

FCC ID: 2A64B-DEX62
IC: 28593-DEX62

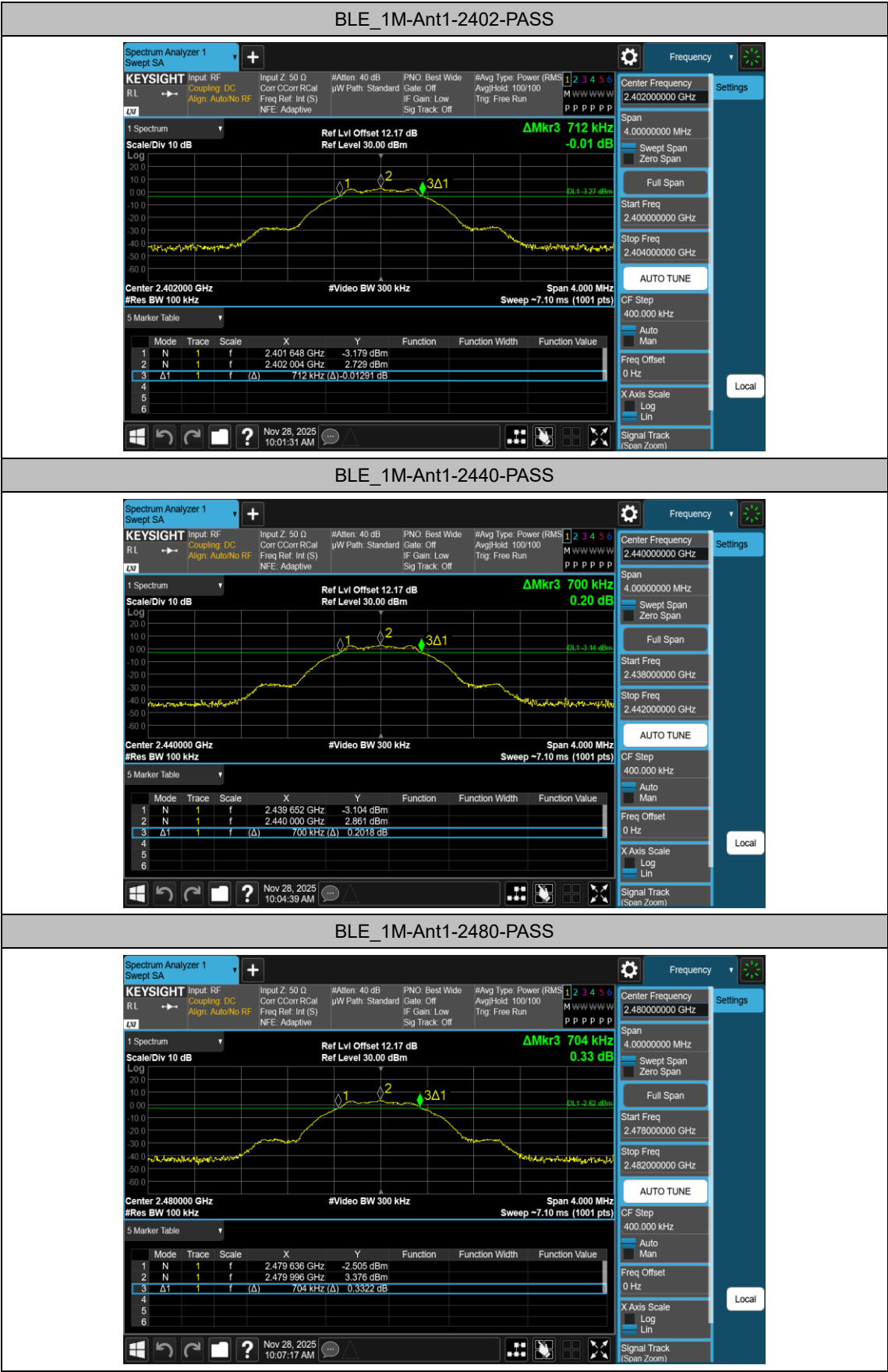
Appendix A of 2511B0890SHA-001 test results of BLE

DTS Bandwidth

Test Result

TestMode	Antenna	Frequency [MHz]	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.712	2401.648	2402.360	0.5	PASS
BLE_1M	Ant1	2440	0.700	2439.652	2440.352	0.5	PASS
BLE_1M	Ant1	2480	0.704	2479.636	2480.340	0.5	PASS

Test Graphs



BLE_1M-Ant1-2440-PASS

Spectrum Analyzer 1
Sweep SA

KEYSIGHT

Input: RF
Coupling: DC
Align: Auto/No RF

Input Z: 50 Ω
Corr: C/Corr/Cal
Freq Ref: Int (S)
NFE: Adaptive

#Atten: 40 dB
 μ W Path: Standard
Gate: Off
IF Gain: Low
Sig Track: Off

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
4.00000000 MHz

Sweep 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 12.17 dB
Ref Level 30.00 dBm

