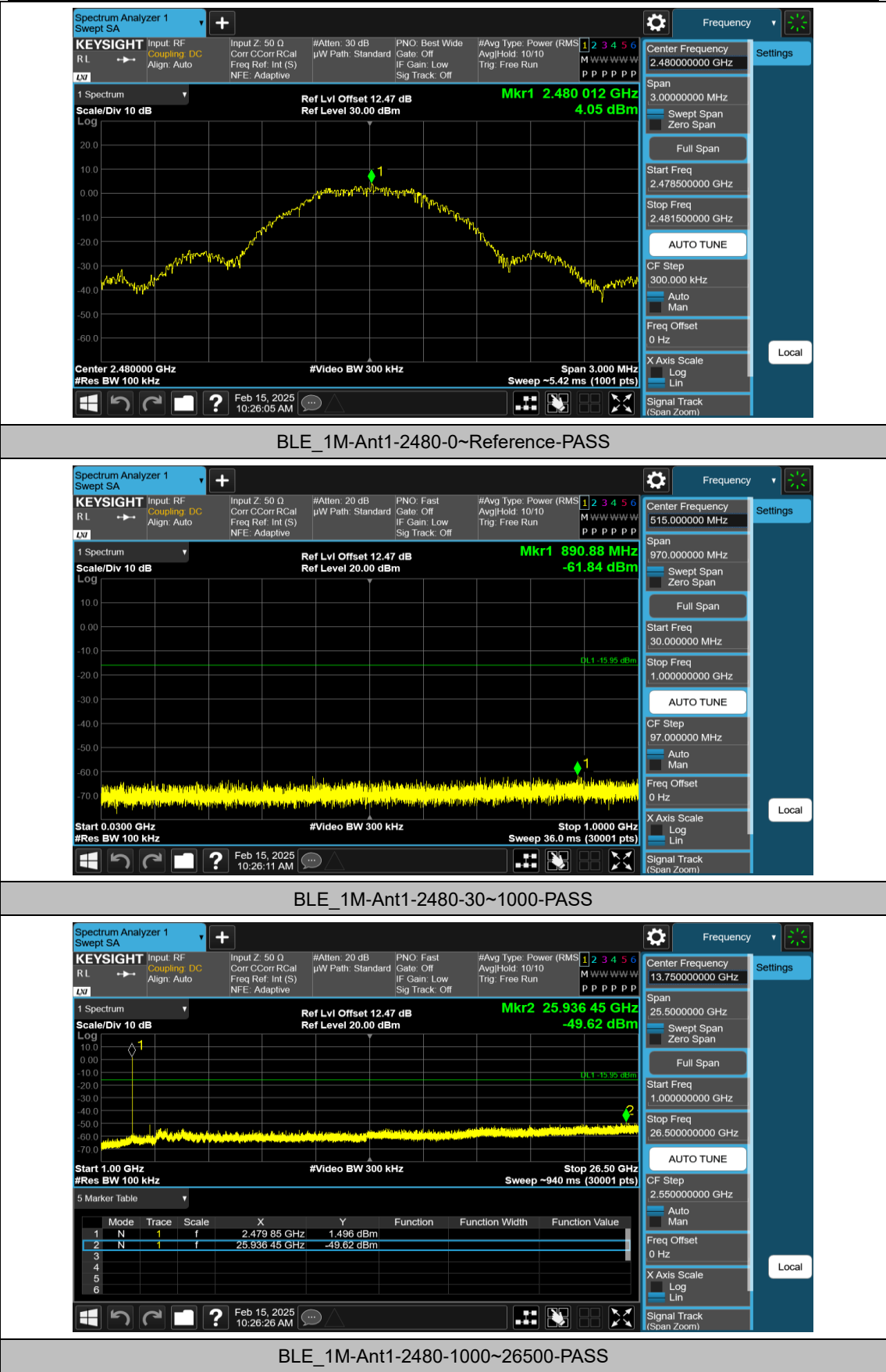
5 Marker Table

	Mode	Trace	Scale	X	Y	Function	Function Width	Function Value
1	N	1	f	2.439 90 GHz	0.3615 dBm			
2	N	1	f	25.711 20 GHz	-50.02 dBm			
3								
4								
5								
6								

Feb 15, 2025

10:23:40 AM

BLE_1M-Ant1-2440-1000~26500-PASS



BLE_1M-Ant1-2480-0~Reference-PASS

Spectrum Analyzer 1

Swept SA

KEYSIGHT

Input: RF

Coupling: DC

Align: Auto

Input Z: 50 Ω

Corr: C

Corr: R

Cal: Int (S)

NFE: Adaptive

#Atten: 20 dB

μ W Path: Standard

Gate: Off

IF Gain: Low

Sig Track: Off

PNO: Fast

#Avg Type: Power (RMS)

Avg/Hold: 10/10

Trig: Free Run

1 2 3 4 5 6

M W W W W W

P P P P P P

Center Frequency

515.000000 MHz

Span

970.000000 MHz

Swept Span

Zero Span

Full Span

Start Freq

30.0000000 MHz

Stop Freq

1.000000000 GHz

AUTO TUNE

CF Step

97.0000000 MHz

Auto

Man

Freq Offset

0 Hz

X Axis Scale

Log

Lin

Signal Track

(Span Zoom)

Local

1 Spectrum

Scale/Div 10 dB

Ref Lvl Offset 12.47 dB

Ref Level 20.00 dBm

Mkr1 890.88 MHz

-61.84 dBm

Start 0.0300 GHz

#Video BW 300 kHz

Stop 1.0000 GHz

#Res BW 100 kHz

Sweep 36.0 ms (30001 pts)

Feb 15, 2025

10:26:11 AM

BLE_1M-Ant1-2480-30~1000-PASS

Spectrum Analyzer 1

Swept SA

KEYSIGHT

Input: RF

Coupling: DC

Align: Auto

Input Z: 50 Ω

Corr: C

Corr: R

Cal: Int (S)

NFE: Adaptive

#Atten: 20 dB

μ W Path: Standard

Gate: Off

IF Gain: Low

Sig Track: Off

PNO: Fast

#Avg Type: Power (RMS)

Avg/Hold: 10/10

Trig: Free Run

1 2 3 4 5 6

M W W W W W

P P P P P P

Center Frequency

13.750000000 GHz

Span

25.50000000 GHz

Swept Span

Zero Span

Full Span

Start Freq

1.000000000 GHz

Stop Freq

26.500000000 GHz

AUTO TUNE

CF Step

2.550000000 GHz

Auto

Man

Freq Offset

0 Hz

X Axis Scale

Log

Lin

Signal Track

(Span Zoom)

Local

1 Spectrum

Scale/Div 10 dB

Ref Lvl Offset 12.47 dB

Ref Level 20.00 dBm

Mkr2 25.936 45 GHz

-49.62 dBm

Start 1.00 GHz

#Video BW 300 kHz

Stop 26.50 GHz

#Res BW 100 kHz

Sweep ~940 ms (30001 pts)

5 Marker Table

Mode	Trace	Scale	X	Y	Function	Function Width	Function Value
1	N	1	f	2.479 85 GHz	1.496 dBm		
2	N	1	f	25.936 45 GHz	-49.62 dBm		
3							
4							
5							
6							

Feb 15, 2025

10:26:26 AM

BLE_1M-Ant1-2480-1000~26500-PASS