
Hardware Setup: WMS Measurements\TS8997 Hardware Setup

Spectrum Analyzer: SA FSV 40 (SA FSV 40) @ VISA (ADR
TCPIP::192.168.48.100::inst0::instr), SN 1321.3008K40/101752,
FW 3.60

Vector Generator: VG SMW200A (VG SMW200A) @ GPIB0 (ADR 28)

Generator: SMB100A (SMB100A) @ VISA (ADR
TCPIP::192.168.48.110::inst0::INSTR), SN 180599, FW
3.20.390.24 / Drv:Rev 2.21.0, 07/2016, CVI 2015

OSP: OSP-B157W8PLUS (OSP-B157W8PLUS) @ VISA (ADR
TCPIP::192.168.48.157::inst0::instr), SN 1527.1144.06 / 100955,
FW 2.00.1.0

Summary

Test	Frequency (MHz)	Nominal Power (dBm)	Nominal Bandwidth (MHz)	Result
Emission Bandwidth 26 dB	5485.000	24.0	20.000000	PASS
RF output power	5485.000	24.0	20.000000	PASS
Power Spectral Density	5485.000	24.0	20.000000	PASS
Occupied Channel Bandwidth 99%	5485.000	24.0	20.000000	PASS
Emission Bandwidth 26 dB	5600.000	24.0	20.000000	PASS
Occupied Channel Bandwidth 99%	5600.000	24.0	20.000000	PASS
Emission Bandwidth 26 dB	5710.000	24.0	20.000000	PASS
Occupied Channel Bandwidth 99%	5710.000	24.0	20.000000	PASS
Emission Bandwidth 26 dB	5495.000	24.0	40.000000	PASS
Occupied Channel Bandwidth 99%	5495.000	24.0	40.000000	PASS
Emission Bandwidth 26 dB	5600.000	24.0	40.000000	PASS
Occupied Channel Bandwidth 99%	5600.000	24.0	40.000000	PASS
Emission Bandwidth 26 dB	5700.000	24.0	40.000000	PASS
Occupied Channel Bandwidth 99%	5700.000	24.0	40.000000	PASS
Emission Bandwidth 26 dB	5515.000	24.0	80.000000	PASS
Occupied Channel Bandwidth 99%	5515.000	24.0	80.000000	PASS
Emission Bandwidth 26 dB	5600.000	24.0	80.000000	PASS
Occupied Channel Bandwidth 99%	5600.000	24.0	80.000000	PASS
Emission Bandwidth 26 dB	5680.000	24.0	80.000000	PASS
Occupied Channel Bandwidth 99%	5680.000	24.0	80.000000	PASS
Emission Bandwidth 26 dB	5570.000	24.0	160.000000	PASS
Occupied Channel Bandwidth 99%	5570.000	24.0	160.000000	PASS

Emission Bandwidth 26 dB (5485 MHz; 24.000 dBm; 20 MHz)

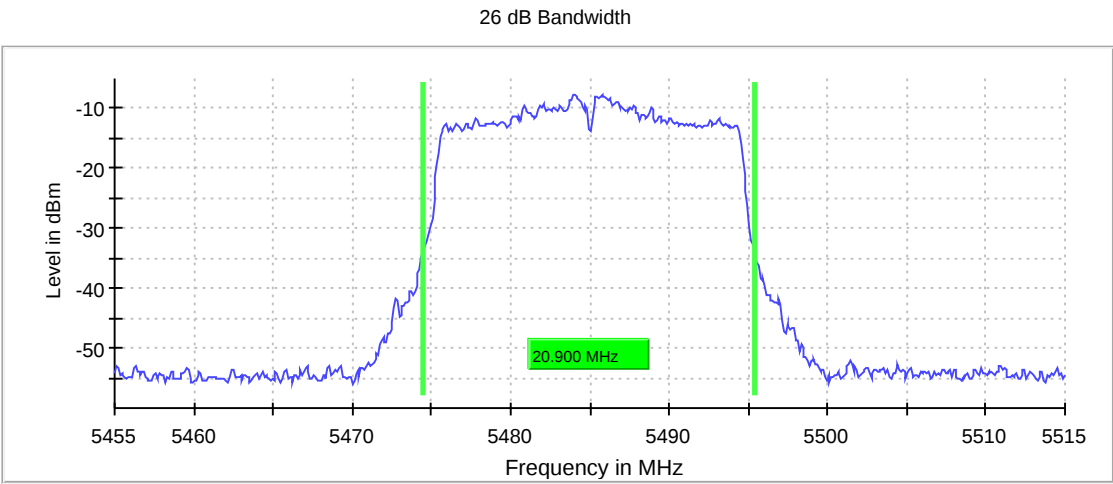
Customized settings.

26 dB Bandwidth

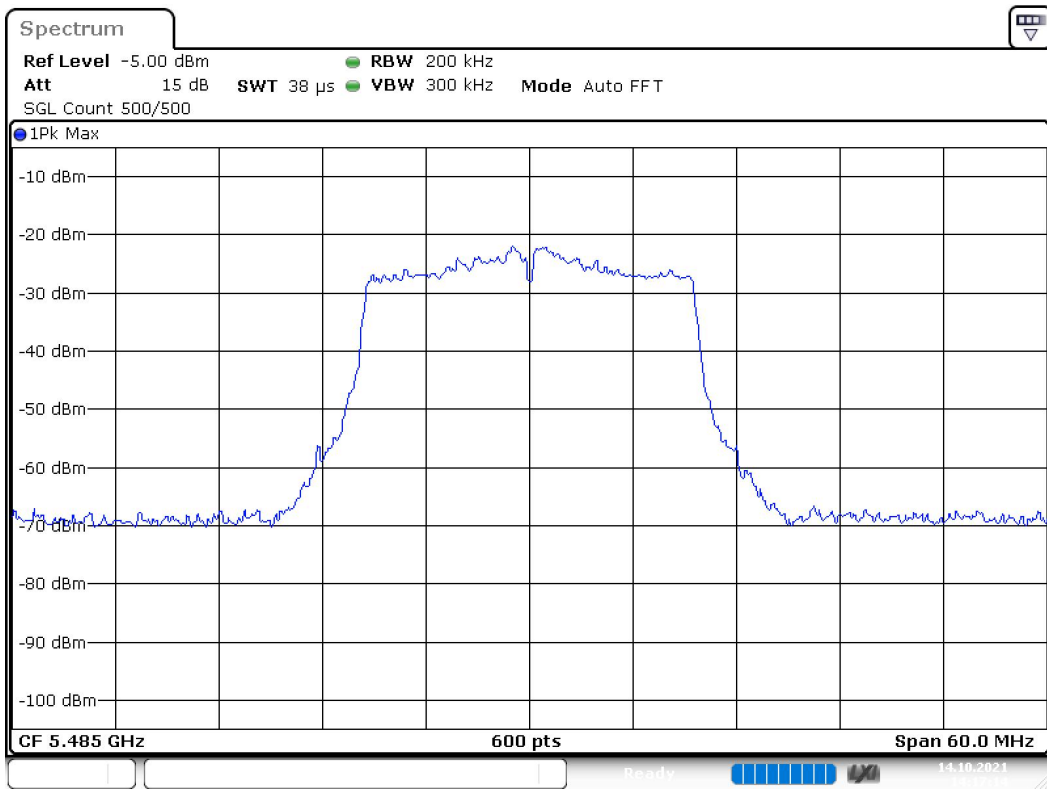
DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5485.000000	20.900000	---	---	5474.450000	5495.350000

(continuation of the "26 dB Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
5485.000000	-7.6	PASS



Bandwidth



Date: 14.OCT.2021 14:17:15

Measurement

Setting	Instrument Value	Target Value
Start Frequency	5.45500 GHz	5.45500 GHz
Stop Frequency	5.51500 GHz	5.51500 GHz
Span	60.000 MHz	60.000 MHz
RBW	200.000 kHz	~ 200.000 kHz
VBW	300.000 kHz	>= 240.000 kHz
SweepPoints	600	~ 600
SweepTime	37.969 μ s	AUTO
Reference Level	-5.000 dBm	-5.000 dBm
Attenuation	15.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	500	500
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	FFT	AUTO
Preamp	off	off

RF output power (5485 MHz; 24.000 dBm; 20 MHz)

Customized settings.

Result

DUT Frequency (MHz)	Gated RMS (dBm)	Limit Max (dBm)	Gated EIRP (dBm)	DutyCycle (%)	Result
5485.000000	7.0	24.0	7.0	92.045	PASS

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

Power Spectral Density (5485 MHz; 24.000 dBm; 20 MHz)

Customized settings.

Max level of analyzer (-6.5 dBm) more than 28.0 dB below the nominal power level.

Result

DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max (dBm)	Result
5485.000000	5485.990099	-6.517	11.0	PASS

Ports

Port	State
1	used
2	used

Measurement

Setting	Instrument Value	Target Value
Start Frequency	5.47500 GHz	5.47500 GHz
Stop Frequency	5.49500 GHz	5.49500 GHz
Span	20.000 MHz	20.000 MHz
RBW	1.000 MHz	<= 1.000 MHz
VBW	3.000 MHz	>= 3.000 MHz
SweepPoints	101	~ 40
SweepTime	2.020 ms	2.020 ms
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	RMS	RMS
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Average Power	Average Power
SweepType	FFT	AUTO
Preamplifier	off	off

Occupied Channel Bandwidth 99% (5485 MHz; 24.000 dBm; 20 MHz)

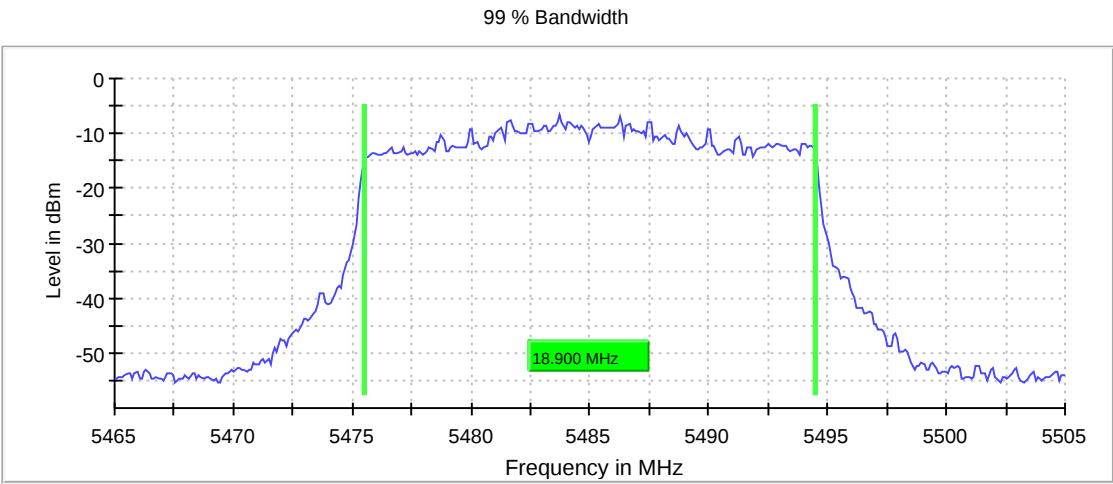
Customized settings.

