



Test Report

Product Name	Wireless Remote Control
Model No.	881490
FCC ID	X96881490

Applicant	COMEUP INDUSTRIES INC.
Address	NO. 112 Nan Yuan Str. Hsi Chih Taipei,Taiwan 22152

Date of Receipt	Aug. 25, 2010
Issued Date	Sep. 24, 2010
Report No.	108430R-RFUSP44V01
Report Version	V1.0

The test results relate only to the samples tested.

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Test Report Certification

Issued Date: Sep. 24, 2010

Report No.: 108430R-RFUSP44V01



Product Name	Wireless Remote Control
Applicant	COMEUP INDUSTRIES INC.
Address	NO. 112 Nan Yuan Str. Hsi Chih Taipei,Taiwan 22152
Manufacturer	COMEUP INDUSTRIES INC.
Model No.	881490
EUT Rated Voltage	DC 8-24V
EUT Test Voltage	DC 12V(Power by battery)
Trade Name	
Applicable Standard	FCC CFR Title 47 Part 15 Subpart C: 2009 ANSI C63.4: 2003
Test Result	Complied

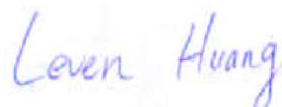


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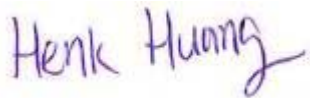
Documented By :



(Senior Adm. Specialist / Leven Huang)



Tested By :



(Engineer /Henk Huang)



Approved By :



(Manager / Vincent Lin)

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1. GENERAL INFORMATION

1.1. EUT Description

Product Name	Wireless Remote Control
Trade Name	COMEUP
Model No.	881490
FCC ID	X96881490
Frequency Range	2402~2480MHz
Channel Control	Auto
Channel Separation	1MHz
Antenna Type	Printed on PCB
Channel Number	79
Type of Modulation	GFSK

Antenna List

No.	Manufacturer	Part No.	Peak Gain
1	COMEUP	N/A	0dBi for 2.4 GHz

Note: The antenna of EUT is conform to FCC 15.203

Frequency of Each Channel

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
Channel 2:	2402 MHz	Channel 23:	2423 MHz	Channel 44:	2444 MHz	Channel 65:	2465 MHz
Channel 3:	2403 MHz	Channel 24:	2424 MHz	Channel 45:	2445 MHz	Channel 66:	2466 MHz
Channel 4:	2404 MHz	Channel 25:	2425 MHz	Channel 46:	2446 MHz	Channel 67:	2467 MHz
Channel 5:	2405 MHz	Channel 26:	2426 MHz	Channel 47:	2447 MHz	Channel 68:	2468 MHz
Channel 6:	2406 MHz	Channel 27:	2427 MHz	Channel 48:	2448 MHz	Channel 69:	2469 MHz
Channel 7:	2407 MHz	Channel 28:	2428 MHz	Channel 49:	2449 MHz	Channel 70:	2470 MHz
Channel 8:	2408 MHz	Channel 29:	2429 MHz	Channel 50:	2450 MHz	Channel 71:	2471 MHz
Channel 9:	2409 MHz	Channel 30:	2430 MHz	Channel 51:	2451 MHz	Channel 72:	2472 MHz
Channel 10:	2410 MHz	Channel 31:	2431 MHz	Channel 52:	2452 MHz	Channel 73:	2473 MHz
Channel 11:	2411 MHz	Channel 32:	2432 MHz	Channel 53:	2453 MHz	Channel 74:	2474 MHz
Channel 12:	2412 MHz	Channel 33:	2433 MHz	Channel 54:	2454 MHz	Channel 75:	2475 MHz
Channel 13:	2413 MHz	Channel 34:	2434 MHz	Channel 55:	2455 MHz	Channel 76:	2476 MHz
Channel 14:	2414 MHz	Channel 35:	2435 MHz	Channel 56:	2456 MHz	Channel 77:	2477 MHz
Channel 15:	2415 MHz	Channel 36:	2436 MHz	Channel 57:	2457 MHz	Channel 78:	2478 MHz
Channel 16:	2416 MHz	Channel 37:	2437 MHz	Channel 58:	2458 MHz	Channel 79:	2479 MHz
Channel 17:	2417 MHz	Channel 38:	2438 MHz	Channel 59:	2459 MHz	Channel 80:	2480 MHz
Channel 18:	2418 MHz	Channel 39:	2439 MHz	Channel 60:	2460 MHz		
Channel 19:	2419 MHz	Channel 40:	2440 MHz	Channel 61:	2461 MHz		
Channel 20:	2420 MHz	Channel 41:	2441 MHz	Channel 62:	2462 MHz		
Channel 21:	2421 MHz	Channel 42:	2442 MHz	Channel 63:	2463 MHz		
Channel 22:	2422 MHz	Channel 43:	2443 MHz	Channel 64:	2464 MHz		

Note:

1. The EUT is a Wireless Remote Control with a built-in 2.4GHz transceiver.
2. Regarding to the operation frequency, the lowest, middle and highest frequency are selected to perform the test.
3. These tests are conducted on a sample of the equipment for the purpose of demonstrating compliance with Part 15 Subpart C Paragraph 15.249 for spread spectrum devices.
4. The radiation measurements are performed in X, Y, Z axis positioning. Only the worst case is shown in the report.

1.2. Operational Description

The EUT is Wireless Remote Control built-in 2.4GHz transceiver. The operation frequency is from 2402 MHz to 2480MHz with GFSK modulation. The signal will be transmitted through 2.4 GHz RF signal from the Printed on PCB.

The EUT build in winch, press the button (cable in / cable out) by wireless remote control for activating the winch.

