



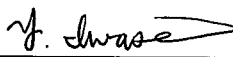
EMI TEST REPORT

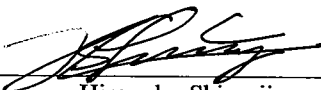
Test Report No. : 23KE0002-HO-1

Applicant : FUJITSU FRONTECH LIMITED
Type of Equipment : Hand Held Terminal
Model No. : CA06178-A3XX
Test standard : FCC Part 15 Subpart C
Section 15.207, Section 15.247
FCC ID : QL9-IPAD100INT
Test Result : Complied

1. This test report shall not be reproduced in full or partial, without the written approval of UL Apex Co., Ltd.
2. The results in this report apply only to the sample tested.
3. This equipment is in compliance with above regulation. We hereby certify that the data contain a true representation of the EMC profile.
4. The test results in this report are traceable to the national or international standards.
5. This test report does not constitute an endorsement by NIST/NVLAP or U.S. Government.

Date of test : June 17, 26 and 27, 2003

Tested by : 
Yoshiaki Iwasa
EMC Section

Approved by : 
Hironobu Shimoji
Group Leader of EMC Section

UL Apex Co., Ltd.

Head Office EMC Lab.

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SECTION 1: Client information

Company Name : FUJITSU FRONTECH LIMITED
Brand Name : FUJITSU LIMITED
Address : 1776, Yanokuchi, Inagi-shi, Tokyo, 206-8555, Japan
Telephone Number : +81-42-377-0614
Facsimile Number : +81-42-378-9765
Contact Person : Takayuki Nokiyama

SECTION 2: Equipment under test (E.U.T.)

2.1 Identification of E.U.T.

Type of Equipment : Hand Held Terminal
Model No. : CA06178-A3XX
Serial No. : 4, 5
Rating : DC 3.7V / 1.5A, AC 120V 60Hz (for AC Adaptor)
Country of Manufacture : Japan
Receipt Date of Sample : June 09, 2003
Condition of EUT : Production prototype

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2.2 Product Description

FUJITSU FRONTECH LIMITED, Model No: CA06178-A3XX is the Hand Held Terminal with Wireless LAN Card. The clock frequency of EUT is 400MHz. The Intended use of the equipment is Hand Held terminal with Scanner/SSLAN/MCR/Audio.

Equipment Type	:	Transceiver
Frequency band	:	Lower Limit :2.412GHz Upper Limit :2.462GHz
Type of modulation	:	PSK:1Mb, QPSK:2Mb, CCK:5.5M and 11Mb
Bandwidth & Channel spacing	:	22MHz/5MHz
Transmit power or power range	:	100mW
Mode of operation	:	Duplex
Antenna Type	:	$\lambda/4$ wavelength printed line
Antenna Gain	:	below 0dBi
Temperature of operation	:	0 deg.C. to 40 deg.C.
Method of Frequency Generation	:	Crystal
ITU code	:	22M0G1D/G7D

FCC 15.31 (e)

The host device CA06178-A3XX provide the stable power supply (DC 3.7V) to Wireless LAN card, and the Hand Held Terminal complies power supply regulation.

FCC Part 15.203 Antenna requirement

The Wireless LAN (Hand Held Terminal) complies with the requirement of 15.203, because the antenna that uses a unique coupling (indicate the name of a unique antenna connector) to the intentional radiator in this equipment is used.

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SECTION 3: Test specification, procedures & results

3.1 Test Specification

Test Specification : FCC Part15 Subpart C

Title : FCC 47CFR Part15 Radio Frequency Device Subpart C Intentional Radiators
Section 15.207 Conducted limits
Section 15.247 Operation within the bands 902-928MHz,
2400-2483.5MHz, and 5725-5850MHz

3.2 Procedures and results

No.	Item	Test Procedure	Specification	Remarks	Deviation	Worst margin	Results
1	Conducted emission	ANSI C63.4:2001	Section 15.207	-	N/A	14.0dB 0.5085MHz AV	Complied
2	6dB Bandwidth	ANSI C63.4:2001	Section 15.247(a)(2)	Conducted	N/A	-	Complied
3	Maximum Peak Output Power	ANSI C63.4:2001	Section 15.247(b)(3)	Conducted	N/A	-	Complied
4	Out of Band Emission	ANSI C63.4:2001	Section 15.247 (c)	Conducted/ Radiated	N/A	1.5dB 4126.0MHz Vertical	Complied
5	Restricted Band Edges	ANSI C63.4:2001	Section 15.247 (c)	Conducted	N/A	-	Complied
6	Power Density	ANSI C63.4:2001	Section 15.247 (d)	-	N/A	-	Complied

Note: UL Apex's EMI Work Procedures No. QPM05.

*These tests were also referred to "Guidance on Measurement for Digital Transmission Systems Section15.247".

*These tests were performed without any deviations from test procedure except for additions or exclusions.

3.3 Confirmation

UL Apex Co., Ltd. hereby confirms that E.U.T., in the configuration tested, complies with the specifications FCC Part 15 Subpart C Section 15.207 and 15.247.

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3.4 Uncertainty

Conducted Emission

The measurement uncertainty (with a 95% confidence level) for this test was $\pm 1.3\text{dB}$.

- ☐ The result is within Head Office EMC lab's uncertainty.
- ☒ The data listed in this test report has enough margin.

Spurious Emission (Radiated)

The measurement uncertainty (with a 95% confidence level) for this test using Biconical antenna is $\pm 4.5\text{dB}$.

The measurement uncertainty (with a 95% confidence level) for this test using Logperiodic antenna is $\pm 5.2\text{dB}$.

The measurement uncertainty (with a 95% confidence level) for this test using Horn antenna is $\pm 6.6\text{dB}$.

- ☒ The result is within Head Office EMC lab's uncertainty.
- ☐ The data listed in this test report has enough margin.

Other test except Conducted Emission and Spurious Emission (Radiated)

The measurement uncertainty (with a 95% confidence level) for this test was $\pm 3.0\text{dB}$.

- ☐ The result is within Head Office EMC lab's uncertainty.
- ☒ The data listed in this test report has enough margin.

3.5 Test Location

UL Apex Co., Ltd. Head Office EMC Lab.

No.1 and No.2 semi anechoic chamber.

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This semi anechoic chamber has been fully described in a report submitted to FCC office, and listed on February 1, 2002 for No.1 and on June 05, 2002 for No.2. (Registration number: No.1 : 313583, No.2 : 846015 Industry Canada: No.1 : IC4247, No.2 : IC4247-2)

*NVLAP Lab. code: 200572-0

3.6 Test set up, Test instruments and Data of EMI

Refer to APPENDIX 1 to 3.

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SECTION 4: Operation of E.U.T. during testing

4.1 Operating Modes

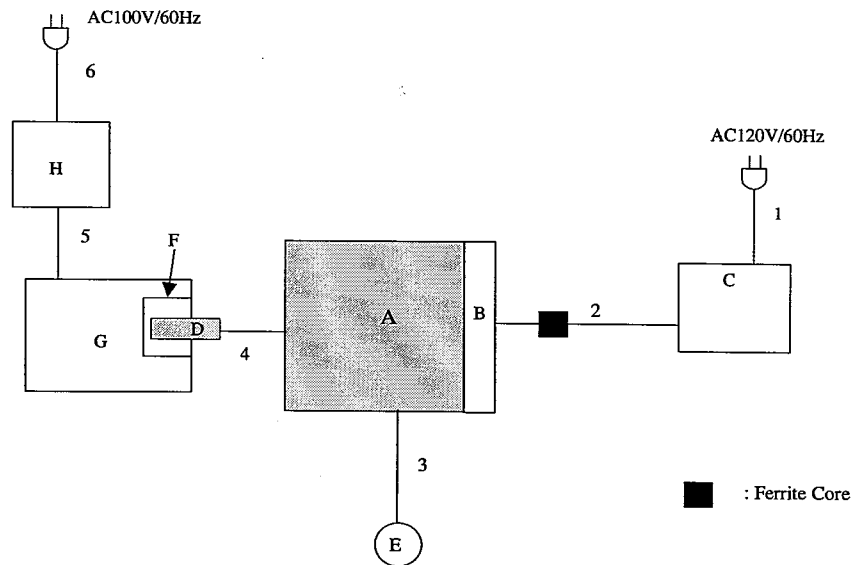
The EUT exercise program used during radiated and conducted testing was designed to exercise the various system components in a manner similar to typical use.

The sequence is used : Transmitting mode (ch1:2412MHz, ch6:2437MHz, ch11:2462MHz)

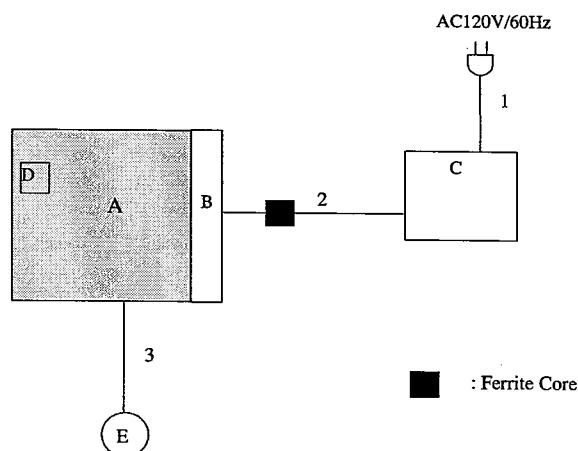
Justification: The system was configured in typical fashion (as a customer would normally use it) for testing.

4.2 Configuration and peripherals

[Other Test except Conducted Emission]



[Conducted Emission]



* Cabling was taken into consideration and test data was taken under worst case conditions.

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Description of EUT and Support equipment

No.	Item	Model number	Serial number	Manufacturer	FCC ID	Remark
A	Hand Held Terminal	CA06178-A3XX	4	FUJITSU FRONTTECH LIMITED	QL9-IPAD100INT	EUT
B	Base Station	-	-	FUJITSU LIMITED	-	-
C	AC Adaptor	FMV-AC3135	-	FUJITSU LIMITED	-	-
D	Wireless LAN CF Card	WCF2011BEW W	0002838A306 C	INTEL CORPORATION	PD9WCF2011BE	EUT*
E	Earphone	ATT-75	-	FUJITSU LIMITED	-	-
F	Compact Flash Adaptor	PCCF-ADP	CMA0349240 QR	IO DATA	-	-
G	Note PC	FMV5BNA6X7	5313	FUJITSU	-	-
H	AC Adaptor	CA01007-0141	R7Y00669	FUJITSU	-	-

*This Wireless LAN CF Card is used as a part of the Hand Held Terminal so that it is tested as EUT.

