

FCC Part 47 §15.247 2400-2483.5 MHz 2015

DUT Information

Frequencies

2402 MHz (2402 MHz)	WLAN CH 3 (2422 MHz)	WLAN CH 6 (2437 MHz)
WLAN CH 9 (2452 MHz)	2440 MHz (2440 MHz)	2480 MHz (2480 MHz)
WLAN CH 2 (2417 MHz)	WLAN CH 4 (2427 MHz)	WLAN CH 5 (2432 MHz)
WLAN CH 7 (2442 MHz)	WLAN CH 8 (2447 MHz)	WLAN CH 10 (2457 MHz)
WLAN CH 11 (2462 MHz)	WLAN CH 12 (2467 MHz)	WLAN CH 13 (2472 MHz)
WLAN CH 1 (2412 MHz)	BT CH 3 (2405 MHz)	

Bandwidths

2 MHz (2 MHz)	1 MHz (1 MHz)	20 MHz (20 MHz)
40 MHz (40 MHz)		

Power

20.000 dBm (20 dBm)

Beamforming Gain

Powerstep name (value)	Beamforming gain table names
20.000 dBm (20 dBm)	---

Gain Tables

Powerstep name (value)	Gain table names
20.000 dBm (20 dBm)	Port 1: ---;

DUT Settings

No. of transmission chains	1
Equipment Type	Other
Digital Modulation	Yes
Frequency Hopping	No

Hardware Setup: WMS Measurements\TS8997

Spectrum Analyzer:	SA FSV 40 (SA FSV 40) @ VISA (ADR TCPIP::192.168.48.111::INST0::INSTR), SN 1307.9002K40/101076, FW 3.40
Vector Generator:	VG SMBV100B (VG SMBV100B) @ VISA (ADR TCPIP::192.168.48.29::INST0::INSTR), SN 101685, FW 4.70.006.33
Generator:	SMB100Aa (SMB100A) @ VISA (ADR TCPIP::192.168.48.28::INST0::INSTR), SN 177894, FW / Drv:Rev 2.21.0, 07/2016, CVI 2015
OSP:	OSP-B157W (OSP-B157W) @ VISA (ADR TCPIP::192.168.48.157::INST0::INSTR), SN 1527.1144. /, FW 1.27.0.0

Summary

Test	Frequency (MHz)	Nominal Power (dBm)	Nominal Bandwidth (MHz)	Result
Minimum Emission Bandwidth 6 dB	2422.000	20.0	20.000000	PASS
Emission Bandwidth 20 dB	2422.000	20.0	20.000000	PASS
RF output power	2422.000	20.0	20.000000	PASS
Peak Power Spectral Density	2422.000	20.0	20.000000	PASS
Band Edge low	2422.000	20.0	20.000000	PASS
Tx Spurious Emission	2422.000	20.0	20.000000	PASS
Emission Bandwidth 20 dB	2437.000	20.0	20.000000	PASS
Minimum Emission Bandwidth 6 dB	2437.000	20.0	20.000000	PASS
RF output power	2437.000	20.0	20.000000	PASS
Peak Power Spectral Density	2437.000	20.0	20.000000	PASS
Tx Spurious Emission	2437.000	20.0	20.000000	PASS
Emission Bandwidth 20 dB	2452.000	20.0	20.000000	PASS
Minimum Emission Bandwidth 6 dB	2452.000	20.0	20.000000	PASS
RF output power	2452.000	20.0	20.000000	PASS
Peak Power Spectral Density	2452.000	20.0	20.000000	PASS
Band Edge high	2452.000	20.0	20.000000	PASS
Tx Spurious Emission	2452.000	20.0	20.000000	PASS

Minimum Emission Bandwidth 6 dB (2422 MHz; 20.000 dBm; 20 MHz)

Customized settings.

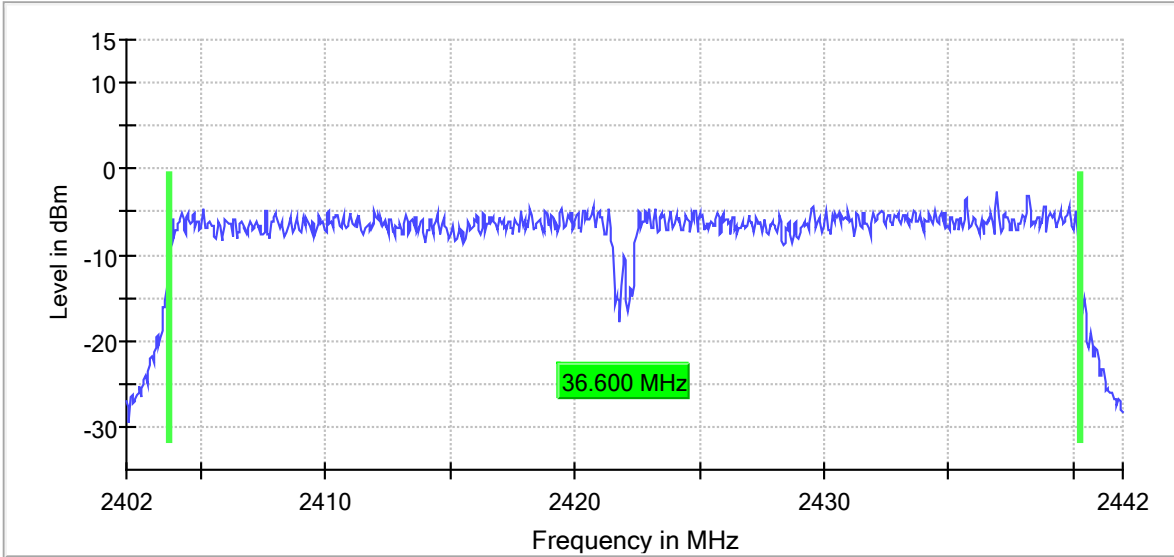
6 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2422.000000	36.600000	0.500000	---	2403.675000	2440.275000

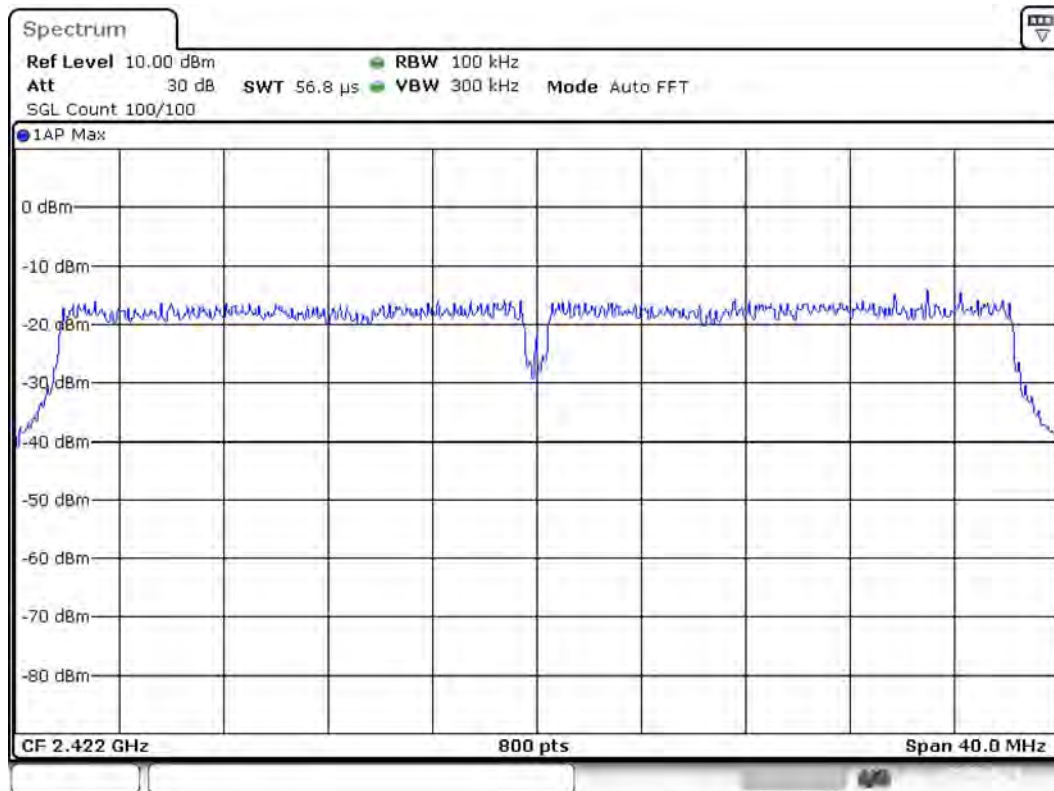
(continuation of the "6 dB Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
2422.000000	-2.7	PASS

6 dB Bandwidth



Bandwidth



Date: 28.AUG.2024 08:13:06

Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.40200 GHz	2.40200 GHz
Stop Frequency	2.44200 GHz	2.44200 GHz
Span	40.000 MHz	40.000 MHz
RBW	100.000 kHz	~ 100.000 kHz
VBW	300.000 kHz	~ 300.000 kHz
SweepPoints	800	~ 800
SweepTime	56.836 µs	AUTO
Reference Level	10.000 dBm	10.000 dBm
Attenuation	30.000 dB	AUTO
Detector	Peak	Peak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	FFT	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	1 / max. 1	max. 1
Stable	0 / 1	1
Max Stable Difference	0.00 dB	0.50 dB

Emission Bandwidth 20 dB (2422 MHz; 20.000 dBm; 20 MHz)

Customized settings.

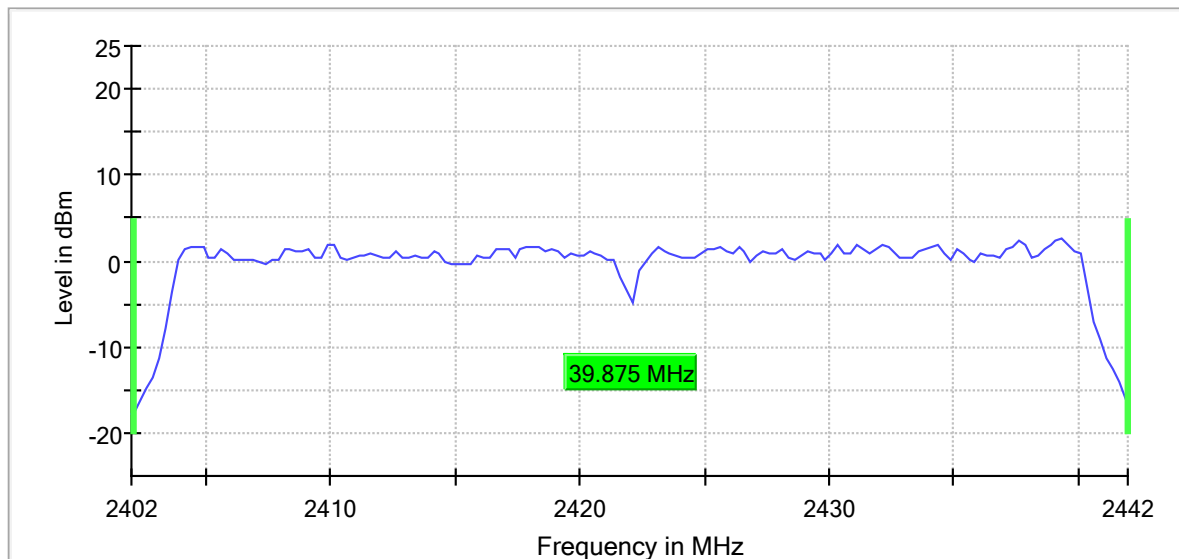
20 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2422.000000	39.875000	---	---	2402.125000	2442.000000

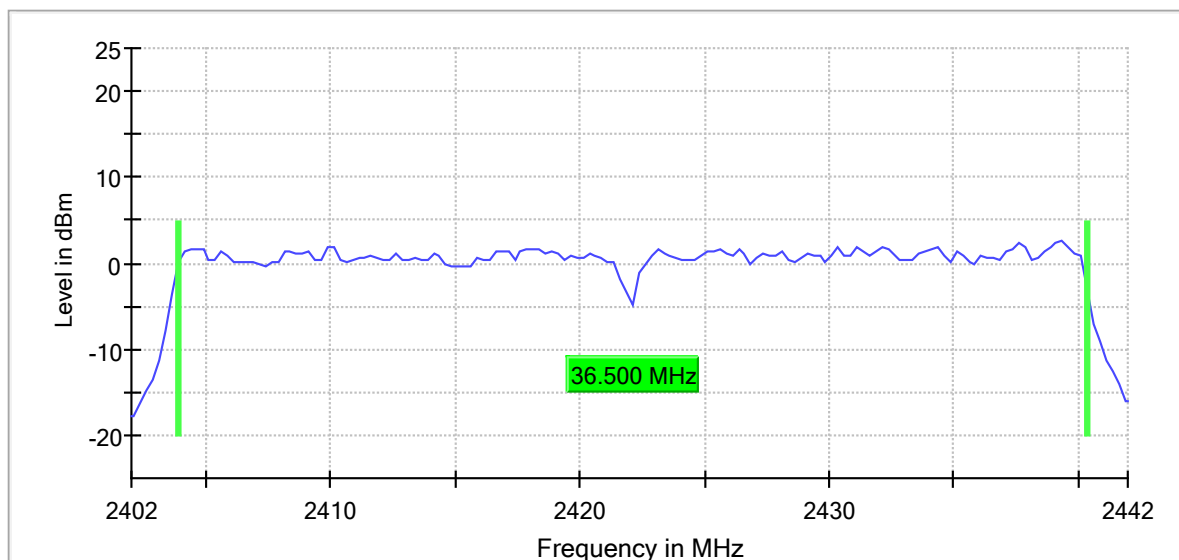
(continuation of the "20 dB Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
2422.000000	2.5	PASS

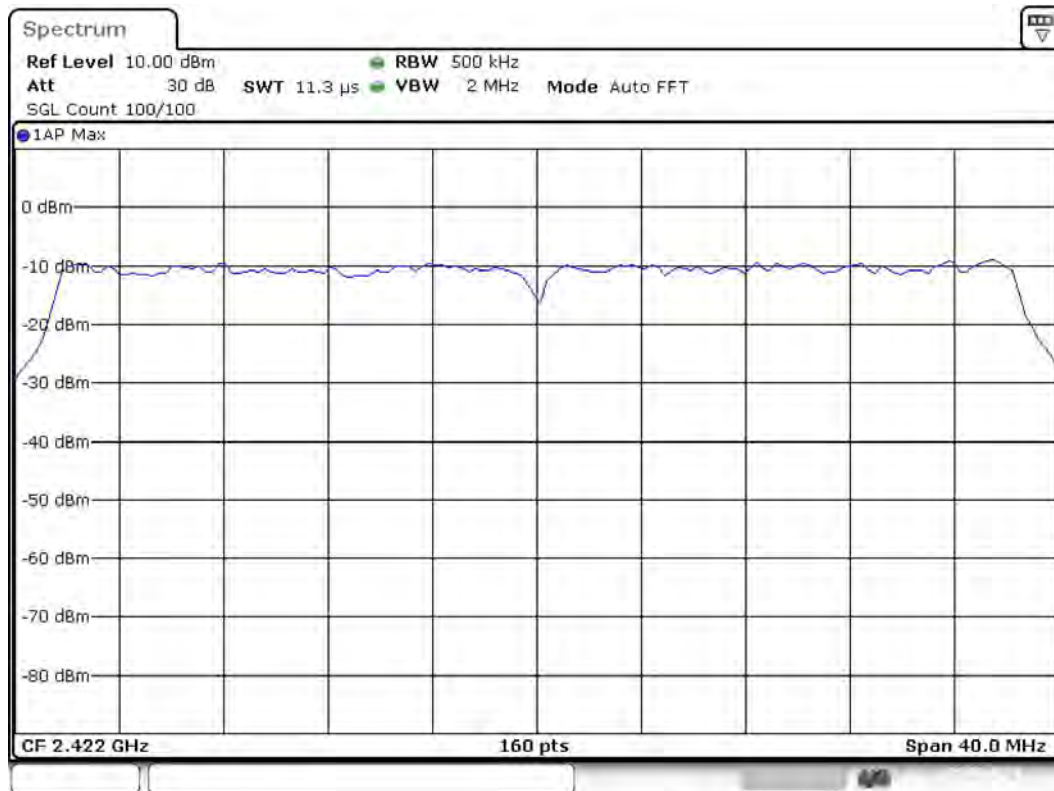
20 dB Bandwidth



99 % Bandwidth



Bandwidth



Date: 28.AUG.2024 08:13:18

Measurement

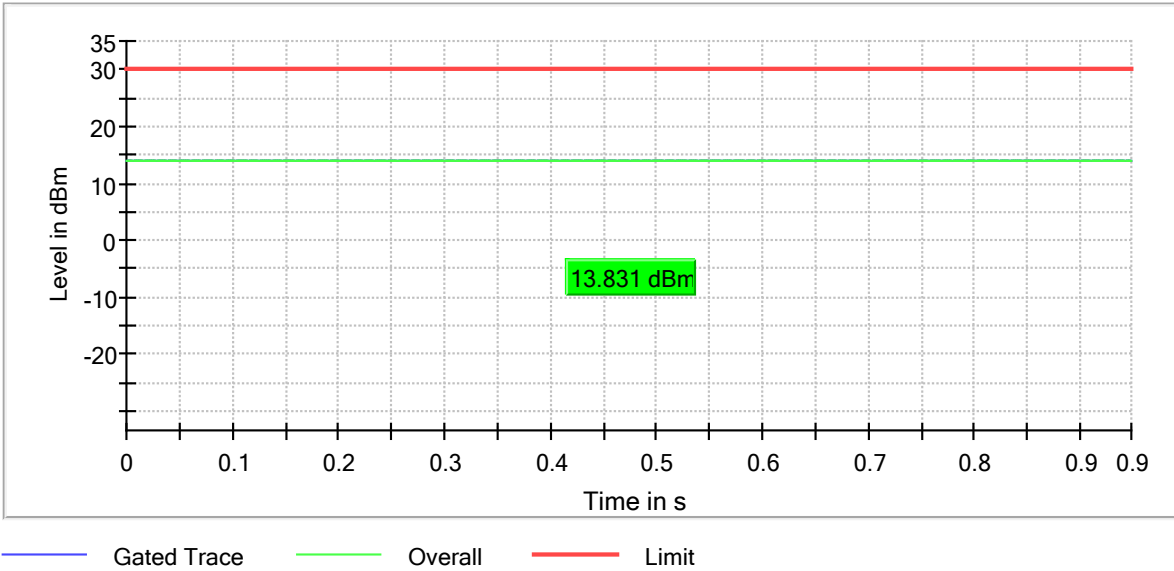
Setting	Instrument Value	Target Value
Start Frequency	2.40200 GHz	2.40200 GHz
Stop Frequency	2.44200 GHz	2.44200 GHz
Span	40.000 MHz	40.000 MHz
RBW	500.000 kHz	>= 500.000 kHz
VBW	2.000 MHz	>= 1.500 MHz
SweepPoints	160	~ 160
SweepTime	11.344 µs	AUTO
Reference Level	10.000 dBm	10.000 dBm
Attenuation	30.000 dB	AUTO
Detector	Peak	Peak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	FFT	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	1 / max. 1	max. 1
Stable	0 / 1	1
Max Stable Difference	0.00 dB	0.50 dB

RF output power (2422 MHz; 20.000 dBm; 20 MHz)

Result

DUT Frequency (MHz)	Gated RMS (dBm)	Limit Max (dBm)	Gated EIRP (dBm)	DutyCycle (%)	Result
2422.000000	13.8	30.0	13.8	94.948	PASS

Gated Trace



OSP PowerMeter settings

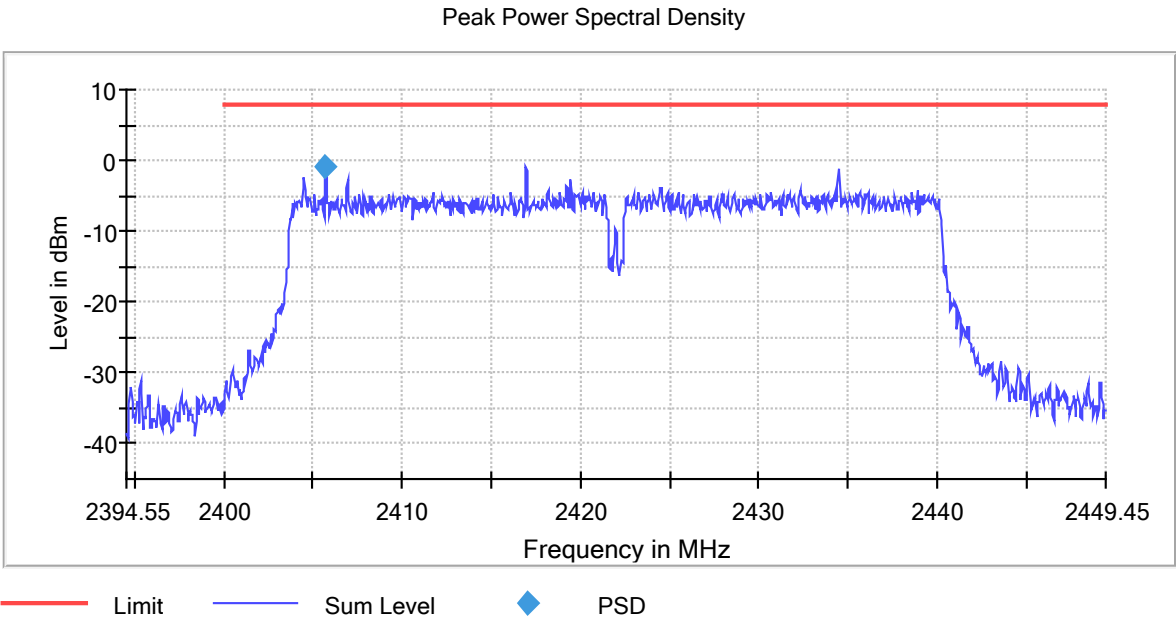
Setting	Instrument Value	Target Value
Measurement Time	1.000 s	1.000 s
Points	1000000	1000000
Time resolution	1.000 µs	1.000 µs

