FCC RADIO TEST REPORT
FCC ID: 2AFEJ-DWH69

Product：	Graphic Tablet (Pen Tablet)
Trade Name：	HUION
Model Name：	DWH69
Serial Model：	DWH1410,WH1409,W58,WH850,WH580, WH690E,W58pro,DW69
Report No.：	NTEK-2015NT06091976F2

Prepared for

Shenzhen Huion Animation Technology Co.,ltd.

Unit D, Floor 2, Building B Shifeng Technology Park, Huangmabu Community, Xixiang Road,Baoan District,ShenZhen City, China

Prepared by

Shenzhen NTEK Testing Technology Co., Ltd.

1/F, Building E, Fenda Science Park, Sanwei Community,Xixiang Street
Bao'an District, Shenzhen P.R. China
Tel.: +86-0755-61156588 Fax.: +86-0755-61156599
Website:www.ntek.org.cn

TEST RESULT CERTIFICATION

Applicant's name	:	Shenzhen Huion Animation Technology Co.,ltd.
Address	:	Unit D, Floor 2, Building B Shifeng Technology Park, Huangmabu Community, Xixiang Road,Baoan District,ShenZhen City, China
Manufacture's Name	:	Shenzhen Huion Animation Technology Co.,ltd.
Address	:	Unit D, Floor 2, Building B Shifeng Technology Park, Huangmabu Community, Xixiang Road,Baoan District,ShenZhen City, China
Product description		
Product name	:	Graphic Tablet (Pen Tablet)
Model and/or type reference	:	DWH69
Serial Model：		DWH1410,WH1409,W58,WH850,WH580, WH690E,W58pro,DW69
Rating(s)	:	DC 3.7V
Standards	:	FCC Part15.249 01 Oct. 2014
Test procedure		ANSI C63.10-2013

This device described above has been tested by NTEK, and the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.

This report shall not be reproduced except in full, without the written approval of NTEK, this document may be altered or revised by NTEK, personnel only, and shall be noted in the revision of the document.

Date of Test	:	
Date (s) of performance of tests	:	09 Jun. 2015 ~10 Jul. 2015
Date of Issue	:	10 Jul. 2015
Test Result	:	**Pass**

Testing Engineer : Jason chen

(Jason Chen)

Technical Manager : Brown Lu

(Brown Lu)

Authorized Signatory : Bill

(Bill Yao)

Table of Contents Page

1. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

FCC Part15, Subpart C (15.249)			
Standard Section	Test Item	Judgment	Remark
15.207	Conducted Emission	Pass	
15.203	Antenna Requirement	Pass	
15.249	Radiated Spurious Emission	Pass	
15.205	Band Edge Emission	Pass	
15.249	Occupied Bandwidth	Pass	

1.1 TEST FACILITY

NTEK Testing Technology Co., Ltd
Add. : 1/F, Building E, Fenda Science Park, Sanwei Community, Xixiang Street, Bao'an District, Shenzhen P.R. China.
FCC FRN Registration No.:238937; IC Registration No.:9270A-1
CNAS Registration No.:L5516

1.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement **y ± U**，where expended uncertainty **U** is based on a standard uncertainty multiplied by a coverage factor of **k=2**，providing a level of confidence of approximately **95** %。

No.	Item	Uncertainty
1	Conducted Emission Test	±1.38dB
2	RF power,conducted	±0.16dB
3	Spurious emissions,conducted	±0.21dB
4	All emissions,radiated(<1G)	±4.68dB
5	All emissions,radiated(>1G)	±4.89dB
6	Temperature	±0.5°C
7	Humidity	±2%

2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

Equipment	Graphic Tablet (Pen Tablet)
Trade Name	HUION
Model Name	DWH69
Serial Model	DWH1410,WH1409,W58,WH850,WH580, WH690E,W58pro,DW69
Model Difference	All the model are the same circuit and RF module, except the model name and colour.
Product Description	The EUT is a Graphic Tablet (Pen Tablet) Operation Frequency: 2405MHz~2480MHz Modulation Type: O-QPSK Antenna Designation: PCB Antenna Antenna Gain(Peak) 1.0 dBi Based on the application, features, or specification exhibited in User's Manual, the EUT is considered as an ITE/Computing Device. More details of EUT technical specification, please refer to the User's Manual.
Channel List	Please refer to the Note 2.
Adapter	N/A
Battery	Tablet :DC 3.7V,2100mAh Pen:DC 3.7V

Note:

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

2.

Channel	Frequency (MHz)
01	2405
02	2440
03	2480

3.

Table for Filed Antenna

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)	NOTE
1	N/A	N/A	PCB Antenna	N/A	1.0	Antenna

2.2 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	Link Mode
Mode 2	CH 01
Mode 3	CH 02
Mode 4	CH 03

For Conducted Emission	
Final Test Mode	Description
Mode 1	Link Mode

For Radiated Emission	
Final Test Mode	Description
Mode 1	Link Mode

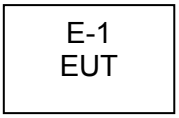
Note:

(1) The measurements are performed at the highest, middle, lowest available channels.

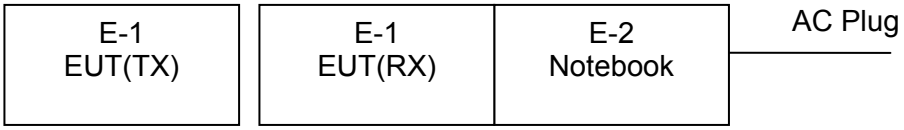
(2) The EUT use new battery.

2.3 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

Radiated Spurious Emission Test



Conducted Emission Test



2.4 DESCRIPTION OF SUPPORT UNITS(CONDUCTED MODE)

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.	Series No.	Note
E-1	Graphic Tablet (Pen Tablet)	HUION	DWH69	N/A	EUT
E-2	Notebook	Lenove	Thinkpad Edge E430	N/A	

Item	Shielded Type	Ferrite Core	Length	Note

Note:

(1) The support equipment was authorized by Declaration of Confirmation.
(2) For detachable type I/O cable should be specified the length in cm in『Length』column.

2.5 EQUIPMENTS LIST FOR ALL TEST ITEMS

Radiation Test equipment

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	Agilent	E4407B	160400005	Jul. 06. 2016
2	Test Receiver	R&S	ESPI	101318	Jul. 06. 2016
3	Bilog Antenna	TESEQ	CBL6111D	31216	Jul. 06. 2016
4	50Ω Coaxial Switch	Anritsu	MP59B	6200264416	Jul. 06. 2016
5	Spectrum Analyzer	ADVANTEST	R3132	150900201	Jul. 06. 2016
6	Horn Antenna	EM	EM-AH-10180	2011071402	Jul. 06. 2016
7	Horn Ant	Schwarzbeck	BBHA 9170	9170-181	Jul. 06. 2016
8	Amplifier	EM	EM-30180	060538	Jul. 06. 2016
9	Loop Antenna	ARA	PLA-1030/B	1029	Jul. 06. 2016
10	Power Meter	R&S	NRVS	100696	Jul. 06. 2016

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	Agilent	E4407B	160400005	Jul. 06. 2015
2	Test Receiver	R&S	ESPI	101318	Jul. 06. 2015
3	Bilog Antenna	TESEQ	CBL6111D	31216	Jul. 06. 2015
4	50Ω Coaxial Switch	Anritsu	MP59B	6200264416	Jul. 06. 2015
5	Spectrum Analyzer	ADVANTEST	R3132	150900201	Jul. 06. 2015
6	Horn Antenna	EM	EM-AH-10180	2011071402	Jul. 06. 2015
7	Horn Ant	Schwarzbeck	BBHA 9170	9170-181	Jul. 06. 2015
8	Amplifier	EM	EM-30180	060538	Jul. 06. 2015
9	Loop Antenna	ARA	PLA-1030/B	1029	Jul. 06. 2015
10	Power Meter	R&S	NRVS	100696	Jul. 06. 2015

`

Conduction Test equipment

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Test Receiver	R&S	ESCI	101160	Jul. 06. 2016
2	LISN	R&S	ENV216	101313	Jul. 06. 2016
3	LISN	EMCO	3816/2	00042990	Jul. 06. 2016
4	50Ω Coaxial Switch	Anritsu	MP59B	6200264417	Jul. 06. 2016
5	Passive Voltage Probe	R&S	ESH2-Z3	100196	Jul. 06. 2016
6	Absorbing clamp	R&S	MOS-21	100423	Jul. 06. 2016

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Test Receiver	R&S	ESCI	101160	Jul. 06. 2015
2	LISN	R&S	ENV216	101313	Jul. 06. 2015
3	LISN	EMCO	3816/2	00042990	Jul. 06. 2015
4	50Ω Coaxial Switch	Anritsu	MP59B	6200264417	Jul. 06. 2015
5	Passive Voltage Probe	R&S	ESH2-Z3	100196	Jul. 06. 2015
6	Absorbing clamp	R&S	MOS-21	100423	Jul. 06. 2015

3. ANTENNA REQUIREMENT

3.1 STANDARD REQUIREMENT

15.203 requirement: For intentional device, according to 15.203: an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

3.2 EUT ANTENNA

The EUT antenna is permanent attached antenna. It comply with the standard requirement.

3.3 CONDUCTED EMISSION MEASUREMENT

3.3.1 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			66 - 56 *	56 - 46 *	CISPR
0.50 -5.0			56.00	46.00	CISPR
5.0 -30.0			60.00	50.00	CISPR

0.15 -0.5			66 - 56 *	56 - 46 *	LP002.
0.50 -5.0			56.00	46.00	LP002.
5.0 -30.0			60.00	50.00	LP002.

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

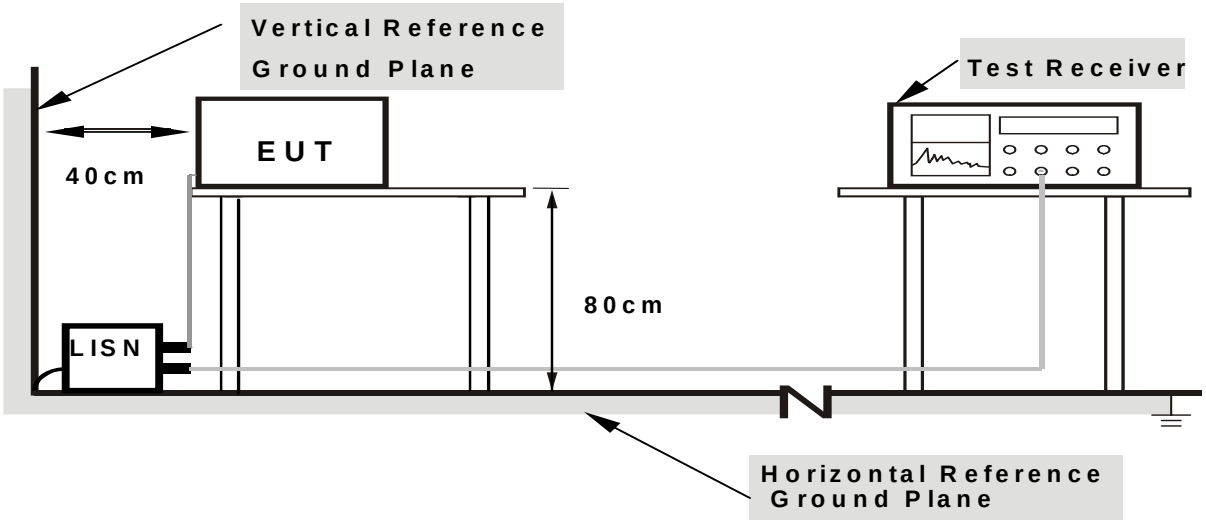
3.3.2 TEST PROCEDURE

a. The EUT was placed 0.4 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.

