



EMI TEST REPORT

Test Report No. : 26LE0147-YK-A

Applicant : SOKKIA CO., LTD.
Type of Equipment : Bluetooth Module
Model No. : SM-BT1
FCC ID : S6MSMBT1
Test Standard : FCC Part15 Subpart C,
Section 15.207, Section 15.209, Section 15.247: 2006
Test Result : Complied

1. This test report shall not be reproduced except in full, 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 the above regulation.
4. The test results in this test report are traceable to the national or international standards.

Date of test: July 21, 26, 27, 28, 31 and August 4, 21 and September 1, 2006

Tested by:

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Tatsuya Arai

&

F. Matsuo
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Tested by:

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Akira Sato

Approved by:

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Osamu Watatani
Site Manager of Yamakita EMC Lab.

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MF060b (14.06.06)

Table of Contents	Page
1 Applicant Information	3
2 Product Description	4
3 Test Specification, Procedures and Results	5
4 System Test Configuration	7
5 Conducted Emission	8
6 Carrier Frequency Separation	9
7 20dB Bandwidth	9
8 Number of Hopping Frequency	9
9 Dwell time	9
10 Maximum Peak Output Power	9
11 Out of Band Emissions (Antenna Port Conducted)	9
12 Out of Band Emissions (Radiated)	10
 <u>Contents of Appendixes</u>	 11
APPENDIX 1: Photographs of test setup	12
APPENDIX 2: Test Data	19
APPENDIX 3: Test instruments	81

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1 Applicant Information

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Brand Name : SOKKIA
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2 Product Description

Type of Equipment : Bluetooth Module

Model No. : SM-BT1

Serial No. : SMBT10001

Rating : DC3.3V

Country of Manufacture : Japan

Receipt Date of Sample : July 20, 2006

Condition of EUT : Production prototype
(Not for Sale: This sample is equivalent to mass-produced items.)

Modification of EUT : No modification by the test lab.

Model: SM-BT1 (referred to as the EUT in this report) is a Bluetooth Module.

Clock frequency : 32.768kHz, 24MHz

Equipment type : Transceiver

Frequency band : 2402-2480MHz

Bandwidth & Channel spacing: 79MHz & 1MHz

Type of modulation : FHSS

Antenna type : Chip, Dipole

Antenna connector type : SMA for Dipole antenna

Antenna gain : -2dBi (Chip), +2dBi (Dipole)

Mode of operation : Duplex

ITU code : F1D

Operating temperature range: -20 to +70 deg.C.

FCC Part15.31 (e)

The modular transmitter does not have its own power supply, so that the regulated power of 3.3V is supplied from the end product. Therefore the use of this device is limited to the end product which has 3.3V stabilized power source.

FCC Part15.203 & 204 (c) Antenna requirement

This module can select two antennas, one is a chip mounted antenna that cannot removed by user, and the other is a dipole antenna. The Dipole antenna of this equipment is connected with U.FL (Board side) and SMA (Antenna side) that cannot be access by user (Please see Installation description).

Therefore the equipment complies with the requirement.

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3 Test Specification, Procedures and Results

3.1 Test specification

Test specification : FCC Part15 Subpart C: 2006
Title : FCC 47CFR Part15 Radio Frequency Device Subpart C Intentional Radiators
Section 15.207 Conducted limits
Section 15.209 Radiated emission limits, general requirements
Section 15.247 Operation within the bands 902-928MHz, 2400-2483.5MHz,
and 5725-5850MHz

3.2 Procedures & Results

Item	Test Procedure	Specification	Remarks	Deviation	Worst Margin	Results
Conducted emission	ANSI C63.4:2003 7. AC powerline conducted emission measurements	Section 15.207	-	N/A	5.5dB (0.1500MHz, L1, QP, Tx 2402MHz, Chip antenna)	Complied
Carrier Frequency Separation	ANSI C63.4:2003 13. Measurement of intentional radiators	Section15.247 (a)(1)	Conducted	N/A	*See data.	Complied
20dB Bandwidth	ANSI C63.4:2003 13. Measurement of intentional radiators	Section15.247 (a)(1)	Conducted	N/A		Complied
Number of Hopping Frequency	ANSI C63.4:2003 13. Measurement of intentional radiators	Section15.247 (a)(1)(iii)	Conducted	N/A		Complied
Dwell time	ANSI C63.4:2003 13. Measurement of intentional radiators	Section15.247 (a)(1)(iii)	Conducted	N/A		Complied
Maximum Peak Output Power	ANSI C63.4:2003 13. Measurement of intentional radiators	Section15.247 (b)(1)	Conducted	N/A		Complied
Spurious Emission	ANSI C63.4:2003 13. Measurement of intentional radiators	Section15.209 Section15.247(d)	Conducted / Radiated	N/A *1)	2.6dB (2483.50MHz, AV, Vertical, Tx 2480MHz, EUT alone, Dipole antenna)	Complied

The measurements also referred to FCC Public Notice DA 00-705 "Guidance on Measurement for Frequency Hopping Spread Spectrum Systems".

*1) No noise emission was detected above 10GHz.

* No addition, exclusion nor deviation has been made from the standard.

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3.3 Uncertainty

Conducted emission

The measurement uncertainty (with 95% confidence level) for this test is ± 2.7 dB.

The data listed in this test report has enough margin, more than site margin.

Antenna port conducted test

The measurement uncertainty (with 95% confidence level) for this test is ± 0.4 dB.

Spurious emission test (Radiated)

The measurement uncertainty (with 95% confidence level) for this test using Biconical antenna is ± 4.5 dB.

The measurement uncertainty (with 95% confidence level) for this test using Logperiodic antenna is ± 4.3 dB.

The measurement uncertainty (with 95% confidence level) for this test using Horn antenna is ± 5.2 dB.

The data listed in this report meets the limits unless the uncertainty is taken into consideration.

3.4 Test Location

UL Apex Co., Ltd. Yamakita EMC Lab.

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Telephone number : +81 465 77 1011

Facsimile number : +81 465 77 2112

NVLAP Lab. code : 200441-0

No. 1 test site has been fully described in a report submitted to FCC office, and accepted on August 26, 2005 (Registration No.: 95486).

IC Registration No. : IC3489A

No. 2 test site has been fully described in a report submitted to FCC office, and accepted on April 4, 2005 (Registration No.: 466226).

IC Registration No. : IC3489A-2

No. 1 anechoic chamber has been fully described in a report submitted to FCC office, and accepted on November 2, 2005 (Registration No.: 95967).

IC Registration No. : IC3489A-B

Test room	Width x Depth x Height (m)	Test room	Width x Depth x Height (m)
No.1 shielded room	8.0 x 5.0 x 2.5	No.1 EMS lab. (Semi-anechoic chamber)	10.0 x 7.5 x 5.7
No.2 shielded room	5.0 x 4.0 x 2.5		
No.3 shielded room	4.0 x 5.0 x 2.7		

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4 System Test Configuration

4.1 Justification

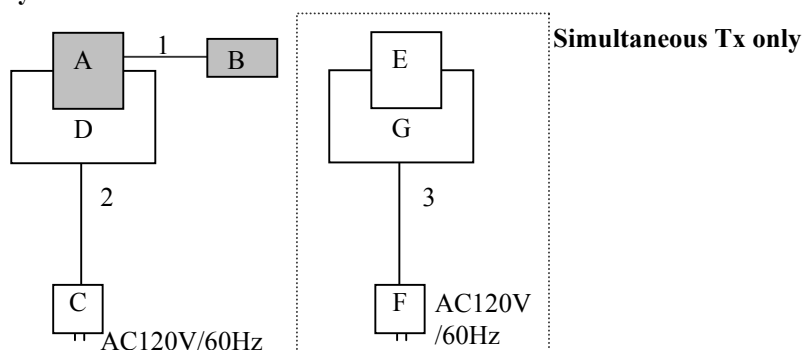
The system was configured in typical fashion (as a customer would normally use it) for testing.

Test mode: Transmitting (Packet size: DH5), EUT alone
- Low channel : 2402MHz
- Middle channel : 2441MHz
- High channel : 2480MHz
- Hopping
- Inquiry
Transmitting (Packet size: DH5), EUT + Another module (Hopping) *1
- Low channel : 2402MHz
- Middle channel : 2441MHz
- High channel : 2480MHz

*1) Since the EUT has the case that it is mounted with another Bluetooth module in the same equipment, test was also performed to simulate the simultaneous transmitting. As for the specification of the module, refer to the following table.

*Remarks: Test was not performed at AFH mode, because the decrease of number of channel (min: 20ch) at AFH mode does not influence on the output power and bandwidth of the EUT.
However, the limit level 125mW of AFH mode was used for the test.

4.2 Configuration of Tested System



* Test data was taken under worst case conditions.

Description of EUT and support equipment

No.	Item	Model number	Serial number	Manufacturer	FCC ID (Remarks)
A	Bluetooth module	SM-BT1	SMBT10001	SOKKIA	S6MSMBT1 (EUT)
B	Dipole antenna	-	-	-	(EUT)
C	AC adapter	GP05-US0510	-	Akizuki denshi	-
D	EVA-board	-	-	-	(jig)
E	Bluetooth module	Z1	0000618	SOKKIA	S6MZ1
F	AC adapter	NP12-1S0912	02023	Go Forward Enterprise Corp.	-
G	EVA-board	-	-	-	(jig)

List of cables used

No.	Name	Length (m)	Shield		Remark
			Connector	Cable	
1	Antenna cable	0.07	Shielded	Shielded	-
2	DC cable	1.6	Unshielded	Unshielded	-
3	DC cable	1.6	Unshielded	Unshielded	-

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5 Conducted Emissions

5.1 Operating environment

The test was carried out in No.2 shielded room.

5.2 Test configuration

EUT was placed on a wooden platform of nominal size, 1m by 1.8m, raised 80cm above the conducting ground plane. The rear of tabletop was located 40cm to the vertical conducting plane. The rear of peripherals was 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 a Line Impedance Stabilization Network (LISN) and excess AC cable was bundled in center.

A drawing of the set up is shown in the photos of Appendix 1.

5.3 Test conditions

Frequency range : 0.15 - 30MHz
EUT operation mode : Transmitting

5.4 Test procedure

The EUT was connected to a LISN.

An overview sweep with peak detection has been performed.

The Conducted emission measurements were made with the following detector function of the test receiver.

Detector: QP/AV
IF Bandwidth: 9kHz

5.5 Results

Summary of the test results : Pass
Test data : APPENDIX 2 Page 19 to 26

Date : August 4, 2006 Test engineer : Tatsuya Arai

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6 Carrier Frequency Separation

Test Procedure

The carrier frequency separation was measured with a spectrum analyzer connected to the antenna port.

Summary of the test results: Pass
Date: July 27, 2006

Test data: APPENDIX 2 Page 27
Test engineer : Tatsuya Arai

7 20dB Bandwidth

Test Procedure

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

Summary of the test results: Pass
Date: July 27, 2006

Test data: APPENDIX 2 Page 28
Test engineer : Tatsuya Arai

8 Number of Hopping Frequency

Test Procedure

The Number of Hopping Frequency was measured with a spectrum analyzer connected to the antenna port.

Summary of the test results: Pass
Date: July 27, 2006

Test data: APPENDIX 2 Page 29 to 31
Test engineer : Tatsuya Arai

9 Dwell time

Test Procedure

The Dwell time was measured with a spectrum analyzer connected to the antenna port.

Pre-check was performed with the packet type of DH1, DH3 and DH5. DH5, which had the longest dwell time, was chosen for the final measurement.

Summary of the test results: Pass
Date: July 27 and September 1, 2006

Test data: APPENDIX 2 Page 32 to 35
Test engineer : Tatsuya Arai

10 Maximum Peak Output Power

Test Procedure

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

Summary of the test results: Pass
Date: July 27, 2006

Test data: APPENDIX 2 Page 36
Test engineer : Tatsuya Arai

11 Out of Band Emissions (Antenna Port Conducted)

Test Procedure

The Out of Band Emissions was measured with a spectrum analyzer connected to the antenna port.

Summary of the test results: Pass
Date: July 27, 2006

Test data: APPENDIX 2 Page 37 to 42
Test engineer : Tatsuya Arai

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12 Out of Band Emissions (Radiated)

12.1 Operating environment

The test was carried out in No.1/No.2 open site.

12.2 Test configuration

EUT was placed on a urethane platform of nominal size, 0.5m by 0.5m, raised 80cm above the conducting ground plane. A drawing of the set up is shown in the photos of Appendix 1.

12.3 Test conditions

Frequency range : 30MHz - 26GHz
 Test distance : 3m (30MHz-18GHz), 1m (18-26GHz) *1
 EUT operation mode : Transmitting

12.4 Test procedure

The Radiated Electric Field Strength intensity has been measured with a ground plane and at a distance of 3m and 1m. The measuring antenna height was varied between 1 and 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.

Measurements were performed with QP, PK, and AV detector.

The radiated emission measurements were made with the following detector function of the test receiver.

When using Spectrum analyzer, the test was made with adjusting span to zero by using peak hold.

Frequency	Below 1GHz	Above 1GHz
Instrument used	Test Receiver	Spectrum Analyzer
Detector IF	QP: BW 120kHz	PK: RBW: 1MHz/VBW: 1MHz, AV: RBW: 1MHz/VBW: 10Hz
Bandwidth		

The EUT and another module were previously checked at each position of three axes X, Y and Z. The position in which the maximum noise occurred was chosen to put into measurement. See the table below and photographs in page 17 and 18. With the position, the noise levels of all the frequencies were measured.

	Below 1GHz		Above 1GHz	
	Module	Antenna	Module	Antenna
Chip antenna (with module)	-	Horizontal: X, Vertical: X	-	Horizontal: Z, Vertical: Y
Dipole antenna	Horizontal: X, Vertical: X	Horizontal: X, Vertical: X	Horizontal: Z, Vertical: Z	Horizontal: Y, Vertical: X
Another module	-	Horizontal: X, Vertical: X	-	Horizontal: X, Vertical: Z

*1) Limit for 1m distance was calculated using the following formula:

$$1m \text{ limit [dB}\mu\text{V/m]} = 15.209 \text{ limit [dB}\mu\text{V/m]} + 20 \log (3m/1m) \text{ [dB]}$$

12.5 Results

Summary of the test results : Pass
 Test data : APPENDIX 2 Page 43 to 78
 Date : July 21, 26, 28, 31 and August 21, 2006
 Test engineer : Tatsuya Arai, Fumiaki Matsuo, Toyokazu Imamura and Akira Sato

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APPENDIX 1: Photographs of test setup

Page 12 - 13	:	Conducted emission
Page 14 - 16	:	Radiated emission
Page 17 - 18	:	Pre-check of the worst position

APPENDIX 2: Test Data

Page 19 - 26	:	Conducted emission
Page 27	:	Carrier Frequency Separation
Page 28	:	20dB Bandwidth
Page 29 - 31	:	Number of Hopping Frequency
Page 32 - 35	:	Dwell time
Page 36	:	Maximum Peak Output Power
Page 37 - 42	:	Out of Band Emissions (Antenna Port Conducted)
Page 43 - 78	:	Out of Band Emissions (Radiated)
43-60		EUT alone
43-51		Chip antenna
52-60		Dipole antenna
61-78		EUT + Another module
61-69		Chip antenna
70-78		Dipole antenna
Page 79 - 80	:	Occupied Bandwidth

APPENDIX 3: Test instruments

Page 81 - 82	:	Test instruments
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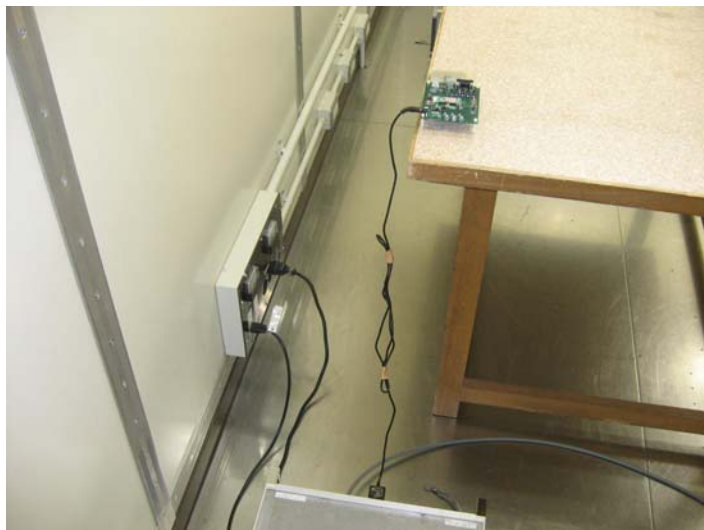
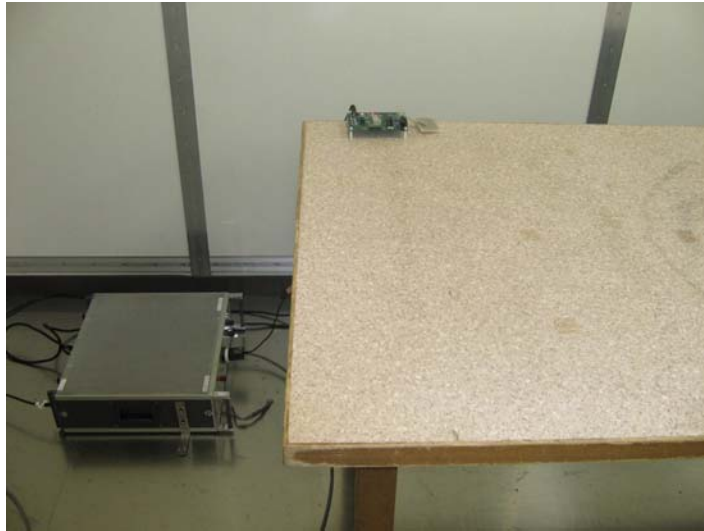
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Conducted emission (Chip antenna)



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Conducted emission (Dipole antenna)



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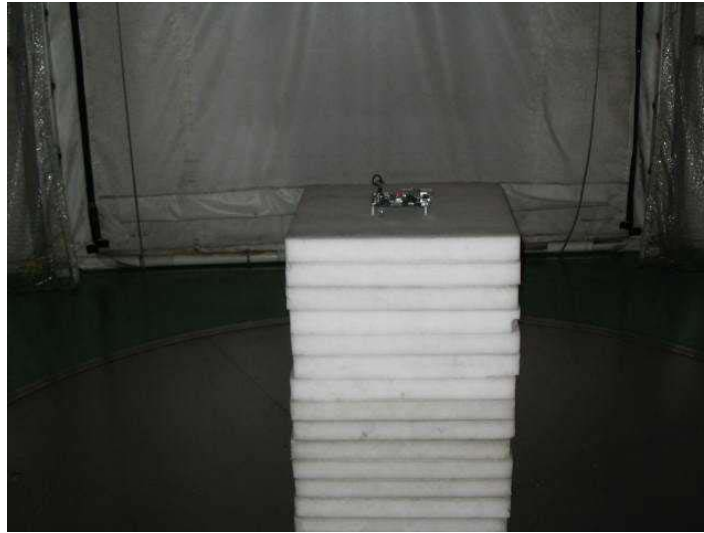
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Radiated emission (EUT alone, Chip antenna)



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Radiated emission (EUT alone, Dipole antenna)



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Radiated emission (EUT + Another module)

Chip antenna



Dipole antenna



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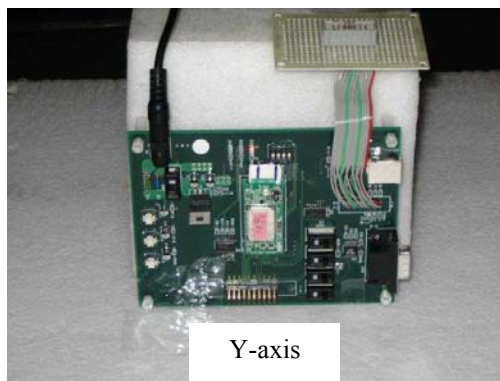
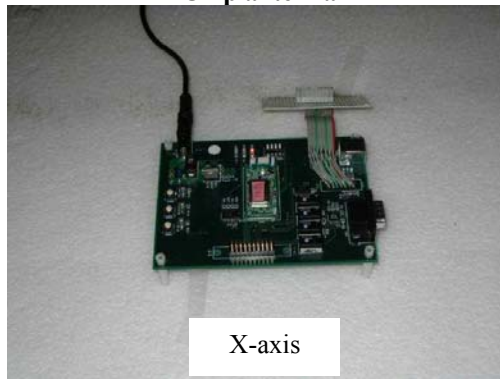
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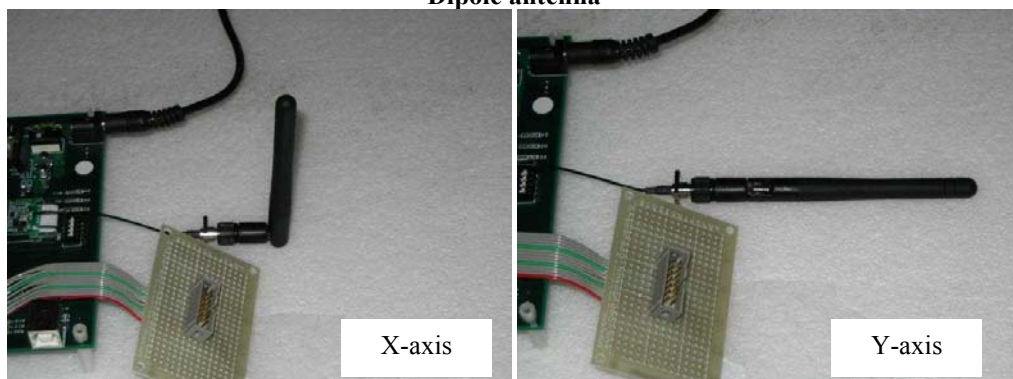
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Pre-check of the worst position (EUT)

Chip antenna



Dipole antenna



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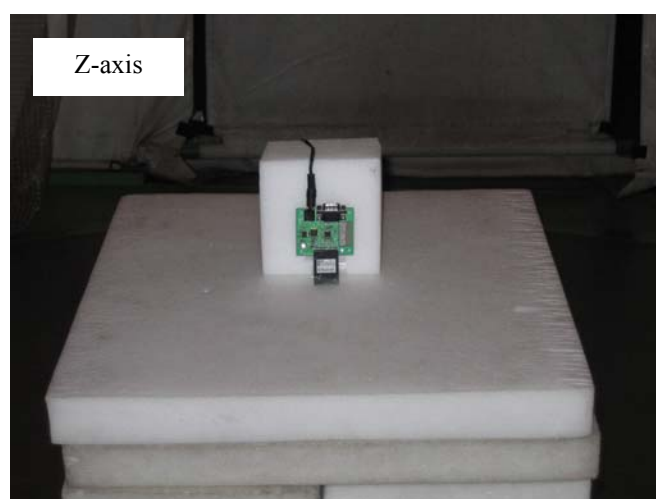
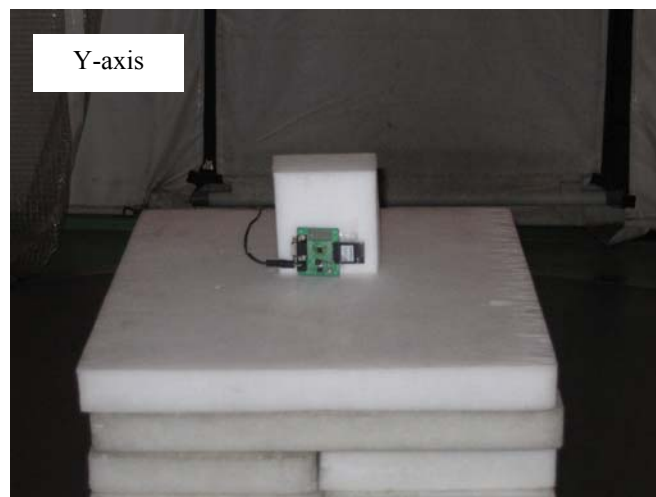
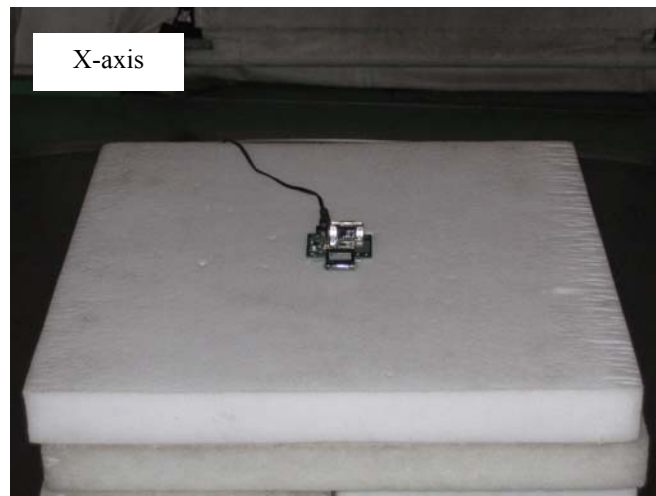
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Pre-check of the worst position (Another module)



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DATA OF CONDUCTION TEST

UL Apex Co.,Ltd.
YAMAKITA No.2 SHIELD ROOM
Report No. : 26LE0147-YK-A

Applicant : SOKKIA CO., LTD.
Kind of Equipment : BLUETOOTH MODULE
Model No. : SM-BT1
Serial No. : SMBT10001
Power : DC3.3V
Mode : Tx:2402MHz
Remarks : Chip Antenna
Date : 8/4/2006
Phase : Single Phase
Temperature : 24 °C
Humidity : 48 %
Regulation : FCC Part15C § 15.207. (CISPR Pub. 22)
Engineer : Tatsuya Arai

No.	FREQ. [MHz]	READING(N)		READING(L1)		LISN FACTOR [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS		MARGIN	
		QP [dB μ V]	AV [dB μ V]	QP [dB μ V]	AV [dB μ V]				QP [dB]	AV [dB μ V]	QP [dB μ V]	AV [dB μ V]	QP [dB]	AV [dB]
1.	0.1500	58.0	34.0	60.3	35.7	0.1	0.1	0.0	60.5	35.9	66.0	56.0	5.5	20.1
2.	0.5186	42.8	20.3	42.9	20.1	0.1	0.1	0.0	43.1	20.5	56.0	46.0	12.9	25.5
3.	0.6903	43.9	23.2	43.6	24.3	0.1	0.1	0.0	44.1	24.5	56.0	46.0	11.9	21.5
4.	0.7308	34.5	17.8	42.0	18.3	0.1	0.1	0.0	42.2	18.5	56.0	46.0	13.8	27.5
5.	1.0020	39.8	19.0	41.0	22.0	0.1	0.1	0.0	41.2	22.2	56.0	46.0	14.8	23.8
6.	2.1768	36.6	16.8	38.6	20.3	0.1	0.2	0.0	38.9	20.6	56.0	46.0	17.1	25.4
7.	3.3940	33.7	17.0	35.5	19.2	0.1	0.2	0.0	35.8	19.5	56.0	46.0	20.2	26.5

CALCULATION: READING + LISN FACTOR + CABLE LOSS + ATTEN.

