APPLICATION CERTIFICATION FCC Part 15C
On Behalf of
Hunan GM Innovation Technology Co., Ltd

Vaxis wireless video system
Model No.: Vaxis Storm3000, Vaxis Storm3000 DV, Vaxis Storm3000 DG, Vaxis Storm5000, Vaxis Storm2000, Vaxis Storm2000+, Vaxis Storm1000+

FCC ID: 2AJOF-3000

Prepared for	:	Hunan GM Innovation Technology Co., Ltd.
Address	:	No 46, Jiefang East Road, Furong District, Changsha City, Hunan Province, China
Prepared by	:	Shenzhen Accurate Technology Co., Ltd.
Address	:	1/F., Building A, Changyuan New Material Port, Science & Industry Park, Nanshan District, Shenzhen, Guangdong, P.R. China
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Report No.	:	ATE20190671
Date of Test	:	May 15-May 16, 2019
Date of Report	:	May 17, 2019

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Test Report Certification

Applicant	:	Hunan GM Innovation Technology Co., Ltd
Address	:	No 46, Jiefang East Road, Furong District, Changsha City, Hunan Province, China
Manufacturer	:	Hunan GM Innovation Technology Co., Ltd
Address	:	No 46, Jiefang East Road, Furong District, Changsha City, Hunan Province, China
Product Name	:	Vaxis wireless video system
Model No.	:	Vaxis Storm3000, Vaxis Storm3000 DV, Vaxis Storm3000 DG, Vaxis Storm5000, Vaxis Storm2000, Vaxis Storm2000+, Vaxis Storm1000+

Measurement Procedure Used:

FCC Rules and Regulations Part 15 Subpart E Section 15.407
ANSI C63.10: 2013
KDB 789033 D02 General UNII Test Procedures New Rules v02r01
KDB 662911 D01 Multiple Transmitter Output v02r01

The device described above is tested by Shenzhen Accurate Technology Co., Ltd to determine the maximum emission levels emanating from the device. The maximum emission levels are compared to the FCC Part 15 Subpart E Section 15.407 limits. The measurement results are contained in this test report and Shenzhen Accurate Technology Co., Ltd is assumed full responsibility for the accuracy and completeness of these measurements. Also, this report shows that the Equipment Under Test (EUT) is to be technically compliant with the FCC requirements.

This report applies to above tested sample only. This report shall not be reproduced in part without written approval of Shenzhen Accurate Technology Co., Ltd.

Date of Test :	May 15-May 16, 2019
Date of Report :	May 17, 2019
Prepared by :	(St Yang, Engineer)
Approved & Authorized Signer :	(Sean Liu, Manager)

1. GENERAL INFORMATION

1.1. Description of Device (EUT)

EUT	:	Vaxis wireless video system
Model Number	:	Vaxis Storm3000, Vaxis Storm3000 DV, Vaxis Storm3000 DG, Vaxis Storm5000, Vaxis Storm2000, Vaxis Storm2000+, Vaxis Storm1000+ (Note: We hereby state that these models are identical in interior structure, electrical circuits and components, Just model name is different. Therefore only model Vaxis Storm3000 is for tests.)
Frequency Range	:	5190MHz, 5230MHz, 5745MHz, 5785MHz, 5825MHz
Number of Channels	:	5
G_{ANT} Max	:	4.5dBi (two antennas have the same gain)
Directional gain (G_{TX})	:	7.51
Antenna type	:	Stick Antenna
Modulation mode	:	OFDM 16QAM
Power Supply	:	DC 6-36V

1.2. Special Accessory and Auxiliary Equipment

N/A

1.3.Description of Test Facility

EMC Lab	:	Recognition of accreditation by Federal Communications Commission (FCC) The Designation Number is CN1189 The Registration Number is 708358 Listed by Innovation, Science and Economic Development Canada (ISEDC) The Registration Number is 5077A-2 Accredited by China National Accreditation Service for Conformity Assessment (CNAS) The Registration Number is CNAS L3193 Accredited by American Association for Laboratory Accreditation (A2LA) The Certificate Number is 4297.01
Subcontracted Items	:	Radiated spurious Emission Test (26.5GHz to 40GHz)
Subcontractor	:	Shenzhen Academy of Metrology and Quality Inspection
Site Location	:	Bldg. of Metrology & Quality Inspection, Longzhu Road Nanshan District, Shenzhen, Guangdong, China
Name of Firm	:	Shenzhen Accurate Technology Co., Ltd
Site Location	:	1/F., Building A, Changyuan New Material Port, Science & Industry Park, Nanshan District, Shenzhen, Guangdong, P.R. China

1.4.Measurement Uncertainty

Radiated Emission Expanded Uncertainty (9kHz-30MHz)	:	U=2.66dB, k=2
Radiated Emission Expanded Uncertainty (30MHz-1000MHz)	:	U=4.28dB, k=2
Radiated Emission Expanded Uncertainty (1G-18GHz)	:	U=4.98dB, k=2
Radiated Emission Expanded Uncertainty (18G-26.5GHz)	:	U=5.06dB, k=2
Conduction Emission Expanded Uncertainty (Mains ports, 9kHz-30MHz)	:	U=2.72dB, k=2

2. MEASURING DEVICE AND TEST EQUIPMENT

Table 1: List of Test and Measurement Equipment

Kind of equipment	Manufacturer	Type	S/N	Calibrated dates	Cal. Interval
EMI Test Receiver	Rohde&Schwarz	ESCS30	100307	Jan. 05, 2019	One Year
EMI Test Receiver	Rohde&Schwarz	ESR	101817	Jan. 05, 2019	One Year
Spectrum Analyzer	Rohde&Schwarz	FSV-40	101495	Jan. 05, 2019	One Year
Pre-Amplifier (Radiated Emission)	Compliance Direction	RSU-M2	38322	Jan. 05, 2019	One Year
Pre-Amplifier (Radiated Emission)	Agilent	8447D	294A10619	Jan. 05, 2019	One Year
Loop Antenna	Schwarzbeck	FMZB1516	1516131	Jan. 05, 2019	One Year
Bilog Antenna	Schwarzbeck	VULB9163	9163-323	Jan. 05, 2019	One Year
Horn Antenna	Schwarzbeck	BBHA9120D	9120D-655	Jan. 05, 2019	One Year
Horn Antenna	Schwarzbeck	BBHA9170	9170-359	Jan. 05, 2019	One Year
LISN	Schwarzbeck	NSLK8126	8126431	Jan. 05, 2019	One Year
Highpass Filter	Wainwright Instruments	WHKX3.6/18G-10SS	N/A	Jan. 05, 2019	One Year
Band Reject Filter	Wainwright Instruments	WRCG2400/2485-2375/2510-60/11SS	N/A	Jan. 05, 2019	One Year
RF Coaxial Cable (Conducted Emission)	SUHNER	N-2m	No.2	Jan. 05, 2019	One Year
RF Coaxial Cable (Radiated Emission)	SUHNER	N-5m	NO.3	Jan. 05, 2019	One Year
RF Coaxial Cable (Radiated Emission)	SUHNER	N-5m	NO.4	Jan. 05, 2019	One Year
RF Coaxial Cable (Radiated Emission)	SUHNER	N-1m	NO.5	Jan. 05, 2019	One Year
RF Coaxial Cable (Radiated Emission)	SUHNER	N-1m	NO.6	Jan. 05, 2019	One Year
Programmable Temperature & Humidity chamber	REALE	RHP-800BT	R20170318310	Jan. 02, 2019	One Year
Conducted Emission Measurement Software: ES-K1 V1.71					
Radiated Emission Measurement Software: EZ_EMC V1.1.4.2					

3. OPERATION OF EUT DURING TESTING

3.1.Operating Mode

For the band 5.15–5.25 GHz: **Transmitting mode**
Low Channel: 5190MHz
High Channel: 5230MHz

For the band 5.725–5.825 GHz: **Transmitting mode**
Low Channel: 5745MHz
Middle Channel: 5785MHz
High Channel: 5825MHz

Note: The EUT has been tested under continuous transmission mode.

3.2.Configuration and peripherals

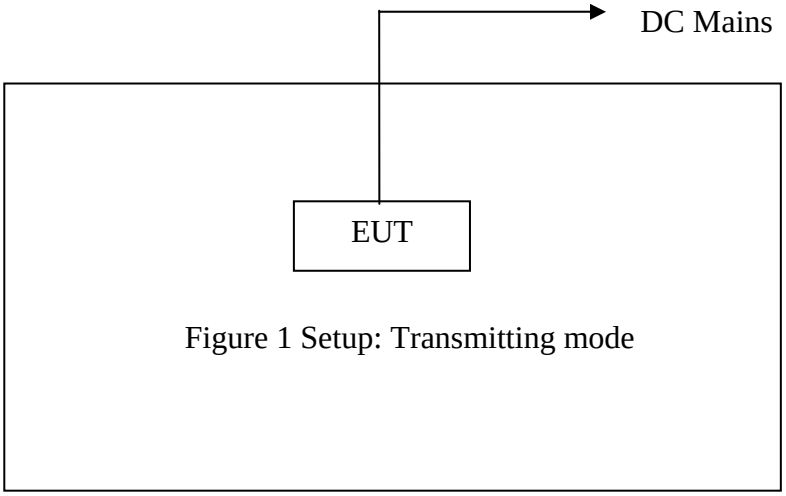


Figure 1 Setup: Transmitting mode

Note: The EUT have two antenna(1 and 2), They can only transmit simultaneously.

4. TEST PROCEDURES AND RESULTS

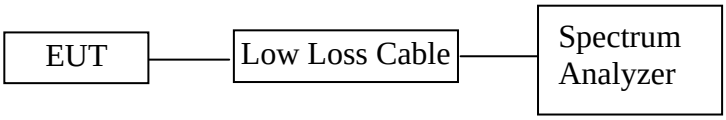
FCC Rules	Description of Test	Result
Section 15.207	AC Power Line Conducted Emission	N/A
KDB 789033 §C Section 15.403(i) Section 15.407(a)(5) Band: 5.15-5.25 GHz 5.25-5.35 GHz 5.47-5.725 GHz	26dB Occupied Bandwidth	Compliant
KDB 789033 §C Section 15.403(i) Section 15.407(e) Band: 5.725-5.85 GHz	6dB Occupied Bandwidth	Compliant
KDB 789033 §D	99% occupied Bandwidth	Compliant
---	Duty cycle	Compliant
Section 15.407(a)(1)(iv) Section 15.407(a)(3) KDB 789033 §F	Power Spectral Density	Compliant
Section 15.407(a)(1)(iv) Section 15.407(a)(3) KDB 789033 §E	Maximum conducted (average) output power	Compliant
Section 15.407(b)(1) Section 15.407(b)(4) Section 15.407(b)(6) Section 15.407(b)(7) Section 15.205 Section 15.209 KDB 789033 §G	Unwanted Emission	Compliant
Section 15.407(b) KDB 789033 §G	Band Edge Compliance	Compliant
Section 15.407(b)(4)(i)	IN Band Emission	Compliant
Section 15.407(g)	Frequency Stability	Compliant
Section 15.203, Section 15.204(b) Section 15.204(c)	Antenna Requirement	Compliant

Remark: “N/A” means “Not applicable”.

Note: The power supply mode of the EUT is DC 6-36V, According to the FCC standard requirements, conducted emission is not applicable.

5. 26DB OCCUPIED BANDWIDTH TEST

5.1.Block Diagram of Test Setup



5.2.The Requirement For Section 15.407(a)(5)

The maximum power spectral density is measured as a conducted emission by direct connection of a calibrated test instrument to the equipment under test. If the device cannot
be connected directly, alternative techniques acceptable to the Commission may be used. Measurements in the 5.725–5.85 GHz band are made over a reference bandwidth of 500 kHz or the 26 dB emission bandwidth of the device, whichever is less. Measurements in the 5.15–5.25 GHz, 5.25–5.35 GHz, and the 5.47–5.725 GHz bands are made over a bandwidth of 1 MHz or the 26 dB emission bandwidth of the device, whichever
is less. A narrower resolution bandwidth can be used, provided that the measured power is integrated over the full reference bandwidth

5.3.EUT Configuration on Measurement

The equipment are installed on the emission measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

5.4.Operating Condition of EUT

5.4.1.Setup the EUT and simulator as shown as Section 5.1.

5.4.2.Turn on the power of all equipment.

5.4.3.Let the EUT work in TX modes measure it. The transmit frequency are 5190MHz and 5230MHz.

5.5.Test Procedure

5.5.1.The transmitter output was connected to the spectrum analyzer through a low loss cable.

5.5.2.Set RBW = approximately 1% of the emission bandwidth.

5.5.3.Set the VBW > RBW.

5.5.4.Detector = Peak.

5.5.5.Trace mode = max hold.

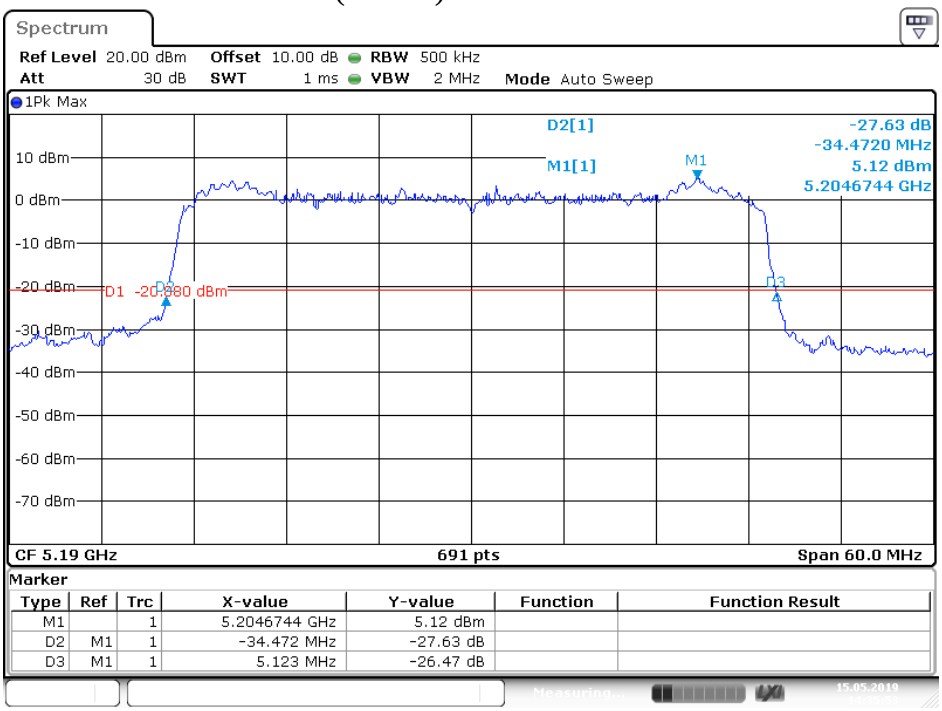
5.5.6.Measure the maximum width of the emission that is 26 dB down from the maximum of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.

5.6.Test Result

Frequency (MHz)	26dB Bandwidth ANT 1 (MHz)	26dB Bandwidth ANT 2(MHz)
5190	39.595	39.363
5230	39.711	39.363

The spectrum analyzer plots are attached as below.

(ANT 1) 5190MHz



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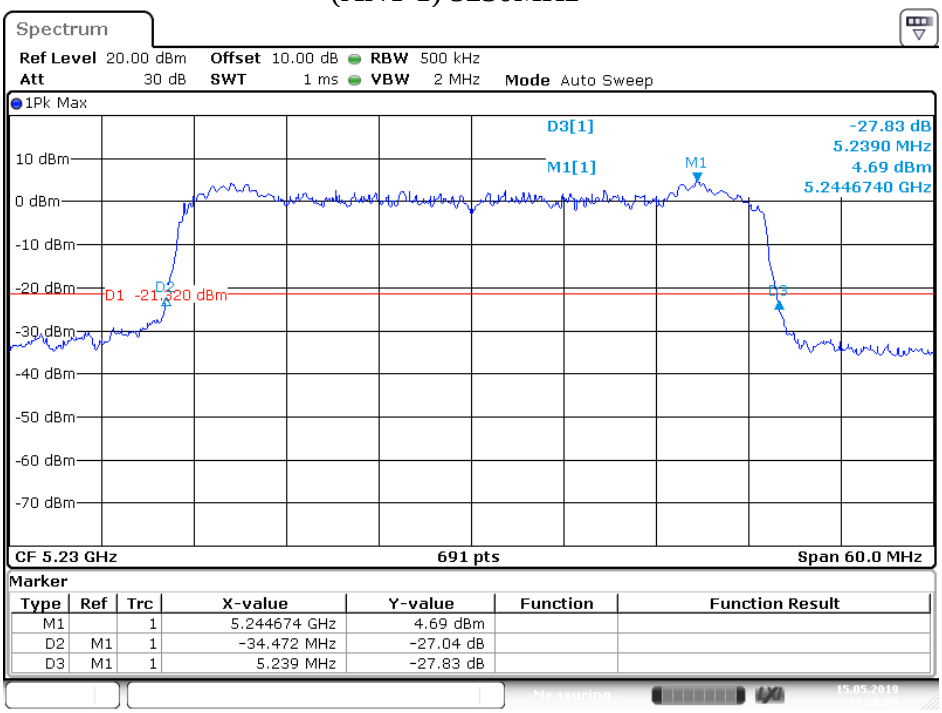
(ANT 1) 5230MHz



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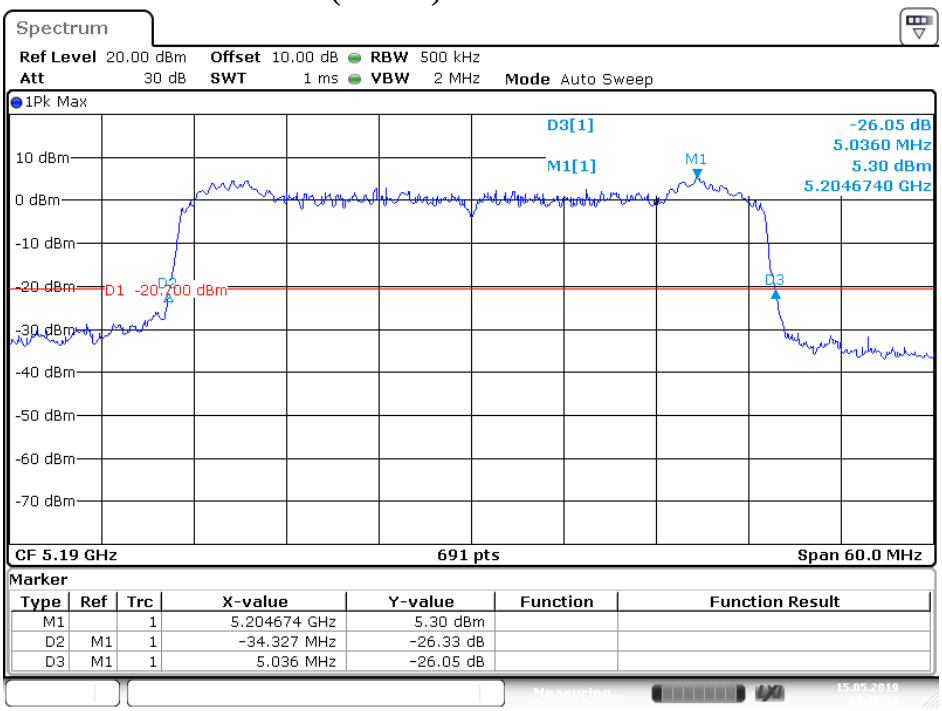
(ANT 2) 5190MHz



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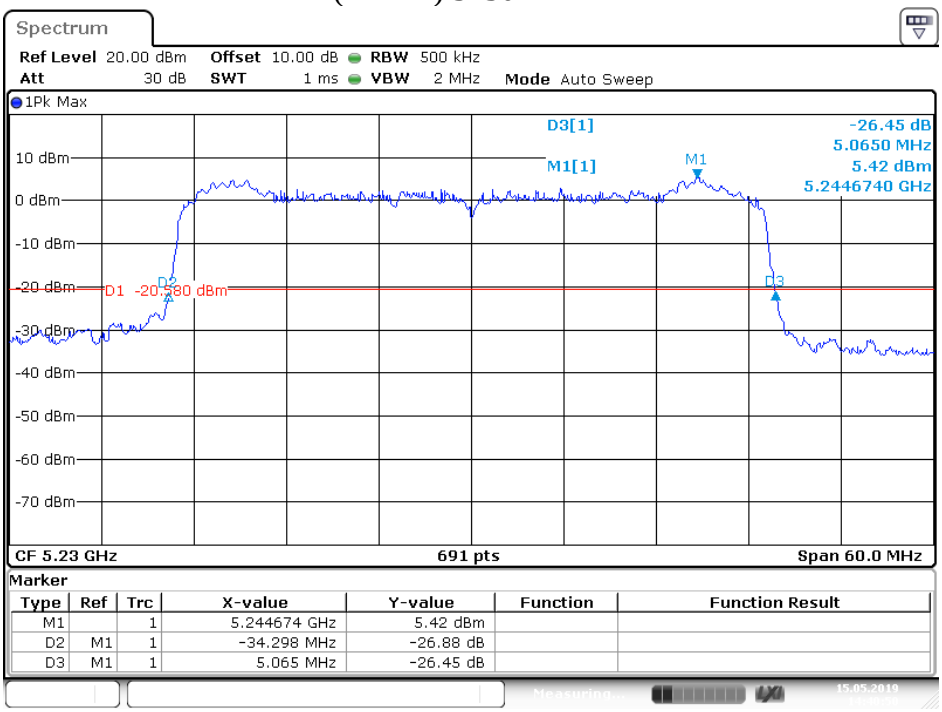
(ANT 2) 5230MHz



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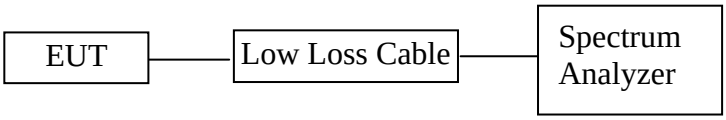
6. 6DB OCCUPIED BANDWIDTH TEST

6.1.Block Diagram of Test Setup



6.2.The Requirement For Section 15.407(e)

Within the 5.725–5.85 GHz band, the minimum 6 dB bandwidth of U–NII devices shall be at least 500 kHz.

6.3.EUT Configuration on Measurement

The equipment are installed on the emission measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

6.4.Operating Condition of EUT

6.4.1.Setup the EUT and simulator as shown as Section 6.1.

6.4.2.Turn on the power of all equipment.

6.4.3.Let the EUT work in TX modes measure it. The transmit frequency are 5745MHz, 5785MHz and 5825MHz.

6.5.Test Procedure

6.5.1.Set RBW = 100 kHz. Set the video bandwidth (VBW) ≥ 3×RBW.

6.5.2.Detector = Peak.

6.5.3.Trace mode = max hold.

6.5.4.Sweep = auto couple.

6.5.5.Allow the trace to stabilize.

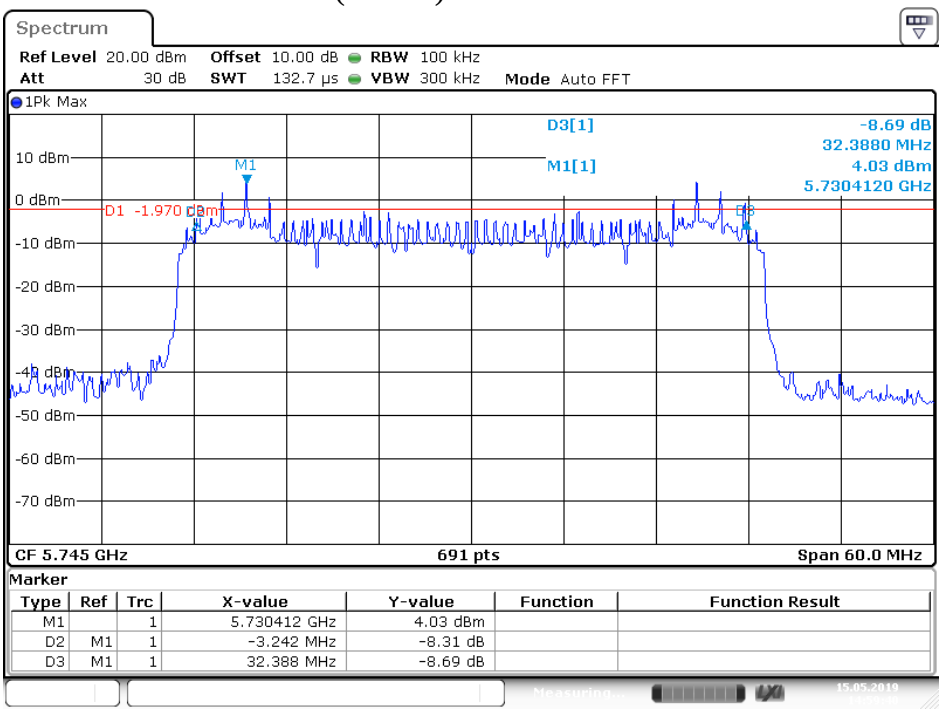
6.5.6.Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

6.6.Test Result

Test mode: MIMO			
Frequency (MHz)	6dB Bandwidth ANT 1 (MHz)	6dB Bandwidth ANT 2(MHz)	Limit (MHz)
5745	35.630	35.601	> 0.5MHz
5785	35.601	35.630	> 0.5MHz
5825	35.601	35.601	> 0.5MHz

The spectrum analyzer plots are attached as below.

(ANT 1) 5745MHz



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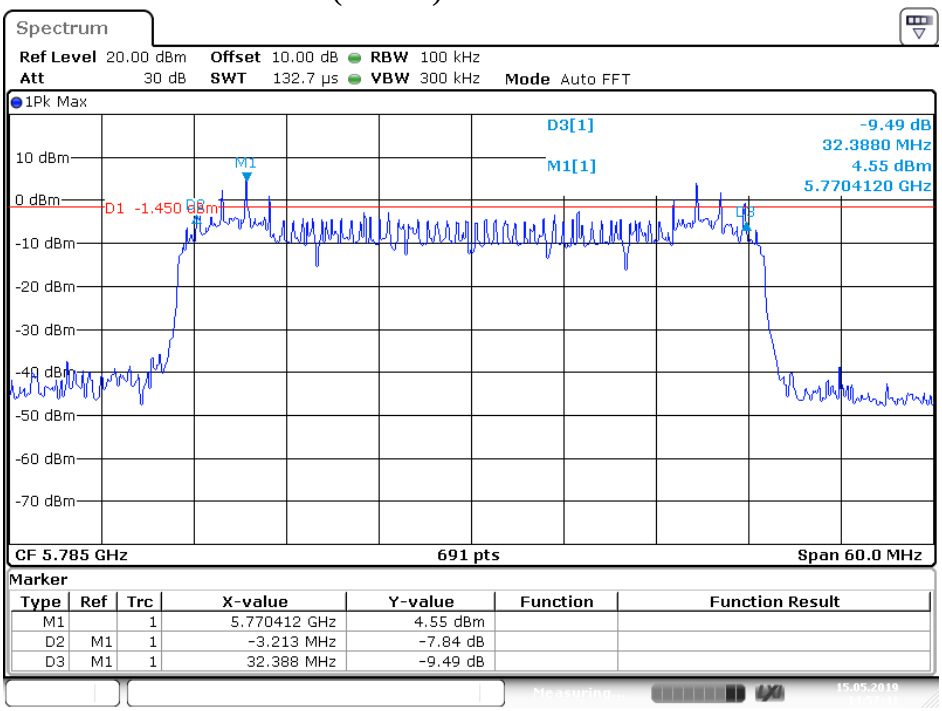
(ANT 1) 5785MHz



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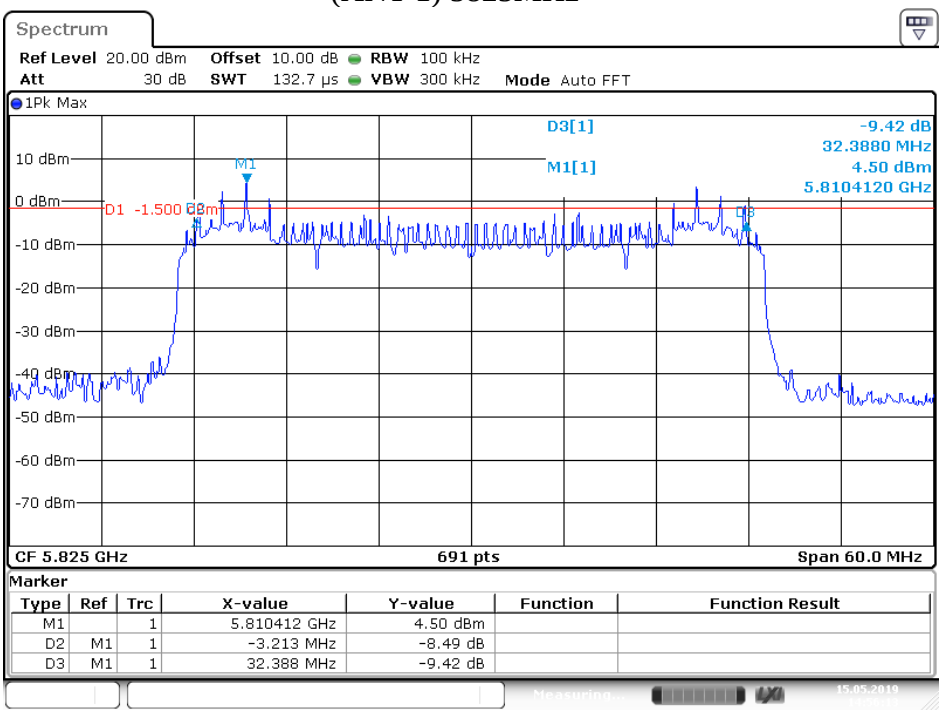
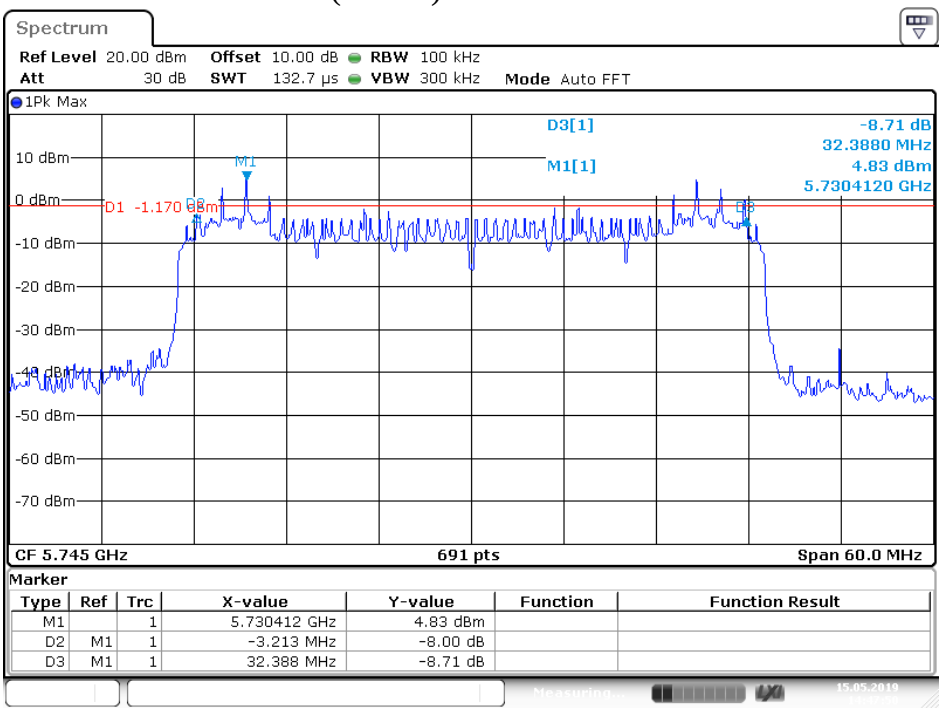
(ANT 1) 5825MHz



Date: 15.MAY.2019 14:56:13

(ANT 2) 5745MHz



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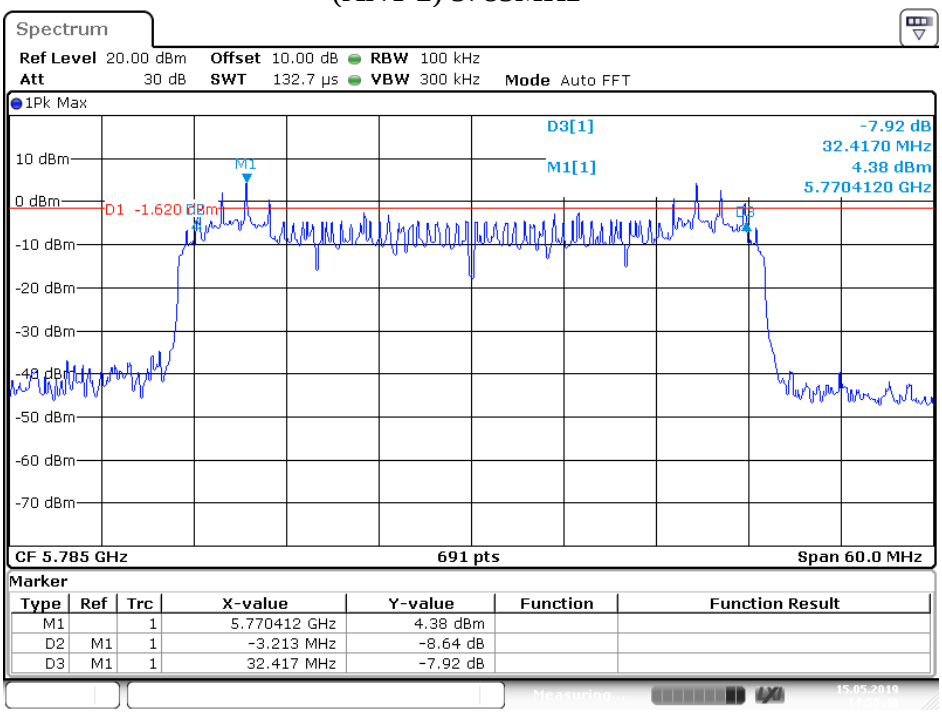
(ANT 2) 5785MHz



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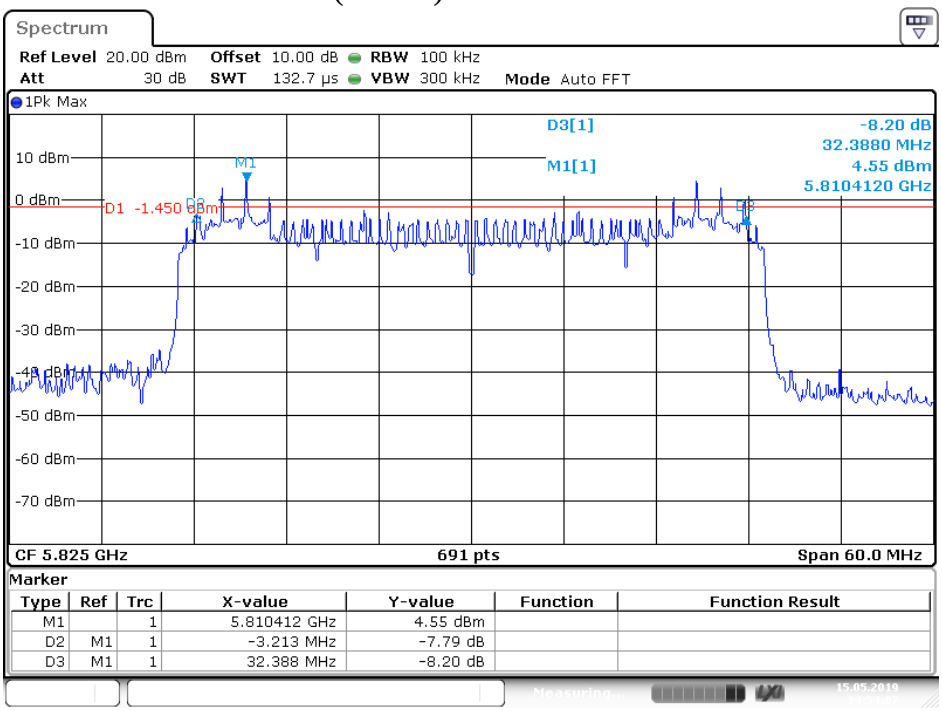
(ANT 2) 5825MHz



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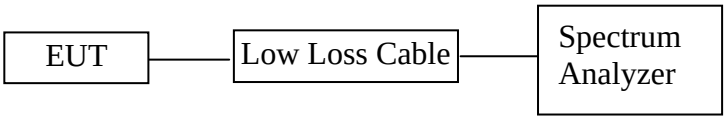
7. 99% OCCUPIED BANDWIDTH

7.1.Block Diagram of Test Setup



7.2.The Requirement For Section KDB 789033 §D

The 99% occupied bandwidth is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers are each equal to 0.5 % of the total mean power of the given emission. Measurement of the 99% occupied bandwidth is required only as a condition for using the optional band-edge measurement techniques described in section II.G.3.d). Measurements of 99% occupied bandwidth may also optionally be used in lieu of the EBW to define the minimum frequency range over which the spectrum is integrated when measuring maximum conducted output power as described in section II.E. However, the EBW must be measured to determine bandwidth dependent limits on maximum conducted output power in accordance with 15.407(a).

