FCC TEST REPORT

(PART 27)

REPORT NO.: RF990210L08-4

MODEL NO.: PC36100

RECEIVED: Feb. 23, 2010

TESTED: Mar. 03 ~ Mar. 12, 2010

ISSUED: Mar. 16, 2010

APPLICANT: HTC Corporation

ADDRESS: No. 23, Xinghua Rd., Taoyuan City, Taoyuan, 330 Taiwan

ISSUED BY: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch

LAB ADDRESS: No. 47, 14th Ling, Chia Pau Tsuen, Lin Kou Hsiang, Taipei Hsien 244, Taiwan, R.O.C.

TEST LOCATION: No. 19, Hwa Ya 2nd Rd, Wen Hwa Tsuen, Kwei Shan Hsiang, Taoyuan Hsien 333, Taiwan, R.O.C.

TABLE OF CONTENTS

1 CERTIFICATION....4
2 SUMMARY OF TEST RESULTS....5
2.1 MEASUREMENT UNCERTAINTY....5
3 GENERAL INFORMATION....6
3.1 GENERAL DESCRIPTION OF EUT....6
3.2 DESCRIPTION OF TEST MODES....8
3.2.1 CONFIGURATION OF SYSTEM UNDER TEST....8
3.2.2 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL....9
3.3 GENERAL DESCRIPTION OF APPLIED STANDARDS....11
3.4 DESCRIPTION OF SUPPORT UNITS....11
4 TEST TYPES AND RESULTS....12
4.1 OUTPUT POWER MEASUREMENT....12
4.1.1 LIMITS OF OUTPUT POWER MEASUREMENT....12
4.1.2 TEST INSTRUMENTS....12
4.1.3 TEST PROCEDURES....14
4.1.4 TEST SETUP....15
4.1.5 EUT OPERATING CONDITIONS....15
4.1.6 TEST RESULTS....16
4.2 FREQUENCY STABILITY MEASUREMENT....18
4.2.1 LIMITS OF FREQUENCY STABILIITY MEASUREMENT....18
4.2.2 TEST INSTRUMENTS....18
4.2.3 TEST PROCEDURE....19
4.2.4 TEST SETUP....19
4.2.5 EUT OPERATING CONDITIONS....19
4.2.6 TEST RESULTS....20
4.3 EMISSION BANDWIDTH MEASUREMENT....22
4.3.1 LIMITS OF EMISSION BANDWIDTH MEASUREMENT....22
4.3.2 TEST INSTRUMENTS....22
4.3.3 TEST PROCEDURE....22
4.3.4 TEST SETUP....23
4.3.5 EUT OPERATING CONDITIONS....23
4.3.6 TEST RESULTS....24
4.4 CHANNEL EDGE MEASUREMENT....26
4.4.1 LIMITS OF CHANNEL EDGE MEASUREMENT....26
4.4.2 TEST INSTRUMENTS....26
4.4.3 TEST SETUP....26
4.4.4 TEST PROCEDURES....27
4.4.5 EUT OPERATING CONDITION....27
4.4.6 TEST RESULTS....28
4.5 CONDUCTED SPURIOUS EMISSIONS....34
4.5.1 LIMITS OF CONDUCTED SPURIOUS EMISSIONS MEASUREMENT....34
4.5.2 TEST INSTRUMENTS....34
4.5.3 TEST PROCEDURE....35
4.5.4 TEST SETUP....35
4.5.5 EUT OPERATING CONDITIONS....35
4.5.6 TEST RESULTS....36
4.6 RADIATED EMISSION MEASUREMENT (BELOW 1GHZ)....48
4.6.1 LIMITS OF RADIATED EMISSION MEASUREMENT....48
4.6.2 TEST INSTRUMENTS....49

4.6.3 TEST PROCEDURES 50
4.6.4 DEVIATION FROM TEST STANDARD 50
4.6.5 TEST SETUP 51
4.6.6 EUT OPERATING CONDITIONS 51
4.6.7 TEST RESULTS 52
4.7 RADIATED EMISSION MEASUREMENT (ABOVE 1GHZ) 54
4.7.1 LIMITS OF RADIATED EMISSION MEASUREMENT 54
4.7.2 TEST INSTRUMENTS 55
4.7.3 TEST PROCEDURES 56
4.7.4 DEVIATION FROM TEST STANDARD 56
4.7.5 TEST SETUP 57
4.7.6 EUT OPERATING CONDITIONS 57
4.7.7 TEST RESULTS 58
5 PHOTOGRAPHS OF THE TEST CONFIGURATION 64
6 INFORMATION ON THE TESTING LABORATORIES 65

1 CERTIFICATION

PRODUCT: Smart Phone
MODEL: PC36100
BRAND: HTC
APPLICANT: HTC Corporation
TESTED: Mar. 03 ~ Mar. 12, 2010
TEST SAMPLE: ENGINEERING SAMPLE
TEST STANDARDS: **FCC Part 27, Subpart C & M**

The above equipment (Model: PC36100) has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch,** and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

PREPARED BY : Andrea Hsia , **DATE :** Mar. 16, 2010
Andrea Hsia / Specialist

TECHNICAL ACCEPTANCE : Long Chen , **DATE :** Mar. 16, 2010
Responsible for RF Long Chen / Senior Engineer

APPROVED BY : Gary Chang , **DATE :** Mar. 16, 2010
Gary Chang / Assistant Manager

2 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

STANDARD SECTION FCC Part 27 & Part 2	TEST TYPE AND LIMIT	RESULT	REMARK
2.1046 27.50(h)(2)	Maximum Peak Output Power Limit: max. 2 Watt.	PASS	Meet the requirement of limit. Minimum passing margin is 21.9dBm at 2593.0MHz.
2.1055 27.54	Frequency Stability Stay with the authorized bands of operation	PASS	Meet the requirement of limit.
2.1049 27.53(m)(6)	Emission Bandwidth	PASS	Meet the requirement of limit.
2.1051 27.53(m)(4)(6)	Band Edge Measurements	PASS	Meet the requirement of limit.
2.1051 27.53(m)(4)(6)	Conducted Spurious Emissions	PASS	Meet the requirement of limit.
2.1053 27.53(m)(4)(6)	Radiated Spurious Emissions	PASS	Meet the requirement of limit. Minimum passing margin is -16.3dB at 5375.0MHz.

2.1 MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

MEASUREMENT	FREQUENCY	UNCERTAINTY
Conducted emissions	150kHz~30MHz	2.44 dB
Radiated emissions	30MHz ~ 200MHz	3.19 dB
	200MHz ~1000MHz	3.21 dB
	1GHz ~ 18GHz	2.26 dB
	18GHz ~ 40GHz	1.94 dB

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k = 2.

3 GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

PRODUCT	Smart Phone
MODEL NO.	PC36100
FCC ID	NM8PC36100
POWER SUPPLY	3.7Vdc (Battery) 5Vdc (Adapter) 5Vdc (host equipment)
MODULATION TYPE	QPSK1/2, QPSK 3/4, 16QAM1/2, 16QAM 3/4
MODULATION TECHNOLOGY	OFDMA
DUPLEX METHOD	TDD
OPERATING RANGE	2498.5MHz ~ 2687.5MHz
CHANNEL BANDWIDTH	5MHz, 10MHz
TX / RX FUNCTION	1TX / 2RX
UL ZONE TYPE	PUSC
MAX. EIRP POWER	21.9dBm
ANTENNA TYPE	PIFA antenna with -2.5dBi gain (Main antenna) PIFA antenna with -3.5dBi gain (Aux. antenna)
OPERATION TEMPERATURE RANGE	-30°C ~ 50°C
DATA CABLE	Refer to NOTE
I/O PORTS	Refer to user's manual
ACCESSORY DEVICES	Refer to NOTE

NOTE:

1. The EUT is a Smart Phone. The functions of EUT listed as below:

	TEST STANDARD	REFERENCE REPORT
CDMA 850	FCC Part 22	RF990210L08
CDMA 1900	FCC Part 24	RF990210L08-1
WLAN 802.11b/g	FCC Part 15, Subpart C (Section 15.247)	RF990210L08-2
BLUETOOTH V2.1 wit EDR		RF990210L08-3
WiMAX	FCC Part 27	RF990210L08-4

1. The EUT has following accessories.

No.	Product	Brand	Manu-facture	MODEL	Description	Remark
1	Power Adapter	hTC	Delta	TC U250	I/P: 100-240Vac, 50-60Hz, 200mA O/P: 5Vdc, 1A	
2			Emerson	TC U250		
3	USB cable	MEC	-	DC M410	1.4m shielded cable without core (For data transmission & charging use)	See NOTE1
4		Foxlink	-			
5	Battery	HT ENERGY	-	RHOD160	Rating: 3.7Vdc, 1500mAh	See NOTE2
6		Formosa	-		Rating: 3.7Vdc, 1500mAh	

NOTE:
1. We pre-tested two brands of USB cables and Foxlink USB cable was the worst case for the final test.
2. We pre-tested two brands of batteries and Formosa battery was found to be the worst case for final test.

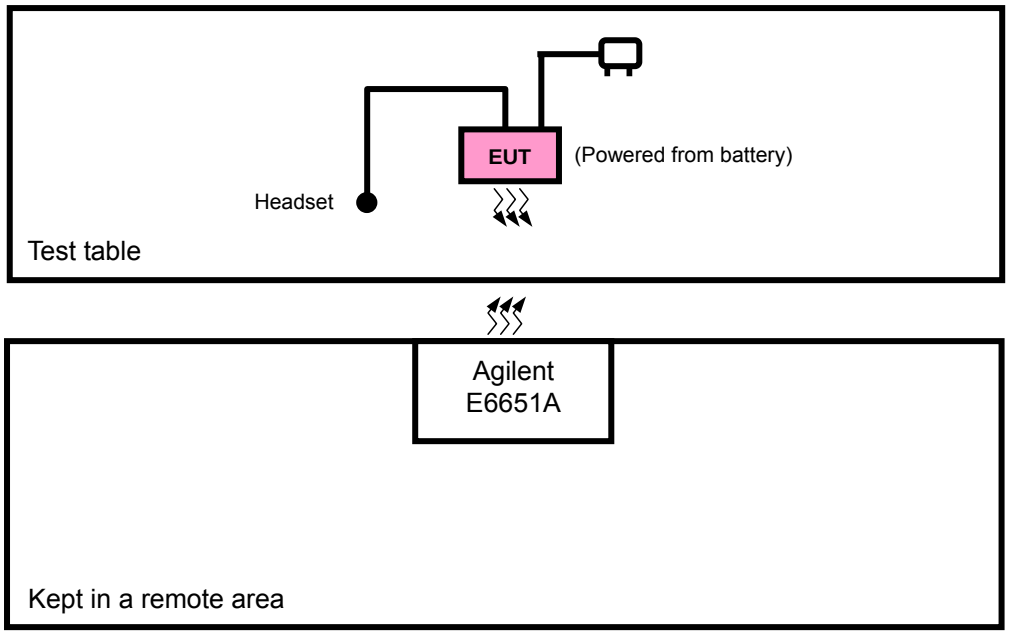
2. After pre-testing in test items of output power and spurious emissions, QPSK was found to be worst case and was selected for the final test configuration.
3. The EUT can supports different UL / DL ratio, max transmit ratio is up to 18 (UL): 29 (DL). After pretesting of output power and spurious emission, 18 (UL): 29 (DL) was found to be worst case and was selected for the final test configuration.
4. The above EUT information was declared by manufacturer and for more detailed features description please refers to the manufacturer's specifications or User's Manual.

3.2 DESCRIPTION OF TEST MODES

Three channels had been tested for each channel bandwidth.

CHANNEL BANDWIDTH: 5MHz	CHANNEL BANDWIDTH: 10MHz
Low channel (L): 2498.5MHz.	**Low channel (L)**: 2501MHz.
Middle channel (M): 2593.0MHz.	**Middle channel (M)**: 2600 MHz.
High channel (H): 2687.5MHz.	**High channel (H)**: 2685 MHz.

3.2.1 CONFIGURATION OF SYSTEM UNDER TEST



3.2.2 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL

EUT CONFIGURE MODE	APPLICABLE TO							DESCRIPTION
	OP	FS	EB	CE	CSE	RE<1G	RE≥1G	
-	√	√	√	√	√	√	√	-

Where **OP:** Output power **FS:** Frequency stability
EB: Emission bandwidth **CE:** Channel edge
CSE: Conducted spurious emissions **RE<1G:** Radiated emission below 1GHz
RE≥1G: Radiated emission above 1GHz

OUTPUT POWER MEASUREMENT:

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, coding rate, and antenna ports (if EUT with antenna diversity architecture).
☒ Following channel(s) was (were) selected for the final test as listed below.

TESTED CHANNEL	MODULATION TECHNOLOGY	CHANNEL BANDWIDTH	MODULATION TYPE	CODING RATE	AXIS
L, M, H	OFDMA	5MHz	QPSK	1/2	X
L, M, H	OFDMA	10MHz	QPSK	1/2	X

FREQUENCY STABILITY MEASUREMENT:

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, coding rate, and antenna ports (if EUT with antenna diversity architecture).
☒ Following channel(s) was (were) selected for the final test as listed below.

TESTED CHANNEL	MODULATION TECHNOLOGY	CHANNEL BANDWIDTH	MODULATION TYPE	CODING RATE
L	OFDMA	5MHz	QPSK	1/2
L	OFDMA	10MHz	QPSK	1/2

EMISSION BANDWIDTH MEASUREMENT:

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, coding rate, and antenna ports (if EUT with antenna diversity architecture).
☒ Following channel(s) was (were) selected for the final test as listed below.

TESTED CHANNEL	MODULATION TECHNOLOGY	CHANNEL BANDWIDTH	MODULATION TYPE	CODING RATE
L, M, H	OFDMA	5MHz	QPSK	1/2
L, M, H	OFDMA	10MHz	QPSK	1/2

CHANNEL EDGE MEASUREMENT:

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, coding rate, and antenna ports (if EUT with antenna diversity architecture).

☒ Following channel(s) was (were) selected for the final test as listed below.

TESTED CHANNEL	MODULATION TECHNOLOGY	CHANNEL BANDWIDTH	MODULATION TYPE	CODING RATE
L, M, H	OFDMA	5MHz	QPSK	1/2
L, M, H	OFDMA	10MHz	QPSK	1/2

CONDUCTED SPURIOUS EMISSIONS MEASUREMENT:

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, coding rate, and antenna ports (if EUT with antenna diversity architecture).

☒ Following channel(s) was (were) selected for the final test as listed below.

TESTED CHANNEL	MODULATION TECHNOLOGY	CHANNEL BANDWIDTH	MODULATION TYPE	CODING RATE
L, M, H	OFDMA	5MHz	QPSK	1/2
L, M, H	OFDMA	10MHz	QPSK	1/2

RADIATED EMISSION MEASUREMENT (BELOW 1 GHz):

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, coding rate, and antenna ports (if EUT with antenna diversity architecture).

☒ Following channel(s) was (were) selected for the final test as listed below.

TESTED CHANNEL	MODULATION TECHNOLOGY	CHANNEL BANDWIDTH	MODULATION TYPE	CODING RATE
L	OFDMA	5MHz	QPSK	1/2
L	OFDMA	10MHz	QPSK	1/2

RADIATED EMISSION MEASUREMENT (ABOVE 1 GHz):

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, coding rate, and antenna ports (if EUT with antenna diversity architecture).

☒ Following channel(s) was (were) selected for the final test as listed below.

TESTED CHANNEL	MODULATION TECHNOLOGY	CHANNEL BANDWIDTH	MODULATION TYPE	CODING RATE
L, M, H	OFDMA	5MHz	QPSK	1/2
L, M, H	OFDMA	10MHz	QPSK	1/2

3.3 GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT is a RF product. According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

FCC 47 CFR Part 2

FCC 47 CFR Part 27

ANSI/TIA/EIA-603-C-2004

NOTE: 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.

3.4 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	HEADSET	NA	NA	NA	NA
2	AGILENT E6651A	Agilent	E6651A	MY48320107	NA

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	1.3m non-shielded cable without core
2	1.8m UTP RJ11 cable.

NOTE: 1. All power cords of the above support units are non shielded (1.8m).
2. Item 2 acted as communication partners to transfer data.
3. Item 1 was supplied from client.

