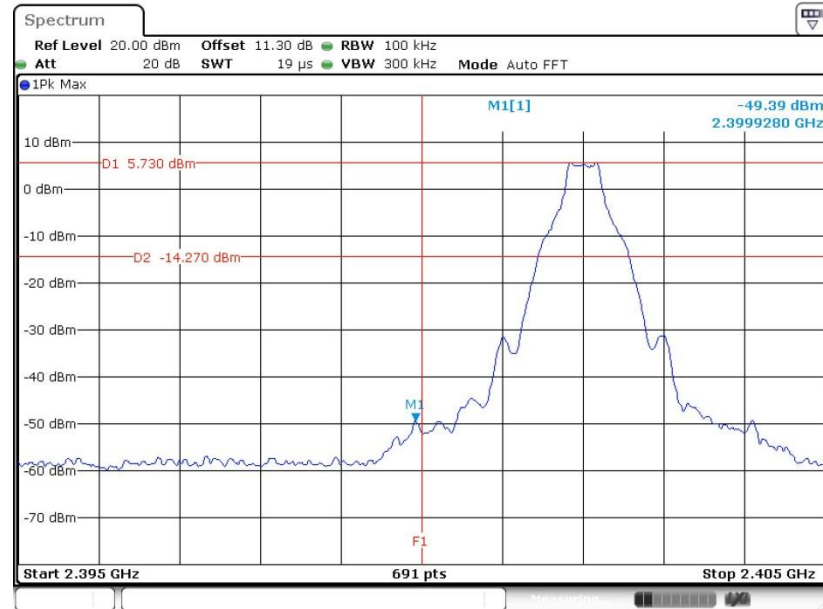


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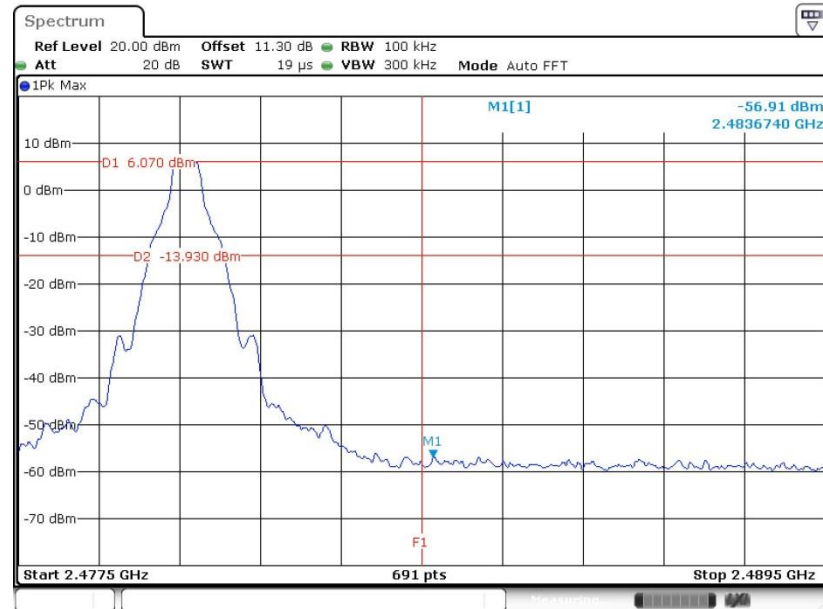
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Low Band Edge Plot on Channel 00



Date: 31.OCT.2020 00:54:00

High Band Edge Plot on Channel 78

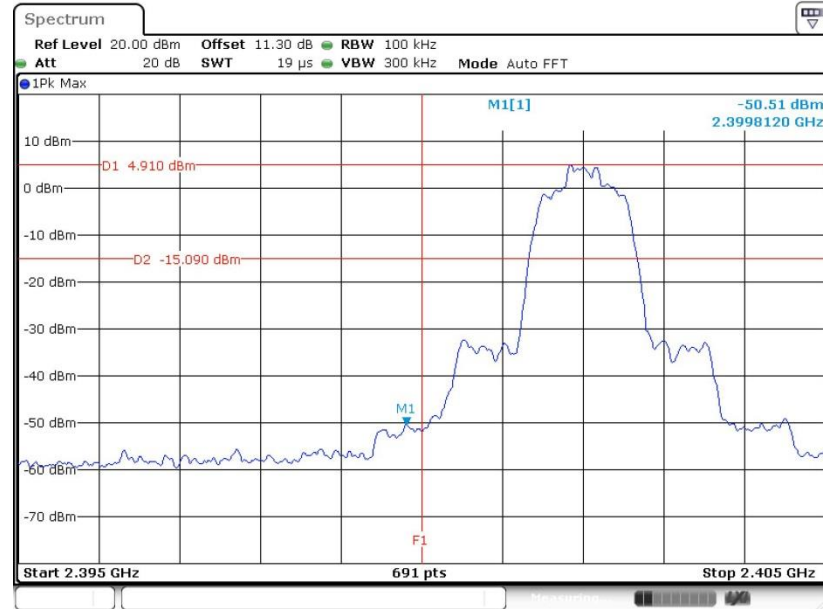


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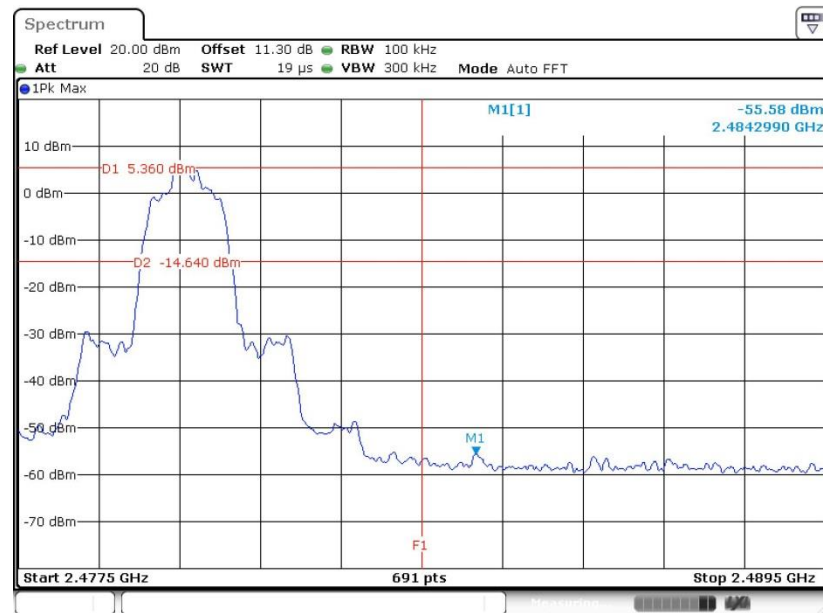
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Low Band Edge Plot on Channel 00



Date: 31.OCT.2020 01:51:25

High Band Edge Plot on Channel 78

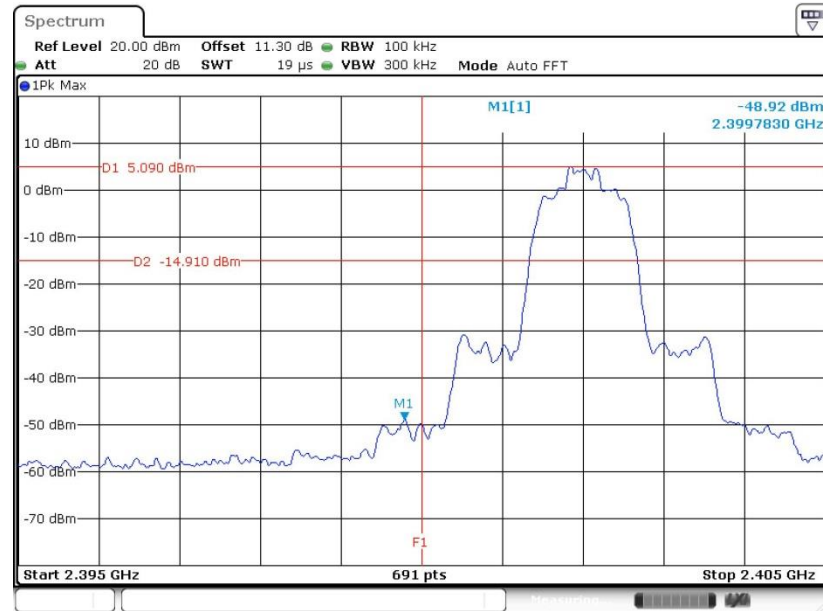


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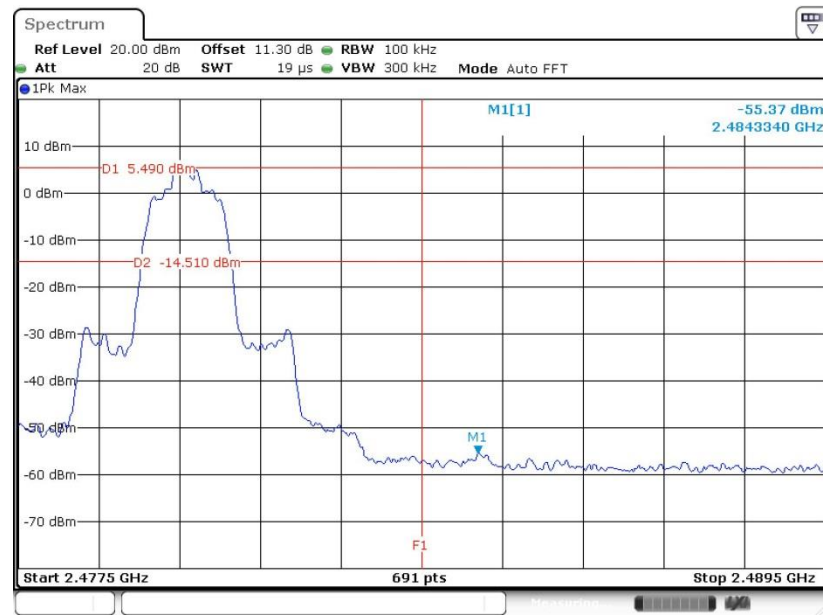
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Low Band Edge Plot on Channel 00



Date: 31.OCT.2020 02:34:36

High Band Edge Plot on Channel 78



Date: 31.OCT.2020 02:54:57

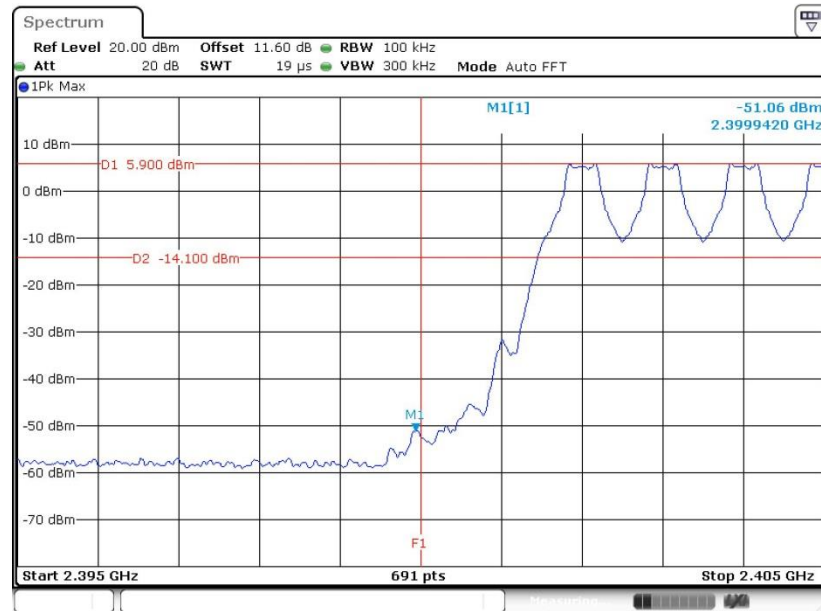


3.6.6 Test Result of Conducted Hopping Mode Band Edges

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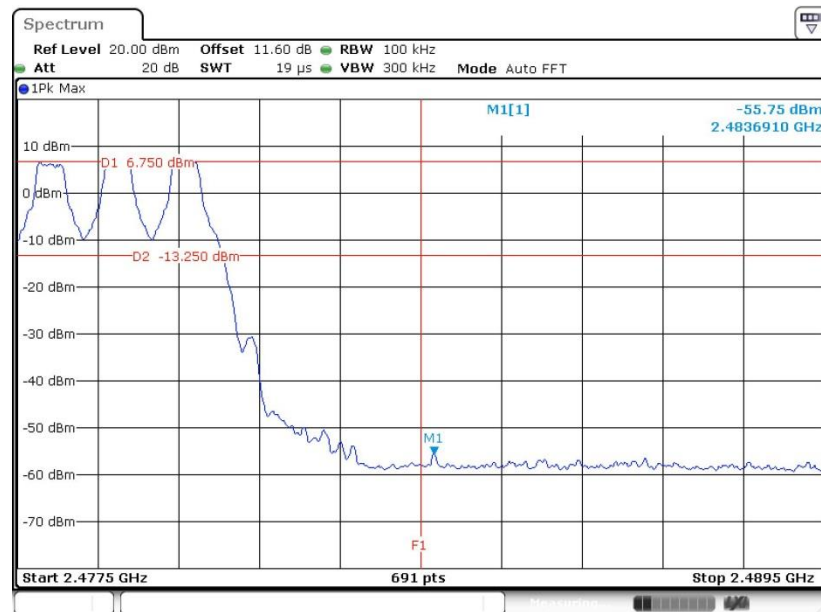
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Hopping Mode Low Band Edge Plot



Date: 30.OCT.2020 04:45:03

Hopping Mode High Band Edge Plot

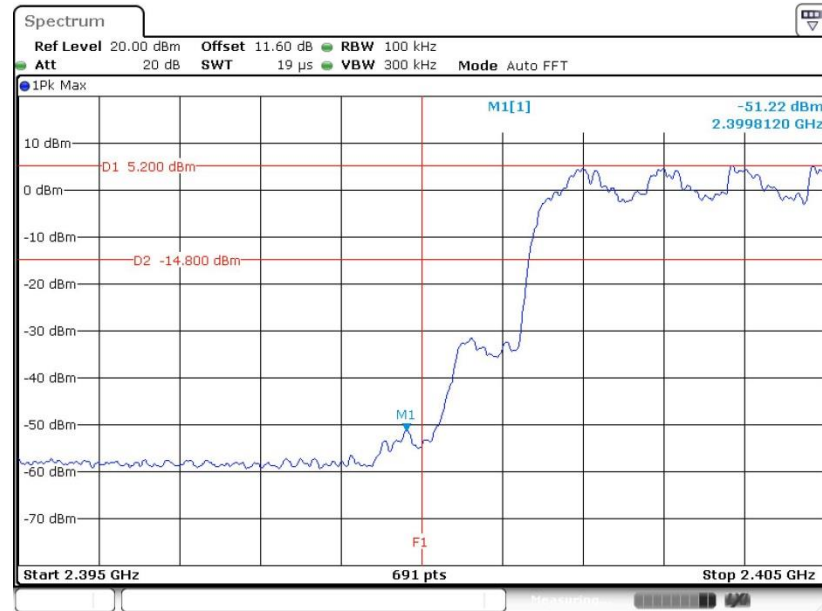


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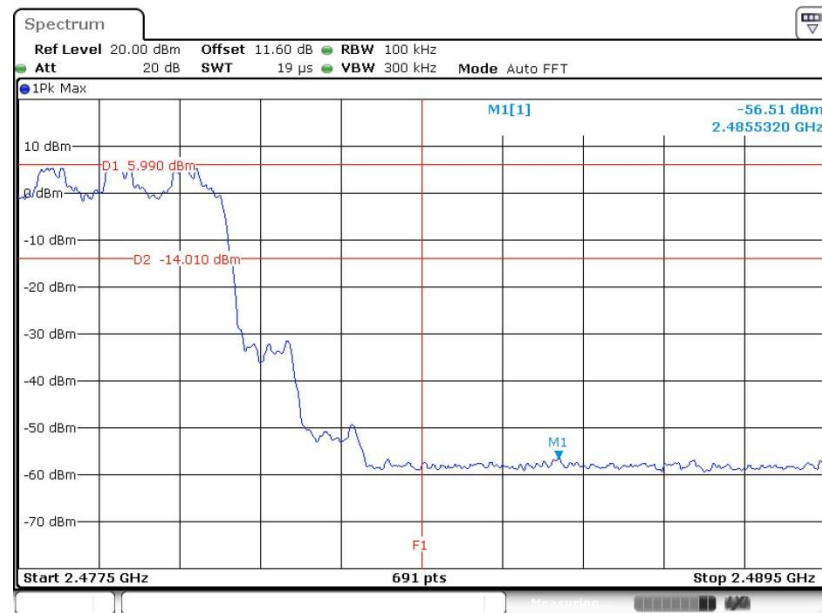
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Hopping Mode Low Band Edge Plot



Date: 30.OCT.2020 04:47:39

Hopping Mode High Band Edge Plot

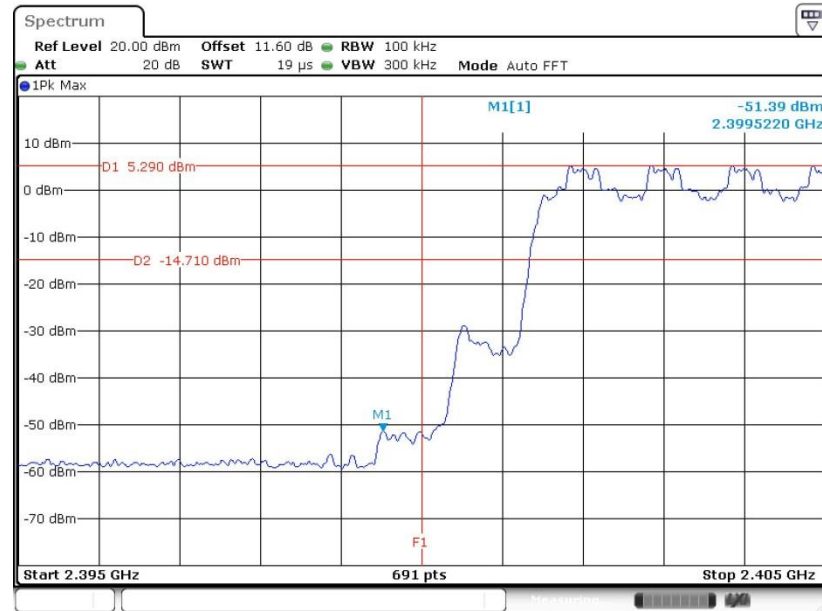


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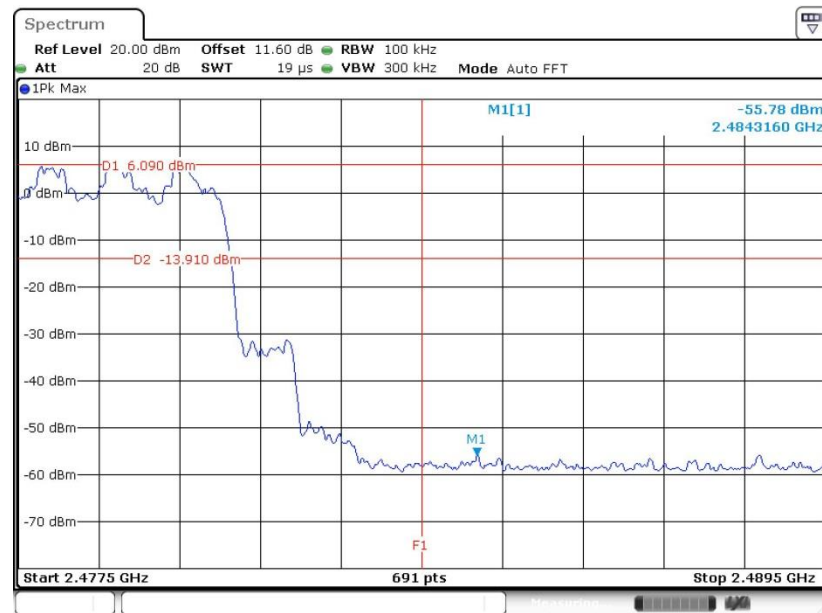
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Hopping Mode Low Band Edge Plot



