

# FCC Radio Test Report

## FCC ID: SIB-BGTAB-NV20A-1

This report concerns (check one): ☒ Original Grant ☐ Class II Change

**Project No.** : 1411C076  
**Equipment** : dreamtab  
**Model Name** : BGTAB-NV20A  
**Applicant** : Foxconn International Inc  
**Address** : NO 2 ZIYOU ST TUCHENG DISTRICT NEW TAIPEI  
Taiwan 236

**Date of Receipt** : Nov. 10, 2014  
**Date of Test** : Nov. 10, 2014~Nov. 26, 2014  
**Issued Date** : Nov. 27, 2014  
**Tested by** : BTL Inc.

**Testing Engineer** : David Mao  
(David Mao)

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(Leo Hung)

**Authorized Signatory** : Steven Lu  
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# **B T L I N C .**

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### **Declaration**

**BTL** represents to the client that testing is done in accordance with standard procedures as applicable and that test instruments used has been calibrated with the standards traceable to National Measurement Laboratory (**NML**) of **R.O.C.**, or National Institute of Standards and Technology (**NIST**) of **U.S.A.**

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### **Limitation**

For the use of the authority's logo is limited unless the Test Standard(s)/Scope(s)/Item(s) mentioned in this test report is (are) included in the conformity assessment authorities acceptance respective.

Table of Contents	Page
<b>1 . CERTIFICATION</b>	<b>6</b>
<b>2 . SUMMARY OF TEST RESULTS</b>	<b>7</b>
2.1 TEST FACILITY	8
2.2 MEASUREMENT UNCERTAINTY	8
<b>3 . GENERAL INFORMATION</b>	<b>9</b>
3.1 GENERAL DESCRIPTION OF EUT	9
3.2 DESCRIPTION OF TEST MODES	11
3.3 TABLE OF PARAMETERS OF TEXT SOFTWARE SETTING	12
3.4 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED	13
3.5 DESCRIPTION OF SUPPORT UNITS	13
<b>4 . EMC EMISSION TEST</b>	<b>14</b>
4.1 CONDUCTED EMISSION MEASUREMENT	14
4.1.1 POWER LINE CONDUCTED EMISSION	14
4.1.2 TEST PROCEDURE	14
4.1.3 DEVIATION FROM TEST STANDARD	14
4.1.4 TEST SETUP	15
4.1.5 EUT OPERATING CONDITIONS	15
4.1.6 EUT TEST CONDITIONS	15
4.1.7 TEST RESULTS	15
4.2 RADIATED EMISSION MEASUREMENT	16
4.2.1 RADIATED EMISSION LIMITS	16
4.2.2 TEST PROCEDURE	17
4.2.3 DEVIATION FROM TEST STANDARD	17
4.2.4 TEST SETUP	17
4.2.5 EUT OPERATING CONDITIONS	18
4.2.6 EUT TEST CONDITIONS	18
4.2.7 TEST RESULTS (9K TO 30MHz)	19
4.2.8 TEST RESULTS (BETWEEN 30 TO 1000 MHz)	19
4.2.9 TEST RESULTS (ABOVE 1000 MHz)	19
<b>5 . 26dB SPECTRUM BANDWIDTH</b>	<b>20</b>
5.1 APPLIED PROCEDURES / LIMIT	20
5.1.1 TEST PROCEDURE	20
5.1.2 DEVIATION FROM STANDARD	20
5.1.3 TEST SETUP	20
5.1.4 EUT OPERATION CONDITIONS	20
5.1.5 EUT TEST CONDITIONS	20
5.1.6 TEST RESULTS	20
<b>6 . MAXIMUM CONDUCTED OUTPUT POWER</b>	<b>21</b>

<b>Table of Contents</b>	<b>Page</b>
<b>6.1 APPLIED PROCEDURES / LIMIT</b>	<b>21</b>
6.1.1 TEST PROCEDURE	21
6.1.2 DEVIATION FROM STANDARD	21
6.1.3 TEST SETUP	21
6.1.4 EUT OPERATION CONDITIONS	21
6.1.5 EUT TEST CONDITIONS	21
6.1.6 TEST RESULTS	21
<b>7 . ANTENNA CONDUCTED SPURIOUS EMISSION</b>	<b>22</b>
7.1 APPLIED PROCEDURES / LIMIT	22
7.1.1 TEST PROCEDURE	22
7.1.2 DEVIATION FROM STANDARD	22
7.1.3 TEST SETUP	22
7.1.4 EUT OPERATION CONDITIONS	22
7.1.5 EUT TEST CONDITIONS	22
7.1.6 TEST RESULTS	22
<b>8 . POWER SPECTRAL DENSITY TEST</b>	<b>23</b>
8.1 APPLIED PROCEDURES / LIMIT	23
8.1.1 TEST PROCEDURE	23
8.1.1 DEVIATION FROM STANDARD	23
8.1.2 TEST SETUP	23
8.1.3 EUT OPERATION CONDITIONS	23
8.1.4 EUT TEST CONDITIONS	23
8.1.5 TEST RESULTS	23
<b>9 . MEASUREMENT INSTRUMENTS LIST</b>	<b>24</b>
<b>10 . EUT TEST PHOTOS</b>	<b>26</b>
<b>ATTACHMENT A - CONDUCTED EMISSION</b>	<b>30</b>
<b>ATTACHMENT B - RADIATED EMISSION (9KHZ TO 30MHZ)</b>	<b>33</b>
<b>ATTACHMENT C - RADIATED EMISSION (30MHZ TO 1000MHZ)</b>	<b>35</b>
<b>ATTACHMENT D - RADIATED EMISSION (ABOVE 1000MHZ)</b>	<b>42</b>
<b>ATTACHMENT E - BANDWIDTH</b>	<b>75</b>
<b>ATTACHMENT F - MAXIMUM OUTPUT POWER</b>	<b>82</b>
<b>ATTACHMENT G - ANTENNA CONDUCTED SPURIOUS EMISSION</b>	<b>86</b>
<b>ATTACHMENT H - POWER SPECTRAL DENSITY</b>	<b>92</b>

### REPORT ISSUED HISTORY

Issued No.	Description	Issued Date
BTL-FCCP-5-1411C076	Original Issue.	Nov. 27, 2014

## 1. CERTIFICATION

Equipment : dreamtab  
Brand Name : Nabi  
Model Name : BGTAB-NV20A  
Applicant : Foxconn International Inc  
Manufacturer : FUHU INC.  
Address : 909N., Sepulveda Blvd., Suite 540, E1 Segundo, CA 90245  
Factory : HONGFUJIN Precision Electronics (Chong Qing) Co., Ltd.  
Address : No.1, 1<sup>st</sup> E District RD., Shapingba District, Chongqing 401332, P.R. China  
Date of Test : Nov. 10, 2014~Nov. 26, 2014  
Test Sample : ENGINEERING SAMPLE  
Standard(s) : FCC Part15, Subpart C(15.247) / ANSI C63.4-2009

The above equipment has been tested and found compliance with the requirement of the relative standards by BTL Inc.

The test data, data evaluation, and equipment configuration contained in our test report (Ref No. BTL-FCCP-5-1411C076) were obtained utilizing the test procedures, test instruments, test sites that has been accredited by the Authority of TAF according to the ISO-17025 quality assessment standard and technical standard(s).

## 2. SUMMARY OF TEST RESULTS

Test procedures according to the technical standard(s):

Applied Standard(s): FCC Part15 (15.247) , Subpart C			
Standard(s) Section	Test Item	Judgment	Remark
FCC			
15.207	Conducted Emission	PASS	
15.247(d)	Antenna conducted Spurious Emission	PASS	
15.247(a)(2)	6dB Bandwidth	PASS	
15.247(b)(3)	Peak Output Power	PASS	
15.247(e)	Power Spectral Density	PASS	
15.203	Antenna Requirement	PASS	
15.209/15.205	Transmitter Radiated Emissions	PASS	

### NOTE:

(1) "N/A" denotes test is not applicable in this test report.

## 2.1 TEST FACILITY

The test facilities used to collect the test data in this report is **DG-C02/DG-CB03** at the location of No.3, Jinshagang 1st Road, Shixia, Dalang Town, Dongguan, Guangdong, China. 523792  
BTL's test firm number for FCC: 319330

## 2.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement  $y \pm U$ , where expanded uncertainty  $U$  is based on a standard uncertainty multiplied by a coverage factor of  $k=2$ , providing a level of confidence of approximately 95%.

### A. Conducted Measurement:

Test Site	Method	Measurement Frequency Range	U, (dB)	NOTE
DG-C02	CISPR	150 KHz ~ 30MHz	1.94	

### B. Radiated Measurement:

Test Site	Method	Measurement Frequency Range	Ant. H / V	U, ( B)	NOTE
DG-CB03	CISPR	9KHz~30MHz	V	3.79	
		9KHz~30MHz	H	3.57	
		30MHz ~ 200MHz	V	3.82	
		30MHz ~ 200MHz	H	3.60	
		200MHz ~ 1,000MHz	V	3.86	
		200MHz ~ 1,000MHz	H	3.94	
		1GHz~18GHz	V	3.12	
		1GHz~18GHz	H	3.68	
		18GHz~40GHz	V	4.15	
		18GHz~40GHz	H	4.14	



### 3. GENERAL INFORMATION

#### 3.1 GENERAL DESCRIPTION OF EUT

Equipment	dreamtab	
Brand Name	Nabi	
Model Name	BGTAB-NV20A	
Mode Different	N/A	
Product Description	Operation Frequency	UNII-3: 5745~5825 MHz
	Modulation Type	OFDM
	Bit Rate of Transmitter	300Mbps
	Output Power (Max.)for UNII-3	802.11a: 21.73dBm 802.11n (20M): 23.54dBm 802.11n (40M): 23.33dBm
Power Source	#1 DC supplied from AC Adapter. Model: ADS-65LSI-19-3 19065G #2 Supplied from rechargeable Li-ion polymer battery. 1) Brand / Model: McNair / MLP2462113-2S 2) Manufacturer: HongKong Highpower Technology Co., Ltd Model: IN484	
Power Rating	#1 I/P AC 100-240V~ 50/60Hz 1.5A O/P: DC 19V 3.42A #2 7.4V 1650mAh 12.21Wh	

Note:

1. For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.

## 2. Channel List:

802.11a 802.11n 20MHz		802.11n 40MHz	
UNII-3		UNII-3	
Channel	Frequency (MHz)	Channel	Frequency (MHz)
149	5745	151	5755
153	5765	159	5795
157	5785		
161	5805		
165	5825		

## 3. Antenna Specification:

**The product has 2 group antenna: MAG Corporation and FOXCONN .**

### Group 1

Ant.	Manufacturer	Model Name	Antenna Type	Connector	Gain (dBi)
1	FOXCONN	PCA-3007-25GC1-A3	PIFA	N/A	2.35
2	FOXCONN	PCA-3007-25GC1-A4	PIFA	N/A	1.82

### Group 2

Ant.	Manufacturer	Model Name	Antenna Type	Connector	Gain (dBi)
1	MAG Corporation	NABI(19.5)	PIFA	N/A	4.39
2	MAG Corporation	NABI(19.5)	PIFA	N/A	1.38

Note: (1) Two groups of antenna used with the same type, only differ in manufacturer and gain, group 2 is tested and recorded as the worst case in this report.

(2) The EUT incorporates a MIMO function. Physically, the EUT provides two completed two transmitters and two receivers (2T2R), all transmit signals are completely uncorrelated, then, **Direction gain = G<sub>ANT</sub>**, that is Directional gain=4.39

(3) The Group 2 of ANT 1 of is the worst case for 1TX

## 4.

Operating Mode TX Mode	1TX	2TX
802.11a	V (ANT 1 )	-
802.11n (20MHz)	-	V (ANT 1 + ANT 2)
802.11n (40MHz)	-	V (ANT 1 + ANT 2)

### 3.2 DESCRIPTION OF TEST MODES

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

Pretest Test Mode	Description
Mode 1	TX A Mode / CH149,CH157,CH165 (UNII-3)
Mode 2	TX N20 Mode / CH149,CH157,CH165 (UNII-3)
Mode 3	TX N40 Mode / CH151,CH159 (UNII-3)
Mode 4	TX Mode

The EUT system operated these modes were found to be the worst case during the pre-scanning test as following:

For Conducted Test	
Final Test Mode	Description
Mode 4	TX Mode

For Radiated Test	
Final Test Mode	Description
Mode 1	TX A Mode / CH149,CH157,CH165 (UNII-3)
Mode 2	TX N20 Mode / CH149,CH157,CH165 (UNII-3)
Mode 3	TX N40 Mode / CH151,CH159 (UNII-3)

Note:

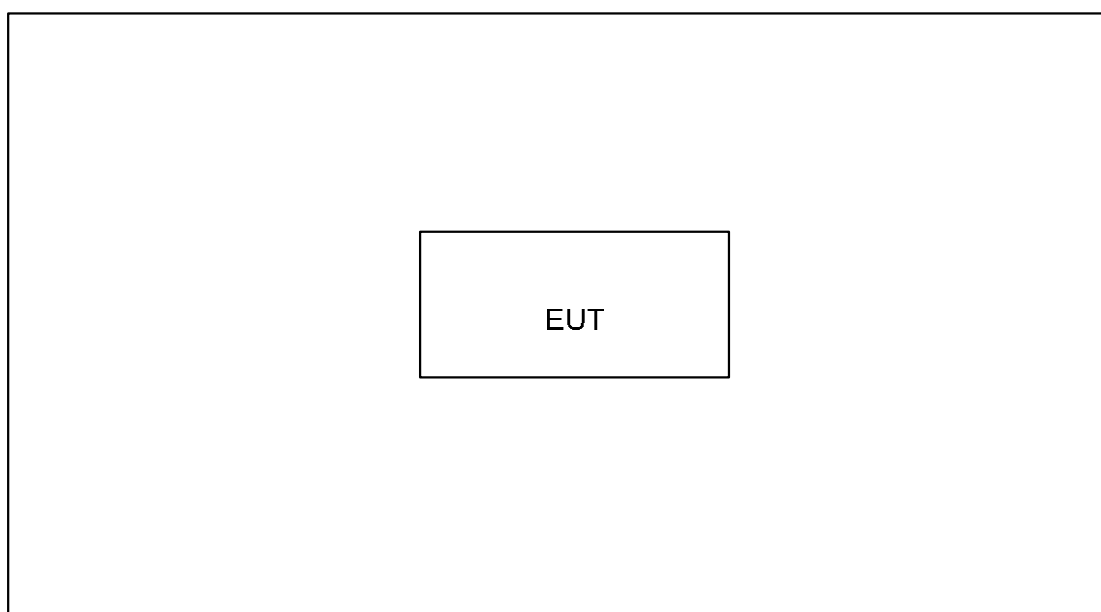
- (1) For Radiated Below 1G test, the 802.11a mode is found to be the worst case and recorded.
- (2) The EUT is considered a portable unit; it was pre-tested on the positioned of each 3 axis. The worst case was found positioned on Z-plane. Therefore only the test data of this Z-plane was used for radiated emission measurement test.

### 3.3 TABLE OF PARAMETERS OF TEXT SOFTWARE SETTING

During testing channel & power controlling software provided by the customer was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product

UNII-3			
Test Software Version	N/A		
Frequency (MHz)	5745	5785	5825
A Mode	13	13	13
N20 Mode	13	13	13
Frequency (MHz)	5755	5795	
N40 Mode	14	13	

### 3.4 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED



### 3.5 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Item	Equipment	Mfr/Brand	Model/Type No.	FCC ID	Series No.	Note
-	-	-	-	-	-	

Item	Shielded Type	Ferrite Core	Length	Note
-	-	-	-	

## 4. EMC EMISSION TEST

### 4.1 CONDUCTED EMISSION MEASUREMENT

#### 4.1.1 POWER LINE CONDUCTED EMISSION (Frequency Range 150KHz-30MHz)

FREQUENCY (MHz)	Class A (dBuV)		Class B (dBuV)	
	Quasi-peak	Average	Quasi-peak	Average
0.15 -0.5	79.00	66.00	66 - 56 *	56 - 46 *
0.50 -5.0	73.00	60.00	56.00	46.00
5.0 -30.0	73.00	60.00	60.00	50.00

Note:

- (1) The tighter limit applies at the band edges.
- (2) The limit of " \* " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.
- (3) The test result calculated as following:  
 Measurement Value = Reading Level + Correct Factor  
 Correct Factor = Antenna Factor + Cable Loss - Amplifier Gain(if use)  
 Margin Level = Measurement Value - Limit Value

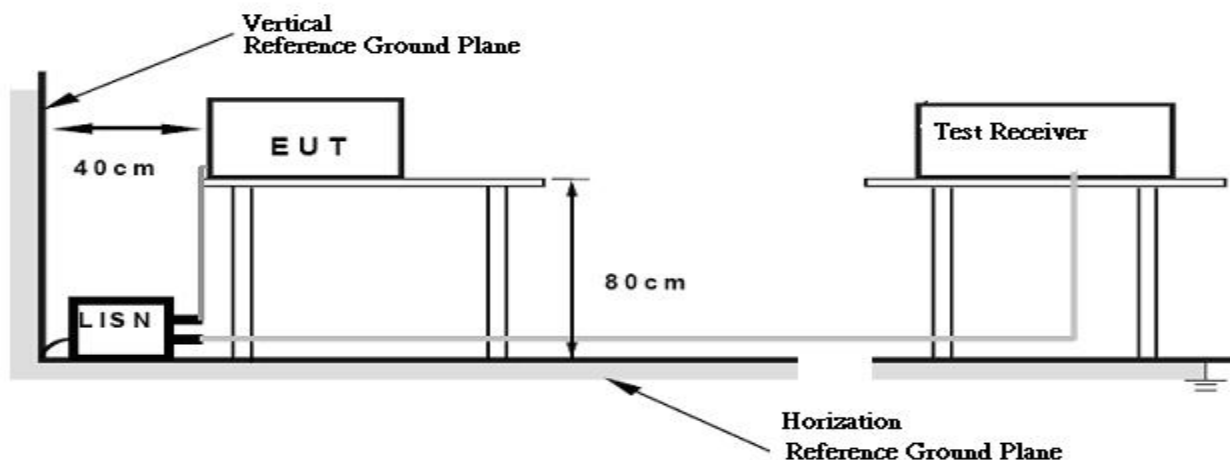
#### 4.1.2 TEST PROCEDURE

- a. The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- b. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
- c. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
- d. LISN at least 80 cm from nearest part of EUT chassis.
- e. For the actual test configuration, please refer to the related Item –EUT Test Photos.

#### 4.1.3 DEVIATION FROM TEST STANDARD

No deviation

#### 4.1.4 TEST SETUP



#### 4.1.5 EUT OPERATING CONDITIONS

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

The EUT was programmed to be in continuously transmitting/TX Mode mode.

#### 4.1.6 EUT TEST CONDITIONS

Temperature: 25°C    Relative Humidity: 55%    Test Voltage: AC 120V/60Hz

#### 4.1.7 TEST RESULTS

Please refer to the Attachment A.

Remark:

- (1) All readings are QP Mode value unless otherwise stated AVG in column of "Note". If the QP Mode Measured value compliance with the QP Limits and lower than AVG Limits, the EUT shall be deemed to meet both QP & AVG Limits and then only QP Mode was measured, but AVG Mode didn't perform. In this case, a "\*" marked in AVG Mode column of Interference Voltage Measured.
- (2) Measuring frequency range from 150KHz to 30MHz.

## 4.2 RADIATED EMISSION MEASUREMENT

### 4.2.1 RADIATED EMISSION LIMITS

20dBc in any 100 kHz bandwidth outside the operating frequency band. In case the emission fall within the restricted band specified on 15.205(a), then the 15.209(a) limit in the table below has to be followed.

Frequencies (MHz)	Field Strength (micorvolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(KHz)	300
0.490~1.705	24000/F(KHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

### LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000MHz)

Frequency (MHz)	(dBuV/m) (at 3 meters)	
	PEAK	AVERAGE
Above 1000	74	54

#### Notes:

- (1) The limit for radiated test was performed according to FCC PART 15C..
- (2) The tighter limit applies at the band edges.
- (3) Emission level (dBuV/m)=20log Emission level (uV/m).
- (4) The test result calculated as following:  
 Measurement Value = Reading Level + Correct Factor  
 Correct Factor = Antenna Factor + Cable Loss - Amplifier Gain(if use)  
 Margin Level = Measurement Value - Limit Value

Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	1000 MHz
Stop Frequency	10th carrier harmonic
RBW / VBW (Emission in restricted band)	1MHz / 1MHz for Peak, 1 MHz / 10Hz for Average



Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9KHz~90KHz for PK/AVG detector
Start ~ Stop Frequency	90KHz~110KHz for QP detector
Start ~ Stop Frequency	110KHz~490KHz for PK/AVG detector
Start ~ Stop Frequency	490KHz~30MHz for QP detector
Start ~ Stop Frequency	30MHz~1000MHz for QP detector

#### 4.2.2 TEST PROCEDURE

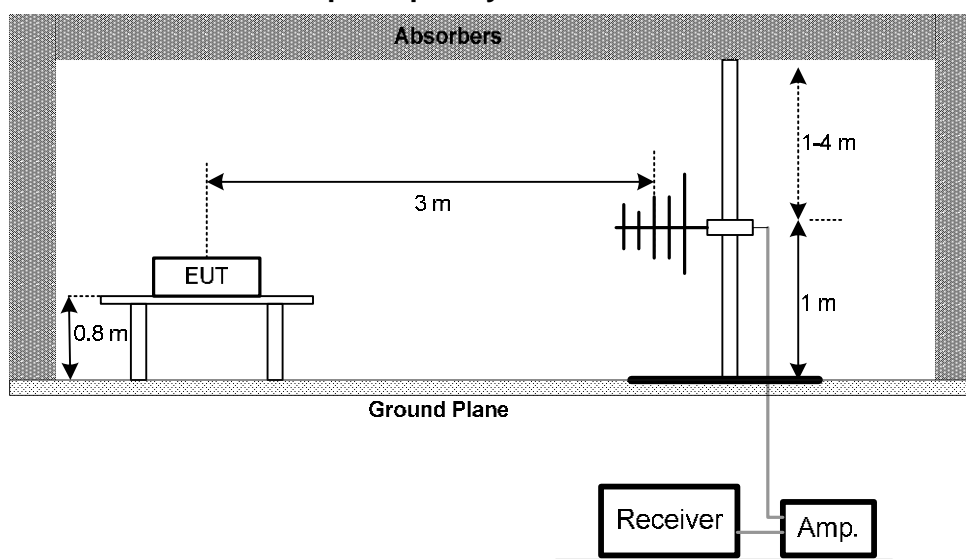
- The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(below 1GHz)
- The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(above 1GHz)
- The height of the equipment or of the substitution antenna shall be 0.8 m; the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
- If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed.
- For the actual test configuration, please refer to the related Item –EUT Test Photos.

