

FCC Radio Test Report

FCC ID: QISVPC800

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

Project No. : 1504C054A
Equipment : HD Video Camera
Model Name : HUAWEI VPC800
Applicant : Huawei Technologies Co., Ltd.
Address : Administration Building, Headquarters of Huawei Technologies Co., Ltd., Bantian, Longgang District, Shenzhen, 518129, P.R.C

Date of Receipt : Jun. 26, 2015
Date of Test : Jun. 26, 2015 ~ Aug. 03, 2015
Issued Date : Aug. 04, 2015
Tested by : BTL Inc.

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Declaration

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

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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
BTL-FCCP-1-1504C054A	Original Issue.	Aug. 04, 2015

1. CERTIFICATION

Equipment : HD Video Camera
Brand Name : HUAWEI
Model Name : HUAWEI VPC800
Applicant : Huawei Technologies Co., Ltd.
Manufacturer : Huawei Technologies Co., Ltd.
Address : Administration Building, Headquarters of Huawei Technologies Co., Ltd.,
Bantian, Longgang District, Shenzhen, 518129, P.R.C
Factory : Huawei Machine Co.,Ltd
Address : No.2 City Avenue Songshan Lake Sci. &Tech. Industry Park,Dongguan
523808
Date of Test : Jun. 26, 2015 ~ Aug. 03, 2015
Test Sample : Engineering Sample
Standard(s) : FCC Part15, Subpart C :2014 (15.249)/ ANSI C63.10-2013

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

The test data, data evaluation, and equipment configuration contained in our test report (Ref No. BTL-FCCP-1-1504C054A) 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):

FCC Part15, Subpart C (15.249)			
Standard Section	Test Item	Judgment	Remark
FCC			
15.207(a)	Conducted Emission	PASS	
15.205	Restricted Band of Operation	PASS	
15.209 15.249(a)	Radiated Emissions	PASS	
15.215(c)	20dB Bandwidth Test	PASS	

NOTE:

(1)"N/A" denotes test is not applicable to this device.

2.1 TEST FACILITY

The test facilities used to collect the test data in this report is at the location of No.3, Jinshagang 1st Road, Shixia, Dalang Town, Dongguan, Guangdong, China.

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 BTL measurement uncertainty is less than the CISPR 16-4-2 U_{CISPR} requirement.

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	$U, (\text{dB})$	Note
DG-C02	CISPR	150 KHz~30MHz	2.32	

B. Radiated Measurement :

Test Site	Method	Measurement Frequency Range	Ant. H / V	$U, (\text{dB})$	Note
DG-CB03	CISPR	9KHz~30MHz	V	3.79	
		9KHz~30MHz	H	3.57	
		30MHz~200MHz	V	3.82	
		30MHz~200MHz	H	3.78	
		200MHz~ 1,000MHz	V	4.10	
		200MHz~ 1,000MHz	H	4.06	
		1GHz~18GHz	V	3.12	
		1GHz~18GHz	H	3.68	
		18GHz~40GHz	V	4.15	
		18GHz~40GHz	H	4.14	

Note: Unless specifically mentioned, the uncertainty of measurement has not been taken into account to declare the compliance or non-compliance to the specification.

3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

Equipment	HD Video Camera	
Brand Name	HUAWEI	
Model Name	HUAWEI VPC800	
Model Difference	N/A	
Product Description	Operation Frequency	2403~2482 MHz
	Modulation Technology	GFSK (1Mbps)
	Data rate	
	Field Strength	85.97dBuV/m(Peak Max) 75.74dBuV/m(AVG Max)
Power Source	DC voltage supplied from AC/DC adapter. Brand/Model: HUAWEI/ HW-60-12AC14D-1	
Power Rating	AC: 100~240V~,1.5A, 50~60Hz. DC:12.0V,5.0A	

Note:

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

2. Channel List:

Channel	Frequency (MHz)	Channel	Frequency (MHz)
01	2403	04	2450
02	2420	05	2467
03	2435	06	2482

3 Table for Filed Antenna:

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	N/A	SL10666A	PCB	N/A	2.00

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 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 Mode (Note (1))

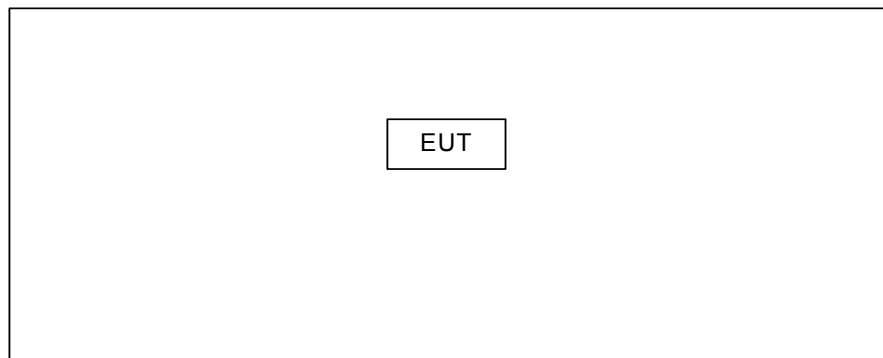
For Conducted Test	
Final Test Mode	Description
Mode 1	TX Mode

For Radiated Test	
Final Test Mode	Description
Mode 1	TX Mode (Note (1))

Note:

(1) The measurements are performed at the high, middle, low available channels.

3.3 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED



3.4 DESCRIPTION OF SUPPORT UNITS

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

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

Item	Shielded Type	Ferrite Core	Length	Note
-	-	-	-	-

4. EMC EMISSION TEST

4.1 CONDUCTED EMISSION MEASUREMENT

4.1.1 POWER LINE CONDUCTED EMISSION (FREQUENCY RANGE 150KHZ-30MHZ)

Frequency of Emission (MHz)	Conducted Limit (dBμV)	
	Quasi-peak	Average
0.15 -0.5	66 to 56*	56 to 46*
0.50 -5.0	56	46
5.0 -30.0	60	50

Note:

- (1) The limit of " * " decreases with the logarithm of the frequency
- (2) The test result calculated as following:
 Measurement Value = Reading Level + Correct Factor
 Correct Factor = Insertion Loss + Cable Loss + Attenuator Factor(if use)
 Margin Level = Measurement Value - Limit Value

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

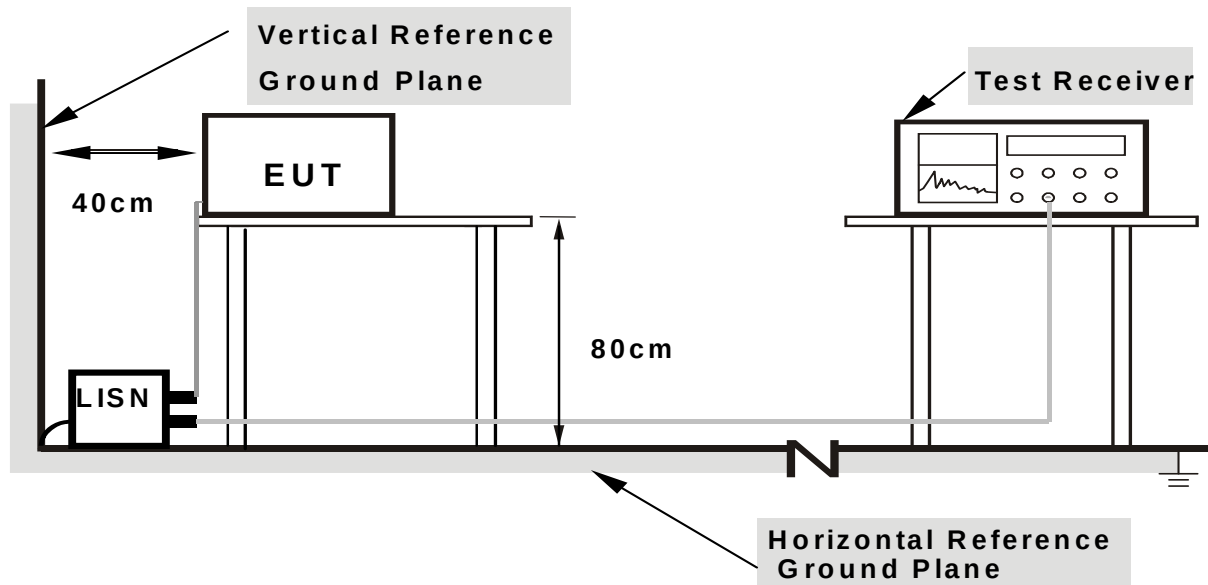
4.1.2 TEST PROCEDURE

- 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 groundplane 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).

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 (FCC 15.209)

Frequencies (MHz)	Field Strength (micorvolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(KHz)	300
0.490~1.705	24000/F(KHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
960~1000	500	3

Harmonic emissions limits comply with below 54 dBuV/m at 3m. Other emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or comply with the radiated emissions limits specified in section 15.209(a) limit in the table below has to be followed.

Note:

- (1) The tighter limit applies at the band edges.
- (2) Emission level (dBuV/m)=20log Emission level (uV/m).

LIMITS OF RADIATED EMISSION MEASUREMENT (FCC 15.209)

FREQUENCY (MHz)	(dBuV/m) (at 3m)	
	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).

LIMITS OF RADIATED EMISSION MEASUREMENT (FCC Part 15.249)

FCC Part15 (15.249) , Subpart C	
Limit	Frequency Range(MHz)
Field strength of fundamental 50000 μ V/m (94 dB μ V/m) @ 3 m	2400-2483.5
Field strength of harmonics 500 μ V/m (54 dB μ V/m) @ 3 m	Above 2483.5

Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	1000 MHz
Stop Frequency	10th carrier harmonic

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 TESTPROCEDURE

- The measuring distance of at 3 m shall be used for measurements. The EUT was placed on the top of a rotating table 0.8 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(below 1GHz)
- The measuring distance of at 3 m shall be used for measurements. The EUT was placed on the top of a rotating table 1.5 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(above 1GHz)
- The height of the equipment or of the substitution antenna shall be 0.8 m or 1.5m, the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- The initial step in collecting conducted emission data is a receiver peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
- 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. (below 1GHz)
- All readings are Peak Mode value unless otherwise stated AVG in column of Note. If the Peak Mode Measured value compliance with the Peak Limits and lower than AVG Limits, the EUT shall be deemed to meet both Peak & AVG Limits and then only Peak Mode was measured, but AVG Mode didn't perform. (above 1GHz)
- For the actual test configuration, please refer to the related Item –EUT Test Photos.