7.3.EUT Configuration on Measurement

The equipment is installed on the emission measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

7.4.Operating Condition of EUT

7.4.1.Setup the EUT and simulator as shown as Section 7.1.

7.4.2.Turn on the power of all equipment.

7.4.3.Let the EUT work in TX modes measure it. The transmit frequency are 5190MHz, 5230MHz, 5745MHz, 5785MHz and 5825MHz.

7.5.Test Procedure

7.5.1.Set center frequency to the nominal EUT channel center frequency.

7.5.2.Set span = 1.5 times to 5.0 times the OBW.

7.5.3.Set RBW = 1% to 5% of the OBW

7.5.4.Set VBW ≥ 3 × RBW

7.5.5.Video averaging is not permitted. Where practical, a sample detection and single sweep mode shall be used. Otherwise, peak detection and max hold mode (until the trace stabilizes) shall be used.

7.5.6.Use the 99% power bandwidth function of the instrument (if available).

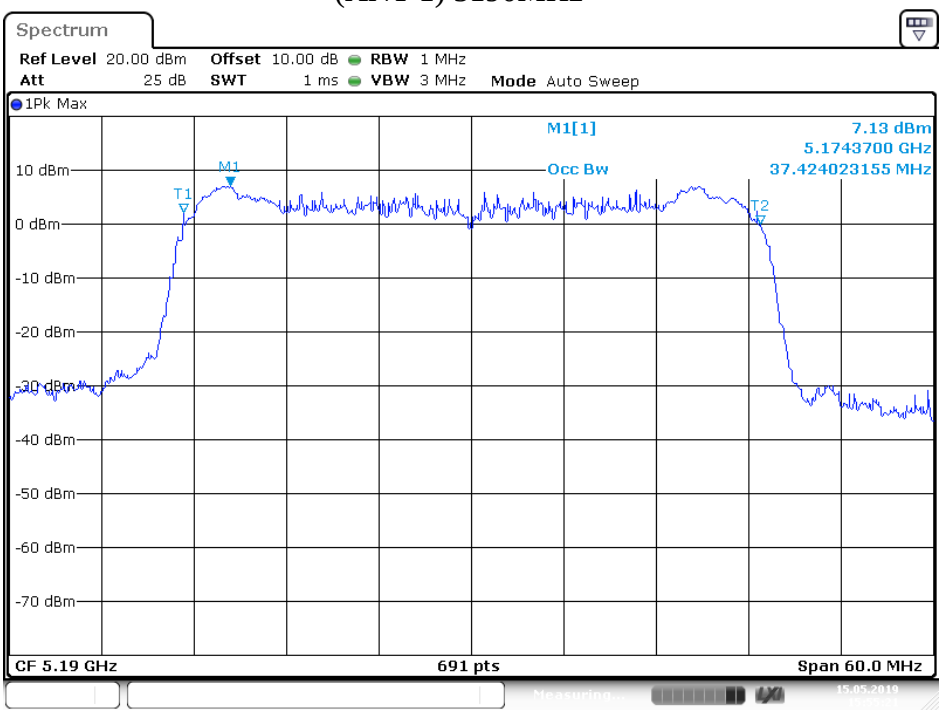
7.5.7.If the instrument does not have a 99% power bandwidth function, the trace data points are recovered and directly summed in power units. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5% of the total is reached; that frequency is recorded as the lower frequency. The process is repeated until 99.5% of the total is reached; that frequency is recorded as the upper frequency. The 99% occupied bandwidth is the difference between these two frequencies.

7.6.Test Result

Test mode: MIMO		
Frequency (MHz)	99% Occupied Bandwidth ANT1 (MHz)	99% Occupied Bandwidth ANT2 (MHz)
5190	37.424	37.424
5230	37.511	37.424
5745	37.424	37.424
5785	37.424	37.424
5825	37.424	37.424

The spectrum analyzer plots are attached as below.

(ANT 1) 5190MHz



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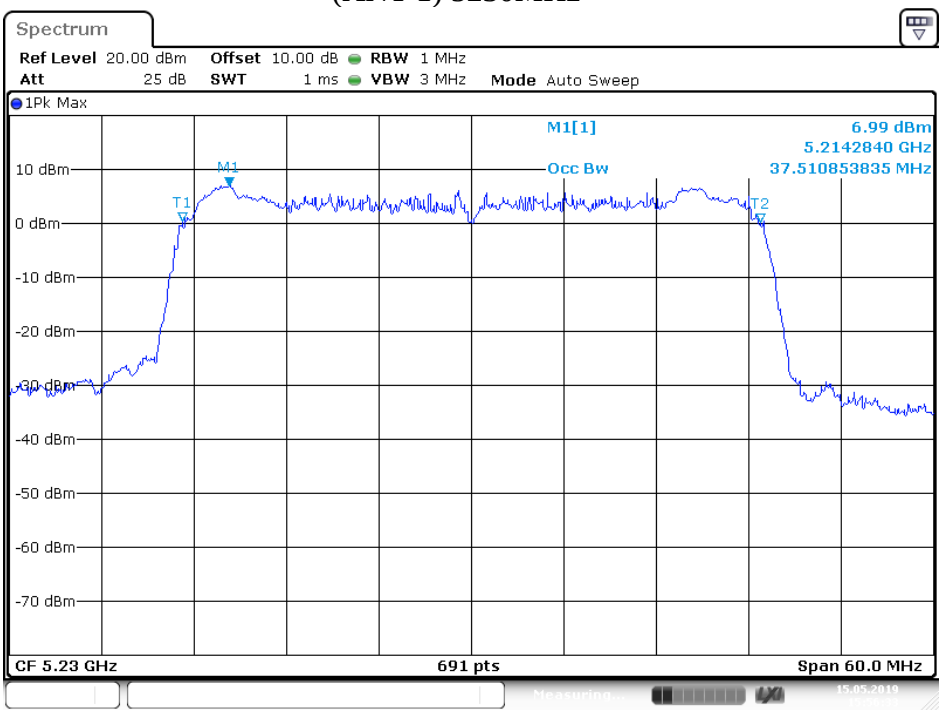
(ANT 1) 5230MHz



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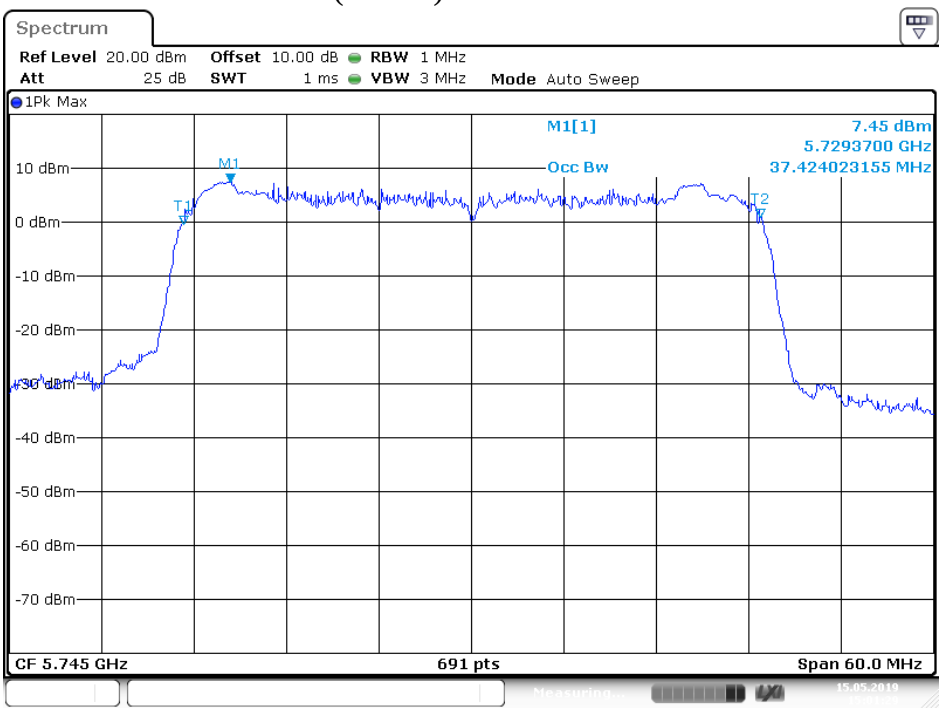
(ANT 1) 5745MHz



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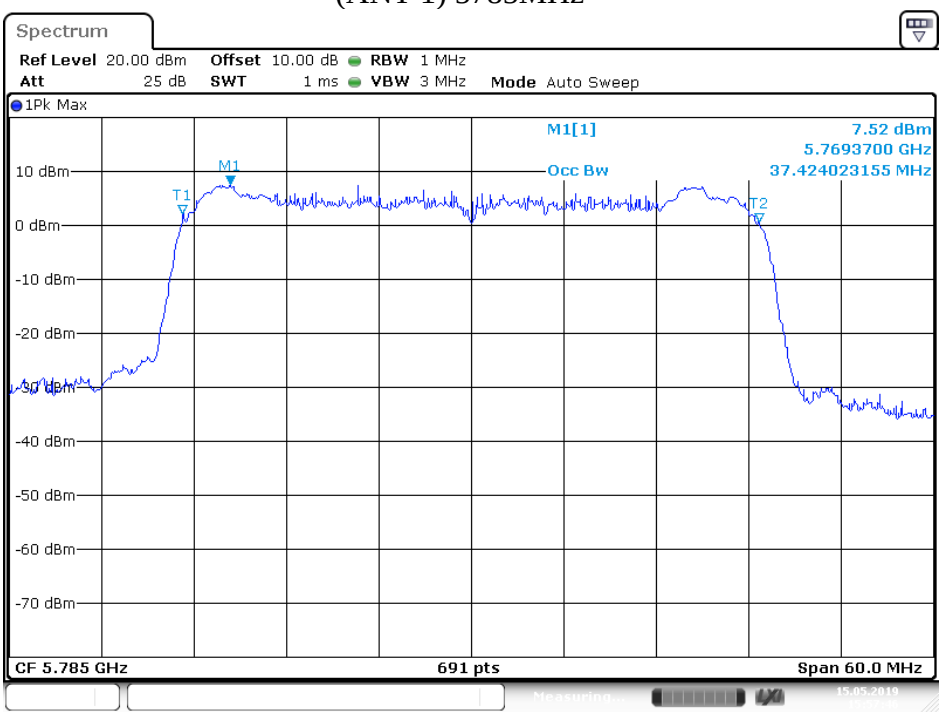
(ANT 1) 5785MHz



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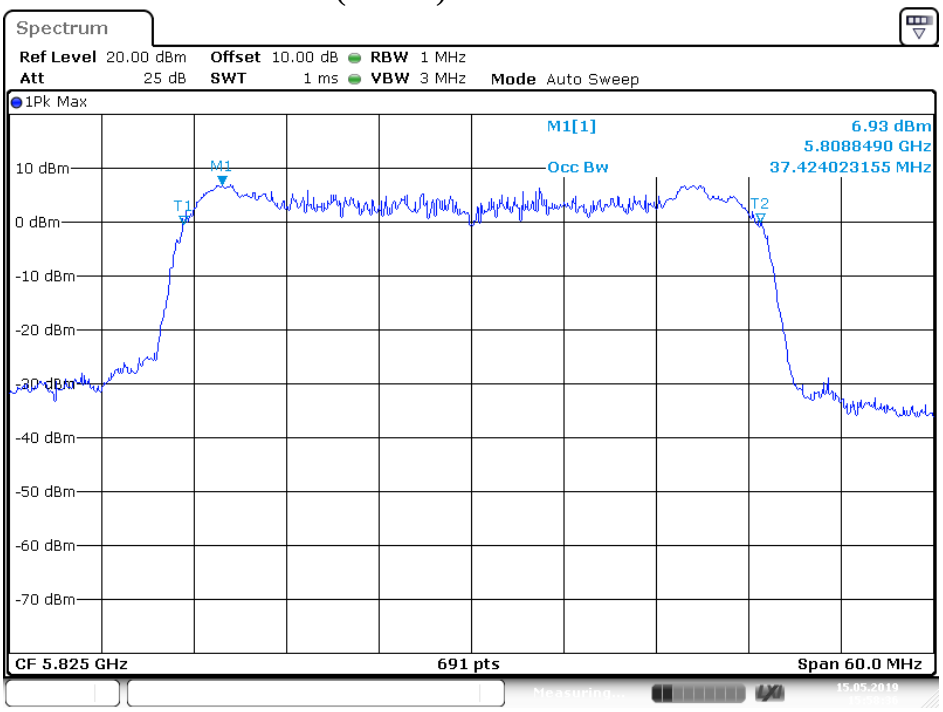
(ANT 1) 5825MHz



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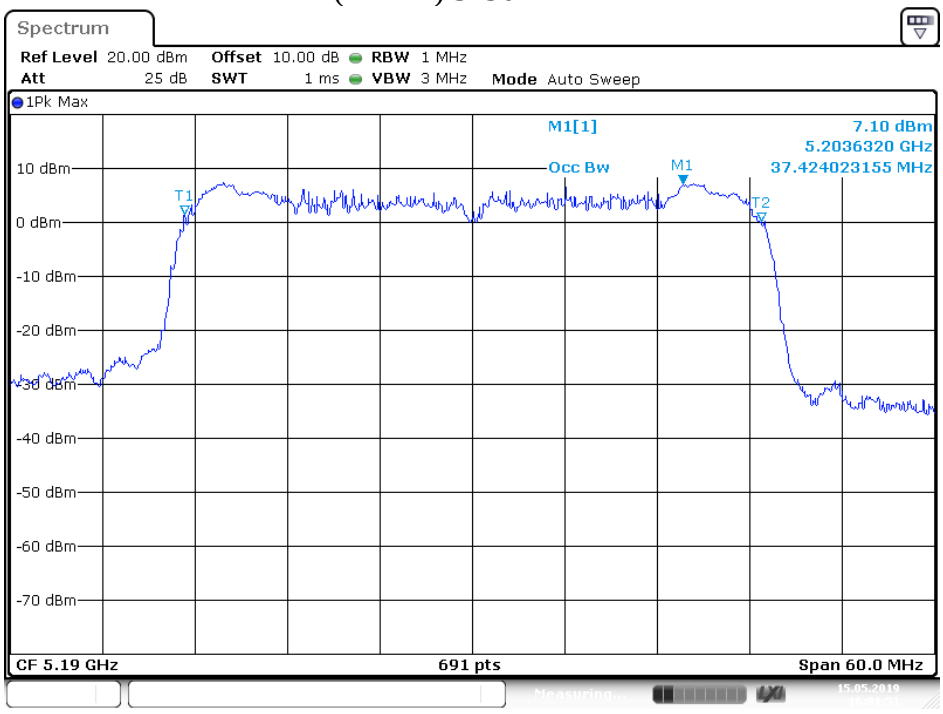
(ANT 2) 5190MHz



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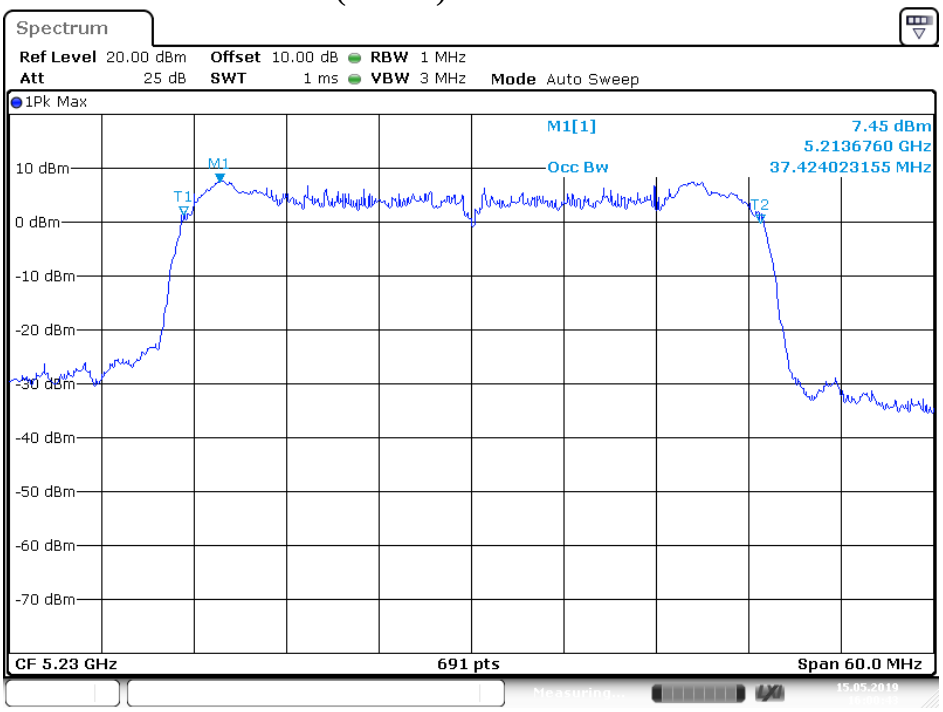
(ANT 2) 5230MHz



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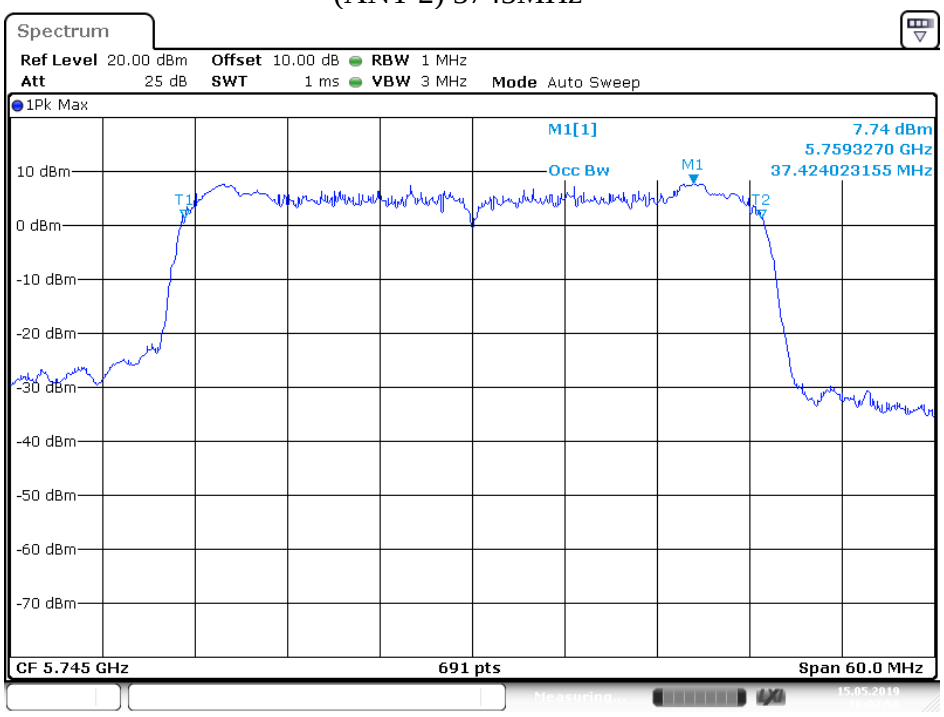
(ANT 2) 5745MHz



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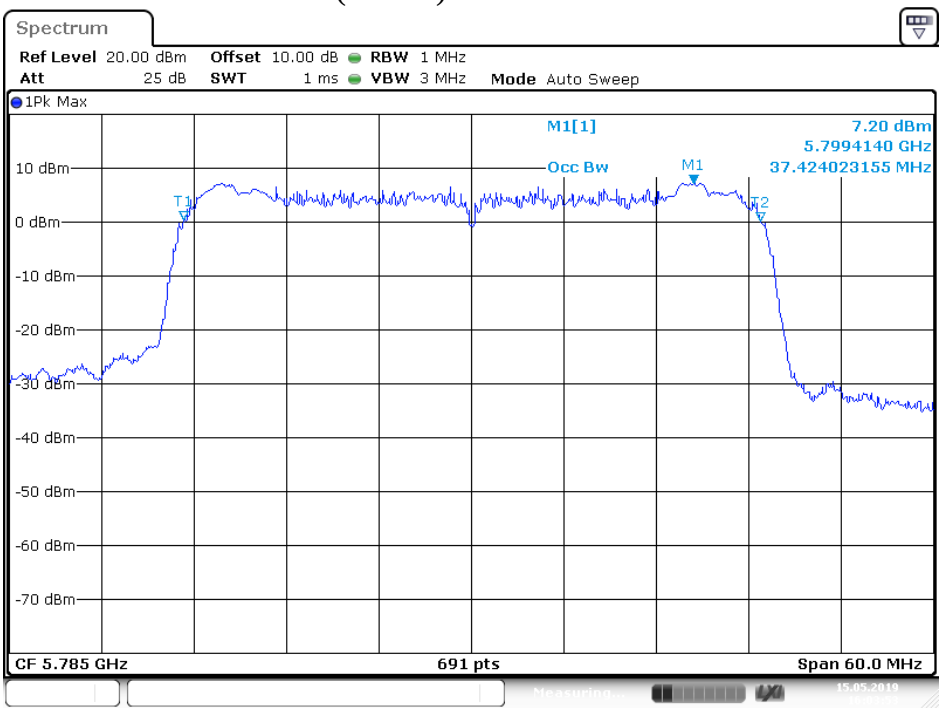
(ANT 2) 5785MHz



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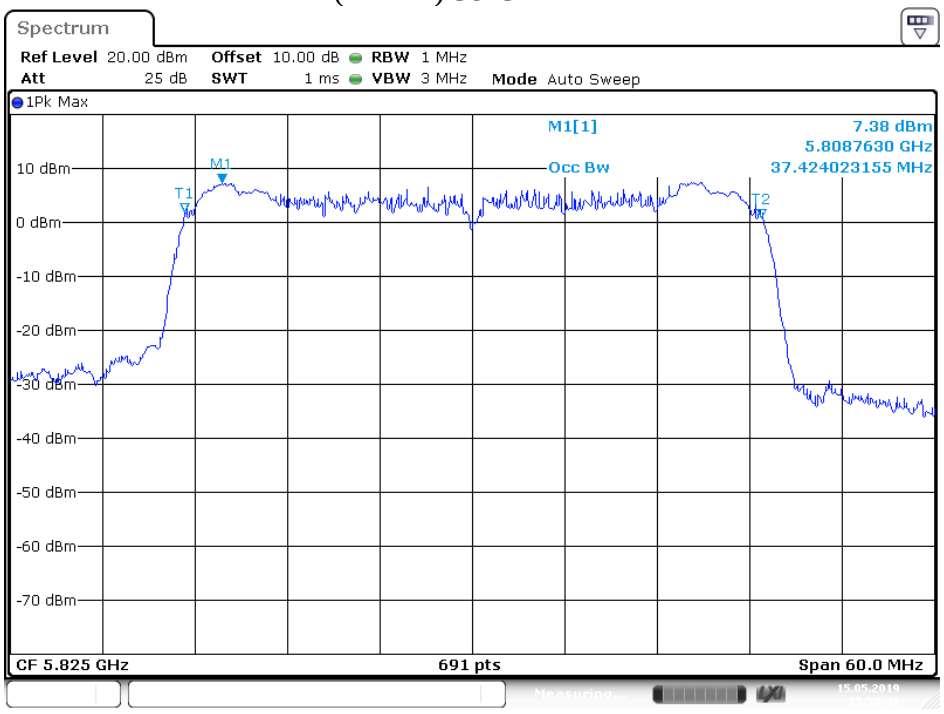
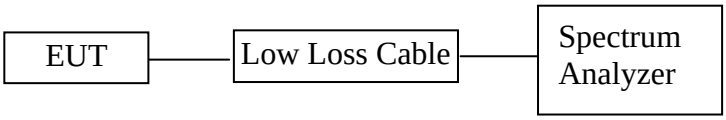
(ANT 2) 5825MHz



Date: 15.MAY.2019 15:59:48

8. DUTY CYCLE MEASUREMENT

8.1.Block Diagram of Test Setup



8.2.EUT Configuration on Measurement

The equipment are installed on the emission measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

8.3.Operating Condition of EUT

8.3.1.Setup the EUT and simulator as shown as Section 8.1.

8.3.2.Turn on the power of all equipment.

8.3.3.Let the EUT work in TX modes measure it. The transmit frequency are 5190MHz, 5230MHz, 5745MHz, 5825MHz and 5785MHz.

8.4.Test Procedure

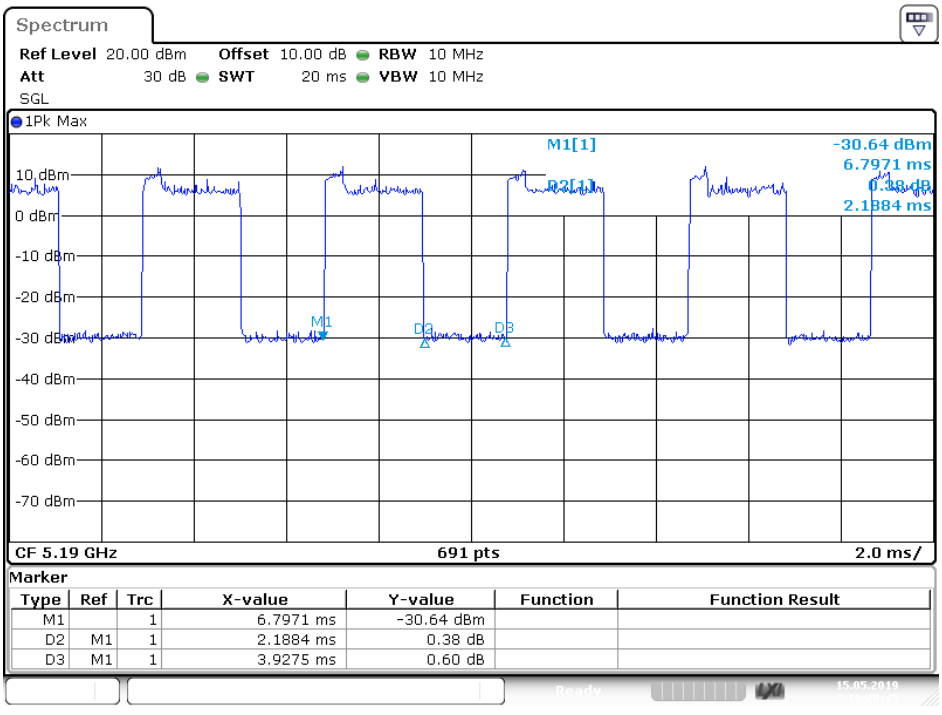
Measurements of duty cycle and transmission duration shall be performed using one of the following techniques:
1. A diode detector and an oscilloscope that together have sufficiently short response time to permit accurate measurements of the on- and off-times of the transmitted signal.
2. The zero-span mode on a spectrum analyzer or EMI receiver if the response time and spacing between bins on the sweep are sufficient to permit accurate measurements of the on- and off-times of the transmitted signal
a. Set the center frequency of the instrument to the centre frequency of the transmission
b. Set RBW ≥ OBW if possible; otherwise, set RBW to the largest available value(10MHz).
c. Set detector = Peak or average.
d. The zero-span measurement method shall not be used unless both RBW and VBW are > 50/T and the number of sweep points across duration T exceeds 100.
(For example, if VBW and/or RBW are limited to 3MHz, then the zero-span method of measuring duty cycle shall not be used if T≤16.7 microseconds.)

8.5.Test Result

Test mode: MIMO				
Frequency (MHz)	duty cycle(x) ANT 1	10log(1/x) ANT 1	duty cycle(x) ANT 2	10log(1/x) ANT 2
5190	55.71%	2.54	56.04%	2.52
5230	55.64%	2.55	55.72%	2.54
5745	56.36%	2.49	55.64%	2.55
5785	55.31%	2.57	54.98%	2.60
5825	55.64%	2.55	55.31%	2.57

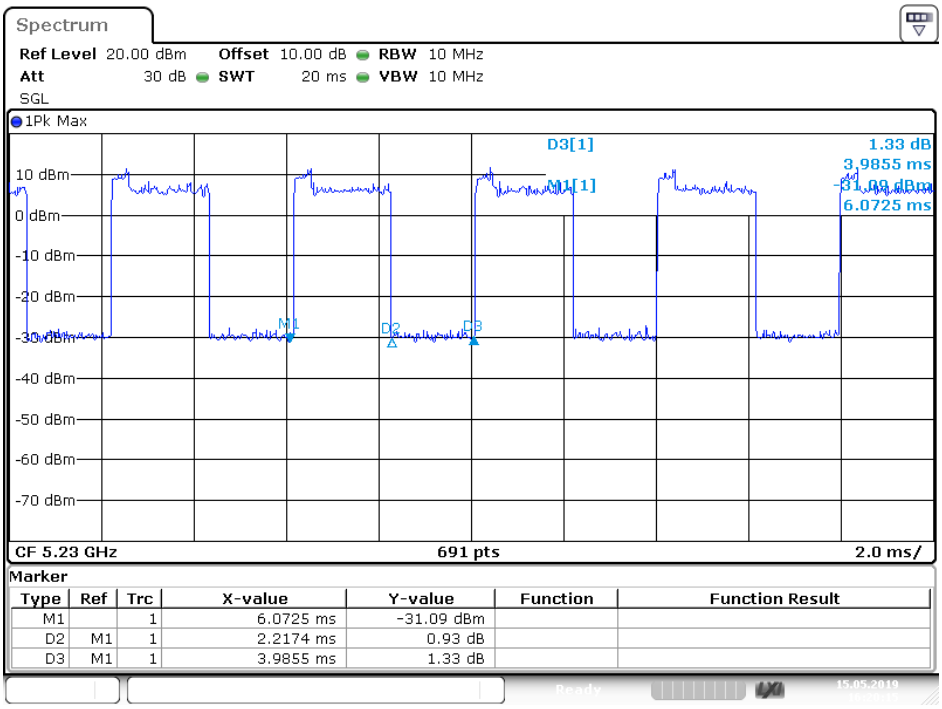
The spectrum analyzer plots are attached as below.

