

AFi-ALN UNII-2 Annex

Summary

Test	Frequency (MHz)	Nominal Power (dBm)	Nominal Bandwidth (MHz)	Result
Emission Bandwidth 26 dB	5500.000	30.0	20.000000	PASS
RF output power	5500.000	30.0	20.000000	PASS
Power Spectral Density	5500.000	30.0	20.000000	PASS
Occupied Channel Bandwidth 99%	5500.000	30.0	20.000000	PASS
Frequency Error	5500.000	30.0	20.000000	PASS
Emission Bandwidth 26 dB	5600.000	30.0	20.000000	PASS
Occupied Channel Bandwidth 99%	5600.000	30.0	20.000000	PASS
Emission Bandwidth 26 dB	5700.000	30.0	20.000000	PASS
Occupied Channel Bandwidth 99%	5700.000	30.0	20.000000	PASS
Frequency Error	5700.000	30.0	20.000000	PASS
Emission Bandwidth 26 dB	5510.000	30.0	40.000000	PASS
Occupied Channel Bandwidth 99%	5510.000	30.0	40.000000	PASS
Emission Bandwidth 26 dB	5590.000	30.0	40.000000	PASS
Occupied Channel Bandwidth 99%	5590.000	30.0	40.000000	PASS
Emission Bandwidth 26 dB	5670.000	30.0	40.000000	PASS
Occupied Channel Bandwidth 99%	5670.000	30.0	40.000000	PASS
Emission Bandwidth 26 dB	5530.000	30.0	80.000000	PASS
Occupied Channel Bandwidth 99%	5530.000	30.0	80.000000	PASS
Emission Bandwidth 26 dB	5610.000	30.0	80.000000	PASS
Occupied Channel Bandwidth 99%	5610.000	30.0	80.000000	PASS
Emission Bandwidth 26 dB	5690.000	30.0	80.000000	PASS
Occupied Channel Bandwidth 99%	5690.000	30.0	80.000000	PASS
Occupied Channel Bandwidth 99%	5570.000	30.0	160.000000	PASS
Emission Bandwidth 26 dB	5570.000	30.0	160.000000	PASS

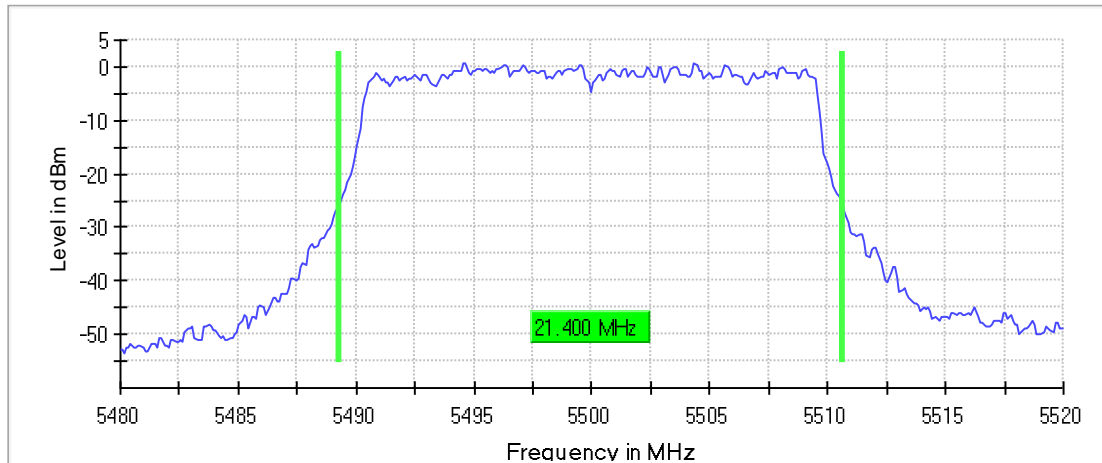
Emission Bandwidth 26 dB (5500 MHz; 30.000 dBm; 20 MHz)

26 dB Bandwidth

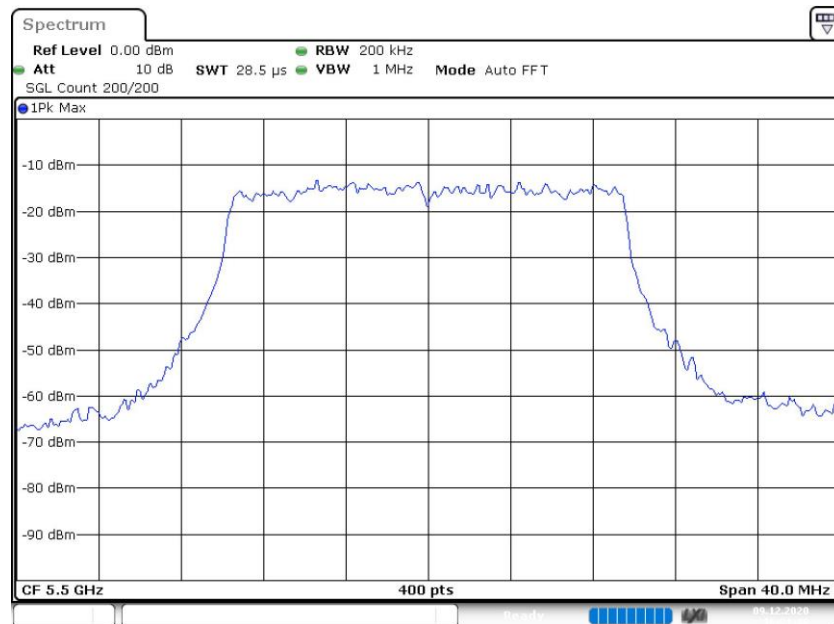
DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5500.000000	21.400000	---	---	5489.250000	5510.650000

DUT Frequency (MHz)	Max Level (dBm)	Result
5500.000000	0.9	PASS

26 dB Bandwidth



Bandwidth



Date: 9.DEC.2020 16:21:41

Measurement

Setting	Instrument Value	Target Value
Start Frequency	5.48000 GHz	5.48000 GHz
Stop Frequency	5.52000 GHz	5.52000 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	0.000 dBm	0.000 dBm
Attenuation	10.000 dB	0.000 dB
Detector	MaxPeak	MaxPeak
SweepCount	200	200
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	FFT	AUTO
Preamp	off	off

RF output power (5500 MHz; 30.000 dBm; 20 MHz)

Result

DUT Frequency (MHz)	Gated RMS (dBm)	Limit Max (dBm)	Gated EIRP (dBm)	DutyCycle (%)	Result
5500.000000	23.8	24.0	27.3	94.188	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

Power Spectral Density (5500 MHz; 30.000 dBm; 20 MHz)

Result

DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max (dBm)	Result
5500.000000	5501.386139	9.040	11.0	PASS

Ports

Port	State
1	used
2	used
3	used
4	used
5	used
6	used
7	used
8	used

Measurement

Setting	Instrument Value	Target Value
Start Frequency	5.49000 GHz	5.49000 GHz
Stop Frequency	5.51000 GHz	5.51000 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	20.000 dBm	20.000 dBm
Attenuation	40.000 dB	AUTO
Detector	RMS	RMS
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	FFT	AUTO
Preamp	off	off

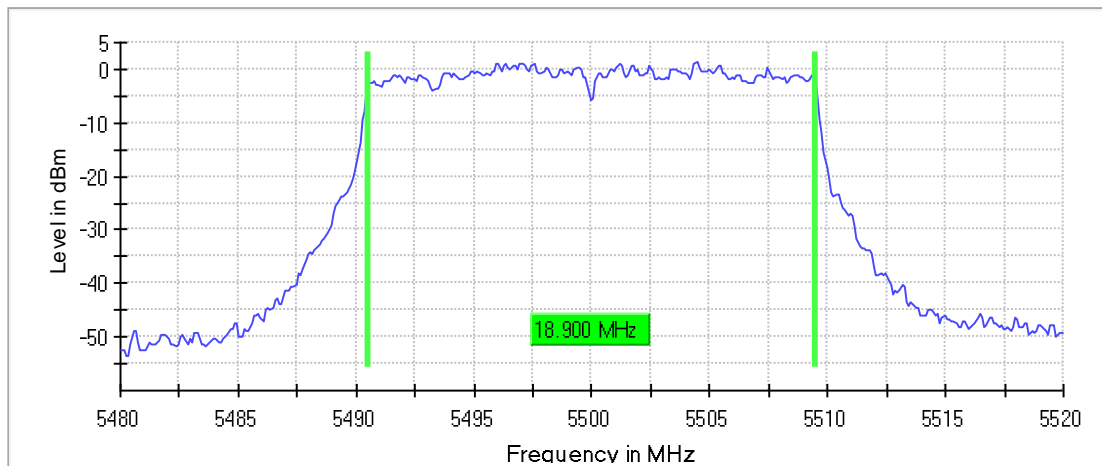
Occupied Channel Bandwidth 99% (5500 MHz; 30.000 dBm; 20 MHz)

99 % Bandwidth

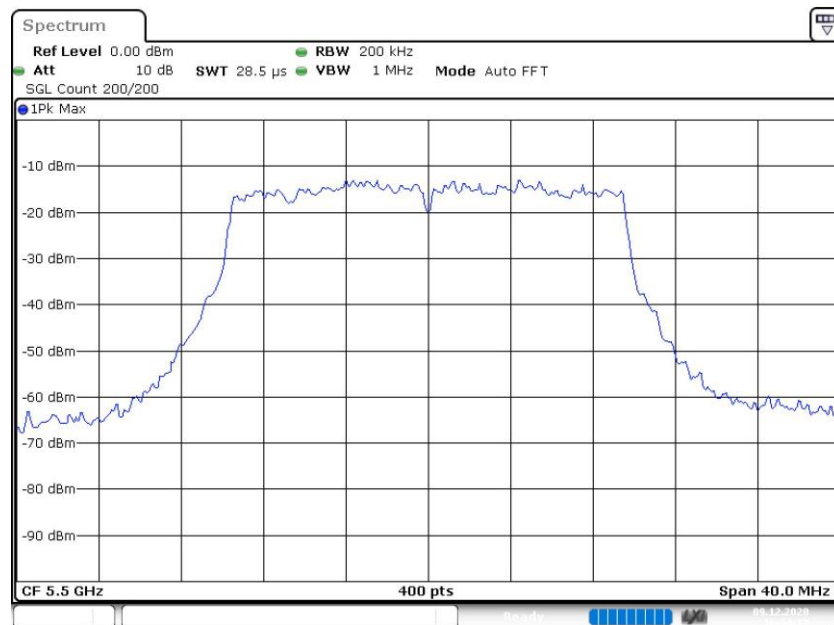
DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5500.000000	18.900000	---	---	5490.550000	5509.450000

DUT Frequency (MHz)	Result
5500.000000	PASS

99 %Bandwidth



Bandwidth



Date: 9.DEC.2020 16:24:18

Measurement

Setting	Instrument Value	Target Value
Start Frequency	5.48000 GHz	5.48000 GHz
Stop Frequency	5.52000 GHz	5.52000 GHz

