



Ecom Sertech Corp.

Rm. 258, Bldg. 17, NO.195, Sec. 4 Chung Hsing Rd., Chu Tung Chen, Hsinchu, Taiwan 310, R.O.C
TEL:886-3-5918012 FAX:886-3-5825720

Report No. : ER04-03-004CRF

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TEST REPORT

Product Name : Wireless 11g CardBus
Model Number : MS-6863
Brand Name : MSI
Marketing Name : CB54G3

Applicant : MICRO-STAR INT'L CO., LTD.
Address : No. 69, Li-De St, Jung-He City, Taipei Hsien 235, Taiwan

Received Date : Mar. 04, 2004
Tested Date : Mar. 04 ~ 15, 2004

Notes :

1. This report will be invalid if duplicated or photocopied in part.
2. This report refers only to the specimen(s) submitted to testing, and be invalid as seperately used.
3. This report is invalid without examination stamp and signature of this institute.
4. The tested specimen(s) will be preserved for thirty days from the data issued.





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Test Report Verification

Product Name : Wireless 11g CardBus

Model Number : MS-6863

Applicant : MICRO-STAR INT'L CO., LTD.


Measurement Standard :

- ETSI EN 301 489-17 V1.2.1 (2002)
- ETSI EN 301 489-01 V1.4.1 (2002)
- ETSI EN 300 328 V1.4.1 (2003)

Tested By : Alan Fan **Date** : Mar. 15, 2004
(Alan Fan)

Reviewed By : Roger Sheng **Date** : Mar. 15, 2004
(Roger Sheng)

Approved By : Chieh-De Tsai **Date** : Mar. 15, 2004
(Chieh-De Tsai, Manager)



WE HEREBY CERTIFY THAT: The measurements shown in the attachment were made in accordance with the procedures indicated, and the energy emitted by the equipment was found to be within the limits applicable. We assume full responsibility for the accuracy and completeness of these measurements and vouch for the qualifications of all persons taking them.



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1. TEST RESULT CERTIFICATION

Applicant : MICRO-STAR INT'L CO., LTD.
Address : No. 69, Li-De St, Jung-He City, Taipei Hsien 235, Taiwan
EUT Description : 2.4GHz Orthogonal Frequency Division Multiplex and Direct Sequence Spread Spectrum Transceiver for Wireless 11g CardBus
Model Number : MS-6863
Serial Number : N/A
Data Tested : Mar. 04~15, 2004

APPLICABLE STANDARDS	
STANDARD	TEST RESULT
ETSI EN 300 328	Complied

The above equipment was tested by E-COM for compliance with the requirements with the requirements set forth in the ETSI EN 300 328. The results of testing in this report apply to the product/system, which was tested only. Other similar equipment will not necessarily produce the same results due to production tolerance and measurement uncertainties.



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2. DESCRIPTION OF EQUIPMENT UNDER TEST (EUT)

MANUFACTURER : MICRO-STAR INT' L CO., LTD.
SAMPLE NAME : Wireless 11g CardBus
MODEL NAME : MS-6863
FREQUENCY CHANNEL : 2457MHz to 2472MHz for France
2412MHz to 2472MHz for other countries in EU
CHANNEL SPACING : 5MHz
CHANNEL NUMBER : 4 for France
13 for other countries in EU
AIR DATA RATE : 11Mbps(802.11b mode), 54Mbps (802.11g mode)
TYPE OF MODULATION : Direct Sequence Spread Spectrum and
Orthogonal Frequency Division Multiplex
FREQUENCY SELECTION : BY SOFTWARE
ANTENNA TYPE : Printed Antenna , Antenna Gain : 0dBi.
POWER SOURCE : 3.3VDC (From PC)
DATA APPLIES TO :
COMPANY : Draytek
PRODUCT NAME : Wireless 11g CardBus Adapter
MODEL NUMBER : Vigor 560-PM
ADDRESS : No. 26, Fu-Shing Road, HuKou County, Hsin-Chu
Industrial Park, Hsin-Chu, 303, Taiwan.



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3. DESCRIPTION OF TEST MODES

The EUT (Wireless 11g CardBus) has been tested under Operating and standby condition. Software used to control the EUT for staying in continuous transmitting and receiving mode is programmed. Channel 1, 7 and 10,13 with 6Mbps (or 11Mbps) highest data rate are chosen for testing.

4. GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT According to the Specifications, it must comply with the requirements of the following standards:

ETSI EN 300 328 V1.4.1 : 2003 – Electromagnetic compatibility and Radio spectrum Matters (ERM) ; wideband transmission systems; data transmission equipment operating in the 2.4GHz ISM band and using spread spectrum modulation techniques:

Harmonized EN covering essential requirements under article 3.2 of the R&TTE Directive.

5. DESCRIPTION OF TEST SITE

SITE DESCRIPTION : FCC Certificate NO. : 90585
BSMI Certificate NO. : SL2-IN-E-0002
NVLAP Lab code : 200118-0
CNLA Certificate NO. : CNLA-ZL97018
VCCI Certificate NO. : R-1189, C-1250
TÜV Certificate NO. : 10008375

NAME OF SITE : Ecom Sertech Corp. Hsinchu

(Spin-off from ITRI / ERSO on Apr. 01, 2003)

SITE LOCATION : Rm.258, Bldg.17, NO.195 , Sec. 4, Chung Hsing Rd.,
Chu-Tung Chen. Hsin-Chu, Taiwan 310 R.O.C.



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6. DESCRIPTION OF PERIPHERALS

(1) Notebook PC

MANUFACTURER : COMPAQ CORP.
MODEL NUMBER : N800V
SERIAL NUMBER : 5Y33KSQZM0W4 1YR
FCC : DOC
INPUT POWER : 18.5VDC,65W,3.5A
POWER CORD : Unshielded, Detachable, 1.8m

Adapter

MANUFACTURER : COMPAQ CORP.
MODEL NUMBER : PPP009H
SERIAL NUMBER : 2Y18650504
INPUT POWER : 100-240VAC 50/60Hz,1.6A
OUTPUT POWER : 18.5VDC, 65W, 3.5A

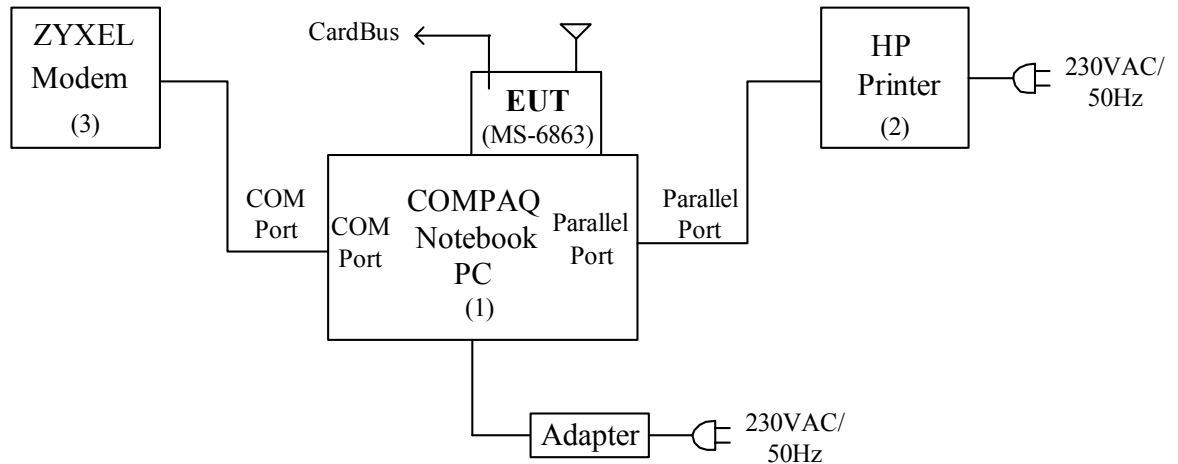
(2) Printer

MANUFACTURER : HP CORP.
MODEL NUMBER : C6431D
SERIAL NUMBER : CN19T6S011
F.C.C. ID : DOC
POWER SOURCE : 100-240VAC,50/60Hz,0.7A
SIGNAL CABLE : Shielded , Undetachable , 1.8m

(3) Modem

MANUFACTURER : ZyXEL Communications Corp.
MODEL NUMBER : Omni 56K
SERIAL NUMBER : S1Z4107729
F.C.C. ID : 1880MN156K
POWER SOURCE : 9VAC(From Power Adapter)
SIGNAL CABLE : Shielded , Undetachable , 1.8m

EUT & Peripherals Setup Diagram



The indicated numbers (1)(2).....,please refer to item 6

EUT Operating Procedure

1. Set up all computers like the setup diagram.
2. All of the function are under run.
3. The INPROCOMM RF Test Utility software was used for testing.