Δ Mkr3 700 kHz
0.20 dB

DL1 -3.14 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	2.439 652 GHz	-3.104 dBm			
2	N	1	f	2.440 000 GHz	2.861 dBm			
3	Δ 1	1	f	(Δ)	700 kHz (Δ)	0.2018 dB		
4								
5								
6								

Nov 28, 2025
10:04:39 AM

BLE_1M-Ant1-2480-PASS

Spectrum Analyzer 1
Sweep SA

KEYSIGHT

Input: RF
Coupling: DC
Align: Auto/No RF

Input Z: 50 Ω
Corr: C/Corr/Cal
Freq Ref: Int (S)
NFE: Adaptive

#Atten: 40 dB
 μ W Path: Standard
Gate: Off
IF Gain: Low
Sig Track: Off

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
4.00000000 MHz

Sweep 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 12.17 dB
Ref Level 30.00 dBm

Δ Mkr3 704 kHz
0.33 dB

DL1 -3.62 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	2.479 636 GHz	-2.505 dBm			
2	N	1	f	2.479 986 GHz	3.376 dBm			
3	Δ 1	1	f	(Δ)	704 kHz (Δ)	0.3322 dB		
4								
5								
6								

Nov 28, 2025
10:07:17 AM

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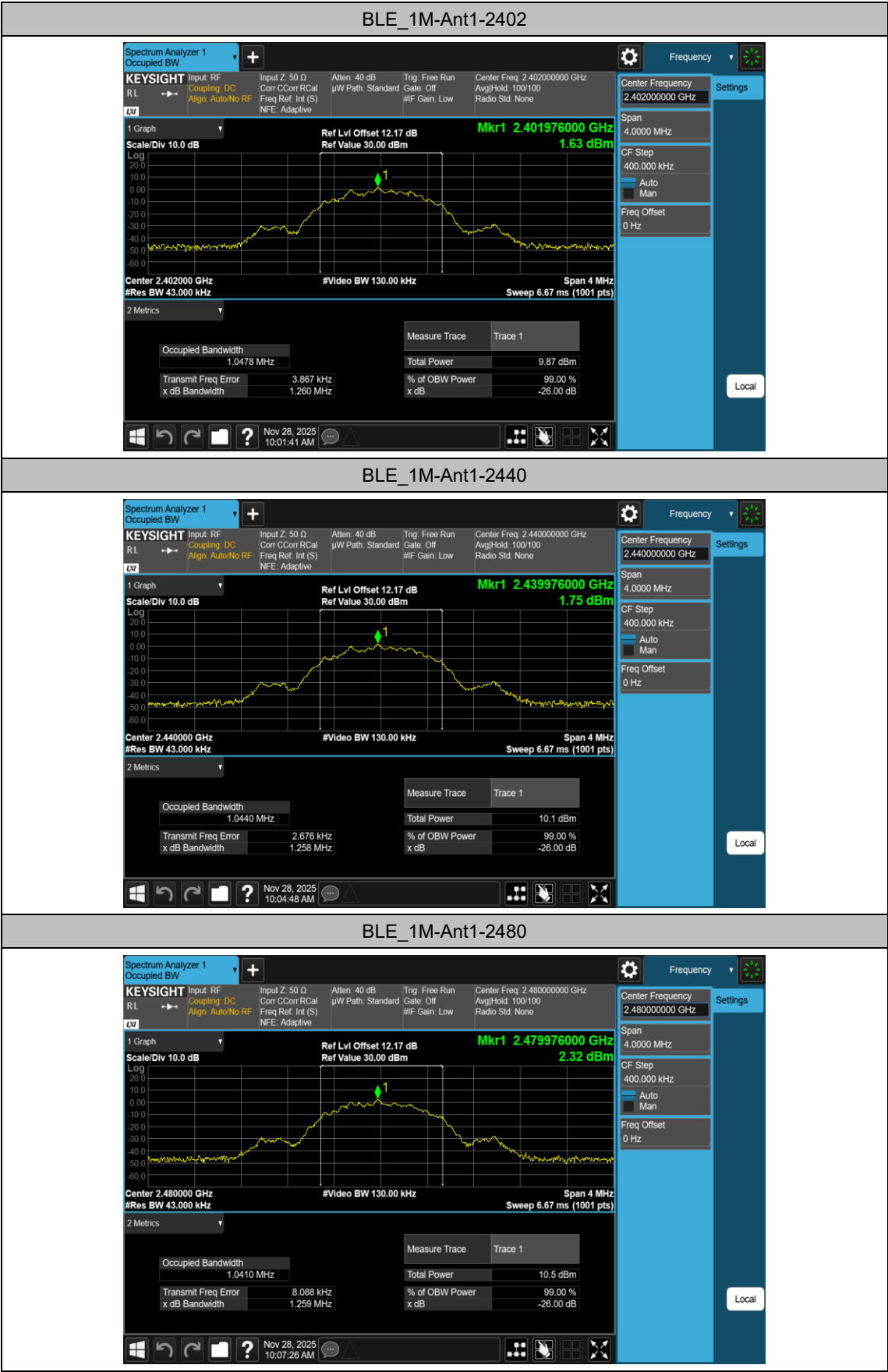
IC:28593-DEX62