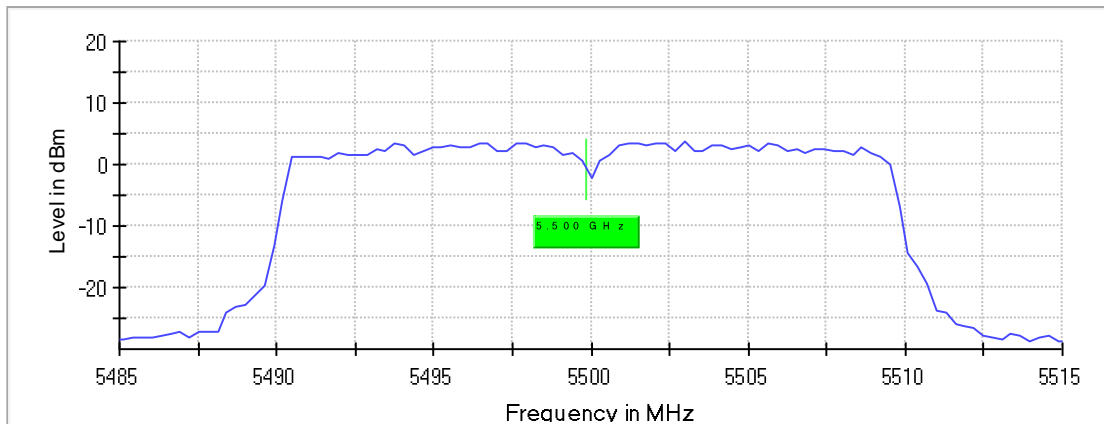
Span	40.000 MHz	40.000 MHz
RBW	200.000 kHz	>= 200.000 kHz
VBW	1.000 MHz	>= 600.000 kHz
SweepPoints	400	~ 400
SweepTime	28.477 μ s	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	10.000 dB	0.000 dB
Detector	MaxPeak	MaxPeak
SweepCount	200	200
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	FFT	AUTO
Preamp	off	off

Frequency Error (5500 MHz; 30.000 dBm; 20 MHz)

Result

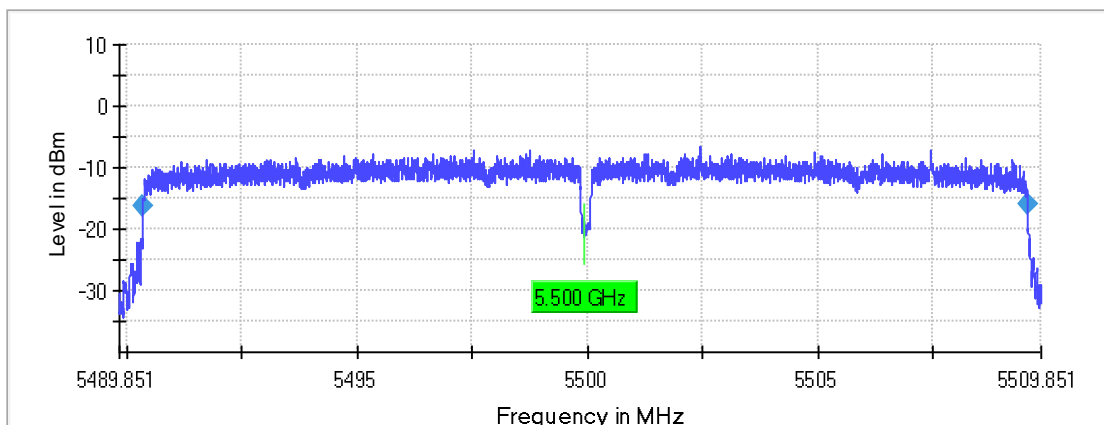
DUT Frequency (MHz)	Frequency (MHz)	Difference (ppm)	Frequency Difference (kHz)	Limit Min (MHz)	Limit Max (MHz)	Result
5500.000000	5499.954475	8.277	-45.525000	---	---	PASS

Frequency stability Pre



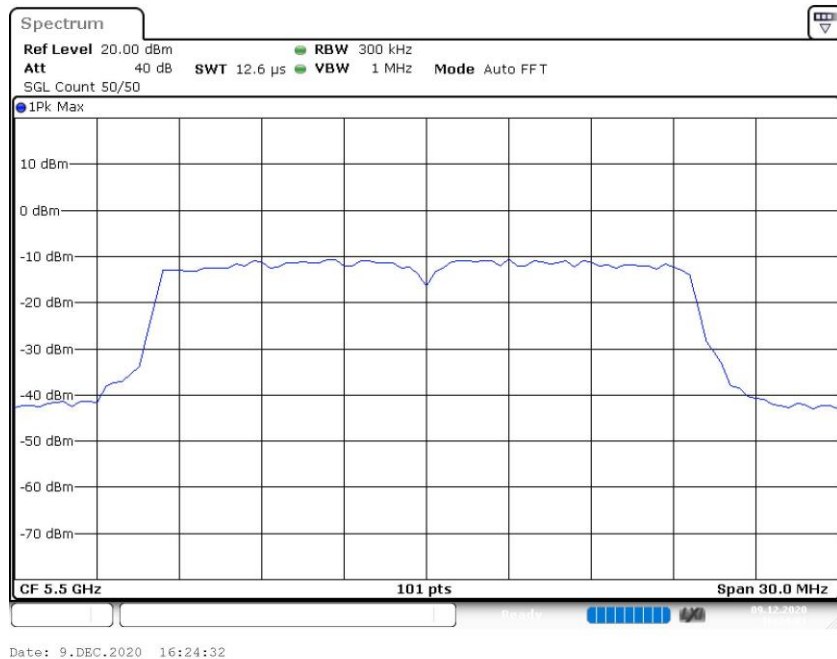
— Center frequency — Max Hold

Frequency stability

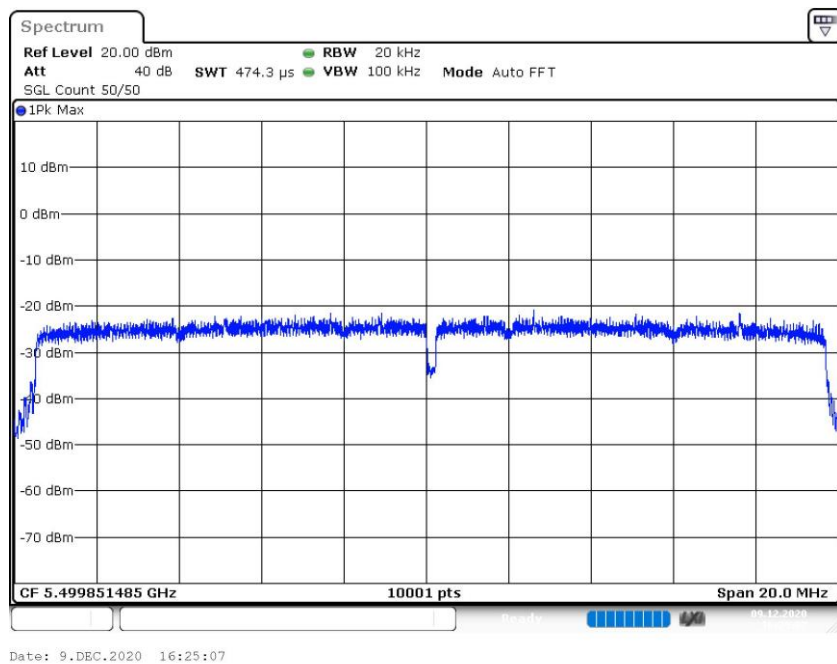


◆ Edge points — Max Hold — Center frequency

Frequency stability Pre



Frequency stability



Measurement

Setting	Instrument Value	Target Value
Start Frequency	5.48985 GHz	5.48985 GHz
Stop Frequency	5.50985 GHz	5.50985 GHz
Span	20.000 MHz	20.000 MHz
RBW	20.000 kHz	\leq 20.000 kHz
VBW	100.000 kHz	\geq 60.000 kHz
SweepPoints	10001	\sim 10001
SweepTime	474.291 μ s	AUTO
Reference Level	20.000 dBm	20.000 dBm
Attenuation	40.000 dB	AUTO

Detector	MaxPeak	MaxPeak
SweepCount	50	50
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	FFT	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	1.00 dB	1.00 dB
Run	28 / max. 150	max. 150
Stable	1 / 1	1
Max Stable Difference	0.98 dB	1.00 dB

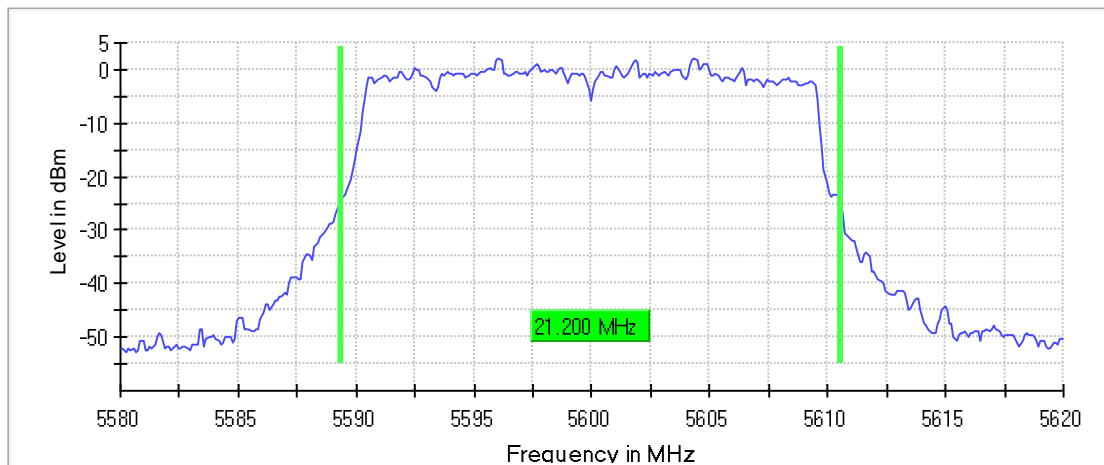
Emission Bandwidth 26 dB (5600 MHz; 30.000 dBm; 20 MHz)

26 dB Bandwidth

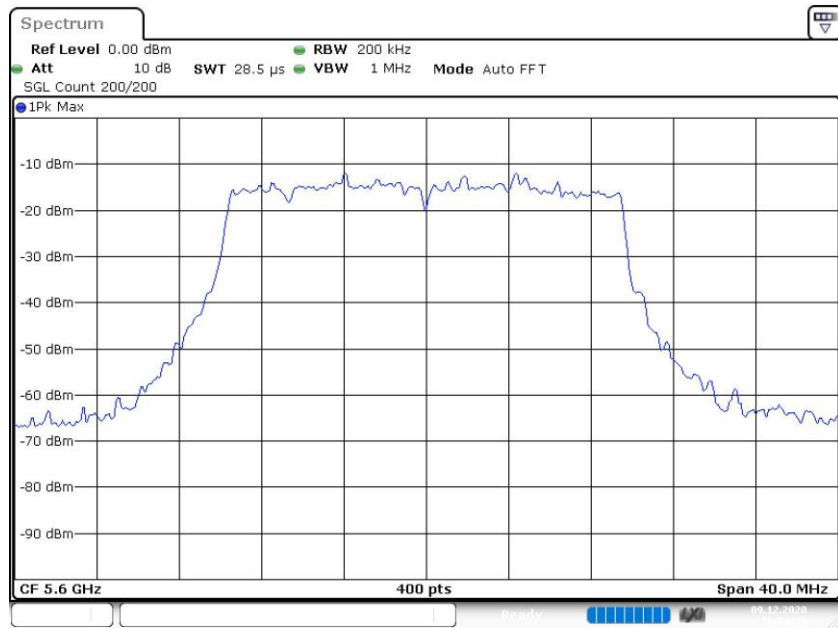
DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5600.000000	21.200000	---	---	5589.350000	5610.550000