3.3.3 DEVIATION FROM TEST STANDARD

No deviation

3.3.4 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

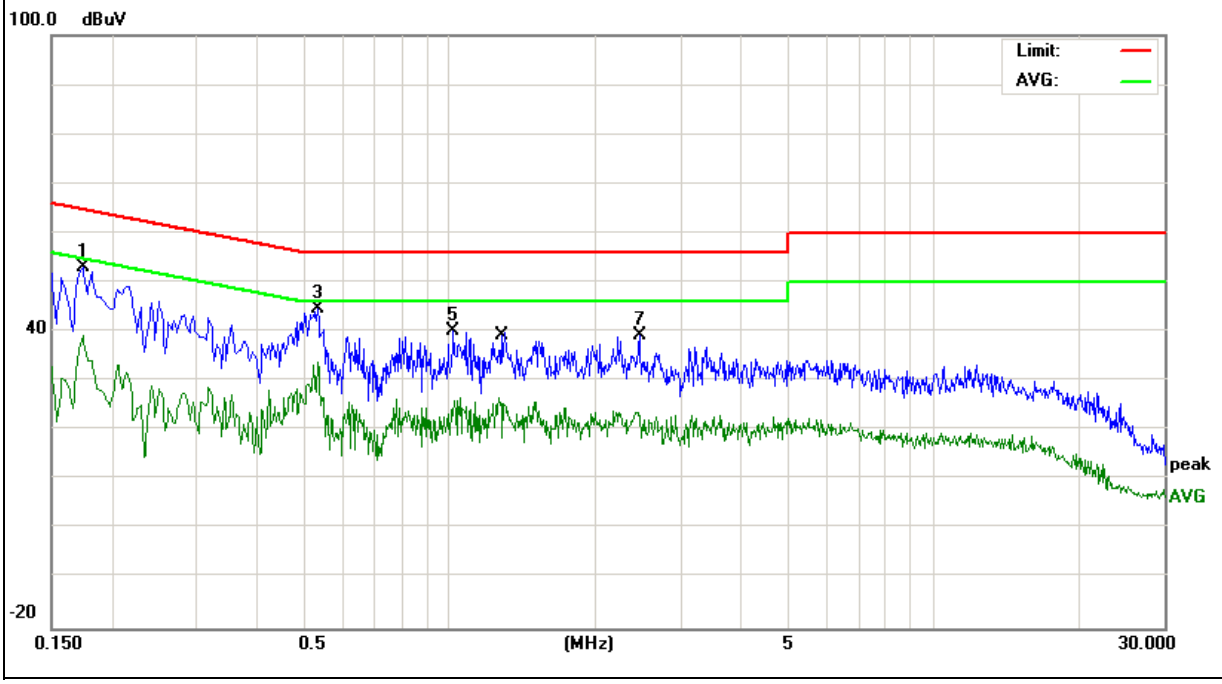
3.2.5 TEST RESULT

EUT：	Graphic Tablet (Pen Tablet)	Model Name. ：	DWH69
Temperature：	26 ℃	Relative Humidity：	54%
Pressure：	1010hPa	Phase：	L
Test Voltage ：	DC 5.0V form PC AC 120V/60Hz	Test Mode：	Mode 1

Frequency	Reading Level	Correct Factor	Measure-ment	Limits	Margin	Remark
(MHz)	(dBμV)	(dB)	(dBμV)	(dBμV)	(dB)	
0.1740	43.49	9.62	53.11	64.76	-11.65	QP
0.1740	29.73	9.62	39.35	54.76	-15.41	AVG
0.5340	34.99	9.77	44.76	56.00	-11.24	QP
0.5340	24.05	9.77	33.82	46.00	-12.18	AVG
1.0180	30.53	9.73	40.26	56.00	-15.74	QP
1.2660	16.92	9.71	26.63	46.00	-19.37	AVG
2.4700	29.45	9.66	39.11	56.00	-16.89	QP

Remark:

1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.

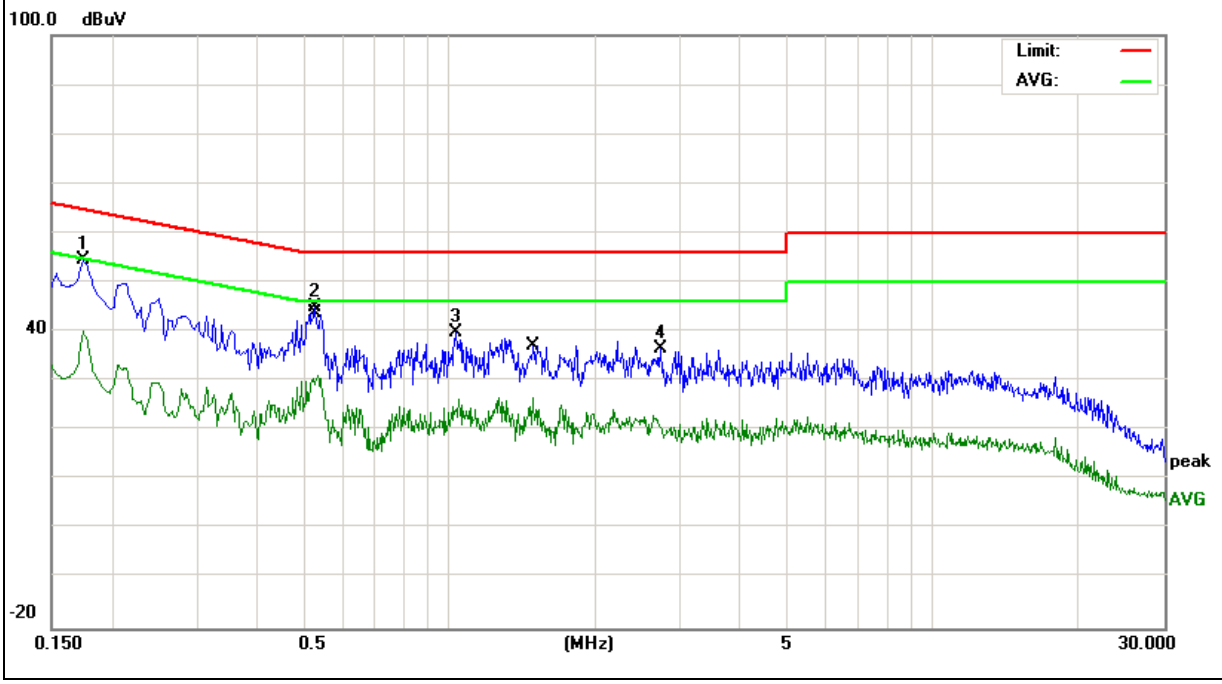


EUT：	Graphic Tablet (Pen Tablet)	Model Name. ：	DWH69
Temperature：	26 ℃	Relative Humidity：	54%
Pressure：	1010hPa	Phase：	L
Test Voltage ：	DC 5.0V form PC AC 120V/60Hz	Test Mode：	Mode 1

Frequency	Reading Level	Correct Factor	Measure-ment	Limits	Margin	Remark
(MHz)	(dBμV)	(dB)	(dBμV)	(dBμV)	(dB)	
0.1740	44.87	9.61	54.48	64.76	-10.28	QP
0.5260	35.26	9.68	44.94	56.00	-11.06	QP
1.0300	30.23	9.61	39.84	56.00	-16.16	QP
2.7220	27.02	9.53	36.55	56.00	-19.45	QP
0.1740	30.61	9.61	40.22	54.76	-14.54	AVG
0.5340	21.40	9.67	31.07	46.00	-14.93	AVG
1.4819	17.02	9.58	26.60	46.00	-19.40	AVG

Remark:

1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.

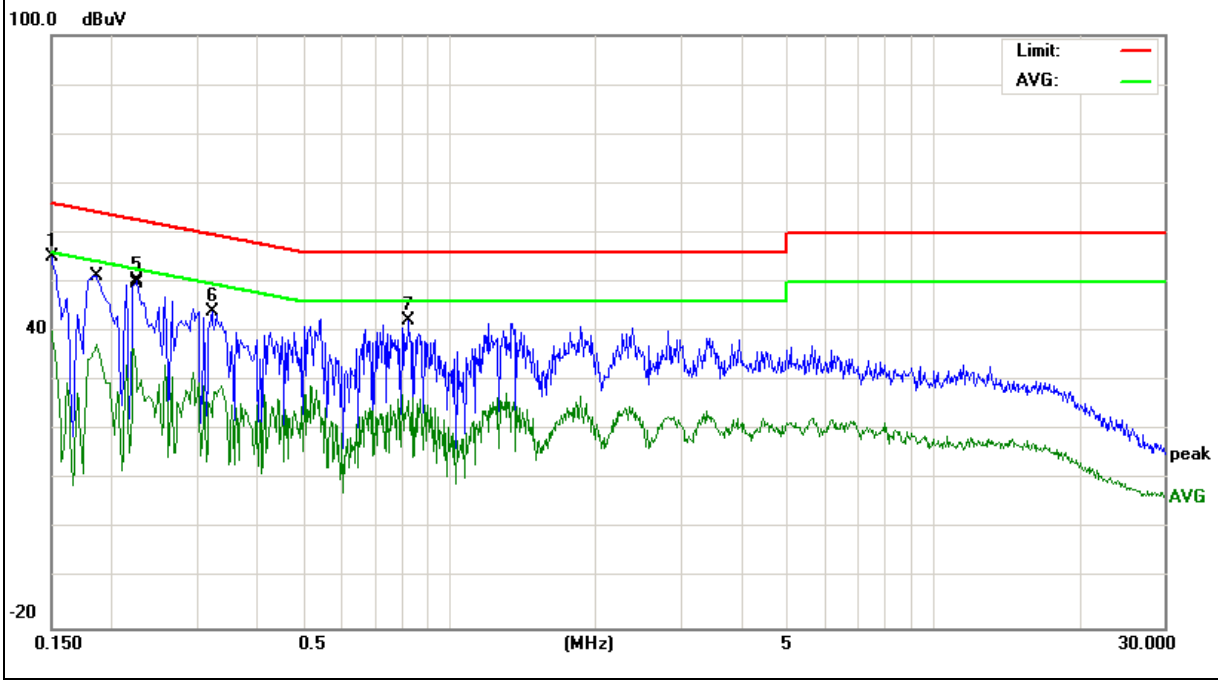


EUT：	Graphic Tablet (Pen Tablet)	Model Name. ：	DWH69
Temperature：	26 ℃	Relative Humidity：	54%
Pressure：	1010hPa	Phase：	L
Test Voltage ：	DC 5.0V form PC AC 240V/60Hz	Test Mode：	Mode 1

Frequency	Reading Level	Correct Factor	Measure-ment	Limits	Margin	Remark
(MHz)	(dBμV)	(dB)	(dBμV)	(dBμV)	(dB)	
0.1499	45.62	9.63	55.25	66.00	-10.75	QP
0.1499	30.40	9.63	40.03	56.00	-15.97	AVG
0.1860	27.72	9.61	37.33	54.21	-16.88	AVG
0.2220	26.96	9.64	36.60	52.74	-16.14	AVG
0.2260	40.61	9.64	50.25	62.59	-12.34	QP
0.3220	34.47	9.66	44.13	59.65	-15.52	QP
0.8260	32.49	9.77	42.26	56.00	-13.74	QP

Remark:

1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.

