

**FCC CFR47 PART 15 SUBPART C
CERTIFICATION
TEST REPORT**

FOR

JYT Enterprises

Transmitter

Model No.: RTFC318

FCC ID: X4R318A

Prepared for : JYT Enterprises
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Report Number : LCS0912240562F
Date of Test : December 24, 2009 – January 15, 2010
Date of Report : January 15, 2010

TABLE OF CONTENTS

Description	Page
1. SUMMARY OF STANDARDS AND RESULTS.....	3
2. GENERAL INFORMATION	4
2.1 Description of Device (EUT).....	4
2.2 Test Facility	4
2.3 Measurement Uncertainty.....	4
3. STOP TRANSMITTING TIME TEST.....	5
3.1 Test Equipment.....	5
3.2 Block Diagram of Test Setup	5
3.3 Limit	5
3.4 Test Results.....	5
4. 20 DB BANDWIDTH TEST	7
4.1 Test Equipment.....	7
4.2 Block Diagram of Test Setup	7
4.3 Limit	7
4.4 Test Results.....	7
5. DUTY CYCLE CORRECTION FACTOR	9
5.1 Test Equipment.....	9
5.2 Block Diagram of Test Setup	9
5.3 Limit	9
5.4 Test Results.....	9
6. RADIATED EMISSION MEASUREMENT.....	12
6.1 Test Equipment.....	12
6.2 Block Diagram of Test Setup	12
6.3 Radiated Emission Limit	13
6.4 Test Results.....	14

1. SUMMARY OF STANDARDS AND RESULTS

Applicant : JYT Enterprises
 Manufacturer : Changzhou Supersonic Industrial Co., Ltd
 EUT : Transmitter
 Model No. : RTFC318
 Serial No. : N/A
 Power Supply : DC 12V

Description of Test Item	Standard	Results
Stop Transmitting Time Test	FCC Part 15C: 15.231	PASS
20 dB Bandwidth Test	FCC Part 15C: 15.231	PASS
Duty Cycle Correction Factor	FCC Part 15C: 15.231&15.35	PASS
Radiated Emission Test	FCC Part 15C: 15.231 ANSI C63.4: 2006	PASS

The measurement results are contained in this test report and SHENZHEN EMTEK CO., LTD. is assumed full responsibility for the accuracy and completeness of these measurements. Also, this report shows that the Equipment Under Test (EUT) is to be technically compliant with the FCC requirements.

This report applies to above tested sample only. This report shall not be reproduced in part without written approval of SHENZHEN LCS CERTIFICATION SERVICES INC.

Date of Test: December 24, 2009 – January 15, 2010

Prepared by:



(Engineer)

Reviewed by:



(Quality Manager)

2. GENERAL INFORMATION

2.1 Description of Device (EUT)

EUT : Remote Transmitter

Model Number : RTFC318

Power Supply : DC 12V

Applicant : JYT Enterprises
Address : P.o Box 120159 Clermont Florida 34711, USA

Manufacturer : Changzhou Supersonic Industrial Co., Ltd
Address : NO.8, Waihuan Road, Xinbei Area, Changzhou City, Jiangsu Province, China

Date of Sample : December 24, 2009
Date of Test : December 24, 2009 – January 15, 2010

2.2 Test Facility

Site Description

EMC Lab. : Accredited by CNAS, 2005.11.02
The certificate is valid until 2010.11
The Laboratory has been assessed and proved to be in compliance with CNAS-CL01: 2006(identical to ISO/IEC17025:2005)
The Certificate Registration Number is L2291.
Accredited by TUV Rheinland Shenzhen, 2008.3 The Laboratory has been assessed according to the requirements ISO/IEC 17025
Accredited by FCC, March 18, 2008 The Certificate Registration Number is 709623.
Accredited by Industry Canada, May 24, 2008 The Certificate Registration Number is 46405-4480.

Name of Firm : SHENZHEN EMTEK CO., LTD

Site Location : Bldg 69, Majialong Industry Zone, Nanshan District, Shenzhen, Guangdong, China

2.3. Measurement Uncertainty

Radiation Uncertainty (30M~1GHz) : Ur = ± 4.26 dB

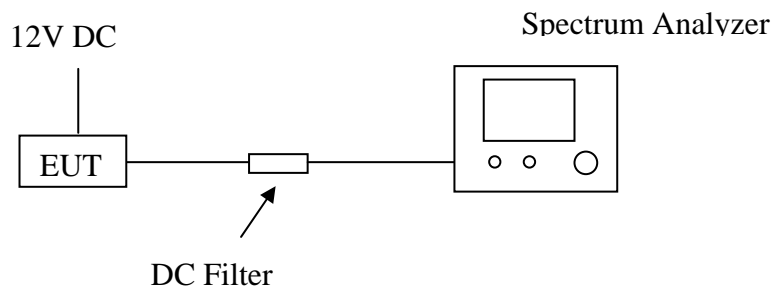
Radiation Uncertainty (1G~3GHz) : Ur = ± 2.66 dB

3. STOP TRANSMITTING TIME TEST

3.1 Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum Analyzer	Agilent	E4407B	MY41440292	May 29, 2009	1 Year
2.	Antenna	EMCO	3115	9035-4764	May 29, 2009	1 Year
3.	RF Cable	Hubersuhne	Sucoflex104	FP2RX2	May 29, 2009	1 Year
4.	DC Filter	MPE	23872C	N/A	May 29, 2009	1 Year

3.2 Block Diagram of Test Setup



3.3 Limit

Part 15.231 (a) (1); (a) (2)