4.2.3 DEVIATION FROM TEST STANDARD

No deviation

Duty cycle: TX 2403MHz

Duty cycle = $T_{ON} / (T_{ON} + T_{OFF})$

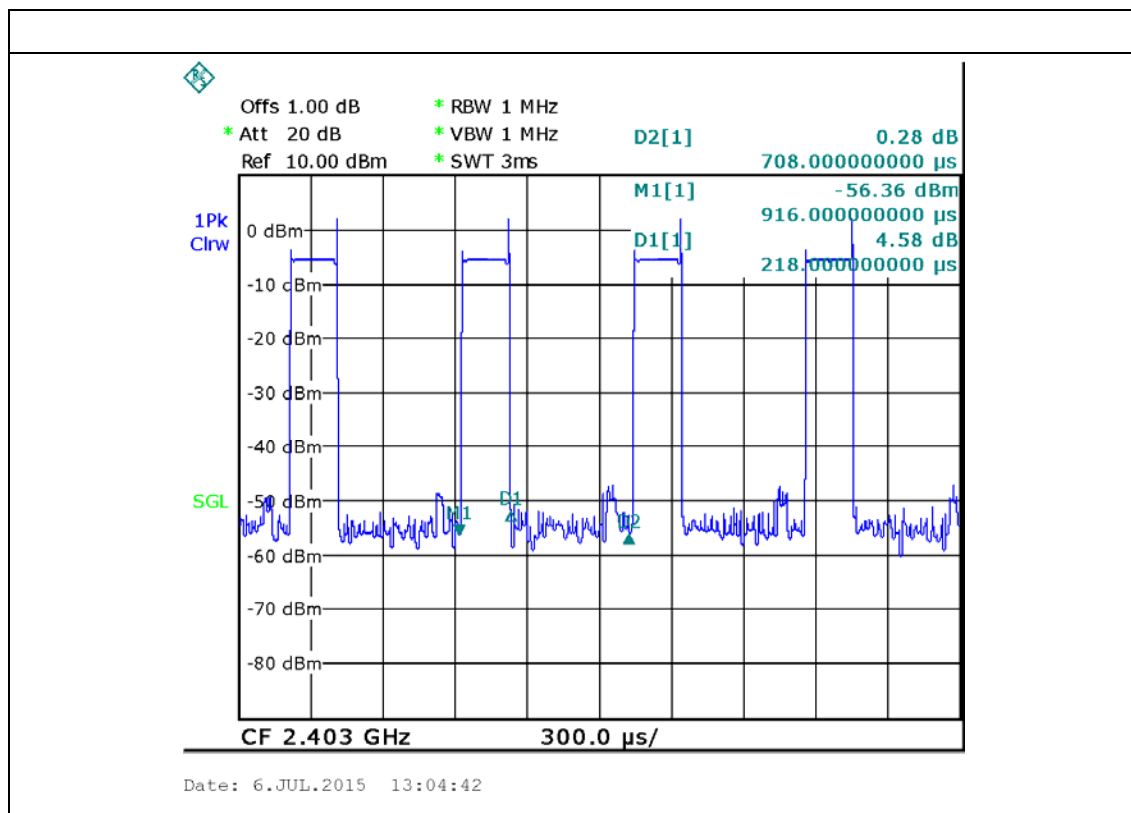
T_{ON} : 0.218/0.708ms

$T_{ON} + T_{OFF}$: (total time):0.708ms

Duty cycle: 30.79%

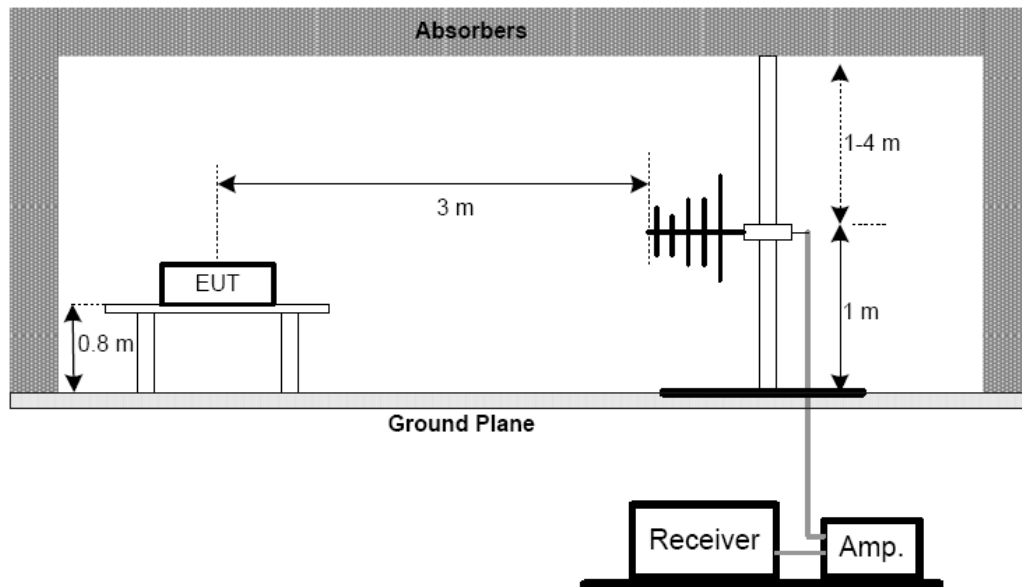
$AV = PK + 20 \log(\text{Duty cycle})$

$AV = PK - 10.23$

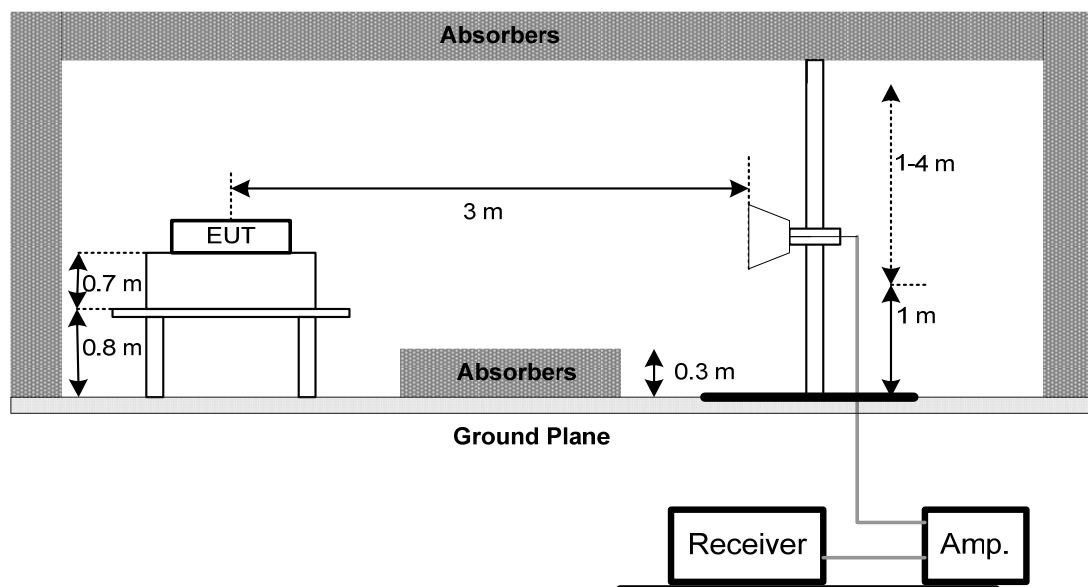


4.2.4 TESTSETUP

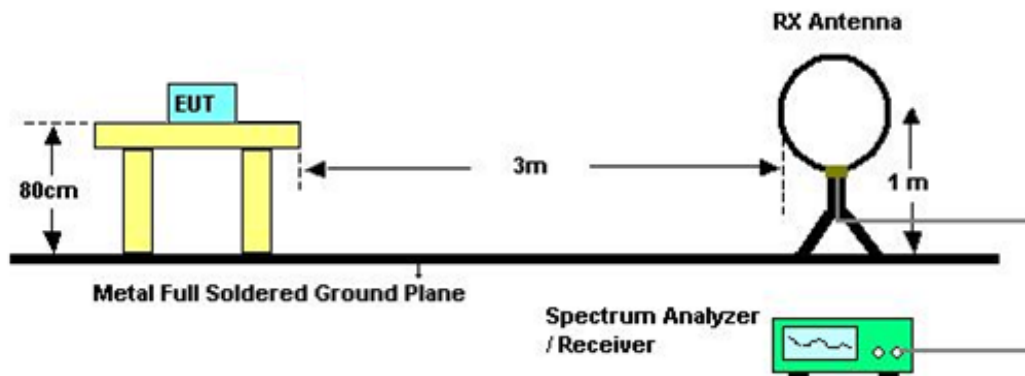
(A) Radiated Emission Test Set-Up Frequency Below 1 GHz



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



(C) For radiated emissions below 30MHz



4.2.5 EUT OPERATING CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

4.2.6 EUT TEST CONDITIONS

Temperature: 25°C

Relative Humidity: 55%

Test Voltage: AC 120V/60Hz

4.2.7 TEST RESULTS (9KHZ 30MHZ)

Please refer to the Attachment B.

Remark:

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

4.2.8 TEST RESULTS (30MHZ to 1000 MHZ)

Please refer to the Attachment C

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) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency. "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency.
- (3) Radiated emissions measured in frequency range from 30 MHz to 1000 MHz were made with an instrument using Peak detector mode or QP detector mode of the emission .

4.2.9 TEST RESULTS (ABOVE1000 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
- (7) No limit: This is fundamental signal, the judgment is not applicable.
For fundamental signal judgment was referred to Peak output test.

5. BANDWIDTH TEST

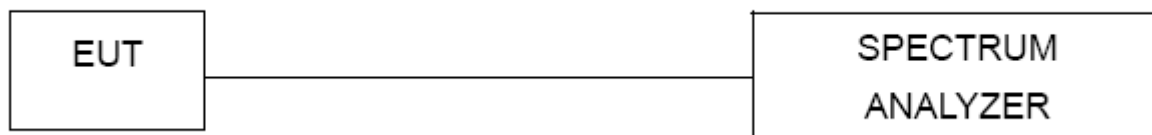
5.1 TEST PROCEDURE

- 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=100KHz, Sweep time = Auto.

5.2 DEVIATION FROM STANDARD

No deviation.

5.3 TEST SETUP



5.4 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

5.5 EUT TEST CONDITIONS

Temperature: 25°C

Relative Humidity: 55%

Test Voltage: AC 120V/60Hz

5.6 TEST RESULTS

Please refer to the Attachment E

6. MEASUREMENT INSTRUMENTS LIST AND SETTING

Conducted Emission Measurement					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	LISN	EMCO	3816/2	00052765	Mar. 28, 2016
2	LISN	R&S	ENV216	101447	Mar. 28, 2016
3	Test Cable	emci	RG223(9KHz-30MHz)	C_17	Mar. 13, 2016
4	EMI Test Receiver	R&S	ESCS30	826547/022	Mar. 28, 2016
5	50Ω Terminator	SHX	TF2-3G-A	08122902	Mar. 28, 2016
6	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A

Radiated Emission Measurement					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Antenna	Schwarzbeck	VULB9160	9160-3232	Mar. 28, 2016
2	Amplifier	HP	8447D	2944A09673	Nov. 17, 2015
3	Receiver	AGILENT	N9038A	MY52130039	Sep. 30, 2015
4	Test Cable	emci	LMR-400(30MHz-1GHz)	C-01	Jun. 28, 2016
5	Controller	CT	SC100	N/A	N/A
6	Antenna	ETS	3115	00075789	Mar. 28, 2016
7	Amplifier	Agilent	8449B	3008A02274	Nov. 02, 2015
8	Receiver	AGILENT	N9038A	MY52130039	Sep. 30, 2015
9	Test Cable	emci	EMC104-SM-SM-10000(1GHz-26.5GHz)	C-68	Jun. 28, 2016
10	Controller	CT	SC100	N/A	N/A
11	Broad-Band Horn Antenna	Schwarzbeck	BBHA 9170	9170319	Mar. 28, 2016
12	Microwave Preamplifier With Adaptor	EMC INSTRUMENT	EMC2654045	980039 & HA01	Mar. 28, 2016
13	Active Loop Antenna	R&S	HFH2-Z2	830749/020	Aug. 16, 2015
14	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A

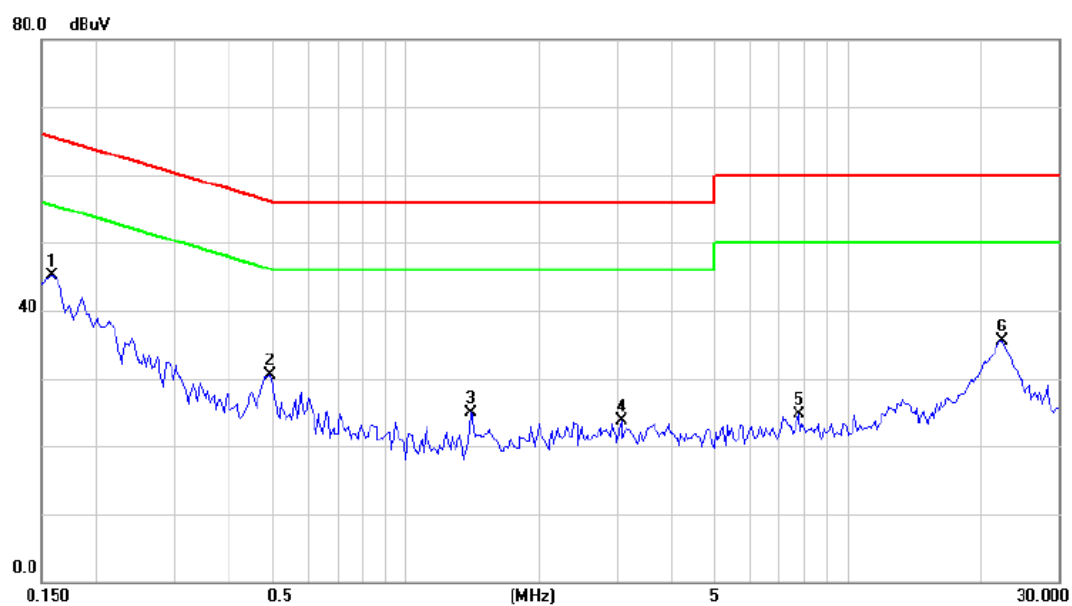
Bandwidth					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSL 6	100423	Nov. 02, 2015

