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CH 54 (5270 MHz)

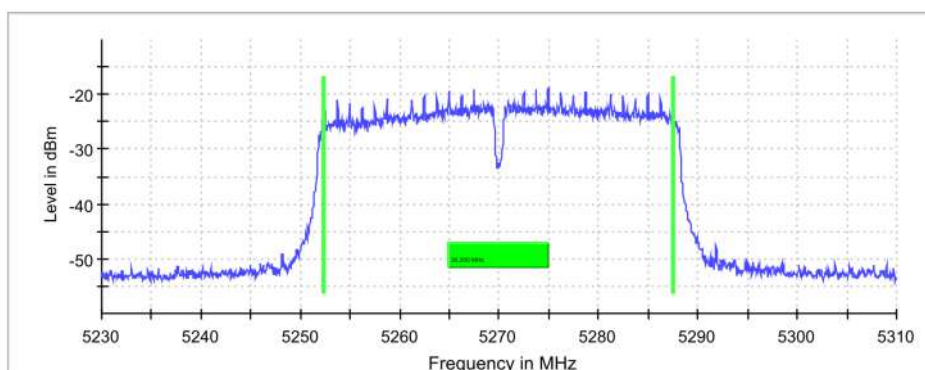
6 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5270.000000	35.200000	---	---	5252.375000	5287.575000

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

DUT Frequency (MHz)	Max Level (dBm)	Result
5270.000000	-18.7	PASS

6 dB Bandwidth



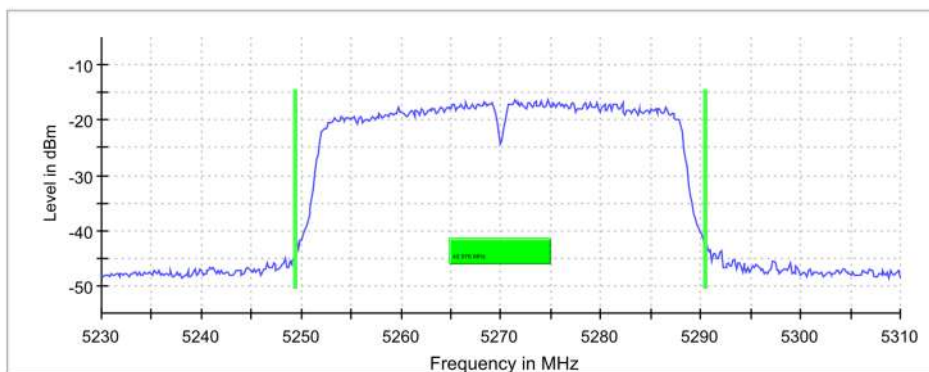
26 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5270.000000	40.975610	---	---	5249.437148	5290.412758

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

DUT Frequency (MHz)	Max Level (dBm)	Result
5270.000000	-16.3	PASS

26 dB Bandwidth



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CH 62 (5310 MHz)

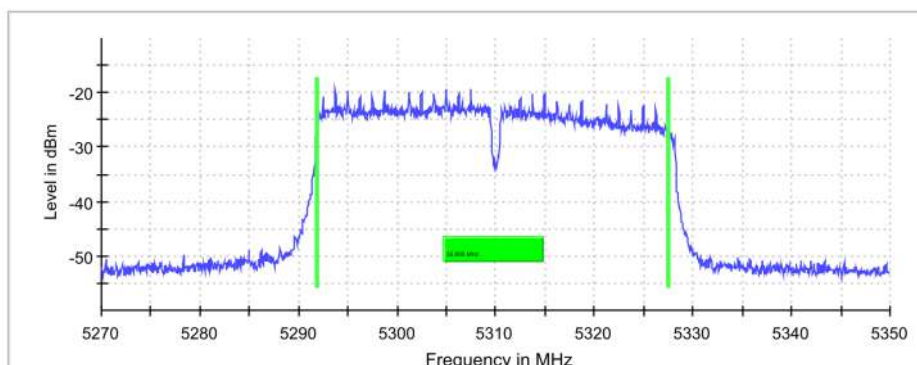
6 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5310.000000	35.800000	---	---	5291.775000	5327.575000

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

DUT Frequency (MHz)	Max Level (dBm)	Result
5310.000000	-19.3	PASS

6 dB Bandwidth



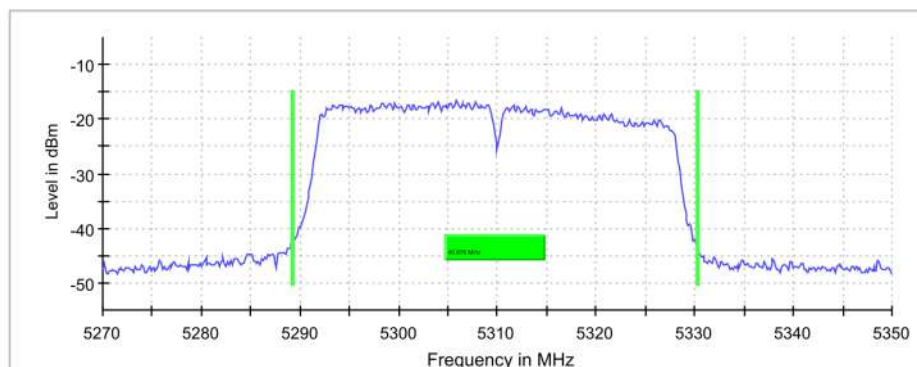
26 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5310.000000	40.975610	---	---	5289.287054	5330.262664

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

DUT Frequency (MHz)	Max Level (dBm)	Result
5310.000000	-16.6	PASS

26 dB Bandwidth



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CH 102 (5510 MHz)

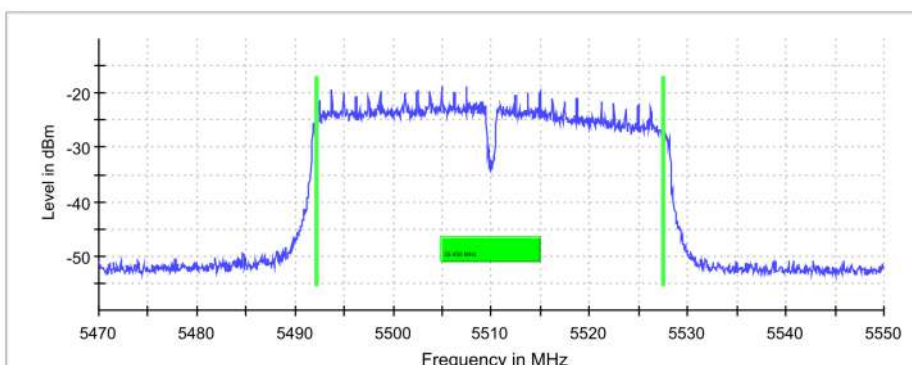
6 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5510.000000	35.450000	---	---	5492.125000	5527.575000

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

DUT Frequency (MHz)	Max Level (dBm)	Result
5510.000000	-18.9	PASS

6 dB Bandwidth



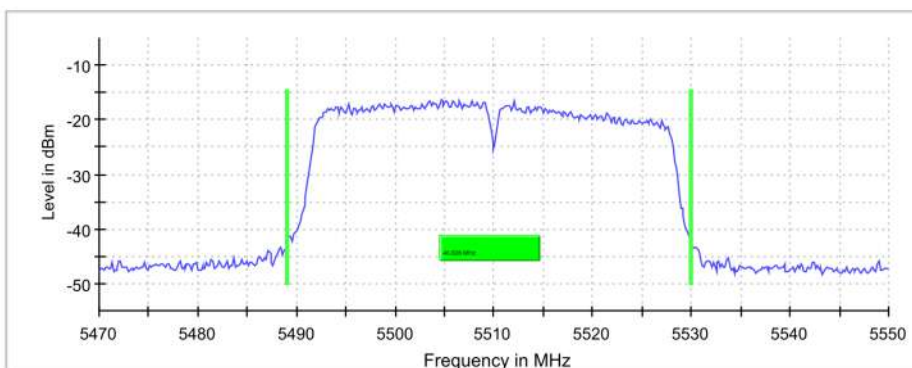
26 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5510.000000	40.825516	---	---	5489.136961	5529.962477

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

DUT Frequency (MHz)	Max Level (dBm)	Result
5510.000000	-16.5	PASS

26 dB Bandwidth



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CH 118 (5590 MHz)

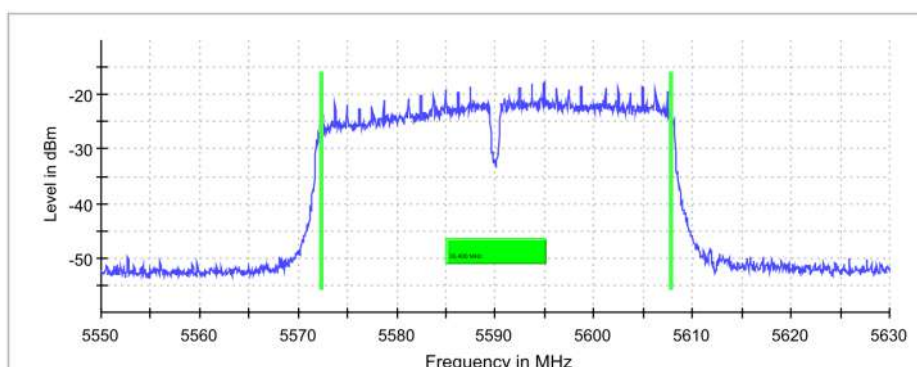
6 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5590.000000	35.400000	---	---	5572.375000	5607.775000

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

DUT Frequency (MHz)	Max Level (dBm)	Result
5590.000000	-17.8	PASS

6 dB Bandwidth



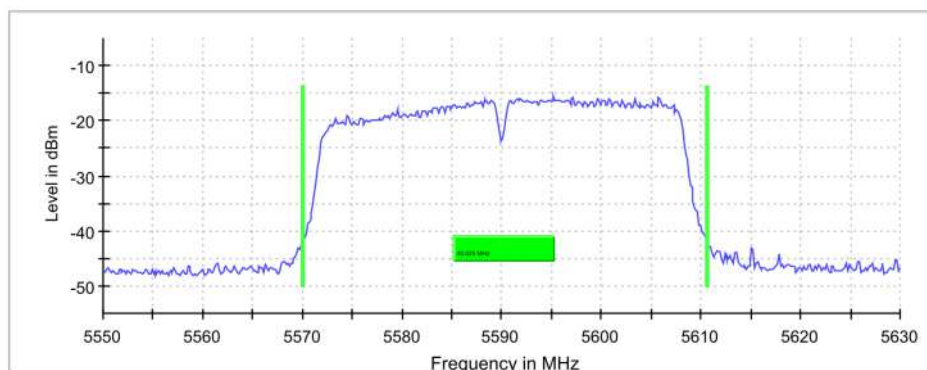
26 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5590.000000	40.525329	---	---	5570.037523	5610.562852

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

DUT Frequency (MHz)	Max Level (dBm)	Result
5590.000000	-15.6	PASS

26 dB Bandwidth



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CH 134 (5670 MHz)

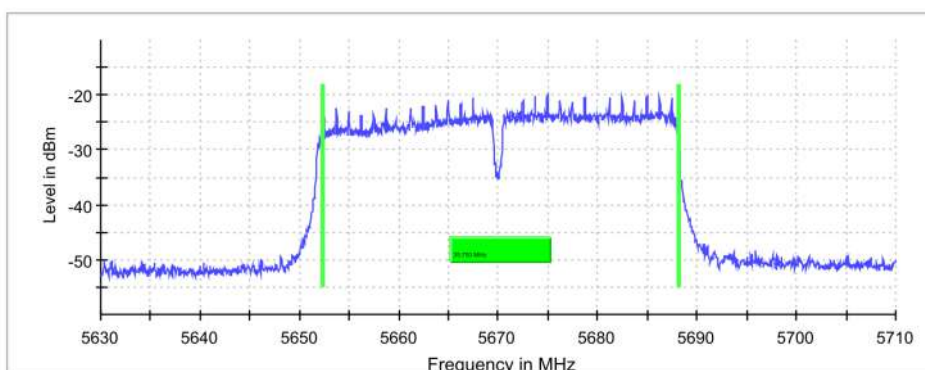
6 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5670.000000	35.750000	---	---	5652.375000	5688.125000

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

DUT Frequency (MHz)	Max Level (dBm)	Result
5670.000000	-20.0	PASS

6 dB Bandwidth



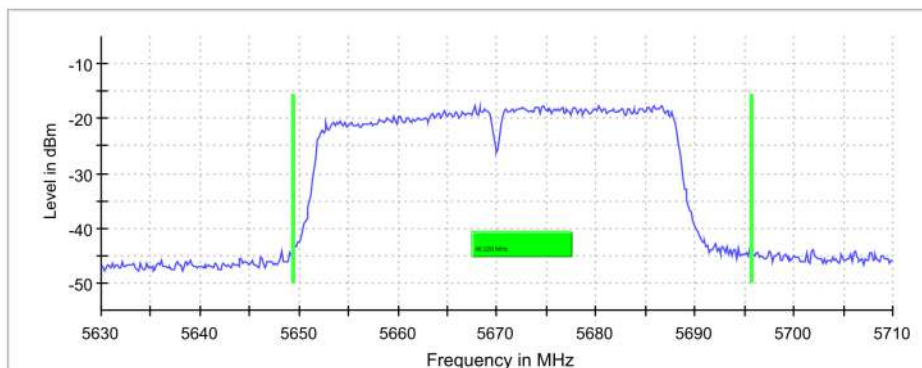
26 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5670.000000	46.228893	---	---	5649.437148	5695.666041

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

DUT Frequency (MHz)	Max Level (dBm)	Result
5670.000000	-17.6	PASS

26 dB Bandwidth



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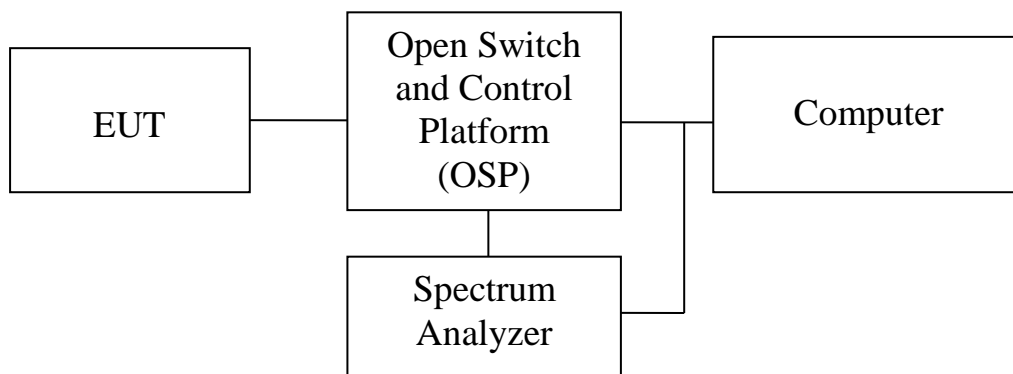
3.1.6 99% Bandwidth Measurement

Test Requirement:	N/A
Test Method:	ANSI C63.10:2013
Test Date:	2020-03-30 to 2020-03-31
Mode of Operation:	Tx mode (802.11 a/n)

Test Method:

The bandwidth is measured at an amplitude level reduced from the reference level by a specified ratio. The reference level is the level of the highest amplitude signal observed from the transmitter at the fundamental frequency. Once the reference level is established, the equipment is conditioned with typical modulating signal to produce the worst-case (i.e. the widest) bandwidth.

Test Setup:



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Appendix C

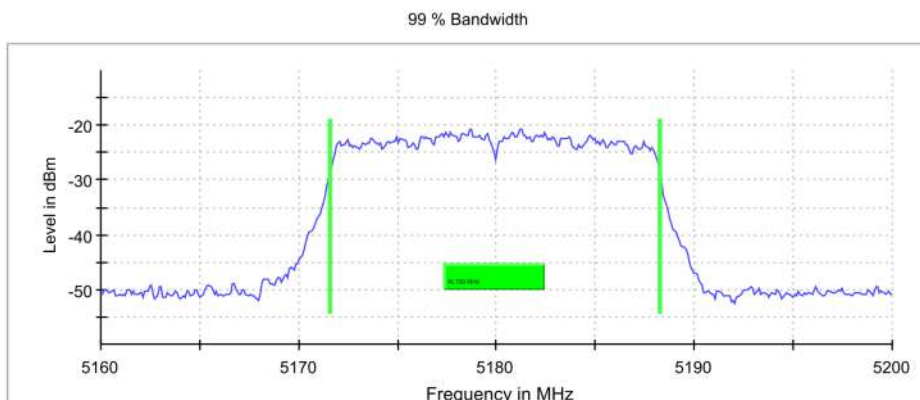
99% Bandwidth Measurement 802.11a

99 % Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5180.000000	16.700000	---	---	5171.550000	5188.250000

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

DUT Frequency (MHz)	Result
5180.000000	PASS

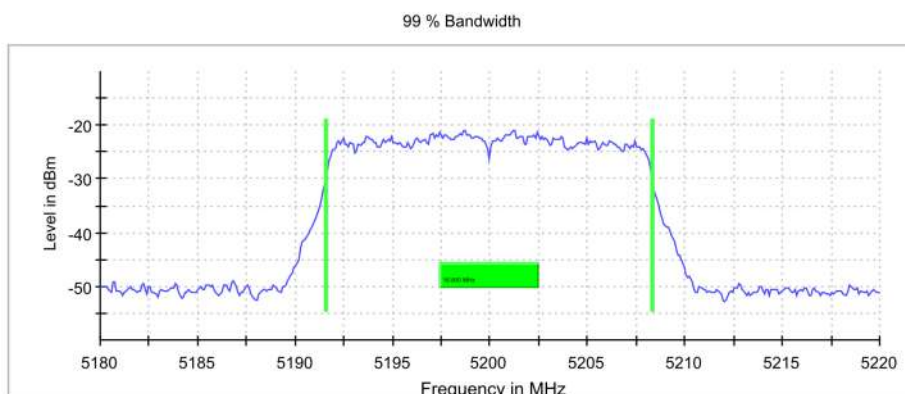


99 % Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5200.000000	16.800000	---	---	5191.550000	5208.350000

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

DUT Frequency (MHz)	Result
5200.000000	PASS



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802.11a

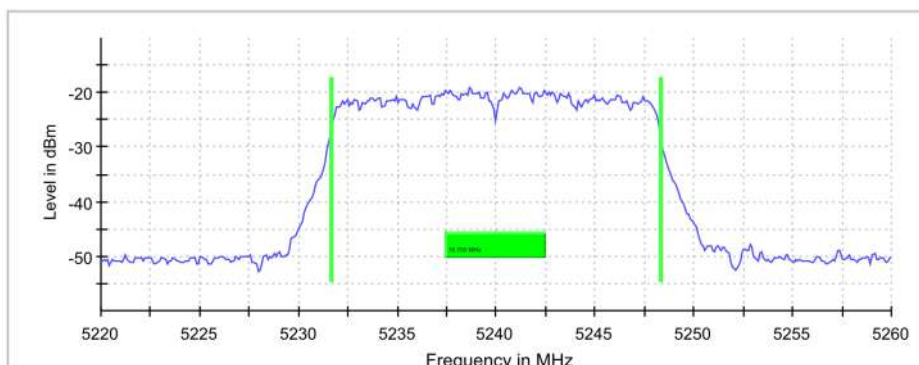
99 % Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5240.000000	16.700000	---	---	5231.650000	5248.350000

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

DUT Frequency (MHz)	Result
5240.000000	PASS

99 % Bandwidth



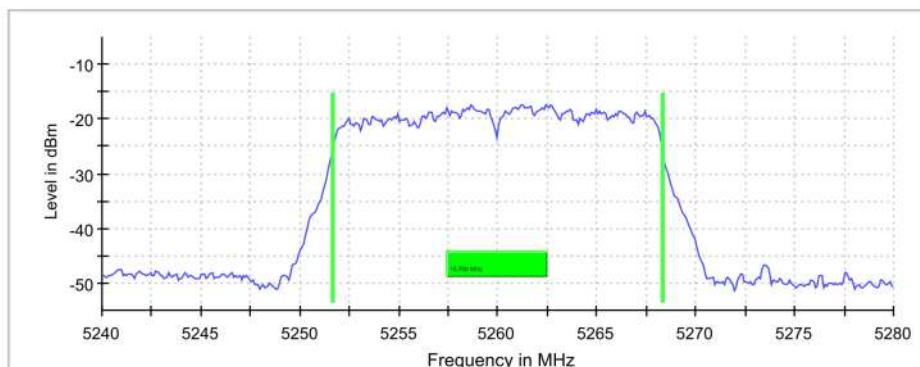
99 % Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5260.000000	16.700000	---	---	5251.650000	5268.350000

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

DUT Frequency (MHz)	Result
5260.000000	PASS

99 % Bandwidth



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802.11a

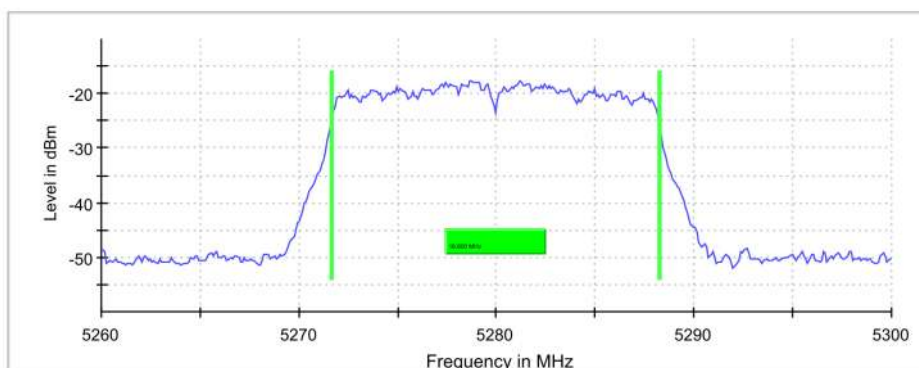
99 % Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5280.000000	16.600000	---	---	5271.650000	5288.250000

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

DUT Frequency (MHz)	Result
5280.000000	PASS

99 % Bandwidth



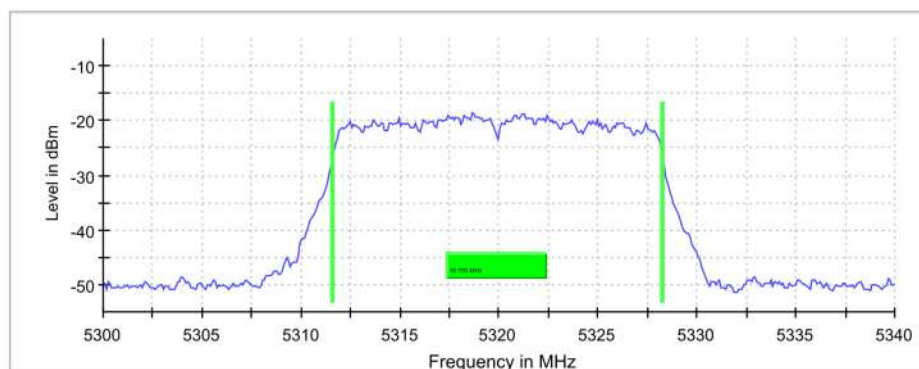
99 % Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5320.000000	16.700000	---	---	5311.550000	5328.250000

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

DUT Frequency (MHz)	Result
5320.000000	PASS

99 % Bandwidth



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802.11a

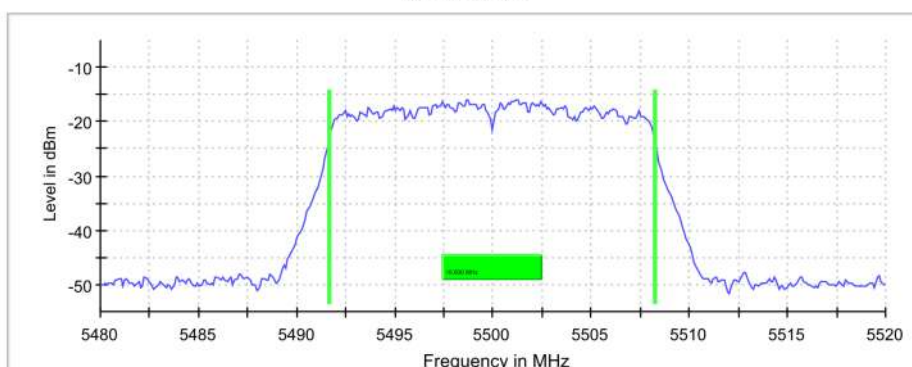
99 % Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5500.000000	16.600000	---	---	5491.650000	5508.250000

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

DUT Frequency (MHz)	Result
5500.000000	PASS

99 % Bandwidth



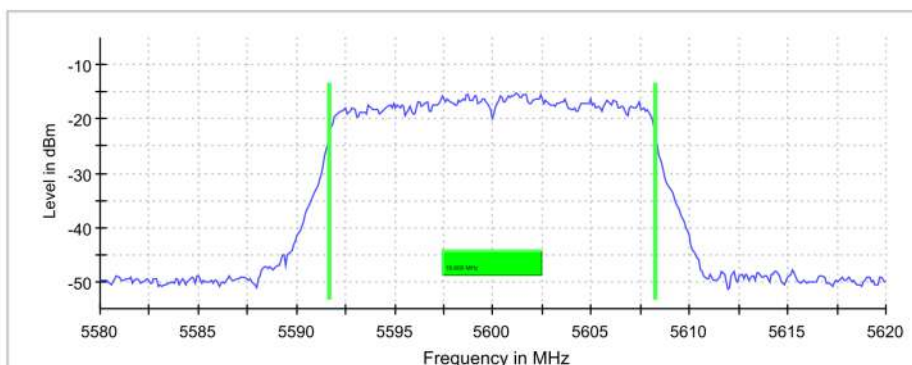
99 % Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5600.000000	16.600000	---	---	5591.650000	5608.250000

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

DUT Frequency (MHz)	Result
5600.000000	PASS

99 % Bandwidth



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802.11a

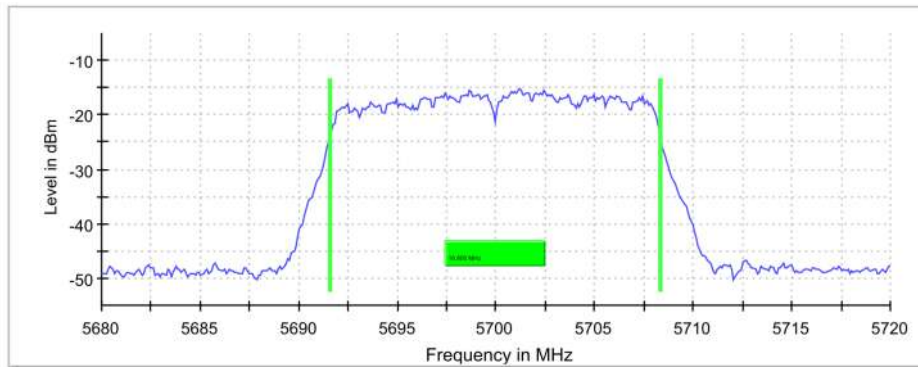
99 % Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5700.000000	16.800000	---	---	5691.550000	5708.350000

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

DUT Frequency (MHz)	Result
5700.000000	PASS

99 % Bandwidth



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802.11n (HT20)

