

TEST REPORT

Product : Remote Controller
Trade mark : PowerVision
Model/Type reference : PRC30
Serial Model : N/A
Report Number : EED39N80210202R2
FCC ID : 2AKBMPPRC30
Date of Issue : July 29, 2021

Test Standards	Results
☒ 47 CFR Part 15 Subpart C	PASS

Prepared for:

PowerVision Tech Inc.

**Zone E, Ocean Venture Valley, No.40, Yangguang Rd, Nanhai new District,
Weihai, Shandong, China. 264200**

Prepared by:

Centre Testing International (Suzhou) CO., LTD.

**Building 18, Zhihui New Town Ecological Industrial Park, No. 1206, Jinyang
East Road, Lujia Town, Kunshan, Jiangsu, China**

TEL: +86-0512-5015 8288

检验检测专用章
Inspection & Testing Services

Compiled by:

Jerry Yu

Reviewed by:

Lily Wang

Approved by:

Jeff Tang

Date:

July 29, 2021

Check No.: 7824090421

Modification Record

No.	Last Report No.	Modification Description
1	EED39N80210202	First report
2	EED39N80210202R1	Change applicant and manufacturer address.
3	EED39N80210202R2	Change Factory name & address.

All test data come from the report of EED39N80210202.

TABLE OF CONTENTS

1. Test Summary.....	4
2. Test Requirement.....	5
2.1. Test Setup.....	5
2.2. Test Environment.....	6
3. General Information	6
3.1. Client Information	6
3.2. General Description of EUT	6
3.3. Product Specification subjective to this standard	7
3.4. Description of Support Units	7
3.5. Test Location.....	7
3.6. Test Facility	7
3.7. Deviation from Standards	8
3.8. Abnormalities from Standard Conditions	8
3.9. Other Information Requested by the Customer	8
3.10. Measurement Uncertainty (95% confidence levels, k=2)	8
4. Equipment List.....	9
5. Test results and measurement data.....	10
5.1. Antenna Requirement.....	10
5.2. AC Power Line Conducted Emission	11
5.3. Radiated Spurious Emissions	12
5.4. Restricted Bands around Fundamental Frequency (Radiated).....	18
5.5. 20dB Bandwidth.....	21
APPENDIX 1 PHOTOGRAPHS OF TEST SETUP	24
APPENDIX 2 PHOTOGRAPHS OF EUT CONSTRUCTIONAL DETAILS	24

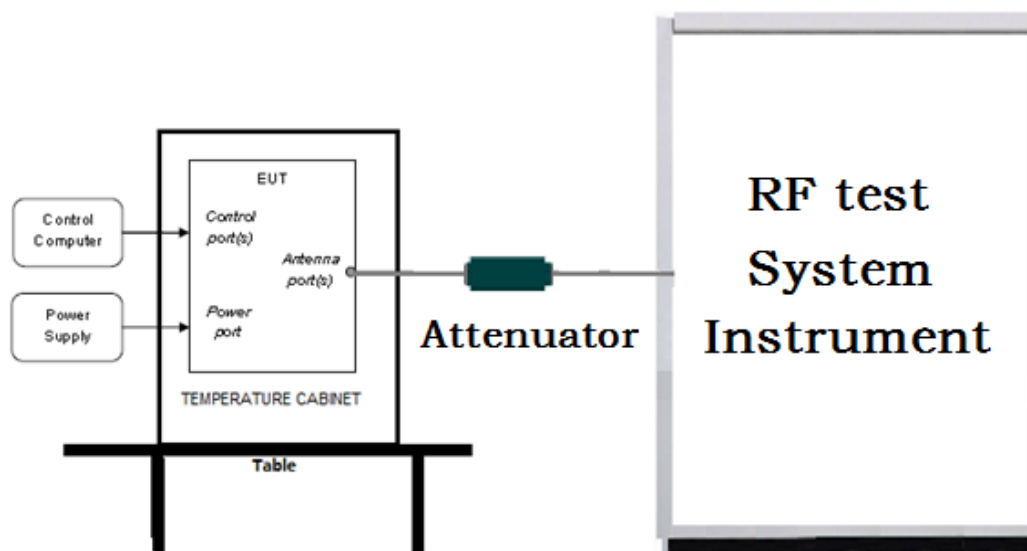
1. Test Summary

Test item	Test Requirement	Test method	Result
Antenna Requirement	47 CFR Part 15 Subpart C Section 15.203	ANSI C63.10-2013	PASS
AC Power Line Conducted Emission	47 CFR Part 15 Subpart C Section 15.207	ANSI C63.10-2013	N/A
Field Strength of the Fundamental Signal	47 CFR Part 15 Subpart C Section 15.249 (a)	ANSI C63.10-2013	PASS
Spurious Emissions	47 CFR Part 15 Subpart C Section 15.249 (a)/15.209	ANSI C63.10-2013	PASS
Restricted bands around fundamental frequency (Radiated Emission)	47 CFR Part 15 Subpart C Section 15.249(a)/15.205	ANSI C63.10-2013	PASS
20dB Occupied Bandwidth	47 CFR Part 15 Subpart C Section 15.215 (c)	ANSI C63.10-2013	PASS

