FCC TEST REPORT

REPORT NO.: RF110921C09

MODEL NO.: DVDOAR-1

FCC ID: PQP-SPLDR1

RECEIVED: Sep. 21, 2011

TESTED: Feb. 14 to 21, 2012

ISSUED: May 16, 2012

APPLICANT: Prime Electronics & Satellitics inc.

ADDRESS: 69, Tung Yuan Rd., Chung Li Industrial Park, Chung Li City, Taoyuan Taiwan, R.O.C

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

LAB ADDRESS : No. 81-1, Lu Liao Keng, 9th Ling,Wu Lung Tsuen, Chiung Lin Hsiang, Hsin Chu Hsien 307, Taiwan, R.O.C

TEST LOCATION (1): No. 81-1, Lu Liao Keng, 9th Ling,Wu Lung Tsuen, Chiung Lin Hsiang, Hsin Chu Hsien 307, Taiwan, R.O.C

TEST LOCATION (2): No. 49, Ln. 206, Wende Rd., Shangshan Tsuen, Chiung Lin Hsiang, Hsin Chu Hsien 307, Taiwan, R.O.C

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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
RF110921C09	Original release	May 16, 2012

1. CERTIFICATION

PRODUCT:	Wireless HD Receiver
BRAND NAME:	DVDO
MODEL NO.:	DVDOAR-1
TEST SAMPLE:	ENGINEERING SAMPLE
APPLICANT:	Prime Electronics & Satellitics inc.
TESTED:	Feb. 14 to 21, 2012
STANDARDS:	FCC Part 15, Subpart C (Section 15.255) ANSI C63.10-2009

The above equipment (Model: DVDOAR-1) 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 : _____ , **DATE:** *May 16, 2012*
(Claire Kuan, Specialist)

APPROVED BY : _____ , **DATE:** *May 16, 2012*
(May Chen, Deputy Manager)

2. SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC Part 15, Subpart C			
Standard Section	**Test Type and Limit**	**Result**	**Remark**
15.207	AC POWER LINE Conducted Emission	PASS	Meet the requirement of limit. Minimum passing margin is -6.19dB at 0.34141MHz
15.255(e)	Occupied Bandwidth	PASS	Meet the requirement of limit.
15.255(b)(1)	Power Density	PASS	Meet the requirement of limit.
15.255(e)	Peak Output Power	PASS	Meet the requirement of limit.
15.255(c)	Spurious Emissions	PASS	Meet the requirement of limit. Minimum passing margin is -2.4dB at 131.61MHz
15.255(f)	Frequency Stability	PASS	Meet the requirement of limit.
15.255(d)	Publicly-accessible Coordination Channel	PASS	Meet the requirement of limit.
15.255(a), (h)	Operation Restriction and Group installation	PASS	Meet the requirement.
15.255(i)	Transmitter Identification	PASS	Meet the requirement.

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:

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

Measurement	Value
Conducted emissions	2.45 dB
Radiated emissions (30MHz-1GHz)	3.81 dB
Radiated emissions (1GHz -18GHz)	2.19 dB
Radiated emissions (18GHz -40GHz)	2.56 dB

3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

PRODUCT	Wireless HD Receiver
MODEL NO.	DVDOAR-1
POWER SUPPLY	DC 5V from power adapter
MODULATION TYPE	BPSK,QPSK,16QAM
MODULATION TECHNOLOGY	OFDM
TRANSFER RATE	LRP-BPSK (20.337Mb/s)
FREQUENCY RANGE	60.32-60.64 GHz / 62.48 - 62.8GHz
MAXIMUM OUTPUT POWER	18.2dBm
ANTENNA TYPE	Please see note
DATA CABLE	HDMI cable (Shielded, 1.5m)
I/O PORTS	Please refer User's manual
ASSOCIATED DEVICES	Power adapter x 1

NOTE:

1. The EUT is a Wireless HD Device. It is operate in 57 to 64GHz band for Wireless Video Audio Network (WVAN).

2. There is one antenna provided to this EUT, please refer to the following table:

Maximum Antenna Gain	Antenna Type	Connecter Type	Frequency range (MHz)
16 dBi	Scanning beam-steering array	NA	60.32 to 60.64GHz

3. The LRP modulation is BPSK. The HRP modulation can be either QPSK or 16QAM. Three system data rates are implemented: QPSK at 0.952 Gb/s (Quarter Rate), QPSK at 1.904 Gb/s (Half Rate) and 16-QAM at 3.807 Gb/s (Full Rate).

4. The EUT must be supplied with a power adapter as the following table:

Brand:	APD
Model No.:	WA-10I5R
Input power :	AC100-240V, 0.3A Max
Output power :	DC 5V, 2A DC output cable (Unshielded, 1.5m)

5. The EUT is one receiver, and it will send traffic (Beacon) message to communicate under LRP mode, therefore only LRP mode has to be performed.

6. The above EUT information was declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications or user's manual.

3.2 DESCRIPTION OF TEST MODES

Test Channel frequency:

FREQUENCY BAND	CHANNEL PLAN	L (LOW CHANNEL)	M (MIDDLE CHANNEL)	H (HIGH CHANNEL)
60.32 – 60.64GHz	1	60.32GHz	60.48GHz	60.64GHz
62.48 – 62.80GHz	2	62.48GHz	62.64GHz	62.80GHz

3.2.1 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL

EUT CONFIGURE MODE	APPLICABLE TO							DESCRIPTION
	PLC	OB	PD	POP	FS	RE < 1G	RE ³ 1G	
L	√	√	√	√	√	√	√	LRP Mode

Where **PLC:** Power Line Conducted Emission **OB:** Occupied Bandwidth

PD: Power Density **PCP:** Peak Output Power

FS: Frequency Stability **RE < 1G:** Radiated Emission below 1GHz

RE ³ 1G: Radiated Emission above 1GHz

POWER LINE CONDUCTED EMISSION TEST:

☒ Pre-Scan has been radiated to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna beam in various orientations.

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

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	ANTENNA BEAM	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE
L	3	Channel plan 1: H	Main lobe (perpendicular)	OFDM	BPSK	20.337 Mb/s

OCCUPIED BANDWIDTH TEST:

☒ Pre-Scan has been radiated to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna beam in various orientations.

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

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	ANTENNA BEAM	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE
L	3	Channel plan 1 & 2: L,M,H	Main lobe (perpendicular)	OFDM	BPSK	20.337 Mb/s

POWER DENSITY:

☒ Pre-Scan has been radiated to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna beam in various orientations.

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

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	ANTENNA BEAM	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE
L	3	Channel plan 1 & 2: L,M,H	Main lobe (perpendicular)	OFDM	BPSK	20.337 Mb/s

POWER OUTPUT POWER:

☒ Pre-Scan has been radiated to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna beam in various orientations.

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

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	ANTENNA BEAM	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE
L	3	Channel plan 1 & 2: L,M,H	Main lobe (perpendicular)	OFDM	BPSK	20.337 Mb/s

FREQUENCY STABILITY TEST:

☒ Pre-Scan has been radiated to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna beam in various orientations.

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

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	ANTENNA BEAM	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE
L	1	Channel plan 1: M	Main lobe (perpendicular)	OFDM	BPSK	20.337 Mb/s

RADIATED EMISSION TEST (BELOW 1 GHz):

☒ Pre-Scan has been radiated to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna beam in various orientations.

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

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	ANTENNA BEAM	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE
L	1	Channel plan 1: M Channel plan 2: M	Main lobe (perpendicular)	OFDM	BPSK	20.337 Mb/s

RADIATED EMISSION TEST (ABOVE 1 GHz):

☒ Pre-Scan has been radiated to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna beam in various orientations.

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

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	ANTENNA BEAM	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE
L	3	Channel plan 1 & 2: L, M, H	Main lobe (perpendicular)	OFDM	BPSK	20.337 Mb/s

TEST CONDITION:

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
RE≥1G	23deg. C, 62%RH	120Vac, 60Hz	Nelson Tseng
RE<1G	23deg. C, 62%RH	120Vac, 60Hz	Nelson Tseng
PLC	25deg. C, 63%RH	120Vac, 60Hz	Kyle Huang
APCM	20deg. C, 60%RH	120Vac, 60Hz	Wen Yu

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 Part 15, Subpart C. (15.255)
ANSI C63.10-2009

All test items have been performed and recorded as per the above standards.

NOTE: The EUT 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

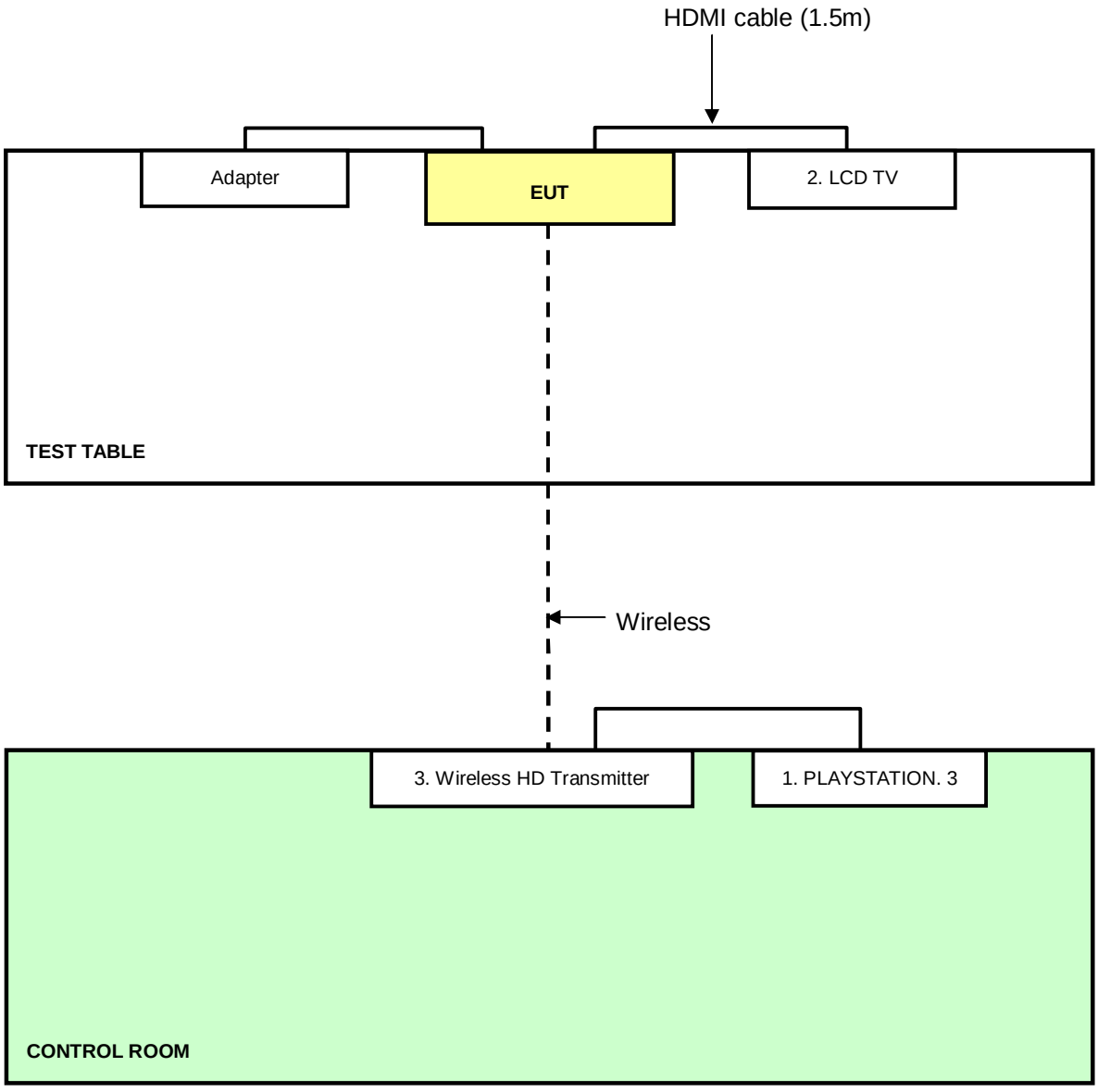
The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	PLAYSTATION. 3	SONY	CECH-2507A	03-27457231-562693 8-CECH-2507A	NA
2	LCD TV	SONY	KDL-32CX520	3676813	NA
3	Wireless HD Transmitter	DVDO	DVDOAT-1	NA	NA

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	HDMI cable (1.5m)
2	HDMI cable (1.5m)
3	NA

NOTE: 1. All power cords of the above support units are non shielded (1.8m).

3.5 CONFIGURATION OF SYSTEM UNDER TEST



4. TEST TYPES AND RESULTS

4.1 AC POWER LINE CONDUCTED EMISSION MEASUREMENT

4.1.1 LIMITS OF AC POWER LINE CONDUCTED EMISSION MEASUREMENT

FREQUENCY OF EMISSION (MHz)	CONDUCTED LIMIT (dBμV)	
	Quasi-peak	Average
0.15-0.5	66 to 56	56 to 46
0.5-5	56	46
5-30	60	50

NOTE: 1. The lower limit shall apply at the transition frequencies.
2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50 MHz.

4.1.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
ROHDE & SCHWARZ Test Receiver	ESCS 30	100287	Mar. 02, 2011	Mar. 01, 2012
Line-Impedance Stabilization Network (for EUT)	NSLK 8127	8127-523	Sep. 20, 2011	Sep. 19, 2012
Line-Impedance Stabilization Network (for Peripheral)	ENV-216	100072	June 10, 2011	June 09, 2012
RF Cable (JYEBAO)	5DFB	CONCAB-003	Aug. 05, 2011	Aug. 04, 2012
50 ohms Terminator	50	3	Nov. 02, 2011	Nov. 01, 2012
Software	BV ADT_Cond_V7.3.7	NA	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 Shielded Room No. A.
3 The VCCI Con A Registration No. is C-817.
4. Tested date: Feb. 15, 2012

4.1.3 TEST PROCEDURES

a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.

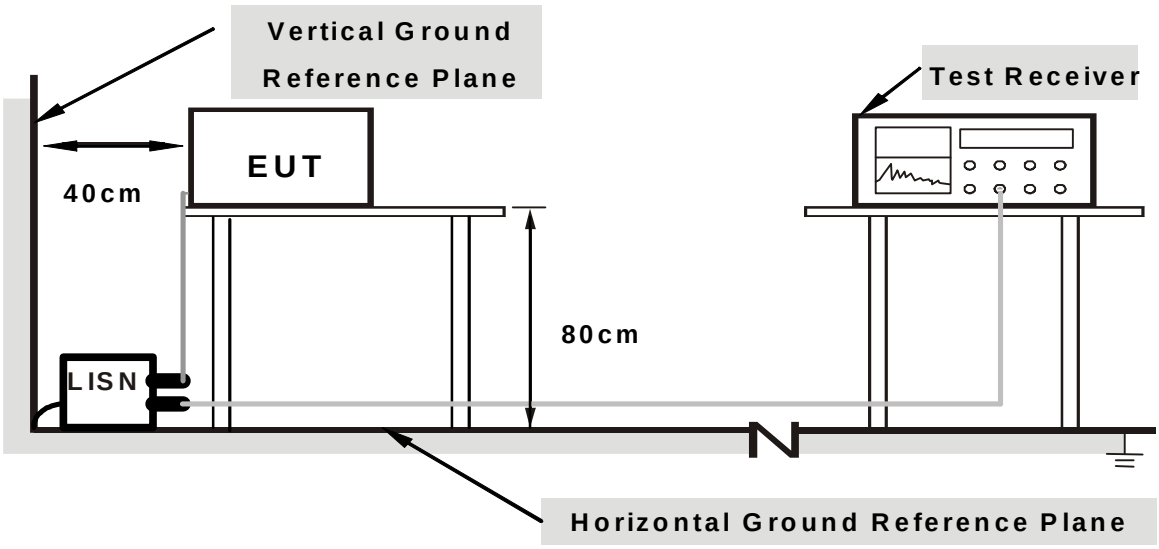
b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.

c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) were not recorded.

