FCC Part 15C Test Report
FCC ID: 2AE4OGLINT

Product Name:	**Remote control**
Trademark:	Keyshare
Model Name :	**GLINT 2.0**
Prepared For : Address :	**Hunan Keyshare Information Technology Co., Ltd** 19th building, Changsha CEC Software Park, No.39 Jianshan Road, High-Tech, Industrial Eatate,Yuelu District, Changsha, Hunan, China
Prepared By : Address :	**Shenzhen BCTC Technology Co., Ltd.** No.101,Yousong Road,Longhua New District, Shenzhen,China
Test Date:	**May 21 – May 28, 2016**
Date of Report :	**Mar. 28, 2016**
Report No.:	**BCTC-160505810-1E**

TEST RESULT CERTIFICATION

Applicant's name	:	**Hunan Keyshare Information Technology Co., Ltd**
Address	:	19th building, Changsha CEC Software Park, No.39 Jianshan Road, High-Tech, Industrial Eatate,Yuelu District, Changsha, Hunan, China
Manufacture's Name	:	**Hunan Keyshare Information Technology Co., Ltd**
Address	:	19th building, Changsha CEC Software Park, No.39 Jianshan Road, High-Tech, Industrial Eatate,Yuelu District, Changsha, Hunan, China
Product description		
Product name	:	Remote control
Model and/or type reference	:	GLINT 2.0
Serial Model	:	N/A
Test Standards	:	FCC Part15.247 ANSI C63.10-2013 KDB 558074 D01 DTS Meas Guidance v03r03

This device described above has been tested by BCTC, 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.

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Testing Engineer	:	Eric Yang
Reviewer (Supervisor)	:	Jade Yang
Approved & Authorized Signer(Manager)	:	Carson Zhang

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1. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

FCC Part15 (15.247) , Subpart C			
Standard Section	Test Item	Judgment	Remark
15.207	Conducted Emission	PASS	
15.247 (a)(2)	6dB Bandwidth	PASS	
15.247 (b)	Peak Output Power	PASS	
15.247 (c)	Radiated Spurious Emission	PASS	
15.247 (d)	Power Spectral Density	PASS	
15.205	Restricted Band of Operation	PASS	
15.247 (d)	Band Edge (Out of Band Emissions)	PASS	
15.203	Antenna Requirement	PASS	

NOTE:

(1)” N/A” denotes test is not applicable in this Test Report

1.1 TEST FACILITY

Shenzhen BCTC Technology Co., Ltd.
Add. : No.101,Yousong Road,Longhua New District, Shenzhen,China
FCC Registered No.: 187086

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	Remote control
Trade Name	Keyshare
Model Name	GLINT 2.0
Serial Model	N/A
Model Difference	N/A
Product Description	Operation Frequency: 5G:5745-5825 MHz(5G 802.11a/n(HT20)) 2.4G:2404-2480MHz Modulation Type: 5G:Orthogonal Frequency Division Multiplexing(OFDM) 2.4G:DSSS Antenna Designation: Please see Note 3. Antenna Gain (dBi) 5G:2dBi for (declare by Applicant) 2.4G:3.0dBi (declare by Applicant) 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	Model: LY012SPS-08010CH Input: AC100-240V~ 50-60Hz 0.35A Output: 8.0V⎓ 1.0A
Battery	DC 7.4V 6000mA
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.

Channel List

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
00	2404	01	2405	02	2406
03	2407	04	2408	05	2409
06	2410	07	2411	08	2412
-	-	-	-	-	-
-	-	-	-	-	-
68	2472	69	2473	70	2474
71	2475	72	2476	73	2477
74	2478	75	2479	76	2480

3.

Table for Filed Antenna

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)	NOTE
1	N/A	N/A	External Antenna	N/A	3.0	
2	N/A	N/A	External Antenna	N/A	3.0	

Note: The EUT is support MIMO mode, Directional Gain=3dBi+10log(2)=6.01dBi.

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.

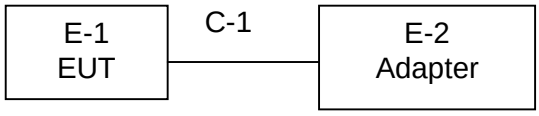
Alltest Mode	Description
Mode 1	TX Mode

Frequency	2404 MHz	2440 MHz	2480 MHz
Channel	Low	Middle	High

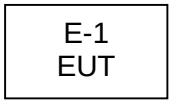
Note:
(1) The measurements are performed at the highest, middle, lowest available channels.

2.3 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

Conducted Emission Test



Radiated Spurious 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	Remote control	Keyshare	GLINT 2.0	N/A	EUT
E-2	Adapter	N/A	LY012SPS-08010CH	N/A	

Item	Shielded Type	Ferrite Core	Length	Note
C1	NO	NO	1.5M	DC cable unshielded

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.	Last calibration	Calibrated until	Calibration period
1	Spectrum Analyzer	Agilent	E4407B	MY45109572	2015.08.25	2016.08.24	1 year
2	Test Receiver	R&S	ESPI	101396	2015.08.25	2016.08.24	1 year
3	Bilog Antenna	SCHWARZBECK	VULB9160	VULB9160-3369	2015.08.25	2016.08.24	1 year
4	50Ω Coaxial Switch	Anritsu	MP59B	6200264416	2015.06.07	2016.06.06	1 year
5	Spectrum Analyzer	ADVANTEST	R3132	150900201	2015.06.07	2016.06.06	1 year
6	Horn Antenna	SCHWARZBECK	9120D	9120D-1275	2015.08.25	2016.08.24	1 year
7	Horn Ant	Schwarzbeck	BBHA 9170	9170-181	2015.07.06	2016.07.05	1 year
8	Amplifier	SCHWARZBECK	BBV9718	9718-270	2015.08.25	2016.08.24	1 year
9	Amplifier	SCHWARZBECK	BBV9743	9743-119	2015.08.25	2016.08.24	1 year
10	Loop Antenna	ARA	PLA-1030/B	1029	2015.06.08	2016.06.07	1 year
11	Power Meter	R&S	NRVS	100696	2015.07.06	2016.07.05	1 year
12	Power Sensor	R&S	URV5-Z55	161905	2015.07.06	2016.07.05	1 year
13	RF cables	R&S	N/A	N/A	2015.07.06	2016.07.05	1 year

Conduction Test equipment

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until	Calibration period
1	Test Receiver	R&S	ESCI	101421	2015.08.25	2016.08.24	1 year
2	LISN	SCHWARZBECK	NSLK8127	812779	2015.08.25	2016.08.24	1 year
3	LISN	EMCO	Feb-16	42990	2016.08.24	2016.08.23	1 year
4	50Ω Coaxial Switch	Anritsu	MP59B	6200264417	2015.06.07	2016.06.06	1 year
5	Passive Voltage Probe	R&S	ESH2-Z3	100196	2015.06.07	2016.06.06	1 year

3. EMC EMISSION TEST

3.1 CONDUCTED EMISSION MEASUREMENT

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

FREQUENCY (MHz)	Class B (dBuV)		Standard
	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 *	FCC
0.50 -5.0	56.00	46.00	FCC
5.0 -30.0	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

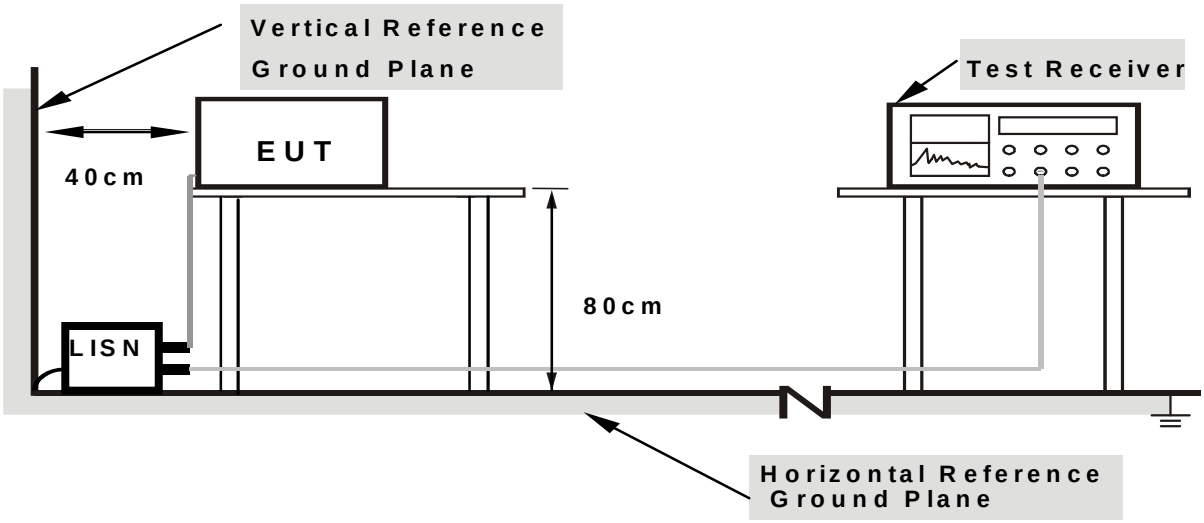
3.1.2 TEST PROCEDURE

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.

3.1.3 DEVIATION FROM TEST STANDARD

No deviation

3.1.4 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

3.1.5 EUT OPERATING CONDITIONS

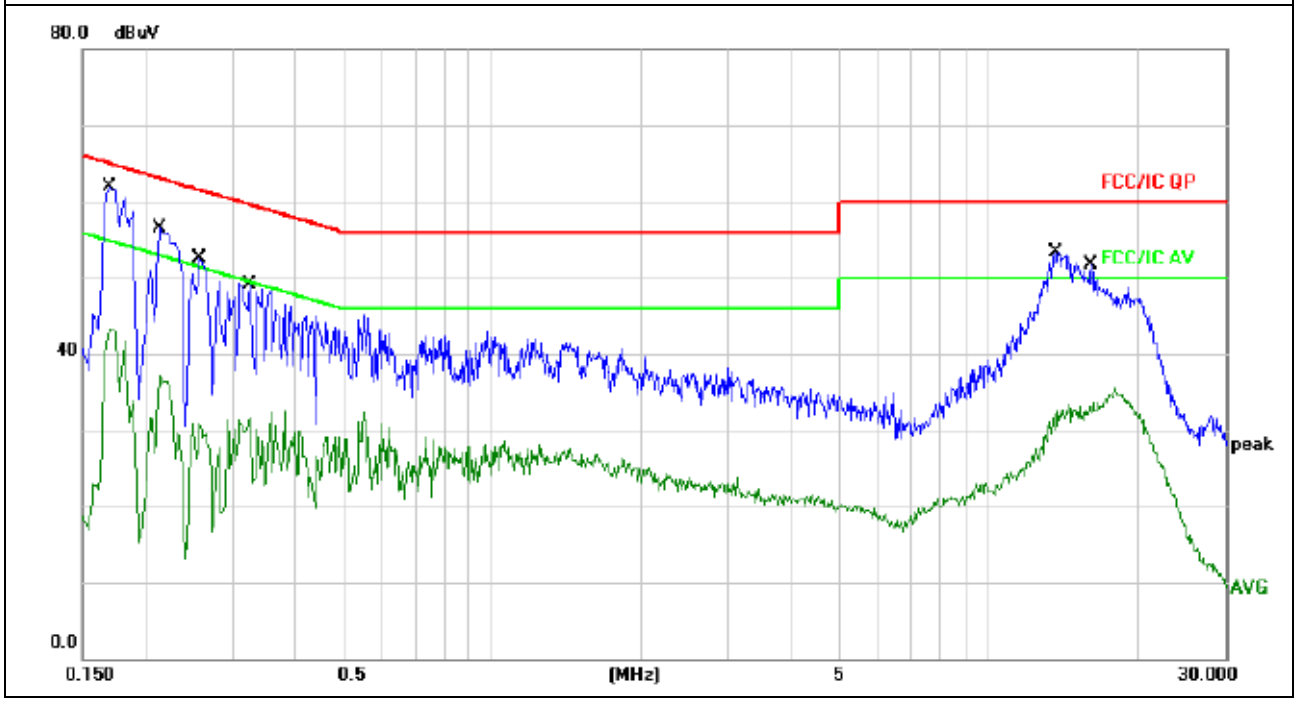
The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

3.1.6 TEST RESULTS

EUT：	Remote control	Model Name. ：	GLINT 2.0
Temperature：	26℃	Relative Humidity：	54%
Pressure：	1010hPa	Phase：	L
Test Voltage ：	AC120V/60Hz	Test Mode：	TX

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV)	Limits (dBμV)	Margin (dB)	Detector Type
0.1700	51.89	10.06	61.95	64.96	-3.01	QP
0.1700	33.21	10.06	43.27	54.96	-11.69	AVG
0.2140	46.44	10.07	56.51	63.04	-6.53	QP
0.2140	27.10	10.07	37.17	53.04	-15.87	AVG
0.2580	42.44	10.08	52.52	61.49	-8.97	QP
0.2580	20.77	10.08	30.85	51.49	-20.64	AVG
0.3260	39.04	10.10	49.14	59.55	-10.41	QP
0.3260	21.56	10.10	31.66	49.55	-17.89	AVG
13.6580	43.09	10.14	53.23	60.00	-6.77	QP
13.6580	22.56	10.14	32.70	50.00	-17.30	AVG
16.1100	41.51	10.15	51.66	60.00	-8.34	QP
16.1100	24.46	10.15	34.61	50.00	-15.39	AVG