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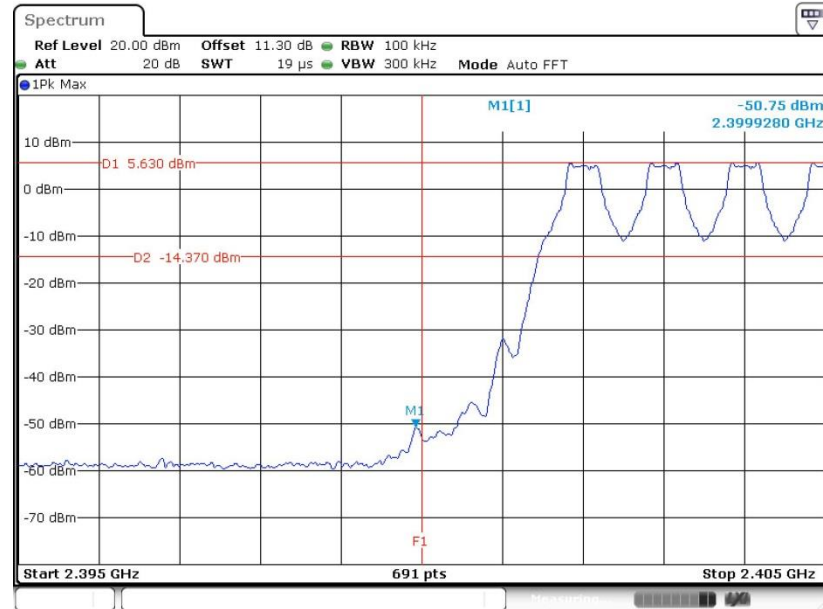


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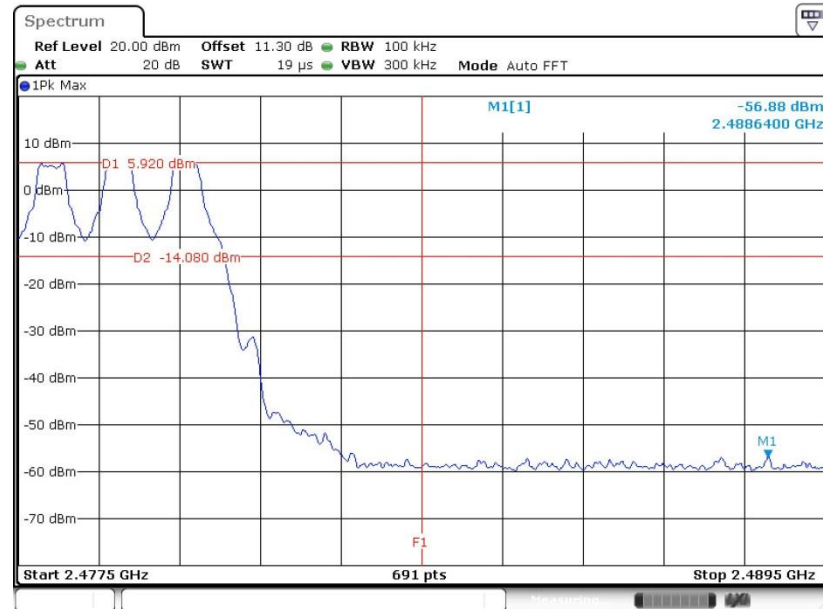
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Hopping Mode Low Band Edge Plot



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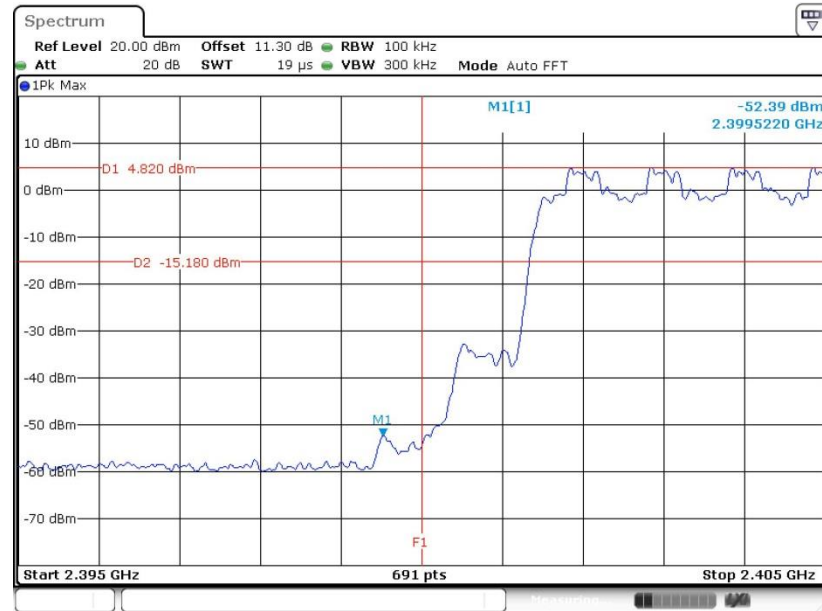


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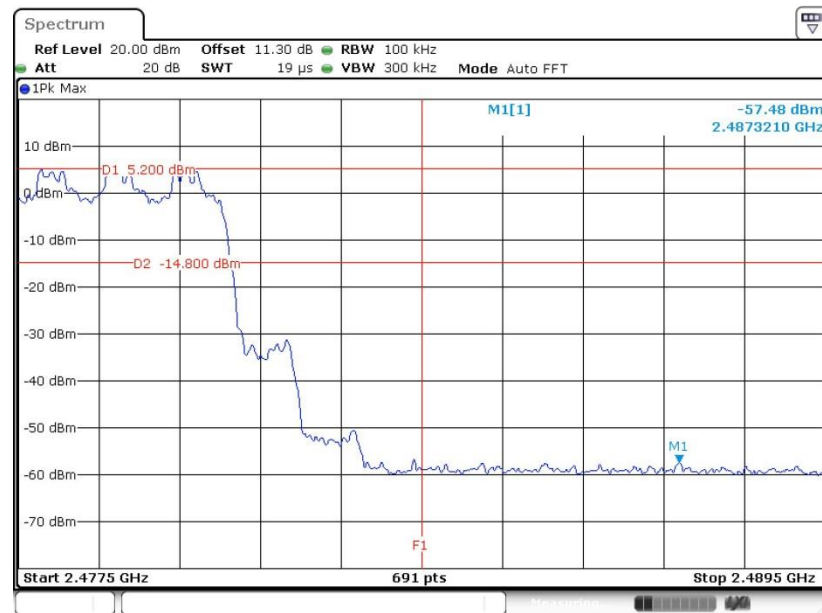
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Hopping Mode Low Band Edge Plot



Date: 30.OCT.2020 23:04:43

Hopping Mode High Band Edge Plot

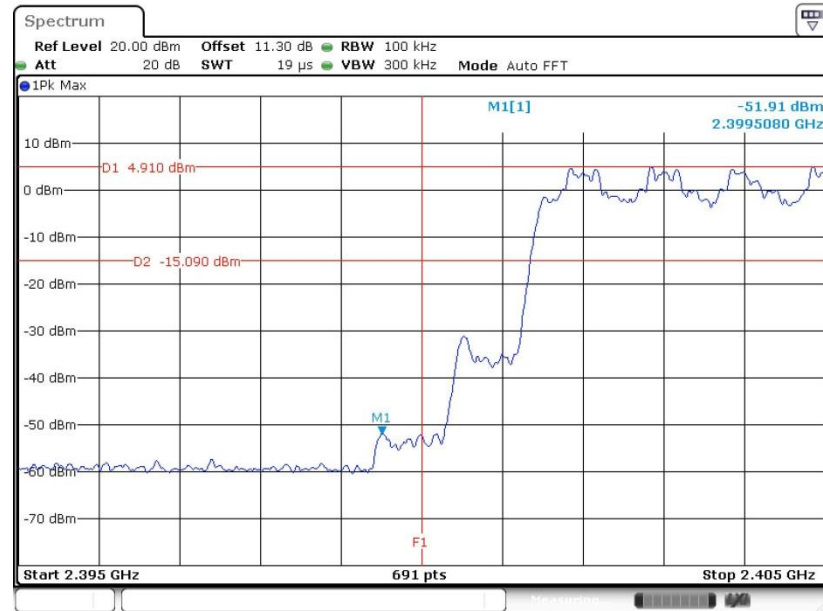


Date: 30.OCT.2020 23:05:51



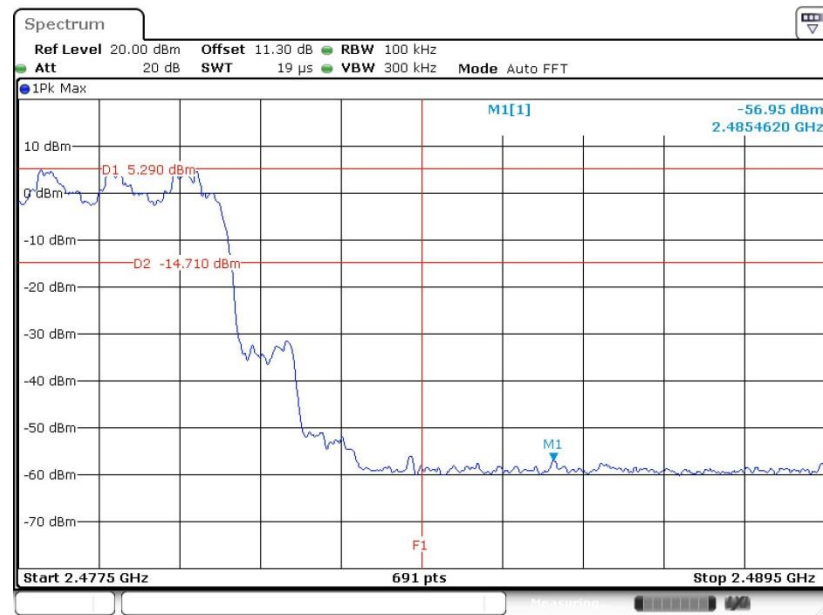
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Hopping Mode Low Band Edge Plot



Date: 30.OCT.2020 23:07:52

Hopping Mode High Band Edge Plot



Date: 30.OCT.2020 23:08:48

3.7 Conducted Spurious Emission Measurement

3.7.1 Limit of Spurious Emission Measurement

In any 100 kHz bandwidth outside the intentional radiation frequency band, the radio frequency power shall be at least 20 dB below the highest level of the radiated power. In addition, radiated emissions which fall in the restricted bands must also comply with the radiated emission limits.

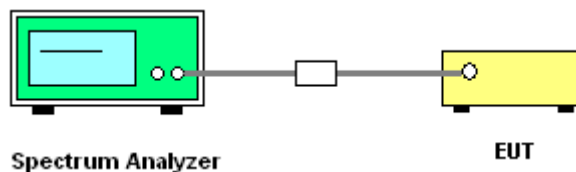
3.7.2 Measuring Instruments

See list of measuring equipment of this test report.

3.7.3 Test Procedure

1. The testing follows ANSI C63.10-2013 clause 7.8.8.
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. Set to the maximum power setting and enable the EUT transmit continuously.
4. Set RBW = 100 kHz, VBW = 300kHz, scan up through 10th harmonic. All harmonics / spurs must be at least 20 dB down from the highest emission level within the authorized band as measured with a 100 kHz RBW.
5. Measure and record the results in the test report.
6. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

3.7.4 Test Setup



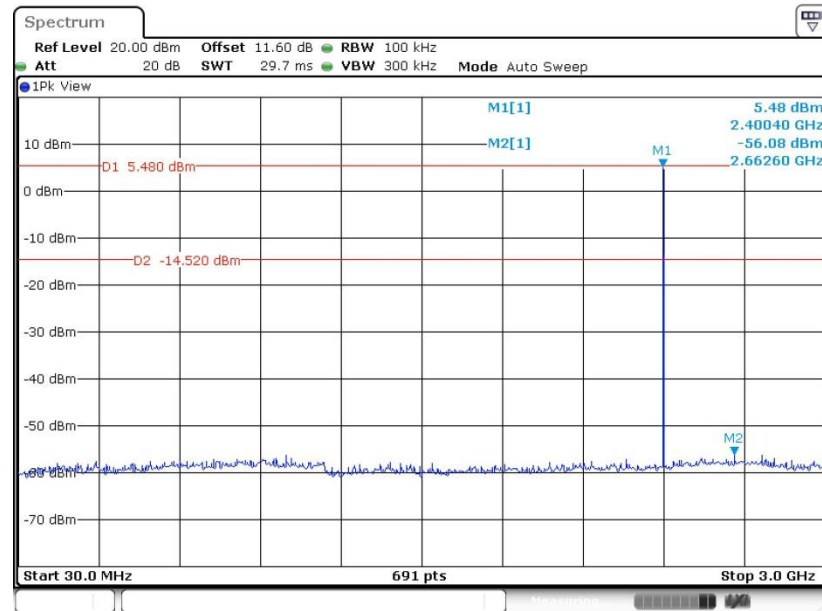


3.7.5 Test Result of Conducted Spurious Emission

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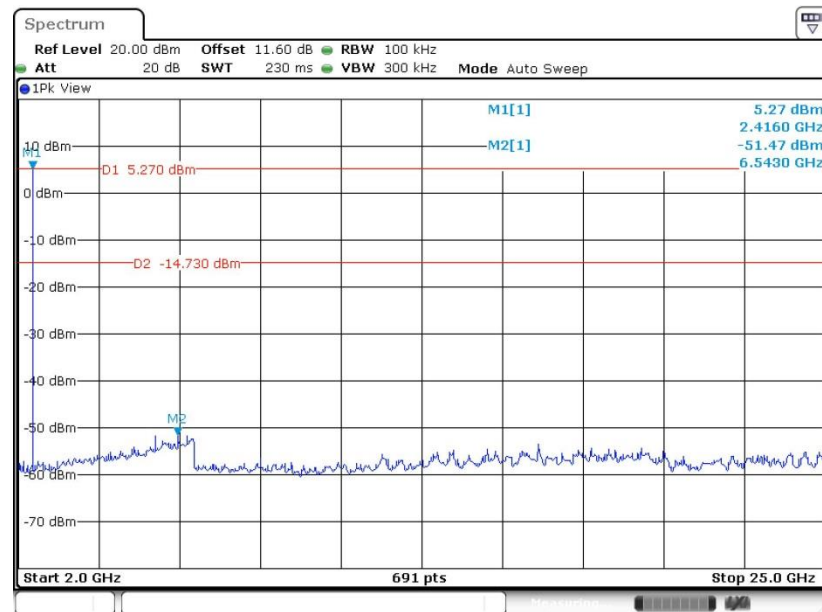
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CSE Plot on Ch 00 between 30MHz ~ 3 GHz