4 TEST TYPES AND RESULTS

4.1 OUTPUT POWER MEASUREMENT

4.1.1 LIMITS OF OUTPUT POWER MEASUREMENT

The radiated peak output power shall be according to the specific rule Part 27.50(h)(2) that “User stations are limited to 2 watts” and 27.50(i) specific that “Peak transmit power must be measure over any interval of continuous transmission using instrumentation calibration in terms of rms-equivalent voltage.”

4.1.2 TEST INSTRUMENTS

CONDUCTED POWER MEASUREMENT:

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
High Speed Peak Power Meter	ML2495A	0824011	Jul. 30, 2009	Jul. 29, 2010
Power Sensor	MA2411B	0738171	Jul. 30, 2009	Jul. 29, 2010
AGILENT E6651A	E6651A	MY48320107	Aug. 11, 2009	Aug. 10, 2010

NOTE:

1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. Measurement Bandwidth of ML2495A is 65MHz greater than 26dB bandwidth of emission.

EIRP POWER MEASUREMENT:

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
Test Receiver ROHDE & SCHWARZ	ESIB7	100212	May 25, 2009	May 24, 2010
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100040	Jul. 07, 2009	Jul. 06, 2010
BILOG Antenna SCHWARZBECK	VULB9168	9168-156	Apr. 30, 2009	Apr. 29, 2010
HORN Antenna SCHWARZBECK	BBHA 9120 D	9120D-563	Aug. 10, 2009	Aug. 09, 2010
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA9170242	Jan. 06, 2009	Jan. 05, 2010
Preamplifier Agilent	8449B	3008A01910	Sep. 11, 2009	Sep. 10, 2010
Preamplifier Agilent	8447D	2944A10638	Dec. 21, 2009	Dec. 20, 2010
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	218190/4 231241/4	May 13, 2009	May 12, 2010
RF signal cable Worken	8D-FB	Cable-HYCH9-01	Aug. 17, 2009	Aug. 16, 2010
Software	ADT_Radiated_ V7.6.15.9.2	NA	NA	NA
Antenna Tower EMCO	2070/2080	512.835.4684	NA	NA
Turn Table EMCO	2087-2.03	NA	NA	NA
Antenna Tower &Turn Table Controller EMCO	2090	NA	NA	NA
AGILENT E6651A	E6651A	MY48320107	Aug. 11, 2009	Aug. 10, 2010

NOTE: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

2. The test was performed in HwaYa Chamber 9.

3. The horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.

4. The FCC Site Registration No. is 460141.

5. The IC Site Registration No. is IC 7450F-4.

4.1.3 TEST PROCEDURES

CONDUCTED POWER MEASUREMENT:

A power sensor was used on the output port of the EUT. A power meter was used to read the response of the power sensor. Record the power level.

EIRP POWER MEASUREMENT:

a. The power was measured with R&S Spectrum Analyzer. All measurements were done at 3 channels (low, middle and high operational frequency range.)

b. The conducted peak output power used the power splitter via EUT RF power connector between simulation base station and spectrum analyzer. The path loss included the splitter loss, cable loss and 20dB pad loss. The spectrum set RB/VB 3MHz,then read peak power value and record to the test. (All transmitted path loss shall be considered in the test report data.)

c. Substitution method is used for E.I.R.P measurement. In the semi-anechoic chamber, EUT placed on the 0.8m height of Turn Table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1m to 4m to find the maximum polar radiated power. The "Read Value" is the spectrum reading the maximum power value.

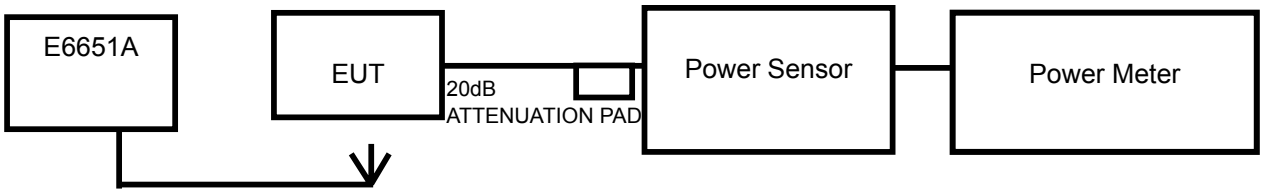
d. The substitution horn antenna is substituted for EUT at the same position and signals generator export the CW signal to the substitution antenna via a TX cable. Rotated the Turn Table and moved receiving antenna to find the maximum radiation power. Adjust output power level of S.G to get a Value of spectrum reading equal to "Read Value " of step b. Record the power level of S.G

e. EIRP = Output power level of S.G – TX cable loss + Antenna gain of substitution horn.

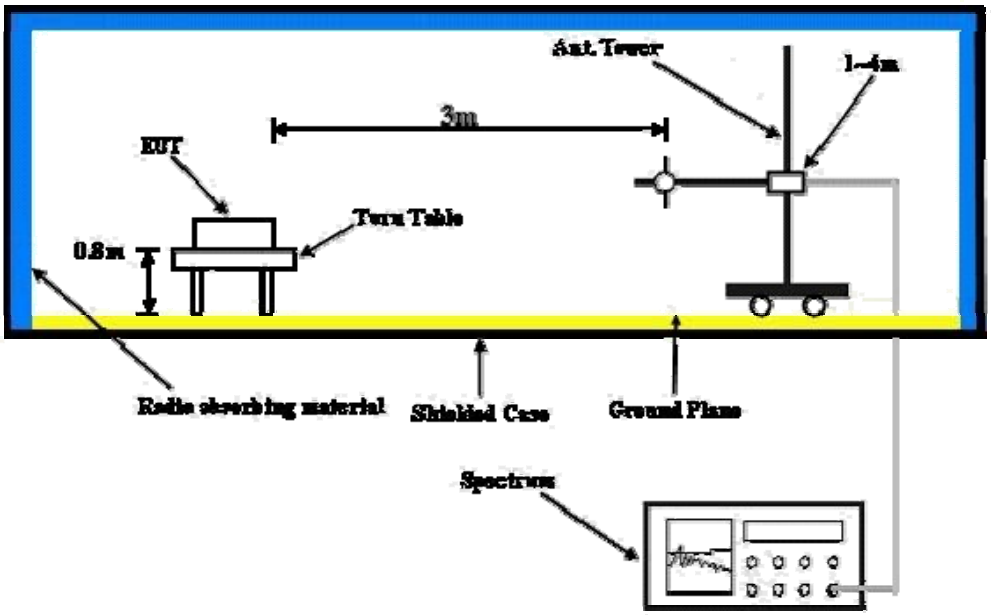
NOTE: The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 10MHz/10MHz.

4.1.4 TEST SETUP

CONDUCTED POWER MEASUREMENT:



EIRP POWER MEASUREMENT:



For the actual test configuration, please refer to the attached file (Test Setup Photo).

4.1.5 EUT OPERATING CONDITIONS

a. The EUT link up with Agilent WiMAX simulator.

b. The simulator station system controlled an EUT to export maximum output power under transmission mode and specific channel frequency and modulation type.

4.1.6 TEST RESULTS

INPUT POWER	120Vac, 60Hz	**CHANNEL BANDWIDTH**	5MHz
ENVIRONMENTAL CONDITIONS	23degoC, 65%RH 991hPa	**TESTED BY**	Dean Wang

CONDUCTED POWER (RMS)					
CHANNEL	**FREQUENCY (MHz)**	**C.F (dB)**	**POWER METER READING (dBm)**	**POWER (dBm)**	**POWER (W)**
Low	2498.5	24.3	-1.6	22.7	0.1862
Middle	2593.0	24.3	-0.4	23.9	0.2455
High	2687.5	24.3	-1.1	23.2	0.2089

NOTE: C.F = attenuator + cable loss

EIRP POWER (RMS)					
CHANNEL	**FREQUENCY (MHz)**	**C.F (dB)**	**S.A. READING (dBm)**	**TOTAL POWER (dBm)**	**TOTAL POWER (W)**
Low	2498.5	8.3	13.0	21.3	0.1349
Middle	**2593.0**	**8.5**	**13.4**	**21.9**	**0.1549**
High	2687.5	8.5	12.7	21.2	0.1318

NOTE: C.F = space loss + antenna factor + cable loss

INPUT POWER	120Vac, 60Hz	**CHANNEL BANDWIDTH**	10MHz
ENVIRONMENTAL CONDITIONS	25degoC, 66%RH 991hPa	**TESTED BY**	Dean Wang

CONDUCTED POWER (RMS)					
CHANNEL	**FREQUENCY (MHz)**	**C.F (dB)**	**POWER METER READING (dBm)**	**POWER (dBm)**	**POWER (W)**
Low	2501	24.3	-1.0	23.3	0.2138
Middle	2600	24.3	-1.2	23.1	0.2042
High	2685	24.3	-1.1	23.2	0.2089

NOTE: C.F = attenuator + cable loss

EIRP POWER (RMS)					
CHANNEL	**FREQUENCY (MHz)**	**C.F (dB)**	**S.A. READING (dBm)**	**TOTAL POWER (dBm)**	**TOTAL POWER (W)**
Low	2501	8.3	12.7	21.0	0.1259
Middle	**2600**	**8.5**	**12.1**	**20.6**	**0.1148**
High	2685	8.5	12.3	20.8	0.1202

NOTE: C.F = space loss + antenna factor + cable loss

4.2 FREQUENCY STABILITY MEASUREMENT

4.2.1 LIMITS OF FREQUENCY STABILIITY MEASUREMENT

According to the FCC part 2.1055 shall be tested the frequency stability. The rule is defined that" The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block." The test extreme voltage is according to the 2.1055(d)(1) Vary primary supply voltage from 85 to 115 percent of the nominal value for other than hand carried battery equipment and the extreme temperature rule is comply with specification of EUT -30℃ ~ 55℃.

4.2.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
Agilent E6651A	E6651A	MY48320107	Aug. 11, 2009	Aug. 10, 2010
Spectrum Analyzer Agilent	E4446A	MY44360128	Feb. 23, 2010	Feb. 22, 2011
* Hewlett Packard RF cable	8120-6192	01428251	NA	NA
* Suhner RF cable	Sucoflex104	204850/4	NA	NA
* WIT Standard Temperature & Humidity Chamber	TH-4S-C	W981030	Jun. 24, 2009	Jun. 23, 2010

NOTE: 1. The calibration interval of the above test instruments is 12 months. And the calibrations are traceable to NML/ROC and NIST/USA.

2. "*" = These equipments are used for the final measurement.

3. The test was performed in ADT RF OVEN room.

4.2.3 TEST PROCEDURE

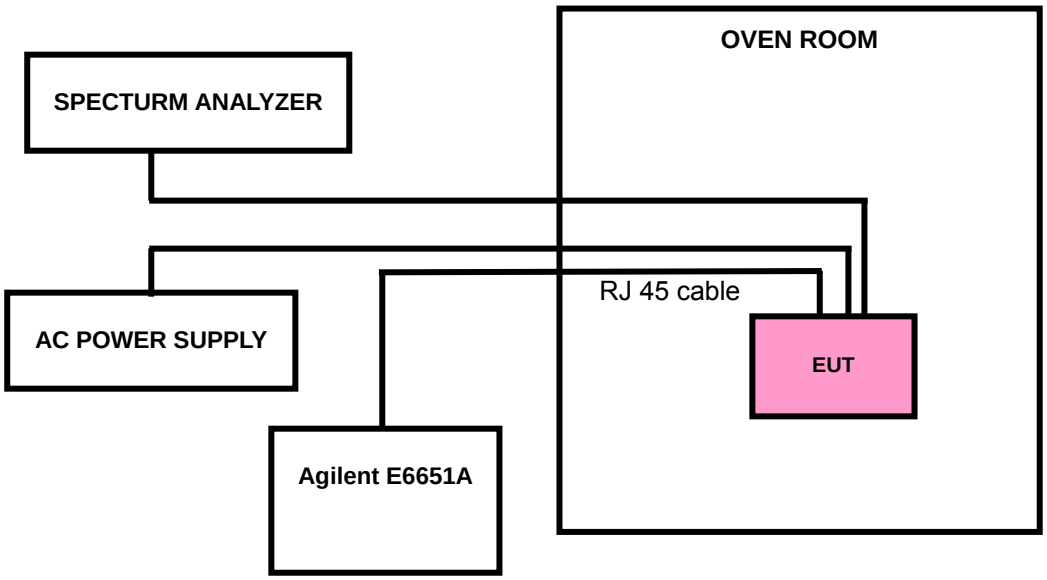
a. Power must be removed when changing from one temperature to another or one voltage to another voltage. Power warm up is at least 15 min and power applied should perform before recording frequency error.

b. EUT is connected the external power supply to control the AC input power. The various Volts from the minimum 93.5 Volts to 126.5 Volts. Each step shall be record the frequency error rate.

c. The temperature range step is 10 degrees in this test items. All temperature levels shall be hold the ±0.5℃ during the measurement testing.

d. The each temperature step shall be at least 0.5 hours, consider the EUT could be test under the stability condition.

4.2.4 TEST SETUP



4.2.5 EUT OPERATING CONDITIONS

Same as 4.1.5

4.2.6 TEST RESULTS

MODE	Low channel	INPUT POWER	120Vac, 60Hz
ENVIRONMENTAL CONDITIONS	25degoC, 60%RH 991hPa	CHANNEL BANDWIDTH	5MHz
TESTED BY	Dean Wang		

AFC FREQUENCY ERROR VS. VOLTAGE		
VOLTAGE (Volts)	FREQUENCY (MHz)	FREQUENCY ERROR (ppm)
93.5	2498.501064	0.426
110.0	2498.501297	0.519
126.5	2498.500604	0.242

AFC FREQUENCY ERROR VS. TEMP.		
TEMP. (℃)	FREQUENCY (MHz)	FREQUENCY ERROR (ppm)
50	2498.500627	0.251
40	2498.500681	0.273
30	2498.500680	0.272
20	2498.501297	0.519
10	2498.500651	0.261
0	2498.500554	0.222
-10	2498.501622	0.649
-20	2498.501552	0.621
-30	2498.501298	0.519

MODE	Low channel	**INPUT POWER**	120Vac, 60Hz
ENVIRONMENTAL CONDITIONS	25degoC, 60%RH 991hPa	**CHANNEL BANDWIDTH**	10MHz
TESTED BY	Dean Wang		

AFC FREQUENCY ERROR VS. VOLTAGE		
VOLTAGE (Volts)	**FREQUENCY (MHz)**	**FREQUENCY ERROR (ppm)**
93.5	2501.001804	0.721
110.0	2501.002326	0.930
126.5	2501.001822	0.729

AFC FREQUENCY ERROR VS. TEMP.		
TEMP. (℃)	**FREQUENCY (MHz)**	**FREQUENCY ERROR (ppm)**
50	2501.000973	0.389
40	2501.001706	0.682
30	2501.001075	0.430
20	2501.002326	0.930
10	2501.001623	0.649
0	2501.001676	0.670
-10	2501.001048	0.419
-20	2501.001536	0.614
-30	2501.001079	0.431

4.3 EMISSION BANDWIDTH MEASUREMENT

4.3.1 LIMITS OF EMISSION BANDWIDTH MEASUREMENT

According to FCC 27.53(m)(6) specified that emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26dB below the transmitter power.

