DATA OF CONDUCTION TEST

UL Japan, Inc.
YAMAKITA No.2 SHIELD ROOM
Report No.: 29BE0200-YK-A

Applicant	:	SUMITOMO PRECISION PRODUCTS CO., LTD.	
Kind of Equipment	:	neoMOTE (IEEE802.15.4 2.4GHz RF Transceiver)	
Model No.	:	WM-Z1110	
Serial No.	:	C124801	
Power	:	AC120V/60Hz	
Mode	:	Transmitting (2405Mhz)	
Remarks	:	-	
Date	:	12/4/2008	
Phase	:	Single Phase	
Temperature	:	24 ℃	Engineer : Tatsuya Arai
Humidity	:	35 %	
Regulation	:	FCC Part15C §15.207.(CISPR Pub.22)	

No.	FREQ.	READING(N)		READING(L1)		LISN	CABLE	ATTEN.	RESULT		LIMITS		MARGIN	
		QP	AV	QP	AV	FACTOR	LOSS		QP	AV	QP	AV	QP	AV
	[MHz]	[dBμV]		[dBμV]		[dB]	[dB]	[dB]	[dB]	[dBμV]		[dBμV]		[dB]
1.	0.1748	44.3	-	44.5	-	0.3	0.1	0.0	44.9	-	64.7	54.7	19.8	-
2.	0.2366	44.7	-	45.1	-	0.2	0.1	0.0	45.4	-	62.2	52.2	16.8	-
3.	0.2930	42.6	-	43.1	-	0.2	0.1	0.0	43.4	-	60.4	50.4	17.0	-
4.	0.3675	43.2	33.3	44.4	32.3	0.2	0.1	0.0	44.7	33.6	58.6	48.6	13.9	15.0
5.	0.5339	37.1	-	36.8	-	0.2	0.1	0.0	37.4	-	56.0	46.0	18.6	-
6.	0.5936	35.7	-	35.7	-	0.2	0.1	0.0	36.0	-	56.0	46.0	20.0	-
7.	0.6507	35.1	-	35.6	-	0.2	0.1	0.0	35.9	-	56.0	46.0	20.1	-

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

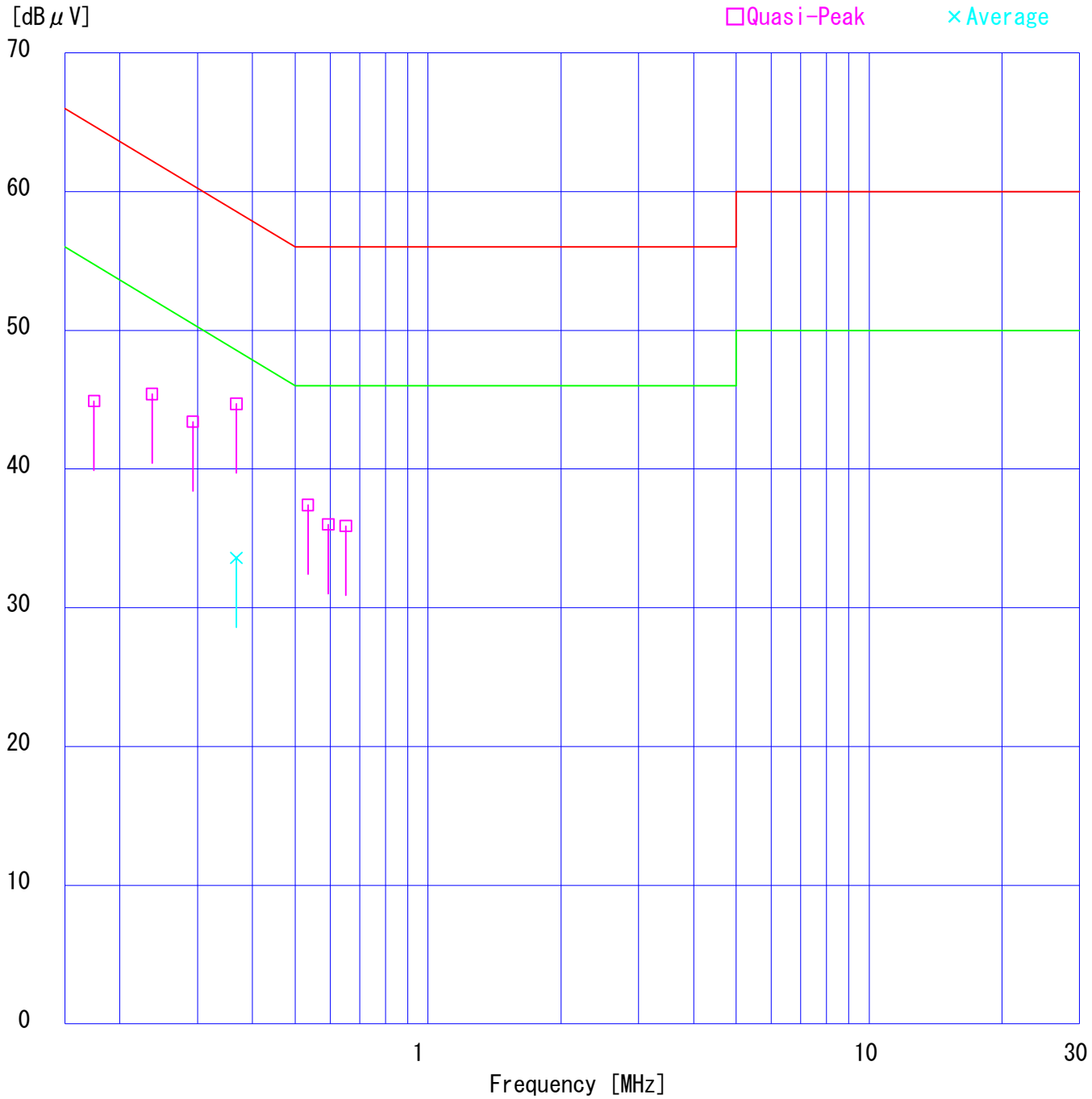
■LISN :KLS-02(NSLK8127)■COAXIAL CABLE:KCC-33/34
■EMI RECEIVER:KTR-04(ESVS10)

