MEASUREMENT REPORT

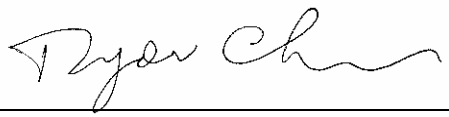
(FCC : Part 15 Subpart C / ANSI C63.4-2003)

Testing Laboratory
1288

Product	:	WALL MOUNT RF TRANSMITTER
Trade Name	:	WEKKA
Model No.	:	WK2101A
Applicant	:	WEKKA TECHNOLOGY CO., LTD
Applicant Address	:	No.550, Sishih Rd. Fongyuan, Taichung 42077, Taiwan

Report Number	MLT0702P15005
Applicant	WEKKA TECHNOLOGY CO., LTD
Product	WALL MOUNT RF TRANSMITTER
Sample Received Date	2007/02/12

Report Prepared By	Jesse Tien
Signature	
Date Prepared	2007/02/13 ~ 2007/03/2

Report Authorized By	Roger Chen
Signature	
Date Authorized	2007/03/21

Test By

Max Light Technology Co., Ltd.
Room 5, 8F, No.125, Section 3 Roosevelt Road,
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CERTIFICATION

We here by verify that :

The test data, data evaluation, test procedures and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.4-2003. All test were conducted by MLT(Max Light Technology Co., Ltd) Room 5, 8F, No.125, Section 3 Roosevelt Road, Taipei, Taiwan, R.O.C Also, we attest to the accuracy of each.

We further submit that the energy emitted by the sample EUT tested as described in the report is in compliance with radiated emission limit of FCC Rules Part 15 Subpart C Section 15.231.

Applicant Name	WEKKA TECHNOLOGY CO., LTD
Applicant Address	No.550, Sishih Rd. Fongyuan, Taichung 42077, Taiwan
Manufacturer Name	WEKKA TECHNOLOGY CO., LTD
Manufacturer Address	No.550, Sishih Rd. Fongyuan, Taichung 42077, Taiwan

Equipment	WALL MOUNT RF TRANSMITTER
Model No	WK2101A
FCC ID	U5UWK2101A

Report Prepared By	Jesse Tien
Signature	

Report Authorized By	Roger Chen
Signature	

I. GENERAL

1.1 Introduction

The following measurement report is submitted on behalf of WEKKA TECHNOLOGY CO., LTD In support of an Intentional Periodic Radiator certification in accordance with Part 2 Subpart J and Part 15 Subpart A And C of the Commission's and Regulations.

1.2 Customer Details

Applicant Name	WEKKA TECHNOLOGY CO., LTD
Applicant Address	No.550, Sishih Rd. Fongyuan, Taichung 42077, Taiwan
Manufacturer Name	WEKKA TECHNOLOGY CO., LTD
Manufacturer Address	No.550, Sishih Rd. Fongyuan, Taichung 42077, Taiwan

1.3 Technical data of EUT

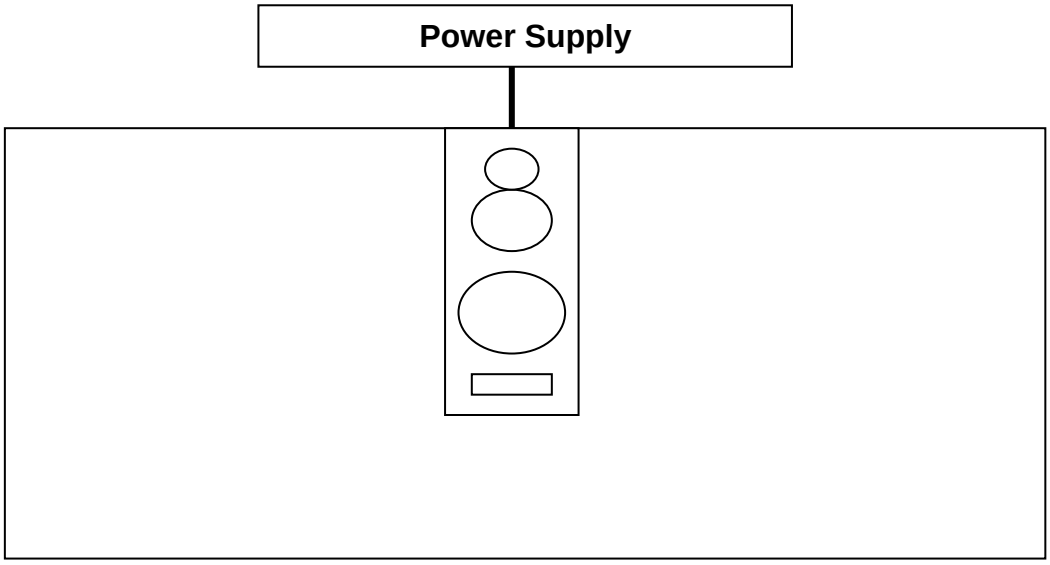
Equipment	WALL MOUNT RF TRANSMITTER
Model No	WK2101A
FCC ID	U5UWK2101A
Power Type	Powered by AC 100~240V

The EUT (WK2101A) is a remote WALL MOUNT RF TRANSMITTER. The operation frequency is 303.8Mhz. Press the button of the remote WALL MOUNT RF TRANSMITTER. The remote WALL MOUNT RF TRANSMITTER contains a DIP SW. and we test the EUT under 4 different modes, in order to choice the worst case to be the data of this report.

1.4 Description of Support Equipment

The EUT itself forms a system. No support equipment is required for its normal operation.

1.5 Configuration of System Under Test



1.6 Test Procedure

All measurements contained in this report were performed according to the techniques described in Measurement procedure ANSI C63.4: 2003 "Measurement of Intentional Radiators."

1.7 General Test Condition

The conditions under which the EUT operates were varied to determine their effect on the equipment's emission characteristics. The final configuration of the test system and the mode of operation used during these tests was chosen as that which produced the highest emission levels. However, only those conditions which the EUT was considered likely to encounter in normal use were investigated.

II. Conducted Emissions Requirements

2.1 General & Setup :

The power line conducted emission measurements were performed in a shielded enclosure. The EUT was assembled on a wooden table which is 80 centimeters high, was placed 40 centimeters from the back wall and at least 1 meter from the sidewall.

Power was fed to the EUT from the public utility power grid through a line filter and EMCO Model 3825/2 Line Impedance Stabilization Networks (LISN). The LISN housing, measuring instrumentation case, ground plane, etc., were electrically bonded together at the same RF potential. The Spectrum analyzer was connected to the AC line through an isolation transformer. The 50-ohm output of the LISN was connected to the spectrum analyzer directly. Conducted emission levels were in the CISPER quasi-peak detection mode. The analyzer's 6 dB bandwidth was set to 9 KHz. No post-detector video filter was used.

The spectrum was scanned from 150 KHz to 30 MHz. The physical arrangement of the test system and associated cabling was varied (within the scope of arrangements likely to be encountered in actual use) to determine the effect on the unit's emanations in amplitude and frequency. All spurious emission frequencies were observed. The highest emission amplitudes relative to the appropriate limit were measured and have been recorded in paragraph 2.6.