99 % Bandwidth

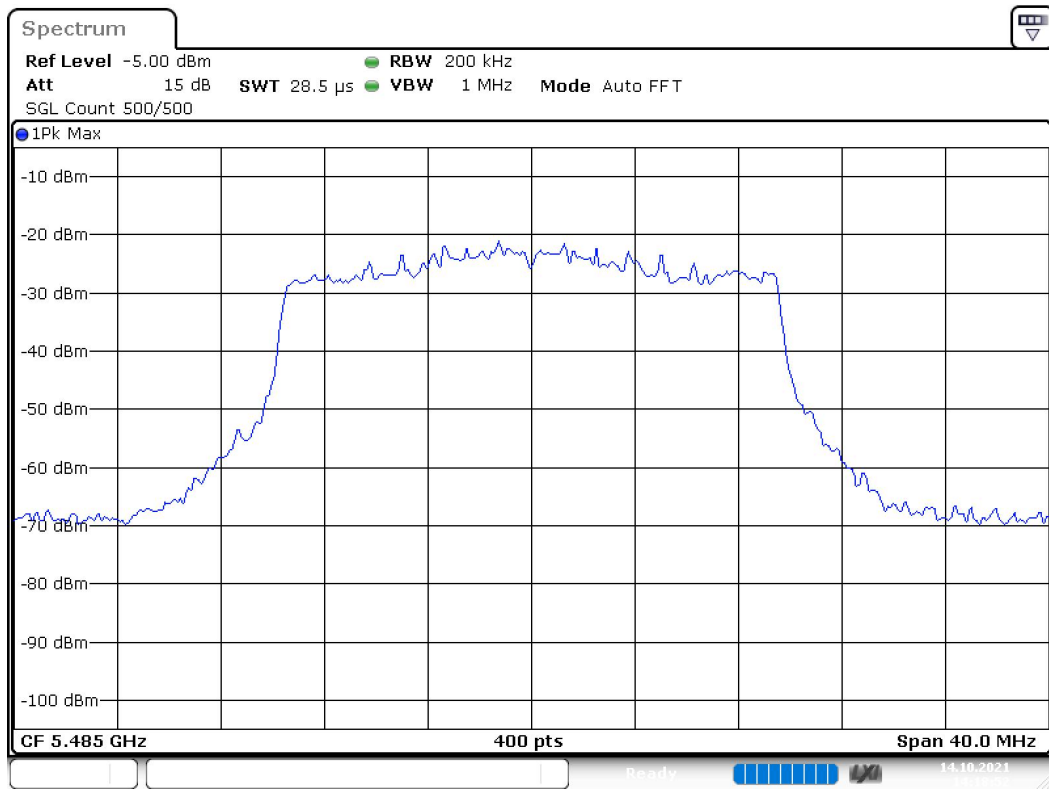
DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5485.000000	18.900000	---	---	5475.550000	5494.450000

(continuation of the "99 % Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Result
5485.000000	PASS



Bandwidth



Date: 14.OCT.2021 14:18:53

Measurement

Setting	Instrument Value	Target Value
Start Frequency	5.46500 GHz	5.46500 GHz
Stop Frequency	5.50500 GHz	5.50500 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 μ s	AUTO
Reference Level	-5.000 dBm	-5.000 dBm
Attenuation	15.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	500	500
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	FFT	AUTO
Preamp	off	off

Emission Bandwidth 26 dB (5600 MHz; 24.000 dBm; 20 MHz)

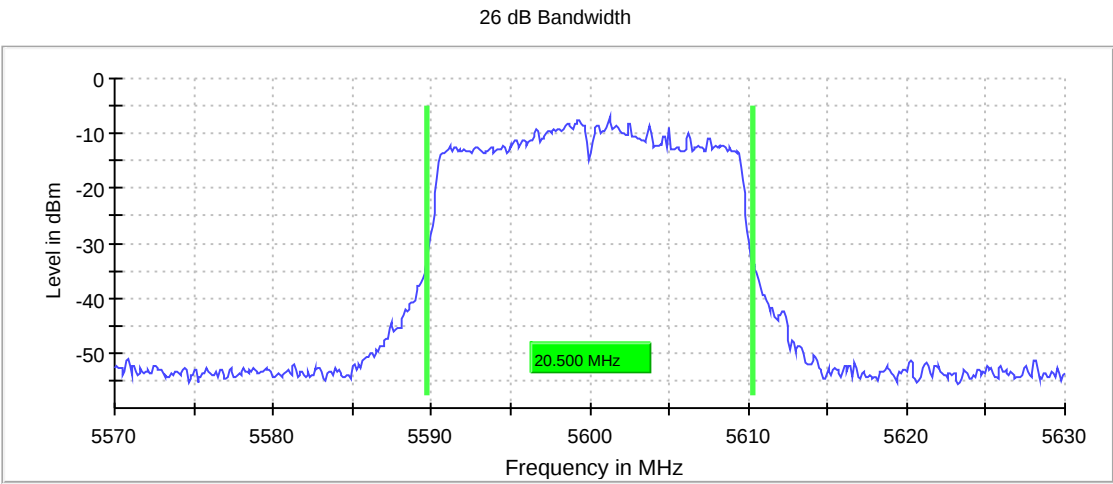
Customized settings.

26 dB Bandwidth

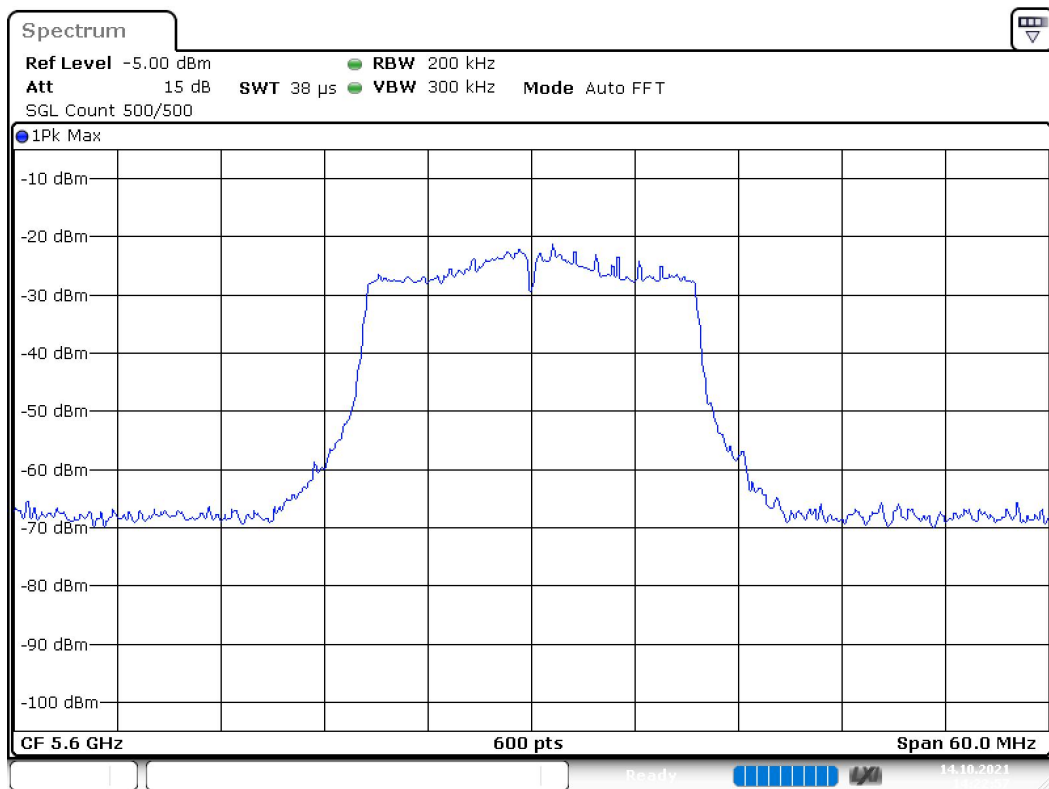
DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5600.000000	20.500000	---	---	5589.750000	5610.250000

(continuation of the "26 dB Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
5600.000000	-6.9	PASS



Bandwidth



Date: 14.OCT.2021 14:22:57

Occupied Channel Bandwidth 99% (5600 MHz; 24.000 dBm; 20 MHz)

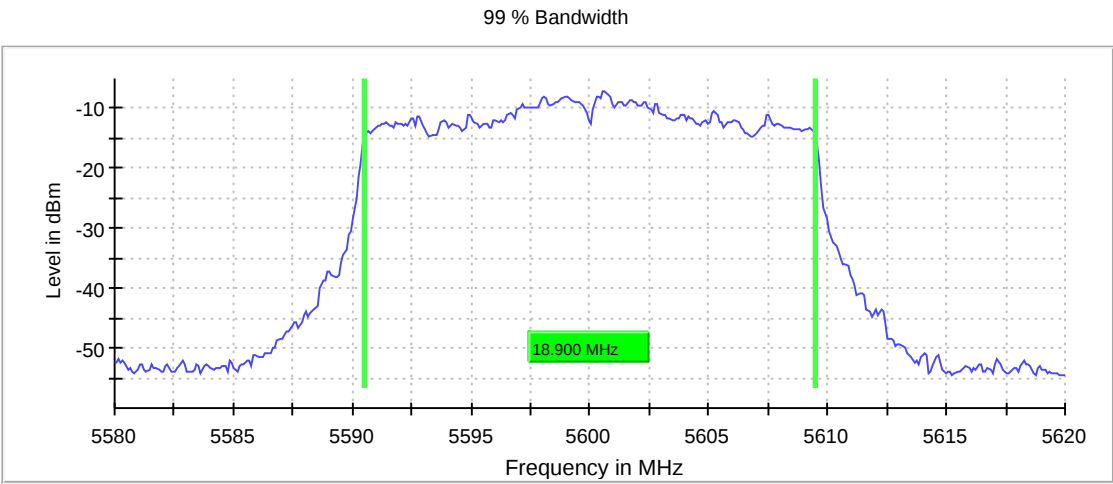
Customized settings.

99 % Bandwidth

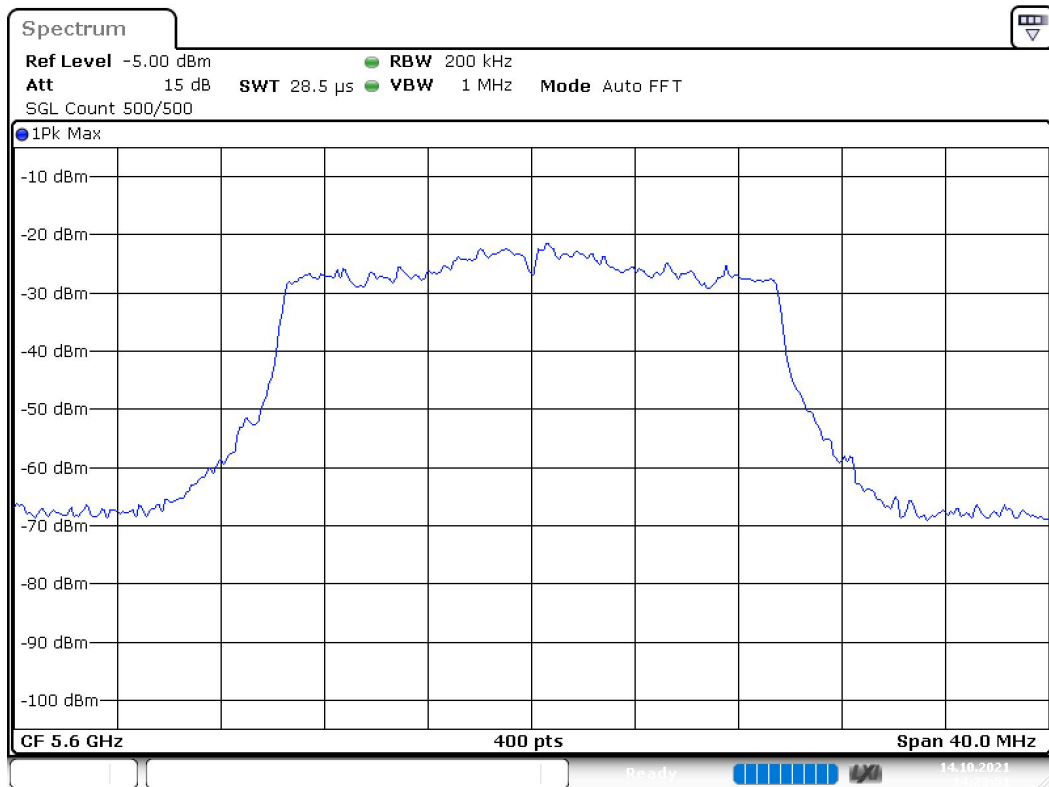
DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5600.000000	18.900000	---	---	5590.550000	5609.450000

(continuation of the "99 % Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Result
5600.000000	PASS



Bandwidth



Date: 14.OCT.2021 14:23:51

Emission Bandwidth 26 dB (5710 MHz; 24.000 dBm; 20 MHz)

Customized settings.