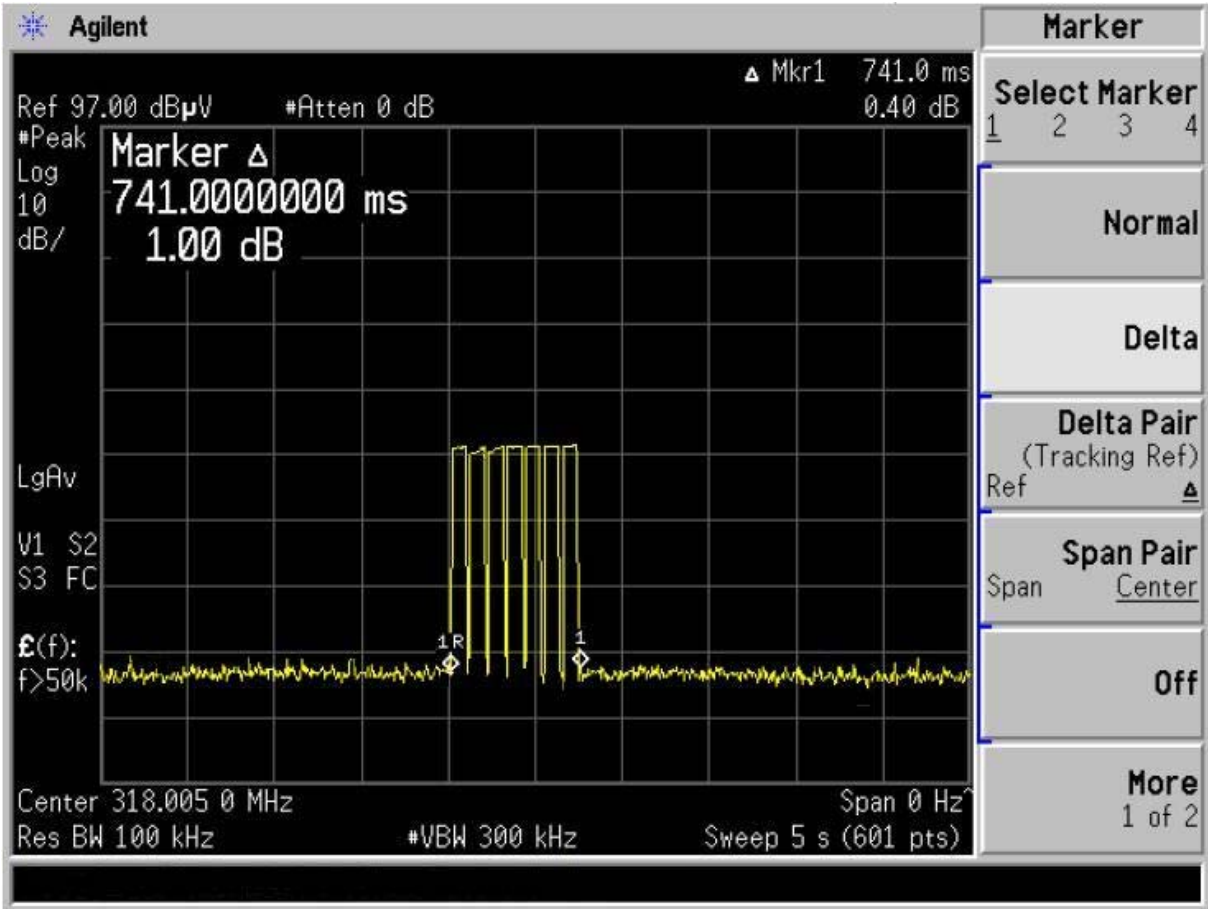
A manually operated transmitter shall employ a switch that will automatically deactivate the transmitter within not more than 5 seconds of being released.

3.4 Test Results

Frequency (MHz)	Stop Transmitting Time	Limit	Results
318	741.00ms	5s	PASS

The test waveforms please refer to the next page.

STOP TRANSMITTING TIME

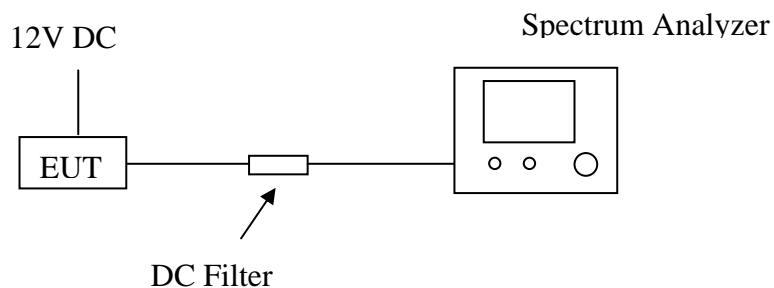


4. 20 DB BANDWIDTH TEST

4.1 Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1	Spectrum Analyzer	Agilent	E4407B	MY41440292	May 29, 2009	1 Year
2	RF Cable	Hubersuhne	Sucoflex104	FP2RX2	May 29, 2009	1 Year
3	DC Filter	MPE	23872C	N/A	May 29, 2009	1 Year

4.2 Block Diagram of Test Setup



4.3 Limit

Part 15.231 (c)