4.3.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
Agilent E6651A	E6651A	MY48320107	Aug. 11, 2009	Aug. 10, 2010
Spectrum Analyzer Agilent	E4446A	MY44360128	Feb. 23, 2010	Feb. 22, 2011
* Hewlett Packard RF cable	8120-6192	01428251	NA	NA
* Suhner RF cable	Sucoflex104	204850/4	NA	NA
* WIT Standard Temperature & Humidity Chamber	TH-4S-C	W981030	Jun. 24, 2009	Jun. 23, 2010

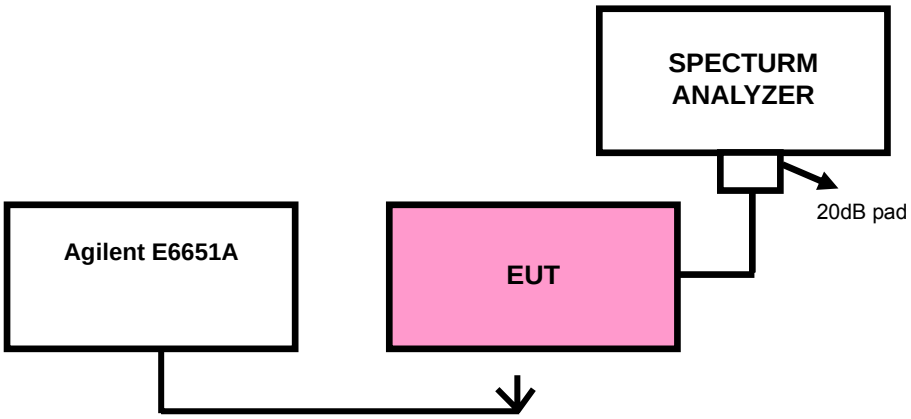
NOTE: 1. The calibration interval of the above test instruments is 12 months. And the calibrations are traceable to NML/ROC and NIST/USA.

2. "*" = These equipments are used for the final measurement.

4.3.3 TEST PROCEDURE

The transmitter output was connected to the spectrum analyzer through an attenuator. The bandwidth of the fundamental frequency was measured by spectrum analyzer with RBW = 51kHz, VBW = 160kHz. The 26dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 26dB.

4.3.4 TEST SETUP



4.3.5 EUT OPERATING CONDITIONS

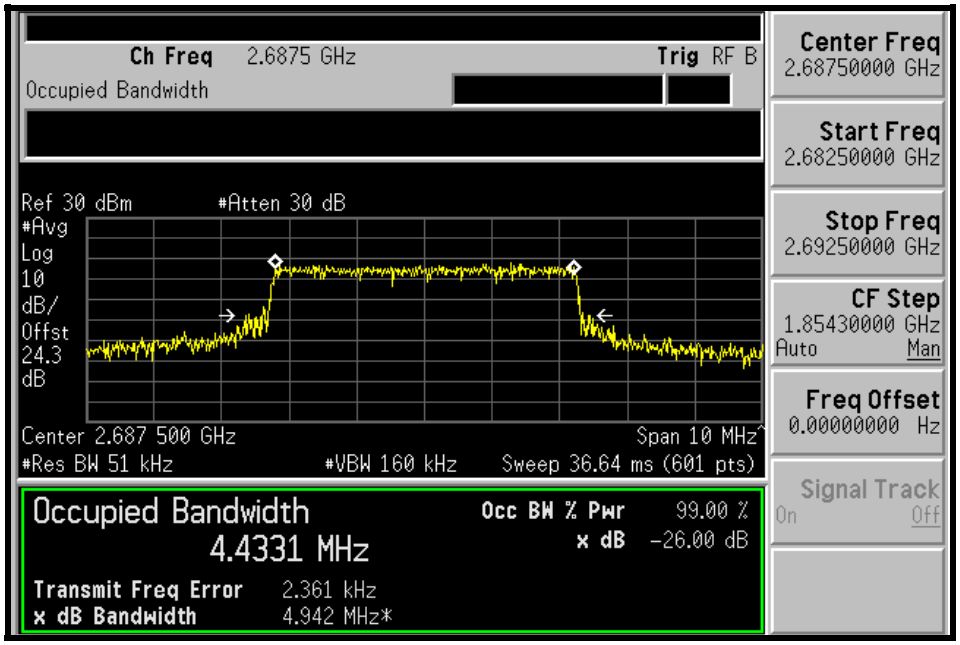
Same as 4.1.5

4.3.6 TEST RESULTS

CHANNEL BANDWIDTH: 5MHz

CHANNEL	-26dBc BANDWIDTH (MHz)
Low	4.938
Middle	4.910
High	4.942

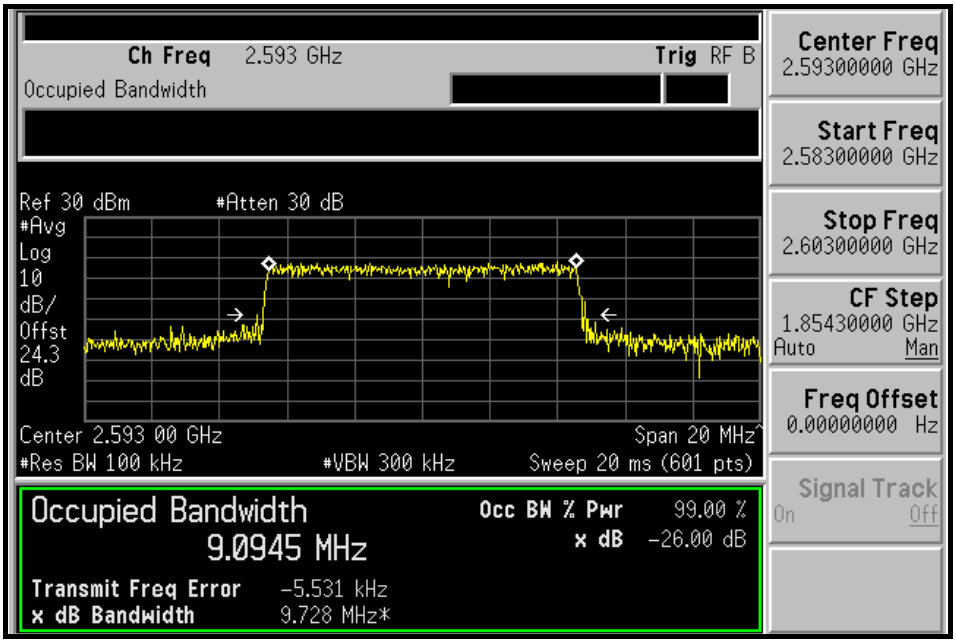
HIGH CHANNEL



CHANNEL BANDWIDTH: 10MHz

CHANNEL	-26dBc BANDWIDTH (MHz)
Low	9.720
Middle	9.728
High	9.624

MIDDLE CHANNEL



4.4 CHANNEL EDGE MEASUREMENT

4.4.1 LIMITS OF CHANNEL EDGE MEASUREMENT

According to FCC 27.53(m)(4) specified that power of any emission outside of the channel edge must be attenuated below the transmitting power (P) by a factor shall be not less than 43 + 10 log (P) dB at the channel edge, the limit of emission equal to –13dBm. And 55 + 10 log (P) dB at 5.5 MHz from the channel edges, the limit of emission equal to –25dBm.In the 1MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

4.4.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
Agilent E6651A	E6651A	MY48320107	Aug. 11, 2009	Aug. 10, 2010
Spectrum Analyzer Agilent	E4446A	MY44360128	Feb. 23, 2010	Feb. 22, 2011
* JFW 20dB attenuation	50HF-020-SMA	NA	NA	NA
* Suhner RF cable	Sucoflex104	204850/4	NA	NA
* WIT Standard Temperature & Humidity Chamber	TH-4S-C	W981030	Jun. 24, 2009	Jun. 23, 2010

NOTE: 1. The calibration interval of the above test instruments is 12 months. And the calibrations are traceable to NML/ROC and NIST/USA.

2. "*" = These equipments are used for the final measurement.

4.4.3 TEST SETUP

Same as Item 4.3.4

4.4.4 TEST PROCEDURES

a. The EUT was set up for the rated peak power. The power was measured with Spectrum Analyzer. All measurements were done at 3 channels: low, middle and high operational frequency range.

b. The center frequency of spectrum is the band edge frequency and span is 20MHz (Channel Bandwidth: 5MHz) / 30MHz (Channel Bandwidth: 10MHz). RBW of the spectrum is 51kHz (Channel Bandwidth: 5MHz) / 100kHz (Channel Bandwidth: 10MHz).

c. Record the max trace plot into the test report.