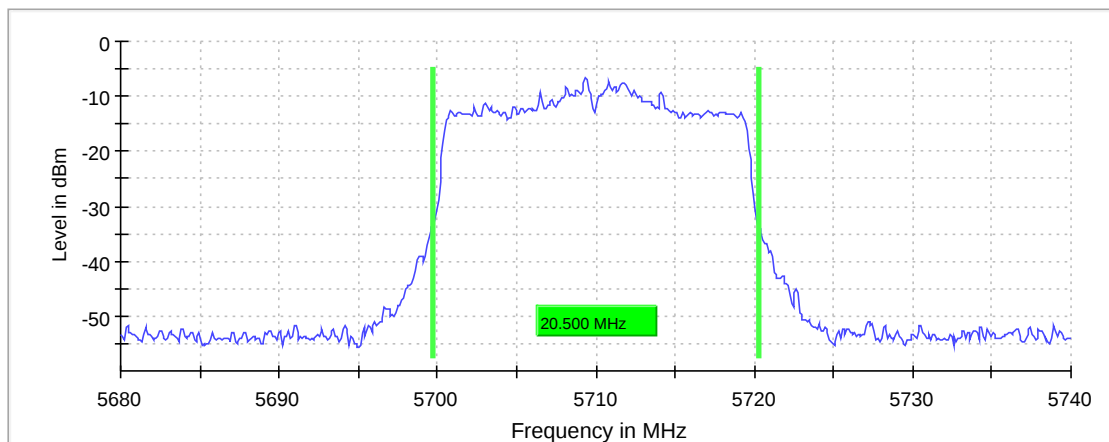
26 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Bandwidth U-NII 2C (MHz)	Bandwidth U-NII 3 (MHz)	Limit Min (MHz)	Limit Max (MHz)
5710.000000	20.500000	20.500000	0.000000	---	---

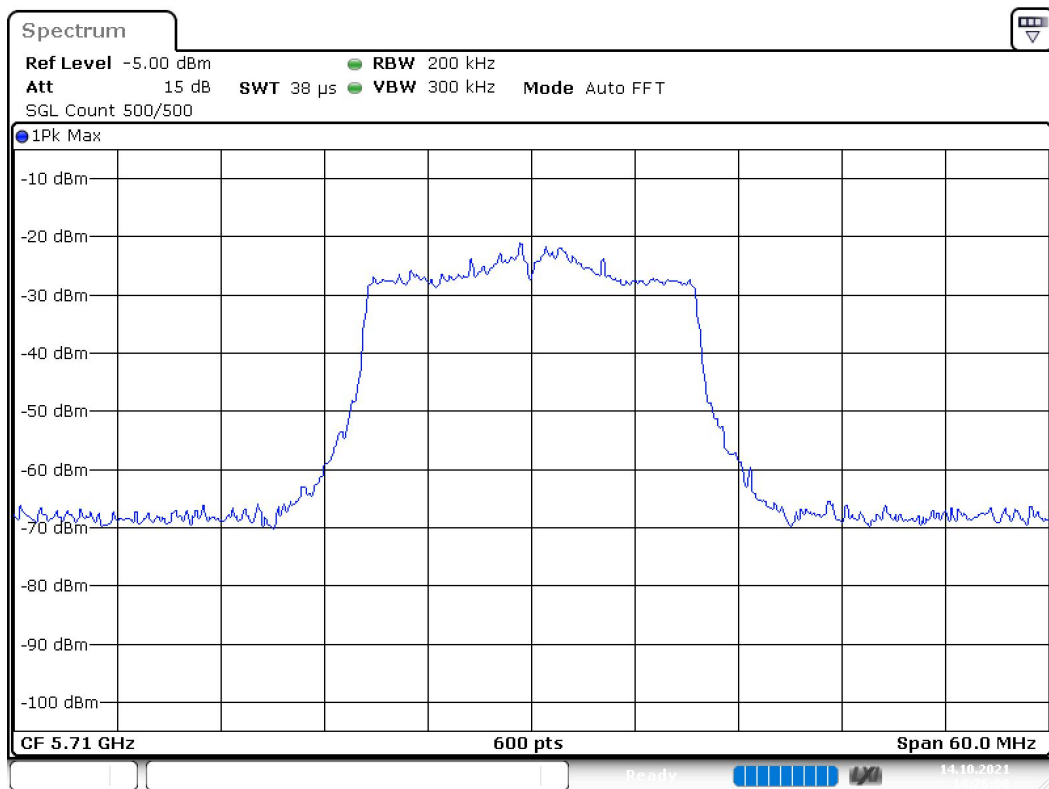
(continuation of the "26 dB Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)	Max Level (dBm)	Result
5710.000000	5699.750000	5720.250000	-6.7	PASS

26 dB Bandwidth



Bandwidth



Date: 14.OCT.2021 14:26:00

Occupied Channel Bandwidth 99% (5710 MHz; 24.000 dBm; 20 MHz)

Customized settings.

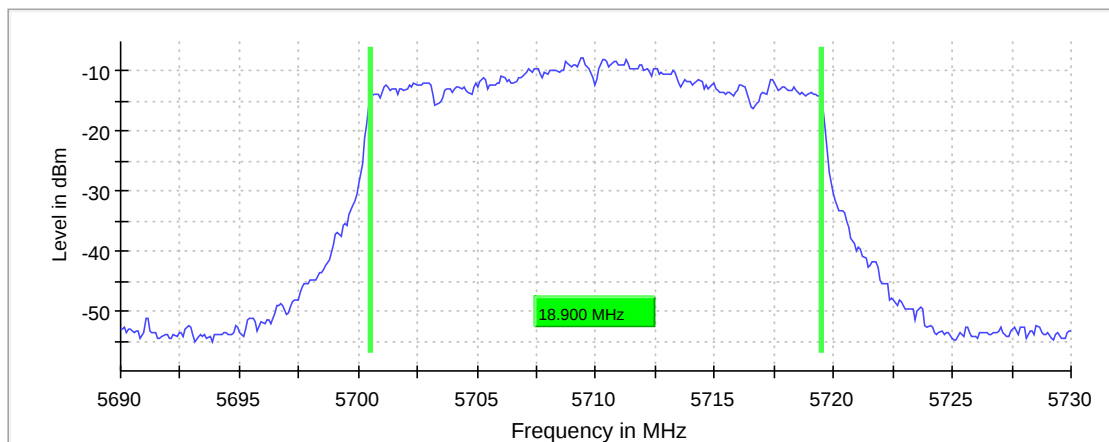
99 % Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Bandwidth U-NII 2C (MHz)	Bandwidth U-NII 3 (MHz)	Limit Min (MHz)	Limit Max (MHz)
5710.000000	18.900000	18.900000	0.000000	---	---

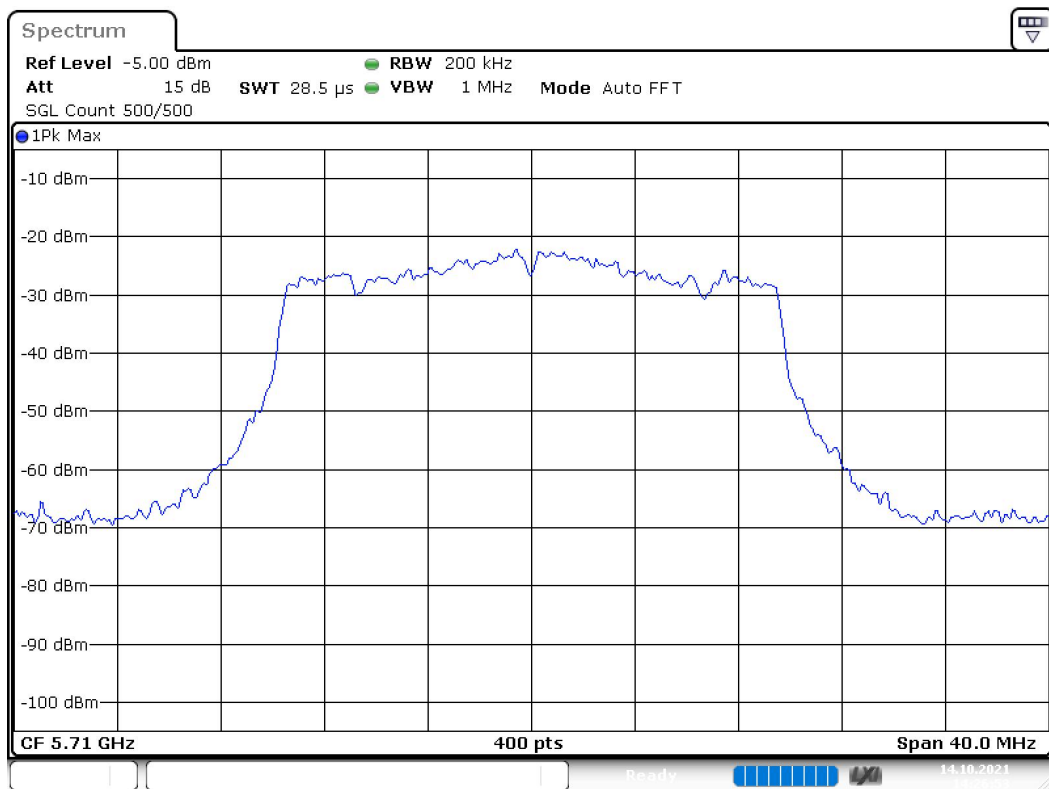
(continuation of the "99 % Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)	Result
5710.000000	5700.550000	5719.450000	PASS

99 % Bandwidth



Bandwidth



Date: 14.OCT.2021 14:26:53

Emission Bandwidth 26 dB (5495 MHz; 24.000 dBm; 40 MHz)

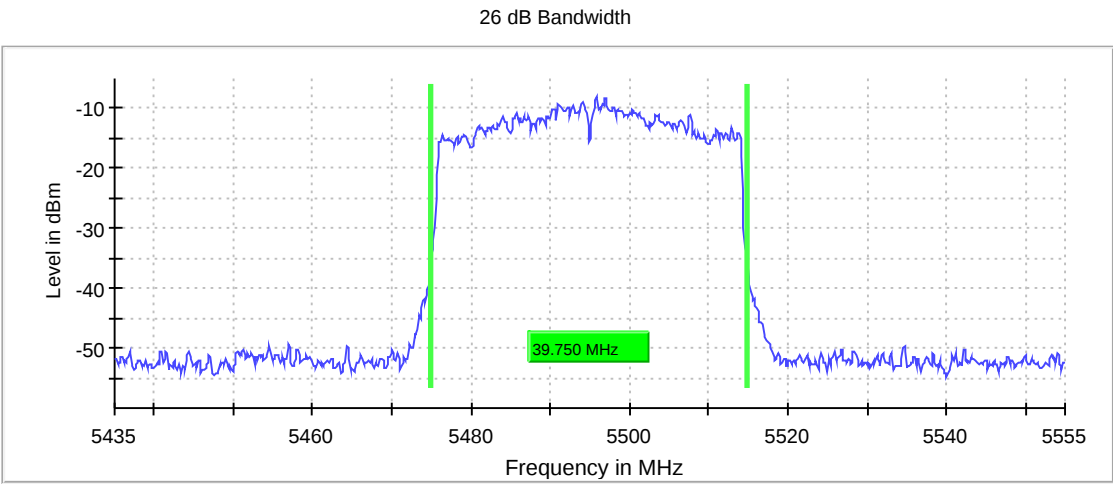
Customized settings.

26 dB Bandwidth

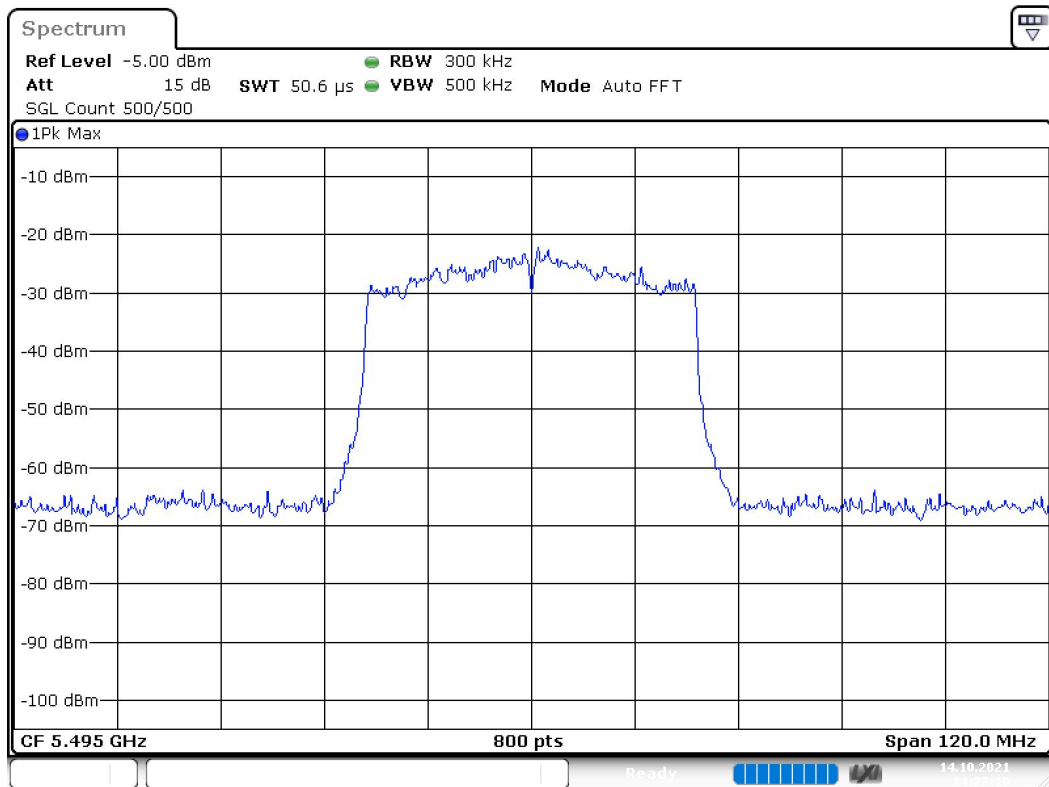
DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5495.000000	39.750000	---	---	5474.975000	5514.725000