4.1.4 DEVIATION FROM TEST STANDARD

No deviation

4.1.5 TEST SETUP



Note: 1.Support units were connected to second LISN.
2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes

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

4.1.6 EUT OPERATING CONDITIONS

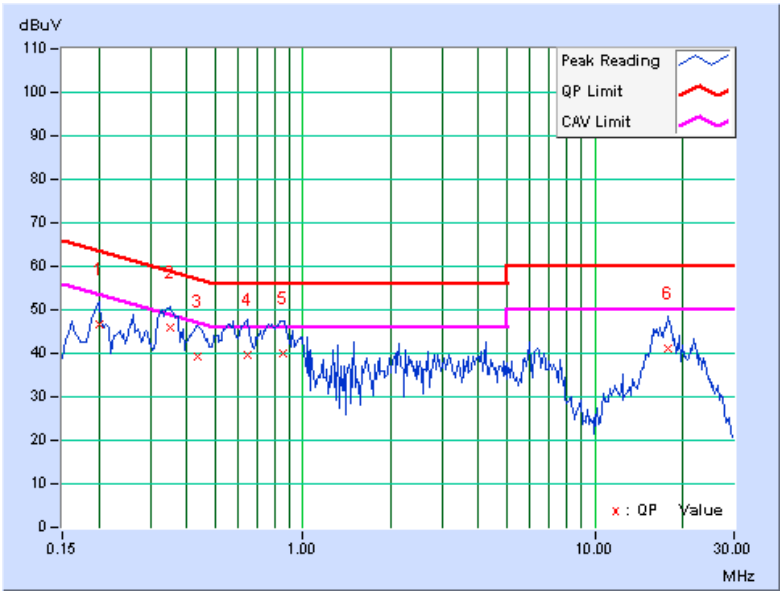
High Definition Audio/Video in the 1080p format was sent from transmitter to the Receiver via the wireless link. The BD Player (PS3) equipped HD A/V to the transmitter. The receiver got the HD A/V signal and transfer to the television. The television was placed outside the test table. A laptop computer with test software was utilized to vary the radio configuration and antenna beam orientation for testing purposes. This computer was not connected during measurements.

4.1.7 TEST RESULTS

PHASE	Line (L)	6dB BANDWIDTH	9 kHz

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.20078	0.06	46.46	31.80	46.52	31.86	63.58	53.58	-17.06	-21.72
2	0.34922	0.07	45.75	33.75	45.82	33.82	58.98	48.98	-13.16	-15.16
3	0.43516	0.08	39.02	26.19	39.10	26.27	57.15	47.15	-18.05	-20.88
4	0.65000	0.09	39.67	27.74	39.76	27.83	56.00	46.00	-16.24	-18.17
5	0.85703	0.10	40.08	26.46	40.18	26.56	56.00	46.00	-15.82	-19.44
6	17.87500	0.96	40.17	28.46	41.13	29.42	60.00	50.00	-18.87	-20.58

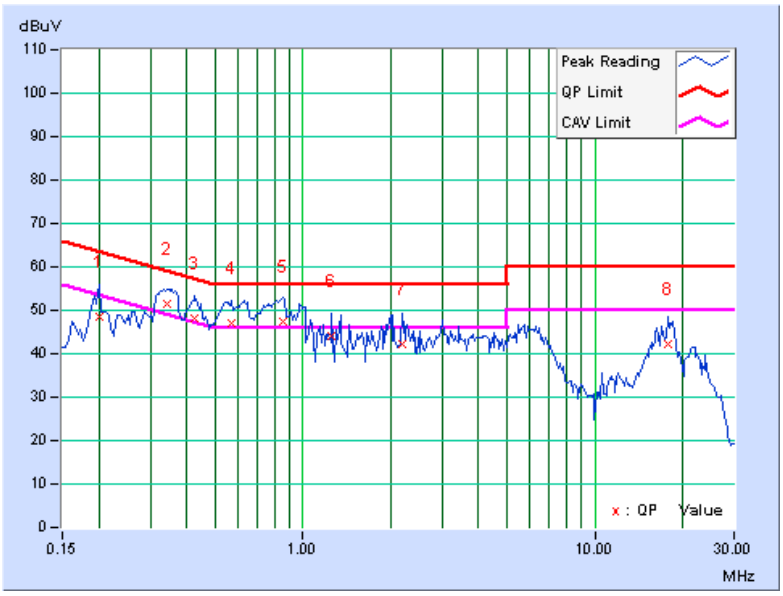
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value.



PHASE	Neutral (N)	6dB BANDWIDTH	9 kHz

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.20078	0.08	48.53	39.29	48.61	39.37	63.58	53.58	-14.97	-14.21
2	**0.34141**	**0.09**	**51.27**	**42.89**	**51.36**	**42.98**	**59.17**	**49.17**	**-7.81**	**-6.19**
3	0.42734	0.09	48.20	38.48	48.29	38.57	57.30	47.30	-9.01	-8.73
4	0.56797	0.10	46.92	35.63	47.02	35.73	56.00	46.00	-8.98	-10.27
5	0.85313	0.11	47.43	36.75	47.54	36.86	56.00	46.00	-8.46	-9.14
6	1.25391	0.14	43.97	34.59	44.11	34.73	56.00	46.00	-11.89	-11.27
7	2.18750	0.22	41.92	34.31	42.14	34.53	56.00	46.00	-13.86	-11.47
8	17.71484	0.95	41.32	29.69	42.27	30.64	60.00	50.00	-17.73	-19.36

REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value.



4.2 SURIOUS EMISSIONS

4.2.1 LIMIT OF SURIOUS EMISSIONS

15.255 (c)

Frequency Range	Average
Radiated emissions below 40GHz	Follow part 15.209
Between 40GHz and 200GHz	90pW/cm2 (at 3 meter)
Note: The levels of the spurious emissions shall not exceed the level of the fundamental emission	

Emissions radiated outside of the specified bands, shall be according to the general radiated limits in 15.209 as following:

Frequencies (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

NOTE:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
3. As shown in 15.35(b), for frequencies above 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition of modulation.
4. Section 15.205 restricted bands of operation shall compliance with the limits in Section 15.209.

4.2.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Agilent Spectrum Analyzer	E4446A	MY48250254	July 12, 2011	July 11, 2012
Agilent Pre-Selector	N9039A	MY46520311	July 12, 2011	July 11, 2012
Agilent Signal Generator	N5181A	MY49060517	July 12, 2011	July 11, 2012
Mini-Circuits Pre-Amplifier	ZFL-1000VH2B	AMP-ZFL-03	Nov. 15, 2011	Nov. 14, 2012
Agilent Pre-Amplifier	8449B	3008A02578	July 04, 2011	July 03, 2012
SPACEK LABS-Amplifier	SLKKa-48-6	9K16	Nov. 15, 2011	Nov. 14, 2012
SCHWARZBECK Trilog Broadband Antenna	VULB 9168	9168-360	Apr. 14, 2011	Apr. 13, 2012
AISI Horn_Antenna	AIH.8018	0000320091110	Nov. 14, 2011	Nov. 13, 2012
SCHWARZBECK Horn_Antenna	BBHA 9170	9170-424	Oct. 07, 2011	Oct. 06, 2012
*OML Harmonic Mixer (33~55GHz)	M22HWD	110215-1	Feb. 16, 2011	Feb. 15, 2013
*OML Horn Antenna (33~55GHz)	M22RH	110215-1	Feb. 16, 2011	Feb. 15, 2013
*OML Harmonic Mixer (50~75GHz)	M15RH	110215-1	Feb. 16, 2011	Feb. 15, 2013
*OML Horn Antenna (50~75GHz)	M15HWD	110215-1	Feb. 16, 2011	Feb. 15, 2013
*OML Harmonic Mixer (75~110GHz)	M10HWD	110215-1	Feb. 16, 2011	Feb. 15, 2013
*OML Horn Antenna (75~110GHz)	M10RH	110215-1	Feb. 16, 2011	Feb. 15, 2013
*OML Harmonic Mixer (110~170GHz)	M06RH	110215-1	Feb. 16, 2011	Feb. 15, 2013
*OML Horn Antenna (110~170GHz)	M06HWD	110215-1	Feb. 16, 2011	Feb. 15, 2013
*OML Harmonic Mixer (140~220GHz)	M05HWD	110215-1	Feb. 16, 2011	Feb. 15, 2013
*OML Horn Antenna (140~220GHz)	M05RH	110215-1	Feb. 16, 2011	Feb. 15, 2013
*Diplexer	DPL26	110215-1	Feb. 16, 2011	Feb. 15, 2013
RF CABLE	NA	RF104-201 RF104-203 RF104-204	Dec. 26, 2011	Dec. 25, 2012
RF Cable	NA	CHGCAB_001	NA	NA
Software	ADT_Radiated_V8.7.05	NA	NA	NA
CT Antenna Tower & Turn Table	NA	NA	NA	NA

Note: 1. The calibration interval of the above test instruments (Except *) is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. * = The calibration interval of the above test instruments is 24 months and the calibrations are traceable to NML/ROC and NIST/USA.
3. The horn antenna, preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
4. The test was performed in 966 Chamber No. G.
5. The FCC Site Registration No. is 966073.
6. The VCCI Site Registration No. is G-137.
7. The CANADA Site Registration No. is IC 7450H-2.
8. Tested date: Feb. 14, 2012.

4.2.3 TEST PROCEDURES

PROCEDURE FOR 30 MHz TO 40 GHz

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meters chamber room. The table was rotated 360 degrees to determine the position of the highest radiation.

b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

c. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

e. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.

f. The test-receiver system was set to peak detect function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz.

NOTE:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth is 1MHz and video bandwidth of test receiver/spectrum analyzer is 3MHz for Peak detection (PK) at frequency above 1GHz.
3. The resolution bandwidth is 1MHz and video bandwidth of test receiver/spectrum analyzer is 10Hz for Average detection (AV) at frequency above 1GHz.

PROCEDURE FOR 40 TO 200 GHz

External harmonic mixers are utilized.

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meters chamber room. The table was rotated 360 degrees to determine the position of the highest radiation.

b. The distance at which limits are typically specified is 3 meter; however, closer measurement distances may be utilized.

c. Begin handheld measurements with the test antenna (horn) at a distance of 1 meter from the EUT, in a horizontally polarized position. Slowly adjust its position, entirely covering the plane 1 meter from the EUT.

d. Repeat (c) with the horn in a vertically polarized position.

e. If the emission cannot be detected at 1 meter, reduce the RBW in order to increase system sensitivity. Note the value. If the emission still cannot be detected, move the horn closer to the EUT, noting the distance at which a measurement is made.

f. Note the maximum level indicated on the Spectrum Analyzer.

g. Based on the distance at which the measurement was made and the calculated distance to the edge of the far field, determine the appropriate distance attenuation factor. Apply this factor to the calculated field strength in order to determine the equivalent field strength at the distance at which the regulatory limit is specified. Compare to the appropriate limits

h. Repeat (a) - (f) for every emission that must be measured, up through the required frequency range of investigation

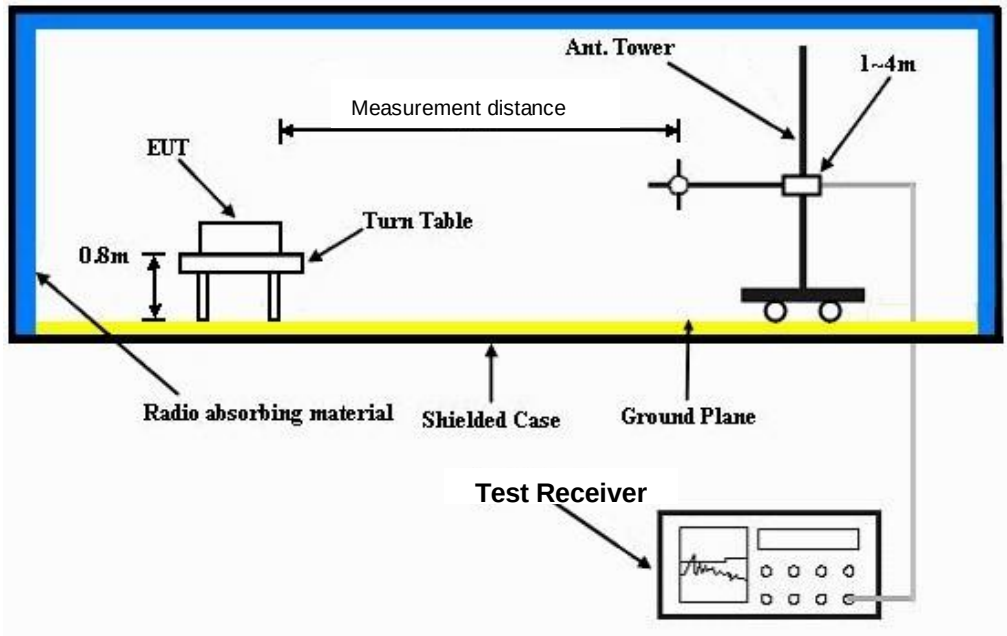
NOTE:

1. The resolution bandwidth is 1MHz and video bandwidth of test receiver/spectrum analyzer is 50MHz for Peak and Average detection at frequency above 40GHz.

4.2.4 DEVIATION FROM TEST STANDARD

No deviation

4.2.5 TEST SETUP



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

4.2.6 EUT OPERATING CONDITIONS

High Definition Audio/Video in the 1080p format was sent from transmitter to the Receiver via the wireless link. The BD Player (PS3) equipped HD A/V to the transmitter. The receiver got the HD A/V signal and transfer to the television. The television was placed outside the test table. A laptop computer with test software was utilized to vary the radio configuration and antenna beam orientation for testing purposes. This computer was not connected during measurements.