(1) Configuration:

- ⇒ Tx Rate:11Mbps (802.11b Mode) 6Mbps (802.11g Mode)
- ⇒ Tx Power(hex) :802.11b Mode Channel 1 (2412MHz) = 88 ⇒ Set to BB
 802.11b Mode Channel 7 (2442MHz) = 88 ⇒ Set to BB
 802.11b Mode Channel 10 (2457MHz) = 89 ⇒ Set to BB
 802.11b Mode Channel 13 (2472MHz) = 8a ⇒ Set to BB
- Tx Power(hex) :802.11g Mode Channel 1 (2412MHz) = 9a ⇒ Set to BB
 802.11g Mode Channel 7 (2442MHz) = 9a ⇒ Set to BB
 802.11g Mode Channel 10 (2457MHz) = 9b ⇒ Set to BB
 802.11g Mode Channel 13 (2472MHz) = 9c ⇒ Set to BB

(2) Commands:

- ⇒ Tx Output Power (Continuous TX Mode)
- ⇒ Continuous Packet RX (Continuous RX Mode)

4. Start test.

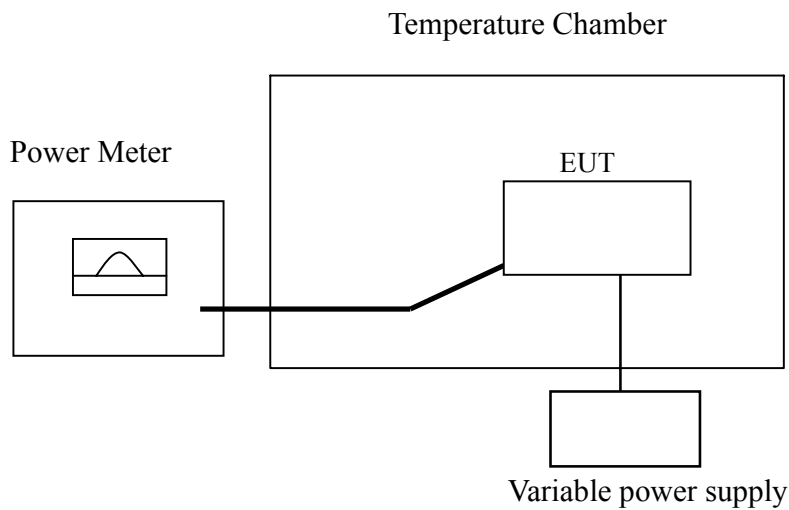
7. ETSI EN 300 328 SUBCLAUSE 4.3.1 EFFECTIVE RADIATED POWER

ETSI EN 300 328 Sub clause 4.3.1.2 : the effective radiated average power shall be equal to or less than 20dBm E.I.R.P, the effective radiated peak power shall be equal or less than 23dBm e.i.r.p.

Measurement Equipment Used:

Manufacturer or Type	Model No	Serial No	Date of Calibration	Calibration Period	Remark
OPEN SITE	-----	No.2	MAY. 09, 2003	1 Year	FINAL
GIGA-TRONICS POWER METER	8542	1828329	SEP. 21, 2003	1 Year	FINAL
TABI TEMP & THUMID CHAMBER	PDL-4F	5104285	JUL. 21, 2003	1 Year	FINAL

Test Setup:



Test Procedure:

See the standard for test conductions and please refer to subclause 5.7.2 for the radiated measurement method.



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Test results:

Ambient temperature: 18 °C **Relative humidity:** 65 %

TRANSMITTER E.I.R.P.

CLAUSE 4.3.1.2

Antenna assembly gain: 0dBi, test cable loss =1.5dB

Transmitter power = Power meter reading + Antenna assembly gain + Cable loss

TEST CONDITIONS		TRANSMITTER POWER (dBm, e.i.r.p)							
		(CH1) 2412MHz		(CH7) 2442MHz		(CH10) 2457MHz		(CH13) 2472MHz	
		PK	AVG	PK	AVG	PK	AVG	PK	AVG
$T_{nom} (25) ^\circ C$	$V_{nom} (230) V$	17.95	16.08	18.28	16.53	18.05	16.32	17.57	15.88
$T_{min} (0) ^\circ C$	$V_{min} (203) V$	21.05	19.28	21.24	19.53	21.30	19.44	20.61	19.08
	$V_{max} (253) V$	21.01	19.37	21.36	19.51	21.33	19.52	20.74	19.03
$T_{max} (50) ^\circ C$	$V_{min} (203) V$	17.10	15.24	17.48	15.56	17.53	15.60	17.30	15.28
	$V_{max} (253) V$	17.31	15.22	17.58	15.62	17.66	15.57	17.43	15.34
Measurement uncertainty		+1.28dB / -1.30dB							

Note : 802.11b mode Transmitting test.



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Test results:

Ambient temperature: 18 °C Relative humidity: 65 %

TRANSMITTER E.I.R.P.

CLAUSE 4.3.1.2

Antenna assembly gain: 0dBi, test cable loss =1.5dB

Transmitter power = Power meter reading + Antenna assembly gain + Cable loss

TEST CONDITIONS		TRANSMITTER POWER (dBm, e.i.r.p)							
		(CH1) 2412MHz		(CH7) 2442MHz		(CH10) 2457MHz		(CH13) 2472MHz	
		PK	AVG	PK	AVG	PK	AVG	PK	AVG
$T_{nom} (25) ^\circ C$	$V_{nom} (230) V$	17.38	15.55	17.26	15.53	17.31	15.48	17.14	15.23
$T_{min} (0) ^\circ C$	$V_{min} (203) V$	20.52	18.63	20.51	18.61	20.47	18.58	20.30	18.23
	$V_{max} (253) V$	20.54	18.62	20.57	18.62	20.50	18.53	20.36	18.30
$T_{max} (50) ^\circ C$	$V_{min} (203) V$	17.39	15.35	17.44	15.39	17.42	15.23	16.82	14.98
	$V_{max} (253) V$	17.46	15.40	17.41	15.32	17.33	15.30	16.76	14.87
Measurement uncertainty		+1.28dB / -1.30dB							

Note : 802.11g mode Transmitting test.



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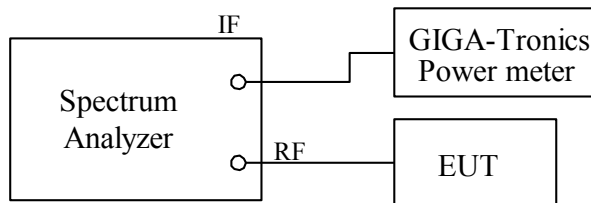
8. ETSI EN 300 328 SUBCLAUSE 4.3.2 MAXIMUM SPECTRAL POWER DENSITY

ETSI EN 300 328 Sub clause 4.3.2.2 limits: the peak power shall be limited to -20dBw (10mW) per MHz e.i.r.p.

Measurement equipment used:

Manufacturer or Type	Model No	Serial No	Date of Calibration	Calibration Period	Remark
HP SPECTRUM ANALYZER	8595E	3829EU01362	APR. 03, 2003	1 Year	FINAL
GIGA-TRONICS POWER METER	8542	1828329	SEP. 21, 2003	1 Year	FINAL

Test Setup:



Test Procedure:

See the standard for test conduction and please refer to clause 5.7.3 for the conducted measurement methods.



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Test results:

Ambient temperature: 18 °C Relative humidity: 65 %

MAXIMUM SPECTRAL POWER DENSITY - DSSS modulation CLAUSE 4.3.2

Antenna assembly gain: 0dBi, cable loss = 1.5dB

Maximum Spectral Power Density = Spectrum reading + Antenna assembly gain + Cable loss

TESTS	Maximum Spectral Power Density			
	(CH1) 2412MHz	(CH7) 2442MHz	(CH10) 2457MHz	(CH13) 2472MHz
Measured power density (dBm/KHz, e.i.r.p)	7.26/1000	7.96/1000	7.93/1000	7.63/1000
LIMIT (dBm/KHz, e.i.r.p)	10/1000			
PASS/FAIL	PASS			
Measurement uncertainty	+1.5dB / -1.4dB			

Note : 802.11b mode Transmitting test



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Test results:

Ambient temperature: 18 °C Relative humidity: 65 %

MAXIMUM SPECTRAL POWER DENSITY - OFDM modulation CLAUSE 4.3.2

Antenna assembly gain: 0dBi, cable loss = 1.5dB

Maximum Spectral Power Density = Spectrum reading + Antenna assembly gain + Cable loss

TESTS	Maximum Spectral Power Density			
	(CH1) 2412MHz	(CH7) 2442MHz	(CH10) 2457MHz	(CH13) 2472MHz
Measured power density (dBm/KHz, e.i.r.p)	4.87/1000	5.78/1000	5.19/1000	5.28/1000
LIMIT (dBm/KHz, e.i.r.p)	10/1000			
PASS/FAIL	PASS			
Measurement uncertainty	+1.5dB / -1.4dB			

Note : 802.11g mode Transmitting test

9. ETSI EN 300 328 SUBCLAUSE 4.3.3 FREQUENCY RANGE

ETSI EN 300 328 Subclause 4.3.3.2 limit:

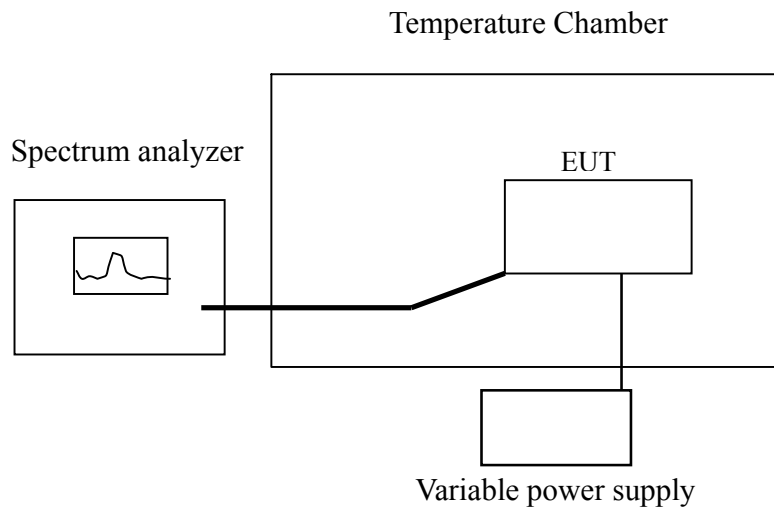
All equipment the frequency range shall lie within the band 2.4GHz to 2.4835GHz
 ($f_L > 2.4\text{GHz}$ and $f_H < 2.4835\text{GHz}$).

