

# Test Report

Industry Canada RSS-Gen Issue 4/RSS-210 Issue 8  
FCC Part15 Subpart C

Product Name : ST10  
Model No. : ST10  
FCC ID : 2ACS5-ST10  
IC : 11554B-ST10

Applicant : Yuneec Technology Co., Limited  
Address : 2/F Man Shung Industrial Building, 7 Lai Yip Street, Kwun  
Tong, Hong Kong

Date of Receipt : Oct. 29, 2014  
Test Date : Oct. 29, 2014~ Dec. 03, 2014  
Issued Date : Dec. 22, 2014  
Report No. : 14B0064R-RF-CE-P14V02  
Report Version : V1.1



The test results relate only to the samples tested.

The test results shown in the test report are traceable to the national/international standard through the calibration of the equipment and evaluated measurement uncertainty herein.

This report must not be used to claim product endorsement by TAF or any agency of the government.

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# Test Report Certification

Issued Date : Dec. 22, 2014  
 Report No. : 14B0064R-RF-US-P05V01



Product Name : ST10  
 Applicant : Yuneec Technology Co., Limited  
 Address : 2/F Man Shung Industrial Building, 7 Lai Yip Street, Kwun Tong, Hong Kong  
 Manufacturer : Good Power Technology Co., Ltd.  
 Address : No.388 East Zhengwei Road, Jinxi Town, Kunshan, Jiangsu 215324, China  
 Model No. : ST10  
 FCC ID : 2ACS5-ST10  
 IC : 11554B-ST10  
 EUT Voltage : DC: 3.6V  
 Brand Name : Yuneec  
 Applicable Standard : FCC CFR Title 47 Part 15 Subpart C: 2014  
 ANSI C63.4: 2009; KDB 558074 D01 v03r02  
 Industry Canada RSS-Gen Issue 4/RSS-210 Issue 8  
 Test Result : Complied  
 Performed Location : Suzhou EMC Laboratory  
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 FCC Registration Number: 800392; IC Lab Code: 4075B

Documented By : Alice Ni  
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## Laboratory Information

We, **Quietek Corporation**, are an independent EMC and safety consultancy that was established the whole facility in our laboratories. The test facility has been accredited/accepted(audited or listed) by the following related bodies in compliance with ISO 17025, EN 45001 and specified testing scope:

<b>Taiwan R.O.C.</b>	<b>:</b>	<b>BSMI, NCC, TAF</b>
<b>Germany</b>	<b>:</b>	<b>TUV Rheinland</b>
<b>Norway</b>	<b>:</b>	<b>Nemko, DNV</b>
<b>USA</b>	<b>:</b>	<b>FCC</b>
<b>Japan</b>	<b>:</b>	<b>VCCI</b>
<b>China</b>	<b>:</b>	<b>CNAS</b>

The related certificate for our laboratories about the test site and management system can be downloaded from Quietek Corporation's Web Site :<http://www.quietek.com/tw/ctg/cts/accreditations.htm>

The address and introduction of Quietek Corporation's laboratories can be founded in our Web site :  
<http://www.quietek.com/>

If you have any comments, Please don't hesitate to contact us. Our contact information is as below:

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**History of This Test Report**

<b>REPORT NO.</b>	<b>VERSION</b>	<b>DESCRIPTION</b>	<b>ISSUED DATE</b>
14B0064R-RF-US-P05V01	V1.0	Initial Issued Report	Dec. 12, 2014
14B0064R-RF-US-P05V01	V1.1	Modified the Frequency Range	Dec. 22, 2014

**1. General Information**

**1.1. EUT Description**

Product Name	ST10
Brand Name	Yuneec
Model No.	ST10
EUT Voltage	DC:3.6V
Frequency Range	2405~2475 MHz
Channel Number	16
Type of Modulation	QPSK
Data Rate	250kbps
Channel Control	Auto
Antenna Delivery	2 identical Antennas
Antenna Type	Dipole Antenna
Peak Antenna Gain	1dBi for 2.4GHz

**For 2.4GHz Band: Total 15 channels**

Working Frequency of Each Channel:					
Channel	Frequency	Channel	Frequency	Channel	Frequency
0	2405	6	2435	12	2465
1	2410	7	2440	13	2470
2	2415	8	2445	14	2475
3	2420	9	2450	N/A	N/A
4	2425	10	2455	N/A	N/A
5	2430	11	2460	N/A	N/A

**Duty Cycle**

Duty Cycle=99%



**1.2. Mode of Operation**

QuieTek has verified the construction and function in typical operation. All the test modes were carried out with the EUT in normal operation, which was shown in this test report and defined as:

Test Mode
Mode 1: 2.4GHz Transmit

## Note:

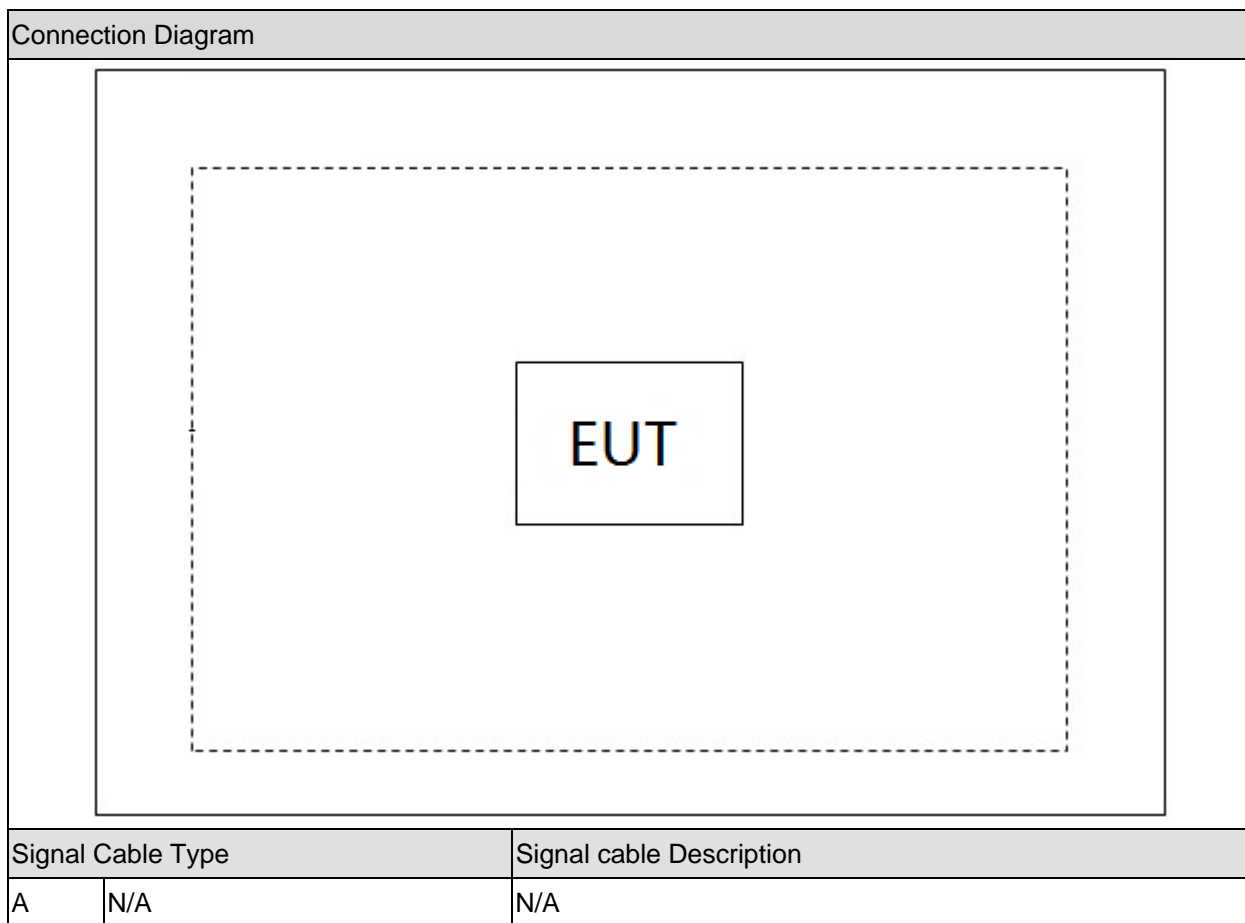
1. Regards to the frequency band operation: the lowest, middle and highest frequency of channel were selected to perform the test, then shown on this report.
2. This device is a composite device in accordance with Part 15.407 regulations. The function for 5.8GHz part was measured and made a test report that the report number is 14B0064R-RF-US-P09V01.

**1.3. Tested System Details**

The types for all equipments, plus descriptions of all cables used in the tested system (including inserted cards) are:

	Product	Manufacturer	Model No.	Serial No.	Power Cord
1	N/A	N/A	N/A	N/A	N/A

1.4. Configuration of Tested System



**1.5. EUT Exercise Software**

1	Setup the EUT and simulators as shown on above.
2	Turn on the power of equipment.
3	Execute some commands on the PC provided by applicant.
4	Set the test mode and channel, then press OK to start continue transmit or receive.

## 2. Technical Test

### 2.1. Summary of Test Result

- No deviations from the test standards  
 Deviations from the test standards as below description:

Performed Test Item	Normative References	Test Performed	Deviation
Conducted Emission	FCC CFR Title 47 Part 15 Subpart C: 2014 Section 15.207	N/A	N/A
Radiated Emission	FCC CFR Title 47 Part 15 Subpart C: 2014 Section 15.209 RSS-Gen Issue 4 November 2014 Section 6.13 and Section 7.1.2	Yes	No
RF Antenna Conducted Spurious	FCC CFR Title 47 Part 15 Subpart C: 2014 Section 15.247(d) RSS-210 Issue 8 December 2010 Section A8.5	Yes	No
Radiated Emission Band Edge	FCC CFR Title 47 Part 15 Subpart C: 2014 15.247(d) RSS-210 Issue 8 December 2010 Section A8.5	Yes	No
Operation Frequency Range of 20dB Bandwidth	FCC CFR Title 47 Part 15 Subpart C: 2014 15.215(c)	Yes	No
Occupied Bandwidth	FCC CFR Title 47 Part 15 Subpart C: 2014 Section 15.247(a)(2) RSS-210 Issue 8 December 2010 Section A8.2(a)	Yes	No
Power Output	FCC CFR Title 47 Part 15 Subpart C: 2014 Section 15.247(b)(3) RSS-210 Issue 8 December 2010 Section A8.4(4)	Yes	No
Power Spectral Density	FCC CFR Title 47 Part 15 Subpart C: 2014 Section 15.247(e) RSS-210 Issue 8 December 2010 Section A8.2(b)	Yes	No

**2.2. Test Environment**

Items	Required (IEC 68-1)	Actual
Temperature (°C)	15-35	21
Humidity (%RH)	25-75	50
Barometric pressure (mbar)	860-1060	950-1000

### 3. Conducted Emission

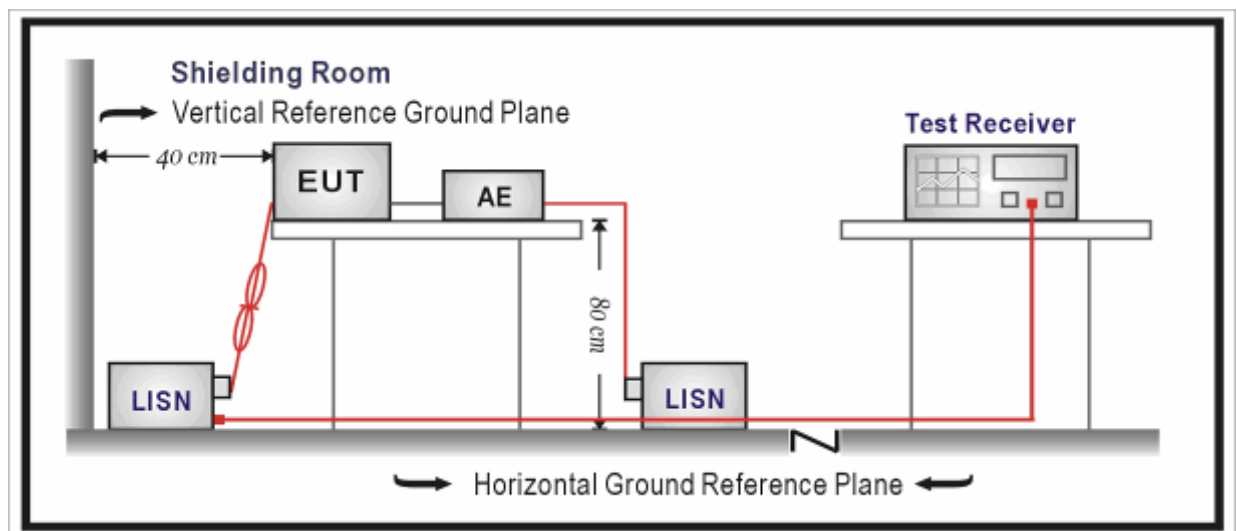
#### 3.1. Test Equipment

Conducted Emission / TR-1

Instrument	Manufacturer	Type No.	Serial No.	Cali. Due Date
EMI Test Receiver	R&S	ESCI	100726	2015.03.28
Two-Line V-Network	R&S	ENV216	100043	2015.03.28
Two-Line V-Network	R&S	ENV216	100044	2015.09.16
50ohm Coaxial Switch	Anritsu	MP59B	6200464462	2015.03.01
50ohm Termination	SHX	TF2	07081401	2015.09.16
Temperature/Humidity Meter	zhicheng	ZC1-2	TR1-TH	2015.01.08

Note: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.

#### 3.2. Test Setup



**3.3. Limit**

FCC Part 15 Subpart C Paragraph 15.207 Limits		
Frequency (MHz)	QP (dBuV)	AV (dBuV)
0.15 - 0.50	66 - 56	56 – 46
0.50 - 5.0	56	46
5.0 - 30	60	50

Note 1: The lower limit shall apply at the transition frequencies.

Note 2: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.

**3.4. Test Procedure**

The EUT was setup according to ANSI C63.4, 2009 and tested according to ANSI C63.10: 2009 for compliance to FCC 47CFR 15.247 requirements. The EUT was placed on a platform of nominal size, 1 m by 1.5 m, raised 80 cm above the conducting ground plane. The vertical conducting plane was located 40 cm to the rear of the EUT. All other surfaces of EUT were at least 80 cm from any other grounded conducting surface. The EUT and simulators are connected to the main power through a line impedance stabilization network (LISN). The LISN provides a 50 ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN. (Please refer to the block diagram of the test setup and photographs) Each current-carrying conductor of the EUT power cord, except the ground (safety) conductor, was individually connected through a LISN to the input power source.

The excess length of the power cord between the EUT and the LISN receptacle were folded back and forth at the center of the lead to form a bundle not exceeding 40 cm in length. Conducted emissions were investigated over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9 kHz.

**3.5. Uncertainty**

The measurement uncertainty is defined as  $\pm 2.02$  dB



**3.6. Test Result**

EUT is battery powered, test is not applicable.

**4. Radiated Emission**

**4.1. Test Equipment**

Radiated Emission / AC-2

Instrument	Manufacturer	Type No.	Serial No.	Cali. Due Date
EMI Test Receiver	R&S	ESCI	100573	2015.03.28
Loop Antenna	R&S	HFH2-Z2	833799/003	2015.11.25
Bilog Chainenna	Teseq GmbH	CBL6112D	27611	2015.10.10
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC2-C	2015.03.01
Temperature/Humidity Meter	Zhicheng	ZC1-2	AC2-TH	2015.01.08

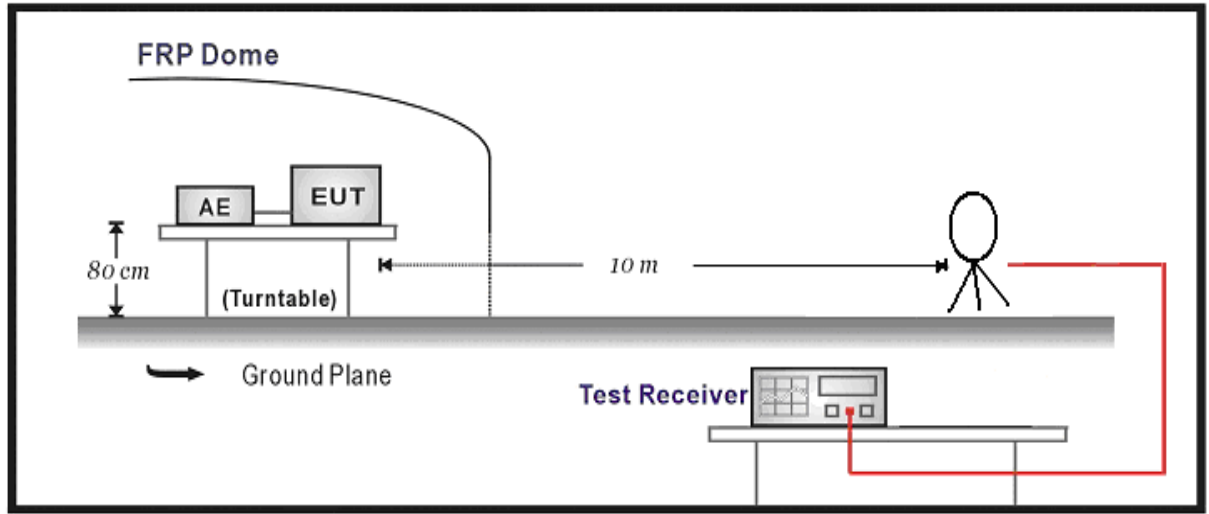
Radiated Emission / AC-5

Instrument	Manufacturer	Type No.	Serial No.	Cali. Due Date
Spectrum Analyzer	Agilent	N9020A	MY49100159	2015.03.28
Spectrum Analyzer	Agilent	E4446A	MY45300103	2015.05.12
Preamplifier	Miteq	NSP1800-25	1364185	2015.05.03
Preamplifier	QuieTek	AP-040G	CHM-0906001	2015.05.03
DRG Horn	ETS-Lindgren	3117	00123988	2015.10.15
Broad-Band Horn Antenna	Schwarzbeck	BBHA9170	294	2015.01.07
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC5-C1	2016.04.10
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC5-C2	2015.03.01
Coaxial Cable	Huber+Suhner	SUCOFLEX 102	AC5-C3	2015.03.01
EMI Receiver	Agilent	N9038A	MY51210196	2015.06.09
Temperature/Humidity Meter	Zhichen	ZC1-2	AC5-TH	2015.01.08

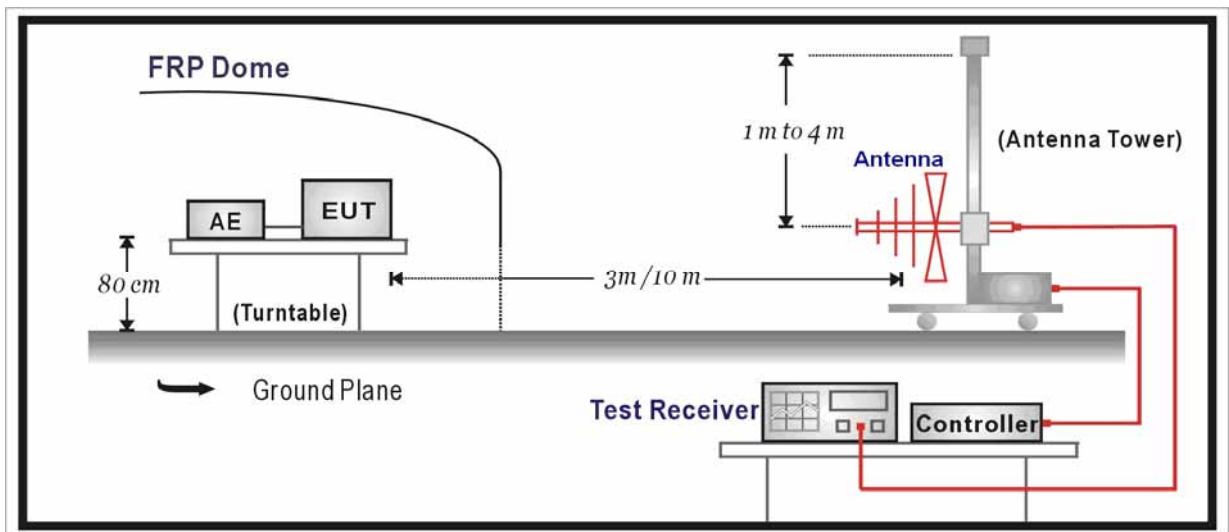
Note 1: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.