(continuation of the "26 dB Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
5495.000000	-7.9	PASS



Bandwidth



Date: 14.OCT.2021 14:27:19

Occupied Channel Bandwidth 99% (5495 MHz; 24.000 dBm; 40 MHz)

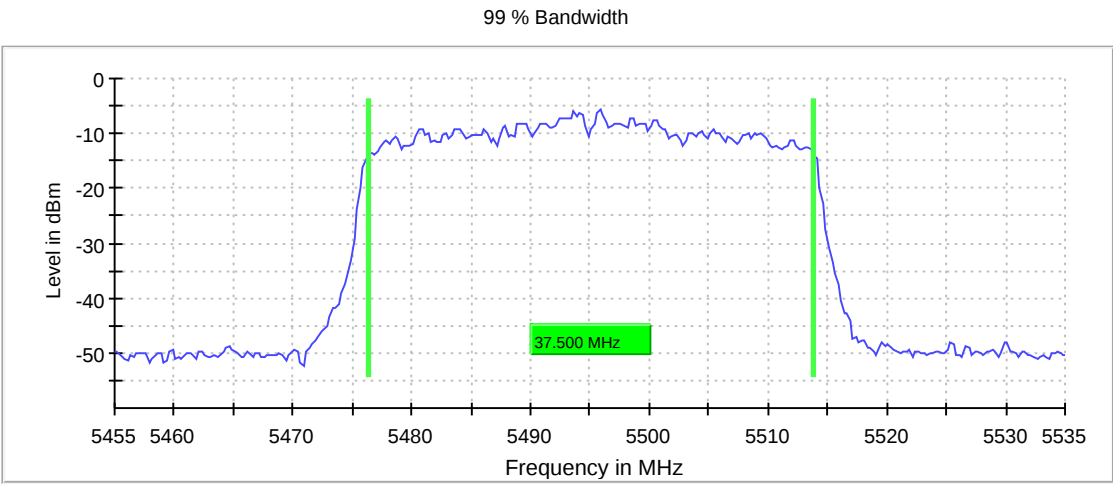
Customized settings.

99 % Bandwidth

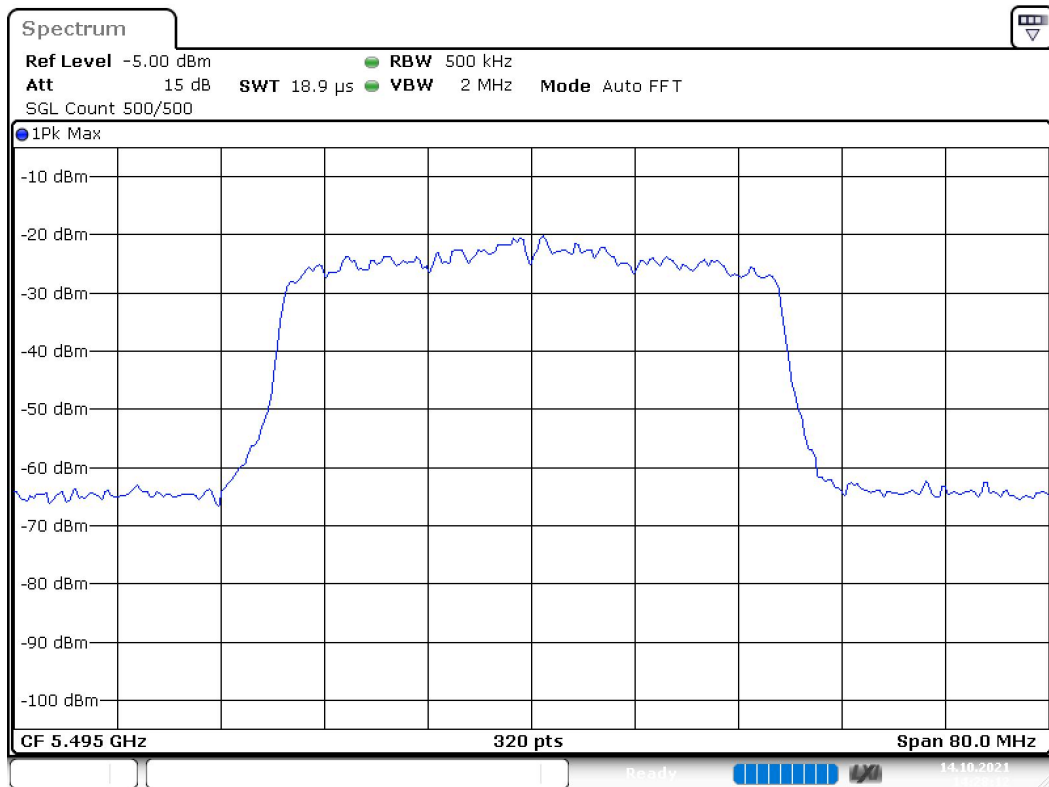
DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5495.000000	37.500000	---	---	5476.375000	5513.875000

(continuation of the "99 % Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Result
5495.000000	PASS



Bandwidth



Date: 14.OCT.2021 14:28:12

Emission Bandwidth 26 dB (5600 MHz; 24.000 dBm; 40 MHz)

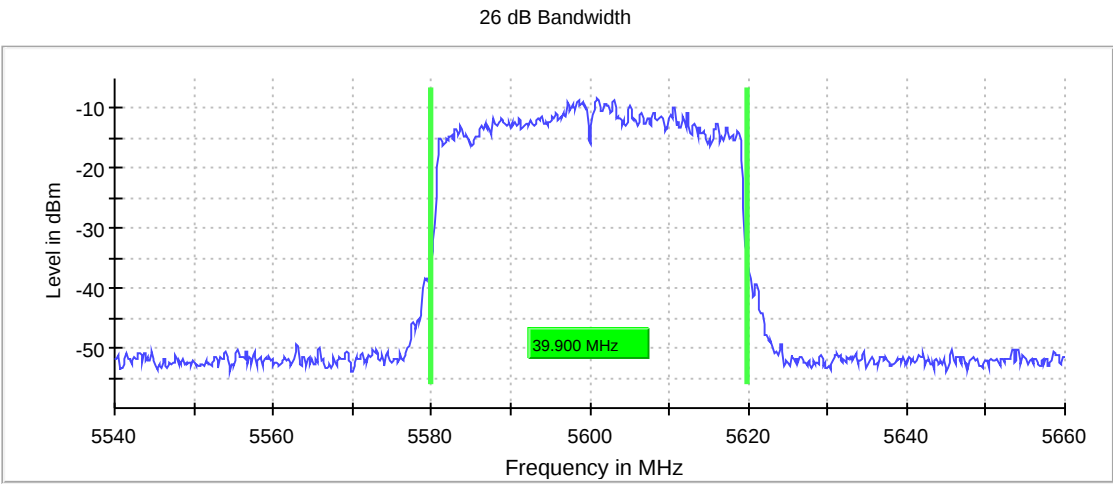
Customized settings.

26 dB Bandwidth

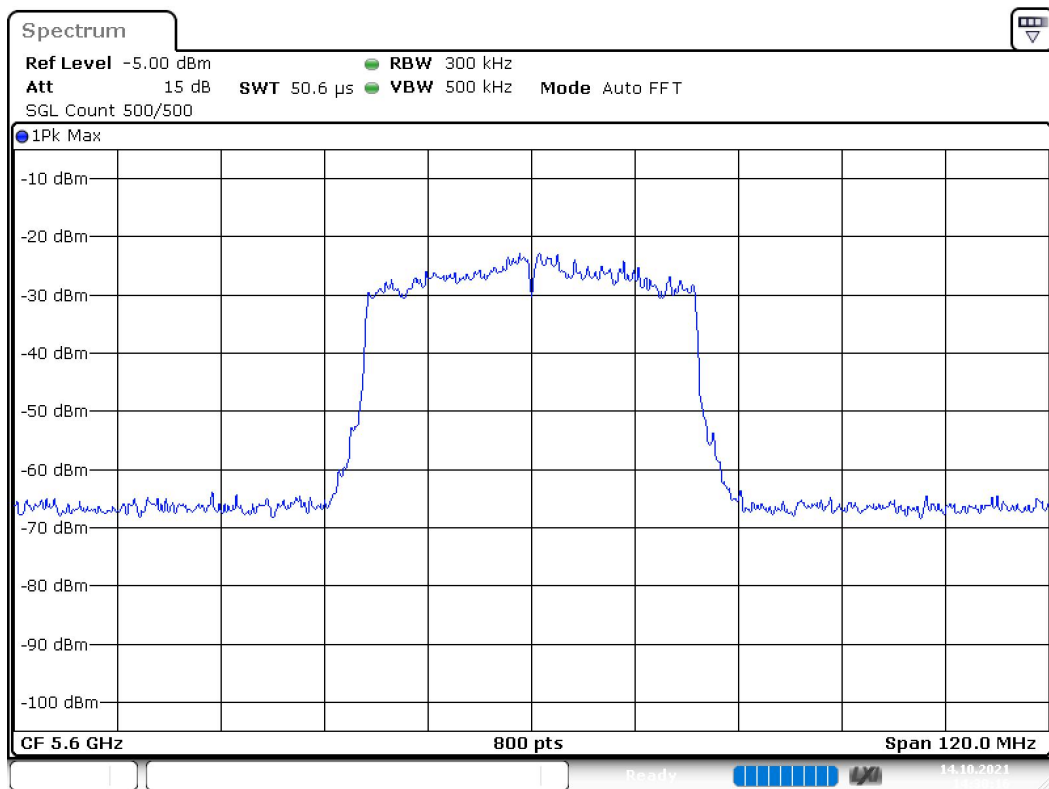
DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5600.000000	39.900000	---	---	5579.975000	5619.875000

(continuation of the "26 dB Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
5600.000000	-8.4	PASS



Bandwidth



Date: 14.OCT.2021 14:30:16

Occupied Channel Bandwidth 99% (5600 MHz; 24.000 dBm; 40 MHz)

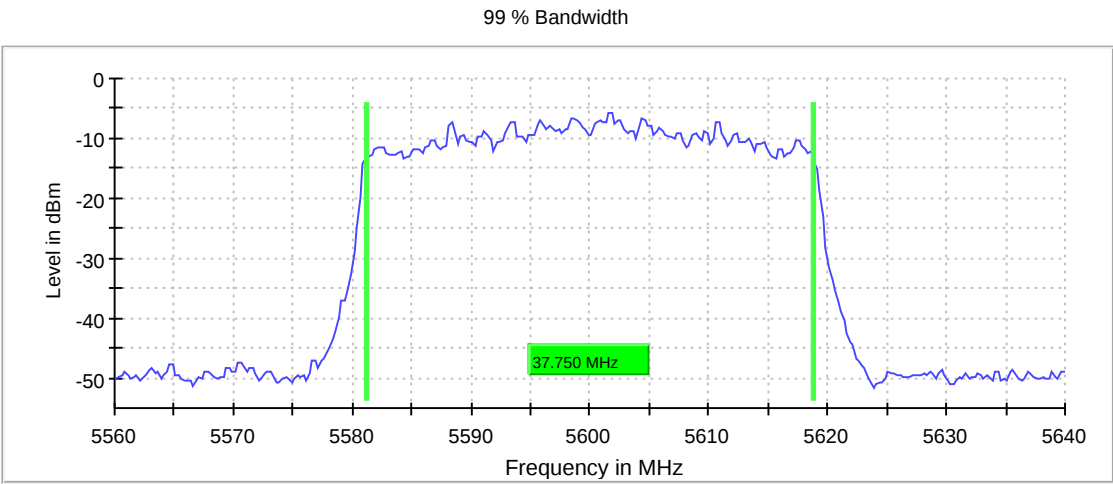
Customized settings.

