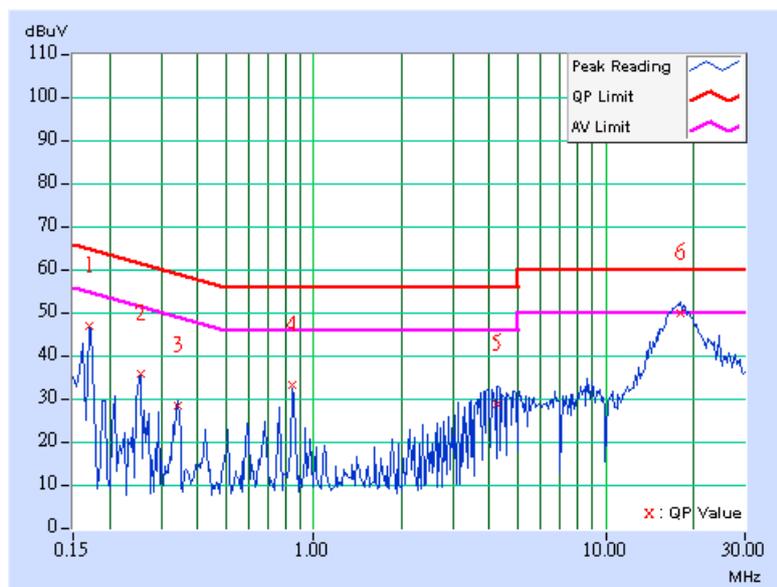


EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 4	PHASE	Line 2
MODULATION TYPE	BPSK	6dB BANDWIDTH	9 kHz
TRANSFER RATE	6Mbps	ENVIRONMENTAL CONDITIONS	20deg. C, 60%RH, 991hPa
INPUT POWER (SYSTEM)	120Vac, 60 Hz	TESTED BY	Match Tsui

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.171	0.21	46.64	-	46.85	-	64.90	54.90	-18.05	-
2	0.255	0.21	35.57	-	35.78	-	61.58	51.58	-25.80	-
3	0.342	0.21	28.07	-	28.28	-	59.16	49.16	-30.88	-
4	0.849	0.23	32.77	-	33.00	-	56.00	46.00	-23.00	-
5	4.246	0.40	28.22	-	28.62	-	56.00	46.00	-27.38	-
6	18.090	0.50	49.46	-	49.96	-	60.00	50.00	-10.04	-

- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
  2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
  3. The emission levels of other frequencies were very low against the limit.
  4. Margin value = Emission level - Limit value
  5. Correction factor = Insertion loss + Cable loss
  6. Emission Level = Correction Factor + Reading Value.



## 5.2 RADIATED EMISSION MEASUREMENT

### 5.2.1 LIMITS OF RADIATED EMISSION MEASUREMENT

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.



## 5.2.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
Test Receiver ROHDE & SCHWARZ	ESI7	838496/016	Dec. 29, 2007
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100039	Dec. 01, 2007
BILOG Antenna SCHWARZBECK	VULB9168	9168-155	Jan. 04, 2008
HORN Antenna SCHWARZBECK	BBHA 9120D	9120D-405	Dec. 18, 2007
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA9170242	Jan. 16, 2008
Preamplifier Agilent	8449B	3008A1960	Oct. 30, 2007
Preamplifier Agilent	8447D	2944A10631	Oct. 30, 2007
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	230128/4	Nov. 14, 2007
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	233233/4	Nov. 14, 2007
Software ADT.	ADT_Radiated_V7.6	NA	NA
Antenna Tower inn-co GmbH	MA 4000	010303	NA
Antenna Tower Controller inn-co GmbH	CO2000	019303	NA
Turn Table ADT.	TT100.	TT93021704	NA
Turn Table Controller ADT.	SC100.	SC93021704	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 IC Site Registration No. is IC3789B-4.