(ANT 1) 5190MHz



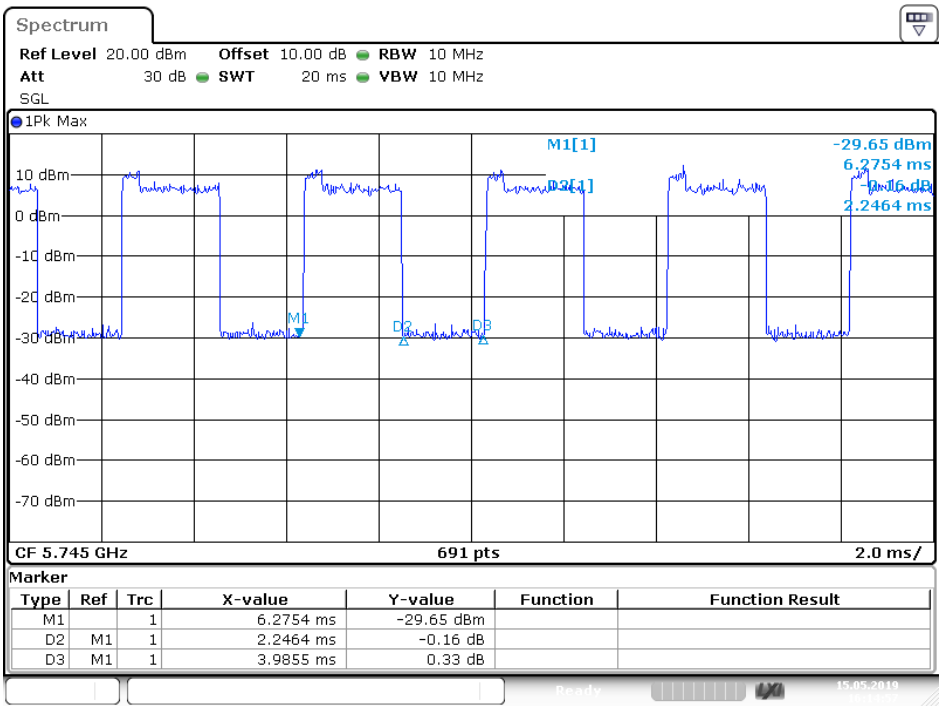
Date: 15.MAY.2019 16:20:45

(ANT 1) 5230MHz



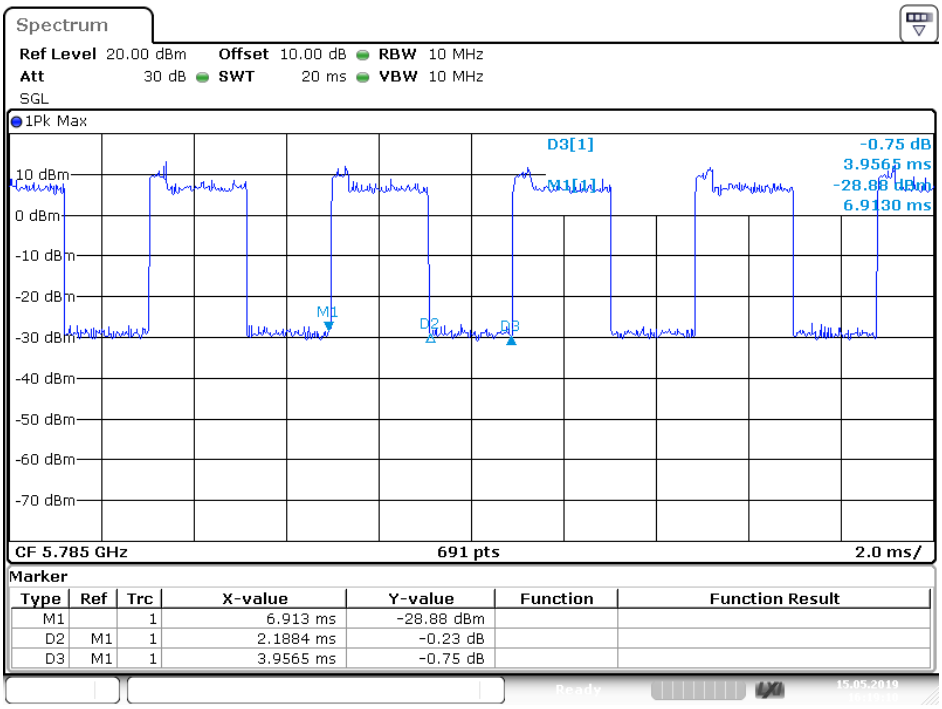
Date: 15.MAY.2019 16:20:15

(ANT 1) 5745MHz



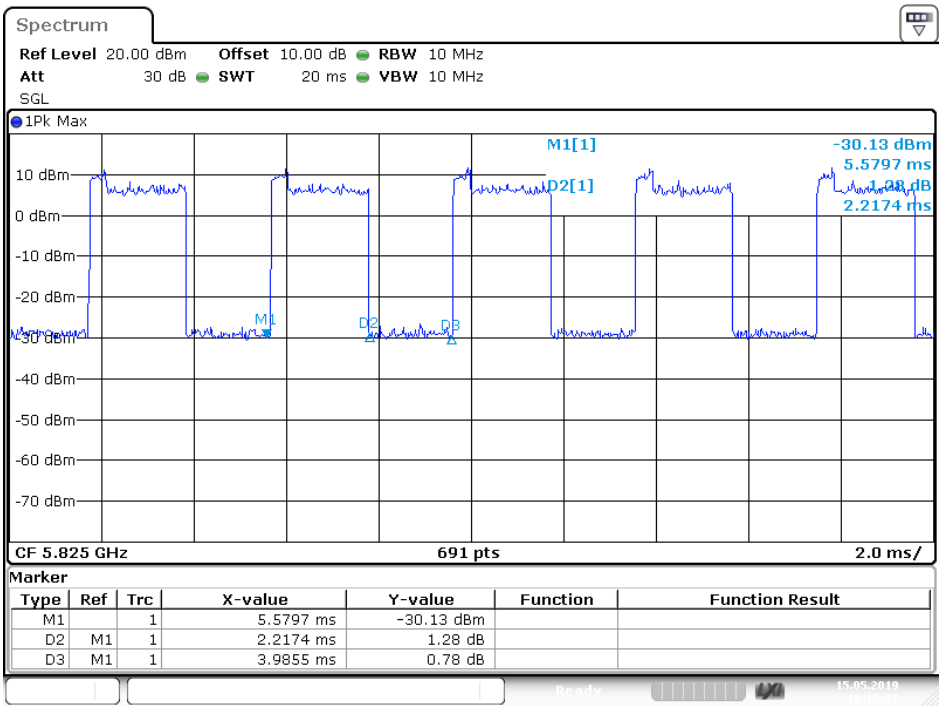
Date: 15.MAY.2019 16:14:57

(ANT 1) 5785MHz



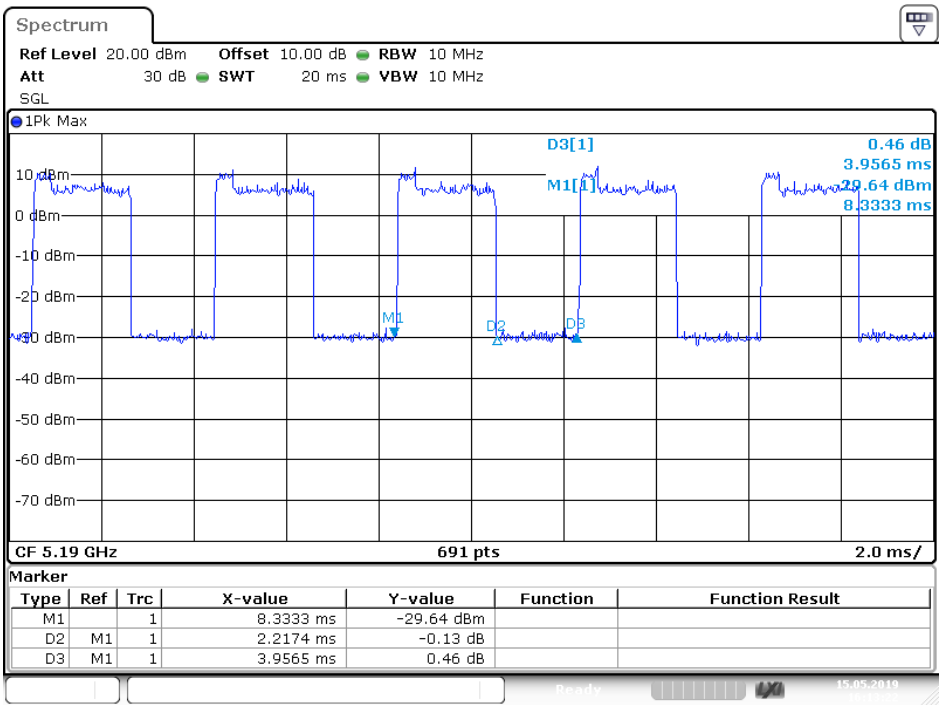
Date: 15.MAY.2019 16:19:09

(ANT 1) 5825MHz



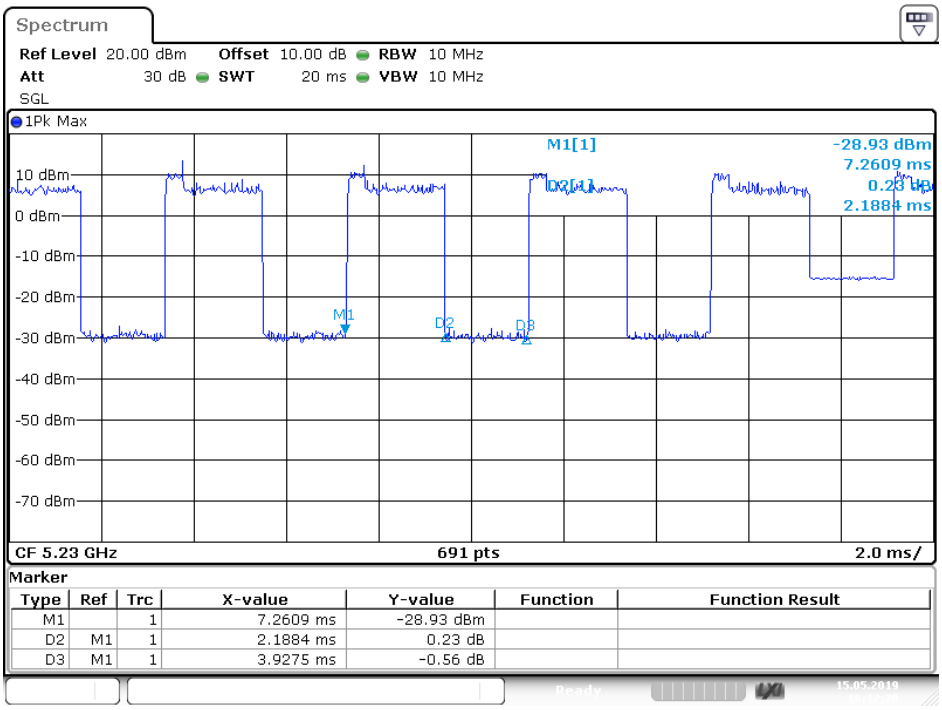
Date: 15.MAY.2019 16:19:41

(ANT 2) 5190MHz



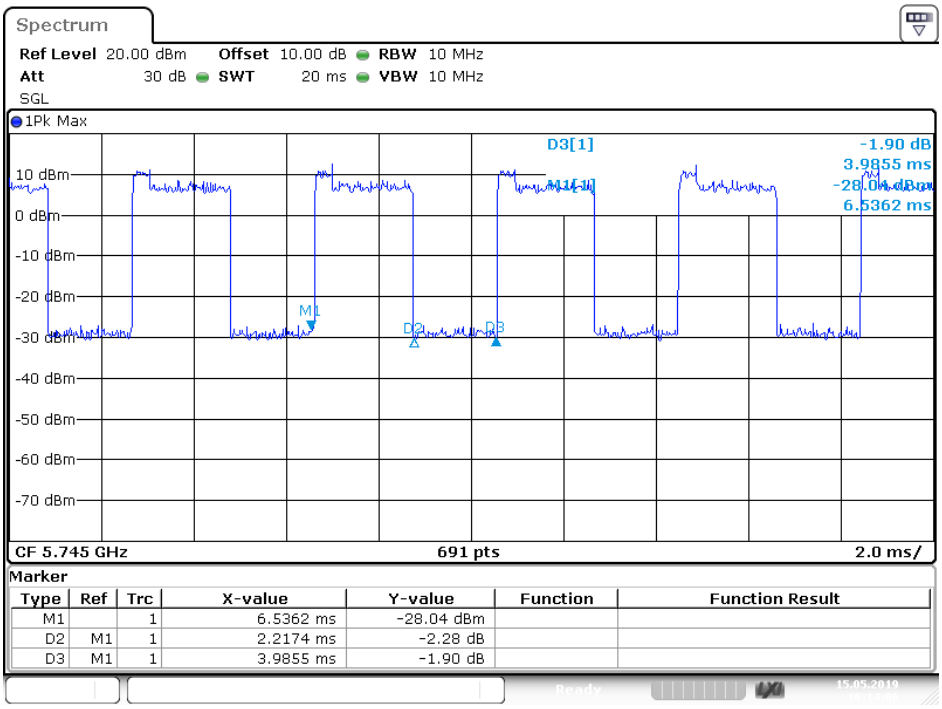
Date: 15.MAY.2019 16:13:22

(ANT 2) 5230MHz



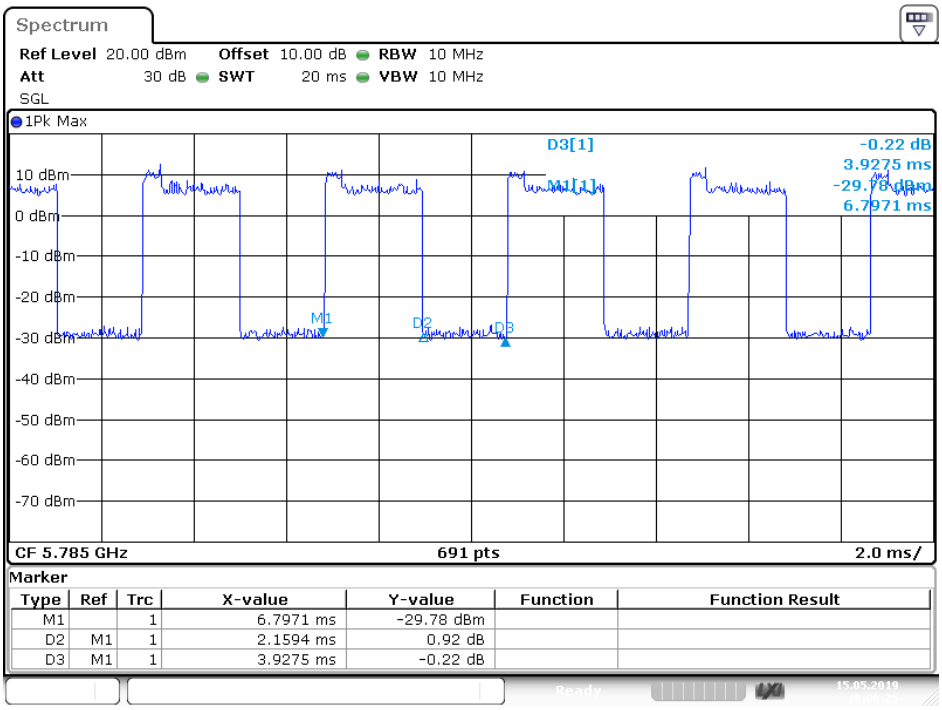
Date: 15.MAY.2019 16:12:20

(ANT 2) 5745MHz



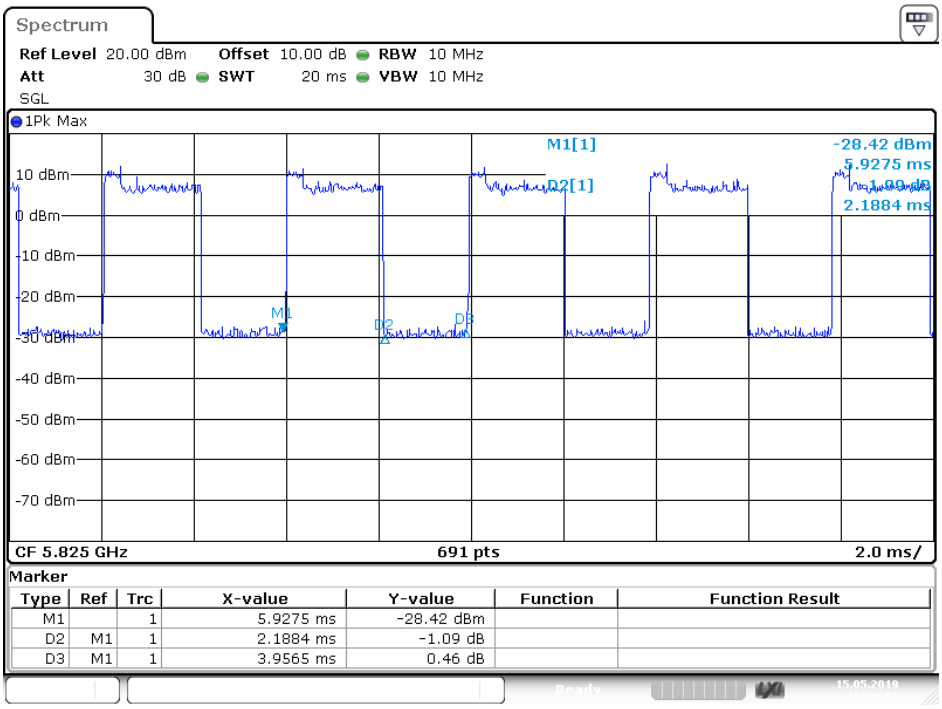
Date: 15.MAY.2019 16:14:06

(ANT 2) 5785MHz



Date: 15.MAY.2019 16:06:25

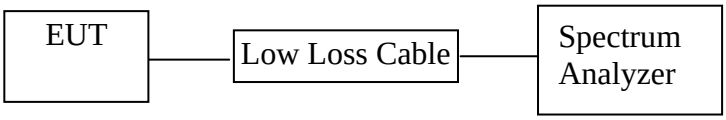
(ANT 2) 5825MHz



Date: 15.MAY.2019 16:10:53

9. POWER SPECTRAL DENSITY TEST

9.1.Block Diagram of Test Setup



9.2.The Requirement For Section 15.407

Section 15.407(a)(1)(iv): For the band 5.15–5.25GHz
the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band, If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the
amount in dB that the directional gain of the antenna exceeds 6 dBi.

Section 15.407(a)(3): For the band 5.725–5.825GHz
The maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the output power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

9.3.EUT Configuration on Measurement

The equipment are installed on the emission Measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

9.4.Operating Condition of EUT

9.4.1.Setup the EUT and simulator as shown as Section 9.1.

9.4.2.Turn on the power of all equipment.

9.4.3.Let the EUT work in TX modes measure it. The transmit frequency are 5190MHz, 5230MHz, 5745MHz, 5785MHz and 5825MHz.

9.5.Test Procedure

9.5.1.The transmitter output was connected to the spectrum analyzer through a low loss cable.

9.5.2.Measurement Procedure PKPSD:

For devices operating in the bands 5.15-5.25 GHz, 5.25-5.35 GHz, and 5.47-5.725 GHz, the above procedures make use of 1 MHz RBW to satisfy directly the 1 MHz reference bandwidth specified in § 15.407(a)(5). For devices operating in the band 5.725-5.85 GHz, the rules specify a measurement bandwidth of 500 kHz. Many spectrum analyzers do not have 500 kHz RBW, thus a narrower RBW may need to be used. The rules permit the use of a RBWs less than 1 MHz, or 500 kHz, "provided that the measured power is integrated over the full reference bandwidth" to show the total power over the specified measurement bandwidth (i.e., 1 MHz, or 500 kHz). If measurements are performed using a reduced resolution bandwidth (< 1 MHz, or < 500 kHz) and integrated over 1 MHz, or 500 kHz bandwidth, the following adjustments to the procedures apply:

1. Set RBW≥1/T, where T is defined in section II.B.l.a). Set VBW ≥ 3 RBW.
2. If measurement bandwidth of Maximum PSD is specified in 500 kHz, add 10 log (500 kHz/RBW) to the measured result, whereas RBW (< 500 kHz) is the reduced resolution bandwidth of the spectrum analyzer set during measurement.
3. If measurement bandwidth of Maximum PSD is specified in 1 MHz, add 10 log (1MHz/RBW) to the measured result, whereas RBW (< 1 MHz) is the reduced resolution bandwidth of spectrum analyzer set during measurement.
4. Care must be taken to ensure that the measurements are performed during a period of continuous transmission or are corrected upward for duty cycle.
5. Detector = RMS.
6. Sweep time = auto couple.
7. Trace mode = max hold.
8. Allow trace to fully stabilize.
9. Use the peak marker function to determine the maximum amplitude level.

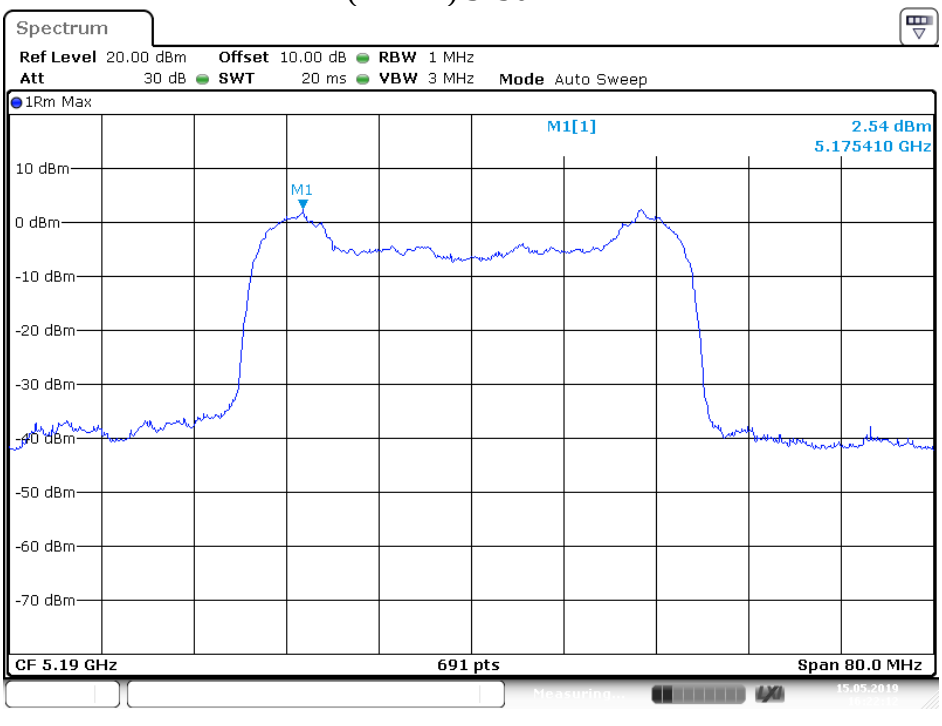
9.5.3.Measurement the maximum power spectral density.

9.6.Test Result

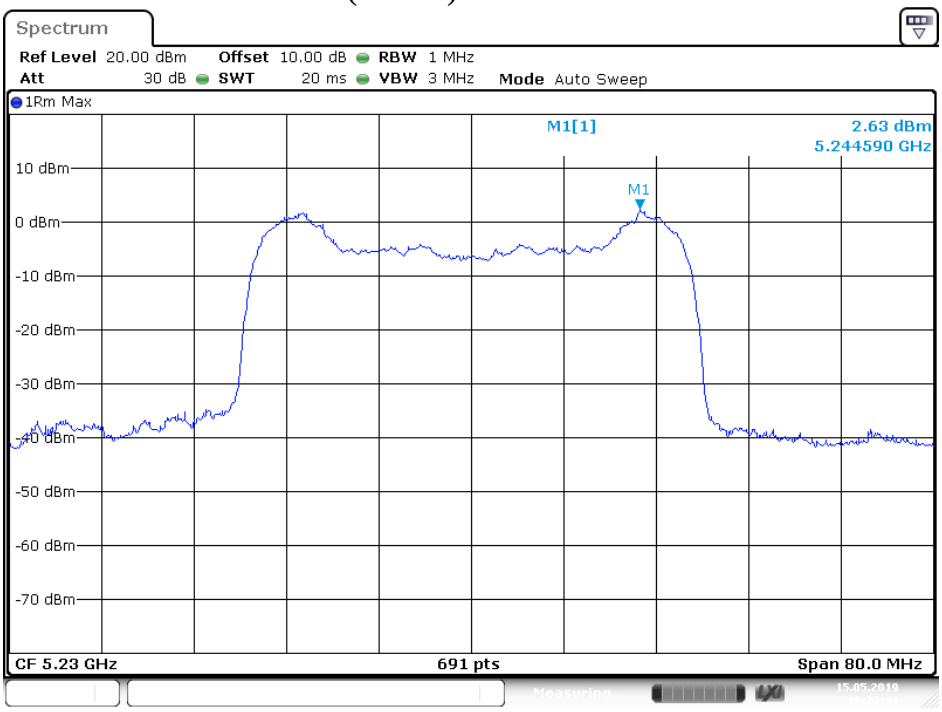
Test mode: MIMO							
Frequency (MHz)	Power Spectral Density ANT 1 (dBm)	Power Spectral Density ANT 2 (dBm)	10log(1/x) ANT 1	10log(1/x) ANT 2	Final Power Spectral Density ANT 1 (dBm)	Final Power Spectral Density ANT 2 (dBm)	Limits (dBm)
5190	2.54	2.76	2.54	2.52	5.08	5.28	9.49
5230	2.63	2.68	2.55	2.54	5.18	5.22	9.49
5745	2.16	2.41	2.49	2.55	4.65	4.96	28.49
5785	1.46	2.15	2.57	2.60	4.03	4.75	28.49
5825	0.93	1.84	2.55	2.57	3.48	4.41	28.49

Directional gain＞6dBi
The spectrum analyzer plots are attached as below.