2.2 Test Equipment List:

Item	Mfr/Brand	Instruments	Serial No.	Model/Type No.	Calibrated Date	Next Cali. Date
1.	Agilent	Spectrum Analyzer	US40240137	E7403A	2007/01/19	2008/01/19
2.	AFJ	EMI Receiver	55090002141	ER 55C	2006/04/18	2007/04/18
3.	EMCO	LISN	2654	3825/2	2006/03/25	2007/03/25
4.	EMCO	LISN	2658	3825/2	2006/03/11	2007/03/11
5.	SCHAFFNER	ISN	16831	ISN T400	N/A	N/A

2.4 Test condition:

EUT tested in accordance with the specifications given by the manufacturer , and exercised in the most unfavorable manner.

2.5 Conducted Emissions Limits:

Frequency range (MHz)	Limits (dBuV)	
	Quasi-peak	Average
0.15 to 0.50	66 to 56	56 to 46
0.50 to 5.0	56	46
5.0 to 30	60	50

2.6 Measurement Data Of Conducted Emissions:

2.6.1 Conducted Emissions (Subpart B)

The following table show a summary of the highest emissions of power line conducted emissions to the HOT and NEUTRAL conductor of the EUT power.

Test Mode : WALL MOUNT RF TRANSMITTER

Conducted Emissions (Class B)					
Conductor	**Frequency (MHz)**	**Quasi-Peak (dBuV)**	**Limits (dBuV)**	**Average (dBuV)**	**Limits (dBuV)**
L1	0.44	40.71	57.07	--	47.07
	0.71	35.44	56	--	46
	1.42	36.90	56	--	46
	1.59	37.12	56	--	46
	3.12	36.54	56	--	46
	5.03	37.15	60	--	50
	8.50	37.47	60	--	50
L2	0.17	37.59	65.12	--	55.12
	1.44	34.28	56	--	46
	7.33	33.07	60	--	50
	9.50	35.64	60	--	50
	10.68	36.68	60	--	50
	11.68	37.42	60	--	50
	17.75	38.84	60	--	50

Notes : 1.L1: One end & Ground L2: The other end & Ground

2.Height of table on which the EUT was placed : 0.8 m.

3.The Quasi-Peak Value have already met the Average Value Limit showed on above limits.

4.The above test results are obtained under the normal condition.

III. Radiated Emissions Requirements

3.1 General Configuration:

Prior to open-field testing, the EUT was placed in a shielded enclosure and scanned at a close distance to determine its emission characteristics. The physical arrangement of the EUT was varied (within the scope of arrangements likely to be encountered in actual use) to determine the effect on the unit's emanations in amplitude, directivity, and frequency. The exact system configuration which produced the highest emissions was noted so it could be reproduced later during the open-field tests. This was done to ensure that the final measurements would demonstrate the worst-case interference potential of the EUT.

3.2 General Configuration:

Final radiation measurements were made on a three-meter, open-field test site. The EUT system was placed on a nonconductive turntable which is 0.8 meters height, top surface 1.0 x 1.5 meter. The spectrum was examined from 250 MHz to 2.5 GHz in order to cover the whole spectrum below 10th harmonic which could generate from the EUT. During the test, EUT was set to transmit continuously & Measurements spectrum range from 30 MHz to5 GHz is investigated.

For measurements below 1 GHz the resolution bandwidth is set to 100 kHz for peak detection measurements or 120 kHz for quasi-peak detection measurements. Peak detection is used unless otherwise noted as quasi-peak.

For measurements above 1 GHz the resolution bandwidth is set to 1 MHz, then the video bandwidth is set to 1 MHz for peak measurements and 10 Hz for average measurements.

A nonconductive material surrounded the EUT to supporting the EUT for standing on tree orthogonal planes. At each condition, the EUT was rotated 360 degrees, and the antenna was raised and lowered from one to four meters to find the maximum emission levels. Measurements were taken using both horizontal and vertical antenna polarization.

The field strength below 1 GHz was measured by EMCO Biconilog Antenna (mode 3142C) at 3 Meter and the SCHWARZBECK Double Ridged Guide Antenna (model BBHA9120D&9170) was used in frequencies 1 – 40 GHz at a distance of 3 meter. All test results were extrapolated to equivalent signal at 3 meters utilizing an inverse linear distance extrapolation Factor (20dB/decade).

For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than average limit (that means the emission level in peak mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.

Appropriate preamplifiers were used for improving sensitivity and precautions were taken to avoid overloading or desensitizing the spectrum analyzer. No post – detector video filters were used in the test.

The spectrum analyzer's 6 dB bandwidth was set to 1 MHz, and the analyzer was operated in the peak detection mode, for frequencies both below and up 1 GHz. The average levels were obtained by subtracting the duty cycle correction factor from the peak readings.

The actual field is intensity in referenced to 1 microvolt per meter (dBuV/m) is determined by algebraically adding the measured reading in dBuV, the antenna factor (dB), and cable loss (dB) and Subtracting the gain of preamplifier (dB) is auto calculate in spectrum analyzer.

(1) Amplitude (dBuV/m)= FI(dBuV)+AF(dBuV)+CL(dBuV)-Gain(dB)

FI= Reading of the field intensity.
AF= Antenna factor.
CL= Cable loss.

P.S Amplitude is auto calculate in spectrum analyzer.

(2) Actual Amplitude (dBuV/m)= Amplitude (dBuV)-Duty(dB)-Dis(dB)

The FCC specified emission limits were calculated according the EUT operating frequency and by following linear interpolation equations:

(1) For fundamental frequency :

FUNDAMENTAL FREQUENCY (MHz), excluding restricted band frequencies of Table 2	FIELD STRENGTH OF FUNDAMENTAL microvolts/m at 3 metres, (watts, EIRP)(1)	FIELD STRENGTH OF UNWANTED EMISSIONS(1) microvolt/metre at 3 metres
40.66-40.70	See RSS-210 section 6.2.2(g).	
70-130	1,250 (470 nW)	125
130-174	1,250 to 3,750*	125 to 375
174-260 (note 1)	3,750 (4.2 uW)	375
260-470 (note 1)	3,750 to 12,500*	375 to 1,250
Above 470	12,500 (47 uW)	1250

Note : Use quasi-peak or averaging meter.

* Linear interpolation with frequency F in MHz:

For 130-174 MHz: FS (microvolts/m) = (56.82 x F) - 6136

For 260-470 MHz: FS (microvolts/m) = (41.67 x F) - 7083

nW = nanowatt (EIRP) ; uW = microwatt (EIRP).