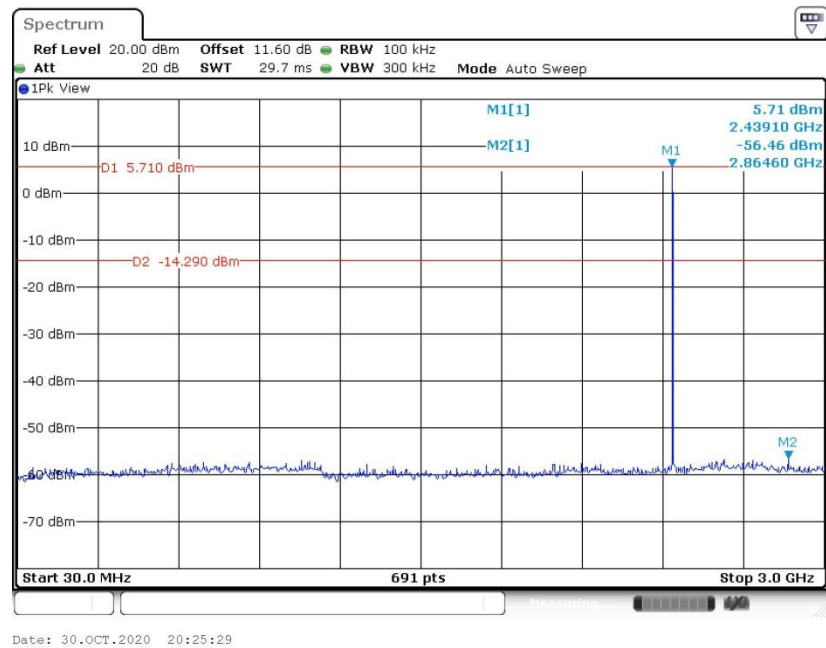
Date: 30.OCT.2020 05:11:20

CSE Plot on Ch 00 between 2 GHz ~ 25 GHz

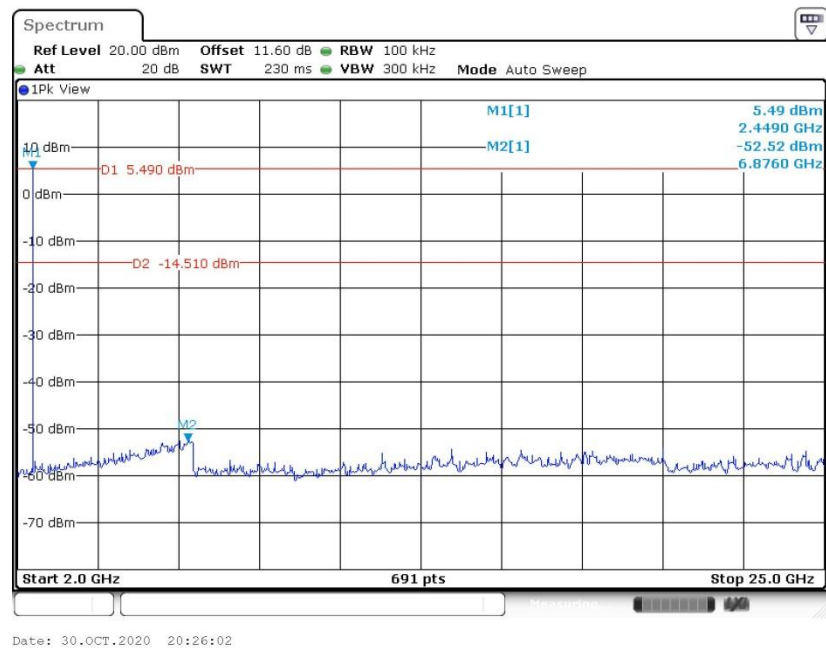


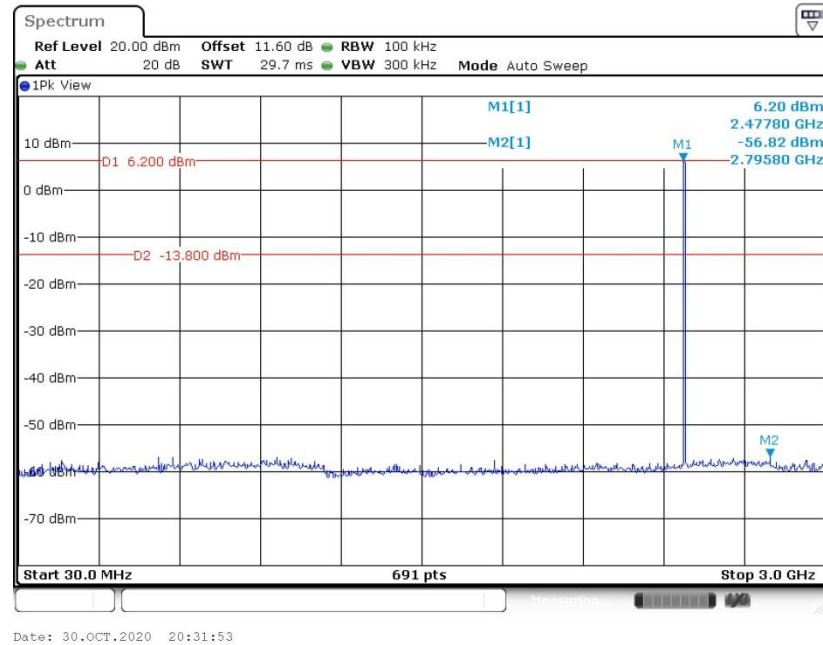
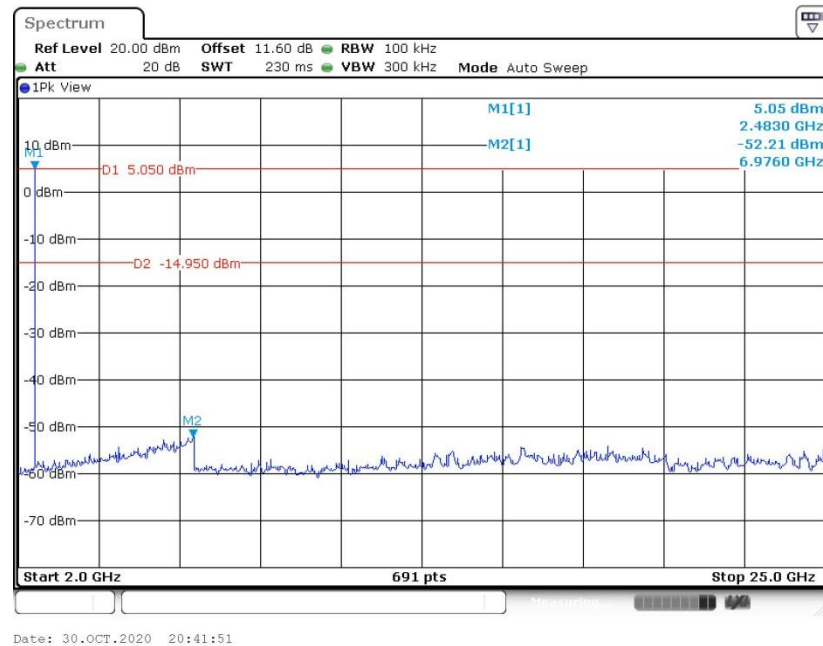
Date: 30.OCT.2020 05:11:51

CSE Plot on Ch 39 between 30MHz ~ 3 GHz



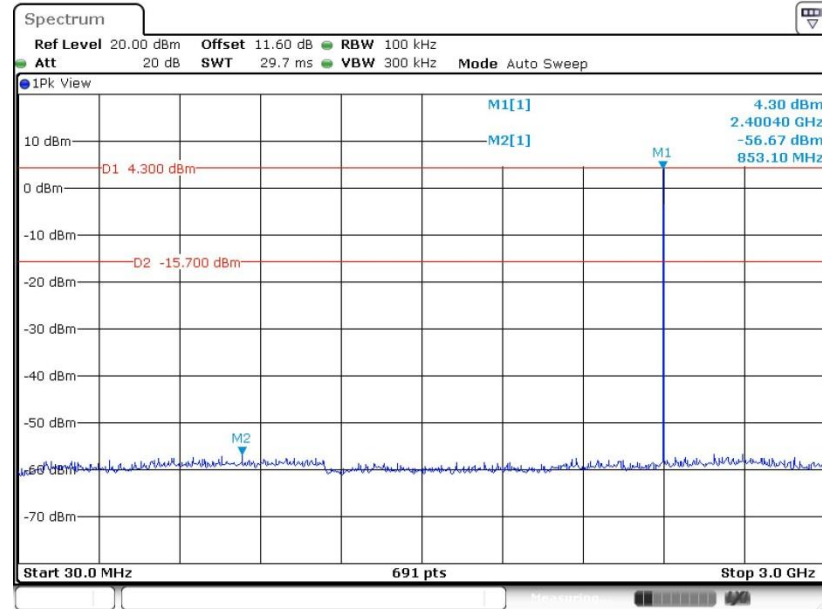
CSE Plot on Ch 39 between 2 GHz ~ 25 GHz



**CSE Plot on Ch 78 between 30MHz ~ 3 GHz****CSE Plot on Ch 78 between 2 GHz ~ 25 GHz**

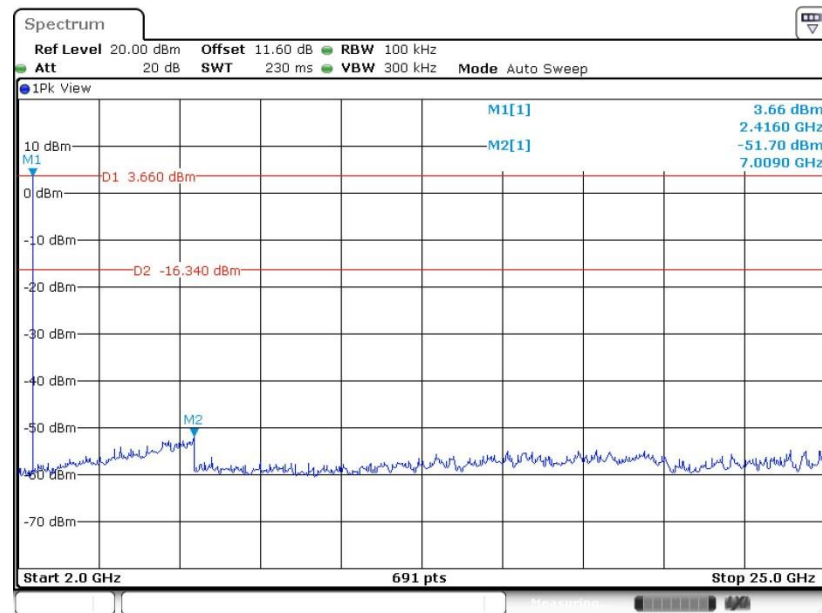
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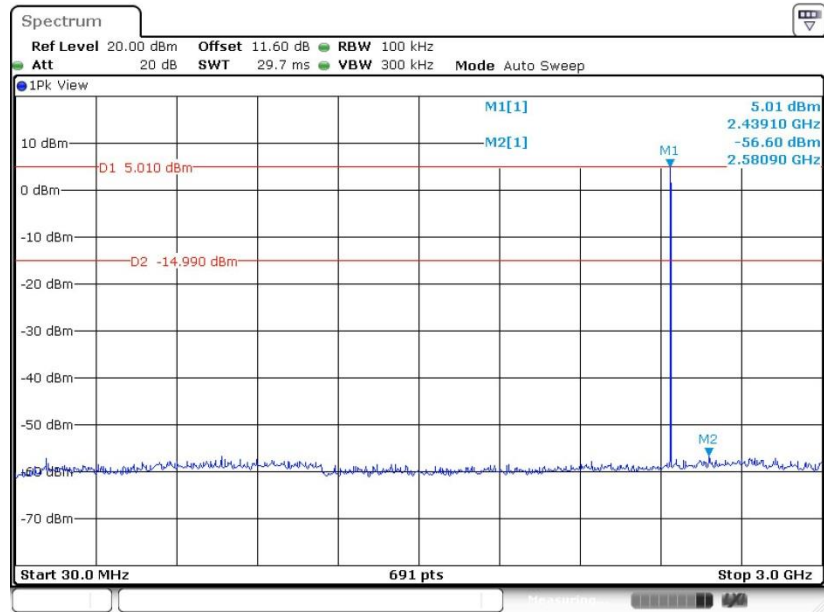


Date: 30.OCT.2020 21:08:44

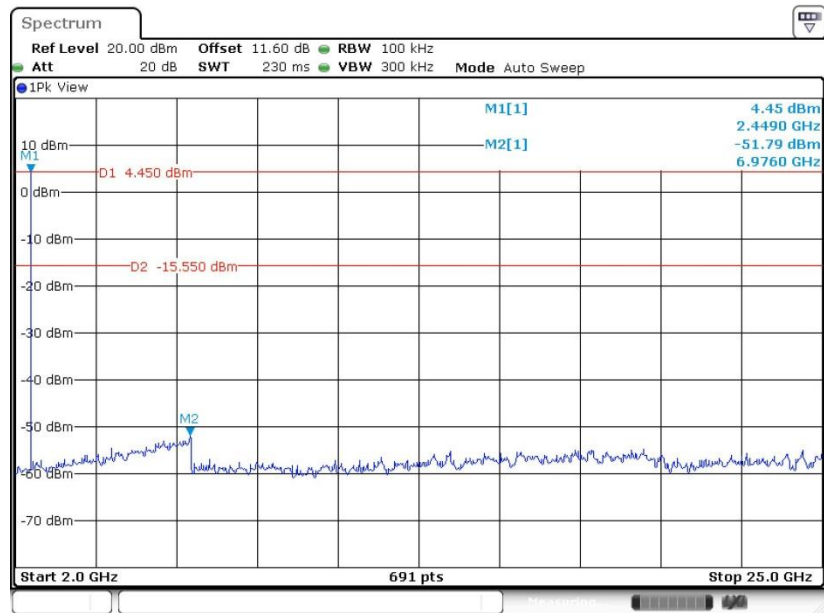
CSE Plot on Ch 00 between 2 GHz ~ 25 GHz



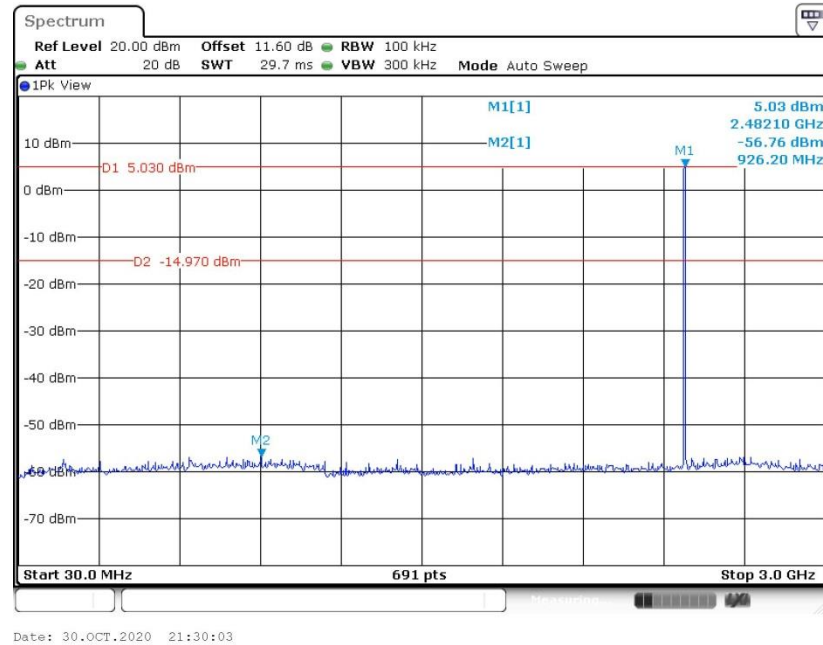
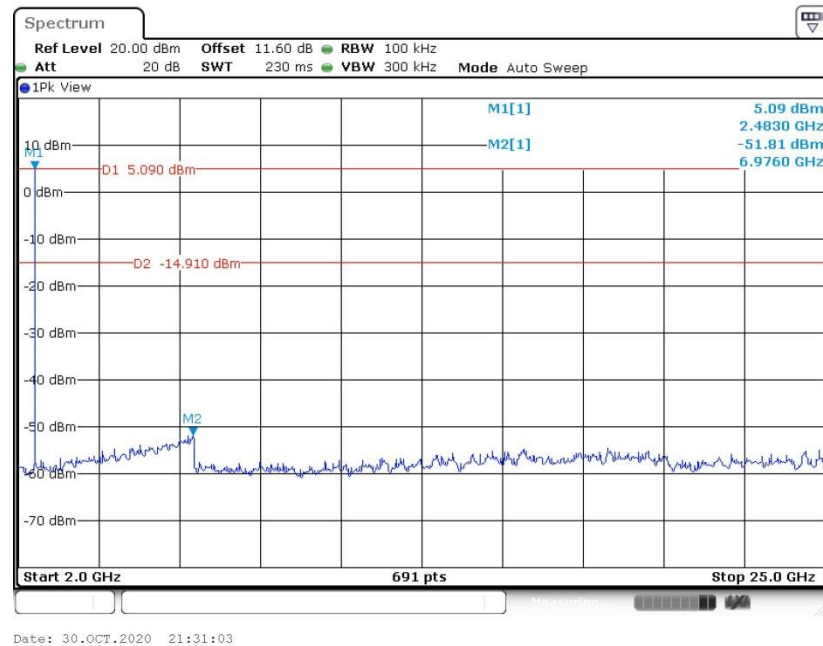
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**CSE Plot on Ch 39 between 30MHz ~ 3 GHz**

Date: 30.OCT.2020 21:18:13

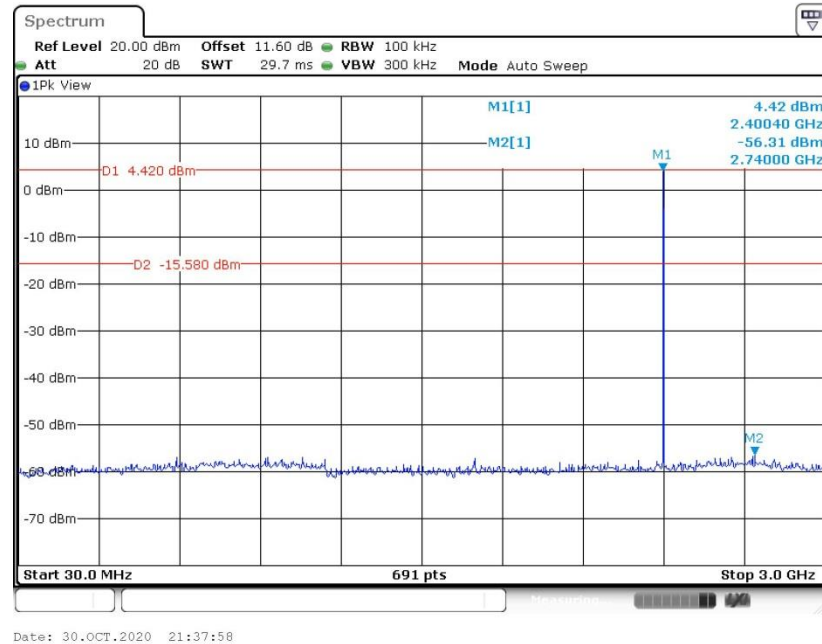
CSE Plot on Ch 39 between 2 GHz ~ 25 GHz

Date: 30.OCT.2020 21:18:44

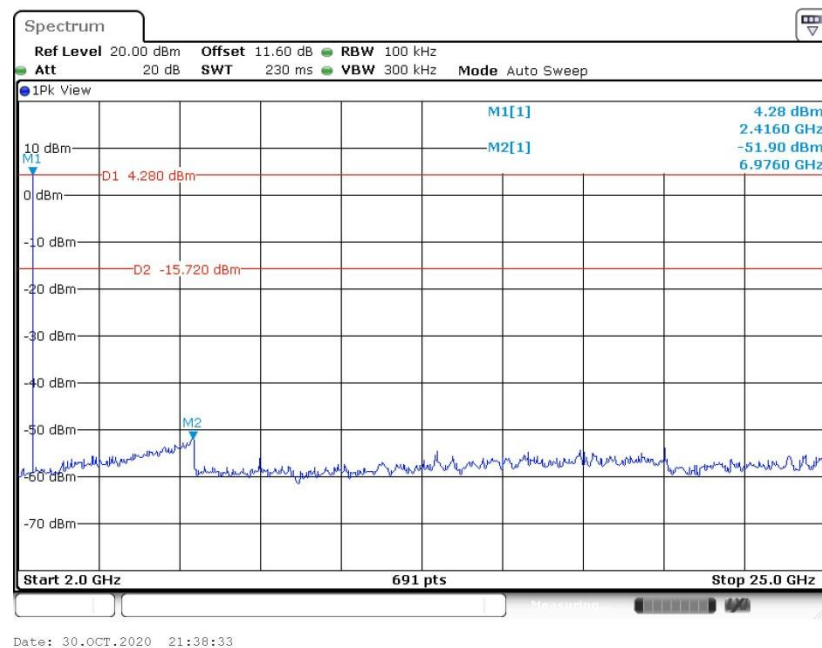
**CSE Plot on Ch 78 between 30MHz ~ 3 GHz****CSE Plot on Ch 78 between 2 GHz ~ 25 GHz**