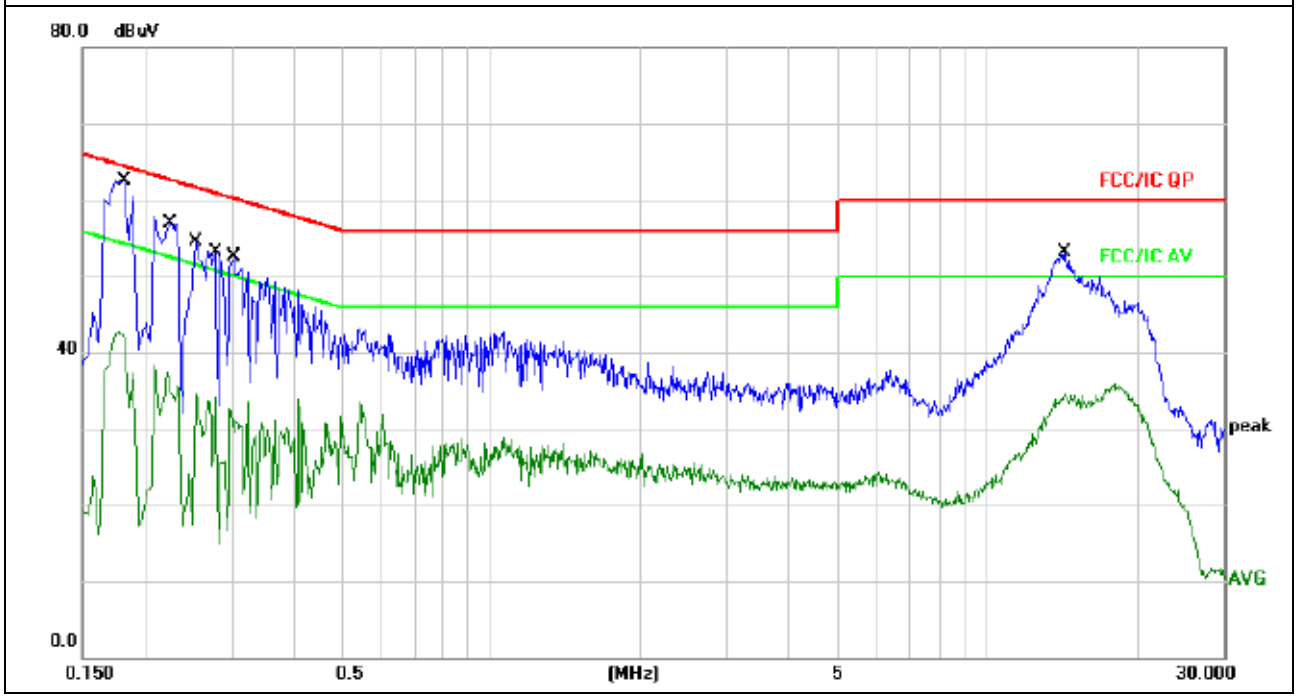
Remark:
1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.



EUT：	Remote control	Model Name. ：	GLINT 2.0
Temperature：	26℃	Relative Humidity：	54%
Pressure：	1010hPa	Phase：	N
Test Voltage ：	AC120V/60Hz	Test Mode：	TX

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV)	(dBμV)	(dB)	
0.1819	52.47	10.06	62.53	64.39	-1.86	QP
0.1819	32.67	10.06	42.73	54.39	-11.66	AVG
0.2220	47.27	10.07	57.34	62.74	-5.40	QP
0.2220	27.36	10.07	37.43	52.74	-15.31	AVG
0.2540	44.43	10.08	54.51	61.62	-7.11	QP
0.2540	24.39	10.08	34.47	51.62	-17.15	AVG
0.2779	43.25	10.09	53.34	60.88	-7.54	QP
0.2779	24.10	10.09	34.19	50.88	-16.69	AVG
0.3020	42.33	10.09	52.42	60.19	-7.77	QP
0.3020	23.32	10.09	33.41	50.19	-16.78	AVG
14.3540	42.87	10.14	53.01	60.00	-6.99	QP
14.3540	24.44	10.14	34.58	50.00	-15.42	AVG

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



3.2 RADIATED EMISSION MEASUREMENT

3.2.1 RADIATED EMISSION LIMITS (Frequency Range 9kHz-1000MHz)

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

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

LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000MHz)

FREQUENCY (MHz)	Class B (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).

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

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

3.2.2 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 meters(above 1GHz, the hight was 1.5m) above the ground at a 3 meter Chamber. 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(above 1GHz, the hight was 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.
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:

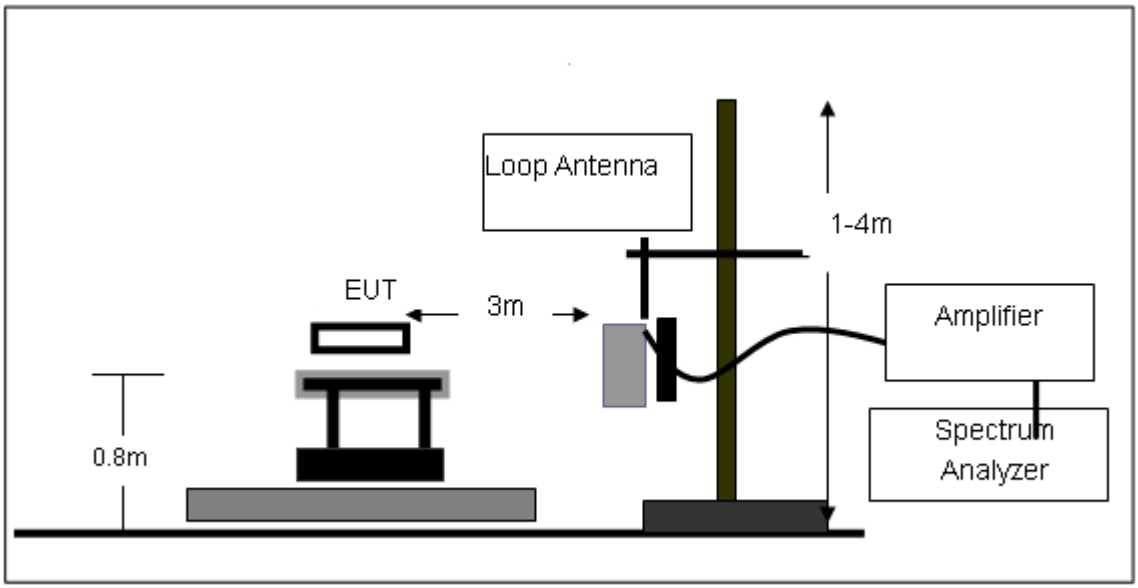
Both horizontal and vertical antenna polarities were tested
and performed pretest to three orthogonal axis. The worst case emissions were reported

3.2.3 DEVIATION FROM TEST STANDARD

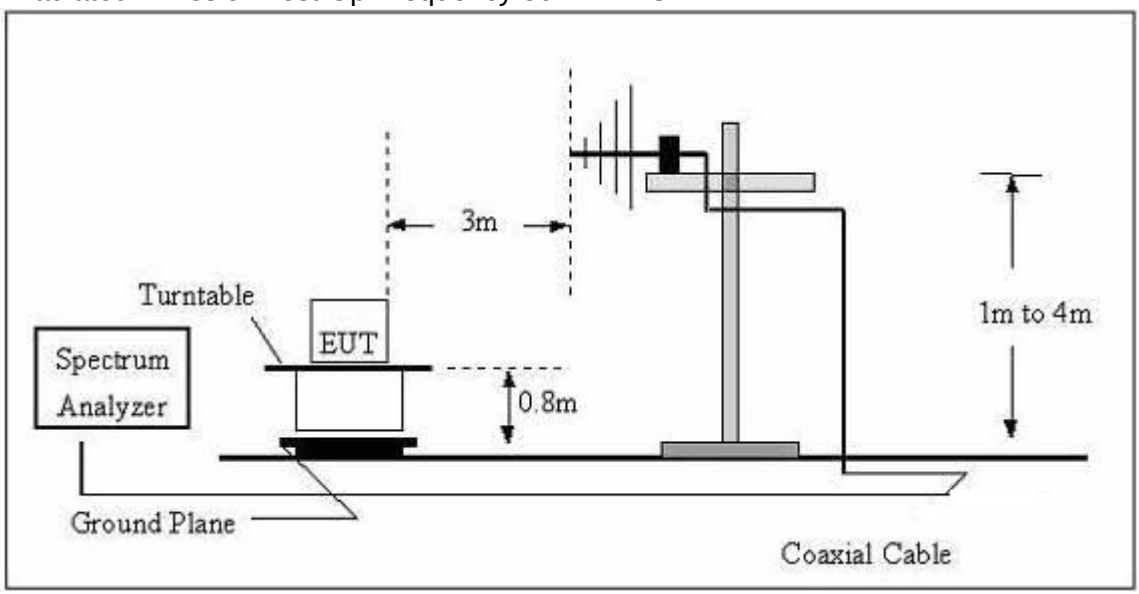
No deviation

3.2.4 TEST SETUP

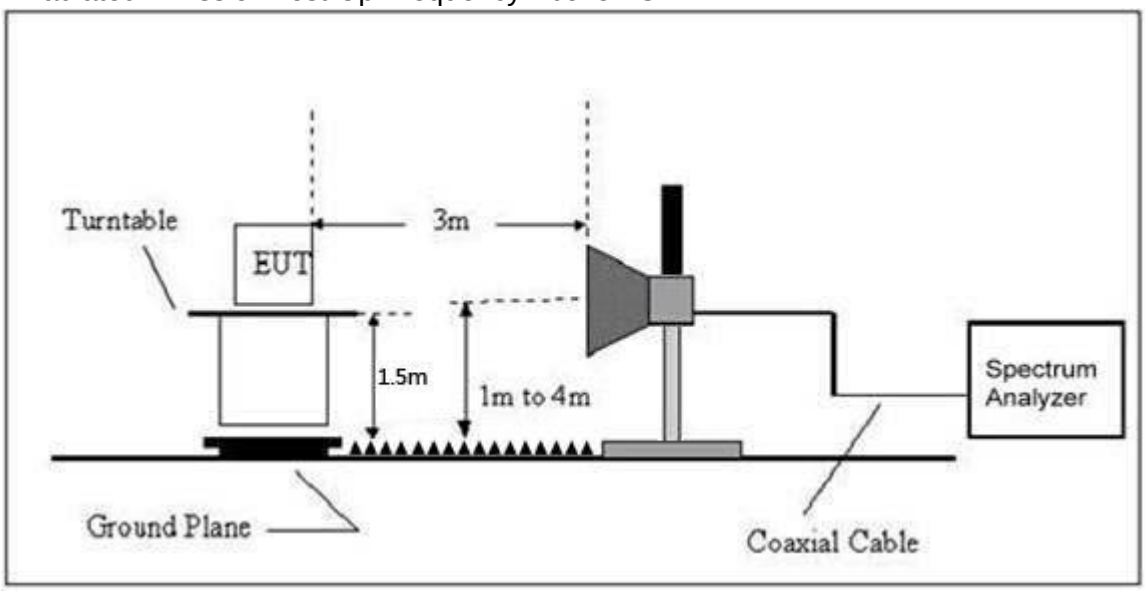
（A）Radiated Emission Test-Up Frequency Below 30MHz



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



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



3.2.5 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

3.2.6 TEST RESULTS (BETWEEN 9KHZ – 30 MHZ)

EUT：	Remote control	Model Name. ：	GLINT 2.0
Temperature：	20℃	Relative Humidtity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 7.4V
Test Mode ：	TX	Polarization :	--

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

NOTE:

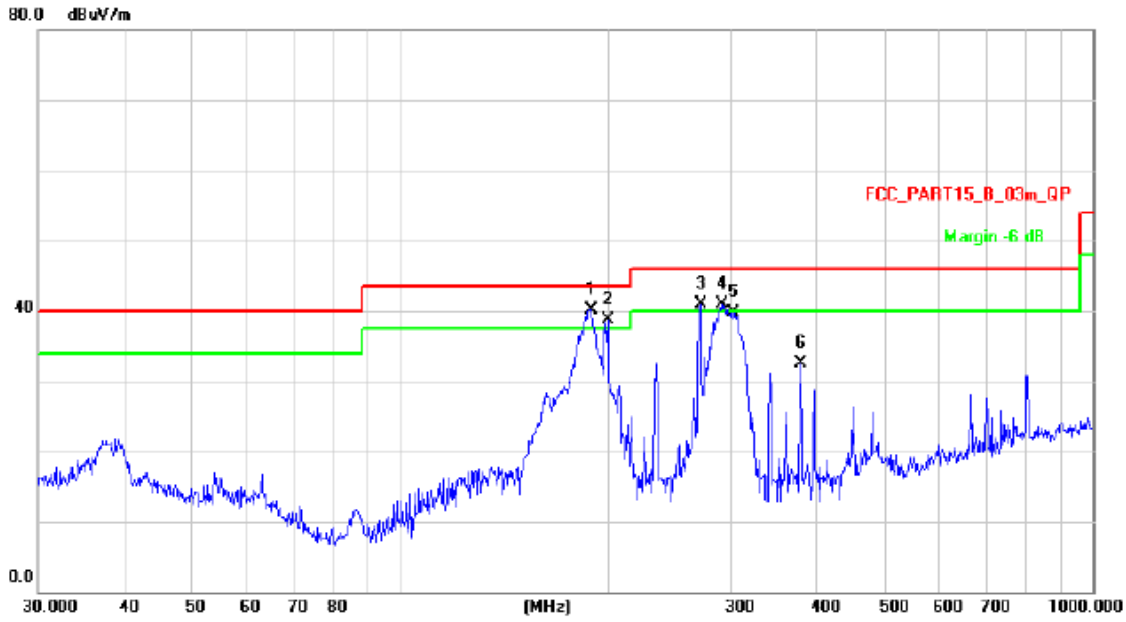
The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.
Distance extrapolation factor =40 log (specific distance/test distance)(dB);
Limit line = specific limits(dBuv) + distance extrapolation factor.

