



## Test Report

Product Name	Tablet PC MC-C5 / MC-F5
Model No.	CFT-003
FCC ID	Q3QIHW622ANH
Transmitter Module	TRF7960

Applicant	Motion Computing Incorporated.
Address	8601 Ranch Road 2222; Building #2 Austin, Texas 78730 USA

Date of Receipt	Jan. 20, 2010
Issued Date	April 26, 2010
Report No.	101358R-RFUSP39V01
Report Version	V1.0

The test results relate only to the samples tested.

The test report shall not be reproduced except in full without the written approval of Quietek Corporation.

This report must not be used to claim product endorsement by NVLAP any agency of the U.S. Government

# Test Report Certification

Issued Date: April 26, 2010

Report No.: 101358R-RFUSP39V01



Product Name	Tablet PC MC-C5 / MC-F5
Applicant	Motion Computing Incorporated.
Address	8601 Ranch Road 2222; Building #2 Austin, Texas 78730 USA
Manufacturer	Motion Computing Incorporated.
Model No.	CFT-003
FCC ID.	Q3QIHW622ANH
EUT Rated Voltage	AC 100-240V, 50-60Hz
EUT Test Voltage	AC 120V/60Hz
Trade Name	Motion Computing Incorporated.
Applicable Standard	FCC CFR Title 47 Part 15 Subpart C: 2009 ANSI C63.4: 2003
Test Result	Complied



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( Engineer / Johnson Liao )



Approved By : Vincent Lin  
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## 1. GENERAL INFORMATION

### 1.1. EUT Description

Product Name	Tablet PC MC-C5 / MC-F5
Trade Name	Motion Computing Incorporated.
Model No.	CFT-003
FCC ID	Q3QIHWM622ANH
Frequency Range	13.56MHz
Channel Control	N/A
Antenna Type	PCB Antenna
Power Adapter	MFR: DELTA, M/N: SADP-65NB BB Input: AC 100-240V, 50-60Hz, 1.5A Output: DC 19V, 3.42A Cable out: Shielded, 1.8m, with one ferrite core bonded. Power Cord: Non-Shielded, 1.5m

Frequency of Each Channel:

Channel	Frequency
Channel 1:	13.56 MHz

Note:

1. This device is a Tablet PC MC-C5 / MC-F5 with a built-in 13.56MHz transceiver.
2. These tests were conducted on a sample of the equipment for the purpose of demonstrating compliance with Part 15 Subpart C Paragraph 15.225.
3. The radiation measurements are performed in X, Y, Z axis positioning. Only the worst case is shown in the report.
4. The device has included WALN module card and Bluetooth module. The module placement and antenna placement please review internal photo of this report. The Bluetooth antenna is separation > 5cm to RFID antenna and WLAN antenna. The RFID antenna distance to WLAN antenna is 12cm and no co-location requirement.

### 1.2. Operational Description

EUT is a Tablet PC MC-C5 / MC-F5 with a built-in 13.56MHz RFID Reader with ASK modulation. The signal will be transmitted through 13.56 MHz ASK RF signal from the Connector antenna.

Test Mode	Mode 1: Transmit mode
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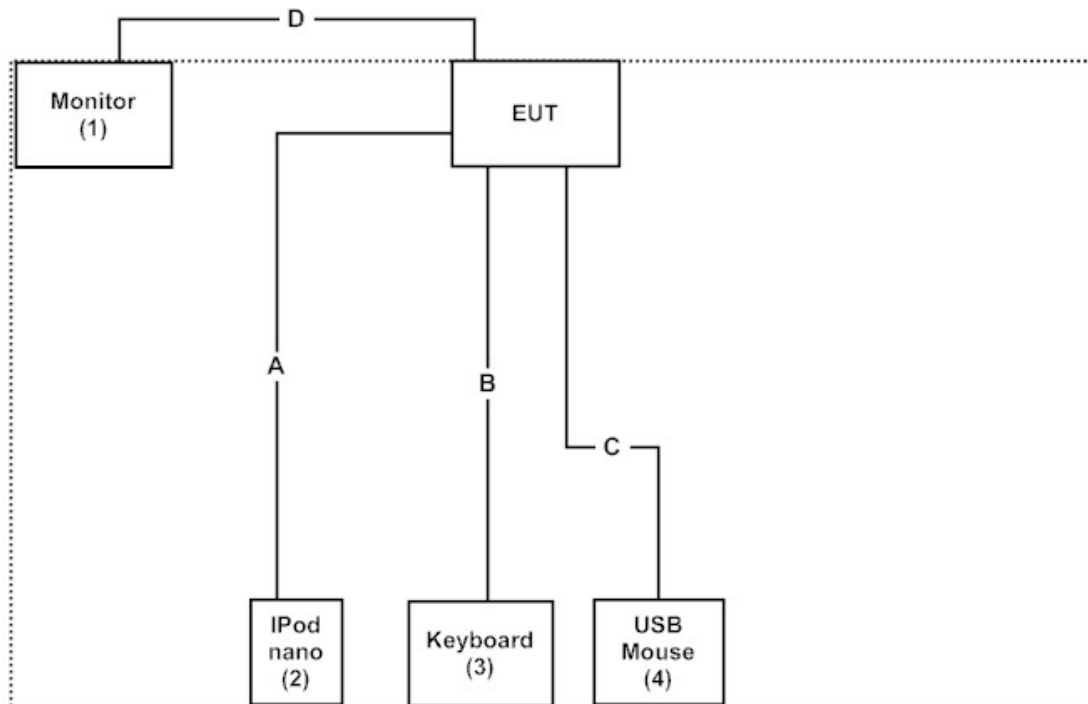
### 1.2. Tested System Details

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) Monitor	Dell	2407WFPb	CN-0FC255-46633-638-1MDS	Non-Shielded, 1.8m
(2) iPod nano	Apple	A1199	5U72894NVQ5	N/A
(3) Keyboard	DELL	SK-8115	MY-0DJ325-71619-6A3-1914	N/A
(4) USB Mouse	DELL	M056U0A	F0Y01YEG	N/A

Signal Cable Type	Signal cable Description
A USB Cable	Shielded, 1.2m
B USB Cable	Shielded, 1.2m
C USB Cable	Shielded, 1.8m
D VGA Cable	Shielded, 1.8m, with two ferrite cores bonded.