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

ATTACHMENT A - CONDUCTED EMISSION

Test Mode: TX Mode

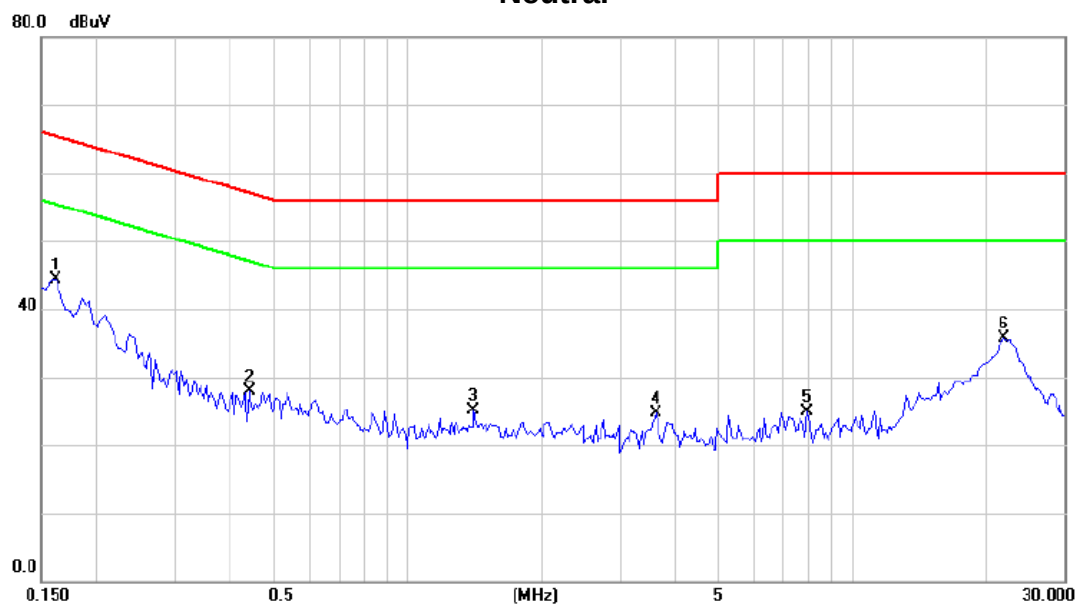
Line



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Margin dB	Detector	Comment
1	*	0.1578	35.61	9.55	45.16	65.58	-20.42	peak	
2		0.4938	20.85	9.68	30.53	56.10	-25.57	peak	
3		1.4078	15.14	9.83	24.97	56.00	-31.03	peak	
4		3.0703	13.68	10.02	23.70	56.00	-32.30	peak	
5		7.7540	14.77	9.91	24.68	60.00	-35.32	peak	
6		22.3828	25.63	9.89	35.52	60.00	-24.48	peak	

Test Mode: TX Mode

Neutral



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Margin dB	Detector	Comment
1	*	0.1617	34.91	9.48	44.39	65.38	-20.99	peak	
2		0.4391	18.40	9.54	27.94	57.08	-29.14	peak	
3		1.4078	15.36	9.65	25.01	56.00	-30.99	peak	
4		3.6133	14.74	9.88	24.62	56.00	-31.38	peak	
5		7.9453	15.02	9.85	24.87	60.00	-35.13	peak	
6		21.9844	25.67	9.98	35.65	60.00	-24.35	peak	

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

Test Mode: TX Mode

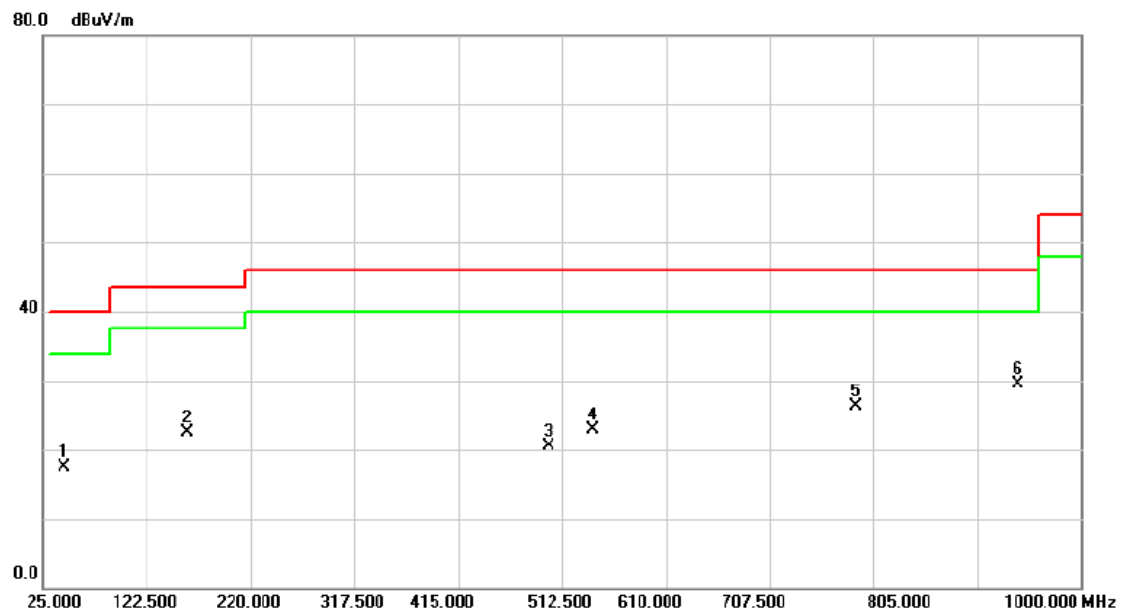
Frequency (MHz)	Ant 0°/90°	Read level dBuV/m	Factor (dB)	Measured(FS) (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Note
0.0102	0°	13.42	24.92	38.34	127.43	-89.09	AVG
1.0102	0°	14.55	24.92	39.47	147.43	-107.96	PEAK
0.0254	0°	6.72	23.96	30.68	119.51	-88.83	AVG
0.0254	0°	8.24	23.96	32.20	139.51	-107.31	PEAK
0.0342	0°	3.29	23.40	26.69	116.92	-90.23	AVG
0.0342	0°	5.72	23.40	29.12	136.92	-107.80	PEAK
0.0451	0°	1.26	22.71	23.97	114.52	-90.55	AVG
0.0451	0°	2.68	22.71	25.39	134.52	-109.13	PEAK
0.4943	0°	19.53	19.81	39.34	73.72	-34.38	QP
1.7172	0°	23.69	19.53	43.22	69.54	-26.32	QP

Frequency (MHz)	Ant 0°/90°	Read level dBuV/m	Factor (dB)	Measured(FS) (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Note
0.0096	90°	13.26	24.30	37.56	127.94	-90.38	AVG
0.0096	90°	14.93	24.30	39.23	147.94	-108.71	PEAK
0.0283	90°	7.46	23.77	31.23	118.57	-87.33	AVG
0.0283	90°	8.84	23.77	32.61	138.57	-105.95	PEAK
0.0346	90°	5.49	23.38	28.87	116.82	-87.96	AVG
0.0346	90°	6.21	23.38	29.59	136.82	-107.24	PEAK
0.0432	90°	1.61	22.83	24.44	114.89	-90.45	AVG
0.0432	90°	2.76	22.83	25.59	134.89	-109.30	PEAK
0.4924	90°	22.31	19.82	42.13	73.76	-31.63	QP
1.7134	90°	24.43	19.53	43.96	69.54	-25.58	QP

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

Test Mode:	TX Low Channel
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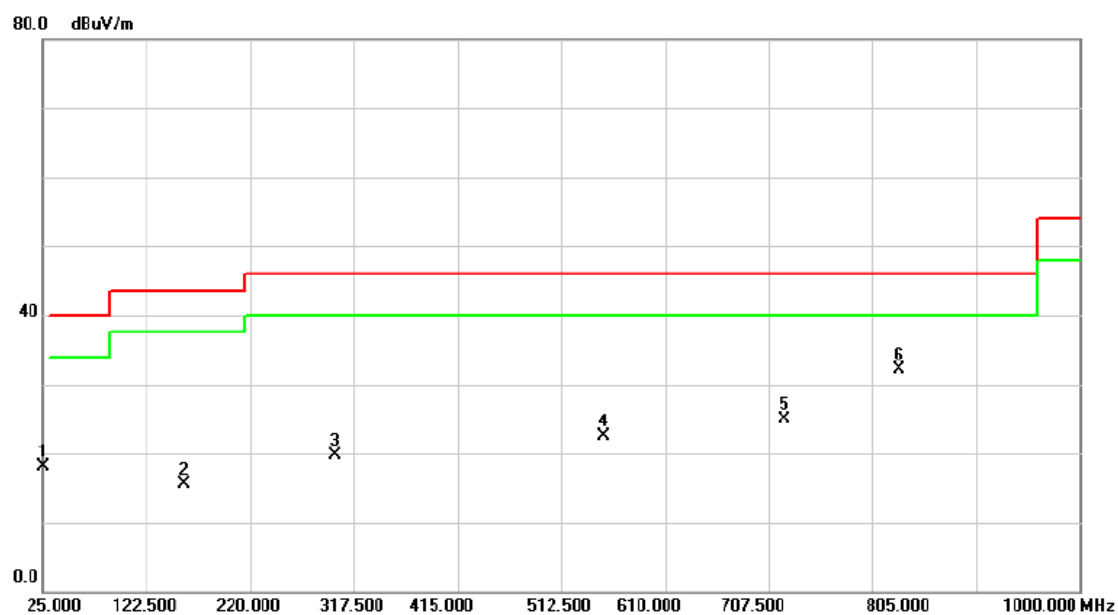
Vertical



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		44.5000	30.99	-13.43	17.56	40.00	-22.44	peak	
2		160.5250	34.86	-12.45	22.41	43.50	-21.09	peak	
3		499.8250	30.55	-9.98	20.57	46.00	-25.43	peak	
4		541.7500	28.82	-5.94	22.88	46.00	-23.12	peak	
5		788.4250	28.92	-2.66	26.26	46.00	-19.74	peak	
6	*	940.5250	29.50	-0.07	29.43	46.00	-16.57	peak	