3.2.7 TEST RESULTS (BETWEEN 30MHZ – 1GHZ)

EUT：	Remote control	Model Name ：	GLINT 2.0
Temperature：	26℃	Relative Humidity：	54%
Pressure：	1010 hPa	Polarization：	Horizontal
Test Voltage ：	DC 7.4V		
Test Mode ：	TX		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
189.0754	55.56	-15.46	40.10	43.50	-3.40	QP
199.2863	54.78	-16.16	38.62	43.50	-4.88	QP
271.3246	54.42	-13.45	40.97	46.00	-5.03	QP
291.0360	53.77	-12.82	40.95	46.00	-5.05	QP
302.4812	52.30	-12.52	39.78	46.00	-6.22	QP
378.5843	43.18	-10.70	32.48	46.00	-13.52	QP

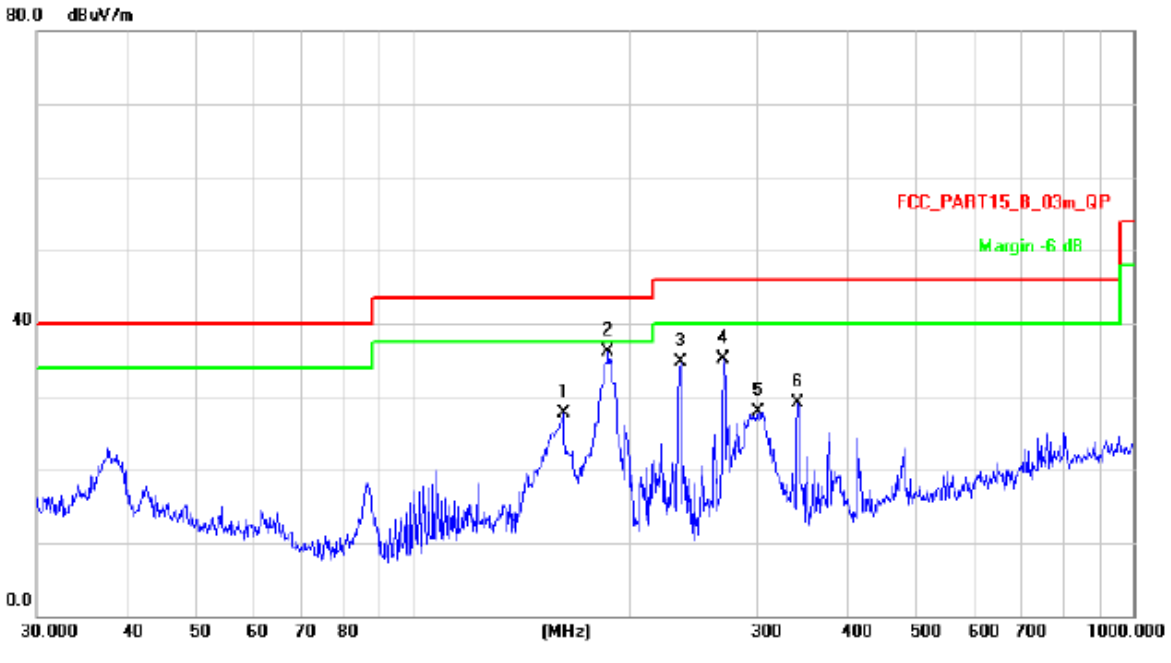
Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT：	Remote control	Model Name ：	GLINT 2.0
Temperature：	26℃	Relative Humidity：	54%
Pressure：	1010 hPa	Polarization：	Vertical
Test Voltage ：	DC 7.4V		
Test Mode ：	TX		

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
161.4742	40.66	-12.96	27.70	43.50	-15.80	QP
186.4425	51.25	-15.14	36.11	43.50	-7.39	QP
234.9909	49.39	-14.77	34.62	46.00	-11.38	QP
269.4284	48.71	-13.53	35.18	46.00	-10.82	QP
301.4224	40.53	-12.55	27.98	46.00	-18.02	QP
341.9786	40.54	-11.53	29.01	46.00	-16.99	QP

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



3.2.8 TEST RESULTS (ABOVE 1000 MHZ)

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Pre-amplifier (dB)	Cable Loss (dB)	Antenna Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
Low Channel:2404MHz									
V	4808.00	67.35	39.55	7.85	25.66	61.31	74	-12.69	PK
V	4808.00	48.74	39.55	7.85	25.66	42.70	54	-11.30	AV
V	7212.00	66.59	38.33	7.52	24.55	60.33	74	-13.67	PK
V	7212.00	48.63	38.33	7.52	24.55	42.37	54	-11.63	AV
V	15450.00	51.48	35.23	6.75	26.59	49.59	74	-24.41	PK
H	4808.00	68.27	39.55	7.85	25.66	62.23	74	-11.77	PK
H	4808.00	49.46	39.55	7.85	25.66	43.42	54	-10.58	AV
H	7212.00	69.39	38.33	7.52	23.55	62.13	74	-11.87	PK
H	7212.00	52.46	38.33	7.52	23.22	44.87	54	-9.13	AV
H	15450.00	47.34	35.45	6.75	27.88	46.52	74	-27.48	PK
Middle Channel:2440MHz									
V	4880.00	65.56	38.89	7.57	25.45	59.69	74	-14.33	PK
V	4880.00	48.65	38.89	7.57	25.45	42.78	54	-11.22	AV
V	7320.00	66.68	38.78	7.35	24.78	60.03	74	-13.97	PK
V	7320.00	48.25	38.78	7.35	24.78	41.60	54	-12.40	AV
V	15450.00	52.36	35.89	6.42	26.47	49.36	74	-24.64	PK
H	4880.00	64.89	38.89	7.57	25.45	59.02	74	-14.98	PK
H	4880.00	49.55	38.89	7.57	25.45	43.68	54	-10.32	AV
H	7320.00	70.35	38.78	7.35	24.78	63.70	74	-10.30	PK
H	7320.00	48.81	38.78	7.35	24.78	42.16	54	-11.84	AV
H	15450.00	48.69	36.68	6.45	26.65	45.11	74	-28.89	PK
High Channel:2480MHz									
V	4960.00	68.81	38.75	7.46	25.45	62.97	74	-11.03	PK
V	4960.00	48.34	38.75	7.46	25.45	42.50	54	-11.50	AV
V	7440.00	67.63	38.65	7.22	24.78	60.98	74	-13.02	PK
V	7440.00	48.72	38.65	7.22	24.78	42.07	54	-11.93	AV
V	15450.00	51.85	35.58	6.35	26.47	49.09	74	-24.91	PK
H	4960.00	68.69	38.75	7.46	25.45	62.85	74	-11.15	PK
H	4960.00	49.88	38.75	7.46	25.45	44.04	54	-9.96	AV
H	7440.00	69.47	38.65	7.22	24.78	62.82	74	-11.18	PK
H	7440.00	52.23	38.65	7.22	24.78	45.58	54	-8.42	AV
H	15450.00	48.41	36.42	6.32	26.65	44.96	74	-29.04	PK

Remark:

1. Emission Level = Meter Reading + Antenna Factor + Cable Loss – Pre-amplifier,
   Margin= Emission Level - Limit
2. If peak below the average limit, the average emission was no test.
3. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

3.3 RADIATED BAND EMISSION MEASUREMENT

3.3.1 TEST REQUIREMENT:

FCC Part15 C Section 15.209 and 15.205

LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000MHz)

FREQUENCY (MHz)	Limit (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).

Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	2300MHz
Stop Frequency	2520
RB / VB (emission in restricted band)	1 MHz / 1 MHz for Peak, 1 MHz / 10Hz for Average

3.3.2 TEST PROCEDURE

Above 1GHz test procedure as below:

a. 1. The EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation.

b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rota table was turned from 0 degrees to 360 degrees to find the maximum reading.

e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

g. Test the EUT in the lowest channel,the Highest channel

Note:

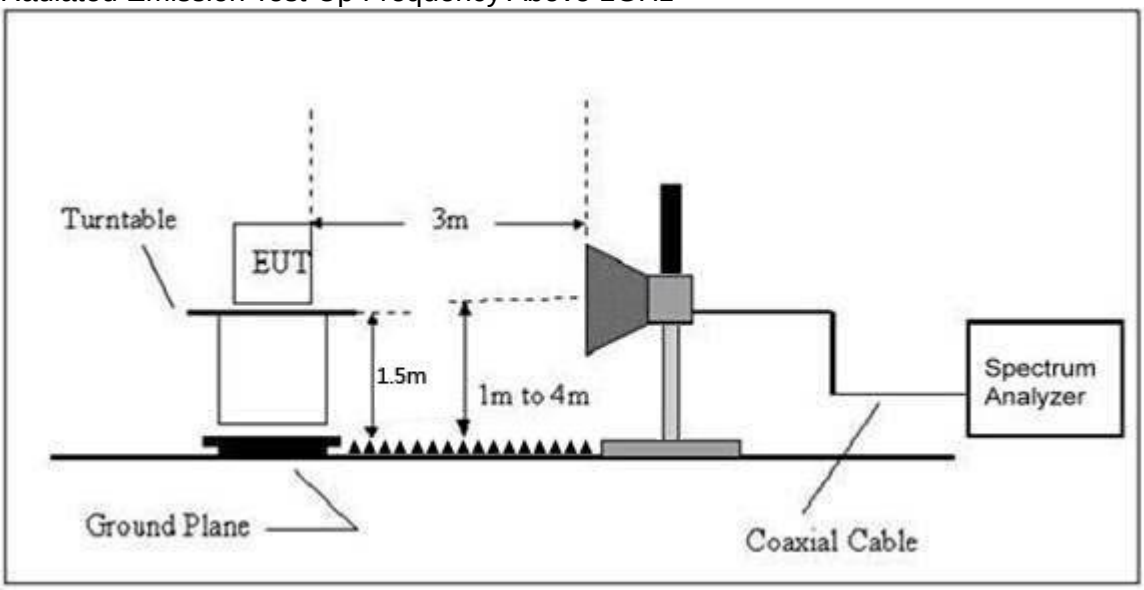
Both horizontal and vertical antenna polarities were tested
and performed pretest to three orthogonal axis. The worst case emissions were reported

3.3.3 DEVIATION FROM TEST STANDARD

No deviation

3.4.4 TEST SETUP

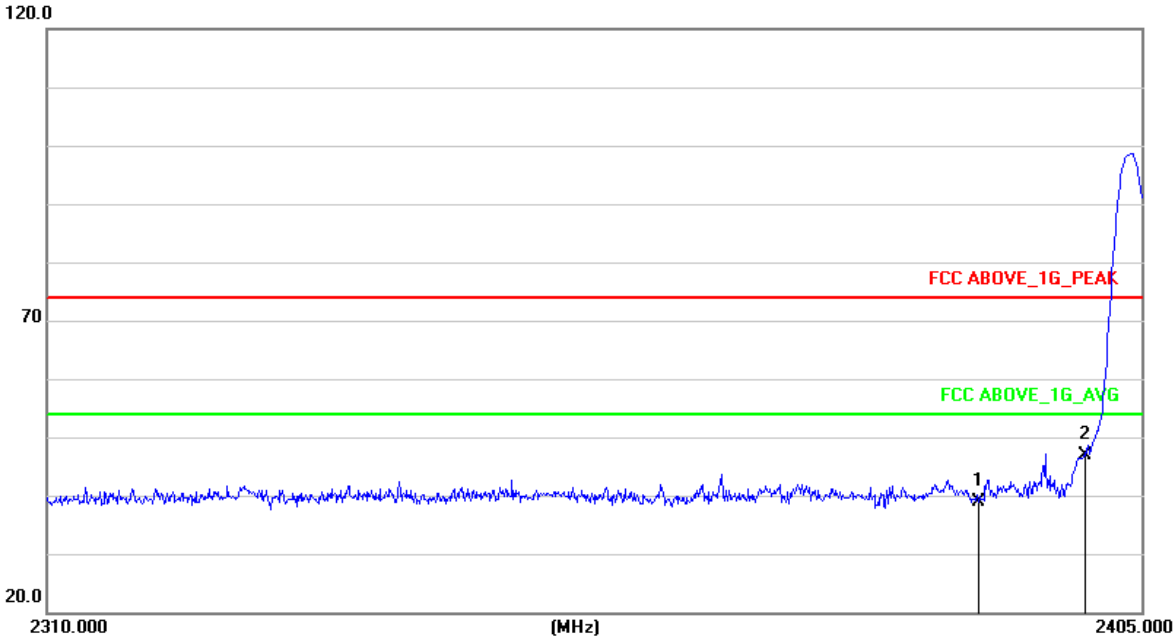
Radiated Emission Test-Up Frequency Above 1GHz