2. Test Requirement

2.1. Test Setup

For Conducted Test Setup



For Radiated Emissions Test Setup

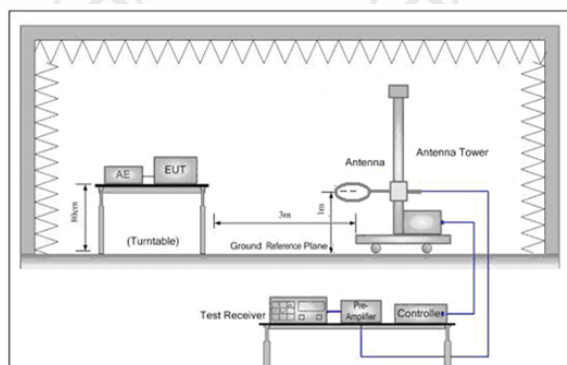


Figure 1. Below 30MHz

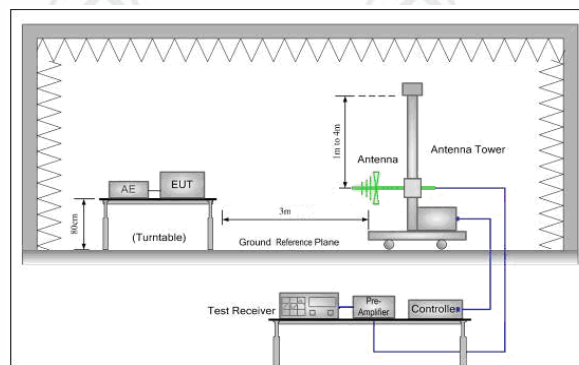


Figure 2. 30MHz to 1GHz

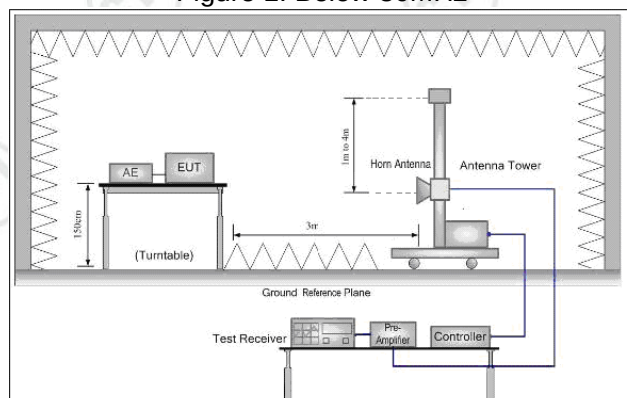
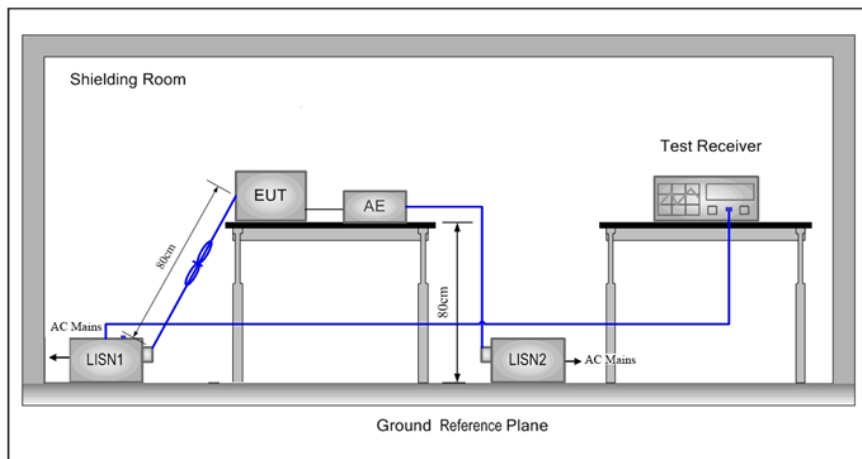


Figure 3. Above 1GHz

For Conducted Emissions Test Setup



2.2. Test Environment

Operating Environment:	
Temperature:	25 °C
Humidity:	59 % RH
Atmospheric Pressure:	1008 mbar

3. General Information

3.1. Client Information

Applicant:	Powervision Tech Inc.
Address of Applicant:	Zone E,Ocean Venture Valley, No.40, Yangguang Rd, Nanhai new District, Weihai, Shandong,China. 264200
Manufacturer:	Powervision Tech Inc.
Address of Manufacturer:	Zone E,Ocean Venture Valley, No.40, Yangguang Rd, Nanhai new District, Weihai, Shandong,China. 264200
Factory:	Powervision (Suzhou) Technology Co.,Ltd.
Address of Factory:	Building 3,No.15, Zhujing Road,Changshu High-tech Industrial Development Zone,Suzhou,China

3.2. General Description of EUT

Product Name:	Remote Controller
Model No.(EUT):	PRC30
Serial Model:	N/A
Model difference:	N/A
Trade Mark:	PowerVision
EUT Supports Radios application:	5GHz
Power Supply:	DC 3.7V FOR BATTERY/DC 5V FOR USB
Sample Received Date:	2021.04.09
Sample tested Date:	2021.05.16~2021.05.27

3.3. Product Specification subjective to this standard

Operation Frequency:	5731MHz~5801MHz						
Channel Numbers:	36 channels						
Channel Separation:	2MHz						
Type of Modulation:	64QAM, 16QAM, QPSK, BPSK						
Test Software of EUT:	Artosyn8020PCTool-v4.4.8 (manufacturer declare)						
Antenna Type:	Dipole antenna						
Antenna Gain ^① :	1 dBi						
Test Voltage:	DC 3.7V						
Operation Frequency each of channel							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
1	5731MHz	10	5149MHz	19	5767MHz	28	5785MHz
2	5733MHz	11	5751MHz	20	5769MHz	29	5787MHz
3	5735MHz	12	5753MHz	21	5771MHz	30	5789MHz
4	5737MHz	13	5755MHz	22	5773MHz	31	5791MHz
5	5739MHz	14	5757MHz	23	5775MHz	32	5793MHz
6	5141MHz	15	5759MHz	24	5777MHz	33	5795MHz
7	5143MHz	16	5761MHz	25	5779MHz	34	5797MHz
8	5145MHz	17	5763MHz	26	5781MHz	35	5799MHz
9	5147MHz	18	5765MHz	27	5783MHz	36	5801MHz

Note: 1 The antenna gain is provided by the client and we Centre Testing International (Suzhou) CO., LTD. test lab is not responsible for the accuracy of the antenna gain information.

Note:

In section 15.31(m), regards to the operating frequency range over 10 MHz, the Lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, and the selected channel see below:

Channel	Frequency
The Lowest channel(CH1)	5731MHz
The Middle channel(CH19)	5767MHz
The Highest channel(CH36)	5801MHz

3.4. Description of Support Units

The EUT has been tested with associated equipment below.

1) support equipment

Description	Manufacturer	Model No.	Certification	Supplied by
NB	ThinkPad	E490	FCC ID and DOC	CTI

3.5. Test Location

All test facilities used to collect the test data are located at Building 18, Zhihui New Town Ecological Industrial Park, No. 1206, Jinyang East Road, Lujia Town, Kunshan, Jiangsu, China.

