

FCC TEST REPORT

according to

FCC Rules and Regulations

Part 15 Subpart C

Applicant	: ACA Digital Corporation
Address	: 17F, No.866-7, ZhongZhen Rd. Zhonghe City, Taipei County, Taiwan, R.O.C
Equipment	: HF RFID Reader
Model No.	: RF1100
FCC ID	: UVZRF1100
Trade Name	: ACA Digital

Laboratory Accreditation



- The test result refers exclusively to the test presented test model / sample.,
- Without written approval of **Exclusive Certification Corp.** the test report shall not be reproduced except in full.
- The EUT is also considered as a kind of computer peripheral, because the connection to computer is necessary for typical use. It has been verified to comply with the requirements of FCC Part 15, Subpart B, Class B (DoC). The test report has been issued separately.

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CERTIFICATE OF COMPLIANCE

according to

FCC Rules and Regulations

Part 15 Subpart C

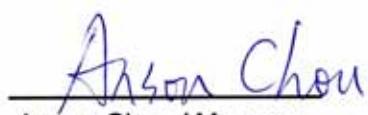
Applicant	:	ACA Digital Corporation
Address	:	17F, No.866-7, ZhongZhen Rd. Zhonghe City, Taipei County, Taiwan, R.O.C
Equipment	:	HF RFID Reader
Model No.	:	RF1100
FCC ID	:	UVZRF1100

I HEREBY CERTIFY THAT :

The measurements shown in this test report were made in accordance with the procedures given in **ANSI C63.4** The equipment was **passed** the test performed according to **FCC Rules and Regulations Part 15 Subpart C (2006)**.

The test was carried out on Jan. 04, 2008 at **Exclusive Certification Corp.**

Signature



Anson Chou / Manager

1. Report of Measurements and Examinations

1.1 List of Measurements and Examinations

FCC Rule	Description of Test	Result
15.207	. Conducted Emission	Pass
15.225(d)	. Radiated Emission	Pass
15.225(a)(b)(c)	. Peak Power Output	Pass
15.225(e)	. Frequency Stability	Pass

2. Test Configuration of Equipment under Test

2.1 Feature of Equipment under Test

Host Support	Windows 2000/XP/XP Embedded, Windows CE 5.0
Interface Type	Compact Flash Type-1
Standard Support	ISO14443A/ ISO14443B/ ISO15693
Reader Type	Contactless
Operating Frequency	13.56MHz
DC Source	5V from CF Interface
Current Consumption	a) Idle mode: 7mA b) RF-OFF mode: 8.5mA c) RF-ON mode: 160mA
Operating Distance	a) 4cm from the top cover surface of HT1100 b) 6cm for NB/PDA installation c) Up to 10cm for large-size antenna options.
Host Interface	CF interface
Host Communication Baud Rate	115200bps
Physical	79.1 x 54.8 x 12 mm; 20g
Environment	Operating Temperature: -20 to 60°C Storage Temperature: -40 to 70°C

2.2 RF Specifications

Type of Modulation	FSK
Number of Channels	1
Frequency Band	13.56MHz
Carrier Frequency of each channel	13.56MHz
Output Power	51.19 dBuV

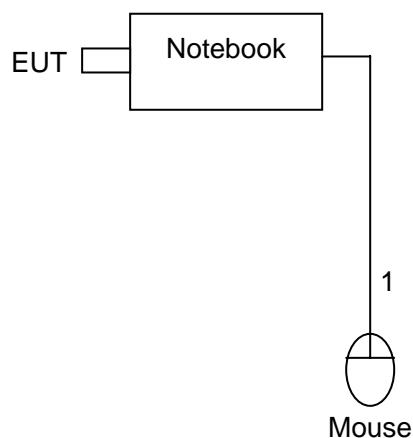
2.3 Test Manner

- During testing, the interface cables and equipment positions were varied according to ANSI C63.4.
- The complete test system included the TOSHIBA Notebook, USB mouse and EUT for EMI test.
- An executive program, EMITEST.EXE under WIN XP, which generates a complete line of continuously repeating "H" pattern was used as the test software.
The program was executed as follows:
 - Turn on the power of all equipment.
 - The Notebook reads the test program from the hard disk drive and runs it.
 - The Notebook sends "H" messages to the monitor, and the monitor displays "H" patterns on the screen.
 - The Notebook sends "H" messages to the internal Hard Disk, and the Hard Disk reads and writes the message.
 - Repeat the steps from 2 to 4.
- An executive program, RFIDread under WIN XP, which generates a continuous signal by the EUT through CF Interface.

2.4 Description of Test System

Device	Manufacturer	Model No.	Description
Mouse	IBM	MO28VO	Data Cable, USB Shielding 1.85 m
Notebook (Remote Workstation)	TOSHIBA	PSA50T-05M00C	Power Cable, Adapter Unshielding 1.8 m

2.5 Connection Diagram of Test System



1. The USB cable is connected from Notebook to the Mouse.

2.6 General Information of Test

Test Site :	Exclusive Certification Corp. 4F-2, No. 28, Lane 78, Xing-Ai Rd. Nei-hu, Taipei City 114 Taiwan R.O.C.
Test Site Location (OATS1-SD):	No.68-1, Shihbachongsi, shihding Township, Taipei City 223, Taiwan, R.O.C. Registration Number: 632249.
FCC Registration Number :	632249
IC Registration Number :	6597A-1
VCCI Registration Number :	T-338 for Telecommunication Test C-2188 for Conducted emission test R-1902 for Radiated emission test
Test Voltage:	DC 3.3V
Test in Compliance with:	ANSI C63.4-2003 FCC Part 15 Subpart C
Frequency Range Investigated:	Conducted: from 150kHz to 30 MHz Radiation: from 30 MHz to 1,000MHz
Test Distance:	The test distance of radiated emission from antenna to EUT is 3 M.