Page:

DATA OF CONDUCTION TEST

UL Japan, Inc.
YAMAKITA No.2 SHIELD ROOM
Report No.: 29BE0200-YK-A

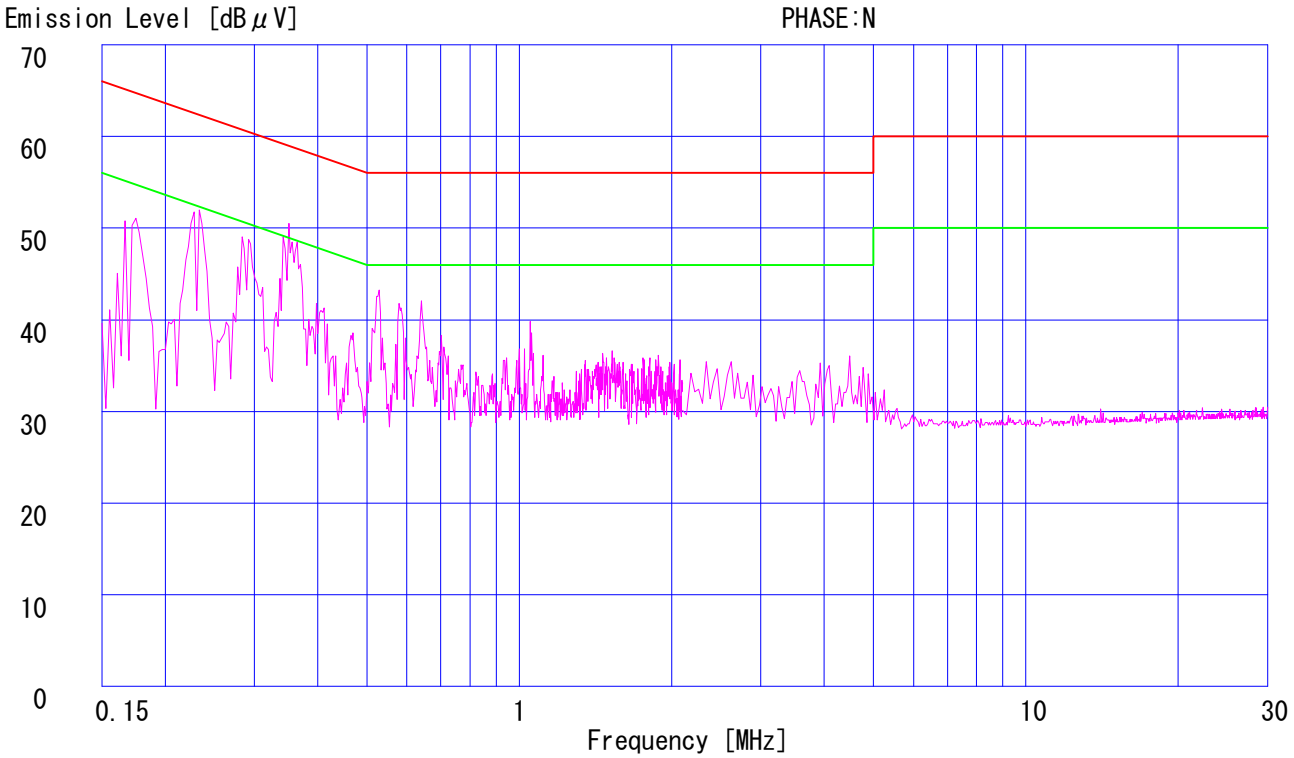
Applicant	: SUMITOMO PRECISION PRODUCTS CO., LTD.		
Kind of Equipment	: neoMOTE (IEEE802.15.4 2.4GHz RF Transceiver)		
Model No.	: WM-Z1110		
Serial No.	: C124801		
Power	: AC120V/60Hz		
Mode	: Transmitting (2405Mhz)		
Remarks	: -		
Date	: 12/4/2008		
Phase	: Single Phase		
Temperature	: 24 ℃	Engineer	: Tatsuya Arai
Humidity	: 35 %		
Regulation	: FCC Part15C §15.207.(CISPR Pub.22)		

