

WiFi g Mode Annex

Summary

Test	Frequency (MHz)	Nominal Power (dBm)	Nominal Bandwidth (MHz)	Result
RF output power	2412.000	24.0	20.000000	PASS
Minimum Emission Bandwidth 6 dB	2412.000	24.0	20.000000	PASS
Power Spectral Density	2412.000	24.0	20.000000	PASS
Occupied Channel Bandwidth 99%	2412.000	24.0	20.000000	PASS
Band Edge low	2412.000	24.0	20.000000	PASS
Tx Spurious Emission	2412.000	24.0	20.000000	PASS
Minimum Emission Bandwidth 6 dB	2437.000	24.0	20.000000	PASS
Occupied Channel Bandwidth 99%	2437.000	24.0	20.000000	PASS
Band Edge low	2437.000	24.0	20.000000	PASS
Band Edge high	2437.000	24.0	20.000000	PASS
Tx Spurious Emission	2437.000	24.0	20.000000	PASS
Minimum Emission Bandwidth 6 dB	2462.000	24.0	20.000000	PASS
Occupied Channel Bandwidth 99%	2462.000	24.0	20.000000	PASS
Band Edge high	2462.000	24.0	20.000000	PASS
Tx Spurious Emission	2462.000	24.0	20.000000	PASS

RF output power (2412 MHz; 24.000 dBm; 20 MHz)

Result

DUT Frequency (MHz)	Gated RMS (dBm)	Limit Max (dBm)	Gated EIRP (dBm)	DutyCycle (%)	Result
2412.000000	15.8	30.0	15.8	90.859	PASS

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

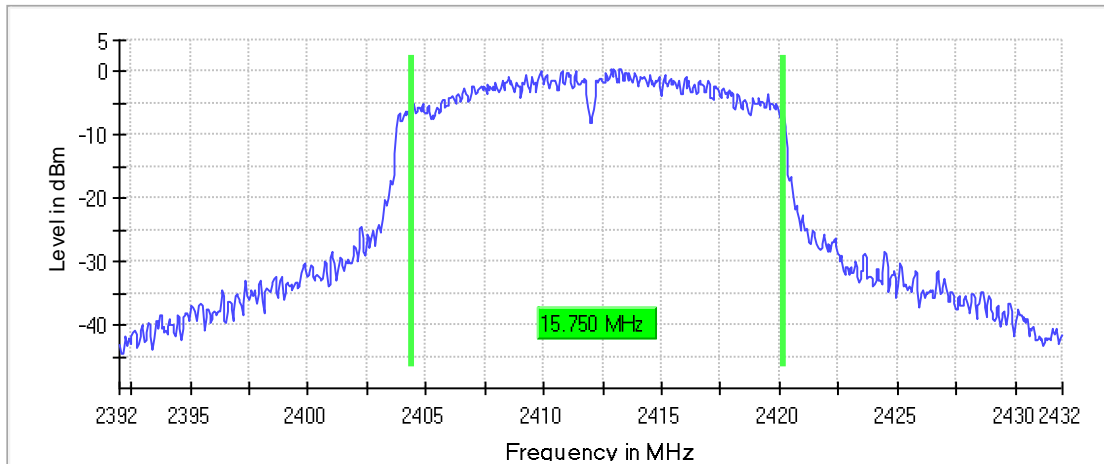
Minimum Emission Bandwidth 6 dB (2412 MHz; 24.000 dBm; 20 MHz)

6 dB Bandwidth

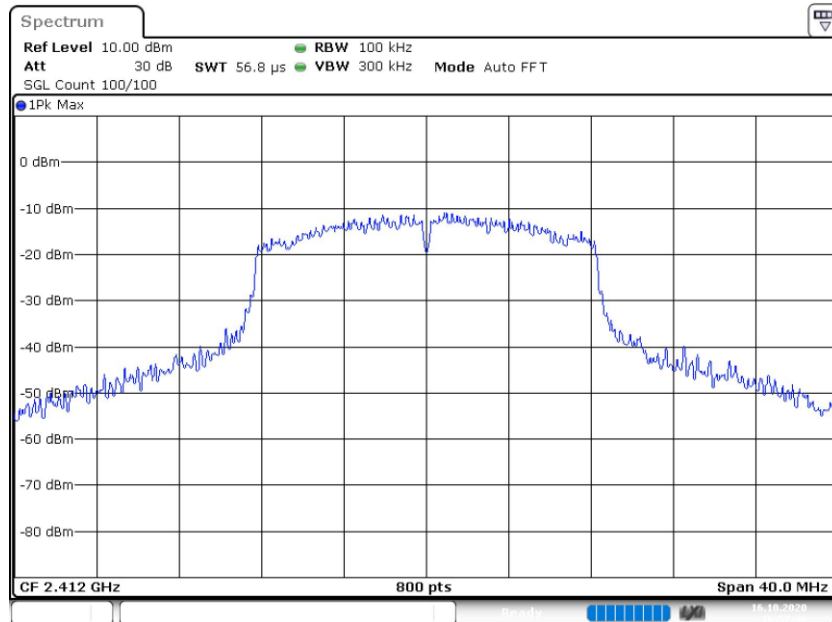
DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2412.000000	15.750000	0.500000	---	2404.425000	2420.175000

DUT Frequency (MHz)	Max Level (dBm)	Result
2412.000000	0.5	PASS

6 dB Bandwidth



Bandwidth



Date: 16.OCT.2020 16:57:36

Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.39200 GHz	2.39200 GHz
Stop Frequency	2.43200 GHz	2.43200 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 μ s	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

Power Spectral Density (2412 MHz; 24.000 dBm; 20 MHz)

Result

DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max (dBm)	Result
2412.000000	2410.775000	-6.270	8.0	PASS

Ports

Port	State
1	used

Measurement

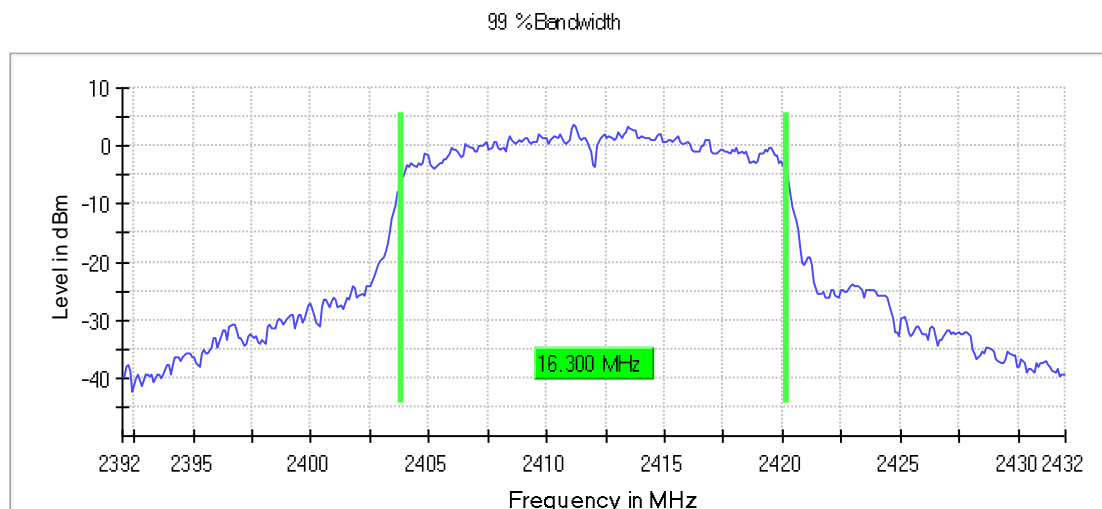
Setting	Instrument Value	Target Value
Start Frequency	2.39700 GHz	2.39700 GHz
Stop Frequency	2.42700 GHz	2.42700 GHz
Span	30.000 MHz	30.000 MHz
RBW	100.000 kHz	<= 100.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	600	~ 600
Sweptime	1.040 ms	AUTO
Reference Level	10.000 dBm	10.000 dBm
Attenuation	30.000 dB	AUTO
Detector	RMS	RMS
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Average Power	Average Power
SweepType	Sweep	Sweep
Preamp	off	off