For the France, the frequency range only lie within the band from 2.4465GHz to 2.4835GHz.

Measurement equipment used:

Manufacturer or Type	Model No	Serial No	Date of Calibration	Calibration Period	Remark
HP SPECTRUM ANALYZER	8595E	3829EU01362	APR. 03, 2003	1 Year	FINAL

Test Setup:



Test Procedure:

See the standard for test conditions and please refer to subclauses 5.7.4 for the measurement methods.

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Page 16 of 49**Test results: (For other EU countries)**

Mode	Channel 1 and 13	Test By	Alan Fan
Environmental Conditions	18°C, 65%RH		

TRANSMITTER FREQUENCY RANGE - DSSS modulation**CLAUSE 4.3.3.2**

TEST CONDITIONS		FREQUENCY (MHz) at which -80 dBm/Hz occurs	
		lowest	Highest
T_{nom} (25)⁰C	V_{nom} (230)V	2402.38	2481.75
T_{min} (0)⁰C	V_{min} (207)V	2402.38	2481.88
	V_{max} (253)V	2402.25	2481.75
T_{max} (50)⁰C	V_{min} (207)V	2402.58	2481.17
	V_{max} (253)V	2402.58	2481.17
Measured frequencies (lowest and highest)		f _L = 2402.25 MHz f _H = 2481.88 MHz	
Measurement uncertainty		+/- 120kHz	

Note : 802.11b mode Transmitting test



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Test results: (For France)

Mode	Channel 10 and 13	Test By	Alan Fan
Environmental Conditions	18°C, 65%RH		

TRANSMITTER FREQUENCY RANGE - DSSS modulation **CLAUSE 4.3.3.2**

TEST CONDITIONS		FREQUENCY (MHz) at which -80 dBm/Hz occurs	
		lowest	Highest
T_{nom} (25)⁰C	V_{nom} (230)V	2447.38	2481.75
T_{min} (0)⁰C	V_{min} (207)V	2447.25	2481.88
	V_{max} (253)V	2447.25	2481.75
T_{max} (50)⁰C	V_{min} (207)V	2447.58	2481.17
	V_{max} (253)V	2447.58	2481.17
Measured frequencies (lowest and highest)		f _L = 2447.25 MHz f _H = 2481.88 MHz	
Measurement uncertainty		+/- 120kHz	

Note : 802.11b mode Transmitting test



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Test results: (For other EU countries)

Mode	Channel 1 and 13	Test By	Alan Fan
Environmental Conditions	18°C, 65%RH		

TRANSMITTER FREQUENCY RANGE - OFDM modulation **CLAUSE 4.3.3.2**

TEST CONDITIONS		FREQUENCY (MHz) at which -80 dBm/Hz occurs	
		lowest	Highest
$T_{nom} (25)^{\circ}C$	$V_{nom} (230)V$	2402.25	2482.00
$T_{min} (0)^{\circ}C$	$V_{min} (207)V$	2400.88	2482.88
	$V_{max} (253)V$	2400.88	2483.00
$T_{max} (50)^{\circ}C$	$V_{min} (207)V$	2402.83	2481.00
	$V_{max} (253)V$	2402.83	2480.88
Measured frequencies (lowest and highest)		$f_L = 2400.88$ MHz	$f_H = 2483.00$ MHz
Measurement uncertainty		+/- 120kHz	

Note : 802.11g mode Transmitting test



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Test results: (For France)

Mode	Channel 10 and 13	Test By	Alan Fan
Environmental Conditions	18°C, 65%RH		

TRANSMITTER FREQUENCY RANGE - OFDM modulation **CLAUSE 4.3.3.2**

TEST CONDITIONS		FREQUENCY (MHz) at which -80 dBm/Hz occurs	
		lowest	Highest
T_{nom} (25)⁰C	V_{nom} (230)V	2446.88	2482.00
T_{min} (0)⁰C	V_{min} (207)V	2446.73	2482.88
	V_{max} (253)V	2446.73	2483.00
T_{max} (50)⁰C	V_{min} (207)V	2447.83	2481.00
	V_{max} (253)V	2447.83	2480.88
Measured frequencies (lowest and highest)		f _L = 2446.73 MHz f _H = 2483.00 MHz	
Measurement uncertainty		+/- 120kHz	

Note : 802.11g mode Transmitting test



10. ETSI EN 300 328 SUBCLAUSE 4.3.4 TRANSMITTER SPURIOUS EMISSIONS

ETSI EN 300 328 Subclause 4.3.4.2 limits:

The spurious emissions of the transmitter shall not exceed the values in tables 2 and 3 in the indicated bands.

Table 2: Transmitter limits for Narrowband Spurious emissions

Frequency Range	Limit when operating	Limit when in standby
30MHz to 1 GHz	-36 dBm	-57 dBm
above 1 GHz to 12.75 GHz	-30 dBm	-47 dBm
1.8 GHz to 1.9 GHz 5.15 GHz to 5.3 GHz	-47 dBm	-47 dBm

Table 3: Transmitter limits for Wideband Spurious emissions

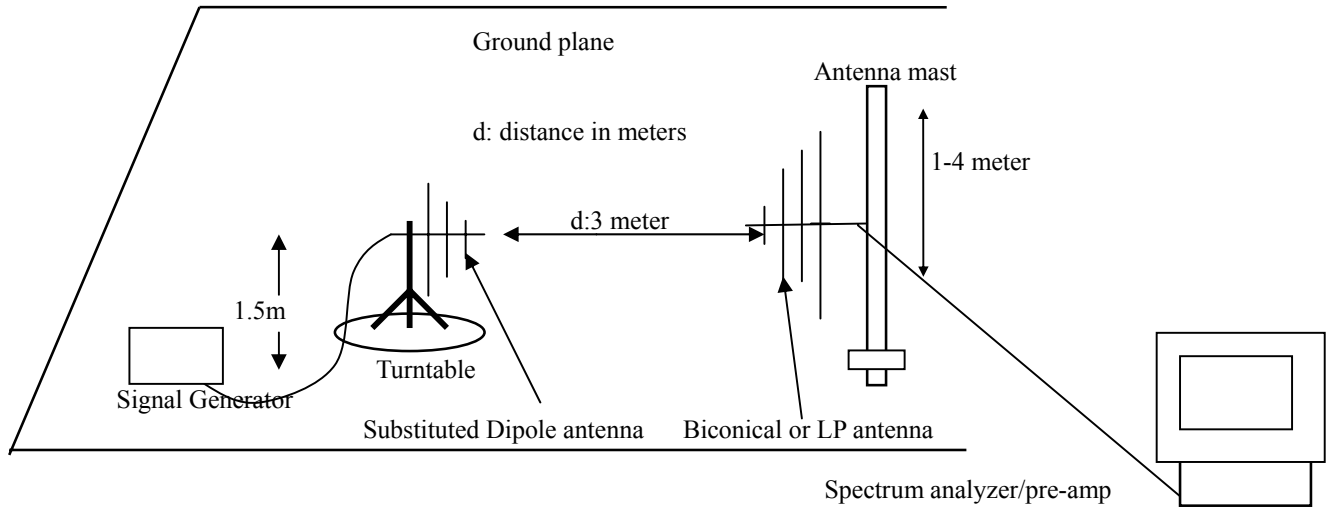
Frequency Range	Limit when operating	Limit when in standby
30MHz to 1 GHz	-86 dBm/Hz	-107 dBm/Hz
above 1 GHz to 12.75 GHz	-80 dBm/Hz	-97 dBm/Hz
1.8 GHz to 1.9 GHz 5.15 GHz to 5.3 GHz	-97 dBm/Hz	-97 dBm/Hz

Measurement Equipment Used:

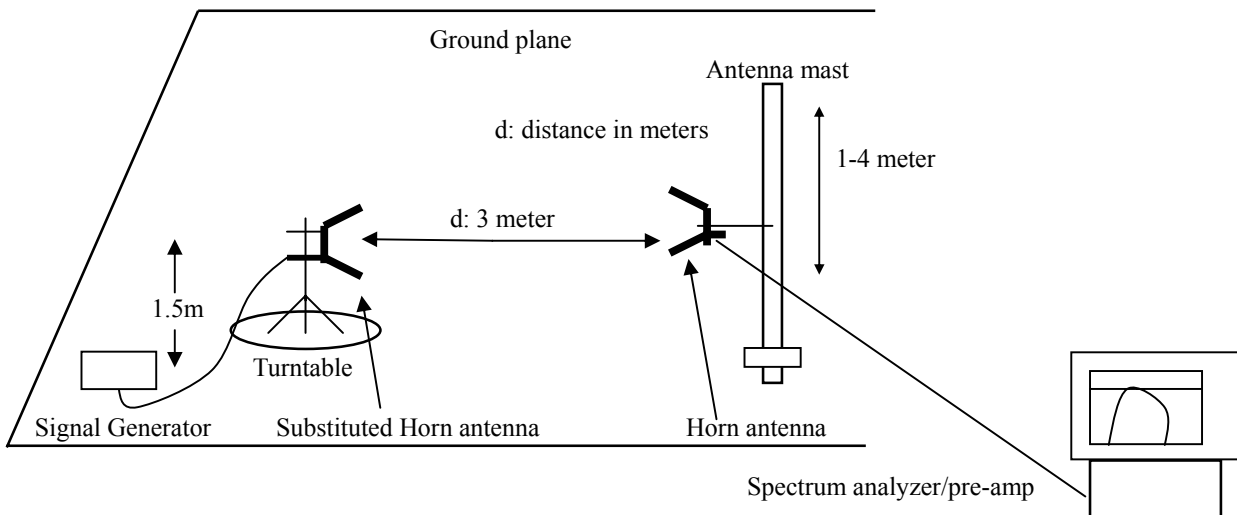
Manufacturer or Type	Model No	Serial No	Date of Calibration	Calibration Period	Remark
CHASE BI-LOG ANTENNA	CBL6112B	2421	MAY. 07, 2003	1 Year	FINAL
ROHDE & SCHWARZ SPECTRUM ANALYZER	FSEK30	835253/002	JUN. 17, 2003	1 Year	FINAL
OPEN SITE	-----	No.2	MAY. 09, 2003	1 Year	FINAL
N TYPE COAXIAL CABLE	CHA9525	4	JUL. 13, 2003	1 Year	FINAL
Horn Antenna	AH-118	10089	FEB. 25, 2004	1 Year	FINAL
HP Pre-amplifier	8449B	3008A01471	OCT. 11, 2003	1 Year	FINAL
High pass filter	84300/80038	011	CAL. ON USE	1 Year	FINAL
Horn Antenna	AH-840	03077	FEB. 25, 2004	1 Year	FINAL

Test Setup:

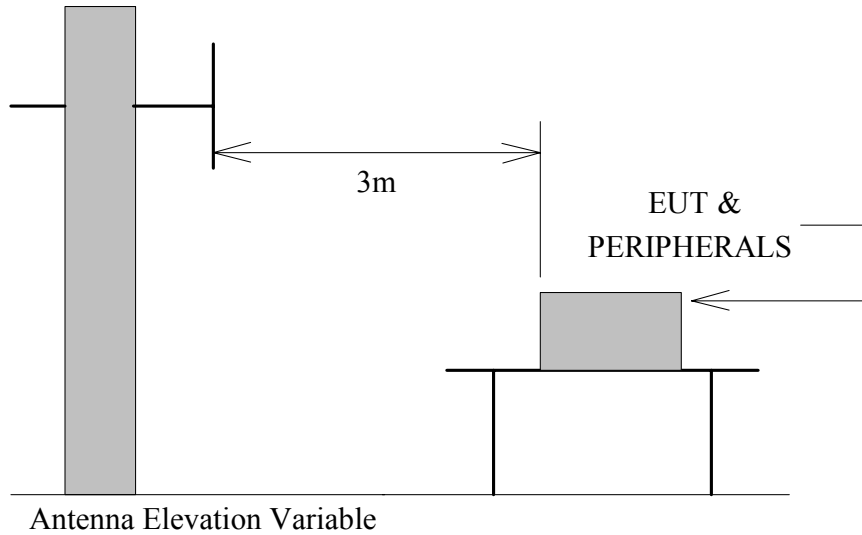
Substitution Measurement setup below 1GHz



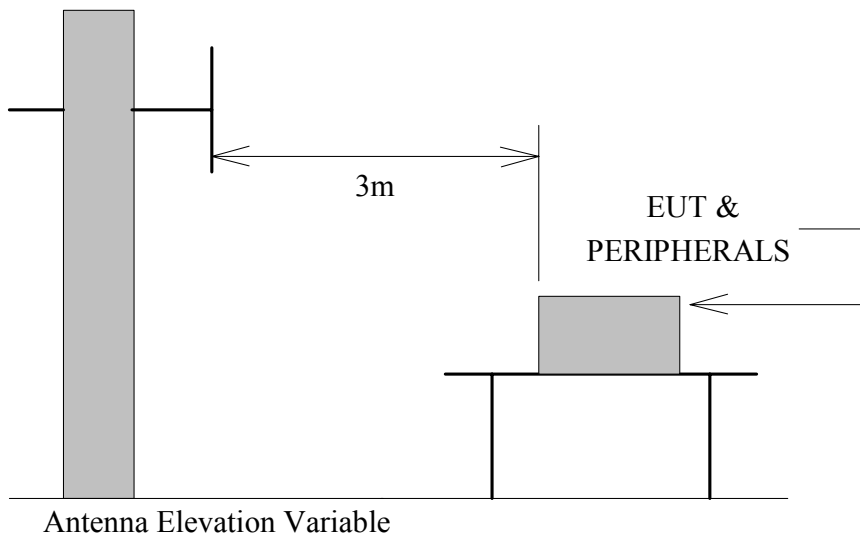
Substitution Measurement setup above 1GHz



Radiated Emission Measurement below 1GHz



Radiated Emission Measurement above 1GHz



Test Procedure:

See the standard for test conditions and please refer to subclause 5.7.5 for the radiated measurement methods.

Uncertainty :

The measurement uncertainty of the test is $\pm 2.72\text{dB}$



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Test results:

Transmitter Spurious Emissions (Radiated)

CLAUSE 4.3.4.2

Frequency Range	30MHz~1GHz	Mode	CH1
Environmental Conditions	21°C, 73%RH	Test By	Alan Fan

Frequency (MHz)	Antenna Polarization	Level E.R.P. (dBm)	Limit (dBm)	Margin (dB)
30.00	H	---	-36	---
200.24	H	-58.78	-36	-22.78
241.23	H	-60.46	-36	-24.46
215.72	H	-67.71	-36	-31.71
301.22	H	-65.30	-36	-29.30
350.96	H	-62.79	-36	-26.79
400.88	H	-70.52	-36	-34.52
451.21	H	-68.61	-36	-32.61
1000.00	H	---	-36	---

Note: 1. The emission behavior belongs to narrowband spurious emission.

2. According to technical experiences, all spurious emissions at channel 1,7,10 and 13 are almost the same below 1GHz, so that the channel 1 was chosen as representative for the test.

3. 802.11b mode Transmitting test.



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Transmitter Spurious Emissions (Radiated) CLAUSE 4.3.4.2

Frequency Range	30MHz~1GHz	Mode	CH1
Environmental Conditions	21°C, 73%RH	Test By	Alan Fan

Frequency (MHz)	Antenna Polarization	Level E.R.P. (dBm)	Limit (dBm)	Margin (dB)
30.00	V	---	-36	---
200.24	V	-55.22	-36	-19.22
241.23	V	-60.37	-36	-24.37
215.72	V	-62.54	-36	-26.54
301.22	V	-60.49	-36	-24.49
350.96	V	-60.32	-36	-24.32
400.88	V	-63.82	-36	-27.82
451.21	V	-61.24	-36	-25.24
1000.00	V	---	-36	---

- Note: 1. The emission behavior belongs to narrowband spurious emission.
2. According to technical experiences, all spurious emissions at channel 1,7,10 and 13 are almost the same below 1GHz, so that the channel 1 was chosen as representative for the test.
3. 802.11b mode Transmitting test.



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Transmitter Spurious Emissions (Radiated)

CLAUSE 4.3.4.2

Frequency Range	30MHz~1GHz	Mode	CH1
Environmental Conditions	21.5°C, 64%RH	Test By	Alan Fan

Frequency (MHz)	Antenna Polarization	Level E.R.P. (dBm)	Limit (dBm)	Margin (dB)
30.00	H	---	-36	---
200.24	H	-59.46	-36	-23.46
241.23	H	-61.33	-36	-25.33
215.72	H	-67.07	-36	-31.07
301.22	H	-64.86	-36	-28.86
350.96	H	-63.16	-36	-27.16
400.88	H	-72.34	-36	-36.34
451.21	H	-69.58	-36	-33.58
1000.00	H	---	-36	---

Note: 1. The emission behavior belongs to narrowband spurious emission.

2. According to technical experiences, all spurious emissions at channel 1,7,10 and 13 are almost the same below 1GHz, so that the channel 1 was chosen as representative for the test.

3. 802.11g mode Transmitting test.



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Transmitter Spurious Emissions (Radiated) CLAUSE 4.3.4.2

Frequency Range	30MHz~1GHz	Mode	CH1
Environmental Conditions	21.5°C, 64%RH	Test By	Alan Fan

Frequency (MHz)	Antenna Polarization	Level E.R.P. (dBm)	Limit (dBm)	Margin (dB)
30.00	V	---	-36	---
200.24	V	-52.61	-36	-16.61
241.23	V	-59.89	-36	-23.89
215.72	V	-63.26	-36	-27.26
301.22	V	-62.13	-36	-26.13
350.96	V	-60.58	-36	-24.58
400.88	V	-64.25	-36	-28.25
451.21	V	-61.93	-36	-25.93
1000.00	V	---	-36	---

Note: 1. The emission behavior belongs to narrowband spurious emission.

2. According to technical experiences, all spurious emissions at channel 1,7,10 and 13 are almost the same below 1GHz, so that the channel 1 was chosen as representative for the test.

3. 802.11g mode Transmitting test.