3.3.5 EUT OPERATING CONDITIONS

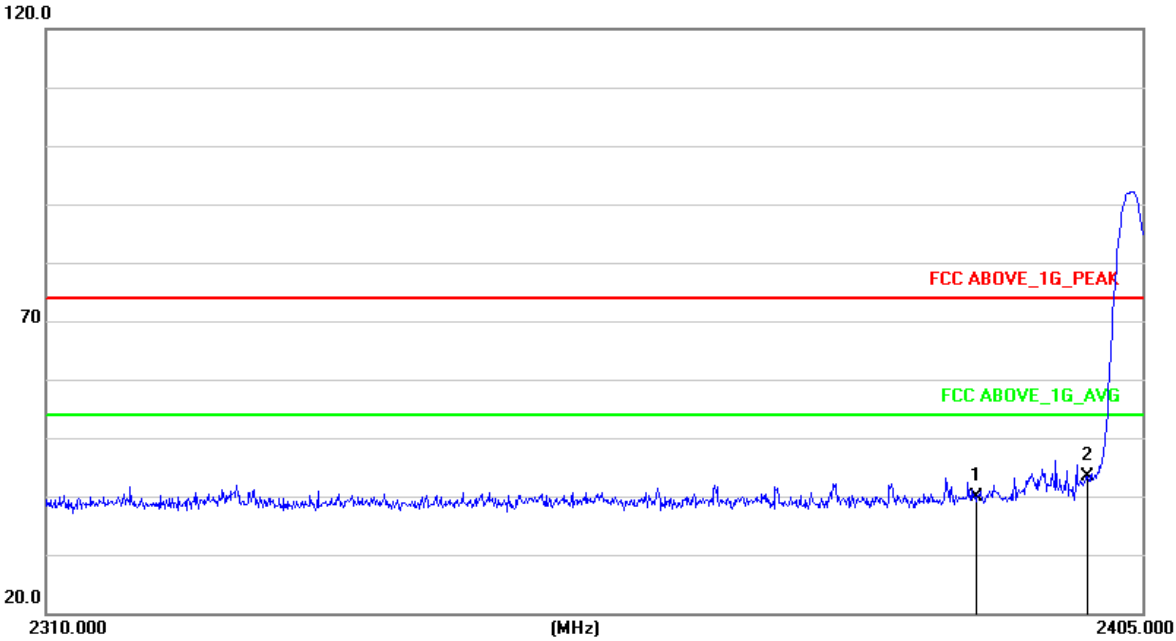
The EUT tested system was configured as the statements of 2.3 Unless otherwise a special operating condition is specified in the follows during the testing.

Horizontal Low Channel 2404MHz



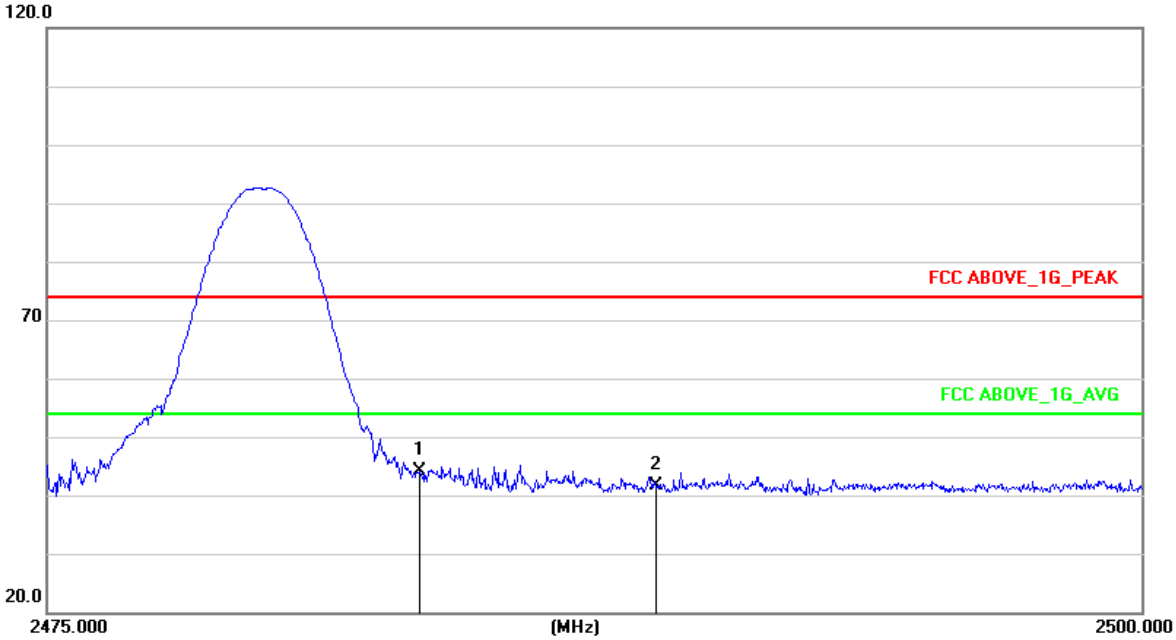
No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2390.655	42.05	-3.19	38.86	74.00	-35.14	peak
2	2400.155	50.05	-3.24	46.81	74.00	-27.19	peak

Vertical Low Channel 2404MHz



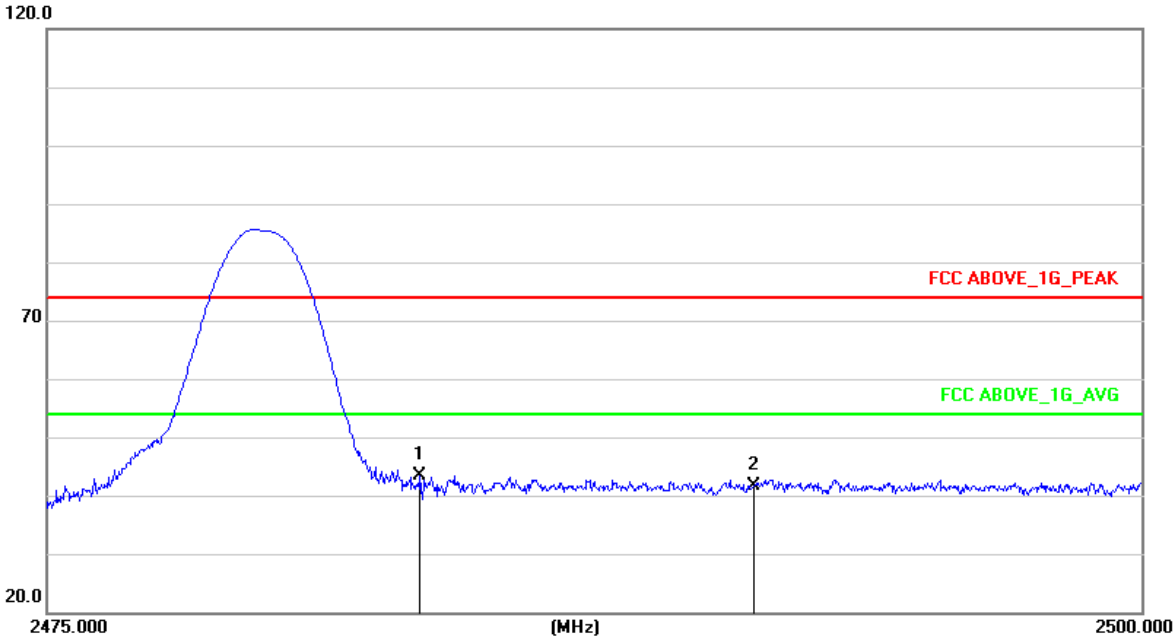
No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2390.465	42.97	-3.19	39.78	74.00	-34.22	peak
2	2400.250	46.66	-3.24	43.42	74.00	-30.58	peak

Horizontal High Channel 2480MHz



No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	47.63	-3.53	44.10	74.00	-29.90	peak
2	2488.900	45.07	-3.53	41.54	74.00	-32.46	peak

Vertical High Channel 2480MHz



No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	46.80	-3.53	43.27	74.00	-30.73	peak
2	2491.125	45.05	-3.54	41.51	74.00	-32.49	peak

If the PK measured levels comply with average limit, then the average level were deemed to comply with average limit.

4. POWER SPECTRAL DENSITY TEST

4.1 APPLIED PROCEDURES / LIMIT

FCC Part15 (15.247) , Subpart C				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247	Power Spectral Density	8 dBm (in any 3KHz)	2400-2483.5	PASS

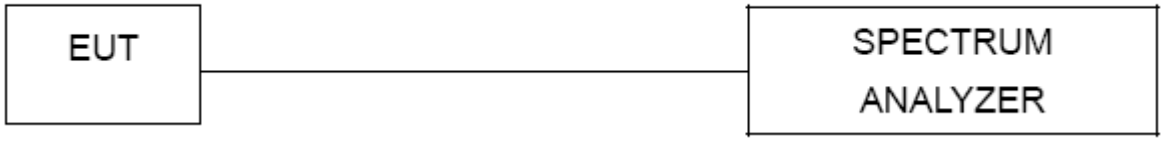
4.1.1 TEST PROCEDURE

1. Set analyzer center frequency to DTS channel center frequency.
2. Set the span to 1.5 times the DTS bandwidth.
3. Set the RBW to: 3 kHz ≤ RBW ≤ 100 kHz.
4. Set the VBW ≥ 3 x RBW.
5. Detector = peak.
6. Sweep time = auto couple.
7. Trace mode = max hold.
8. Allow trace to fully stabilize.
9. Use the peak marker function to determine the maximum amplitude level within the RBW.
10. If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

4.1.2 DEVIATION FROM STANDARD

No deviation.

4.1.3 TEST SETUP



4.1.4 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.1 Unless otherwise a special operating condition is specified in the follows during the testing.

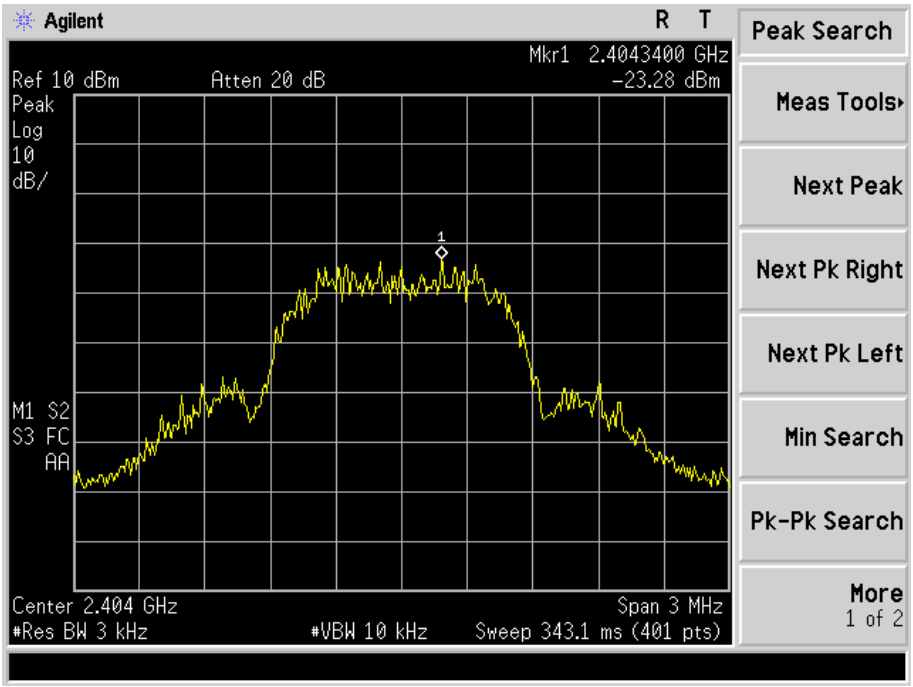
4.1.5 TEST RESULTS

EUT：	Remote control	Model Name ：	GLINT 2.0
Temperature：	25℃	Relative Humidity：	60%
Pressure：	1015 hPa	Test Voltage ：	DC 7.4V
Test Mode ：	TX		

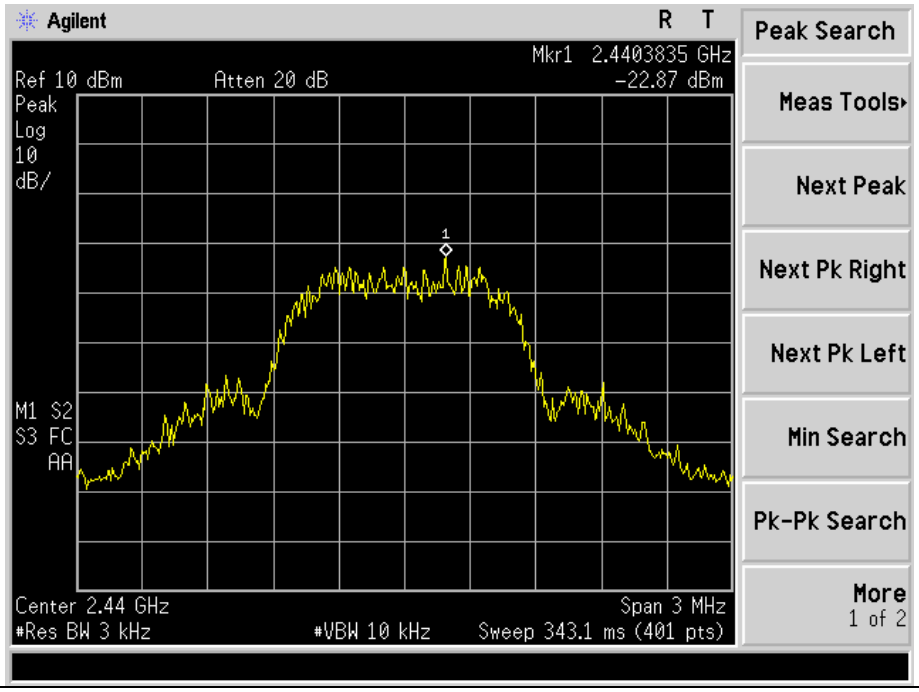
Frequency	Power Density (dBm)		Total Power Spectral Density(dBm)	Limit (dBm)	Result
2404 MHz	Ant.1	-23.28	-20.37	8	PASS
	Ant.2	-23.48			
2440 MHz	Ant.1	-22.87	-19.90	8	PASS
	Ant.2	-22.95			
2480 MHz	Ant.1	-22.75	-19.77	8	PASS
	Ant.2	-22.82			