(ANT 1) 5190MHz

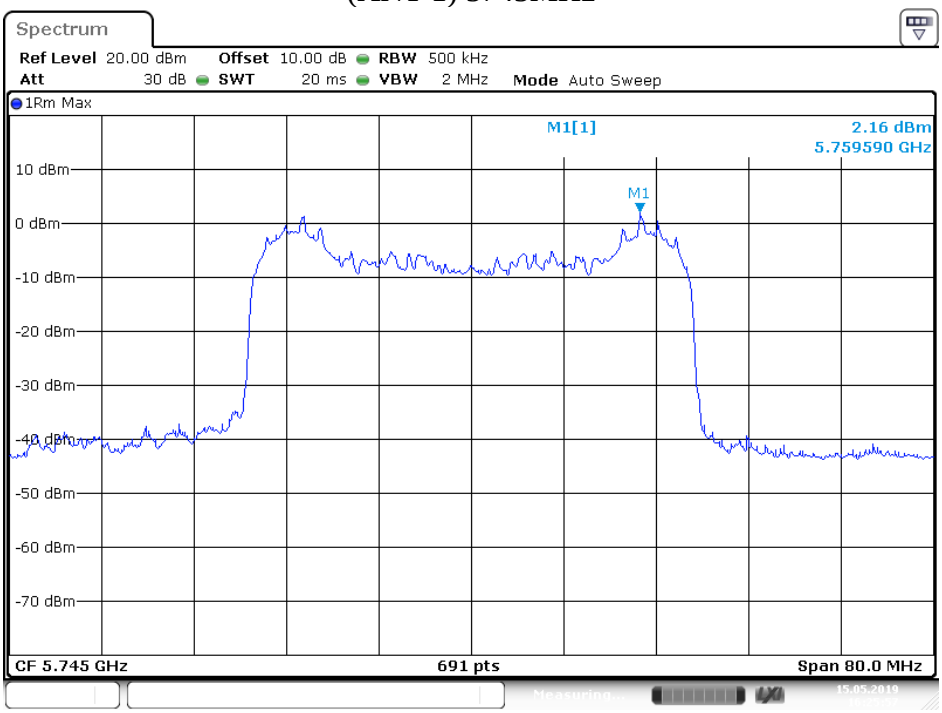


(ANT 1) 5230MHz



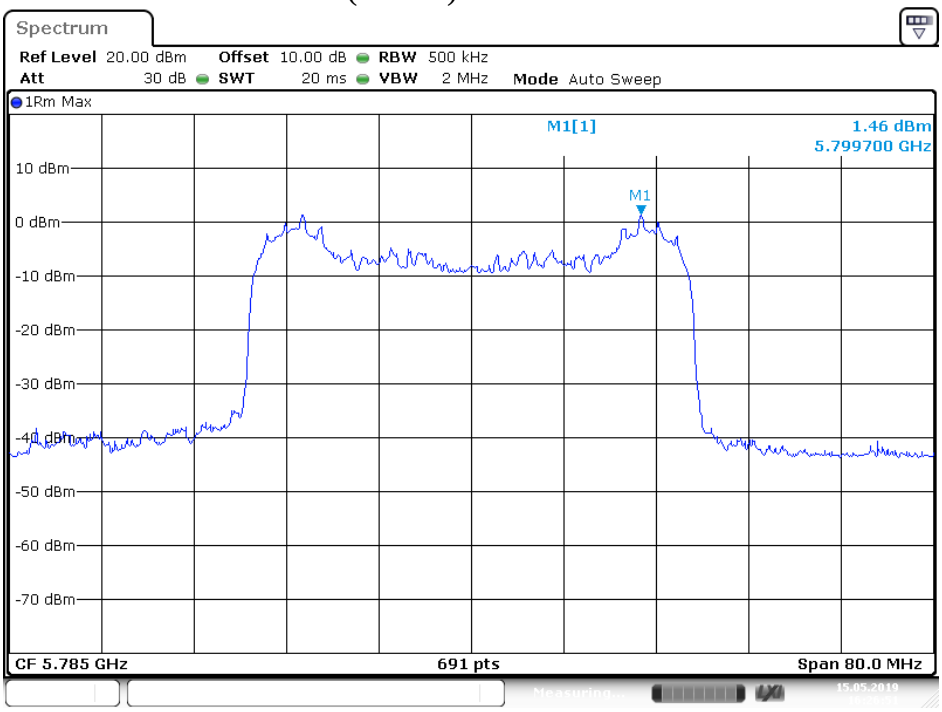
Date: 15.MAY.2019 16:23:41

(ANT 1) 5745MHz



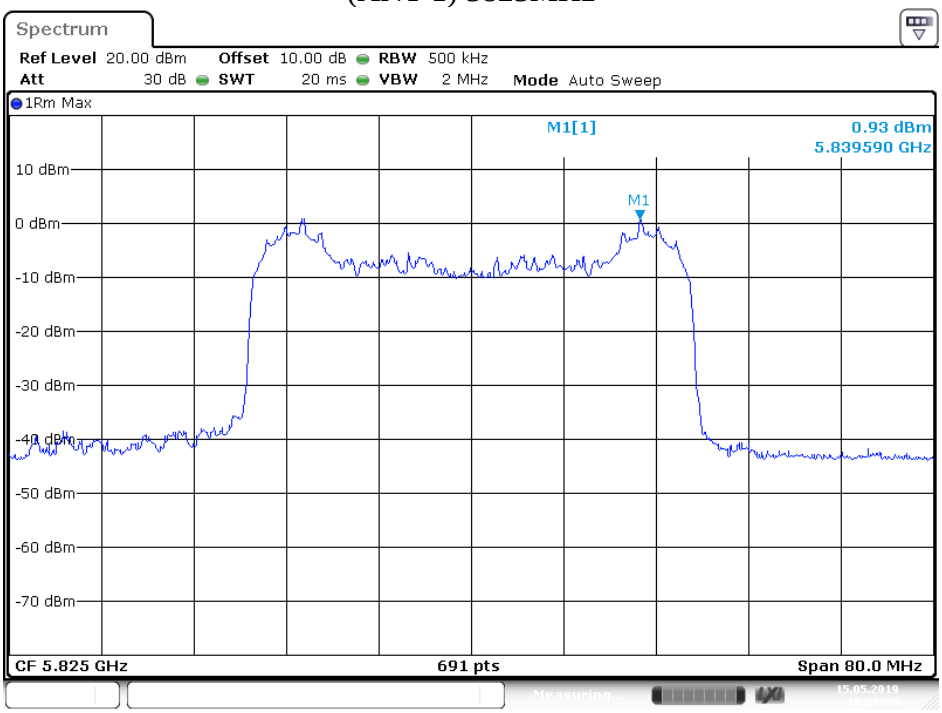
Date: 15.MAY.2019 16:25:57

(ANT 1) 5785MHz



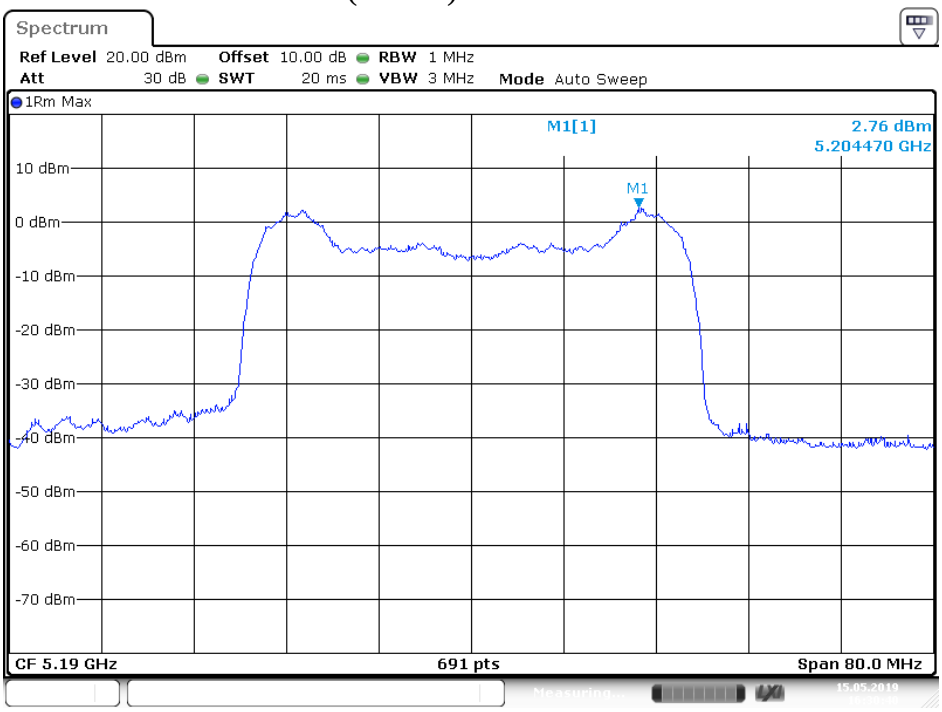
Date: 15.MAY.2019 16:26:51

(ANT 1) 5825MHz



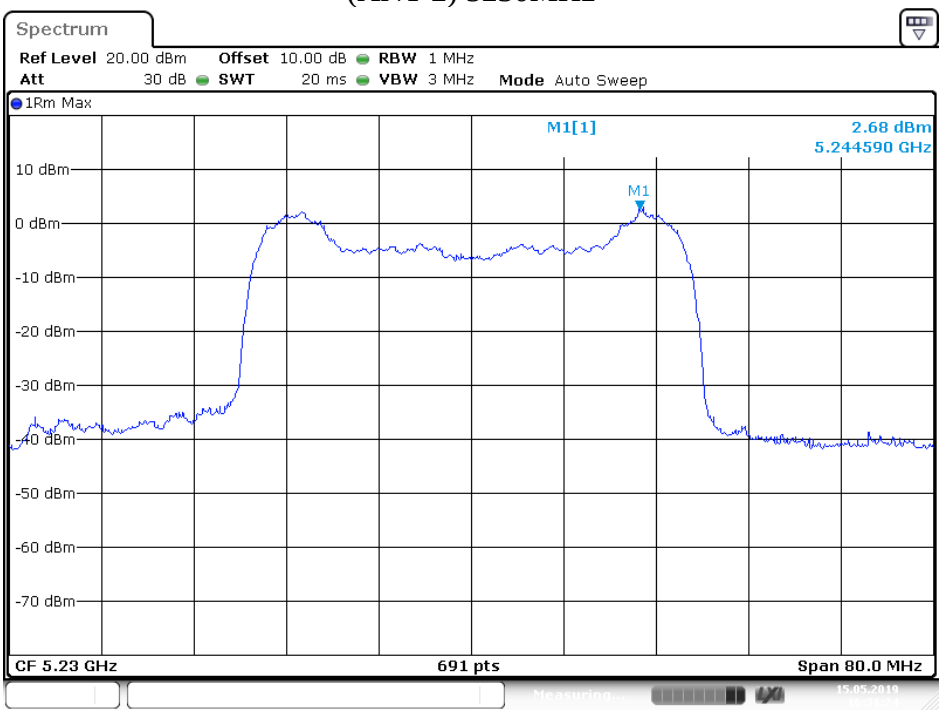
Date: 15.MAY.2019 16:27:34

(ANT 2) 5190MHz



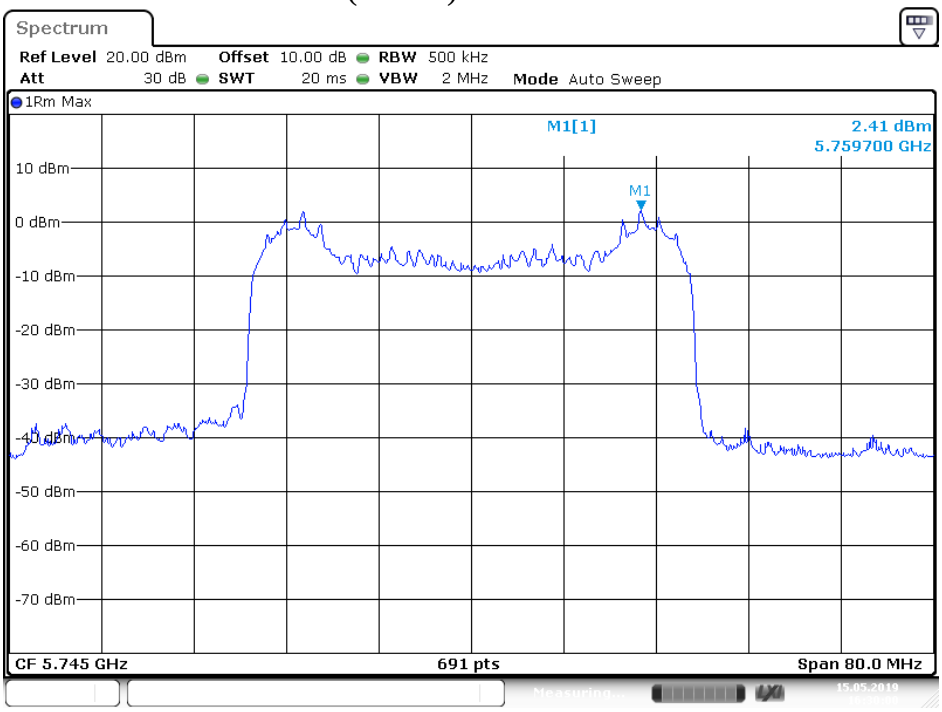
Date: 15.MAY.2019 16:30:40

(ANT 2) 5230MHz



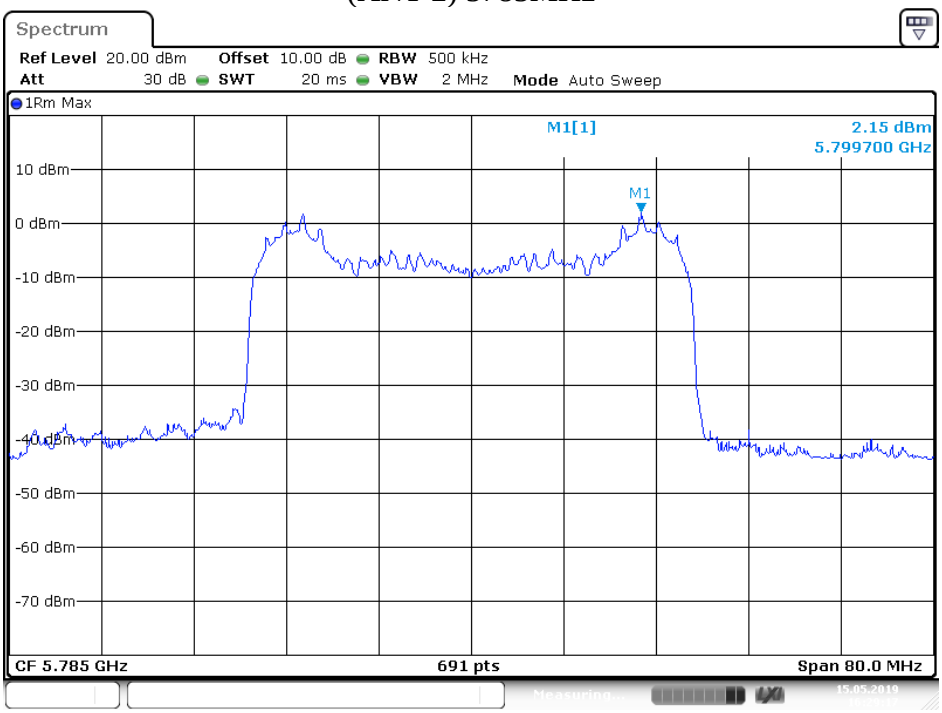
Date: 15.MAY.2019 16:31:24

(ANT 2) 5745MHz



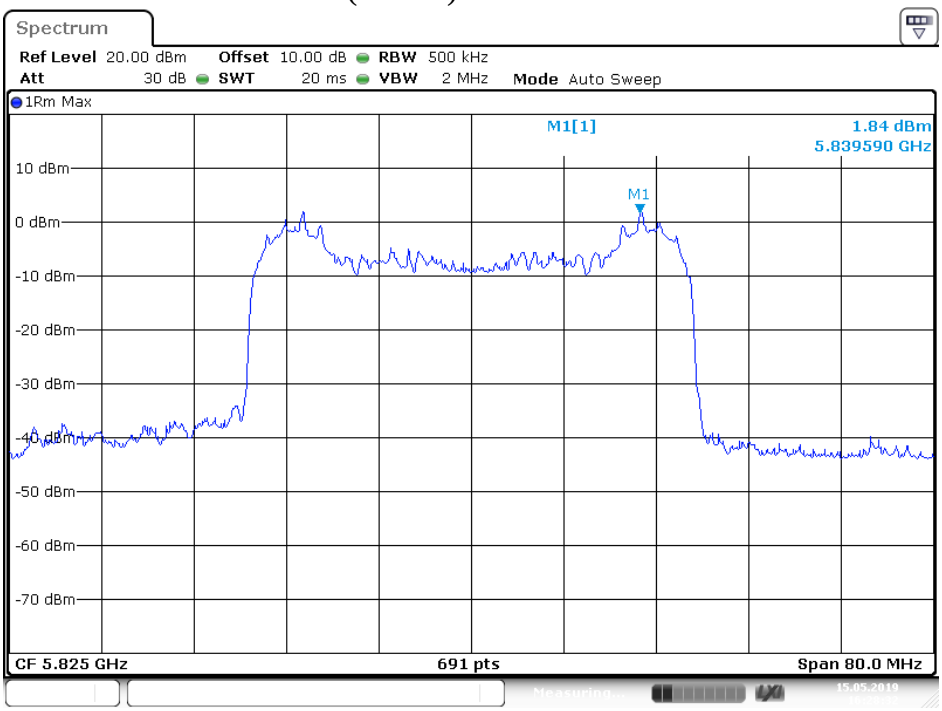
Date: 15.MAY.2019 16:30:00

(ANT 2) 5785MHz



Date: 15.MAY.2019 16:29:17

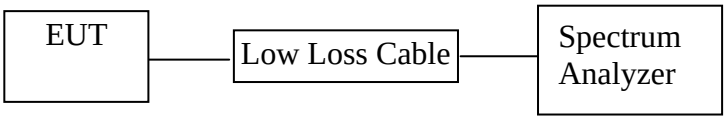
(ANT 2) 5825MHz



Date: 15.MAY.2019 16:28:31

10.MAXIMUM CONDUCTED (AVERAGE) OUTPUT POWER

10.1.Block Diagram of Test Setup



10.2.The Requirement For Section 15.407

Section 15.407(a)(1)(iv): For client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

Section 15.407(a)(3): For the band 5.725–5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi

10.3.EUT Configuration on Measurement

The equipment is installed on the emission Measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

10.4.Operating Condition of EUT

10.4.1.Setup the EUT and simulator as shown as Section 10.1.

10.4.2.Turn on the power of all equipment.

10.4.3.Let the EUT work in TX modes measure it. The transmit frequency are 5190MHz, 5230MHz, 5745MHz, 5785MHz and 5825MHz.

10.5.Test Procedure

10.5.1.The transmitter output was connected to the spectrum analyzer through a low loss cable.

10.5.2.Set RBW = 1 MHz, VBW ≥ 3 x RBW, Sweep time = auto, Set span to at least 1.5 times the OBW, Detector = RMS.

10.5.3.Measurement the Maximum conducted (average) output power.

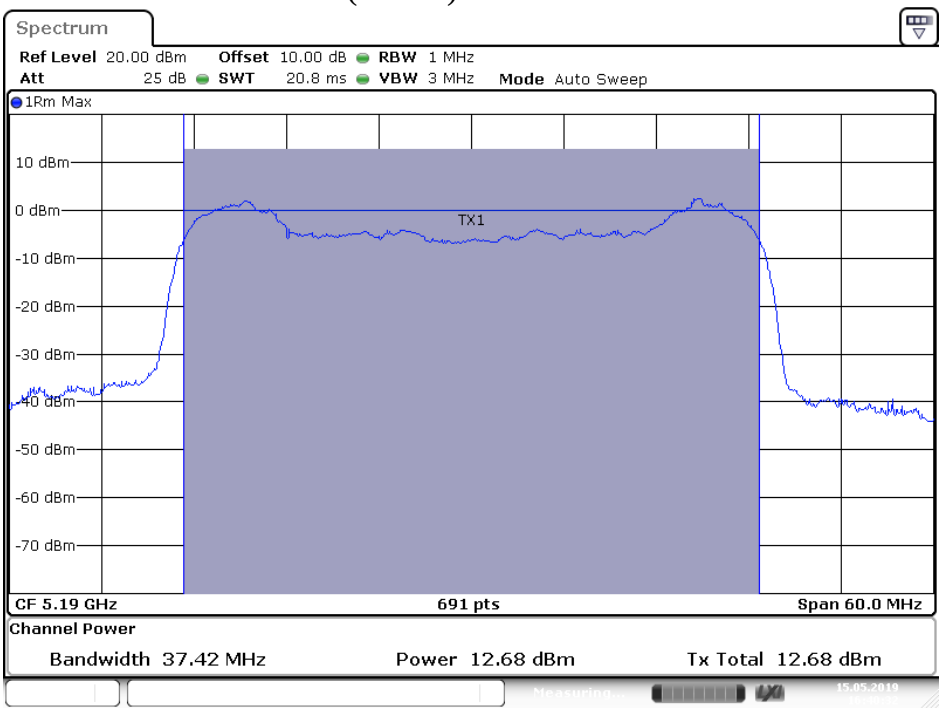
10.6.Test Result

Final power= Ave output power+10log(1/ duty cycle)
$P_{out}= P_{Limit}-(G_{TX}-6)$
Directional gain＞6dBi

Test mode: MIMO								
Frequency (MHz)	Ave output power ANT1 (dBm)	Ave output power ANT 2 (dBm)	10log(1/ duty cycle) ANT 1	10log(1/ duty cycle) ANT 2	Final output power ANT 1 (dBm)	Final output power ANT 2 (dBm)	Total output power (dBm)	Conducted output power limits (dBm)
5190	12.68	12.94	2.54	2.52	15.22	15.46	18.35	22.49
5230	12.49	12.97	2.55	2.54	15.04	15.51	18.29	22.49
5745	12.90	13.43	2.49	2.55	15.39	15.98	18.71	28.49
5785	12.92	13.13	2.57	2.60	15.49	15.73	18.62	28.49
5825	12.57	13.32	2.55	2.57	15.12	15.89	18.53	28.49

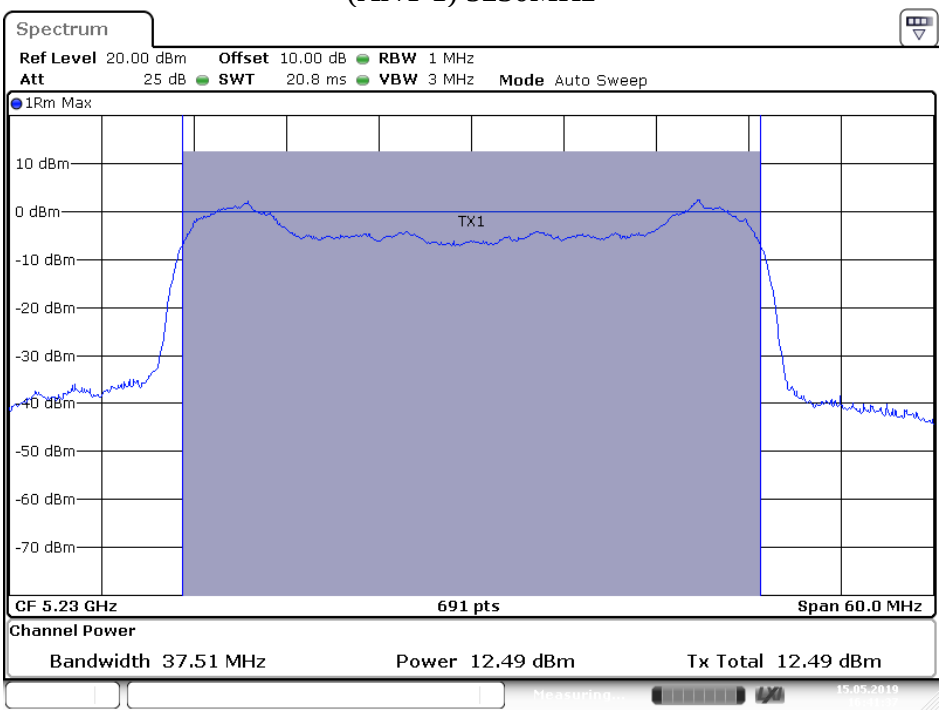
The spectrum analyzer plots are attached as below.

(ANT 1) 5190MHz



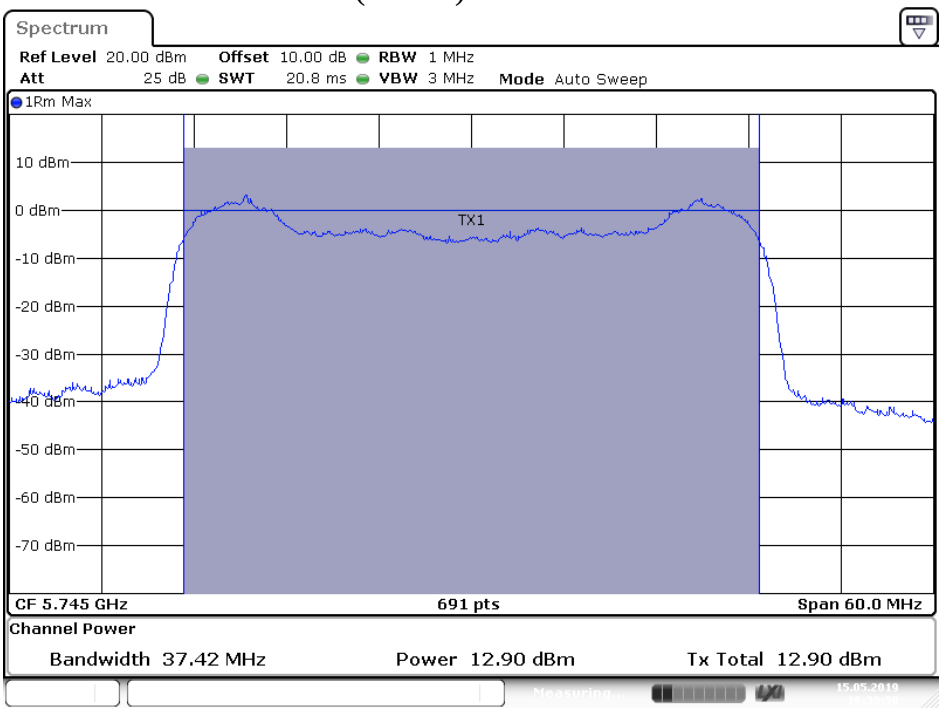
Date: 15.MAY.2019 16:40:32

(ANT 1) 5230MHz



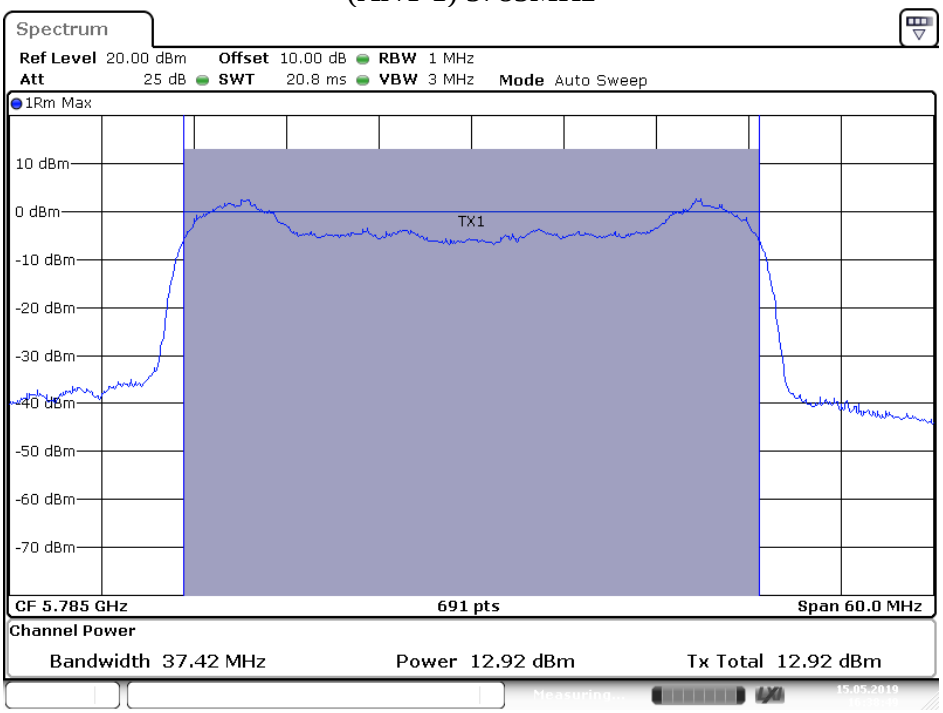
Date: 15.MAY.2019 16:41:37

(ANT 1) 5745MHz



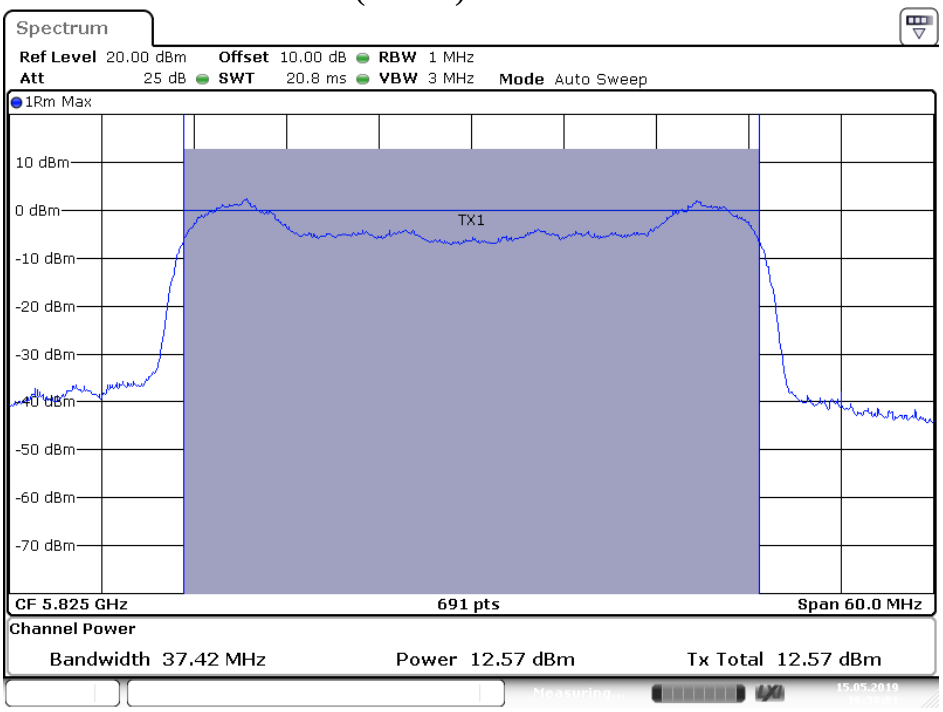
Date: 15.MAY.2019 16:39:30

(ANT 1) 5785MHz



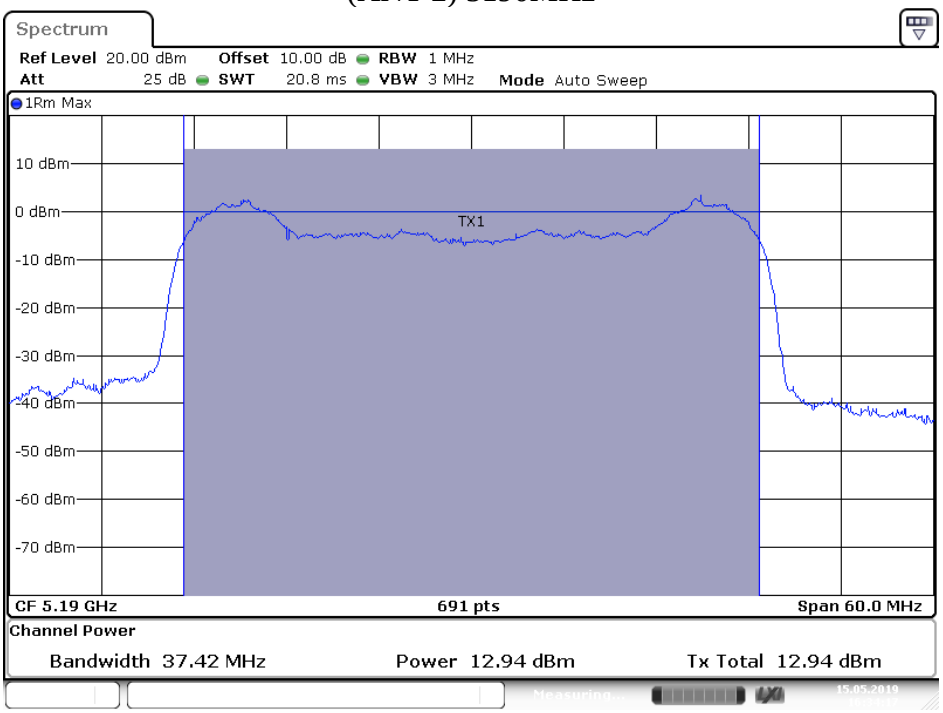
Date: 15.MAY.2019 16:38:48

(ANT 1) 5825MHz



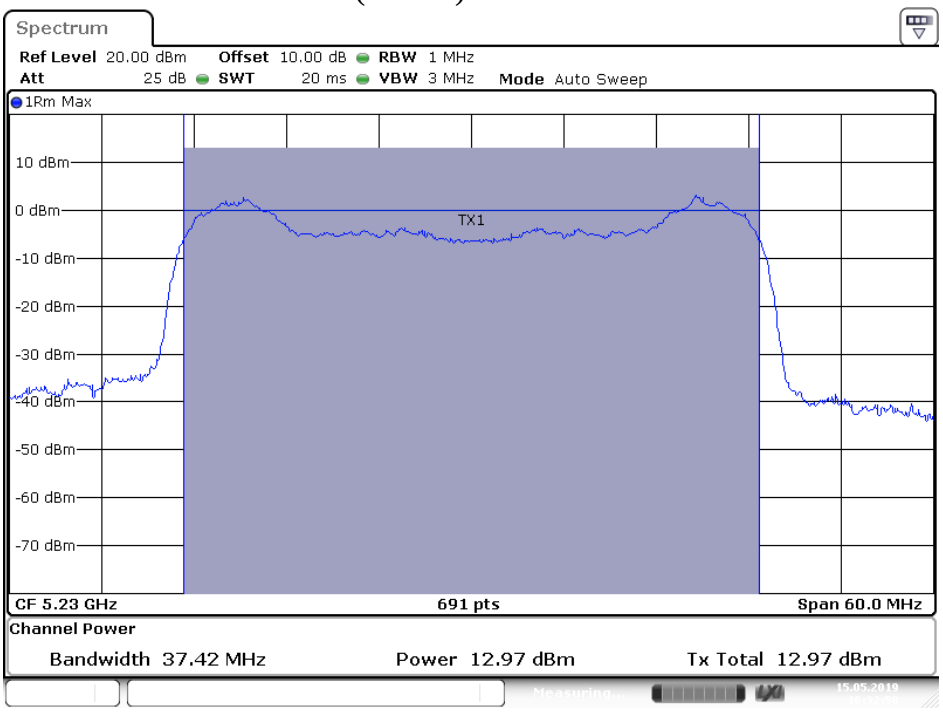
Date: 15.MAY.2019 16:38:01

(ANT 2) 5190MHz



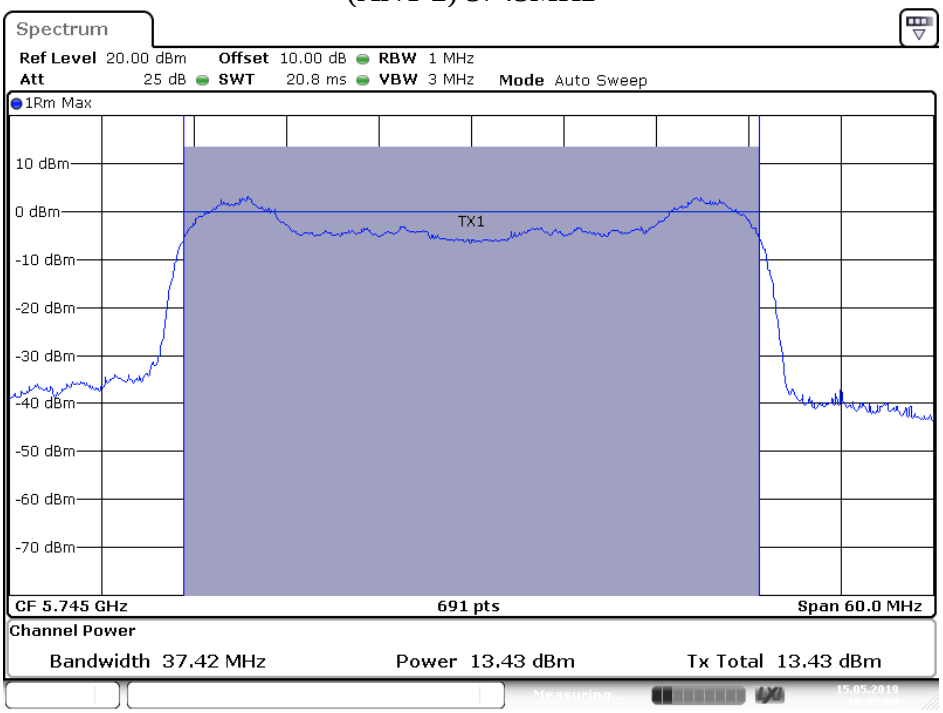
Date: 15.MAY.2019 16:34:17

(ANT 2) 5230MHz



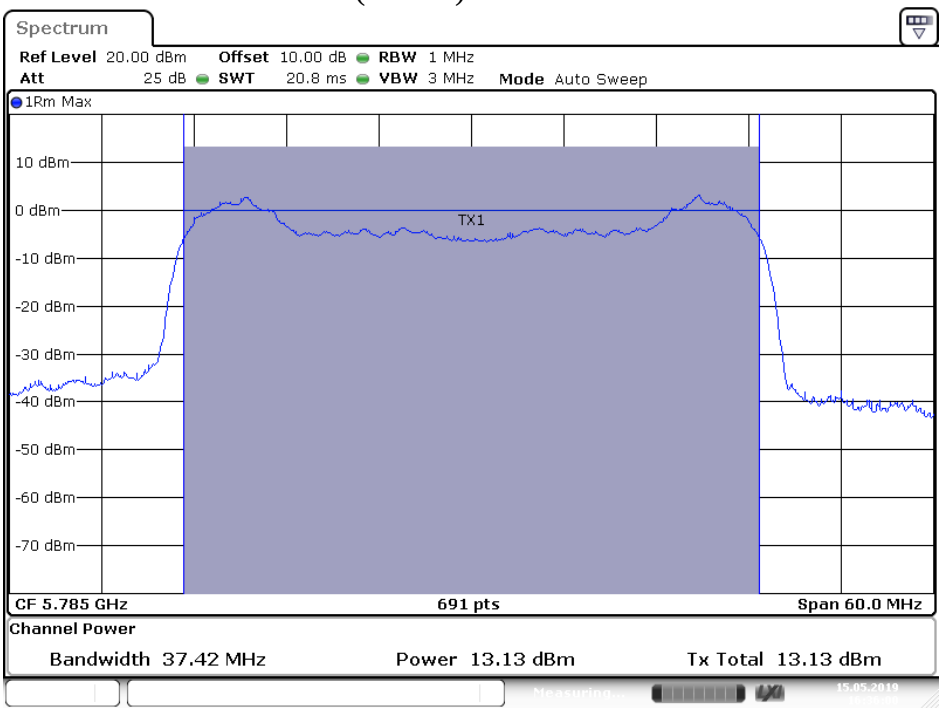
Date: 15.MAY.2019 16:32:58

(ANT 2) 5745MHz



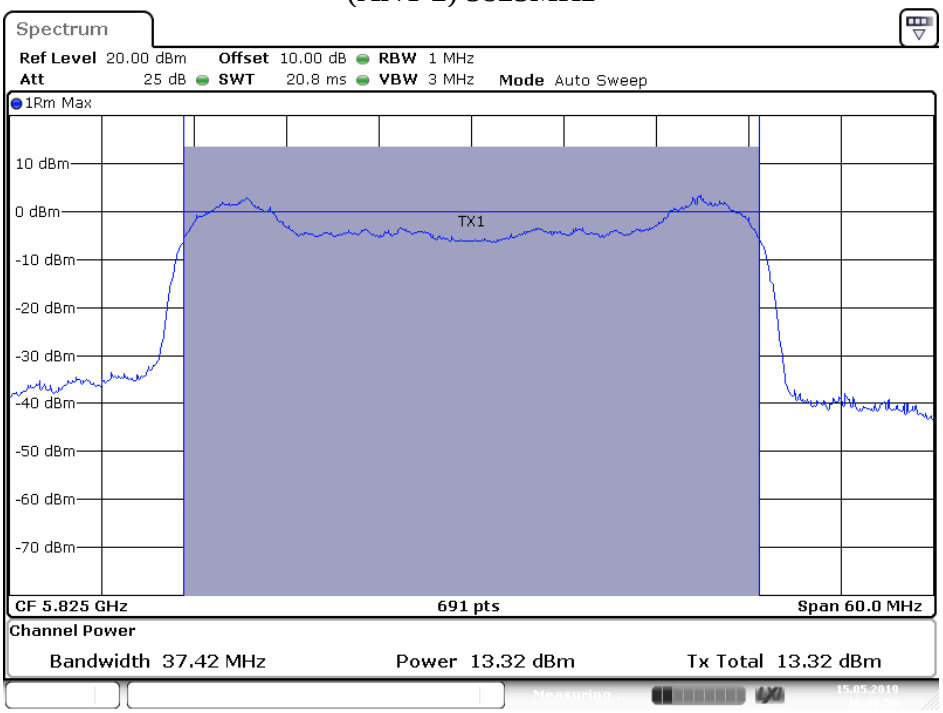
Date: 15.MAY.2019 16:35:04

(ANT 2) 5785MHz



Date: 15.MAY.2019 16:36:00

(ANT 2) 5825MHz



Date: 15.MAY.2019 16:36:56

11.RADIATED SPURIOUS EMISSION TEST

11.1.Block Diagram of Test Setup

11.1.1.Block diagram of connection between the EUT and peripherals

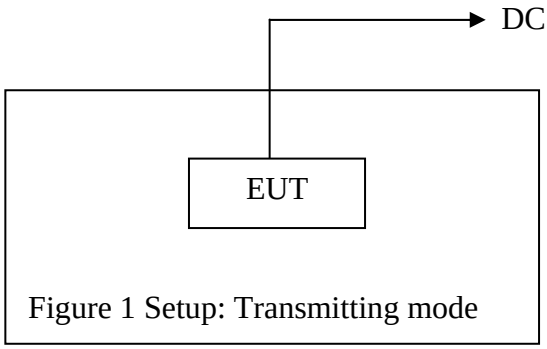
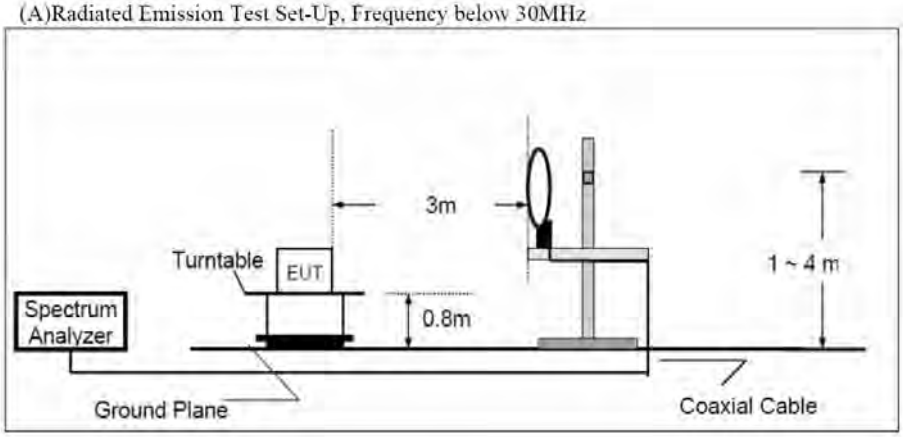


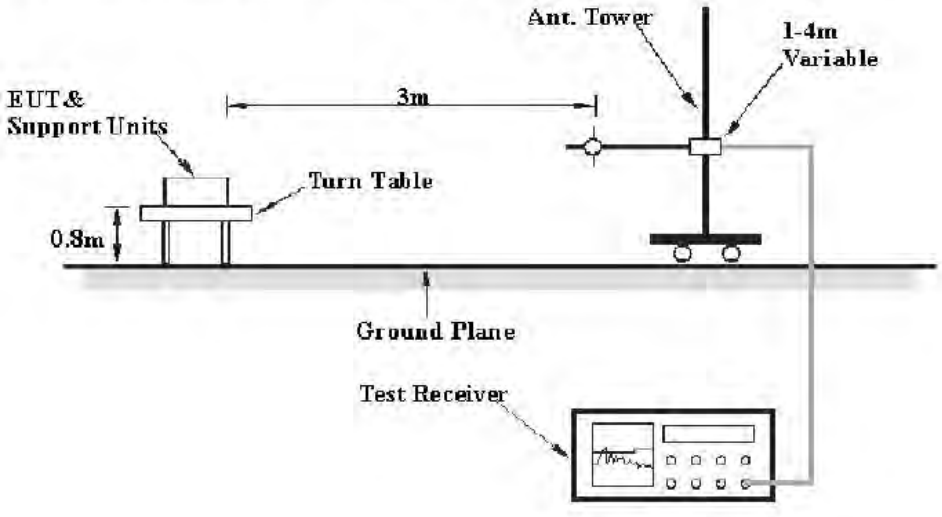
Figure 1 Setup: Transmitting mode

11.1.2.Semi-Anechoic Chamber Test Setup Diagram

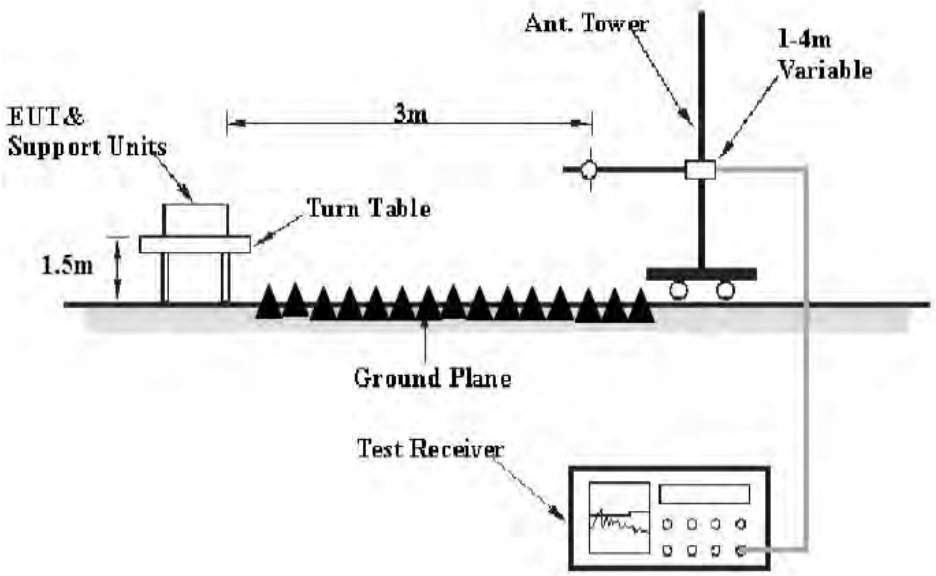
(A)Radiated Emission Test Set-Up, Frequency below 30MHz



(B)Radiated Emission Test Set-Up, Frequency 30MHz-1GHz



(C) Radiated Emission Test Set-Up, Frequency above 1GHz



11.2.The Requirement For Section 15.407(b)

(1) For transmitters operating in the 5.15-5.25 GHz band:
All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

(4) For transmitters operating in the 5.725–5.825 GHz band:
All emissions shall be limited to a level of −27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in § 15.209.