Test Mode: TX Low Channel

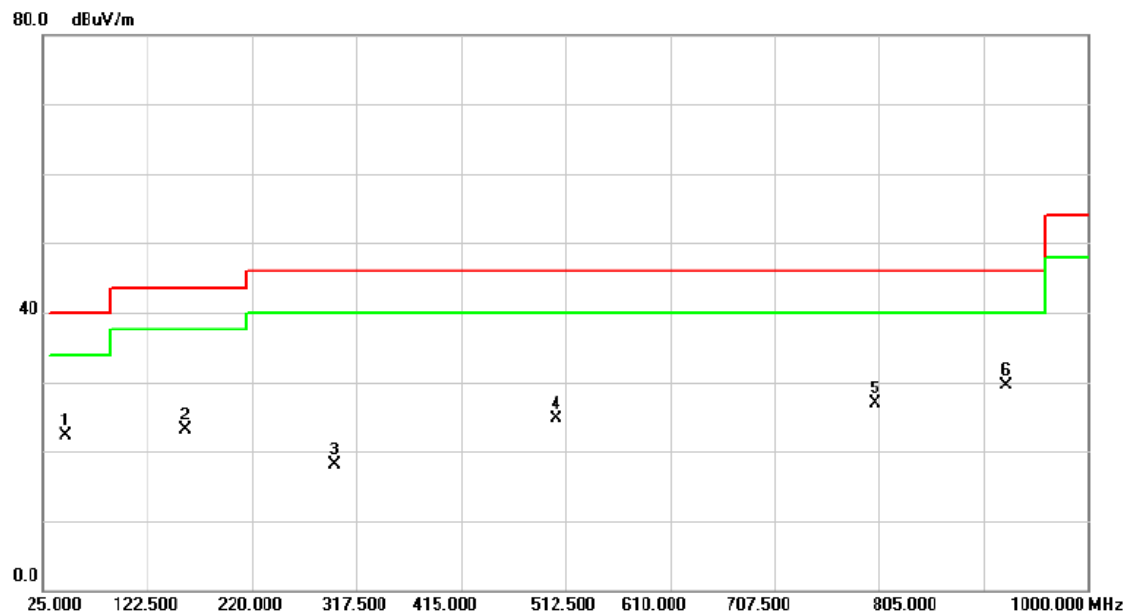
Horizontal



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		25.0000	33.54	-15.52	18.02	40.00	-21.98	peak	
2		158.5750	27.92	-12.51	15.41	43.50	-28.09	peak	
3		299.9500	30.24	-10.50	19.74	46.00	-26.26	peak	
4		551.5000	27.82	-5.23	22.59	46.00	-23.41	peak	
5		722.1250	29.19	-4.38	24.81	46.00	-21.19	peak	
6	*	830.3500	35.37	-3.27	32.10	46.00	-13.90	peak	

Test Mode: TX Middle Channel

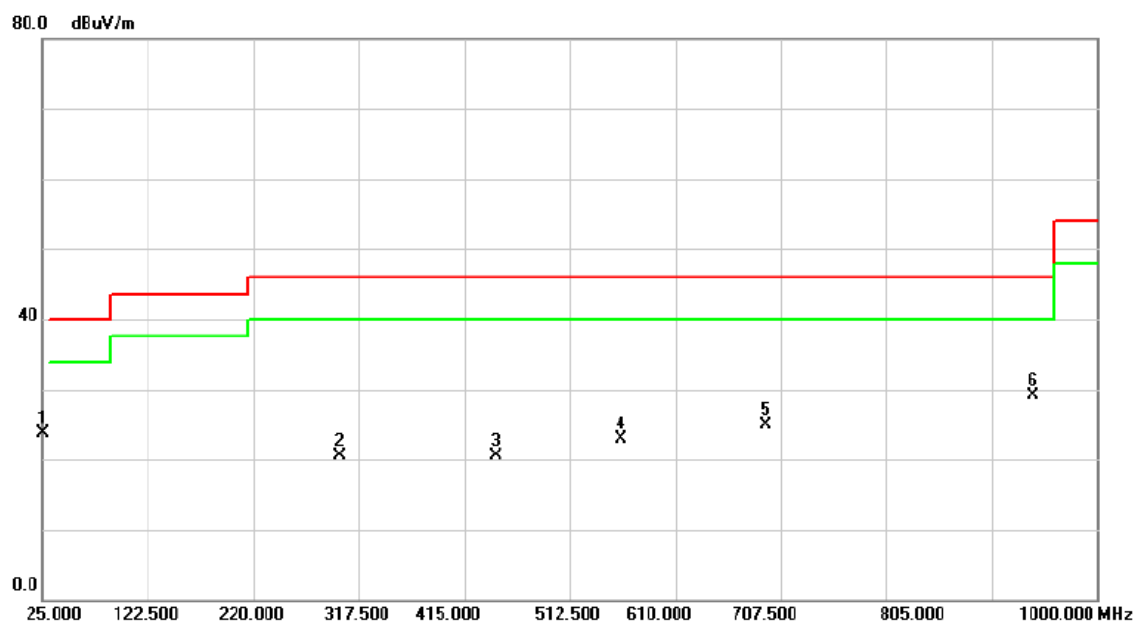
Vertical



No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Margin		
		MHz	Level	Factor	ment			Detector	Comment
			dBuV	dB	dBuV/m	dBuV/m	dB		
1		46.4500	35.70	-13.31	22.39	40.00	-17.61	peak	
2		157.6000	35.67	-12.56	23.11	43.50	-20.39	peak	
3		297.0250	28.84	-10.65	18.19	46.00	-27.81	peak	
4		503.7250	34.32	-9.63	24.69	46.00	-21.31	peak	
5		802.0750	29.07	-2.15	26.92	46.00	-19.08	peak	
6	*	923.9500	29.29	0.15	29.44	46.00	-16.56	peak	

Test Mode: TX Middle Channel

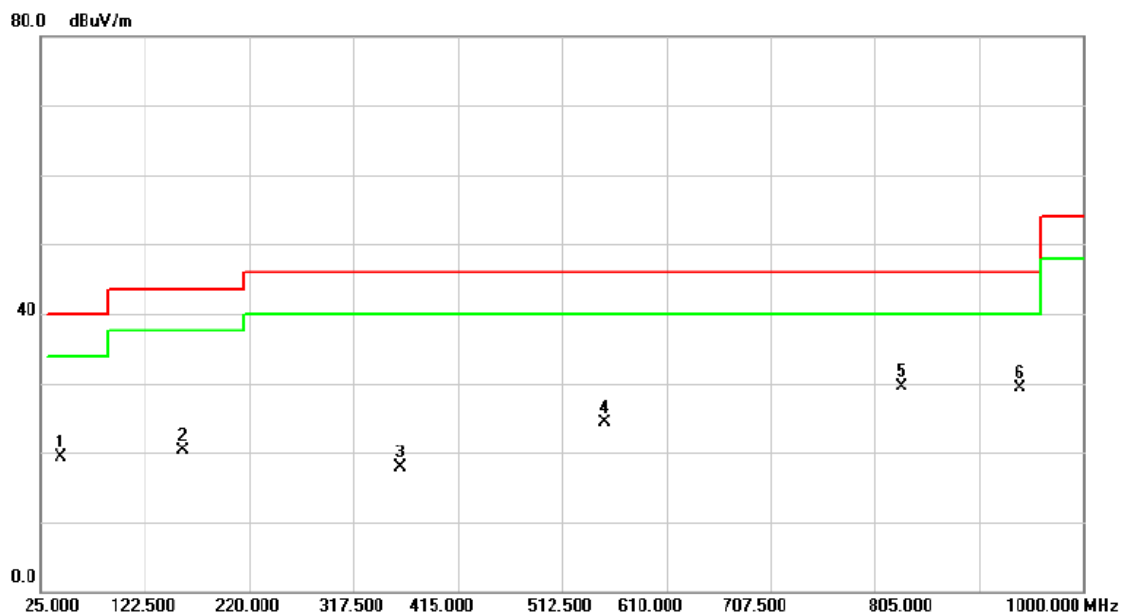
Horizontal



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	*	25.9750	39.22	-15.50	23.72	40.00	-16.28	peak	
2		299.9500	31.04	-10.50	20.54	46.00	-25.46	peak	
3		444.2500	28.74	-8.19	20.55	46.00	-25.45	peak	
4		560.2750	28.67	-5.70	22.97	46.00	-23.03	peak	
5		693.8500	29.27	-4.30	24.97	46.00	-21.03	peak	
6		940.5250	29.21	-0.07	29.14	46.00	-16.86	peak	

Test Mode:	TX High Channel
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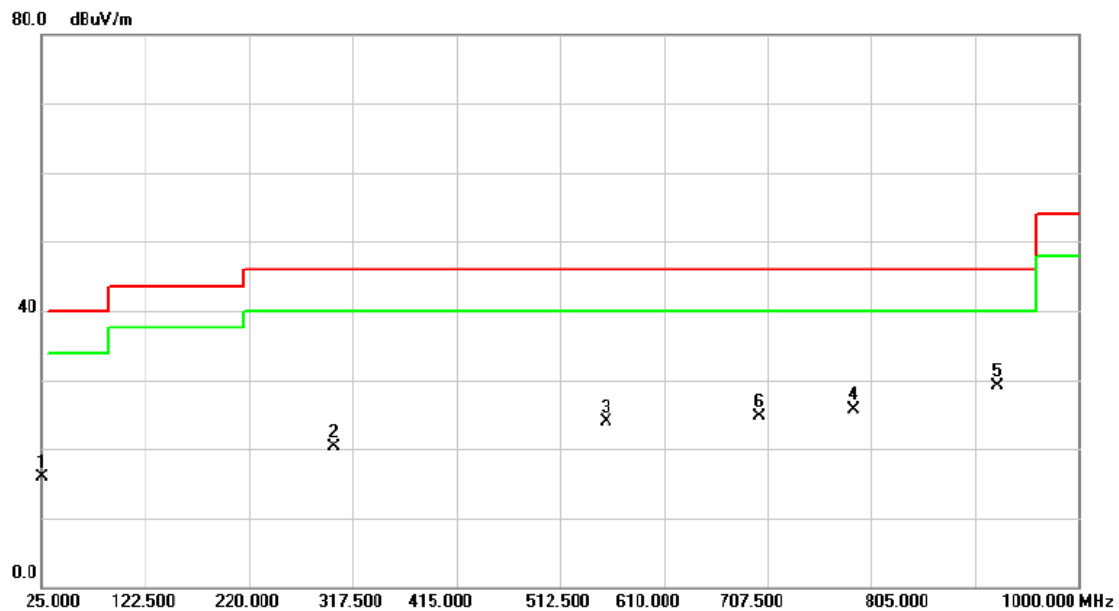
Vertical



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		43.5250	32.75	-13.54	19.21	40.00	-20.79	peak	
2		158.5750	32.78	-12.51	20.27	43.50	-23.23	peak	
3		361.3750	28.76	-10.87	17.89	46.00	-28.11	peak	
4		552.4750	29.60	-5.27	24.33	46.00	-21.67	peak	
5	*	830.3500	32.68	-3.27	29.41	46.00	-16.59	peak	
6		940.5250	29.38	-0.07	29.31	46.00	-16.69	peak	

Test Mode: TX High Channel

Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1		25.0000	31.35	-15.52	15.83	40.00	-24.17	peak	
2		299.9500	30.71	-10.50	20.21	46.00	-25.79	peak	
3		555.4000	29.30	-5.44	23.86	46.00	-22.14	peak	
4		788.4250	28.28	-2.66	25.62	46.00	-20.38	peak	
5	*	923.9500	28.93	0.15	29.08	46.00	-16.92	peak	
6		700.6750	28.86	-4.21	24.65	46.00	-21.35	peak	

ATTACHMENT D -RADIATED EMISSION (ABOVE 1000MHZ)

