FCC TEST REPORT

REPORT NO.: RF941012L01
MODEL NO.: MC7070
RECEIVED: Sep. 02, 2005
TESTED: Sep. 02 ~ Oct. 17, 2005
ISSUED: Oct. 26, 2005

APPLICANT: Symbol Technologies, Inc.

ADDRESS: One Symbol Plaza, Holtsville, NY 11742-1300, U.S.A.

ISSUED BY: Advance Data Technology Corporation

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

0528
ILAC MRA

No. 2177-01

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1. CERTIFICATION

PRODUCT:	EDA (Enterprise Digital Assistant)
MODEL:	MC7070
BRAND:	Symbol
APPLICANT:	Symbol Technologies, Inc.
TEST SAMPLE:	PROTOTYPE
TESTED:	Sep. 02 ~ Oct. 17, 2005
STANDARDS:	FCC Part 15, Subpart C (Section 15.247), ANSI C63.4-2003

The above equipment has been tested by **Advance Data Technology Corporation,** 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:**	Oct. 25, 2005
TECHNICAL ACCEPTANCE Responsible for RF	: Gary Chang	, **DATE:**	Oct. 25, 2005
APPROVED BY	: Cody Chang / Deputy Manager	, **DATE:**	Oct. 25, 2005

2. SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC Part 15, Subpart C (Section 15.247)			
Standard Section	**Test Type and Limit**	**Result**	**Remark**
15.207	AC Power Conducted Emission	PASS	Meet the requirement of limit. Minimum passing margin is –14.76dB at 0.201MHz
15.247(a)(2)	Spectrum Bandwidth of a Direct Sequence Spread Spectrum System Limit: min. 500kHz	PASS	Meet the requirement of limit.
15.247(b)	Maximum Peak Output Power Limit: max. 30dBm	PASS	Meet the requirement of limit.
15.247(d)	Radiated Emissions Limit: Table 15.209	PASS	Meet the requirement of limit. Minimum passing margin is –5.92dB at 2390.00MHz
15.247(e)	Power Spectral Density Limit: max. 8dBm	PASS	Meet the requirement of limit.
15.247(d)	Band Edge Measurement Limit: 20dB less than the peak value of fundamental frequency	PASS	Meet the requirement of limit.

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:

Measurement	Frequency	Uncertainty
Conducted emissions	9kHz~30MHz	2.44 dB
Radiated emissions	30MHz ~ 200MHz	3.73 dB
	200MHz ~1000MHz	3.74 dB
	1GHz ~ 18GHz	2.20 dB
	18GHz ~ 40GHz	1.88 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

EUT	EDA (Enterprise Digital Assistant)
MODEL NO.	MC7070
POWER SUPPLY	3.7Vdc from rechargeable lithium battery 5.4Vdc from power adapter for charger 12.0Vdc from power adapter for cradle
MODULATION TYPE	Wireless LAN: CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM Bluetooth: GFSK for FHSS
MODULATION TECHNOLOGY	DSSS, OFDM, FHSS
TRANSFER RATE	Wireless LAN: 802.11b:11/5.5/2/1Mbps 802.11g: 54/48/36/24/18/12/9/6Mbps Bluetooth: 723Kbps
FREQUENCY RANGE	Wireless LAN: 802.11b & 802.11g: 2.412 ~ 2.462GHz Bluetooth: 2.402 ~ 2.480GHz
NUMBER OF CHANNEL	Wireless LAN: 802.11b & 802.11g: 11 Bluetooth: 79
CHANNEL SPACING	Wireless LAN: 802.11b & 802.11g: 5MHz Bluetooth: 1MHz
OUTPUT POWER	Wireless LAN: 40.551mW for 802.11b 44.771mW for 802.11g Bluetooth: 1.057mW
ANTENNA TYPE	Wireless LAN: PIFA antenna with 2.0dBi gain Bluetooth: Chip antenna with 2.0dBi gain
DATA CABLE	0.92m non-shielded cable for earphone
I/O PORTS	Refer to user's manual
ASSOCIATED DEVICES	Earphone, cradle

NOTE:

1. The EUT is an EDA (Enterprise Digital Assistant) with wireless LAN and bluetooth functions.
2. The wireless LAN included two dual band antennas. After pre-testing both primary and auxiliary antennas, the former as the worst case, was chosen for final test.
3. The EDA supports two battery options, Heavy (high capacity) and Main (normal). Both options were assessed and the heavy battery was found to be worst case and was selected for the final test configuration.

HEAVY BATTERY:	
BRAND:	Symbol
MODEL:	82-71364-01
RATING:	3.7Vdc, 3800 mAh

MAIN BATTERY:	
BRAND:	Symbol
MODEL:	82-71363-01
RATING:	3.7Vdc, 1900 mAh

4. The cradle was operated with following power adapter:

BRAND:	HIPRO
MODEL:	HP-O2040D43
INPUT:	100-240Vac, 50-60Hz, 1.5A
OUTPUT:	12Vdc, 3.33A
POWER LINE:	AC 1.8m non-shielded cable without core DC 1.8m non-shielded cable with one core

5. The EUT was operated with following charging cradle:

BRAND:	Delta
MODEL:	ADP-16GB A
INPUT:	100-240Vac, 50-60Hz, 0.4A
OUTPUT:	5.4Vdc, 3A
POWER LINE:	AC 0.7m non-shielded cable without core DC 1.87m non-shielded cable with one core

6. The EUT operates in 2.4GHz Bands and compatibility with 802.11b and 802.11g technology.
7. The above EUT information was declared by the manufacturer and for more detailed features description, please refer to the manufacturer's specifications or User's Manual.

3.2 DESCRIPTION OF TEST MODES

Since the EUT is considered a portable unit, it was pre-tested on the positioned of each 3 axis. The worst case was found when positioned on X-plane. Therefore only the test data of this X-plane was used for radiated test.

Operated in 2400 ~ 2483.5MHz band:

11 channels are provided to the EUT for wireless LAN function:

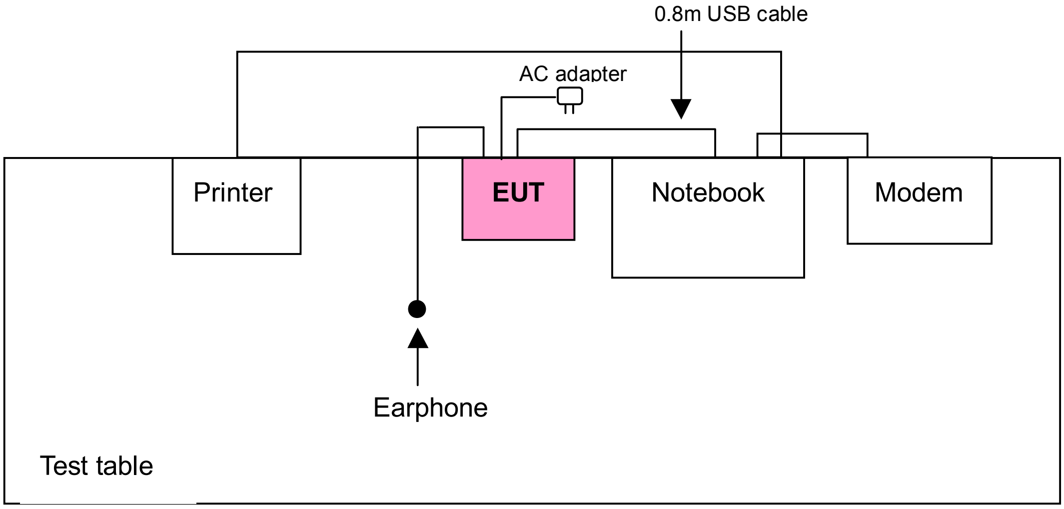
CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
1	2412 MHz	7	2442 MHz
2	2417 MHz	8	2447 MHz
3	2422 MHz	9	2452 MHz
4	2427 MHz	10	2457 MHz
5	2432 MHz	11	2462 MHz
6	2437 MHz		

79 channels are provided to this EUT for bluetooth function:

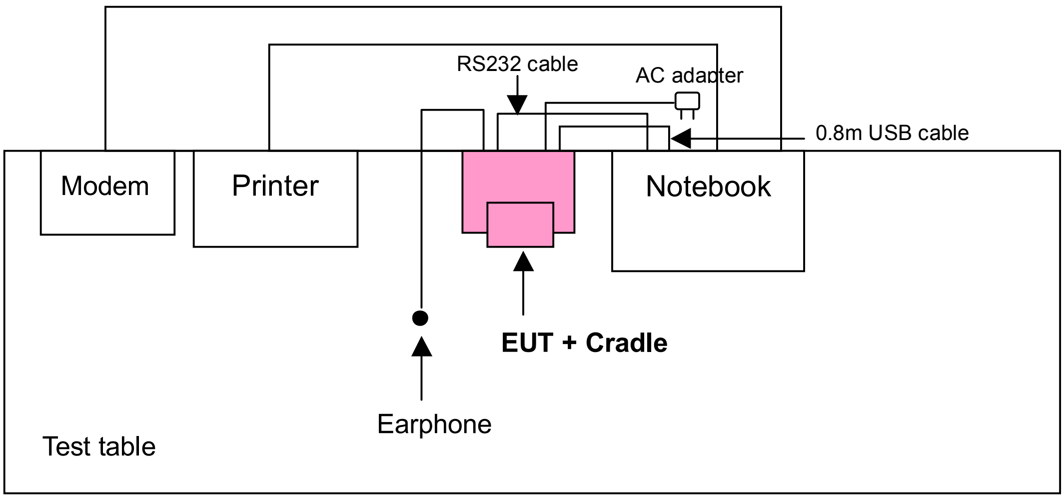
CHANNEL	FREQ. (MHz)	CHANNEL	FREQ. (MHz)	CHANNEL	FREQ. (MHz)	CHANNEL	FREQ. (MHz)
0	2402	20	2422	40	2442	60	2462
1	2403	21	2423	41	2443	61	2463
2	2404	22	2424	42	2444	62	2464
3	2405	23	2425	43	2445	63	2465
4	2406	24	2426	44	2446	64	2466
5	2407	25	2427	45	2447	65	2467
6	2408	26	2428	46	2448	66	2468
7	2409	27	2429	47	2449	67	2469
8	2410	28	2430	48	2450	68	2470
9	2411	29	2431	49	2451	69	2471
10	2412	30	2431	50	2452	70	2472
11	2413	31	2433	51	2453	71	2473
12	2414	32	2434	52	2454	72	2474
13	2415	33	2435	53	2455	73	2475
14	2416	34	2436	54	2456	74	2476
15	2417	35	2437	55	2457	75	2477
16	2418	36	2438	56	2458	76	2478
17	2419	37	2439	57	2459	77	2479
18	2420	38	2440	58	2460	78	2480
19	2421	39	2441	59	2461		

3.2.1 CONFIGURATION OF SYSTEM UNDER TEST

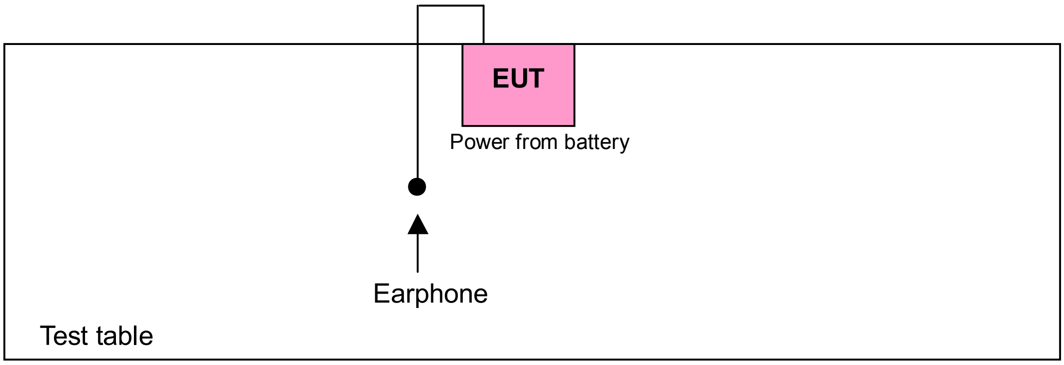
Mode 1



Mode 2



Mode 3



3.2.2 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL

FOR WIRELESS LAN FUNCTION:

EUT configure mode	Applicable to				Description
	PLC	RE<1G	RE≥1G	APCM	
A	√	√	√	√	The EUT with heavy battery connected with the earphone, and was powered by the adapter mode: ADP-16GB A
B	√	√	-	-	The EUT with heavy battery connected with the earphone and cradle, and was powered by the adapter model: HP-O2040D43
C	-	√	-	-	The EUT with heavy battery connected with the earphone

Where PLC: Power Line Conducted Emission RE<1G RE: Radiated Emission below 1GHz
RE≥1G: Radiated Emission above 1GHz APCM: Antenna Port Conducted Measurement

NOTE: "-" means no effect.

POWER LINE CONDUCTED EMISSION TEST:

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

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

EUT CONFIGURE MODE	Mode	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A	802.11b	1 to 11	1, 6, 11	DSSS	CCK	11
A	802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6
B	802.11b	1 to 11	1, 6, 11	DSSS	CCK	11
B	802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6

RADIATED EMISSION TEST (BELOW 1 GHz):

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

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

EUT CONFIGURE MODE	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)	AXIS
A	802.11b	1 to 11	11	DSSS	CCK	11	X
A	802.11g	1 to 11	11	OFDM	BPSK	6	X
B	802.11b	1 to 11	11	DSSS	CCK	11	-
B	802.11g	1 to 11	11	OFDM	BPSK	6	-
C	802.11b	1 to 11	11	DSSS	CCK	11	X
C	802.11g	1 to 11	11	OFDM	BPSK	6	X

RADIATED EMISSION TEST (ABOVE 1 GHz):

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

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

EUT CONFIGURE MODE	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)	AXIS
A	802.11b	1 to 11	1, 6, 11	DSSS	CCK	11	X
A	802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6	X

BANDEDGE MEASUREMENT:

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

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

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11b	1 to 11	1, 11	DSSS	CCK	11
802.11g	1 to 11	1, 11	OFDM	BPSK	6

ANTENNA PORT CONDUCTED MEASUREMENT:

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

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

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11b	1 to 11	1, 6, 11	DSSS	CCK	11
802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6

FOR BLUETOOTH FUNCTION:

EUT configure mode	Applicable to				Description
	PLC	RE<1G	RE≥1G	APCM	
A	√	√	√	√	The EUT with heavy battery connected with the earphone, and was powered by the adapter mode: ADP-16GB A
B	√	√	-	-	The EUT with heavy battery connected with the earphone and cradle, and was powered by the adapter model: HP-O2040D43
C	-	√	-	-	The EUT with heavy battery connected with the earphone

Where PLC: Power Line Conducted Emission
RE≥1G: Radiated Emission above 1GHz
RE<1G RE: Radiated Emission below 1GHz
APCM: Antenna Port Conducted Measurement

NOTE: "-" means no effect.

POWER LINE CONDUCTED EMISSION TEST:

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

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

EUT CONFIGURE MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	PACKET TYPE
A	0 to 78	0, 39, 78	FHSS	GFSK	DH5
B	0 to 78	0, 39, 78	FHSS	GFSK	DH5

RADIATED EMISSION TEST (BELOW 1 GHz):

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates, antenna ports (if EUT with antenna diversity architecture), X, Y, Z Axis, and packet types.

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

EUT CONFIGURE MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	PACKET TYPE	AXIS
A	0 to 78	78	FHSS	GFSK	DH5	X
B	0 to 78	78	FHSS	GFSK	DH5	-
C	0 to 78	78	FHSS	GFSK	DH5	X

RADIATED EMISSION TEST (ABOVE 1 GHz):

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture), X, Y, Z Axis, and packet types.

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

EUT CONFIGURE MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	PACKET TYPE	AXIS
A	0 to 78	0, 39, 78	FHSS	GFSK	DH5	X

BANDEDGE MEASUREMENT:

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

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

AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	PACKET TYPE
0 to 78	0, 78	FHSS	GFSK	DH5

ANTENNA PORT CONDUCTED MEASUREMENT:

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

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

AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	PACKET TYPE
0 to 78	0, 39, 78	FHSS	GFSK	DH5

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. (15.247)
ANSI C63.4-2003

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

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	NOTEBOOK COMPUTER	DELL	PP05L	16484462992	E2K24CLNS
2	MODEM	ACEEX	1414V/3	0401008269	IFAXDM1414
3	PRINTER	EPSON	LQ-300+	DCGY054147	FCC DoC Approved

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	NA
2	1.8 m shielded cable without core
3	1.2 m shielded cable without core

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

4. TEST TYPES AND RESULTS (FOR 802.11b & g 2412~2462MHz BAND)

4.1 CONDUCTED EMISSION MEASUREMENT

4.1.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

FREQUENCY OF EMISSION (MHz)	CONDUCTED LIMIT (dBμV)	
	Quasi-peak	Average
0.15-0.5 0.5-5 5-30	66 to 56 56 60	56 to 46 46 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.
3. All emanations from a class A/B digital device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified above.

4.1.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
Test Receiver ROHDE & SCHWARZ	ESCS30	100288	Nov. 06, 2005
RF signal cable Woken	5D-FB	Cable-HyC02-01	Jan. 09, 2006
LISN ROHDE & SCHWARZ	ESH2-Z5	100100	Jan. 20, 2006
LISN ROHDE & SCHWARZ	ESH3-Z5	100311	Jan. 20, 2006
Software ADT	ADT_Cond_V3	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 Shielded Room 3.
3. The VCCI Site Registration No. is C-2047.

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.

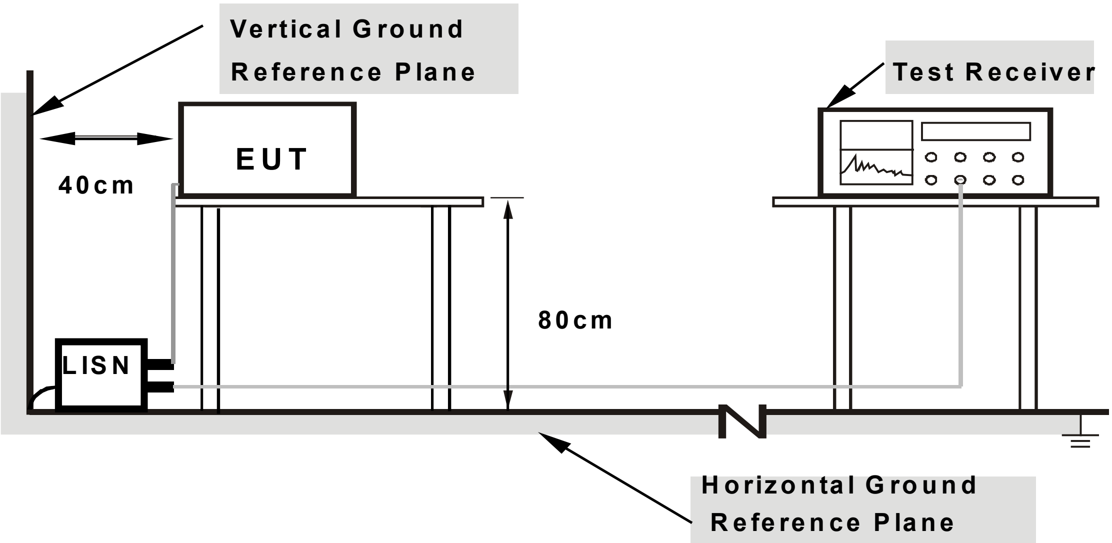
b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.

c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was 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

a. Connected the EUT to notebook system placed on a testing table.
b. The EUT ran a test program (provided by manufacturer) to enable EUT under transmission/receiving condition continuously at specific channel frequency.
c. The notebook system sent "H" messages to its screen.
d. The notebook system sent “H” messages to modem.
e. The notebook system sent "H" messages to printer, and the printer printed them on paper.
f. Steps c ~ e were repeated.

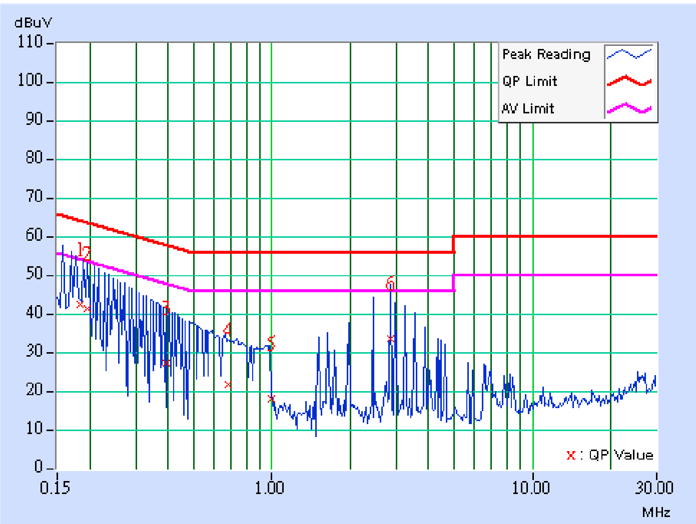
4.1.7 TEST RESULTS

Conducted Worst-Case Data (with charging cable)

EUT	EDA (Enterprise Digital Assistant)	**MEASUREMENT DETAIL**	
MODEL	MC7070	**PHASE**	Line 1
CHANNEL	Channel 1	**6dB BANDWIDTH**	9 kHz
MODULATION TYPE	BPSK	**ENVIRONMENTAL CONDITIONS**	25deg. C, 65%RH, 991hPa
TRANSFER RATE	6Mbps	**INPUT POWER (SYSTEM)**	120Vac, 60 Hz
TEST MODE	A	**TESTED BY**	Jay Hsu

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	0.183	0.11	42.49	-	42.60	-	64.34	54.34	-21.74	-
2	0.196	0.11	41.07	-	41.18	-	63.79	53.79	-22.61	-
3	0.394	0.12	27.19	-	27.31	-	57.97	47.97	-30.66	-
4	0.676	0.17	21.72	-	21.89	-	56.00	46.00	-34.11	-
5	0.991	0.23	17.86	-	18.09	-	56.00	46.00	-37.91	-
6	2.863	0.27	33.45	-	33.72	-	56.00	46.00	-22.28	-

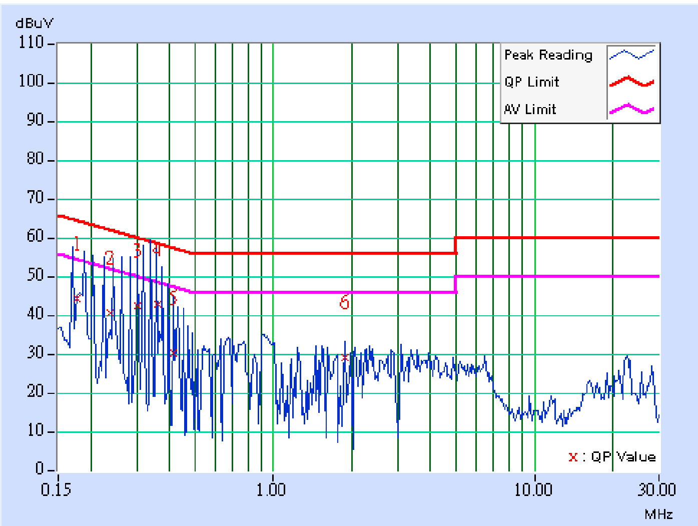
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT	EDA (Enterprise Digital Assistant)	MEASUREMENT DETAIL	
MODEL	MC7070	PHASE	Line 2
CHANNEL	Channel 1	6dB BANDWIDTH	9 kHz
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 991hPa
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST MODE	A	TESTED BY	Jay Hsu

No	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.177	0.11	44.21	-	44.32	-	64.60	54.60	-20.28	-
2	0.238	0.11	40.36	-	40.47	-	62.15	52.15	-21.68	-
3	0.302	0.12	42.27	-	42.39	-	60.18	50.18	-17.79	-
4	0.359	0.12	42.67	-	42.79	-	58.74	48.74	-15.96	-
5	0.416	0.12	29.97	-	30.09	-	57.52	47.52	-27.43	-
6	1.883	0.25	29.11	-	29.36	-	56.00	46.00	-26.64	-

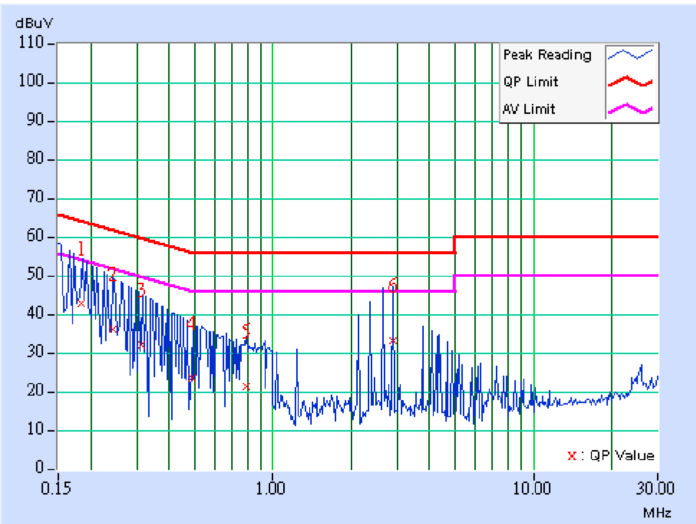
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT	EDA (Enterprise Digital Assistant)	MEASUREMENT DETAIL	
MODEL	MC7070	PHASE	Line 1
CHANNEL	Channel 6	6dB BANDWIDTH	9 kHz
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 991hPa
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST MODE	A	TESTED BY	Jay Hsu

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	0.183	0.11	42.55	-	42.66	-	64.36	54.36	-21.70	-
2	0.242	0.11	36.13	-	36.24	-	62.02	52.02	-25.77	-
3	0.313	0.12	31.89	-	32.01	-	59.89	49.89	-27.88	-
4	0.487	0.14	23.58	-	23.72	-	56.22	46.22	-32.51	-
5	0.797	0.19	21.06	-	21.25	-	56.00	46.00	-34.75	-
6	2.908	0.27	33.13	-	33.40	-	56.00	46.00	-22.60	-

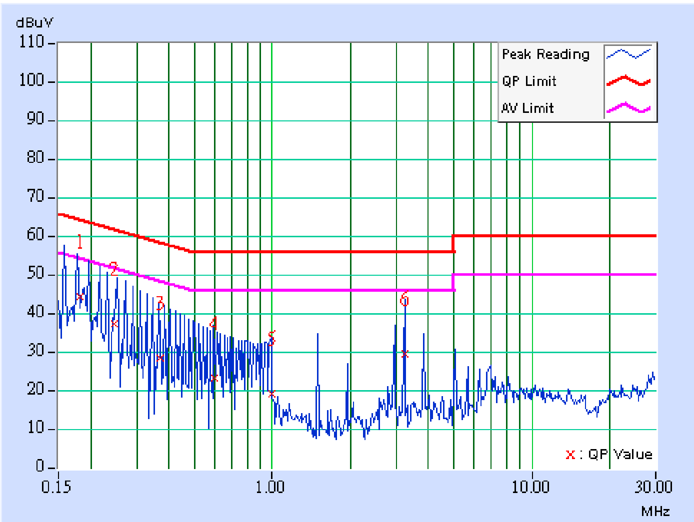
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT	EDA (Enterprise Digital Assistant)	MEASUREMENT DETAIL	
MODEL	MC7070	**PHASE**	Line 2
CHANNEL	Channel 6	**6dB BANDWIDTH**	9 kHz
MODULATION TYPE	BPSK	**ENVIRONMENTAL CONDITIONS**	25deg. C, 65%RH, 991hPa
TRANSFER RATE	6Mbps	**INPUT POWER (SYSTEM)**	120Vac, 60 Hz
TEST MODE	A	**TESTED BY**	Jay Hsu