### 1.3. Configuration of tested System



## 1.4. EUT Exercise Software

- (1) Setup the EUT as shown in Section 1.4
- (2) Execute RF ID Software on the EUT.
- (3) Configure the test mode, the test channel, and the data rate.
- (4) Press “OK” to start the continuous transmitter.
- (5) Verify that the EUT works properly.

**1.5. 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://tw.quietek.com/tw/emc/accreditations/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



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FCC Accreditation Number: TW1014



## 2. Conducted Emission

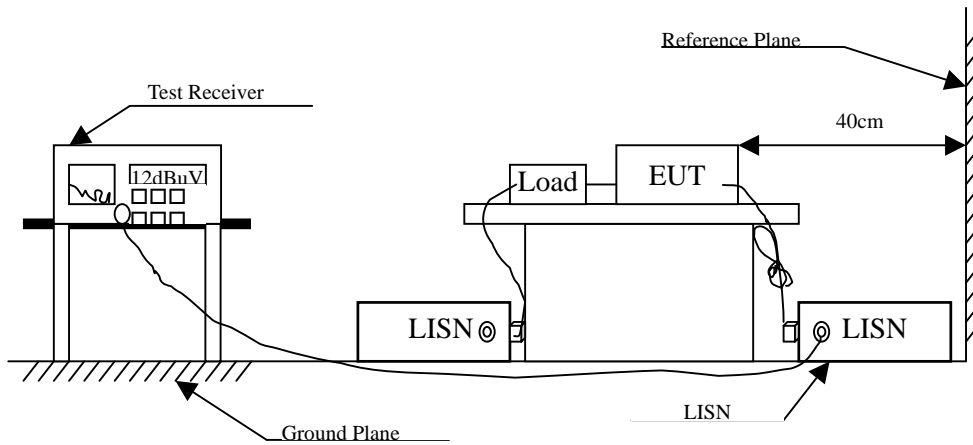
### 2.1. Test Equipment

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

Item	Instrument	Manufacturer	Type No./Serial No	Last Cal.	Remark
1	Test Receiver	R & S	ESCS 30/825442/17	May, 2009	
2	L.I.S.N.	R & S	ESH3-Z5/825016/6	May, 2009	EUT
3	L.I.S.N.	Kyoritsu	KNW-407/8-1420-3	May, 2009	Peripherals
4	Pulse Limiter	R & S	ESH3-Z2	May, 2009	
5	No.1 Shielded Room			N/A	

Note: All equipments are calibrated every one year.

### 2.2. Test Setup



### 2.3. Limits

FCC Part 15 Subpart C Paragraph 15.207 (dBuV) Limit		
Frequency MHz	Limits	
	QP	AV
0.15 - 0.50	66-56 <sub>(註)</sub>	56-46 <sub>(註)</sub>
0.50-5.0	56	46
5.0 - 30	60	50



## 2.4. Test Procedure

The EUT and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50 ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm /50uH coupling impedance with 50ohm termination. (Please refers to the block diagram of the test setup and photographs.)

Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.4: 2003 on conducted measurement.

Conducted emissions were investigated over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9kHz.

## 2.5. Uncertainty

± 2.26 dB

## 2.6. Test Result of Conducted Emission

Product : Tablet PC MC-C5 / MC-F5  
 Test Item : Conducted Emission Test  
 Power Line : Line 1  
 Test Mode : Mode 1: Transmit mode

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV	Margin dB	Limit dBuV
<b>LINE 1</b>					
<b>Quasi-Peak</b>					
0.166	9.790	27.870	37.660	-27.883	65.543
0.201	9.790	36.310	46.100	-18.443	64.543
0.255	9.790	27.330	37.120	-25.880	63.000
3.107	9.820	29.810	39.630	-16.370	56.000
8.185	9.860	23.450	33.310	-26.690	60.000
25.865	10.140	30.950	41.090	-18.910	60.000
<b>Average</b>					
0.166	9.790	-2.070	7.720	-47.823	55.543
0.201	9.790	10.190	19.980	-34.563	54.543
0.255	9.790	5.750	15.540	-37.460	53.000
3.107	9.820	20.180	30.000	-16.000	46.000
8.185	9.860	17.500	27.360	-22.640	50.000
25.865	10.140	25.400	35.540	-14.460	50.000

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. “” means the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Product : Tablet PC MC-C5 / MC-F5  
 Test Item : Conducted Emission Test  
 Power Line : Line 2  
 Test Mode : Mode 1: Transmit mode

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV	Margin dB	Limit dBuV
<b>LINE 2</b>					
<b>Quasi-Peak</b>					
0.154	9.782	28.710	38.492	-27.394	65.886
0.193	9.780	37.110	46.890	-17.881	64.771
0.212	9.780	21.530	31.310	-32.919	64.229
0.263	9.780	27.010	36.790	-25.981	62.771
2.869	9.810	29.630	39.440	-16.560	56.000
25.502	10.300	30.730	41.030	-18.970	60.000
<b>Average</b>					
0.154	9.782	-1.680	8.102	-47.784	55.886
0.193	9.780	27.530	37.310	-17.461	54.771
0.212	9.780	-1.760	8.020	-46.209	54.229
0.263	9.780	17.790	27.570	-25.201	52.771
2.869	9.810	20.510	30.320	-15.680	46.000
25.502	10.300	26.150	36.450	-13.550	50.000

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. "■" means the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