### 5.2.3 TEST PROCEDURES

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meters semi-anechoic chamber. 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 antenna is a broadband antenna, and its height 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 Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- f. If the emission level of the EUT in peak mode was lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

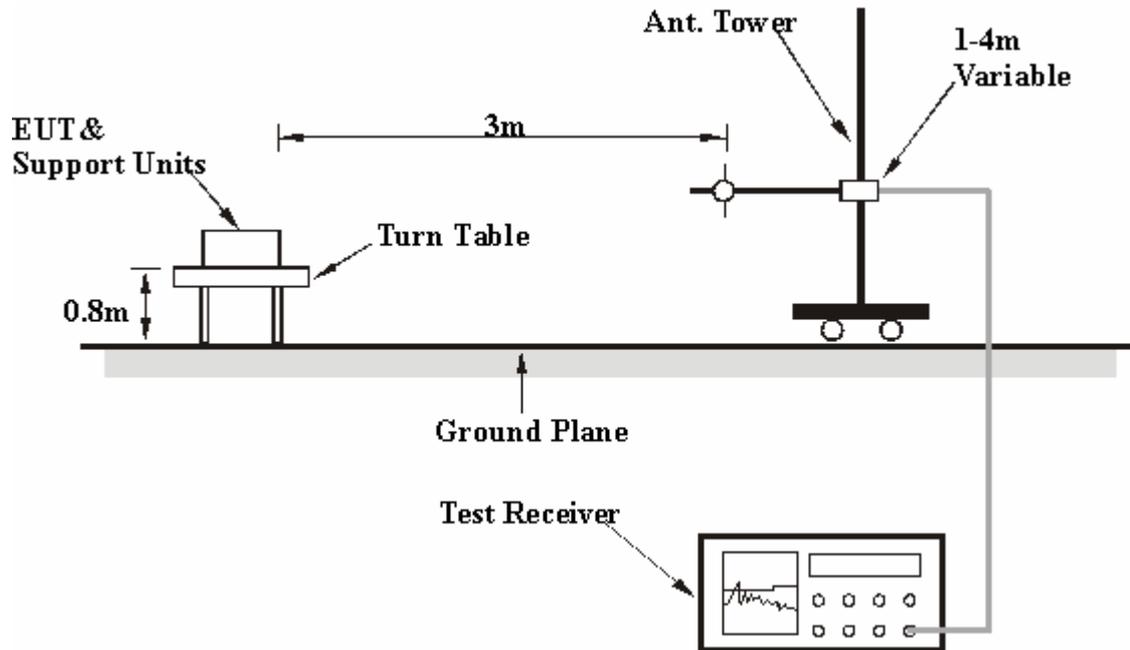
**NOTE:**

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

### 5.2.4 DEVIATION FROM TEST STANDARD

No deviation

### 5.2.5 TEST SETUP



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

### 5.2.6 EUT OPERATING CONDITIONS

Same as 4.1.6

## 5.2.7 TEST RESULTS

### BELOW 1GHz WORST-CASE DATA FOR TEST MODE A (ADAPTER MODE):

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 4	FREQUENCY RANGE	Below 1000MHz
MODULATION TYPE	BPSK	DETECTOR FUNCTION	Quasi-Peak
TRANSFER RATE	6Mbps	ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 991hPa
INPUT POWER (SYSTEM)	120Vac, 60 Hz	TESTED BY	Match Tsui

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	249.60	40.72 QP	46.00	-5.28	1.50 H	115	27.04	13.69
2	366.26	40.87 QP	46.00	-5.13	1.00 H	298	24.40	16.47
3	500.42	40.45 QP	46.00	-5.55	2.00 H	10	19.91	20.54
4	667.63	39.20 QP	46.00	-6.80	2.50 H	238	14.59	24.61
5	700.68	38.57 QP	46.00	-7.43	1.00 H	10	13.32	25.26
6	727.90	40.75 QP	46.00	-5.25	1.50 H	55	15.18	25.57
7	867.89	38.00 QP	46.00	-8.00	2.50 H	70	10.56	27.44

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	31.84	38.45 QP	40.00	-1.55	1.00 V	352	25.92	12.53
2	119.34	36.09 QP	43.50	-7.41	1.00 V	10	23.93	12.15
3	166.00	35.85 QP	43.50	-7.65	1.00 V	163	21.84	14.01
4	249.60	42.96 QP	46.00	-3.04	1.00 V	103	29.27	13.69
5	366.26	41.33 QP	46.00	-4.67	1.50 V	61	24.86	16.47
6	500.42	39.04 QP	46.00	-6.96	1.00 V	46	18.50	20.54
7	667.63	44.04 QP	46.00	-1.96	1.00 V	109	19.43	24.61
8	731.79	44.29 QP	46.00	-1.71	1.50 V	10	18.67	25.62
9	799.84	38.62 QP	46.00	-7.38	1.50 V	169	12.19	26.43
10	865.94	41.36 QP	46.00	-4.64	1.50 V	10	13.96	27.41

- 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.