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	0.181	0.11	44.04	-	44.15	-	64.42	54.42	-20.27	-
2	0.245	0.11	37.00	-	37.11	-	61.93	51.93	-24.82	-
3	0.368	0.12	28.31	-	28.43	-	58.54	48.54	-30.11	-
4	0.597	0.16	22.89	-	23.05	-	56.00	46.00	-32.95	-
5	0.996	0.23	18.93	-	19.16	-	56.00	46.00	-36.84	-
6	3.227	0.27	29.52	-	29.79	-	56.00	46.00	-26.21	-

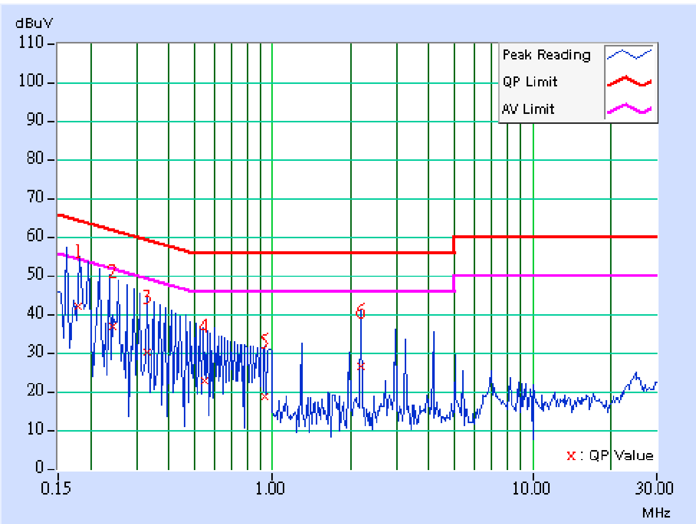
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT	EDA (Enterprise Digital Assistant)	MEASUREMENT DETAIL	
MODEL	MC7070	PHASE	Line 1
CHANNEL	Channel 11	6dB BANDWIDTH	9 kHz
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 991hPa
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST MODE	A	TESTED BY	Jay Hsu

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	0.180	0.11	41.83	-	41.94	-	64.51	54.51	-22.57	-
2	0.244	0.11	36.61	-	36.72	-	61.96	51.96	-25.24	-
3	0.328	0.12	30.18	-	30.30	-	59.50	49.50	-29.21	-
4	0.549	0.15	22.77	-	22.92	-	56.00	46.00	-33.08	-
5	0.935	0.22	18.58	-	18.80	-	56.00	46.00	-37.20	-
6	2.195	0.25	26.28	-	26.53	-	56.00	46.00	-29.47	-

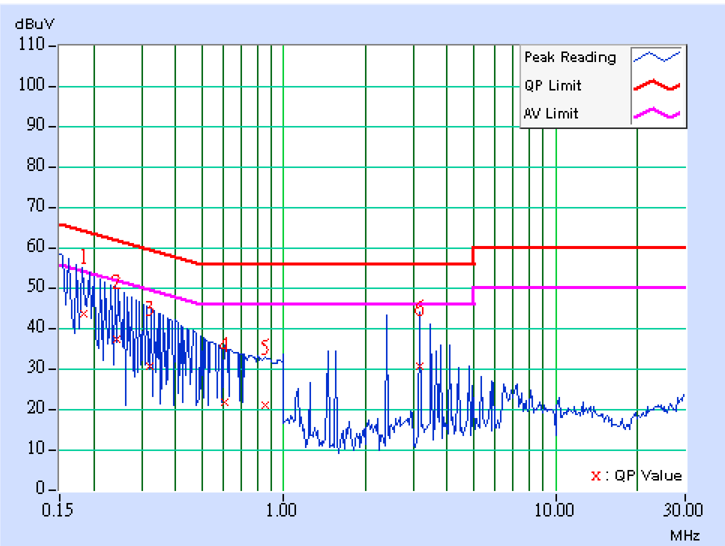
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT	EDA (Enterprise Digital Assistant)	MEASUREMENT DETAIL	
MODEL	MC7070	PHASE	Line 2
CHANNEL	Channel 11	6dB BANDWIDTH	9 kHz
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 991hPa
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST MODE	A	TESTED BY	Jay Hsu

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	0.185	0.11	43.39	-	43.50	-	64.28	54.28	-20.78	-
2	0.244	0.11	37.12	-	37.23	-	61.95	51.95	-24.72	-
3	0.322	0.12	30.40	-	30.52	-	59.66	49.66	-29.15	-
4	0.609	0.16	21.48	-	21.64	-	56.00	46.00	-34.36	-
5	0.857	0.20	20.72	-	20.92	-	56.00	46.00	-35.08	-
6	3.180	0.27	30.30	-	30.57	-	56.00	46.00	-25.43	-

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.

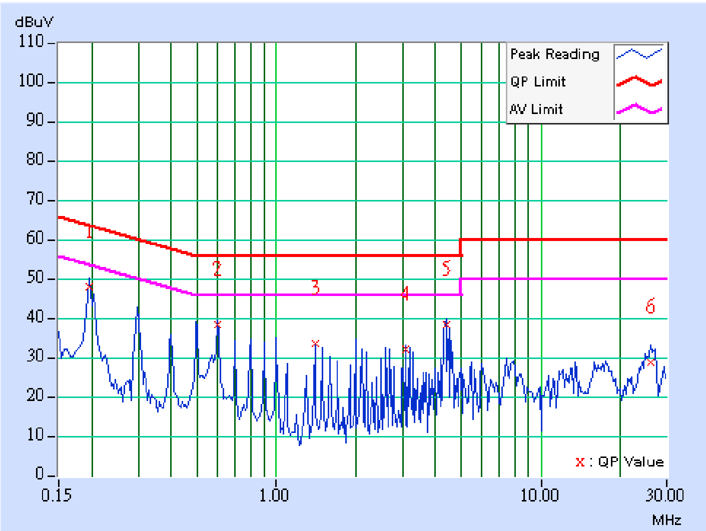


Conducted Worst-Case Data (with cradle)

EUT	EDA (Enterprise Digital Assistant)	MEASUREMENT DETAIL	
MODEL	MC7070	PHASE	Line 1
CHANNEL	Channel 1	6dB BANDWIDTH	9 kHz
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 991hPa
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST MODE	B	TESTED BY	Jay Hsu

No	Freq.	Corr. Factor	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.197	0.11	46.82	-	46.93	-	63.74	53.74	-16.81	-
2	0.599	0.15	37.07	-	37.22	-	56.00	46.00	-18.78	-
3	1.398	0.25	32.29	-	32.54	-	56.00	46.00	-23.46	-
4	3.094	0.33	30.74	-	31.07	-	56.00	46.00	-24.93	-
5	4.391	0.40	37.06	-	37.46	-	56.00	46.00	-18.54	-
6	26.047	1.48	27.46	-	28.94	-	60.00	50.00	-31.06	-

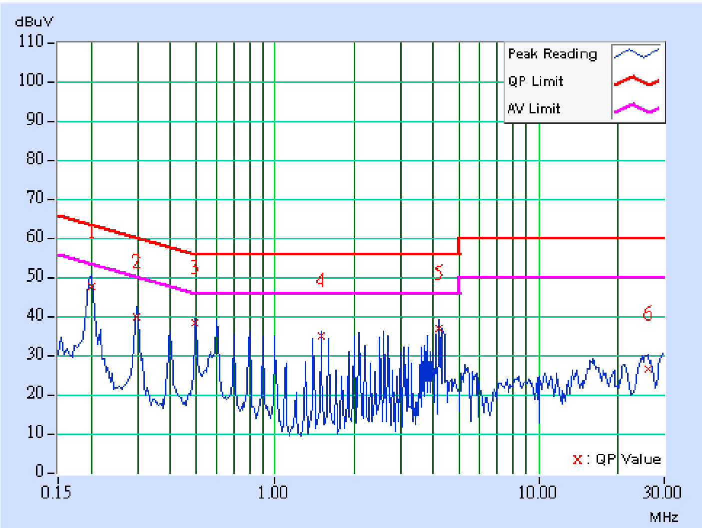
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT	EDA (Enterprise Digital Assistant)	MEASUREMENT DETAIL	
MODEL	MC7070	PHASE	Line 2
CHANNEL	Channel 1	6dB BANDWIDTH	9 kHz
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 991hPa
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST MODE	B	TESTED BY	Jay Hsu

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	0.201	0.11	46.92	-	47.03	-	63.58	53.58	-16.55	-
2	0.298	0.11	39.12	-	39.23	-	60.29	50.29	-21.06	-
3	0.498	0.13	37.40	-	37.53	-	56.04	46.04	-18.51	-
4	1.496	0.25	34.27	-	34.52	-	56.00	46.00	-21.48	-
5	4.188	0.39	36.25	-	36.64	-	56.00	46.00	-19.36	-
6	26.047	0.94	25.90	-	26.84	-	60.00	50.00	-33.16	-

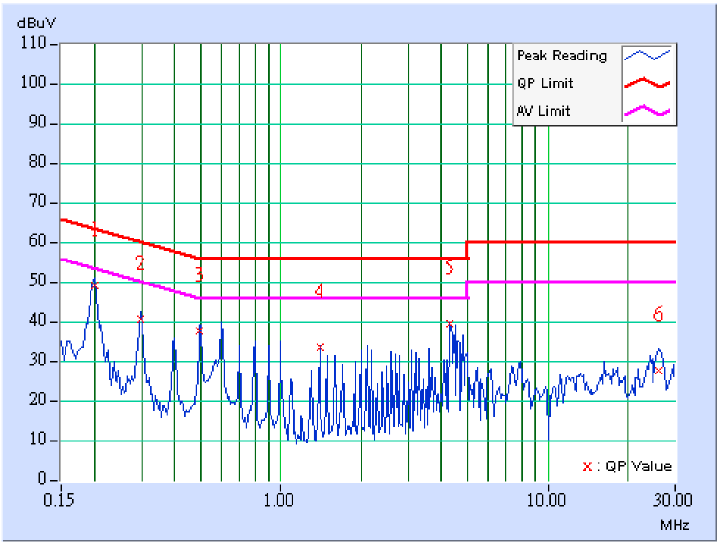
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT	EDA (Enterprise Digital Assistant)	MEASUREMENT DETAIL	
MODEL	MC7070	PHASE	Line 1
CHANNEL	Channel 6	6dB BANDWIDTH	9 kHz
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 991hPa
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST MODE	B	TESTED BY	Jay Hsu

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	0.201	0.11	47.74	-	47.85	-	63.58	53.58	-15.73	-
2	0.298	0.11	39.36	-	39.47	-	60.29	50.29	-20.82	-
3	0.498	0.13	36.45	-	36.58	-	56.04	46.04	-19.46	-
4	1.398	0.25	32.17	-	32.42	-	56.00	46.00	-23.58	-
5	4.293	0.40	37.98	-	38.38	-	56.00	46.00	-17.62	-
6	25.957	1.47	26.47	-	27.94	-	60.00	50.00	-32.06	-

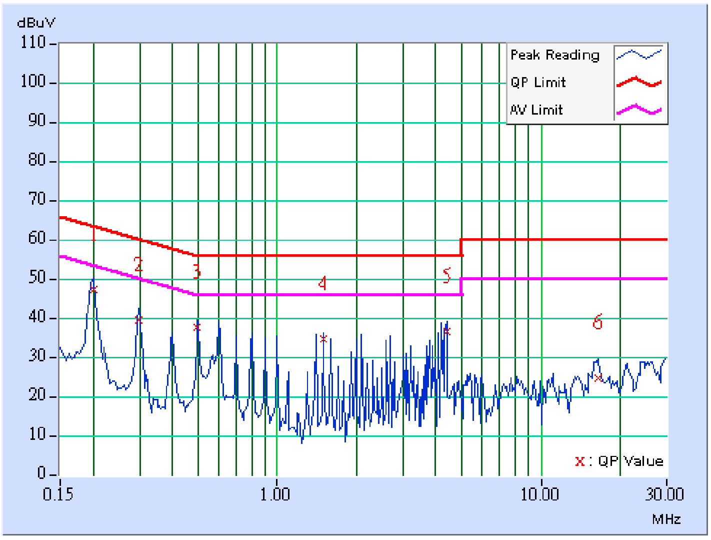
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT	EDA (Enterprise Digital Assistant)	MEASUREMENT DETAIL	
MODEL	MC7070	PHASE	Line 2
CHANNEL	Channel 6	6dB BANDWIDTH	9 kHz
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 991hPa
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST MODE	B	TESTED BY	Jay Hsu

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	0.201	0.11	46.88	-	46.99	-	63.58	53.58	-16.59	-
2	0.298	0.11	39.06	-	39.17	-	60.29	50.29	-21.12	-
3	0.498	0.13	37.40	-	37.53	-	56.04	46.04	-18.51	-
4	1.496	0.25	34.27	-	34.52	-	56.00	46.00	-21.48	-
5	4.391	0.39	35.97	-	36.36	-	56.00	46.00	-19.64	-
6	16.473	0.53	24.18	-	24.71	-	60.00	50.00	-35.29	-

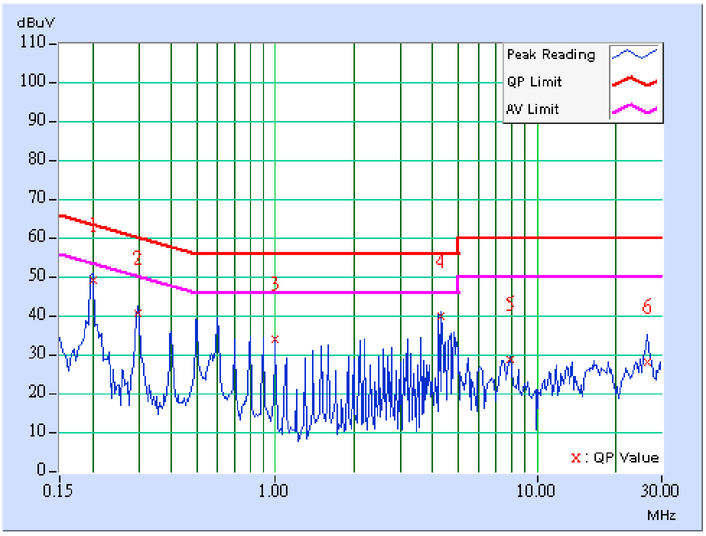
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT	EDA (Enterprise Digital Assistant)	MEASUREMENT DETAIL	
MODEL	MC7070	PHASE	Line 1
CHANNEL	Channel 11	6dB BANDWIDTH	9 kHz
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 991hPa
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST MODE	B	TESTED BY	Jay Hsu

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	0.201	0.11	47.66	-	47.77	-	63.58	53.58	-15.81	-
2	0.298	0.11	39.28	-	39.39	-	60.29	50.29	-20.90	-
3	0.998	0.24	32.43	-	32.67	-	56.00	46.00	-23.33	-
4	4.289	0.40	38.64	-	39.04	-	56.00	46.00	-16.96	-
5	7.883	0.49	27.33	-	27.82	-	60.00	50.00	-32.18	-
6	26.457	1.53	26.75	-	28.28	-	60.00	50.00	-31.72	-

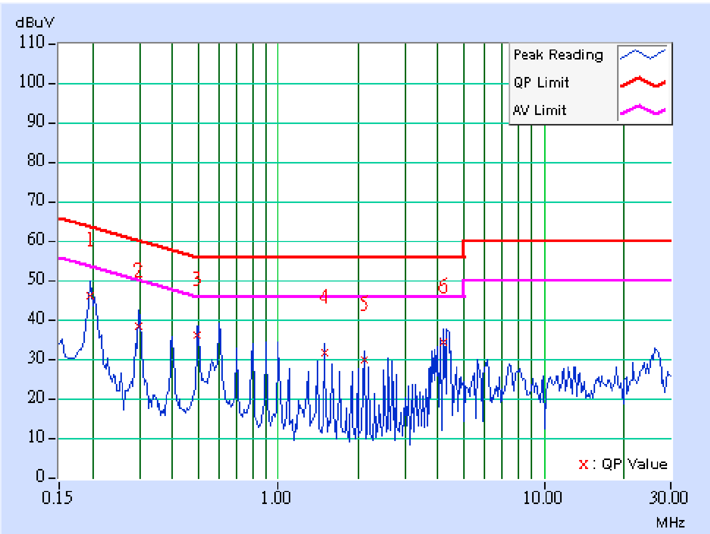
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT	EDA (Enterprise Digital Assistant)	MEASUREMENT DETAIL	
MODEL	MC7070	PHASE	Line 2
CHANNEL	Channel 11	6dB BANDWIDTH	9 kHz
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 991hPa
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST MODE	B	TESTED BY	Jay Hsu

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	0.197	0.11	45.75	-	45.86	-	63.74	53.74	-17.88	-
2	0.298	0.11	38.31	-	38.42	-	60.29	50.29	-21.87	-
3	0.498	0.13	36.08	-	36.21	-	56.04	46.04	-19.83	-
4	1.496	0.25	31.54	-	31.79	-	56.00	46.00	-24.21	-
5	2.098	0.27	29.63	-	29.90	-	56.00	46.00	-26.10	-
6	4.195	0.39	34.20	-	34.59	-	56.00	46.00	-21.41	-

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.



4.2 RADIATED EMISSION MEASUREMENT

4.2.1 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.

4.2.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
Test Receiver ROHDE & SCHWARZ	ESIB7	100188	Dec. 19, 2005
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100039	Nov. 21, 2005
BILOG Antenna SCHWARZBECK	VULB9168	9168-157	Jan. 22, 2006
HORN Antenna SCHWARZBECK	BBHA 9120 D	9120D-407	Jan. 16, 2006
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA 9170241	Feb. 23, 2006
Preamplifier Agilent	8449B	3008A01961	Nov. 09, 2005
Preamplifier Agilent	8447D	2944A10629	Nov. 09, 2005
RF signal cable HUBER+SUHNER	SUCOFLEX 104	218182/4	Feb. 17, 2006
RF signal cable HUBER+SUHNER	SUCOFLEX 104	218194/4	Feb. 17, 2006
Software ADT.	ADT_Radiated_V5.14	NA	NA
Antenna Tower ADT.	AT100	AT93021702	NA
Turn Table ADT.	TT100.	TT93021702	NA
Controller ADT.	SC100.	SC93021702	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 1.

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 IC4924-2.

4.2.3 TEST PROCEDURES

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter 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.

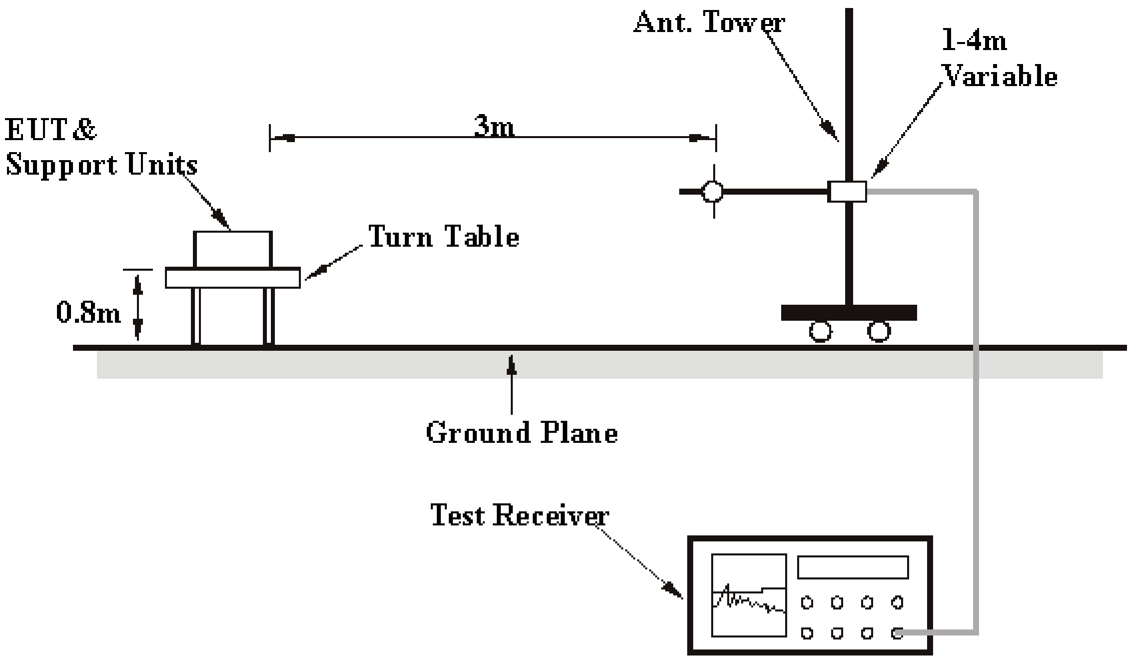
NOTE:

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

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

Same as 4.1.6

4.2.7 TEST RESULTS

Below 1GHz Worst-Case Data (with charger)

EUT	EDA (Enterprise Digital Assistant)	MEASUREMENT DETAIL	
MODEL	MC7070	FREQUENCY RANGE	Below 1000MHz
CHANNEL	Channel 11	DETECTOR FUNCTION	Quasi-Peak
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 991hPa
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST MODE	A	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	101.92	27.92 QP	43.50	-15.58	2.00 H	55	16.98	10.94
2	134.98	30.07 QP	43.50	-13.43	1.50 H	292	16.21	13.86
3	166.07	33.76 QP	43.50	-9.74	1.50 H	244	19.69	14.07
4	199.12	28.87 QP	43.50	-14.63	1.50 H	256	17.67	11.20
5	249.66	39.25 QP	46.00	-6.75	1.00 H	88	26.17	13.08
6	374.07	36.86 QP	46.00	-9.14	1.00 H	112	20.83	16.03
7	457.66	28.78 QP	46.00	-17.22	1.50 H	340	10.77	18.01
8	735.63	29.20 QP	46.00	-16.80	2.00 H	310	6.12	23.08

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	49.44	22.45 QP	40.00	-17.55	1.00 V	178	7.92	14.53
2	80.54	23.37 QP	40.00	-16.63	2.00 V	360	13.61	9.76
3	111.64	29.11 QP	43.50	-14.39	1.00 V	151	17.17	11.94
4	162.18	29.86 QP	43.50	-13.64	1.00 V	202	15.41	14.45
5	199.12	28.93 QP	43.50	-14.57	1.50 V	316	17.73	11.20
6	249.66	37.69 QP	46.00	-8.31	2.00 V	193	24.61	13.08
7	374.07	32.72 QP	46.00	-13.28	1.00 V	160	16.69	16.03
8	457.66	29.10 QP	46.00	-16.90	2.00 V	360	11.09	18.01
9	601.50	27.50 QP	46.00	-18.50	1.50 V	328	6.59	20.91
10	731.74	27.42 QP	46.00	-18.58	1.50 V	360	4.43	22.99
11	799.78	27.25 QP	46.00	-18.75	2.00 V	13	3.55	23.70

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

Below 1GHz Worst-Case Data (with cradle)

EUT	EDA (Enterprise Digital Assistant)	MEASUREMENT DETAIL	
MODEL	MC7070	FREQUENCY RANGE	Below 1000MHz
CHANNEL	Channel 11	DETECTOR FUNCTION	Quasi-Peak
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 991hPa
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST MODE	B	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	115.53	28.28 QP	43.50	-15.22	1.50 H	265	15.94	12.34
2	164.13	34.86 QP	43.50	-8.64	1.50 H	229	20.61	14.26
3	195.23	27.19 QP	43.50	-16.31	2.00 H	265	15.68	11.51
4	249.66	39.21 QP	46.00	-6.79	1.00 H	85	26.13	13.08
5	374.07	37.33 QP	46.00	-8.67	1.00 H	100	21.30	16.03
6	449.88	28.88 QP	46.00	-17.12	1.50 H	352	10.97	17.91
7	733.69	29.97 QP	46.00	-16.03	1.00 H	277	6.94	23.03
8	801.72	29.26 QP	46.00	-16.74	1.00 H	307	5.55	23.72

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	78.60	23.32 QP	40.00	-16.68	1.00 V	82	13.21	10.11
2	111.64	29.82 QP	43.50	-13.68	1.00 V	166	17.88	11.94
3	162.18	30.49 QP	43.50	-13.01	1.00 V	190	16.04	14.45
4	249.66	38.27 QP	46.00	-7.73	2.00 V	16	25.19	13.08
5	374.07	32.77 QP	46.00	-13.23	1.00 V	157	16.75	16.03
6	457.66	29.19 QP	46.00	-16.81	1.50 V	154	11.17	18.01
7	519.86	28.24 QP	46.00	-17.76	1.00 V	91	9.25	18.99

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

Below 1GHz Worst-Case Data (battery mode)

EUT	EDA (Enterprise Digital Assistant)	**MEASUREMENT DETAIL**	
MODEL	MC7070	**FREQUENCY RANGE**	Below 1000MHz
CHANNEL	Channel 11	**DETECTOR FUNCTION**	Quasi-Peak
MODULATION TYPE	BPSK	**ENVIRONMENTAL CONDITIONS**	25deg. C, 65%RH, 991hPa
TRANSFER RATE	6Mbps	**INPUT POWER (SYSTEM)**	120Vac, 60 Hz
TEST MODE	C	**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	92.20	28.19 QP	43.50	-15.31	2.00 H	259	18.07	10.12
2	136.91	34.75 QP	43.50	-8.75	2.00 H	289	20.76	13.99
3	175.79	28.44 QP	43.50	-15.06	1.50 H	250	15.32	13.12
4	206.89	25.93 QP	43.50	-17.57	1.50 H	343	14.63	11.30
5	519.86	29.34 QP	46.00	-16.66	1.50 H	64	10.35	18.99
6	731.74	29.65 QP	46.00	-16.35	1.00 H	280	6.66	22.99

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	47.49	23.69 QP	40.00	-16.31	1.00 V	115	8.93	14.76
2	134.97	28.13 QP	43.50	-15.37	2.50 V	226	14.27	13.86
3	166.07	28.06 QP	43.50	-15.44	1.00 V	214	13.99	14.07
4	619.00	27.56 QP	46.00	-18.44	1.00 V	130	6.40	21.16
5	825.05	26.37 QP	46.00	-19.63	1.00 V	181	2.46	23.91
6	867.82	26.91 QP	46.00	-19.09	1.00 V	262	2.44	24.47