(2) For spurious frequency :

Spurious emission limits = fundamental emission limit /10

3.3 Test Equipment List:

Item	Mfr/Brand	Instruments	Serial No.	Model/Type No.	Calibrated Date	Next Cali. Date
1.	HP	Spectrum Analyzer	73412A00110	8591EM	2007/02/12	2008/02/12
2.	HP	Pre Amplifier	2944A08954	8447D	2006/04/14	2007/04/14
3.	HP	Pre Amplifier	3113A05475	8447F	2007/02/14	2008/02/14
4.	R&S	EMI Receiver	881121/010	ESVP	2007/02/12	2008/02/12
5.	EMCO	Biconilog Antenna	00059739	3142C	2006/04/19	2007/04/19
6.	Agilent	Spectrum Analyzer	US44300422	E4446A	2006/04/19	2007/04/19
7.	HP	Pre Amplifier	3008A01463	8449B	2007/02/12	2008/02/12
8.	SCHWARZBECK	Horn Antenna	181	BBHA 9170	2006/07/06	2007/07/06
9.	SCHWARZBECK	Horn Antenna	304	BBHA 9120 D	2006/07/06	2007/07/06
10.	EMCO	Biconilog Antenna	00044568	3142C	2006/06/27	2007/06/27

3.4 Measurement Data Of Radiated Emissions:

3.4.1 Open Field Radiated Emissions (Horizontal/X-axis)

The highest peak values of radiated emissions from the EUT at various antenna heights, antenna polarization, EUT orientation , etc. are recorded on the following

Test Mode : WALL MOUNT RF TRANSMITTER

Radiated Emissions (HORIZONTAL)							
Frequency (MHz)	**Amplitude (dBuV/m)**	**Ant. (m)**	**Table (Degree)**	**Duty (dB)**	**Actual Amp (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**
303.80	63.88	1.5	300	15.45	48.43	74.92	-26.49
608.00	41.06	1.5	320	15.45	25.61	54.92	-29.31
911.10	29.48	1	250	15.45	14.03	54.92	-40.89
1215.10	43.87	1	70	15.45	28.42	54.00	-25.58
1518.60	44.24	1	160	15.45	28.79	54.00	-25.21
1822.50	43.68	1	140	15.45	28.23	54.92	-26.69
2126.30	42.50	1	220	15.45	27.05	54.92	-27.87

Notes : 1.Margin= Amplitude - Limits

2.Distance of Measurement : 3 Meter (30MHz~26.5GHz)

3.Height of table for EUT placed: 0.8 Meter.

4.ANT= Antenna height.

5.Duty= Duty cycle correction factor.

6.Amplitude= Reading Amplitude – Amplifier gain + Cable loss + Antenna factor (Auto calculate in spectrum analyzer)

7.Actual Amp= Amplitude – Duty.

8. EUT Orthogonal Axes：X denotes Laid on Table；Z denotes Side Stand；Y denotes Vertical Stand.

3.4.2 Open Field Radiated Emissions (Vertical/X-axis)

The highest peak values of radiated emissions from the EUT at various antenna heights, antenna polarization, EUT orientation , etc. are recorded on the following

Test Mode : WALL MOUNT RF TRANSMITTER

Radiated Emissions (VERTICAL)							
Frequency (MHz)	**Amplitude (dBuV/m)**	**Ant. (m)**	**Table (Degree)**	**Duty (dB)**	**Actual Amp (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**
303.80	68.58	1.4	320	15.45	53.13	74.92	-21.79
608.00	38.08	1	140	15.45	22.63	54.92	-32.29
912.50	30.19	1	170	15.45	14.74	54.92	-40.18
1215.25	45.23	1	200	15.45	29.78	54.00	-24.22
1518.66	46.01	1	290	15.45	30.56	54.00	-23.44
1822.45	43.47	1	210	15.45	28.02	54.92	-26.90
2126.53	43.11	1	150	15.45	27.66	54.92	-27.26

Notes : 1.Margin= Amplitude - Limits

2.Distance of Measurement : 3 Meter (30MHz~26.5GHz)

3.Height of table for EUT placed: 0.8 Meter.

4.ANT= Antenna height.

5.Duty= Duty cycle correction factor.

6.Amplitude= Reading Amplitude – Amplifier gain + Cable loss + Antenna factor (Auto calculate in spectrum analyzer)

7.Actual Amp= Amplitude – Duty.

8. EUT Orthogonal Axes：X denotes Laid on Table；Z denotes Side Stand；Y denotes Vertical Stand.

3.4.3 Open Field Radiated Emissions (Horizontal/Y-axis)

The highest peak values of radiated emissions from the EUT at various antenna heights, antenna polarization, EUT orientation , etc. are recorded on the following

Test Mode : WALL MOUNT RF TRANSMITTER

Radiated Emissions (HORIZONTAL)							
Frequency (MHz)	**Amplitude (dBuV/m)**	**Ant. (m)**	**Table (Degree)**	**Duty (dB)**	**Actual Amp (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**
303.80	61.90	2	220	15.45	46.45	74.92	-28.47
608.00	42.59	1.4	140	15.45	27.14	54.92	-27.78
911.10	28.82	1.8	310	15.45	13.37	54.92	-41.55
1215.10	44.83	1	70	15.45	29.38	54.00	-24.62
1518.60	42.52	1	110	15.45	27.07	54.00	-26.93
1822.50	43.99	1	240	15.45	28.54	54.92	-26.38
2126.30	43.08	1	290	15.45	27.63	54.92	-27.29

Notes : 1.Margin= Amplitude - Limits

2.Distance of Measurement : 3 Meter (30MHz~26.5GHz)

3.Height of table for EUT placed: 0.8 Meter.

4.ANT= Antenna height.

5.Duty= Duty cycle correction factor.

6.Amplitude= Reading Amplitude – Amplifier gain + Cable loss + Antenna factor (Auto calculate in spectrum analyzer)

7.Actual Amp= Amplitude – Duty.

8. EUT Orthogonal Axes：X denotes Laid on Table；Z denotes Side Stand；Y denotes Vertical Stand.

3.4.4 Open Field Radiated Emissions (Vertical/Y-axis)

The highest peak values of radiated emissions from the EUT at various antenna heights, antenna polarization, EUT orientation , etc. are recorded on the following

Test Mode : WALL MOUNT RF TRANSMITTER

Radiated Emissions (VERTICAL)							
Frequency (MHz)	**Amplitude (dBuV/m)**	**Ant. (m)**	**Table (Degree)**	**Duty (dB)**	**Actual Amp (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**
303.80	65.98	1	220	15.45	50.53	74.92	-24.39
608.00	39.06	1.2	90	15.45	23.61	54.92	-31.31
912.50	28.36	1	300	15.45	12.91	54.92	-42.01
1215.25	43.24	1	160	15.45	27.79	54.00	-26.21
1518.66	44.20	1	200	15.45	28.75	54.00	-25.25
1822.45	44.11	1	270	15.45	28.66	54.92	-26.26
2126.53	43.09	1	210	15.45	27.64	54.92	-27.28

Notes : 1.Margin= Amplitude - Limits

2.Distance of Measurement : 3 Meter (30MHz~26.5GHz)

3.Height of table for EUT placed: 0.8 Meter.

4.ANT= Antenna height.

5.Duty= Duty cycle correction factor.

6.Amplitude= Reading Amplitude – Amplifier gain + Cable loss + Antenna factor (Auto calculate in spectrum analyzer)

7.Actual Amp= Amplitude – Duty.