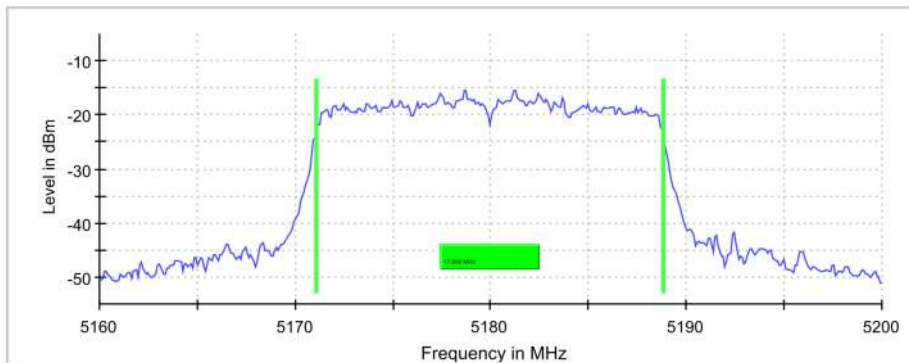
99 % Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5180.000000	17.800000	---	---	5171.050000	5188.850000

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

DUT Frequency (MHz)	Result
5180.000000	PASS

99 % Bandwidth



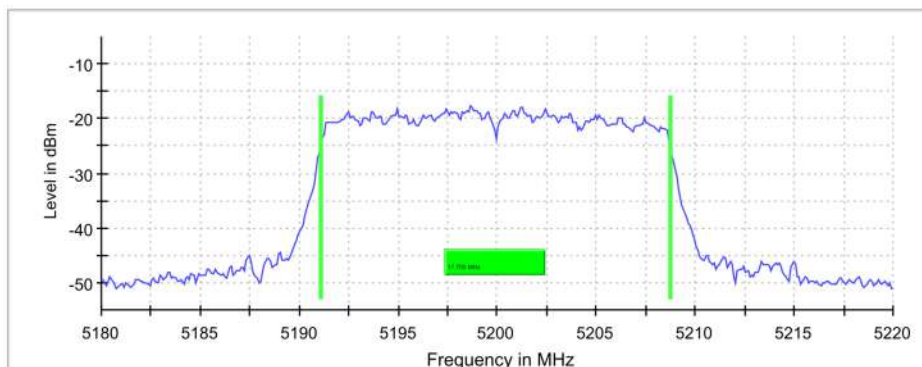
99 % Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5200.000000	17.700000	---	---	5191.050000	5208.750000

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

DUT Frequency (MHz)	Result
5200.000000	PASS

99 % Bandwidth



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802.11n (HT20)

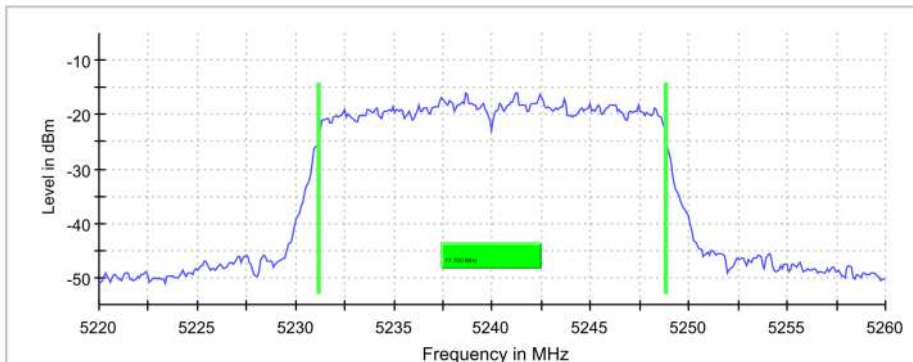
99 % Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5240.000000	17.700000	---	---	5231.150000	5248.850000

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

DUT Frequency (MHz)	Result
5240.000000	PASS

99 % Bandwidth



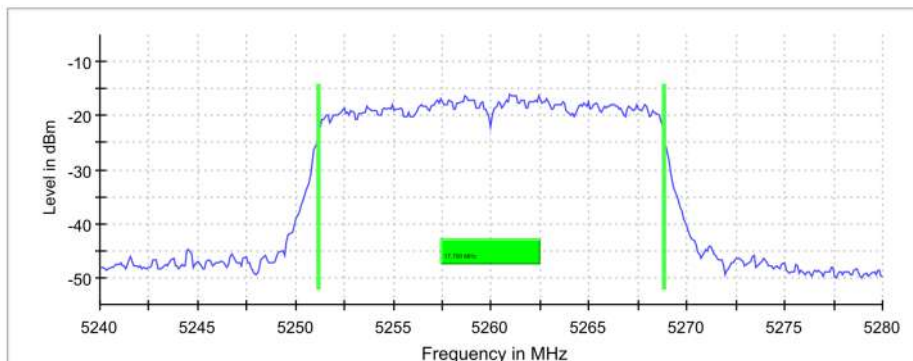
99 % Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5260.000000	17.700000	---	---	5251.150000	5268.850000

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

DUT Frequency (MHz)	Result
5260.000000	PASS

99 % Bandwidth



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802.11n (HT20)

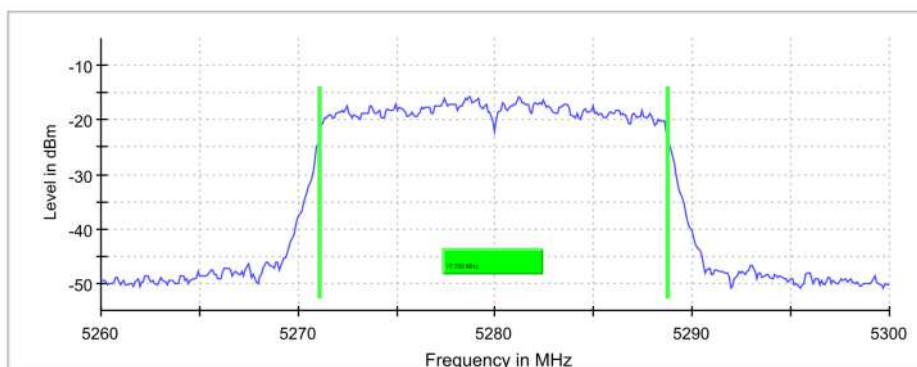
99 % Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5280.000000	17.700000	---	---	5271.050000	5288.750000

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

DUT Frequency (MHz)	Result
5280.000000	PASS

99 % Bandwidth



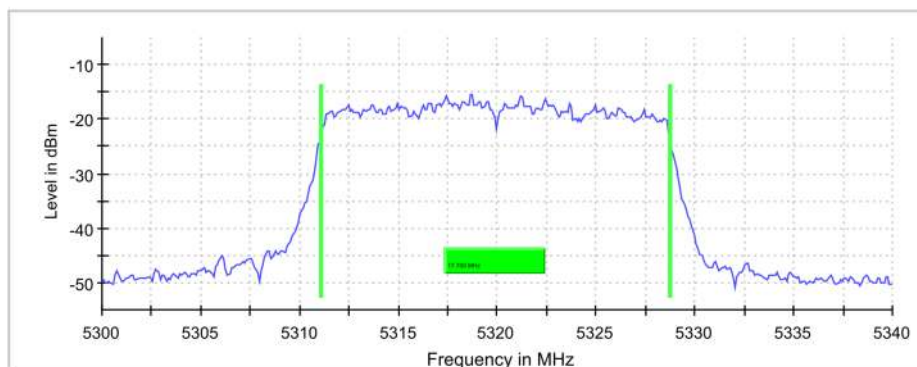
99 % Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5320.000000	17.700000	---	---	5311.050000	5328.750000

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

DUT Frequency (MHz)	Result
5320.000000	PASS

99 % Bandwidth



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802.11n (HT20)

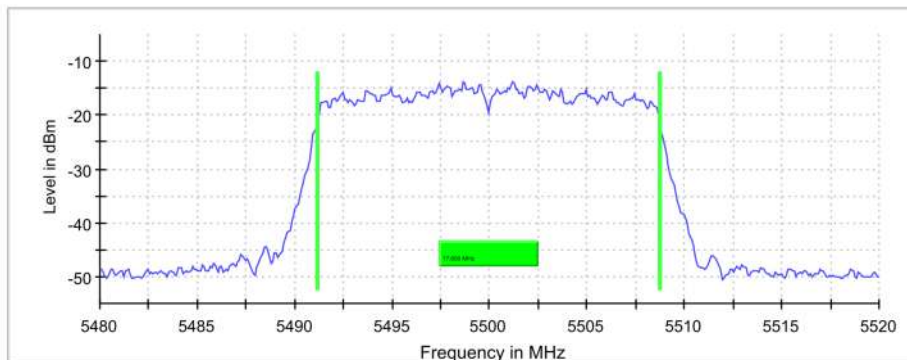
99 % Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5500.000000	17.600000	---	---	5491.150000	5508.750000

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

DUT Frequency (MHz)	Result
5500.000000	PASS

99 % Bandwidth



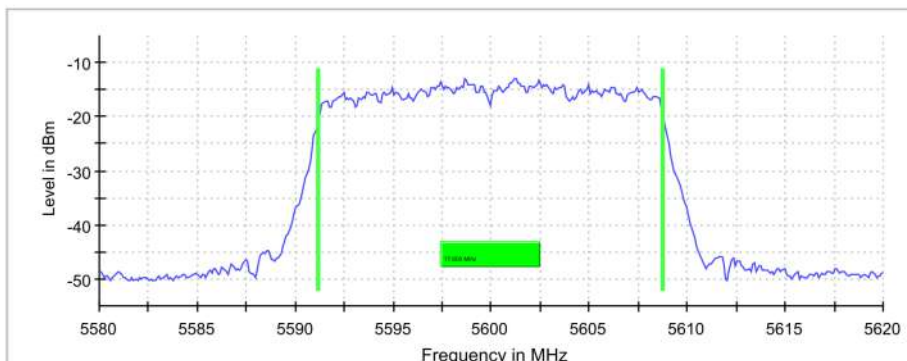
99 % Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5600.000000	17.600000	---	---	5591.150000	5608.750000

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

DUT Frequency (MHz)	Result
5600.000000	PASS

99 % Bandwidth



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802.11n (HT20)

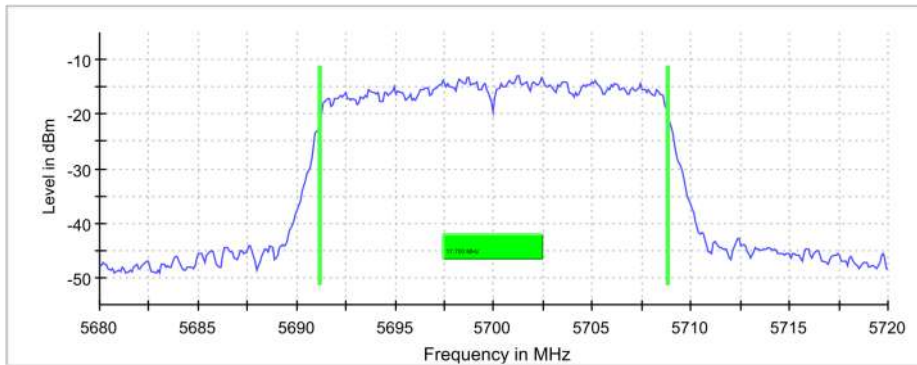
99 % Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5700.000000	17.700000	---	---	5691.150000	5708.850000

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

DUT Frequency (MHz)	Result
5700.000000	PASS

99 % Bandwidth



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802.11n (HT40)

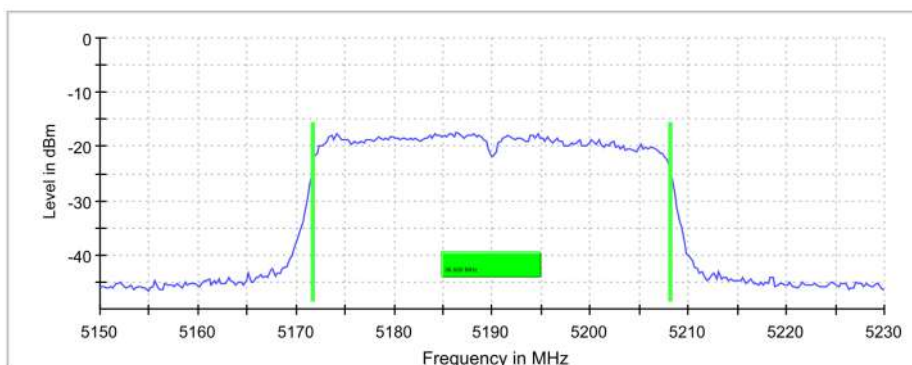
99 % Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5190.000000	36.500000	---	---	5171.625000	5208.125000

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

DUT Frequency (MHz)	Result
5190.000000	PASS

99 % Bandwidth



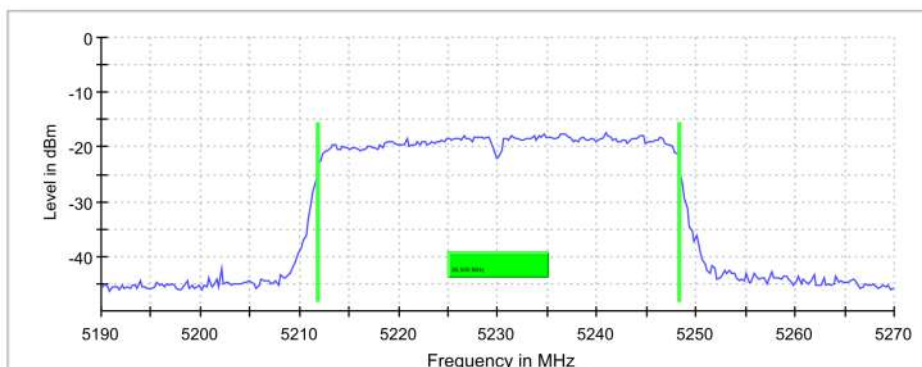
99 % Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5230.000000	36.500000	---	---	5211.875000	5248.375000

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

DUT Frequency (MHz)	Result
5230.000000	PASS

99 % Bandwidth



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802.11n (HT40)

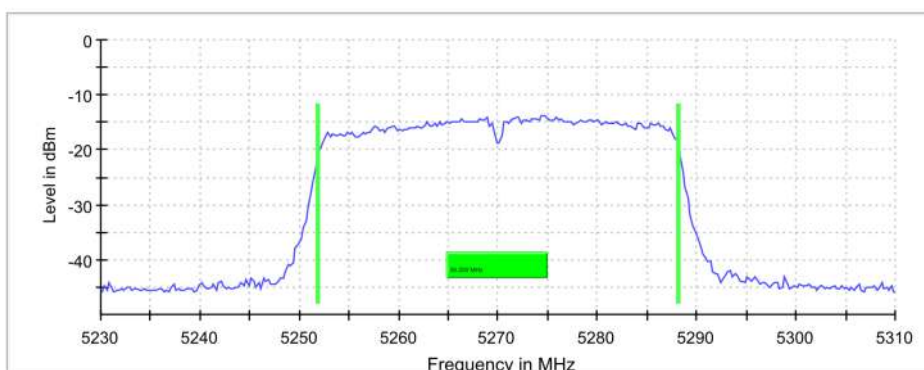
99 % Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5270.000000	36.250000	---	---	5251.875000	5288.125000

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

DUT Frequency (MHz)	Result
5270.000000	PASS

99 % Bandwidth



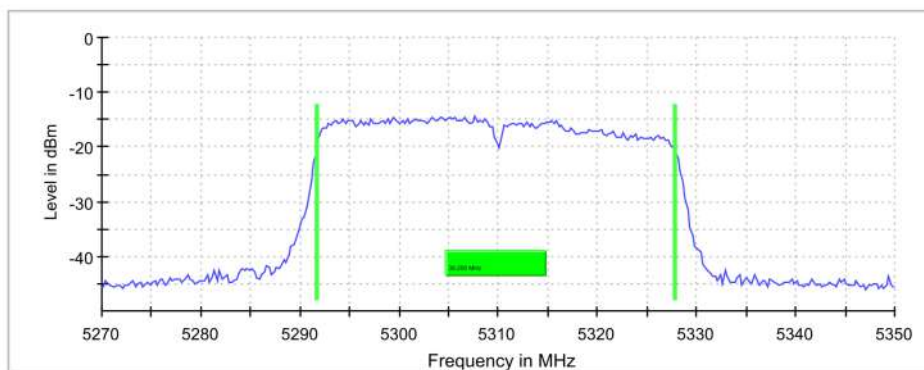
99 % Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5310.000000	36.250000	---	---	5291.625000	5327.875000

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

DUT Frequency (MHz)	Result
5310.000000	PASS

99 % Bandwidth



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802.11n (HT40)

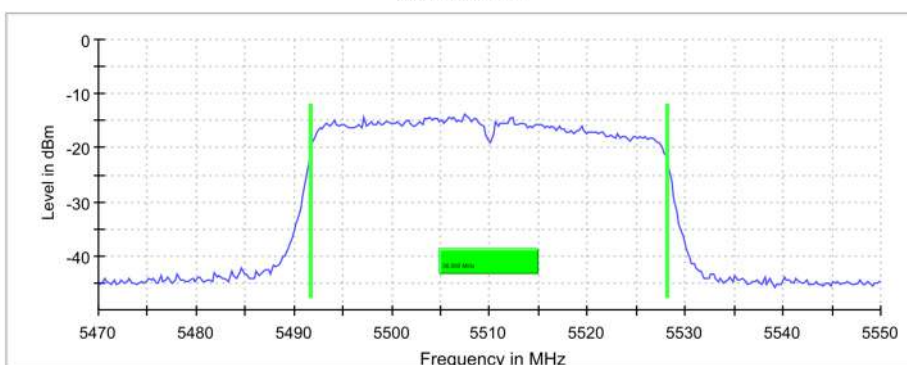
99 % Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5510.000000	36.500000	---	---	5491.625000	5528.125000

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

DUT Frequency (MHz)	Result
5510.000000	PASS

99 % Bandwidth



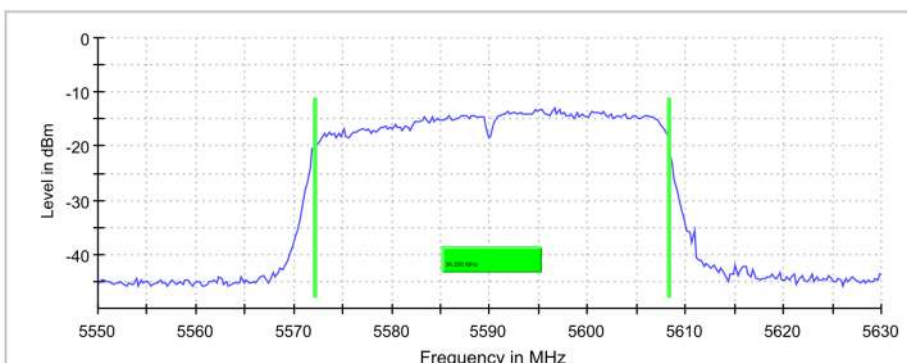
99 % Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5590.000000	36.250000	---	---	5572.125000	5608.375000

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

DUT Frequency (MHz)	Result
5590.000000	PASS

99 % Bandwidth



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802.11n (HT40)

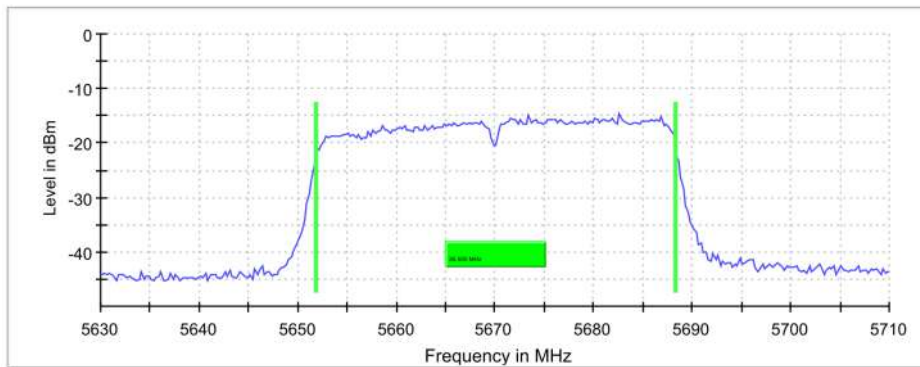
99 % Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5670.000000	36.500000	---	---	5651.875000	5688.375000

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

DUT Frequency (MHz)	Result
5670.000000	PASS

99 % Bandwidth



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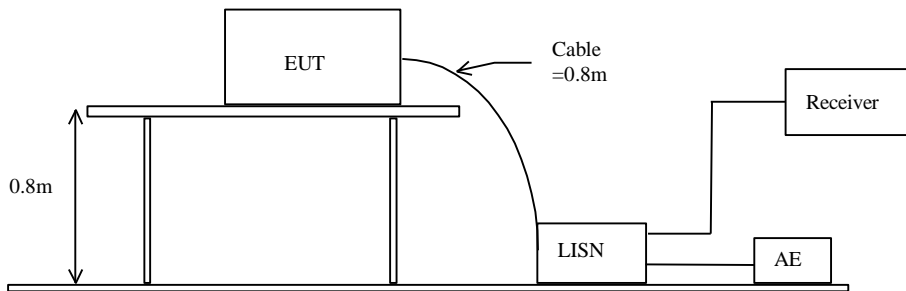
3.1.7 Conducted Emissions (0.15MHz to 30MHz)

Test Requirement:	FCC 47CFR 15.207 Class B
Test Method:	ANSI C63.10: 2013
Test Date:	2020-03-31
Mode of Operation:	Tx mode

Test Method:

The test was performed in accordance with ANSI C63.10: 2013, with the following: initial measurements were performed in peak and average detection modes on the live line, any emissions recorded within 30dB of the relevant limit lines were re-measured using quasi-peak and average detection on the live and neutral lines with the worst case recorded in the table of results.

Test Setup:



Limits for Conducted Emissions (FCC 47 CFR 15.207):

Frequency Range [MHz]	Quasi-Peak Limits [dBμV]	Average [dBμV]
0.15-0.5	66 to 56*	56 to 46*
0.5-5.0	56	46
5.0-30.0	60	50

* Decreases with the logarithm of the frequency.

Limits for Conducted Emissions Test, please refer to limit lines (Quasi-Peak and Average) in the following diagram.



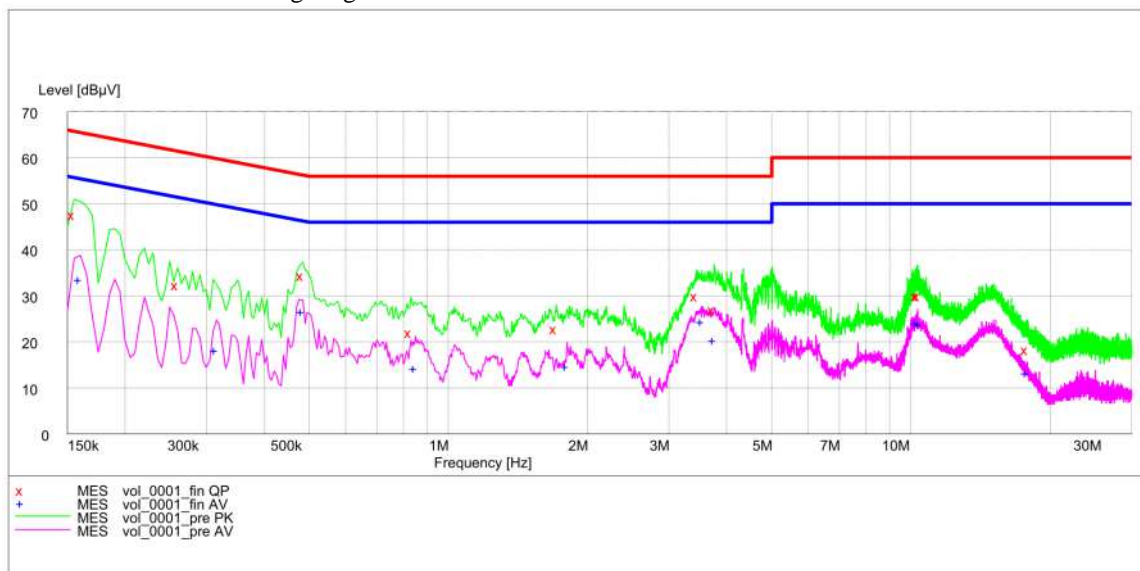
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Results of Tx mode (Live): PASS

Please refer to the following diagram for individual results.



MEASUREMENT RESULT: "vol_0001_fin QP"

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line	PE
0.155000	47.90	9.9	66	17.8	L1	GND
0.260000	32.60	9.9	61	28.8	L1	GND
0.485000	34.70	10.0	56	21.6	L1	GND
0.830000	22.30	10.0	56	33.7	L1	GND
1.710000	23.10	10.0	56	32.9	L1	GND
3.445000	30.20	10.1	56	25.8	L1	GND
3.755000	27.30	10.2	56	28.7	L1	GND
10.345000	30.30	10.5	60	29.7	L1	GND
10.430000	30.30	10.5	60	29.7	L1	GND
17.865000	18.60	10.3	60	41.4	L1	GND

MEASUREMENT RESULT: "vol_0001_fin AV"

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line	PE
0.160000	33.70	9.9	56	21.8	L1	GND
0.315000	18.30	10.0	50	31.5	L1	GND
0.485000	26.70	10.0	46	19.5	L1	GND
0.850000	14.40	10.0	46	31.6	L1	GND
1.805000	14.80	10.0	46	31.2	L1	GND
3.550000	24.50	10.2	46	21.5	L1	GND
3.760000	20.50	10.2	46	25.5	L1	GND
10.335000	24.30	10.5	50	25.7	L1	GND
10.500000	23.90	10.5	50	26.1	L1	GND
17.855000	13.40	10.3	50	36.6	L1	GND

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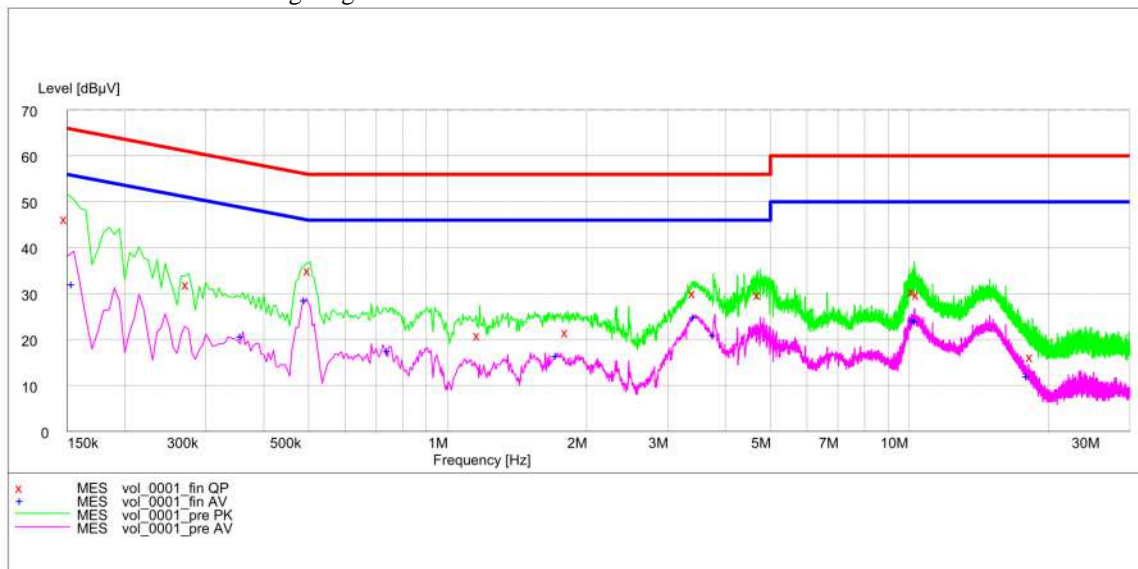
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Results of Tx mode (Neutral): PASS

Please refer to the following diagram for individual results.