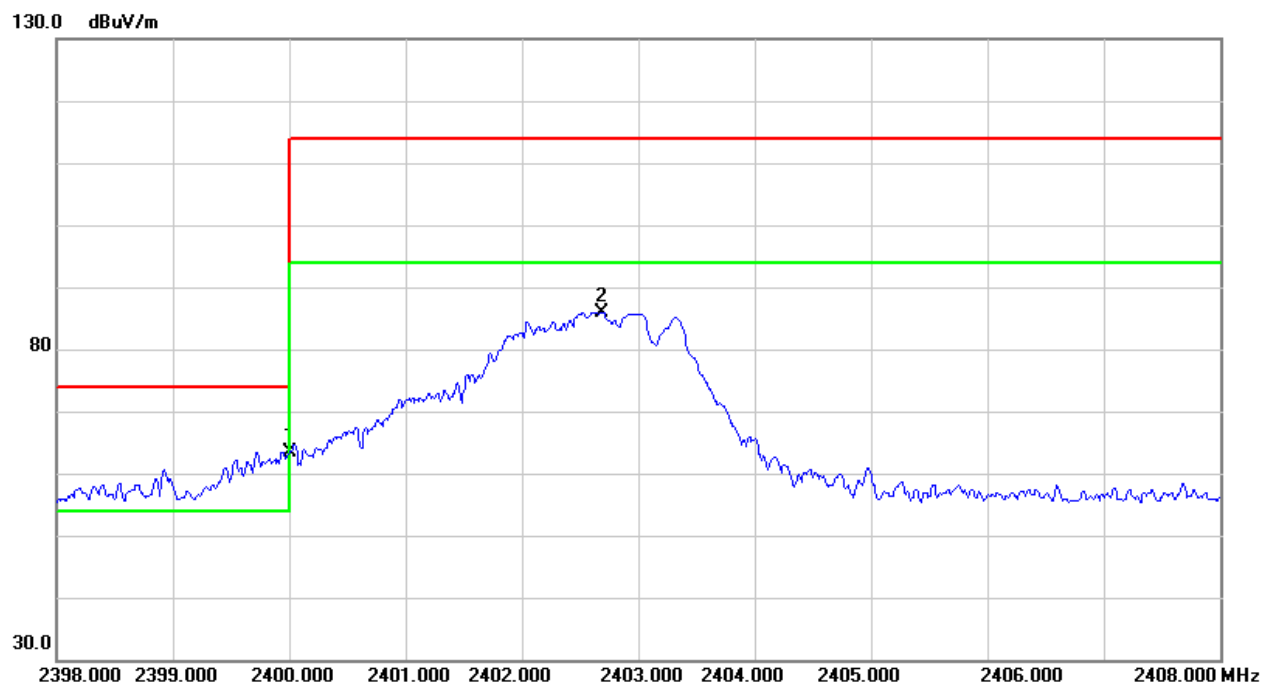
Orthogonal Axis :	X
Test Mode :	TX Low Channel
About the duty cycle correction factor calculated, please refer to the page 16	

Freq. (MHz)	Ant.Pol. H/V	Reading		Ant./CF CF(dB)	Act.		Limit		Result
		Peak (dBuV)	AV (dBuV)		Peak (dBuV/m)	AV (dBuV/m)	Peak (dBuV/m)	AV (dBuV/m)	
2400.00	V	30.71		32.69	63.40	53.17	74.00	54.00	X/F
2412.30	V	53.28		32.69	85.97	75.74	114.00	94.00	X/H

Remark :

- (1) Peak value is much lower than the limit, So AV value isn't shown on this test item.
- (2) The average value of fundamental frequency is:
Average = Peak value + 20log(Duty cycle) , FinalAV=PK-10.23

Vertical

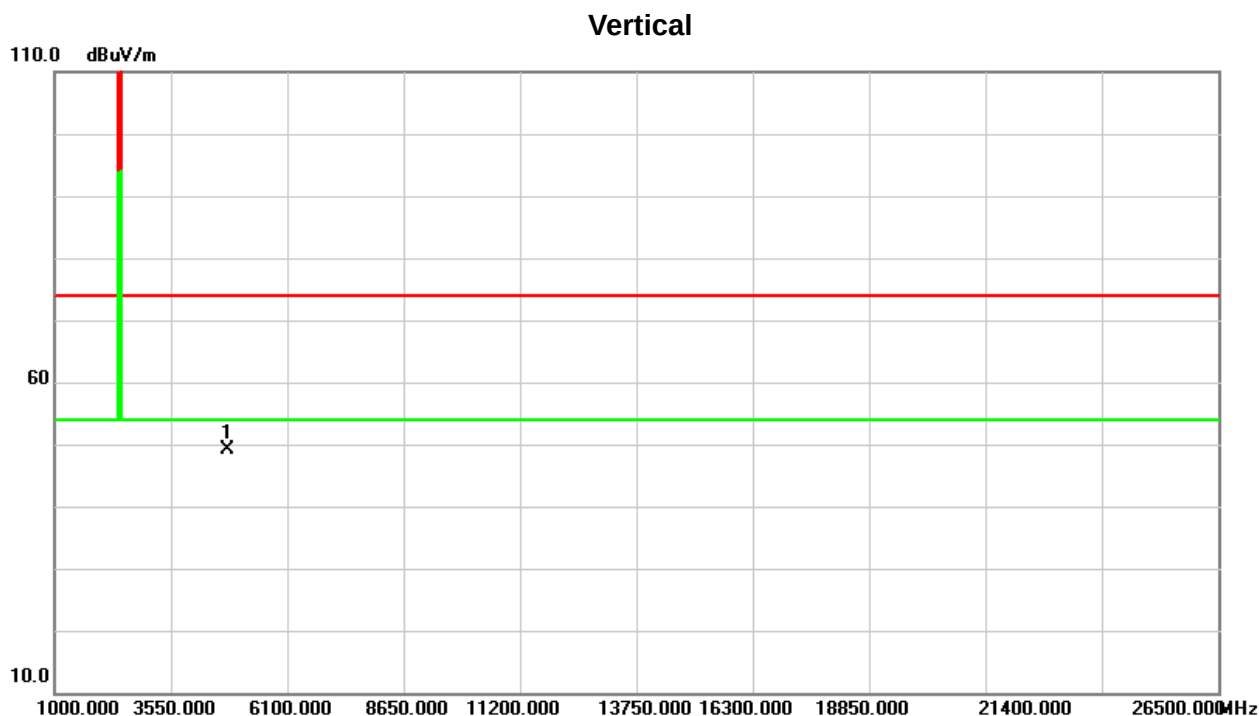


Orthogonal Axis :	X
Test Mode :	TX Low Channel
About the duty cycle correction factor calculated, please refer to the page 16	

Freq. (MHz)	Ant.Pol. H/V	Reading		Ant./CF CF(dB)	Act.		Limit		Result
		Peak (dBuV)	AV (dBuV)		Peak (dBuV/m)	AV (dBuV/m)	Peak (dBuV/m)	AV (dBuV/m)	
4805.60	V	43.33		5.81	49.14	38.91	74.00	54.00	X/F

Remark :

- (1) Peak value is much lower than the limit, So AV value isn't shown on this test item.
- (2) The average value of fundamental frequency is:
Average = Peak value + 20log(Duty cycle) , FinalAV=PK-10.23

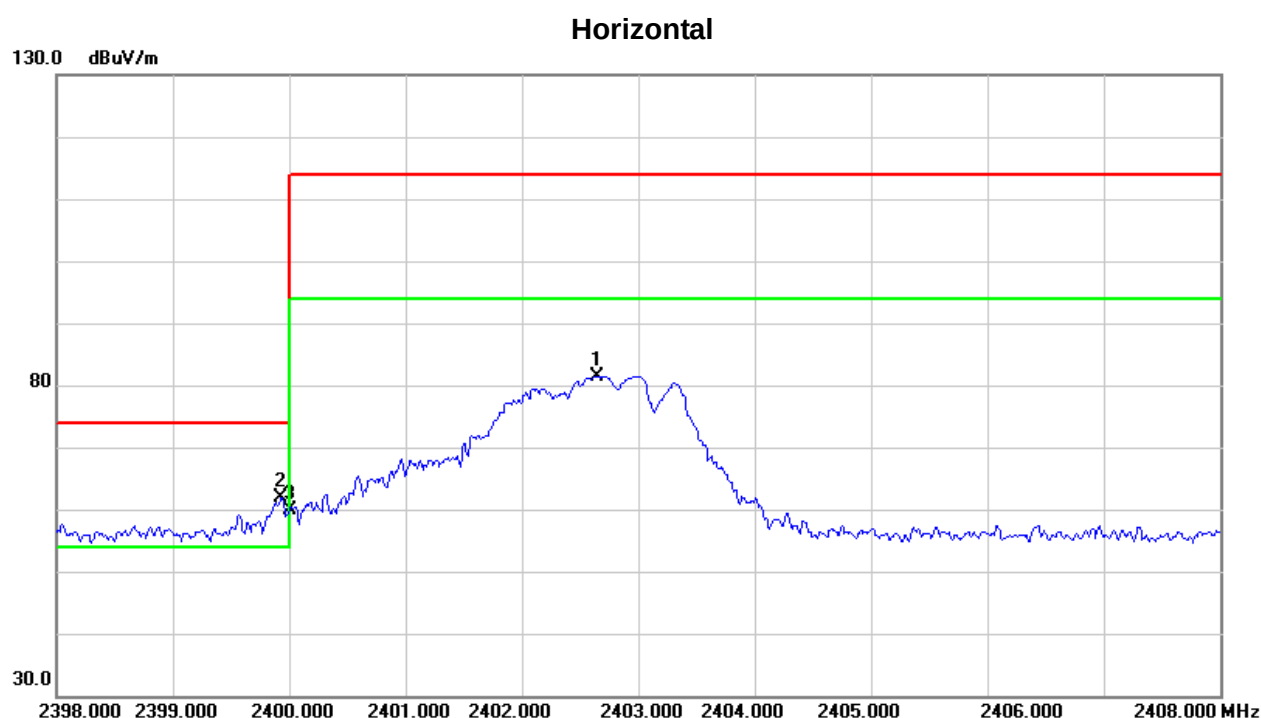


Orthogonal Axis :	X
Test Mode :	TX Low Channel
About the duty cycle correction factor calculated, please refer to the page 16	

Freq. (MHz)	Ant.Pol. H/V	Reading		Ant./CF CF(dB)	Act.		Limit		Result
		Peak (dBuV)	AV (dBuV)		Peak (dBuV/m)	AV (dBuV/m)	Peak (dBuV/m)	AV (dBuV/m)	
2402.65	H	48.70		32.69	81.39	71.16	114.00	94.00	X/F
2399.93	H	29.14		32.69	61.83	51.60	74.00	54.00	X/H
2400.00	H	27.19		32.69	59.88	49.65	74.00	54.00	X/H

Remark :

- (1) Peak value is much lower than the limit, So AV value isn't shown on this test item.
- (2) The average value of fundamental frequency is:
Average = Peak value + $20\log(\text{Duty cycle})$, FinalAV=PK-10.23

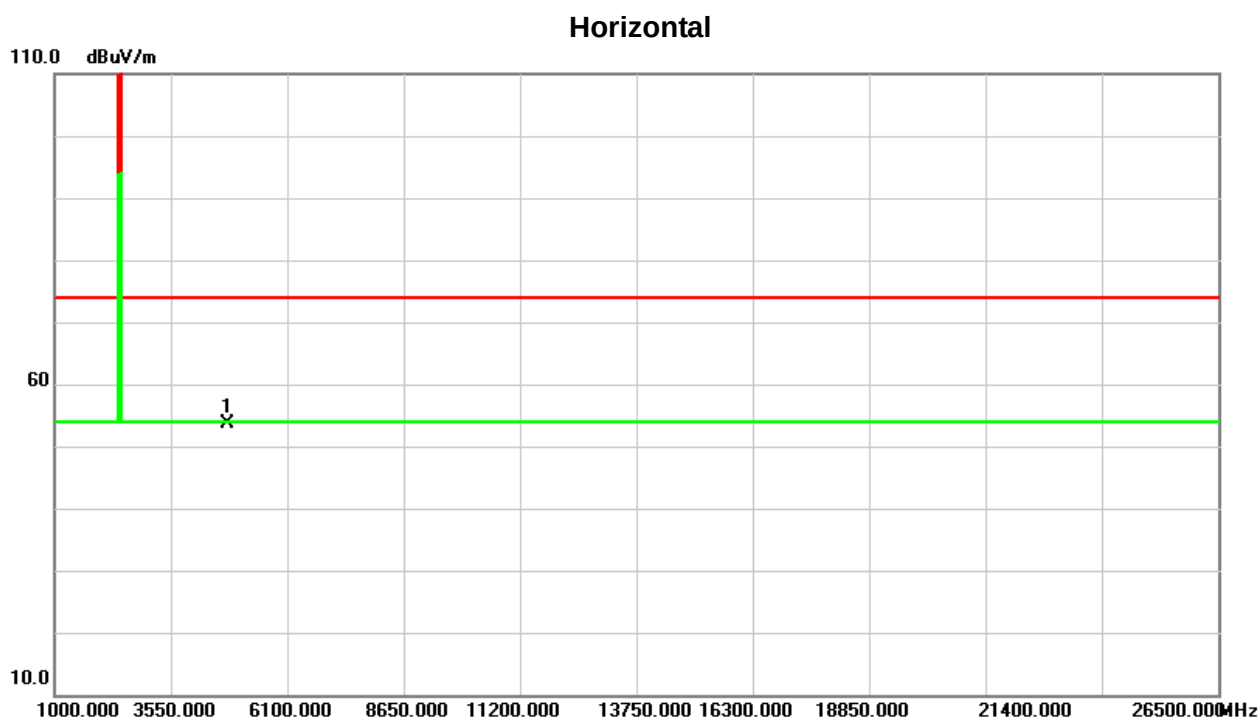


Orthogonal Axis :	X
Test Mode :	TX Low Channel
About the duty cycle correction factor calculated, please refer to the page 16	