Occupied Channel Bandwidth

Test Result

TestMode	Antenna	Frequency [MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.0478	2401.4800	2402.5278	---	---
BLE_1M	Ant1	2440	1.0440	2439.4807	2440.5247	---	---
BLE_1M	Ant1	2480	1.0410	2479.4876	2480.5286	---	---

Test Graphs

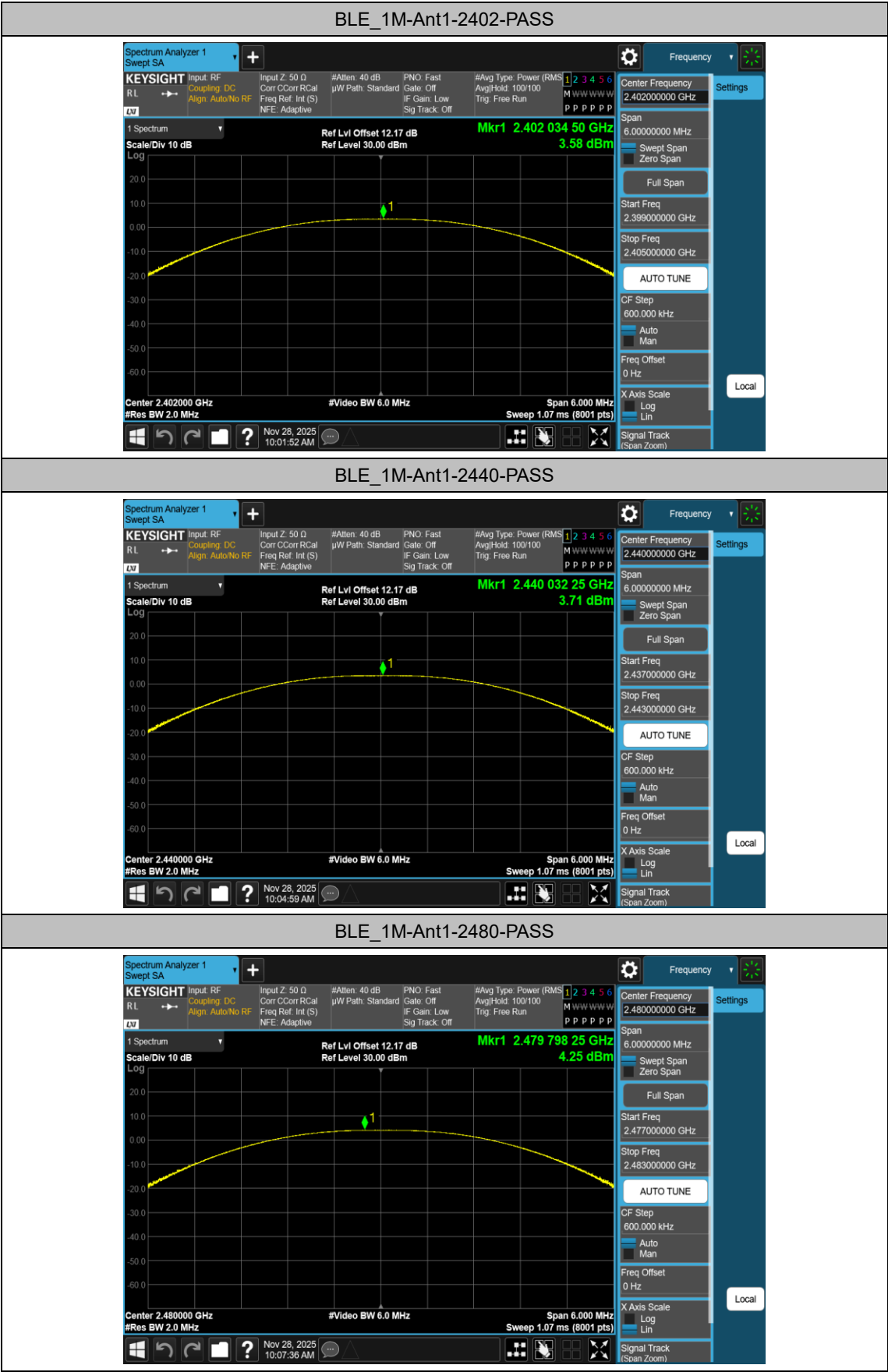


Maximum conducted output power

Test Result Peak

TestMode	Antenna	Frequency [MHz]	Conducted Peak Power[dBm]	Conducted Limit[dBm]	EIRP[dBm]	EIRP Limit[dBm]	Verdict
BLE_1M	Ant1	2402	3.58	≤30	6.97	≤36	PASS
BLE_1M	Ant1	2440	3.71	≤30	7.10	≤36	PASS
BLE_1M	Ant1	2480	4.25	≤30	7.64	≤36	PASS