DUT Frequency (MHz)	Max Level (dBm)	Result
5600.000000	2.2	PASS

26 dB Bandwidth



Bandwidth



Date: 9.DEC.2020 16:36:19

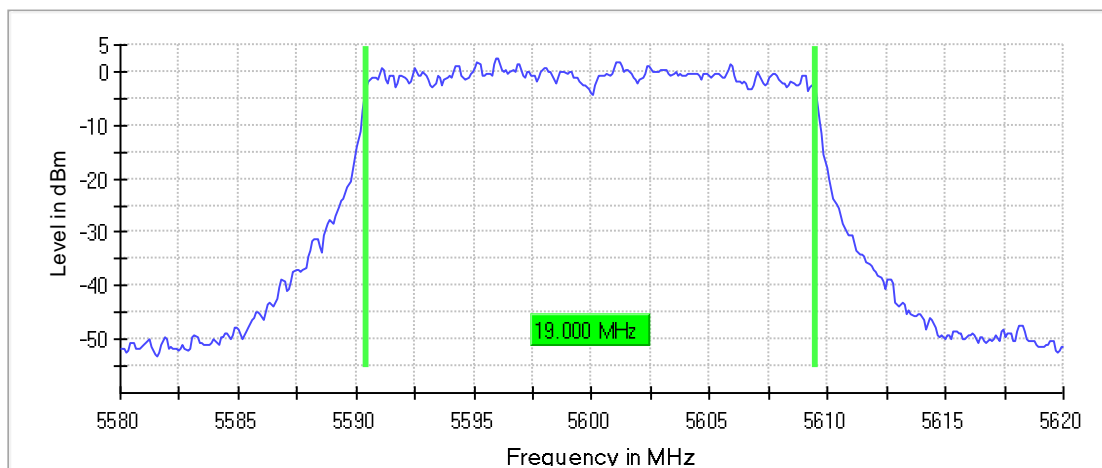
Occupied Channel Bandwidth 99% (5600 MHz; 30.000 dBm; 20 MHz)

99 % Bandwidth

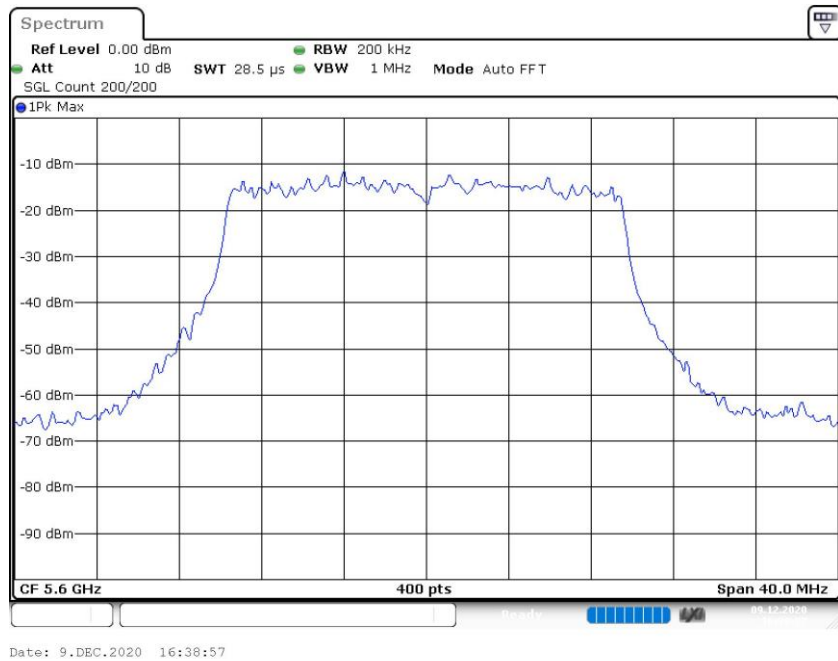
DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5600.000000	19.000000	---	---	5590.450000	5609.450000

DUT Frequency (MHz)	Result
5600.000000	PASS

99 %Bandwidth



Bandwidth



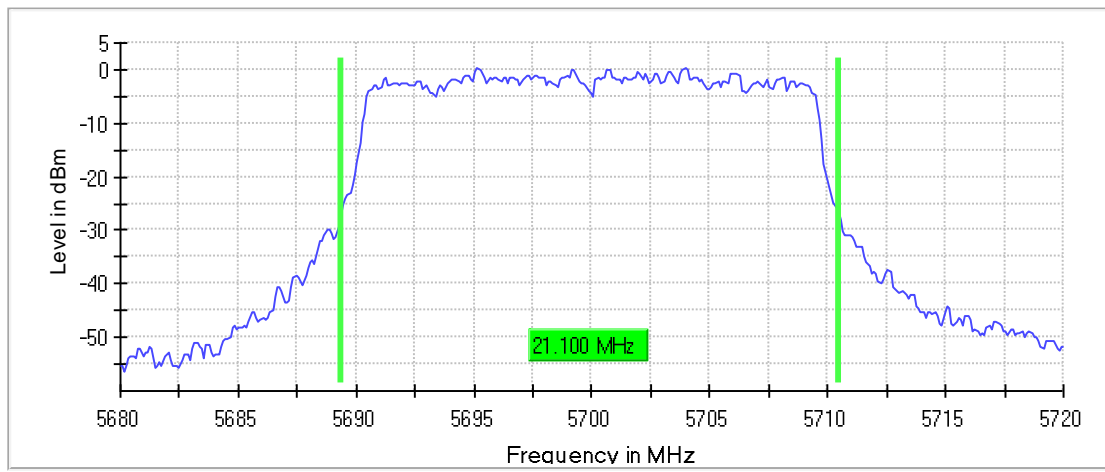
Emission Bandwidth 26 dB (5700 MHz; 30.000 dBm; 20 MHz)

26 dB Bandwidth

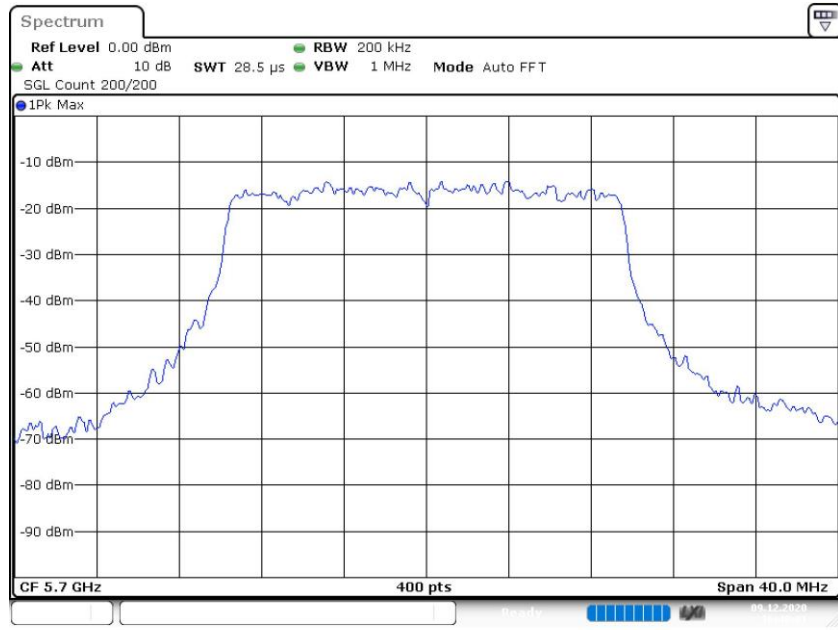
DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5700.000000	21.100000	---	---	5689.350000	5710.450000

DUT Frequency (MHz)	Max Level (dBm)	Result
5700.000000	0.2	PASS

26 dB Bandwidth



Bandwidth



Date: 9.DEC.2020 16:48:42

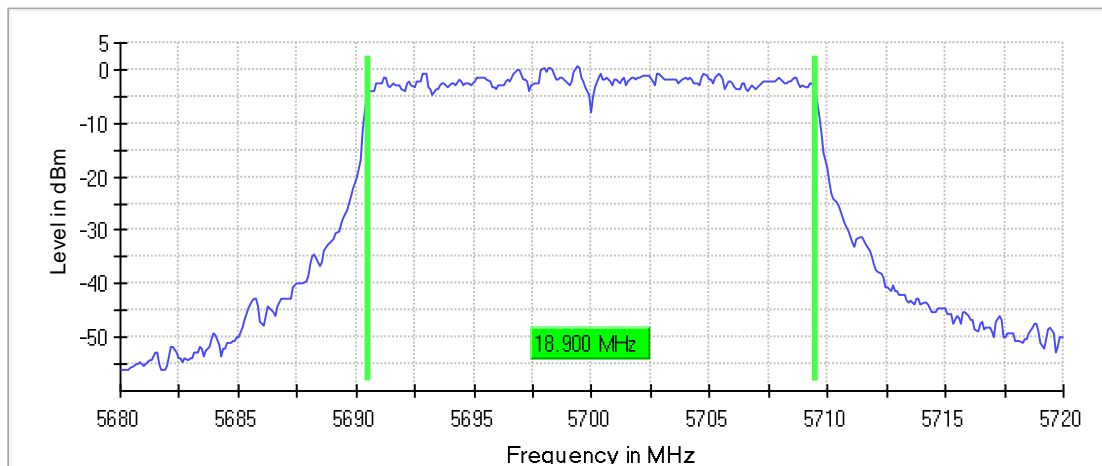
Occupied Channel Bandwidth 99% (5700 MHz; 30.000 dBm; 20 MHz)

99 % Bandwidth

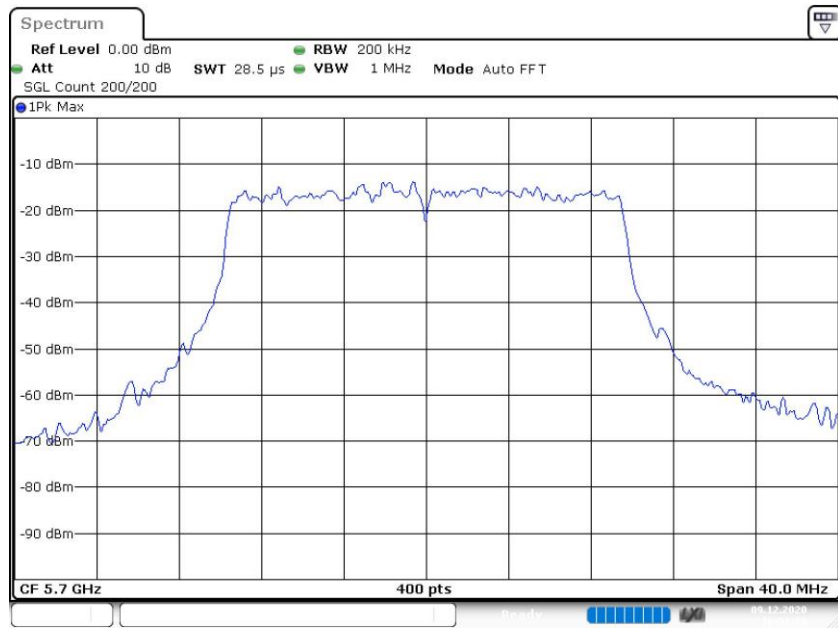
DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5700.000000	18.900000	---	---	5690.550000	5709.450000

DUT Frequency (MHz)	Result
5700.000000	PASS

99 %Bandwidth



Bandwidth



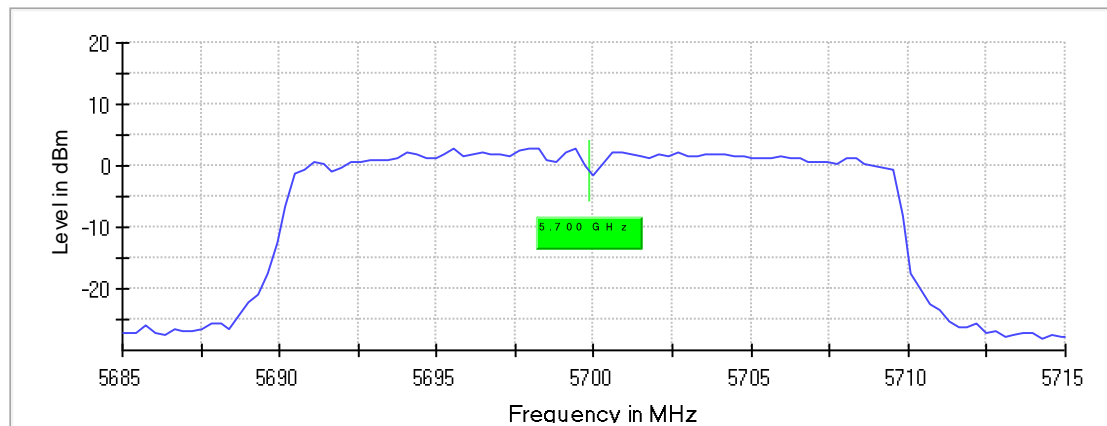
Date: 9.DEC.2020 16:51:19

Frequency Error (5700 MHz; 30.000 dBm; 20 MHz)