2.7 Measurement Uncertainty

Measurement Item	Measurement Frequency	Polarization	Uncertainty
Conducted Emission	9 kHz ~ 30 MHz	LINE/NEUTRAL	2.71 dB
Radiated Emission	30 MHz ~ 1GHz	Vertical	4.11 dB
		Horizontal	4.10 dB
6 dB Bandwidth	---	---	7500 Hz
Maximum Peak Output Power	---	---	1.4 dB
100kHz Bandwidth of Frequency Band Edges	---	---	2.2 dB
Power Spectral Density	---	---	2.2 dB

2.8 History of this test report

■ ORIGINAL.

Additional attachment as following record:

3. Test of Conducted Emission

3.1 Test Limit

Conducted Emissions were measured from 150 kHz to 30 MHz with a bandwidth of 9 KHz on the 120 VAC power and return leads of the EUT according to the methods defined in ANSI C63.4-2003 Section 3.1. The EUT was placed on a nonmetallic stand in a shielded room 0.8 meters above the ground plane as shown in section 2.2. The interface cables and equipment positioning were varied within limits of reasonable applications to determine the position produced maximum conducted emissions.

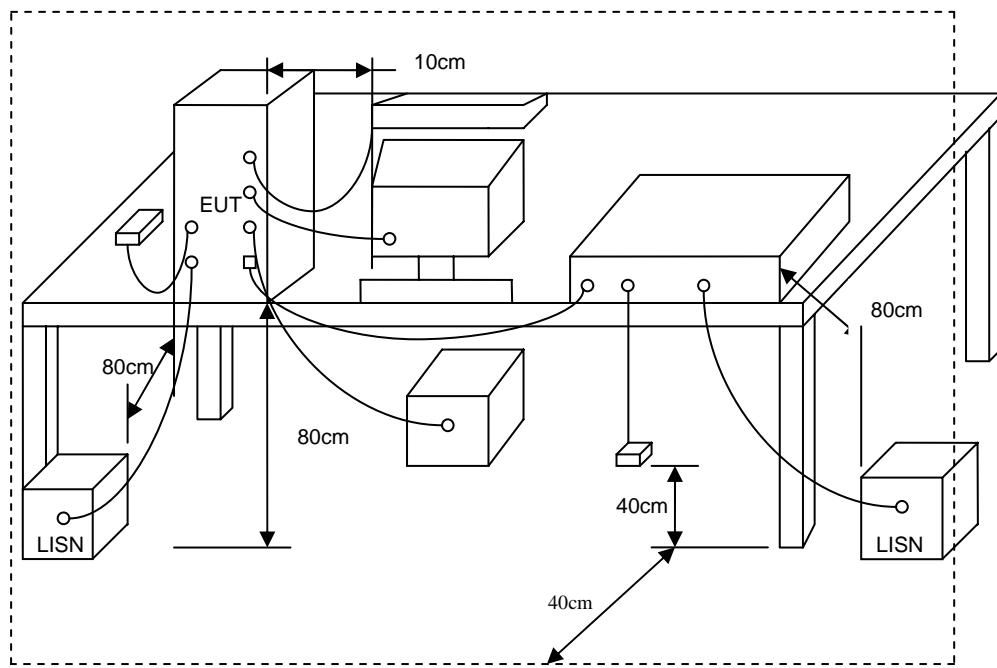
Frequency (MHz)	Quasi Peak (dB μ V)	Average (dB μ V)
0.15 – 0.5	66-56*	56-46*
0.5 – 5.0	56	46
5.0 – 30.0	60	50

*Decreases with the logarithm of the frequency.

3.2 Test Procedures

- a. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
- b. Connect EUT to the power mains through a line impedance stabilization network (LISN).
- c. All the support units are connecting to the other LISN.
- d. The LISN provides 50 ohm coupling impedance for the measuring instrument.
- e. The FCC states that a 50 ohm, 50 micro-Henry LISN should be used.
- f. Both sides of AC line were checked for maximum conducted interference.
- g. The frequency range from 150 kHz to 30 MHz was searched.
- h. Set the test-receiver system to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