### 4.2. Test Setup

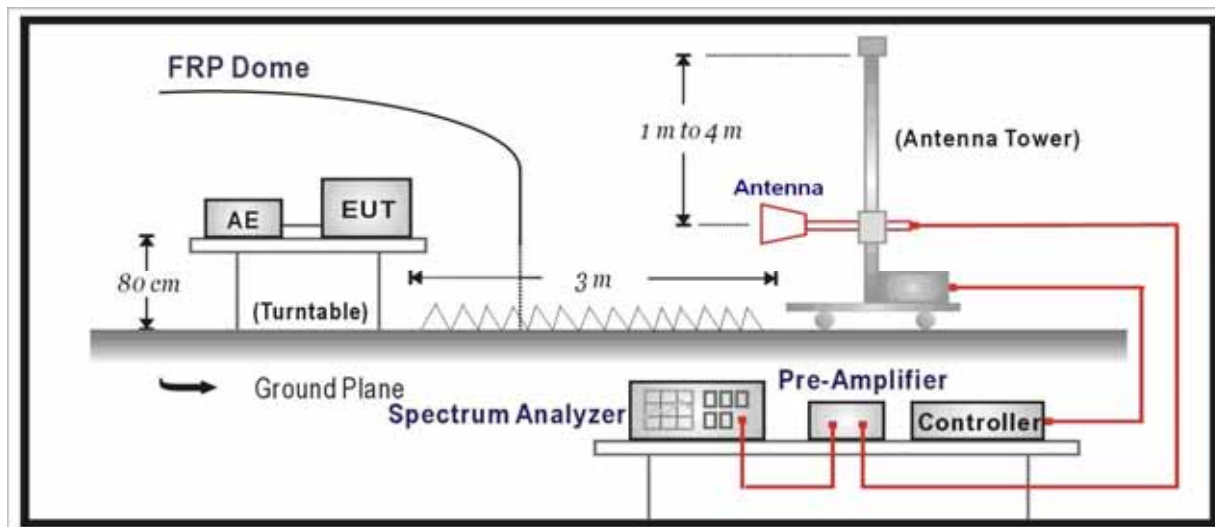
Below 30MHz Test Setup:



Below 1GHz Test Setup:



Above 1GHz Test Setup:



### 4.3. Limit

FCC Part 15 Subpart C Paragraph 15.209		
Frequency (MHz)	Distance (m)	Level (dBuV/m)
30 - 88	3	40
88 - 216	3	43.5
216 - 960	3	46
Above 960	3	54

Note 1: The lower limit shall apply at the transition frequency.

Note 2: Distance refers to the distance in meters between the measuring instrument Antenna and the closed point of any part of the device or system.

Note 3: E field strength (dBuV/m) = 20 log E field strength (uV/m)

### 4.4. Test Procedure

The EUT was setup according to ANSI C63.4: 2009 and tested according to KDB 558074 for compliance to FCC 47CFR 15.247 requirements.

The EUT is placed on a turn table which is 0.8 meter above ground. The turn table is rotated 360 degrees to determine the position of the maximum emission level. The EUT was positioned such that the distance from Antenna to the EUT was 3 meters.

The Antenna is scanned from 1 meter to 4 meters to find out the maximum emission level. This

is repeated for both horizontal and vertical polarization of the Antenna. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.4:2009 on radiated measurement.

The resolution bandwidth below 1GHz setting on the field strength meter is 120 kHz and above 1GHz is 1MHz.

The frequency range from 30MHz to 10th harmonic is checked.

Note: When doing emission measurement above 1GHz, the horn Antenna will be bended down a little (as horn Antenna has the narrow beamwidth) in order to keeping the Antenna in the “cone of radiation” of EUT. The 3dB beamwidth is 10~60 degrees for H-plane and 10~90 degrees for E-plane.

#### **4.5. Uncertainty**

The measurement uncertainty above 1G is defined as  $\pm 3.9$  dB  
below 1G is defined as  $\pm 3.8$  dB

**4.6. Test Result**

All of the test result shown indicates the worst case, and spectrum analyzer parameters setting as shown below:

Peak detector: RBW = 1MHz, VBW = 3MHz, sweep time = 200ms;

Average detector: RBW = 1MHz, VBW = 10Hz, sweep time = auto.

Measure Level = Reading Level + Cable Loss + Antenna Factor - Preamplifier Gain

Mode1: Transmit by Ant 1

CH (MHz)	Antenna	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
2405	H	4808.0	49.5	6.7	56.2	74	-17.8	PK
	H	4810.2	24.7	6.7	31.4	54	-22.6	AV
	H	7215.0	25.2	9.0	34.2	54(Note3)	-19.8	PK
	H	9648	35.9	4.9	40.8	54(Note3)	-13.2	PK
	V	4808.0	40.8	6.7	47.5	54(Note3)	-6.5	PK
	V	7215.0	25.4	9.0	34.4	54(Note3)	-19.6	PK
	V	9644.5	39.4	4.9	44.3	54(Note3)	-9.7	PK
2440	H	4884.5	41.4	6.9	48.3	54(Note3)	-5.7	PK
	H	7320.0	25.8	9.1	34.9	54(Note3)	-19.1	PK
	H	9746.5	37.7	5	42.7	54(Note3)	-11.3	PK
	V	4884.5	44.2	6.9	51.1	54(Note3)	-2.9	PK
	V	7320.0	26.3	9.1	35.4	54(Note3)	-18.6	PK
	V	9746.5	41.2	5.1	46.3	54(Note3)	-7.7	PK
2475	H	4952.5	40.6	7.0	47.6	54(Note3)	-6.4	PK
	H	7425.0	25.8	9.2	35.0	54(Note3)	-19.0	PK
	H	9848	35.1	5.2	40.3	54(Note3)	-13.7	PK
	V	4952.5	32.6	7.0	39.6	54(Note3)	-14.4	PK
	V	7425.0	25.9	9.2	35.1	54(Note3)	-18.9	PK
	V	9848.5	37.4	5.3	42.7	54(Note3)	-11.3	PK

Note: 1. Measure Level = Reading Level + Factor.

2. The test trace is same as the ambient noise (the test frequency range: 9kHz~30MHz, 18GHz~25GHz), therefore no data appear in the report.

3. This limit applies for using average detector, if the test result on peak is lower than average limit, then average measurement needn't be performed.

Mode1: Transmit by Ant 2

CH (MHz)	Antenna	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
2405	H	4810.2	24.1	6.7	30.8	54(Note3)	-23.2	PK
	H	7215.3	24.9	9.0	33.9	54(Note3)	-20.1	PK
	H	9648.1	35.7	4.9	40.6	54(Note3)	-13.4	PK
	V	4808.2	39.2	6.7	45.9	54(Note3)	-8.1	PK
	V	7215.3	23.7	9.0	32.7	54(Note3)	-21.3	PK
	V	9644.4	38.6	4.9	43.5	54(Note3)	-10.5	PK
2440	H	4884.3	40.5	6.9	47.4	54(Note3)	-6.6	PK
	H	7320.2	24.9	9.1	34.0	54(Note3)	-20.0	PK
	H	9746.5	37.5	5.0	42.5	54(Note3)	-11.5	PK
	V	4884.5	44.1	6.9	51.0	54(Note3)	-3.0	PK
	V	7320.3	26.2	9.1	35.3	54(Note3)	-18.7	PK
	V	9746.5	40.8	5.1	45.9	54(Note3)	-8.1	PK
2475	H	4952.2	40.7	7.0	47.7	54(Note3)	-6.3	PK
	H	7425.5	26.1	9.2	35.3	54(Note3)	-18.7	PK
	H	9848.1	35.4	5.2	40.6	54(Note3)	-13.4	PK
	V	4952.5	31.9	7.0	38.9	54(Note3)	-15.1	PK
	V	7425	26.1	9.2	35.3	54(Note3)	-18.7	PK
	V	9848.5	36.8	5.3	42.1	54(Note3)	-11.9	PK

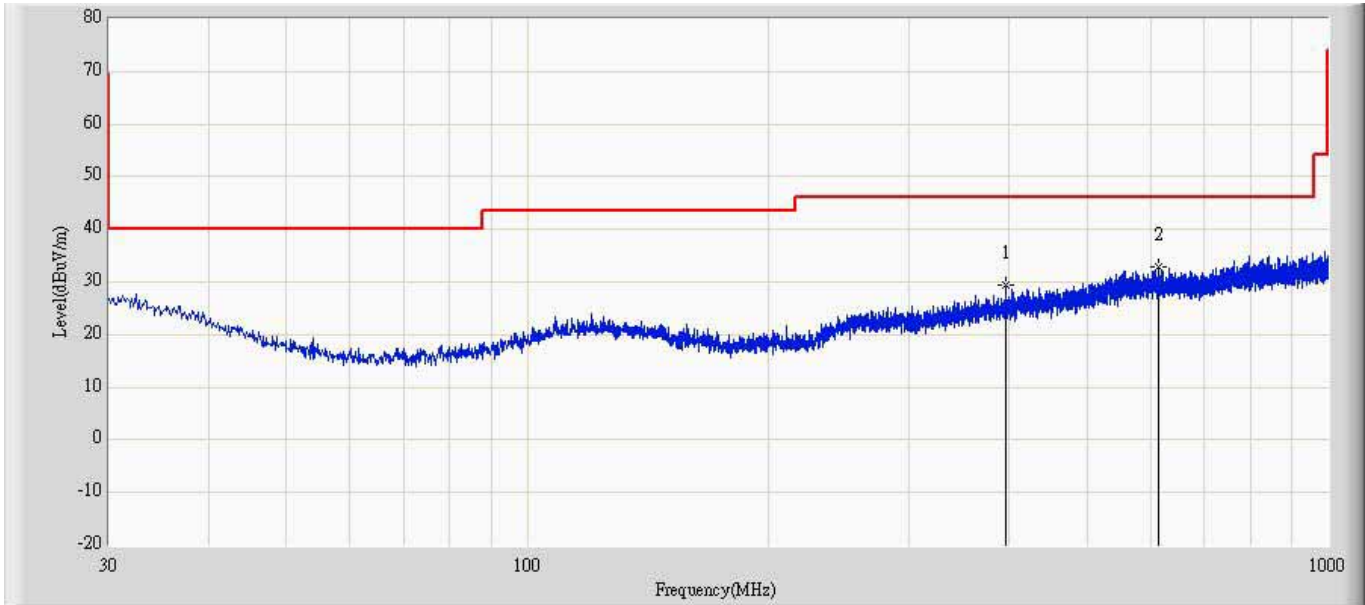
Note: 1. Measure Level = Reading Level + Factor.

2. The test trace is same as the ambient noise (the test frequency range: 9kHz~30MHz, 18GHz~25GHz), therefore no data appear in the report.

3. This limit applies for using average detector, if the test result on peak is lower than average limit, then average measurement needn't be performed.

### The worst case of Radiated Emission below 1GHz:

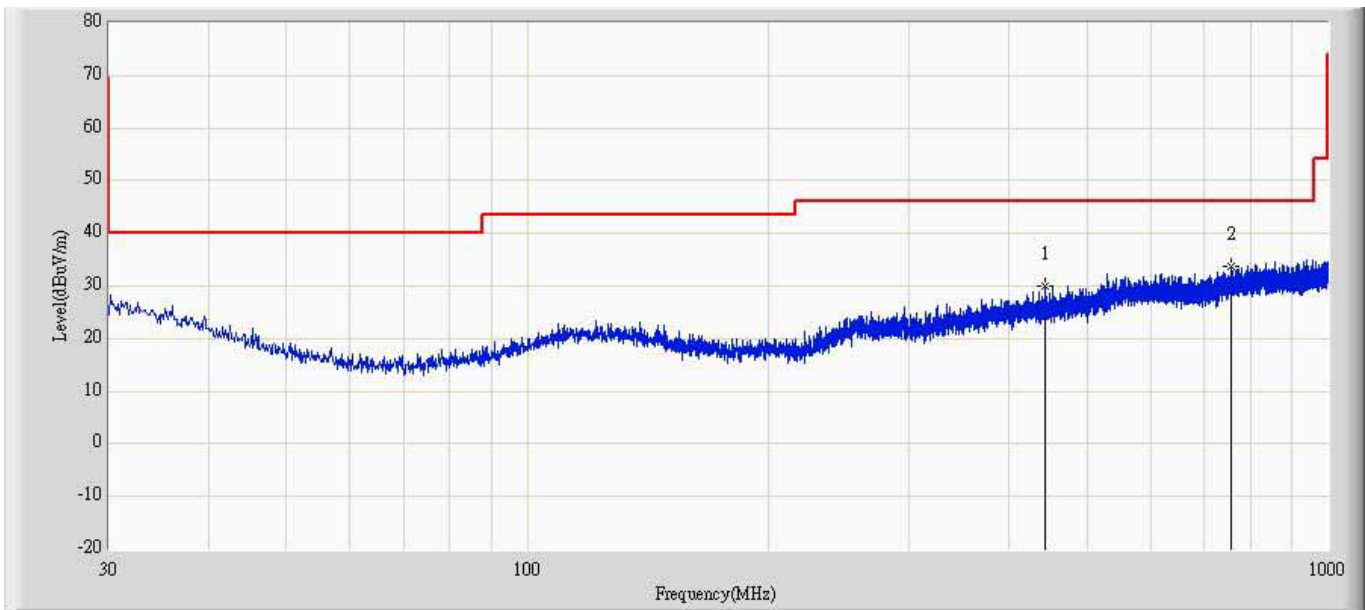
Site: AC2	Time: 2014/12/02 - 09:11
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: CBL6112D_27613(30-1000MHz)	Polarity: Horizontal
EUT: ST10	Power: AC 120V/60Hz
Note: Mode 1: Transmit at channel 2405MHz by ant 1	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			396.418	29.441	5.630	-16.559	46.000	23.811	QP
2		*	615.638	32.960	5.285	-13.040	46.000	27.675	QP



Site: AC2	Time: 2014/12/02 - 09:12
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: CBL6112D_27613(30-1000MHz)	Polarity: Vertical
EUT: ST10	Power: AC 120V/60Hz
Note: Mode 1: Transmit at channel 2405MHz ant 1	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			442.735	30.030	5.498	-15.970	46.000	24.532	QP
2		*	755.924	33.758	5.000	-12.242	46.000	28.757	QP

## 5. RF Antenna Conducted Spurious

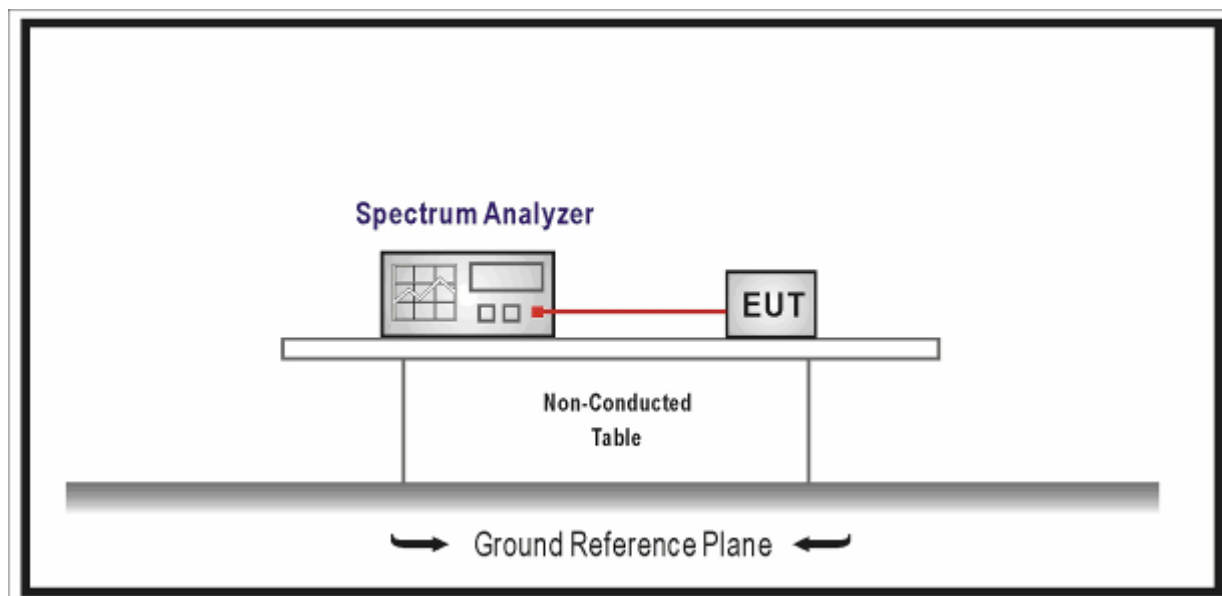
### 5.1. Test Equipment

RF Antenna Conducted Spurious / TR-8

Instrument	Manufacturer	Type No.	Serial No.	Cali. Due Date
Spectrum Analyzer	Agilent	N9010A	MY48030494	2015.01.07
Temperature/Humidity Meter	zhicheng	ZC1-2	TR8-TH	2015.04.09

Note: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.

### 5.2. Test Setup



### 5.3. Limit

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum 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.

#### **5.4. Test Procedure**

The EUT was tested according to KDB 558074 for compliance to FCC 47CFR 15.247 requirements.

Set RBW = 100 kHz, Set VBW > RBW, scan up through 10th harmonic.

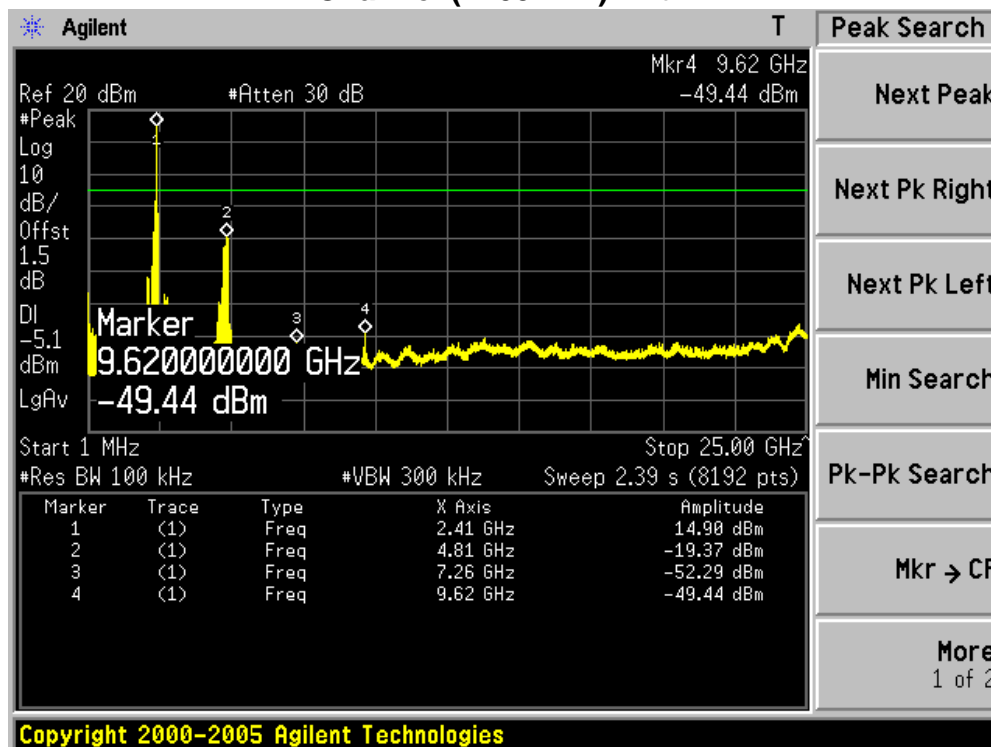
#### **5.5. Uncertainty**

The measurement uncertainty is defined as  $\pm 1.27$  dB

5.6. Test Result

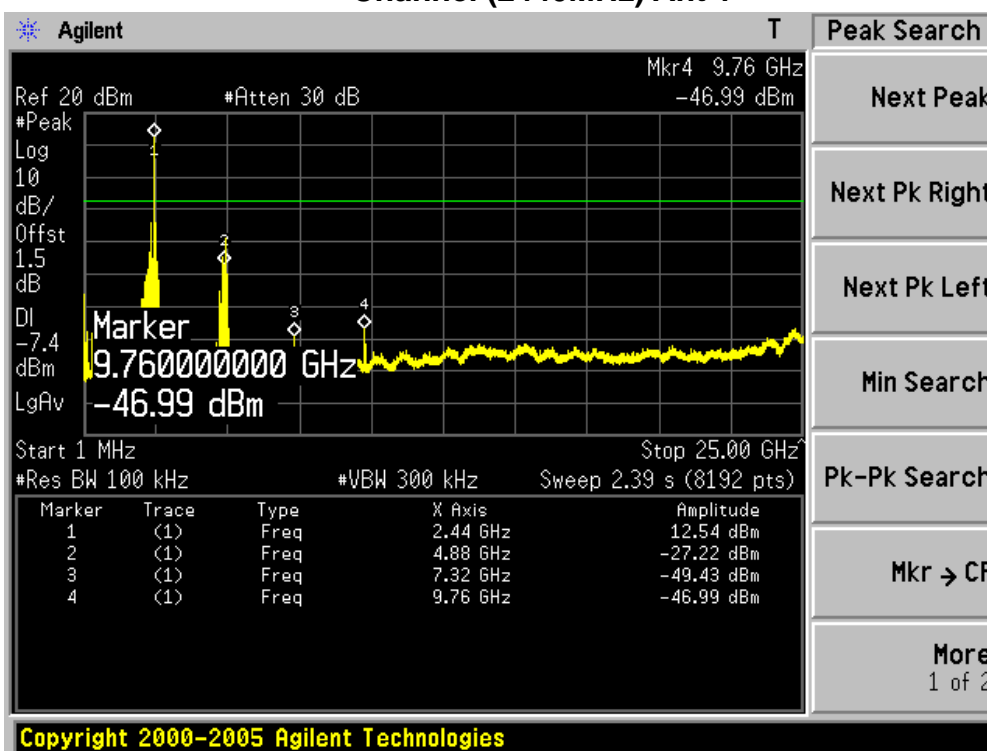
Product	:	ST10
Test Item	:	RF Antenna Conducted Spurious
Test Site	:	TR-8
Test Mode	:	Mode 1: Transmit

Channel (2405MHz) Ant 1



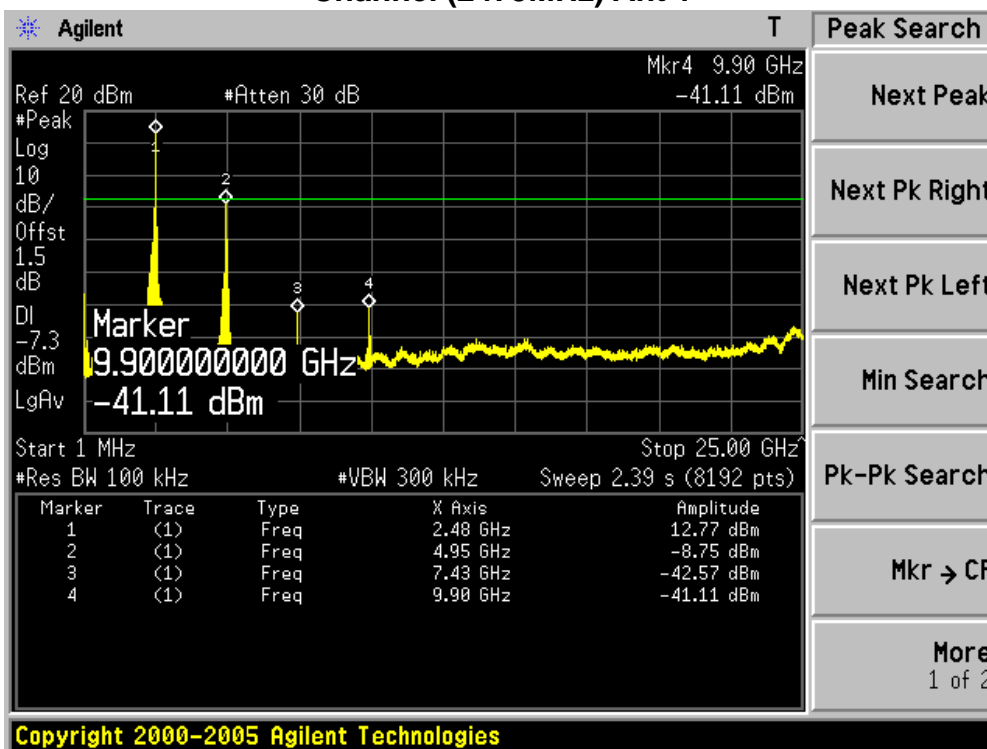
Note: The above test pattern is synthesized by multiple of the frequency range.