Result

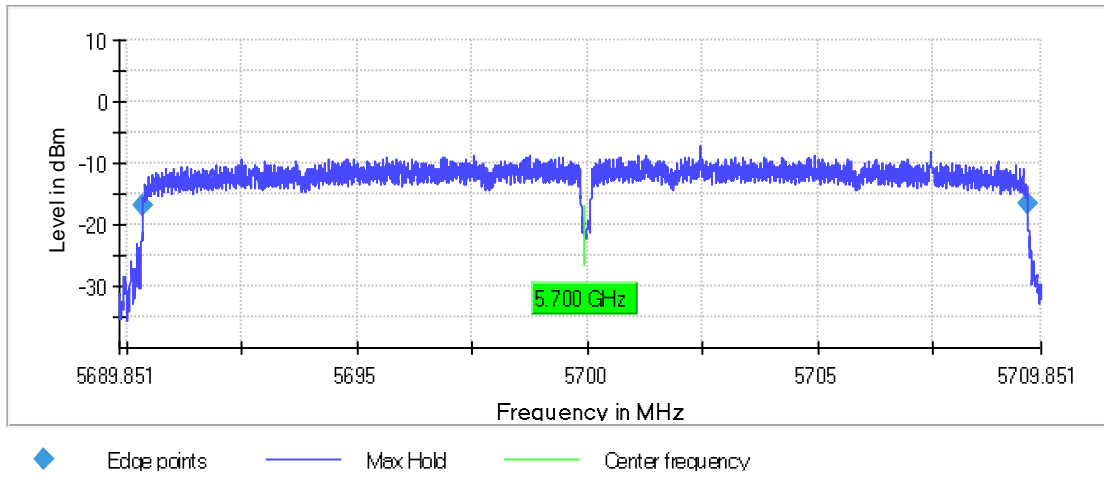
DUT Frequency (MHz)	Frequency (MHz)	Difference (ppm)	Frequency Difference (kHz)	Limit Min (MHz)	Limit Max (MHz)	Result
5700.000000	5699.955475	7.811	-44.525000	---	---	PASS

Frequency stability Pre

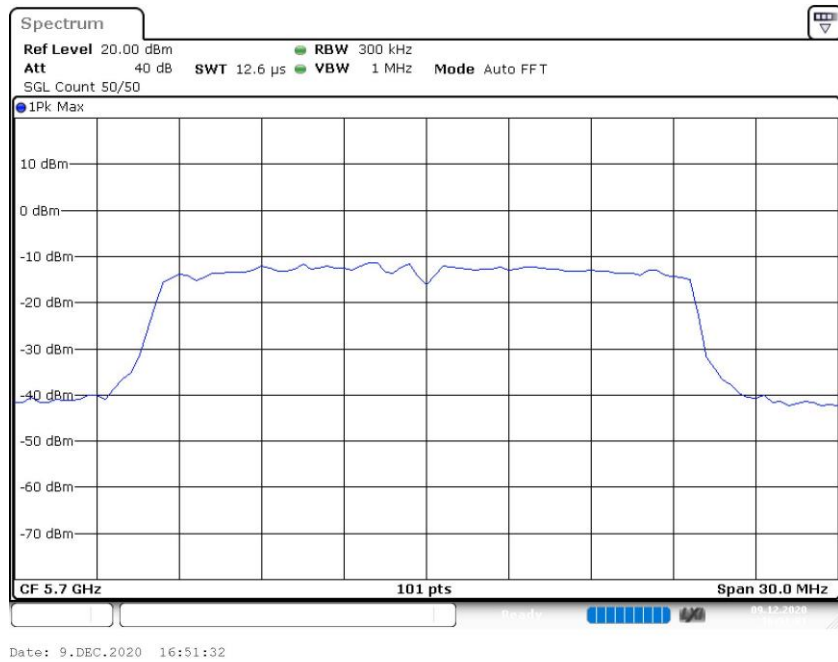


Center frequency Max Hold

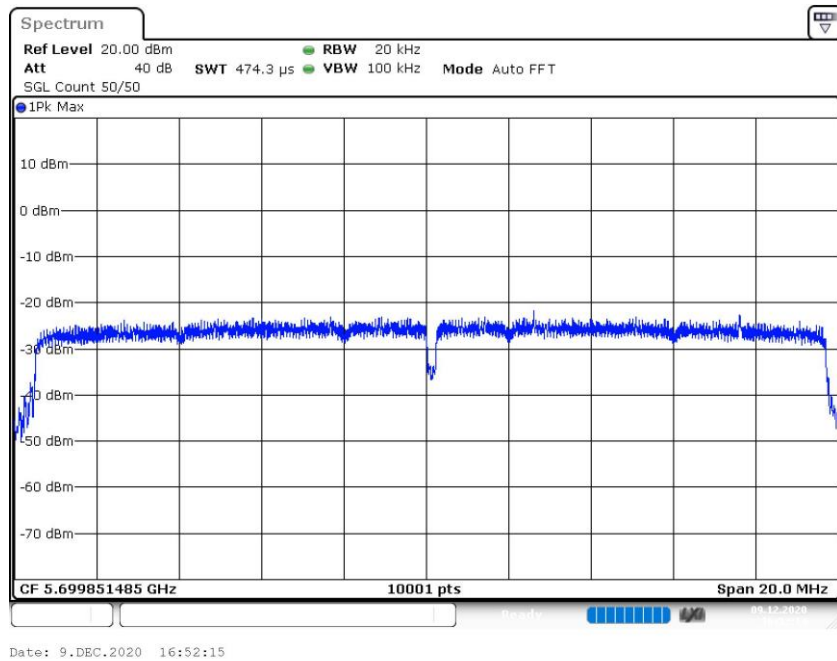
Frequency stability



Frequency stability Pre



Frequency stability



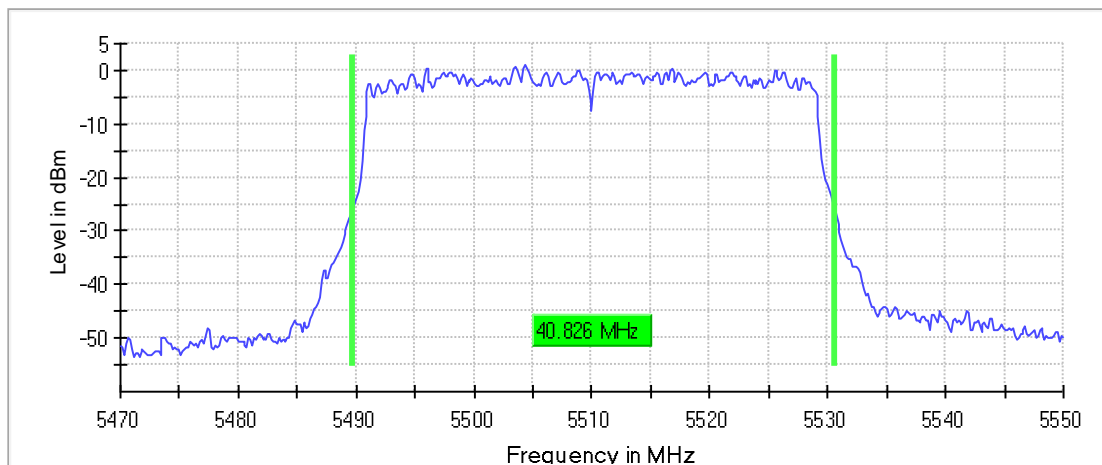
Emission Bandwidth 26 dB (5510 MHz; 30.000 dBm; 40 MHz)

26 dB Bandwidth

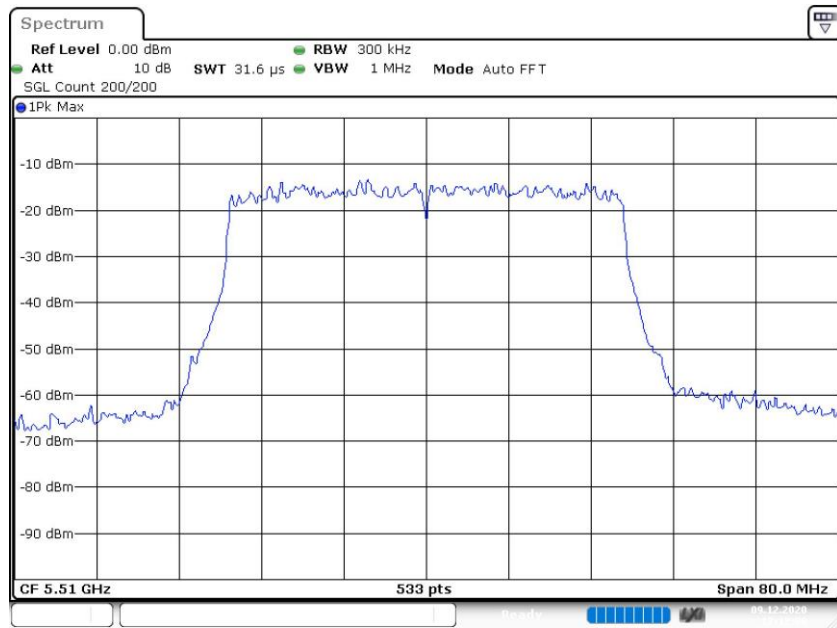
DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5510.000000	40.825516	---	---	5489.737336	5530.562852

DUT Frequency (MHz)	Max Level (dBm)	Result
5510.000000	0.9	PASS

26 dB Bandwidth



Bandwidth



Date: 9.DEC.2020 17:12:31

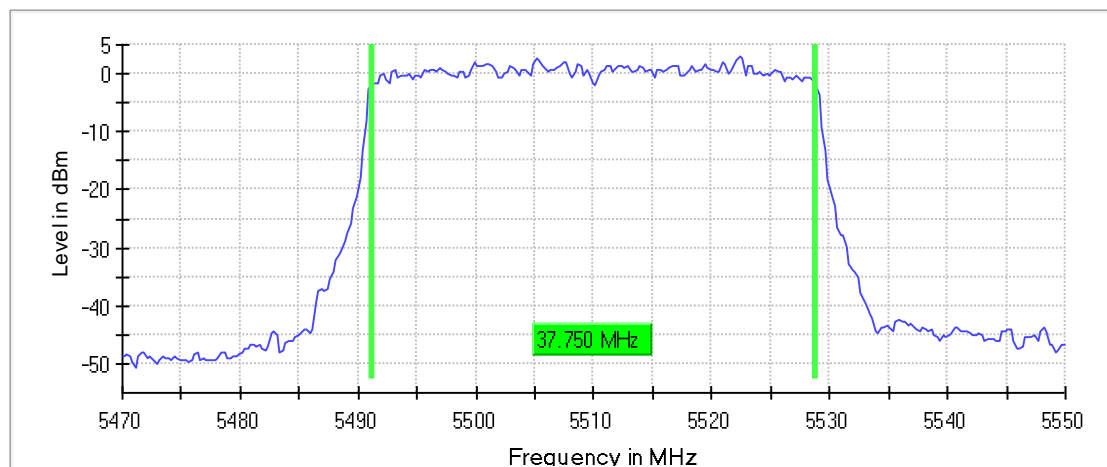
Occupied Channel Bandwidth 99% (5510 MHz; 30.000 dBm; 40 MHz)