3.6. Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

A2LA-Lab Cert. No. 5734.01

Centre Testing International (Suzhou) CO., LTD. EMC Laboratory has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025: 2005 General Requirements for the Competence of

Report No. : EED39N80210202R2

Testing and Calibration. Laboratories and any additional program requirements in the identified field of testing.

FCC-Designation No.:CN1290

Centre Testing International Group Co., Ltd EMC Laboratory has been registered and fully described in a report filed with the FCC (Federal Communications Commission). The American association for Centre Testing International Group Co., Ltd. EMC laboratory accreditation Designation No.:CN1290

3.7. Deviation from Standards

None.

3.8. Abnormalities from Standard Conditions

None.

3.9. Other Information Requested by the Customer

None.

3.10. Measurement Uncertainty (95% confidence levels, k=2)

No.	Item	Measurement Uncertainty
1	Occupied Bandwidth	0.56%
2	RF Power conducted	0.59 dB
3	Power Spectral Density, conducted	2.37 dB
4	Unwanted Emission, conducted	2.68 dB
5	All Emission, radiated	4.41 dB(30MHz-1GHz)
		4.99 dB(1GHz-18GHz)
		5.307 dB(18GHz-40GHz)
6	Temperature test	0.54°C
7	Humidity test	1.62%
8	DC and low frequency voltages test	1.14%

4. Equipment List

RF test system					
Equipment	Manufacturer	Mode No.	Serial Number	Cal. Date (mm-dd-yyyy)	Cal. Due date (mm-dd-yyyy)
Signal Generator	R&S	SMB100A	182002	2020-10-23	2021-10-22
Communication test set test set	R&S	CMW500	107929	2021-04-29	2022-04-28
Spectrum Analyzer	R&S	FSV40	101588	2020-10-23	2021-10-22
Vector signal generator	R&S	SMBV100B	101985	2020-10-23	2021-10-22
Temperature/ Humidity Indicator	testo	608-H1	1945222628	2020-11-09	2021-11-08
Switch Automatic control	R&S	OSP-B157W8	101111	2020-10-23	2021-10-22
High-low temperature chamber	GIANT FORCE	GTH-800-40-CP	MAA1908-003	2020-12-08	2021-12-07
Automatic test software	Shenzhen JS TONSCEND	/	V2.6.77.0518	/	/

966 Semi-anechoic Chamber					
Equipment	Manufacturer	Mode No.	Serial Number	Cal. Date (mm-dd-yyyy)	Cal. Due date (mm-dd-yyyy)
Receiver	R&S	ESU8	100537	2020-12-10	2021-12-09
Spectrum analyzer	R&S	FSV40	101185	2020-12-10	2021-12-09
Preamplifier (30MHz~1GHz)	SONOMA	317	393347	2020-12-04	2021-12-03
Preamplifier (1GHz~18GHz)	R&S	SCU-18D	1987397	2020-12-10	2021-12-09
Preamplifier (18GHz~40GHz)	/	MTLNA1804003 0235	12009007	2020-10-23	2021-10-22
Loop Antenna (9kHz~30MHz)	TESEQ	HLA6121	54575	2021-02-27	2022-02-26
Antenna (30MHz~1GHz)	SCHWARZBEC K	VULB9163	9163-965	2020-10-16	2021-10-15
Antenna (1GHz~18GHz)	R&S	HF907	102524	2020-12-15	2021-12-14
Antenna (18GHz~40GHz)	R&S	BBHA9170	1032	2020-10-23	2021-10-22
Band rejection filter	Xi'an xingbo	XBLBQ-DZA81	200827-1-02	/	/

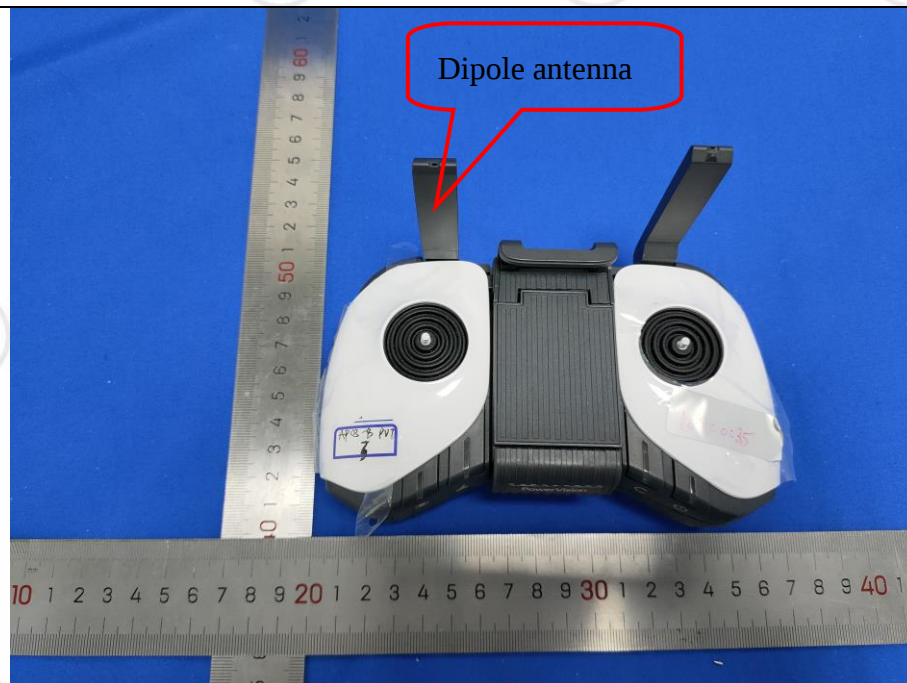
5. Test results and measurement data

5.1. Antenna Requirement

15.203 requirement:

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

EUT Antenna:



The antenna is integrated on the main PCB and no consideration of replacement.