4.2.7 TEST RESULTS

BELOW 1GHz WORST-CASE DATA：CHANNEL PLAN 1

CHANNEL	TX Channel M	**DETECTOR FUNCTION**	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 1GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	**FREQ. (MHz)**	**EMISSION LEVEL (dBuV/m)**	**LIMIT (dBuV/m)**	**MARGIN (dB)**	**ANTENNA HEIGHT (m)**	**TABLE ANGLE (Degree)**	**RAW VALUE (dBuV)**	**CORRECTION FACTOR (dB/m)**
1	134.57	33.6 QP	43.5	-9.9	1.50 H	281	19.78	13.85
2	150.08	34.1 QP	43.5	-9.4	1.25 H	13	19.37	14.74
3	445.07	35.1 QP	46.0	-10.9	1.00 H	57	16.46	18.68
4	593.46	41.1 QP	46.0	-4.9	1.50 H	72	19.14	22.00
5	741.72	43.0 QP	46.0	-3.0	1.50 H	320	19.36	23.66
6	890.10	42.9 QP	46.0	-3.2	1.00 H	32	16.48	26.37
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	**FREQ. (MHz)**	**EMISSION LEVEL (dBuV/m)**	**LIMIT (dBuV/m)**	**MARGIN (dB)**	**ANTENNA HEIGHT (m)**	**TABLE ANGLE (Degree)**	**RAW VALUE (dBuV)**	**CORRECTION FACTOR (dB/m)**
1	30.59	34.2 QP	40.0	-5.8	1.00 V	324	21.17	13.06
2	122.96	40.1 QP	43.5	-3.4	1.00 V	5	27.25	12.89
3	131.61	41.0 QP	43.5	-2.5	1.25 V	351	27.43	13.60
4	593.46	41.2 QP	46.0	-4.8	1.75 V	351	19.24	22.00
5	741.72	41.1 QP	46.0	-4.9	1.00 V	2	17.47	23.66
6	890.10	42.1 QP	46.0	-3.9	2.00 V	16	15.75	26.37

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.

ABOVE 1GHz WORST-CASE DATA

CHANNEL	TX Channel L	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	1038.09	50.5 PK	74.0	-23.5	1.50 H	295	23.88	26.66
2	1038.09	42.9 AV	54.0	-11.1	1.50 H	295	16.20	26.66
3	1559.64	50.8 PK	74.0	-23.2	1.75 H	322	22.41	28.35
4	1559.64	34.4 AV	54.0	-19.6	1.75 H	322	6.07	28.35
5	1873.15	53.3 PK	74.0	-20.7	1.50 H	2	23.47	29.86
6	1873.15	37.9 AV	54.0	-16.1	1.50 H	2	8.08	29.86
7	2183.74	50.9 PK	74.0	-23.1	1.00 H	314	19.77	31.10
8	2183.74	42.8 AV	54.0	-11.3	1.00 H	314	11.65	31.10
9	3985.72	50.6 PK	74.0	-23.4	2.00 H	195	14.35	36.29
10	3985.72	35.9 AV	54.0	-18.1	2.00 H	195	-0.42	36.29
11	6373.70	57.3 PK	74.0	-16.7	1.25 H	78	13.32	44.01
12	6373.70	44.2 AV	54.0	-9.8	1.25 H	78	0.23	44.01
13	23530.58	67.0 PK	74.0	-7.0	1.75 H	323	8.08	58.89
14	23530.58	51.3 AV	54.0	-2.8	1.75 H	323	-7.64	58.89
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	1559.64	54.2 PK	74.0	-19.8	2.00 V	2	25.87	28.35
2	1559.64	35.9 AV	54.0	-18.1	2.00 V	2	7.52	28.35
3	1870.22	59.6 PK	74.0	-14.4	2.00 V	5	29.79	29.85
4	1870.22	41.2 AV	54.0	-12.8	2.00 V	5	11.36	29.85
5	2183.74	53.9 PK	74.0	-20.1	1.25 V	356	22.77	31.10
6	2183.74	38.3 AV	54.0	-15.7	1.25 V	356	7.21	31.10
7	3994.51	54.8 PK	74.0	-19.2	2.49 V	152	18.45	36.32
8	3994.51	36.9 AV	54.0	-17.1	2.49 V	152	0.57	36.32
9	4791.48	53.1 PK	74.0	-20.9	1.25 V	54	13.85	39.26
10	4791.48	41.2 AV	54.0	-12.8	1.25 V	54	1.90	39.26
11	6391.28	59.9 PK	74.0	-14.1	1.75 V	42	15.78	44.09
12	6391.28	45.3 AV	54.0	-8.8	1.75 V	42	1.16	44.09
13	17364.67	65.2 PK	74.0	-8.8	1.00 V	327	10.10	55.13
14	17364.67	49.9 AV	54.0	-4.2	1.00 V	327	-5.28	55.13

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.

CHANNEL	TX Channel L	**DETECTOR FUNCTION**	Peak (PK) Average (AV)
FREQUENCY RANGE	40GHz ~ 200GHz		

No spurious emissions were detected in the band 40 to 200GHz for both Hor. Ver. polarities at 1m measurement distance.

CHANNEL	TX Channel M	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	1038.09	50.7 PK	74.0	-23.3	1.50 H	296	24.00	26.66
2	1038.09	42.9 AV	54.0	-11.1	1.50 H	296	16.28	26.66
3	1559.64	50.9 PK	74.0	-23.1	1.75 H	321	22.53	28.35
4	1559.64	34.5 AV	54.0	-19.5	1.75 H	321	6.18	28.35
5	1873.15	53.5 PK	74.0	-20.6	1.50 H	5	23.59	29.86
6	1873.15	38.0 AV	54.0	-16.0	1.50 H	5	8.17	29.86
7	2183.74	51.0 PK	74.0	-23.1	1.00 H	313	19.85	31.10
8	2183.74	42.8 AV	54.0	-11.2	1.00 H	313	11.73	31.10
9	3985.72	50.8 PK	74.0	-23.2	2.00 H	196	14.47	36.29
10	3985.72	35.9 AV	54.0	-18.1	2.00 H	196	-0.35	36.29
11	6373.70	57.5 PK	74.0	-16.6	1.25 H	77	13.44	44.01
12	6373.70	44.3 AV	54.0	-9.7	1.25 H	77	0.32	44.01
13	23530.58	66.9 PK	74.0	-7.1	1.75 H	325	7.99	58.89
14	23530.58	51.2 AV	54.0	-2.8	1.75 H	325	-7.73	58.89
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	1559.64	54.3 PK	74.0	-19.7	2.00 V	4	25.91	28.35
2	1559.64	35.9 AV	54.0	-18.1	2.00 V	4	7.57	28.35
3	1870.22	59.6 PK	74.0	-14.4	2.00 V	7	29.74	29.85
4	1870.22	41.3 AV	54.0	-12.7	2.00 V	7	11.49	29.85
5	2183.74	53.9 PK	74.0	-20.1	1.25 V	355	22.84	31.10
6	2183.74	38.4 AV	54.0	-15.6	1.25 V	355	7.26	31.10
7	3994.51	54.8 PK	74.0	-19.2	2.49 V	153	18.52	36.32
8	3994.51	36.9 AV	54.0	-17.1	2.49 V	153	0.60	36.32
9	4791.48	53.2 PK	74.0	-20.8	1.25 V	57	13.96	39.26
10	4791.48	41.2 AV	54.0	-12.8	1.25 V	57	1.96	39.26
11	6391.28	59.9 PK	74.0	-14.1	1.75 V	43	15.85	44.09
12	6391.28	45.3 AV	54.0	-8.7	1.75 V	43	1.23	44.09
13	17364.67	65.4 PK	74.0	-8.6	1.00 V	328	10.23	55.13
14	17364.67	49.9 AV	54.0	-4.1	1.00 V	328	-5.19	55.13

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).

2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).

3. The other emission levels were very low against the limit.

4. Margin value = Emission level – Limit value.

CHANNEL	TX Channel M	**DETECTOR FUNCTION**	Peak (PK) Average (AV)
FREQUENCY RANGE	40GHz ~ 200GHz		

No spurious emissions were detected in the band 40 to 200GHz for both Hor. Ver. polarities at 1m measurement distance.

CHANNEL	TX Channel H	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	1038.09	50.7 PK	74.0	-23.3	1.50 H	292	24.08	26.66
2	1038.09	43.1 AV	54.0	-10.9	1.50 H	292	16.41	26.66
3	1559.64	50.8 PK	74.0	-23.2	1.75 H	325	22.41	28.35
4	1559.64	34.5 AV	54.0	-19.5	1.75 H	325	6.11	28.35
5	1873.15	53.5 PK	74.0	-20.5	1.50 H	6	23.67	29.86
6	1873.15	38.1 AV	54.0	-15.9	1.50 H	6	8.28	29.86
7	2183.74	50.9 PK	74.0	-23.1	1.00 H	312	19.78	31.10
8	2183.74	42.8 AV	54.0	-11.2	1.00 H	312	11.66	31.10
9	3985.72	50.8 PK	74.0	-23.2	2.00 H	194	14.54	36.29
10	3985.72	35.8 AV	54.0	-18.2	2.00 H	194	-0.46	36.29
11	6373.70	57.6 PK	74.0	-16.4	1.25 H	78	13.55	44.01
12	6373.70	44.5 AV	54.0	-9.5	1.25 H	78	0.46	44.01
13	23530.58	66.7 PK	74.0	-7.3	1.75 H	329	7.85	58.89
14	23530.58	51.2 AV	54.0	-2.8	1.75 H	329	-7.67	58.89
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	1559.64	54.3 PK	74.0	-19.7	2.00 V	6	25.98	28.35
2	1559.64	36.1 AV	54.0	-18.0	2.00 V	6	7.70	28.35
3	1870.22	59.6 PK	74.0	-14.4	2.00 V	8	29.78	29.85
4	1870.22	41.5 AV	54.0	-12.5	2.00 V	8	11.61	29.85
5	2183.74	54.1 PK	74.0	-19.9	1.25 V	354	22.96	31.10
6	2183.74	38.4 AV	54.0	-15.6	1.25 V	354	7.32	31.10
7	3994.51	54.9 PK	74.0	-19.1	2.49 V	155	18.60	36.32
8	3994.51	37.0 AV	54.0	-17.0	2.49 V	155	0.71	36.32
9	4791.48	53.2 PK	74.0	-20.8	1.25 V	56	13.90	39.26
10	4791.48	41.3 AV	54.0	-12.7	1.25 V	56	2.06	39.26
11	6391.28	60.1 PK	74.0	-13.9	1.75 V	44	15.98	44.09
12	6391.28	45.5 AV	54.0	-8.5	1.75 V	44	1.37	44.09
13	17364.67	65.5 PK	74.0	-8.6	1.00 V	321	10.32	55.13
14	17364.67	50.1 AV	54.0	-3.9	1.00 V	321	-5.02	55.13

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).

2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).

3. The other emission levels were very low against the limit.

4. Margin value = Emission level – Limit value.

CHANNEL	TX Channel H	**DETECTOR FUNCTION**	Peak (PK) Average (AV)
FREQUENCY RANGE	40GHz ~ 200GHz		

No spurious emissions were detected in the band 40 to 200GHz for both Hor. Ver. polarities at 1m measurement distance.

BELOW 1GHz WORST-CASE DATA：CHANNEL PLAN 2

CHANNEL	TX Channel M	**DETECTOR FUNCTION**	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 1GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	**FREQ. (MHz)**	**EMISSION LEVEL (dBuV/m)**	**LIMIT (dBuV/m)**	**MARGIN (dB)**	**ANTENNA HEIGHT (m)**	**TABLE ANGLE (Degree)**	**RAW VALUE (dBuV)**	**CORRECTION FACTOR (dB/m)**
1	134.57	33.5 QP	43.5	-10.0	1.50 H	281	19.69	13.85
2	150.08	34.1 QP	43.5	-9.4	1.25 H	16	19.39	14.74
3	445.07	35.1 QP	46.0	-10.9	1.00 H	54	16.46	18.68
4	593.46	41.1 QP	46.0	-4.9	1.50 H	72	19.11	22.00
5	741.72	42.9 QP	46.0	-3.1	1.50 H	320	19.22	23.66
6	890.10	42.8 QP	46.0	-3.2	1.00 H	32	16.39	26.37
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	**FREQ. (MHz)**	**EMISSION LEVEL (dBuV/m)**	**LIMIT (dBuV/m)**	**MARGIN (dB)**	**ANTENNA HEIGHT (m)**	**TABLE ANGLE (Degree)**	**RAW VALUE (dBuV)**	**CORRECTION FACTOR (dB/m)**
1	30.59	34.1 QP	40.0	-5.9	1.00 V	325	21.06	13.06
2	122.96	40.0 QP	43.5	-3.5	1.00 V	6	27.13	12.89
3	**131.61**	**41.1 QP**	**43.5**	**-2.4**	**1.25 V**	**350**	**27.51**	**13.60**
4	593.46	41.2 QP	46.0	-4.9	1.75 V	350	19.15	22.00
5	741.72	41.0 QP	46.0	-5.0	1.00 V	6	17.38	23.66
6	890.10	42.0 QP	46.0	-4.0	2.00 V	15	15.67	26.37

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.

ABOVE 1GHz WORST-CASE DATA

CHANNEL	TX Channel L	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	1038.09	50.9 PK	74.0	-23.2	1.50 H	291	24.19	26.66
2	1038.09	43.1 AV	54.0	-10.9	1.50 H	291	16.45	26.66
3	1559.64	50.9 PK	74.0	-23.1	1.75 H	326	22.51	28.35
4	1559.64	34.6 AV	54.0	-19.5	1.75 H	326	6.20	28.35
5	1873.15	53.7 PK	74.0	-20.3	1.50 H	5	23.81	29.86
6	1873.15	38.3 AV	54.0	-15.7	1.50 H	5	8.40	29.86
7	2183.74	51.0 PK	74.0	-23.1	1.00 H	315	19.85	31.10
8	2183.74	42.8 AV	54.0	-11.2	1.00 H	315	11.73	31.10
9	3985.72	50.9 PK	74.0	-23.1	2.00 H	195	14.65	36.29
10	3985.72	36.0 AV	54.0	-18.1	2.00 H	195	-0.34	36.29
11	6373.70	57.6 PK	74.0	-16.4	1.25 H	72	13.63	44.01
12	6373.70	44.6 AV	54.0	-9.4	1.25 H	72	0.55	44.01
13	23530.58	66.9 PK	74.0	-7.2	1.75 H	322	7.96	58.89
14	23530.58	51.2 AV	54.0	-2.8	1.75 H	322	-7.73	58.89
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	1559.64	54.3 PK	74.0	-19.8	2.00 V	1	25.90	28.35
2	1559.64	36.0 AV	54.0	-18.0	2.00 V	1	7.63	28.35
3	1870.22	59.6 PK	74.0	-14.5	2.00 V	7	29.70	29.85
4	1870.22	41.4 AV	54.0	-12.7	2.00 V	7	11.50	29.85
5	2183.74	54.0 PK	74.0	-20.0	1.25 V	355	22.87	31.10
6	2183.74	38.4 AV	54.0	-15.6	1.25 V	355	7.26	31.10
7	3994.51	54.9 PK	74.0	-19.1	2.49 V	152	18.55	36.32
8	3994.51	36.9 AV	54.0	-17.1	2.49 V	152	0.62	36.32
9	4791.48	53.2 PK	74.0	-20.8	1.25 V	57	13.96	39.26
10	4791.48	41.4 AV	54.0	-12.6	1.25 V	57	2.13	39.26
11	6391.28	60.1 PK	74.0	-13.9	1.75 V	43	16.02	44.09
12	6391.28	45.5 AV	54.0	-8.5	1.75 V	43	1.45	44.09
13	17364.67	65.6 PK	74.0	-8.4	1.00 V	322	10.43	55.13
14	17364.67	50.3 AV	54.0	-3.7	1.00 V	322	-4.87	55.13

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.