99 % Bandwidth

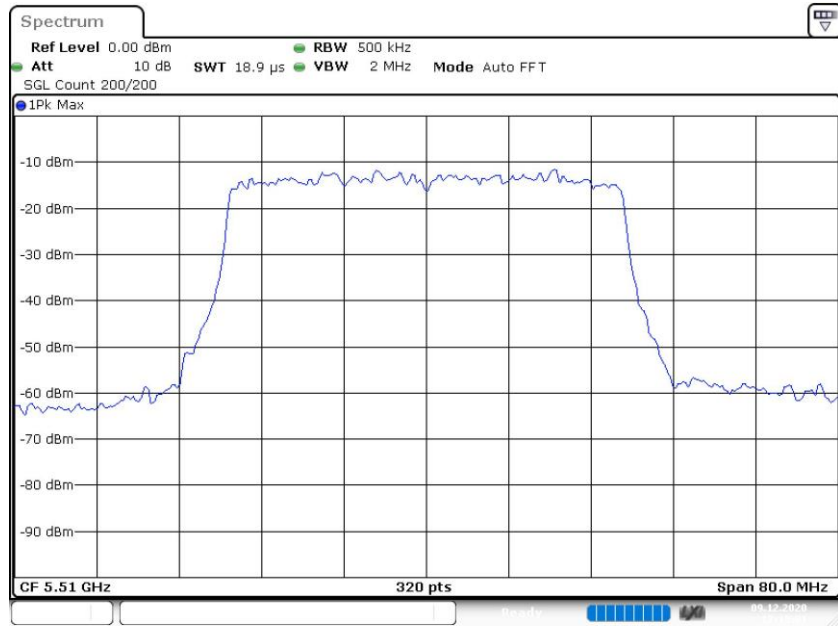
DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5510.000000	37.750000	---	---	5491.125000	5528.875000

DUT Frequency (MHz)	Result
5510.000000	PASS

99 %Bandwidth



Bandwidth



Date: 9.DEC.2020 17:15:02

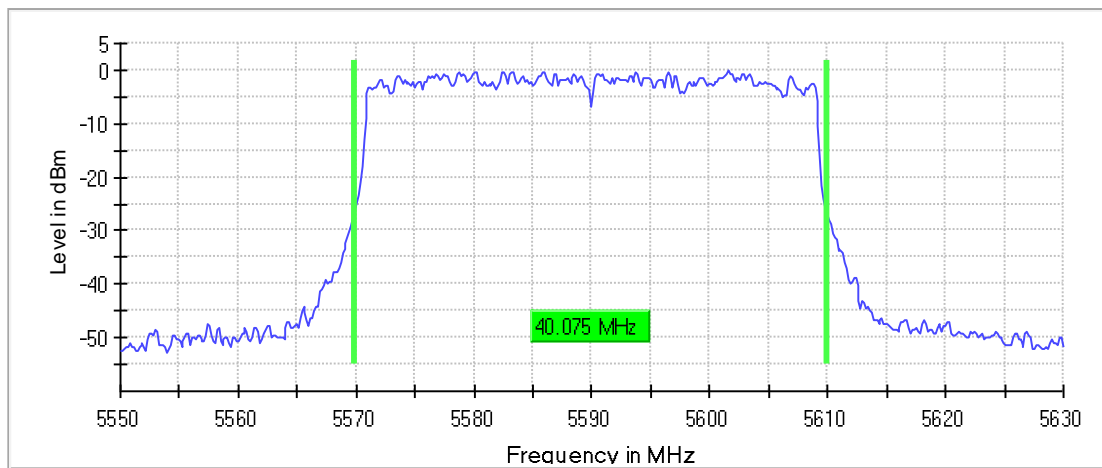
Emission Bandwidth 26 dB (5590 MHz; 30.000 dBm; 40 MHz)

26 dB Bandwidth

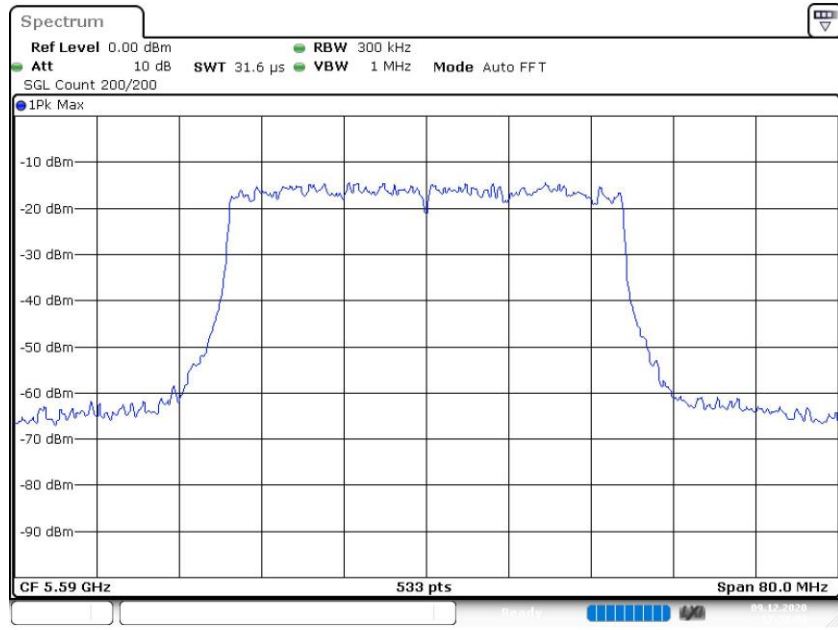
DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5590.000000	40.075047	---	---	5569.887430	5609.962477

DUT Frequency (MHz)	Max Level (dBm)	Result
5590.000000	-0.2	PASS

26 dB Bandwidth



Bandwidth



Date: 9.DEC.2020 17:27:03

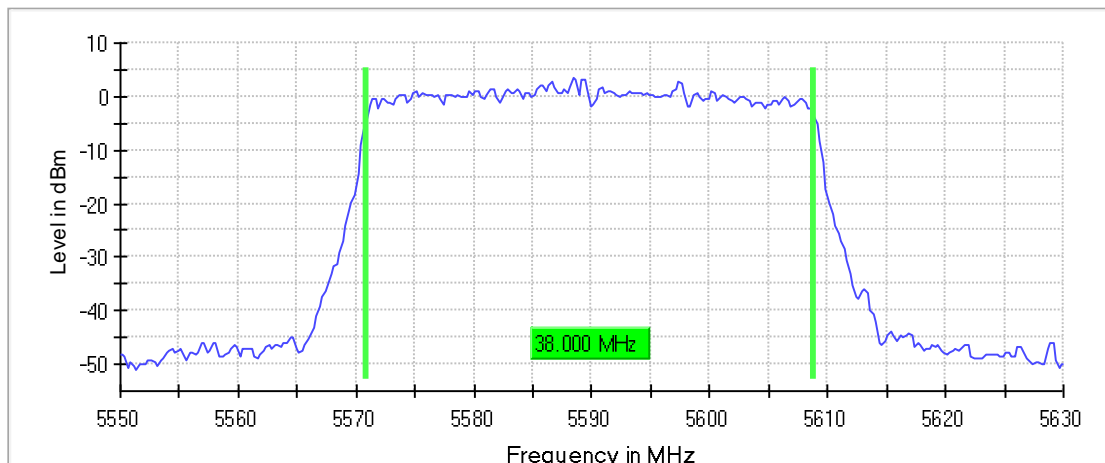
Occupied Channel Bandwidth 99% (5590 MHz; 30.000 dBm; 40 MHz)

99 % Bandwidth

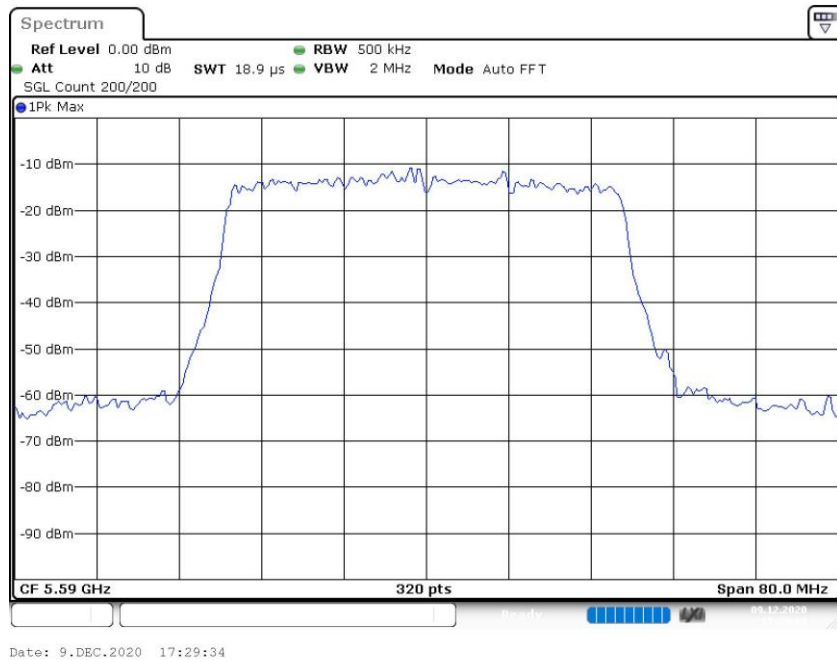
DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5590.000000	38.000000	---	---	5570.875000	5608.875000

DUT Frequency (MHz)	Result
5590.000000	PASS

99 %Bandwidth



Bandwidth



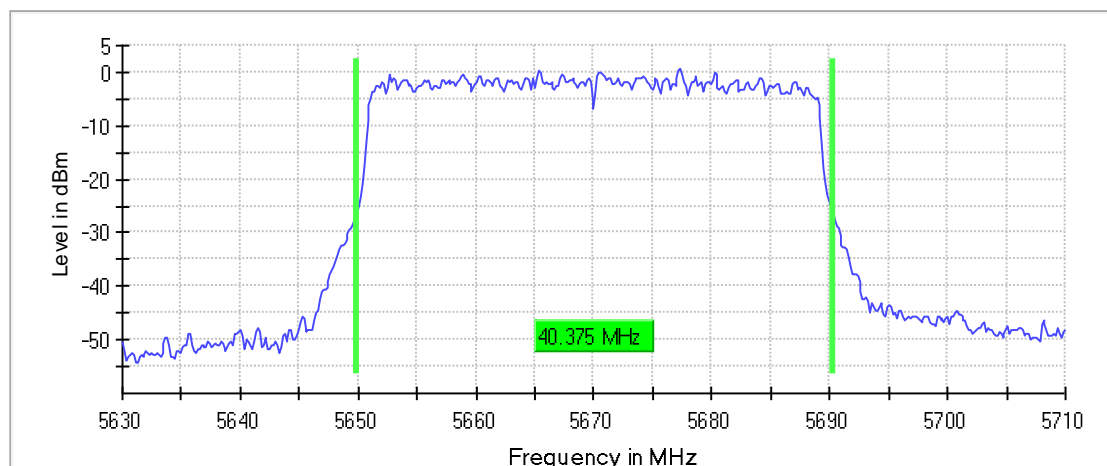
Emission Bandwidth 26 dB (5670 MHz; 30.000 dBm; 40 MHz)

26 dB Bandwidth

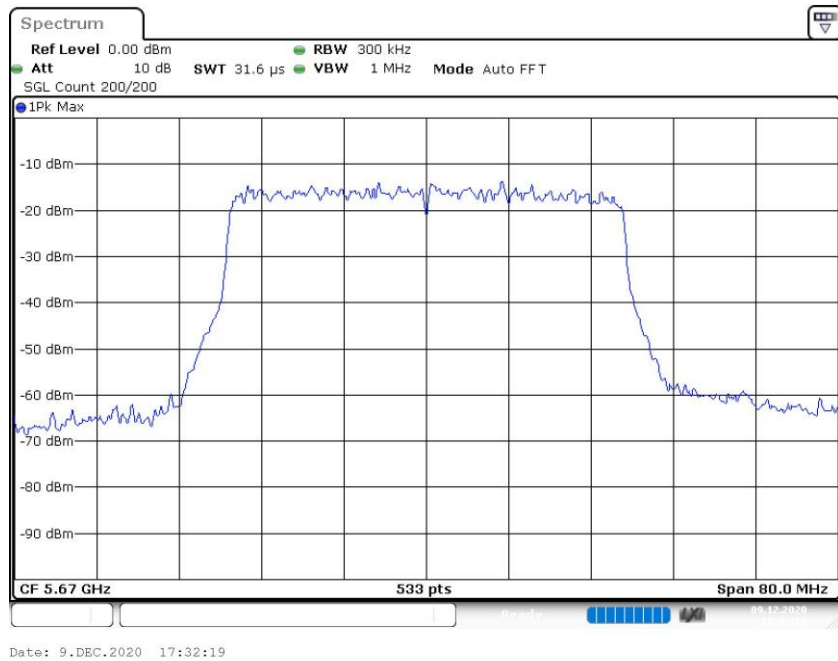
DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5670.000000	40.375234	---	---	5649.887430	5690.262664