5.2. AC Power Line Conducted Emission

Test Procedure:	Test frequency range :150KHz-30MHz 1)The mains terminal disturbance voltage test was conducted in a shielded room. 2) The EUT was connected to AC power source through a LISN 1 (Line Impedance Stabilization Network) which provides a 50Ω/50μH + 5Ω linear impedance. The power cables of all other units of the EUT were connected to a second LISN 2, which was bonded to the ground reference plane in the same way as the LISN 1 for the unit being measured. A multiple socket outlet strip was used to connect multiple power cables to a single LISN provided the rating of the LISN was not exceeded. 3)The tabletop EUT was placed upon a non-metallic table 0.8m above the ground reference plane. And for floor-standing arrangement, the EUT was placed on the horizontal ground reference plane, 4) The test was performed with a vertical ground reference plane. The rear of the EUT shall be 0.4 m from the vertical ground reference plane. The vertical ground reference plane was bonded to the horizontal ground reference plane. The LISN 1 was placed 0.8 m from the boundary of the unit under test and bonded to a ground reference plane for LISNs mounted on top of the ground reference plane. This distance was between the closest points of the LISN 1 and the EUT. All other units of the EUT and associated equipment was at least 0.8 m from the LISN 2. 5) In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10 on conducted measurement.														
Limit:	<table><tr><th rowspan="2">Frequency range (MHz)</th><th colspan="2">Limit (dBμV)</th></tr><tr><th>Quasi-peak</th><th>Average</th></tr><tr><td>0.15-0.5</td><td>66 to 56*</td><td>56 to 46*</td></tr><tr><td>0.5-5</td><td>56</td><td>46</td></tr><tr><td>5-30</td><td>60</td><td>50</td></tr></table> * The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz. NOTE: The lower limit is applicable at the transition frequency	Frequency range (MHz)	Limit (dBμV)		Quasi-peak	Average	0.15-0.5	66 to 56*	56 to 46*	0.5-5	56	46	5-30	60	50
Frequency range (MHz)	Limit (dBμV)														
	Quasi-peak	Average													
0.15-0.5	66 to 56*	56 to 46*													
0.5-5	56	46													
5-30	60	50													

Measurement Data

The product is supplied by DC power.

5.3. Radiated Spurious Emissions

Test Requirement: 47 CFR Part 15C Section 15.249 and 15.209 and 15.205

Test Method: ANSI C63.10

Test Site: Measurement Distance: 3m (Semi-Anechoic Chamber)

Receiver Setup:

Frequency	Detector	RBW	VBW	Remark
0.009MHz-0.090MHz	Peak	10kHz	30kHz	Peak
0.009MHz-0.090MHz	Average	10kHz	30kHz	Average
0.090MHz-0.110MHz	Quasi-peak	10kHz	30kHz	Quasi-peak
0.110MHz-0.490MHz	Peak	10kHz	30kHz	Peak
0.110MHz-0.490MHz	Average	10kHz	30kHz	Average
0.490MHz -30MHz	Quasi-peak	10kHz	30kHz	Quasi-peak
30MHz-1GHz	Quasi-peak	120kHz	300kHz	Quasi-peak
Above 1GHz	Peak	1MHz	3MHz	Peak
	Peak	1MHz	10kHz	Average

Limit: (Spurious Emissions)

Frequency	Field strength (microvolt/meter)	Limit (dBμV/m)	Remark	Measurement distance (m)
0.009MHz-0.490MHz	2400/F(kHz)	-	-	300
0.490MHz-1.705MHz	24000/F(kHz)	-	-	30
1.705MHz-30MHz	30	-	-	30
30MHz-88MHz	100	40.0	Quasi-peak	3
88MHz-216MHz	150	43.5	Quasi-peak	3
216MHz-960MHz	200	46.0	Quasi-peak	3
960MHz-1GHz	500	54.0	Quasi-peak	3
Above 1GHz	500	54.0	Average	3

Note: 15.35(b), Unless otherwise specified, the limit on peak radio frequency emissions is 20dB above the maximum permitted average emission limit applicable to the equipment under test. This peak limit applies to the total peak emission level radiated by the device.

Limit: (Field strength of the fundamental signal)

Frequency	Limit (dBμV/m @3m)	Remark
2400MHz-2483.5MHz	94.0	Average Value
	114.0	Peak Value

Test Procedure:

Below 1GHz test procedure as below:

The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.

The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rota table was turned from 0 degrees to 360 degrees to find the maximum reading.

The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

Above 1GHz test procedure as below:

Different between above is the test site, change from Semi- Anechoic Chamber to fully Anechoic Chamber and change form table 0.8 metre to 1.5 metre(Above 18GHz the distance is 1 meter and table is 1.5 metre).

Test the EUT in the lowest channel ,middle channel, the Highest channel

The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is worse case.

Repeat above procedures until all frequencies measured was complete.

Pass

Test Results:

Report No. : EED39N80210202R2

Measurement Data

Field Strength Of The Fundamental Signal:

Mode:	Transmitting	Frequency:	5731
Remark:			

Frequency (MHz)	Ant. Pol. (H/V)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5731.070	V	88.84	9.95	98.79	114.00	-15.21	peak
5731.070	V	78.94	9.95	88.89	94.00	-5.11	AVG
5731.070	H	90.54	9.95	100.49	114.00	-13.51	peak
5731.070	H	83.60	9.95	93.55	94.00	-0.45	AVG

Mode:	Transmitting	Frequency:	5767
Remark:			

Frequency (MHz)	Ant. Pol. (H/V)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5767.470	V	86.19	10.04	96.23	114.00	-17.77	peak
5767.470	V	75.54	10.04	85.58	94.00	-8.42	AVG
5767.210	H	93.89	10.04	103.93	114.00	-10.07	peak
5767.210	H	83.55	10.04	93.59	94.00	-0.41	AVG

Mode:	Transmitting	Frequency:	5801
Remark:			

Frequency (MHz)	Ant. Pol. (H/V)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5801.140	V	87.14	10.11	97.25	114.00	-16.75	peak
5801.140	V	77.17	10.11	87.28	94.00	-6.72	AVG
5801.010	H	95.22	10.11	105.33	114.00	-8.67	peak
5801.010	H	83.75	10.11	93.86	94.00	-0.14	AVG