**FOR TEST MODE B (POE MODE):**

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 4	FREQUENCY RANGE	Below 1000MHz
MODULATION TYPE	BPSK	DETECTOR FUNCTION	Quasi-Peak
TRANSFER RATE	6Mbps	ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 991hPa
INPUT POWER (SYSTEM)	120Vac, 60 Hz	TESTED BY	Match Tsui

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	199.05	34.47 QP	43.50	-9.03	1.00 H	169	23.07	11.40
2	232.11	40.04 QP	46.00	-5.96	1.00 H	181	27.18	12.86
3	366.26	38.45 QP	46.00	-7.55	2.50 H	13	21.98	16.47
4	399.31	41.45 QP	46.00	-4.55	2.00 H	181	24.14	17.31
5	432.37	36.26 QP	46.00	-9.74	2.00 H	181	17.91	18.35
6	500.42	35.05 QP	46.00	-10.95	1.50 H	193	14.51	20.54
7	667.63	44.11 QP	46.00	-1.89	1.00 H	160	19.50	24.61
8	700.68	36.36 QP	46.00	-9.64	1.00 H	289	11.10	25.26
9	733.73	36.85 QP	46.00	-9.15	1.00 H	25	11.21	25.64
10	799.84	41.20 QP	46.00	-4.80	1.00 H	13	14.78	26.43
11	900.94	39.57 QP	46.00	-6.43	1.00 H	10	11.60	27.97
12	933.99	44.20 QP	46.00	-1.80	1.50 H	349	15.86	28.34

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	53.23	37.09 QP	40.00	-2.91	1.00 V	19	22.92	14.17
2	366.26	40.80 QP	46.00	-5.20	1.50 V	316	24.34	16.47
3	399.31	38.72 QP	46.00	-7.28	1.00 V	208	21.40	17.31
4	667.63	40.99 QP	46.00	-5.01	1.00 V	109	16.38	24.61
5	799.84	38.46 QP	46.00	-7.54	1.50 V	109	12.04	26.43
6	900.94	39.23 QP	46.00	-6.77	1.00 V	238	11.26	27.97
7	933.99	43.25 QP	46.00	-2.75	1.00 V	349	14.91	28.34

- 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.



**802.11a OFDM MODULATION  
FOR TEST MODE B (POE MODE):**

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	1 ~ 40 GHz
MODULATION TYPE	BPSK	DETECTOR FUNCTION	Peak(PK) Average (AV)
TRANSFER RATE	6Mbps	ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 991hPa
INPUT POWER (SYSTEM)	120Vac, 60 Hz	TESTED BY	Match Tsui

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	#1066.00	51.22 PK	74.00	-22.78	1.05 H	62	22.49	28.73
2	#1066.00	46.02 AV	54.00	-7.98	1.05 H	62	17.29	28.73
3	5725.00	72.62 PK	77.09	-4.47	1.02 H	301	32.56	40.06
4	5725.00	56.68 AV	67.23	-10.55	1.02 H	301	16.62	40.06
5	*5745.00	97.09 PK			1.21 H	221	56.97	40.12
6	*5745.00	87.23 AV			1.21 H	221	47.11	40.12
7	#11490.00	66.94 PK	74.00	-7.06	1.23 H	205	15.68	51.26
8	#11490.00	47.61 AV	54.00	-6.39	1.23 H	205	-3.65	51.26

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	#1066.00	50.26 PK	74.00	-23.74	1.09 V	221	21.53	28.73
2	#1066.00	45.36 AV	54.00	-8.64	1.09 V	221	16.63	28.73
3	5725.00	81.39 PK	85.70	-4.34	1.24 V	63	41.33	40.06
4	5725.00	61.08 AV	75.14	-14.06	1.24 V	63	21.02	40.06
5	*5745.00	105.70 PK			1.34 V	159	65.58	40.12
6	*5745.00	95.14 AV			1.34 V	159	55.02	40.12
7	#11490.00	65.21 PK	74.00	-8.79	1.05 V	63	15.14	50.07
8	#11490.00	47.86 AV	54.00	-6.14	1.05 V	63	-2.21	50.07

- NOTE:**
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
  5. "\*" : Fundamental frequency
  6. "#"The radiated frequency falling in the restricted band.
  7. The limit value is defined as per 15.247