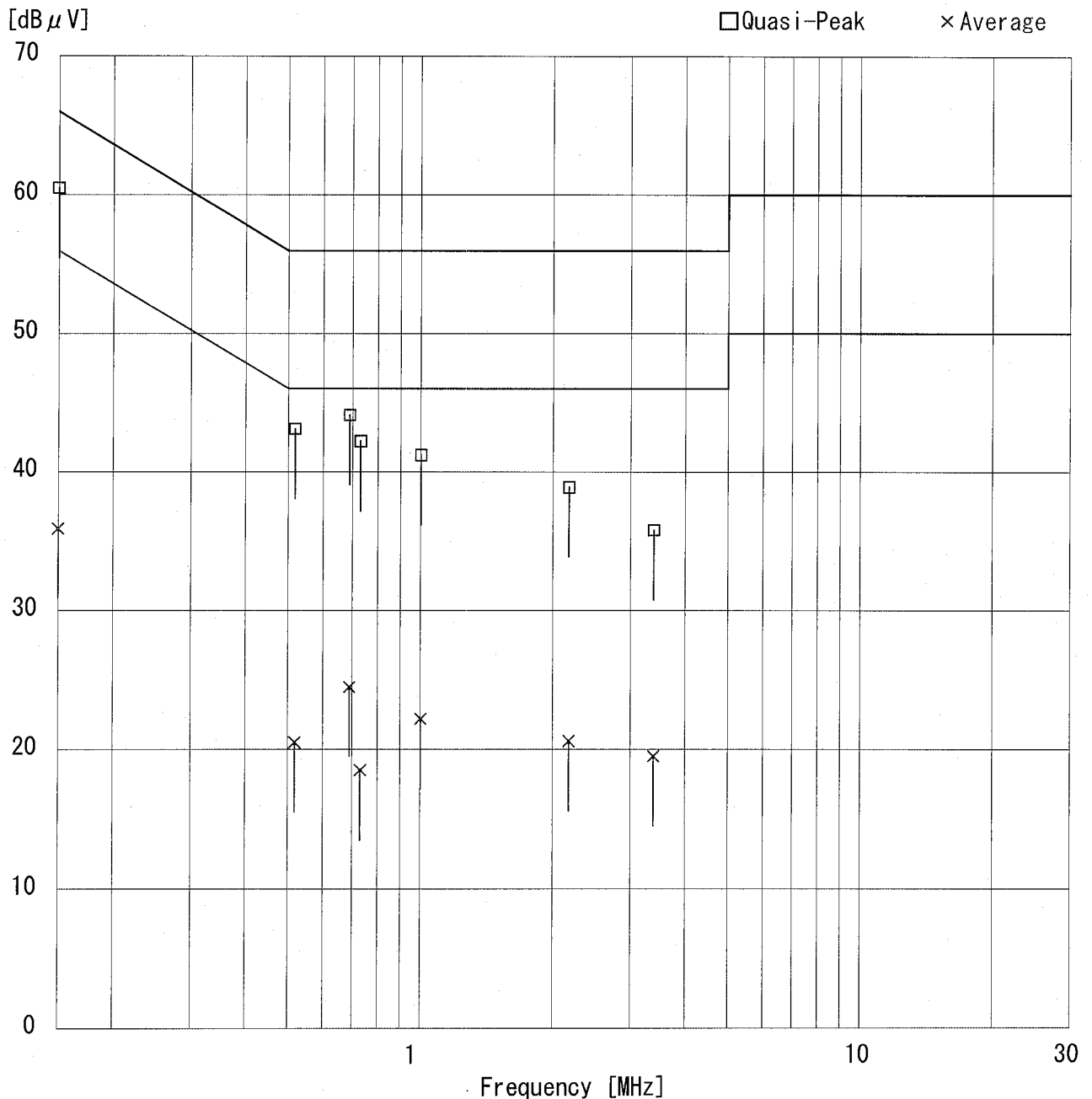
■ LISN : KLS-02 (NSLK8127) ■ COAXIAL CABLE : KCC-33/34
■ EMI RECEIVER : APRCV03

DATA OF CONDUCTION TEST

UL Apex Co.,Ltd.
YAMAKITA No.2 SHIELD ROOM
Report No. : 26LE0147-YK-A

Applicant : SOKKIA CO.,LTD.
Kind of Equipment : BLUETOOTH MODULE
Model No. : SM-BT1
Serial No. : SMBT10001
Power : DC3.3V
Mode : Tx:2402MHz
Remarks : Chip Antenna
Date : 8/4/2006
Phase : Single Phase
Temperature : 24 °C
Humidity : 48 %
Regulation : FCC Part15C § 15.207. (CISPR Pub. 22)

Engineer : Tatsuya Arai



DATA OF CONDUCTION TEST CHART

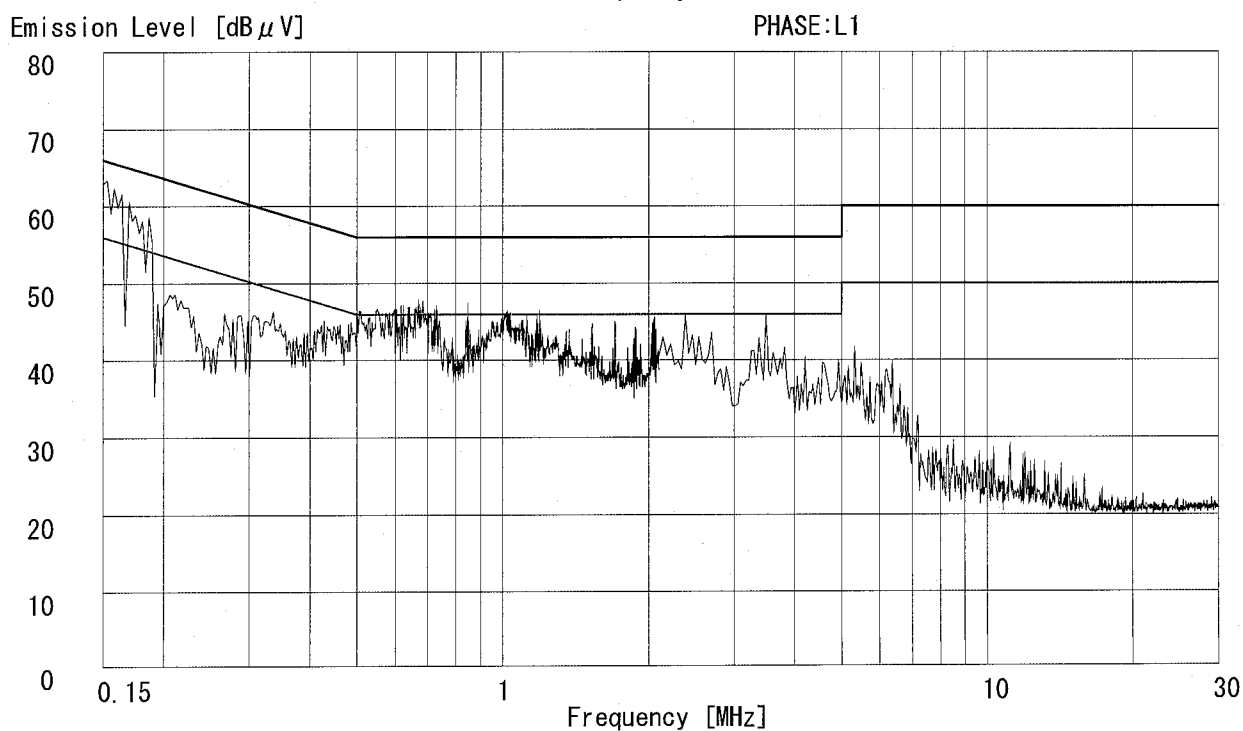
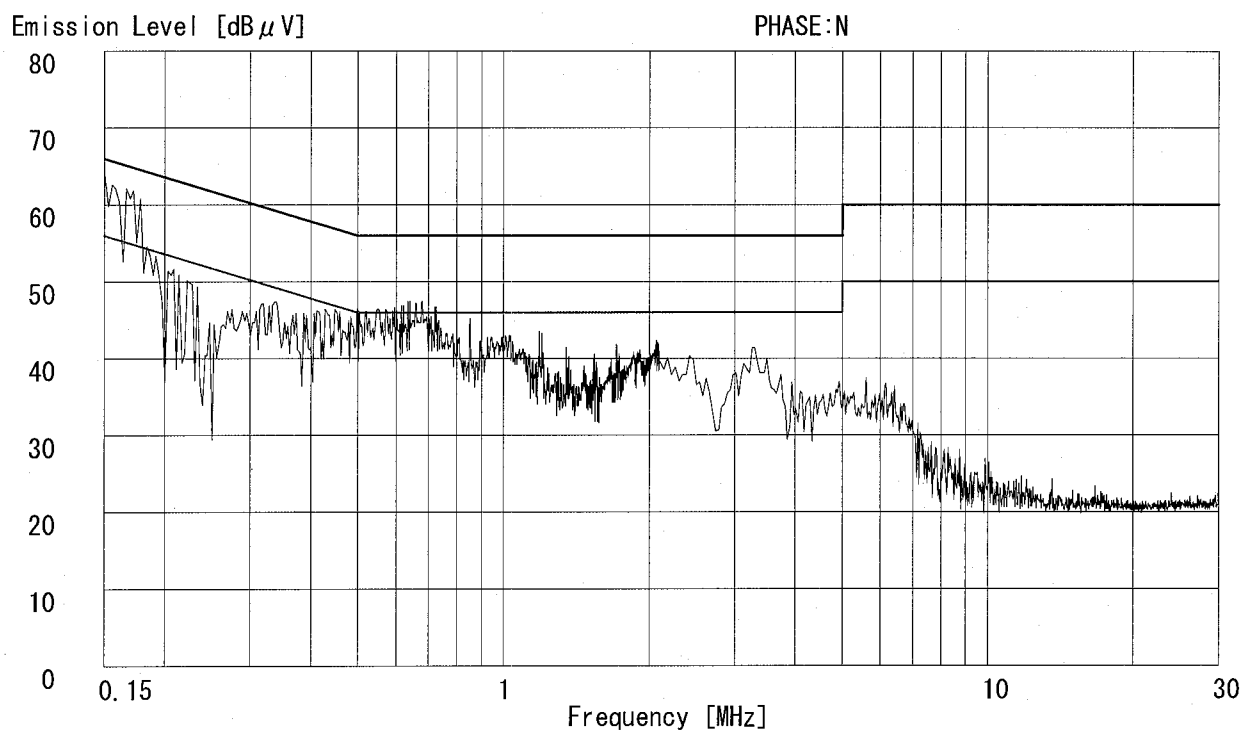
UL Apex Co.,Ltd.

YAMAKITA No.2 SHIELD ROOM

Report No. : 26LE0147-YK-A

Applicant : SOKKIA CO., LTD.
Kind of Equipment : BLUETOOTH MODULE
Model No. : SM-BT1
Serial No. : SMBT10001
Power : DC3.3V
Mode : Tx:2402MHz
Remarks : Chip Antenna
Date : 8/4/2006
Phase : Single Phase
Temperature : 24 °C
Humidity : 48 %
Regulation 1 : FCC Part15C § 15.207. (CISPR Pub.22)
Regulation 2 : None

Engineer : Tatsuya Arai



Page:

DATA OF CONDUCTION TEST CHART

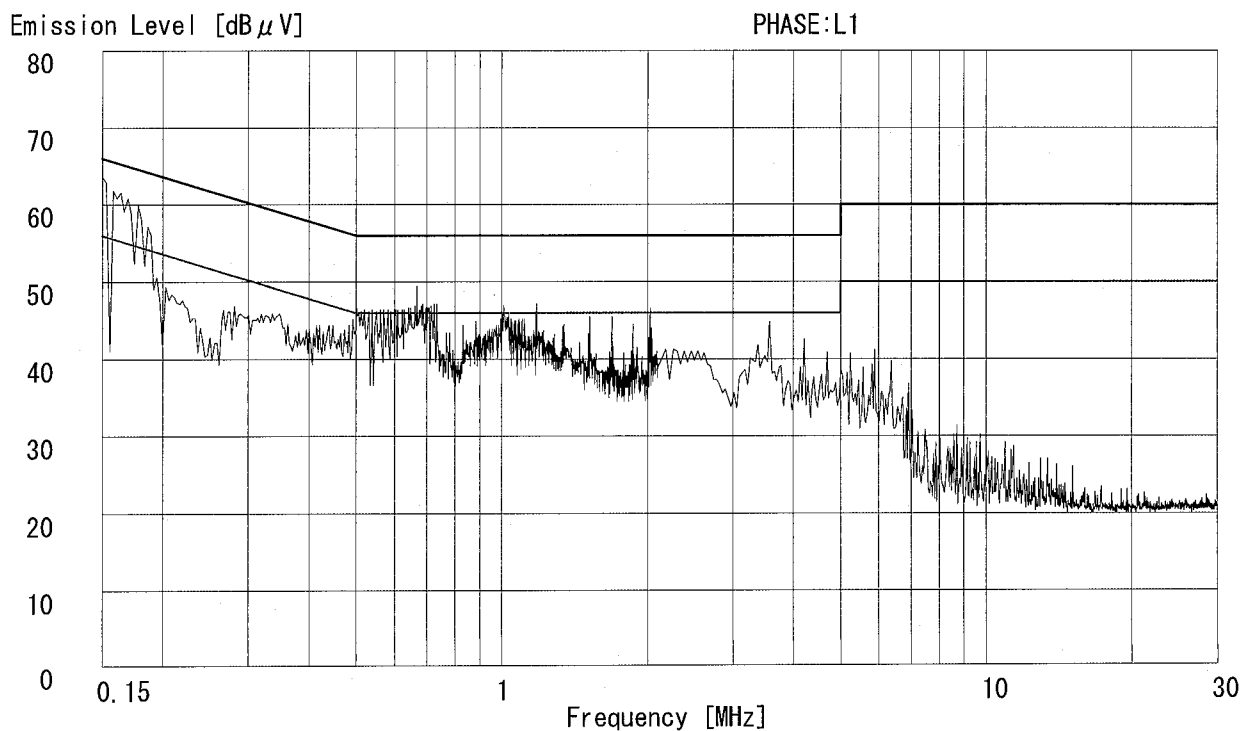
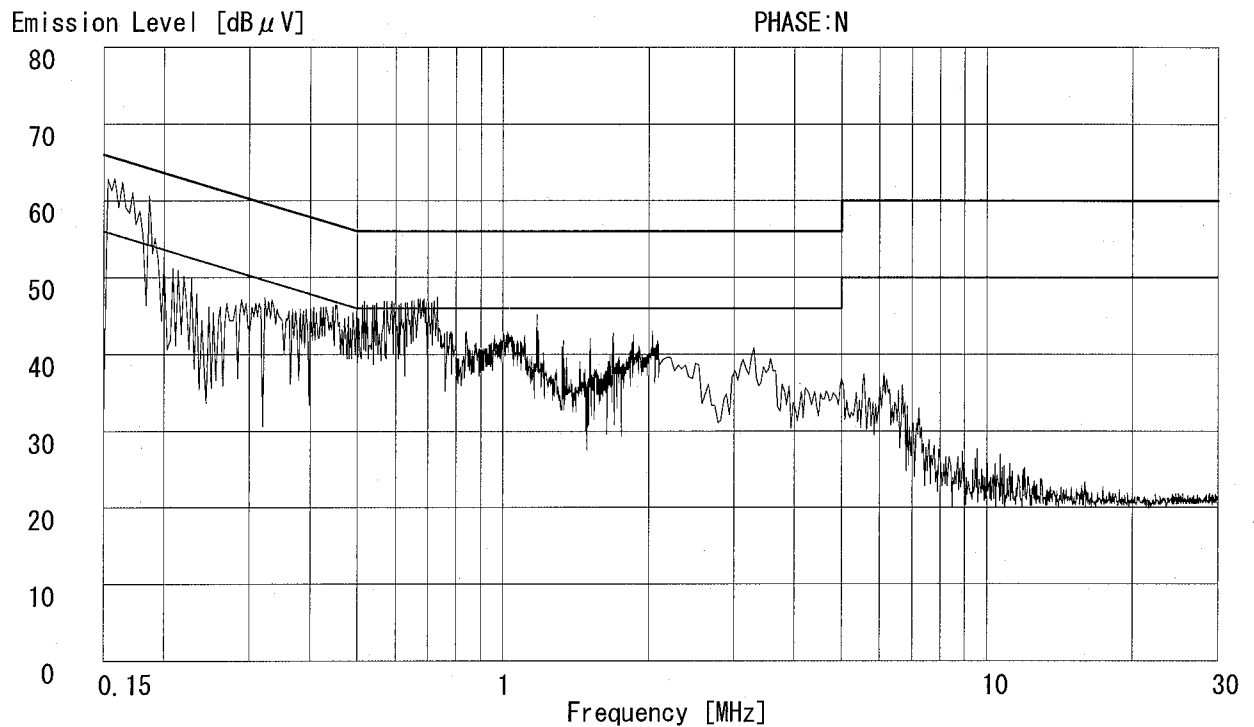
UL Apex Co.,Ltd.

YAMAKITA No.2 SHIELD ROOM

Report No. : 26LE0147-YK-A

Applicant : SOKKIA CO., LTD.
Kind of Equipment : BLUETOOTH MODULE
Model No. : SM-BT1
Serial No. : SMBT10001
Power : DC3.3V
Mode : Tx:2441MHz
Remarks : Chip Antenna
Date : 8/4/2006
Phase : Single Phase
Temperature : 24 °C
Humidity : 48 %
Regulation 1 : FCC Part15C § 15.207. (CISPR Pub. 22)
Regulation 2 : None

Engineer : Tatsuya Arai



Page:

DATA OF CONDUCTION TEST CHART

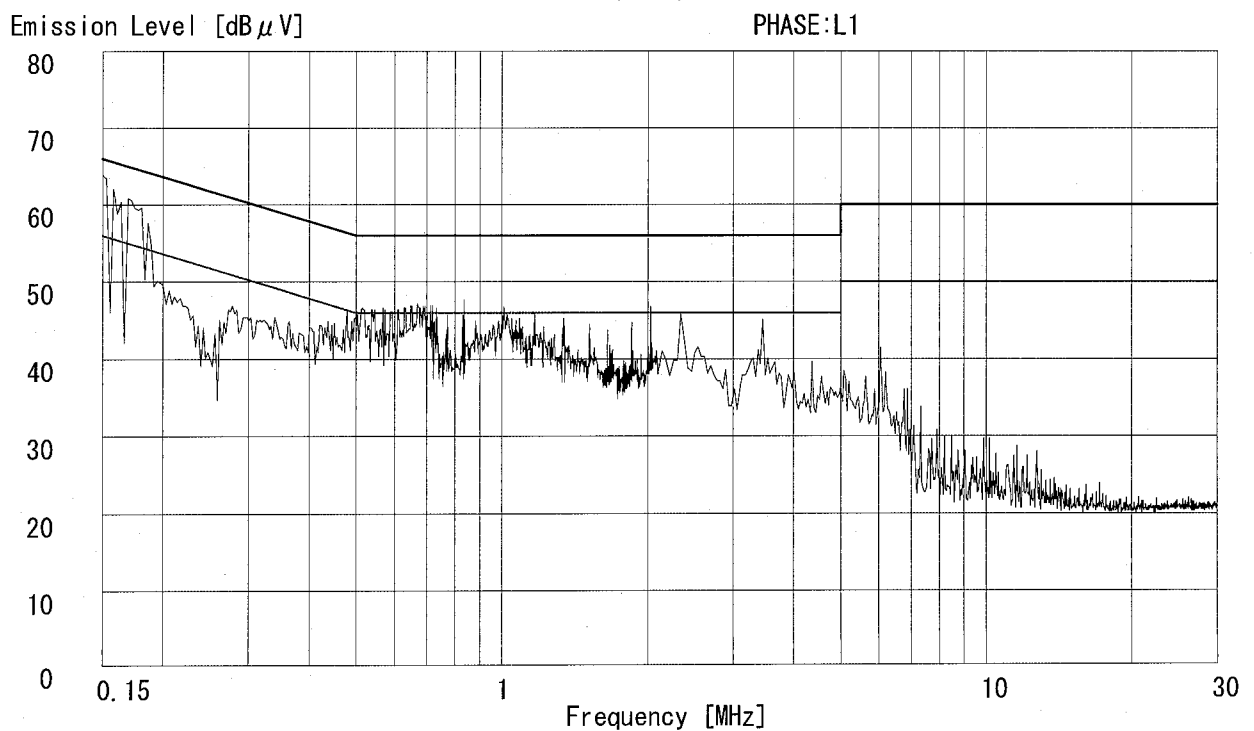
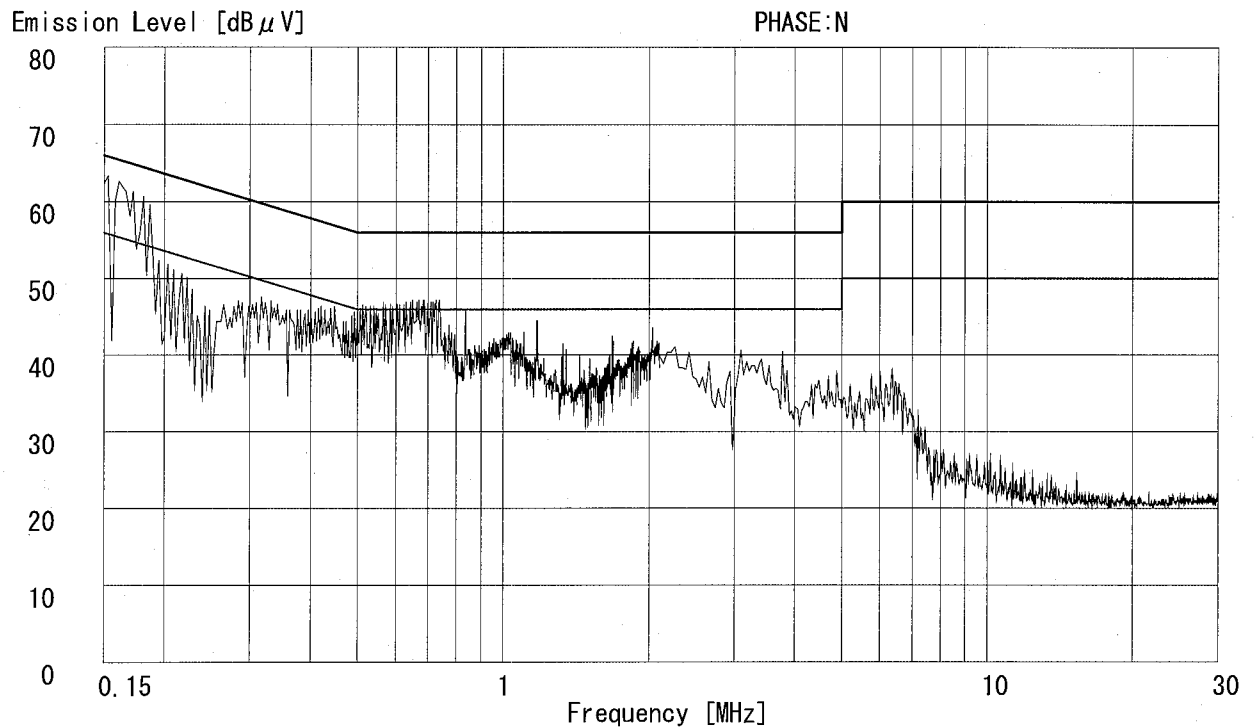
UL Apex Co.,Ltd.