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

802.11b DSSS modulation

EUT	EDA (Enterprise Digital Assistant)	**MEASUREMENT DETAIL**	
MODEL	MC7070	**FREQUENCY RANGE**	1 ~ 25GHz
CHANNEL	Channel 1	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
MODULATION TYPE	CCK	**ENVIRONMENTAL CONDITIONS**	25deg. C, 68%RH, 991hPa
TRANSFER RATE	11Mbps	**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	2390.00	59.85 PK	74.00	-14.15	1.05 H	325	27.81	32.04
1	2390.00	46.93 AV	54.00	-7.07	1.05 H	325	14.89	32.04
2	*2412.00	108.09 PK			1.05 H	325	75.96	32.13
2	*2412.00	100.63 AV			1.05 H	325	68.50	32.13
3	4824.00	47.07 PK	74.00	-26.93	1.10 H	300	8.87	38.20
3	4824.00	34.49 AV	54.00	-19.51	1.10 H	300	-3.71	38.20

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	2390.00	54.21 PK	74.00	-19.79	1.07 V	360	22.17	32.04
1	2390.00	45.64 AV	54.00	-8.36	1.07 V	360	13.60	32.04
2	*2412.00	104.21 PK			1.07 V	360	72.08	32.13
2	*2412.00	99.44 AV			1.07 V	360	67.31	32.13
3	4824.00	47.18 PK	74.00	-26.82	1.07 V	360	8.98	38.20
3	4824.00	34.45 AV	54.00	-19.55	1.07 V	360	-3.75	38.20

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.
5. The limit value is defined as per 15.247
6. “ * “ : Fundamental frequency

EUT	EDA (Enterprise Digital Assistant)	MEASUREMENT DETAIL	
MODEL	MC7070	FREQUENCY RANGE	1 ~ 25GHz
CHANNEL	Channel 6	DETECTOR FUNCTION	Peak(PK) Average (AV)
MODULATION TYPE	CCK	ENVIRONMENTAL CONDITIONS	25deg. C, 68%RH, 991hPa
TRANSFER RATE	11Mbps	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	*2437.00	110.28 PK			1.03 H	333	78.03	32.25
1	*2437.00	102.75 AV			1.03 H	333	70.50	32.25
2	4874.00	47.67 PK	74.00	-26.33	1.01 H	123	9.35	38.32
2	4874.00	34.90 AV	54.00	-19.10	1.01 H	123	-3.42	38.32

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	*2437.00	106.47 PK			1.33 V	340	74.22	32.25
1	*2437.00	100.59 AV			1.33 V	340	68.34	32.25
2	4874.00	47.54 PK	74.00	-26.46	1.07 V	147	9.22	38.32
2	4874.00	34.59 AV	54.00	-19.41	1.07 V	147	-3.73	38.32

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.
5. The limit value is defined as per 15.247
6. “ * “ : Fundamental frequency

EUT	EDA (Enterprise Digital Assistant)	MEASUREMENT DETAIL	
MODEL	MC7070	FREQUENCY RANGE	1 ~ 25GHz
CHANNEL	Channel 11	DETECTOR FUNCTION	Peak(PK) Average (AV)
MODULATION TYPE	CCK	ENVIRONMENTAL CONDITIONS	25deg. C, 68%RH, 991hPa
TRANSFER RATE	11Mbps	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	*2462.00	106.21 PK			1.28 H	325	73.85	32.36
1	*2462.00	98.58 AV			1.28 H	325	66.22	32.36
2	2483.50	54.88 PK	74.00	-19.12	1.28 H	325	22.42	32.46
2	2483.50	46.53 AV	54.00	-7.47	1.28 H	325	14.07	32.46
3	4924.00	47.83 PK	74.00	-26.17	1.11 H	143	9.37	38.46
3	4924.00	35.38 AV	54.00	-18.62	1.11 H	143	-3.08	38.46

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	*2462.00	104.23 PK			1.33 V	345	71.87	32.36
1	*2462.00	97.20 AV			1.33 V	345	64.84	32.36
2	2483.50	57.24 PK	74.00	-16.76	1.33 V	345	24.78	32.46
2	2483.50	46.74 AV	54.00	-7.26	1.33 V	345	14.28	32.46
3	4924.00	47.44 PK	74.00	-26.56	1.00 V	130	8.98	38.46
3	4924.00	35.30 AV	54.00	-18.70	1.00 V	130	-3.16	38.46

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.
5. The limit value is defined as per 15.247
6. “ * “ : Fundamental frequency

802.11g OFDM modulation

EUT	EDA (Enterprise Digital Assistant)	**MEASUREMENT DETAIL**	
MODEL	MC7070	**FREQUENCY RANGE**	1 ~ 25GHz
CHANNEL	Channel 1	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
MODULATION TYPE	BPSK	**ENVIRONMENTAL CONDITIONS**	25deg. C, 68%RH, 991hPa
TRANSFER RATE	6Mbps	**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	2390.00	58.55 PK	74.00	-15.45	1.33 H	324	26.51	32.04
1	**2390.00**	**48.08 AV**	**54.00**	**-5.92**	**1.33 H**	**324**	**16.04**	**32.04**
2	*2412.00	107.44 PK			1.33 H	324	75.31	32.13
2	*2412.00	97.55 AV			1.33 H	324	65.42	32.13
3	4824.00	46.48 PK	74.00	-27.52	1.12 H	300	8.28	38.20
3	4824.00	34.13 AV	54.00	-19.87	1.12 H	300	-4.07	38.20

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	2390.00	57.32 PK	74.00	-16.68	1.31 V	6	25.28	32.04
1	2390.00	46.75 AV	54.00	-7.25	1.31 V	6	14.71	32.04
2	*2412.00	102.91 PK			1.31 V	6	70.78	32.13
2	*2412.00	93.98 AV			1.31 V	6	61.85	32.13
3	4824.00	47.48 PK	74.00	-26.52	1.00 V	347	9.28	38.20
3	4824.00	34.31 AV	54.00	-19.69	1.00 V	347	-3.89	38.20

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.
5. The limit value is defined as per 15.247
6. “ * “ : Fundamental frequency

EUT	EDA (Enterprise Digital Assistant)	MEASUREMENT DETAIL	
MODEL	MC7070	FREQUENCY RANGE	1 ~ 25GHz
CHANNEL	Channel 6	DETECTOR FUNCTION	Peak(PK) Average (AV)
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	25deg. C, 68%RH, 991hPa
TRANSFER RATE	6Mbps	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	*2437.00	108.13 PK			1.30 H	309	75.88	32.25
1	*2437.00	98.82 AV			1.30 H	309	66.57	32.25
2	4824.00	46.57 PK	74.00	-27.43	1.17 H	122	8.37	38.20
2	4824.00	34.22 AV	54.00	-19.78	1.17 H	122	-3.98	38.20

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	*2437.00	104.53 PK			1.30 V	360	72.28	32.25
1	*2437.00	95.17 AV			1.30 V	360	62.92	32.25
2	4824.00	47.18 PK	74.00	-26.82	1.00 V	135	8.98	38.20
2	4824.00	34.25 AV	54.00	-19.75	1.00 V	135	-3.95	38.20

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.
5. The limit value is defined as per 15.247
6. " * " : Fundamental frequency

EUT	EDA (Enterprise Digital Assistant)	MEASUREMENT DETAIL	
MODEL	MC7070	FREQUENCY RANGE	1 ~ 25GHz
CHANNEL	Channel 11	DETECTOR FUNCTION	Peak(PK) Average (AV)
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	25deg. C, 68%RH, 991hPa
TRANSFER RATE	6Mbps	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	*2462.00	105.65 PK			1.03 H	322	73.29	32.36
1	*2462.00	95.64 AV			1.03 H	322	63.28	32.36
2	2483.50	59.29 PK	74.00	-14.71	1.03 H	322	26.83	32.46
2	2483.50	47.79 AV	54.00	-6.21	1.03 H	322	15.33	32.46
3	4924.00	47.41 PK	74.00	-26.59	1.10 H	300	8.95	38.46
3	4924.00	34.47 AV	54.00	-19.53	1.10 H	300	-3.99	38.46

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	*2462.00	100.78 PK			1.29 V	14	68.42	32.36
1	*2462.00	91.48 AV			1.29 V	14	59.12	32.36
2	2483.50	54.09 PK	74.00	-19.91	1.29 V	14	21.63	32.46
2	2483.50	46.37 AV	54.00	-7.63	1.29 V	14	13.91	32.46
3	4924.00	47.81 PK	74.00	-26.19	1.10 V	300	9.35	38.46
3	4924.00	34.62 AV	54.00	-19.38	1.10 V	300	-3.84	38.46

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.
5. The limit value is defined as per 15.247
6. “ * “ : Fundamental frequency

4.3 6dB BANDWIDTH MEASUREMENT

4.3.1 LIMITS OF 6dB BANDWIDTH MEASUREMENT

The minimum of 6dB Bandwidth Measurement is 0.5 MHz.

4.3.2 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
SPECTRUM ANALYZER	FSEK 30	100049	Aug. 14, 2006

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

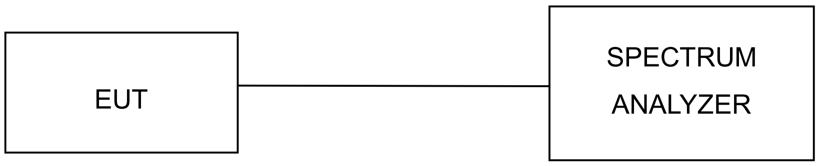
4.3.3 TEST PROCEDURE

The transmitter output was connected to the spectrum analyzer through an attenuator. The bandwidth of the fundamental frequency was measured by spectrum analyzer with 100kHz RBW and 100kHz VBW. The 6dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 6dB.

4.3.4 DEVIATION FROM TEST STANDARD

No deviation

4.3.5 TEST SETUP



4.3.6 EUT OPERATING CONDITIONS

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

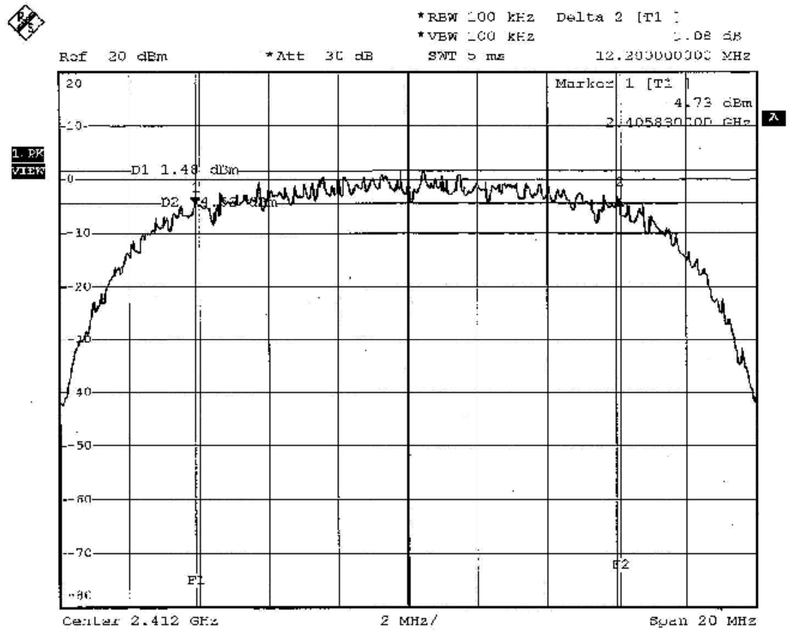
4.3.7 TEST RESULTS

802.11b DSSS modulation

EUT	EDA (Enterprise Digital Assistant)	**MODEL**	MC7070
MODULATION TYPE	CCK	**TRANSFER RATE**	11Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	27deg.C, 63%RH, 991hPa
TESTED BY	Gary Chang		

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS/FAIL
1	2412	12.20	0.5	PASS
6	2437	11.52	0.5	PASS
11	2462	11.52	0.5	PASS

CH 1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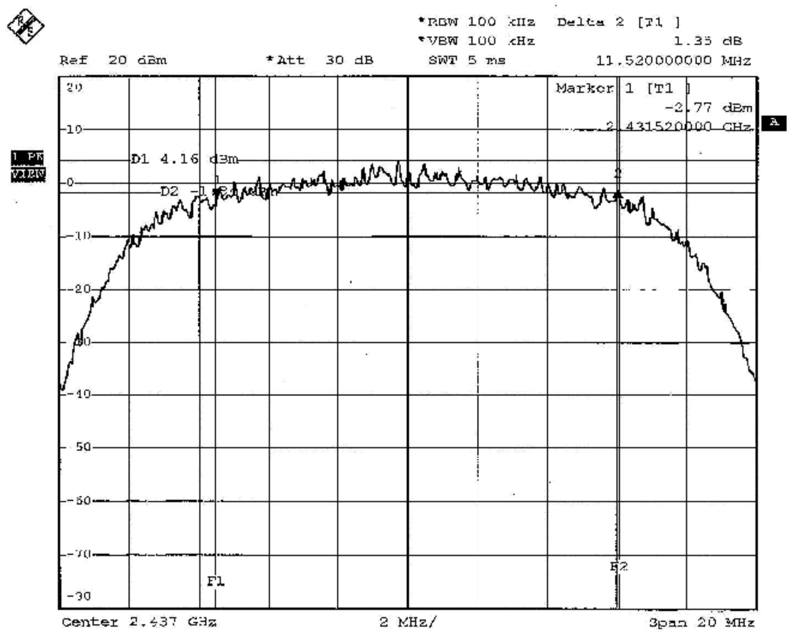
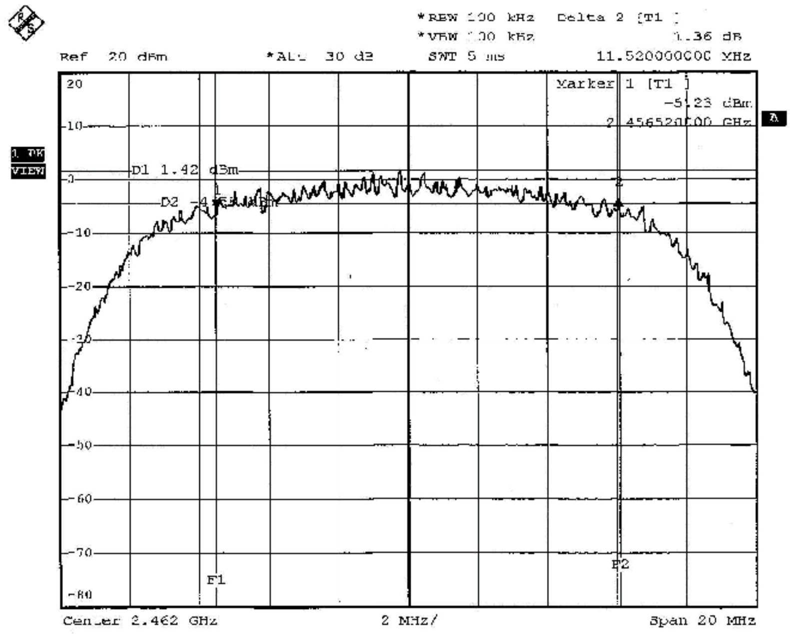
*VBW 100 kHz
SWT 5 ms
Delta 2 [T1]
Ref 20 dBm
*Att 30 dB
12.200000000 MHz
Marker 1 [T1]
4.73 dBm
2.405830000 GHz
D1 1.48 dBm
D2
F1
F2
Center 2.412 GHz
2 MHz/
Span 20 MHz

CH 6


*RBW 100 kHz
*VBW 100 kHz
SWT 5 ms
Delta 2 [T1]
1.35 dB
Ref 20 dBm
*Att 30 dB
11.520000000 MHz
Marker 1 [T1]
-2.77 dBm
2.431520000 GHz
D1 4.16 dBm
D2
F1
F2
Center 2.437 GHz
2 MHz/
Span 20 MHz

CH 11

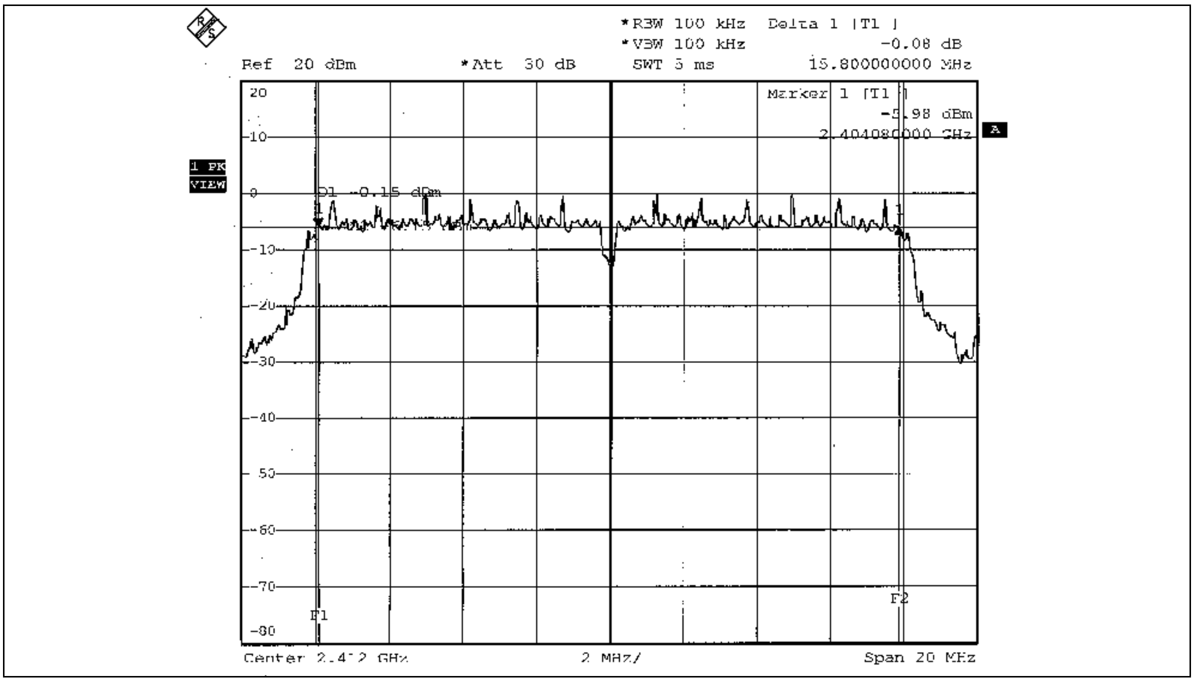

*RBW 100 kHz
Delta 2 [T1]
*VBW 100 kHz
1.36 dB
Ref 20 dBm
*Att 30 dB
SWT 5 ms
11.520000000 MHz
Marker 1 [T1]
-5.23 dBm
2.45652000 GHz
D1 1.42 dBm
F1
F2
Center 2.462 GHz
2 MHz/
Span 20 MHz

802.11g OFDM modulation

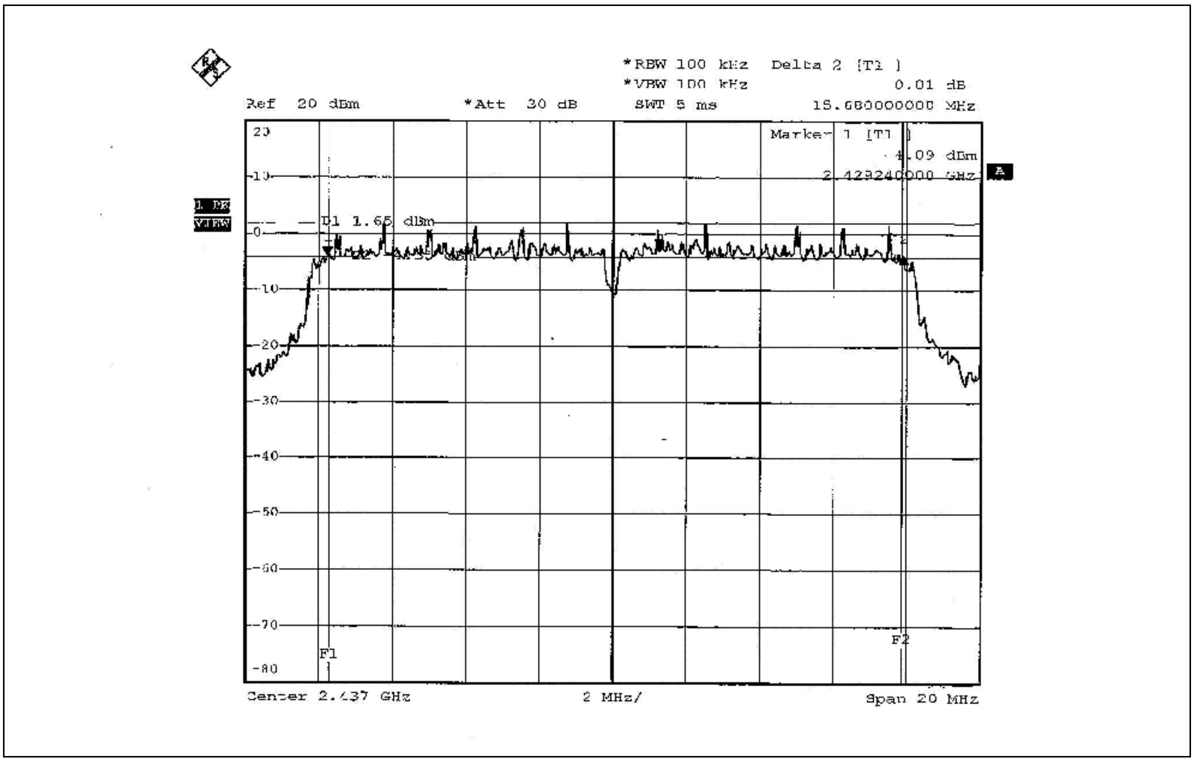
EUT	EDA (Enterprise Digital Assistant)	**MODEL**	MC7070
MODULATION TYPE	BPSK	**TRANSFER RATE**	6Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	27deg.C, 63%RH, 991hPa
TESTED BY	Gary Chang		

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS/FAIL
1	2412	15.80	0.5	PASS
6	2437	15.68	0.5	PASS
11	2462	15.76	0.5	PASS

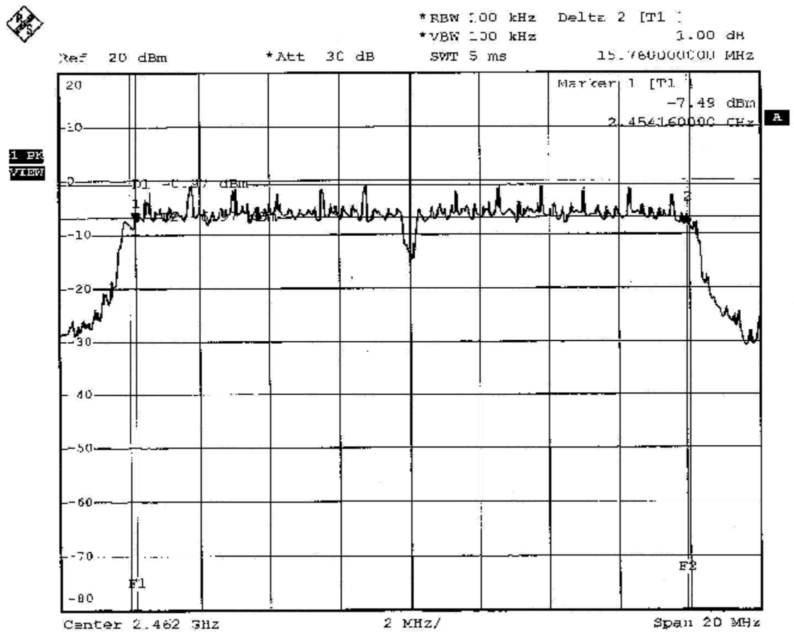
CH 1


*RBW 100 kHz
*VBW 100 kHz
SWT 5 ms
Delta 1 [T1]
-0.08 dB
15.800000000 MHz
Ref 20 dBm
*Att 30 dB
Marker 1 [T1]
-5.98 dBm
2.404080000 GHz
D1 -0.15 dBm
1 PK VIEW
A
F1
F2
Center 2.412 GHz
2 MHz/
Span 20 MHz

CH 6


*RBW 100 kHz
*VBW 100 kHz
SWT 5 ms
Delta 2 [T1]
0.01 dB
15.680000000 MHz
Ref 20 dBm
*Att 30 dB
Marker 1 [T1]
-4.09 dBm
2.429240000 GHz
D1 1.65 dBm
1 PK VIEW
A
F1
F2
Center 2.437 GHz
2 MHz/
Span 20 MHz

CH 11


*RBW 100 kHz
*VBW 100 kHz
Ref 20 dBm
*Att 30 dB
SWT 5 ms
Delta 2 [T1]
1.00 dB
15.76000000 MHz
Marker 1 [T1]
-7.49 dBm
2.45416000 GHz
1 PK
VIEW
A
F1
F2
Center 2.462 GHz
2 MHz/
Span 20 MHz

4.4 MAXIMUM PEAK OUTPUT POWER

4.4.1 LIMITS OF MAXIMUM PEAK OUTPUT POWER MEASUREMENT

The Maximum Peak Output Power Measurement is 30dBm.

4.4.2 INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
R&S SPECTRUM ANALYZER	FSEK30	100049	Aug. 14, 2006
AGILENT SIGNAL GENERATOR	E8257C	MY43320668	Dec. 31, 2005
TEKTRONIX OSCILLOSCOPE	TDS 1012	C019167	Feb. 01, 2006
NARDA DETECTOR	4503A	FSCM99899	NA

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

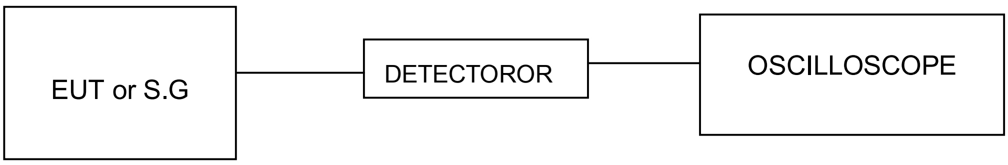
4.4.1 TEST PROCEDURES

1. A detector was used on the output port of the EUT. An oscilloscope was used to read the response of the detector.
2. Replaced the EUT by the signal generator. The center frequency of the S.G was adjusted to the center frequency of the measured channel.
3. Adjusted the power to have the same reading on oscilloscope. Record the power level.

4.4.2 DEVIATION FROM TEST STANDARD

No deviation

4.4.3 TEST SETUP



4.4.4 EUT OPERATING CONDITIONS

Same as Item 4.3.6

4.4.3 TEST RESULTS

802.11b DSSS modulation

EUT	EDA (Enterprise Digital Assistant)	MODEL	MC7070
MODULATION TYPE	CCK	TRANSFER RATE	11Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	27deg.C, 63%RH, 991hPa
TESTED BY	Gary Chang		

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
1	2412	22.699	13.56	30	PASS
6	2437	40.551	16.08	30	PASS
11	2462	25.468	14.06	30	PASS

802.11g OFDM modulation

EUT	EDA (Enterprise Digital Assistant)	MODEL	MC7070
MODULATION TYPE	BPSK	TRANSFER RATE	6Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	27deg.C, 63%RH, 991hPa
TESTED BY	Gary Chang		

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
1	2412	25.235	14.02	30	PASS
6	2437	44.771	16.51	30	PASS
11	2462	25.410	14.05	30	PASS

4.5 POWER SPECTRAL DENSITY MEASUREMENT

4.5.1 LIMITS OF POWER SPECTRAL DENSITY MEASUREMENT

The Maximum of Power Spectral Density Measurement is 8dBm.