CHANNEL	TX Channel L	**DETECTOR FUNCTION**	Peak (PK) Average (AV)
FREQUENCY RANGE	40GHz ~ 200GHz		

No spurious emissions were detected in the band 40 to 200GHz for both Hor. Ver. polarities at 1m measurement distance.

CHANNEL	TX Channel M	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	1038.09	50.9 PK	74.0	-23.1	1.50 H	292	24.27	26.66
2	1038.09	43.2 AV	54.0	-10.8	1.50 H	292	16.56	26.66
3	1559.64	51.0 PK	74.0	-23.0	1.75 H	327	22.62	28.35
4	1559.64	34.6 AV	54.0	-19.4	1.75 H	327	6.29	28.35
5	1873.15	53.7 PK	74.0	-20.3	1.50 H	6	23.87	29.86
6	1873.15	38.3 AV	54.0	-15.7	1.50 H	6	8.48	29.86
7	2183.74	51.0 PK	74.0	-23.0	1.00 H	314	19.88	31.10
8	2183.74	42.9 AV	54.0	-11.1	1.00 H	314	11.78	31.10
9	3985.72	50.9 PK	74.0	-23.1	2.00 H	196	14.63	36.29
10	3985.72	36.0 AV	54.0	-18.0	2.00 H	196	-0.30	36.29
11	6373.70	57.7 PK	74.0	-16.3	1.25 H	71	13.72	44.01
12	6373.70	44.5 AV	54.0	-9.6	1.25 H	71	0.44	44.01
13	23530.58	66.9 PK	74.0	-7.1	1.75 H	323	7.99	58.89
14	23530.58	51.4 AV	54.0	-2.6	1.75 H	323	-7.53	58.89
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	1559.64	54.3 PK	74.0	-19.7	2.00 V	2	25.98	28.35
2	1559.64	36.1 AV	54.0	-18.0	2.00 V	2	7.70	28.35
3	1870.22	59.7 PK	74.0	-14.3	2.00 V	5	29.81	29.85
4	1870.22	41.5 AV	54.0	-12.5	2.00 V	5	11.61	29.85
5	2183.74	54.1 PK	74.0	-19.9	1.25 V	359	23.01	31.10
6	2183.74	38.5 AV	54.0	-15.5	1.25 V	359	7.37	31.10
7	3994.51	55.0 PK	74.0	-19.0	2.49 V	153	18.66	36.32
8	3994.51	37.0 AV	54.0	-17.0	2.49 V	153	0.71	36.32
9	4791.48	53.4 PK	74.0	-20.6	1.25 V	55	14.11	39.26
10	4791.48	41.5 AV	54.0	-12.6	1.25 V	55	2.19	39.26
11	6391.28	60.3 PK	74.0	-13.7	1.75 V	42	16.18	44.09
12	6391.28	45.7 AV	54.0	-8.3	1.75 V	42	1.59	44.09
13	17364.67	65.6 PK	74.0	-8.4	1.00 V	320	10.50	55.13
14	17364.67	50.3 AV	54.0	-3.7	1.00 V	320	-4.80	55.13

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).

2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).

3. The other emission levels were very low against the limit.

4. Margin value = Emission level – Limit value.

CHANNEL	TX Channel M	**DETECTOR FUNCTION**	Peak (PK) Average (AV)
FREQUENCY RANGE	40GHz ~ 200GHz		

No spurious emissions were detected in the band 40 to 200GHz for both Hor. Ver. polarities at 1m measurement distance.

CHANNEL	TX Channel H	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	1038.09	50.9 PK	74.0	-23.1	1.50 H	296	24.21	26.66
2	1038.09	43.2 AV	54.0	-10.9	1.50 H	296	16.49	26.66
3	1559.64	50.9 PK	74.0	-23.1	1.75 H	323	22.52	28.35
4	1559.64	34.6 AV	54.0	-19.4	1.75 H	323	6.23	28.35
5	1873.15	53.7 PK	74.0	-20.3	1.50 H	9	23.80	29.86
6	1873.15	38.3 AV	54.0	-15.7	1.50 H	9	8.41	29.86
7	2183.74	50.9 PK	74.0	-23.1	1.00 H	317	19.82	31.10
8	2183.74	42.8 AV	54.0	-11.2	1.00 H	317	11.71	31.10
9	3985.72	50.9 PK	74.0	-23.1	2.00 H	192	14.58	36.29
10	3985.72	35.9 AV	54.0	-18.1	2.00 H	192	-0.40	36.29
11	6373.70	57.8 PK	74.0	-16.2	1.25 H	72	13.82	44.01
12	6373.70	44.6 AV	54.0	-9.4	1.25 H	72	0.56	44.01
13	23530.58	66.9 PK	74.0	-7.1	1.75 H	325	8.05	58.89
14	23530.58	51.4 AV	54.0	-2.6	1.75 H	325	-7.50	58.89
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	1559.64	54.5 PK	74.0	-19.6	2.00 V	5	26.10	28.35
2	1559.64	36.2 AV	54.0	-17.8	2.00 V	5	7.82	28.35
3	1870.22	59.7 PK	74.0	-14.3	2.00 V	6	29.87	29.85
4	1870.22	41.6 AV	54.0	-12.4	2.00 V	6	11.72	29.85
5	2183.74	54.2 PK	74.0	-19.8	1.25 V	350	23.13	31.10
6	2183.74	38.3 AV	54.0	-15.7	1.25 V	350	7.22	31.10
7	3994.51	54.9 PK	74.0	-19.2	2.49 V	154	18.53	36.32
8	3994.51	37.1 AV	54.0	-16.9	2.49 V	154	0.79	36.32
9	4791.48	53.4 PK	74.0	-20.6	1.25 V	51	14.17	39.26
10	4791.48	41.6 AV	54.0	-12.4	1.25 V	51	2.31	39.26
11	6391.28	60.4 PK	74.0	-13.6	1.75 V	45	16.27	44.09
12	6391.28	45.8 AV	54.0	-8.2	1.75 V	45	1.69	44.09
13	17364.67	65.8 PK	74.0	-8.2	1.00 V	321	10.63	55.13
14	17364.67	50.5 AV	54.0	-3.6	1.00 V	321	-4.68	55.13

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).

2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).

3. The other emission levels were very low against the limit.

4. Margin value = Emission level – Limit value.

CHANNEL	TX Channel H	**DETECTOR FUNCTION**	Peak (PK) Average (AV)
FREQUENCY RANGE	40GHz ~ 200GHz		

No spurious emissions were detected in the band 40 to 200GHz for both Hor. Ver. polarities at 1m measurement distance.

4.3 6dB BANDWIDTH MEASUREMENT

4.3.1 LIMITS OF 6dB BANDWIDTH MEASUREMENT

APPLICABLE RULE

15.255 (e) (1) For the purposes of this paragraph (e) (1), emission bandwidth is defined as the instantaneous frequency range occupied by a steady state radiated signal with modulation, outside which the radiated power spectral density never exceeds 6 dB below the maximum radiated power spectral density in the band, as measured with a 100 kHz resolution bandwidth spectrum analyzer. The center frequency must be stationary during the measurement interval, even if not stationary during normal operation (e.g. for frequency hopping devices).

LIMIT

None: For reporting purposes only.

4.3.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Agilent Spectrum Analyzer	E4446A	MY48250254	July 12, 2011	July 11, 2012
*OML Harmonic Mixer (50~75GHz)	M15RH	110215-1	Feb. 16, 2011	Feb. 15, 2013
*OML Horn Antenna (50~75GHz)	M15HWD	110215-1	Feb. 16, 2011	Feb. 15, 2013
*Diplexer	DPL26	110215-1	Feb. 16, 2011	Feb. 15, 2013
SPACEK LABS-Amplifier	SLKKa-48-6	9K16	Nov. 15, 2011	Nov. 14, 2012
CT Antenna Tower & Turn Table	NA	NA	NA	NA

NOTE:

1. The calibration interval of the above test instruments (Except *) is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. * = The calibration interval of the above test instruments is 24 months and the calibrations are traceable to NML/ROC and NIST/USA.
3. Tested date: Feb. 14, 2012

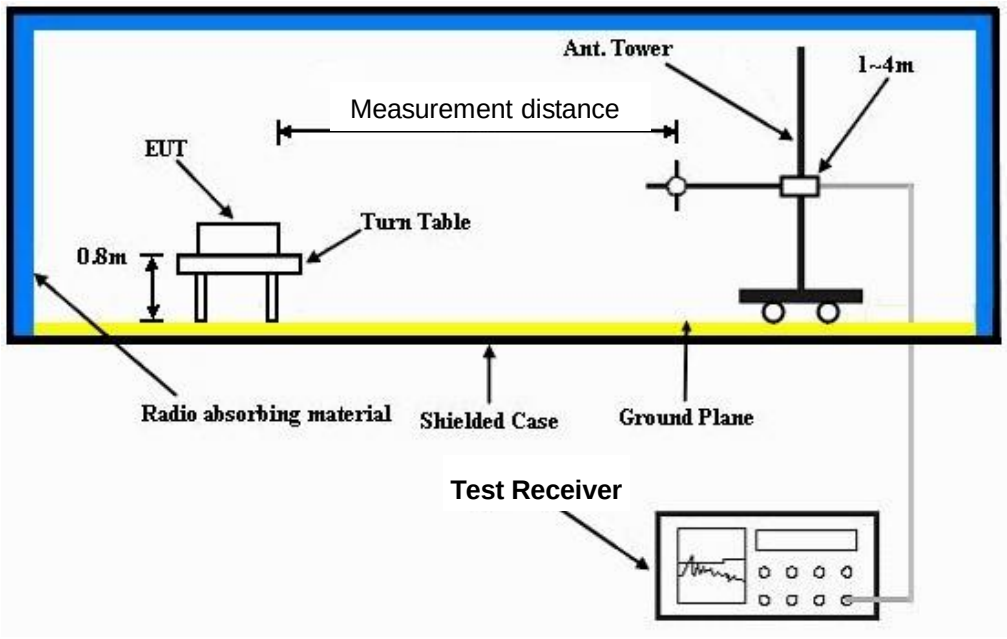
4.3.3 TEST PROCEDURE

The spectrum analyzer and external mixer are set up to measure the radiated output of the transmitter.

4.3.4 DEVIATION FROM TEST STANDARD

No deviation

4.3.5 TEST SETUP



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

4.3.6 EUT OPERATING CONDITIONS

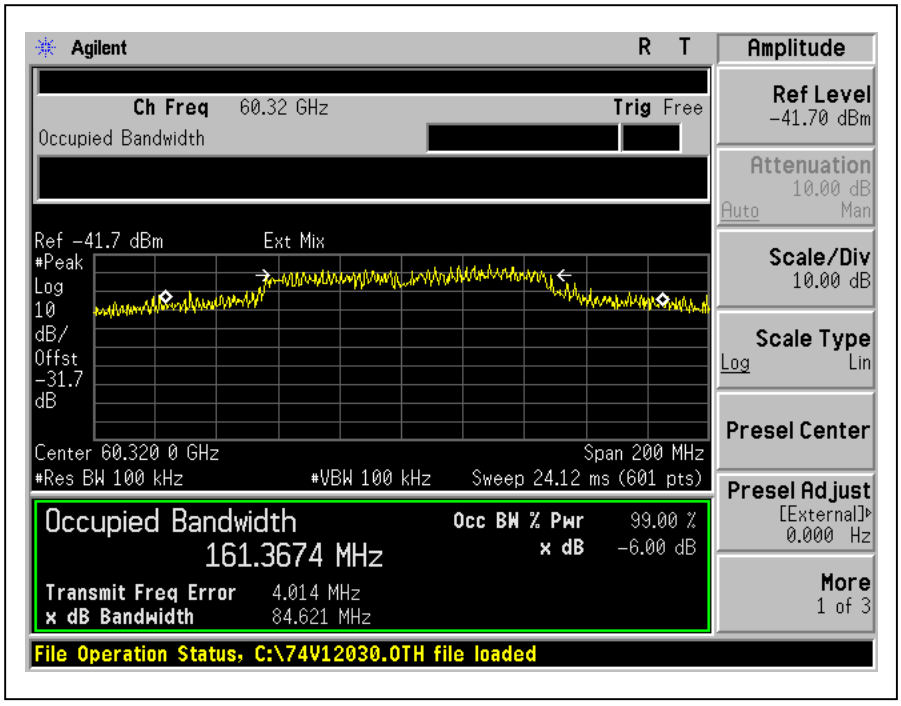
High Definition Audio/Video in the 1080p format was sent from transmitter to the Receiver via the wireless link. The BD Player (PS3) equipped HD A/V to the transmitter. The receiver got the HD A/V signal and transfer to the television. The television was placed outside the test table. A laptop computer with test software was utilized to vary the radio configuration and antenna beam orientation for testing purposes. This computer was not connected during measurements.