### 3. Radiated Emission

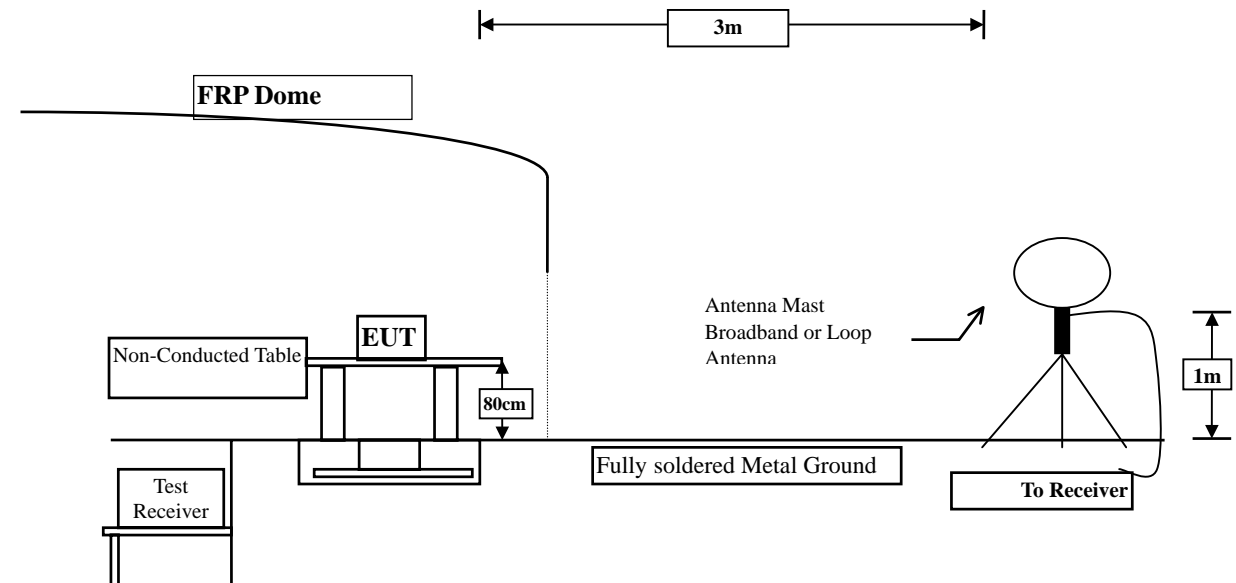
#### 3.1. Test Equipment

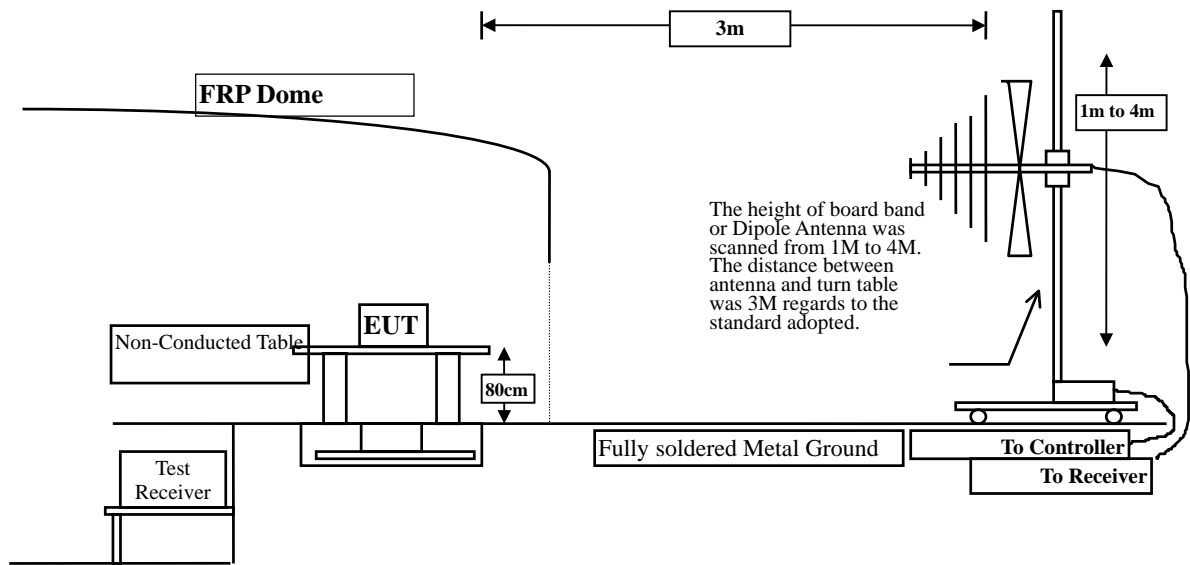
The following test equipment are used during the radiated emission test:

Test Site	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
☒ Site # 3	X Loop Antenna	Teseq	HLA6120 / 26739	Jul., 2009
	X Bilog Antenna	Schaffner Chase	CBL6112B/2673	Sep., 2009
	Horn Antenna	Schwarzbeck	BBHA9120D/D305	Sep., 2009
	Horn Antenna	Schwarzbeck	BBHA9170/208	Jul., 2009
	Pre-Amplifier	Agilent	8447D/2944A09549	Sep., 2009
	X Spectrum Analyzer	Agilent	E4407B / US39440758	May, 2009
	X Test Receiver	R & S	ESCS 30/ 825442/018	Sep., 2009
	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.

#### 3.2. Test Setup





### 3.3. Limits

➤ Fundamental electric field strength Limit

FCC Part 15 Subpart C Paragraph 15.225 Limits				
Fundamental Frequency MHz	Field strength of fundamental			
	uV/m	Distance (meter)	dBuV/m	Distance (meter)
13.553 – 13.567	15848	30	124	3
13.410 – 13.553 and 13.567 – 13.710	334	30	90.47	10
13.110 – 13.410 and 13.710 – 14.010	106	30	80.50	10
Outside of the 13.110 – 14.010	See 15.209 Limits			

- Remarks :
1. RF Voltage (dBuV) = 20 log RF Voltage (uV)
  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.
  3. The emission limit in this paragraph is based on measurement instrumentation employing an average detector.