YAMAKITA No.2 SHIELD ROOM

Report No. : 26LE0147-YK-A

Applicant : SOKKIA CO., LTD.
Kind of Equipment : BLUETOOTH MODULE
Model No. : SM-BT1
Serial No. : SMBT10001
Power : DC3.3V
Mode : Tx:2480MHz
Remarks : Chip Antenna
Date : 8/4/2006
Phase : Single Phase
Temperature : 24 °C
Humidity : 48 %
Regulation 1 : FCC Part15C § 15.207. (CISPR Pub.22)
Regulation 2 : None

Engineer : Tatsuya Arai



Page:

DATA OF CONDUCTION TEST CHART

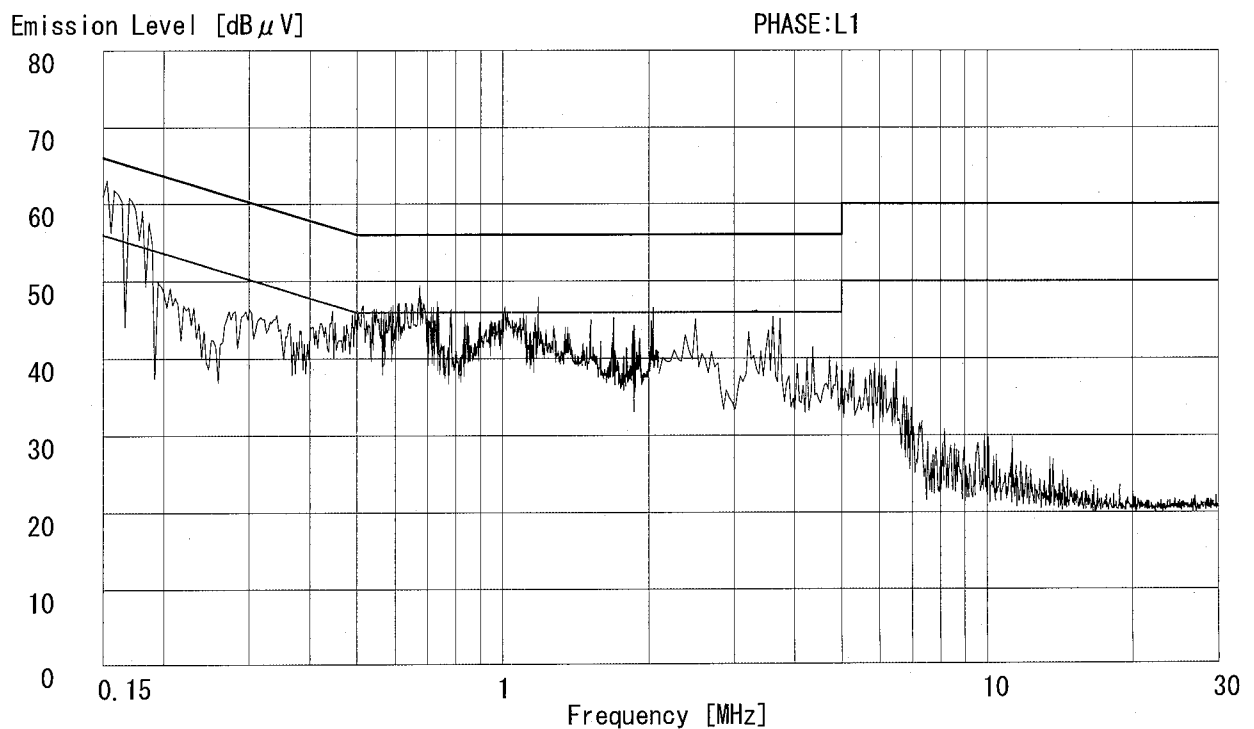
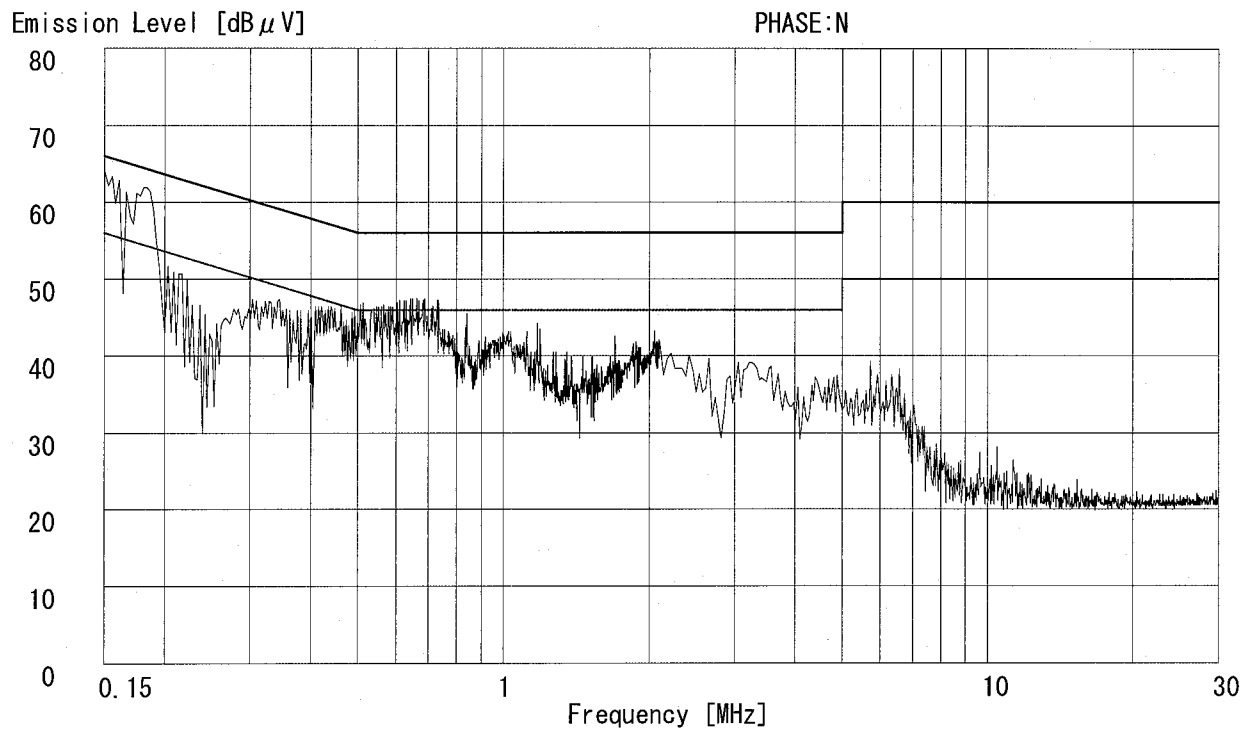
UL Apex Co.,Ltd.

YAMAKITA No.2 SHIELD ROOM

Report No. : 26LE0147-YK-A

Applicant : SOKKIA CO.,LTD.
Kind of Equipment : BLUETOOTH MODULE
Model No. : SM-BT1
Serial No. : SMBT10001
Power : DC3.3V
Mode : Tx:2402MHz
Remarks : Dipole Antenna
Date : 8/4/2006
Phase : Single Phase
Temperature : 24 °C
Humidity : 48 %
Regulation 1 : FCC Part15C § 15.207. (CISPR Pub.22)
Regulation 2 : None

Engineer : Tatsuya Arai



Page:

DATA OF CONDUCTION TEST CHART

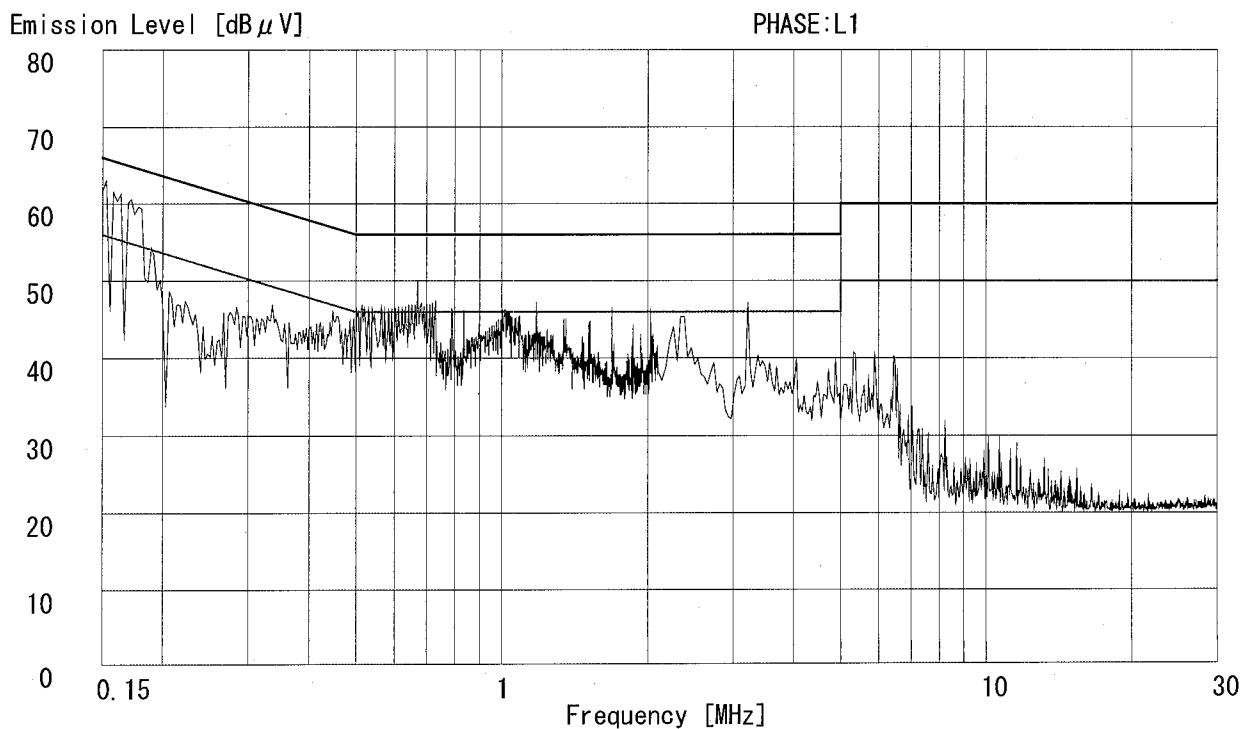
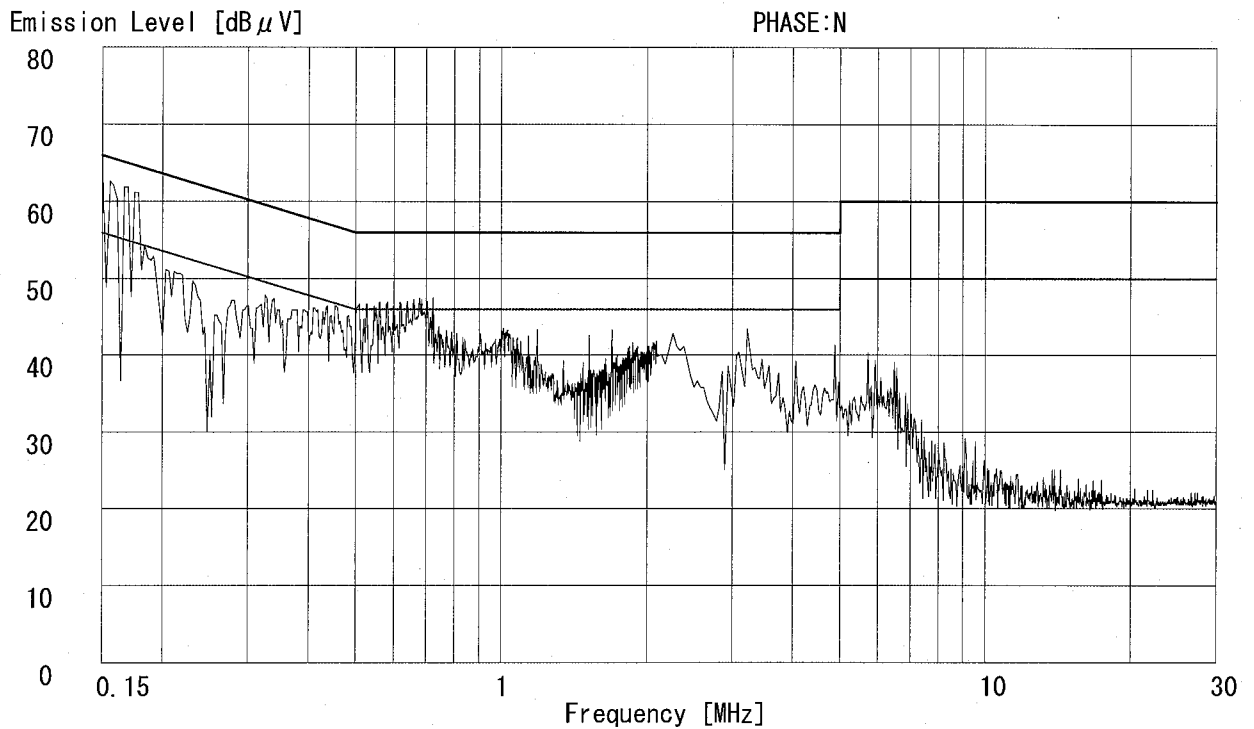
UL Apex Co.,Ltd.

YAMAKITA No.2 SHIELD ROOM

Report No. : 26LE0147-YK-A

Applicant : SOKKIA CO.,LTD.
Kind of Equipment : BLUETOOTH MODULE
Model No. : SM-BT1
Serial No. : SMT10001
Power : DC3.3V
Mode : Tx:2441MHz
Remarks : Dipole Antenna
Date : 8/4/2006
Phase : Single Phase
Temperature : 24 °C
Humidity : 48 %
Regulation 1 : FCC Part15C § 15.207. (CISPR Pub. 22)
Regulation 2 : None

Engineer : Tatsuya Arai



Page:

DATA OF CONDUCTION TEST CHART

UL Apex Co.,Ltd.

YAMAKITA No.2 SHIELD ROOM

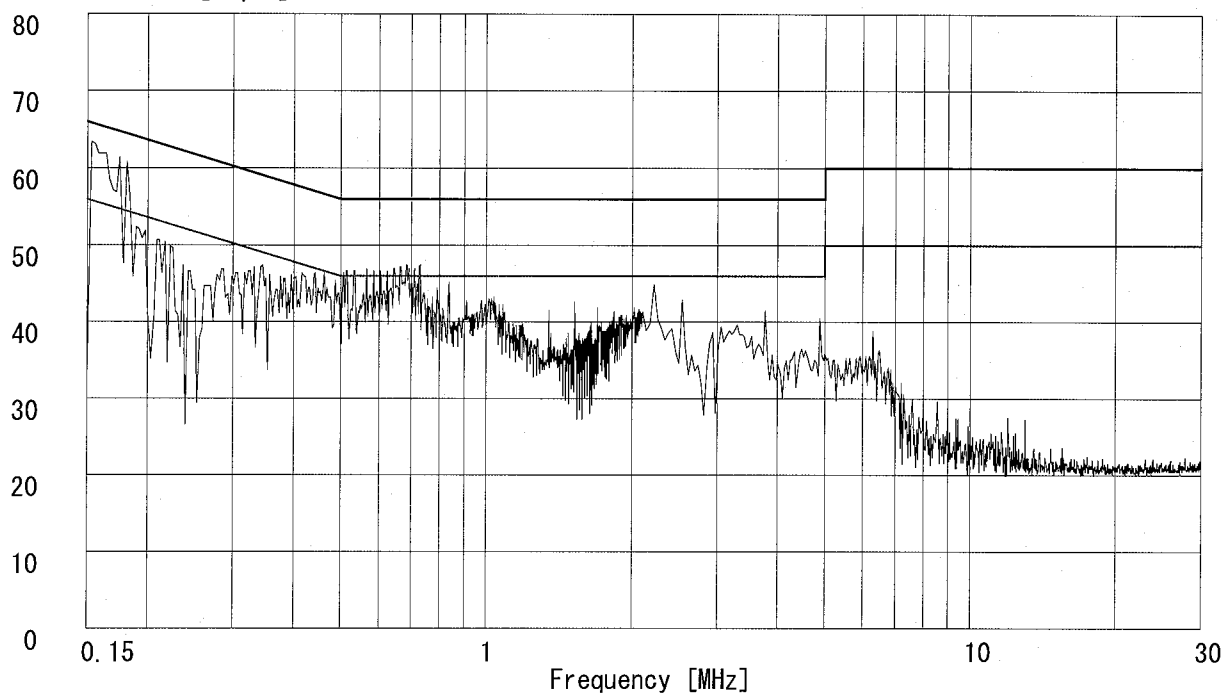
Report No. : 26LE0147-YK-A

Applicant : SOKKIA CO.,LTD.
Kind of Equipment : BLUETOOTH MODULE
Model No. : SM-BT1
Serial No. : SMBT10001
Power : DC3.3V
Mode : Tx:2480MHz
Remarks : Dipole Antenna
Date : 8/4/2006
Phase : Single Phase
Temperature : 24 °C
Humidity : 48 %
Regulation 1 : FCC Part15C § 15.207. (CISPR Pub. 22)
Regulation 2 : None

Engineer : Tatsuya Arai

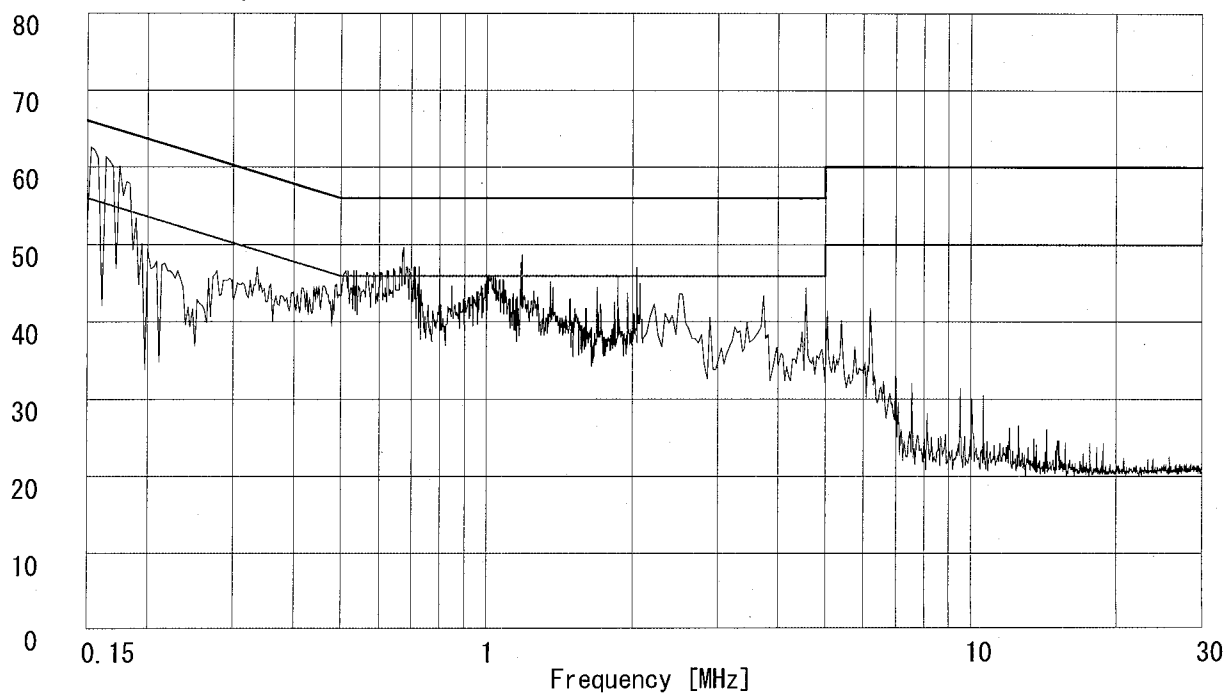
Emission Level [dB μ V]

PHASE:N



Emission Level [dB μ V]

PHASE:L1



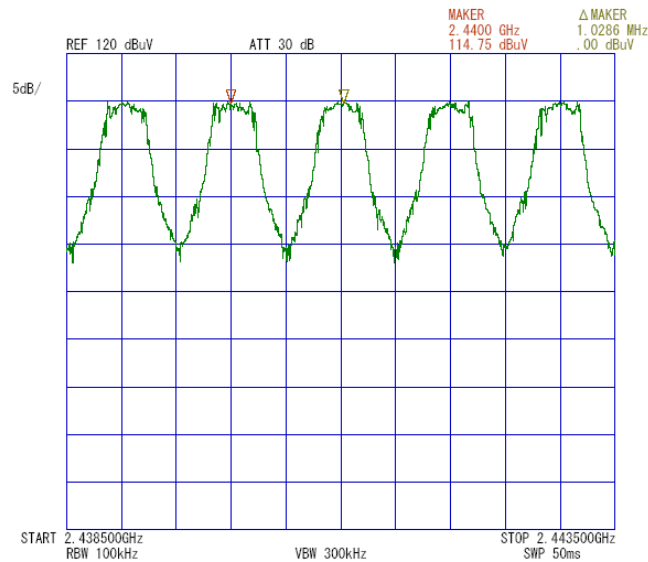
Page:

Channel Separation: FCC 15.247(a)(1)

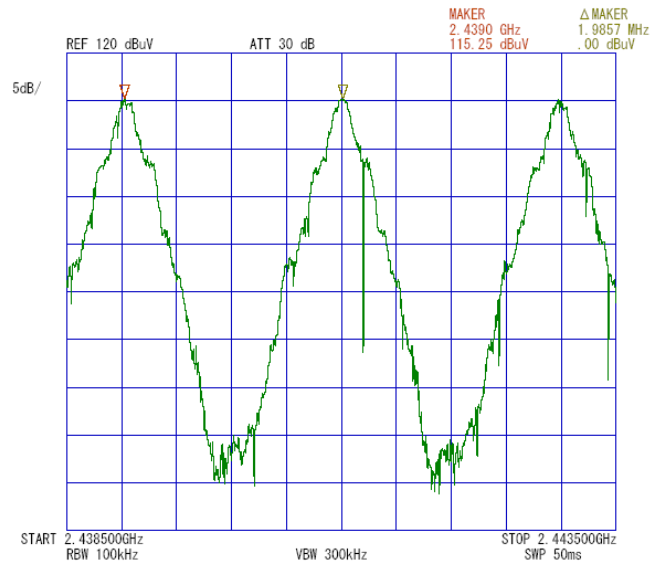
COMPANY : SOKKIA CO.,LTD.
EQUIPMENT : BLUETOOTH MODULE
MODEL NUMBER: SM-BT1
SERIAL NUMBER: SMBT10001
FCC ID : S6MSMBT1
POWER : DC3.3V

UL Apex Co.,Ltd. Yamakita No.4 Shielded Room
REPORT NO : 26LE0147-YK-A
REGULATION : Fcc Part15SubpartC 247(a)(1)
DATE : 2006/07/27
TEMP./HUMI : 25deg.C./60%
TEST MODE : Transmitting
ENGINEER : Tatsuya Arai

1. Hopping:1028.60kHz



2. Inquiry:1985.70kHz

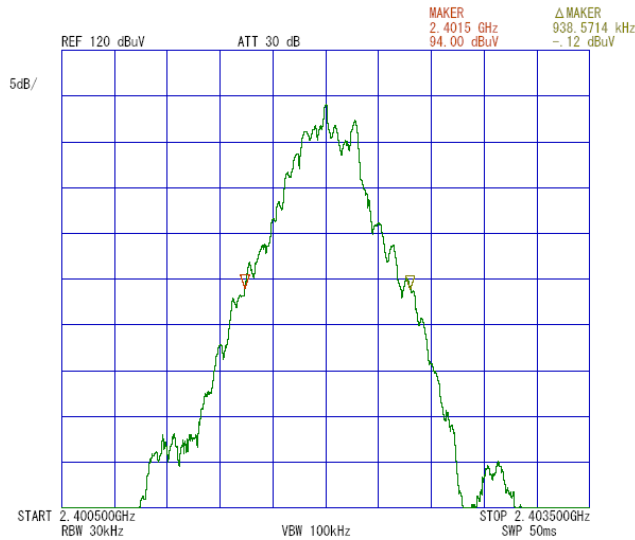


20dB Bandwidth: FCC 15.247(a)(1)

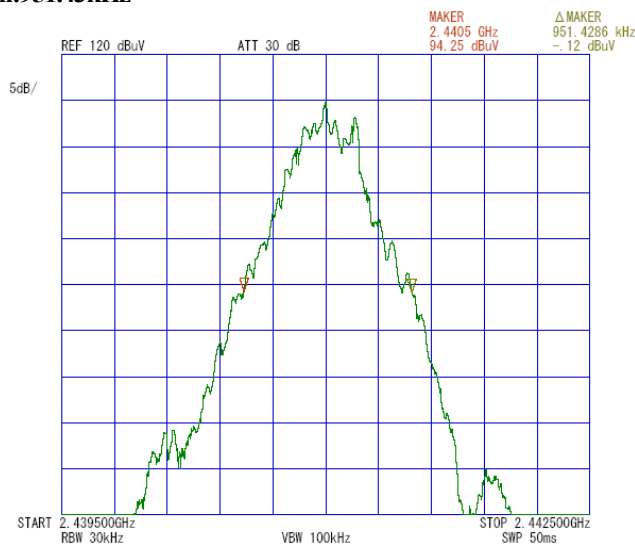
COMPANY : SOKKIA CO.,LTD.
EQUIPMENT : BLUETOOTH MODULE
MODEL NUMBER: SM-BT1
SERIAL NUMBER: SMT10001
FCC ID : S6MSMBT1
POWER : DC3.3V

UL Apex Co.,Ltd. Yamakita No.4 Shielded Room
REPORT NO : 26LE0147-YK-A
REGULATION : Fcc Part15SubpartC 247(a)(1)
DATE : 2006/07/27
TEMP./HUMI : 25deg.C./60%
TEST MODE : Transmitting (Hopping off)
ENGINEER : Tatsuya Arai

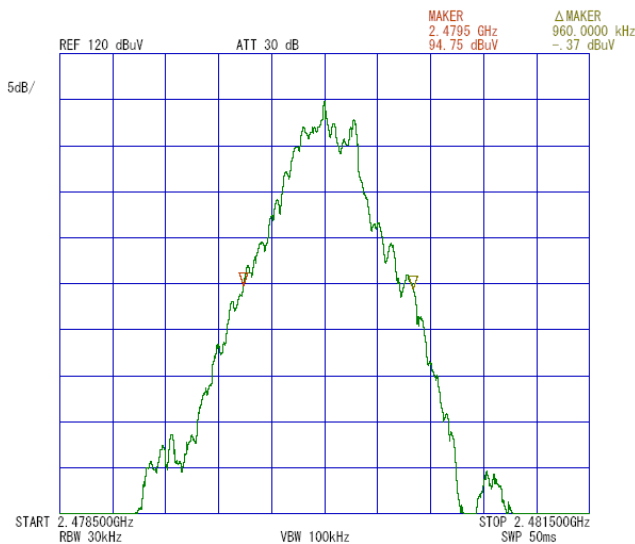
1. ch : 2402MHz/20dB Bandwidth:938.57kHz



2. ch : 2441MHz/20dB Bandwidth:951.43kHz



3. ch : 2480MHz/20dB Bandwidth:960.00kHz



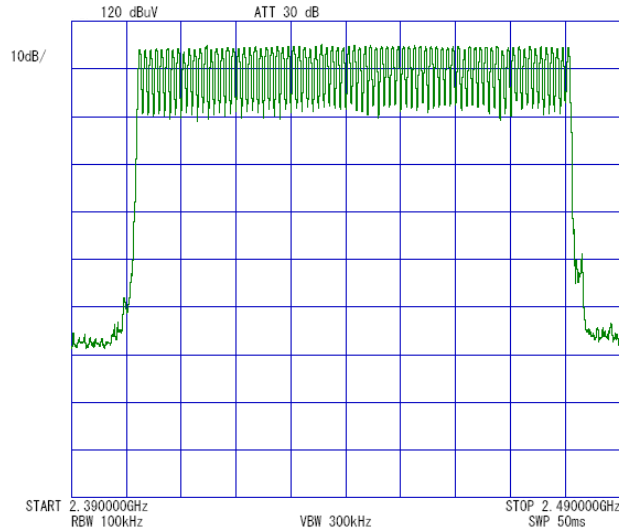
Channel Utilization: FCC 15.247(a)(1)(iii)

COMPANY : SOKKIA CO.,LTD.
EQUIPMENT : BLUETOOTH MODULE
MODEL NUMBER: SM-BT1
SERIAL NUMBER: SMT10001
FCC ID : S6MSMBT1
POWER : DC3.3V

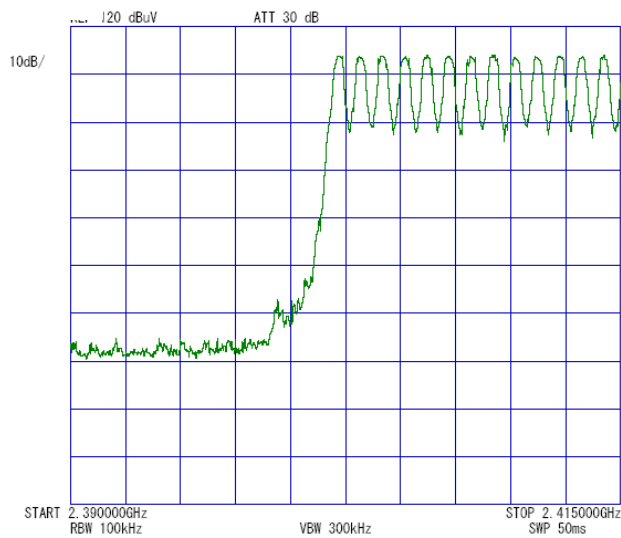
UL Apex Co.,Ltd. Yamakita No.4 Shielded Room
REPORT NO : 26LE0147-YK-A
REGULATION : Fcc Part15SubpartC 247(a)(1)(iii)
DATE : 2006/07/27
TEMP./HUMI : 25deg.C./60%
TEST MODE : Transmitting
ENGINEER : Tatsuya Arai

Hopping: 79ch

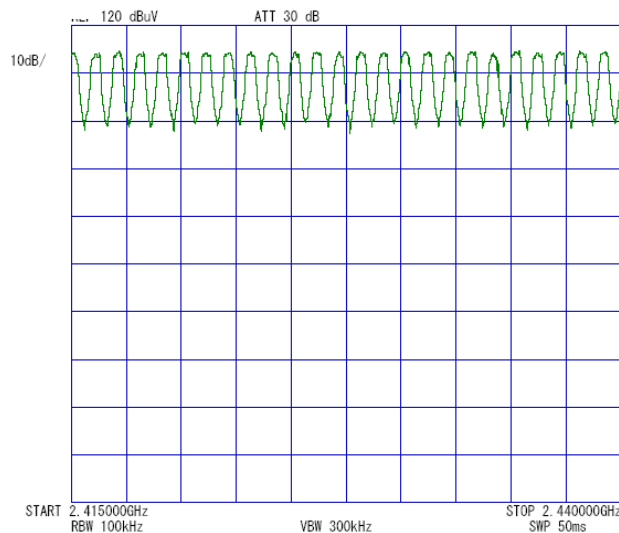
1.