3.3 Typical Test Setup

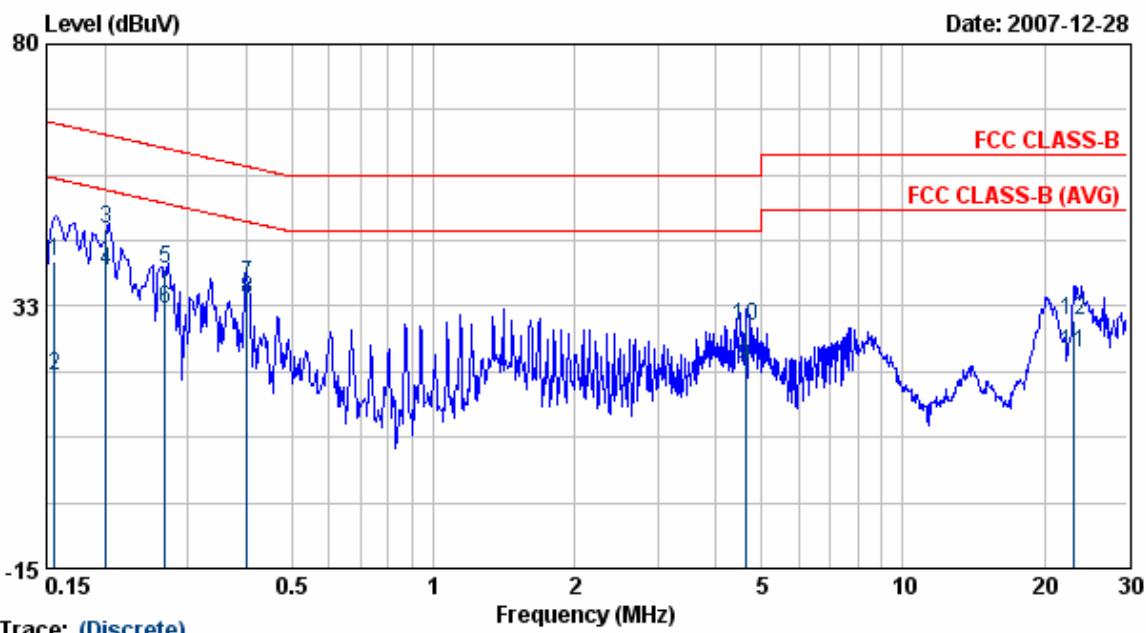


3.4 Measurement equipment

Instrument/Ancillary	Model No.	Manufacturer	Serial No.	Calibration Date	Valid Date.
Receiver	R&S	ESCI	100443	2007/09/27	2008/09/26
LISN	NNB-2/16Z	MESS TEC	02/10191	2007/05/14	2008/05/13
LISN	NNB-2/16Z	ROLF HEINE	03/10058	2007/04/19	2008/04/18

3.5 Test Result and Data

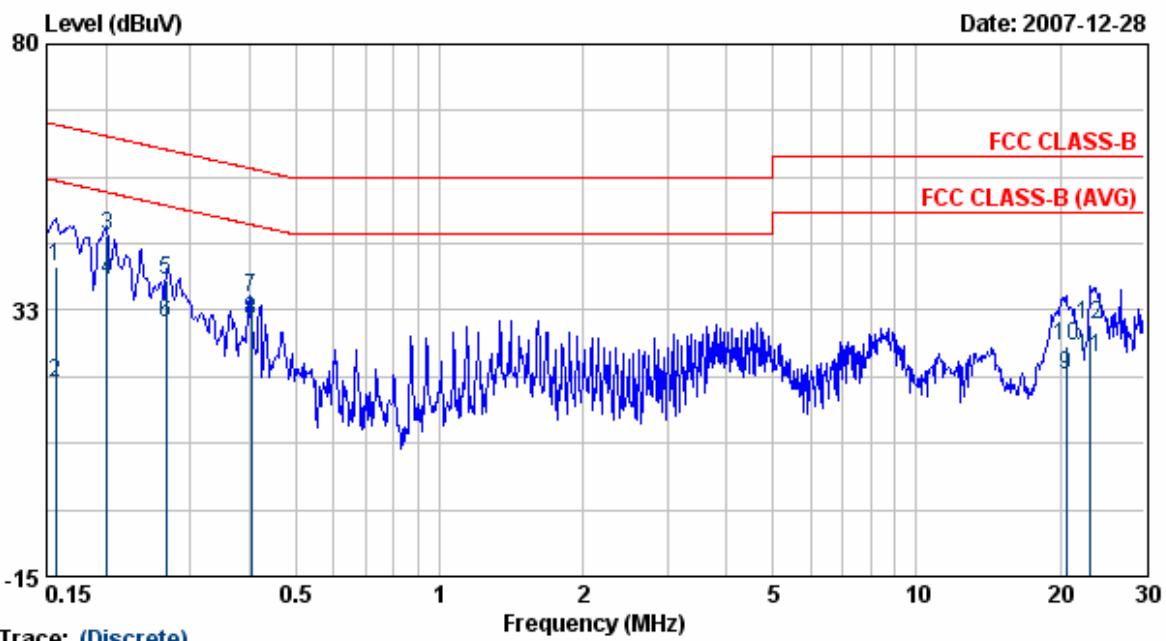
Power	:	DC 5V from PC	Pol/Phase	:	LINE
Test Mode	:	Transmit / Receive	Temperature	:	25 °C
Memo	:		Humidity	:	58 %



Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark
	MHz	dBuV	dB	dBuV	dBuV	dBuV	
1	0.16	40.43	0.10	40.53	65.67	-25.14	QP
2	0.16	19.87	0.10	19.97	55.67	-35.70	AVERAGE
3	0.20	46.27	0.10	46.38	63.57	-17.20	QP
4	0.20	38.74	0.10	38.84	53.57	-14.73	AVERAGE
5	0.27	39.13	0.11	39.25	61.17	-21.93	QP
6	0.27	31.83	0.11	31.94	51.17	-19.23	AVERAGE
7	0.40	36.44	0.11	36.55	57.82	-21.26	QP
8	0.40	33.65	0.11	33.76	47.82	-14.06	AVERAGE
9	4.62	21.47	0.25	21.72	46.00	-24.28	AVERAGE
10	4.62	28.58	0.25	28.83	56.00	-27.17	QP
11	23.19	23.56	0.49	24.04	50.00	-25.96	AVERAGE
12	23.19	29.36	0.49	29.85	60.00	-30.15	QP

Remarks: 1. Level = Read Level + Factor
2. Factor = LISN(ISN) Factor + Cable Loss
3. The data is worse case.