4.5.2 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
R&S SPECTRUM ANALYZER	FSEK30	100049	Aug. 14, 2006

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

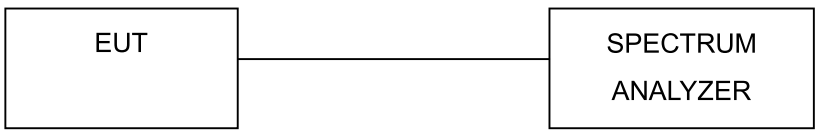
4.5.3 TEST PROCEDURE

The transmitter output was connected to the spectrum analyzer through an attenuator, the bandwidth of the fundamental frequency was measured with the spectrum analyzer using 3kHz RBW and 30kHz VBW, set sweep time = span/3kHz. The power spectral density was measured and recorded.
The sweep time is allowed to be longer than span/3kHz for a full response of the mixer in the spectrum analyzer.

4.5.4 DEVIATION FROM TEST STANDARD

No deviation

4.5.5 TEST SETUP



4.5.6 EUT OPERATING CONDITION

Same as Item 4.3.6

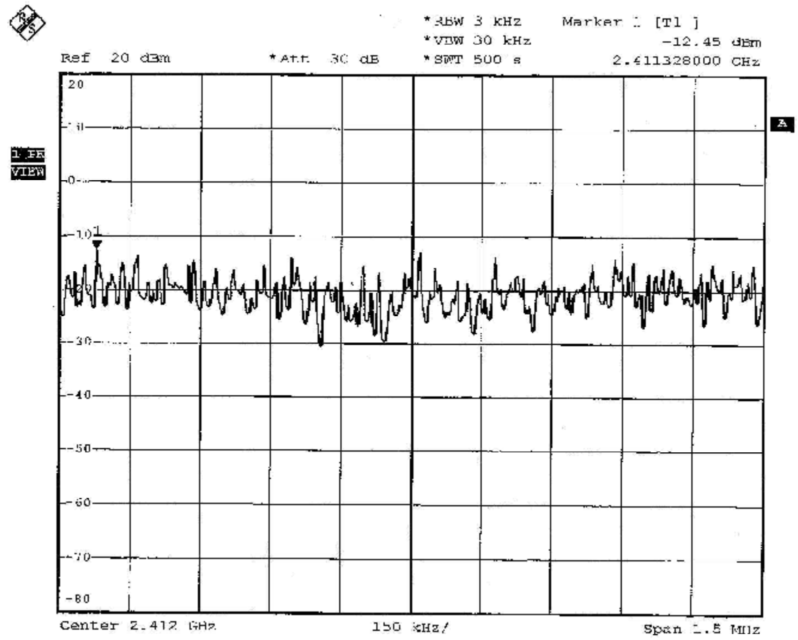
4.5.7 TEST RESULTS

802.11b DSSS modulation

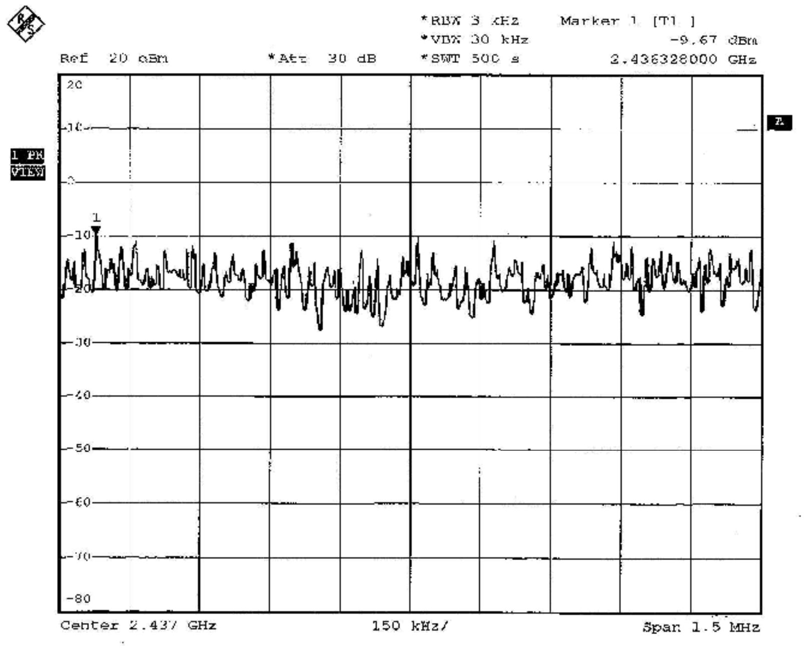
EUT	EDA (Enterprise Digital Assistant)	**MODEL**	MC7070
MODULATION TYPE	CCK	**TRANSFER RATE**	11Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	27deg.C, 63%RH, 991hPa
TESTED BY	Gary Chang		

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3kHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	2412	-12.45	8	PASS
6	2437	-9.67	8	PASS
11	2462	-12.86	8	PASS

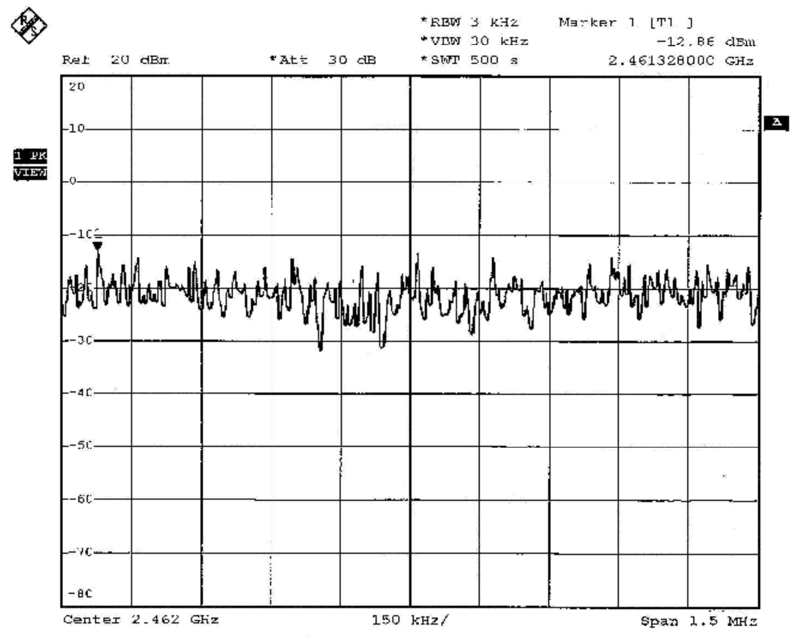
CH 1


*RBW 3 kHz
*VBW 30 kHz
*SWT 500 s
Marker 1 [T1]
-12.45 dBm
2.411328000 GHz
Ref 20 dBm
*Att 30 dB
1 PK
VIEW
A
Center 2.412 GHz
150 kHz/
Span 1.5 MHz

CH 6


*RBW 3 kHz
*VBW 30 kHz
*SWT 500 s
Marker 1 [T1]
-9.67 dBm
2.436328000 GHz
Ref 20 dBm
*Att 30 dB
1 PK
VIEW
A
Center 2.437 GHz
150 kHz/
Span 1.5 MHz

CH 11

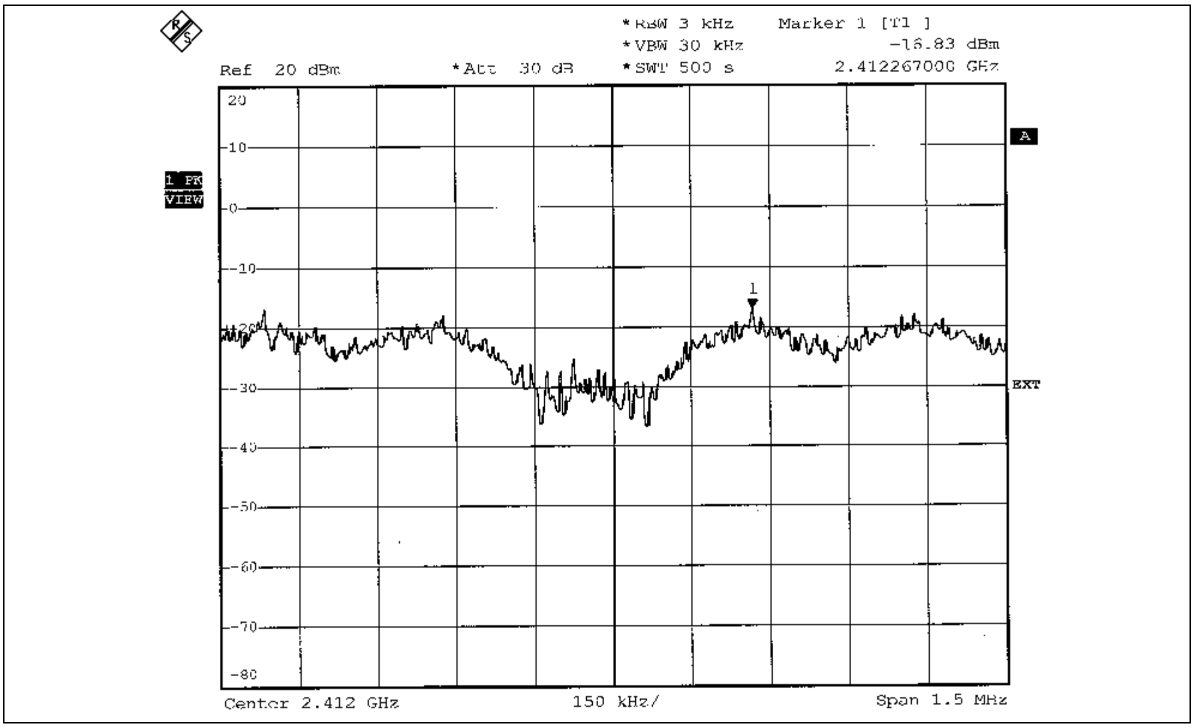

*RBW 3 kHz
Marker 1 [T1]
*VBW 30 kHz
-12.86 dBm
Ref 20 dBm
*Att 30 dB
*SWT 500 s
2.461328000 GHz
1 PK VIEW
Center 2.462 GHz
150 kHz/
Span 1.5 MHz

802.11g OFDM modulation

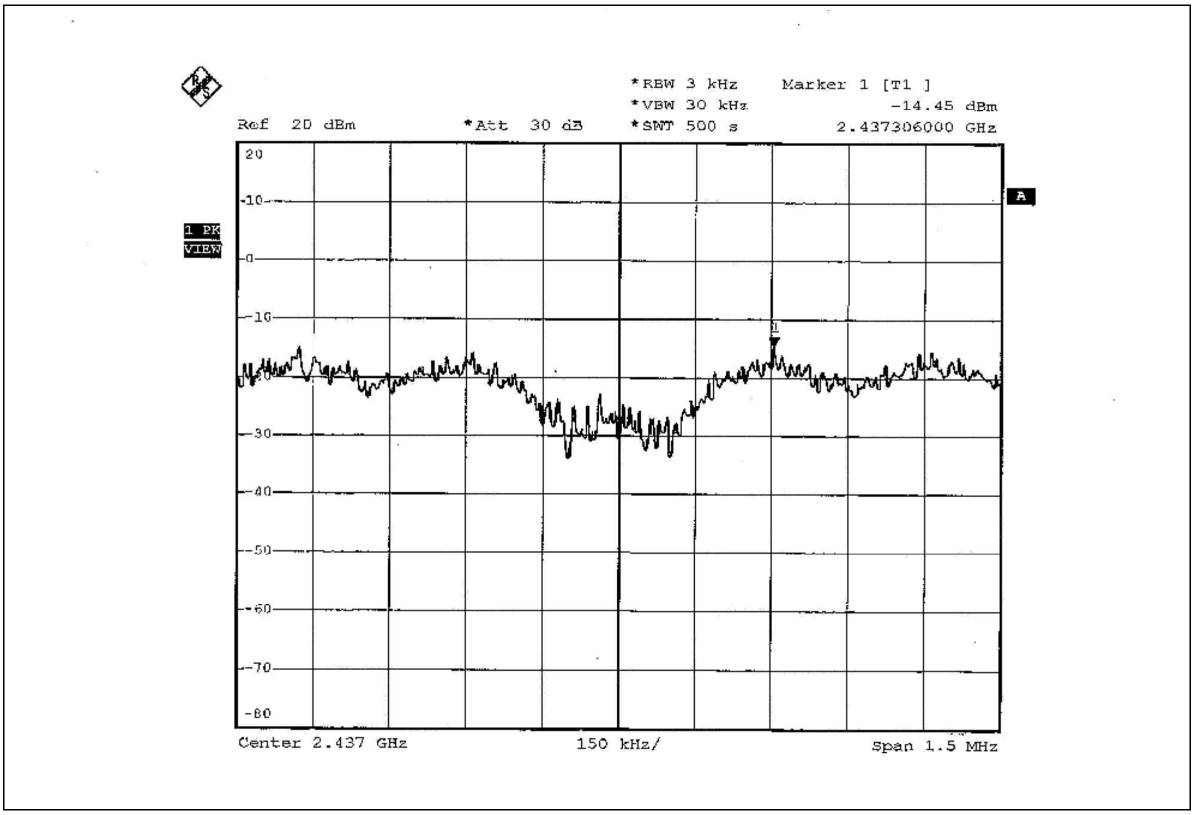
EUT	EDA (Enterprise Digital Assistant)	MODEL	MC7070
MODULATION TYPE	BPSK	TRANSFER RATE	6Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	27deg.C, 63%RH, 991hPa
TESTED BY	Gary Chang		

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3kHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	2412	-16.83	8	PASS
6	2437	-14.45	8	PASS
11	2462	-17.20	8	PASS

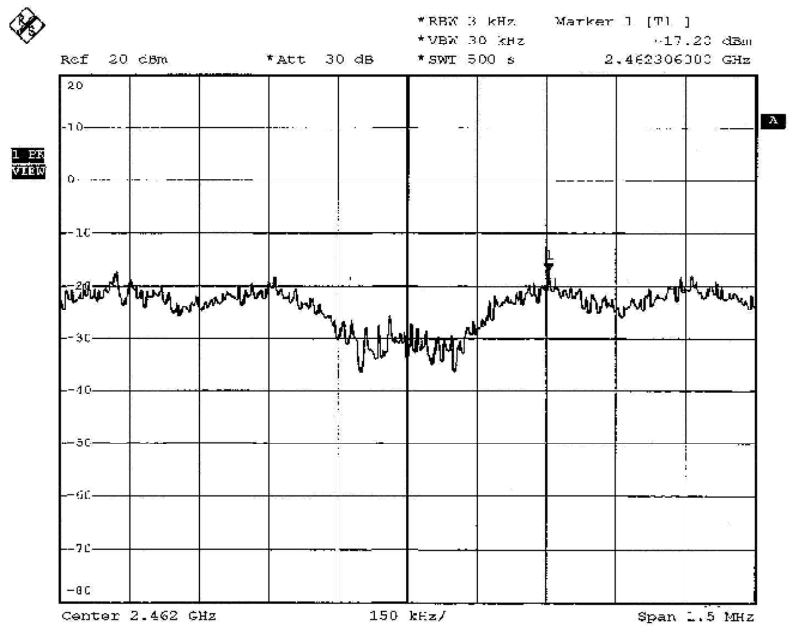
CH 1


*RBW 3 kHz
*VBW 30 kHz
*SWT 500 s
Marker 1 [T1]
-16.83 dBm
2.412267000 GHz
Ref 20 dBm
*Att 30 dB
1 PK
VIEW
A
EXT
Center 2.412 GHz
150 kHz/
Span 1.5 MHz

CH 6


*RBW 3 kHz
*VBW 30 kHz
*SWT 500 s
Marker 1 [T1]
-14.45 dBm
2.437306000 GHz
Ref 20 dBm
*Att 30 dB
1 PK
VIEW
A
Center 2.437 GHz
150 kHz/
Span 1.5 MHz

CH 11


*RBW 3 kHz
Marker 1 [T1]
*VBW 30 kHz
-17.20 dBm
Ref 20 dBm
*Att 30 dB
*SWT 500 s
2.46230600 GHz
1 PK
VIEW
Center 2.462 GHz
150 kHz/
Span 1.5 MHz

4.6 BAND EDGES MEASUREMENT

4.6.1 LIMITS OF BAND EDGES MEASUREMENT

Below –20dB of the highest emission level of operating band (in 100kHz Resolution Bandwidth).

4.6.2 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
R&S SPECTRUM ANALYZER	FSEK30	100049	Aug. 14, 2006

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

4.6.3 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 100kHz with suitable frequency span including 100 MHz bandwidth from band edge. The band edges was measured and recorded.

The spectrum plots (Peak RBW=VBW=100kHz ; Average RBW=1MHz, VBW=10Hz) are attached on the following pages.

4.6.4 DEVIATION FROM TEST STANDARD

No deviation

4.6.5 EUT OPERATING CONDITION

Same as Item 4.3.6

4.6.6 TEST RESULTS

The spectrum plots are attached on the following 12 images. D1 line indicates the highest level, and D2 line indicates the 20dB offset below D1. It shows compliance with the requirement in part 15.247(d).

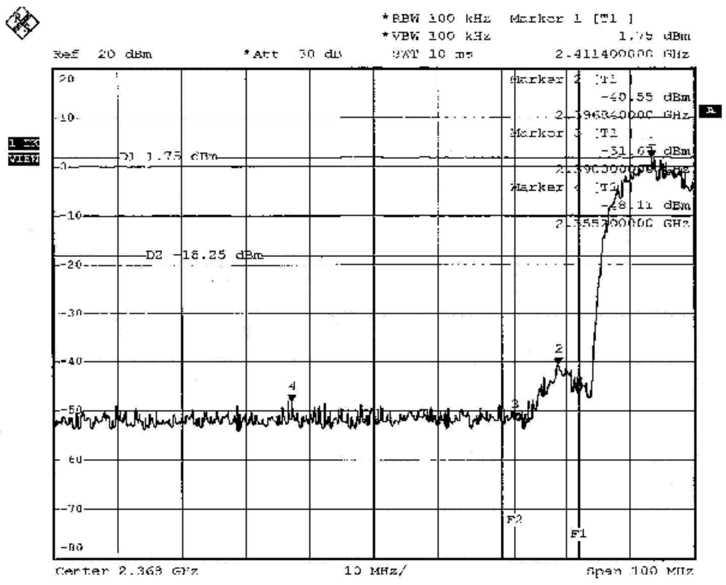
802.11b DSSS modulation

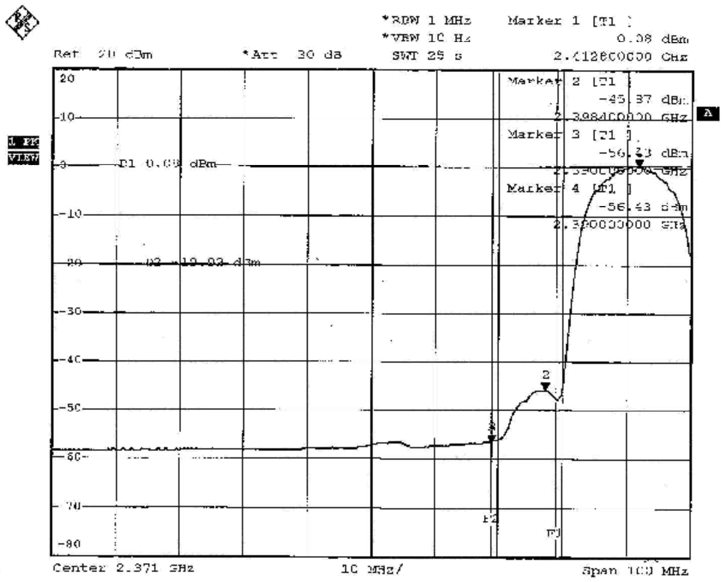
NOTE 1: The band edge emission plot on page 67 shows 49.86dBc between carrier maximum power and local maximum emission in restrict band (2.3552GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.7 is 108.09dBuV/m (Peak), so the maximum field strength in restrict band is 108.09-49.86=58.23dBuV/m which is under 74dBuV/m limit.

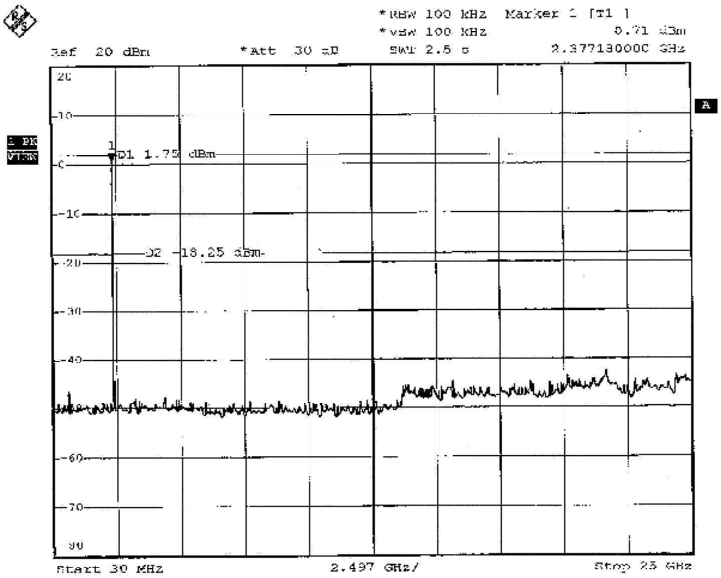
The band edge emission plot of on page 67 shows 56.51dBc between carrier maximum power and local maximum emission in restrict band (2.3900GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.7 is 100.63dBuV/m (Average), so the maximum field strength in restrict band is 100.63-56.51=44.12dBuV/m which is under 54dBuV/m limit.

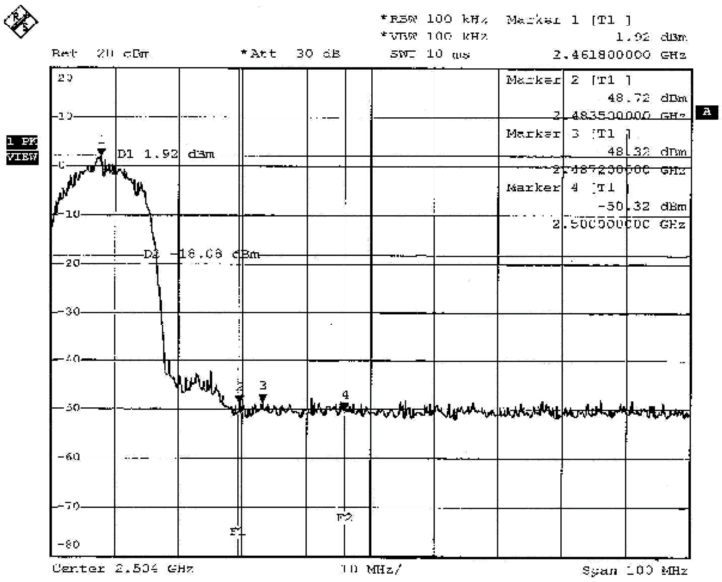
NOTE 2: The band edge emission plot on page 68 shows 50.24dBc between carrier maximum power and local maximum emission in restrict band (2.4872GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.2.7 is 106.21dBuV/m (Peak), so the maximum field strength in restrict band is 106.21-50.24=55.97dBuV/m which is under 74dBuV/m limit.

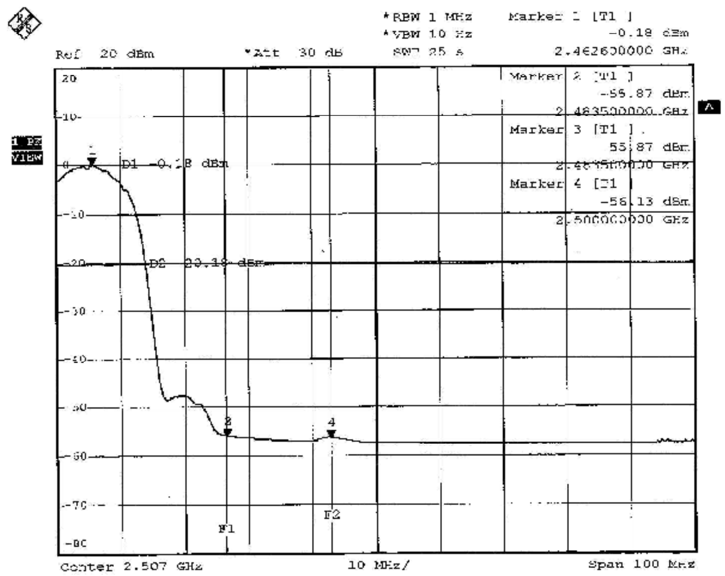
The band edge emission plot on page 69 shows 55.69dBc between carrier maximum power and local maximum emission in restrict band (2.4835GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.2.7 is 98.58dBuV/m (Average), so the maximum field strength in restrict band is 98.58-55.69=42.89dBuV/m which is under 54dBuV/m limit.