2.



3.

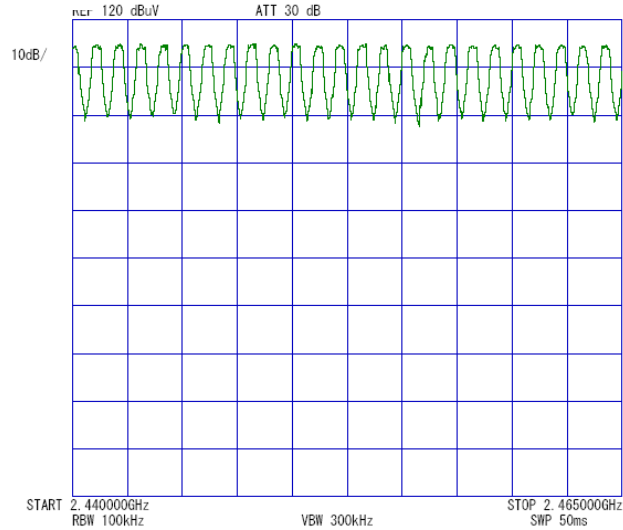


Channel Utilization: FCC 15.247(a)(1)(iii)

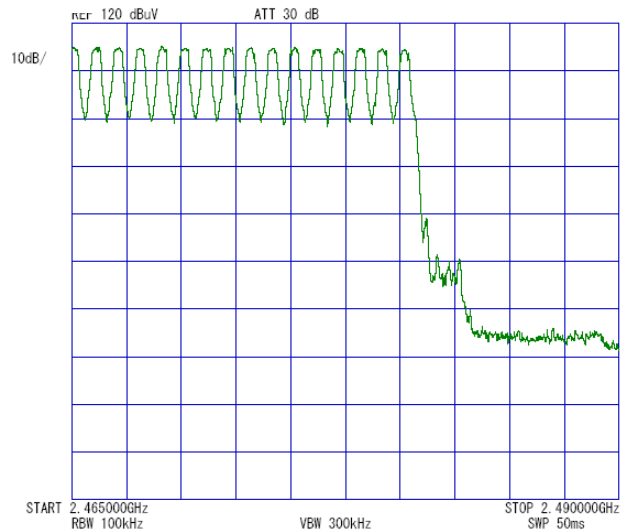
COMPANY : SOKKIA CO.,LTD.
EQUIPMENT : BLUETOOTH MODULE
MODEL NUMBER: SM-BT1
SERIAL NUMBER: SMT10001
FCC ID : S6MSMT1
POWER : DC3.3V

UL Apex Co.,Ltd. Yamakita No.4 Shielded Room
REPORT NO : 26LE0147-YK-A
REGULATION : Fcc Part15SubpartC 247(a)(1)(iii)
DATE : 2006/07/27
TEMP./HUMI : 25deg.C./60%
TEST MODE : Transmitting
ENGINEER : Tatsuya Arai

4.



5.

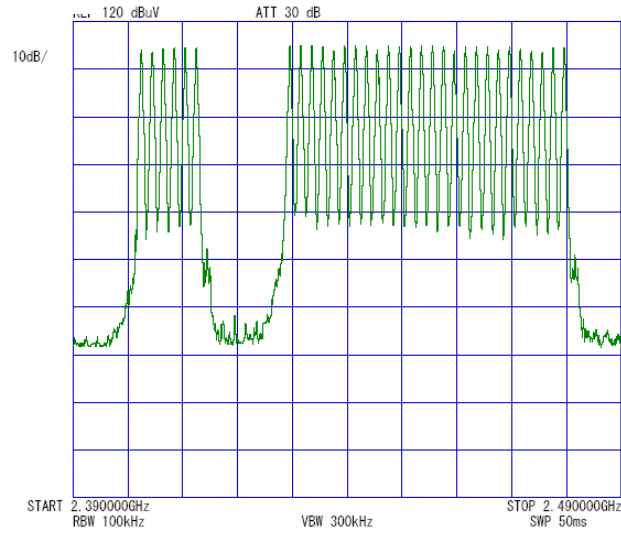


Channel Utilization: FCC 15.247(a)(1)(iii)

COMPANY : SOKKIA CO.,LTD.
EQUIPMENT : BLUETOOTH MODULE
MODEL NUMBER: SM-BT1
SERIAL NUMBER: SMBT10001
FCC ID : S6MSMBT1
POWER : DC3.3V

UL Apex Co.,Ltd. Yamakita No.4 Shielded Room
REPORT NO : 26LE0147-YK-A
REGULATION : Fcc Part15SubpartC 247(a)(1)(iii)
DATE : 2006/07/27
TEMP./HUMI : 25deg.C./60%
TEST MODE : Transmitting
ENGINEER : Tatsuya Arai

1. Inquiry: 32ch



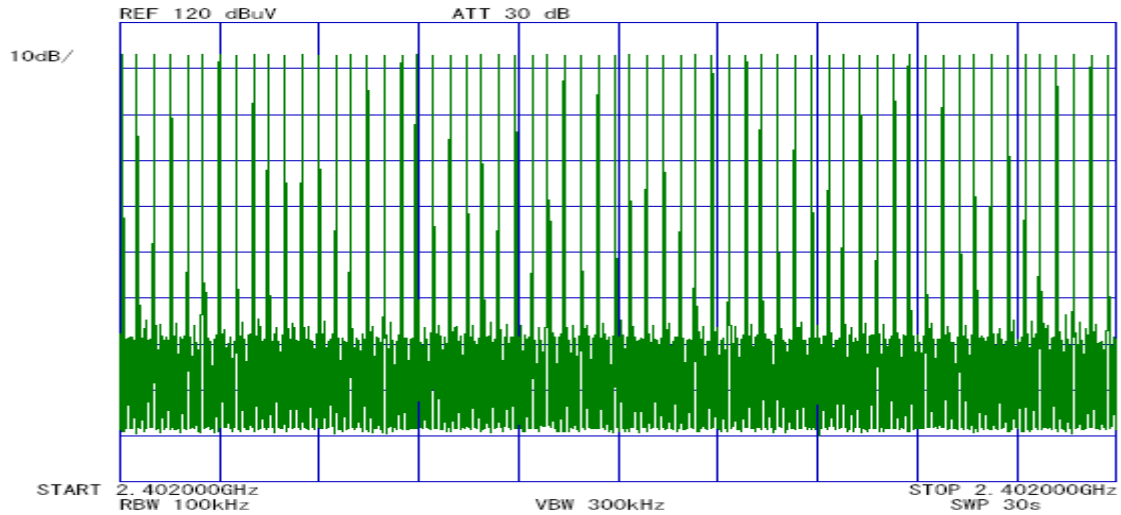
Dwell Time: FCC 15.247(a)(1)(iii)

COMPANY : SOKKIA CO.,LTD.
EQUIPMENT : BLUETOOTH MODULE
MODEL NUMBER: SM-BT1
SERIAL NUMBER: SMT10001
FCC ID : S6MSMT1
POWER : DC3.3V

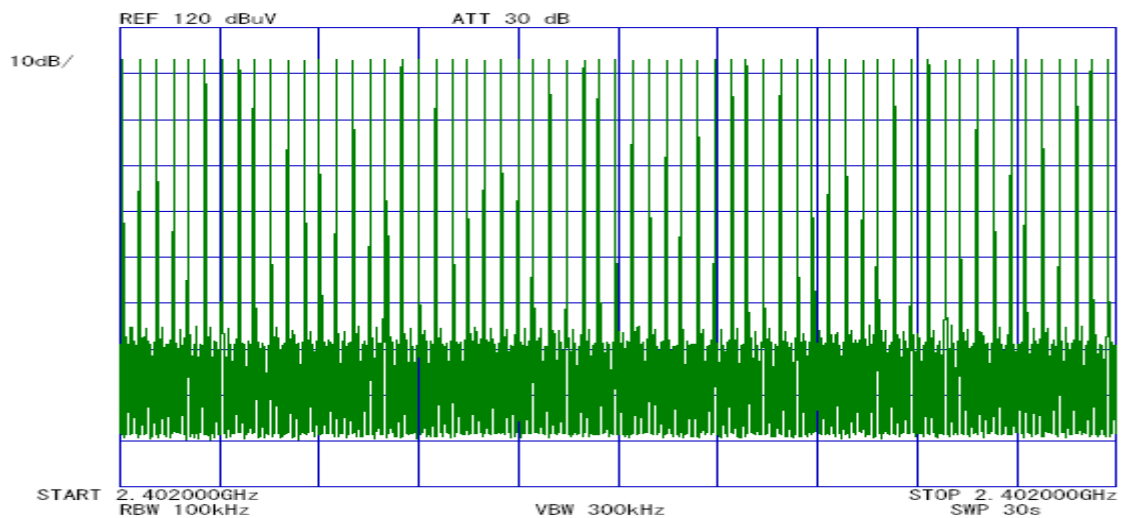
UL Apex Co.,Ltd. Yamakita No.2 Shielded Room
REPORT NO : 26LE0147-YK-A
REGULATION : Fcc Part15SubpartC 247(a)(1)(iii)
DATE : 2006/09/01
TEMP./HUMI : 25deg.C./67%
TEST MODE : Transmitting
ENGINEER : Tatsuya Arai

Hopping (Packet Type: DH5)

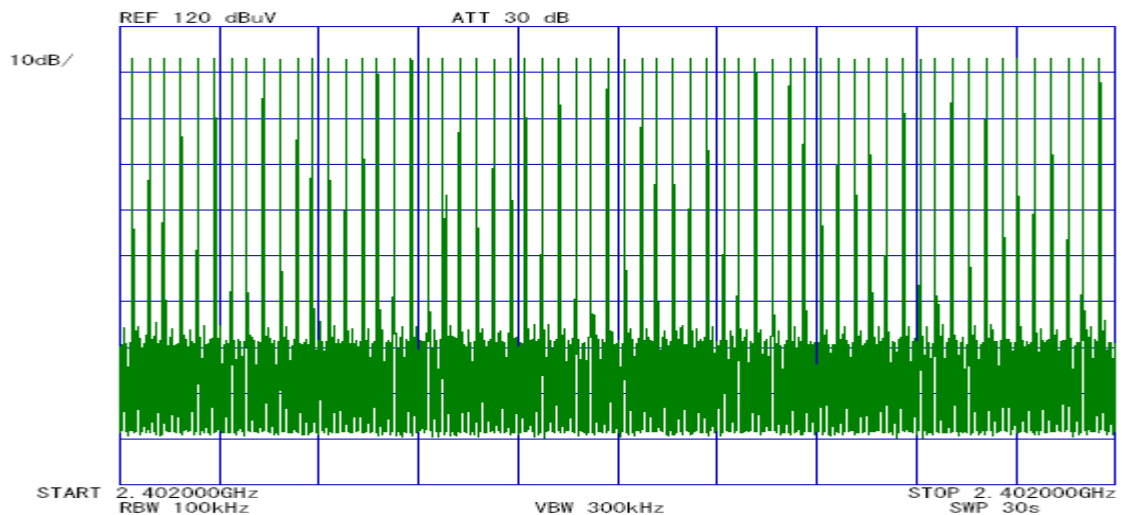
Count 1



Count 2



Count 3

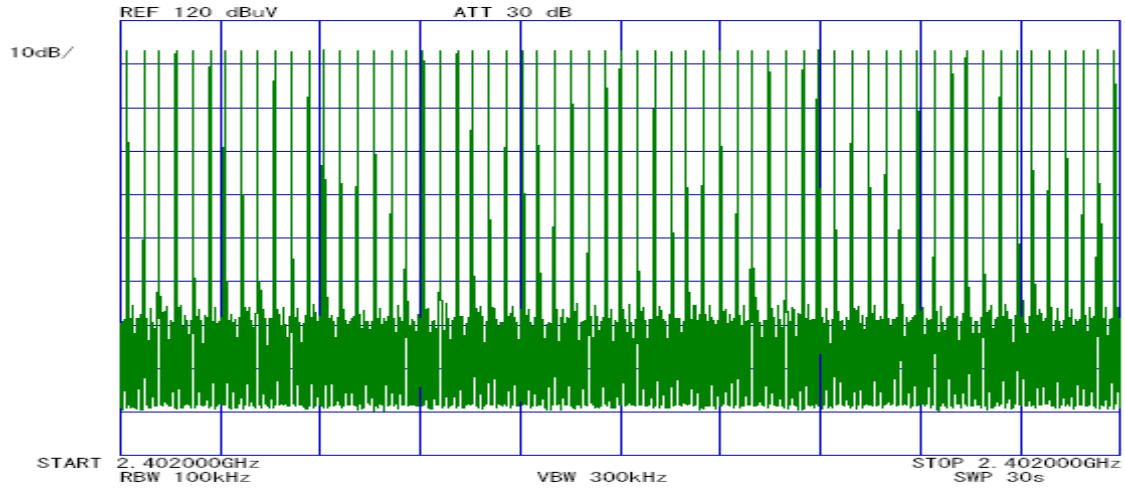


Dwell Time: FCC 15.247(a)(1)(iii)

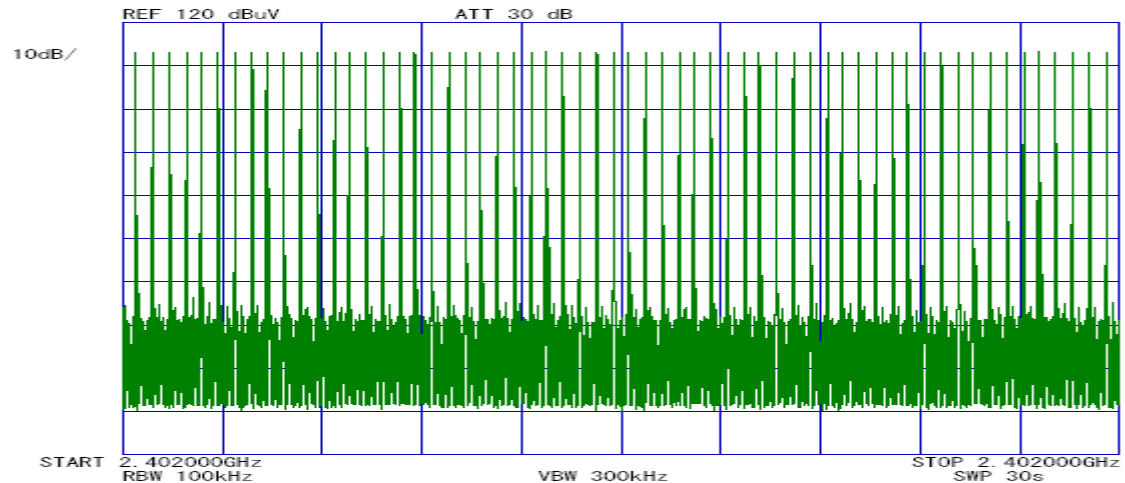
COMPANY : SOKKIA CO.,LTD.
EQUIPMENT : BLUETOOTH MODULE
MODEL NUMBER: SM-BT1
SERIAL NUMBER: S6MSMBT1
FCC ID : S6MSMBT1
POWER : DC3.3V

UL Apex Co.,Ltd. Yamakita No.2 Shielded Room
REPORT NO : 26LE0147-YK-A
REGULATION : Fcc Part15SubpartC 247(a)(1)(iii)
DATE : 2006/09/01
TEMP./HUMI : 25deg.C./67%
TEST MODE : Transmitting
ENGINEER : Tatsuya Arai

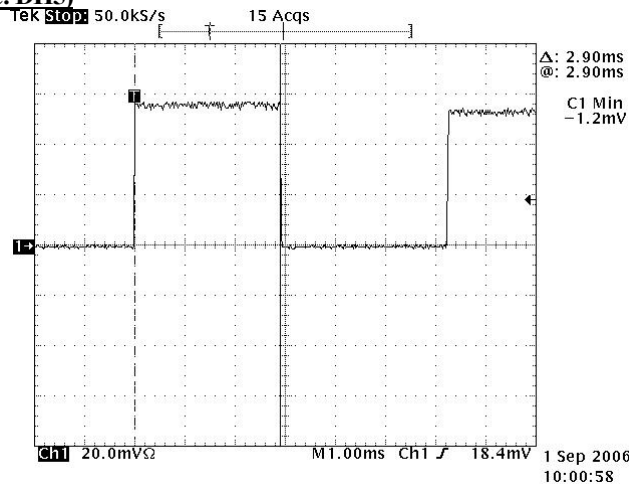
Count 4



Count 5



Duty cycle(Hopping - Packet Type: DH5)



Average times of rising in 30 sec. of sweep = $(61 + 61 + 60 + 61 + 60) / 5 = 60.6$

Average times of rising in 1 sec. = $60.6 / 30s = 2.02$

Average times of rising in 0.4x = $0.4 * 79ch * 2.02 = 63.83$

Dwell time = $63.83 * 2.90 = 185.11 \text{ [ms]}$

Limit : Dwell Time < 0.4[s]

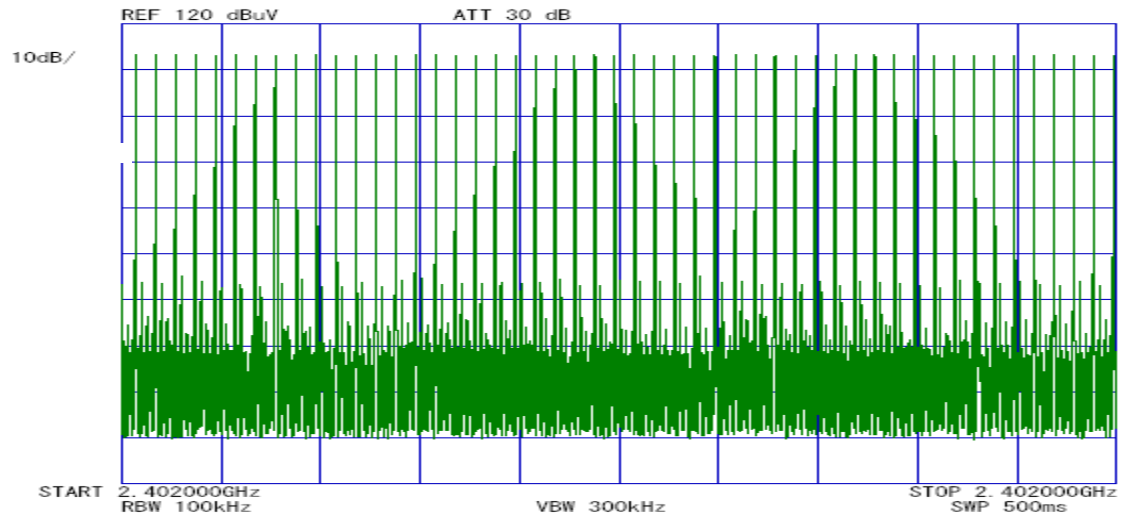
Dwell Time: FCC 15.247(a)(1)(iii)

COMPANY : SOKKIA CO.,LTD.
EQUIPMENT : BLUETOOTH MODULE
MODEL NUMBER: SM-BT1
SERIAL NUMBER: S6MSMBT1
FCC ID : S6MSMBT1
POWER : DC3.3V

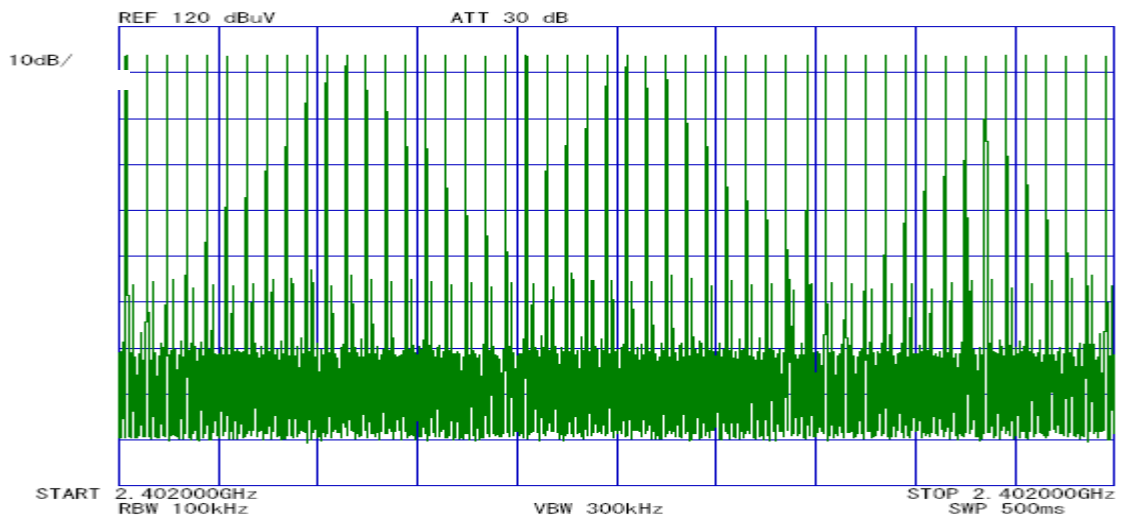
UL Apex Co.,Ltd. Yamakita No.4 Shielded Room
REPORT NO : 26LE0147-YK-A
REGULATION : Fcc Part15SubpartC 247(a)(1)(iii)
DATE : 2006/07/27
TEMP./HUMI : 25deg.C./60%
TEST MODE : Transmitting
ENGINEER : Tatsuya Arai

Inquiry:

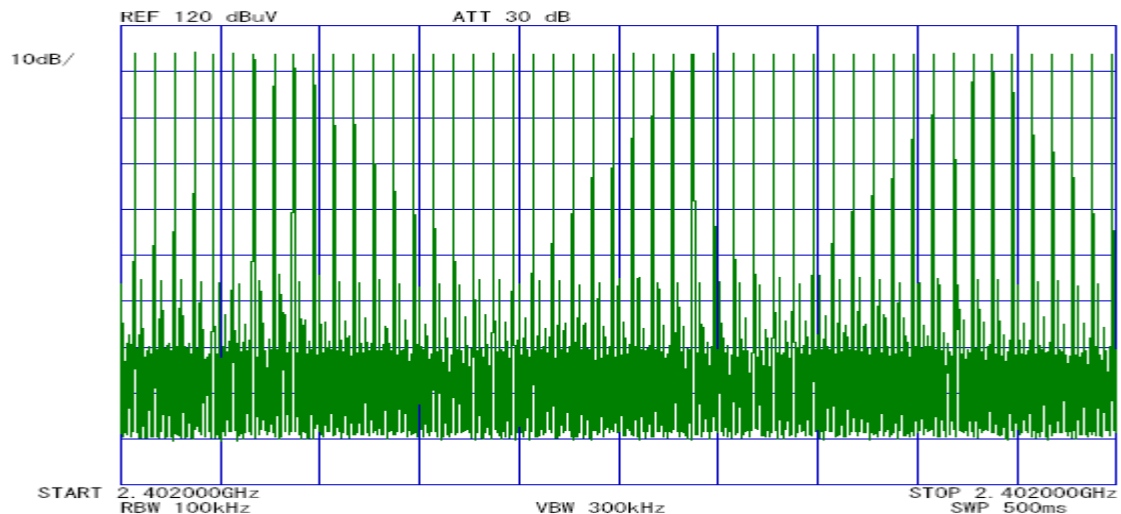
Count 1



Count 2



Count 3

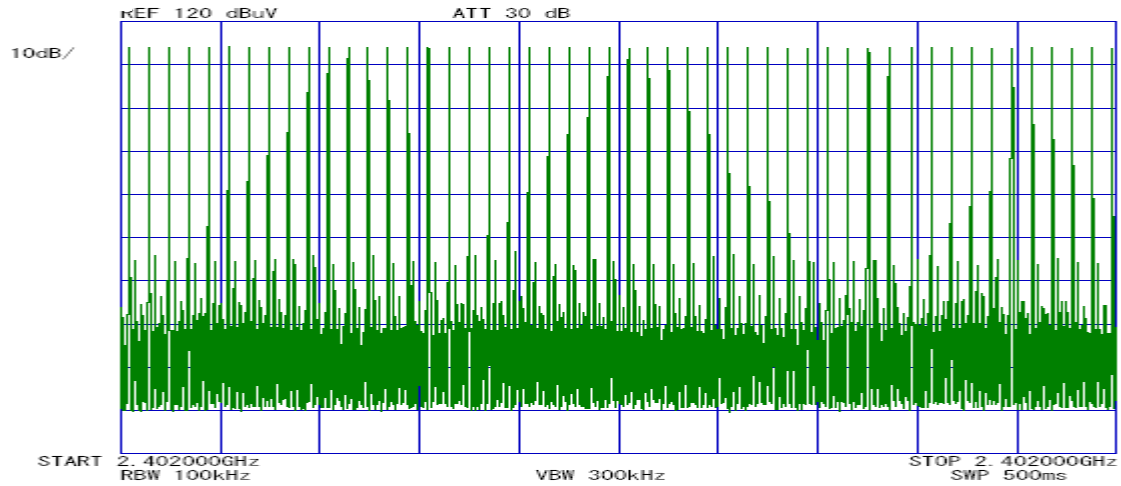


Dwell Time: FCC 15.247(a)(1)(iii)