Power	: DC 5V from PC	Pol/Phase	: NEUTRAL
Test Mode	: Transmit / Receive	Temperature	: 25 °C
Memo		Humidity	: 58 %



Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark
	MHz	dBuV	dB	dBuV	dBuV	dBuV	
1	0.16	40.35	0.09	40.44	65.63	-25.20	QP
2	0.16	19.58	0.09	19.67	55.63	-35.96	AVERAGE
3	0.20	45.64	0.09	45.73	63.59	-17.86	QP
4	0.20	37.83	0.09	37.92	53.59	-15.66	AVERAGE
5	0.27	37.70	0.09	37.79	61.20	-23.41	QP
6	0.27	30.30	0.09	30.40	51.20	-20.80	AVERAGE
7	0.40	34.57	0.10	34.67	57.80	-23.14	QP
8	0.40	30.63	0.10	30.73	47.80	-17.07	AVERAGE
9	20.58	20.36	0.55	20.91	50.00	-29.09	AVERAGE
10	20.58	25.51	0.55	26.07	60.00	-33.93	QP
11	23.19	23.39	0.66	24.05	50.00	-25.95	AVERAGE
12	23.19	29.38	0.66	30.04	60.00	-29.96	QP

Remarks: 1. Level = Read Level + Factor
 2. Factor = LISN(ISN) Factor + Cable Loss
 3. The data is worse case.

Test engineer: Ben

4. Test of Radiated Emission

4.1 Test Limit

Radiated emissions from 13.553 MHz to 13.567 MHz were measured according to the 15.225(a), the field strength of any emissions within the band 13.553 – 13.567 MHz shall not exceed 15.848 microvolts/meter at 30 meters.

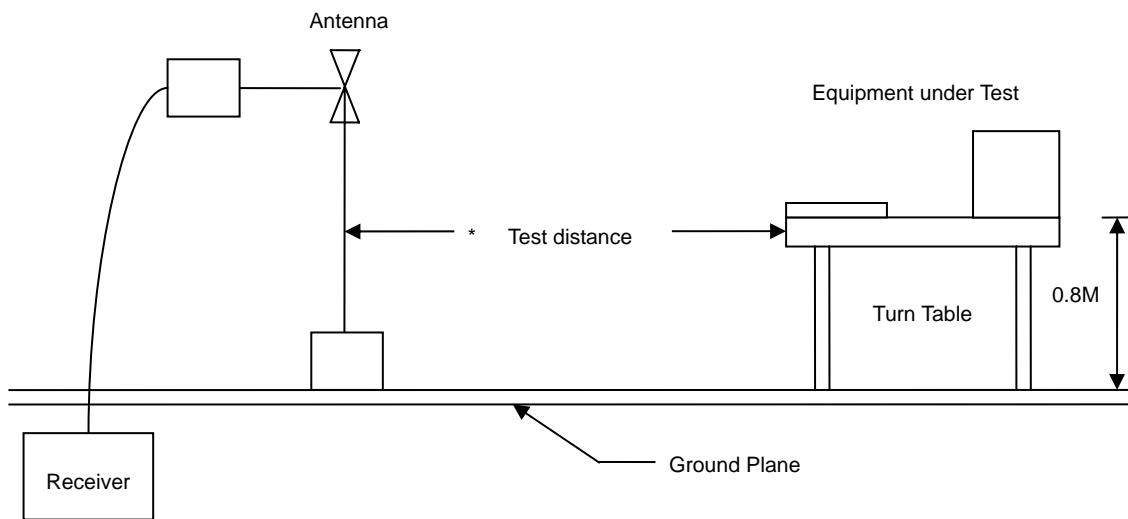
The filed strength of any emissions which appear outside of the 13.110 – 14.010 MHz band shall not exceed the general radisted emission limits in Section 15.209.

Frequency (MHz)	Distance Meters	Radiated (μ V / M)	Radiated (dB μ V / M)
1.705 to 30	30	30	29.5
30-88	3	100	40.0
88-216	3	150	43.5
216-960	3	200	46.0
Above 960	3	500	54.0

4.2 Test Procedures

- a. The EUT was placed on a rotatable table top 0.8 meter above ground.
- b. The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
- c. The table was rotated 360 degrees to determine the position of the highest radiation.
- d. The antenna is a broadband antenna and its height is varied between one meter and four meters above ground to find the maximum value of the field strength both horizontal polarization and vertical polarization of the antenna are set to make the measurement.
- e. For each suspected emission the EUT was arranged to its worst case and then tune the antenna tower (from 1 M to 4 M) and turn table (from 0 degree to 360 degrees) to find the maximum reading.
- f. Set the test-receiver system to Peak or CISPR quasi-peak Detect Function and specified bandwidth with Maximum Hold Mode.
- g. If the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions which do not have 3 dB margin will be repeated one by one using the quasi-peak method and reported.
- h. 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.

4.3 Typical Test Setup



4.4 Measurement equipment

Instrument/Ancillary	Model No.	Manufacturer	Serial No.	Calibration Date	Valid Date
EMI Receiver	85460A	HP	3807A00454	2007/06/05	2008/06/04
Spectrum Analyzer	FSP40	R&S	10047	2007/01/23	2008/01/22
Loop Antenna	6507	EMCO	40855	2007/05/24	2008/05/23
Bilog Antenna	CBL6112B	Schaffner	2840	2007/04/26	2008/04/25
Amplifier	8447D	Agilent	2944A10531	2007/09/26	2008/09/25