List of cables used

No.	Name	Length (m)	Shield	Backshell Material
1	AC Power Cable	1.9	N	Polyvinyl chloride
2	DC Power Cable	1.1	N	Polyvinyl chloride
3	Audio Cable	1.2	N	Polyvinyl chloride
4	Antenna Cable	0.2	N	Polyvinyl chloride
5	DC Power Cable	1.8	N	Polyvinyl chloride
6	AC Power Cable	0.5	N	Polyvinyl chloride

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SECTION 5: Conducted Emission, Section 15.207

Test Procedure

EUT was placed on a platform of nominal size, 1m by 1.5m, raised 80cm above the conducting ground plane. The rear of tabletop was located 40cm to the vertical conducting plane. The rear of EUT, including peripherals aligned and flushed with rear of tabletop. All other surfaces of tabletop were at least 80cm from any other grounded conducting surface. EUT was located 80cm from LISN and excess AC cable was bundled in center. They were folded back and forth forming a bundle 30cm to 40cm long and were hanged at a 40cm height to the ground plane. Each EUT current-carrying power lead, except the ground (safety) lead, was individually connected through a LISN to the input power source. All unused 50ohm connectors of the LISN were resistively terminated in 50ohm when not connected to the measuring equipment.

The AC Mains Terminal Continuous disturbance Voltage has been measured with the EUT on a reference ground plane 7.0 x 6.0m in a No.1 semi Anechoic Chamber.

The EUT was connected to a Line Impedance Stabilization Network (LISN).

An overview sweep with peak detection has been performed.

The measurements have been performed with a CISPR quasi-peak detector (IF BW 9 kHz).

Measurement range: 0.15-30MHz

Test data	:	APPENDIX 3
Test result	:	Pass
Test instruments	:	MAEC-01, MCC-03, MLS-02, MTR-01

SECTION 6: 6dB Bandwidth, Section 15.247(a)(2)

Test Procedure

The minimum 6dB bandwidth was measured with a spectrum analyzer connected to the antenna port.

Test data	:	APPENDIX 3
Test result	:	Pass
Test instruments	:	MBTR-10, MCC-04

SECTION 7: Maximum Peak Output Power, Section 15.247(b)(3)

Test Procedure

The Maximum Peak Output Power was measured with a Power Meter connected to the antenna port.

Test data	:	APPENDIX 3
Test result	:	Pass
Test instruments	:	MPM-01, MCC-04, PS-02

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SECTION 8: Out of Band Emission and Restricted Band Edge, Section 15.247 (c)

[Conducted]

Test Procedure

The Out of Band Emission (Conducted) was measured with a spectrum analyzer connected to the antenna port.

Test data : APPENDIX 3
Test result : Pass
Test instruments : MBTR-10, MCC-04

[Radiated]

Test Procedure

EUT was placed on a platform of nominal size, 1m by 1.5m, raised 80cm above the conducting ground plane.

Test was made with the antenna positioned in both the horizontal and vertical planes of polarization.

The Radiated Electric Field Strength intensity has been measured in No.2 semi anechoic chamber (7.5x5.8x5.2m) with a ground plane and at a distance of 3m.

The measuring antenna height was varied between 1 to 4m and EUT was rotated a full revolution in order to obtain the maximum value of the electric field intensity.

The measurements were performed for both vertical and horizontal antenna polarization.

In any 100kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator confirmed 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power, based on a radiated measurement.

-The noise was measured at each position of all three axes X, Y and Z to compare the level, and the maximum noise level was recorded.

-The relative measurements were performed on the fundamental and the spurious emissions with each conduction of the EUT folded and the EUT set up. The EUT set-up condition was worse case under both the fundamental and the spurious emissions, we, therefore, tested while the EUT was set up. See the APPENDIX1.

Test data : APPENDIX 3
Test result : Pass
Test instruments : MAEC-02, MCC-13, MHA-06, MPA-01/04, MBA-03, MLA-03, MAT-07, MHA-02, SA-07, MTR-02, MBF-01/02, MCC-11/05/06

SECTION 9: Peak Power Density, Section 15.247 (c)

[Conducted]

Test Procedure

The Peak Power Density was measured with a spectrum analyzer connected to the antenna port.

Test data : APPENDIX 3
Test result : Pass
Test instruments : MBTR-10, MCC-04

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APPENDIX 1: Photographs of test setup

Page 12 : Conducted Emission
Page 13 : Spurious Emission (Radiated)
Page 14 : Worst case position

APPENDIX 2: Test instruments

Page 15 : Test instruments

APPENDIX 3: Data of EMI test

Page 16-19 : Conducted Emission
Page 20-25 : Radiated Emission
Page 26-27 : 6dB Bandwidth
Page 28 : Maximum Peak Output Power
Page 29-32 : Out of Band Emission and Restricted Band Edge
Page 33-34 : Power Density
Page 35 : 99% Occupied Bandwidth

APPENDIX 1: Photographs of test setup

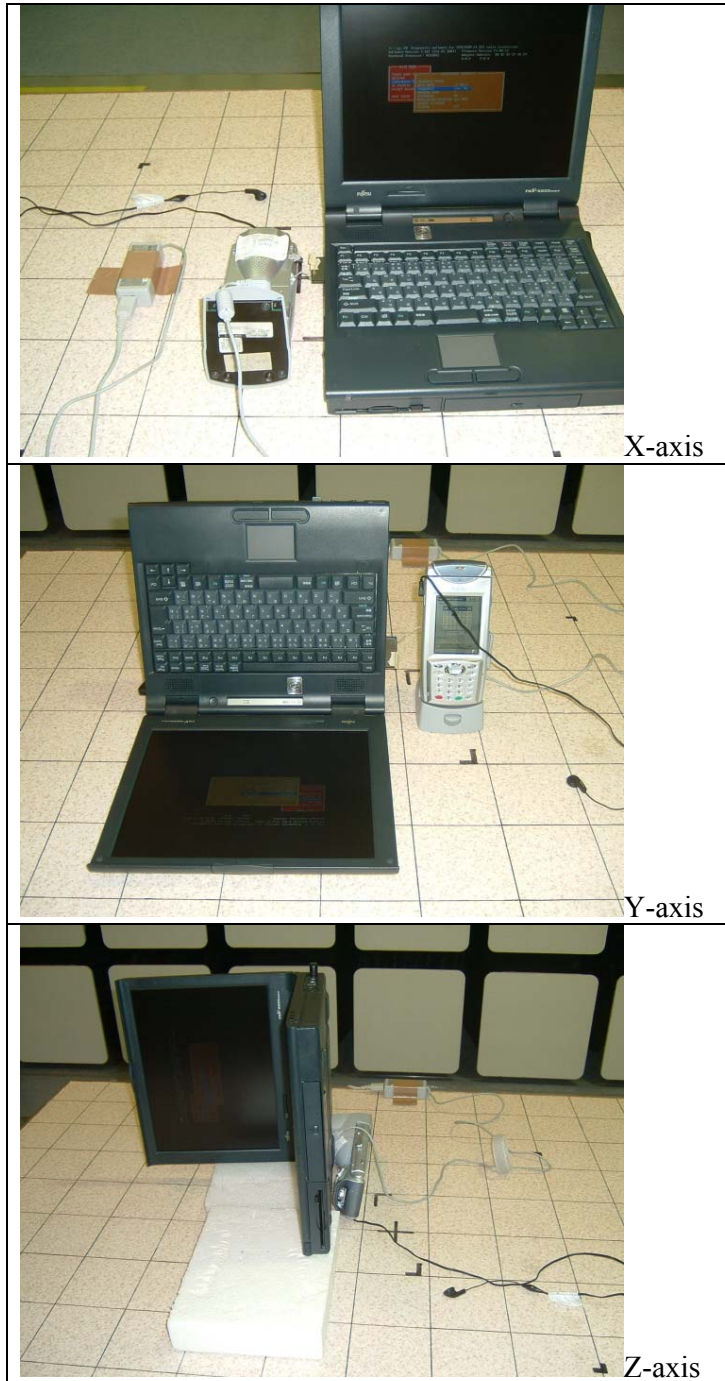
Conducted Emission



Spurious Emission (Radiated)



Worst Case Position (X-axis:Horizontal / Y-axis:Vertical)



APPENDIX 2: Test instruments

EMI test equipment

Control No.	Instrument	Manufacturer	Model No.	Test Item	Calibration Date * Interval(month)
MAEC-01	Anechoic Chamber	TDK	Semi Anechoic Chamber 10m	RE / CE	2002/12/28 * 12
MAT-06	Attenuator(6dB)	Weinschel Corp	2	RE	2002/12/24 * 12
MBA-01	Biconical Antenna	Schwarzbeck	BBA9106	RE	2002/10/16 * 12
MCC-01	Coaxial Cable	Suhner/storm/Agilent/TS J	-	RE	2002/12/19 * 12
MLA-01	Logperiodic Antenna	Schwarzbeck	USLP9143	RE	2002/10/16 * 12
MPA-02	Pre Amplifier	Agilent	87405A	RE	2003/04/17 * 12
MTR-01	Test Receiver	Rohde & Schwarz	ES140	RE	2002/11/01 * 12
MTR-02	Test Receiver	Rohde & Schwarz	ESCS30	RE	2003/01/31 * 12
SA-07	Spectrum Analyzer	Advantest	R3273	RE	2002/12/10 * 12
AF-07	Pre Amplifier	Agilent	HP8449B	RE	2002/12/20 * 12
MPM-01	Power Meter	Agilent	E4417A	RE	2002/11/08 * 12
MAT-10	Attenuator	Weinschel Corp	2	RE	2002/12/24 * 12
MBTR10	Spectrum Analyzer	Rohde & Schwarz	FSP30	CE	2002/11/13 * 12
PS-03	Power sensor	Agilent	E9327A	CE	2003/03/18 * 12
MAEC-02	Anechoic Chamber	TDK	Semi Anechoic Chamber 3m	RE / CE	2003/04/11 * 12
MAT-07	Attenuator(6dB)	Weinschel Corp	2	RE	2002/12/24 * 12
MBA-03	Biconical Antenna	Schwarzbeck	BBA9106	RE	2003/04/28 * 12
MCC-12	Coaxial Cable	Fujikura/Agilent	MCC-12-01(8D-2W15m), MCC-12-02(5D-2W-0.7), MCC-12-03(5D-2W-0.8), MCC-12-04(5D-2W-1m), MCC-12-05(RF SW), MCC-12-06(RF SW), ※ MCC-12-07(5D-2W-0.4m)5/8追加	RE	2003/05/08 * 12
MLA-03	Logperiodic Antenna	Schwarzbeck	USLP9143	RE	2003/04/28 * 12
HF-04	High Pass Filter	Tokimec	TF323DCA	RE	2002/09/20 * 12
SA-07	Spectrum Analyzer	Advantest	R3273	RE	2002/12/10 * 12
MAT-23	Attenuator	Orient Microwave	BX10-0476-00	RE	2003/03/31 * 12
MBF-01	SHF Bandpass Filter	M-City	5GHz BPF	RE	2003/04/24 * 12
MBF-02	SHF Bandpass Filter	M-City	8GHz BPF	RE	2003/04/24 * 12
MCC-04	Microwave Cable	Storm	421-011	RE	2003/01/14 * 12
MHA-02	Horn Antenna	EMCO	3180-09	RE	2003/01/11 * 12
MHA-06	Horn Antenna	Schwarzbeck	BBHA9120D	RE	2003/01/11 * 12
MPA-01	Pre Amplifier	Agilent	8449B	RE	2003/02/08 * 12
MCC-05	Microwave Cable	Storm	421-011	RE	2003/01/14 * 12
MCC-06	Microwave Cable	Storm	421-011	RE	2003/01/14 * 12
MCC-11	Microwave coaxial cable	Suhner	SUCOFLEX 104	RE	2003/03/27 * 12
MPM-01	Power Meter	Agilent	E4417A	RE	2002/11/08 * 12

All equipment is calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.