ANT.1

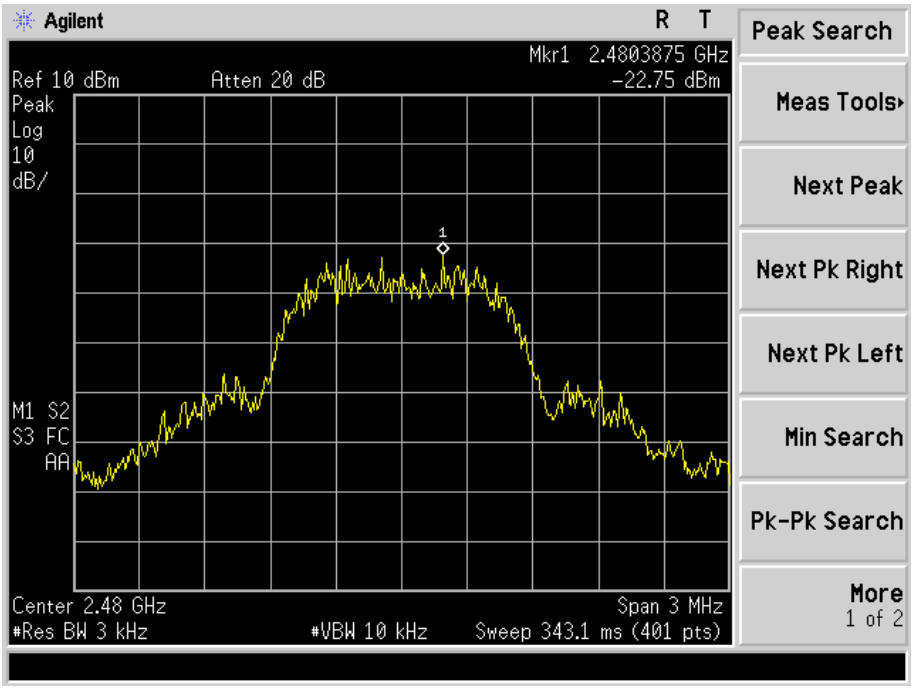
Low



Middle

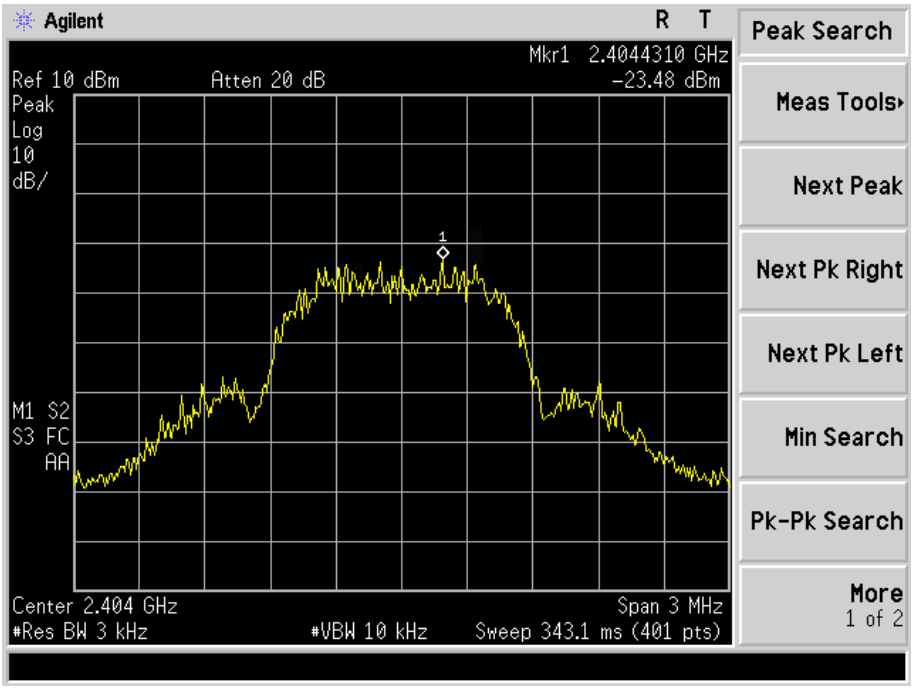

Agilent
R T
Mkr1 2.4403835 GHz
Ref 10 dBm
Atten 20 dB
-22.87 dBm
Peak
Log
10
dB/
M1 S2
S3 FC
AA
Center 2.44 GHz
Span 3 MHz
#Res BW 3 kHz
#VBW 10 kHz
Sweep 343.1 ms (401 pts)
Peak Search
Meas Tools
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
More
1 of 2

High

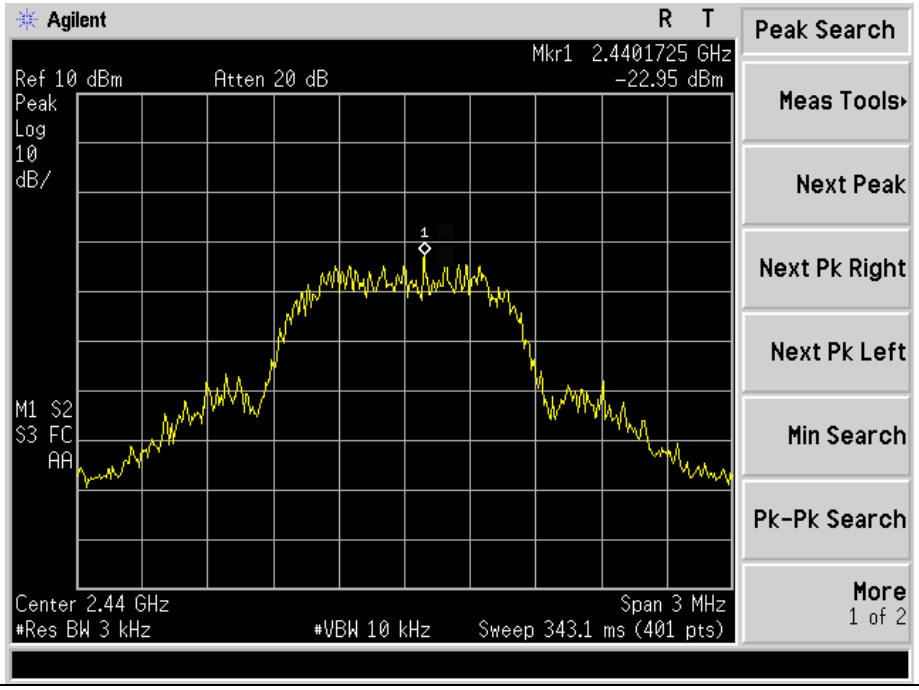

Agilent
R T
Mkr1 2.4803875 GHz
Ref 10 dBm
Atten 20 dB
-22.75 dBm
Peak
Log
10
dB/
M1 S2
S3 FC
AA
Center 2.48 GHz
Span 3 MHz
#Res BW 3 kHz
#VBW 10 kHz
Sweep 343.1 ms (401 pts)
Peak Search
Meas Tools
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
More
1 of 2

ANT.2

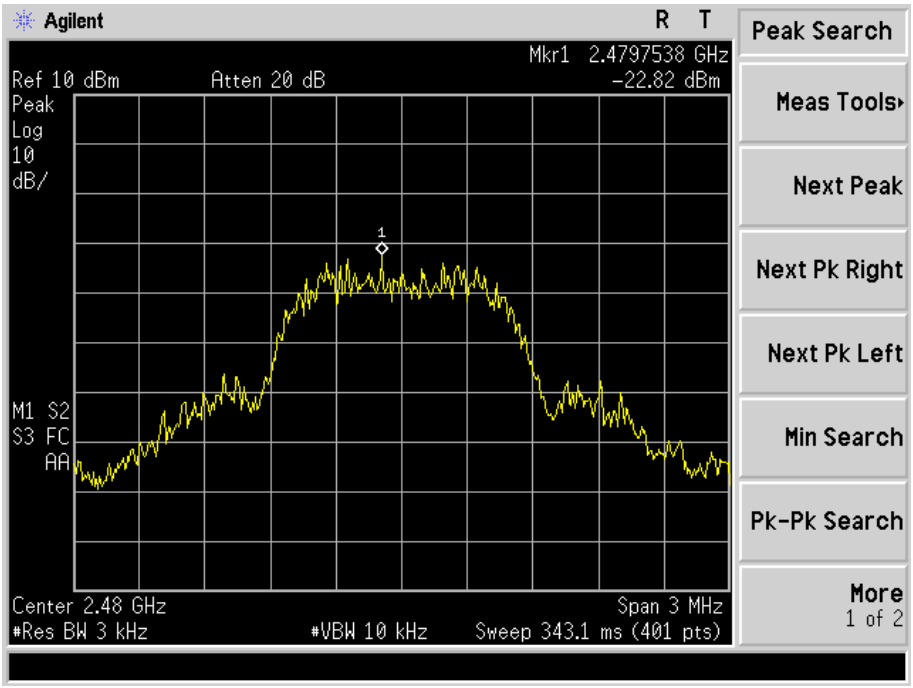
Low



Middle



High


Agilent
R T
Mkr1 2.4797538 GHz
-22.82 dBm
Ref 10 dBm
Atten 20 dB
Peak
Log
10
dB/
M1 S2
S3 FC
AA
Center 2.48 GHz
#Res BW 3 kHz
#VBW 10 kHz
Span 3 MHz
Sweep 343.1 ms (401 pts)
Peak Search
Meas Tools
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
More
1 of 2

5. BANDWIDTH TEST

5.1 APPLIED PROCEDURES / LIMIT

FCC Part15 (15.247) , Subpart C				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247(a)(2)	Bandwidth	>= 500KHz (6dB bandwidth)	2400-2483.5	PASS

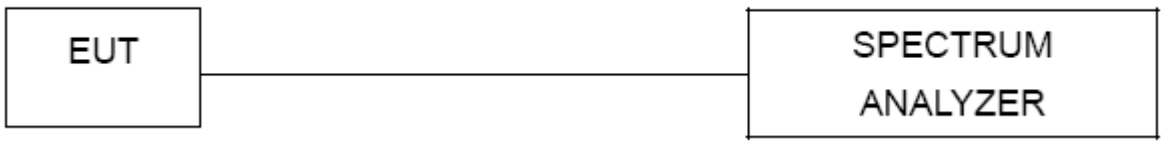
5.1.1 TEST PROCEDURE

1. Set RBW = 30 kHz.
2. Set the video bandwidth (VBW) ≥ 3 x RBW.
3. Detector = Peak.
4. Trace mode = max hold.
5. Sweep = auto couple.
6. Allow the trace to stabilize.
7. Measure the maximum width of the emission that is constrained by the frequencies associated with he two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

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

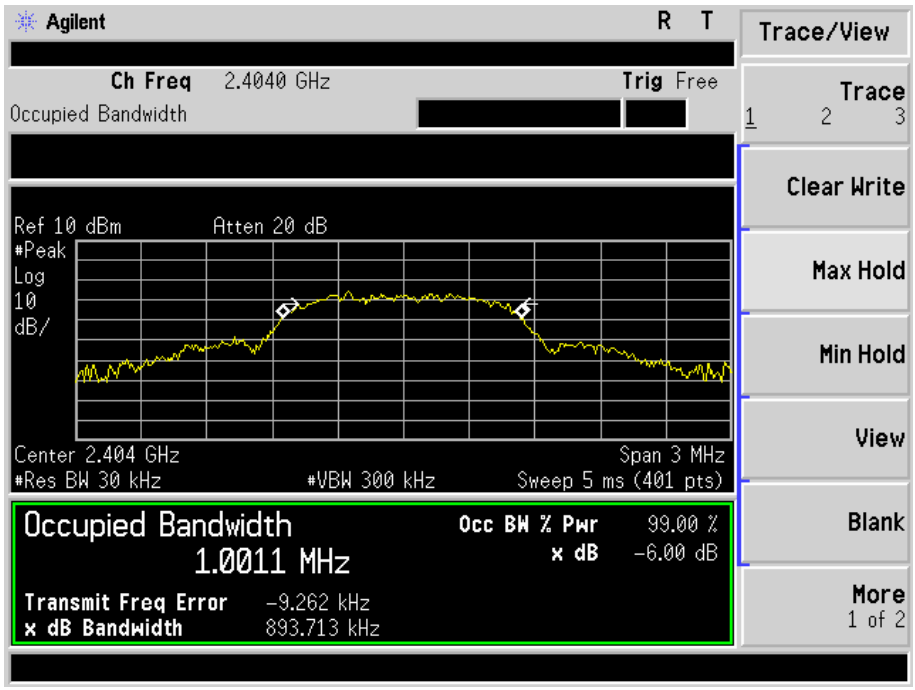
5.1.5 TEST RESULTS

EUT：	Remote control	Model Name ：	GLINT 2.0
Temperature：	25℃	Relative Humidity：	60%
Pressure：	1012 hPa	Test Voltage ：	DC 7.4V
Test Mode ：	TX		