Freq. (MHz)	Ant.Pol. H/V	Reading		Ant./CF CF(dB)	Act.		Limit		Result
		Peak (dBuV)	AV (dBuV)		Peak (dBuV/m)	AV (dBuV/m)	Peak (dBuV/m)	AV (dBuV/m)	
4805.63	H	47.94		5.81	53.75	43.52	74.00	54.00	X/F

Remark :

- (1) Peak value is much lower than the limit, So AV value isn't shown on this test item.
- (2) The average value of fundamental frequency is:
Average = Peak value + 20log(Duty cycle) , FinalAV=PK-10.23



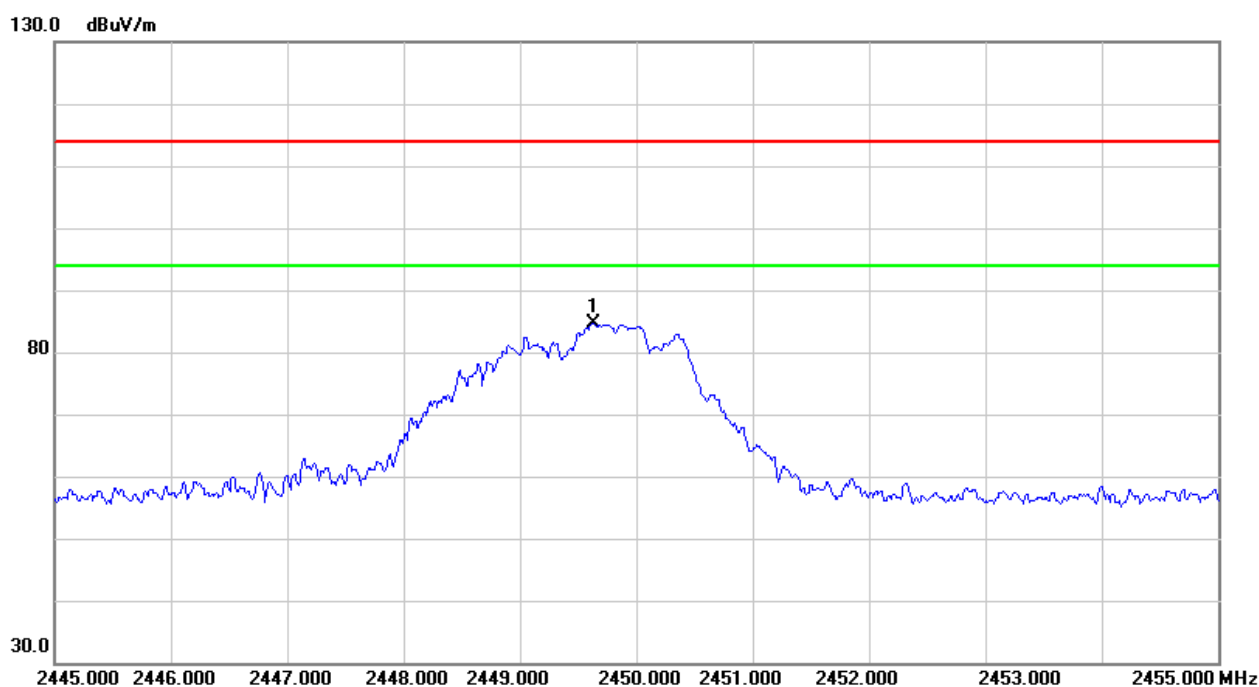
Orthogonal Axis :	X
Test Mode :	TX Middle Channel
About the duty cycle correction factor calculated, please refer to the page 16	

Freq. (MHz)	Ant.Pol. H/V	Reading		Ant./CF CF(dB)	Act.		Limit		Result
		Peak (dBuV)	AV (dBuV)		Peak (dBuV/m)	AV (dBuV/m)	Peak (dBuV/m)	AV (dBuV/m)	
2449.63	V	51.82		32.76	84.58	74.35	114.00	94.00	X/F

Remark :

- (1) Peak value is much lower than the limit, So AV value isn't shown on this test item.
- (2) The average value of fundamental frequency is:
Average = Peak value + 20log(Duty cycle) , FinalAV=PK-10.23

Vertical

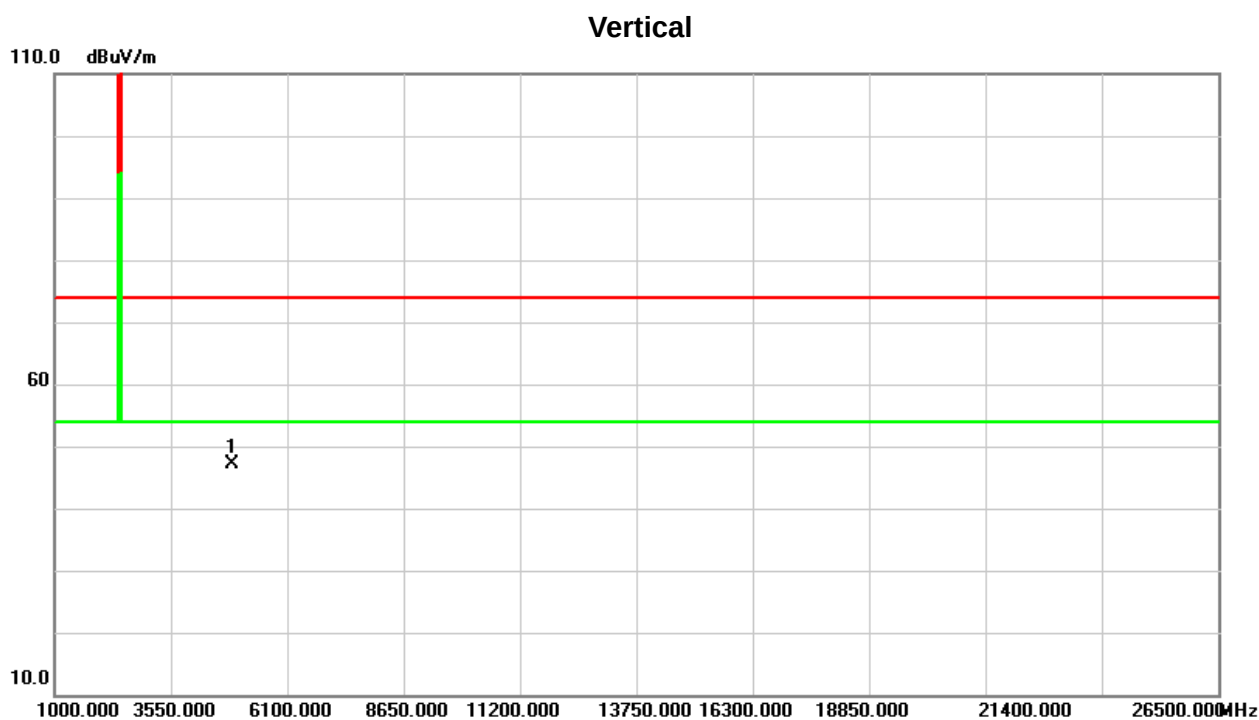


Orthogonal Axis :	X
Test Mode :	TX Middle Channel
About the duty cycle correction factor calculated, please refer to the page 16	

Freq. (MHz)	Ant.Pol. H/V	Reading		Ant./CF CF(dB)	Act.		Limit		Result
		Peak (dBuV)	AV (dBuV)		Peak (dBuV/m)	AV (dBuV/m)	Peak (dBuV/m)	AV (dBuV/m)	
4899.38	V	40.94		6.08	47.02	36.79	74.00	54.00	X/F

Remark :

- (1) Peak value is much lower than the limit, So AV value isn't shown on this test item.
- (2) The average value of fundamental frequency is:
Average = Peak value + 20log(Duty cycle) , FinalAV=PK-10.23

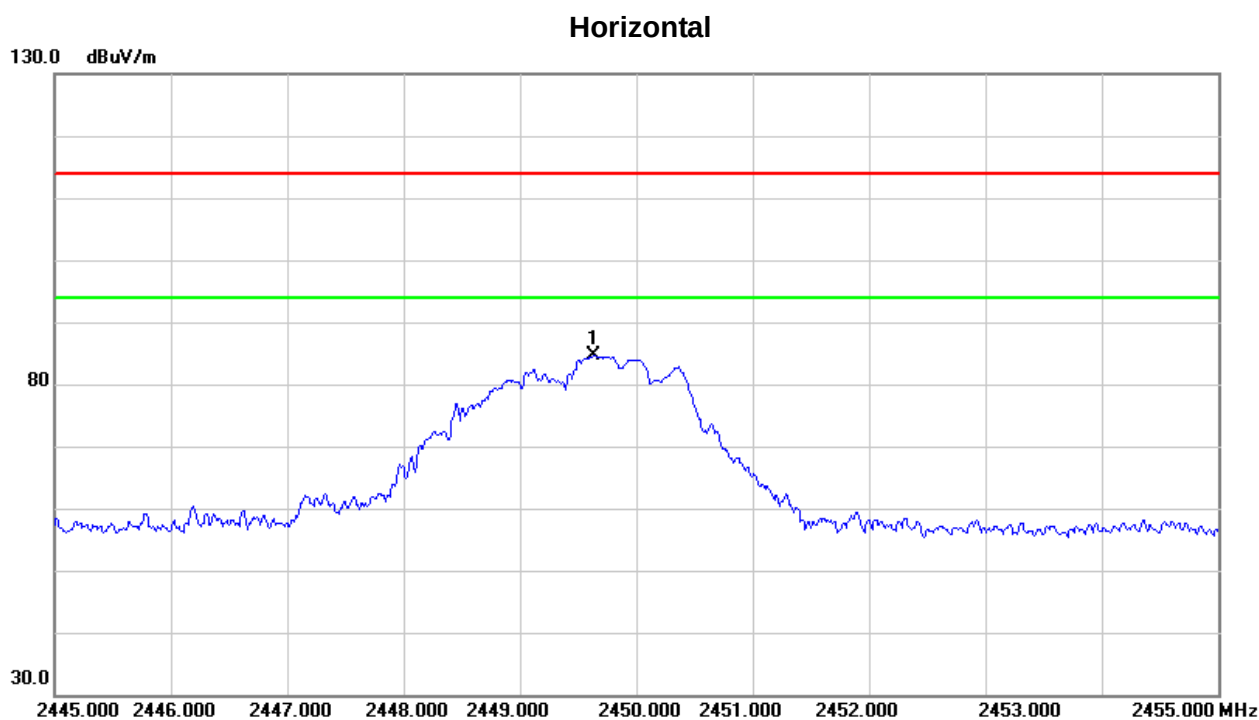


Orthogonal Axis :	X
Test Mode :	TX Middle Channel
About the duty cycle correction factor calculated, please refer to the page 16	

Freq. (MHz)	Ant.Pol. H/V	Reading		Ant./CF CF(dB)	Act.		Limit		Result
		Peak (dBuV)	AV (dBuV)		Peak (dBuV/m)	AV (dBuV/m)	Peak (dBuV/m)	AV (dBuV/m)	
2449.64	H	51.81		32.76	84.57	74.34	114.00	94.00	X/F

Remark :

- (1) Peak value is much lower than the limit, So AV value isn't shown on this test item.
- (2) The average value of fundamental frequency is:
Average = Peak value + 20log(Duty cycle) , FinalAV=PK-10.23