99 % Bandwidth

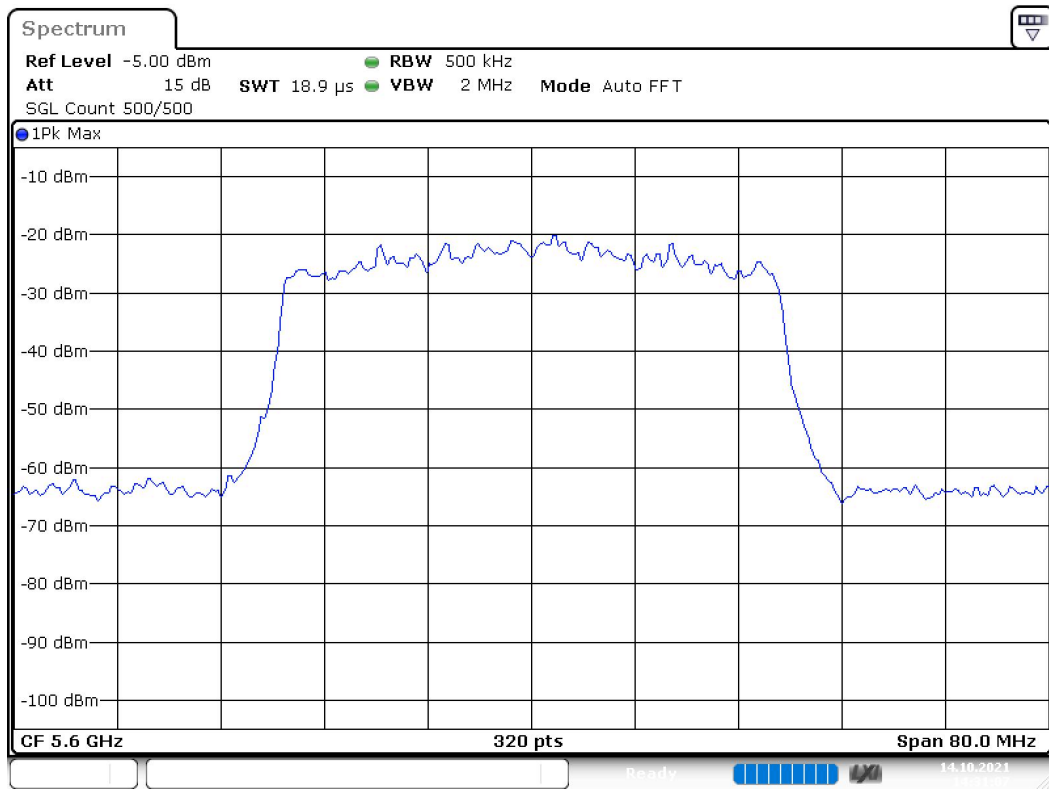
DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5600.000000	37.750000	---	---	5581.125000	5618.875000

(continuation of the "99 % Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Result
5600.000000	PASS



Bandwidth



Date: 14.OCT.2021 14:31:07

Emission Bandwidth 26 dB (5700 MHz; 24.000 dBm; 40 MHz)

Customized settings.

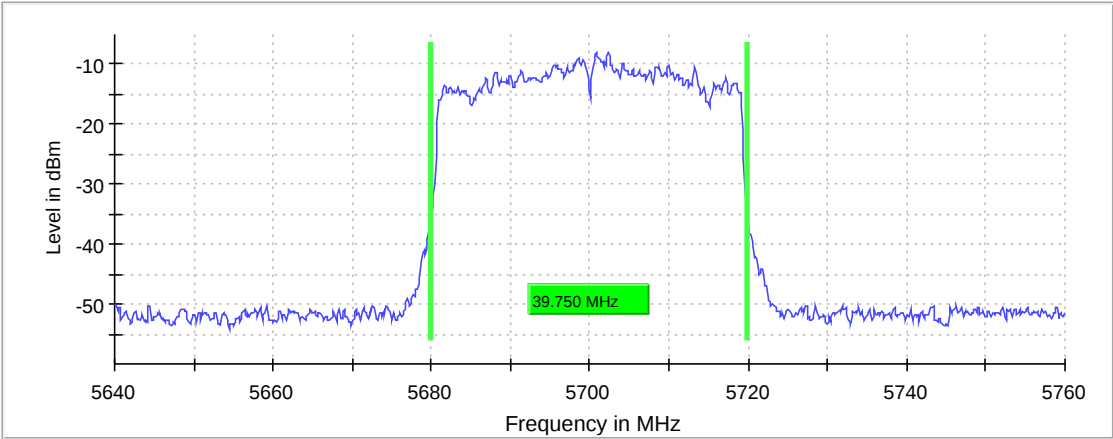
26 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Bandwidth U-NII 2C (MHz)	Bandwidth U-NII 3 (MHz)	Limit Min (MHz)	Limit Max (MHz)
5700.000000	39.750000	39.750000	0.000000	---	---

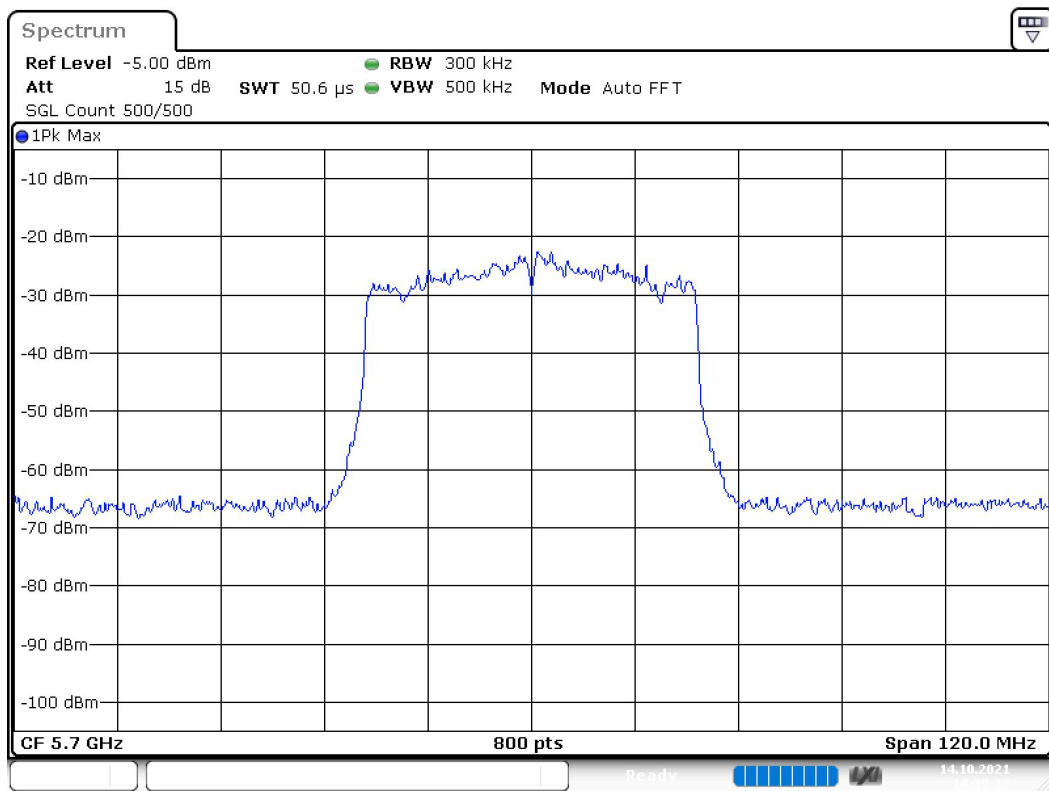
(continuation of the "26 dB Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)	Max Level (dBm)	Result
5700.000000	5679.975000	5719.725000	-8.1	PASS

26 dB Bandwidth



Bandwidth



Date: 14.OCT.2021 14:39:12

Occupied Channel Bandwidth 99% (5700 MHz; 24.000 dBm; 40 MHz)

Customized settings.

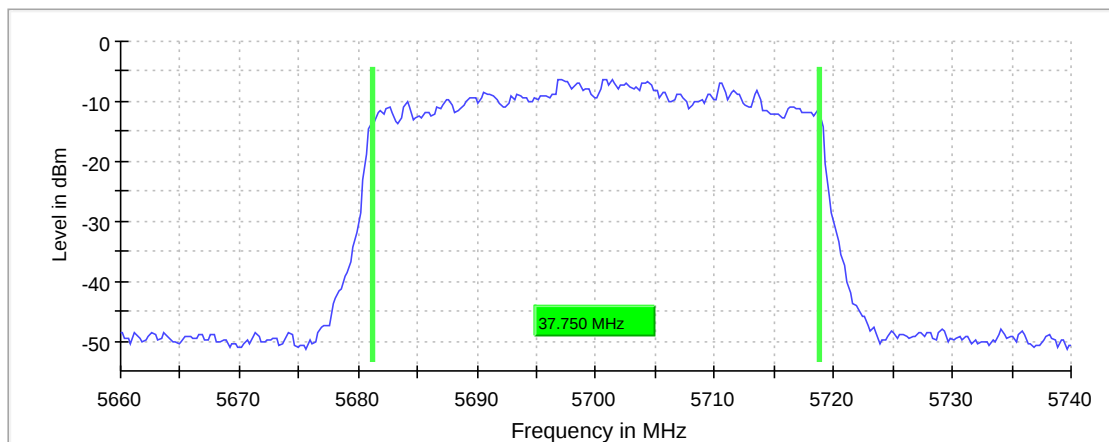
99 % Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Bandwidth U-NII 2C (MHz)	Bandwidth U-NII 3 (MHz)	Limit Min (MHz)	Limit Max (MHz)
5700.000000	37.750000	37.750000	0.000000	---	---

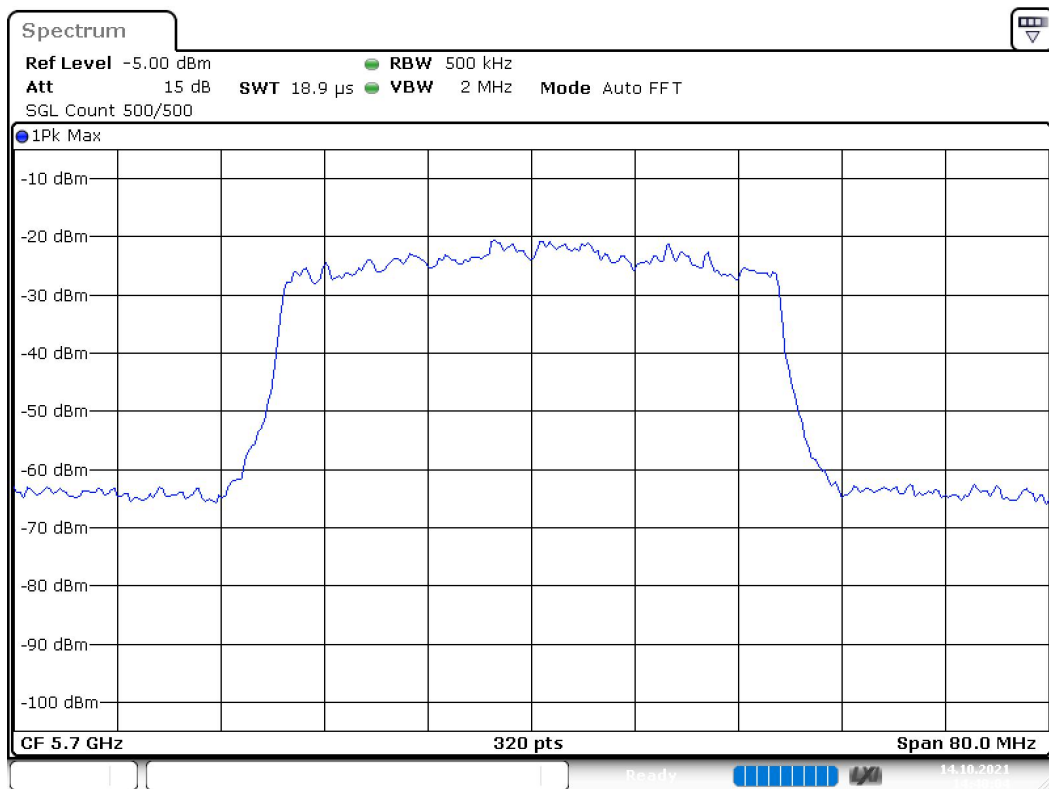
(continuation of the "99 % Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)	Result
5700.000000	5681.125000	5718.875000	PASS

99 % Bandwidth



Bandwidth



Date: 14.OCT.2021 14:40:04

Emission Bandwidth 26 dB (5515 MHz; 24.000 dBm; 80 MHz)

Customized settings.