Channel (2440MHz) Ant 1



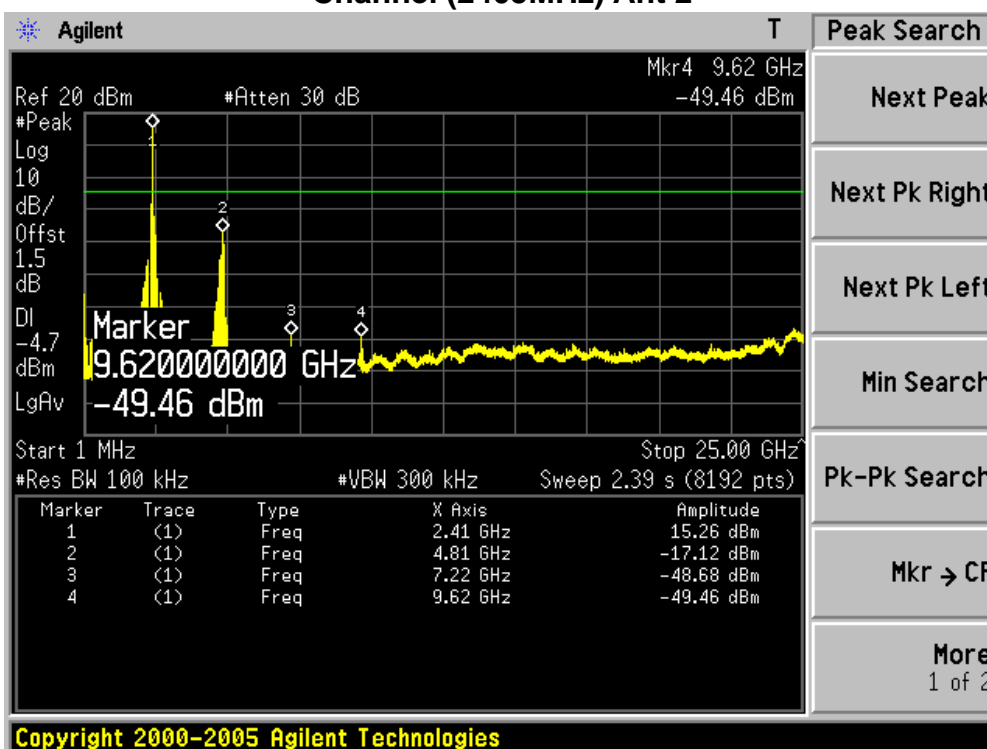
Note: The above test pattern is synthesized by multiple of the frequency range.

Channel (2475MHz) Ant 1



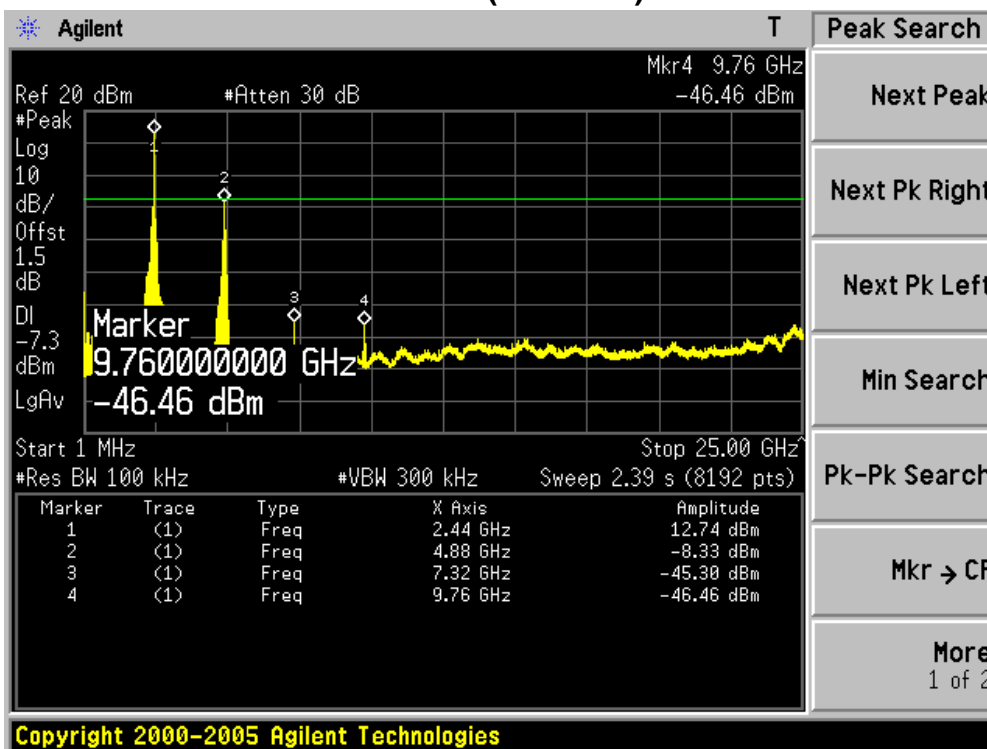
Note: The above test pattern is synthesized by multiple of the frequency range.

Channel (2405MHz) Ant 2



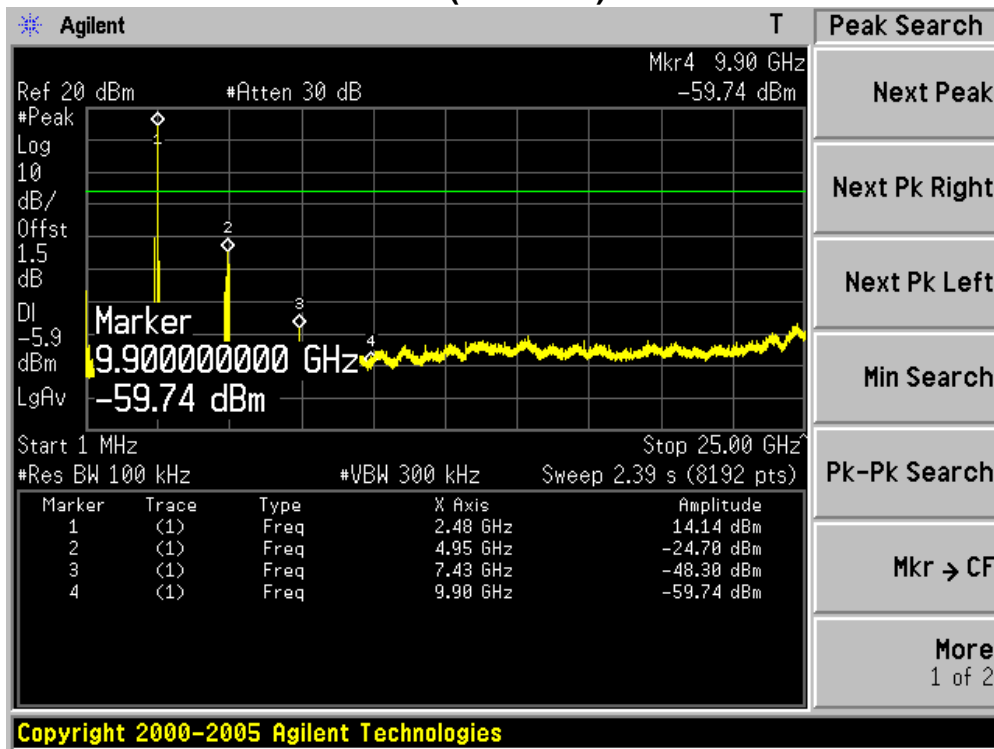
Note: The above test pattern is synthesized by multiple of the frequency range.

Channel (2440MHz) Ant 2



Note: The above test pattern is synthesized by multiple of the frequency range.

Channel (2475MHz) Ant 2



Note: The above test pattern is synthesized by multiple of the frequency range.

**6. Radiated Emission Band Edge**

**6.1. Test Equipment**

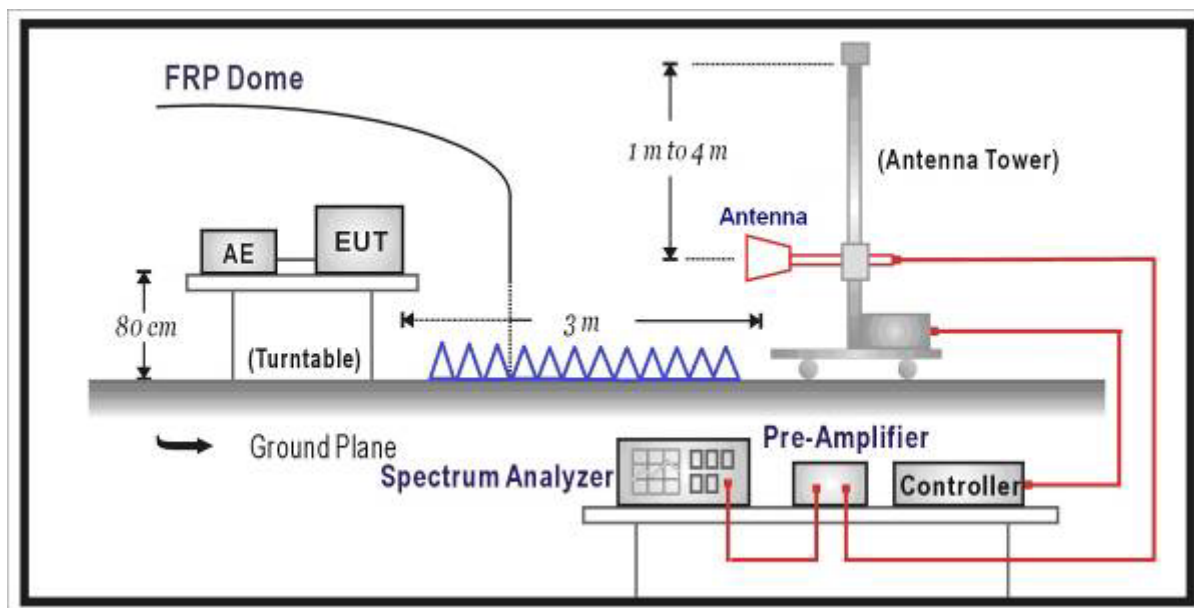
Radiated Emission Band Edge / AC-5

Instrument	Manufacturer	Type No.	Serial No.	Cali. Due Date
Spectrum Analyzer	Agilent	N9020A	MY49100159	2015.03.28
Preamplifier	Miteq	NSP1800-25	1364185	2015.05.03
Preamplifier	QuieTek	AP-040G	CHM-0906001	2015.05.03
Bilog Antenna	Teseq GmbH	CBL6112D	27612	2015.10.15
DRG Horn	ETS-Lindgren	3117	00123988	2015.01.07
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC5-C1	2015.03.01
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC5-C2	2015.03.01
Coaxial Cable	Huber+Suhner	SUCOFLEX 102	AC5-C3	2015.03.01
EMI Receiver	Agilent	N9038A	MY51210196	2015.06.09
Temperature/Humidity Meter	Zhicheng	ZC1-2	AC5-TH	2015.01.08

Note 1: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.



## 6.2. Test Setup



## 6.3. Limit

Radiated emissions which fall in the restricted bands, as defined in Section 15.205(a) of FCC part 15, must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

## 6.4. Test Procedure

Since the EUT can be set to transmit continuously (Duty cycle >98%), use KDB 558074 Section 11.13.3.3 to perform band edge test for average value.

If the EUT can be configured or modified to transmit continuously ( $D \geq 98\%$ ), then the average emission levels within 2 MHz of the authorized band edge may be measured using the following method (with EUT transmitting continuously):

- a) Set instrument center frequency to the frequency of the emission to be measured (must be within 2 MHz of the authorized band edge).
- b) Set span to 2 MHz.
- c) RBW = 100 kHz.
- d) VBW  $\geq [3 \times \text{RBW}]$ .
- e) Detector = RMS (power averaging), if  $[\text{span} / (\# \text{ of points in sweep})] \leq (\text{RBW} / 2)$ .
- f) Averaging type = power (i.e., rms).
  - 1) As an alternative, the detector and averaging type may be set for linear voltage averaging.
  - 2) Some instruments require linear display mode to use linear voltage averaging. Log or

dB averaging shall not be used.

g) Sweep time = auto.

h) Perform a trace average of at least 100 traces.

i) Compute the power by integrating the spectrum over 1 MHz using the analyzer's band power measurement function with band limits set equal to the emission frequency (femission)  $\pm$  0.5 MHz.

If the instrument does not have a band power function, then sum the amplitude levels (in power units) at 100 kHz intervals extending across the 1 MHz spectrum defined by femission  $\pm$  0.5 MHz.

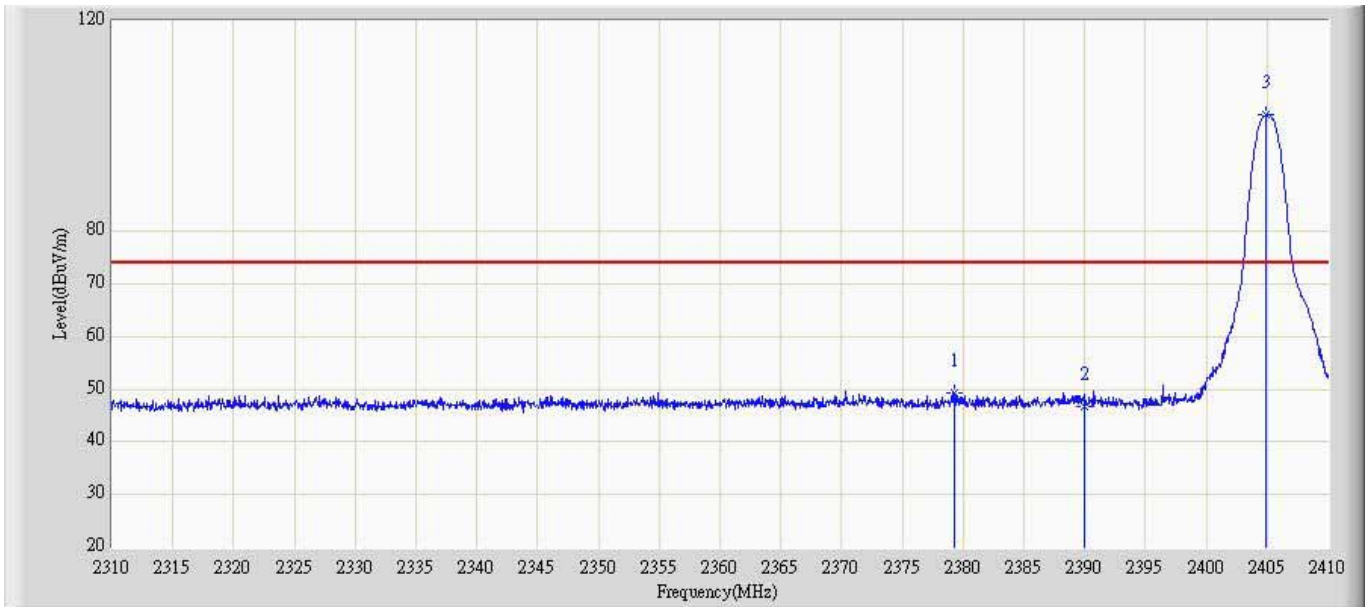
## 6.5. Uncertainty

The measurement uncertainty above 1G is defined as  $\pm$  3.9 dB

6.6. Test Result

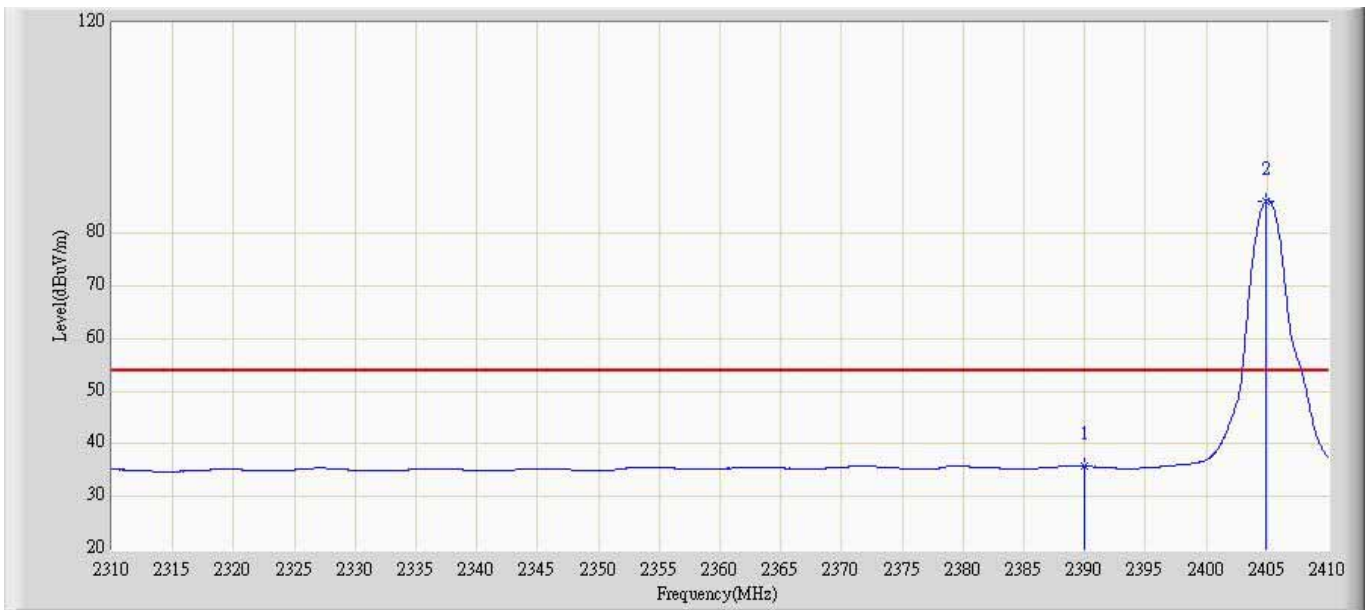
Measure Level = Reading Level + Cable Loss + Antenna Factor - Preamplifier Gain

Site: AC5	Time: 2014/12/18 - 15:39
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: ST10	Power: DC 3.6V
Note: Mode1: Transmit at channel 2405MHz by ant 1	



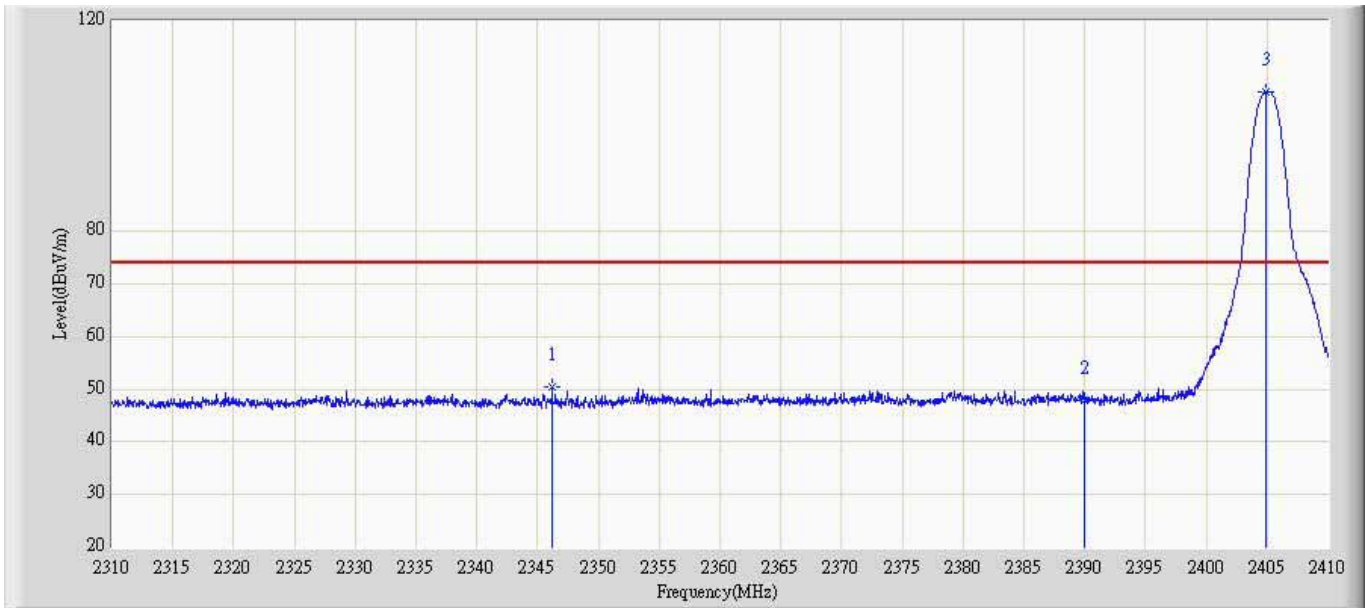
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2379.250	49.305	11.664	-24.695	74.000	37.641	PK
2		2390.000	46.656	8.963	-27.344	74.000	37.693	PK
3	*	2404.900	102.159	64.392	N/A	N/A	37.767	PK