8. EUT Orthogonal Axes：X denotes Laid on Table；Z denotes Side Stand；Y denotes Vertical Stand.

3.4.5 Open Field Radiated Emissions (Horizontal/Z-axis)

The highest peak values of radiated emissions from the EUT at various antenna heights, antenna polarization, EUT orientation , etc. are recorded on the following

Test Mode : WALL MOUNT RF TRANSMITTER

Radiated Emissions (HORIZONTAL)							
Frequency (MHz)	**Amplitude (dBuV/m)**	**Ant. (m)**	**Table (Degree)**	**Duty (dB)**	**Actual Amp (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**
303.80	63.28	1.3	300	15.45	47.83	74.92	-27.09
608.00	43.88	2	340	15.45	28.43	54.92	-26.49
911.10	30.69	1.1	80	15.45	15.24	54.92	-39.68
1215.20	44.23	1	110	15.45	28.78	54.00	-25.22
1519.00	43.52	1	210	15.45	28.07	54.00	-25.93
1822.80	45.44	1	100	15.45	29.99	54.92	-24.93
2126.60	42.78	1	260	15.45	27.33	54.92	-27.59

Notes : 1.Margin= Amplitude - Limits

2.Distance of Measurement : 3 Meter (30MHz~26.5GHz)

3.Height of table for EUT placed: 0.8 Meter.

4.ANT= Antenna height.

5.Duty= Duty cycle correction factor.

6.Amplitude= Reading Amplitude – Amplifier gain + Cable loss + Antenna factor (Auto calculate in spectrum analyzer)

7.Actual Amp= Amplitude – Duty.

8. EUT Orthogonal Axes：X denotes Laid on Table；Z denotes Side Stand；Y denotes Vertical Stand.

3.4.6 Open Field Radiated Emissions (Vertical/Z-axis)

The highest peak values of radiated emissions from the EUT at various antenna heights, antenna polarization, EUT orientation , etc. are recorded on the following

Test Mode : WALL MOUNT RF TRANSMITTER

Radiated Emissions (VERTICAL)							
Frequency (MHz)	**Amplitude (dBuV/m)**	**Ant. (m)**	**Table (Degree)**	**Duty (dB)**	**Actual Amp (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**
303.80	64.24	1	330	15.45	48.79	74.92	-26.13
608.00	41.85	1.4	120	15.45	26.40	54.92	-28.52
912.50	28.93	1	140	15.45	13.48	54.92	-41.44
1215.25	45.87	1	250	15.45	30.42	54.00	-23.58
1518.66	45.95	1	270	15.45	30.50	54.00	-23.50
1822.45	44.73	1	220	15.45	29.28	54.92	-25.64
2126.53	43.60	1	90	15.45	28.15	54.92	-26.77

Notes : 1.Margin= Amplitude - Limits

2.Distance of Measurement : 3 Meter (30MHz~26.5GHz)

3.Height of table for EUT placed: 0.8 Meter.

4.ANT= Antenna height.

5.Duty= Duty cycle correction factor.

6.Amplitude= Reading Amplitude – Amplifier gain + Cable loss + Antenna factor (Auto calculate in spectrum analyzer)

7.Actual Amp= Amplitude – Duty.

8. EUT Orthogonal Axes：X denotes Laid on Table；Z denotes Side Stand；Y denotes Vertical Stand.

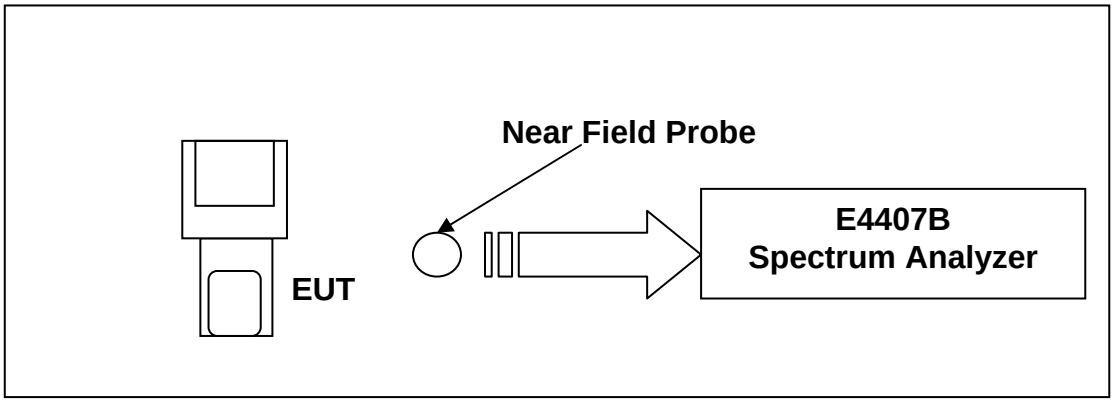
IV. WALL MOUNT RF TRANSMITTER Bandwidth Measurement

4.1 Test Condition & Setup :

The WALL MOUNT RF TRANSMITTER bandwidth measurements were performed in a shielded enclosure. The EUT was placed on a wooded table which is 0.8 meters height and a near field probe was used at a distance about 20 cm for receiving. While testing, EUT was set to transmit continuously.

The resolution bandwidth of the spectrum analyzer was set to 10KHz. The detector function was set to peak and hold mode to clearly observe the components. The maximum permitted bandwidth at –20dB with respect to the reference level specified by the rule was 0.25 % of the center frequency of the EUT.