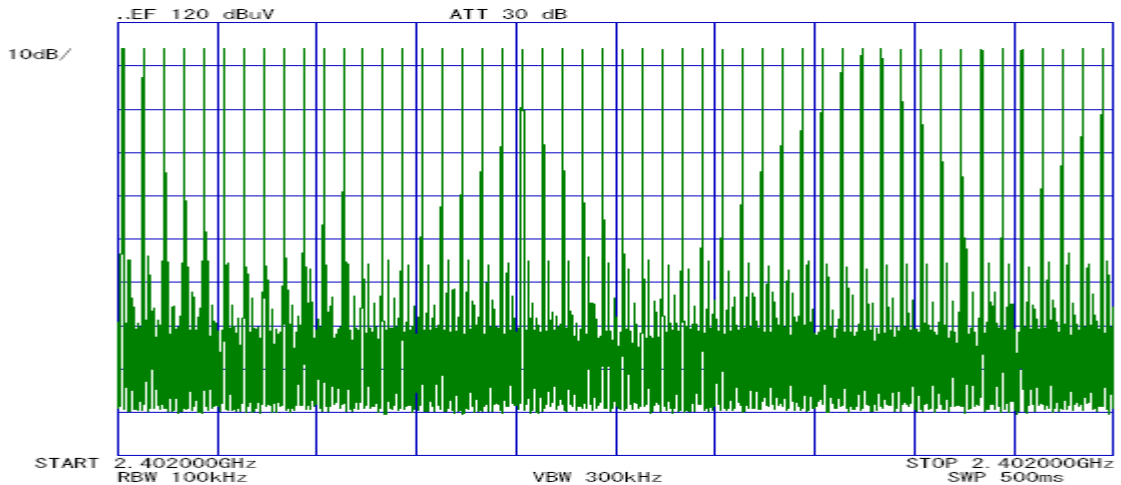
COMPANY : SOKKIA CO.,LTD.
EQUIPMENT : BLUETOOTH MODULE
MODEL NUMBER: SM-BT1
SERIAL NUMBER: SMBT10001
FCC ID : S6MSMBT1
POWER : DC3.3V

UL Apex Co.,Ltd. Yamakita No.4 Shielded Room
REPORT NO : 26LE0147-YK-A
REGULATION : Fcc Part15SubpartC 247(a)(1)(iii)
DATE : 2006/07/27
TEMP./HUMI : 25deg.C./60%
TEST MODE : Transmitting
ENGINEER : Tatsuya Arai

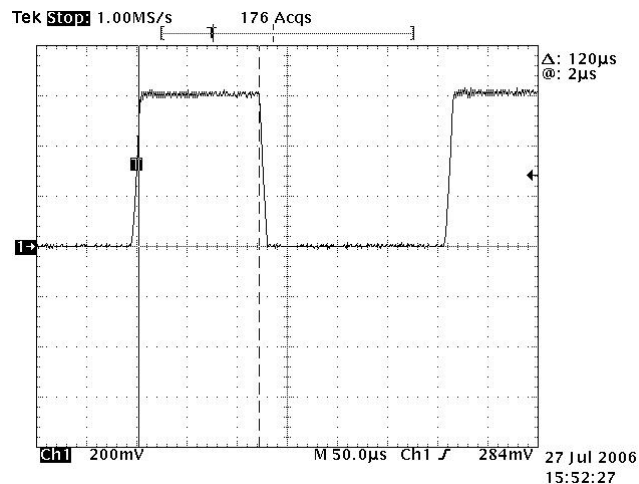
Count 4



Count 5



Duty cycle(Inquiry)



Average times of rising in 0.5 sec. of sweep = (50 + 50 + 50 + 50 + 50) / 5 = 50

Average times of rising in 1 sec. = 50 / 0.5s = 100.0

Average times of rising in 0.4x = 0.4 * 32ch * 100.0 = 1280.0

Dwell time = 1280.0 * 0.12 = 153.60 [ms]

Limit : Dwell Time < 0.4[s]

Maximum Peak Conducted Output Power

UL Apex Co.,Ltd
YAMAKITA No.4 Shielded Room

COMPANY : SOKKIA CO.,LTD.
EQUIPMENT : BLUETOOTH MODULE
MODEL NUMBER : SM-BT1
SERIAL NUMBER : SMBT10001
FCC ID : S6MSMBT1
POWER : DC3.3V
TEST MODE : Transmitting

REPORT NO : 26LE0147-YK-A
REGULATION : Fcc Part15SubpartC 247(b)(1)
DATE : 2006/07/27
TEMP./HUMI : 25deg.C/60%

ENGINEER : Tatsuya Arai

CH	FREQ [GHz]	P/M Reading [dBm]	Cable Loss [dB]	Results [dBm]	Limit (125mW) [dBm]	MARGIN [dB]
Low	2402.00	8.13	0.80	8.93	20.96	12.03
Mid	2441.00	8.94	0.80	9.74	20.96	11.22
High	2480.00	8.97	0.80	9.77	20.96	11.19
Hopping	-	8.54	0.80	9.34	20.96	11.62
Inquiry	-	9.34	0.80	10.14	20.96	10.82

Limit: 125mW=20.96dBm

P/M: Power Meter

CABLE LOSS:The Cable Prepared by The Client + KCC-D16

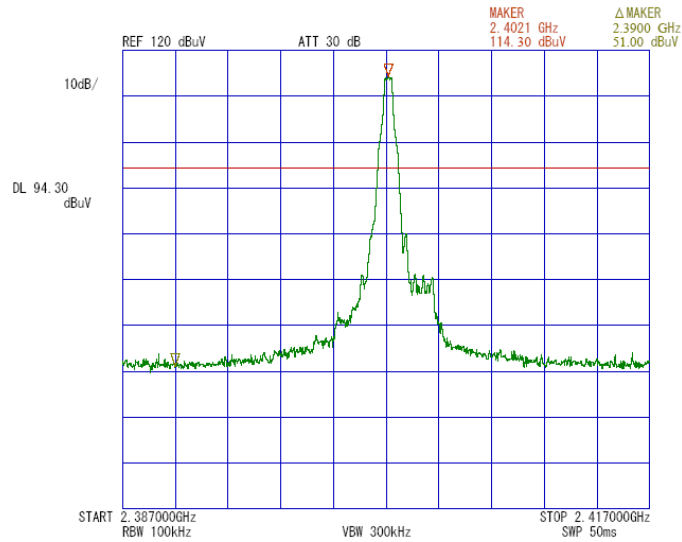
Out of Band Emission(Antenna Terminal Conducted): FCC 15.247(d)

COMPANY : SOKKIA CO.,LTD.
EQUIPMENT : BLUETOOTH MODULE
MODEL NUMBER: SM-BT1
SERIAL NUMBER: SMBT10001
FCC ID : S6MSMBT1
POWER : DC3.3V

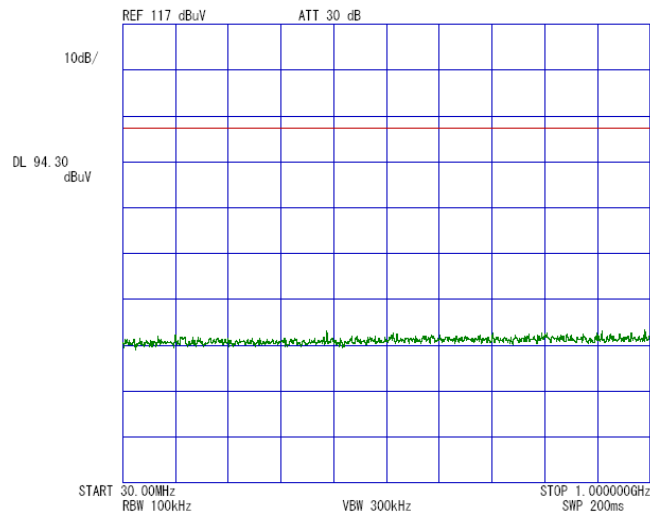
UL Apex Co.,Ltd. Yamakita No.4 Shielded Room
REPORT NO : 26LE0147-YK-A
REGULATION : Fcc Part15SubpartC 247(d)
DATE : 2006/07/27
TEMP./HUMI : 25deg.C./60%
TEST MODE : Transmitting (Hopping off)
ENGINEER : Tatsuya Arai

[Transmitting]
Ch:2402MHz

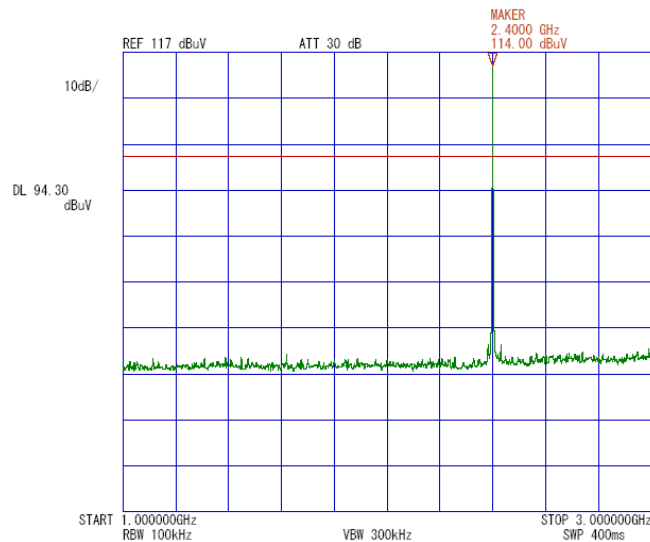
1.



2.



3.



Out of Band Emission(Antenna Terminal Conducted): FCC 15.247(d)

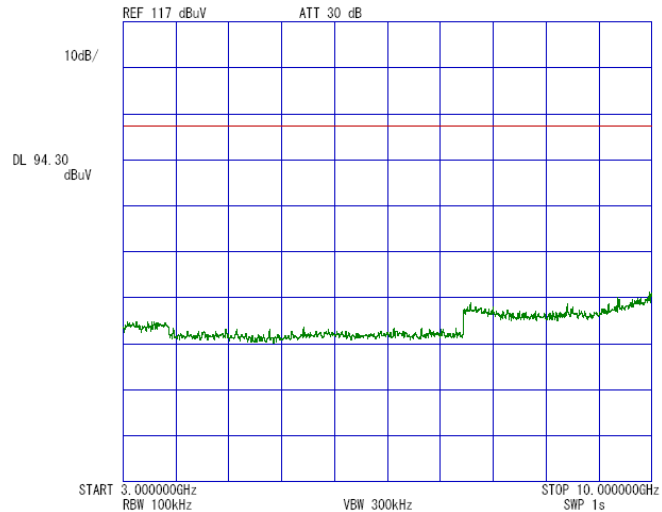
COMPANY : SOKKIA CO.,LTD.
EQUIPMENT : BLUETOOTH MODULE
MODEL NUMBER: SM-BT1
SERIAL NUMBER: SMT10001
FCC ID : S6MSMT1
POWER : DC3.3V

UL Apex Co.,Ltd. Yamakita No.4 Shielded Room
REPORT NO : 26LE0147-YK-A
REGULATION : Fcc Part15SubpartC 247(d)
DATE : 2006/07/27
TEMP./HUMI : 25deg.C./60%
TEST MODE : Transmitting (Hopping off)
ENGINEER : Tatsuya Arai

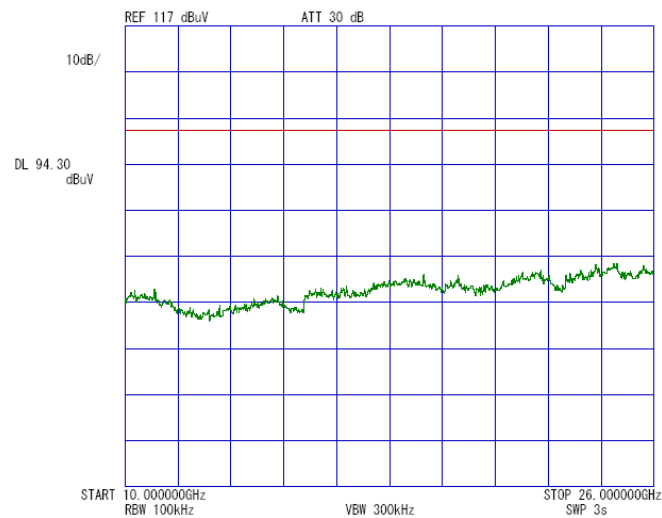
[Transmitting]

Ch:2402MHz

4.



5.



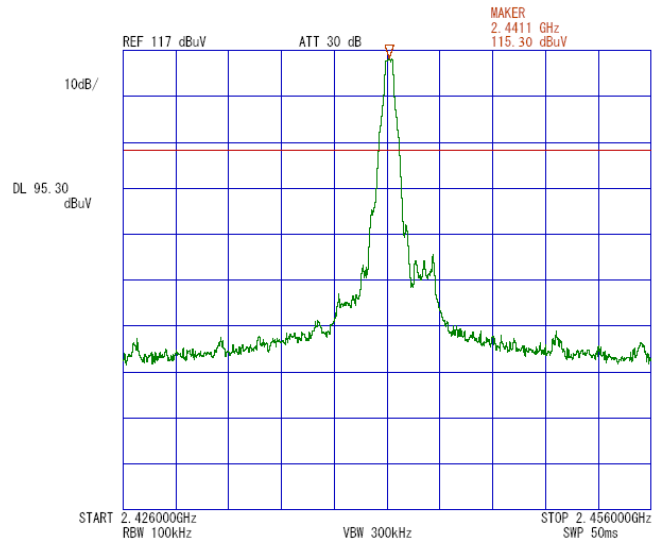
Out of Band Emission(Antenna Terminal Conducted): FCC 15.247(d)

COMPANY : SOKKIA CO.,LTD.
EQUIPMENT : BLUETOOTH MODULE
MODEL NUMBER: SM-BT1
SERIAL NUMBER: SMT10001
FCC ID : S6MSMT1
POWER : DC3.3V

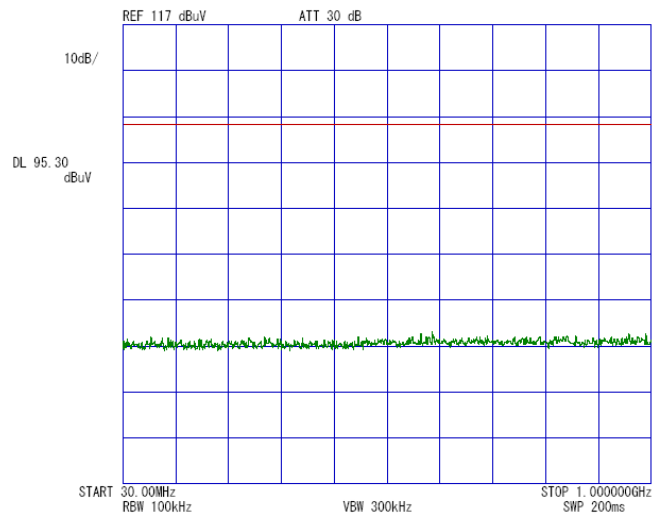
UL Apex Co.,Ltd. Yamakita No.4 Shielded Room
REPORT NO : 26LE0147-YK-A
REGULATION : Fcc Part15SubpartC 247(d)
DATE : 2006/07/27
TEMP./HUMI : 25deg.C./60%
TEST MODE : Transmitting (Hopping off)
ENGINEER : Tatsuya Arai

[Transmitting]
Ch:2441MHz

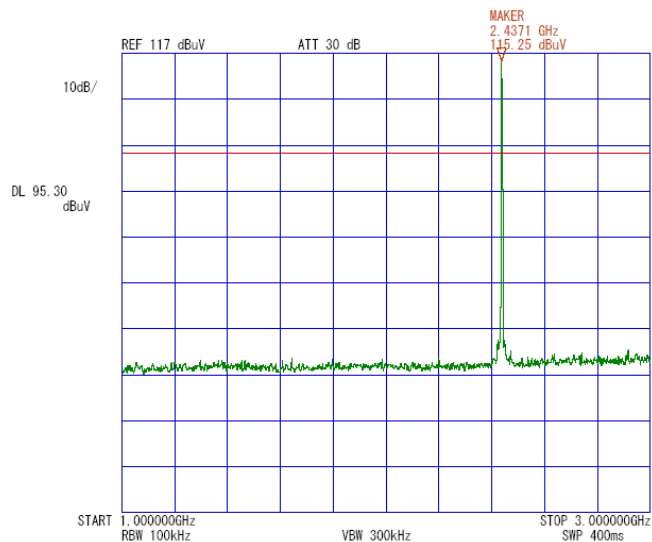
1.



2.



3.



Out of Band Emission(Antenna Terminal Conducted): FCC 15.247(d)

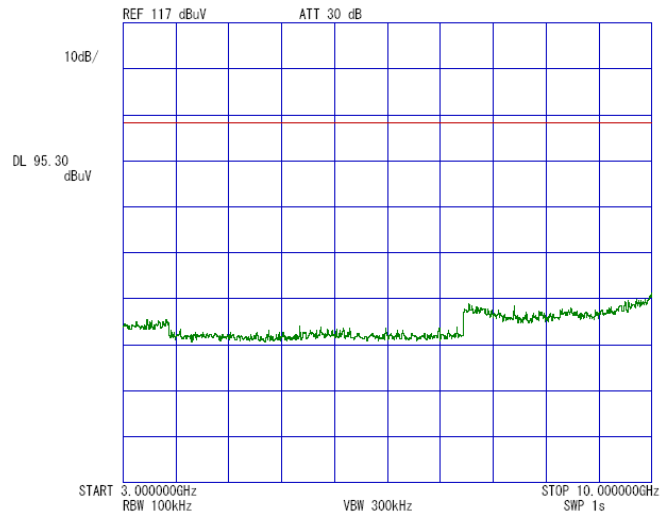
COMPANY : SOKKIA CO.,LTD.
EQUIPMENT : BLUETOOTH MODULE
MODEL NUMBER: SM-BT1
SERIAL NUMBER: SMT10001
FCC ID : S6MSMT1
POWER : DC3.3V

UL Apex Co.,Ltd. Yamakita No.4 Shielded Room
REPORT NO : 26LE0147-YK-A
REGULATION : Fcc Part15SubpartC 247(d)
DATE : 2006/07/27
TEMP./HUMI : 25deg.C./60%
TEST MODE : Transmitting (Hopping off)
ENGINEER : Tatsuya Arai

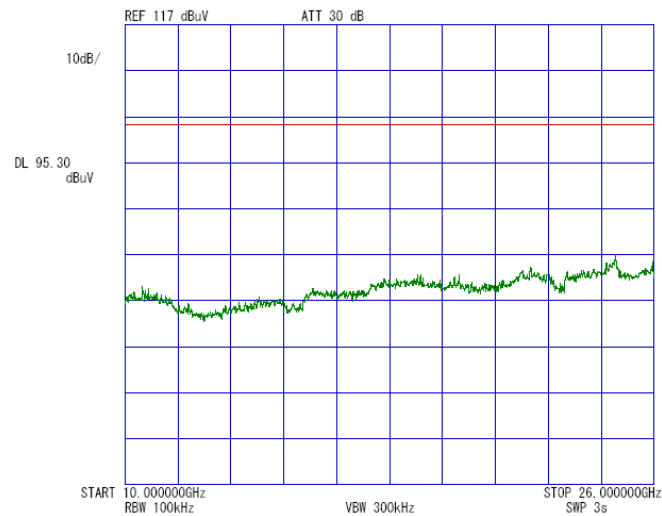
[Transmitting]

Ch:2441MHz

4.



5.



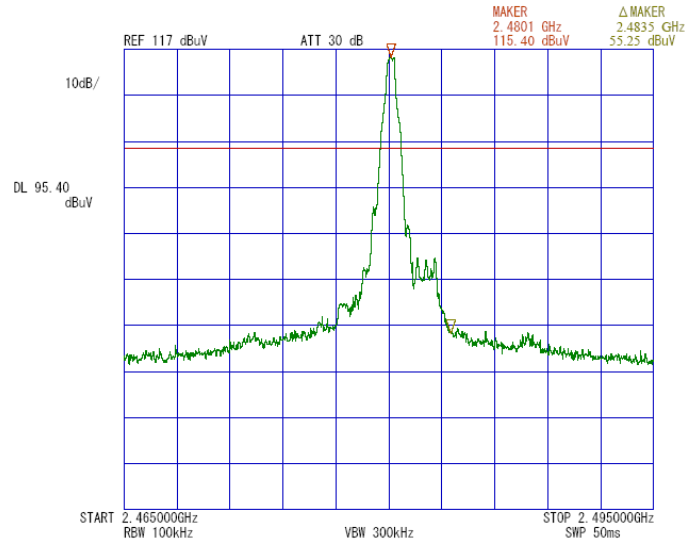
Out of Band Emission(Antenna Terminal Conducted): FCC 15.247(d)

COMPANY : SOKKIA CO.,LTD.
EQUIPMENT : BLUETOOTH MODULE
MODEL NUMBER: SM-BT1
SERIAL NUMBER: SMT10001
FCC ID : S6MSMBT1
POWER : DC3.3V

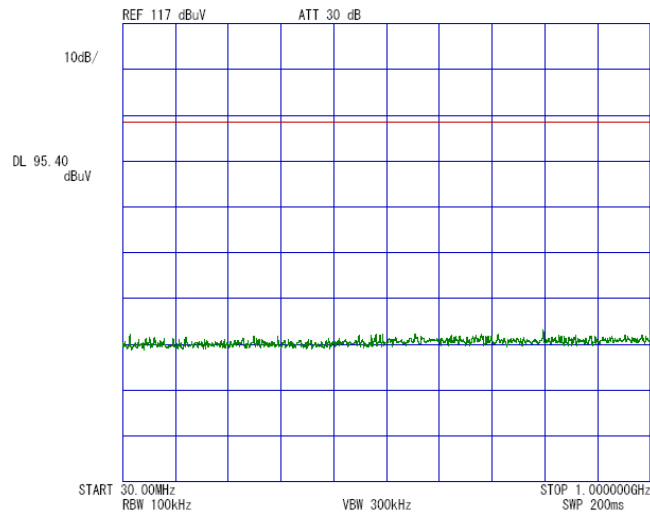
UL Apex Co.,Ltd. Yamakita No.4 Shielded Room
REPORT NO : 26LE0147-YK-A
REGULATION : Fcc Part15SubpartC 247(d)
DATE : 2006/07/27
TEMP./HUMI : 25deg.C./60%
TEST MODE : Transmitting (Hopping off)
ENGINEER : Tatsuya Arai

[Transmitting]
Ch11:2480MHz

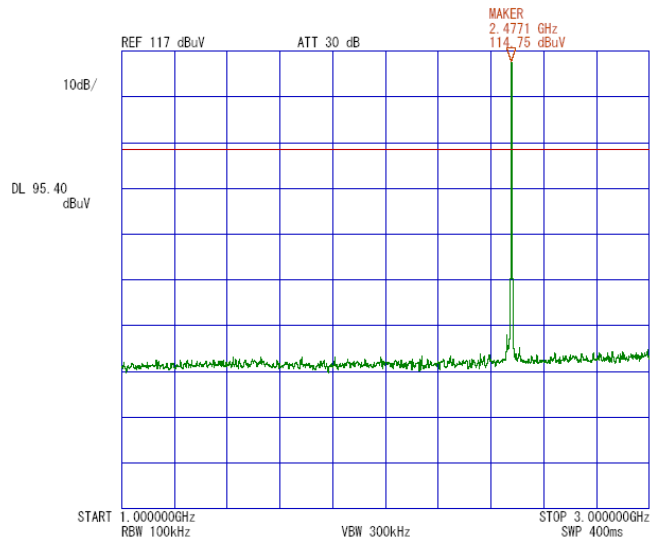
1.



2.



3.