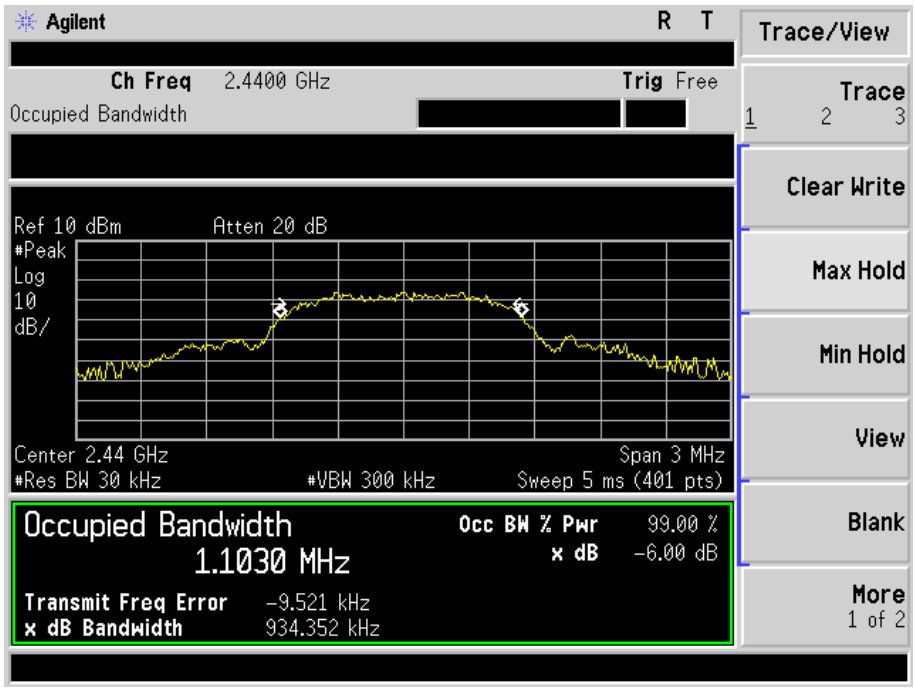
Channel	Frequency (MHz)	6dB bandwidth (KHz)		Limit (kHz)	Result
		ANT.1	ANT.2		
Low	2404	893.713	893.263	500	Pass
Middle	2440	934.352	934.371	500	Pass
High	2480	906.052	906.056	500	Pass

ANT.1

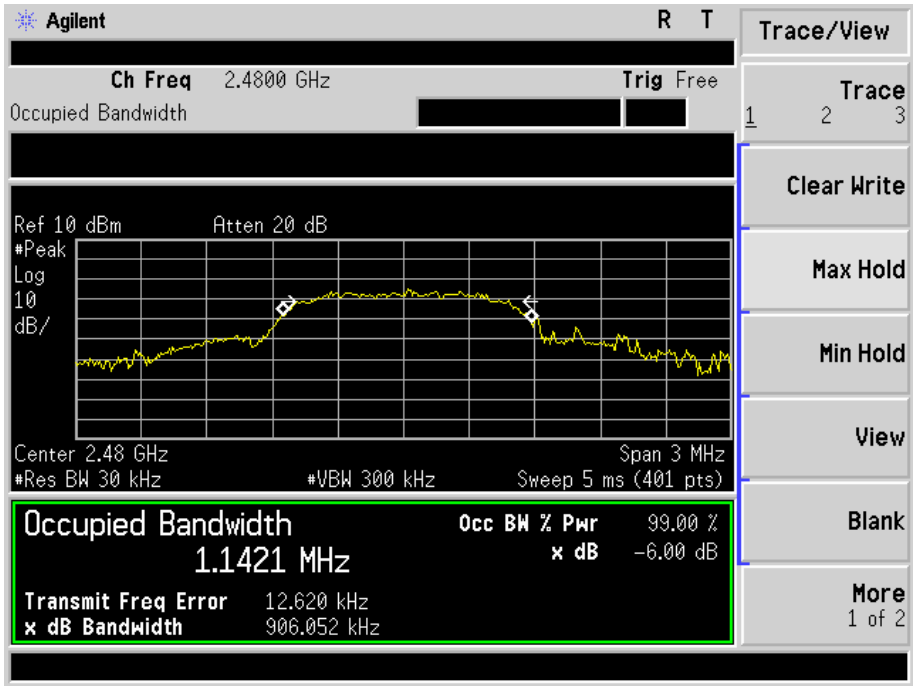
Low



Middle

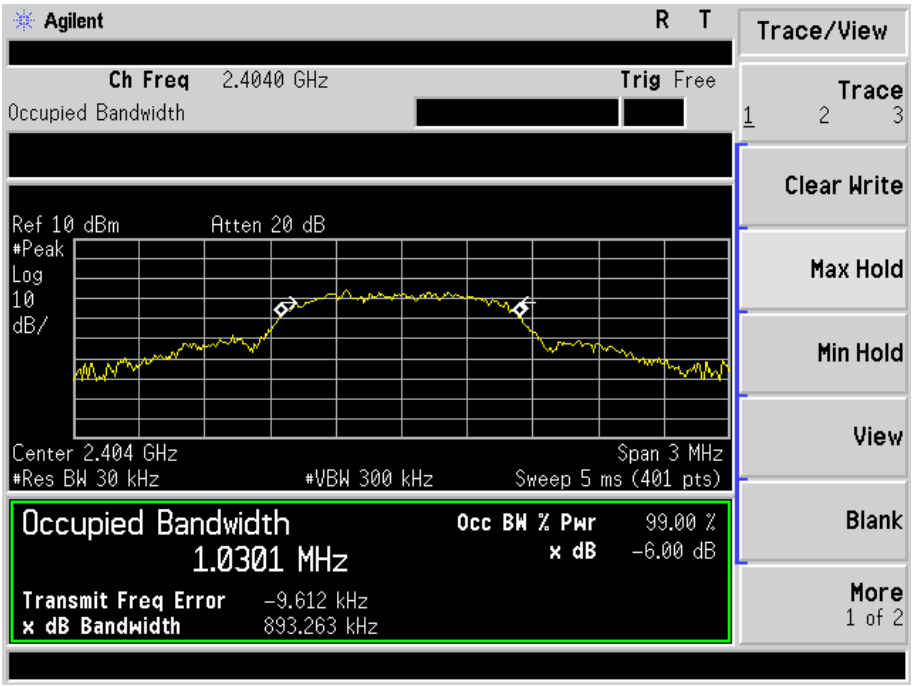

Agilent
R T
Trace/View
Ch Freq 2.4400 GHz
Trig Free
Occupied Bandwidth
Trace
1 2 3
Clear Write
Ref 10 dBm
Atten 20 dB
#Peak
Log
10
dB/
Max Hold
Min Hold
View
Center 2.44 GHz
Span 3 MHz
#Res BW 30 kHz
#VBW 300 kHz
Sweep 5 ms (401 pts)
Blank
Occupied Bandwidth
1.1030 MHz
Occ BW % Pwr 99.00 %
x dB -6.00 dB
Transmit Freq Error -9.521 kHz
x dB Bandwidth 934.352 kHz
More
1 of 2

High

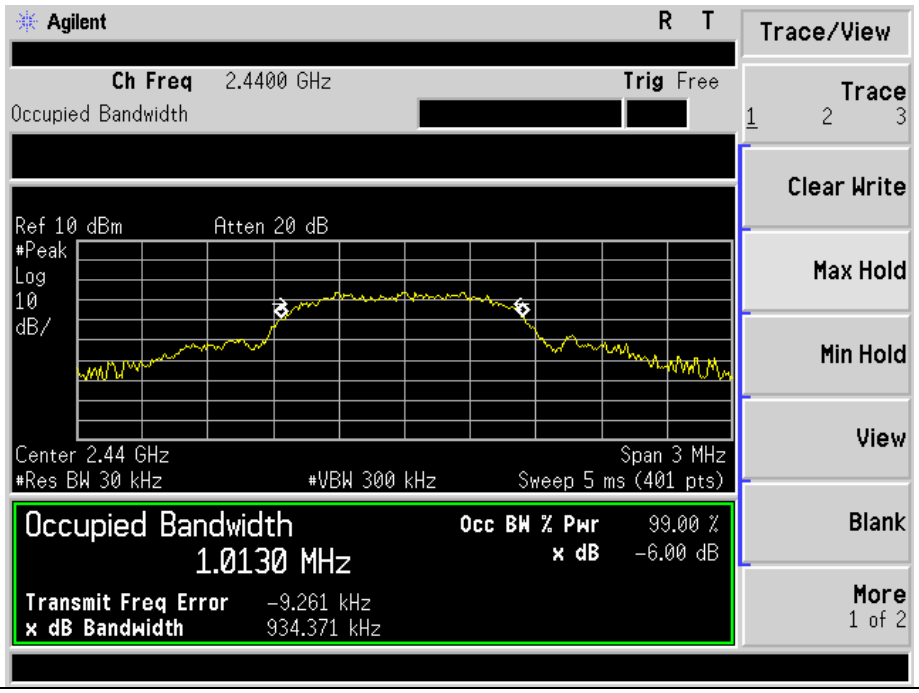

Agilent
R T
Trace/View
Ch Freq 2.4800 GHz
Trig Free
Occupied Bandwidth
Trace
1 2 3
Clear Write
Ref 10 dBm
Atten 20 dB
#Peak
Log
10
dB/
Max Hold
Min Hold
View
Center 2.48 GHz
Span 3 MHz
#Res BW 30 kHz
#VBW 300 kHz
Sweep 5 ms (401 pts)
Blank
Occupied Bandwidth
1.1421 MHz
Occ BW % Pwr 99.00 %
x dB -6.00 dB
Transmit Freq Error 12.620 kHz
x dB Bandwidth 906.052 kHz
More
1 of 2

ANT.2

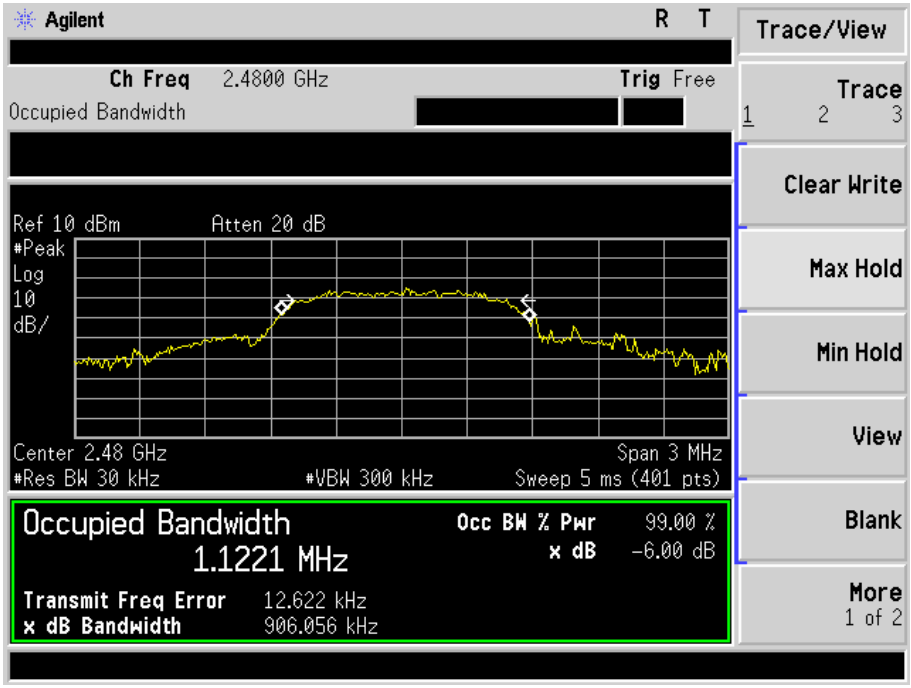
Low



Middle



High


Agilent
R T
Trace/View
Ch Freq 2.4800 GHz
Trig Free
Occupied Bandwidth
Trace
1 2 3
Clear Write
Ref 10 dBm
Atten 20 dB
#Peak
Log
10
dB/
Max Hold
Min Hold
View
Center 2.48 GHz
Span 3 MHz
#Res BW 30 kHz
#VBW 300 kHz
Sweep 5 ms (401 pts)
Blank
Occupied Bandwidth
1.1221 MHz
Occ BW % Pwr 99.00 %
x dB -6.00 dB
More
1 of 2
Transmit Freq Error 12.622 kHz
x dB Bandwidth 906.056 kHz

6. PEAK 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)	Peak Output Power	1 watt or 30dBm	2400-2483.5	PASS

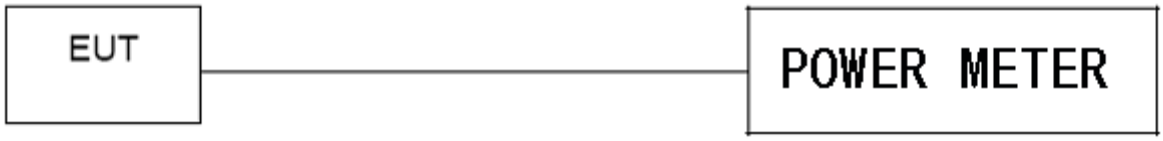
6.1.1 TEST PROCEDURE

a. The EUT was directly connected to the Power meter

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

6.1.5 TEST RESULTS

EUT：	Remote control	Model Name ：	GLINT 2.0
Temperature：	25℃	Relative Humidity：	60%
Pressure：	1012 hPa	Test Voltage ：	DC 7.4V
Test Mode ：	TX		

Test Channe	Frequency	Average Output Power		Average Output Power		Total Power	LIMIT
		ANT.1	ANT.2	ANT.1	ANT.2	(dBm)	
	(MHz)	(dBm)		(mW)			dBm
Low	2404	5.62	5.85	3.65	3.85	7.50	30
Middle	2440	5.40	5.60	3.47	3.63	7.10	30
High	2480	5.50	5.78	3.55	3.78	7.33	30

7. 100 KHZ BANDWIDTH OF FREQUENCY BAND EDGE

APPLICABLE STANDARD

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 or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

TEST PROCEDURE

a) Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
b) Position the EUT without connection to measurement instrument. Turn on the EUT and connect its antenna terminal to measurement instrument via a low loss cable. Then set it to any one measured frequency within its operating range, and make sure the instrument is operated in its linear range.
c) Set RBW to 100 kHz and VBW of spectrum analyzer to 300 kHz with a convenient frequency span including 100 kHz bandwidth from band edge.
d) Measure the highest amplitude appearing on spectral display and set it as a reference level. Plot the graph with marking the highest point and edge frequency.
e) Repeat above procedures until all measured frequencies were complete.