4.2 Test Instruments Configuration:



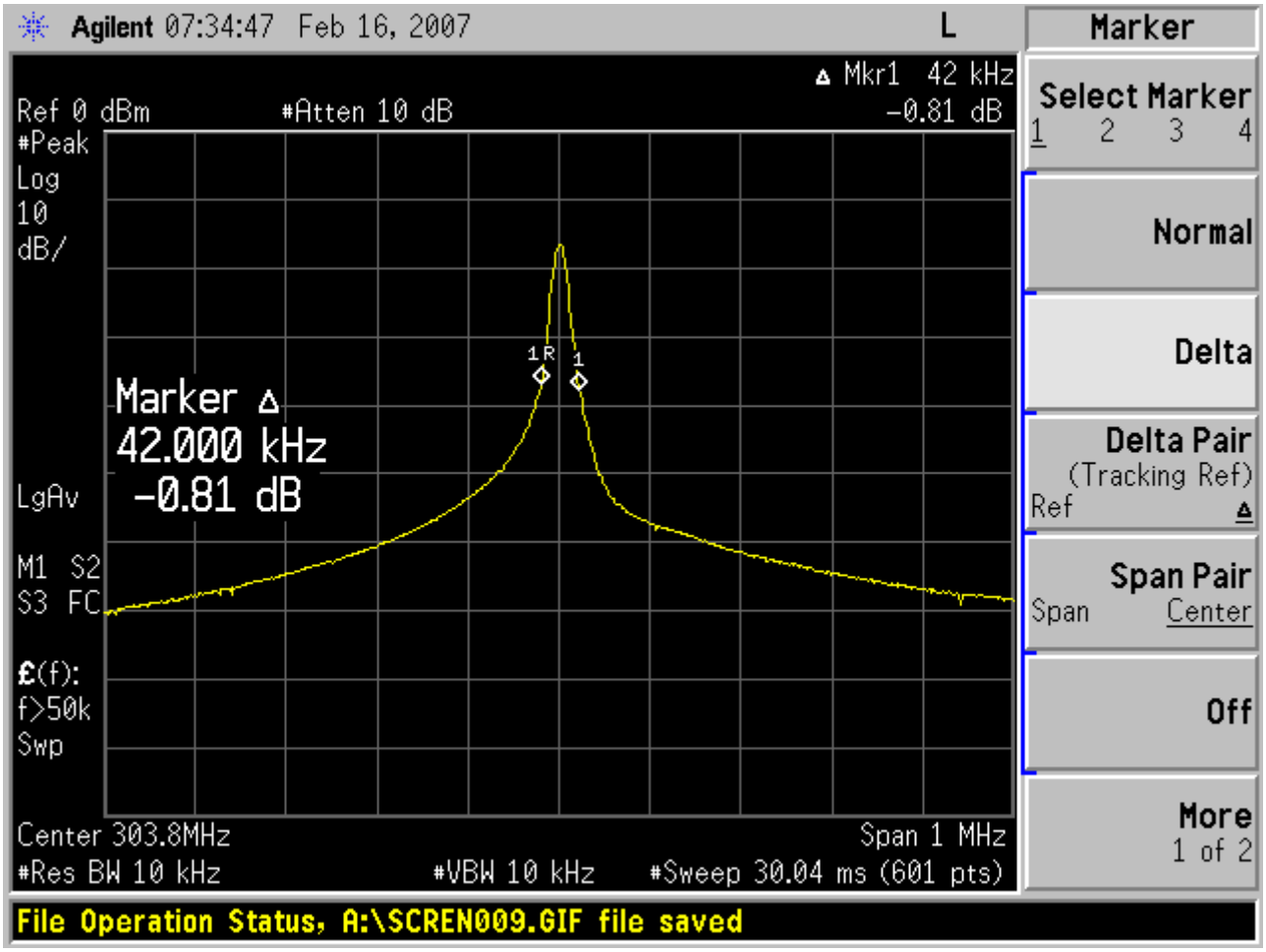
4.3 Test Equipment List:

Item	Mfr/Brand	Instruments	Serial No.	Model/Type No.	Calibrated Date	Next Cali. Date
1.	Agilent	Spectrum Analyzer	US44300422	E4446A	2006/04/19	2007/04/19
2.	HP	Pre Amplifier	3008A01463	8449B	2007/02/12	2008/02/12
3.	HP	Pre Amplifier	2805A03013	8447F	2007/02/13	2008/02/13
4.	EMCO	Biconilog Antenna	00044568	3142C	2006/06/27	2007/06/27
5.	SCHWARZBECK	Horn Antenna	181	BBHA 9170	2006/07/06	2007/07/06
6.	SCHWARZBECK	Horn Antenna	304	BBHA 9120 D	2006/07/06	2007/07/06
7	EM	Probe	107328	EM-6992	N/A	N/A

4.4 Test Result:

Permitted Maximum Bandwidth	759.50	KHz
Bandwidth Measurement	42.00	KHz

4.5 Test Graphs:



V. WALL MOUNT RF TRANSMITTER Duty Cycle Measurement

5.1 Test Condition & Setup :

The WALL MOUNT RF TRANSMITTER bandwidth measurements were performed in a shielded enclosure. The EUT was placed on a wooded table which is 0.8 meters height and a near field probe was used at a distance about 20 cm for receiving. While testing, EUT was set to transmit continuously. Various key configurations were also investigated to find the maximum duty cycle.

The spectrum analyzer resolution bandwidth and video bandwidth were all set to 1 MHZ to encompass all significant spectral components during the test. The analyzer was operated in linear scale and zero span mode after tuning to the WALL MOUNT RF TRANSMITTER carrier frequency. A digital oscilloscope was connected to the aux video output of the spectrum analyzer for measuring pulse width. The pulse width was determined by the difference between the half voltage points on a pulse.

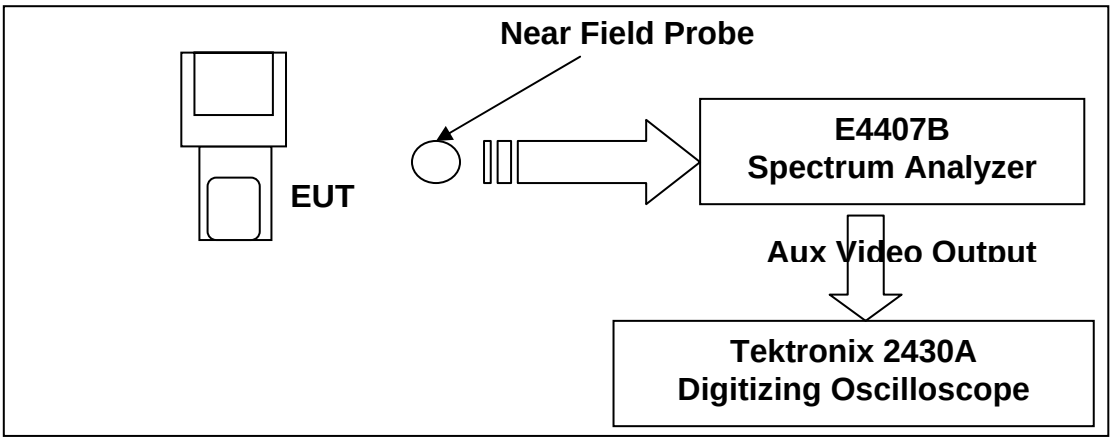
The duty cycle was determined by the following equation :

TO calculate the actual field intensity, the duty cycle correction factor in decibel is needed for later use and can be obtained from following conversion :

$$\text{Duty Cycle}(\%) = \frac{\text{(Total On Interval in a Complete Pulse Train)}}{\text{(Length of a Complete Pulse Train)}} \text{ X100\%}$$

Duty Cycle Correction Factor (dB)= 20 X Log10 (Duty Cycle(%))

5.2 Test Instruments Configuration:



5.3 Test Equipment List:

Item	Mfr/Brand	Instruments	Serial No.	Model/Type No.	Calibrated Date	Next Cali. Date
1.	Agilent	Spectrum Analyzer	US44300422	E4446A	2006/04/19	2007/04/19
2.	HP	Pre Amplifier	3008A01463	8449B	2007/02/12	2008/02/12
3.	HP	Pre Amplifier	2805A03013	8447F	2007/02/13	2008/02/13
4.	EMCO	Biconilog Antenna	00044568	3142C	2006/06/27	2007/06/27
5.	SCHWARZBECK	Horn Antenna	181	BBHA 9170	2006/07/06	2007/07/06
6.	SCHWARZBECK	Horn Antenna	304	BBHA 9120 D	2006/07/06	2007/07/06
7	EM	Probe	107328	EM-6992	N/A	N/A

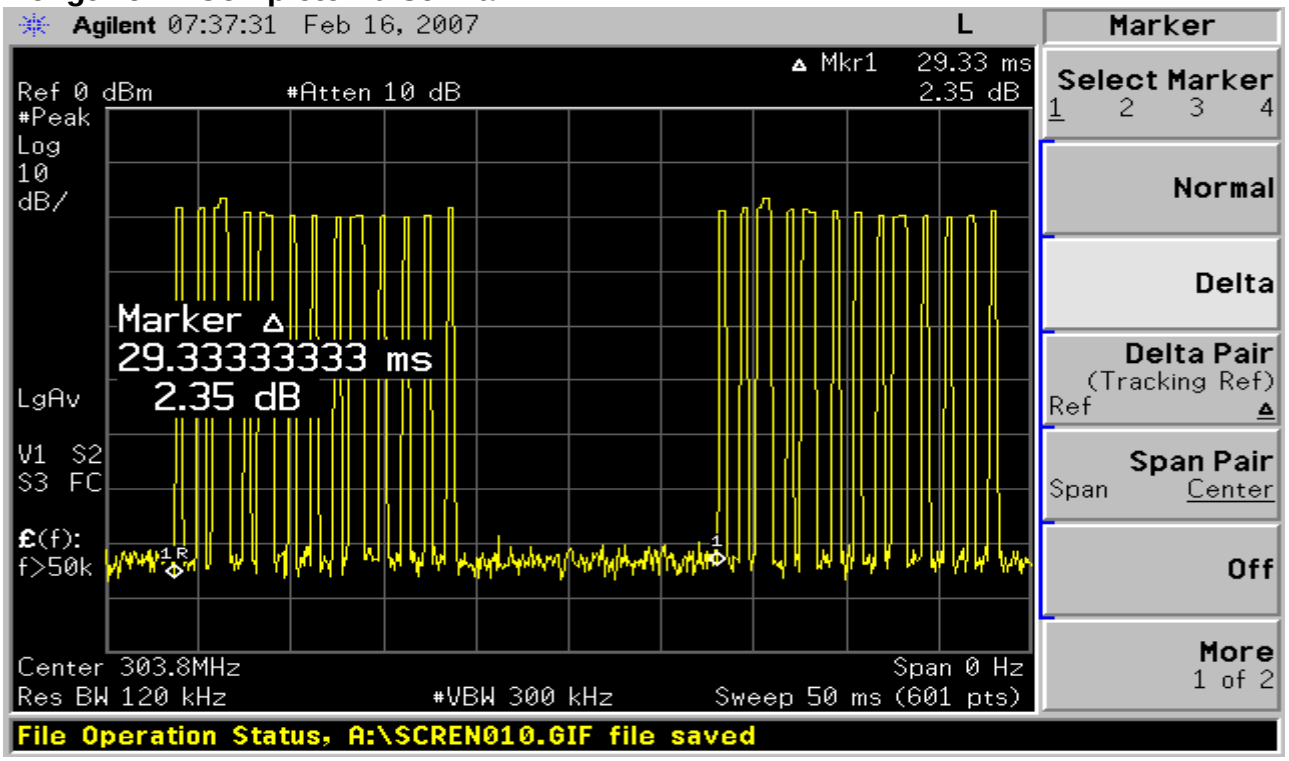
5.4 Test Result:

Pulse Train	Number of Pulse	T(ms)	Total Time (ms)	
Long Pulse	3	0.65	1.95	msec
Short Pulse	10	0.30	3	msec

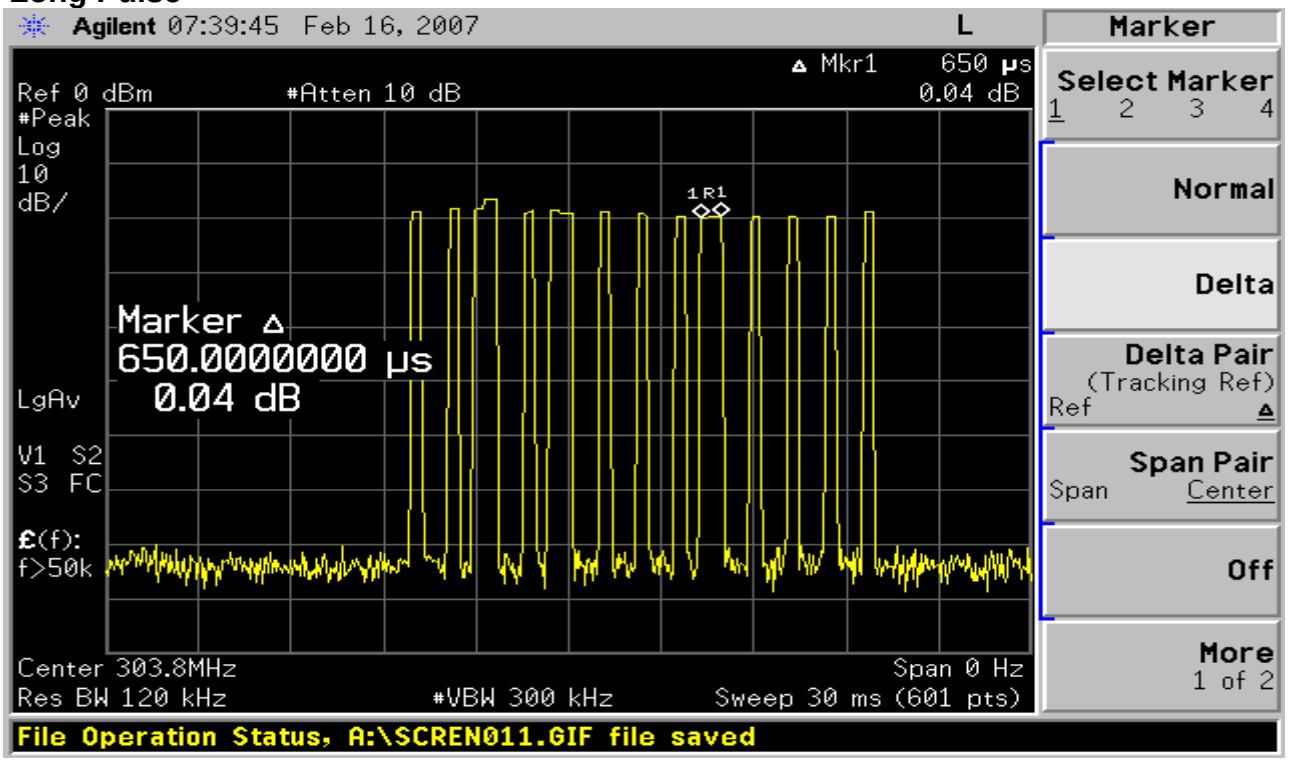
Total ON interval in a complete pulse train	4.95	msec
Length of a complete pulse train	29.33	msec
Duty Cycle (%)	16.87	%
Duty Cycle Correction Factor (dB)	15.45	dB

5.5 Test Graphs: See next page.

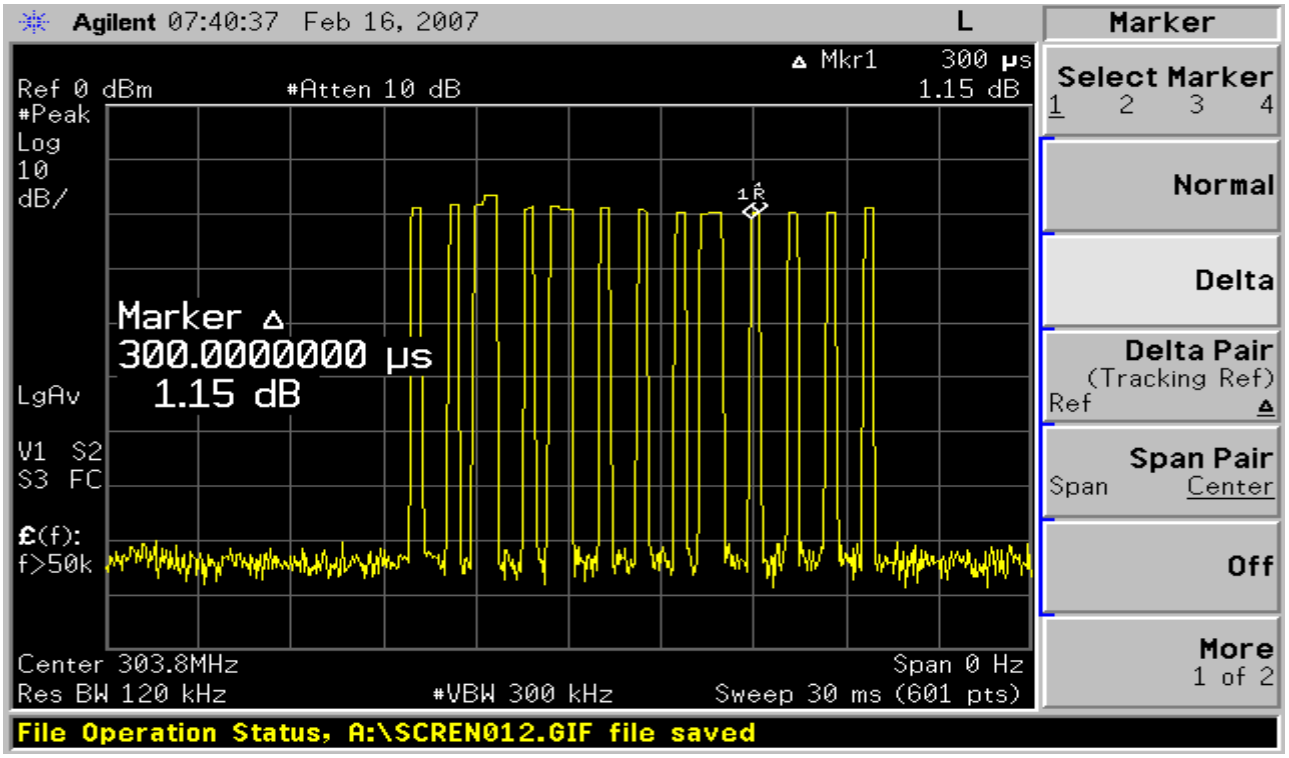
Length of A Complete Pulse Train



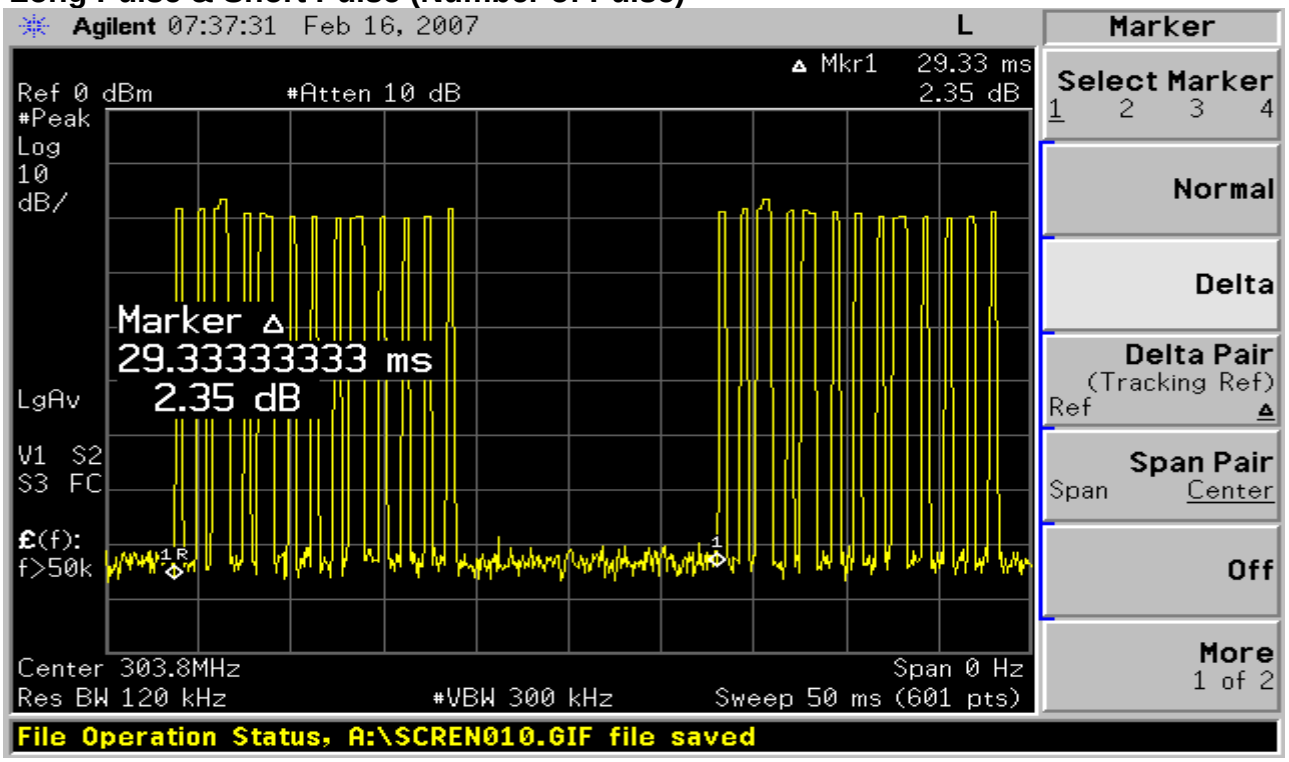
Long Pulse



Short Pulse



Long Pulse & Short Pulse (Number of Pulse)



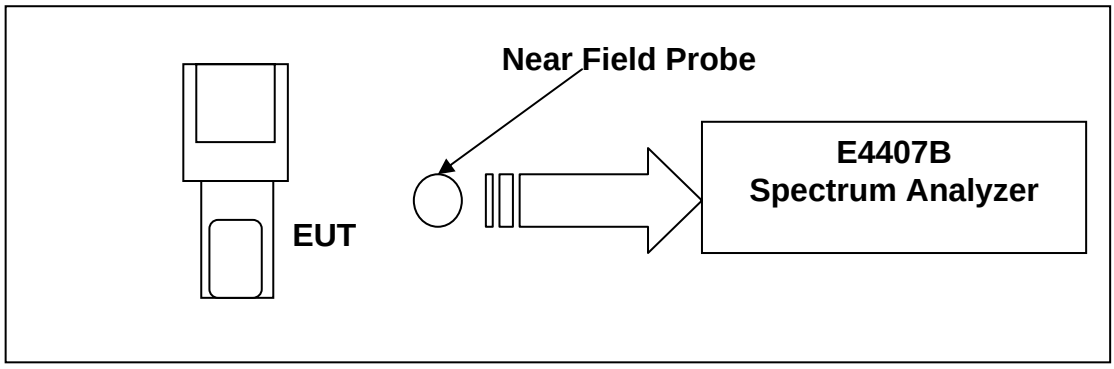
VI. Verification of De-activation after 5 seconds

6.1 Test Condition & Setup :

Verification of the WALL MOUNT RF TRANSMITTER de-activation after 5 seconds was performed in a shielded enclosure. The EUT was placed on a wooded table which is 0.8 meters height and a near field probe was used at a distance about 20 cm for receiving.

The spectrum analyzer resolution bandwidth and video bandwidth were all set to 100KHZ to encompass all Significant spectral components during the test. The analyzer was operated in linear scale and zero span mode after tuning to the WALL MOUNT RF TRANSMITTER carrier frequency.

6.2 Test Instruments Configuration:



6.3 Test Equipment List:

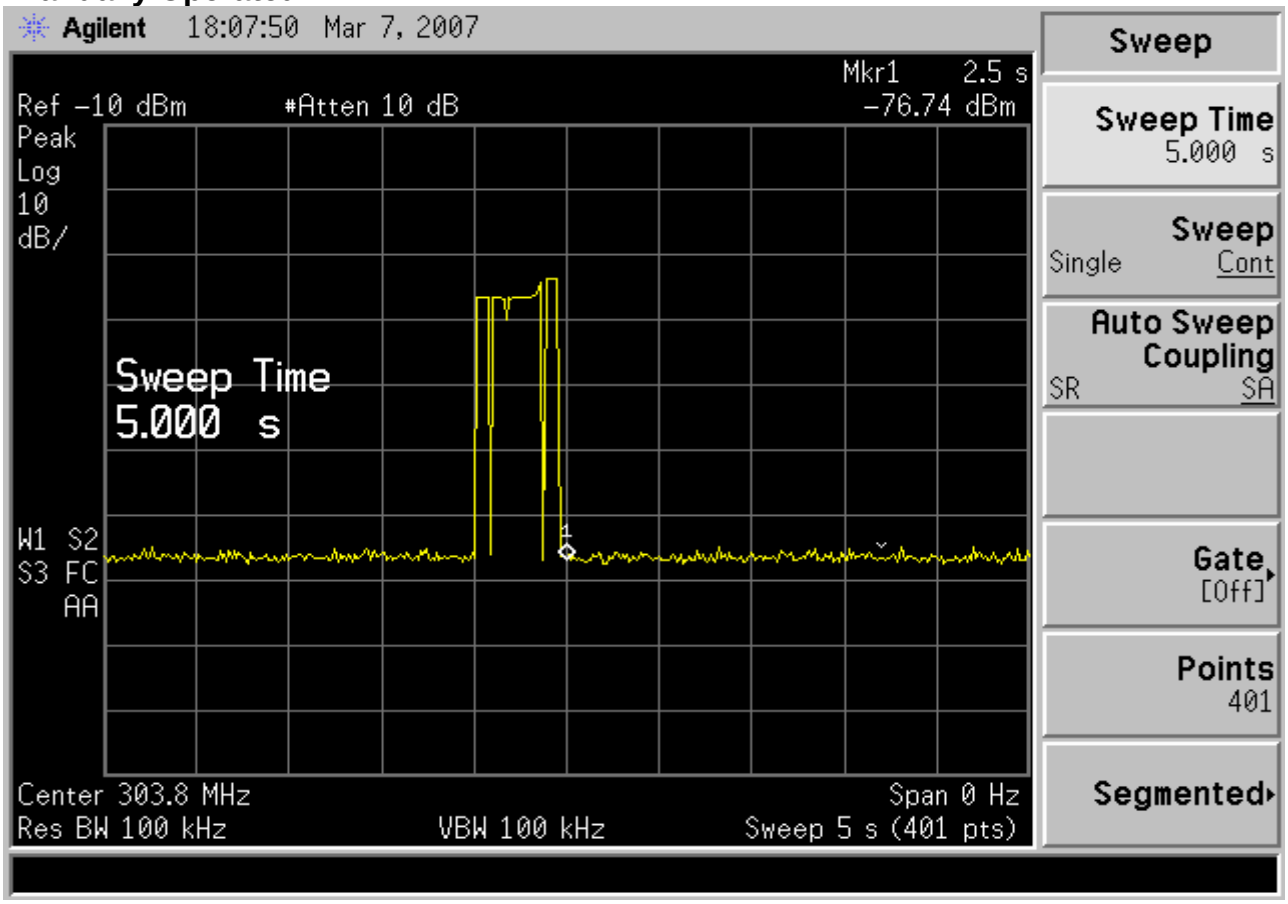
Item	Mfr/Brand	Instruments	Serial No.	Model/Type No.	Calibrated Date	Next Cali. Date
1.	Agilent	Spectrum Analyzer	US44300422	E4446A	2006/04/19	2007/04/19
2.	HP	Pre Amplifier	3008A01463	8449B	2007/02/12	2008/02/12
3.	HP	Pre Amplifier	2805A03013	8447F	2007/02/13	2008/02/13
4.	EMCO	Biconilog Antenna	00044568	3142C	2006/06/27	2007/06/27
5.	SCHWARZBECK	Horn Antenna	181	BBHA 9170	2006/07/06	2007/07/06
6.	SCHWARZBECK	Horn Antenna	304	BBHA 9120 D	2006/07/06	2007/07/06
7	EM	Probe	107328	EM-6992	N/A	N/A

6.4 Test Result:

Compliant Conditions (Section 15.231)	EUT Status
Was the EUT manually operated ?	x Yes No
If yes, did the EUT employ a switch that would automatically deactivate the WALL MOUNT RF TRANSMITTER within not more than 5 seconds of being released ?	x Yes No
Was the EUT automatically activated ?	Yes x No
The devices operated under the provisions of this paragraph shall be provided with a means for automatically limiting operation so that the duration of each transmission shall not be greater than one second and the silent period between transmissions shall be at least 30 times the duration of the transmission but in no case less than 10 seconds.	Yes x No

Note: This device stops transmitting once the activation button in released.

Manually Operated



Appendix I- EUT Test SETUP

MEASUREMENT OF RADIATED EMISSION