Test Graphs Peak



BLE_1M-Ant1-2440-PASS

Spectrum Analyzer 1
Sweep SA

KEYSIGHT

Input: RF
RL

Coupling: DC
Align: Auto/No RF

Input Z: 50 Ω
Corr: C/Corr R/Cal
Freq Ref: Int (S)
NFE: Adaptive

#Atten: 40 dB
μW 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
2.440000000 GHz

Span
6.000000000 MHz

Sweep Span
Zero Span

Full Span

Start Freq
2.437000000 GHz

Stop Freq
2.443000000 GHz

AUTO TUNE

CF Step
600.000 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 12.17 dB

Ref Level 30.00 dBm

Mkr1 2.440 032 25 GHz

3.71 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)

Nov 28, 2025
10:04:59 AM

BLE_1M-Ant1-2480-PASS

Spectrum Analyzer 1
Sweep SA

KEYSIGHT

Input: RF
RL

Coupling: DC
Align: Auto/No RF

Input Z: 50 Ω
Corr: C/Corr R/Cal
Freq Ref: Int (S)
NFE: Adaptive

#Atten: 40 dB
μW 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
2.480000000 GHz

Span
6.000000000 MHz

Sweep Span
Zero Span

Full Span

Start Freq
2.477000000 GHz

Stop Freq
2.483000000 GHz

AUTO TUNE

CF Step
600.000 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 12.17 dB

Ref Level 30.00 dBm

Mkr1 2.479 798 25 GHz

4.25 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)

Nov 28, 2025
10:07:36 AM

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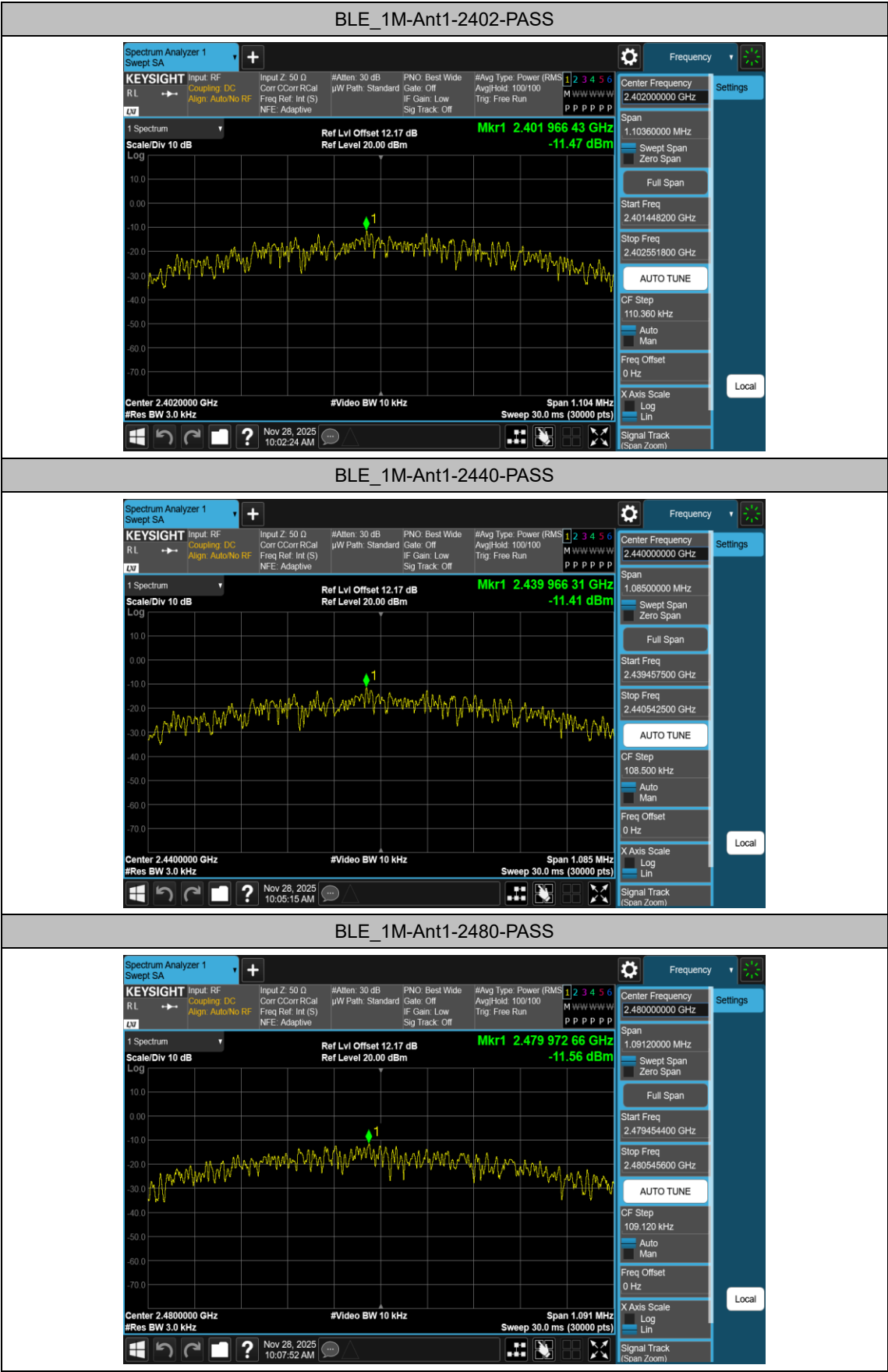
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Maximum power spectral density