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 3	FREQUENCY RANGE	1 ~ 40 GHz
MODULATION TYPE	BPSK	DETECTOR FUNCTION	Peak(PK) Average (AV)
TRANSFER RATE	6Mbps	ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 991hPa
INPUT POWER (SYSTEM)	120Vac, 60 Hz	TESTED BY	Match Tsui

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	#1066.00	51.96 PK	74.00	-22.04	1.15 H	49	23.23	28.73
2	#1066.00	46.85 AV	54.00	-7.15	1.15 H	49	18.12	28.73
3	*5785.00	98.54 PK			1.22 H	205	58.32	40.22
4	*5785.00	88.72 AV			1.22 H	205	48.50	40.22
5	#11570.00	63.85 PK	74.00	-10.15	1.02 H	156	12.80	51.05
6	#11570.00	49.01 AV	54.00	-4.99	1.02 H	156	-2.04	51.05

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	#1066.00	51.58 PK	74.00	-22.42	1.05 V	114	22.85	28.73
2	#1066.00	46.05 AV	54.00	-7.95	1.05 V	114	17.32	28.73
3	*5785.00	106.66 PK			1.24 V	160	66.44	40.22
4	*5785.00	96.51 AV			1.24 V	160	56.29	40.22
5	#11570.00	62.60 PK	74.00	-11.40	1.00 V	215	11.55	51.05
6	#11570.00	48.95 AV	54.00	-5.05	1.00 V	215	-2.10	51.05

- NOTE:**
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
  5. "\*" : Fundamental frequency
  6. "#"The radiated frequency falling in the restricted band.
  7. The limit value is defined as per 15.247



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 4	FREQUENCY RANGE	1 ~ 40 GHz
MODULATION TYPE	BPSK	DETECTOR FUNCTION	Peak(PK) Average (AV)
TRANSFER RATE	6Mbps	ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 991hPa
INPUT POWER (SYSTEM)	120Vac, 60 Hz	TESTED BY	Match Tsui

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	#1066.00	48.68 PK	74.00	-25.32	1.13 H	68	20.74	27.94
2	#1066.00	44.25 AV	54.00	-9.75	1.13 H	68	16.31	27.94
3	*5805.00	103.46 PK			1.13 H	328	63.06	40.40
4	*5805.00	94.61 AV			1.13 H	328	54.21	40.40
5	5850.00	60.09 PK	83.46	-23.37	1.13 H	328	19.58	40.52
6	5850.00	51.24 AV	74.61	-23.37	1.13 H	328	10.73	40.52
7	#11610.00	53.71 PK	74.00	-20.29	1.10 H	84	2.13	51.58
8	#11610.00	49.22 AV	54.00	-4.78	1.10 H	84	-2.36	51.58

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	#1066.00	51.15 PK	74.00	-22.85	1.05 V	116	22.42	28.73
2	#1066.00	45.89 AV	54.00	-8.11	1.05 V	116	17.16	28.73
3	*5805.00	106.19 PK			1.16 V	160	65.92	40.27
4	*5805.00	96.03 AV			1.16 V	160	55.76	40.27
5	5850.00	66.32 PK	86.19	-19.87	1.26 V	125	25.95	40.36
6	5850.00	56.56 AV	76.03	-19.47	1.26 V	125	16.20	40.36
7	#11610.00	63.02 PK	74.00	-10.98	1.09 V	65	12.06	50.96
8	#11610.00	48.35 AV	54.00	-5.65	1.09 V	65	-2.61	50.96

- NOTE:**
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
  5. "\*" : Fundamental frequency
  6. "#"The radiated frequency falling in the restricted band.
  7. The limit value is defined as per 15.247

**FOR TEST MODE C (POE MODE):**

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	1 ~ 40 GHz
MODULATION TYPE	BPSK	DETECTOR FUNCTION	Peak(PK) Average (AV)
TRANSFER RATE	6Mbps	ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 991hPa
INPUT POWER (SYSTEM)	120Vac, 60 Hz	TESTED BY	Match Tsui