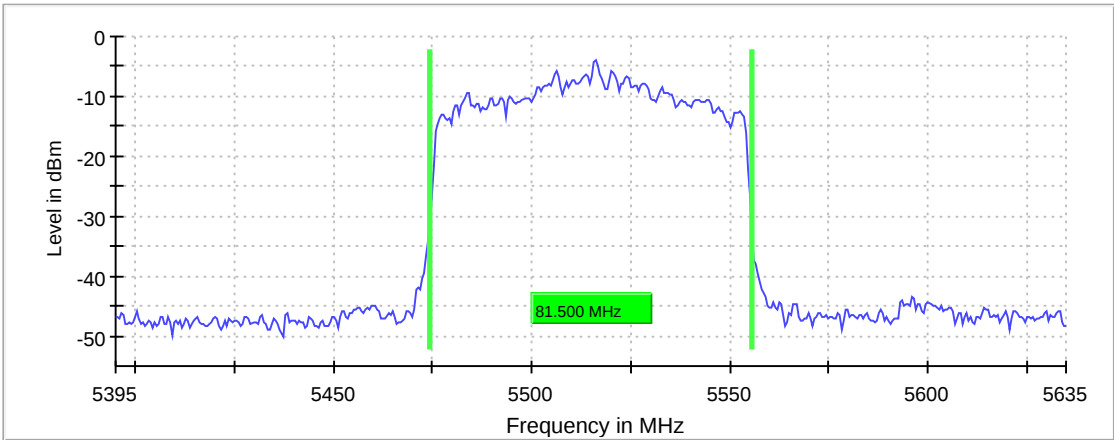
26 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5515.000000	81.500000	---	---	5474.250000	5555.750000

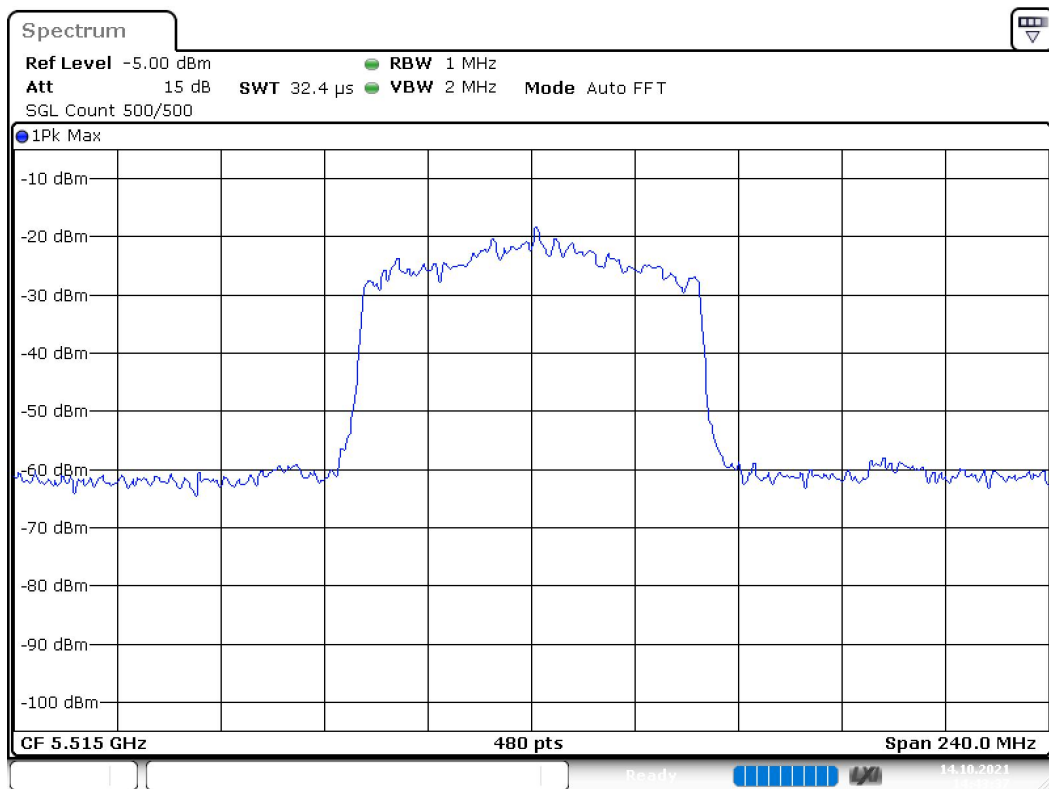
(continuation of the "26 dB Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
5515.000000	-4.0	PASS

26 dB Bandwidth



Bandwidth



Date: 14.OCT.2021 14:43:37

Occupied Channel Bandwidth 99% (5515 MHz; 24.000 dBm; 80 MHz)

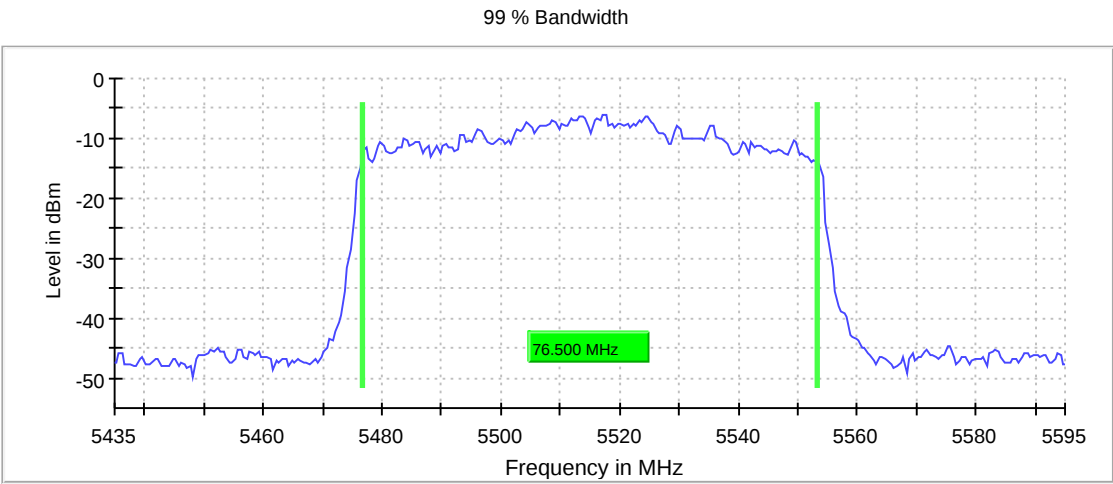
Customized settings.

99 % Bandwidth

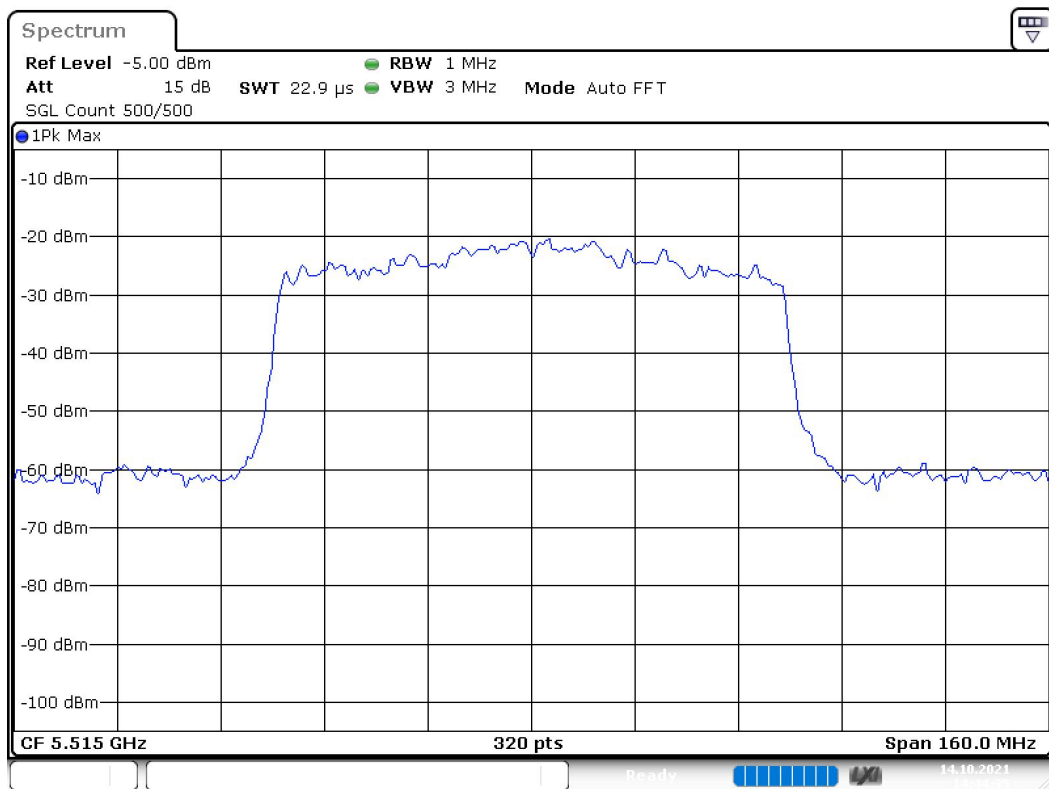
DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5515.000000	76.500000	---	---	5476.750000	5553.250000

(continuation of the "99 % Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Result
5515.000000	PASS



Bandwidth



Date: 14.OCT.2021 14:44:35

Emission Bandwidth 26 dB (5600 MHz; 24.000 dBm; 80 MHz)

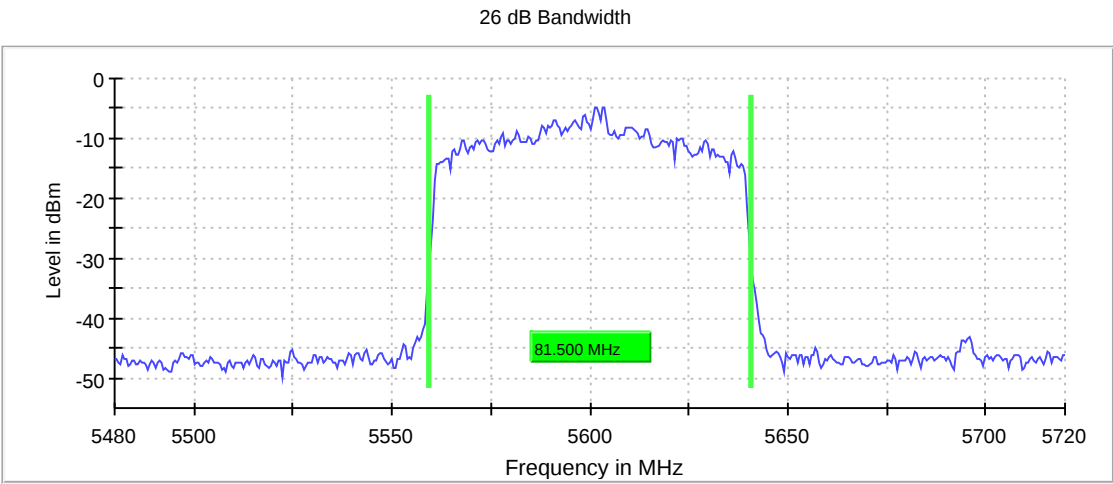
Customized settings.