➤ Spurious electric field strength Limit

FCC Part 15 Subpart C Paragraph 15.209 Limits			
Frequency MHz	uV/m	dBuV/m	Measurement distance (meter)
0.009-0.490	2400/F(kHz)	See Remark <sup>1</sup>	300
0.490-1.705	24000/F(kHz)	See Remark <sup>1</sup>	30
1.705-30	30	29.5	30
30-88	100	40	3
88-216	150	43.5	3
216-960	200	46	3
Above 960	500	54	3

- Remarks :
1. RF Voltage (dBuV) = 20 log RF Voltage (uV)
  2. In the Above Table, the tighter limit applies at the band edges.
  3. Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.

### 3.4. Test Procedure

Fundamental electric field strength:

The EUT and its simulators are placed on a turn table which is 1 meter above ground. The turn table can rotate 360 degrees to determine the position of the maximum electric field strength. The EUT was positioned such that the distance from antenna to the EUT was 3 meters. The antenna which is 1 meter above ground. All X-axis, Y-axis and Z-axis polarization of the antenna are set on measurement.

Spurious electric field strength:

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 antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level. The EUT was positioned such that the distance from antenna to the EUT was 3 meters. 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 on radiated measurement.

On any frequency the radiated limits shown are based upon the use of measurement instrumentation

employing an average detector function. When average radiated emission measurement are included emission measurement below 1000 MHz, there also is a limit on the radio frequency emissions, as measured using instrumentation with a peak detector function, corresponding to 20 dB above the maximum permitted average limit.

The bandwidth below 30MHz setting on the field strength meter is 9kHz and above 30MHz is 120kHz.

### **3.5. Uncertainty**

± 2.6 dB below 30MHz

± 3.8 dB above 30MHz

### 3.6. Test Result of Radiated Emission

Product : Tablet PC MC-C5 / MC-F5  
 Test Item : Fundamental Radiated Emission  
 Test Site : No.3 OATS  
 Test Mode : Mode 1: Transmit mode

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
<b>X-axis</b>					
<b>Quasi-Peak</b>					
13.560	19.598	35.200	54.798	-69.202	124.000
<b>Y-axis</b>					
<b>Quasi-Peak</b>					
13.560	19.598	35.050	54.648	-69.352	124.000
<b>Z-axis</b>					
<b>Quasi-Peak</b>					
13.560	19.598	34.210	53.808	-70.192	124.000

Note:

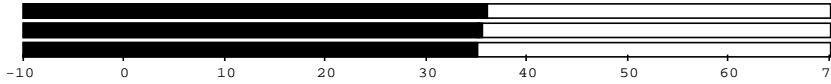
1.  $\text{Limit} = 84 \text{dBuV/m} + 40 * \text{Log} (30(\text{m})/3(\text{m})) = 124 \text{dBuV/m}$
2. All Readings below 1GHz are Quasi-Peak, above are average value.
3. Measurement Level = Reading Level + Correct Factor.
4. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.



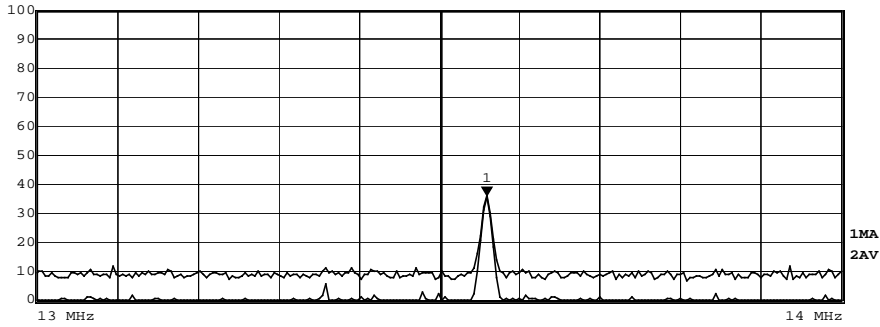
**FUNDAMENTAL : X-axis**

Att 10 dB INPUT 1 Det MA/QP/AV Trd  
 ResBW 9 kHz Meas T 100 ms Unit dBV

FREQUENCY	13.5600000 MHz		
LEVEL PK+	35.62	dBV	
QPK	35.20	dBV	
AV	35.04	dBV	



Marker 1 [T1]  
 35.63 dBV  
 13.5600000 MHz

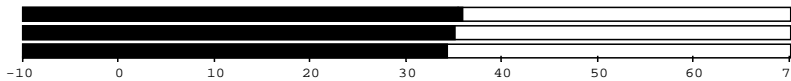


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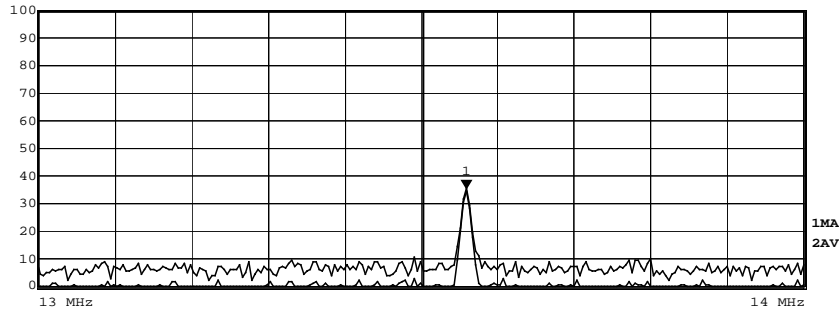
**FUNDAMENTAL : Y-axis**