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	#1066.00	48.65 PK	74.00	-25.35	1.18 H	231	19.92	28.73
2	#1066.00	44.29 AV	54.00	-9.71	1.18 H	231	15.56	28.73
3	5725.00	68.96 PK	83.36	-14.40	1.19 H	321	28.89	40.06
4	5725.00	60.21 AV	73.32	-13.11	1.19 H	321	20.15	40.06
5	*5745.00	103.36 PK			1.19 H	321	63.24	40.12
6	*5745.00	93.32 AV			1.19 H	321	53.20	40.12
7	#11490.00	61.25 PK	74.00	-12.75	1.10 H	36	9.99	51.26
8	#11490.00	49.22 AV	54.00	-4.78	1.10 H	36	-2.04	51.26

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	#1066.00	50.49 PK	74.00	-23.51	1.20 V	45	21.76	28.73
2	#1066.00	47.38 AV	54.00	-6.62	1.20 V	45	18.65	28.73
3	5725.00	82.85 PK	91.47	-8.62	1.00 V	15	42.78	40.06
4	5725.00	67.47 AV	80.47	-13.00	1.00 V	15	27.41	40.06
5	*5745.00	111.47 PK			1.00 V	15	71.35	40.12
6	*5745.00	100.47 AV			1.00 V	15	60.35	40.12
7	#11490.00	63.08 PK	74.00	-10.92	1.00 V	1	11.82	51.26
8	#11490.00	49.57 AV	54.00	-4.43	1.00 V	1	-1.69	51.26

- NOTE:**
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
  5. "\*" : Fundamental frequency
  6. "#"The radiated frequency falling in the restricted band.
  7. The limit value is defined as per 15.247

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 4	FREQUENCY RANGE	1 ~ 40 GHz
MODULATION TYPE	BPSK	DETECTOR FUNCTION	Peak(PK) Average (AV)
TRANSFER RATE	6Mbps	ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 991hPa
INPUT POWER (SYSTEM)	120Vac, 60 Hz	TESTED BY	Match Tsui

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	#1066.00	48.45 PK	74.00	-25.55	1.14 H	219	19.72	28.73
2	#1066.00	44.02 AV	54.00	-9.98	1.14 H	219	15.29	28.73
3	*5805.00	103.91 PK			1.19 H	320	63.64	40.27
4	*5805.00	93.84 AV			1.19 H	320	53.57	40.27
5	5850.00	59.07 PK	83.91	-24.84	1.19 H	320	18.71	40.36
6	5850.00	47.43 AV	73.84	-26.41	1.19 H	320	7.07	40.36
7	#11610.00	61.36 PK	74.00	-12.64	1.09 H	42	10.40	50.96
8	#11610.00	49.38 AV	54.00	-4.62	1.09 H	42	-1.58	50.96

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	#1066.00	49.85 PK	74.00	-24.15	1.12 V	234	21.12	28.73
2	#1066.00	46.68 AV	54.00	-7.32	1.12 V	234	17.95	28.73
3	*5805.00	111.93 PK			1.00 V	14	71.66	40.27
4	*5805.00	101.13 AV			1.00 V	14	60.86	40.27
5	5850.00	67.09 PK	91.93	-24.84	1.00 V	14	26.73	40.36
6	5850.00	54.72 AV	81.13	-26.41	1.00 V	14	14.36	40.36
7	#11610.00	54.95 PK	74.00	-19.05	1.10 V	323	3.99	50.96
8	#11610.00	50.48 AV	54.00	-3.52	1.10 V	323	-0.48	50.96

- NOTE:**
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
  5. "\*" : Fundamental frequency
  6. "#"The radiated frequency falling in the restricted band.
  7. The limit value is defined as per 15.247

### 5.3 BAND EDGES MEASUREMENT

#### 5.3.1 LIMITS OF BAND EDGES MEASUREMENT

Below  $-20\text{dB}$  of the highest emission level of operating band (in 100kHz Resolution Bandwidth).

#### 5.3.2 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
R&S SPECTRUM ANALYZER	FSP 40	100040	Jun. 07, 2007

**NOTES:**

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

#### 5.3.3 TEST PROCEDURE

The transmitter output was connected to the spectrum analyzer via a low lose cable. Set both RBW and VBW of spectrum analyzer to 100 kHz with suitable frequency span including 100 MHz bandwidth from band edge. The band edges was measured and recorded.