Occupied Channel Bandwidth 99% (2412 MHz; 24.000 dBm; 20 MHz)

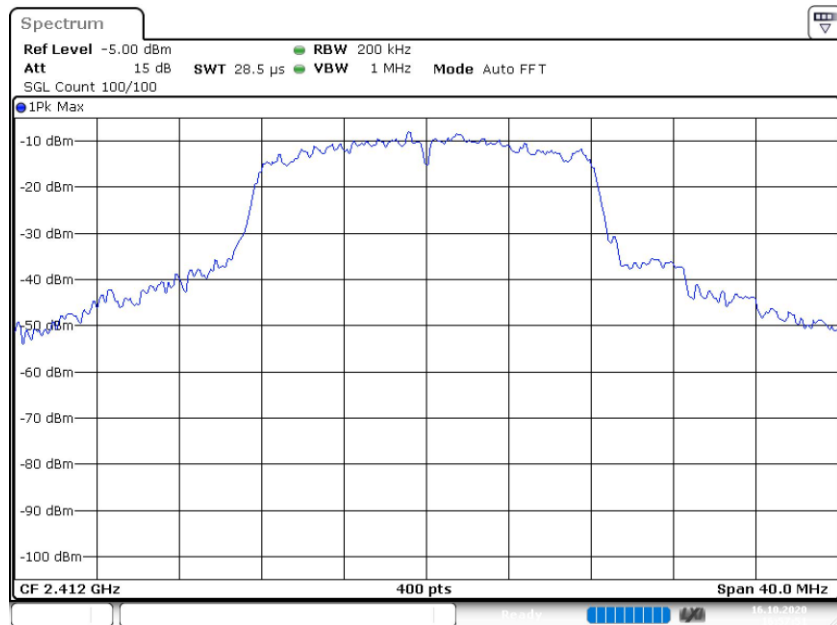
99 % Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2412.000000	16.300000	---	---	2403.850000	2420.150000

DUT Frequency (MHz)	Result
2412.000000	PASS



Bandwidth



Date: 16.OCT.2020 16:57:51

Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.39200 GHz	2.39200 GHz
Stop Frequency	2.43200 GHz	2.43200 GHz
Span	40.000 MHz	40.000 MHz
RBW	200.000 kHz	>= 200.000 kHz
VBW	1.000 MHz	>= 600.000 kHz
SweepPoints	400	~ 400
Sweeptime	28.477 μs	AUTO
Reference Level	-5.000 dBm	-5.000 dBm
Attenuation	15.000 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

Band Edge low (2412 MHz; 24.000 dBm; 20 MHz)

Result

DUT Frequency (MHz)	Result
2412.000000	PASS

Inband Peak

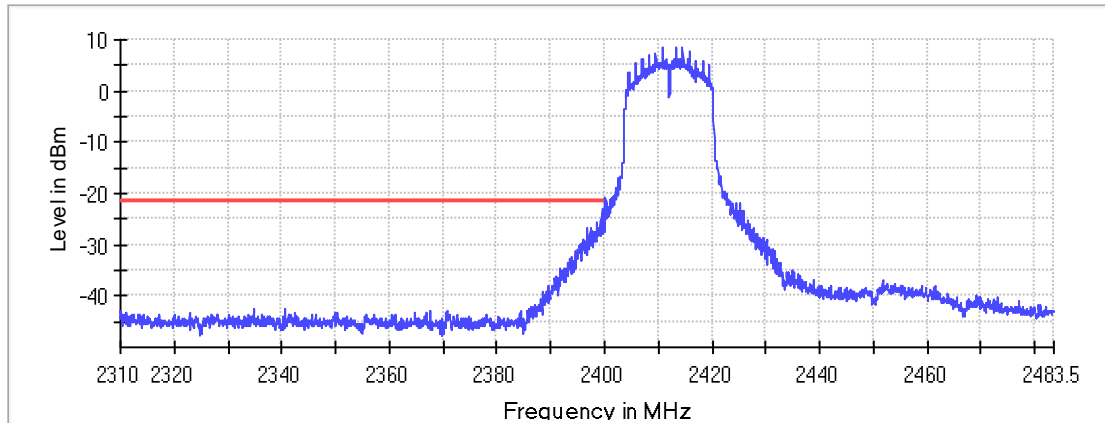
Frequency (MHz)	Level (dBm)
2413.275000	8.4

Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2399.525000	-23.1	1.5	-21.6	PASS
2399.475000	-23.3	1.7	-21.6	PASS
2399.575000	-24.4	2.8	-21.6	PASS
2399.875000	-24.7	3.1	-21.6	PASS
2399.825000	-24.8	3.2	-21.6	PASS
2399.725000	-25.1	3.5	-21.6	PASS

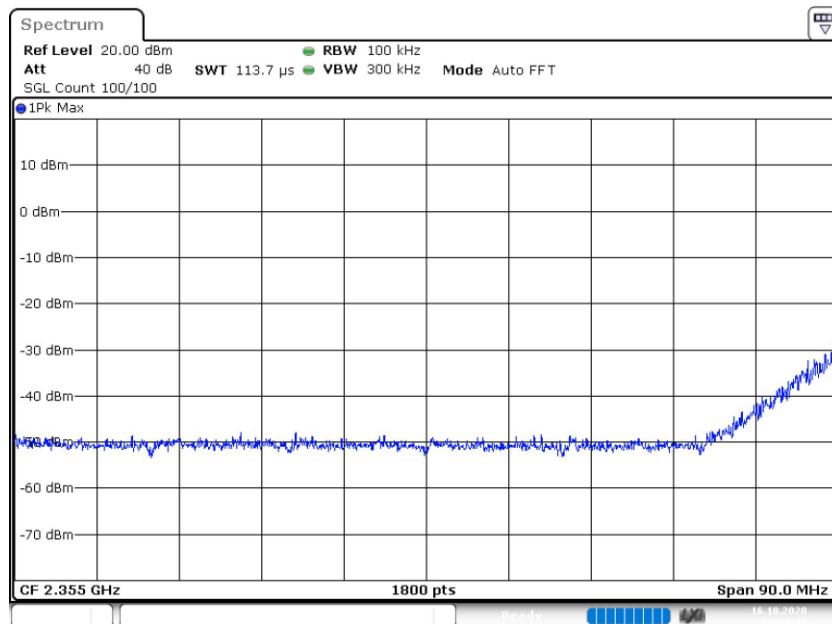
2399.225000	-25.1	3.5	-21.6	PASS
2399.275000	-25.1	3.5	-21.6	PASS
2399.775000	-25.2	3.6	-21.6	PASS
2398.525000	-25.4	3.9	-21.6	PASS
2398.575000	-25.6	4.0	-21.6	PASS
2399.425000	-25.8	4.2	-21.6	PASS
2399.175000	-26.0	4.4	-21.6	PASS
2399.125000	-26.0	4.4	-21.6	PASS
2399.675000	-26.2	4.6	-21.6	PASS