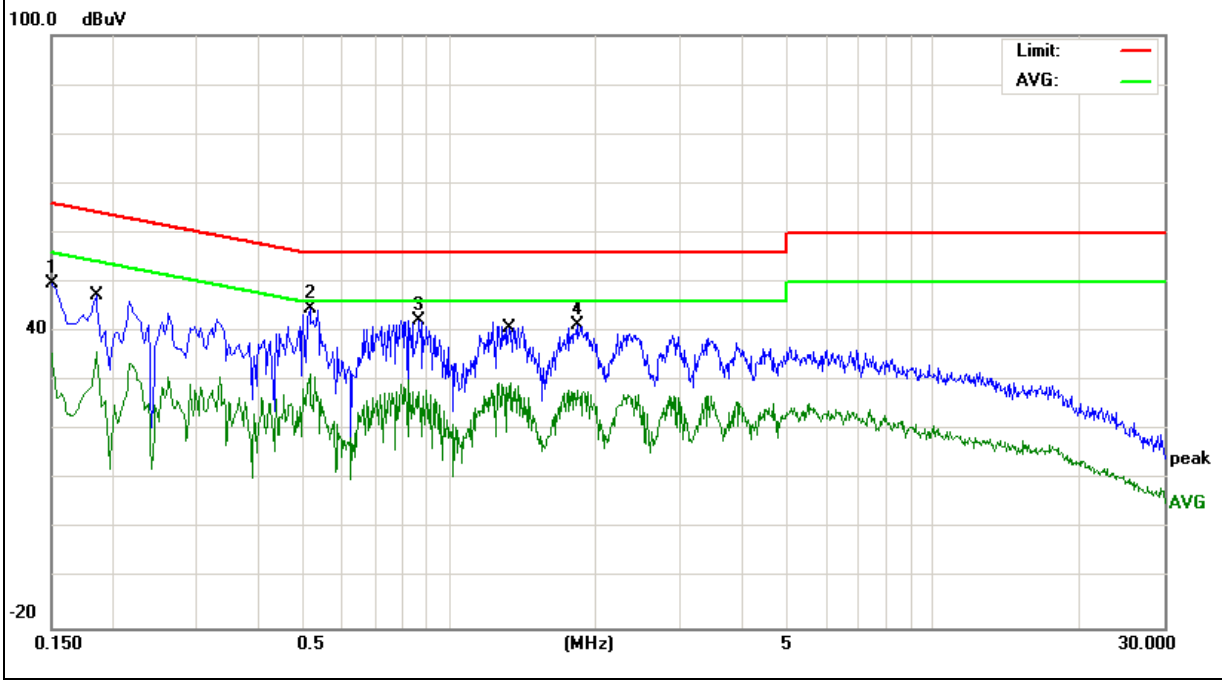


EUT：	Graphic Tablet (Pen Tablet)	Model Name. ：	DWH69
Temperature：	26 ℃	Relative Humidity：	54%
Pressure：	1010hPa	Phase：	L
Test Voltage ：	DC 5.0V form PC AC 240V/60Hz	Test Mode：	Mode 1

Frequency	Reading Level	Correct Factor	Measure-ment	Limits	Margin	Remark
(MHz)	(dBμV)	(dB)	(dBμV)	(dBμV)	(dB)	
0.1499	40.14	9.60	49.74	66.00	-16.26	peak
0.5140	35.03	9.68	44.71	56.00	-11.29	peak
0.8660	32.75	9.63	42.38	56.00	-13.62	peak
1.8340	31.95	9.55	41.50	56.00	-14.50	peak
0.1860	26.26	9.61	35.87	54.21	-18.34	AVG
0.5140	21.65	9.68	31.33	46.00	-14.67	AVG
1.3380	20.15	9.59	29.74	46.00	-16.26	AVG

Remark:

1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.



3.4 RADIATED EMISSION MEASUREMENT

3.4.1 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
Frequency (MHz)	Limit (dBuV)	
30~88	40	3
88~216	43.5	3
216~960	46	3
960 -10000	54.00	3
*902 - 928	94.00	3

Note:

(1) The tighter limit applies at the band edges.

(2) Emission level (dBuV/m)=20log Emission level (uV/m).

(3) *Note: This is the limit for the fundamental frequency.

LIMITS OF RADIATED EMISSION MEASUREMENT (FCC 15.249)

Frequency of Emission (MHz)	Field Strength of fundamental ((millivolts /meter)	Field Strength of Harmonics (microvolts/meter)
902-928	50	500

Notes:

(1) 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 to the general radiated emission limits in Section 15.209, whichever is the lesser attenuation.

Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	1000 MHz
Stop Frequency	10th carrier harmonic
RB / VB (emission in restricted band)	1MHz / 1MHz for Peak

Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~150kHz / RB 200Hz for QP
Start ~ Stop Frequency	150kHz~30MHz / RB 9kHz for QP
Start ~ Stop Frequency	30MHz~1000MHz / RB 120kHz for QP

3.4.2 TEST PROCEDURE

a. The measuring distance of at 3 m shall be used for measurements at frequency up to 1GHz. For frequencies above 1GHz, any suitable measuring distance may be used.
b. The EUT was placed on the top of a rotating table 0.8 m for below 1GHz and 1.5m for above 1GHz the ground at a 3 meter open area test site. The table was rotated 360 degrees to determine the position of the highest radiation.
c. The height of the equipment or of the substitution antenna shall be 0.8 m for below 1GHz and 1.5m for above 1GHz; 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.

Note:

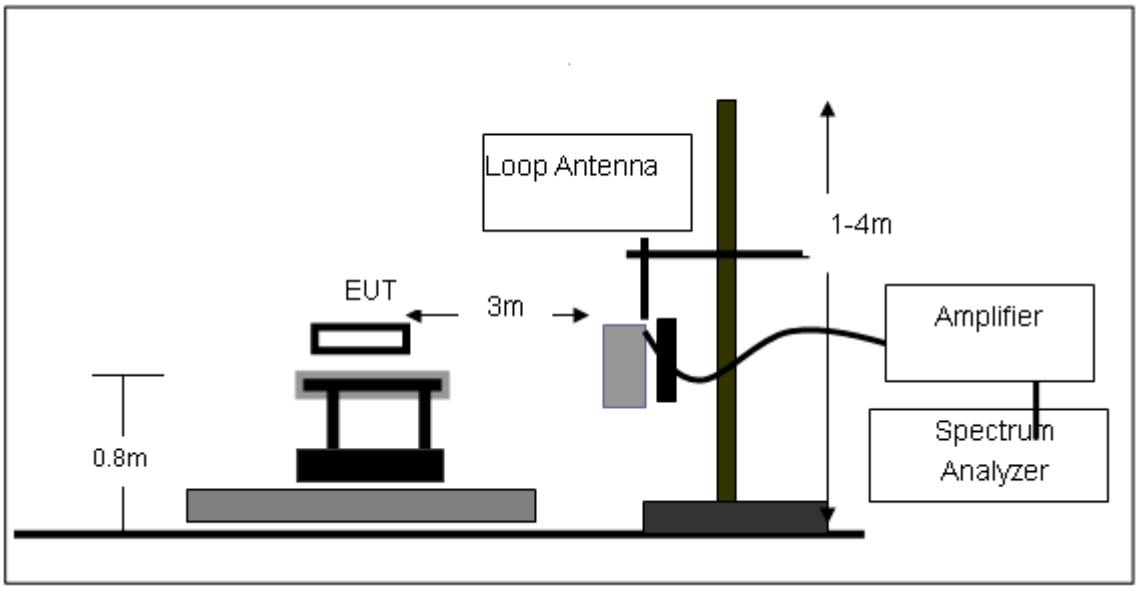
Both horizontal and vertical antenna polarities were tested
and performed pretest to three orthogonal axis. The worst case emissions were reported