Test Result

TestMode	Antenna	Frequency [MHz]	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-11.47	≤8.00	PASS
BLE_1M	Ant1	2440	-11.41	≤8.00	PASS
BLE_1M	Ant1	2480	-11.56	≤8.00	PASS

Test Graphs



BLE_1M-Ant1-2440-PASS

Spectrum Analyzer 1
Swept SA

KEYSIGHT

Input: RF
RL

Coupling: DC
Align: Auto/No RF

Input Z: 50 Ω
Corr: C/Corr/Cal
Freq Ref: Int (S)
NFE: Adaptive

#Atten: 30 dB
μW 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
1.08500000 MHz

Sweep Span
Zero Span

Full Span

Start Freq
2.439457500 GHz

Stop Freq
2.440542500 GHz

AUTO TUNE

CF Step
108.500 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 12.17 dB

Ref Level 20.00 dBm

Mkr1 2.43996631 GHz

-11.41 dBm

Center 2.4400000 GHz

#Video BW 10 kHz

Span 1.085 MHz

#Res BW 3.0 kHz

Sweep 30.0 ms (30000 pts)

Nov 28, 2025
10:05:15 AM

BLE_1M-Ant1-2480-PASS

Spectrum Analyzer 1
Swept SA

KEYSIGHT

Input: RF
RL

Coupling: DC
Align: Auto/No RF

Input Z: 50 Ω
Corr: C/Corr/Cal
Freq Ref: Int (S)
NFE: Adaptive

#Atten: 30 dB
μW 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
1.09120000 MHz

Sweep Span
Zero Span

Full Span

Start Freq
2.479454400 GHz

Stop Freq
2.480545600 GHz

AUTO TUNE

CF Step
109.120 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 12.17 dB

Ref Level 20.00 dBm

Mkr1 2.47997266 GHz

-11.56 dBm

Center 2.4800000 GHz

#Video BW 10 kHz

Span 1.091 MHz

#Res BW 3.0 kHz

Sweep 30.0 ms (30000 pts)