MEASUREMENT RESULT: "vol_0001_fin QP"

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line	PE
0.150000	46.60	9.9	66	19.4	N	GND
0.275000	32.30	9.9	61	28.7	N	GND
0.505000	35.30	10.0	56	20.7	N	GND
1.175000	21.20	10.0	56	34.8	N	GND
1.820000	21.90	10.0	56	34.1	N	GND
3.435000	30.40	10.1	56	25.6	N	GND
4.755000	30.10	10.3	56	25.9	N	GND
10.245000	30.80	10.4	60	29.2	N	GND
10.490000	30.10	10.5	60	29.9	N	GND
18.510000	16.60	10.3	60	43.4	N	GND

MEASUREMENT RESULT: "vol_0001_fin AV"

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line	PE
0.155000	32.20	9.9	56	23.5	N	GND
0.360000	20.90	10.0	49	27.8	N	GND
0.495000	28.80	10.0	46	17.2	N	GND
0.750000	17.70	10.0	46	28.3	N	GND
1.735000	16.70	10.0	46	29.3	N	GND
3.445000	25.10	10.1	46	20.9	N	GND
3.795000	21.20	10.2	46	24.8	N	GND
10.275000	24.40	10.5	50	25.6	N	GND
10.410000	24.20	10.5	50	25.8	N	GND
18.140000	12.20	10.3	50	37.8	N	GND



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3.1.7 RF Exposure

RF Exposure

Test Requirement: FCC 47CFR 2.1093
Test Date: 2020-02-27
Mode of Operation: Tx mode

Requirements:

In 15.407(f), an equipment shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess of the limits in §§ 1.1310 and 2.1093 of this chapter. Applications to the Commission for construction permits, licenses to transmit or renewals thereof, equipment authorizations or modifications in existing facilities must contain a statement confirming compliance with the limits unless the facility, operation, or transmitter is categorically excluded, as discussed below. Technical information showing the basis for this statement must be submitted to the Commission upon request.

According to KDB447498 D01 General RF Exposure Guidance v06, unless specifically required by the published RF exposure KDB procedures, standalone 1-g head or body and 10-g extremity SAR evaluation for general population exposure conditions, by measurement or numerical simulation, is not required when the corresponding SAR Exclusion Threshold condition.

Test Results:

RF Exposure Evaluation

For 802.11a/n

The Maximum conducted output power = 13.69dBm @5280MHz (802.11n HT20)

Tune-up power = 14.0dBm (25.18mW)

The test separation distances is ≥ 45 mm

= $(25.18\text{mW}/45\text{mm}) \times \sqrt{5.28} = 1.29$, which is < 3.0 for 1-g SAR and < 7.5 for 10-g SAR

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Appendix A

List of Measurement Equipment

Radiated Emission

EQP NO.	DESCRIPTION	MANUFACTURER	MODEL NO.	SERIAL NO.	LAST CAL	DUE CAL
EM215	MULTIDevice CONTROLLER	EMCO	2090	00024676	N/A	N/A
EM217	ELECTRIC POWERED TURNTABLE	EMCO	2088	00029144	N/A	N/A
EM218	ANECHOIC CHAMBER	ETS-LINDGREN	FACT-3	--	2019/04/24	2020/04/24
EM356	ANTENNA POSITIONING TOWER	ETS-LINDGREN	2171B	00150346	N/A	N/A
EM219	BICONILOG ANTENNA	ETS-LINDGREN	3142C	00029071	2019/11/07	2021/11/07
EM229	EMI TEST RECEIVER	R&S	ESIB40	100248	2019/06/12	2020/06/12
EM276	BROADBAND HORN ANTENNA	A-INFOMW	JXTXLB-10180-SF	J2031090903007	2018/04/27	2020/04/27
EM299	Double-Ridged Waveguide Horn Antenna	ETS-Lindgren	3115	00114120	2018/08/08	2020/08/08
EM300	Pyramidal Standard Gain Horn Antenna	ETS-Lindgren	3160-09	00130130	2018/08/08	2020/08/08
EM301	Pyramidal Standard Gain Horn Antenna	ETS-Lindgren	3160-10	00130988	2018/08/08	2020/08/08
EM318	USB WIDEBAND POWER SENSOR	AGILENT	U2022XA	MY53470001	2019/03/23	2021/03/23
EM353	LOOP ANTENNA	ETS_LINDGREN	6502	00206533	2019/11/30	2021/11/30
EM363	SIGNAL AND SPECTRUM ANALYZER	R&S	FSV 40	1321.3008K39-101231-EK	2019/09/06	2020/09/06
EM364	OPEN SWITCH AND CONTROL PLATFORM	R&S	OSP-B157W8	101002	2019/05/03	2021/05/03

Line Conducted

EQP NO.	DESCRIPTION	MANUFACTURER	MODEL NO.	SERIAL NO.	LAST CAL	DUE CAL
EM119	LISN	R & S	ESH3-Z5	0831.5518.52	2020/06/30	2021/06/30
EM181	EMI TEST RECEIVER	ROHDE & SCHWARZ	ESIB7	100072	2019/06/10	2020/06/10
EM179	IMPULSE LIMITER	ROHDE & SCHWARZ	ESH3-Z2	357-8810.52/54	2019/01/16	2021/01/16
EM154	SHIELDING ROOM	SIEMENS MATSUSHITA COMPONENTS	N/A	803-740-057-99A	2017/02/06	2022/02/06
N/A	MEASUREMENT AND EVALUATION SOFTWARE	ROHDE & SCHWARZ	ESIB-K1	V1.20	N/A	N/A

Remarks:-

CM Corrective Maintenance
N/A Not Applicable
TBD To Be Determined

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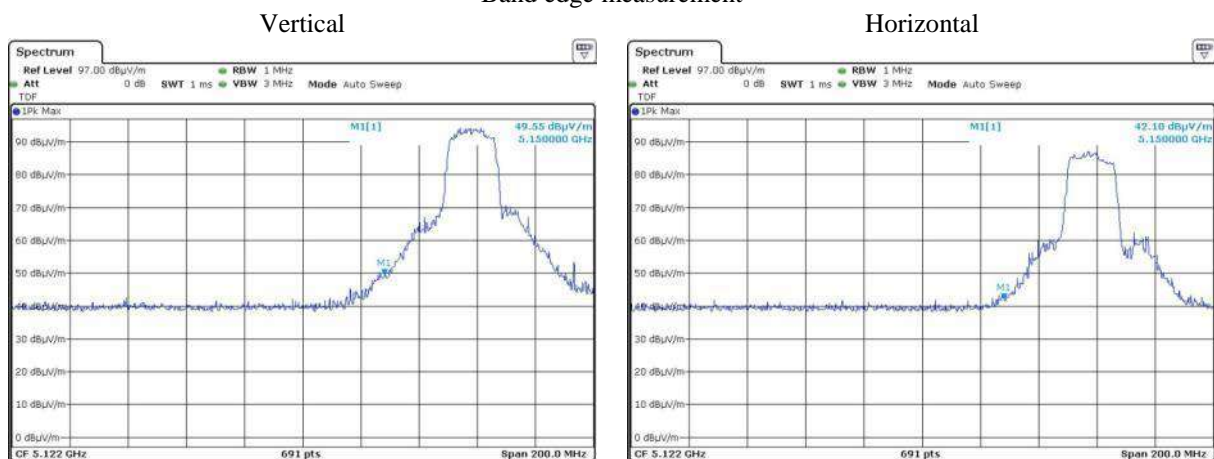
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Appendix B

Unwanted emission 802.11a (CH36)

Band edge measurement



Frequency (MHz)	Antenna Polarization	Detector	Measuring Bandwidth (MHz)	Measured Level @ 3m (dBµV/m)	Limit (dBµV/m)	Margin (dB)
5150.0	V	PK	1	49.6	74.0	-24.4
5150.0	V	AV	1	44.2	54.0	-9.8
5150.0	H	PK	1	42.1	74.0	-31.9
5150.0	H	AV	1	38.3	54.0	-15.7

Measured Level [dBµV/m] = Reading of test receiver [dBµV] + correction factor

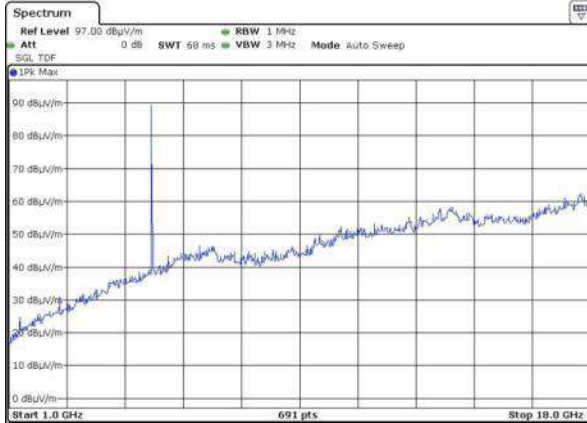
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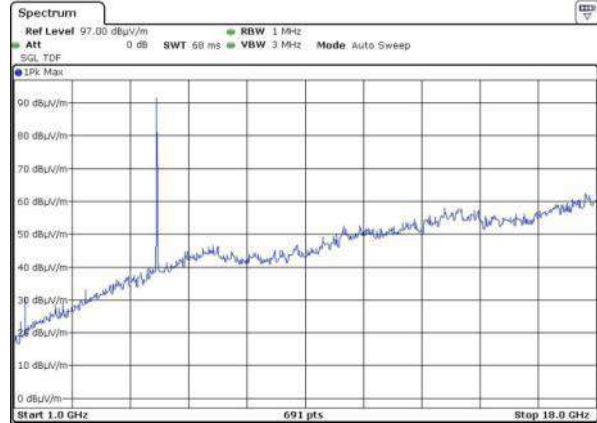
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**Unwanted emission
 802.11a (CH36)**

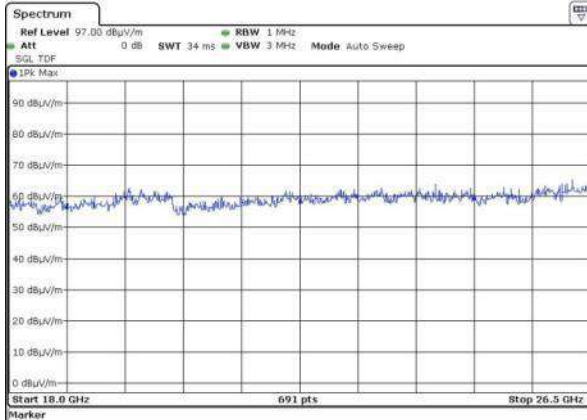
1G to 18GHz V



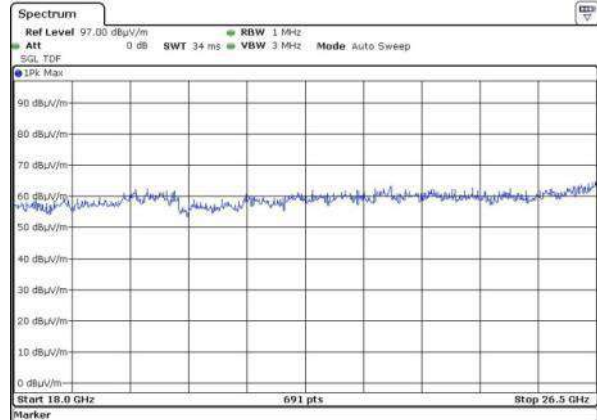
1G to 18GHz H



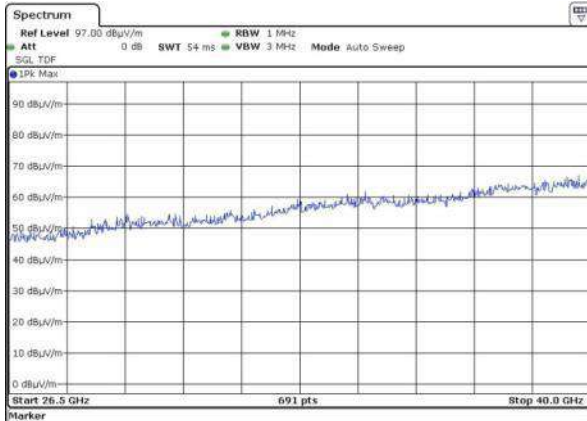
18G – 26.5GHz V



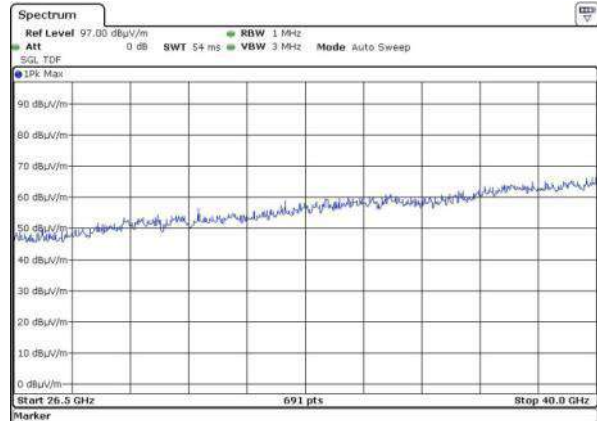
18G – 26.5GHz H



26.5G – 40GHz V



26.5G – 40GHz H



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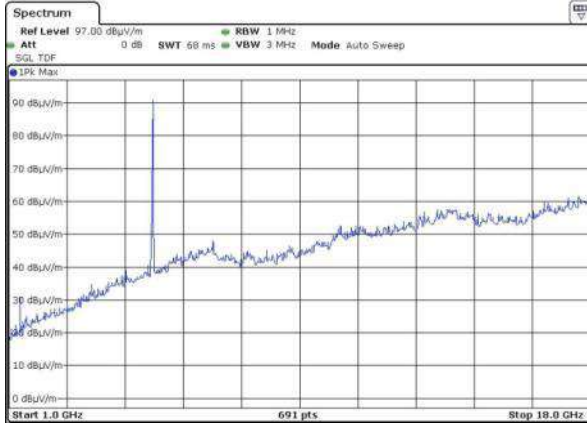
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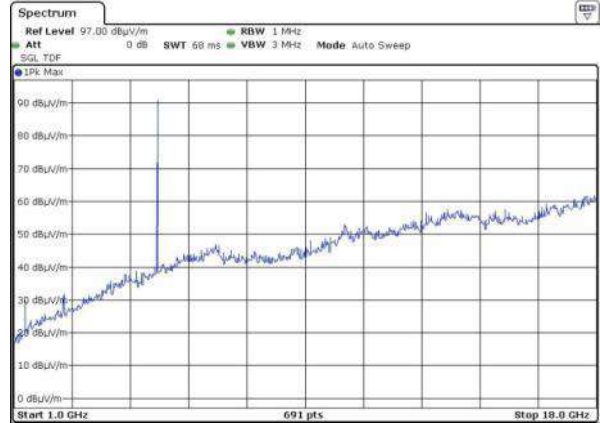
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**Unwanted emission
 802.11a (CH40)**

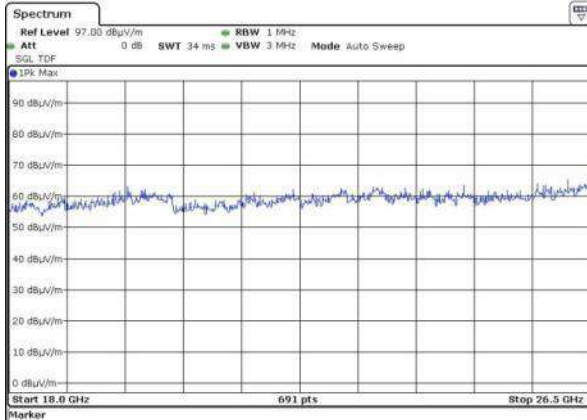
1G to 18GHz V



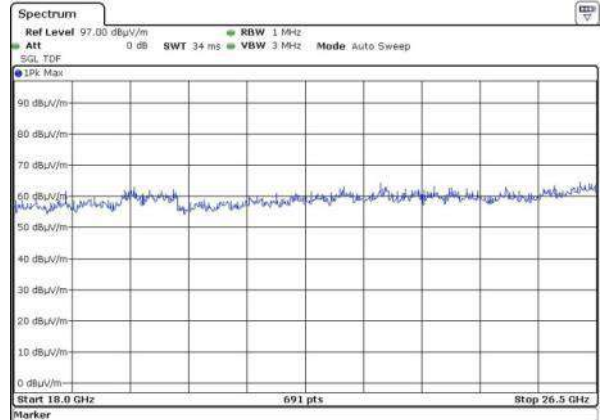
1G to 18GHz H



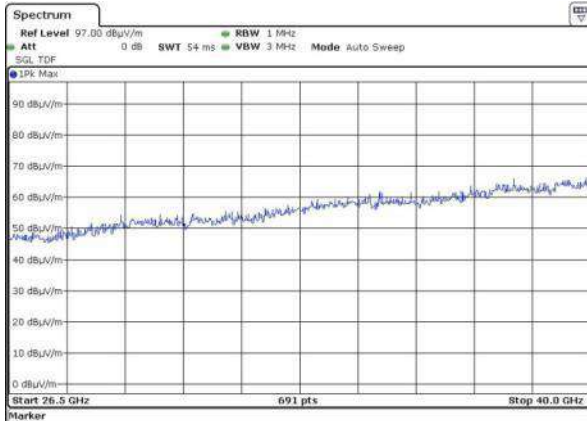
18G – 26.5GHz V



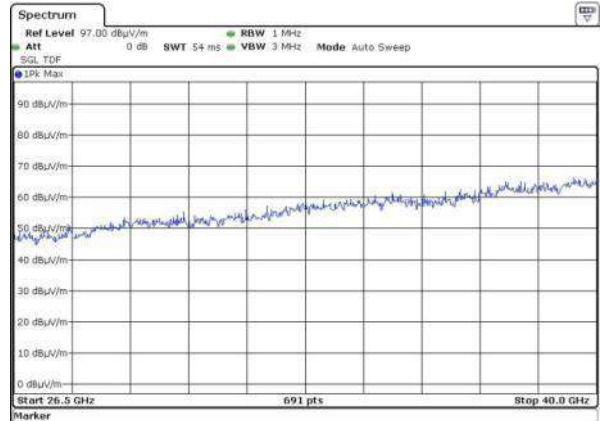
18G – 26.5GHz H



26.5G – 40GHz V



26.5G – 40GHz H



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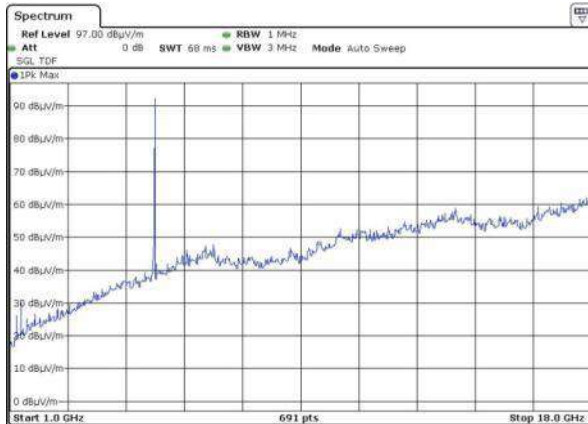
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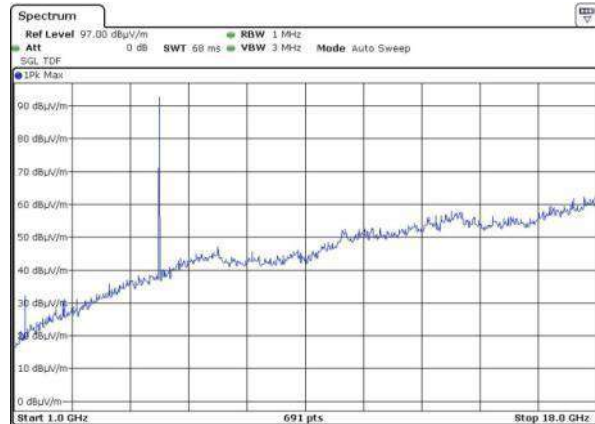
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**Unwanted emission
 802.11a (CH48)**

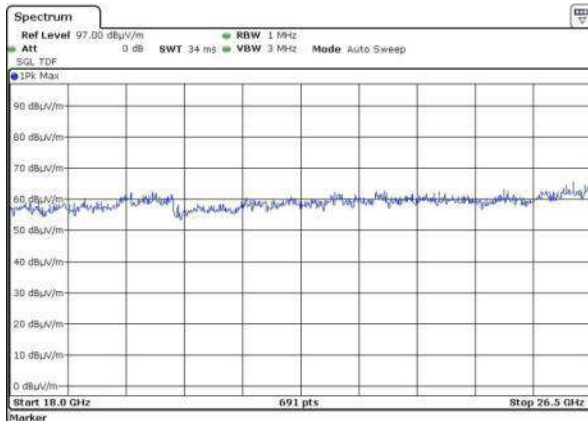
1G to 18GHz V



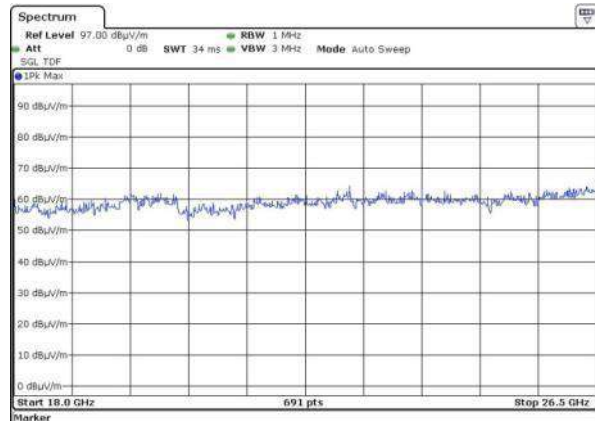
1G to 18GHz H



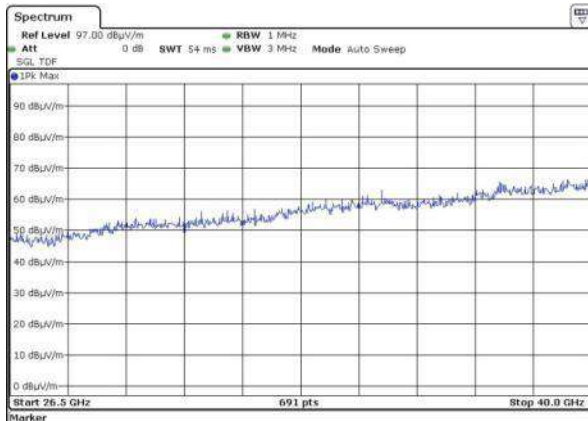
18G – 26.5GHz V



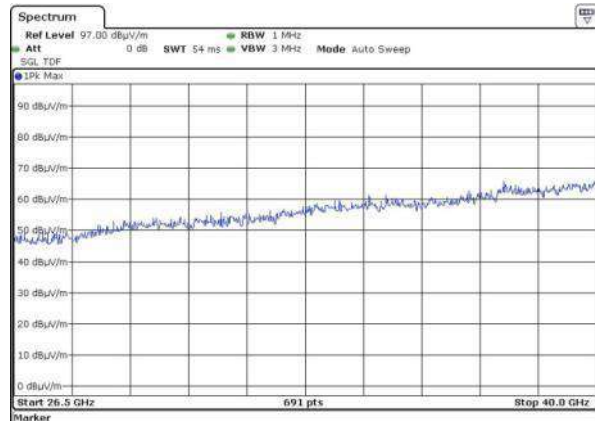
18G – 26.5GHz H



26.5G – 40GHz V



26.5G – 40GHz H



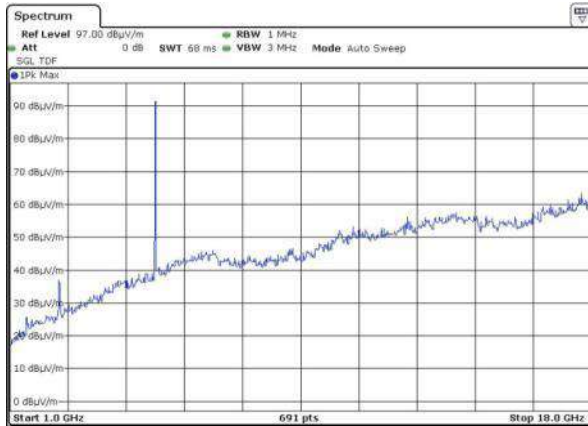
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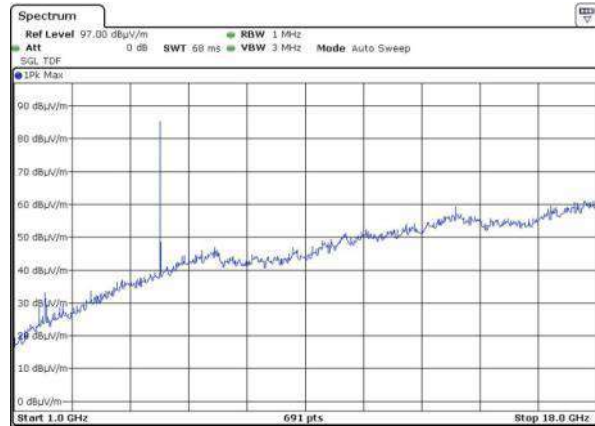
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**Unwanted emission
 802.11a (CH52)**

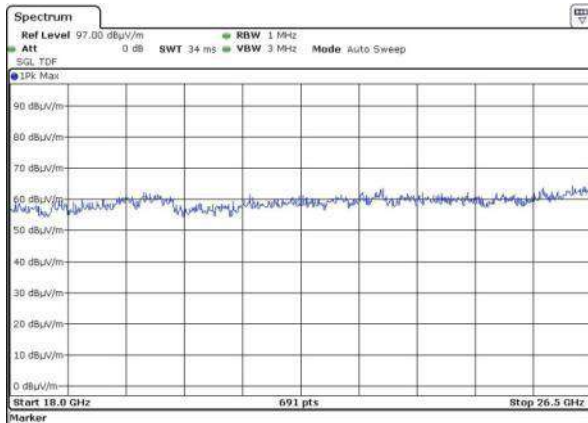
1G to 18GHz V



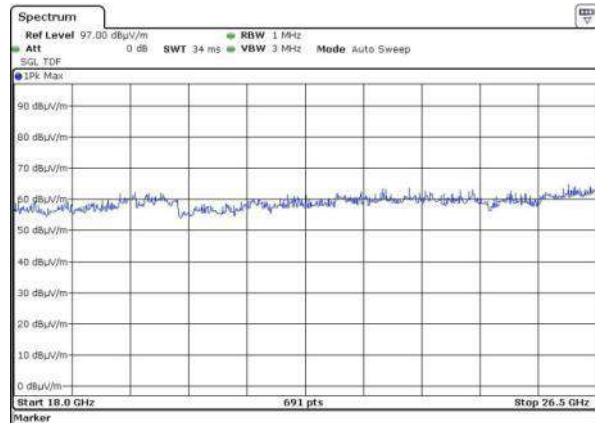
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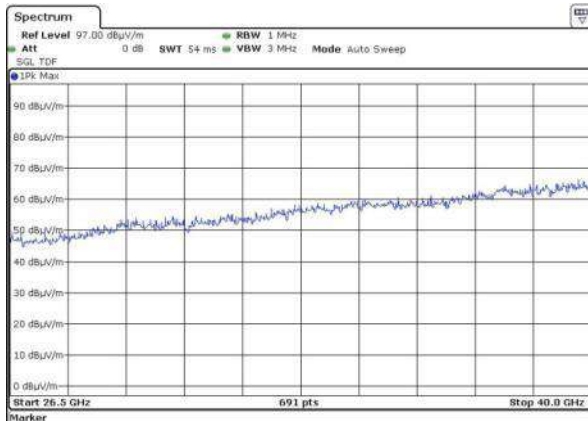
18G – 26.5GHz V