4.5 Test Result and Data

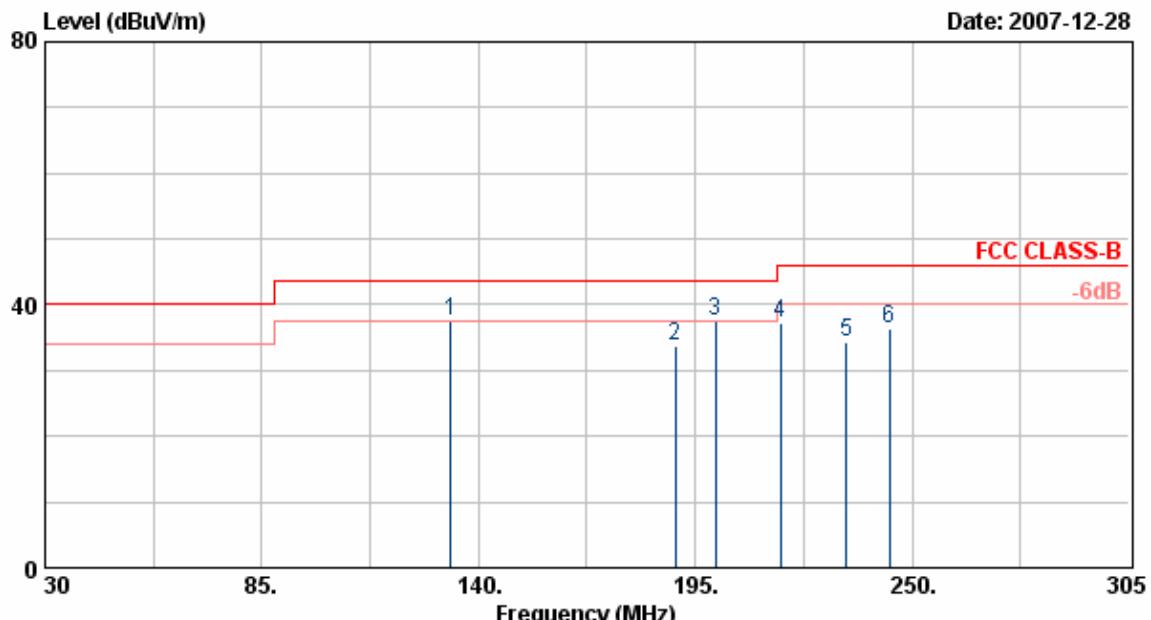
4.5.1 Test Result of Fundamental Emission

Frequency (MHz)	Reading (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Distance Correction	Field Strength (dBuV/m)	Limit (dB)	Margin	Pol H/V
13.563	51.19	17.3	1.5	19.9	50.09	84	-33.91	H
13.555	45.71	17.3	1.5	19.9	44.61	84	-39.39	V

4.5.2 Test Result of Spurious emission

Frequency (MHz)	Reading (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Distance Correction	Field Strength (dBuV/m)	Limit (dB)	Margin	Pol H/V
4.817	23.44	17.85	1.6	19.9	22.99	29.5	-6.51	H
10.759	20.82	17.35	1.5	19.9	19.77	29.5	-9.73	H
4.181	24.04	17.88	1.6	19.9	23.62	29.5	-5.88	V
10.123	20.61	17.38	1.5	19.9	19.59	29.5	-9.91	V

Power	:	DC 5V from PC	Pol/Phase	:	VERTICAL
Test Mode	:	Transmit / Receive	Temperature	:	18 °C
Operation Channel	:	1	Humidity	:	70 %
Modulation Type	:	FSK	Atmospheric Pressure	:	1030 hPa
Memo	:				



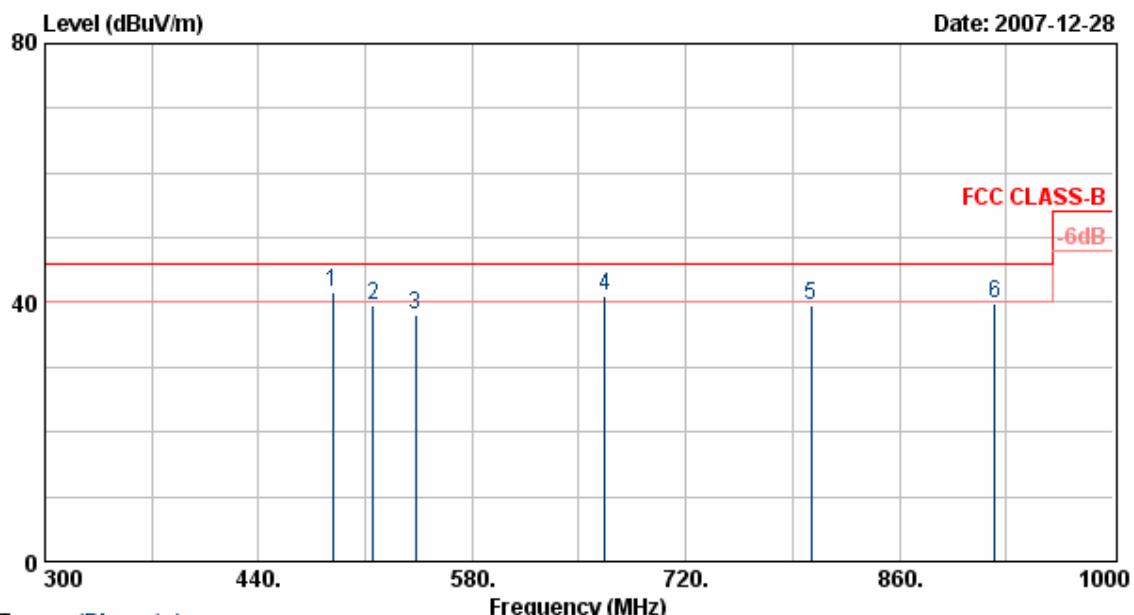
Trace: (Discrete)

Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV/m		dB	dBuV/m			cm	Deg
1	132.85	50.60	-12.97	37.63	43.50	-5.87	QP	100	152
2	190.05	46.15	-12.36	33.79	43.50	-9.71	Peak	100	112
3	200.23	50.32	-12.76	37.56	43.50	-5.94	QP	100	139
4	216.73	49.60	-12.31	37.29	46.00	-8.71	Peak	100	89
5	233.23	46.61	-12.29	34.32	46.00	-11.68	Peak	100	110
6	244.23	48.30	-11.82	36.49	46.00	-9.51	Peak	100	100

Notes:

1. Result = Read Value + Factor
2. Factor = Antenna Factor + Cable Loss - Amplifier
3. The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
5. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average detection at frequency above 1GHz.
6. The other emissions is too low to be measured.

Power	:	DC 5V from PC	Pol/Phase	:	VERTICAL
Test Mode	:	Transmit / Receive	Temperature	:	18 °C
Operation Channel	:	1	Humidity	:	70 %
Modulation Type	:	FSK	Atmospheric Pressure	:	1030 hPa
Memo	:				



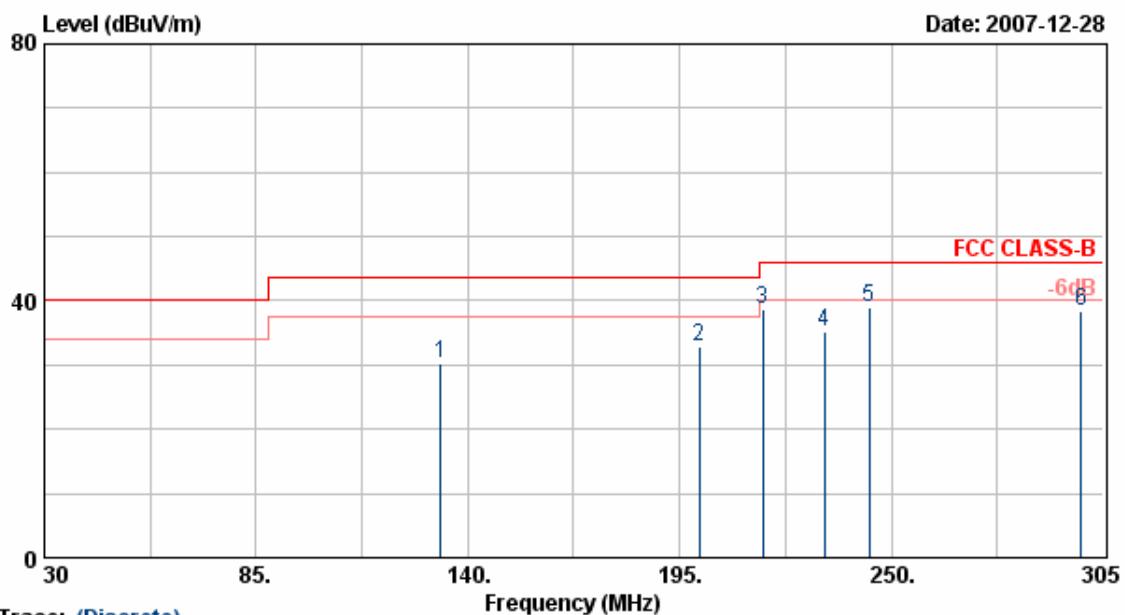
Trace: (Discrete)

Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB		cm	Deg
1	488.30	47.87	-6.19	41.68	46.00	-4.32	QP	101	66
2	514.90	45.42	-5.95	39.46	46.00	-6.54	Peak	101	93
3	542.90	41.42	-3.31	38.11	46.00	-7.89	Peak	101	91
4	666.80	45.57	-4.59	40.98	46.00	-5.02	QP	101	88
5	801.90	40.88	-1.40	39.47	46.00	-6.53	Peak	101	144
6	922.30	36.69	3.21	39.90	46.00	-6.10	Peak	101	79

Notes:

1. Result = Read Value + Factor
2. Factor = Antenna Factor + Cable Loss - Amplifier
3. The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
5. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average detection at frequency above 1GHz.
6. The other emissions is too low to be measured.

Power	: DC 5V from PC	Pol/Phase	: HORIZONTAL
Test Mode	: Transmit / Receive	Temperature	: 18 °C
Operation Channel	: 1	Humidity	: 70 %
Modulation Type	: FSK	Atmospheric Pressure	: 1030 hPa
Memo	:		