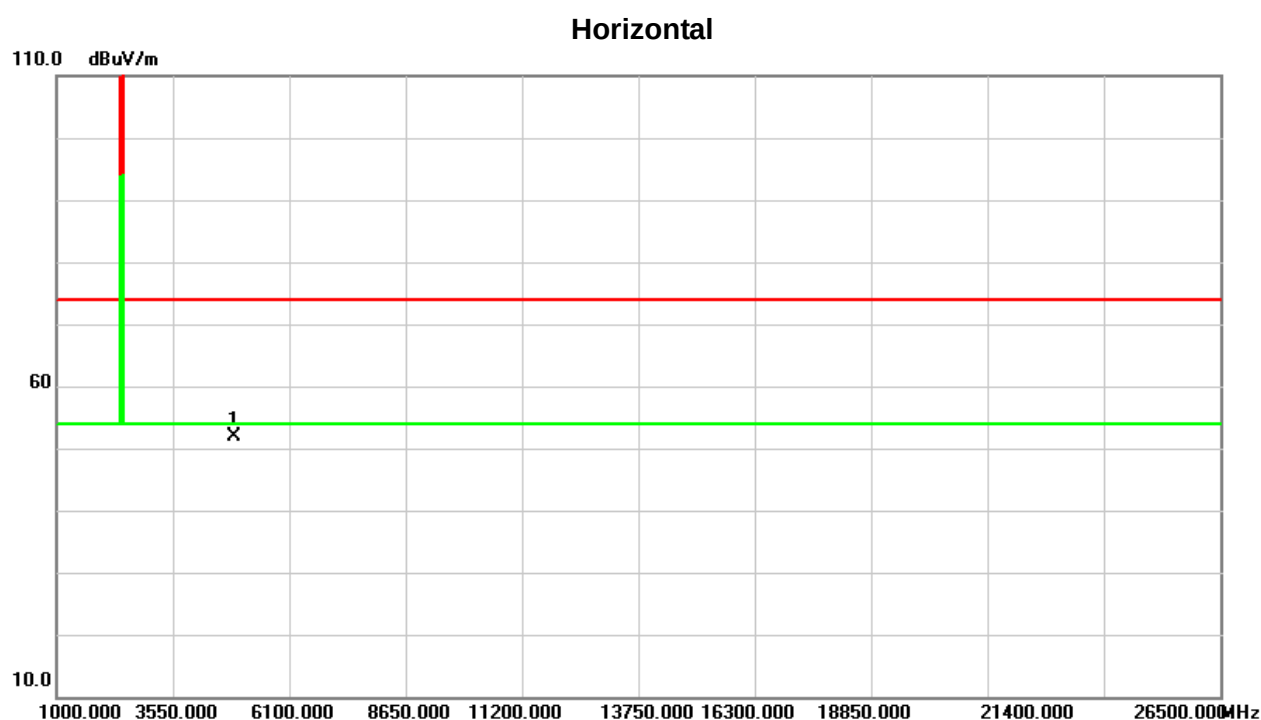


Orthogonal Axis :	X
Test Mode :	TX Middle Channel
About the duty cycle correction factor calculated, please refer to the page 16	

Freq. (MHz)	Ant.Pol. H/V	Reading		Ant./CF CF(dB)	Act.		Limit		Result
		Peak (dBuV)	AV (dBuV)		Peak (dBuV/m)	AV (dBuV/m)	Peak (dBuV/m)	AV (dBuV/m)	
4899.56	H	45.74		6.08	51.82	41.59	74.00	54.00	X/F

Remark :

- (1) Peak value is much lower than the limit, So AV value isn't shown on this test item.
- (2) The average value of fundamental frequency is:
Average = Peak value + 20log(Duty cycle) , FinalAV=PK-10.23

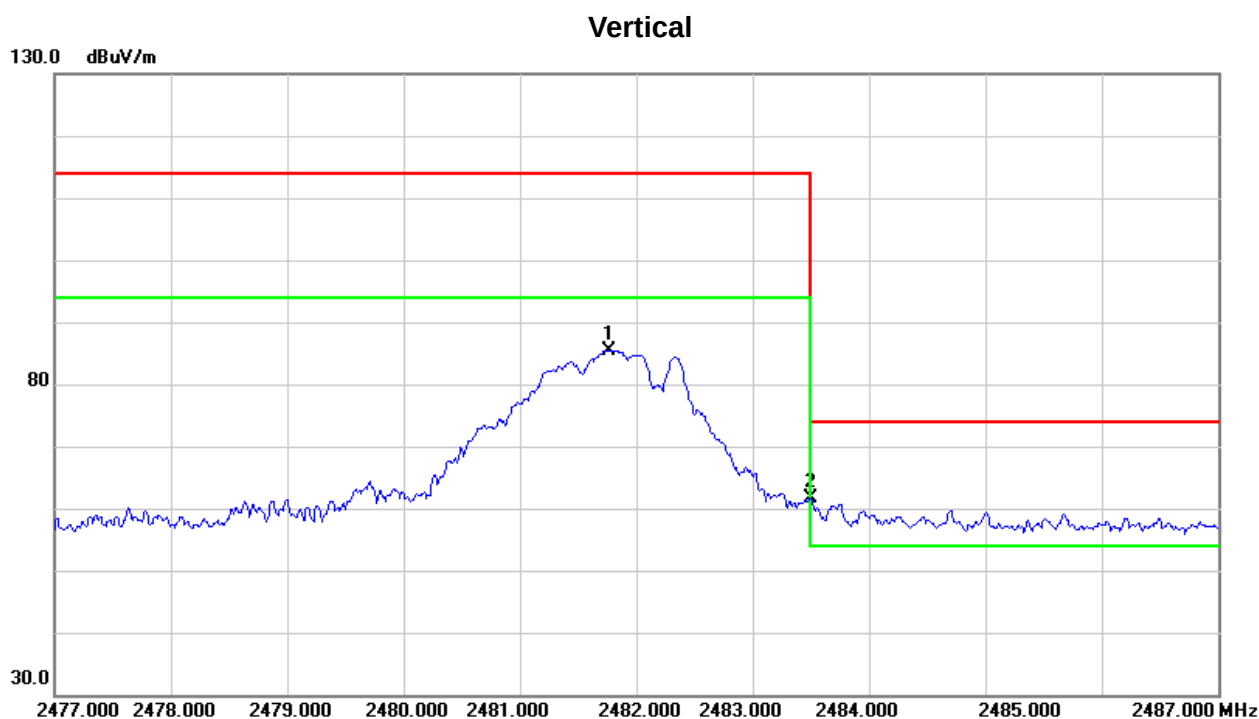


Orthogonal Axis :	X
Test Mode :	TX High Channel
About the duty cycle correction factor calculated, please refer to the page 16	

Freq. (MHz)	Ant.Pol. H/V	Reading		Ant./CF CF(dB)	Act.		Limit		Result
		Peak (dBuV)	AV (dBuV)		Peak (dBuV/m)	AV (dBuV/m)	Peak (dBuV/m)	AV (dBuV/m)	
2481.77	V	52.65		32.81	85.46	75.23	114.00	94.00	X/F
2483.50	V	28.88		32.81	61.69	51.46	74.00	54.00	X/H

Remark :

- (1) Peak value is much lower than the limit, So AV value isn't shown on this test item.
- (2) The average value of fundamental frequency is:
Average = Peak value + 20log(Duty cycle) , FinalAV=PK-10.23

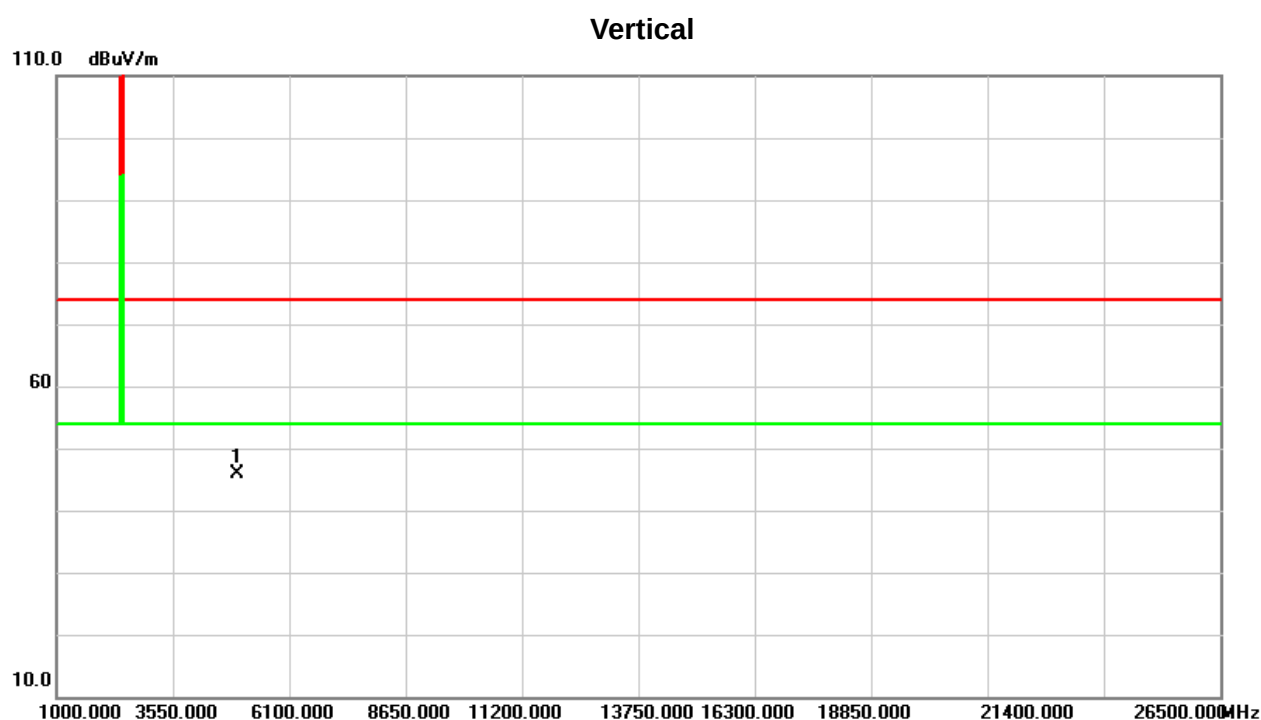


Orthogonal Axis :	X
Test Mode :	TX High Channel
About the duty cycle correction factor calculated, please refer to the page 16	

Freq. (MHz)	Ant.Pol. H/V	Reading		Ant./CF CF(dB)	Act.		Limit		Result
		Peak (dBuV)	AV (dBuV)		Peak (dBuV/m)	AV (dBuV/m)	Peak (dBuV/m)	AV (dBuV/m)	
4963.53	V	39.52		6.24	45.76	35.53	74.00	54.00	X/F

Remark :

- (1) Peak value is much lower than the limit, So AV value isn't shown on this test item.
- (2) The average value of fundamental frequency is:
Average = Peak value + 20log(Duty cycle) , FinalAV=PK-10.23