Test Item:

CE: Conducted emission,
RE: Radiated emission,

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APPENDIX 3: Data of EMI test

DATA OF CONDUCTED EMISSION TEST

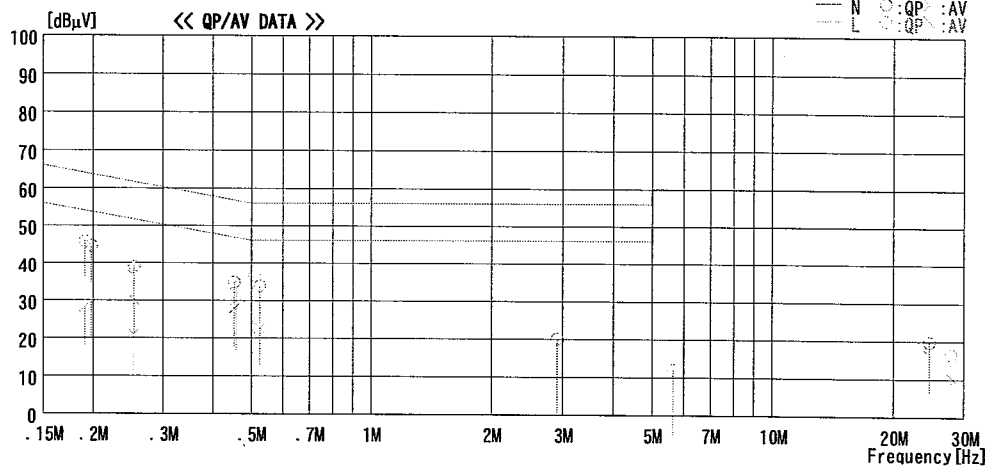
UL Apex Co., Ltd. Head Office EMC Lab. No. 1 Semi Anechoic Chamber
Date : 2003/06/17 09:24:40

Applicant : FUJITSU FRONTECH LIMITED
Kind of EUT : Hand Held Terminal
Model No. : CA06178-A3XX
Serial No. : 5

Report No. : 23KE0002-HO
Power : AC120V / 60Hz
Temp°C/Humi% : 26 / 69
Operator : Yoshiaki Iwasa

Mode / Remarks: Tx:2412MHz

LIMIT : FCC15C §15.207 (QP)
FCC15C §15.207 (AV)



NO	FREQ [MHz]	READING		C. F	RESULT		LIMIT		MARGIN		PHASE
		QP [dBμV]	AV [dBμV]		QP [dBμV]	AV [dBμV]	QP [dBμV]	AV [dBμV]	QP [dB]	AV [dB]	
1	0.1978	34.6	19.6	10.0	44.6	29.6	63.7	53.7	19.1	24.1	N
2	0.2534	29.1	20.1	10.0	39.1	30.1	61.6	51.6	22.5	21.5	N
3	0.4529	24.4	17.5	10.4	34.8	27.9	56.8	46.8	22.0	18.9	N
4	0.5247	23.5	12.3	10.4	33.9	22.7	56.0	46.0	22.1	23.3	N
5	2.9096	9.1	-1.1	11.0	20.1	9.9	56.0	46.0	35.9	36.1	N
6	24.5815	6.9	3.6	12.9	19.8	16.5	60.0	50.0	40.2	33.5	N
7	0.1906	35.8	18.2	10.0	45.8	28.2	64.0	54.0	18.2	25.8	L
8	0.2526	28.5	11.0	10.0	38.5	21.0	61.7	51.7	23.2	30.7	L
9	0.4577	23.1	16.1	10.4	33.5	26.5	56.7	46.7	23.2	20.2	L
10	0.5085	26.1	21.6	10.4	36.5	32.0	56.0	46.0	19.5	14.0	L
11	5.6415	1.0	-6.3	11.1	12.1	4.8	60.0	50.0	47.9	45.2	L
12	27.8883	3.7	-2.3	12.9	16.6	10.6	60.0	50.0	43.4	39.4	L

CHART:WITHOUT FACTOR, Peak hold data. Data is uncorrected.
Except for the above table : adequate margin data below the limits.
CALCULATION: RESULT=READING+C. F (CurrentProbe+CABLE+Limiter)

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Page:

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DATA OF CONDUCTED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2003/06/17 09:24:40

Applicant : FUJITSU FRONTECH LIMITED
Kind of EUT : Hand Held Terminal
Model No. : CA06178-A3XX
Serial No. : 5

Report No. : 23KE0002-HO
Power : AC120V / 60Hz
Temp°C/Humi% : 26 / 69
Operator : Yoshiaki Iwasa

Mode / Remarks: Tx:2412MHz

LIMIT : FCC15C §15.207 (QP)
FCC15C §15.207 (AV)

Y. Iwasa

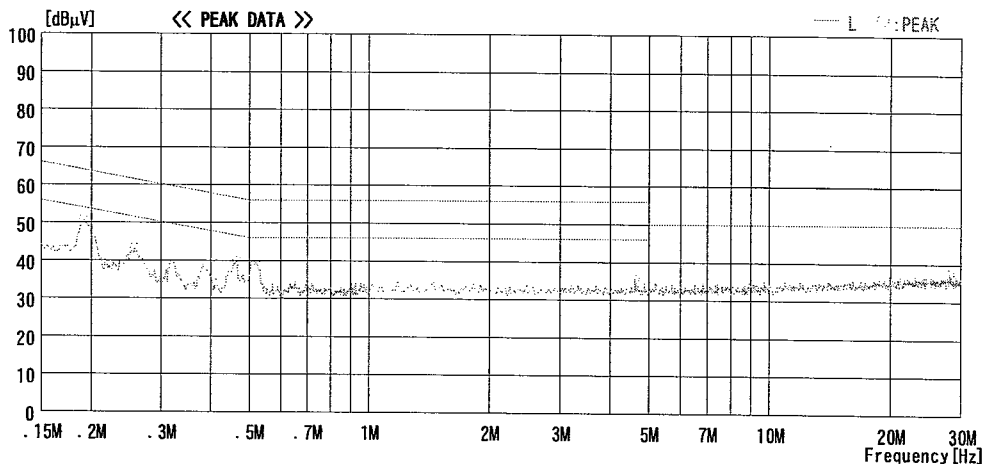
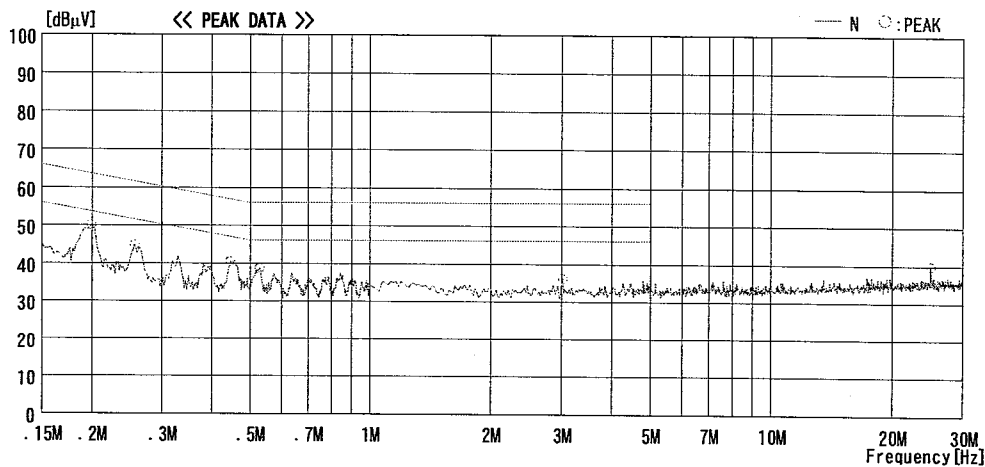


CHART:WITHOUT FACTOR, Peak hold data. Data is uncorrected.

Except for the above table : adequate margin data below the limits.

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Page:

CALCULATION: RESULT=READING+C. F (CurrentProbe+CABLE+Limiter)

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DATA OF CONDUCTED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2003/06/17 10:15:00

Applicant : FUJITSU FRONTECH LIMITED
Kind of EUT : Hand Held Terminal
Model No. : CA06178-A3XX
Serial No. : 5

Report No. : 23KE0002-HO
Power : AC120V / 60Hz
Temp°C/Humi% : 26 / 69
Operator : Yoshiaki Iwasa

Mode / Remarks: Tx:2437MHz

LIMIT : FCC15C §15.207 (QP)
FCC15C §15.207 (AV)