Band Edge



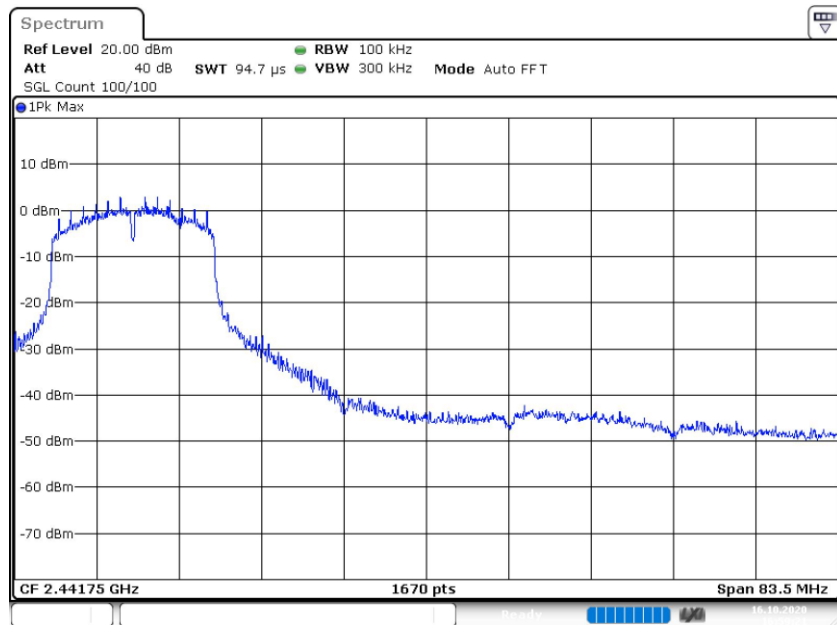
— Limit — SumLevel × Fail

Band Edge Connector 1_0



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Band Edge Connector 1_1



Date: 16.OCT.2020 16:59:21

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
Sweeptime	113.672 μs	AUTO
Reference Level	20.000 dBm	20.000 dBm
Attenuation	40.000 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	11 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.30 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	20.000 dBm	20.000 dBm
Attenuation	40.000 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	54 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.39 dB	0.50 dB

Tx Spurious Emission (2412 MHz; 24.000 dBm; 20 MHz)

Result

DUT Frequency (MHz)	Result
2412.000000	PASS

Final measurements

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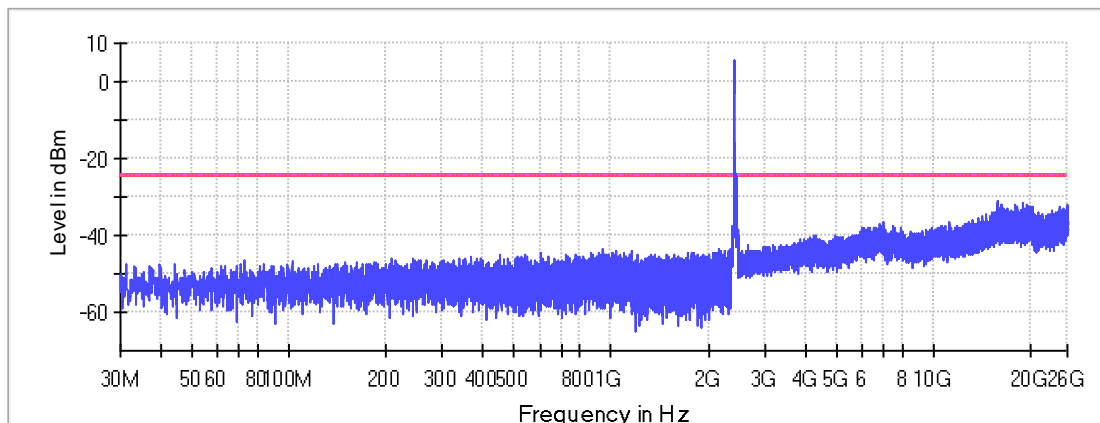
Pre Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)
2399.825000	-25.7	1.3	-24.5
2399.875000	-25.8	1.3	-24.5
2399.475000	-26.0	1.5	-24.5
2398.575000	-26.6	2.1	-24.5
2399.525000	-26.6	2.2	-24.5
2398.625000	-26.6	2.2	-24.5
2399.425000	-26.8	2.4	-24.5
2398.775000	-26.9	2.4	-24.5
2398.675000	-26.9	2.5	-24.5
2398.525000	-27.0	2.5	-24.5
2398.725000	-27.0	2.5	-24.5
2399.125000	-27.0	2.5	-24.5
2399.175000	-27.1	2.7	-24.5
2397.625000	-27.2	2.7	-24.5
2399.925000	-27.2	2.8	-24.5

Measurement Settings

Start Frequency (MHz)	Stop Frequency (MHz)	Pre Measurement	Final Measurement
30.000000	2350.000000	1	1
2350.000000	2483.500000	2	1
2483.500000	26000.000000	1	1

Spurious



— Limit — SumLevel - - - Threshold × Critical × Final Critical

Pre Measurement 1

Setting	Instrument Value	Target Value
RBW	100.000 kHz	<= 100.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	32001	~ 46400
Sweptime	32.100 ms	AUTO
Reference Level	20.000 dBm	20.000 dBm
Attenuation	40.000 dB	40.000 dB
Detector	MaxPeak	MaxPeak
SweepCount	3	3
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	Sweep	AUTO
Preamp	off	off

Pre Measurement 2

Setting	Instrument Value	Target Value
RBW	100.000 kHz	<= 100.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	2670	~ 2670
Sweptime	151.563 μ s	AUTO
Reference Level	20.000 dBm	20.000 dBm
Attenuation	40.000 dB	40.000 dB
Detector	MaxPeak	MaxPeak
SweepCount	300	300
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	FFT	AUTO
Preamp	off	off

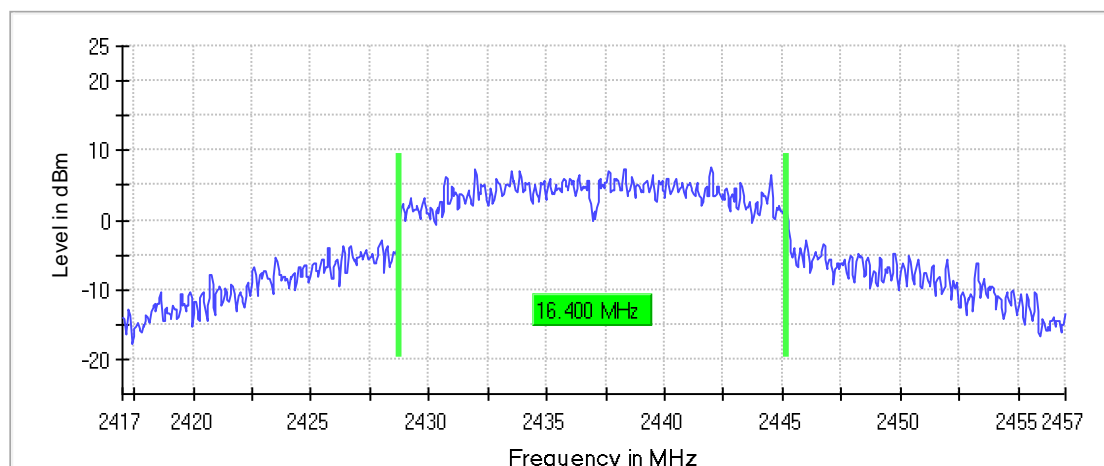
Minimum Emission Bandwidth 6 dB (2437 MHz; 24.000 dBm; 20 MHz)