Site: AC5	Time: 2014/12/18 - 15:40
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: ST10	Power: DC 3.6V
Note: Mode1: Transmit at channel 2405MHz by ant 1	



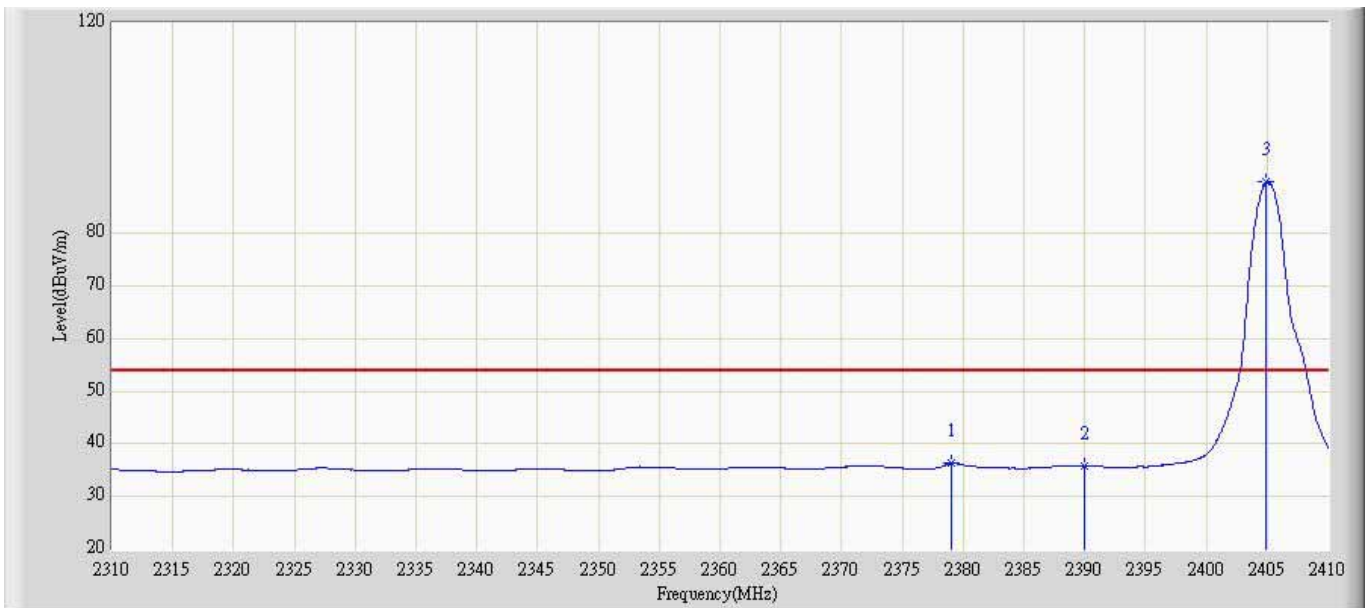
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	35.738	-1.955	-18.262	54.000	37.693	AV
2	*	2404.850	86.045	48.279	N/A	N/A	37.767	AV

Site: AC5	Time: 2014/12/18 - 15:41
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: ST10	Power: DC 3.6V
Note: Mode1: Transmit at channel 2405MHz by ant 1	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2346.200	50.325	12.842	-23.675	74.000	37.482	PK
2		2390.000	47.763	10.070	-26.237	74.000	37.693	PK
3	*	2404.950	106.621	68.854	N/A	N/A	37.767	PK

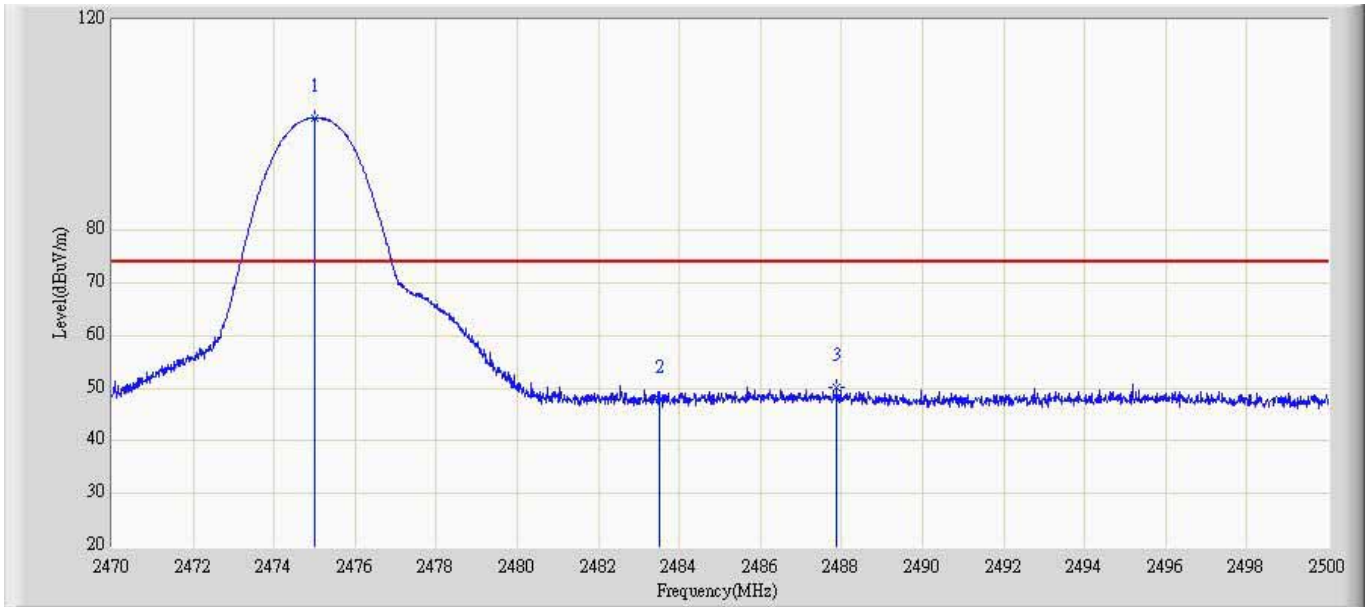
Site: AC5	Time: 2014/12/18 - 15:41
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: ST10	Power: DC 3.6V
Note: Mode1: Transmit at channel 2405MHz by ant 1	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2379.000	36.318	-1.322	-17.682	54.000	37.639	AV
2		2390.000	35.850	-1.843	-18.150	54.000	37.693	AV
3	*	2404.950	89.774	52.007	N/A	N/A	37.767	AV

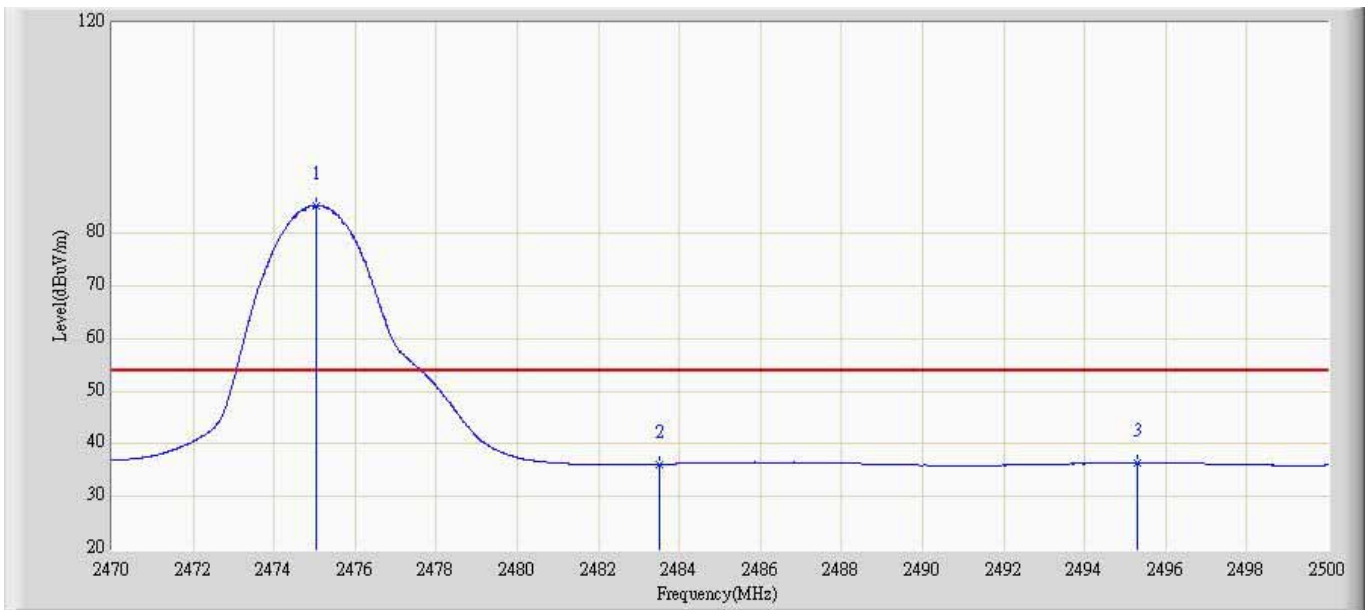
Site: AC5	Time: 2014/12/18 - 15:32
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Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: ST10	Power: DC 3.6V
Note: Mode1: Transmit at channel 2475MHz by ant 1	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2475.010	101.462	63.352	N/A	N/A	38.110	PK
2		2483.500	47.761	9.610	-26.239	74.000	38.150	PK
3		2487.880	50.143	11.971	-23.857	74.000	38.172	PK

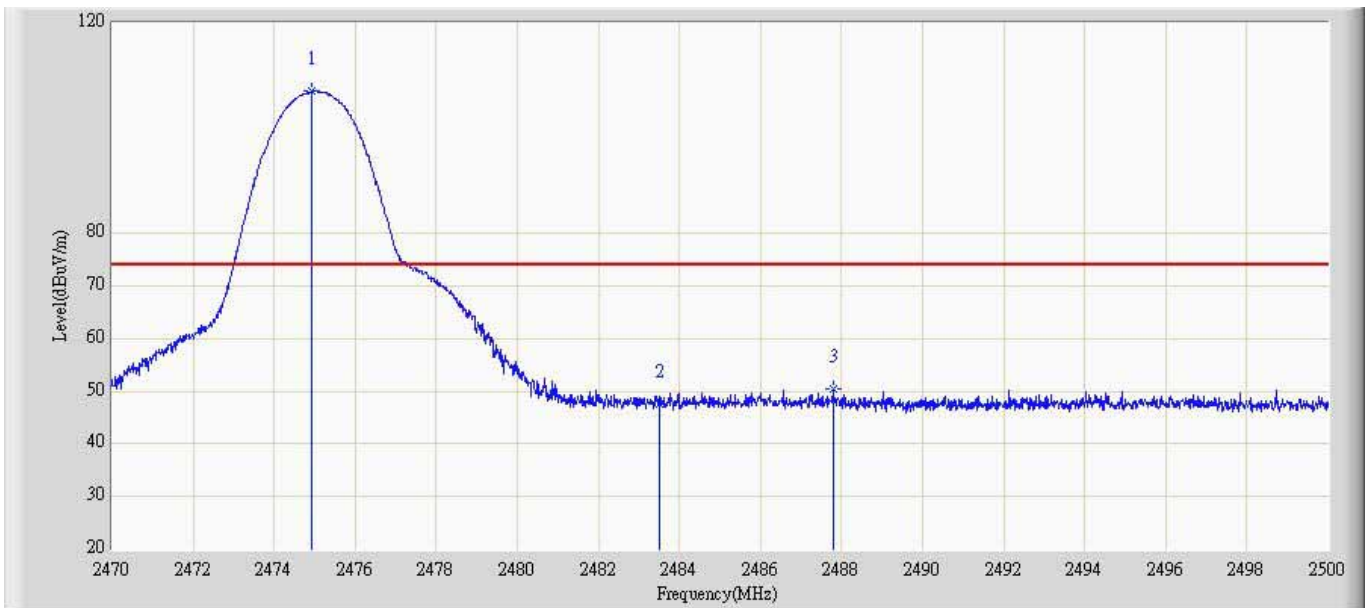
Site: AC5	Time: 2014/12/18 - 15:32
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: ST10	Power: DC 3.6V
Note: Mode1: Transmit at channel 2475MHz by ant 1	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2475.055	85.243	47.133	N/A	N/A	38.110	AV
2		2483.500	36.162	-1.989	-17.838	54.000	38.150	AV
3		2495.290	36.414	-1.794	-17.586	54.000	38.208	AV

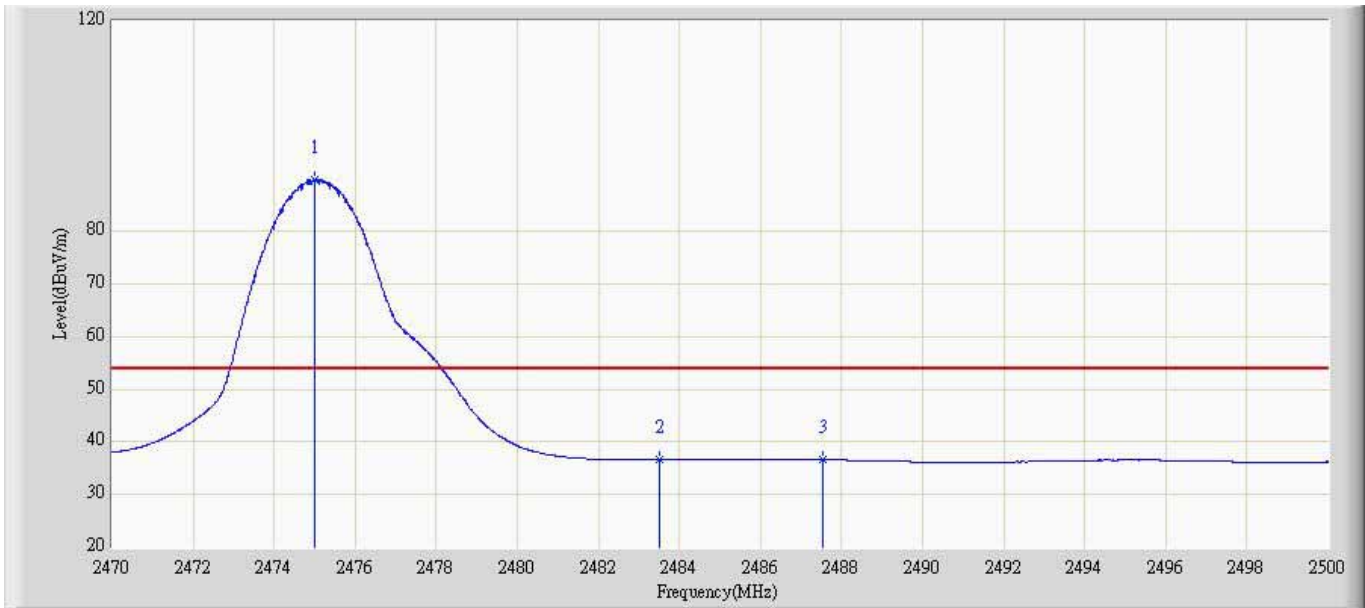


Site: AC5	Time: 2014/12/18 - 15:33
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: ST10	Power: DC 3.6V
Note: Mode1: Transmit at channel 2475MHz by ant 1	



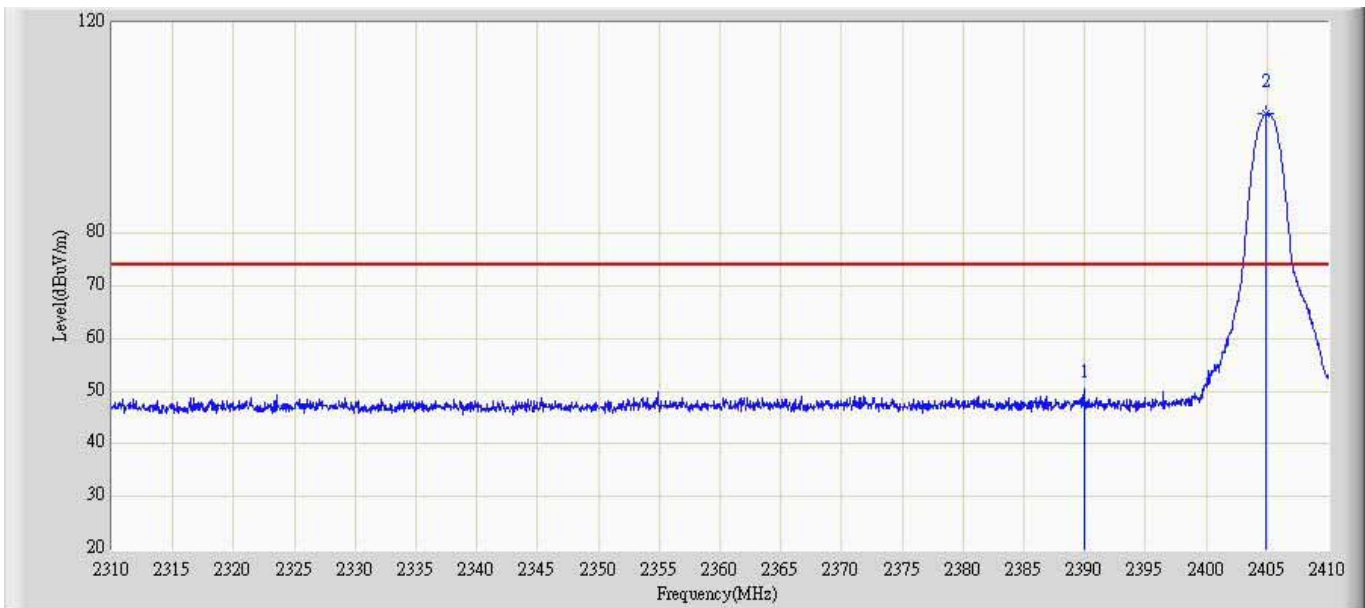
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2474.920	106.940	68.831	N/A	N/A	38.109	PK
2		2483.500	47.449	9.298	-26.551	74.000	38.150	PK
3		2487.790	50.397	12.225	-23.603	74.000	38.172	PK

Site: AC5	Time: 2014/12/18 - 15:33
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: ST10	Power: DC 3.6V
Note: Mode1: Transmit at channel 2475MHz by ant 1	



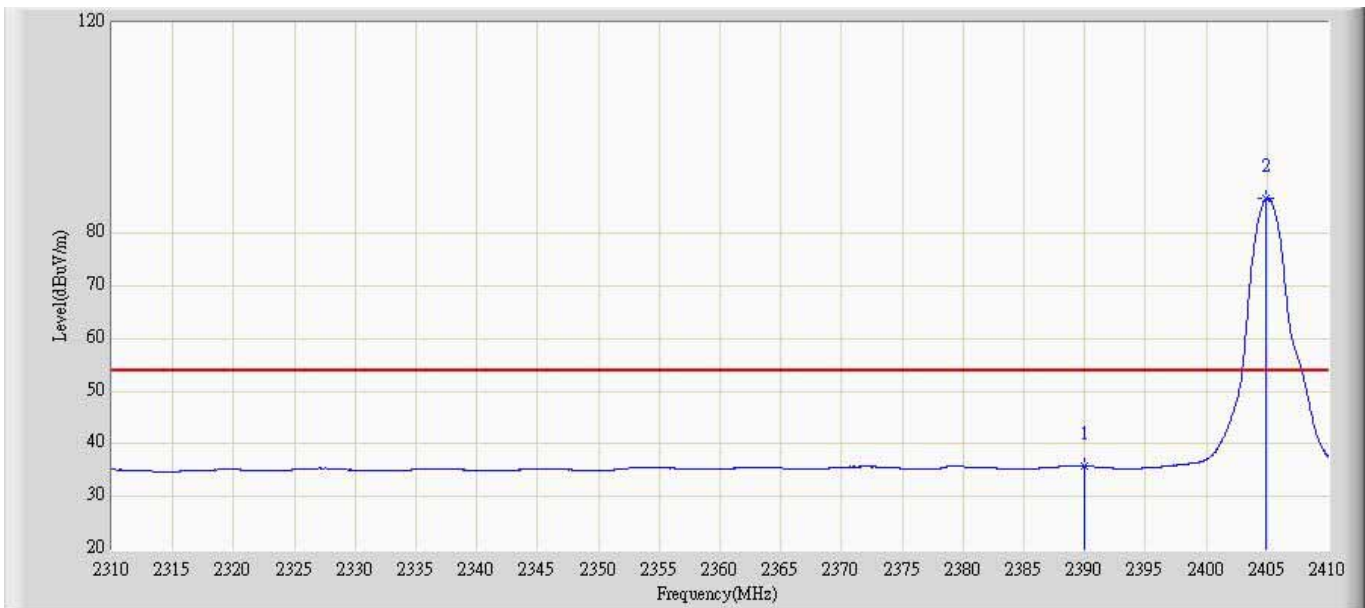
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2475.010	89.791	51.681	N/A	N/A	38.110	AV
2		2483.500	36.563	-1.588	-17.437	54.000	38.150	AV
3		2487.550	36.661	-1.510	-17.339	54.000	38.170	AV