Att 10 dB INPUT 1 Det MA/QP/AV Trd  
 ResBW 9 kHz Meas T 100 ms Unit dBV

FREQUENCY	13.5600000 MHz		
LEVEL PK+	35.48	dBV	
QPK	35.05	dBV	
AV	34.26	dBV	



Marker 1 [T1]  
 35.22 dBV  
 13.5600000 MHz

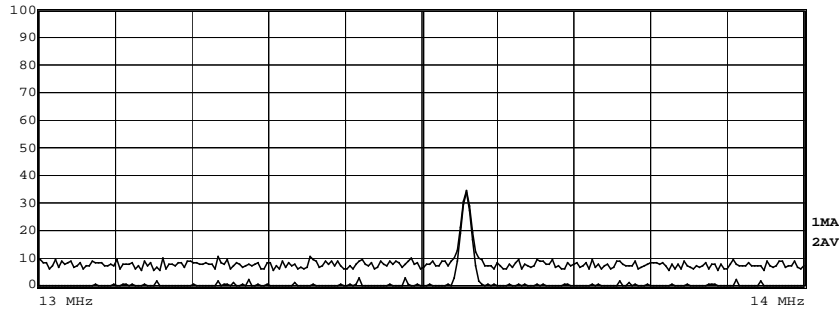


Date: 15.APR.2010 22:29:52

**FUNDAMENTAL : Z-axis**

Att 10 dB      Det    MA/QP/AV      Trd  
 INPUT 1      ResBW    9 kHz  
 Meas T    100 ms      Unit      dBµV

FREQUENCY		13.560000	MHz
LEVEL	PK+	34.70	dBµV
	QPK	34.21	dBµV
	AV	33.44	dBµV



Date: 15.APR.2010 22:32:34

Product : Tablet PC MC-C5 / MC-F5  
 Test Item : General Radiated Emission Data (below 30MHz)  
 Test Site : No.3 OATS  
 Test Mode : Mode 1: Transmit mode

Frequency	Correct	Reading	Measurement	Margin	Limit
MHz	Factor	Level	Level	dB	dBuV/m
	dB	dBuV	dBuV/m		
27.120	19.256	16.624	35.880	-33.660	69.540

Note:

1.  $\text{Limit} = 29.54 \text{ dBuV/m} + 40 * \text{Log} (30(\text{m})/3(\text{m})) = 69.54 \text{ dBuV/m}$
2. All Readings below 1GHz are Quasi-Peak, above are average value.
3. "■" means the worst emission level.
4.  $\text{Measurement Level} = \text{Reading Level} + \text{Correct Factor}$ .

Product : Tablet PC MC-C5 / MC-F5  
 Test Item : General Radiated Emission Data (above 30MHz)  
 Test Site : No.3 OATS  
 Test Mode : Mode 1: Transmit mode

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
<b>Horizontal</b>					
<b>QP Detector</b>					
113.587	-9.603	44.295	34.692	-8.808	43.500
329.359	-5.827	38.239	32.412	-13.588	46.000
354.629	-4.173	33.940	29.767	-16.233	46.000
430.441	-0.882	31.215	30.333	-15.667	46.000
515.972	0.400	30.525	30.925	-15.075	46.000
576.232	3.206	26.332	29.538	-16.462	46.000
<b>Vertical</b>					
<b>QP Detector</b>					
140.802	-7.263	43.193	35.931	-7.569	43.500
160.240	-8.343	43.679	35.337	-8.163	43.500
374.068	-3.817	33.429	29.612	-16.388	46.000
624.830	1.272	33.594	34.866	-11.134	46.000
696.753	1.516	27.723	29.239	-16.761	46.000
834.770	3.863	28.156	32.019	-13.981	46.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above are average value.
2. "█" means the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

## 4. Band Edge

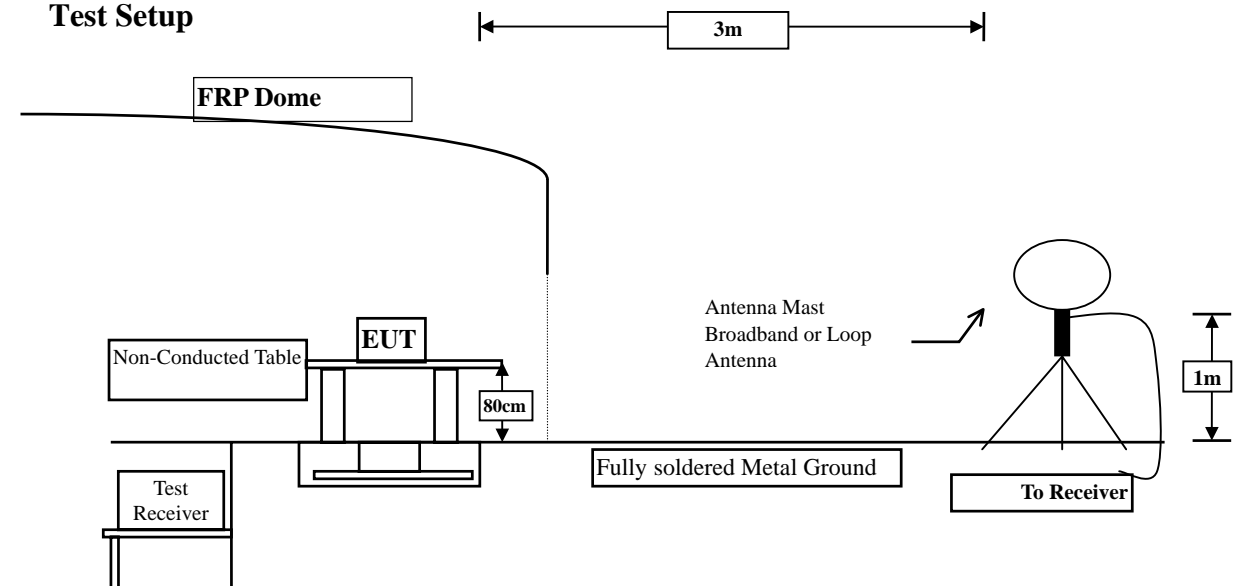
### 4.1. Test Equipment

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

Test Site		Equipment	Manufacturer	Model No./Serial No.	Last Cal.
☒ Site # 3	X	Loop Antenna	Teseq	HLA6120 / 26739	Jul., 2009
		Bilog Antenna	Schaffner Chase	CBL6112B/2673	Sep., 2009
		Horn Antenna	Schwarzbeck	BBHA9120D/D305	Sep., 2009
		Horn Antenna	Schwarzbeck	BBHA9170/208	Jul., 2009
		Pre-Amplifier	Agilent	8447D/2944A09549	Sep., 2009
	X	Spectrum Analyzer	Agilent	E4407B / US39440758	May, 2009
	X	Test Receiver	R & S	ESCS 30/ 825442/018	Sep., 2009
	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.