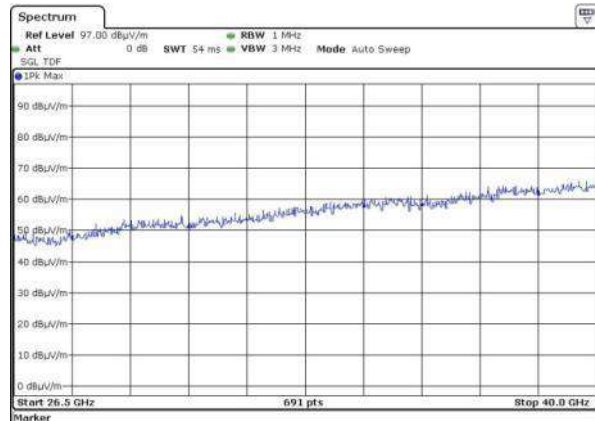
18G – 26.5GHz H



26.5G – 40GHz V



26.5G – 40GHz H



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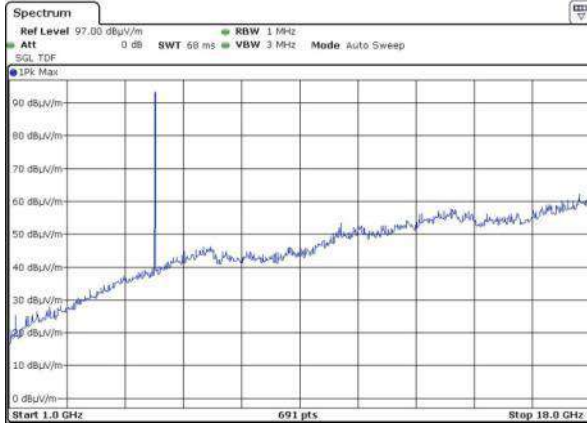
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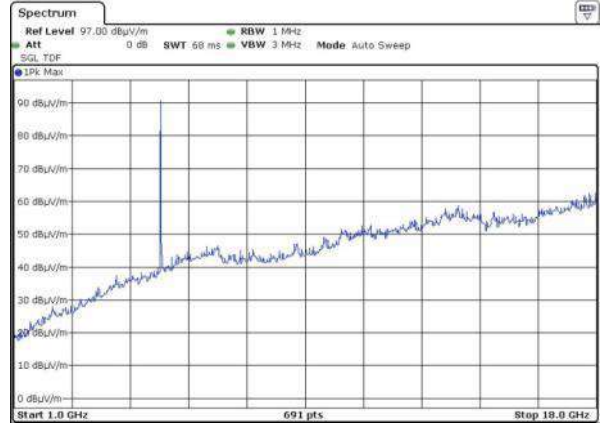
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**Unwanted emission
 802.11a (CH56)**

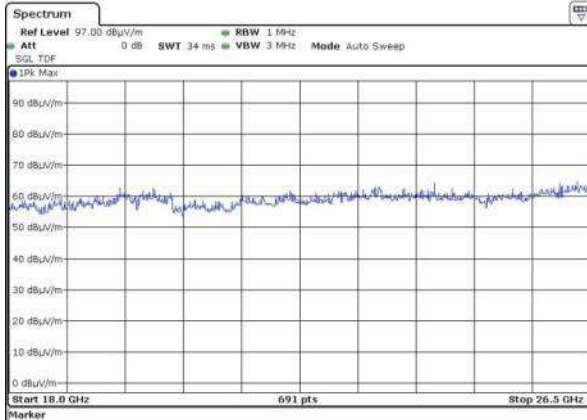
1G to 18GHz V



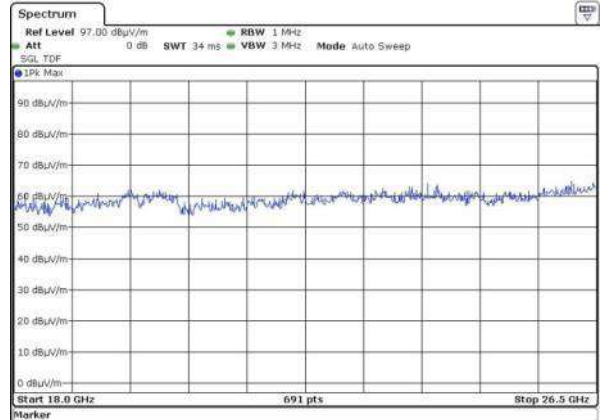
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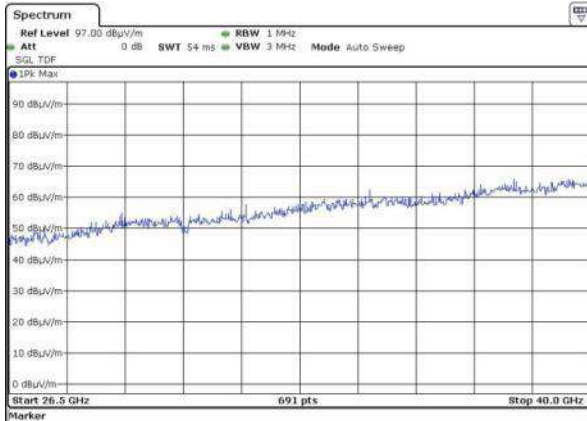
18G – 26.5GHz V



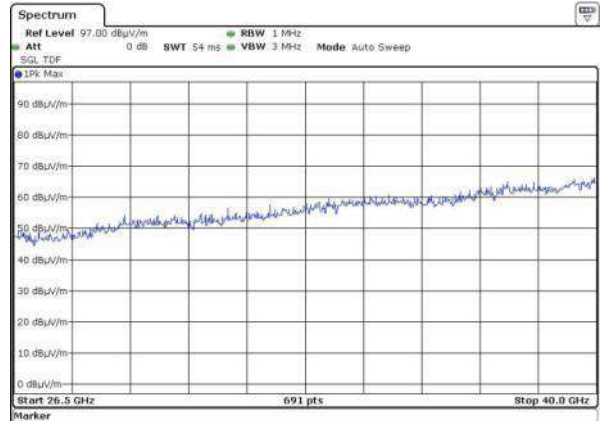
18G – 26.5GHz H



26.5G – 40GHz V



26.5G – 40GHz H



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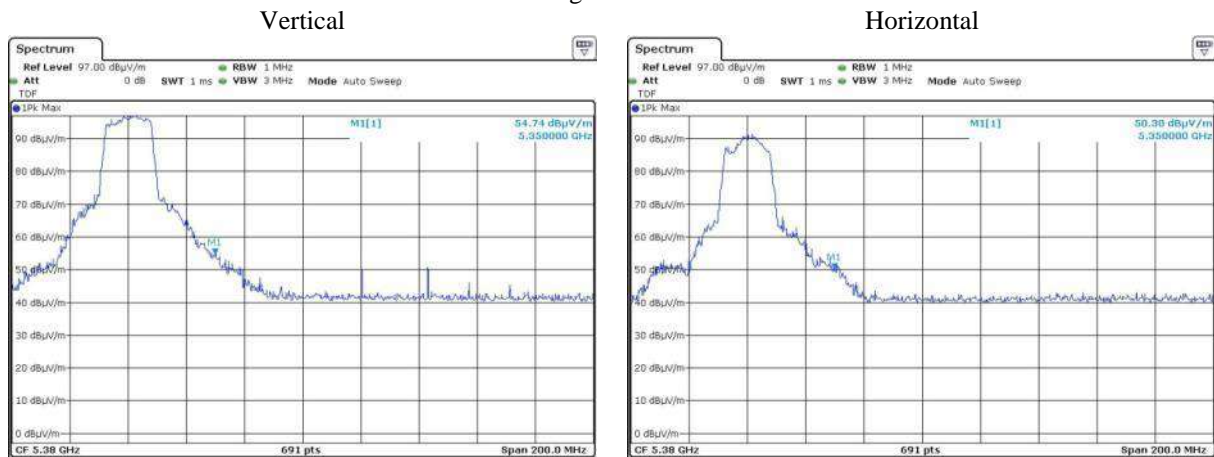
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Unwanted emission
 802.11a (CH64)

Band edge measurement



Frequency (MHz)	Antenna Polarization	Detector	Measuring Bandwidth (MHz)	Measured Level @ 3m (dBµV/m)	Limit (dBµV/m)	Margin (dB)
5350.0	V	PK	1	50.3	74.0	-23.7
5350.0	V	AV	1	44.8	54.0	-9.2
5350.0	H	PK	1	54.7	74.0	-19.3
5350.0	H	AV	1	46.6	54.0	-7.4

Measured Level [dBµV/m] = Reading of test receiver [dBµV] + correction factor

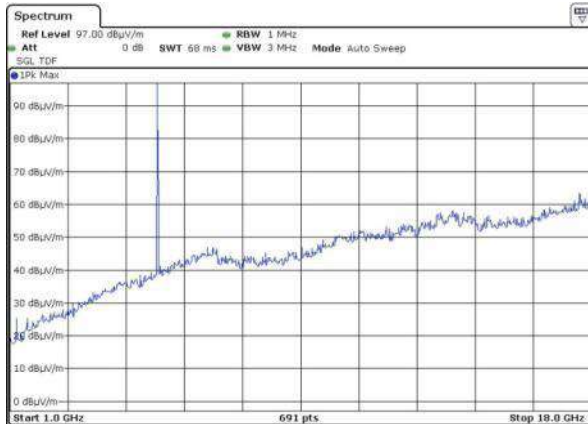
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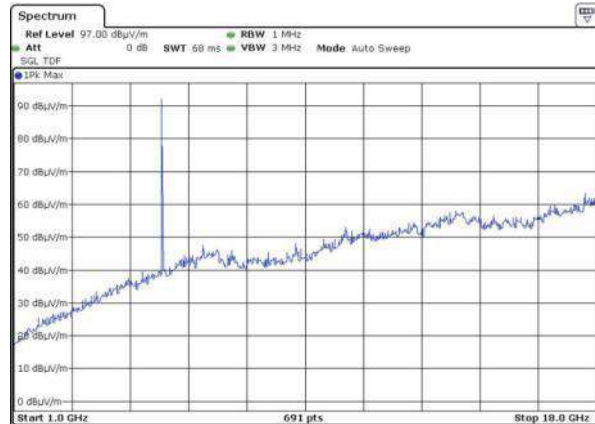
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**Unwanted emission
 802.11a (CH64)**

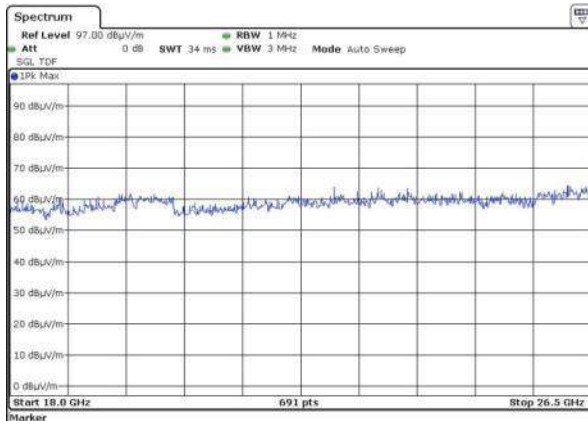
1G to 18GHz V



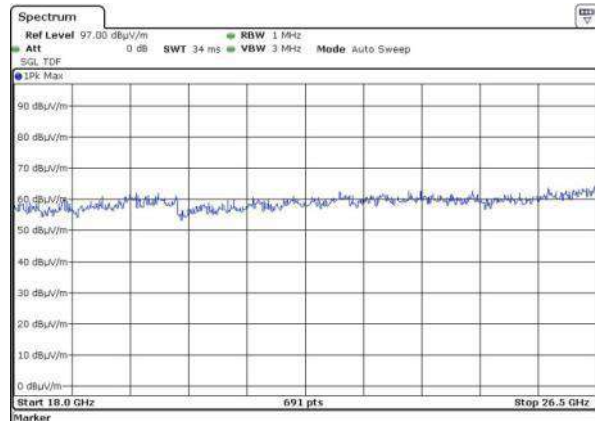
1G to 18GHz H



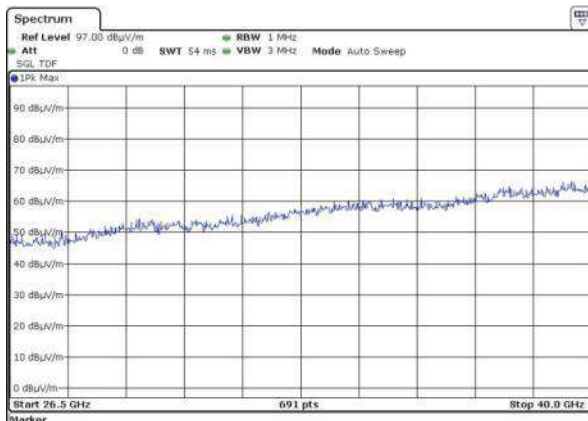
18G – 26.5GHz V



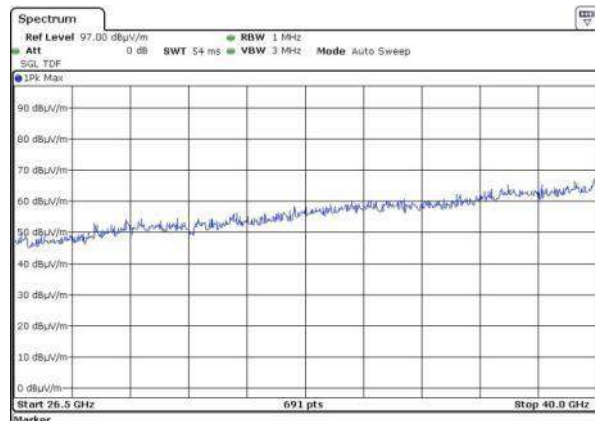
18G – 26.5GHz H



26.5G – 40GHz V



26.5G – 40GHz H



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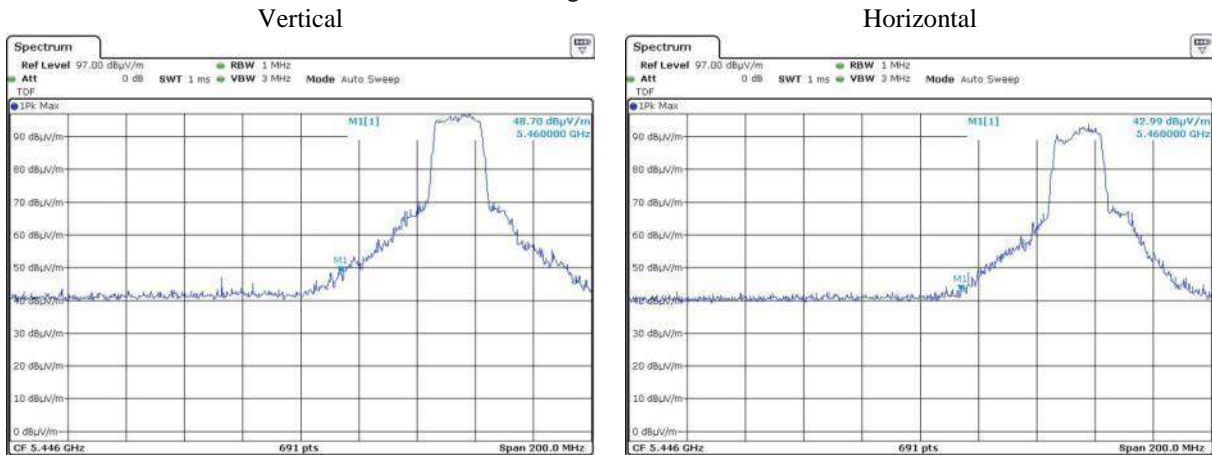
Test Report

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Unwanted emission
 802.11a (CH100)

Band edge measurement



Frequency (MHz)	Antenna Polarization	Detector	Measuring Bandwidth (MHz)	Measured Level @ 3m (dBµV/m)	Limit (dBµV/m)	Margin (dB)
5460.0	V	PK	1	48.7	74.0	-25.3
5460.0	V	AV	1	43.5	54.0	-10.5
5460.0	H	PK	1	43.0	74.0	-31.0
5460.0	H	AV	1	38.5	54.0	-15.5

Measured Level [dBµV/m] = Reading of test receiver [dBµV] + correction factor

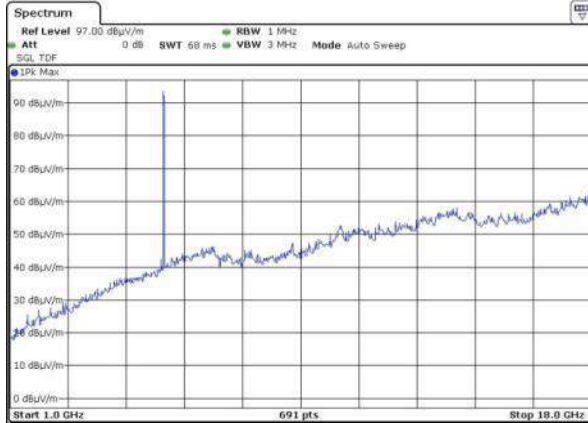
Test Report

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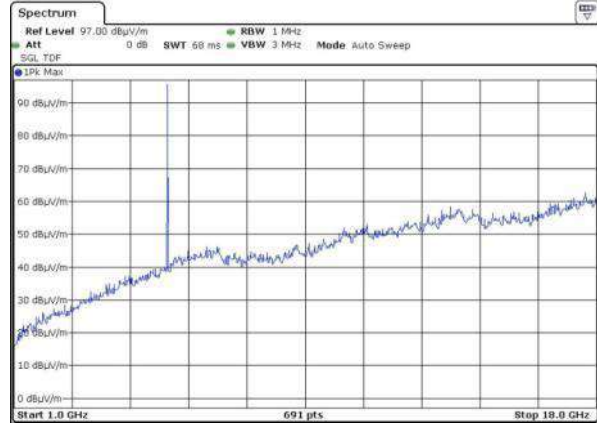
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Unwanted emission 802.11a (CH100)

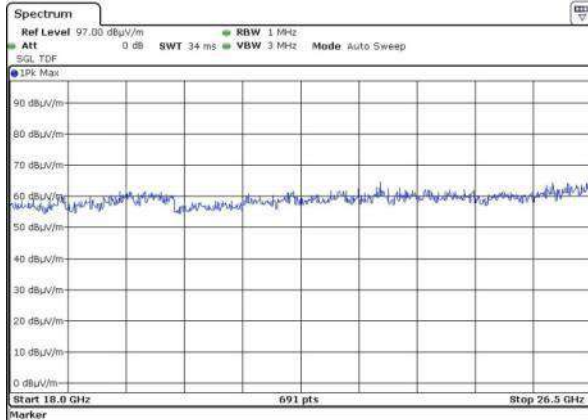
1G to 18GHz V



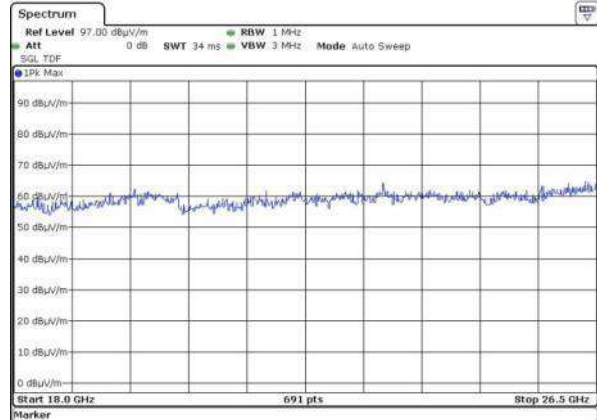
1G to 18GHz H



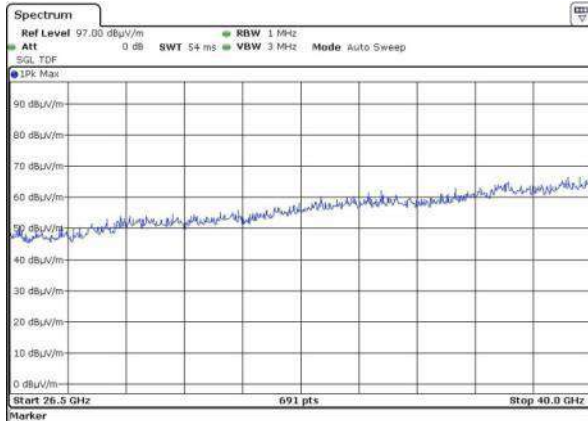
18G – 26.5GHz V



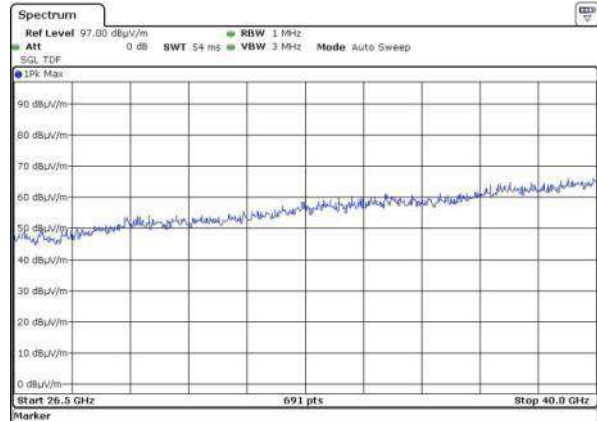
18G – 26.5GHz H



26.5G – 40GHz V



26.5G – 40GHz H



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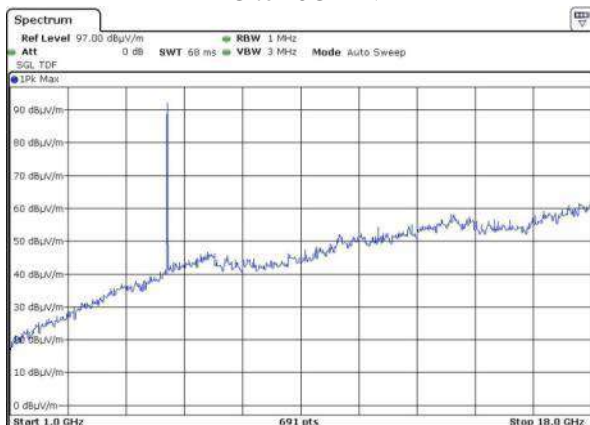
Test Report

Date : 2020-12-08
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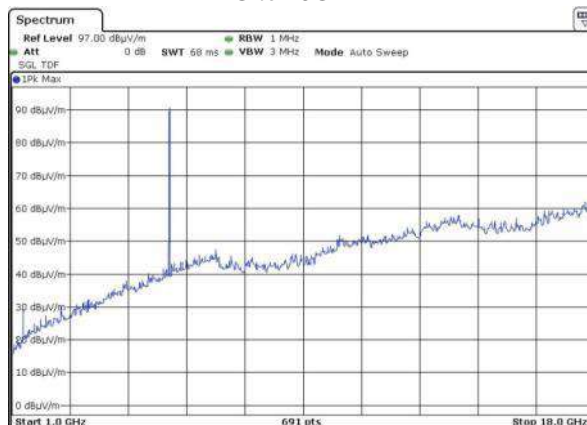
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**Unwanted emission
 802.11a (CH120)**

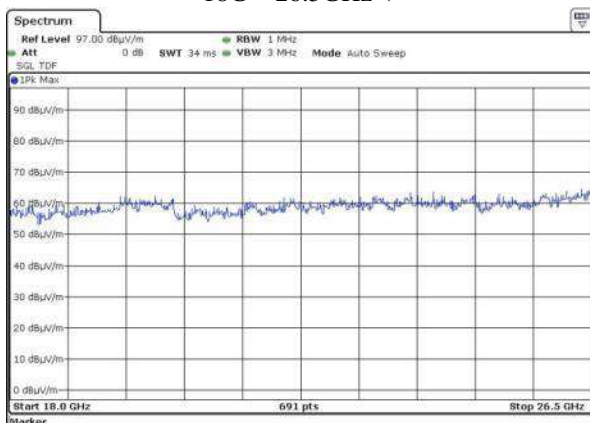
1G to 18GHz V



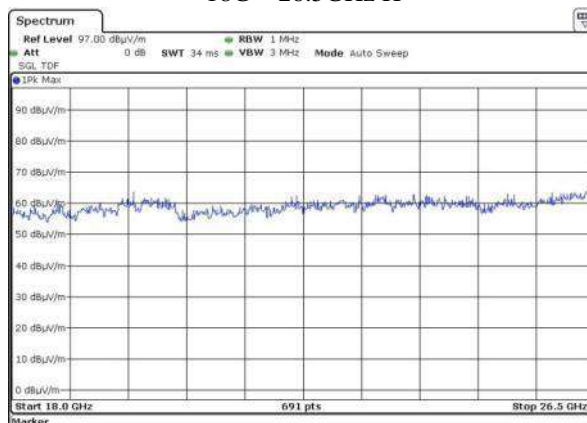
1G to 18GHz H



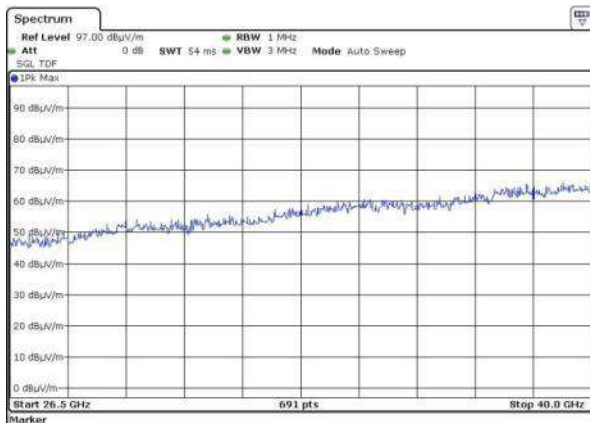
18G – 26.5GHz V



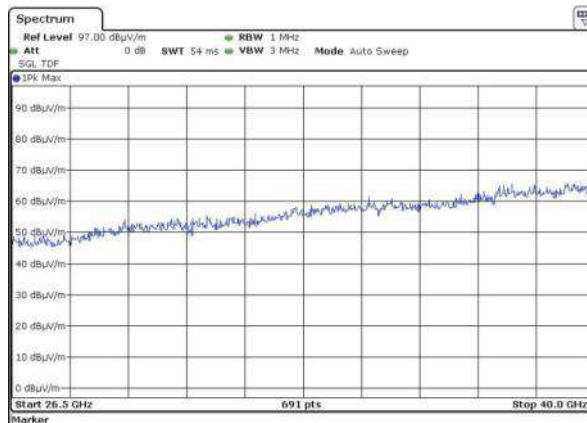
18G – 26.5GHz H



26.5G – 40GHz V



26.5G – 40GHz H



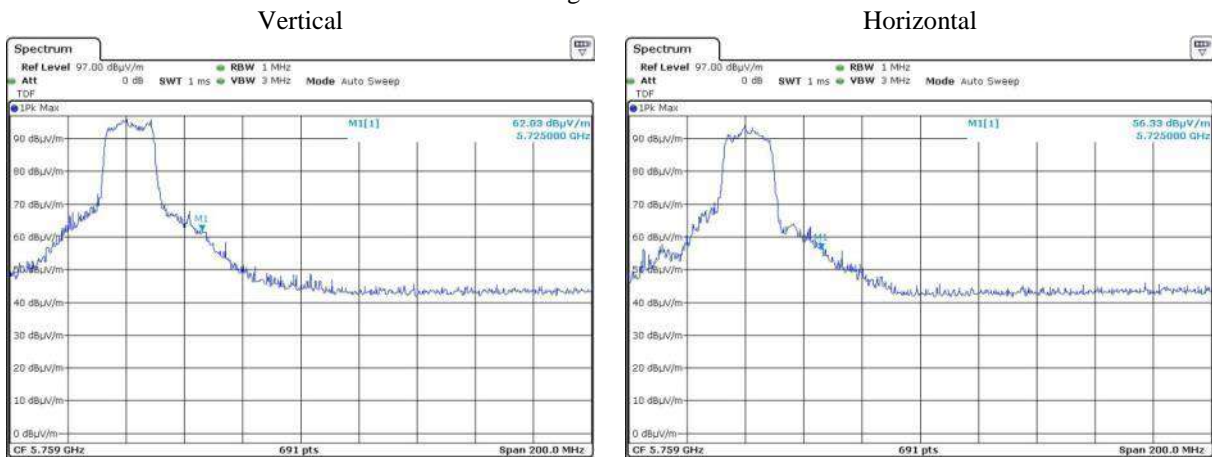
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Unwanted emission
 802.11a (CH140)