Site: AC5	Time: 2014/12/18 - 15:36
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: ST10	Power: DC 3.6V
Note: Mode1: Transmit at channel 2405MHz by ant 2	



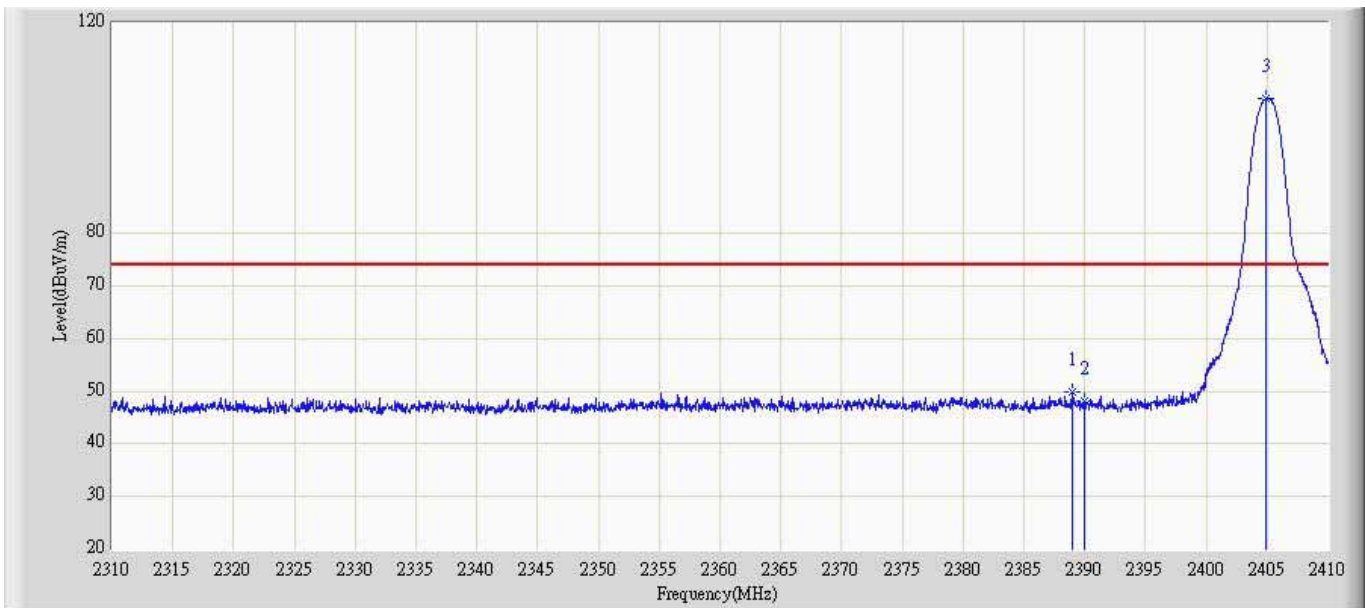
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	47.571	9.878	-26.429	74.000	37.693	PK
2	*	2404.950	102.713	64.946	N/A	N/A	37.767	PK

Site: AC5	Time: 2014/12/18 - 15:37
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: ST10	Power: DC 3.6V
Note: Mode1: Transmit at channel 2405MHz by ant 2	



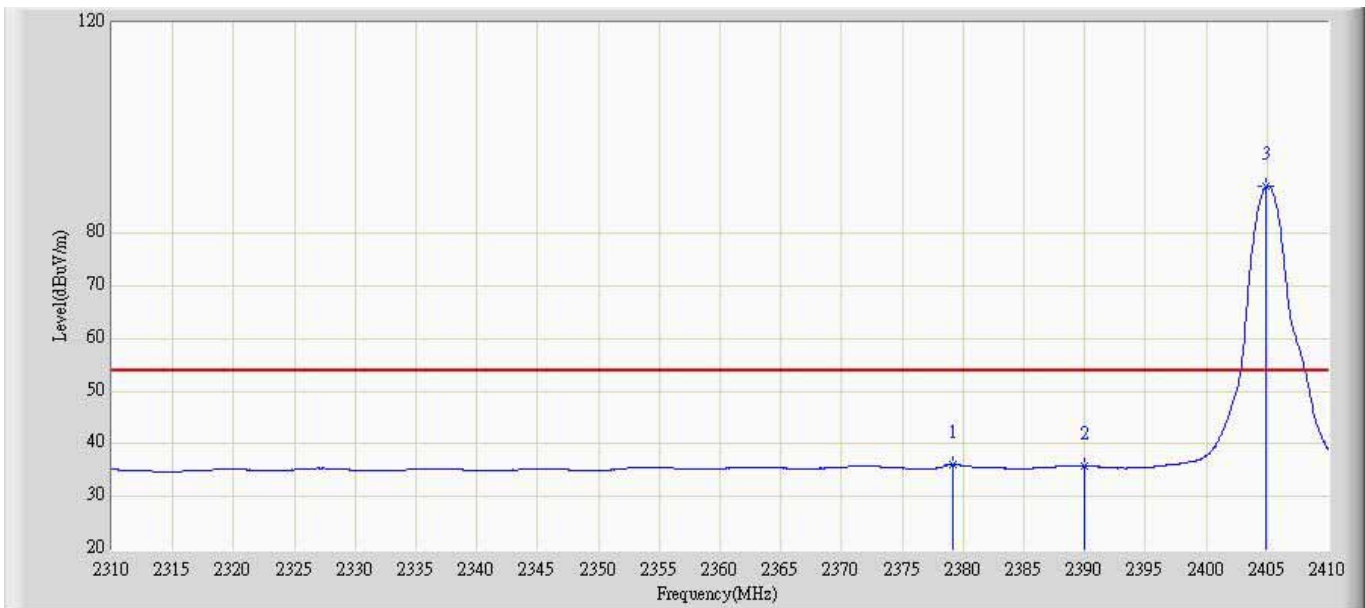
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	35.729	-1.964	-18.271	54.000	37.693	AV
2	*	2404.950	86.630	48.863	N/A	N/A	37.767	AV

Site: AC5	Time: 2014/12/18 - 15:38
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: ST10	Power: DC 3.6V
Note: Mode1: Transmit at channel 2405MHz by ant 2	



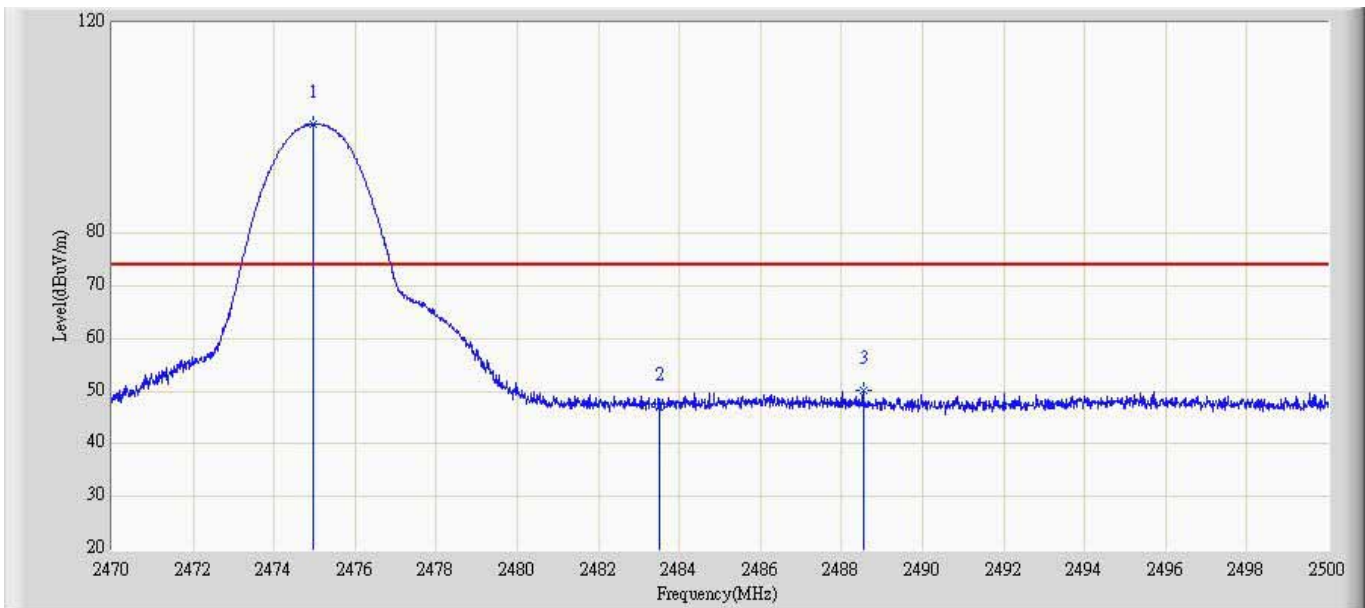
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2389.000	49.742	12.054	-24.258	74.000	37.688	PK
2		2390.000	48.119	10.426	-25.881	74.000	37.693	PK
3	*	2404.900	105.578	67.811	N/A	N/A	37.767	PK

Site: AC5	Time: 2014/12/18 - 15:38
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: ST10	Power: DC 3.6V
Note: Mode1: Transmit at channel 2405MHz by ant 2	



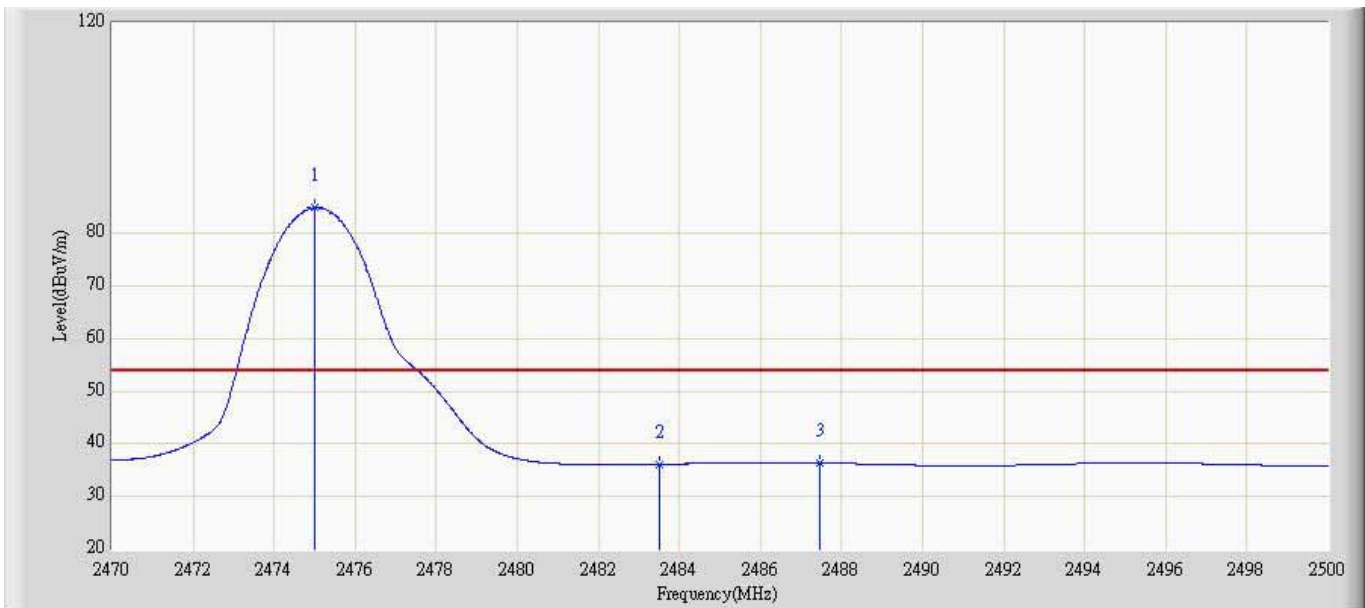
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2379.100	36.126	-1.514	-17.874	54.000	37.641	AV
2		2390.000	35.801	-1.892	-18.199	54.000	37.693	AV
3	*	2404.850	88.837	51.071	N/A	N/A	37.767	AV

Site: AC5	Time: 2014/12/18 - 15:24
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: ST10	Power: DC 3.6V
Note: Mode1: Transmit at channel 2475MHz by ant 2	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2474.965	100.780	62.671	N/A	N/A	38.110	PK
2		2483.500	46.956	8.805	-27.044	74.000	38.150	PK
3		2488.540	50.163	11.988	-23.837	74.000	38.176	PK

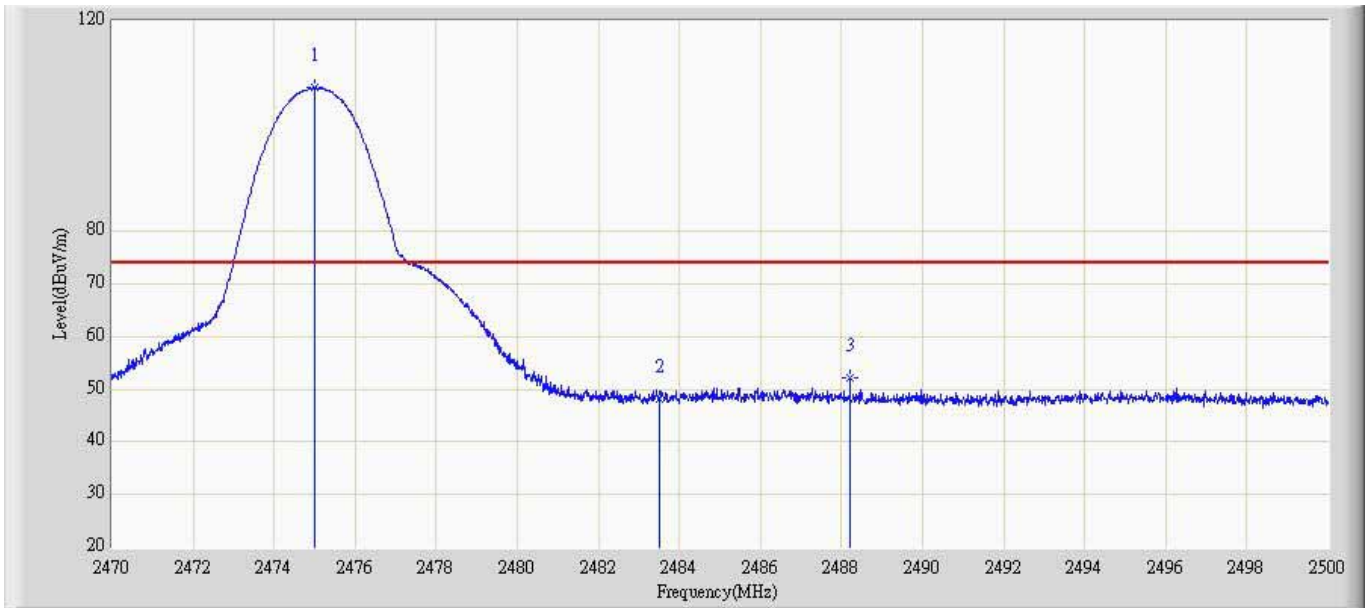
Site: AC5	Time: 2014/12/18 - 15:30
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: ST10	Power: DC 3.6V
Note: Mode1: Transmit at channel 2475MHz by ant 2	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2475.010	84.842	46.732	N/A	N/A	38.110	AV
2		2483.500	36.107	-2.044	-17.893	54.000	38.150	AV
3		2487.445	36.392	-1.778	-17.608	54.000	38.170	AV

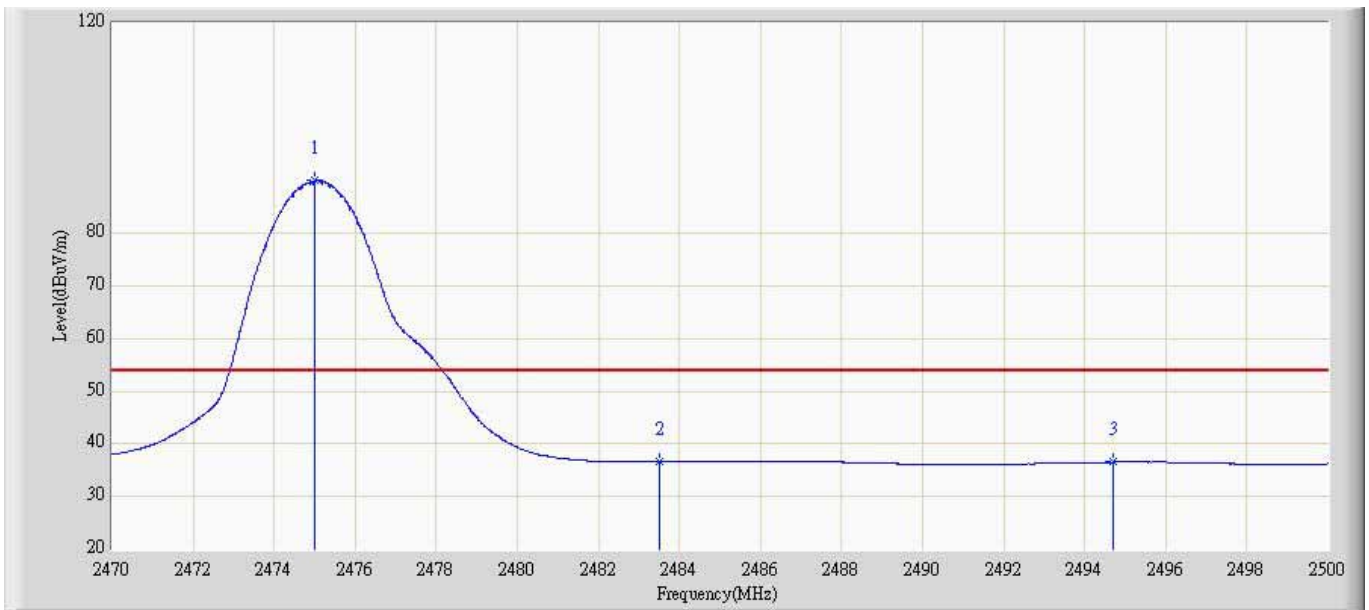


Site: AC5	Time: 2014/12/18 - 15:31
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: ST10	Power: DC 3.6V
Note: Mode1: Transmit at channel 2475MHz by ant 2	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2475.010	107.219	69.109	N/A	N/A	38.110	PK
2		2483.500	48.146	9.995	-25.854	74.000	38.150	PK
3		2488.210	52.102	13.928	-21.898	74.000	38.174	PK

Site: AC5	Time: 2014/12/18 - 15:31
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: ST10	Power: DC 3.6V
Note: Mode1: Transmit at channel 2475MHz by ant 2	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2475.010	90.000	51.890	N/A	N/A	38.110	AV
2		2483.500	36.578	-1.573	-17.422	54.000	38.150	AV
3		2494.720	36.523	-1.682	-17.477	54.000	38.205	AV

## 7. Operation Frequency Range of 20dB Bandwidth

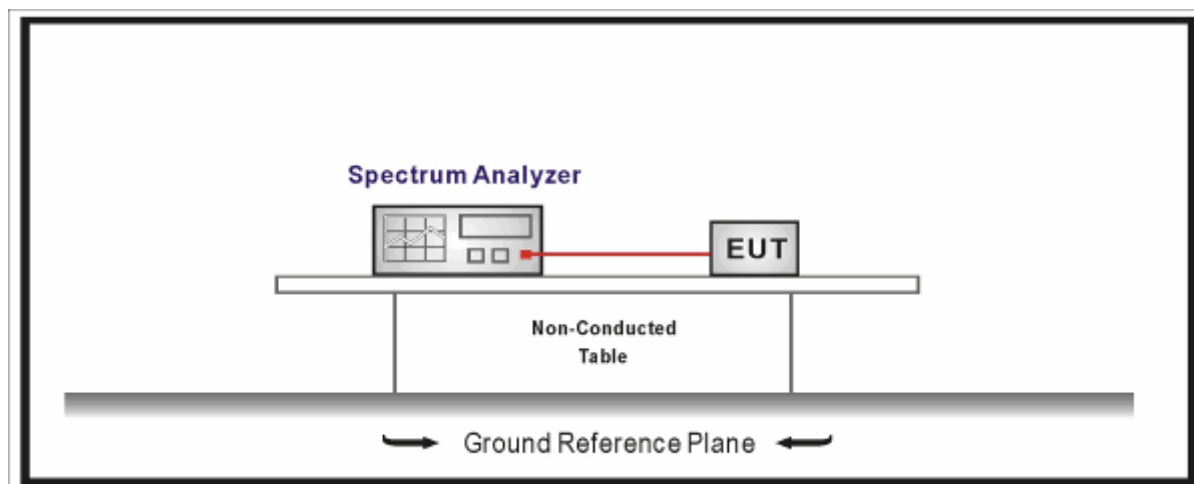
### 7.1. Test Equipment

Operation Frequency Range of 20dB Bandwidth / TR-8

Instrument	Manufacturer	Type No.	Serial No.	Cali. Due Date
Spectrum Analyzer	Agilent	E4446A	MY45300103	2015.01.07
Temperature/Humidity Meter	zhicheng	ZC1-2	TR8-TH	2015.04.09

Note: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.

### 7.2. Test Setup



### 7.3. Limit

20 dB bandwidth of the emission is contained within the operation frequency band.