Y. Iwasa

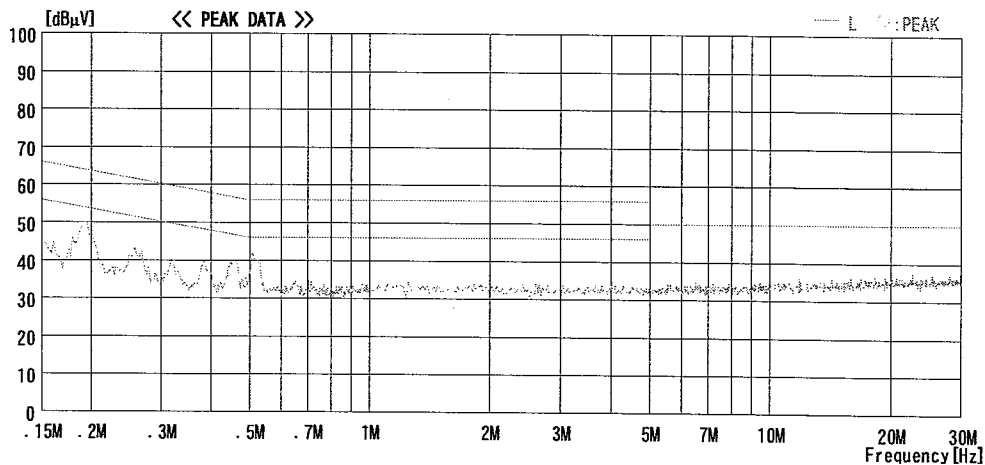
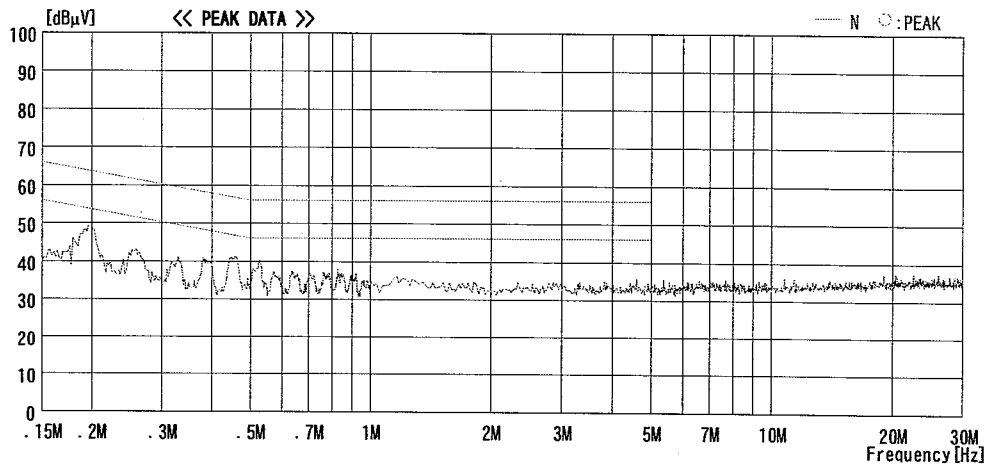


CHART:WITHOUT FACTOR, Peak hold data. Data is uncorrected.
Except for the above table : adequate margin data below the limits.
CALCURATION: RESULT=READING+C. F (CurrentProbe+CABLE+Limiter)

MLS-02

Page:

DATA OF CONDUCTED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2003/06/17 10:25:52

Applicant : FUJITSU FRONTECH LIMITED
Kind of EUT : Hand Held Terminal
Model No. : CA06178-A3XX
Serial No. : 5

Report No. : 23KE0002-HO
Power : AC120V / 60Hz
Temp°C/Humi% : 26 / 69
Operator : Yoshiaki Iwasa

Mode / Remarks: Tx:2462MHz

LIMIT : FCC15C §15.207 (QP)
FCC15C §15.207 (AV)

Y. Iwasa

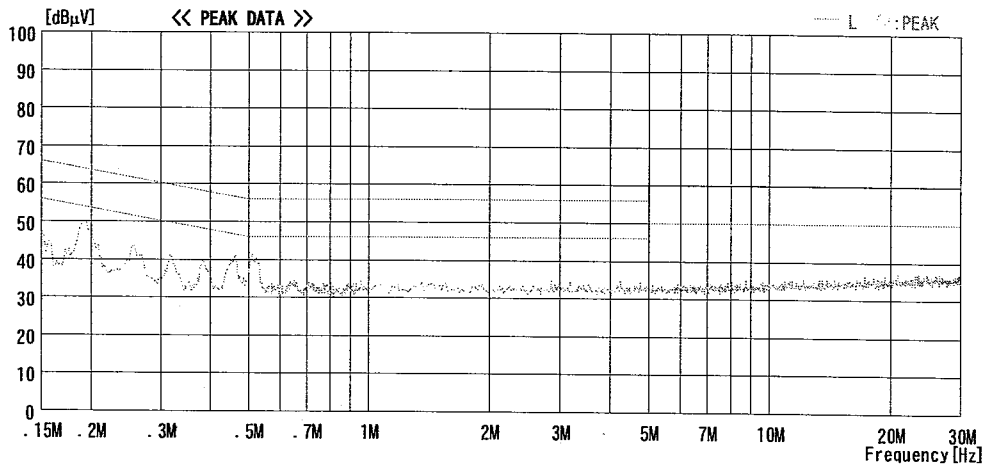
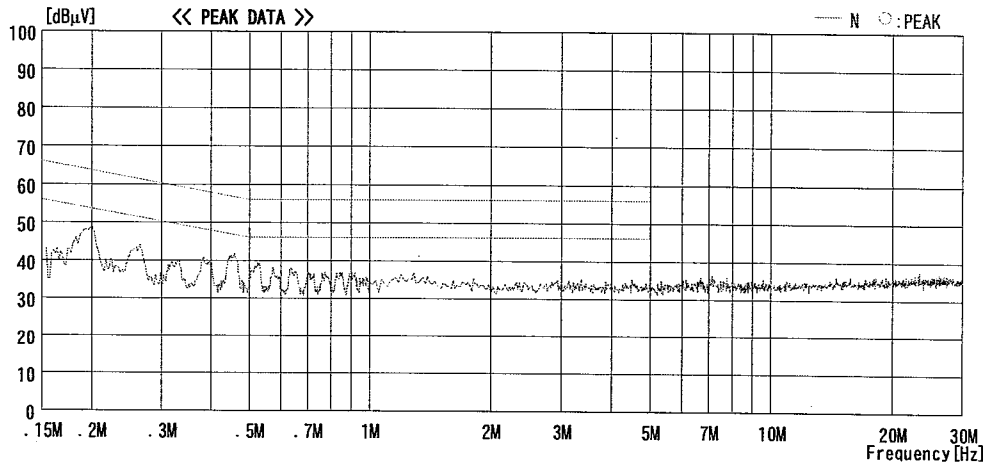


CHART:WITHOUT FACTOR, Peak hold data. Data is uncorrected.
Except for the above table : adequate margin data below the limits.
CALCURATION: RESULT=READING+C. F (CurrentProbe+CABLE+Limiter)

MLS-02

Page:

UL Apex Co., Ltd.

Head Office EMC Lab.

4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

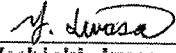
Telephone : +81 596 24 8116

Facsimile : +81 596 24 8124

MF060b(10.04.03)

DATA OF RADIATION TEST

UL Apex Co., Ltd. Head Office EMC Lab.
No.2 Semi Anechoic Chamber
Report No. : 23KE0002-HO

Applicant : FUJITSU FRONTTECH LIMITED
Kind of Equipment : Hand Held Terminal
Model No. : CA06178-A3XX
Serial No. : 4
Power : AC120V/60Hz
Mode : Tx (CH1:2412MHz)
Remarks : FCC ID : QL9-IPAD100INT, IC Number : 4432A-IPAD1001, DETECTOR : OP
Date : 6/26/2003
Test Distance : 3 m
Temperature : 28 °C
Humidity : 56 %
Regulation : FCC § 15.247(C)
Engineer :  Yoshiaki Iwasa

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS [dB μV/m]	MARGIN	
			HOR [dB μV]	VER [dB μV]					HOR [dB μV/m]	VER [dB μV/m]		HOR [dB]	VER [dB]
1.	69.37	BB	23.7	30.7	4.9	23.5	1.0	6.0	12.1	19.1	40.0	27.9	20.9
2.	99.01	BB	33.2	34.1	8.2	23.4	1.2	6.1	25.3	26.2	43.5	18.2	17.3
3.	123.02	BB	24.3	21.5	13.4	23.3	1.5	6.0	21.9	19.1	43.5	21.6	24.4
4.	356.42	BB	24.1	22.2	16.0	23.1	2.5	6.1	25.6	23.7	46.0	20.4	22.3
5.	393.29	BB	24.0	22.6	17.1	23.2	2.7	6.2	26.8	25.4	46.0	19.2	20.6
6.	836.00	BB	27.6	26.6	21.3	23.2	4.2	6.1	36.0	35.0	46.0	10.0	11.0

CALCULATION: READING + ANT. FACTOR + CABLE LOSS - AMP. GAIN + ATTEN.

Except for the above table:adequate margin data below the limits.
ANT. TYPE:30-300MHz Biconical, 300-1000MHz Logperiodic

Page:

DATA OF RADIATION TEST

UL Apex Co., Ltd. Head Office EMC Lab.
No.2 Semi Anechoic Chamber
Report No. : 23KE0002-HO

Applicant : FUJITSU FRONTTECH LIMITED
Kind of Equipment : Hand Held Terminal
Model No. : CA06178-A3XX
Serial No. : 4
Power : AC120V/60Hz
Mode : Tx (CH6:2437MHz)
Remarks : FCC ID : QL9-IPAD100INT, IC Number : 4432A-IPAD1001, DETECTOR : GP
Date : 6/26/2003
Test Distance : 3 m
Temperature : 28 °C
Humidity : 56 %
Regulation : FCC § 15.247(C)
Engineer : Yoshiaki Iwasa

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS [dB μV/m]	MARGIN	
			HOR [dB μV]	VER [dB μV]					HOR [dB μV/m]	VER [dB μV/m]		HOR [dB]	VER [dB]
1.	69.37	BB	24.5	30.6	4.9	23.5	1.0	6.0	12.9	19.0	40.0	27.1	21.0
2.	99.01	BB	32.3	33.0	8.2	23.4	1.2	6.1	24.4	25.1	43.5	19.1	18.4
3.	123.02	BB	24.6	21.6	13.4	23.3	1.5	6.0	22.2	19.2	43.5	21.3	24.3
4.	356.42	BB	24.2	22.2	16.0	23.1	2.5	6.1	25.7	23.7	46.0	20.3	22.3
5.	393.29	BB	23.8	22.2	17.1	23.2	2.7	6.2	26.6	25.0	46.0	19.4	21.0
6.	836.00	BB	28.3	26.7	21.3	23.2	4.2	6.1	36.7	35.1	46.0	9.3	10.9

CALCULATION: READING + ANT. FACTOR + CABLE LOSS - AMP. GAIN + ATTEN.

Except for the above table:adequate margin data below the limits.
ANT. TYPE:30-300MHz Biconical, 300-1000MHz Logperiodic

Page:

DATA OF RADIATION TEST

UL Apex Co., Ltd. Head Office EMC Lab.
No.2 Semi Anechoic Chamber
Report No. : 23KE0002-HO

Applicant : FUJITSU FRONTTECH LIMITED
Kind of Equipment : Hand Held Terminal
Model No. : CA06178-A3XX
Serial No. : 4
Power : AC120V/60Hz
Mode : Tx (CH11:2462MHz)
Remarks : FCC ID : QL9-IPAD100INT, IC Number : 4432A-IPAD1001, DETECTOR : QP
Date : 6/26/2003
Test Distance : 3 m
Temperature : 28 °C
Humidity : 56 %
Regulation : FCC § 15.247(C)
Engineer : *Y. Iwasa* : Yoshiaki Iwasa

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS [dB μV/m]	MARGIN	
			HOR [dB μV]	VER [dB μV]					HOR [dB μV/m]	VER [dB μV/m]		HOR [dB]	VER [dB]
1.	69.37	BB	25.3	22.8	4.9	23.5	1.0	6.0	13.7	11.2	40.0	26.3	28.8
2.	99.01	BB	32.2	22.1	8.2	23.4	1.2	6.1	24.3	14.2	43.5	19.2	29.3
3.	123.02	BB	24.4	26.6	13.4	23.3	1.5	6.0	22.0	24.2	43.5	21.5	19.3
4.	356.42	BB	24.2	22.8	16.0	23.1	2.5	6.1	25.7	24.3	46.0	20.3	21.7
5.	393.29	BB	23.8	22.1	17.1	23.2	2.7	6.2	26.6	24.9	46.0	19.4	21.1
6.	836.00	BB	28.3	26.6	21.3	23.2	4.2	6.1	36.7	35.0	46.0	9.3	11.0

CALCULATION: READING + ANT. FACTOR + CABLE LOSS - AMP. GAIN + ATTEN.