4.3.7 TEST RESULTS

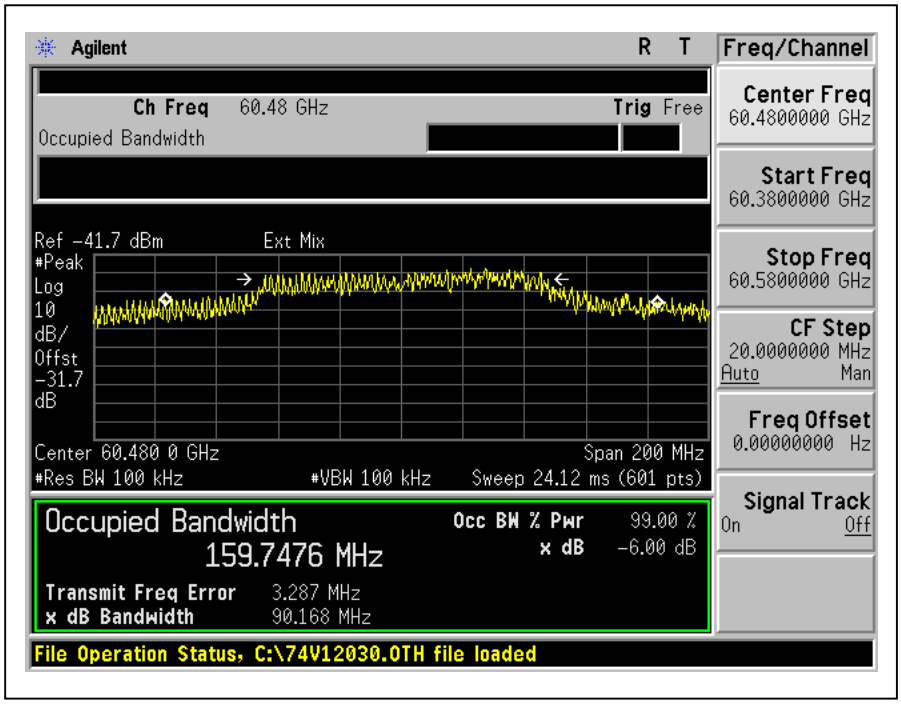
CHANNEL PLAN 1

CHANNEL	CHANNEL FREQUENCY (GHz)	6dB BANDWIDTH (MHz)	PASS / FAIL
Low	60.32	84.621	NA
Middle	60.48	90.168	NA
High	60.64	89.925	NA

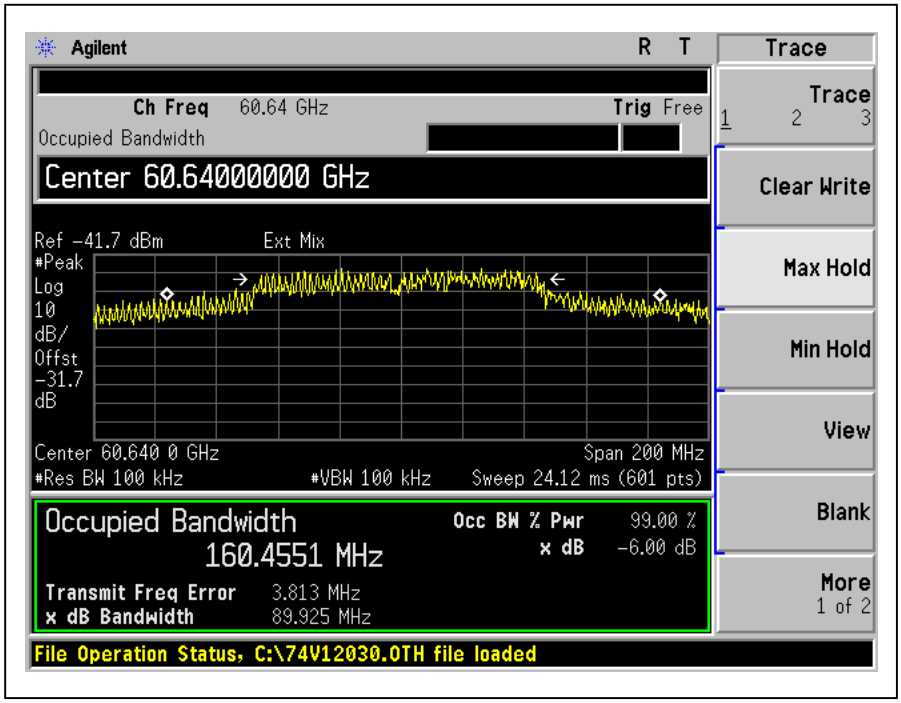
Low Channel



Middle Channel



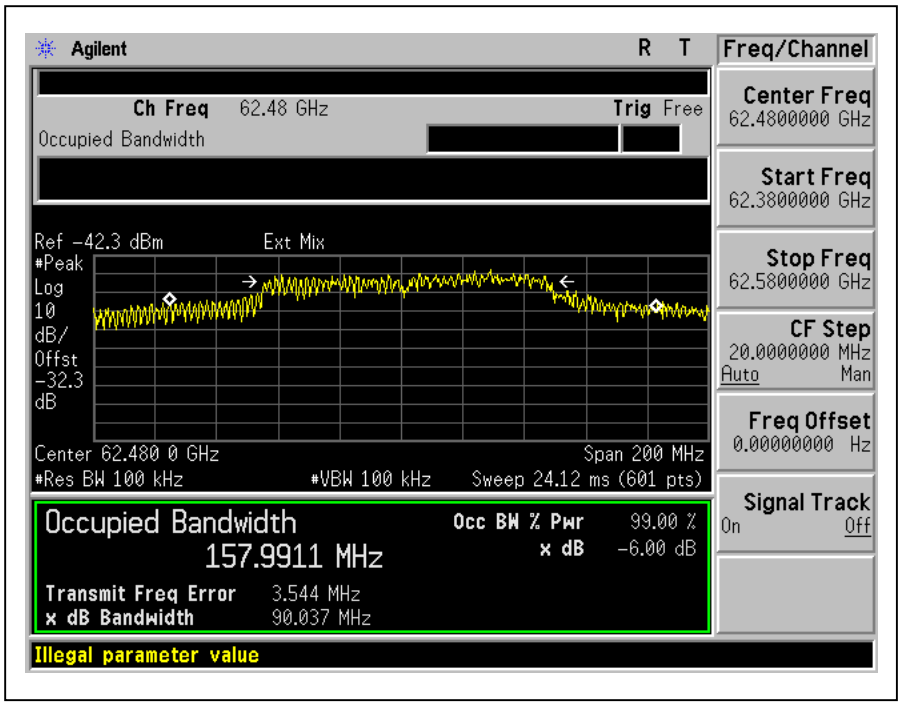
High Channel



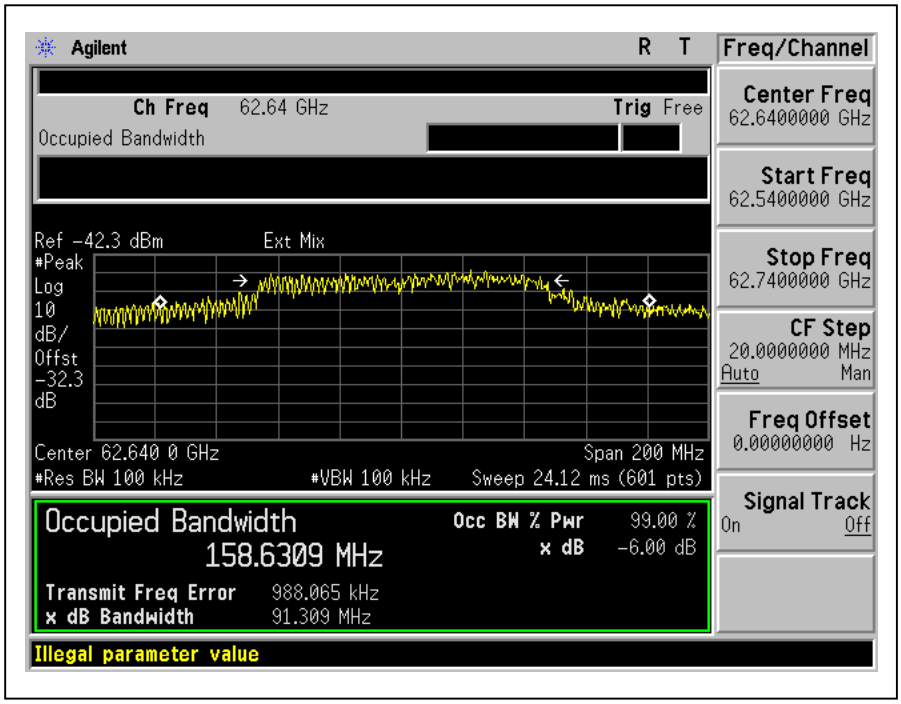
CHANNEL PLAN 2

CHANNEL	CHANNEL FREQUENCY (GHz)	6dB BANDWIDTH (MHz)	PASS / FAIL
Low	62.48	90.037	NA
Middle	62.64	91.309	NA
High	62.80	91.251	NA

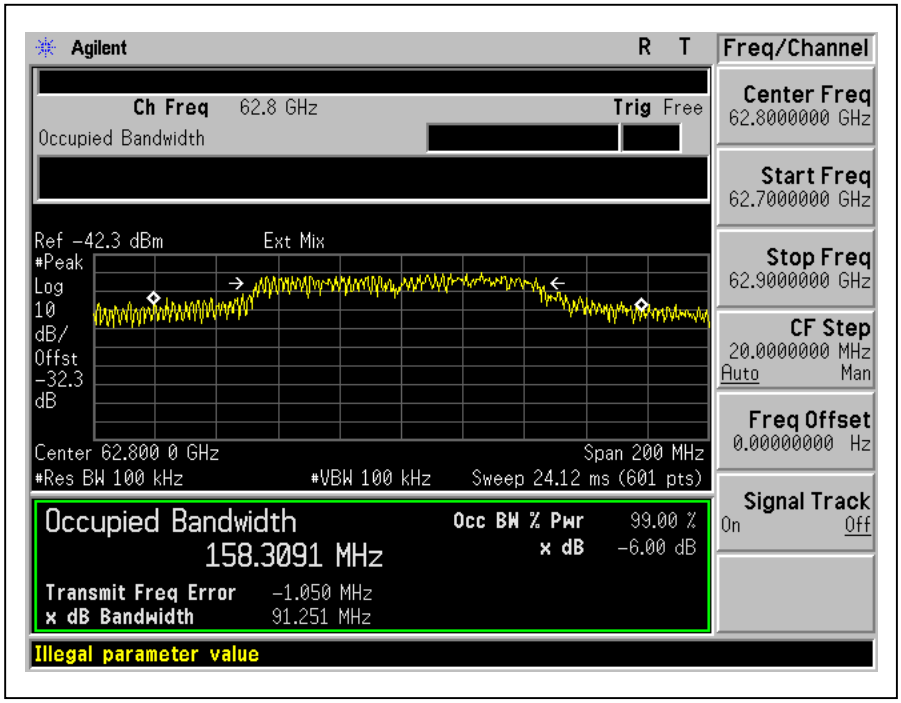
Low Channel



Middle Channel



High Channel



4.4 POWER DENSITY MEASUREMENT

4.4.1 LIMITS OF POWER DENSITY MEASUREMENT

15.255 (b) Within the 57-64 GHz band, emission levels shall not exceed the following:

Power Density Limit		
Application	**EIRP Average Power Density**	**EIRP Peak Power Density**
(15.255 (b)(1))- Other than Fixed field disturbance sensors	9uW/cm^2	18uW/cm^2
(15.255 (b)(2))- Fixed field disturbance sensors that occupy 500 MHz or less of bandwidth (wholly within the 61-61.5GHz)	9uW/cm^2	18uW/cm^2
(15.255 (b)(2))- Fixed field disturbance sensors that occupy 500 MHz or less of bandwidth (outside of the 61–61.5 GHz band, but still within the 57–64 GHz band)	9nW/cm^2	18nW/cm^2
(15.255 (b)(3))- Other fixed field disturbance sensors	NA	9nW/cm^2
Note: 1. The measurement distance is based on 3 meters. 2. The average emission limits shall be calculated, based on the measured peak levels, over the actual time period during which transmission occurs.		

Per FCC KDB Publication 200443, Millimeter Wave Test Procedures, If the emission under investigation is not pulsed, then the average levels may be measured by using a video filtering technique (i.e., VBW << RBW).

4.4.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Agilent Spectrum Analyzer	E4446A	MY48250254	July 12, 2011	July 11, 2012
*OML Harmonic Mixer (50~75GHz)	M15RH	110215-1	Feb. 16, 2011	Feb. 15, 2013
*OML Horn Antenna (50~75GHz)	M15HWD	110215-1	Feb. 16, 2011	Feb. 15, 2013
*Diplexer	DPL26	110215-1	Feb. 16, 2011	Feb. 15, 2013
SPACEK LABS-Amplifier	SLKKa-48-6	9K16	Nov. 15, 2011	Nov. 14, 2012
CT Antenna Tower & Turn Table	NA	NA	NA	NA

NOTE:

1. The calibration interval of the above test instruments (Except *) is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. * = The calibration interval of the above test instruments is 24 months and the calibrations are traceable to NML/ROC and NIST/USA.
3. Tested date: Feb. 14, 2012

4.4.3 TEST PROCEDURE

Measurements are made at a distance greater than or equal to the far field boundary distance.

The peak power is measured by integrating the spectral envelope over the 26 dB EBW.

The measured power level is converted to EIRP using the Friis equation:
EIRP = PT * GT = (PR / GR) * (4 * Pi * D / λ)^ 2
where:
G R is the gain of the receive measurement antenna
D is the measurement distance is the wavelength
The EIRP is converted to Power Density using the equation:
P D = EIRP / (4 * Pi * D S ^ 2)
where:
D S is the specification distance

FAR FIELD BOUNDARY CALCULATIONS

The far-field boundary is given in FCC KDB Publication 200443 as:

R far field = (2 * L^2) / λ

where: L = Largest Antenna Dimension, including the reflector, in meters

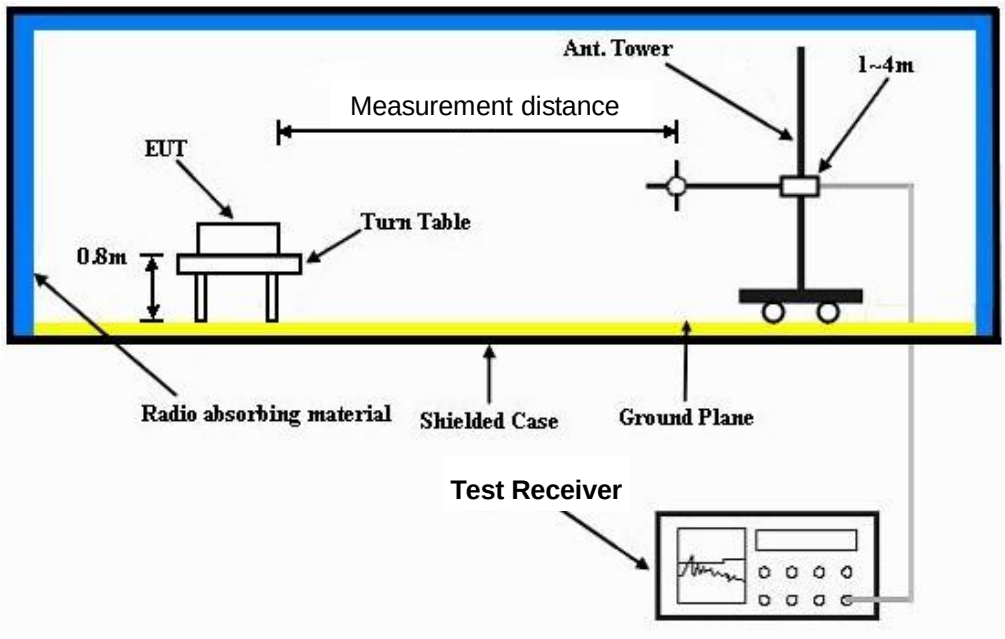
入= wavelength in meters

FREQUENCY (GHz)	L (m)	Lambda (m)	R (Far Field) (m)
60.48	0.025	0.0050	0.25

4.4.4 DEVIATION FROM TEST STANDARD

No deviation

4.4.5 TEST SETUP



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

4.4.6 EUT OPERATING CONDITION

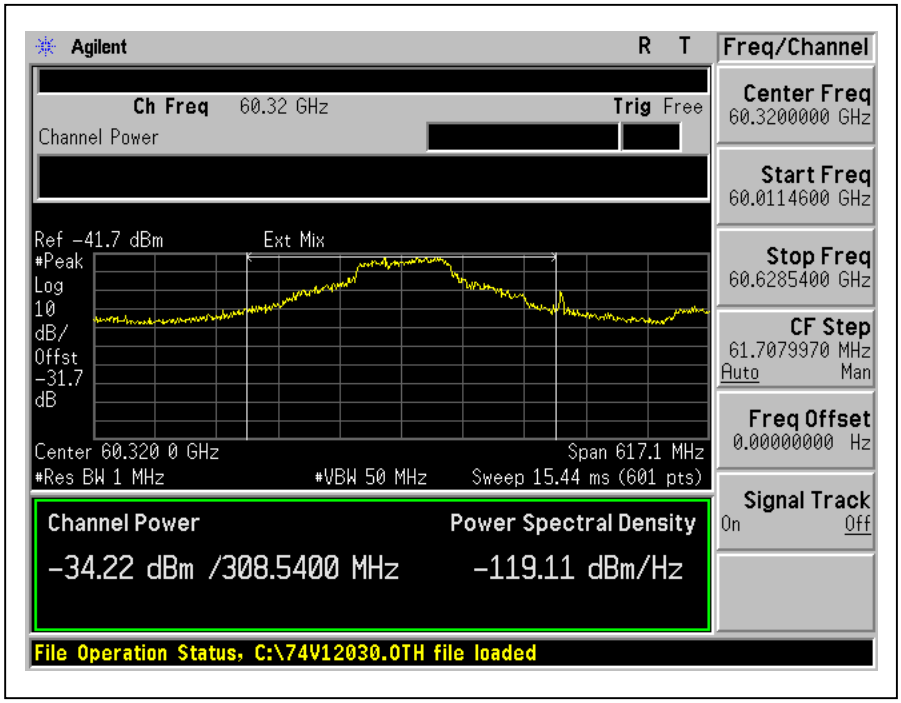
Same as Item 4.3.6

4.4.7 TEST RESULTS

CHANNEL PLAN 1

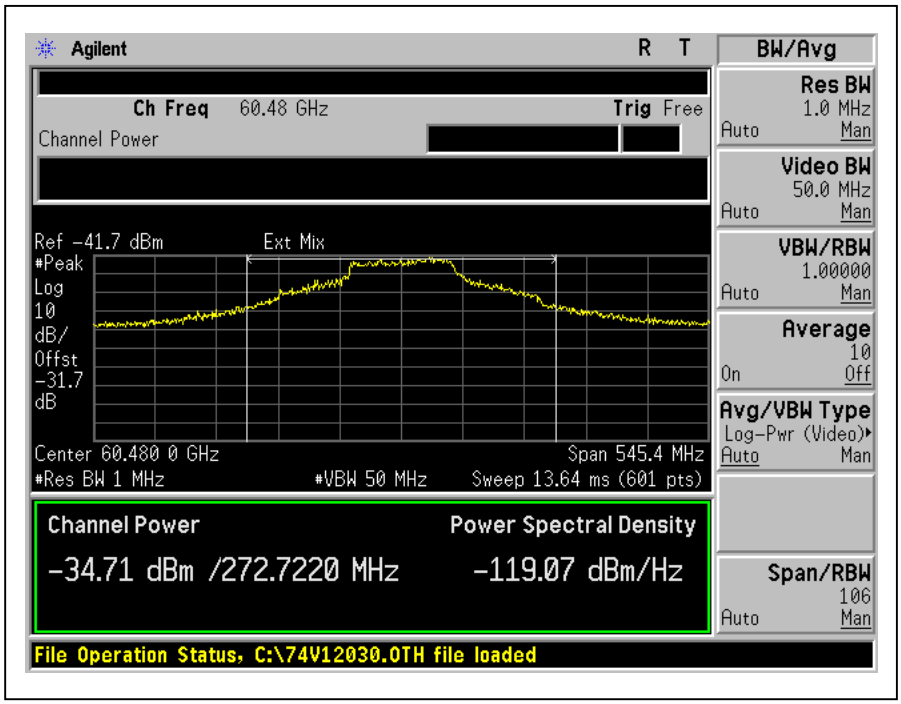
Channel	FREQ. (GHz)	Measurement Distance (m)	Peak Power (dBm)	RX Antenna Gain (dB)	EIRP (dBm)
Low Channel	60.32	2.5	-34.2	24	17.8
	Specification Distance (m)	**Power Density (uW/cm^2)**	**Peak Limit (uW/cm^2)**	**Average Limit (uW/cm^2)**	
	3	0.05	18	9	

Note: The Peak Power Density complies with both the peak and average limits.



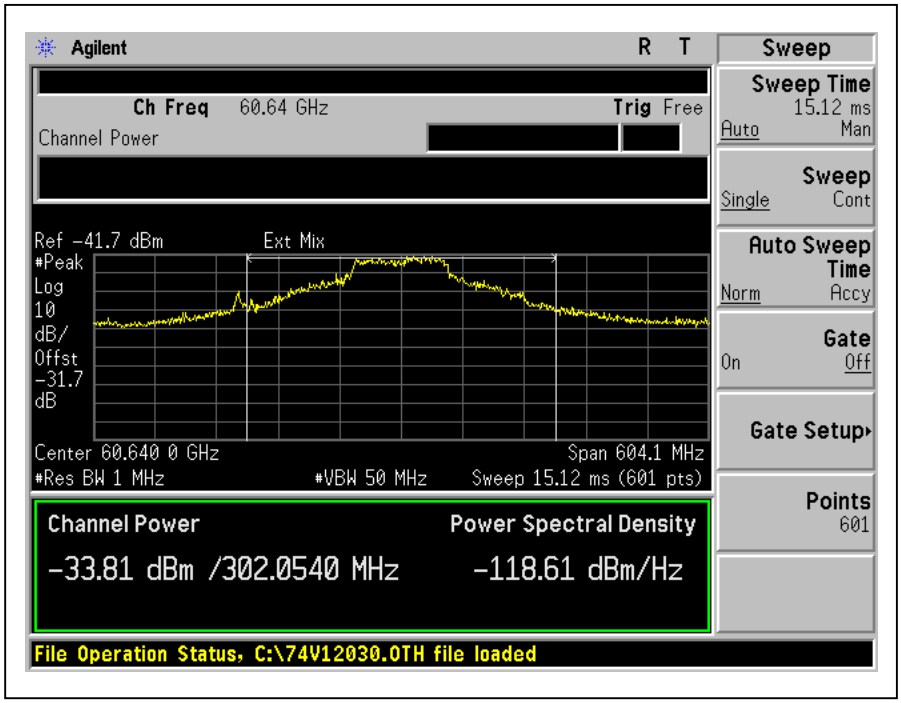
Channel	FREQ. (GHz)	Measurement Distance (m)	Peak Power (dBm)	RX Antenna Gain (dB)	EIRP (dBm)
Middle Channel	60.48	2.5	-34.7	24	17.8
	Specification Distance (m)	**Power Density (uW/cm^2)**	**Peak Limit (uW/cm^2)**	**Average Limit (uW/cm^2)**	
	3	0.05	18	9	

Note: The Peak Power Density complies with both the peak and average limits.



Channel	FREQ. (GHz)	Measurement Distance (m)	Peak Power (dBm)	RX Antenna Gain (dB)	EIRP (dBm)
High Channel	60.64	2.5	-33.8	24	18.2
	Specification Distance (m)	**Power Density (uW/cm^2)**	**Peak Limit (uW/cm^2)**	**Average Limit (uW/cm^2)**	
	3	0.06	18	9	

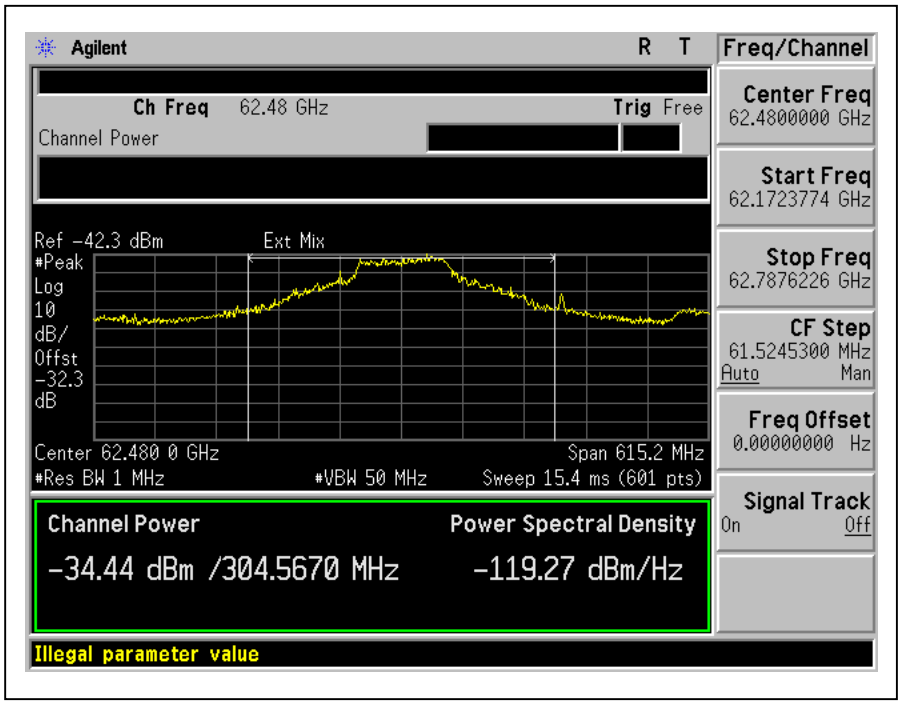
Note: The Peak Power Density complies with both the peak and average limits.



CHANNEL PLAN 2

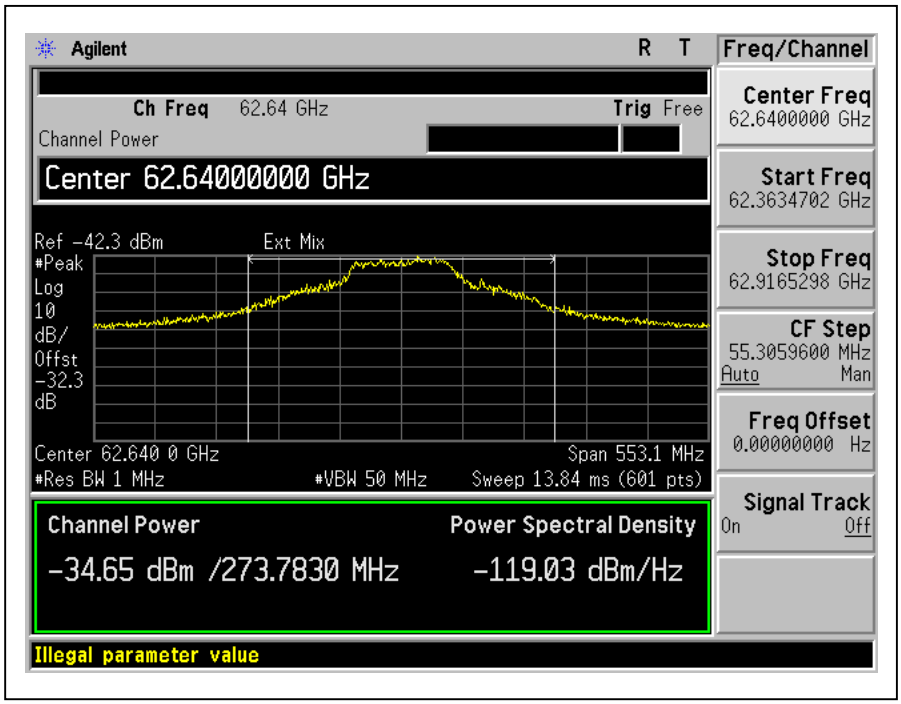
Channel	FREQ. (GHz)	Measurement Distance (m)	Peak Power (dBm)	RX Antenna Gain (dB)	EIRP (dBm)
Low Channel	62.48	2.5	-34.4	24	17.9
	Specification Distance (m)	**Power Density (uW/cm^2)**	**Peak Limit (uW/cm^2)**	**Average Limit (uW/cm^2)**	
	3	0.05	18	9	

Note: The Peak Power Density complies with both the peak and average limits.



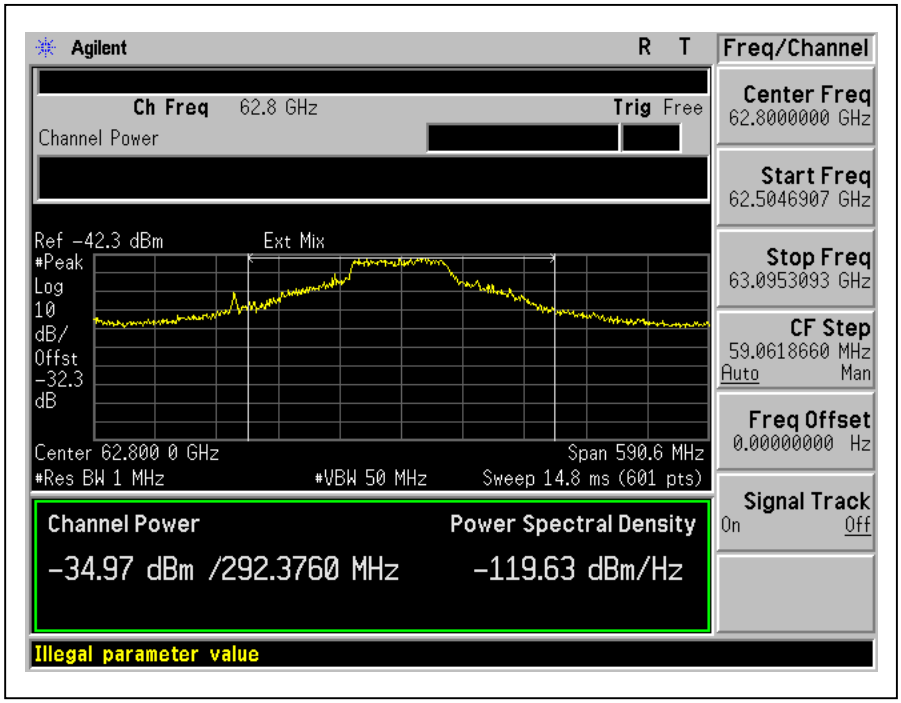
Channel	FREQ. (GHz)	Measurement Distance (m)	Peak Power (dBm)	RX Antenna Gain (dB)	EIRP (dBm)
Middle Channel	62.64	2.5	-34.7	24	17.7
	Specification Distance (m)	**Power Density (uW/cm^2)**	**Peak Limit (uW/cm^2)**	**Average Limit (uW/cm^2)**	
	3	0.05	18	9	

Note: The Peak Power Density complies with both the peak and average limits.



Channel	FREQ. (GHz)	Measurement Distance (m)	Peak Power (dBm)	RX Antenna Gain (dB)	EIRP (dBm)
High Channel	62.80	2.5	-35.0	24	17.4
	Specification Distance (m)	**Power Density (uW/cm^2)**	**Peak Limit (uW/cm^2)**	**Average Limit (uW/cm^2)**	
	3	0.05	18	9	

Note: The Peak Power Density complies with both the peak and average limits.