### 7.4. Test Procedure

The EUT was setup according to ANSI C63.4: 2009; tested according to DTS test procedure of KDB558074 for compliance to FCC 47CFR 15.247 requirements.

The 20dB bandwidth test is using KDB 558074 Section 8.1 option 1 method.

- a) Set RBW = 100 kHz.
- b) Set the video bandwidth (VBW)  $\geq 3 \times$  RBW.
- c) Detector = Peak.
- d) Trace mode = max hold.

- e) Sweep = auto couple.
- f) Allow the trace to stabilize.
- g) Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 20dB relative to the maximum level measured in the fundamental emission.
- h) Remark the 20dB down frequency point and make sure this is within the operating frequency band.

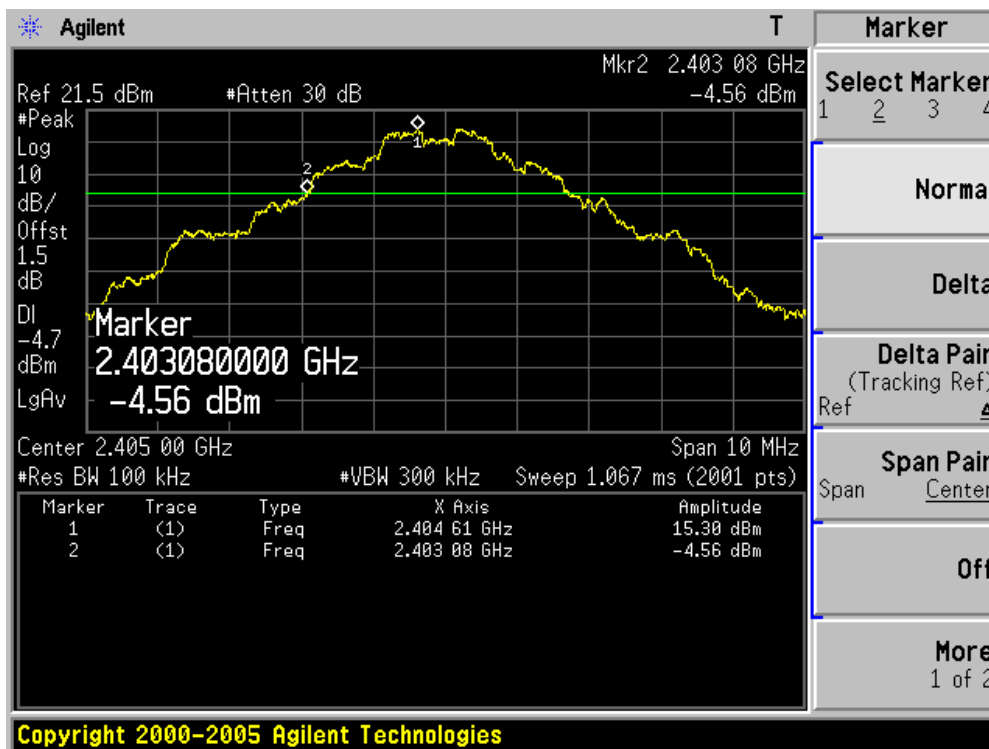
## 7.5. Uncertainty

The measurement uncertainty is defined as  $\pm 1$  kHz

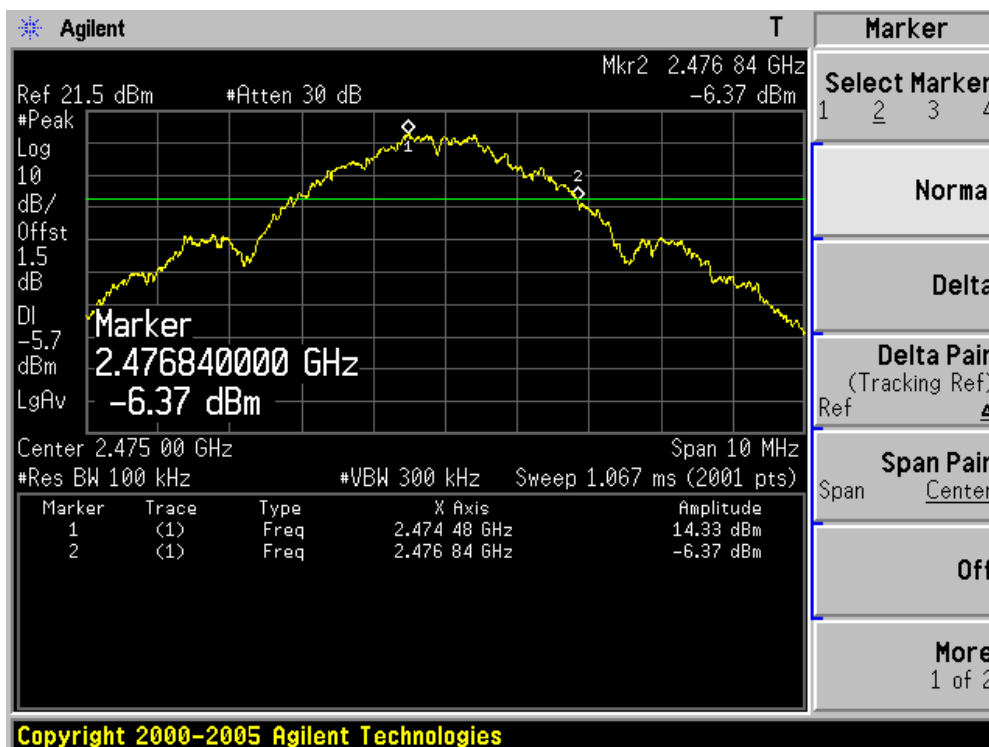
7.6. Test Result

Product	:	ST10
Test Item	:	Operation Frequency Range of 20dB Bandwidth
Test Site	:	TR-8
Test Mode	:	Mode 1: Transmit by Ant 1

2405MHz

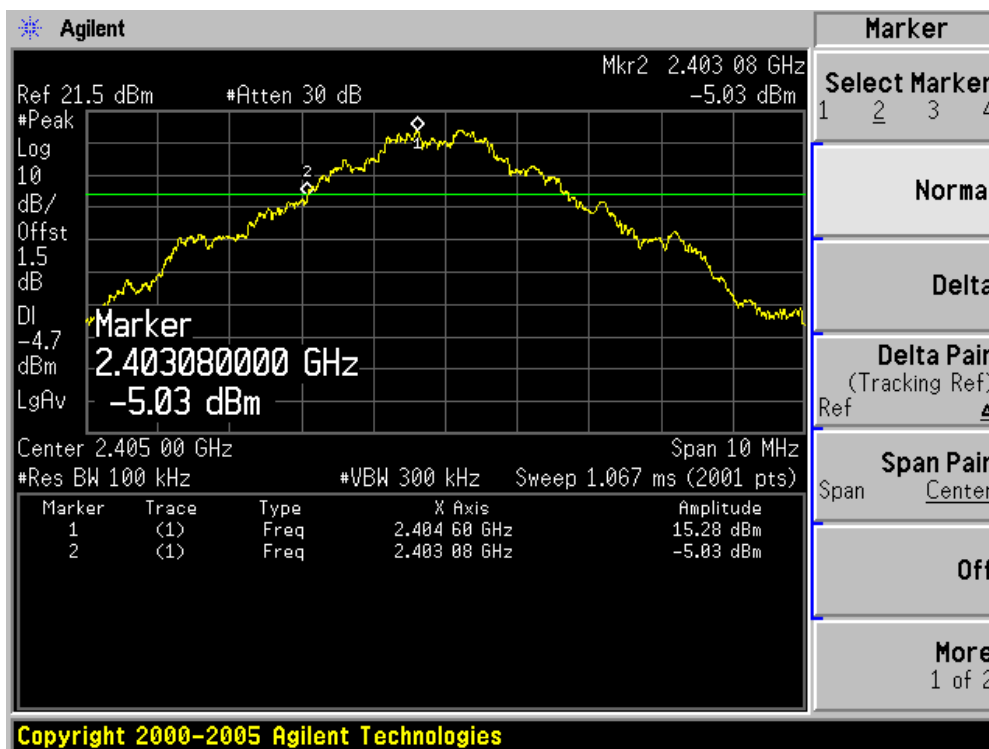


2475MHz

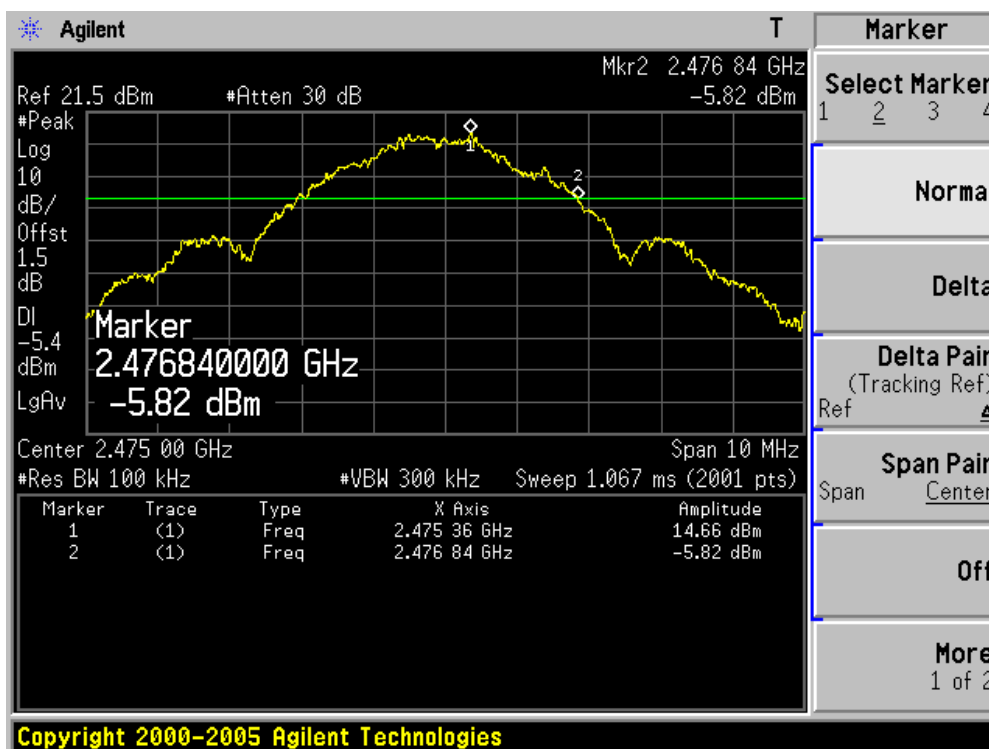


Product	:	ST10
Test Item	:	Operation Frequency Range of 20dB Bandwidth
Test Site	:	TR-8
Test Mode	:	Mode 1: Transmit by Ant 2

### 2405MHz



### 2475MHz



## 8. Occupied Bandwidth

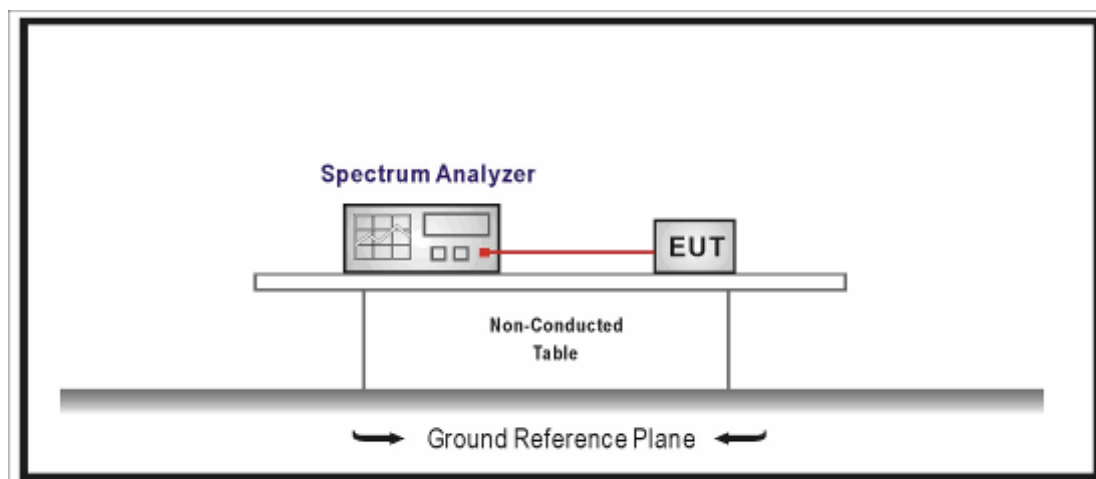
### 8.1. Test Equipment

Occupied Bandwidth / TR-8

Instrument	Manufacturer	Type No.	Serial No.	Cali. Due Date
Spectrum Analyzer	Agilent	E4446A	MY45300103	2015.01.07
Temperature/Humidity Meter	zhicheng	ZC1-2	TR8-TH	2015.04.09

Note: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.

### 8.2. Test Setup



### 8.3. Limit

The minimum 6dB bandwidth shall be at least 500 kHz.

### 8.4. Test Procedure

The EUT was setup according to ANSI C63.4: 2009; tested according to DTS test procedure of KDB558074 for compliance to FCC 47CFR 15.247 requirements. The 6dB bandwidth test is using KDB 558074 Section 8.1 option 1 method.

- a) Set RBW = 100 kHz.
- b) Set the video bandwidth (VBW)  $\geq 3 \times$  RBW.
- c) Detector = Peak.
- d) Trace mode = max hold.
- e) Sweep = auto couple.

- f) Allow the trace to stabilize.
- g) Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

## 8.5. Uncertainty

The measurement uncertainty is defined as  $\pm 1$  kHz



8.6. Test Result

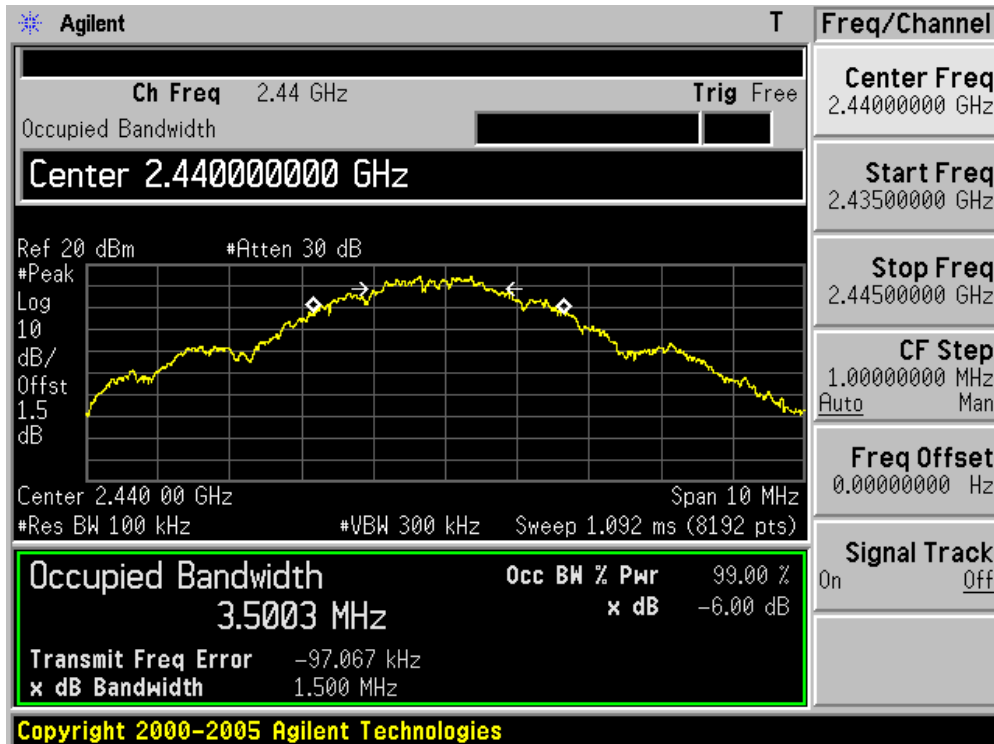
Product	:	ST10
Test Item	:	6dB Occupied Bandwidth
Test Site	:	TR-8
Test Mode	:	Mode 1: Transmit by Ant 1

Frequency (MHz)	6dB Occupied Bandwidth (kHz)	Limit (kHz)	Result	99% Bandwidth (kHz)
2405	1462.0	500	Pass	3465.3
2440	1500.0	500	Pass	3500.3
2475	1596.0	500	Pass	3541.3

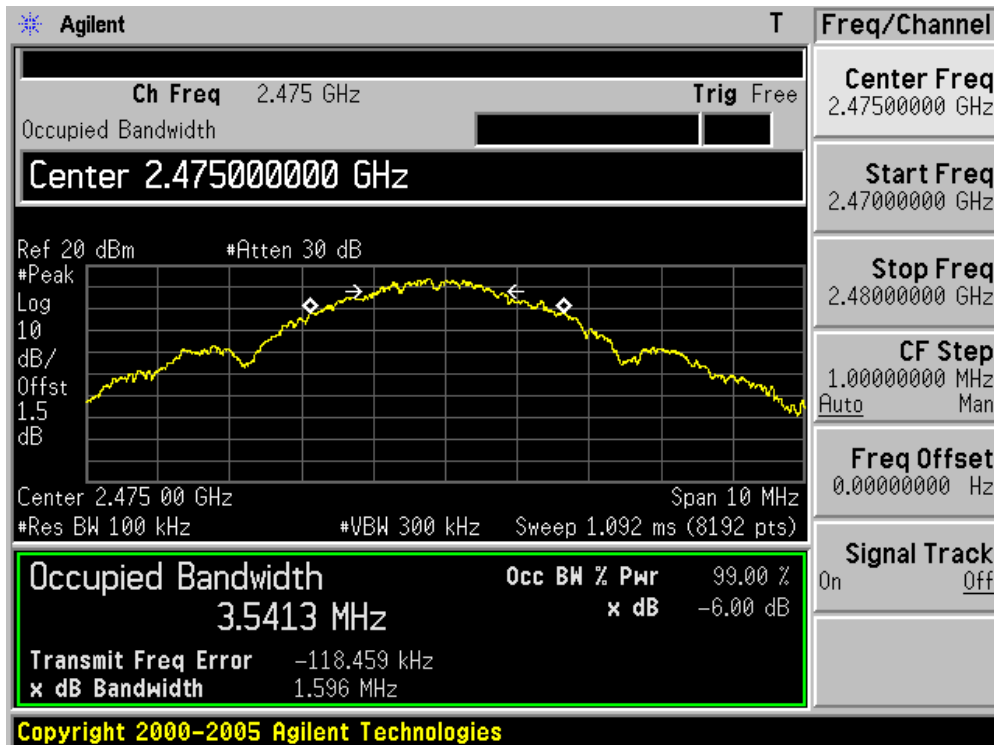
2405MHz



2440MHz



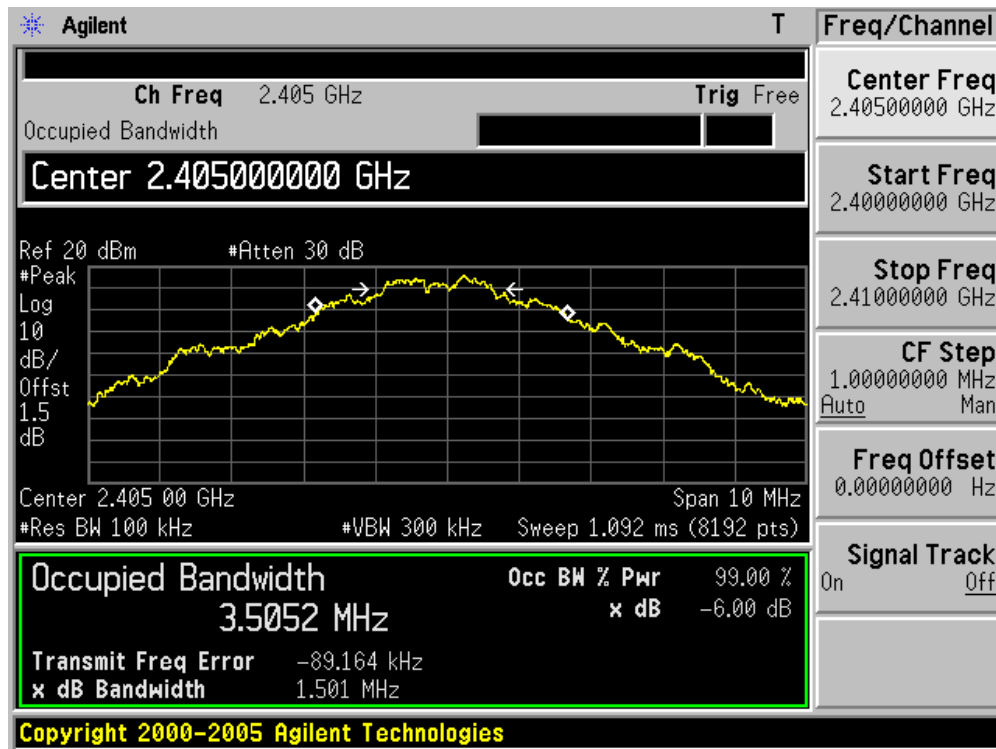
2475MHz



Product	:	ST10
Test Item	:	6dB Occupied Bandwidth
Test Site	:	TR-8
Test Mode	:	Mode 1: Transmit by Ant 2

Frequency (MHz)	6dB Occupied Bandwidth (kHz)	Limit (kHz)	Result	99% Bandwidth (kHz)
2405	1501.0	500	Pass	3505.2
2440	1509.0	500	Pass	3535.7
2475	1533.0	500	Pass	3518.9