3.4.3 DEVIATION FROM TEST STANDARD

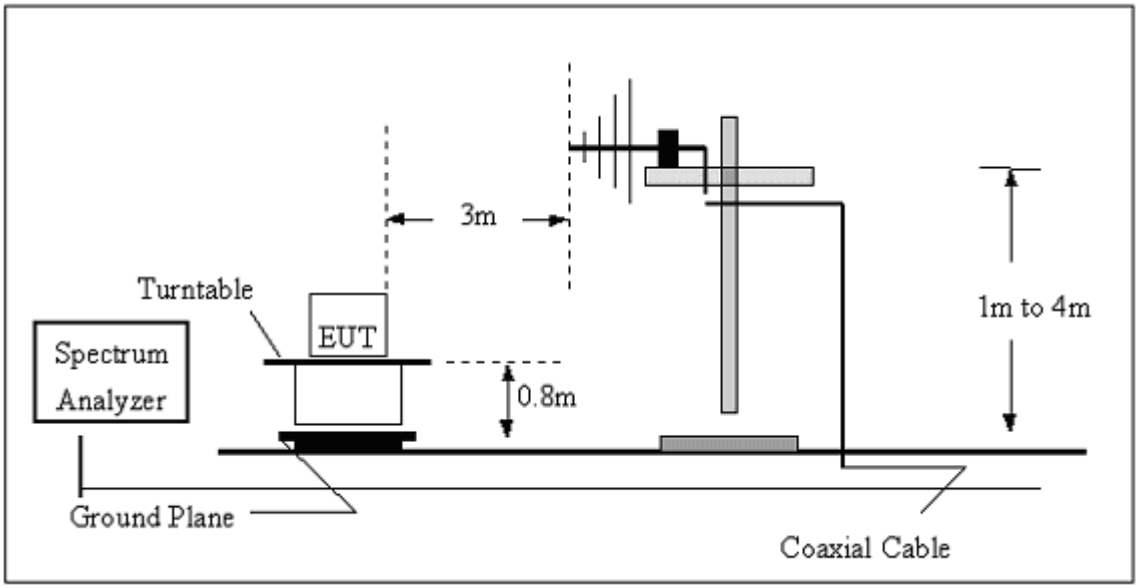
No deviation

3.4.4 TEST SETUP

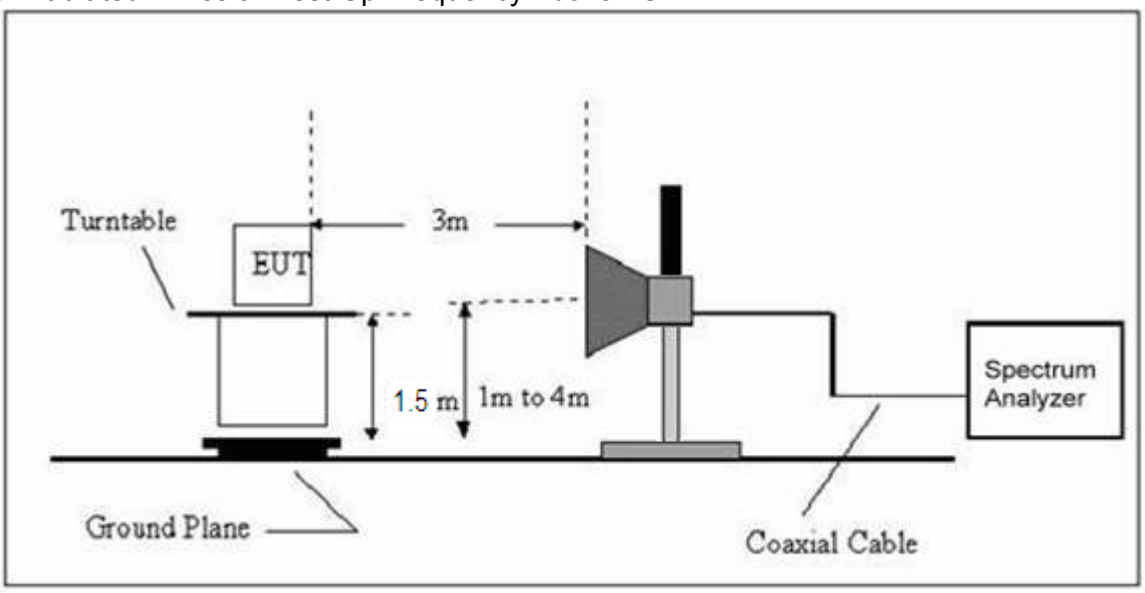
（A）Radiated Emission Test-Up Frequency Below 30MHz



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



（C）Radiated Emission Test-Up Frequency Above 1GHz



3.4.5 TEST RESULTS (BLOW 30MHz)

EUT：	Graphic Tablet (Pen Tablet)	Model Name. ：	DWH69
Temperature：	20 ℃	Relative Humidtity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 3.7V
Test Mode ：	TX	Polarization :	--

Freq.	Reading	Limit	Margin	State
(MHz)	(dBuV/m)	(dBuV/m)	(dB)	P/F
--	--	--	--	PASS
--	--	--	--	PASS

NOTE:

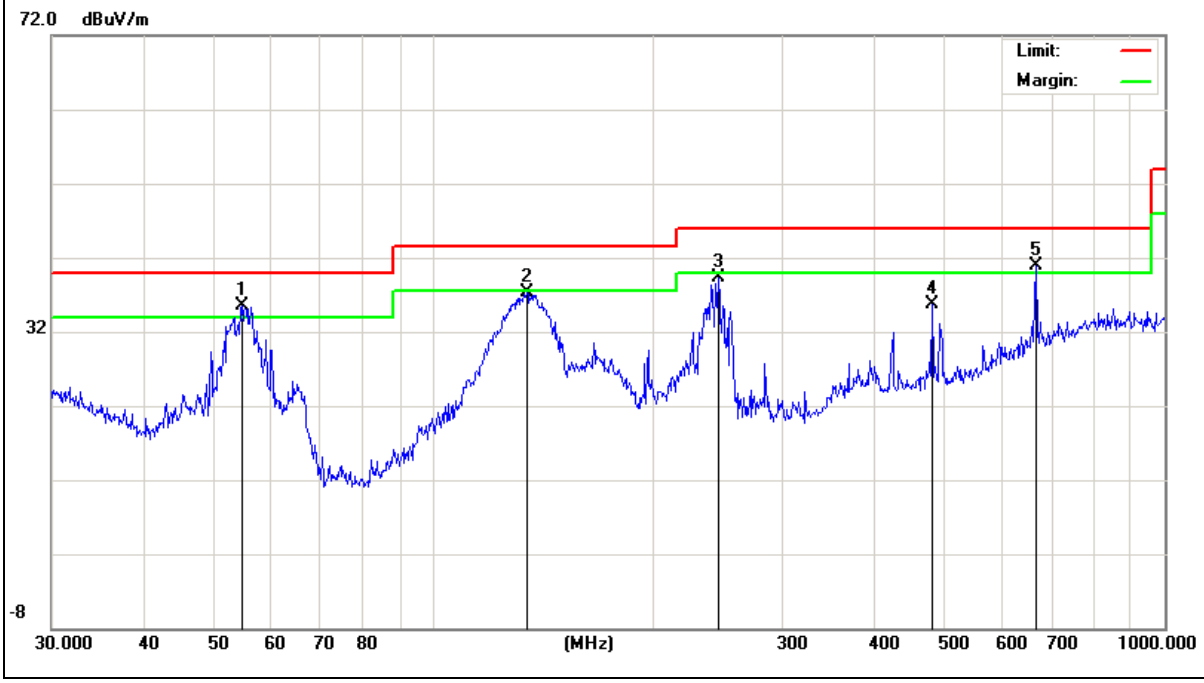
The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.
Distance extrapolation factor =20 log (specific distance/test distance)(dB);
Limit line = specific limits(dBuv) + distance extrapolation factor.

3.4.6 TEST RESULTS (BETWEEN 30 – 1000 MHZ)

EUT：	Graphic Tablet (Pen Tablet)	Model Name ：	DWH69
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 3.7V
Test Mode ：	TX	Polarization：	Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
54.6428	26.23	9.37	35.60	40.00	-4.40	QP
134.0882	25.52	11.70	37.22	43.50	-6.28	QP
245.0900	25.72	13.54	39.26	46.00	-6.74	QP
480.5276	15.77	19.91	35.68	46.00	-10.32	QP
668.1422	17.04	23.91	40.95	46.00	-5.05	QP

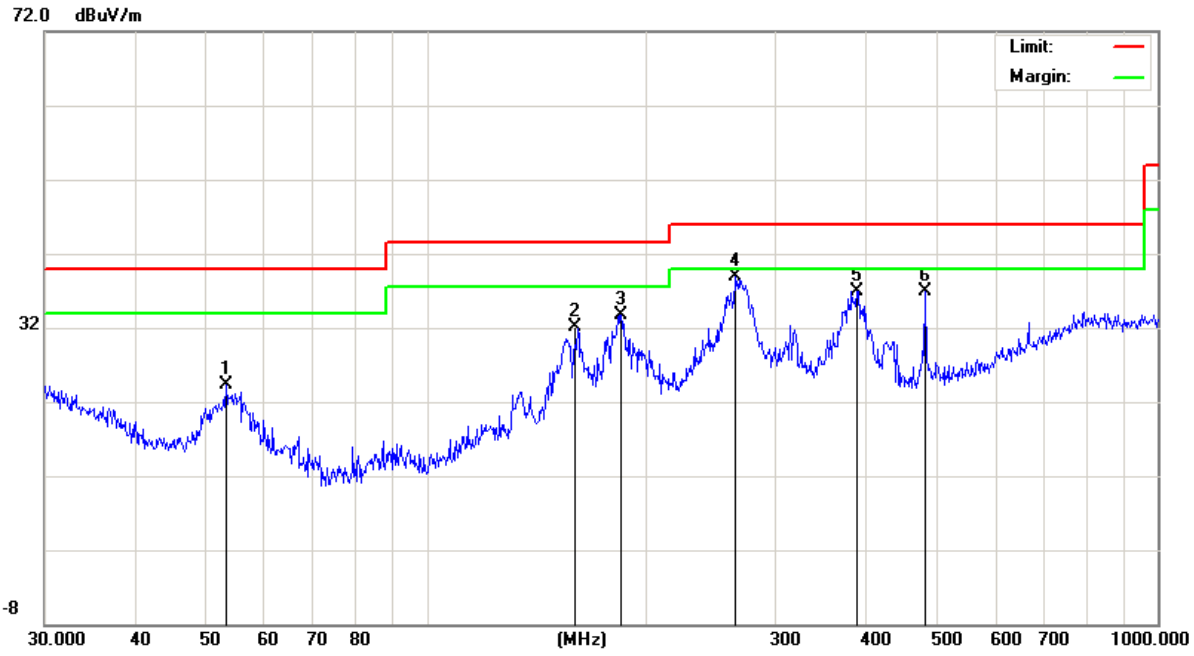
Remark:
1. Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT：	Graphic Tablet (Pen Tablet)	Model Name ：	DWH69
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 3.7V
Test Mode ：	TX	Polarization：	Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
53.1313	14.46	9.80	24.26	40.00	-15.74	QP
158.6676	21.60	10.47	32.07	43.50	-11.43	QP
184.4898	23.06	10.66	33.72	43.50	-9.78	QP
264.7457	25.12	13.75	38.87	46.00	-7.13	QP
387.9920	19.13	17.81	36.94	46.00	-9.06	QP
480.5276	17.03	19.91	36.94	46.00	-9.06	QP

Remark:
1. Factor = Antenna Factor + Cable Loss – Pre-amplifier.