#### 5.3.4 DEVIATION FROM TEST STANDARD

No deviation

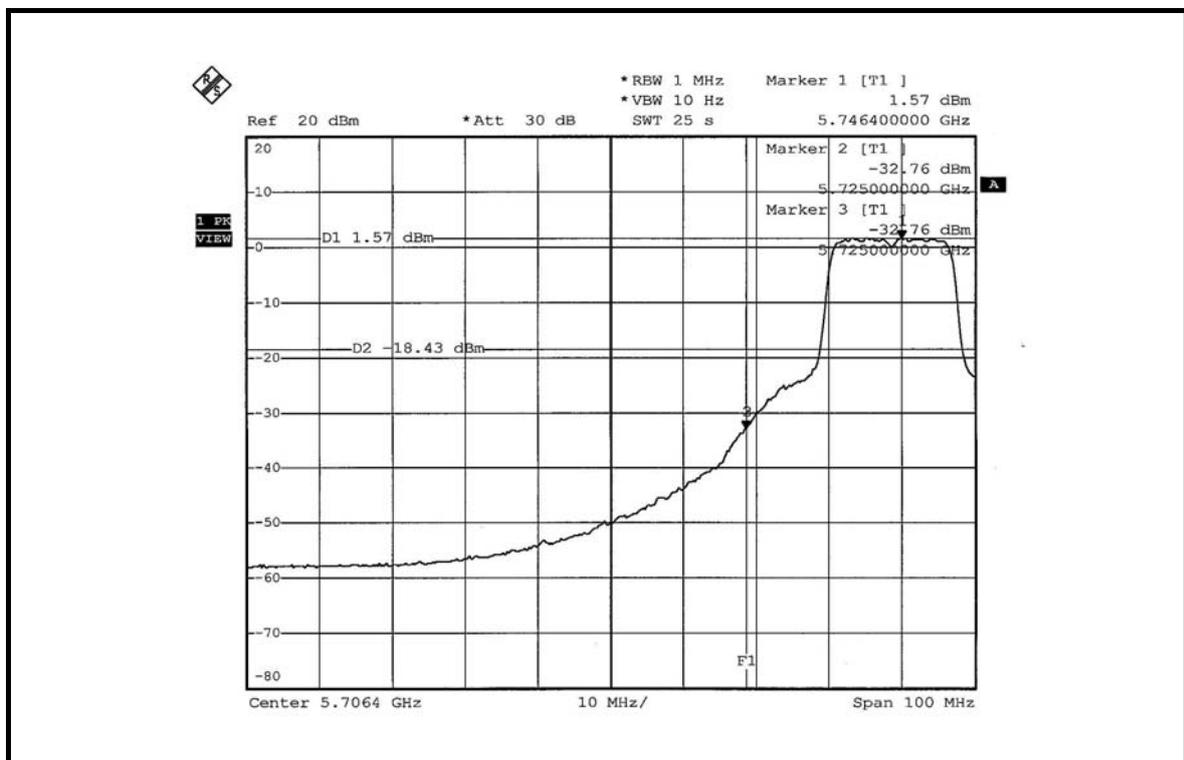
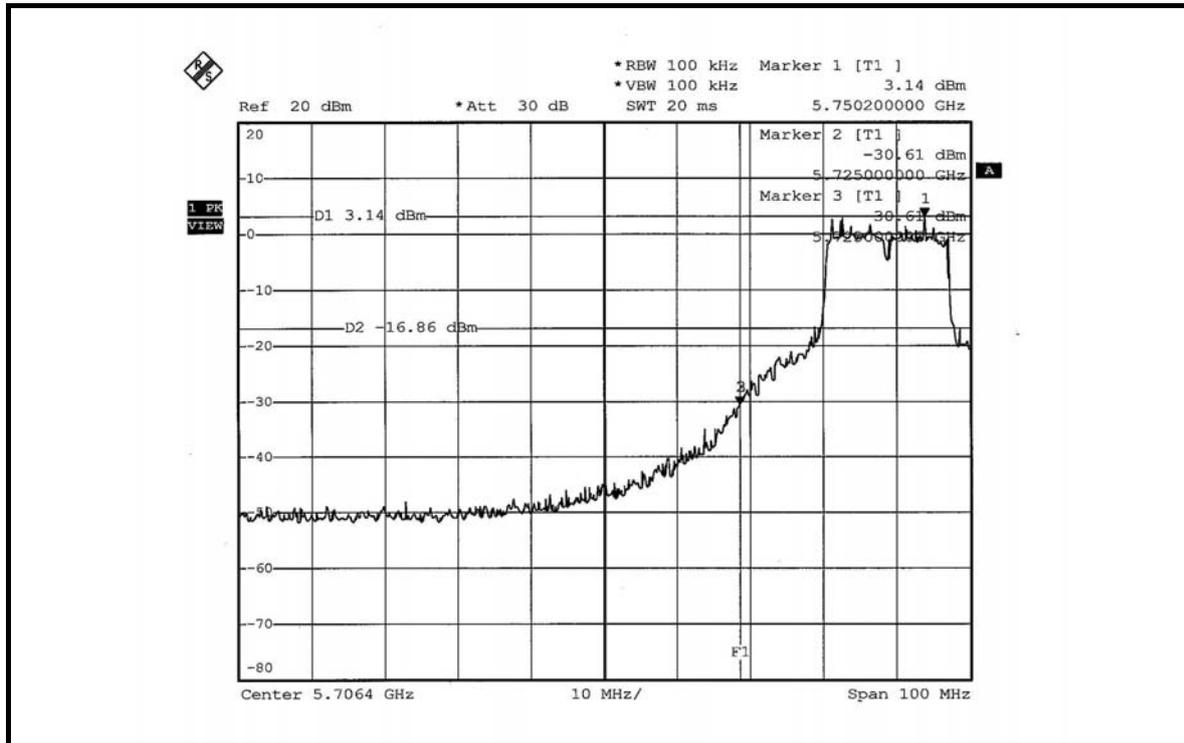