6 dB Bandwidth

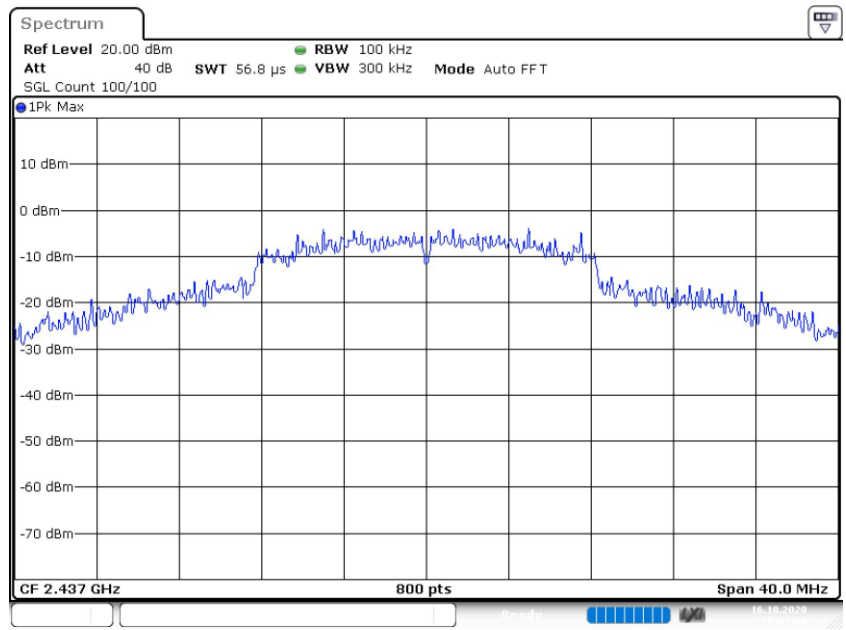
DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2437.000000	16.400000	0.500000	---	2428.775000	2445.175000

DUT Frequency (MHz)	Max Level (dBm)	Result
2437.000000	7.6	PASS

6 dB Bandwidth



Bandwidth



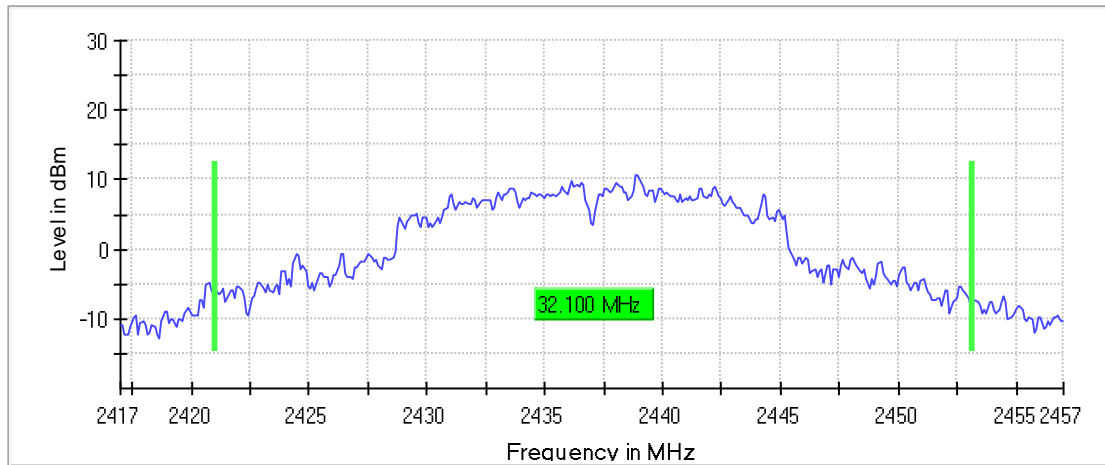
Occupied Channel Bandwidth 99% (2437 MHz; 24.000 dBm; 20 MHz)

99 % Bandwidth

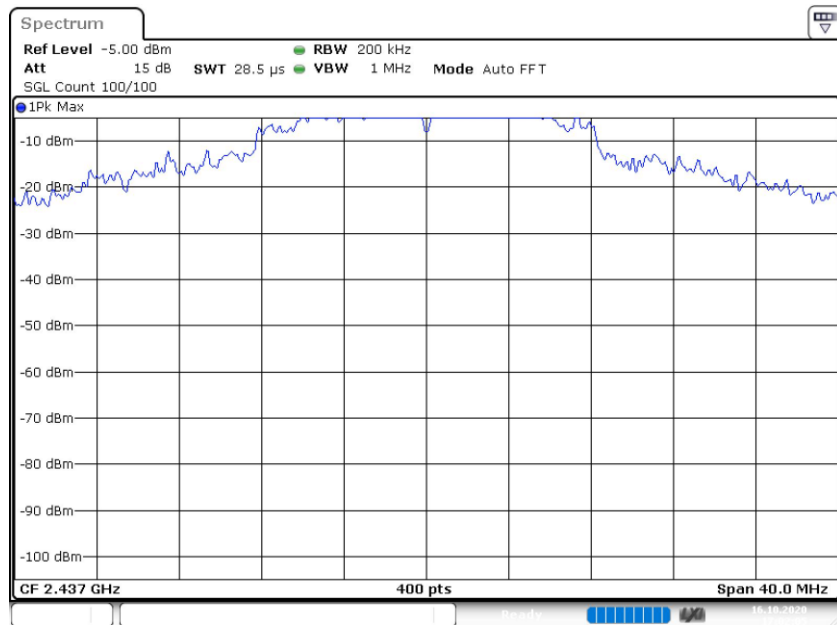
DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2437.000000	32.100000	---	---	2421.050000	2453.150000

DUT Frequency (MHz)	Result
2437.000000	PASS

99 %Bandwidth



Bandwidth



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Band Edge low (2437 MHz; 24.000 dBm; 20 MHz)