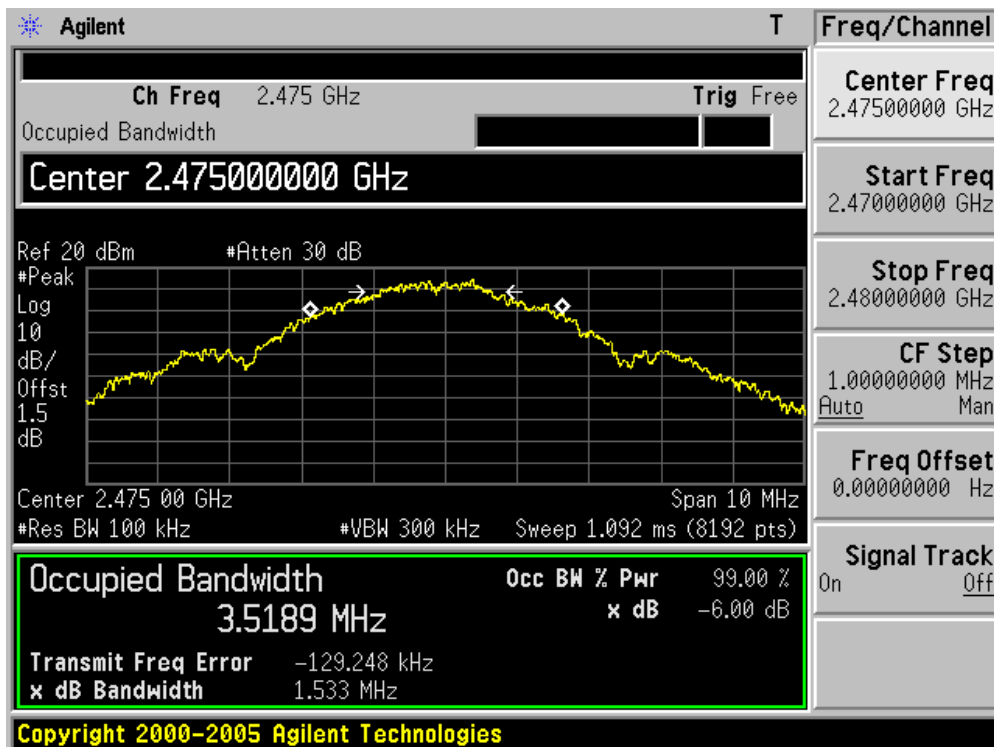
2405MHz



2440MHz



2475MHz



## 9. Power Output

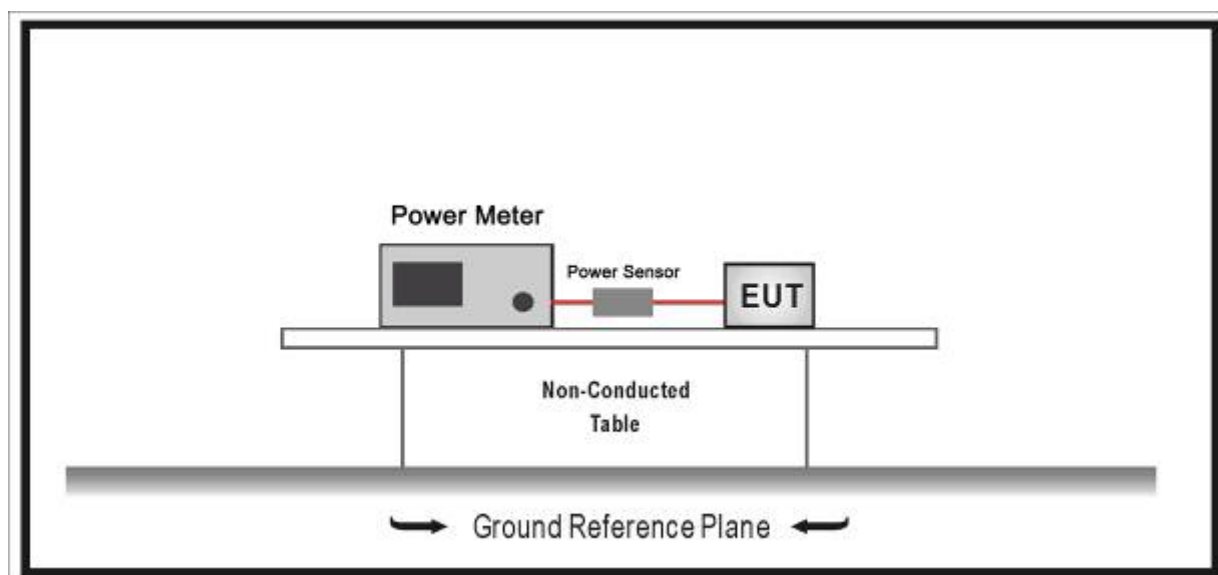
### 9.1. Test Equipment

Power Output / TR-8

Instrument	Manufacturer	Type No.	Serial No.	Cali. Due Date
Wideband Peak Power Meter	Anritsu	ML2495A	0905006	2015.11.01
Power Sensor	Anritsu	MA2411B	0846014	2015.11.01
Temperature/Humidity Meter	zhicheng	ZC1-2	TR8-TH	2015.04.09

Note: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.

### 9.2. Test Setup



### 9.3. Limit

The maximum peak power shall be less 1 Watt (30dBm).

Note: the conducted output power limit specified above is based on the use the antennas with directional gains that do not exceed 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values above, as appropriate, by the amount in dB that the directional gain of antenna exceeds 6 dBi.

#### 9.4. Test Procedure

The EUT was tested according to DTS test procedure of KDB 558074 for compliance to FCC 47CFR 15.247 requirements. The maximum peak conducted output power using KDB 558074 D01 DTS Meas Guidance v03r02 section 9.1.2 PKPM1 Peak power meter method.

1. Power meter and sensor's minimum video bandwidth is 50MHz, larger than zigbee bandwidth;
2. Fast responding diode sensors respond immediately to changes in power level to reduce total test time.
3. Use peak detector to test.

Use the broadband peak RF power meter to test peak power and record the result.

#### 9.5. Uncertainty

The measurement uncertainty is defined as  $\pm 1.27$  dB

**9.6. Test Result**

Product	:	ST10
Test Item	:	Power Output
Test Site	:	TR8
Test Mode	:	Mode 1: Transmit

Frequency (MHz)	Power Output Value (dBm)		Peak Power Output Value (dBm)	Limit (dBm)	Result
	Ant 1	Ant 2			
2405	7.73	7.65	10.70	30	Pass
2440	7.62	7.48	10.56	30	Pass
2475	7.98	7.59	10.80	30	Pass

## 10. Power Spectral Density

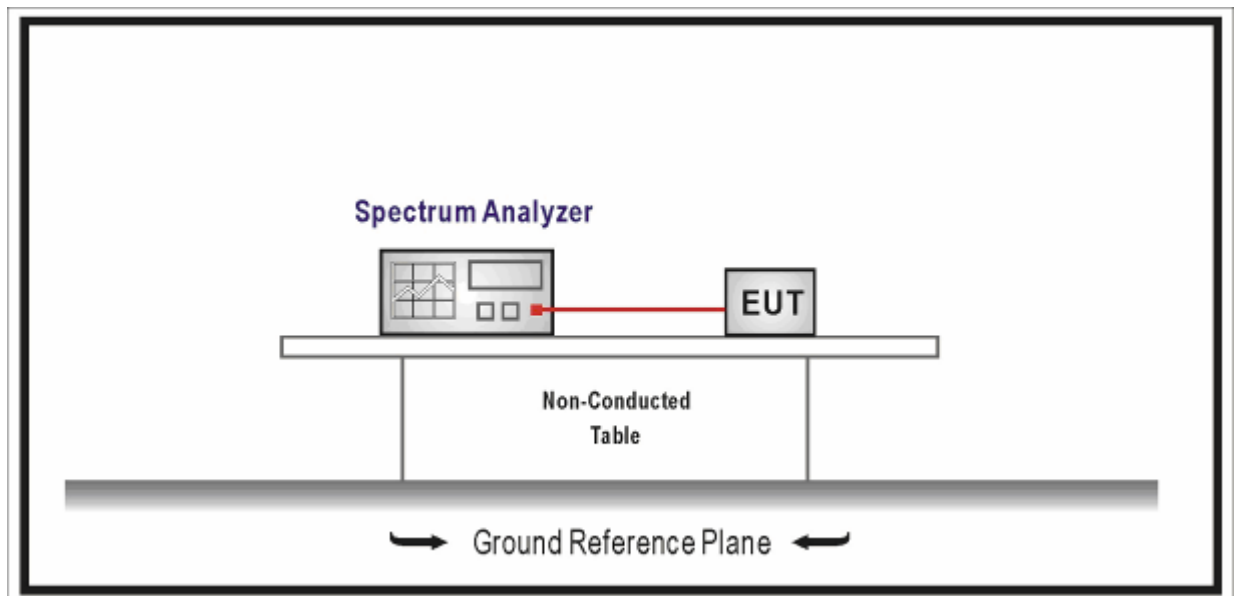
### 10.1. Test Equipment

Power Spectral Density / TR-8

Instrument	Manufacturer	Type No.	Serial No.	Cali. Due Date
Spectrum Analyzer	Agilent	E4446A	MY45300103	2015.01.07
Temperature/Humidity Meter	zhicheng	ZC1-2	TR8-TH	2015.04.09

Note: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.

### 10.2. Test Setup



### 10.3. Limit

For digitally modulated systems, the power spectral density conducted from the intentional radiated to the Antenna shall not be greater than 8dBm in any 3kHz band during any time interval of continuous transmission.



#### 10.4. Test Procedure

The EUT was setup according to ANSI C63.10, 2009; tested according to DTS test procedure of KDB 558074 for compliance to FCC 47CFR 15.247 requirements.

The maximum power spectral density using KDB 558074 section 10.2 PKPSD (peak PSD) method.

- a) Set analyzer center frequency to DTS channel center frequency.
- b) Set the span to 1.5 times the DTS bandwidth.
- c) Set the RBW to:  $3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}$ . (Actually we use 3kHz RBW)
- d) Set the VBW  $\geq 3 \times \text{RBW}$ .
- e) Detector = peak.
- f) Sweep time = auto couple.
- g) Trace mode = max hold.
- h) Allow trace to fully stabilize.
- i) Use the peak marker function to determine the maximum amplitude level within the band.
- j) If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

#### 10.5. Uncertainty

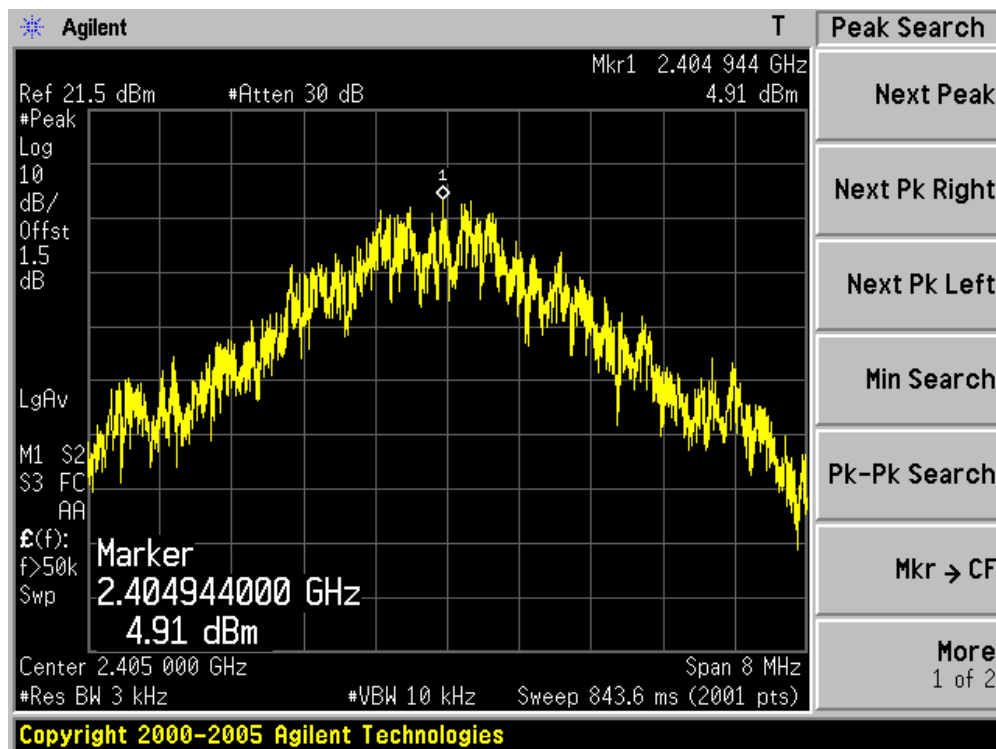
The measurement uncertainty is defined as  $\pm 1.27 \text{ dB}$

10.6. Test Result

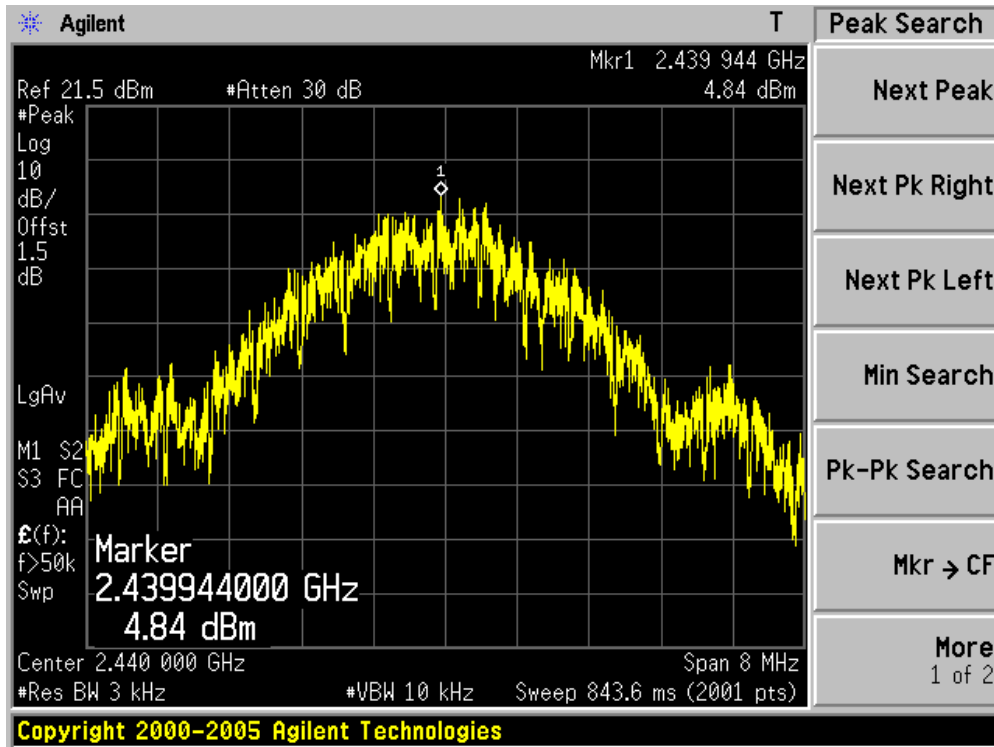
Product	:	ST10
Test Item	:	Power Spectral Density
Test Site	:	TR-8
Test Mode	:	Mode 1: Transmit

Frequency (MHz)	Measurement PPSD (dBm)		Total PPSD (dBm)	Limit (dBm)	Result
	Ant 1	Ant 2			
2405	4.91	4.48	7.71	8	Pass
2440	4.84	4.85	7.86	8	Pass
2475	3.97	3.87	6.93	8	Pass

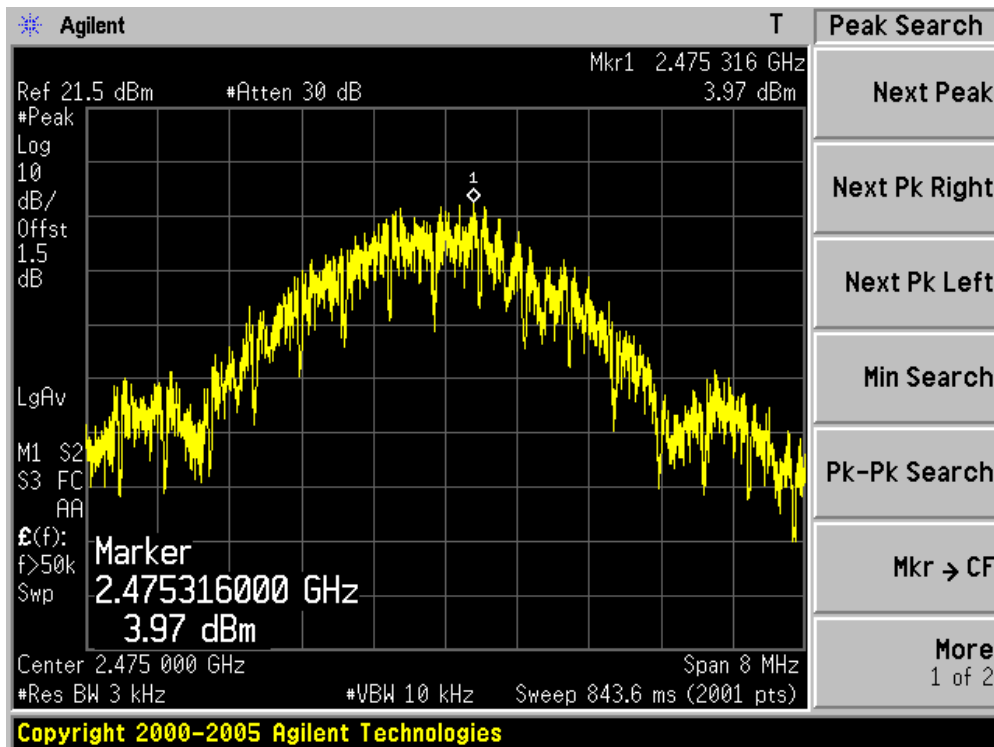
2405MHz-Ant 1



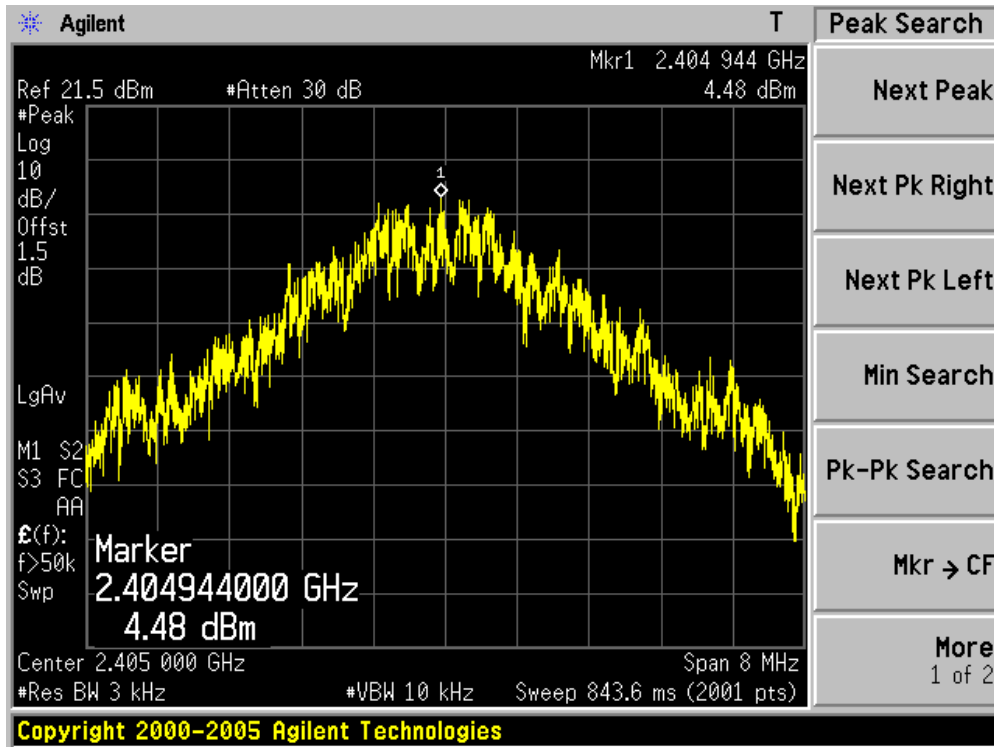
2440MHz-Ant 1



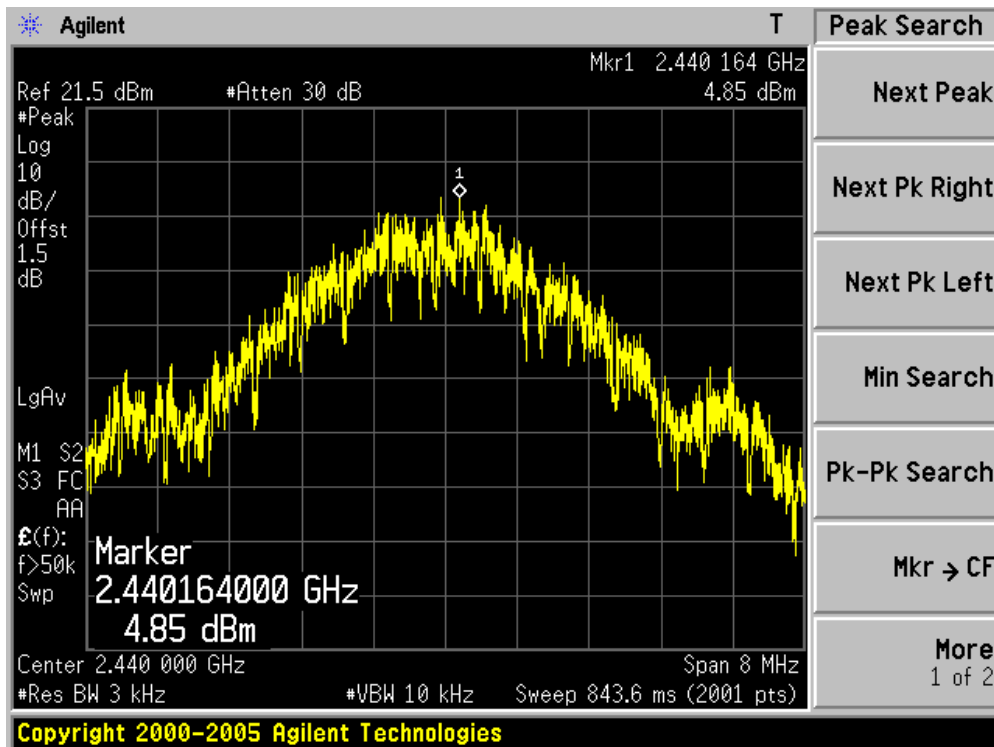
2475MHz-Ant 1



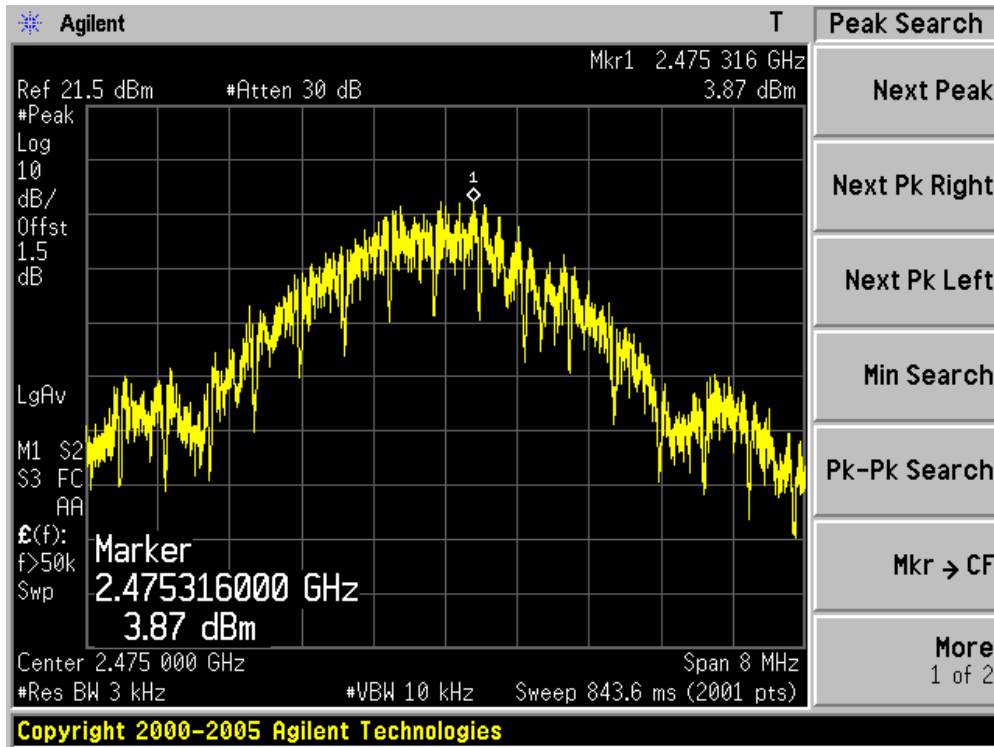
2405MHz-Ant 2



2440MHz-Ant 2



2475MHz-Ant 2



**11. Receiver Spurious Emission for Industry Canada RSS-Gen Requirement**

**11.1. Test Equipment**

Radiated Emission / AC-2

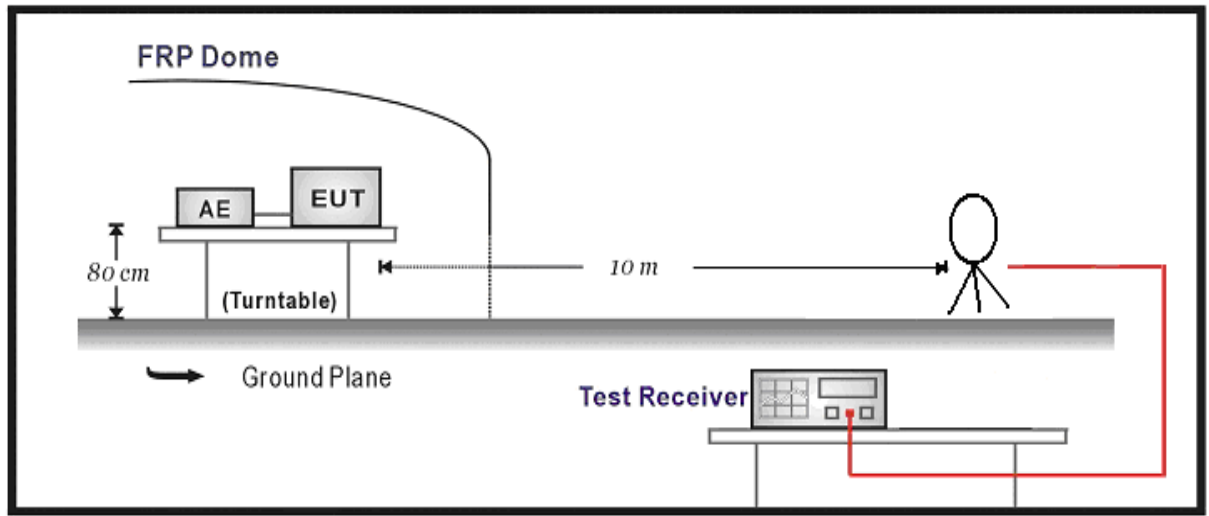
Instrument	Manufacturer	Type No.	Serial No.	Cali. Due Date
EMI Test Receiver	R&S	ESCI	100573	2015.03.28
Loop Antenna	R&S	HFH2-Z2	833799/003	2015.11.25
Bilog Antenna	Teseq GmbH	CBL6112D	27611	2015.10.10
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC2-C	2015.03.01
Temperature/Humidity Meter	Zhicheng	ZC1-2	AC2-TH	2015.01.08

Radiated Emission / AC-5

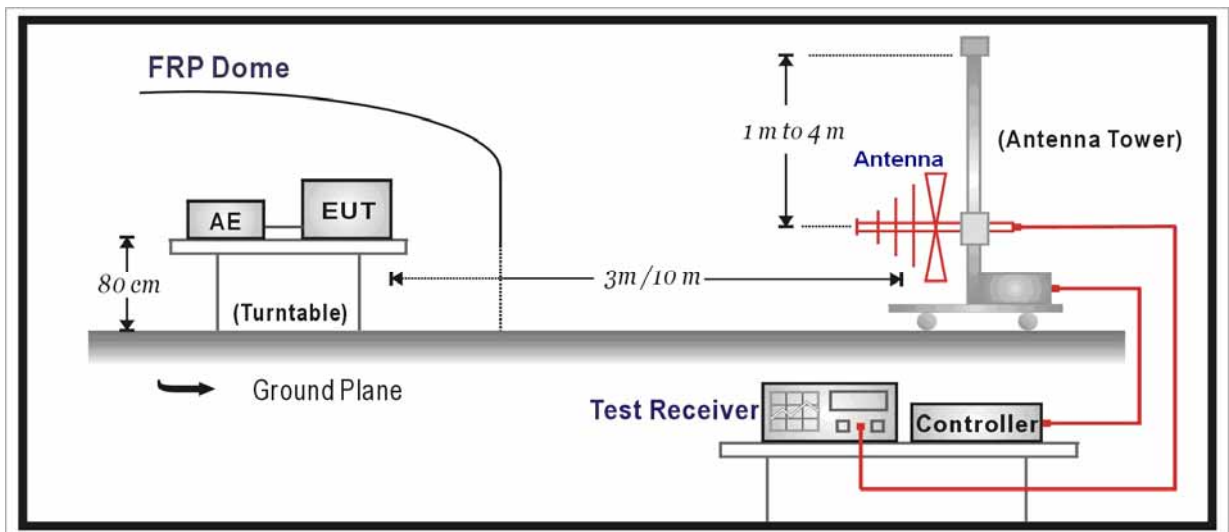
Instrument	Manufacturer	Type No.	Serial No.	Cali. Due Date
Spectrum Analyzer	Agilent	N9010A	MY48030494	2015.05.12
Preamplifier	Miteq	NSP1800-25	1364185	2015.05.03
Preamplifier	Quietek	AP-040G	CHM-0906001	2015.05.03
Bilog Antenna	Teseq GmbH	CBL6112D	27612	2015.10.15
Broad-Band Horn Antenna	Schwarzbeck	BBHA9120D	499	2015.01.07
Broad-Band Horn Antenna	Schwarzbeck	BBHA9170	294	2016.04.10
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC5-C1	2015.03.01
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC5-C2	2015.03.01
Coaxial Cable	Huber+Suhner	SUCOFLEX 102	AC5-C3	2015.06.09
Temperature/Humidity Meter	Zhicheng	ZC1-2	AC5-TH	2015.01.08

### 11.2. Test Setup

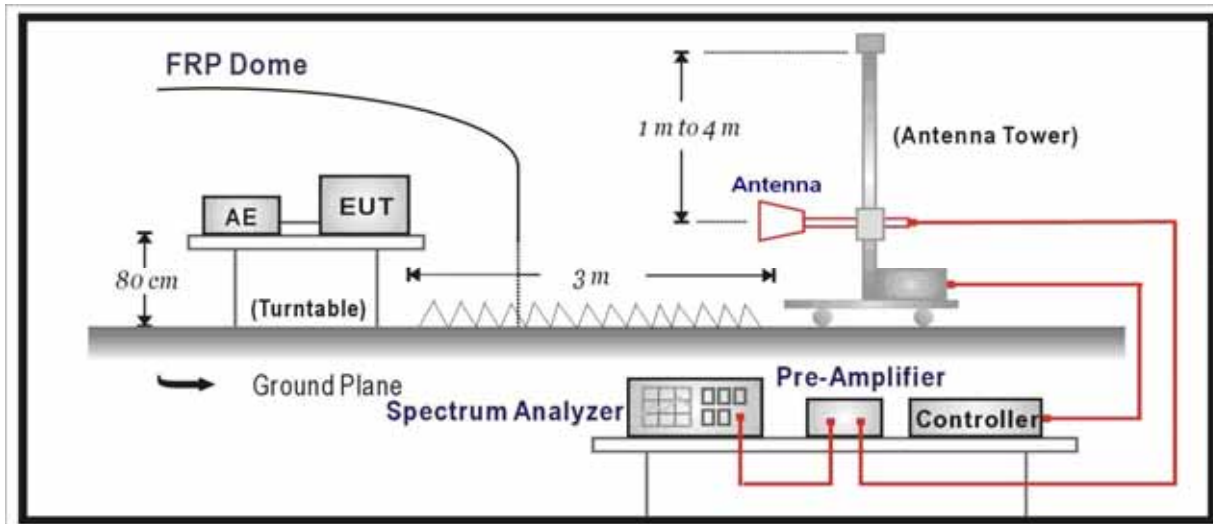
Below 30MHz Test Setup:



Below 1GHz Test Setup:



Above 1GHz Test Setup:



11.3. Limit

FCC Part 15 Subpart B Paragraph 15.109		
Frequency (MHz)	Distance (m)	Level (dBuV/m)
30 - 88	3	40
88 - 216	3	43.5
216 - 960	3	46
Above 960	3	54

Note 1: The lower limit shall apply at the transition frequency.

Note 2: Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.

Note 3: E field strength (dBuV/m) = 20 log E field strength (uV/m)



## 11.4. Test Procedure

According to ANSI C63.10: 2009.

The EUT is placed on a turn table which is 0.8 meter above ground. The turn table is rotated 360 degrees to determine the position of the maximum emission level. The EUT was positioned such that the distance from antenna to the EUT was 3 meters.

The antenna is scanned from 1 meter to 4 meters to find out the maximum emission level. This is repeated for both horizontal and vertical polarization of the antenna. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.4: 2009 on radiated measurement.

The resolution bandwidth below 1GHz setting on the field strength meter is 120 kHz and above 1GHz is 1MHz.

The frequency range from 9kHz to 10th harmonic is checked.

Note: When doing emission measurement above 1GHz, the horn antenna will be bended down a little (as horn antenna has the narrow beamwidth) in order to keeping the antenna in the "cone of radiation" of EUT. The 3dB beamwidth is 60~10 degrees for H-plane and 90~10 degrees for E-plane.

## 11.5. Uncertainty

The measurement uncertainty above 1G is defined as  $\pm 3.9$  dB  
below 1G is defined as  $\pm 3.8$  dB

**11.6. Test Result**

All of the test result shown indicates the worst case, and spectrum analyzer parameters setting as shown below:

Peak detector: RBW = 1MHz, VBW = 3MHz, sweep time = 200ms;

Average detector: RBW = 1MHz, VBW = 10Hz, sweep time = auto.

Measure Level = Reading Level + Cable Loss + Antenna Factor - Preamp Gain

Mode 1: Receive by ant 1

CH	Antenna	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	H	2062.5	39.7	-1.4	38.3	54(Note1)	-15.7	PK
	V	2793.5	39.0	0.2	39.2	54(Note1)	-14.8	PK
	H	3507.5	38.8	1.9	40.7	54(Note1)	-13.3	PK
	V	4264.0	31.1	4.2	35.3	54(Note1)	-18.7	PK
6	H	4816.5	29.6	6.7	36.3	54(Note1)	-17.7	PK
	V	5335.0	27.1	8.0	35.1	54(Note1)	-18.9	PK
	H	5904.5	26.5	8.7	35.2	54(Note1)	-18.8	PK
	V	6848.0	26.8	8.8	35.6	54(Note1)	-18.4	PK
11	H	1994.5	40.1	-1.4	38.7	54(Note1)	-15.3	PK
	V	2581.0	39.8	-0.2	39.6	54(Note1)	-14.4	PK
	H	2997.5	39.3	0.5	39.8	54(Note1)	-14.2	PK
	V	3363.0	38.2	1.7	39.9	54(Note1)	-14.1	PK

Note1: This limit applies for using average detector, if the test result on peak is lower than average limit, then average measurement needn't be performed.

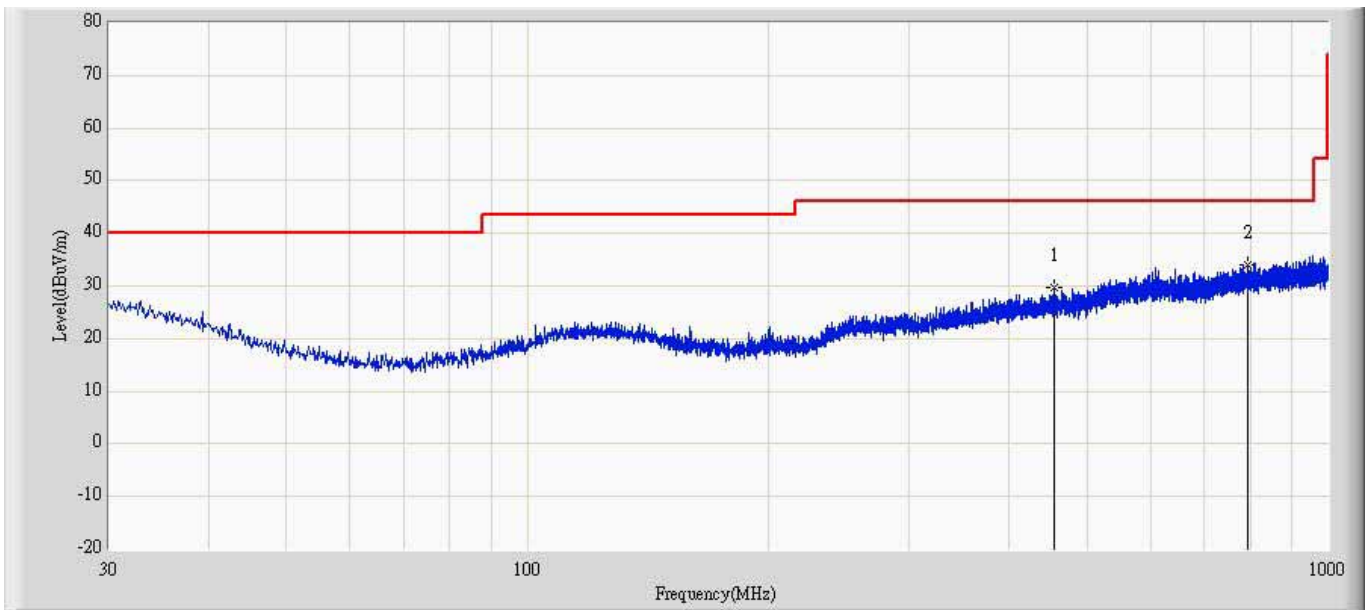
Mode 1: Receive by ant 2

CH	Antenna	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	H	2683.0	40.3	0.0	40.3	54(Note1)	-13.7	PK
	V	3227.0	38.7	1.4	40.1	54(Note1)	-13.9	PK
	H	3584.0	38.0	2.1	40.1	54(Note1)	-13.9	PK
	V	4799.5	30.0	6.7	36.7	54(Note1)	-17.3	PK
6	H	5394.5	27.3	8.1	35.4	54(Note1)	-18.6	PK
	V	5896.0	27.4	8.7	36.1	54(Note1)	-17.9	PK
	H	4850.5	28.2	6.8	35.0	54(Note1)	-19.0	PK
	V	5386.0	28.3	8.1	36.4	54(Note1)	-17.6	PK
11	H	4374.5	31.1	4.8	35.9	54(Note1)	-18.1	PK
	V	4799.5	29.7	6.7	36.4	54(Note1)	-17.6	PK
	H	5913.0	27.9	8.7	36.6	54(Note1)	-17.4	PK
	V	6763.0	26.7	8.9	35.6	54(Note1)	-18.4	PK

Note1: This limit applies for using average detector, if the test result on peak is lower than average limit, then average measurement needn't be performed.

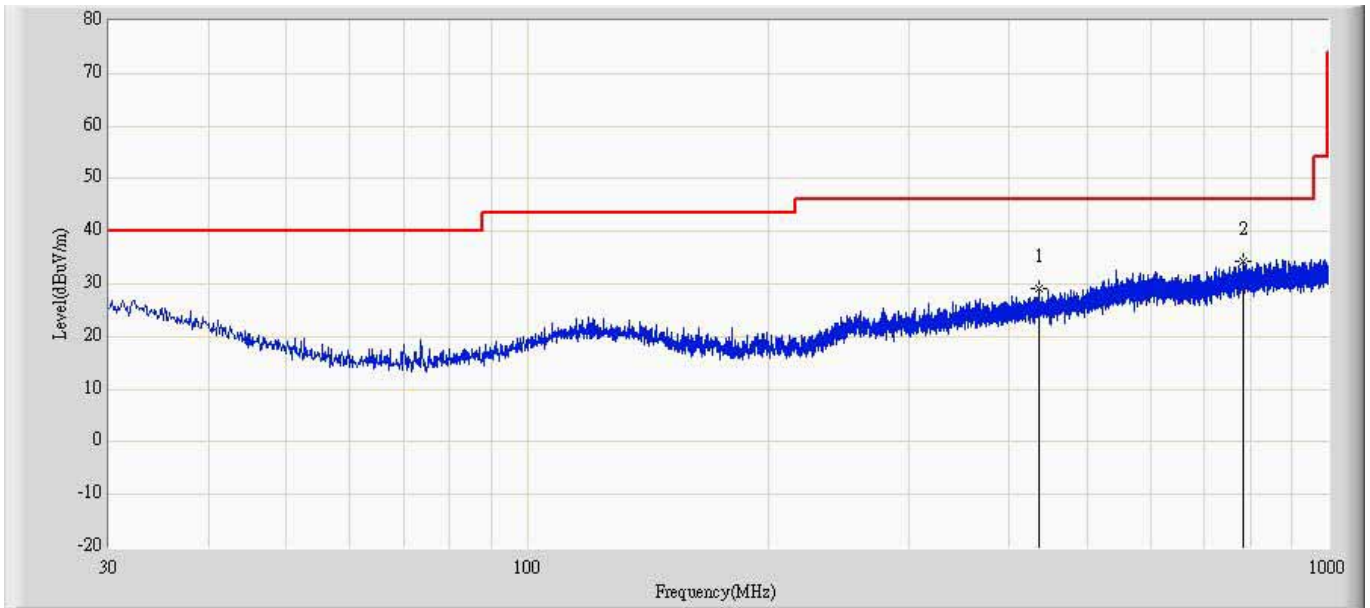
### The worst case of Radiated Emission below 1GHz:

Site: AC2	Time: 2014/12/02 - 09:09
Limit: FCC_Part15.109_RE(3m)_ClassB	Margin: 0
Probe: CBL6112D_27613(30-1000MHz)	Polarity: Horizontal
EUT: ST10	Power: AC 120V/60Hz
Note: Mode 1: Receive at channel 2405MHz by ant 1	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			454.254	29.619	4.913	-16.381	46.000	24.706	QP
2		*	793.026	33.997	4.715	-12.003	46.000	29.282	QP

Site: AC2	Time: 2014/12/02 - 09:10
Limit: FCC_Part15.109_RE(3m)_ClassB	Margin: 0
Probe: CBL6112D_27613(30-1000MHz)	Polarity: Vertical
EUT: ST10	Power: AC 120V/60Hz
Note: Mode 1: Receive at channel 2405MHz by ant 1	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			435.460	29.020	4.594	-16.980	46.000	24.426	QP
2		*	784.296	34.222	5.062	-11.778	46.000	29.160	QP

\_\_\_\_\_ The End \_\_\_\_\_