Except for the above table:adequate margin data below the limits.
ANT. TYPE:30-300MHz Biconical, 300-1000MHz Logperiodic

Page:

DATA OF SPURIOUS EMISSIONS(1GHz to 26GHz)

UL Apex Co., Ltd.
Head Office EMC Lab. No.2 Semi Anechoic Chamber

Company : FUJITSU FRONTECH LIMITED
Equipment : Hand Held Terminal
Model : CA06178-A3XX
Sample No. : 4
Power : AC120V/60Hz
Mode : Transmitting (CH1:2412MHz)
FCC ID : QL9-IPAD100INT
IC No. : 4432A-IPAD100I

REPORT NO : 23KE0002-HO
REGULATION : Fcc Part15 Subpart C 15.247(c)
TEST DISTANCE : 3m
DATE : 06/26/2003
TEMPERATURE : 26°C
HUMIDITY : 72%

Y. Iwasa

ENGINEER : Yoshiaki Iwasa

PK DETECT

No.	FREQ [MHz]	T/R READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Band-Pass Filter [dB]	RESULT		Limit PK [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
		[dBuV/m]	[dBuV/m]					[dBuV/m]	[dBuV/m]		[dB]	[dB]
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass												
0	1206.0	47.0	49.9	22.6	37.6	4.7	0.0	36.7	39.6	74.0	37.3	34.4
1	2038.0	42.7	46.7	30.3	36.9	6.0	0.0	42.1	46.1	74.0	31.9	27.9
2	2360.7	51.4	49.1	30.5	36.9	6.3	0.0	51.3	49.0	74.0	22.7	25.0
3	2400.0	62.5	65.0	30.5	36.9	6.3	0.0	62.4	64.9	106.8	44.4	41.9
4	2483.6	45.5	49.3	30.6	36.9	6.3	0.0	45.5	49.3	74.0	28.5	24.7
5	4076.0	46.6	48.9	33.2	36.8	8.1	0.0	51.1	53.4	74.0	22.9	20.6
6	4824.0	43.9	42.8	35.7	36.8	8.8	0.7	52.3	51.2	74.0	21.7	22.8
7	7236.0	40.0	41.0	37.7	36.5	10.7	0.2	52.1	53.1	74.0	21.9	20.9
8	9648.0	41.8	41.9	37.2	37.2	12.7	0.0	54.5	54.6	74.0	19.5	19.4
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass - Dfac												
9	12060.0	40.0	40.8	40.5	36.8	14.3	0.0	48.5	49.3	74.0	25.5	24.7
10	14472.0	40.9	38.7	43.0	35.3	15.8	0.0	54.9	52.7	74.0	19.1	21.3
11	16884.0	49.4	41.9	44.7	36.4	17.6	0.0	65.8	58.3	74.0	8.2	15.7
12	19296.0	43.7	44.2	40.5	36.0	19.0	0.0	57.7	58.2	74.0	16.3	15.8
13	21708.0	45.6	45.5	40.6	36.0	19.6	0.0	60.3	60.2	74.0	13.7	13.8
14	24120.0	46.1	47.0	40.3	36.9	21.0	0.0	61.0	61.9	74.0	13.0	12.1

AV DETECT

No.	FREQ [MHz]	T/R READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Band-Pass Filter [dB]	RESULT		Limit AV [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
		[dBuV/m]	[dBuV/m]					[dBuV/m]	[dBuV/m]		[dB]	[dB]
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass												
0	1206.0	34.4	39.0	22.6	37.6	4.7	0.0	24.1	28.7	54.0	29.9	25.3
1	2038.0	32.0	41.1	30.3	36.9	6.0	0.0	31.4	40.5	54.0	22.6	13.5
2	2360.7	41.9	39.5	30.5	36.9	6.3	0.0	41.8	39.4	54.0	12.2	14.6
3	2400.0	54.3	56.4	30.5	36.9	6.3	0.0	54.2	56.3	86.8	32.6	30.5
4	2483.6	33.1	37.2	30.6	36.9	6.3	0.0	33.1	37.2	54.0	20.9	16.8
5	4076.0	41.2	45.2	33.2	36.8	8.1	0.0	45.7	49.7	54.0	8.3	4.3
6	4824.0	30.4	31.3	35.7	36.8	8.8	0.7	38.8	39.7	54.0	15.2	14.3
7	7236.0	29.8	29.7	37.7	36.5	10.7	0.2	41.9	41.8	54.0	12.1	12.2
8	9648.0	30.3	31.5	37.2	37.2	12.7	0.0	43.0	44.2	54.0	11.0	9.8
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass												
9	12060.0	29.7	29.7	40.5	36.8	14.3	0.0	38.2	38.2	54.0	15.8	15.8
10	14472.0	28.8	28.8	43.0	35.3	15.8	0.0	42.8	42.8	54.0	11.2	11.2
11	16884.0	30.8	31.3	44.7	36.4	17.6	0.0	47.2	47.7	54.0	6.8	6.3
12	19296.0	31.1	31.1	40.5	36.0	19.0	0.0	45.1	45.1	54.0	8.9	8.9
13	21708.0	32.1	32.1	40.6	36.0	19.6	0.0	46.8	46.8	54.0	7.2	7.2
14	24120.0	33.2	33.2	40.3	36.9	21.0	0.0	48.1	48.1	54.0	6.0	5.9

Test Distance 1.0m : Distance Factor(Dfac) = 20log(3/1.0) = 9.5dB

*Except for the above table : All other spurious emissions were less than 20dB for the limit.

*In the frequency over the fifth harmonic, the noise from the EUT was not seen. The data above is its base noise.

*The limit values at frequencies excepting restricted bands indicated in 15.205 are values 20dB below lower

UL Apex Co., Ltd.

Head Office EMC Lab.

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MF060b(10.04.03)

DATA OF SPURIOUS EMISSIONS(1GHz to 26GHz)

UL Apex Co., Ltd.
Head Office EMC Lab. No.2 Semi Anechoic Chamber

Company : FUJITSU FRONTECH LIMITED
Equipment : Hand Held Terminal
Model : CA06178-A3XX
Sample No. : 5
Power : AC120V/60Hz
Mode : Transmitting (CH6:2437MHz)
FCC ID : QL9-IPAD100INT
IC No. : 4432A-IPAD100I

REPORT NO : 23KE0002-HO
REGULATION : Fcc Part15 Subpart C 15.247(c)
TEST DISTANCE : 3m
DATE : 06/26/2003
TEMPERATURE : 26°C
HUMIDITY : 72%

Y. Iwasa

ENGINEER : Yoshiaki Iwasa

PK DETECT

No.	FREQ [MHz]	T/R READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Band-Pass Filter [dB]	RESULT		Limit PK [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
		[dBuV/m]	[dBuV/m]	[dB/m]	[dB]	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dBuV/m]	[dB]	[dB]
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass												
0	1218.5	43.1	44.3	22.7	37.6	4.7	0.0	32.9	34.1	74.0	41.1	39.9
1	2385.7	54.1	51.6	30.5	36.9	6.3	0.0	54.0	51.5	74.0	20.0	22.5
2	2327.0	53.9	51.2	30.5	36.9	6.2	0.0	53.7	51.0	74.0	20.3	23.0
3	2400.0	45.1	45.2	30.5	36.9	6.3	0.0	45.0	45.1	106.8	61.8	61.7
4	2483.5	46.6	52.3	30.6	36.9	6.3	0.0	46.6	52.3	74.0	27.4	21.7
5	4126.0	43.7	50.3	33.2	36.8	8.2	0.0	48.3	54.9	74.0	25.7	19.1
6	4874.0	39.2	44.0	36.0	36.8	8.8	0.7	47.9	52.7	74.0	26.1	21.3
7	7311.0	39.9	40.6	37.8	36.6	10.8	0.3	52.2	52.9	74.0	21.8	21.1
8	9748.0	42.0	41.6	36.9	37.2	12.8	0.0	54.5	54.1	74.0	19.5	19.9
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass - Dfac												
9	12185.0	40.7	46.7	41.0	36.7	14.3	0.0	49.8	55.8	74.0	24.2	18.2
10	14622.0	39.7	39.9	43.2	35.5	15.9	0.0	53.8	54.0	74.0	20.2	20.0
11	17059.0	41.2	42.2	44.8	36.2	17.8	0.0	58.1	59.1	74.0	15.9	14.9
12	19496.0	43.3	43.2	40.5	36.0	19.0	0.0	57.3	57.2	74.0	16.7	16.8
13	21933.0	44.7	44.9	40.6	36.0	19.6	0.0	59.4	59.6	74.0	14.7	14.4
14	24370.0	46.6	45.6	40.3	36.9	21.0	0.0	61.5	60.5	74.0	12.5	13.5

AV DETECT

No.	FREQ [MHz]	T/R READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Band-Pass Filter [dB]	RESULT		Limit AV [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
		[dBuV/m]	[dBuV/m]	[dB/m]	[dB]	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dBuV/m]	[dB]	[dB]
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass												
0	1218.5	33.3	33.4	22.7	37.6	4.7	0.0	23.1	23.2	54.0	30.9	30.8
1	2385.7	43.9	42.2	30.5	36.9	6.3	0.0	43.8	42.1	54.0	10.2	11.9
2	2327.0	43.4	40.4	30.5	36.9	6.2	0.0	43.2	40.2	54.0	10.8	13.8
3	2400.0	35.7	35.2	30.5	36.9	6.3	0.0	35.6	35.1	86.8	51.2	51.7
4	2483.5	33.2	37.1	30.6	36.9	6.3	0.0	33.2	37.1	54.0	20.8	16.9
5	4126.0	36.6	47.9	33.2	36.8	8.2	0.0	41.2	52.5	54.0	12.8	1.5
6	4874.0	30.2	31.7	36.0	36.8	8.8	0.7	38.9	40.4	54.0	15.1	13.6
7	7311.0	29.8	29.8	37.8	36.6	10.8	0.3	42.1	42.1	54.0	11.9	11.9
8	9748.0	30.8	30.5	36.9	37.2	12.8	0.0	43.3	43.0	54.0	10.7	11.0
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass												
9	12185.0	29.9	35.6	41.0	36.7	14.3	0.0	39.0	44.7	54.0	15.0	9.3
10	14622.0	28.8	28.9	43.2	35.5	15.9	0.0	42.9	43.0	54.0	11.1	11.0
11	17059.0	31.0	30.8	44.8	36.2	17.8	0.0	47.9	47.7	54.0	6.1	6.3
12	19496.0	30.7	30.7	40.5	36.0	19.0	0.0	44.7	44.7	54.0	9.3	9.3
13	21933.0	32.1	32.1	40.6	36.0	19.6	0.0	46.8	46.8	54.0	7.2	7.2
14	24370.0	32.7	32.7	40.3	36.9	21.0	0.0	47.6	47.6	54.0	6.4	6.4

Test Distance 1.0m : Distance Factor(Dfac) = $20\log(3/1.0) = 9.5\text{dB}$

*Except for the above table : All other spurious emissions were less than 20dB for the limit.