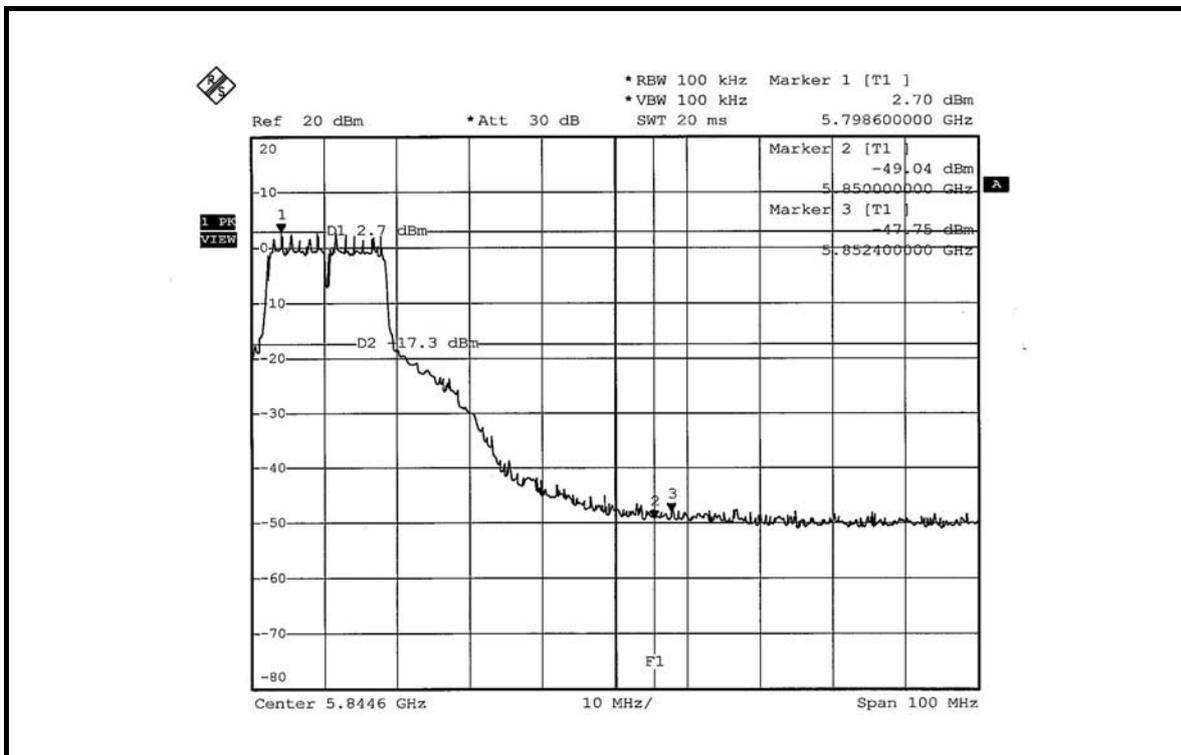
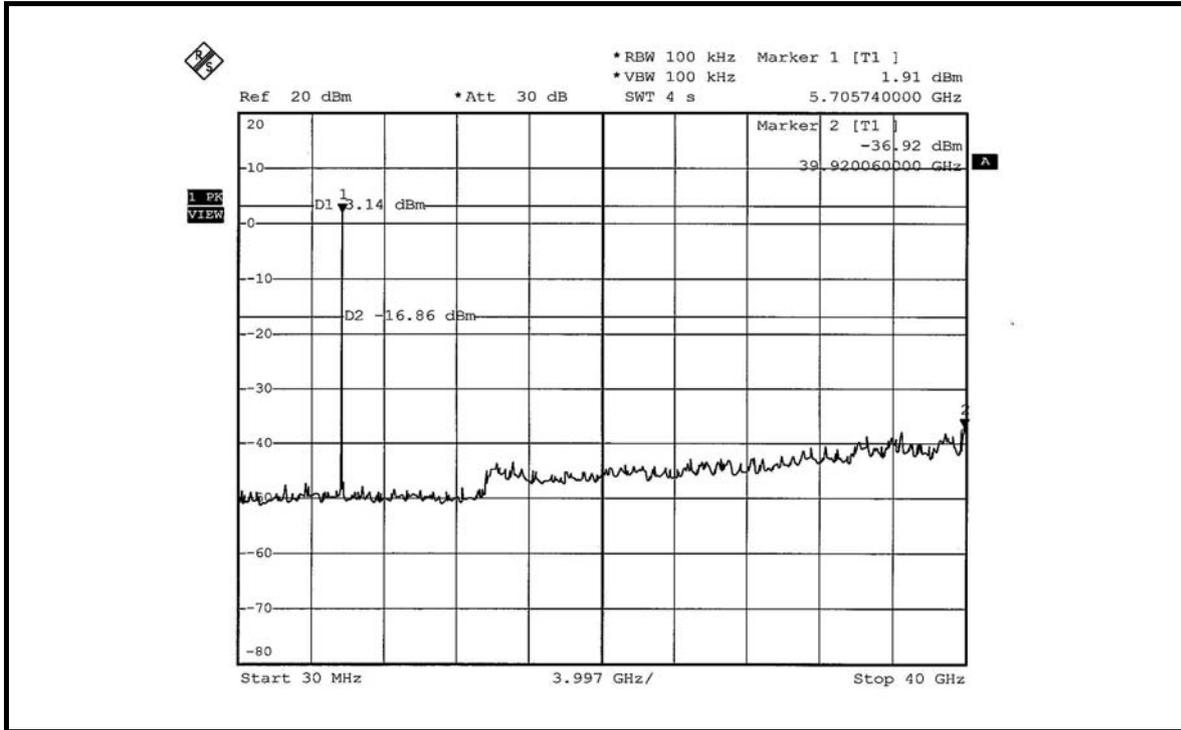
### 5.3.5 EUT OPERATING CONDITION