Test Mode	Mode 1: Transmit
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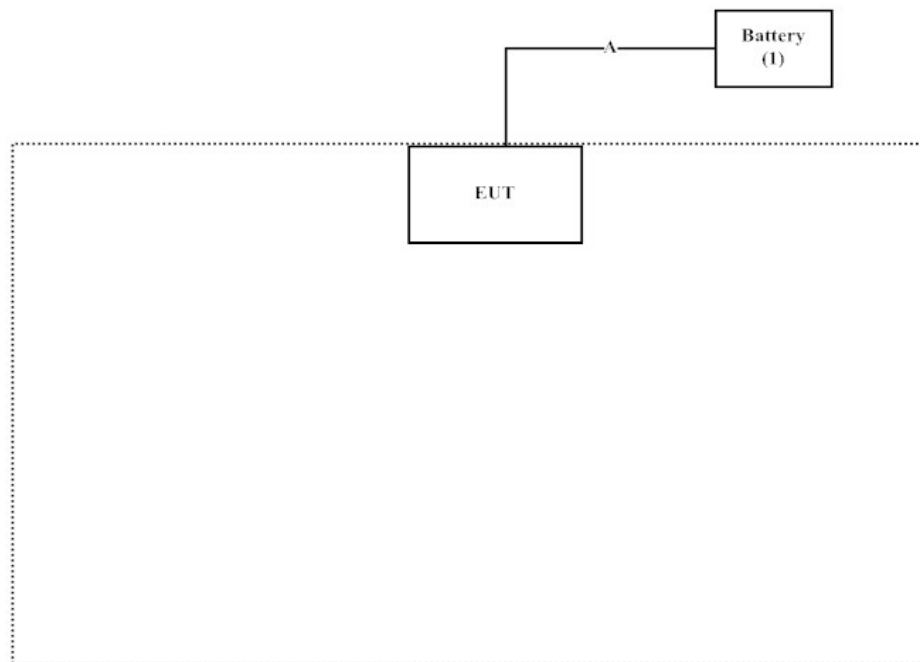
1.3. Tested System Details

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

	Product	Manufacturer	Model No.	Serial No.	Power Cord
(1)	Battery	TRANE	12B50PE	N/A	N/A

Signal Cable Type	Signal cable Description
A. Power Cable	Non-shielded, 1m

1.4. Configuration of Test System



1.5. EUT Exercise Software

- (1) Setup the EUT as shown in section 1.4.
- (2) Provide the DC Power Source.
- (3) Start transmits continually.
- (4) Verify that the EUT works properly.

1.6. Test Facility

Ambient conditions in the laboratory:

Items	Required (IEC 68-1)	Actual
Temperature (°C)	15-35	20-35
Humidity (%RH)	25-75	50-65
Barometric pressure (mbar)	860-1060	950-1000

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/>

Site Description: File on
Federal Communications Commission
FCC Engineering Laboratory
7435 Oakland Mills Road
Columbia, MD 21046
Registration Number: 92195



Accreditation on NVLAP
NVLAP Lab Code: 200533-0



Site Name: Quietek Corporation
Site Address: No. 5-22, Ruei-Shu Valley, Ruei-Ping Tsuen,
Lin-Kou Shiang, Taipei,
Taiwan, R.O.C.
TEL: 886-2-8601-3788 / FAX : 886-2-8601-3789
E-Mail : service@quietek.com

FCC Accreditation Number: TW1014



2. Radiated Emission

2.1. Test Equipment

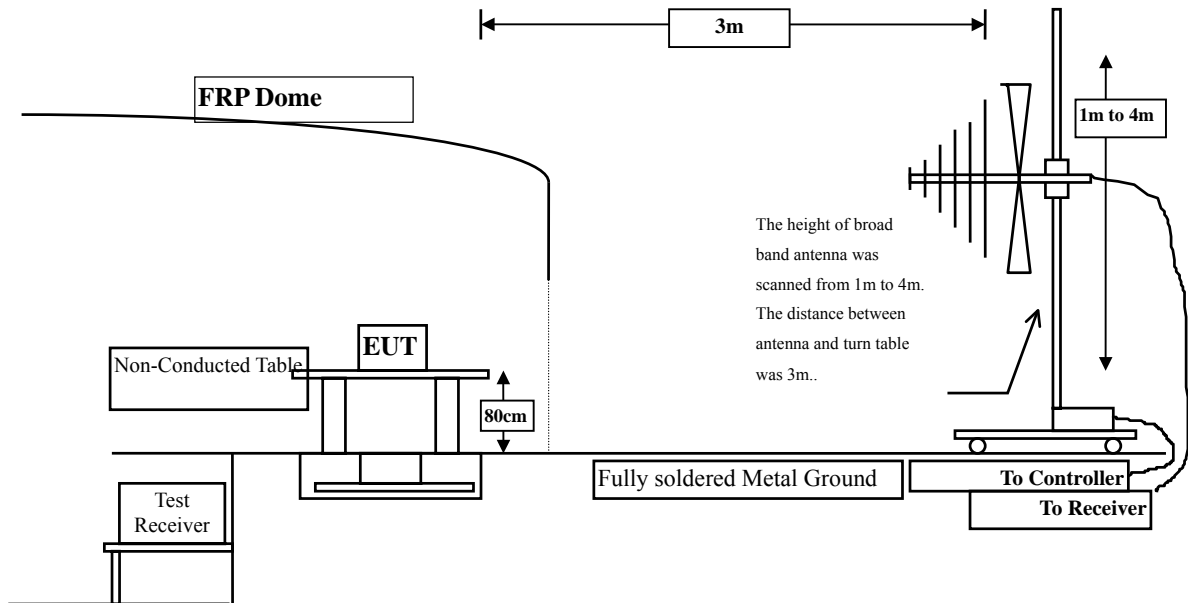
The following test equipment are used during the radiated emission test:

Test Site		Equipment	Manufacturer	Model No./Serial No.	Last Cal.
<input checked="" type="checkbox"/> Site # 3	X	Bilog Antenna	Schaffner Chase	CBL6112B/2673	Sep., 2010
	X	Horn Antenna	Schwarzbeck	BBHA9120D/D305	Sep., 2010
	X	Horn Antenna	Schwarzbeck	BBHA9170/208	Jul., 2010
	X	Pre-Amplifier	Agilent	8447D/2944A09549	Sep., 2010
	X	Spectrum Analyzer	Agilent	E4407B / US39440758	May, 2010
	X	Test Receiver	R & S	ESCS 30/ 825442/018	Sep., 2010
	X	Coaxial Cable	QuieTek	QTK-CABLE/ CAB5	Feb., 2010
	X	Controller	QuieTek	QTK-CONTROLLER/ CTRL3	N/A
	X	Coaxial Switch	Anritsu	MP59B/6200265729	N/A