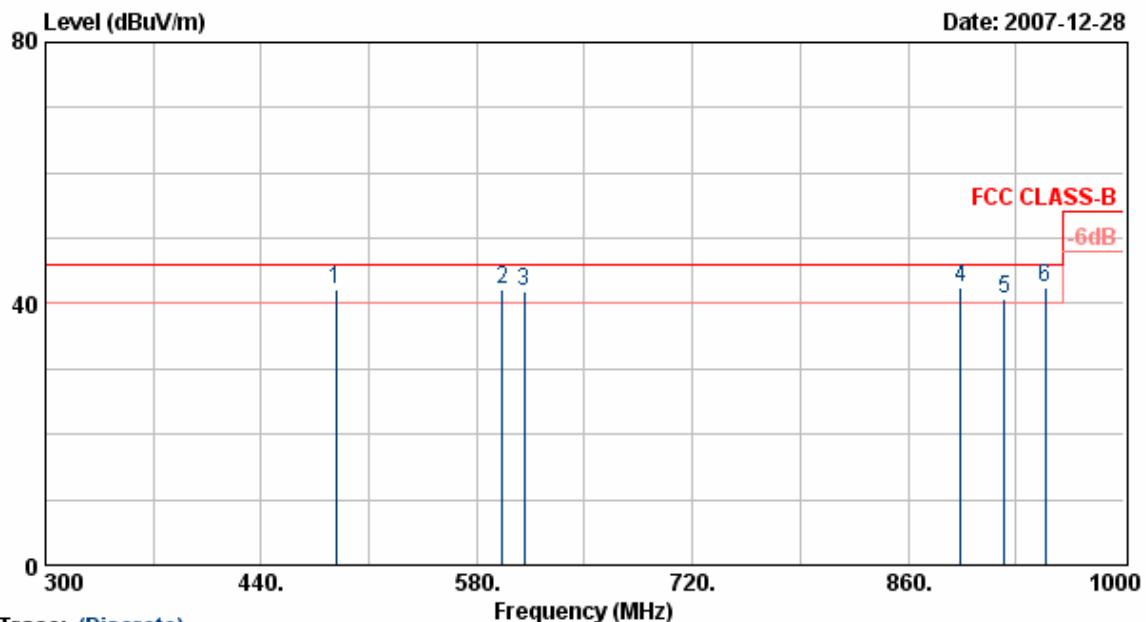


Trace: (Discrete)										
Item	Freq	Read		Factor	Result	Limit	Margin	Remark	Ant	Tab
		Value	Unit						Pos	Pos
		MHz	dBuV/m		dB	dBuV/m	dBuV/m		cm	Deg
1	132.85	49.81	-19.63		30.18	43.50	-13.32	Peak	100	82
2	200.23	51.72	-18.99		32.74	43.50	-10.76	Peak	100	93
3	216.73	56.96	-18.21		38.75	46.00	-7.25	Peak	100	103
4	232.68	52.03	-16.90		35.13	46.00	-10.87	Peak	100	99
5	244.23	55.99	-16.98		39.01	46.00	-6.99	Peak	100	124
6	299.23	53.75	-15.31		38.44	46.00	-7.56	Peak	100	114

Notes:

1. Result = Read Value + Factor
2. Factor = Antenna Factor + Cable Loss - Amplifier
3. The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
5. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average detection at frequency above 1GHz.
6. The other emissions is too low to be measured.

Power	DC 5V from PC	Pol/Phase	HORIZONTAL
Test Mode	Transmit / Receive	Temperature	18 °C
Operation Channel	1	Humidity	70 %
Modulation Type	FSK	Atmospheric Pressure	1030 hPa
Memo			



Trace: (Discrete)		Frequency (MHz)							
Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV/m		dB	dBuV/m	dBuV/m		cm	Deg
1	488.30	49.78	-7.74	42.04	46.00	-3.96	QP	100	89
2	596.80	45.17	-2.94	42.23	46.00	-3.77	QP	100	88
3	610.80	45.32	-3.28	42.04	46.00	-3.96	QP	100	116
4	894.30	39.02	3.36	42.38	46.00	-3.62	QP	100	85
5	922.30	37.83	2.78	40.61	46.00	-5.39	QP	100	179
6	948.90	35.87	6.73	42.60	46.00	-3.40	QP	100	132

Notes:

1. Result = Read Value + Factor
2. Factor = Antenna Factor + Cable Loss - Amplifier
3. The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
5. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average detection at frequency above 1GHz.
6. The other emissions is too low to be measured.

Test engineer: Ben

5. Frequency Stability

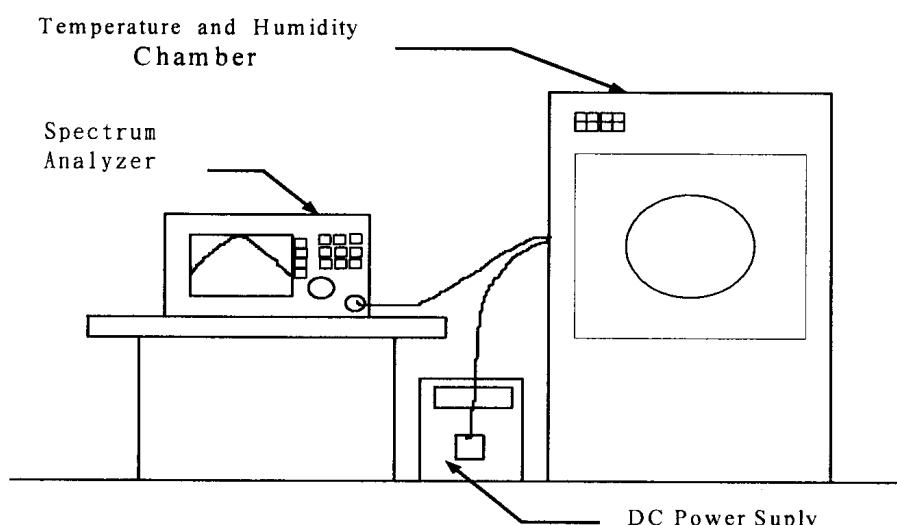
5.1 Test Limit

The frequency tolerance of the carrier signal shall be maintained within $\pm 0.01\%$ of the operating frequency over a temperature variation of -20°C to $+50^{\circ}\text{C}$ at normal supply voltage, and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20°C . For battery operated equipment, the equipment tests shall be performed using a new battery.