Peak Power Spectral Density (2422 MHz; 20.000 dBm; 20 MHz)

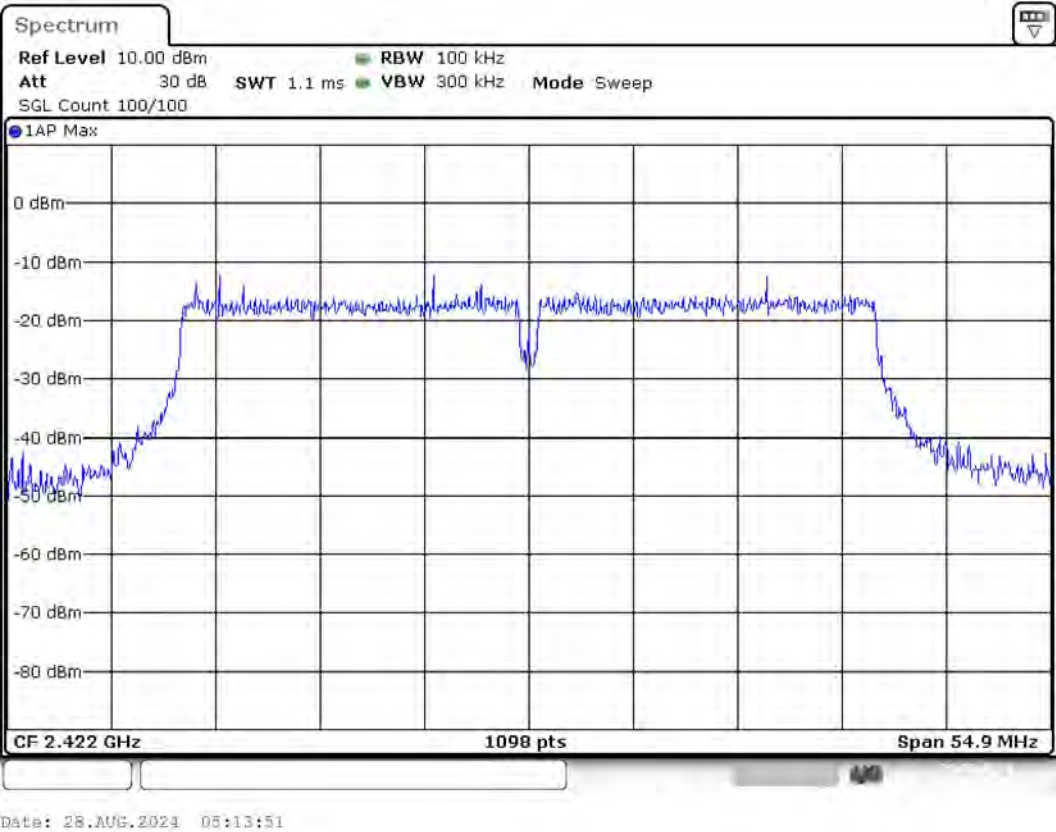
Customized settings.

Result

DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max (dBm)	Result
2422.000000	2405.725000	-0.943	8.0	PASS



PSD Connector 1



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.39455 GHz	2.39455 GHz
Stop Frequency	2.44945 GHz	2.44945 GHz
Span	54.900 MHz	54.900 MHz
RBW	100.000 kHz	<= 100.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	1098	~ 1098
SweepTime	1.100 ms	AUTO
Reference Level	10.000 dBm	10.000 dBm
Attenuation	30.000 dB	AUTO
Detector	Peak	Peak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	Sweep	Sweep
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	1 / max. 1	max. 1
Stable	0 / 1	1
Max Stable Difference	0.00 dB	0.50 dB

Band Edge low (2422 MHz; 20.000 dBm; 20 MHz)

Customized settings.

Result

DUT Frequency (MHz)	Result
2422.000000	PASS

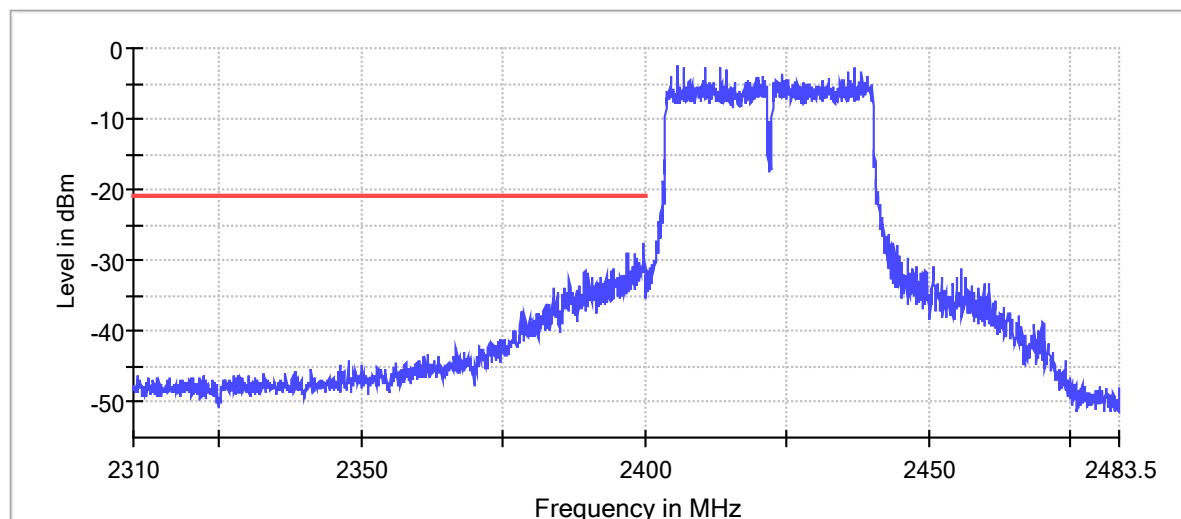
Inband Peak

Frequency (MHz)	Level (dBm)
2405.725000	-2.3

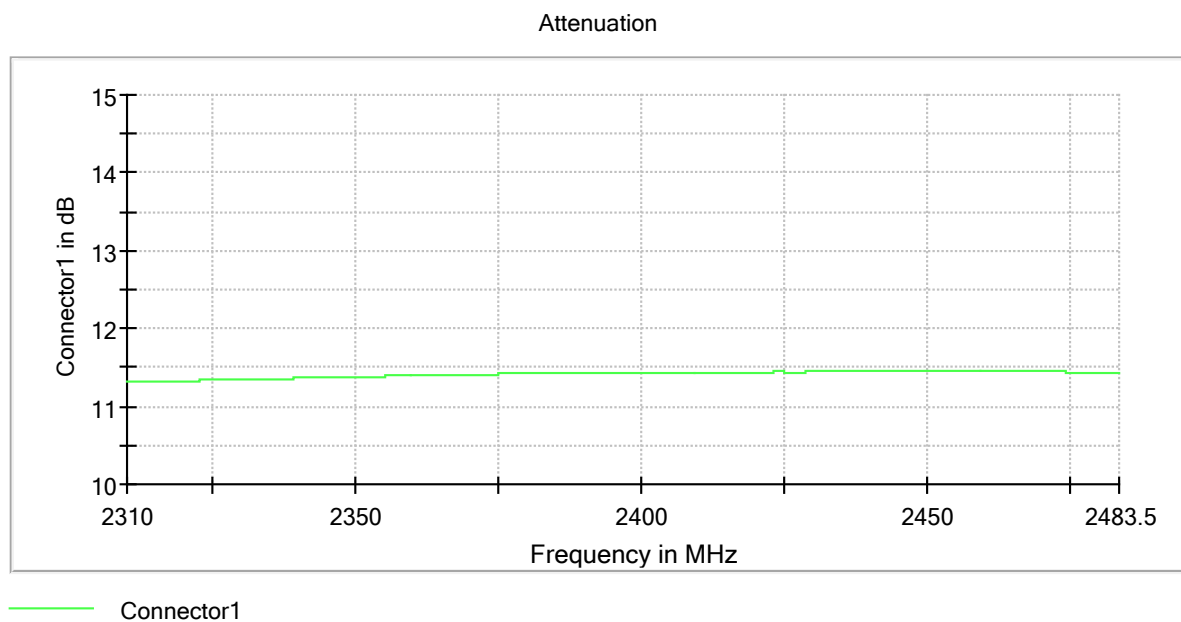
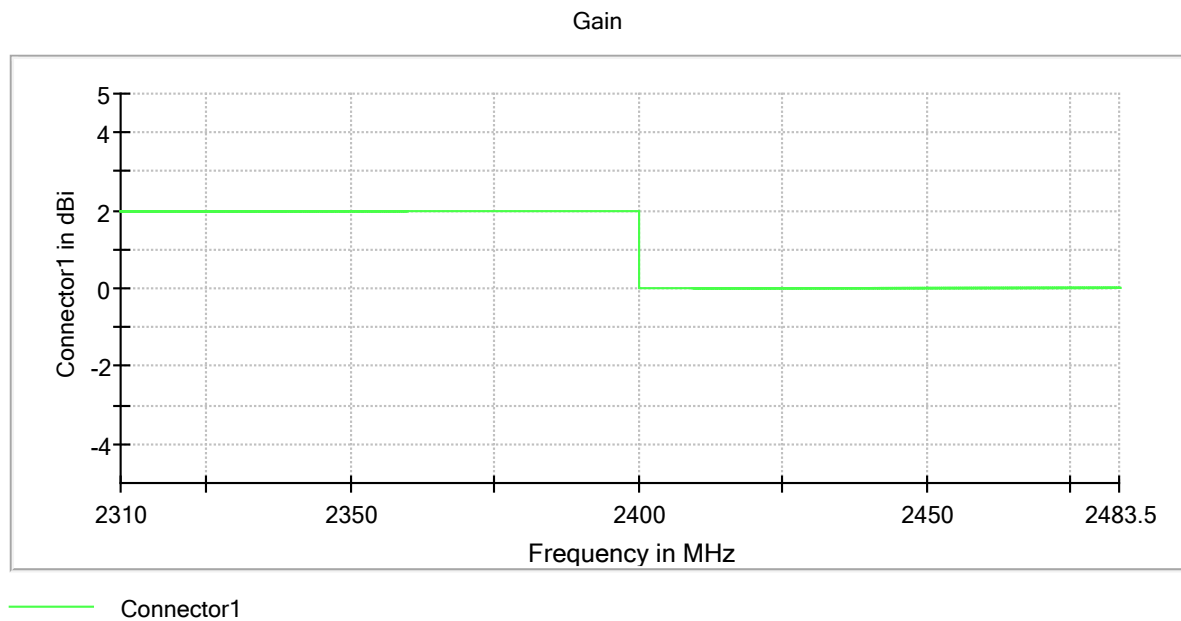
Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2399.825000	-27.4	6.5	-20.9	PASS
2399.775000	-27.4	6.5	-20.9	PASS
2399.875000	-28.6	7.7	-20.9	PASS
2399.725000	-28.6	7.7	-20.9	PASS
2396.975000	-28.9	7.9	-20.9	PASS
2398.225000	-29.1	8.1	-20.9	PASS
2396.925000	-29.1	8.2	-20.9	PASS
2398.175000	-29.2	8.3	-20.9	PASS
2399.925000	-29.5	8.5	-20.9	PASS
2398.525000	-29.5	8.6	-20.9	PASS
2397.025000	-29.6	8.6	-20.9	PASS
2398.475000	-29.8	8.9	-20.9	PASS
2398.575000	-30.2	9.2	-20.9	PASS
2399.575000	-30.3	9.4	-20.9	PASS
2399.125000	-30.4	9.4	-20.9	PASS

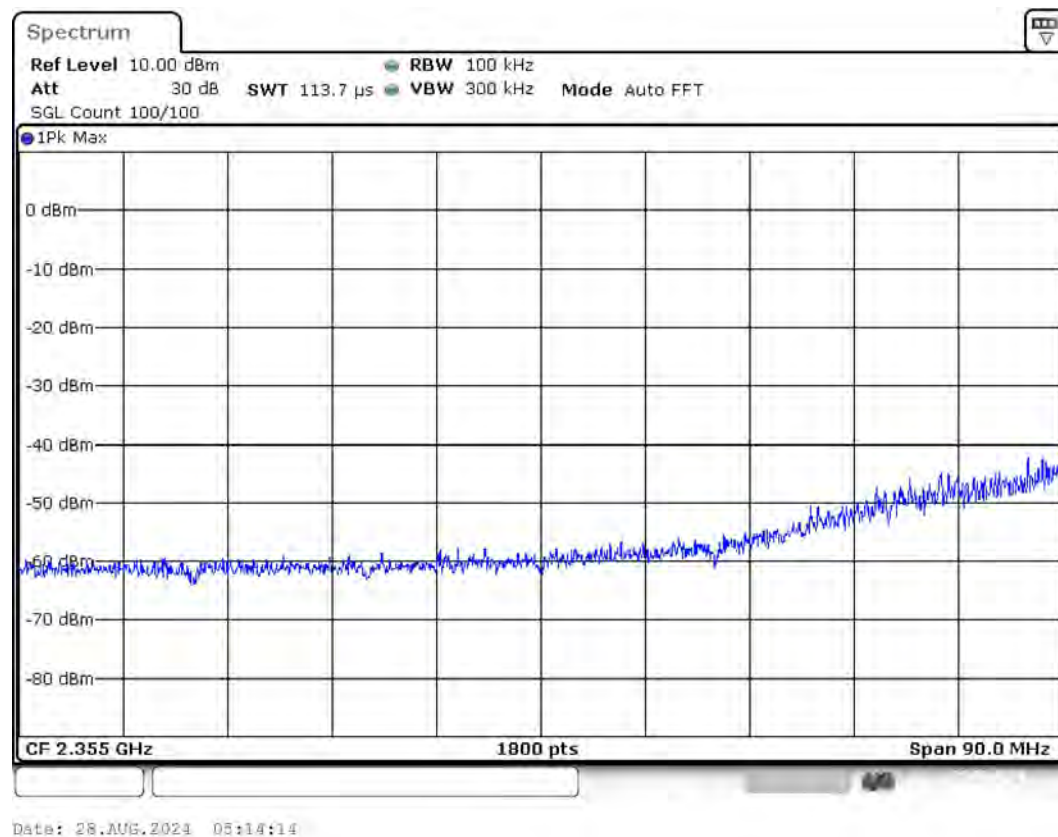
Band Edge



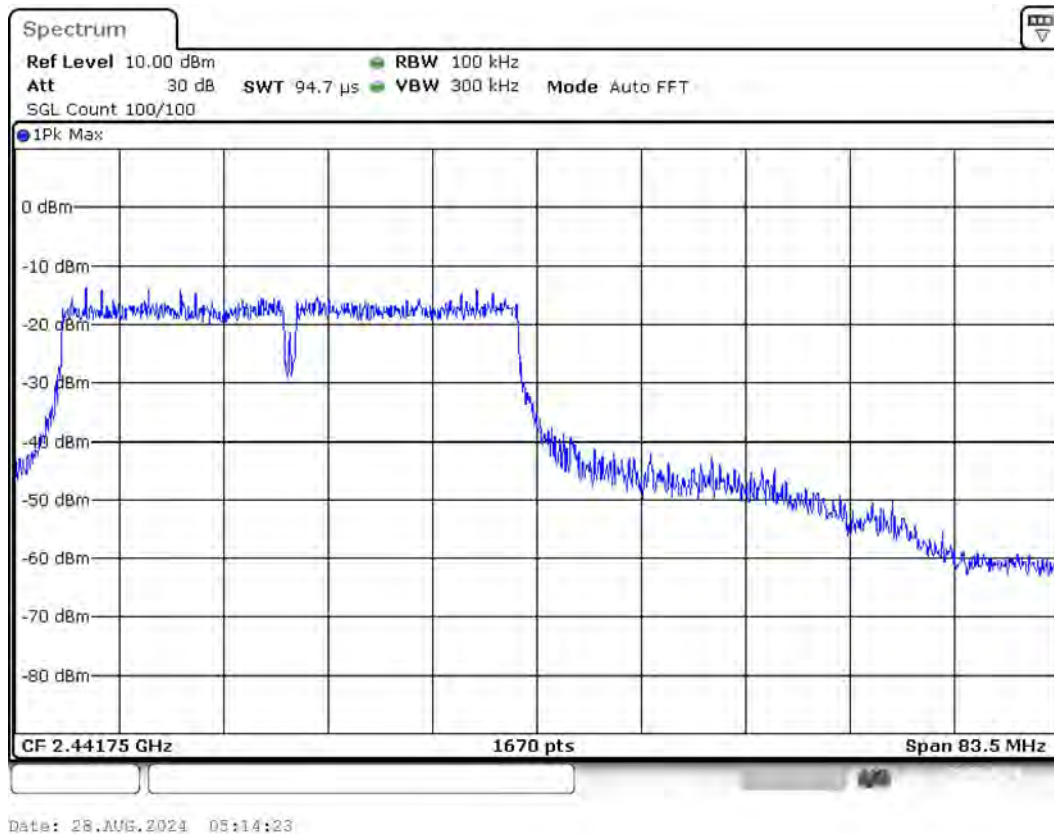
— Limit — Sum Level × Fail



Band Edge Connector 1_0



Band Edge Connector 1_1



Measurement 1

Setting	Instrument Value	Target Value
Start Frequency	2.31000 GHz	2.31000 GHz
Stop Frequency	2.40000 GHz	2.40000 GHz
Span	90.000 MHz	90.000 MHz
RBW	100.000 kHz	<= 100.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	1800	~ 1800
Sweptime	113.672 μs	AUTO
Reference Level	10.000 dBm	10.000 dBm
Attenuation	30.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	FFT	AUTO
Preamplifier	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	8 / max. 11	max. 11
Stable	1 / 1	1
Max Stable Difference	0.00 dB	0.50 dB

Measurement 2

Setting	Instrument Value	Target Value
Start Frequency	2.40000 GHz	2.40000 GHz
Stop Frequency	2.48350 GHz	2.48350 GHz
Span	83.500 MHz	83.500 MHz
RBW	100.000 kHz	<= 100.000 kHz
VBW	300.000 kHz	>= 300.000 kHz

SweepPoints	1670	~ 1670
SweepTime	94.727 µs	AUTO
Reference Level	10.000 dBm	10.000 dBm
Attenuation	30.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	FFT	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	1 / max. 1	max. 1
Stable	0 / 1	1
Max Stable Difference	0.00 dB	0.50 dB

Tx Spurious Emission (2422 MHz; 20.000 dBm; 20 MHz)

Customized settings.