4.5 PEAK OUTPUT POWER

4.5.1 LIMITS OF PEAK OUTPUT POWER MEASUREMENT

15.255 (e)

Peak Output Power		
Type	**6dB Bandwidth**	**Maximum Conducted Power**
Fixed field disturbance sensors (Exclude 61-61.5GHz)	-	≦ 0.1mW
Other	Other	500mW
	Less than 100MHz	500mW x (B/100)

Note:
1. B is 6dB Bandwidth (measured with a 100kHz resolution bandwidth)
2. Peak transmitter output power shall be measured with an RF detector that has a detection bandwidth that encompasses the 57-64 GHz band and the has a video bandwidth of at least 10 MHz, or using an equivalent measurement method.
3. For purposes of demonstrating complained with this paragraph (e), corrections to the transmitter output power may be made due to the antenna and circuit loss.

4.5.2 INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Agilent Spectrum Analyzer	E4446A	MY48250254	July 12, 2011	July 11, 2012
*OML Harmonic Mixer (50~75GHz)	M15RH	110215-1	Feb. 16, 2011	Feb. 15, 2013
*OML Horn Antenna (50~75GHz)	M15HWD	110215-1	Feb. 16, 2011	Feb. 15, 2013
*Diplexer	DPL26	110215-1	Feb. 16, 2011	Feb. 15, 2013
CT Antenna Tower & Turn Table	NA	NA	NA	NA

NOTE:
1. The calibration interval of the above test instruments (Except *) is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. * = The calibration interval of the above test instruments is 24 months and the calibrations are traceable to NML/ROC and NIST/USA.
3. Tested date: Feb. 14, 2012

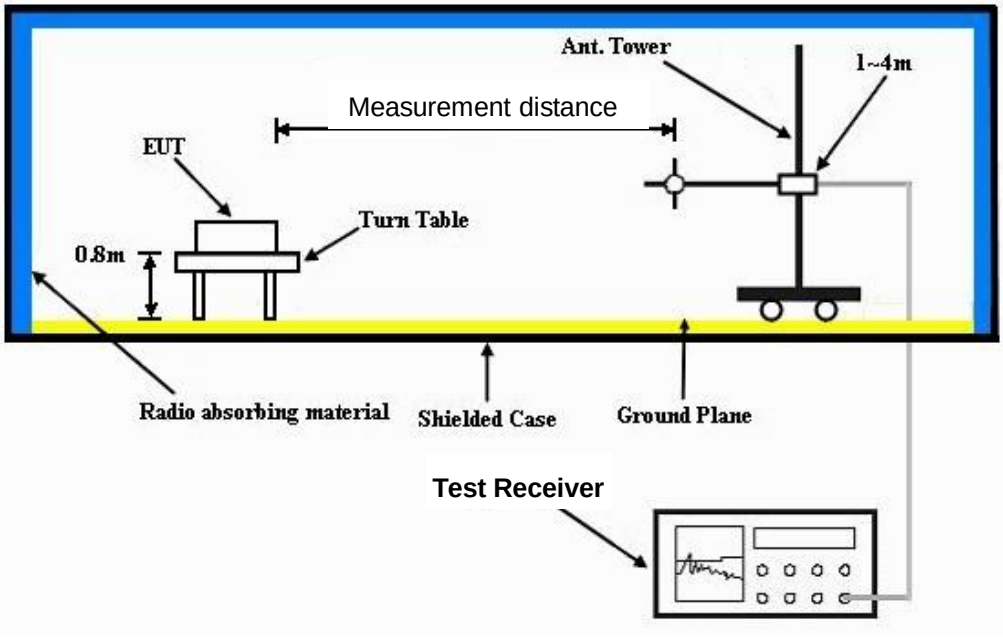
4.5.3 TEST PROCEDURES

The maximum EUT antenna gain is subtracted from the Peak EIRP.

4.5.4 DEVIATION FROM TEST STANDARD

No deviation

4.5.5 TEST SETUP



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

4.5.6 EUT OPERATING CONDITIONS

Same as Item 4.3.6

4.5.7 TEST RESULTS

CHANNEL PLAN 1

Channel	FREQ. (GHz)	EIRP (dBm)	Max. Antenna Gain (dBi)	Output Power (dBm)	Output Power (mW)	6dB Bandwidth (MHz)	Peak Power limit (mW)
Low	60.32	17.8	16	1.8	1.5	84.62	423.1
Middle	60.48	17.3	16	1.3	1.4	90.16	450.8
High	60.64	18.2	16	2.2	1.7	89.92	449.6

CHANNEL PLAN 2

Channel	FREQ. (GHz)	EIRP (dBm)	Max. Antenna Gain (dBi)	Output Power (dBm)	Output Power (mW)	6dB Bandwidth (MHz)	Peak Power limit (mW)
Low	62.48	17.9	16	1.9	1.5	90.03	450.15
Middle	62.64	17.7	16	1.7	1.5	91.3	456.5
High	62.80	17.4	16	1.4	1.4	91.25	456.25

4.6 26dB BANDWIDTH MEASUREMENT

4.6.1 LIMITS OF 26dB BANDWIDTH MEASUREMENT

APPLICABLE RULE

15.403 (c) as referenced by FCC KDB Publication 200443, Millimeter Wave Test Procedures.

LIMIT

None; for reporting purposes only.

4.6.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Agilent Spectrum Analyzer	E4446A	MY48250254	July 12, 2011	July 11, 2012
*OML Harmonic Mixer (50~75GHz)	M15RH	110215-1	Feb. 16, 2011	Feb. 15, 2013
*OML Horn Antenna (50~75GHz)	M15HWD	110215-1	Feb. 16, 2011	Feb. 15, 2013
*Diplexer	DPL26	110215-1	Feb. 16, 2011	Feb. 15, 2013
SPACEK LABS-Amplifier	SLKKa-48-6	9K16	Nov. 15, 2011	Nov. 14, 2012
CT Antenna Tower & Turn Table	NA	NA	NA	NA

NOTE:

1. The calibration interval of the above test instruments (Except *) is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. * = The calibration interval of the above test instruments is 24 months and the calibrations are traceable to NML/ROC and NIST/USA.
3. Tested date: Feb. 14, 2012

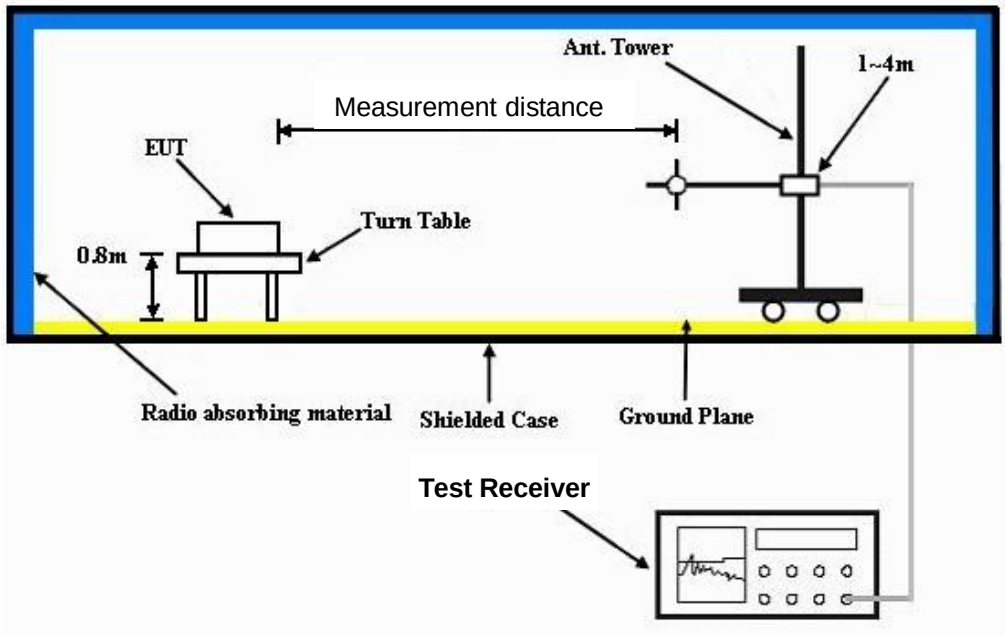
4.6.3 TEST PROCEDURE

The spectrum analyzer and external mixer are set up to measure the radiated output of the transmitter.

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

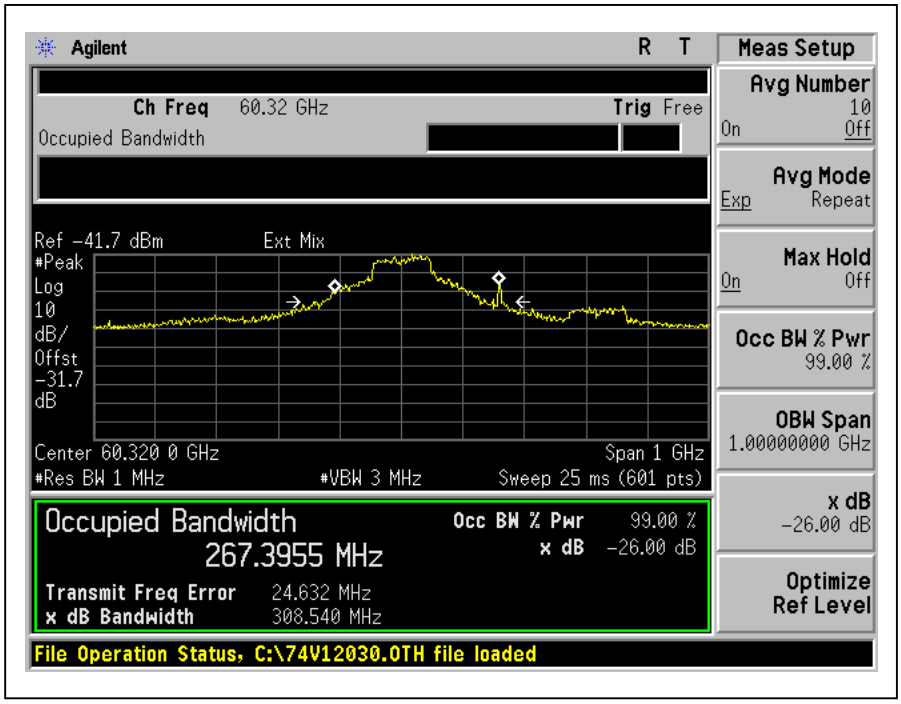
The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

4.6.7 TEST RESULTS

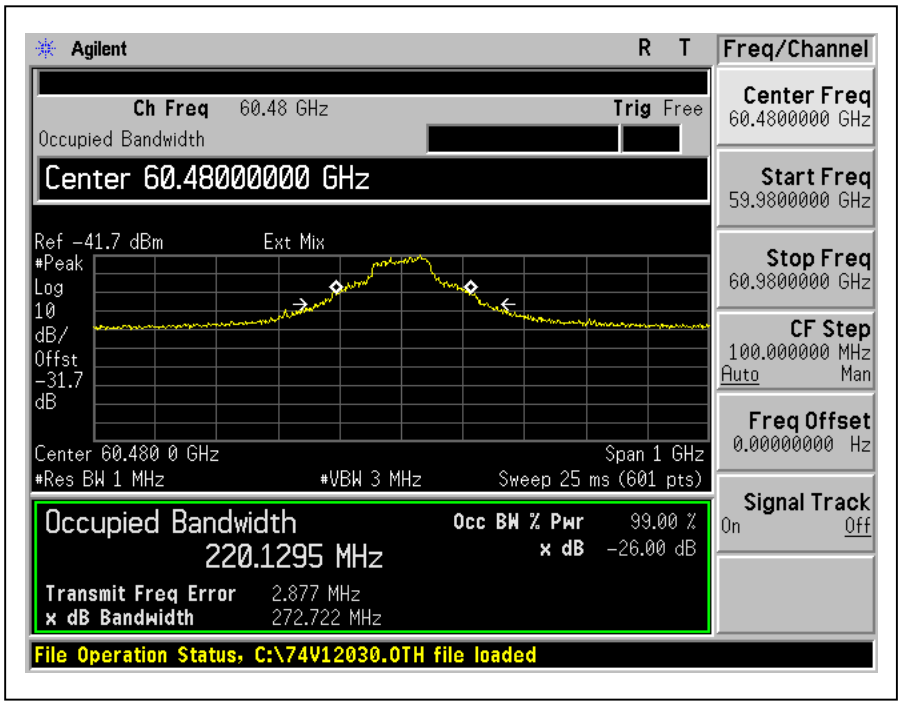
CHENNEL PLAN 1

CHANNEL	CHANNEL FREQUENCY (GHz)	26dB BANDWIDTH (MHz)	PASS / FAIL
Low	60.32	308.540	NA
Middle	60.48	272.722	NA
High	60.64	302.054	NA