7.1 DEVIATION FROM STANDARD

No deviation.

7.2 TEST SETUP

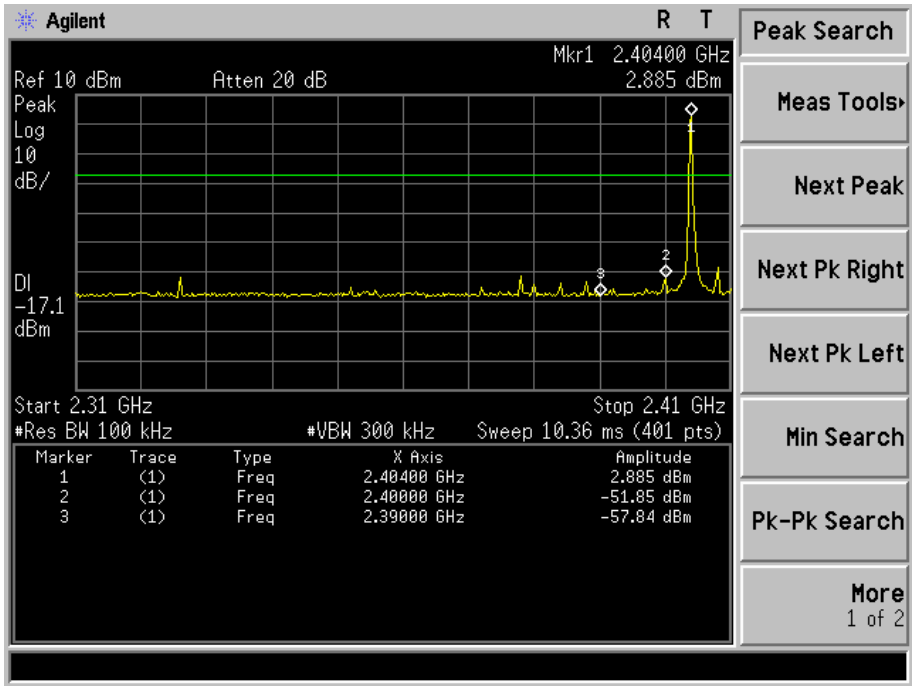
7.3 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