DUT Frequency (MHz)	Max Level (dBm)	Result
5670.000000	0.6	PASS

26 dB Bandwidth



Bandwidth



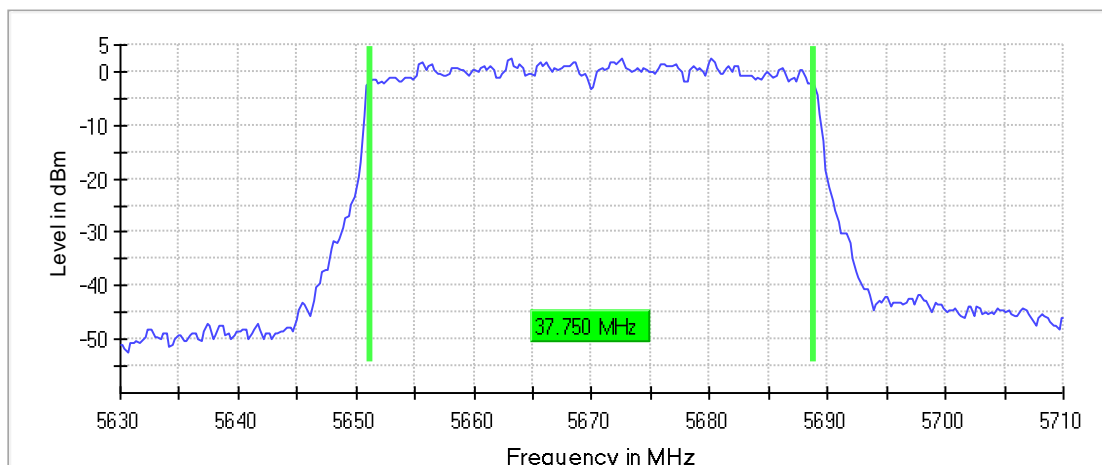
Occupied Channel Bandwidth 99% (5670 MHz; 30.000 dBm; 40 MHz)

99 % Bandwidth

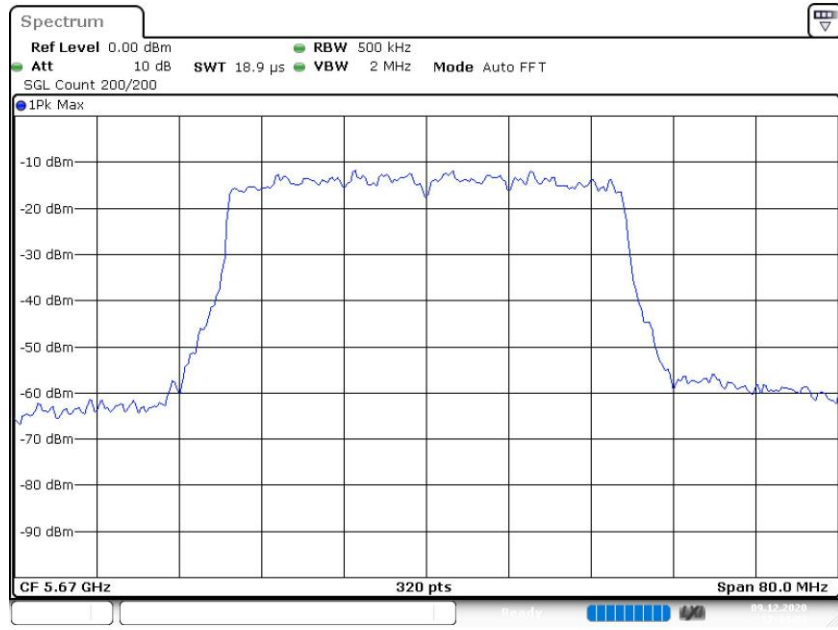
DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5670.000000	37.750000	---	---	5651.125000	5688.875000

DUT Frequency (MHz)	Result
5670.000000	PASS

99 %Bandwidth



Bandwidth



Date: 9.DEC.2020 17:34:54

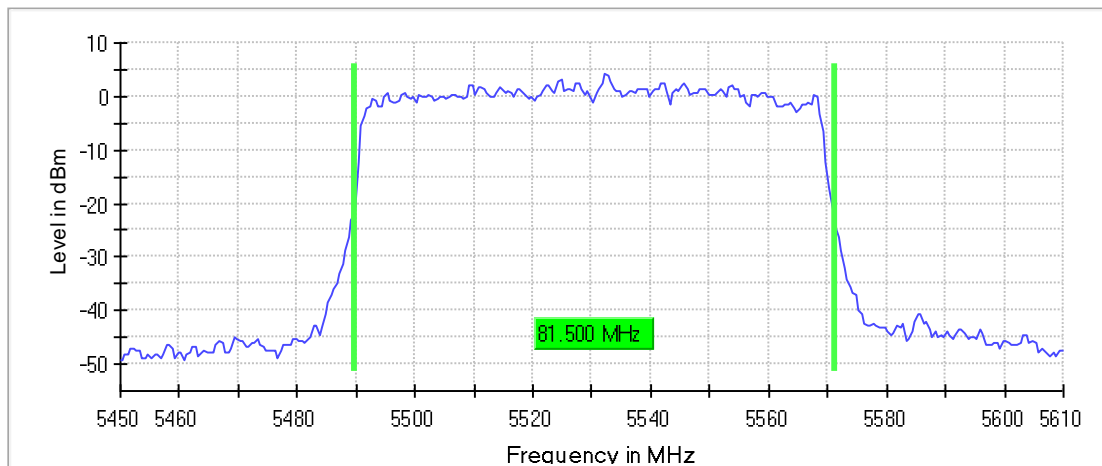
Emission Bandwidth 26 dB (5530 MHz; 30.000 dBm; 80 MHz)

26 dB Bandwidth

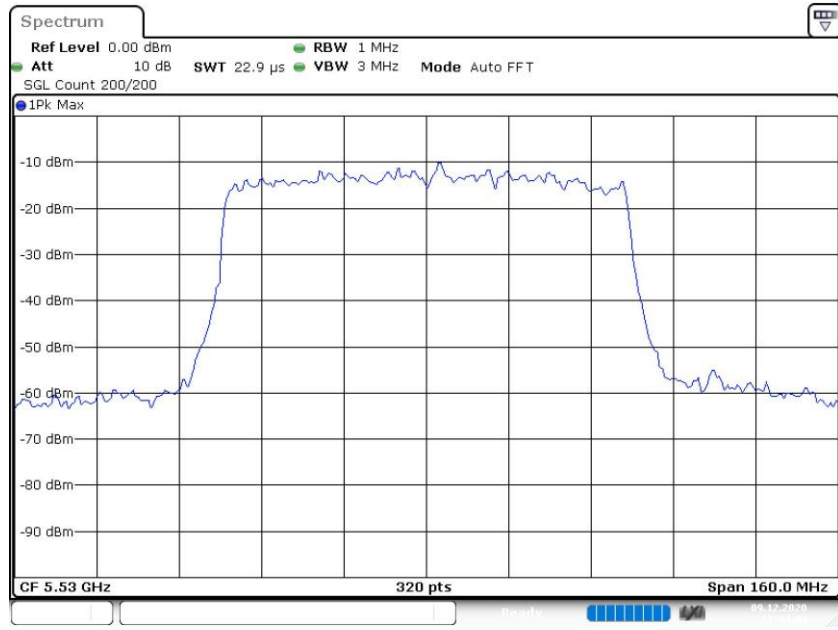
DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5530.000000	81.500000	---	---	5489.750000	5571.250000

DUT Frequency (MHz)	Max Level (dBm)	Result
5530.000000	4.1	PASS

26 dB Bandwidth



Bandwidth



Date: 9.DEC.2020 17:44:45

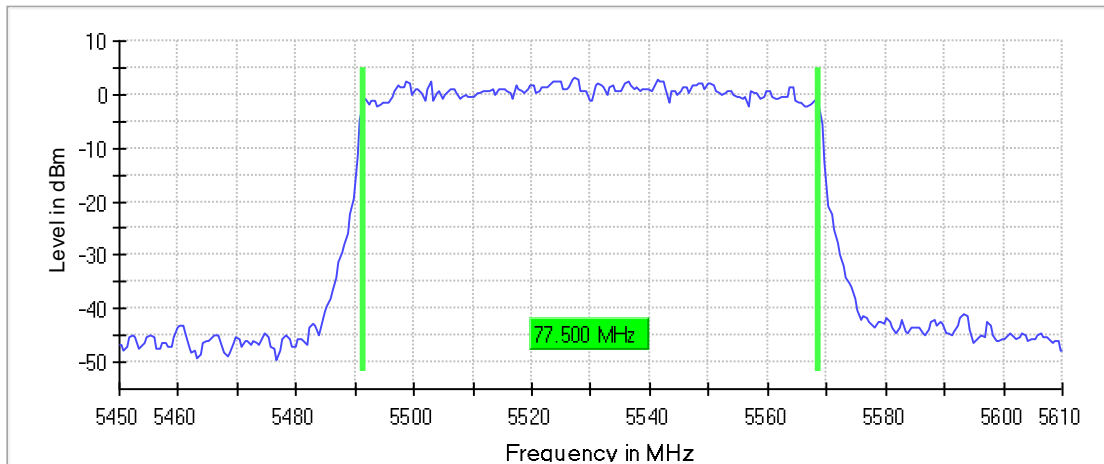
Occupied Channel Bandwidth 99% (5530 MHz; 30.000 dBm; 80 MHz)

99 % Bandwidth

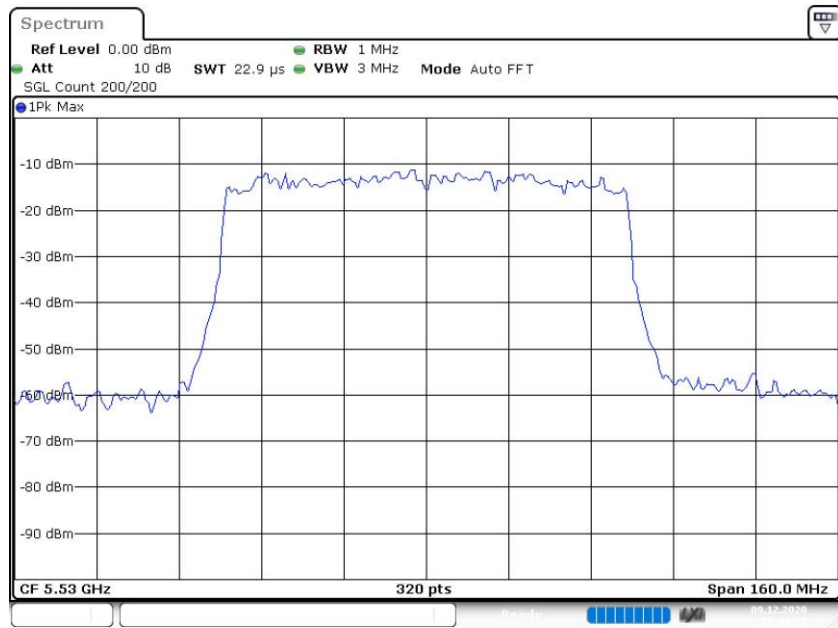
DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5530.000000	77.500000	---	---	5491.250000	5568.750000