Out of Band Emission(Antenna Terminal Conducted): FCC 15.247(d)

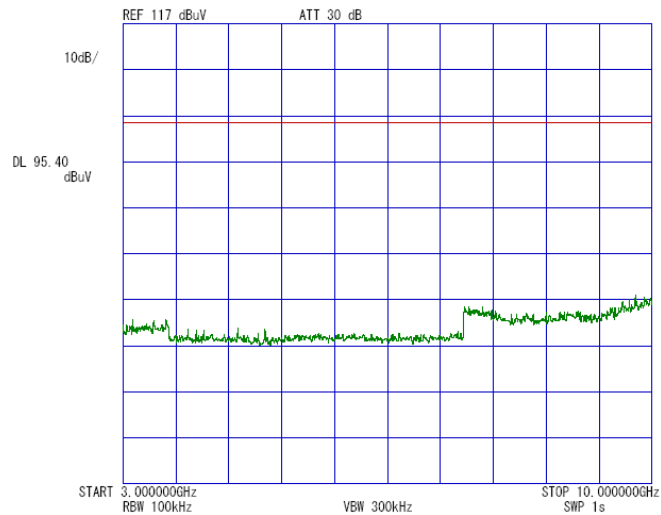
COMPANY : SOKKIA CO.,LTD.
EQUIPMENT : BLUETOOTH MODULE
MODEL NUMBER: SM-BT1
SERIAL NUMBER: SMT10001
FCC ID : S6MSMT1
POWER : DC3.3V

UL Apex Co.,Ltd. Yamakita No.4 Shielded Room
REPORT NO : 26LE0147-YK-A
REGULATION : Fcc Part15SubpartC 247(d)
DATE : 2006/07/27
TEMP./HUMI : 25deg.C./60%
TEST MODE : Transmitting (Hopping off)
ENGINEER : Tatsuya Arai

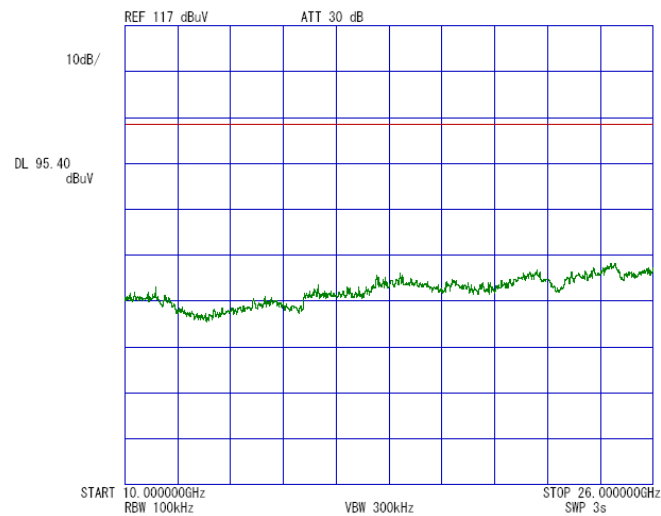
[Transmitting]

Ch:2480MHz

4.



5.



DATA OF RADIATION TEST

UL Apex Co.,Ltd.

YAMAKITA No.2 OPEN TEST SITE

Report No. : 26LE0147-YK-A

Applicant : SOKKIA CO.,LTD.
Kind of Equipment : BLUETOOTH MODULE
Model No. : SM-BT1
Serial No. : SMT10001
Power : DC3.3V
Mode : Tx:2402MHz
Remarks : Chip Antenna
Date : 7/21/2006
Test Distance : 3 m
Temperature : 22 °C
Humidity : 78 %
Regulation : FCC Part15C § 15.209

Engineer : Tatsuya Arai

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS [dB μ V/m]	MARGIN	
			HOR [dB μ V]	VER [dB μ V]					HOR [dB μ V/m]	VER [dB μ V/m]		HOR [dB]	VER [dB]
1.	44.27	BB	23.6	35.1	13.3	27.8	1.4	6.0	16.5	28.0	40.0	23.5	12.0
2.	54.01	BB	25.4	32.6	10.4	27.7	1.5	6.0	15.6	22.8	40.0	24.4	17.2
3.	111.91	BB	27.1	27.7	12.6	27.8	2.2	6.0	20.1	20.7	43.5	23.4	22.8

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

■ ANTENNA: KBA-03 (BBA9106) 30-299MHz/KLA-03 (USLP9143) 300-1000MHz

■ AMP: KAF-03 (8447D) ■ RECEIVER: KTR-04 (ESVS10) ■ CABLE: KCC-20/21/22/23/29

DATA OF RADIATION TEST

UL Apex Co.,Ltd.

YAMAKITA No.2 OPEN TEST SITE

Report No. : 26LE0147-YK-A

Applicant : SOKKIA CO.,LTD.
 Kind of Equipment : BLUETOOTH MODULE
 Model No. : SM-BT1
 Serial No. : SMBT10001
 Power : DC3.3V
 Mode : Tx:2441MHz
 Remarks : Chip Antenna
 Date : 7/21/2006
 Test Distance : 3 m
 Temperature : 22 °C
 Humidity : 78 %
 Regulation : FCC Part15C § 15. 209

Engineer : Tatsuya Arai

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS [dB μ V/m]	MARGIN	
			HOR [dB μ V]	VER [dB μ V]					HOR [dB μ V/m]	VER [dB μ V/m]		HOR [dB]	VER [dB]
1.	44.36	BB	23.6	33.6	13.3	27.8	1.4	6.0	16.5	26.5	40.0	23.5	13.5
2.	54.08	BB	24.6	32.4	10.4	27.7	1.5	6.0	14.8	22.6	40.0	25.2	17.4
3.	111.95	BB	27.4	28.4	12.6	27.8	2.2	6.0	20.4	21.4	43.5	23.1	22.1

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

■ ANTENNA: KBA-03 (BBA9106) 30-299MHz/KLA-03 (USLP9143) 300-1000MHz

■ AMP: KAF-03 (8447D) ■ RECEIVER: KTR-04 (ESVS10) ■ CABLE: KCC-20/21/22/23/29

DATA OF RADIATION TEST

UL Apex Co., Ltd.

YAMAKITA No.2 OPEN TEST SITE

Report No. : 26LE0147-YK-A

Applicant : SOKKIA CO., LTD.
Kind of Equipment : BLUETOOTH MODULE
Model No. : SM-BT1
Serial No. : SMBT10001
Power : DC3.3V
Mode : Tx:2480MHz
Remarks : Chip Antenna
Date : 7/21/2006
Test Distance : 3 m
Temperature : 22 °C
Humidity : 78 %
Regulation : FCC Part15C § 15.209

Engineer : Tatsuya Arai

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS [dB μ V/m]	MARGIN	
			HOR [dB μ V]	VER [dB μ V]					HOR [dB μ V/m]	VER [dB μ V/m]		HOR [dB]	VER [dB]
1.	44.28	BB	23.5	33.5	13.3	27.8	1.4	6.0	16.4	26.4	40.0	23.6	13.6
2.	54.05	BB	24.9	32.1	10.4	27.7	1.5	6.0	15.1	22.3	40.0	24.9	17.7
3.	111.67	BB	27.6	28.9	12.5	27.8	2.2	6.0	20.5	21.8	43.5	23.0	21.7

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

■ ANTENNA: KBA-03 (BBA9106) 30-299MHz/KLA-03 (USLP9143) 300-1000MHz

■ AMP: KAF-03 (8447D) ■ RECEIVER: KTR-04 (ESVS10) ■ CABLE: KCC-20/21/22/23/29

DATA OF RADIATION TEST

UL Apex Co.,Ltd.

YAMAKITA No.2 OPEN TEST SITE

Report No. : 26LE0147-YK-A

Applicant : SOKKIA CO.,LTD.
 Kind of Equipment : BLUETOOTH MODULE
 Model No. : SM-BT1
 Serial No. : SMT10001
 Power : DC3.3V
 Mode : Tx:2402MHz
 Remarks : Chip Antenna, RBW:1MHz, VBW:1MHz (18-26GHz Distance:1m)
 Date : 7/31/2006
 Test Distance : 3 m
 Temperature : 23 °C
 Humidity : 63 %
 Regulation : FCC Part15C § 15.209(a) (PK) 1-18GHz:3m/18-40GHz:1m

Engineer : Fumiaki Matsuo

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS [dB μ V/m]	MARGIN	
			HOR [dB μ V]	VER [dB μ V]					HOR [dB μ V/m]	VER [dB μ V/m]		HOR [dB]	VER [dB]
1.	2390.00	BB	41.8	42.5	27.1	34.8	3.2	9.9	47.2	47.9	74.0	26.8	26.1
2.	4804.00	BB	49.9	48.7	31.1	34.6	4.6	0.5	51.5	50.3	74.0	22.5	23.7
3.	7206.00	BB	43.7	43.4	35.3	34.4	6.3	0.5	51.4	51.1	74.0	22.6	22.9
4.	9608.00	BB	44.6	44.9	37.9	34.6	6.6	1.0	55.5	55.8	74.0	18.5	18.2
5.	12010.00	BB	41.3	41.0	38.5	34.1	7.6	0.4	53.7	53.4	74.0	20.3	20.6
6.	14412.00	BB	41.1	40.9	40.5	32.1	8.8	0.7	59.0	58.8	74.0	15.0	15.2
7.	16814.00	BB	40.4	40.0	39.4	33.1	9.3	0.3	56.3	55.9	74.0	17.7	18.1
8.	19216.00	BB	40.2	40.5	40.8	32.0	9.6	0.0	58.6	58.9	83.5	24.9	24.6
9.	21618.00	BB	42.3	42.2	40.7	31.7	10.3	0.0	61.6	61.5	83.5	21.9	22.0
10.	24020.00	BB	42.9	42.5	40.8	31.6	11.1	0.0	63.2	62.8	83.5	20.3	20.7

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

■ ANTENNA: KHA-02 (1-18GHz) / KHA-04 (18-26GHz)

■ AMP: KAF-04 (8449B) ■ SPECTRUM ANALYZER: KSA-04 ■ CABLE: KCC-D16/D17

DATA OF RADIATION TEST

UL Apex Co.,Ltd.

YAMAKITA No.2 OPEN TEST SITE

Report No. : 26LE0147-YK-A

Applicant : SOKKIA CO.,LTD.
 Kind of Equipment : BLUETOOTH MODULE
 Model No. : SM-BT1
 Serial No. : SMBT10001
 Power : DC3.3V
 Mode : Tx:2402MHz
 Remarks : Chip Antenna, RBW:1MHz, VBW:10Hz (18-26GHz Distance:1m)
 Date : 7/31/2006
 Test Distance : 3 m
 Temperature : 23 °C
 Humidity : 63 %
 Regulation : FCC Part15C § 15.209(a) 1-18GHz:3m/18-40GHz:1m

Engineer : Fumiaki Matsuo

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.	2390.00	BB	30.4	30.3	27.1	34.8	3.2	9.9	35.8	35.7	54.0	18.2	18.3
2.	4804.00	BB	37.4	36.4	31.1	34.6	4.6	0.5	39.0	38.0	54.0	15.0	16.0
3.	7206.00	BB	30.9	31.4	35.3	34.4	6.3	0.5	38.6	39.1	54.0	15.4	14.9
4.	9608.00	BB	31.1	32.6	37.9	34.6	6.6	1.0	42.0	43.5	54.0	12.0	10.5
5.	12010.00	BB	29.4	29.3	38.5	34.1	7.6	0.4	41.8	41.7	54.0	12.2	12.3
6.	14412.00	BB	29.2	29.2	40.5	32.1	8.8	0.7	47.1	47.1	54.0	6.9	6.9
7.	16814.00	BB	30.4	30.5	39.4	33.1	9.3	0.3	46.3	46.4	54.0	7.7	7.6
8.	19216.00	BB	30.9	30.8	40.8	32.0	9.6	0.0	49.3	49.2	63.5	14.2	14.3
9.	21618.00	BB	32.0	31.0	40.7	31.7	10.3	0.0	51.3	50.3	63.5	12.2	13.2
10.	24020.00	BB	32.2	32.7	40.8	31.6	11.1	0.0	52.5	53.0	63.5	11.0	10.5

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

■ ANTENNA: KHA-02 (1-18GHz) / KHA-04 (18-26GHz)

■ AMP: KAF-04 (8449B) ■ SPECTRUM ANALYZER: KSA-04 ■ CABLE: KCC-D16/D17

DATA OF RADIATION TEST

UL Apex Co.,Ltd.

YAMAKITA No.2 OPEN TEST SITE

Report No. : 26LE0147-YK-A

Applicant : SOKKIA CO.,LTD.
 Kind of Equipment : BLUETOOTH MODULE
 Model No. : SM-BT1
 Serial No. : SMT10001
 Power : DC3.3V
 Mode : Tx:2441MHz
 Remarks : Chip Antenna, RBW:1MHz, VBW:1MHz (18-26GHz Distance:1m)
 Date : 7/31/2006
 Test Distance : 3 m
 Temperature : 23 °C
 Humidity : 63 %
 Regulation : FCC Part15C § 15.209(a) (PK) 1-18GHz:3m/18-40GHz:1m

Engineer : Fumiaki Matsuo

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS [dB μ V/m]	MARGIN	
			HOR [dB μ V]	VER [dB μ V]					HOR [dB μ V/m]	VER [dB μ V/m]		HOR [dB]	VER [dB]
1.	4882.00	BB	51.3	50.5	31.3	34.7	4.6	0.5	53.0	52.2	74.0	21.0	21.8
2.	7323.00	BB	48.1	49.4	35.4	34.4	6.3	0.5	55.9	57.2	74.0	18.1	16.8
3.	9764.00	BB	46.8	42.6	37.9	34.6	6.6	0.9	57.6	53.4	74.0	16.4	20.6
4.	12205.00	BB	41.3	41.0	38.6	33.8	7.7	0.5	54.3	54.0	74.0	19.7	20.0
5.	14646.00	BB	41.0	41.0	40.2	32.5	8.8	0.7	58.2	58.2	74.0	15.8	15.8
6.	17087.00	BB	40.5	40.2	40.5	32.8	9.4	0.4	58.0	57.7	74.0	16.0	16.3
7.	19528.00	BB	40.3	40.5	40.8	32.3	9.8	0.0	58.6	58.8	83.5	24.9	24.7
8.	21969.00	BB	42.2	42.1	40.9	32.9	10.1	0.0	60.3	60.2	83.5	23.2	23.3
9.	24410.00	BB	42.5	42.5	41.0	31.1	11.5	0.0	63.9	63.9	83.5	19.6	19.6

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

■ ANTENNA: KHA-02 (1-18GHz) / KHA-04 (18-26GHz)

■ AMP: KAF-04 (8449B) ■ SPECTRUM ANALYZER: KSA-04 ■ CABLE: KCC-D16/D17

DATA OF RADIATION TEST

UL Apex Co.,Ltd.

YAMAKITA No.2 OPEN TEST SITE

Report No. : 26LE0147-YK-A

Applicant : SOKKIA CO.,LTD.
 Kind of Equipment : BLUETOOTH MODULE
 Model No. : SM-BT1
 Serial No. : SMBT10001
 Power : DC3.3V
 Mode : Tx:2441MHz
 Remarks : Chip Antenna, RBW:1MHz, VBW:10Hz (18-26GHz Distance:1m)
 Date : 7/31/2006
 Test Distance : 3 m
 Temperature : 23 °C
 Humidity : 63 %
 Regulation : FCC Part15C § 15.209(a) 1-18GHz:3m/18-40GHz:1m

Engineer : Fumiaki Matsuo

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR	AMP GAIN	CABLE LOSS	ATTEN.	RESULT		LIMITS	MARGIN	
			HOR	VER					HOR	VER		HOR	VER
			[dB μ V]	[dB μ V]	[dB/m]	[dB]	[dB]	[dB]	[dB μ V/m]	[dB μ V/m]	[dB μ V/m]	[dB]	[dB]
1.	4882.00	BB	38.0	38.4	31.3	34.7	4.6	0.5	39.7	40.1	54.0	14.3	13.9
2.	7323.00	BB	36.4	36.4	35.4	34.4	6.3	0.5	44.2	44.2	54.0	9.8	9.8
3.	9764.00	BB	34.9	32.3	37.9	34.6	6.6	0.9	45.7	43.1	54.0	8.3	10.9
4.	12205.00	BB	29.2	29.0	38.6	33.8	7.7	0.5	42.2	42.0	54.0	11.8	12.0
5.	14646.00	BB	29.3	29.3	40.2	32.5	8.8	0.7	46.5	46.5	54.0	7.5	7.5
6.	17087.00	BB	30.3	30.3	40.5	32.8	9.4	0.4	47.8	47.8	54.0	6.2	6.2
7.	19528.00	BB	30.9	31.0	40.8	32.3	9.8	0.0	49.2	49.3	63.5	14.3	14.2
8.	21969.00	BB	31.9	31.1	40.9	32.9	10.1	0.0	50.0	49.2	63.5	13.5	14.3
9.	24410.00	BB	32.1	32.5	41.0	31.1	11.5	0.0	53.5	53.9	63.5	10.0	9.6

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

■ ANTENNA: KHA-02 (1-18GHz) / KHA-04 (18-26GHz)

■ AMP: KAF-04 (8449B) ■ SPECTRUM ANALYZER: KSA-04 ■ CABLE: KCC-D16/D17

DATA OF RADIATION TEST

UL Apex Co.,Ltd.

YAMAKITA No.2 OPEN TEST SITE

Report No. : 26LE0147-YK-A

Applicant : SOKKIA CO.,LTD.
 Kind of Equipment : BLUETOOTH MODULE
 Model No. : SM-BT1
 Serial No. : SMBT10001
 Power : DC3.3V
 Mode : Tx:2480MHz
 Remarks : Chip Antenna, RBW:1MHz, VBW:1MHz (18-26GHz Distance:1m)
 Date : 7/31/2006
 Test Distance : 3 m
 Temperature : 23 °C
 Humidity : 63 %
 Regulation : FCC Part15C § 15.209(a) (PK) 1-18GHz:3m/18-40GHz:1m
 Engineer : Fumiaki Matsuo

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.	2483.50	BB	40.1	40.0	27.3	34.8	3.2	9.9	45.7	45.6	74.0	28.3	28.4
2.	4960.00	BB	45.9	44.8	31.4	34.7	4.6	0.4	47.6	46.5	74.0	26.4	27.5
3.	7440.00	BB	45.5	45.5	35.6	34.5	6.4	0.5	53.5	53.5	74.0	20.5	20.5
4.	9920.00	BB	44.5	41.6	38.0	34.6	6.6	0.8	55.3	52.4	74.0	18.7	21.6
5.	12400.00	BB	41.2	41.1	38.7	33.4	7.8	0.6	54.9	54.8	74.0	19.1	19.2
6.	14880.00	BB	41.5	41.0	40.0	32.9	8.8	0.6	58.0	57.5	74.0	16.0	16.5
7.	17360.00	BB	40.3	40.0	42.6	32.8	9.3	0.2	59.6	59.3	74.0	14.4	14.7
8.	19840.00	BB	40.5	40.3	40.8	31.8	9.9	0.0	59.4	59.2	83.5	24.1	24.3
9.	22320.00	BB	41.9	41.8	41.0	32.1	10.2	0.0	61.0	60.9	83.5	22.5	22.6
10.	24800.00	BB	42.0	42.3	41.1	31.7	11.5	0.0	62.9	63.2	83.5	20.6	20.3

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

■ ANTENNA: KHA-02 (1-18GHz) / KHA-04 (18-26GHz)

■ AMP: KAF-04 (8449B) ■ SPECTRUM ANALYZER: KSA-04 ■ CABLE: KCC-D16/D17

DATA OF RADIATION TEST

UL Apex Co.,Ltd.

YAMAKITA No.2 OPEN TEST SITE

Report No. : 26LE0147-YK-A

Applicant : SOKKIA CO.,LTD.
 Kind of Equipment : BLUETOOTH MODULE
 Model No. : SM-BT1
 Serial No. : SMBT10001
 Power : DC3.3V
 Mode : Tx:2480MHz
 Remarks : Chip Antenna, RBW:1MHz, VBW:10Hz (18-26GHz Distance:1m)
 Date : 7/31/2006
 Test Distance : 3 m
 Temperature : 23 °C
 Humidity : 63 %
 Regulation : FCC Part15C § 15.209(a) 1-18GHz:3m/18-40GHz:1m
 Engineer : Fumiaki Matsuo

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS [dB μ V/m]	MARGIN	
			HOR [dB μ V]	VER [dB μ V]					HOR [dB μ V/m]	VER [dB μ V/m]		HOR [dB]	VER [dB]
1.	2483.50	BB	31.3	31.0	27.3	34.8	3.2	9.9	36.9	36.6	54.0	17.1	17.4
2.	4960.00	BB	34.3	33.2	31.4	34.7	4.6	0.4	36.0	34.9	54.0	18.0	19.1
3.	7440.00	BB	33.8	33.6	35.6	34.5	6.4	0.5	41.8	41.6	54.0	12.2	12.4
4.	9920.00	BB	33.0	30.2	38.0	34.6	6.6	0.8	43.8	41.0	54.0	10.2	13.0
5.	12400.00	BB	29.3	29.4	38.7	33.4	7.8	0.6	43.0	43.1	54.0	11.0	10.9
6.	14880.00	BB	29.2	29.4	40.0	32.9	8.8	0.6	45.7	45.9	54.0	8.3	8.1
7.	17360.00	BB	30.4	30.5	42.6	32.8	9.3	0.2	49.7	49.8	54.0	4.3	4.2
8.	19840.00	BB	31.1	31.0	40.8	31.8	9.9	0.0	50.0	49.9	63.5	13.5	13.6
9.	22320.00	BB	31.8	31.2	41.0	32.1	10.2	0.0	50.9	50.3	63.5	12.6	13.2
10.	24800.00	BB	32.5	32.0	41.1	31.7	11.5	0.0	53.4	52.9	63.5	10.1	10.6

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

■ ANTENNA: KHA-02 (1-18GHz) / KHA-04 (18-26GHz)

■ AMP: KAF-04 (8449B) ■ SPECTRUM ANALYZER: KSA-04 ■ CABLE: KCC-D16/D17

DATA OF RADIATION TEST

UL Apex Co., Ltd.

YAMAKITA No.2 OPEN TEST SITE

Report No. : 26LE0147-YK-A

Applicant : SOKKIA CO., LTD.
Kind of Equipment : BLUETOOTH MODULE
Model No. : SM-BT1
Serial No. : SMBT10001
Power : DC3.3V
Mode : Tx:2402MHz
Remarks : Dipole Antenna
Date : 7/26/2006
Test Distance : 3 m
Temperature : 22 °C
Humidity : 60 %
Regulation : FCC Part15C § 15.209

Engineer : Toyokazu Imamura

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS [dB μ V/m]	MARGIN	
			HOR [dB μ V]	VER [dB μ V]					HOR [dB μ V/m]	VER [dB μ V/m]		HOR [dB]	VER [dB]
1.	43.86	BB	23.4	32.2	11.7	27.8	1.4	5.8	14.5	23.3	40.0	25.5	16.7
2.	53.18	BB	25.2	29.7	9.0	27.7	1.5	5.8	13.8	18.3	40.0	26.2	21.7
3.	111.43	BB	28.2	28.5	11.4	27.8	2.2	5.8	19.8	20.1	43.5	23.7	23.4
4.	384.03	BB	32.9	26.4	17.0	27.7	4.3	5.8	32.3	25.8	46.0	13.7	20.2

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

■ ANTENNA: KBA-02 (BBA9106) 30-299MHz/KLA-02 (USLP9143) 300-1000MHz

■ AMP: KAF-03 (8447D) ■ RECEIVER: KTR-04 (ESVS10) ■ CABLE: KCC-20/21/22/23/29

DATA OF RADIATION TEST

UL Apex Co.,Ltd.

YAMAKITA No.2 OPEN TEST SITE

Report No. : 26LE0147-YK-A

Applicant : SOKKIA CO.,LTD.
 Kind of Equipment : BLUETOOTH MODULE
 Model No. : SM-BT1
 Serial No. : SMBT10001
 Power : DC3.3V
 Mode : Tx:2441MHz
 Remarks : Dipole Antenna
 Date : 7/26/2006
 Test Distance : 3 m
 Temperature : 22 °C
 Humidity : 60 %
 Regulation : FCC Part15C §15.209

Engineer : Toyokazu Imamura

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS [dB μ V/m]	MARGIN	
			HOR [dB μ V]	VER [dB μ V]					HOR [dB μ V/m]	VER [dB μ V/m]		HOR [dB]	VER [dB]
1.	43.86	BB	23.3	32.1	11.7	27.8	1.4	5.8	14.4	23.2	40.0	25.6	16.8
2.	53.16	BB	24.1	29.3	9.0	27.7	1.5	5.8	12.7	17.9	40.0	27.3	22.1
3.	111.45	BB	27.9	28.4	11.4	27.8	2.2	5.8	19.5	20.0	43.5	24.0	23.5
4.	384.02	BB	33.1	26.2	17.0	27.7	4.3	5.8	32.5	25.6	46.0	13.5	20.4

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

■ ANTENNA: KBA-02 (BBA9106) 30-299MHz/KLA-02 (USLP9143) 300-1000MHz

■ AMP: KAF-03 (8447D) ■ RECEIVER: KTR-04 (ESVS10) ■ CABLE: KCC-20/21/22/23/29

DATA OF RADIATION TEST

UL Apex Co.,Ltd.

YAMAKITA No.2 OPEN TEST SITE

Report No. : 26LE0147-YK-A

Applicant : SOKKIA CO., LTD.
Kind of Equipment : BLUETOOTH MODULE
Model No. : SM-BT1
Serial No. : SMBT10001
Power : DC3.3V
Mode : Tx:2480MHz
Remarks : Dipole Antenna
Date : 7/26/2006
Test Distance : 3 m
Temperature : 22 °C
Humidity : 60 %
Regulation : FCC Part15C § 15.209

Engineer : Toyokazu Imamura

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS [dB μ V/m]	MARGIN	
			HOR [dB μ V]	VER [dB μ V]					HOR [dB μ V/m]	VER [dB μ V/m]		HOR [dB]	VER [dB]
1.	43.72	BB	23.1	31.9	11.7	27.8	1.4	5.8	14.2	23.0	40.0	25.8	17.0
2.	53.16	BB	25.0	29.2	9.0	27.7	1.5	5.8	13.6	17.8	40.0	26.4	22.2
3.	111.44	BB	28.0	28.4	11.4	27.8	2.2	5.8	19.6	20.0	43.5	23.9	23.5
4.	384.03	BB	33.0	25.9	17.0	27.7	4.3	5.8	32.4	25.3	46.0	13.6	20.7

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

■ ANTENNA: KBA-02 (BBA9106) 30-299MHz/KLA-02 (USLP9143) 300-1000MHz

■ AMP: KAF-03 (8447D) ■ RECEIVER: KTR-04 (ESVS10) ■ CABLE: KCC-20/21/22/23/29

DATA OF RADIATION TEST

UL Apex Co.,Ltd.