#### 4.2.3 DEVIATION FROM TEST STANDARD

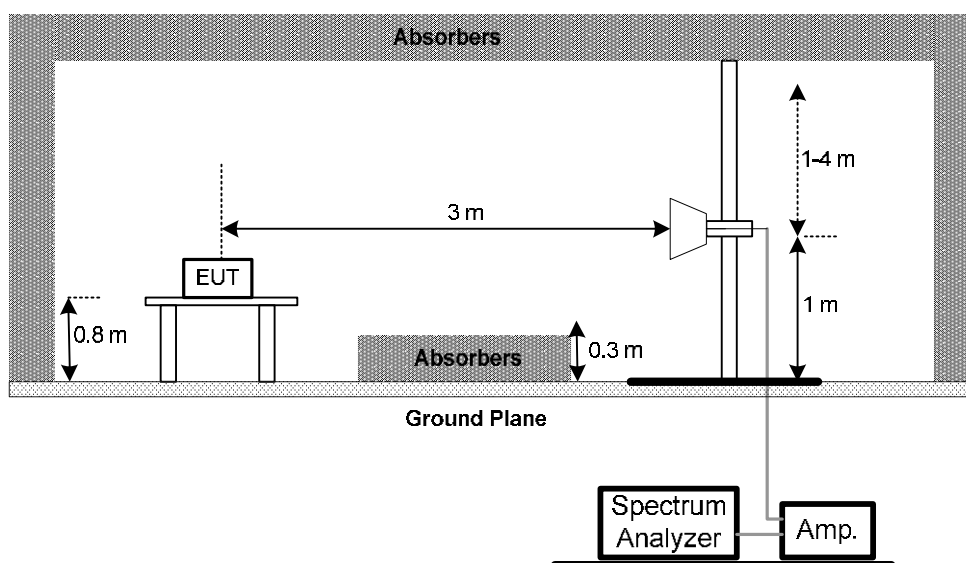
No deviation

#### 4.2.4 TEST SETUP

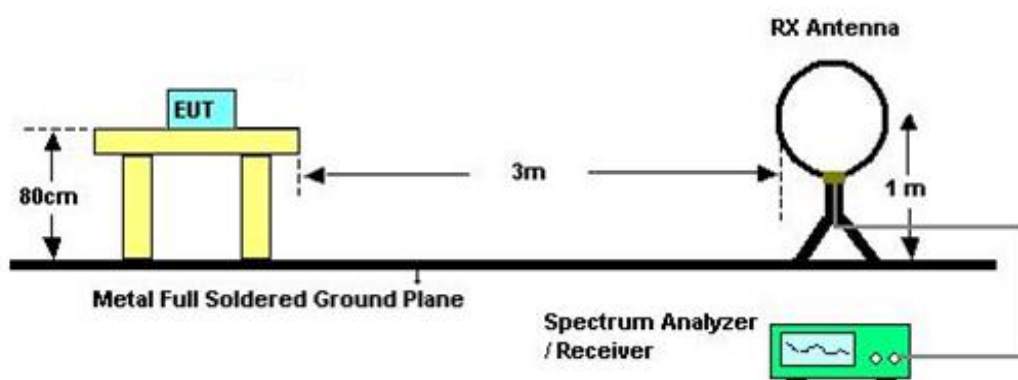
##### (A) Radiated Emission Test Set-Up Frequency 30 - 1000MHz



## (B) Radiated Emission Test Set-Up Frequency Above 1 GHz



## (C) Radiated emissions below 30MHz



### 4.2.5 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of 4.1.5 Unless otherwise a special operating condition is specified in the follows during the testing.

### 4.2.6 EUT TEST CONDITIONS

Temperature: 25°C    Relative Humidity: 55%    Test Voltage: DC 7.4V

#### 4.2.7 TEST RESULTS (9K TO 30MHz)

Please refer to the Attachment B

Remark:

- (1) The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.
- (2) Distance extrapolation factor =  $40 \log (\text{specific distance} / \text{test distance})$  (dB);
- (3) Limit line = specific limits (dBuV) + distance extrapolation factor.

#### 4.2.8 TEST RESULTS (BETWEEN 30 TO 1000 MHz)

Please refer to the Attachment C.

Remark:

- (1) Reading in which marked as QP or Peak means measurements by using are Quasi-Peak Mode or Peak Mode with Detector BW=120KHz ; SPA setting in RBW=120KHz, VBW =120KHz, Swp. Time = 0.3 sec./MHz.
- (2) All readings are Peak unless otherwise stated QP in column of 『Note』 . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform.
- (3) Measuring frequency range from 30MHz to 1000MHz.
- (4) If the peak scan value lower limit more than 20dB, then this signal data does not show in table.

#### 4.2.9 TEST RESULTS (ABOVE 1000 MHz)

Please refer to the Attachment D.

Remark:

- (1) Spectrum Setting: 30MHz – 1000MHz , RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 40GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated AV in column of 『Note』 . Peak denotes that the Peak reading compliance with the AV Limits and then AV Mode measurement didn't perform.
- (3) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission .
- (4) Data of measurement within this frequency range shown “ \* ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (5) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (6) EUT Orthogonal Axes:  
“X” - denotes Laid on Table ; “Y” - denotes Vertical Stand ; “Z” - denotes Side Stand
- (7) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.
- (8) No limit: This is fundamental signal, the judgment is not applicable.  
For fundamental signal judgment was referred to Peak output test.

## 5. 26dB SPECTRUM BANDWIDTH

### 5.1 APPLIED PROCEDURES / LIMIT

FCC Part15 (15.247) , Subpart C				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247(b)(3)	Bandwidth	$\geq 500\text{KHz}$	5745 - 5825	PASS

#### 5.1.1 TEST PROCEDURE

- The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,
- Spectrum Setting: RBW= 100KHz, VBW=300KHz, Sweep time = Auto.

#### 5.1.2 DEVIATION FROM STANDARD

No deviation.

#### 5.1.3 TEST SETUP



#### 5.1.4 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 4.1.5 Unless otherwise a special operating condition is specified in the follows during the testing.

#### 5.1.5 EUT TEST CONDITIONS

Temperature: 25°C    Relative Humidity: 55%    Test Voltage: DC 7.4V

#### 5.1.6 TEST RESULTS

Please refer to the Attachment E.

## 6. MAXIMUM CONDUCTED OUTPUT POWER

### 6.1 APPLIED PROCEDURES / LIMIT

FCC Part15 (15.247)				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247(b)(3)	Conducted Output Power	1 Watt (30dBm)	5745 - 5825	PASS

#### 6.1.1 TEST PROCEDURE

- a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,

#### 6.1.2 DEVIATION FROM STANDARD

No deviation.

#### 6.1.3 TEST SETUP



#### 6.1.4 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 4.1.5 Unless otherwise a special operating condition is specified in the follows during the testing.

#### 6.1.5 EUT TEST CONDITIONS

Temperature: 25°C    Relative Humidity: 55%    Test Voltage: DC 7.4V

#### 6.1.6 TEST RESULTS

Please refer to the Attachment F.

## 7. ANTENNA CONDUCTED SPURIOUS EMISSION

### 7.1 APPLIED PROCEDURES / LIMIT

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted measurement, provided the transmitter demonstrates compliance with the peak conducted power limits.

#### 7.1.1 TEST PROCEDURE

- a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,
- b. Spectrum Setting: RBW= 100KHz, VBW=300KHz, Sweep time = Auto.

#### 7.1.2 DEVIATION FROM STANDARD

No deviation.

#### 7.1.3 TEST SETUP



#### 7.1.4 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 4.1.5 Unless otherwise a special operating condition is specified in the follows during the testing.

#### 7.1.5 EUT TEST CONDITIONS

Temperature: 25°C    Relative Humidity: 55%    Test Voltage: DC 7.4V

#### 7.1.6 TEST RESULTS

Please refer to the Attachment G.

## 8. POWER SPECTRAL DENSITY TEST

### 8.1 APPLIED PROCEDURES / LIMIT

FCC Part15 (15.247) , Subpart C				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247(e)	Power Spectral Density	8 dBm (in any 3KHz)	5745 - 5825	PASS

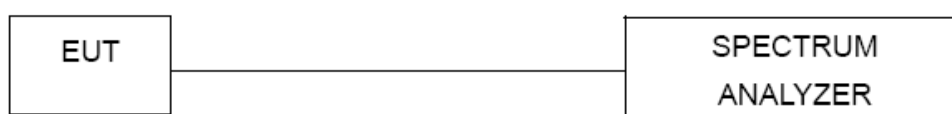
#### 8.1.1 TEST PROCEDURE

- The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,
- Spectrum Setting: RBW=3KHz, VBW=10KHz, Sweep time = Auto.

#### 8.1.1 DEVIATION FROM STANDARD

No deviation.

#### 8.1.2 TEST SETUP



#### 8.1.3 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 4.1.5 Unless otherwise a special operating condition is specified in the follows during the testing.

#### 8.1.4 EUT TEST CONDITIONS

Temperature: 25°C    Relative Humidity: 55%    Test Voltage: DC 7.4V

#### 8.1.5 TEST RESULTS

Please refer to the Attachment H.

## 9. MEASUREMENT INSTRUMENTS LIST

Conducted Emission Measurement					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	LISN	EMCO	3816/2	00052765	Mar. 29, 2015
2	LISN	R&S	ENV216	101447	Mar. 29, 2015
3	Test Cable	N/A	C_17	N/A	Mar. 14, 2015
4	EMI TEST RECEIVER	R&S	ESCS30	833364/017	Mar. 29, 2015
5	50Ω Terminator	SHX	TF2-3G-A	08122902	Mar. 29, 2015
6	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-0 1	N/A	N/A

Radiated Emission Measurement					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Antenna	Schwarzbeck	VULB9160	9160-3232	Mar. 29, 2015
2	Amplifier	HP	8447D	2944A09673	Mar. 29, 2015
3	Receiver	AGILENT	N9038A	MY52130039	Sep. 30, 2015
4	Test Cable	N/A	C-01_CB03	N/A	Jul. 01, 2015
5	Controller	CT	SC100	N/A	N/A
6	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-0 1	N/A	N/A
7	Antenna	ETS	3115	00075789	Mar. 29, 2015
8	Amplifier	Agilent	8449B	3008A02274	Mar. 29, 2015
9	Receiver	AGILENT	N9038A	MY52130039	Sep. 30, 2015
10	Test Cable	HUBER+SUHNER	C-48	N/A	Apr. 30, 2015
11	Controller	CT	SC100	N/A	N/A
12	Broad-Band Horn Antenna	Schwarzbeck	BBHA 9170	9170319	Feb. 22, 2015
13	Microwave Preamplifier With Adaptor	EMC INSTRUMENT	EMC2654045	980039 & HA01	Feb. 22, 2015
14	Active Loop Antenna	R&S	HFH2-Z2	830749/020	Mar. 29, 2015



Spectrum Bandwidth Measurement					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP 40	100185	Nov. 02, 2015

Maximum Conducted Output Power Measurement					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	power Meter	ANRITSU	ML2495A	1128009	May. 29, 2015
2	Pulse Power Sensor	ANRITSU	MA 2411B	1027500	May. 29, 2015

Antenna Conducted Spurious Emission Measurement					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP 40	100185	Nov. 02, 2015

Power Spectral Density Measurement					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP 40	100185	Nov. 02, 2015

Remark: "N/A" denotes no model name, serial no. or calibration specified.  
All calibration period of equipment list is one year.

## 10. EUT TEST PHOTOS

### Conducted Measurement Photos



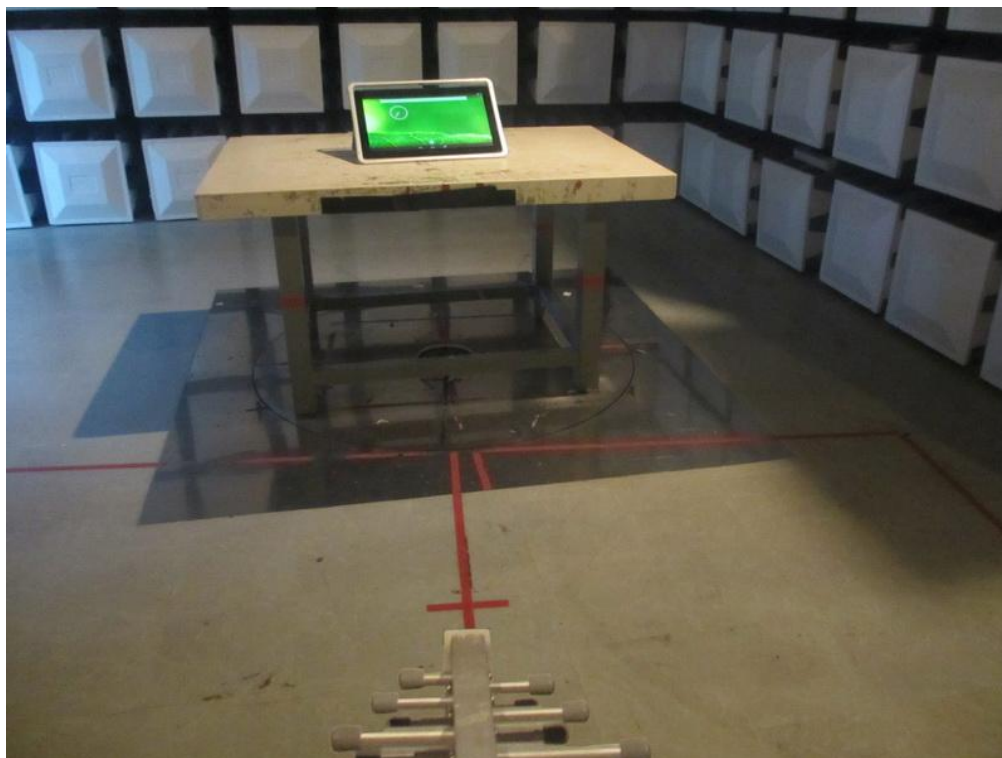
## Radiated Measurement Photos

9KHz to 30MHz



## Radiated Measurement Photos

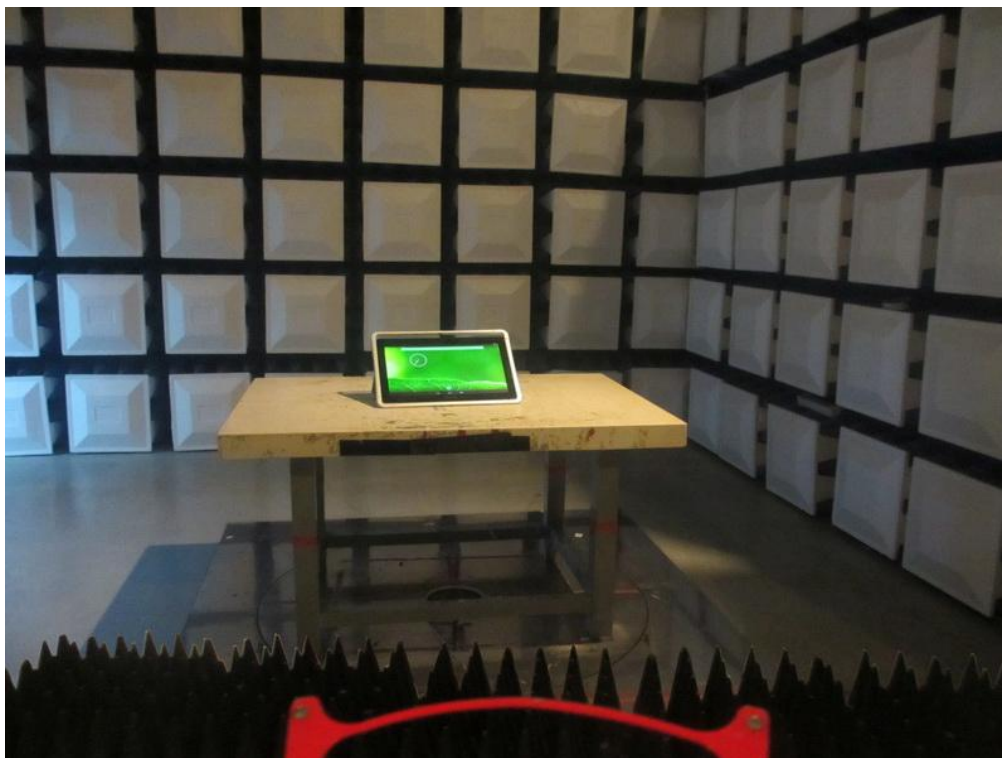
30MHz to 1000MHz





## Radiated Measurement Photos

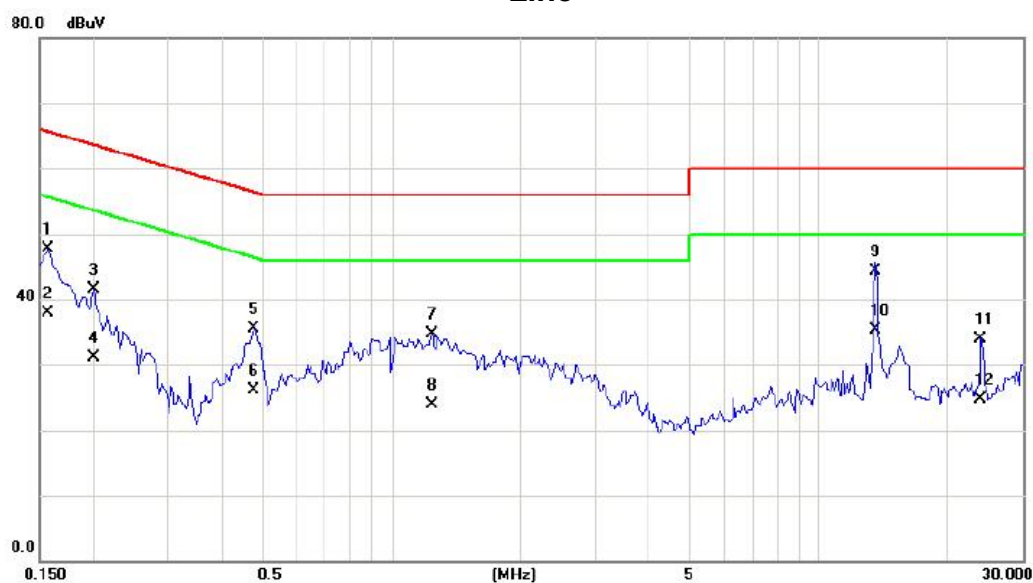
Above 1000MHz



## **ATTACHMENT A - CONDUCTED EMISSION**

Test Mode: TX MODE

### Line

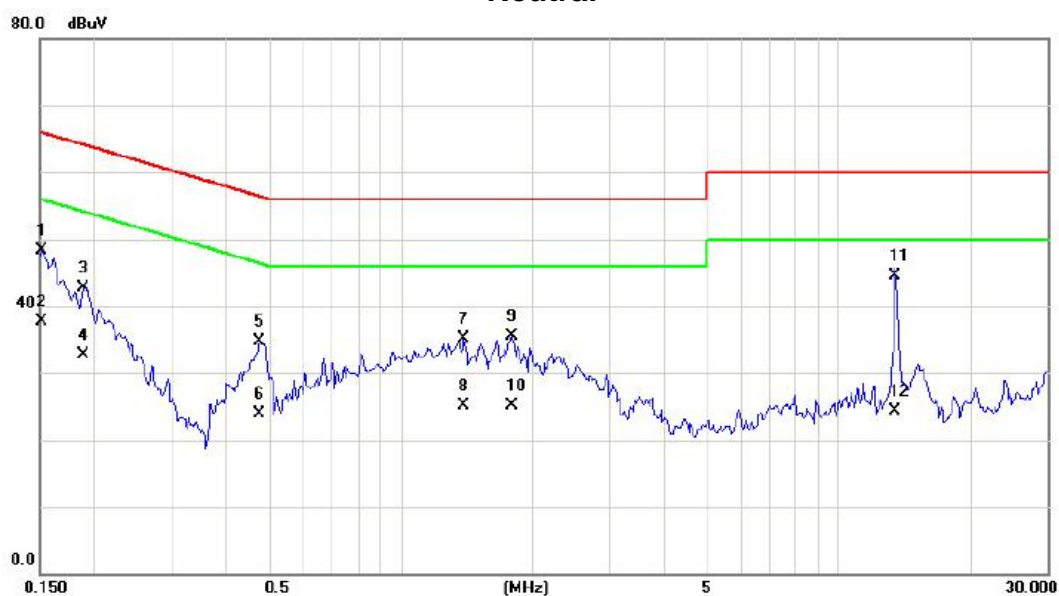


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1		0.1577	38.10	9.52	47.62	65.58	-17.96	QP	
2		0.1577	28.34	9.52	37.86	55.58	-17.72	AVG	
3		0.2006	32.01	9.54	41.55	63.59	-22.04	QP	
4		0.2006	21.64	9.54	31.18	53.59	-22.41	AVG	
5		0.4781	25.83	9.69	35.52	56.37	-20.85	QP	
6		0.4781	16.37	9.69	26.06	46.37	-20.31	AVG	
7		1.2437	24.99	9.71	34.70	56.00	-21.30	QP	
8		1.2437	14.29	9.71	24.00	46.00	-22.00	AVG	
9		13.6013	34.08	10.19	44.27	60.00	-15.73	QP	
10	*	13.6013	25.16	10.19	35.35	50.00	-14.65	AVG	
11		24.0000	23.42	10.55	33.97	60.00	-26.03	QP	
12		24.0000	14.07	10.55	24.62	50.00	-25.38	AVG	

Note : The test result has included the cable loss.