11.3.Restricted bands of operation

11.3.1.FCC Part 15.205 Restricted bands of operation

(a) Except as shown in paragraph (d) of this section, Only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
[1]0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	([2])
13.36-13.41			

[1]Until February 1, 1999, this restricted band shall be 0.490-0.510
[2]Above 38.6

(b) Except as provided in paragraphs (d) and (e), the field strength of emission appearing within these frequency bands shall not exceed the limits shown in Section 15.209. At frequencies equal to or less than 1000MHz, Compliance with the limits in Section 15.209 shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Above 1000MHz, compliance with the emission limits in Section15.209 shall be demonstrated based on the average value of the measured emissions. The provisions in Section 15.35 apply to these measurements.

11.4.Configuration of EUT on Measurement

The equipment are installed on Radiated Emission Measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

11.5.Operating Condition of EUT

11.5.1.Setup the EUT and simulator as shown as Section 11.1.

11.5.2.Turn on the power of all equipment.

11.5.3.Let the EUT work in TX modes measure it. The transmit frequency are 5745MHz, 5785MHz and 5825MHz.

11.6.Test Procedure

The EUT and its simulators are placed on a turntable, which is 0.8 meter high above ground(Below 1GHz). The EUT and its simulators are placed on a turntable, which is 1.5 meter high above ground(Above 1GHz). The turntable can rotate 360 degrees to determine the position of the maximum emission level. EUT is set 3.0 meters away from the receiving antenna, which is mounted on an antenna tower. The antenna can be moved up and down between 1.0 meter and 4 meters to find out the maximum emission level. Broadband antenna (calibrated bi-log antenna) is used as receiving antenna. Both horizontal and vertical polarizations of the antenna are set on measurement. In order to find the maximum emission levels, all of the EUT location must be manipulated according to ANSI C63.10:2013 on radiated emission measurement. This EUT was tested in 3 orthogonal positions and the worst case position data was reported.

The frequency range from 9KHz to 40GHz is checked.

During the radiated emission test, the spectrum analyzer was set with the following configurations:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for peak measurement with peak detector at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average measurement with peak detection at frequency above 1GHz.
4. All modes of operation were investigated and the worst-case emissions are reported.

11.7.Data Sample

Frequency (MHz)	Reading (dBμv)	Factor (dB/m)	Result (dBμv/m)	Limit (dBμv/m)	Margin (dB)	Remark
X.XX	48.69	-13.35	35.34	46	-10.66	QP

Frequency(MHz) = Emission frequency in MHz
Reading(dBμv) = Uncorrected Analyzer/Receiver reading
Factor (dB/m) = Antenna factor + Cable Loss – Amplifier gain
Result(dBμv/m) = Reading(dBμv) + Factor(dB/m)
Limit (dBμv/m) = Limit stated in standard
Margin (dB) = Result(dBμv/m) - Limit (dBμv/m)
QP = Quasi-peak Reading

Calculation Formula:
Margin(dB) = Result (dBμV/m)–Limit(dBμV/m)
Result(dBμV/m)= Reading(dBμV)+ Factor(dB/m)

The “Margin” column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of -7dB means the emission is 7dB below the limit.

11.8.Test Result

Pass.

Note: Testing is carried out with frequency rang 9kHz to the tenth harmonics, which above 3th Harmonics are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
The measurements greater than 20dB below the limit from 9kHz to 30MHz and 18 to 40GHz.

The spectrum analyzer plots are attached as below.

Below 1G

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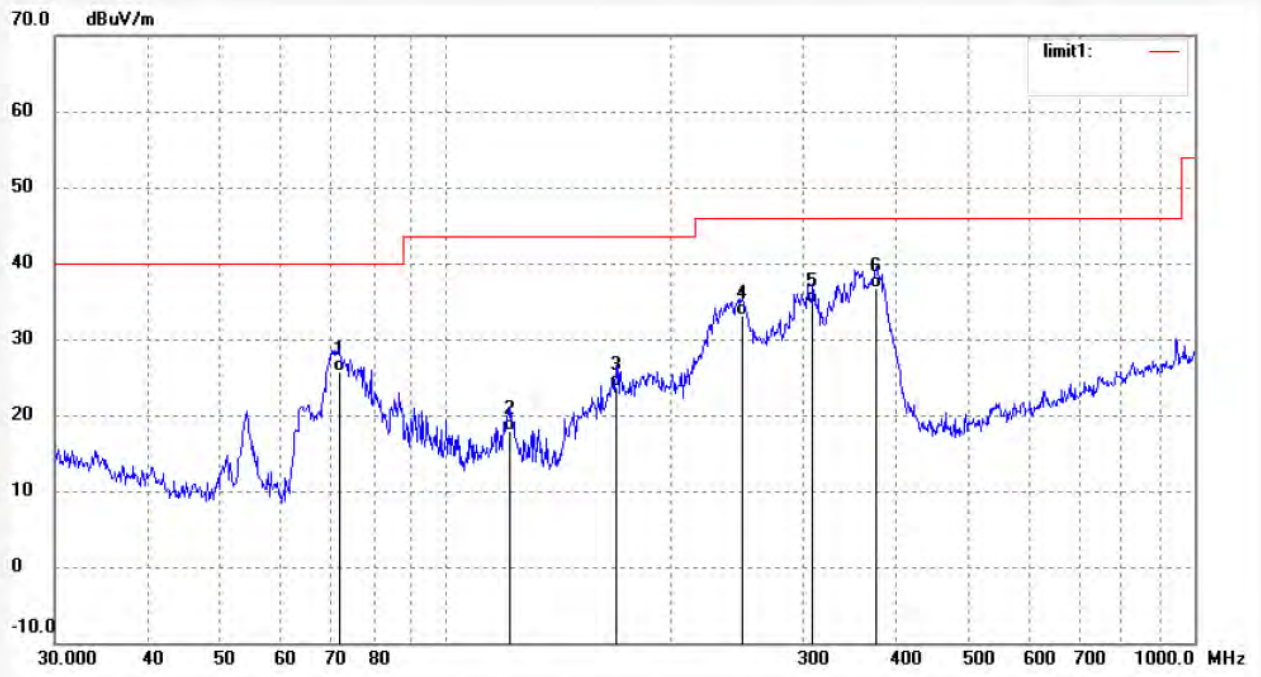
Job No.: star2019 #83
Standard: FCC Part 15E 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Vaxis wireless video system
Mode: TX 5190MHz
Model: Vaxis Strom3000
Manufacturer: GM

Polarization: Horizontal
Power Source: DC 36V
Date: 19/05/16/
Time: 10/42/25
Engineer Signature: star
Distance: 3m

Note: Report No.:ATE20190671



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	71.9578	53.20	-27.57	25.63	40.00	-14.37	QP			
2	121.4623	45.29	-27.48	17.81	43.50	-25.69	QP			
3	168.9970	49.74	-26.11	23.63	43.50	-19.87	QP			
4	248.7319	56.70	-23.65	33.05	46.00	-12.95	QP			
5	309.2710	55.69	-20.98	34.71	46.00	-11.29	QP			
6	375.2022	55.40	-18.69	36.71	46.00	-9.29	QP			

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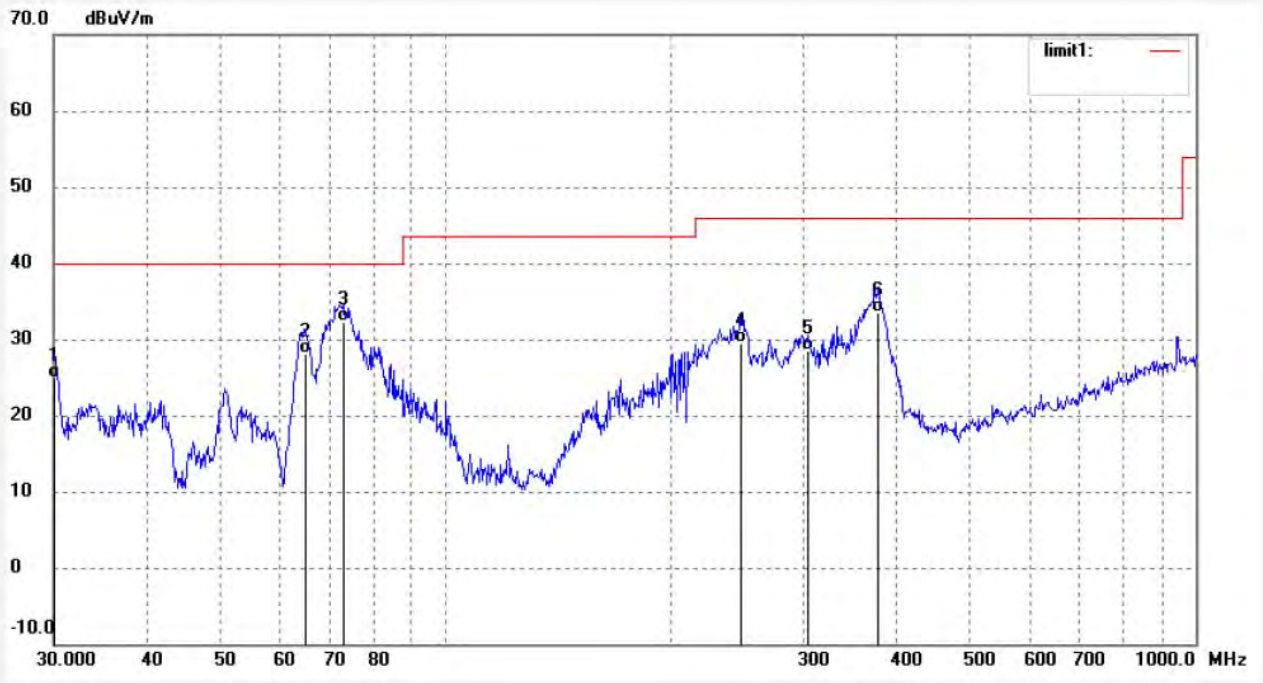
Job No.: star2019 #84
Standard: FCC Part 15E 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Vaxis wireless video system
Mode: TX 5190MHz
Model: Vaxis Strom3000
Manufacturer: GM

Polarization: Vertical
Power Source: DC 36V
Date: 19/05/16/
Time: 10/43/50
Engineer Signature: star
Distance: 3m

Note: Report No.:ATE20190671



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	30.1055	45.10	-20.23	24.87	40.00	-15.13	QP			
2	64.7590	55.39	-27.29	28.10	40.00	-11.90	QP			
3	72.9762	59.99	-27.61	32.38	40.00	-7.62	QP			
4	247.8594	53.20	-23.65	29.55	46.00	-16.45	QP			
5	303.8851	49.57	-21.11	28.46	46.00	-17.54	QP			
6	377.8480	52.10	-18.66	33.44	46.00	-12.56	QP			

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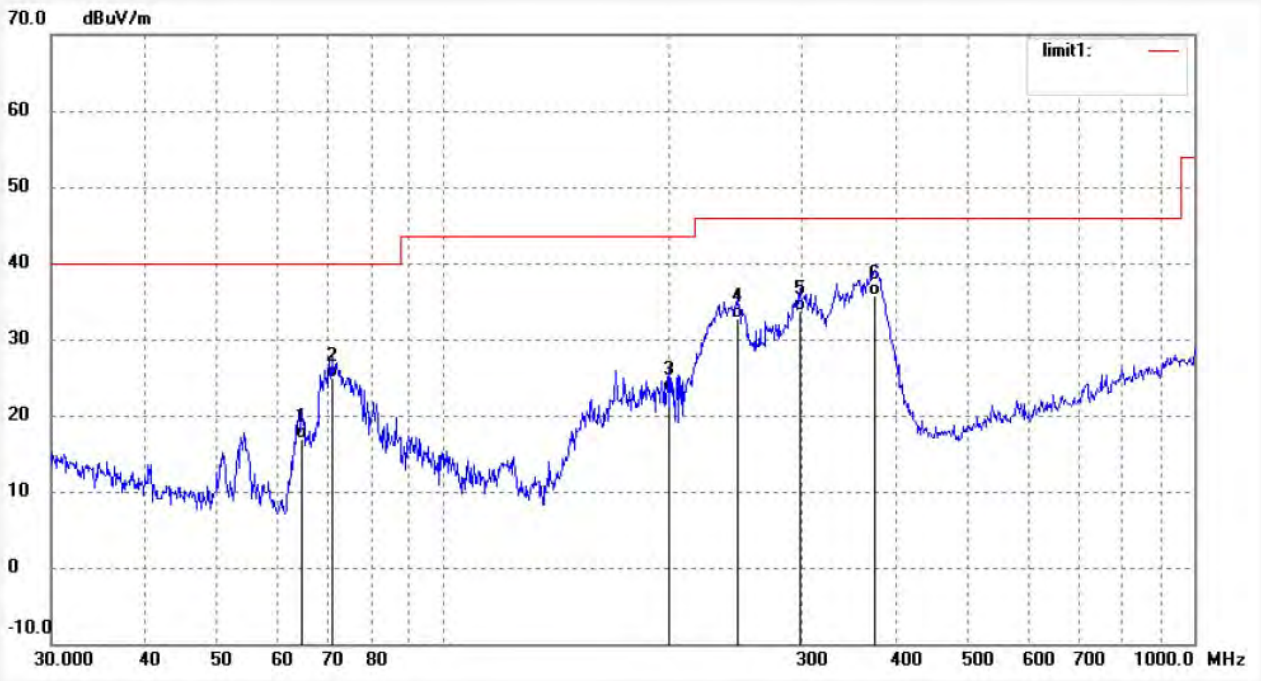
Job No.: star2019 #86
Standard: FCC Part 15E 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Vaxis wireless video system
Mode: TX 5230MHz
Model: Vaxis Strom3000
Manufacturer: GM

Polarization: Horizontal
Power Source: DC 36V
Date: 19/05/16/
Time: 10/45/53
Engineer Signature: star
Distance: 3m

Note: Report No.:ATE20190671



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	64.7590	44.10	-27.29	16.81	40.00	-23.19	QP			
2	70.9535	52.40	-27.52	24.88	40.00	-15.12	QP			
3	199.3415	47.52	-24.39	23.13	43.50	-20.37	QP			
4	246.9901	56.33	-23.66	32.67	46.00	-13.33	QP			
5	298.5932	55.04	-21.28	33.76	46.00	-12.24	QP			
6	375.2022	54.39	-18.69	35.70	46.00	-10.30	QP			

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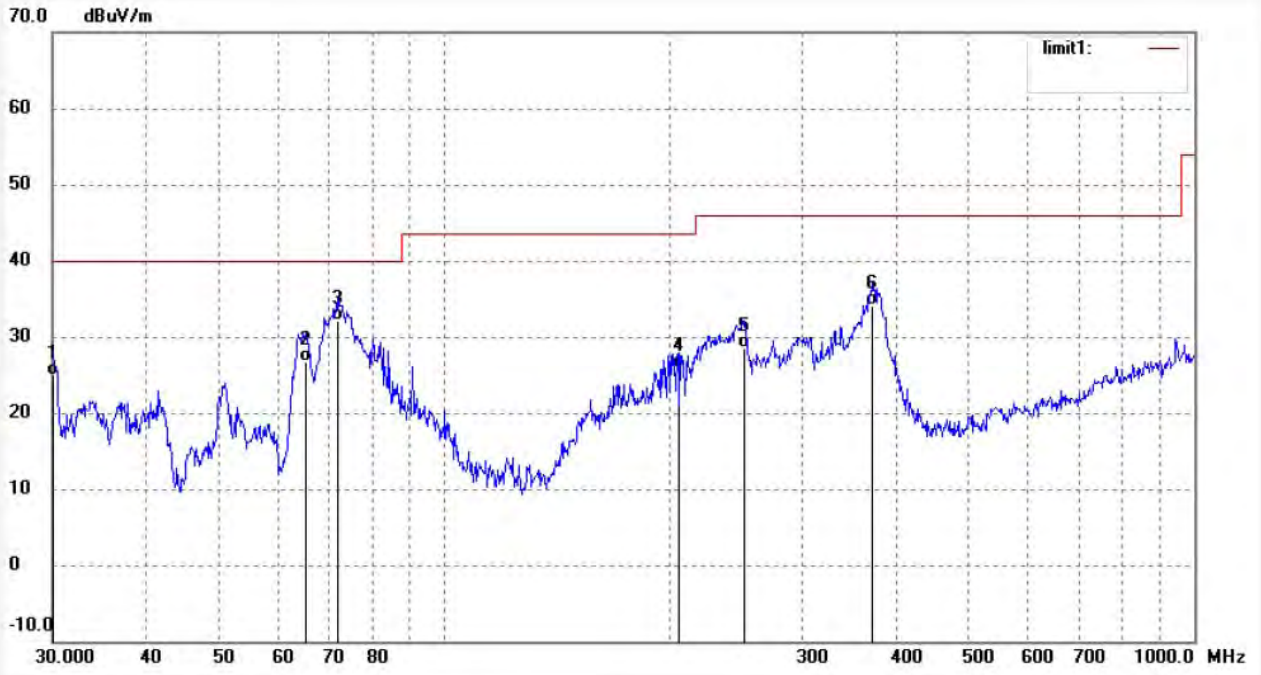
Job No.: star2019 #85
Standard: FCC Part 15E 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Vaxis wireless video system
Mode: TX 5230MHz
Model: Vaxis Strom3000
Manufacturer: GM

Polarization: Vertical
Power Source: DC 36V
Date: 19/05/16/
Time: 10/44/43
Engineer Signature: star
Distance: 3m

Note: Report No.:ATE20190671



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	30.0000	45.10	-20.20	24.90	40.00	-15.10	QP			
2	65.2156	54.00	-27.31	26.69	40.00	-13.31	QP			
3	71.9578	59.70	-27.57	32.13	40.00	-7.87	QP			
4	205.0243	50.10	-24.16	25.94	43.50	-17.56	QP			
5	251.3676	52.11	-23.55	28.56	46.00	-17.44	QP			
6	372.5747	52.75	-18.74	34.01	46.00	-11.99	QP			

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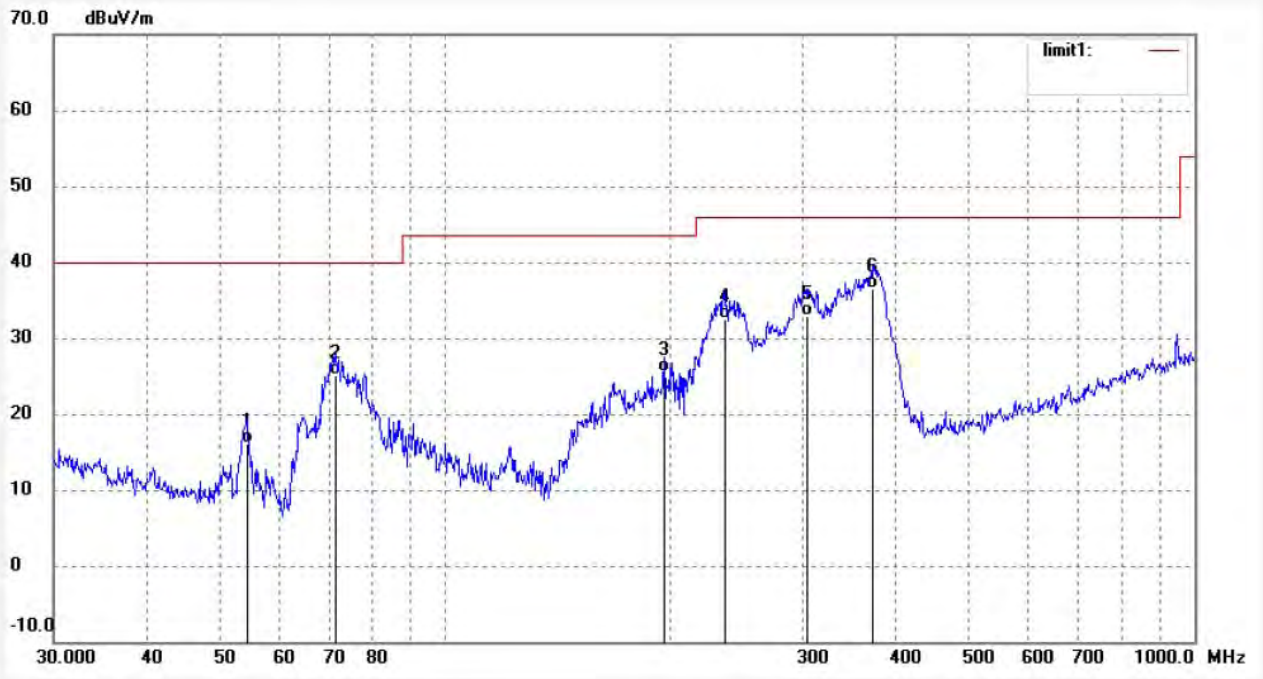
Job No.: star2019 #87
Standard: FCC Part 15E 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Vaxis wireless video system
Mode: TX 5745MHz
Model: Vaxis Strom3000
Manufacturer: GM

Polarization: Horizontal
Power Source: DC 36V
Date: 19/05/16/
Time: 10/46/57
Engineer Signature: star
Distance: 3m

Note: Report No.:ATE20190671



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	54.3254	43.10	-26.90	16.20	40.00	-23.80	QP			
2	71.4539	52.60	-27.54	25.06	40.00	-14.94	QP			
3	195.8701	50.04	-24.59	25.45	43.50	-18.05	QP			
4	235.9621	56.34	-23.79	32.55	46.00	-13.45	QP			
5	303.8851	54.00	-21.11	32.89	46.00	-13.11	QP			
6	371.2679	55.21	-18.75	36.46	46.00	-9.54	QP			

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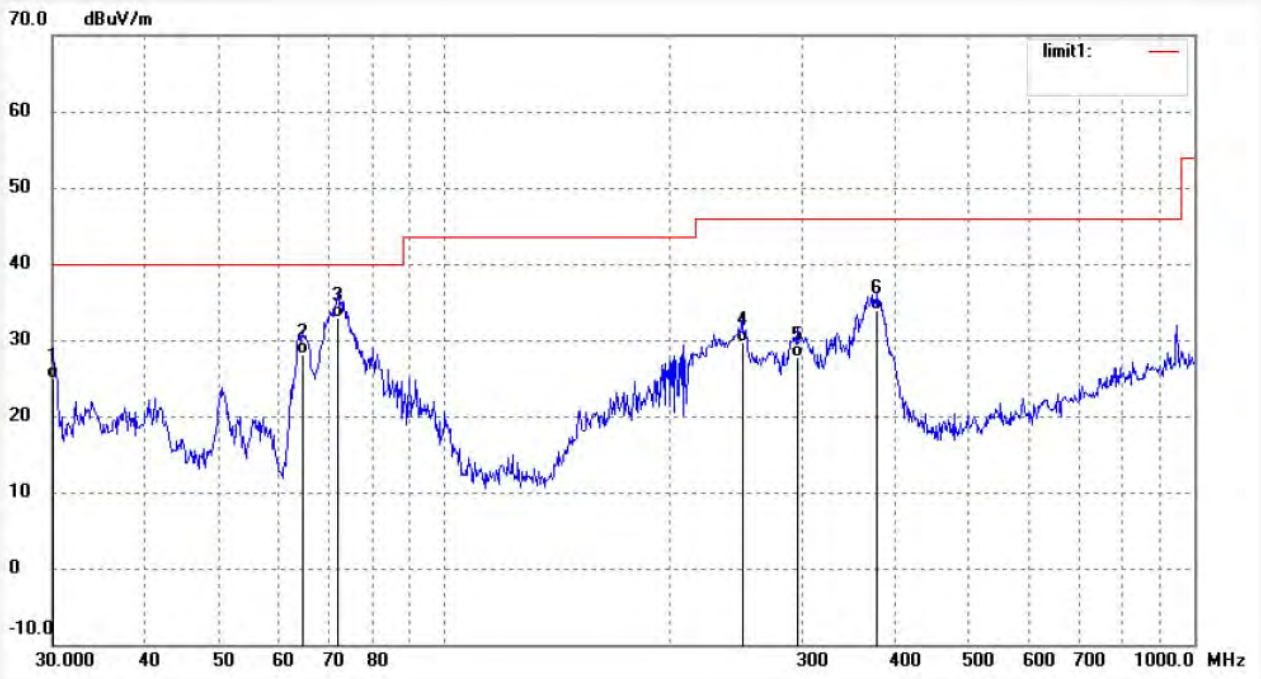
Job No.: star2019 #88
Standard: FCC Part 15E 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Vaxis wireless video system
Mode: TX 5745MHz
Model: Vaxis Strom3000
Manufacturer: GM

Polarization: Vertical
Power Source: DC 36V
Date: 19/05/16/
Time: 10/48/05
Engineer Signature: star
Distance: 3m

Note: Report No.:ATE20190671



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	30.0000	45.10	-20.20	24.90	40.00	-15.10	QP			
2	64.7590	55.30	-27.29	28.01	40.00	-11.99	QP			
3	72.2111	60.58	-27.58	33.00	40.00	-7.00	QP			
4	249.6074	53.32	-23.63	29.69	46.00	-16.31	QP			
5	295.4623	49.04	-21.39	27.65	46.00	-18.35	QP			
6	377.8480	52.60	-18.66	33.94	46.00	-12.06	QP			

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Job No.: star2019 #90
Standard: FCC Part 15E 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Vaxis wireless video system
Mode: TX 5785MHz
Model: Vaxis Strom3000
Manufacturer: GM

Polarization: Horizontal
Power Source: DC 36V
Date: 19/05/16/
Time: 10/50/29
Engineer Signature: star
Distance: 3m

Note: Report No.:ATE20190671

No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	70.9535	52.10	-27.52	24.58	40.00	-15.42	QP			
2	168.4043	47.58	-26.17	21.41	43.50	-22.09	QP			
3	202.1630	47.60	-24.28	23.32	43.50	-20.18	QP			
4	235.1346	56.55	-23.79	32.76	46.00	-13.24	QP			
5	306.0282	55.34	-21.04	34.30	46.00	-11.70	QP			
6	376.5227	54.20	-18.67	35.53	46.00	-10.47	QP			

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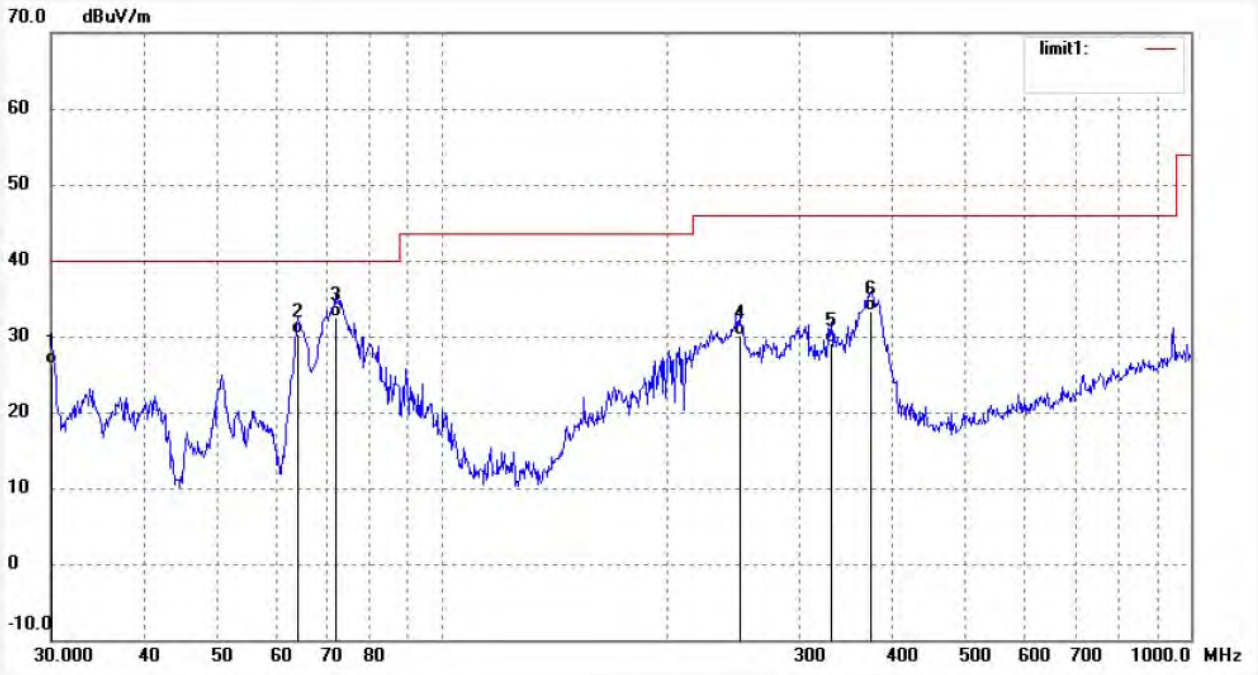
Job No.: star2019 #89
Standard: FCC Part 15E 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Vaxis wireless video system
Mode: TX 5785MHz
Model: Vaxis Strom3000
Manufacturer: GM

Polarization: Vertical
Power Source: DC 36V
Date: 19/05/16/
Time: 10/49/36
Engineer Signature: star
Distance: 3m

Note: Report No.:ATE20190671



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	30.1055	46.50	-20.23	26.27	40.00	-13.73	QP			
2	64.0799	57.62	-27.28	30.34	40.00	-9.66	QP			
3	71.9578	60.10	-27.57	32.53	40.00	-7.47	QP			
4	249.6074	53.66	-23.63	30.03	46.00	-15.97	QP			
5	330.6220	49.24	-20.13	29.11	46.00	-16.89	QP			
6	373.8861	51.92	-18.71	33.21	46.00	-12.79	QP			