Result

DUT Frequency (MHz)	Result
2437.000000	PASS

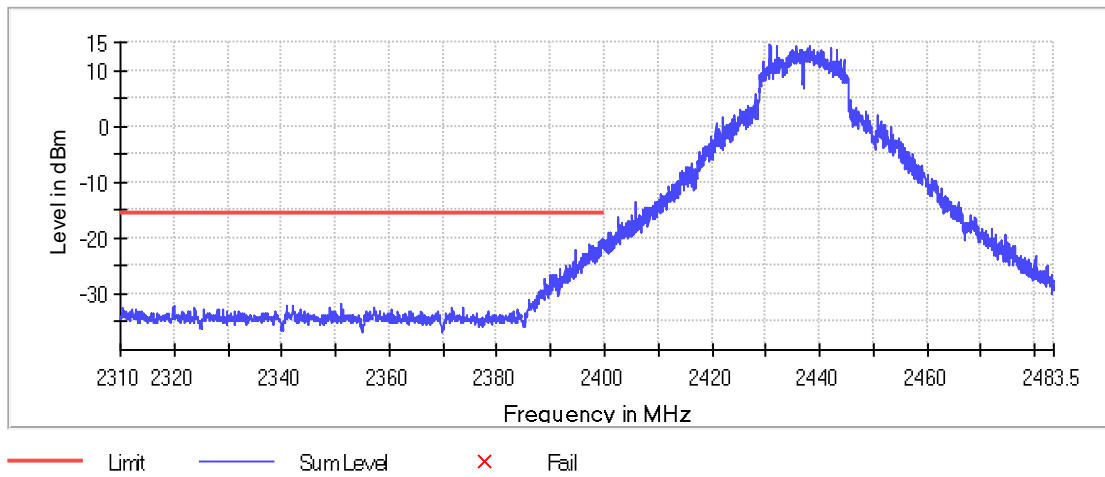
Inband Peak

Frequency (MHz)	Level (dBm)
2430.725000	14.5

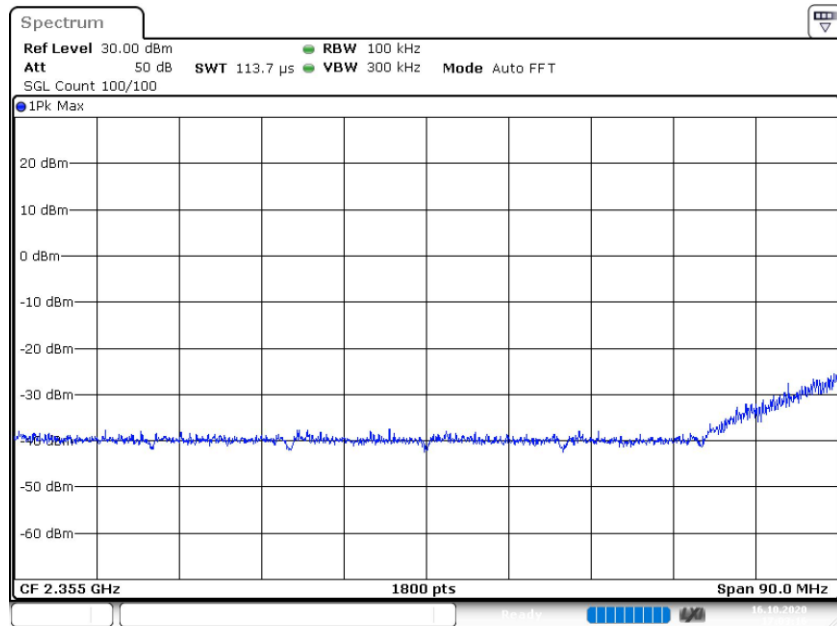
Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2399.475000	-20.1	4.6	-15.5	PASS
2399.525000	-20.1	4.6	-15.5	PASS
2399.725000	-20.2	4.7	-15.5	PASS
2399.775000	-20.3	4.8	-15.5	PASS
2399.875000	-20.5	5.0	-15.5	PASS
2399.125000	-20.5	5.0	-15.5	PASS
2399.225000	-20.6	5.1	-15.5	PASS
2399.175000	-20.6	5.1	-15.5	PASS
2399.825000	-20.8	5.2	-15.5	PASS
2398.875000	-20.9	5.4	-15.5	PASS
2397.225000	-21.1	5.6	-15.5	PASS
2398.925000	-21.1	5.6	-15.5	PASS
2397.275000	-21.2	5.7	-15.5	PASS
2397.625000	-21.3	5.8	-15.5	PASS
2397.675000	-21.3	5.8	-15.5	PASS

Band Edge

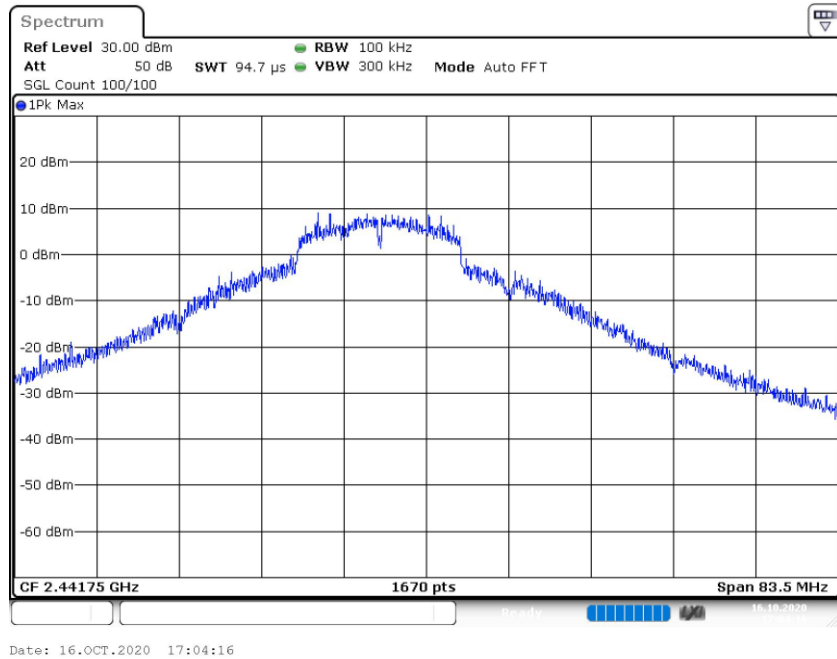


Band Edge Connector 1_0



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Band Edge Connector 1_1



Band Edge high (2437 MHz; 24.000 dBm; 20 MHz)

Result

DUT Frequency (MHz)	Result
2437.000000	PASS

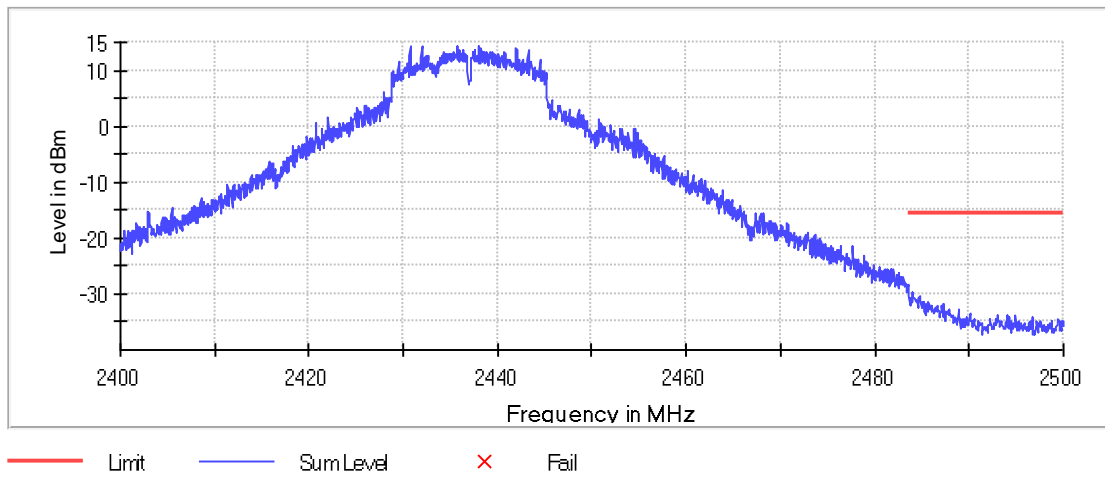
Inband Peak

Frequency (MHz)	Level (dBm)
2437.975000	14.4

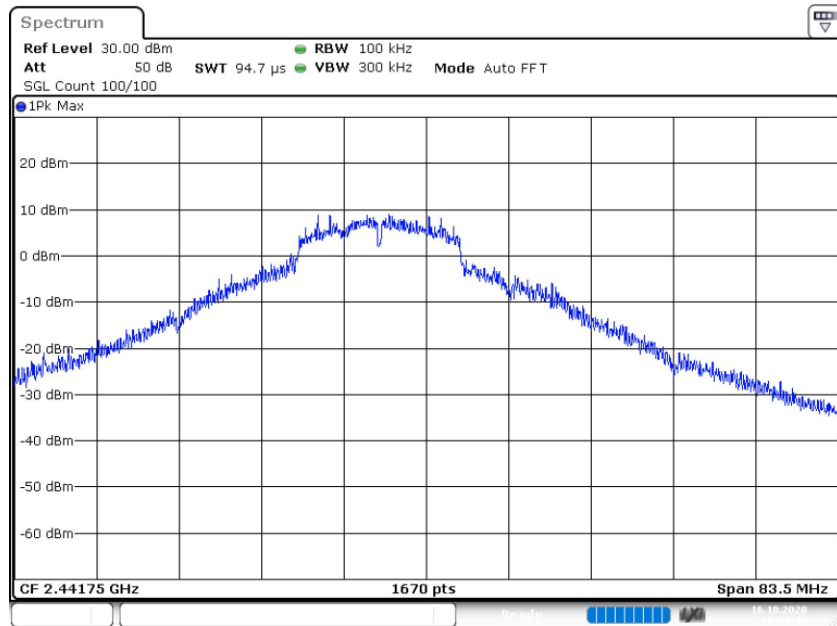
Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2484.025000	-29.5	14.0	-15.6	PASS
2483.525000	-29.6	14.1	-15.6	PASS
2483.575000	-29.7	14.1	-15.6	PASS
2483.975000	-29.9	14.4	-15.6	PASS
2483.625000	-30.0	14.4	-15.6	PASS
2484.775000	-30.3	14.7	-15.6	PASS
2483.675000	-30.3	14.7	-15.6	PASS
2484.825000	-30.3	14.8	-15.6	PASS
2484.725000	-30.4	14.8	-15.6	PASS
2484.275000	-30.6	15.0	-15.6	PASS
2484.075000	-30.6	15.0	-15.6	PASS
2484.125000	-30.7	15.1	-15.6	PASS
2484.225000	-30.7	15.2	-15.6	PASS
2483.825000	-30.8	15.3	-15.6	PASS
2484.675000	-30.8	15.3	-15.6	PASS