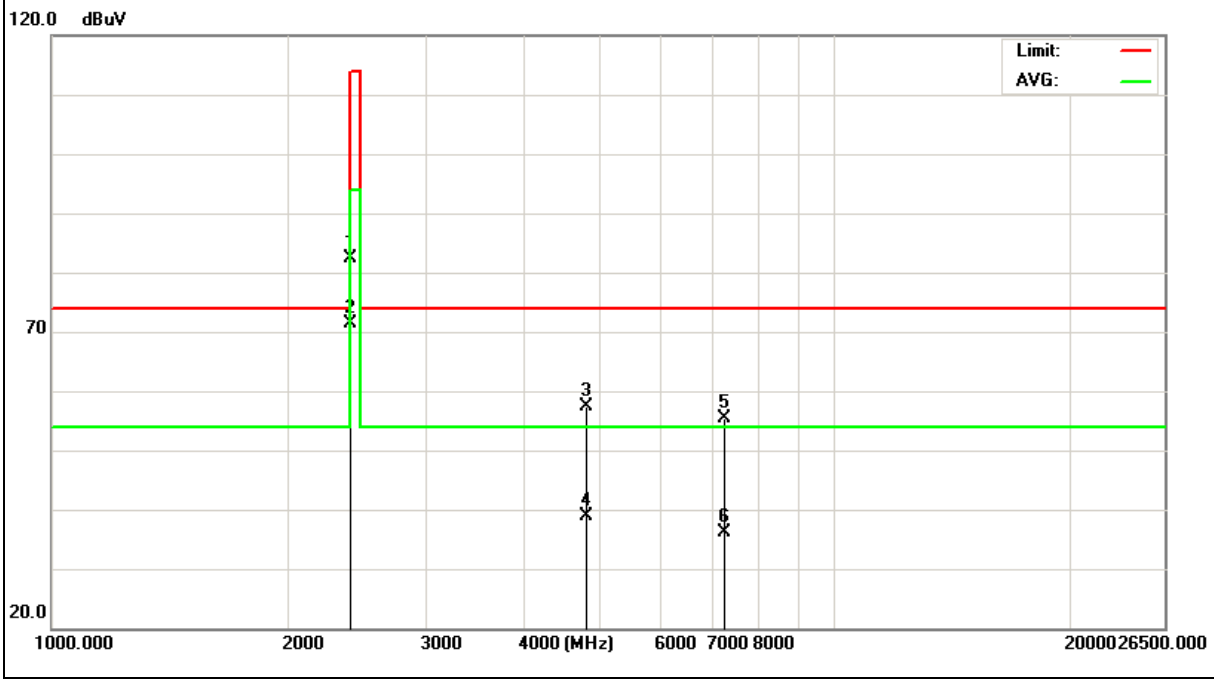


3.4.7 TEST RESULTS (ABOVE 1000 MHZ)

EUT：	Graphic Tablet (Pen Tablet)	Model Name ：	DWH69
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 3.7V
Test Mode ：	TX-2405MHz	Polarization：	Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
2405.121	95.34	-12.99	82.35	114.00	-31.65	peak
2405.121	84.31	-12.99	71.32	94.00	-22.68	AVG
4810.232	61.03	-3.63	57.40	74.00	-16.60	peak
4810.250	42.39	-3.63	38.76	54.00	-15.24	AVG
7215.036	56.31	-0.97	55.34	74.00	-18.66	peak
7215.023	37.19	-0.97	36.22	54.00	-37.78	AVG

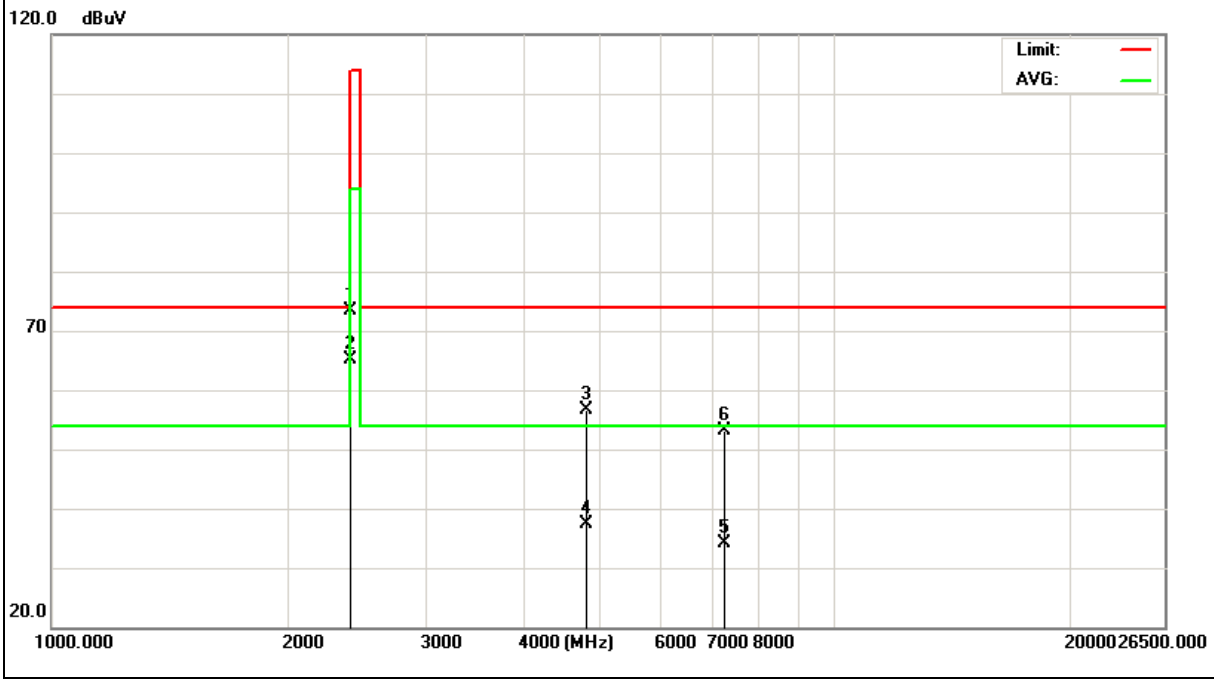
Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.
No emission above 18GHz.



EUT：	Graphic Tablet (Pen Tablet)	Model Name ：	DWH69
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 3.7V
Test Mode ：	TX-2405MHz	Polarization：	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2405.121	86.31	-12.99	73.32	114.00	-40.68	peak
2405.121	78.19	-12.99	65.20	94.00	-28.80	AVG
4810.232	60.33	-3.63	56.70	74.00	-17.30	peak
4810.250	41.08	-3.63	37.45	54.00	-16.55	AVG
7215.023	54.09	-0.97	53.12	74.00	-20.88	peak
7215.036	43.28	-0.97	42.31	54.00	-11.69	AVG

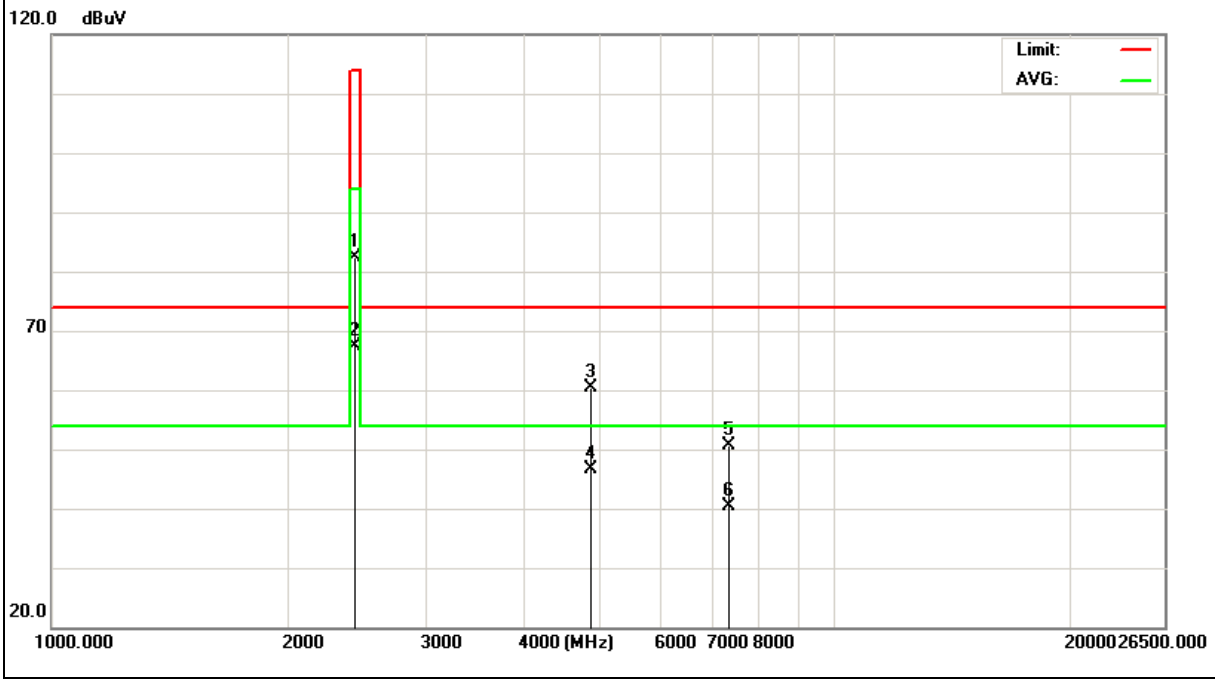
Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.
No emission above 18GHz.



EUT：	Graphic Tablet (Pen Tablet)	Model Name ：	DWH69
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 3.7V
Test Mode ：	TX-2440MHz	Polarization：	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2440.033	95.26	-12.94	82.32	114.00	-31.68	peak
2440.034	80.31	-12.94	67.37	94.00	-26.63	AVG
4880.070	64.15	-3.67	60.48	74.00	-13.52	peak
4880.071	50.37	-3.67	46.70	54.00	-7.30	AVG
7320.121	51.32	-0.81	50.51	74.00	-23.49	peak
7320.102	41.11	-0.81	40.30	54.00	-13.70	AVG

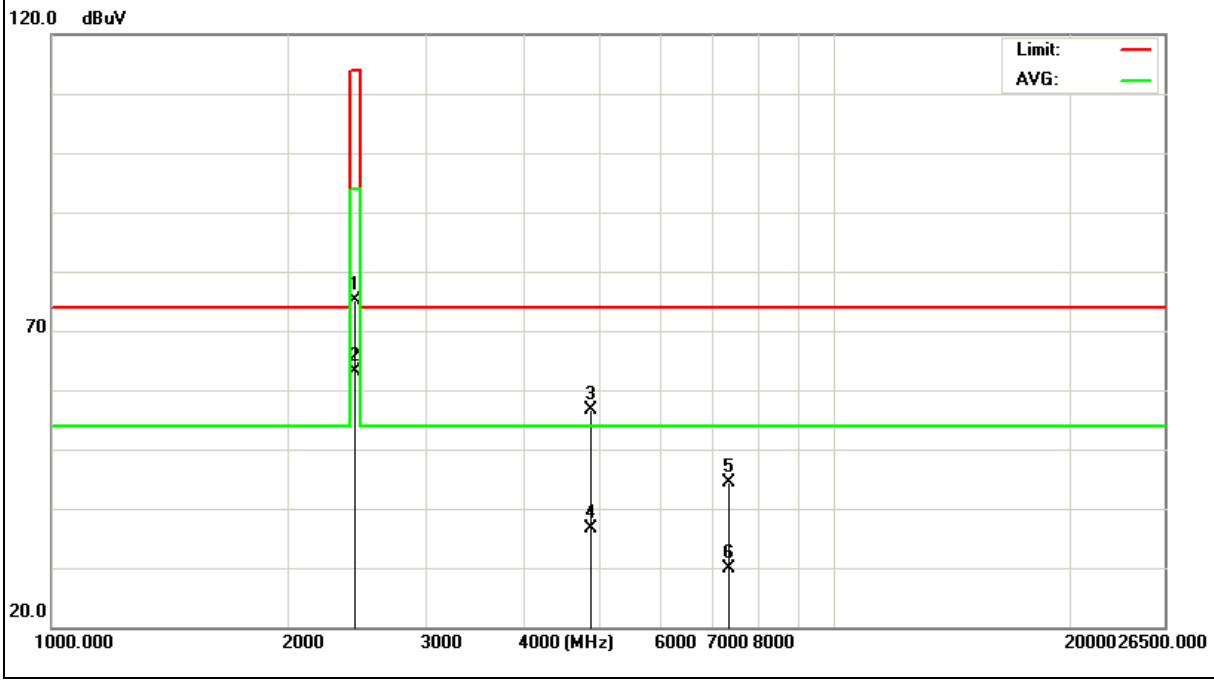
Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.
No emission above 18GHz.