Result

DUT Frequency (MHz)	Result
2422.000000	PASS

Final measurements

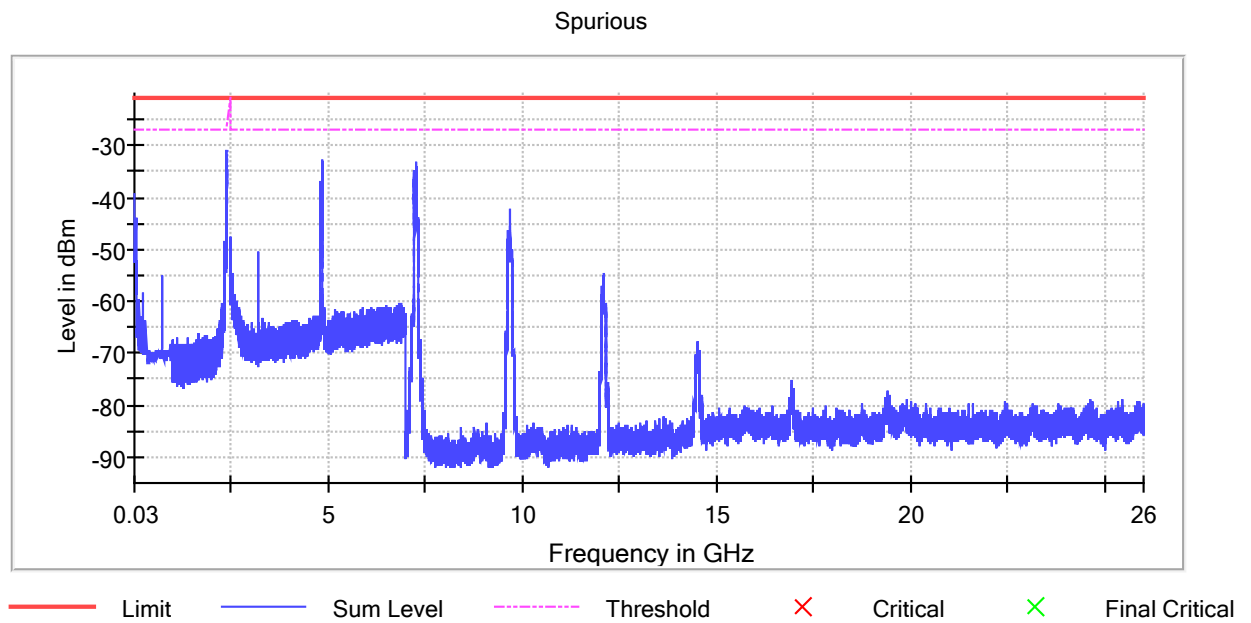
Frequency (MHz)	Level Pre Measurement (dBm)	level (dBm)	Limit (dBm)	Margin (dB)	Result
---	---	---	---	---	---

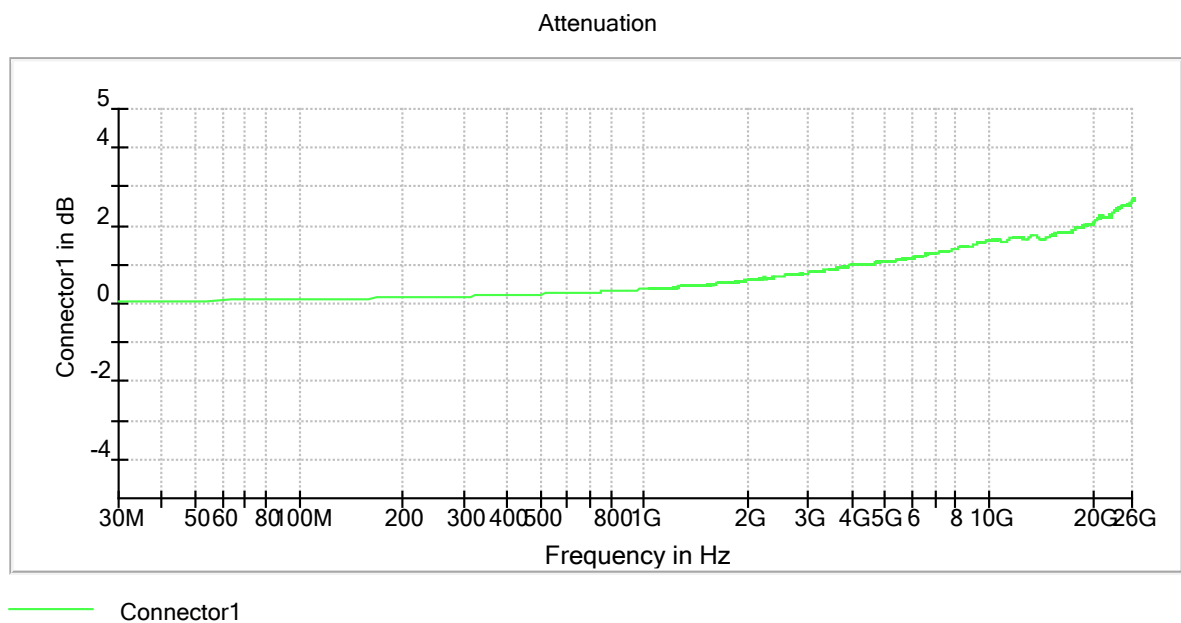
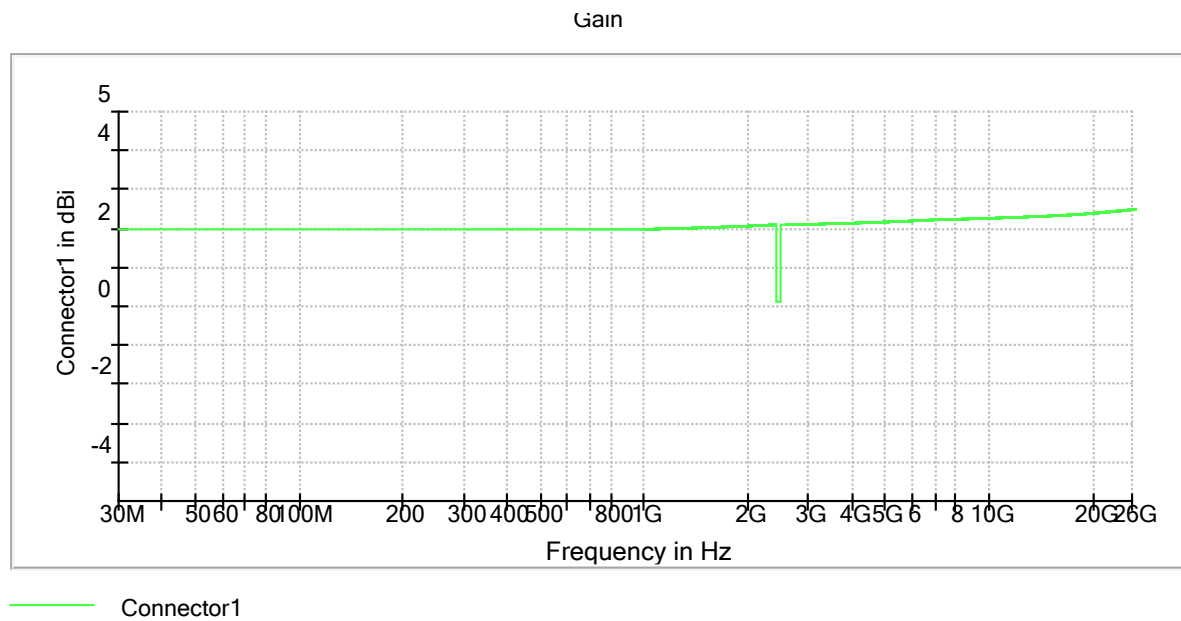
Pre Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)
2399.475000	-31.0	10.1	-20.9
2399.425000	-31.2	10.2	-20.9
2399.725000	-31.2	10.2	-20.9
2399.675000	-31.3	10.3	-20.9
2399.525000	-31.4	10.4	-20.9
2396.675000	-31.8	10.9	-20.9
2395.725000	-31.9	10.9	-20.9
2399.575000	-31.9	11.0	-20.9
2396.625000	-32.0	11.0	-20.9
2399.775000	-32.2	11.3	-20.9
2395.675000	-32.2	11.3	-20.9
2395.775000	-32.2	11.3	-20.9
2399.625000	-32.5	11.6	-20.9
2399.125000	-32.7	11.7	-20.9
2396.325000	-32.8	11.8	-20.9

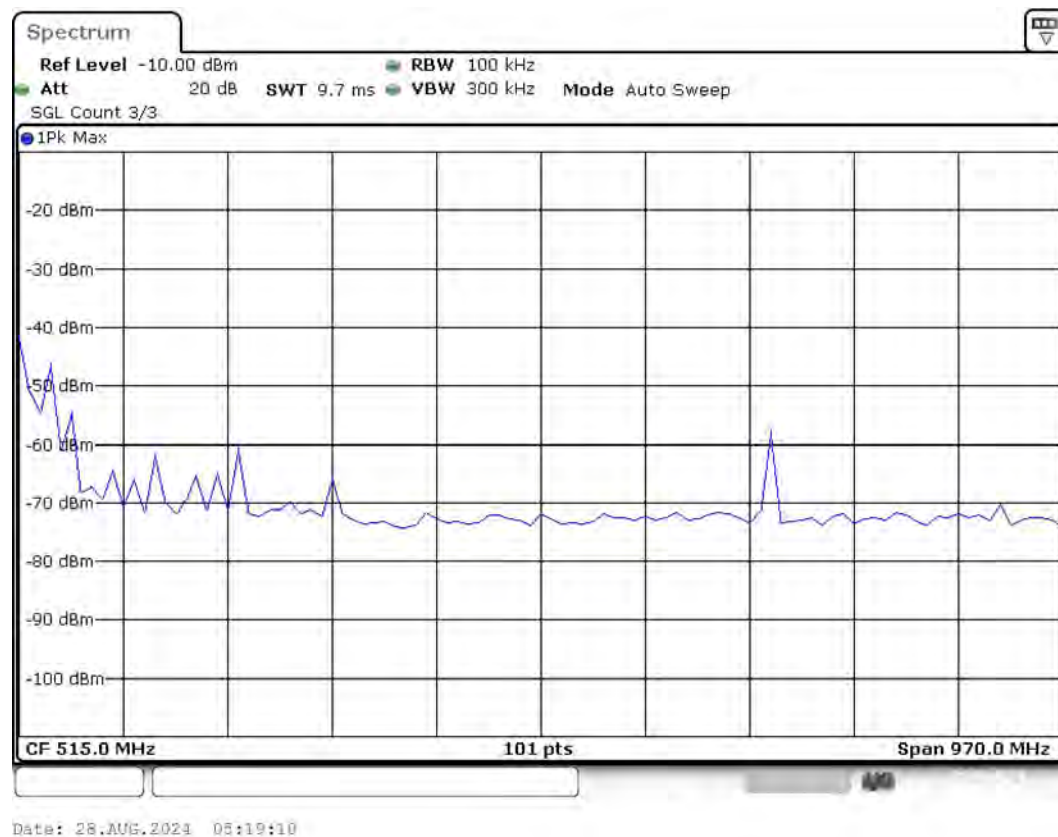
Measurement Settings

Start Frequency (MHz)	Stop Frequency (MHz)	Pre Measurement	Final Measurement
30.000000	1000.000000	1	1
1000.000000	2400.000000	2	2
2483.500000	7000.000000	2	2
7000.000000	18000.000000	2	2
18000.000000	26000.000000	2	2

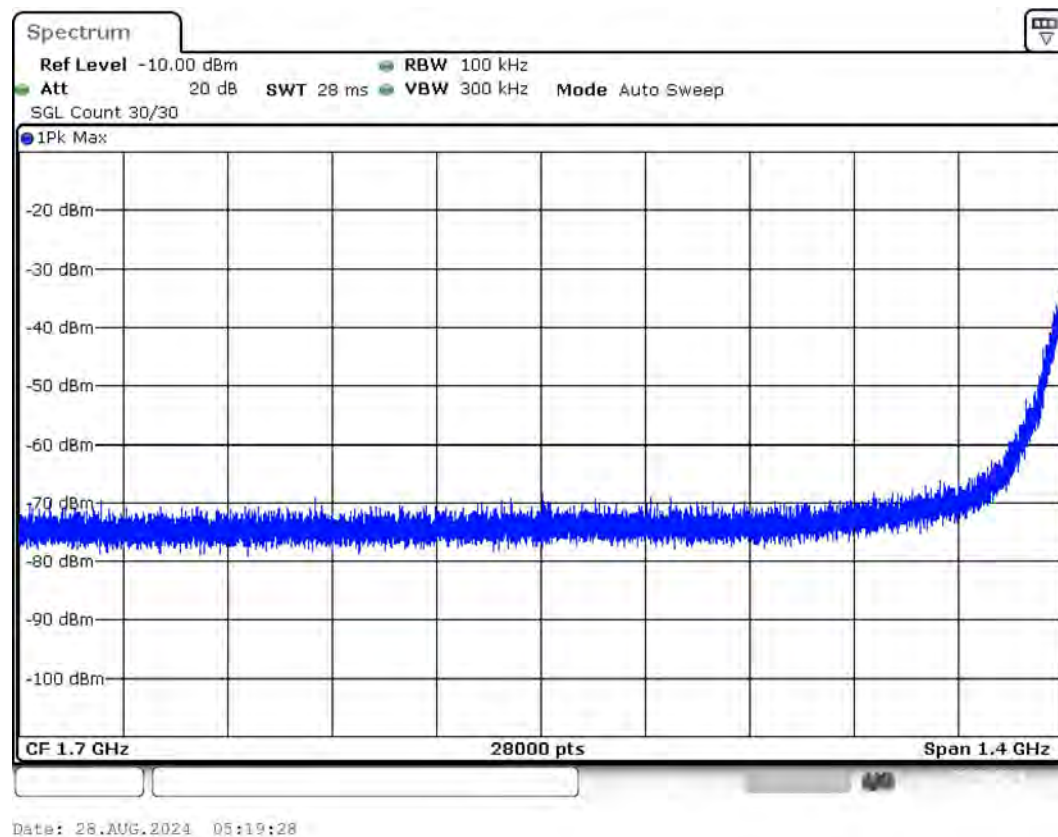




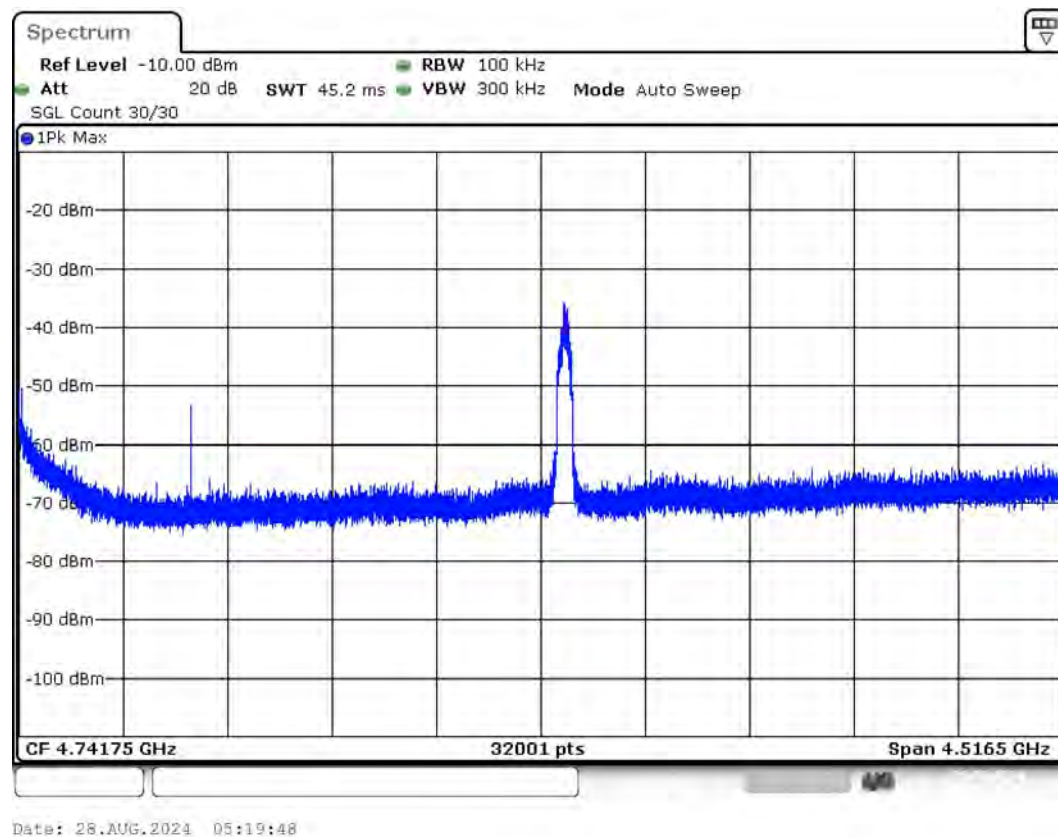
Spurious Connector 1_0



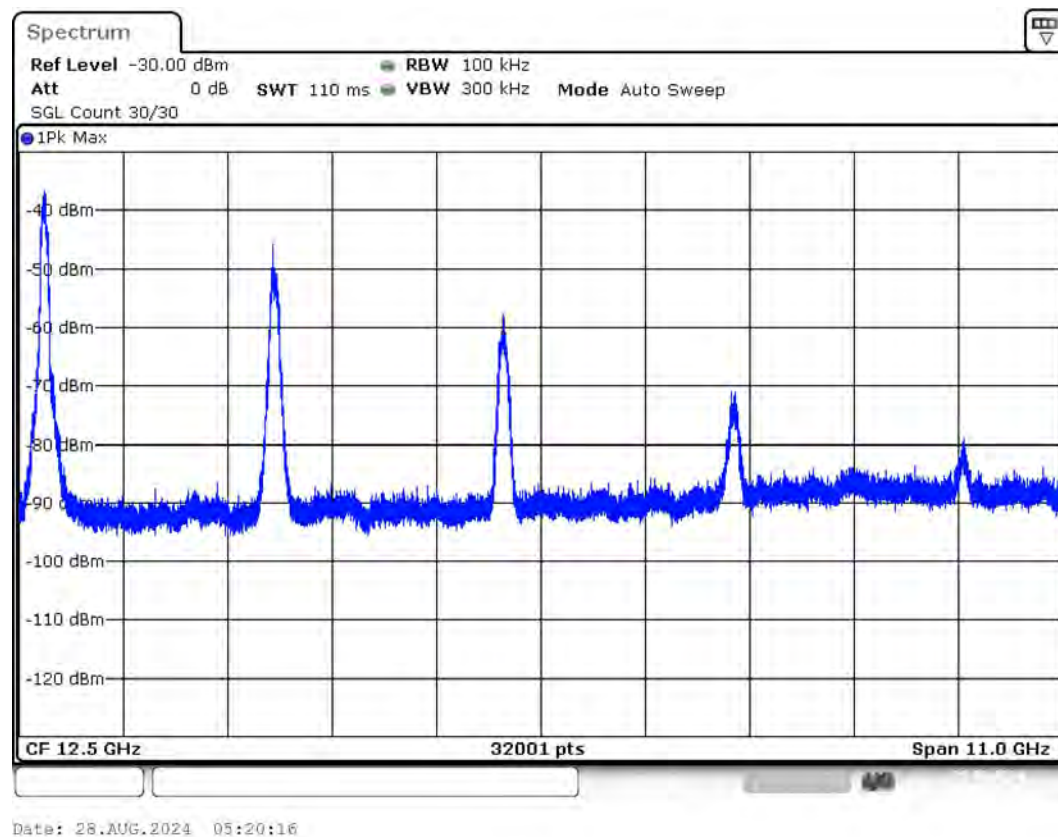
Spurious Connector 1_1



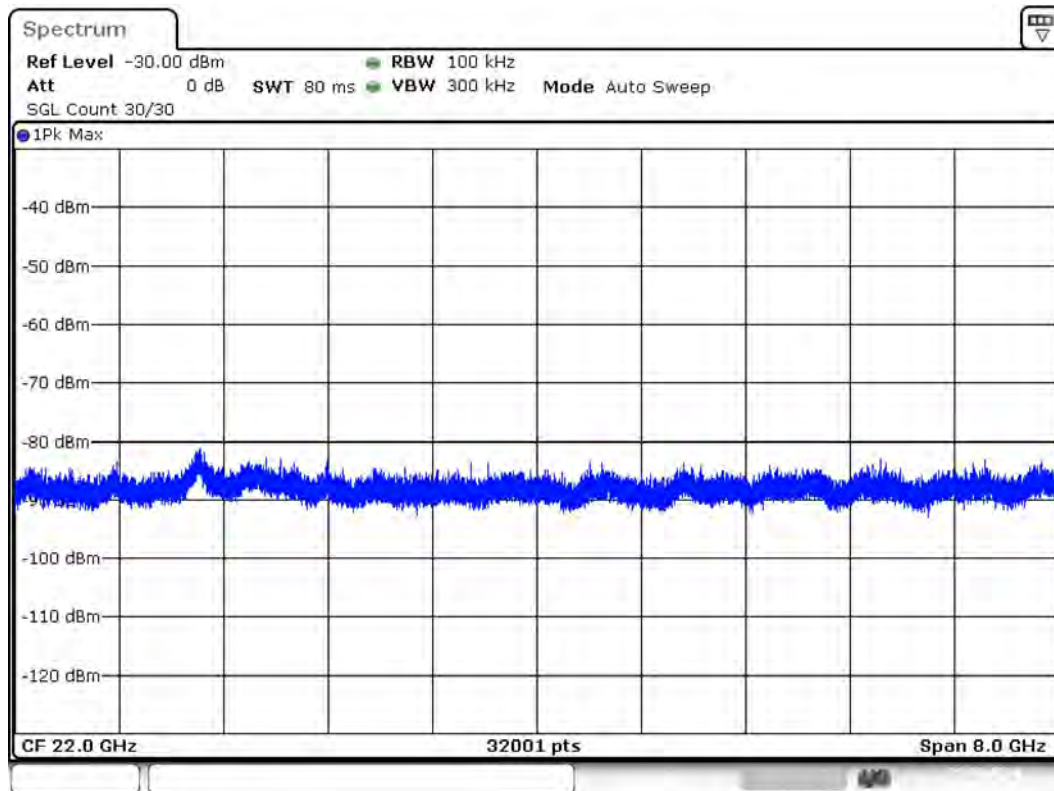
Spurious Connector 1_2



Spurious Connector 1_3



Spurious Connector 1_4



Date: 28.AUG.2024 05:20:37

Pre Measurement 1

Setting	Instrument Value	Target Value
RBW	100.000 kHz	<= 100.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	101	~ 98
SweepTime	9.700 ms	AUTO
Reference Level	-10.000 dBm	-30.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	3	3
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	1 / max. 1	max. 1
Stable	0 / 1	1
Max Stable Difference	0.00 dB	0.50 dB

Pre Measurement 2

Setting	Instrument Value	Target Value
RBW	100.000 kHz	<= 100.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	28000	~ 28000
SweepTime	28.000 ms	AUTO
Reference Level	-10.000 dBm	-30.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	30	30

Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweep type	Sweep	AUTO
Preamp	off	off
Stable mode	Trace	Trace
Stable value	1.00 dB	1.00 dB
Run	1 / max. 1	max. 1
Stable	0 / 3	3
Max Stable Difference	0.00 dB	1.00 dB

Emission Bandwidth 20 dB (2437 MHz; 20.000 dBm; 20 MHz)

Customized settings.