*In the frequency over the fifth harmonic, the noise from the EUT was not seen. The data above is its base noise.

*The limit values at frequencies excepting restricted bands indicated in 15.205 are values 20dB below lower

UL Apex Co., Ltd.

Head Office EMC Lab.

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MF060b(10.04.03)

DATA OF SPURIOUS EMISSIONS(1GHz to 26GHz)

UL Apex Co., Ltd.
Head Office EMC Lab. No.2 Semi Anechoic Chamber

Company : FUJITSU FRONTECH LIMITED
Equipment : Hand Held Terminal
Model : CA06178-A3XX
Sample No. : 5
Power : AC120V/60Hz
Mode : Transmitting (CH11:2462MHz)
FCC ID : QL9-IPAD100INT
IC No. : 4432A-IPAD100I

REPORT NO : 23KE0002-HO
REGULATION : Fcc Part15 Subpart C 15.247(c)
TEST DISTANCE : 3m
DATE : 06/26/2003
TEMPERATURE : 26°C
HUMIDITY : 72%

Y. Iwasa

ENGINEER : Yoshiaki Iwasa

PK DETECT

No.	FREQ	T/R READING		ANT	AMP	CABLE	Band-Pass	RESULT		Limit	MARGIN	
		HOR	VER	Factor	GAIN	LOSS	Filter	HOR	VER	PK	HOR	VER
	[MHz]	[dBuV/m]		[dB/m]	[dB]	[dB]	[dB]	[dBuV/m]		[dBuV/m]	[dB]	[dB]
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass												
0	1231.0	44.1	46.7	22.7	37.6	4.7	0.0	33.9	36.5	74.0	40.1	37.5
1	2354.0	54.5	50.3	30.5	36.9	6.3	0.0	54.4	50.2	74.0	19.6	23.8
2	2400.0	52.9	51.1	30.5	36.9	6.3	0.0	52.8	51.0	106.8	54.0	55.8
3	2484.2	54.0	53.1	30.6	36.9	6.3	0.0	54.0	53.1	74.0	20.0	20.9
4	4176.0	43.6	49.3	33.3	36.8	8.2	0.0	48.3	54.0	74.0	25.7	20.0
5	4924.0	40.8	40.5	36.3	36.8	8.9	0.8	50.0	49.7	74.0	24.0	24.3
6	7386.0	40.2	40.8	37.9	36.6	10.8	0.3	52.6	53.2	74.0	21.4	20.8
7	9848.0	41.0	43.0	36.6	37.3	12.9	0.0	53.2	55.2	74.0	20.8	18.8
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass - Dfac												
8	12310.0	40.3	35.4	41.6	36.6	14.4	0.0	50.2	45.3	74.0	23.8	28.7
9	14772.0	39.3	31.5	43.3	35.6	16.0	0.0	53.5	45.7	74.0	20.5	28.3
10	17234.0	42.5	32.0	45.4	36.2	17.9	0.0	60.1	49.6	74.0	13.9	24.4
11	19696.0	44.4	44.5	40.5	36.0	19.0	0.0	58.4	58.5	74.0	15.6	15.5
12	22158.0	46.0	46.0	40.6	36.0	19.6	0.0	60.7	60.7	74.0	13.3	13.3
13	24620.0	46.4	46.2	40.3	36.9	21.0	0.0	61.3	61.1	74.0	12.7	12.9

AV DETECT

No.	FREQ [MHz]	T/R READING [dBuV/m]		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Band-Pass Filter [dB]	RESULT [dBuV/m]		Limit AV [dBuV/m]	MARGIN [dB]	
		HOR	VER					HOR	VER		HOR	VER
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass												
0	1231.0	33.9	35.7	22.7	37.6	4.7	0.0	23.7	25.5	54.0	30.3	28.5
1	2354.0	46.3	36.2	30.5	36.9	6.3	0.0	46.2	36.1	54.0	7.8	17.9
2	2400.0	48.0	46.4	30.5	36.9	6.3	0.0	47.9	46.3	86.8	38.9	40.5
3	2484.2	44.1	45.6	30.6	36.9	6.3	0.0	44.1	45.6	54.0	9.9	8.4
4	4176.0	36.7	46.0	33.3	36.8	8.2	0.0	41.4	50.7	54.0	12.6	3.3
5	4924.0	30.4	30.2	36.3	36.8	8.9	0.8	39.6	39.4	54.0	14.4	14.6
6	7386.0	29.9	29.8	37.9	36.6	10.8	0.3	42.3	42.2	54.0	11.7	11.8
7	9848.0	31.0	31.0	36.6	37.3	12.9	0.0	43.2	43.2	54.0	10.8	10.8
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass												
8	12310.0	29.6	24.2	41.0	36.6	14.4	0.0	38.9	33.5	54.0	15.1	20.5
9	14772.0	29.1	19.8	43.2	35.6	16.0	0.0	43.2	33.9	54.0	10.8	20.1
10	17234.0	31.4	22.0	44.8	36.2	17.9	0.0	48.4	39.0	54.0	5.6	15.0
11	19696.0	31.0	31.1	40.5	36.0	19.0	0.0	45.0	45.1	54.0	9.0	8.9
12	22158.0	32.5	32.5	40.6	36.0	19.6	0.0	47.2	47.2	54.0	6.8	6.8
13	24620.0	33.1	33.1	40.3	36.9	21.0	0.0	48.0	48.0	54.0	6.0	6.0

Test Distance 1.0m : Distance Factor(Dfac) = 20log(3/1.0) = 9.5dB

*Except for the above table : All other spurious emissions were less than 20dB for the limit.

*In the frequency over the fifth harmonic, the noise from the EUT was not seen. The data above is its base noise.

*The limit values at frequencies excepting restricted bands indicated in 15.205 are values 20dB below lower

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MF060b(10.04.03)

DATA OF 6dB BANDWIDTH (CONDUCTED)

UL Apex Co., Ltd.
Head Office EMC Lab. No.3 Shield Room

Company : FUJITSU FRONTECH LIMITED
Equipment : Hand Held Terminal
Model : CA06178-A3XX
Sample No. : 4
Power : AC120V/60Hz
Mode : Tx (ch1,6,11)
FCC ID : QL9-IPAD100INT
IC No. : 4432A-IPAD100I

REPORT NO : 23KE0002-HO
REGULATION : Fcc Part15 Subpart C 15.247(a)(2)
TEST DISTANCE : -
DATE : 06/27/2003
TEMPERATURE : 21°C
HUMIDITY : 61%

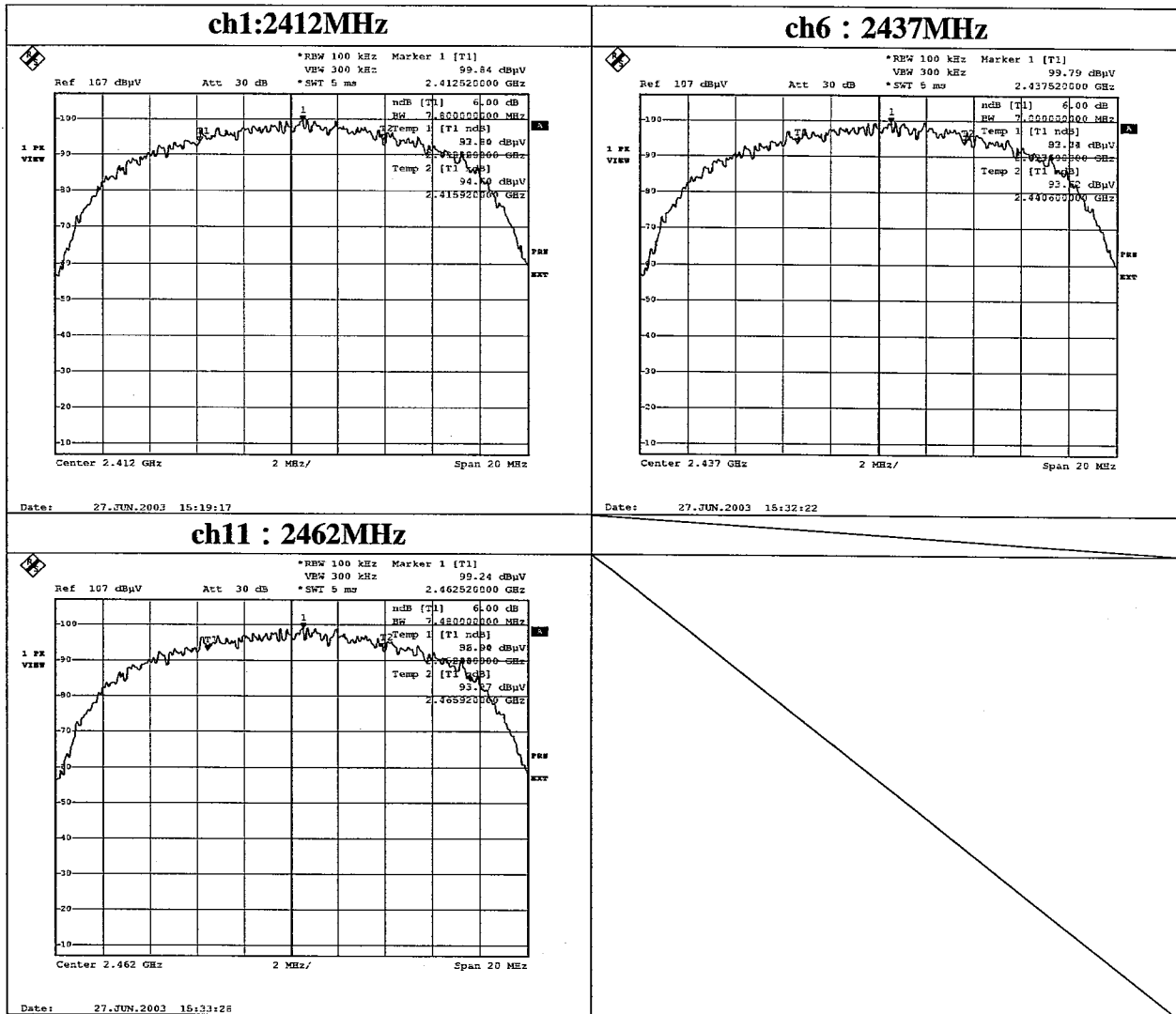


ENGINEER : Yoshiaki Iwasa

PK DETECT(RBW 100kHz,VBW 300kHz)