DUT Frequency (MHz)	Result
5530.000000	PASS

99 %Bandwidth



Bandwidth



Date: 9.DEC.2020 17:47:18

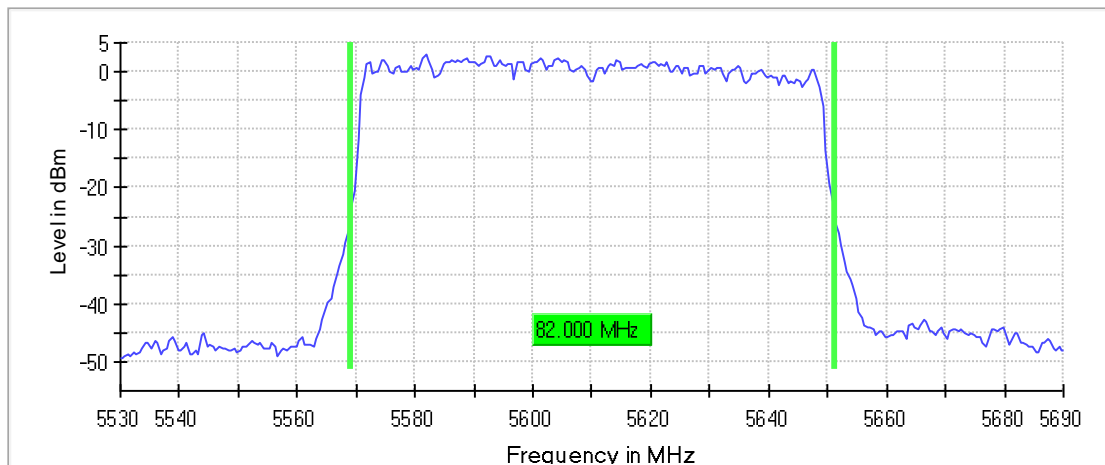
Emission Bandwidth 26 dB (5610 MHz; 30.000 dBm; 80 MHz)

26 dB Bandwidth

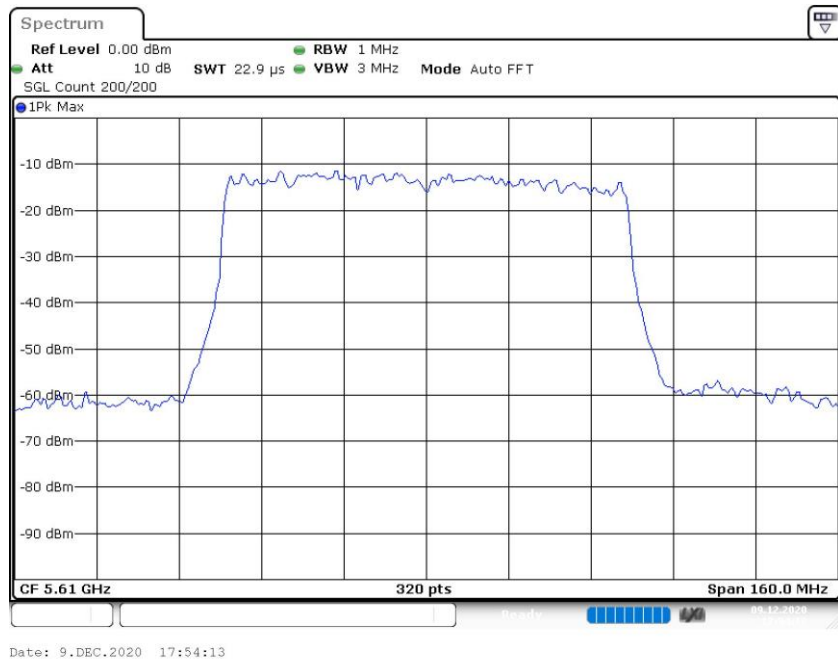
DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5610.000000	82.000000	---	---	5569.250000	5651.250000

DUT Frequency (MHz)	Max Level (dBm)	Result
5610.000000	2.9	PASS

26 dB Bandwidth



Bandwidth



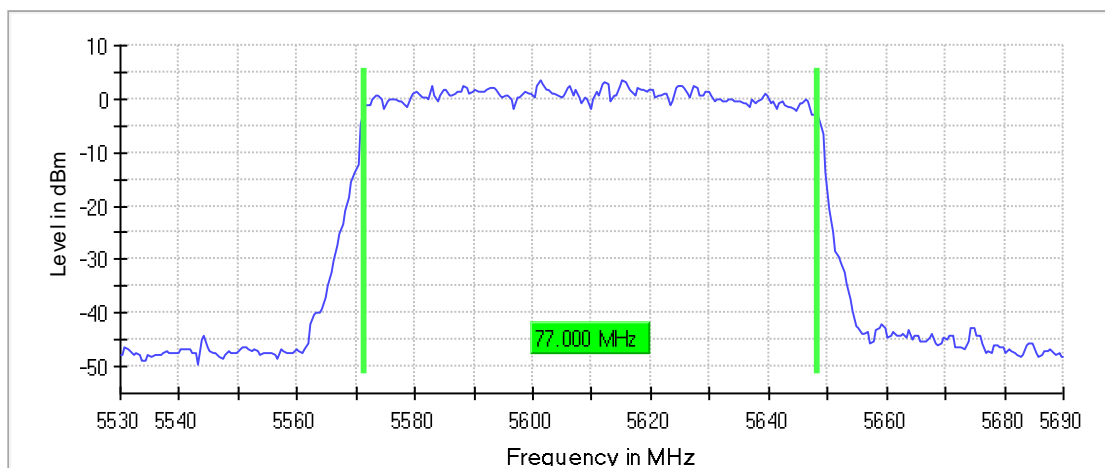
Occupied Channel Bandwidth 99% (5610 MHz; 30.000 dBm; 80 MHz)

99 % Bandwidth

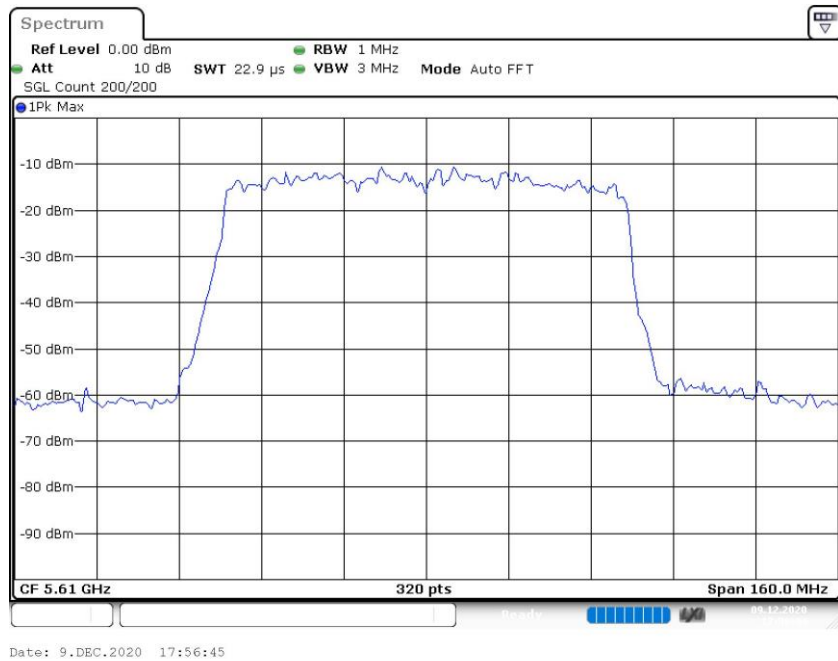
DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5610.000000	77.000000	---	---	5571.250000	5648.250000

DUT Frequency (MHz)	Result
5610.000000	PASS

99 %Bandwidth



Bandwidth



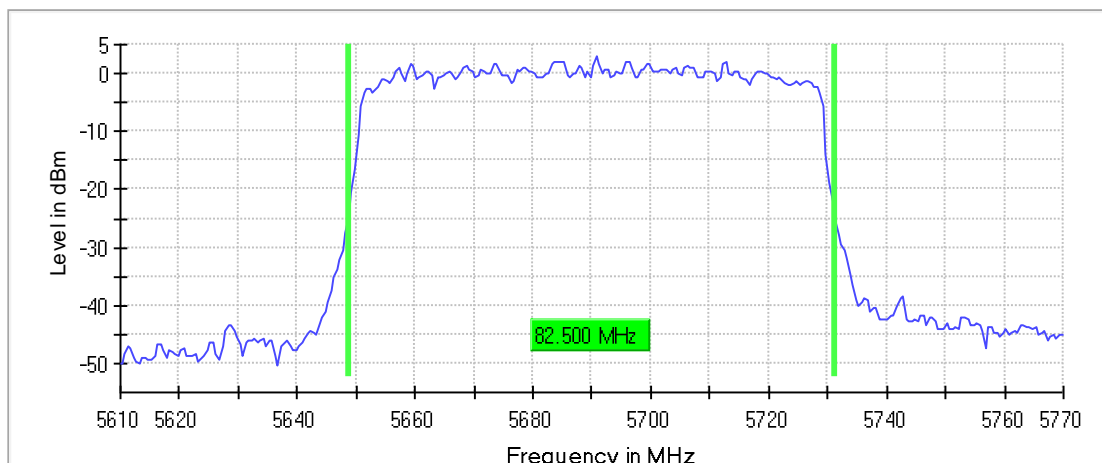
Emission Bandwidth 26 dB (5690 MHz; 30.000 dBm; 80 MHz)

26 dB Bandwidth

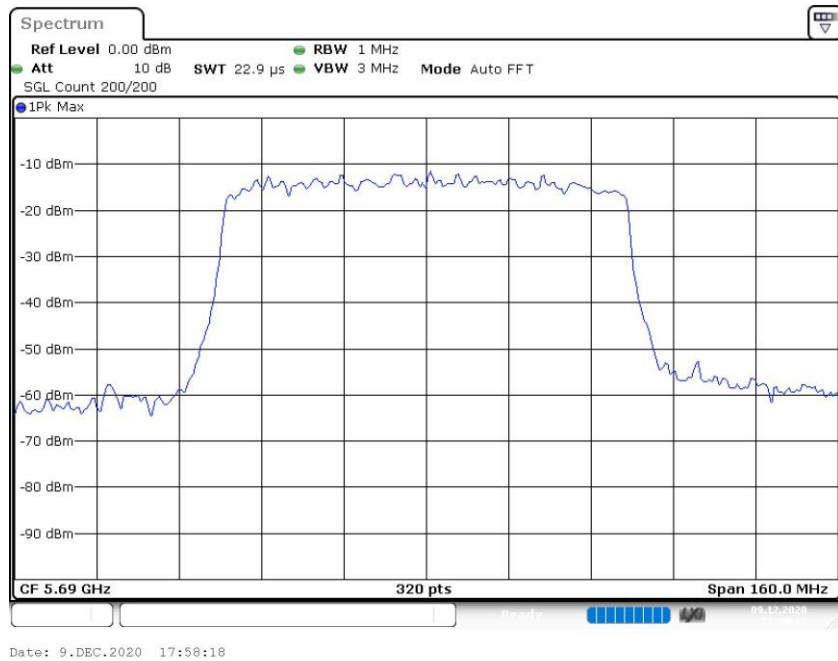
DUT Frequency (MHz)	Bandwidth (MHz)	Bandwidth U-NII 2C (MHz)	Bandwidth U-NII 3 (MHz)	Limit Min (MHz)	Limit Max (MHz)
5690.000000	82.500000	76.250000	6.250000	---	---

DUT Frequency (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)	Max Level (dBm)	Result
5690.000000	5648.750000	5731.250000	2.9	PASS