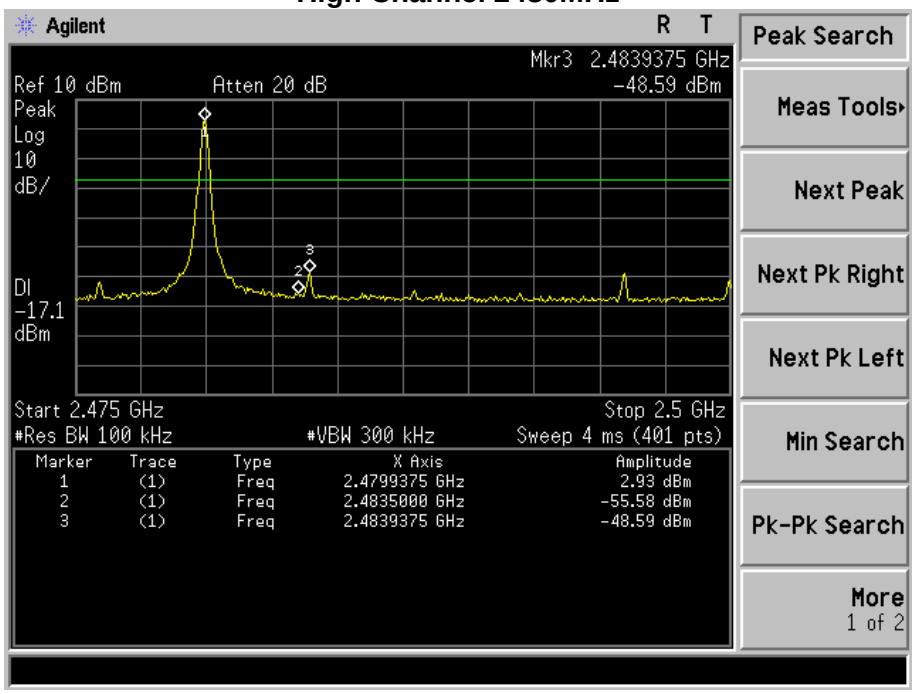
7.4 TEST RESULTS

ANT.1

Low Channel 2404MHz

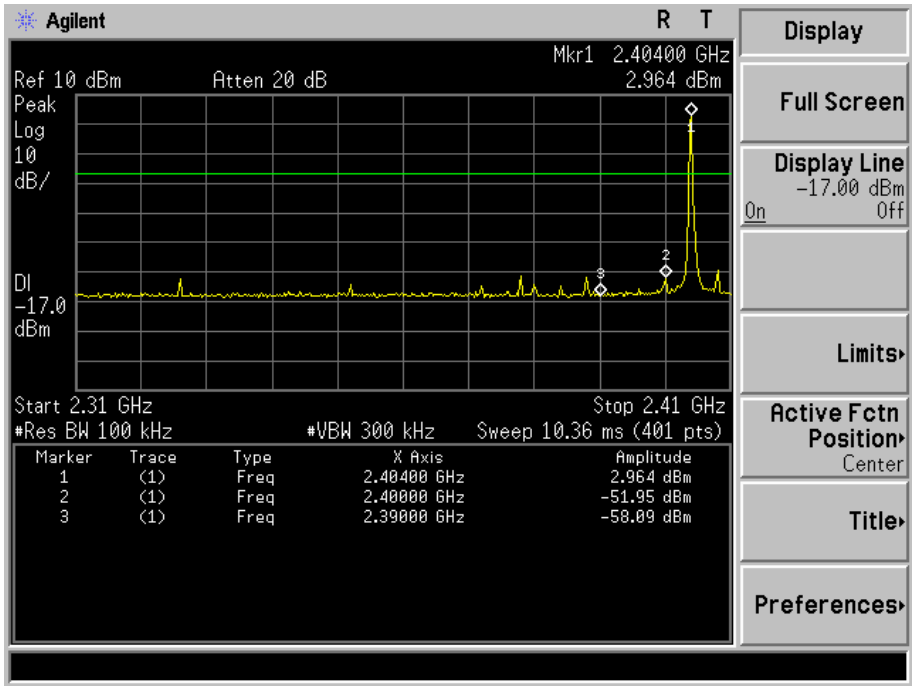


High Channel 2480MHz

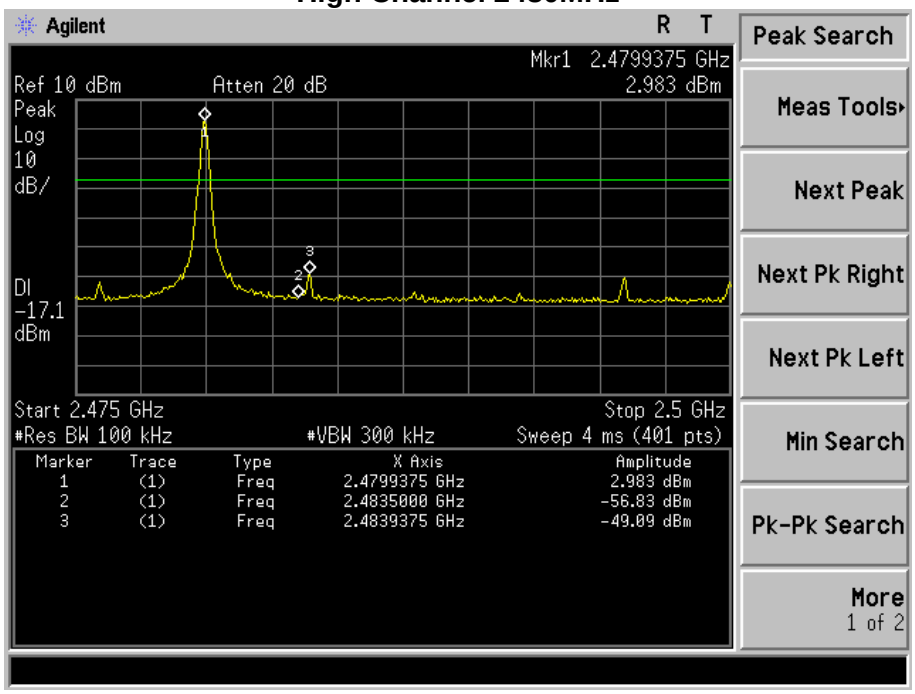


ANT.2

Low Channel 2404MHz



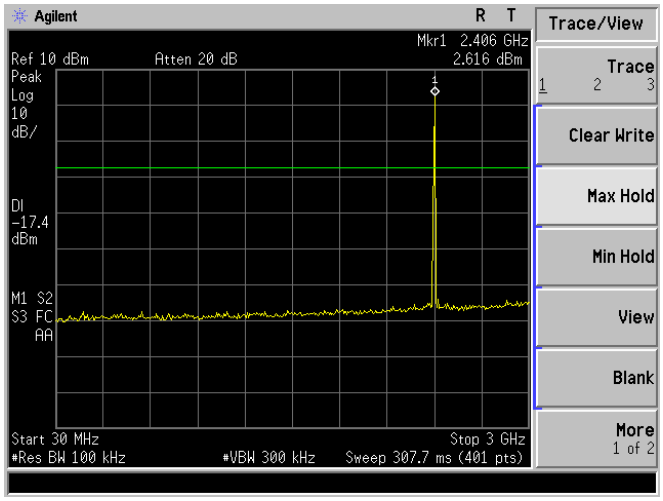
High Channel 2480MHz

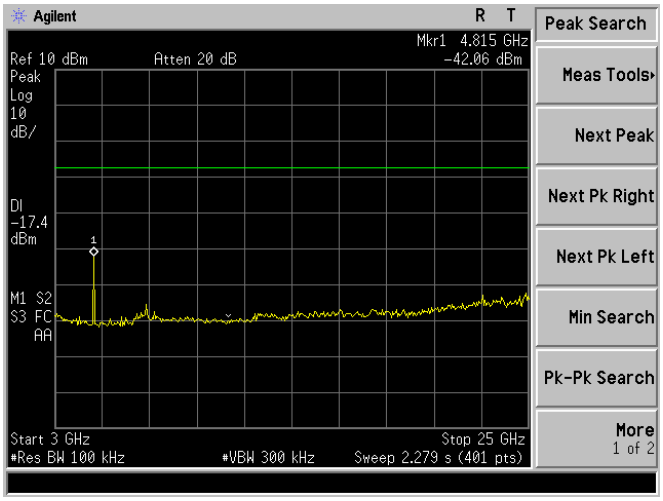


CONDUCTED EMISSION MEASUREMENT

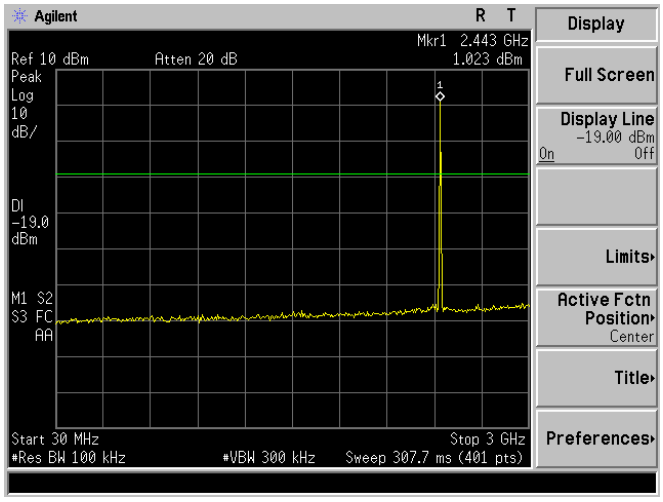
ANT.1

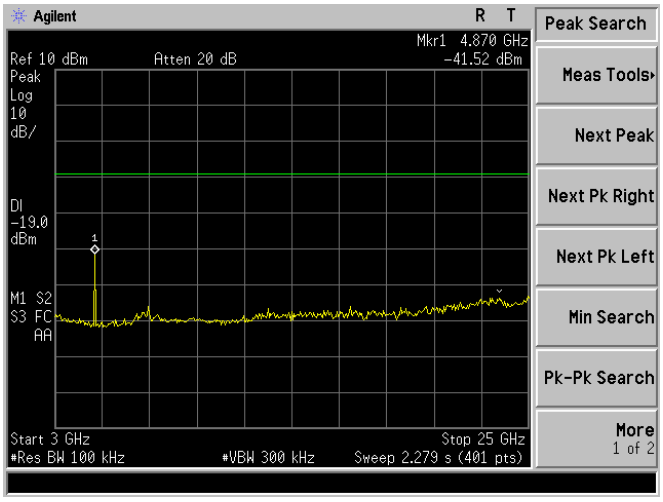
Low Channel 2404MHz



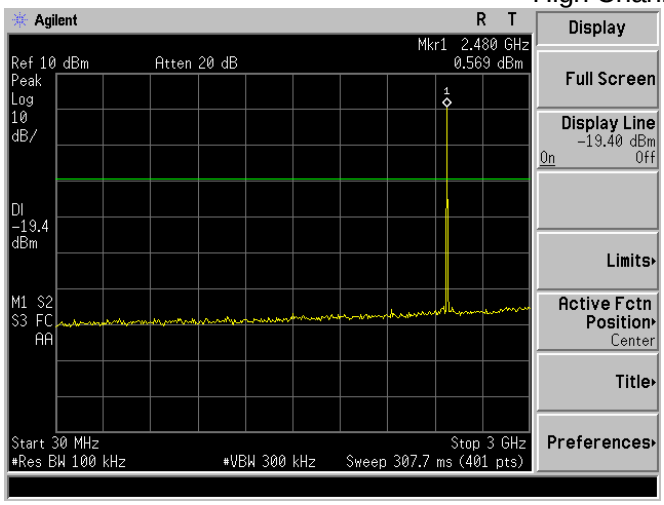


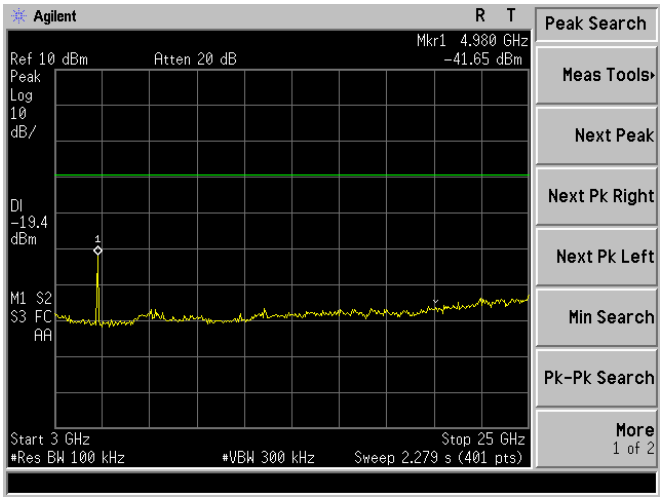
Middle Channel 2440MHz





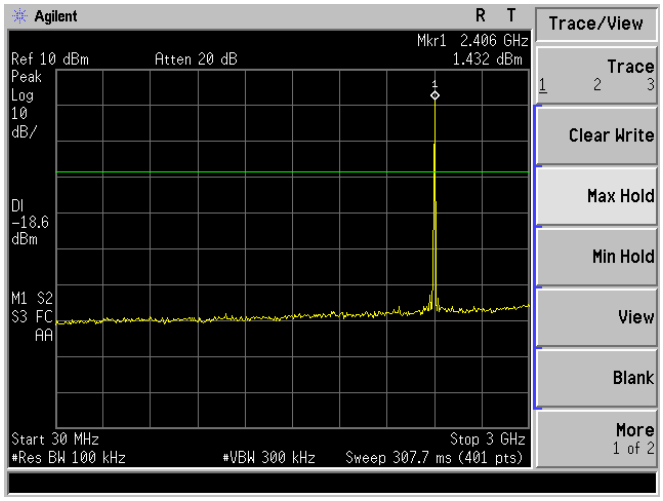
High Channel 2480MHz

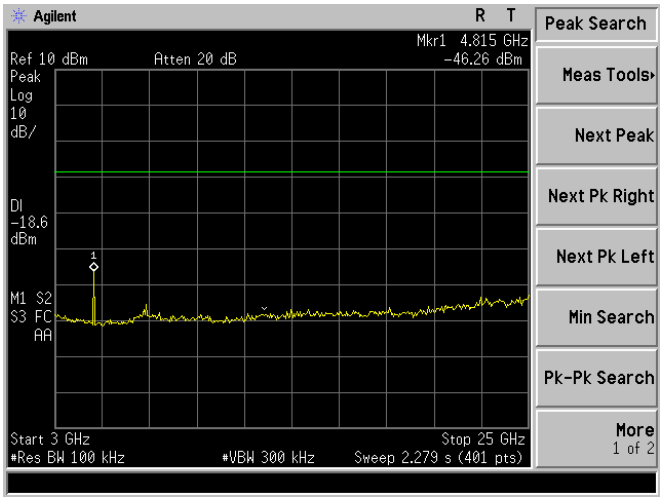




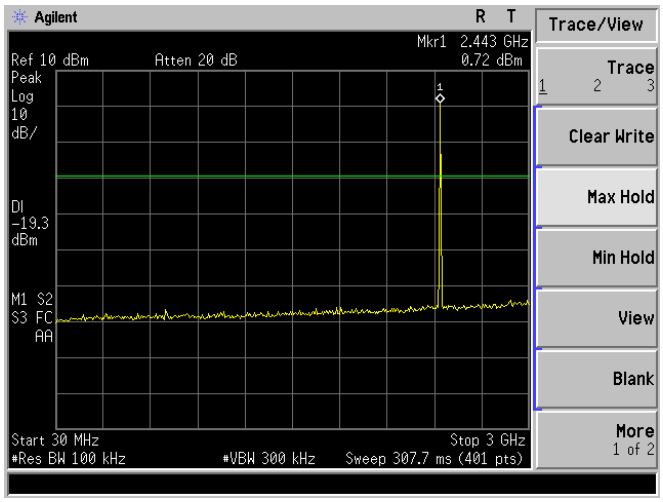
ANT.2

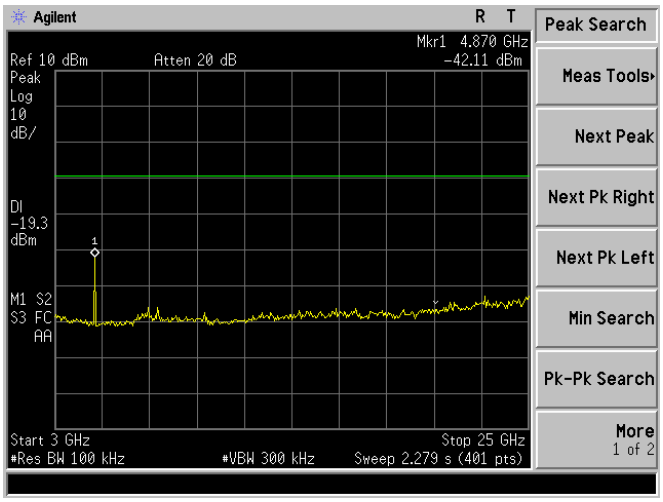
Low Channel 2404MHz



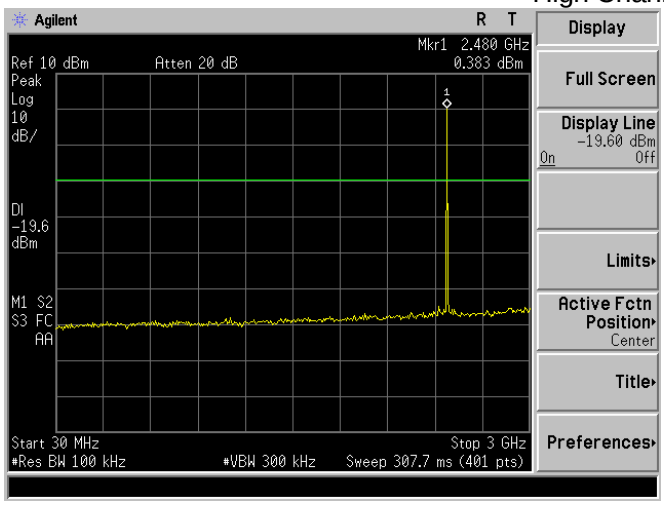


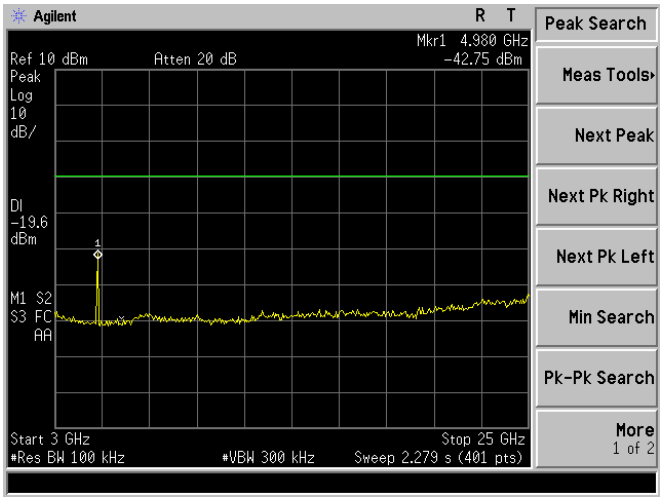
Middle Channel 2440MHz





High Channel 2480MHz





8. ANTENNA REQUIREMENT

8.1 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.

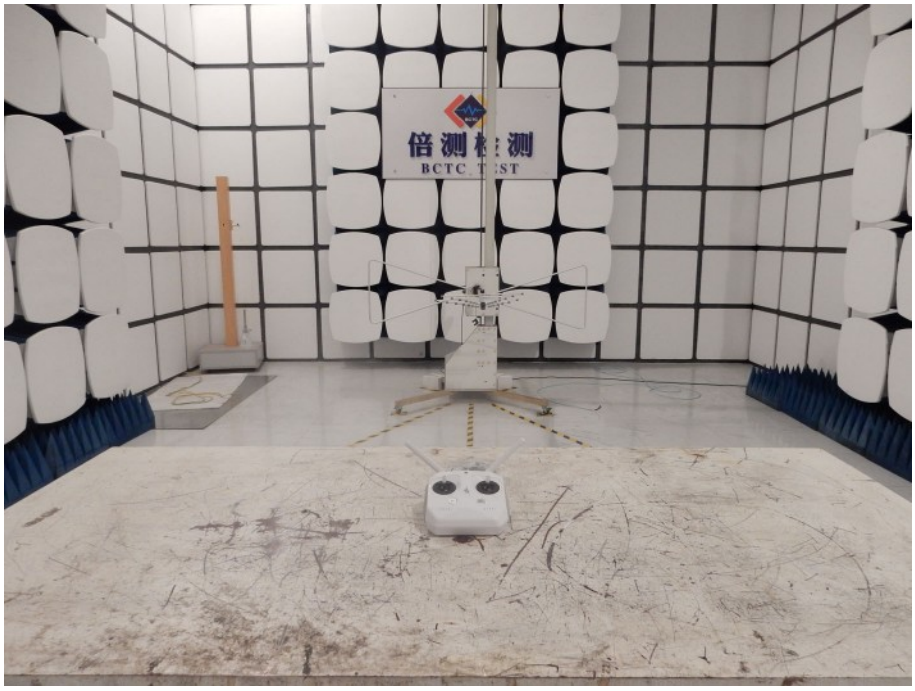
8.2 EUT ANTENNA

The EUT antenna is permanent connection and non-detachable (External) antenna. It comply with the standard requirement.

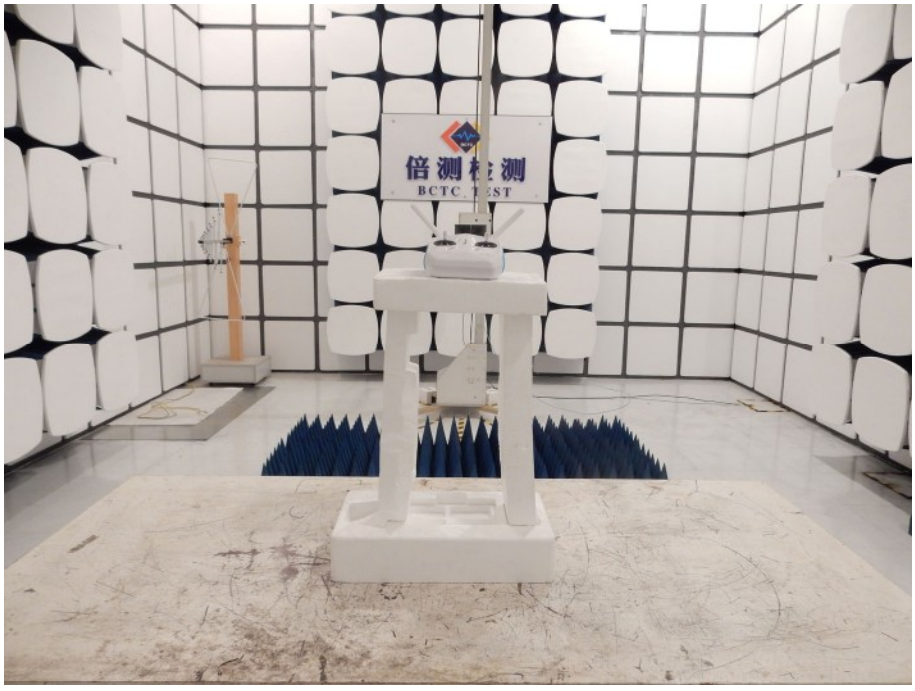
9. EUT TEST PHOTO

Conducted Measurement Photos

Radiated Measurement Photos



Radiated Measurement Photos



10. EUT TEST PHOTO