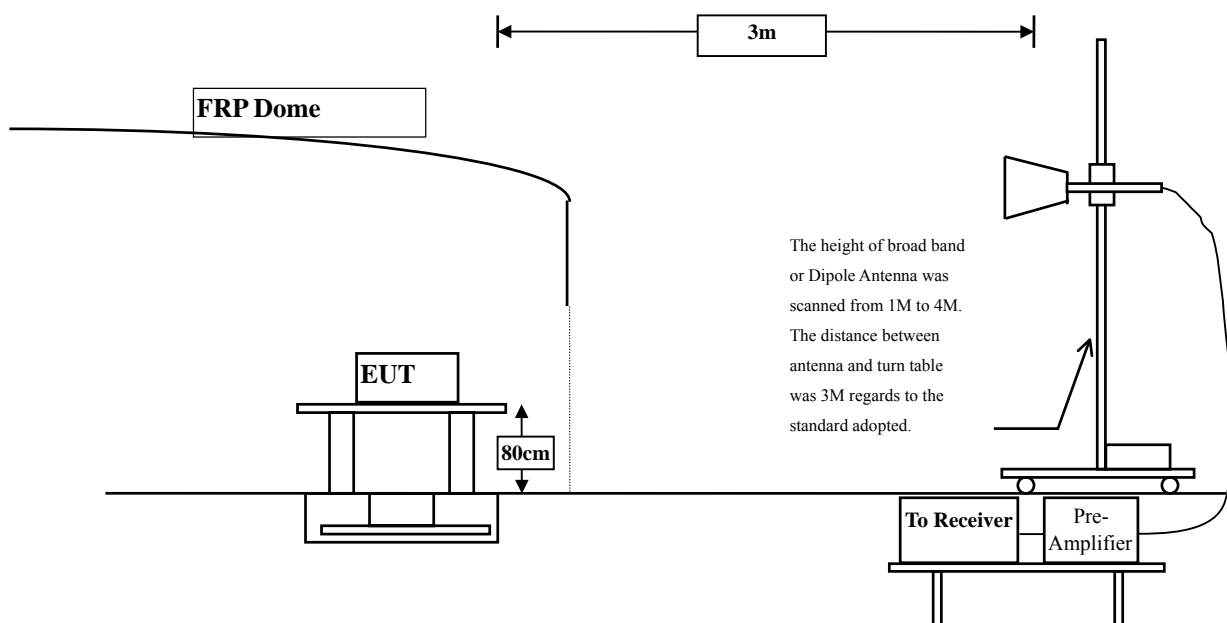
- Note:
1. All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.
 2. The test instruments marked with “X” are used to measure the final test results.

2.2. Test Setup

Radiated Emission Below 1GHz



Radiated Emission Above 1GHz



2.3. Limits

➤ Fundamental and Harmonics Emission Limits

FCC Part 15 Subpart C Paragraph 15.249 Limits				
Frequency MHz	Field Strength of Fundamental		Field Strength of Harmonics	
	(mV/m @3m)	(dBuV/m @3m)	(uV/m @3m)	(dBuV/m @3m)
902-928	50	94	500	54
2400-2483.5	50	94	500	54
5725-5875	50	94	500	54

Remarks : 1. RF Voltage (dBuV/m) = 20 log RF Voltage (uV/m)
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.

➤ General Radiated Emission Limits

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50dB below the level of the fundamental or to the general radiated emission limits in paragraph 15.209, whichever is the lesser attenuation.

FCC Part 15 Subpart C Paragraph 15.209(a) Limits		
Frequency MHz	uV/m @3m	dBuV/m@3m
30-88	100	40
88-216	150	43.5
216-960	200	46
Above 960	500	54

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

2.4. Test Procedure

The EUT was setup according to ANSI C63.4, 2003 and tested compliance to FCC 47CFR 15.249 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 between 1 meter and 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: 2003 on radiated

measurement.

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

Radiated emission measurements below 1GHz are made using broadband Bilog antenna and above 1GHz are made using Horn Antennas.

The measurement is divided into the Preliminary Measurement and the Final Measurement.

The suspected frequencies are searched for in Preliminary Measurement with the measurement antenna kept pointed at the source of the emission both in azimuth and elevation, with the polarization of the antenna oriented for maximum response. The antenna is pointed at an angle towards the source of the emission, and the EUT is rotated in both height and polarization to maximize the measured emission. The emission is kept within the illumination area of the 3 dB bandwidth of the antenna.

The worst radiated emission is measured on the Final Measurement.

The measurement frequency range from 30MHz - 10th Harmonic of fundamental was investigated.

2.5. Uncertainty

± 3.9 dB above 1GHz

± 3.8 dB below 1GHz

2.6. Test Result of Radiated Emission

Product : Wireless Remote Control
 Test Item : Fundamental Radiated Emission
 Test Site : No.3OATS
 Test Mode : Mode 1: Transmit (X-Line)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
Horizontal					
Peak Detector:					
2402.000	31.573	33.490	65.064	-48.936	114.000
2441.000	31.860	31.300	63.160	-50.840	114.000
2480.000	32.155	29.560	61.716	-52.284	114.000
Vertical					
Peak Detector:					
2402.000	30.917	32.470	63.387	-50.613	114.000
2441.000	31.146	30.240	61.386	-52.614	114.000
2480.000	31.412	28.730	60.142	-53.858	114.000

Note:

1. Measurement Level = Reading Level + Correct Factor.
2. Correct Factor = Antenna Factor + Cable Loss – PreAMP.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Product : Wireless Remote Control
 Test Item : Fundamental Radiated Emission
 Test Site : No.3OATS
 Test Mode : Mode 1: Transmit (Y-Line)

Frequency	Correct	Reading	Measurement	Margin	Limit
MHz	Factor	Level	Level		
	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
2402.000	31.573	36.290	67.864	-46.136	114.000
2441.000	31.860	33.470	65.330	-48.670	114.000
2480.000	32.155	33.290	65.446	-48.554	114.000
Vertical					
Peak Detector:					
2402.000	30.917	37.970	68.887	-45.113	114.000
2441.000	31.146	35.390	66.536	-47.464	114.000
2480.000	31.412	32.640	64.052	-49.948	114.000

Note:

1. Measurement Level = Reading Level + Correct Factor.
2. Correct Factor = Antenna Factor + Cable Loss – PreAMP.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

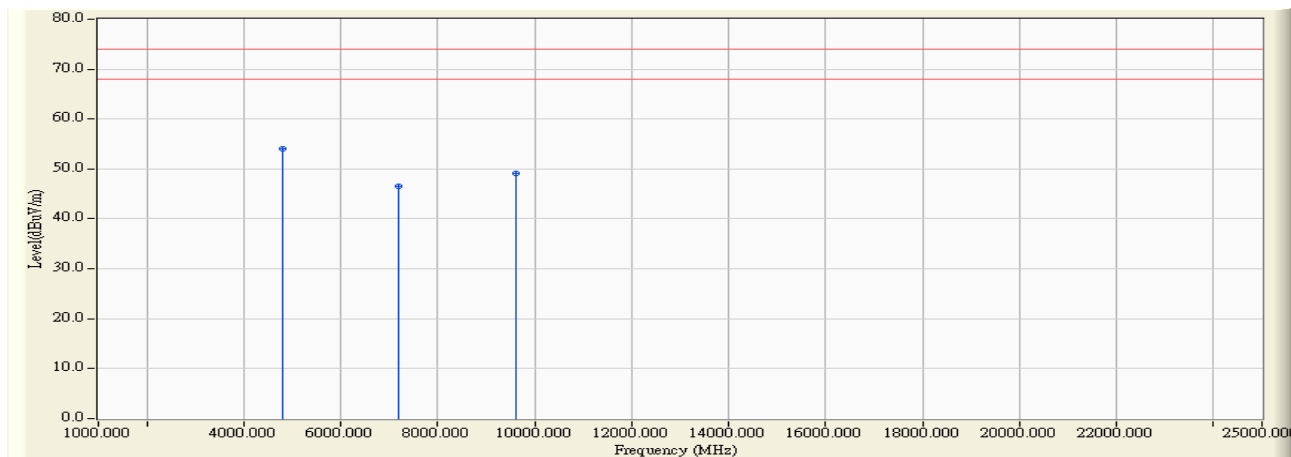
Product : Wireless Remote Control
 Test Item : Fundamental Radiated Emission
 Test Site : No.3OATS
 Test Mode : Mode 1: Transmit (Z-Line)

Frequency	Correct	Reading	Measurement	Margin	Limit
MHz	Factor	Level	Level		
	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
2402.000	31.573	33.090	64.664	-49.336	114.000
2441.000	31.860	31.080	62.940	-51.060	114.000
2480.000	32.155	30.440	62.596	-51.404	114.000
Vertical					
Peak Detector:					
2402.000	31.573	37.140	68.714	-45.286	114.000
2441.000	31.860	36.980	68.840	-45.160	114.000
2480.000	32.155	36.630	68.786	-45.214	114.000

Note:

1. Measurement Level = Reading Level + Correct Factor.
2. Correct Factor = Antenna Factor + Cable Loss – PreAMP.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Product : Wireless Remote Control
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit (2402MHz)

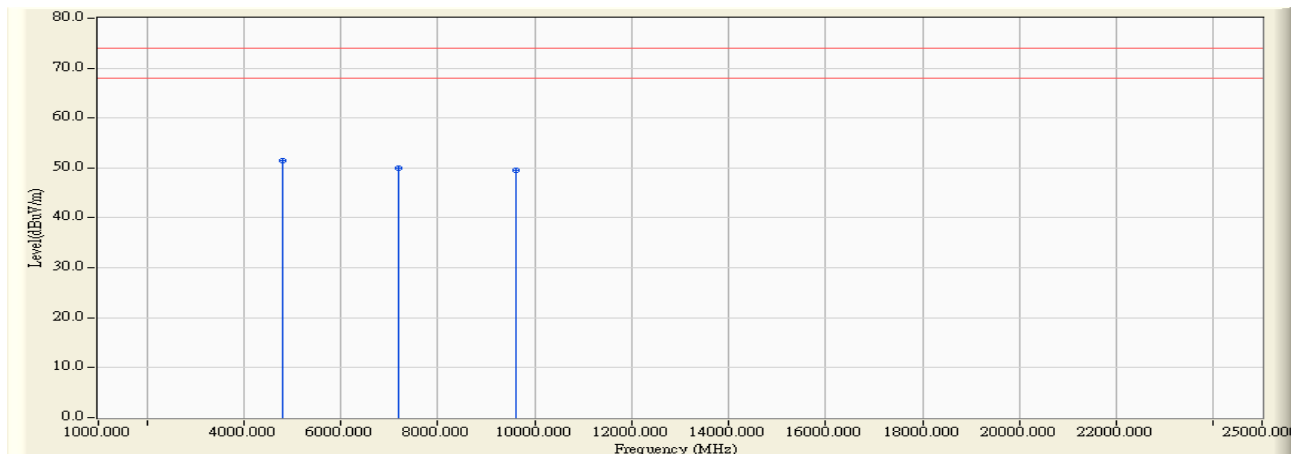


Frequency	Correct	Reading	Measurement	Margin	Limit
MHz	Factor	Level	Level		
	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
4804.000	3.327	50.660	53.987	-20.013	74.000
7206.000	10.136	36.380	46.516	-27.484	74.000
9608.000	13.706	35.350	49.056	-24.944	74.000

Note:

1. The reading levels below 1GHz and above 1GHz are quasi-peak values and peak/average values, respectively.
2. Receiver setting (Peak Detector) : RBW:1MHz; VBW:1MHz; Span:100MHz °
3. Emission Level = Reading Level + Correct Factor.
4. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : Wireless Remote Control
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit (2402MHz)