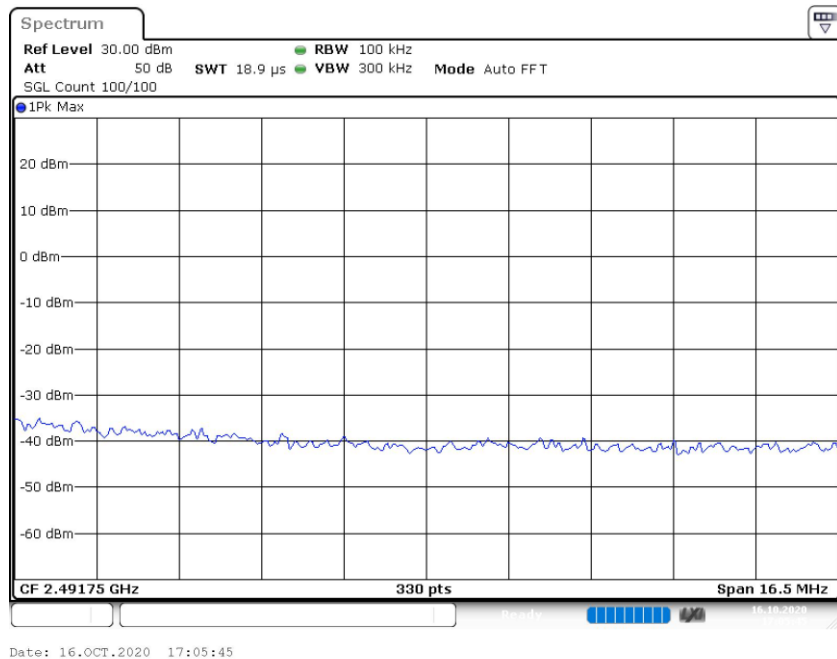
Band Edge



Band Edge Connector 1_0



Band Edge Connector 1_1



Tx Spurious Emission (2437 MHz; 24.000 dBm; 20 MHz)

Result

DUT Frequency (MHz)	Result
2437.000000	PASS

Final measurements

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

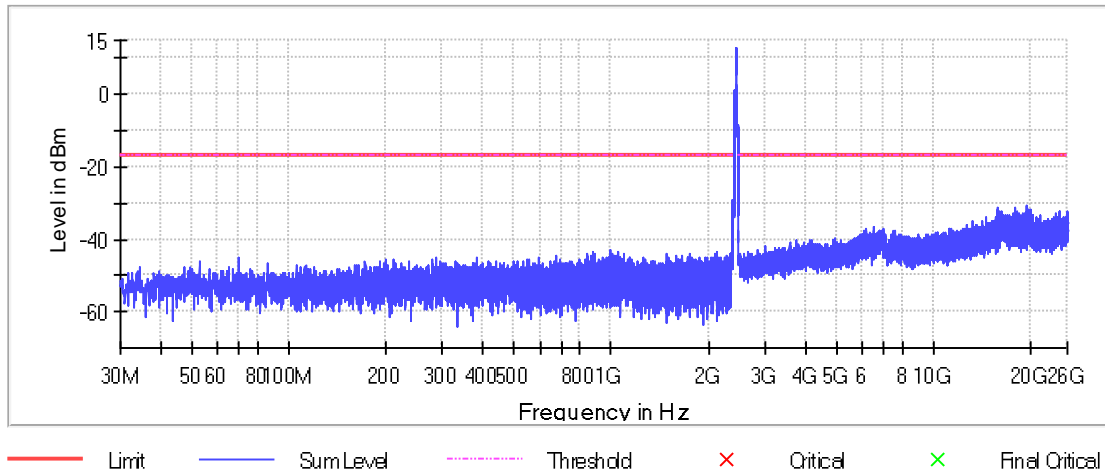
Pre Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)
2398.775000	-22.0	4.9	-17.1
2398.825000	-22.2	5.1	-17.1
2398.875000	-22.4	5.3	-17.1
2397.975000	-22.6	5.5	-17.1
2398.025000	-22.6	5.5	-17.1
2398.275000	-22.7	5.6	-17.1
2398.225000	-22.7	5.6	-17.1
2397.625000	-22.8	5.7	-17.1
2398.725000	-22.8	5.7	-17.1
2399.825000	-23.0	5.9	-17.1
2397.675000	-23.1	6.0	-17.1
2399.125000	-23.2	6.1	-17.1
2399.225000	-23.3	6.2	-17.1
2397.575000	-23.4	6.3	-17.1
2398.925000	-23.4	6.3	-17.1

Measurement Settings

Start Frequency (MHz)	Stop Frequency (MHz)	Pre Measurement	Final Measurement
30.000000	2350.000000	1	1
2350.000000	2483.500000	2	1
2483.500000	26000.000000	1	1

Spurious



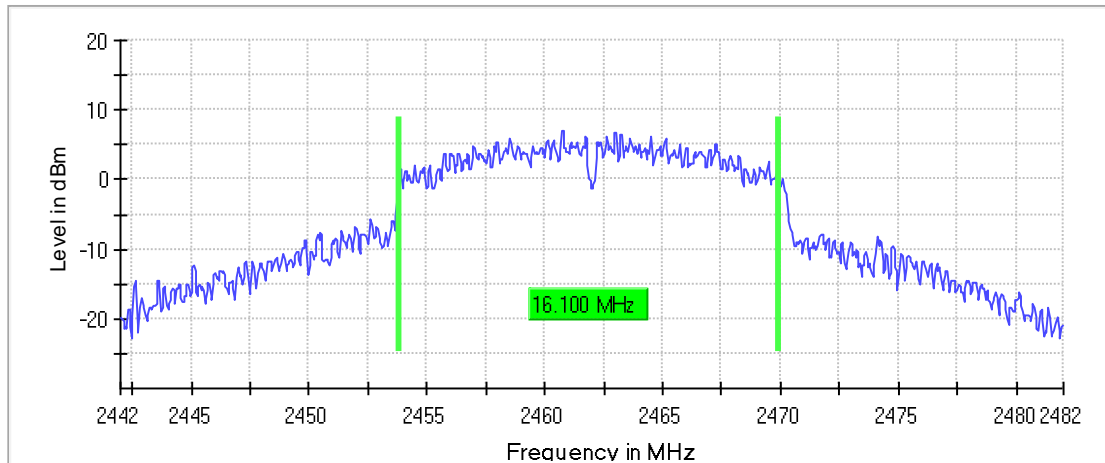
Minimum Emission Bandwidth 6 dB (2462 MHz; 24.000 dBm; 20 MHz)