CH	FREQ	6dB Bandwidth	Limit
	[MHz]	[MHz]	[kHz]
ch1	2412.0	7.800	500.0
ch6	2437.0	7.000	500.0
ch11	2462.0	7.480	500.0

DATA OF 6 dB BANDWIDTH (CONDUCTED)



DATA OF PEAK OUTPUT POWER (CONDUCTED)

UL Apex Co., Ltd.
Head Office EMC Lab. No.3 Shield Room

Company : FUJITSU FRONTECH LIMITED
Equipment : Hand Held Terminal
Model : CA06178-A3XX
Sample No. : 4
Power : AC120V/60Hz
Mode : Tx(ch1,6,11)
FCC ID : QL9-IPAD100INT
IC No. : 4432A-IPAD100I

REPORT NO : 23KE0002-HO
REGULATION : Fcc Part15 Subpart C 15.247(b)(3)
TEST DISTANCE : -
DATE : 06/27/2003
TEMPERATURE : 21℃
HUMIDITY : 61%

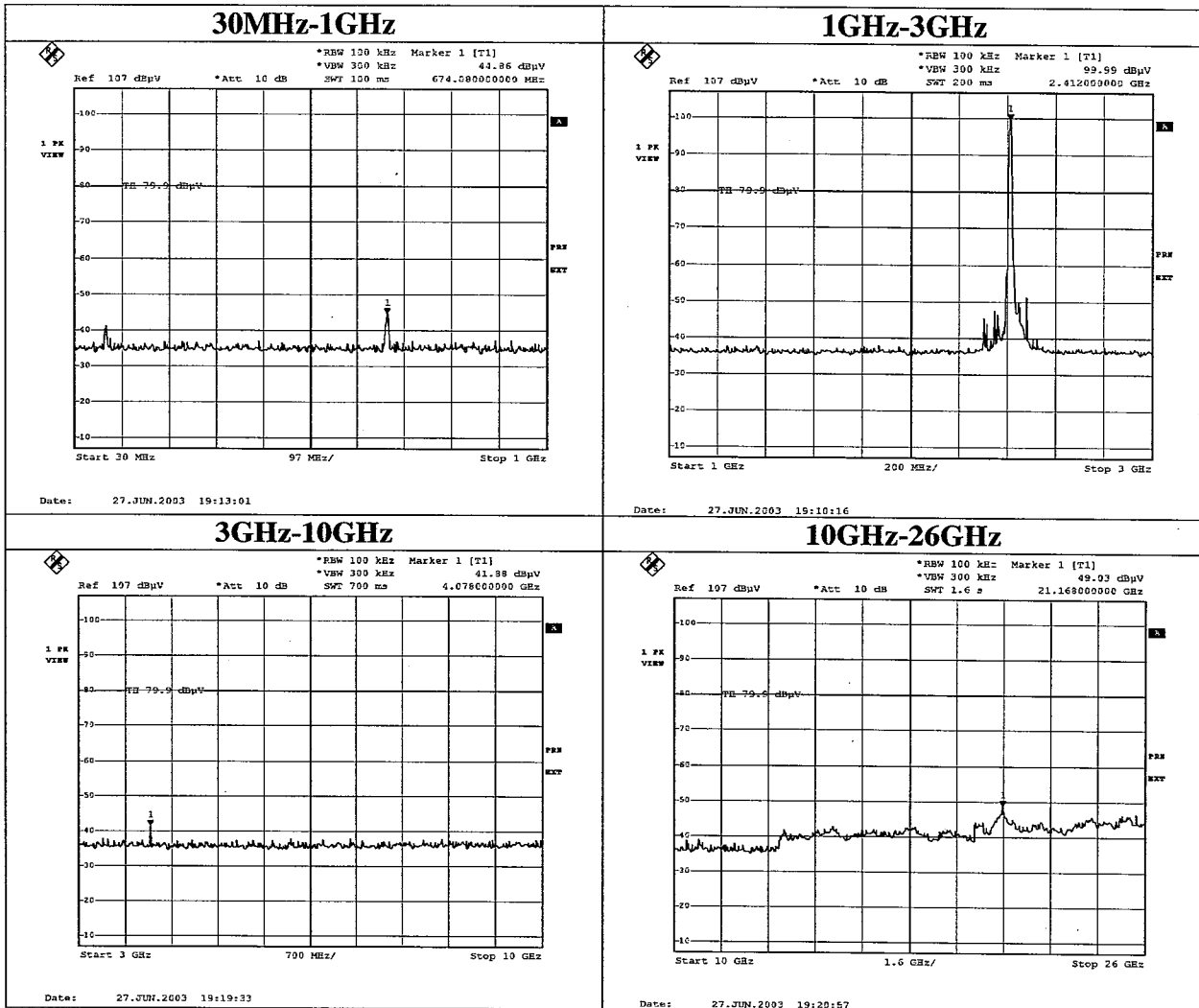
Y. Iwasa

ENGINEER : Yoshiaki Iwasa

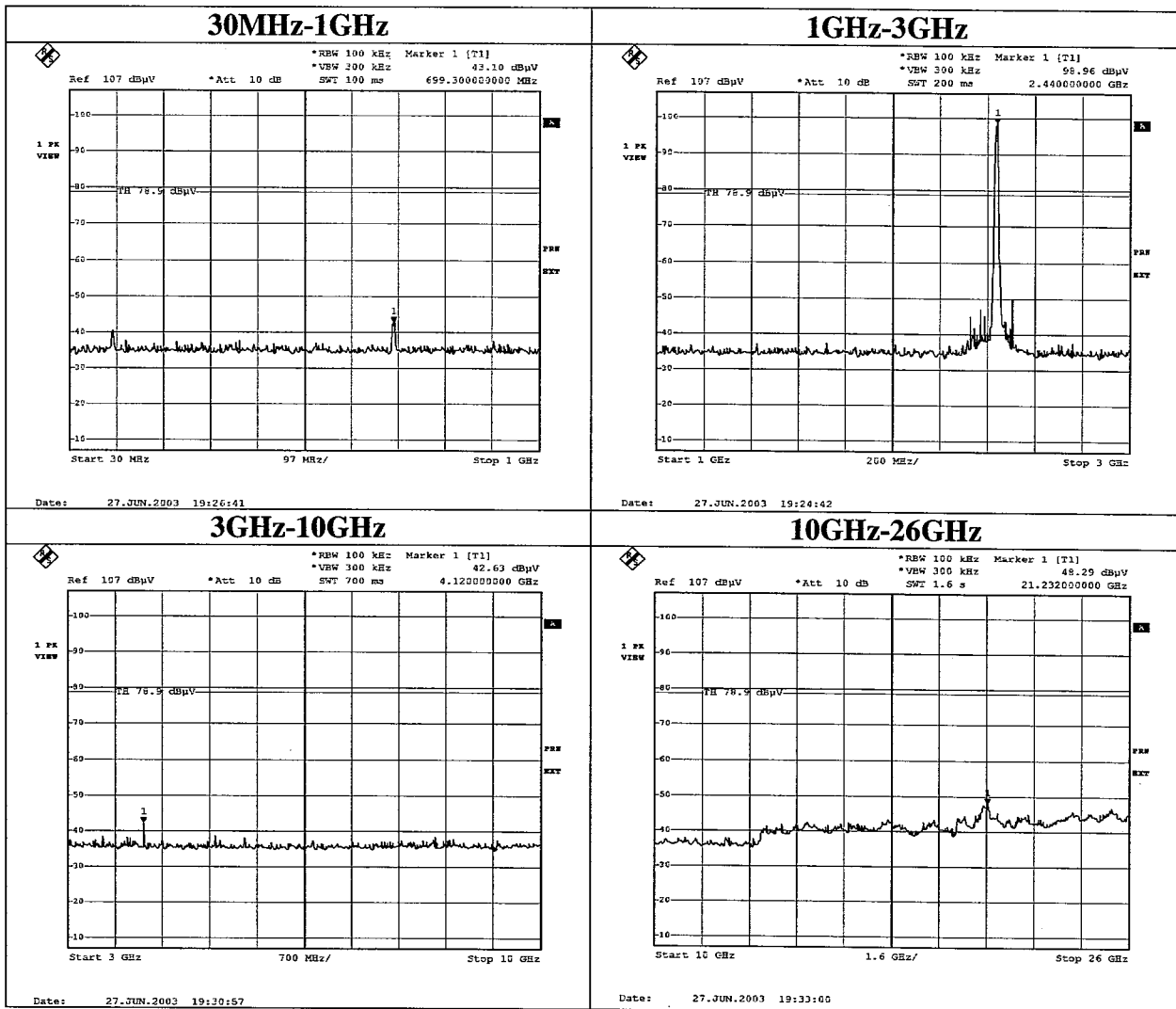
ch	FREQ [MHz]	Power Meter Reading [dBm]	Cable Loss [dB]	ATTEN. [dB]	Result [dBm]	Limit (1W) [dBm]	Margin [dB]
ch1	2412.0	7.20	0.0	10.0	17.2	30.0	12.8
ch6	2437.0	7.20	0.0	10.0	17.2	30.0	12.8
ch11	2462.0	6.70	0.0	10.0	16.7	30.0	13.3