Band edge measurement



Frequency (MHz)	Antenna Polarization	Detector	Measuring Bandwidth (MHz)	Measured Level @ 3m (dBμV/m)	Limit (dBμV/m)	Margin (dB)
5725.0	V	PK	1	62.0	74.0	-12.0
5725.0	V	AV	1	51.2	54.0	-2.8
5725.0	H	PK	1	56.3	74.0	-17.7
5725.0	H	AV	1	49.4	54.0	-4.6

Measured Level [dBμV/m] = Reading of test receiver [dBμV] + correction factor

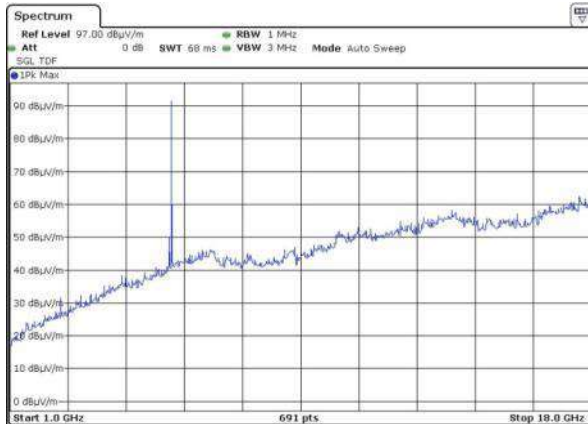
Test Report

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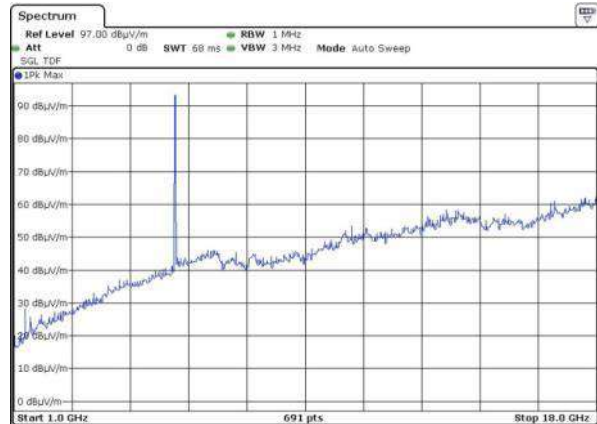
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Unwanted emission 802.11a (CH140)

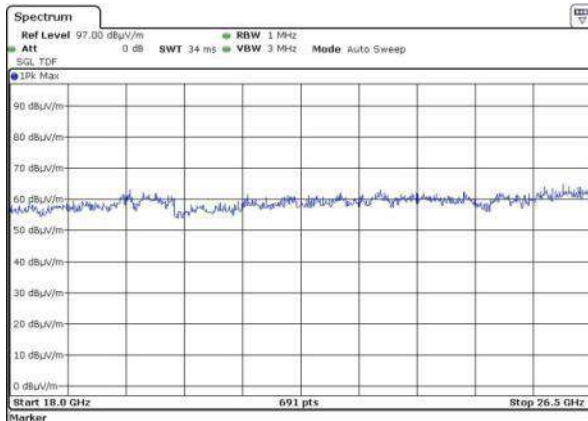
1G to 18GHz V



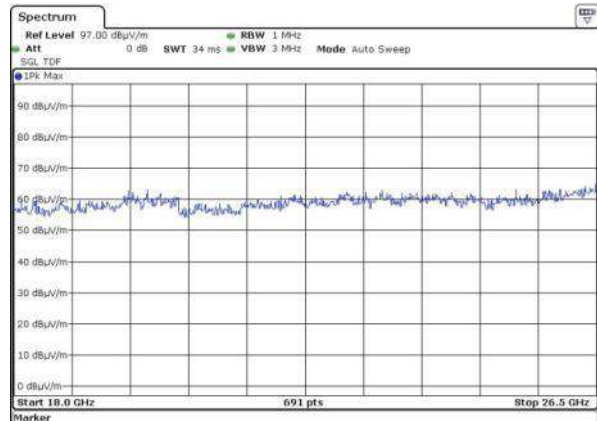
1G to 18GHz H



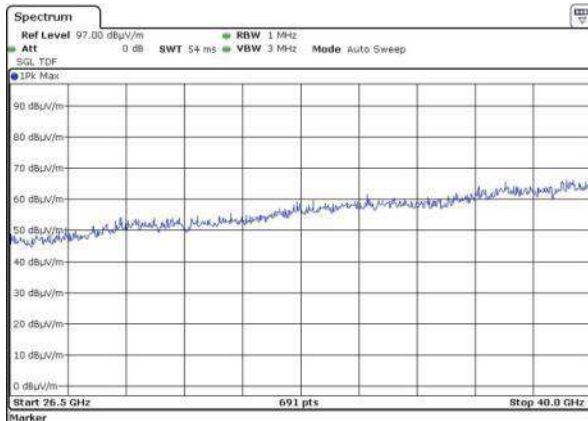
18G – 26.5GHz V



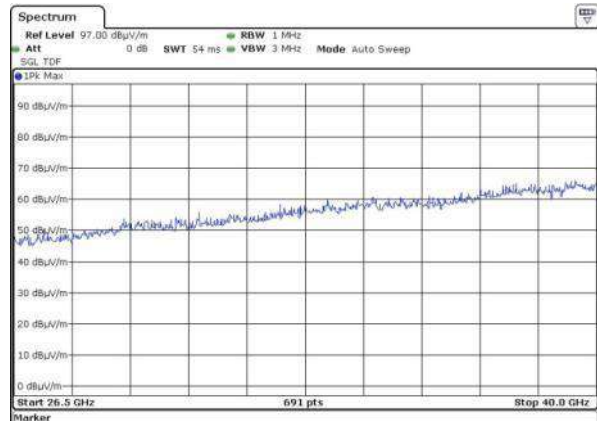
18G – 26.5GHz H



26.5G – 40GHz V



26.5G – 40GHz H



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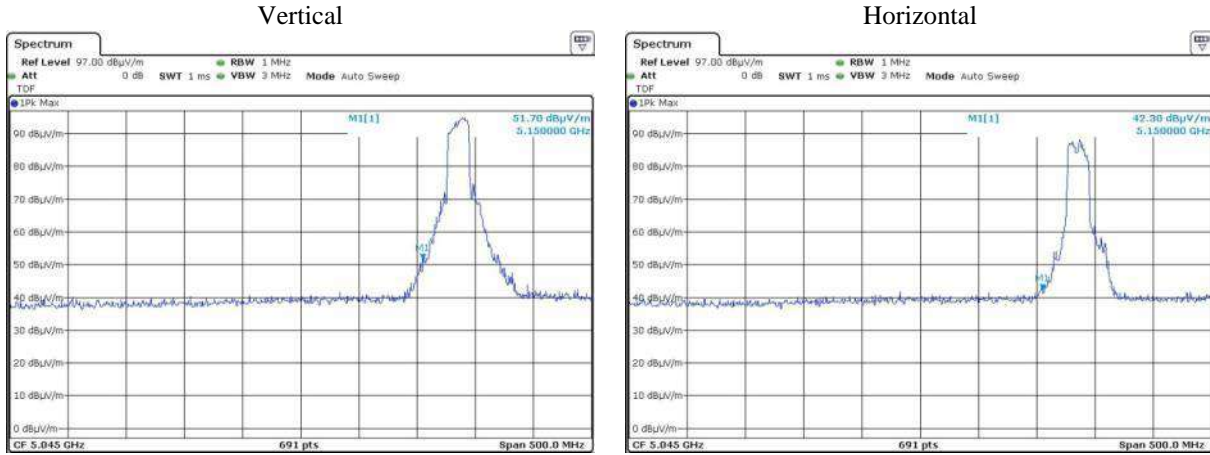
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**Unwanted emission
 802.11n (HT20) (CH36)**

Band edge measurement



Frequency (MHz)	Antenna Polarization	Detector	Measuring Bandwidth (MHz)	Measured Level @ 3m (dBµV/m)	Limit (dBµV/m)	Margin (dB)
5150.0	V	PK	1	51.7	74.0	-22.3
5150.0	V	AV	1	44.6	54.0	-9.4
5150.0	H	PK	1	42.3	74.0	-31.7
5150.0	H	AV	1	37.4	54.0	-16.6

Measured Level [dBµV/m] = Reading of test receiver [dBµV] + correction factor

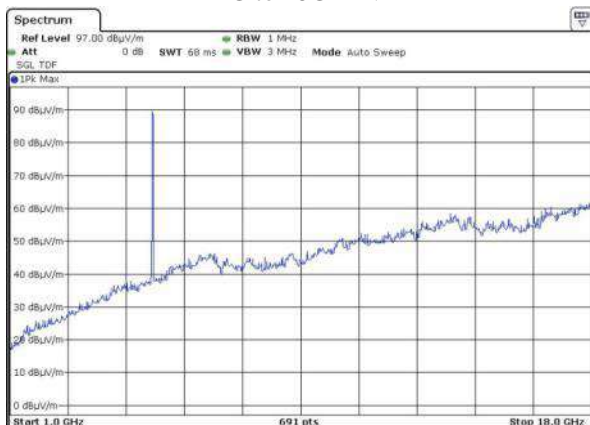
Test Report

Date : 2020-12-08
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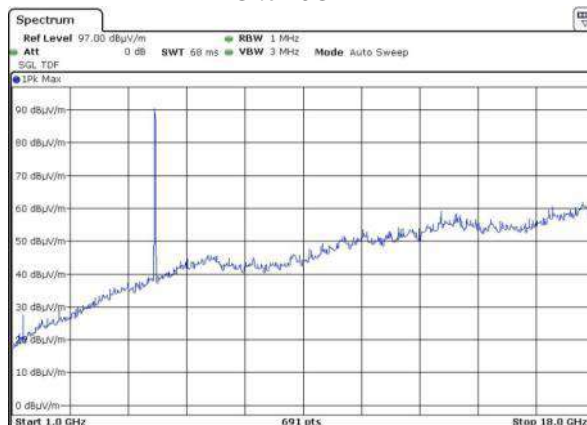
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**Unwanted emission
 802.11n (HT20) (CH36)**

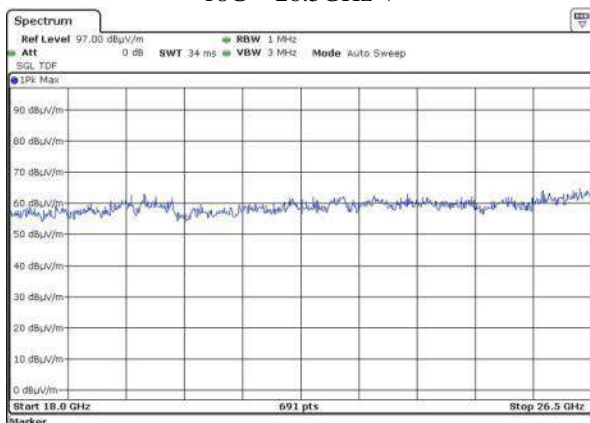
1G to 18GHz V



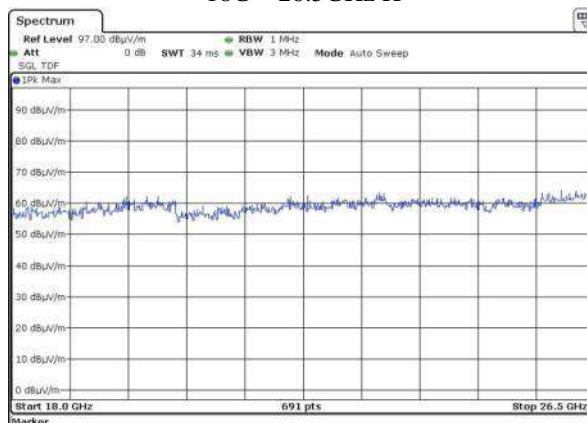
1G to 18GHz H



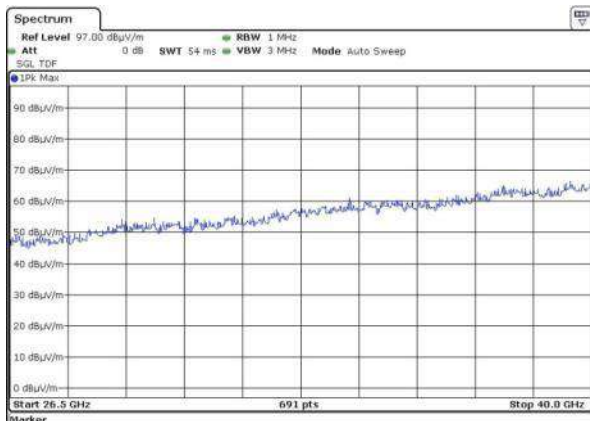
18G – 26.5GHz V



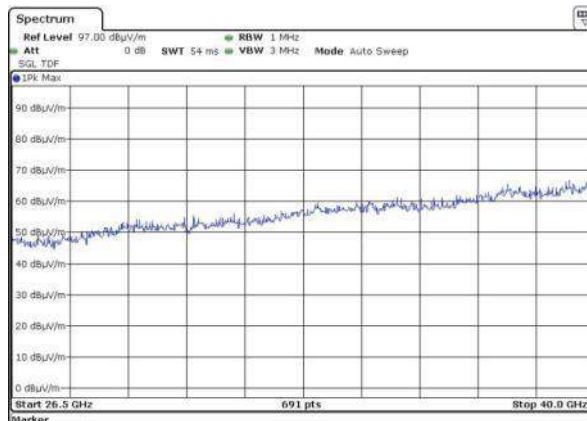
18G – 26.5GHz H



26.5G – 40GHz V



26.5G – 40GHz H



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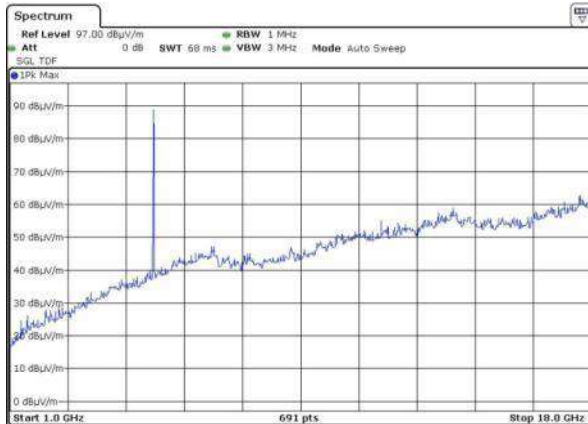
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Test Report

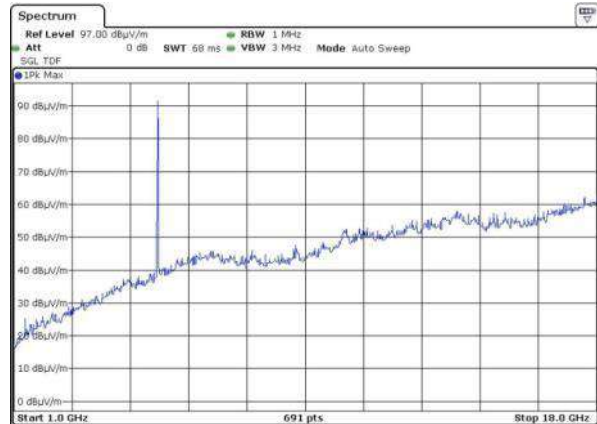
Date : 2020-12-08
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Unwanted emission 802.11n (HT20) (CH40)

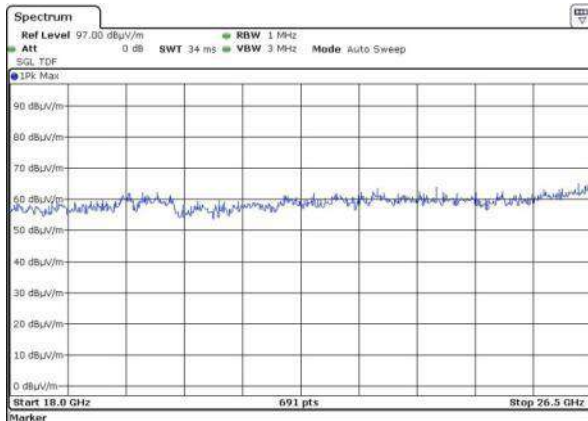
1G to 18GHz V



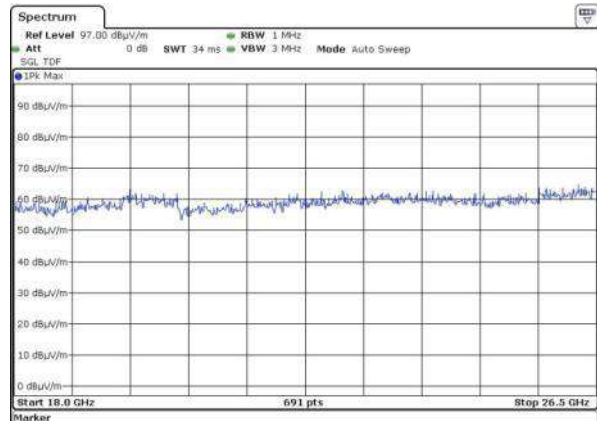
1G to 18GHz H



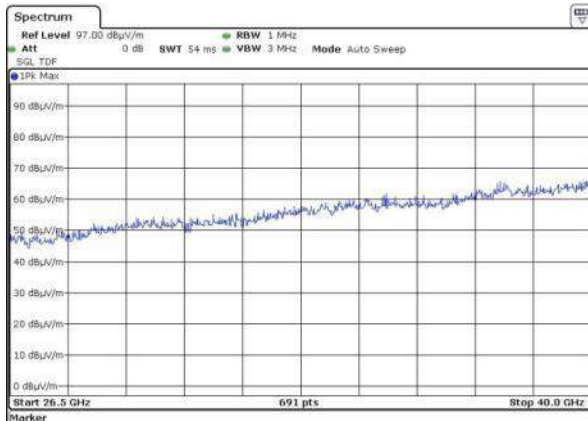
18G – 26.5GHz V



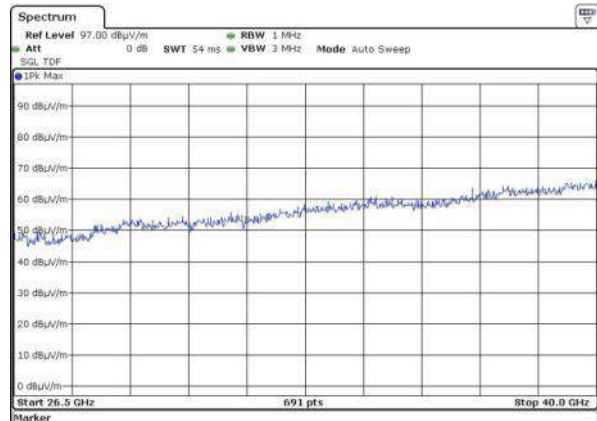
18G – 26.5GHz H



26.5G – 40GHz V



26.5G – 40GHz H



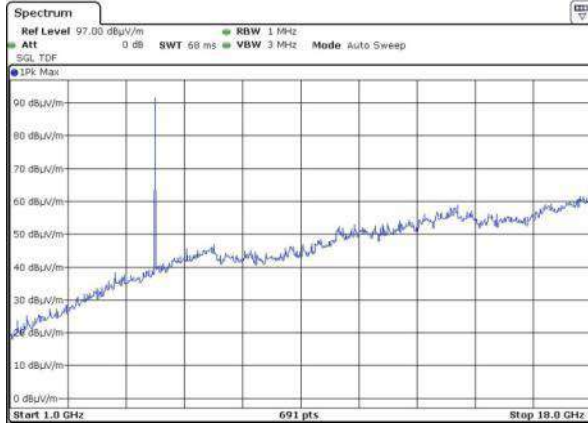
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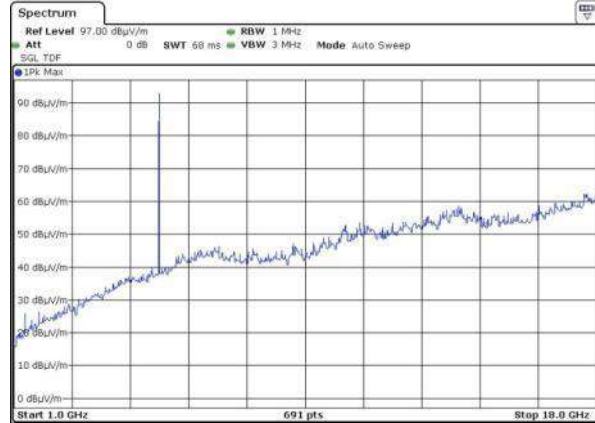
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**Unwanted emission
 802.11n (HT20) (CH48)**

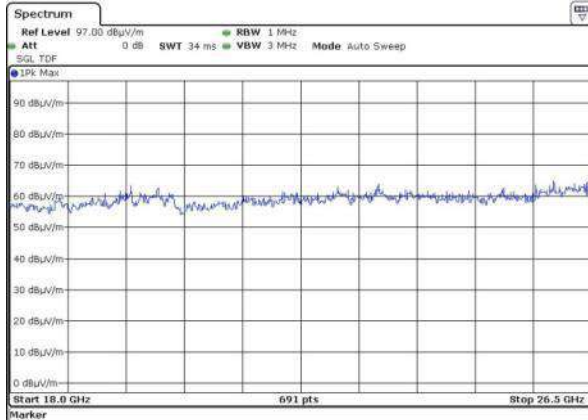
1G to 18GHz V



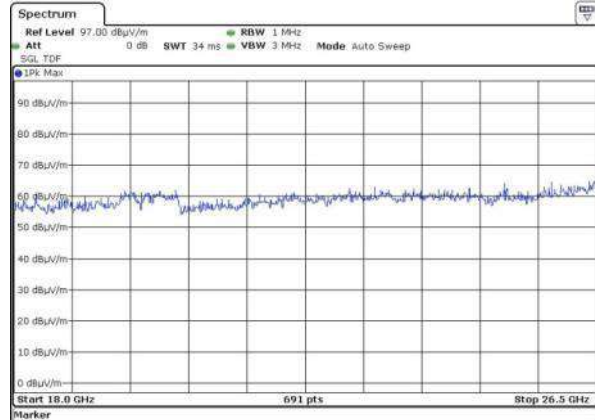
1G to 18GHz H



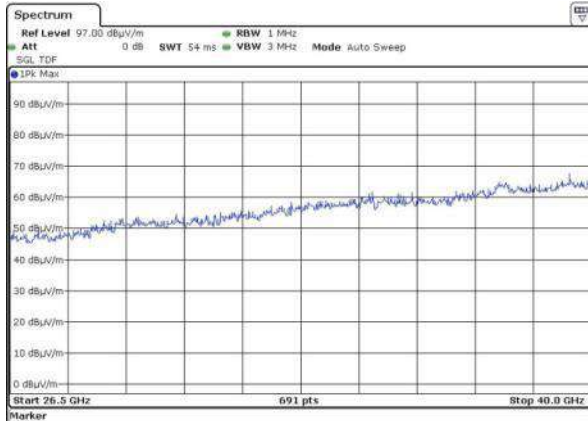
18G – 26.5GHz V



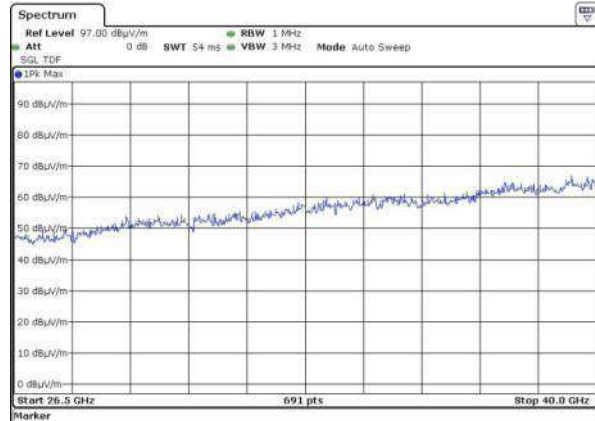
18G – 26.5GHz H



26.5G – 40GHz V



26.5G – 40GHz H



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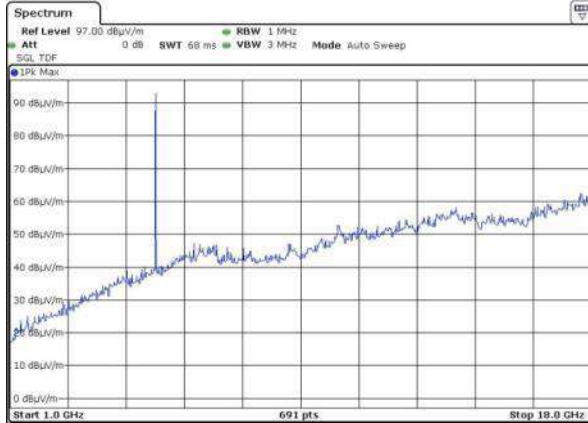
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Date : 2020-12-08
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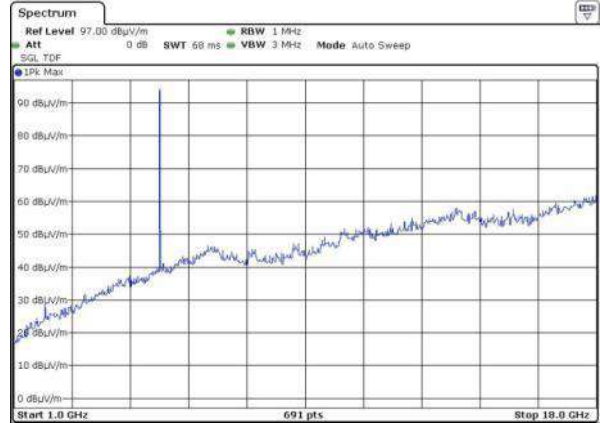
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**Unwanted emission
 802.11n (HT20) (CH52)**