YAMAKITA No.2 OPEN TEST SITE

Report No. : 26LE0147-YK-A

Applicant : SOKKIA CO.,LTD.
Kind of Equipment : BLUETOOTH MODULE
Model No. : SM-BT1
Serial No. : SMT10001
Power : DC3.3V
Mode : Tx:2402MHz
Remarks : Dipole Antenna, RBW:1MHz, VBW:1MHz (18-26GHz Distance:1m)
Date : 7/28/2006
Test Distance : 3 m
Temperature : 24 °C
Humidity : 68 %
Regulation : FCC Part15C § 15.209(a) (PK) 1-18GHz:3m/18-40GHz:1m
Engineer : Toyokazu Imamura

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS [dB μ V/m]	MARGIN	
			HOR [dB μ V]	VER [dB μ V]					HOR [dB μ V/m]	VER [dB μ V/m]		HOR [dB]	VER [dB]
1.	2386.04	BB	45.9	46.0	27.1	34.8	3.2	9.9	51.3	51.4	74.0	22.7	22.6
2.	2390.00	BB	46.6	46.7	27.1	34.8	3.2	9.9	52.0	52.1	74.0	22.0	21.9
3.	4804.00	BB	49.0	45.5	31.1	34.6	4.6	0.5	50.6	47.1	74.0	23.4	26.9
4.	7206.00	BB	46.0	43.0	35.3	34.4	6.3	0.5	53.7	50.7	74.0	20.3	23.3
5.	9608.00	BB	46.2	41.5	37.9	34.6	6.6	1.0	57.1	52.4	74.0	16.9	21.6
6.	12010.00	BB	40.7	39.2	38.5	34.1	7.6	0.4	53.1	51.6	74.0	20.9	22.4
7.	14412.00	BB	40.3	39.7	40.5	32.1	8.8	0.7	58.2	57.6	74.0	15.8	16.4
8.	16814.00	BB	40.8	39.8	39.4	33.1	9.3	0.3	56.7	55.7	74.0	17.3	18.3
9.	19216.00	BB	42.1	41.7	40.8	32.0	9.6	0.0	60.5	60.1	83.5	23.0	23.4
10.	21618.00	BB	42.3	41.7	40.7	31.7	10.3	0.0	61.6	61.0	83.5	21.9	22.5
11.	24020.00	BB	42.8	42.3	40.8	31.6	11.1	0.0	63.1	62.6	83.5	20.4	20.9

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

■ ANTENNA: KHA-02 (1-18GHz) / KHA-04 (18-26GHz)

■ AMP: KAF-04 (8449B) ■ SPECTRUM ANALYZER: KSA-04 ■ CABLE: KCC-D16/D17

DATA OF RADIATION TEST

UL Apex Co.,Ltd.

YAMAKITA No.2 OPEN TEST SITE

Report No. : 26LE0147-YK.A

Applicant : SOKKIA CO., LTD.
 Kind of Equipment : BLUETOOTH MODULE
 Model No. : SM-BT1
 Serial No. : SMT10001
 Power : DC3.3V
 Mode : Tx:2402MHz
 Remarks : Dipole Antenna, RBW:1MHz, VBW:10Hz (18-26GHz Distance:1m)
 Date : 7/28/2006
 Test Distance : 3 m
 Temperature : 24 °C
 Humidity : 68 %
 Regulation : FCC Part15C § 15.209(a) 1-18GHz:3m/18-40GHz:1m

Engineer : Toyokazu Imamura

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.	2386.04	BB	35.6	36.1	27.1	34.8	3.2	9.9	41.0	41.5	54.0	13.0	12.5
2.	2390.00	BB	32.5	33.3	27.1	34.8	3.2	9.9	37.9	38.7	54.0	16.1	15.3
3.	4804.00	BB	41.4	37.7	31.1	34.6	4.6	0.5	43.0	39.3	54.0	11.0	14.7
4.	7206.00	BB	36.9	33.3	35.3	34.4	6.3	0.5	44.6	41.0	54.0	9.4	13.0
5.	9608.00	BB	35.8	29.7	37.9	34.6	6.6	1.0	46.7	40.6	54.0	7.3	13.4
6.	12010.00	BB	29.3	28.2	38.5	34.1	7.6	0.4	41.7	40.6	54.0	12.3	13.4
7.	14412.00	BB	29.2	29.3	40.5	32.1	8.8	0.7	47.1	47.2	54.0	6.9	6.8
8.	16814.00	BB	29.6	29.7	39.4	33.1	9.3	0.3	45.5	45.6	54.0	8.5	8.4
9.	19216.00	BB	31.5	31.4	40.8	32.0	9.6	0.0	49.9	49.8	63.5	13.6	13.7
10.	21618.00	BB	32.3	32.3	40.7	31.7	10.3	0.0	51.6	51.6	63.5	11.9	11.9
11.	24020.00	BB	33.2	33.0	40.8	31.6	11.1	0.0	53.5	53.3	63.5	10.0	10.2

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

■ ANTENNA: KHA-02 (1-18GHz) / KHA-04 (18-26GHz)

■ AMP: KAF-04 (8449B) ■ SPECTRUM ANALYZER: KSA-04 ■ CABLE: KCC-D16/D17

DATA OF RADIATION TEST

UL Apex Co.,Ltd.

YAMAKITA No.2 OPEN TEST SITE

Report No. : 26LE0147-YK -A

Applicant : SOKKIA CO., LTD.
 Kind of Equipment : BLUETOOTH MODULE
 Model No. : SM-BT1
 Serial No. : SMBT10001
 Power : DC3.3V
 Mode : Tx:2441MHz
 Remarks : Dipole Antenna, RBW:1MHz, VBW:1MHz (18-26GHz Distance:1m)
 Date : 7/28/2006
 Test Distance : 3 m
 Temperature : 24 °C
 Humidity : 68 %
 Regulation : FCC Part15C § 15.209(a) (PK) 1-18GHz:3m/18-40GHz:1m

Engineer : Toyokazu Imamura

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.	4882.00	BB	45.3	43.1	31.3	34.7	4.6	0.5	47.0	44.8	74.0	27.0	29.2
2.	7323.00	BB	44.5	43.5	35.4	34.4	6.3	0.5	52.3	51.3	74.0	21.7	22.7
3.	9764.00	BB	42.9	42.8	37.9	34.6	6.6	0.9	53.7	53.6	74.0	20.3	20.4
4.	12205.00	BB	40.4	39.4	38.6	33.8	7.7	0.5	53.4	52.4	74.0	20.6	21.6
5.	14646.00	BB	40.5	39.8	40.2	32.5	8.8	0.7	57.7	57.0	74.0	16.3	17.0
6.	17087.00	BB	40.1	40.5	40.5	32.8	9.4	0.4	57.6	58.0	74.0	16.4	16.0
7.	19528.00	BB	41.5	41.5	40.8	32.3	9.8	0.0	59.8	59.8	83.5	23.7	23.7
8.	21969.00	BB	42.0	43.5	40.9	32.9	10.1	0.0	60.1	61.6	83.5	23.4	21.9
9.	24410.00	BB	41.6	43.2	41.0	31.1	11.5	0.0	63.0	64.6	83.5	20.5	18.9

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

■ ANTENNA: KHA-02 (1-18GHz) / KHA-04 (18-26GHz)

■ AMP: KAF-04 (8449B) ■ SPECTRUM ANALYZER: KSA-04 ■ CABLE: KCC-D16/D17

DATA OF RADIATION TEST

UL Apex Co., Ltd.

YAMAKITA No.2 OPEN TEST SITE

Report No. : 26LE0147-YK-A

Applicant : SOKKIA CO., LTD.
 Kind of Equipment : BLUETOOTH MODULE
 Model No. : SM-BT1
 Serial No. : SMBT10001
 Power : DC3.3V
 Mode : Tx:2441MHz
 Remarks : Dipole Antenna, RBW:1MHz, VBW:10Hz (18-26GHz Distance:1m)
 Date : 7/28/2006
 Test Distance : 3 m
 Temperature : 24 °C
 Humidity : 68 %
 Regulation : FCC Part15C § 15.209(a) 1-18GHz:3m/18-40GHz:1m
 Engineer : Toyokazu Imamura

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.	4882.00	BB	37.5	34.4	31.3	34.7	4.6	0.5	39.2	36.1	54.0	14.8	17.9
2.	7323.00	BB	36.0	34.5	35.4	34.4	6.3	0.5	43.8	42.3	54.0	10.2	11.7
3.	9764.00	BB	32.3	31.5	37.9	34.6	6.6	0.9	43.1	42.3	54.0	10.9	11.7
4.	12205.00	BB	29.2	29.1	38.6	33.8	7.7	0.5	42.2	42.1	54.0	11.8	11.9
5.	14646.00	BB	29.7	29.6	40.2	32.5	8.8	0.7	46.9	46.8	54.0	7.1	7.2
6.	17087.00	BB	30.1	29.9	40.5	32.8	9.4	0.4	47.6	47.4	54.0	6.4	6.6
7.	19528.00	BB	31.6	31.4	40.8	32.3	9.8	0.0	49.9	49.7	63.5	13.6	13.8
8.	21969.00	BB	32.5	32.5	40.9	32.9	10.1	0.0	50.6	50.6	63.5	12.9	12.9
9.	24410.00	BB	32.6	32.9	41.0	31.1	11.5	0.0	54.0	54.3	63.5	9.5	9.2

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

■ ANTENNA: KHA-02 (1-18GHz) / KHA-04 (18-26GHz)

■ AMP: KAF-04 (8449B) ■ SPECTRUM ANALYZER: KSA-04 ■ CABLE: KCC-D16/D17

DATA OF RADIATION TEST

UL Apex Co.,Ltd.

YAMAKITA No.2 OPEN TEST SITE

Report No. : 26LE0147-YK-A

Applicant : SOKKIA CO., LTD.
 Kind of Equipment : BLUETOOTH MODULE
 Model No. : SM-BT1
 Serial No. : SMBT10001
 Power : DC3.3V
 Mode : Tx:2480MHz
 Remarks : Dipole Antenna, RBW:1MHz, VBW:1MHz (18-26GHz Distance:1m)
 Date : 7/28/2006
 Test Distance : 3 m
 Temperature : 24 °C
 Humidity : 68 %
 Regulation : FCC Part15C § 15.209(a) (PK) 1-18GHz:3m/18-40GHz:1m
 Engineer : Toyokazu Imamura

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.	2483.50	BB	61.2	61.0	27.3	34.8	3.2	9.9	66.8	66.6	74.0	7.2	7.4
2.	2512.00	BB	45.5	46.8	27.4	34.8	3.2	9.9	51.2	52.5	74.0	22.8	21.5
3.	4960.00	BB	41.9	43.1	31.4	34.7	4.6	0.4	43.6	44.8	74.0	30.4	29.2
4.	7440.00	BB	43.9	44.2	35.6	34.5	6.4	0.5	51.9	52.2	74.0	22.1	21.8
5.	9920.00	BB	42.7	39.4	38.0	34.6	6.6	0.8	53.5	50.2	74.0	20.5	23.8
6.	12400.00	BB	39.5	38.1	38.7	33.4	7.8	0.6	53.2	51.8	74.0	20.8	22.2
7.	14880.00	BB	40.5	39.6	40.0	32.9	8.8	0.6	57.0	56.1	74.0	17.0	17.9
8.	17360.00	BB	41.0	39.4	42.6	32.8	9.3	0.2	60.3	58.7	74.0	13.7	15.3
9.	19840.00	BB	41.8	41.8	40.8	31.8	9.9	0.0	60.7	60.7	83.5	22.8	22.8
10.	22320.00	BB	42.9	42.5	41.0	32.1	10.2	0.0	62.0	61.6	83.5	21.5	21.9
11.	24800.00	BB	44.3	44.4	41.1	31.7	11.5	0.0	65.2	65.3	83.5	18.3	18.2

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

■ ANTENNA: KHA-02 (1-18GHz) / KHA-04 (18-26GHz)

■ AMP: KAF-04 (8449B) ■ SPECTRUM ANALYZER: KSA-04 ■ CABLE: KCC-D16/D17

DATA OF RADIATION TEST

UL Apex Co.,Ltd.

YAMAKITA No.2 OPEN TEST SITE

Report No. : 26LE0147-YK-A

Applicant : SOKKIA CO.,LTD.
 Kind of Equipment : BLUETOOTH MODULE
 Model No. : SM-BT1
 Serial No. : SMBT10001
 Power : DC3.3V
 Mode : Tx:2480MHz
 Remarks : Dipole Antenna, RBW:1MHz, VBW:10Hz (18-26GHz Distance:1m)
 Date : 7/28/2006
 Test Distance : 3 m
 Temperature : 24 °C
 Humidity : 68 %
 Regulation : FCC Part15C § 15.209(a) 1-18GHz:3m/18-40GHz:1m

Engineer : Toyokazu Imamura

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.	2483.50	BB	44.5	45.8	27.3	34.8	3.2	9.9	50.1	51.4	54.0	3.9	2.6
2.	2512.00	BB	36.5	36.6	27.4	34.8	3.2	9.9	42.2	42.3	54.0	11.8	11.7
3.	4960.00	BB	31.6	33.4	31.4	34.7	4.6	0.4	33.3	35.1	54.0	20.7	18.9
4.	7440.00	BB	35.0	34.7	35.6	34.5	6.4	0.5	43.0	42.7	54.0	11.0	11.3
5.	9920.00	BB	31.2	29.3	38.0	34.6	6.6	0.8	42.0	40.1	54.0	12.0	13.9
6.	12400.00	BB	28.8	28.2	38.7	33.4	7.8	0.6	42.5	41.9	54.0	11.5	12.1
7.	14880.00	BB	29.5	29.5	40.0	32.9	8.8	0.6	46.0	46.0	54.0	8.0	8.0
8.	17360.00	BB	30.5	30.3	42.6	32.8	9.3	0.2	49.8	49.6	54.0	4.2	4.4
9.	19840.00	BB	32.4	32.3	40.8	31.8	9.9	0.0	51.3	51.2	63.5	12.2	12.3
10.	22320.00	BB	33.2	33.0	41.0	32.1	10.2	0.0	52.3	52.1	63.5	11.2	11.4
11.	24800.00	BB	34.5	34.8	41.1	31.7	11.5	0.0	55.4	55.7	63.5	8.1	7.8

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

■ ANTENNA: KHA-02 (1-18GHz) / KHA-04 (18-26GHz)

■ AMP: KAF-04 (8449B) ■ SPECTRUM ANALYZER: KSA-04 ■ CABLE: KCC-D16/D17

Page:

DATA OF RADIATION TEST

UL Apex Co.,Ltd.

YAMAKITA No.1 OPEN TEST SITE

Report No. : 26LE0147-YK-A

Applicant : SOKKIA CO.,LTD.
 Kind of Equipment : BLUETOOTH MODULE
 Model No. : SM-BT1
 Serial No. : SMBT10001
 Power : DC3.3V
 Mode : Tx:2402MHz
 Remarks : Chip ANT/+Another BTmodule
 Date : 8/21/2006
 Test Distance : 3 m
 Temperature : 23 °C
 Humidity : 68 %
 Regulation : FCC Part15C § 15.209

Engineer : Akira Sato

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	VER					HOR	VER		HOR	VER
			[dB μV]						[dB μV/m]			[dB]	
1.	49.10	BB	25.4	35.6	9.9	28.4	1.8	6.0	14.7	24.9	40.0	25.3	15.1
2.	99.44	BB	26.2	29.5	9.7	28.2	2.6	6.1	16.4	19.7	43.5	27.1	23.8

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

■ ANTENNA: KBA-01 (BBA9106) 30-299.99MHz/KLA-01 (USLP9143) 300-1000MHz

■ CABLE: KCC-10/11/12/13/18 ■ PREAMP: KAF-01 (8447D) ■ EMI RECEIVER: KTR-02 (ESCS30)

DATA OF RADIATION TEST

UL Apex Co.,Ltd.

YAMAKITA No.1 OPEN TEST SITE

Report No. : 26LE0147-YK-A

Applicant : SOKKIA CO.,LTD.
 Kind of Equipment : BLUETOOTH MODULE
 Model No. : SM-BT1
 Serial No. : SMBT10001
 Power : DC3.3V
 Mode : Tx:2441MHz
 Remarks : Chip ANT/+Another BTmodule
 Date : 8/21/2006
 Test Distance : 3 m
 Temperature : 23 °C
 Humidity : 68 %
 Regulation : FCC Part15C § 15.209

Engineer : Akira Sato

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS [dB μ V/m]	MARGIN	
			HOR [dB μ V]	VER [dB μ V]					HOR [dB μ V/m]	VER [dB μ V/m]		HOR [dB]	VER [dB]
1.	49.06	BB	25.3	35.5	9.9	28.4	1.8	6.0	14.6	24.8	40.0	25.4	15.2
2.	99.44	BB	26.0	29.1	9.7	28.2	2.6	6.1	16.2	19.3	43.5	27.3	24.2
3.	111.95	BB	22.4	22.2	11.4	28.2	2.7	6.1	14.4	14.2	43.5	29.1	29.3

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

■ANTENNA:KBA-01 (BBA9106) 30-299.99MHz/KLA-01 (USLP9143) 300-1000MHz

■CABLE:KCC-10/11/12/13/18■PREAMP:KAF-01 (8447D) ■EMI RECEIVER:KTR-02 (ESCS30)

DATA OF RADIATION TEST

UL Apex Co.,Ltd.

YAMAKITA No.1 OPEN TEST SITE

Report No. : 26LE0147-YK -A

Applicant : SOKKIA CO.,LTD.
 Kind of Equipment : BLUETOOTH MODULE
 Model No. : SM-BT1
 Serial No. : SMBT10001
 Power : DC3.3V
 Mode : Tx:2480MHz
 Remarks : Chip ANT/+Another BTmodule
 Date : 8/21/2006
 Test Distance : 3 m
 Temperature : 23 °C
 Humidity : 68 %
 Regulation : FCC Part15C § 15.209

Engineer : Akira Sato

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS [dB μ V/m]	MARGIN	
			HOR [dB μ V]	VER [dB μ V]					HOR [dB μ V/m]	VER [dB μ V/m]		HOR [dB]	VER [dB]
1.	49.06	BB	25.3	35.8	9.9	28.4	1.8	6.0	14.6	25.1	40.0	25.4	14.9
2.	99.44	BB	25.3	29.7	9.7	28.2	2.6	6.1	15.5	19.9	43.5	28.0	23.6

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

■ANTENNA:KBA-01 (BBA9106) 30-299.99MHz/KLA-01 (USLP9143) 300-1000MHz

■CABLE:KCC-10/11/12/13/18■PREAMP:KAF-01 (8447D) ■EMI RECEIVER:KTR-02 (ESCS30)

DATA OF RADIATION TEST

UL Apex Co.,Ltd.

YAMAKITA No.1 OPEN TEST SITE

Report No. : 26LE0147-YK-A

Applicant : SOKKIA CO., LTD.
Kind of Equipment : BLUETOOTH MODULE
Model No. : SM-BT1
Serial No. : SMBT10001
Power : DC3.3V
Mode : Tx:2402MHz
Remarks : Chip ANT, RBW:1MHz, VBW:1MHz (18-26GHz Distance:1m) /+Another BTmodule
Date : 8/21/2006
Test Distance : 3 m
Temperature : 23 °C Engineer : Akira Sato
Humidity : 68 %
Regulation : FCC Part15C § 15.209 (a) (PK) 1-18GHz:3m/18-40GHz:1m

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.	2390.00	BB	44.6	43.1	27.1	36.8	3.2	9.9	48.0	46.5	74.0	26.0	27.5
2.	4804.00	BB	52.6	50.4	31.1	37.1	4.6	0.5	51.7	49.5	74.0	22.3	24.5
3.	7206.00	BB	45.3	43.9	35.3	36.9	6.3	0.5	50.5	49.1	74.0	23.5	24.9
4.	9608.00	BB	45.2	45.4	37.9	37.0	6.6	1.0	53.7	53.9	74.0	20.3	20.1

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

■ ANTENNA:KHA-02 (1-18GHz) /KHA-04 (18-26GHz)

■ AMP:KAF-02 (8449B) ■ SPECTRUM ANALYZER:KSA-04 ■ CABLE:KCC-D16/D17

DATA OF RADIATION TEST

UL Apex Co.,Ltd.

YAMAKITA No.1 OPEN TEST SITE

Report No. : 26LE0147-YK -A

Applicant : SOKKIA CO., LTD.
 Kind of Equipment : BLUETOOTH MODULE
 Model No. : SM-BT1
 Serial No. : SMT10001
 Power : DC3.3V
 Mode : Tx:2402MHz
 Remarks : Chip ANT, RBW:1MHz, VBW:10Hz (18-26GHz Distance:1m)/+Another BTmodule
 Date : 8/21/2006
 Test Distance : 3 m
 Temperature : 23 °C
 Humidity : 68 %
 Regulation : FCC Part15C § 15.209 (a) 1-18GHz:3m/18-40GHz:1m

Engineer : Akira Sato

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.	2390.00	BB	33.3	33.2	27.1	36.8	3.2	9.9	36.7	36.6	54.0	17.3	17.4
2.	4804.00	BB	40.6	38.5	31.1	37.1	4.6	0.5	39.7	37.6	54.0	14.3	16.4
3.	7206.00	BB	34.6	33.2	35.3	36.9	6.3	0.5	39.8	38.4	54.0	14.2	15.6
4.	9608.00	BB	35.1	34.6	37.9	37.0	6.6	1.0	43.6	43.1	54.0	10.4	10.9

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

■ ANTENNA: KHA-02 (1-18GHz) / KHA-04 (18-26GHz)

■ AMP: KAF-02 (8449B) ■ SPECTRUM ANALYZER: KSA-04 ■ CABLE: KCC-D16/D17

DATA OF RADIATION TEST

UL Apex Co.,Ltd.

YAMAKITA No.1 OPEN TEST SITE

Report No. : 26LE0147-YK-A

Applicant : SOKKIA CO., LTD.
 Kind of Equipment : BLUETOOTH MODULE
 Model No. : SM-BT1
 Serial No. : SMBT10001
 Power : DC3.3V
 Mode : Tx:2441MHz
 Remarks : Chip ANT, RBW:1MHz, VBW:1MHz (18-26GHz Distance:1m) /+Another BTmodule
 Date : 8/21/2006
 Test Distance : 3 m
 Temperature : 23 °C
 Humidity : 68 %
 Regulation : FCC Part15C § 15.209 (a) (PK) 1-18GHz:3m/18-40GHz:1m

Engineer : Akira Sato

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.	4882.00	BB	53.0	50.5	31.3	37.2	4.6	0.5	52.2	49.7	74.0	21.8	24.3
2.	7323.00	BB	50.6	54.3	35.4	37.0	6.3	0.5	55.8	59.5	74.0	18.2	14.5
3.	9764.00	BB	51.0	46.6	37.9	37.0	6.6	0.9	59.4	55.0	74.0	14.6	19.0

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

■ ANTENNA: KHA-02 (1-18GHz) /KHA-04 (18-26GHz)

■ AMP: KAF-02 (8449B) ■ SPECTRUM ANALYZER: KSA-04 ■ CABLE: KCC-D16/D17

DATA OF RADIATION TEST

UL Apex Co.,Ltd.

YAMAKITA No.1 OPEN TEST SITE

Report No. : 26LE0147-YK-A

Applicant : SOKKIA CO., LTD.
Kind of Equipment : BLUETOOTH MODULE
Model No. : SM-BT1
Serial No. : SMBT10001
Power : DC3.3V
Mode : Tx:2441MHz
Remarks : Chip ANT, RBW:1MHz, VBW:10Hz (18-26GHz Distance:1m) /+Another BTmodule
Date : 8/21/2006
Test Distance : 3 m
Temperature : 23 °C
Humidity : 68 %
Regulation : FCC Part15C § 15.209 (a) 1-18GHz:3m/18-40GHz:1m
Engineer : Akira Sato

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.	4882.00	BB	41.3	39.8	31.3	37.2	4.6	0.5	40.5	39.0	54.0	13.5	15.0
2.	7323.00	BB	39.6	41.5	35.4	37.0	6.3	0.5	44.8	46.7	54.0	9.2	7.3
3.	9764.00	BB	38.9	36.3	37.9	37.0	6.6	0.9	47.3	44.7	54.0	6.7	9.3

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

■ ANTENNA: KHA-02 (1-18GHz) /KHA-04 (18-26GHz)

■ AMP: KAF-02 (8449B) ■ SPECTRUM ANALYZER: KSA-04 ■ CABLE: KCC-D16/D17

DATA OF RADIATION TEST

UL Apex Co.,Ltd.

YAMAKITA No.1 OPEN TEST SITE

Report No. : 26LE0147-YK-A

Applicant : SOKKIA CO., LTD.
Kind of Equipment : BLUETOOTH MODULE
Model No. : SM-BT1
Serial No. : SMT10001
Power : DC3.3V
Mode : Tx:2480MHz
Remarks : Chip ANT, RBW:1MHz, VBW:1MHz (18-26GHz Distance:1m)/+Another BTmodule
Date : 8/21/2006
Test Distance : 3 m
Temperature : 23 °C
Humidity : 68 %
Regulation : FCC Part15C § 15.209 (a) (PK) 1-18GHz:3m/18-40GHz:1m
Engineer : Akira Sato

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS [dB μ V/m]	MARGIN	
			HOR [dB μ V]	VER [dB μ V]					HOR [dB μ V/m]	VER [dB μ V/m]		HOR [dB]	VER [dB]
1.	2483.50	BB	43.6	43.3	27.3	36.8	3.2	9.9	47.2	46.9	74.0	26.8	27.1
2.	4960.00	BB	51.9	49.4	31.4	37.3	4.6	0.4	51.0	48.5	74.0	23.0	25.5
3.	7440.00	BB	51.1	54.0	35.6	37.0	6.4	0.5	56.6	59.5	74.0	17.4	14.5
4.	9920.00	BB	50.0	51.0	38.0	36.9	6.6	0.8	58.5	59.5	74.0	15.5	14.5

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

■ ANTENNA:KHA-02 (1-18GHz) /KHA-04 (18-26GHz)

■ AMP:KAF-02 (8449B) ■ SPECTRUM ANALYZER:KSA-04 ■ CABLE:KCC-D16/D17

DATA OF RADIATION TEST

UL Apex Co.,Ltd.