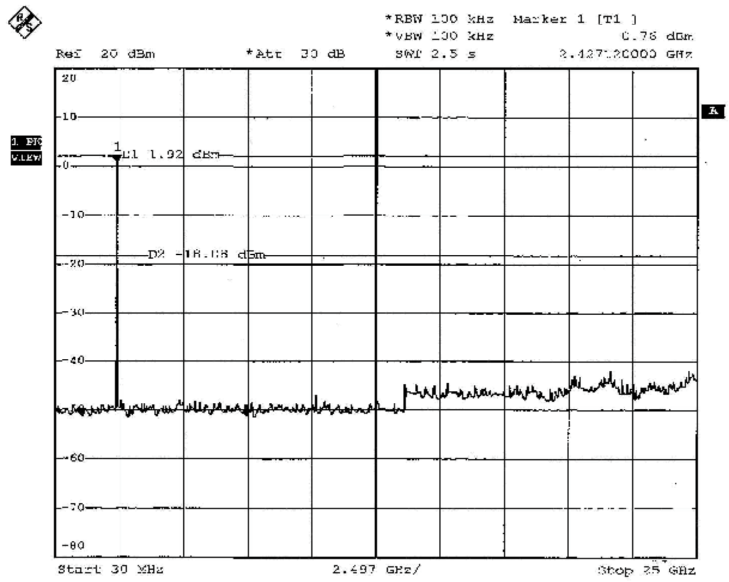

*RBW 100 kHz Marker 1 [T1]
*VBW 100 kHz 1.75 dBm
Ref 20 dBm *Att 30 dB SWT 10 ms 2.411400000 GHz
Marker 2 [T1]
-40.55 dBm
2.396840000 GHz
Marker 3 [T1]
-51.67 dBm
2.390000000 GHz
Marker 4 [T1]
-48.11 dBm
2.355700000 GHz
D1 1.75 dBm
D2 -18.25 dBm
F2
F1
Center 2.368 GHz 10 MHz/ Span 100 MHz


*RBW 1 MHz Marker 1 [T1]
*VBW 10 Hz 0.08 dBm
Ref 20 dBm *Att 30 dB SWT 25 s 2.412800000 GHz
Marker 2 [T1]
-45.37 dBm
2.398400000 GHz
Marker 3 [T1]
-56.23 dBm
Marker 4 [T1]
-56.43 dBm
2.390000000 GHz
D1 0.08 dBm
F2
F1
Center 2.371 GHz 10 MHz/ Span 100 MHz


*RBW 100 kHz Marker 1 [T1]
*VBW 100 kHz 0.71 dBm
Ref 20 dBm *Att 30 dB SWT 2.5 s 2.37713000C GHz
D1 1.75 dBm
D2 -18.25 dBm
Start 30 MHz 2.497 GHz/ Stop 25 GHz


*RBW 100 kHz Marker 1 [T1]
*VBW 100 kHz 1.92 dBm
Ref 20 dBm *Att 30 dB SWT 10 ms 2.461800000 GHz
Marker 2 [T1]
-48.72 dBm
2.483500000 GHz
Marker 3 [T1]
-48.32 dBm
2.487230000 GHz
Marker 4 [T1]
-50.32 dBm
2.500500000 GHz
D1 1.92 dBm
D2 -18.08 dBm
F1
F2
Center 2.504 GHz 10 MHz/ Span 100 MHz


*RBW 1 MHz
*VBW 10 Hz
SWT 25 s
Marker 1 [T1]
-0.18 dBm
2.46260000 GHz
Ref 20 dBm
*Att 30 dB
Marker 2 [T1]
-55.87 dBm
2.48350000 GHz
Marker 3 [T1]
55.87 dBm
Marker 4 [T1]
-56.13 dBm
2.50000000 GHz
D1 -0.18 dBm
D2 -20.18 dBm
F1
F2
Center 2.507 GHz
10 MHz/
Span 100 MHz


*RBW 100 kHz
*VBW 100 kHz
SWT 2.5 s
Marker 1 [T1]
0.78 dBm
Ref 20 dBm
*Att 30 dB
D1 1.92 dBm
D2 -18.08 dBm
Start 30 MHz
2.497 GHz/
Stop 25 GHz

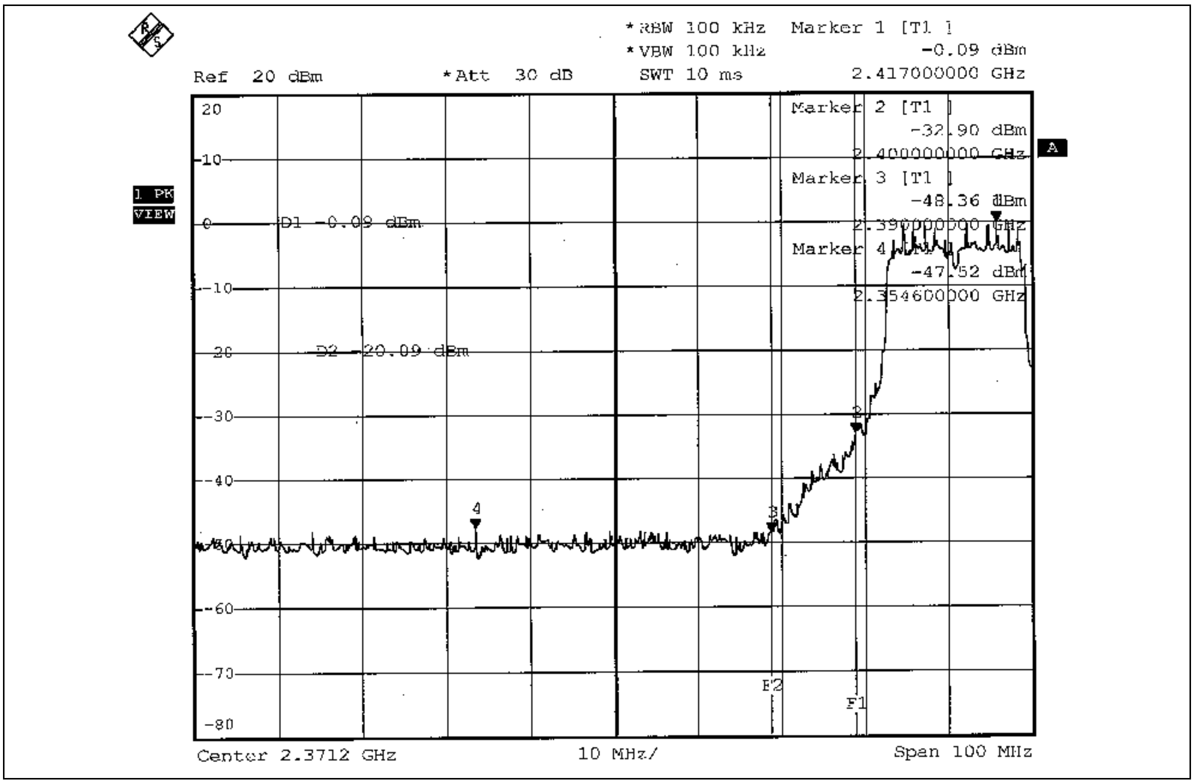
802.11g OFDM modulation

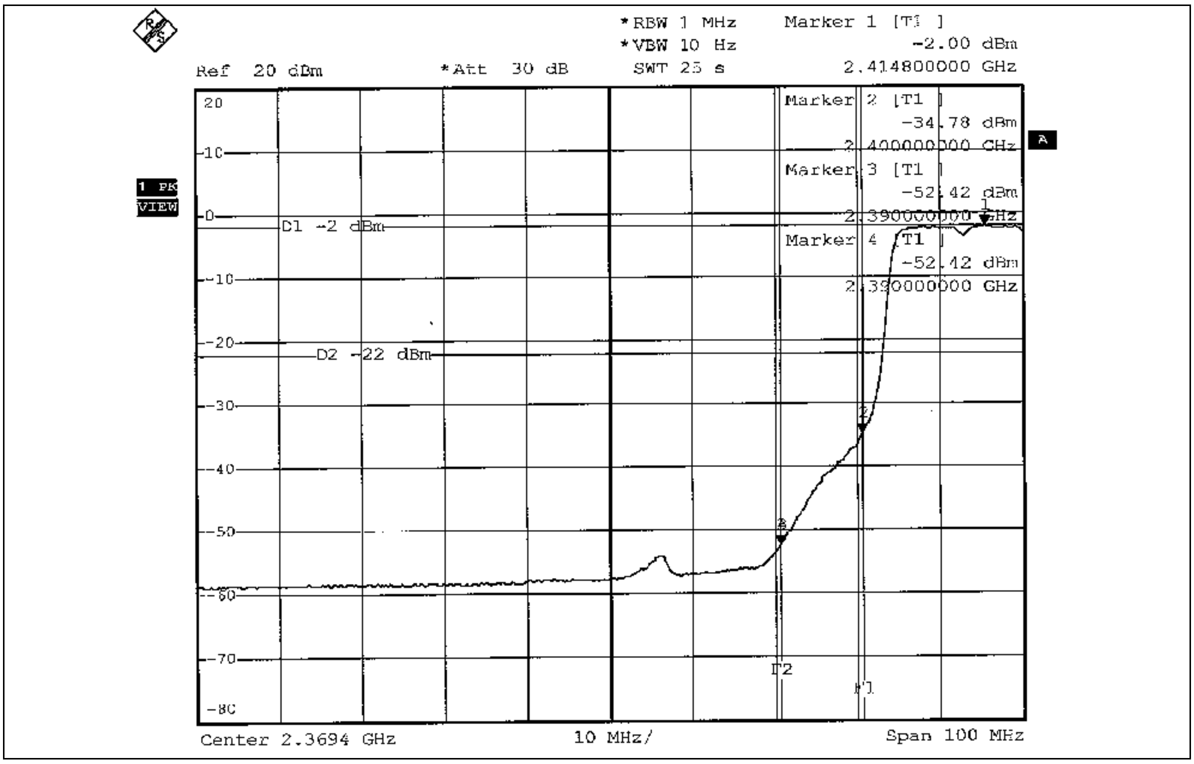
NOTE 1: The band edge emission plot on page 71 shows 47.43dBc between carrier maximum power and local maximum emission in restrict band (2.3546GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.7 is 107.44dBuV/m (Peak), so the maximum field strength in restrict band is 107.44-47.43=60.01dBuV/m which is under 74dBuV/m limit.

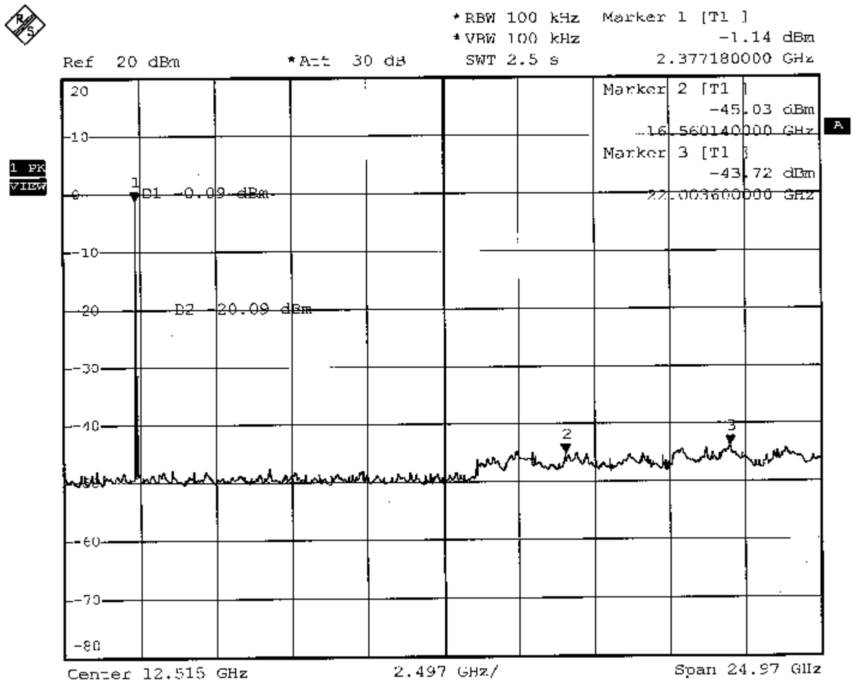
The band edge emission plot of on page 71 shows 50.42dBc between carrier maximum power and local maximum emission in restrict band (2.3900GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.7 is 97.55dBuV/m (Average), so the maximum field strength in restrict band is 97.55-50.42=47.13dBuV/m which is under 54dBuV/m limit.

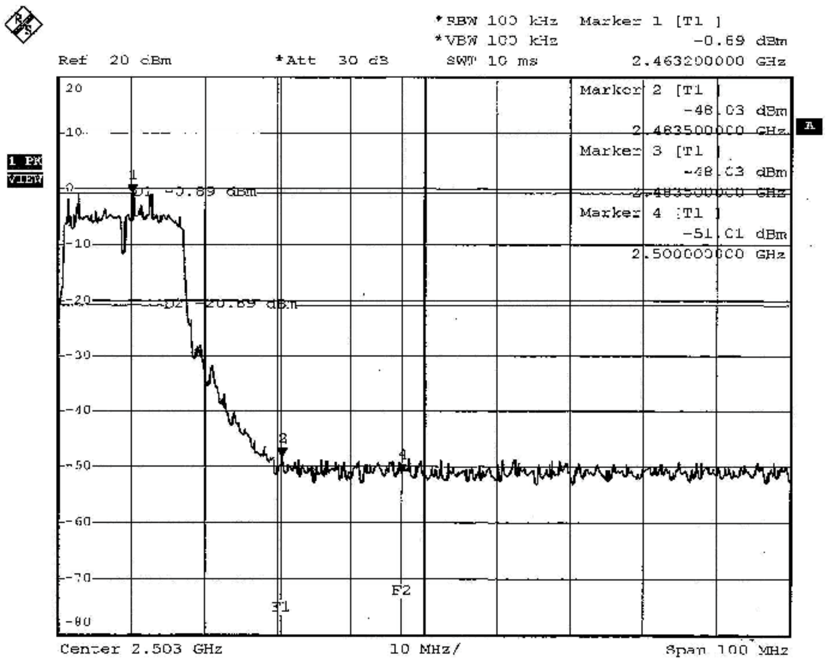
NOTE 2: The band edge emission plot on page 72 shows 47.14dBc between carrier maximum power and local maximum emission in restrict band (2.4835GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.2.7 is 105.65dBuV/m (Peak), so the maximum field strength in restrict band is 105.65-47.14=58.51dBuV/m which is under 74dBuV/m limit.

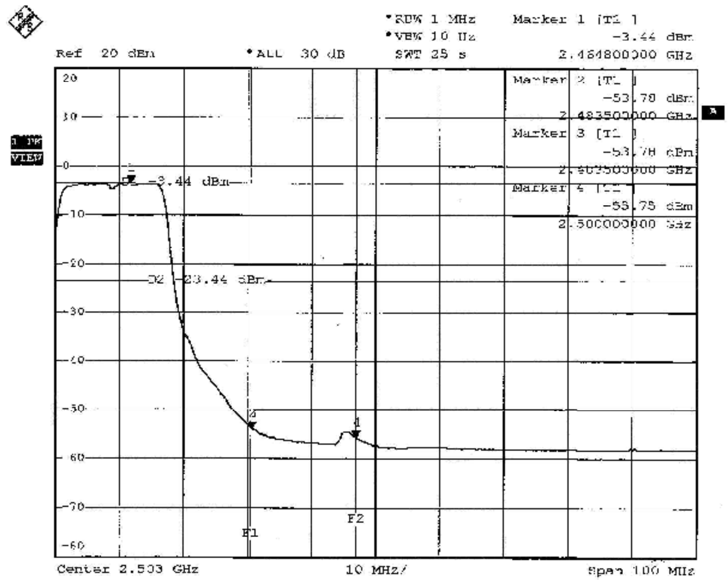
The band edge emission plot on page 73 shows 50.34dBc between carrier maximum power and local maximum emission in restrict band (2.4835GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.2.7 is 95.64dBuV/m (Average), so the maximum field strength in restrict band is 95.64-50.34=45.30dBuV/m which is under 54dBuV/m limit.

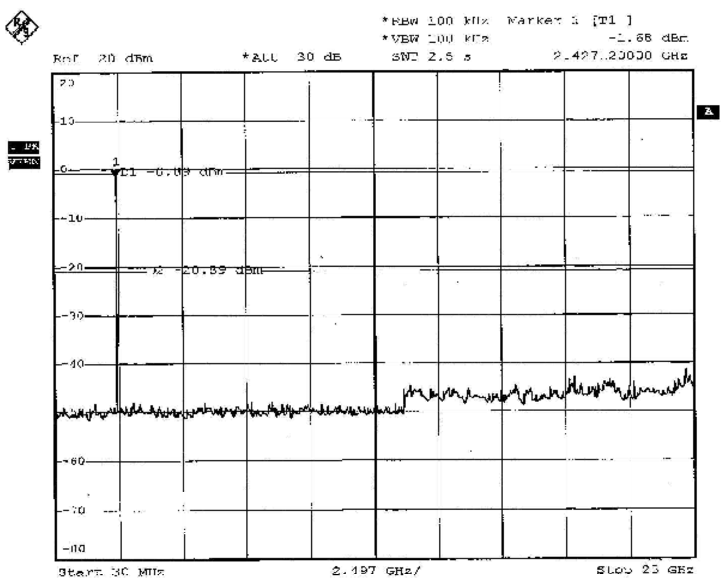

*RBW 100 kHz
Marker 1 [T1]
*VBW 100 kHz
-0.09 dBm
Ref 20 dBm
*Att 30 dB
SWT 10 ms
2.417000000 GHz
Marker 2 [T1]
-32.90 dBm
2.400000000 GHz
Marker 3 [T1]
-48.36 dBm
2.390000000 GHz
Marker 4 [T1]
-47.52 dBm
2.354600000 GHz
1 PK
VIEW
A
D1 -0.09 dBm
D2 -20.09 dBm
F2
F1
Center 2.3712 GHz
10 MHz/
Span 100 MHz


*RBW 1 MHz
Marker 1 [T1]
*VBW 10 Hz
-2.00 dBm
Ref 20 dBm
*Att 30 dB
SWT 25 s
2.414800000 GHz
Marker 2 [T1]
-34.78 dBm
2.400000000 GHz
Marker 3 [T1]
-52.42 dBm
2.390000000 GHz
Marker 4 [T1]
-52.42 dBm
2.390000000 GHz
1 PK
VIEW
A
D1 -2 dBm
D2 -22 dBm
F2
F1
Center 2.3694 GHz
10 MHz/
Span 100 MHz


*RBW 100 kHz
*VBW 100 kHz
SWT 2.5 s
Ref 20 dBm
*Att 30 dB
Marker 1 [T1]
-1.14 dBm
2.377180000 GHz
Marker 2 [T1]
-45.03 dBm
16.560140000 GHz
Marker 3 [T1]
-43.72 dBm
22.003600000 GHz
D1 -0.09 dBm
D2 -20.09 dBm
Center 12.515 GHz
2.497 GHz/
Span 24.97 GHz


*RBW 100 kHz
*VBW 100 kHz
SWT 10 ms
Ref 20 dBm
*Att 30 dB
Marker 1 [T1]
-0.69 dBm
2.463200000 GHz
Marker 2 [T1]
-48.03 dBm
2.483500000 GHz
Marker 3 [T1]
-48.03 dBm
2.483500000 GHz
Marker 4 [T1]
-51.01 dBm
2.500000000 GHz
D2 -20.69 dBm
F1
F2
Center 2.503 GHz
10 MHz/
Span 100 MHz


*RBW 1 MHz
*VBW 10 Hz
Marker 1 [T1]
-3.44 dBm
Ref 20 dBm
*ATT 30 dB
SWT 25 s
2.484800000 GHz
Marker 2 [T1]
-53.78 dBm
2.483500000 GHz
Marker 3 [T1]
-53.78 dBm
2.483500000 GHz
Marker 4 [T1]
-55.75 dBm
2.500000000 GHz
D1 -3.44 dBm
D2 -23.44 dBm
F1
F2
Center 2.503 GHz
10 MHz/
Span 100 MHz


*RBW 100 kHz
Marker 1 [T1]
*VBW 100 kHz
-1.68 dBm
Ref 20 dBm
*ATT 30 dB
SWT 2.5 s
2.427120000 GHz
D2 -20.89 dBm
Start 30 MHz
2.497 GHz/
Stop 25 GHz

4.7 ANTENNA REQUIREMENT

4.7.1 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 (b), 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.

4.7.2 ANTENNA CONNECTED CONSTRUCTION

The antenna used in this product is PIFA antenna with UFL connector. The maximum Gain of the antenna is 2.0dBi.

5. TEST TYPES AND RESULTS (FOR BLUETOOTH)

5.1.1 CONDUCTED EMISSION MEASUREMENT

5.1.2 LIMITS OF 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.
3. All emanations from a class A/B digital device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified above.

5.1.3 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
Test Receiver ROHDE & SCHWARZ	ESCS30	100288	Nov. 06, 2005
RF signal cable Woken	5D-FB	Cable-HyC02-01	Jan. 09, 2006
LISN ROHDE & SCHWARZ	ESH2-Z5	100100	Jan. 20, 2006
LISN ROHDE & SCHWARZ	ESH3-Z5	100311	Jan. 20, 2006
Software ADT	ADT_Cond_V3	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 Shielded Room 3.
3. The VCCI Site Registration No. is C-2047.

5.1.4 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.

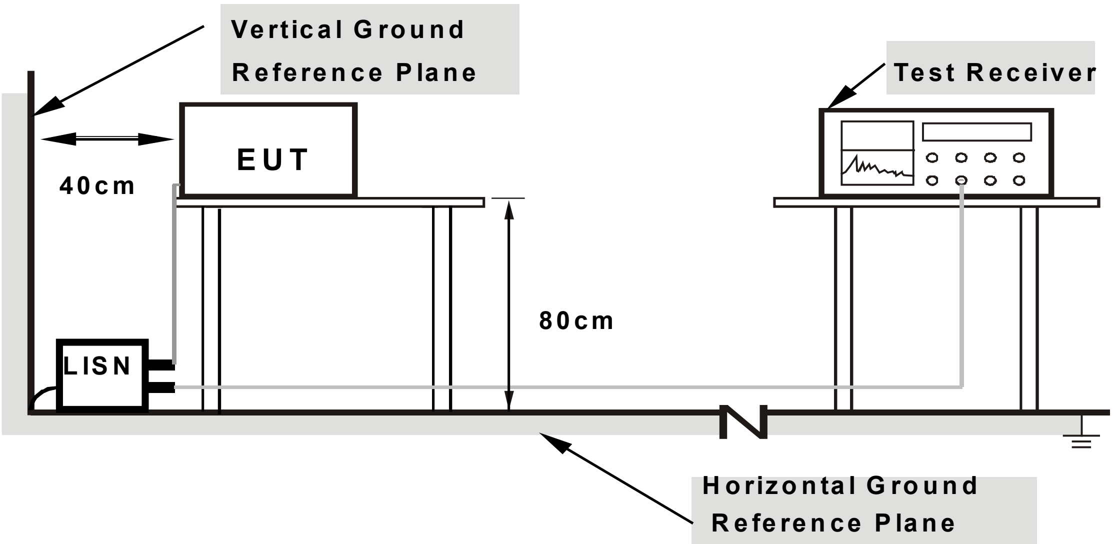
b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.

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

5.1.5 DEVIATION FROM TEST STANDARD

No deviation

5.1.6 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.

5.1.7 EUT OPERATING CONDITIONS

Same as 4.1.6

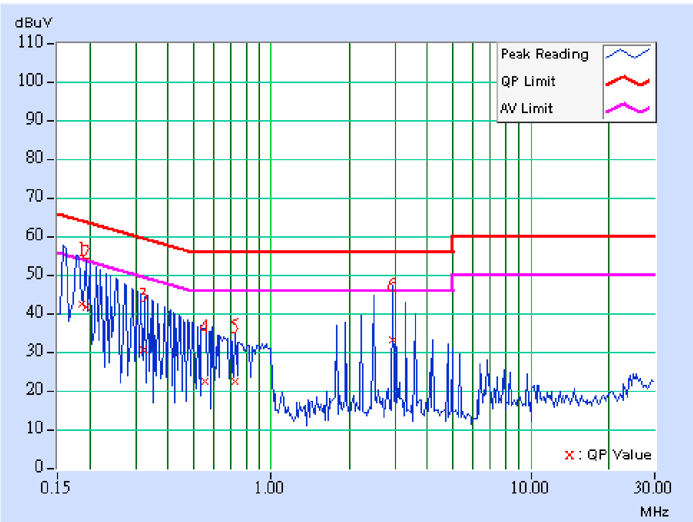
5.1.8 TEST RESULTS

Conducted Worst-Case Data (with charging cable)

EUT	EDA (Enterprise Digital Assistant)	MEASUREMENT DETAIL	
MODEL	MC7070	PHASE	Line 1
CHANNEL	Channel 0	6dB BANDWIDTH	9 kHz
MODULATION TYPE	GFSK	ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 991hPa
INPUT POWER (SYSTEM)	120Vac, 60 Hz	TEST MODE	A
TESTED BY	Jay Hsu		

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	0.186	0.11	42.19	-	42.30	-	64.22	54.22	-21.93	-
2	0.193	0.11	41.41	-	41.52	-	63.89	53.89	-22.37	-
3	0.322	0.12	30.41	-	30.53	-	59.66	49.66	-29.13	-
4	0.554	0.15	22.23	-	22.38	-	56.00	46.00	-33.62	-
5	0.728	0.18	22.22	-	22.40	-	56.00	46.00	-33.60	-
6	2.922	0.27	33.11	-	33.38	-	56.00	46.00	-22.62	-

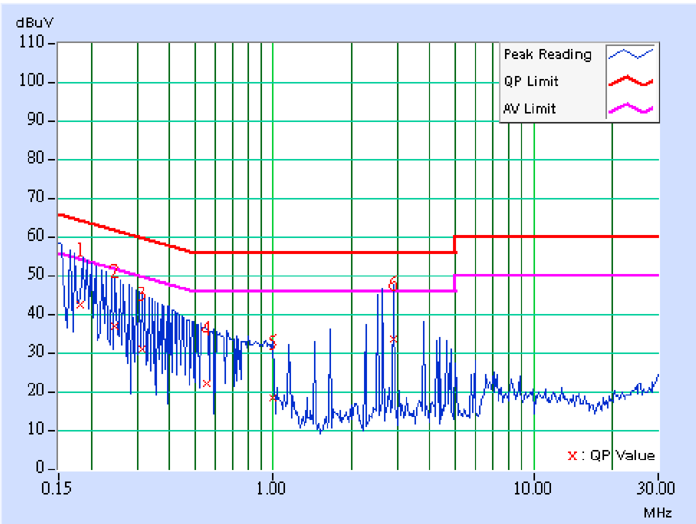
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT	EDA (Enterprise Digital Assistant)	MEASUREMENT DETAIL	
MODEL	MC7070	PHASE	Line 2
CHANNEL	Channel 0	6dB BANDWIDTH	9 kHz
MODULATION TYPE	GFSK	ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 991hPa
INPUT POWER (SYSTEM)	120Vac, 60 Hz	TEST MODE	A
TESTED BY	Jay Hsu		

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	0.181	0.11	42.32	-	42.43	-	64.44	54.44	-22.02	-
2	0.245	0.11	36.67	-	36.78	-	61.93	51.93	-25.15	-
3	0.314	0.12	30.93	-	31.05	-	59.86	49.86	-28.82	-
4	0.553	0.15	21.93	-	22.08	-	56.00	46.00	-33.92	-
5	0.998	0.23	18.43	-	18.66	-	56.00	46.00	-37.34	-
6	2.892	0.27	33.44	-	33.71	-	56.00	46.00	-22.29	-

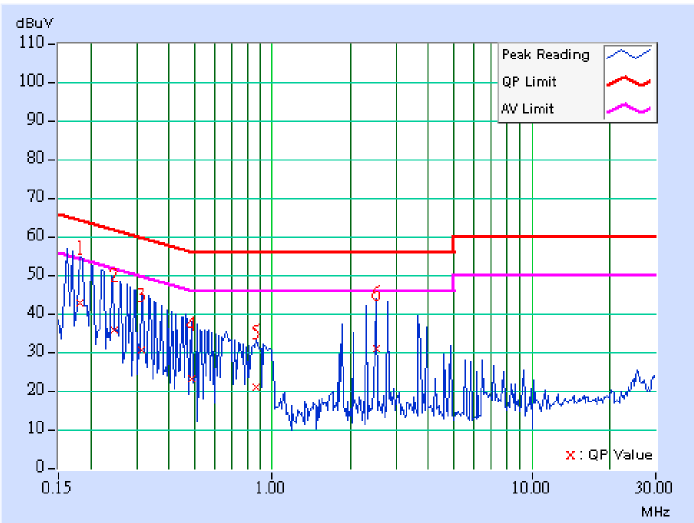
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT	EDA (Enterprise Digital Assistant)	MEASUREMENT DETAIL	
MODEL	MC7070	PHASE	Line 1
CHANNEL	Channel 39	6dB BANDWIDTH	9 kHz
MODULATION TYPE	GFSK	ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 991hPa
INPUT POWER (SYSTEM)	120Vac, 60 Hz	TEST MODE	A
TESTED BY	Jay Hsu		