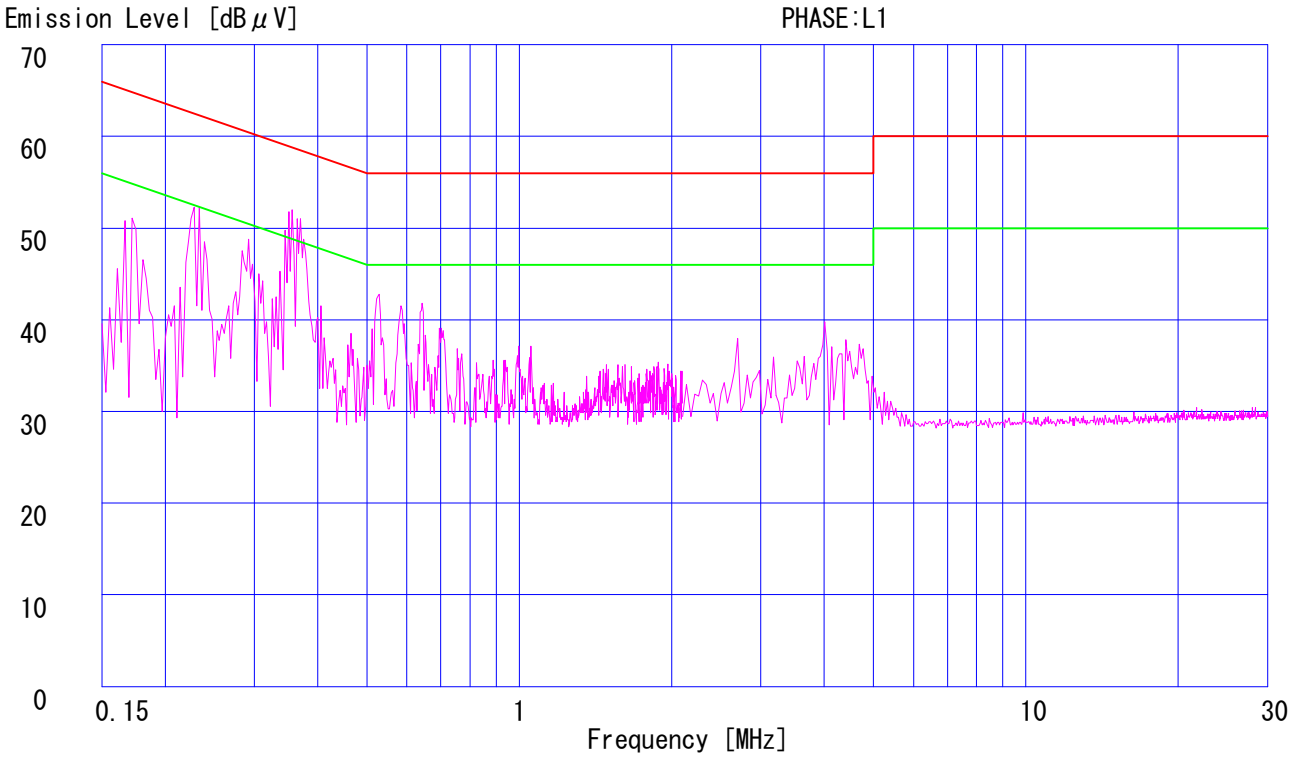


DATA OF CONDUCTION TEST CHART

UL Japan, Inc.
YAMAKITA No.2 SHIELD ROOM
Report No.: 29BE0200-YK-A

Applicant	: SUMITOMO PRECISION PRODUCTS CO., LTD.		
Kind of Equipment	: neoMOTE (IEEE802.15.4 2.4GHz RF Transceiver)		
Model No.	: WM-Z1110		
Serial No.	: C124801		
Power	: AC120V/60Hz		
Mode	: Transmitting (2405Mhz)		
Remarks	: -		
Date	: 12/4/2008		
Phase	: Single Phase		
Temperature	: 24 ℃	Engineer	: Tatsuya Arai
Humidity	: 35 %		
Regulation 1	: FCC Part15C §15.207.(CISPR Pub.22)		
Regulation 2	: None		