EUT：	Graphic Tablet (Pen Tablet)	Model Name ：	DWH69
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 3.7V
Test Mode ：	TX-2440MHz	Polarization：	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2440.033	88.16	-12.94	75.22	114.00	-38.78	peak
2440.034	76.18	-12.94	63.24	94.00	-30.76	AVG
4880.070	60.37	-3.67	56.70	74.00	-17.30	peak
4880.071	40.36	-3.67	36.69	54.00	-17.31	AVG
7320.121	45.15	-0.81	44.34	74.00	-29.66	peak
7320.102	30.61	-0.81	29.80	54.00	-24.20	AVG

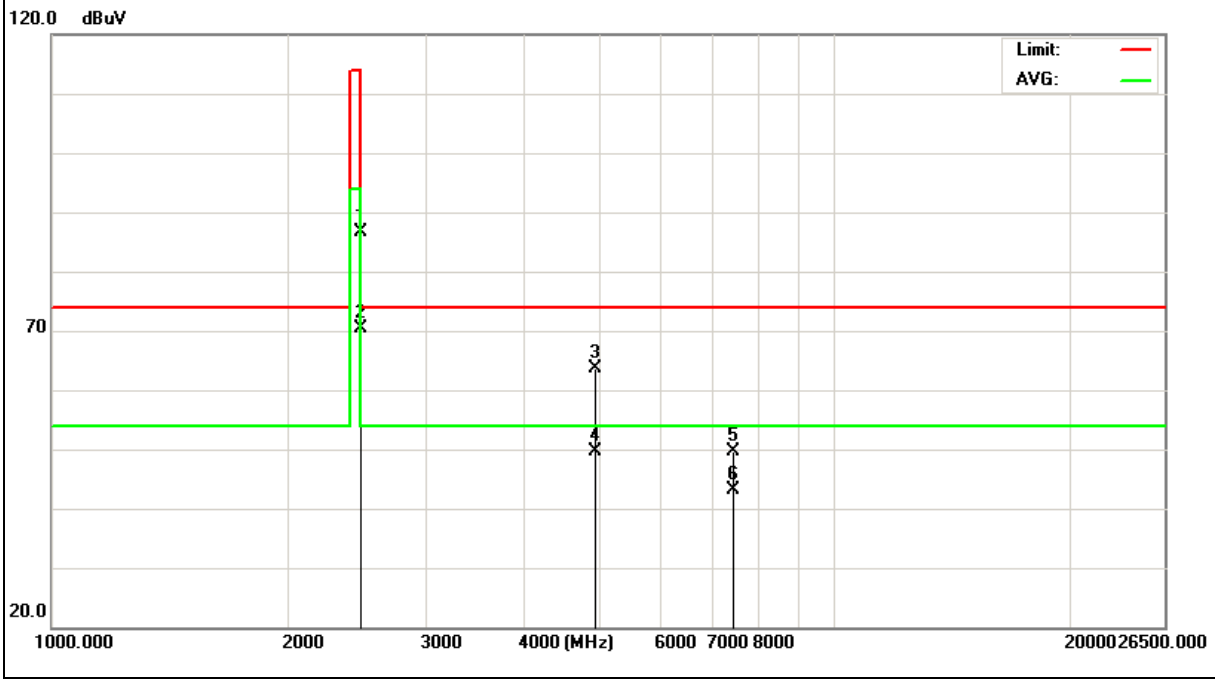
Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.
No emission above 18GHz.



EUT：	Graphic Tablet (Pen Tablet)	Model Name ：	DWH69
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 3.7V
Test Mode ：	TX-2480MHz	Polarization：	Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
2480.103	99.32	-12.79	86.53	114.00	-27.47	peak
2480.103	83.17	-12.79	70.38	94.00	-23.62	AVG
4960.204	67.19	-3.59	63.60	74.00	-10.40	peak
4960.204	53.12	-3.59	49.53	54.00	-4.47	AVG
7440.311	50.36	-0.68	49.68	74.00	-24.32	peak
7440.311	43.87	-0.68	43.19	54.00	-10.81	AVG

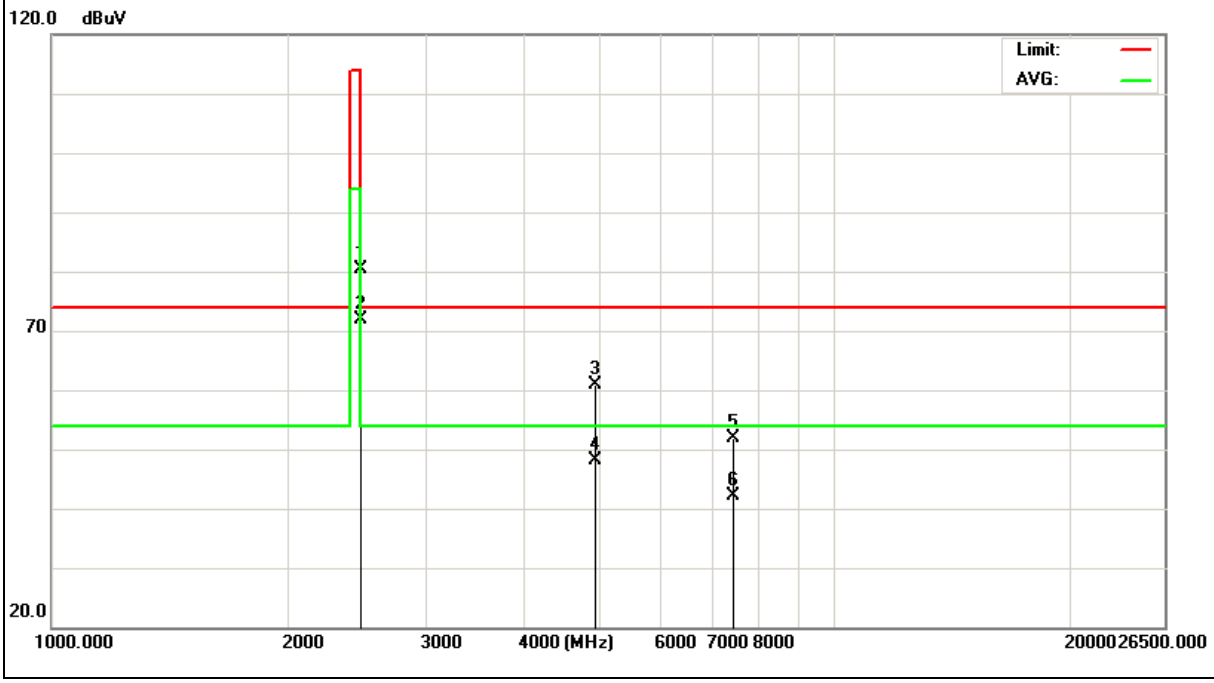
Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.
No emission above 18GHz.



EUT：	Graphic Tablet (Pen Tablet)	Model Name ：	DWH69
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 3.7V
Test Mode ：	TX-2480MHz	Polarization：	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2480.103	93.17	-12.79	80.38	114.00	-33.62	peak
2480.103	84.73	-12.79	71.94	94.00	-22.06	AVG
4960.204	64.53	-3.59	60.94	74.00	-13.06	peak
4960.204	51.76	-3.59	48.17	54.00	-5.83	AVG
7440.311	52.49	-0.68	51.81	74.00	-22.19	peak
7440.311	42.91	-0.68	42.23	54.00	-11.77	AVG

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.
No emission above 18GHz.



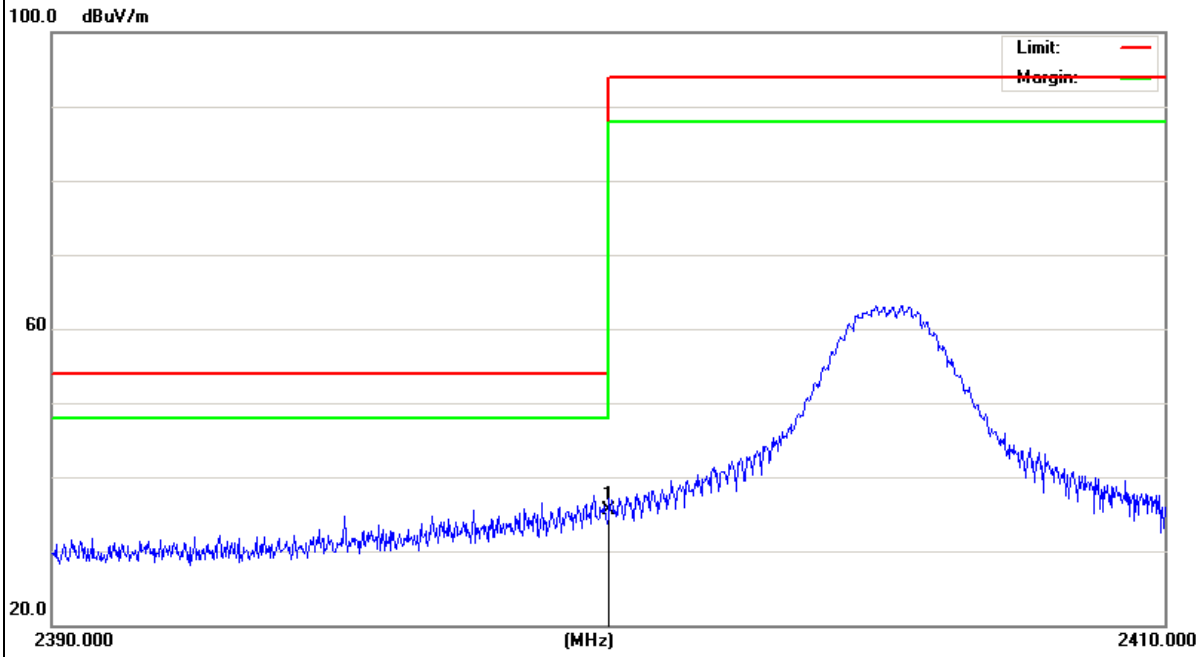
Note: EUT Pre-scan X/Y/Z orientation, only worst case is presented in the report(X orientation).