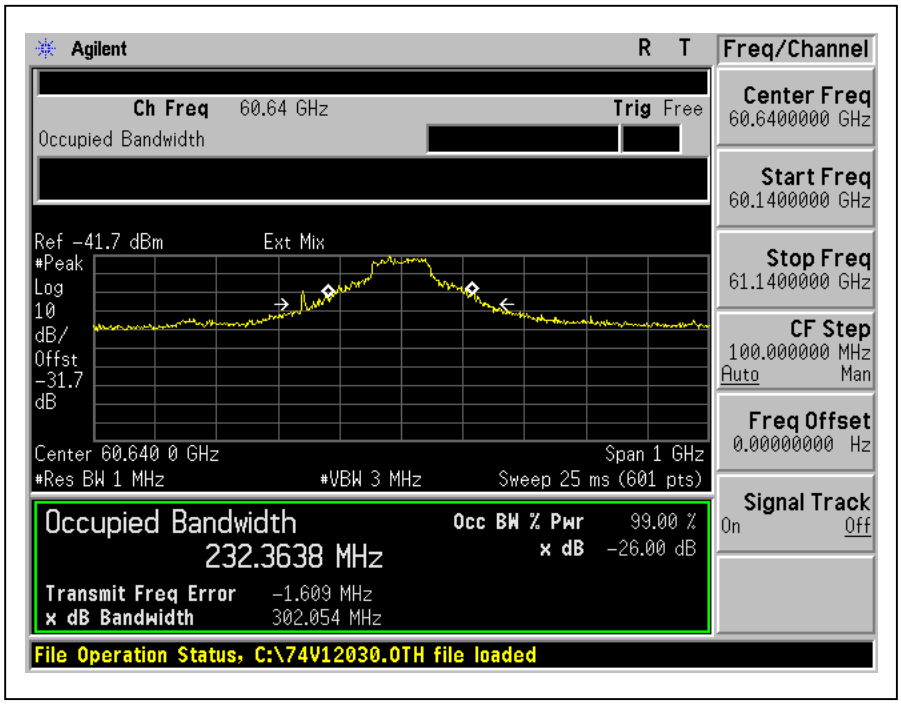
Low Channel



Middle Channel



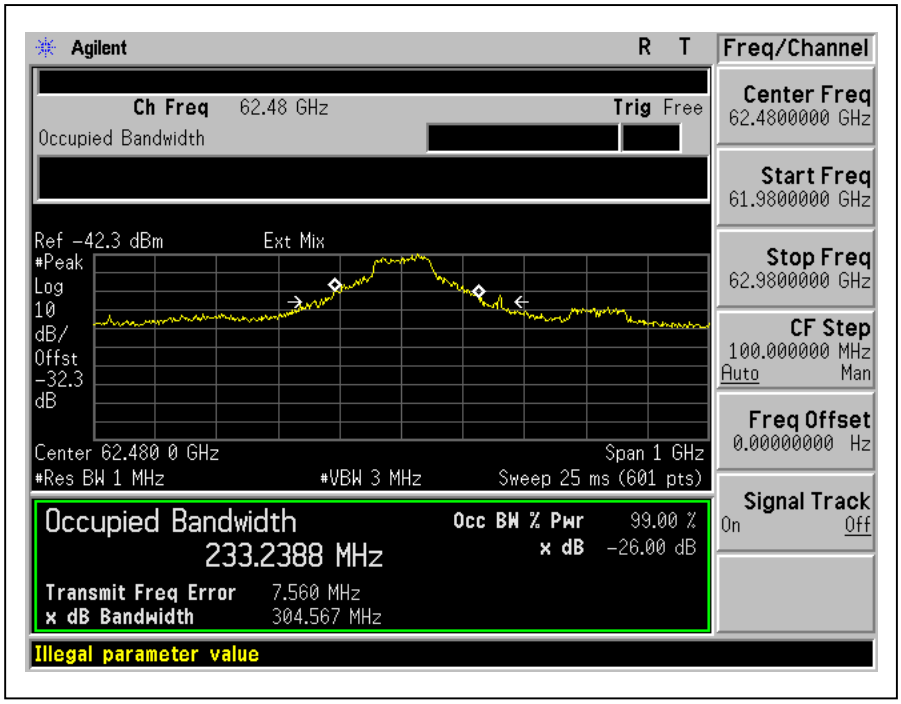
High Channel



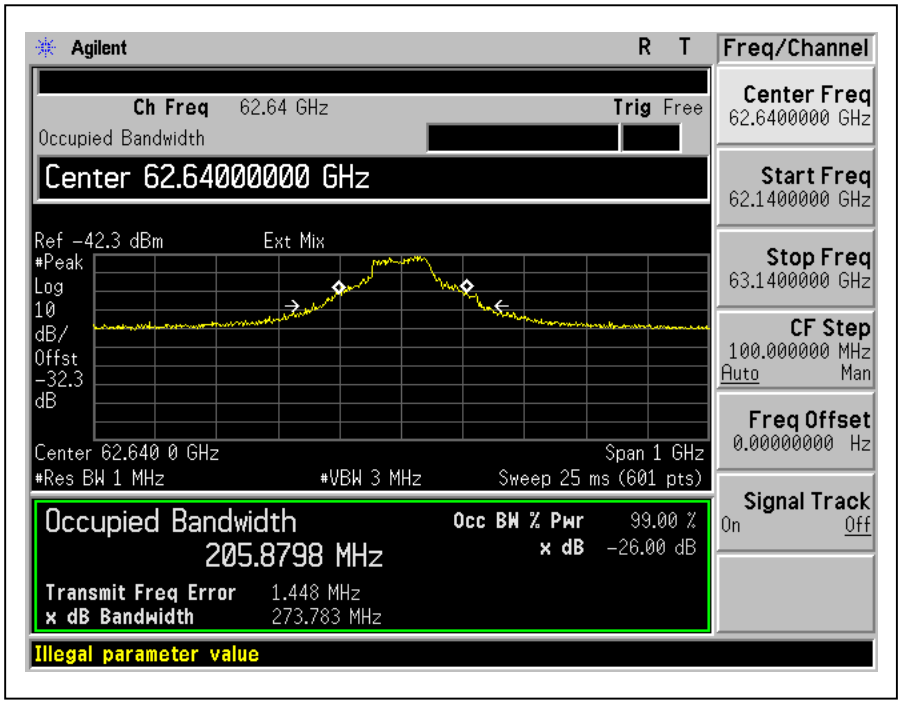
LRP Mode: CHENNEL PLAN 2

CHANNEL	CHANNEL FREQUENCY (GHz)	26dB BANDWIDTH (MHz)	PASS / FAIL
Low	62.48	304.567	NA
Middle	62.64	273.783	NA
High	62.80	292.376	NA

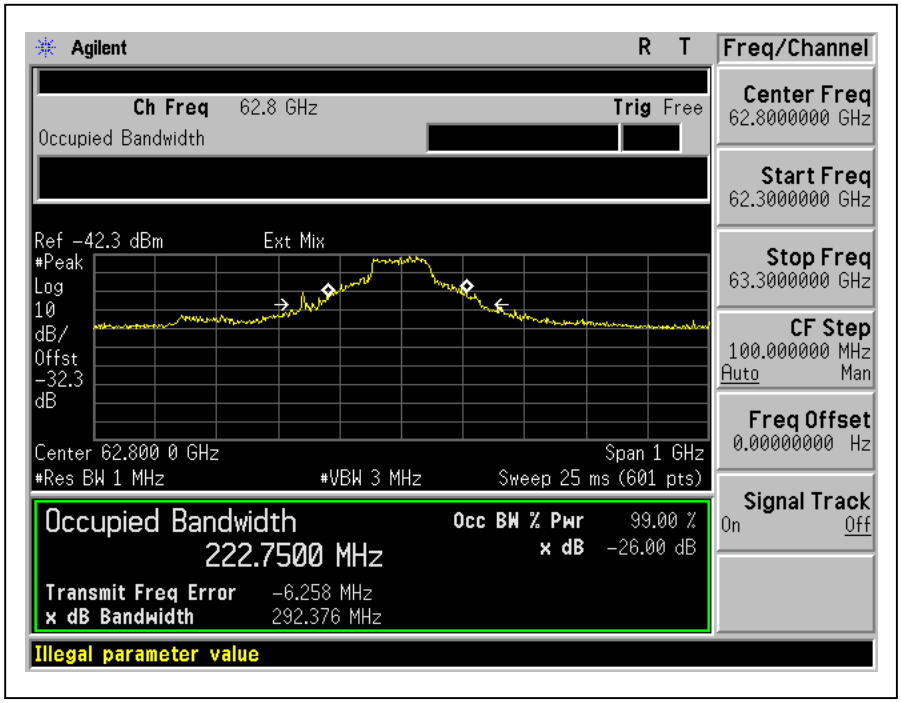
Low Channel



Middle Channel



High Channel



4.7 FREQUENCY STABILITY

4.7.1 LIMITS OF FREQUENCY STABILITY

15.255(f) Fundamental emissions must be contained within the frequency bands specified in this section during all conditions of operation. Equipment is presumed to operate over the temperature range -20 to +50 degrees Celsius with an input voltage variation of 85% to 115% of rated input voltage, unless justification is presented to demonstrate otherwise.

4.7.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Agilent Spectrum Analyzer	E4446A	MY48250254	July 12, 2011	July 11, 2012
*OML Harmonic Mixer (50~75GHz)	M15RH	110215-1	Feb. 16, 2011	Feb. 15, 2013
*OML Horn Antenna (50~75GHz)	M15HWD	110215-1	Feb. 16, 2011	Feb. 15, 2013
*Diplexer	DPL26	110215-1	Feb. 16, 2011	Feb. 15, 2013
CT Antenna Tower & Turn Table	NA	NA	NA	NA
OVEN	MHU-225AU	911033	Dec. 12, 2011	Dec. 11, 2012
Electronics AC Power Source	6205	1440452	NA	NA

NOTE:

1. The calibration interval of the above test instruments (Except *) is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. * = The calibration interval of the above test instruments is 24 months and the calibrations are traceable to NML/ROC and NIST/USA.
3. Tested date: Feb. 21, 2012

4.7.3 TEST PROCEDURE

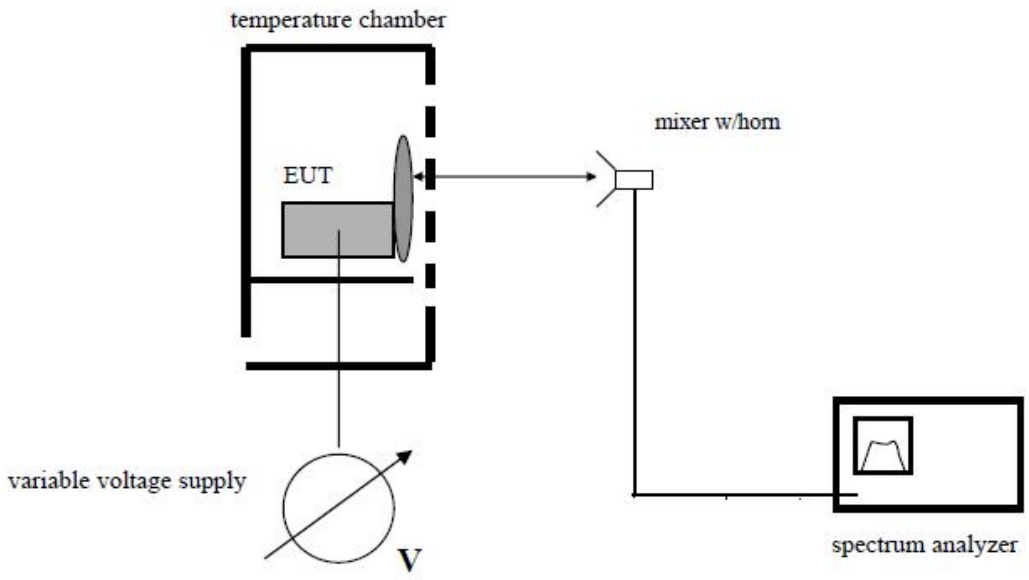
The radio module is placed in an environmental chamber, with power furnished by an adjustable source. The carrier frequency is counted at each condition and compared with the reference condition.

The EUT is intended for indoor use only; the manufacturer's specified temperature range is 40 degrees Celsius.

4.7.4 DEVIATION FROM TEST STANDARD

No deviation

4.7.5 TEST SETUP



4.7.6 EUT OPERATING CONDITIONS

High Definition Audio/Video in the 1080p format was sent from transmitter to the Receiver via the wireless link. The BD Player (PS3) equipped HD A/V to the transmitter. The receiver got the HD A/V signal and transfer to the television. The television was placed outside the test table. A laptop computer with test software was utilized to vary the radio configuration and antenna beam orientation for testing purposes. This computer was not connected during measurements.

4.7.7 TEST RESULTS

AFC FREQUENCY ERROR vs. VOLTAGE								
Voltage (Volts)	0Minutes		2Minutes		5Minutes		10Minutes	
	Frequency (MHz)	p.p.m.	Frequency (MHz)	p.p.m.	Frequency (MHz)	p.p.m.	Frequency (MHz)	p.p.m.
126.5	60481.518	25.0926	60481.523	25.1786	60481.530	25.3026	60481.523	25.1868
110	60481.421	23.4904	60481.416	23.4094	60481.420	23.4854	60481.404	23.2126
93.5	60479.306	11.4815	60479.303	11.5278	60479.303	11.5245	60479.304	11.5129

AFC FREQUENCY ERROR vs. TEMP								
Temp (℃)	0Minutes		2Minutes		5Minutes		10Minutes	
	Frequency (MHz)	p.p.m.	Frequency (MHz)	p.p.m.	Frequency (MHz)	p.p.m.	Frequency (MHz)	p.p.m.
50	60482.922	48.3135	60482.931	48.4656	60482.965	49.0245	60482.954	48.8426
40	60482.357	38.9716	60482.308	38.1531	60482.308	38.1531	60482.358	38.9947
30	60481.865	30.8433	60481.874	30.9888	60481.868	30.8780	60481.808	29.8892
20	60481.421	23.4904	60481.416	23.4094	60481.420	23.4854	60481.404	23.2126
10	60478.977	16.9180	60478.977	16.9163	60478.977	16.9180	60478.976	16.9263
0	60478.129	30.9329	60478.129	30.9325	60478.129	30.9327	60478.129	30.9334
-10	60477.573	40.1323	60477.582	39.9735	60477.583	39.9719	60477.582	39.9769
-20	60476.956	50.3370	60476.957	50.3148	60476.956	50.3313	60476.955	50.3481

4.8 PUBLICLY-ACCESSIBLE COORDINATION CHANNEL

4.8.1 LIMITS OF PUBLICLY-ACCESSIBLE COORDINATION CHANNEL

15.255(h) Any transmitter that has received the necessary FCC equipment authorization under the rules of this chapter may be mounted in a group installation for simultaneous operation with one or more other transmitter(s) that have received the necessary FCC equipment authorization, without any additional equipment authorization. However, no transmitter operating under the provisions of this section may be equipped with external phase- locking inputs that permit beam-forming arrays to be realized.

4.8.2 TEST RESULTS

No spurious emission were detected in 57GHz ~57.05GHz.

4.9 OPERATION RESTRICTION AND GROUP INSTALLATION

4.9.1 LIMITS OF OPERATION RESTRICTION AND GROUP INSTALLATION

15.255(a) Operation under the provisions of this section is not permitted for the following products:

(1) Equipment used on aircraft or satellites.

(2) Field disturbance sensors, including vehicle radar systems, unless the field disturbance sensors are employed for fixed operation. For the purposes of this section, the reference to fixed operation includes field disturbance sensors installed in fixed equipment, even if the sensor itself moves within the equipment.

15.255(h) Any transmitter that has received the necessary FCC equipment authorization under the rules of this chapter may be mounted in a group installation for simultaneous operation with one or more other transmitter(s) that have received the necessary FCC equipment authorization, without any additional equipment authorization. However, no transmitter operating under the provisions of this section may be equipped with external phase- locking inputs that permit beam-forming arrays to be realized.

4.9.2 TEST RESULTS

Operation Restriction

Manufacturer declares the EUT will not been used on aircraft or satellites. User manual will include a statement to caution EUT is not permitted for used on aircraft or satellites.

Group Installation:

The frequency, amplitude and phase of the transmit signal are set within the EUT. There are no external phase-locking inputs or any other means of combining two or more units together to realize a beam-forming array.

4.10 TRANSMITTER IDENTIFICATION

4.10.1 LIMITS OF TRANSMITTER IDENTIFICATION

15.255(i) For all transmissions that emanate from inside of a building, whin any one second interval of signal transmission, each transmitter with a peak output power equal to or greater than 0.1 mW or a peak power density equal to or greater than 3 nW/cm2, as measured 3 meters from the radiating structure, must transmit a transmitter identification at least once. Each application for equipment authorization for equipment that will be used inside of a building must declare that the equipment contains the required transmitter identification feature and must specify a method whereby interested parties can obtain sufficient information, at no cost, to enable them to fully detect and decode this transmitter identification information. Upon the completion of decoding, the transmitter identification data block must provide the following fields:
(1) FCC Identifier, which shall be programmed at the factory.

(2) Manufacturer's serial number, which shall be programmed at the factory.

(3) Provision for at least 24 bytes of data relevant to the specific device, which shall be field programmable. The grantee must implement a method that makes it possible for users to specify and update this data. The recommended content of this field is information to assist in contacting the operator.

4.10.2 TEST RESULTS

Not Applicable.

The EUT is part of a WVAN. All components of the WVAN are for indoor operation only. There are no outdoor units therefore no transmissions are directed outside the building.

5.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 and authorization 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: 886-2-26052943

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

Email: service@adt.com.tw
Web Site: www.adt.com.tw

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

6.APPENDIX A - MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB

No modifications were made to the EUT by the lab during the test.

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