Report No. : EED39N80210202R2

Field Strength Of The Spurious Emissions: Radiated Emission below 1GHz:

Mode:	Transmitting	Frequency:	5767
Remark:			

Frequency (MHz)	Ant. Pol. (H/V)	Reading (dBUV)	Correction Factor (dB/m)	Result (dBUV/m)	Limit (dBUV/m)	Margin (dB)	Remark
57.1600	V	41.25	-21.66	19.59	40.00	-20.41	QP
138.6400	V	40.18	-23.18	17.00	43.50	-26.50	QP
244.3700	V	42.77	-21.42	21.35	46.00	-24.65	QP
278.3200	V	41.59	-21.10	20.49	46.00	-25.51	QP
499.4800	V	39.98	-16.05	23.93	46.00	-22.07	QP
999.0300	V	42.58	-9.16	33.42	54.00	-20.58	QP
42.6100	H	40.26	-22.03	18.23	40.00	-21.77	QP
105.6600	H	39.86	-21.73	18.13	43.50	-25.37	QP
244.3700	H	48.57	-21.42	27.15	46.00	-18.85	QP
276.3800	H	48.95	-21.14	27.81	46.00	-18.19	QP
354.9500	H	45.51	-19.34	26.17	46.00	-19.83	QP
996.1200	H	45.10	-9.17	35.93	54.00	-18.07	QP

Notes:

- 1) Through Pre-scan then find the CH19 is the worst case mode and only the worst data was recorded.

Transmitter Emission above 1GHz:

Mode:	Transmitting	Frequency:	5731
Remark:			

Horizontal

No.	Frequency	Reading	Correct	Result	Limit	Margin	Height	Degree	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	(cm)	(deg.)	
1	5725.425	16.06	9.94	26.00	54.00	-28.00	200	325	AVG
2	5726.000	47.55	9.94	57.49	74.00	-16.51	200	325	peak
3	10605.000	30.80	16.00	46.80	74.00	-27.20	200	310	peak

Vertical

No.	Frequency	Reading	Correct	Result	Limit	Margin	Height	Degree	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	(cm)	(deg.)	
1	5726.000	37.92	9.94	47.86	74.00	-26.14	200	323	peak
2	6984.000	35.92	11.67	47.59	74.00	-26.41	100	207	peak
3	14940.000	29.54	23.02	52.56	74.00	-21.44	100	38	peak

Mode:	Transmitting	Frequency:	5767
Remark:			

Horizontal

No.	Frequency	Reading	Correct	Result	Limit	Margin	Height	Degree	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	(cm)	(deg.)	
1	5760.000	43.27	10.02	53.29	74.00	-20.71	100	57	peak
2	10520.000	30.17	15.78	45.95	74.00	-28.05	100	55	peak
3	13563.000	30.08	20.45	50.53	74.00	-23.47	200	215	peak

Vertical

No.	Frequency	Reading	Correct	Result	Limit	Margin	Height	Degree	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	(cm)	(deg.)	
1	4978.000	37.17	9.55	46.72	74.00	-27.28	200	154	peak
2	5760.000	39.17	10.02	49.19	74.00	-24.81	200	73	peak
3	6644.000	36.25	11.38	47.63	74.00	-26.37	100	142	peak

Mode:	Transmitting	Frequency:	5801
Remark:			

Horizontal

No.	Frequency	Reading	Correct	Result	Limit	Margin	Height	Degree	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	(cm)	(deg.)	
1	5794.000	42.60	10.10	52.70	74.00	-21.30	152	0	peak
2	10112.000	31.61	14.87	46.48	74.00	-27.52	200	57	peak

Vertical

No.	Frequency	Reading	Correct	Result	Limit	Margin	Height	Degree	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	(cm)	(deg.)	
1	5794.000	41.80	10.10	51.90	74.00	-22.10	200	55	peak
2	6967.000	36.38	11.65	48.03	74.00	-25.97	100	236	peak
3	12543.000	29.18	18.34	47.52	74.00	-26.48	200	28	peak

Note:

1) As shown in this section, for frequencies above 1GHz, the field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. So, only the peak values are measured:

2) The field strength is calculated by adding the correct Factor. The basic equation with a sample calculation is as follows:

Final Test Level = Reading + Correct Factor

Correct Factor = Preamplifier Factor – Antenna Factor – Cable Factor

3) Scan from 9kHz to 25GHz, the disturbance above 18GHz and below 30MHz was very low, and the above harmonics were the highest point could be found when testing, so only the above harmonics had been displayed. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need not be reported.

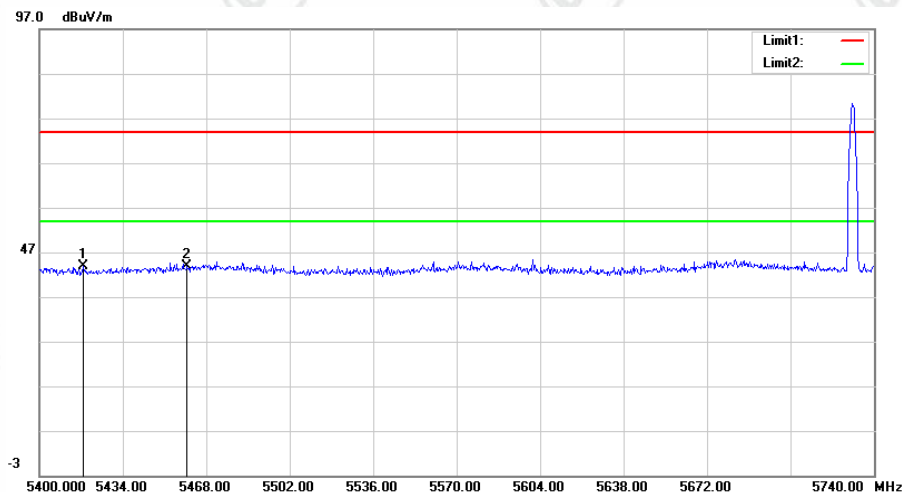
5.4. Restricted Bands around Fundamental Frequency (Radiated)