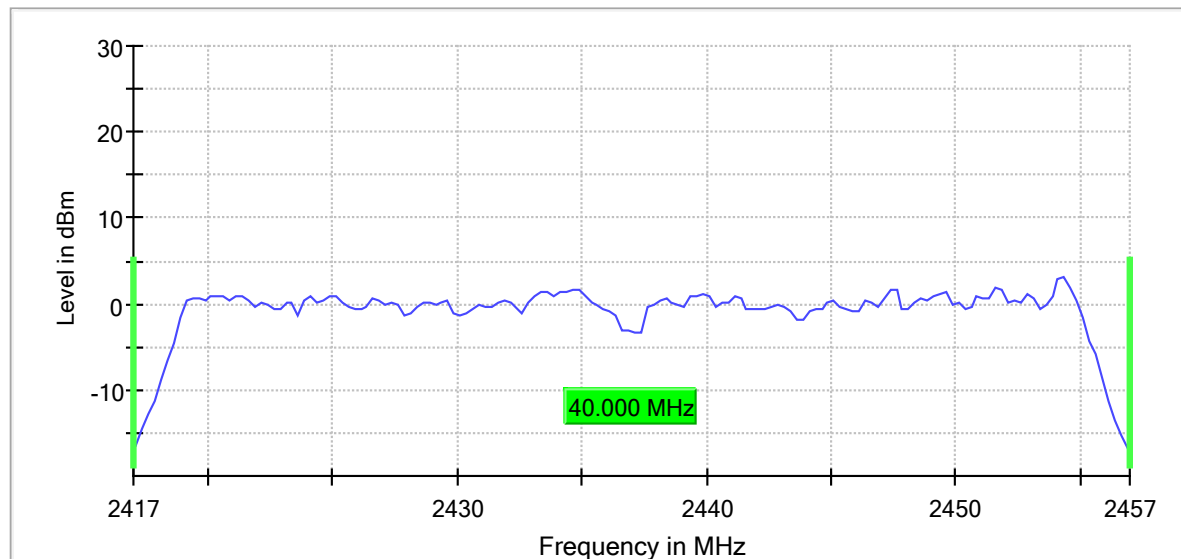
20 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2437.000000	40.000000	---	---	2417.000000	2457.000000

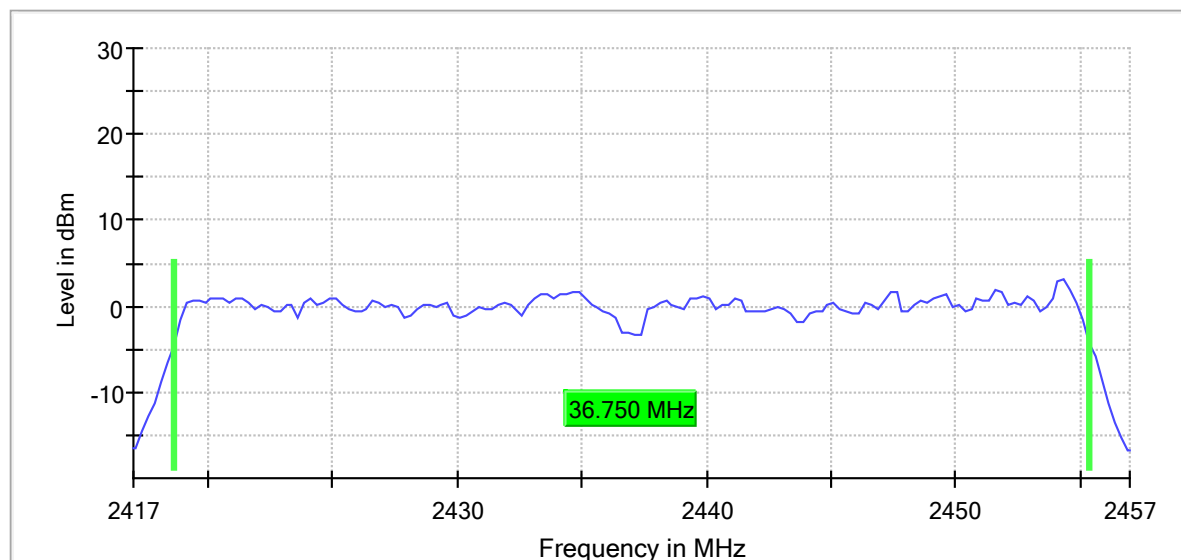
(continuation of the "20 dB Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
2437.000000	3.1	PASS

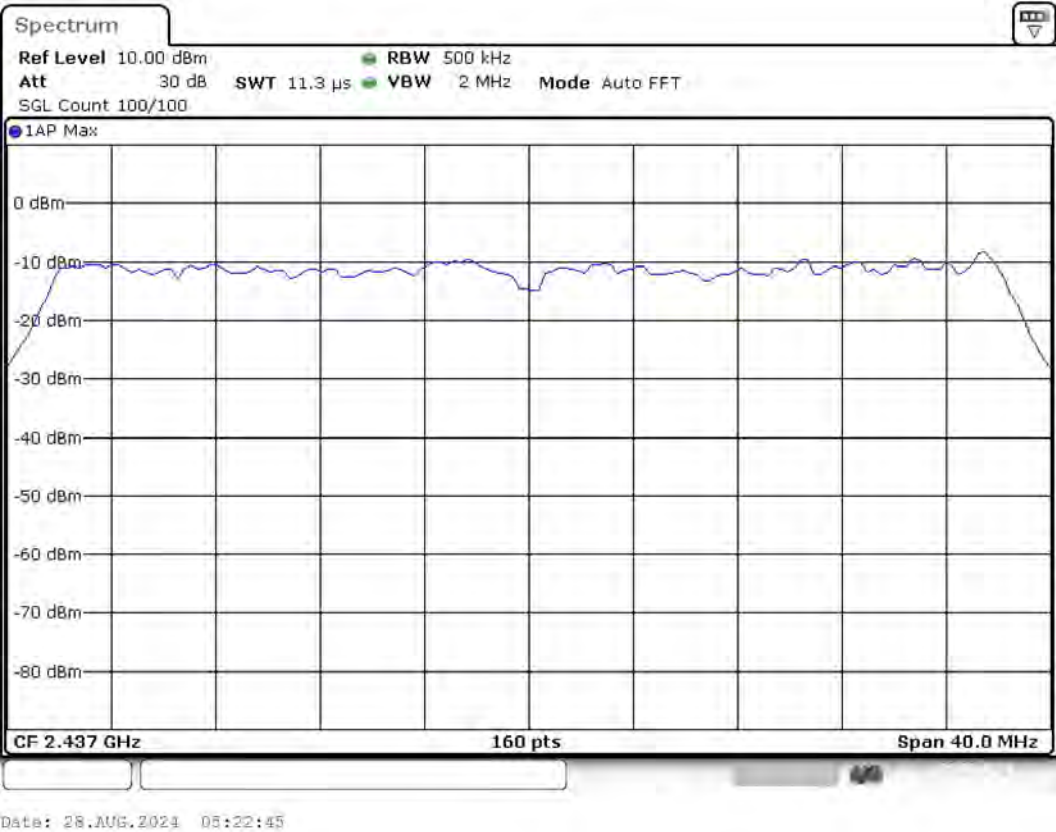
20 dB Bandwidth



99 % Bandwidth



Bandwidth



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.41700 GHz	2.41700 GHz
Stop Frequency	2.45700 GHz	2.45700 GHz
Span	40.000 MHz	40.000 MHz
RBW	500.000 kHz	>= 500.000 kHz
VBW	2.000 MHz	>= 1.500 MHz
SweepPoints	160	~ 160
SweepTime	11.344 µs	AUTO
Reference Level	10.000 dBm	10.000 dBm
Attenuation	30.000 dB	AUTO
Detector	Peak	Peak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	FFT	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	1 / max. 1	max. 1
Stable	0 / 1	1
Max Stable Difference	0.00 dB	0.50 dB

Minimum Emission Bandwidth 6 dB (2437 MHz; 20.000 dBm; 20 MHz)

Customized settings.

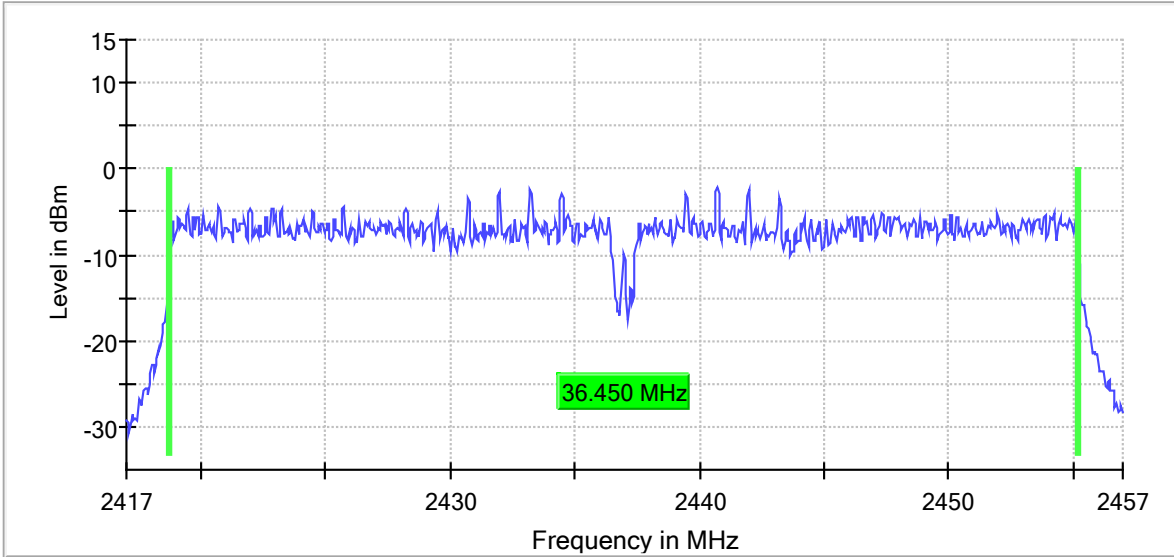
6 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2437.000000	36.450000	0.500000	---	2418.725000	2455.175000

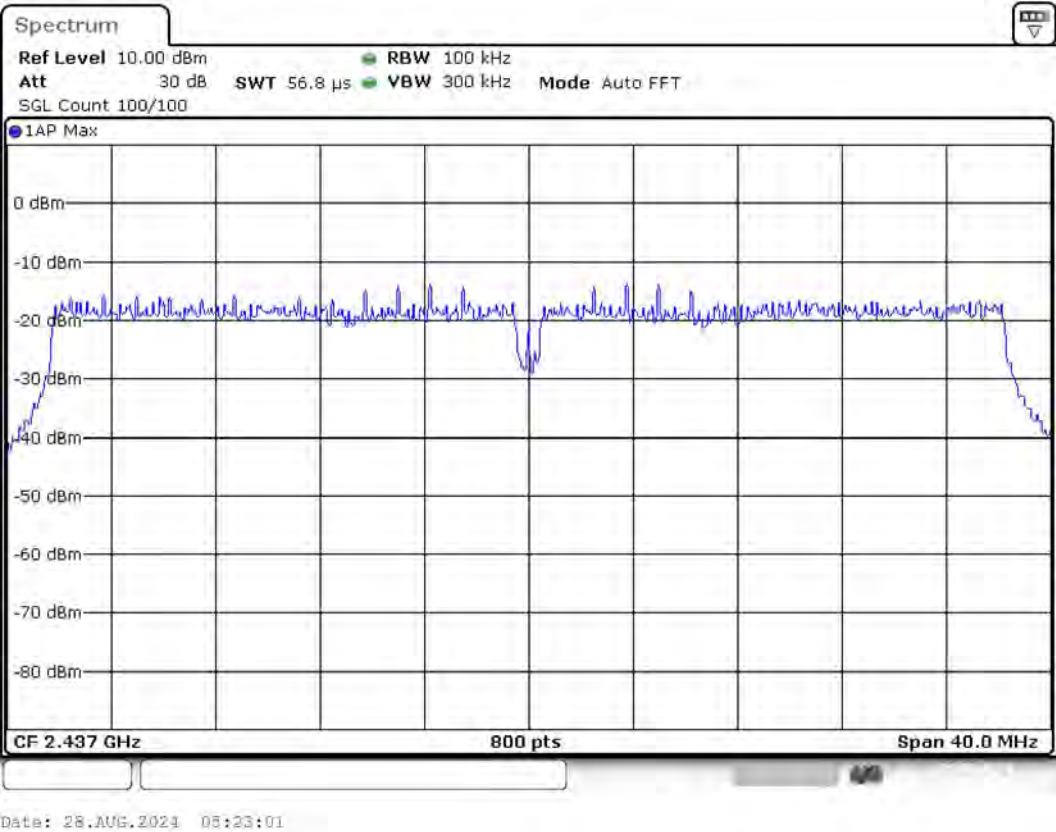
(continuation of the "6 dB Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
2437.000000	-2.1	PASS

6 dB Bandwidth



Bandwidth



Measurement

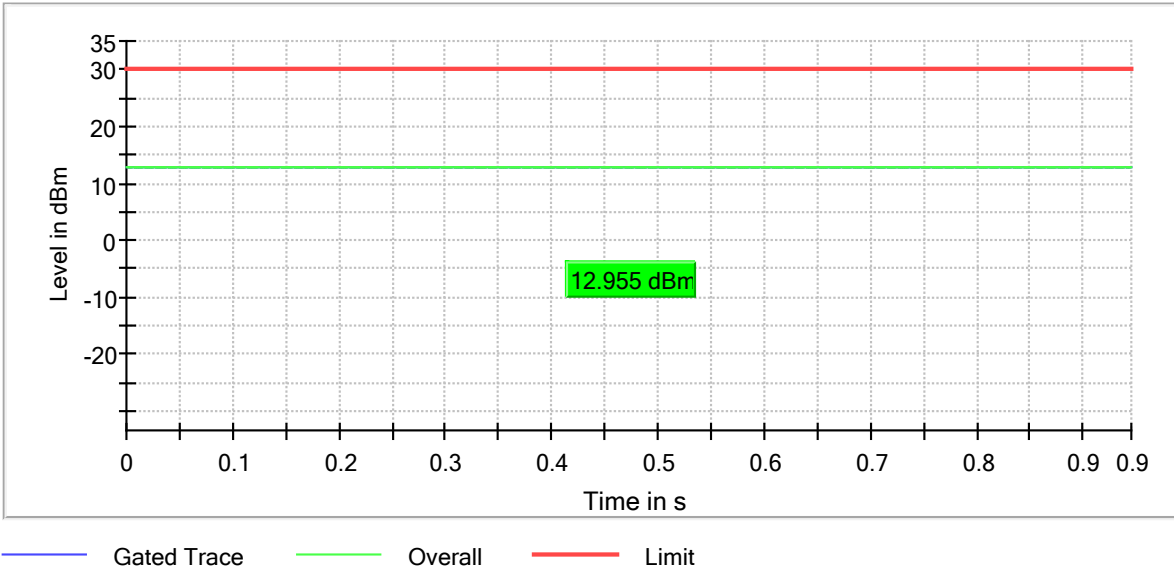
Setting	Instrument Value	Target Value
Start Frequency	2.41700 GHz	2.41700 GHz
Stop Frequency	2.45700 GHz	2.45700 GHz
Span	40.000 MHz	40.000 MHz
RBW	100.000 kHz	~ 100.000 kHz
VBW	300.000 kHz	~ 300.000 kHz
SweepPoints	800	~ 800
SweepTime	56.836 µs	AUTO
Reference Level	10.000 dBm	10.000 dBm
Attenuation	30.000 dB	AUTO
Detector	Peak	Peak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	FFT	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	1 / max. 1	max. 1
Stable	0 / 1	1
Max Stable Difference	0.00 dB	0.50 dB

RF output power (2437 MHz; 20.000 dBm; 20 MHz)

Result

DUT Frequency (MHz)	Gated RMS (dBm)	Limit Max (dBm)	Gated EIRP (dBm)	DutyCycle (%)	Result
2437.000000	13.0	30.0	13.0	94.948	PASS

Gated Trace



OSP PowerMeter settings

Setting	Instrument Value	Target Value
Measurement Time	1.000 s	1.000 s
Points	1000000	1000000
Time resolution	1.000 µs	1.000 µs

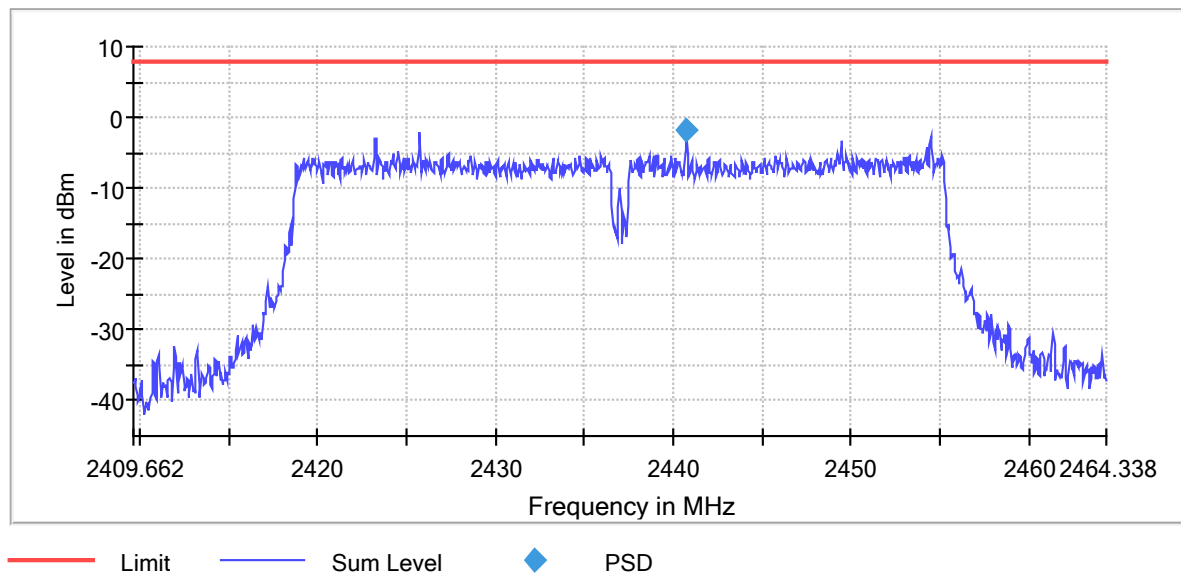
Peak Power Spectral Density (2437 MHz; 20.000 dBm; 20 MHz)

Customized settings.

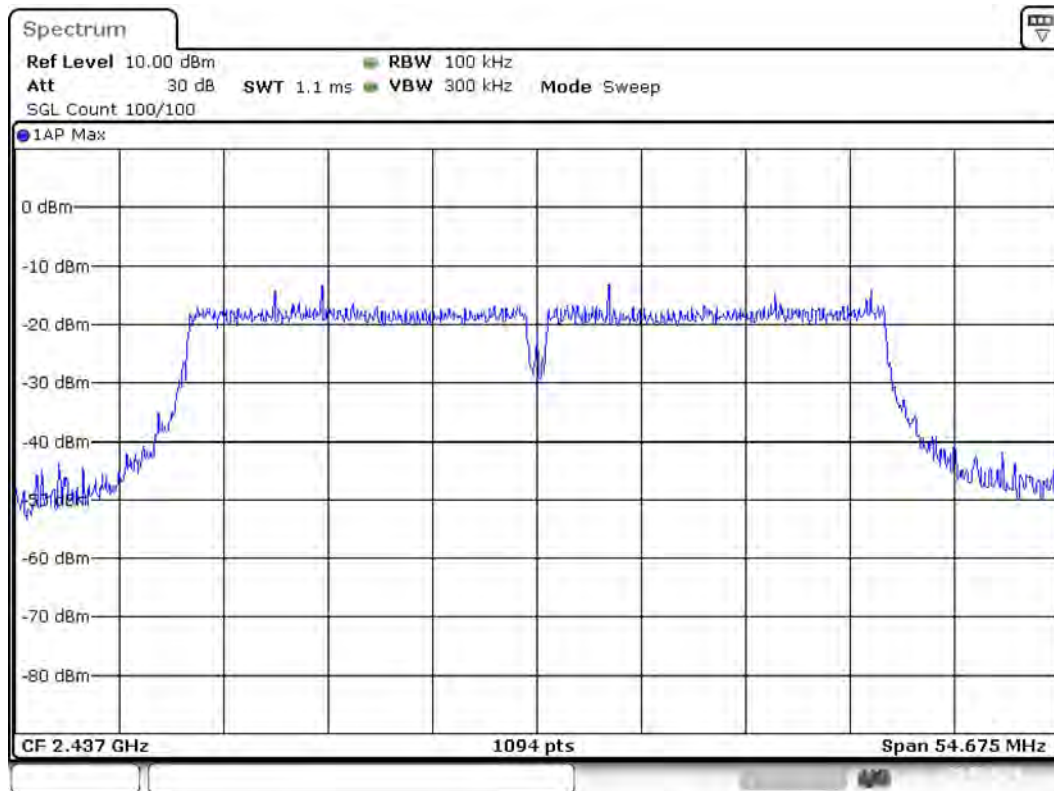
Result

DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max (dBm)	Result
2437.000000	2440.723298	-1.833	8.0	PASS

Peak Power Spectral Density



PSD Connector 1



Date: 28.AUG.2024 05:23:29

Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.40966 GHz	2.40966 GHz
Stop Frequency	2.46434 GHz	2.46434 GHz
Span	54.675 MHz	54.675 MHz
RBW	100.000 kHz	<= 100.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	1094	~ 1094
SweepTime	1.100 ms	AUTO
Reference Level	10.000 dBm	10.000 dBm
Attenuation	30.000 dB	AUTO
Detector	Peak	Peak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	Sweep	Sweep
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	1 / max. 1	max. 1
Stable	0 / 1	1
Max Stable Difference	0.00 dB	0.50 dB

Tx Spurious Emission (2437 MHz; 20.000 dBm; 20 MHz)

Customized settings.