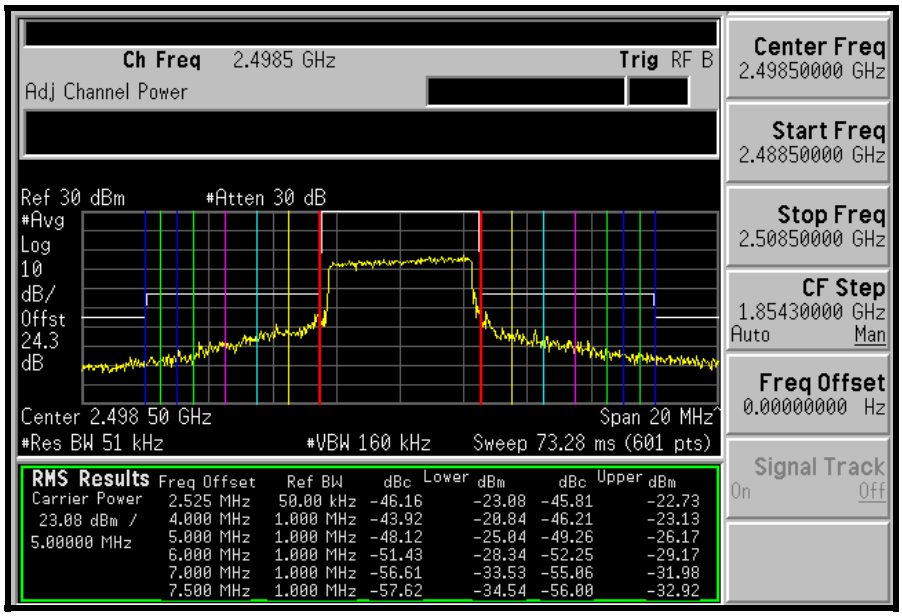
4.4.5 EUT OPERATING CONDITION

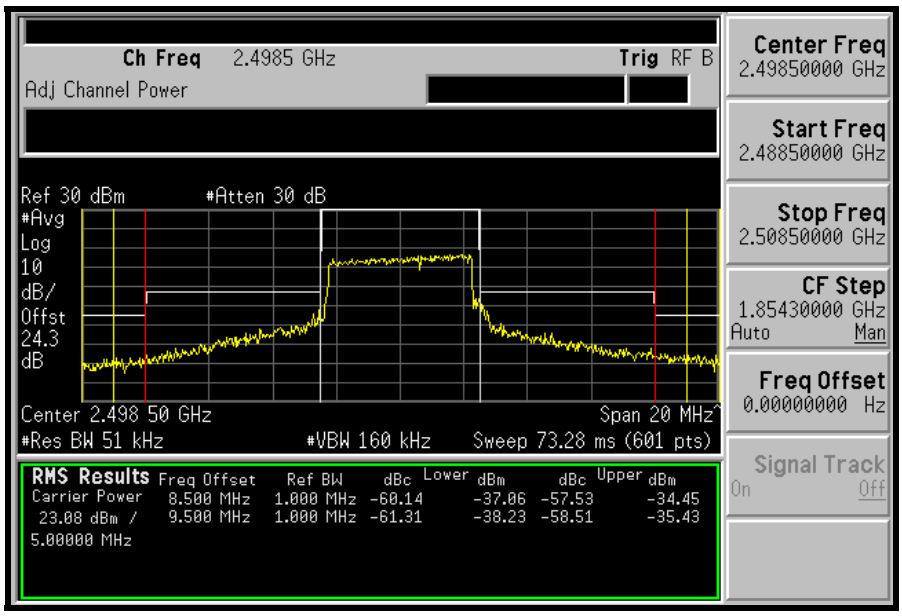
Same as 4.1.5

4.4.6 TEST RESULTS

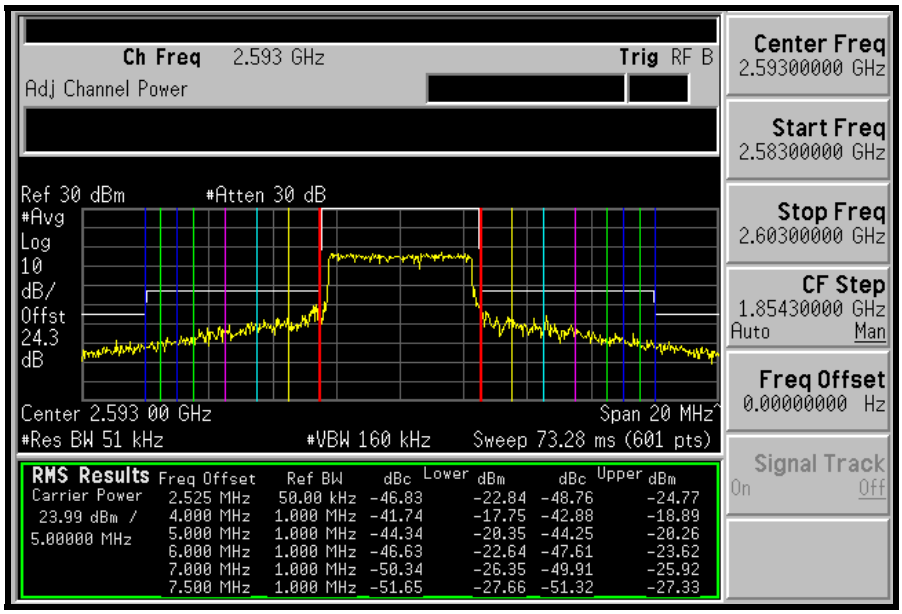
CHANNEL BANDWIDTH: 5MHz

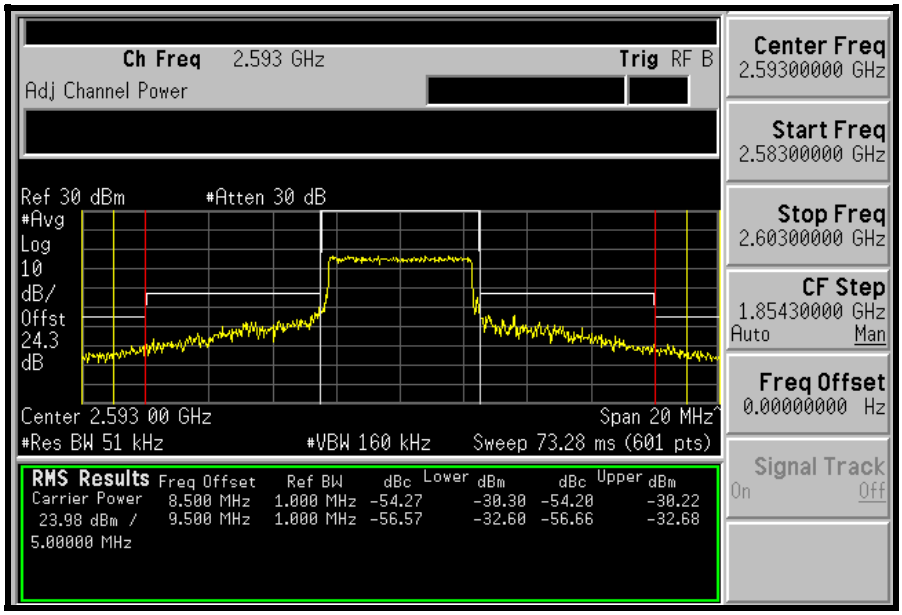
LOW CHANNEL



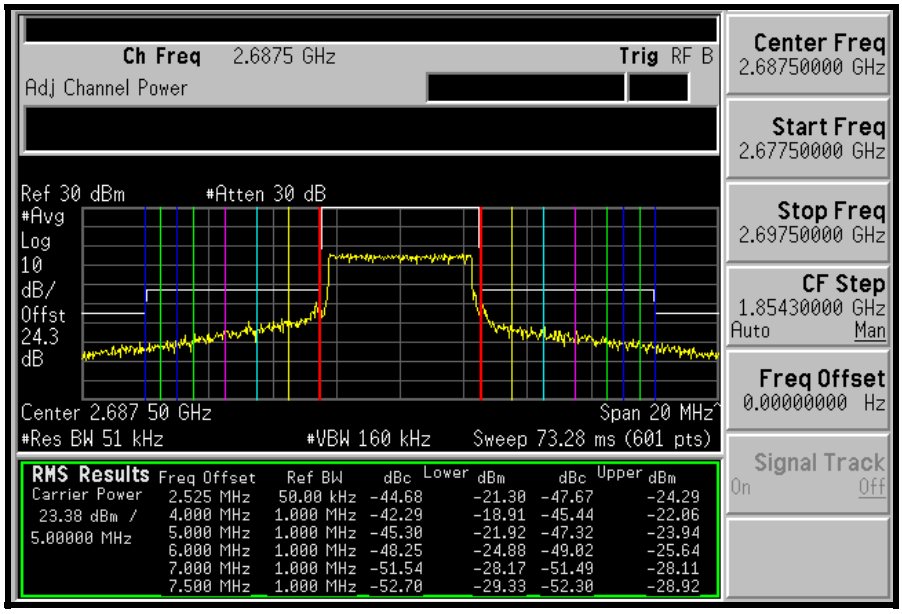


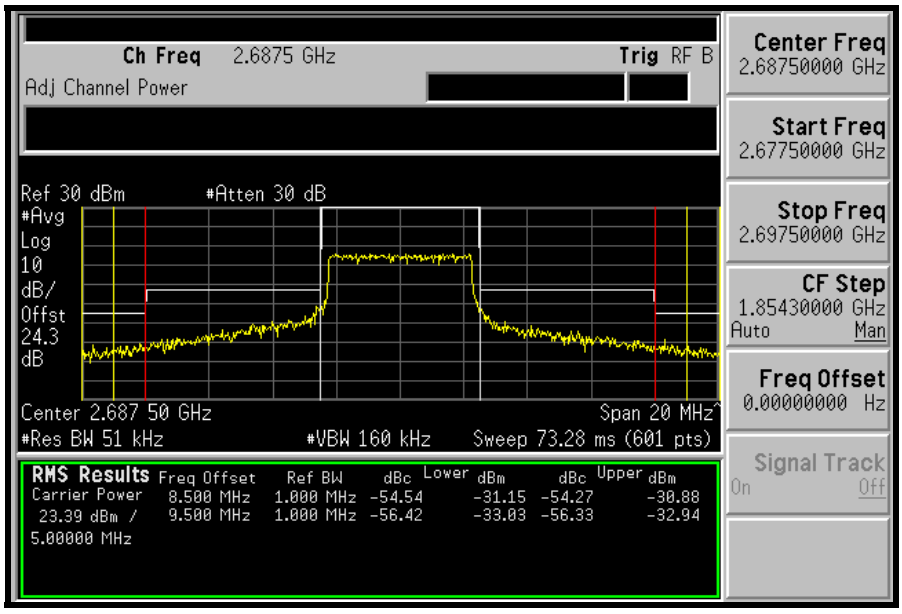
MIDDLE CHANNEL





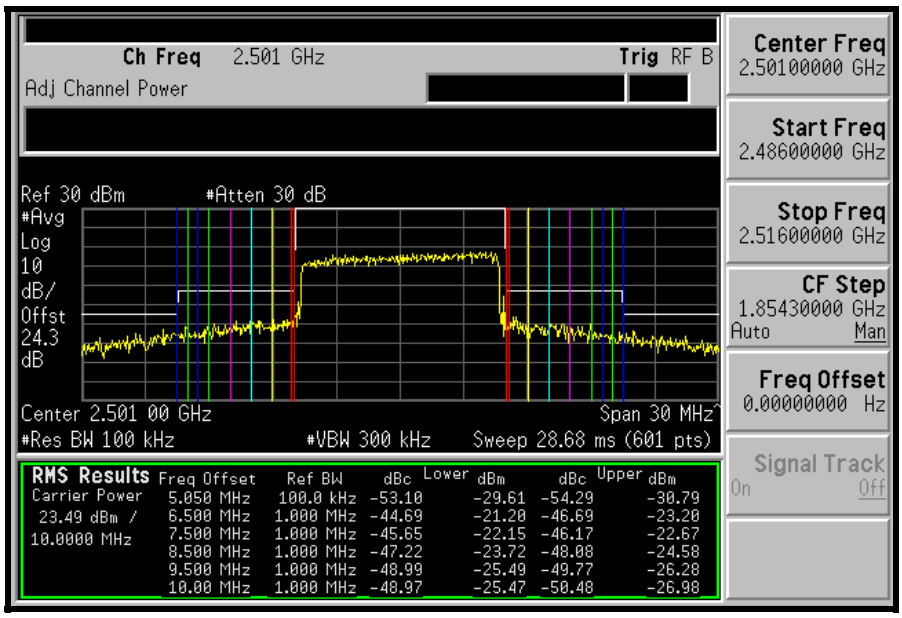
HIGH CHANNEL

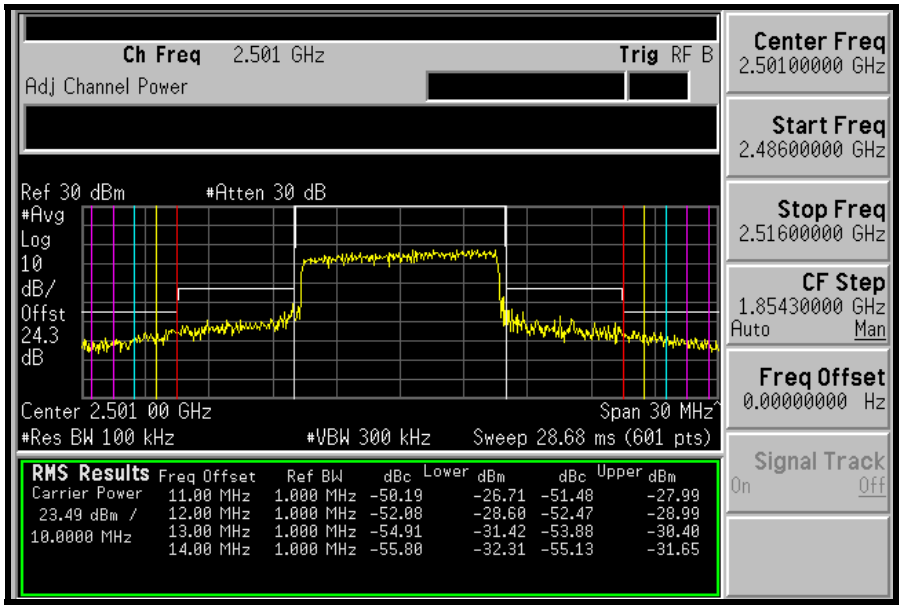




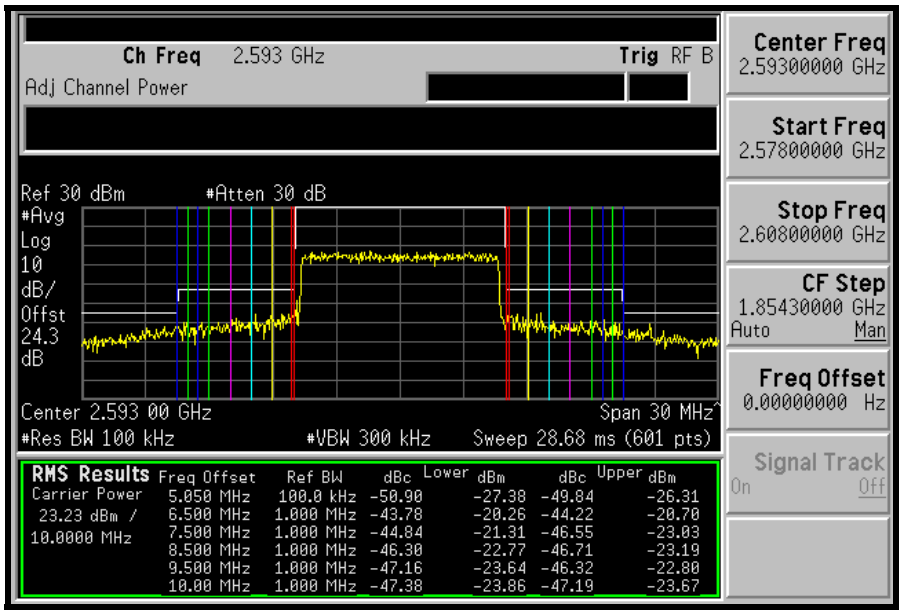
CHANNEL BANDWIDTH: 10MHz

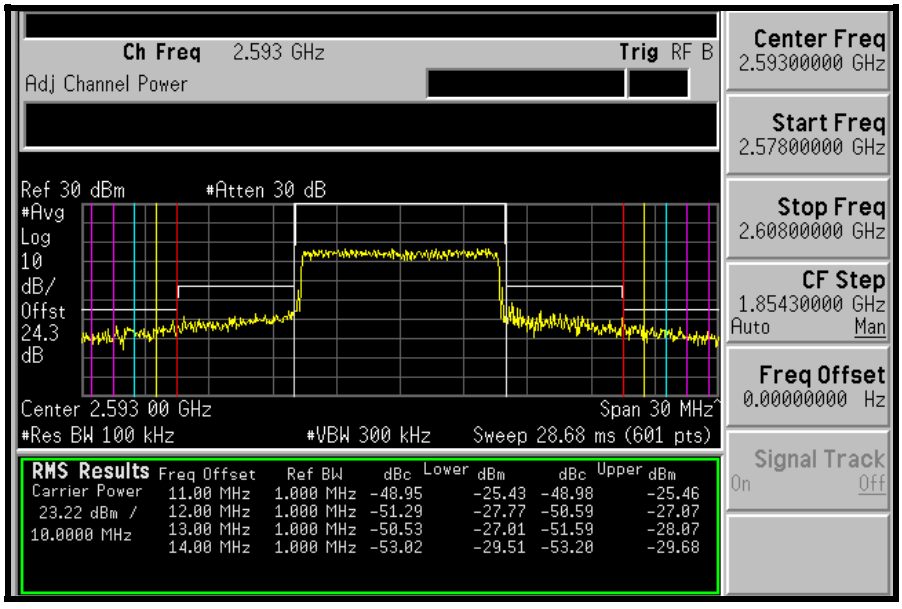
LOW CHANNEL



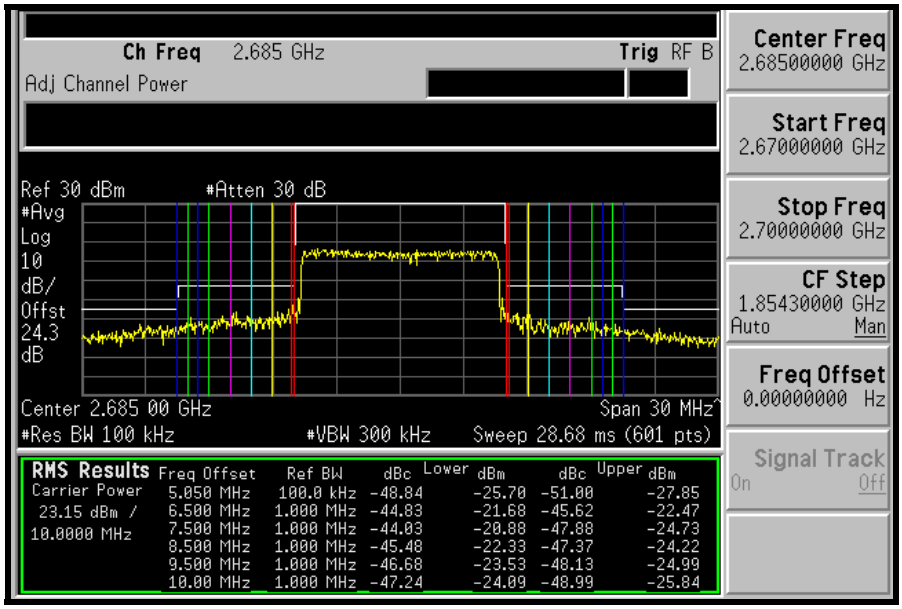


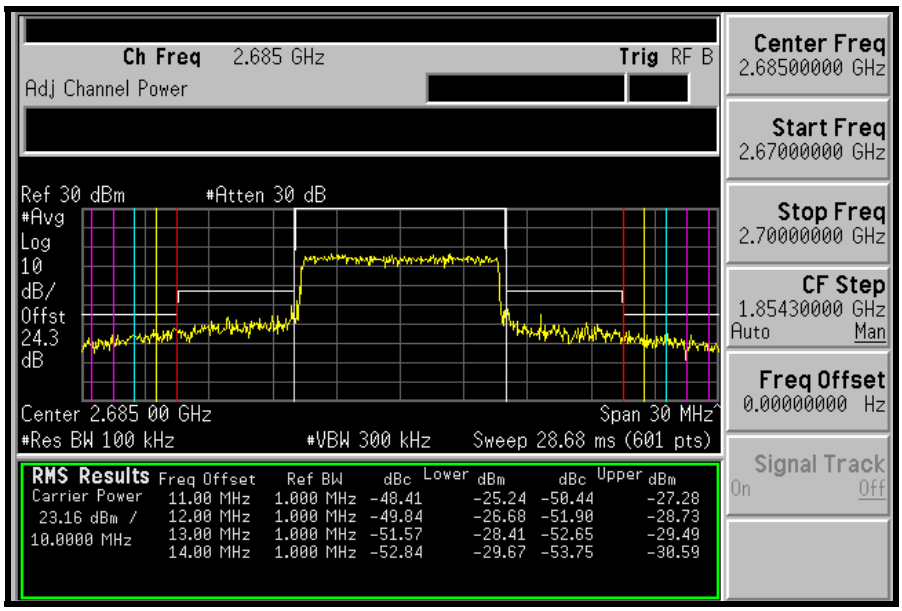
MIDDLE CHANNEL





HIGH CHANNEL





4.5 CONDUCTED SPURIOUS EMISSIONS

4.5.1 LIMITS OF CONDUCTED SPURIOUS EMISSIONS MEASUREMENT

In the FCC 27.53(m)(4), On any frequency outside a licensee's frequency block, the power of any emission shall be attenuated below the transmitter power (P) by at least 55 +10 log (P)dB. The limit of emission equal to –25dBm.

4.5.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
Agilent E6651A	E6651A	MY48320107	Aug. 11, 2009	Aug. 10, 2010
Spectrum Analyzer Agilent	E4446A	MY44360128	Feb. 23, 2010	Feb. 22, 2011
* Wainwright Instruments High Pass Filter	WHK3.1/18G-10 SS	ZZ-010091	NA	NA
* JFW 20dB attenuation	50HF-020-SMA	NA	NA	NA
* Suhner RF cable	Sucoflex104	204850/4	NA	NA

NOTE: 1. The calibration interval of the above test instruments is 12 months. And the calibrations are traceable to NML/ROC and NIST/USA.

2. "*" = These equipments are used for the final measurement.

4.5.3 TEST PROCEDURE

a. All measurements were done at 3 channels: low, middle and high operational frequency range.

b. When the spectrum scanned from 30MHz to 27GHz, it shall be connected to the 20dB pad attenuated the carried frequency. The spectrum set RB = 1MHz, VB = 3MHz.