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	0.182	0.11	42.59	-	42.70	-	64.41	54.41	-21.71	-
2	0.246	0.11	35.56	-	35.67	-	61.89	51.89	-26.22	-
3	0.315	0.12	30.53	-	30.65	-	59.83	49.83	-29.18	-
4	0.490	0.14	23.09	-	23.23	-	56.17	46.17	-32.94	-
5	0.865	0.21	20.84	-	21.05	-	56.00	46.00	-34.95	-
6	2.516	0.26	30.93	-	31.19	-	56.00	46.00	-24.81	-

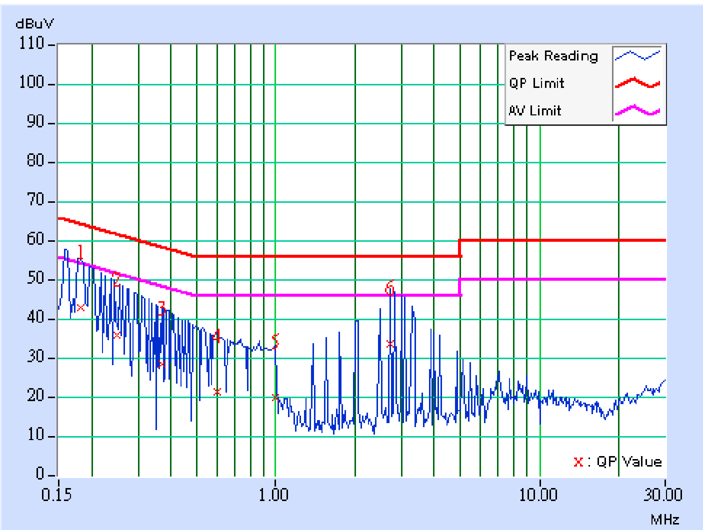
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT	EDA (Enterprise Digital Assistant)	MEASUREMENT DETAIL	
MODEL	MC7070	PHASE	Line 2
CHANNEL	Channel 39	6dB BANDWIDTH	9 kHz
MODULATION TYPE	GFSK	ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 991hPa
INPUT POWER (SYSTEM)	120Vac, 60 Hz	TEST MODE	A
TESTED BY	Jay Hsu		

No	Freq.	Corr. Factor	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.182	0.11	42.59	-	42.70	-	64.41	54.41	-21.72	-
2	0.248	0.11	35.48	-	35.59	-	61.82	51.82	-26.23	-
3	0.369	0.12	28.13	-	28.25	-	58.53	48.53	-30.28	-
4	0.601	0.16	21.12	-	21.28	-	56.00	46.00	-34.72	-
5	0.994	0.23	19.66	-	19.89	-	56.00	46.00	-36.11	-
6	2.723	0.26	33.41	-	33.67	-	56.00	46.00	-22.33	-

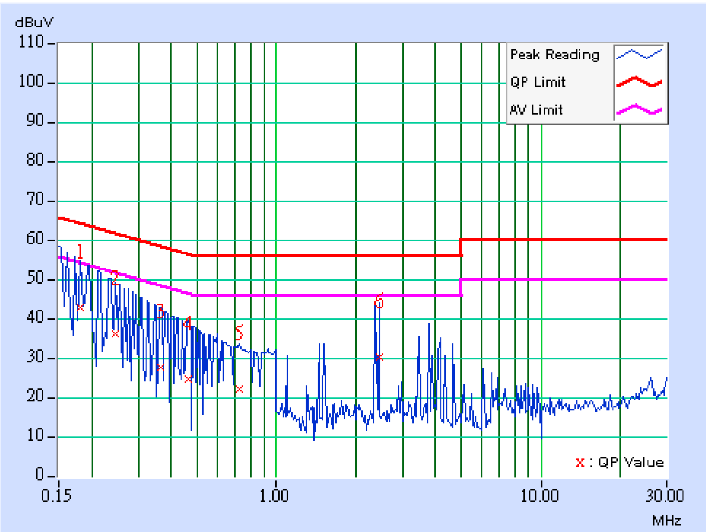
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT	EDA (Enterprise Digital Assistant)	MEASUREMENT DETAIL	
MODEL	MC7070	PHASE	Line 1
CHANNEL	Channel 78	6dB BANDWIDTH	9 kHz
MODULATION TYPE	GFSK	ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 991hPa
INPUT POWER (SYSTEM)	120Vac, 60 Hz	TEST MODE	A
TESTED BY	Jay Hsu		

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	0.183	0.11	42.56	-	42.67	-	64.36	54.36	-21.70	-
2	0.247	0.11	36.05	-	36.16	-	61.87	51.87	-25.70	-
3	0.366	0.12	27.67	-	27.79	-	58.59	48.59	-30.80	-
4	0.463	0.13	24.53	-	24.66	-	56.65	46.65	-31.99	-
5	0.726	0.18	22.04	-	22.22	-	56.00	46.00	-33.78	-
6	2.453	0.26	30.07	-	30.33	-	56.00	46.00	-25.67	-

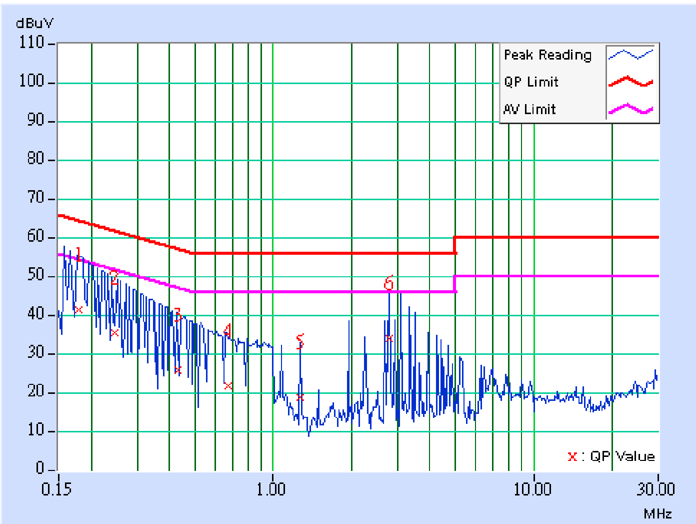
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT	EDA (Enterprise Digital Assistant)	MEASUREMENT DETAIL	
MODEL	MC7070	PHASE	Line 2
CHANNEL	Channel 78	6dB BANDWIDTH	9 kHz
MODULATION TYPE	GFSK	ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 991hPa
INPUT POWER (SYSTEM)	120Vac, 60 Hz	TEST MODE	A
TESTED BY	Jay Hsu		

No	Freq.	Corr. Factor	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.179	0.11	41.25	-	41.36	-	64.51	54.51	-23.15	-
2	0.248	0.11	35.36	-	35.47	-	61.83	51.83	-26.36	-
3	0.430	0.13	25.63	-	25.76	-	57.24	47.24	-31.49	-
4	0.670	0.17	21.46	-	21.63	-	56.00	46.00	-34.37	-
5	1.275	0.24	18.71	-	18.95	-	56.00	46.00	-37.05	-
6	2.790	0.27	33.68	-	33.95	-	56.00	46.00	-22.05	-

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.

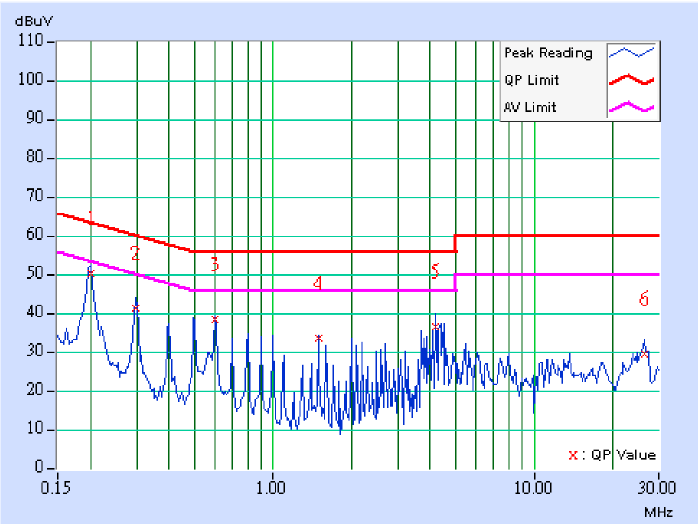


Conducted Worst-Case Data (with cradle)

EUT	EDA (Enterprise Digital Assistant)	MEASUREMENT DETAIL	
MODEL	MC7070	PHASE	Line 1
CHANNEL	Channel 0	6dB BANDWIDTH	9 kHz
MODULATION TYPE	GFSK	ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 991hPa
INPUT POWER (SYSTEM)	120Vac, 60 Hz	TEST MODE	B
TESTED BY	Jay Hsu		

No	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	**0.201**	**0.11**	**48.71**	**-**	**48.82**	**-**	**63.58**	**53.58**	**-14.76**	**-**
2	0.298	0.11	40.09	-	40.20	-	60.29	50.29	-20.09	-
3	0.599	0.15	36.92	-	37.07	-	56.00	46.00	-18.93	-
4	1.496	0.25	32.29	-	32.54	-	56.00	46.00	-23.46	-
5	4.188	0.39	35.30	-	35.69	-	56.00	46.00	-20.31	-
6	26.453	1.53	28.19	-	29.72	-	60.00	50.00	-30.28	-

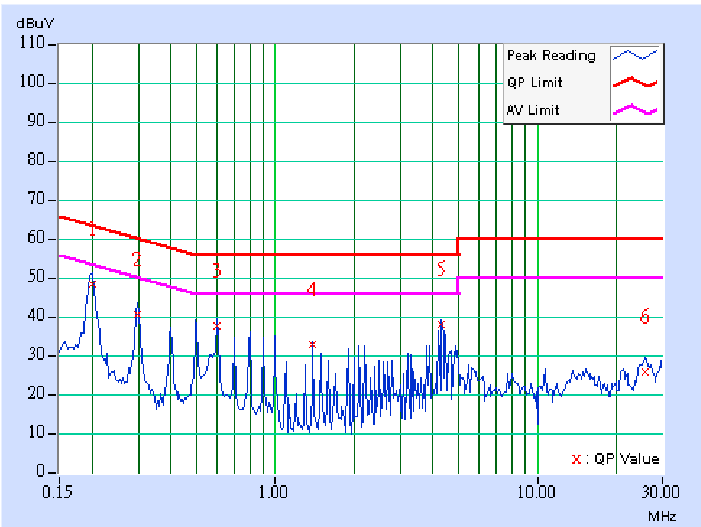
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT	EDA (Enterprise Digital Assistant)	MEASUREMENT DETAIL	
MODEL	MC7070	PHASE	Line 2
CHANNEL	Channel 0	6dB BANDWIDTH	9 kHz
MODULATION TYPE	GFSK	ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 991hPa
INPUT POWER (SYSTEM)	120Vac, 60 Hz	TEST MODE	B
TESTED BY	Jay Hsu		

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	0.201	0.11	47.78	-	47.89	-	63.58	53.58	-15.69	-
2	0.298	0.11	39.71	-	39.82	-	60.29	50.29	-20.47	-
3	0.599	0.15	36.76	-	36.91	-	56.00	46.00	-19.09	-
4	1.395	0.25	32.00	-	32.25	-	56.00	46.00	-23.75	-
5	4.293	0.39	37.29	-	37.68	-	56.00	46.00	-18.32	-
6	25.848	0.92	25.04	-	25.96	-	60.00	50.00	-34.04	-

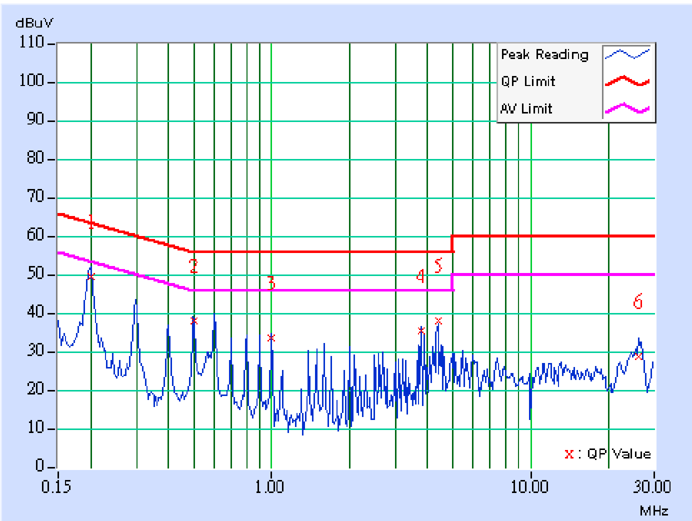
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT	EDA (Enterprise Digital Assistant)	MEASUREMENT DETAIL	
MODEL	MC7070	PHASE	Line 1
CHANNEL	Channel 39	6dB BANDWIDTH	9 kHz
MODULATION TYPE	GFSK	ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 991hPa
INPUT POWER (SYSTEM)	120Vac, 60 Hz	TEST MODE	B
TESTED BY	Jay Hsu		

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	0.201	0.11	48.23	-	48.34	-	63.58	53.58	-15.24	-
2	0.500	0.13	36.78	-	36.91	-	56.00	46.00	-19.09	-
3	0.998	0.24	32.15	-	32.39	-	56.00	46.00	-23.61	-
4	3.793	0.38	33.96	-	34.34	-	56.00	46.00	-21.66	-
5	4.391	0.40	36.57	-	36.97	-	56.00	46.00	-19.03	-
6	26.051	1.48	27.54	-	29.02	-	60.00	50.00	-30.98	-

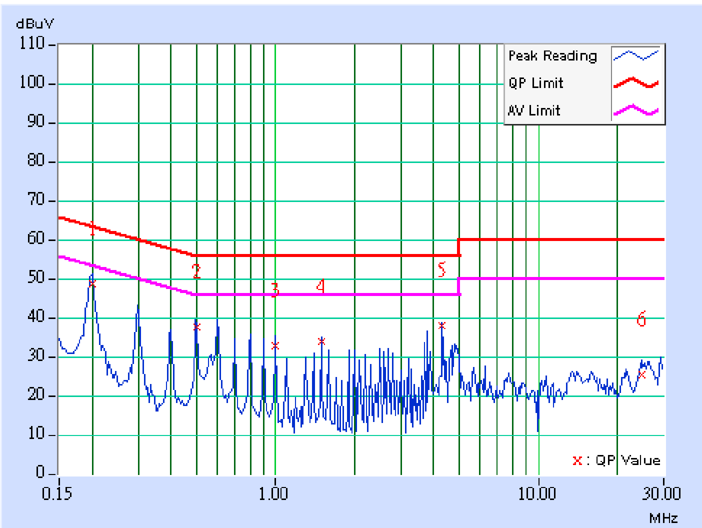
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT	EDA (Enterprise Digital Assistant)	MEASUREMENT DETAIL	
MODEL	MC7070	PHASE	Line 2
CHANNEL	Channel 39	6dB BANDWIDTH	9 kHz
MODULATION TYPE	GFSK	ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 991hPa
INPUT POWER (SYSTEM)	120Vac, 60 Hz	TEST MODE	B
TESTED BY	Jay Hsu		

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	0.201	0.11	48.22	-	48.33	-	63.58	53.58	-15.25	-
2	0.500	0.13	37.05	-	37.18	-	56.00	46.00	-18.82	-
3	0.998	0.24	32.23	-	32.47	-	56.00	46.00	-23.53	-
4	1.496	0.25	33.15	-	33.40	-	56.00	46.00	-22.60	-
5	4.293	0.39	37.27	-	37.66	-	56.00	46.00	-18.34	-
6	24.648	0.84	24.58	-	25.42	-	60.00	50.00	-34.58	-

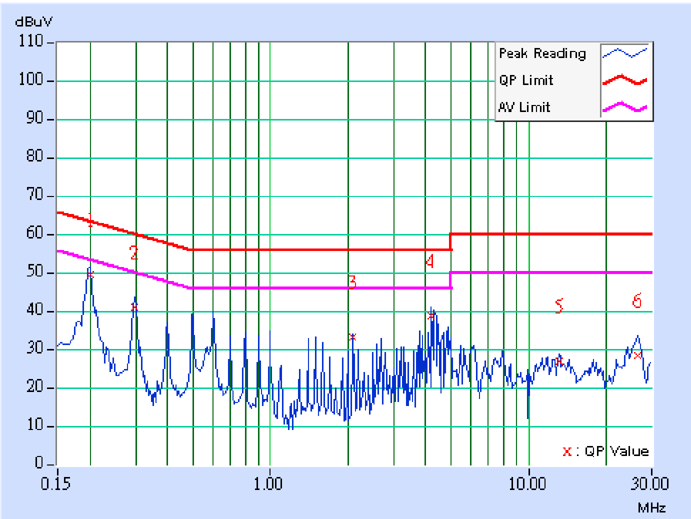
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT	EDA (Enterprise Digital Assistant)	MEASUREMENT DETAIL	
MODEL	MC7070	PHASE	Line 1
CHANNEL	Channel 78	6dB BANDWIDTH	9 kHz
MODULATION TYPE	GFSK	ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 991hPa
INPUT POWER (SYSTEM)	120Vac, 60 Hz	TEST MODE	B
TESTED BY	Jay Hsu		

No	Freq.	Corr. Factor	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.201	0.11	48.11	-	48.22	-	63.58	53.58	-15.36	-
2	0.298	0.11	39.67	-	39.78	-	60.29	50.29	-20.51	-
3	2.094	0.27	31.79	-	32.06	-	56.00	46.00	-23.94	-
4	4.191	0.39	37.52	-	37.91	-	56.00	46.00	-18.09	-
5	13.070	0.55	25.65	-	26.20	-	60.00	50.00	-33.80	-
6	26.543	1.54	27.04	-	28.58	-	60.00	50.00	-31.42	-

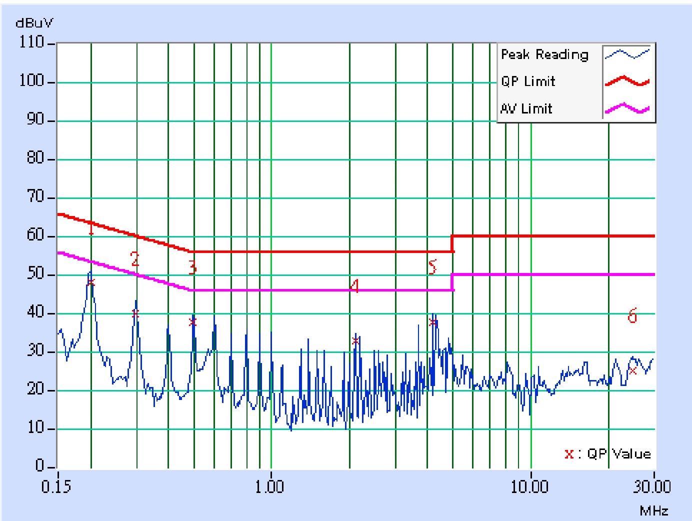
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT	EDA (Enterprise Digital Assistant)	MEASUREMENT DETAIL	
MODEL	MC7070	PHASE	Line 2
CHANNEL	Channel 78	6dB BANDWIDTH	9 kHz
MODULATION TYPE	GFSK	ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 991hPa
INPUT POWER (SYSTEM)	120Vac, 60 Hz	TEST MODE	B
TESTED BY	Jay Hsu		

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	0.201	0.11	47.32	-	47.43	-	63.58	53.58	-16.15	-
2	0.298	0.11	39.32	-	39.43	-	60.29	50.29	-20.86	-
3	0.498	0.13	37.00	-	37.13	-	56.04	46.04	-18.91	-
4	2.098	0.27	32.18	-	32.45	-	56.00	46.00	-23.55	-
5	4.191	0.39	36.81	-	37.20	-	56.00	46.00	-18.80	-
6	24.844	0.85	24.24	-	25.09	-	60.00	50.00	-34.91	-

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	ESIB7	100188	Dec. 19, 2005
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100039	Nov. 21, 2005
BILOG Antenna SCHWARZBECK	VULB9168	9168-157	Jan. 22, 2006
HORN Antenna SCHWARZBECK	BBHA 9120 D	9120D-407	Jan. 16, 2006
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA 9170241	Feb. 23, 2006
Preamplifier Agilent	8449B	3008A01961	Nov. 09, 2005
Preamplifier Agilent	8447D	2944A10629	Nov. 09, 2005
RF signal cable HUBER+SUHNER	SUCOFLEX 104	218182/4	Feb. 17, 2006
RF signal cable HUBER+SUHNER	SUCOFLEX 104	218194/4	Feb. 17, 2006
Software ADT.	ADT_Radiated_V5.14	NA	NA
Antenna Tower ADT.	AT100	AT93021702	NA
Turn Table ADT.	TT100.	TT93021702	NA
Controller ADT.	SC100.	SC93021702	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 1.

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 IC4924-2.

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 meter 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.

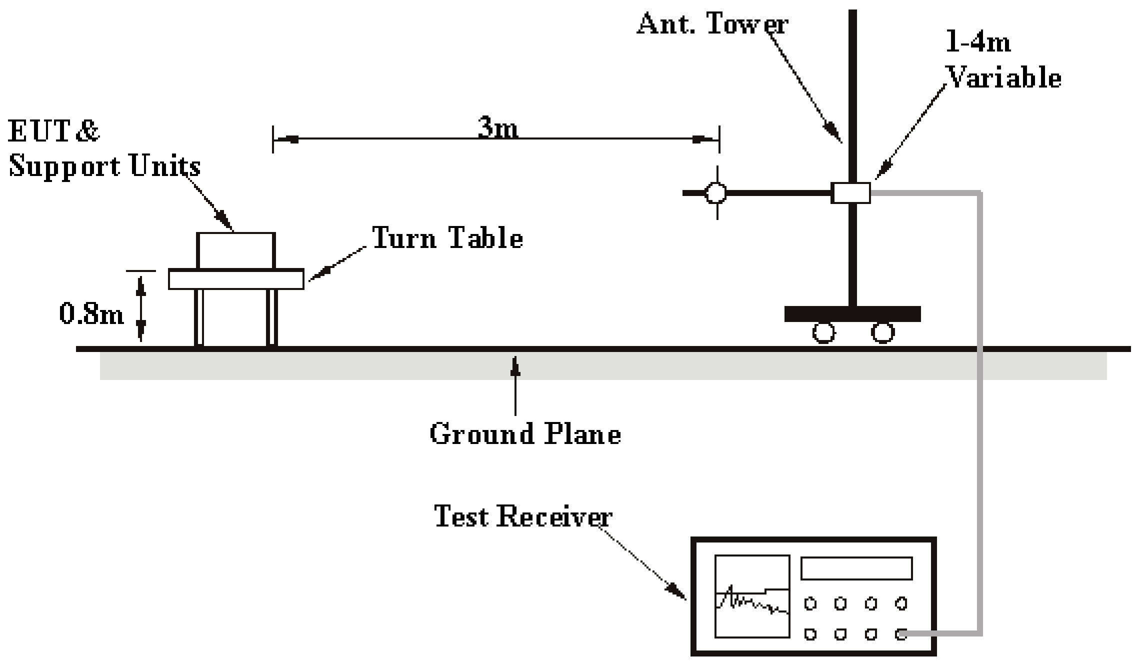
NOTE:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection at frequency below 1GHz.
2. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1 MHz for Peak detection (PK) 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 related item – Photographs of the Test Configuration.

5.2.6 EUT OPERATING CONDITIONS

Same as 4.1.6

5.2.7 TEST RESULTS

Radiated Worst Case Data (with charger)

EUT	EDA (Enterprise Digital Assistant)	MEASUREMENT DETAIL	
MODEL	MC7070	FREQUENCY RANGE	Below 1000MHz
CHANNEL	Channel 78	DETECTOR FUNCTION	Quasi-Peak
MODULATION TYPE	GFSK	ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 991hPa
INPUT POWER (SYSTEM)	120Vac, 60 Hz	TEST MODE	A
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	53.33	26.73 QP	40.00	-13.27	1.00 H	52	12.60	14.13
2	96.43	34.33 QP	43.50	-9.17	2.00 H	132	23.87	10.46
3	148.58	29.10 QP	43.50	-14.40	1.50 H	70	14.70	14.40
4	201.06	31.09 QP	43.50	-12.41	1.00 H	82	19.93	11.16
5	259.38	31.17 QP	46.00	-14.83	1.00 H	109	17.96	13.21
6	370.18	27.09 QP	46.00	-18.91	1.00 H	256	11.15	15.94
7	519.86	27.08 QP	46.00	-18.92	1.50 H	223	8.09	18.99

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	53.55	29.39 QP	40.00	-10.61	2.00 V	132	15.28	14.11
2	94.15	32.87 QP	43.50	-10.63	1.00 V	52	22.59	10.28
3	164.13	31.89 QP	43.50	-11.61	1.00 V	25	17.63	14.26
4	197.17	24.52 QP	43.50	-18.98	1.00 V	360	13.17	11.35
5	385.73	26.79 QP	46.00	-19.21	2.50 V	10	10.49	16.30
6	599.56	26.78 QP	46.00	-19.22	1.00 V	28	5.90	20.88

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.

Radiated Worst Case Data (with cradle)

EUT	EDA (Enterprise Digital Assistant)	MEASUREMENT DETAIL	
MODEL	MC7070	FREQUENCY RANGE	Below 1000MHz
CHANNEL	Channel 78	DETECTOR FUNCTION	Quasi-Peak
MODULATION TYPE	GFSK	ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 991hPa
INPUT POWER (SYSTEM)	120Vac, 60 Hz	TEST MODE	B
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	98.04	27.37 QP	43.50	-16.13	2.00 H	286	16.78	10.59
2	133.03	31.17 QP	43.50	-12.33	1.50 H	274	17.45	13.72
3	164.13	33.31 QP	43.50	-10.19	1.50 H	250	19.05	14.26
4	212.73	25.88 QP	43.50	-17.62	1.00 H	241	14.43	11.45
5	249.66	39.42 QP	46.00	-6.58	1.00 H	97	26.34	13.08
6	307.98	28.54 QP	46.00	-17.46	1.00 H	79	14.03	14.51
7	374.07	37.12 QP	46.00	-8.88	1.00 H	106	21.09	16.03
8	457.66	29.94 QP	46.00	-16.06	1.50 H	346	11.93	18.01
9	733.69	29.17 QP	46.00	-16.83	1.00 H	301	6.14	23.03
10	799.78	28.18 QP	46.00	-17.82	2.00 H	37	4.48	23.70

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	51.38	23.44 QP	40.00	-16.56	1.00 V	211	9.11	14.33
2	111.64	28.35 QP	43.50	-15.15	1.00 V	187	16.41	11.94
3	166.07	29.55 QP	43.50	-13.95	1.00 V	199	15.49	14.07
4	249.66	38.33 QP	46.00	-7.67	2.00 V	199	25.25	13.08
5	374.07	32.90 QP	46.00	-13.10	1.00 V	166	16.87	16.03
6	457.66	29.23 QP	46.00	-16.77	2.00 V	154	11.22	18.01

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.