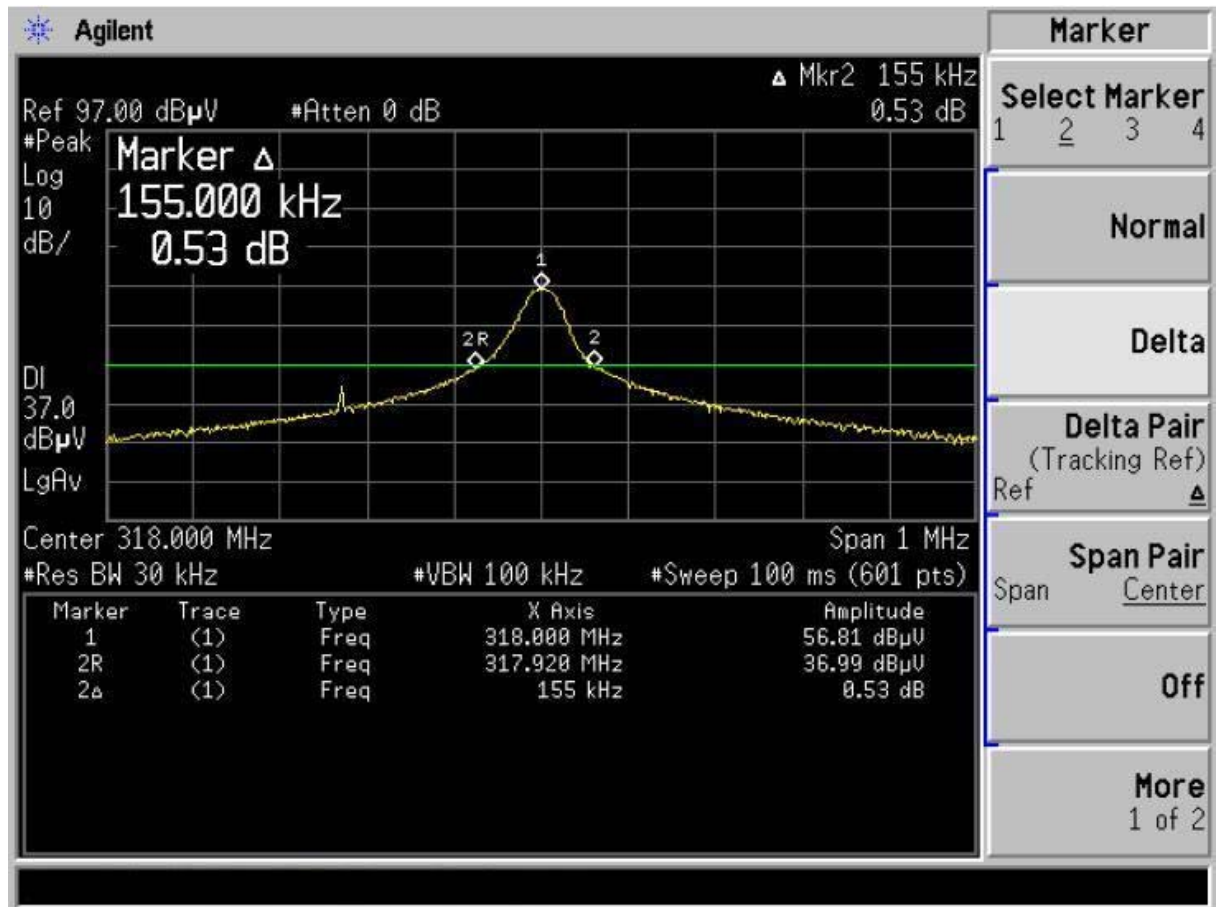
The bandwidth of the emission shall be no wider than 0.25% of the center frequency for devices operating above 70 MHz and below 900 MHz. For devices operating above 900 MHz, the emission shall be no wider than 0.5% of the center frequency. Bandwidth is determined at the points 20 dB down from the modulated carrier.

4.4 Test Results

Frequency (MHz)	20 dB Bandwidth (KHz)	Limit (KHz)	Results
318	155	795	PASS

The test waveforms please refer to the next page.

20 DB BANDWIDTH

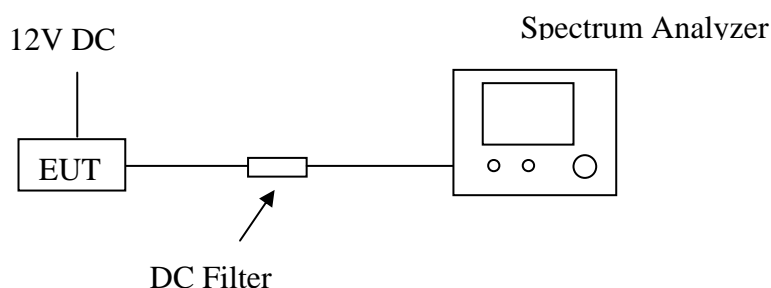


5. DUTY CYCLE CORRECTION FACTOR

5.1 Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1	Spectrum Analyzer	Agilent	E4407B	MY41440292	May 29, 2009	1 Year
2	RF Cable	Hubersuhne	Sucoflex104	FP2RX2	May 29, 2009	1 Year
3	DC Filter	MPE	23872C	N/A	May 29, 2009	1 Year

5.2 Block Diagram of Test Setup



5.3 Limit

Part 15.231(b)(2) and Part 15.35

When the field strength (or envelope power) is not constant or when it is in pulses, and an averaging detector is specified to be used, the current or voltage over one complete pulse train, including blanking intervals, shall be averaged as long as the pulse train does not exceed 0.1 second. Where the pulse train exceeds 0.1 second, the average value (of field strength or output power) shall be determined over the 0.1-second interval during which the field strength is at its maximum.

5.4 Test Results

The unit's RF output was directly coupled to the input of the spectrum analyzer. The analyzer was set for a frequency span of 0Hz. The sweep time was then adjusted in order to display one full pulse train. The transmitter on time was then summed and compared to the time for one full cycle in order to obtain the duty cycle.