26 dB Bandwidth

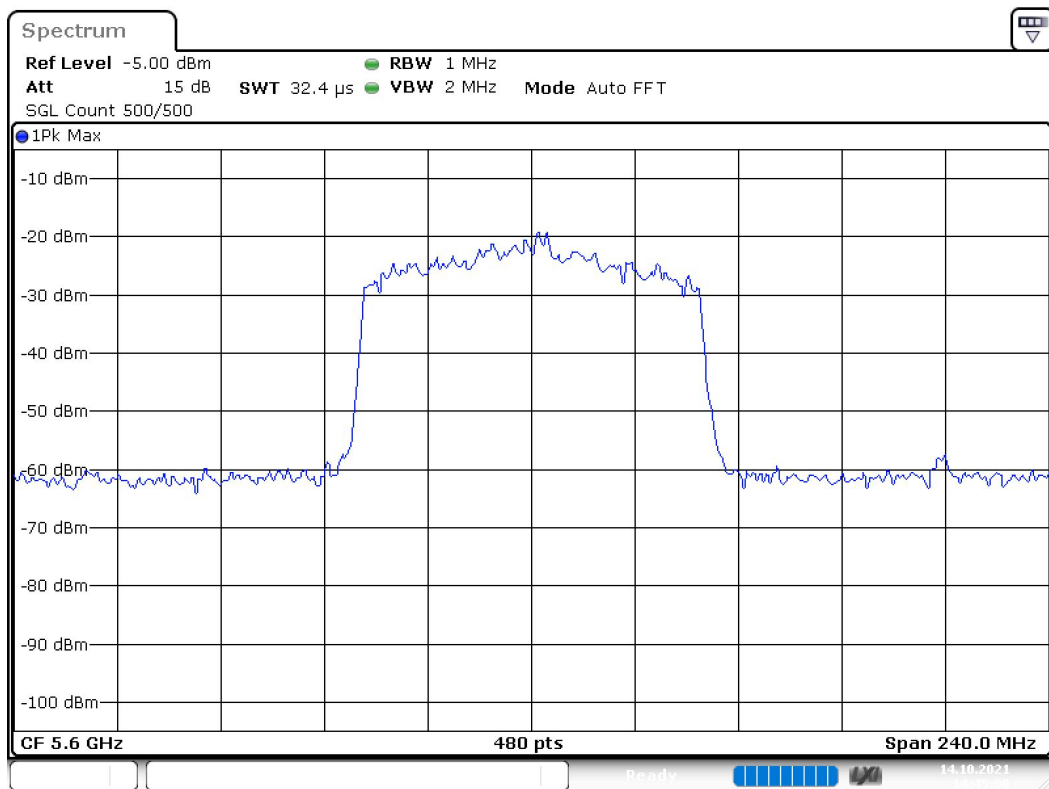
DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5600.000000	81.500000	---	---	5559.250000	5640.750000

(continuation of the "26 dB Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
5600.000000	-4.8	PASS



Bandwidth



Date: 14.OCT.2021 14:45:00

Occupied Channel Bandwidth 99% (5600 MHz; 24.000 dBm; 80 MHz)

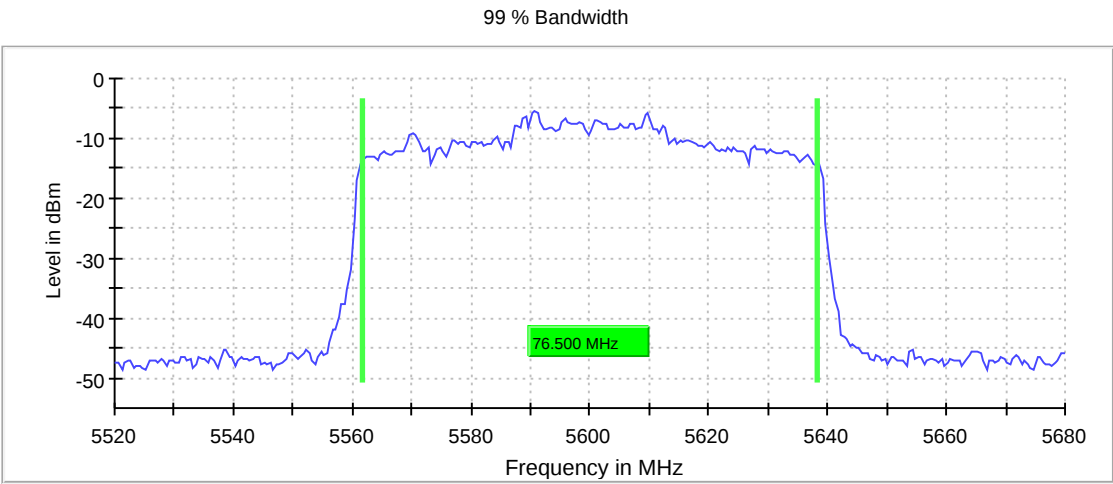
Customized settings.

99 % Bandwidth

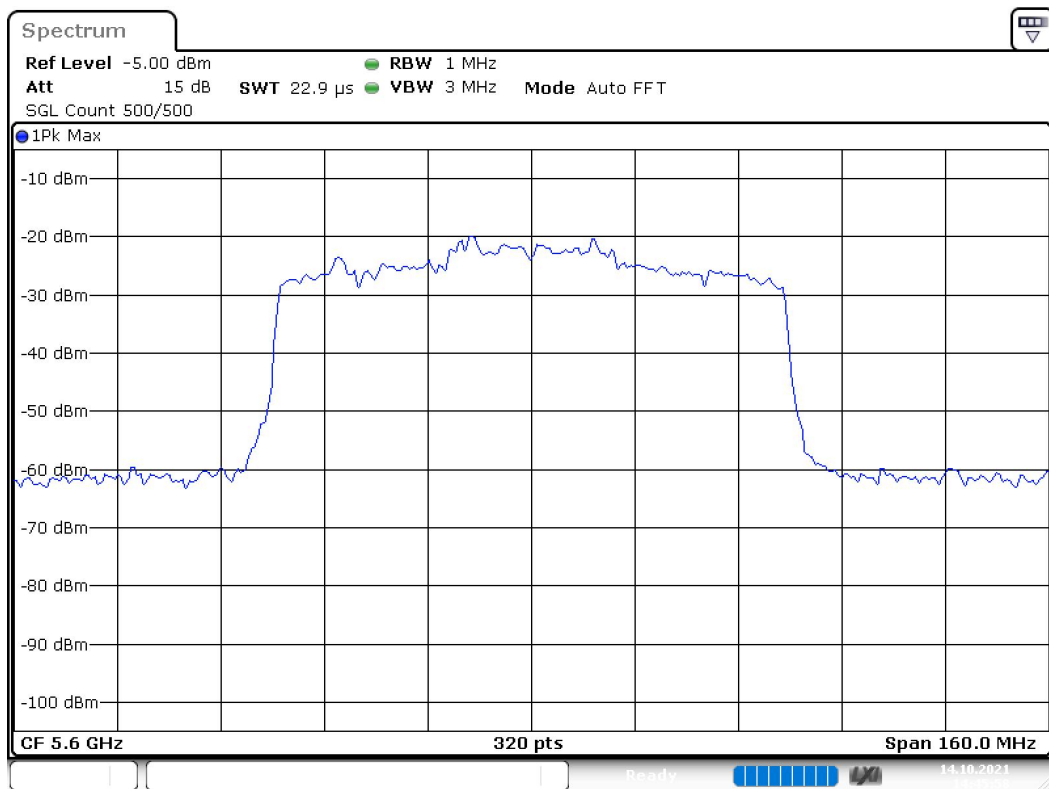
DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5600.000000	76.500000	---	---	5561.750000	5638.250000

(continuation of the "99 % Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Result
5600.000000	PASS



Bandwidth



Date: 14.OCT.2021 14:45:58

Emission Bandwidth 26 dB (5680 MHz; 24.000 dBm; 80 MHz)

Customized settings.

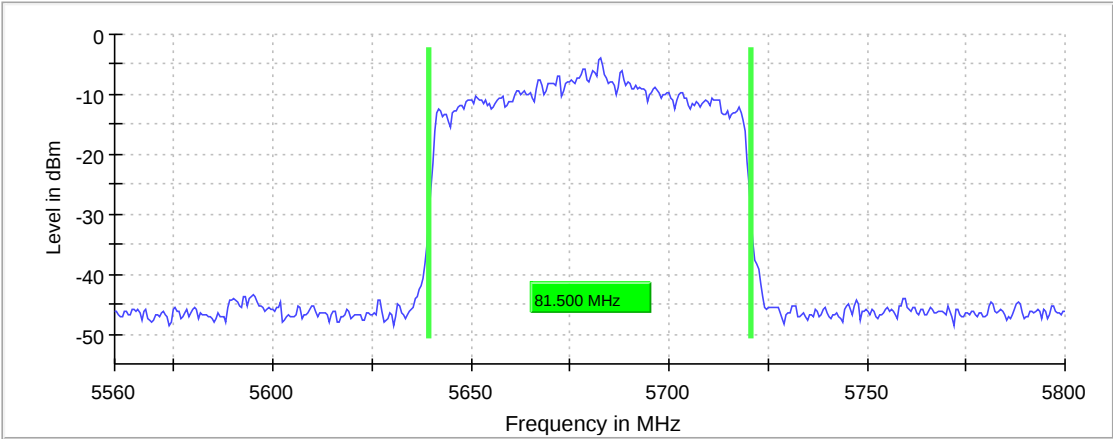
26 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Bandwidth U-NII 2C (MHz)	Bandwidth U-NII 3 (MHz)	Limit Min (MHz)	Limit Max (MHz)
5680.000000	81.500000	81.500000	0.000000	---	---

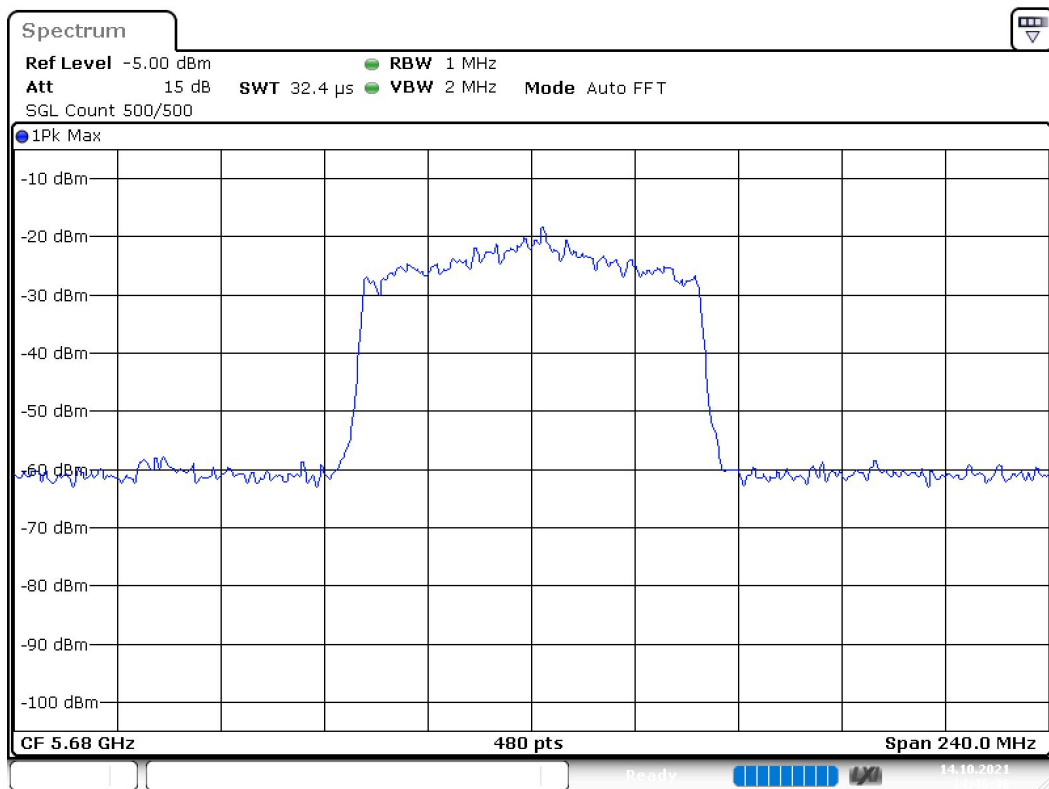
(continuation of the "26 dB Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)	Max Level (dBm)	Result
5680.000000	5639.250000	5720.750000	-4.0	PASS

26 dB Bandwidth



Bandwidth



Date: 14.OCT.2021 14:46:36

Occupied Channel Bandwidth 99% (5680 MHz; 24.000 dBm; 80 MHz)

Customized settings.