Radiated Worst Case Data (battery mode)

EUT	EDA (Enterprise Digital Assistant)	MEASUREMENT DETAIL	
MODEL	MC7070	FREQUENCY RANGE	Below 1000MHz
CHANNEL	Channel 78	DETECTOR FUNCTION	Quasi-Peak
MODULATION TYPE	GFSK	ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 991hPa
INPUT POWER (SYSTEM)	120Vac, 60 Hz	TEST MODE	C
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	98.04	28.47 QP	43.50	-15.03	2.00 H	286	17.88	10.59
2	136.91	34.82 QP	43.50	-8.68	2.00 H	286	20.83	13.99
3	168.02	32.40 QP	43.50	-11.10	1.50 H	235	18.53	13.88
4	199.12	26.70 QP	43.50	-16.80	1.50 H	325	15.50	11.20
5	519.86	28.32 QP	46.00	-17.68	1.50 H	70	9.33	18.99
6	739.52	30.62 QP	46.00	-15.38	1.00 H	283	7.45	23.17
7	811.44	28.59 QP	46.00	-17.41	1.00 H	283	4.79	23.80

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	47.49	23.31 QP	40.00	-16.69	1.00 V	175	8.54	14.76
2	162.18	27.60 QP	43.50	-15.90	1.00 V	268	13.16	14.45
3	615.11	29.72 QP	46.00	-16.28	1.00 V	133	8.61	21.10
4	731.74	27.39 QP	46.00	-18.61	1.50 V	343	4.41	22.99
5	850.32	29.39 QP	46.00	-16.61	1.50 V	274	5.26	24.13
6	902.81	27.75 QP	46.00	-18.25	1.50 V	133	2.62	25.13

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.

EUT	EDA (Enterprise Digital Assistant)	MEASUREMENT DETAIL	
MODEL	MC7070	FREQUENCY RANGE	1 ~ 25GHz
CHANNEL	Channel 0	DETECTOR FUNCTION	Peak (PK) Average (AV)
MODULATION TYPE	GFSK	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	25deg. C, 67%RH, 991hPa	TESTED BY	Long Chen

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	2390.00	38.97 PK	74.00	-35.03	1.50 H	28	6.93	32.04
2	*2402.00	91.97 PK			1.50 H	28	59.88	32.09
2	*2402.00	61.97 AV			1.50 H	28	29.88	32.09
3	4804.00	51.88 PK	74.00	-22.12	1.31 H	233	13.73	38.15
3	4804.00	21.88 AV	54.00	-32.12	1.31 H	233	-16.27	38.15

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	2390.00	34.64 PK	74.00	-39.36	1.35 V	151	2.60	32.04
2	*2402.00	87.64 PK			1.35 V	151	55.55	32.09
2	*2402.00	57.64 AV			1.35 V	151	25.55	32.09
3	4804.00	51.20 PK	74.00	-22.80	1.00 V	243	13.05	38.15
3	4804.00	21.20 AV	54.00	-32.80	1.00 V	243	-16.95	38.15

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.
5. The DH5 packet was the worse case duty cycle for a transmit dwell time on a channel, based upon bluetooth theory the transmitter is on 0.625 * 5 per 296.25 ms per channel. Therefore, the duty cycle be equal to: 20log(3.125/100)= -30 dB.
6. Average value = peak reading –20log(duty cycle).

EUT	EDA (Enterprise Digital Assistant)	MEASUREMENT DETAIL	
MODEL	MC7070	FREQUENCY RANGE	1 ~ 25GHz
CHANNEL	Channel 39	DETECTOR FUNCTION	Peak (PK) Average (AV)
MODULATION TYPE	GFSK	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	25deg. C, 67%RH, 991hPa	TESTED BY	Long Chen

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	*2441.00	92.35 PK			1.39 H	26	60.09	32.26
1	*2441.00	62.35 AV			1.39 H	26	30.09	32.26
2	4882.00	52.68 PK	74.00	-21.32	1.00 H	296	14.34	38.34
2	4882.00	22.68 AV	54.00	-31.32	1.00 H	296	-15.66	38.34

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	*2441.00	88.30 PK			1.32 V	154	56.21	32.09
1	*2441.00	58.30 AV			1.32 V	154	26.21	32.09
2	4882.00	51.63 PK	74.00	-22.37	1.27 V	229	13.29	38.34
2	4882.00	21.63 AV	54.00	-32.37	1.27 V	229	-16.71	38.34

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.
5. The DH5 packet was the worse case duty cycle for a transmit dwell time on a channel, based upon bluetooth theory the transmitter is on 0.625 * 5 per 296.25 ms per channel. Therefore, the duty cycle be equal to: 20log(3.125/100)= -30 dB.
6. Average value = peak reading –20log(duty cycle).

EUT	EDA (Enterprise Digital Assistant)	MEASUREMENT DETAIL	
MODEL	MC7070	FREQUENCY RANGE	1 ~ 25GHz
CHANNEL	Channel 78	DETECTOR FUNCTION	Peak (PK) Average (AV)
MODULATION TYPE	GFSK	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	25deg. C, 67%RH, 991hPa	TESTED BY	Long Chen

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	*2480.00	93.42 PK			1.43 H	25	60.98	32.44
1	*2480.00	63.42 AV			1.43 H	25	30.98	32.44
2	2483.50	41.42 PK	74.00	-32.58	1.43 H	25	8.96	32.46
3	4960.00	54.96 PK	74.00	-19.04	1.32 H	296	16.39	38.57
3	4960.00	24.96 AV	54.00	-29.04	1.32 H	296	-13.61	38.57

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	*2480.00	88.96 PK			1.06 V	173	56.52	32.44
1	*2480.00	58.96 AV			1.06 V	173	26.52	32.44
2	2483.50	36.96 PK	74.00	-37.04	1.06 V	173	4.50	32.46
3	4960.00	53.84 PK	74.00	-20.16	1.00 V	327	15.27	38.57
3	4960.00	23.84 AV	54.00	-30.16	1.00 V	327	-14.73	38.57

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.
5. The DH5 packet was the worse case duty cycle for a transmit dwell time on a channel, based upon bluetooth theory the transmitter is on 0.625 * 5 per 296.25 ms per channel. Therefore, the duty cycle be equal to: 20log(3.125/100)= -30 dB.
6. Average value = peak reading –20log(duty cycle).

5.3 NUMBER OF HOPPING FREQUENCY USED

5.3.1 LIMIT OF HOPPING FREQUENCY USED

At least 15 channels frequencies, and should be equally spaced.

5.3.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
SPECTRUM ANALYZER	FSEK30	100049	Aug. 14, 2006

NOTE: 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 PROCEDURES

a. Check the calibration of the measuring instrument (SA) using either an internal calibrator or a known signal from an external generator.

b. Turn on the EUT and connect its antenna terminal to measurement via a low loss cable. Then set it to any one measured frequency within its operating range and make sure the instrument is operated in its linear range.

c. Set the SA on MaxHold Mode, and then keep the EUT in hopping mode. Record all the signals from each channel until each one has been recorded.

d. Set the SA on View mode and then plot the result on SA screen.

e. Repeat above procedures until all frequencies measured were complete.

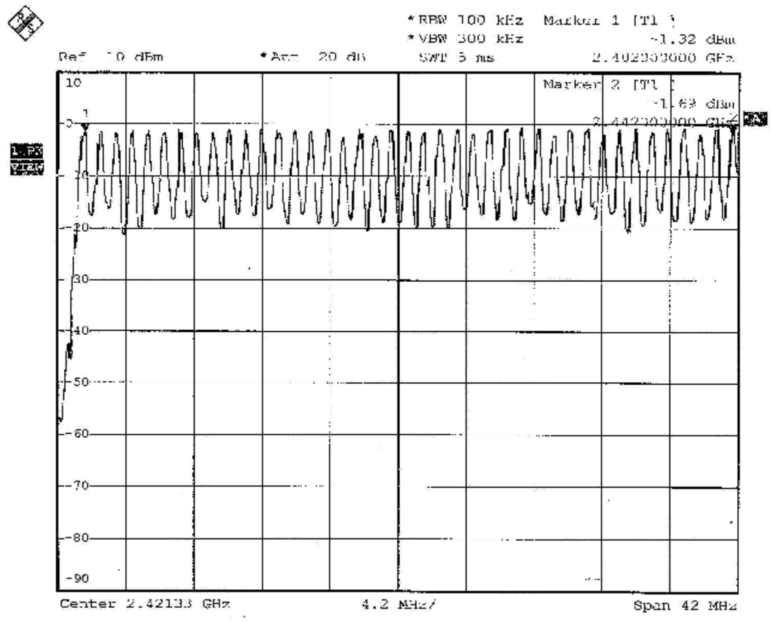
5.3.4 DEVIATION FROM TEST STANDARD

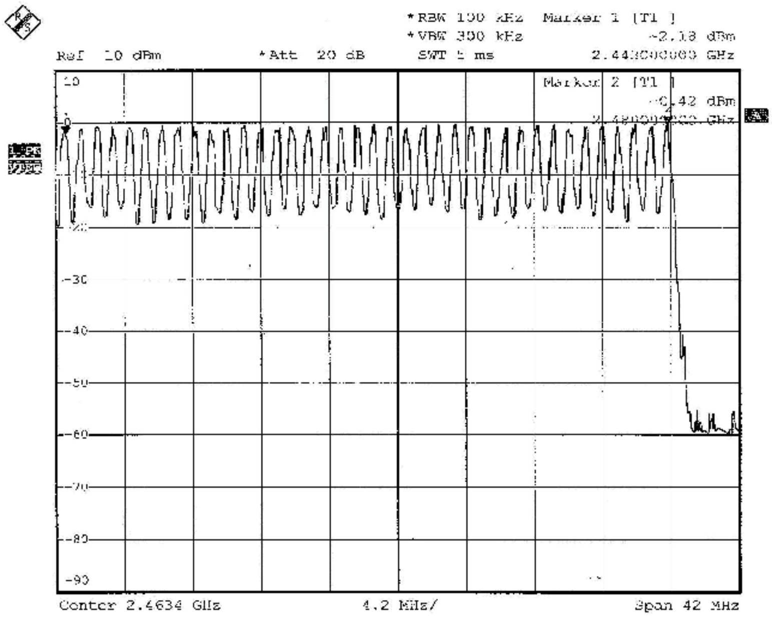
No deviation.

5.3.5 TEST SETUP

5.3.6 TEST RESULTS

There are 79 hopping frequencies in the hopping mode. Please refer to next two pages for the test result. On the plots, it shows that the hopping frequencies are equally spaced.


*RBW 100 kHz
Marker 1 [T1]
*VBW 300 kHz
-1.32 dBm
Ref 10 dBm
*Att 20 dB
SWT 5 ms
Marker 2 [T1]
Center 2.42133 GHz
4.2 MHz/
Span 42 MHz


*RBW 100 kHz
Marker 1 [T1]
*VBW 300 kHz
-2.18 dBm
Ref 10 dBm
*Att 20 dB
SWT 5 ms
Marker 2 [T1]
-0.42 dBm
Center 2.4634 GHz
4.2 MHz/
Span 42 MHz

5.4 DWELL TIME ON EACH CHANNEL

5.4.1 LIMIT OF DWELL TIME USED

The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed.

5.4.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
SPECTRUM ANALYZER	FSEK30	100049	Aug. 14, 2006

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

5.4.3 TEST PROCEDURES

a. Check the calibration of the measuring instrument (SA) using either an internal calibrator or a known signal from an external generator.

b. Turn on the EUT and connect its antenna terminal to measurement via a low loss cable. Then set it to any one measured frequency within its operating range and make sure the instrument is operated in its linear range.

c. Adjust the center frequency of SA on any frequency be measured and set SA to zero span mode. And then, set RBW and VBW of spectrum analyzer to proper value.

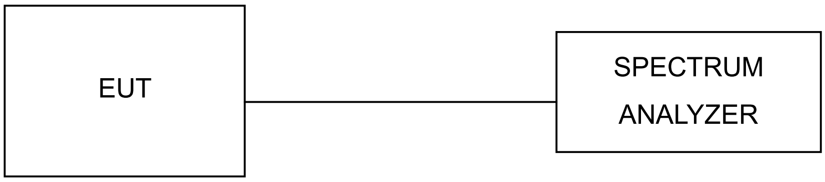
d. Measure the time duration of one transmission on the measured frequency. And then plot the result with time difference of this time duration.

e. Repeat above procedures until all different time-slot modes have been completed.

5.4.4 DEVIATION FROM TEST STANDARD

No deviation.

5.4.5 TEST SETUP

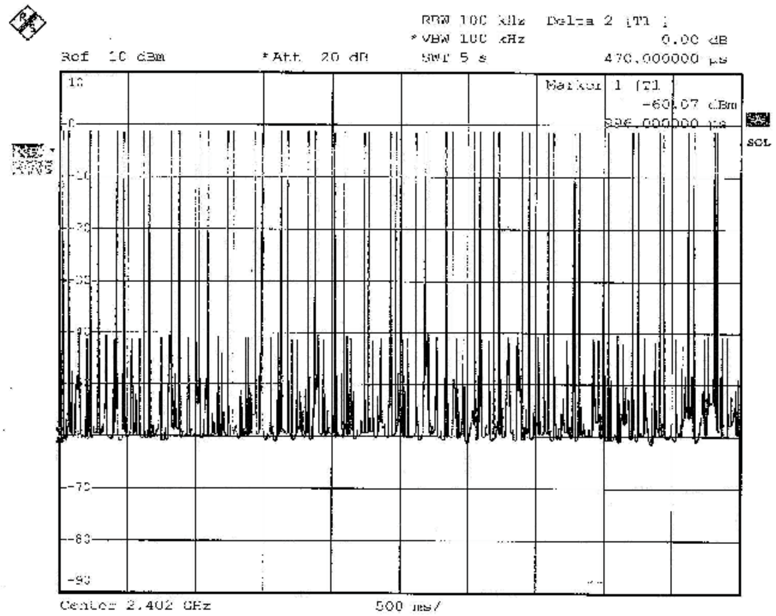


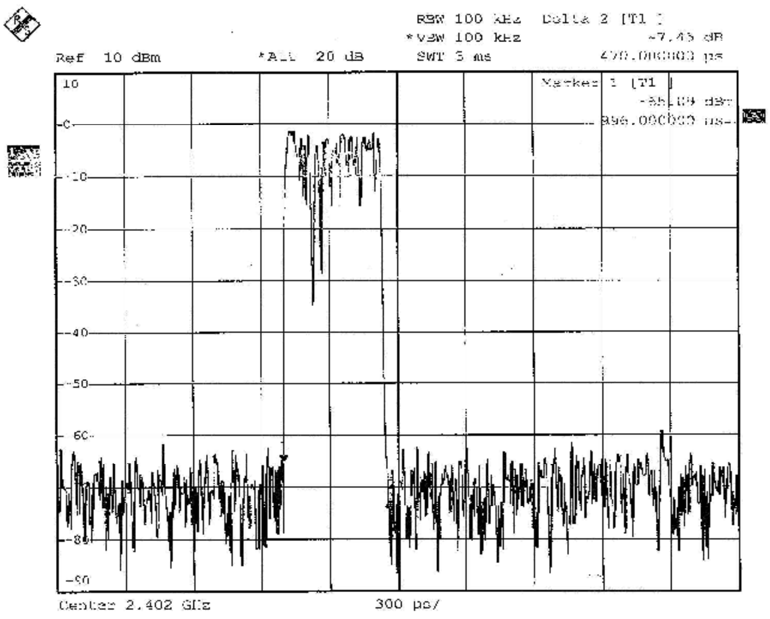
5.4.6 TEST RESULTS

MODE	NUMBER OF TRANSMISSION IN A 31.6 (79HOPPING * 0.4)	LENGTH OF TRANSMISSION TIME (msec)	RESULT (msec)	LIMIT (msec)
DH1	50 (times / 5 sec) * 6.32 = 316.00 times	0.470	148.52	400
DH3	28 (times / 5 sec) * 6.32 = 176.96 times	1.728	305.79	400
DH5	17 (times / 5 sec) * 6.32 = 107.44 times	2.980	320.17	400

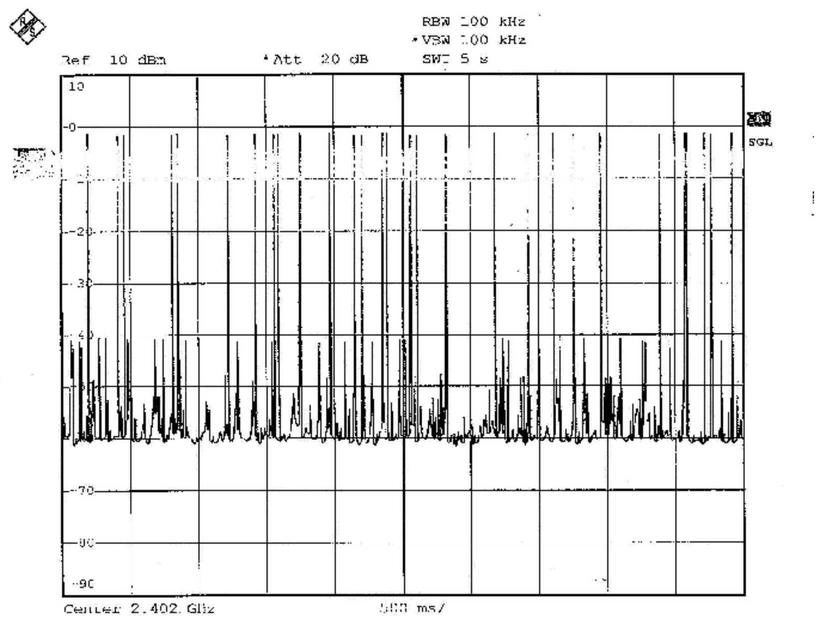
NOTE: Test plots of the transmitting time slot are shown on next 3 pages.

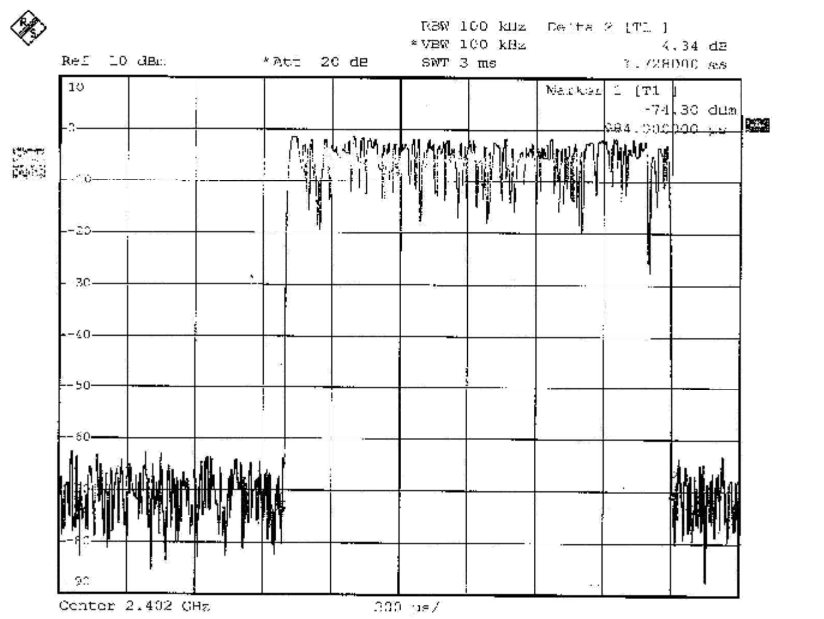
DH1


RBW 100 kHz
Delta 2 [T1]
*VBW 100 kHz
0.00 dB
Ref 10 dBm
*Att 20 dB
SWT 5 s
470.000000 µs
Marker 1 [T1]
-60.07 dBm
896.000000 µs
SGL
Center 2.402 GHz
500 ms/

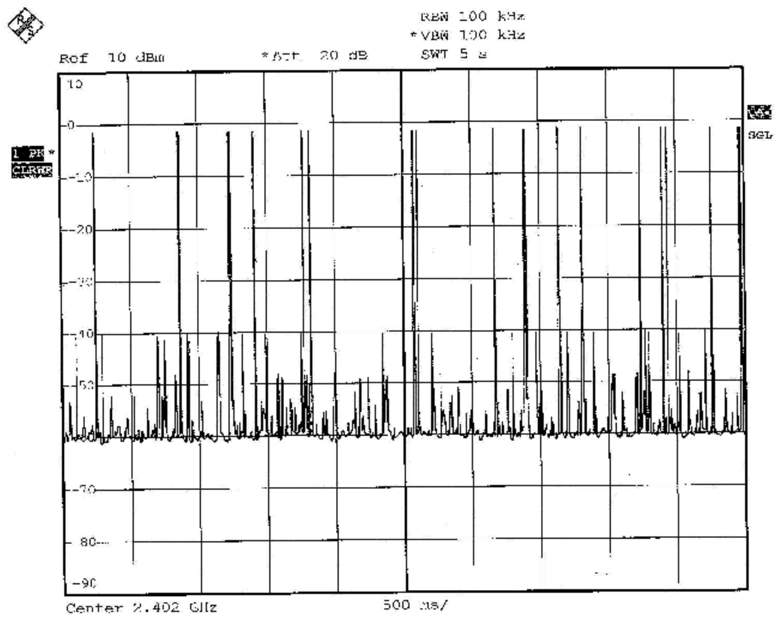

RBW 100 kHz
Delta 2 [T1]
*VBW 100 kHz
-7.45 dB
Ref 10 dBm
*Att 20 dB
SWT 3 ms
470.000000 µs
Marker 1 [T1]
896.000000 µs
Center 2.402 GHz
300 µs/

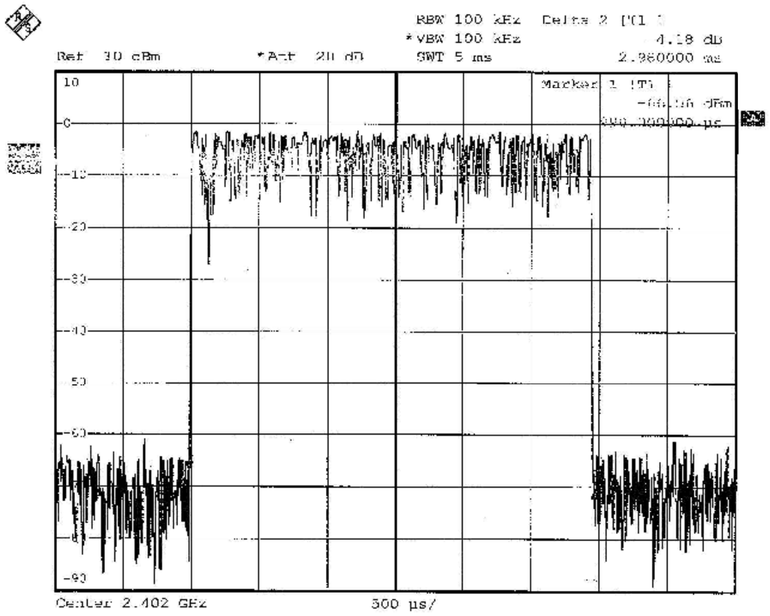
DH3


RBW 100 kHz
*VBW 100 kHz
Ref 10 dBm
*Att 20 dB
SWT 5 s
SGL
Center 2.402 GHz
500 ms/


RBW 100 kHz
*VBW 100 kHz
Ref 10 dBm
*Att 20 dB
SWT 3 ms
Marker 1 [T1]
Center 2.402 GHz
300 µs/

DH5


RBW 100 kHz
*VBW 100 kHz
Ref 10 dBm
*Att 20 dB
SWT 5 s
SGL
Center 2.402 GHz
500 ms/


RBW 100 kHz
Delta 2 [T1]
*VBW 100 kHz
4.18 dB
Ref 10 dBm
*Att 20 dB
SWT 5 ms
2.960000 ms
Marker 1 [T1]
Center 2.402 GHz
500 µs/

5.5 CHANNEL BANDWIDTH

5.5.1 LIMITS OF CHANNEL BANDWIDTH

For frequency hopping system operating in the 2400-2483.5MHz, If the 20dB bandwidth of hopping channel is greater than 25kHz, the 20dBbandwidth of hopping channel shell be a minimum limit for the hopping channel separation.

5.5.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
SPECTRUM ANALYZER	FSEK30	100049	Aug. 14, 2006

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

5.5.3 TEST PROCEDURE

a. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.

b. Turn on the EUT and connect it to measurement instrument. Then set it to any one convenient frequency within its operating range. Set a reference level on the measuring instrument equal to the highest peak value.

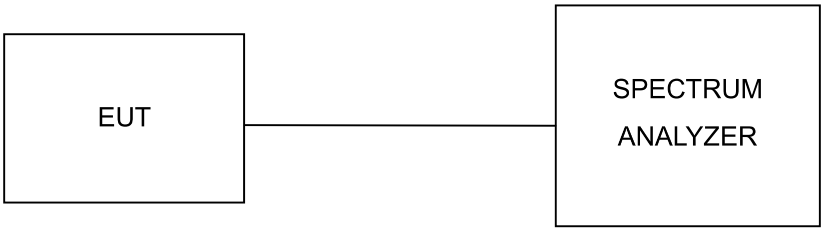
c. Measure the frequency difference of two frequencies that were attenuated 20dB from the reference level. Record the frequency difference as the emission bandwidth.

d. Repeat above procedures until all frequencies measured were complete.

5.5.4 DEVIATION FROM TEST STANDARD

No deviation.

5.5.5 TEST SETUP



5.5.6 EUT OPERATING CONDITION

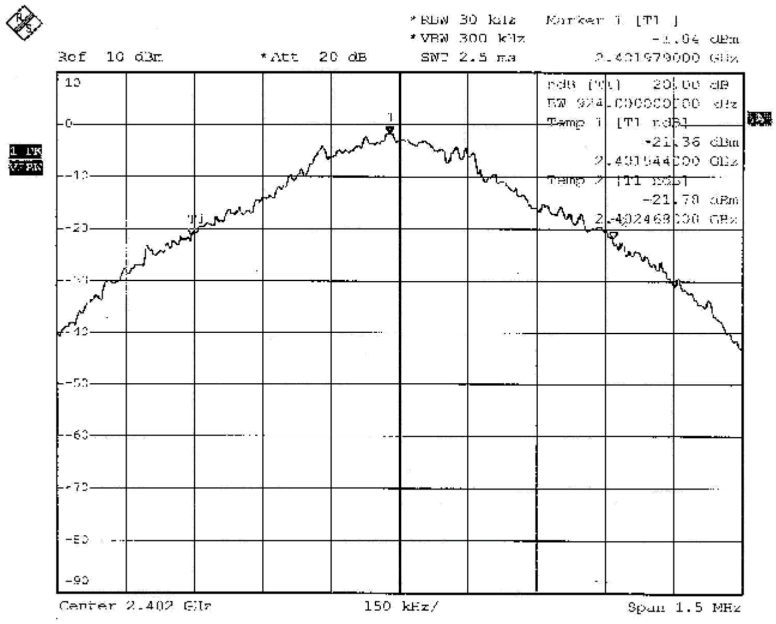
The software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel frequencies individually.