Receiver Setup:	<table><tr><td>Frequency</td><td>Detector</td><td>RBW</td><td>VBW</td><td>Remark</td></tr><tr><td>30MHz-1GHz</td><td>Quasi-peak</td><td>120kHz</td><td>300kHz</td><td>Quasi-peak</td></tr><tr><td rowspan="2">Above 1GHz</td><td>Peak</td><td>1MHz</td><td>3MHz</td><td>Peak</td></tr><tr><td>Peak</td><td>1MHz</td><td>10Hz</td><td>Average</td></tr></table>	Frequency	Detector	RBW	VBW	Remark	30MHz-1GHz	Quasi-peak	120kHz	300kHz	Quasi-peak	Above 1GHz	Peak	1MHz	3MHz	Peak	Peak	1MHz	10Hz	Average	
Frequency	Detector	RBW	VBW	Remark																	
30MHz-1GHz	Quasi-peak	120kHz	300kHz	Quasi-peak																	
Above 1GHz	Peak	1MHz	3MHz	Peak																	
	Peak	1MHz	10Hz	Average																	
Test Procedure:	Below 1GHz test procedure as below: a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic camber. The table was rotated 360 degrees to determine the position of the highest radiation. b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement. d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable was turned from 0 degrees to 360 degrees to find the maximum reading. e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode. f. Place a marker at the end of the restricted band closest to the transmit frequency to show compliance. Also measure any emissions in the restricted bands. Save the spectrum analyzer plot. Repeat for each power and modulation for lowest and highest channel Above 1GHz test procedure as below: a. Different between above is the test site, change from Semi- Anechoic Chamber to fully Anechoic Chamber and change form table 0.8 meter to 1.5 meter(Above 18GHz the distance is 1 meter and table is 1.5 meter). b. . Test the EUT in the lowest channel , the Highest channel c. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is worse case. d. Repeat above procedures until all frequencies measured was complete.																				
Limit:	<table><tr><td>Frequency</td><td>Limit (dBμV/m @3m)</td><td>Remark</td></tr><tr><td>30MHz-88MHz</td><td>40.0</td><td>Quasi-peak Value</td></tr><tr><td>88MHz-216MHz</td><td>43.5</td><td>Quasi-peak Value</td></tr><tr><td>216MHz-960MHz</td><td>46.0</td><td>Quasi-peak Value</td></tr><tr><td>960MHz-1GHz</td><td>54.0</td><td>Quasi-peak Value</td></tr><tr><td rowspan="2">Above 1GHz</td><td>54.0</td><td>Average Value</td></tr><tr><td>74.0</td><td>Peak Value</td></tr></table>	Frequency	Limit (dBμV/m @3m)	Remark	30MHz-88MHz	40.0	Quasi-peak Value	88MHz-216MHz	43.5	Quasi-peak Value	216MHz-960MHz	46.0	Quasi-peak Value	960MHz-1GHz	54.0	Quasi-peak Value	Above 1GHz	54.0	Average Value	74.0	Peak Value
Frequency	Limit (dBμV/m @3m)	Remark																			
30MHz-88MHz	40.0	Quasi-peak Value																			
88MHz-216MHz	43.5	Quasi-peak Value																			
216MHz-960MHz	46.0	Quasi-peak Value																			
960MHz-1GHz	54.0	Quasi-peak Value																			
Above 1GHz	54.0	Average Value																			
	74.0	Peak Value																			

Test plot as follows:

Mode:	Transmitting	Frequency:	5731
Remark:	Horizontal		

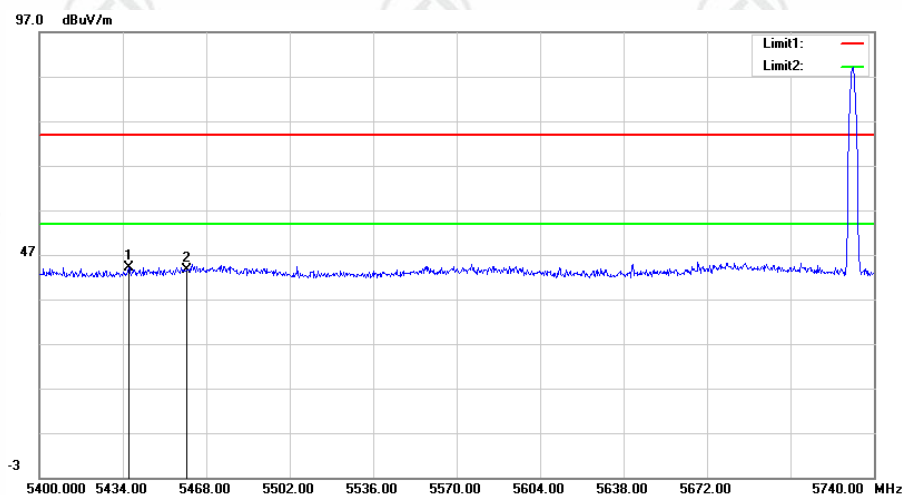
Test Graph



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg.)	Remark
1	5418.020	34.15	9.73	43.88	74.00	-30.12	193	0	peak
2	5460.000	34.23	9.72	43.95	74.00	-30.05	200	358	peak

Mode:	Transmitting	Frequency:	5731
Remark:	Vertical		

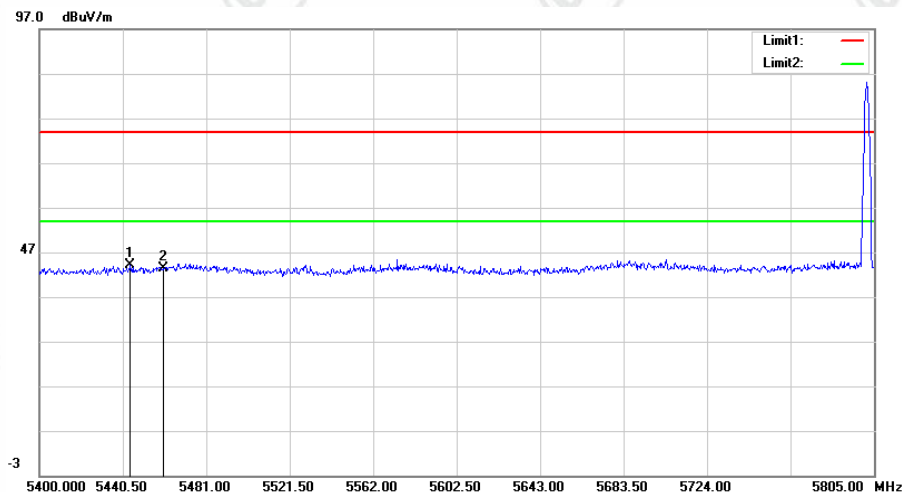
Test Graph



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg.)	Remark
1	5436.380	34.29	9.73	44.02	74.00	-29.98	100	304	peak
2	5460.000	33.84	9.72	43.56	74.00	-30.44	100	217	peak