Test Mode: TX MODE

### Neutral



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1		0.1514	38.71	9.63	48.34	65.92	-17.58	QP	
2		0.1514	28.11	9.63	37.74	55.92	-18.18	AVG	
3		0.1890	33.01	9.61	42.62	64.08	-21.46	QP	
4		0.1890	23.16	9.61	32.77	54.08	-21.31	AVG	
5		0.4781	25.09	9.64	34.73	56.37	-21.64	QP	
6		0.4781	14.33	9.64	23.97	46.37	-22.40	AVG	
7		1.3960	25.40	9.70	35.10	56.00	-20.90	QP	
8		1.3960	15.37	9.70	25.07	46.00	-20.93	AVG	
9		1.7943	25.69	9.73	35.42	56.00	-20.58	QP	
10		1.7943	15.31	9.73	25.04	46.00	-20.96	AVG	
11	*	13.5152	34.25	10.23	44.48	60.00	-15.52	QP	
12		13.5152	14.16	10.23	24.39	50.00	-25.61	AVG	

Note : The test result has included the cable loss.



## **ATTACHMENT B - RADIATED EMISSION (9KHZ TO 30MHZ)**

Test Mode: TX MODE

Freq. (MHz)	Ant. 0°/90°	Reading(RA) (dBuV)	Corr.Factor(CF) (dB)	Measured(FS) (dBuV/m)	Limits(QP) (dBuV/m)	Margin (dB)	Note
0.0092	0°	13.51	24.99	38.50	108.35	-69.85	AVG
0.0092	0°	14.45	24.99	39.44	128.35	-88.91	PEAK
0.0126	0°	6.59	24.77	31.36	105.60	-74.24	AVG
0.0126	0°	7.43	24.77	32.20	125.60	-93.40	PEAK
0.0257	0°	3.57	23.94	27.51	99.41	-71.90	AVG
0.0257	0°	5.21	23.94	29.15	119.41	-90.26	PEAK
0.0312	0°	0.94	23.59	24.53	97.72	-73.19	AVG
0.0312	0°	2.98	23.59	26.57	117.72	-91.15	PEAK
0.5863	0°	30.76	20.08	50.84	72.24	-21.41	QP
1.7549	0°	21.62	19.52	41.14	69.54	-28.40	QP

Freq. (MHz)	Ant. 0°/90°	Reading(RA) (dBuV)	Corr.Factor(CF) (dB)	Measured(FS) (dBuV/m)	Limits(QP) (dBuV/m)	Margin (dB)	Note
0.0092	90°	13.46	24.30	37.76	128.37	-90.61	AVG
0.0092	90°	14.50	24.30	38.80	148.37	-109.57	PEAK
0.0243	90°	6.42	24.03	30.45	119.89	-89.44	AVG
0.0243	90°	8.63	24.03	32.66	139.89	-107.23	PEAK
0.0315	90°	3.62	23.57	27.19	117.64	-90.45	AVG
0.0315	90°	5.31	23.57	28.88	137.64	-108.76	PEAK
0.0436	90°	0.62	22.81	23.43	114.81	-91.39	AVG
0.0436	90°	2.88	22.81	25.69	134.81	-109.13	PEAK
0.4931	90°	30.74	19.82	50.56	73.75	-23.19	QP
1.7183	90°	21.59	19.53	41.12	69.54	-28.42	QP

## **ATTACHMENT C - RADIATED EMISSION (30MHZ TO 1000MHZ)**

Test Mode: UNII-3/TX A Mode 5745MHz

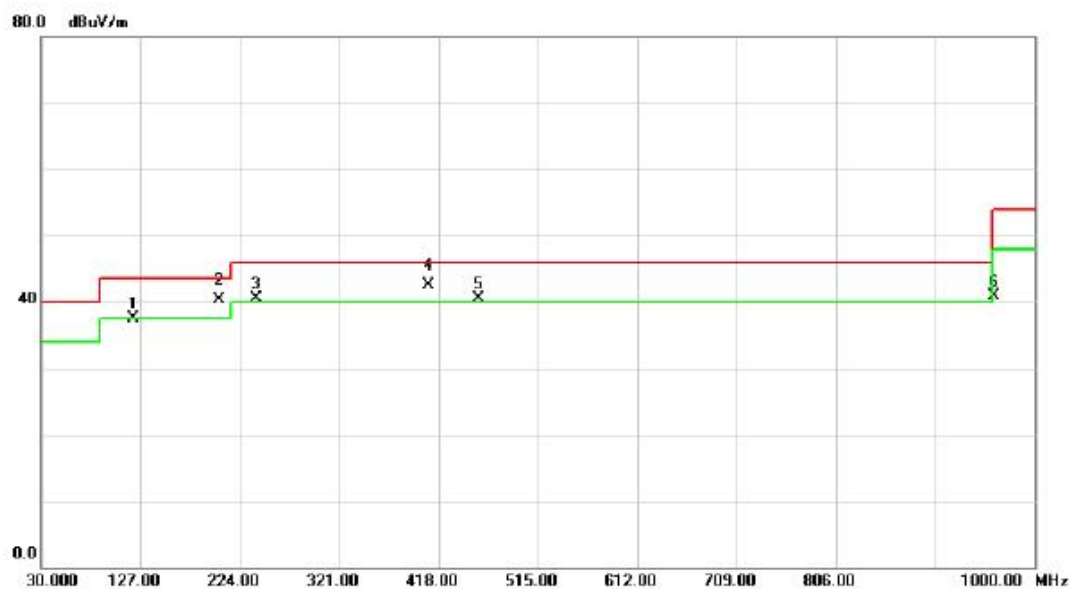
### Vertical



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		119.2400	54.02	-16.77	37.25	43.50	-6.25	peak	
2	!	142.5200	53.71	-14.50	39.21	43.50	-4.29	peak	
3	!	203.6300	56.45	-16.94	39.51	43.50	-3.99	peak	
4	!	561.5600	49.07	-7.88	41.19	46.00	-4.81	peak	
5	*	612.0000	49.42	-6.79	42.63	46.00	-3.37	peak	
6		960.2300	43.71	-2.19	41.52	54.00	-12.48	peak	

Test Mode: UNII-3/TX A Mode 5745MHz

### Horizontal



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	!	119.2400	54.36	-16.77	37.59	43.50	-5.91	peak	
2	*	203.6300	57.22	-16.94	40.28	43.50	-3.22	QP	
3	!	239.5200	55.98	-15.50	40.48	46.00	-5.52	peak	
4	!	408.3000	53.44	-10.95	42.49	46.00	-3.51	QP	
5	!	456.8000	50.14	-9.73	40.41	46.00	-5.59	peak	
6		960.2300	43.14	-2.19	40.95	54.00	-13.05	peak	

Test Mode: UNII-3/TX A Mode 5785MHz

### Vertical



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	!	142.5200	52.20	-14.50	37.70	43.50	-5.80	peak	
2	!	203.6300	55.94	-16.94	39.00	43.50	-4.50	peak	
3		305.4800	50.02	-13.72	36.30	46.00	-9.70	peak	
4	!	601.3300	47.98	-6.76	41.22	46.00	-4.78	peak	
5	*	612.0000	49.59	-6.79	42.80	46.00	-3.20	QP	
6		960.2300	44.20	-2.19	42.01	54.00	-11.99	peak	

Test Mode: UNII-3/TX A Mode 5785MHz

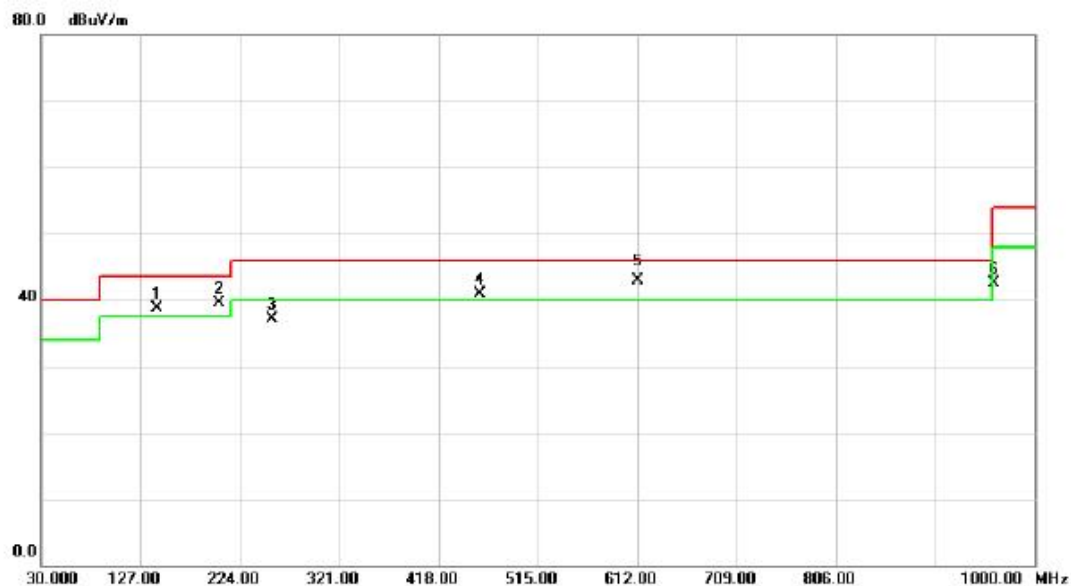
### Horizontal



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	!	119.2400	54.34	-16.77	37.57	43.50	-5.93	peak	
2	*	203.6300	56.99	-16.94	40.05	43.50	-3.45	QP	
3	!	239.5200	55.96	-15.50	40.46	46.00	-5.54	peak	
4	!	408.3000	51.86	-10.95	40.91	46.00	-5.09	peak	
5	!	612.0000	47.66	-6.79	40.87	46.00	-5.13	peak	
6		960.2300	45.12	-2.19	42.93	54.00	-11.07	peak	

Test Mode: UNII-3/TX A Mode 5825MHz

Vertical



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	!	142.5200	53.11	-14.50	38.61	43.50	-4.89	peak	
2	!	203.6300	56.35	-16.94	39.41	43.50	-4.09	peak	
3		255.0400	51.83	-14.74	37.09	46.00	-8.91	peak	
4	!	458.7400	50.53	-9.72	40.81	46.00	-5.19	peak	
5	*	612.0000	49.72	-6.79	42.93	46.00	-3.07	QP	
6		960.2300	44.61	-2.19	42.42	54.00	-11.58	peak	



Test Mode: UNII-3/TX A Mode 5825MHz

### Horizontal

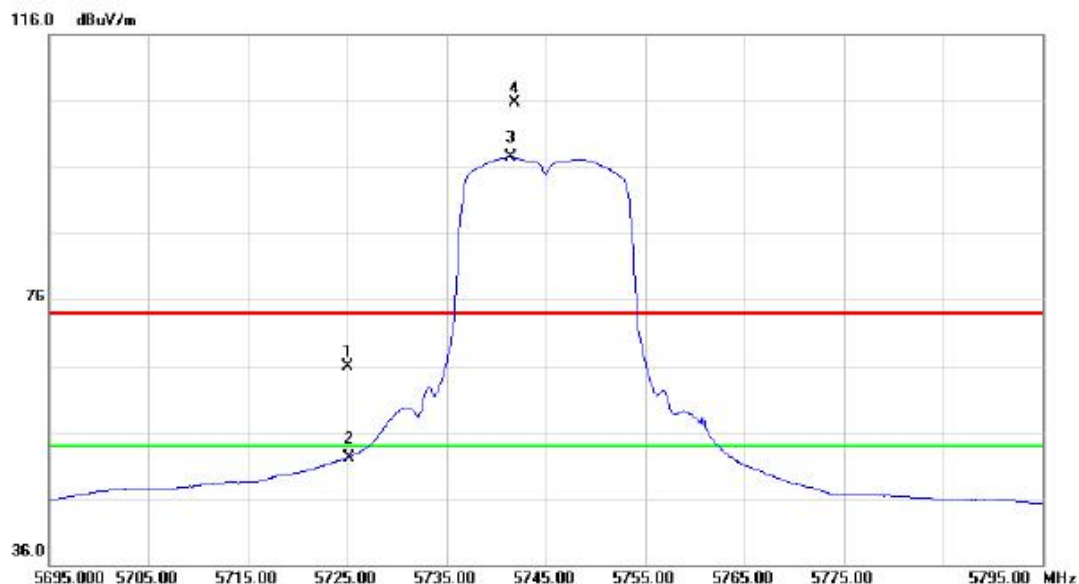


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	*	203.6300	57.32	-16.94	40.38	43.50	-3.12	peak	
2	!	239.5200	55.87	-15.50	40.37	46.00	-5.63	peak	
3	!	408.3000	51.77	-10.95	40.82	46.00	-5.18	peak	
4		456.8000	47.53	-9.73	37.80	46.00	-8.20	peak	
5		612.0000	46.07	-6.79	39.28	46.00	-6.72	peak	
6		960.2300	43.53	-2.19	41.34	54.00	-12.66	peak	

## **ATTACHMENT D - RADIATED EMISSION (ABOVE 1000MHZ)**

Orthogonal Axis:	X
Test Mode:	UNII-3/TX A Mode 5745MHz

### Vertical



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		5725.000	21.31	44.58	65.89	74.00	-8.11	peak	
2		5725.000	7.53	44.58	52.11	54.00	-1.89	AVG	
3	*	5741.400	52.78	44.66	97.44	54.00	43.44	AVG	no limit
4	X	5741.800	61.04	44.66	105.70	74.00	31.70	peak	no limit

Orthogonal Axis:	X
Test Mode:	UNII-3/TX A Mode 5745MHz

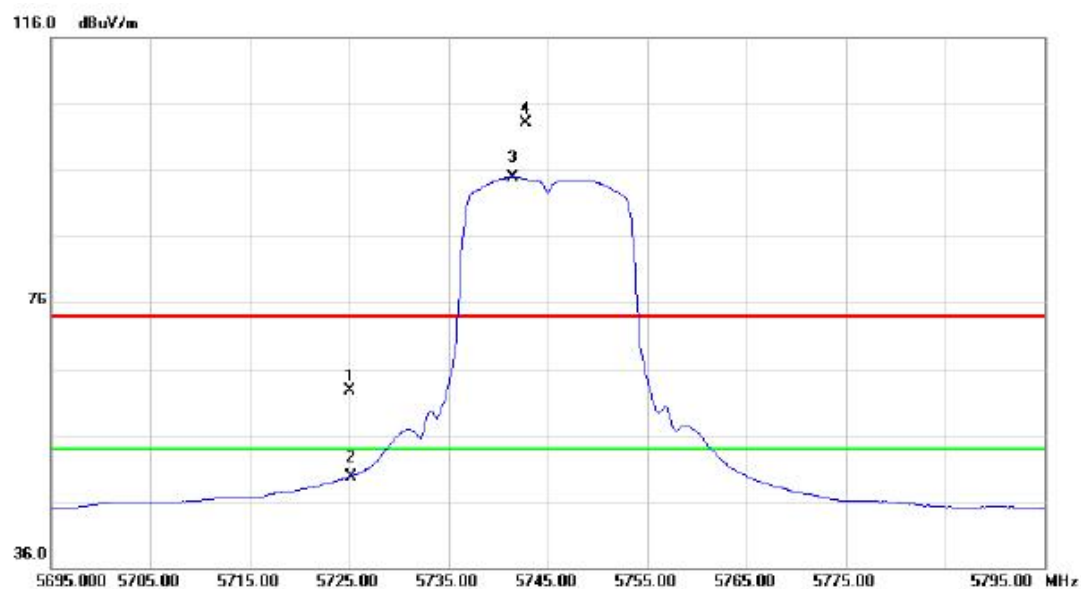
### Vertical



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		11490.06	37.45	14.25	51.70	74.00	-22.30	peak	
2	*	11490.06	24.28	14.25	38.53	54.00	-15.47	AVG	

Orthogonal Axis:	X
Test Mode:	UNII-3/TX A Mode 5745MHz

### Horizontal



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		5725.000	18.16	44.58	62.74	74.00	-11.26	peak	
2		5725.000	5.17	44.58	49.75	54.00	-4.25	AVG	
3	*	5741.500	50.30	44.66	94.96	54.00	40.96	AVG	no limit
4	X	5742.800	58.35	44.67	103.02	74.00	29.02	peak	no limit

Orthogonal Axis:	X
Test Mode:	UNII-3/TX A Mode 5745MHz

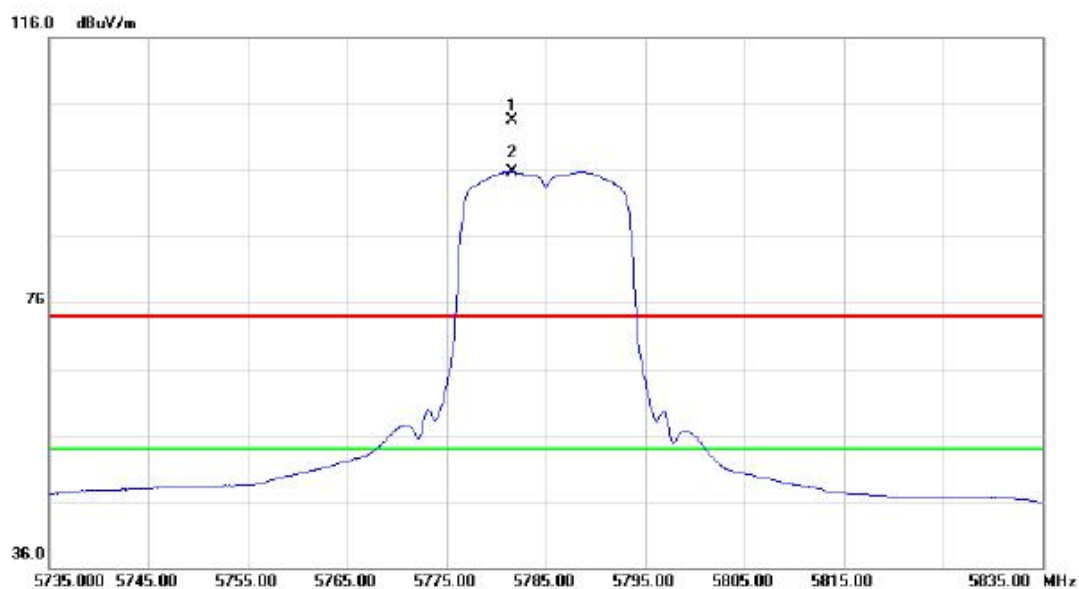
### Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		11490.02	35.73	14.25	49.98	74.00	-24.02	peak	
2	*	11490.02	23.77	14.25	38.02	54.00	-15.98	AVG	

Orthogonal Axis:	X
Test Mode:	UNII-3/TX A Mode 5785MHz

### Vertical



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	X	5781.600	58.66	44.87	103.53	74.00	29.53	peak	no limit
2	*	5781.800	50.86	44.87	95.73	54.00	41.73	AVG	no limit

Orthogonal Axis:	X
Test Mode:	UNII-3/TX A Mode 5785MHz

### Vertical

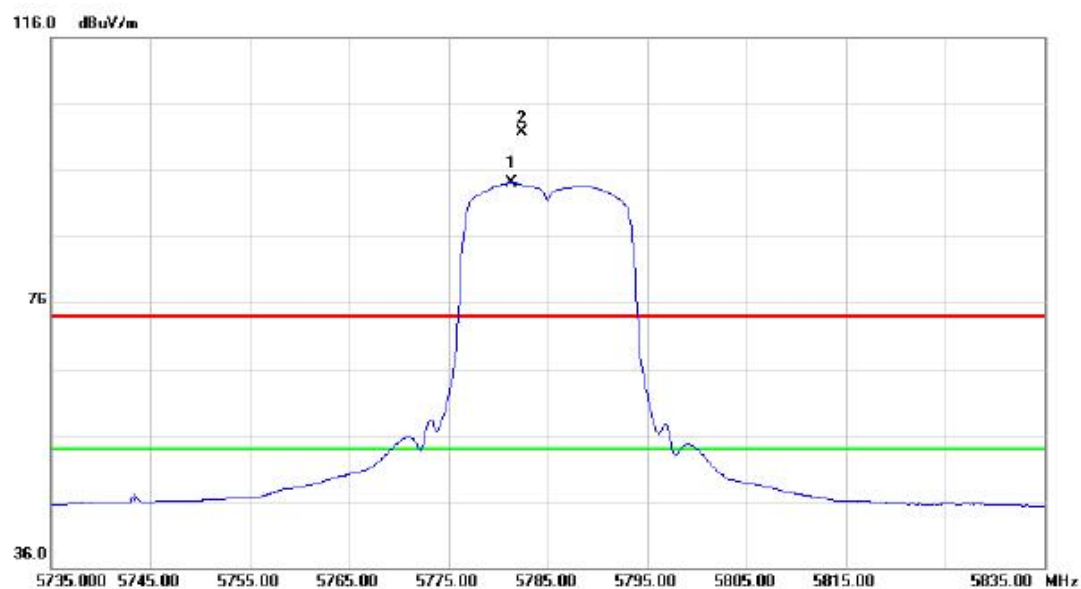


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		11570.08	37.25	14.30	51.55	74.00	-22.45	peak	
2	*	11570.08	25.95	14.30	40.25	54.00	-13.75	AVG	