YAMAKITA No.1 OPEN TEST SITE

Report No. : 26LE0147-YK-A

Applicant : SOKKIA CO., LTD.
 Kind of Equipment : BLUETOOTH MODULE
 Model No. : SM-BT1
 Serial No. : SMBT10001
 Power : DC3.3V
 Mode : Tx:2480MHz
 Remarks : Chip ANT, RBW:1MHz, VBW:10Hz (18-26GHz Distance:1m)/+Another BTmodule
 Date : 8/21/2006
 Test Distance : 3 m
 Temperature : 23 °C
 Humidity : 68 %
 Regulation : FCC Part15C § 15.209 (a) 1-18GHz:3m/18-40GHz:1m

Engineer : Akira Sato

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.	2483.50	BB	33.5	33.0	27.3	36.8	3.2	9.9	37.1	36.6	54.0	16.9	17.4
2.	4960.00	BB	38.7	39.1	31.4	37.3	4.6	0.4	37.8	38.2	54.0	16.2	15.8
3.	7440.00	BB	40.3	40.7	35.6	37.0	6.4	0.5	45.8	46.2	54.0	8.2	7.8
4.	9920.00	BB	38.6	38.2	38.0	36.9	6.6	0.8	47.1	46.7	54.0	6.9	7.3

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

■ ANTENNA:KHA-02 (1-18GHz) /KHA-04 (18-26GHz)

■ AMP:KAF-02 (8449B) ■ SPECTRUM ANALYZER:KSA-04 ■ CABLE:KCC-D16/D17

DATA OF RADIATION TEST

UL Apex Co.,Ltd.

YAMAKITA No.1 OPEN TEST SITE

Report No. : 26LE0147-YK-A

Applicant : SOKKIA CO.,LTD.
Kind of Equipment : BLUETOOTH MODULE
Model No. : SM-BT1
Serial No. : SMBT10001
Power : DC3.3V
Mode : Tx:2402MHz
Remarks : Dipole ANT/+Another BTmodule
Date : 8/21/2006
Test Distance : 3 m
Temperature : 23 °C Engineer : Akira Sato
Humidity : 68 %
Regulation : FCC Part15C § 15.209

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS [dB μ V/m]	MARGIN	
			HOR [dB μ V]	VER [dB μ V]					HOR [dB μ V/m]	VER [dB μ V/m]		HOR [dB]	VER [dB]
1.	48.01	BB	26.9	38.8	10.2	28.4	1.7	6.0	16.4	28.3	40.0	23.6	11.7
2.	384.02	BB	29.8	26.4	17.0	28.4	5.6	6.0	30.0	26.6	46.0	16.0	19.4

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

■ ANTENNA: KBA-01 (BBA9106) 30-299.99MHz/KLA-01 (USLP9143) 300-1000MHz
■ CABLE: KCC-10/11/12/13/18 ■ PREAMP: KAF-01 (8447D) ■ EMI RECEIVER: KTR-02 (ESCS30)

DATA OF RADIATION TEST

UL Apex Co.,Ltd.

YAMAKITA No.1 OPEN TEST SITE

Report No. : 26LE0147-YK-A

Applicant : SOKKIA CO.,LTD.
 Kind of Equipment : BLUETOOTH MODULE
 Model No. : SM-BT1
 Serial No. : SMBT10001
 Power : DC3.3V
 Mode : Tx:2441MHz
 Remarks : Dipole ANT/+Another BTmodule
 Date : 8/21/2006
 Test Distance : 3 m
 Temperature : 23 °C
 Humidity : 68 %
 Regulation : FCC Part15C § 15.209

Engineer : Akira Sato

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.	48.02	BB	26.7	39.2	10.2	28.4	1.7	6.0	16.2	28.7	40.0	23.8	11.3
2.	111.95	BB	22.5	22.3	11.4	28.2	2.7	6.1	14.5	14.3	43.5	29.0	29.2
3.	384.02	BB	29.7	24.9	17.0	28.4	5.6	6.0	29.9	25.1	46.0	16.1	20.9

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

■ ANTENNA: KBA-01 (BBA9106) 30-299.99MHz/KLA-01 (USLP9143) 300-1000MHz

■ CABLE: KCC-10/11/12/13/18 ■ PREAMP: KAF-01 (8447D) ■ EMI RECEIVER: KTR-02 (ESCS30)

DATA OF RADIATION TEST

UL Apex Co.,Ltd.

YAMAKITA No.1 OPEN TEST SITE

Report No. : 26LE0147-YK-A

Applicant : SOKKIA CO.,LTD.
Kind of Equipment : BLUETOOTH MODULE
Model No. : SM-BT1
Serial No. : SMBT10001
Power : DC3.3V
Mode : Tx:2480MHz
Remarks : Dipole ANT/+Another BTmodule
Date : 8/21/2006
Test Distance : 3 m
Temperature : 23 °C
Humidity : 68 %
Regulation : FCC Part15C § 15.209

Engineer : Akira Sato

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS [dB μ V/m]	MARGIN	
			HOR [dB μ V]	VER [dB μ V]					HOR [dB μ V/m]	VER [dB μ V/m]		HOR [dB]	VER [dB]
1.	48.02	BB	27.0	38.6	10.2	28.4	1.7	6.0	16.5	28.1	40.0	23.5	11.9
2.	384.03	BB	30.1	25.4	17.0	28.4	5.6	6.0	30.3	25.6	46.0	15.7	20.4

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

■ANTENNA:KBA-01 (BBA9106) 30-299.99MHz/KLA-01 (USLP9143) 300-1000MHz

■CABLE:KCC-10/11/12/13/18■PREAMP:KAF-01 (8447D) ■EMI RECEIVER:KTR-02 (ESCS30)

DATA OF RADIATION TEST

UL Apex Co.,Ltd.

YAMAKITA No.1 OPEN TEST SITE

Report No. : 26LE0147-YK-A

Applicant : SOKKIA CO., LTD.
 Kind of Equipment : BLUETOOTH MODULE
 Model No. : SM-BT1
 Serial No. : SMBT10001
 Power : DC3.3V
 Mode : Tx:2402MHz
 Remarks : Dipole ANT, RBW:1MHz, VBW:1MHz (18-26GHz Distance:1m)/+Another BTmodule
 Date : 8/21/2006
 Test Distance : 3 m
 Temperature : 23 °C
 Humidity : 68 %
 Regulation : FCC Part15C § 15.209(a) (PK) 1-18GHz:3m/18-40GHz:1m
 Engineer : Akira Sato

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.	2390.00	BB	43.8	49.6	27.1	36.8	3.2	9.9	47.2	53.0	74.0	26.8	21.0
2.	4804.00	BB	50.6	52.8	31.1	37.1	4.6	0.5	49.7	51.9	74.0	24.3	22.1
3.	7206.00	BB	47.2	49.4	35.3	36.9	6.3	0.5	52.4	54.6	74.0	21.6	19.4
4.	9608.00	BB	48.4	44.6	37.9	37.0	6.6	1.0	56.9	53.1	74.0	17.1	20.9

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

■ ANTENNA: KHA-02 (1-18GHz) / KHA-04 (18-26GHz)

■ AMP: KAF-02 (8449B) ■ SPECTRUM ANALYZER: KSA-04 ■ CABLE: KCC-D16/D17

DATA OF RADIATION TEST

UL Apex Co.,Ltd.

YAMAKITA No.1 OPEN TEST SITE

Report No. : 26LE0147-YK-A

Applicant : SOKKIA CO., LTD.
Kind of Equipment : BLUETOOTH MODULE
Model No. : SM-BT1
Serial No. : SMBT10001
Power : DC3.3V
Mode : Tx:2402MHz
Remarks : Dipole ANT, RBW:1MHz, VBW:10Hz (18-26GHz Distance:1m)/+Another BTmodule
Date : 8/21/2006
Test Distance : 3 m
Temperature : 23 °C
Humidity : 68 %
Regulation : FCC Part15C § 15.209(a) 1-18GHz:3m/18-40GHz:1m
Engineer : Akira Sato

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS [dB μ V/m]	MARGIN	
			HOR [dB μ V]	VER [dB μ V]					HOR [dB μ V/m]	VER [dB μ V/m]		HOR [dB]	VER [dB]
1.	2390.00	BB	33.6	34.3	27.1	36.8	3.2	9.9	37.0	37.7	54.0	17.0	16.3
2.	4804.00	BB	39.0	39.7	31.1	37.1	4.6	0.5	38.1	38.8	54.0	15.9	15.2
3.	7206.00	BB	36.0	37.6	35.3	36.9	6.3	0.5	41.2	42.8	54.0	12.8	11.2
4.	9608.00	BB	36.7	34.5	37.9	37.0	6.6	1.0	45.2	43.0	54.0	8.8	11.0

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

■ ANTENNA: KHA-02 (1-18GHz) / KHA-04 (18-26GHz)

■ AMP: KAF-02 (8449B) ■ SPECTRUM ANALYZER: KSA-04 ■ CABLE: KCC-D16/D17

DATA OF RADIATION TEST

UL Apex Co.,Ltd.

YAMAKITA No.1 OPEN TEST SITE

Report No. : 26LE0147-YK -A

Applicant : SOKKIA CO., LTD.
Kind of Equipment : BLUETOOTH MODULE
Model No. : SM-BT1
Serial No. : SMBT10001
Power : DC3.3V
Mode : Tx:2441MHz
Remarks : Dipole ANT, RBW:1MHz, VBW:1MHz (18-26GHz Distance:1m)/+Another BTmodule
Date : 8/21/2006
Test Distance : 3 m
Temperature : 23 °C Engineer : Akira Sato
Humidity : 68 %
Regulation : FCC Part15C § 15.209(a) (PK) 1-18GHz:3m/18-40GHz:1m

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS [dB μ V/m]	MARGIN	
			HOR [dB μ V]	VER [dB μ V]					HOR [dB μ V/m]	VER [dB μ V/m]		HOR [dB]	VER [dB]
1.	4882.00	BB	49.9	49.3	31.3	37.2	4.6	0.5	49.1	48.5	74.0	24.9	25.5
2.	7323.00	BB	46.5	46.5	35.4	37.0	6.3	0.5	51.7	51.7	74.0	22.3	22.3
3.	9764.00	BB	45.8	46.8	37.9	37.0	6.6	0.9	54.2	55.2	74.0	19.8	18.8

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

■ ANTENNA: KHA-02 (1-18GHz) / KHA-04 (18-26GHz)

■ AMP: KAF-02 (8449B) ■ SPECTRUM ANALYZER: KSA-04 ■ CABLE: KCC-D16/D17

DATA OF RADIATION TEST

UL Apex Co.,Ltd.

YAMAKITA No.1 OPEN TEST SITE

Report No. : 26LE0147-YK-A

Applicant : SOKKIA CO., LTD.
 Kind of Equipment : BLUETOOTH MODULE
 Model No. : SM-BT1
 Serial No. : SMBT10001
 Power : DC3.3V
 Mode : Tx:2441MHz
 Remarks : Dipole ANT, RBW:1MHz, VBW:10Hz (18-26GHz Distance:1m)/+Another BTmodule
 Date : 8/21/2006
 Test Distance : 3 m
 Temperature : 23 °C
 Humidity : 68 %
 Regulation : FCC Part15C § 15.209(a) 1-18GHz:3m/18-40GHz:1m

Engineer : Akira Sato

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.	4882.00	BB	39.7	38.8	31.3	37.2	4.6	0.5	38.9	38.0	54.0	15.1	16.0
2.	7323.00	BB	37.3	36.5	35.4	37.0	6.3	0.5	42.5	41.7	54.0	11.5	12.3
3.	9764.00	BB	35.0	35.1	37.9	37.0	6.6	0.9	43.4	43.5	54.0	10.6	10.5

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

■ ANTENNA: KHA-02 (1-18GHz) / KHA-04 (18-26GHz)

■ AMP: KAF-02 (8449B) ■ SPECTRUM ANALYZER: KSA-04 ■ CABLE: KCC-D16/D17

DATA OF RADIATION TEST

UL Apex Co.,Ltd.

YAMAKITA No.1 OPEN TEST SITE

Report No. : 26LE0147-YK-A

Applicant : SOKKIA CO., LTD.
Kind of Equipment : BLUETOOTH MODULE
Model No. : SM-BT1
Serial No. : SMBT10001
Power : DC3.3V
Mode : Tx:2480MHz
Remarks : Dipole ANT, RBW:1MHz, VBW:1MHz (18-26GHz Distance:1m)/+Another BTmodule
Date : 8/21/2006
Test Distance : 3 m
Temperature : 23 °C
Humidity : 68 %
Regulation : FCC Part15C § 15.209(a) (PK) 1-18GHz:3m/18-40GHz:1m
Engineer : Akira Sato

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS [dB μ V/m]	MARGIN	
			HOR [dB μ V]	VER [dB μ V]					HOR [dB μ V/m]	VER [dB μ V/m]		HOR [dB]	VER [dB]
1.	2483.50	BB	59.2	61.0	27.3	36.8	3.2	9.9	62.8	64.6	74.0	11.2	9.4
2.	4960.00	BB	42.9	43.7	31.4	37.3	4.6	0.4	42.0	42.8	74.0	32.0	31.2
3.	7440.00	BB	46.2	45.8	35.6	37.0	6.4	0.5	51.7	51.3	74.0	22.3	22.7
4.	9920.00	BB	46.3	46.7	38.0	36.9	6.6	0.8	54.8	55.2	74.0	19.2	18.8

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

■ ANTENNA: KHA-02 (1-18GHz) / KHA-04 (18-26GHz)

■ AMP: KAF-02 (8449B) ■ SPECTRUM ANALYZER: KSA-04 ■ CABLE: KCC-D16/D17

DATA OF RADIATION TEST

UL Apex Co., Ltd.

YAMAKITA No.1 OPEN TEST SITE

Report No. : 26LE0147-YK-A

Applicant : SOKKIA CO., LTD.
 Kind of Equipment : BLUETOOTH MODULE
 Model No. : SM-BT1
 Serial No. : SMBT10001
 Power : DC3.3V
 Mode : Tx:2480MHz
 Remarks : Dipole ANT, RBW:1MHz, VBW:10Hz (18-26GHz Distance:1m)/+Another BTmodule
 Date : 8/21/2006
 Test Distance : 3 m
 Temperature : 23 °C
 Humidity : 68 %
 Regulation : FCC Part15C § 15.209(a) 1-18GHz:3m/18-40GHz:1m

Engineer : Akira Sato

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.	2483.50	BB	43.1	46.6	27.3	36.8	3.2	9.9	46.7	50.2	54.0	7.3	3.8
2.	4960.00	BB	32.4	31.1	31.4	37.3	4.6	0.4	31.5	30.2	54.0	22.5	23.8
3.	7440.00	BB	34.6	36.1	35.6	37.0	6.4	0.5	40.1	41.6	54.0	13.9	12.4
4.	9920.00	BB	35.6	35.6	38.0	36.9	6.6	0.8	44.1	44.1	54.0	9.9	9.9

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

■ ANTENNA: KHA-02 (1-18GHz) / KHA-04 (18-26GHz)

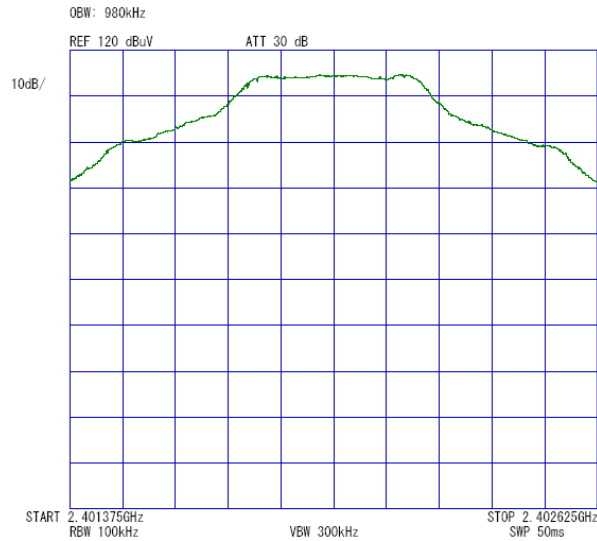
■ AMP: KAF-02 (8449B) ■ SPECTRUM ANALYZER: KSA-04 ■ CABLE: KCC-D16/D17

Occupied Bandwidth(99%)

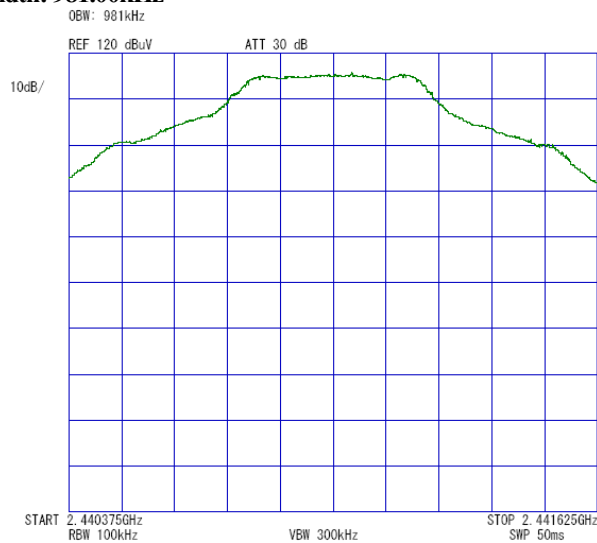
COMPANY : SOKKIA CO., LTD.
EQUIPMENT : BLUETOOTH MODULE
MODEL NUMBER: SM-BT1
SERIAL NUMBER: SMT10001
FCC ID : S6MSMBT1
POWER : DC3.3V

UL Apex Co.,Ltd. Yamakita No.4 Shielded Room
REPORT NO : 26LE0147-YK-A
REGULATION : RSS-210
DATE : 2006/07/27
TEMP./HUMI : 25deg.C./60%
TEST MODE : Transmitting
ENGINEER : Tatsuya Arai

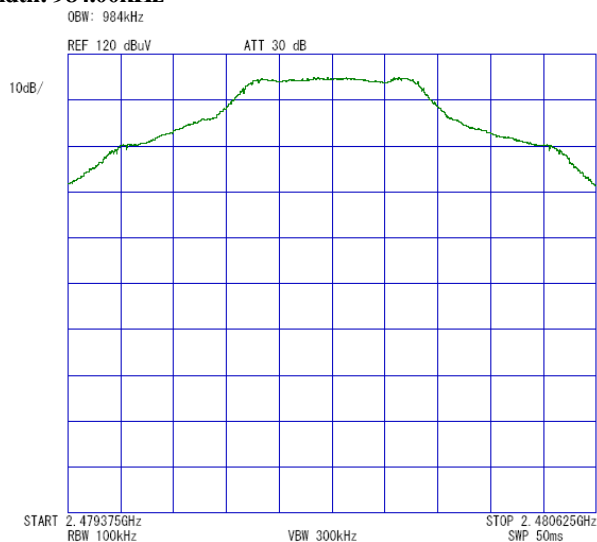
1. ch : 2402MHz/Occupied Bandwidth: 980.00kHz



2. ch : 2437MHz/Occupied Bandwidth: 981.00kHz



3. ch : 2462MHz/Occupied Bandwidth: 984.00kHz

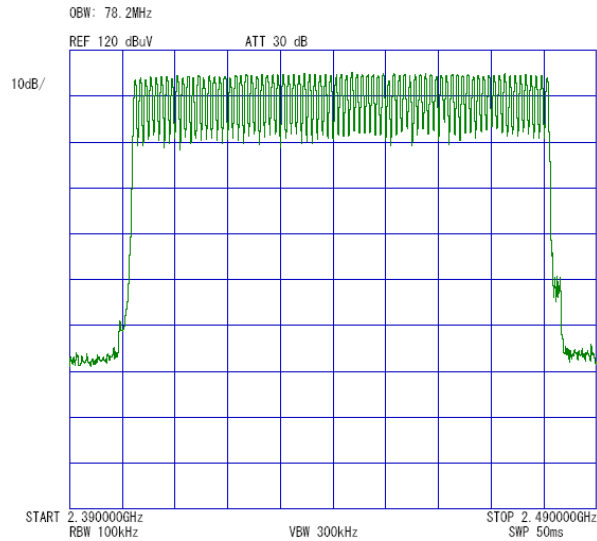


Occupied Bandwidth(99%)

COMPANY : SOKKIA CO., LTD.
EQUIPMENT : BLUETOOTH MODULE
MODEL NUMBER: SM-BT1
SERIAL NUMBER: SMT10001
FCC ID : S6MSMT1
POWER : DC3.3V

UL Apex Co.,Ltd. Yamakita No.4 Shielded Room
REPORT NO : 26LE0147-YK-A
REGULATION : RSS-210
DATE : 2006/07/27
TEMP./HUMI : 25deg.C./60%
TEST MODE : Transmitting
ENGINEER : Tatsuya Arai

4. Hopping/Occupied Bandwidth: 78.20MHz



Test Report No :26LE0147-YK-A

APPENDIX 3 Test Instruments

EMI test equipment

Control No.	Instrument	Manufacturer	Model No	Test Item	Calibration Date * Interval(month)
YA-CE	Conducted emission(software)	UL-Apex	CE(Ver.1.6)	CE	-
YA-RE	Radiated emission(software)	UL-Apex	RE(Ver.1.5)	RE	-
KAF-01	Pre Amplifier	Hewlett Packard	8447D	RE	2006/05/10 * 12
KAT6-02	Attenuator	INMET	18N-6dB	RE	2006/03/24 * 12
KCC-10/11/12 /13/18/KRM-0 1	Coaxial Cable/RF Relay Matrix	Fujikura/Suhner/TSJ	8D-2W/12D-SFA/S042 72B/S04272B/S04272B /-	RE	2006/05/16 * 12
KLA-01	Logperiodic Antenna	Schwarzbeck	USLP9143	RE	2006/01/17 * 12
KSA-01	Spectrum Analyzer	Advantest	R3365	RE	2006/07/01 * 12
KOS-03	Digital Humidity Indicator	SATO	PC-5000TRH	RE	2006/07/10 * 24
KAF-03	Pre Amplifier	Hewlett Packard	8447D	RE	2005/09/09 * 12
KAT6-03	Attenuator	INMET	18N-6dB	RE	2006/03/24 * 12
KAT6-04	Attenuator	INMET	18N-6dB	RE	2006/03/24 * 12
KBA-03	Biconical Antenna	Schwarzbeck	BBA9106	RE	2006/01/17 * 12
KCC-20/21/22 /23/29/KRM-0 2	Coaxial Cable/RF Relay Matrix	Fujikura/Suhner/TSJ	8D-2W/12D-SFA/S042 72B/S04272B/RFM-E3 21	RE	2005/09/02 * 12
KLA-03	Logperiodic Antenna	Schwarzbeck	USLP9143	RE	2006/01/17 * 12
KSA-02	Spectrum Analyzer	Advantest	R3265A	RE	2005/11/10 * 12
KTR-04	Test Receiver	Rohde & Schwarz	ESVS10	RE	2005/11/01 * 12
KOS-06	Digital Humidity Indicator	Custom	CTH-190	RE	2006/07/14 * 24
KCC-33/34/KR M-03	Coaxial Cable/RF Relay Matrix	Fujikura/Suhner/TSJ	5D-2W/S04272B/RFM- E421	CE	2005/12/22 * 12
KLS-01	LISN(AMN)	Schwarzbeck	NSLK8126	CE	2006/04/19 * 12
KSA-04	Spectrum Analyzer	Advantest	R3271A	CE	2005/09/13 * 12
KOS-01	Digital Humidity Indicator	Custom	CTH-190	CE	2006/07/14 * 24
APRCV03	Test Receiver	MEB	SMV41	CE	2005/10/12 * 12
KAF-02	Pre Amplifier	Hewlett Packard	8449B	RE	2006/04/24 * 12
KAF-04	Pre Amplifier	Agilent	8449B	RE	2006/04/24 * 12
KAT10-S1	Attenuator	Agilent	8449D 010	RE	2006/04/11 * 12
KCC-D14/D15	Coaxial cable	Suhner	SUCOFLEX 104	RE	2005/12/28 * 12
KCC-D16	Coaxial Cable	INSULATED WIRE INC	KPS-1501-200-KPS	AT all	2005/09/02 * 12
KCC-D16/D17	Coaxial Cable	INSULATED WIRE INC	KPS-1501-200-KPS/K PS-1501-2000-KPS	RE	2005/09/02 * 12
KDT-01	Coaxial Crystal Detector	Agilent	8473C	AT 4	Pre Check
KFL-01	Highpass Filter	Hewlett Packard	84300 80038	RE	2006/04/11 * 12
KHA-02	Horn Antenna	Schwarzbeck	BBHA9120D	RE	2006/04/10 * 12
KHA-04	Horn Antenna	EMCO	3160-09	RE	2006/04/10 * 12
KPM-05	Power meter	Agilent	E4417A	AT 5	2006/02/16 * 12

The expiration date of the calibration is the end of the expired month .

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

Test Item :

RE: Out of Band Emission (Radiated)

AT: Antenna terminal conducted test

1: Carrier Frequency Separation

2: 20dB Bandwidth

3: Number of Hopping Frequency

4: Dwell time

5: Maximum Peak Output Power

6: Out of Band Emission (Conducted)

Test Report No :26LE0147-YK-A

APPENDIX 3

Test Instruments

EMI test equipment

Control No.	Instrument	Manufacturer	Model No	Test Item	Calibration Date * Interval(month)
KPSS-01	Power sensor	Agilent	E9327A	AT 5	2006/03/15 * 12
KSA-04	Spectrum Analyzer	Advantest	R3271A	AT 1,2,3,4,6	2005/09/13 * 12
KST-09	Digitizing Oscilloscope	Tektronix	TDS420A	AT 4	2005/08/31 * 12
KOS-07	Digital Humidity Indicator	Custom	CTH-190	AT all	2004/10/14 * 24
KBA-01	Biconical Antenna	Schwarzbeck	BBA9106	RE	2005/08/04 * 12
KBA-01	Biconical Antenna	Schwarzbeck	BBA9106	RE	2006/07/22 * 12
KOTS-02	Open Test Site	JSE	10m	RE	2005/08/07 * 12
KOTS-02	Open Test Site	JSE	10m	RE	2006/08/05 * 12
KBA-02	Biconical Antenna	Schwarzbeck	BBA9106	RE	2005/07/29 * 12
KBA-02	Biconical Antenna	Schwarzbeck	BBA9106	RE	2006/07/22 * 12
KLA-02	Logperiodic Antenna	Schwarzbeck	USLP9143	RE	2005/07/29 * 12
KLA-02	Logperiodic Antenna	Schwarzbeck	USLP9143	RE	2006/07/22 * 12

The expiration date of the calibration is the end of the expired month .

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

Test Item :

RE: Out of Band Emission (Radiated)

AT: Antenna terminal conducted test

1: Carrier Frequency Separation

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