4.5.4 TEST SETUP

Same as 4.3.4

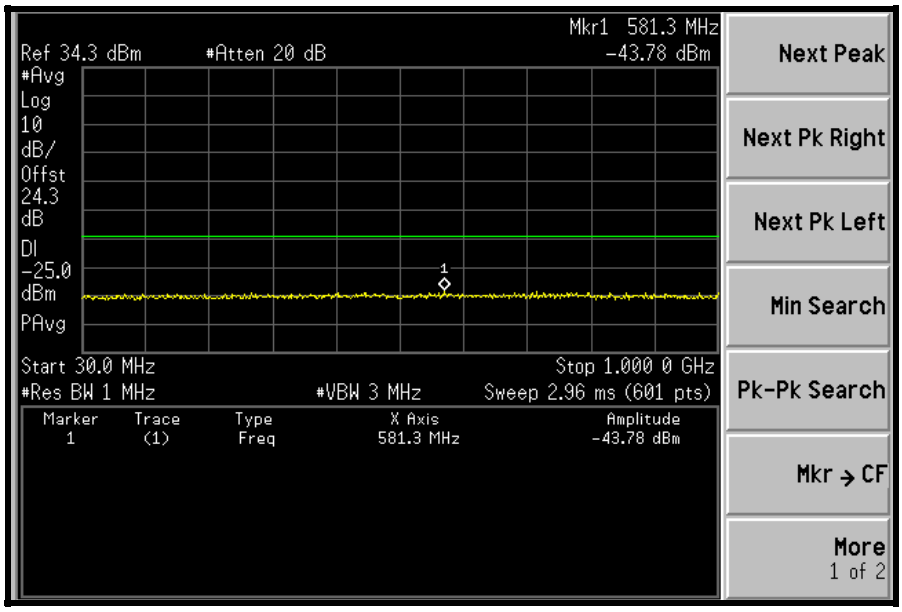
4.5.5 EUT OPERATING CONDITIONS

Same as 4.1.5

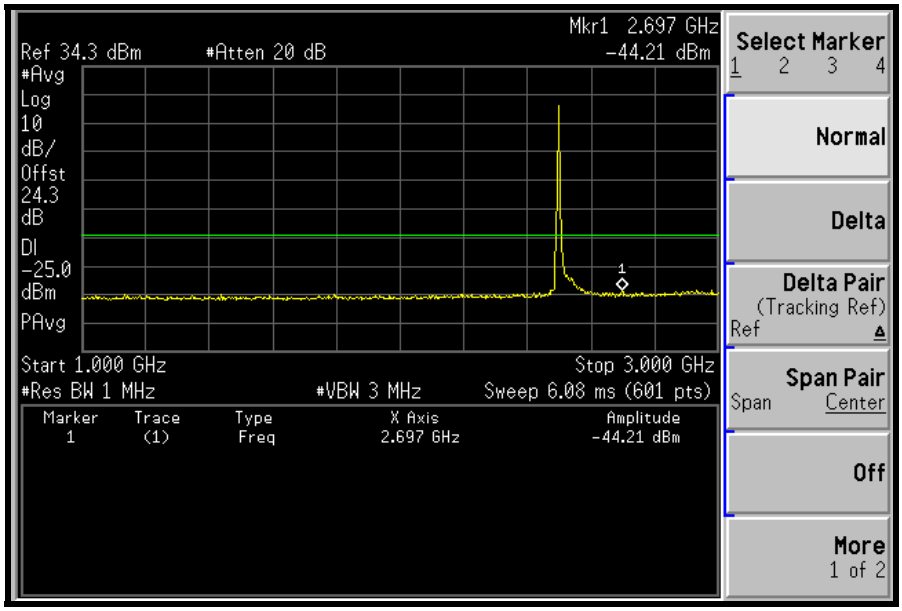
4.5.6 TEST RESULTS

CHANNEL BANDWIDTH: 5MHz

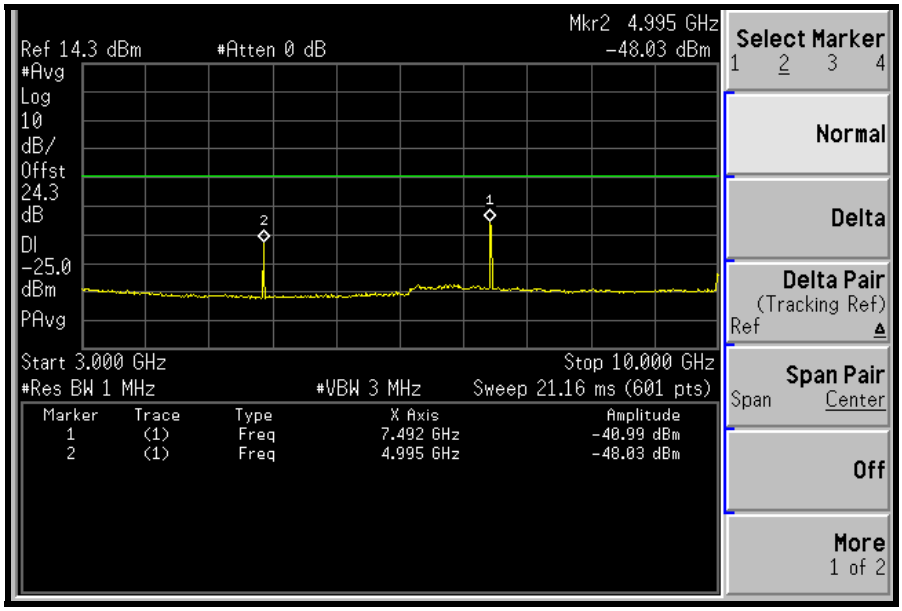
LOW CHANNEL: 30MHz ~ 1GHz:



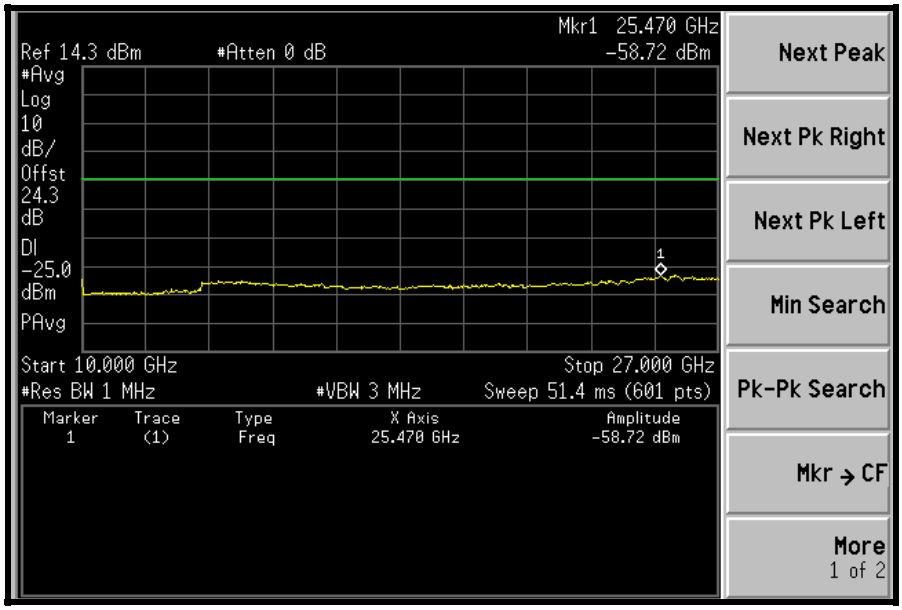
1GHz ~ 3GHz:



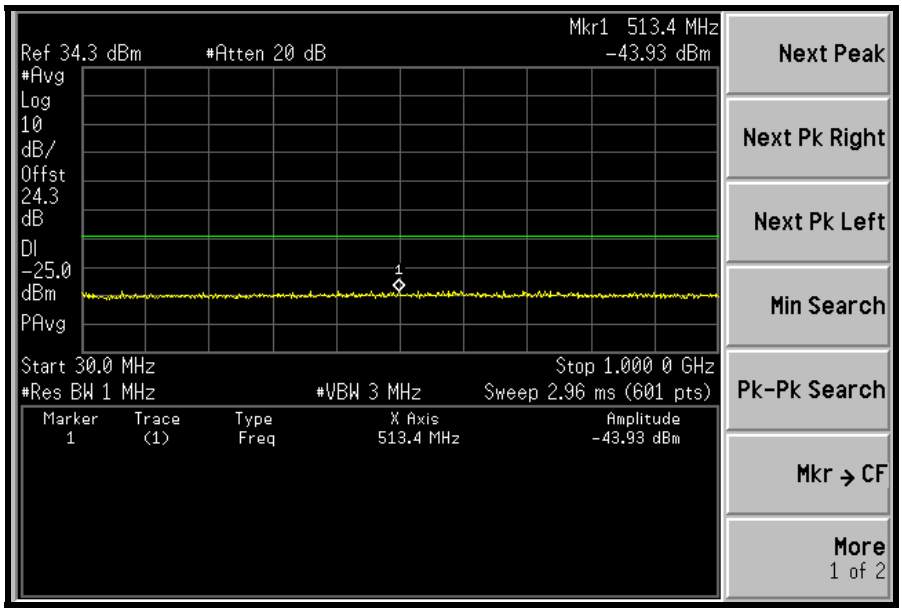
3GHz ~ 10GHz:



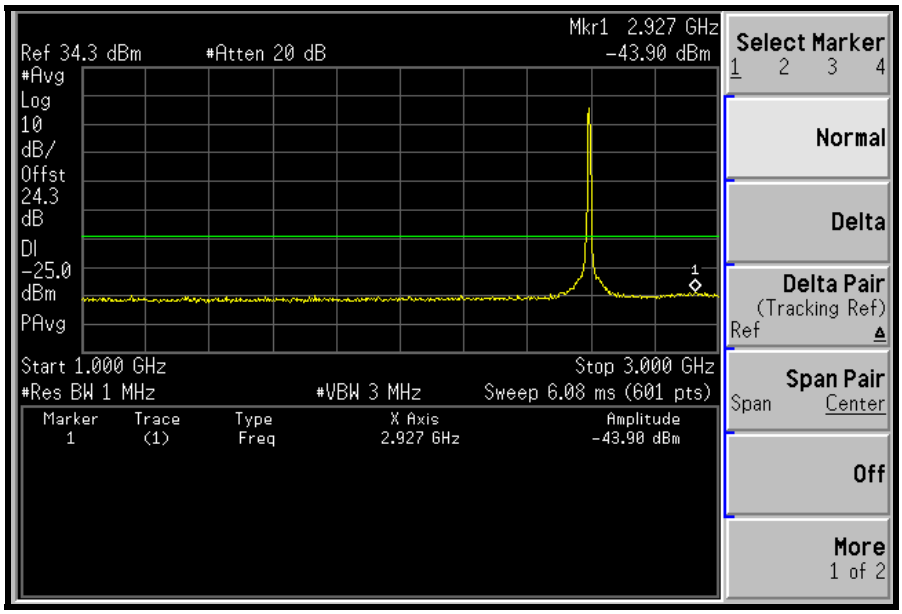
10GHz ~ 27GHz:



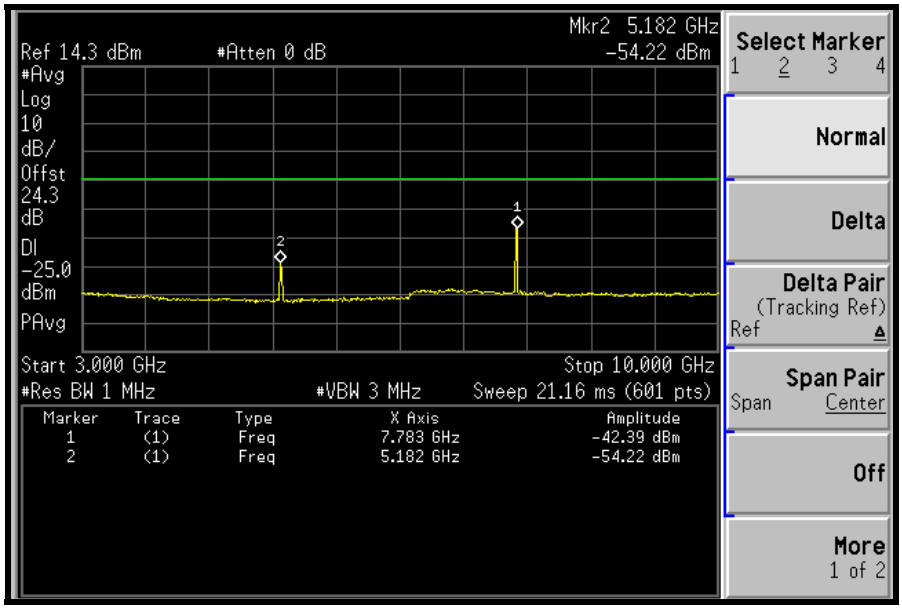
MIDDLE CHANNEL: 30MHz ~ 1GHz:



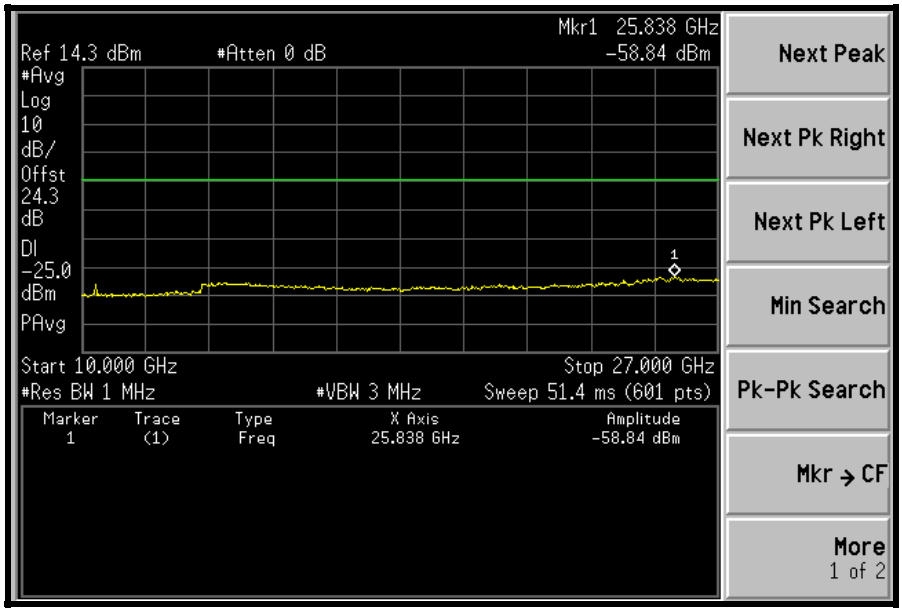
1GHz ~ 3GHz:



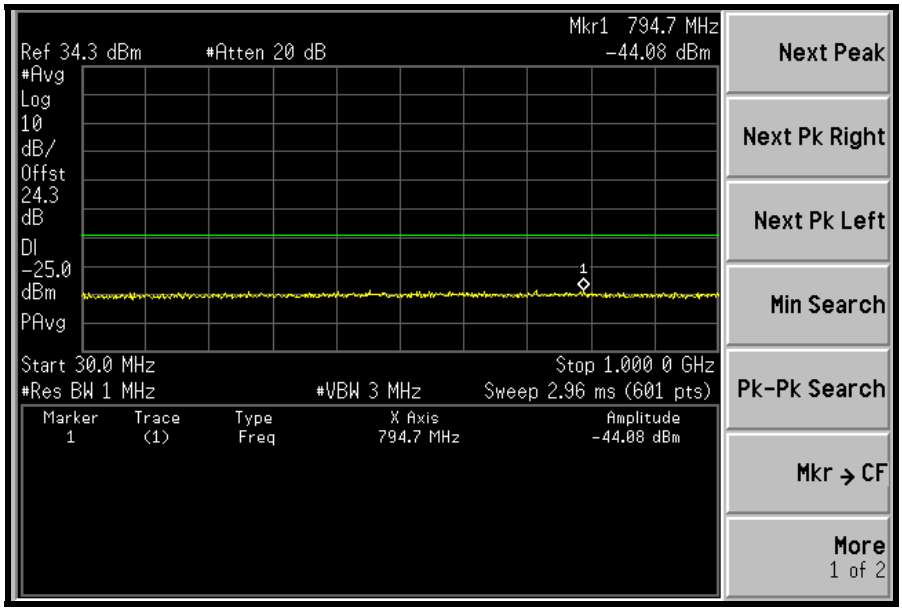
3GHz ~ 10GHz:



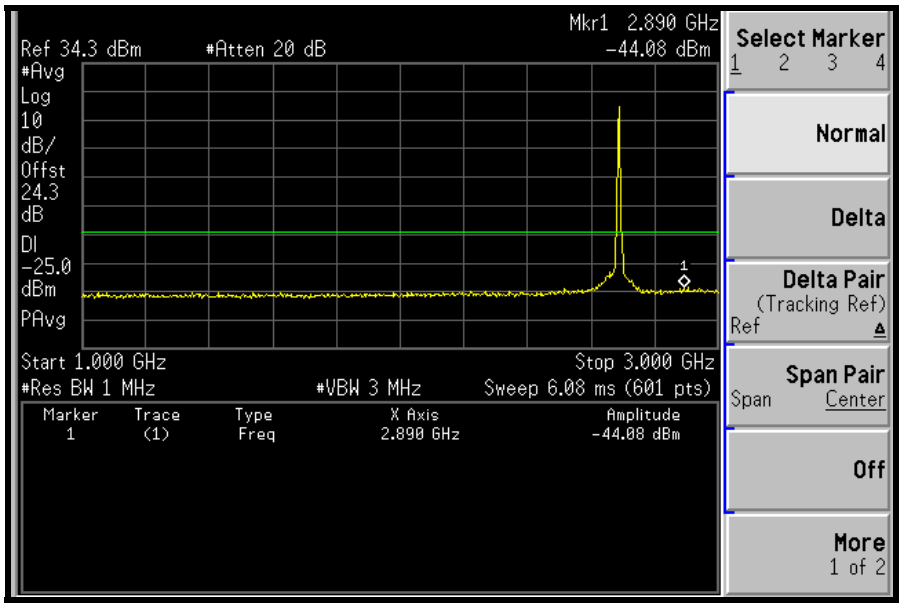
10GHz ~ 27GHz:



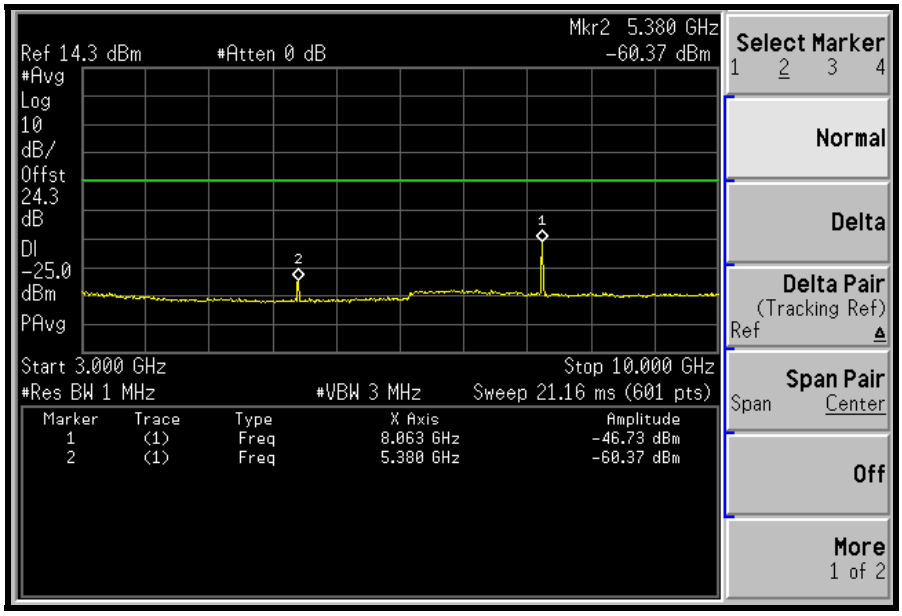
HIGH CHANNEL: 30MHz ~ 1GHz:



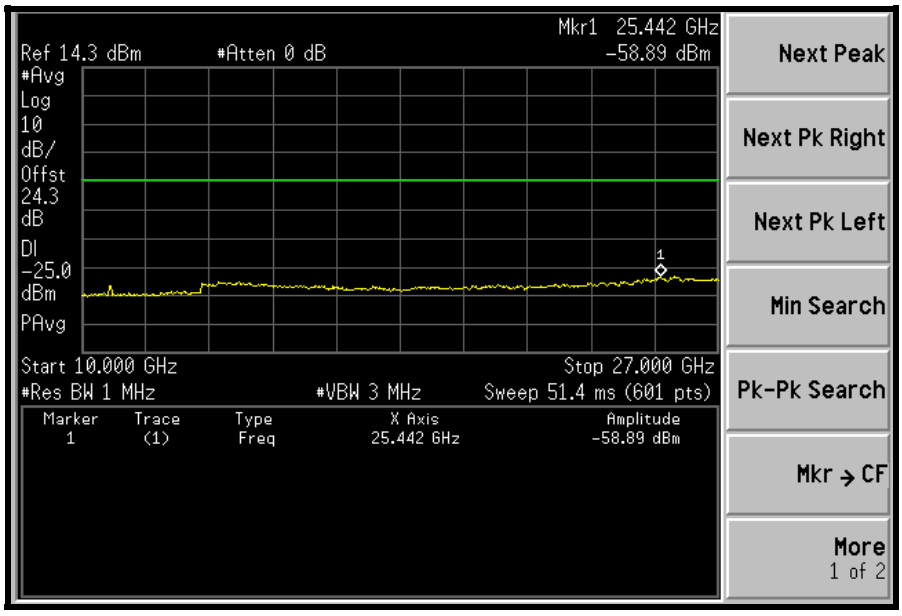
1GHz ~ 3GHz:



3GHz ~ 10GHz:

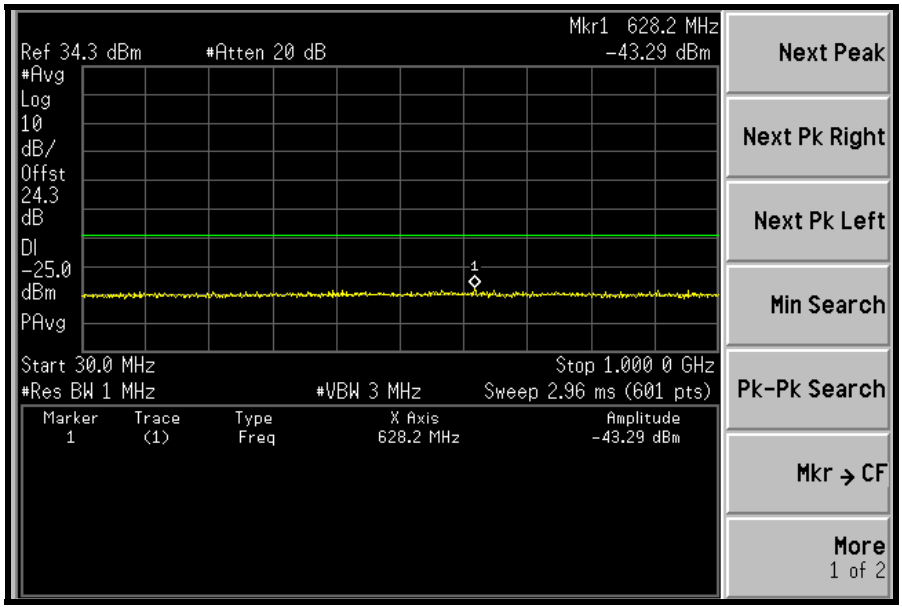


10GHz ~ 27GHz:

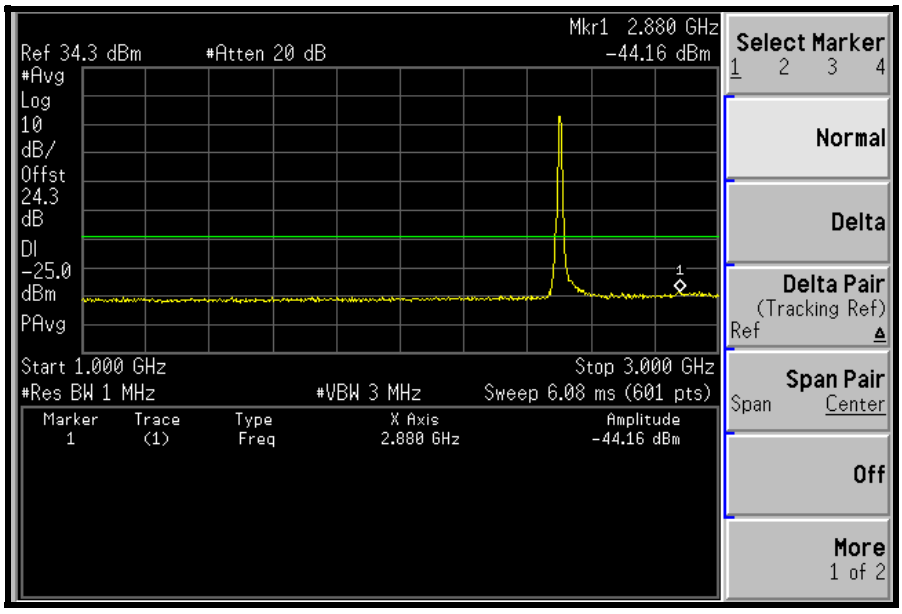


CHANNEL BANDWIDTH: 10MHz

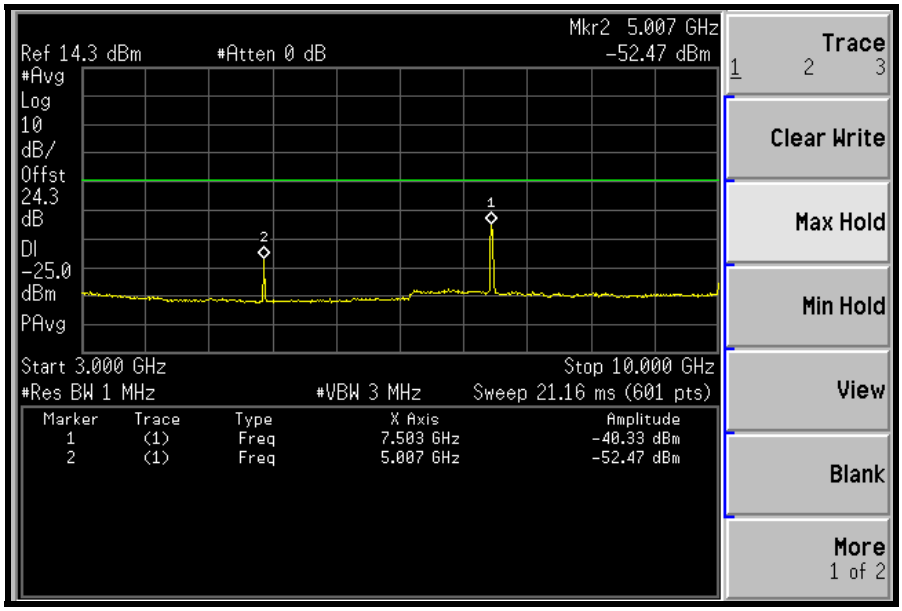
LOW CHANNEL: 30MHz ~ 1GHz:



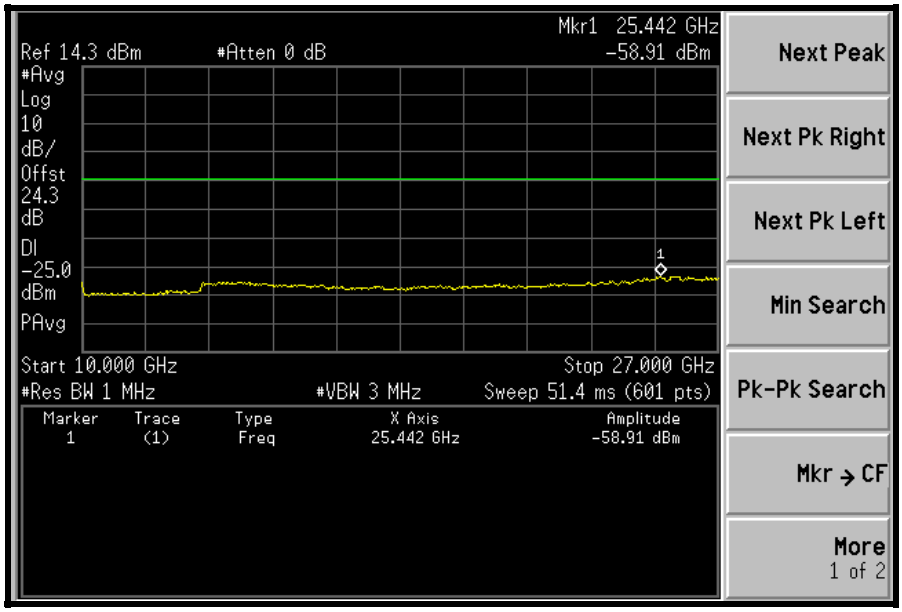
1GHz ~ 3GHz:



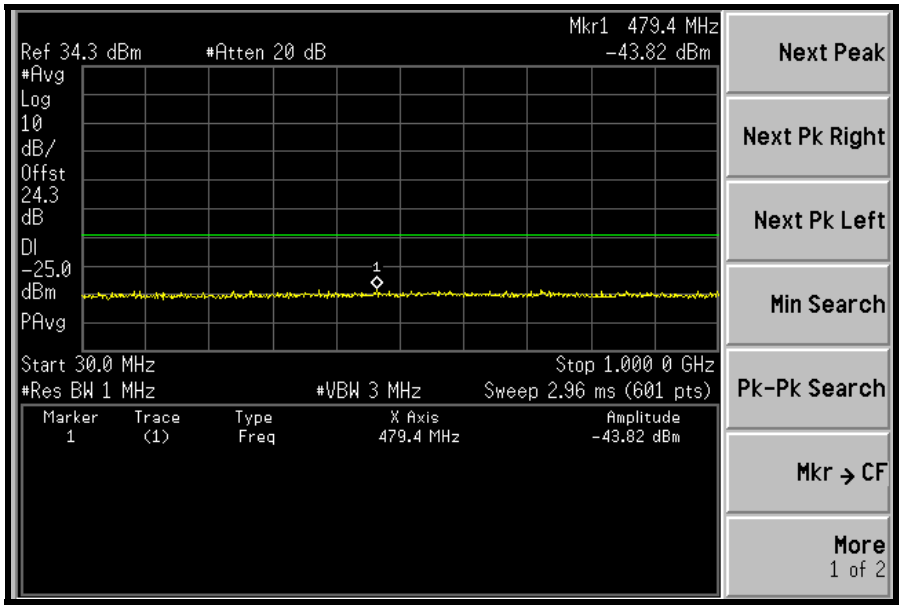
3GHz ~ 10GHz:



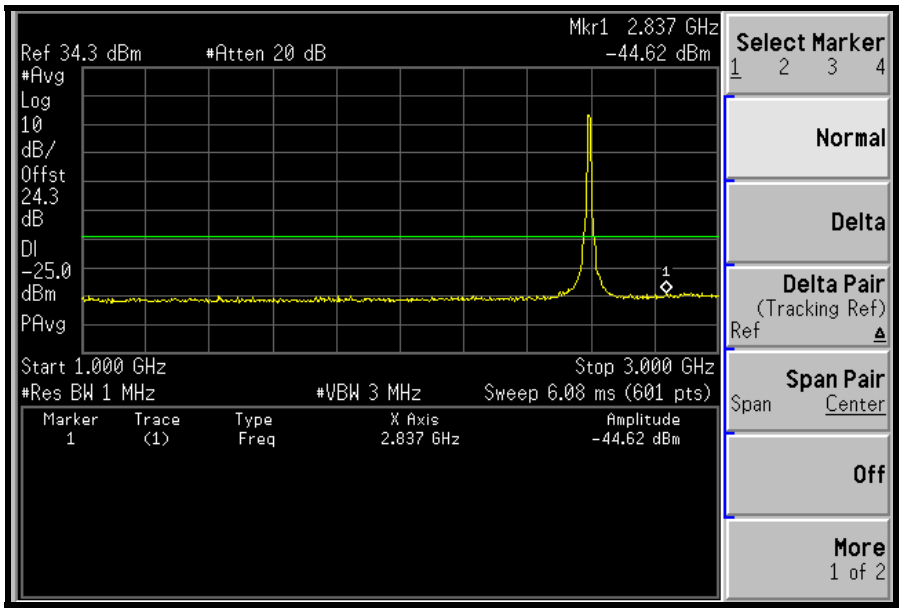
10GHz ~ 27GHz:



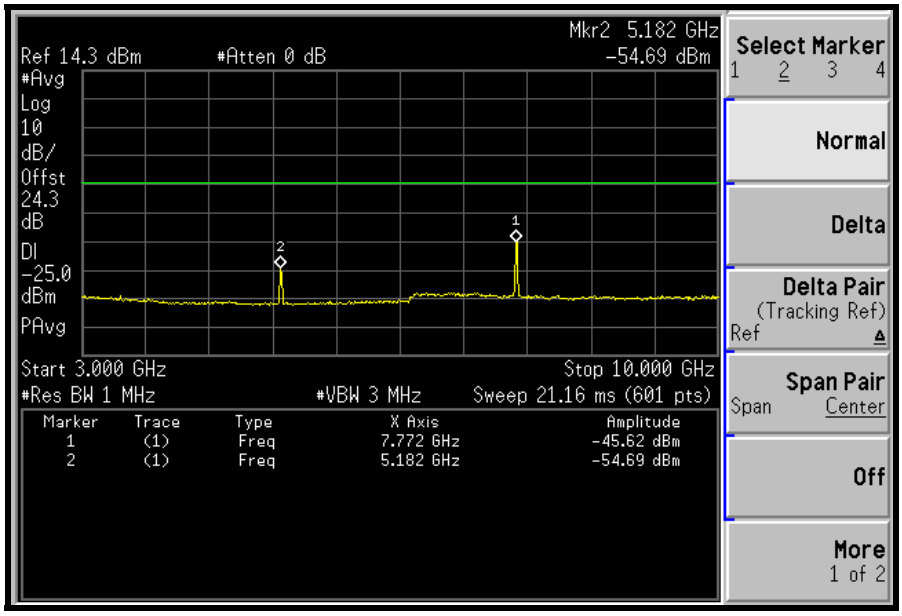
MIDDLE CHANNEL: 30MHz ~ 1GHz:



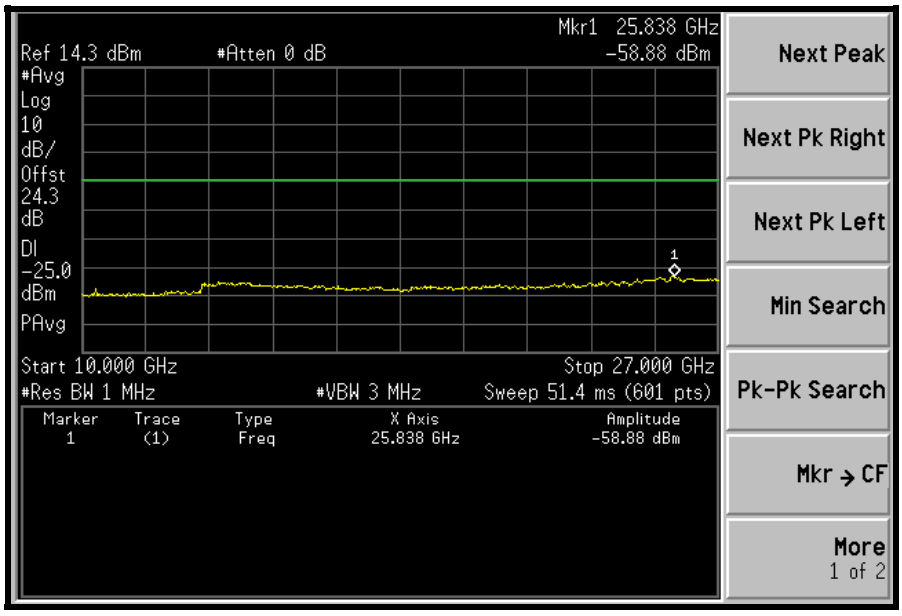
1GHz ~ 3GHz:



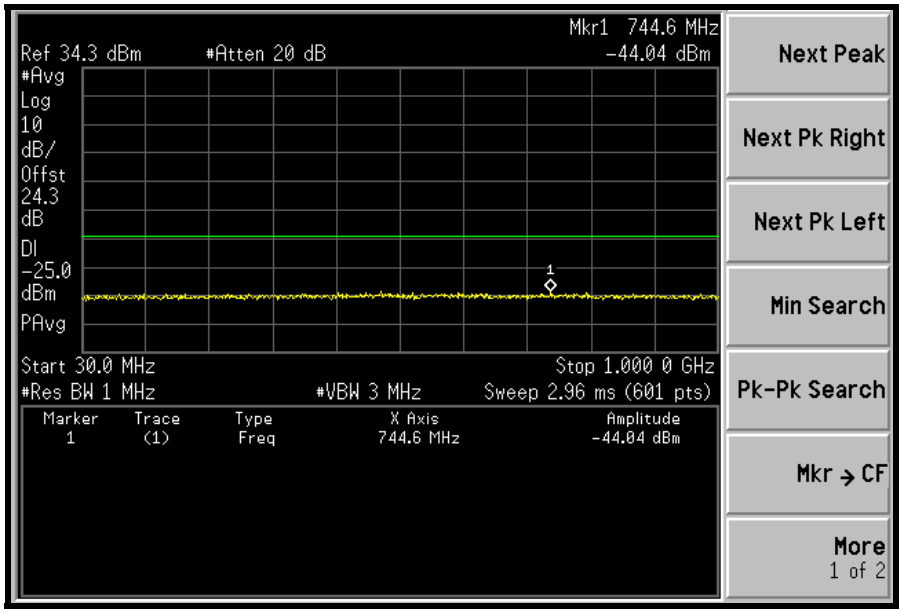
3GHz ~ 10GHz:



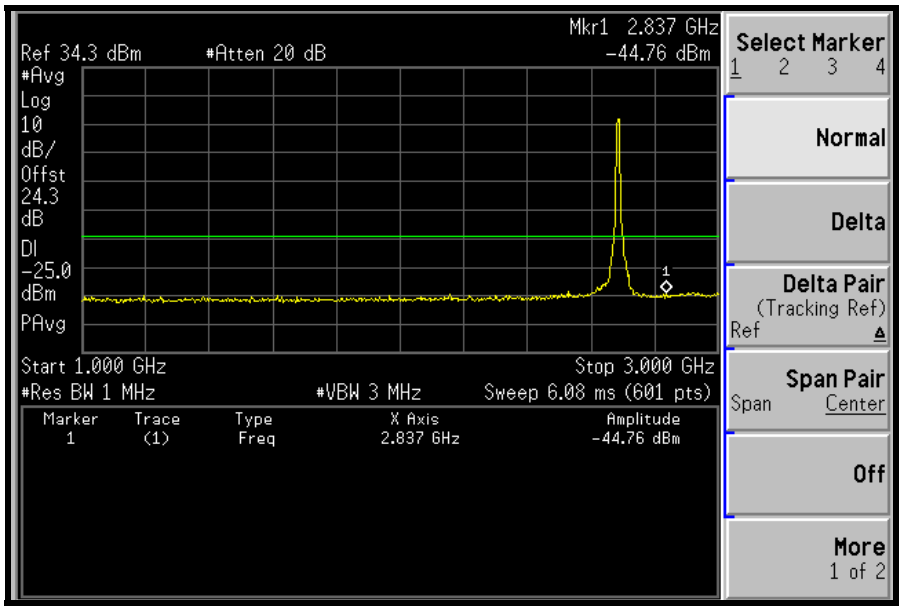
10GHz ~ 27GHz:



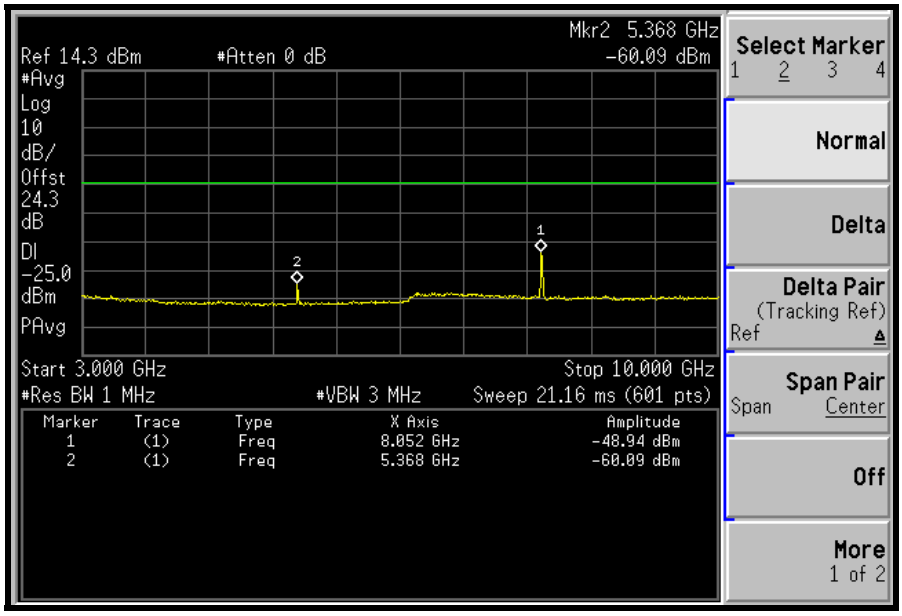
HIGH CHANNEL: 30MHz ~ 1GHz:



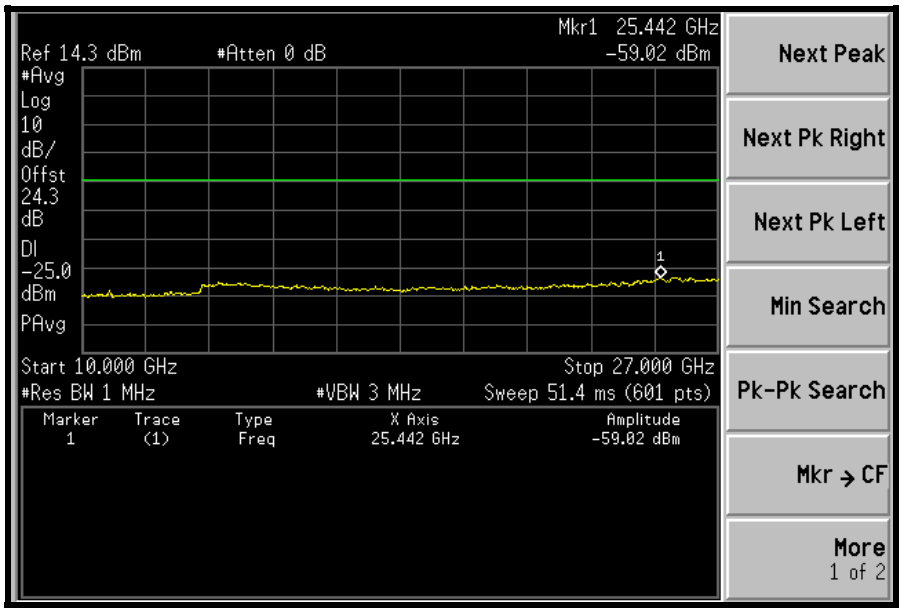
1GHz ~ 3GHz:



3GHz ~ 10GHz:



10GHz ~ 27GHz:



4.6 RADIATED EMISSION MEASUREMENT (BELOW 1GHz)

4.6.1 LIMITS OF RADIATED EMISSION MEASUREMENT

In the FCC 27.53(m) (4), On any frequency outside a licensee's frequency block the power of any emission shall be attenuated below the transmitter power (P) by at least 55 +10 log (P)dB. The limit of emission equal to –25dBm.

4.6.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
Test Receiver ROHDE & SCHWARZ	ESI7	838496/016	Dec. 29, 2009	Dec. 28, 2010
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100041	May 13, 2009	May 12, 2010
BILOG Antenna SCHWARZBECK	VULB9168	9168-155	Apr. 29, 2009	Apr. 28, 2010
HORN Antenna SCHWARZBECK	BBHA 9120D	9120D-209	Jul. 01, 2009	Jun. 30, 2010
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA9170242	Dec. 25, 2009	Dec. 24, 2010
Preamplifier Agilent	8449B	3008A01961	Nov. 04, 2009	Nov. 03, 2010
Preamplifier Agilent	8447D	2944A10738	Nov. 04, 2009	Nov. 03, 2010
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	274041/4	Aug. 28, 2009	Aug. 27, 2010
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	283397/4	Aug. 28, 2009	Aug. 27, 2010
Software ADT.	ADT_Radiated_ V7.6.15.9.2	NA	NA	NA
Antenna Tower inn-co GmbH	MA 4000	010303	NA	NA
Antenna Tower Controller inn-co GmbH	CO2000	019303	NA	NA
Turn Table ADT.	TT100.	TT93021704	NA	NA
Turn Table Controller ADT.	SC100.	SC93021704	NA	NA

NOTE: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

2. The test was performed in HwaYa Chamber 4.

3. The horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.

4. The FCC Site Registration No. is 988962.

5. The IC Site Registration No. is IC7450F-4.

4.6.3 TEST PROCEDURES

a. The power was measured with R&S Spectrum Analyzer. All measurements were done at 3 channels (low, middle and high channel of operational frequency range.)

b. Substitution method is used for E.I.R.P measurement. In the semi-anechoic chamber, EUT placed on the 0.8m height of Turn Table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1m to 4m to find the maximum polar radiated power. The “Read Value” is the spectrum reading the maximum power value.

c. The substitution antenna is substituted for EUT at the same position and signals generator export the CW signal to the substitution antenna via a TX cable. Rotated the Turn Table and moved receiving antenna to find the maximum radiation power. Adjust output power level of S.G to get a Value of spectrum reading equal to “Read Value “ of step b. Record the power level of S.G

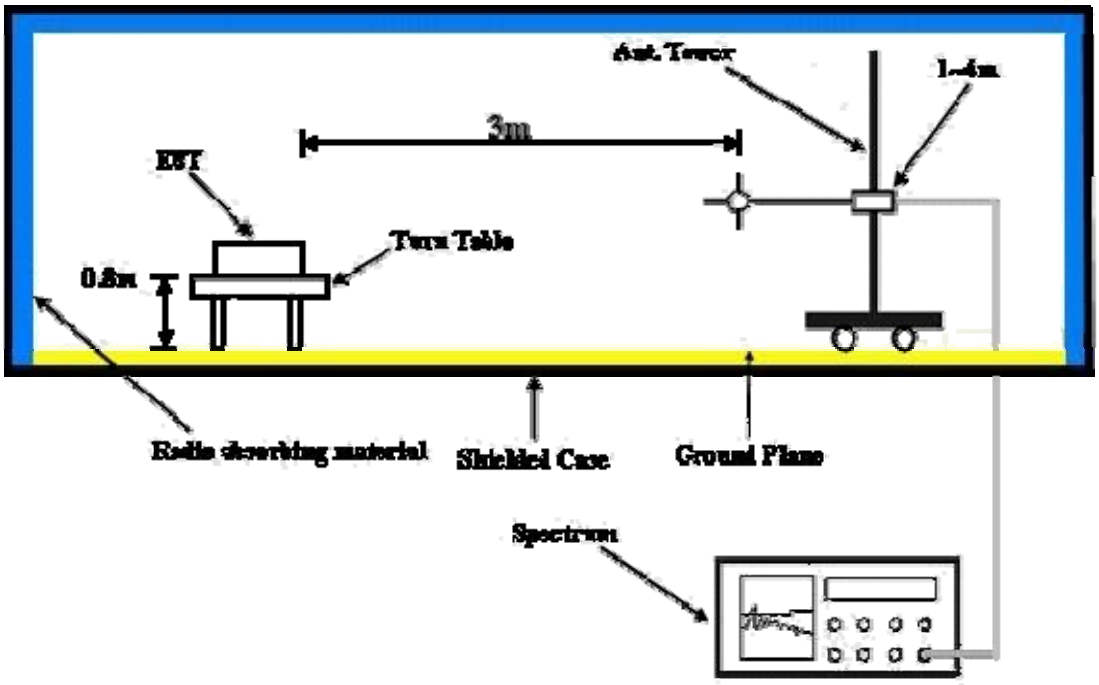
d. EIRP = Output power level of S.G – TX cable loss + Antenna gain of substitution antenna.

NOTE: The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1MHz/3MHz

4.6.4 DEVIATION FROM TEST STANDARD

No deviation

4.6.5 TEST SETUP



For the actual test configuration, please refer to the related item – Photographs of the Test Configuration.

4.6.6 EUT OPERATING CONDITIONS

Same as 4.1.5

4.6.7 TEST RESULTS

MODE	Low channel	FREQUENCY RANGE	Below 1000MHz
INPUT POWER	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	25degoC, 66%RH 991hPa
CHANNEL BANDWIDTH	5MHz	TESTED BY	Dean Wang

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3m						
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV)	LIMIT (dBm)	S.G POWER VALUE (dBm)	CORRECTION FACTOR (dB)	POWER VALUE (dBm)
1	70.82	46.9	-25.0	-40.0	-7.7	-47.7
2	111.64	44.6	-25.0	-41.8	-7.7	-49.5
3	138.86	47.8	-25.0	-38.9	-7.9	-46.8
4	173.85	46.7	-25.0	-39.6	-7.8	-47.5
5	216.61	55.4	-25.0	-30.8	-7.9	-38.7
6	228.28	51.1	-25.0	-35.1	-7.9	-43.0
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3m						
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBm)	S.G POWER VALUE (dBm)	CORRECTION FACTOR (dB)	POWER VALUE (dBm)
1	39.72	54.2	-25.0	-32.7	-7.7	-40.4
2	68.88	48.6	-25.0	-38.7	-7.9	-46.6
3	107.76	42.4	-25.0	-43.6	-7.9	-51.5
4	140.80	43.5	-25.0	-42.6	-7.9	-50.5
5	203.01	46.3	-25.0	-40.2	-7.9	-48.1
6	228.28	44.4	-25.0	-41.9	-7.9	-49.8

NOTE 1: Power Value (dBum) = S.G Power Value (dBm) + Correction Factor (dB).