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Transmitter Spurious Emissions (Radiated) CLAUSE 4.3.4.2

Frequency Range	ABOVE 1GHz	Mode	CH1,7,10,13
Environmental Conditions	17.5°C, 66 %RH	Test By	Alan Fan

Frequency (MHz)	Antenna Polarization	Level E.R.P. (dBm)	Limit (dBm)	Margin (dB)	Channel
1000.00	H	---	-30	---	CH1
2412.80	H	-46.89	-30	-16.89	CH1
4823.29	H	-60.97	-30	-30.97	CH1
7235.14	H	-61.73	-30	-31.73	CH1
9648.00	H	-63.59	-30	-33.59	CH1
12750.00	H	---	-30	---	CH1
1000.00	H	---	-30	---	CH7
2445.35	H	-46.48	-30	-16.48	CH7
4883.89	H	-65.45	-30	-35.45	CH7
7326.75	H	-60.15	-30	-30.15	CH7
9767.94	H	-59.57	-30	-29.57	CH7
12750.00	H	---	-30	---	CH7
1000.00	H	---	-30	---	CH10
2458.88	H	-40.46	-30	-10.46	CH10
4913.89	H	-66.34	-30	-36.34	CH10
7371.39	H	-62.67	-30	-32.67	CH10
9827.93	H	-62.34	-30	-32.34	CH10
12750.00	H	---	-30	---	CH10
1000.00	H	---	-30	---	CH13
2471.19	H	-38.67	-30	-8.67	CH13
4944.00	H	-63.66	-30	-33.66	CH13
7416.30	H	-63.05	-30	-33.05	CH13
9887.93	H	-61.20	-30	-31.20	CH13
12750.00	H	---	-30	---	CH13

- Note: 1. The emission behavior belongs to narrowband spurious emission.
 2. The frequency is searched to 12.75GHz.
 3. If the emission level is too low to be measured, it is not reported,
 "----" means that the emissions level is too low to be measured.
 4. Wireless 802.11b mode Transmitting test.



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Transmitter Spurious Emissions (Radiated) CLAUSE 4.3.4.2

Frequency Range	ABOVE 1GHz	Mode	CH1,7,10,13
Environmental Conditions	17.5°C, 66 %RH	Test By	Alan Fan

Frequency (MHz)	Antenna Polarization	Level E.R.P. (dBm)	Limit (dBm)	Margin (dB)	Channel
1000.00	V	---	-30	---	CH1
2412.87	V	-71.77	-30	-41.77	CH1
4824.05	V	-59.57	-30	-29.57	CH1
7235.94	V	-58.06	-30	-28.06	CH1
9648.00	V	-64.02	-30	-34.02	CH1
12750.00	V	---	-30	---	CH1
1000.00	V	---	-30	---	CH7
2443.72	V	-71.28	-30	-41.28	CH7
4884.05	V	-58.95	-30	-28.95	CH7
7326.70	V	-58.88	-30	-28.88	CH7
9767.94	V	-61.70	-30	-31.70	CH7
12750.00	V	---	-30	---	CH7
1000.00	V	---	-30	---	CH10
2459.04	V	-65.55	-30	-35.55	CH10
4914.00	V	-61.37	-30	-31.37	CH10
7371.23	V	-62.00	-30	-32.00	CH10
9827.94	V	-64.49	-30	-34.49	CH10
12750.00	V	---	-30	---	CH10
1000.00	V	---	-30	---	CH13
2471.02	V	-64.52	-30	-34.52	CH13
4944.00	V	-61.74	-30	-31.74	CH13
7418.49	V	-60.75	-30	-30.75	CH13
9887.94	V	-61.76	-30	-31.76	CH13
12750.00	V	---	-30	---	CH13

- Note: 1. The emission behavior belongs to narrowband spurious emission.
 2. The frequency is searched to 12.75GHz.
 3. If the emission level is too low to be measured, it is not reported, "----" means that the emissions level is too low to be measured.
 4. Wireless 802.11b mode Transmitting test.



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Transmitter Spurious Emissions (Radiated) CLAUSE 4.3.4.2

Frequency Range	ABOVE 1GHz	Mode	CH1,7,10,13
Environmental Conditions	18.9°C, 72.5 %RH	Test By	Alan Fan

Frequency (MHz)	Antenna Polarization	Level E.R.P. (dBm)	Limit (dBm)	Margin (dB)	Channel
1000.00	H	---	-30	---	CH1
2417.01	H	-51.47	-30	-21.47	CH1
4823.69	H	-67.40	-30	-37.40	CH1
7236.00	H	-62.54	-30	-32.54	CH1
9648.00	H	-64.67	-30	-34.67	CH1
12750.00	H	---	-30	---	CH1
1000.00	H	---	-30	---	CH7
2449.61	H	-49.46	-30	-19.46	CH7
4883.89	H	-70.53	-30	-40.53	CH7
7326.12	H	-64.69	-30	-34.69	CH7
9767.79	H	-64.05	-30	-34.05	CH7
12750.00	H	---	-30	---	CH7
1000.00	H	---	-30	---	CH10
2462.88	H	-44.32	-30	-14.32	CH10
4913.44	H	-70.73	-30	-40.73	CH10
7371.65	H	-64.31	-30	-34.31	CH10
9827.80	H	-65.14	-30	-35.14	CH10
12750.00	H	---	-30	---	CH10
1000.00	H	---	-30	---	CH13
2474.55	H	-44.91	-30	-14.91	CH13
4942.09	H	-69.56	-30	-39.56	CH13
7412.84	H	-64.33	-30	-34.33	CH13
9887.80	H	-64.94	-30	-34.94	CH13
12750.00	H	---	-30	---	CH13

Note: 1. The emission behavior belongs to narrowband spurious emission.

2. The frequency is searched to 12.75GHz.

3. If the emission level is too low to be measured, it is not reported,
“-----“ means that the emissions level is too low to be measured.

4. Wireless 802.11g mode Transmitting test.



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Transmitter Spurious Emissions (Radiated) CLAUSE 4.3.4.2

Frequency Range	ABOVE 1GHz	Mode	CH1,7,10,13
Environmental Conditions	18.9°C, 72.5 %RH	Test By	Alan Fan

Frequency (MHz)	Antenna Polarization	Level E.R.P. (dBm)	Limit (dBm)	Margin (dB)	Channel
1000.00	V	---	-30	---	CH1
2417.91	V	-73.19	-30	-43.19	CH1
4822.94	V	-63.07	-30	-33.07	CH1
7236.00	V	-64.74	-30	-34.74	CH1
9648.00	V	-64.73	-30	-34.73	CH1
12750.00	V	---	-30	---	CH1
1000.00	V	---	-30	---	CH7
2448.86	V	-72.65	-30	-42.65	CH7
4883.89	V	-66.58	-30	-36.58	CH7
7326.95	V	-64.60	-30	-34.60	CH7
9767.79	V	-66.76	-30	-36.76	CH7
12750.00	V	---	-30	---	CH7
1000.00	V	---	-30	---	CH10
2462.51	V	-73.05	-30	-43.05	CH10
4913.44	V	-66.11	-30	-36.11	CH10
7371.65	V	-64.06	-30	-34.06	CH10
9827.80	V	-64.49	-30	-34.49	CH10
12750.00	V	---	-30	---	CH10
1000.00	V	---	-30	---	CH13
2475.50	V	-69.47	-30	-39.47	CH13
4942.09	V	-68.76	-30	-38.76	CH13
7416.00	V	-66.12	-30	-36.12	CH13
9887.80	V	-65.83	-30	-35.83	CH13
12750.00	V	---	-30	---	CH13

Note: 1. The emission behavior belongs to narrowband spurious emission.

2. The frequency is searched to 12.75GHz.

3. If the emission level is too low to be measured, it is not reported,
“-----“ means that the emissions level is too low to be measured.

4. Wireless 802.11g mode Transmitting test.



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Stand By Mode CLAUSE 4.3.4.2

Frequency Range	30MHz~1GHz	Mode	Stand by
Environmental Conditions	21°C, 73%RH	Test By	Alan Fan

Frequency (MHz)	Antenna Polarization	Level E.R.P. (dBm)	Limit (dBm)	Margin (dB)
30.00	H	---	-57	---
200.24	H	-61.09	-57	-4.09
241.23	H	-63.66	-57	-6.66
215.72	H	-65.19	-57	-8.19
301.22	H	-65.07	-57	-8.07
350.96	H	-64.28	-57	-7.28
400.88	H	-72.42	-57	-15.42
451.21	H	-68.83	-57	-11.83
1000.00	H	---	-57	---

- Note: 1. The emission behavior belongs to narrowband spurious emission.
2. If the emission level is too low to be measured, it is not reported.
3. 802.11b stand-by mode test.
4. The spurious emission of the EUT in stand-by mode above 1GHz is too low to be measured.
It is not reported.



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Stand By CLAUSE 4.3.4.2

Frequency Range	30MHz~1GHz	Mode	Stand_by
Environmental Conditions	21°C, 73%RH	Test By	Alan Fan

Frequency (MHz)	Antenna Polarization	Level E.R.P. (dBm)	Limit (dBm)	Margin (dB)
30.00	V	---	-57	---
200.24	V	-60.00	-57	-3.00
241.23	V	-60.13	-57	-3.13
215.72	V	-70.21	-57	-13.21
301.22	V	-63.47	-57	-6.47
350.96	V	-63.42	-57	-6.42
400.88	V	-67.76	-57	-10.76
451.21	V	-62.17	-57	-5.17
1000.00	V	---	-57	---

- Note: 1. The emission behavior belongs to narrowband spurious emission.
2. If the emission level is too low to be measured, it is not reported.
3. 802.11b stand-by mode test.
4. The spurious emission of the EUT in stand-by mode above 1GHz is too low to be measured.
It is not reported.