<3Mbps>

CSE Plot on Ch 00 between 30MHz ~ 3 GHz

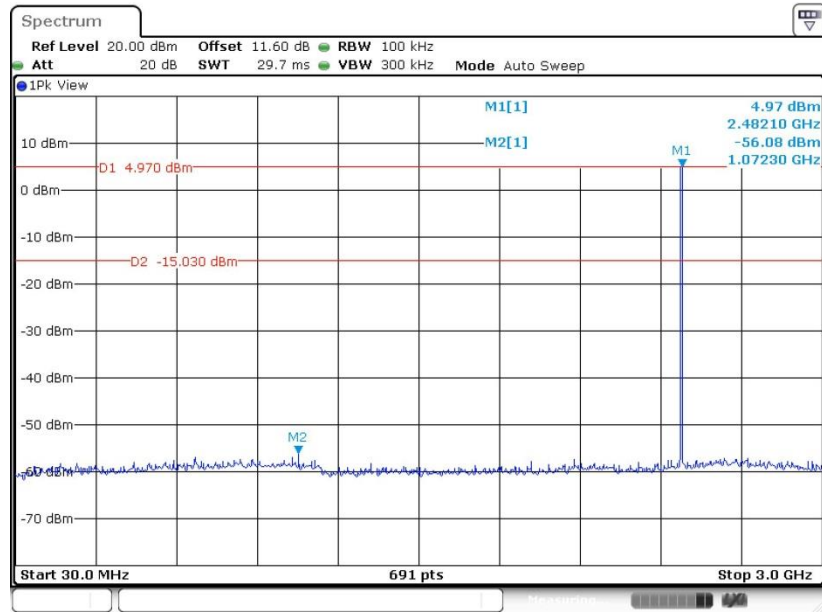


CSE Plot on Ch 00 between 2 GHz ~ 25 GHz



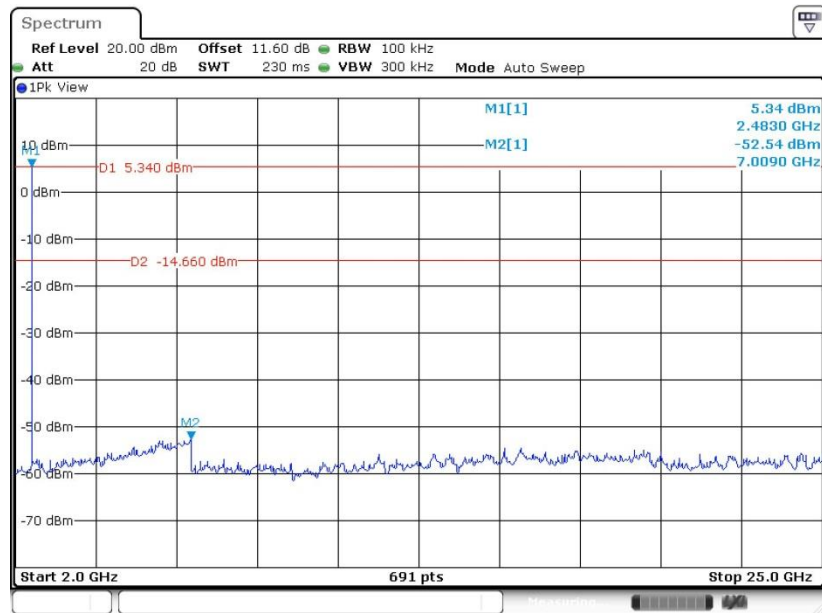


CSE Plot on Ch 78 between 30MHz ~ 3 GHz



Date: 30.OCT.2020 22:28:29

CSE Plot on Ch 78 between 2 GHz ~ 25 GHz

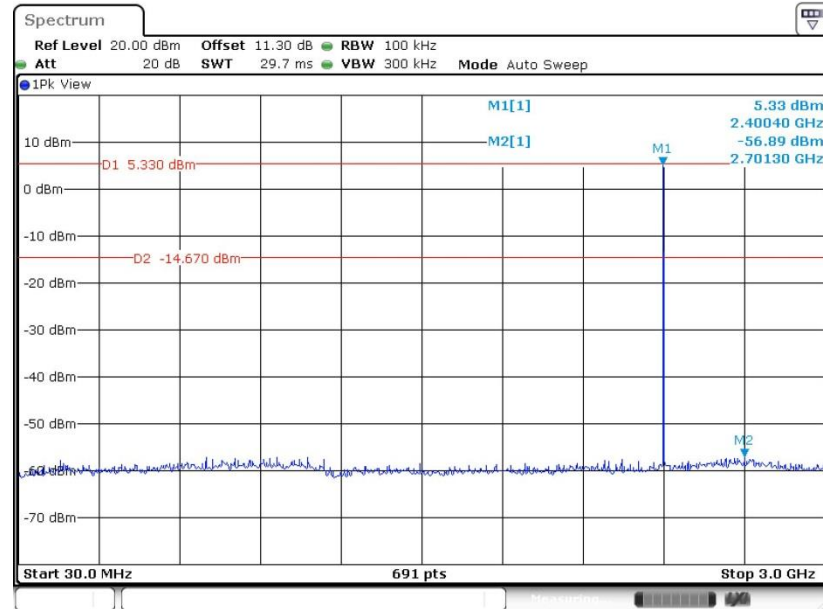


Date: 30.OCT.2020 22:29:04

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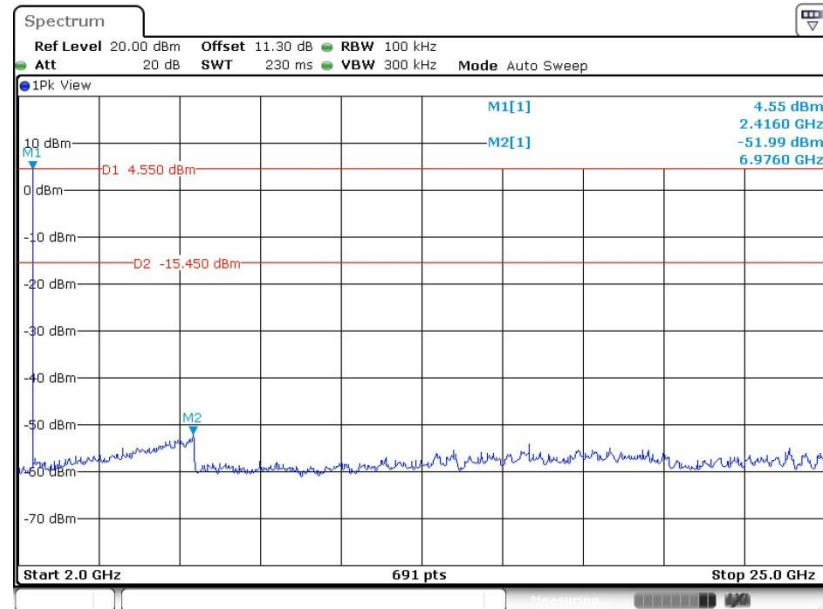
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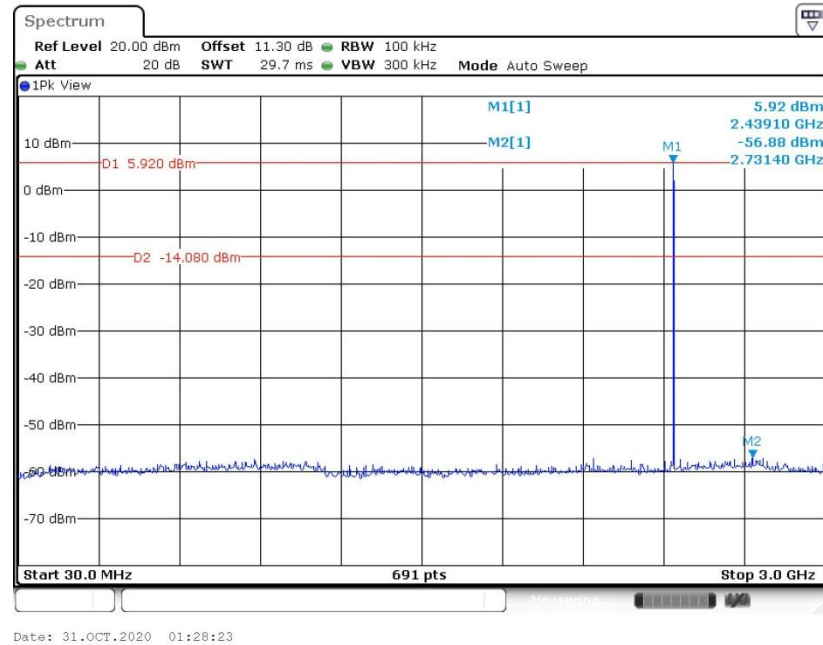
CSE Plot on Ch 00 between 2 GHz ~ 25 GHz



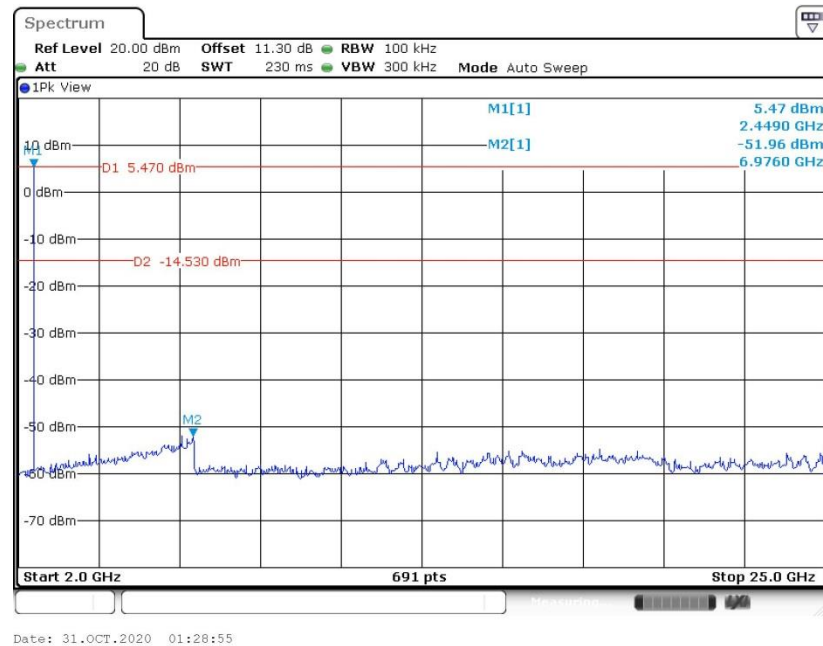
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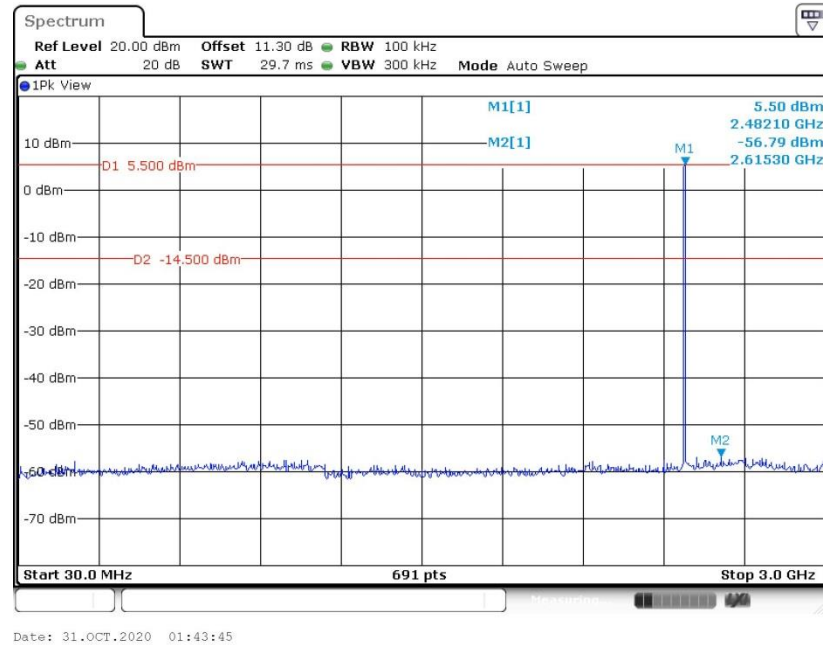
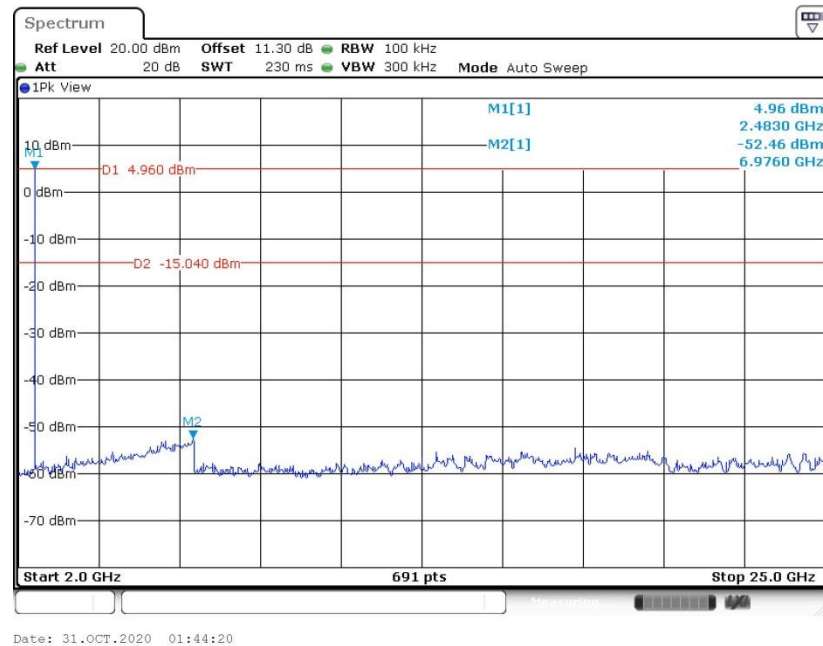


CSE Plot on Ch 39 between 30MHz ~ 3 GHz



CSE Plot on Ch 39 between 2 GHz ~ 25 GHz

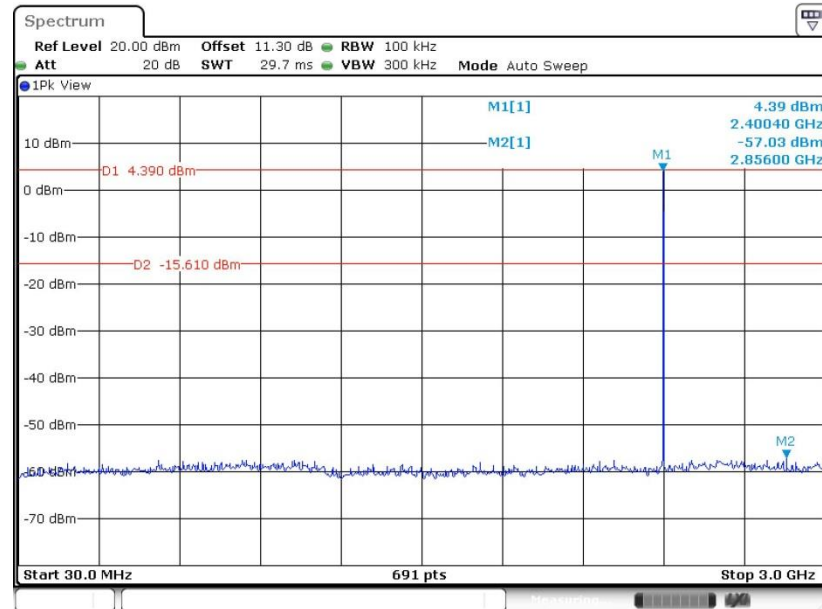


**CSE Plot on Ch 78 between 30MHz ~ 3 GHz****CSE Plot on Ch 78 between 2 GHz ~ 25 GHz**



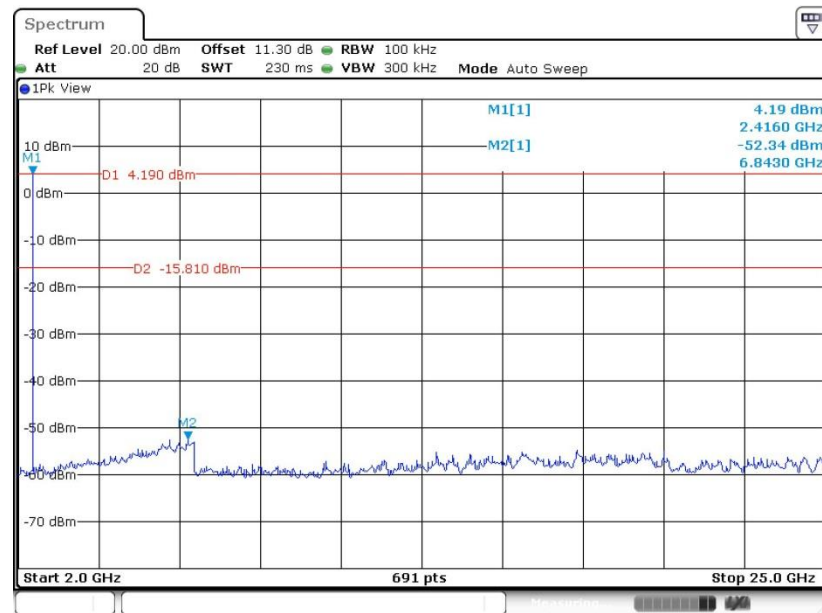
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CSE Plot on Ch 00 between 30MHz ~ 3 GHz

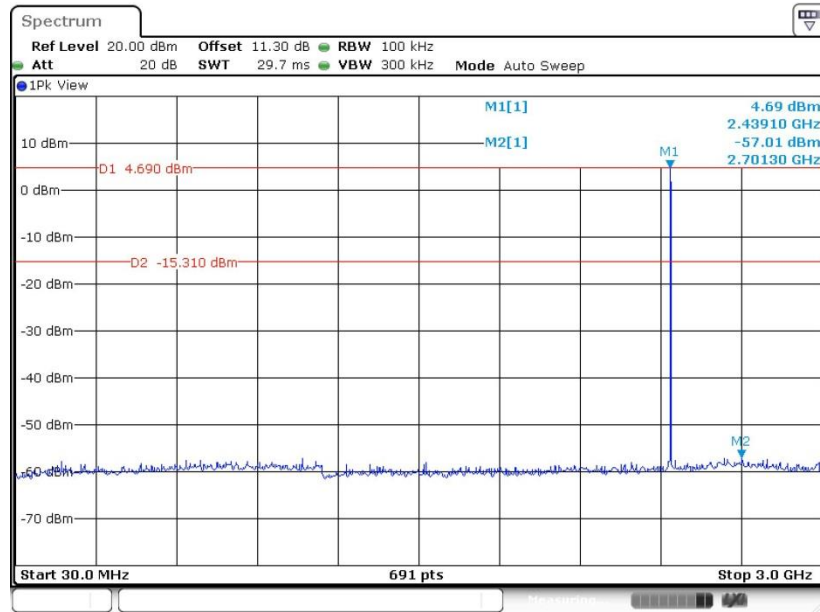


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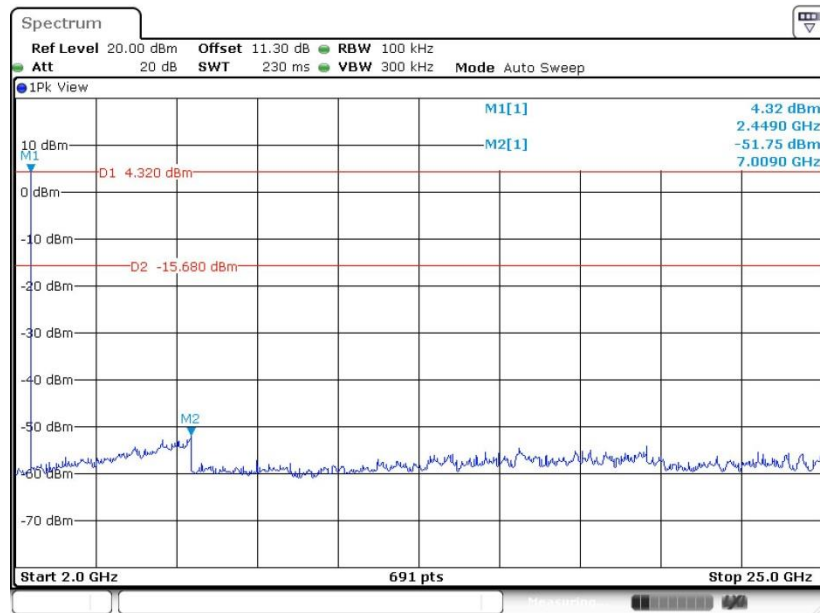
CSE Plot on Ch 00 between 2 GHz ~ 25 GHz