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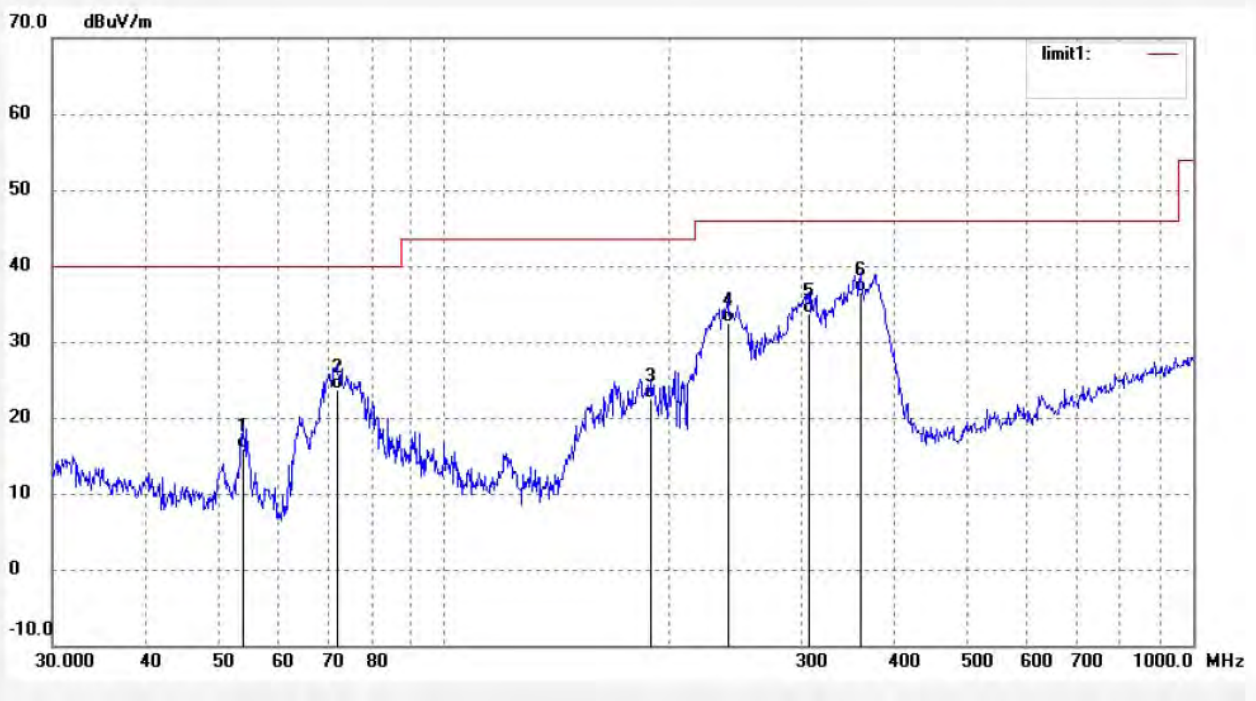
Job No.: star2019 #91
Standard: FCC Part 15E 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Vaxis wireless video system
Mode: TX 5825MHz
Model: Vaxis Strom3000
Manufacturer: GM

Polarization: Horizontal
Power Source: DC 36V
Date: 19/05/16/
Time: 10/51/40
Engineer Signature: star
Distance: 3m

Note: Report No.:ATE20190671



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	53.9450	42.76	-26.84	15.92	40.00	-24.08	QP			
2	71.9578	51.20	-27.57	23.63	40.00	-16.37	QP			
3	189.1075	47.60	-25.19	22.41	43.50	-21.09	QP			
4	239.3019	56.22	-23.73	32.49	46.00	-13.51	QP			
5	307.1051	54.78	-21.02	33.76	46.00	-12.24	QP			
6	359.7114	55.36	-18.92	36.44	46.00	-9.56	QP			

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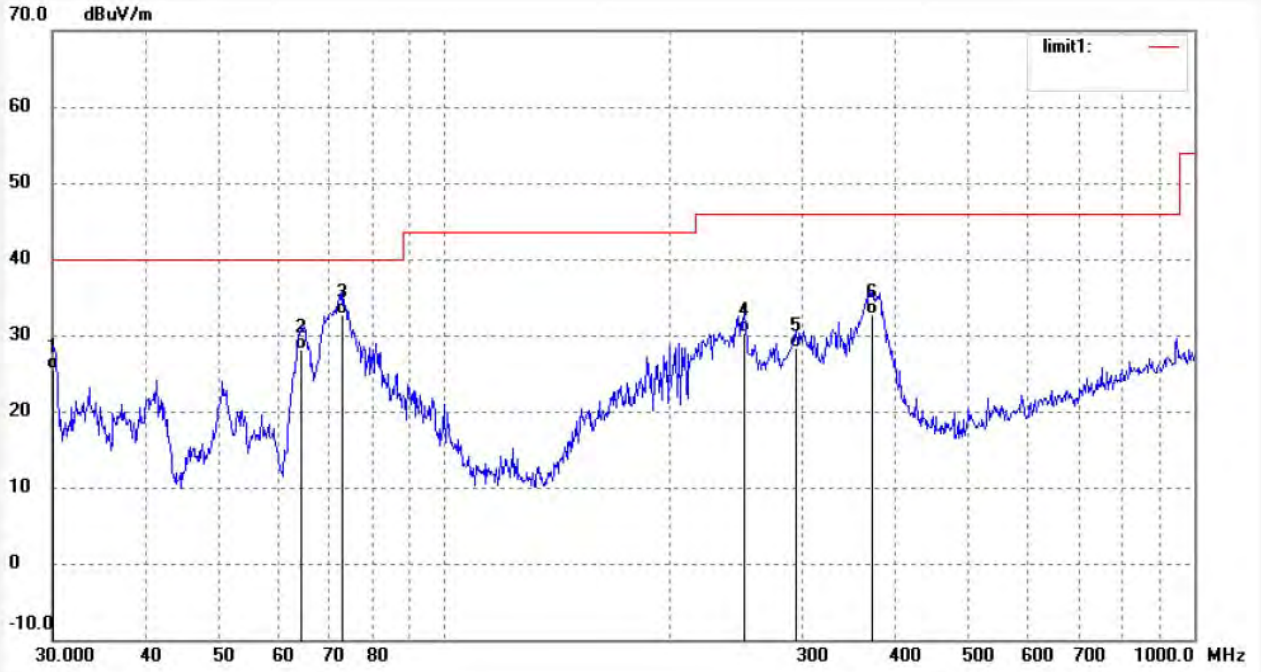
Job No.: star2019 #92
Standard: FCC Part 15E 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Vaxis wireless video system
Mode: TX 5825MHz
Model: Vaxis Strom3000
Manufacturer: GM

Polarization: Vertical
Power Source: DC 36V
Date: 19/05/16/
Time: 10/52/29
Engineer Signature: star
Distance: 3m

Note: Report No.:ATE20190671



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	30.0000	45.70	-20.20	25.50	40.00	-14.50	QP			
2	64.5318	55.30	-27.29	28.01	40.00	-11.99	QP			
3	73.2330	60.36	-27.63	32.73	40.00	-7.27	QP			
4	251.3676	53.92	-23.55	30.37	46.00	-15.63	QP			
5	294.4259	49.84	-21.45	28.39	46.00	-17.61	QP			
6	371.2679	51.52	-18.75	32.77	46.00	-13.23	QP			

Above 1G

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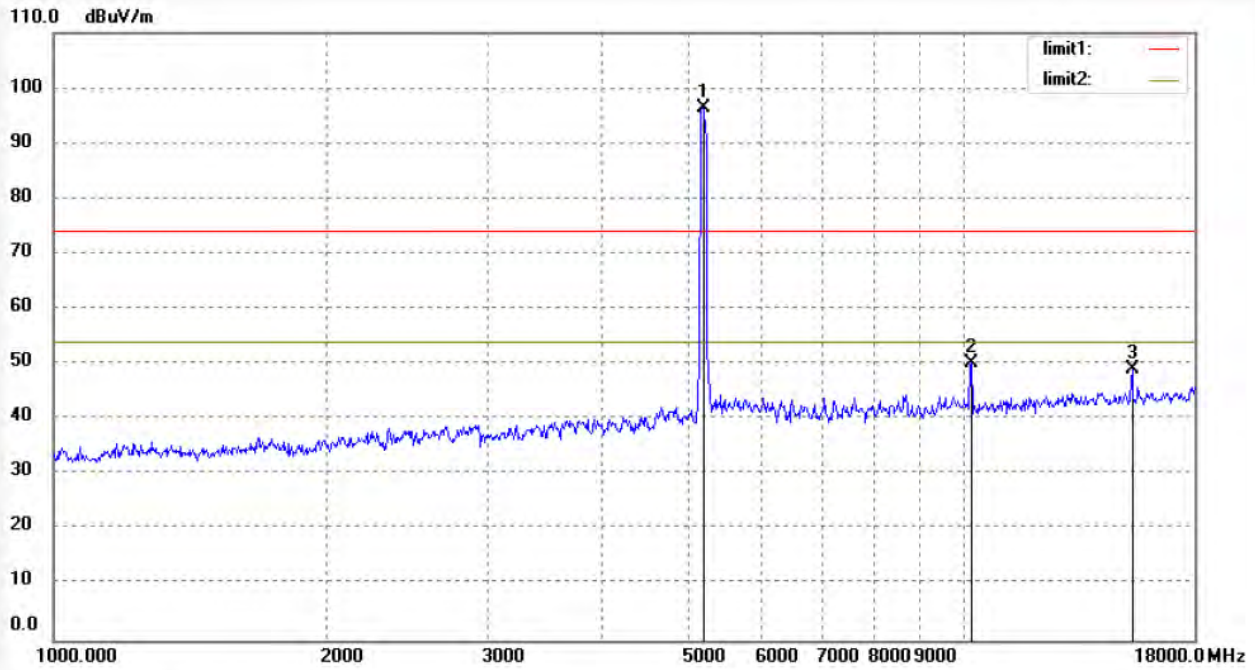
Job No.: star2019 #94
Standard: FCC Part 15E 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Vaxis wireless video system
Mode: TX 5190MHz
Model: Vaxis Strom3000
Manufacturer: GM

Polarization: Horizontal
Power Source: DC 36V
Date: 19/05/16/
Time: 10/57/52
Engineer Signature: star
Distance: 3m

Note: Report No.:ATE20190671



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	5190.089	94.35	2.09	96.44	/	/	peak			
2	10380.007	41.65	8.55	50.20	74.00	-23.80	peak			
3	15570.099	31.59	17.42	49.01	74.00	-24.99	peak			

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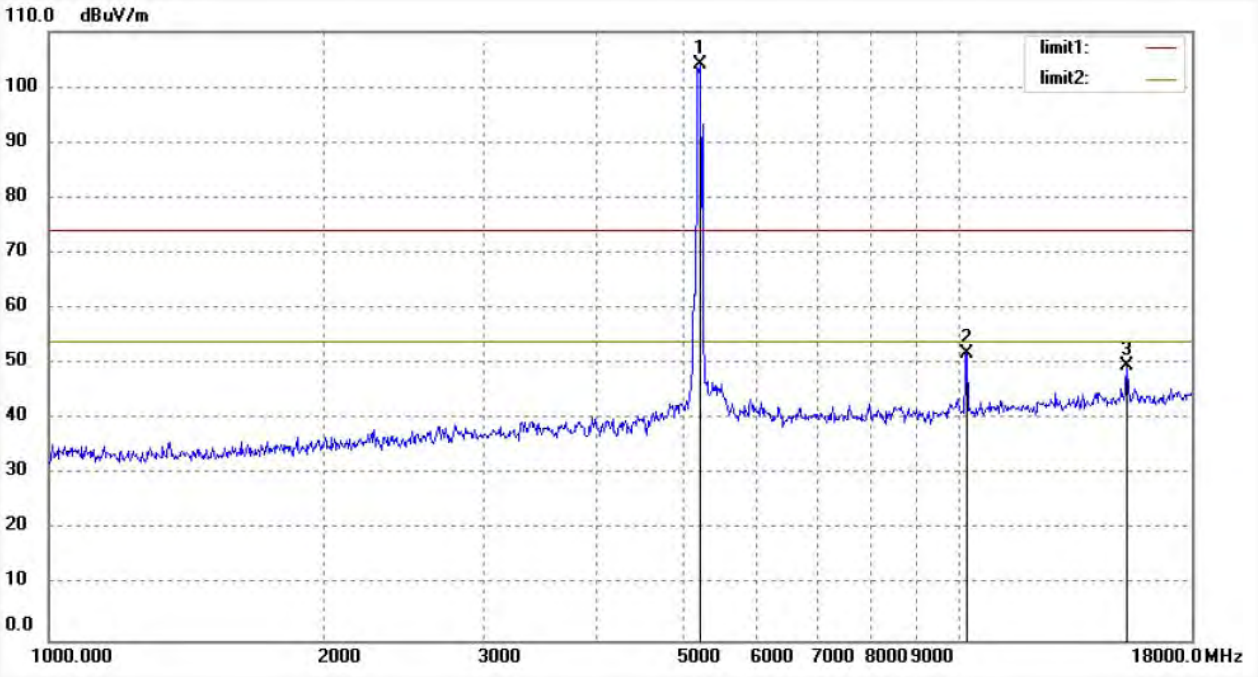
Job No.: star2019 #93
Standard: FCC Part 15E 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Vaxis wireless video system
Mode: TX 5190MHz
Model: Vaxis Strom3000
Manufacturer: GM

Polarization: Vertical
Power Source: DC 36V
Date: 19/05/16/
Time: 10/56/06
Engineer Signature: star
Distance: 3m

Note: Report No.:ATE20190671



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	5190.089	101.96	2.09	104.05	/	/	peak			
2	10380.062	43.37	8.54	51.91	74.00	-22.09	peak			
3	15570.013	32.23	17.43	49.66	74.00	-24.34	peak			

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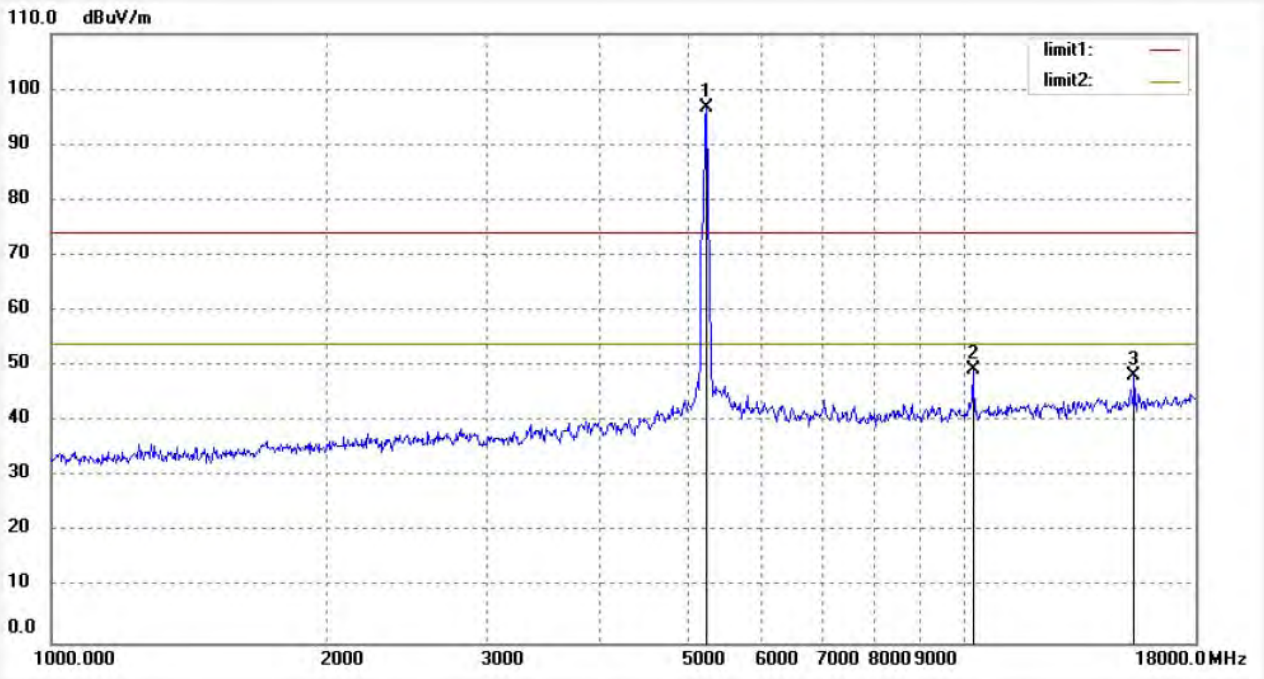
Job No.: star2019 #95
Standard: FCC Part 15E 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Vaxis wireless video system
Mode: TX 5230MHz
Model: Vaxis Strom3000
Manufacturer: GM

Polarization: Horizontal
Power Source: DC 36V
Date: 19/05/16/
Time: 11/00/27
Engineer Signature: star
Distance: 3m

Note: Report No.:ATE20190671



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	5230.014	94.61	2.13	96.74	/	/	peak			
2	10460.038	40.83	8.57	49.40	74.00	-24.60	peak			
3	15690.037	30.73	17.41	48.14	74.00	-25.86	peak			

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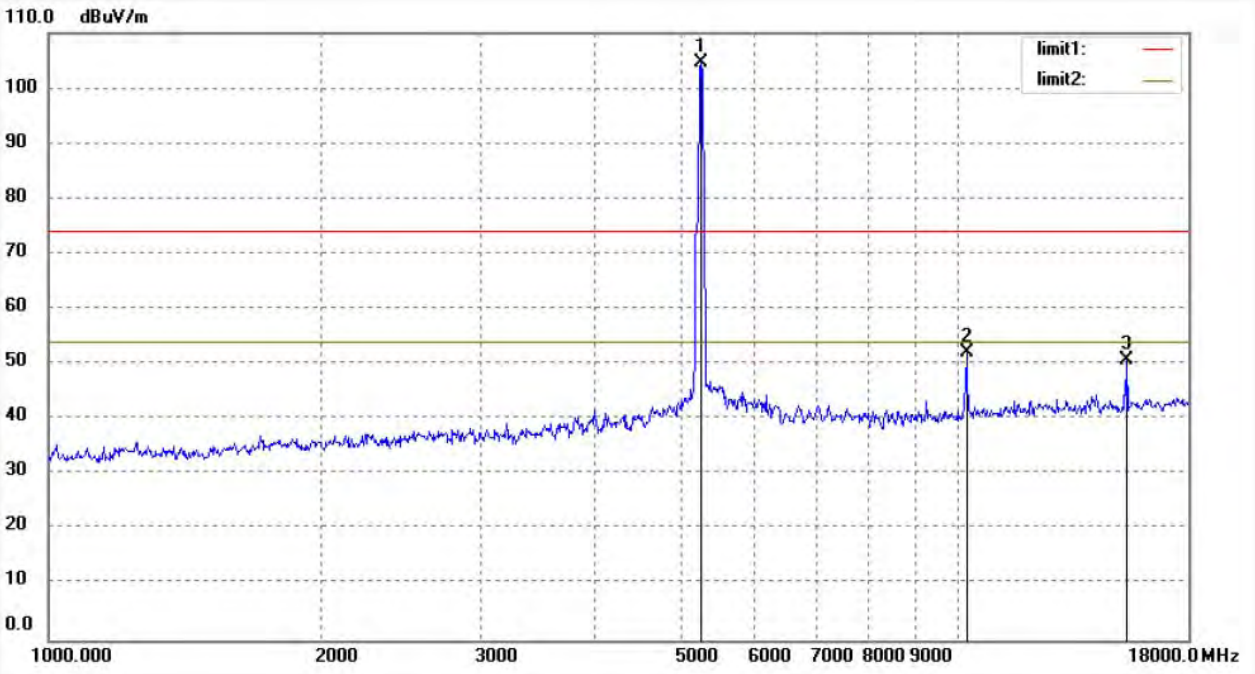
Job No.: star2019 #96
Standard: FCC Part 15E 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Vaxis wireless video system
Mode: TX 5230MHz
Model: Vaxis Strom3000
Manufacturer: GM

Polarization: Vertical
Power Source: DC 36V
Date: 19/05/16/
Time: 11/03/22
Engineer Signature: star
Distance: 3m

Note: Report No.:ATE20190671



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	5230.014	102.60	2.13	104.73	/	/	peak			
2	10460.038	43.45	8.57	52.02	74.00	-21.98	peak			
3	15690.037	33.20	17.41	50.61	74.00	-23.39	peak			

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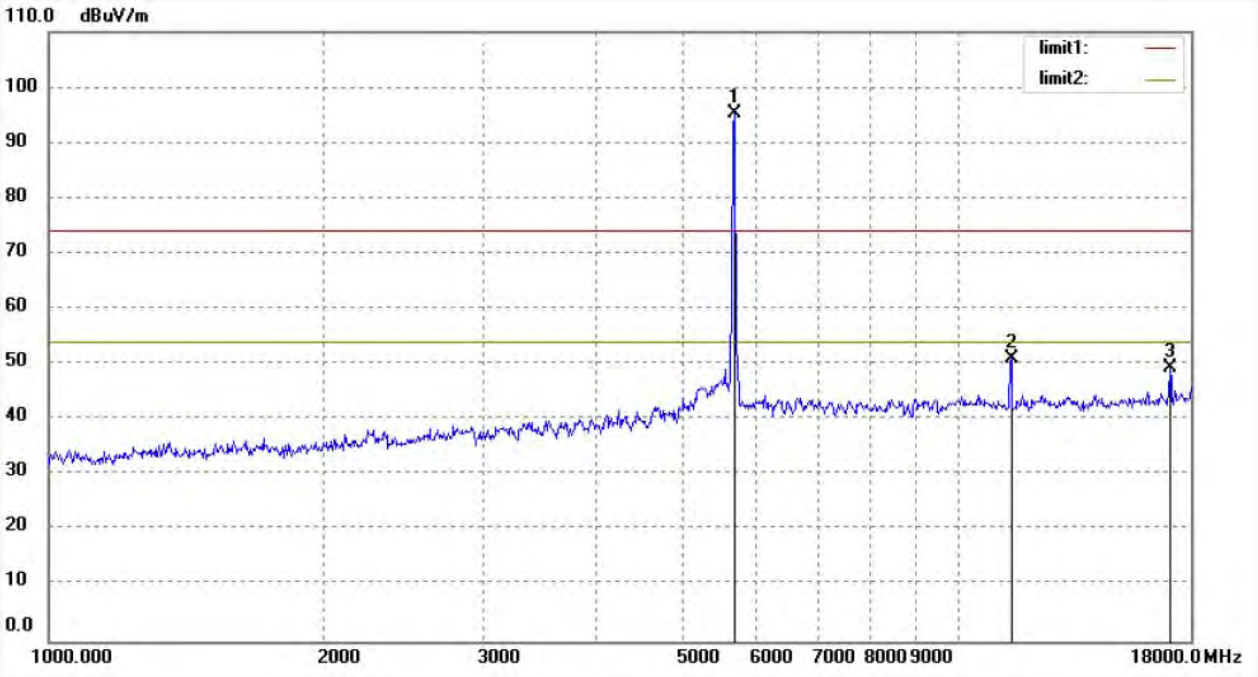
Job No.: star2019 #98
Standard: FCC Part 15E 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Vaxis wireless video system
Mode: TX 5745MHz
Model: Vaxis Strom3000
Manufacturer: GM

Polarization: Horizontal
Power Source: DC 36V
Date: 19/05/16/
Time: 11/07/24
Engineer Signature: star
Distance: 3m

Note: Report No.:ATE20190671



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	5745.045	92.67	2.69	95.36	/	/	peak			
2	11490.014	41.01	9.97	50.98	74.00	-23.02	peak			
3	17235.198	29.92	19.37	49.29	74.00	-24.71	peak			

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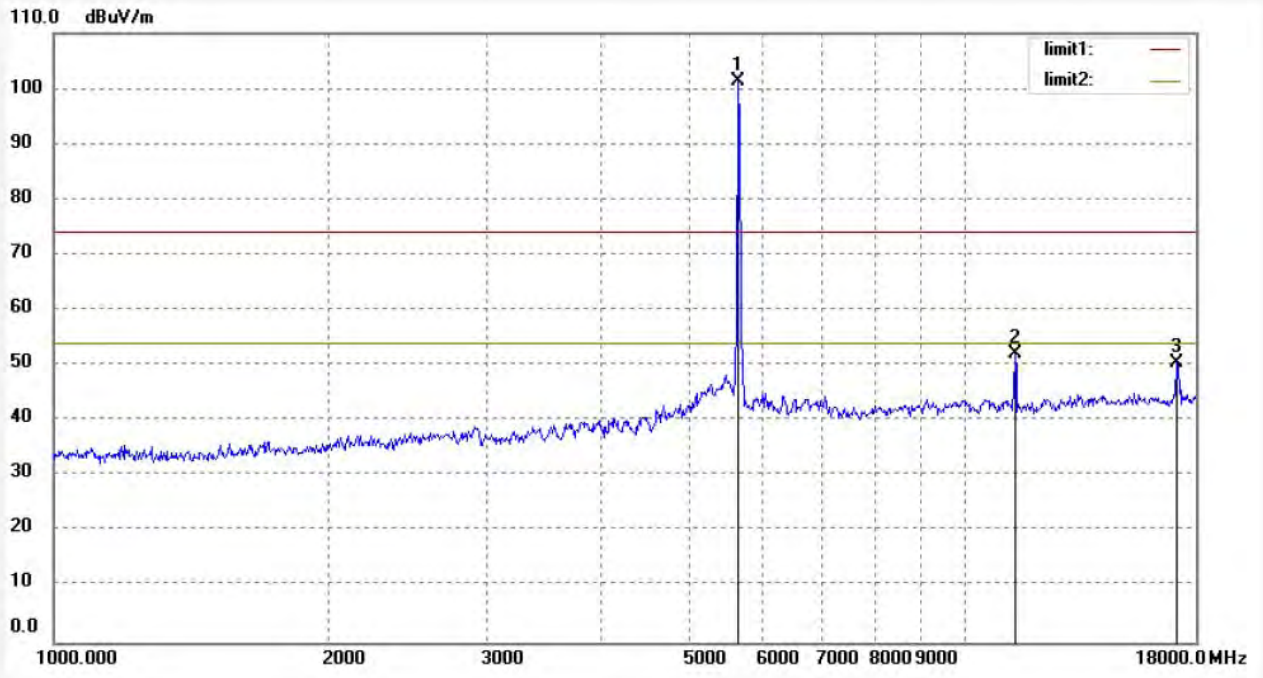
Job No.: star2019 #97
Standard: FCC Part 15E 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Vaxis wireless video system
Mode: TX 5745MHz
Model: Vaxis Strom3000
Manufacturer: GM

Polarization: Vertical
Power Source: DC 36V
Date: 19/05/16/
Time: 11/05/58
Engineer Signature: star
Distance: 3m

Note: Report No.:ATE20190671



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	5745.050	98.73	2.65	101.38	/	/	peak			
2	11490.091	42.28	9.93	52.21	74.00	-21.79	peak			
3	17235.089	30.75	19.64	50.39	74.00	-23.61	peak			

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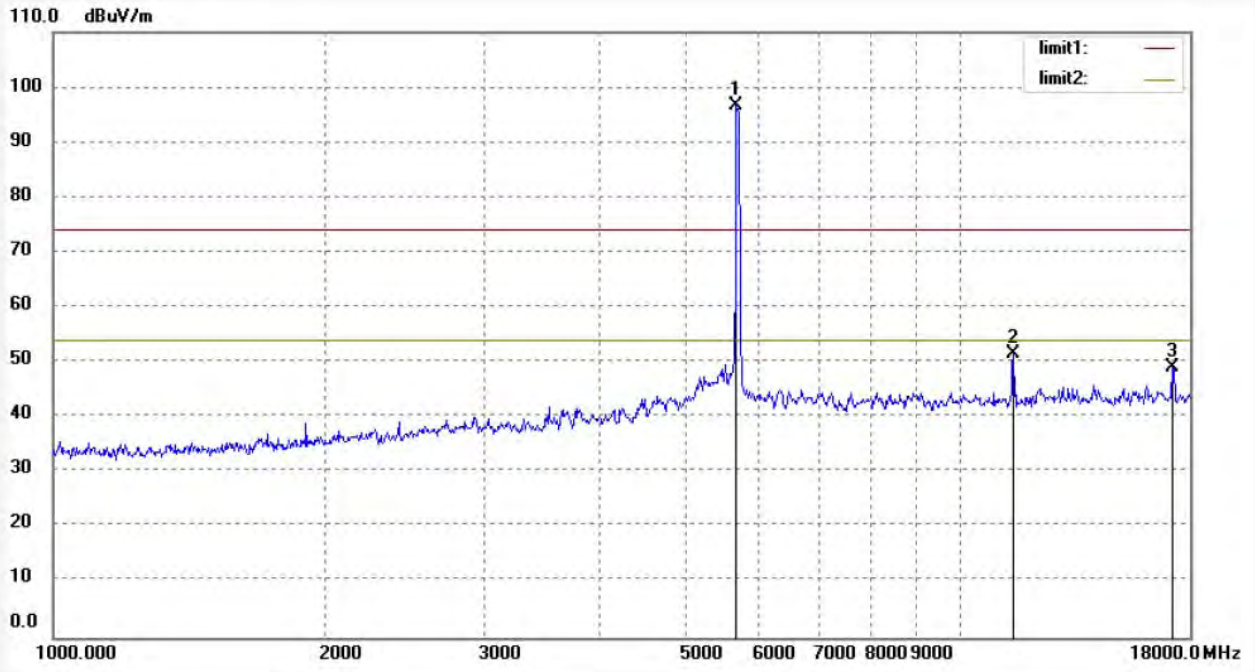
Job No.: star2019 #100
Standard: FCC Part 15E 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Vaxis wireless video system
Mode: TX 5785MHz
Model: Vaxis Strom3000
Manufacturer: GM

Polarization: Horizontal
Power Source: DC 36V
Date: 19/05/16/
Time: 11/17/04
Engineer Signature: star
Distance: 3m

Note: Report No.:ATE20190671



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	5785.45	93.91	2.69	96.60	/	/	peak			
2	11570.052	41.46	10.05	51.51	74.00	-22.49	peak			
3	17355.008	29.05	20.17	49.22	74.00	-24.78	peak			

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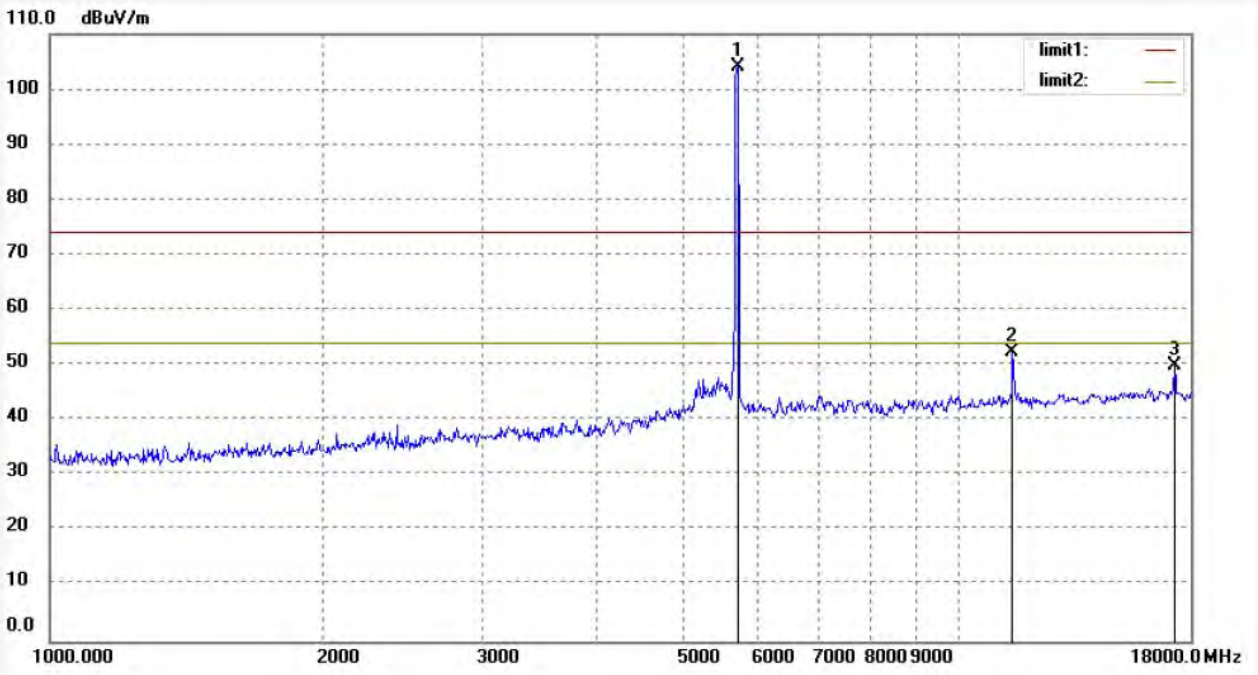
Job No.: star2019 #99
Standard: FCC Part 15E 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Vaxis wireless video system
Mode: TX 5785MHz
Model: Vaxis Strom3000
Manufacturer: GM

Polarization: Vertical
Power Source: DC 36V
Date: 19/05/16/
Time: 11/10/41
Engineer Signature: star
Distance: 3m

Note: Report No.:ATE20190671



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	5785.033	101.22	2.75	103.97	/	/	peak			
2	11570.034	42.42	10.00	52.42	74.00	-21.58	peak			
3	17355.036	29.38	20.44	49.82	74.00	-24.18	peak			