Same as Item 5.9.6

### 5.3.6 TEST RESULTS

The spectrum plots are attached on the following pages. D1 line indicates the highest level, D2 line indicates the 20dB offset below D1. It shows compliance with the requirement in part 15.247(d).









## **5.4 ANTENNA REQUIREMENT**

### **5.4.1 STANDARD APPLICABLE**

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

And according to FCC 47 CFR Section 15.247(a), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

### **5.4.2 ANTENNA CONNECTED CONSTRUCTION**

The antennas used in this product are Dipole with R-TNC connector and Dualband Built-in directional antenna with UFL connector. The maximum Gain of the antenna is 8dBi.



## 6. PHOTOGRAPHS OF THE TEST CONFIGURATION

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



## 7. INFORMATION ON THE TESTING LABORATORIES

We, ADT Corp., were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are accredited and approved by the following approval agencies according to ISO/IEC 17025.

<b>USA</b>	FCC, UL, A2LA
<b>Germany</b>	TUV Rheinland
<b>Japan</b>	VCCI
<b>Norway</b>	NEMKO
<b>Canada</b>	INDUSTRY CANADA , CSA
<b>R.O.C.</b>	CNLA, BSMI, NCC
<b>Netherlands</b>	Telefication
<b>Singapore</b>	PSB , GOST-ASIA(MOU)
<b>Russia</b>	CERTIS(MOU)

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](http://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](http://www.adt.com.tw)

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



## **APPENDIX-A**

### **MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB**

No any modifications are made to the EUT by the lab during the test.