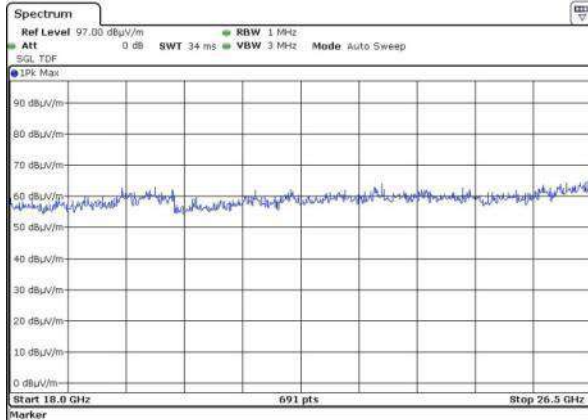
1G to 18GHz V



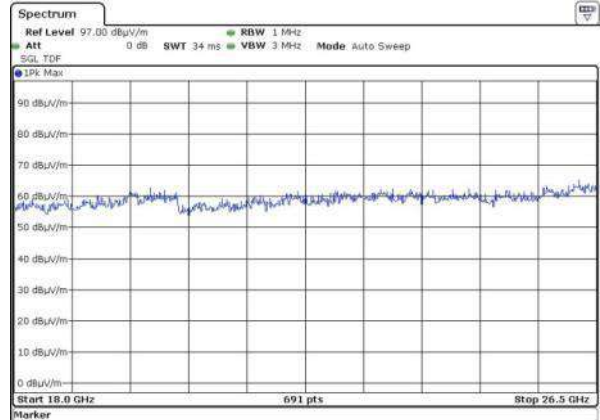
1G to 18GHz H



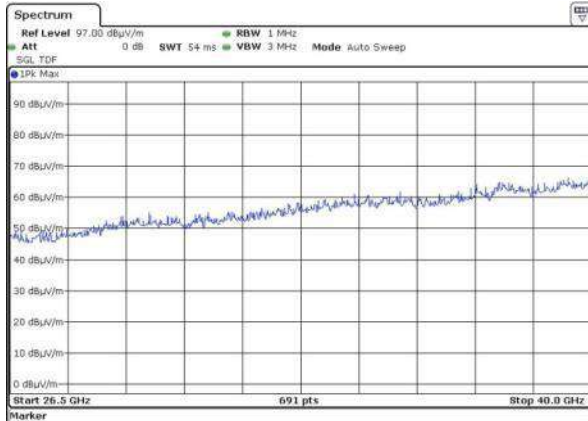
18G – 26.5GHz V



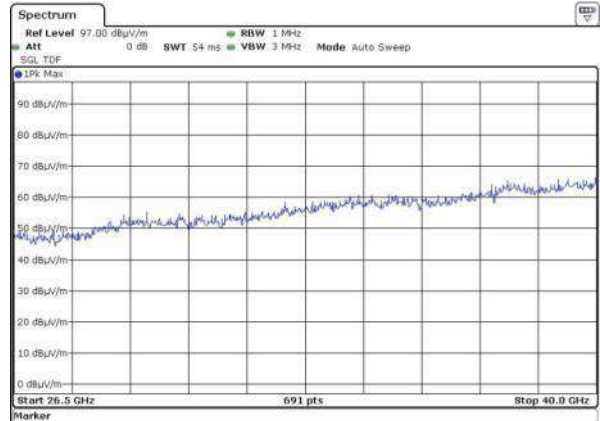
18G – 26.5GHz H



26.5G – 40GHz V



26.5G – 40GHz H



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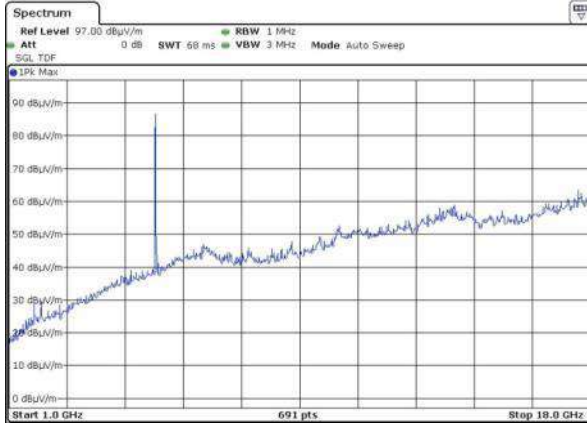
Test Report

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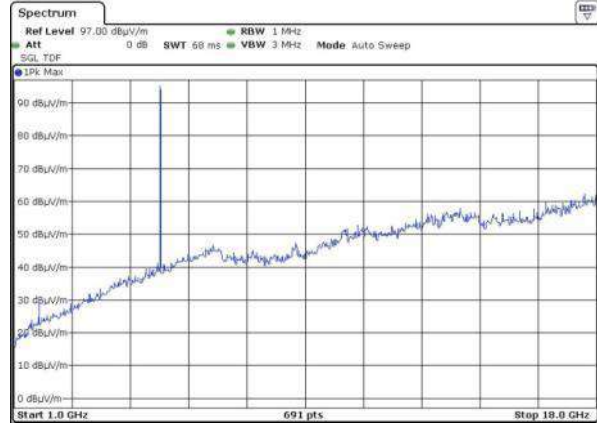
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Unwanted emission 802.11n (HT20) (CH56)

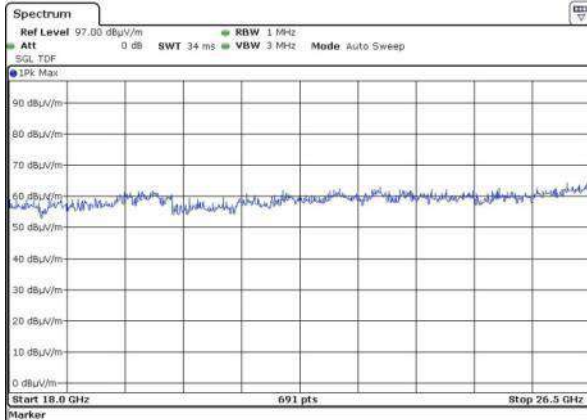
1G to 18GHz V



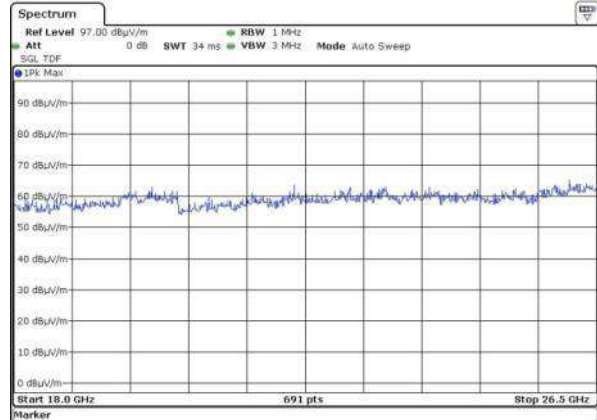
1G to 18GHz H



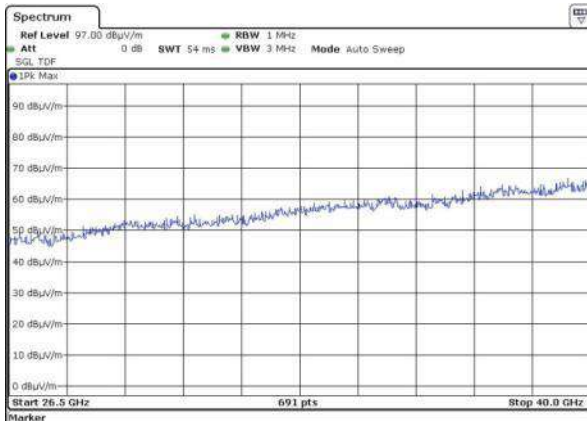
18G – 26.5GHz V



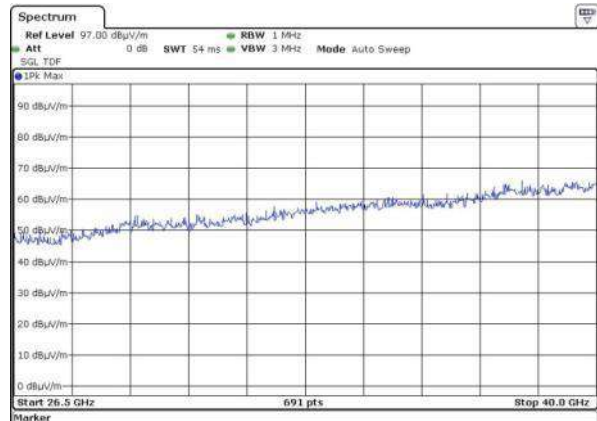
18G – 26.5GHz H



26.5G – 40GHz V



26.5G – 40GHz H



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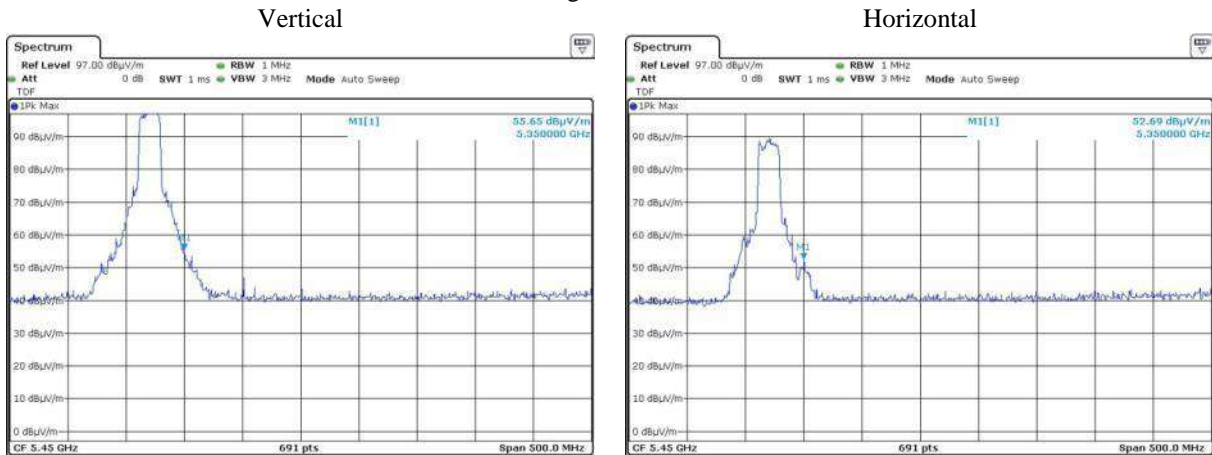
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Unwanted emission
 802.11n (HT20) (CH64)

Band edge measurement



Frequency (MHz)	Antenna Polarization	Detector	Measuring Bandwidth (MHz)	Measured Level @ 3m (dBµV/m)	Limit (dBµV/m)	Margin (dB)
5350.0	V	PK	1	55.7	74.0	-18.3
5350.0	V	AV	1	47.5	54.0	-6.5
5350.0	H	PK	1	52.7	74.0	-21.3
5350.0	H	AV	1	44.4	54.0	-9.6

Measured Level [dBµV/m] = Reading of test receiver [dBµV] + correction factor

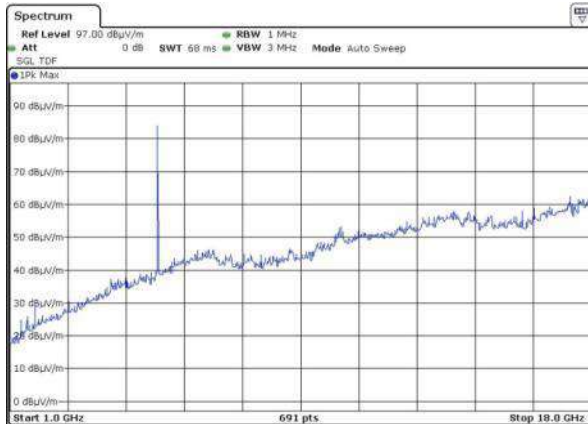
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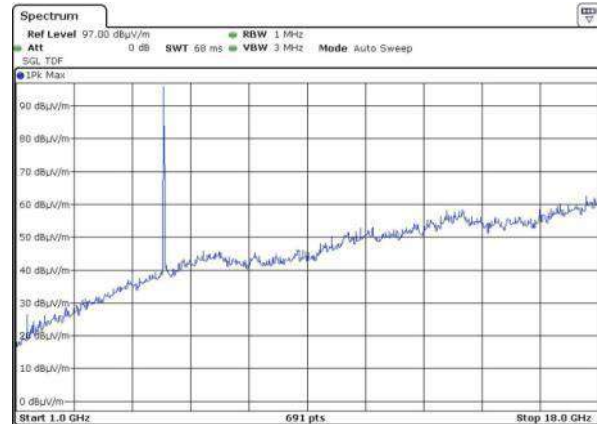
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**Unwanted emission
 802.11n (HT20) (CH64)**

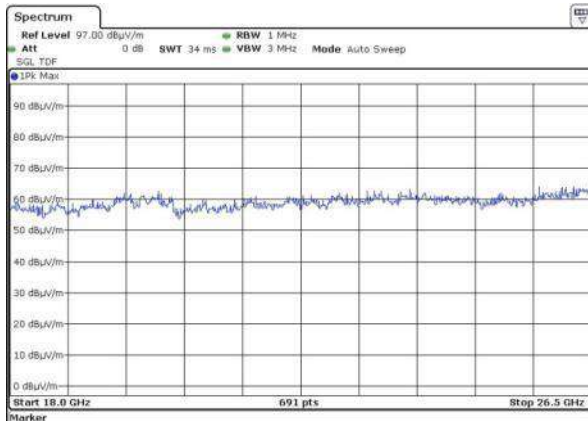
1G to 18GHz V



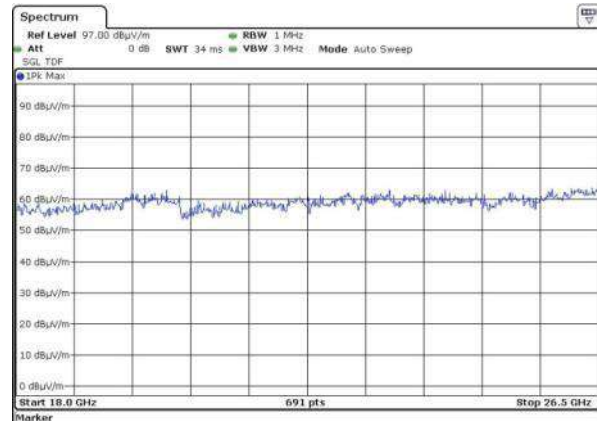
1G to 18GHz H



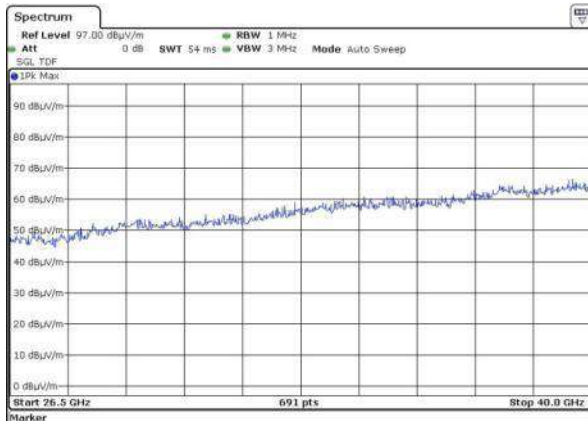
18G – 26.5GHz V



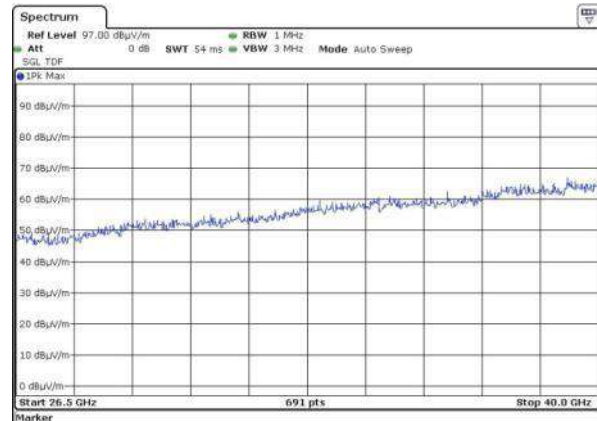
18G – 26.5GHz H



26.5G – 40GHz V



26.5G – 40GHz H



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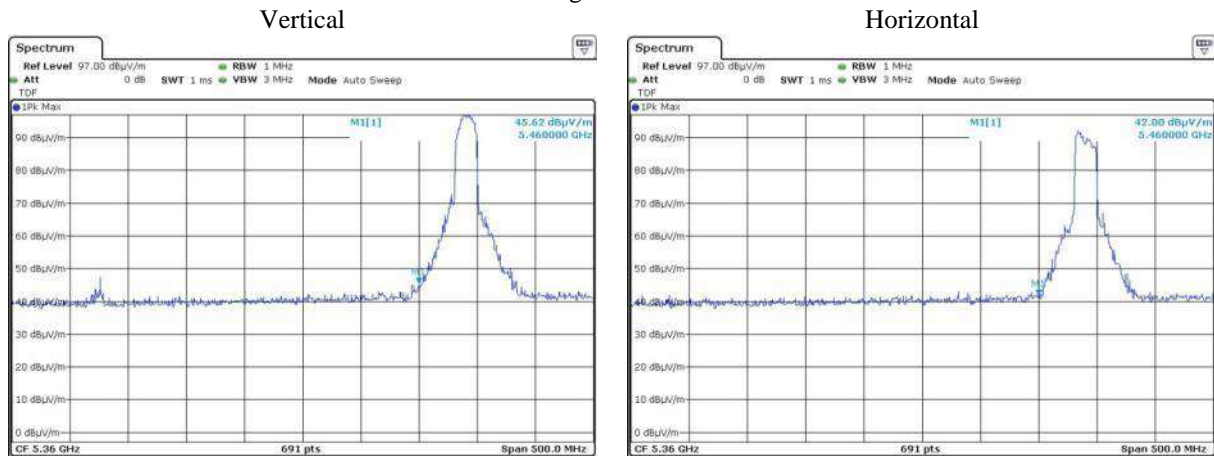
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**Unwanted emission
 802.11n (HT20) (CH100)**

Band edge measurement



Frequency (MHz)	Antenna Polarization	Detector	Measuring Bandwidth (MHz)	Measured Level @ 3m (dBµV/m)	Limit (dBµV/m)	Margin (dB)
5460.0	V	PK	1	45.6	74.0	-28.4
5460.0	V	AV	1	41.3	54.0	-12.7
5460.0	H	PK	1	42.0	74.0	-32.0
5460.0	H	AV	1	38.1	54.0	-15.9

Measured Level [dBµV/m] = Reading of test receiver [dBµV] + correction factor

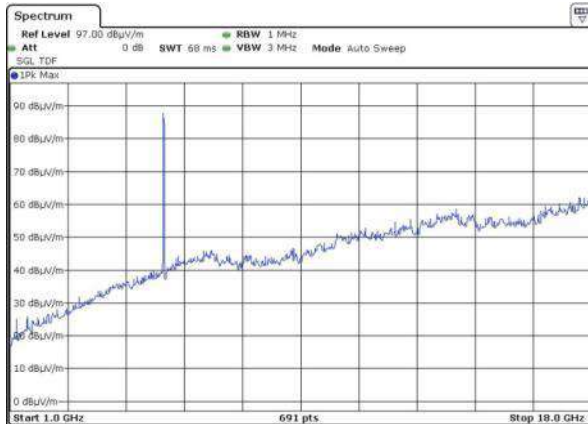
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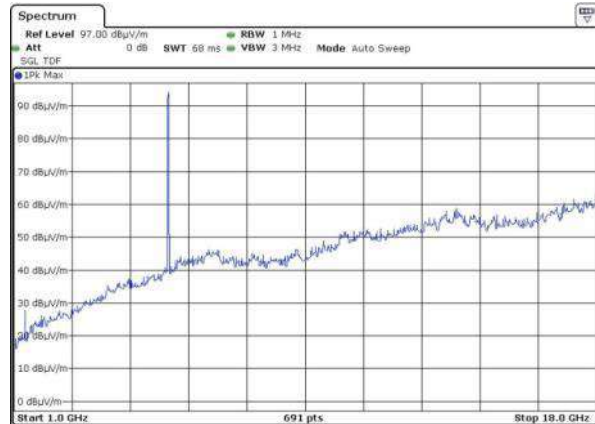
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**Unwanted emission
 802.11n (HT20) (CH100)**

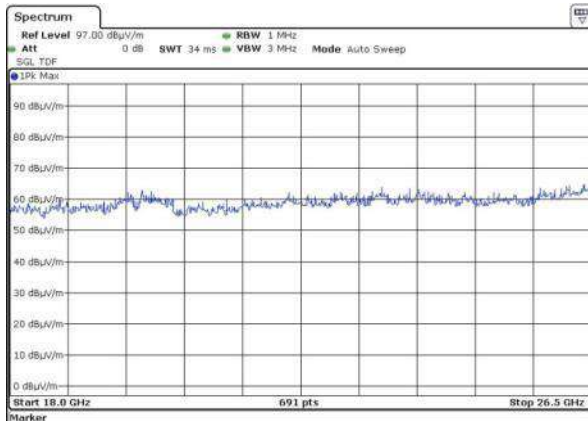
1G to 18GHz V



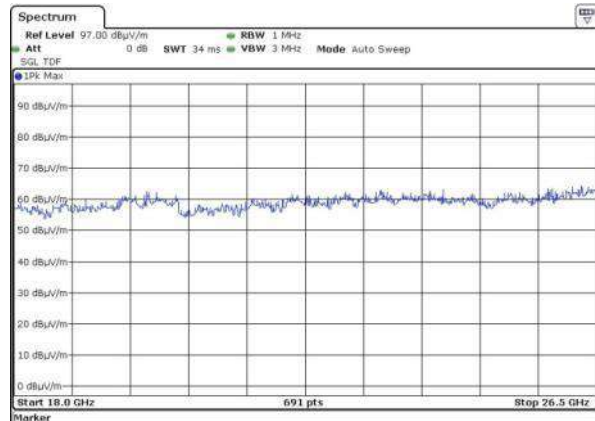
1G to 18GHz H



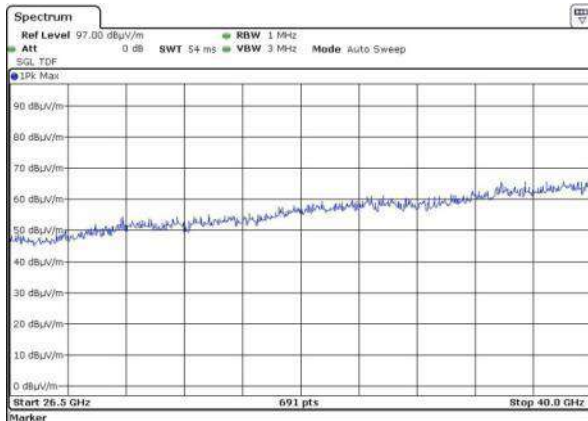
18G – 26.5GHz V



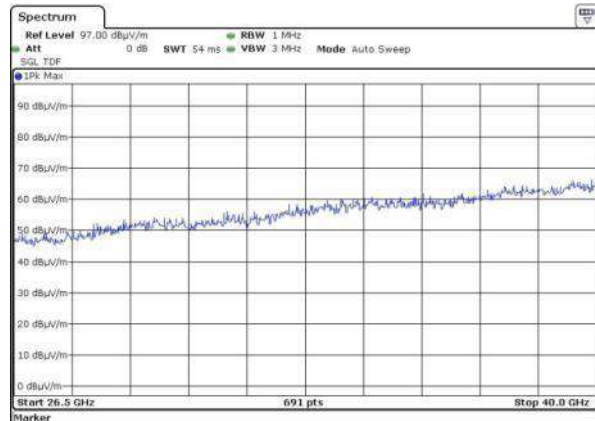
18G – 26.5GHz H



26.5G – 40GHz V



26.5G – 40GHz H



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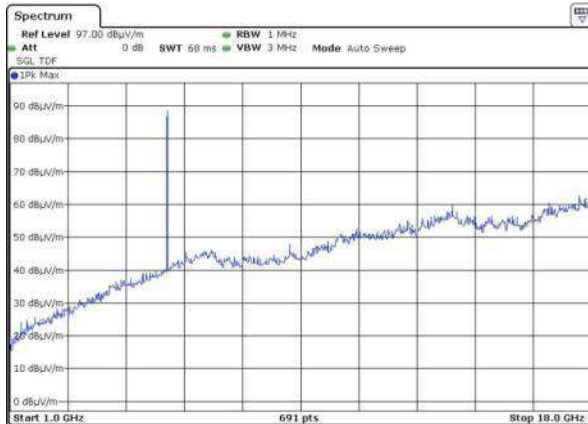
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**Unwanted emission
 802.11n (HT20) (CH120)**

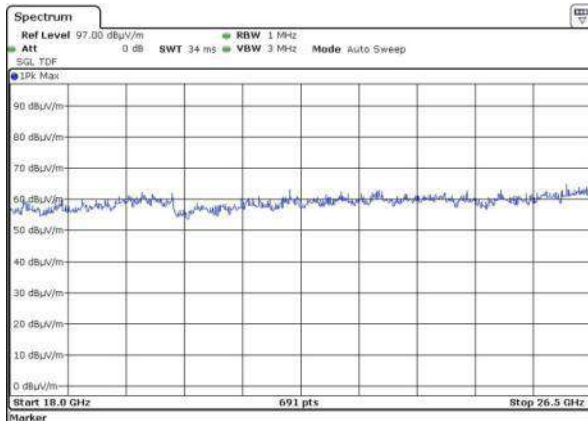
1G to 18GHz V



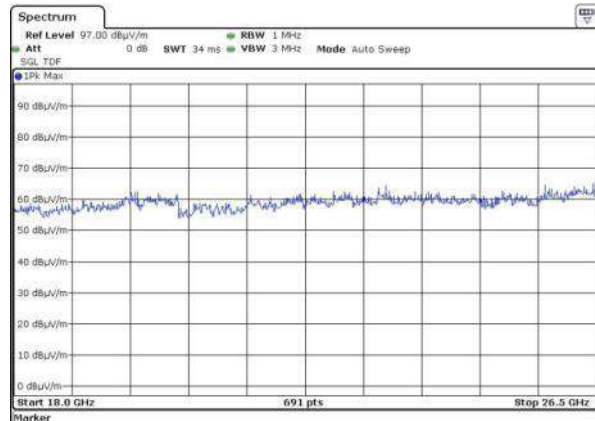
1G to 18GHz H



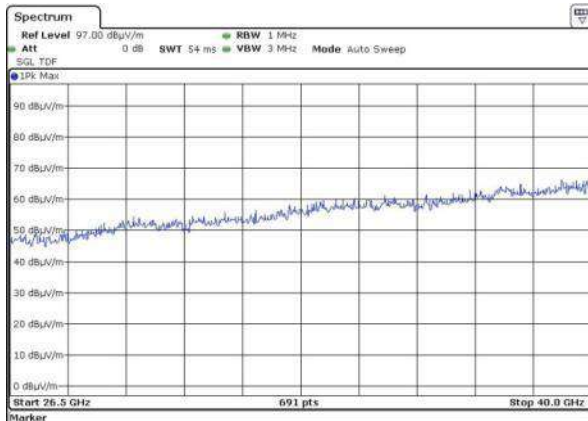
18G – 26.5GHz V



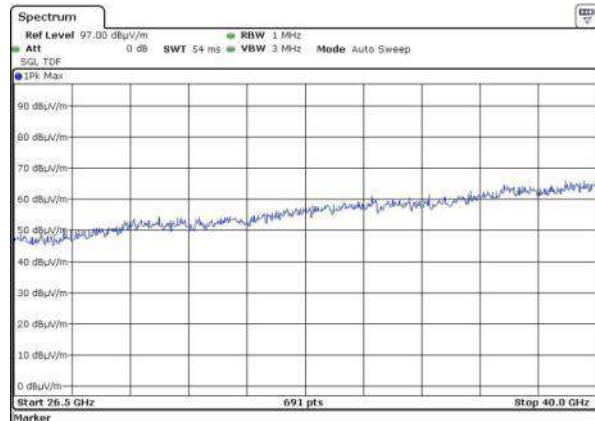
18G – 26.5GHz H



26.5G – 40GHz V



26.5G – 40GHz H



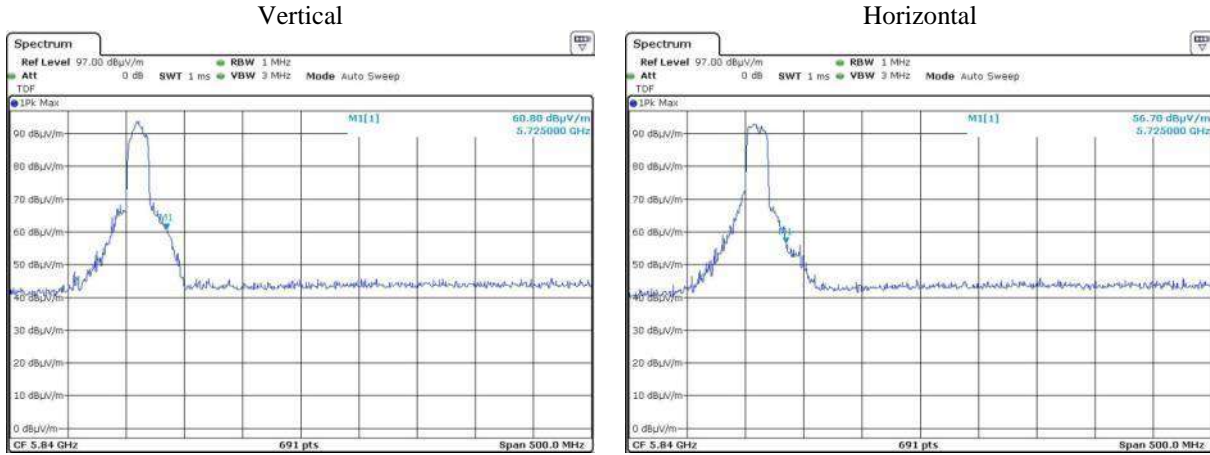
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**Unwanted emission
 802.11n (HT20) (CH140)**