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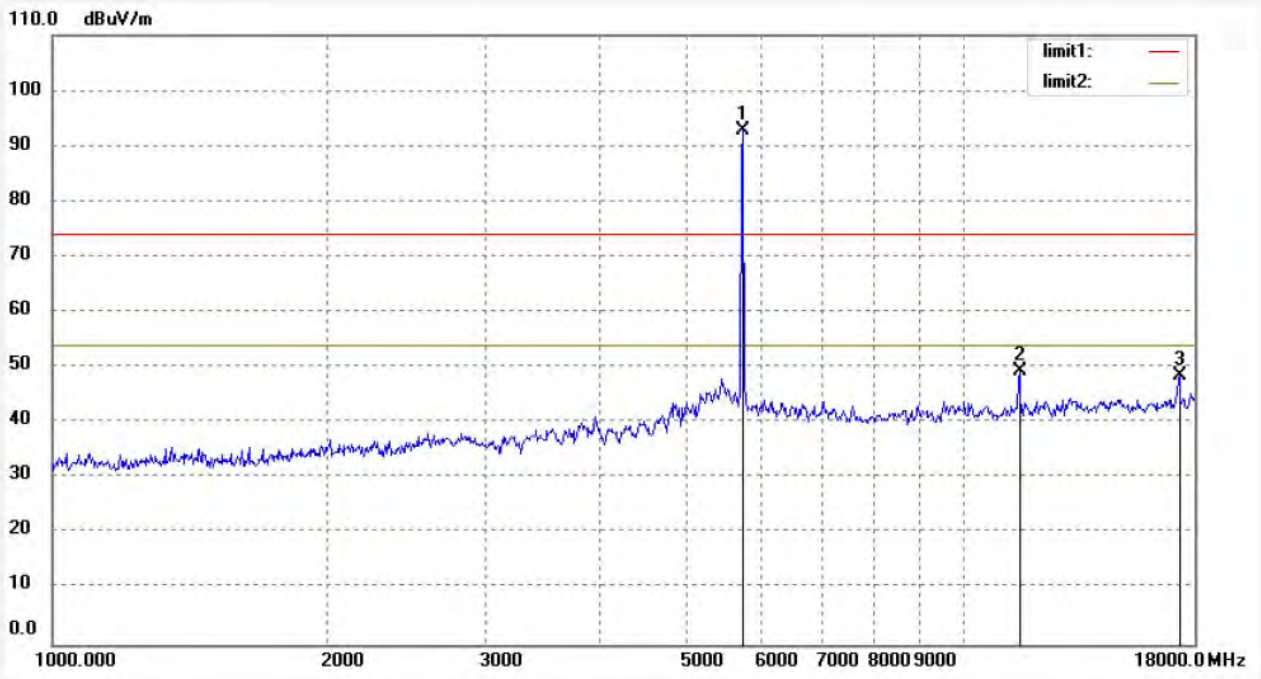
Job No.: star2019 #101
Standard: FCC Part 15E 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Vaxis wireless video system
Mode: TX 5825MHz
Model: Vaxis Strom3000
Manufacturer: GM

Polarization: Horizontal
Power Source: DC 36V
Date: 19/05/16/
Time: 11/22/20
Engineer Signature: star
Distance: 3m

Note: Report No.:ATE20190671



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	5825.200	90.18	2.76	92.94	/	/	peak			
2	11650.079	39.38	10.12	49.50	74.00	-24.50	peak			
3	17475.011	27.90	20.72	48.62	74.00	-25.38	peak			

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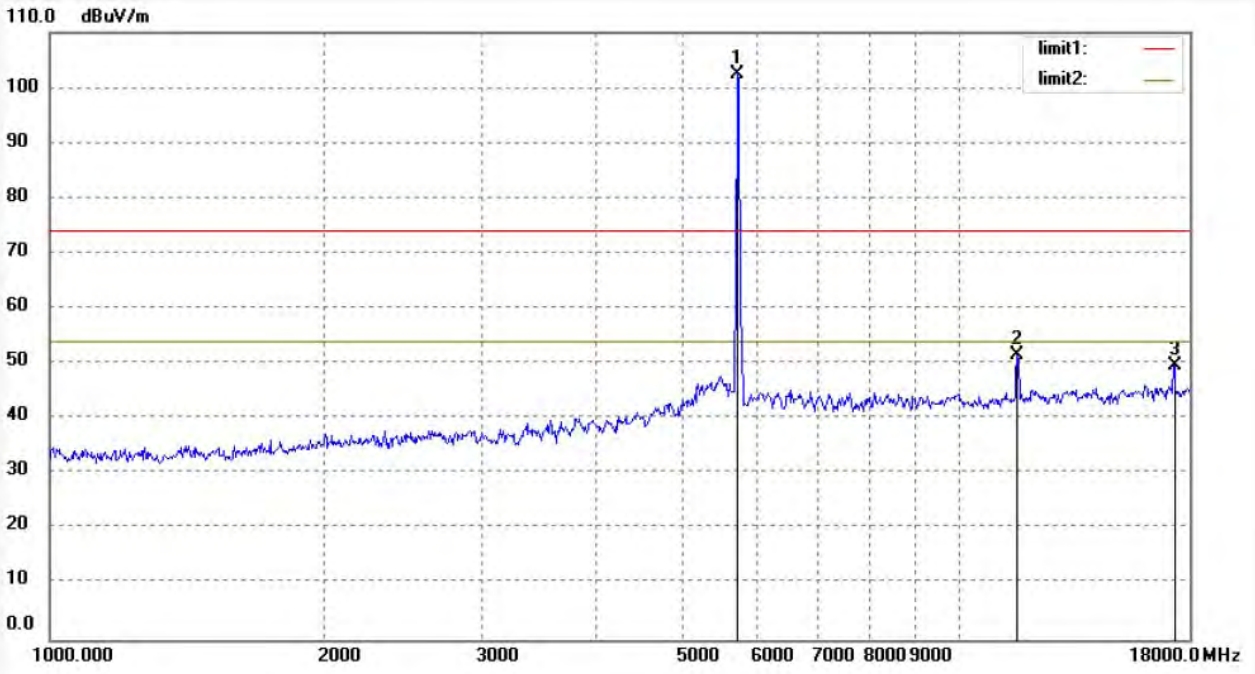
Job No.: star2019 #102
Standard: FCC Part 15E 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Vaxis wireless video system
Mode: TX 5825MHz
Model: Vaxis Strom3000
Manufacturer: GM

Polarization: Vertical
Power Source: DC 36V
Date: 19/05/16/
Time: 11/25/02
Engineer Signature: star
Distance: 3m

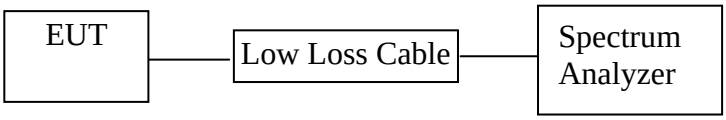
Note: Report No.:ATE20190671



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	5825.033	99.61	2.75	102.36	/	/	peak			
2	11650.097	41.39	10.19	51.58	74.00	-22.42	peak			
3	17475.011	28.87	20.72	49.59	74.00	-24.41	peak			

12.BAND EDGE COMPLIANCE TEST

12.1.Block Diagram of Test Setup



12.2.The Requirement For Section 15.407(b)

(1) For transmitters operating in the 5.15–5.25 GHz band: All emissions outside of the 5.15–5.35 GHz band shall not exceed an e.i.r.p. of –27 dBm/MHz.

(4) For transmitters operating in the 5.725–5.85 GHz band:
(i) All emissions shall be limited to a level of –27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

12.3.EUT Configuration on Measurement

The equipment are installed on the emission Measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

12.4.Operating Condition of EUT

12.4.1.Setup the EUT and simulator as shown as Section 12.1.

12.4.2.Turn on the power of all equipment.

12.4.3.Let the EUT work in TX modes measure it. The transmit frequency are 5190MHz, 5230MHz, 5745MHz and 5825MHz.

12.5.Test Procedure

Conducted Band Edge:

12.5.1.The transmitter output was connected to the spectrum analyzer via a low loss cable.

12.5.2.Set RBW of spectrum analyzer to 100kHz and VBW to 300kHz.

Radiate Band Edge:

12.5.3.The EUT is placed on a turntable, which is 1.5m above the ground plane and worked at highest radiated power.

12.5.4.The turntable was rotated for 360 degrees to determine the position of maximum emission level.

12.5.5.EUT is set 3m away from the receiving antenna, which is varied from 1m to 4m to find out the highest emission.

12.5.6.Set the spectrum analyzer in the following setting in order to capture the lower and upper band-edges of the emission:

12.5.7.RBW=1MHz, VBW=1MHz

12.5.8.The band edges was measured and recorded.

12.5.9.The field strength is calculated by adding the antenna factor, high pass filter loss(if used) and cable loss, and subtracting the amplifier gain(if any)from the measured reading. The basic equation calculation is as follows:

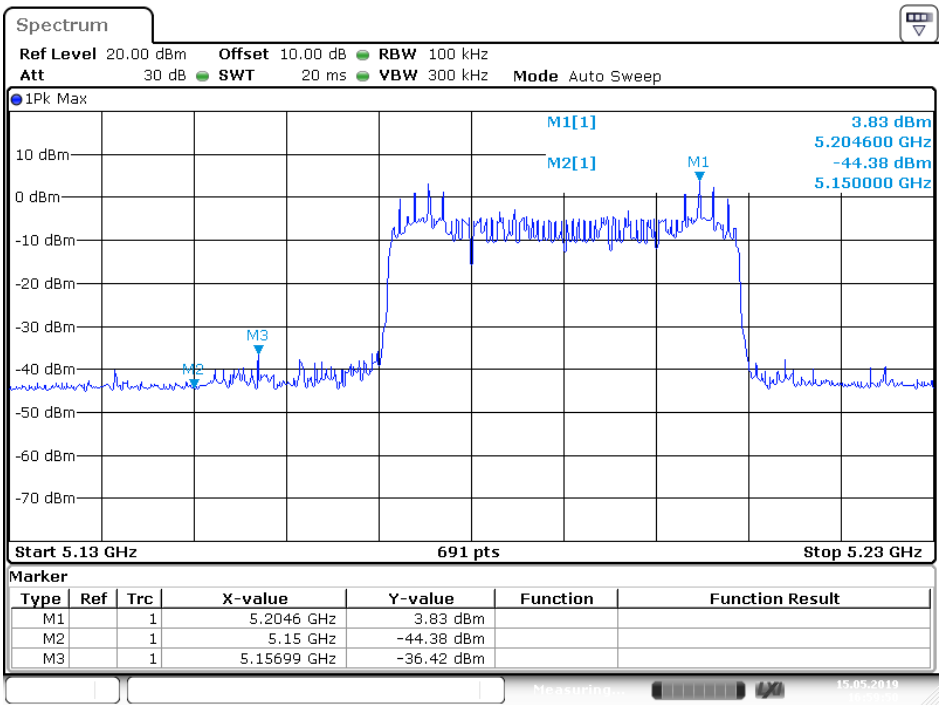
Result = Reading + Corrected Factor

12.6.Test Result

Pass

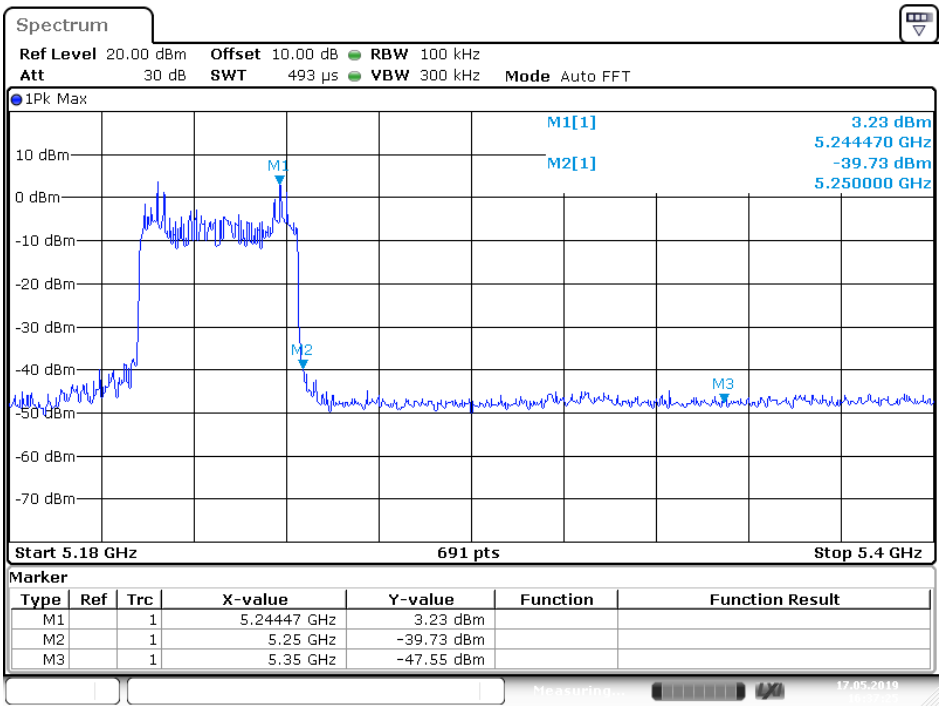
The spectrum analyzer plots are attached as below.

(ANT 1) 5190MHz



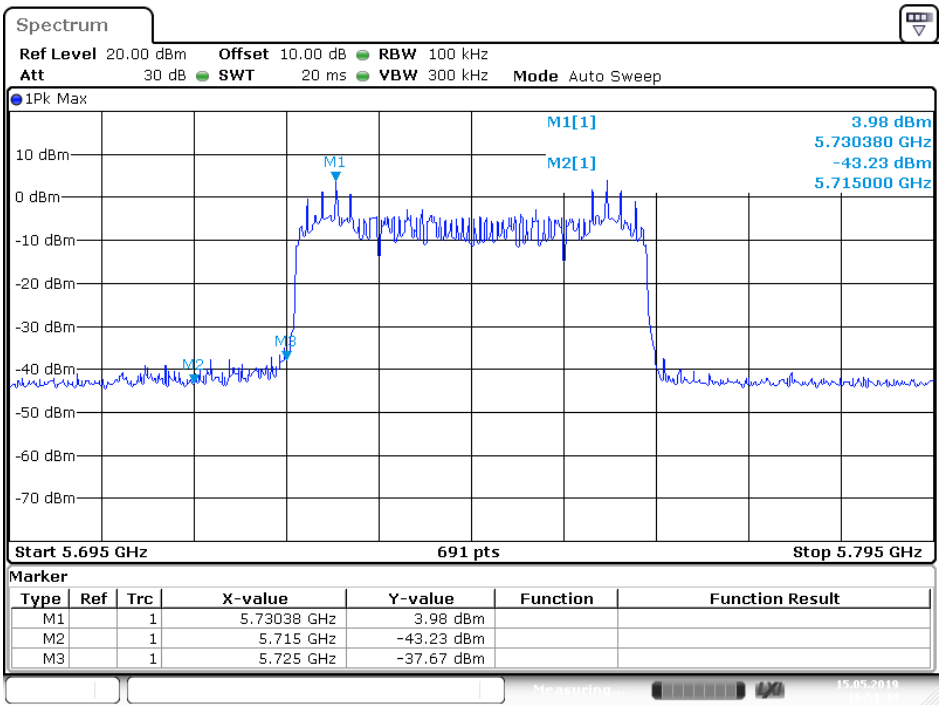
Date: 15.MAY.2019 16:59:50

(ANT 1) 5230MHz



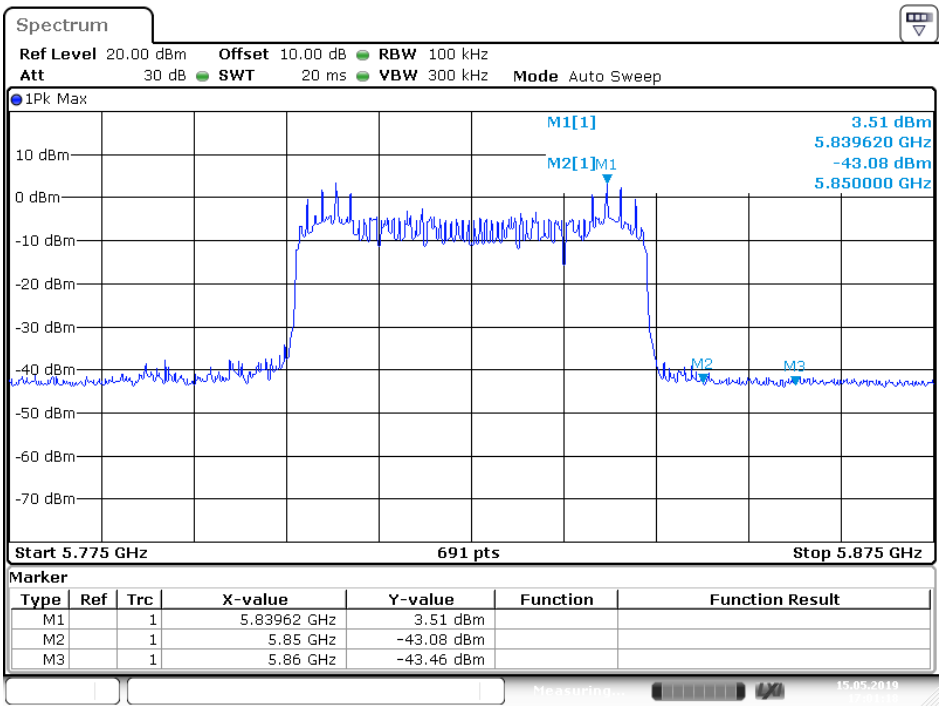
Date: 17.MAY.2019 16:37:25

(ANT 1) 5745MHz



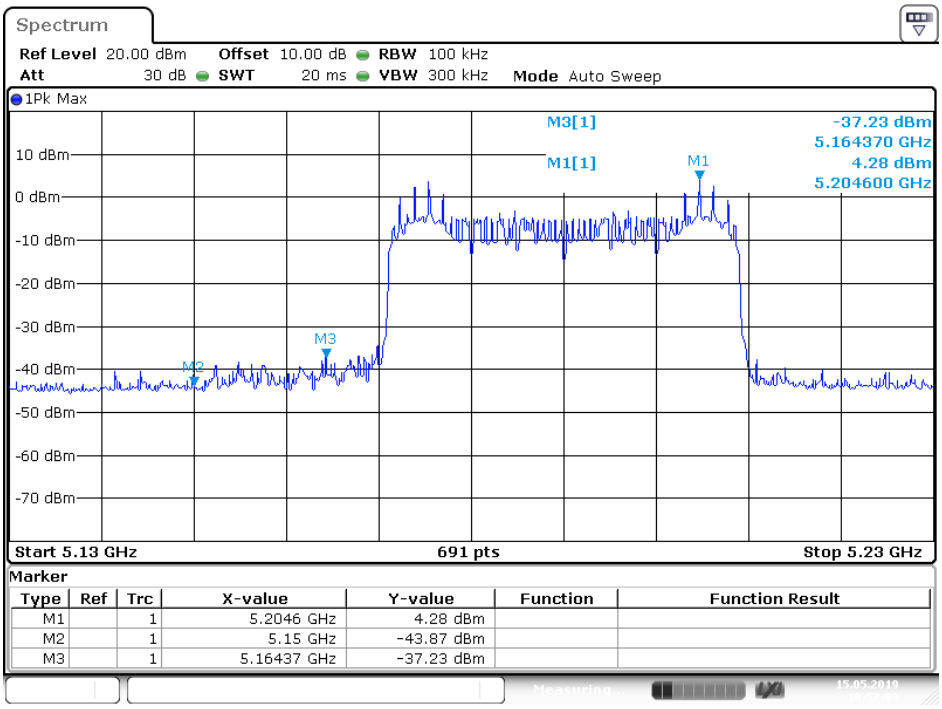
Date: 15.MAY.2019 16:51:44

(ANT 1) 5825MHz



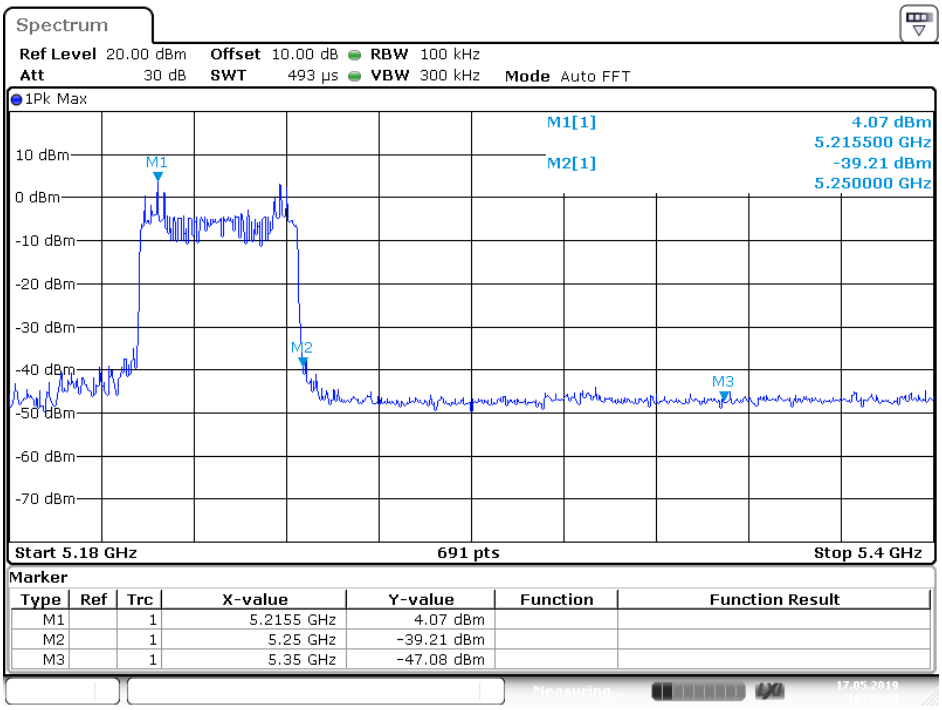
Date: 15.MAY.2019 17:01:18

(ANT 2) 5190MHz



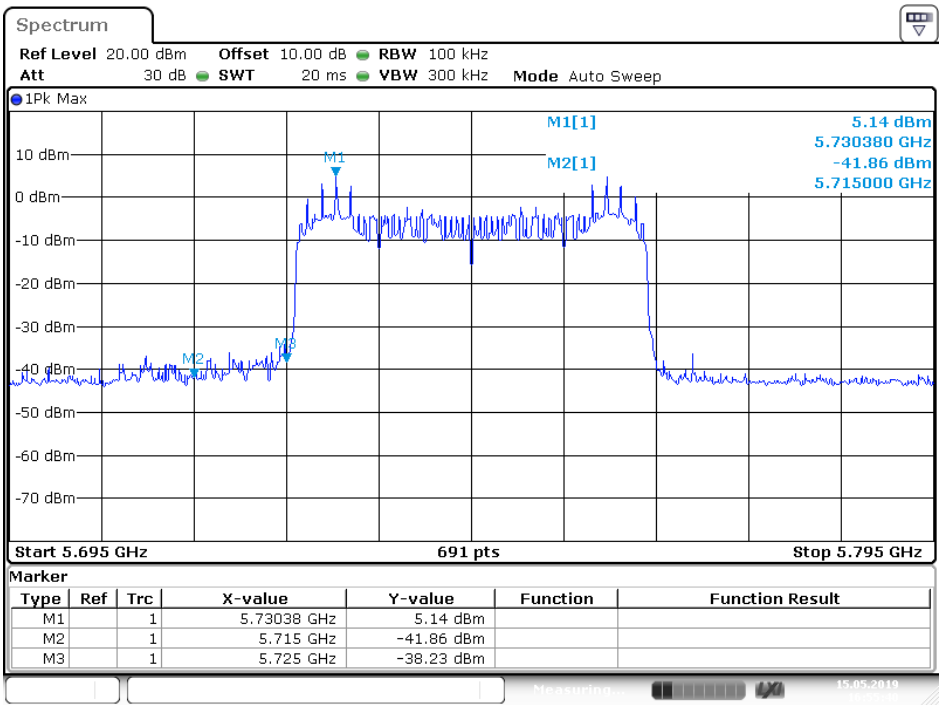
Date: 15.MAY.2019 16:57:03

(ANT 2) 5230MHz



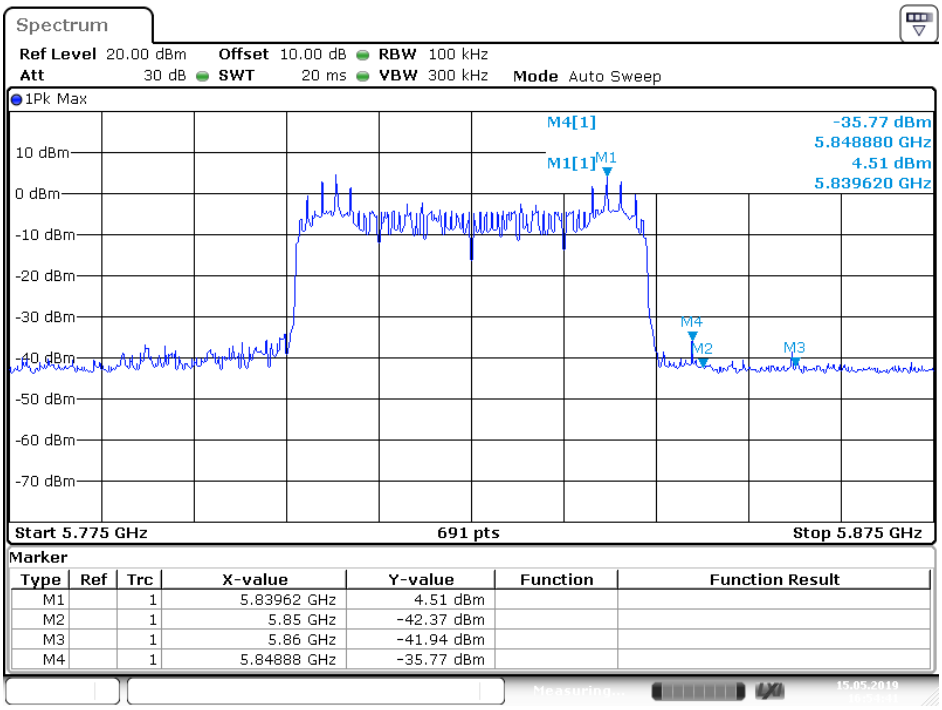
Date: 17.MAY.2019 16:40:40

(ANT 2) 5745MHz



Date: 15.MAY.2019 16:55:40

(ANT 2) 5825MHz



Date: 15.MAY.2019 16:54:41

Radiated Band Edge Result

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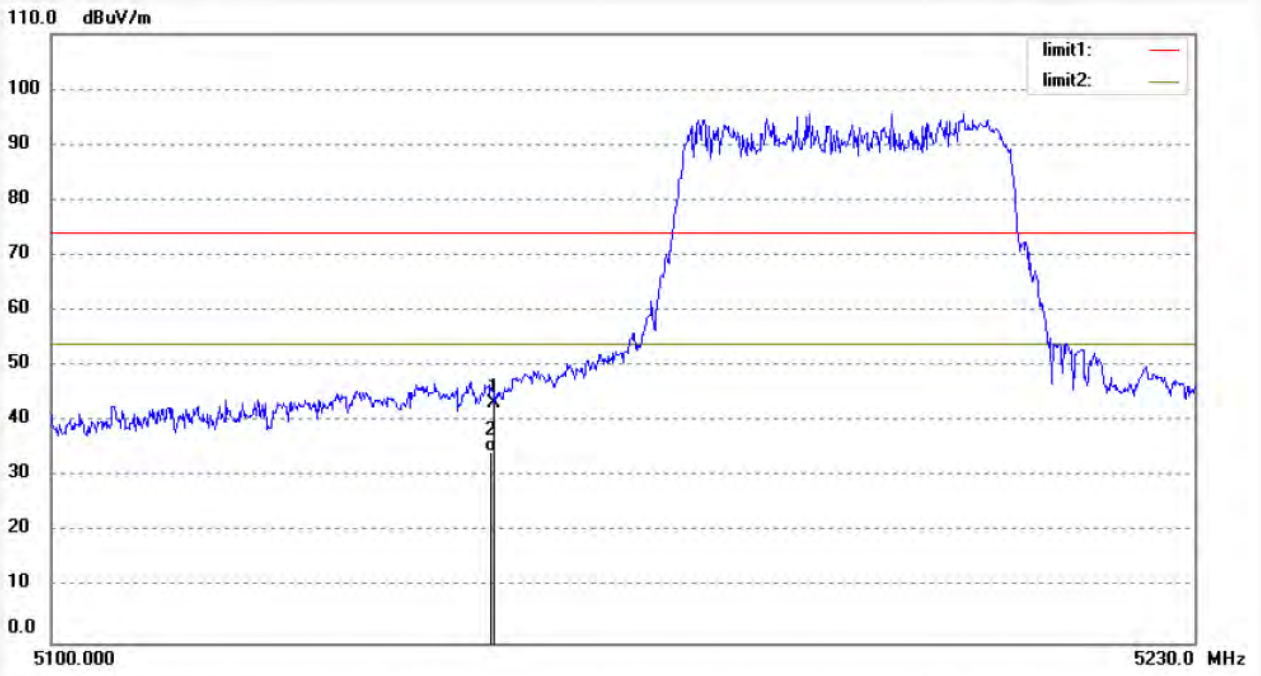
Job No.: star2019 #108
Standard: FCC Part 15E 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Vaxis wireless video system
Mode: TX 5190MHz
Model: Vaxis Strom3000
Manufacturer: GM

Polarization: Horizontal
Power Source: DC 36V
Date: 19/05/16/
Time: 11/44/08
Engineer Signature: star
Distance: 3m

Note: Report No.:ATE20190671



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	5150.000	41.20	2.04	43.24	74.00	-30.76	peak			
2	5150.000	32.42	2.04	34.46	54.00	-19.54	AVG			

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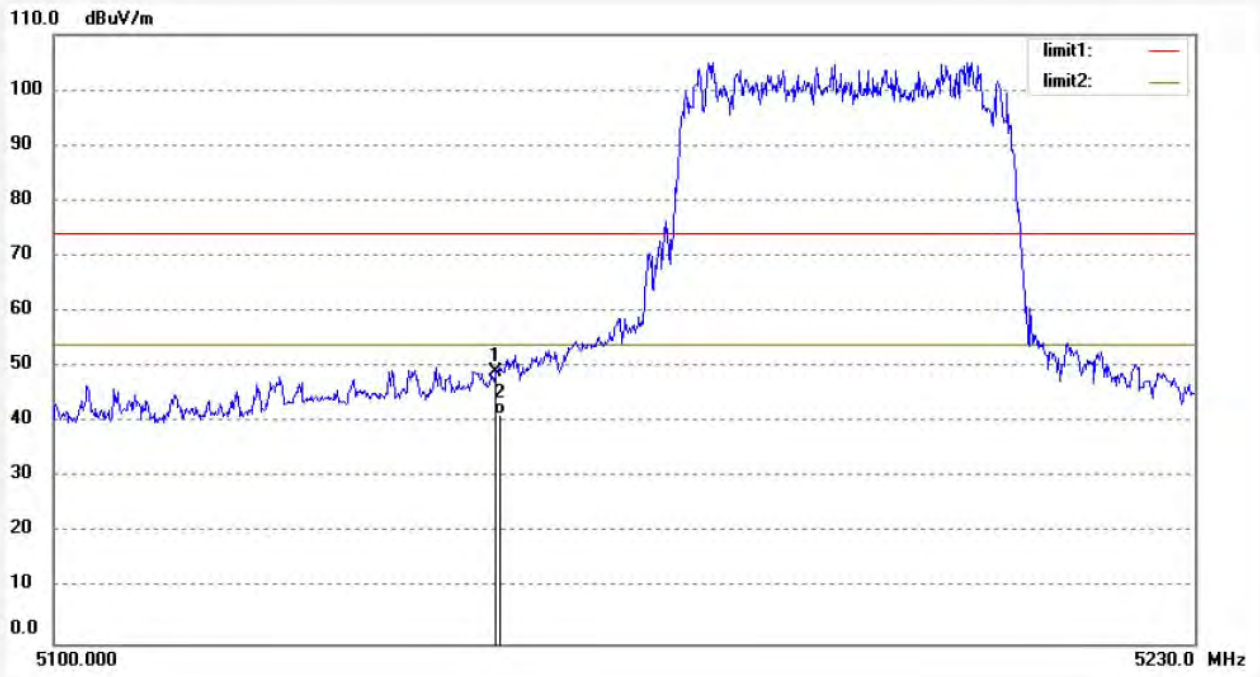
Job No.: star2019 #107
Standard: FCC Part 15E 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Vaxis wireless video system
Mode: TX 5190MHz
Model: Vaxis Strom3000
Manufacturer: GM

Polarization: Vertical
Power Source: DC 36V
Date: 19/05/16/
Time: 11/42/09
Engineer Signature: star
Distance: 3m

Note: Report No.:ATE20190671



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	5150.000	47.05	2.04	49.09	74.00	-24.91	peak			
2	5150.000	39.27	2.04	41.31	54.00	-12.69	AVG			

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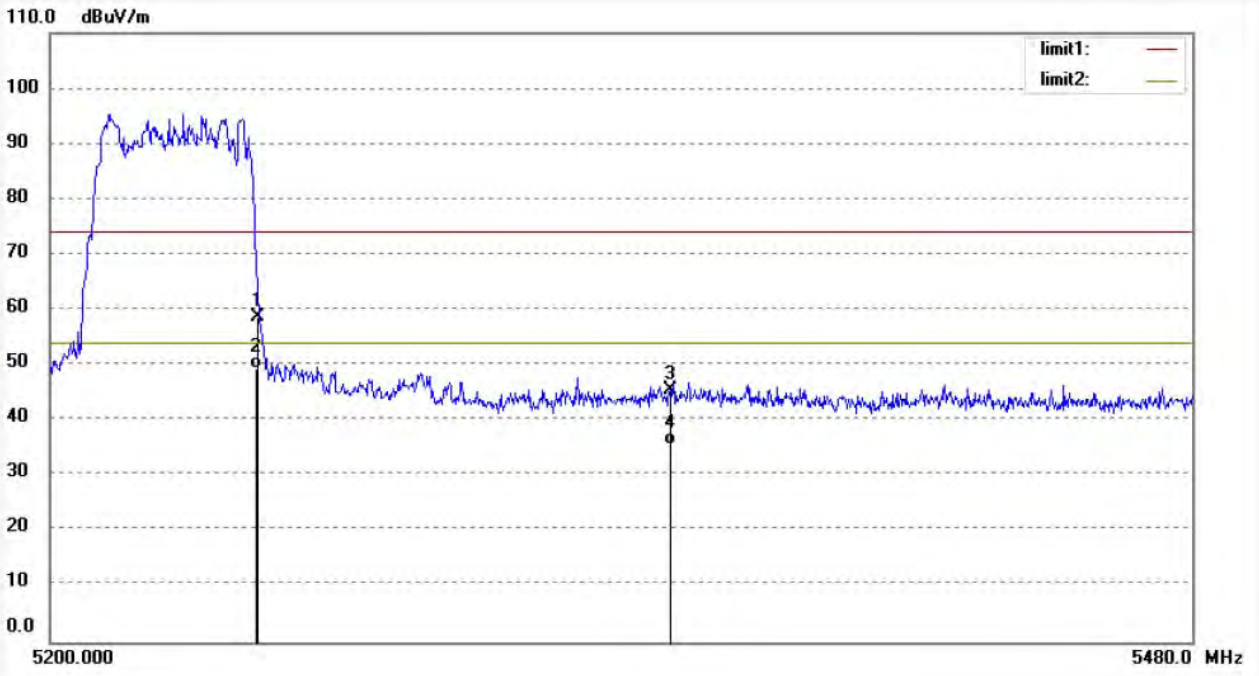
Job No.: STAR2019 #109
Standard: FCC Part 15E 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Vaxis wireless video system
Mode: TX 5230MHz
Model: Vaxis Strom3000
Manufacturer: GM