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Stand By Mode CLAUSE 4.3.4.2

Frequency Range	30MHz~1GHz	Mode	Stand_by
Environmental Conditions	21.5°C, 64%RH	Test By	Alan Fan

Frequency (MHz)	Antenna Polarization	Level E.R.P. (dBm)	Limit (dBm)	Margin (dB)
30.00	H	---	-57	---
200.24	H	-61.09	-57	-4.09
241.23	H	-63.66	-57	-6.66
215.72	H	-65.19	-57	-8.19
301.22	H	-65.07	-57	-8.07
350.96	H	-64.28	-57	-7.28
400.88	H	-72.42	-57	-15.42
451.21	H	-68.83	-57	-11.83
1000.00	H	---	-57	---

- Note: 1. The emission behavior belongs to narrowband spurious emission.
2. If the emission level is too low to be measured, it is not reported.
3. 802.11g stand-by mode test.
4. The spurious emission of the EUT in stand-by mode above 1GHz is too low to be measured.
It is not reported.



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Stand By CLAUSE 4.3.4.2

Frequency Range	30MHz~1GHz	Mode	Stand_by
Environmental Conditions	21.5°C, 64%RH	Test By	Alan Fan

Frequency (MHz)	Antenna Polarization	Level E.R.P. (dBm)	Limit (dBm)	Margin (dB)
30.00	V	---	-57	---
200.24	V	-60.00	-57	-3.00
241.23	V	-60.13	-57	-3.13
215.72	V	-70.21	-57	-13.21
301.22	V	-63.47	-57	-6.47
350.96	V	-63.42	-57	-6.42
400.88	V	-67.76	-57	-10.76
451.21	V	-62.17	-57	-5.17
1000.00	V	---	-57	---

- Note: 1. The emission behavior belongs to narrowband spurious emission.
2. If the emission level is too low to be measured, it is not reported.
3. 802.11g stand-by mode test.
4. The spurious emission of the EUT in stand-by mode above 1GHz is too low to be measured.
It is not reported.



11. ETSI EN 300 328 SUBCLAUSE 4.3.5 RECEIVER SPURIOUS EMISSIONS

ETSI EN 300 328 Subclause 4.3.5.2 Limits

The spurious emissions of the receiver shall not exceed the values in table 4 and 5 in the indicated bands.

Table 4: Narrowband spurious emission limits for receivers

Frequency Range	Limit
30MHz to 1 GHz	-57 dBm
above 1 GHz to 12.75 GHz	-47 dBm

Table 5: Wideband spurious emission limits for receivers

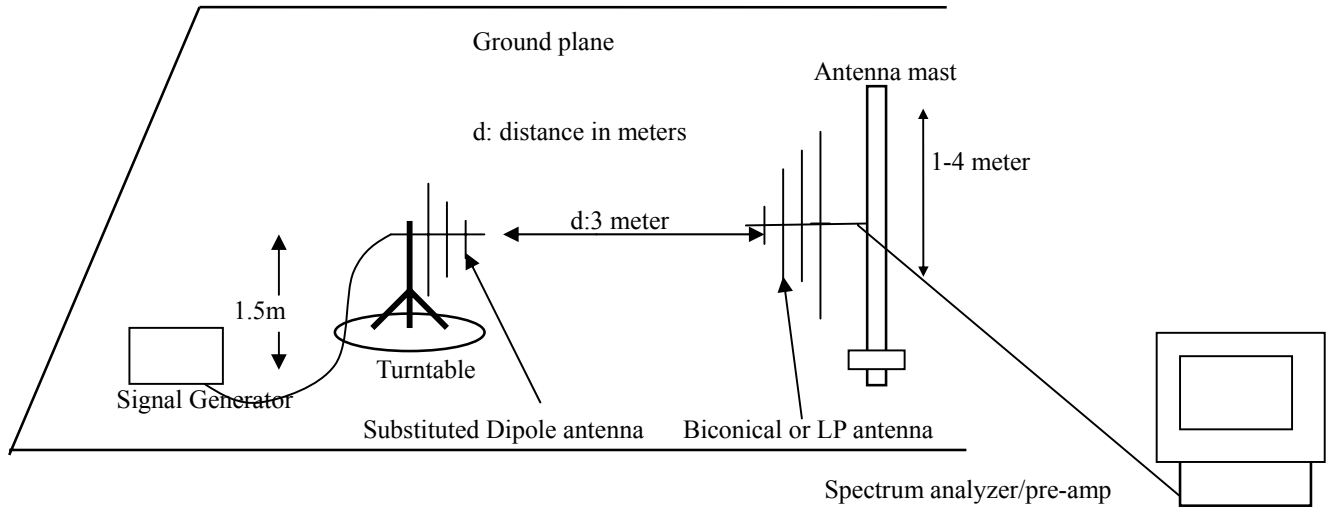
Frequency Range	Limit
30MHz to 1 GHz	-107 dBm/Hz
above 1 GHz to 12.75 GHz	-97 dBm/Hz

Measurement Equipment Used:

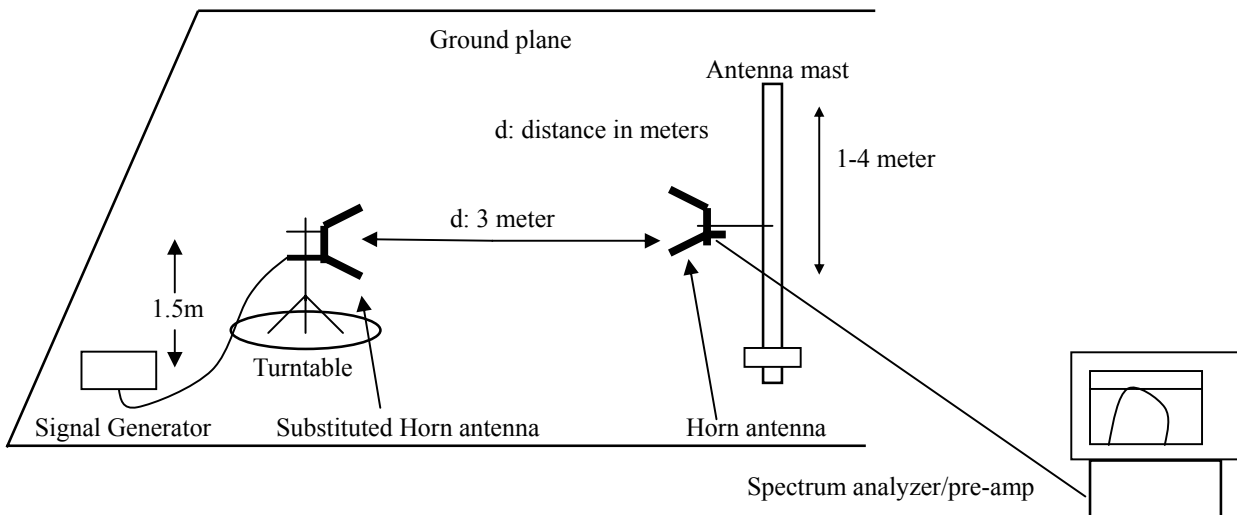
Manufacturer or Type	Model No	Serial No	Date of Calibration	Calibration Period	Remark
CHASE BI-LOG ANTENNA	CBL6112B	2421	MAY. 07, 2003	1 Year	FINAL
ROHDE & SCHWARZ SPECTRUM ANALYZER	FSEK30	835253/002	JUN. 17, 2003	1 Year	FINAL
OPEN SITE	-----	No.2	MAY. 09, 2003	1 Year	FINAL
N TYPE COAXIAL CABLE	CHA9525	4	JUL. 13, 2003	1 Year	FINAL
Horn Antenna	AH-118	10089	FEB. 25, 2004	1 Year	FINAL
HP Pre-amplifier	8449B	3008A01471	OCT. 11, 2003	1 Year	FINAL
High pass filter	84300/80038	011	CAL. ON USE	1 Year	FINAL
Horn Antenna	AH-840	03077	FEB. 25, 2004	1 Year	FINAL

Test Setup:

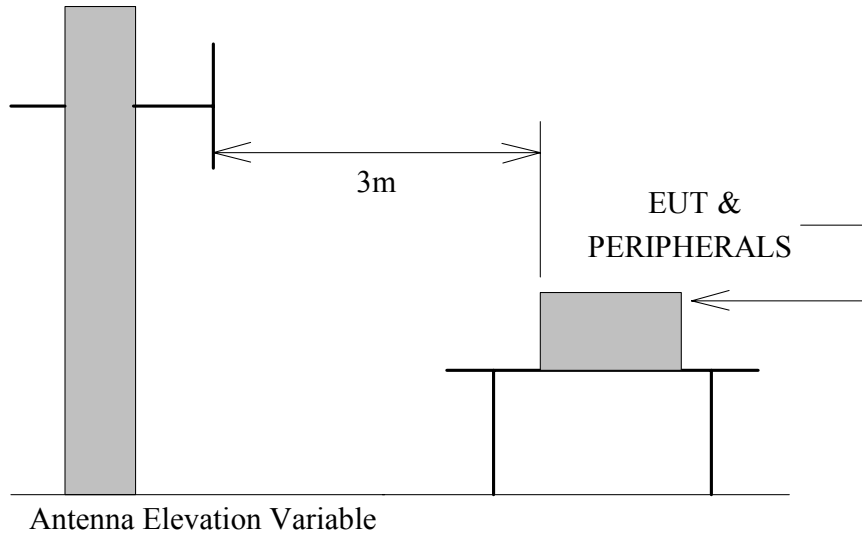
Substitution Measurement setup below 1GHz