### 4.2. Test Setup



#### **4.3. Limits**

In any 9 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 9 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)).

#### **4.4. 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 on radiated measurement.

The bandwidth below 30MHz setting on the field strength meter is 9kHz and above 30MHz is 120kHz.

#### **4.5. Uncertainty**

Radiated is  $\pm 2.6$  dB

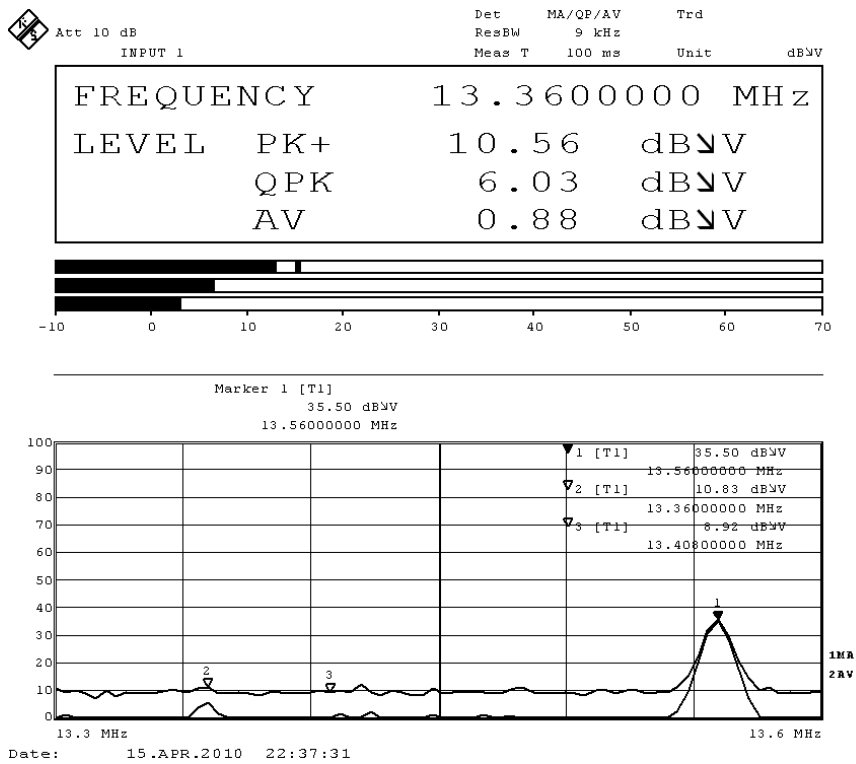
### 4.6. Test Result of Band Edge

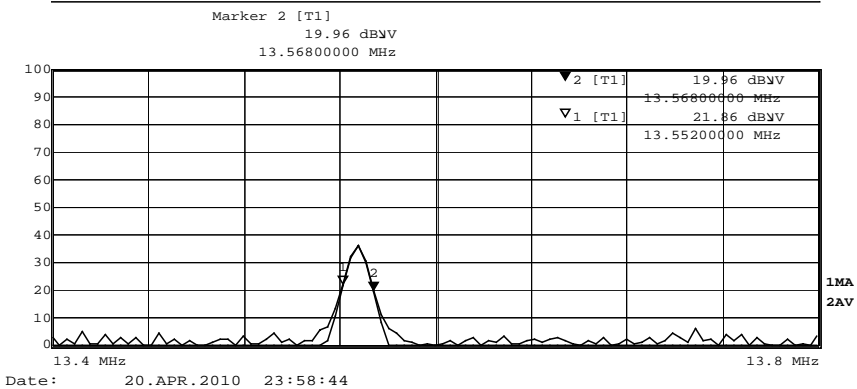
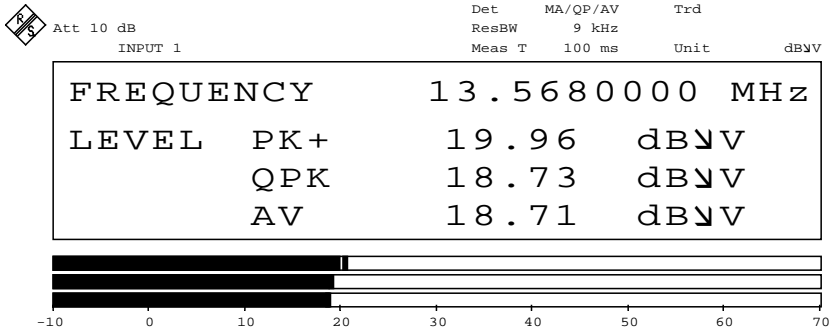
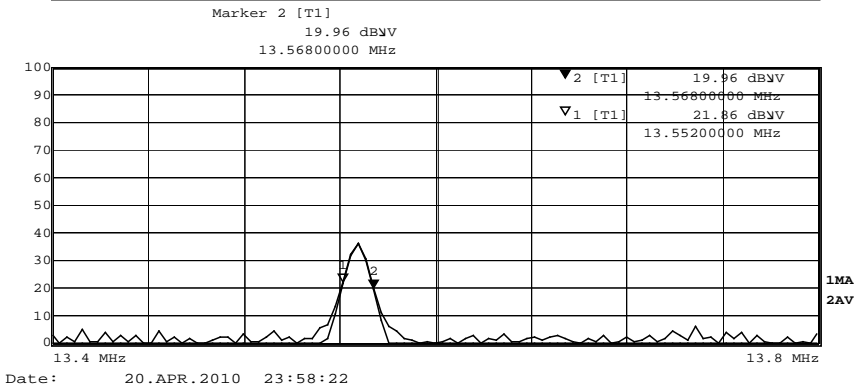
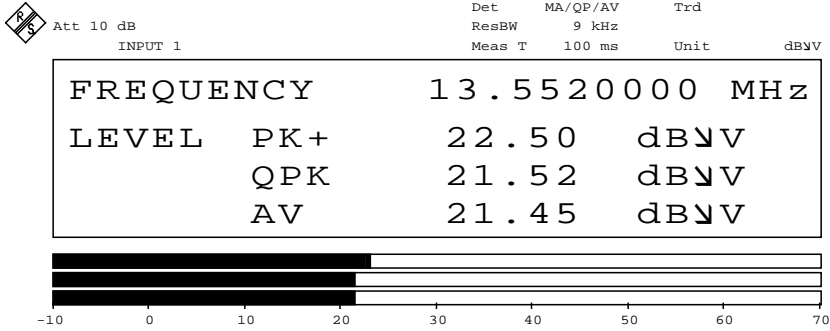
Product : Tablet PC MC-C5 / MC-F5  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 1: Transmit mode