Result

DUT Frequency (MHz)	Result
2437.000000	PASS

Final measurements

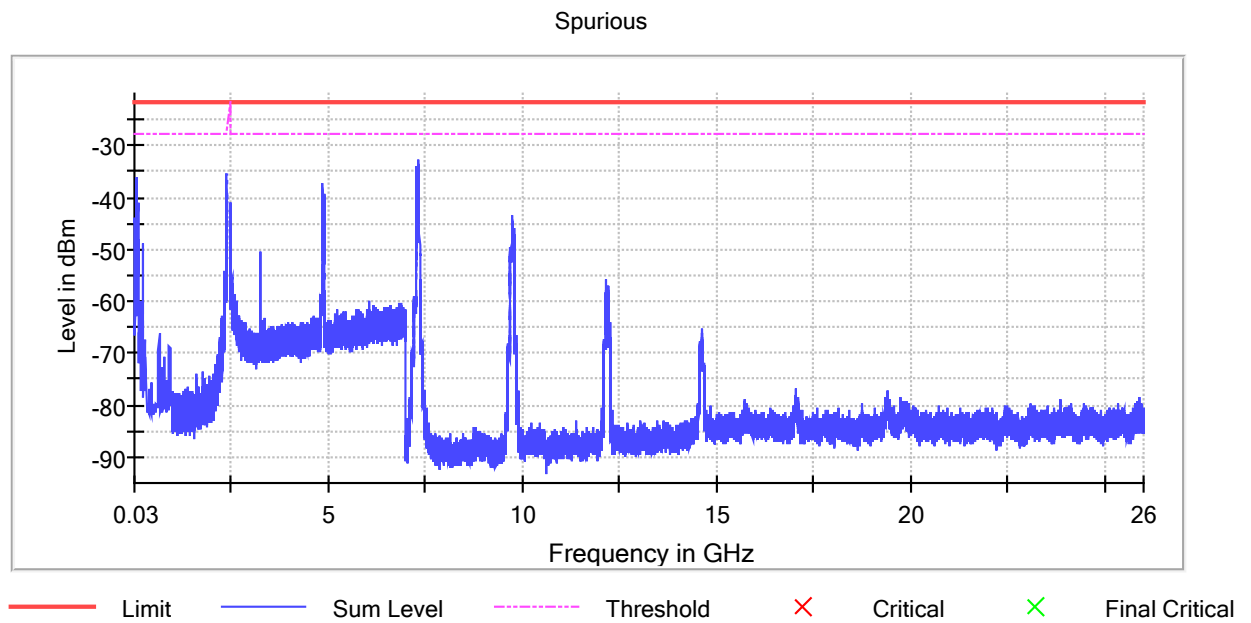
Frequency (MHz)	Level Pre Measurement (dBm)	level (dBm)	Limit (dBm)	Margin (dB)	Result
---	---	---	---	---	---

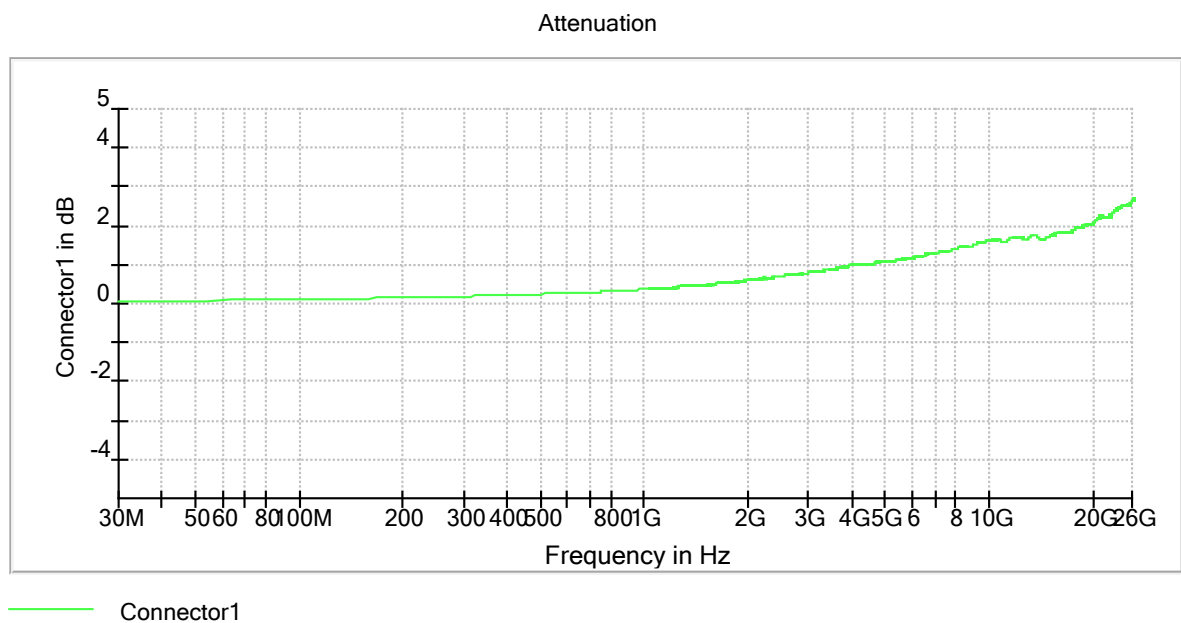
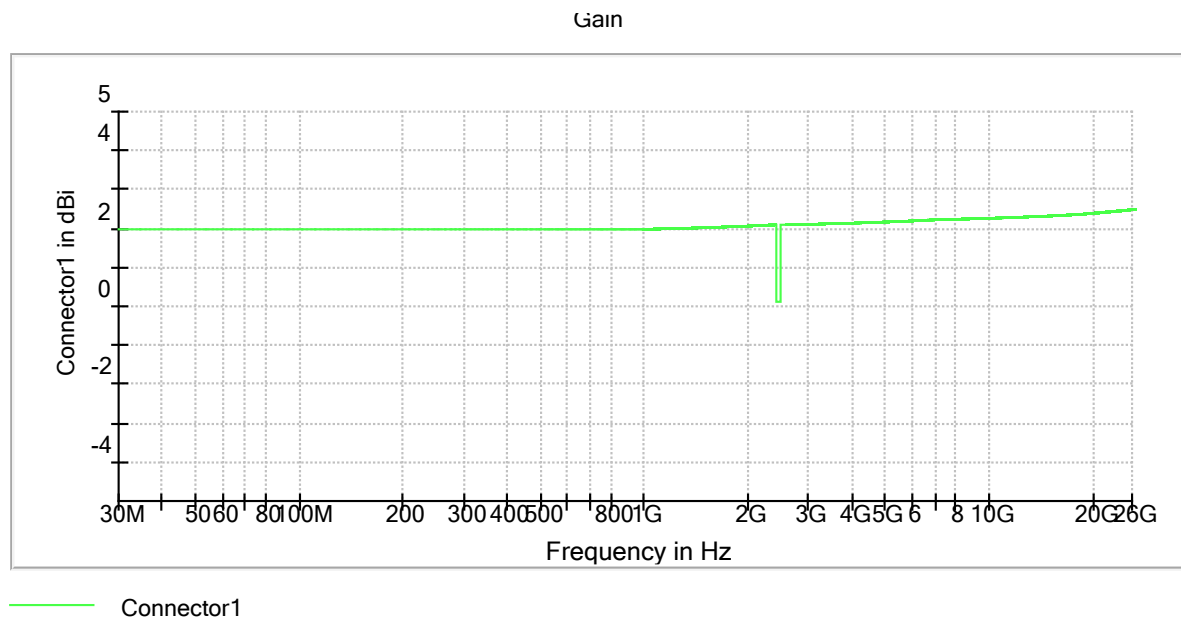
Pre Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)
7306.099809	-32.6	10.8	-21.8
7305.756070	-33.5	11.7	-21.8
7319.849380	-33.6	11.8	-21.8
7310.568420	-34.0	12.2	-21.8
7300.599981	-34.2	12.4	-21.8
7316.068248	-34.3	12.5	-21.8
7298.537546	-34.3	12.5	-21.8
7314.349552	-34.4	12.5	-21.8
7325.692947	-34.4	12.6	-21.8
7300.943721	-34.5	12.7	-21.8
7303.006156	-34.6	12.7	-21.8
7324.317990	-34.6	12.7	-21.8
7317.099466	-34.6	12.7	-21.8
7313.318334	-34.7	12.8	-21.8
7309.880941	-34.9	13.0	-21.8

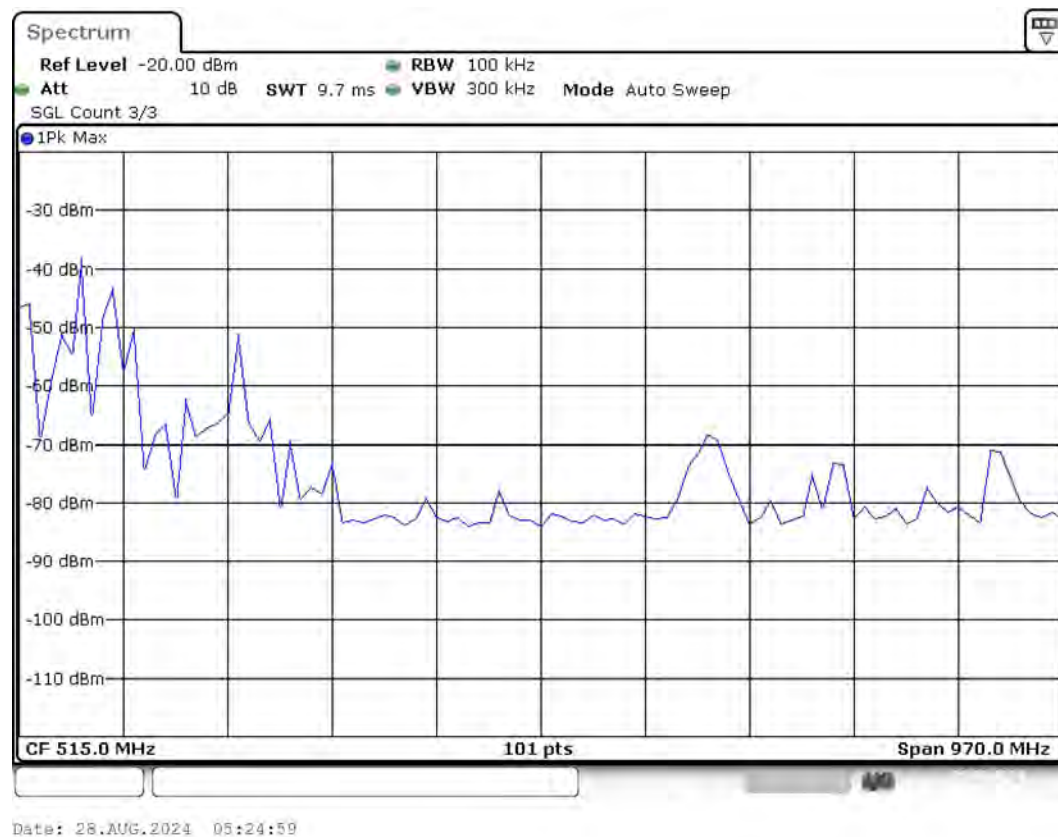
Measurement Settings

Start Frequency (MHz)	Stop Frequency (MHz)	Pre Measurement	Final Measurement
30.000000	1000.000000	1	1
1000.000000	2400.000000	2	2
2483.500000	7000.000000	2	2
7000.000000	18000.000000	2	2
18000.000000	26000.000000	2	2

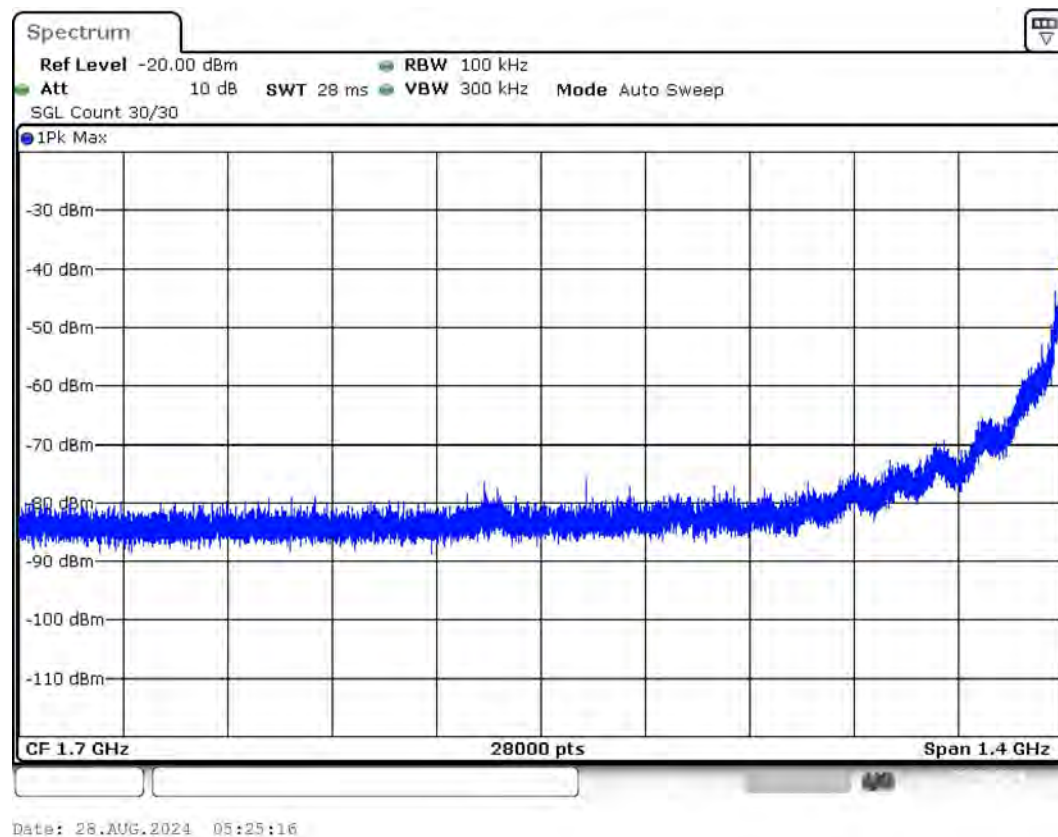




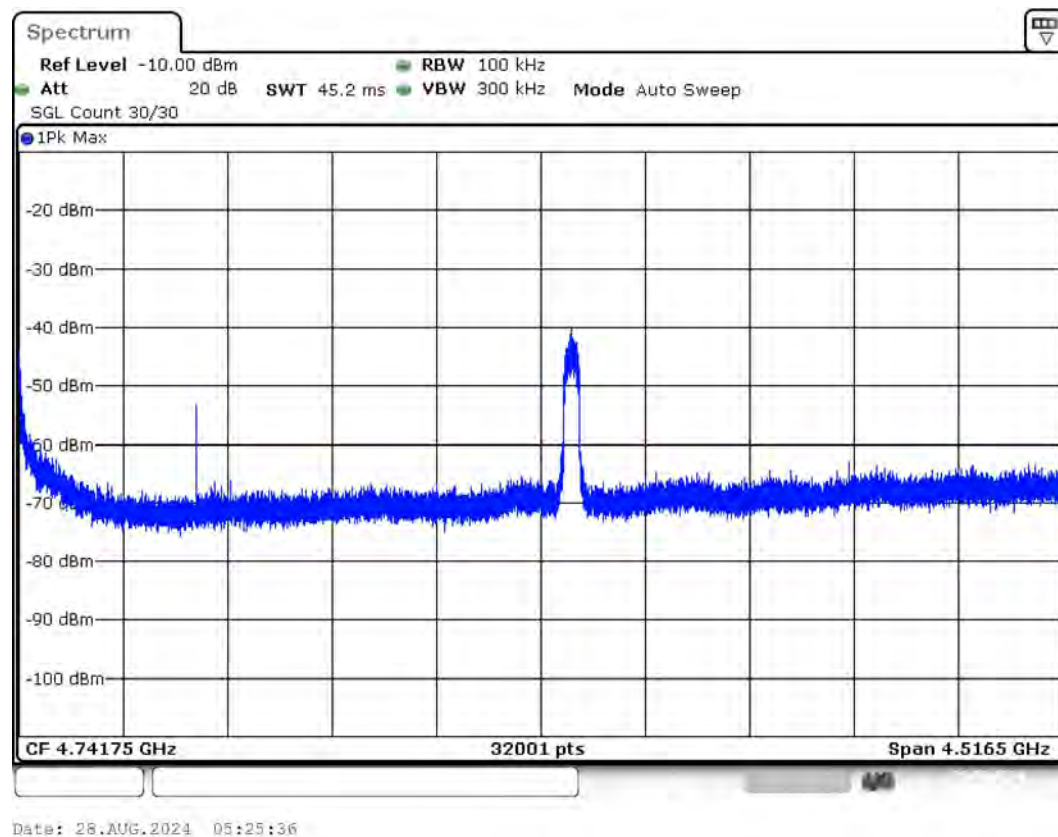
Spurious Connector 1_0



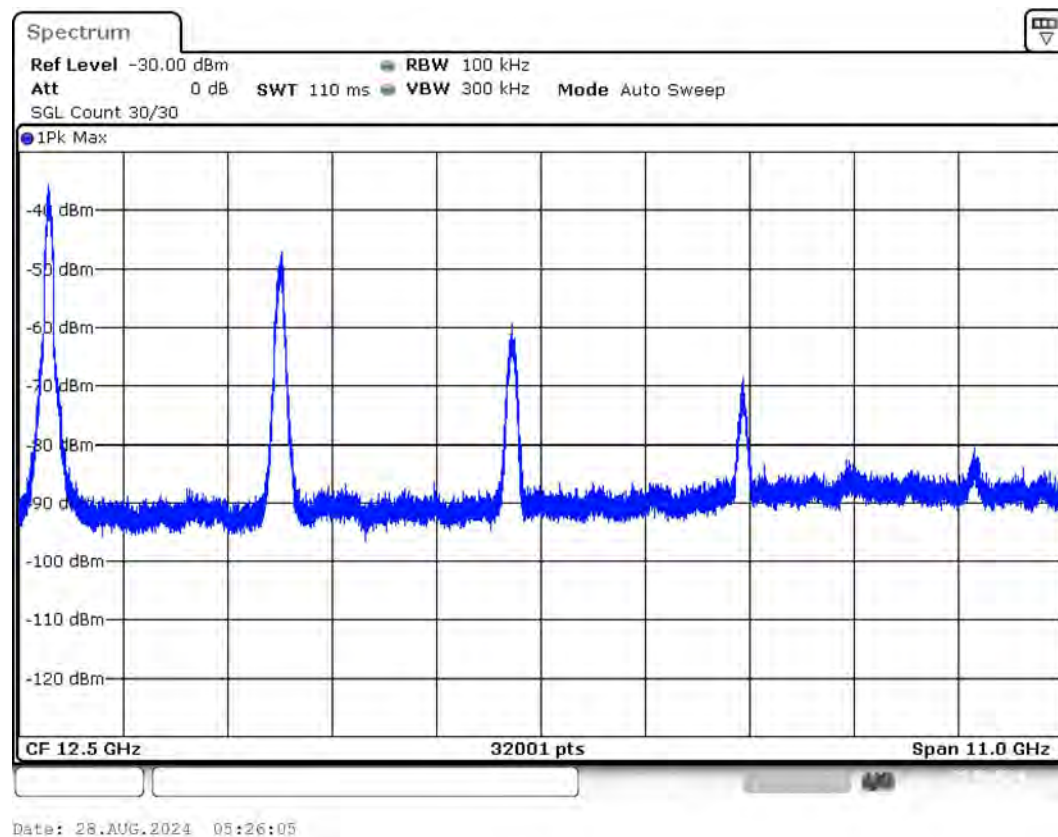
Spurious Connector 1_1



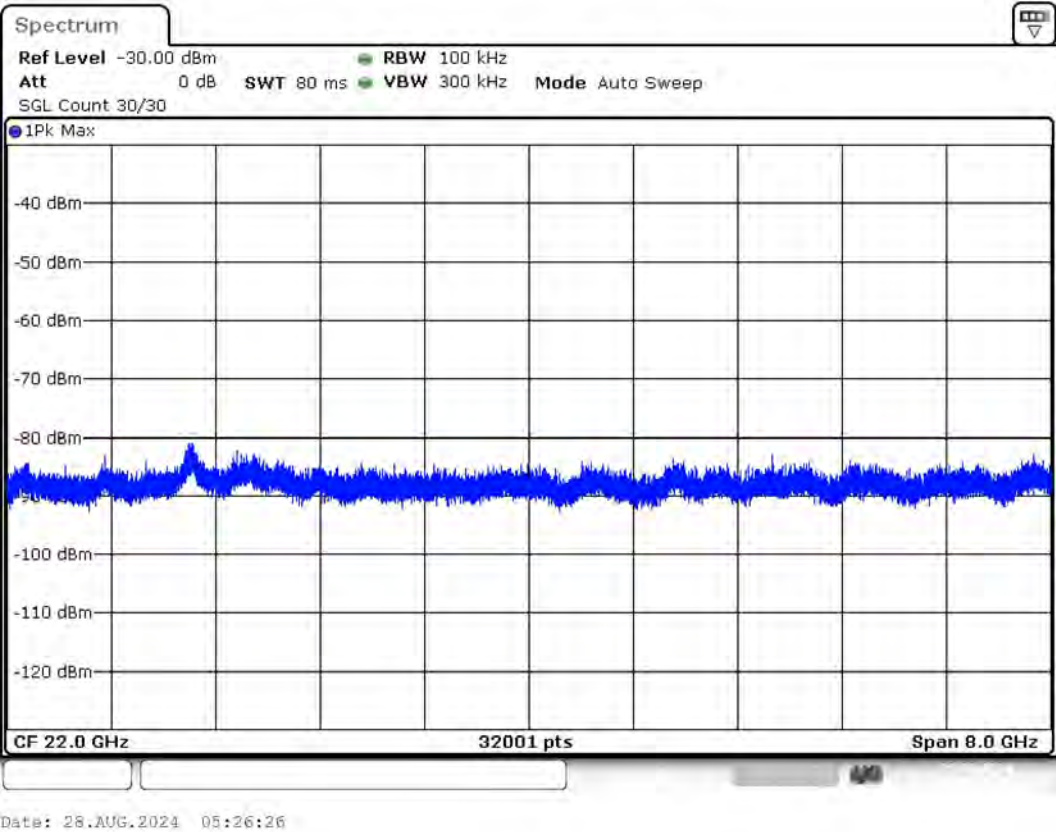
Spurious Connector 1_2



Spurious Connector 1_3



Spurious Connector 1_4



Pre Measurement 1

Setting	Instrument Value	Target Value
RBW	100.000 kHz	<= 100.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	101	~ 98
SweepTime	9.700 ms	AUTO
Reference Level	-20.000 dBm	-30.000 dBm
Attenuation	10.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	3	3
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	1 / max. 1	max. 1
Stable	0 / 1	1
Max Stable Difference	0.00 dB	0.50 dB