Band edge measurement



Frequency (MHz)	Antenna Polarization	Detector	Measuring Bandwidth (MHz)	Measured Level @ 3m (dBµV/m)	Limit (dBµV/m)	Margin (dB)
5725.0	V	PK	1	60.8	74.0	-13.2
5725.0	V	AV	1	51.3	54.0	-2.7
5725.0	H	PK	1	56.7	74.0	-17.3
5725.0	H	AV	1	50.7	54.0	-3.3

Measured Level [dBµV/m] = Reading of test receiver [dBµV] + correction factor

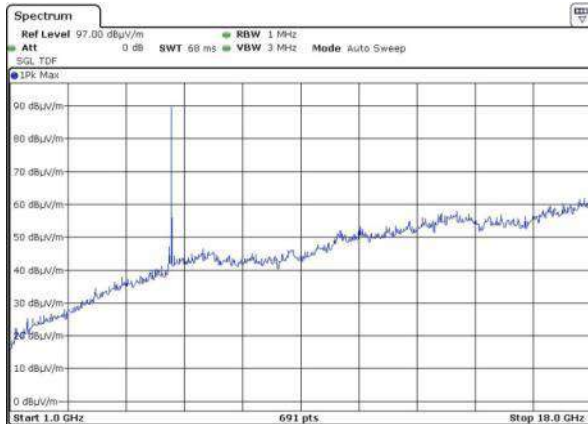
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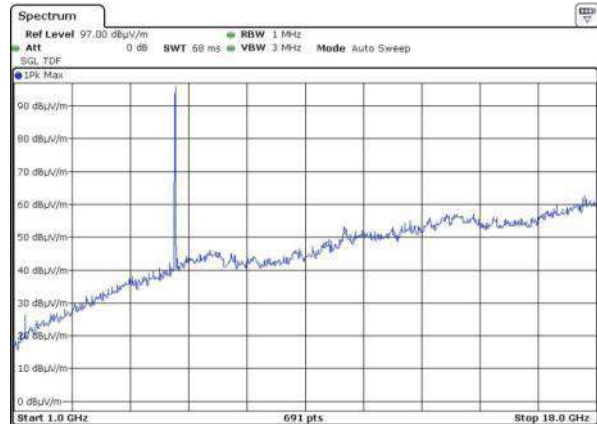
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Unwanted emission 802.11n (HT20) (CH140)

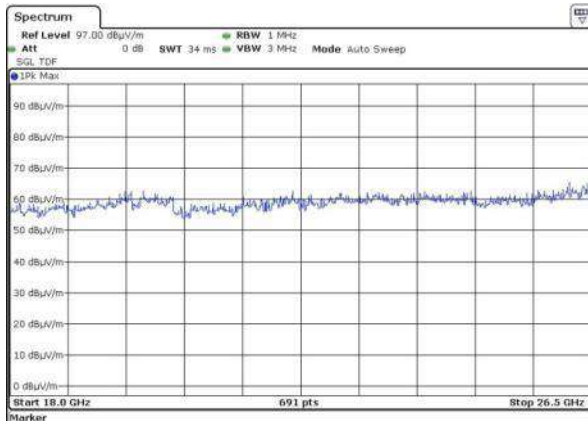
1G to 18GHz V



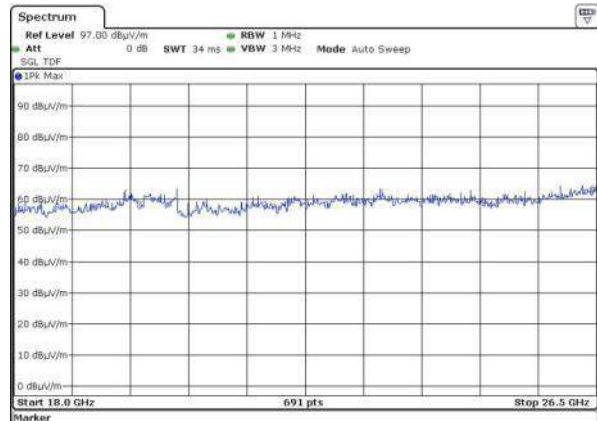
1G to 18GHz H



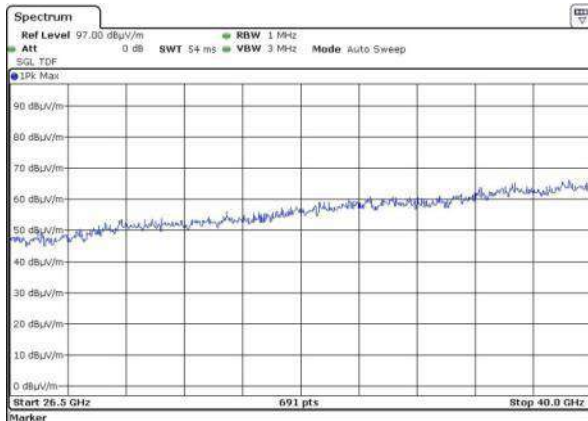
18G – 26.5GHz V



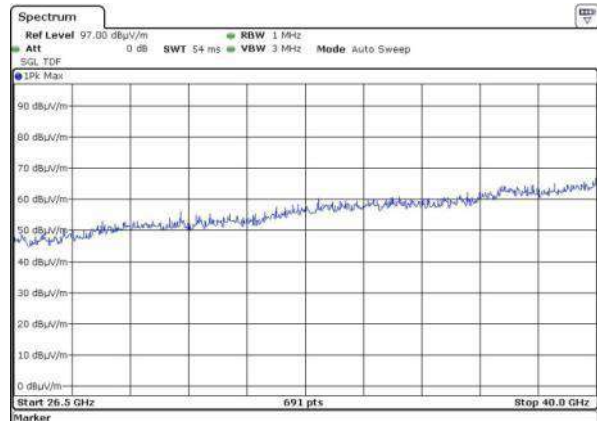
18G – 26.5GHz H



26.5G – 40GHz V



26.5G – 40GHz H



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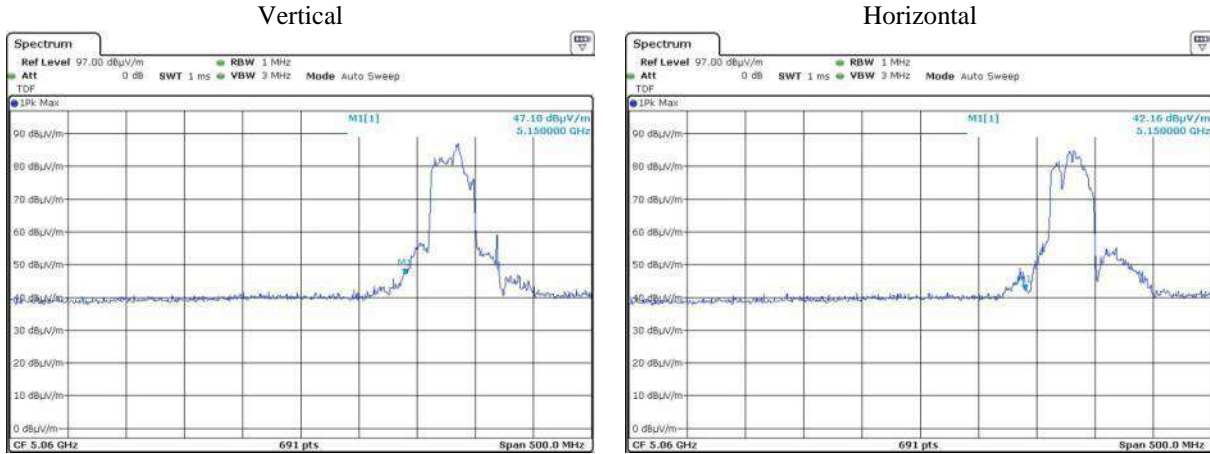
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Unwanted emission
 802.11n (HT40) (CH38)

Band edge measurement



Frequency (MHz)	Antenna Polarization	Detector	Measuring Bandwidth (MHz)	Measured Level @ 3m (dBµV/m)	Limit (dBµV/m)	Margin (dB)
5150.0	V	PK	1	47.1	74.0	-26.9
5150.0	V	AV	1	40.9	54.0	-13.1
5150.0	H	PK	1	42.2	74.0	-31.8
5150.0	H	AV	1	35.8	54.0	-18.2

Measured Level [dBµV/m] = Reading of test receiver [dBµV] + correction factor

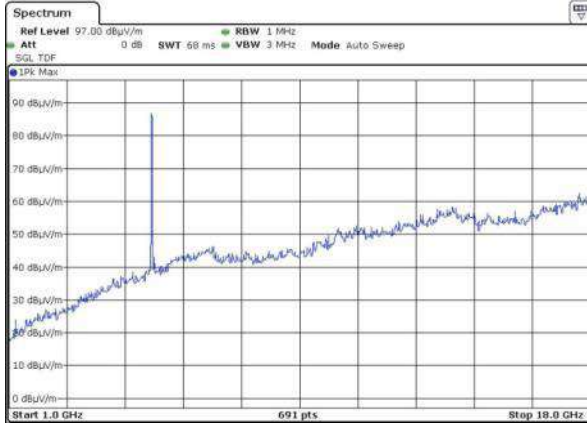
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**Unwanted emission
 802.11n (HT40) (CH38)**

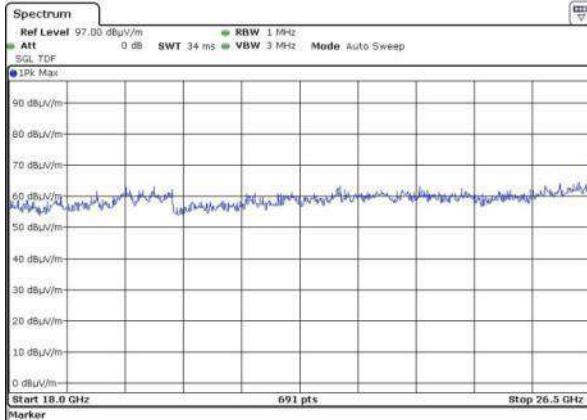
1G to 18GHz V



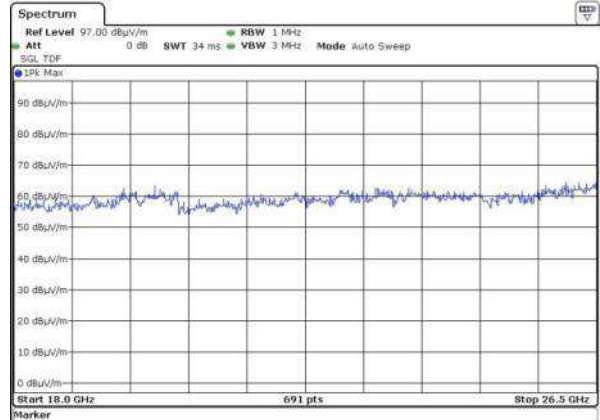
1G to 18GHz H



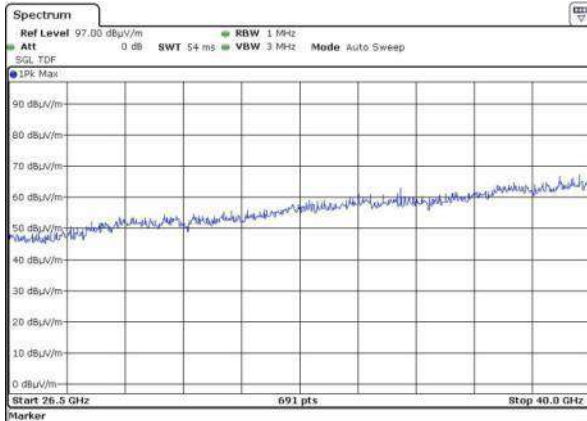
18G – 26.5GHz V



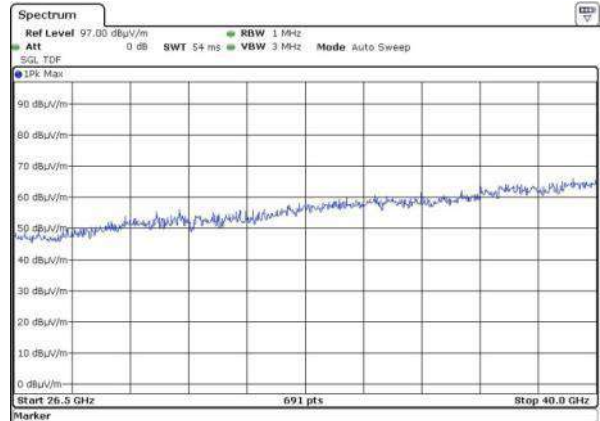
18G – 26.5GHz H



26.5G – 40GHz V



26.5G – 40GHz H



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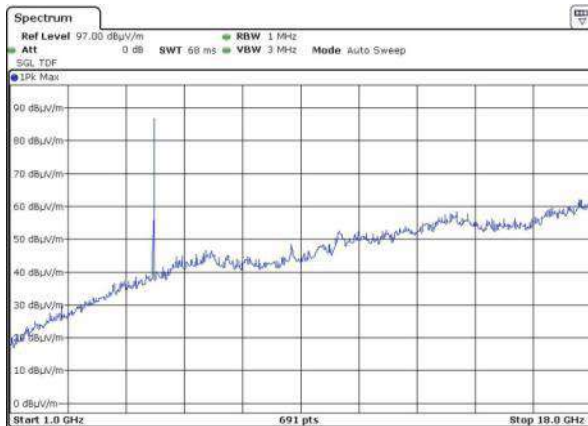
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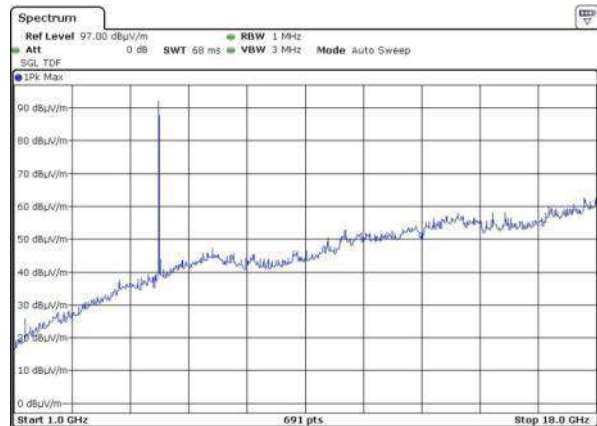
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**Unwanted emission
 802.11n (HT40) (CH46)**

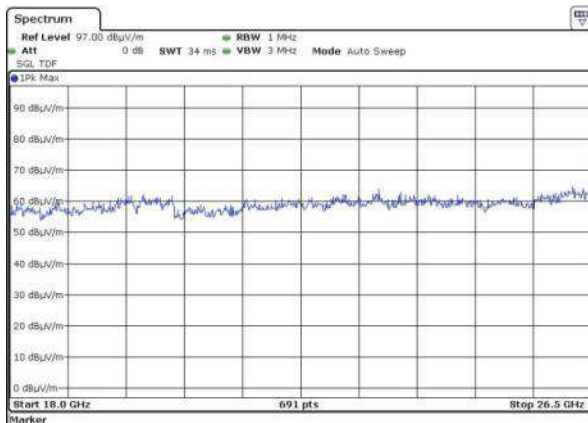
1G to 18GHz V



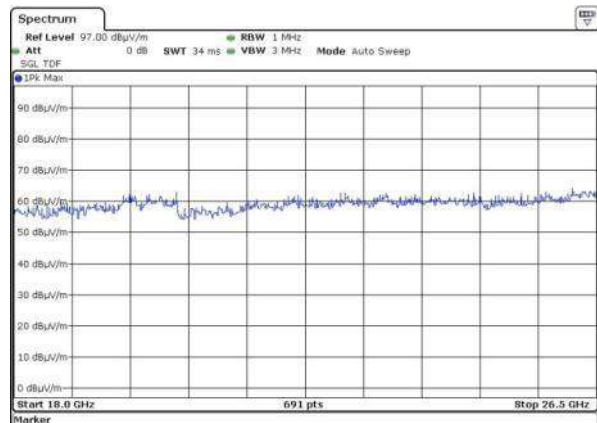
1G to 18GHz H



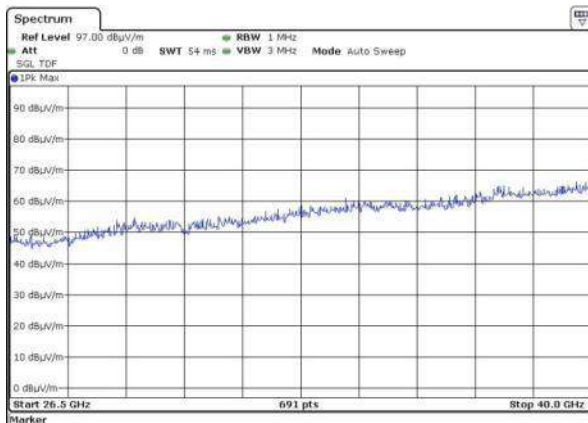
18G – 26.5GHz V



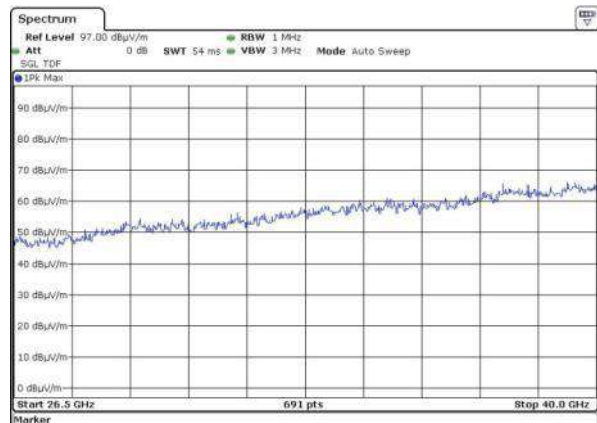
18G – 26.5GHz H



26.5G – 40GHz V



26.5G – 40GHz H



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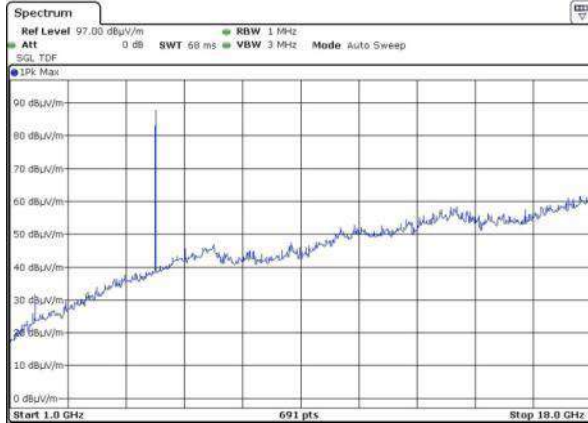
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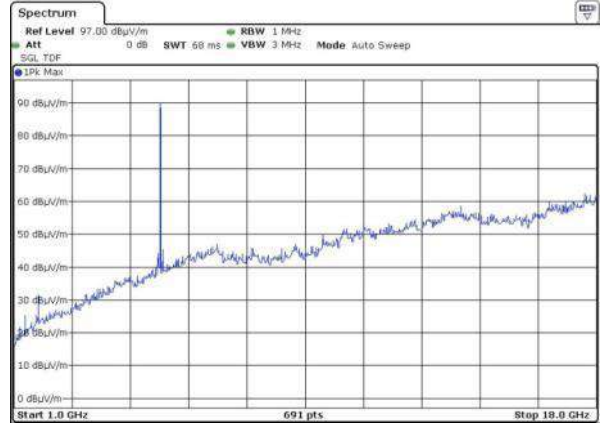
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Unwanted emission
 802.11n (HT40) (CH54)

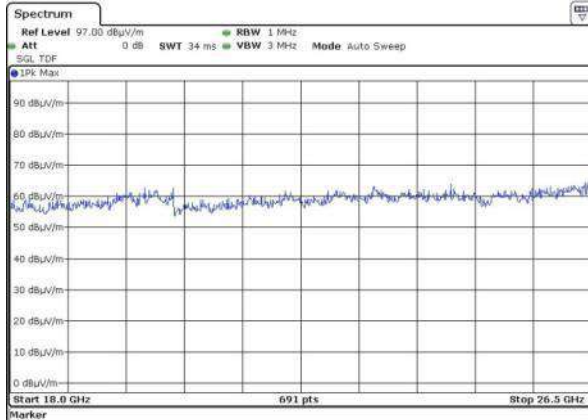
1G to 18GHz V



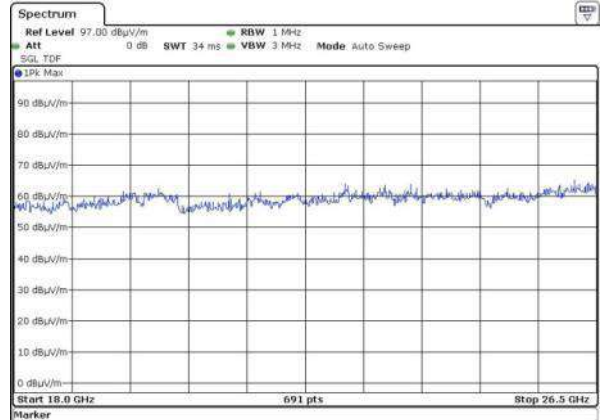
1G to 18GHz H



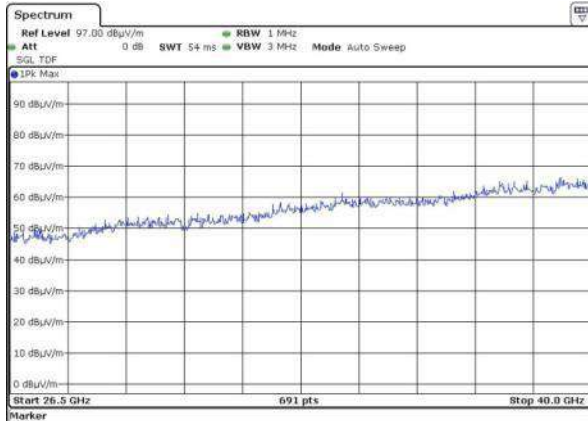
18G – 26.5GHz V



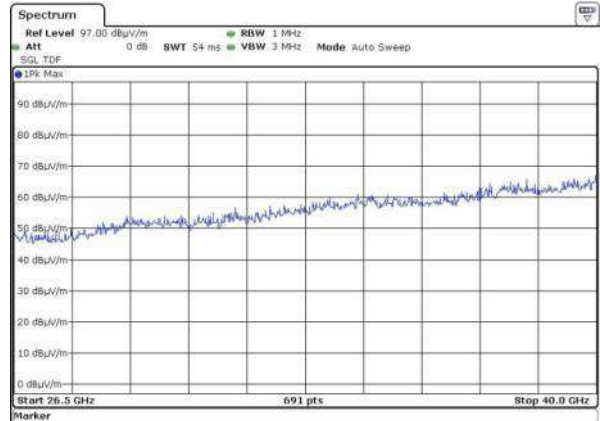
18G – 26.5GHz H



26.5G – 40GHz V



26.5G – 40GHz H



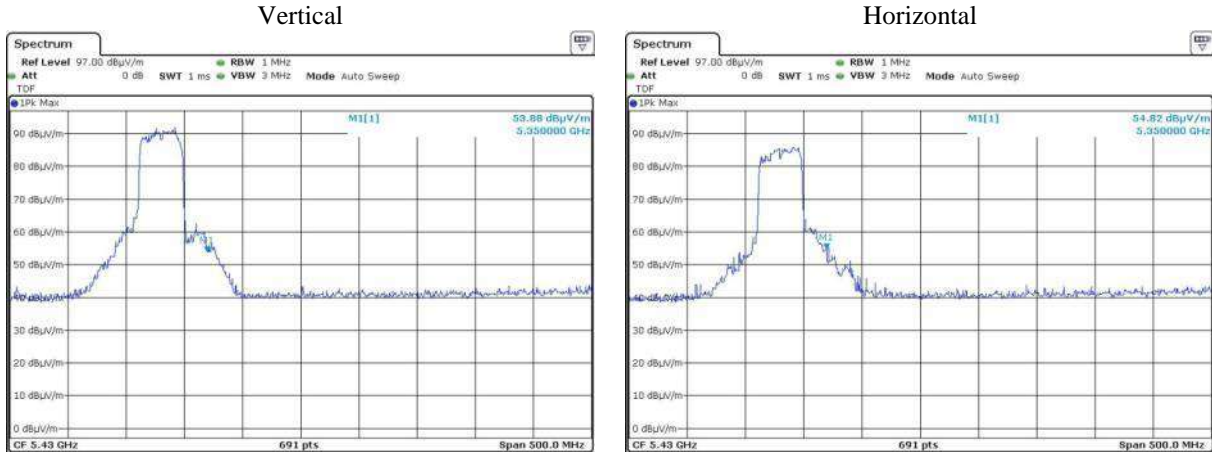
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Unwanted emission
 802.11n (HT40) (CH62)

Band edge measurement



Frequency (MHz)	Antenna Polarization	Detector	Measuring Bandwidth (MHz)	Measured Level @ 3m (dBµV/m)	Limit (dBµV/m)	Margin (dB)
5350.0	V	PK	1	53.9	74.0	-20.1
5350.0	V	AV	1	48.8	54.0	-5.2
5350.0	H	PK	1	54.8	74.0	-19.2
5350.0	H	AV	1	48.2	54.0	-5.8