26 dB Bandwidth



Bandwidth



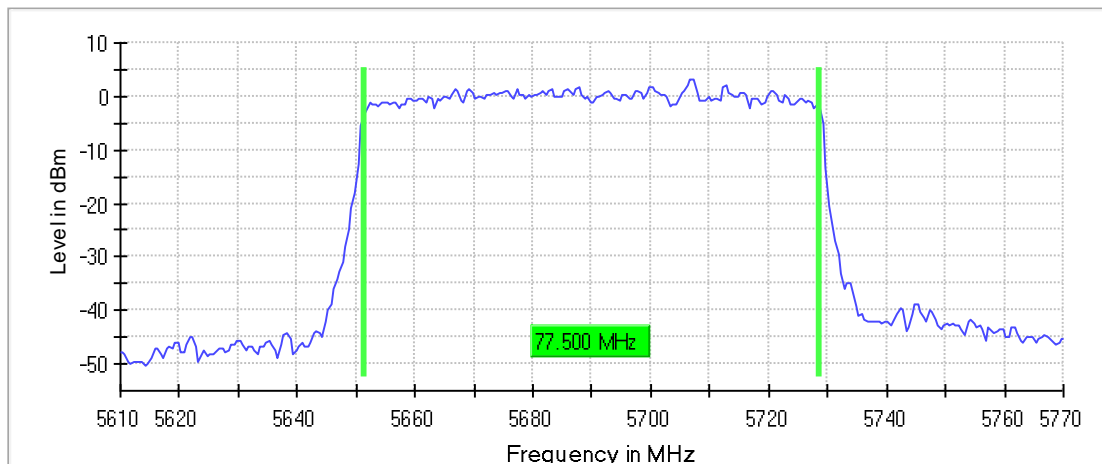
Occupied Channel Bandwidth 99% (5690 MHz; 30.000 dBm; 80 MHz)

99 % Bandwidth

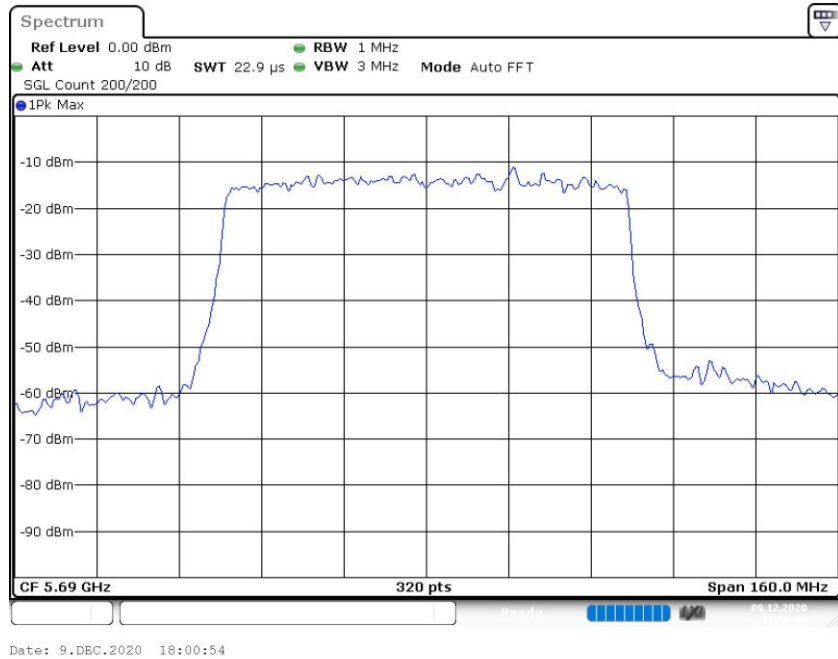
DUT Frequency (MHz)	Bandwidth (MHz)	Bandwidth U-NII 2C (MHz)	Bandwidth U-NII 3 (MHz)	Limit Min (MHz)	Limit Max (MHz)
5690.000000	77.500000	73.750000	3.750000	---	---

DUT Frequency (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)	Result
5690.000000	5651.250000	5728.750000	PASS

99 %Bandwidth



Bandwidth



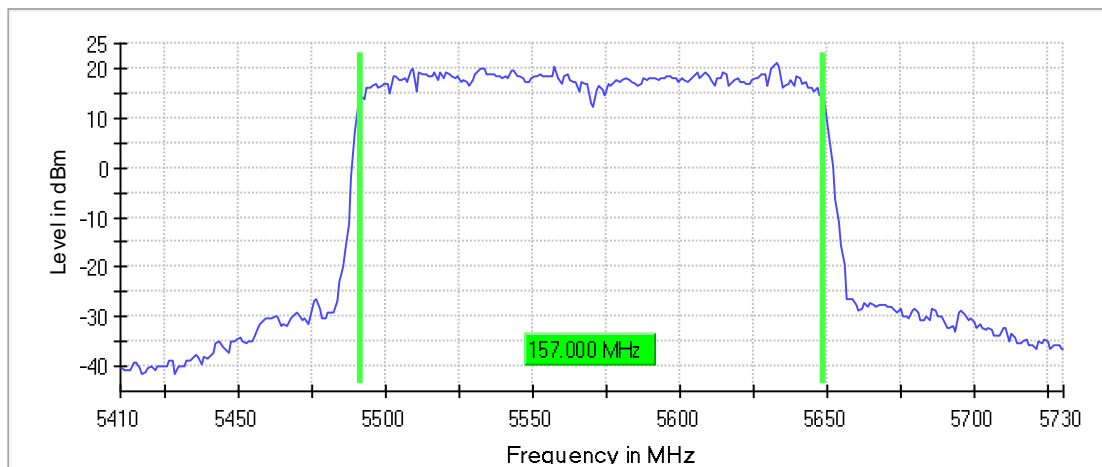
Occupied Channel Bandwidth 99% (5570 MHz; 30.000 dBm; 160 MHz)

99 % Bandwidth

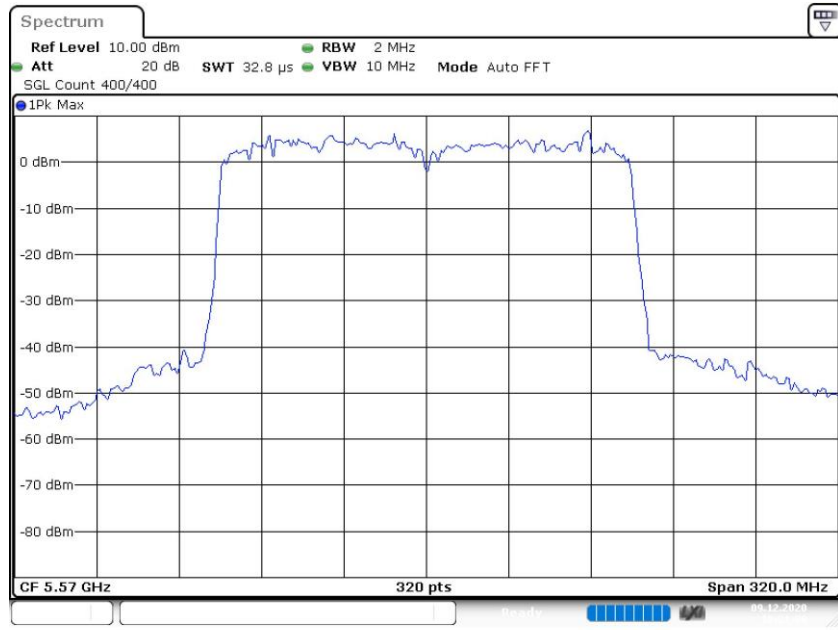
DUT Frequency (MHz)	Bandwidth (MHz)	Bandwidth U-NII 2C (MHz)	Bandwidth U-NII 3 (MHz)	Limit Min (MHz)	Limit Max (MHz)
5570.000000	157.000000	157.000000	0.000000	---	---

DUT Frequency (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)	Result
5570.000000	5491.500000	5648.500000	PASS

99 %Bandwidth



Bandwidth



Date: 9.DEC.2020 18:21:31

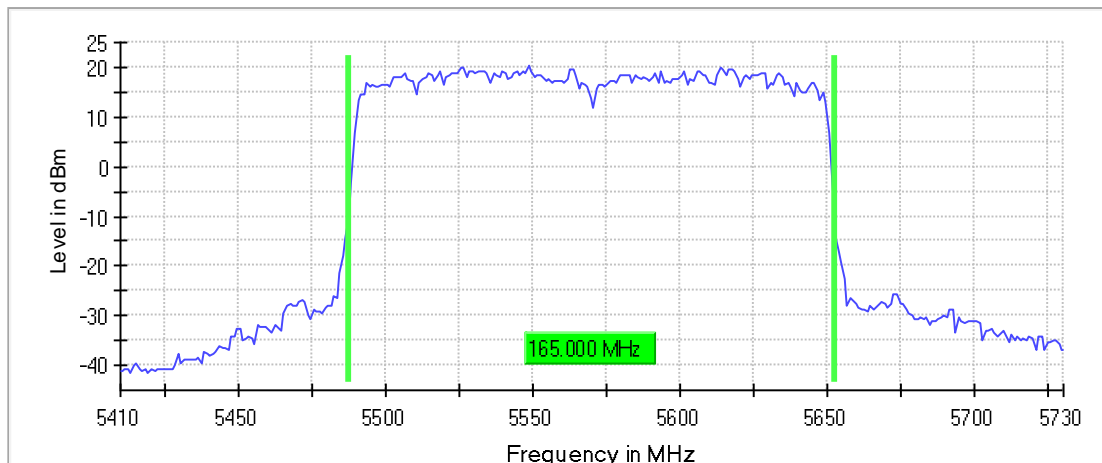
Emission Bandwidth 26 dB (5570 MHz; 30.000 dBm; 160 MHz)

26 dB Bandwidth

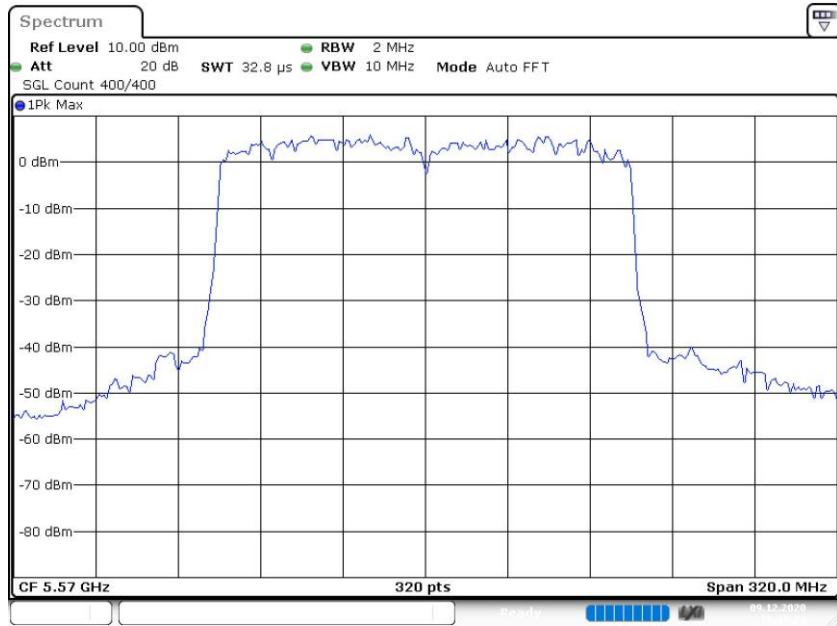
DUT Frequency (MHz)	Bandwidth (MHz)	Bandwidth U-NII 2C (MHz)	Bandwidth U-NII 3 (MHz)	Limit Min (MHz)	Limit Max (MHz)
5570.000000	165.000000	165.000000	0.000000	---	---

DUT Frequency (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)	Max Level (dBm)	Result
5570.000000	5487.500000	5652.500000	20.2	PASS

26 dB Bandwidth



Bandwidth



Date: 9.DEC.2020 18:18:25