3.4.8 TEST RESULTS (RESTRICTED BANDS REQUIREMENTS)

EUT：	Graphic Tablet (Pen Tablet)	Model Name ：	DWH69
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 3.7V
Test Mode ：	TX-2405MHz	Polarization：	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2400.000	43.24	-7.74	35.50	54.00	-18.50	peak

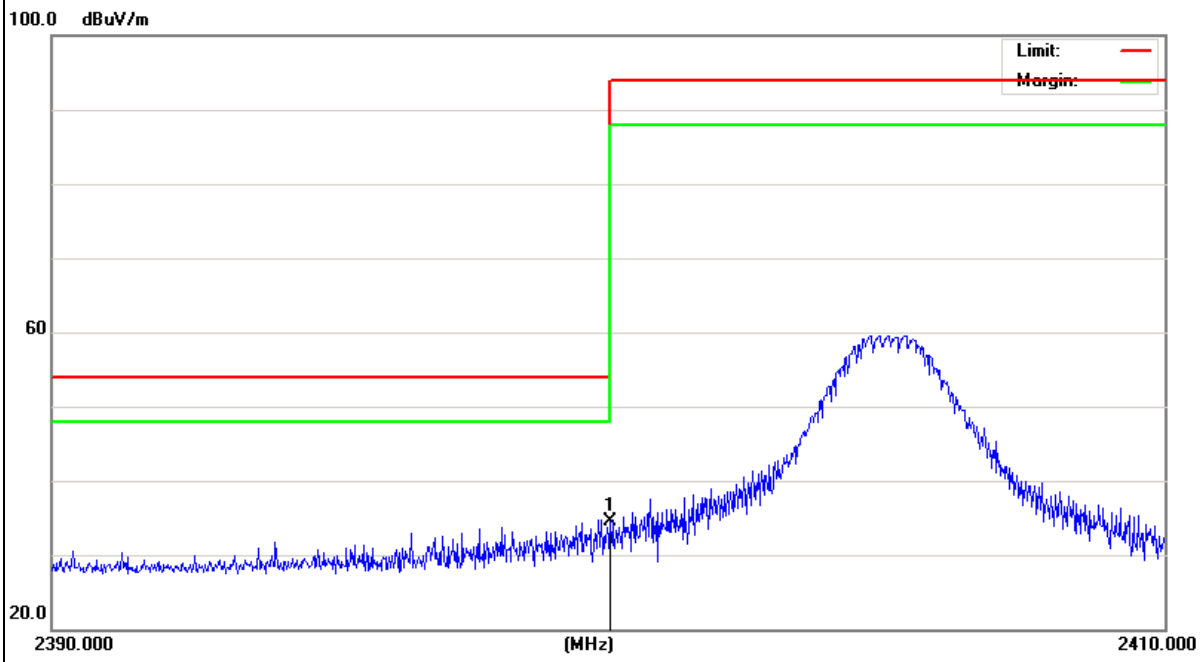
Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT：	Graphic Tablet (Pen Tablet)	Model Name ：	DWH69
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 3.7V
Test Mode ：	TX-2405MHz	Polarization：	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2400.000	42.22	-7.74	34.48	54.00	-19.52	peak

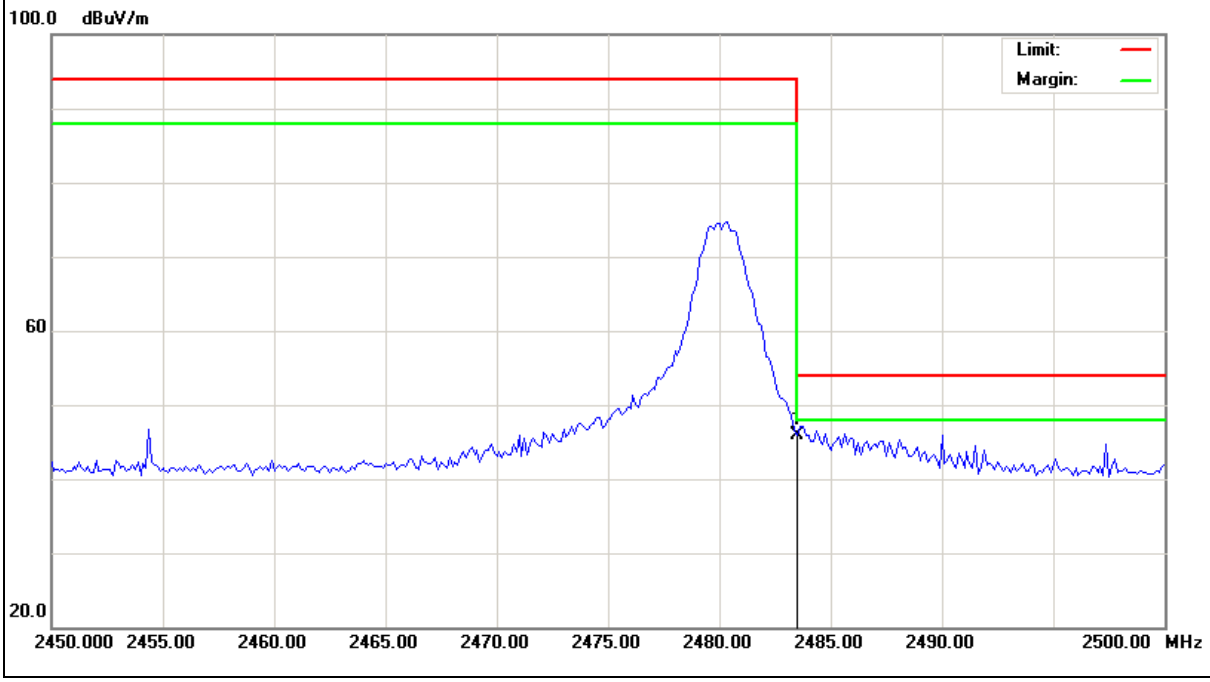
Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT：	Graphic Tablet (Pen Tablet)	Model Name ：	DWH69
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 3.7V
Test Mode ：	TX-2480MHz	Polarization：	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2483.500	51.03	-5.03	46.00	54.00	-8.00	peak

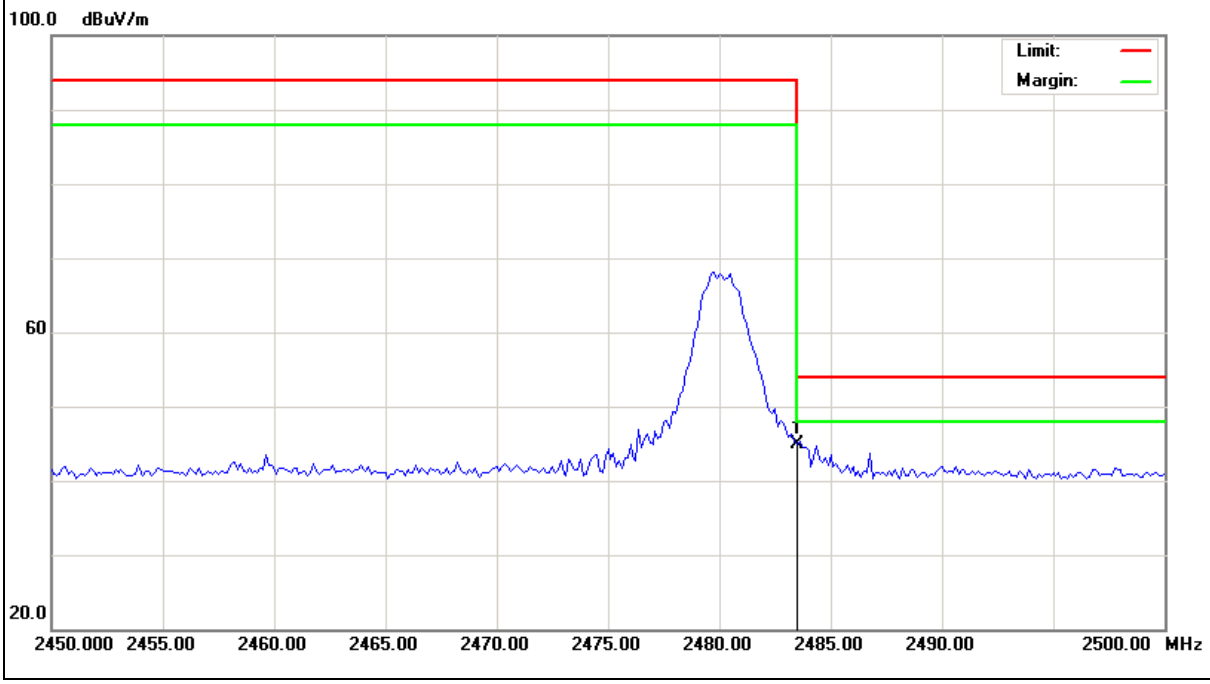
Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT：	Graphic Tablet (Pen Tablet)	Model Name ：	DWH69
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 3.7V
Test Mode ：	TX-2480MHz	Polarization：	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2483.500	49.95	-5.03	44.92	54.00	-9.08	peak

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.



4. BANDWIDTH TEST

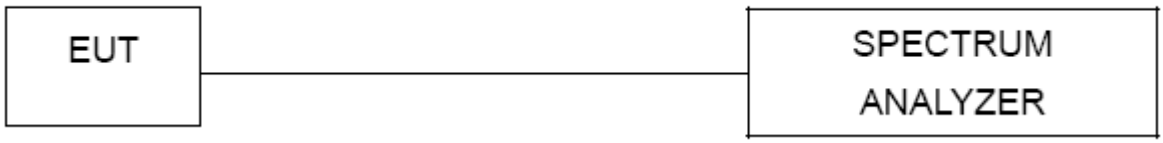
4.1 TEST PROCEDURE

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≧RBW, Sweep time = Auto.

4.2 DEVIATION FROM STANDARD

No deviation.