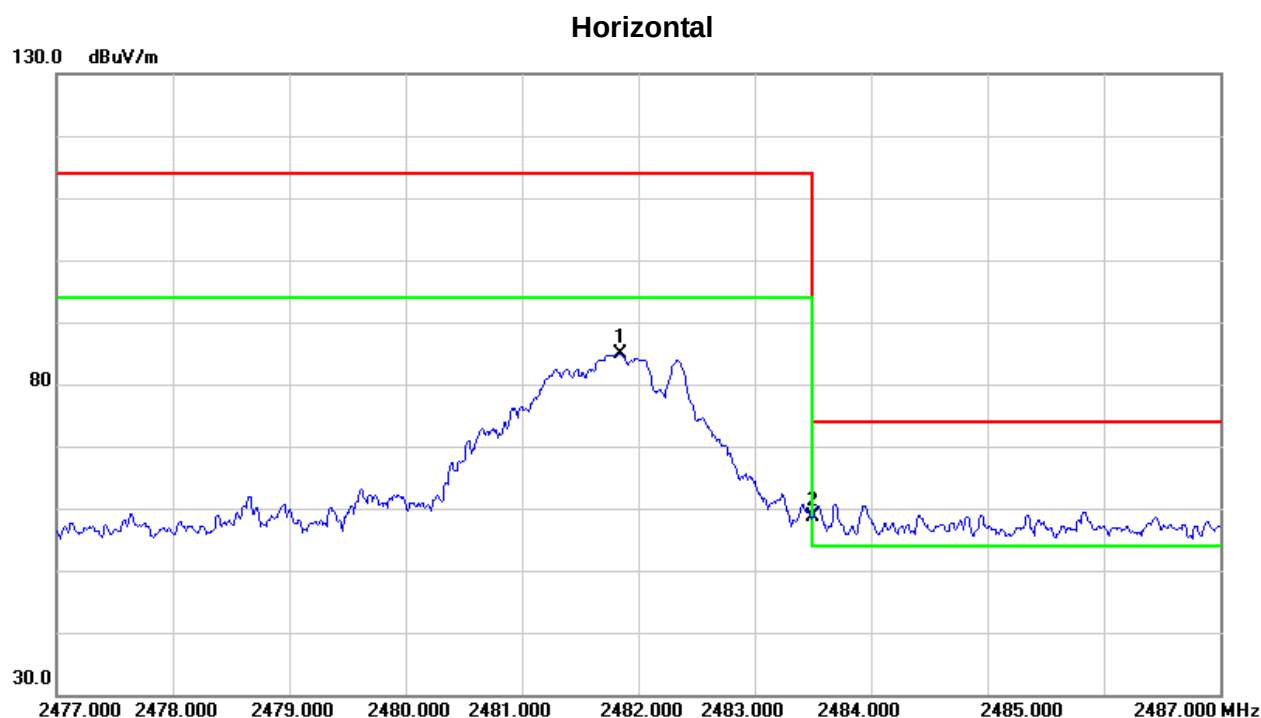


Orthogonal Axis :	X
Test Mode :	TX High Channel
About the duty cycle correction factor calculated, please refer to the page 16	

Freq. (MHz)	Ant.Pol. H/V	Reading		Ant./CF CF(dB)	Act.		Limit		Result
		Peak (dBuV)	AV (dBuV)		Peak (dBuV/m)	AV (dBuV/m)	Peak (dBuV/m)	AV (dBuV/m)	
2481.84	H	51.99		32.81	84.80	74.57	114.00	94.00	X/F
2483.50	H	25.79		32.81	58.60	48.37	74.00	54.00	X/H

Remark :

- (1) Peak value is much lower than the limit, So AV value isn't shown on this test item.
- (2) The average value of fundamental frequency is:
Average = Peak value + 20log(Duty cycle) , FinalAV=PK-10.23

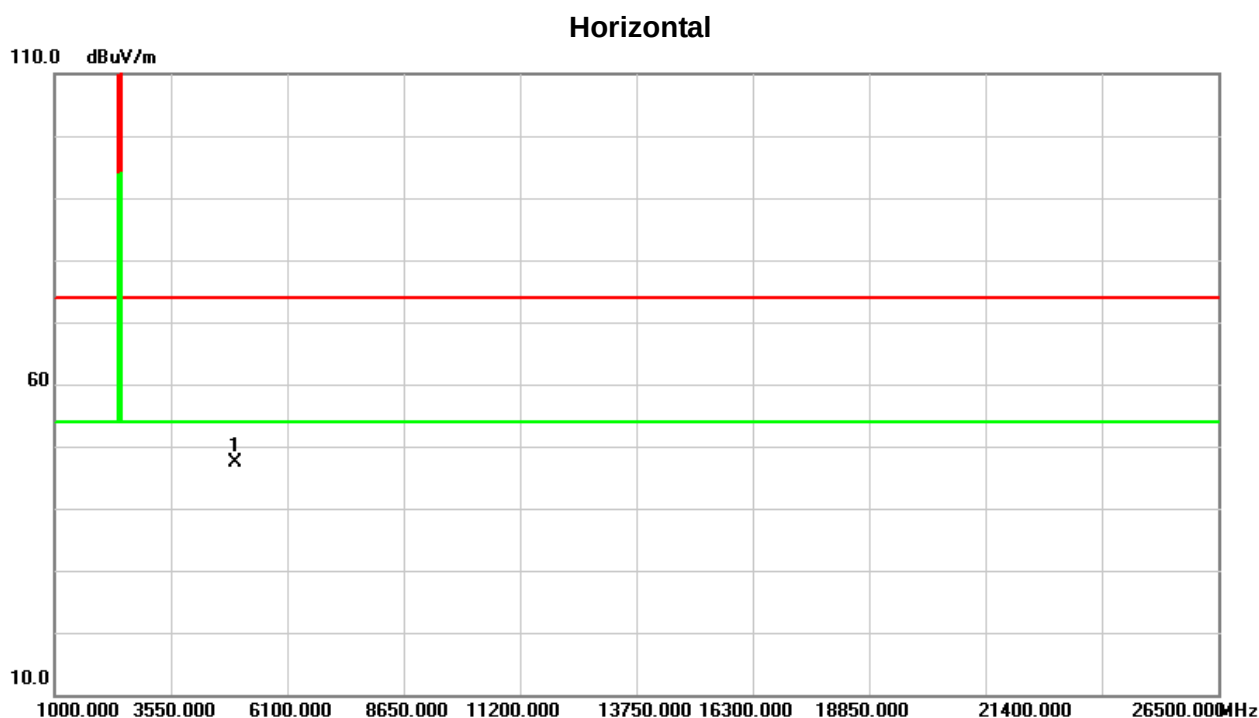


Orthogonal Axis :	X
Test Mode :	TX High Channel
About the duty cycle correction factor calculated, please refer to the page 16	

Freq. (MHz)	Ant.Pol. H/V	Reading		Ant./CF CF(dB)	Act.		Limit		Result
		Peak (dBuV)	AV (dBuV)		Peak (dBuV/m)	AV (dBuV/m)	Peak (dBuV/m)	AV (dBuV/m)	
4963.71	H	41.06		6.24	47.30	37.07	74.00	54.00	X/F

Remark :

- (1) Peak value is much lower than the limit, So AV value isn't shown on this test item.
- (2) The average value of fundamental frequency is:
Average = Peak value + 20log(Duty cycle) , FinalAV=PK-10.23

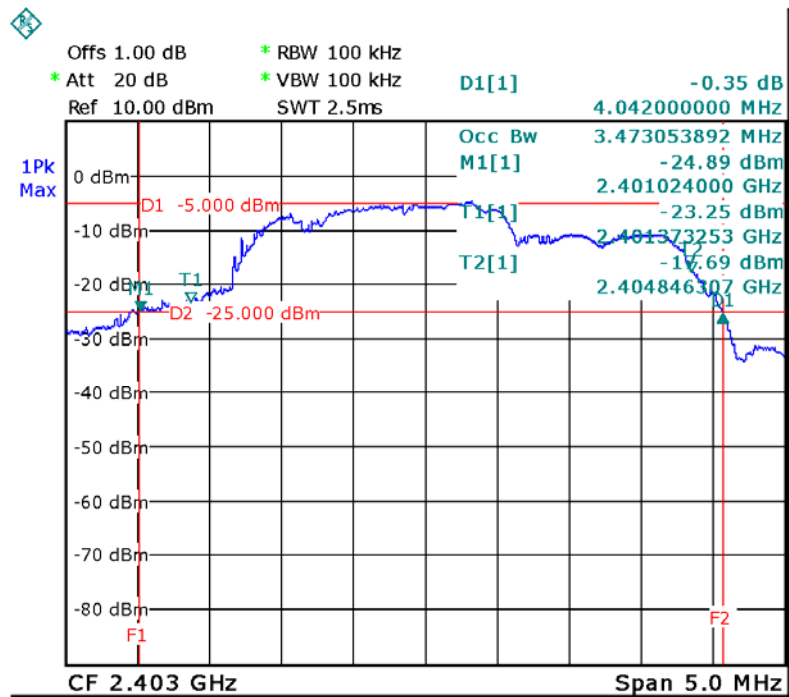


ATTACHMENT E - BANDWIDTH

Test Mode:	TX Mode
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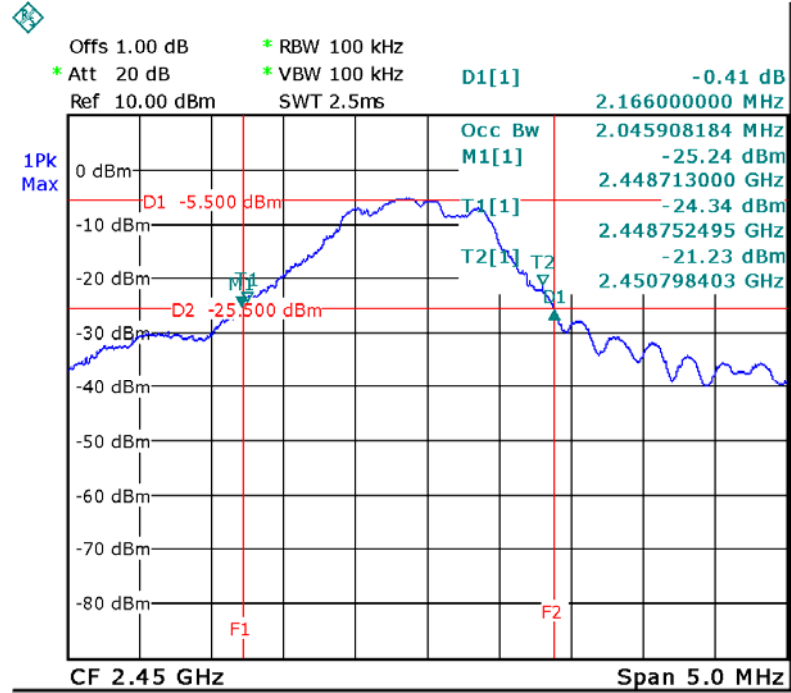
Frequency (MHz)	20dB Bandwidth (MHz)	99% Occupied BW (MHz)
2403	4.04	3.47
2450	2.17	2.05
2482	2.30	2.09

TX Low Channel



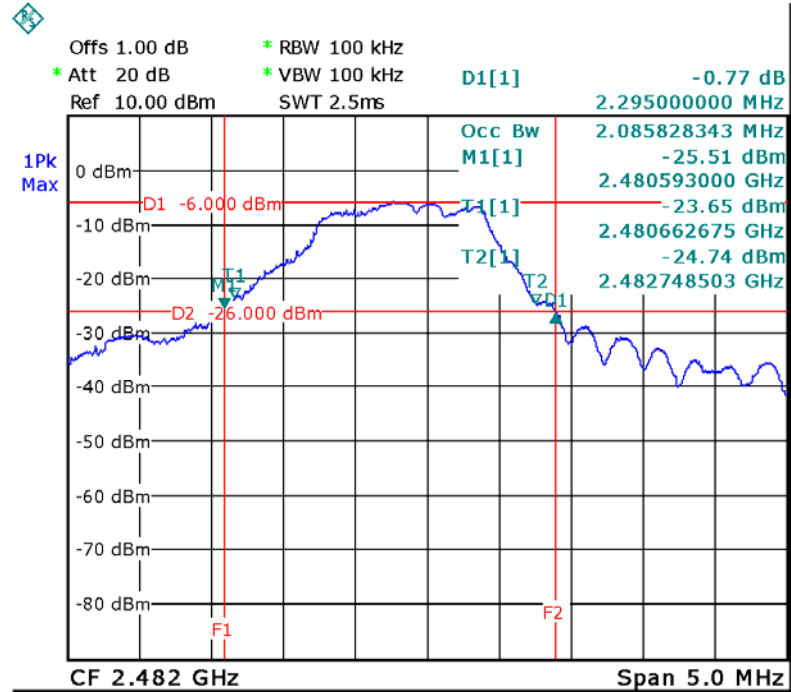
Date: 2.JUL.2015 13:50:29

TX Middle Channel



Date: 2.JUL.2015 14:31:23

TX High Channel



Date: 2.JUL.2015 14:38:00