Nov 28, 2025
10:07:52 AM

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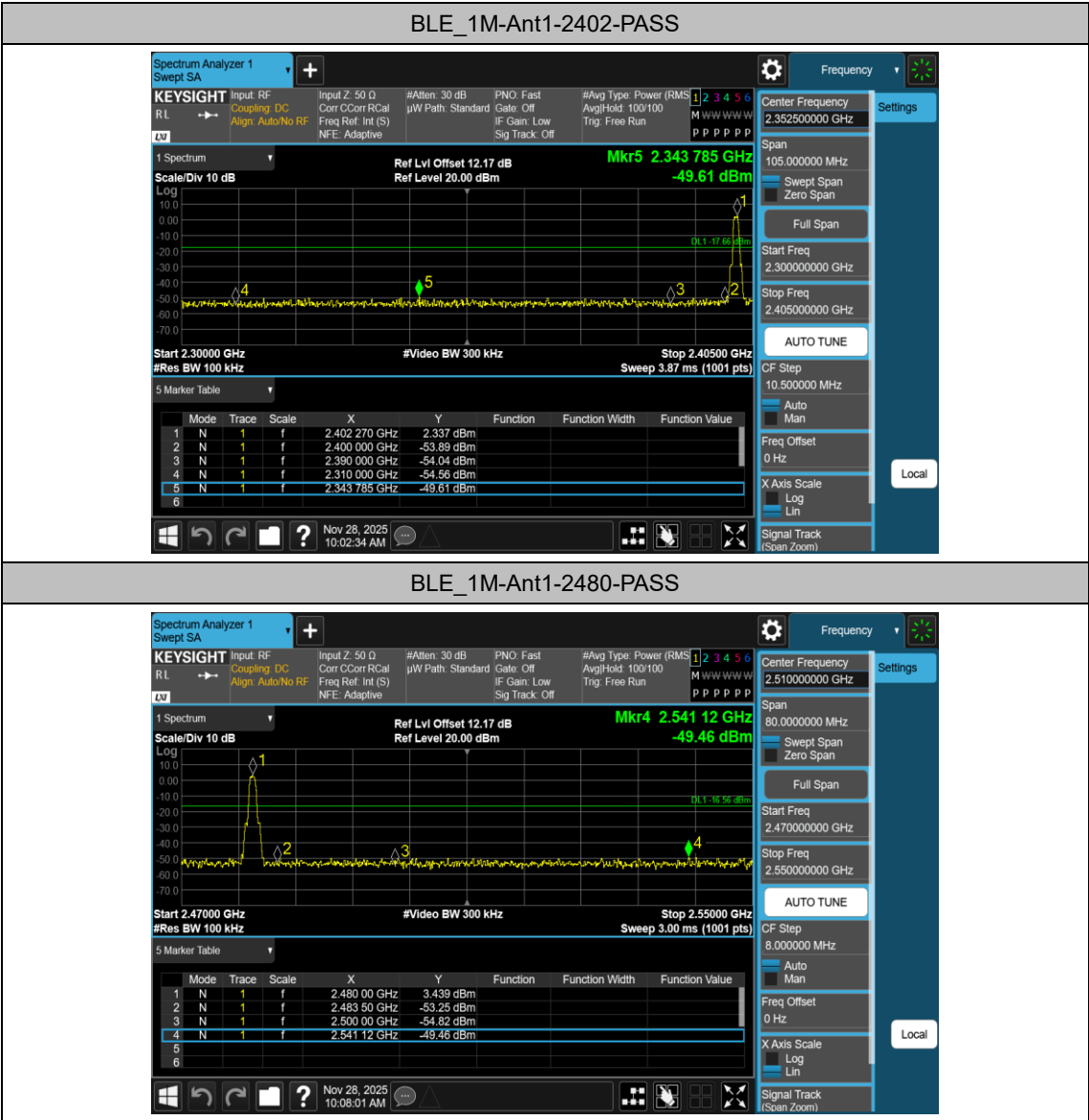
IC:28593-DEX62

Band edge measurements

Test Result

TestMode	Antenna	ChName	Frequency [MHz]	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	2.34	-49.61	≤-17.66	PASS
BLE_1M	Ant1	High	2480	3.44	-49.46	≤-16.56	PASS

Test Graphs



BLE_1M-Ant1-2480-PASS

Spectrum Analyzer 1
Swept SA

KEYSIGHT

Input: RF
Coupling: DC
Align: Auto/No RF

Input Z: 50 Ω
Corr: C/Corr/Cal
Freq Ref: Int (S)
NFE: Adaptive

#Atten: 30 dB
μW 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
2.510000000 GHz

Span
80.0000000 MHz

Sweep Span
Zero Span

Full Span

Start Freq
2.470000000 GHz

Stop Freq
2.550000000 GHz

AUTO TUNE

CF Step
8.0000000 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 12.17 dB
Ref Level 20.00 dBm

Mkr4 2.541 12 GHz
-49.46 dBm

Start 2.47000 GHz
#Res BW 100 kHz

#Video BW 300 kHz

Stop 2.55000 GHz
Sweep 3.00 ms (1001 pts)

5 Marker Table

	Mode	Trace	Scale	X	Y	Function	Function Width	Function Value
1	N	1	f	2.480 00 GHz	3.439 dBm			
2	N	1	f	2.483 50 GHz	-53.25 dBm			
3	N	1	f	2.500 00 GHz	-54.82 dBm			
4	N	1	f	2.541 12 GHz	-49.46 dBm			
5								
6								