Pre Measurement 2

Setting	Instrument Value	Target Value
RBW	100.000 kHz	<= 100.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	28000	~ 28000
SweepTime	28.000 ms	AUTO
Reference Level	-20.000 dBm	-30.000 dBm
Attenuation	10.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	30	30

Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweep type	Sweep	AUTO
Preamp	off	off
Stable mode	Trace	Trace
Stable value	1.00 dB	1.00 dB
Run	1 / max. 1	max. 1
Stable	0 / 3	3
Max Stable Difference	0.00 dB	1.00 dB

Emission Bandwidth 20 dB (2452 MHz; 20.000 dBm; 20 MHz)

Customized settings.

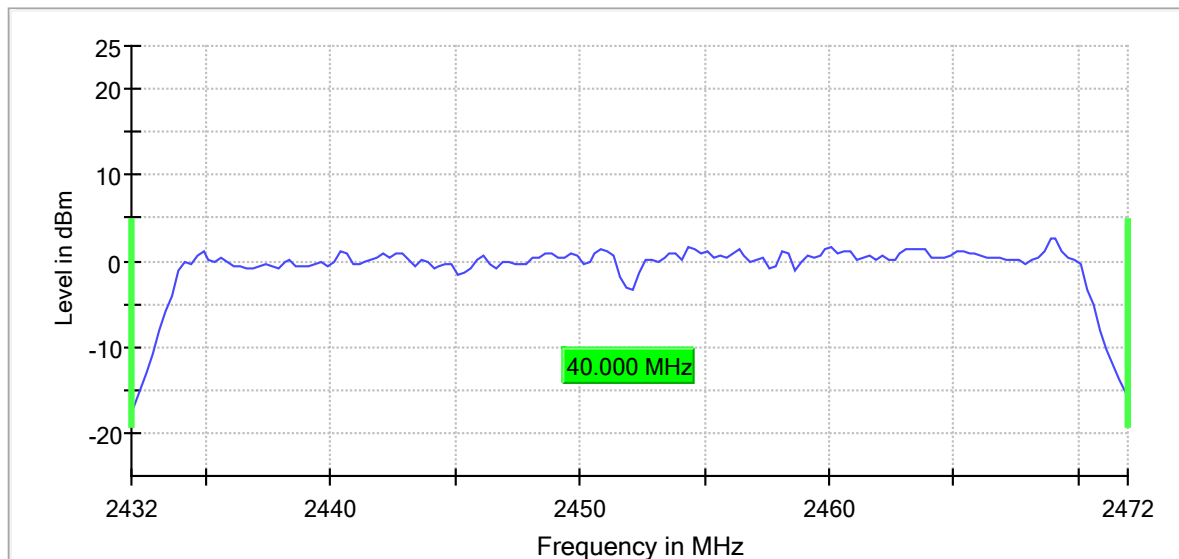
20 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2452.000000	40.000000	---	---	2432.000000	2472.000000

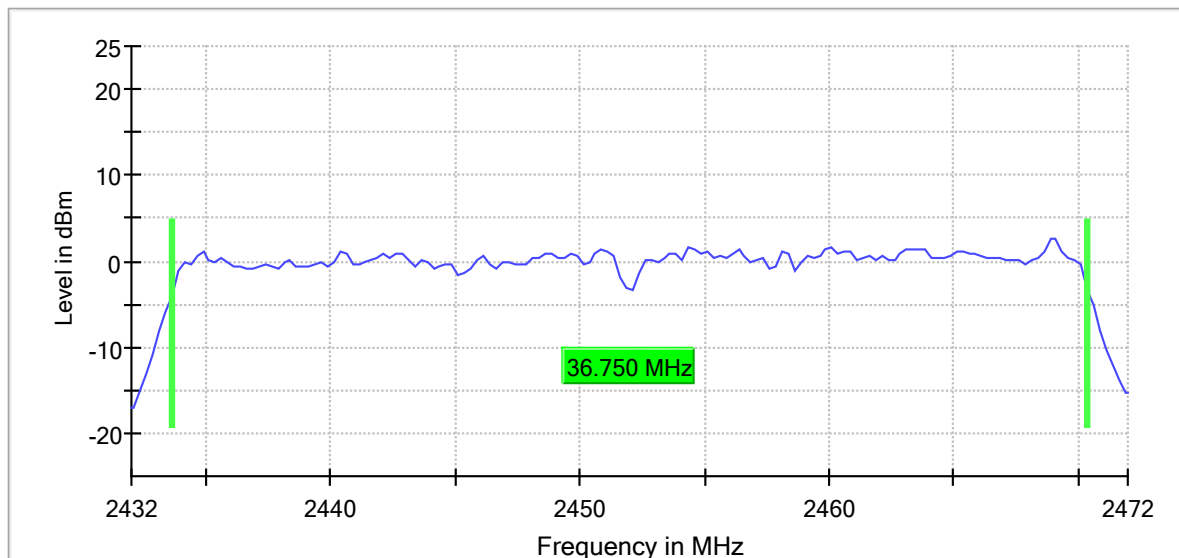
(continuation of the "20 dB Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
2452.000000	2.7	PASS

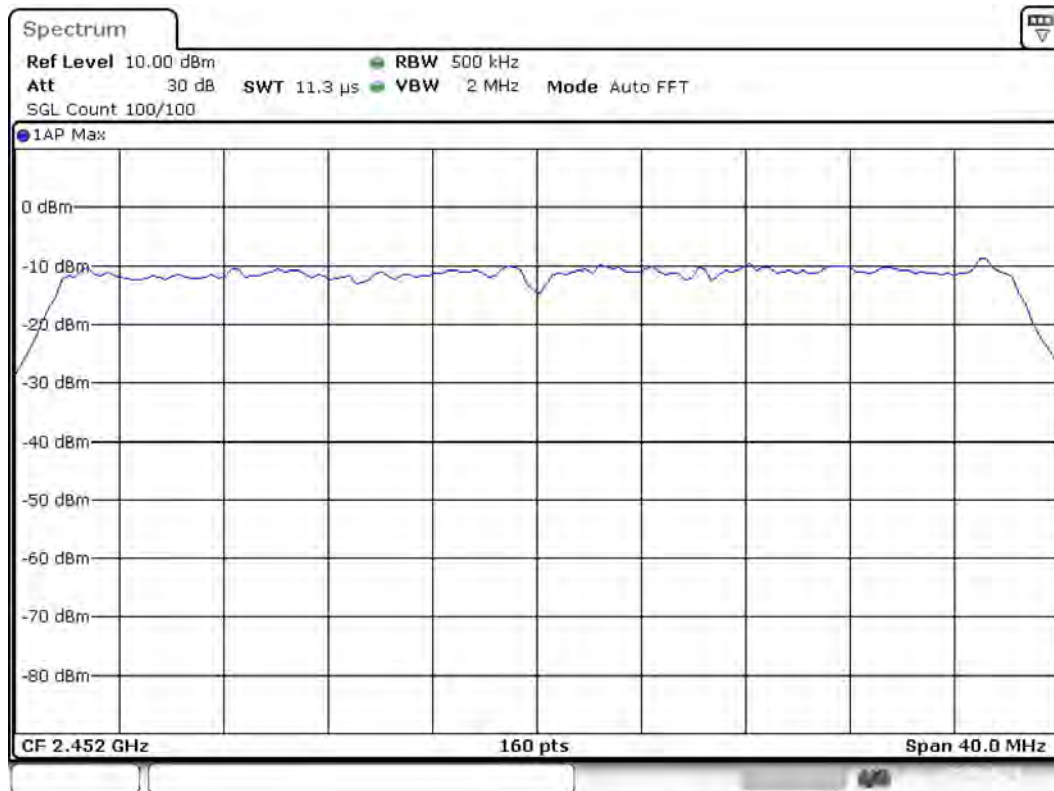
20 dB Bandwidth



99 % Bandwidth



Bandwidth



Date: 28.AUG.2024 03:28:53

Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.43200 GHz	2.43200 GHz
Stop Frequency	2.47200 GHz	2.47200 GHz
Span	40.000 MHz	40.000 MHz
RBW	500.000 kHz	>= 500.000 kHz
VBW	2.000 MHz	>= 1.500 MHz
SweepPoints	160	~ 160
SweepTime	11.344 µs	AUTO
Reference Level	10.000 dBm	10.000 dBm
Attenuation	30.000 dB	AUTO
Detector	Peak	Peak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	FFT	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	1 / max. 1	max. 1
Stable	0 / 1	1
Max Stable Difference	0.00 dB	0.50 dB

Minimum Emission Bandwidth 6 dB (2452 MHz; 20.000 dBm; 20 MHz)

Customized settings.

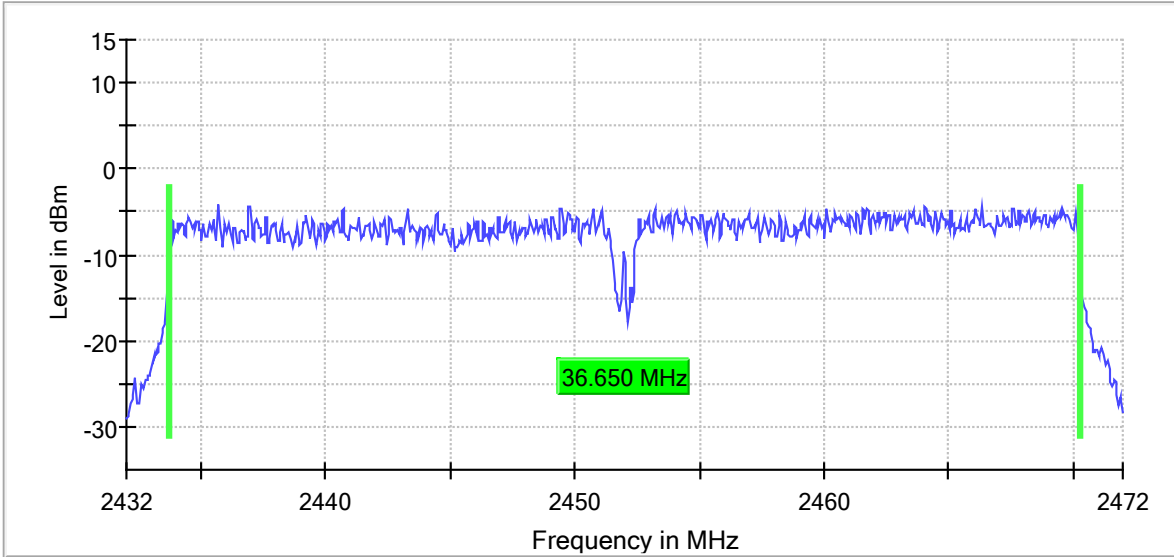
6 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2452.000000	36.650000	0.500000	---	2433.675000	2470.325000

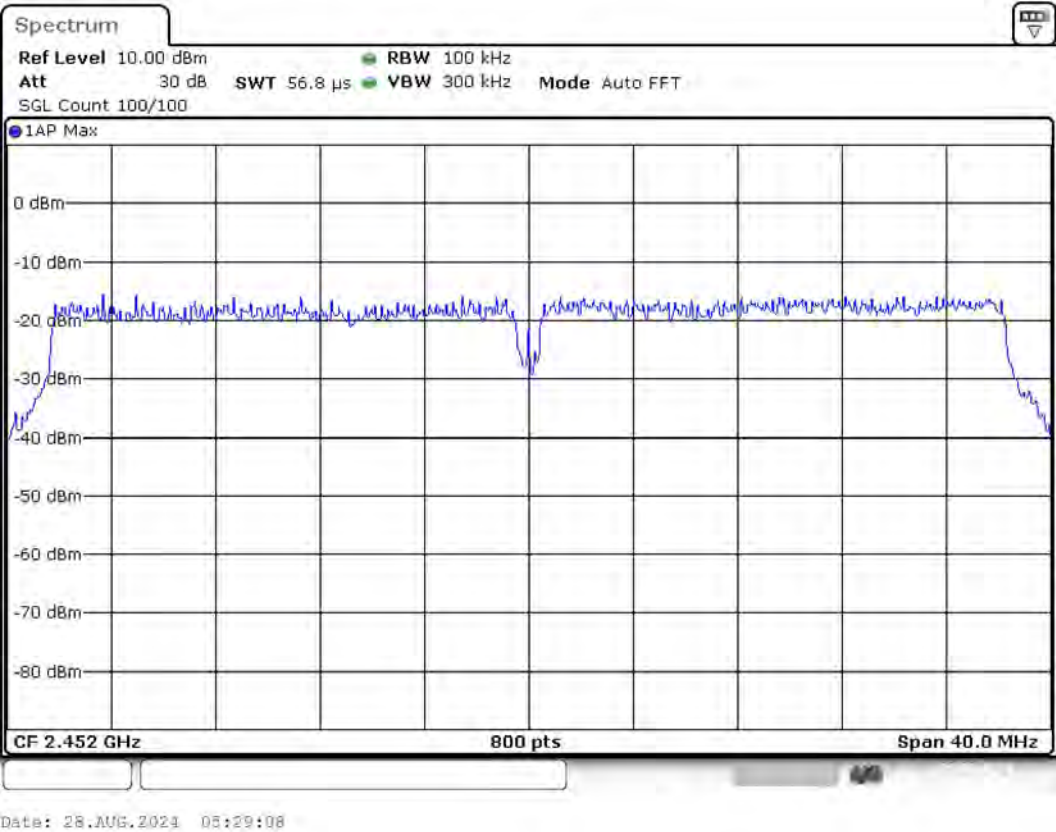
(continuation of the "6 dB Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
2452.000000	-4.1	PASS

6 dB Bandwidth



Bandwidth



Measurement

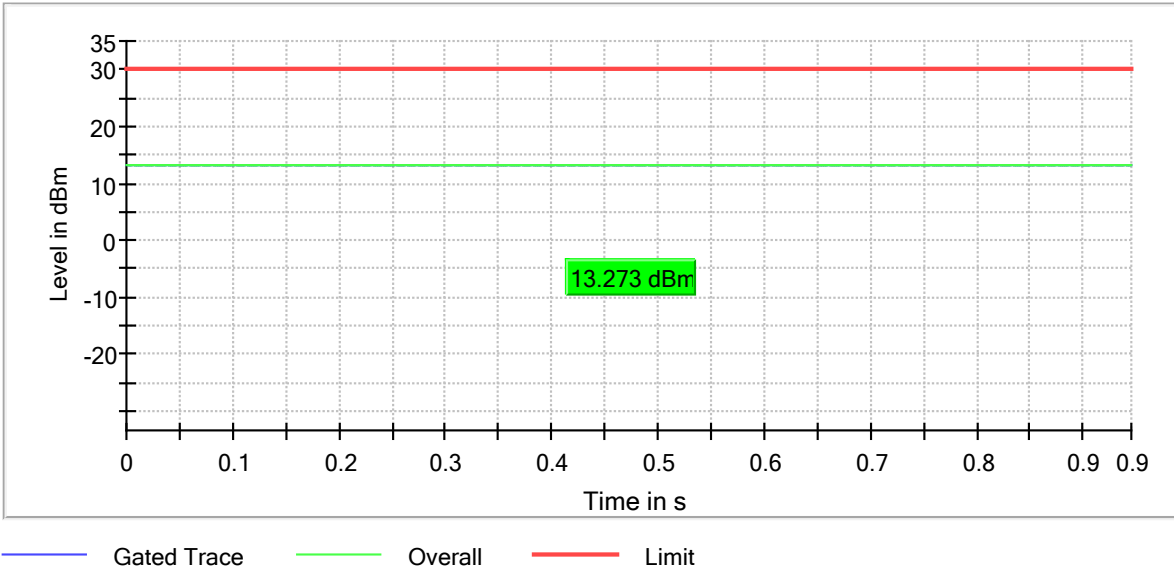
Setting	Instrument Value	Target Value
Start Frequency	2.43200 GHz	2.43200 GHz
Stop Frequency	2.47200 GHz	2.47200 GHz
Span	40.000 MHz	40.000 MHz
RBW	100.000 kHz	~ 100.000 kHz
VBW	300.000 kHz	~ 300.000 kHz
SweepPoints	800	~ 800
SweepTime	56.836 µs	AUTO
Reference Level	10.000 dBm	10.000 dBm
Attenuation	30.000 dB	AUTO
Detector	Peak	Peak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	FFT	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	1 / max. 1	max. 1
Stable	0 / 1	1
Max Stable Difference	0.00 dB	0.50 dB

RF output power (2452 MHz; 20.000 dBm; 20 MHz)

Result

DUT Frequency (MHz)	Gated RMS (dBm)	Limit Max (dBm)	Gated EIRP (dBm)	DutyCycle (%)	Result
2452.000000	13.3	30.0	13.3	94.948	PASS

Gated Trace



OSP PowerMeter settings

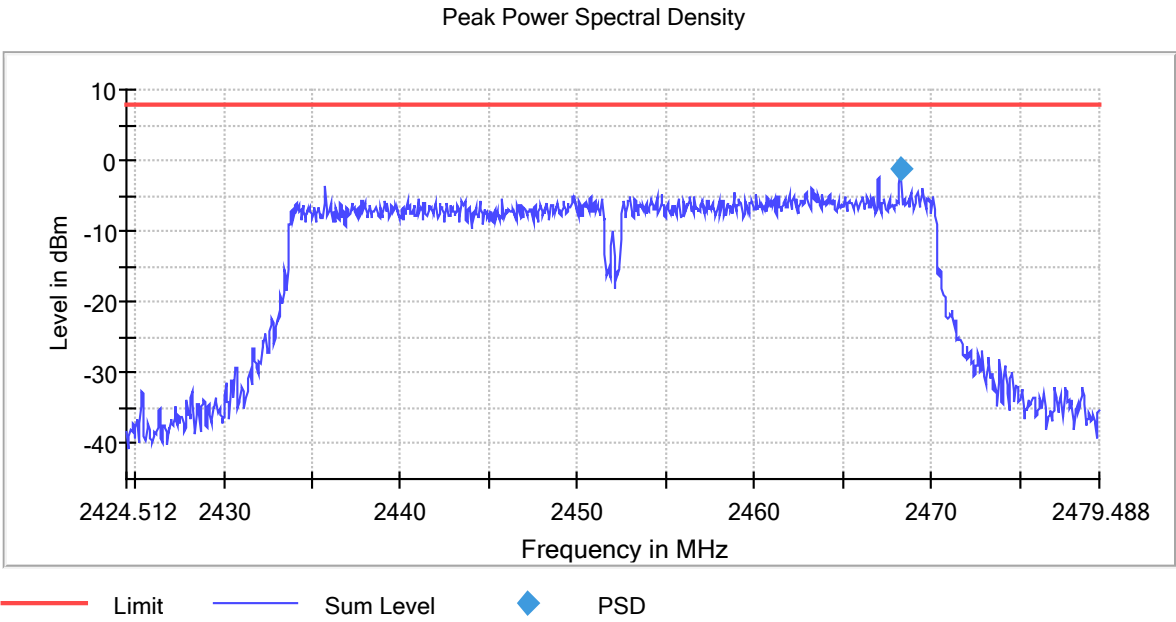
Setting	Instrument Value	Target Value
Measurement Time	1.000 s	1.000 s
Points	1000000	1000000
Time resolution	1.000 μ s	1.000 μ s