Orthogonal Axis:	X
Test Mode:	UNII-3/TX A Mode 5785MHz

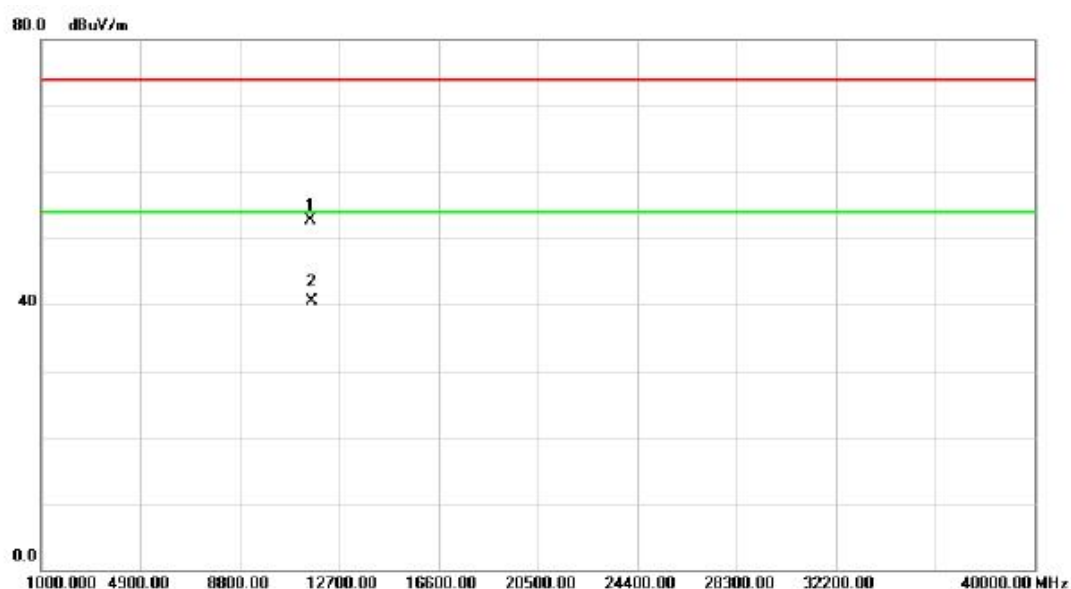
### Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	5781.300	49.20	44.87	94.07	54.00	40.07	AVG	no limit
2	X	5782.400	56.80	44.87	101.67	74.00	27.67	peak	no limit

Orthogonal Axis:	X
Test Mode:	UNII-3/TX A Mode 5785MHz

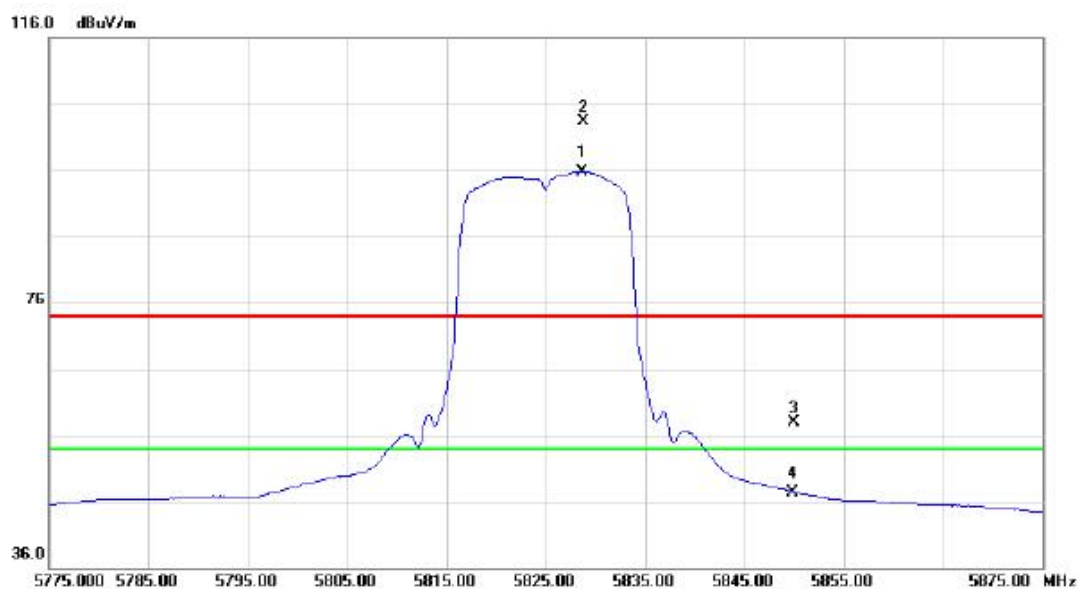
### Horizontal



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		11570.09	38.33	14.30	52.63	74.00	-21.37	peak	
2	*	11570.09	26.12	14.30	40.42	54.00	-13.58	AVG	

Orthogonal Axis:	X
Test Mode:	UNII-3/TX A Mode 5825MHz

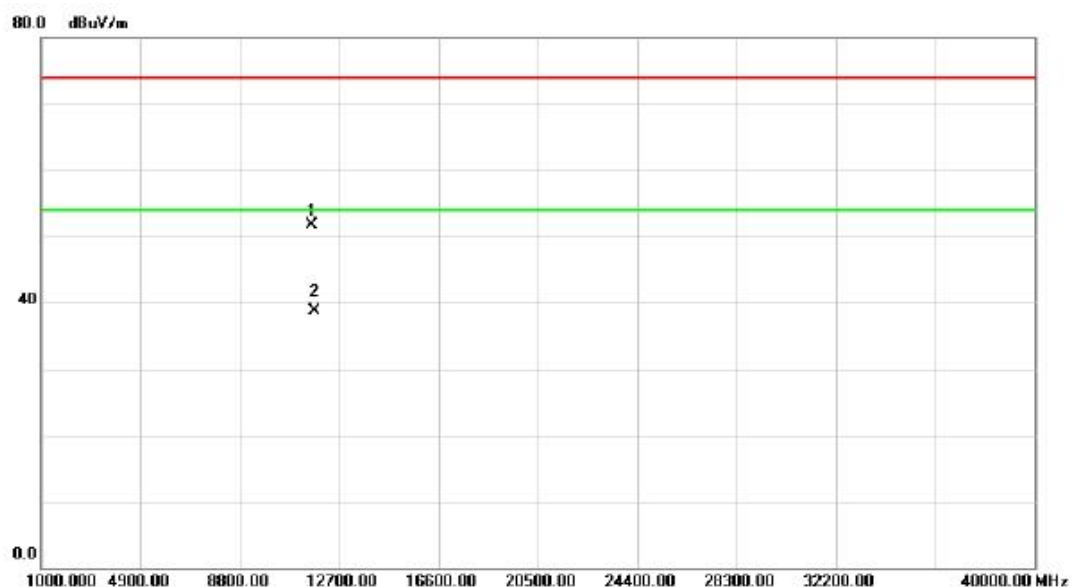
### Vertical



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	*	5828.700	50.64	45.12	95.76	54.00	41.76	AVG	no limit
2	X	5828.800	58.17	45.12	103.29	74.00	29.29	peak	no limit
3		5850.000	12.74	45.23	57.97	74.00	-16.03	peak	
4		5850.000	2.17	45.23	47.40	54.00	-6.60	AVG	

Orthogonal Axis:	X
Test Mode:	UNII-3/TX A Mode 5825MHz

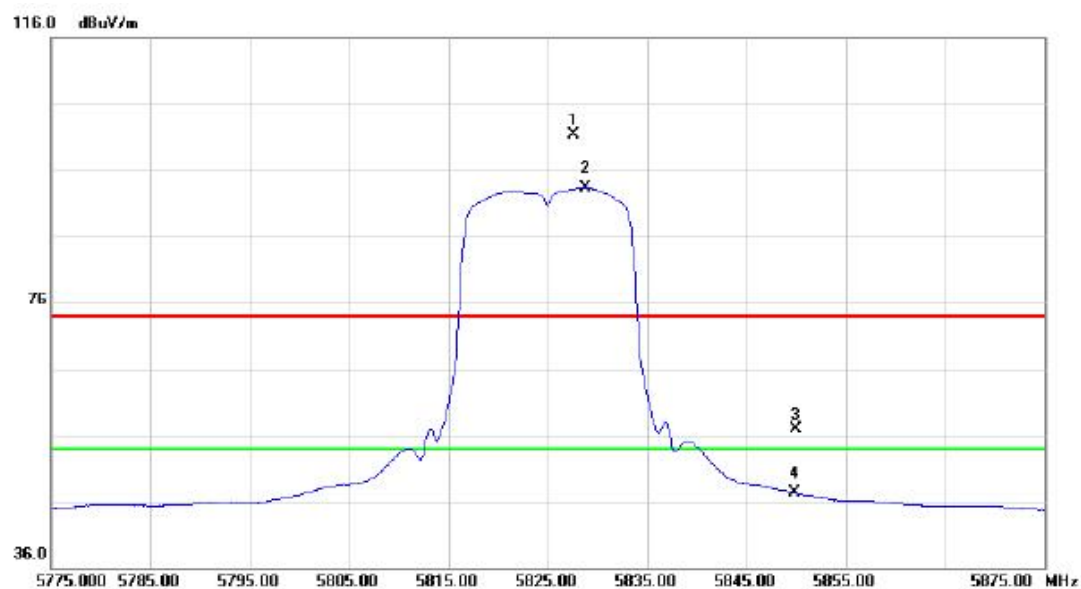
### Vertical



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		11650.06	37.28	14.34	51.62	74.00	-22.38	peak	
2	*	11650.06	24.34	14.34	38.68	54.00	-15.32	AVG	

Orthogonal Axis:	X
Test Mode:	UNII-3/TX A Mode 5825MHz

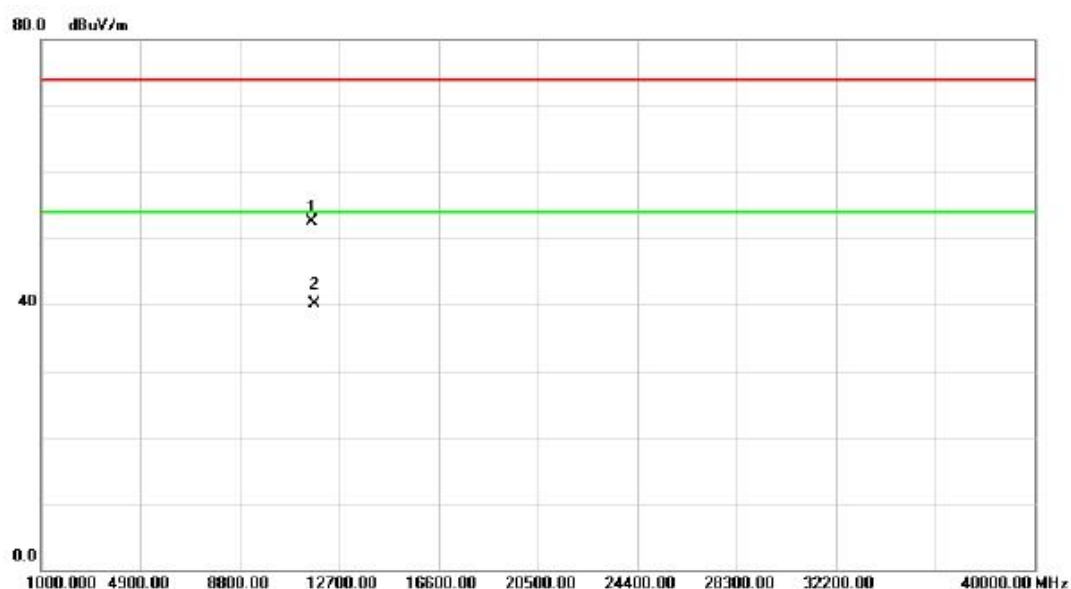
### Horizontal



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	X	5827.600	56.29	45.11	101.40	74.00	27.40	peak	no limit
2	*	5828.800	48.21	45.12	93.33	54.00	39.33	AVG	no limit
3		5850.000	11.75	45.23	56.98	74.00	-17.02	peak	
4		5850.000	1.99	45.23	47.22	54.00	-6.78	AVG	

Orthogonal Axis:	X
Test Mode:	UNII-3/TX A Mode 5825MHz

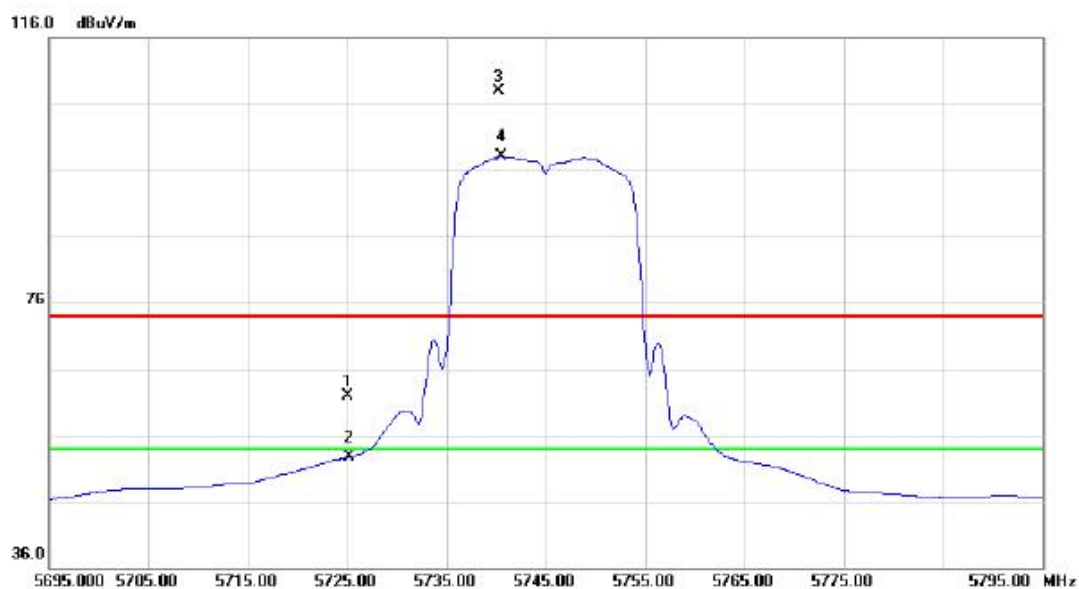
### Horizontal



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		11650.06	38.12	14.34	52.46	74.00	-21.54	peak	
2	*	11650.06	25.85	14.34	40.19	54.00	-13.81	AVG	

Orthogonal Axis:	X
Test Mode:	UNII-3/TX N20 Mode 5745MHz

### Vertical



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		5725.000	17.25	44.58	61.83	74.00	-12.17	peak	
2		5725.000	8.03	44.58	52.61	54.00	-1.39	AVG	
3	X	5740.200	63.16	44.66	107.82	74.00	33.82	peak	no limit
4	*	5740.500	53.35	44.66	98.01	54.00	44.01	AVG	no limit

Orthogonal Axis:	X
Test Mode:	UNII-3/TX N20 Mode 5745MHz

### Vertical

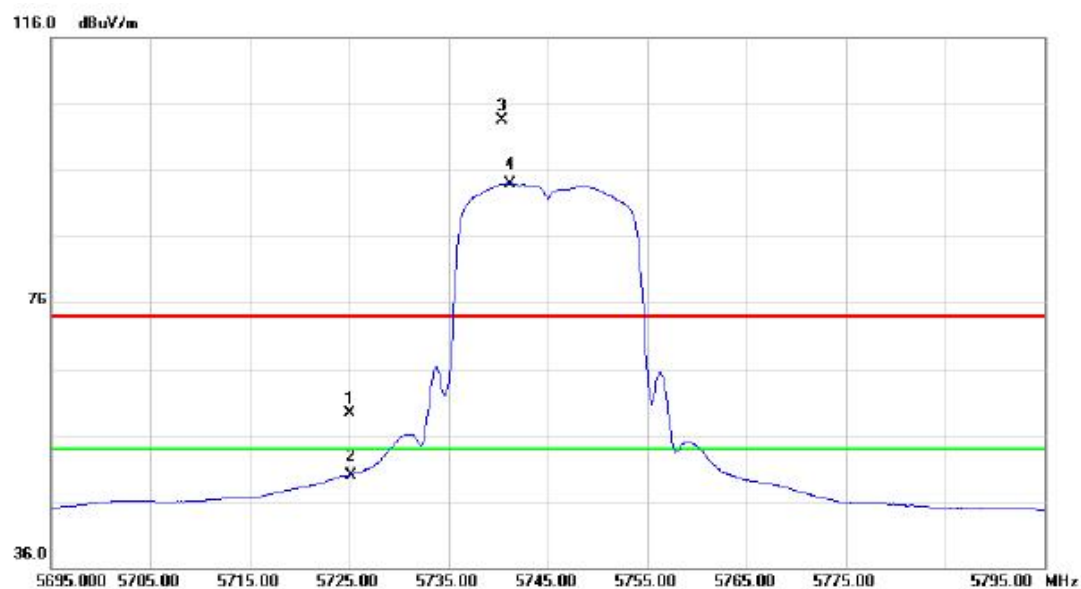


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		11490.02	38.59	14.25	52.84	74.00	-21.16	peak	
2	*	11490.02	24.38	14.25	38.63	54.00	-15.37	AVG	



Orthogonal Axis:	X
Test Mode:	UNII-3/TX N20 Mode 5745MHz

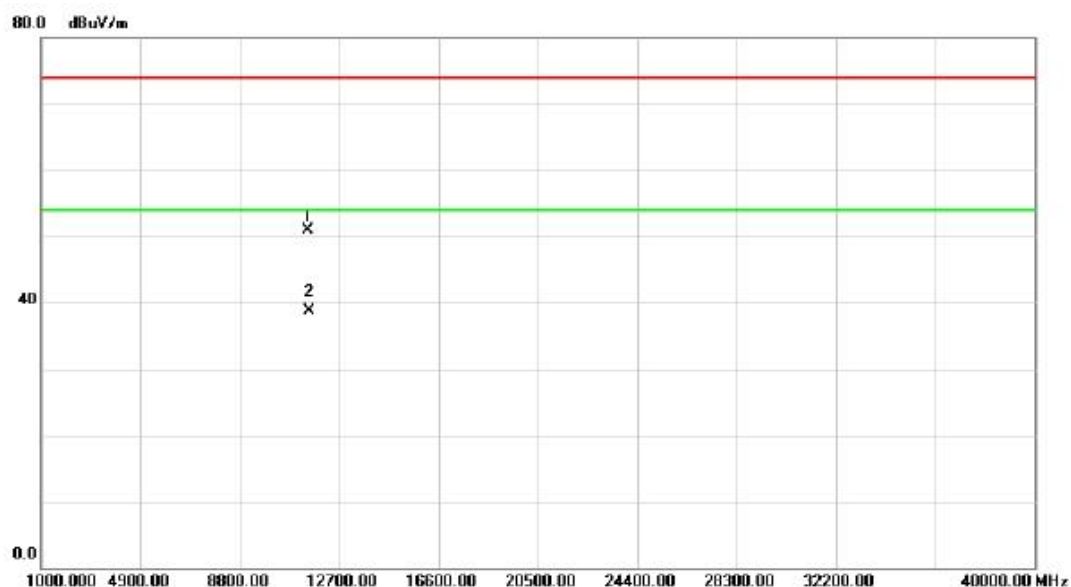
### Horizontal



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		5725.000	14.70	44.58	59.28	74.00	-14.72	peak	
2		5725.000	5.40	44.58	49.98	54.00	-4.02	AVG	
3	X	5740.400	58.90	44.66	103.56	74.00	29.56	peak	no limit
4	*	5741.200	49.32	44.66	93.98	54.00	39.98	AVG	no limit

Orthogonal Axis:	X
Test Mode:	UNII-3/TX N20 Mode 5745MHz

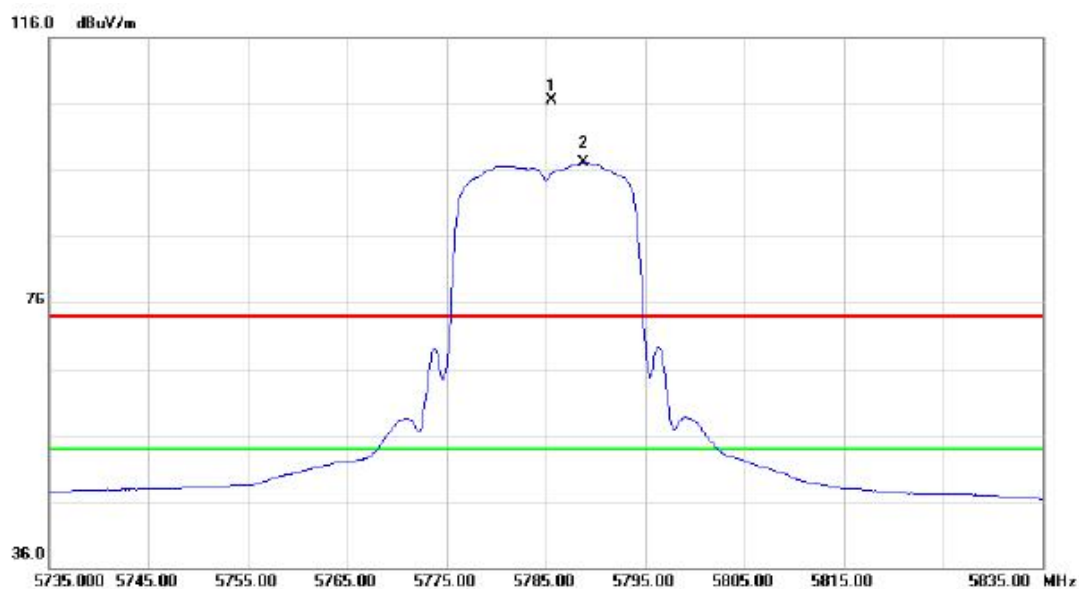
### Horizontal



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		11490.08	36.68	14.25	50.93	74.00	-23.07	peak	
2	*	11490.08	24.44	14.25	38.69	54.00	-15.31	AVG	

Orthogonal Axis:	X
Test Mode:	UNII-3/TX N20 Mode 5785MHz

### Vertical



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	X	5785.600	61.52	44.90	106.42	74.00	32.42	peak	no limit
2	*	5788.800	52.24	44.91	97.15	54.00	43.15	AVG	no limit

Orthogonal Axis:	X
Test Mode:	UNII-3/TX N20 Mode 5785MHz

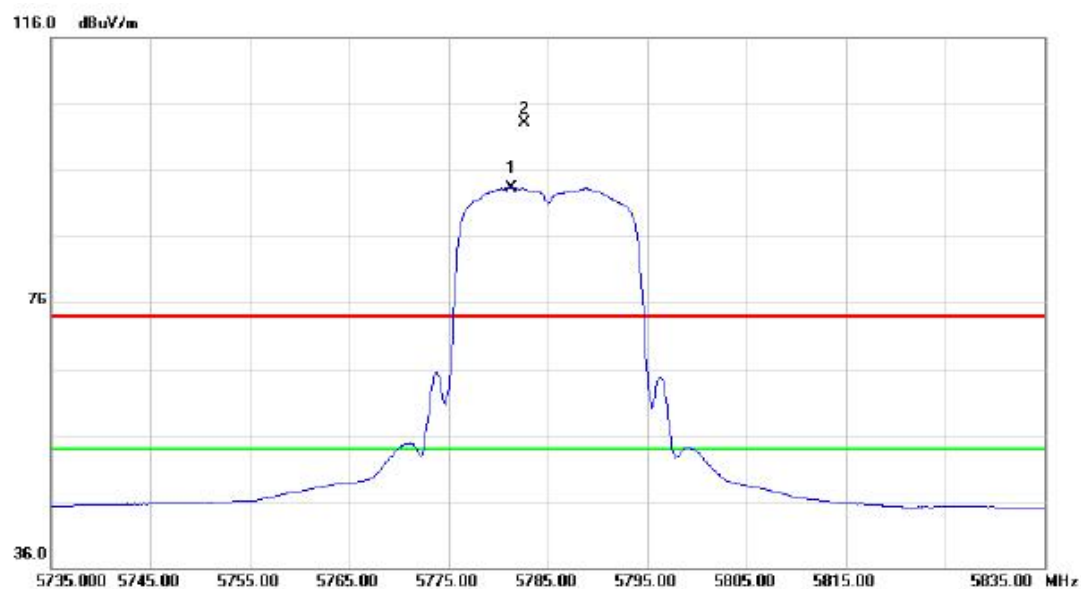
### Vertical



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		11570.04	38.89	14.30	53.19	74.00	-20.81	peak	
2	*	11570.04	25.28	14.30	39.58	54.00	-14.42	AVG	

Orthogonal Axis:	X
Test Mode:	UNII-3/TX N20 Mode 5785MHz

### Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	5781.300	48.48	44.87	93.35	54.00	39.35	AVG	no limit
2	X	5782.600	58.31	44.87	103.18	74.00	29.18	peak	no limit

Orthogonal Axis:	X
Test Mode:	UNII-3/TX N20 Mode 5785MHz

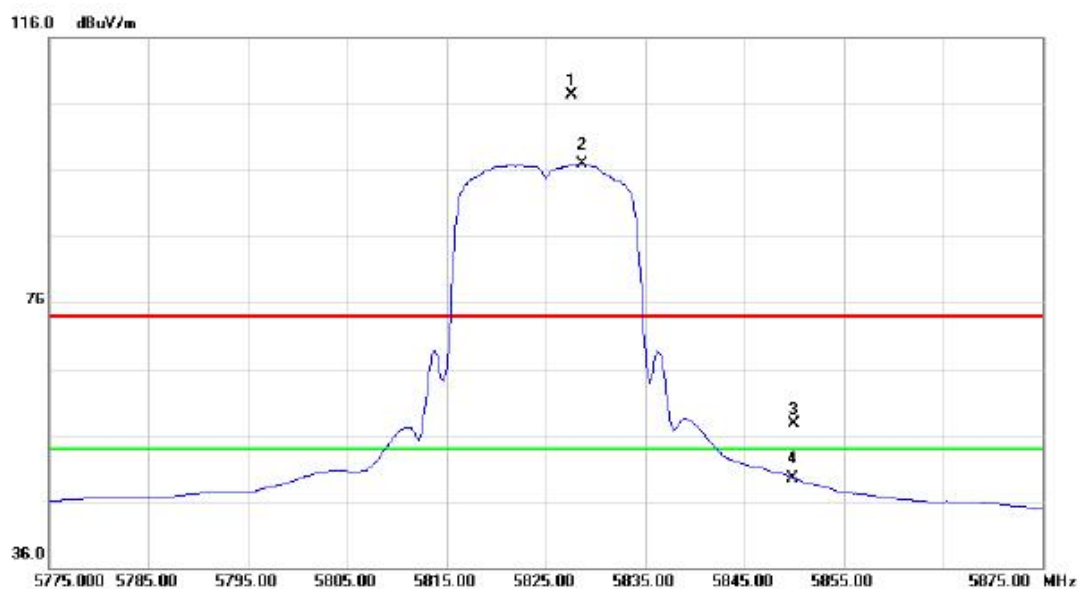
### Horizontal



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		11570.06	39.26	14.30	53.56	74.00	-20.44	peak	
2	*	11570.06	26.39	14.30	40.69	54.00	-13.31	AVG	

Orthogonal Axis:	X
Test Mode:	UNII-3/TX N20 Mode 5825MHz

### Vertical



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	X	5827.600	62.15	45.11	107.26	74.00	33.26	peak	no limit
2	*	5828.700	51.85	45.12	96.97	54.00	42.97	AVG	no limit
3		5850.000	12.43	45.23	57.66	74.00	-16.34	peak	
4		5850.000	4.28	45.23	49.51	54.00	-4.49	AVG	

Orthogonal Axis:	X
Test Mode:	UNII-3/TX N20 Mode 5825MHz

### Vertical

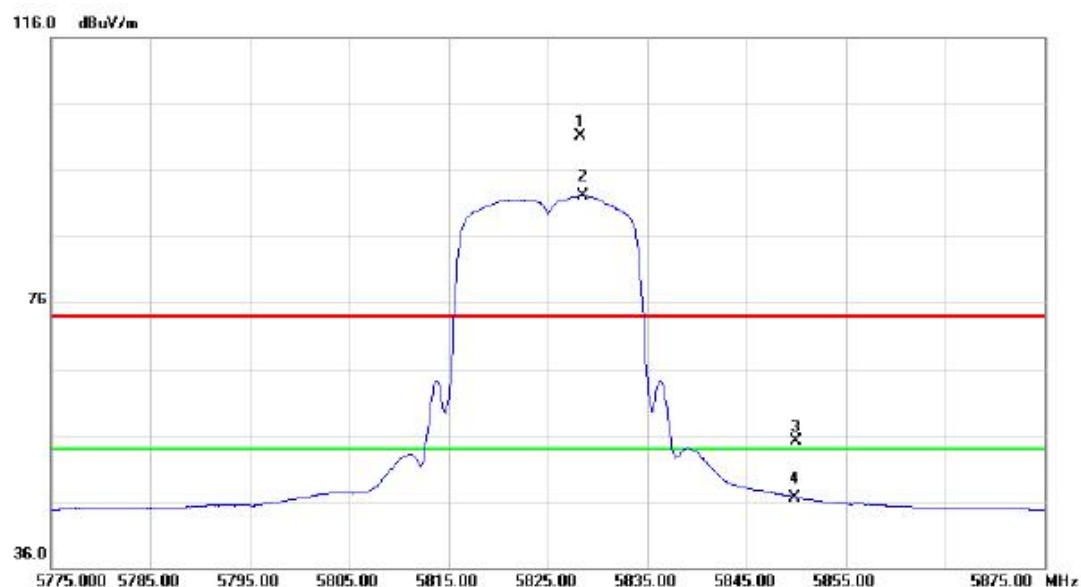


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		11650.05	36.45	14.34	50.79	74.00	-23.21	peak	
2	*	11650.05	23.66	14.34	38.00	54.00	-16.00	AVG	



Orthogonal Axis:	X
Test Mode:	UNII-3/TX N20 Mode 5825MHz

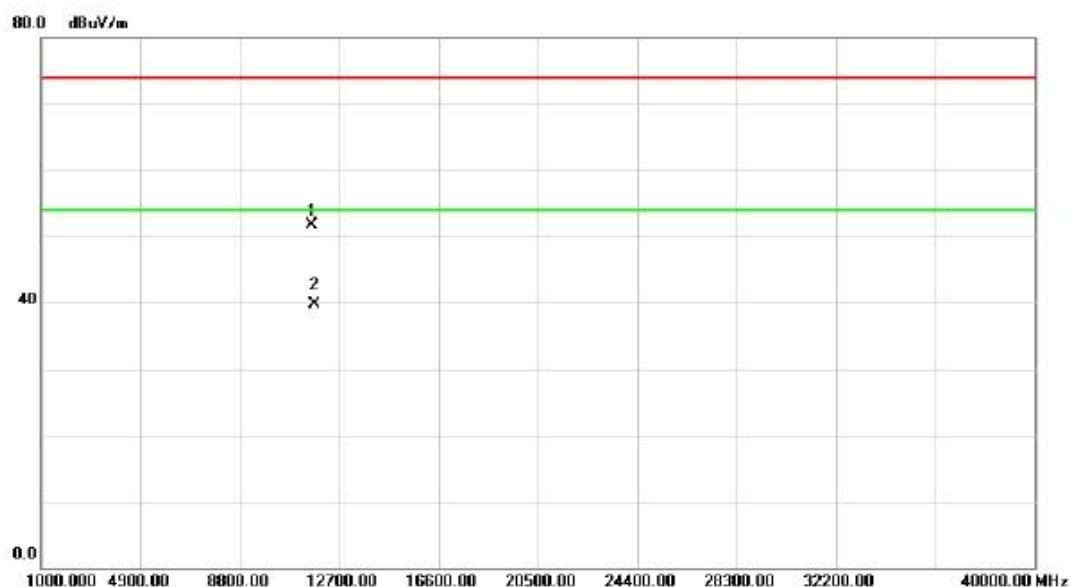
### Horizontal



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	X	5828.200	56.05	45.11	101.16	74.00	27.16	peak	no limit
2	*	5828.500	47.08	45.12	92.20	54.00	38.20	AVG	no limit
3		5850.000	9.84	45.23	55.07	74.00	-18.93	peak	
4		5850.000	1.36	45.23	46.59	54.00	-7.41	AVG	

Orthogonal Axis:	X
Test Mode:	UNII-3/TX N20 Mode 5825MHz

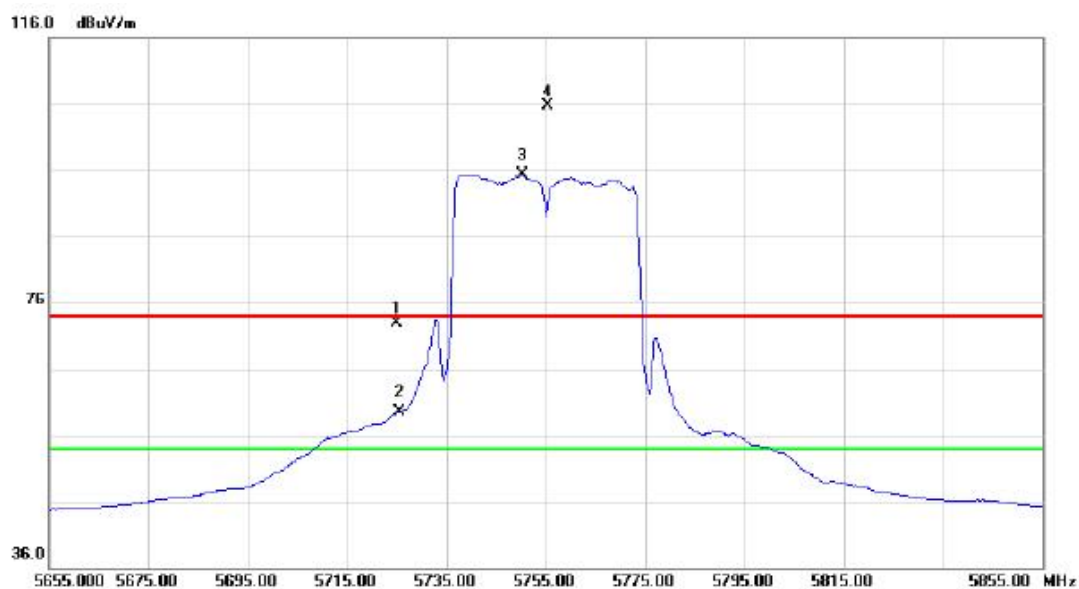
### Horizontal



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		11650.06	37.41	14.34	51.75	74.00	-22.25	peak	
2	*	11650.06	25.35	14.34	39.69	54.00	-14.31	AVG	

Orthogonal Axis:	X
Test Mode:	UNII-3/TX N40 Mode 5755MHz

### Vertical



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		5725.000	28.30	44.58	72.88	74.00	-1.12	peak	
2	X	5725.000	14.85	44.58	59.43	54.00	5.43	AVG	
3	*	5750.200	50.66	44.71	95.37	54.00	41.37	AVG	no limit
4	X	5755.400	61.03	44.73	105.76	74.00	31.76	peak	no limit

Orthogonal Axis:	X
Test Mode:	UNII-3/TX N40 Mode 5755MHz

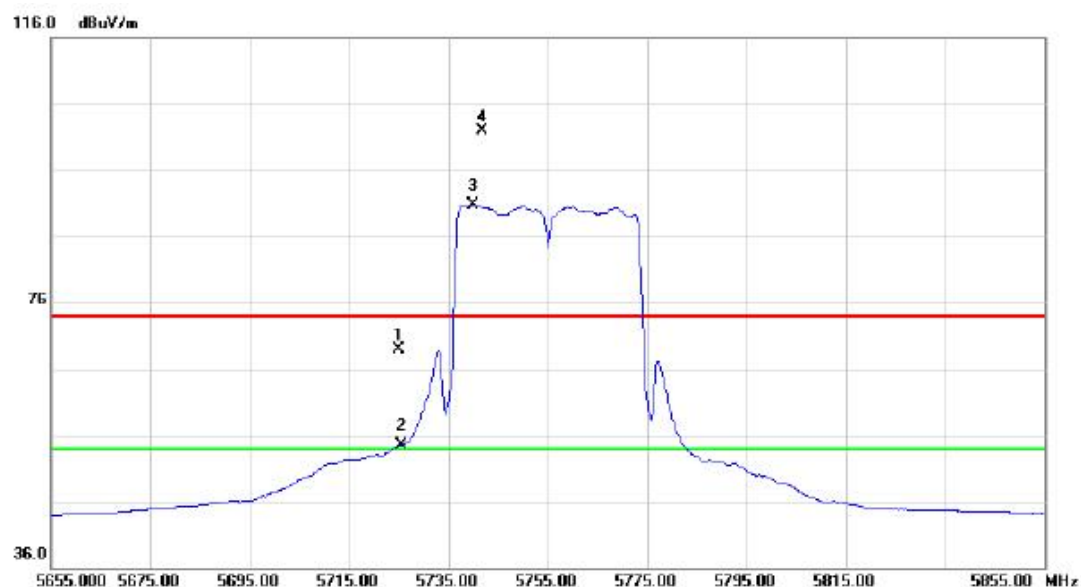
### Vertical



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		11510.06	36.28	14.27	50.55	74.00	-23.45	peak	
2	*	11510.06	24.57	14.27	38.84	54.00	-15.16	AVG	

Orthogonal Axis:	X
Test Mode:	UNII-3/TX N40 Mode 5755MHz

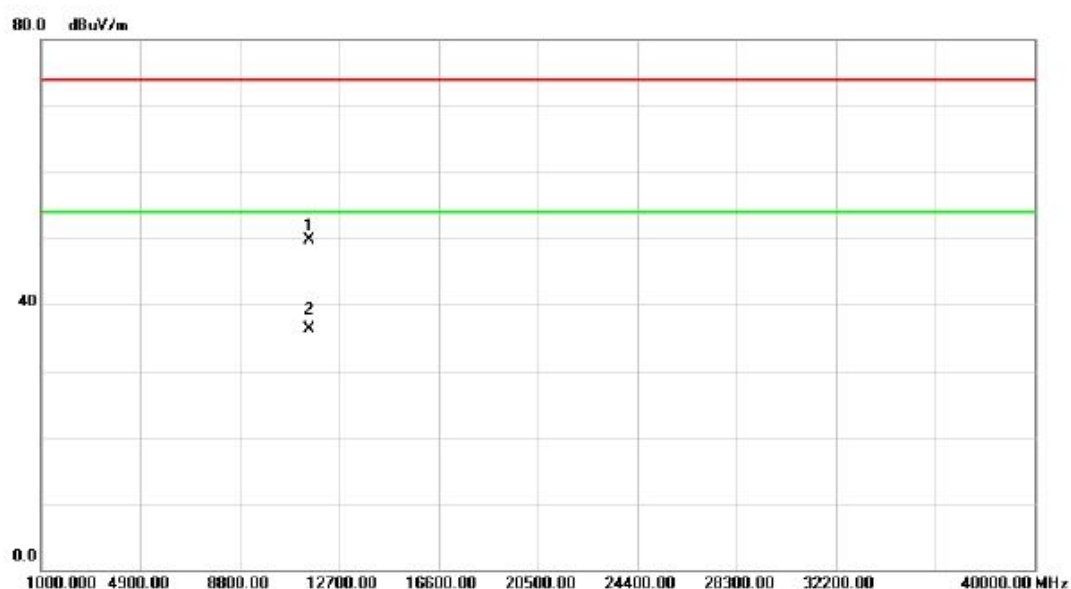
### Horizontal



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		5725.000	24.40	44.58	68.98	74.00	-5.02	peak	
2	X	5725.000	9.84	44.58	54.42	54.00	0.42	AVG	
3	*	5740.000	46.06	44.66	90.72	54.00	36.72	AVG	no limit
4	X	5741.800	57.29	44.66	101.95	74.00	27.95	peak	no limit

Orthogonal Axis:	X
Test Mode:	UNII-3/TX N40 Mode 5755MHz

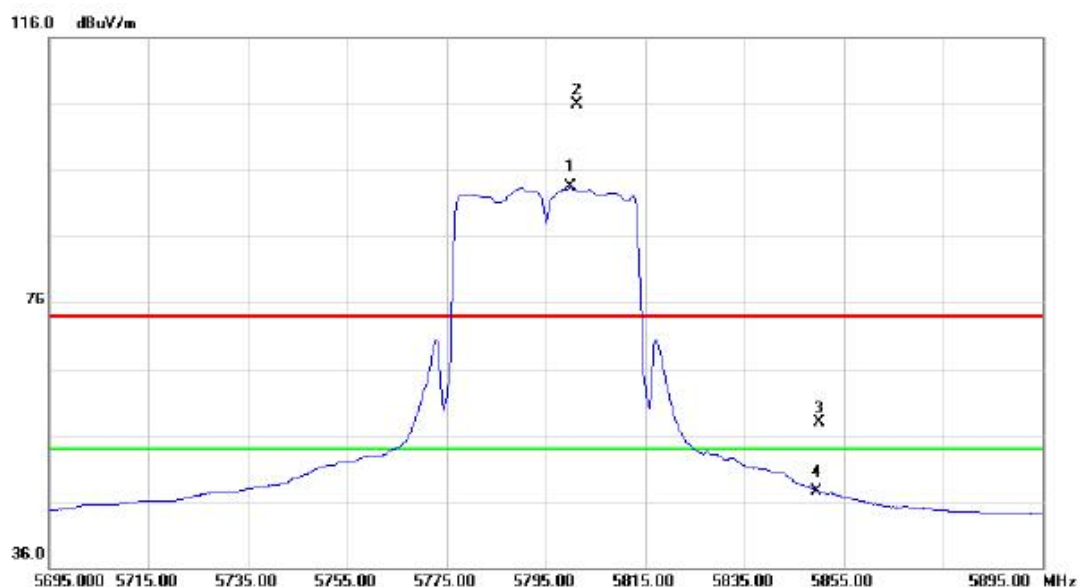
### Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		11510.06	35.41	14.27	49.68	74.00	-24.32	peak	
2	*	11510.06	22.11	14.27	36.38	54.00	-17.62	AVG	

Orthogonal Axis:	X
Test Mode:	UNII-3/TX N40 Mode 5795MHz

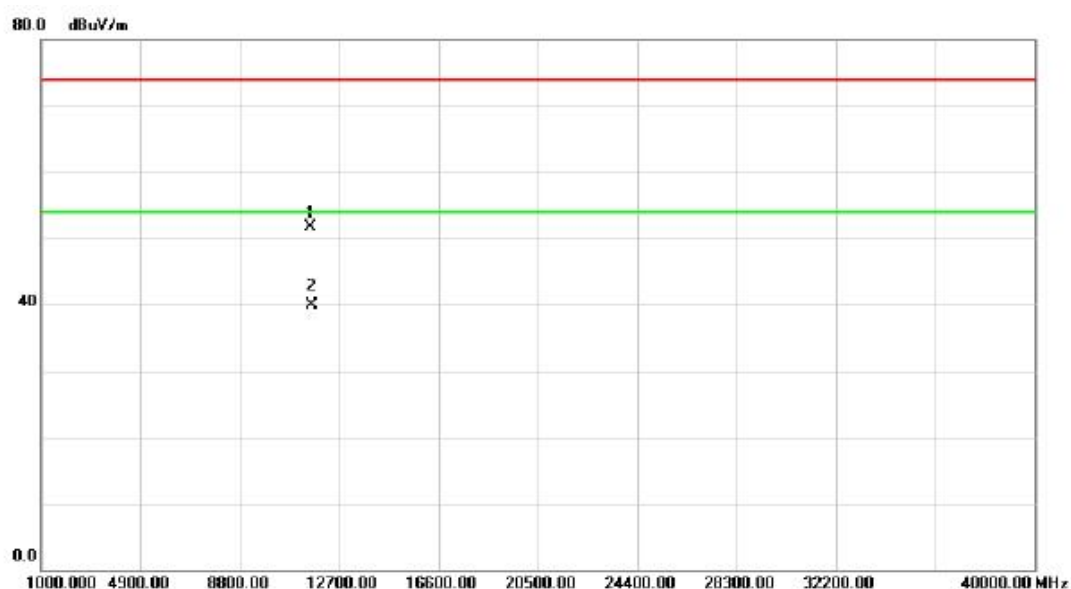
### Vertical



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	*	5800.000	48.45	44.97	93.42	54.00	39.42	AVG	no limit
2	X	5801.200	60.97	44.98	105.95	74.00	31.95	peak	no limit
3		5850.000	12.76	45.23	57.99	74.00	-16.01	peak	
4		5850.000	2.22	45.23	47.45	54.00	-6.55	AVG	

Orthogonal Axis:	X
Test Mode:	UNII-3/TX N40 Mode 5795MHz

### Vertical

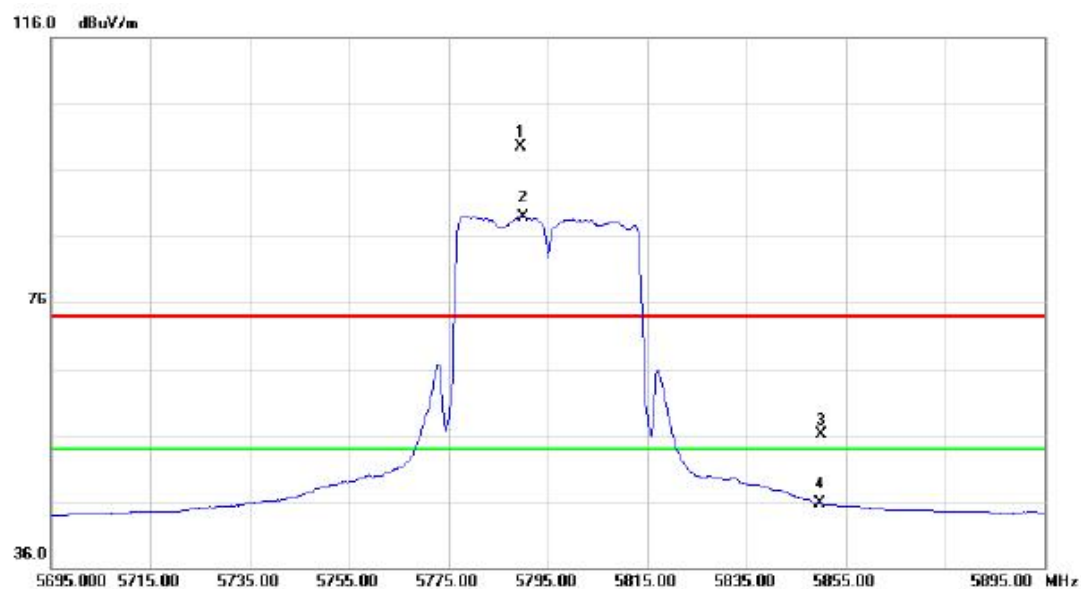


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		11590.02	37.38	14.31	51.69	74.00	-22.31	peak	
2	*	11590.02	25.57	14.31	39.88	54.00	-14.12	AVG	



Orthogonal Axis:	X
Test Mode:	UNII-3/TX N40 Mode 5795MHz

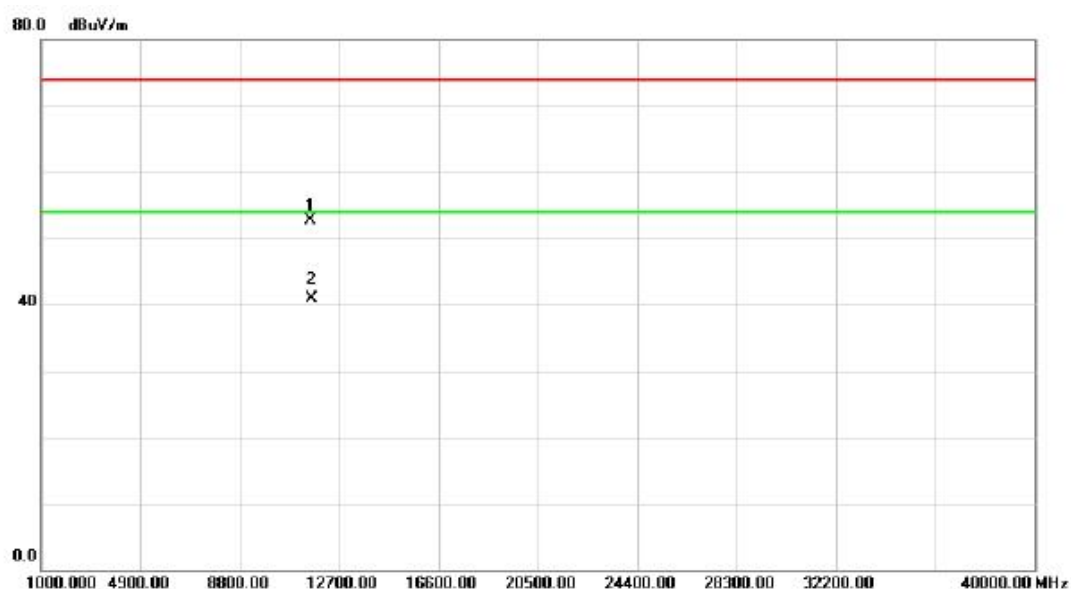
### Horizontal



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	X	5789.400	54.52	44.91	99.43	74.00	25.43	peak	no limit
2	*	5790.200	44.08	44.92	89.00	54.00	35.00	AVG	no limit
3		5850.000	10.80	45.23	56.03	74.00	-17.97	peak	
4		5850.000	0.38	45.23	45.61	54.00	-8.39	AVG	

Orthogonal Axis:	X
Test Mode:	UNII-3/TX N40 Mode 5795MHz

### Horizontal



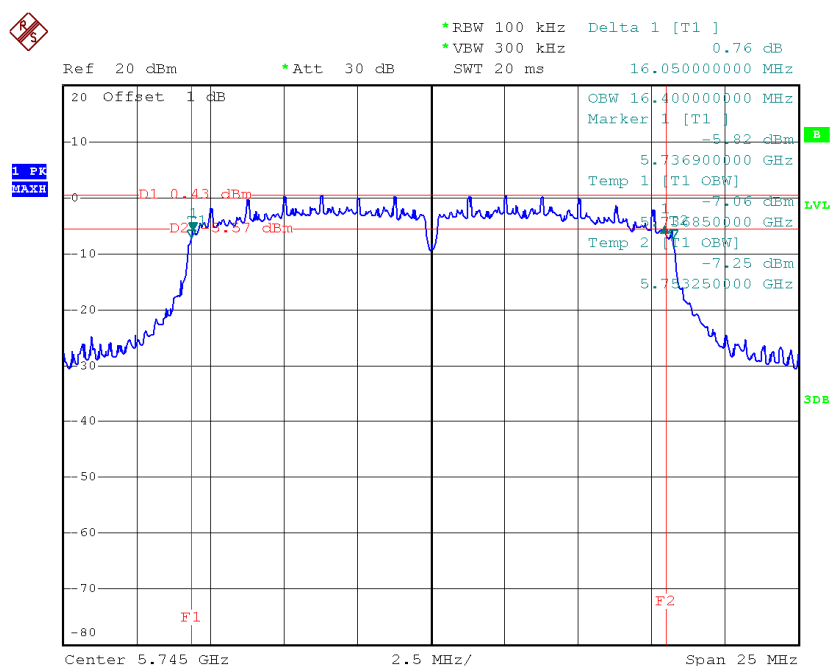
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		11590.02	38.41	14.31	52.72	74.00	-21.28	peak	
2	*	11590.02	26.53	14.31	40.84	54.00	-13.16	AVG	

## **ATTACHMENT E - BANDWIDTH**

**Test Mode: UNII-3/ TX A Mode\_CH149/CH157/CH165**

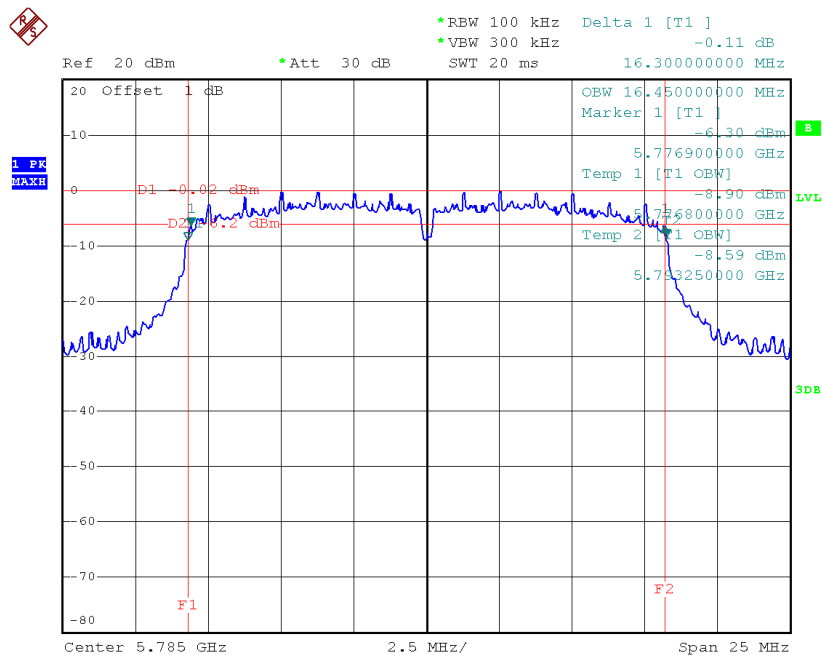
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Limit (KHz)
CH149	5745	16.05	16.40	>=500
CH157	5785	16.30	16.45	>=500
CH165	5825	16.05	16.40	>=500

**TX CH 149**



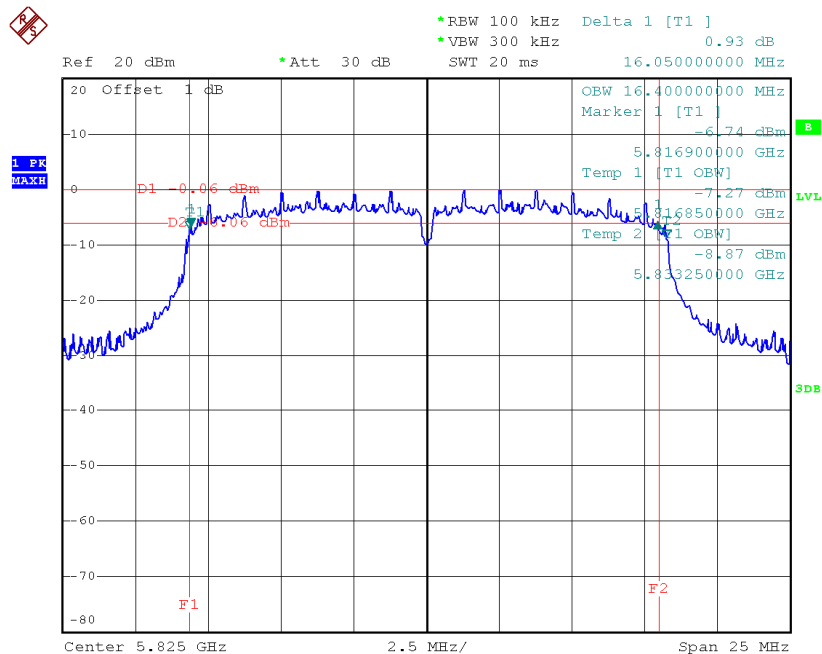
Date: 21.NOV.2014 13:28:54

# TX CH 157



Date: 21.NOV.2014 14:07:54

# TX CH 165

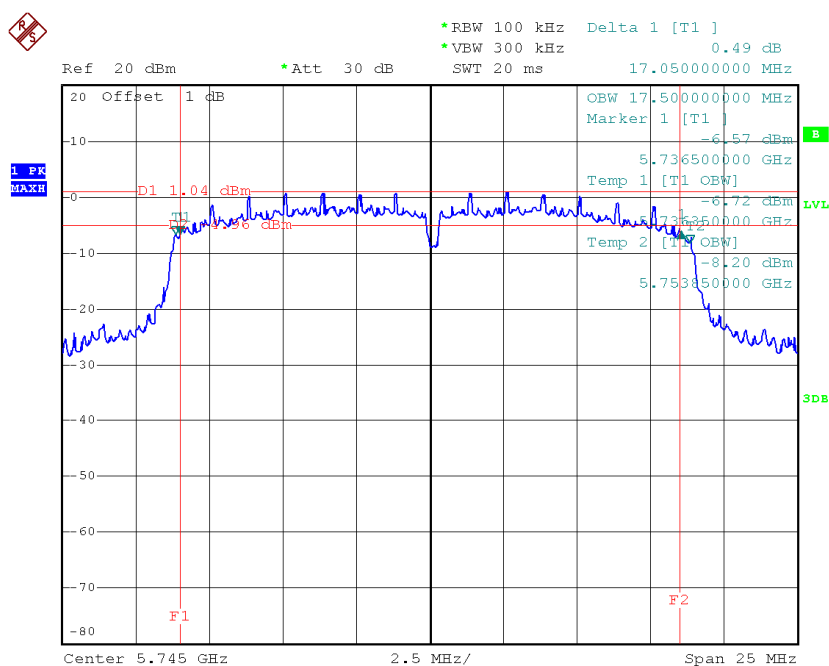


Date: 21.NOV.2014 14:12:23

**Test Mode: UNII-3/ TX N20 Mode\_CH149/CH157/CH165**

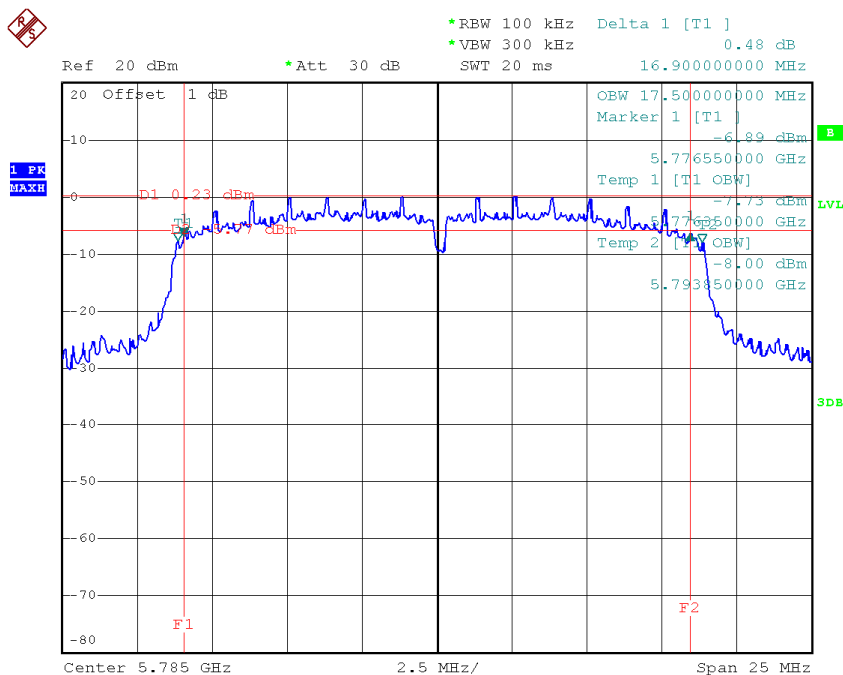
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Limit (KHz)
CH149	5745	17.05	17.50	>=500
CH157	5785	16.90	17.50	>=500
CH165	5825	16.90	17.50	>=500

**TX CH 149**



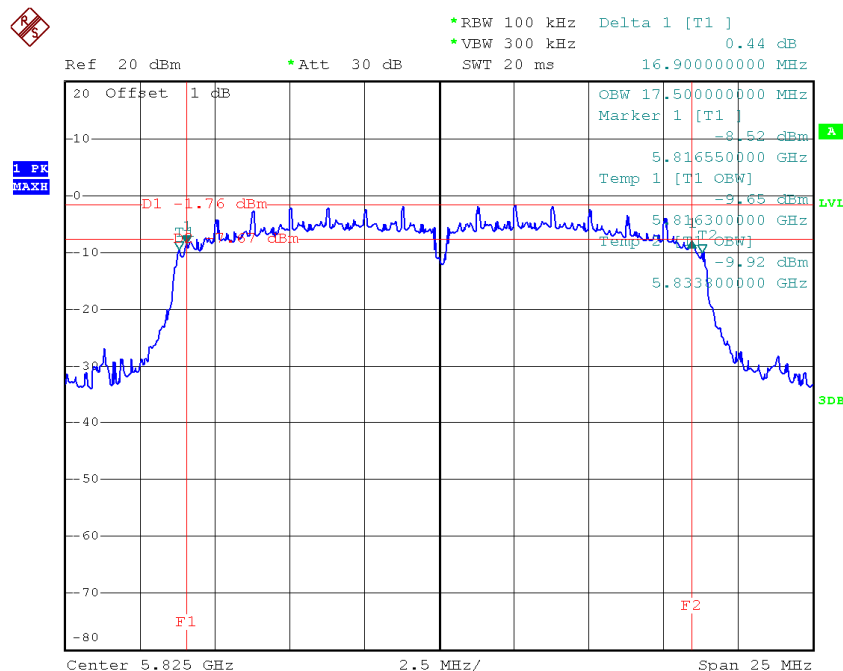
Date: 21.NOV.2014 15:20:26

# TX CH 157



Date: 21.NOV.2014 15:30:31

# TX CH 165



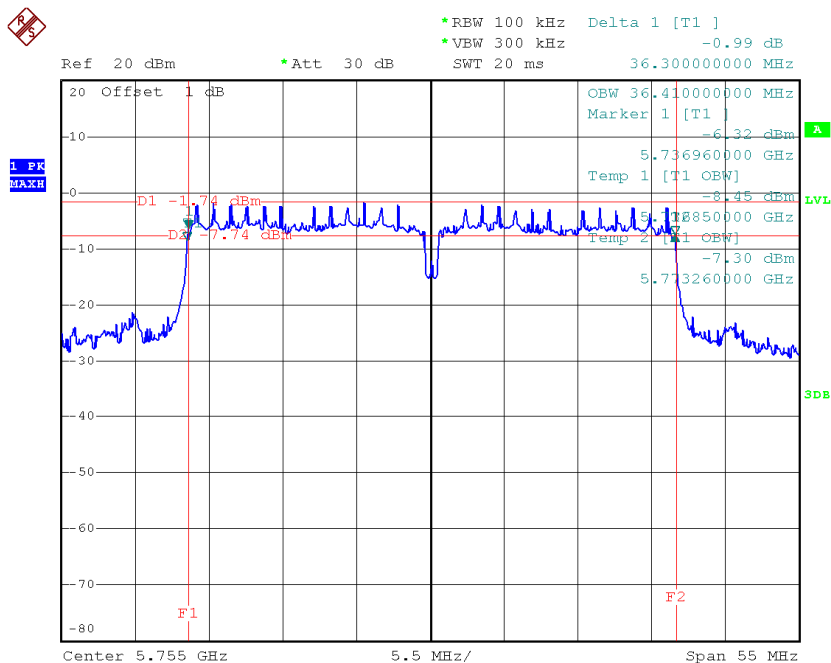
Date: 21.NOV.2014 17:18:53

**Test Mode: UNII-3/ TX N40 Mode\_CH151/CH159**

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Limit (KHz)
CH151	5755	36.30	36.40	>=500
CH159	5795	36.19	36.52	>=500

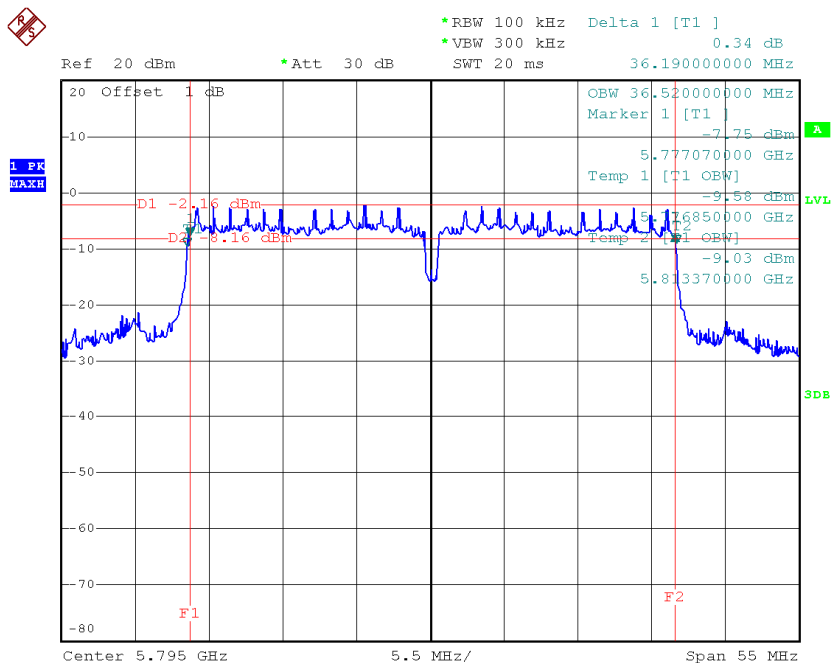


# TX CH 151



Date: 21.NOV.2014 17:52:34

# TX CH 159



Date: 21.NOV.2014 17:59:50

## **ATTACHMENT F - MAXIMUM OUTPUT POWER**

**Test Mode: UNII-3/ TX A Mode**

Channel	Frequency (MHz)	Conducted Output Power (dBm)	Limit (dBm)	Limit (Watt)
CH149	5745	21.73	30.00	1.00
CH157	5785	21.72	30.00	1.00
CH165	5825	21.51	30.00	1.00

**Test Mode: UNII-3/TX N20 Mode\_ANT 1**

Channel	Frequency (MHz)	Conducted Output Power (dBm)	Limit (dBm)	Limit (Watt)
CH149	5745	20.88	30.00	1.00
CH157	5785	20.85	30.00	1.00
CH165	5825	20.64	30.00	1.00

**Test Mode: UNII-3/TX N20 Mode\_ANT 2**

Channel	Frequency (MHz)	Conducted Output Power (dBm)	Limit (dBm)	Limit (Watt)
CH149	5745	20.15	30.00	1.00
CH157	5785	20.11	30.00	1.00
CH165	5825	20.12	30.00	1.00

**Test Mode: UNII-3/TX N20 Mode\_Total**

Channel	Frequency (MHz)	Conducted Output Power (dBm)	Limit (dBm)	Limit (Watt)
CH149	5745	23.54	30.00	1.00
CH157	5785	23.51	30.00	1.00
CH165	5825	23.40	30.00	1.00

**Test Mode: UNII-3/ TX N40 Mode\_ANT 1**

Channel	Frequency (MHz)	Conducted Output Power (dBm)	Limit (dBm)	Limit (Watt)
CH151	5755	20.75	30.00	1.00
CH159	5795	20.53	30.00	1.00

**Test Mode: UNII-3/ TX N40 Mode\_ANT 2**

Channel	Frequency (MHz)	Conducted Output Power (dBm)	Limit (dBm)	Limit (Watt)
CH151	5755	19.84	30.00	1.00
CH159	5795	19.45	30.00	1.00

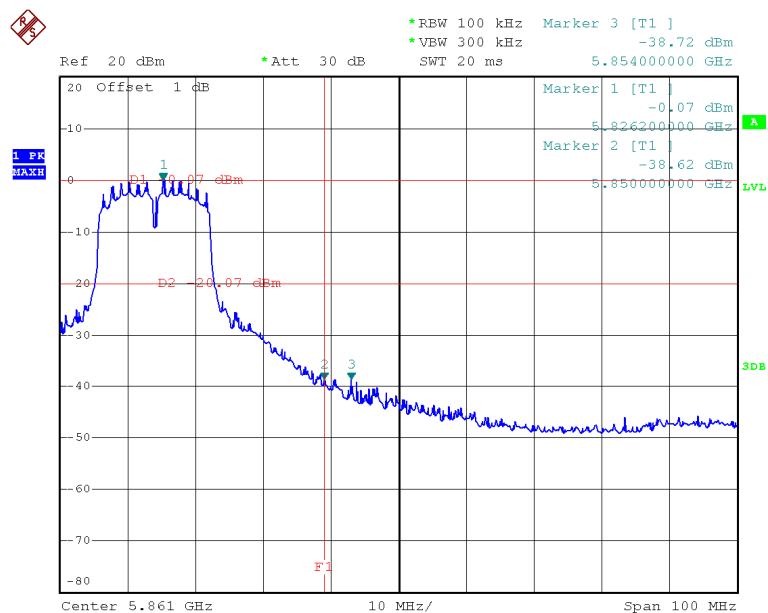
**Test Mode: UNII-3/ TX N40 Mode\_Total**

Channel	Frequency (MHz)	Conducted Output Power (dBm)	Limit (dBm)	Limit (Watt)
CH151	5755	23.33	30.00	1.00
CH159	5795	23.03	30.00	1.00

## **ATTACHMENT G - ANTENNA CONDUCTED SPURIOUS EMISSION**

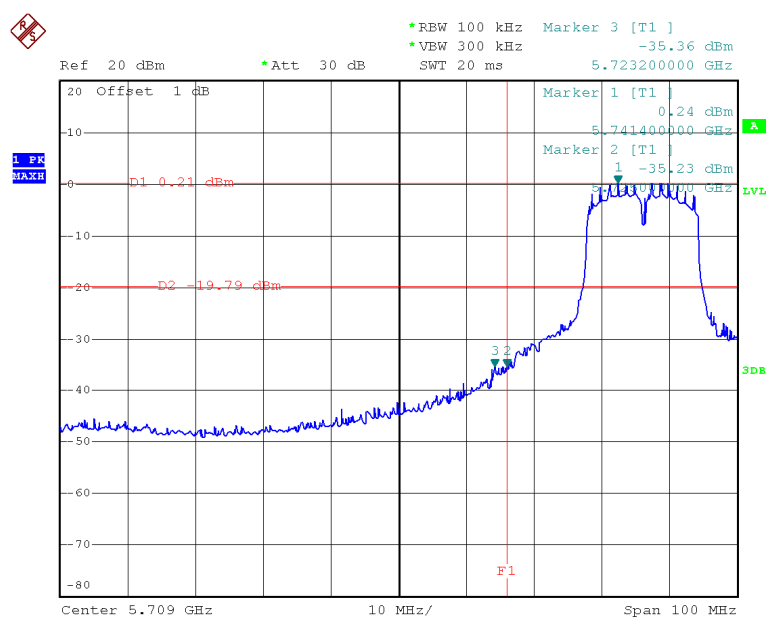
**Test Mode:** UNII-3/TX A Mode

### TX A Mode CH149



Date: 21.NOV.2014 14:18:08

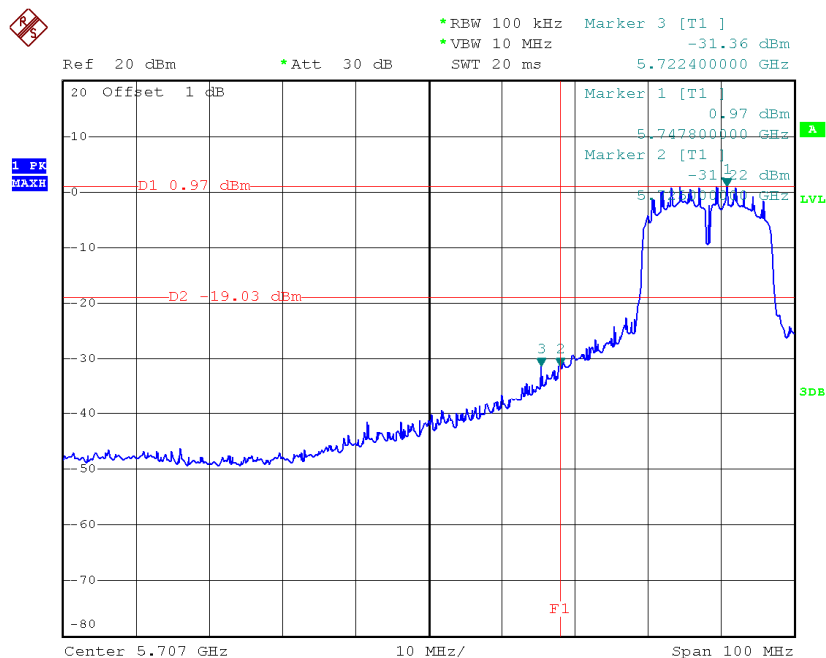
### TX A Mode CH165



Date: 21.NOV.2014 13:33:08

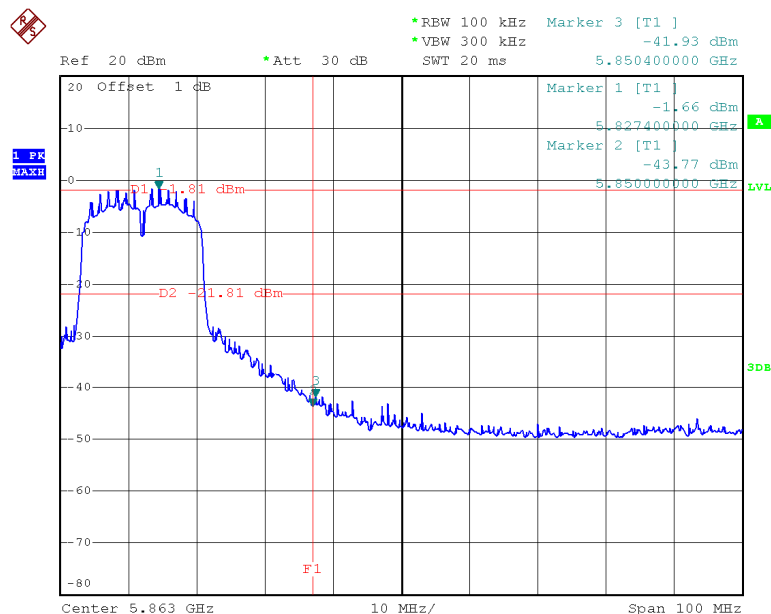
Test Mode: UNII-3/TX N20 Mode\_ANT 1

### TX HT20 mode CH149



Date: 21.NOV.2014 15:22:56

### TX HT20 mode CH165

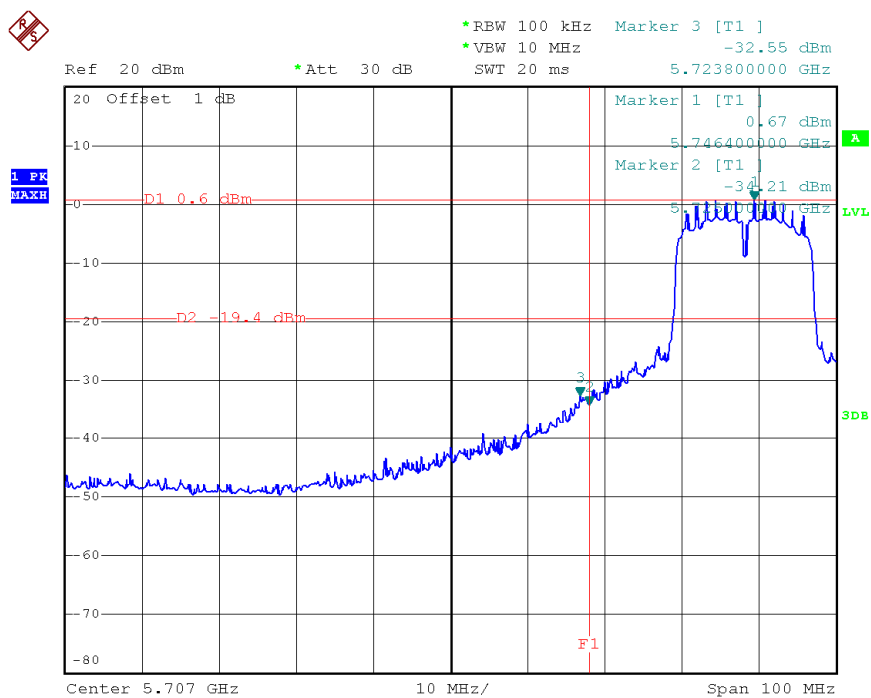


Date: 21.NOV.2014 17:38:47



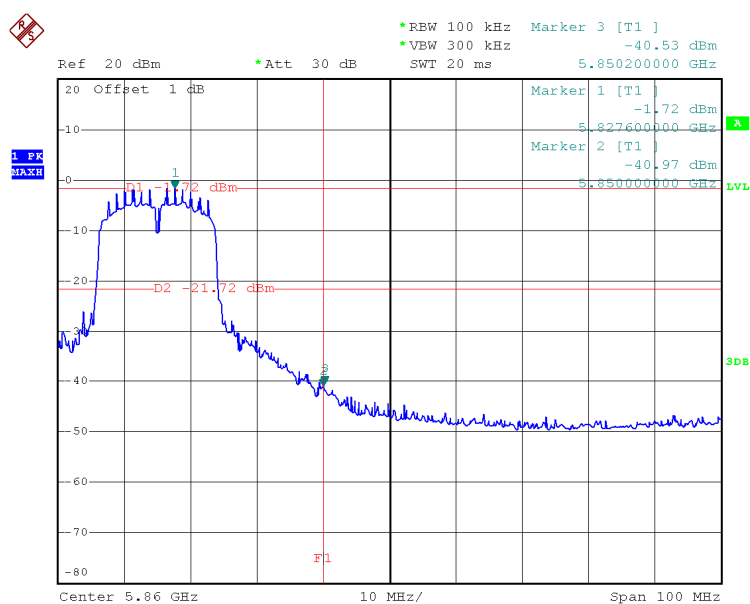
Test Mode: UNII-3/TX N20 Mode\_ANT 2

### TX HT20 mode CH149



Date: 21.NOV.2014 15:24:24

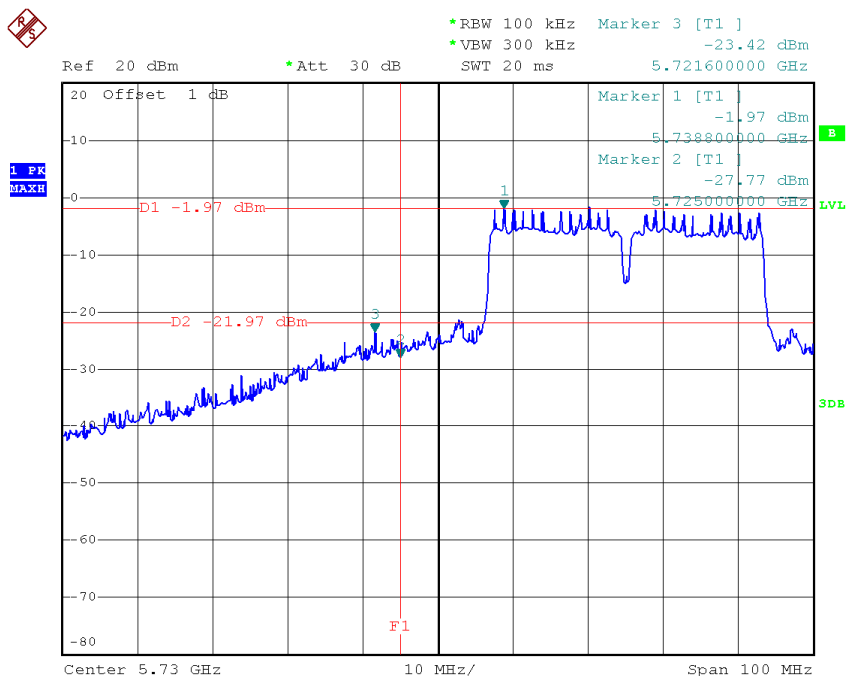
### X HT20 mode CH165



Date: 21.NOV.2014 17:43:01

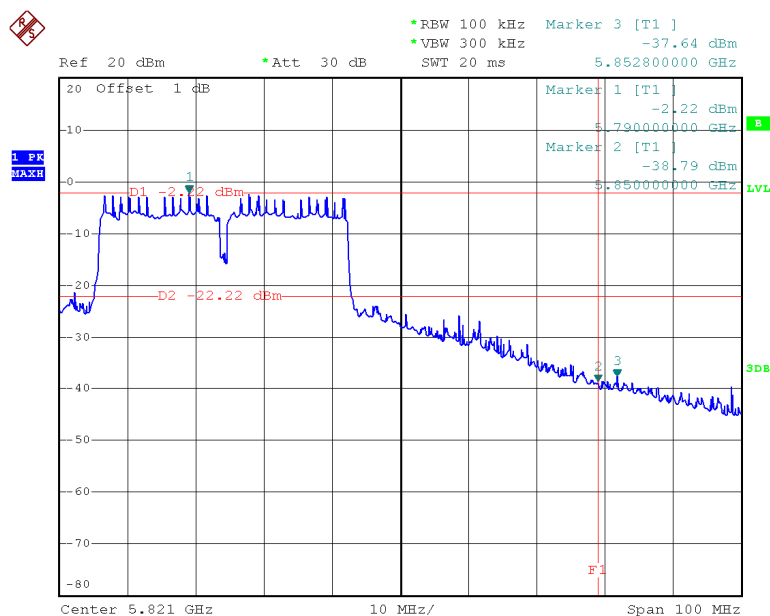
**Test Mode:** UNII-3/TX N40 Mode\_ANT 1

### UNII-3/TX HT40 mode CH151



Date: 21.NOV.2014 17:54:27

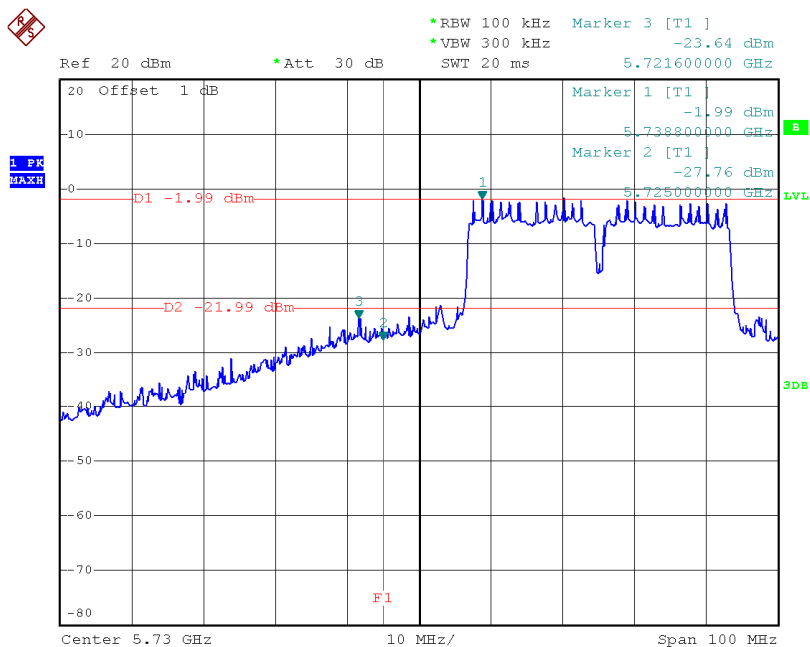
### UNII-3/TX HT40 mode CH159



Date: 21.NOV.2014 18:02:02

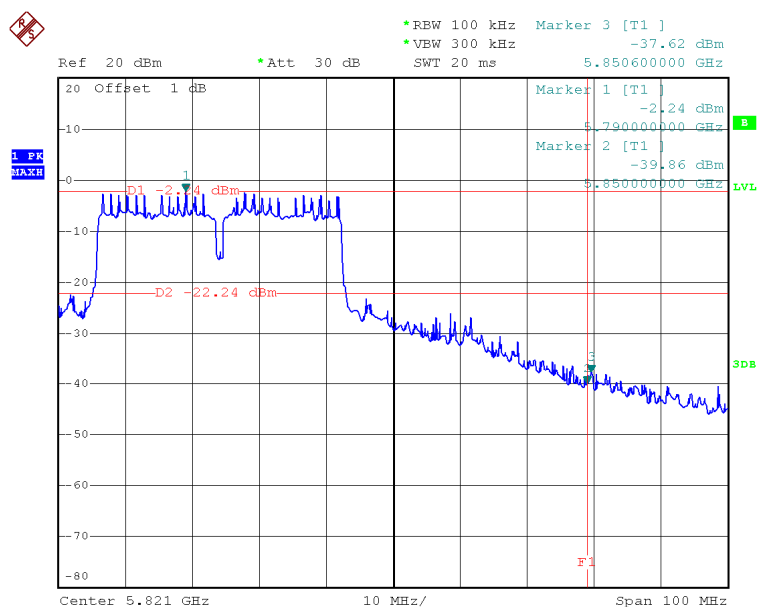
Test Mode: UNII-3/TX N40 Mode\_ANT 2

### TX HT40 mode CH151



Date: 21.NOV.2014 17:54:59

### HT40 mode CH159



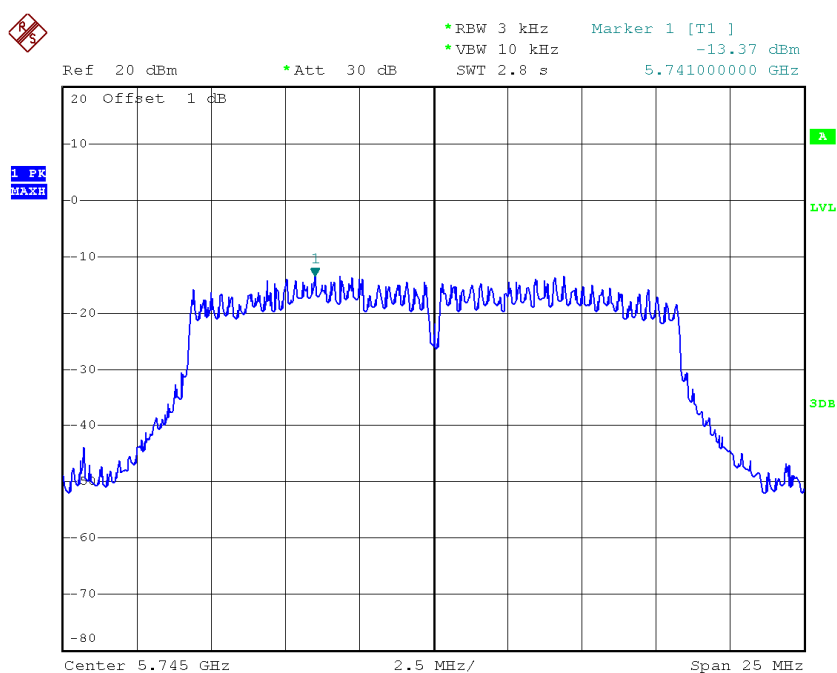
Date: 21.NOV.2014 18:02:24

## **ATTACHMENT H - POWER SPECTRAL DENSITY**

**Test Mode: UNII-3/TX A Mode\_CH149/CH157/CH165\_ANT 1**

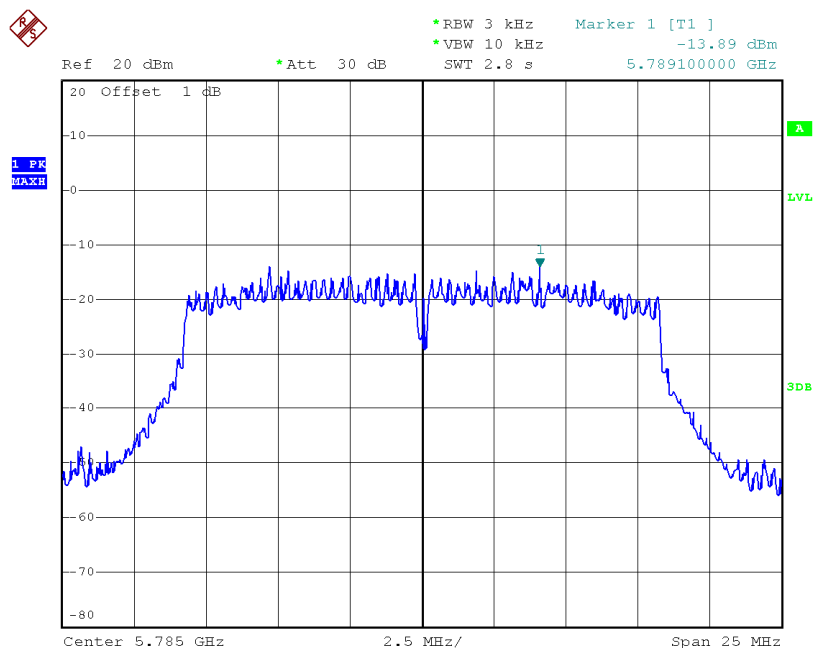
Channel	Frequency (MHz)	Power Density (dBm/3kHz)	Limit (dBm/3kHz)
CH149	5745	-13.37	8.00
CH157	5785	-13.89	8.00
CH165	5825	-13.61	8.00