Nov 28, 2025
10:08:01 AM

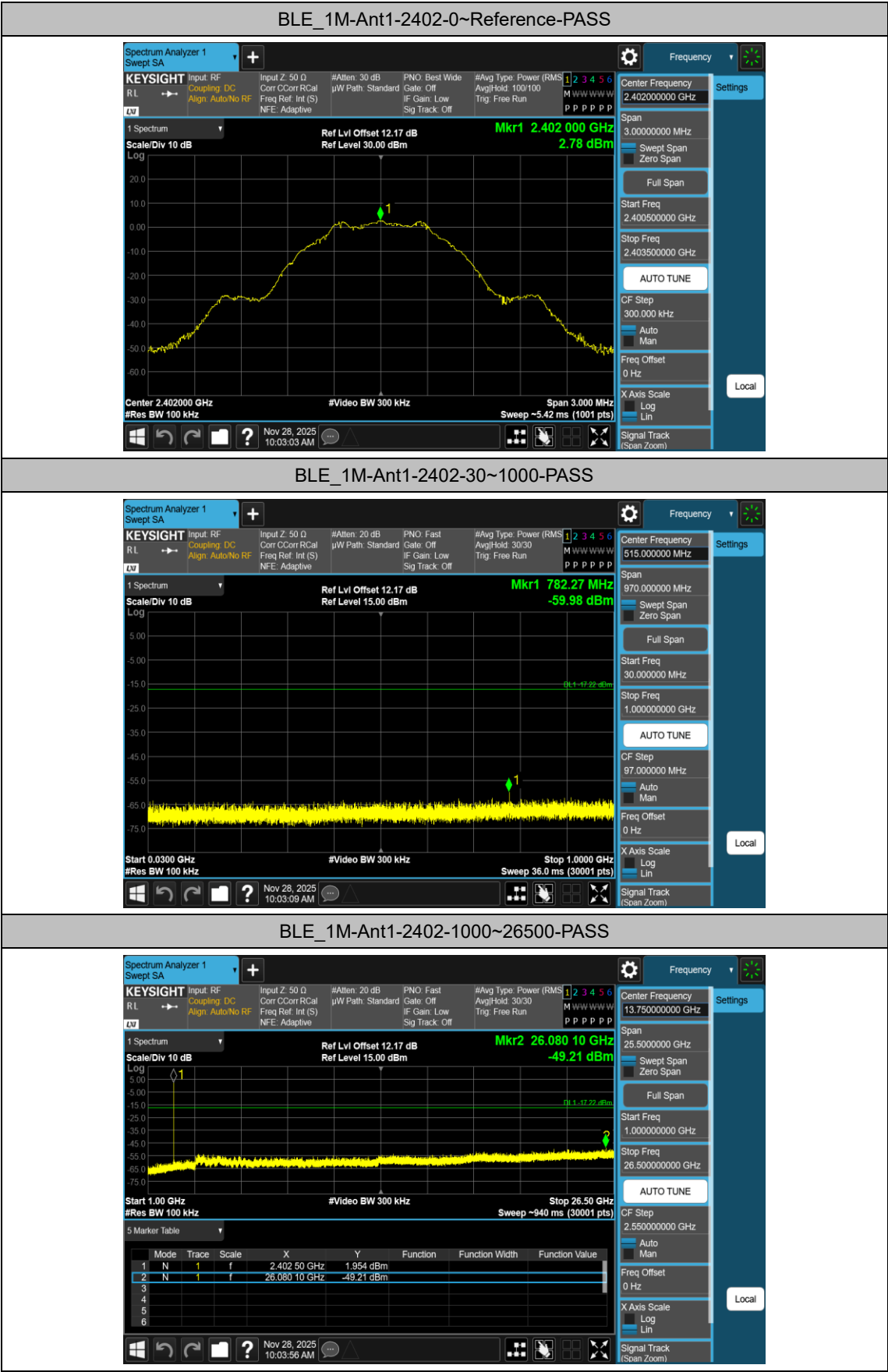
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IC: 28593-DEX62