5.5.7 TEST RESULTS

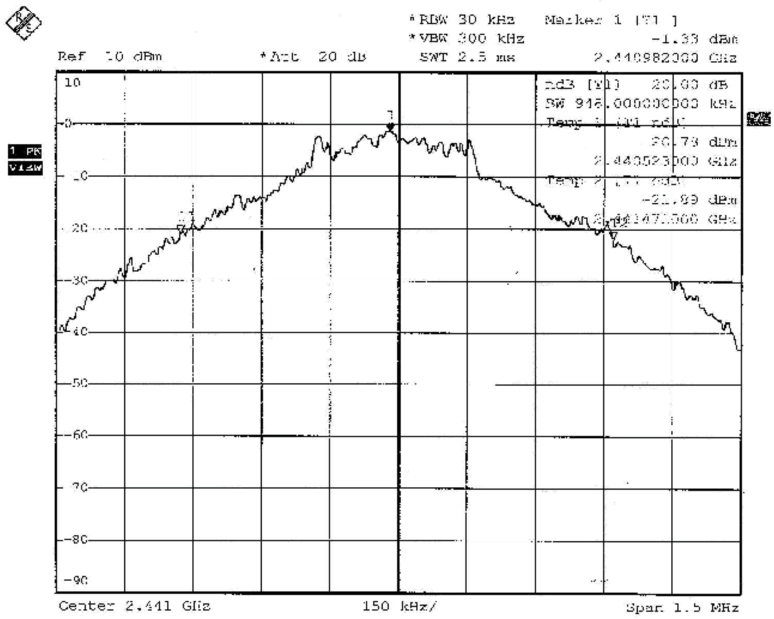
EUT	EDA (Enterprise Digital Assistant)	**MODEL**	MC7070
MODULATION TYPE	GFSK	**ENVIRONMENTAL CONDITIONS**	27deg. C, 63%RH, 991hPa
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**TESTED BY**	Long Chen

CHANNEL	CHANNEL FREQUENCY (MHz)	20dB BANDWIDTH (MHz)
0	2402	0.924
39	2441	0.948
78	2480	0.948

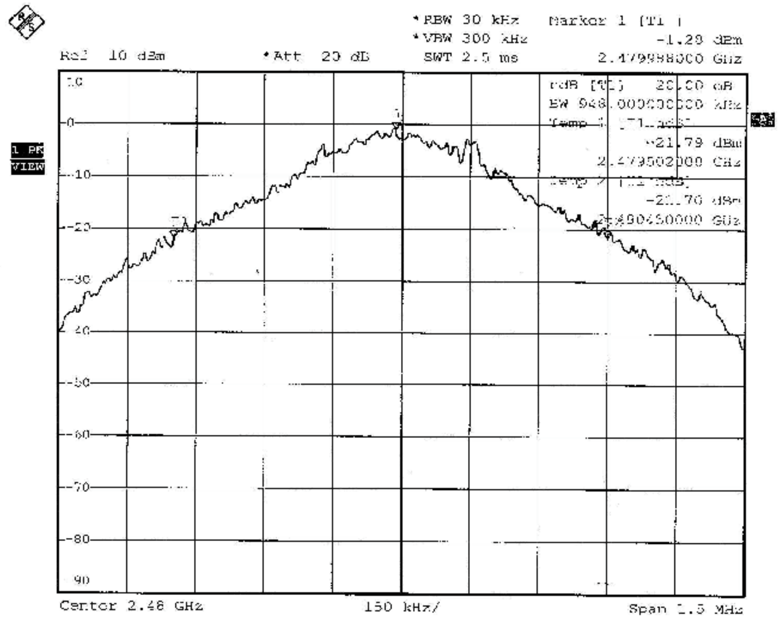
CH 0


*RBW 30 kHz
*VBW 300 kHz
SWT 2.5 ms
Marker 1 [T1]
-1.04 dBm
Ref 10 dBm
*Att 20 dB
ndB [T1] 20.00 dB
Temp 1 [T1 ndB]
-21.36 dBm
Temp 2 [T1 ndB]
-21.79 dBm
Center 2.402 GHz
150 kHz/
Span 1.5 MHz

CH 39


*RBW 30 kHz
*VBW 300 kHz
SWT 2.5 ms
Marker 1 [T1]
-1.33 dBm
2.440982000 GHz
Ref 10 dBm
*Att 20 dB
ndB [T1] 20.00 dB
BW 946.000000000 kHz
Temp 1 [T1 ndB]
Temp 2 [T1 ndB]
-21.89 dBm
Center 2.441 GHz
150 kHz/
Span 1.5 MHz

CH 78


RBW 30 kHz
VBW 300 kHz
SWT 2.5 ms
Marker 1 [T1]
-1.29 dBm
Ref 10 dBm
Att 20 dB
Center 2.48 GHz
150 kHz/
Span 1.5 MHz

5.6 HOPPING CHANNEL SEPARATION

5.6.1 LIMIT OF HOPPING CHANNEL SEPARATION

At least 25kHz or 20dB hopping channel bandwidth (whichever is greater).

5.6.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
SPECTRUM ANALYZER	FSEK30	100049	Aug. 14, 2006

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

5.6.3 TEST PROCEDURES

1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
2. Turn on the EUT and connect it to measurement instrument. Then set it to any one convenient frequency within its operating range.
3. By using the MaxHold function record the separation of two adjacent channels.
4. Measure the frequency difference of these two adjacent channels by SA MARK function. And then plot the result on SA screen.
5. Repeat above procedures until all frequencies measured were complete.

5.6.4 DEVIATION FROM TEST STANDARD

No deviation.

5.6.5 TEST SETUP

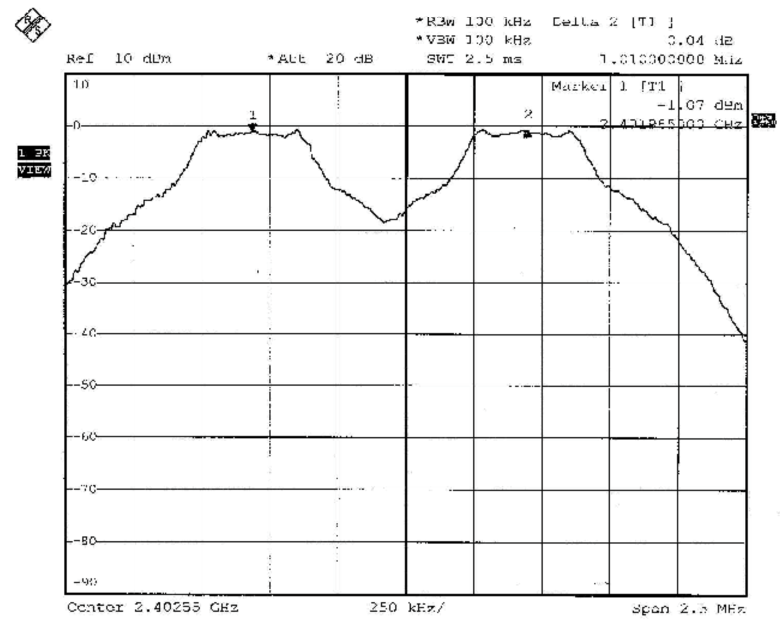
5.6.6 TEST RESULTS

EUT	EDA (Enterprise Digital Assistant)	**MODEL**	MC7070
MODULATION TYPE	GFSK	**ENVIRONMENTAL CONDITIONS**	27deg. C, 63%RH, 991hPa
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**TESTED BY**	Long Chen

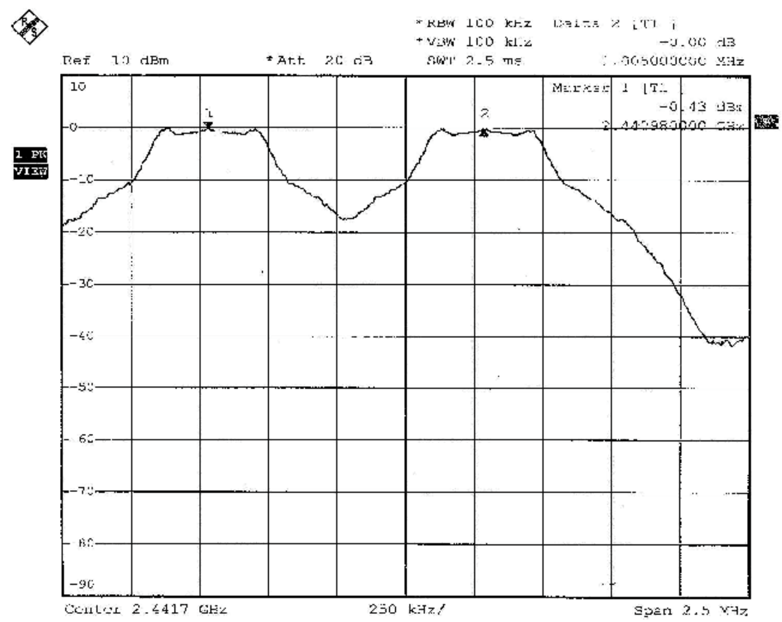
CHANNEL	FREQUENCY (MHz)	ADJACENT CHANNEL SEPARATION (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
0	2402	1.010	0.924	PASS
39	2441	1.005	0.948	PASS
78	2480	1.015	0.948	PASS

NOTE: The minimum limit is 20dB bandwidth. Test results please refer to next two pages.

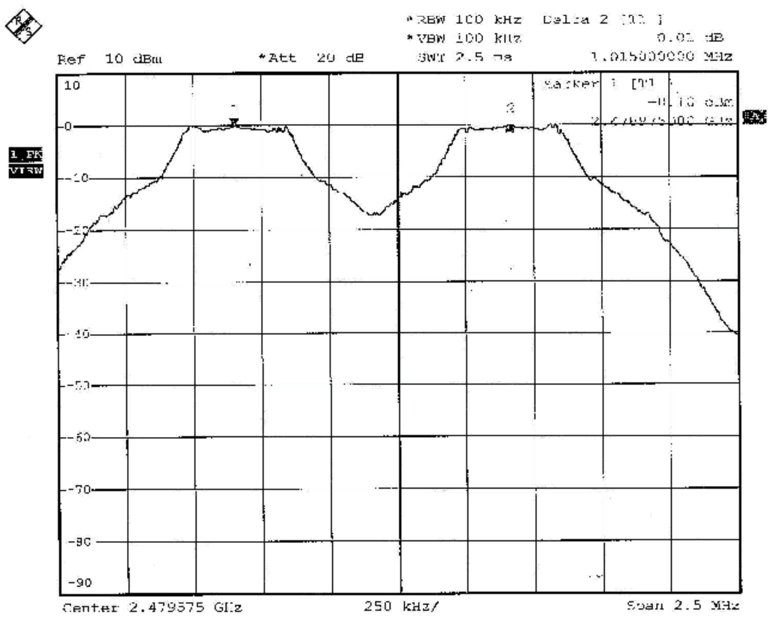
CH 0


*RBW 100 kHz
Delta 2 [T1]
*VBW 100 kHz
0.04 dB
Ref 10 dBm
*Att 20 dB
SWT 2.5 ms
Marker 1 [T1]
-1.07 dBm
Center 2.40255 GHz
250 kHz/
Span 2.5 MHz

CH 39


*RBW 100 kHz
Delta 2 [T1]
*VBW 100 kHz
Ref 10 dBm
*Att 20 dB
SWT 2.5 ms
Marker 1 [T1]
-0.43 dBm
Center 2.4417 GHz
250 kHz/
Span 2.5 MHz

CH 78


*RBW 100 kHz
Delta 2 [T1]
*VBW 100 kHz
0.01 dB
Ref 10 dBm
*Att 20 dB
SWT 2.5 ms
1.015000000 MHz
Marker 1 [T1]
1 PK
VIEW
10
0
-10
-30
-40
-50
-60
-70
-80
-90
Center 2.479575 GHz
250 kHz/
Span 2.5 MHz

5.7 MAXIMUM PEAK OUTPUT POWER

5.7.1 LIMITS OF MAXIMUM PEAK OUTPUT POWER MEASUREMENT

The Maximum Peak Output Power Measurement is 30dBm.

5.7.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
SPECTRUM ANALYEER	FSEK30	100049	Aug. 14, 2006

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

5.7.3 TEST PROCEDURES

a. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.

b. Turn on the EUT and connect it to measurement instrument. Then set it to any one convenient frequency within its operating range. Set a reference level on the measuring instrument equal to the highest peak value.

c. The center frequency of the spectrum analyzer is set to the fundamental frequency and using 1 MHz RBW and 3 MHz VBW.

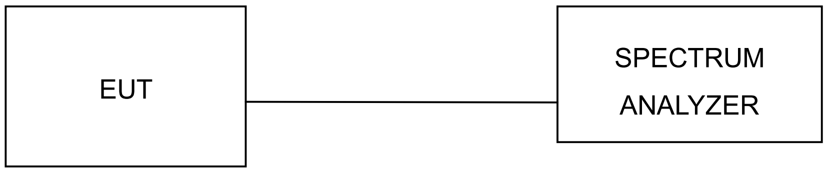
d. Measure the captured power within the band and recording the plot.

e. Repeat above procedures until all frequencies required were complete.

5.7.4 DEVIATION FROM TEST STANDARD

No deviation

5.7.5 TEST SETUP



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

5.7.6 EUT OPERATING CONDITION

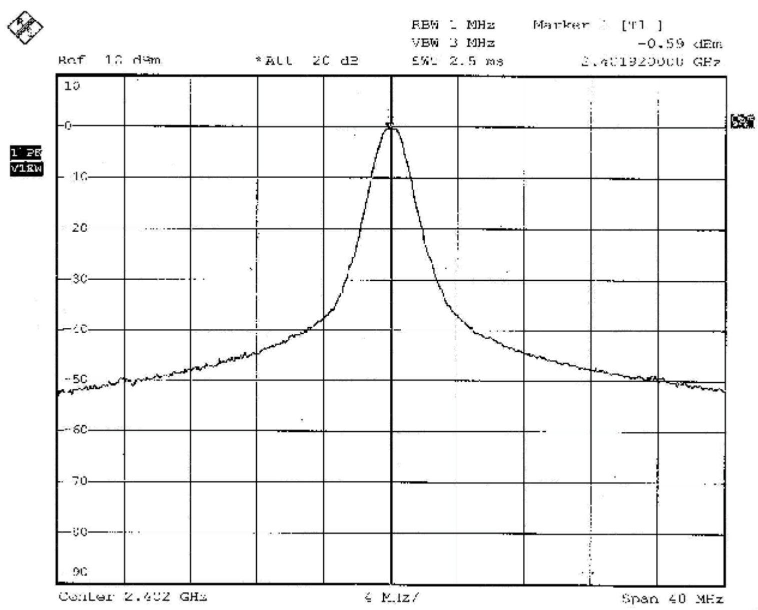
The software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel frequencies individually.

5.7.7 TEST RESULTS

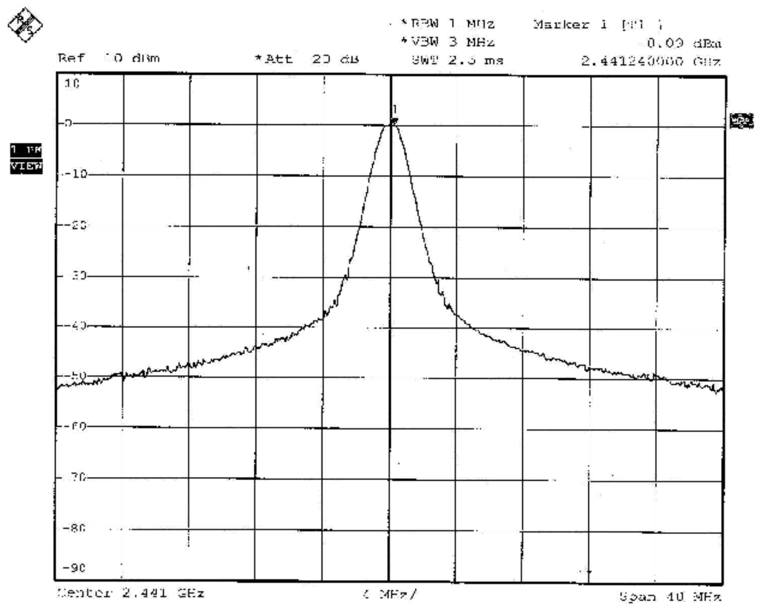
EUT	EDA (Enterprise Digital Assistant)	MODEL	MC7070
MODULATION TYPE	GFSK	ENVIRONMENTAL CONDITIONS	27deg. C, 63%RH, 991hPa
INPUT POWER (SYSTEM)	120Vac, 60 Hz	TESTED BY	Long Chen

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
0	2402	0.873	-0.59	30	PASS
39	2441	0.979	-0.09	30	PASS
78	2480	1.057	0.24	30	PASS

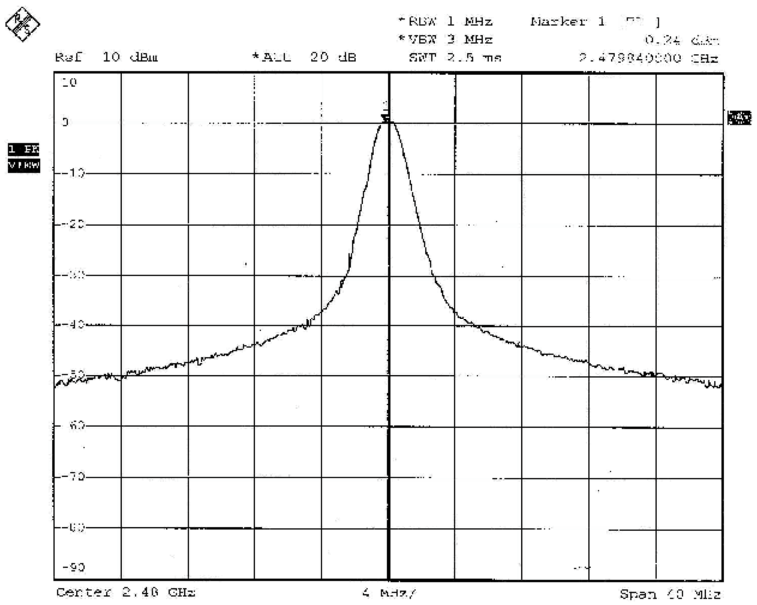
CH 0


RBW 1 MHz
VBW 3 MHz
-0.59 dBm
Center 2.402 GHz
Span 40 MHz

CH 39


*RBW 1 MHz
*VBW 3 MHz
Marker 1 [T1]
0.09 dBm
Ref 10 dBm
*Att 20 dB
2.441240000 GHz
Center 2.441 GHz
Span 40 MHz

CH 78


*RBW 1 MHz
Marker 1
*VBW 3 MHz
0.24 dBm
Ref 10 dBm
*ATT 20 dB
SWT 2.5 ms
2.479840000 GHz
Center 2.48 GHz
4 MHz/
Span 40 MHz

5.8 BAND EDGES MEASUREMENT

5.8.1 LIMITS OF BAND EDGES MEASUREMENT

Below –20dB of the highest emission level of operating band (in 100KHz RBW).

5.8.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
SPECTRUM ANALYZER	FSEK30	100049	Aug. 14, 2006

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

5.8.3 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.

5.8.4 DEVIATION FROM TEST STANDARD

No deviation.

5.8.5 EUT OPERATING CONDITION

The software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel frequencies individually.

5.8.6 TEST RESULTS

The spectrum plots are attached on the following 4 images. 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).

NOTE 1:

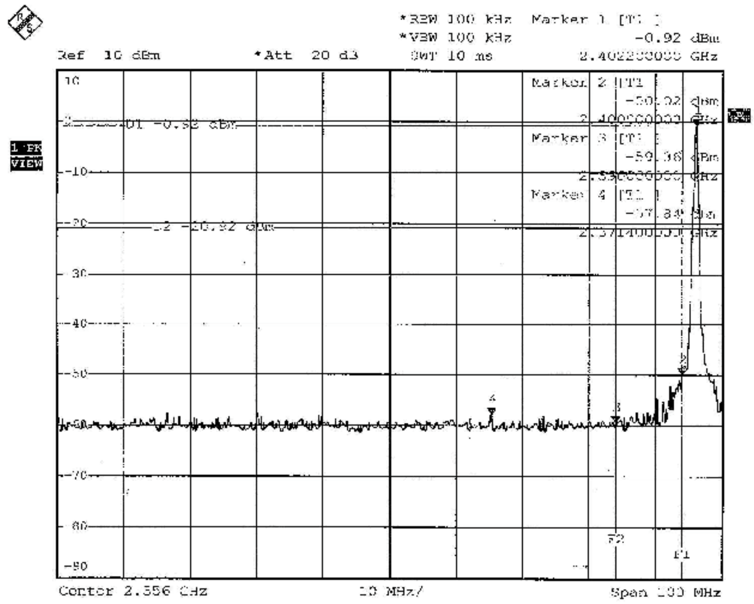
The band edge emission plot on page 124 shows 56.92dBc between carrier maximum power and local maximum emission in restrict band (2.3714GHz). The emission of carrier strength list in the test result of channel 0 at the item 6.2.7 is 91.97dBuV/m (Peak), so the maximum field strength in restrict band is 91.97-56.92=35.05dBuV/m, which is under 74 dBuV/m limit.

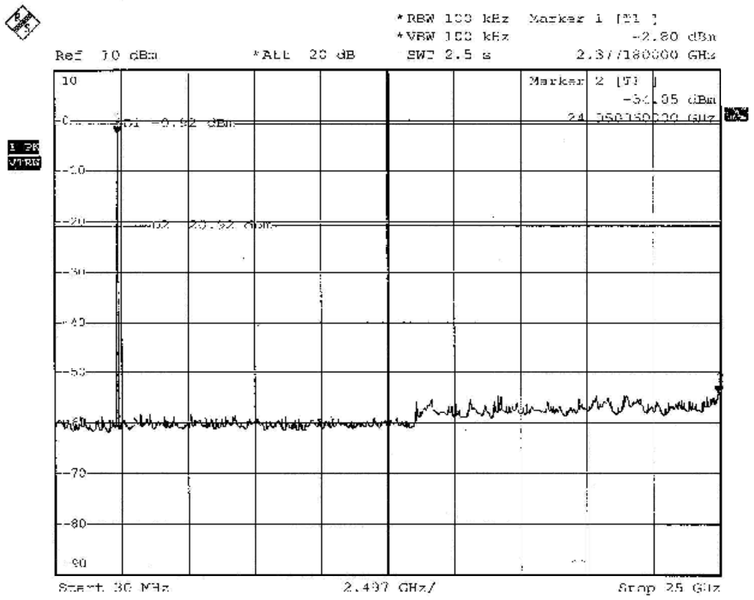
The band edge emission plot on page 124 shows 56.92dBc between carrier maximum power and local maximum emission in restrict band (2.3714GHz). The emission of carrier strength list in the test result of channel 0 at the item 6.2.7 is 61.97dBuV/m (Average), so the maximum field strength in restrict band is 61.97-56.92=5.05dBuV/m, which is under 54 dBuV/m limit.

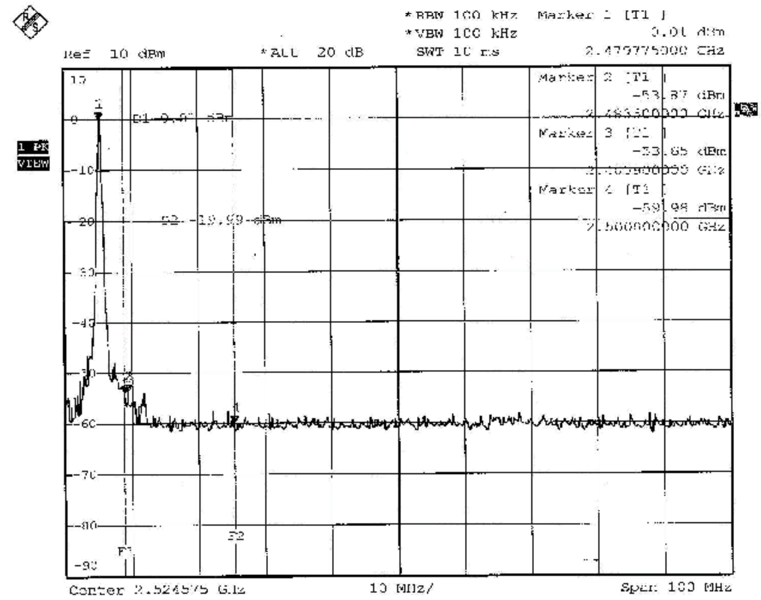
NOTE 2:

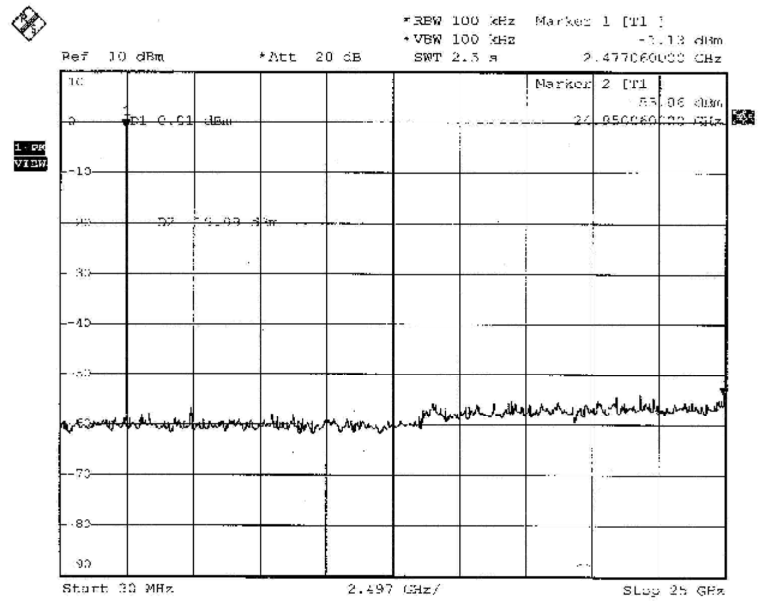
The band edge emission plot on page 125 shows 53.66dBc between carrier maximum power and local maximum emission in restrict band (2.4839GHz). The emission of carrier strength list in the test result of channel 78 at the item 6.2.7 is 93.42dBuV/m (Peak), so the maximum field strength in restrict band is 93.42-53.66=39.76dBuV/m, which is under 74 dBuV/m limit.

The band edge emission plot on page 125 shows 53.66dBc between carrier maximum power and local maximum emission in restrict band (2.4839GHz). The emission of carrier strength list in the test result of channel 78 at the item 6.2.7 is 63.42dBuV/m (Average), so the maximum field strength in restrict band is 63.42-53.66=9.76dBuV/m, which is under 54 dBuV/m limit.






*RBW 100 kHz
Marker 1 [T1]
*VBW 100 kHz
Ref 10 dBm
*Att 20 dB
SWT 10 ms
2.479775000 GHz
Marker 2 [T1]
-53.87 dBm
2.483500000 GHz
Marker 3 [T1]
-53.65 dBm
Marker 4 [T1]
-59.98 dBm
2.500000000 GHz
1 PK
VIEW
Center 2.524575 GHz
10 MHz/
Span 100 MHz


*RBW 100 kHz
Marker 1 [T1]
*VBW 100 kHz
Ref 10 dBm
*Att 20 dB
SWT 2.5 s
2.477060000 GHz
Marker 2 [T1]
-53.06 dBm
1 PK
VIEW
Start 30 MHz
2.497 GHz/
Stop 25 GHz

5.9 ANTENNA REQUIREMENT

5.9.1 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 (b), if transmitting antennas of directional gain greater than 6 dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

5.9.2 ANTENNA CONNECTED CONSTRUCTION

The antenna used in this product is Chip antenna without antenna connector. The maximum gain of this antenna is 2.0dBi.

6. 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.

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

Linko RF Lab.
Tel: 886-3-3270910
Fax: 886-3-3270892

Web Site: 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.