Measured Level [dBµV/m] = Reading of test receiver [dBµV] + correction factor

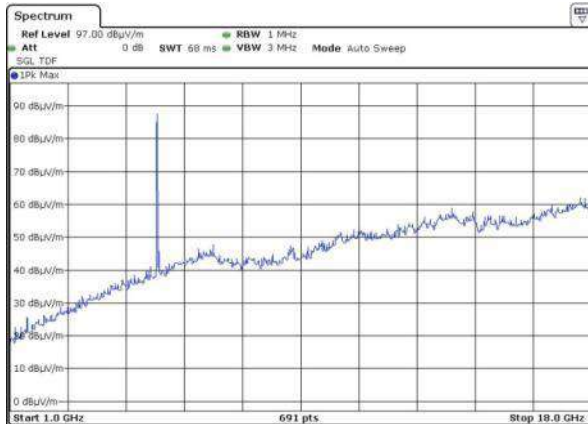
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Unwanted emission 802.11n (HT40) (CH62)

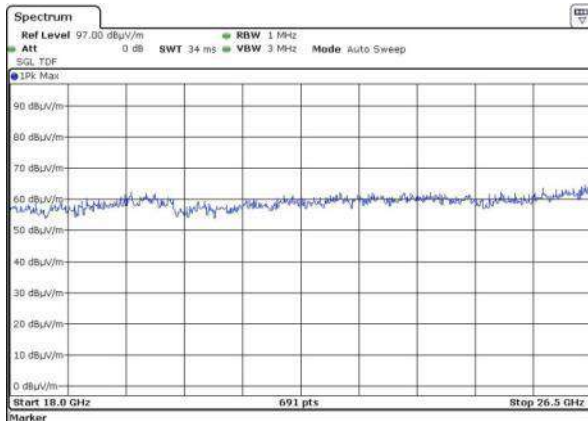
1G to 18GHz V



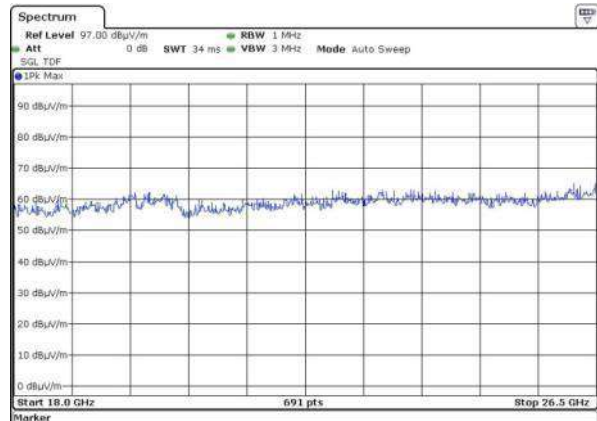
1G to 18GHz H



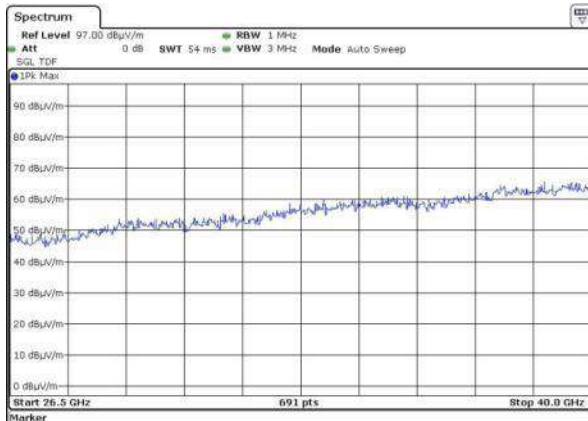
18G – 26.5GHz V



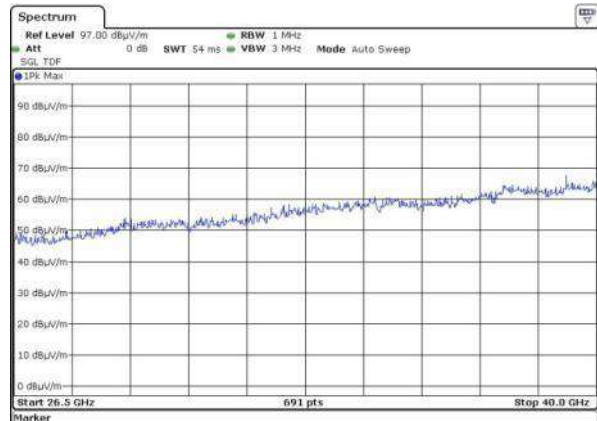
18G – 26.5GHz H



26.5G – 40GHz V



26.5G – 40GHz H



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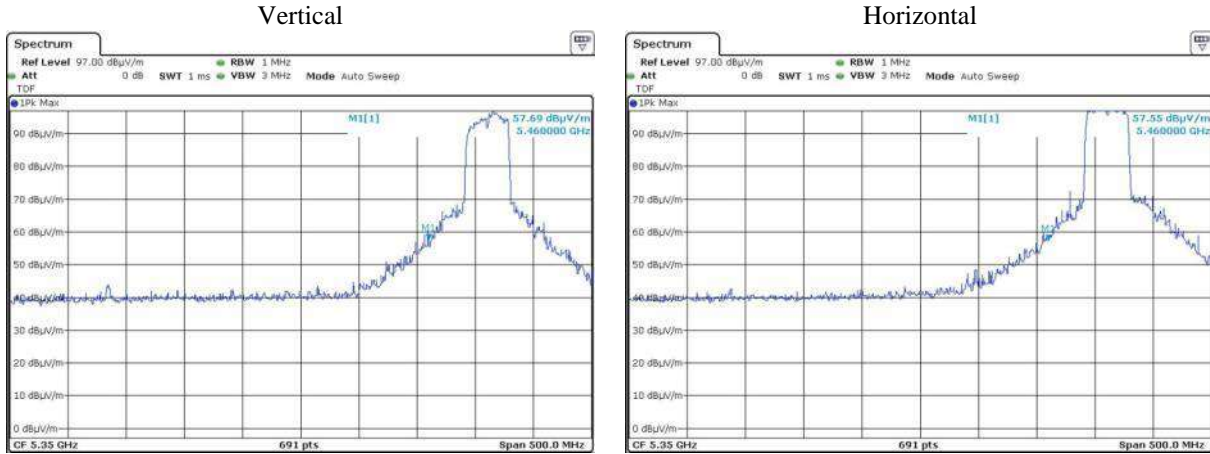
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Unwanted emission
 802.11n (HT40) (CH102)

Band edge measurement



Frequency (MHz)	Antenna Polarization	Detector	Measuring Bandwidth (MHz)	Measured Level @ 3m (dBµV/m)	Limit (dBµV/m)	Margin (dB)
5460.0	V	PK	1	57.7	74.0	-16.3
5460.0	V	AV	1	49.1	54.0	-4.9
5460.0	H	PK	1	57.6	74.0	-16.4
5460.0	H	AV	1	49.8	54.0	-4.2

Measured Level [dBµV/m] = Reading of test receiver [dBµV] + correction factor

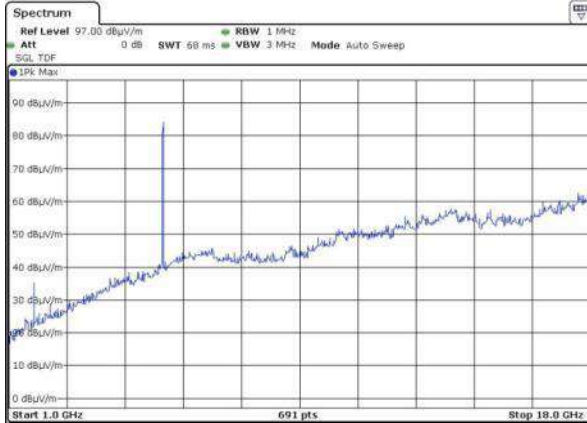
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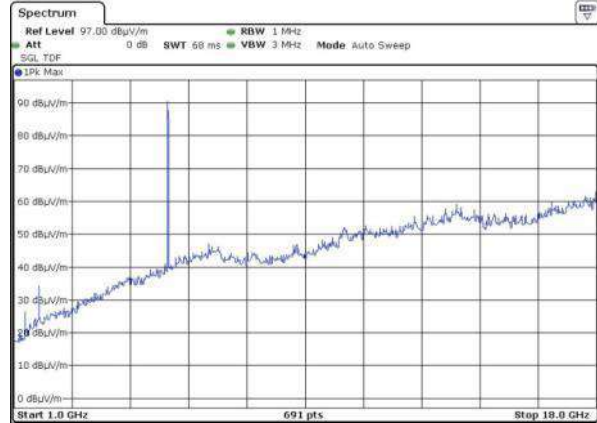
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**Unwanted emission
 802.11n (HT40) (CH102)**

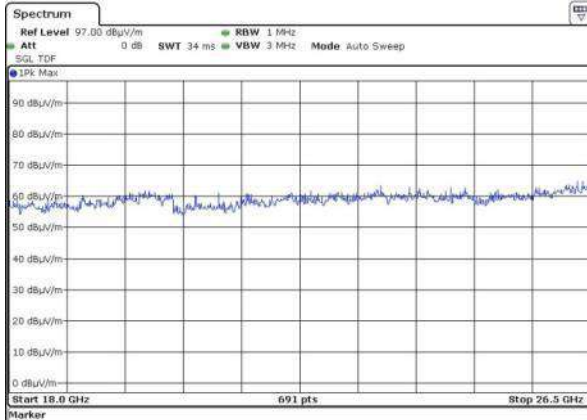
1G to 18GHz V



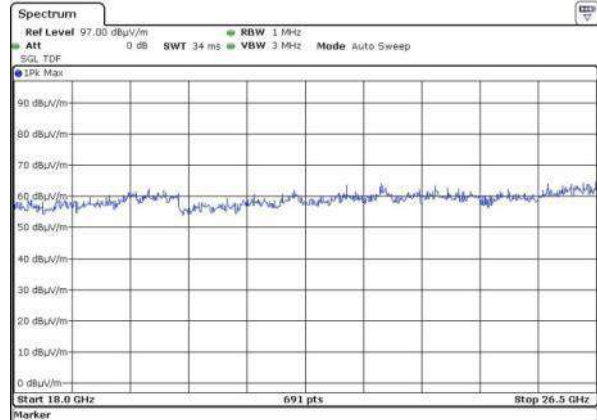
1G to 18GHz H



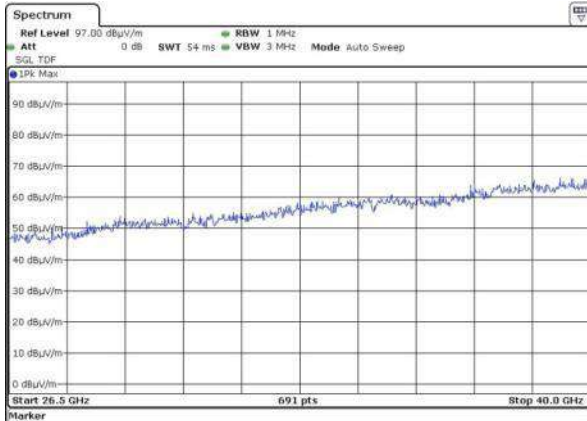
18G – 26.5GHz V



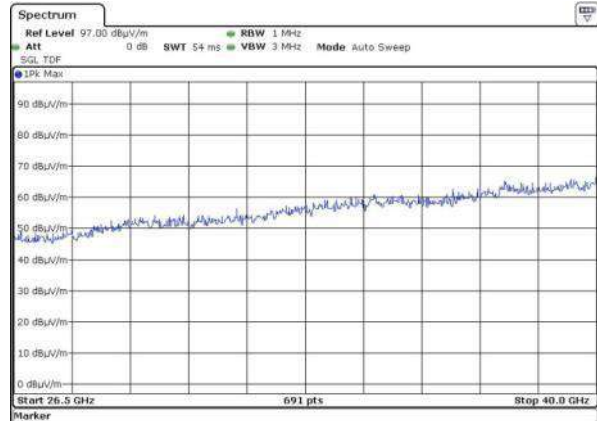
18G – 26.5GHz H



26.5G – 40GHz V



26.5G – 40GHz H



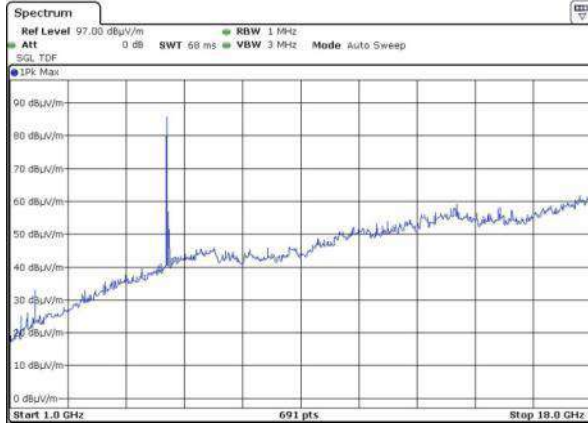
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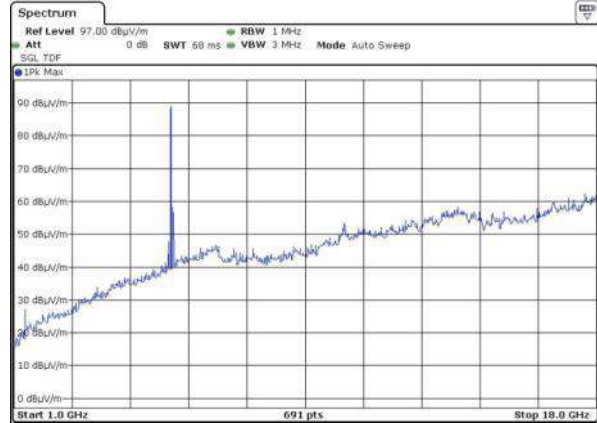
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Unwanted emission 802.11n (HT40) (CH118)

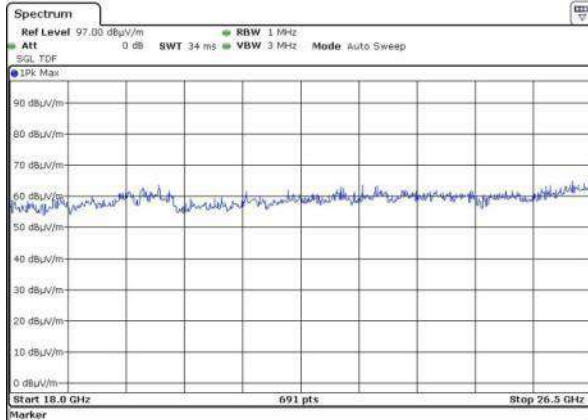
1G to 18GHz V



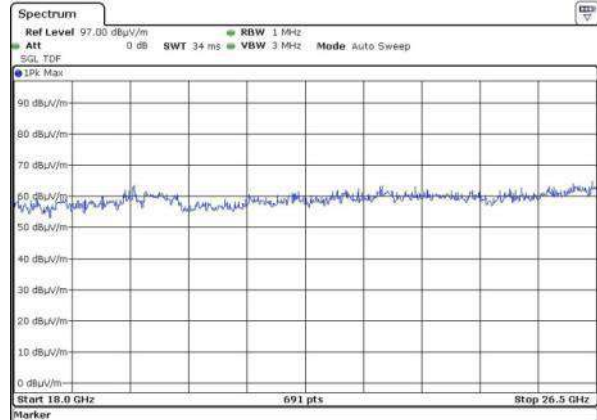
1G to 18GHz H



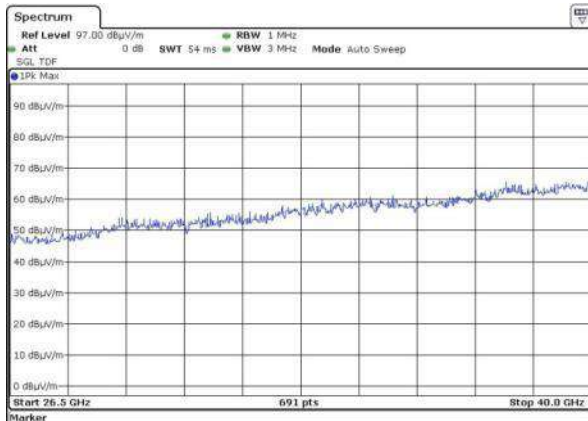
18G – 26.5GHz V



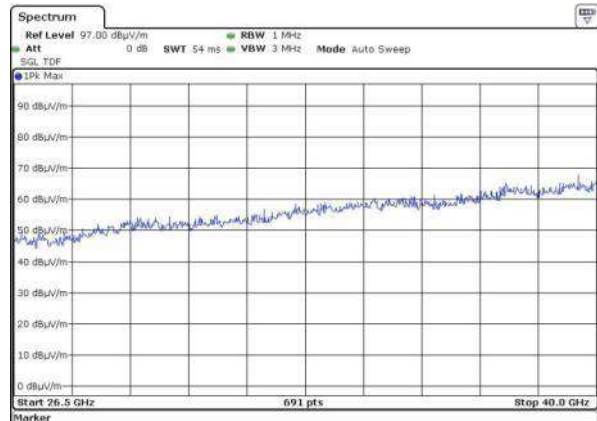
18G – 26.5GHz H



26.5G – 40GHz V



26.5G – 40GHz H



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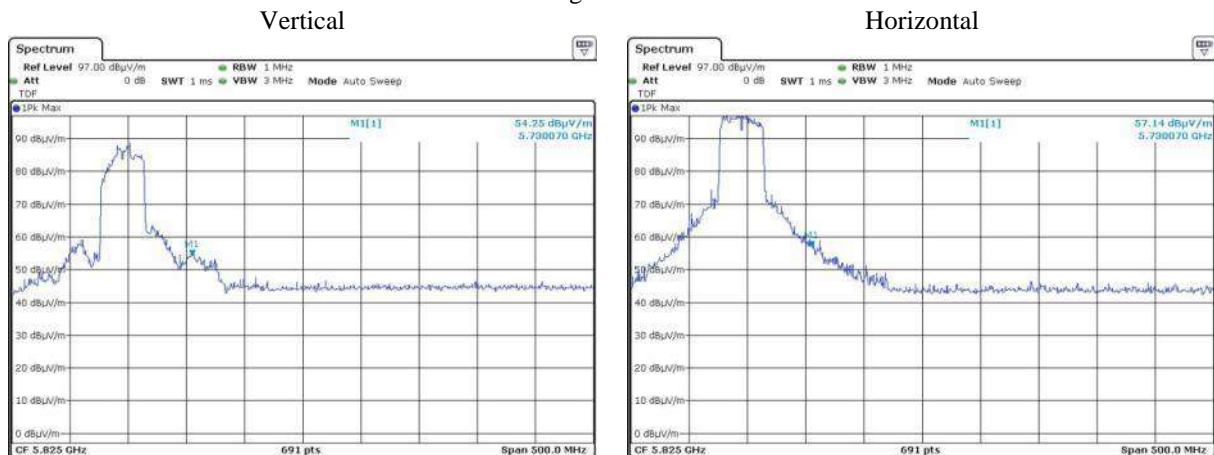
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Unwanted emission
 802.11n (HT40) (CH134)

Band edge measurement



Frequency (MHz)	Antenna Polarization	Detector	Measuring Bandwidth (MHz)	Measured Level @ 3m (dBµV/m)	Limit (dBµV/m)	Margin (dB)
5725.0	V	PK	1	54.3	74.0	-19.7
5725.0	V	AV	1	48.5	54.0	-5.5
5725.0	H	PK	1	57.1	74.0	-16.9
5725.0	H	AV	1	50.6	54.0	-3.4

Measured Level [dBµV/m] = Reading of test receiver [dBµV] + correction factor



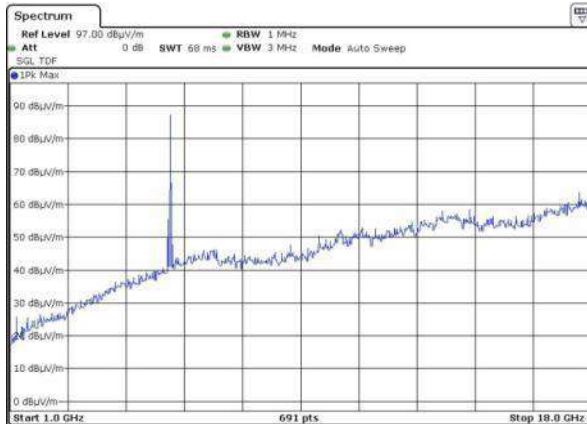
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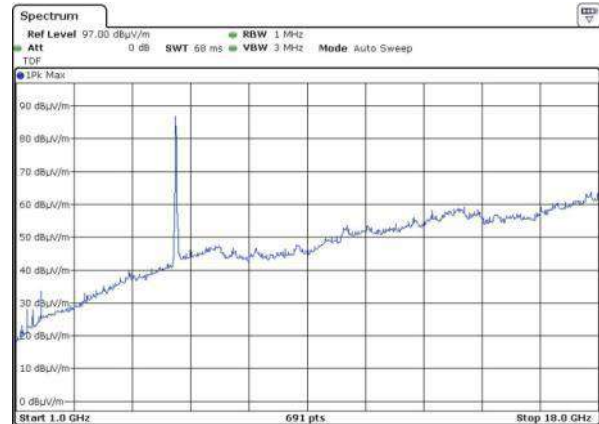
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Unwanted emission
802.11n (HT40) (CH134)

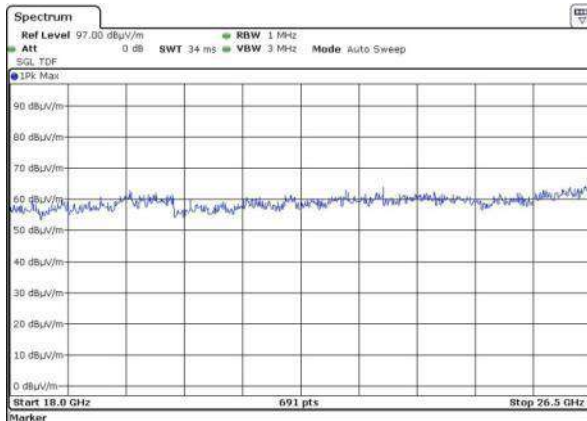
1G to 18GHz V



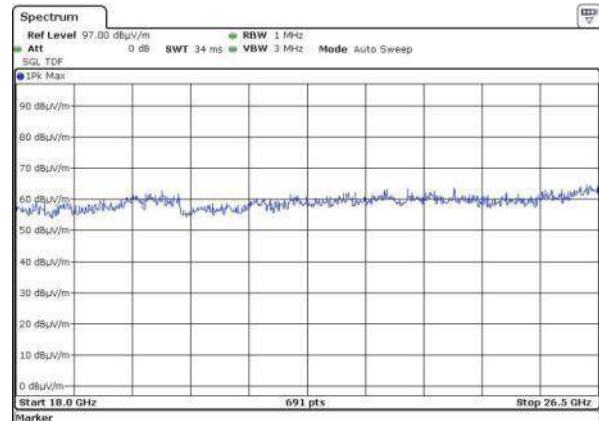
1G to 18GHz H



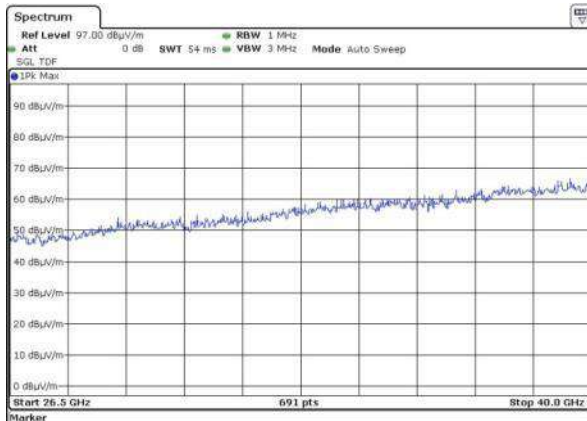
18G – 26.5GHz V



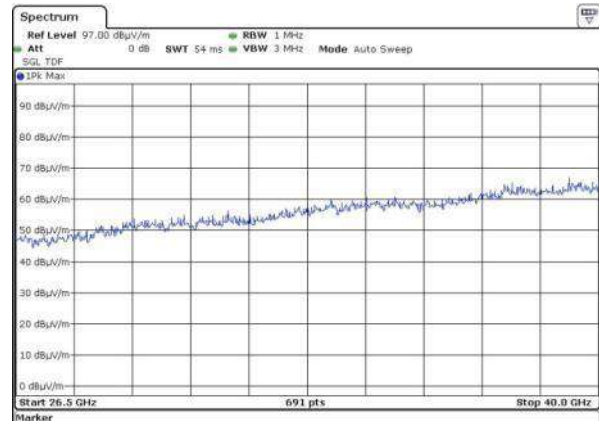
18G – 26.5GHz H



26.5G – 40GHz V



26.5G – 40GHz H



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Conditions of Issuance of Test Reports

1. All samples and goods are accepted by The Hong Kong Standards & Testing Centre Limited (the "Company") solely for testing and reporting in accordance with the following terms and conditions. The Company provides its services on the basis that such terms and conditions constitute express agreement between the Company and any person, firm or company requesting its services (the "Clients").
2. Any report issued by the Company as a result of this application for testing service (the "Report") shall be issued in confidence to the Clients and the Report will be strictly treated as such by the Company. It may not be reproduced either in its entirety or in part and it may not be used for advertising or other unauthorized purposes without the written consent of the Company. The Clients to whom the Report is issued may, however, show or send it, or a certified copy thereof prepared by the Company to his customer, supplier or other persons directly concerned. Subject to clause 3, the Company will not, without the consent of the Clients, enter into any discussion or correspondence with any third party concerning the contents of the Report, unless required by the relevant governmental authorities, laws or court orders.
3. The Company shall be at liberty to disclose the testing-related documents and/or files anytime to any third-party accreditation and/or recognition bodies for audit or other related purposes. No liabilities whatsoever shall attach to the Company's act of disclosure.
4. The Company shall not be called or be liable to be called to give evidence or testimony on the Report in a court of law without its prior written consent, unless required by the relevant governmental authorities, laws or court orders.
5. The results in Report apply only to the sample as received and do not apply to the bulk, unless the sampling has been carried out by the Company and is stated as such in the Report.
6. When a statement of conformity to a specification or standard is provided, the ILAC-G8 Guidance document (and/or IEC Guide 115 in the electrotechnical sector) will be adopted as a decision rule for the determination of conformity unless it is inherent in the requested specification or standard, or otherwise specified in the Report.
7. In the event of the improper use the report as determined by the Company, the Company reserves the right to withdraw it, and to adopt any other additional remedies which may be appropriate.
8. Sample submitted for testing are accepted on the understanding that the Report issued cannot form the basis of, or be the instrument for, any legal action against the Company.
9. The Company will not be liable for or accept responsibility for any loss or damage howsoever arising from the use of information contained in any of its Reports or in any communication whatsoever about its said tests or investigations.
10. Clients wishing to use the Report in court proceedings or arbitration shall inform the Company to that effect prior to submitting the sample for testing.
11. Subject to the variable length of retention time for test data and report stored hereinto as to otherwise specifically required by individual accreditation authorities, the Company will only keep the supporting test data and information of this test report for a period of three years. The data and information will be disposed of after the aforementioned retention period has elapsed. Under no circumstances shall we provide any data and information which has been disposed of after the retention period. Under no circumstances shall we be liable for damages of any kind, including (but not limited to) compensatory damages, lost profits, lost data, or any form of special, incidental, indirect, consequential or punitive damages of any kind, whether based on breach of contract of warranty, tort (including negligence), product liability or otherwise, even if we are informed in advance of the possibility of such damages.
12. Issuance records of the Report are available on the internet at www.stc.group. Further enquiry of validity or verification of the Reports should be addressed to the Company.