Conducted Spurious Emission

Test Result

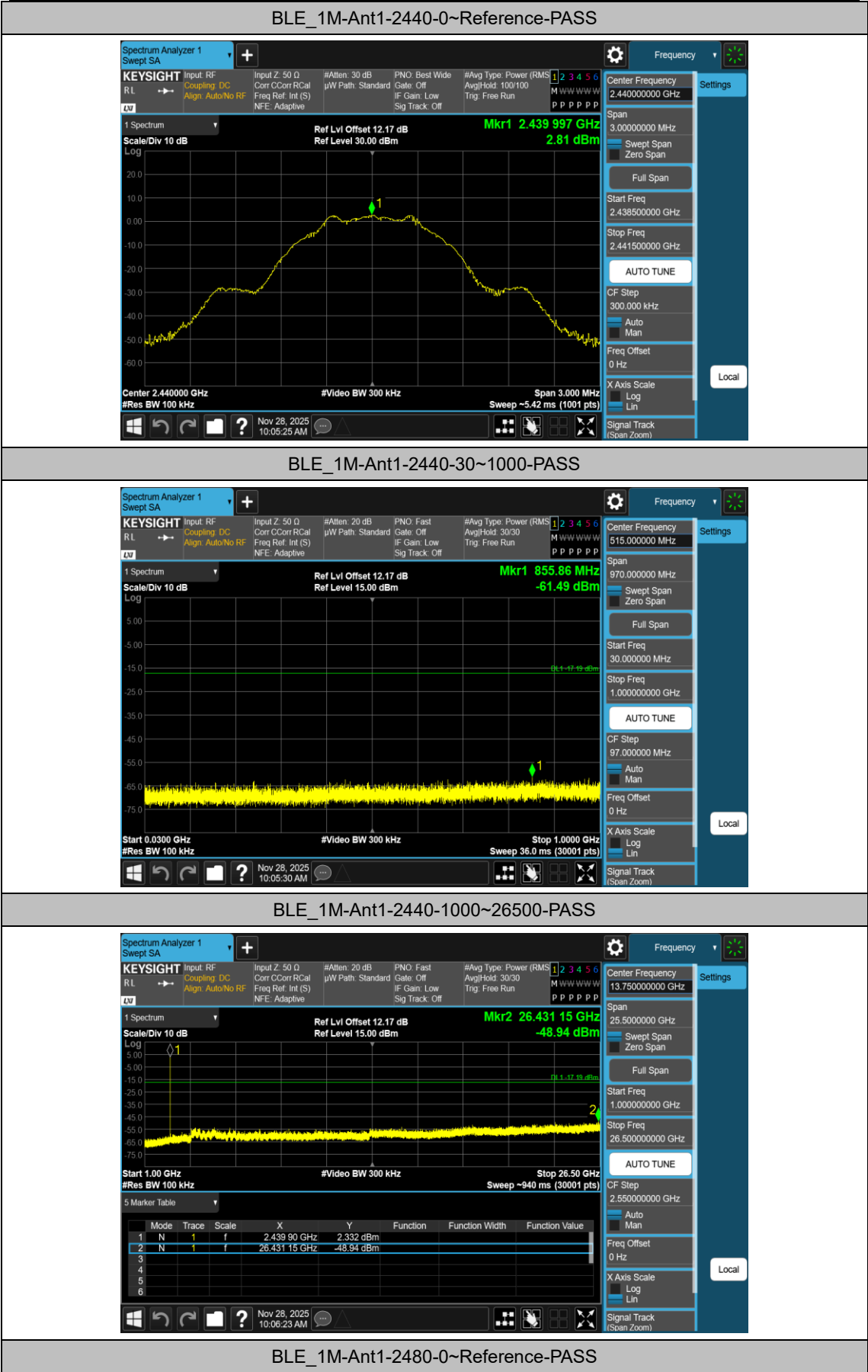
TestMode	Antenna	Frequency [MHz]	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	0~Reference	2.78	2.78	---	PASS
BLE_1M	Ant1	2402	30~1000	2.78	-59.98	≤-17.22	PASS
BLE_1M	Ant1	2402	1000~26500	2.78	-49.21	≤-17.22	PASS
BLE_1M	Ant1	2440	0~Reference	2.81	2.81	---	PASS
BLE_1M	Ant1	2440	30~1000	2.81	-61.49	≤-17.19	PASS
BLE_1M	Ant1	2440	1000~26500	2.81	-48.94	≤-17.19	PASS
BLE_1M	Ant1	2480	0~Reference	3.44	3.44	---	PASS
BLE_1M	Ant1	2480	30~1000	3.44	-61.59	≤-16.56	PASS
BLE_1M	Ant1	2480	1000~26500	3.44	-48.65	≤-16.56	PASS

Test Graphs



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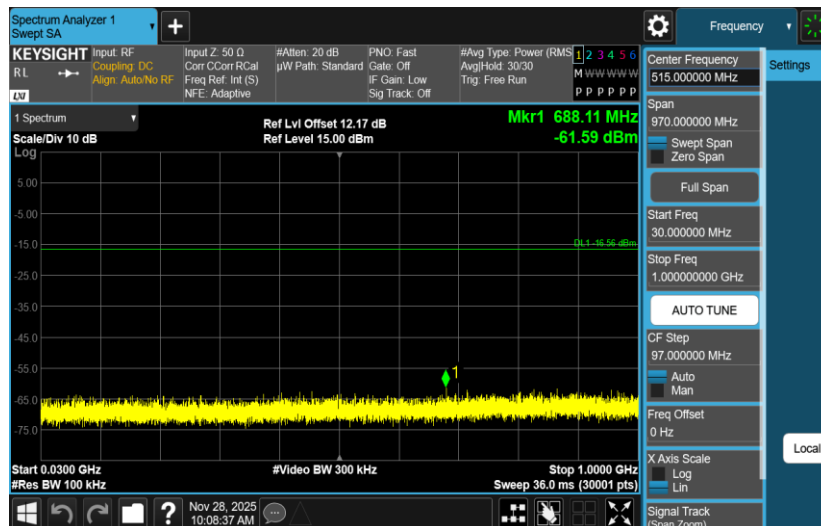


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BLE_1M-Ant1-2480-30~1000-PASS



BLE_1M-Ant1-2480-1000~26500-PASS