Date: 31.OCT.2020 01:58:54

**CSE Plot on Ch 39 between 30MHz ~ 3 GHz**

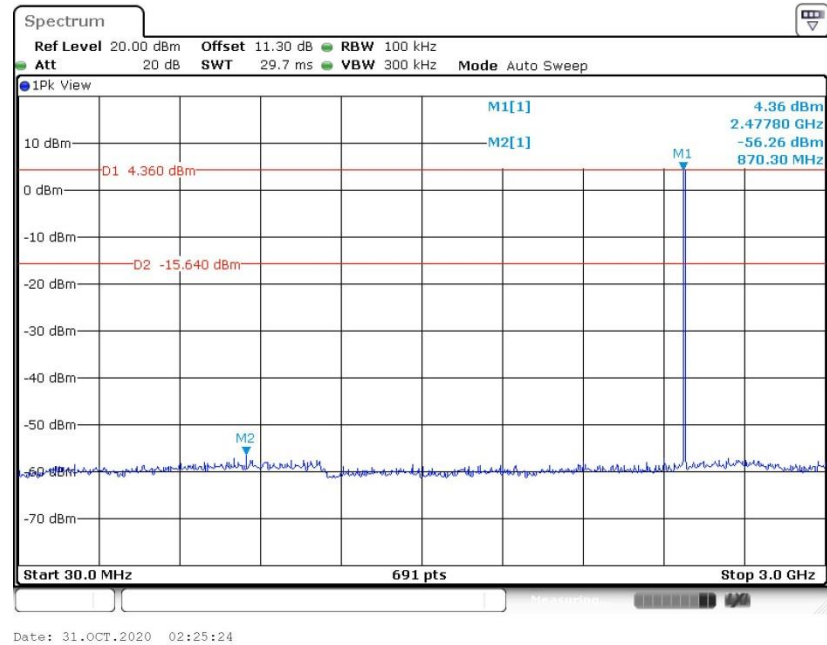
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CSE Plot on Ch 39 between 2 GHz ~ 25 GHz

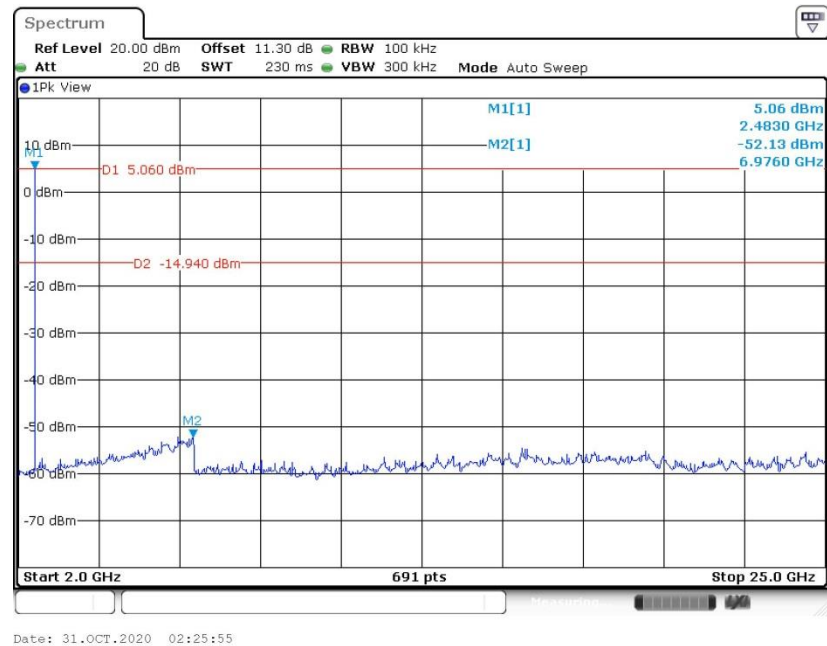
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CSE Plot on Ch 78 between 30MHz ~ 3 GHz

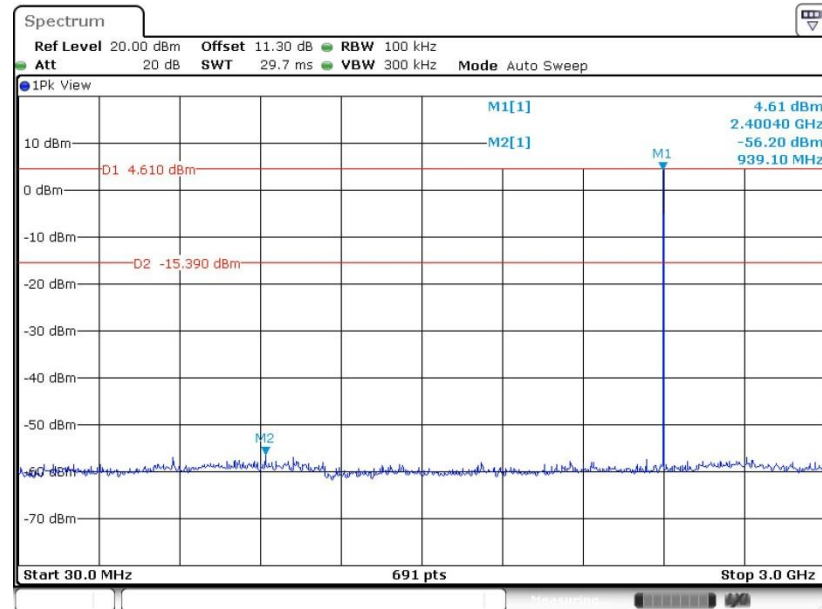


CSE Plot on Ch 78 between 2 GHz ~ 25 GHz



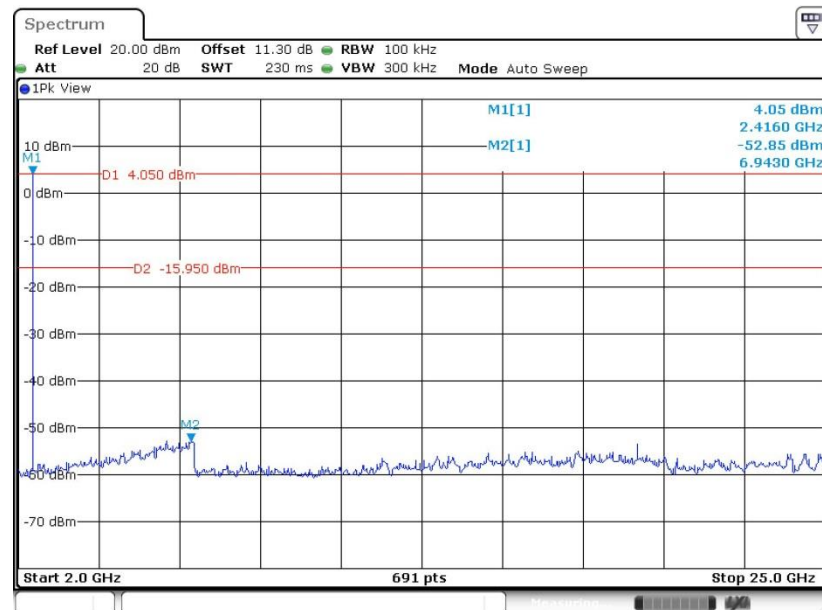
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CSE Plot on Ch 00 between 30MHz ~ 3 GHz



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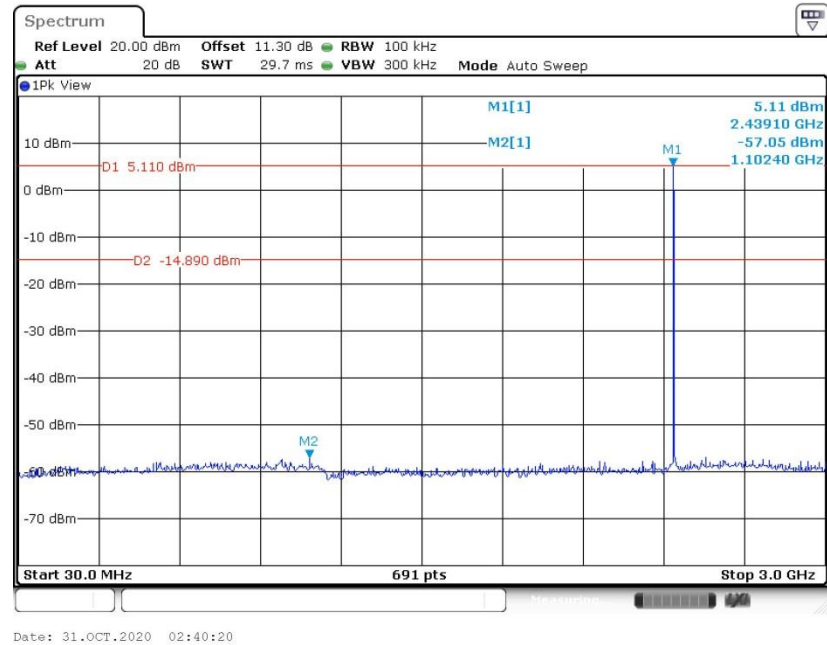
CSE Plot on Ch 00 between 2 GHz ~ 25 GHz



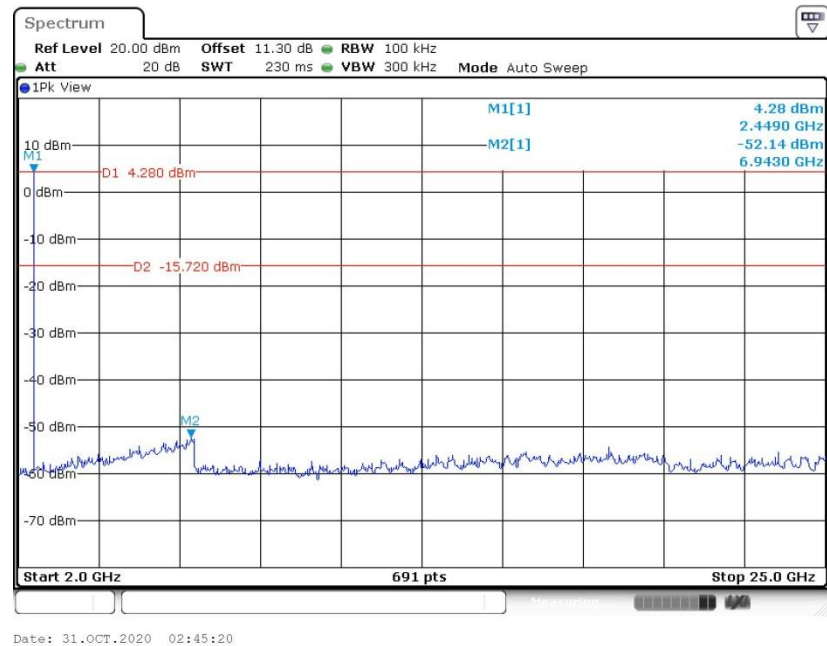
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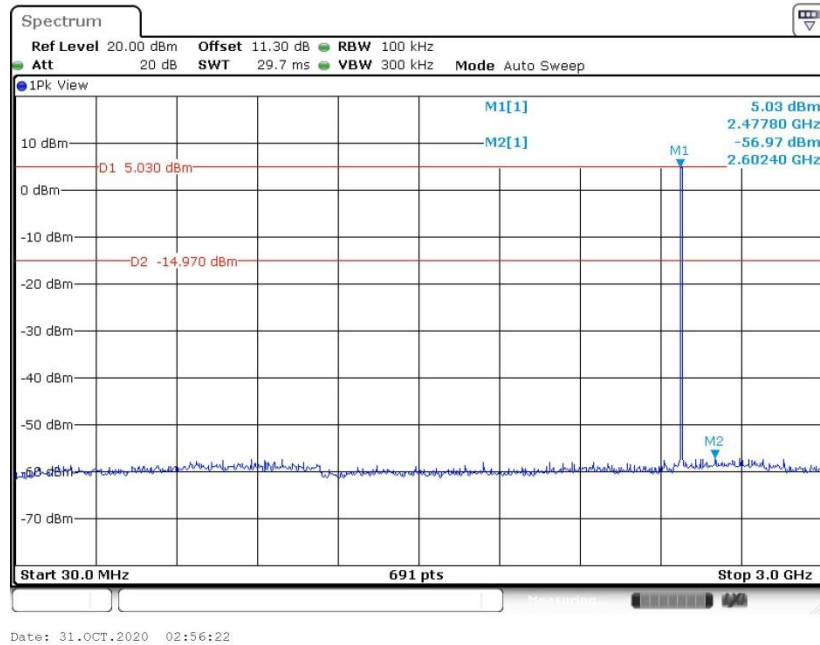
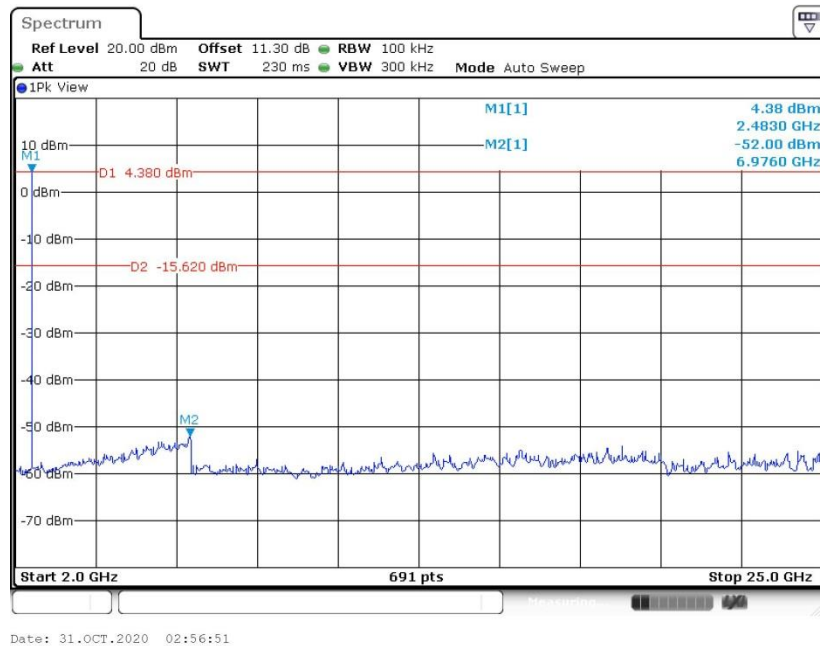


CSE Plot on Ch 39 between 30MHz ~ 3 GHz



CSE Plot on Ch 39 between 2 GHz ~ 25 GHz



**CSE Plot on Ch 78 between 30MHz ~ 3 GHz****CSE Plot on Ch 78 between 2 GHz ~ 25 GHz**

3.8 Radiated Band Edges and Spurious Emission Measurement

3.8.1 Limit of Radiated Band Edges and Spurious Emission

In any 100 kHz bandwidth outside the intentional radiator frequency band, all harmonics/spurious must be at least 20 dB below the highest emission level within the authorized band. In addition, radiated emissions which fall in the restricted bands must also comply with the limits as below.

Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009 – 0.490	2400/F(kHz)	300
0.490 – 1.705	24000/F(kHz)	30
1.705 – 30.0	30	30
30 – 88	100	3
88 – 216	150	3
216 - 960	200	3
Above 960	500	3

3.8.2 Measuring Instruments

See list of measuring equipment of this test report.

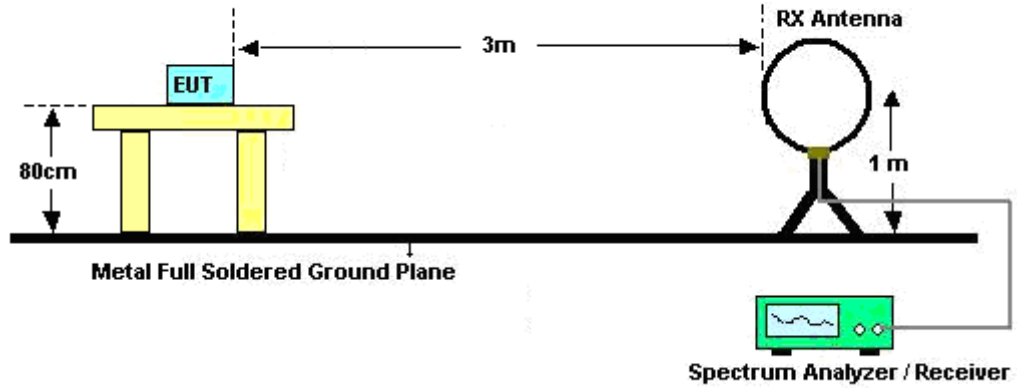
3.8.3 Test Procedures

1. The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively above ground.
2. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
3. For each suspected emission, the EUT was arranged to its worst case and then tune the Antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level to comply with the guidelines.
4. Set to the maximum power setting and enable the EUT transmit continuously.
5. Use the following spectrum analyzer settings:
 - (1) Span shall wide enough to fully capture the emission being measured;
 - (2) Set RBW=100 kHz for $f < 1$ GHz, RBW=1MHz for $f > 1$ GHz ; VBW $\geq$ RBW; Sweep = auto; Detector function = peak; Trace = max hold for peak
 - (3) For average measurement: use duty cycle correction factor method per 15.35(c).
Duty cycle = On time/100 milliseconds
On time = $N_1 * L_1 + N_2 * L_2 + \dots + N_{n-1} * L_{n-1} + N_n * L_n$
Where N_1 is number of type 1 pulses, L_1 is length of type 1 pulses, etc.
Average Emission Level = Peak Emission Level + $20 * \log(\text{Duty cycle})$
6. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level
7. For testing below 1GHz, if the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then peak values of EUT will be reported, otherwise, the emissions will be repeated one by one using the CISPR quasi-peak method and reported.
8. For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than average limit (that means the emission level in average mode also complies with the limit in average mode), then peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.