6 dB Bandwidth

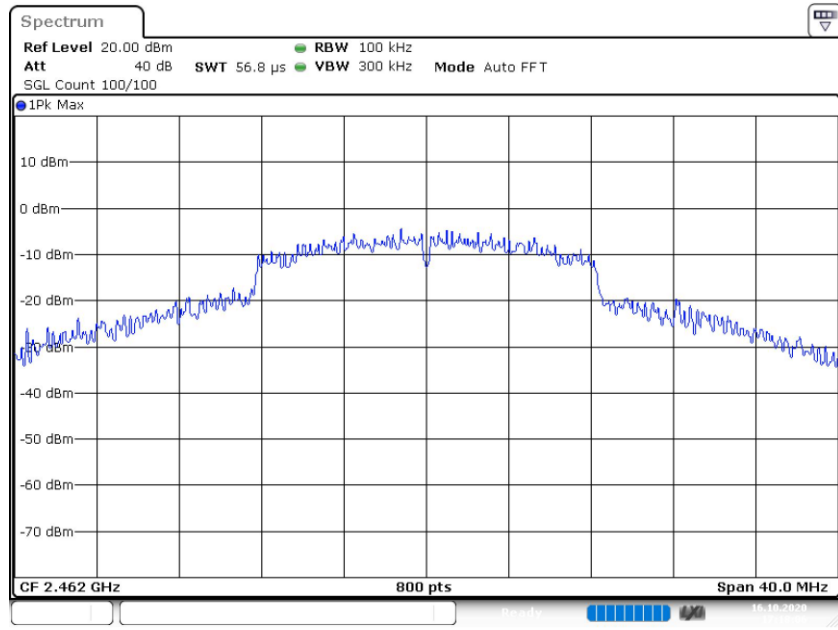
DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2462.000000	16.100000	0.500000	---	2453.825000	2469.925000

DUT Frequency (MHz)	Max Level (dBm)	Result
2462.000000	7.1	PASS

6 dB Bandwidth



Bandwidth



Date: 16.OCT.2020 17:18:06

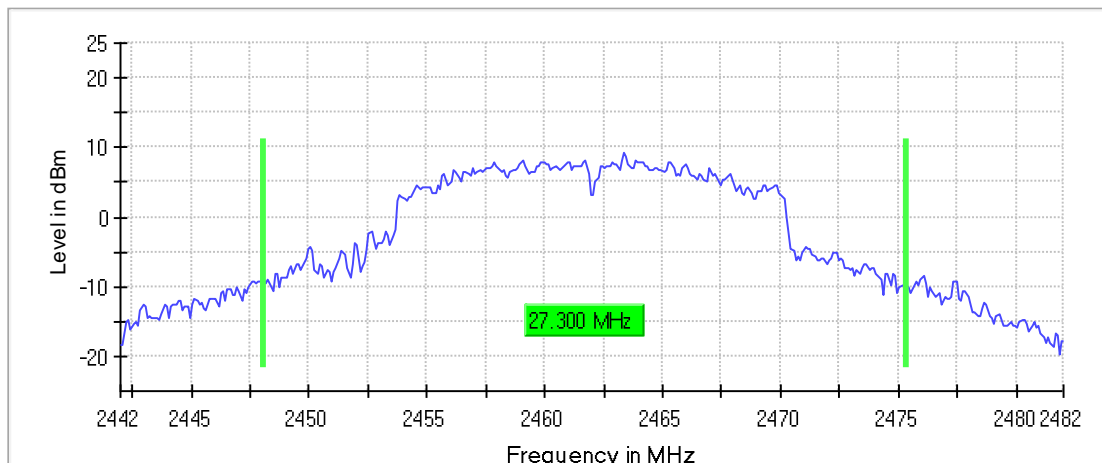
Occupied Channel Bandwidth 99% (2462 MHz; 24.000 dBm; 20 MHz)

99 % Bandwidth

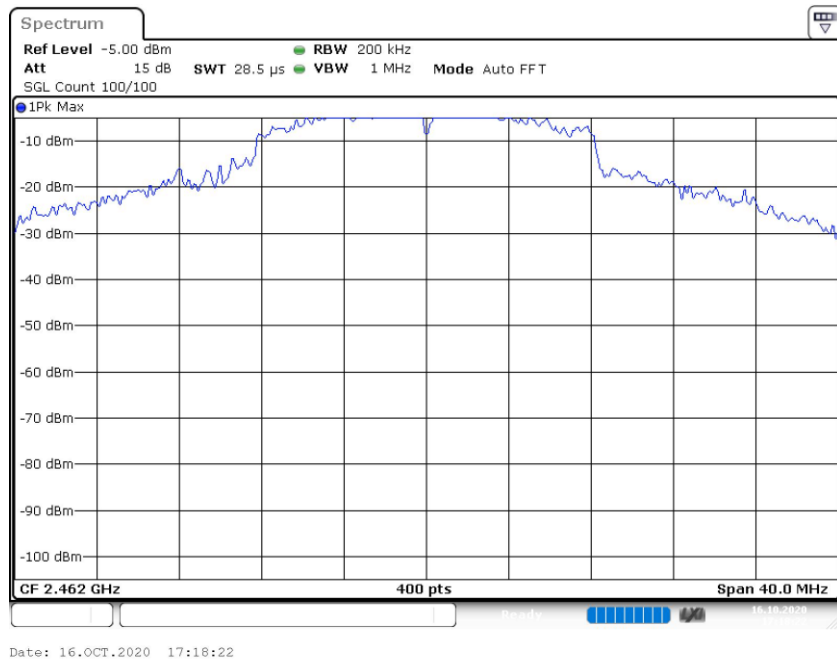
DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2462.000000	27.300000	---	---	2448.050000	2475.350000

DUT Frequency (MHz)	Result
2462.000000	PASS

99 %Bandwidth



Bandwidth



Band Edge high (2462 MHz; 24.000 dBm; 20 MHz)