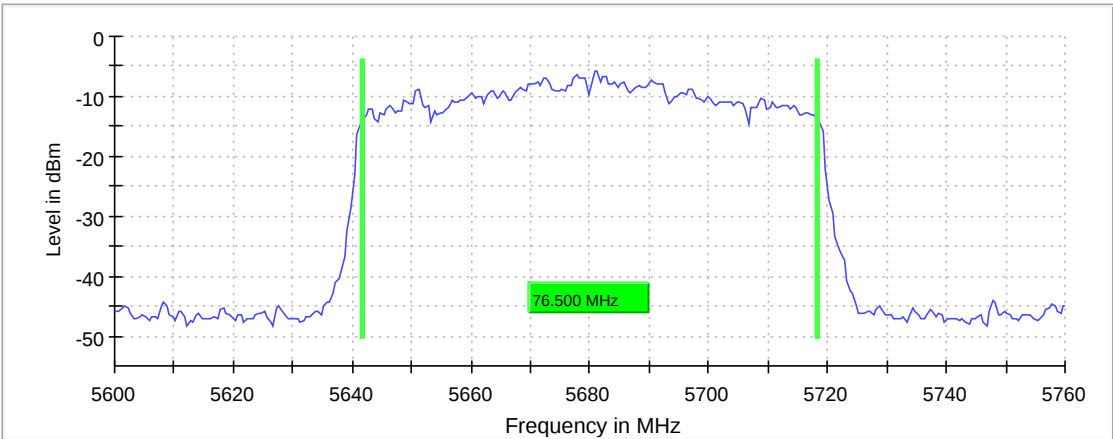
99 % Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Bandwidth U-NII 2C (MHz)	Bandwidth U-NII 3 (MHz)	Limit Min (MHz)	Limit Max (MHz)
5680.000000	76.500000	76.500000	0.000000	---	---

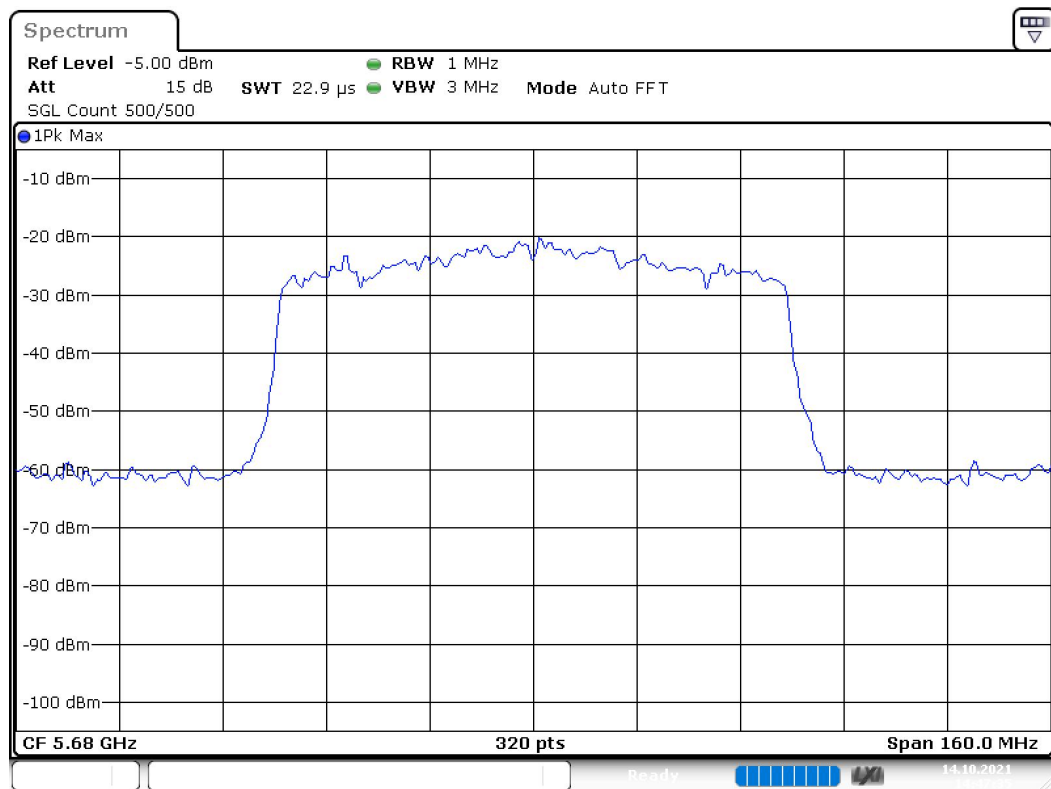
(continuation of the "99 % Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)	Result
5680.000000	5641.750000	5718.250000	PASS

99 % Bandwidth



Bandwidth



Date: 14.OCT.2021 14:47:35

Emission Bandwidth 26 dB (5570 MHz; 24.000 dBm; 160 MHz)

Customized settings.

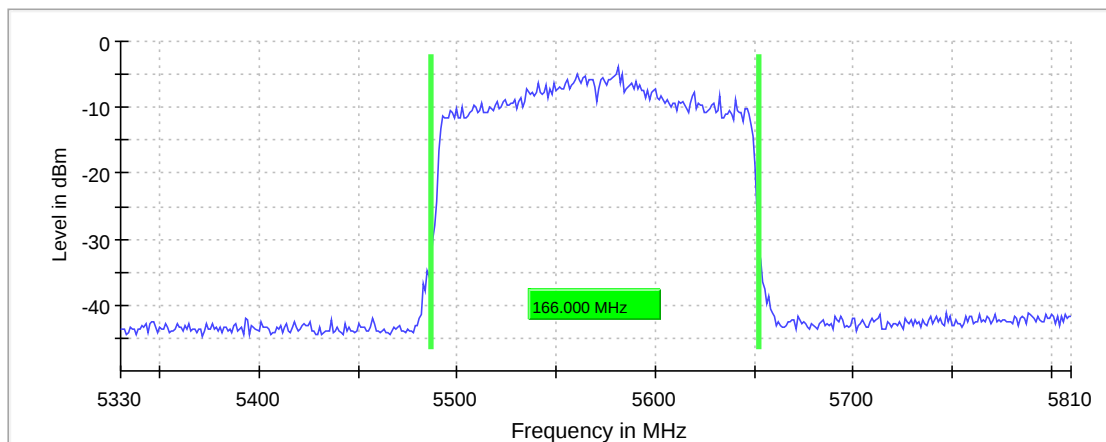
26 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Bandwidth U-NII 2C (MHz)	Bandwidth U-NII 3 (MHz)	Limit Min (MHz)	Limit Max (MHz)
5570.000000	166.000000	166.000000	0.000000	---	---

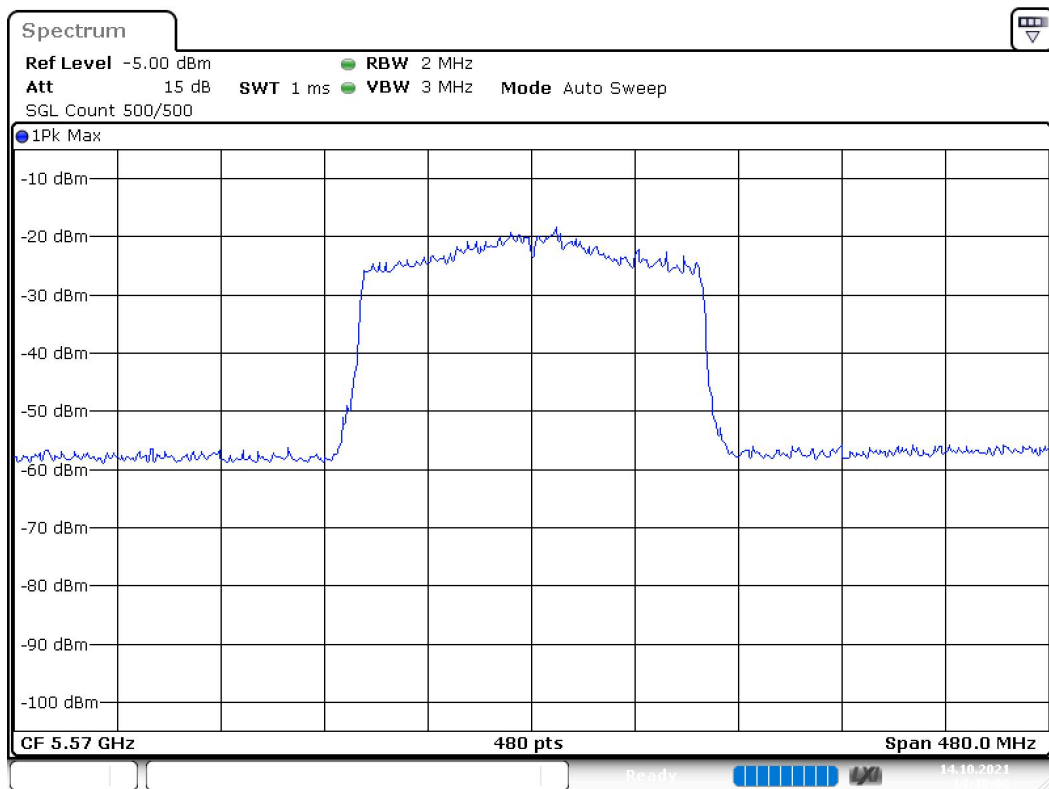
(continuation of the "26 dB Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)	Max Level (dBm)	Result
5570.000000	5486.500000	5652.500000	-4.0	PASS

26 dB Bandwidth



Bandwidth



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Occupied Channel Bandwidth 99% (5570 MHz; 24.000 dBm; 160 MHz)

Customized settings.

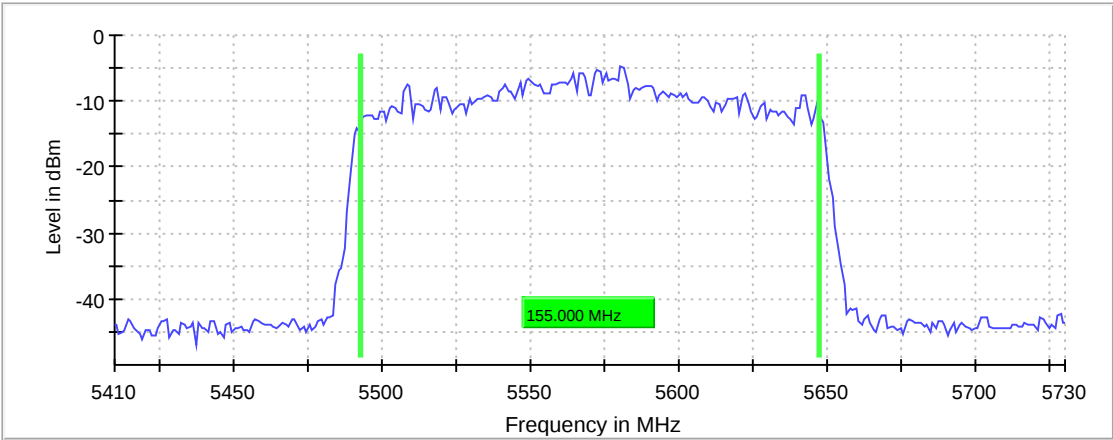
99 % Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Bandwidth U-NII 2C (MHz)	Bandwidth U-NII 3 (MHz)	Limit Min (MHz)	Limit Max (MHz)
5570.000000	155.000000	155.000000	0.000000	---	---

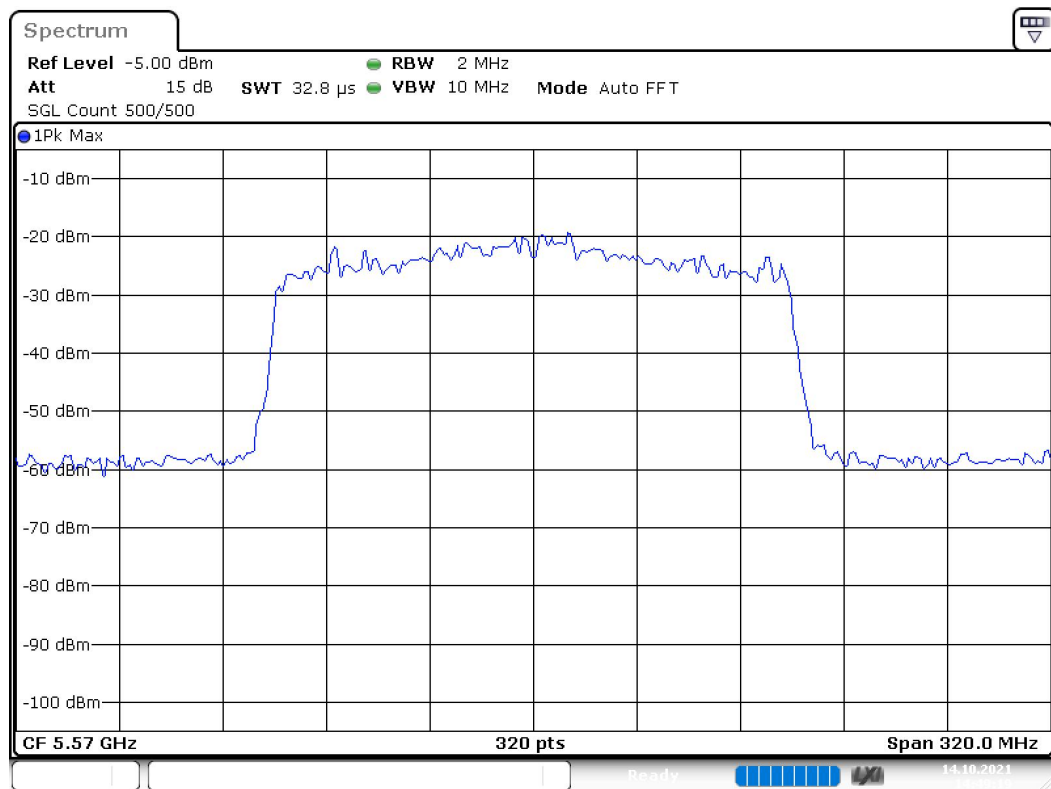
(continuation of the "99 % Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)	Result
5570.000000	5492.500000	5647.500000	PASS

99 % Bandwidth



Bandwidth



Date: 14.OCT.2021 14:49:19