Peak Power Spectral Density (2452 MHz; 20.000 dBm; 20 MHz)

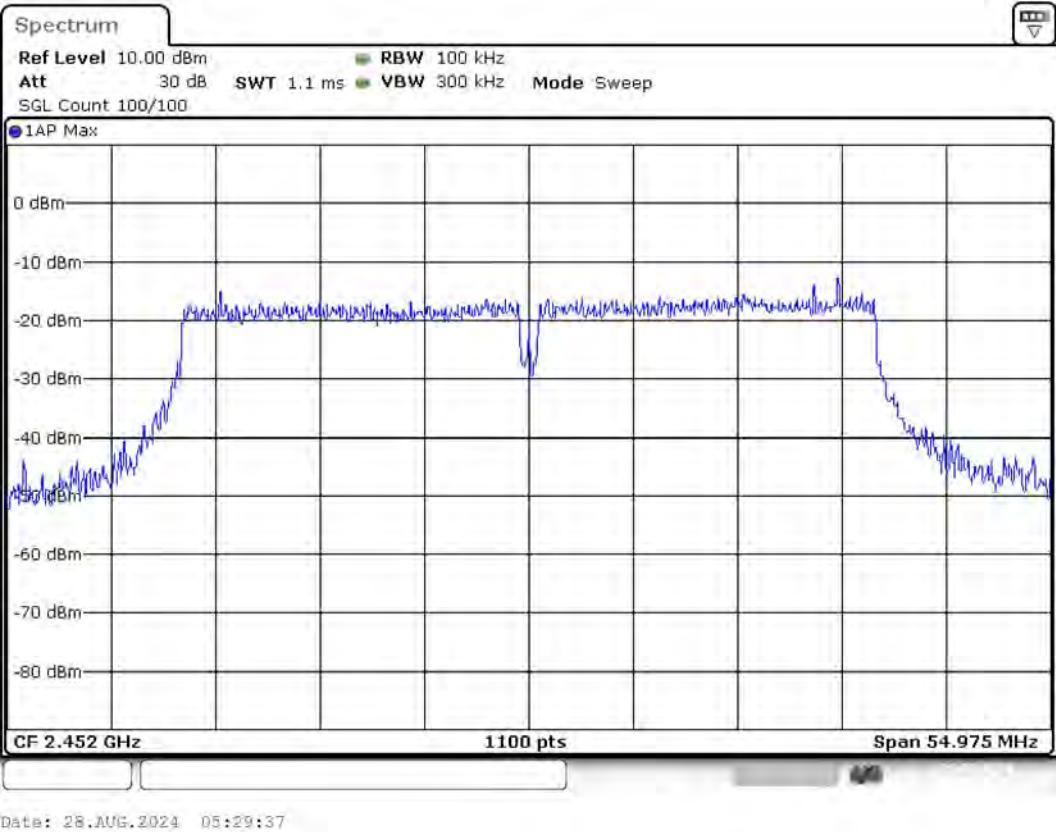
Customized settings.

Result

DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max (dBm)	Result
2452.000000	2468.217625	-1.246	8.0	PASS



PSD Connector 1



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.42451 GHz	2.42451 GHz
Stop Frequency	2.47949 GHz	2.47949 GHz
Span	54.975 MHz	54.975 MHz
RBW	100.000 kHz	<= 100.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	1100	~ 1100
SweepTime	1.100 ms	AUTO
Reference Level	10.000 dBm	10.000 dBm
Attenuation	30.000 dB	AUTO
Detector	Peak	Peak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	Sweep	Sweep
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	1 / max. 1	max. 1
Stable	0 / 1	1
Max Stable Difference	0.00 dB	0.50 dB

Band Edge high (2452 MHz; 20.000 dBm; 20 MHz)

Customized settings.

Result

DUT Frequency (MHz)	Result
2452.000000	PASS

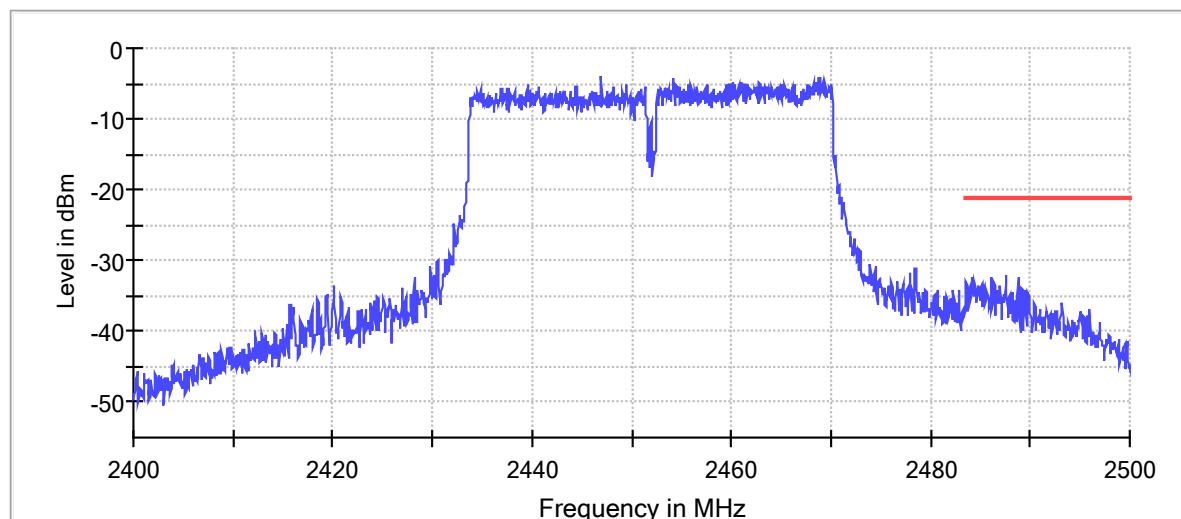
Inband Peak

Frequency (MHz)	Level (dBm)
2446.925000	-3.8

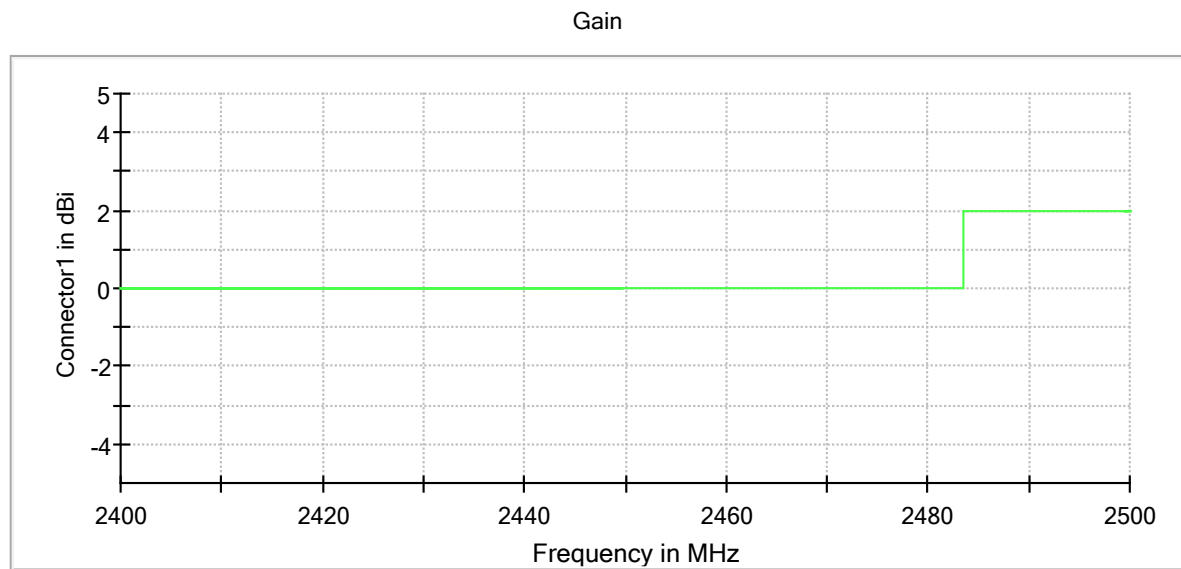
Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2487.575000	-32.0	10.8	-21.2	PASS
2488.825000	-32.2	10.9	-21.2	PASS
2486.075000	-32.3	11.1	-21.2	PASS
2488.775000	-32.3	11.1	-21.2	PASS
2484.225000	-32.4	11.1	-21.2	PASS
2484.175000	-32.4	11.1	-21.2	PASS
2486.025000	-32.4	11.1	-21.2	PASS
2487.625000	-32.6	11.3	-21.2	PASS
2484.475000	-32.9	11.7	-21.2	PASS
2483.575000	-33.0	11.8	-21.2	PASS
2486.375000	-33.0	11.8	-21.2	PASS
2487.525000	-33.2	12.0	-21.2	PASS
2484.375000	-33.3	12.0	-21.2	PASS
2484.425000	-33.3	12.0	-21.2	PASS
2485.125000	-33.3	12.1	-21.2	PASS

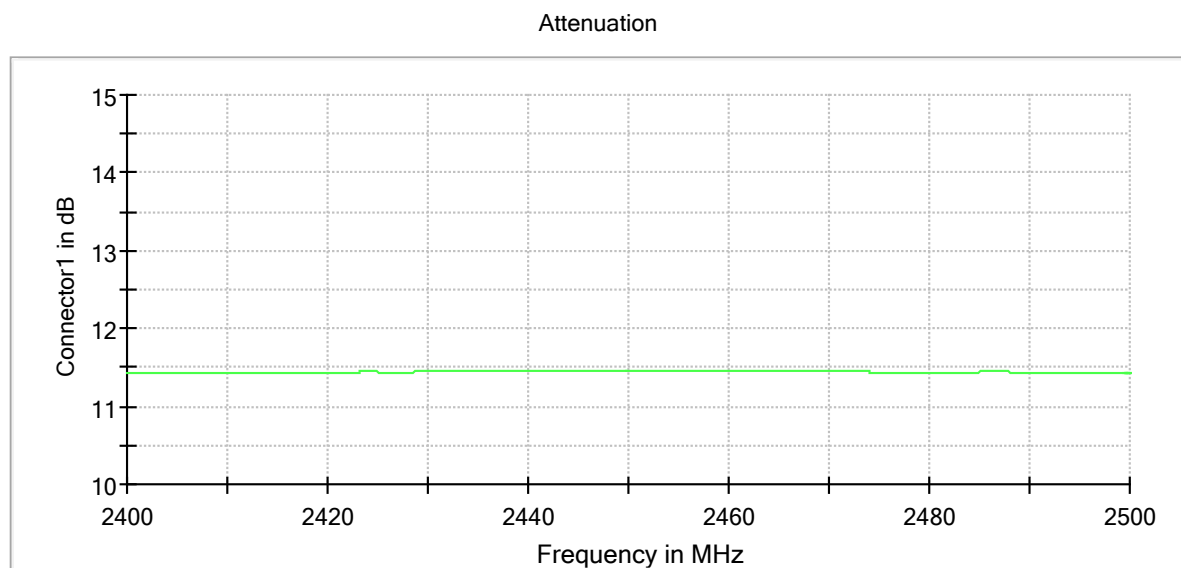
Band Edge



— Limit — Sum Level × Fail

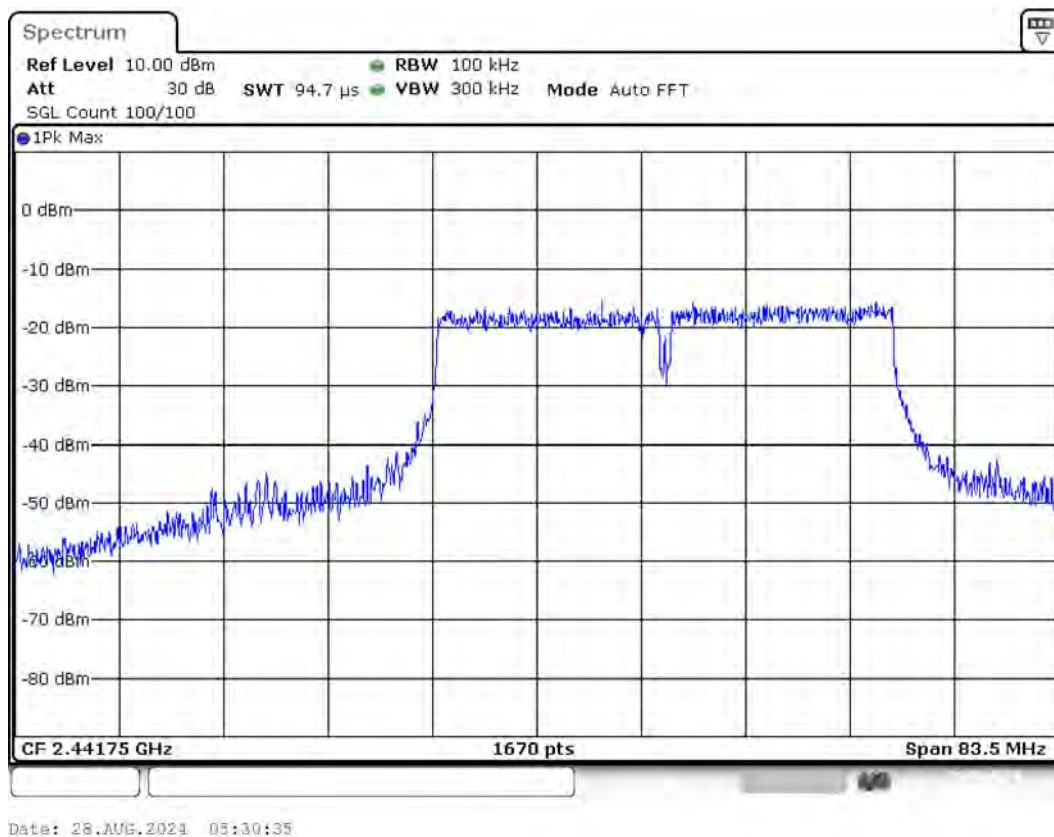


Connector1

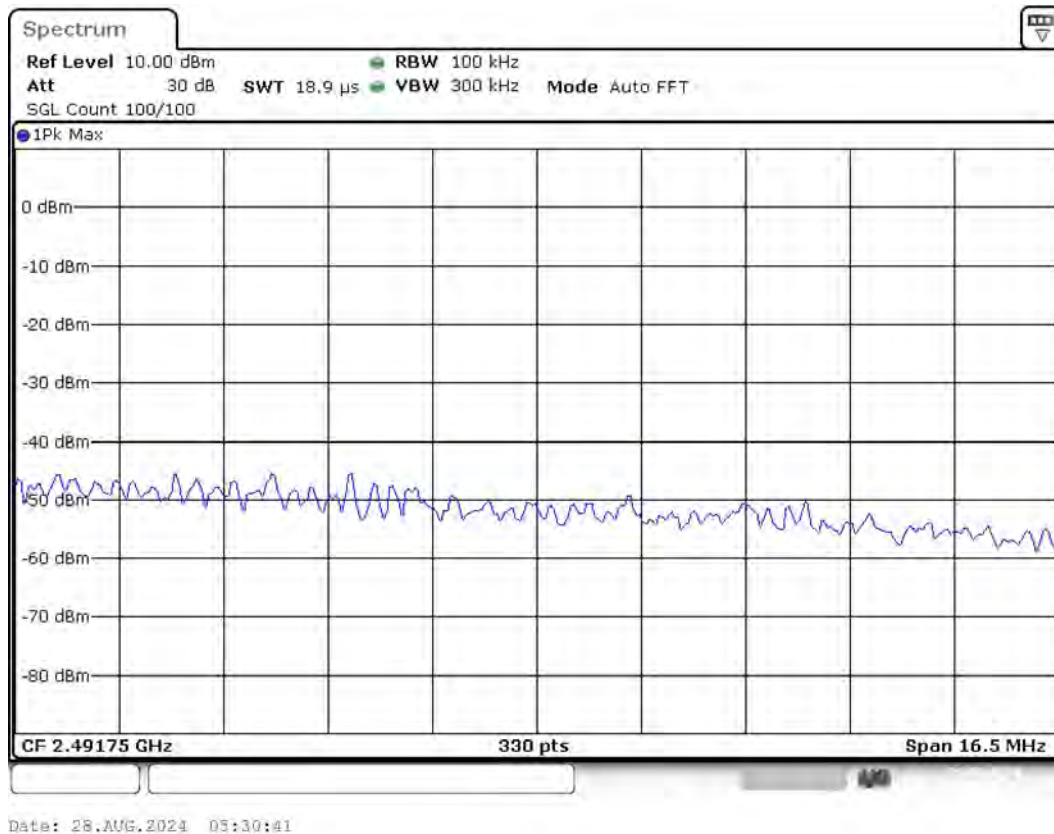


Connector1

Band Edge Connector 1_0



Band Edge Connector 1_1



Measurement 1

Setting	Instrument Value	Target Value
Start Frequency	2.40000 GHz	2.40000 GHz
Stop Frequency	2.48350 GHz	2.48350 GHz
Span	83.500 MHz	83.500 MHz
RBW	100.000 kHz	<= 100.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	1670	~ 1670
Sweptime	94.727 µs	AUTO
Reference Level	10.000 dBm	10.000 dBm
Attenuation	30.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	FFT	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	1 / max. 1	max. 1
Stable	0 / 1	1
Max Stable Difference	0.00 dB	0.50 dB

Measurement 2

Setting	Instrument Value	Target Value
Start Frequency	2.48350 GHz	2.48350 GHz
Stop Frequency	2.50000 GHz	2.50000 GHz
Span	16.500 MHz	16.500 MHz
RBW	100.000 kHz	<= 100.000 kHz
VBW	300.000 kHz	>= 300.000 kHz

SweepPoints	330	~ 330
SweepTime	18.945 µs	AUTO
Reference Level	10.000 dBm	10.000 dBm
Attenuation	30.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	FFT	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	1 / max. 1	max. 1
Stable	0 / 1	1
Max Stable Difference	0.00 dB	0.50 dB

Tx Spurious Emission (2452 MHz; 20.000 dBm; 20 MHz)

Customized settings.