Mode:	Transmitting	Frequency:	5801
Remark:	Horizontal		

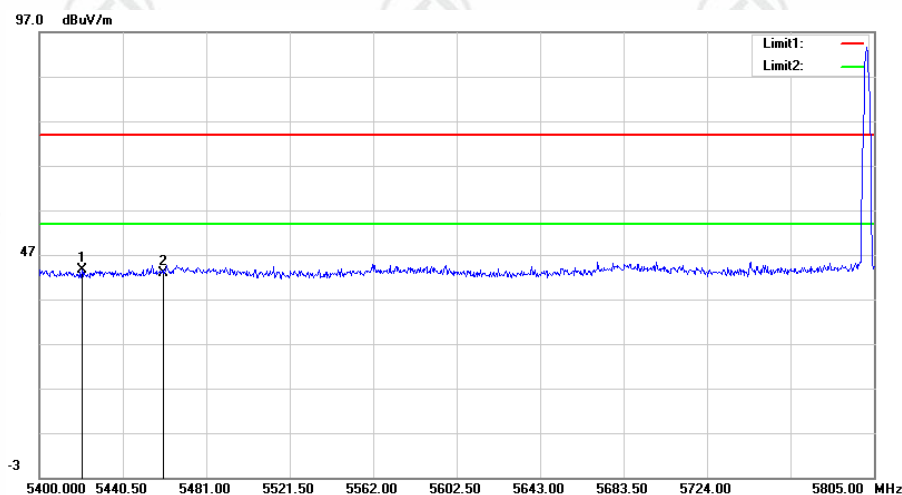
Test Graph



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg.)	Remark
1	5444.145	34.32	9.72	44.04	74.00	-29.96	144	0	peak
2	5460.000	33.60	9.72	43.32	74.00	-30.68	100	133	peak

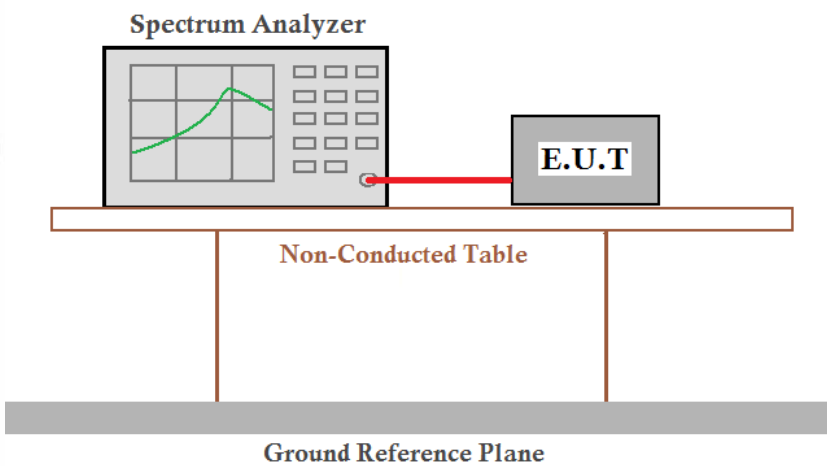
Mode:	Transmitting	Frequency:	5801
Remark:	Vertical		

Test Graph



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg.)	Remark
1	5420.655	33.78	9.73	43.51	74.00	-30.49	160	0	peak
2	5460.000	33.09	9.72	42.81	74.00	-31.19	127	0	peak

5.5. 20dB Bandwidth

Test Requirement:	47 CFR Part 15C Section 15.215
Test Method:	ANSI C63.10: 2013
Test Setup:	 Remark: Offset=Cable loss+ attenuation factor.
Test Procedure:	1) 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. 2) Set to the maximum power setting and enable the EUT transmit continuously. 3) Use the following spectrum analyzer settings for 20dB Bandwidth measurement. Span = approximately 2 to 5 times the 20 dB bandwidth, centered on a test channel; $1\% \leq RBW \leq 5\%$ of the 20 dB bandwidth; $VBW \geq 3RBW$; Sweep = auto; Detector function = peak; Trace = max hold. 4) Measure and record the results in the test report.
Limit:	N/A
Test Mode:	Transmitter mode
Test Results:	Pass

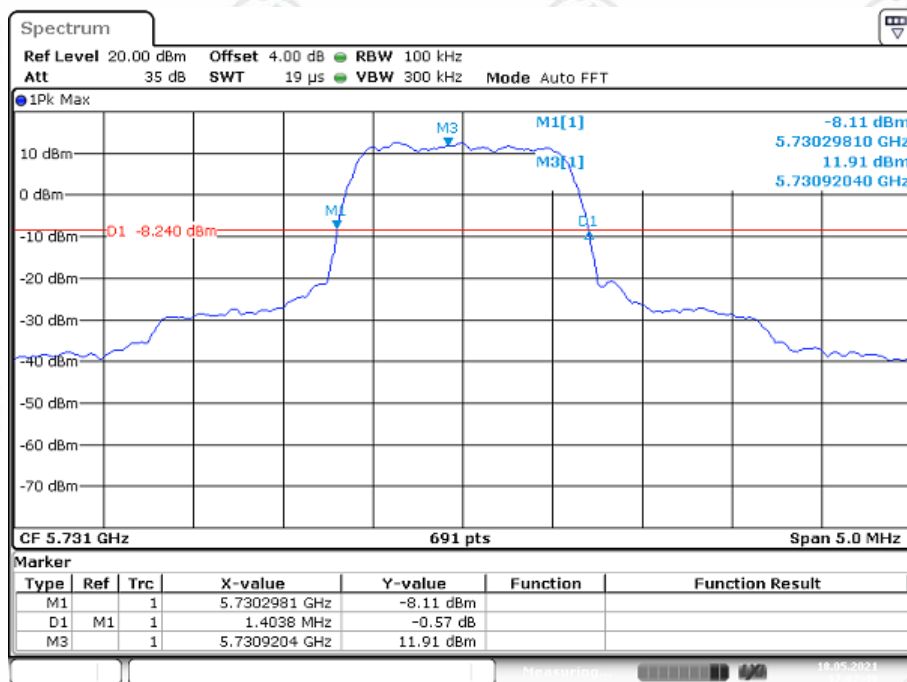
Measurement Data:

Test Channel	20dB bandwidth (MHz)	Results
Lowest	1.4038	Pass
Middle	1.3893	Pass
Highest	1.3965	Pass

Report No. : EED39N80210202R2

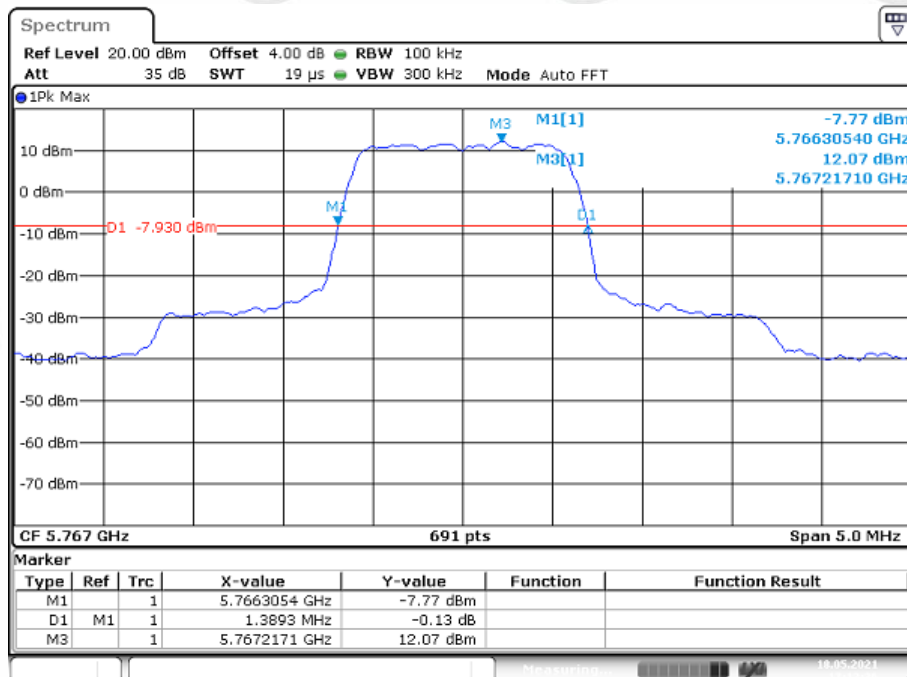
Test plot as follows:

Test channel: Lowest



Date: 18 MAY 2021 17:07:49

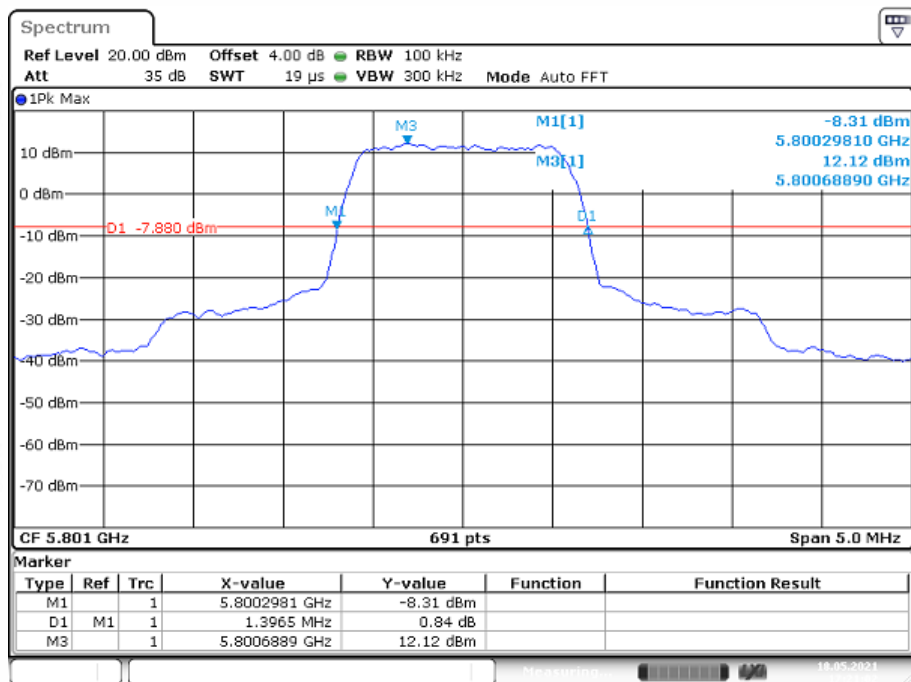
Test channel: Middle



Date: 18 MAY 2021 17:12:36

Report No. : EED39N80210202R2

Test channel: Highest



Date: 18 MAY 2021 17:21:03

APPENDIX 1 PHOTOGRAPHS OF TEST SETUP

Refer to Report No. EED39N80210201 for test setup photos.

APPENDIX 2 PHOTOGRAPHS OF EUT CONSTRUCTIONAL DETAILS

Refer to Report No. EED39N80210201 for EUT external and internal photos.

The testing data and results in this report are just for scientific research, education, internal quality control and product development etc.

*** End of Report ***

The test report is effective only with both signature and specialized stamp; the result(s) shown in this report refer only to the sample(s) tested. Without written approval of CTI, this report can't be reproduced except in full.