#### RF Radiated Measurement :

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	QP Limit (dBuV/m)	Result
1 (Quasi-Peak)	13.360	19.591	6.030	25.621	69.540	Pass
2 (Quasi-Peak)	13.552	19.599	21.520	41.119	69.540	Pass
3 (Quasi-Peak)	13.568	19.598	18.730	38.328	69.540	Pass

Figure Channel 1:







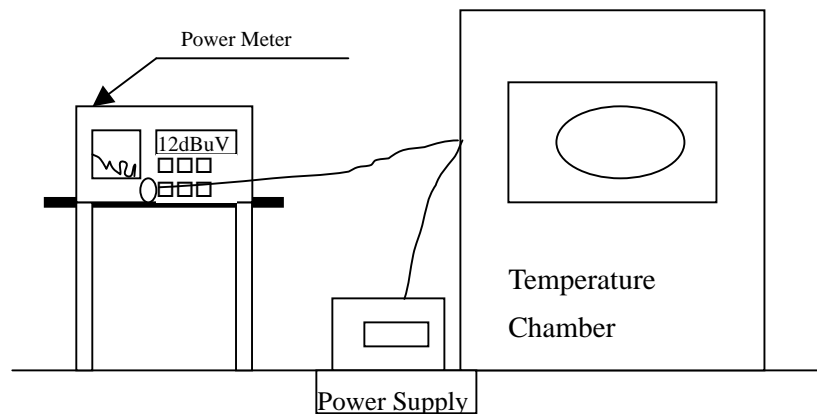
**5. Frequency Tolerance**

**5.1. Test Equipment**

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
	Spectrum Analyzer	R&S	FSP40 / 100170	Jun, 2009
	Spectrum Analyzer	Agilent	E4407B / US39440758	Jun, 2009
X	Spectrum Analyzer	Agilent	N9010A / MY48030495	Apr., 2010
X	Temperature Chamber	TDE	CHM 150CT	March, 2010

Note: All equipments are calibrated every one year.

**5.2. Test Setup**



**5.3. Limits**

The frequency tolerance of the carrier signal shall be maintained within  $\pm 0.01\%$  of the operating frequency.

**5.4. Test Procedure**

The over operating frequency over a temperature variation of -20 degrees to +50 degrees 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 degrees C. For battery operated equipment, the equipment tests shall be performed using a new battery.

**5.5. Uncertainty**

$\pm 150$  Hz

## 5.6. Test Result of Frequency Stability

Product : Tablet PC MC-C5 / MC-F5  
 Test Item : Frequency Tolerance  
 Test Site : Temperature Chamber  
 Test Mode : Mode 1: Transmit mode (STA)

Test Conditions		Ref. Freq. (MHz)	Measure Level (MHz)	Limits (MHz)		Result
T <sub>nom</sub> 20 °C	V <sub>nom</sub> 120.00 V	13.56088	13.56088	13.55952	~ 13.56223	PASS
T <sub>nom</sub> 20 °C	V <sub>high</sub> 132.00 V	13.56088	13.56075	13.55952	~ 13.56223	PASS
T <sub>nom</sub> 20 °C	V <sub>low</sub> 108.00 V	13.56088	13.56100	13.55952	~ 13.56223	PASS
T <sub>max</sub> 50 °C	V <sub>nom</sub> 120.00 V	13.56088	13.56100	13.55952	~ 13.56223	PASS
T <sub>max</sub> 40 °C	V <sub>nom</sub> 120.00 V	13.56088	13.56075	13.55952	~ 13.56223	PASS
T <sub>max</sub> 30 °C	V <sub>nom</sub> 120.00 V	13.56088	13.56075	13.55952	~ 13.56223	PASS
T <sub>min</sub> 10 °C	V <sub>nom</sub> 120.00 V	13.56088	13.56088	13.55952	~ 13.56223	PASS
T <sub>min</sub> 0 °C	V <sub>nom</sub> 120.00 V	13.56088	13.56113	13.55952	~ 13.56223	PASS
T <sub>min</sub> -10 °C	V <sub>nom</sub> 120.00 V	13.56088	13.56075	13.55952	~ 13.56223	PASS
T <sub>min</sub> -20 °C	V <sub>nom</sub> 120.00 V	13.56088	13.56100	13.55952	~ 13.56223	PASS

Note: Limit= Ref. Freq. \* (±) 0.01% = 13.55952~13.56223MHz

Product : Tablet PC MC-C5 / MC-F5  
 Test Item : Frequency Tolerance  
 Test Site : Temperature Chamber  
 Test Mode : Mode 1: Transmit mode (AFTER 2mins)