Result

DUT Frequency (MHz)	Result
2452.000000	PASS

Final measurements

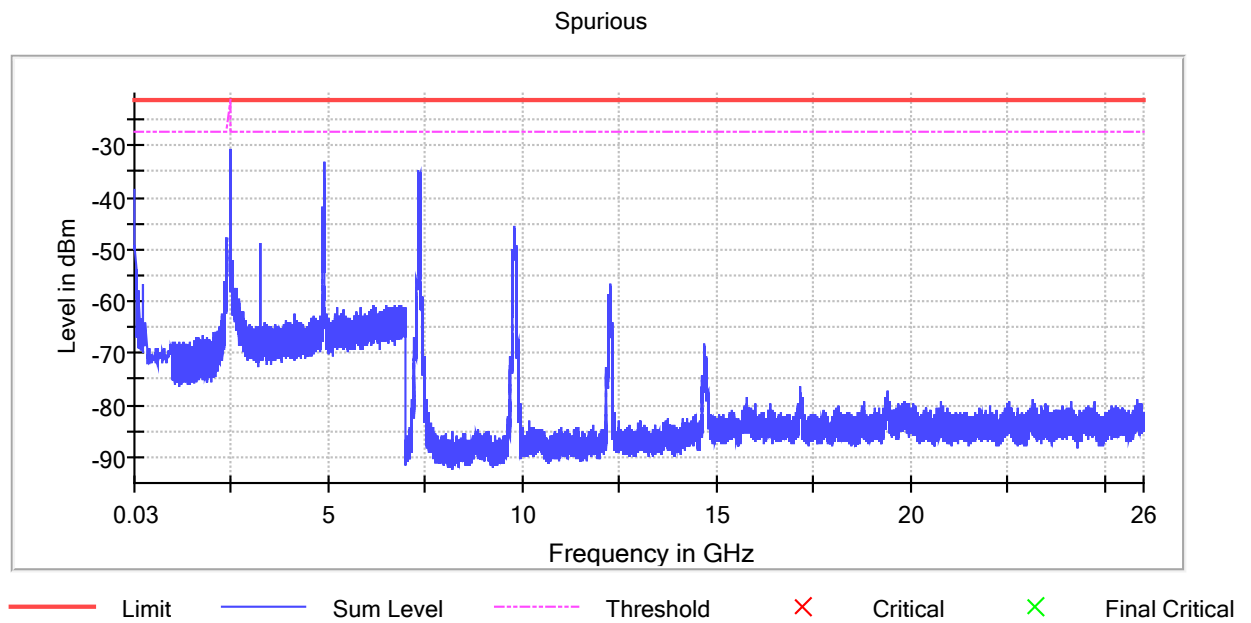
Frequency (MHz)	Level Pre Measurement (dBm)	level (dBm)	Limit (dBm)	Margin (dB)	Result
---	---	---	---	---	---

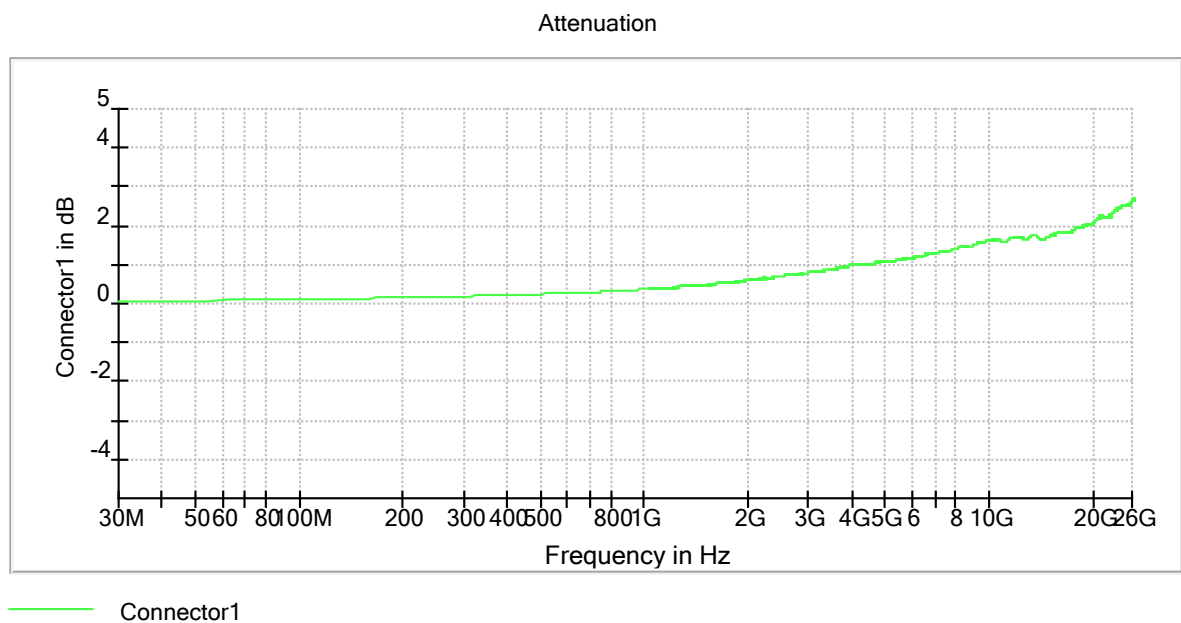
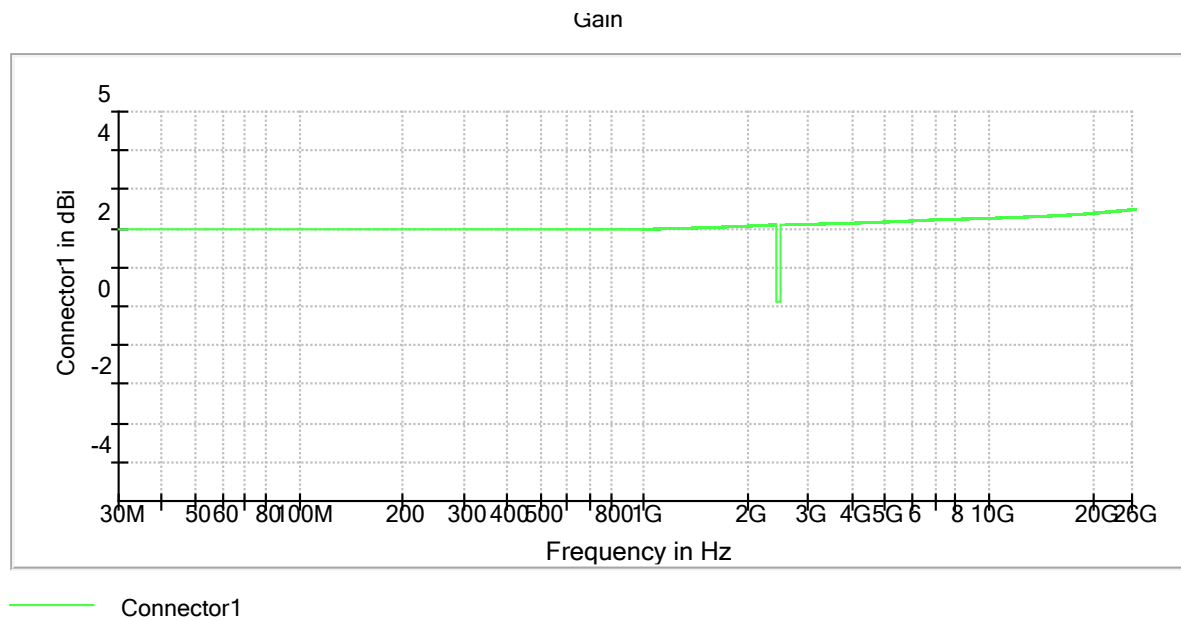
Pre Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)
2485.687611	-30.5	9.3	-21.2
2485.828748	-31.2	9.9	-21.2
4905.185736	-33.4	12.1	-21.2
2484.135113	-33.6	12.3	-21.2
2484.558522	-33.9	12.7	-21.2
2484.417385	-34.2	13.0	-21.2
2483.852841	-34.4	13.2	-21.2
2483.570568	-34.5	13.3	-21.2
2484.699658	-34.7	13.5	-21.2
2485.123066	-34.8	13.5	-21.2
2487.381246	-34.8	13.5	-21.2
7351.129652	-35.0	13.8	-21.2
2486.957837	-35.0	13.8	-21.2
7362.129308	-35.1	13.9	-21.2
2485.546475	-35.1	13.9	-21.2

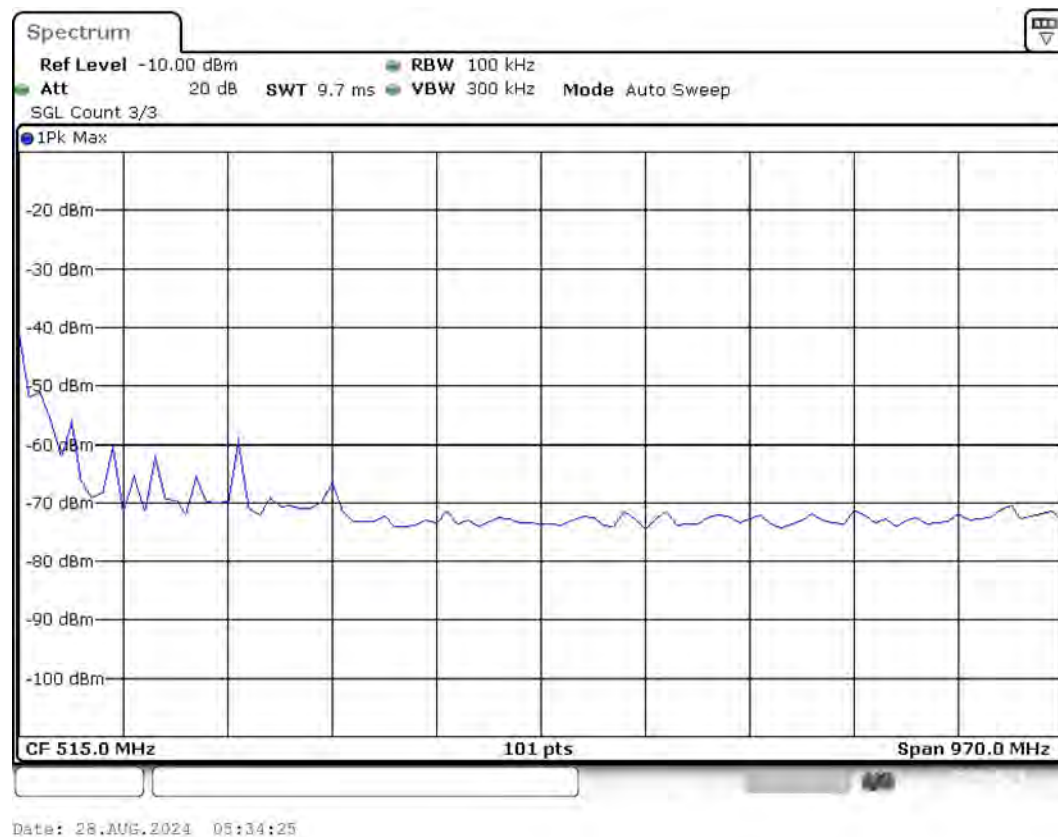
Measurement Settings

Start Frequency (MHz)	Stop Frequency (MHz)	Pre Measurement	Final Measurement
30.000000	1000.000000	1	1
1000.000000	2400.000000	2	2
2483.500000	7000.000000	2	2
7000.000000	18000.000000	2	2
18000.000000	26000.000000	2	2

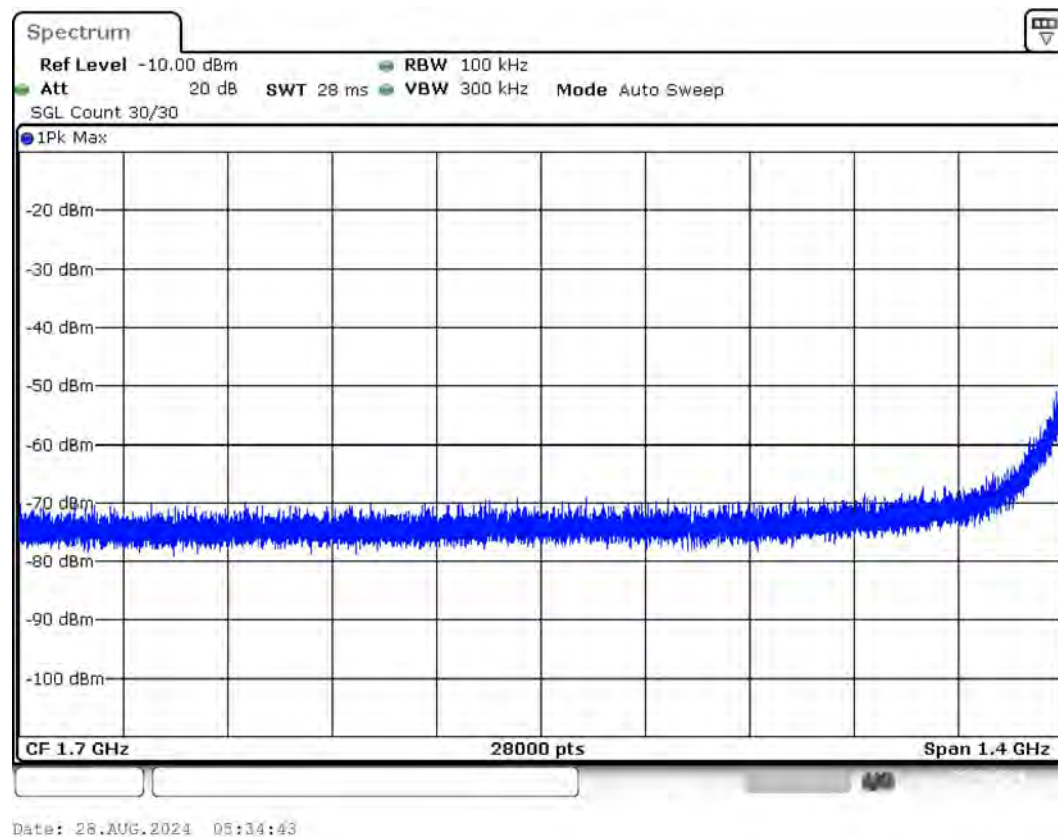




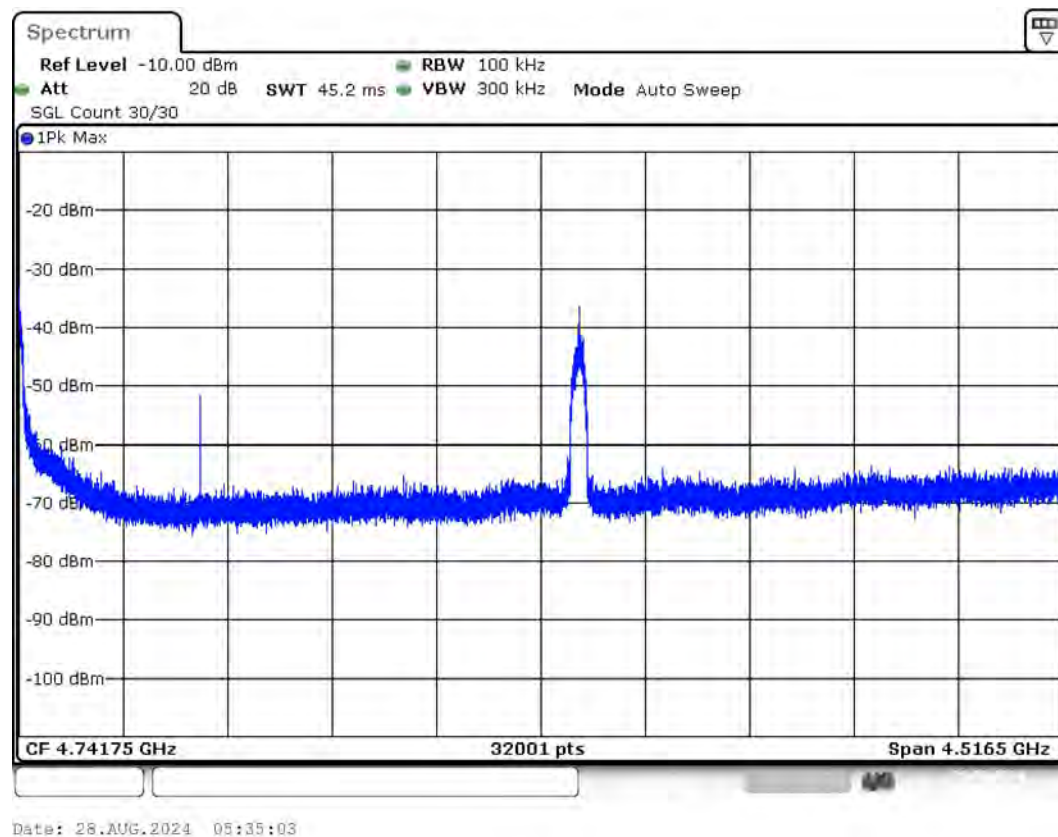
Spurious Connector 1_0



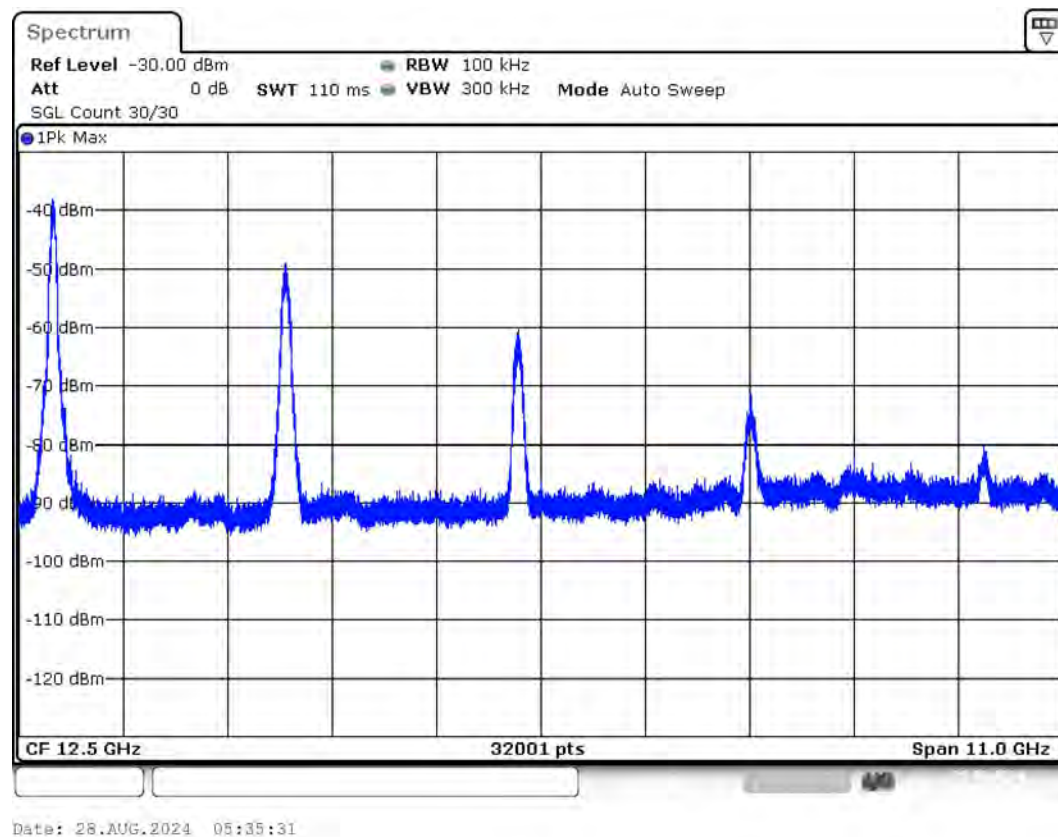
Spurious Connector 1_1



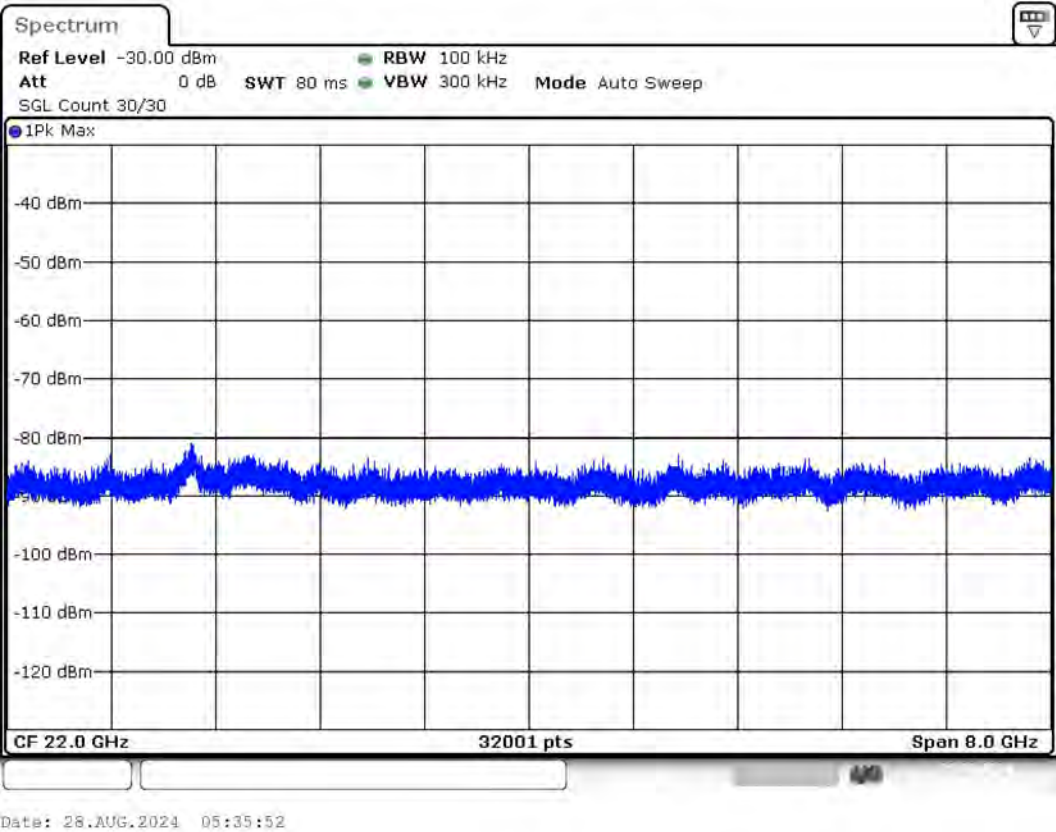
Spurious Connector 1_2



Spurious Connector 1_3



Spurious Connector 1_4



Pre Measurement 1

Setting	Instrument Value	Target Value
RBW	100.000 kHz	<= 100.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	101	~ 98
SweepTime	9.700 ms	AUTO
Reference Level	-10.000 dBm	-30.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	3	3
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	1 / max. 1	max. 1
Stable	0 / 1	1
Max Stable Difference	0.00 dB	0.50 dB

Pre Measurement 2

Setting	Instrument Value	Target Value
RBW	100.000 kHz	<= 100.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	28000	~ 28000
SweepTime	28.000 ms	AUTO
Reference Level	-10.000 dBm	-30.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	30	30

Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweep type	Sweep	AUTO
Preamp	off	off
Stable mode	Trace	Trace
Stable value	1.00 dB	1.00 dB
Run	1 / max. 1	max. 1
Stable	0 / 3	3
Max Stable Difference	0.00 dB	1.00 dB