



FCC Radio Test Report

FCC ID: V7TF1200

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

Project No. : 1406C099
Equipment : Wireless AC1200 Dual-band Router
Model Name : F1200
Applicant : SHENZHEN TENDA TECHNOLOGY CO.,LTD
Address : 6-8 Floor, Tower E3, No. 1001, Zhongshanyuan
Road, Nanshan District, Shenzhen, China. 518052

Tested by: BTL Inc. EMC Laboratory
Date of Receipt: Jun. 16, 2014
Date of Test: Jun. 16, 2014 ~ Jun. 27, 2014
Issued Date: Jun. 30, 2014

Testing Engineer : David Mao
(David Mao)

Technical Manager : Leo Hung
(Leo Hung)

Authorized Signatory : Steven Lu
(Steven Lu)

BTL INC.

No.3, Jinshagang 1st Road, Shixia,
Dalang Town, Dongguan, China.
TEL: 0769-8318-3000 FAX: 0769-8319-6000



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.**

BTL's reports apply only to the specific samples tested under conditions. It is manufacture's responsibility to ensure that additional production units of this model are manufactured with the identical electrical and mechanical components. **BTL** shall have no liability for any declarations, inferences or generalizations drawn by the client or others from **BTL** issued reports.

BTL's reports must not be used by the client to claim product endorsement by the authorities or any agency of the Government.

This report is the confidential property of the client. As a mutual protection to the clients, the public and **BTL-self**, extracts from the test report shall not be reproduced except in full with **BTL's** authorized written approval.

BTL's laboratory quality assurance procedures are in compliance with the **ISO Guide 17025** requirements, and accredited by the conformity assessment authorities listed in this test report.

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
1 . CERTIFICATION	6
2 . SUMMARY OF TEST RESULTS	7
2.1 TEST FACILITY	8
2.2 MEASUREMENT UNCERTAINTY	8
3 . GENERAL INFORMATION	9
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	14
4 . EMC EMISSION TEST	15
4.1 CONDUCTED EMISSION MEASUREMENT	15
4.1.1 POWER LINE CONDUCTED EMISSION LIMITS	15
4.1.2 TEST PROCEDURE	15
4.1.3 DEVIATION FROM TEST STANDARD	15
4.1.4 TEST SETUP	16
4.1.5 EUT OPERATING CONDITIONS	16
4.1.6 EUT TEST CONDITIONS	16
4.1.7 TEST RESULTS	16
4.2 RADIATED EMISSION MEASUREMENT	17
4.2.1 RADIATED EMISSION LIMITS	17
4.2.2 TEST PROCEDURE	18
4.2.3 DEVIATION FROM TEST STANDARD	18
4.2.4 TEST SETUP	19
4.2.5 EUT OPERATING CONDITIONS	20
4.2.6 EUT TEST CONDITIONS	20
4.2.7 TEST RESULTS (9K TO 30MHZ)	20
4.2.8 TEST RESULTS (BETWEEN 30 TO 1000 MHZ)	20
4.2.9 TEST RESULTS (ABOVE 1000 MHZ)	21
5 . BANDWIDTH TEST	22
5.1 APPLIED PROCEDURES	22
5.1.1 TEST PROCEDURE	22
5.1.2 DEVIATION FROM STANDARD	22
5.1.3 TEST SETUP	22
5.1.4 EUT OPERATION CONDITIONS	22
5.1.5 EUT TEST CONDITIONS	22
5.1.6 TEST RESULTS	22

Table of Contents	Page
6 . MAXIMUM OUTPUT POWER TEST	23
6.1 APPLIED PROCEDURES / LIMIT	23
6.1.1 TEST PROCEDURE	23
6.1.2 DEVIATION FROM STANDARD	23
6.1.3 TEST SETUP	23
6.1.4 EUT OPERATION CONDITIONS	23
6.1.5 EUT TEST CONDITIONS	23
6.1.6 TEST RESULTS	23
7 . ANTENNA CONDUCTED SPURIOUS EMISSION	24
7.1 APPLIED PROCEDURES / LIMIT	24
7.1.1 TEST PROCEDURE	24
7.1.2 DEVIATION FROM STANDARD	24
7.1.3 TEST SETUP	24
7.1.4 EUT OPERATION CONDITIONS	24
7.1.5 EUT TEST CONDITIONS	24
7.1.6 TEST RESULTS	24
8 . POWER SPECTRAL DENSITY TEST	25
8.1 APPLIED PROCEDURES / LIMIT	25
8.1.1 TEST PROCEDURE	25
8.1.2 DEVIATION FROM STANDARD	25
8.1.3 TEST SETUP	25
8.1.4 EUT OPERATION CONDITIONS	25
8.1.5 EUT TEST CONDITIONS	25
8.1.6 TEST RESULTS	25
9 . MEASUREMENT INSTRUMENTS LIST	26
10 . EUT TEST PHOTO	28
ATTACHMENT A - CONDUCTED EMISSION	32
ATTACHMENT B - RADIATED EMISSION (9KHZ TO 30MHZ)	错误！未定义书签。
ATTACHMENT C - RADIATED EMISSION (30MHZ TO 1000MHZ)	37
ATTACHMENT D - RADIATED EMISSION (ABOVE 1000MHZ)	44
ATTACHMENT E - BANDWIDTH	101
ATTACHMENT F - MAXIMUM OUTPUT POWER	118
ATTACHMENT G – ANTENNA CONDUCTED SPURIOUS EMISSION	125
ATTACHMENT H – POWER SPECTRAL DENSITY	173



REPORT ISSUED HISTORY

Issued No.	Description	Issued Date
NEI-FCCP-3-1406C099	Original Issue.	Jun. 30, 2014

1. CERTIFICATION

Equipment : Wireless AC1200 Dual-band Router
Brand Name : Tenda
Model Name : F1200
Applicant : SHENZHEN TENDA TECHNOLOGY CO.,LTD
Manufacturer : SHENZHEN TENDA TECHNOLOGY CO.,LTD
Address : 6-8 Floor,Tower E3,No.1001,Zhongshanyuan Road,Nanshan District,
Shenzhen,China.518052
Date of Test : Jun. 16, 2014 ~ Jun.27, 2014
Test Item : 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. EMC Laboratory.

The test data, data evaluation, and equipment configuration contained in our test report (Ref No. NEI-FCCP-3-1406C099) 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) The test follows FCC KDB Publication No. 558074 D01 DTS Meas Guidance v03r01 (Measurement Guidelines of DTS)

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, Dong Guan, China.523792
BTL's test firm number for FCC: 319330

2.2 MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

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 , (dB)	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	Wireless AC1200 Dual-band Router	
Brand Name	Tenda	
Model Name	F1200	
Model Difference	N/A	
Product Description	Operation Frequency	5745~5825 MHz
	Modulation Technology	802.11a/n/ac:OFDM
	Bit Rate of Transmitter	300Mbps
	Output Power (Max.)	802.11a: 23.40dBm 802.11n (20M): 25.56dBm 802.11n (40M): 26.14dBm 802.11ac (20M): 25.66 dBm 802.11ac (40M): 25.91 dBm 802.11ac (80M): 26.16 dBm
Power Source	DC Voltage supplied from AC/DC adapter. Manufacturer: SHENZHEN HEWEISHUN NETWORK TECHNOLOGY CO.LTD Model: TEA12U-12100	
Power Rating	I/P: AC 100-240V~ 50/60Hz 0.3A O/P: DC 12V/1 A	
Connecting I/O Port(s)	Please refer to the User's Manual	

Note:

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

2.

802.11a / 802.11n 20M / 802.11ac 20M					
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
149	5745	153	5765	157	5785
161	5805	165	5825		

802.11n 40M / 802.11ac 40M			
Channel	Frequency (MHz)	Channel	Frequency (MHz)
151	5755	159	5795

802.11ac 80M			
Channel	Frequency (MHz)		
155	5775		

3. Table for Filed Antenna

Ant.	Manufacturer	Model Name	Antenna Type	Connector	Gain (dBi)	Note
0	Tenda	Q5116	Internal	N/A	3.25	TX/RX
1	Tenda	Q5116	Internal	N/A	3.25	TX/RX

Note:

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_{ANT} , that is Directional gain=3.25.

4.

Operating Mode	1TX	2TX
TX Mode		
802.11a	V (ANT 2 or ANT 3)	-
802.11n(20MHz)	-	V (ANT 2 + ANT 3)
802.11n(40MHz)	-	V (ANT 2 + ANT 3)
802.11ac(40MHz)	-	V (ANT 2 + ANT 3)
802.11ac(80MHz)	-	V (ANT 2 + ANT 3)

3.2 DESCRIPTION OF TEST MODES

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

Pretest Mode	Description
Mode 1	TX A MODE CHANNEL 149/157/165
Mode 2	TX N-20MHZ MODE CHANNEL 149/157/165
Mode 3	TX N-40MHZ MODE CHANNEL 151/159
Mode 4	TX AC N20 Mode Channel 149/157/165
Mode 5	TX AC N40 Mode Channel 151/159
Mode 6	TX AC N80 Mode Channel 155
Mode 7	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 Channel 149/157/165
Mode 2	TX N20 Mode Channel 149/157/165
Mode 3	TX N40 Mode Channel 151/159
Mode 4	TX AC N20 Mode Channel 149/157/165
Mode 5	TX AC N40 Mode Channel 151/159
Mode 6	TX AC N80 Mode Channel 155

Note:

(1) For radiated below 1G test, the 802.11a is found to be the worst case and recorded.

3.3 TABLE OF PARAMETERS OF TEXT SOFTWARE SETTING

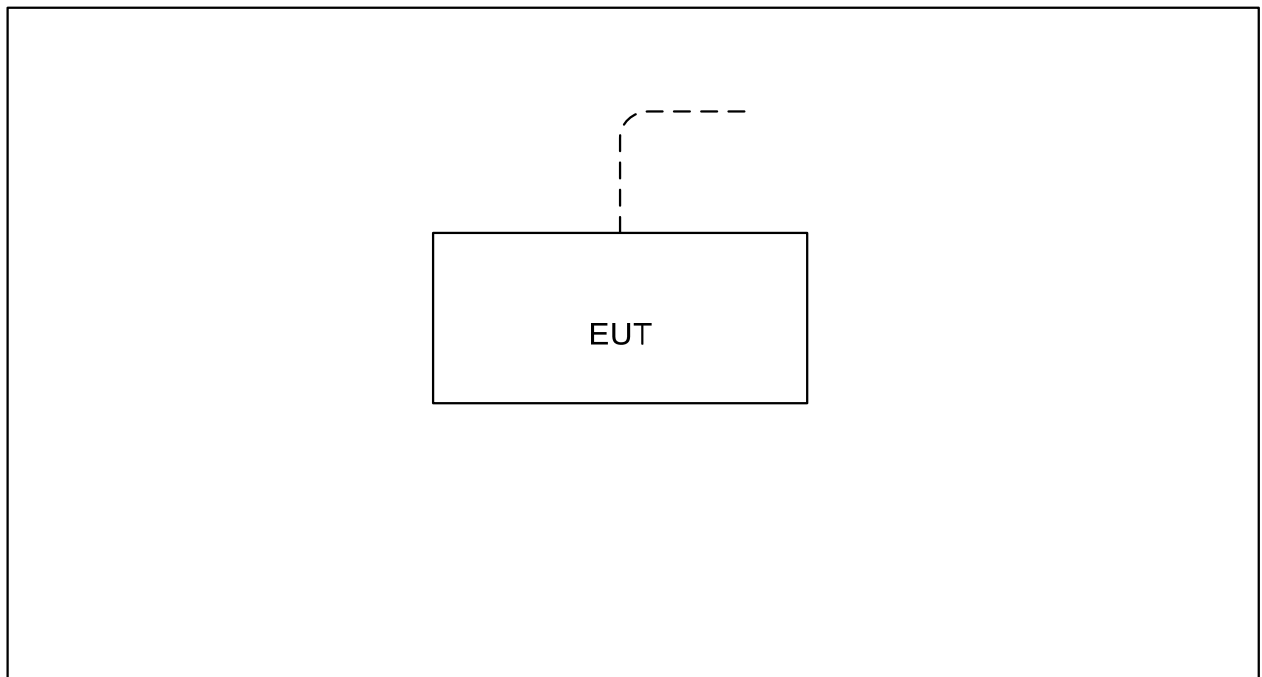
During testing, channel & power controlling software provided by the customer was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final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

Test software version	Mtool_2.0.0.6exe		
Frequency	5745 MHz	5785 MHz	5825MHz
TX A Mode	78	78	78
TX N20 Mode	65	67	68
TX AC 20 Mode	69	67	69

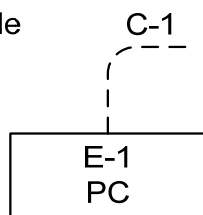
Test software version	Mtool_2.0.0.6exe	
Frequency	5745 MHz	5825MHz
TX N40 Mode	70	69
TX AC 40 Mode	70	70

Test software version	Mtool_2.0.0.6exe	
Frequency	5775 MHz	
TX AC 80 Mode	71	

3.4 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED



C-1 RJ45 Cable



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
E-1	PC	Dell 745	DCSM	DOC	G7K832X	-

Item	Shielded Type	Ferrite Core	Length	Note
C-1	NO	NO	10m	-

4. EMC EMISSION TEST

4.1 CONDUCTED EMISSION MEASUREMENT

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

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

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.

The following table is the setting of the receiver

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 KHz

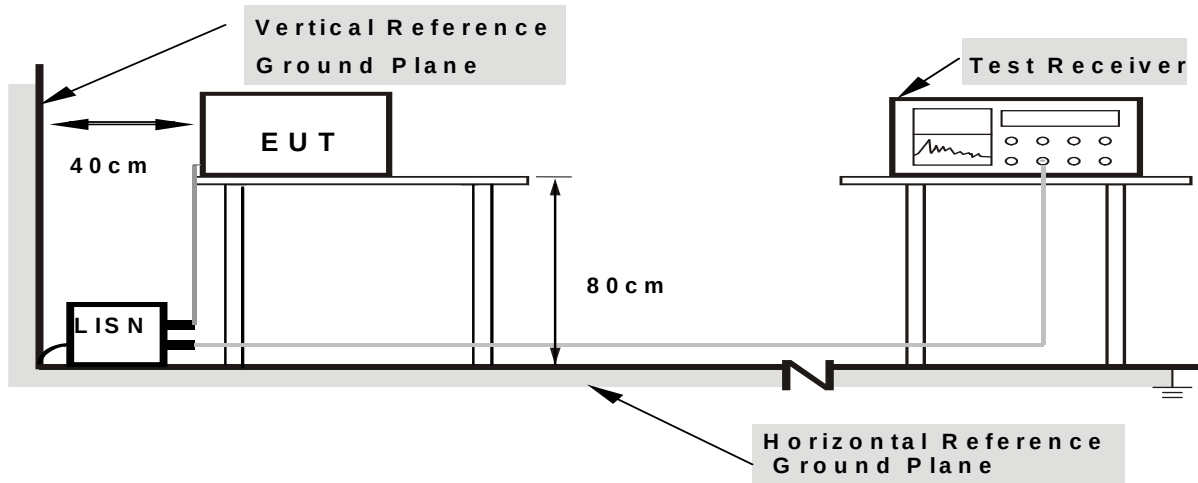
4.1.2 TEST PROCEDURE

- 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



Note: 1.Support units were connected to second LISN.
 2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes

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.

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 (Frequency Range 9KHz-1000MHz)

20dB 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.

Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(KHz)	300
0.490~1.705	24000/F(KHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
960~1000	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).

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

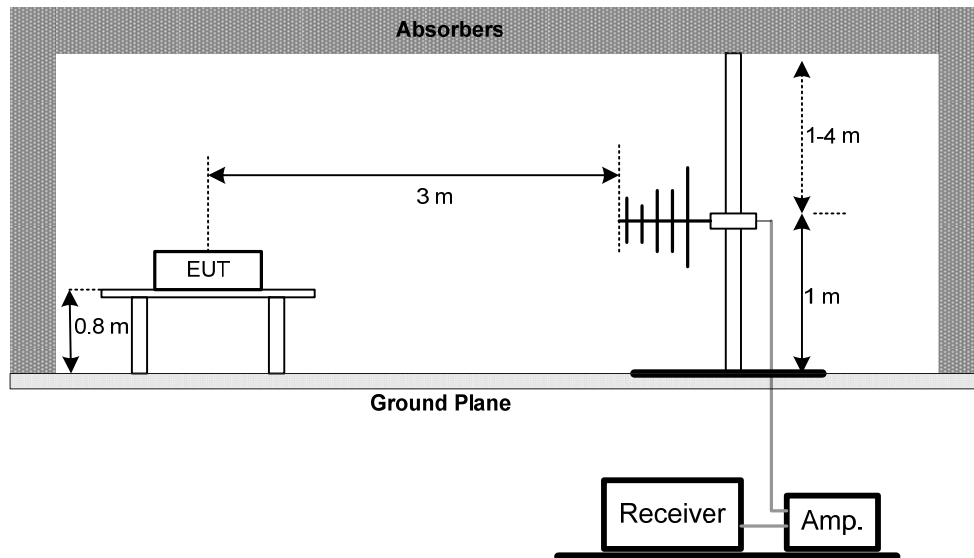
- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(below 1GHz)
- b. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(above 1GHz)
- c. 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.
- d. 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.
- e. 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.
- f. For the actual test configuration, please refer to the related Item –EUT Test Photos.

4.2.3 DEVIATION FROM TEST STANDARD

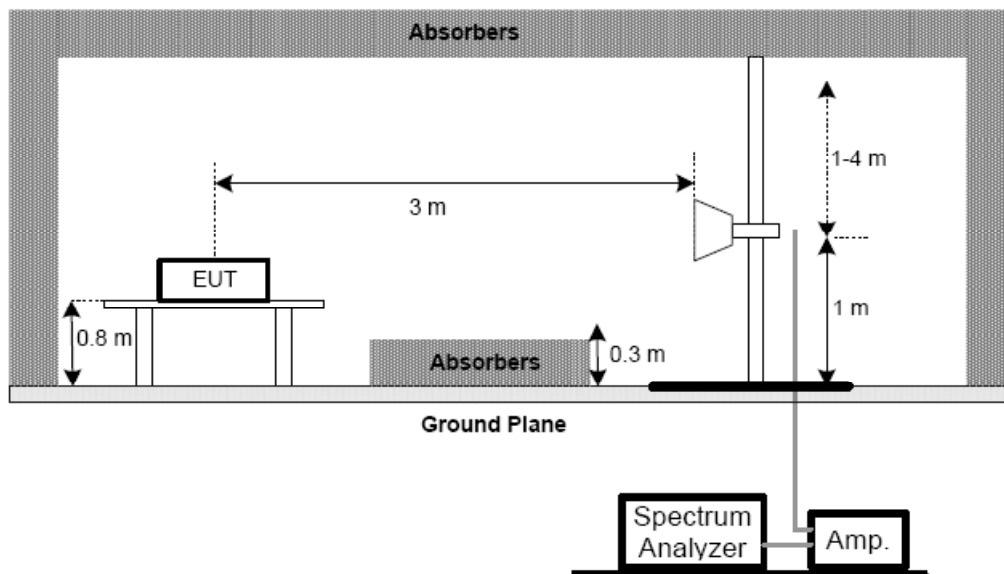
No deviation

4.2.4 TEST SETUP

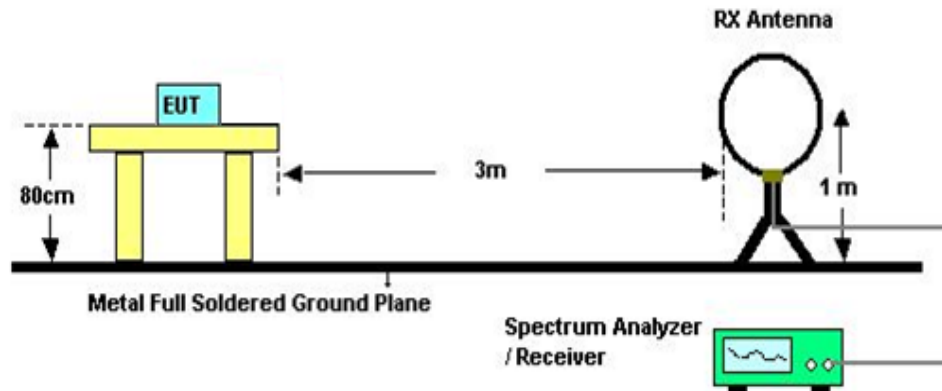
(A) Radiated Emission Test Set-Up Frequency Below 1 GHz



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



(C) For radiated emissions below 30MHz



4.2.5 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of 4.1.6 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: AC 120V/60Hz

4.2.7 TEST RESULTS (9K TO 30MHZ)

Please refer to the Attachment B

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) 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.
- (2) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission.
- (3) 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.
- (4) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (5) EUT Orthogonal Axis:
"X" - denotes Laid on Table; "Y" - denotes Vertical Stand; "Z" - denotes Side Stand
- (6) During the measurements above 1 GHz it is taken care of that the EUT is always within the 3 dB cone of radiation BW of the used antenna

5. BANDWIDTH TEST

5.1 Applied procedures

FCC Part15 (15.247) , Subpart C			
Section	Test Item	Frequency Range (MHz)	Result
15.247(a)(2)	Bandwidth	5725 - 5825	PASS

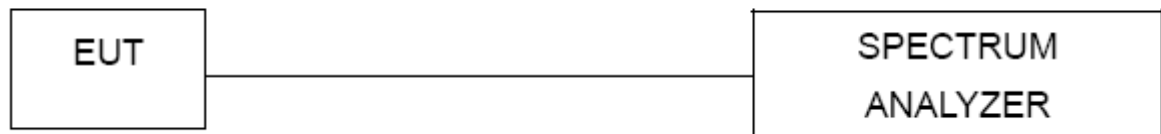
5.1.1 TEST PROCEDURE

- 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 4.1.6 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: AC 120V/60Hz

5.1.6 TEST RESULTS

Please refer to the Attachment E.

6. MAXIMUM OUTPUT POWER TEST

6.1 Applied procedures / limit

FCC Part15 (15.247) , Subpart C				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247(b)(3)	Maximum Output Power	1 Watt or 30dBm	5725 - 5825	PASS

6.1.1 TEST PROCEDURE

- The EUT was directly connected to the power meter and antenna output port as show in the block diagram below,
- The maximum peak conducted output power was performed in accordance with method 9.1.3 of FCC KDB 558074 D01 DTS Meas Guidance v03r01.

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 4.1.6 Unless otherwise a special operating condition is specified in the follows during the testing.

Transmit output power was measured while the host equipment supply voltage was varied from 85 % to 115 % of the nominal rated supply voltage. No change in transmit output power was observed.

6.1.5 EUT TEST CONDITIONS

Temperature: 25°C

Relative Humidity: 55%

Test Voltage: AC 120V/60Hz

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 4.1.6 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: AC 120V/60Hz

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.

8.1.2 DEVIATION FROM STANDARD

No deviation.

8.1.3 TEST SETUP



8.1.4 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 4.1.6 Unless otherwise a special operating condition is specified in the follows during the testing.

8.1.5 EUT TEST CONDITIONS

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

8.1.6 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

Radiated Emission Measurement					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Antenna	EMCO	3142C	00066462	Mar. 29, 2015
2	Antenna	EMCO	3142C	00066464	Mar. 29, 2015
3	Amplifier	Agilent	8447D	2944A11203	Nov. 11, 2014
4	Amplifier	Agilent	8447D	2944A11204	Nov. 11, 2014
5	Spectrum Analyzer	Agilent	E4443A	MY48250370	Nov. 11, 2014
6	RF Pre-selector	Agilent	N9039A	MY46520201	Nov. 11, 2014
7	Test Cable	N/A	Cable_5m_8m_15m	N/A	Jan. 14, 2015
8	Test Cable	N/A	Cable_5m_11m_15m	N/A	Jan. 14, 2015
9	Spectrum Analyzer	Agilent	E4447A	MY48250208	Nov. 11, 2014
10	RF Pre-selector	Agilent	N9039A	MY46520214	Nov. 11, 2014
11	Multi-Device Controller	ETS-Lindgren	2090	N/A	N/A
12	Horn Antenna	EMCO	3115	9605-4803	Mar. 29, 2015
13	Amplifier	Agilent	8449B	3008A02584	Nov. 11, 2014
14	Spectrum Analyzer	Agilent	E4447A	MY48250208	Nov. 11, 2014
15	Test Cable	Huber+Suhner	SUCOFLEX_15m_4m	N/A	Jan. 14, 2015
16	Multi-Device Controller	ETS-Lindgren	2090	N/A	N/A
17	Broad-Band Horn Antenna (40G)	Schwarzbeck	BBHA 9170	9170319	Feb. 22, 2015

6dB Bandwidth Measurement					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP 40	100185	Nov. 11, 2014

Peak Output Power Measurement					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	P-series Power meter	Agilent	N1911A	MY45100473	Apr. 24, 2015
2	Wireband Power sensor	Agilent	N1921A	MY51100041	Apr. 24, 2015

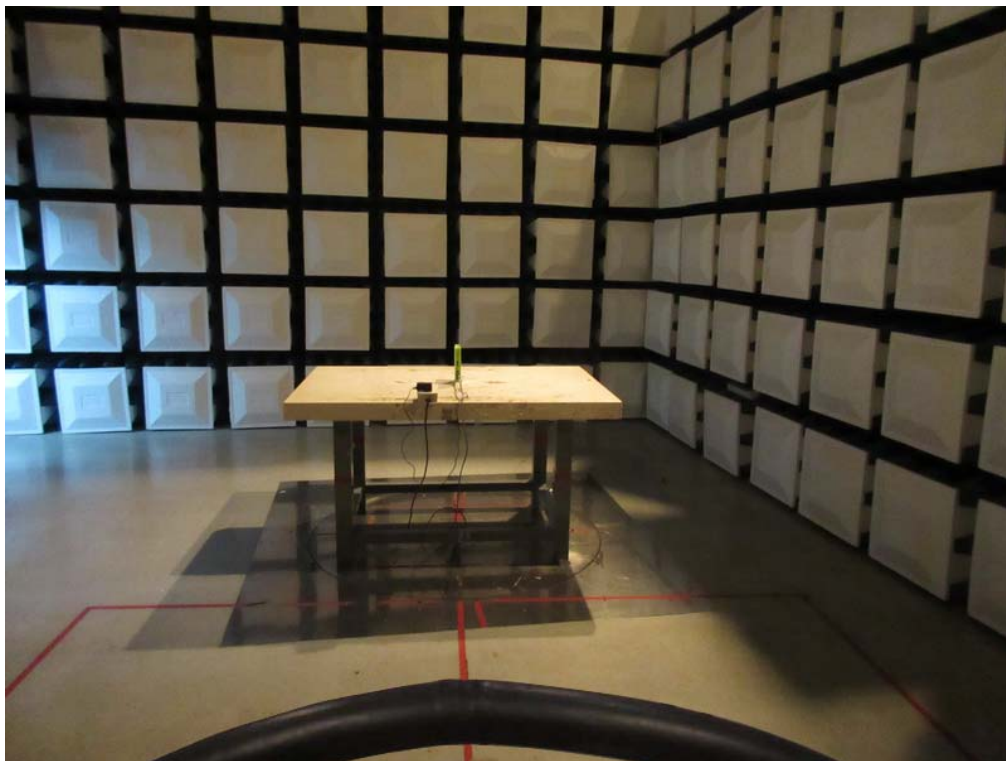
Antenna Conducted Spurious Emission Measurement					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP 40	100185	Nov. 11, 2014

Power Spectral Density Measurement					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP 40	100185	Nov. 11, 2014

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

10. EUT TEST PHOTO**Conducted Measurement Photos**

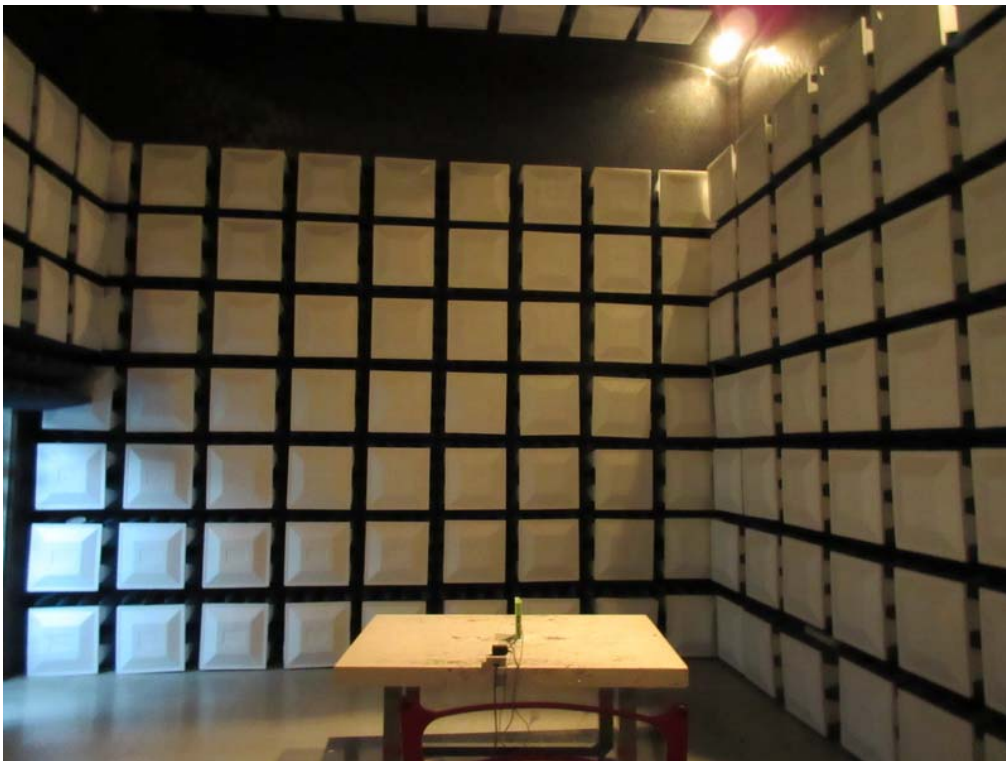
**Radiated Measurement Photos
9KHz to 30MHz**



**Radiated Measurement Photos
30MHz to 1000MHz**



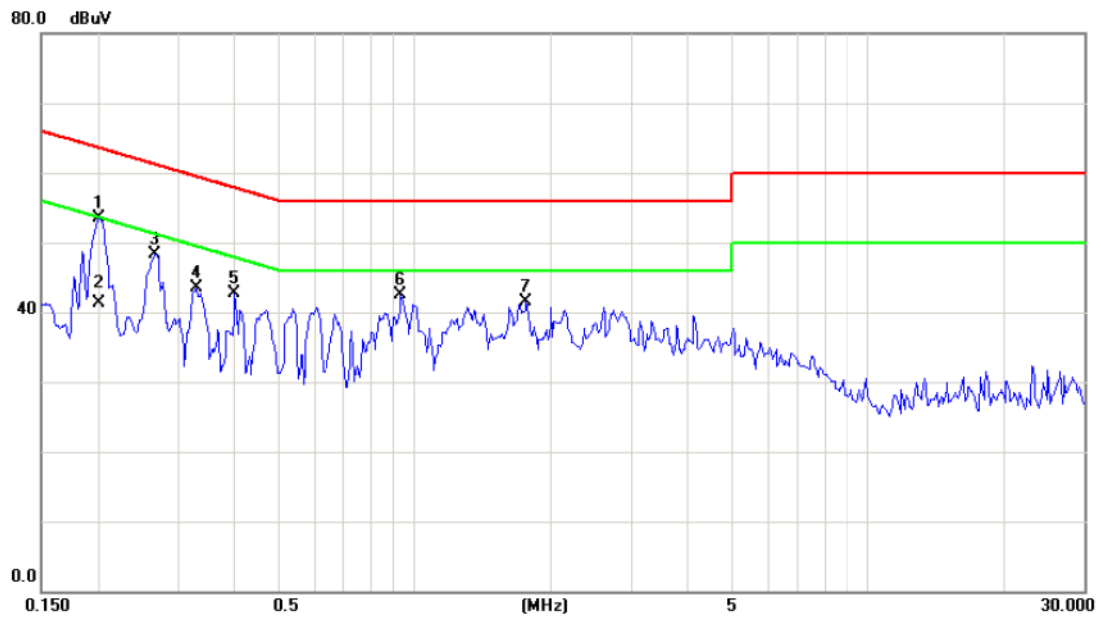
**Radiated Measurement Photos
Above 1000MHz**



ATTACHMENT A - CONDUCTED EMISSION

Test Mode : TX MODE

Line

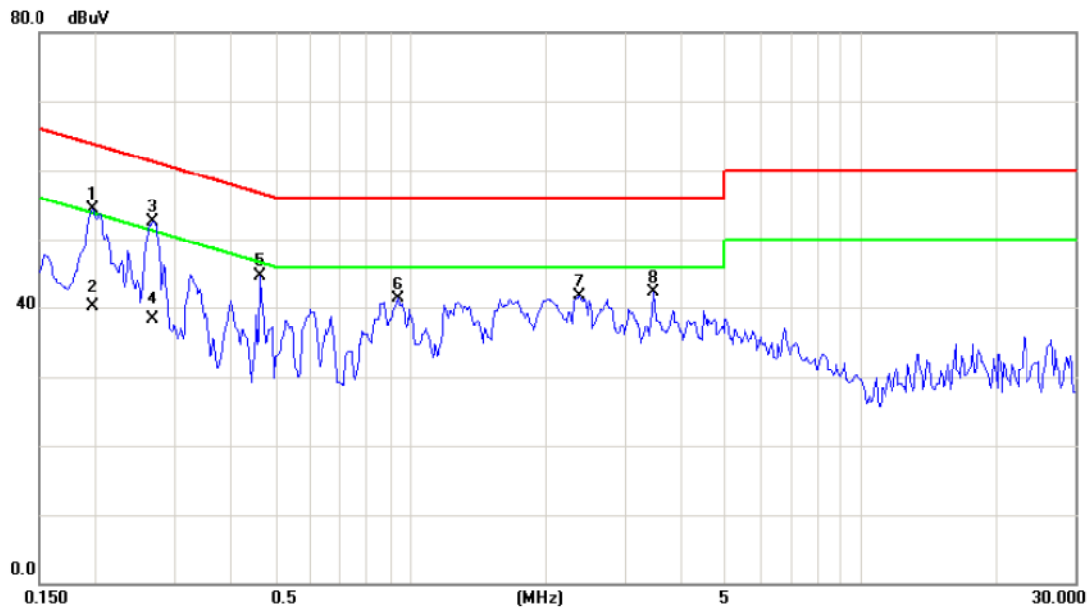


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1	*	0.2008	43.99	9.54	53.53	63.58	-10.05	peak	
2		0.2008	31.70	9.54	41.24	53.58	-12.34	AVG	
3		0.2672	38.65	9.58	48.23	61.20	-12.97	peak	
4		0.3297	33.90	9.61	43.51	59.46	-15.95	peak	
5		0.4000	33.15	9.65	42.80	57.85	-15.05	peak	
6		0.9352	32.85	9.68	42.53	56.00	-13.47	peak	
7		1.7672	31.72	9.70	41.42	56.00	-14.58	peak	

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		0.1970	44.65	9.61	54.26	63.74	-9.48	peak	
2		0.1970	30.50	9.61	40.11	53.74	-13.63	AVG	
3	*	0.2672	42.87	9.62	52.49	61.20	-8.71	peak	
4		0.2672	28.70	9.62	38.32	51.20	-12.88	AVG	
5		0.4625	35.00	9.64	44.64	56.65	-12.01	peak	
6		0.9430	31.60	9.67	41.27	56.00	-14.73	peak	
7		2.3687	31.86	9.76	41.62	56.00	-14.38	peak	
8		3.4688	32.57	9.81	42.38	56.00	-13.62	peak	

Note : The test result has included the cable loss.

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

Test Mode: TX Mode 2412MHz

Freq. (MHz)	Ant. 0°/90°	Reading(RA) (dBuV)	Corr.Factor(CF) (dB)	Measured(FS) (dBuV/m)	Limits(QP) (dBuV/m)	Margin (dB)	Note
0.0094	0°	68.35	24.30	92.65	128.12	-35.47	AVG
0.0095	0°	72.35	24.30	96.65	148.12	-51.47	PEAK
0.0136	0°	70.35	24.30	94.65	124.93	-30.28	AVG
0.0137	0°	79.35	24.30	103.65	144.93	-41.28	PEAK
0.0243	0°	56.36	24.03	80.39	119.89	-39.50	AVG
0.0245	0°	60.12	24.03	84.15	139.89	-55.74	PEAK
0.0326	0°	61.36	23.50	84.86	117.34	-32.48	AVG
0.0328	0°	65.38	23.50	88.88	137.34	-48.46	PEAK
0.5670	0°	18.72	20.01	38.73	72.53	-33.80	QP
1.7535	0°	18.95	19.52	38.47	69.54	-31.07	QP

Freq. (MHz)	Ant. 0°/90°	Reading(RA) (dBuV)	Corr.Factor(CF) (dB)	Measured(FS) (dBuV/m)	Limits(QP) (dBuV/m)	Margin (dB)	Note
0.0094	90°	76.35	24.30	100.65	128.19	-27.54	AVG
0.0094	90°	82.36	24.30	106.66	148.19	-41.53	PEAK
0.0234	90°	56.38	24.08	80.46	120.22	-39.76	AVG
0.0237	90°	59.35	24.08	83.43	140.22	-56.79	PEAK
0.0315	90°	57.35	23.57	80.92	117.64	-36.72	AVG
0.0318	90°	58.35	23.57	81.92	137.64	-55.72	PEAK
0.0426	90°	59.35	22.87	82.22	115.02	-32.80	AVG
0.0429	90°	63.35	22.87	86.22	135.02	-48.80	PEAK
0.4914	90°	17.45	19.82	37.27	73.78	-36.50	QP
1.7157	90°	18.63	19.53	38.16	69.54	-31.38	QP

Remark:

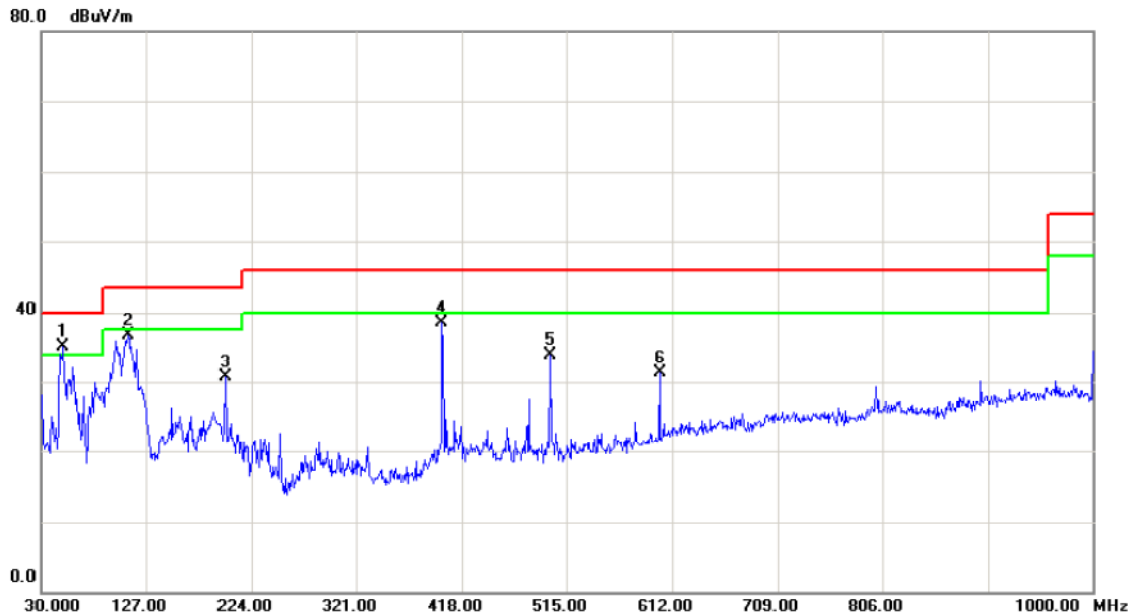
- (1) The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.
- (2) Distance extrapolation factor = $40 \log (\text{specific distance} / \text{test distance})$ (dB);
- (3) Limit line = specific limits (dBuV) + distance extrapolation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



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

Test Mode: TX A MODE 5745MHz

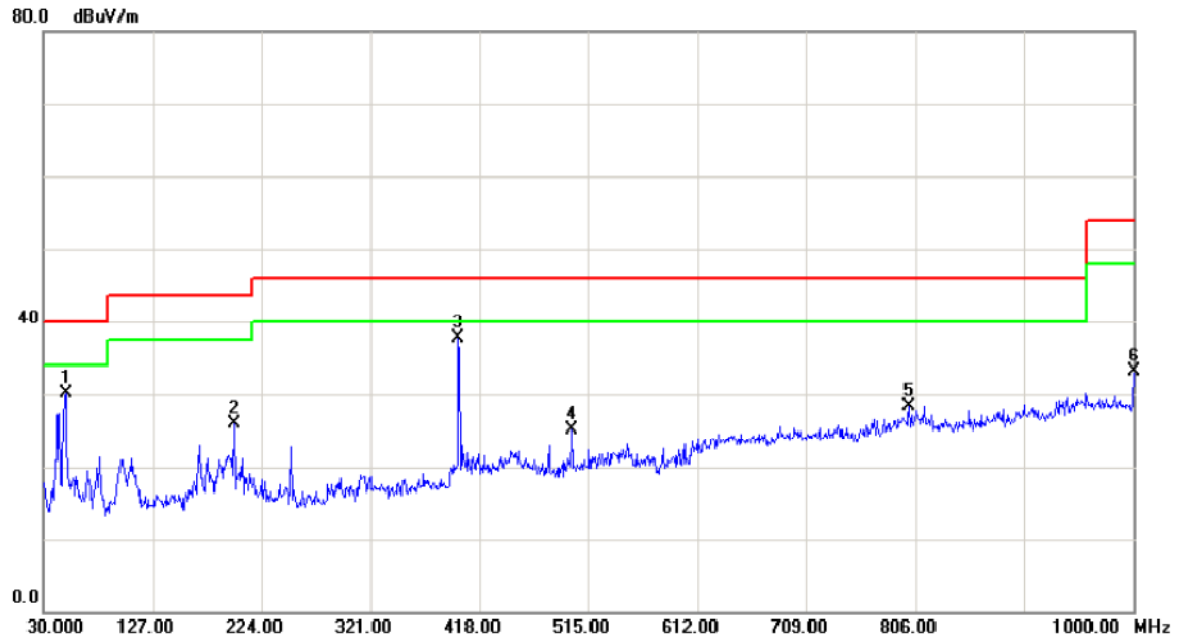
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	50.3700	49.47	-14.29	35.18	40.00	-4.82	peak	
2		110.5100	52.00	-15.35	36.65	43.50	-6.85	peak	
3		199.7500	45.88	-15.13	30.75	43.50	-12.75	peak	
4		399.5700	48.17	-9.70	38.47	46.00	-7.53	peak	
5		500.4500	44.50	-10.52	33.98	46.00	-12.02	peak	
6		600.3600	39.30	-8.08	31.22	46.00	-14.78	peak	

Test Mode: TX A MODE 5745MHz

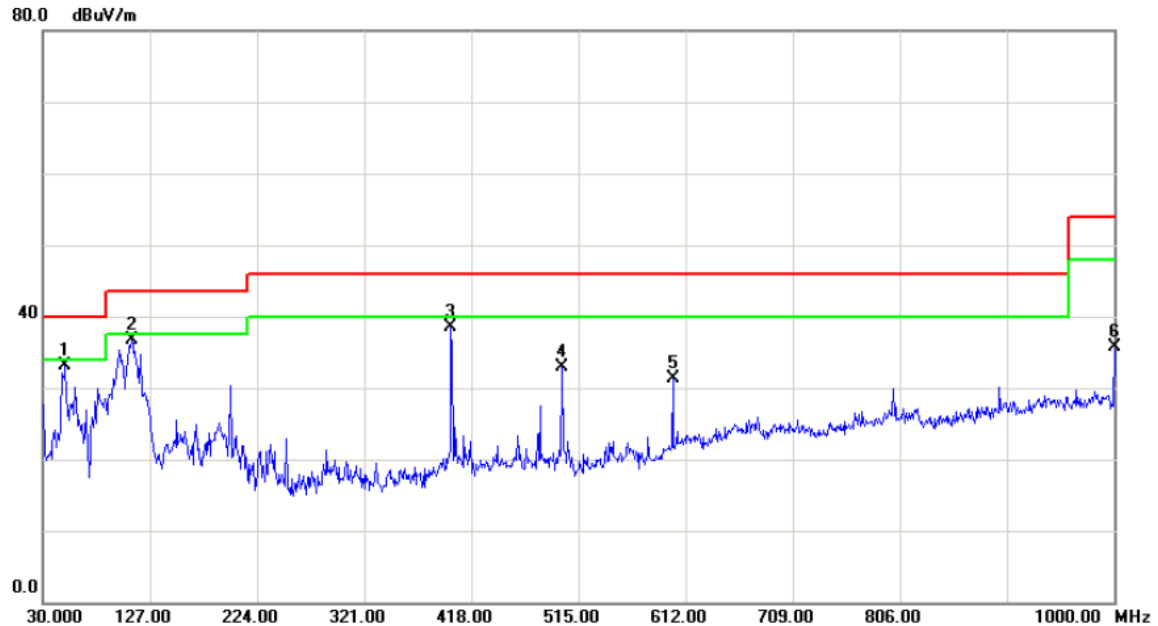
Horizontal



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		49.4000	44.39	-14.22	30.17	40.00	-9.83	peak	
2		199.7500	41.13	-15.13	26.00	43.50	-17.50	peak	
3	*	399.5700	47.49	-9.70	37.79	46.00	-8.21	peak	
4		500.4500	35.65	-10.52	25.13	46.00	-20.87	peak	
5		800.1800	31.20	-2.91	28.29	46.00	-17.71	peak	
6		1000.000	33.63	-0.44	33.19	54.00	-20.81	peak	

Test Mode: TX A MODE 5785MHz

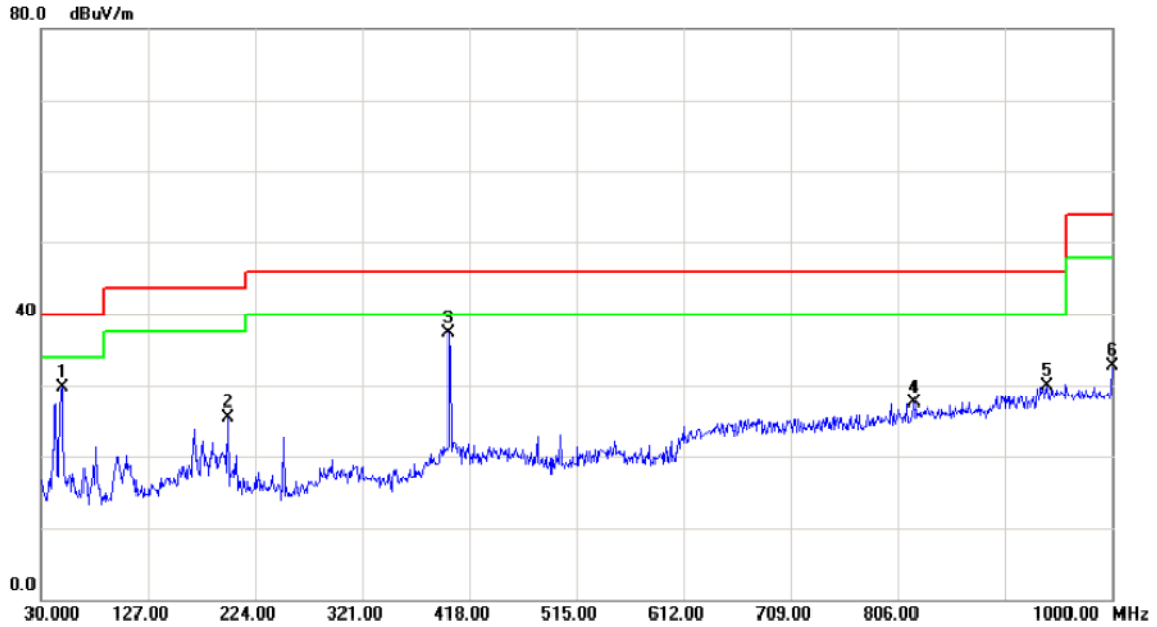
Vertical



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	*	50.3700	47.47	-14.29	33.18	40.00	-6.82	peak	
2		110.5100	52.00	-15.35	36.65	43.50	-6.85	peak	
3		399.5700	48.17	-9.70	38.47	46.00	-7.53	peak	
4		500.4500	43.50	-10.52	32.98	46.00	-13.02	peak	
5		600.3600	39.30	-8.08	31.22	46.00	-14.78	peak	
6		1000.000	36.17	-0.44	35.73	54.00	-18.27	peak	

Test Mode: TX A MODE 5785MHz

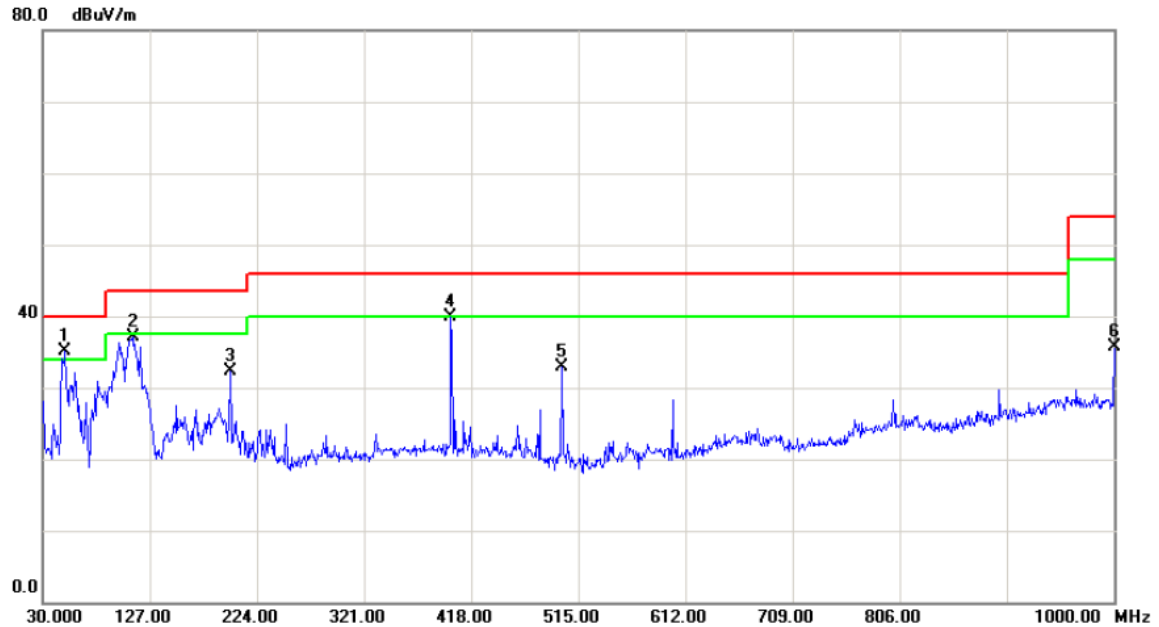
Horizontal



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		49.4000	43.89	-14.22	29.67	40.00	-10.33	peak	
2		199.7500	40.63	-15.13	25.50	43.50	-18.00	peak	
3	*	399.5700	46.99	-9.70	37.29	46.00	-8.71	peak	
4		820.5500	30.63	-3.05	27.58	46.00	-18.42	peak	
5		940.8300	30.53	-0.54	29.99	46.00	-16.01	peak	
6		1000.000	33.13	-0.44	32.69	54.00	-21.31	peak	

Test Mode: TX A MODE 5825MHz

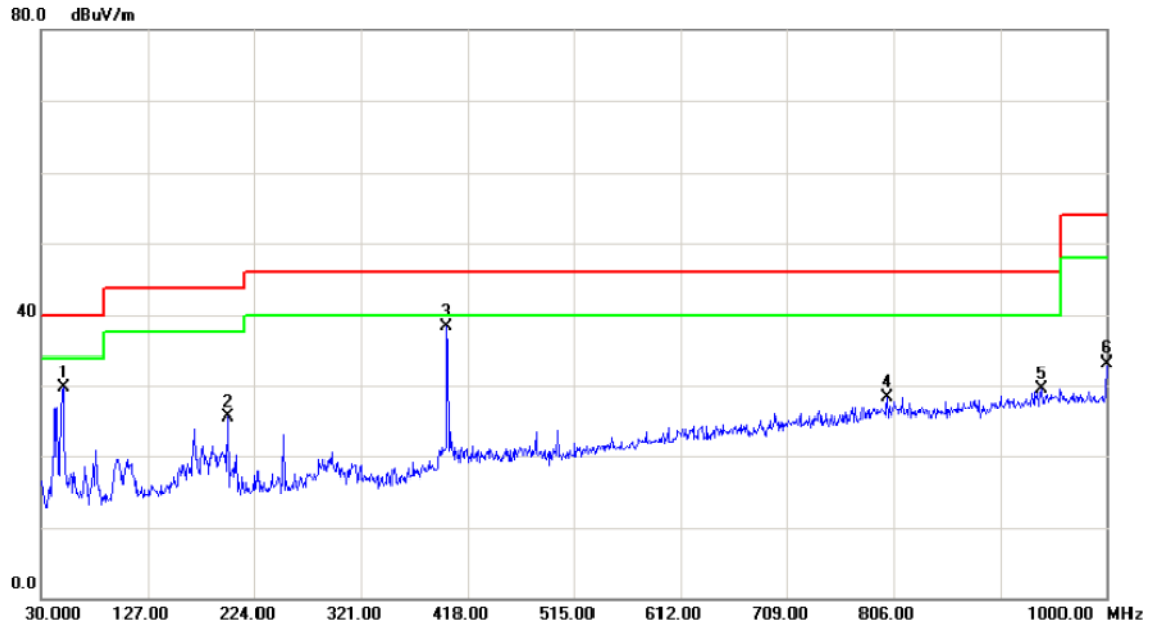
Vertical



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	*	50.3700	49.47	-14.29	35.18	40.00	-4.82	peak	
2		111.4800	52.33	-15.24	37.09	43.50	-6.41	peak	
3		199.7500	47.38	-15.13	32.25	43.50	-11.25	peak	
4		399.5700	49.67	-9.70	39.97	46.00	-6.03	peak	
5		500.4500	43.50	-10.52	32.98	46.00	-13.02	peak	
6		1000.000	36.17	-0.44	35.73	54.00	-18.27	peak	

Test Mode: TX A MODE 5825MHz

Horizontal

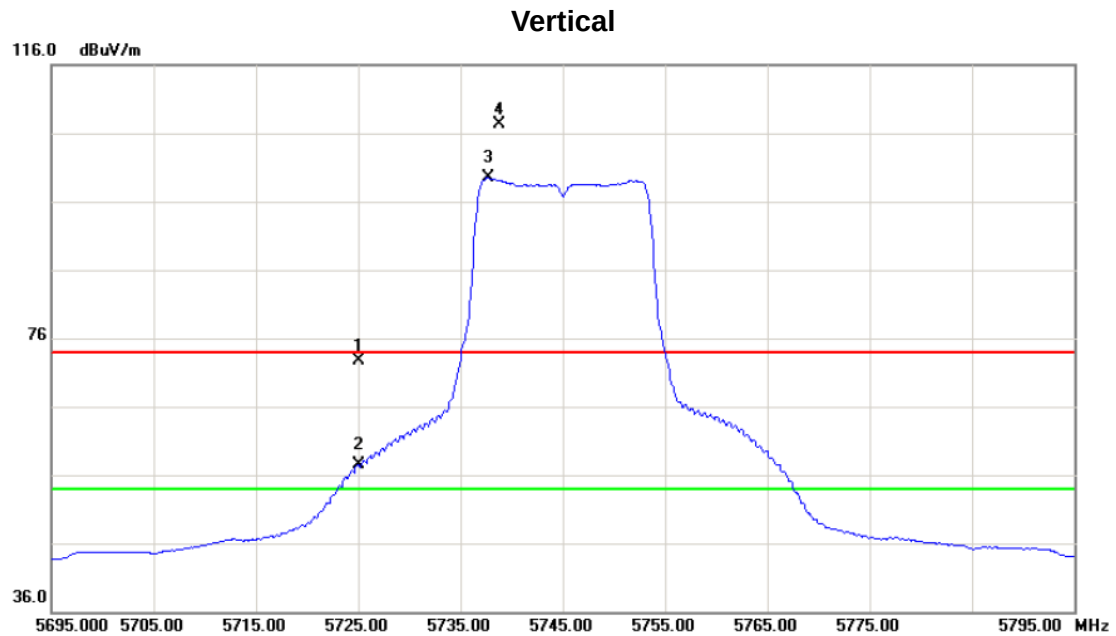


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		49.4000	43.89	-14.22	29.67	40.00	-10.33	peak	
2		199.7500	40.63	-15.13	25.50	43.50	-18.00	peak	
3	*	399.5700	47.99	-9.70	38.29	46.00	-7.71	peak	
4		800.1800	31.20	-2.91	28.29	46.00	-17.71	peak	
5		940.8300	30.03	-0.54	29.49	46.00	-16.51	peak	
6		1000.000	33.63	-0.44	33.19	54.00	-20.81	peak	



ATTACHMENT D - RADIATED EMISSION (ABOVE 1000MHZ)

Orthogonal Axis :	X
Test Mode :	TX A Mode 5745MHz

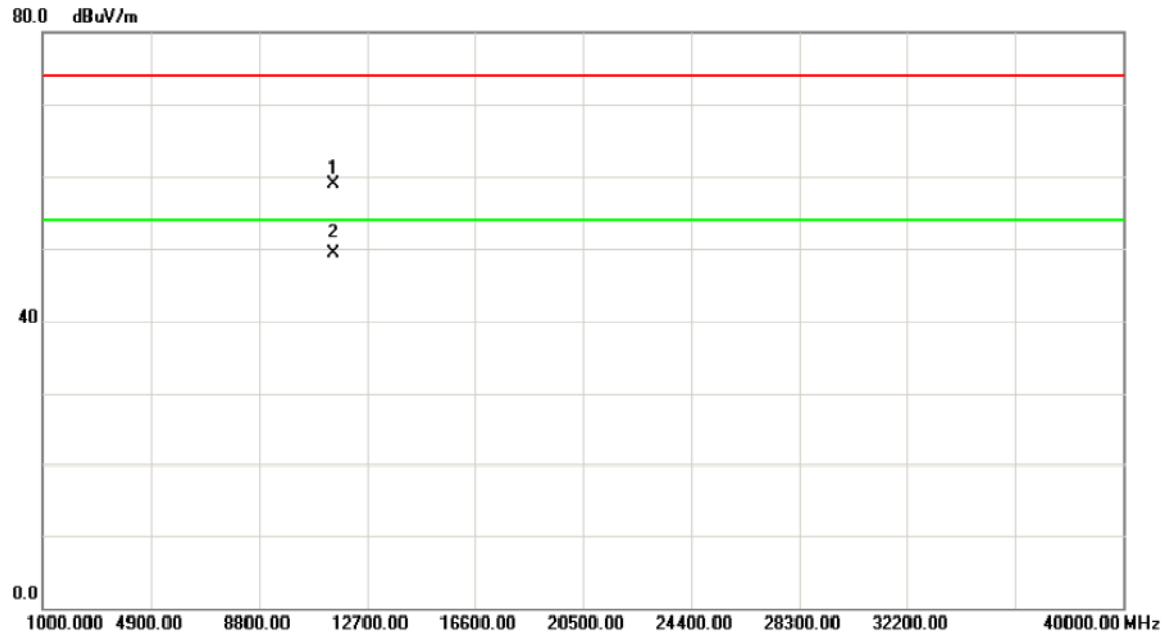


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		5725.000	28.18	44.58	72.76	74.00	-1.24	peak	
2	X	5725.000	12.94	44.58	57.52	54.00	3.52	AVG	
3	*	5737.700	54.82	44.65	99.47	54.00	45.47	AVG	Fundamental frequency, no limit
4	X	5738.800	62.59	44.65	107.24	74.00	33.24	peak	Fundamental frequency, no limit

Note: The band edge frequency Limit line= fundamental - 20dB

Orthogonal Axis :	X
Test Mode :	TX A Mode 5745MHz

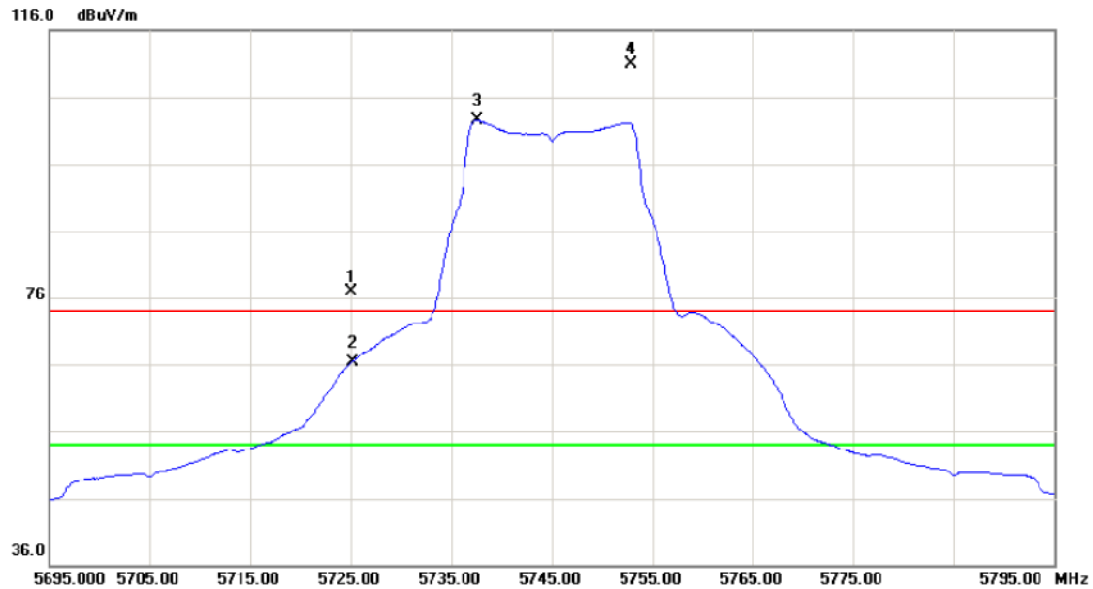
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		11490.20	42.37	16.47	58.84	74.00	-15.16	peak	
2	*	11490.20	32.75	16.47	49.22	54.00	-4.78	AVG	

Orthogonal Axis :	X
Test Mode :	TX A Mode 5745MHz

Horizontal

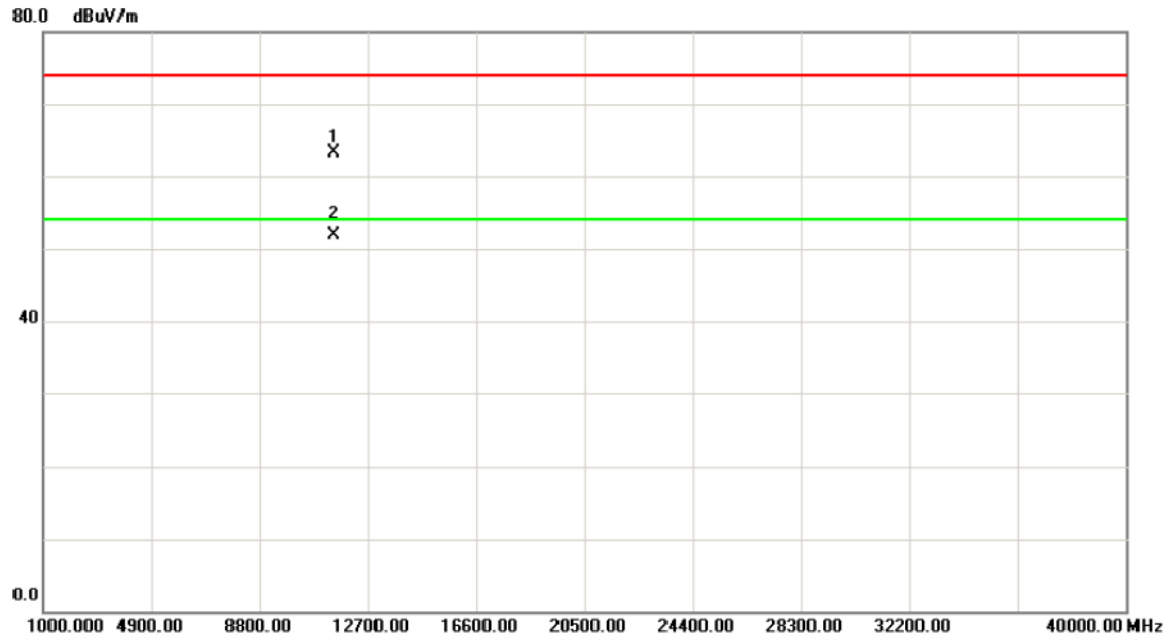


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	X	5725.000	32.27	44.58	76.85	74.00	2.85	peak	
2	X	5725.000	21.63	44.58	66.21	54.00	12.21	AVG	
3	*	5737.600	57.85	44.65	102.50	54.00	48.50	AVG	Fundamental frequency, no limit
4	X	5752.900	66.21	44.72	110.93	74.00	36.93	peak	Fundamental frequency, no limit

Note: The band edge frequency Limit line= fundamental - 20dB

Orthogonal Axis :	X
Test Mode :	TX A Mode 5745MHz

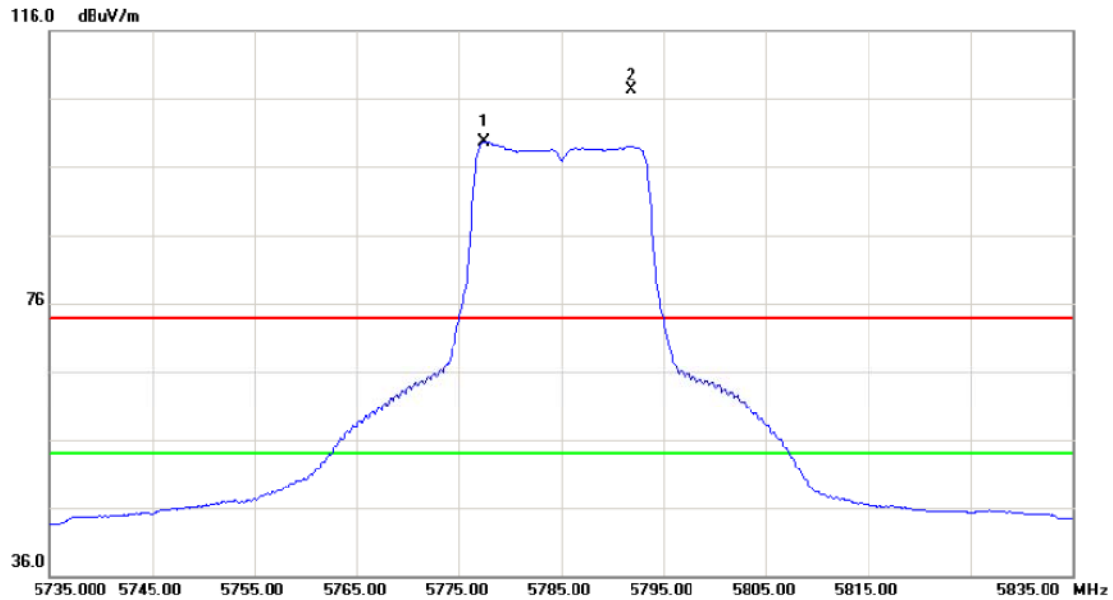
Horizontal



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		11490.12	46.81	16.47	63.28	74.00	-10.72	peak	
2	*	11490.57	35.37	16.47	51.84	54.00	-2.16	AVG	

Orthogonal Axis :	X
Test Mode :	TX A Mode 5785MHz

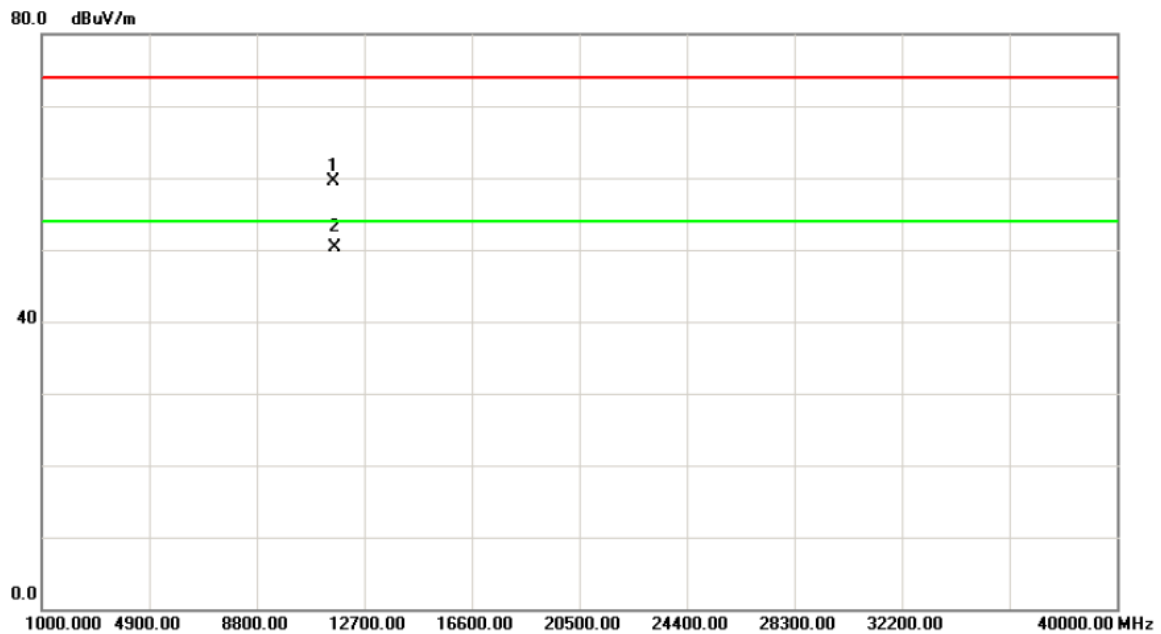
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	5777.400	54.88	44.85	99.73	54.00	45.73	AVG	Fundamental frequency, no limit
2	X	5791.800	62.35	44.92	107.27	74.00	33.27	peak	Fundamental frequency, no limit

Orthogonal Axis :	X
Test Mode :	TX A Mode 5785MHz

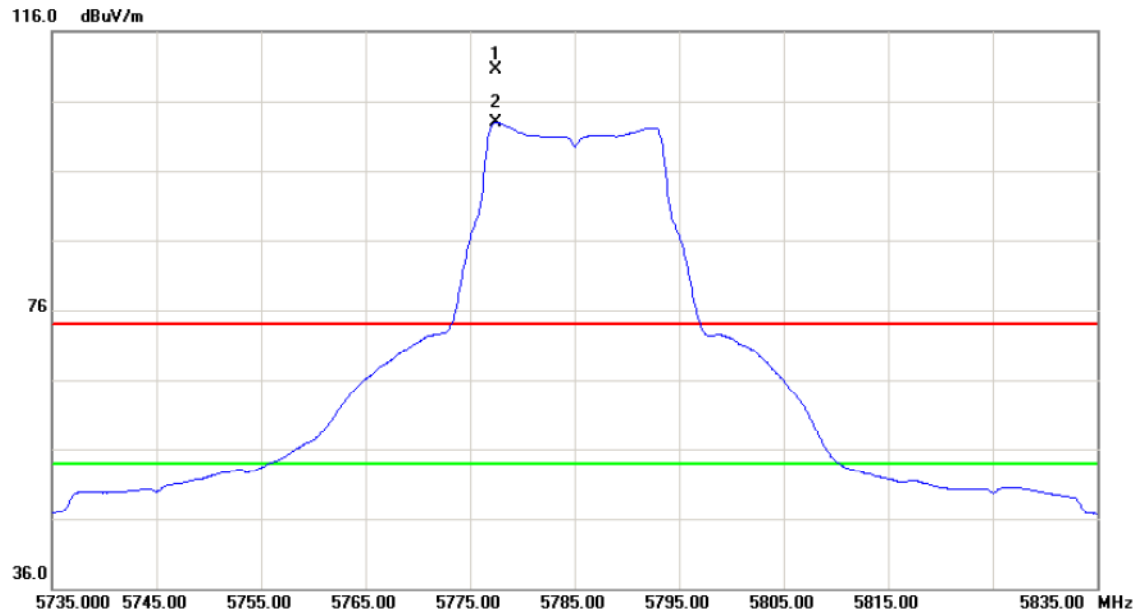
Vertical



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		11570.17	43.07	16.44	59.51	74.00	-14.49	peak	
2	*	11570.23	33.82	16.44	50.26	54.00	-3.74	AVG	

Orthogonal Axis :	X
Test Mode :	TX A Mode 5785MHz

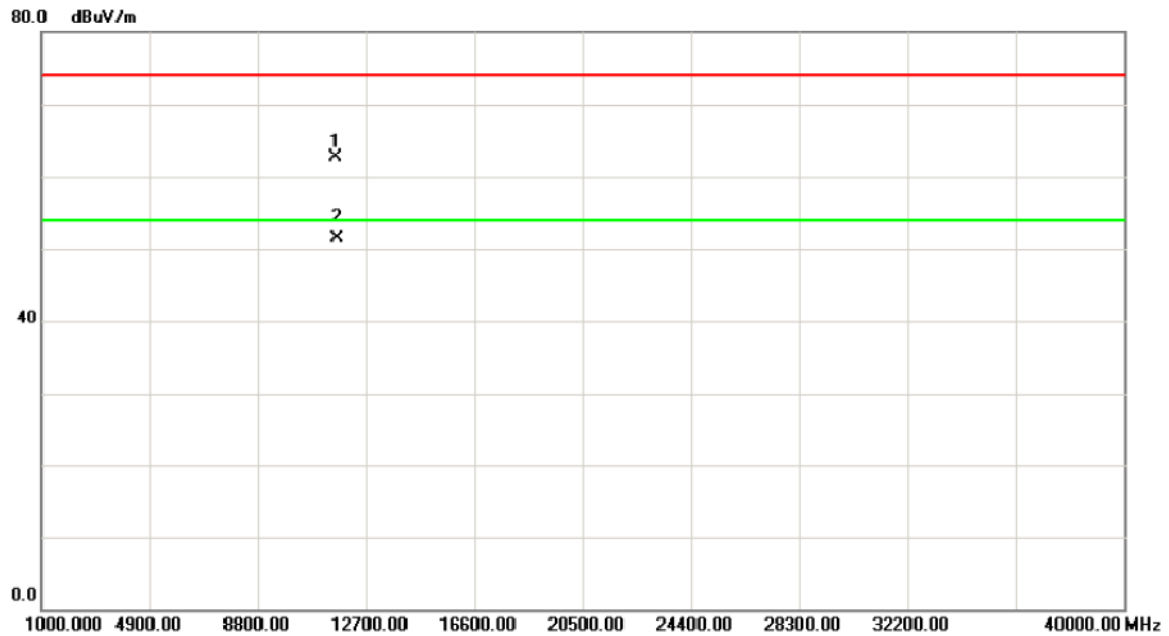
Horizontal



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	X	5777.400	65.59	44.85	110.44	74.00	36.44	peak	Fundamental frequency, no limit
2	*	5777.500	58.07	44.85	102.92	54.00	48.92	AVG	Fundamental frequency, no limit

Orthogonal Axis :	X
Test Mode :	TX A Mode 5785MHz

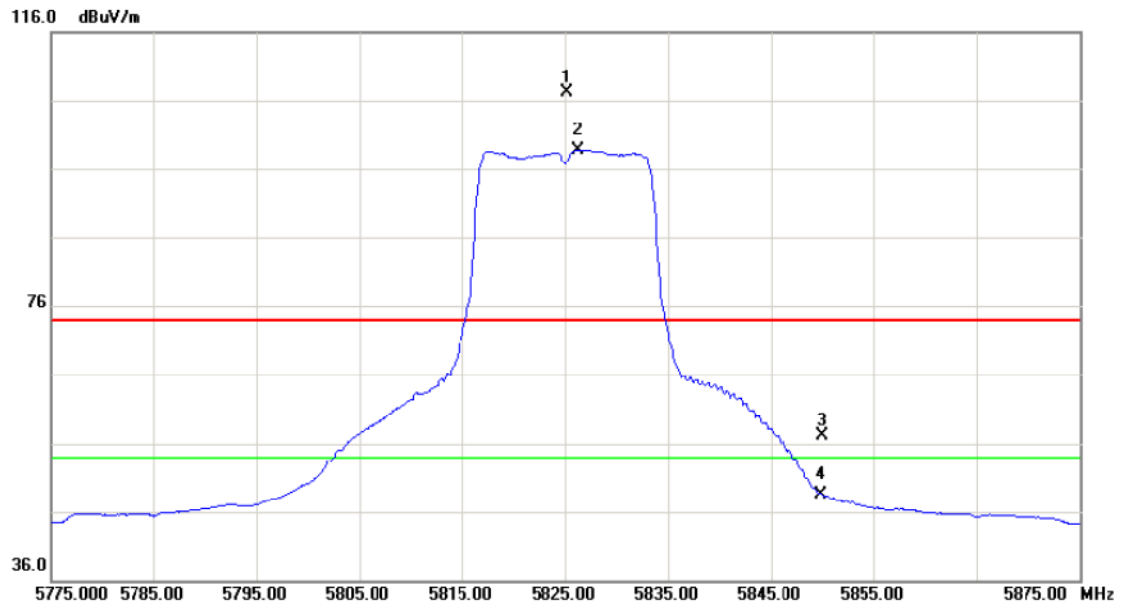
Horizontal



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		11569.81	46.21	16.44	62.65	74.00	-11.35	peak	
2	*	11569.92	35.15	16.44	51.59	54.00	-2.41	AVG	

Orthogonal Axis :	X
Test Mode :	TX A Mode 5825MHz

Vertical

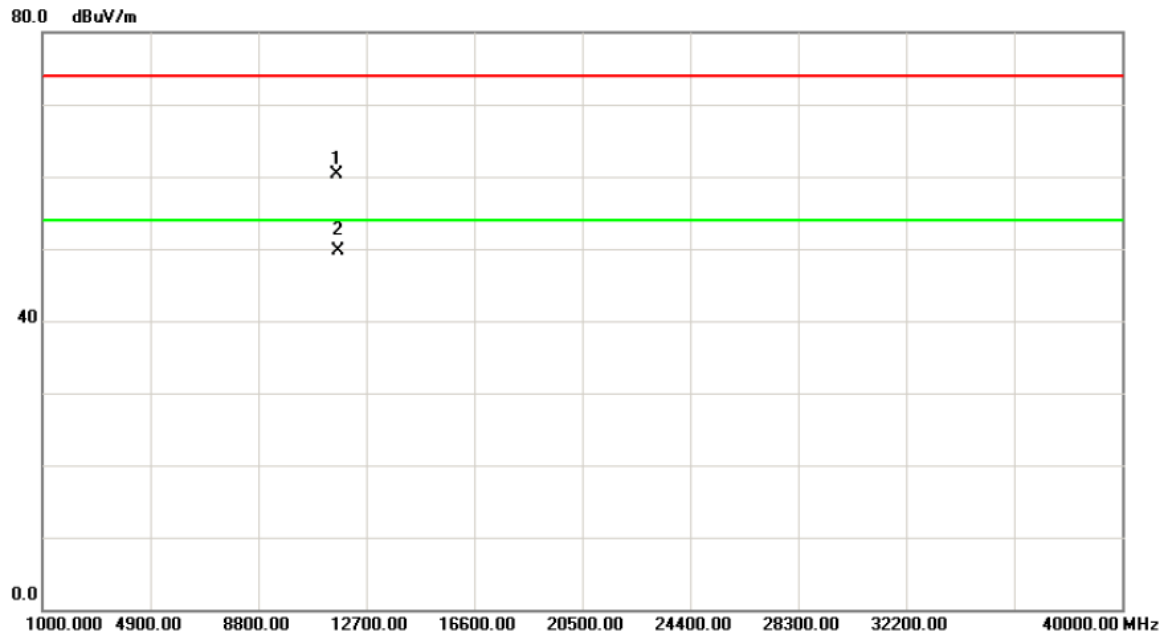


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	X	5825.200	62.07	45.10	107.17	74.00	33.17	peak	Fundamental frequency, no limit
2	*	5826.300	53.67	45.11	98.78	54.00	44.78	AVG	Fundamental frequency, no limit
3		5850.000	11.91	45.23	57.14	74.00	-16.86	peak	
4		5850.000	3.34	45.23	48.57	54.00	-5.43	AVG	

Note: The band edge frequency Limit line= fundamental - 20dB

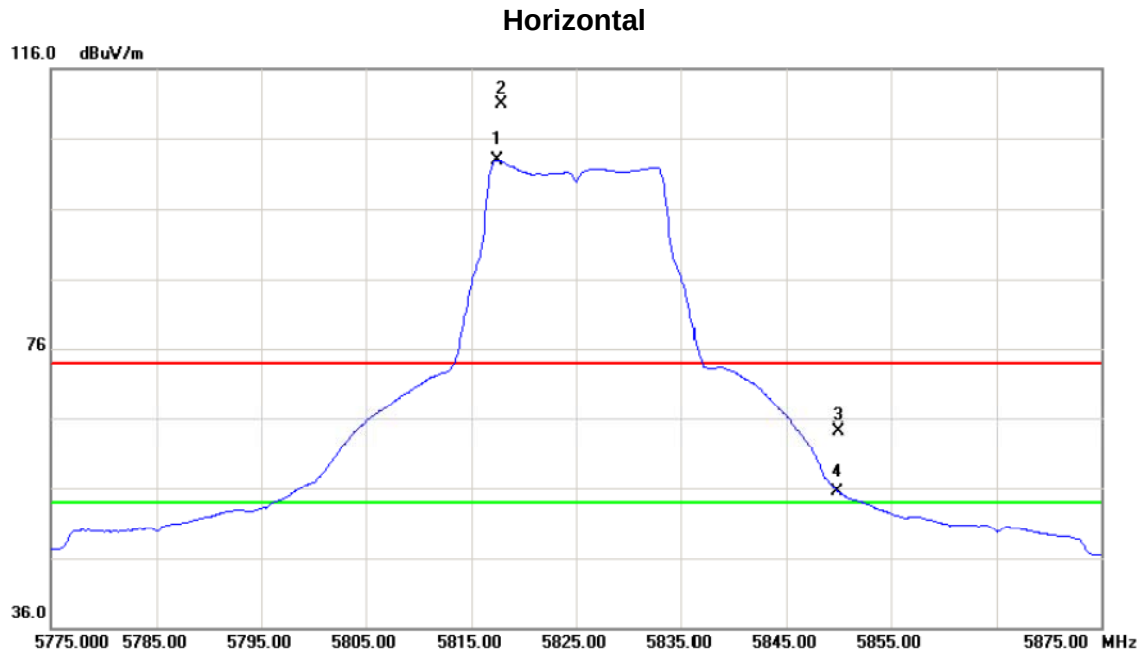
Orthogonal Axis :	X
Test Mode :	TX A Mode 5825MHz

Vertical



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		11650.13	43.85	16.40	60.25	74.00	-13.75	peak	
2	*	11650.25	33.21	16.40	49.61	54.00	-4.39	AVG	

Orthogonal Axis :	X
Test Mode :	TX A Mode 5825MHz

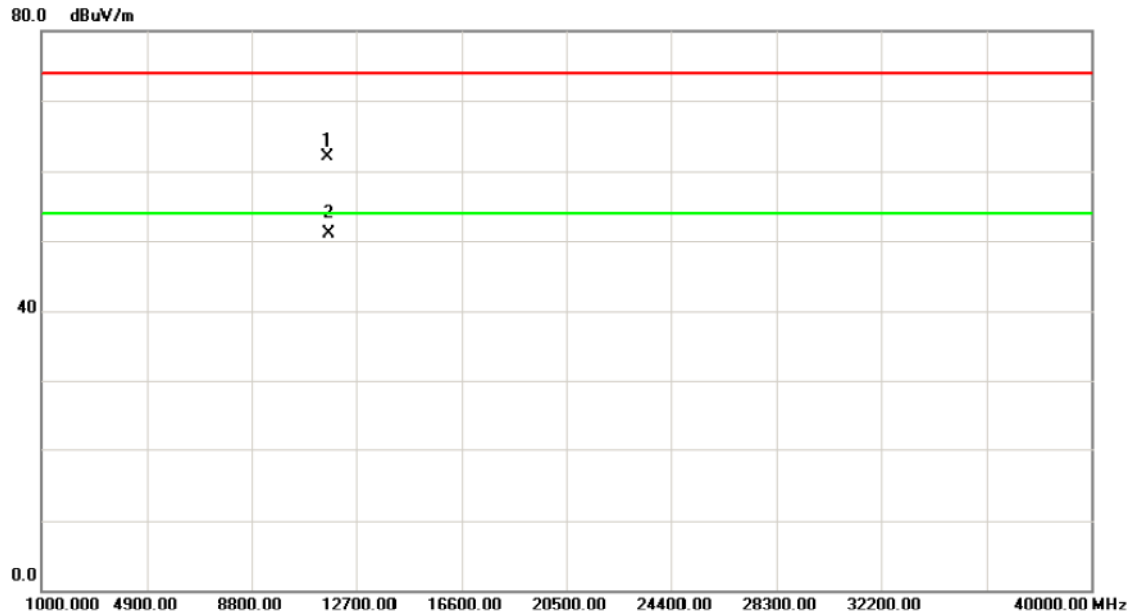


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	*	5817.500	57.90	45.06	102.96	54.00	48.96	AVG	Fundamental frequency, no limit
2	X	5817.900	65.93	45.06	110.99	74.00	36.99	peak	Fundamental frequency, no limit
3		5850.000	19.04	45.23	64.27	74.00	-9.73	peak	
4	X	5850.000	10.26	45.23	55.49	54.00	1.49	AVG	

Note: The band edge frequency Limit line = fundamental - 20dB

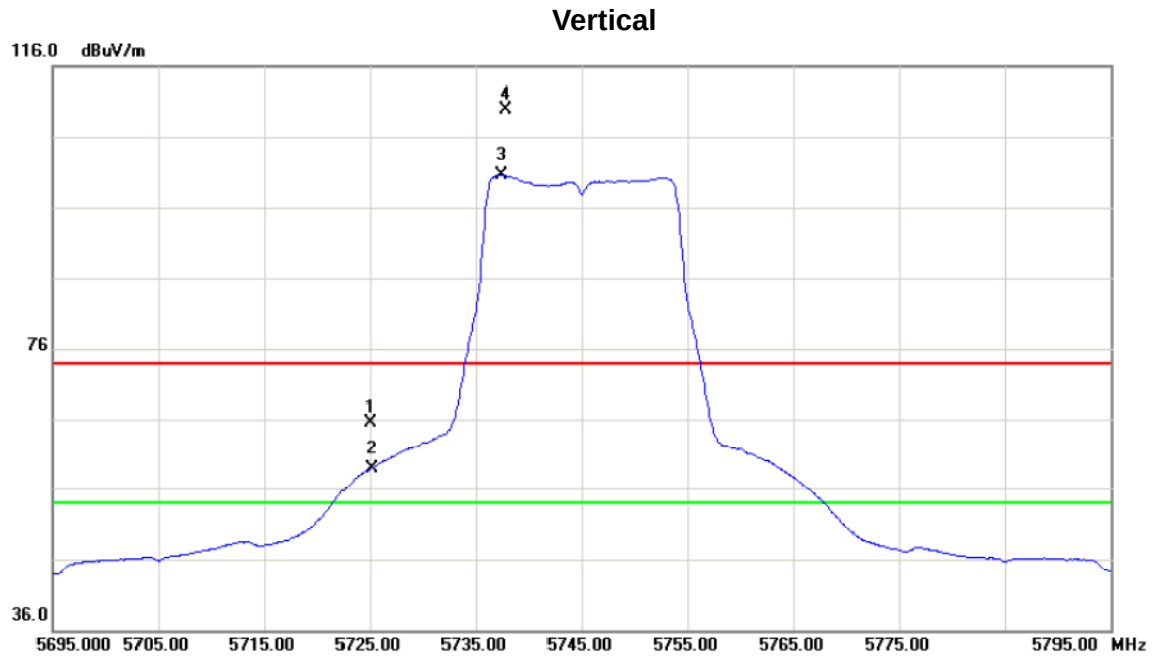
Orthogonal Axis :	X
Test Mode :	TX A Mode 5825MHz

Horizontal



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		11650.10	45.79	16.40	62.19	74.00	-11.81	peak	
2	*	11650.11	34.71	16.40	51.11	54.00	-2.89	AVG	

Orthogonal Axis :	X
Test Mode :	TX N20 Mode 5745MHz

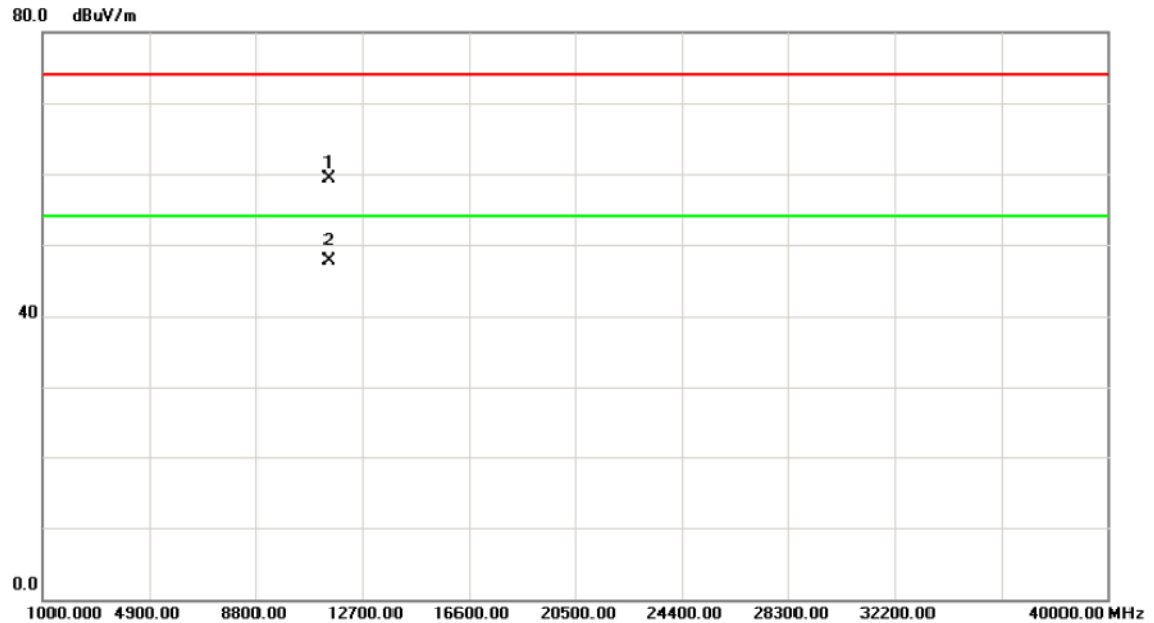


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		5725.000	20.88	44.58	65.46	74.00	-8.54	peak	
2	X	5725.000	14.28	44.58	58.86	54.00	4.86	AVG	
3	*	5737.500	55.91	44.64	100.55	54.00	46.55	AVG	Fundamental frequency, no limit
4	X	5737.900	65.20	44.65	109.85	74.00	35.85	peak	Fundamental frequency, no limit

Note: The band edge frequency Limit line= fundamental - 20dB

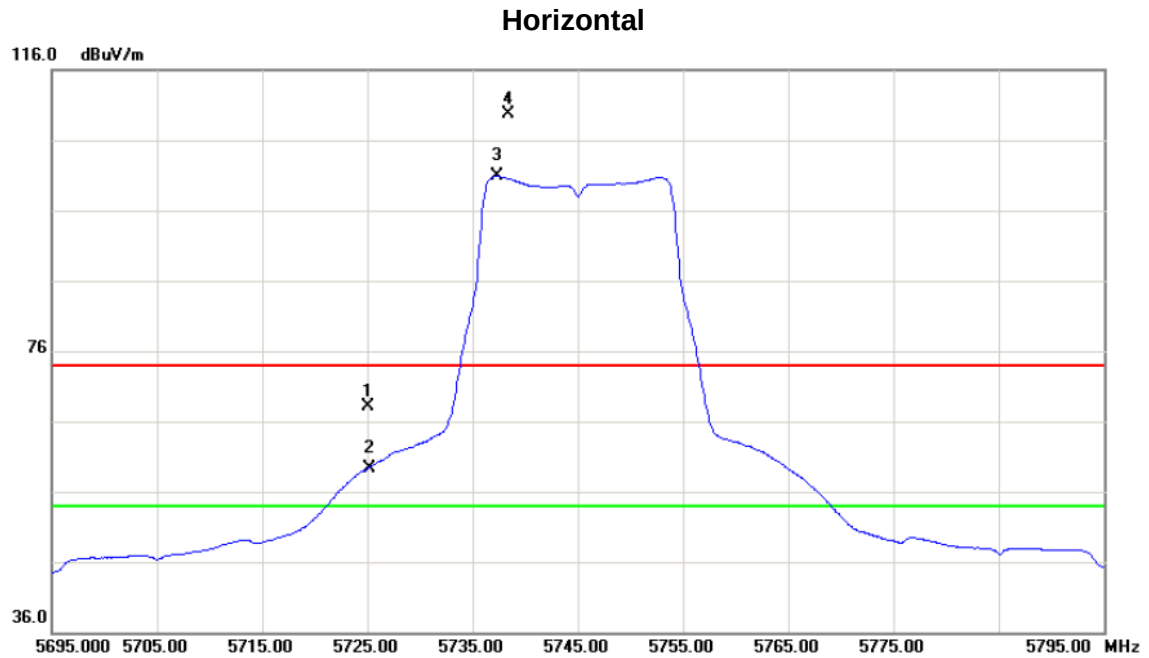
Orthogonal Axis :	X
Test Mode :	TX N20 Mode 5745MHz

Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		11489.83	42.79	16.47	59.26	74.00	-14.74	peak	
2	*	11489.91	31.17	16.47	47.64	54.00	-6.36	AVG	

Orthogonal Axis :	X
Test Mode :	TX N20 Mode 5745MHz

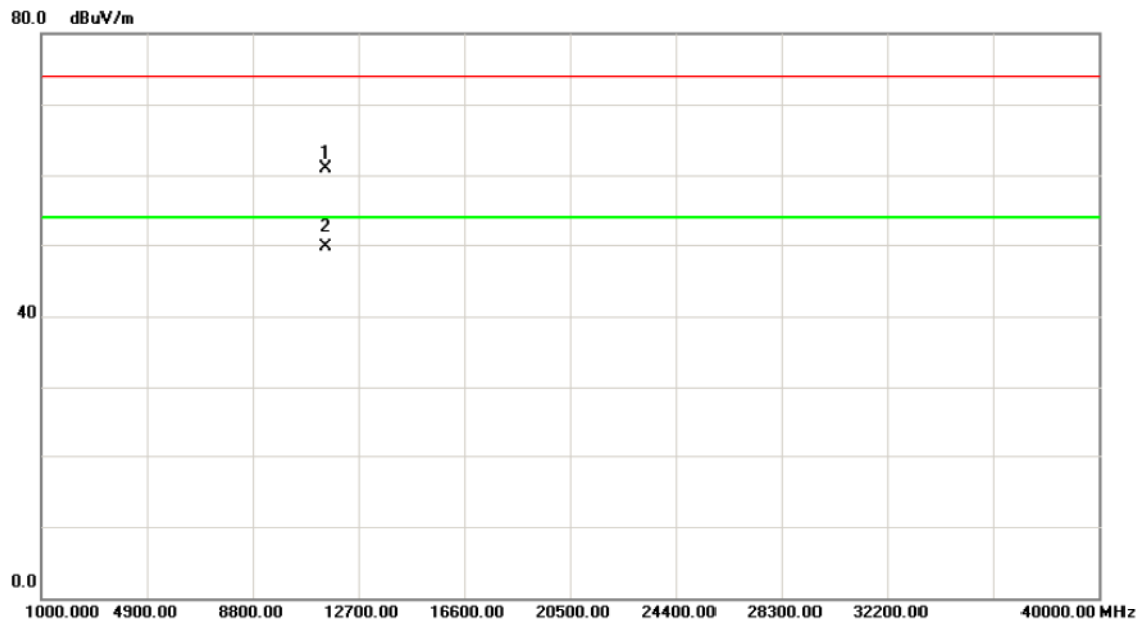


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		5725.000	23.47	44.58	68.05	74.00	-5.95	peak	
2	X	5725.000	14.74	44.58	59.32	54.00	5.32	AVG	Fundamental frequency, no limit
3	*	5737.300	56.26	44.64	100.90	54.00	46.90	AVG	Fundamental frequency, no limit
4	X	5738.400	65.12	44.65	109.77	74.00	35.77	peak	

Note: The band edge frequency Limit line= fundamental - 20dB

Orthogonal Axis :	X
Test Mode :	TX N20 Mode 5745MHz

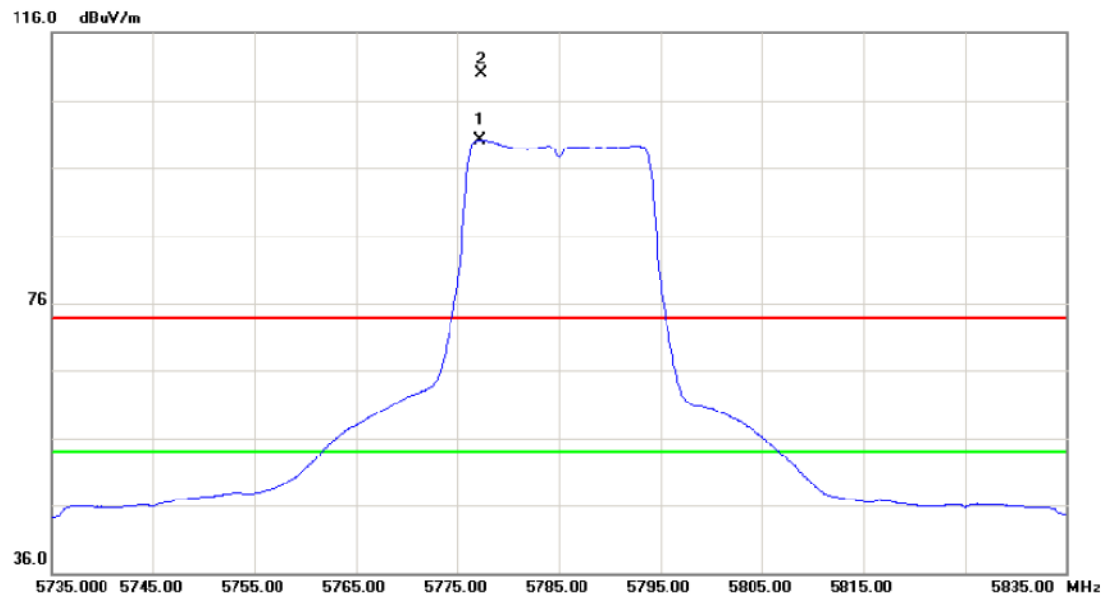
Horizontal



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		11490.03	44.36	16.47	60.83	74.00	-13.17	peak	
2	*	11490.15	33.15	16.47	49.62	54.00	-4.38	AVG	

Orthogonal Axis :	X
Test Mode :	TX N20 Mode 5785MHz

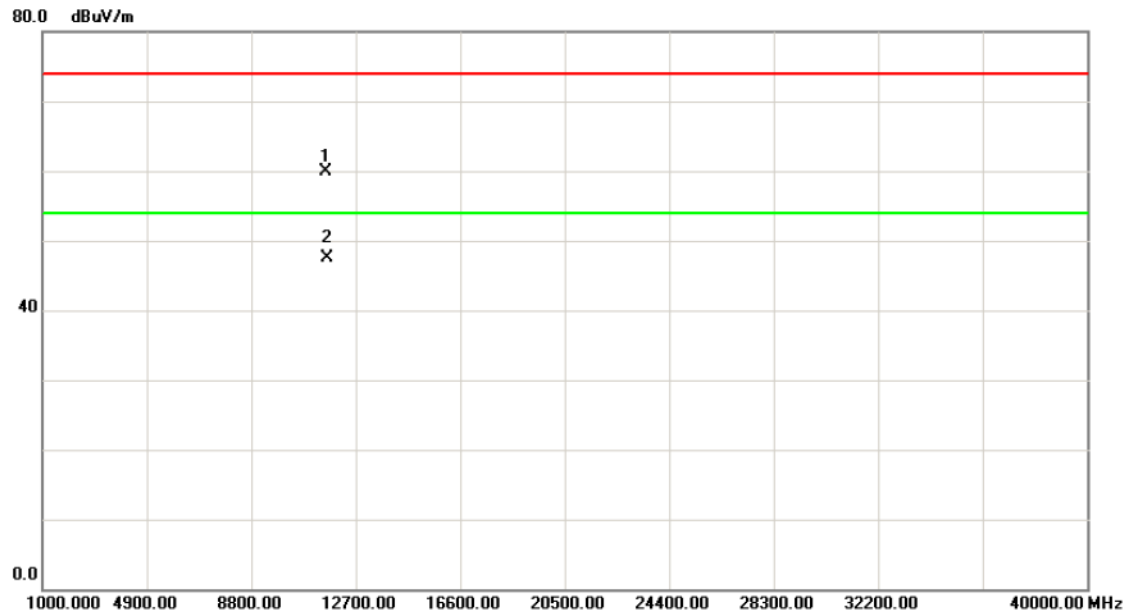
Vertical



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	*	5777.200	55.27	44.85	100.12	54.00	46.12	AVG	Fundamental frequency, no limit
2	X	5777.300	64.97	44.85	109.82	74.00	35.82	peak	Fundamental frequency, no limit

Orthogonal Axis :	X
Test Mode :	TX N20 Mode 5785MHz

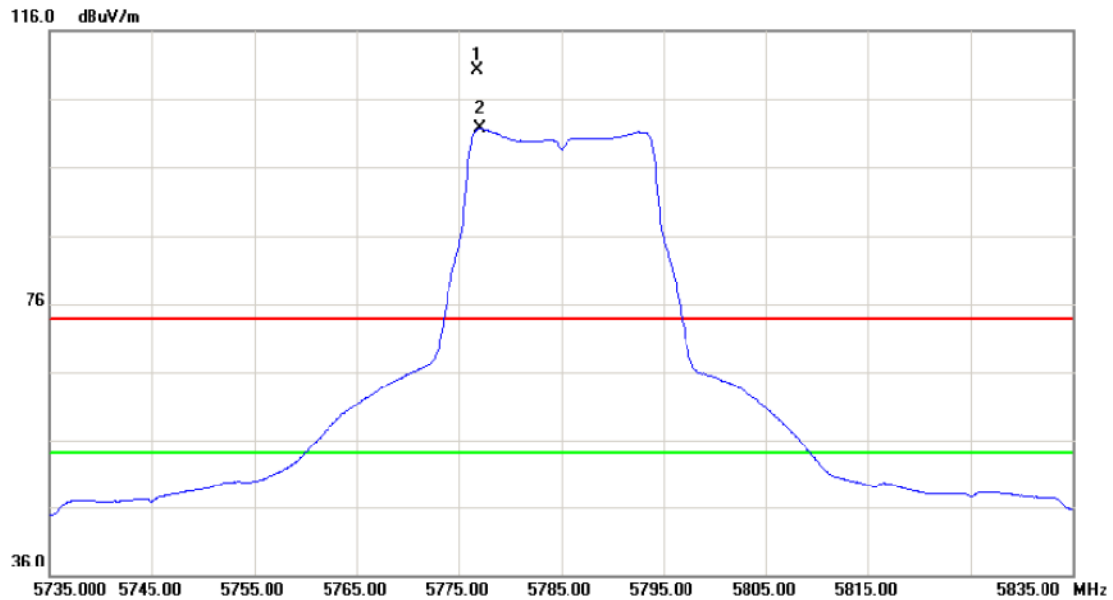
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		11569.93	43.52	16.44	59.96	74.00	-14.04	peak	
2	*	11569.98	31.13	16.44	47.57	54.00	-6.43	AVG	

Orthogonal Axis :	X
Test Mode :	TX N20 Mode 5785MHz

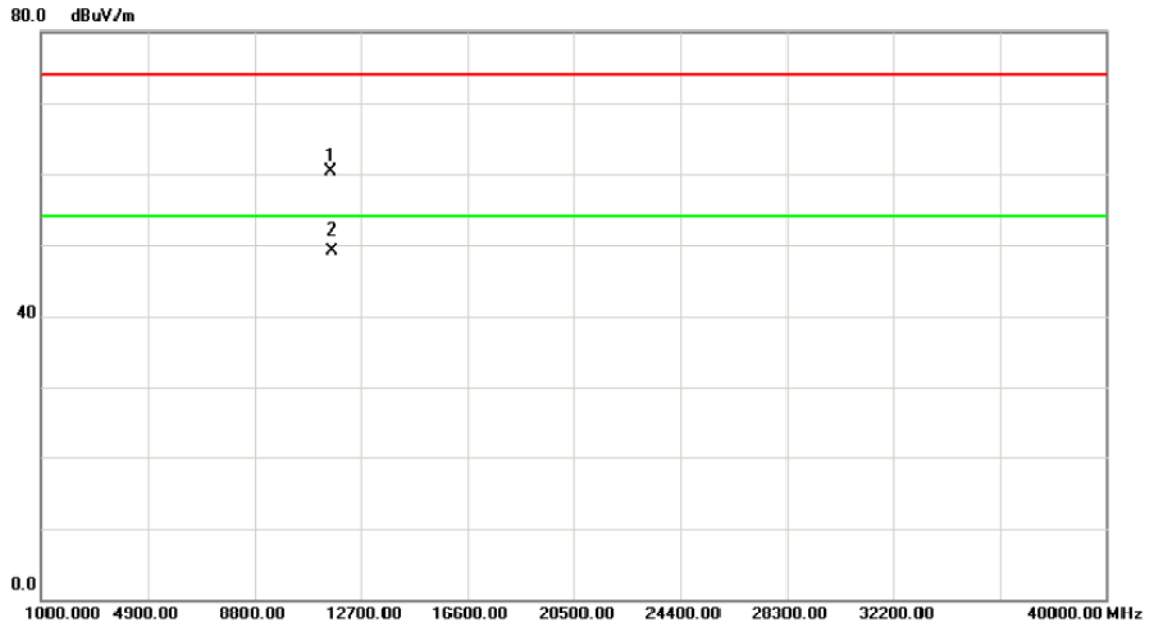
Horizontal



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	X	5776.800	65.47	44.85	110.32	74.00	36.32	peak	Fundamental frequency, no limit
2	*	5777.100	56.80	44.85	101.65	54.00	47.65	AVG	Fundamental frequency, no limit

Orthogonal Axis :	X
Test Mode :	TX N20 Mode 5785MHz

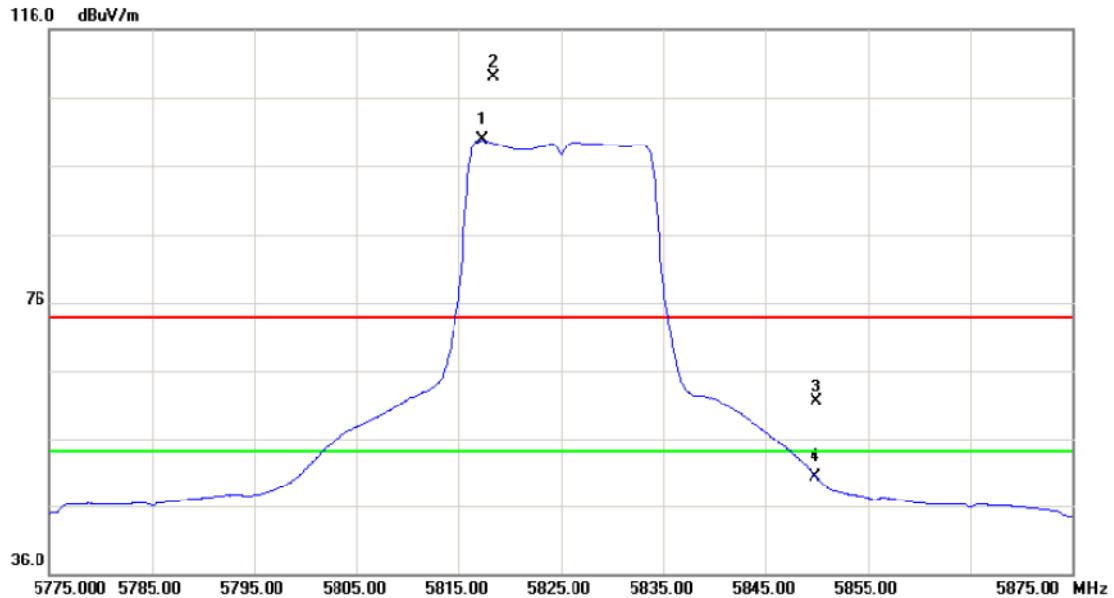
Horizontal



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		11570.01	43.91	16.44	60.35	74.00	-13.65	peak	
2	*	11570.08	32.74	16.44	49.18	54.00	-4.82	AVG	

Orthogonal Axis :	X
Test Mode :	TX N20 Mode 5825MHz

Vertical

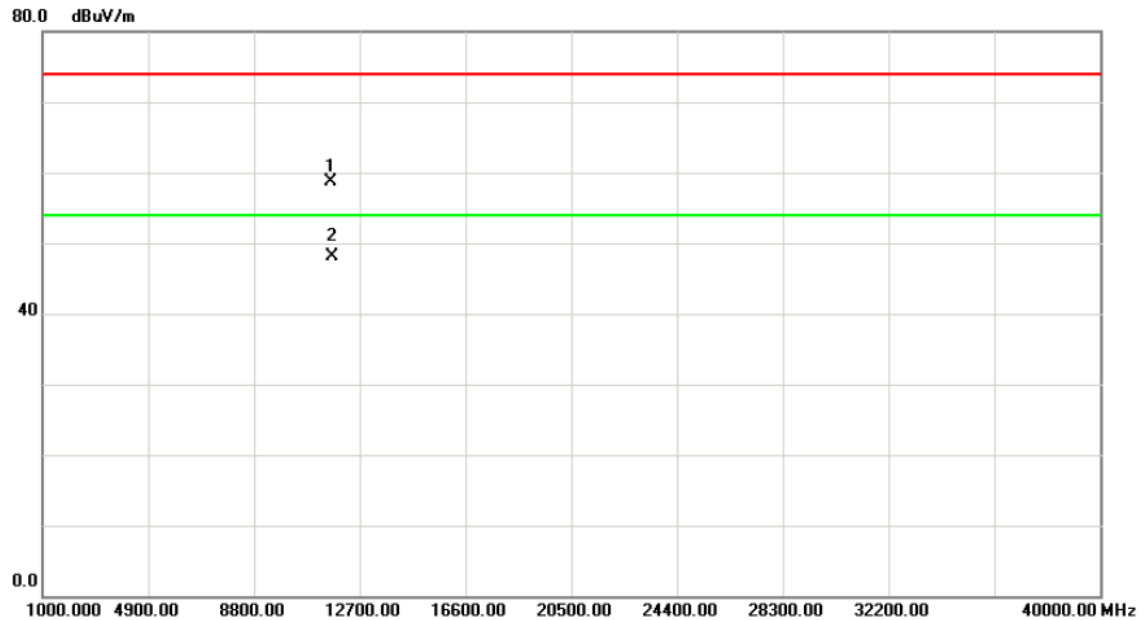


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	*	5817.300	54.75	45.06	99.81	54.00	45.81	AVG	Fundamental frequency, no limit
2	X	5818.400	64.03	45.06	109.09	74.00	35.09	peak	Fundamental frequency, no limit
3		5850.000	16.25	45.23	61.48	74.00	-12.52	peak	
4		5850.000	5.15	45.23	50.38	54.00	-3.62	AVG	

Note: The band edge frequency Limit line= fundamental - 20dB

Orthogonal Axis :	X
Test Mode :	TX N20 Mode 5825MHz

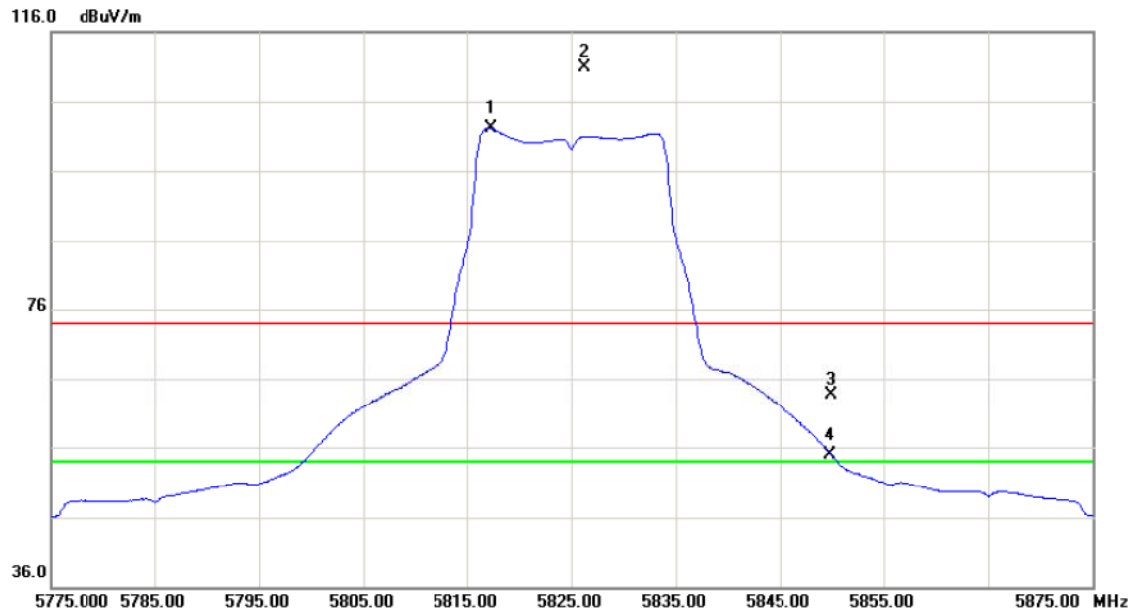
Vertical



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		11650.23	42.36	16.40	58.76	74.00	-15.24	peak	
2	*	11650.37	31.78	16.40	48.18	54.00	-5.82	AVG	

Orthogonal Axis :	X
Test Mode :	TX N20 Mode 5825MHz

Horizontal

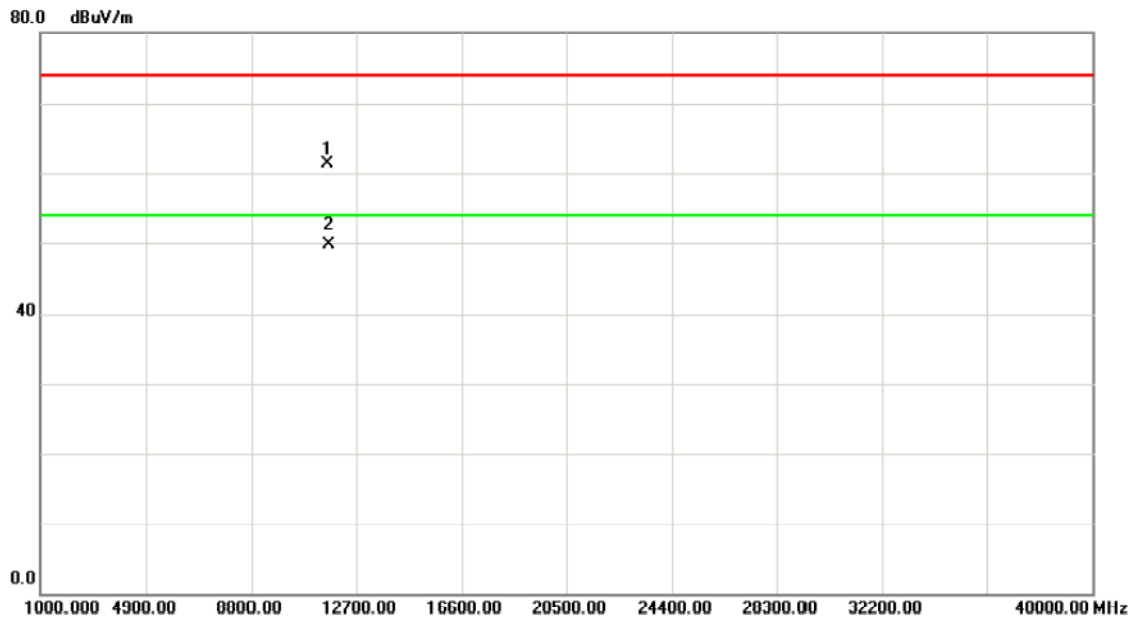


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	*	5817.300	57.02	45.06	102.08	54.00	48.08	AVG	Fundamental frequency, no limit
2	X	5826.300	65.80	45.11	110.91	74.00	36.91	peak	Fundamental frequency, no limit
3		5850.000	18.47	45.23	63.70	74.00	-10.30	peak	
4	X	5850.000	9.67	45.23	54.90	54.00	0.90	AVG	

Note: The band edge frequency Limit line= fundamental - 20dB

Orthogonal Axis :	X
Test Mode :	TX N20 Mode 5825MHz

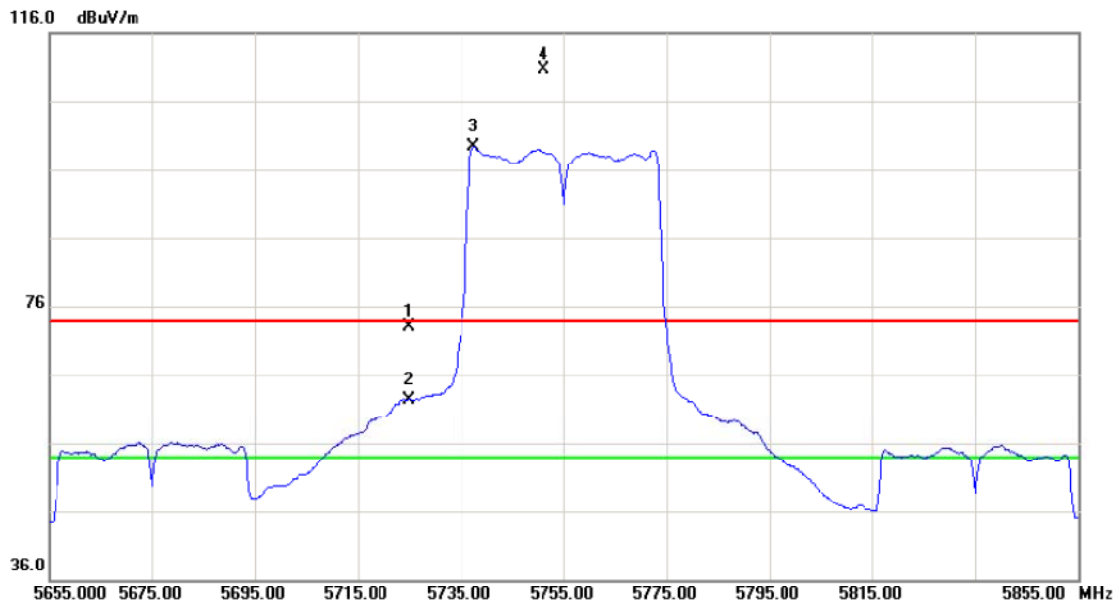
Horizontal



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		11650.05	44.96	16.40	61.36	74.00	-12.64	peak	
2	*	11650.36	33.27	16.40	49.67	54.00	-4.33	AVG	

Orthogonal Axis :	X
Test Mode :	TX N40 Mode 5755MHz

Vertical

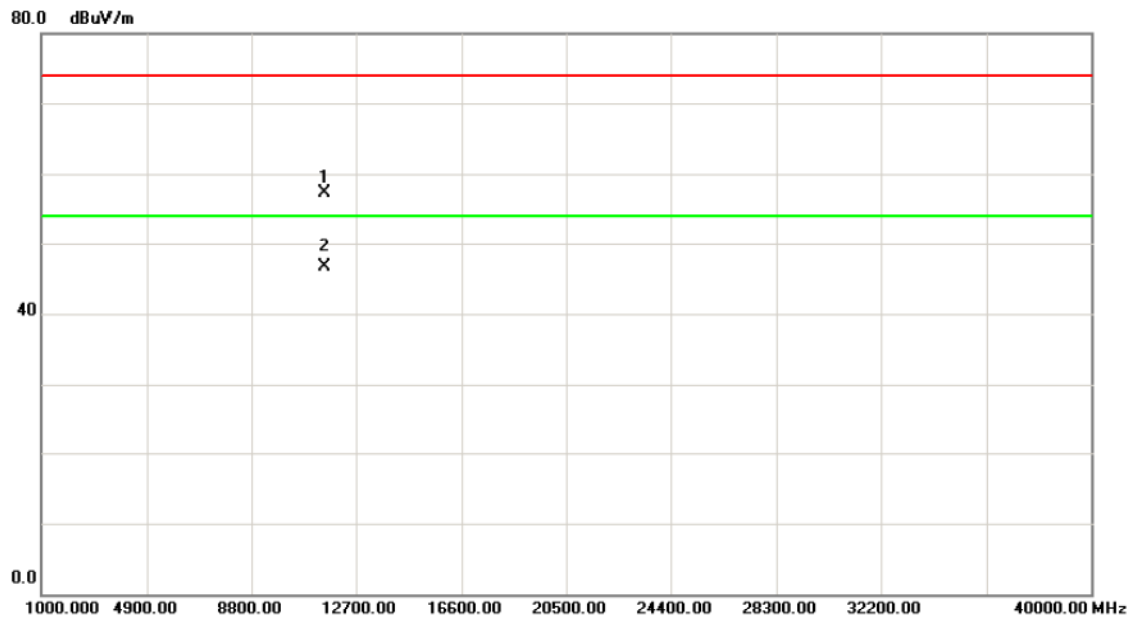


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		5725.000	28.51	44.58	73.09	74.00	-0.91	peak	
2	X	5725.000	17.82	44.58	62.40	54.00	8.40	AVG	
3	*	5737.600	54.68	44.65	99.33	54.00	45.33	AVG	Fundamental frequency, no limit
4	X	5751.200	65.71	44.72	110.43	74.00	36.43	peak	Fundamental frequency, no limit

Note: The band edge frequency Limit line= fundamental - 20dB

Orthogonal Axis :	X
Test Mode :	TX N40 Mode 5755MHz

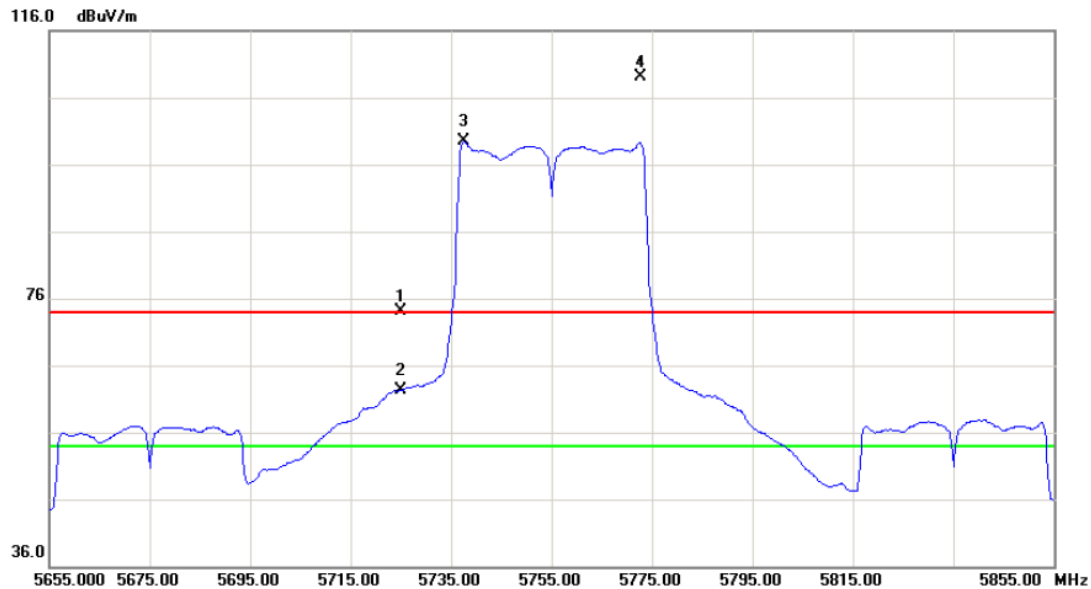
Vertical



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		11510.31	40.75	16.49	57.24	74.00	-16.76	peak	
2	*	11510.37	30.19	16.49	46.68	54.00	-7.32	AVG	

Orthogonal Axis :	X
Test Mode :	TX N40 Mode 5755MHz

Horizontal

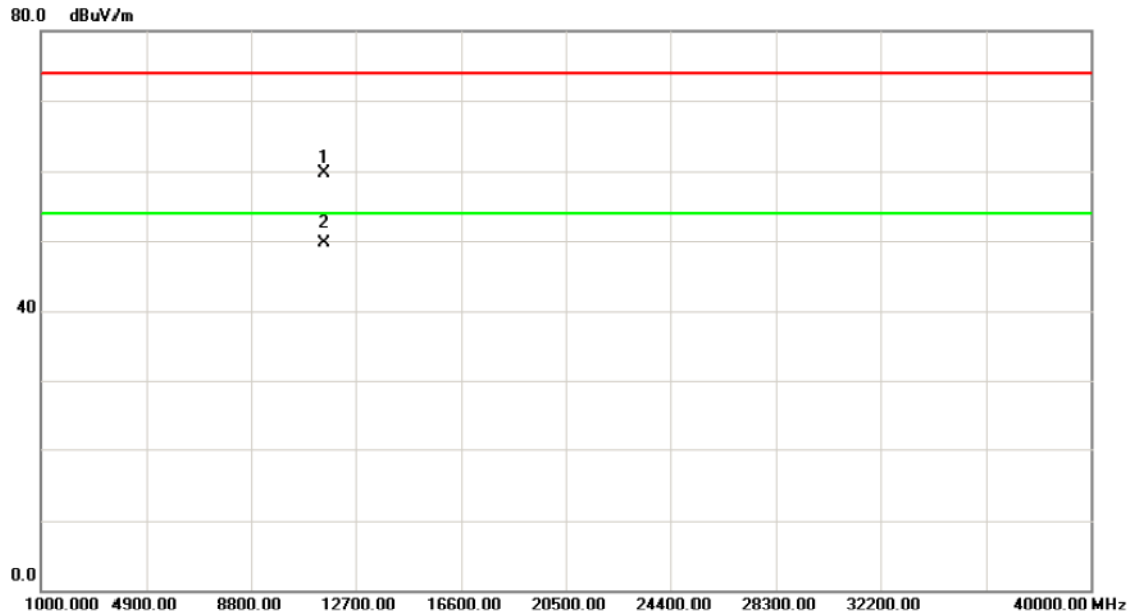


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	X	5725.000	29.48	44.58	74.06	74.00	0.06	peak	
2	X	5725.000	17.80	44.58	62.38	54.00	8.38	AVG	
3	*	5737.600	54.79	44.65	99.44	54.00	45.44	AVG	Fundamental frequency, no limit
4	X	5772.800	64.26	44.83	109.09	74.00	35.09	peak	Fundamental frequency, no limit

Note: The band edge frequency Limit line = fundamental - 20dB

Orthogonal Axis :	X
Test Mode :	TX N40 Mode 5755MHz

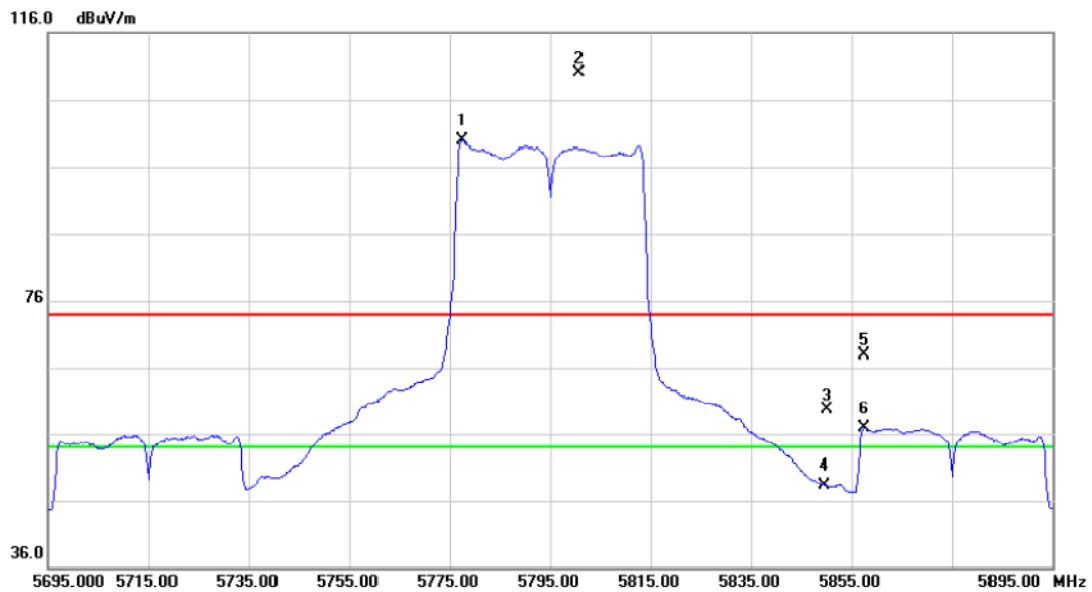
Horizontal



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		11510.03	43.25	16.49	59.74	74.00	-14.26	peak	
2	*	11510.25	33.21	16.49	49.70	54.00	-4.30	AVG	

Orthogonal Axis :	X
Test Mode :	TX N40 Mode 5795MHz

Vertical

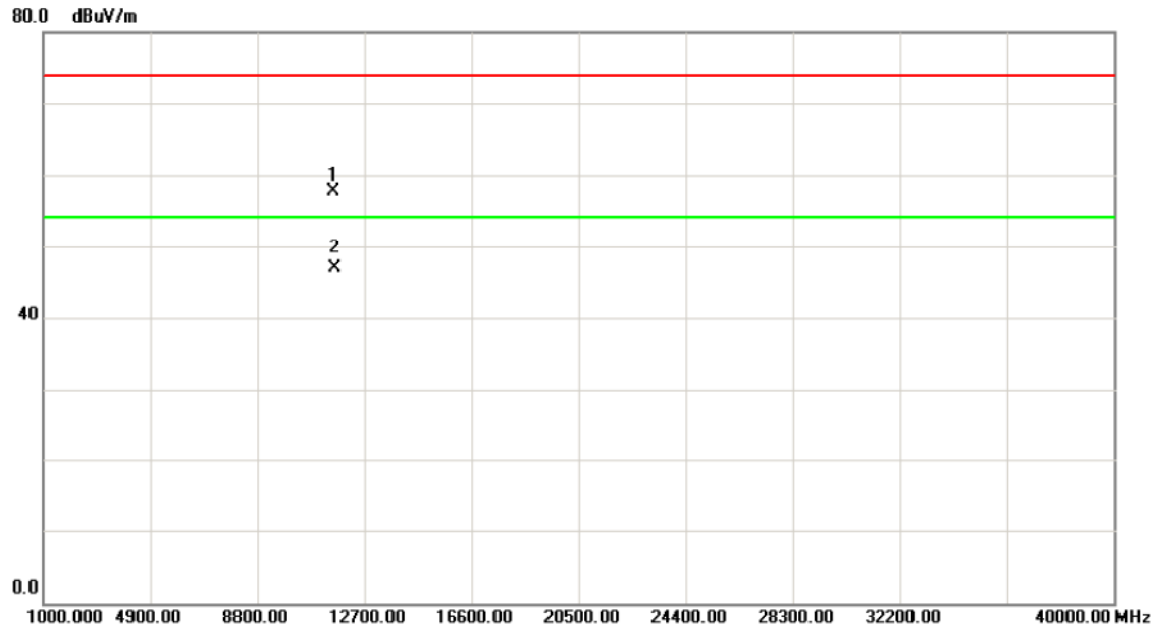


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	*	5777.600	55.15	44.85	100.00	54.00	46.00	AVG	Fundamental frequency, no limit
2	X	5800.800	65.11	44.97	110.08	74.00	36.08	peak	Fundamental frequency, no limit
3		5850.000	14.52	45.23	59.75	74.00	-14.25	peak	
4		5850.000	3.01	45.23	48.24	54.00	-5.76	AVG	
5		5857.600	22.56	45.26	67.82	74.00	-6.18	peak	
6	X	5857.600	11.58	45.26	56.84	54.00	2.84	AVG	

Note: The band edge frequency Limit line= fundamental - 20dB

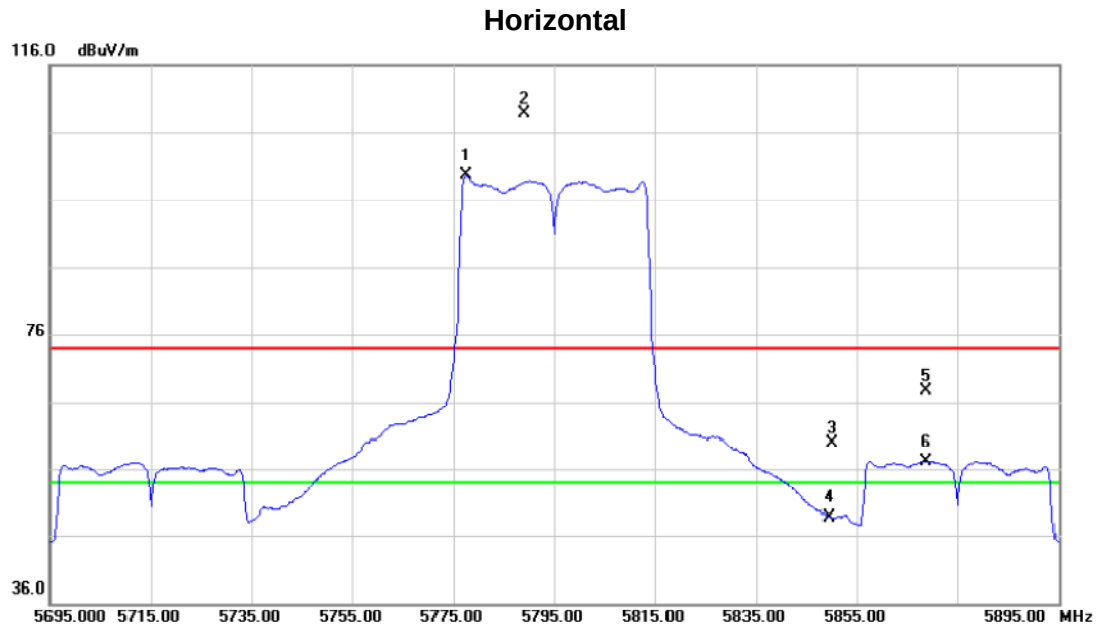
Orthogonal Axis :	X
Test Mode :	TX N40 Mode 5795MHz

Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		11590.17	41.37	16.43	57.80	74.00	-16.20	peak	
2	*	11590.52	30.51	16.43	46.94	54.00	-7.06	AVG	

Orthogonal Axis :	X
Test Mode :	TX N40 Mode 5795MHz

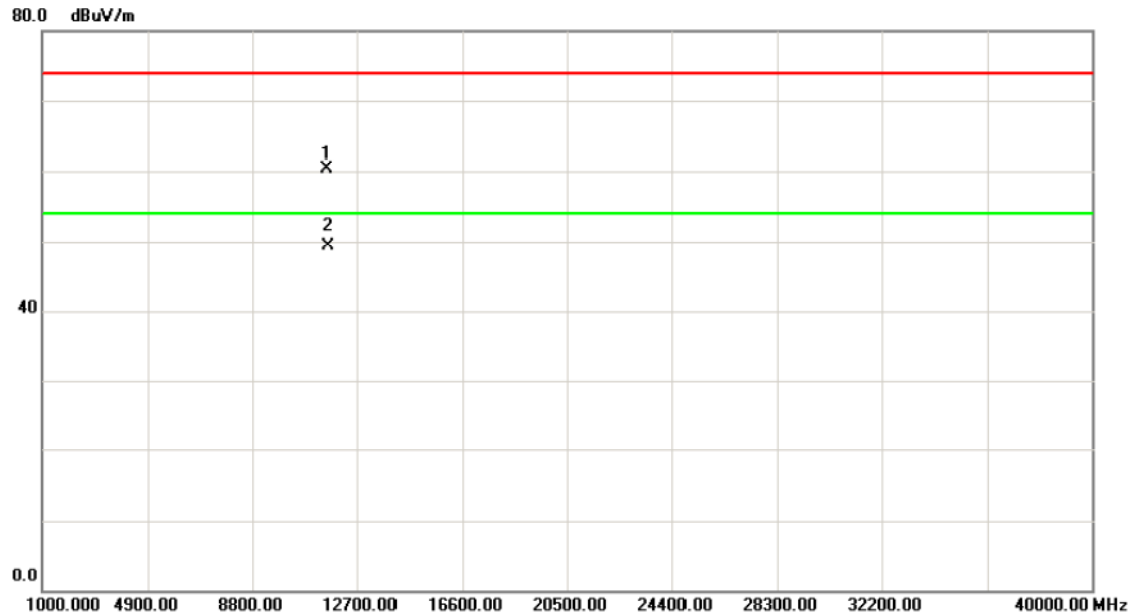


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	*	5777.600	54.77	44.85	99.62	54.00	45.62	AVG	Fundamental frequency, no limit
2	X	5789.000	63.96	44.91	108.87	74.00	34.87	peak	Fundamental frequency, no limit
3		5850.000	14.75	45.23	59.98	74.00	-14.02	peak	
4		5850.000	3.54	45.23	48.77	54.00	-5.23	AVG	
5		5868.600	22.31	45.32	67.63	74.00	-6.37	peak	
6	X	5868.600	11.83	45.32	57.15	54.00	3.15	AVG	

Note: The band edge frequency Limit line= fundamental - 20dB

Orthogonal Axis :	X
Test Mode :	TX N40 Mode 5795MHz

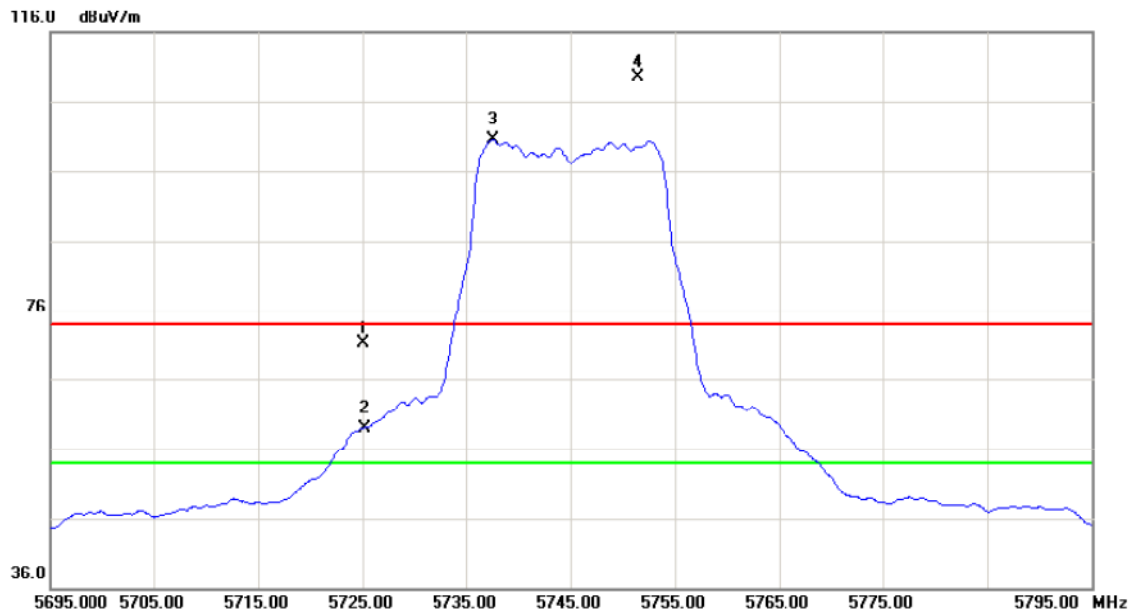
Horizontal



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		11589.92	43.86	16.43	60.29	74.00	-13.71	peak	
2	*	11589.95	32.86	16.43	49.29	54.00	-4.71	AVG	

Orthogonal Axis :	X
Test Mode :	TX AC N20 Mode 5745MHz

Vertical

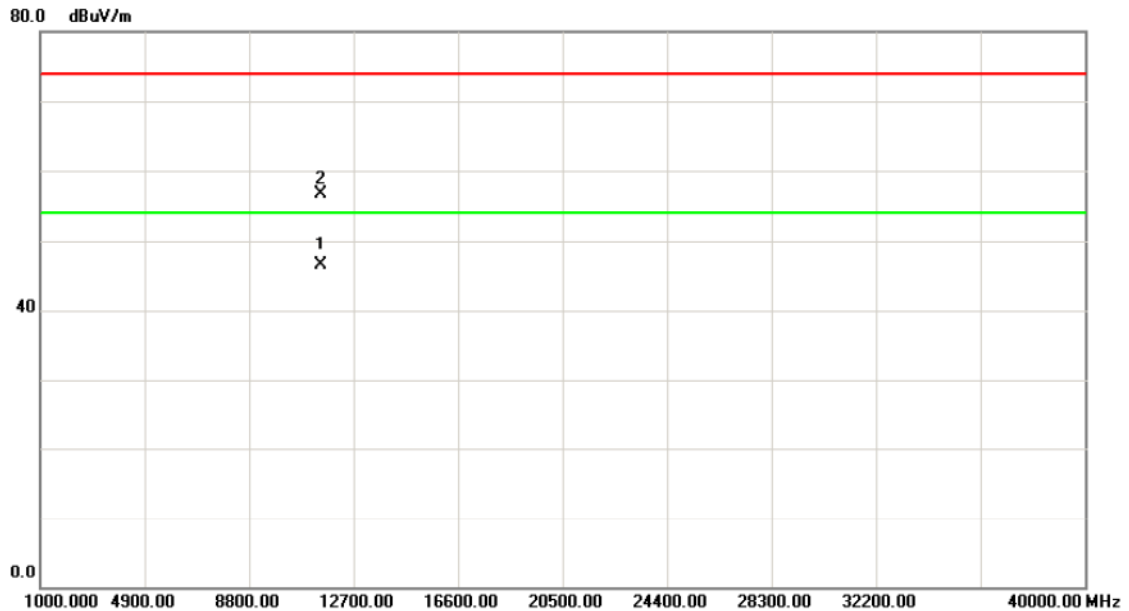


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		5725.000	26.59	44.58	71.17	74.00	-2.83	peak	
2	X	5725.000	14.35	44.58	58.93	54.00	4.93	AVG	
3	*	5737.600	55.84	44.65	100.49	54.00	46.49	AVG	Fundamental frequency, no limit
4	X	5751.500	64.87	44.72	109.59	74.00	35.59	peak	Fundamental frequency, no limit

Note: The band edge frequency Limit line = fundamental - 20dB

Orthogonal Axis :	X
Test Mode :	TX AC N20 Mode 5745MHz

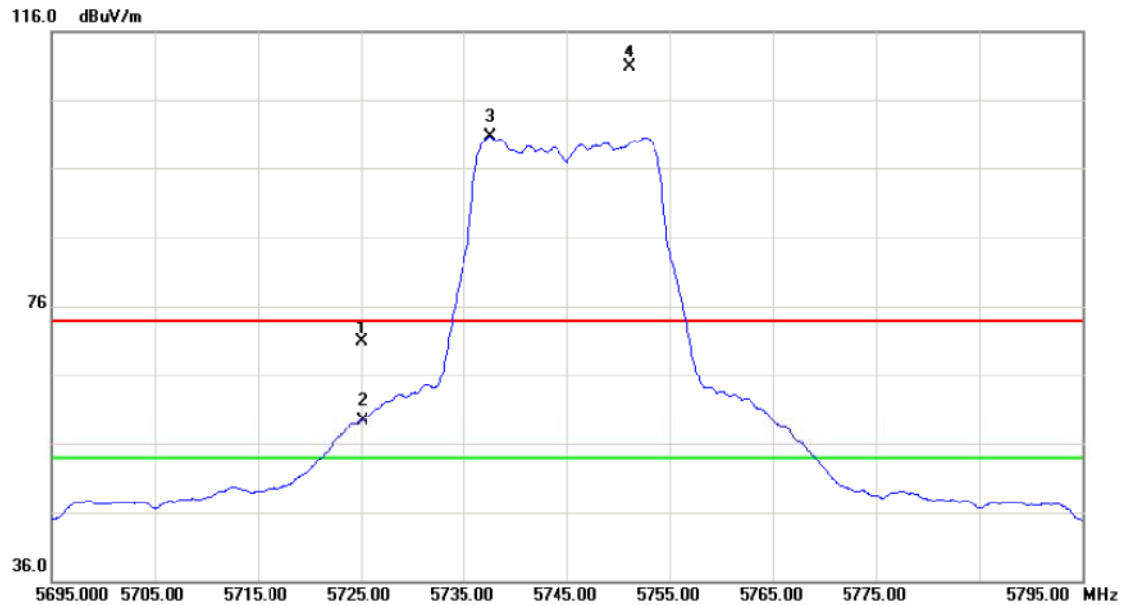
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	11490.07	30.05	16.47	46.52	54.00	-7.48	AVG	
2		11490.13	40.23	16.47	56.70	74.00	-17.30	peak	

Orthogonal Axis :	X
Test Mode :	TX AC N20 Mode 5745MHz

Horizontal

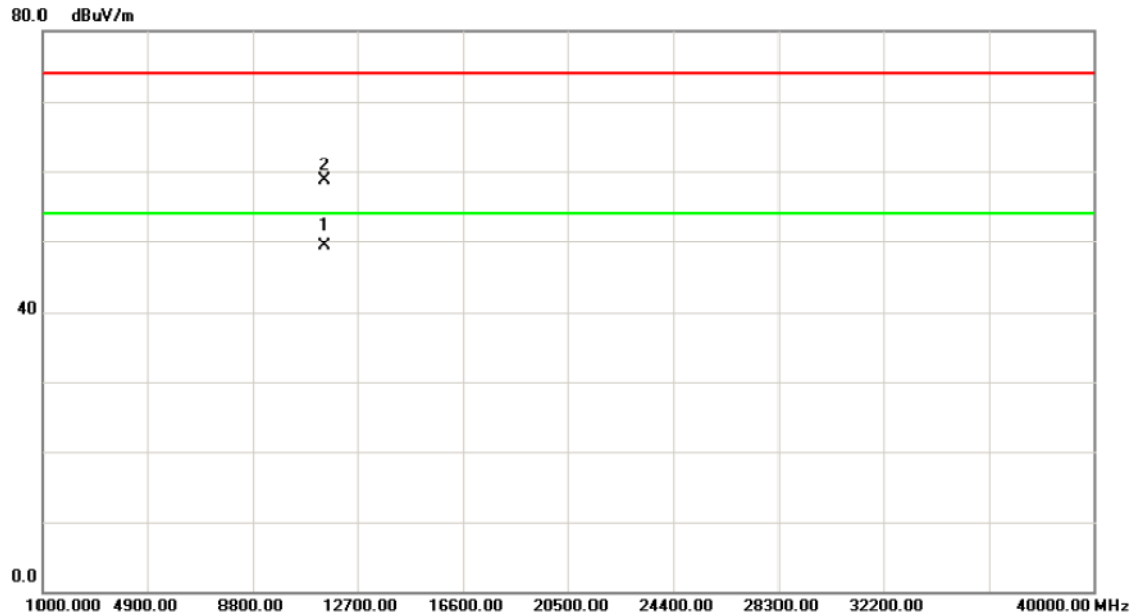


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		5725.000	26.15	44.58	70.73	74.00	-3.27	peak	
2	X	5725.000	14.78	44.58	59.36	54.00	5.36	AVG	
3	*	5737.600	55.99	44.65	100.64	54.00	46.64	AVG	Fundamental frequency, no limit
4	X	5751.100	65.94	44.71	110.65	74.00	36.65	peak	Fundamental frequency, no limit

Note: The band edge frequency Limit line= fundamental - 20dB

Orthogonal Axis :	X
Test Mode :	TX AC N20 Mode 5745MHz

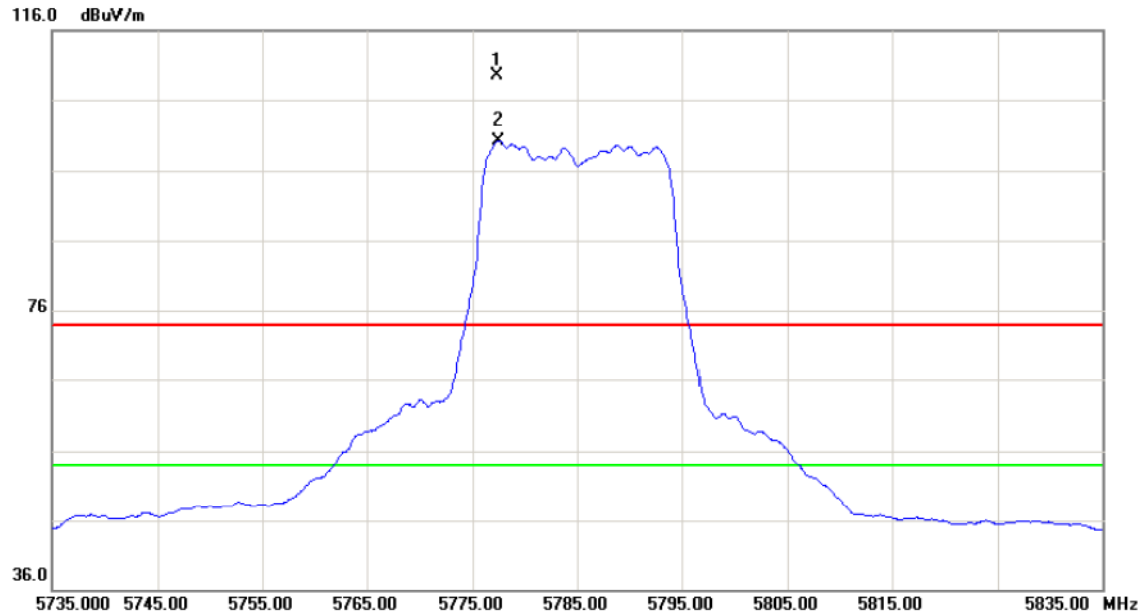
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1	*	11490.05	32.75	16.47	49.22	54.00	-4.78	AVG	
2		11490.17	42.31	16.47	58.78	74.00	-15.22	peak	

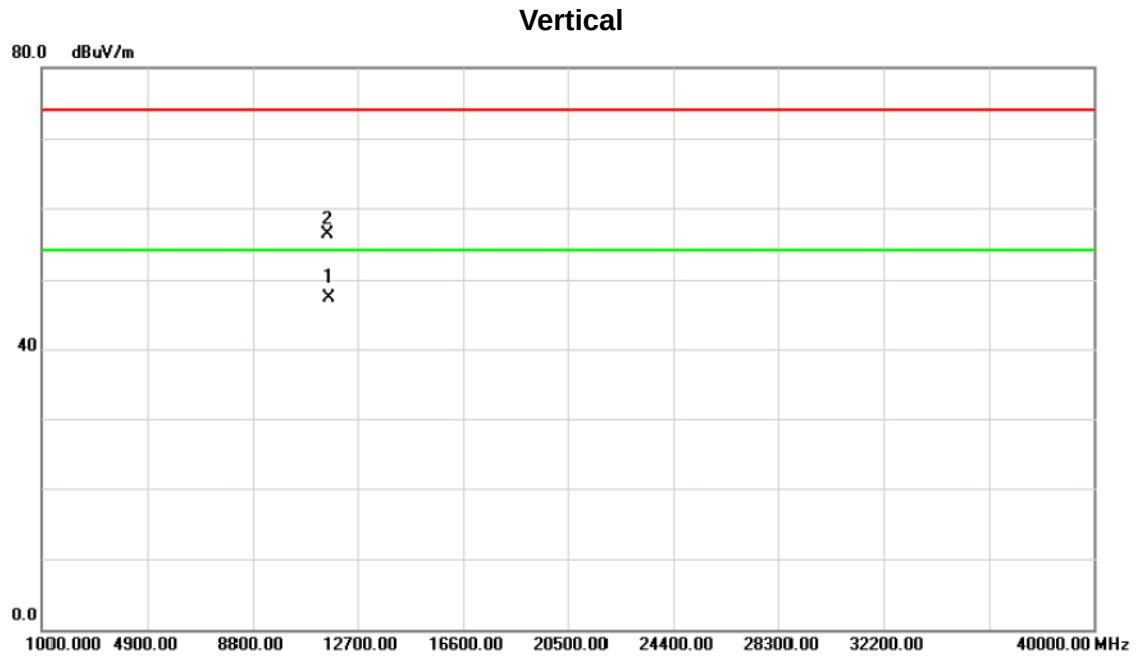
Orthogonal Axis :	X
Test Mode :	TX N20 AC Mode 5785MHz

Vertical



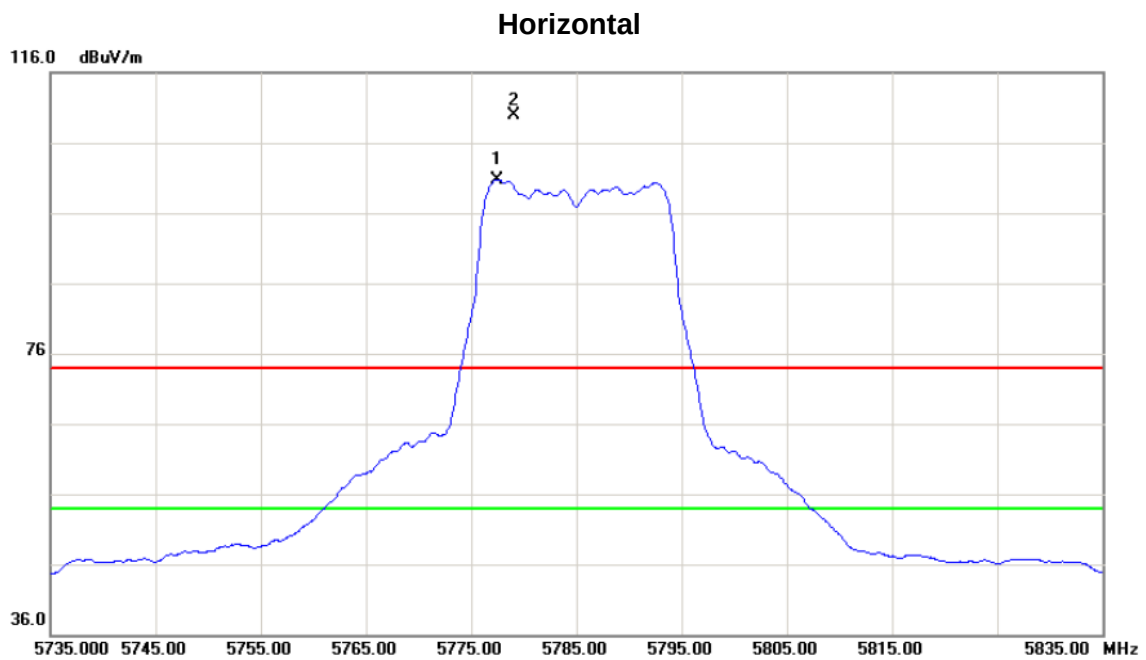
No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Over		
		MHz	Level	Factor	ment			Detector	Comment
			dBuV	dB	dBuV/m	dBuV/m	dB		
1	X	5777.300	64.74	44.85	109.59	74.00	35.59	peak	Fundamental frequency, no limit
2	*	5777.500	55.49	44.85	100.34	54.00	46.34	AVG	Fundamental frequency, no limit

Orthogonal Axis :	X
Test Mode :	TX AC N20 Mode 5785MHz



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	11569.89	30.87	16.44	47.31	54.00	-6.69	AVG	
2		11569.92	39.96	16.44	56.40	74.00	-17.60	peak	

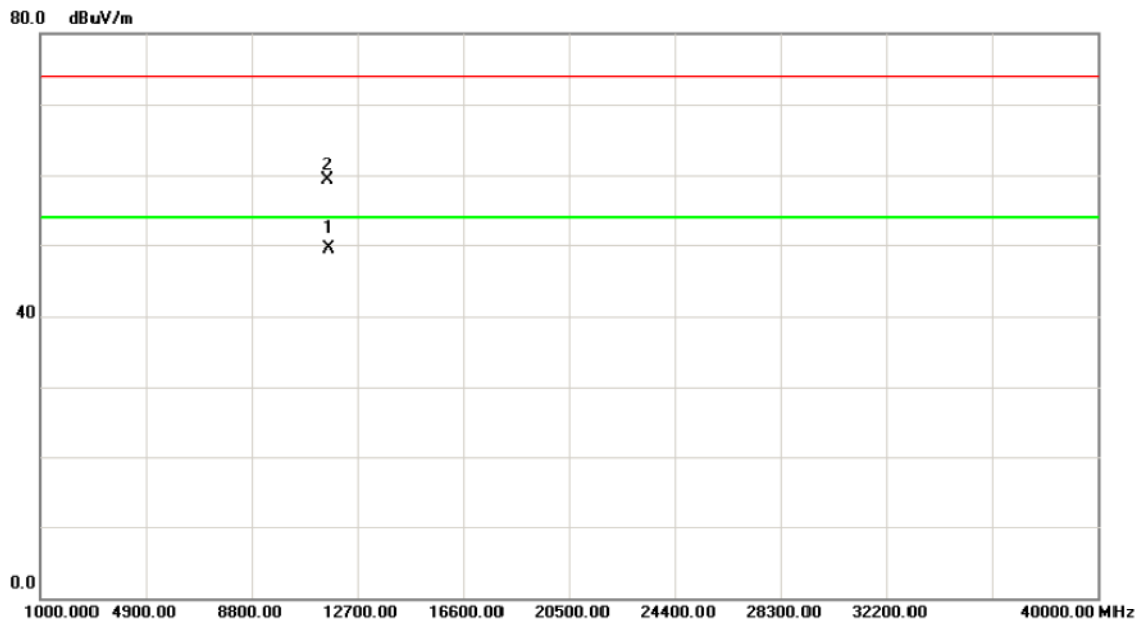
Orthogonal Axis :	X
Test Mode :	TX AC N20 Mode 5785MHz



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	*	5777.500	55.94	44.85	100.79	54.00	46.79	AVG	Fundamental frequency, no limit
2	X	5779.000	65.10	44.86	109.96	74.00	35.96	peak	Fundamental frequency, no limit

Orthogonal Axis :	X
Test Mode :	TX AC N20 Mode 5785MHz

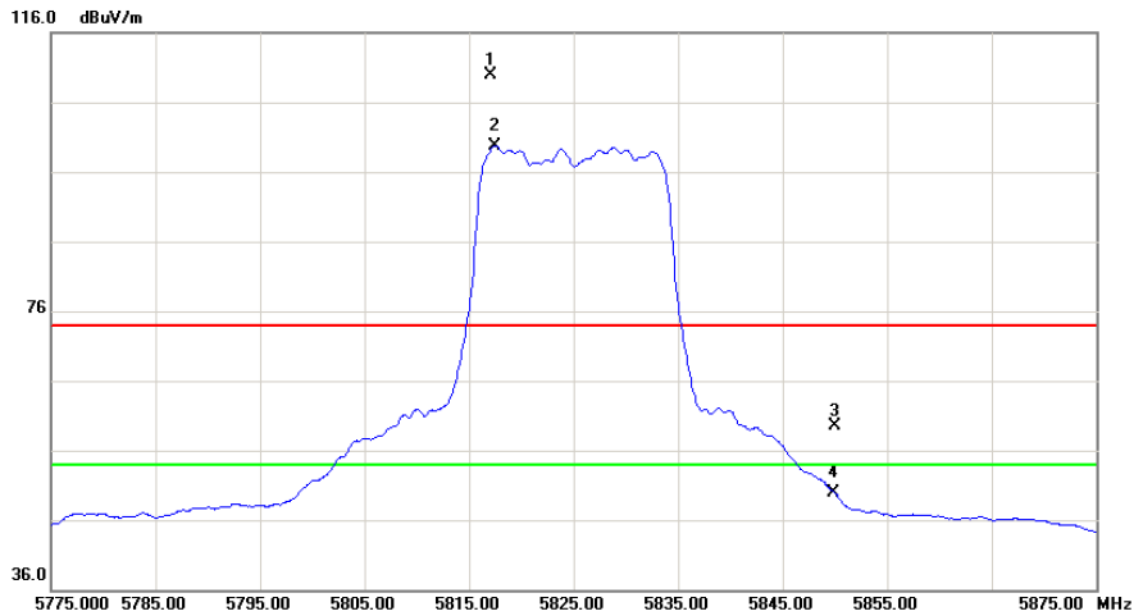
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1	*	11569.89	33.12	16.44	49.56	54.00	-4.44	AVG	
2		11570.21	42.86	16.44	59.30	74.00	-14.70	peak	

Orthogonal Axis :	X
Test Mode :	TX AC N20 Mode 5825MHz

Vertical

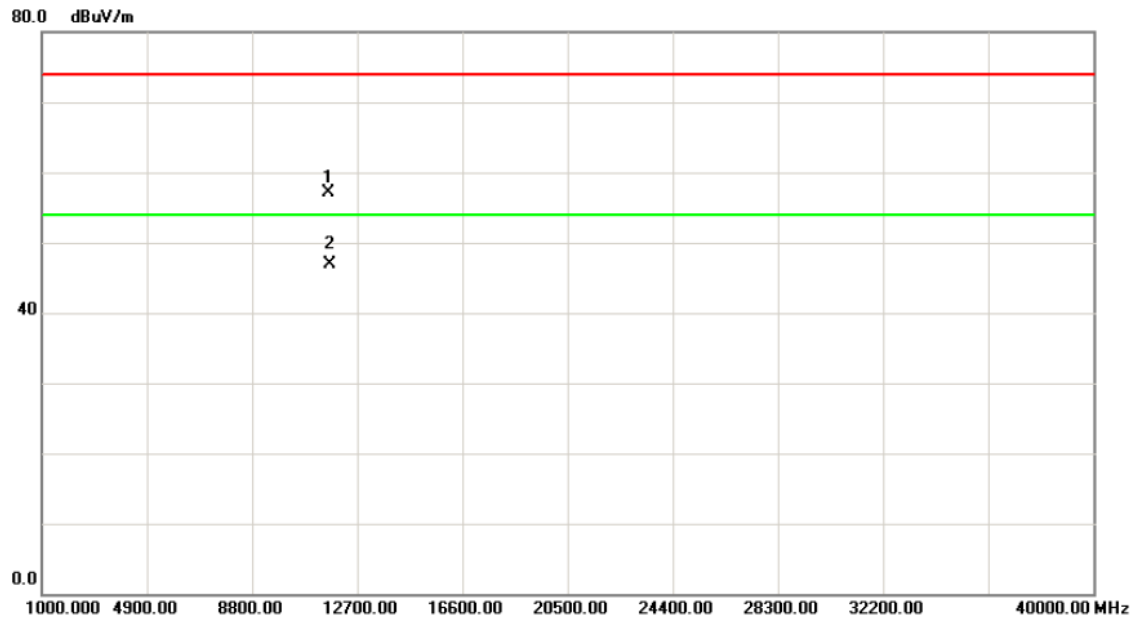


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	X	5817.100	64.75	45.06	109.81	74.00	35.81	peak	Fundamental frequency, no limit
2	*	5817.500	54.68	45.06	99.74	54.00	45.74	AVG	Fundamental frequency, no limit
3		5850.000	14.18	45.23	59.41	74.00	-14.59	peak	
4		5850.000	4.70	45.23	49.93	54.00	-4.07	AVG	

Note: The band edge frequency Limit line= fundamental - 20dB

Orthogonal Axis :	X
Test Mode :	TX AC N20 Mode 5825MHz

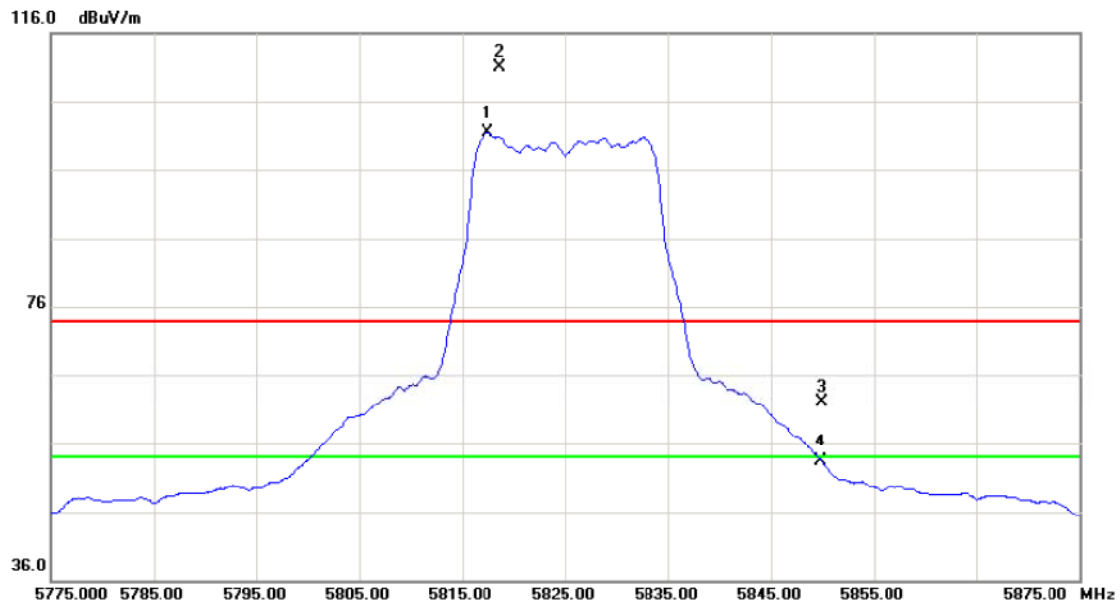
Vertical



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		11650.12	40.76	16.40	57.16	74.00	-16.84	peak	
2	*	11650.28	30.58	16.40	46.98	54.00	-7.02	AVG	

Orthogonal Axis :	X
Test Mode :	TX AC N20 Mode 5825MHz

Horizontal

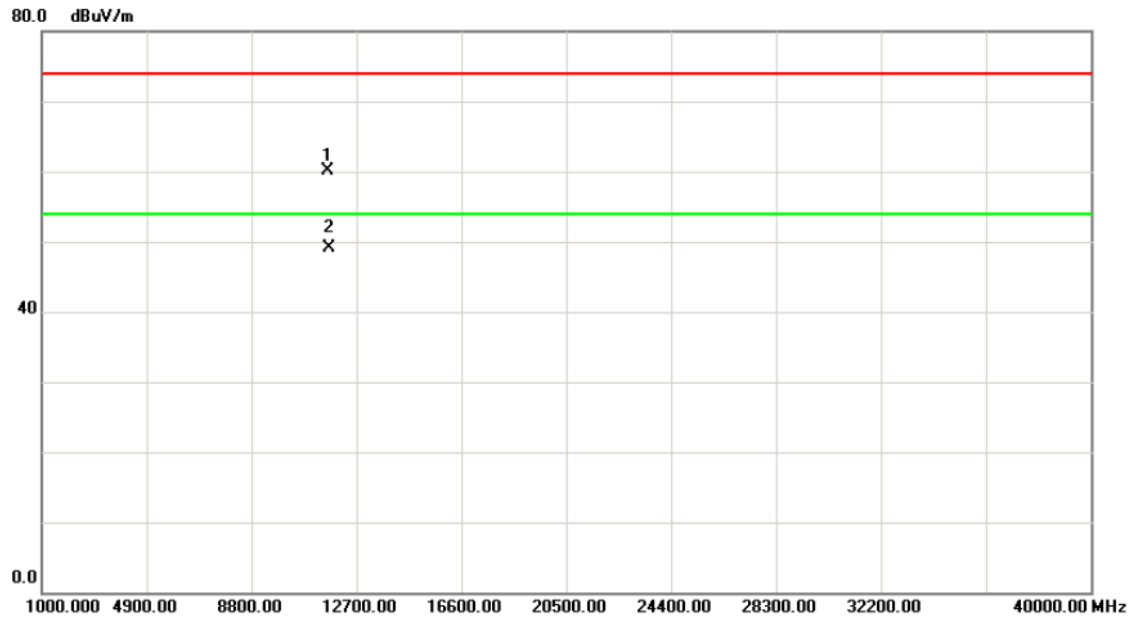


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment:
1	*	5817.400	56.25	45.06	101.31	54.00	47.31	AVG	Fundamental frequency, no limit
2	X	5818.600	65.78	45.06	110.84	74.00	36.84	peak	Fundamental frequency, no limit
3		5850.000	16.90	45.23	62.13	74.00	-11.87	peak	
4		5850.000	8.06	45.23	53.29	54.00	-0.71	AVG	

Note: The band edge frequency Limit line = fundamental - 20dB

Orthogonal Axis :	X
Test Mode :	TX AC N20 Mode 5825MHz

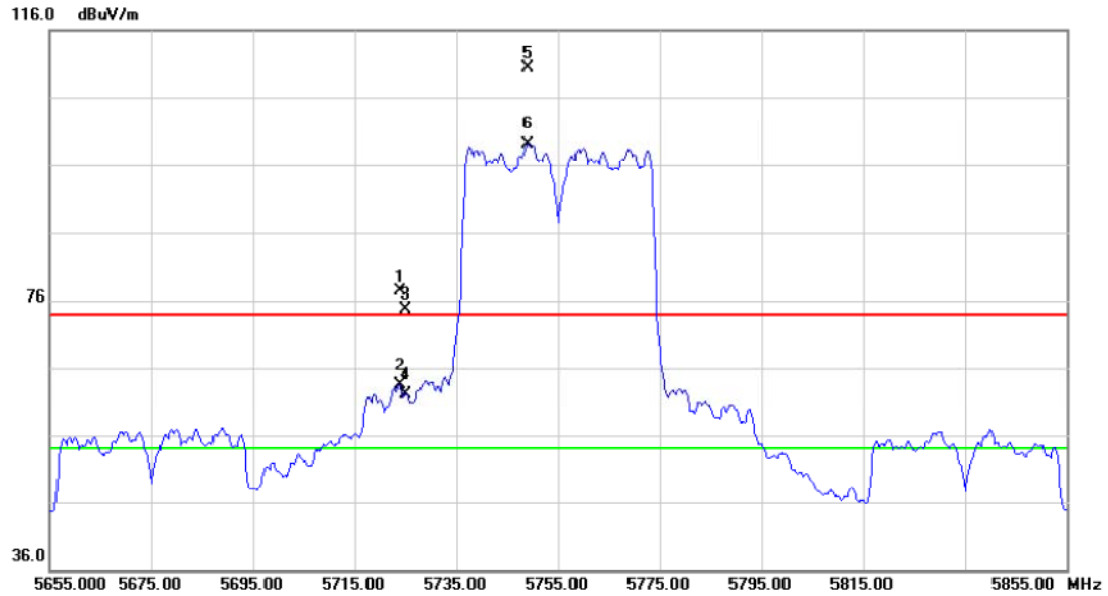
Horizontal



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		11650.02	43.63	16.40	60.03	74.00	-13.97	peak	
2	*	11650.34	32.71	16.40	49.11	54.00	-4.89	AVG	

Orthogonal Axis :	X
Test Mode :	TX AC N40 Mode 5755MHz

Vertical

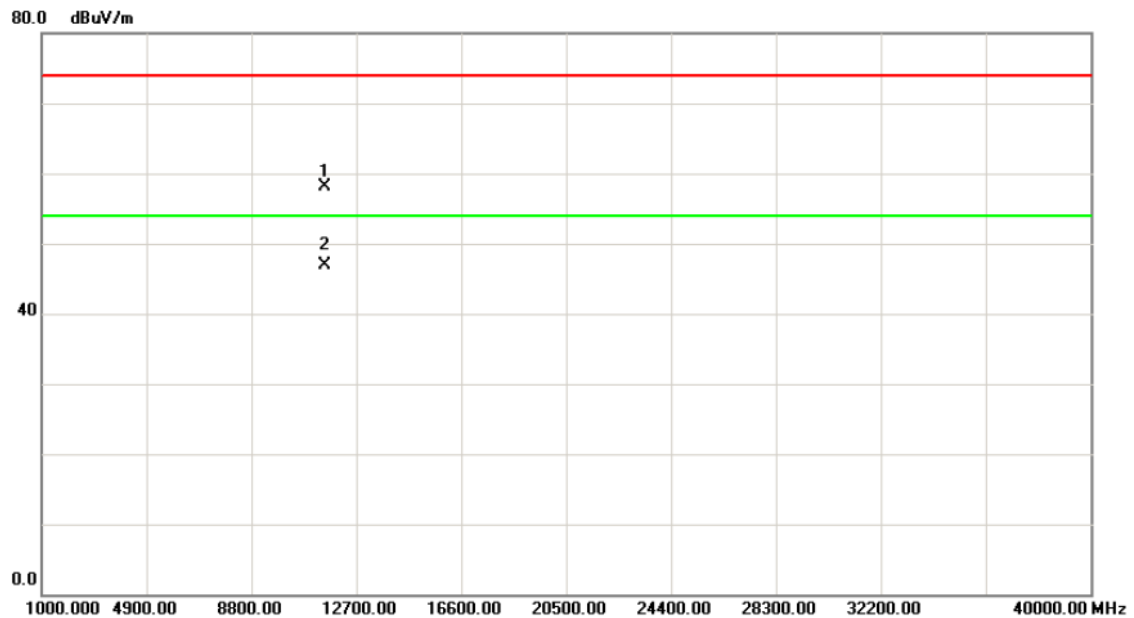


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	X	5723.800	32.71	44.57	77.28	74.00	3.28	peak	
2	X	5723.800	18.94	44.57	63.51	54.00	9.51	AVG	
3	X	5725.000	30.17	44.58	74.75	74.00	0.75	peak	
4	X	5725.000	17.58	44.58	62.16	54.00	8.16	AVG	
5	X	5749.000	65.65	44.71	110.36	74.00	36.36	peak	Fundamental frequency, no limit
6	*	5749.000	54.43	44.71	99.14	54.00	45.14	AVG	Fundamental frequency, no limit

Note: The band edge frequency Limit line= fundamental - 20dB

Orthogonal Axis :	X
Test Mode :	TX AC N40 Mode 5755MHz

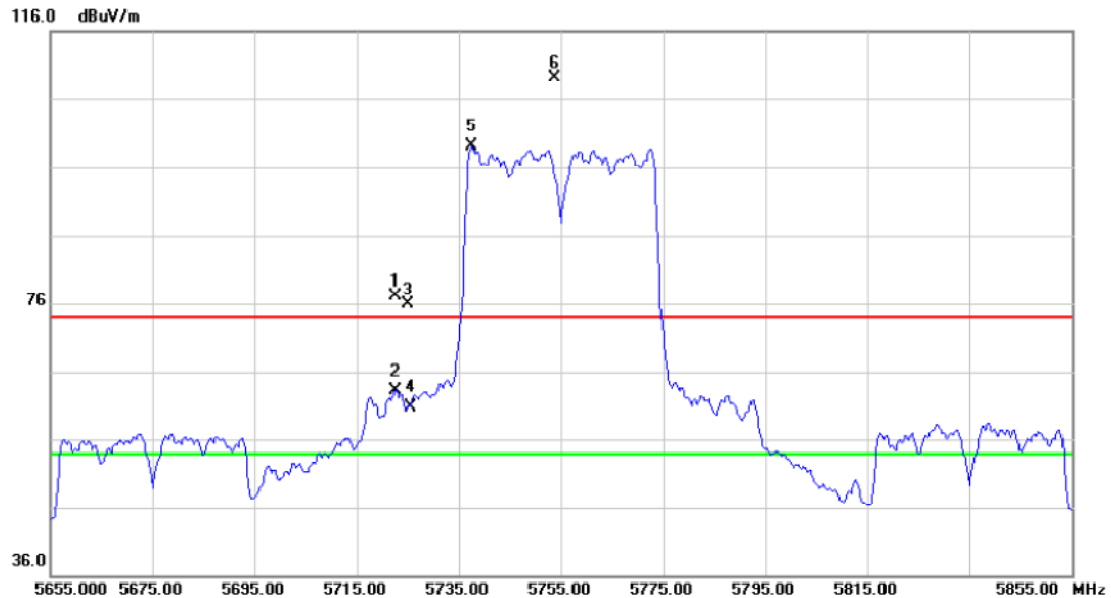
Vertical



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		11509.84	41.63	16.49	58.12	74.00	-15.88	peak	
2	*	11509.93	30.39	16.49	46.88	54.00	-7.12	AVG	

Orthogonal Axis :	X
Test Mode :	TX AC N40 Mode 5755MHz

Horizontal

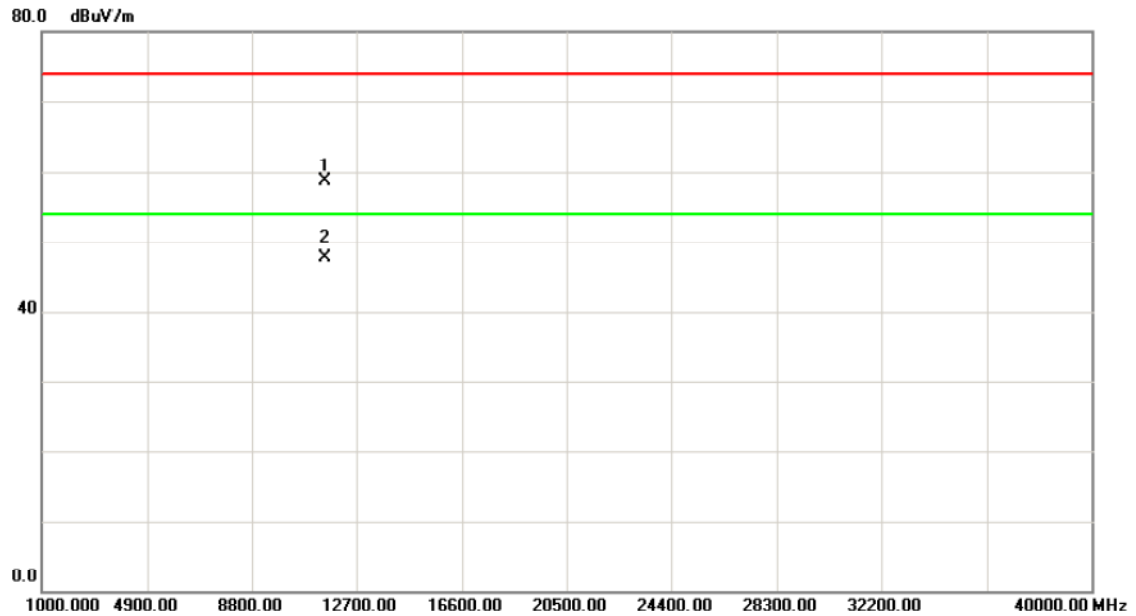


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	X	5722.600	32.63	44.57	77.20	74.00	3.20	peak	
2	X	5722.600	18.60	44.57	63.17	54.00	9.17	AVG	
3	X	5725.000	31.27	44.58	75.85	74.00	1.85	peak	
4	X	5725.000	16.18	44.58	60.76	54.00	6.76	AVG	
5	*	5737.600	54.36	44.65	99.01	54.00	45.01	AVG	Fundamental frequency, no limit
6	X	5753.800	64.36	44.73	109.09	74.00	35.09	peak	Fundamental frequency, no limit

Note: The band edge frequency Limit line= fundamental - 20dB

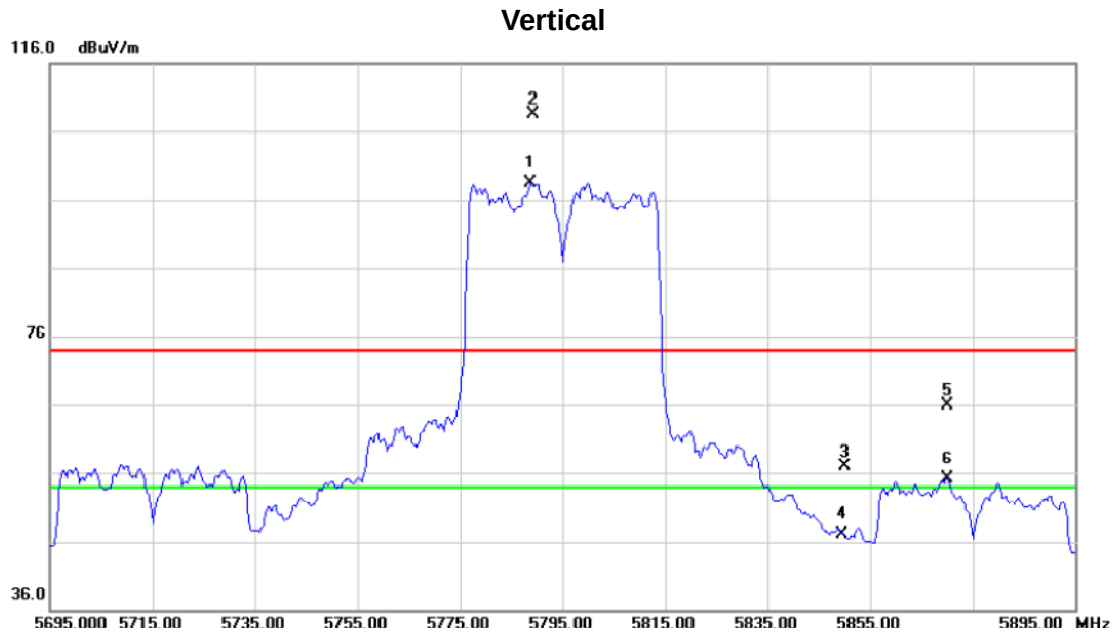
Orthogonal Axis :	X
Test Mode :	TX AC N40 Mode 5755MHz

Horizontal



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		11510.06	42.27	16.49	58.76	74.00	-15.24	peak	
2	*	11510.31	31.16	16.49	47.65	54.00	-6.35	AVG	

Orthogonal Axis :	X
Test Mode :	TX AC N40 Mode 5795MHz



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	*	5788.800	53.56	44.91	98.47	54.00	44.47	AVG	Fundamental frequency, no limit
2	X	5789.200	63.62	44.91	108.53	74.00	34.53	peak	Fundamental frequency, no limit
3		5850.000	11.61	45.23	56.84	74.00	-17.16	peak	
4		5850.000	1.91	45.23	47.14	54.00	-6.86	AVG	
5		5870.000	20.60	45.33	65.93	74.00	-8.07	peak	
6	X	5870.000	9.80	45.33	55.13	54.00	1.13	AVG	

Note: The band edge frequency Limit line = fundamental - 20dB