NOTE 2: Correction Factor = Antenna gain of substitution antenna- tx cable loss

MODE	Low channel	**FREQUENCY RANGE**	Below 1000MHz
INPUT POWER	120Vac, 60Hz	**ENVIRONMENTAL CONDITIONS**	25degoC, 66%RH 991hPa
CHANNEL BANDWIDTH	10MHz	**TESTED BY**	Dean Wang

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3m						
NO.	**FREQ. (MHz)**	**EMISSION LEVEL (dBuV)**	**LIMIT (dBm)**	**S.G POWER VALUE (dBm)**	**CORRECTION FACTOR (dB)**	**POWER VALUE (dBm)**
1	113.59	41.8	-25.0	-45.4	-7.7	-53.1
2	158.30	43.6	-25.0	-42.7	-7.7	-50.4
3	173.85	43.9	-25.0	-42.3	-7.9	-50.2
4	218.56	53.3	-25.0	-33.4	-7.9	-41.3
5	228.28	47.7	-25.0	-39.2	-7.9	-47.1
6	261.32	41.8	-25.0	-44.5	-7.9	-52.4
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3m						
NO.	**FREQ. (MHz)**	**EMISSION LEVEL (dBuV/m)**	**LIMIT (dBm)**	**S.G POWER VALUE (dBm)**	**CORRECTION FACTOR (dB)**	**POWER VALUE (dBm)**
1	33.89	48.0	-25.0	-38.6	-7.7	-46.3
2	74.71	39.3	-25.0	-47.0	-7.9	-54.9
3	103.87	44.4	-25.0	-42.3	-7.9	-50.2
4	173.85	37.5	-25.0	-49.1	-7.9	-57.0
5	218.56	41.9	-25.0	-44.6	-7.9	-52.5
6	228.28	40.5	-25.0	-46.5	-7.9	-54.4

NOTE 1: Power Value (dBum) = S.G Power Value (dBm) + Correction Factor (dB).

NOTE 2: Correction Factor = Antenna gain of substitution antenna- tx cable loss

4.7 RADIATED EMISSION MEASUREMENT (ABOVE 1GHz)

4.7.1 LIMITS OF RADIATED EMISSION MEASUREMENT

In the FCC 27.53(m) (4), On any frequency outside a licensee's frequency block, the power of any emission shall be attenuated below the transmitter power (P) by at least 55 +10 log (P)dB. The limit of emission equal to –25dBm.

4.7.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
Test Receiver ROHDE & SCHWARZ	ESI7	838496/016	Dec. 29, 2009	Dec. 28, 2010
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100041	May 13, 2009	May 12, 2010
BILOG Antenna SCHWARZBECK	VULB9168	9168-155	Apr. 29, 2009	Apr. 28, 2010
HORN Antenna SCHWARZBECK	BBHA 9120D	9120D-209	Jul. 01, 2009	Jun. 30, 2010
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA9170242	Dec. 25, 2009	Dec. 24, 2010
Preamplifier Agilent	8449B	3008A01961	Nov. 04, 2009	Nov. 03, 2010
Preamplifier Agilent	8447D	2944A10738	Nov. 04, 2009	Nov. 03, 2010
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	274041/4	Aug. 28, 2009	Aug. 27, 2010
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	283397/4	Aug. 28, 2009	Aug. 27, 2010
Software ADT.	ADT_Radiated_ V7.6.15.9.2	NA	NA	NA
Antenna Tower inn-co GmbH	MA 4000	010303	NA	NA
Antenna Tower Controller inn-co GmbH	CO2000	019303	NA	NA
Turn Table ADT.	TT100.	TT93021704	NA	NA
Turn Table Controller ADT.	SC100.	SC93021704	NA	NA

NOTE: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

2. The test was performed in HwaYa Chamber 4.

3. The horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.

4. The FCC Site Registration No. is 988962.

5. The IC Site Registration No. is IC7450F-4.

4.7.3 TEST PROCEDURES

a. The power was measured with R&S Spectrum Analyzer. All measurements were done at 3 channels (low, middle and high channel of operational frequency range.)

b. Substitution method is used for E.I.R.P measurement. In the semi-anechoic chamber, EUT placed on the 0.8m height of Turn Table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1m to 4m to find the maximum polar radiated power. The “Read Value” is the spectrum reading the maximum power value.

c. The substitution antenna is substituted for EUT at the same position and signals generator export the CW signal to the substitution antenna via a TX cable. Rotated the Turn Table and moved receiving antenna to find the maximum radiation power. Adjust output power level of S.G to get a Value of spectrum reading equal to “Read Value “ of step b. Record the power level of S.G

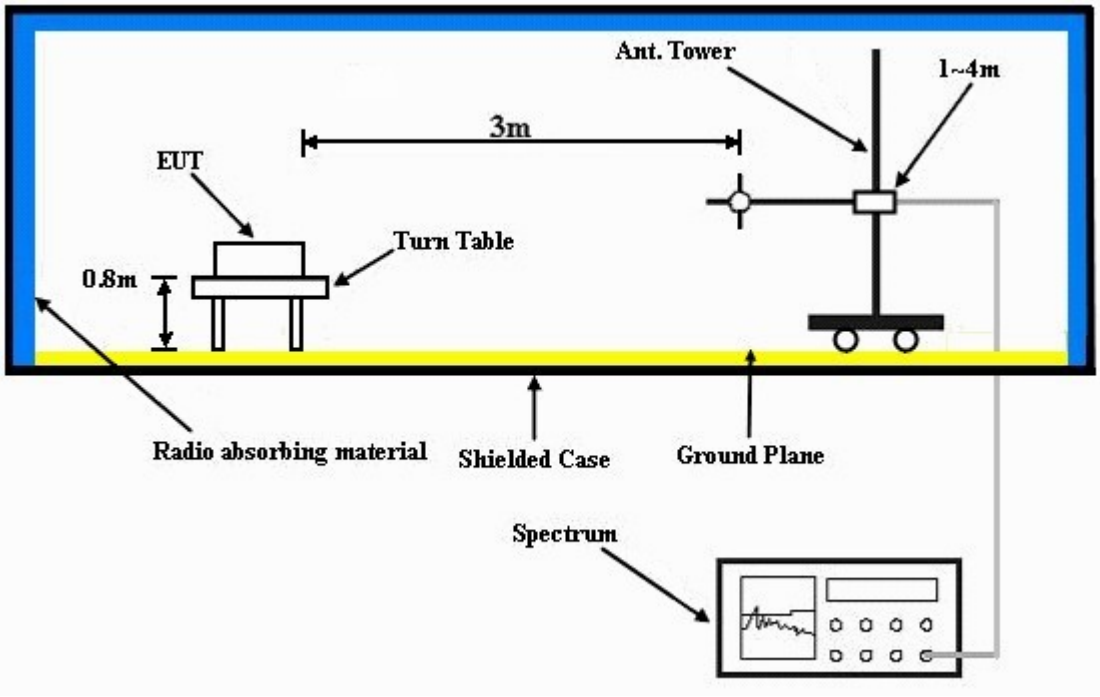
d. EIRP = Output power level of S.G – TX cable loss + Antenna gain of substitution antenna.

NOTE: The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1MHz/3MHz

4.7.4 DEVIATION FROM TEST STANDARD

No deviation

4.7.5 TEST SETUP



For the actual test configuration, please refer to the related item – Photographs of the Test Configuration.

4.7.6 EUT OPERATING CONDITIONS

Same as 4.6.6.

4.7.7 TEST RESULTS

MODE	Low channel	FREQUENCY RANGE	Above 1000MHz
INPUT POWER	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	25degoC, 66%RH 991hPa
CHANNEL BANDWIDTH	5MHz	TESTED BY	Dean Wang

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3m						
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV)	LIMIT (dBm)	S.G POWER VALUE (dBm)	CORRECTION FACTOR (dB)	POWER VALUE (dBm)
1	4997.0	45.6	-25.0	-57.8	9.5	-48.3
2	7495.5	46.9	-25.0	-55.3	7.8	-47.5
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3m						
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV)	LIMIT (dBm)	S.G POWER VALUE (dBm)	CORRECTION FACTOR (dB)	POWER VALUE (dBm)
1	4997.0	47.3	-25.0	-56.8	9.5	-47.3
2	7495.5	49.9	-25.0	-52.3	7.8	-44.5

NOTE 1: Power Value (dBum) = S.G Power Value (dBm) + Correction Factor (dB).

NOTE 2: Correction Factor = Antenna gain of substitution antenna- tx cable loss

MODE	Middle channel	**FREQUENCY RANGE**	Above 1000MHz
INPUT POWER	120Vac, 60Hz	**ENVIRONMENTAL CONDITIONS**	25degoC, 66%RH 991hPa
CHANNEL BANDWIDTH	5MHz	**TESTED BY**	Dean Wang

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3m						
NO.	**FREQ. (MHz)**	**EMISSION LEVEL (dBuV)**	**LIMIT (dBm)**	**S.G POWER VALUE (dBm)**	**CORRECTION FACTOR (dB)**	**POWER VALUE (dBm)**
1	5186.0	46.2	-25.0	-57.5	9.7	-47.8
2	7779.0	46.6	-25.0	-56.1	7.8	-48.3
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3m						
NO.	**FREQ. (MHz)**	**EMISSION LEVEL (dBuV)**	**LIMIT (dBm)**	**S.G POWER VALUE (dBm)**	**CORRECTION FACTOR (dB)**	**POWER VALUE (dBm)**
1	5186.0	50.4	-25.0	-53.8	9.7	-44.1
2	7779.0	49.6	-25.0	-52.6	7.8	-44.8

NOTE 1: Power Value (dBum) = S.G Power Value (dBm) + Correction Factor (dB).

NOTE 2: Correction Factor = Antenna gain of substitution antenna- tx cable loss

MODE	High channel	**FREQUENCY RANGE**	Above 1000MHz
INPUT POWER	120Vac, 60Hz	**ENVIRONMENTAL CONDITIONS**	25degoC, 66%RH 991hPa
CHANNEL BANDWIDTH	5MHz	**TESTED BY**	Dean Wang

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3m						
NO.	**FREQ. (MHz)**	**EMISSION LEVEL (dBuV)**	**LIMIT (dBm)**	**S.G POWER VALUE (dBm)**	**CORRECTION FACTOR (dB)**	**POWER VALUE (dBm)**
1	5375.0	47.3	-25.0	-57.0	9.7	-47.3
2	8062.5	49.5	-25.0	-52.6	7.8	-44.8
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3m						
NO.	**FREQ. (MHz)**	**EMISSION LEVEL (dBuV)**	**LIMIT (dBm)**	**S.G POWER VALUE (dBm)**	**CORRECTION FACTOR (dB)**	**POWER VALUE (dBm)**
1	**5375.0**	**53.4**	**-25.0**	**-51.0**	**9.7**	**-41.3**
2	8062.5	52.6	-25.0	-50.1	7.8	-42.3

NOTE 1: Power Value (dBum) = S.G Power Value (dBm) + Correction Factor (dB).

NOTE 2: Correction Factor = Antenna gain of substitution antenna- tx cable loss

MODE	Low channel	FREQUENCY RANGE	Above 1000MHz
INPUT POWER	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	25degoC, 66%RH 991hPa
CHANNEL BANDWIDTH	10MHz	TESTED BY	Dean Wang

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3m						
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV)	LIMIT (dBm)	S.G POWER VALUE (dBm)	CORRECTION FACTOR (dB)	POWER VALUE (dBm)
1	5002.0	42.3	-25.0	-61.7	9.5	-52.2
2	7503.0	45.8	-25.0	-56.4	7.8	-48.6
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3m						
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV)	LIMIT (dBm)	S.G POWER VALUE (dBm)	CORRECTION FACTOR (dB)	POWER VALUE (dBm)
1	5002.0	48.4	-25.0	-55.3	9.5	-45.8
2	7503.0	47.1	-25.0	-54.8	7.8	-47.0

NOTE 1: Power Value (dBum) = S.G Power Value (dBm) + Correction Factor (dB).

NOTE 2: Correction Factor = Antenna gain of substitution antenna- tx cable loss

MODE	Middle channel	**FREQUENCY RANGE**	Above 1000MHz
INPUT POWER	120Vac, 60Hz	**ENVIRONMENTAL CONDITIONS**	25degoC, 66%RH 991hPa
CHANNEL BANDWIDTH	10MHz	**TESTED BY**	Dean Wang

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3m						
NO.	**FREQ. (MHz)**	**EMISSION LEVEL (dBuV)**	**LIMIT (dBm)**	**S.G POWER VALUE (dBm)**	**CORRECTION FACTOR (dB)**	**POWER VALUE (dBm)**
1	5200.0	43.1	-25.0	-60.9	9.7	-51.2
2	7800.0	45.8	-25.0	-56.0	7.8	-48.2
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3m						
NO.	**FREQ. (MHz)**	**EMISSION LEVEL (dBuV)**	**LIMIT (dBm)**	**S.G POWER VALUE (dBm)**	**CORRECTION FACTOR (dB)**	**POWER VALUE (dBm)**
1	5200.0	48.3	-25.0	-56.2	9.7	-46.5
2	7800.0	47.6	-25.0	-55.1	7.8	-47.3

NOTE 1: Power Value (dBum) = S.G Power Value (dBm) + Correction Factor (dB).

NOTE 2: Correction Factor = Antenna gain of substitution antenna- tx cable loss

MODE	High channel	**FREQUENCY RANGE**	Above 1000MHz
INPUT POWER	120Vac, 60Hz	**ENVIRONMENTAL CONDITIONS**	25degoC, 66%RH 991hPa
CHANNEL BANDWIDTH	10MHz	**TESTED BY**	Dean Wang

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3m						
NO.	**FREQ. (MHz)**	**EMISSION LEVEL (dBuV)**	**LIMIT (dBm)**	**S.G POWER VALUE (dBm)**	**CORRECTION FACTOR (dB)**	**POWER VALUE (dBm)**
1	5370.0	44.8	-25.0	-59.2	9.7	-49.5
2	8055.0	46.9	-25.0	-54.7	7.8	-46.9
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3m						
NO.	**FREQ. (MHz)**	**EMISSION LEVEL (dBuV)**	**LIMIT (dBm)**	**S.G POWER VALUE (dBm)**	**CORRECTION FACTOR (dB)**	**POWER VALUE (dBm)**
1	5370.0	50.4	-25.0	-54.1	9.7	-44.4
2	8055.0	48.8	-25.0	-53.7	7.8	-45.9

NOTE 1: Power Value (dBum) = S.G Power Value (dBm) + Correction Factor (dB).

NOTE 2: Correction Factor = Antenna gain of substitution antenna- tx cable loss

5 PHOTOGRAPHS OF THE TEST CONFIGURATION

Please refer to the attached file (Test Setup Photo).

6 INFORMATION ON THE TESTING LABORATORIES

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are accredited and approved according to ISO/IEC 17025.

Copies of accreditation certificates of our laboratories obtained from approval agencies can be downloaded from our web site: www.adt.com.tw/index.5/phtml. If you have any comments, please feel free to contact us at the following:

Linko EMC/RF Lab:
Tel: 886-2-26052180
Fax: 886-2-26051924

Hsin Chu EMC/RF Lab:
Tel: 886-3-5935343
Fax: 886-3-5935342

Hwa Ya EMC/RF/Safety/Telecom Lab:
Tel: 886-3-3183232
Fax: 886-3-3185050

Web Site: www.adt.com.tw

The address and road map of all our labs can be found in our web site also.

---END---