4.3 TEST SETUP

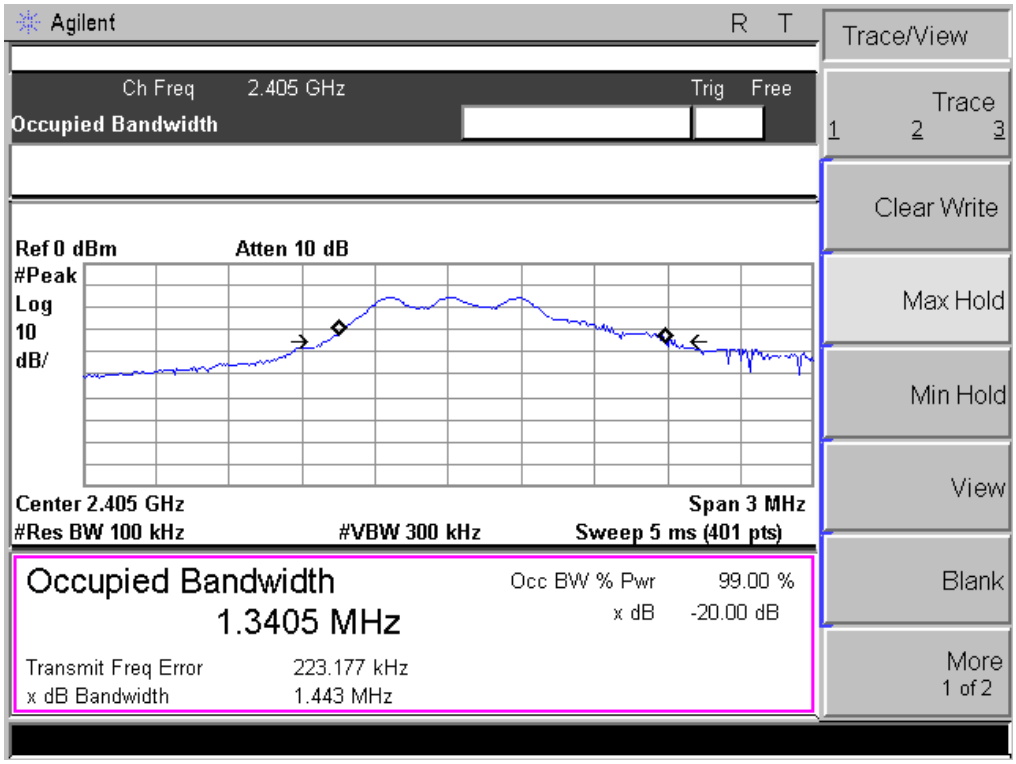


4.4 TEST RESULTS

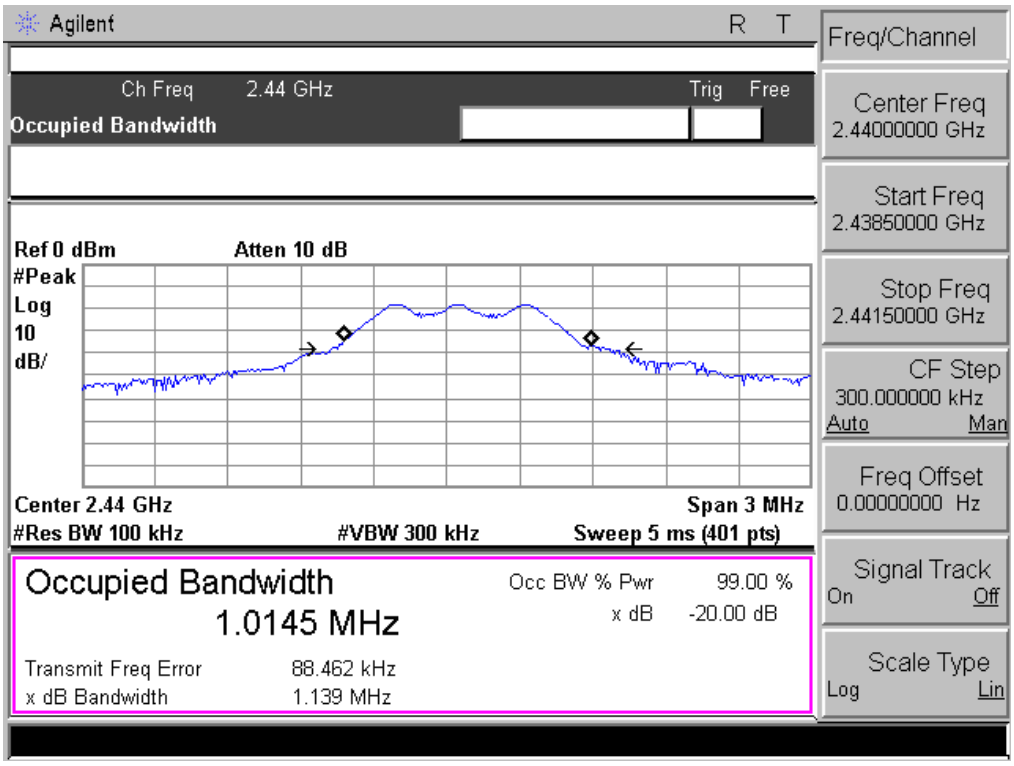
EUT：	Graphic Tablet (Pen Tablet)	Model Name ：	DWH69
Temperature：	26 ℃	Relative Humidity：	53%
Pressure：	1020 hPa	Test Power ：	DC 3.7V
Test Mode ：	TX		

Test Channel	Frequency (MHz)	20 dBc Bandwidth (MHz)
CH01	2405	1.443
CH02	2440	1.139
CH03	2480	1.066

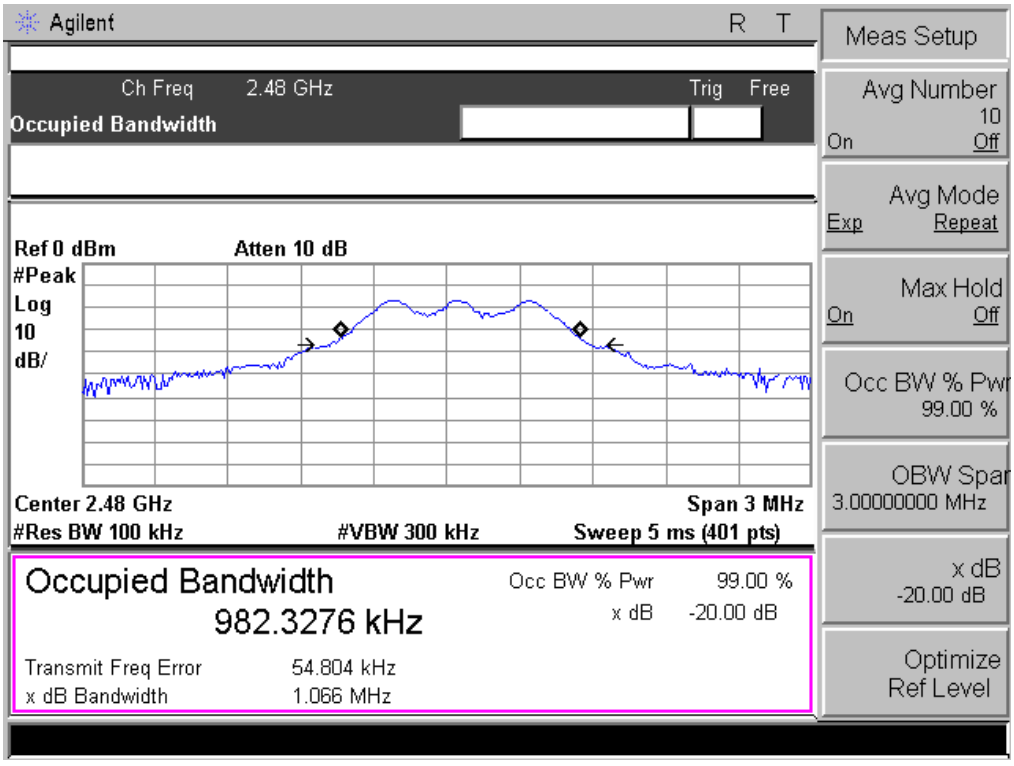
CH01



CH02

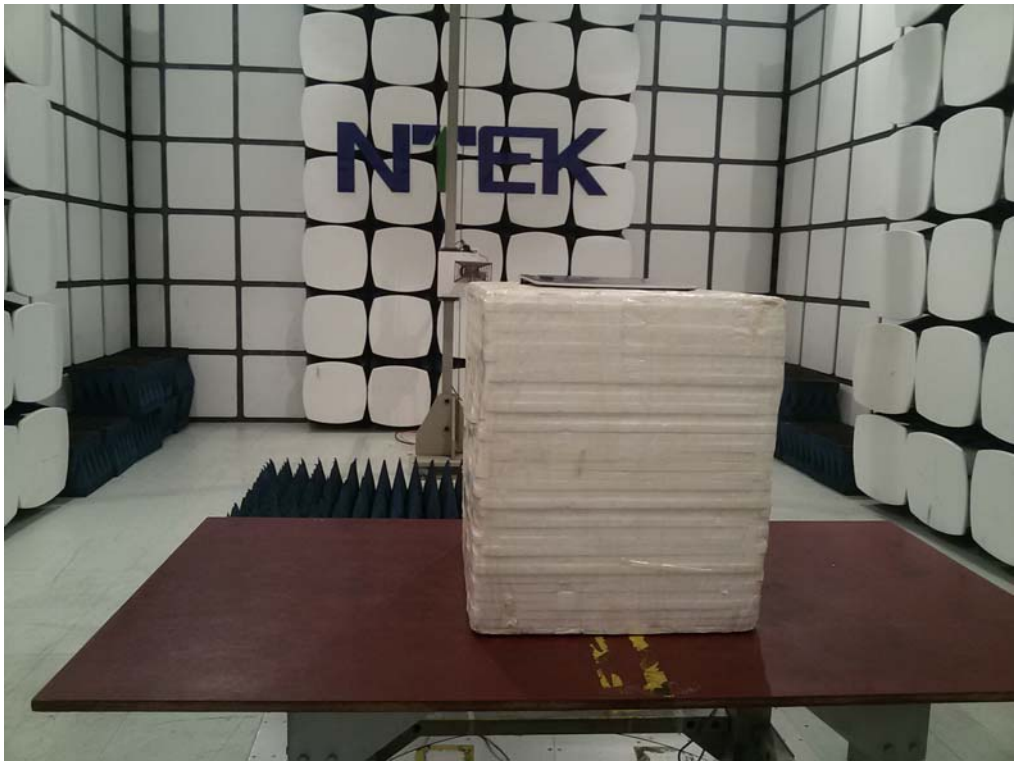

Agilent
R T
Ch Freq 2.44 GHz
Trig Free
Occupied Bandwidth
Ref 0 dBm
Atten 10 dB
#Peak
Log
10
dB/
Center 2.44 GHz
Span 3 MHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 5 ms (401 pts)
Occupied Bandwidth
1.0145 MHz
Occ BW % Pwr 99.00 %
x dB -20.00 dB
Transmit Freq Error 88.462 kHz
x dB Bandwidth 1.139 MHz
Freq/Channel
Center Freq
2.44000000 GHz
Start Freq
2.43850000 GHz
Stop Freq
2.44150000 GHz
CF Step
300.000000 kHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
Scale Type
Log Lin

CH03


Agilent
R T
Ch Freq 2.48 GHz
Trig Free
Occupied Bandwidth
Ref 0 dBm
Atten 10 dB
#Peak
Log
10
dB/
Center 2.48 GHz
Span 3 MHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 5 ms (401 pts)
Occupied Bandwidth
982.3276 kHz
Occ BW % Pwr 99.00 %
x dB -20.00 dB
Transmit Freq Error 54.804 kHz
x dB Bandwidth 1.066 MHz
Meas Setup
Avg Number
10
On Off
Avg Mode
Exp Repeat
Max Hold
On Off
Occ BW % Pwr
99.00 %
OBW Span
3.00000000 MHz
x dB
-20.00 dB
Optimize
Ref Level

5. EUT TEST PHOTO

Radiated Measurement Photos



Conducted Measurement Photos