Result

DUT Frequency (MHz)	Result
2462.000000	PASS

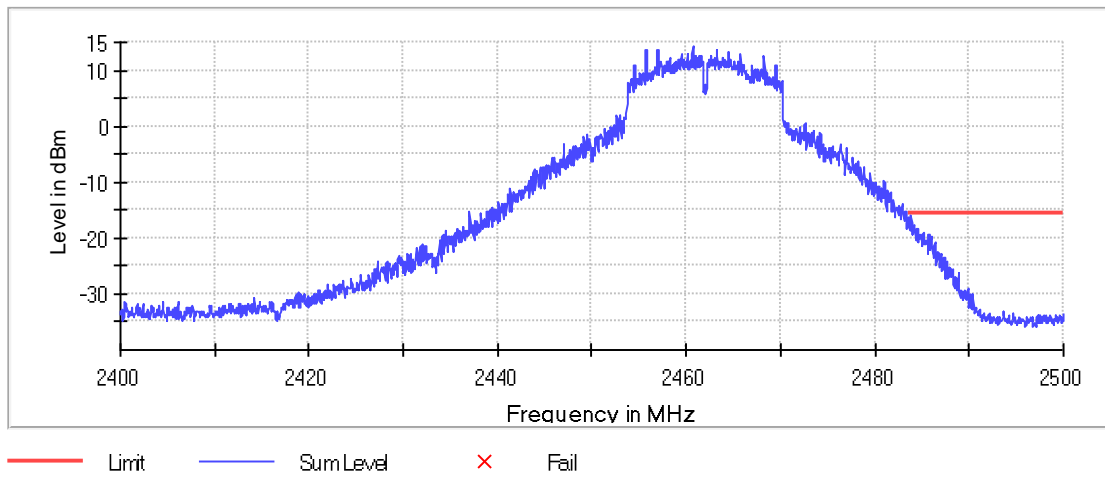
Inband Peak

Frequency (MHz)	Level (dBm)
2460.725000	14.4

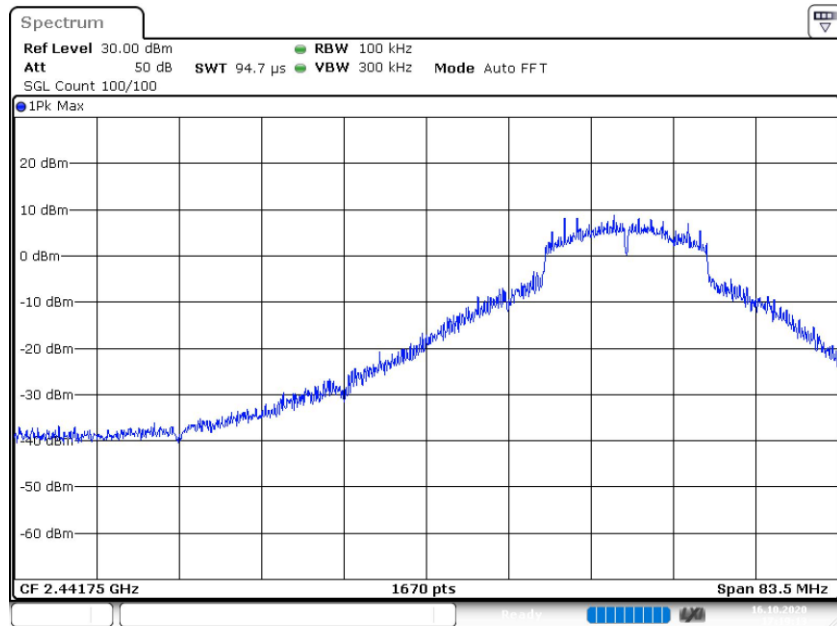
Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2483.875000	-15.9	0.2	-15.6	PASS
2483.825000	-16.2	0.6	-15.6	PASS
2483.625000	-16.8	1.1	-15.6	PASS
2483.575000	-16.9	1.3	-15.6	PASS
2483.525000	-17.2	1.5	-15.6	PASS
2483.925000	-17.3	1.6	-15.6	PASS
2484.125000	-17.6	1.9	-15.6	PASS
2484.175000	-17.7	2.0	-15.6	PASS
2483.675000	-18.0	2.3	-15.6	PASS
2484.475000	-18.2	2.5	-15.6	PASS
2484.525000	-18.3	2.6	-15.6	PASS
2484.075000	-18.3	2.7	-15.6	PASS
2484.425000	-18.5	2.8	-15.6	PASS
2484.225000	-18.7	3.0	-15.6	PASS
2483.775000	-18.7	3.0	-15.6	PASS

Band Edge

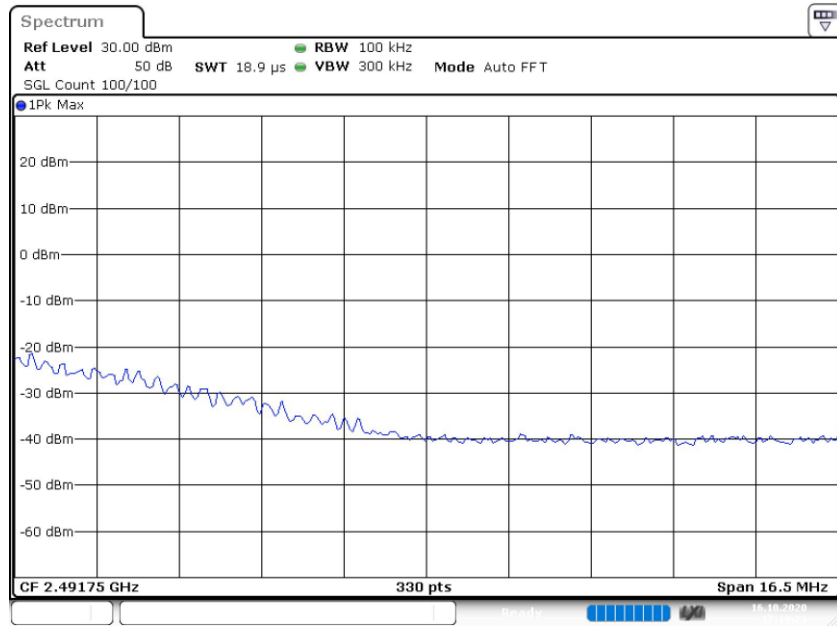


Band Edge Connector 1_0



Date: 16.OCT.2020 17:19:13

Band Edge Connector 1_1



Date: 16.OCT.2020 17:19:23

Tx Spurious Emission (2462 MHz; 24.000 dBm; 20 MHz)

Result

DUT Frequency (MHz)	Result
2462.000000	PASS

Final measurements

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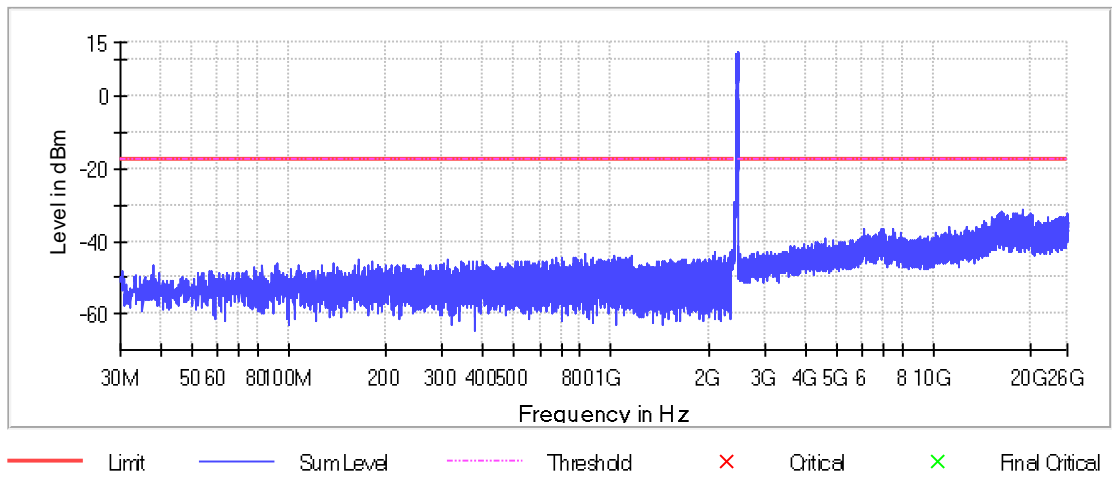
Pre Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)
2483.867434	-21.9	4.4	-17.5
18903.015570	-31.3	13.8	-17.5
16184.740094	-31.7	14.2	-17.5
17600.830076	-32.1	14.6	-17.5
15911.369324	-32.2	14.7	-17.5
18946.372762	-32.2	14.7	-17.5
18184.314998	-32.2	14.7	-17.5
18858.923510	-32.2	14.7	-17.5
2484.602301	-32.2	14.7	-17.5
25990.079287	-32.4	14.8	-17.5
16445.618113	-32.4	14.9	-17.5
17878.610051	-32.4	14.9	-17.5
19923.746750	-32.4	14.9	-17.5
15926.801545	-32.5	15.0	-17.5
17892.572537	-32.6	15.0	-17.5

Measurement Settings

Start Frequency (MHz)	Stop Frequency (MHz)	Pre Measurement	Final Measurement
30.000000	2350.000000	1	1
2350.000000	2483.500000	2	1
2483.500000	26000.000000	1	1

Spurious



-- End of Annex --