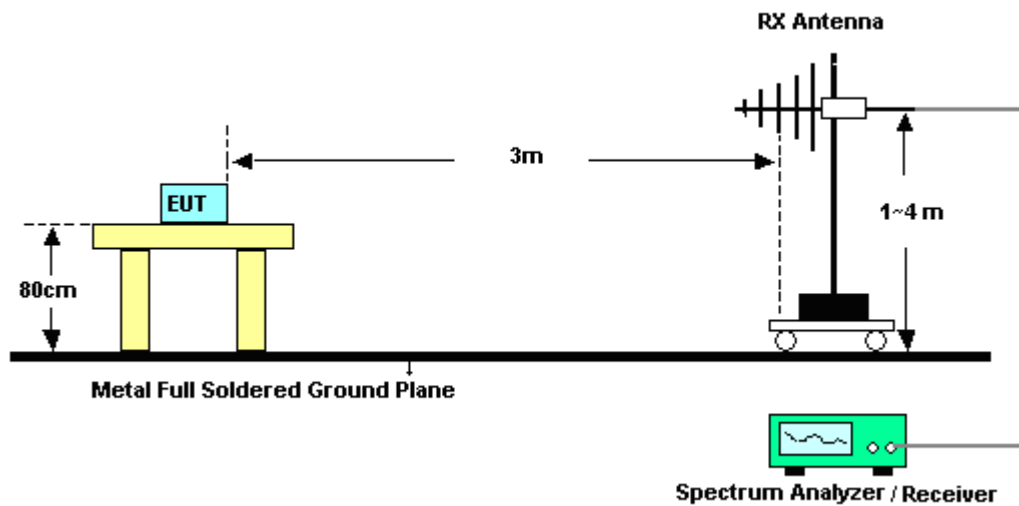
Note: The average levels were calculated from the peak level corrected with duty cycle correction factor (-24.79dB) derived from $20 \log(\text{dwell time}/100\text{ms})$. This correction is only for signals that hop with the fundamental signal, such as band-edge and harmonic. Other spurious signals that are independent of the hopping signal would not use this correction.

3.8.4 Test Setup

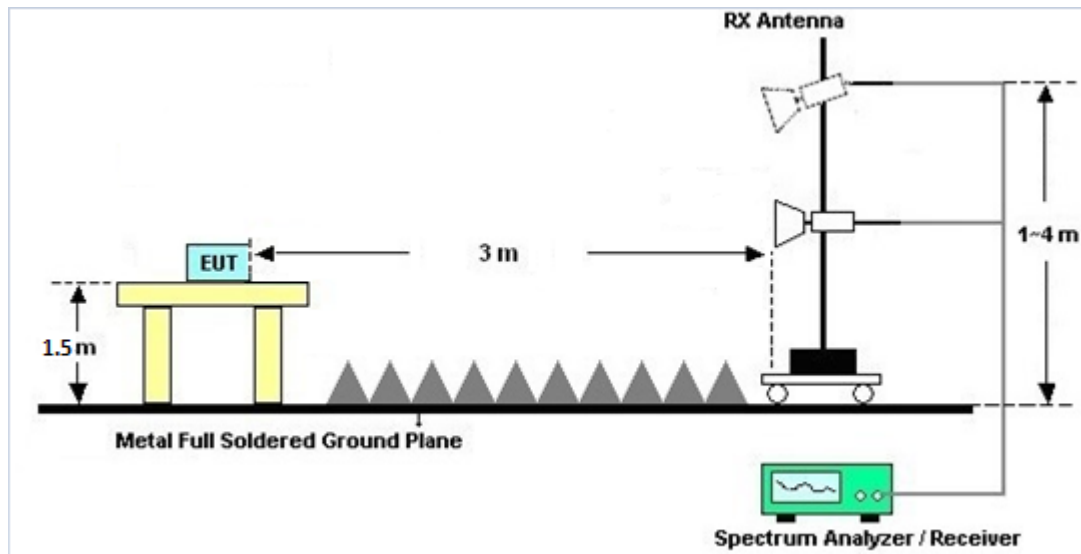
For radiated emissions below 30MHz



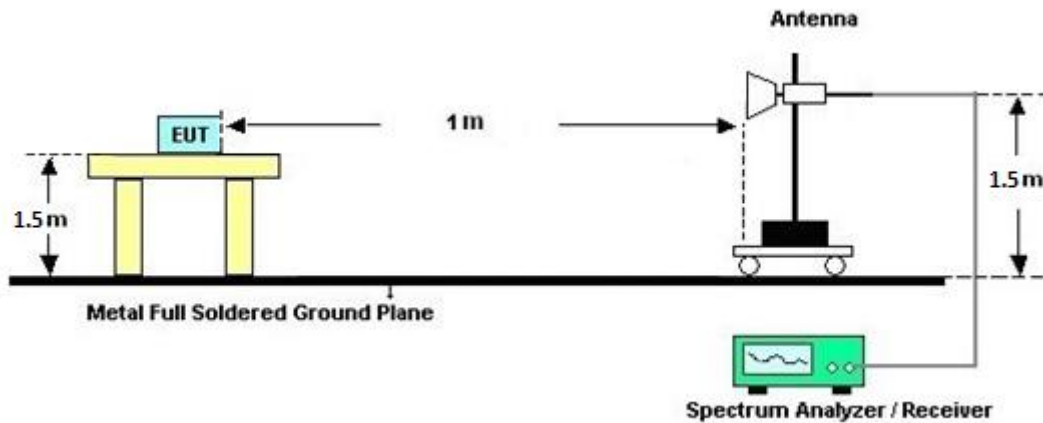
For radiated emissions from 30MHz to 1GHz



For radiated emissions from 1GHz to 18GHz



For radiated emissions above 18GHz



**3.8.5 Test Results of Radiated Spurious Emissions (9 kHz ~ 30 MHz)**

The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line was not reported.

There is a comparison data of both open-field test site and alternative test site - semi-Anechoic chamber according to 414788 D01 Radiated Test Site v01r01, and the result came out very similar.

3.8.6 Test Result of Radiated Spurious at Band Edges

Please refer to Appendix C and D.

3.8.7 Duty Cycle

Please refer to Appendix E.

3.8.8 Test Result of Radiated Spurious Emission (30MHz ~ 10th Harmonic)

Please refer to Appendix C and D.

3.9 AC Conducted Emission Measurement

3.9.1 Limit of AC Conducted Emission

For equipment that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table.

Frequency of emission (MHz)	Conducted limit (dB μ V)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

*Decreases with the logarithm of the frequency.

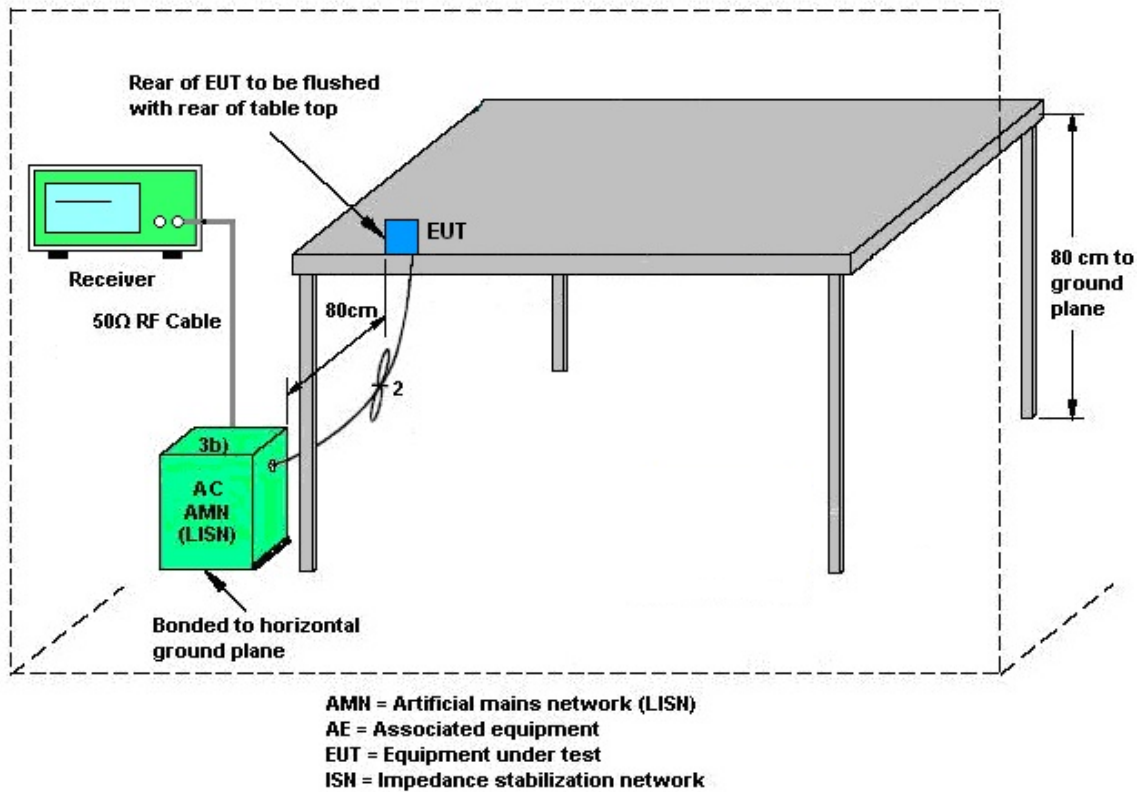
3.9.2 Measuring Instruments

See list of measuring equipment of this test report.

3.9.3 Test Procedures

1. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connecting to the other LISN.
4. The LISN provides 50 ohm coupling impedance for the measuring instrument.
5. The FCC states that a 50 ohm, 50 microhenry LISN should be used.
6. Both sides of AC line were checked for maximum conducted interference.
7. The frequency range from 150 kHz to 30 MHz was searched.
8. Set the test-receiver system to Peak Detect Function and specified bandwidth (IF Bandwidth = 9kHz) with Maximum Hold Mode. Then measurement is also conducted by Average Detector and Quasi-Peak Detector Function respectively.

3.9.4 Test Setup



3.9.5 Test Result of AC Conducted Emission

Please refer to Appendix B.



3.10 Antenna Requirements

3.10.1 Standard Applicable

If directional gain of transmitting antennas is greater than 6dBi, the power shall be reduced by the same level in dB comparing to gain minus 6dBi. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the rule.

3.10.2 Antenna Anti-Replacement Construction

An embedded-in antenna design is used.

3.10.3 Antenna Gain

The antenna peak gain of EUT is less than 6 dBi. Therefore, it is not necessary to reduce maximum peak output power limit.



4 List of Measuring Equipment

Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100488	9 kHz~30 MHz	Jan. 09, 2020	Oct. 19, 2020~Nov. 11, 2020	Jan. 08, 2021	Radiation (03CH13-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-1212	1GHz ~ 18GHz	May 20, 2020	Oct. 19, 2020~Nov. 11, 2020	May 19, 2021	Radiation (03CH13-HY)
Bilog Antenna	TESEQ	CBL 6111D&00800 N1D01N-06	40103&07	30MHz to 1GHz	Apr. 29, 2020	Oct. 19, 2020~Nov. 11, 2020	Apr. 28, 2021	Radiation (03CH13-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170584	18GHz- 40GHz	Dec. 10, 2019	Oct. 19, 2020~Nov. 11, 2020	Dec. 09, 2020	Radiation (03CH13-HY)
Preamplifier	Keysight	83017A	MY53270147	1GHz~26.5GHz	Oct. 28, 2019	Oct. 19, 2020~Nov. 11, 2020	Oct. 27, 2020	Radiation (03CH13-HY)
Preamplifier	Keysight	83017A	MY53270147	1GHz~26.5GHz	Oct. 27, 2020	Oct. 27, 2020~Nov. 11, 2020	Oct. 26, 2021	Radiation (03CH13-HY)
Preamplifier	MITEQ	AMF-7D-0010 1800-30-10P	1590074	1GHz~18GHz	May 19, 2020	Oct. 19, 2020~Nov. 11, 2020	May 18, 2021	Radiation (03CH13-HY)
Amplifier	Sonoma-Instrument	310 N	187282	9KHz~1GHz	Dec. 17, 2019	Oct. 19, 2020~Nov. 11, 2020	Dec. 16, 2020	Radiation (03CH13-HY)
Preamplifier	EMEC	EM18G40G	060715	18GHz ~ 40GHz	Dec. 13, 2019	Oct. 19, 2020~Nov. 11, 2020	Dec. 12, 2020	Radiation (03CH13-HY)
Hygrometer	TECEPIL	DTM-303B	TP140349	N/A	Oct. 02, 2020	Oct. 19, 2020~Nov. 11, 2020	Oct. 01, 2021	Radiation (03CH13-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 126E	0030/126E	30M-18G	Feb. 12, 2020	Oct. 19, 2020~Nov. 11, 2020	Feb. 11, 2021	Radiation (03CH13-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	804793/4	30M-18G	Feb. 12, 2020	Oct. 19, 2020~Nov. 11, 2020	Feb. 11, 2021	Radiation (03CH13-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY24961/4	30M-18G	Feb. 12, 2020	Oct. 19, 2020~Nov. 11, 2020	Feb. 11, 2021	Radiation (03CH13-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	MY2859/2	30M~40GHz	Mar. 12, 2020	Oct. 19, 2020~Nov. 11, 2020	Mar. 11, 2021	Radiation (03CH13-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	MY4274/2	30M~40GHz	Mar. 12, 2020	Oct. 19, 2020~Nov. 11, 2020	Mar. 11, 2021	Radiation (03CH13-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY9837/4 PE	9kHz~30MHz	Mar. 12, 2020	Oct. 19, 2020~Nov. 11, 2020	Mar. 11, 2021	Radiation (03CH13-HY)
Spectrum Analyzer	Keysight	N9010A	MY54200485	10Hz~44GHz	Feb. 10, 2020	Oct. 19, 2020~Nov. 11, 2020	Feb. 09, 2021	Radiation (03CH13-HY)
Controller	EMEC	EM1000	N/A	Control Turn table & Ant Mast	N/A	Oct. 19, 2020~Nov. 11, 2020	N/A	Radiation (03CH13-HY)
Antenna Mast	EMEC	AM-BS-4500-B	N/A	1m~4m	N/A	Oct. 19, 2020~Nov. 11, 2020	N/A	Radiation (03CH13-HY)
Turn Table	EMEC	TT2000	N/A	0~360 Degree	N/A	Oct. 19, 2020~Nov. 11, 2020	N/A	Radiation (03CH13-HY)
Software	AUDIX	E3 6.2009-8-24c	RK-001124	N/A	N/A	Oct. 19, 2020~Nov. 11, 2020	N/A	Radiation (03CH13-HY)
EMI Test Receiver	Keysight	N9038A(MXE)	MY53290045	20Hz ~ 8.4GHz	Jan. 18, 2020	Oct. 19, 2020~Nov. 11, 2020	Jan. 17, 2021	Radiation (03CH13-HY)
Filter	Wainwright	WHKX8-5872. 5-6750-18000-40ST	SN6	6.75GHz High Pass Filter	Mar. 12, 2020	Oct. 19, 2020~Nov. 11, 2020	Mar. 11, 2021	Radiation (03CH13-HY)
Filter	Wainwright	WLK4-1000-15 30-8000-40SS	SN12	1.53GHz Low Pass Filter	Sep. 15, 2020	Oct. 19, 2020~Nov. 11, 2020	Sep. 14, 2021	Radiation (03CH13-HY)



Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
AC Power Source	ChainTek	APC-1000W	N/A	N/A	N/A	Oct. 20, 2020	N/A	Conduction (CO05-HY)
EMI Test Receiver	Rohde & Schwarz	ESR3	102388	9kHz~3.6GHz	Nov. 15, 2019	Oct. 20, 2020	Nov. 14, 2020	Conduction (CO05-HY)
Hygrometer	Testo	608-H1	34913912	N/A	Nov. 07, 2019	Oct. 20, 2020	Nov. 06, 2020	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100080	9kHz~30MHz	Nov. 20, 2019	Oct. 20, 2020	Nov. 19, 2020	Conduction (CO05-HY)
Software	Rohde & Schwarz	EMC32 V10.30	N/A	N/A	N/A	Oct. 20, 2020	N/A	Conduction (CO05-HY)
LF Cable	HUBER + SUHNER	RG-214/U	LF01	N/A	Jan. 02, 2020	Oct. 20, 2020	Jan. 01, 2021	Conduction (CO05-HY)
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100851	N/A	Jan. 02, 2020	Oct. 20, 2020	Jan. 01, 2021	Conduction (CO05-HY)
Hygrometer	Testo	608-H1	34893241	N/A	Mar. 02, 2020	Oct. 22, 2020~ Oct. 31, 2020	Mar. 01, 2021	Conducted (TH05-HY)
Power Meter	Agilent	E4416A	GB412923 44	N/A	Dec. 27, 2019	Oct. 22, 2020~ Oct. 31, 2020	Dec. 26, 2020	Conducted (TH05-HY)
Power Sensor	Agilent	E9327A	US404415 48	50MHz~18GHz	Dec. 27, 2019	Oct. 22, 2020~ Oct. 31, 2020	Dec. 26, 2020	Conducted (TH05-HY)
Signal Analyzer	Rohde & Schwarz	FSV40	101397	10Hz~40GHz	Nov. 15, 2019	Oct. 22, 2020~ Oct. 31, 2020	Nov. 14, 2020	Conducted (TH05-HY)
Switch Box & RF Cable	EM Electronics	EMSW18SE	SW200302	N/A	Mar. 17, 2020	Oct. 22, 2020~ Oct. 31, 2020	Mar. 16, 2021	Conducted (TH05-HY)

5 Uncertainty of Evaluation

Uncertainty of Conducted Emission Measurement (150kHz ~ 30MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	2.3
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Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	4.8
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Uncertainty of Radiated Emission Measurement (1000 MHz ~ 18000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	5.1
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Uncertainty of Radiated Emission Measurement (18000 MHz ~ 40000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	4.8
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Appendix A. Test Result of Conducted Test Items

Test Engineer:	Shiming Liu	Temperature:	23.1~23.4	°C
Test Date:	2020/10/22~2020/10/31	Relative Humidity:	54.1~54.4	%

<Ant. 1>

TEST RESULTS DATA**20dB and 99% Occupied Bandwidth and Hopping Channel Separation**

Mod.	Data Rate	NTX	CH.	Freq. (MHz)	20db BW (MHz)	99% Bandwidth (MHz)	Hopping Channel Separation Measurement (MHz)	Hopping Channel Separation Measurement Limit (MHz)	Pass/Fail
DH	1Mbps	1	0	2402	0.932	0.863	1.003	0.6213	Pass
DH	1Mbps	1	39	2441	0.929	0.865	0.999	0.6194	Pass
DH	1Mbps	1	78	2480	0.929	0.865	1.003	0.6194	Pass
2DH	2Mbps	1	0	2402	1.216	1.161	0.999	0.8104	Pass
2DH	2Mbps	1	39	2441	1.250	1.158	0.999	0.8336	Pass
2DH	2Mbps	1	78	2480	1.250	1.161	0.999	0.8336	Pass
3DH	3Mbps	1	0	2402	1.242	1.149	0.999	0.8278	Pass
3DH	3Mbps	1	39	2441	1.242	1.149	0.999	0.8278	Pass
3DH	3Mbps	1	78	2480	1.242	1.149	1.316	0.8278	Pass

TEST RESULTS DATA**Dwell Time**

Mod.	Hopping Channel Number Rate	Hops Over Occupancy Time(hops)	Package Transfer Time (msec)	Dwell Time (sec)	Limits (sec)	Pass/Fail
Nomal	79	106.67	2.88	0.31	0.4	Pass
AFH	20	53.33	2.88	0.15	0.4	Pass