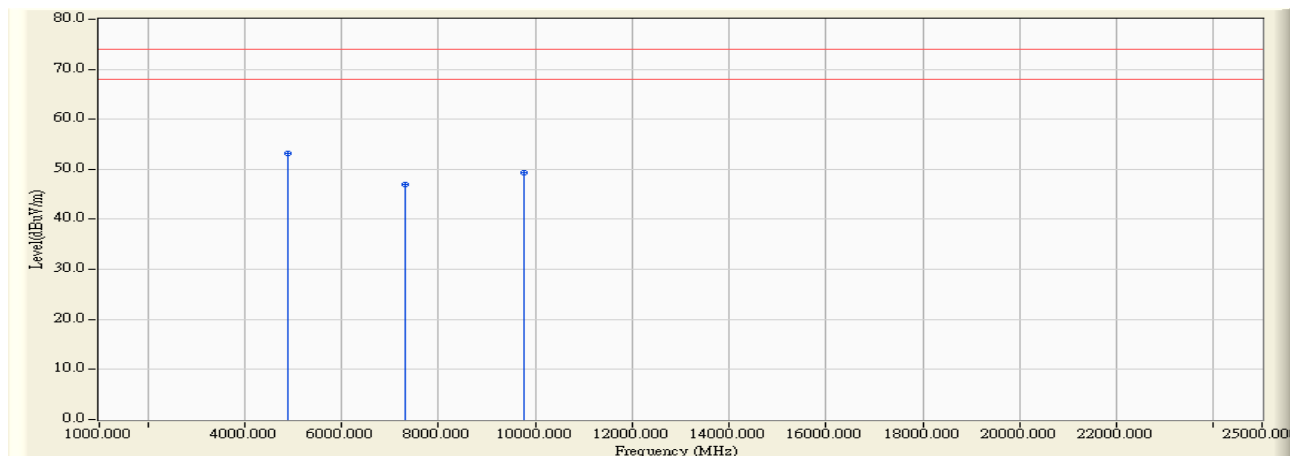


Frequency	Correct	Reading	Measurement	Margin	Limit
MHz	Factor	Level	Level		
	dB	dBuV	dBuV/m	dB	dBuV/m
Vertical					
Peak Detector:					
4804.000	6.638	44.880	51.517	-22.483	74.000
7206.000	11.005	39.060	50.065	-23.935	74.000
9608.000	14.103	35.490	49.593	-24.407	74.000

Note:

1. The reading levels below 1GHz and above 1GHz are quasi-peak values and peak/average values, respectively.
2. Receiver setting (Peak Detector) : RBW:1MHz; VBW:1MHz; Span:100MHz °
3. Emission Level = Reading Level + Correct Factor.
4. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : Wireless Remote Control
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit (2441 MHz)

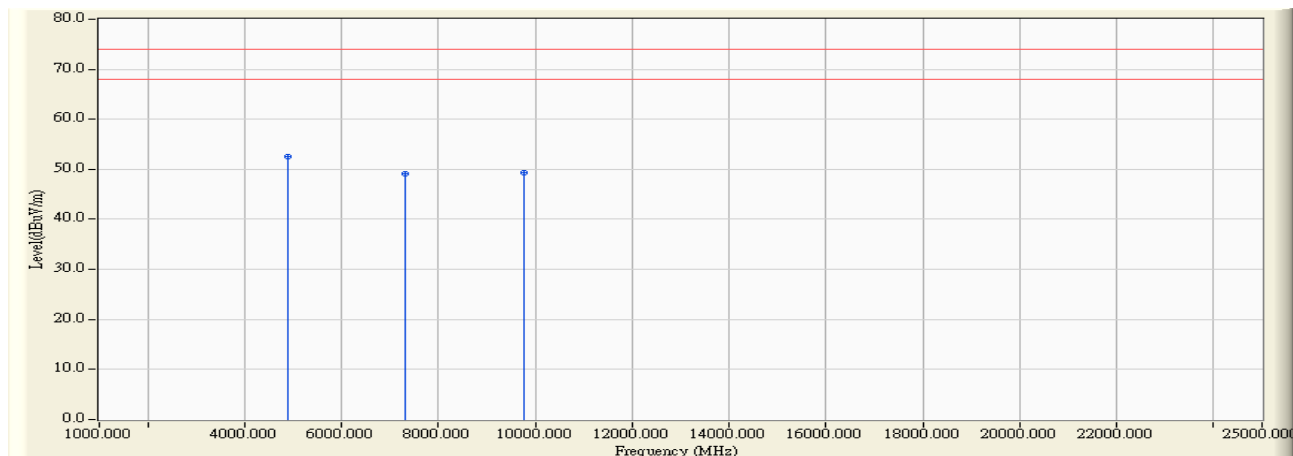


Frequency	Correct	Reading	Measurement	Margin	Limit
MHz	Factor	Level	Level		
	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
4882.000	3.001	50.230	53.231	-20.769	74.000
7323.000	11.846	35.220	47.067	-26.933	74.000
9764.000	12.563	36.790	49.353	-24.647	74.000

Note:

1. The reading levels below 1GHz and above 1GHz are quasi-peak values and peak/average values, respectively.
2. Receiver setting (Peak Detector) : RBW:1MHz; VBW:1MHz; Span:100MHz °
3. Emission Level = Reading Level + Correct Factor.
4. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : Wireless Remote Control
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit (2441 MHz)

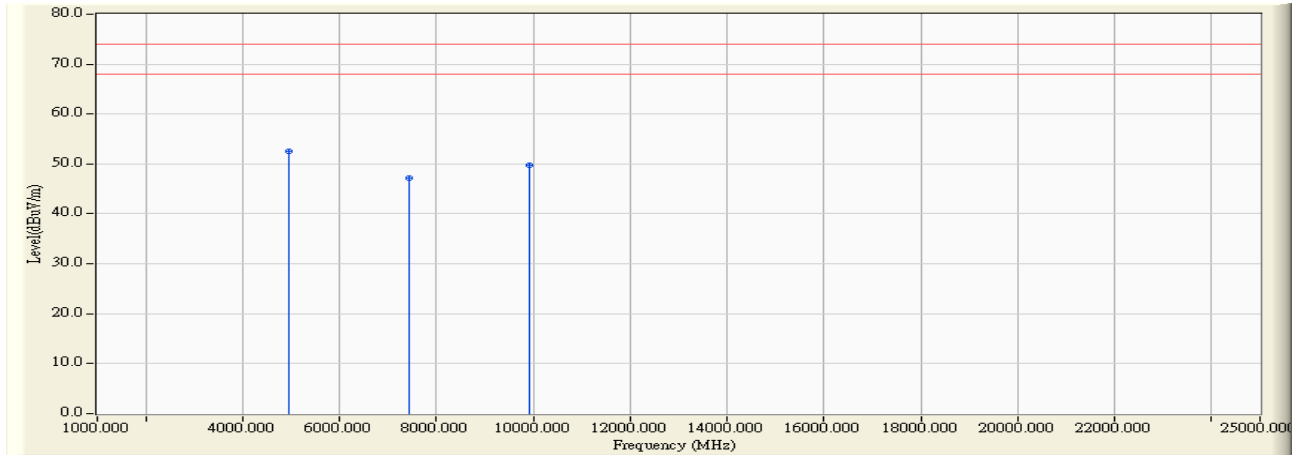


Frequency	Correct	Reading	Measurement	Margin	Limit
MHz	Factor	Level	Level		
	dB	dBuV	dBuV/m	dB	dBuV/m
Vertical					
Peak Detector:					
4882.000	5.713	46.890	52.604	-21.396	74.000
7323.000	12.727	36.480	49.208	-24.792	74.000
9764.000	13.028	36.350	49.378	-24.622	74.000

Note:

1. The reading levels below 1GHz and above 1GHz are quasi-peak values and peak/average values, respectively.
2. Receiver setting (Peak Detector) : RBW:1MHz; VBW:1MHz; Span:100MHz °
3. Emission Level = Reading Level + Correct Factor.
4. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : Wireless Remote Control
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit (2480 MHz)

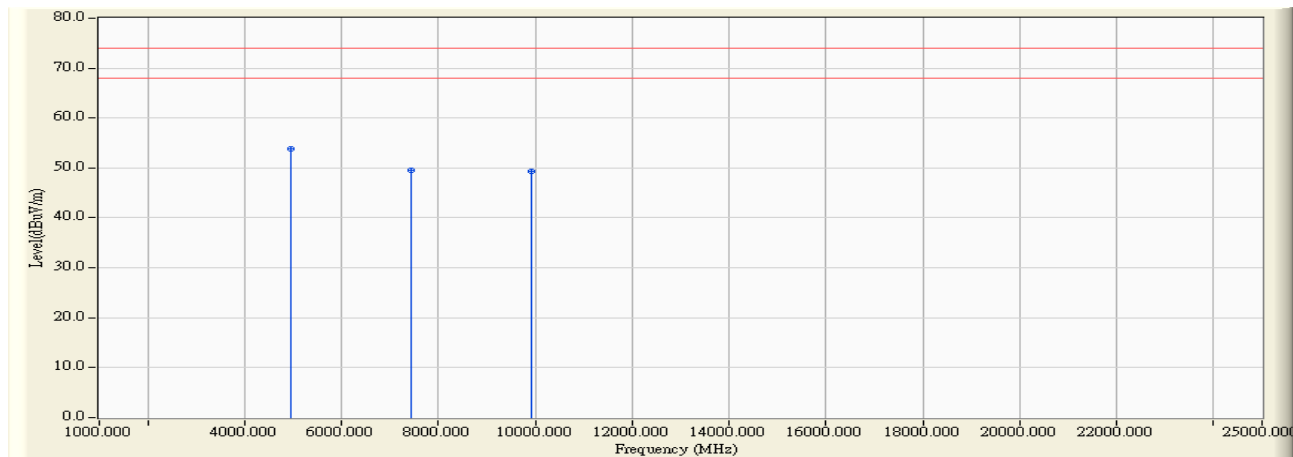


Frequency	Correct	Reading	Measurement	Margin	Limit
MHz	Factor	Level	Level		
	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
4960.000	2.760	49.860	52.620	-21.380	74.000
7440.000	12.567	34.570	47.136	-26.864	74.000
9920.000	13.456	36.340	49.796	-24.204	74.000

Note:

1. The reading levels below 1GHz and above 1GHz are quasi-peak values and peak/average values, respectively.
2. Receiver setting (Peak Detector) : RBW:1MHz; VBW:1MHz; Span:100MHz °
3. Emission Level = Reading Level + Correct Factor.
4. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : Wireless Remote Control
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit (2480 MHz)



Frequency	Correct	Reading	Measurement	Margin	Limit
MHz	Factor	Level	Level		
	dB	dBuV	dBuV/m	dB	dBuV/m
Vertical					
Peak Detector:					
4960.000	5.557	48.280	53.837	-20.163	74.000
7440.000	13.426	36.220	49.645	-24.355	74.000
9920.000	13.958	35.410	49.368	-24.632	74.000


Note:

1. The reading levels below 1GHz and above 1GHz are quasi-peak values and peak/average values, respectively.
2. Receiver setting (Peak Detector) : RBW:1MHz; VBW:1MHz; Span:100MHz
3. Emission Level = Reading Level + Correct Factor.
4. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : Wireless Remote Control
 Test Item : General Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit (2441 MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
MHz	Factor	Level	Level		
	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
35.820	-4.149	33.236	29.087	-10.913	40.000
111.480	-7.914	43.441	35.527	-7.973	43.500
146.400	-10.318	43.055	32.737	-10.763	43.500
268.620	-4.942	32.384	27.442	-18.558	46.000
377.260	-1.115	29.833	28.718	-17.282	46.000
610.060	4.101	30.235	34.336	-11.664	46.000
Vertical					
35.820	-2.159	41.817	39.658	-0.342	40.000
53.280	-6.022	44.618	38.596	-1.404	40.000
111.480	-0.954	39.919	38.965	-4.535	43.500
332.640	-4.914	32.451	27.537	-18.463	46.000
377.260	-1.765	31.022	29.257	-16.743	46.000
509.180	-0.158	28.477	28.319	-17.681	46.000

Note:

1. The reading levels below 1GHz are quasi-peak values.
2. “” means the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.
4. The radiated emissions below 1GHz of the lowest, middle, highest frequency are pretested. Only the worst case is shown on the report.

3. Band Edge

3.1. Test Equipment

RF Conducted Measurement

The following test equipments are used during the band edge tests:

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
	Spectrum Analyzer	R&S	FSP40 / 100170	Jun, 2010
	Spectrum Analyzer	Agilent	E4407B / US39440758	Jun, 2010
X	Spectrum Analyzer	Agilent	N9010A / MY48030495	Apr.,2010

Note:

1. All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.
2. The test instruments marked with "X" are used to measure the final test results.

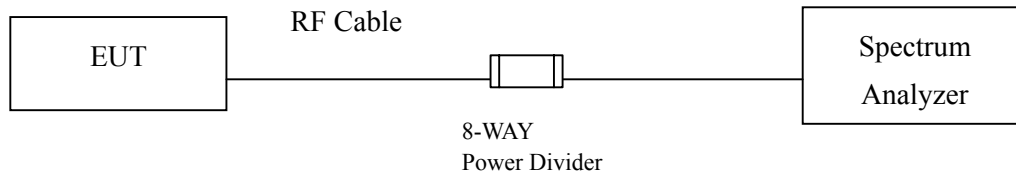
The following test equipments are used during the band edge tests:

Test Site		Equipment	Manufacturer	Model No./Serial No.	Last Cal.
☒ Site # 3		Bilog Antenna	Schaffner Chase	CBL6112B/2673	Sep., 2010
	X	Horn Antenna	Schwarzbeck	BBHA9120D/D305	Sep., 2010
		Horn Antenna	Schwarzbeck	BBHA9170/208	Jul., 2010
	X	Pre-Amplifier	Agilent	8447D/2944A09549	Sep., 2010
	X	Spectrum Analyzer	Agilent	E4407B / US39440758	May, 2010
		Test Receiver	R & S	ESCS 30/ 825442/018	Sep., 2010
	X	Coaxial Cable	QuieTek	QTK-CABLE/ CAB5	Feb., 2010
	X	Controller	QuieTek	QTK-CONTROLLER/ CTRL3	N/A
	X	Coaxial Switch	Anritsu	MP59B/6200265729	N/A

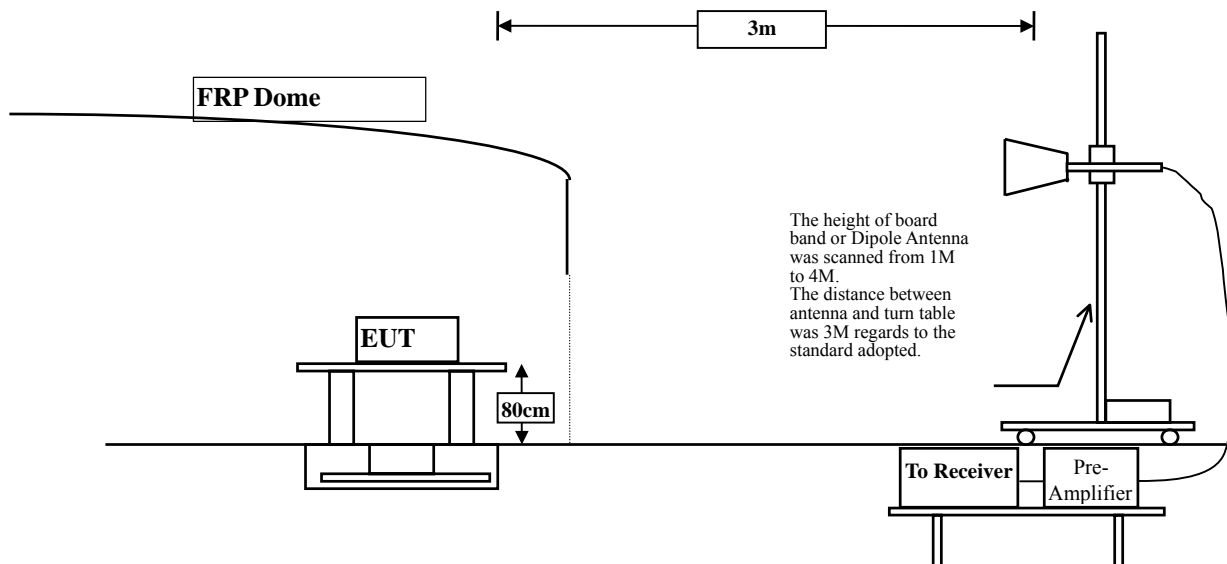
- Note:
1. All equipments are calibrated every one year.
 2. The test equipments marked by "X" are used to measure the final test results.

3.2. Test Setup

RF Conducted Measurement



RF Radiated Measurement:



3.3. Limits

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 50 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. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

3.4. Test Procedure

The EUT and its simulators are placed on a turn table which is 0.8 meter above ground. The turn table can rotate 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 can move up and down between 1 meter and 4 meters to find out the maximum emission level.

Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be manipulated according to ANSI C63.4: 2003 on radiated measurement.

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

3.5. Uncertainty

Conducted is ± 1.27 dB

Radiated is ± 3.9 dB

3.6. Test Result of Band Edge

Product : Wireless Remote Control
 Test Item : Band Edge Data
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit

Fundamental Filed Strength

Antenna Pole	Frequency [MHz]	Correction Factor [dB/m]	Reading Level [dBuV]	Emission Level [dBuV/m]	Detector
Horizontal	2402	31.573	36.29	67.864	Peak
Vertical	2402	30.917	37.97	68.887	Peak

Note: 1:Spectrum Analyzer setting:

Peak detector: RBW=1MHz, VBW=1MHz

Average detector: RBW=1MHz, VBW=10Hz

Band Edge Test Data

Antenna Pole	Test Frequency (MHz)	Fundamental (dBuV/m)	Δ (dB)	Band Edge Field Strength (dBuV/m)	Detector
Horizontal	2400	67.864	19.343	48.521	Peak
Vertical	2400	68.887	19.343	49.544	Peak

Note:

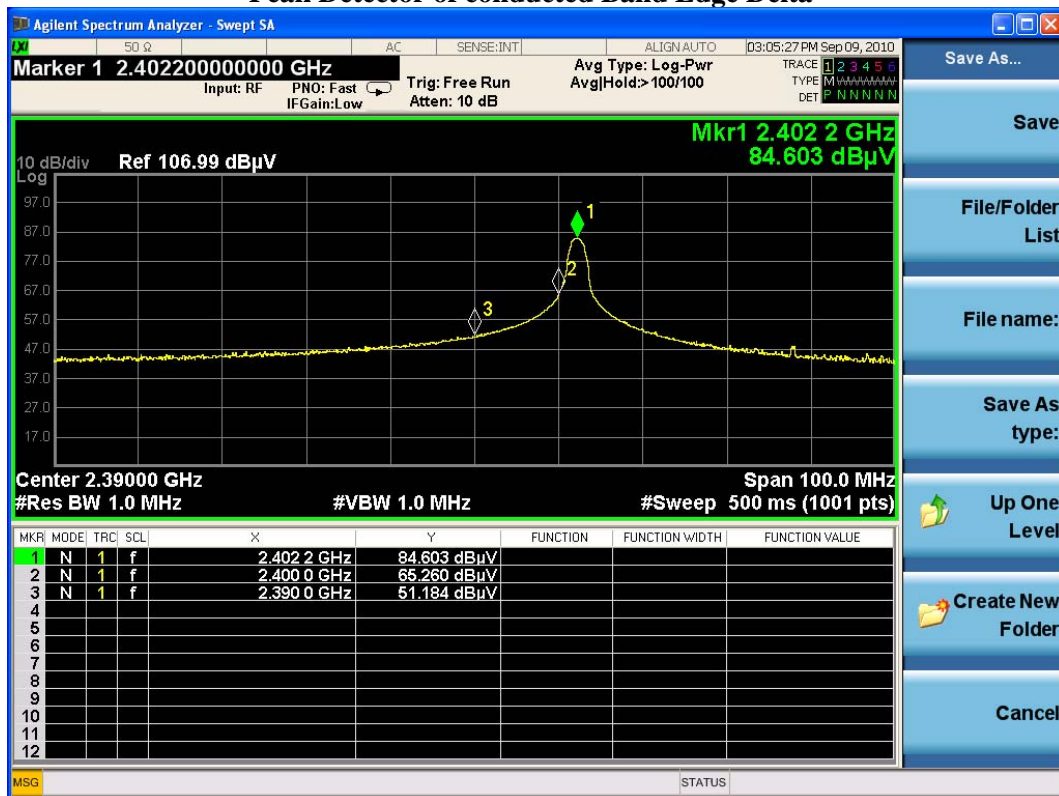
The Band Edge Field Strength was calculated using the Fundamental and Conducted Band Edge measurements per the Marker-Delta Method with the following formula:

Band Edge field Strength = F - Δ

F = Fundamental field Strength (Peak or Average)

Δ = Conducted Band Edge Delta (Peak or Average)

Peak Detector of conducted Band Edge Delta



Product : Wireless Remote Control
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit

Fundamental Filed Strength

Antenna Pole	Frequency [MHz]	Correction Factor [dB/m]	Reading Level [dB(uV)]	Emission Level [dB(uV/m)]	Detector
Horizontal	2480	32.155	33.29	65.446	Peak
Vertical	2480	31.412	32.64	64.052	Peak

Note: 1:Spectrum Analyzer setting:

Peak detector: RBW=1MHz, VBW=1MHz

Average detector: RBW=1MHz, VBW=10Hz

Band Edge Test Data

Antenna Pole	Test Frequency (MHz)	Fundamental (dBuV/m)	Δ (dB)	Band Edge Field Strength (dBuV/m)	Detector
Horizontal	2483.5	65.446	24.181	41.265	Peak
Vertical	2483.5	64.052	24.181	39.871	Peak

Note:

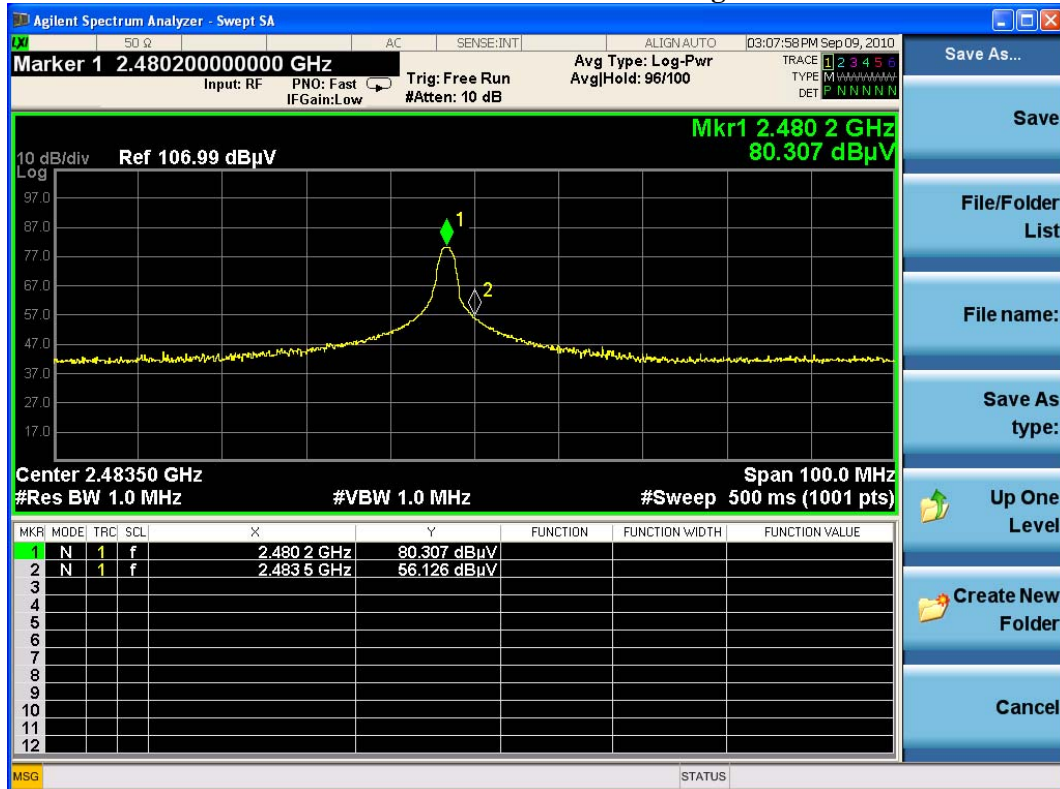
The Band Edge Field Strength was calculated using the Fundamental and Conducted Band Edge measurements per the Marker-Delta Method with the following formula:

Band Edge field Strength = F - Δ

F = Fundamental field Strength (Peak or Average)

Δ = Conducted Band Edge Delta (Peak or Average)

Peak Detector of conducted Band Edge Delta



4. EMI Reduction Method During Compliance Testing

No modification was made during testing.