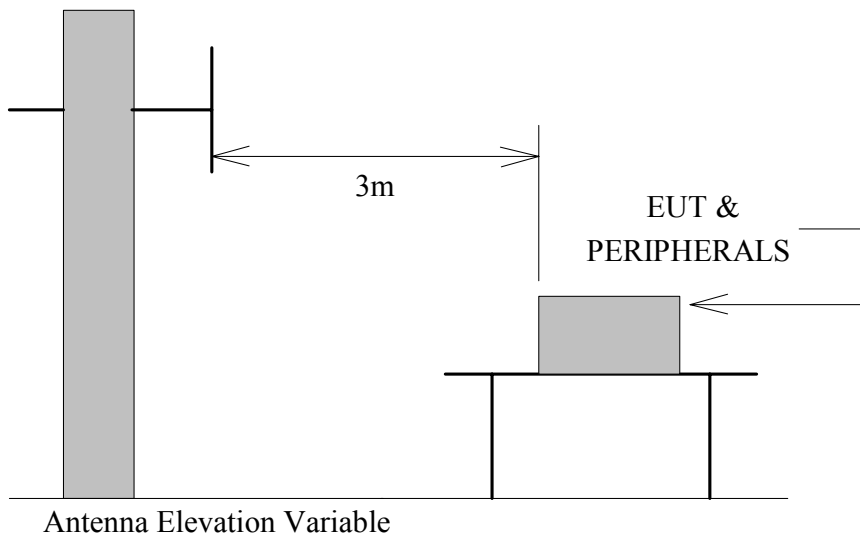
Substitution Measurement setup above 1GHz



Radiated Emission Measurement below 1GHz



Radiated Emission Measurement above 1GHz





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Test Procedure:

See the standard for the test conduction and please refer to subclause 5.7.6 for the radiated measurement methods.

EUT was placed on an 1.5m outdoor wooden table. The search antenna is placed at 3m distance from the EUT and search antenna height is from 1-4m. with the transmitter operating at continuously mode, the turntable was slowly rotated to locate the direction of maximum emission. Once maximum direction is determined, the search antenna was raised and lowered in both vertical and horizontal polarizations.

The EUT was removed from the turntable and replaced with a Horn antenna connected to a calibrated RF signal generator. The RF generator was set to a measured emission frequency and the search antenna was raised and lowered to produced a maximum received reading . The generator output was increased to match the radiated emission reading measured previously and the result expressed in dB or ERP.

Uncertainty :

The measurement uncertainty of the test is $\pm 2.72\text{dB}$



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Test results:

Receiver Spurious Emissions (Radiated)

CLAUSE 4.3.5.2

Frequency Range	BELOW 1GHz	Mode	CH1,7,10,13
Environmental Conditions	21°C, 73%RH	Test By	Alan Fan

Frequency (MHz)	Antenna Polarization	Level E.R.P. (dBm)	Limit (dBm)	Margin (dB)
30.00	H	---	-57	---
200.24	H	-62.22	-57	-5.22
241.23	H	-60.89	-57	-3.89
215.72	H	-60.33	-57	-3.33
301.22	H	-68.02	-57	-11.02
350.96	H	-63.85	-57	-6.85
400.88	H	-69.27	-57	-12.27
451.21	H	-67.67	-57	-10.67
1000.00	H	---	-57	---

- Note:
1. The emission behavior belongs to narrowband spurious emission.
 2. According to technical experiences, all spurious emissions at channel 1,7,10 and 13 are almost the same below 1GHz, so that the channel 1 was chosen as representative for the test.
 3. 802.11b mode receiver test.



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Receiver Spurious Emissions (Radiated) CLAUSE 4.3.5.2

Frequency Range	BELOW 1GHz	Mode	CH1,7,10,13
Environmental Conditions	21°C, 73%RH	Test By	Alan Fan

Frequency (MHz)	Antenna Polarization	Level E.R.P. (dBm)	Limit (dBm)	Margin (dB)
30.00	V	---	-57	---
200.24	V	-60.05	-57	-3.05
241.23	V	-59.94	-57	-2.94
215.72	V	-64.54	-57	-7.54
301.22	V	-60.65	-57	-3.65
350.96	V	-60.07	-57	-3.07
400.88	V	-61.07	-57	-4.07
451.21	V	-60.65	-57	-3.65
1000.00	V	---	-57	---

- Note: 1. The emission behavior belongs to narrowband spurious emission.
2. According to technical experiences, all spurious emissions at channel 1,7,10 and 13 are almost the same below 1GHz, so that the channel 1 was chosen as representative for the test.
3. 802.11b mode receiver test.



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Receiver Spurious Emissions (Radiated)

CLAUSE 4.3.5.2

Frequency Range	BELOW 1GHz	Mode	CH1,7,10,13
Environmental Conditions	21.5°C, 64%RH	Test By	Alan Fan

Frequency (MHz)	Antenna Polarization	Level E.R.P. (dBm)	Limit (dBm)	Margin (dB)
30.00	H	---	-57	---
200.24	H	-61.47	-57	-4.47
241.23	H	-59.99	-57	-2.99
215.72	H	-60.33	-57	-3.33
301.22	H	-68.27	-57	-11.27
350.96	H	-64.71	-57	-7.71
400.88	H	-70.83	-57	-13.83
451.21	H	-64.82	-57	-7.82
1000.00	H	---	-57	---

- Note: 1. The emission behavior belongs to narrowband spurious emission.
2. According to technical experiences, all spurious emissions at channel 1,7,10 and 13 are almost the same below 1GHz,so that the channel 1 was chosen as representative for the test.
3. 802.11g mode receiver test.



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Receiver Spurious Emissions (Radiated) CLAUSE 4.3.5.2

Frequency Range	BELOW 1GHz	Mode	CH1,7,10,13
Environmental Conditions	21.5°C, 64%RH	Test By	Alan Fan

Frequency (MHz)	Antenna Polarization	Level E.R.P. (dBm)	Limit (dBm)	Margin (dB)
30.00	V	---	-57	---
200.24	V	-59.87	-57	-2.87
241.23	V	-61.04	-57	-4.04
215.72	V	-68.07	-57	-11.07
301.22	V	-61.70	-57	-4.70
350.96	V	-63.19	-57	-6.19
400.88	V	-59.82	-57	-2.82
451.21	V	-61.42	-57	-4.42
1000.00	V	---	-57	---

- Note:
1. The emission behavior belongs to narrowband spurious emission.
 2. According to technical experiences, all spurious emissions at channel 1,7,10 and 13 are almost the same below 1GHz,so that the channel 1 was chosen as representative for the test.
 3. 802.11g mode receiver test.



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Receiver Spurious Emissions (Radiated) CLAUSE 4.3.5.2

Frequency Range	ABOVE 1GHz	Mode	CH1,7,10,13
Environmental Conditions	17.5°C, 66%RH	Test By	Alan Fan

Frequency (MHz)	Antenna Polarization	Level E.R.P. (dBm)	Limit (dBm)	Margin (dB)	Channel
1000.00	H	---	-47	---	CH1
2037.98	H	-66.12	-47	-19.12	CH1
4075.99	H	-72.41	-47	-25.41	CH1
6114.00	H	-69.93	-47	-22.93	CH1
8152.01	H	-64.21	-47	-17.21	CH1
12750.00	H	---	-47	---	CH1
1000.00	H	---	-47	---	CH7
2067.98	H	-66.84	-47	-19.84	CH7
4135.98	H	-70.80	-47	-23.80	CH7
6204.00	H	-70.11	-47	-23.11	CH7
8272.00	H	-61.81	-47	-14.81	CH7
12750.00	H	---	-47	---	CH7
1000.00	H	---	-47	---	CH10
2082.98	H	-67.01	-47	-20.01	CH10
4166.02	H	-71.45	-47	-24.45	CH10
6249.01	H	-69.58	-47	-22.58	CH10
8332.04	H	-63.88	-47	-16.88	CH10
12750.00	H	---	-47	---	CH10
1000.00	H	---	-47	---	CH13
2097.98	H	-67.00	-47	-20.00	CH13
4196.00	H	-71.00	-47	-24.00	CH13
6294.01	H	-70.43	-47	-23.43	CH13
8391.98	H	-64.58	-47	-17.58	CH13
12750.00	H	---	-47	---	CH13

- Note: 1. The emission behavior belongs to narrowband spurious emission.
 2. The frequency is searched to 12.75GHz.
 3. If the emission level is too low to be measured, it is not reported,
 "----" means that the emissions level is too low to be measured.
 4. Wireless 802.11b mode Transmitting test.