TEST RESULTS DATA**Peak Power Table**

DH	CH.	NTX	Peak Power (dBm)	Power Limit (dBm)	Test Result
DH1	0	1	7.40	20.97	Pass
	39	1	7.90	20.97	Pass
	78	1	8.10	20.97	Pass
2DH1	0	1	7.09	20.97	Pass
	39	1	7.55	20.97	Pass
	78	1	7.79	20.97	Pass
3DH1	0	1	7.38	20.97	Pass
	39	1	7.85	20.97	Pass
	78	1	8.08	20.97	Pass

TEST RESULTS DATA**Average Power Table****(Reporting Only)**

DH	CH.	NTX	Average Power (dBm)	Duty Factor (dB)
DH1	0	1	7.17	5.22
	39	1	7.67	5.22
	78	1	8.00	5.22
2DH1	0	1	5.37	5.12
	39	1	5.81	5.12
	78	1	6.17	5.12
3DH1	0	1	5.42	5.12
	39	1	5.87	5.12
	78	1	6.19	5.12

TEST RESULTS DATA**Number of Hopping Frequency**

Number of Hopping (Channel)	Adaptive Frequency Hopping (Channel)	Limits (Channel)	Pass/Fail
79	20	> 15	Pass

<Ant. 2>

TEST RESULTS DATA**20dB and 99% Occupied Bandwidth and Hopping Channel Separation**

Mod.	Data Rate	NTX	CH.	Freq. (MHz)	20db BW (MHz)	99% Bandwidth (MHz)	Hopping Channel Separation Measurement (MHz)	Hopping Channel Separation Measurement Limit (MHz)	Pass/Fail
DH	1Mbps	1	0	2402	0.932	0.865	0.999	0.6213	Pass
DH	1Mbps	1	39	2441	0.929	0.865	0.999	0.6194	Pass
DH	1Mbps	1	78	2480	0.929	0.865	1.311	0.6194	Pass
2DH	2Mbps	1	0	2402	1.250	1.158	0.999	0.8336	Pass
2DH	2Mbps	1	39	2441	1.250	1.158	1.003	0.8336	Pass
2DH	2Mbps	1	78	2480	1.250	1.161	0.999	0.8336	Pass
3DH	3Mbps	1	0	2402	1.246	1.146	0.999	0.8307	Pass
3DH	3Mbps	1	39	2441	1.246	1.149	0.999	0.8307	Pass
3DH	3Mbps	1	78	2480	1.246	1.149	1.159	0.8307	Pass

TEST RESULTS DATA**Dwell Time**

Mod.	Hopping Channel Number Rate	Hops Over Occupancy Time(hops)	Package Transfer Time (msec)	Dwell Time (sec)	Limits (sec)	Pass/Fail
Nomal	79	106.67	2.90	0.31	0.4	Pass
AFH	20	53.33	2.90	0.15	0.4	Pass

TEST RESULTS DATA**Peak Power Table**

DH	CH.	NTX	Peak Power (dBm)	Power Limit (dBm)	Test Result
DH1	0	1	7.55	20.97	Pass
	39	1	7.80	20.97	Pass
	78	1	7.68	20.97	Pass
2DH1	0	1	7.17	20.97	Pass
	39	1	7.43	20.97	Pass
	78	1	7.30	20.97	Pass
3DH1	0	1	7.54	20.97	Pass
	39	1	7.79	20.97	Pass
	78	1	7.64	20.97	Pass

TEST RESULTS DATA**Average Power Table****(Reporting Only)**

DH	CH.	NTX	Average Power (dBm)	Duty Factor (dB)
DH1	0	1	7.27	5.22
	39	1	7.42	5.22
	78	1	7.38	5.22
2DH1	0	1	5.45	5.15
	39	1	5.85	5.15
	78	1	5.70	5.15
3DH1	0	1	5.47	5.12
	39	1	5.88	5.12
	78	1	5.77	5.12

TEST RESULTS DATA**Number of Hopping Frequency**

Number of Hopping (Channel)	Adaptive Frequency Hopping (Channel)	Limits (Channel)	Pass/Fail
79	20	> 15	Pass



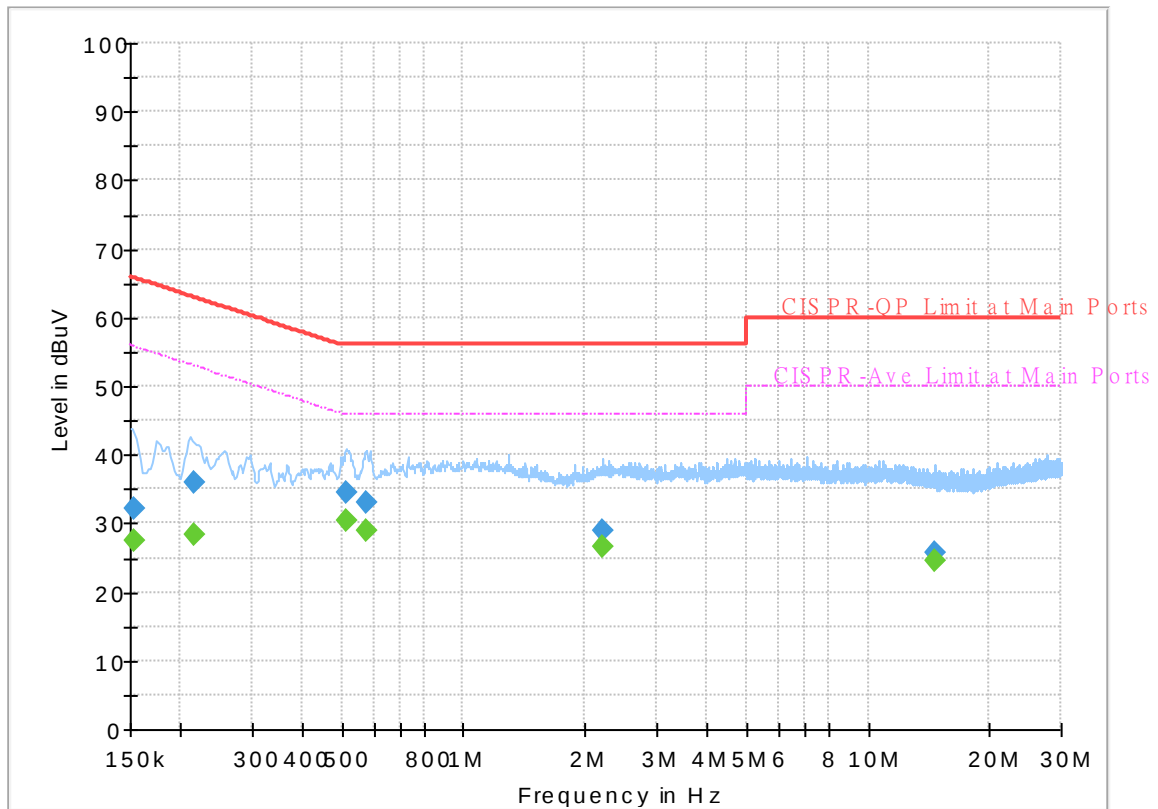
Appendix B. AC Conducted Emission Test Results

Test Engineer :	Howard Huang and Bor-Shiang Huang	Temperature :	24~26°C
		Relative Humidity :	38~41%

EUT Information

Report NO : 072932-01
Test Mode : Mode 1
Test Voltage : 120Vac/60Hz
Phase : Line

Full Spectrum



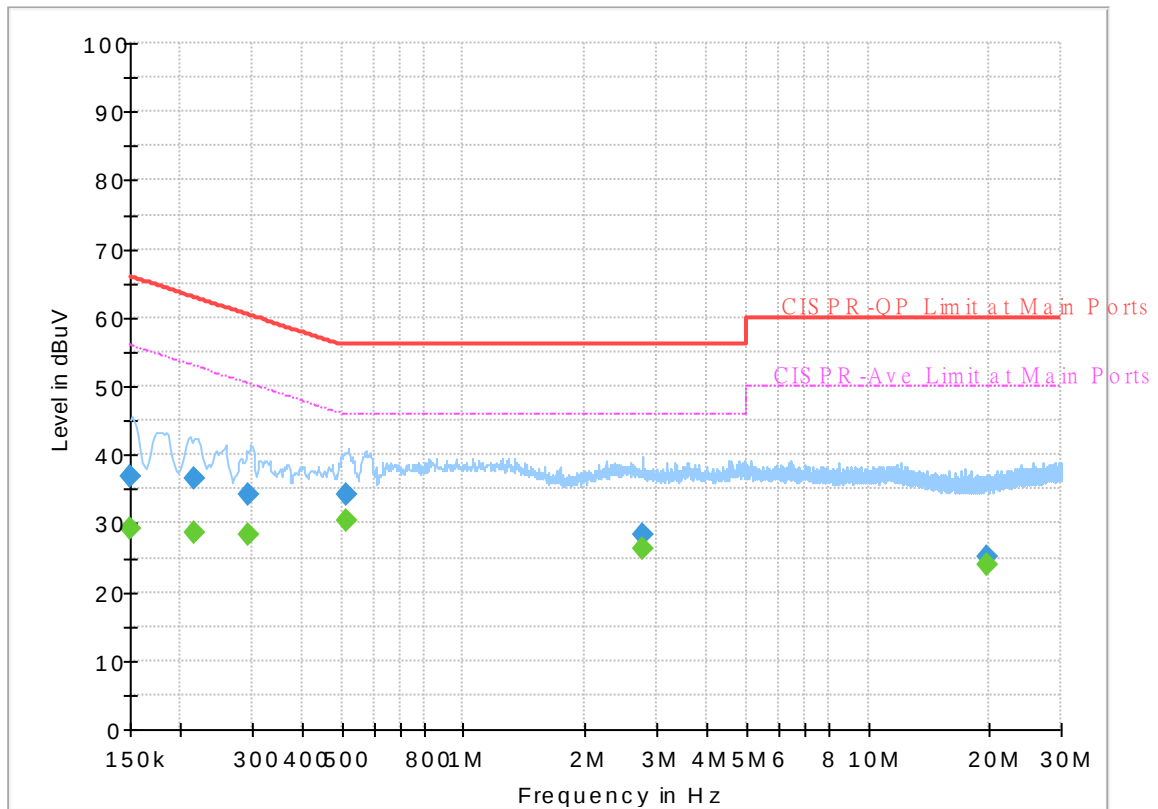
Final_Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.154185	---	27.42	55.77	28.35	L1	OFF	19.6
0.154185	32.09	---	65.77	33.68	L1	OFF	19.6
0.215250	---	28.25	53.00	24.75	L1	OFF	19.6
0.215250	35.93	---	63.00	27.07	L1	OFF	19.6
0.514230	---	30.49	46.00	15.51	L1	OFF	19.6
0.514230	34.65	---	56.00	21.35	L1	OFF	19.6
0.576330	---	28.83	46.00	17.17	L1	OFF	19.6
0.576330	33.05	---	56.00	22.95	L1	OFF	19.6
2.211450	---	26.52	46.00	19.48	L1	OFF	19.6
2.211450	29.08	---	56.00	26.92	L1	OFF	19.6
14.585280	---	24.55	50.00	25.45	L1	OFF	20.2
14.585280	25.70	---	60.00	34.30	L1	OFF	20.2

EUT Information

Report NO : 072932-01
Test Mode : Mode 1
Test Voltage : 120Vac/60Hz
Phase : Neutral

Full Spectrum



Final Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.150000	---	29.11	56.00	26.89	N	OFF	19.6
0.150000	36.82	---	66.00	29.18	N	OFF	19.6
0.215250	---	28.73	53.00	24.27	N	OFF	19.5
0.215250	36.64	---	63.00	26.36	N	OFF	19.5
0.294000	---	28.42	50.41	21.99	N	OFF	19.5
0.294000	34.16	---	60.41	26.25	N	OFF	19.5
0.514500	---	30.30	46.00	15.70	N	OFF	19.5
0.514500	34.19	---	56.00	21.81	N	OFF	19.5
2.786100	---	26.20	46.00	19.80	N	OFF	19.6
2.786100	28.37	---	56.00	27.63	N	OFF	19.6
19.644630	---	24.11	50.00	25.89	N	OFF	19.9
19.644630	25.11	---	60.00	34.89	N	OFF	19.9



Appendix C. Radiated Spurious Emission

Test Engineer :	Daniel Lee, Jacky Hong and Wilson Wu	Temperature :	20~25°C
		Relative Humidity :	50~60%

2.4GHz 2400~2483.5MHz

BT (Band Edge @ 3m)

BT	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
BT CH00 2402MHz		2389.59	45.27	-28.73	74	41.43	27.62	4.06	27.84	213	134	P	H
		2389.59	20.48	-33.52	54	-	-	-	-	-	-	A	H
		2402	104.34	-	-	100.51	27.6	4.07	27.84	213	134	P	H
		2402	79.55	-	-	-	-	-	-	-	-	A	H
		2334.78	44.5	-29.5	74	40.61	27.73	4.01	27.85	400	250	P	V
		2334.78	19.71	-34.29	54	-	-	-	-	-	-	A	V
		2402	99.83	-	-	96	27.6	4.07	27.84	400	250	P	V
		2402	75.04	-	-	-	-	-	-	-	-	A	V
BT CH 39 2441MHz		2364.18	44.52	-29.48	74	40.66	27.67	4.04	27.85	159	136	P	H
		2364.18	19.73	-34.27	54	-	-	-	-	-	-	A	H
		2441	105.57	-	-	101.77	27.52	4.11	27.83	159	136	P	H
		2441	80.78	-	-	-	-	-	-	-	-	A	H
		2496.15	44.35	-29.65	74	40.51	27.5	4.16	27.82	159	136	P	H
		2496.15	19.56	-34.44	54	-	-	-	-	-	-	A	H
		2310.28	45	-29	74	41.1	27.78	3.98	27.86	344	239	P	V
		2310.28	20.21	-33.79	54	-	-	-	-	-	-	A	V
		2441	100.71	-	-	96.91	27.52	4.11	27.83	344	239	P	V
		2441	75.92	-	-	-	-	-	-	-	-	A	V
		2499.3	45.11	-28.89	74	41.27	27.5	4.16	27.82	344	239	P	V
		2499.3	20.32	-33.68	54	-	-	-	-	-	-	A	V



BT CH 78 2480MHz		2480	105.8	-	-	101.98	27.5	4.14	27.82	178	136	P	H
		2480	81.01	-	-	-	-	-	-	-	-	A	H
		2484.16	47.08	-26.92	74	43.25	27.5	4.15	27.82	178	136	P	H
		2484.16	22.29	-31.71	54	-	-	-	-	-	-	A	H
		2480	102.53	-	-	98.71	27.5	4.14	27.82	333	233	P	V
		2480	77.74	-	-	-	-	-	-	-	-	A	V
		2493.12	45.32	-28.68	74	41.49	27.5	4.15	27.82	333	233	P	V
		2493.12	20.53	-33.47	54	-	-	-	-	-	-	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

**2.4GHz 2400~2483.5MHz****BT (Harmonic @ 3m)**

BT Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
BT CH 00 2402MHz		4804	41.07	-32.93	74	60.47	31.11	6.98	57.49	100	0	P	H
		4804	16.28	-37.72	54	-	-	-	-	-	-	A	H
		18000	57.03	-16.97	74	51.63	48.1	13.77	56.47	269	152	P	H
		18000	32.24	-21.76	54	-	-	-	-	-	-	A	H
		4804	38.38	-35.62	74	57.78	31.11	6.98	57.49	100	0	P	V
		4804	13.59	-40.41	54	-	-	-	-	-	-	A	V
		18000	57.18	-16.82	74	51.78	48.1	13.77	56.47	137	214	P	V
		18000	32.39	-21.61	54	-	-	-	-	-	-	A	V
BT CH 39 2441MHz		4882	38.22	-35.78	74	57.35	31.2	6.99	57.32	100	0	P	H
		4882	13.43	-40.57	54	-	-	-	-	-	-	A	H
		7323	43.93	-30.07	74	55.96	36.75	8.32	57.1	100	0	P	H
		7323	19.14	-34.86	54	-	-	-	-	-	-	A	H
		18000	57.51	-16.49	74	52.11	48.1	13.77	56.47	100	0	P	H
		18000	32.72	-21.28	54	-	-	-	-	-	-	A	H
		4882	40.14	-33.86	74	59.27	31.2	6.99	57.32	100	0	P	V
		4882	15.35	-38.65	54	-	-	-	-	-	-	A	V
		7323	44.05	-29.95	74	56.08	36.75	8.32	57.1	100	0	P	V
		7323	19.26	-34.74	54	-	-	-	-	-	-	A	V
		17985	56.39	-17.61	74	51.43	47.68	13.76	56.48	100	0	P	V
		17985	31.6	-22.4	54	-	-	-	-	-	-	A	V



BT CH 78 2480MHz		4960	41.57	-32.43	74	60.31	31.42	7	57.16	100	0	P	H
		4960	16.78	-37.22	54	-	-	-	-	-	-	A	H
		7440	43.36	-30.64	74	55.49	36.82	8.33	57.28	100	0	P	H
		7440	18.57	-35.43	54	-	-	-	-	-	-	A	H
		18000	56.88	-17.12	74	51.48	48.1	13.77	56.47	251	148	P	H
		18000	32.09	-21.91	54	-	-	-	-	-	-	A	H
		4960	39.34	-34.66	74	58.08	31.42	7	57.16	100	0	P	V
		4960	14.55	-39.45	54	-	-	-	-	-	-	A	V
		7440	43.47	-30.53	74	55.6	36.82	8.33	57.28	100	0	P	V
		7440	18.68	-35.32	54	-	-	-	-	-	-	A	V
		18000	56.97	-17.03	74	51.57	48.1	13.77	56.47	140	228	P	V
		18000	32.18	-21.82	54	-	-	-	-	-	-	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

**Emission after 18GHz****2.4GHz BT (SHF)**

BT	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
2.4GHz BT SHF		23446	43.76	-30.24	74	35.44	39.57	22.08	53.33	100	0	P	H
		20576	42.25	-31.75	74	36.91	38.06	20.76	53.48	100	0	P	V
Remark	1. No other spurious found. 2. All results are PASS against limit line.												



Emission below 1GHz

2.4GHz BT (LF)

BT	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
2.4GHz BT LF		61.04	27.85	-12.15	40	47.54	11.93	0.65	32.27	-	-	P	H
		118.27	33.07	-10.43	43.5	46.79	17.47	0.96	32.15	100	0	P	H
		196.84	30.2	-13.3	43.5	46.22	15.02	1.26	32.3	-	-	P	H
		752.65	29.34	-16.66	46	30.74	28.05	2.35	31.8	-	-	P	H
		841.89	31.3	-14.7	46	31.83	28.81	2.48	31.82	-	-	P	H
		943.74	32.85	-13.15	46	31.08	30.17	2.68	31.08	-	-	P	H
		44.55	27.46	-12.54	40	41.97	17.21	0.57	32.29	-	-	P	V
		73.65	27.58	-12.42	40	46.17	12.88	0.75	32.22	100	0	P	V
		124.09	27.36	-16.14	43.5	40.9	17.64	0.98	32.16	-	-	P	V
		184.23	27.67	-15.83	43.5	43.84	14.91	1.2	32.28	-	-	P	V
		840.92	30.56	-15.44	46	31.13	28.77	2.48	31.82	-	-	P	V
		953.44	33.02	-12.98	46	30.64	30.64	2.7	30.96	-	-	P	V
Remark	1. No other spurious found. 2. All results are PASS against limit line.												