Calculation:

$$\text{Transmitter On Time} = 9 * 4.236\text{ms (Large Pulse)} + 9 * 0.570\text{ms (Small Pulse)} \\ = 43.254\text{ms}$$

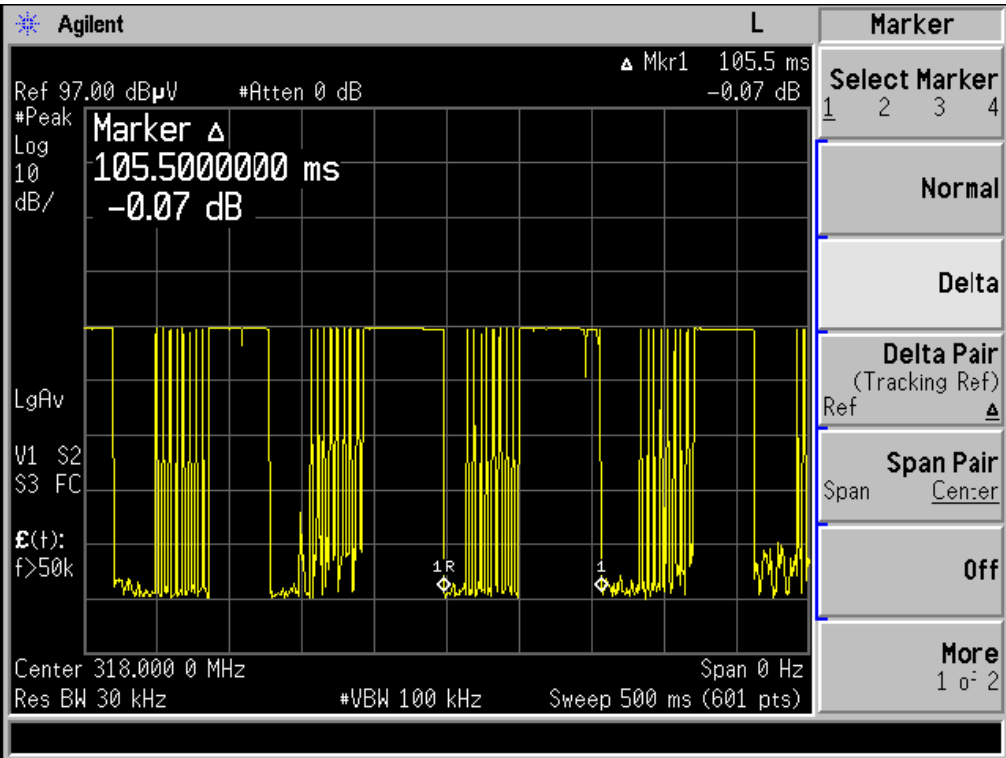
$$\text{Transmitter Cycle Time} = 105.5 \text{ ms } (> 100 \text{ milliseconds})$$

$$\text{Duty Cycle} = (43.254/100) * 100\% = 43.25\%$$

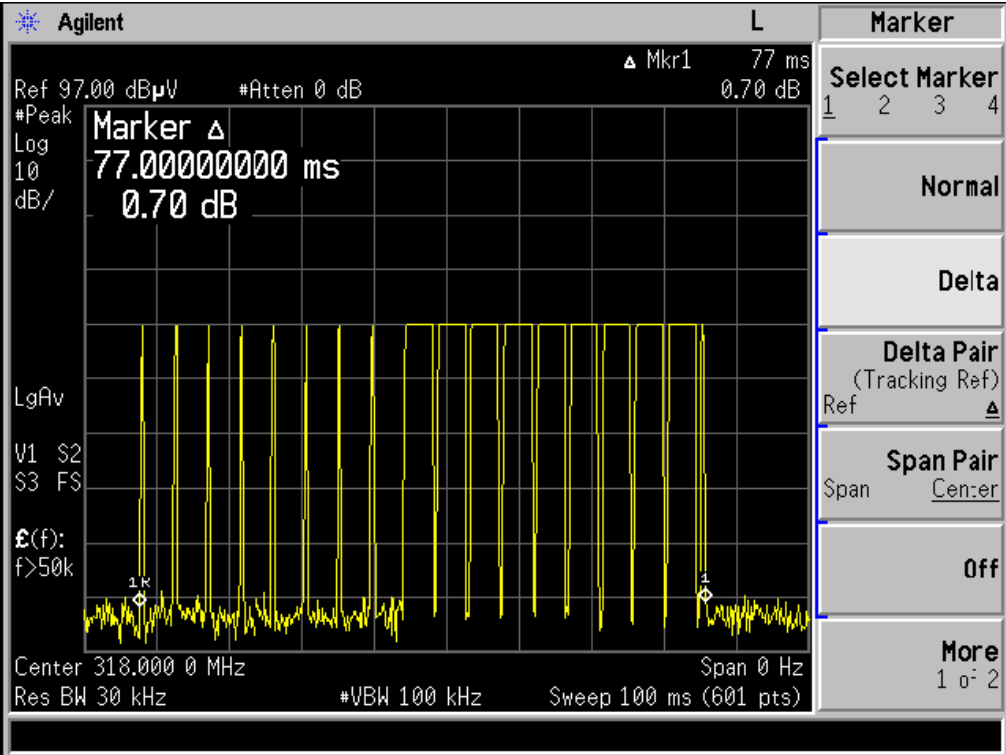
$$\text{Correction Factor} = 20 \log(\text{Duty Cycle}) = -7.28$$

The test waveforms please refer to the next page.