5.2 Test Procedure

1. The EUT was placed inside the Temperature and Humidity chamber.
2. The transmitter output was connected to spectrum analyzer.
3. Turn the EUT on and couple its output to a spectrum analyzer.
4. Turn the EUT off and set the chamber to the highest temperature specified.
5. Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize, turn the EUT on and measure the operating frequency after 2, 5, and 10 minutes.
6. Repeat step 2 and 3 with the temperature chamber set to the lowest temperature.
7. The test chamber was allowed to stabilize at $+20$ degree C for a minimum of 30 minutes. The supply voltage was then adjusted on the EUT from 85% to 115% and the frequency record.

5.3 Test Setup Layout



5.4 Measurement equipment

Instrument/Ancillary	Model No.	Manufacturer	Serial No.	Calibration Date	Valid Date.
Spectrum Analyzer	FSP40	R&S	100047	2007/01/23	2008/01/22
Temperature Chamber	TMJ-9712	T MACHINE	T-12-040111	2007/01/24	2008/01/23
DC Power Supply	GPD-3030	GM	7020936	N/A	N/A
AC POWER CONVERTER	AFC-11005	APC	F103120008	N/A	N/A

5.5 Test Result and Data

Operating frequency: 13.56 MHz					
Temperature (°C)	Power supply (V)	Observe Time	Read Frequency (MHz)	Tolerance (%)	Limit
50	120	Start	13.56124	0.009145	±0.01 %
		2 minute	13.56047	0.003466	±0.01 %
		5 minute	13.56119	0.008776	±0.01 %
		10 minute	13.56087	0.006416	±0.01 %
40	120	Start	13.56133	0.009808	±0.01 %
		2 minute	13.56089	0.006563	±0.01 %
		5 minute	13.56089	0.006563	±0.01 %
		10 minute	13.56124	0.009145	±0.01 %
30	120	Start	13.56033	0.002434	±0.01 %
		2 minute	13.56099	0.007301	±0.01 %
		5 minute	13.5612	0.008850	±0.01 %
		10 minute	13.56085	0.006268	±0.01 %
20	120	Start	13.56079	0.005826	±0.01 %
		2 minute	13.56077	0.005678	±0.01 %
		5 minute	13.56124	0.009145	±0.01 %
		10 minute	13.561	0.007375	±0.01 %
10	120	Start	13.56056	0.004130	±0.01 %
		2 minute	13.56105	0.007743	±0.01 %
		5 minute	13.56088	0.006490	±0.01 %
		10 minute	13.56122	0.008997	±0.01 %
0	120	Start	13.56074	0.005457	±0.01 %
		2 minute	13.56055	0.004056	±0.01 %
		5 minute	13.56124	0.009145	±0.01 %
		10 minute	13.56117	0.008628	±0.01 %
-10	120	Start	13.56114	0.008407	±0.01 %
		2 minute	13.56129	0.009513	±0.01 %
		5 minute	13.56087	0.006416	±0.01 %
		10 minute	13.56124	0.009145	±0.01 %
-20	120	Start	13.56011	0.000811	±0.01 %
		2 minute	13.56087	0.006416	±0.01 %
		5 minute	13.5611	0.008112	±0.01 %
		10 minute	13.56125	0.009218	±0.01 %
20	102	Start	13.56124	0.009145	±0.01 %
		2 minute	13.56047	0.003466	±0.01 %
		5 minute	13.56119	0.008776	±0.01 %
		10 minute	13.56087	0.006416	±0.01 %
20	138	Start	13.56133	0.009808	±0.01 %
		2 minute	13.56089	0.006563	±0.01 %
		5 minute	13.56089	0.006563	±0.01 %
		10 minute	13.56124	0.009145	±0.01 %

6. Restricted Bands of Operation

Only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz
0.09000 – 0.11000	16.42000 – 16.42300	399.9 – 410.0	4.500 – 5.250
0.49500 – 0.505**	16.69475 – 16.69525	608.0 – 614.0	5.350 – 5.460
2.17350 – 2.19050	16.80425 – 16.80475	960.0 – 1240.0	7.250 – 7.750
4.12500 – 4.12800	25.50000 – 25.67000	1300.0 – 1427.0	8.025 – 8.500
4.17725 – 4.17775	37.50000 – 38.25000	1435.0 – 1626.5	9.000 – 9.200
4.20725 – 4.20775	73.00000 – 74.60000	1645.5 – 1646.5	9.300 – 9.500
6.21500 – 6.21800	74.80000 – 75.20000	1660.0 – 1710.0	10.600 – 12.700
6.26775 – 6.26825	108.00000 – 121.94000	1718.8 – 1722.2	13.250 – 13.400
6.31175 – 6.31225	123.00000 – 138.00000	2200.0 – 2300.0	14.470 – 14.500
8.29100 – 8.29400	149.90000 – 150.05000	2310.0 – 2390.0	15.350 – 16.200
8.36200 – 8.36600	156.52475 – 156.52525	2483.5 – 2500.0	17.700 – 21.400
8.37625 – 8.38675	156.70000 – 156.90000	2655.0 – 2900.0	22.010 – 23.120
8.41425 – 8.41475	162.01250 – 167.17000	3260.0 – 3267.0	23.600 – 24.000
12.29000 – 12.29300	167.72000 – 173.20000	3332.0 – 3339.0	31.200 – 31.800
12.51975 – 12.52025	240.00000 – 285.00000	3345.8 – 3358.0	36.430 – 36.500
12.57675 – 12.57725	322.00000 – 335.40000	3600.0 – 4400.0	Above 38.6
13.36000 – 13.41000			

**: Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz

6.1 Labeling Requirement

The device shall bear the following statement in a conspicuous location on the device:

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.