2.4GHz 2400~2483.5MHz

BT (Band Edge @ 3m)

BT	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
BT CH00 2402MHz		2347.275	44.71	-29.29	74	40.83	27.71	4.02	27.85	302	125	P	H
		2347.275	19.92	-34.08	54	-	-	-	-	-	-	A	H
	*	2402	103.48	-	-	99.65	27.6	4.07	27.84	302	125	P	H
	*	2402	78.69	-	-	-	-	-	-	-	-	A	H
		2355.675	45.36	-28.64	74	41.49	27.69	4.03	27.85	142	83	P	V
		2355.675	20.57	-33.43	54	-	-	-	-	-	-	A	V
	*	2402	102.36	-	-	98.53	27.6	4.07	27.84	142	83	P	V
	*	2402	77.57	-	-	-	-	-	-	-	-	A	V
BT CH 39 2441MHz		2378.04	44.3	-29.7	74	40.45	27.64	4.05	27.84	360	123	P	H
		2378.04	19.51	-34.49	54	-	-	-	-	-	-	A	H
	*	2441	103.84	-	-	100.04	27.52	4.11	27.83	360	123	P	H
	*	2441	79.05	-	-	-	-	-	-	-	-	A	H
		2492.79	45.2	-28.8	74	41.37	27.5	4.15	27.82	360	123	P	H
		2492.79	20.41	-33.59	54	-	-	-	-	-	-	A	H
		2322.04	44.74	-29.26	74	40.84	27.76	4	27.86	249	110	P	V
		2322.04	19.95	-34.05	54	-	-	-	-	-	-	A	V
	*	2441	103.46	-	-	99.66	27.52	4.11	27.83	249	110	P	V
	*	2441	78.67	-	-	-	-	-	-	-	-	A	V
		2487.12	44.89	-29.11	74	41.06	27.5	4.15	27.82	249	110	P	V
		2487.12	20.1	-33.9	54	-	-	-	-	-	-	A	V



BT CH 78 2480MHz	*	2480	104.41	-	-	100.59	27.5	4.14	27.82	346	124	P	H
	*	2480	79.62	-	-	-	-	-	-	-	-	A	H
		2484.36	45.67	-28.33	74	41.84	27.5	4.15	27.82	346	124	P	H
		2484.36	20.88	-33.12	54	-	-	-	-	-	-	A	H
	*	2480	103.93	-	-	100.11	27.5	4.14	27.82	239	108	P	V
	*	2480	79.14	-	-	-	-	-	-	-	-	A	V
		2488.88	46.59	-27.41	74	42.76	27.5	4.15	27.82	239	108	P	V
		2488.88	21.8	-32.2	54	-	-	-	-	-	-	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

**2.4GHz 2400~2483.5MHz****BT (Harmonic @ 3m)**

BT Ant. 2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
BT CH 00 2402MHz		4804	38.31	-35.69	74	57.71	31.11	6.98	57.49	100	0	P	H
		4804	13.52	-40.48	54	-	-	-	-	-	-	A	H
		17970	56.64	-17.36	74	52.12	47.26	13.75	56.49	239	178	P	H
		17970	31.85	-22.15	54							A	H
		4804	38.51	-35.49	74	57.91	31.11	6.98	57.49	100	0	P	V
		4804	13.72	-40.28	54							A	V
		18000	56.42	-17.58	74	51.02	48.1	13.77	56.47	131	243	P	V
		18000	31.63	-22.37	54							A	V
BT CH 39 2441MHz		4882	38.37	-35.63	74	57.5	31.2	6.99	57.32	100	0	P	H
		4882	13.58	-40.42	54	-	-	-	-	-	-	A	H
		7323	43.94	-30.06	74	55.97	36.75	8.32	57.1	100	0	P	H
		7323	19.15	-34.85	54	-	-	-	-	-	-	A	H
		17985	57.09	-16.91	74	52.13	47.68	13.76	56.48	100	0	P	H
		17985	32.3	-21.7	54	-	-	-	-	-	-	A	H
		4882	38.55	-35.45	74	57.68	31.2	6.99	57.32	100	0	P	V
		4882	13.76	-40.24	54	-	-	-	-	-	-	A	V
		7323	43.87	-30.13	74	55.9	36.75	8.32	57.1	100	0	P	V
		7323	19.08	-34.92	54	-	-	-	-	-	-	A	V
		17985	56.73	-17.27	74	51.77	47.68	13.76	56.48	100	0	P	V
		17985	31.94	-22.06	54	-	-	-	-	-	-	A	V



BT CH 78 2480MHz		4960	38.44	-35.56	74	57.18	31.42	7	57.16	100	0	P	H
		4960	13.65	-40.35	54	-	-	-	-	-	-	A	H
		7440	44.01	-29.99	74	56.14	36.82	8.33	57.28	100	0	P	H
		7440	19.22	-34.78	54	-	-	-	-	-	-	A	H
		17970	57.34	-16.66	74	52.82	47.26	13.75	56.49	241	170	P	H
		17970	32.55	-21.45	54	-	-	-	-	-	-	A	H
		4960	40.03	-33.97	74	58.77	31.42	7	57.16	100	0	P	V
		4960	15.24	-38.76	54	-	-	-	-	-	-	A	V
		7440	44.48	-29.52	74	56.61	36.82	8.33	57.28	100	0	P	V
		7440	19.69	-34.31	54	-	-	-	-	-	-	A	V
		18000	57.46	-16.54	74	52.06	48.1	13.77	56.47	142	251	P	V
		18000	32.67	-21.33	54	-	-	-	-	-	-	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

**Emission above 18GHz****2.4GHz BT (SHF)**

BT	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
2.4GHz BT SHF		21570	43.44	-30.56	74	37.64	37.99	21.3	53.49	100	0	P	H
		24349	44.04	-29.96	74	34.79	40.19	22.5	53.44	100	0	P	V
Remark	1. No other spurious found. 2. All results are PASS against limit line.												

**Emission below 1GHz****2.4GHz BT (LF)**

BT	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
2.4GHz BT LF		61.04	25.53	-14.47	40	45.22	11.93	0.65	32.27	-	-	P	H
		117.3	31.95	-11.55	43.5	45.71	17.43	0.95	32.14	100	0	P	H
		147.37	27.39	-16.11	43.5	41.15	17.37	1.07	32.2	-	-	P	H
		199.75	30.26	-13.24	43.5	46.3	15	1.27	32.31	-	-	P	H
		726.46	29.56	-16.44	46	31.53	27.41	2.33	31.71	-	-	P	H
		875.84	31.45	-14.55	46	31.71	28.86	2.59	31.71	-	-	P	H
		32.91	25.81	-14.19	40	34.3	23.25	0.5	32.24	-	-	P	V
		91.11	25.98	-17.52	43.5	42.3	15.04	0.79	32.15	-	-	P	V
		125.06	26.73	-16.77	43.5	40.32	17.59	0.98	32.16	-	-	P	V
		184.23	27.59	-15.91	43.5	43.76	14.91	1.2	32.28	-	-	P	V
		839.95	30.69	-15.31	46	31.29	28.74	2.48	31.82	-	-	P	V
		935.01	32.32	-13.68	46	31.21	29.61	2.69	31.19	100	0	P	V
Remark	1. No other spurious found. 2. All results are PASS against limit line.												

Note symbol

*	Fundamental Frequency which can be ignored. However, the level of any unwanted emissions shall not exceed the level of the fundamental frequency.
!	Test result is over limit line.
P/A	P eak or A verage
H/V	H orizontal or V ertical



A calculation example for radiated spurious emission is shown as below:

BT	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
BT CH 00 2402MHz		2390	55.45	-18.55	74	54.51	32.22	4.58	35.86	103	308	P	H
		2390	43.54	-10.46	54	42.6	32.22	4.58	35.86	103	308	A	H

1. Path Loss(dB) = Cable loss(dB) + Filter loss(dB) + Attenuator loss(dB)
2. Level(dBμV/m) =
Antenna Factor(dB/m) + Path Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)
3. Over Limit(dB) = Level(dBμV/m) – Limit Line(dBμV/m)

For Peak Limit @ 2390MHz:

1. Level(dBμV/m)
= Antenna Factor(dB/m) + Path Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)
= 32.22(dB/m) + 4.58(dB) + 54.51(dBμV) – 35.86 (dB)
= 55.45 (dBμV/m)
2. Over Limit(dB)
= Level(dBμV/m) – Limit Line(dBμV/m)
= 55.45(dBμV/m) – 74(dBμV/m)
= -18.55(dB)

For Average Limit @ 2390MHz:

1. Level(dBμV/m)
= Antenna Factor(dB/m) + Path Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)
= 32.22(dB/m) + 4.58(dB) + 42.6(dBμV) – 35.86 (dB)
= 43.54 (dBμV/m)
2. Over Limit(dB)
= Level(dBμV/m) – Limit Line(dBμV/m)
= 43.54(dBμV/m) – 54(dBμV/m)
= -10.46(dB)

Both peak and average measured complies with the limit line, so test result is “PASS”.



Appendix D. Radiated Spurious Emission Plots

Test Engineer :	Daniel Lee, Jacky Hong and Wilson Wu	Temperature :	20~25°C
		Relative Humidity :	50~60%

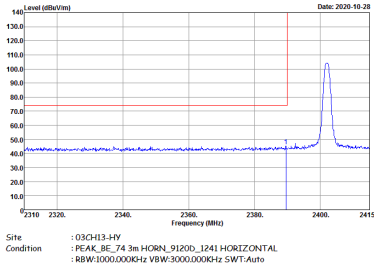
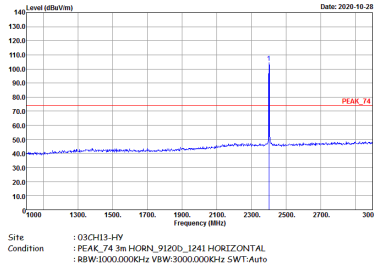
Note symbol

-L	Low channel location
-R	High channel location

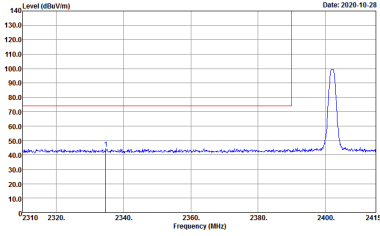
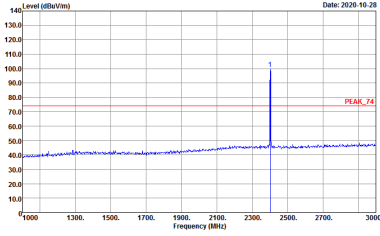


2.4GHz 2400~2483.5MHz

BT (Band Edge @ 3m)

BT	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BT CH00 2402MHz	
1	Horizontal	Fundamental
Peak	 Site : 03CH13-HV Condition : PEAK_BE_74 3m HORN_91200_1241 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH13-HV Condition : PEAK_74 3m HORN_91200_1241 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto



BT	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BT CH00 2402MHz	
1	Vertical	Fundamental
Peak	 Site : 03CH13-HY Condition : PEAK_SE_74 3m HORN_91200_1241 VERTICAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto	 Site : 03CH13-HY Condition : PEAK_74 3m HORN_91200_1241 VERTICAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto



BT	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BT CH39 2441MHz	
1	Horizontal	Fundamental
Peak	Site : 03CH13-HY Condition : PEAK_BE_74 3m HORN_91200_1241 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Site : 03CH13-HY Condition : PEAK_74 3m HORN_91200_1241 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Peak	Site : 03CH13-HY Condition : PEAK_BE_74 3m HORN_91200_1241 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank



BT	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BT CH39 2441MHz	
1	Vertical	Fundamental
Peak	Site : 03CH13-HY Condition : PEAK_BE_74 3m HORN_91200_1241 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Site : 03CH13-HY Condition : PEAK_74 3m HORN_91200_1241 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Peak	Site : 03CH13-HY Condition : PEAK_BE_74 3m HORN_91200_1241 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank



BT	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BT CH78 2480MHz	
1	Horizontal	Fundamental
Peak	Site : 03CH13-HY Condition : PEAK_Bt_74 3m HORN_91200_1241 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Site : 03CH13-HY Condition : PEAK_74 3m HORN_91200_1241 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto



BT	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BT CH78 2480MHz	
1	Vertical	Fundamental
Peak	Site : 03CH13-HY Condition : PEAK_B1_74 3m HORN_91200_1241 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Site : 03CH13-HY Condition : PEAK_74 3m HORN_91200_1241 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto



2.4GHz 2400~2483.5MHz

BT (Harmonic @ 3m)

BT	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	BT CH00 2402MHz	
1	Horizontal	Vertical
Peak Avg.	Site : 03CH13-HY Condition : PEAK_74 3m HORN_91200_1241 HORIZONTAL	Site : 03CH13-HY Condition : PEAK_74 3m HORN_91200_1241 VERTICAL



BT	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	BT CH39 2441MHz	
1	Horizontal	Vertical
Peak Avg.	Site : 03CH13-HY Condition : PEAK_74 3m HORN_91200_1241 HORIZONTAL	Site : 03CH13-HY Condition : PEAK_74 3m HORN_91200_1241 VERTICAL

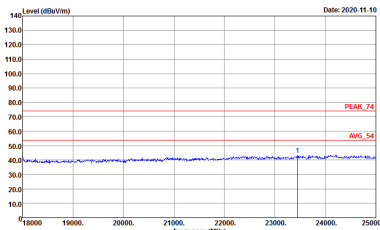
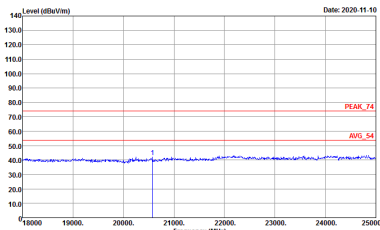


BT	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	BT CH78 2480MHz	
1	Horizontal	Vertical
Peak Avg.	Site : 03CH13-HY Condition : PEAK_74 3m HORN_91200_1241 HORIZONTAL	Site : 03CH13-HY Condition : PEAK_74 3m HORN_91200_1241 VERTICAL



Emission after 18GHz

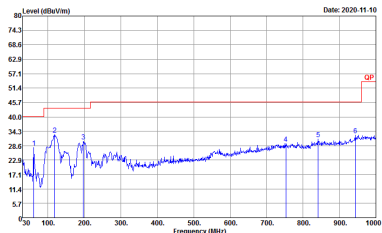
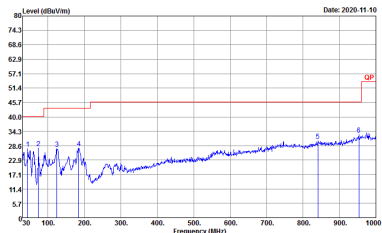
2.4GHz BT (SHF)

BT	2.4GHz 2400~2483.5MHz	
ANT	BT SHF	
1	Horizontal	Vertical
QP / Peak	 Site : 03CH13-HY Condition : PEAK_74 1m SHF HORN 88HA9170584 HORIZONTAL	 Site : 03CH13-HY Condition : PEAK_74 1m SHF HORN 88HA9170584 VERTICAL



Emission below 1GHz

2.4GHz BT (LF)

BT	2.4GHz 2400~2483.5MHz	
ANT	BT LF	
1	Horizontal	Vertical
QP / Peak	 Site : 03CH13-HY Condition : QP 3m B1LOG_40103 HORIZONTAL	 Site : 03CH13-HY Condition : QP 3m B1LOG_40103 VERTICAL

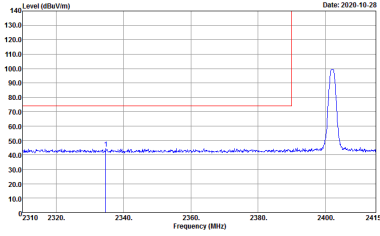
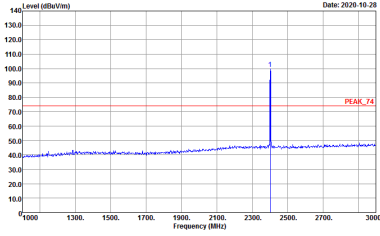


2.4GHz 2400~2483.5MHz

BT (Band Edge @ 3m)

BT	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BT CH00 2402MHz	
2	Horizontal	Fundamental
Peak	Site : 03CH13-HV Condition : PEAK_BE_74 3m HORN_91200_1241 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Site : 03CH13-HV Condition : PEAK_74 3m HORN_91200_1241 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto

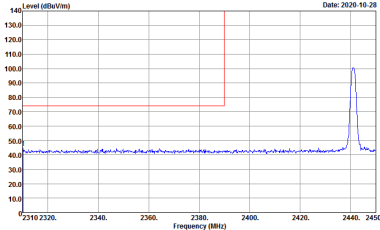
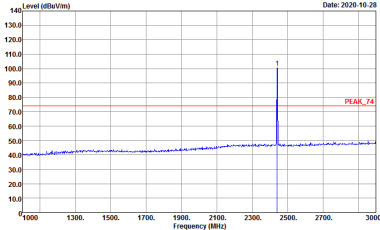
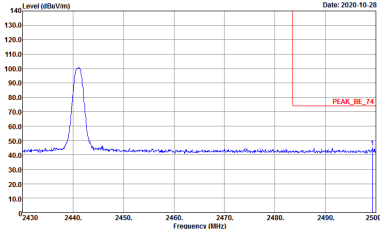


BT	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BT CH00 2402MHz	
2	Vertical	Fundamental
Peak	 Site : 03CH13-HY Condition : PEAK_SE_74 3m HORN_91200_1241 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH13-HY Condition : PEAK_74 3m HORN_91200_1241 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto



BT	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BT CH39 2441MHz	
2	Horizontal	Fundamental
Peak	Site : 03CH13-HY Condition : PEAK_BE_74 3m HORN_91200_1241 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Site : 03CH13-HY Condition : PEAK_74 3m HORN_91200_1241 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Peak	Site : 03CH13-HY Condition : PEAK_BE_74 3m HORN_91200_1241 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank



BT	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BT CH39 2441MHz	
2	Vertical	Fundamental
Peak	 Site : 03CH13-HY Condition : PEAK_BE_74 3m HORN_91200_1241 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH13-HY Condition : PEAK_74 3m HORN_91200_1241 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
	 Site : 03CH13-HY Condition : PEAK_BE_74 3m HORN_91200_1241 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank



BT	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BT CH78 2480MHz	
2	Horizontal	Fundamental
Peak	Site : 03CH13-HY Condition : PEAK_B8_74 3m HORN_91200_1241 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Site : 03CH13-HY Condition : PEAK_74 3m HORN_91200_1241 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto



BT	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BT CH78 2480MHz	
2	Vertical	Fundamental
Peak	Site : 03CH13-HY Condition : PEAK_B8_74 3m HORN_91200_1241 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Site : 03CH13-HY Condition : PEAK_74 3m HORN_91200_1241 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto