



FCC Radio Test Report

FCC ID: 2ABZMW75AP

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

Project No. : 1405C054
Equipment : Wireless N900 High Power Dual Band
Access Point
Model Name : W75AP
Applicant : SHENZHEN IP-COM NETWORKS
CO.,LTD.
Address : Room 101, Unit A, First Floor, Tower E3,
No. 1001, Zhongshanyuan Road, Nanshan
District, Shenzhen,China. 518052

Tested by: Neutron Engineering Inc. EMC Laboratory
Date of Receipt: May. 08, 2014
Date of Test: May. 08, 2014 ~ May. 19, 2014
Issued Date: May. 20, 2014

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Declaration

Neutron 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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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.



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REPORT ISSUED HISTORY

Issued No.	Description	Issued Date
NEI-FCCP-3-1405C054	Original Issue.	May. 20, 2014



1. CERTIFICATION

Equipment : Wireless N900 High Power Dual Band Access Point
Brand Name : IP-COM
Model Name : W75AP
Applicant : SHENZHEN IP-COM NETWORKS CO.,LTD.
Manufacturer : SHENZHEN IP-COM NETWORKS CO.,LTD.
Address : Room 101, Unit A, First Floor, Tower E3, No. 1001, Zhongshanyuan Road,
Nanshan District, Shenzhen, China. 518052
Date of Test : May. 08, 2014 ~ May. 19, 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 Neutron Engineering Inc. EMC Laboratory.

The test data, data evaluation, and equipment configuration contained in our test report (Ref No. NEI-FCCP-3-1405C054) 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
 Neutron'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 N900 High Power Dual Band Access Point	
Brand Name	IP-COM	
Model Name	W75AP	
Model Difference	N/A	
Product Description	Operation Frequency	5745~5825 MHz
	Modulation Technology	802.11a/n:OFDM
	Bit Rate of Transmitter	450Mbps
	Output Power (Max.)	802.11a: 24.25dBm 802.11n (20M): 24.94dBm 802.11n (40M): 25.01dBm
Power Source	PoE Power Supply Manufacturer:GOSPELL DIGITAL TECHNOLOGY CO.,LTD Model: GP306A-510-125	
Power Rating	I/P: AC 100-240V~1.5A MAX 50/60Hz O/P: DC 51V/1.25A	
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					
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
149	5745	153	5765	157	5785
161	5805	165	5825		

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

3. Table for Filed Antenna

Ant.	Manufacturer	Model Name	Antenna Type	Connector	Gain (dBi)	Note
0	Tenda	Q5078	Internal	N/A	5	TX/RX
1	Tenda	Q5078	Internal	N/A	5	TX/RX
2	Tenda	Q5078	Internal	N/A	5	TX/RX

Note:

The EUT incorporates a MIMO function. Physically, the EUT provides three completed three transmitters and three receivers (3T3R), all transmit signals are completely uncorrelated, then, **Direction gain = G_{ANT}**, that is Directional gain=5

4.

Operating Mode TX Mode	1TX	3TX
	802.11a	V (ANT 0 or ANT 1 or ANT 2)
802.11n(20MHz)	-	V (ANT 0 + ANT 1 + ANT 2)
802.11n(40MHz)	-	V (ANT 0 + 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 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 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 N-20MHZ MODE CHANNEL 149/157/165
Mode 3	TX N-40MHZ MODE CHANNEL 151/159

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

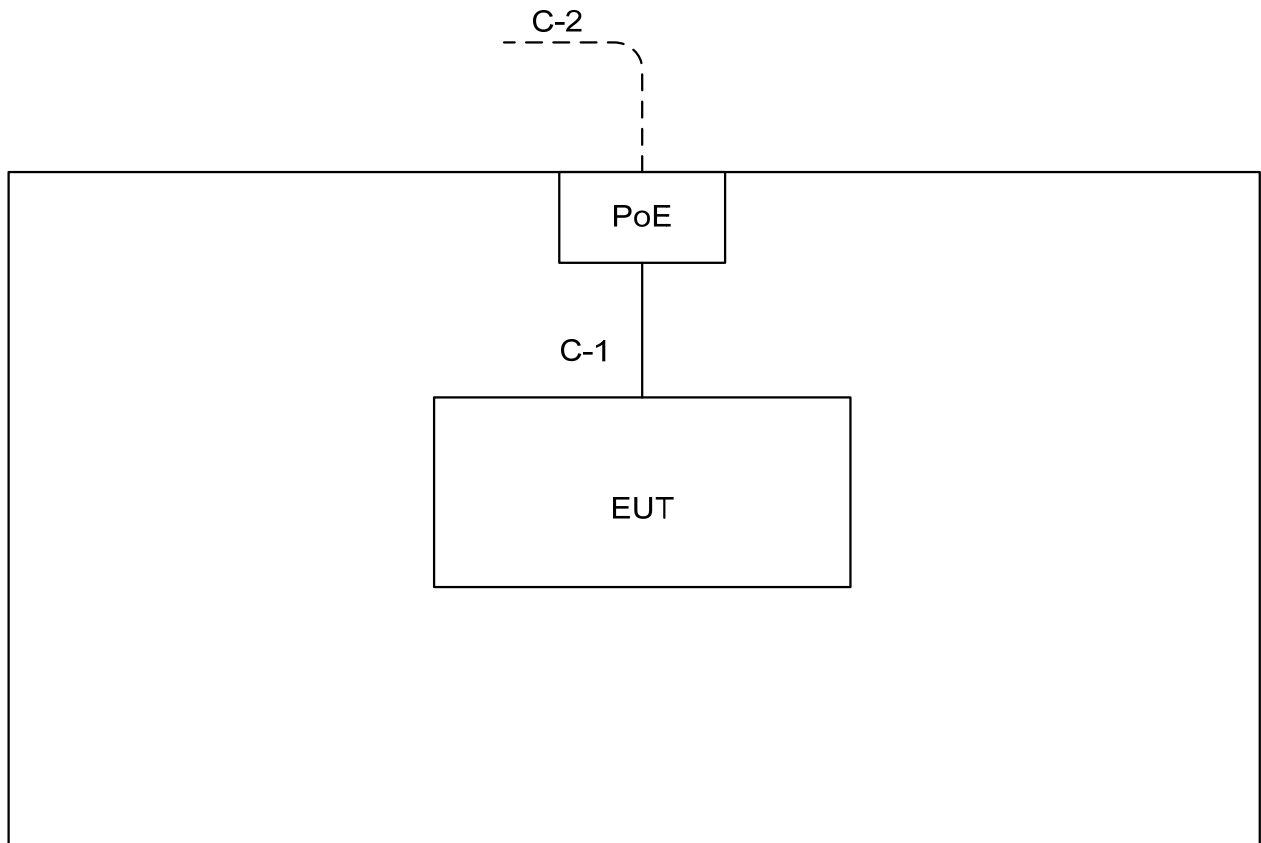
During testing, channel & power controlling software provided by the customer was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final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

Test software version	art_ver_4_6_153_10		
Frequency	5745 MHz	5785 MHz	5825 MHz
IEEE 802.11a	5	55	55
IEEE 802.11 n (20MHz)	35	35	35

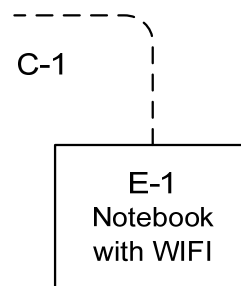
Test software version	art_ver_4_6_153_10	
Frequency	5755 MHz	5795 MHz
IEEE 802.11 n (40MHz)	36	36



3.4 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED



C-1 RJ45 Cable
C-2 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	Notebook	DELL	D600	DOC	7T390 A03	

Item	Shielded Type	Ferrite Core	Length	Note
C-1	NO	NO	3m	
C-2	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

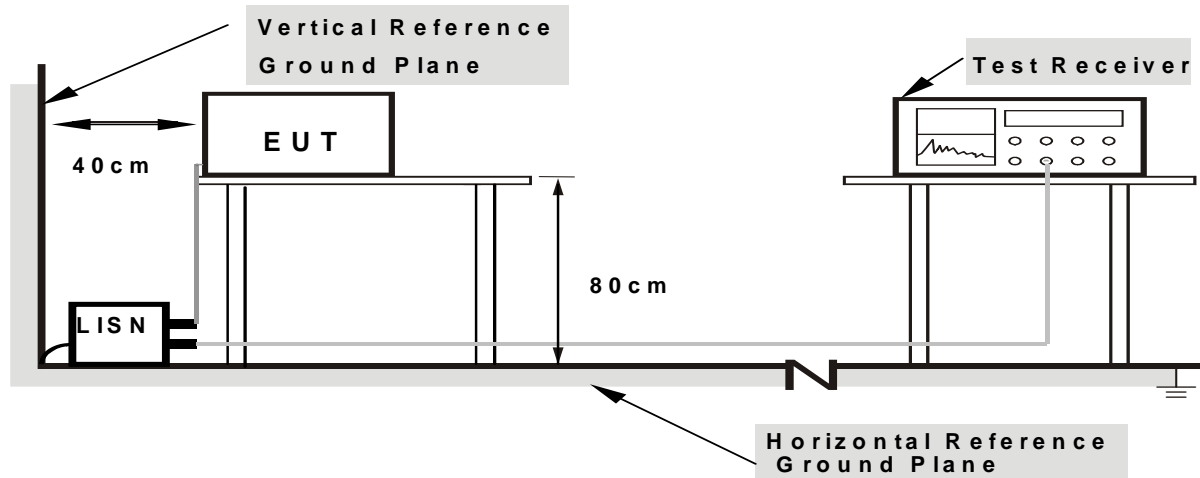
4.1.2 TEST PROCEDURE

- 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

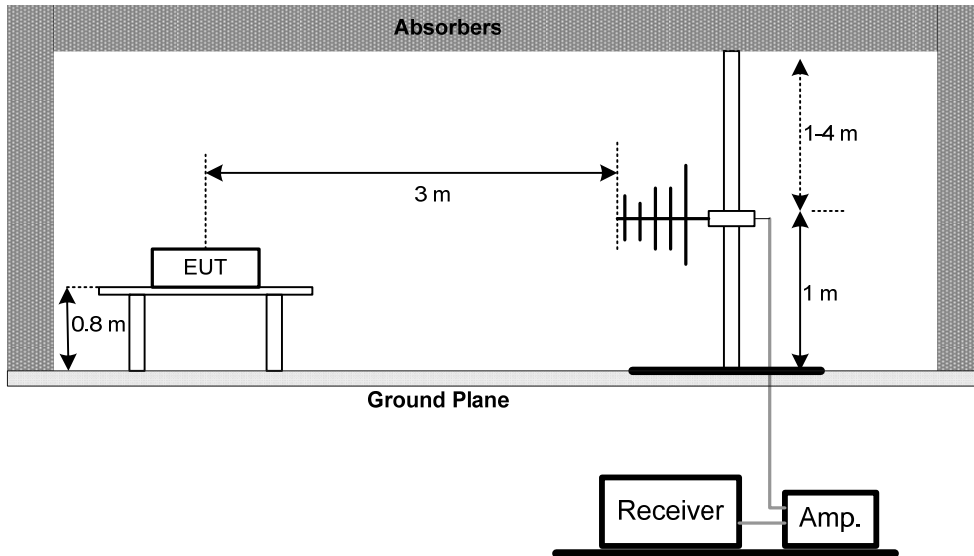
- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(below 1GHz)
- b. The EUT was placed on the top of a rotating table 0.8 meters above the ground at 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

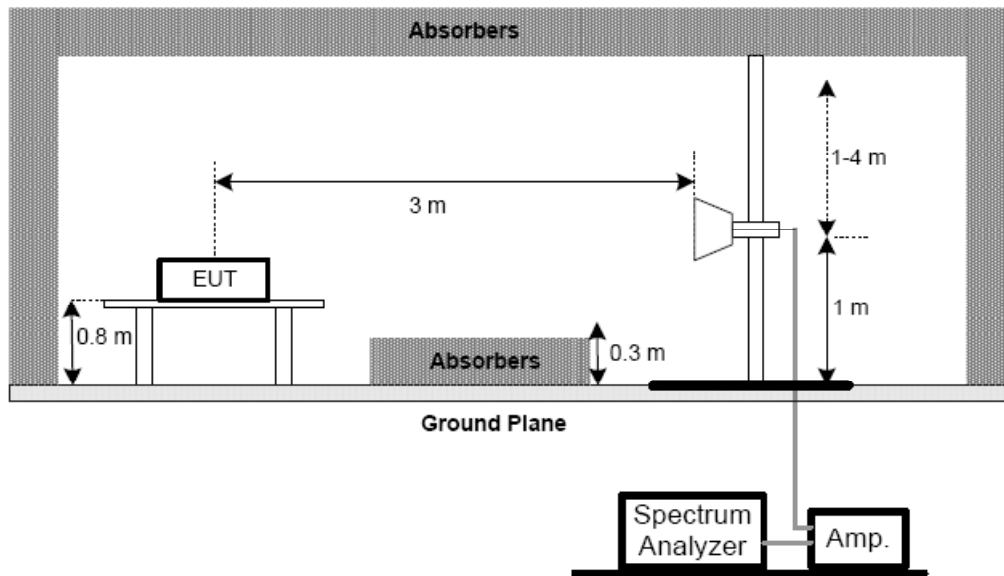
No deviation

4.2.4 TEST SETUP

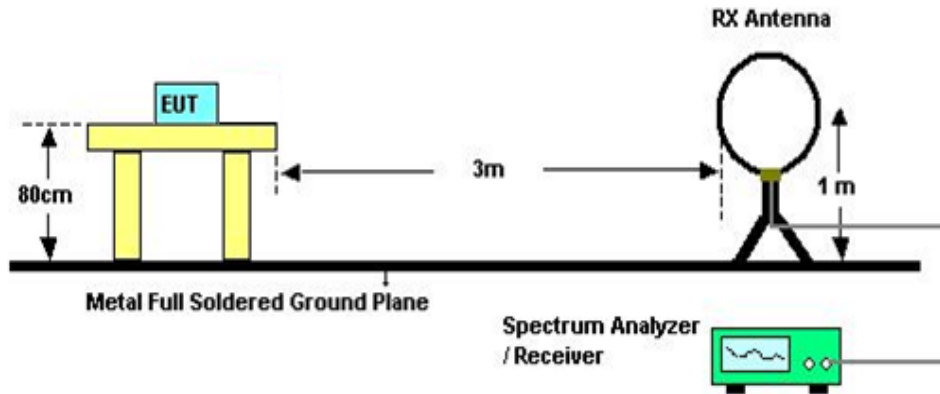
(A) Radiated Emission Test Set-Up Frequency Below 1 GHz



(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

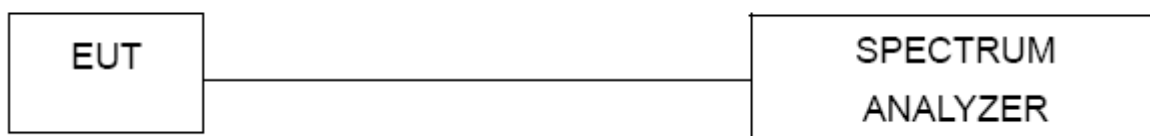
5.1.1 TEST PROCEDURE

- 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.

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

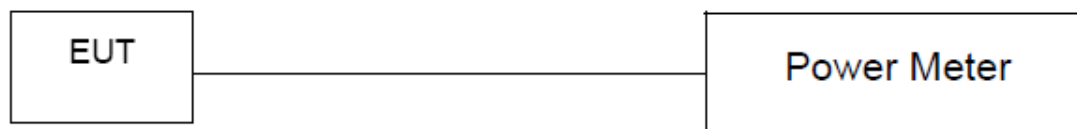
6.1.1 TEST PROCEDURE

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

- 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=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_1_5m_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.



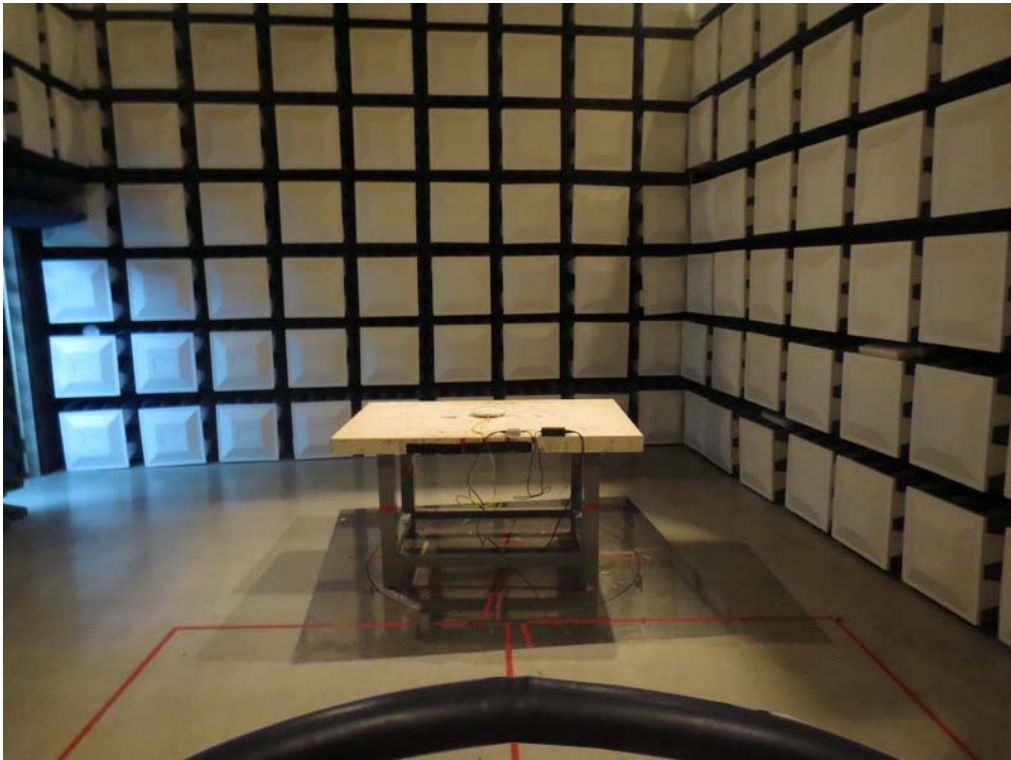
10. EUT TEST PHOTO

Conducted Measurement Photos

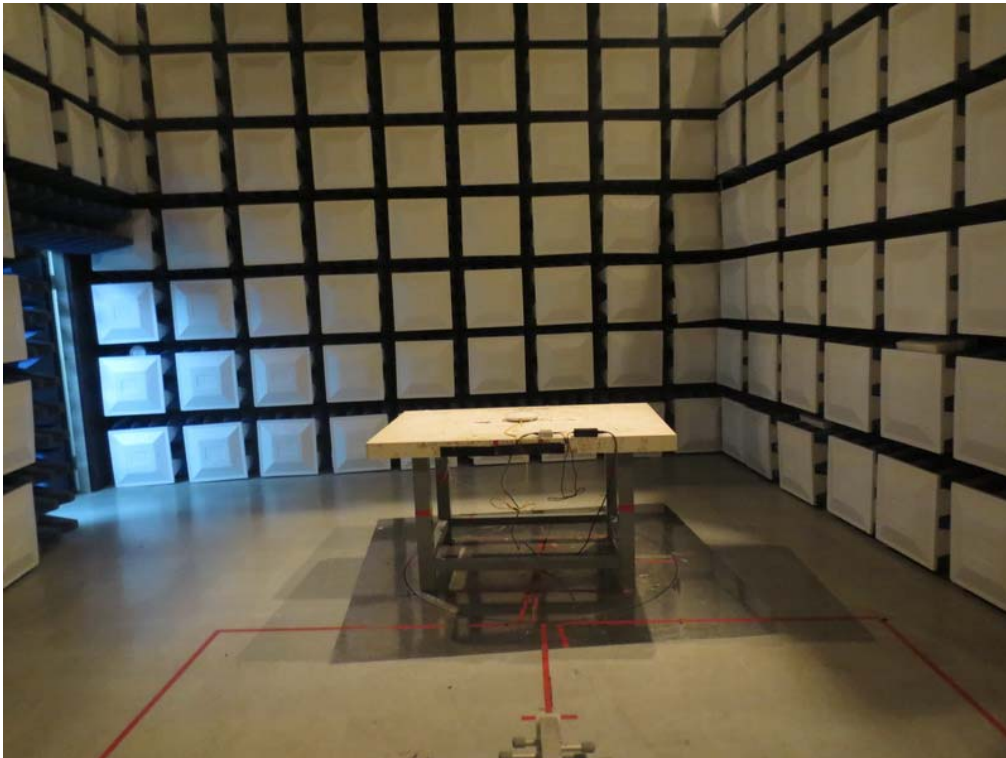




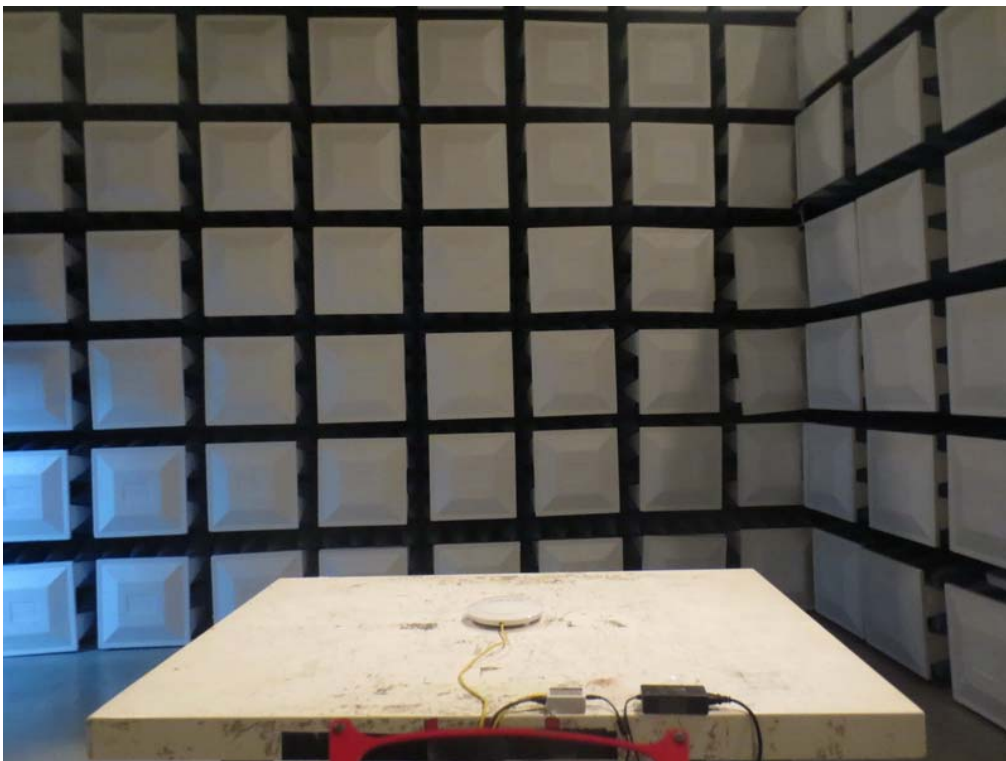
**Radiated Measurement Photos
9KHz to 30MHz**



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



**Radiated Measurement Photos
Above 1000MHz**



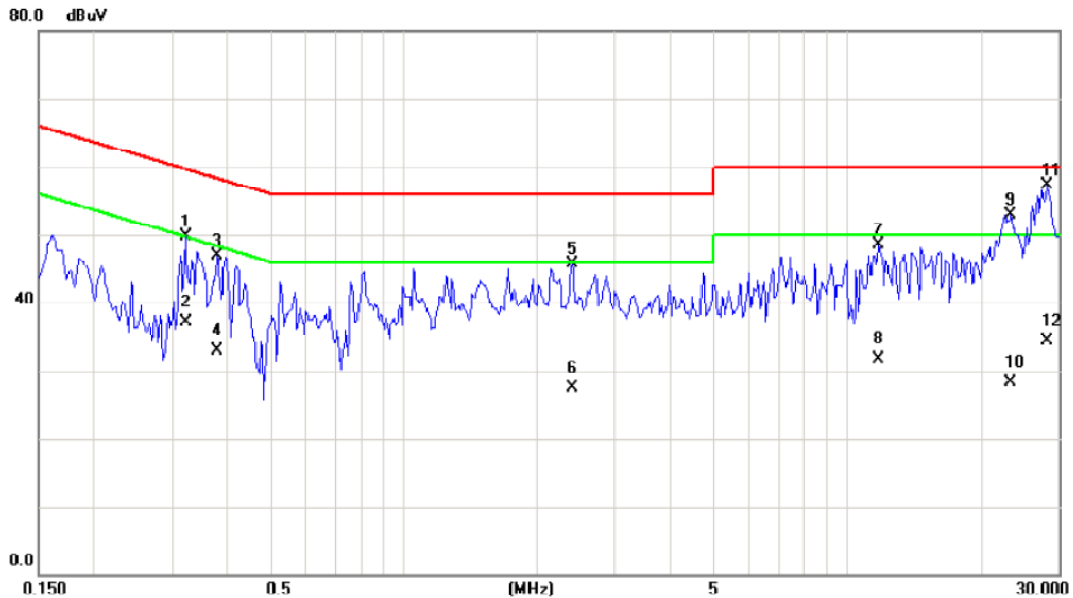


ATTACHMENT A - CONDUCTED EMISSION



Test Mode : TX MODE

Line



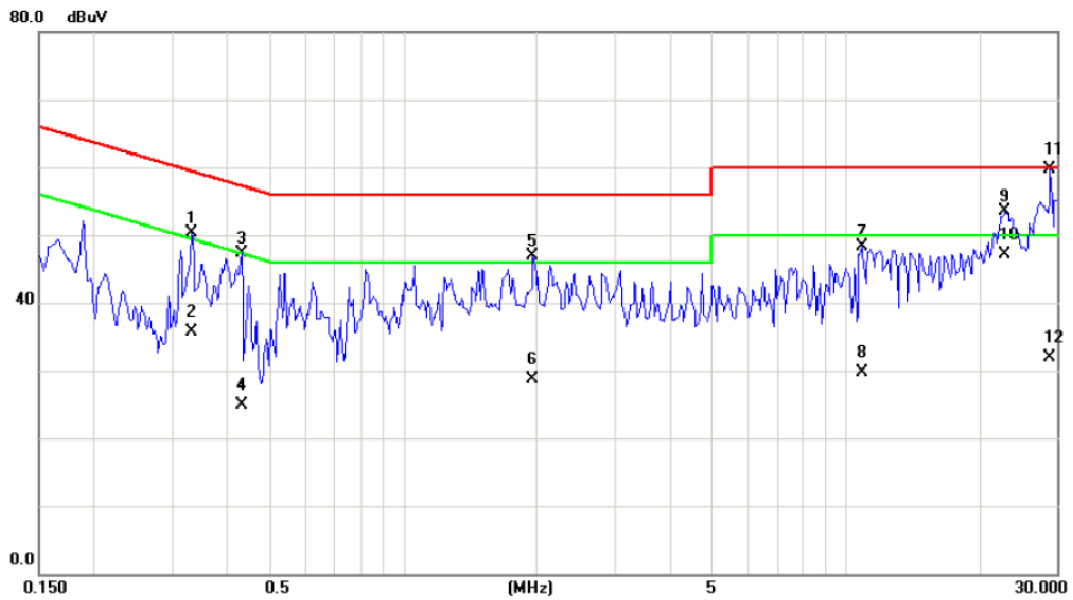
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1		0.3220	40.12	9.60	49.72	59.66	-9.94	peak	
2		0.3220	27.60	9.60	37.20	49.66	-12.46	AVG	
3		0.3805	37.32	9.64	46.96	58.27	-11.31	peak	
4		0.3805	23.20	9.64	32.84	48.27	-15.43	AVG	
5		2.4000	35.99	9.73	45.72	56.00	-10.28	peak	
6		2.4000	17.80	9.73	27.53	46.00	-18.47	AVG	
7		11.7500	38.35	10.14	48.49	60.00	-11.51	peak	
8		11.7500	21.60	10.14	31.74	50.00	-18.26	AVG	
9		23.4297	42.40	10.54	52.94	60.00	-7.06	peak	
10		23.4297	17.70	10.54	28.24	50.00	-21.76	AVG	
11	*	28.1758	46.48	10.82	57.30	60.00	-2.70	peak	
12		28.1758	23.40	10.82	34.22	50.00	-15.78	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		0.3336	40.67	9.62	50.29	59.36	-9.07	peak	
2		0.3336	26.10	9.62	35.72	49.36	-13.64	AVG	
3		0.4313	37.75	9.63	47.38	57.23	-9.85	peak	
4		0.4313	15.20	9.63	24.83	47.23	-22.40	AVG	
5		1.9625	37.14	9.74	46.88	56.00	-9.12	peak	
6		1.9625	19.00	9.74	28.74	46.00	-17.26	AVG	
7		10.8516	38.16	10.13	48.29	60.00	-11.71	peak	
8		10.8516	19.50	10.13	29.63	50.00	-20.37	AVG	
9		22.9570	42.75	10.67	53.42	60.00	-6.58	peak	
10		22.9570	36.50	10.67	47.17	50.00	-2.83	AVG	
11	*	28.9375	48.86	10.93	59.79	60.00	-0.21	QP	
12		28.9375	20.90	10.93	31.83	50.00	-18.17	AVG	

Note : The test result has included the cable loss.



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



Test Mode : TX Mode 5745MHz

Freq. (MHz)	Ant. 0°/90°	Reading(RA) (dBuV)	Corr.Factor(CF) (dB)	Measured(FS) (dBuV/m)	Limits(QP) (dBuV/m)	Margin (dB)	Note
0.0089	0°	26.32	24.30	50.62	128.62	-78.00	AVG
0.0089	0°	30.19	24.30	54.49	148.62	-94.13	PEAK
0.0256	0°	22.85	23.94	46.79	119.43	-72.64	AVG
0.0256	0°	25.37	23.94	49.31	139.43	-90.12	PEAK
0.0382	0°	20.92	23.15	44.07	115.96	-71.89	AVG
0.0382	0°	23.65	23.15	46.80	135.96	-89.16	PEAK
0.0652	0°	19.82	22.10	41.92	111.32	-69.40	AVG
0.0652	0°	24.27	22.10	46.37	131.32	-84.95	PEAK
0.2639	0°	20.38	20.37	40.75	99.18	-58.43	AVG
0.2639	0°	23.72	20.37	44.09	119.18	-75.09	PEAK
1.4864	0°	27.68	19.55	47.23	64.16	-16.93	QP

Freq. (MHz)	Ant. 0°/90°	Reading(RA) (dBuV)	Corr.Factor(CF) (dB)	Measured(FS) (dBuV/m)	Limits(QP) (dBuV/m)	Margin (dB)	Note
0.0099	90°	18.56	24.30	42.86	127.67	-84.81	AVG
0.0099	90°	21.34	24.30	45.64	147.67	-102.03	PEAK
0.0224	90°	14.37	24.15	38.52	120.59	-82.07	AVG
0.0224	90°	16.68	24.15	40.83	140.59	-99.76	PEAK
0.0463	90°	19.72	22.64	42.36	114.30	-71.94	AVG
0.0463	90°	22.39	22.64	45.03	134.30	-89.27	PEAK
0.0774	90°	20.61	21.85	42.46	109.83	-67.37	AVG
0.0774	90°	23.53	21.85	45.38	129.83	-84.45	PEAK
0.3756	90°	20.29	20.10	40.39	96.11	-55.72	AVG
0.3756	90°	23.75	20.10	43.85	116.11	-72.26	PEAK
1.6719	90°	24.92	19.53	44.45	63.14	-18.69	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 (specific distance / test distance) (dB);
- (3) Limit line = specific limits (dBuV) + distance extrapolation factor.

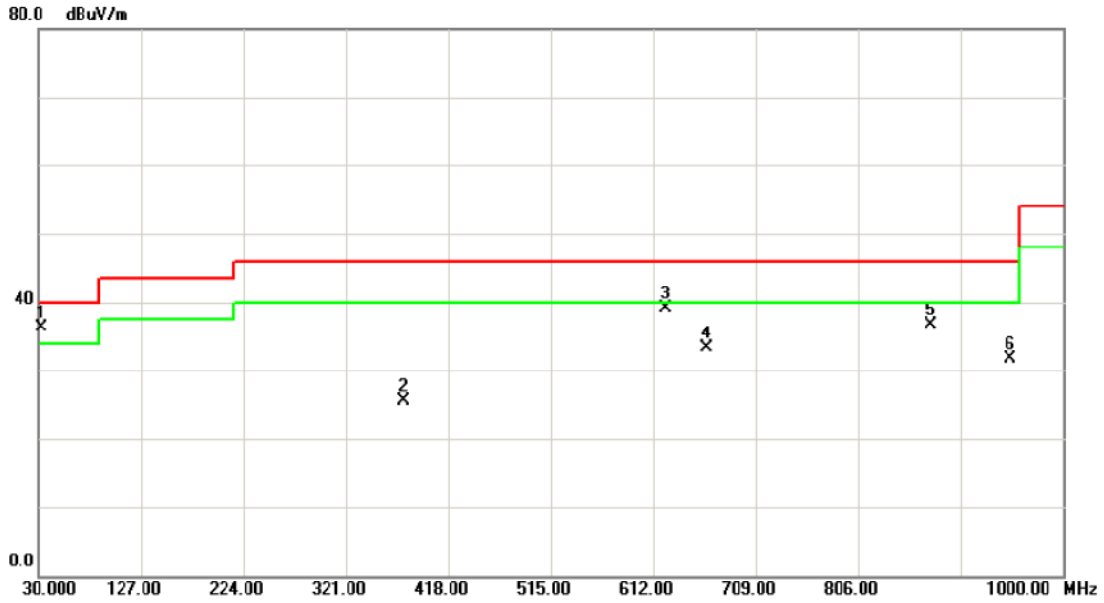


ATTACHMENT C - RADIATED EMISSION (30MHZ TO 1000MHZ)



Test Mode: TX A MODE 5745MHz

Vertical

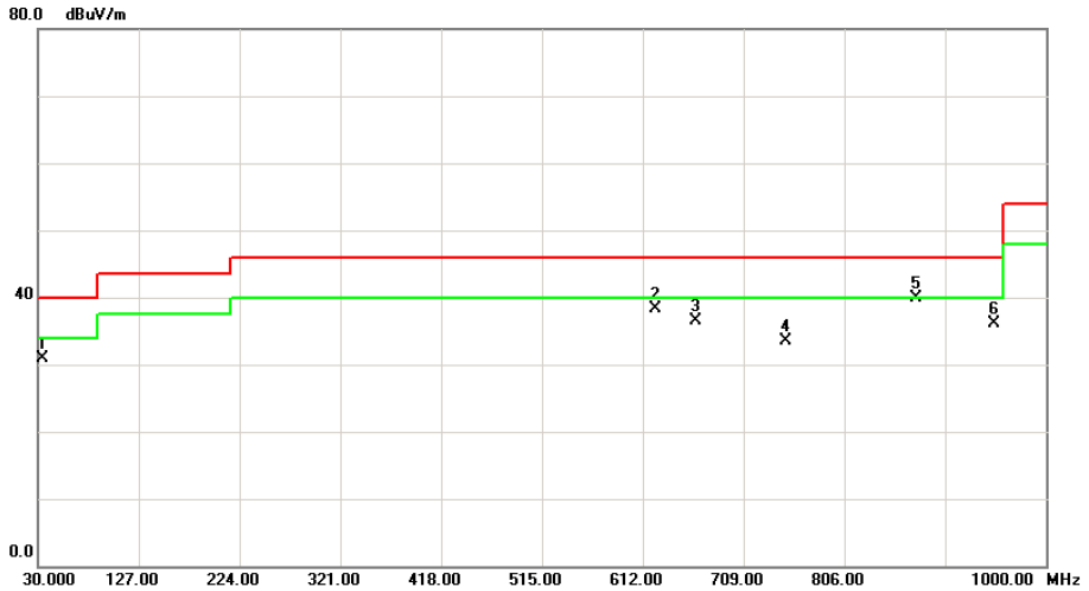


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measurement dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	*	32.9100	51.65	-15.28	36.37	40.00	-3.63	peak	
2		375.3200	36.14	-10.72	25.42	46.00	-20.58	peak	
3		624.6100	45.77	-6.67	39.10	46.00	-6.90	peak	
4		662.4400	38.42	-5.14	33.28	46.00	-12.72	peak	
5		874.8700	39.07	-2.44	36.63	46.00	-9.37	peak	
6		949.5600	32.09	-0.31	31.78	46.00	-14.22	peak	



Test Mode: TX A MODE 5745MHz

Horizontal

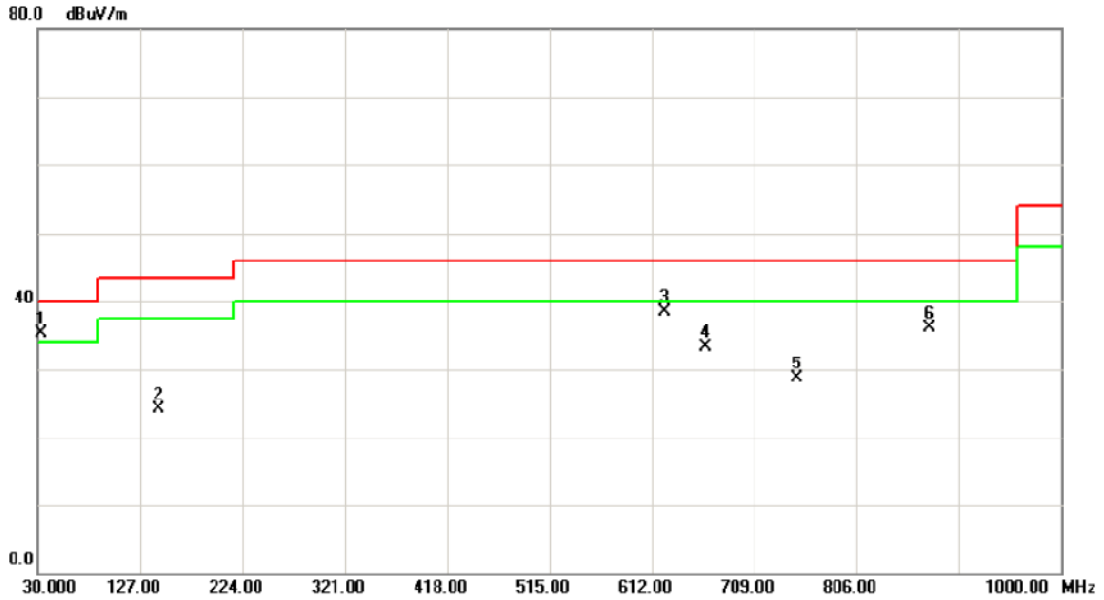


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		33.8800	45.90	-15.07	30.83	40.00	-9.17	peak	
2		624.6100	44.91	-6.67	38.24	46.00	-7.76	peak	
3		662.4400	41.74	-5.14	36.60	46.00	-9.40	peak	
4		749.7400	38.20	-4.68	33.52	46.00	-12.48	peak	
5	*	874.8700	42.32	-2.44	39.88	46.00	-6.12	peak	
6		949.5600	36.51	-0.31	36.20	46.00	-9.80	peak	



Test Mode: TX A MODE 5785MHz

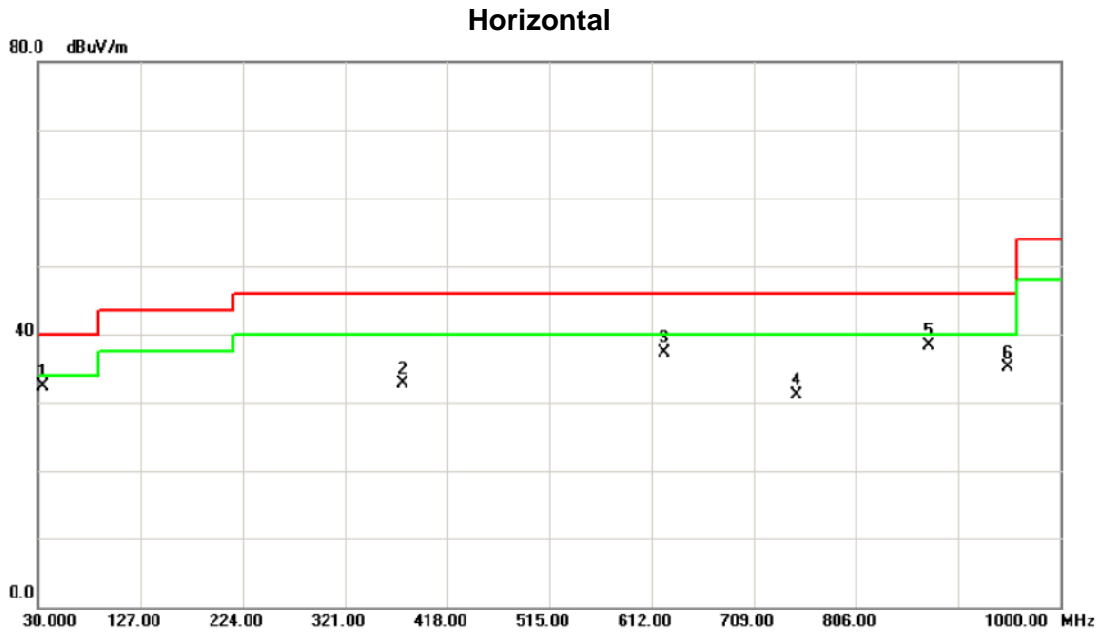
Vertical



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	*	32.9100	50.65	-15.28	35.37	40.00	-4.63	peak	
2		144.4600	37.35	-13.19	24.16	43.50	-19.34	peak	
3		624.6100	45.27	-6.67	38.60	46.00	-7.40	peak	
4		662.4400	38.42	-5.14	33.28	46.00	-12.72	peak	
5		749.7400	33.43	-4.68	28.75	46.00	-17.25	peak	
6		874.8700	38.57	-2.44	36.13	46.00	-9.87	peak	



Test Mode: TX A MODE 5785MHz

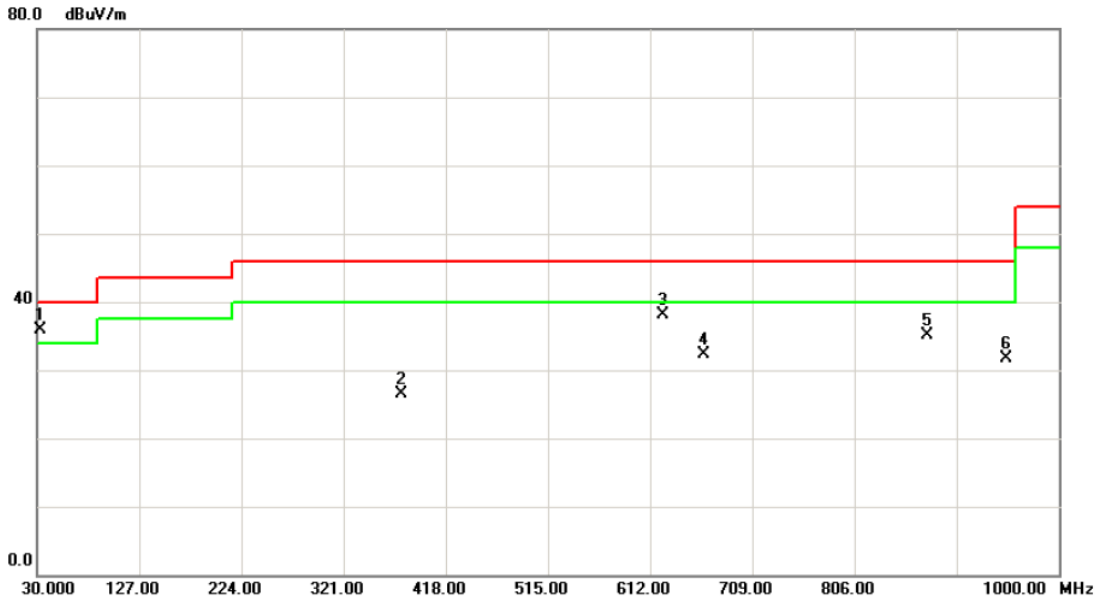


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		33.8800	47.40	-15.07	32.33	40.00	-7.67	peak	
2		375.3200	43.49	-10.72	32.77	46.00	-13.23	peak	
3		624.6100	43.91	-6.67	37.24	46.00	-8.76	peak	
4		749.7400	35.70	-4.68	31.02	46.00	-14.98	peak	
5	*	874.8700	40.82	-2.44	38.38	46.00	-7.62	peak	
6		949.5600	35.51	-0.31	35.20	46.00	-10.80	peak	



Test Mode: TX A MODE 5825MHz

Vertical

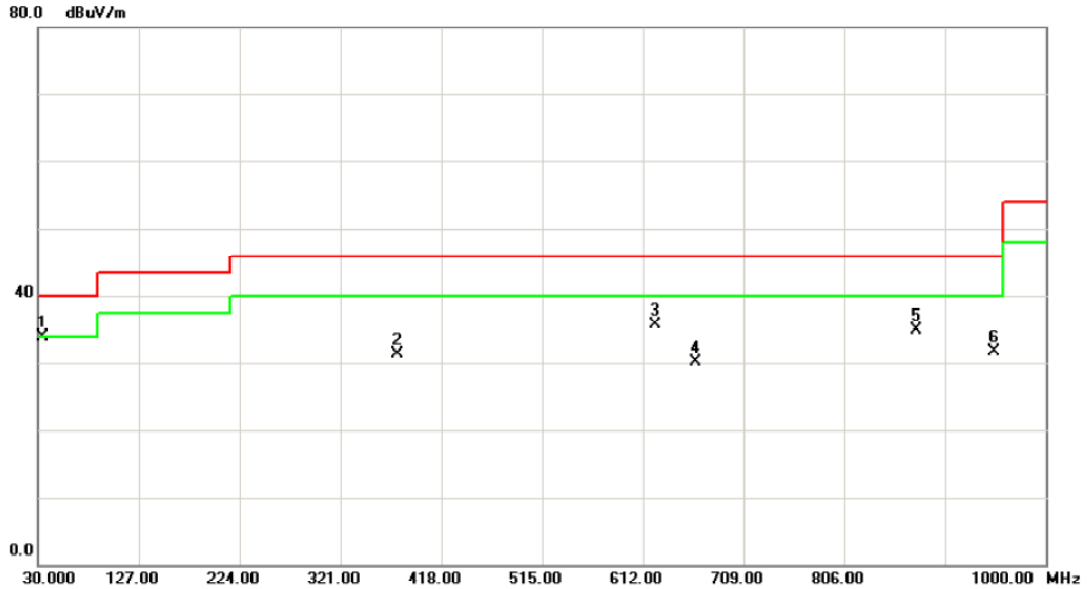


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	*	32.9100	51.15	-15.28	35.87	40.00	-4.13	peak	
2		375.3200	37.14	-10.72	26.42	46.00	-19.58	peak	
3		624.6100	44.77	-6.67	38.10	46.00	-7.90	peak	
4		662.4400	37.42	-5.14	32.28	46.00	-13.72	peak	
5		874.8700	37.57	-2.44	35.13	46.00	-10.87	peak	
6		949.5600	32.09	-0.31	31.78	46.00	-14.22	peak	



Test Mode: TX A MODE 5825MHz

Horizontal



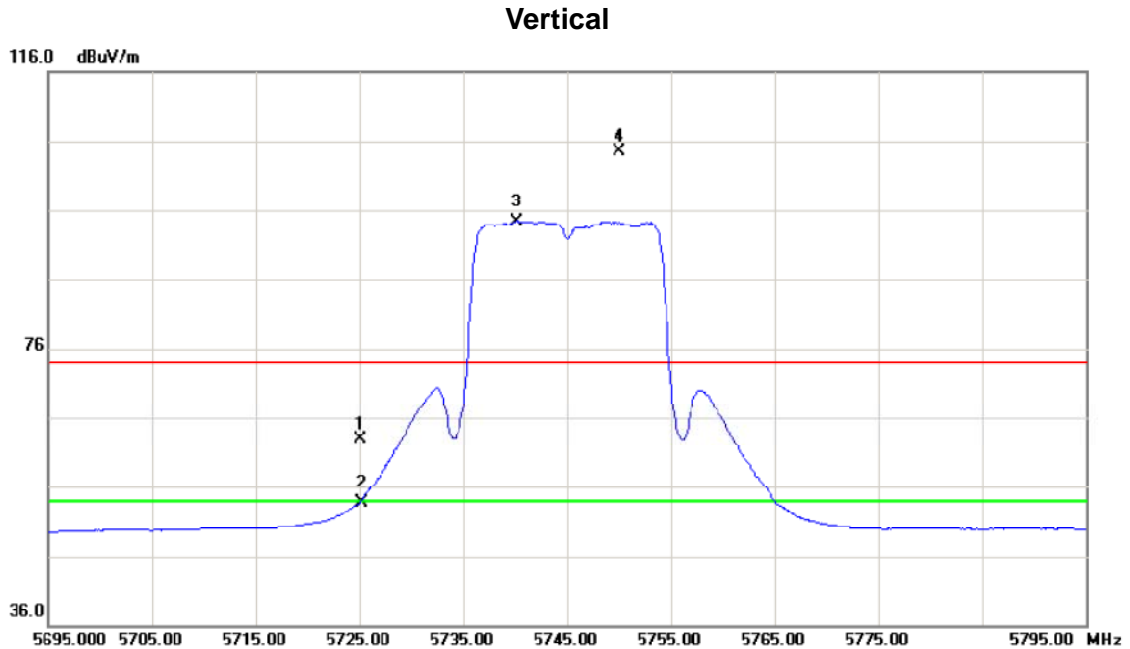
No. Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measurement dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1 *	33.8800	48.90	-15.07	33.83	40.00	-6.17	peak	
2	375.3200	41.99	-10.72	31.27	46.00	-14.73	peak	
3	624.6100	42.41	-6.67	35.74	46.00	-10.26	peak	
4	662.4400	35.24	-5.14	30.10	46.00	-15.90	peak	
5	874.8700	37.32	-2.44	34.88	46.00	-11.12	peak	
6	949.5600	32.01	-0.31	31.70	46.00	-14.30	peak	



ATTACHMENT D - RADIATED EMISSION (ABOVE 1000MHZ)



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



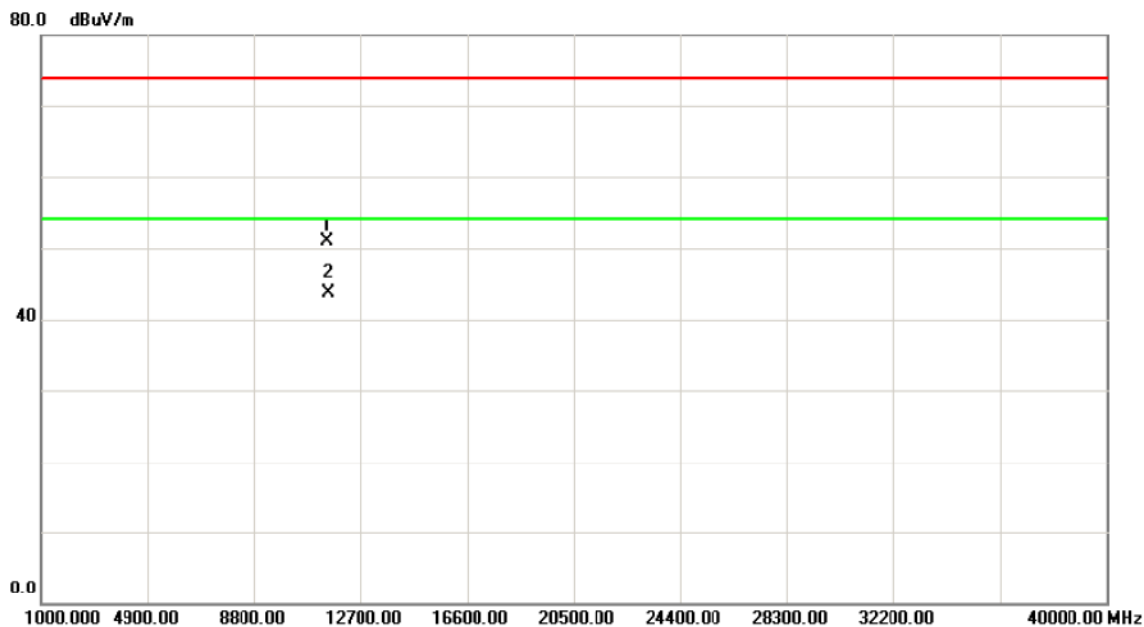
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		5725.000	18.56	44.34	62.90	74.00	-11.10	peak	
2		5725.000	9.29	44.34	53.63	54.00	-0.37	AVG	
3	*	5740.300	49.98	44.40	94.38	54.00	40.38	AVG	Fundamental frequency, no limit
4	X	5750.000	60.06	44.44	104.50	74.00	30.50	peak	Fundamental frequency, no limit

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



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

Vertical

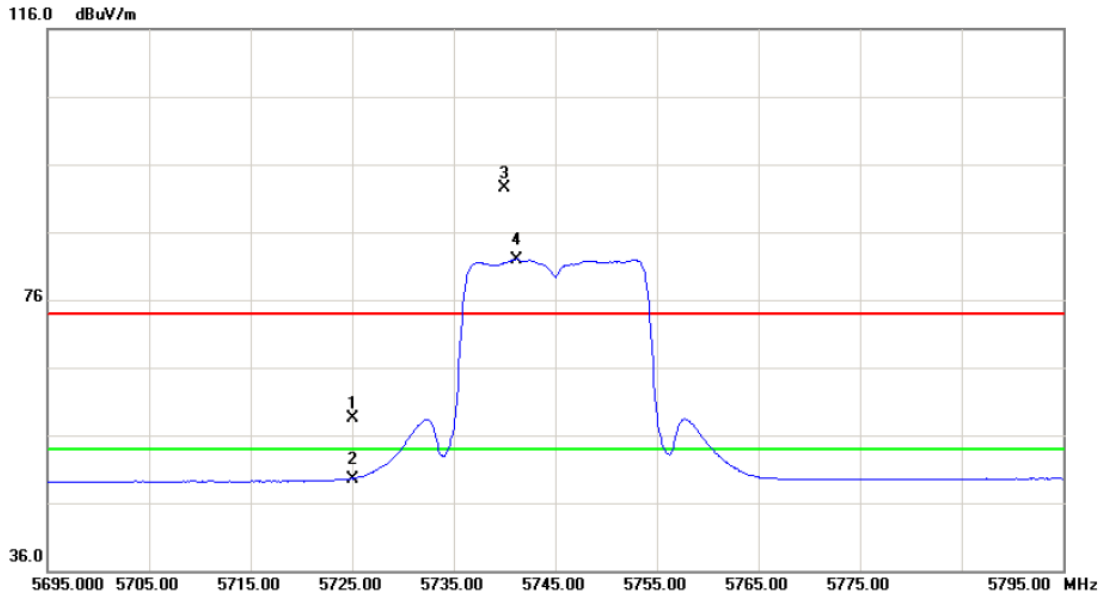


No. Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measurement dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	11493.00	32.36	18.47	50.83	74.00	-23.17	peak	
2 *	11496.00	25.19	18.49	43.68	54.00	-10.32	AVG	



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

Horizontal



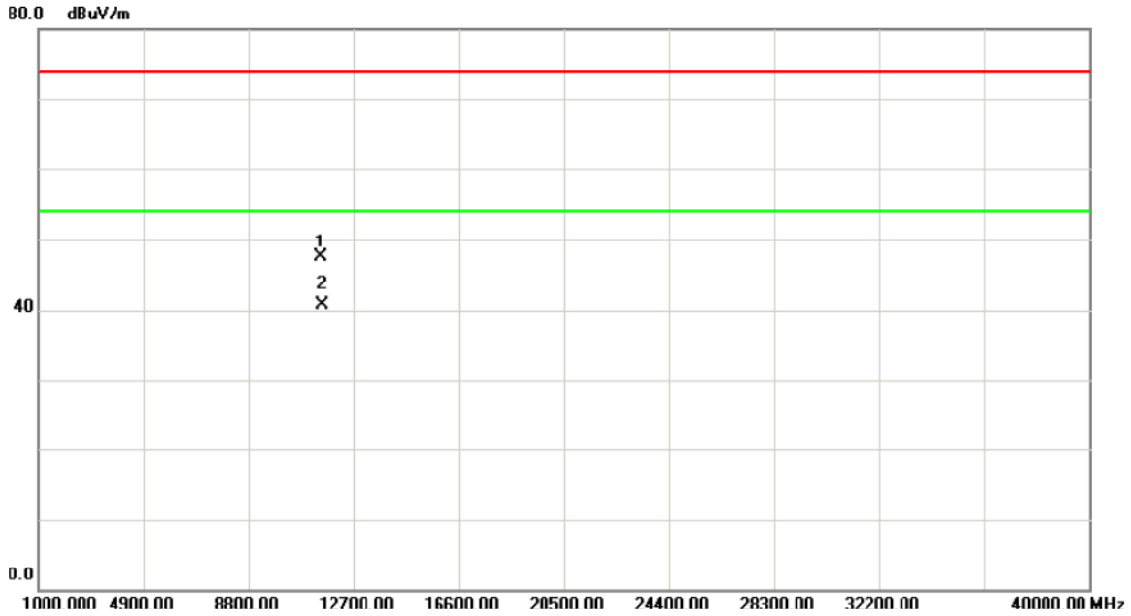
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		5725.000	14.16	44.34	58.50	74.00	-15.50	peak	
2		5725.000	5.12	44.34	49.46	54.00	-4.54	AVG	
3	X	5740.000	48.02	44.40	92.42	74.00	18.42	peak	Fundamental frequency, no limit
4	*	5741.000	37.56	44.40	81.96	54.00	27.96	AVG	Fundamental frequency, no limit

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



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

Horizontal

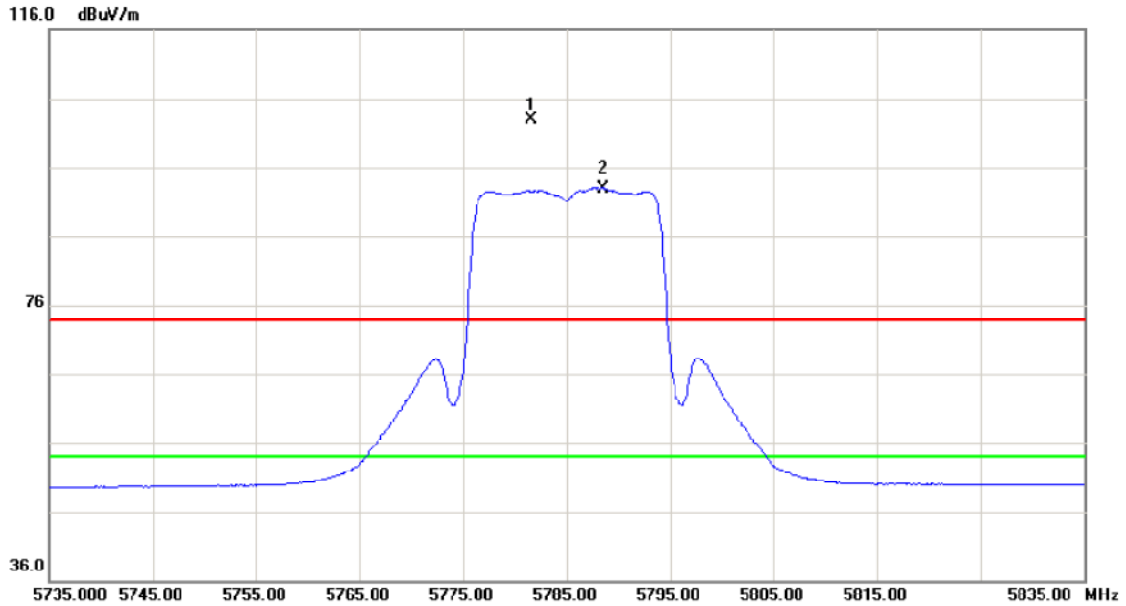


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		11492.00	29.12	18.47	47.59	74.00	-26.41	peak	
2	*	11493.00	22.21	18.47	40.68	54.00	-13.32	AVG	



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

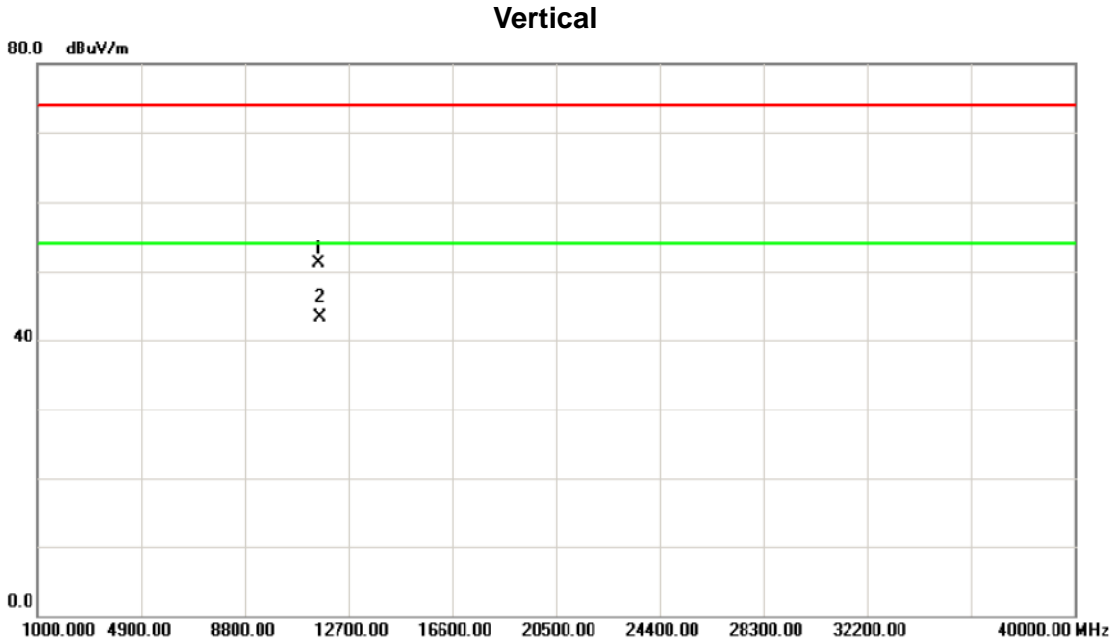
Vertical



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	X	5781.600	58.36	44.54	102.90	74.00	28.90	peak	Fundamental frequency, no limit
2	*	5788.300	48.42	44.56	92.98	54.00	38.98	AVG	Fundamental frequency, no limit



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

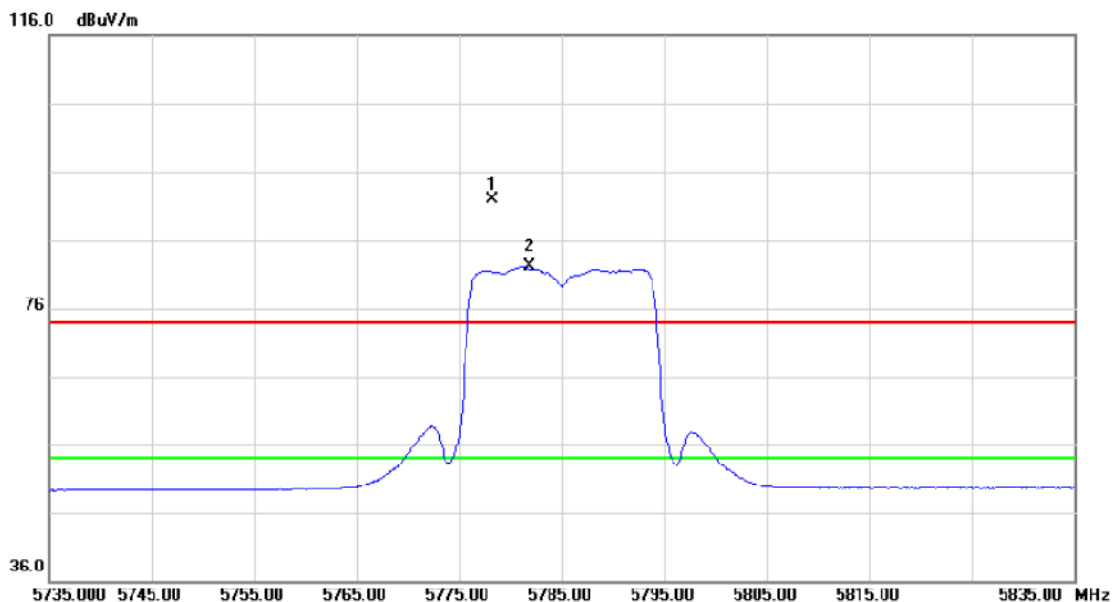


No. Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	11572.00	32.49	18.67	51.16	74.00	-22.84	peak	
2 *	11572.00	24.65	18.67	43.32	54.00	-10.68	AVG	



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

Horizontal

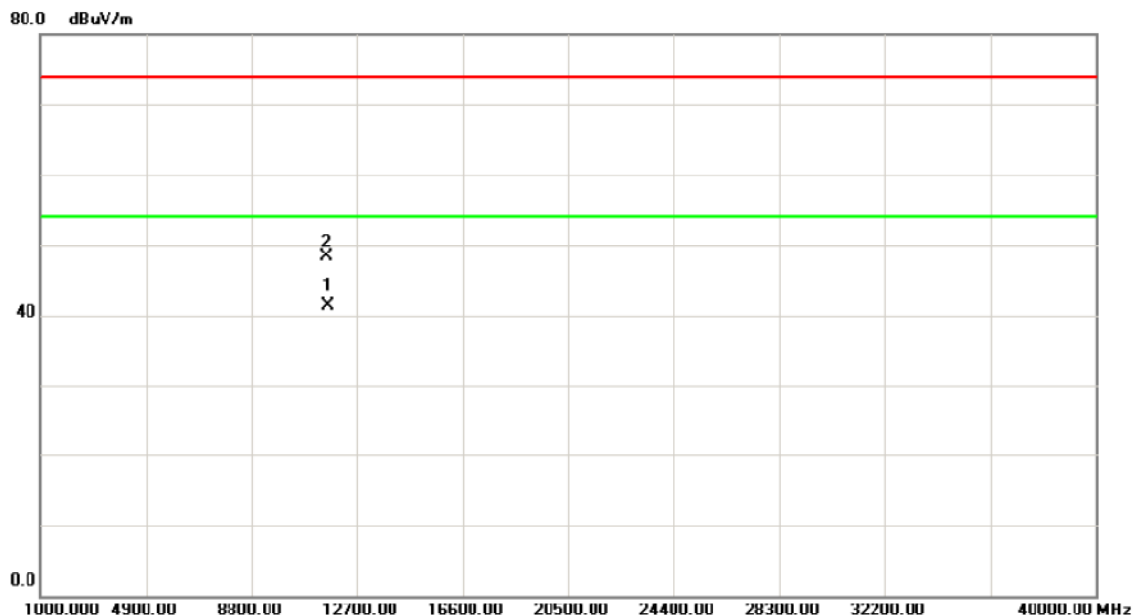


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	X	5778.300	47.46	44.53	91.99	74.00	17.99	peak	Fundamental frequency, no limit
2	*	5782.000	37.49	44.55	82.04	54.00	28.04	AVG	Fundamental frequency, no limit



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

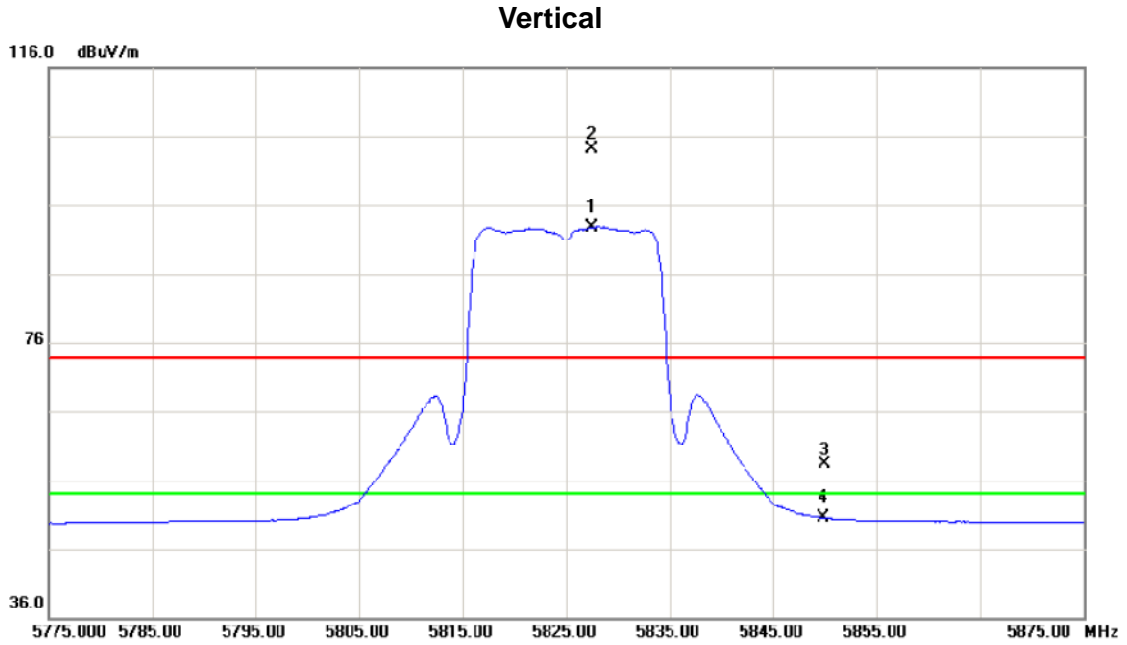
Horizontal



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	*	11572.00	22.59	18.67	41.26	54.00	-12.74	AVG	
2		11578.00	29.69	18.69	48.38	74.00	-25.62	peak	



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

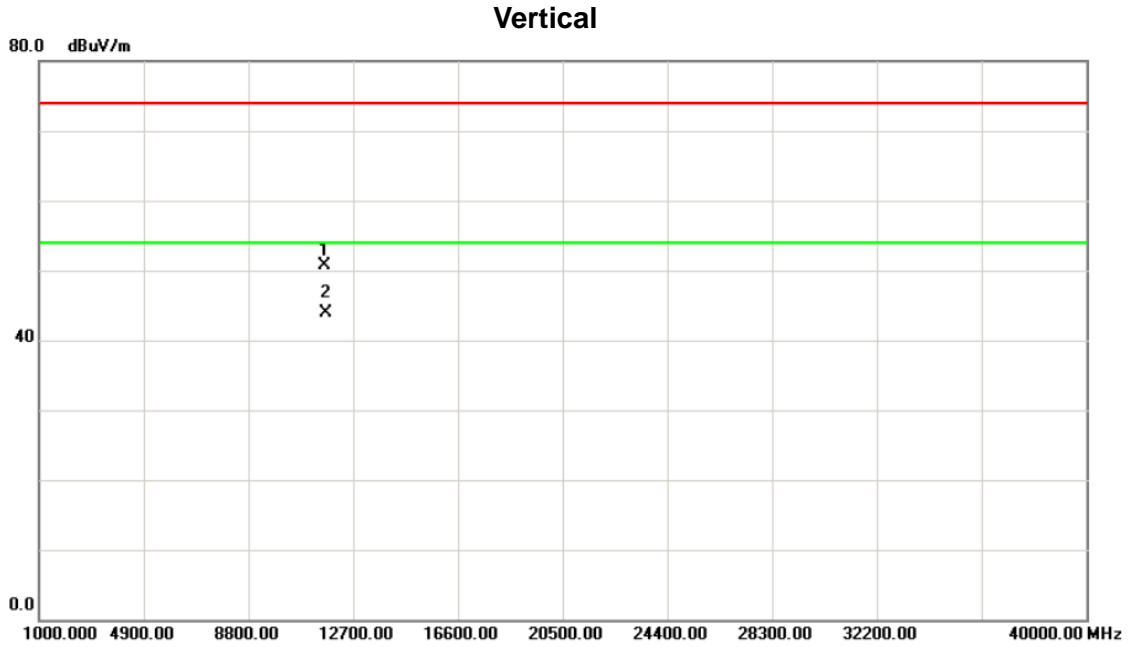


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	*	5827.300	48.06	44.70	92.76	54.00	38.76	AVG	Fundamental frequency, no limit
2	X	5827.500	59.36	44.70	104.06	74.00	30.06	peak	Fundamental frequency, no limit
3		5850.000	13.45	44.78	58.23	74.00	-15.77	peak	
4		5850.000	5.69	44.78	50.47	54.00	-3.53	AVG	

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



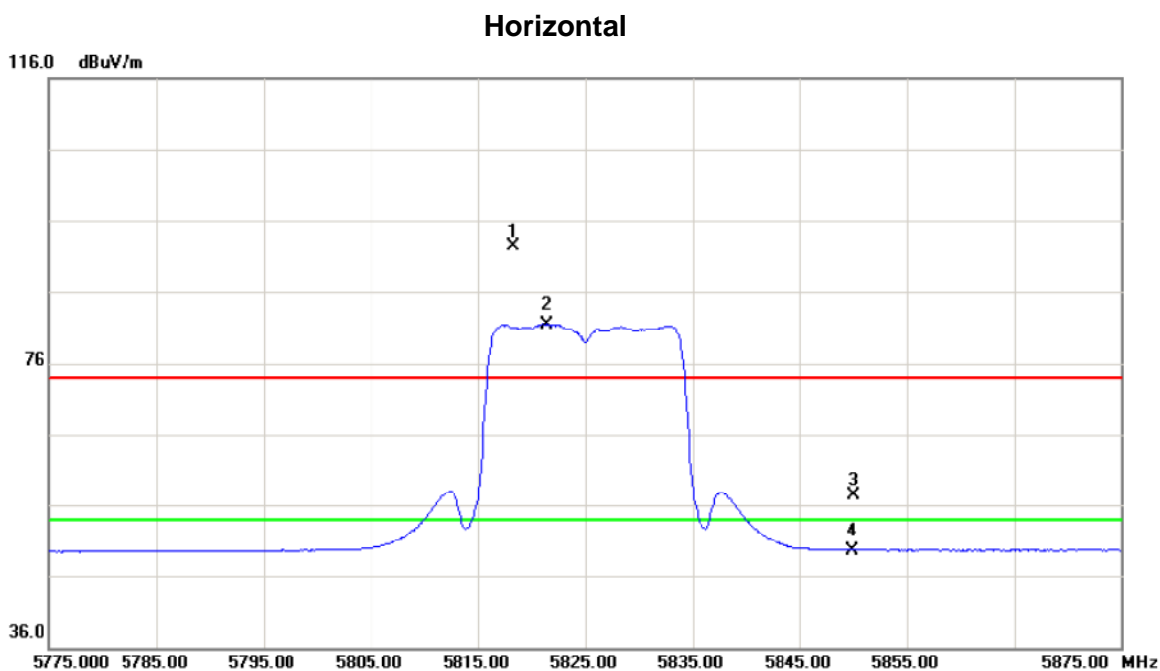
Orthogonal Axis :	X
Test Mode :	TX A Mode 5825MHz



No. Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measurement dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	11652.00	31.85	18.87	50.72	74.00	-23.28	peak	
2 *	11653.00	24.98	18.87	43.85	54.00	-10.15	AVG	



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



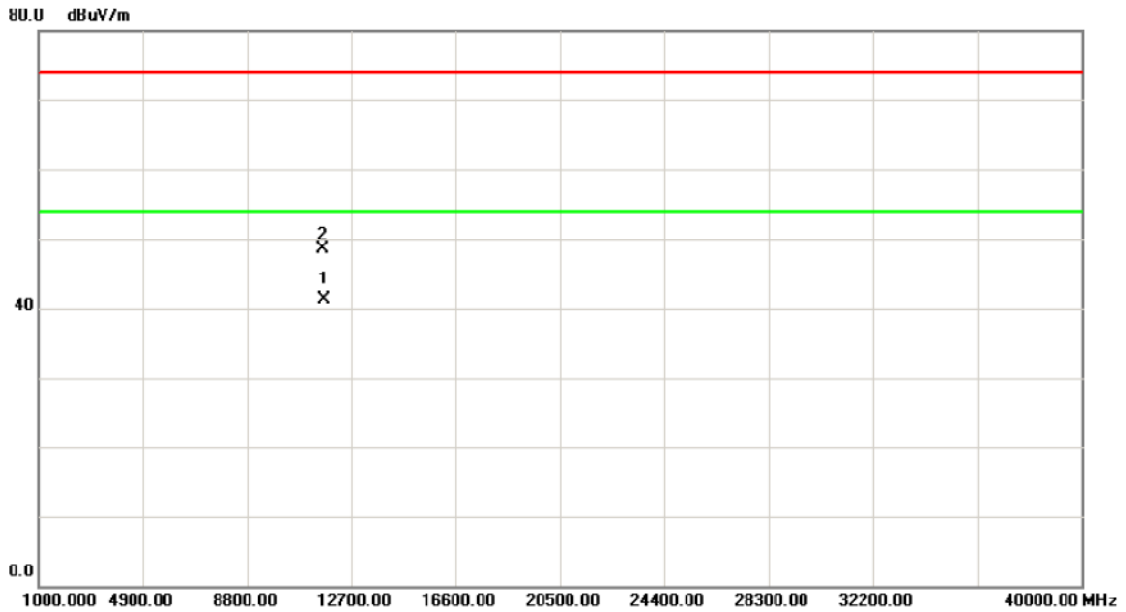
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	X	5818.200	47.59	44.66	92.25	74.00	18.25	peak	Fundamental frequency, no limit
2	*	5821.300	36.65	44.67	81.32	54.00	27.32	AVG	Fundamental frequency, no limit
3		5850.000	12.52	44.78	57.30	74.00	-16.70	peak	
4		5850.000	4.76	44.78	49.54	54.00	-4.46	AVG	

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



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

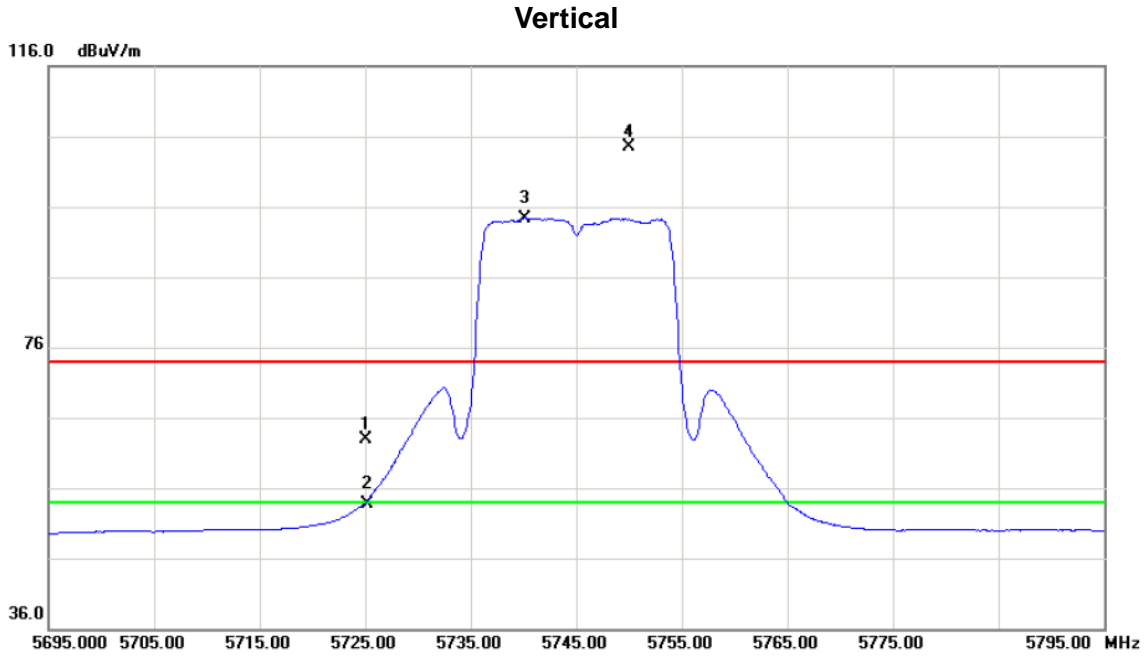
Horizontal



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	*	11652.00	22.46	18.87	41.33	54.00	-12.67	AVG	
2		11653.00	29.69	18.87	48.56	74.00	-25.44	peak	



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



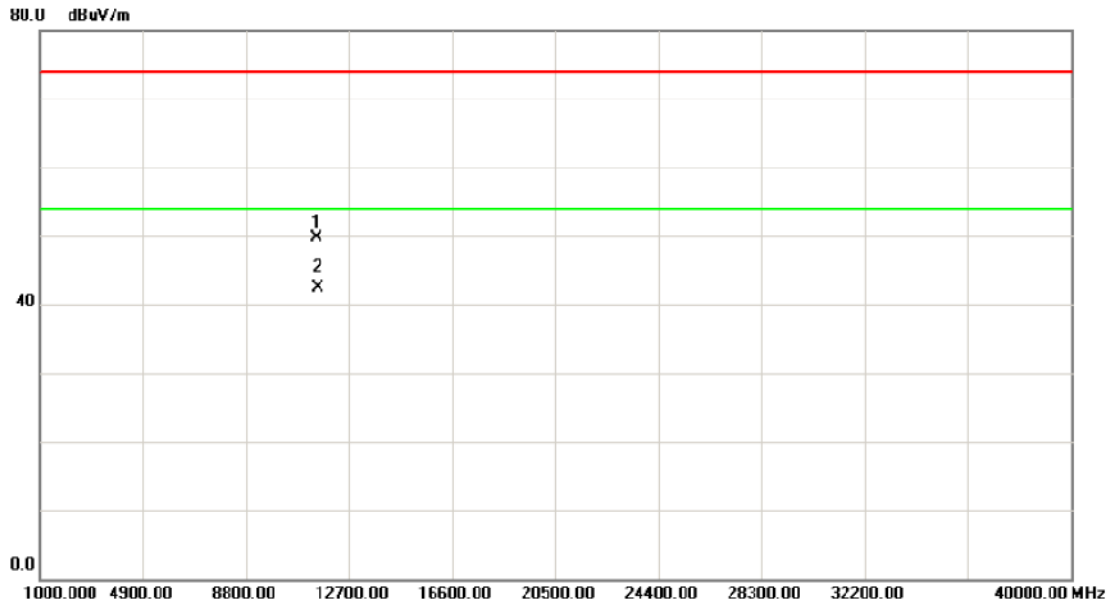
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		5725.000	18.56	44.34	62.90	74.00	-11.10	peak	
2		5725.000	9.29	44.34	53.63	54.00	-0.37	AVG	
3	*	5740.300	49.98	44.40	94.38	54.00	40.38	AVG	Fundamental frequency, no limit
4	X	5750.000	60.06	44.44	104.50	74.00	30.50	peak	Fundamental frequency, no limit

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



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

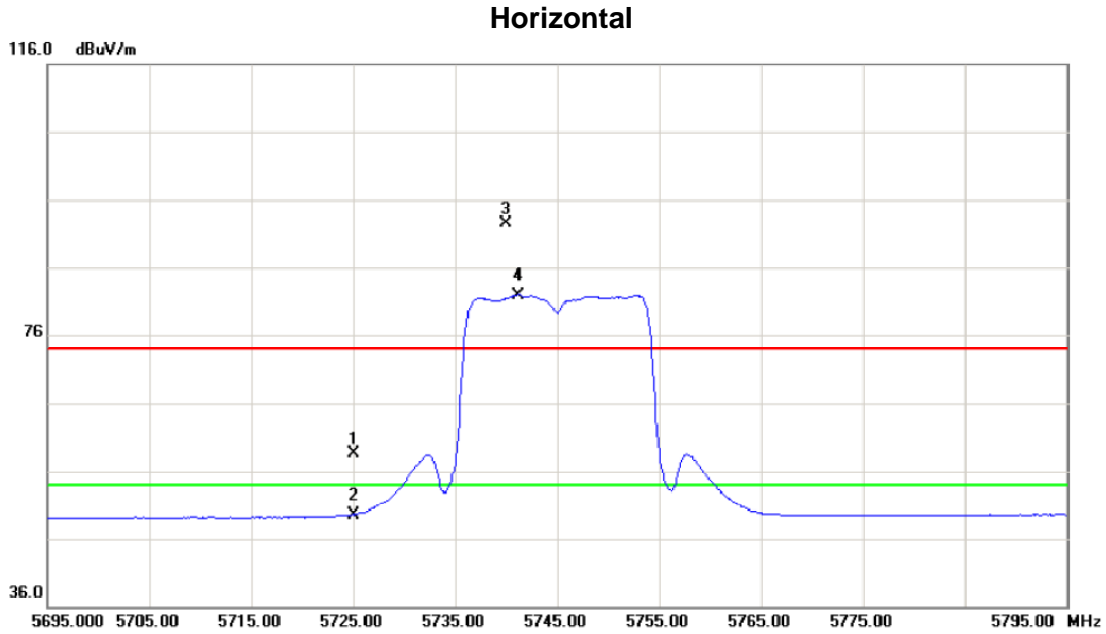
Vertical



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		11495.00	31.16	18.48	49.64	74.00	-24.36	peak	
2	*	11496.00	24.06	18.49	42.55	54.00	-11.45	AVG	



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



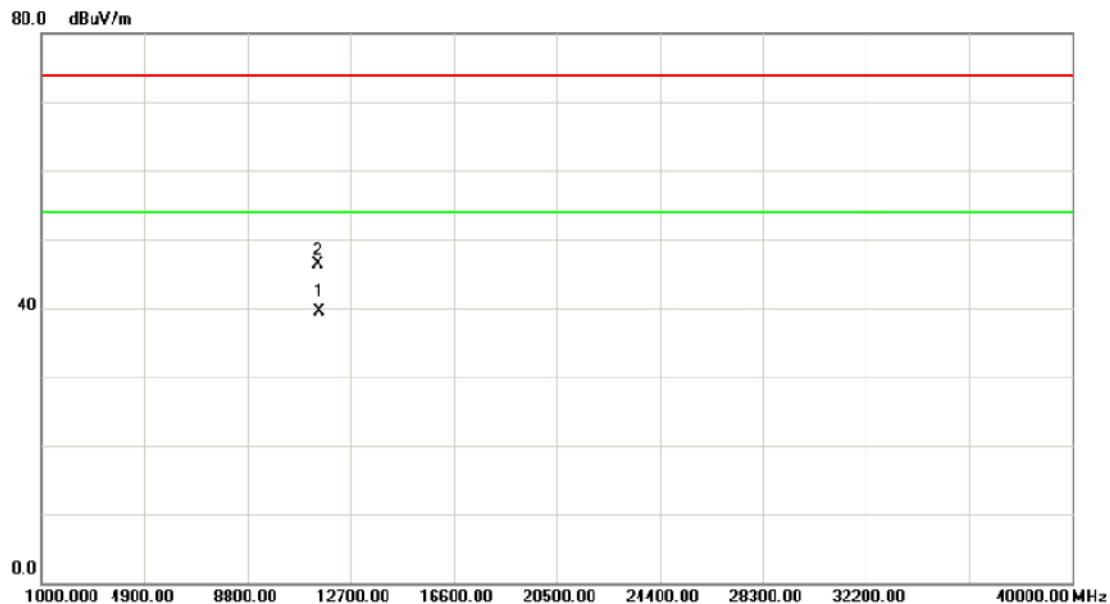
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		5725.000	14.16	44.34	58.50	74.00	-15.50	peak	
2		5725.000	5.12	44.34	49.46	54.00	-4.54	AVG	
3	X	5740.000	48.02	44.40	92.42	74.00	18.42	peak	Fundamental frequency, no limit
4	*	5741.000	37.56	44.40	81.96	54.00	27.96	AVG	Fundamental frequency, no limit

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



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

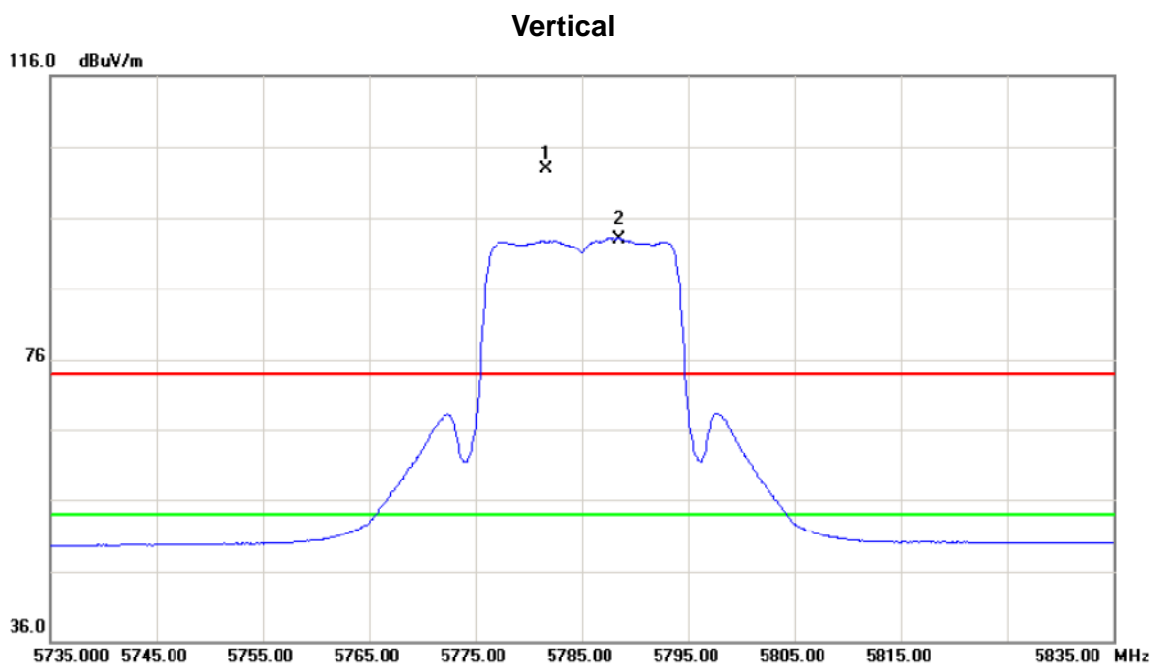
Horizontal



No. Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measurement dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1 *	11492.00	21.03	18.47	39.50	54.00	-14.50	AVG	
2	11496.00	27.89	18.49	46.38	74.00	-27.62	peak	



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

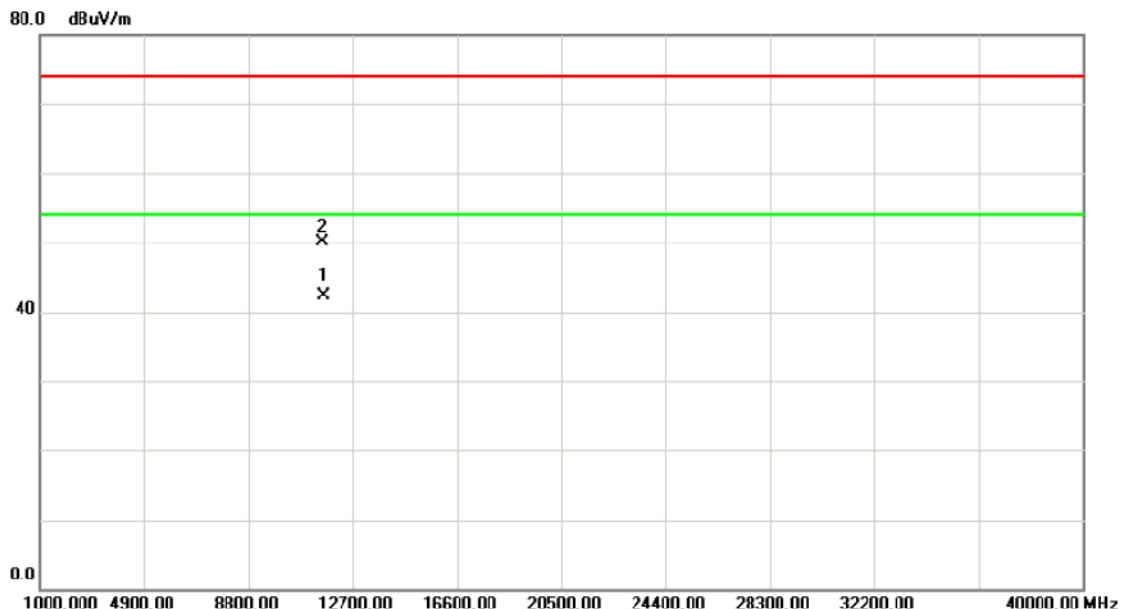


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	X	5781.600	58.36	44.54	102.90	74.00	28.90	peak	Fundamental frequency, no limit
2	*	5788.300	48.42	44.56	92.98	54.00	38.98	AVG	Fundamental frequency, no limit



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

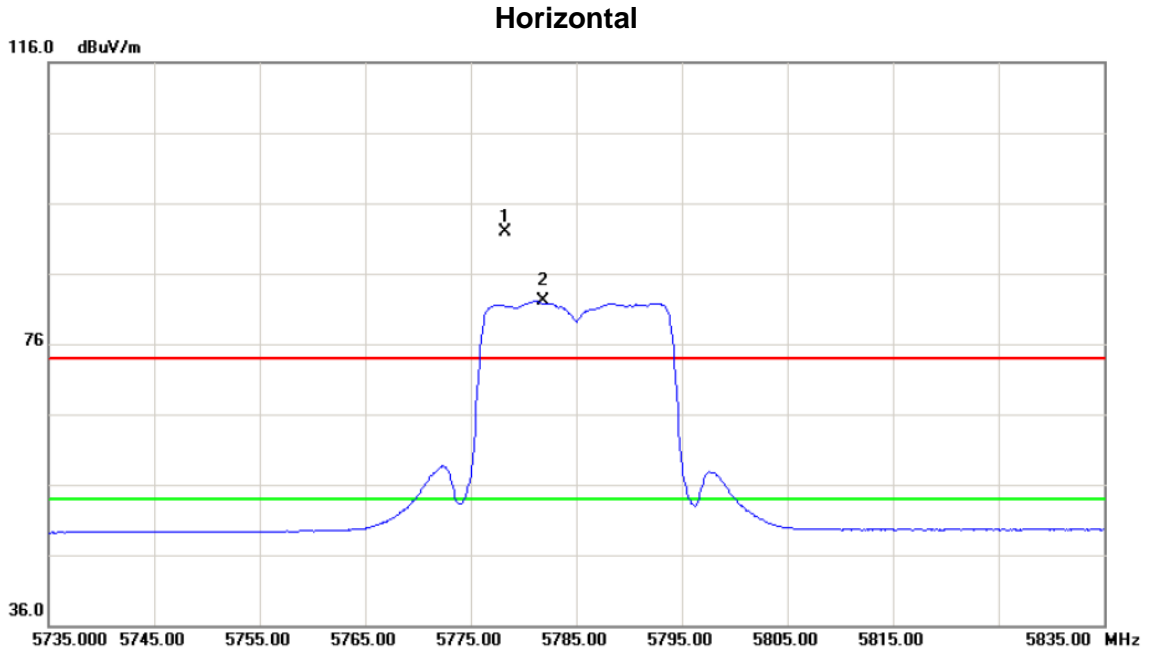
Vertical



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	*	11572.00	23.59	18.67	42.26	54.00	-11.74	AVG	
2		11574.00	31.36	18.67	50.03	74.00	-23.97	peak	



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

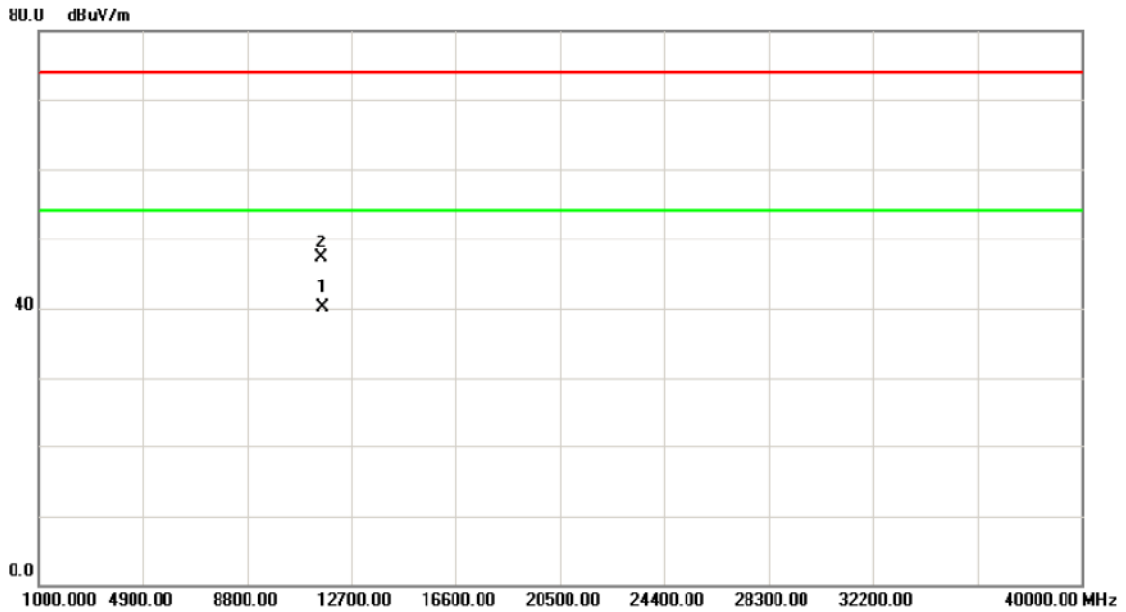


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	X	5778.300	47.46	44.53	91.99	74.00	17.99	peak	Fundamental frequency, no limit
2	*	5782.000	37.49	44.55	82.04	54.00	28.04	AVG	Funda mental frequency, no limit



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

Horizontal

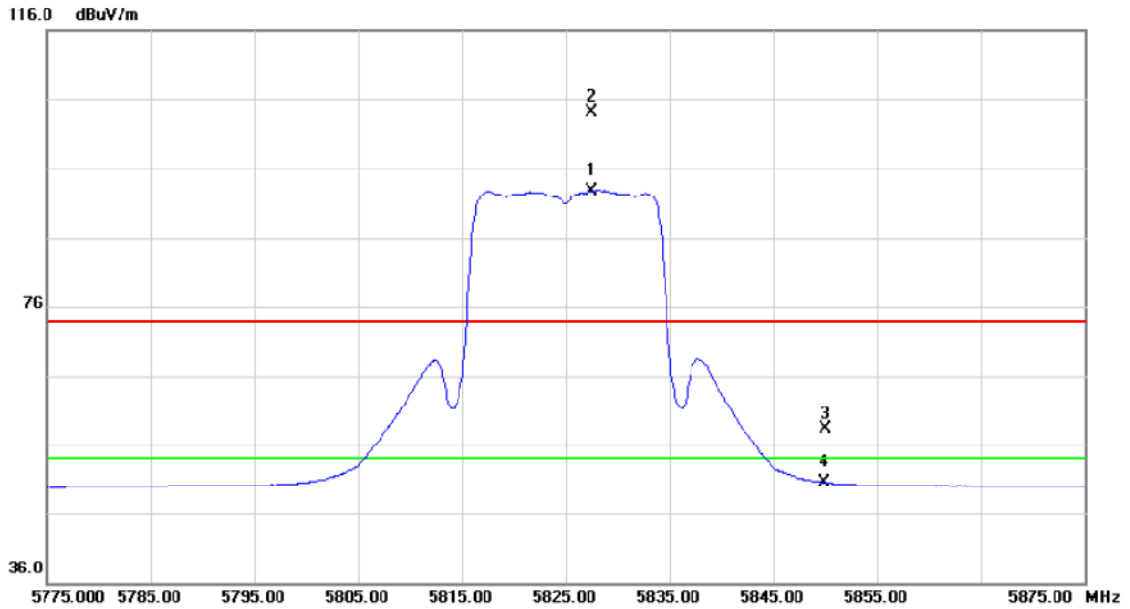


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	*	11573.00	21.52	18.67	40.19	54.00	-13.81	AVG	
2		11574.00	28.69	18.67	47.36	74.00	-26.64	peak	



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

Vertical

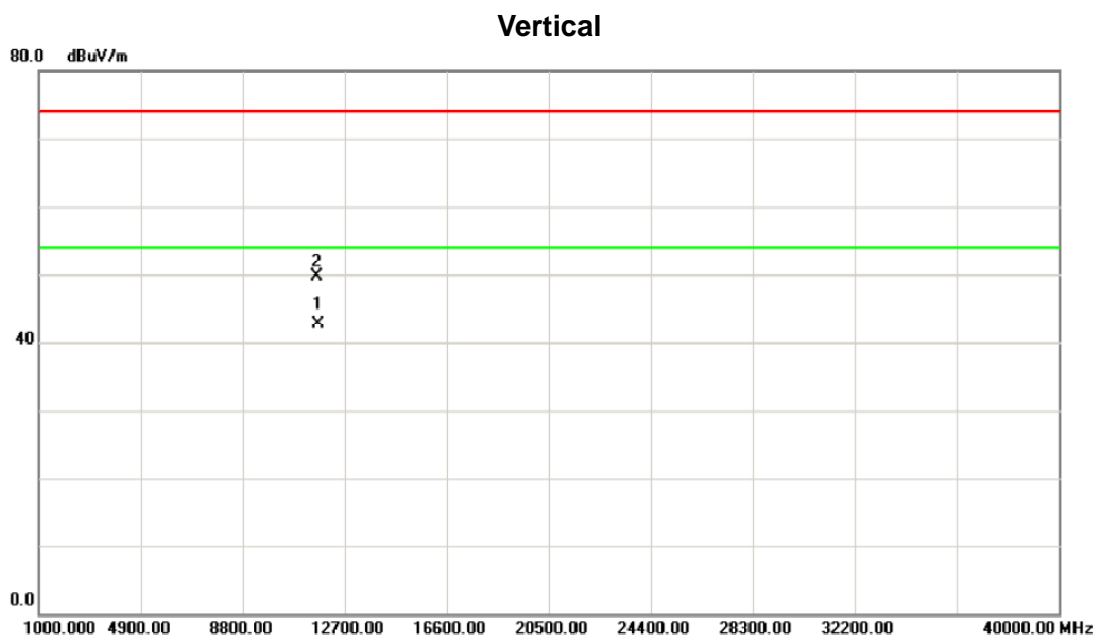


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	*	5827.300	48.06	44.70	92.76	54.00	38.76	AVG	Fundamental frequency, no limit
2	X	5827.500	59.36	44.70	104.06	74.00	30.06	peak	Fundamental frequency, no limit
3		5850.000	13.45	44.78	58.23	74.00	-15.77	peak	
4		5850.000	5.69	44.78	50.47	54.00	-3.53	AVG	

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



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

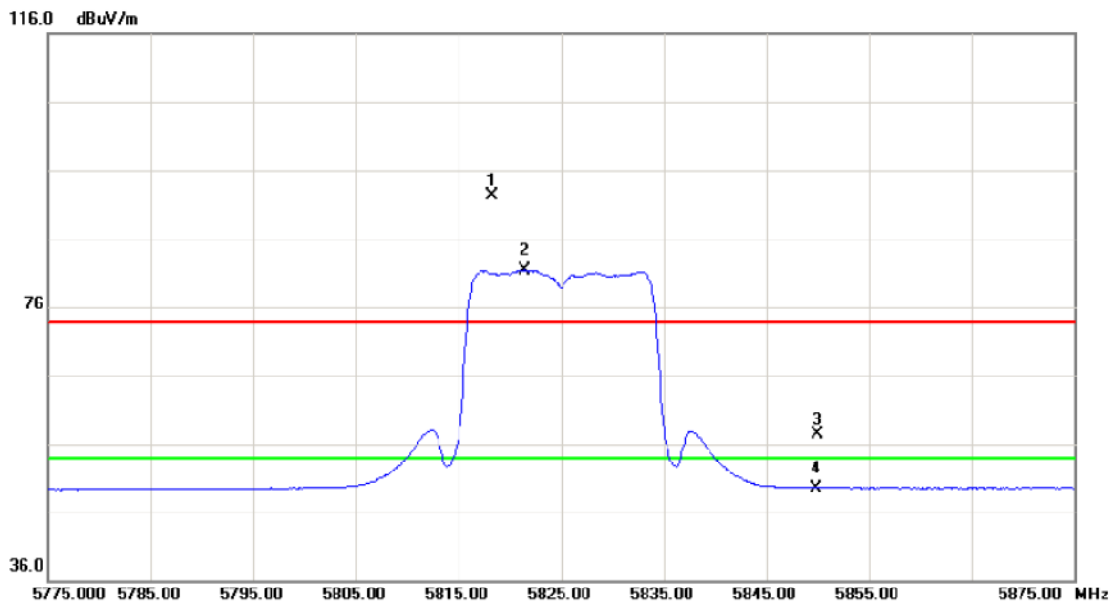


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	*	11652.00	23.85	18.87	42.72	54.00	-11.28	AVG	
2		11653.00	30.75	18.87	49.62	74.00	-24.38	peak	



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

Horizontal



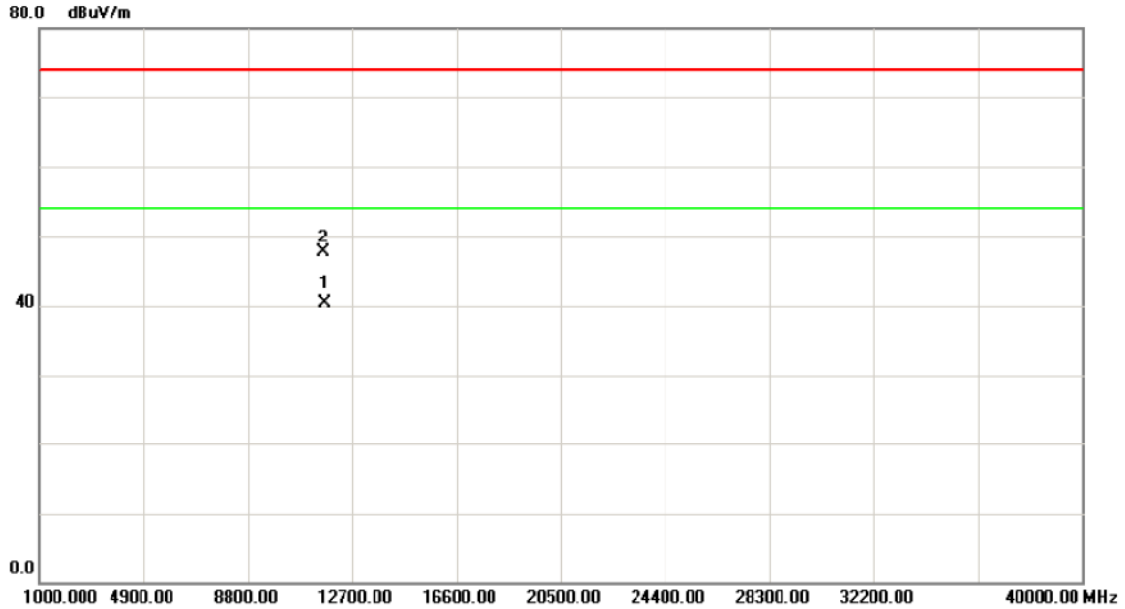
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1	X	5818.200	47.59	44.66	92.25	74.00	18.25	peak	Fundamental frequency, no limit
2	*	5821.300	36.65	44.67	81.32	54.00	27.32	AVG	Fundamental frequency, no limit
3		5850.000	12.52	44.78	57.30	74.00	-16.70	peak	
4		5850.000	4.76	44.78	49.54	54.00	-4.46	AVG	

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



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

Horizontal

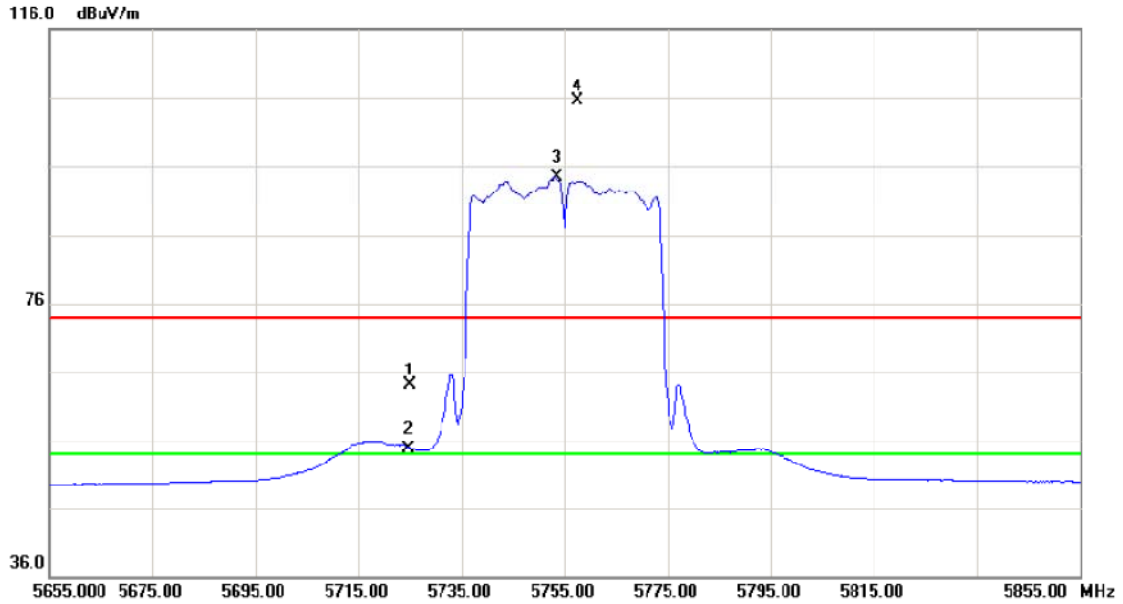


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	*	11652.00	21.39	18.87	40.26	54.00	-13.74	AVG	
2		11654.00	28.84	18.87	47.71	74.00	-26.29	peak	



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

Vertical

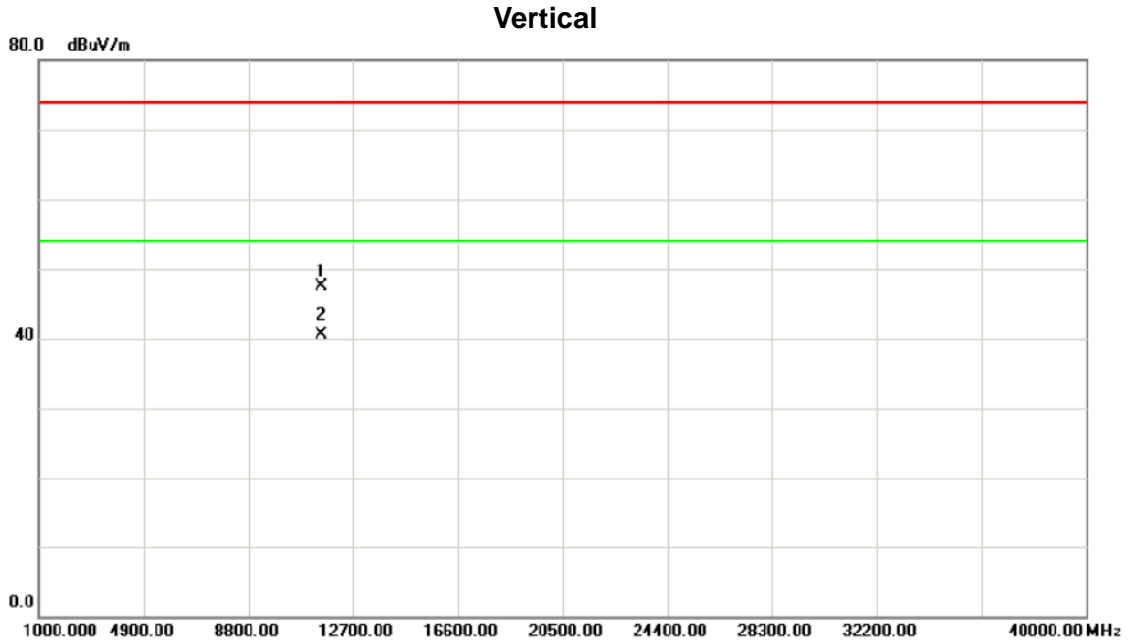


No. Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measurement dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	5725.000	19.75	44.34	64.09	74.00	-9.91	peak	
2 X	5725.000	10.36	44.34	54.70	54.00	0.70	AVG	
3 *	5754.000	49.79	44.45	94.24	54.00	40.24	AVG	Fundamental frequency, no limit
4 X	5757.600	61.13	44.46	105.59	74.00	31.59	peak	Fundamental frequency, no limit

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



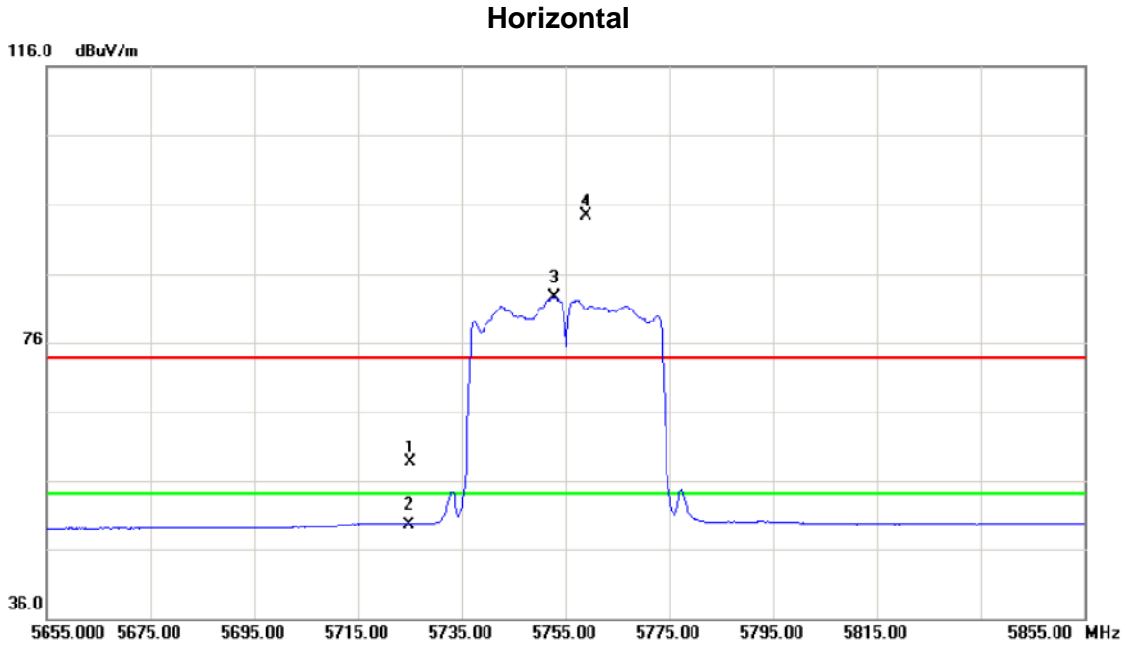
Orthogonal Axis :	X
Test Mode :	TX N40 Mode 5755MHz



No. Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	11512.00	29.06	18.52	47.58	74.00	-26.42	peak	
2 *	11513.00	22.04	18.52	40.56	54.00	-13.44	AVG	



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



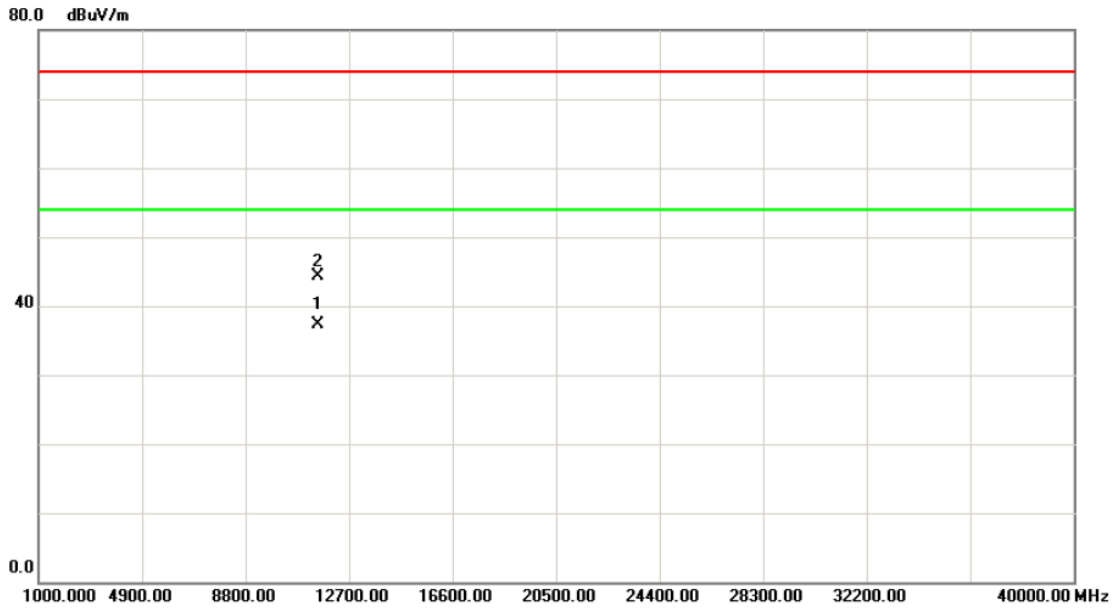
No. Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measurement dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	5725.000	14.46	44.34	58.80	74.00	-15.20	peak	
2	5725.000	5.26	44.34	49.60	54.00	-4.40	AVG	
3 *	5752.300	38.09	44.45	82.54	54.00	28.54	AVG	Fundamental frequency, no limit
4 X	5758.900	49.79	44.47	94.26	74.00	20.26	peak	Fundamental frequency, no limit

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



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

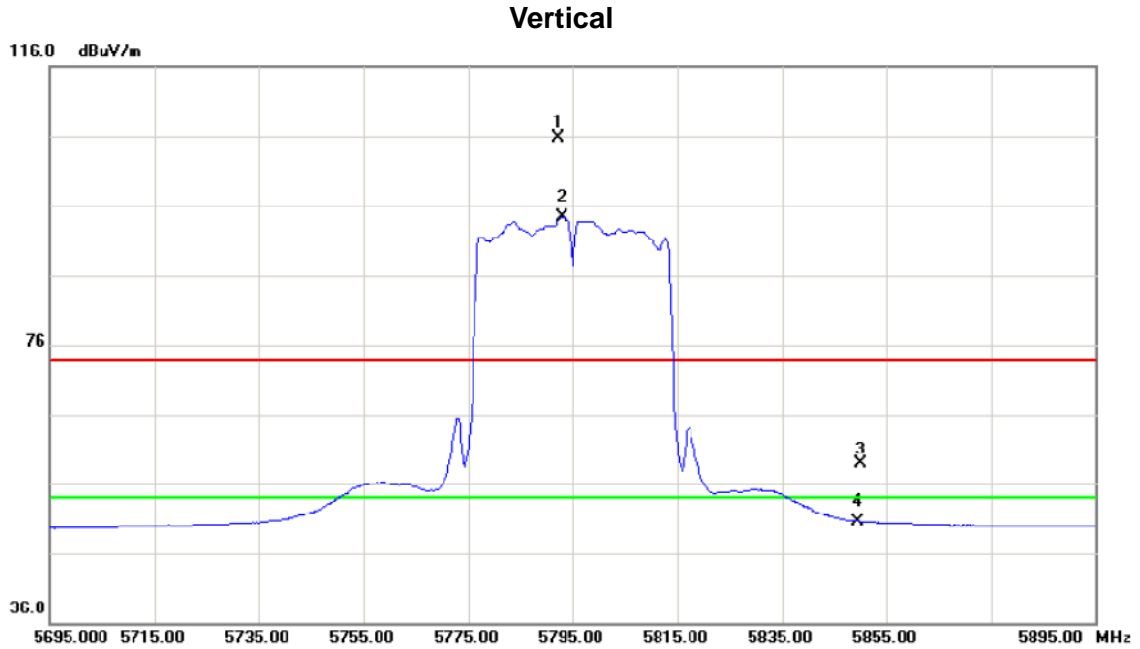
Horizontal



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	*	11512.00	18.85	18.52	37.37	54.00	-16.63	AVG	
2		11515.00	25.74	18.54	44.28	74.00	-29.72	peak	



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



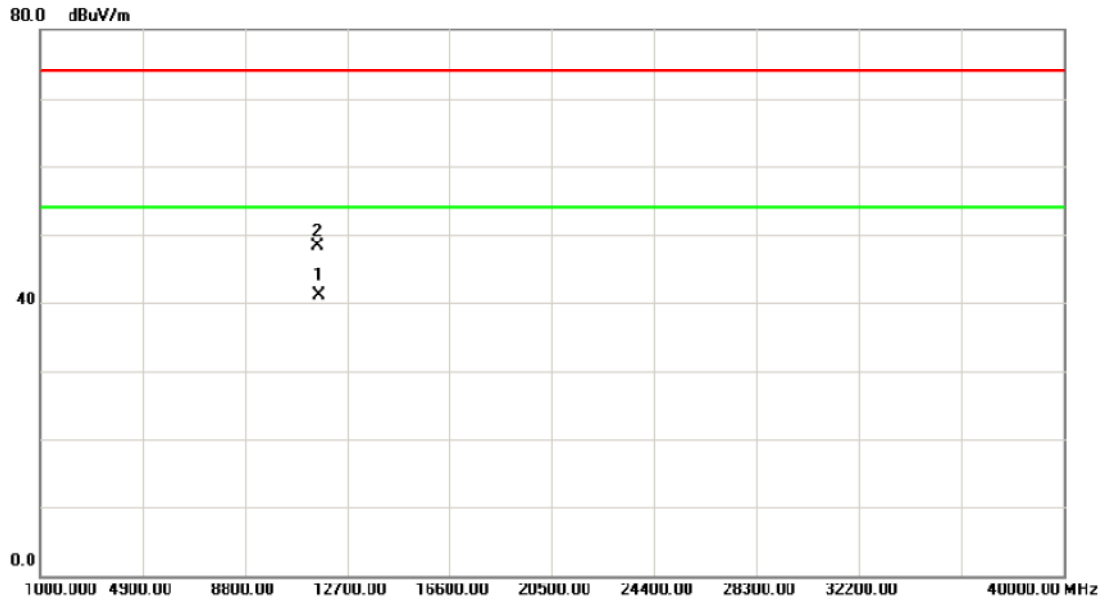
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	X	5792.300	61.05	44.58	105.63	74.00	31.63	peak	Fundamental frequency, no limit
2	*	5793.200	49.79	44.58	94.37	54.00	40.37	AVG	Fundamental frequency, no limit
3		5850.000	14.08	44.78	58.86	74.00	-15.14	peak	
4		5850.000	5.76	44.78	50.54	54.00	-3.46	AVG	

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



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

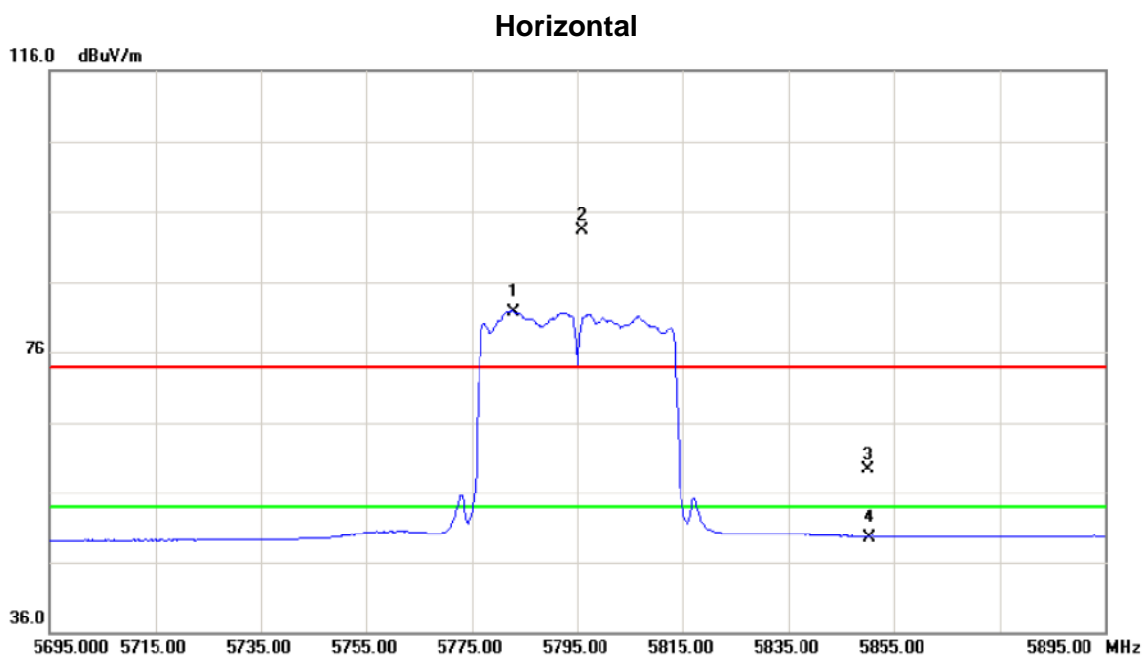
Vertical



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	*	11592.00	22.46	18.72	41.18	54.00	-12.82	AVG	
2		11596.00	29.51	18.74	48.25	74.00	-25.75	peak	



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



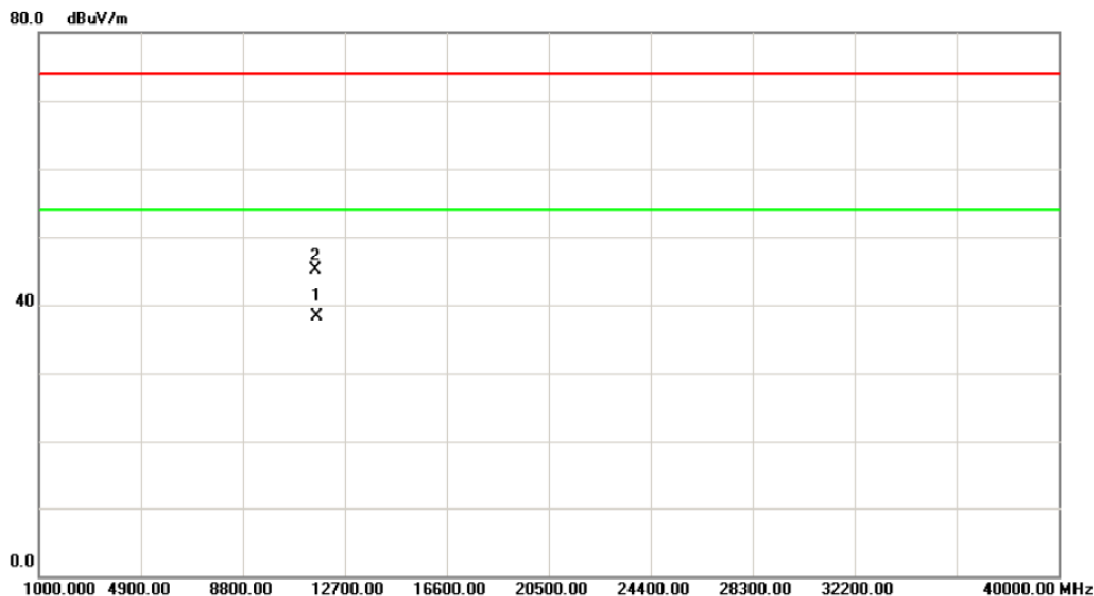
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	*	5783.200	37.25	44.55	81.80	54.00	27.80	AVG	Fundamental frequency, no limit
2	X	5796.000	48.78	44.59	93.37	74.00	19.37	peak	Fundamental frequency, no limit
3		5850.000	14.56	44.78	59.34	74.00	-14.66	peak	
4		5850.000	4.82	44.78	49.60	54.00	-4.40	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	Measurement dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1 *	11592.00	19.59	18.72	38.31	54.00	-15.69	AVG	
2	11593.00	26.38	18.72	45.10	74.00	-28.90	peak	

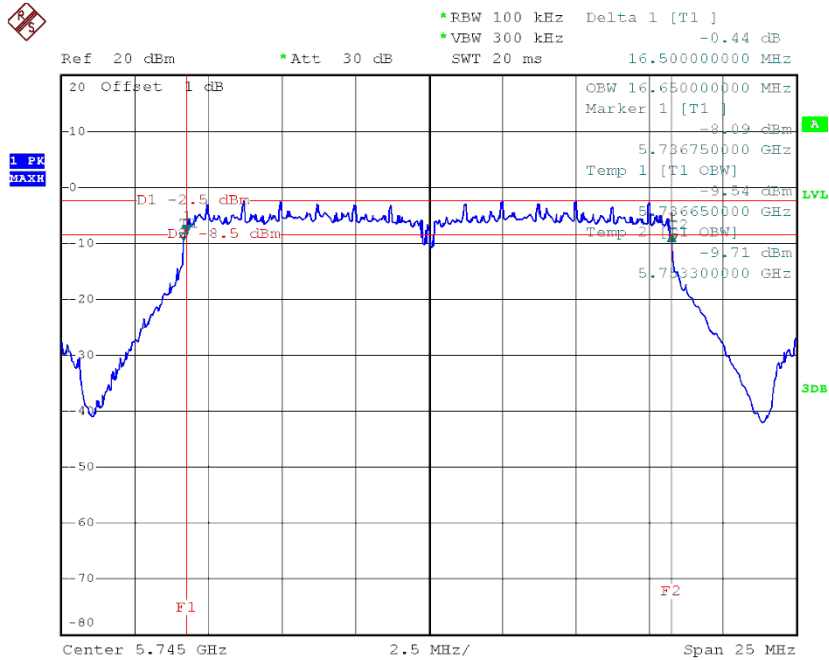


ATTACHMENT E - BANDWIDTH



Test Mode : TX A Mode_CH149/157/165

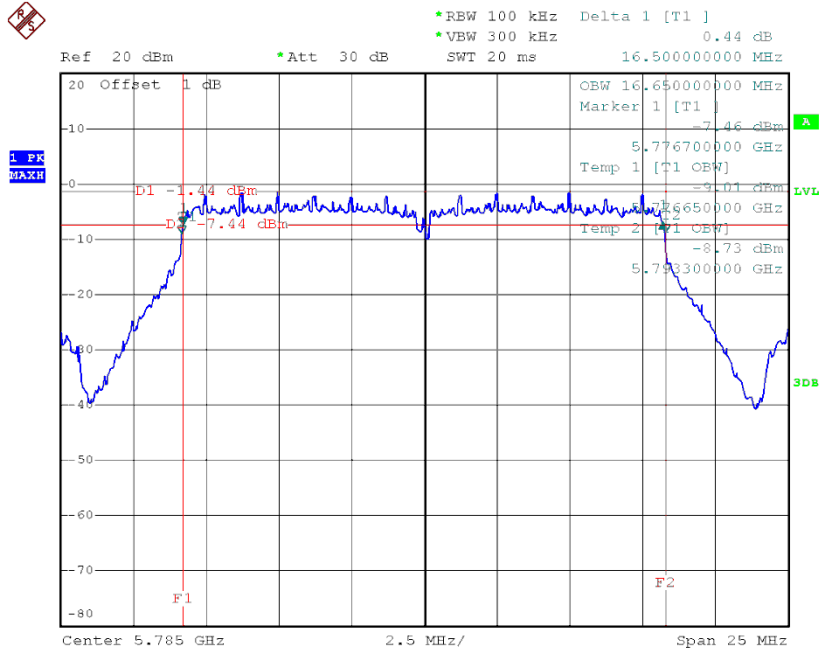
TX CH 149



Date: 15.MAY.2014 10:16:30

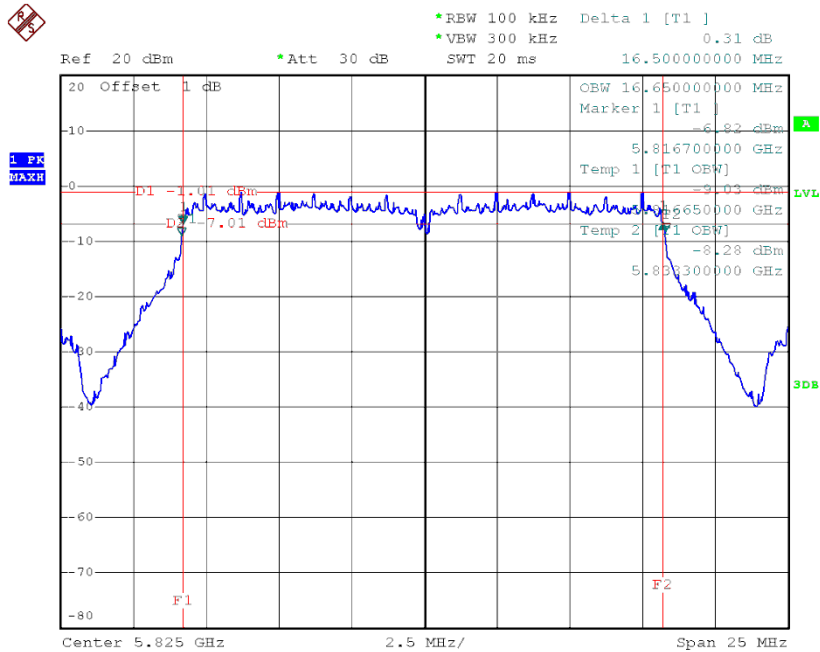


TX CH 157



Date: 15.MAY.2014 10:14:39

TX CH 165

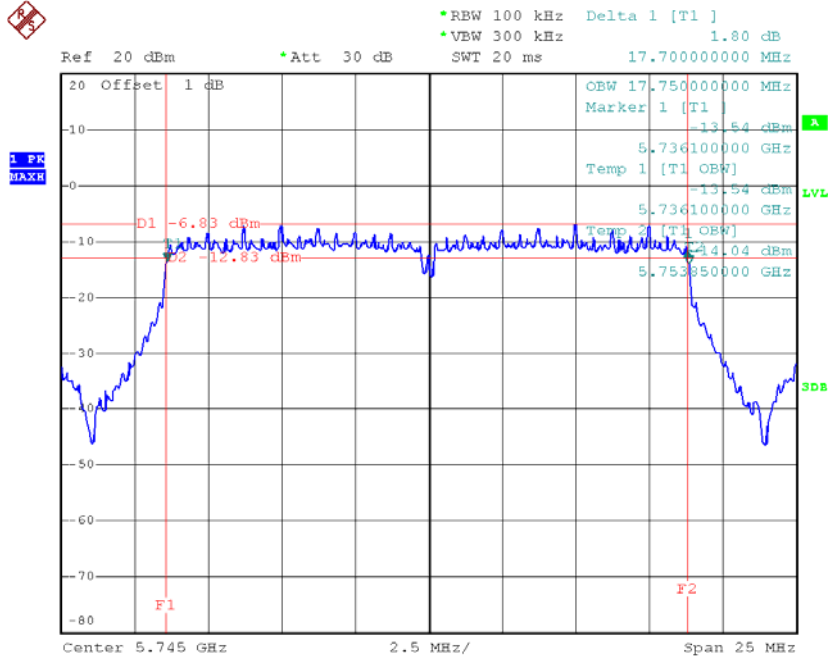


Date: 15.MAY.2014 10:17:16



Test Mode : TX N-20MHz Mode_CH149/157/165_ANT 0

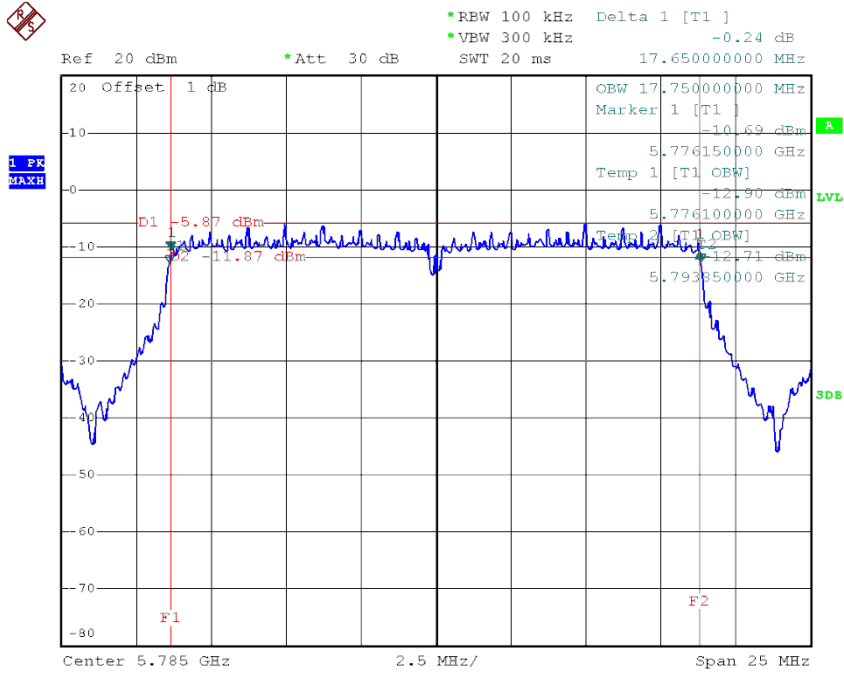
TX CH 149



Date: 15.MAY.2014 10:19:53

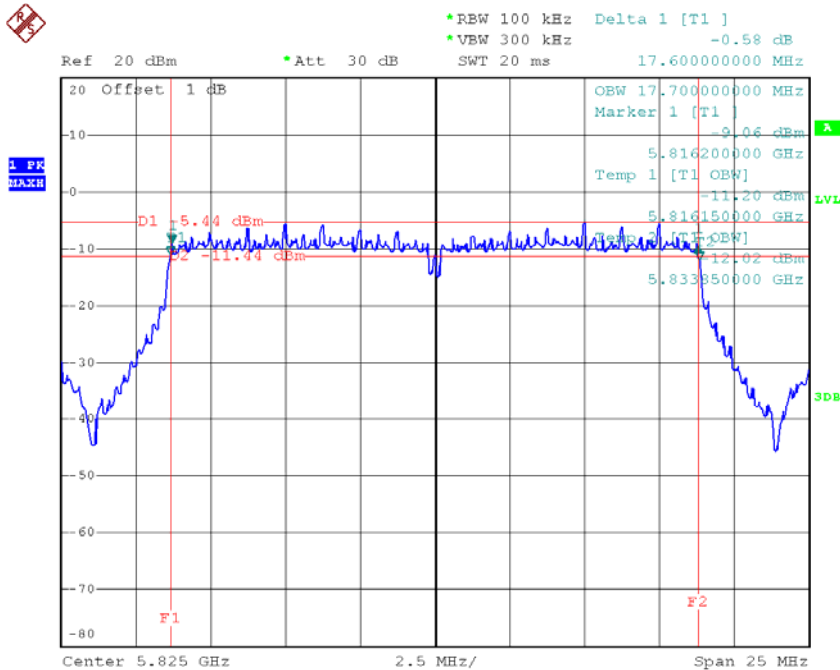


TX CH 157



Date: 15.MAY.2014 10:27:21

TX CH 165

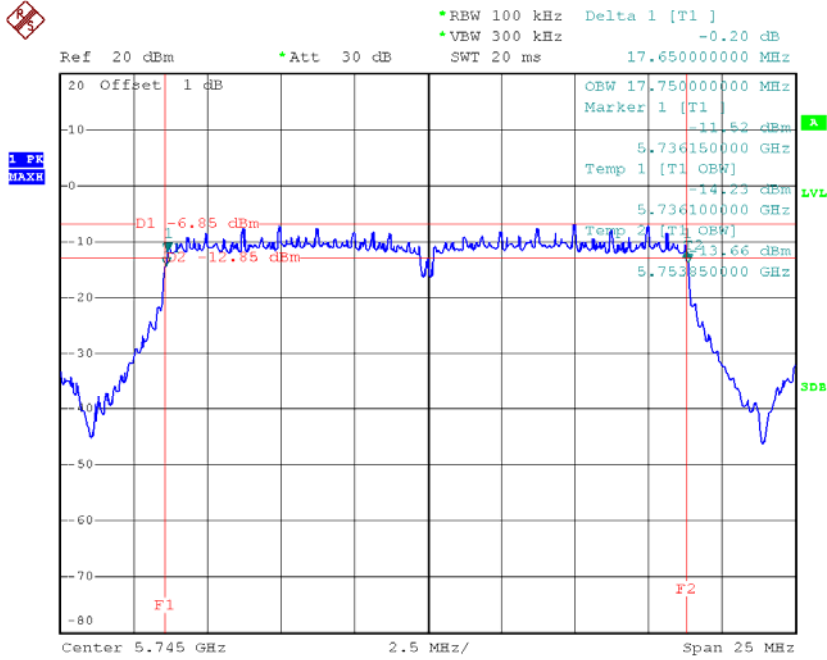


Date: 15.MAY.2014 10:34:56



Test Mode : TX N-20MHz Mode_CH149/157/165_ANT 1

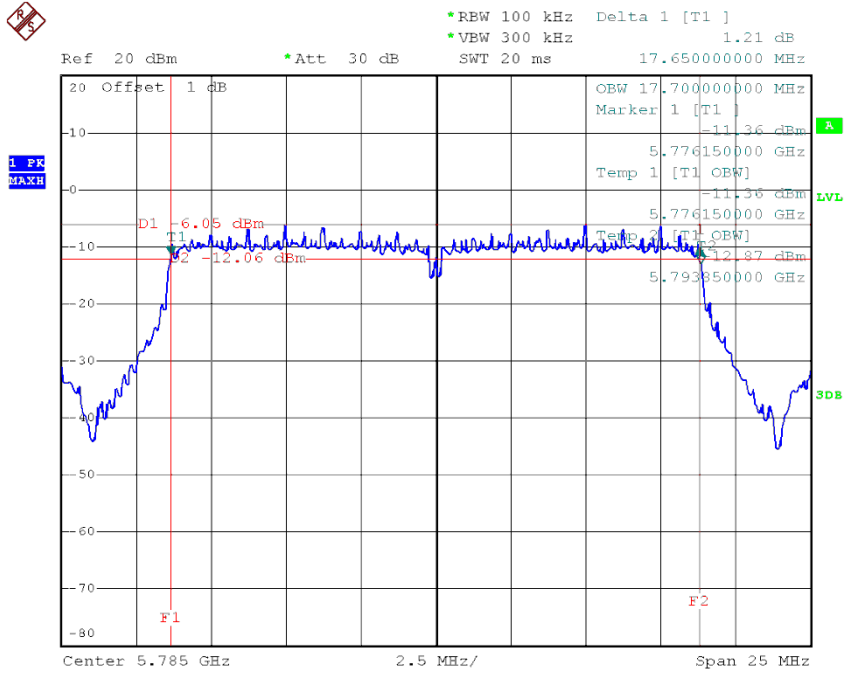
TX CH 149



Date: 15.MAY.2014 10:20:34

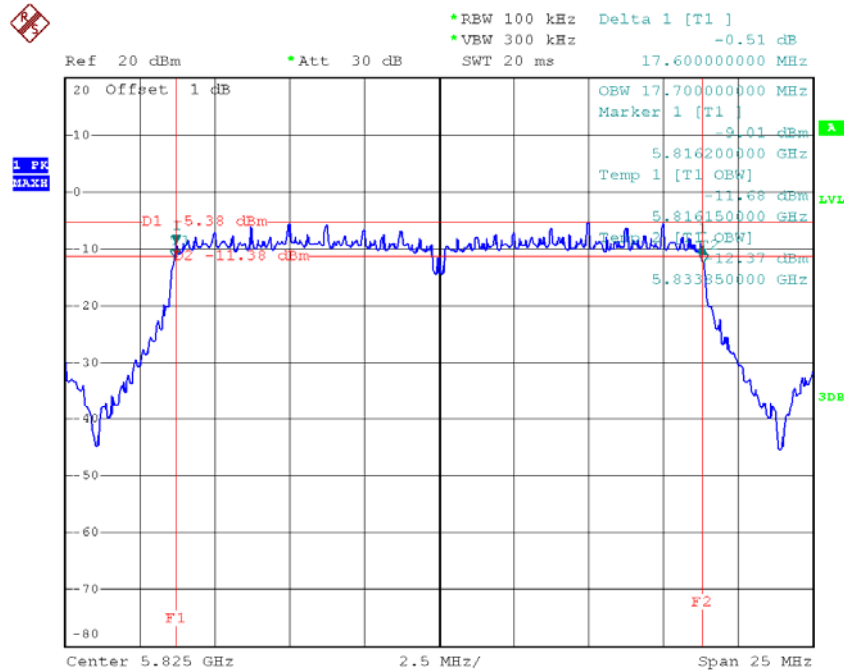


TX CH 157



Date: 15.MAY.2014 10:28:36

TX CH 165

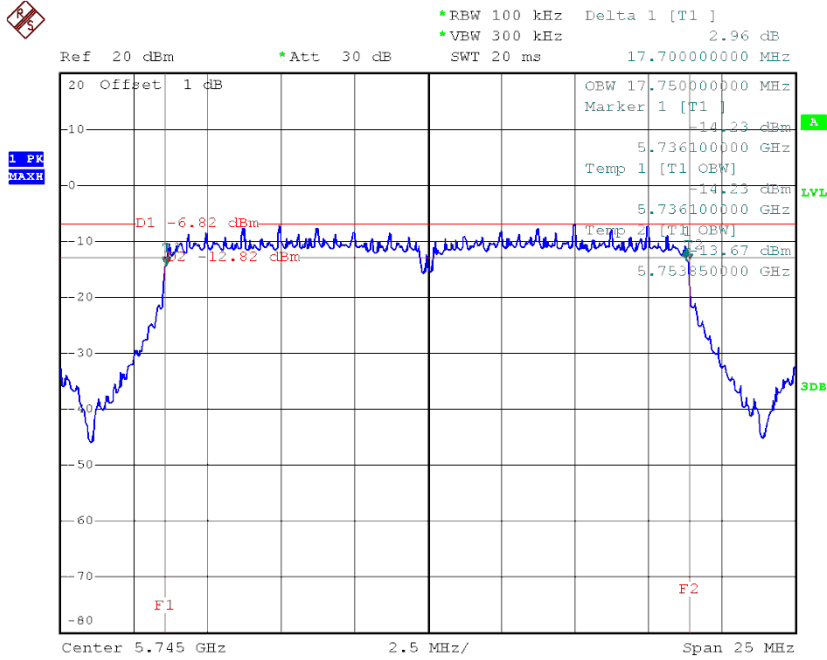


Date: 15.MAY.2014 10:35:36



Test Mode : TX N-20MHz Mode_CH149/157/165_ANT 2

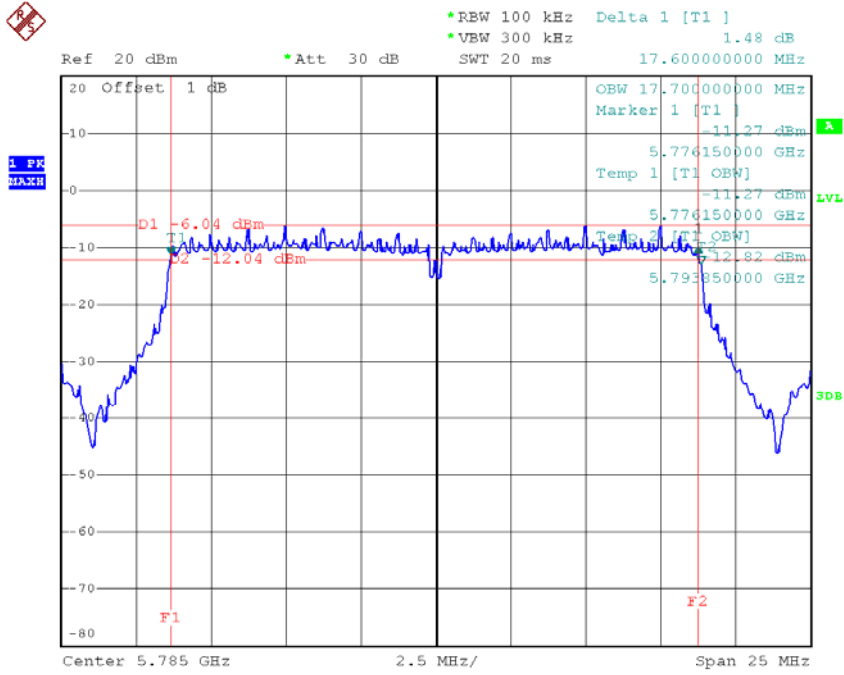
TX CH 149



Date: 15.MAY.2014 10:21:23

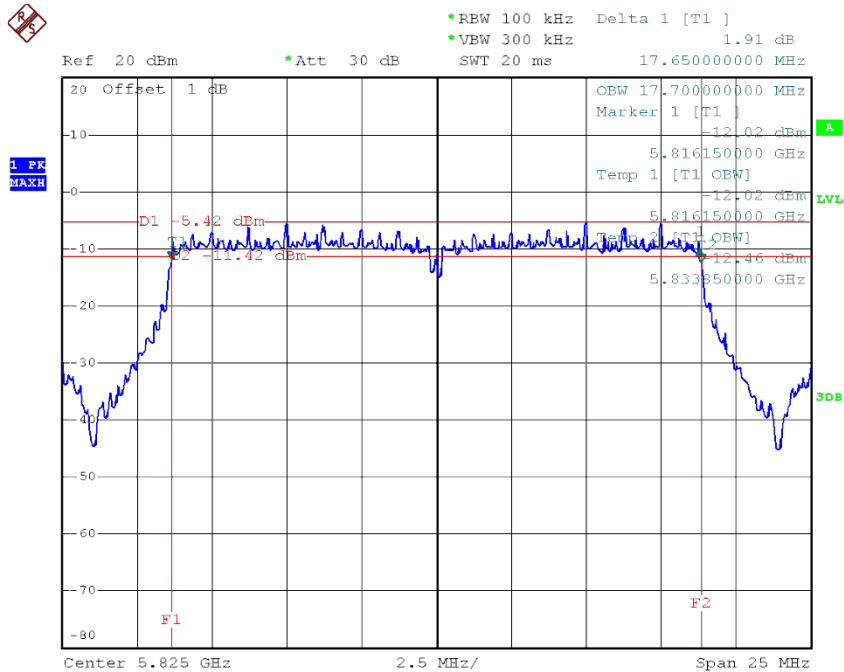


TX CH 157



Date: 15.MAY.2014 10:29:29

TX CH 165

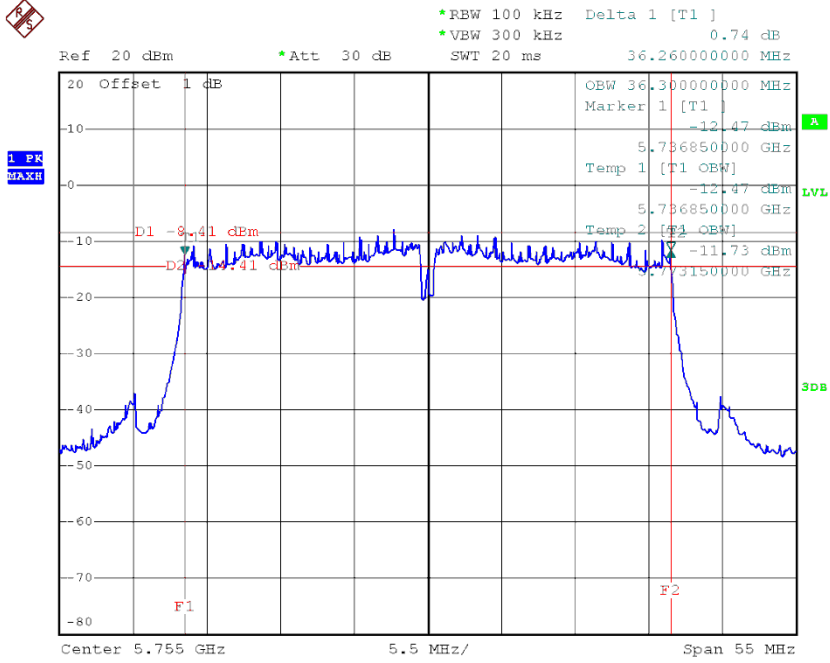


Date: 15.MAY.2014 10:36:09



Test Mode : TX N-40MHz Mode_CH151/159_ANT 0

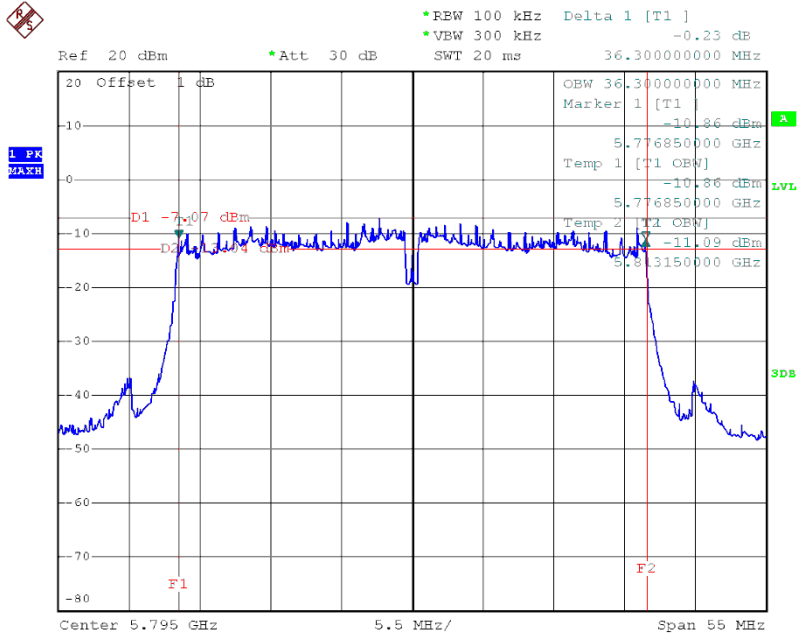
TX CH 151



Date: 15.MAY.2014 10:59:32



TX CH 159

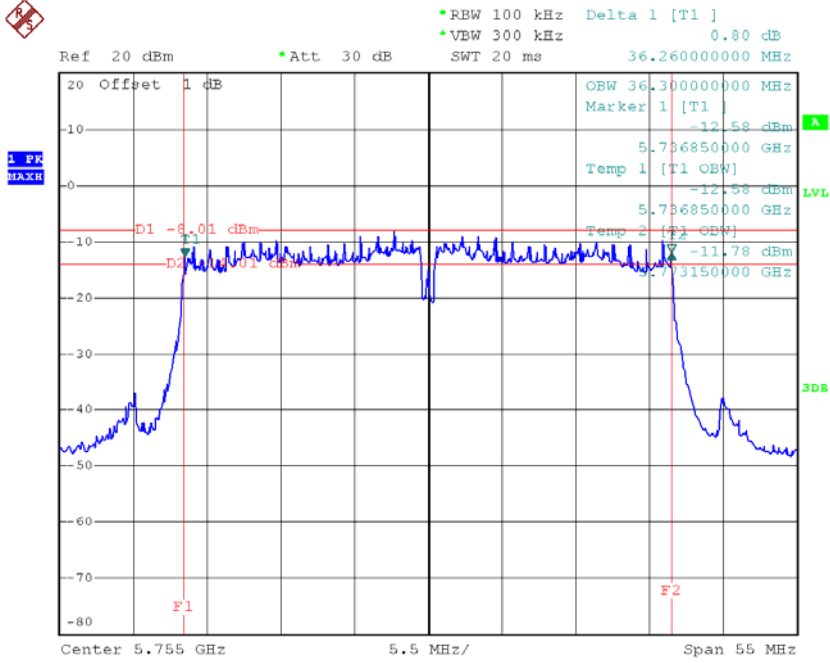


Date: 15.MAY.2014 11:05:38



Test Mode : TX N-40MHz Mode_CH151/159_ANT 1

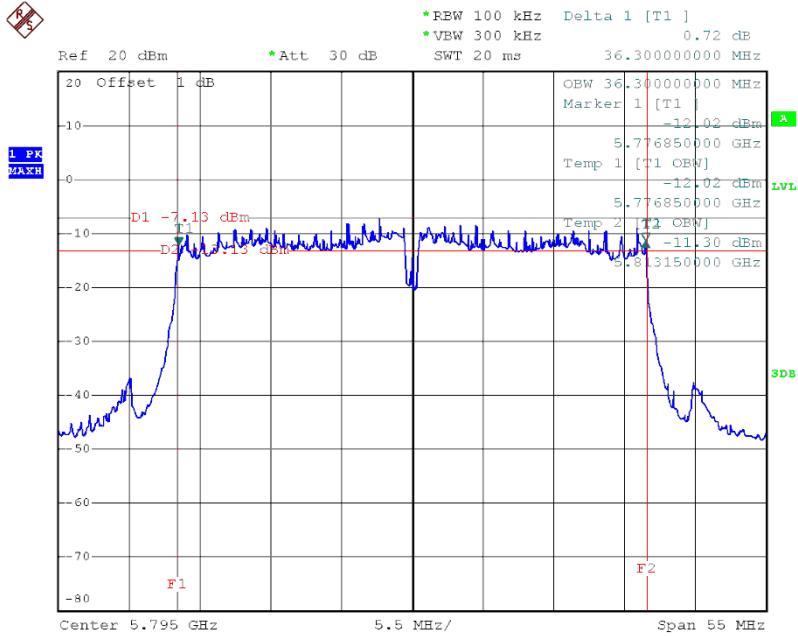
TX CH 151



Date: 15.MAY.2014 11:00:14



TX CH 159

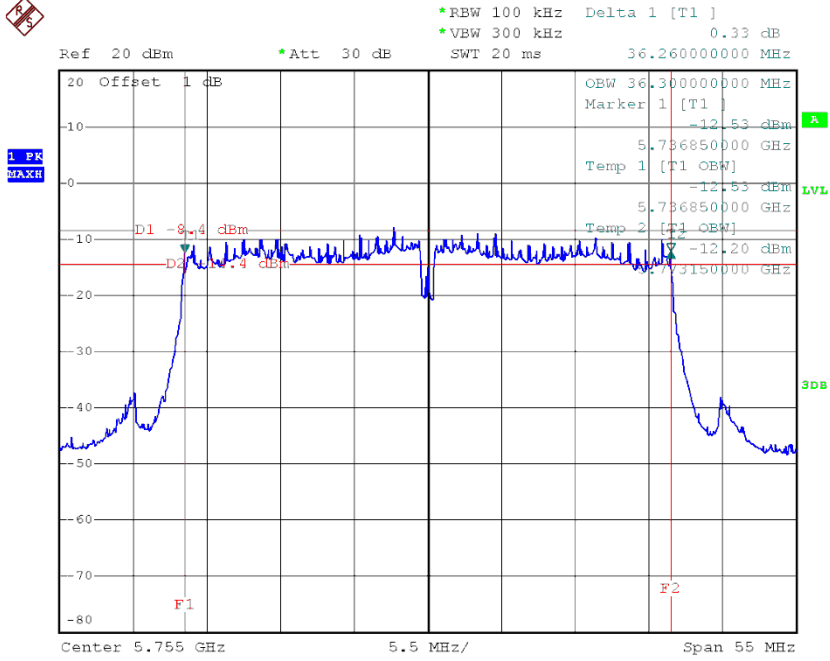


Date: 15.MAY.2014 11:06:05



Test Mode : TX N-40MHz Mode_CH151/159_ANT 2

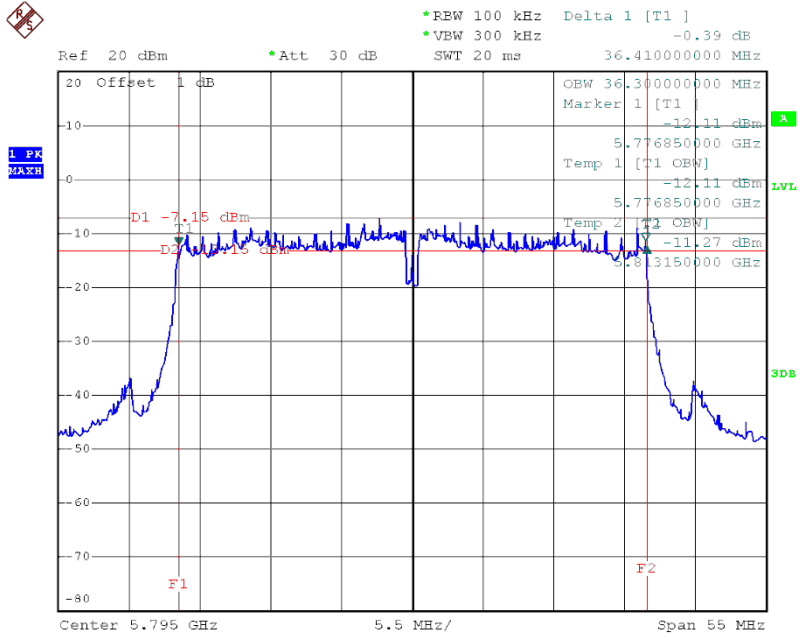
TX CH 151



Date: 15.MAY.2014 11:00:50



TX CH 159



Date: 15.MAY.2014 11:06:36



ATTACHMENT F - MAXIMUM OUTPUT POWER



Test Mode : TX A Mode				
Test Channel	Frequency (MHz)	Output Power (dBm)	Limit (dBm)	Limit (Watt)
CH149	5745	24.25	30	1
CH157	5785	24.17	30	1
CH165	5825	24.23	30	1



Test Mode : TX N-20M Mode_ANT 0

Test Channel	Frequency (MHz)	Output Power (dBm)	Limit (dBm)	Limit (Watt)
CH149	5745	20.13	30	1
CH157	5785	20.21	30	1
CH165	5825	20.15	30	1

Test Mode : TX N-20M Mode_ANT 1

Test Channel	Frequency (MHz)	Output Power (dBm)	Limit (dBm)	Limit (Watt)
CH149	5745	20.07	30	1
CH157	5785	20.16	30	1
CH165	5825	20.17	30	1

Test Mode : TX N-20M Mode_ANT 2

Test Channel	Frequency (MHz)	Output Power (dBm)	Limit (dBm)	Limit (Watt)
CH149	5745	20.16	30	1
CH157	5785	20.15	30	1
CH165	5825	20.13	30	1

Test Mode : TX N-20M Mode_Total

Test Channel	Frequency (MHz)	Output Power (dBm)	Limit (dBm)	Limit (Watt)
CH149	5745	24.93	30	1
CH157	5785	24.94	30	1
CH165	5825	24.92	30	1



Test Mode : TX N-40M Mode_ANT 0

Test Channel	Frequency (MHz)	Output Power (dBm)	Limit (dBm)	Limit (Watt)
CH151	5755	20.29	30	1
CH159	5795	20.27	30	1

Test Mode : TX N-40M Mode_ANT 1

Test Channel	Frequency (MHz)	Output Power (dBm)	Limit (dBm)	Limit (Watt)
CH151	5755	20.17	30	1
CH159	5795	20.12	30	1

Test Mode : TX N-40M Mode_ANT 2

Test Channel	Frequency (MHz)	Output Power (dBm)	Limit (dBm)	Limit (Watt)
CH151	5755	20.26	30	1
CH159	5795	20.21	30	1

Test Mode : TX N-40M Mode_Total

Test Channel	Frequency (MHz)	Output Power (dBm)	Limit (dBm)	Limit (Watt)
CH151	5755	25.01	30	1
CH159	5795	24.97	30	1



Neutron Engineering Inc.

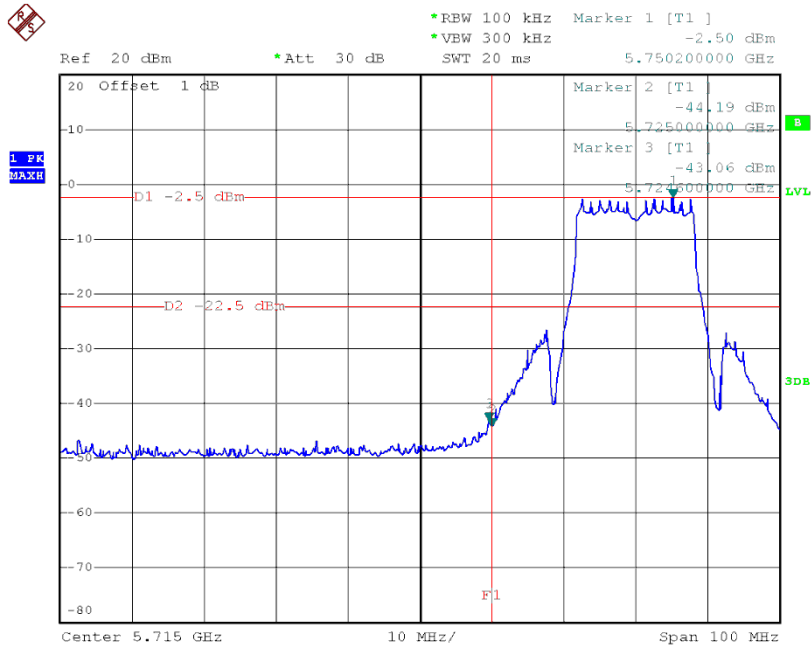
ATTACHMENT G – ANTENNA CONDUCTED SPURIOUS EMISSION



Test Mode :	TX A Mode
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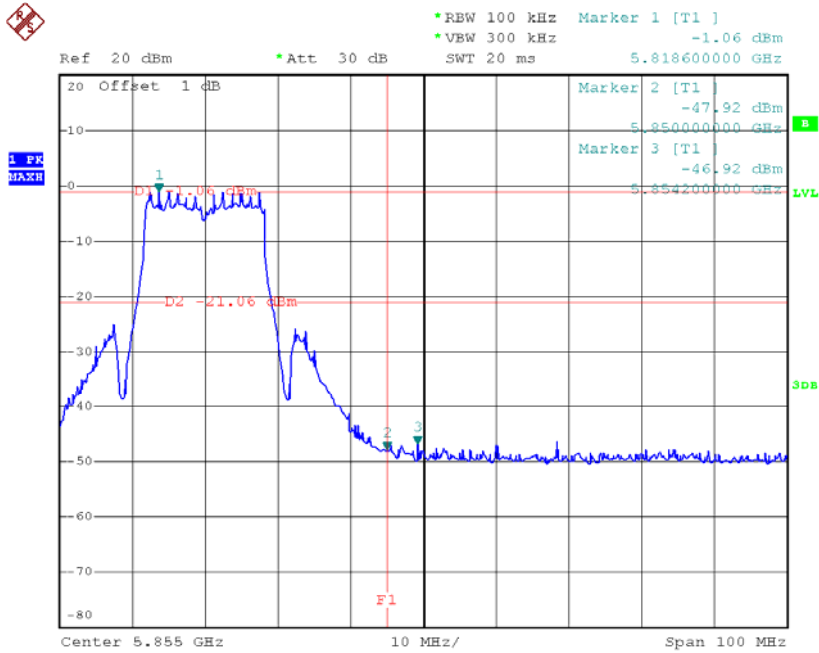


TX A Mode CH149



Date: 15.MAY.2014 10:12:40

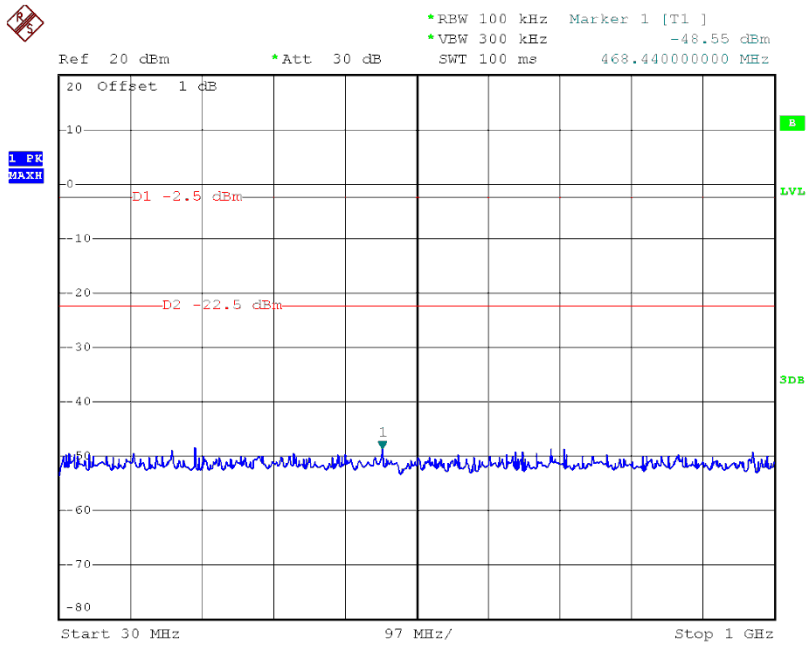
TX A Mode CH165



Date: 15.MAY.2014 10:18:00

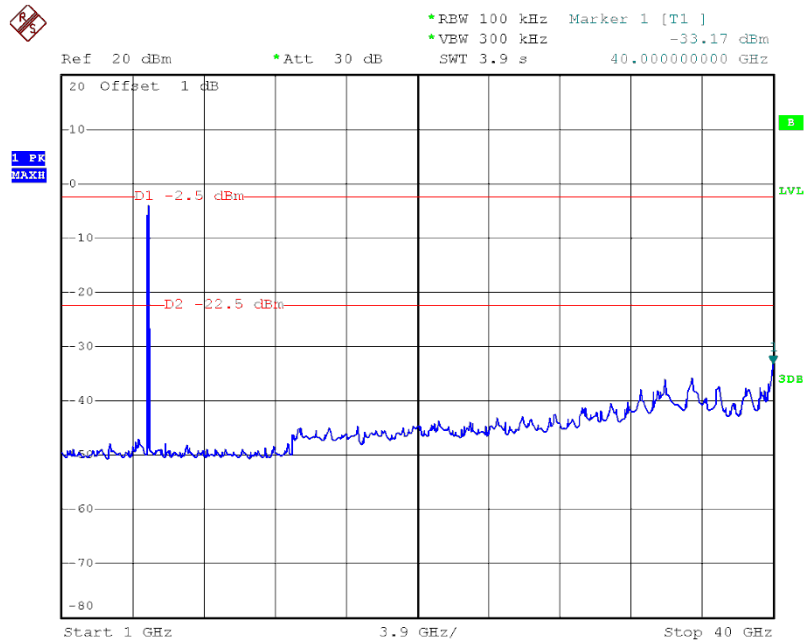


TX A Mode CH149 (30MHz to 1000MHz)



Date: 15.MAY.2014 10:12:51

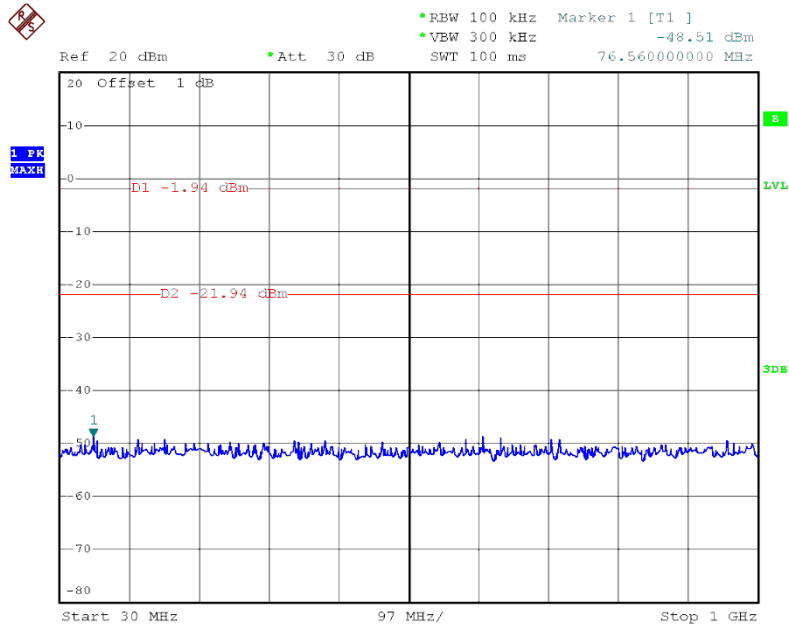
TX A Mode CH149 (1000MHz to 10th Harmonic)



Date: 15.MAY.2014 10:13:22

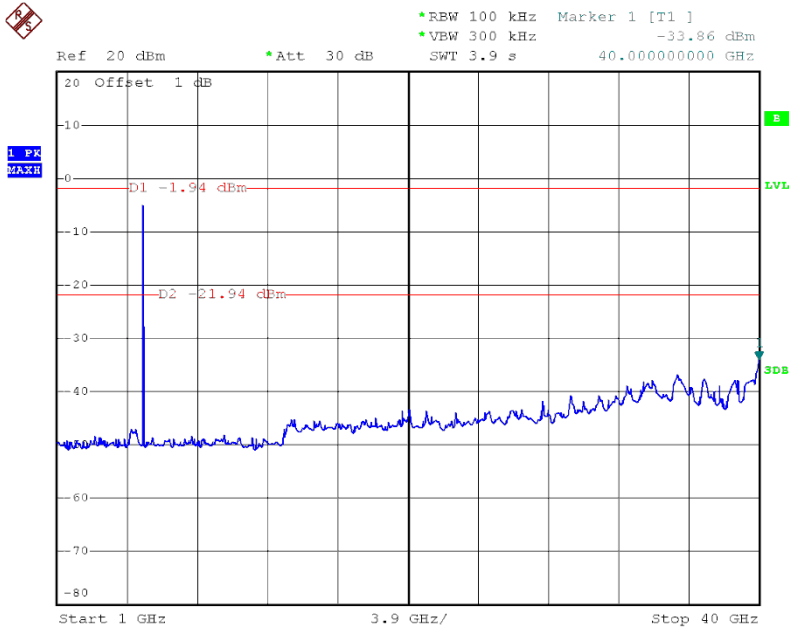


TX A Mode CH157 (30MHz to 1000MHz)



Date: 15.MAY.2014 10:15:16

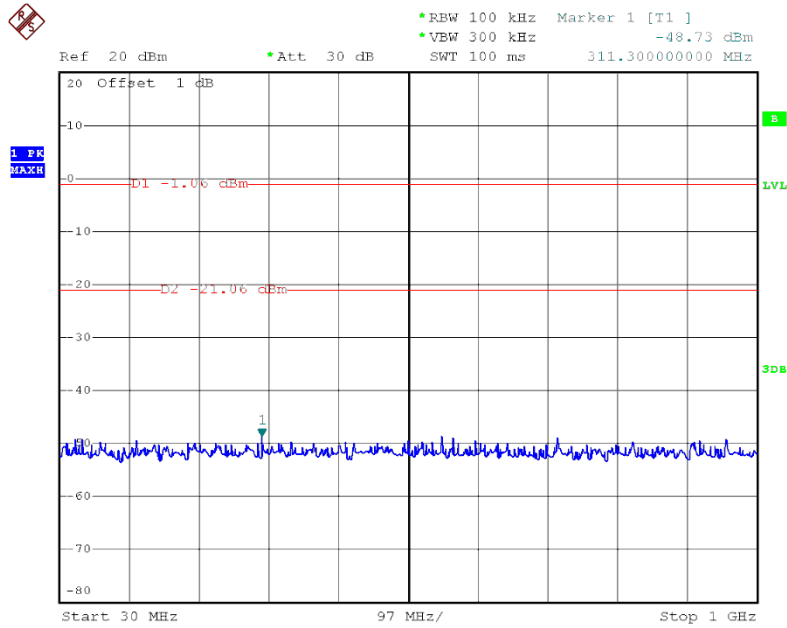
TX A Mode CH157 (1000MHz to 10th Harmonic)



Date: 15.MAY.2014 10:15:35

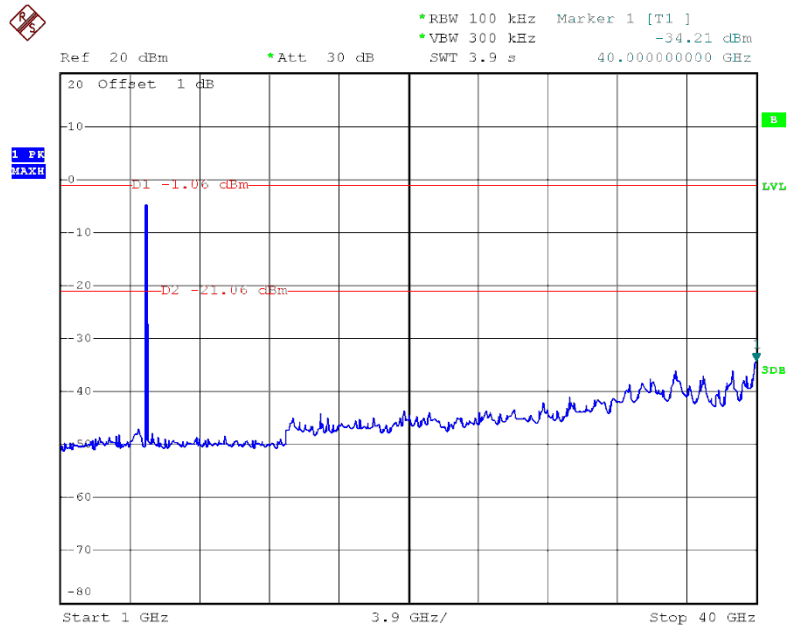


TX A Mode CH165 (30MHz to 1000MHz)



Date: 15.MAY.2014 10:18:11

TX A Mode CH165 (1000MHz to 10th Harmonic)



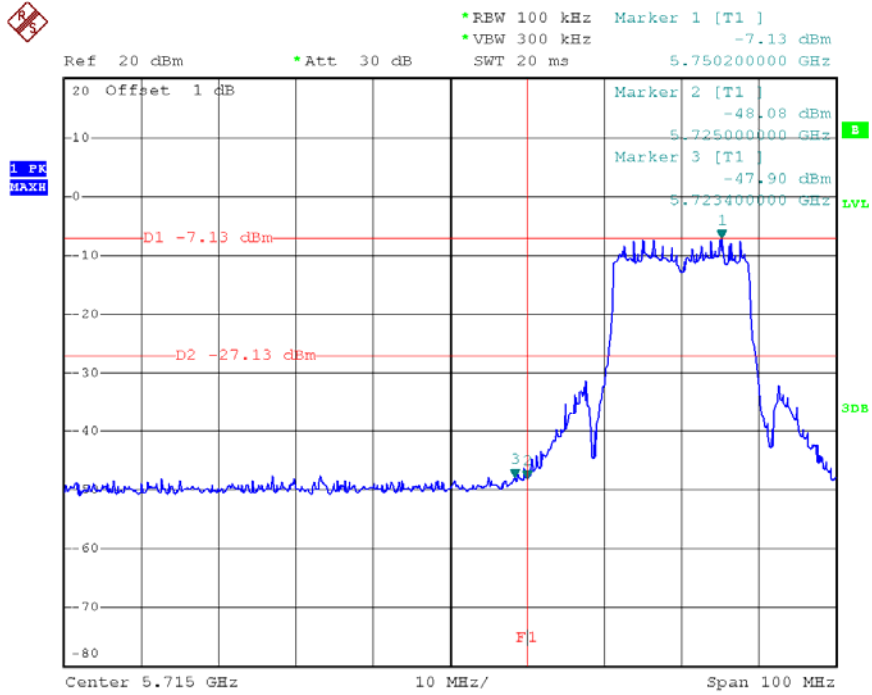
Date: 15.MAY.2014 10:18:28



Test Mode :	TX N-20M Mode_ANT 0
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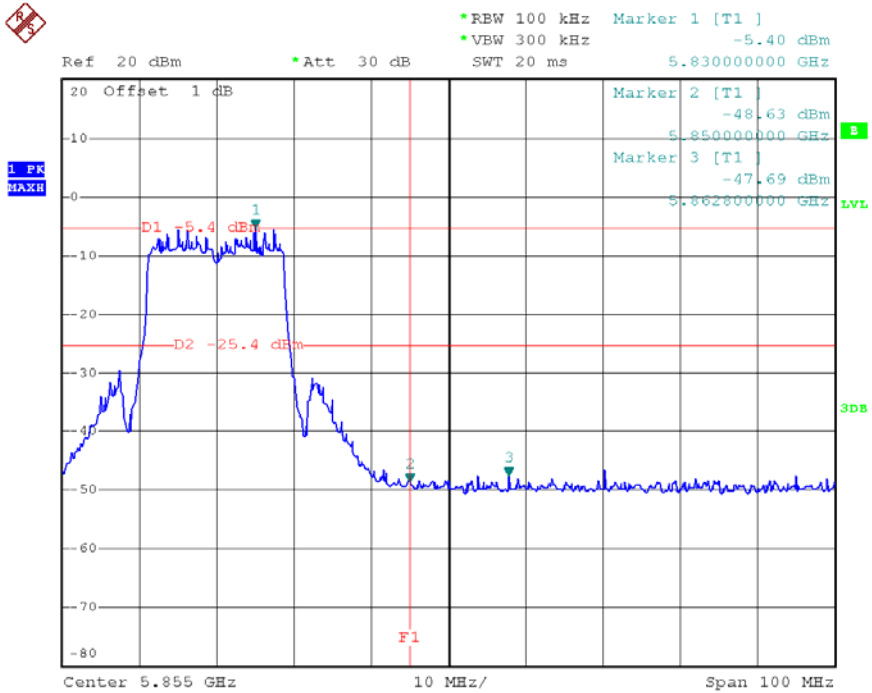


TX HT20 mode CH149



Date: 15.MAY.2014 10:22:29

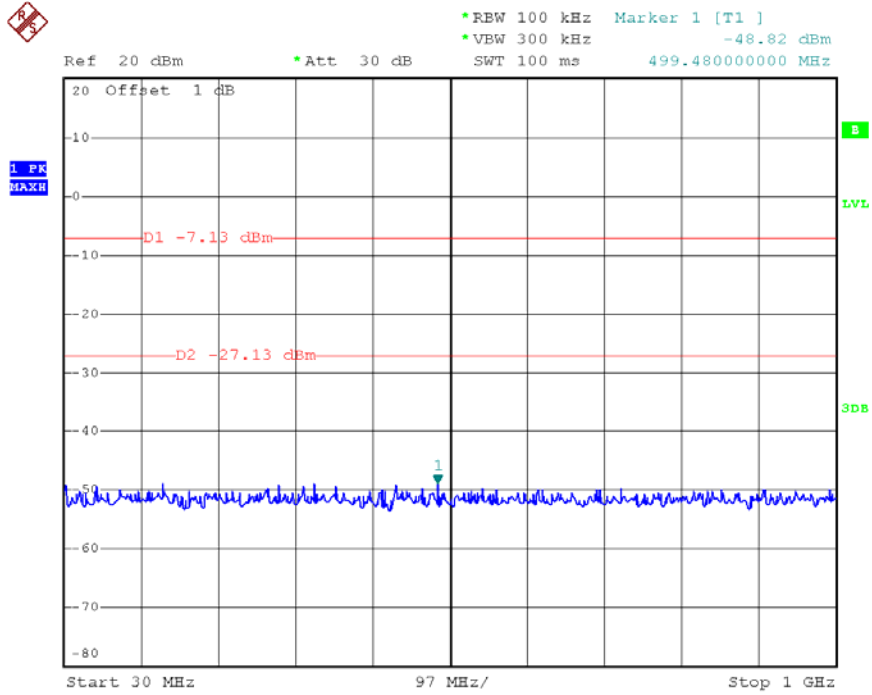
TX HT20 mode CH165



Date: 15.MAY.2014 10:37:33

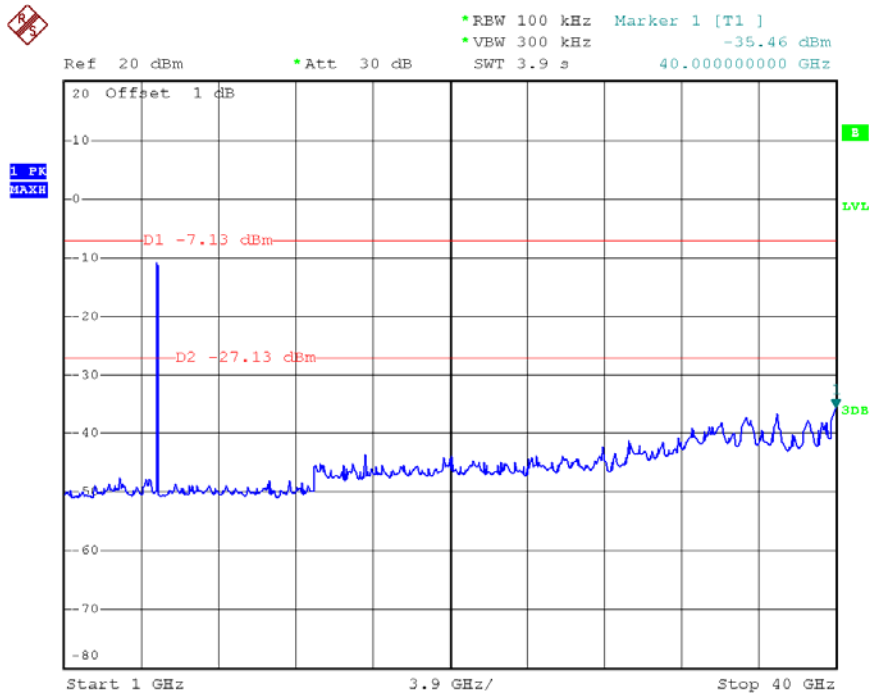


TX HT20 mode CH149 (30MHz to 1000MHz)



Date: 15.MAY.2014 10:22:40

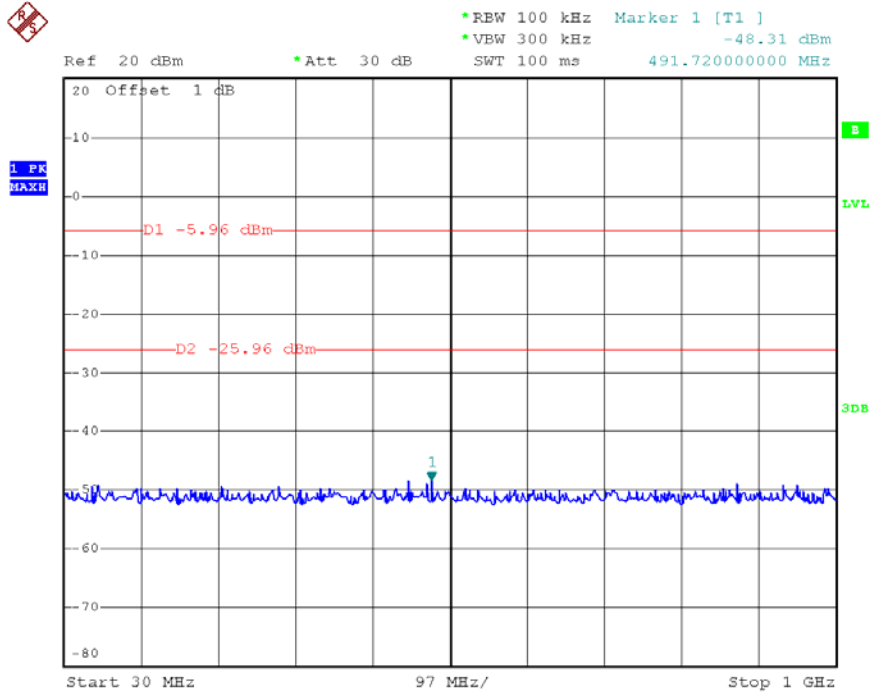
TX HT20 mode CH149 (1000MHz to 10th Harmonic)



Date: 15.MAY.2014 10:22:55

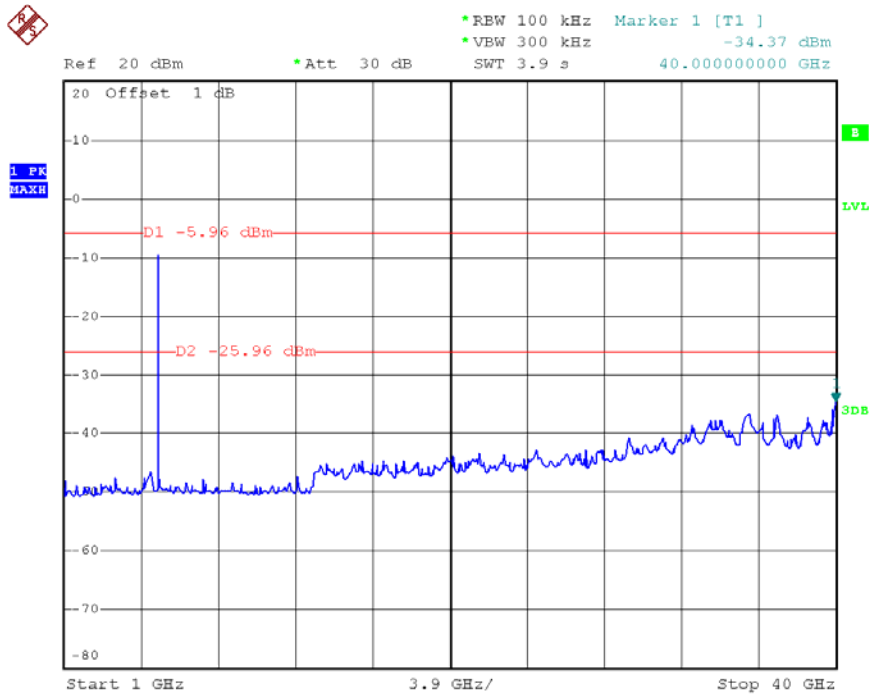


TX HT20 mode CH157 (30MHz to 1000MHz)



Date: 15.MAY.2014 10:30:37

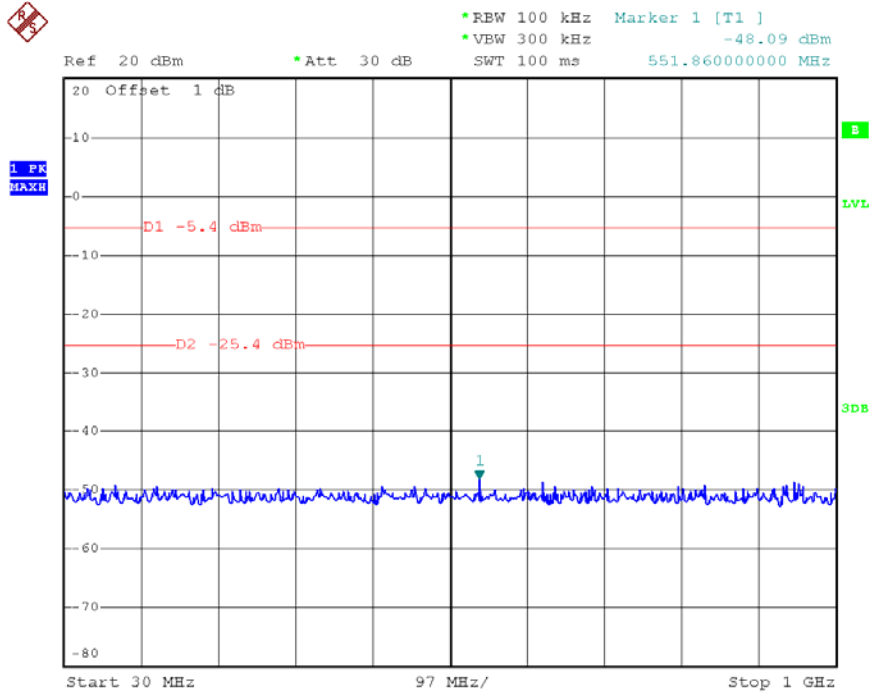
TX HT20 mode CH157 (1000MHz to 10th Harmonic)



Date: 15.MAY.2014 10:31:02

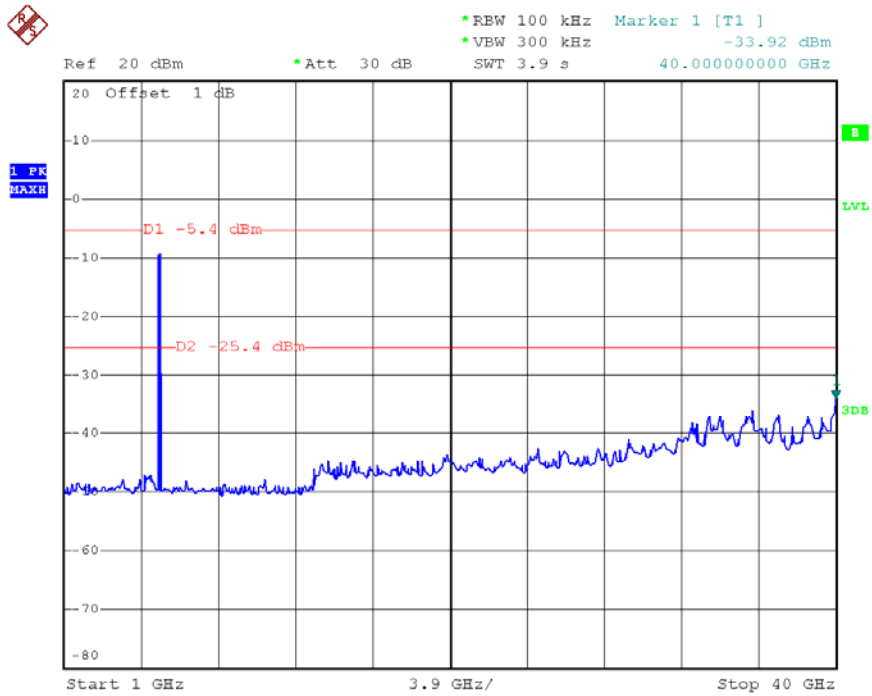


TX HT20 mode CH165 (30MHz to 1000MHz)



Date: 15.MAY.2014 10:37:42

TX HT20 mode CH165 (1000MHz to 10th Harmonic)



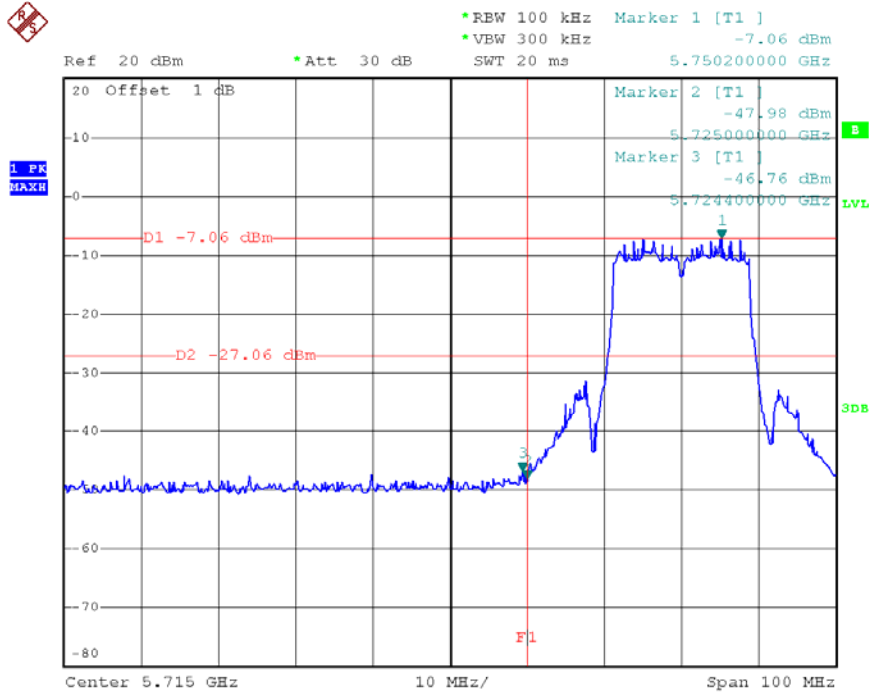
Date: 15.MAY.2014 10:38:09



Test Mode :	TX N-20M Mode_ANT 1
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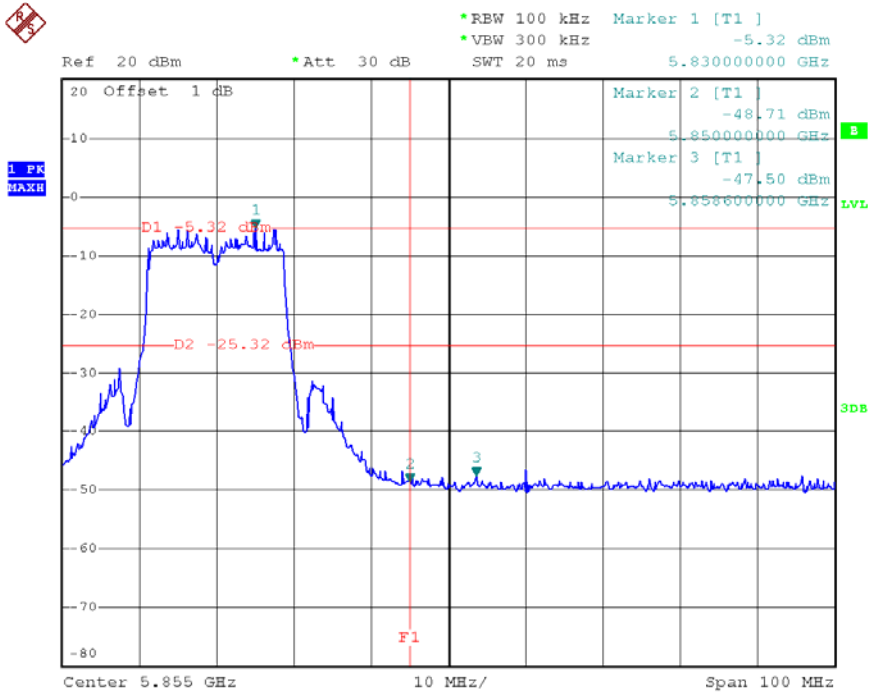


TX HT20 mode CH149



Date: 15.MAY.2014 10:23:38

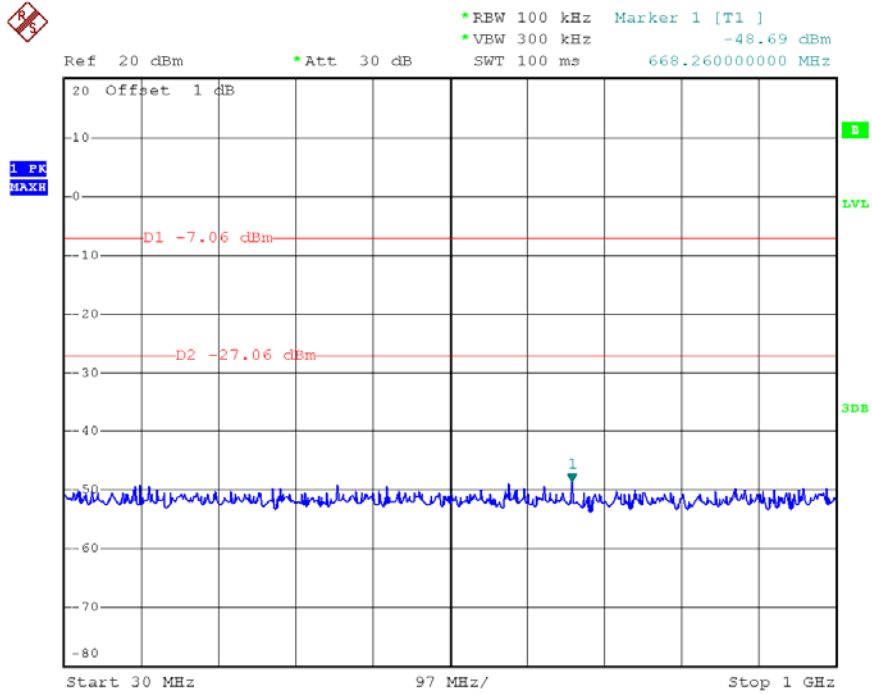
TX HT20 mode CH165



Date: 15.MAY.2014 10:38:56

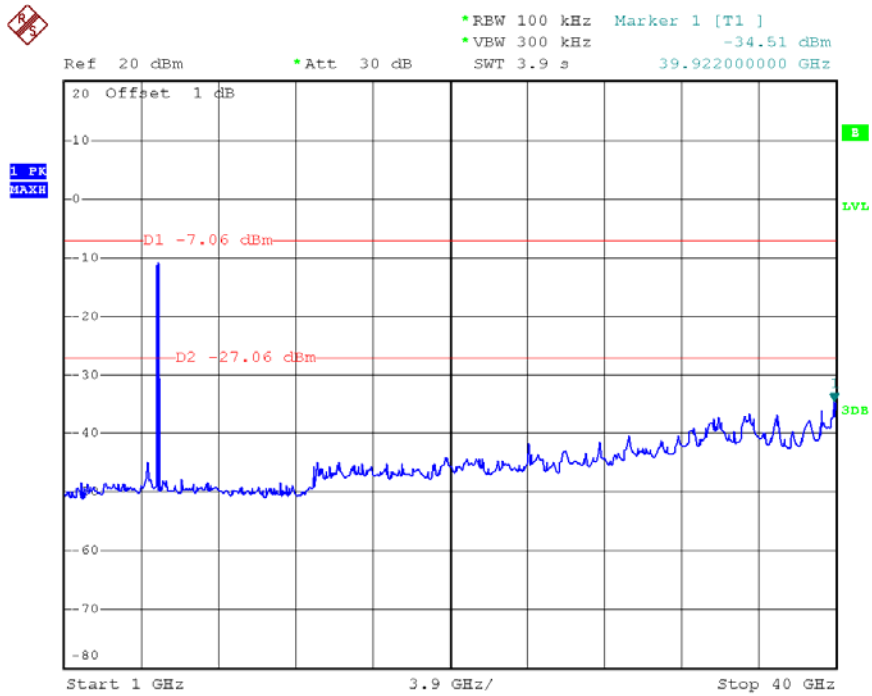


TX HT20 mode CH149 (30MHz to 1000MHz)



Date: 15.MAY.2014 10:23:46

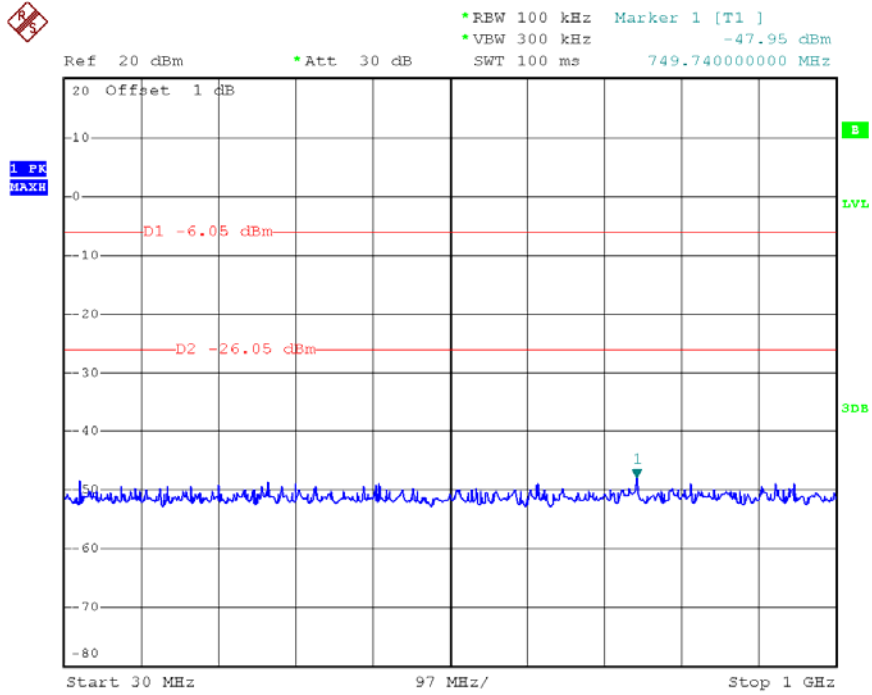
TX HT20 mode CH149 (1000MHz to 10th Harmonic)



Date: 15.MAY.2014 10:24:07

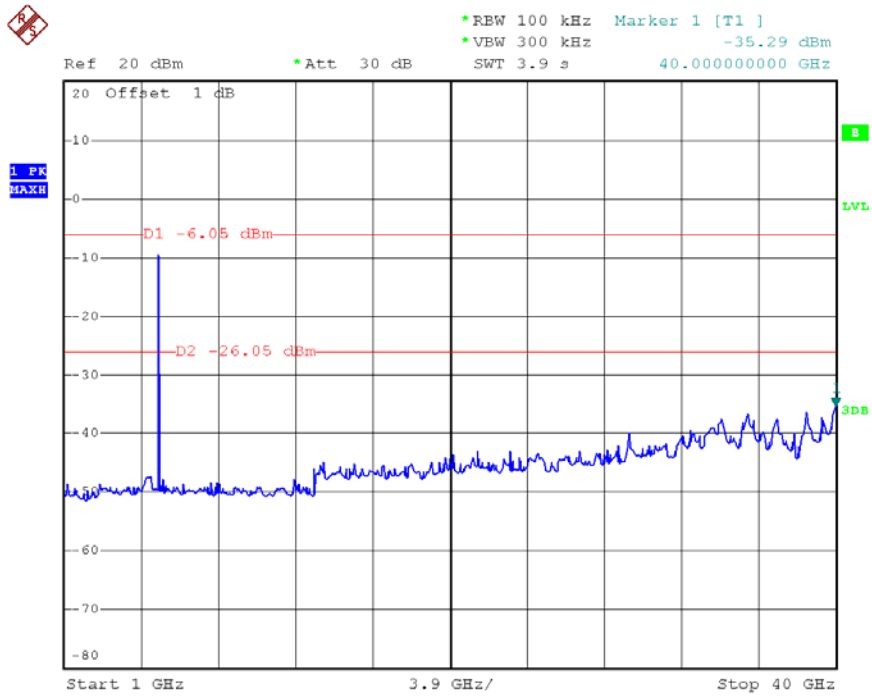


TX HT20 mode CH157 (30MHz to 1000MHz)



Date: 15.MAY.2014 10:32:06

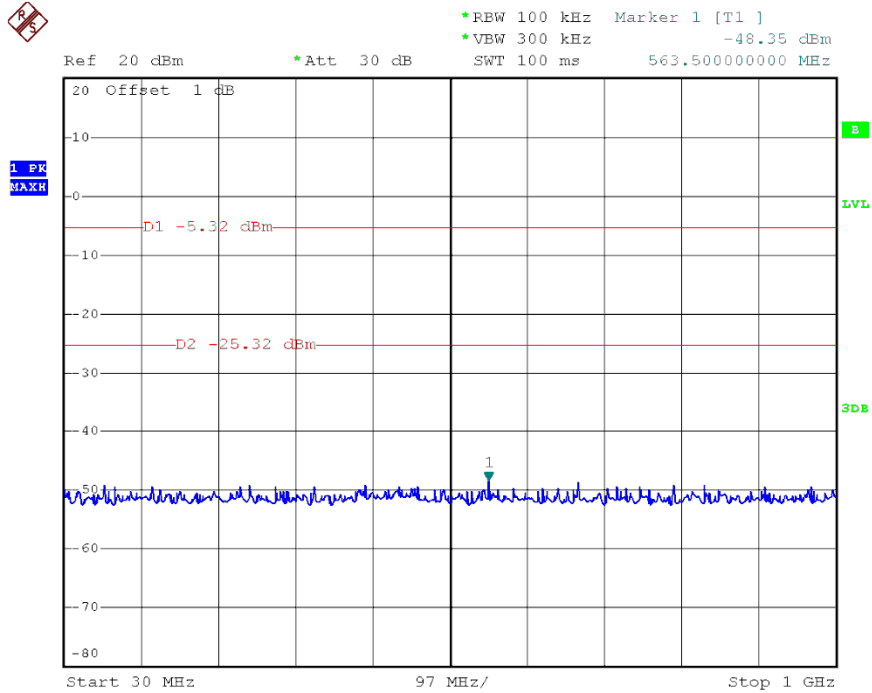
TX HT20 mode CH157 (1000MHz to 10th Harmonic)



Date: 15.MAY.2014 10:32:21

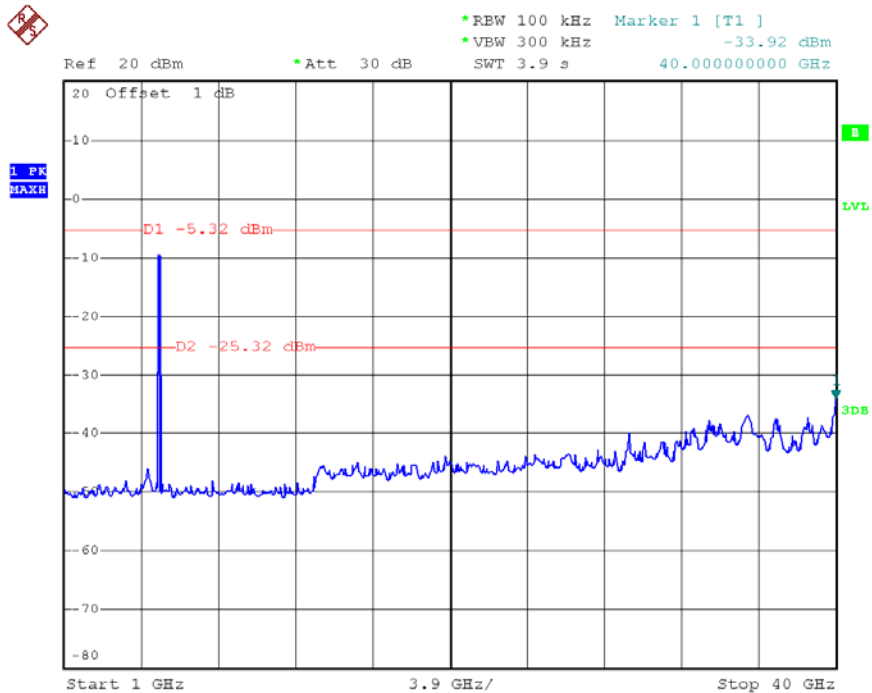


TX HT20 mode CH165 (30MHz to 1000MHz)



Date: 15.MAY.2014 10:39:05

TX HT20 mode CH165 (1000MHz to 10th Harmonic)



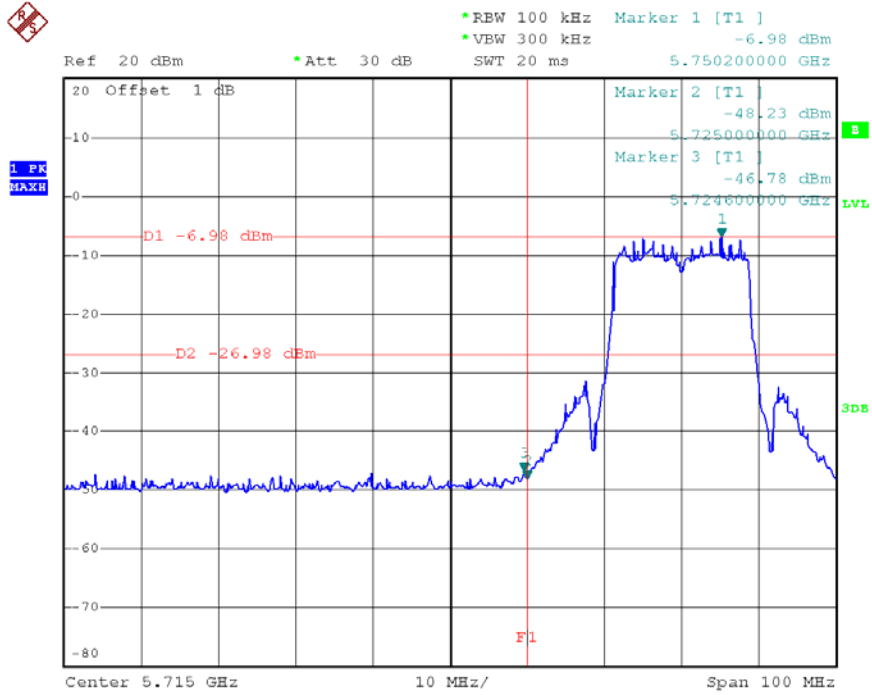
Date: 15.MAY.2014 10:39:20



Test Mode :	TX N-20M Mode_ANT 2
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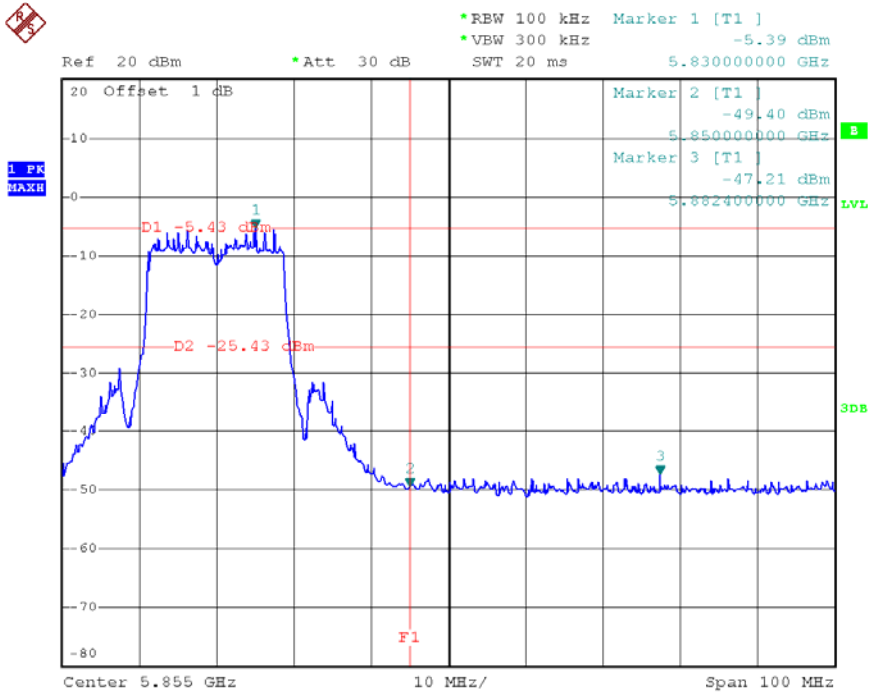


TX HT20 mode CH149



Date: 15.MAY.2014 10:24:55

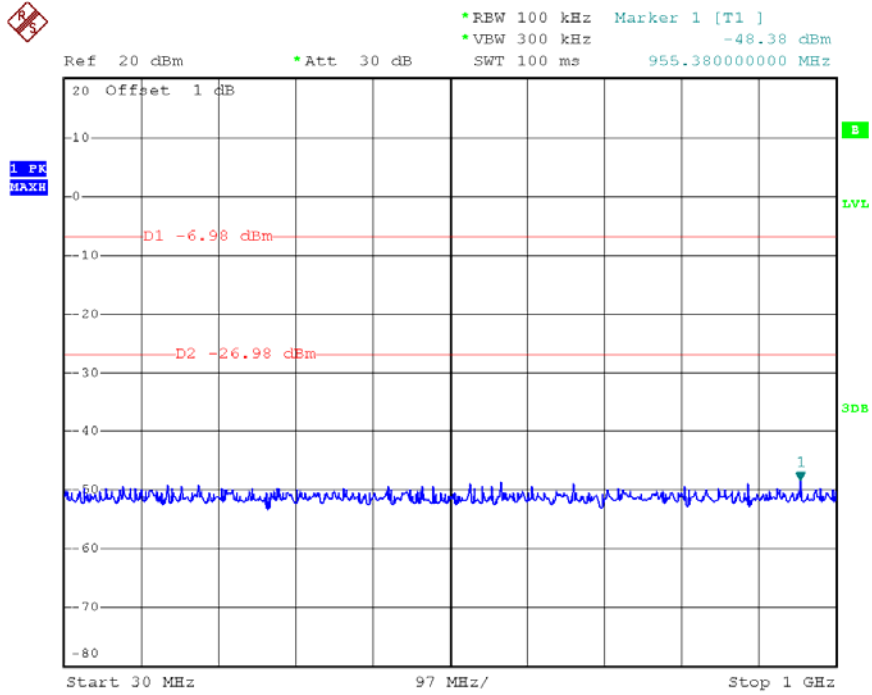
TX HT20 mode CH165



Date: 15.MAY.2014 10:39:50

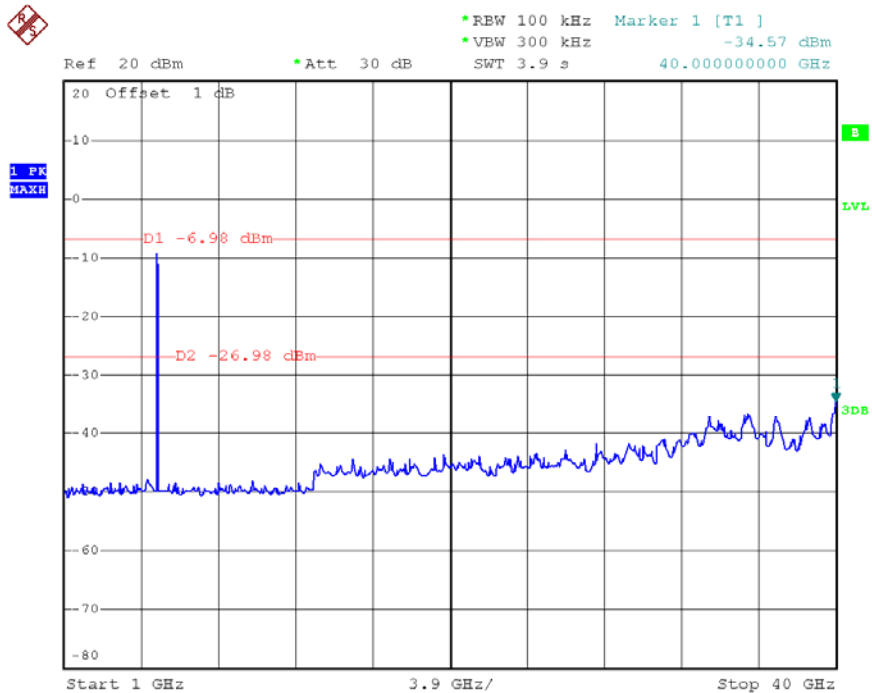


TX HT20 mode CH149 (30MHz to 1000MHz)



Date: 15.MAY.2014 10:25:07

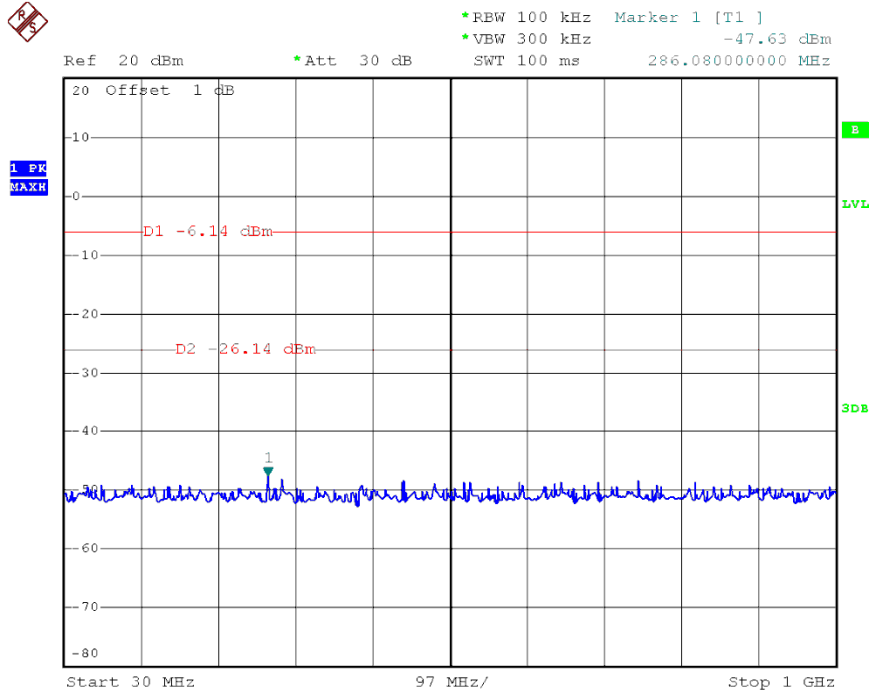
TX HT20 mode CH149 (1000MHz to 10th Harmonic)



Date: 15.MAY.2014 10:25:31

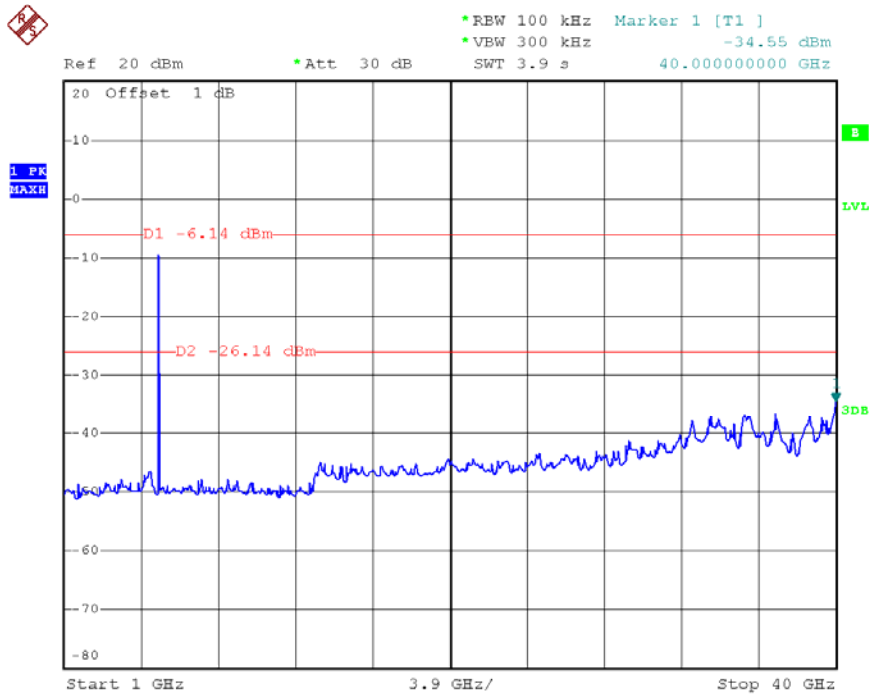


TX HT20 mode CH157 (30MHz to 1000MHz)



Date: 15.MAY.2014 10:33:27

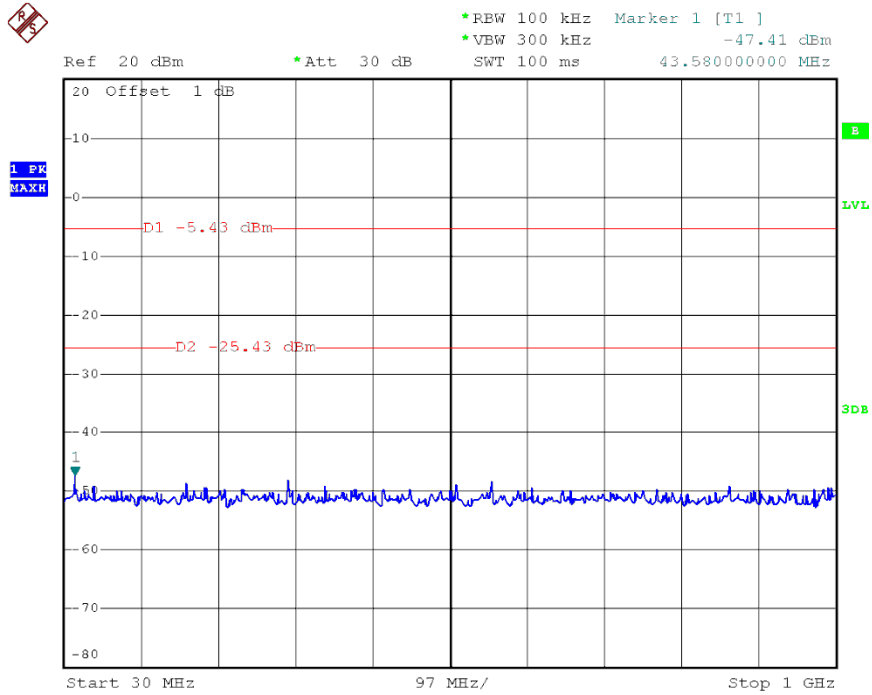
TX HT20 mode CH157 (1000MHz to 10th Harmonic)



Date: 15.MAY.2014 10:33:46

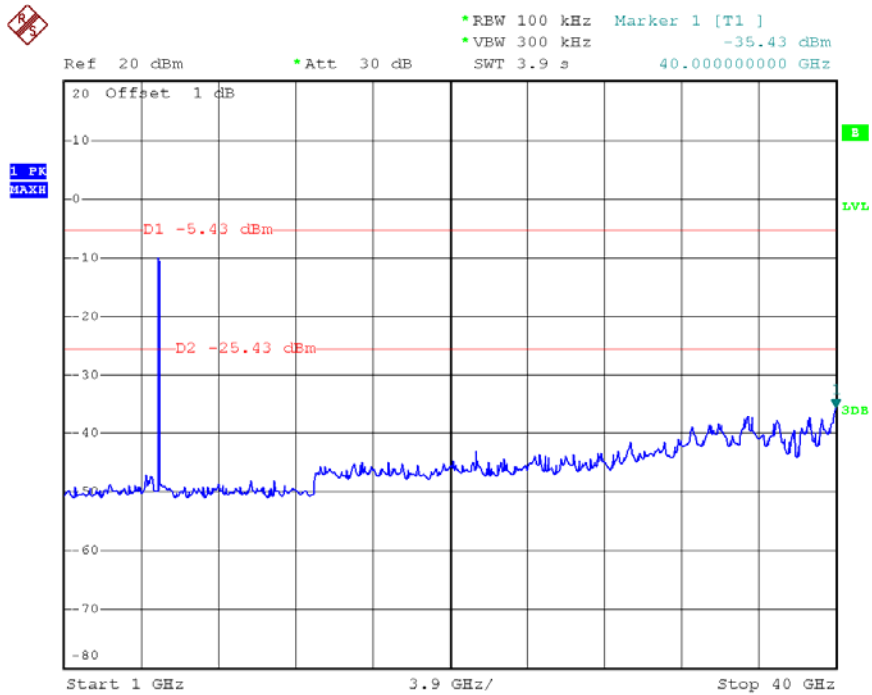


TX HT20 mode CH165 (30MHz to 1000MHz)



Date: 15.MAY.2014 10:40:05

TX HT20 mode CH165 (1000MHz to 10th Harmonic)



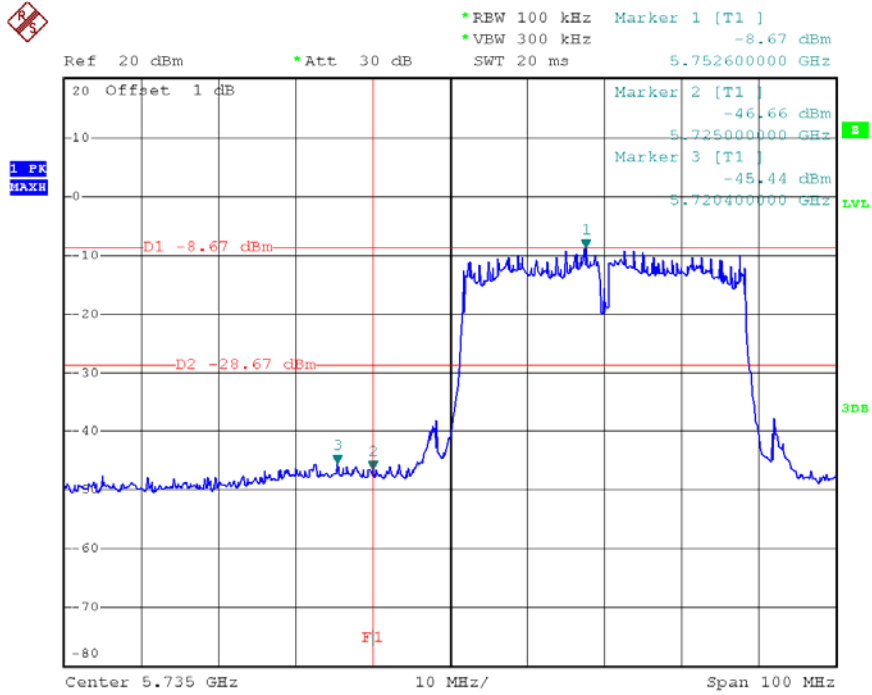
Date: 15.MAY.2014 10:40:20



Test Mode :	TX N-40M Mode_ANT 0
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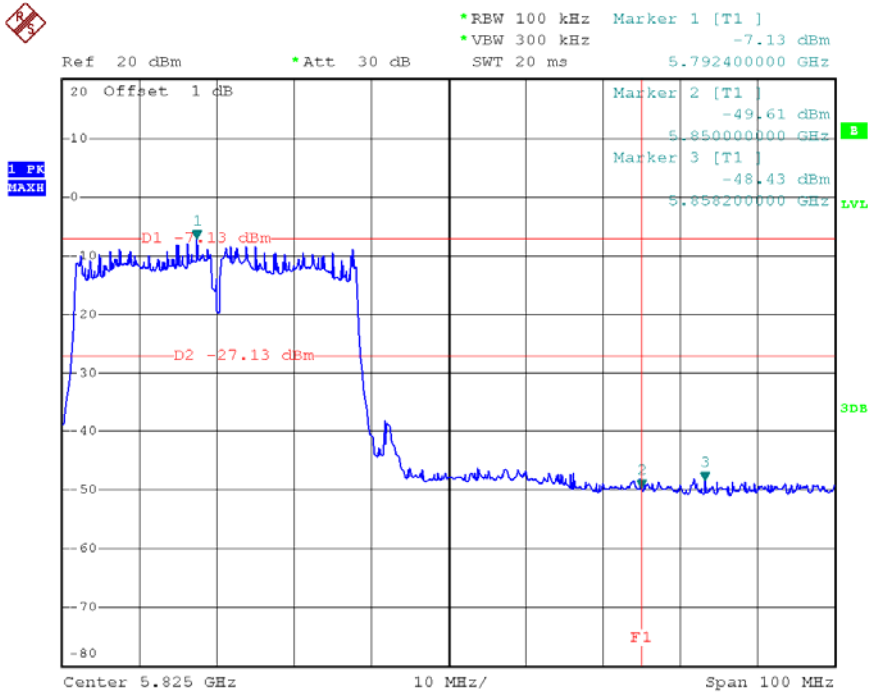


TX HT40 mode CH151



Date: 15.MAY.2014 11:02:12

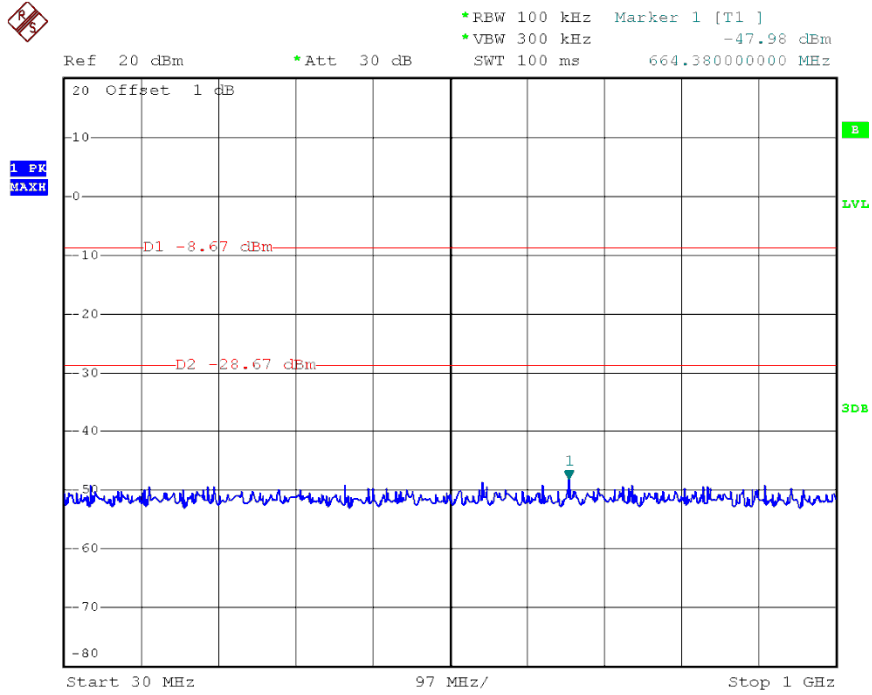
TX HT40 mode CH159



Date: 15.MAY.2014 11:08:30

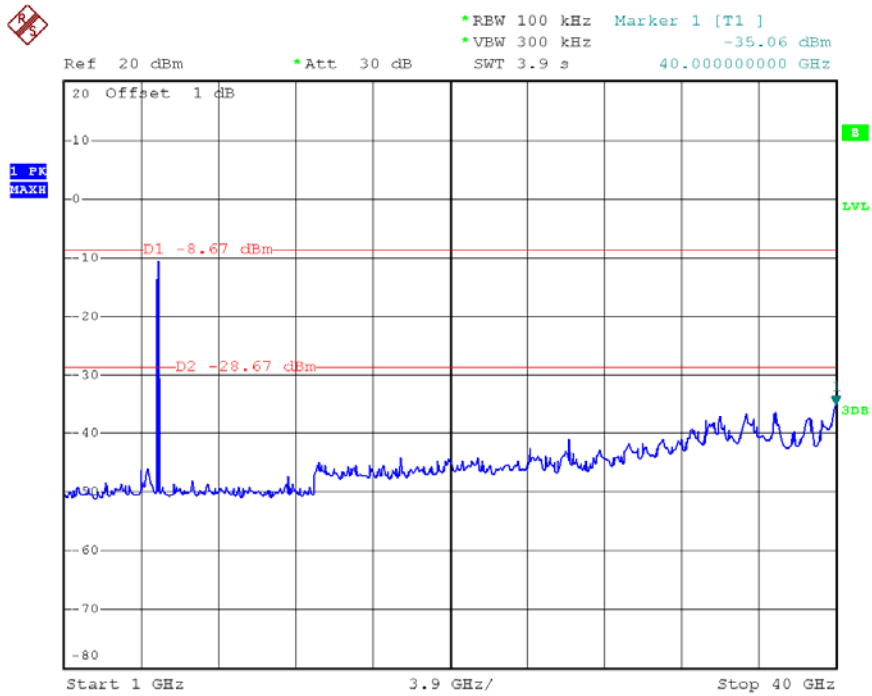


TX HT40 mode CH151 (30MHz to 1000MHz)



Date: 15.MAY.2014 11:02:24

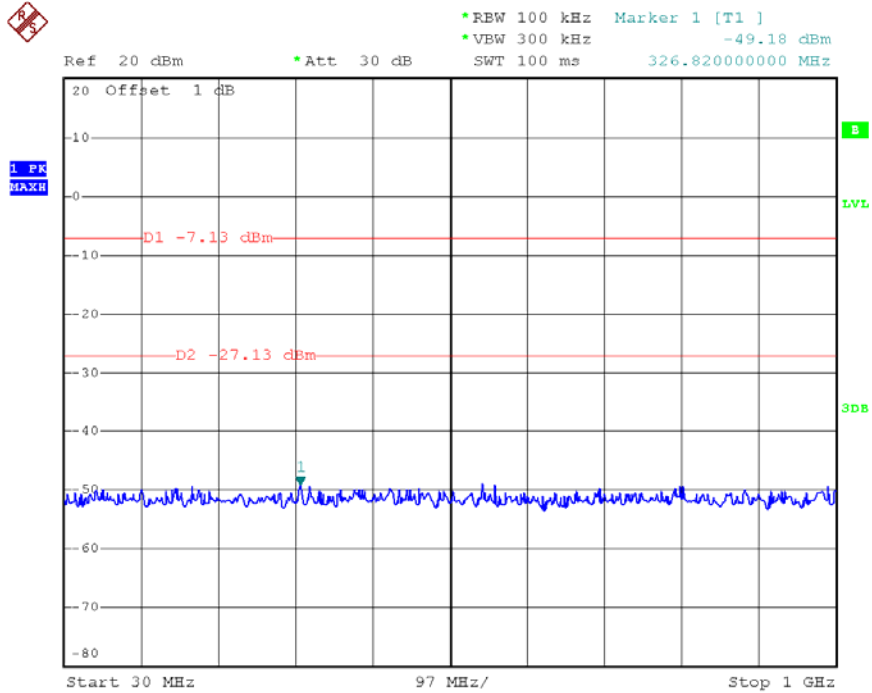
TX HT40 mode CH151 (1000MHz to 10th Harmonic)



Date: 15.MAY.2014 11:02:41

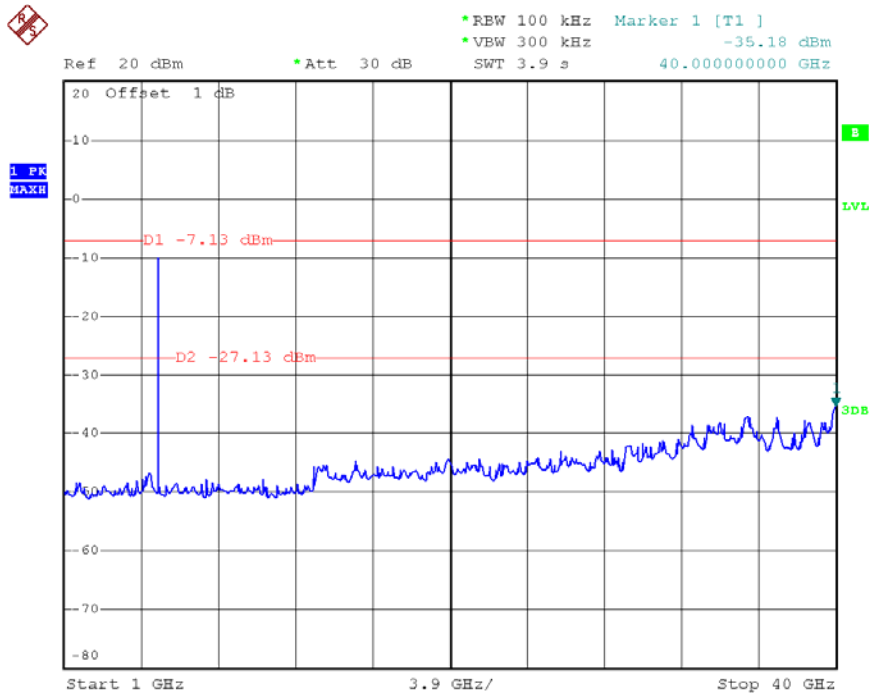


TX HT40 mode CH159 (30MHz to 1000MHz)



Date: 15.MAY.2014 11:08:38

TX HT40 mode CH159 (1000MHz to 10th Harmonic)



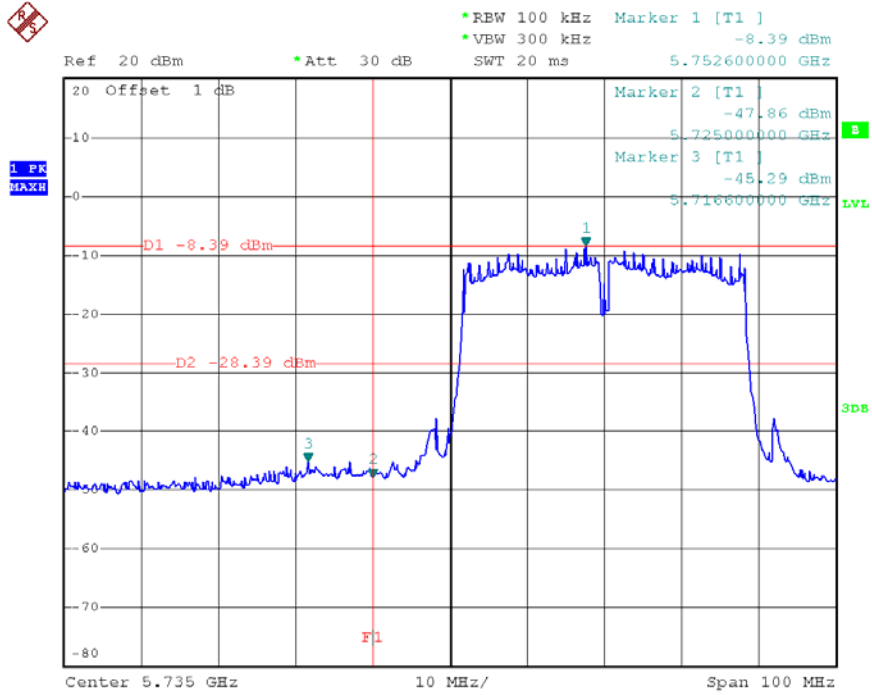
Date: 15.MAY.2014 11:08:52



Test Mode :	TX N-40M Mode_ANT 1
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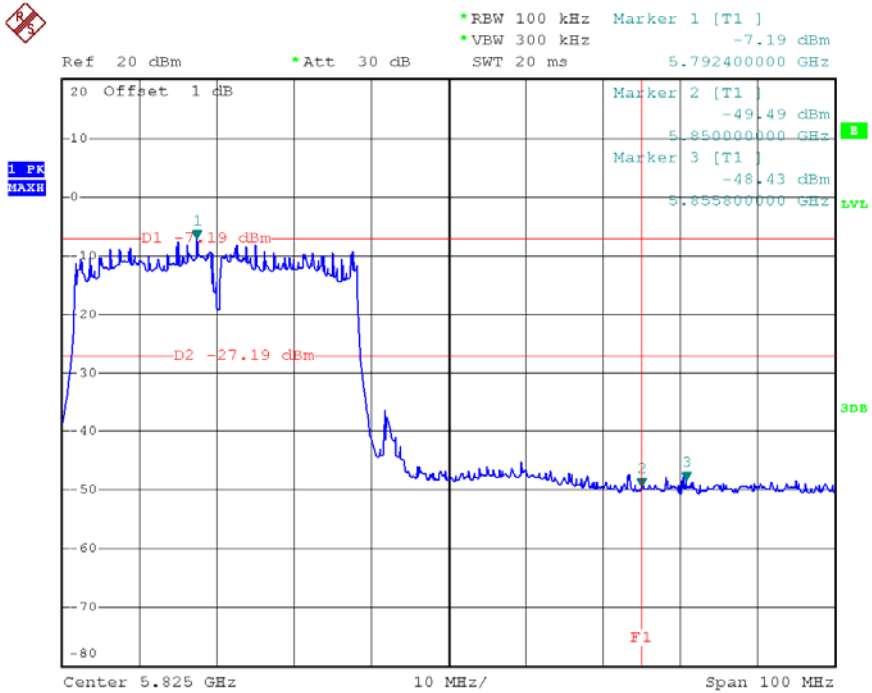


TX HT40 mode CH151



Date: 15.MAY.2014 11:03:19

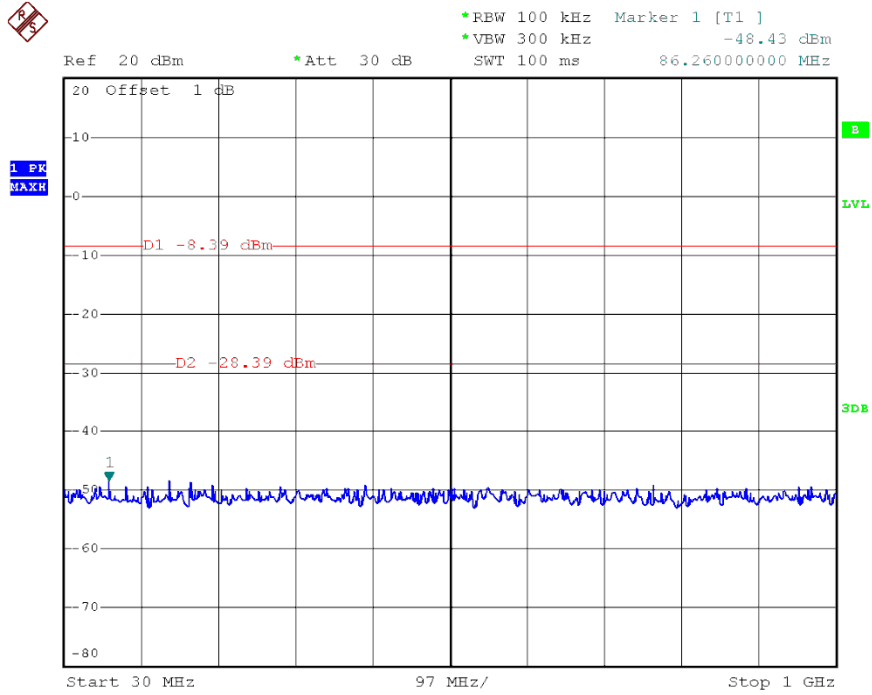
TX HT40 mode CH159



Date: 15.MAY.2014 11:09:24

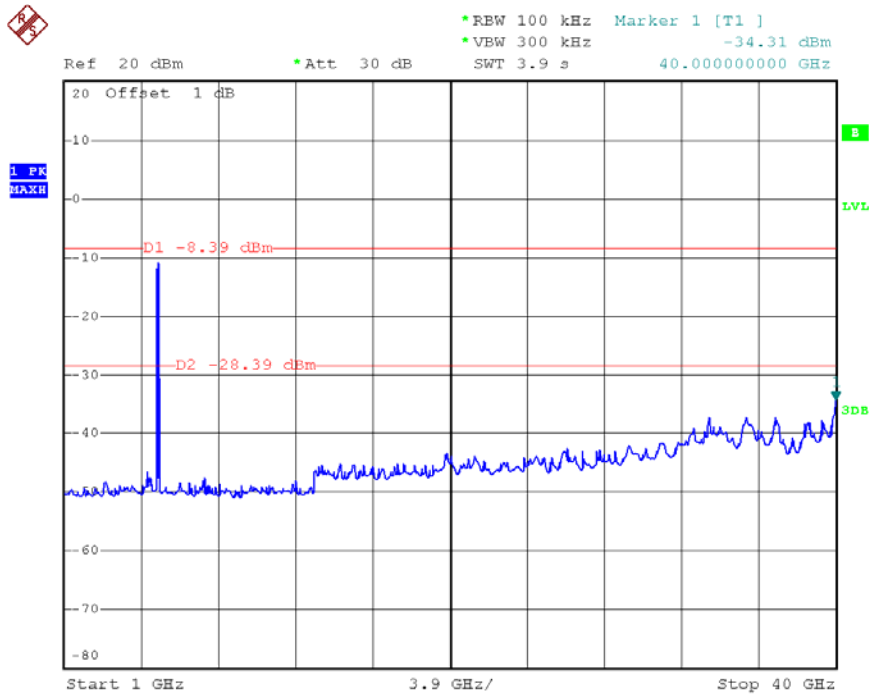


TX HT40 mode CH151 (30MHz to 1000MHz)



Date: 15.MAY.2014 11:03:28

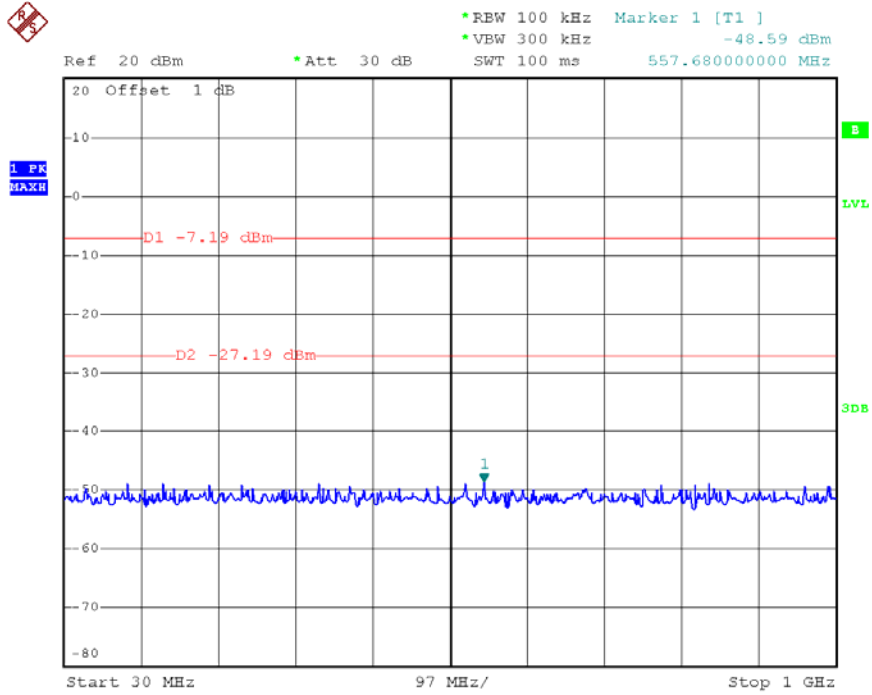
TX HT40 mode CH151 (1000MHz to 10th Harmonic)



Date: 15.MAY.2014 11:03:44

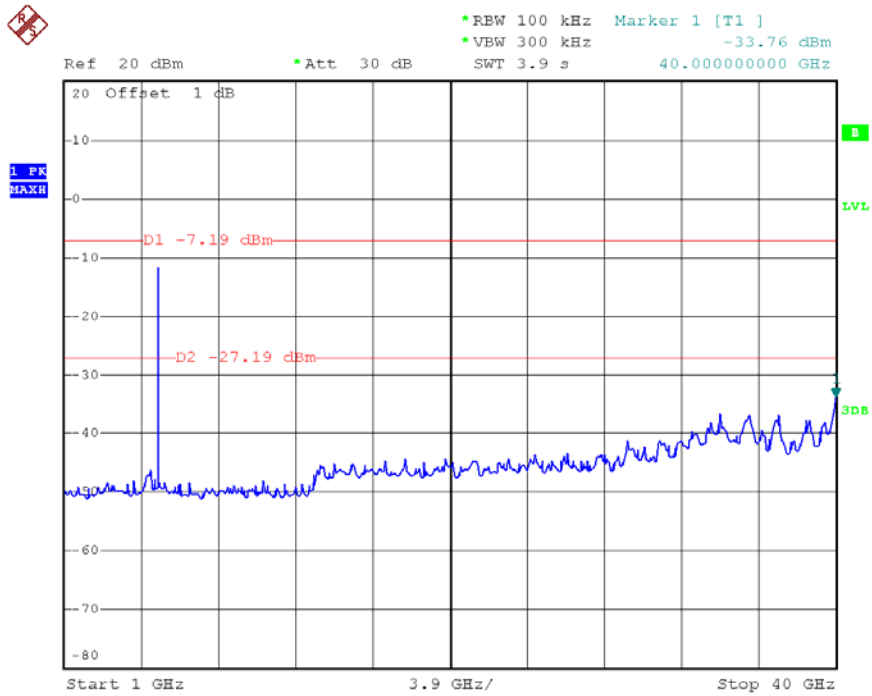


TX HT40 mode CH159 (30MHz to 1000MHz)



Date: 15.MAY.2014 11:09:36

TX HT40 mode CH159 (1000MHz to 10th Harmonic)



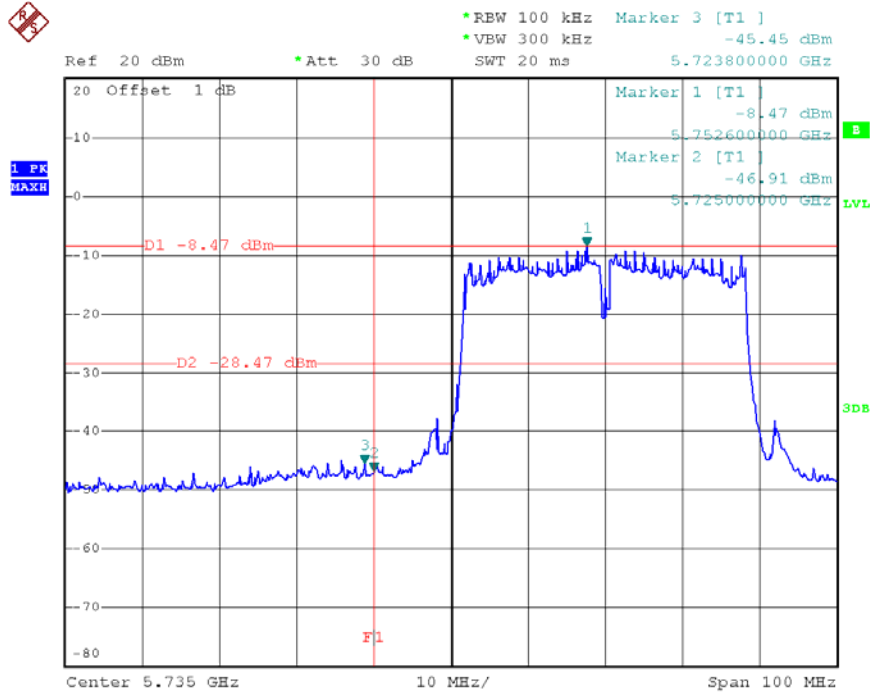
Date: 15.MAY.2014 11:09:50



Test Mode :	TX N-40M Mode_ANT 2
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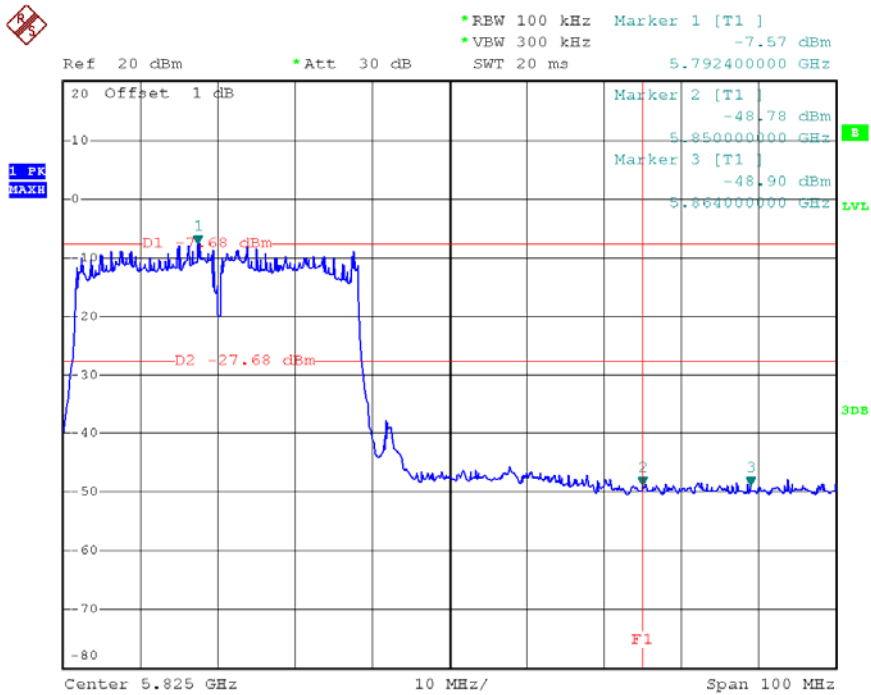


TX HT40 mode CH151



Date: 15.MAY.2014 11:04:14

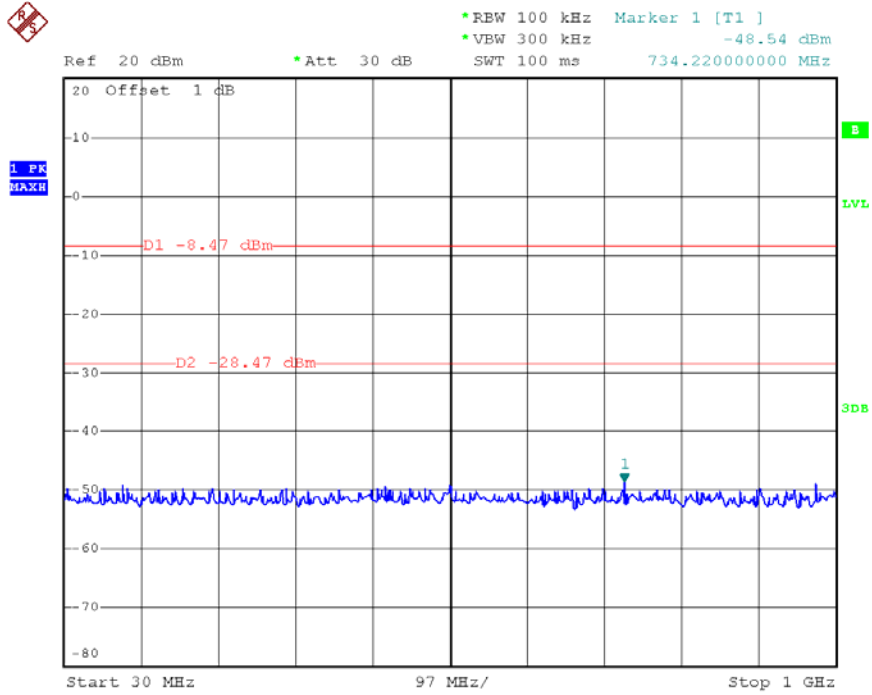
TX HT40 mode CH159



Date: 15.MAY.2014 11:10:26

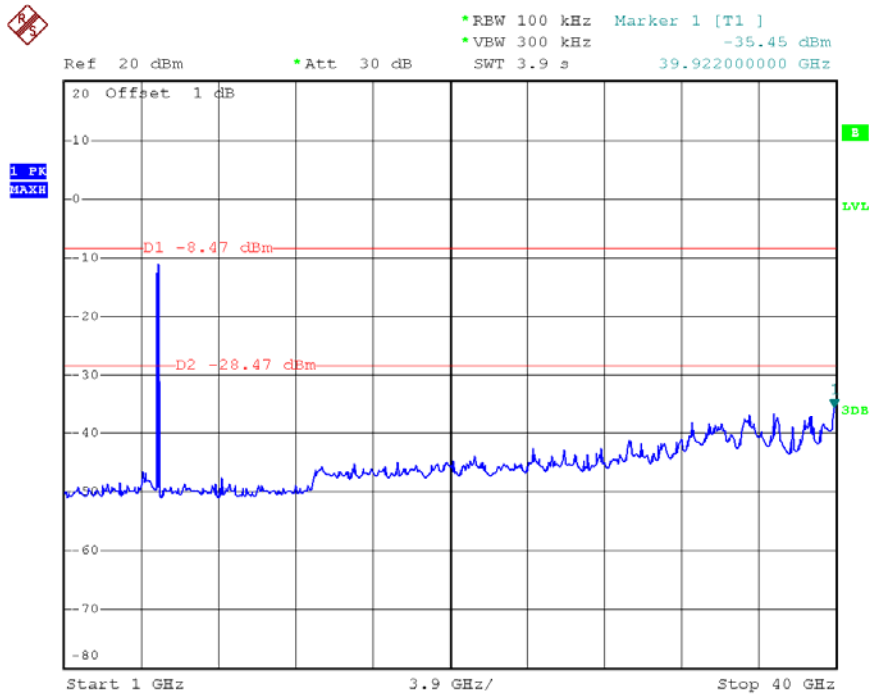


TX HT40 mode CH151 (30MHz to 1000MHz)



Date: 15.MAY.2014 11:04:24

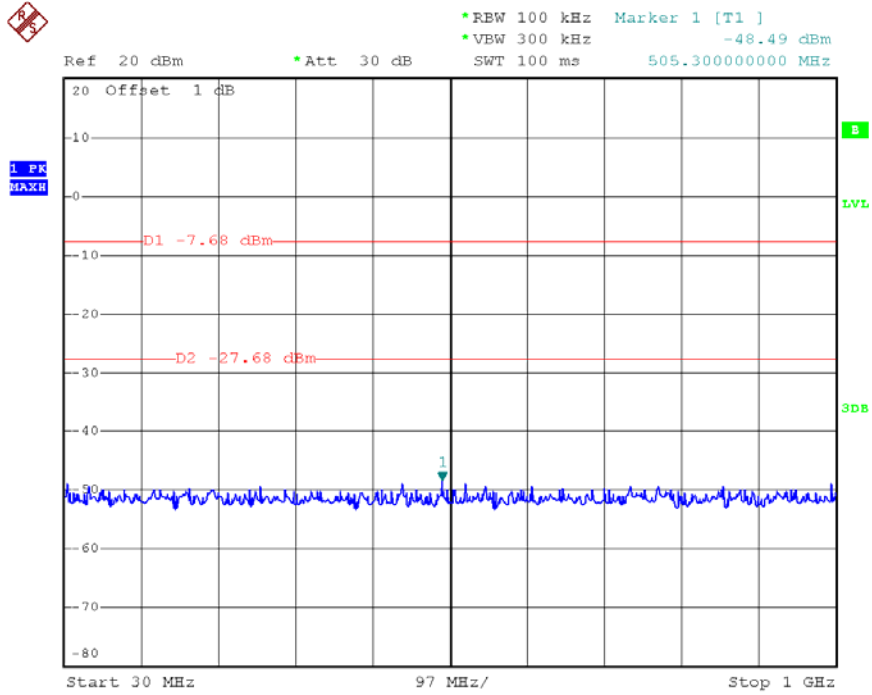
TX HT40 mode CH151 (1000MHz to 10th Harmonic)



Date: 15.MAY.2014 11:04:39

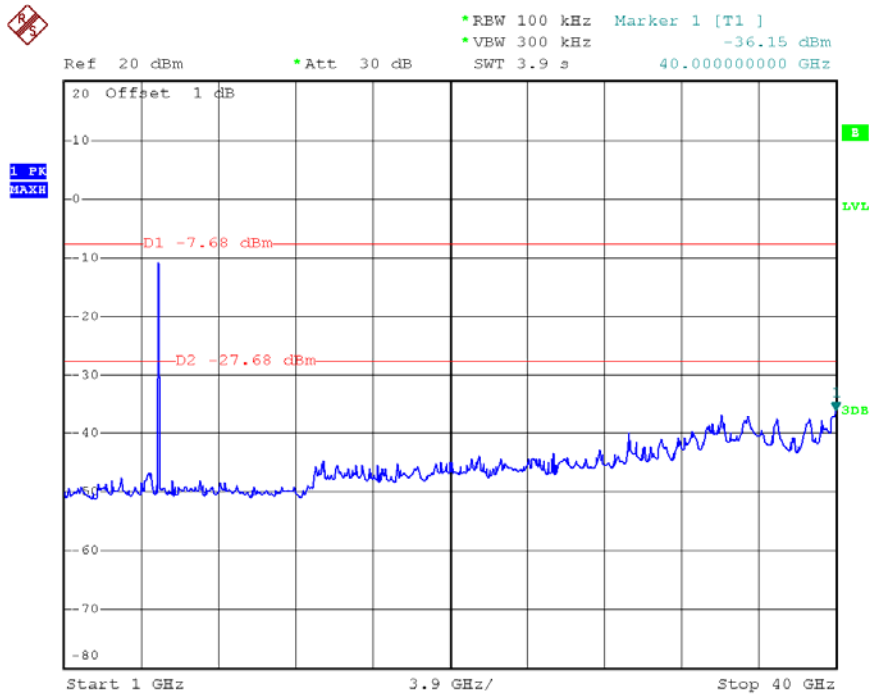


TX HT40 mode CH159 (30MHz to 1000MHz)



Date: 15.MAY.2014 11:10:34

TX HT40 mode CH159 (1000MHz to 10th Harmonic)



Date: 15.MAY.2014 11:10:48



ATTACHMENT H – POWER SPECTRAL DENSITY

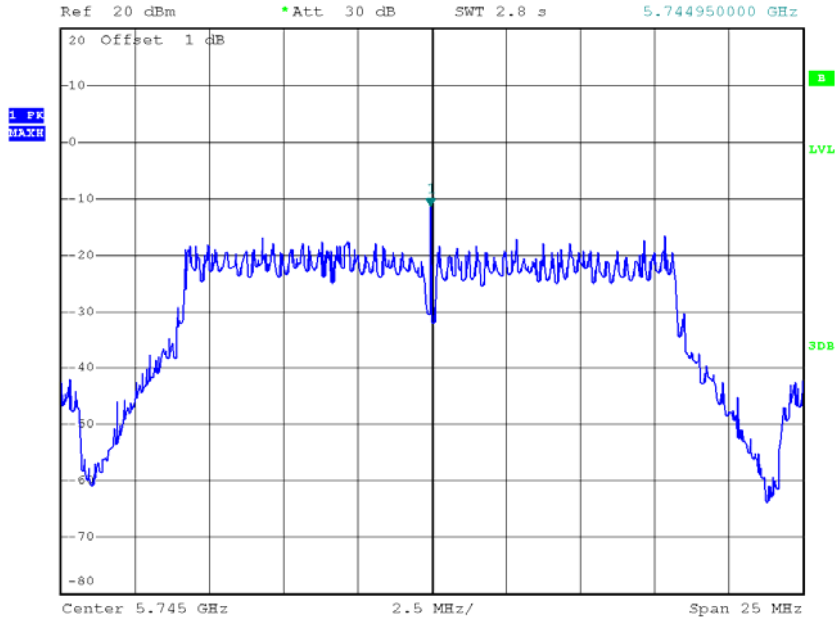


Test Mode :TX A Mode_CH149/157/165

TX CH149



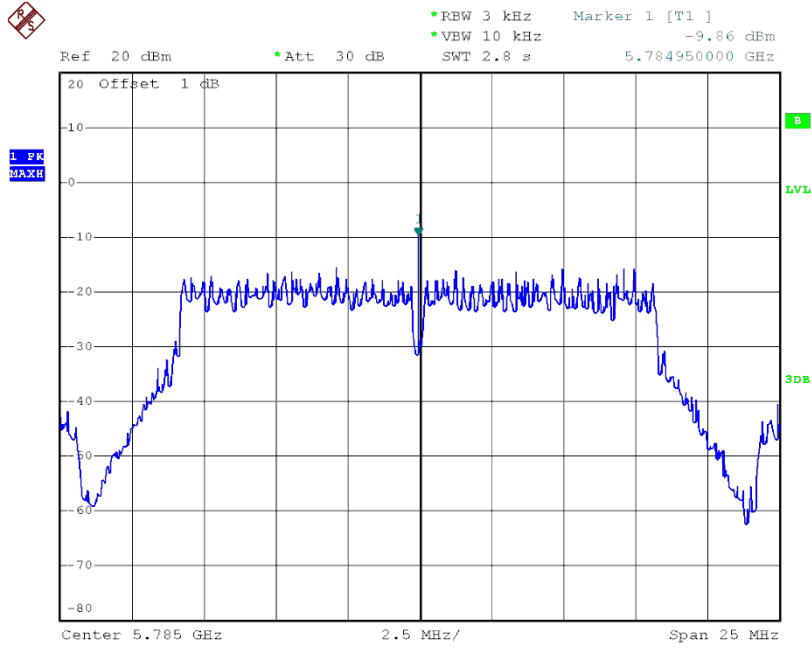
RBW 3 kHz Marker 1 [T1] -11.31 dBm
VBW 10 kHz 5.744950000 GHz
Att 30 dB SWT 2.8 s



Date: 15.MAY.2014 10:11:37

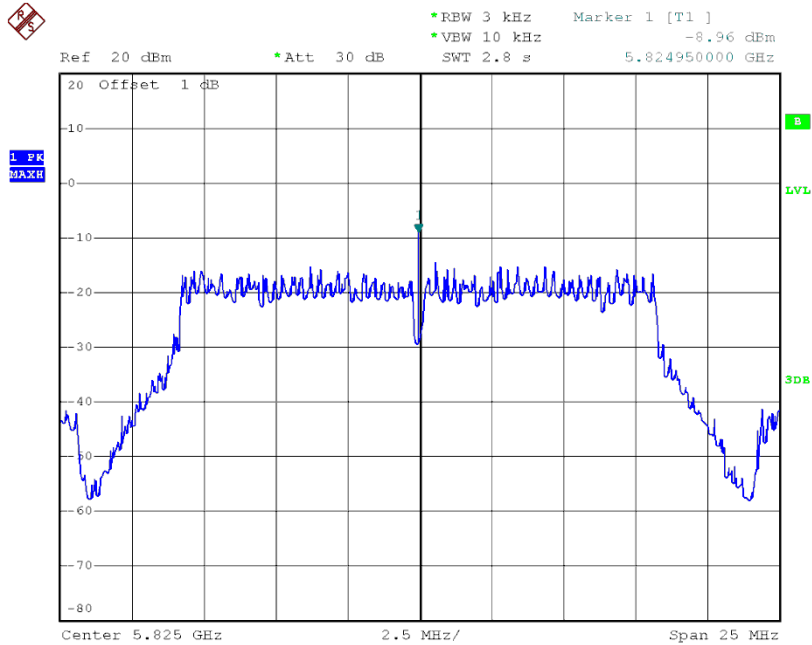


TX CH157



Date: 15.MAY.2014 10:14:54

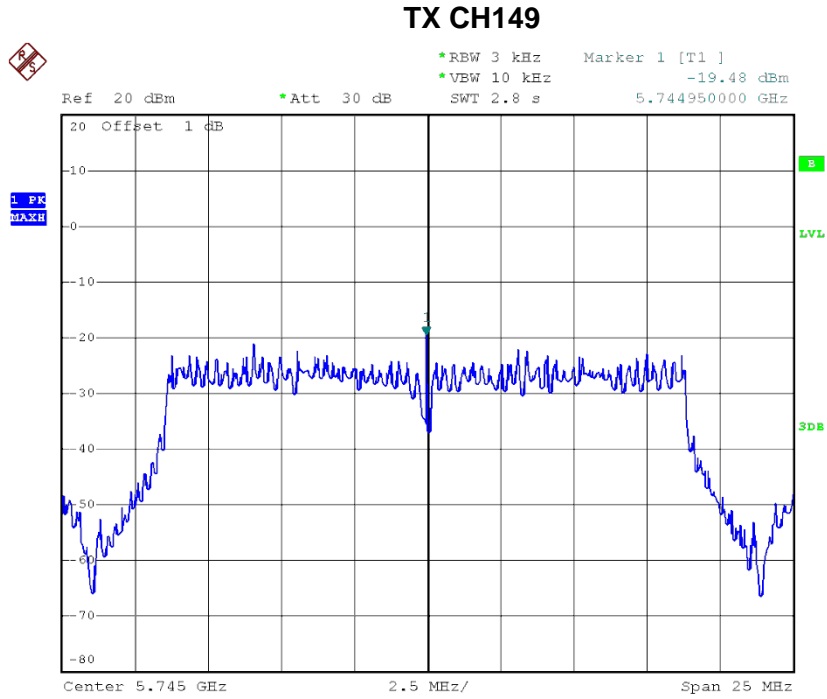
TX CH165



Date: 15.MAY.2014 10:17:31



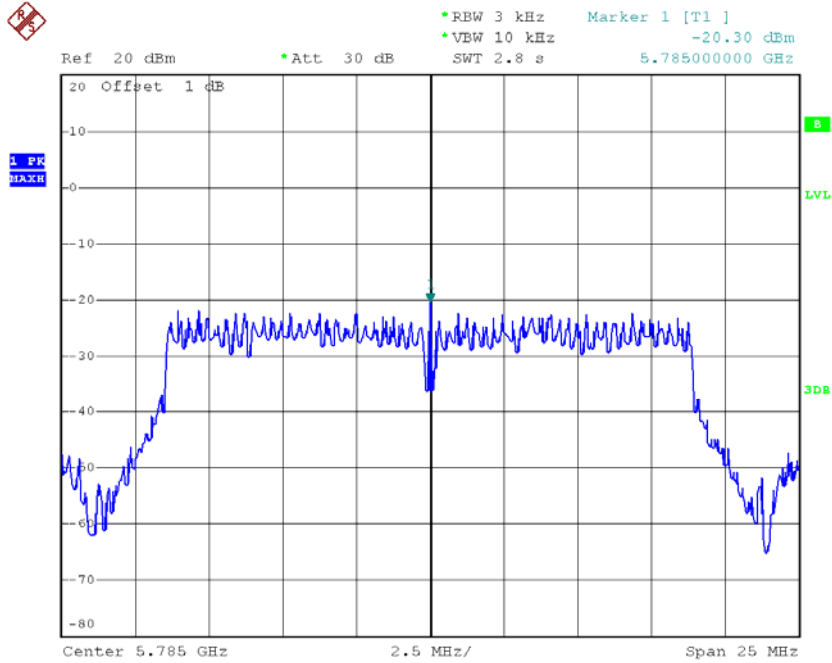
Test Mode : TX N-20M Mode_CH149/157/165_ANT 0



Date: 15.MAY.2014 10:21:38

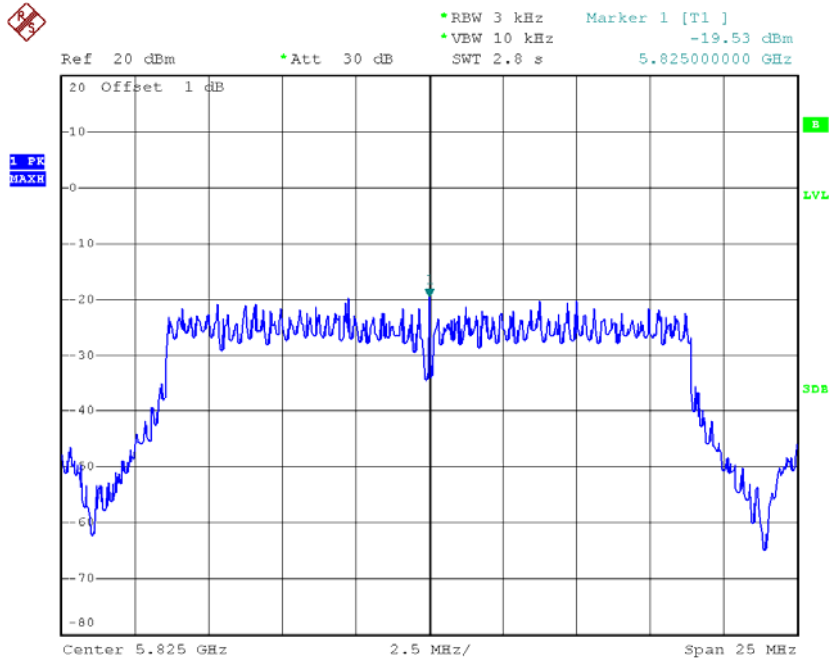


TX CH157



Date: 15.MAY.2014 10:29:54

TX CH165

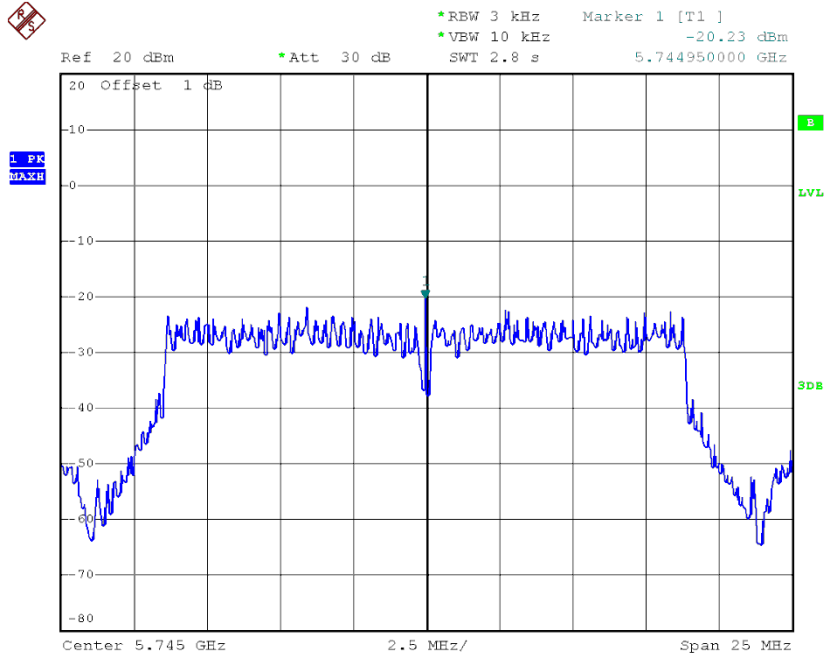


Date: 15.MAY.2014 10:36:27



Test Mode : TX N-20M Mode_CH149/157/165_ANT 1

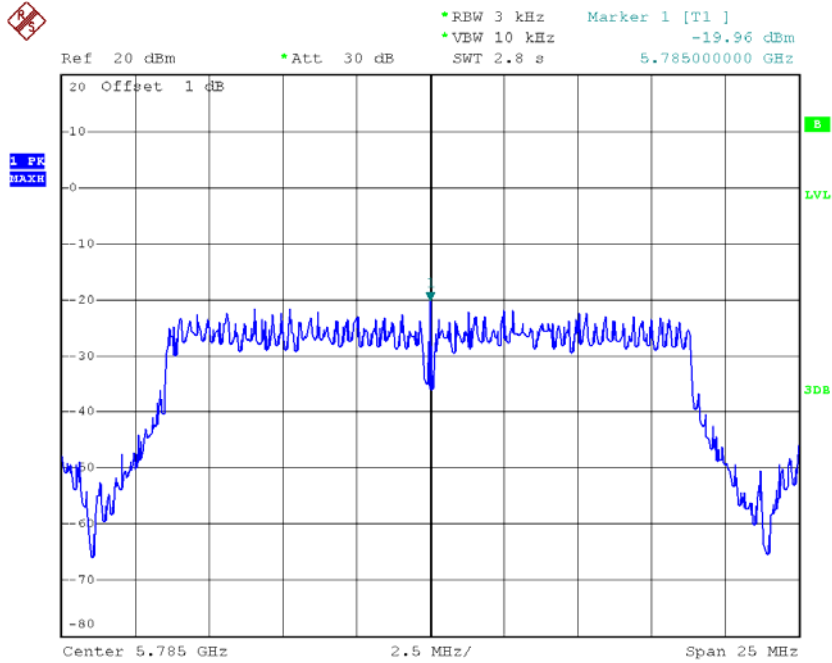
TX CH149



Date: 15.MAY.2014 10:21:48

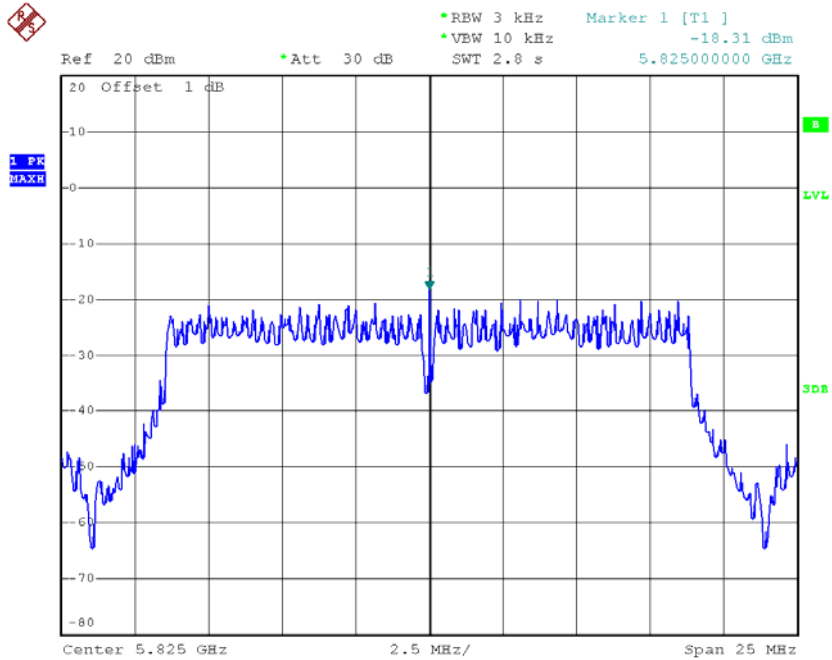


TX CH157



Date: 15.MAY.2014 10:30:02

TX CH165

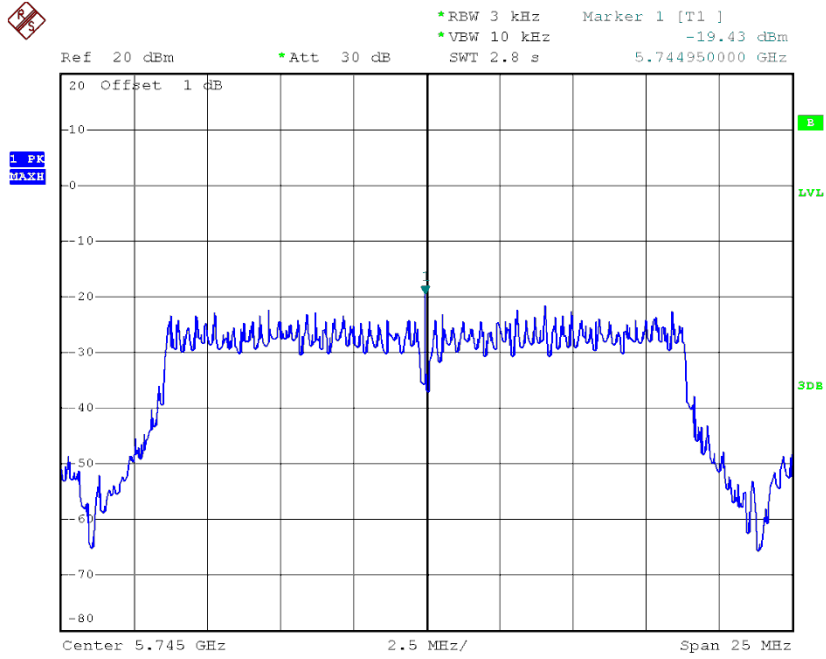


Date: 15.MAY.2014 10:36:49



Test Mode : TX N-20M Mode_CH149/157/165_ANT 2

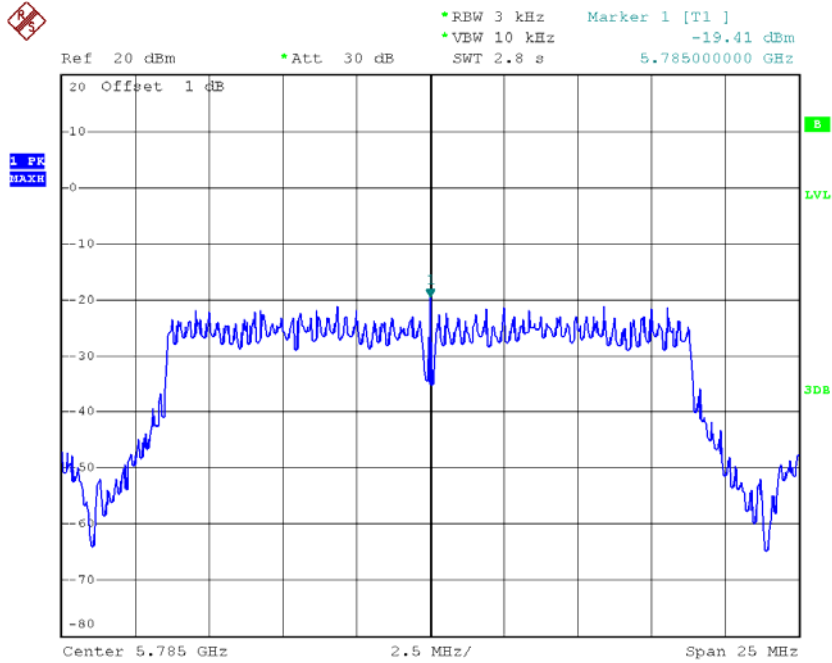
TX CH149



Date: 15.MAY.2014 10:21:56

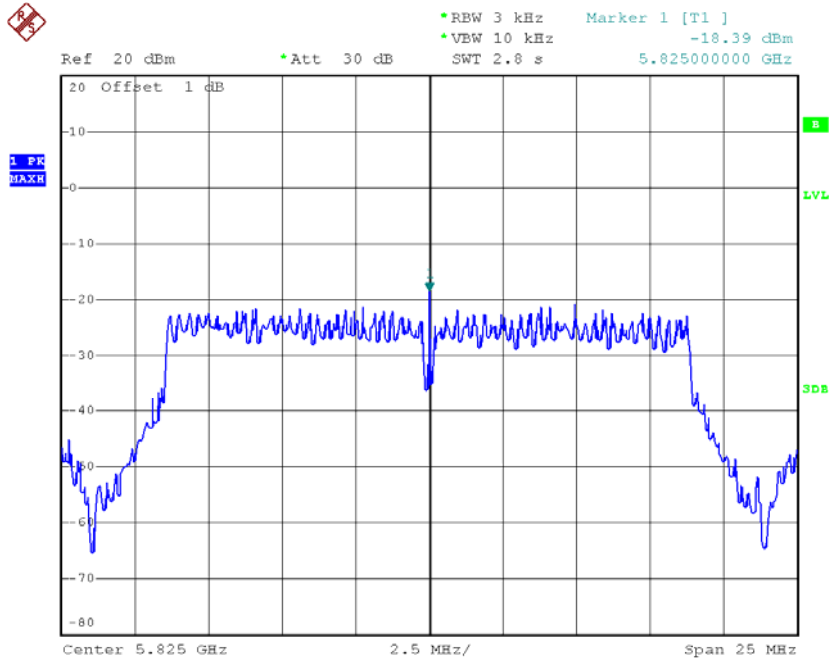


TX CH157



Date: 15.MAY.2014 10:30:15

TX CH165



Date: 15.MAY.2014 10:36:58

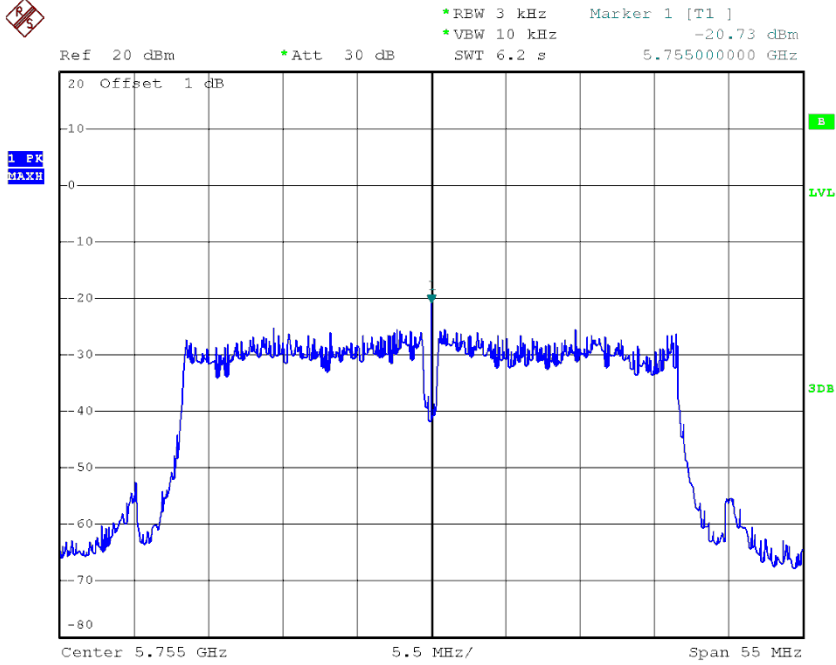


Test Mode : TX N-20M Mode_CH149/157/165_Total			
Test Channel	Frequency (MHz)	Power Density (dBm)	Limit (dBm)
CH149	5745	-14.83	8
CH157	5785	-15.10	8
CH165	5825	-13.94	8



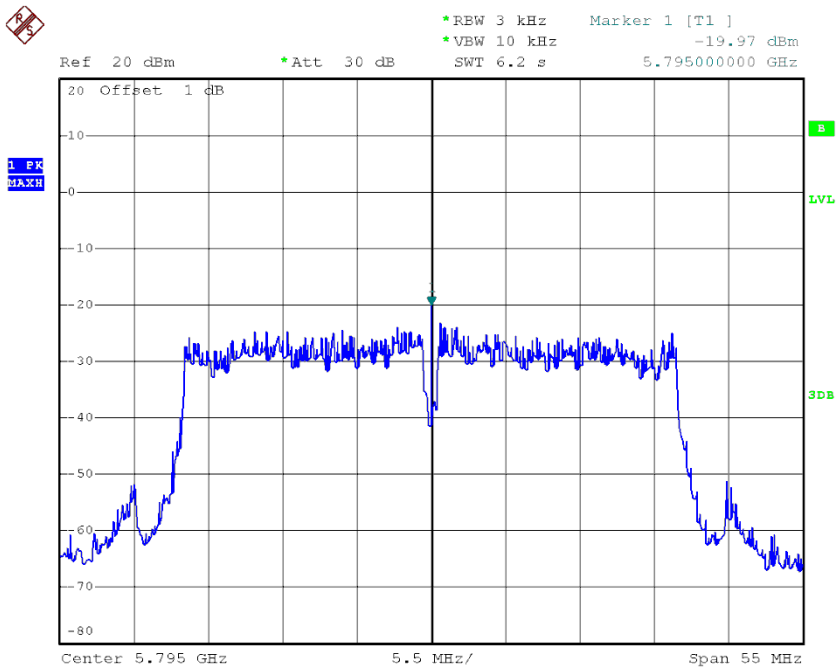
Test Mode : TX N-40M Mode_CH151/159_ANT 0

TX CH151



Date: 15.MAY.2014 11:01:08

TX CH159

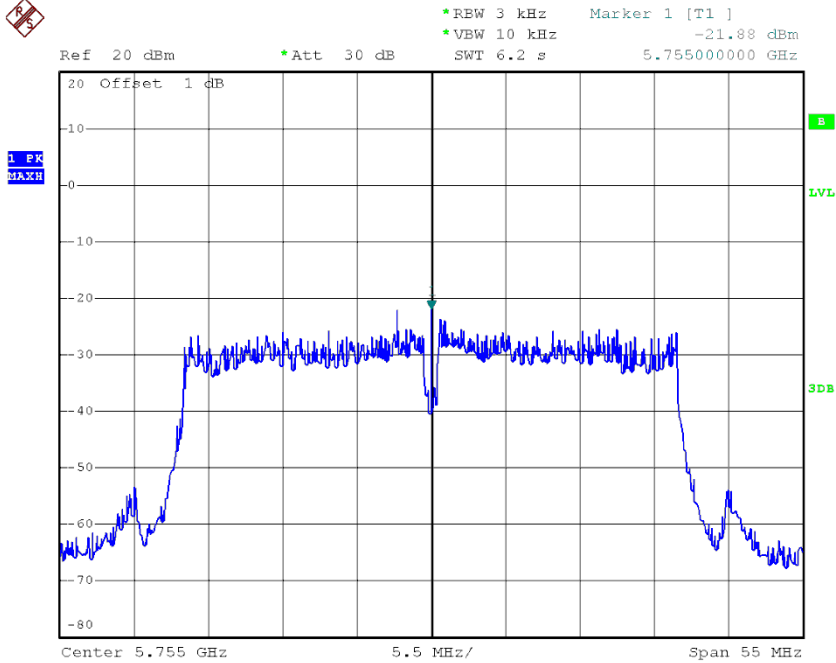


Date: 15.MAY.2014 11:06:55



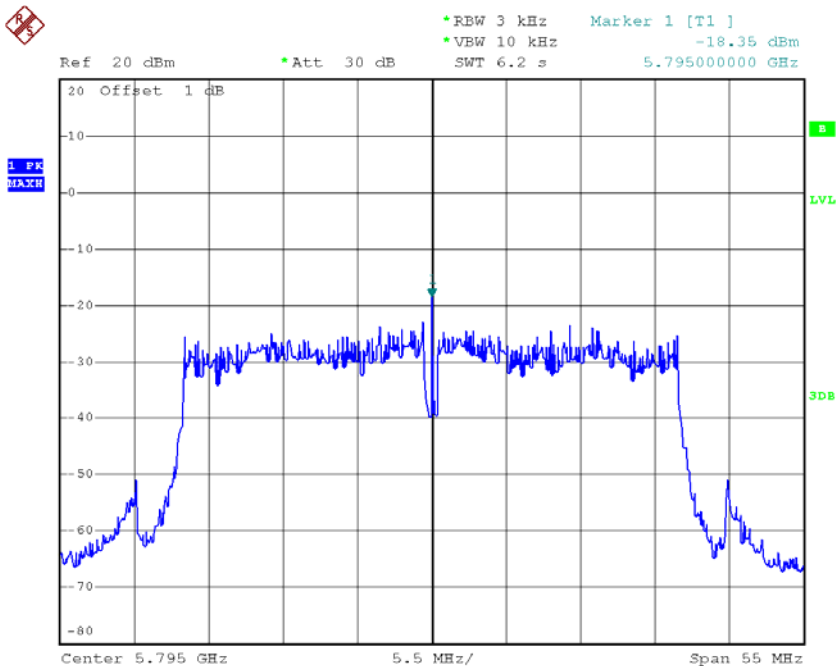
Test Mode : TX N-40M Mode_CH151/159_ANT 1

TX CH151



Date: 15.MAY.2014 11:01:17

TX CH159

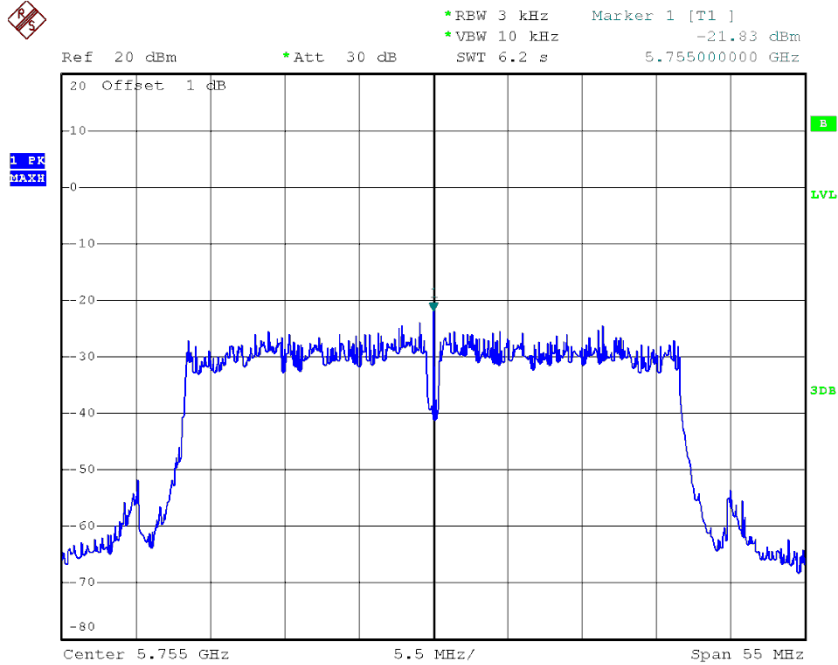


Date: 15.MAY.2014 11:07:04



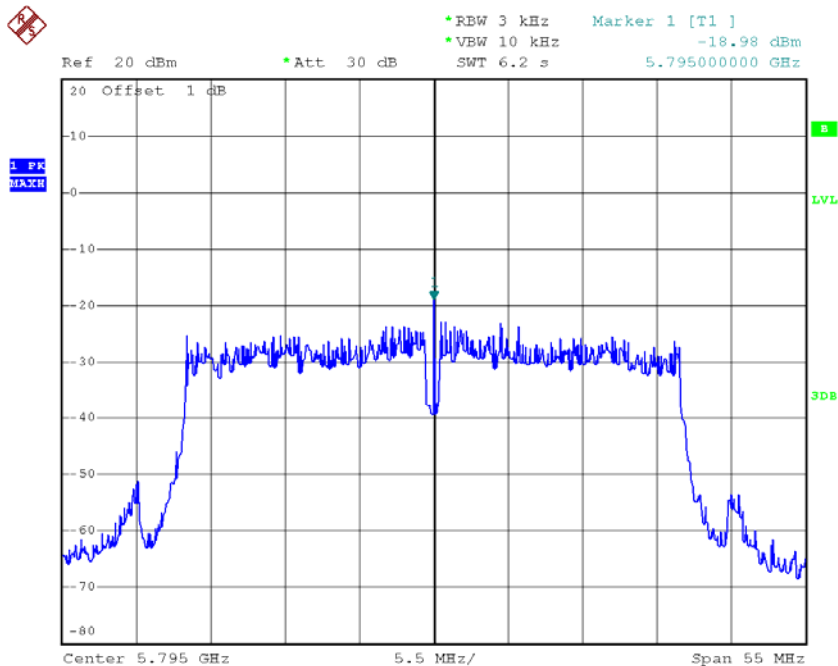
Test Mode : TX N-40M Mode_CH151/159_ANT 2

TX CH151



Date: 15.MAY.2014 11:01:27

TX CH165



Date: 15.MAY.2014 11:07:14



Test Mode : TX N-40M Mode_CH151/159_Total			
Test Channel	Frequency (MHz)	Power Density (dBm)	Limit (dBm)
CH151	5755	-16.68	8
CH159	5795	-14.25	8