Test Conditions			Ref. Freq. (MHz)	Measure Level (MHz)	Limits (MHz)			Result
T <sub>nom</sub>	20 °C	V <sub>nom</sub> 120.00 V	13.56088	13.56088	13.55952	~	13.56223	PASS
T <sub>nom</sub>	20 °C	V <sub>high</sub> 132.00 V	13.56088	13.56113	13.55952	~	13.56223	PASS
T <sub>nom</sub>	20 °C	V <sub>low</sub> 108.00 V	13.56088	13.56100	13.55952	~	13.56223	PASS
T <sub>max</sub>	50 °C	V <sub>nom</sub> 120.00 V	13.56088	13.56100	13.55952	~	13.56223	PASS
T <sub>max</sub>	40 °C	V <sub>nom</sub> 120.00 V	13.56088	13.56075	13.55952	~	13.56223	PASS
T <sub>max</sub>	30 °C	V <sub>nom</sub> 120.00 V	13.56088	13.56088	13.55952	~	13.56223	PASS
T <sub>min</sub>	10 °C	V <sub>nom</sub> 120.00 V	13.56088	13.56100	13.55952	~	13.56223	PASS
T <sub>min</sub>	0 °C	V <sub>nom</sub> 120.00 V	13.56088	13.56075	13.55952	~	13.56223	PASS
T <sub>min</sub>	-10 °C	V <sub>nom</sub> 120.00 V	13.56088	13.56075	13.55952	~	13.56223	PASS
T <sub>min</sub>	-20 °C	V <sub>nom</sub> 120.00 V	13.56088	13.56100	13.55952	~	13.56223	PASS

Note: Limit= Ref. Freq. \* (±) 0.01% = 13.55952~13.56223MHz

Product : Tablet PC MC-C5 / MC-F5  
 Test Item : Frequency Tolerance  
 Test Site : Temperature Chamber  
 Test Mode : Mode 1: Transmit mode (AFTER 5mins)

Test Conditions				Ref. Freq. (MHz)	Measure Level (MHz)	Limits (MHz)			Result
T <sub>nom</sub>	20	°C	V <sub>nom</sub> 120.00 V	13.56088	13.56088	13.55952	~	13.56223	PASS
T <sub>nom</sub>	20	°C	V <sub>high</sub> 132.00 V	13.56088	13.56075	13.55952	~	13.56223	PASS
T <sub>nom</sub>	20	°C	V <sub>low</sub> 108.00 V	13.56088	13.56075	13.55952	~	13.56223	PASS
T <sub>max</sub>	50	°C	V <sub>nom</sub> 120.00 V	13.56088	13.56100	13.55952	~	13.56223	PASS
T <sub>max</sub>	40	°C	V <sub>nom</sub> 120.00 V	13.56088	13.56088	13.55952	~	13.56223	PASS
T <sub>max</sub>	30	°C	V <sub>nom</sub> 120.00 V	13.56088	13.56088	13.55952	~	13.56223	PASS
T <sub>min</sub>	10	°C	V <sub>nom</sub> 120.00 V	13.56088	13.56100	13.55952	~	13.56223	PASS
T <sub>min</sub>	0	°C	V <sub>nom</sub> 120.00 V	13.56088	13.56100	13.55952	~	13.56223	PASS
T <sub>min</sub>	-10	°C	V <sub>nom</sub> 120.00 V	13.56088	13.56113	13.55952	~	13.56223	PASS
T <sub>min</sub>	-20	°C	V <sub>nom</sub> 120.00 V	13.56088	13.56100	13.55952	~	13.56223	PASS

Note: Limit= Ref. Freq. \* (±) 0.01% = 13.55952~13.56223MHz

Product : Tablet PC MC-C5 / MC-F5  
 Test Item : Frequency Tolerance  
 Test Site : Temperature Chamber  
 Test Mode : Mode 1: Transmit mode (AFTER 10mins)

Test Conditions				Ref. Freq. (MHz)	Measure Level (MHz)	Limits (MHz)			Result
T <sub>nom</sub>	20	°C	V <sub>nom</sub> 120.00 V	13.56088	13.56088	13.55952	~	13.56223	PASS
T <sub>nom</sub>	20	°C	V <sub>high</sub> 132.00 V	13.56088	13.56100	13.55952	~	13.56223	PASS
T <sub>nom</sub>	20	°C	V <sub>low</sub> 108.00 V	13.56088	13.56075	13.55952	~	13.56223	PASS
T <sub>max</sub>	50	°C	V <sub>nom</sub> 120.00 V	13.56088	13.56125	13.55952	~	13.56223	PASS
T <sub>max</sub>	40	°C	V <sub>nom</sub> 120.00 V	13.56088	13.56075	13.55952	~	13.56223	PASS
T <sub>max</sub>	30	°C	V <sub>nom</sub> 120.00 V	13.56088	13.56100	13.55952	~	13.56223	PASS
T <sub>min</sub>	10	°C	V <sub>nom</sub> 120.00 V	13.56088	13.56100	13.55952	~	13.56223	PASS
T <sub>min</sub>	0	°C	V <sub>nom</sub> 120.00 V	13.56088	13.56075	13.55952	~	13.56223	PASS
T <sub>min</sub>	-10	°C	V <sub>nom</sub> 120.00 V	13.56088	13.56088	13.55952	~	13.56223	PASS
T <sub>min</sub>	-20	°C	V <sub>nom</sub> 120.00 V	13.56088	13.56100	13.55952	~	13.56223	PASS

Note: Limit= Ref. Freq. \* (±) 0.01% = 13.55952~13.56223MHz

## 6. EMI Reduction Method During Compliance Testing

No modification was made during testing.

## Attachment 1: EUT Test Photographs

## Attachment 2: EUT Detailed Photographs