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Receiver Spurious Emissions (Radiated)

CLAUSE 4.3.5.2

Frequency Range	ABOVE 1GHz	Mode	CH1,7,10,13
Environmental Conditions	17.5°C, 66%RH	Test By	Alan Fan

Frequency (MHz)	Antenna Polarization	Level E.R.P. (dBm)	Limit (dBm)	Margin (dB)	Channel
1000.00	V	---	-47	---	CH1
2037.98	V	-69.73	-47	-22.73	CH1
4076.00	V	-72.27	-47	-25.27	CH1
6114.00	V	-69.81	-47	-22.81	CH1
8151.93	V	-64.20	-47	-17.20	CH1
12750.00	V	---	-47	---	CH1
1000.00	V	---	-47	---	CH7
2067.98	V	-68.56	-47	-21.56	CH7
4135.98	V	-70.84	-47	-23.84	CH7
6204.00	V	-69.33	-47	-22.33	CH7
8271.96	V	-64.23	-47	-17.23	CH7
12750.00	V	---	-47	---	CH7
1000.00	V	---	-47	---	CH10
2082.98	V	-70.94	-47	-23.94	CH10
4166.08	V	-71.52	-47	-24.52	CH10
6249.00	V	-70.10	-47	-23.10	CH10
8332.06	V	-65.14	-47	-18.14	CH10
12750.00	V	---	-47	---	CH10
1000.00	V	---	-47	---	CH13
2097.98	V	-68.21	-47	-21.21	CH13
4196.00	V	-71.26	-47	-24.26	CH13
6294.01	V	-70.30	-47	-23.30	CH13
8391.98	V	-63.92	-47	-16.92	CH13
12750.00	V	---	-47	---	CH13

Note: 1. The emission behavior belongs to narrowband spurious emission.

2. The frequency is searched to 12.75GHz.

3. If the emission level is too low to be measured, it is not reported,
 "----" means that the emissions level is too low to be measured.

4. Wireless 802.11b mode Transmitting test.



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Receiver Spurious Emissions (Radiated)

CLAUSE 4.3.5.2

Frequency Range	ABOVE 1GHz	Mode	CH1,7,10,13
Environmental Conditions	18.9°C, 72.5%RH	Test By	Alan Fan

Frequency (MHz)	Antenna Polarization	Level E.R.P. (dBm)	Limit (dBm)	Margin (dB)	Channel
1000.00	H	---	-47	---	CH1
2037.98	H	-64.91	-47	-17.91	CH1
4075.99	H	-72.05	-47	-25.05	CH1
6114.00	H	-70.06	-47	-23.06	CH1
8152.01	H	-63.88	-47	-16.88	CH1
12750.00	H	---	-47	---	CH1
1000.00	H	---	-47	---	CH7
2067.98	H	-65.42	-47	-18.42	CH7
4135.98	H	-71.11	-47	-24.11	CH7
6204.00	H	-70.20	-47	-23.20	CH7
8272.00	H	-62.36	-47	-15.36	CH7
12750.00	H	---	-47	---	CH7
1000.00	H	---	-47	---	CH10
2082.98	H	-66.11	-47	-19.11	CH10
4166.08	H	-71.72	-47	-24.72	CH10
6249.01	H	-67.22	-47	-20.22	CH10
8332.04	H	-64.83	-47	-17.83	CH10
12750.00	H	---	-47	---	CH10
1000.00	H	---	-47	---	CH13
2097.99	H	-68.02	-47	-21.02	CH13
4196.00	H	-70.17	-47	-23.17	CH13
6294.01	H	-70.62	-47	-23.62	CH13
8391.96	H	-64.37	-47	-17.37	CH13
12750.00	H	---	-47	---	CH13

- Note: 1. The emission behavior belongs to narrowband spurious emission.
 2. The frequency is searched to 12.75GHz.
 3. If the emission level is too low to be measured, it is not reported,
 "-----" means that the emissions level is too low to be measured.
 4. Wireless 802.11g mode Transmitting test.



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Receiver Spurious Emissions (Radiated)

CLAUSE 4.3.5.2

Frequency Range	ABOVE 1GHz	Mode	CH1,7,10,13
Environmental Conditions	18.9°C, 72.5%RH	Test By	Alan Fan

Frequency (MHz)	Antenna Polarization	Level E.R.P. (dBm)	Limit (dBm)	Margin (dB)	Channel
1000.00	V	---	-47	---	CH1
2037.99	V	-69.57	-47	-22.57	CH1
4076.00	V	-71.56	-47	-24.56	CH1
6114.00	V	-70.90	-47	-23.90	CH1
8152.00	V	-64.11	-47	-17.11	CH1
12750.00	V	---	-47	---	CH1
1000.00	V	---	-47	---	CH7
2067.98	V	-68.31	-47	-21.31	CH7
4135.98	V	-72.95	-47	-25.95	CH7
6204.00	V	-70.14	-47	-23.14	CH7
8271.96	V	-63.27	-47	-16.27	CH7
12750.00	V	---	-47	---	CH7
1000.00	V	---	-47	---	CH10
2082.98	V	-70.65	-47	-23.65	CH10
4166.08	V	-70.98	-47	-23.98	CH10
6249.01	V	-69.17	-47	-22.17	CH10
8332.04	V	-64.07	-47	-17.07	CH10
12750.00	V	---	-47	---	CH10
1000.00	V	---	-47	---	CH13
2097.98	V	-69.83	-47	-22.83	CH13
4196.00	V	-70.03	-47	-23.03	CH13
6294.01	V	-69.88	-47	-22.88	CH13
8391.96	V	-65.46	-47	-18.46	CH13
12750.00	V	---	-47	---	CH13

Note: 1. The emission behavior belongs to narrowband spurious emission.

2. The frequency is searched to 12.75GHz.

3. If the emission level is too low to be measured, it is not reported,
 "----" means that the emissions level is too low to be measured.

4. Wireless 802.11g mode Transmitting test.



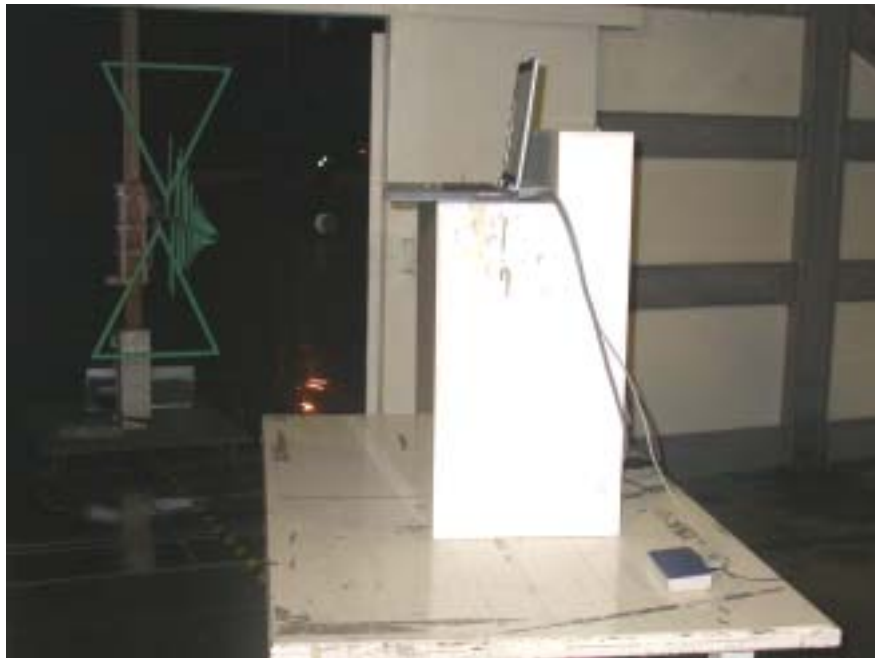
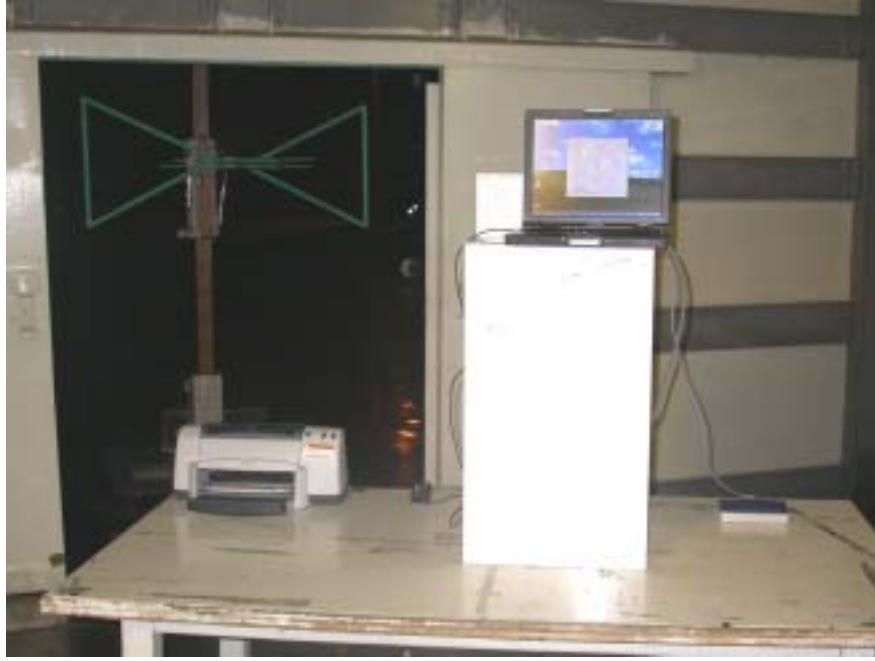
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12. APPENDIX 1 PHOTOGRPHS OF SPURIOUS EMISSION TEST CONFIGURATION





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13. APPENDIX 2 PHOTOGRPHS OF SPURIOUS EMISSION TEST CONFIGURATION