Sample Calculation:
Result = Reading + Cable Loss

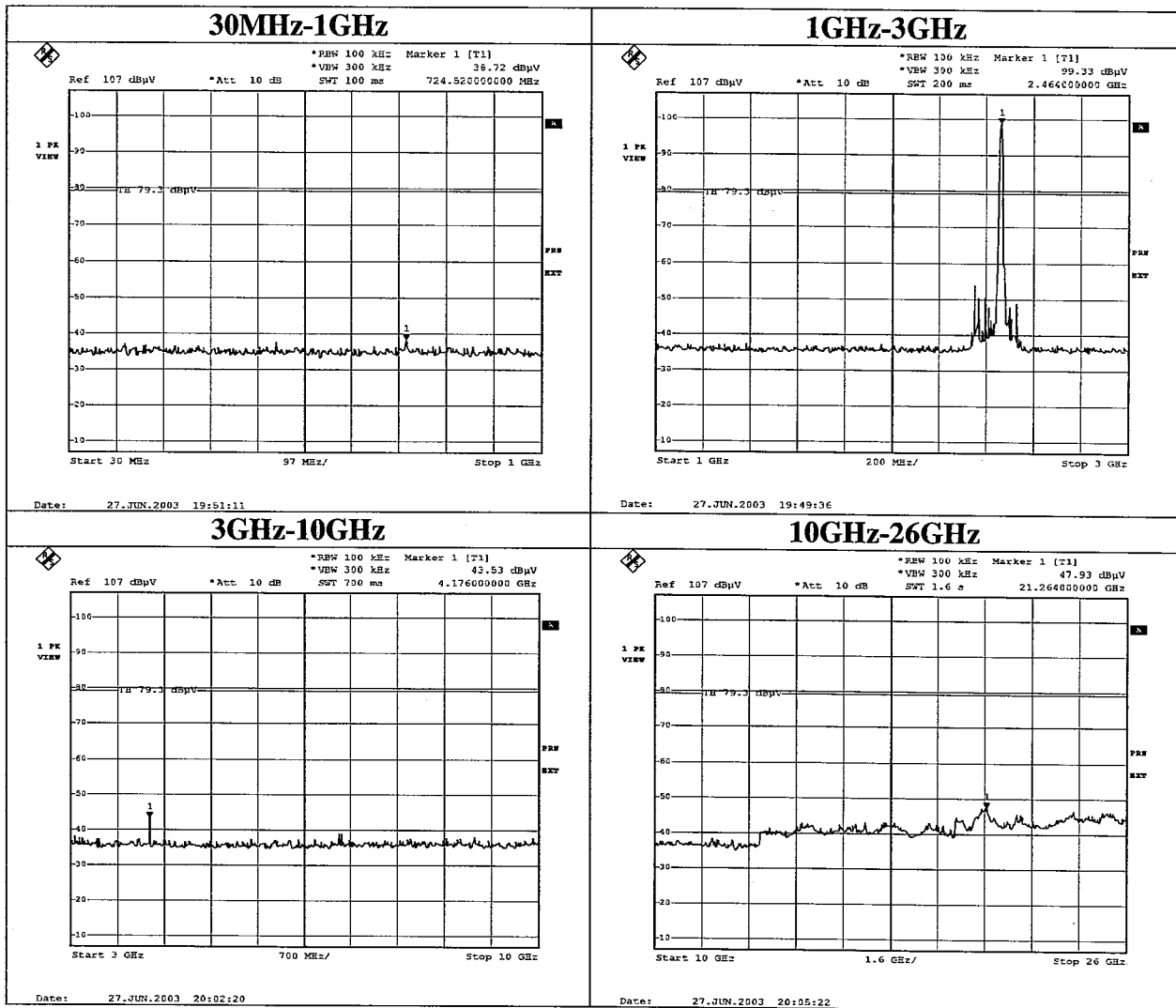
DATA OF OUT BAND EMISSIONS (ch1 : 2412MHz) (Conducted)



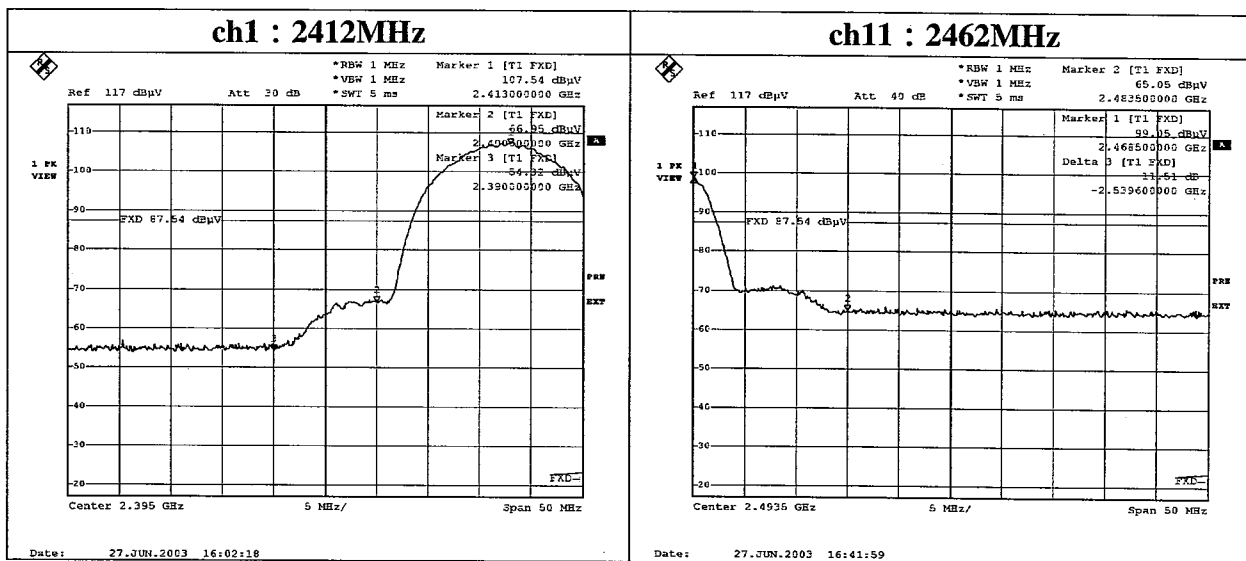
DATA OF OUT BAND EMISSIONS (ch6 : 2437MHz) (Conducted)



DATA OF OUT BAND EMISSIONS (ch11 : 2462MHz) (Conducted)



DATA OF RESTRICTED BAND EDGES (CONDUCTED)



DATA OF POWER DENSITY(CONDUCTED)

UL Apex Co., Ltd.

Head Office EMC Lab. No.3 Shield Room

Company : FUJITSU FRONTECH LIMITED
Equipment : Hand Held Terminal
Model : CA06178-A3XX
Sample No. : 4
Power : AC120V/60Hz
Mode : Tx (ch1,6,11)
FCC ID : QL9-IPAD100INT
IC No. : 4432A-IPAD100I

REPORT NO : 23KE0002-HO
REGULATION : Fcc Part15 Subpart C 15.247(d)
TEST DISTANCE : -
DATE : 06/27/2003
TEMPERATURE : 21℃
HUMIDITY : 61%



ENGINEER : Yoshiaki Iwasa

ch	FREQ [MHz]	S/A Reading [dBm]	Cable Loss [dB]	ATTEN. [dB]	Result [dBm]	Limit [dBm]	Margin [dB]
ch1	2412.3	-20.73	2.1	10.0	-8.6	8.0	16.6
ch6	2437.3	-20.66	2.1	10.0	-8.6	8.0	16.6
ch11	2462.3	-21.09	2.1	10.0	-9.0	8.0	17.0

Sample Calculation:

Result = Reading + Cable Loss

UL Apex Co., Ltd.

Head Office EMC Lab.

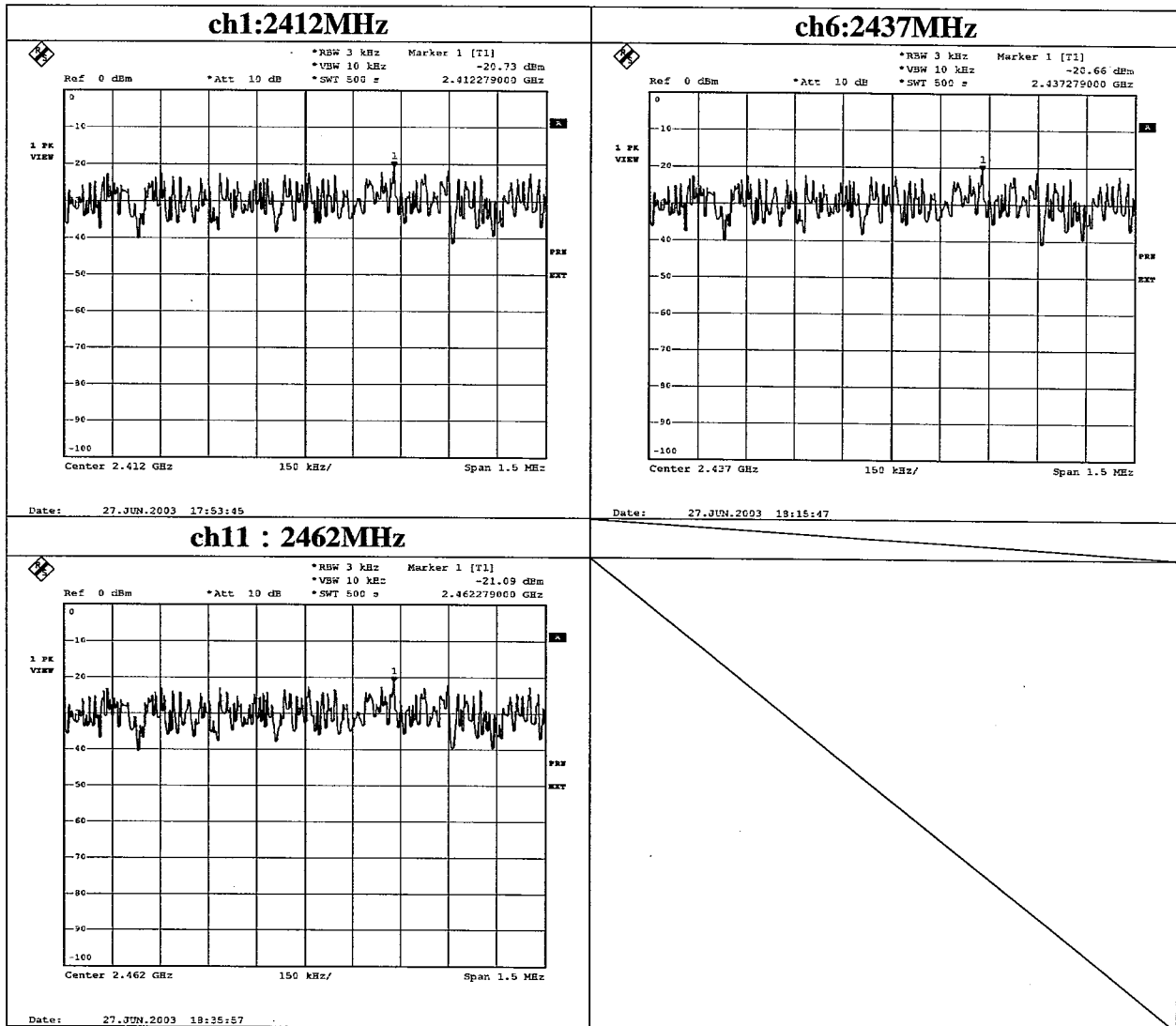
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MF060b(10.04.03)

DATA OF POWER DENSITY



DATA OF 99% OCCUPIED BANDWIDTH