Polarization: Horizontal
Power Source: DC 36V
Date: 19/05/16/
Time: 11/47/23
Engineer Signature: star
Distance: 3m

Note: Report No.:ATE20190671



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	5250.000	56.53	2.16	58.69	74.00	-15.31	peak			
2	5250.000	47.25	2.16	49.41	54.00	-4.59	AVG			
3	5350.000	43.25	2.28	45.53	74.00	-28.47	peak			
4	5350.000	33.40	2.28	35.68	54.00	-18.32	AVG			

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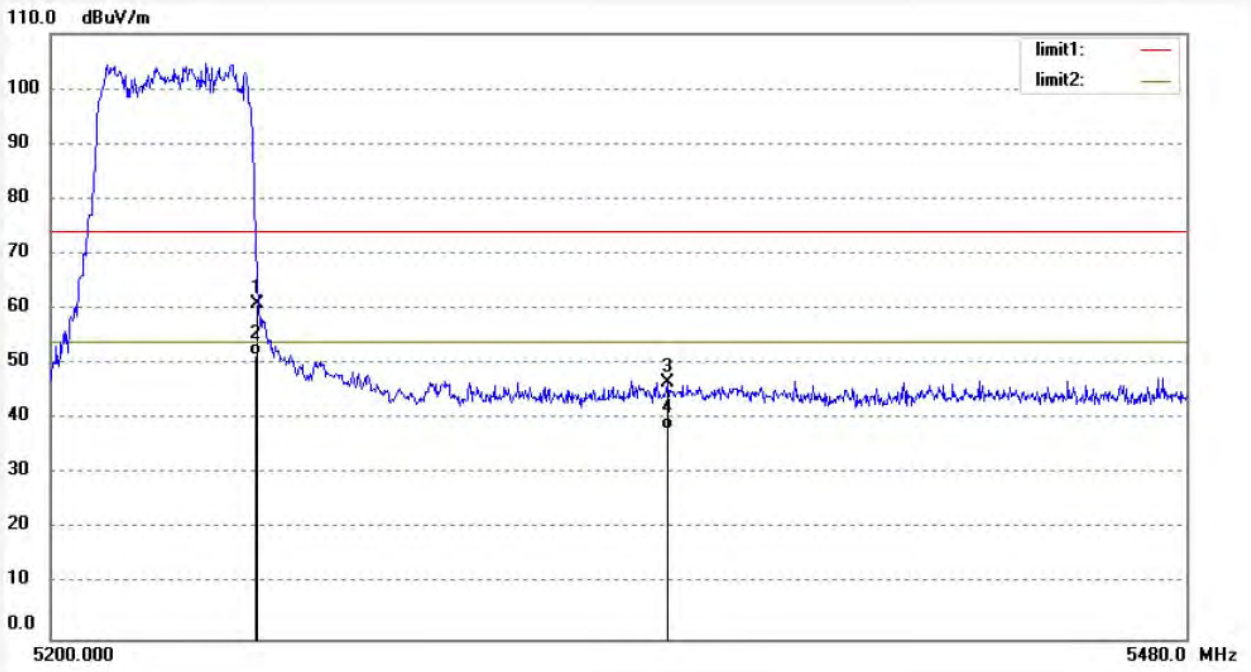
Job No.: STAR2019 #110
Standard: FCC Part 15E 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Vaxis wireless video system
Mode: TX 5230MHz
Model: Vaxis Strom3000
Manufacturer: GM

Polarization: Vertical
Power Source: DC 36V
Date: 19/05/16/
Time: 11/49/01
Engineer Signature: star
Distance: 3m

Note: Report No.:ATE20190671



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	5250.000	58.82	2.16	60.98	74.00	-13.02	peak			
2	5250.000	49.30	2.16	51.46	54.00	-2.54	AVG			
3	5350.000	44.47	2.28	46.75	74.00	-27.25	peak			
4	5350.000	35.69	2.28	37.97	54.00	-16.03	AVG			

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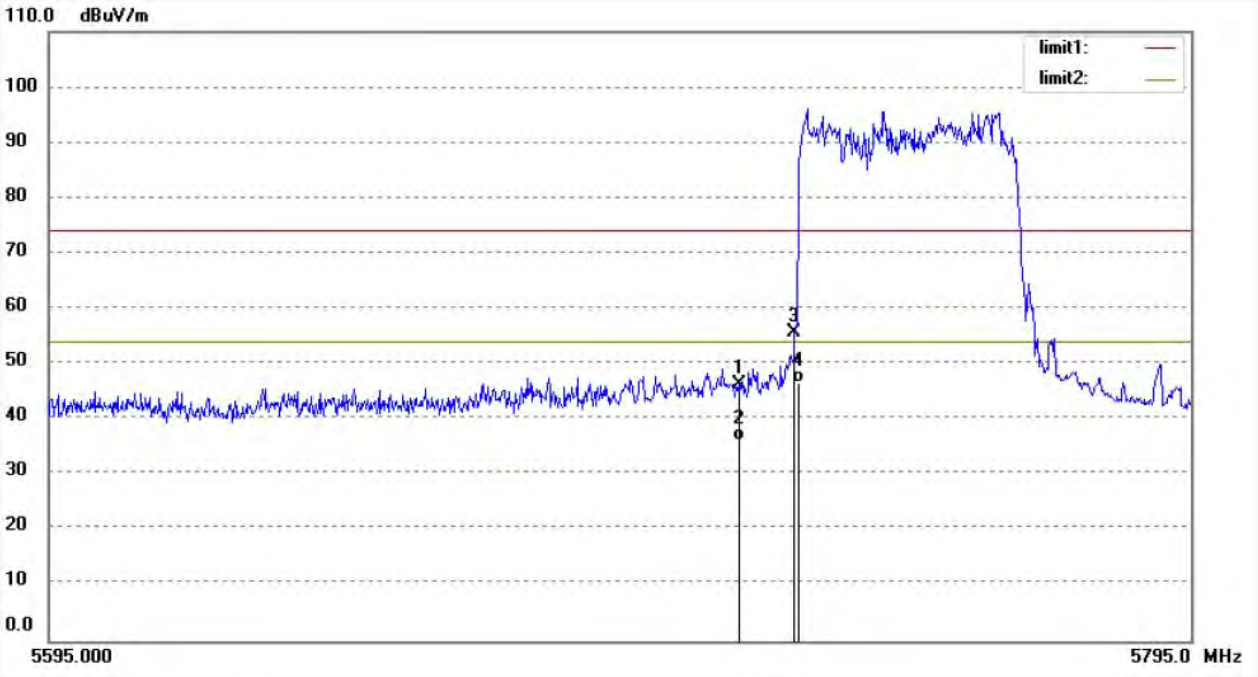
Job No.: star2019 #105
Standard: FCC Part 15E 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Vaxis wireless video system
Mode: TX 5745MHz
Model: Vaxis Strom3000
Manufacturer: GM

Polarization: Horizontal
Power Source: DC 36V
Date: 19/05/16/
Time: 11/36/06
Engineer Signature: star
Distance: 3m

Note: Report No.:ATE20190671



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	5715.000	43.54	2.74	46.28	74.00	-27.72	peak			
2	5715.000	33.40	2.74	36.14	54.00	-17.86	AVG			
3	5725.000	52.94	2.75	55.69	74.00	-18.31	peak			
4	5725.000	43.90	2.75	46.65	54.00	-7.35	AVG			

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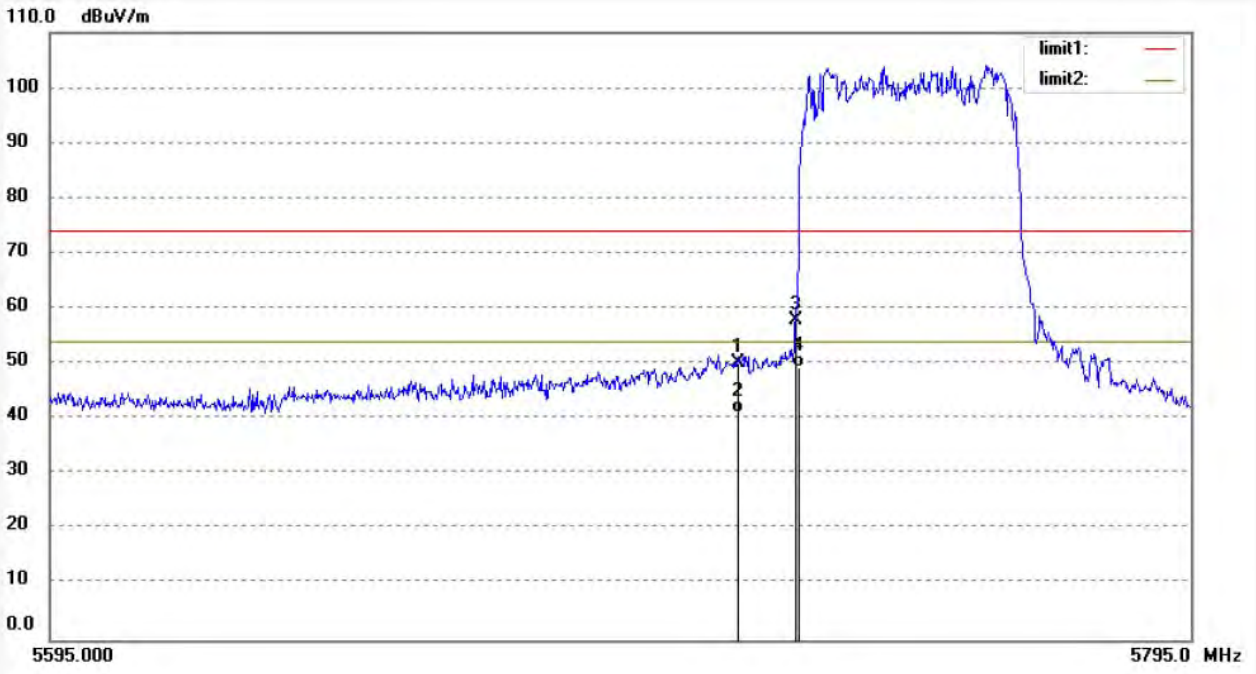
Job No.: star2019 #106
Standard: FCC Part 15E 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Vaxis wireless video system
Mode: TX 5745MHz
Model: Vaxis Strom3000
Manufacturer: GM

Polarization: Vertical
Power Source: DC 36V
Date: 19/05/16/
Time: 11/37/52
Engineer Signature: star
Distance: 3m

Note: Report No.:ATE20190671



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	5715.000	47.35	2.74	50.09	74.00	-23.91	peak			
2	5715.000	38.25	2.74	40.99	54.00	-13.01	AVG			
3	5725.000	55.24	2.75	57.99	74.00	-16.01	peak			
4	5725.000	46.73	2.75	49.48	54.00	-4.52	AVG			

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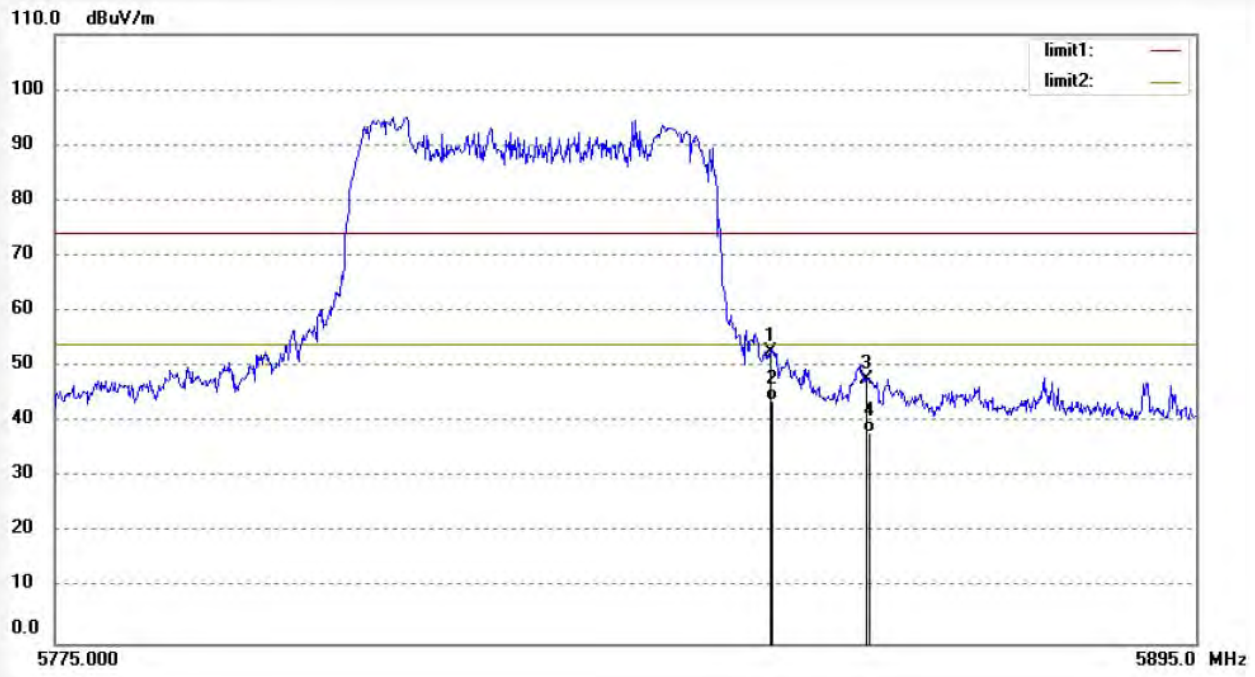
Job No.: star2019 #104
Standard: FCC Part 15E 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Vaxis wireless video system
Mode: TX 5825MHz
Model: Vaxis Strom3000
Manufacturer: GM

Polarization: Horizontal
Power Source: DC 36V
Date: 19/05/16/
Time: 11/33/34
Engineer Signature: star
Distance: 3m

Note: Report No.:ATE20190671



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	5850.000	49.78	2.93	52.71	74.00	-21.29	peak			
2	5850.000	40.90	2.93	43.83	54.00	-10.17	AVG			
3	5860.000	44.65	2.95	47.60	74.00	-26.40	peak			
4	5860.000	35.14	2.95	38.09	54.00	-15.91	AVG			

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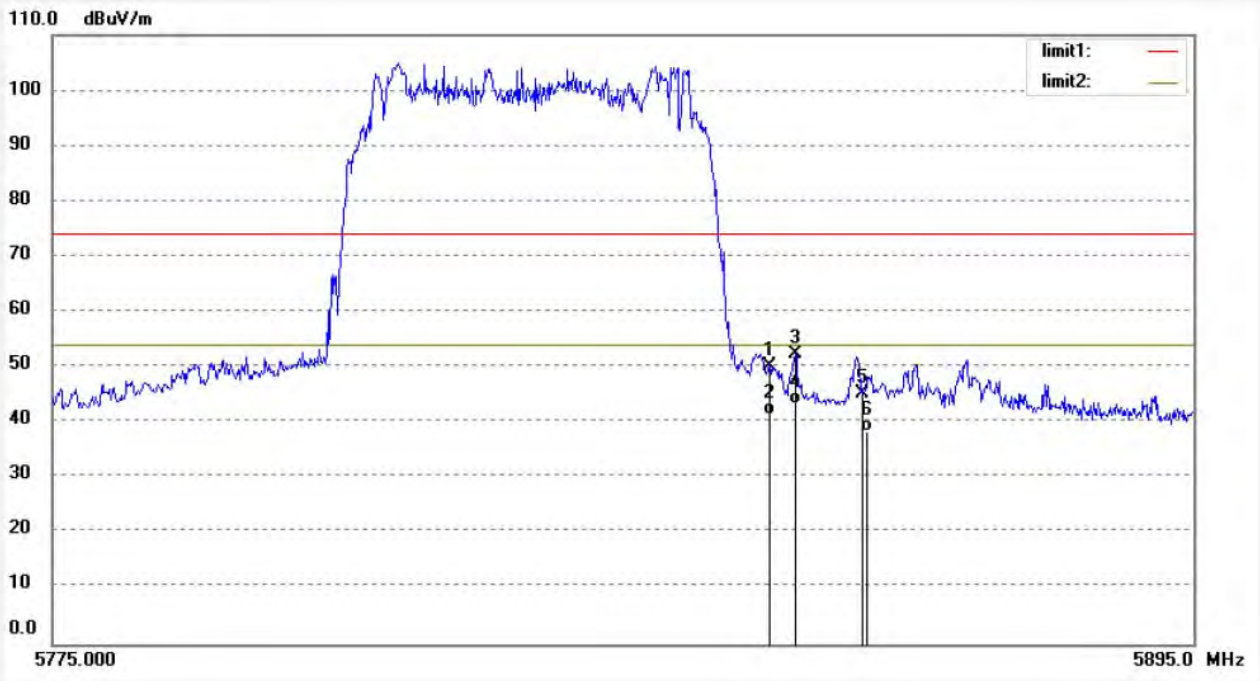
Job No.: star2019 #103
Standard: FCC Part 15E 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Vaxis wireless video system
Mode: TX 5825MHz
Model: Vaxis Strom3000
Manufacturer: GM

Polarization: Vertical
Power Source: DC 36V
Date: 19/05/16/
Time: 11/30/56
Engineer Signature: star
Distance: 3m

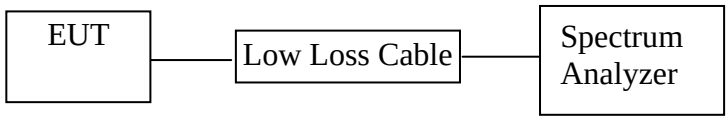
Note: Report No.:ATE20190671



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	5850.000	47.15	2.93	50.08	74.00	-23.92	peak			
2	5850.000	38.52	2.93	41.45	54.00	-12.55	AVG			
3	5852.876	49.56	2.93	52.49	74.00	-21.51	peak			
4	5852.876	40.44	2.93	43.37	54.00	-10.63	AVG			
5	5860.000	42.27	2.95	45.22	74.00	-28.78	peak			
6	5860.000	35.28	2.95	38.23	54.00	-15.77	AVG			

13. IN BAND EMISSION TEST

13.1. Block Diagram of Test Setup



13.2. The Requirement For Section 15.407(b)

(4) For transmitters operating in the 5.725–5.85 GHz band:
(i) All emissions shall be limited to a level of –27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

13.3. EUT Configuration on Measurement

The equipment are installed on the emission Measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

13.4. Operating Condition of EUT

13.4.1. Setup the EUT and simulator as shown as Section 13.1.

13.4.2. Turn on the power of all equipment.

13.4.3. Let the EUT work in TX modes measure it. The transmit frequency are 5745MHz and 5825MHz.

13.5. Test Procedure

13.5.1. The transmitter output was connected to the spectrum analyzer via a low loss cable.

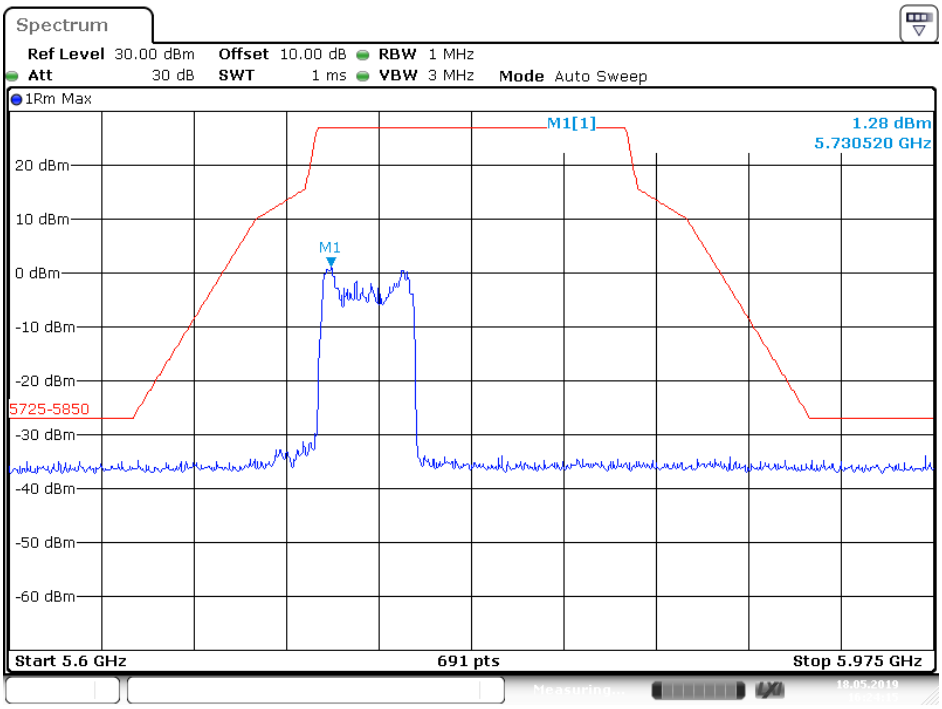
13.5.2. Set RBW of spectrum analyzer to 1MHz and VBW to 3MHz.

13.6. Test Result

Pass

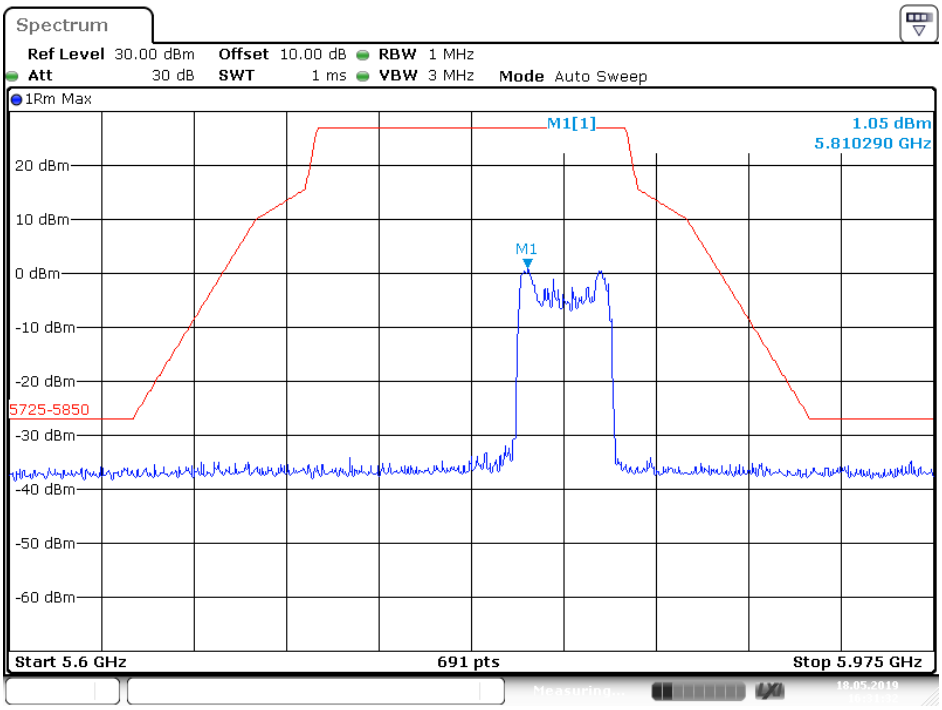
The spectrum analyzer plots are attached as below.

(ANT 1) 5745MHz



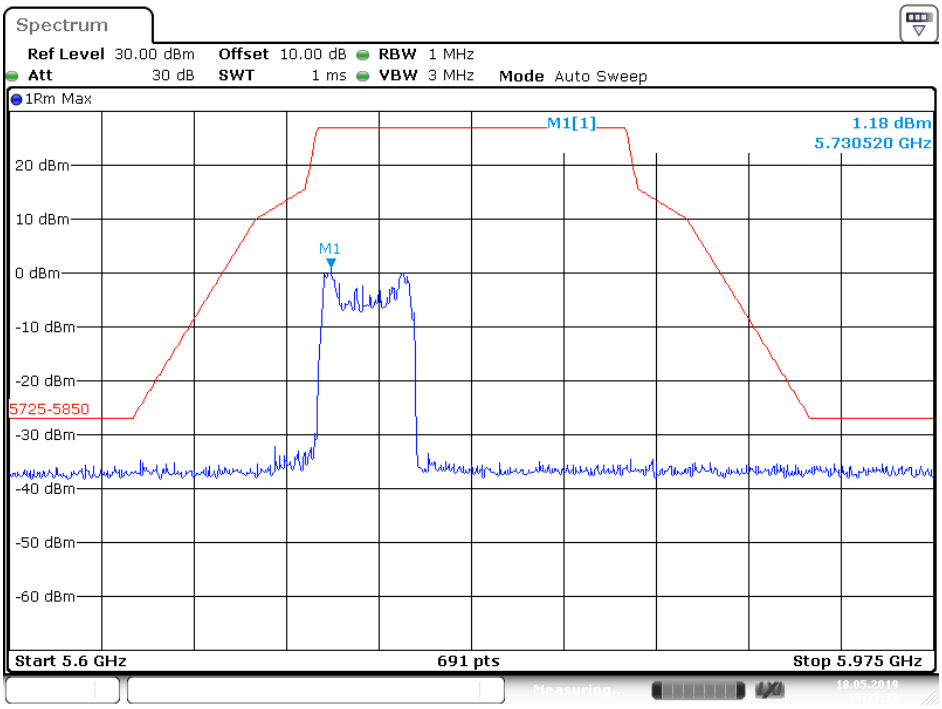
Date: 18.MAY.2019 16:24:16

(ANT 1) 5825MHz



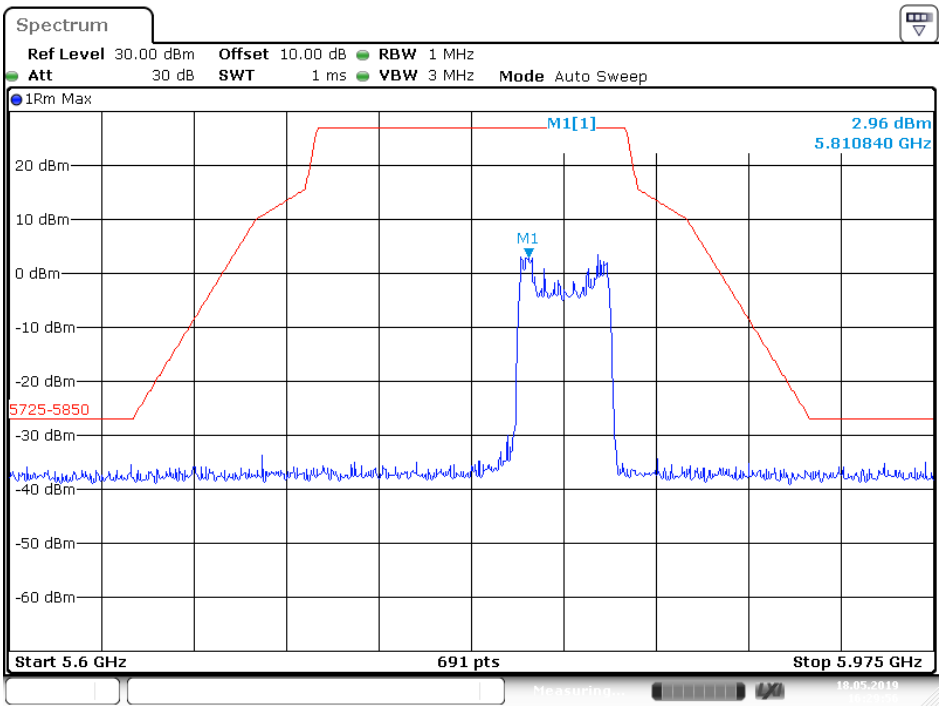
Date: 18.MAY.2019 16:31:33

(ANT 2) 5745MHz



Date: 18.MAY.2019 16:33:33

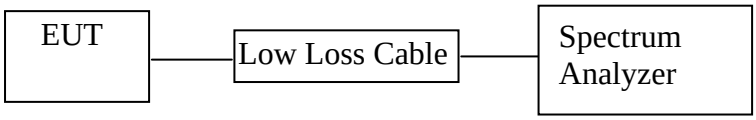
(ANT 2) 5825MHz



Date: 18.MAY.2019 16:29:56

14.FREQUENCIES STABILITY

14.1.Block Diagram of Test Setup



14.2.EUT Configuration on Measurement

Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the user manual.

14.3.Operating Condition of EUT

14.3.1.Setup the EUT and simulator as shown as Section 14.1.

14.3.2.Turn on the power of all equipment.

14.3.3.Let the EUT work in TX modes measure it. The transmit frequency are 5190MHz, 5230MHz, 5745MHz, 5785MHz and 5825MHz.

14.4.Test Result

Pass.

The spectrum analyzer plots are attached as below.

Frequencies Stability test result: 5190MHz

Test Conditions	Measured Frequency(MHz) 5190
V nor(V)	5190.0017
V max(V)	5190.0024
V min(V)	5190.0030
Max. Deviation Frequency	0.0030
Max. Frequency Error (ppm)	0.6

Frequency Error vs. Temperature:

Test Conditions (°C)	Measured Frequency(MHz) 5190
-5	5190.0014
5	5190.0022
15	5190.0038
25	5190.0042
35	5190.0028
45	5190.0051
50	5190.0068
Max. Deviation Frequency	0.0068
Max. Frequency Error (ppm)	1.31

Frequencies Stability test result: 5230MHz

Test Conditions	Measured Frequency(MHz) 5230
V nor(V)	5230.0058
V max(V)	5230.0047
V min(V)	5230.0069
Max. Deviation Frequency	0.0069
Max. Frequency Error (ppm)	1.32

Frequency Error vs. Temperature:

Test Conditions (°C)	Measured Frequency(MHz) 5230
-5	5230.0047
5	5230.0039
15	5230.0011
25	5230.0070
35	5230.0034
45	5230.0014
50	5230.0092
Max. Deviation Frequency	0.0092
Max. Frequency Error (ppm)	1.76

Frequencies Stability test result: 5745MHz

Test Conditions	Measured Frequency(MHz) 5745
V nor(V)	5745.0047
V max(V)	5745.0055
V min(V)	5745.0064
Max. Deviation Frequency	0.0064
Max. Frequency Error (ppm)	1.11

Frequency Error vs. Temperature:

Test Conditions (°C)	Measured Frequency(MHz) 5745
-5	5745.0099
5	5745.0092
15	5745.0054
25	5745.0043
35	5745.0090
45	5745.0072
50	5745.0066
Max. Deviation Frequency	0.0099
Max. Frequency Error (ppm)	1.72

Frequencies Stability test result: 5785MHz

Test Conditions	Measured Frequency(MHz) 5785
V nor(V)	5785.0037
V max(V)	5785.0061
V min(V)	5785.0054
Max. Deviation Frequency	0.0061
Max. Frequency Error (ppm)	1.05

Frequency Error vs. Temperature:

Test Conditions (°C)	Measured Frequency(MHz) 5785
-5	5785.0040
5	5785.0037
15	5785.0021
25	5785.0033
35	5785.0045
45	5785.0030
50	5785.0088
Max. Deviation Frequency	0.0088
Max. Frequency Error (ppm)	1.52

Frequencies Stability test result: 5825MHz

Test Conditions	Measured Frequency(MHz) 5825
V nor(V)	5825.0071
V max(V)	5825.0054
V min(V)	5825.0024
Max. Deviation Frequency	0.0071
Max. Frequency Error (ppm)	1.22

Frequency Error vs. Temperature:

Test Conditions (°C)	Measured Frequency(MHz) 5825
-5	5825.0014
5	5825.0033
15	5825.0082
25	5825.0014
35	5825.0067
45	5825.0051
50	5825.0029
Max. Deviation Frequency	0.0082
Max. Frequency Error (ppm)	1.41

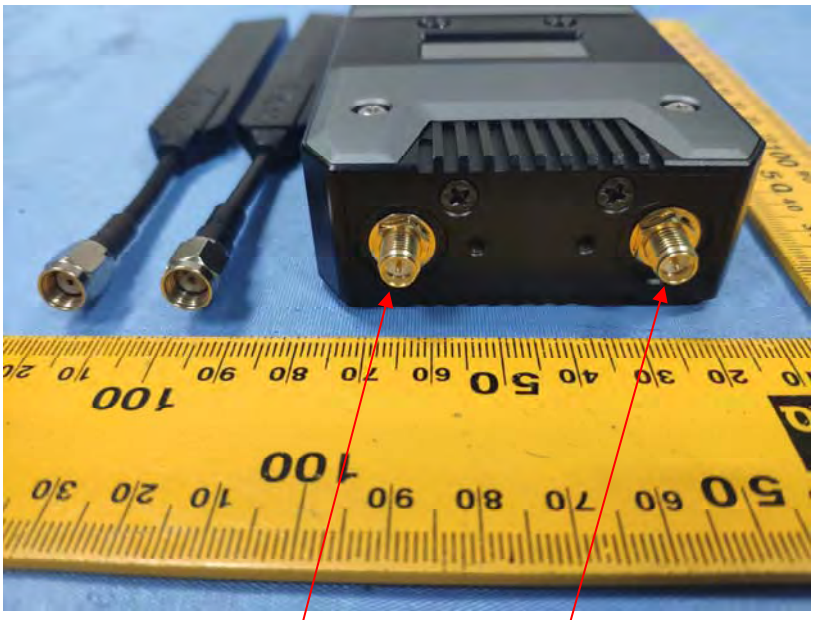
15. ANTENNA REQUIREMENT

15.1. The Requirement

According to Section 15.203 and 15.204, 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.

15.2. Antenna Construction

The antenna use a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. 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. The antenna jack of EUT correspond to the standard. The Antenna gain of EUT is 4.5dBi. Therefore, the equipment complies with the antenna requirement of Section 15.203 and 15.204.



Antenna 1 Antenna 2

******* End of Test Report *******