**TX CH149**



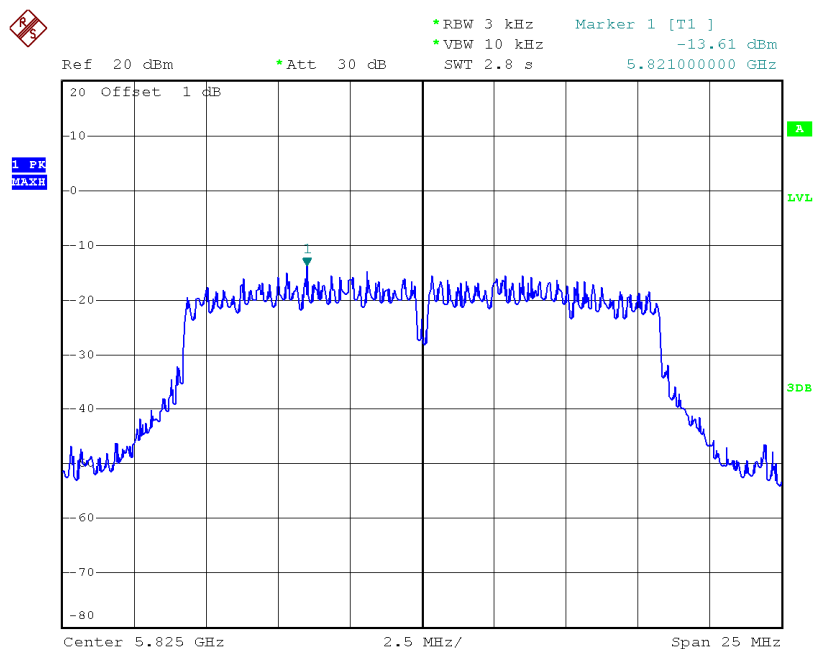
Date: 21.NOV.2014 13:24:30

# TX CH157



Date: 21.NOV.2014 14:09:10

# TX CH165

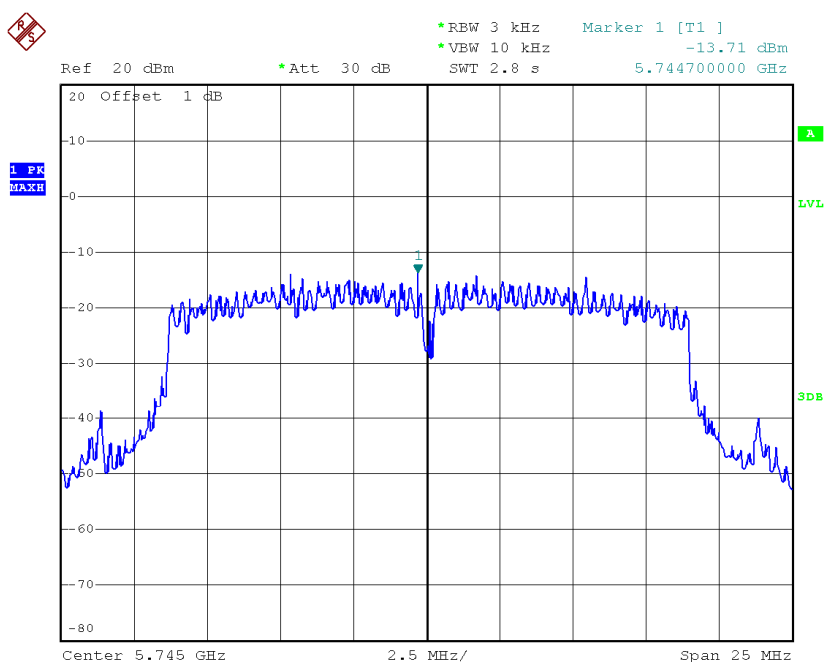


Date: 21.NOV.2014 14:11:11

**Test Mode: UNII-3/ TX N20 Mode\_CH149/CH157/CH165\_ANT 1**

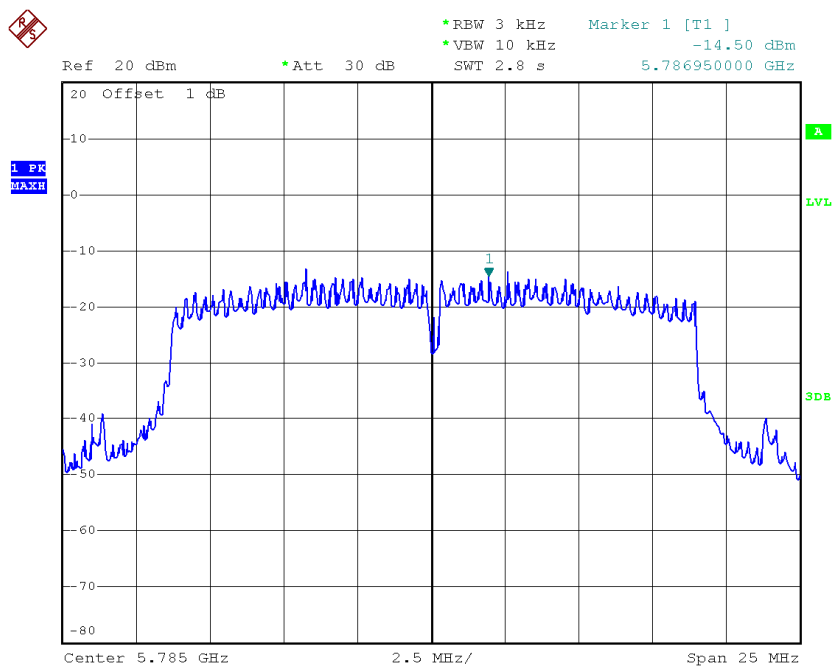
Channel	Frequency (MHz)	Power Density (dBm/3kHz)	Limit (dBm/3kHz)
CH149	5745	-13.71	8.00
CH157	5785	-14.50	8.00
CH165	5825	-14.06	8.00

**TX CH149**



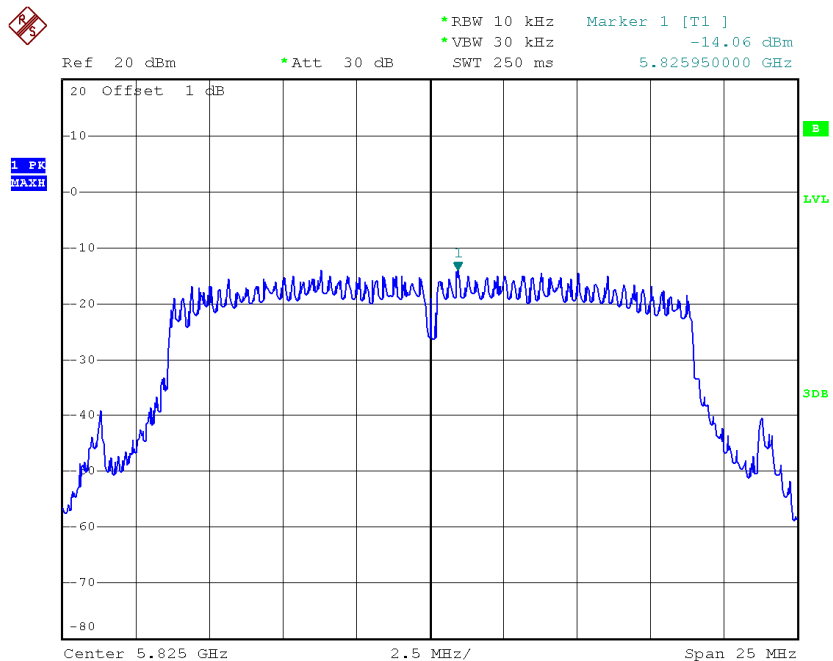
Date: 21.NOV.2014 15:17:31

# TX CH157



Date: 21.NOV.2014 15:35:34

# TX CH165



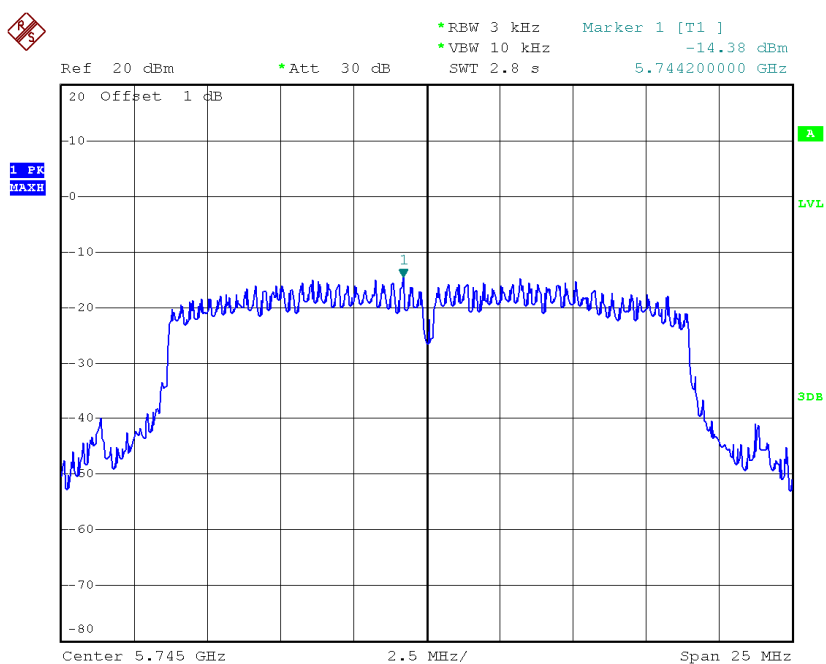
Date: 21.NOV.2014 17:16:21



**Test Mode: UNII-3/ TX N20 Mode\_CH149/CH157/CH165\_ANT 2**

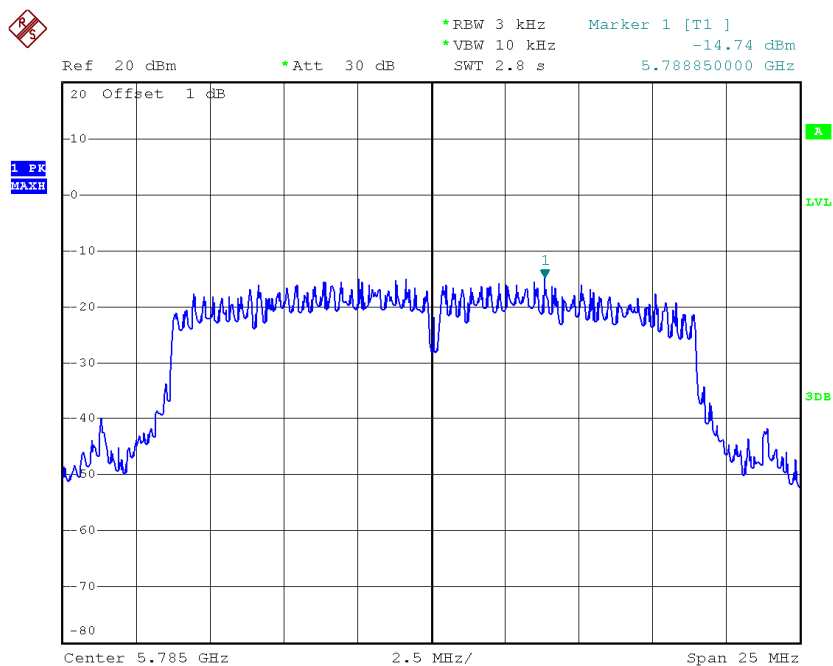
Channel	Frequency (MHz)	Power Density (dBm/3kHz)	Limit (dBm/3kHz)
CH149	5745	-14.38	8.00
CH157	5785	-14.74	8.00
CH165	5825	-13.72	8.00

**TX CH149**



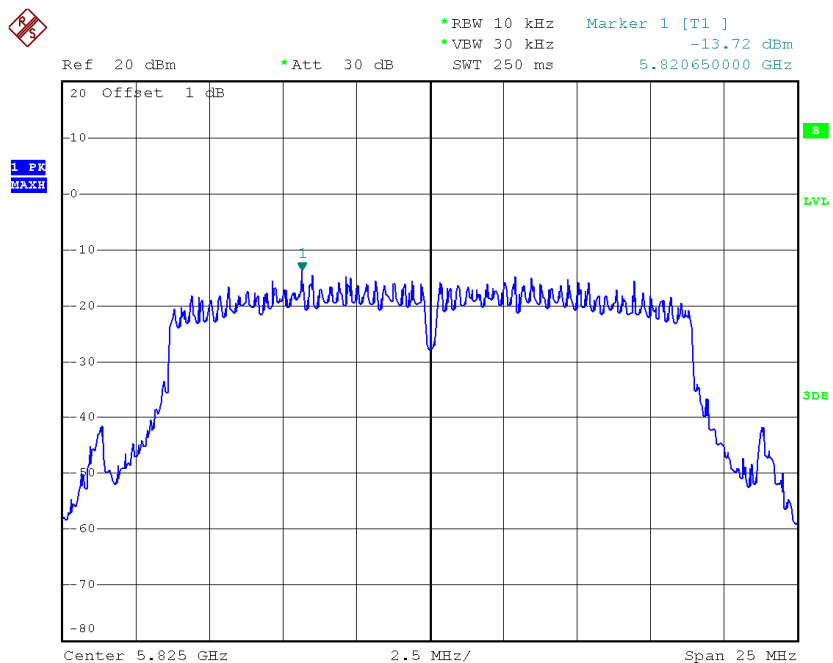
Date: 21.NOV.2014 15:17:55

# TX CH157



Date: 21.NOV.2014 15:35:46

# TX CH165



Date: 21.NOV.2014 17:16:33

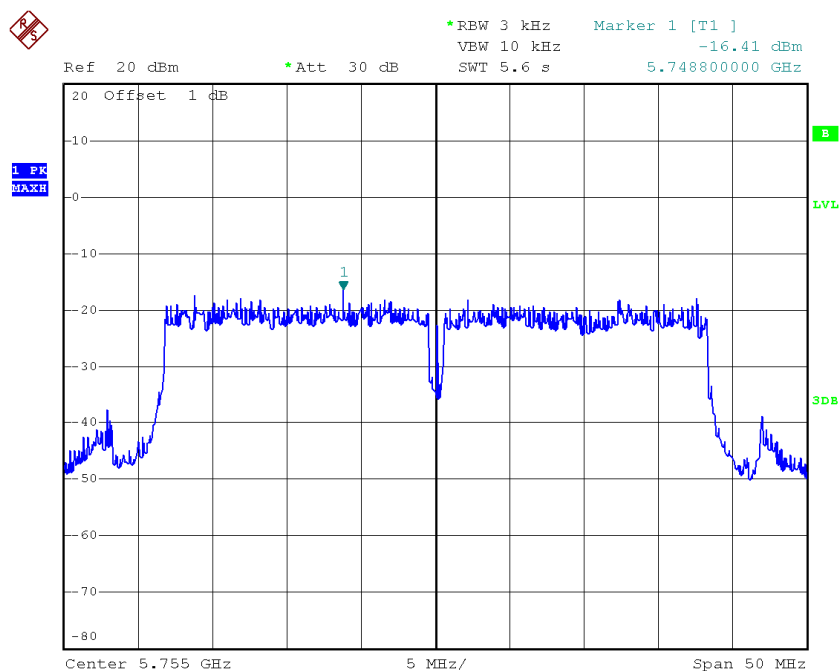
**Test Mode: UNII-3/ TX N20 Mode\_CH149/CH157/CH165\_Total**

Channel	Frequency (MHz)	Power Density (dBm/3kHz)	Limit (dBm/3kHz)
CH149	5745	-11.02	8.00
CH157	5785	-11.61	8.00
CH165	5825	-10.88	8.00

**Test Mode: UNII-3/ TX N40 Mode\_CH151/CH159\_ANT 1**

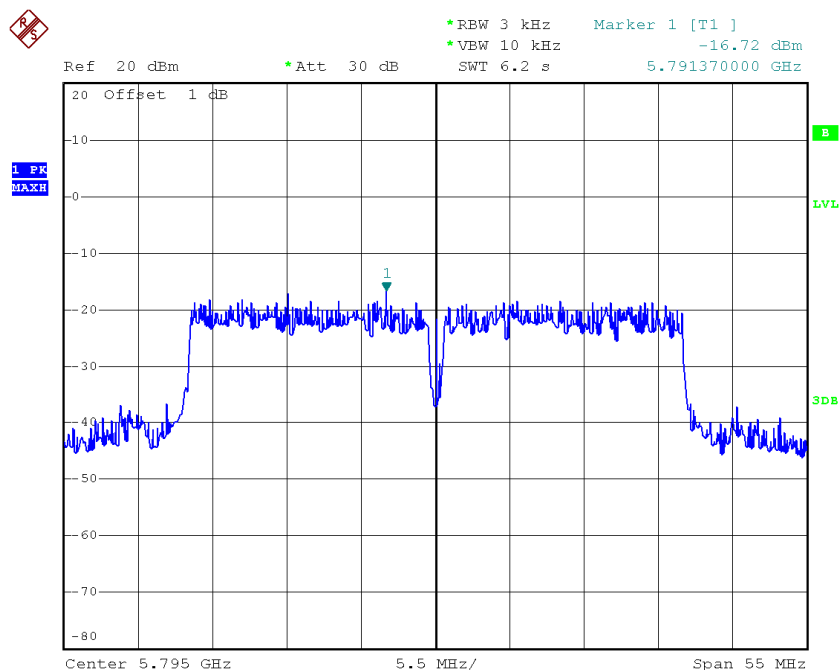
Channel	Frequency (MHz)	Power Density (dBm/3kHz)	Limit (dBm/3kHz)
CH151	5755	-16.41	8.00
CH159	5795	-16.72	8.00

# TX CH151



Date: 21.NOV.2014 17:51:10

# TX CH159

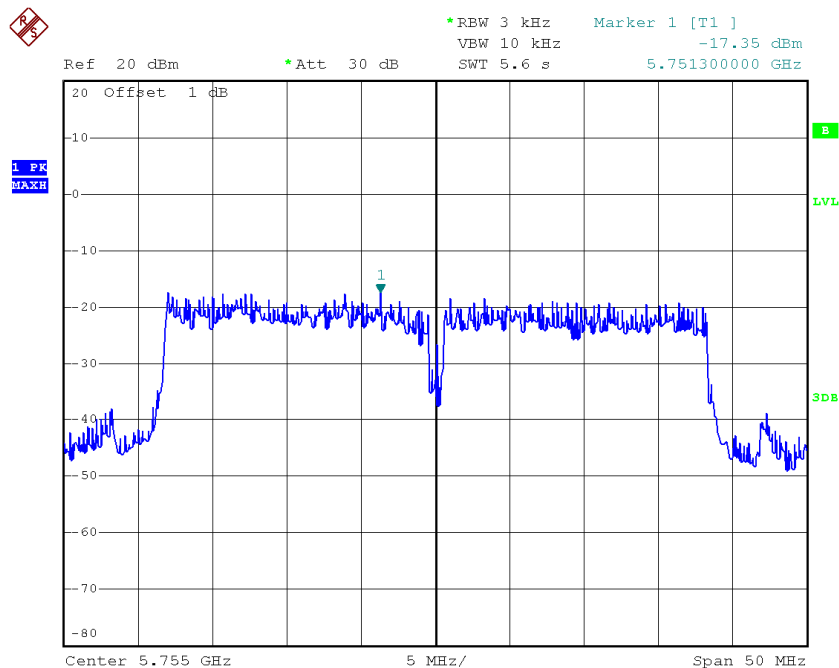


Date: 21.NOV.2014 18:06:34

**Test Mode: UNII-3/ TX N40 Mode\_CH151/CH159\_ANT 2**

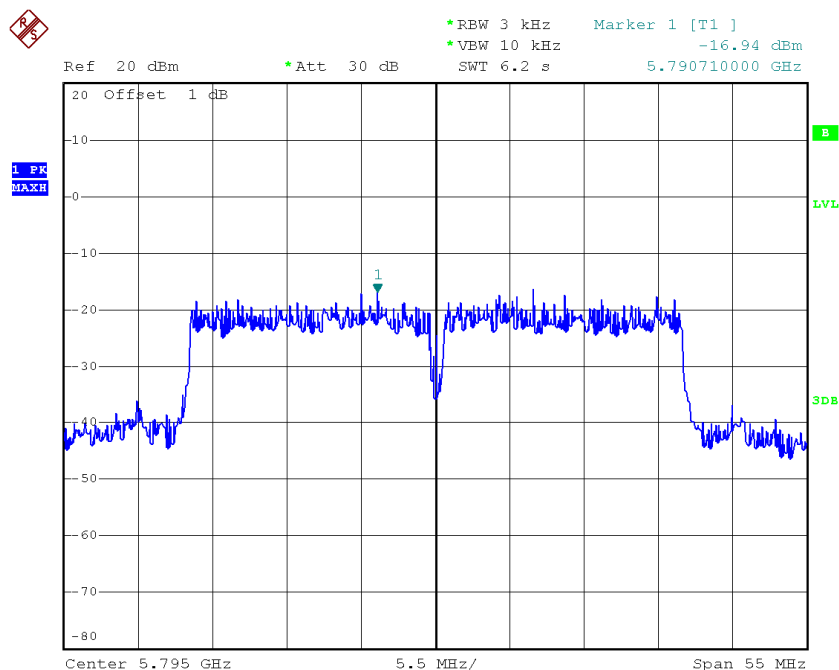
Channel	Frequency (MHz)	Power Density (dBm/3kHz)	Limit (dBm/3kHz)
CH151	5755	-17.35	8.00
CH159	5795	-16.94	8.00

# TX CH151



Date: 21.NOV.2014 17:51:21

# TX CH159



Date: 21.NOV.2014 18:06:44

**Test Mode: UNII-3/ TX N40 Mode\_CH151/CH159\_Total**

Channel	Frequency (MHz)	Power Density (dBm/3kHz)	Limit (dBm/3kHz)
CH151	5755	-13.84	8.00
CH159	5795	-13.82	8.00