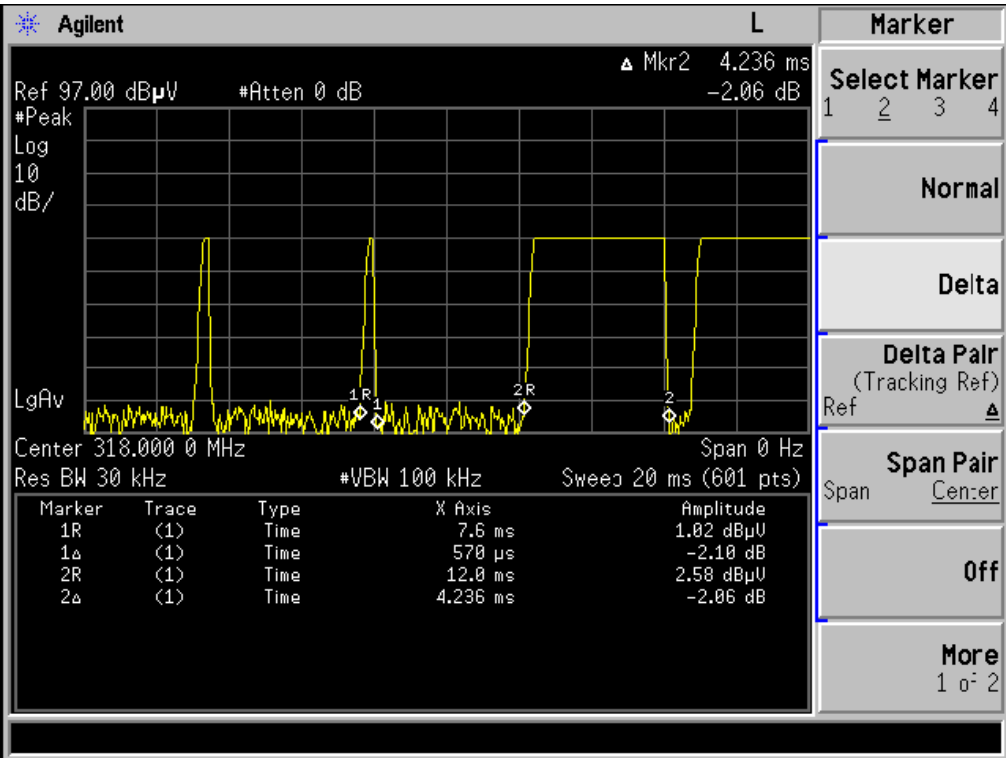
Transmitter Cycle Time



Pulse Number



Transmitter On Time

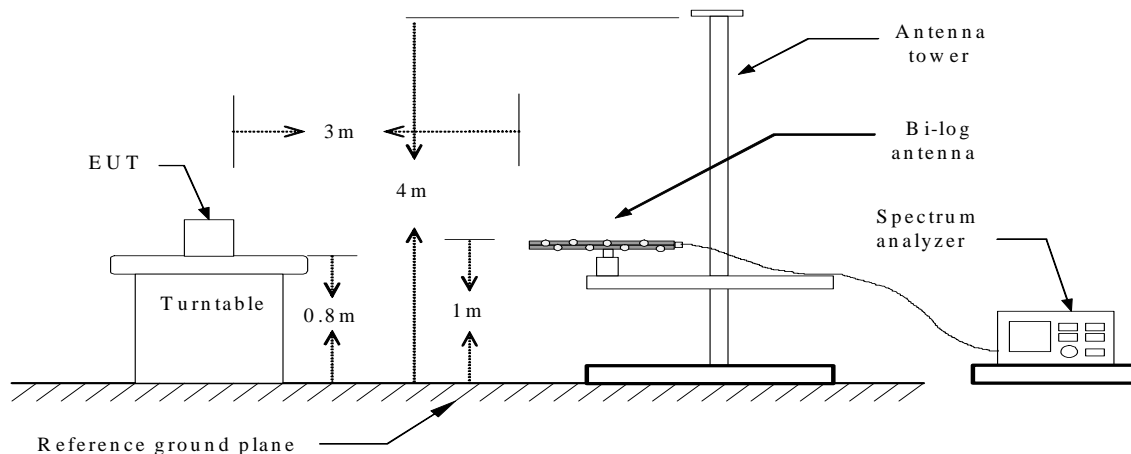


6. RADIATED EMISSION MEASUREMENT

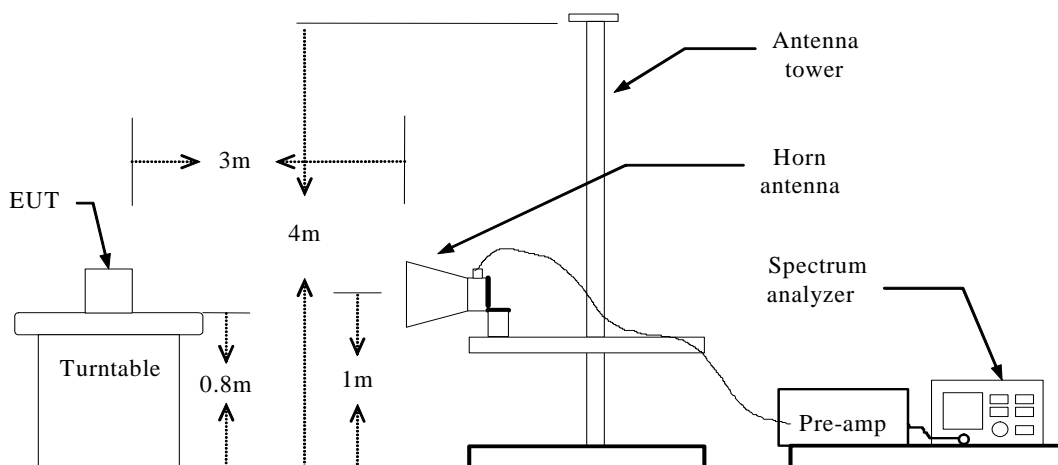
6.1 Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1	Spectrum Analyzer	ANRITSU	MS2661C	6200140915	May 29, 2009	1 Year
2	Test Receiver	Rohde & Schwarz	ESCS30	828985/018	May 29, 2009	1 Year
3	Antenna	Schwarzbeck	VULB9163	142	May 29, 2009	1 Year
4	Horn-antenna	SCHWARZBECK	BBHA9120D	D:266	May 29, 2009	1 Year
5	DC Power Filter	MPE	23872C	N/A	May 29, 2009	1 Year
6	Single Phase Power Line Filter	MPE	23332C	N/A	May 29, 2009	1 Year

6.2 Block Diagram of Test Setup



Below 1 GHz



Above 1 GHz

6.3 Radiated Emission Limit

Part 15.231 (b) In addition to the provisions of § 15.205, the field strength of emissions from Intentional radiators operated under this section shall not exceed the following:

Fundamental Frequency (MHz)	Field Strength of Fundamental (microvolts/meter)	Field Strength of Spurious Emissions (microvolts/meter)
40.66 - 40.70	2,250	225
70 - 130	1,250	125
130 - 174	* 1,250 to 3,750	* 125 to 375
174 - 260	3,750	375
260 - 470	* 3,750 to 12,500	* 375 to 1,250
Above 470	12,500	1,250

* Linear interpolation

15.205 (a) Except as shown in paragraph (d) of this section, only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
\1\ 0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	(\2\)
13.36-13.41			

\1\ Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz.

\2\ Above 38.6

Part 15.205 (b) Except as provided in paragraphs (d) and (e), the field strength of emissions appearing within these frequency bands shall not exceed the limits shown in Section 15.209. At frequencies equal to or less than 1000 MHz, compliance with the limits in Section 15.209 shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector.

Above 1000 MHz, compliance with the emission limits in Section 15.209 shall be demonstrated based on the average value of the measured emissions. The provisions in Section 15.35 apply to these measurements.

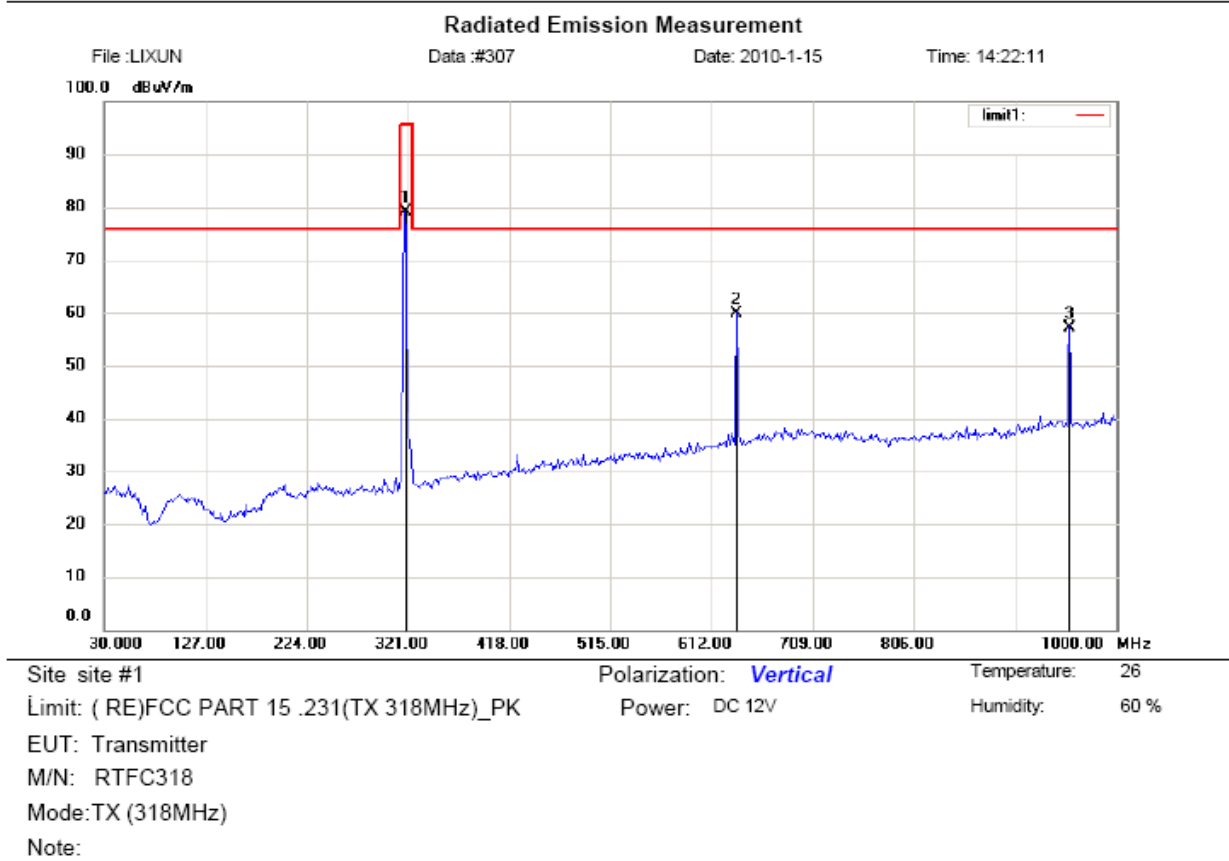
Part 15.209 (a) Except as provided elsewhere in this Subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

6.4 Test Results

PASS.

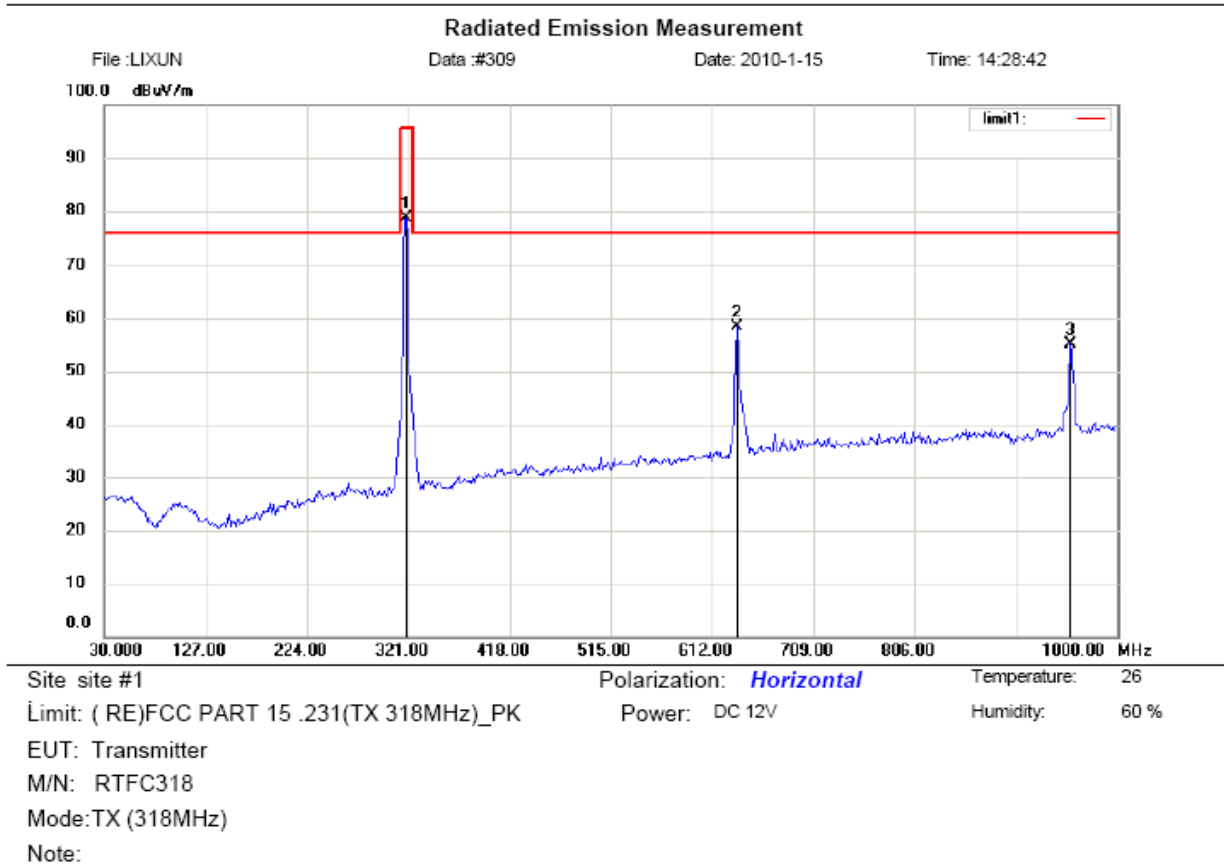
The test data please refer to next page.



Frequency (MHz)	Reading (dBuV)	Correct Factor	PK Value (dBuV)	Ave Value (dBuV)	PK Limit (dBuV)	Ave Limit (dBuV)	PK Margin (dB)	Ave Margin (dB)
318.00	65.48	14.49	79.97	72.69	95.80	75.80	15.83	3.11
636.00	38.74	21.76	60.50	53.22	75.80	55.80	15.30	2.58
954.00	33.03	24.65	57.68	50.40	75.80	55.80	18.12	5.40

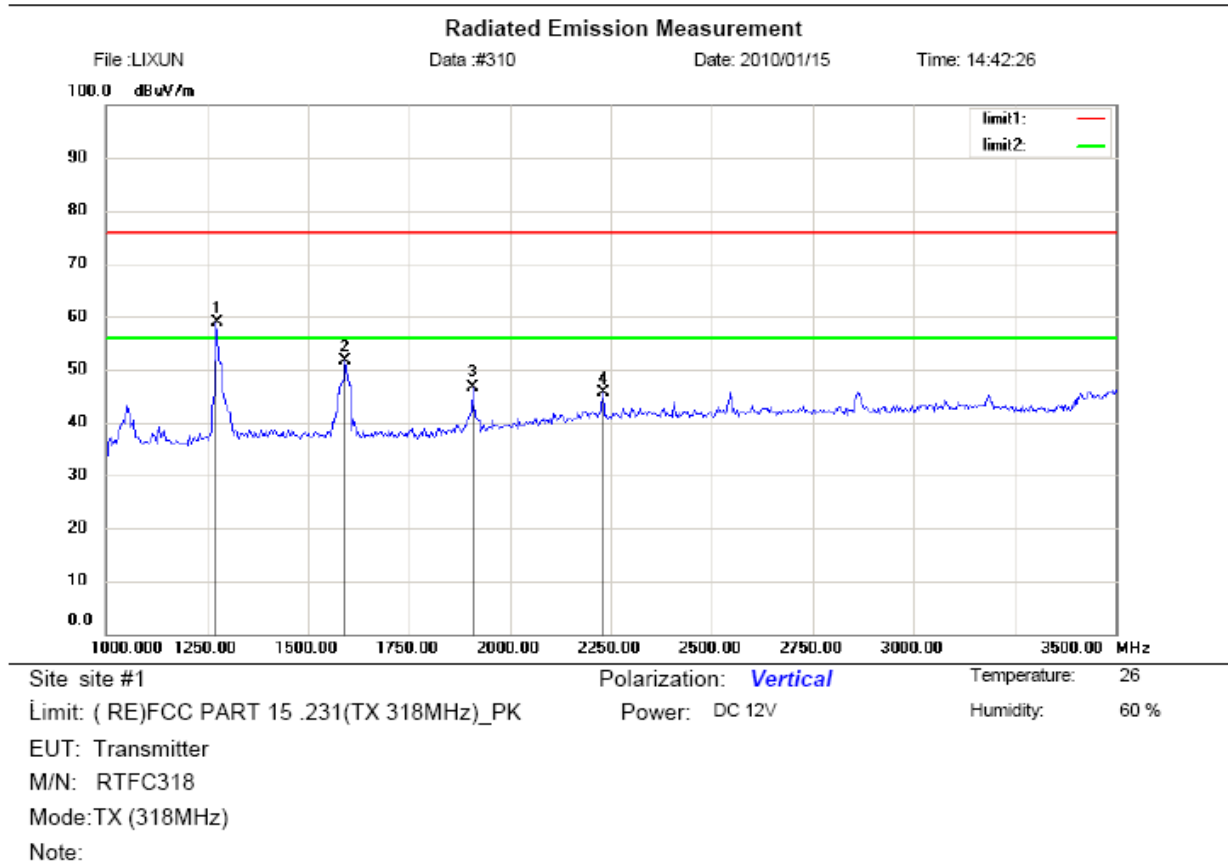
**Peak Result = Reading + Correct Factor*

Ave. Result = Peak Value + Duty Cycle Correction Factor



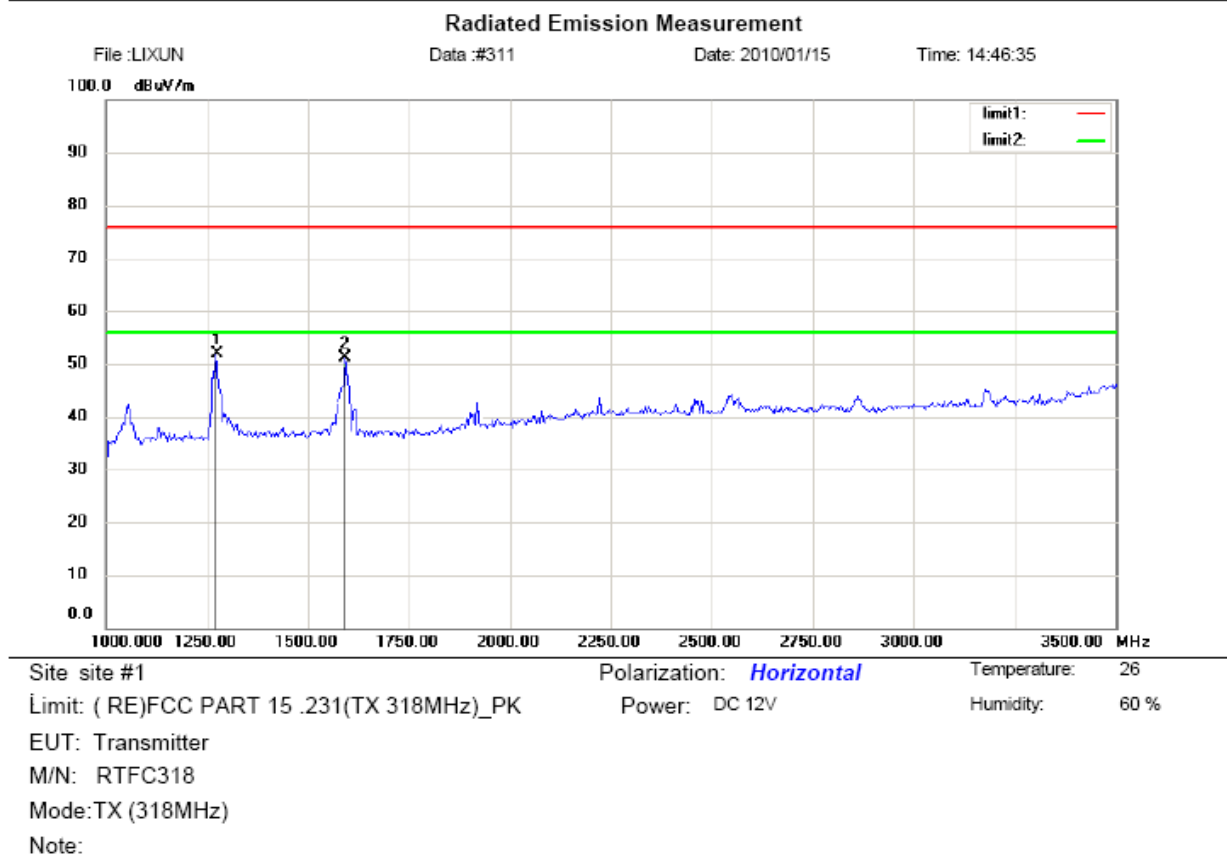
Frequency (MHz)	Reading (dBuV)	Correct Factor	PK Value (dBuV)	Ave Value (dBuV)	PK Limit (dBuV)	Ave Limit (dBuV)	PK Margin (dB)	Ave Margin (dB)
318.00	63.91	14.32	78.23	70.95	95.80	75.80	17.57	4.85
636.00	37.61	20.79	58.40	51.12	75.80	55.80	17.40	4.68
954.00	31.26	24.65	55.91	48.63	75.80	55.80	19.89	7.17

* *Peak Result = Reading + Correct Factor*
Ave. Result = Peak Value + Duty Cycle Correction Factor



Frequency (MHz)	Reading (dBuV)	Correct Factor	PK Value (dBuV)	Ave Value (dBuV)	PK Limit (dBuV)	Ave Limit (dBuV)	PK Margin (dB)	Ave Margin (dB)
1272.00	71.64	-12.49	59.15	51.87	75.80	55.80	16.65	3.93
1590.00	65.51	-12.24	53.27	45.99	75.80	55.80	22.53	9.81
1908.00	58.36	-11.38	46.98	39.70	75.80	55.80	28.82	16.10
2226.00	54.44	-8.61	45.83	38.55	75.80	55.80	29.97	17.25

**Peak Result = Reading + Correct Factor*
Ave. Result = Peak Value + Duty Cycle Correction Factor



Frequency (MHz)	Reading (dBuV)	Correct Factor	PK Value (dBuV)	Ave Value (dBuV)	PK Limit (dBuV)	Ave Limit (dBuV)	PK Margin (dB)	Ave Margin (dB)
1272.00	71.64	-12.49	53.21	45.93	75.80	55.80	22.59	9.87
1590.00	65.51	-12.24	52.74	45.46	75.80	55.80	23.06	10.34

**Peak Result = Reading + Correct Factor*
Ave. Result = Peak Value + Duty Cycle Correction Factor

----- END REPORT -----