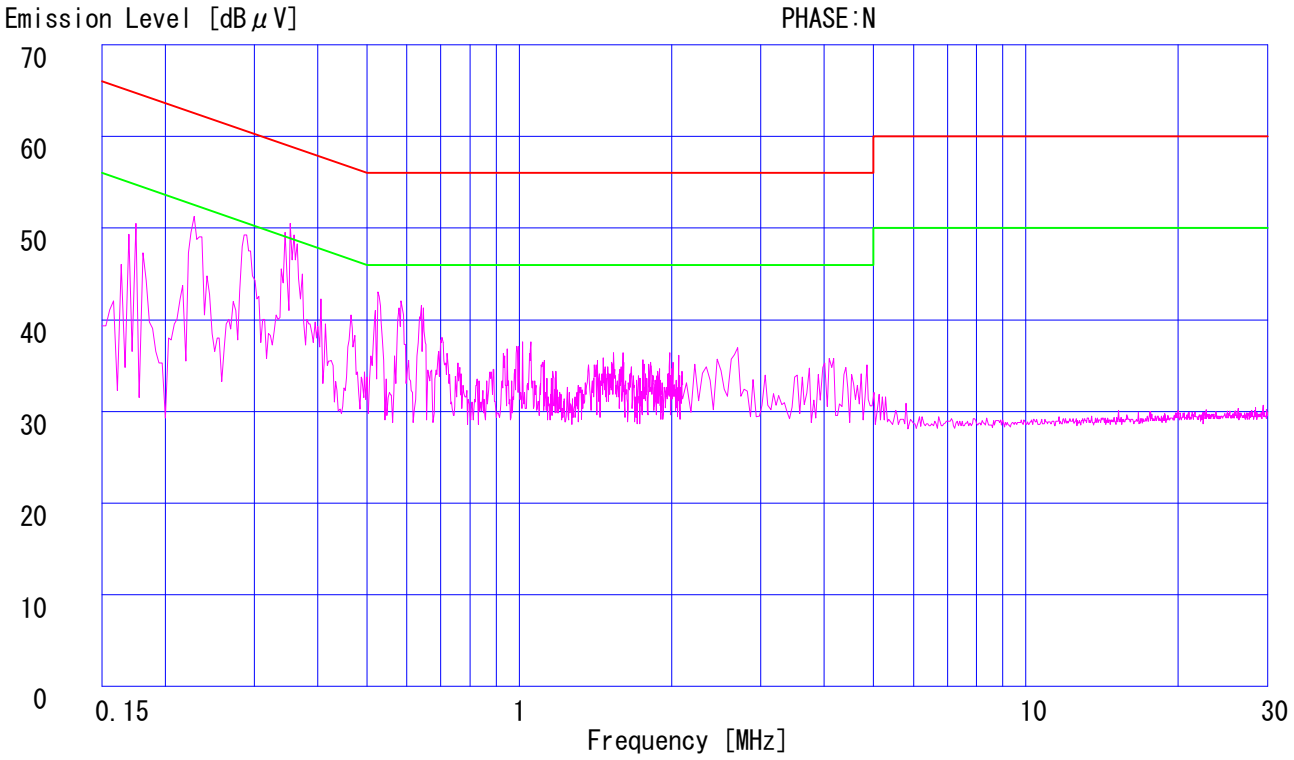


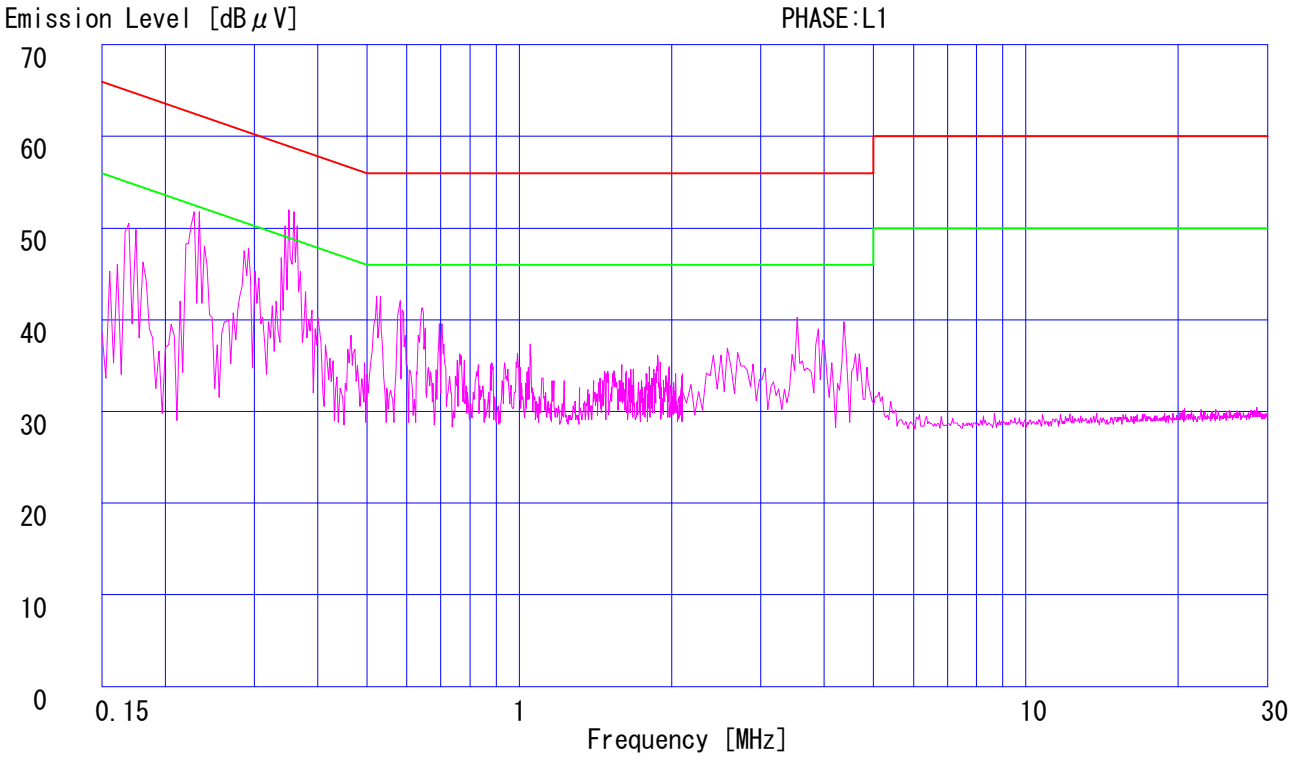


DATA OF CONDUCTION TEST CHART

UL Japan, Inc.
YAMAKITA No.2 SHIELD ROOM
Report No.: 29BE0200-YK-A

Applicant	: SUMITOMO PRECISION PRODUCTS CO., LTD.		
Kind of Equipment	: neoMOTE (IEEE802.15.4 2.4GHz RF Transceiver)		
Model No.	: WM-Z1110		
Serial No.	: C124801		
Power	: AC120V/60Hz		
Mode	: Transmitting (2440MHz)		
Remarks	: -		
Date	: 12/4/2008		
Phase	: Single Phase		
Temperature	: 24 ℃	Engineer	: Tatsuya Arai
Humidity	: 35 %		
Regulation 1	: FCC Part15C §15.207.(CISPR Pub.22)		
Regulation 2	: None		

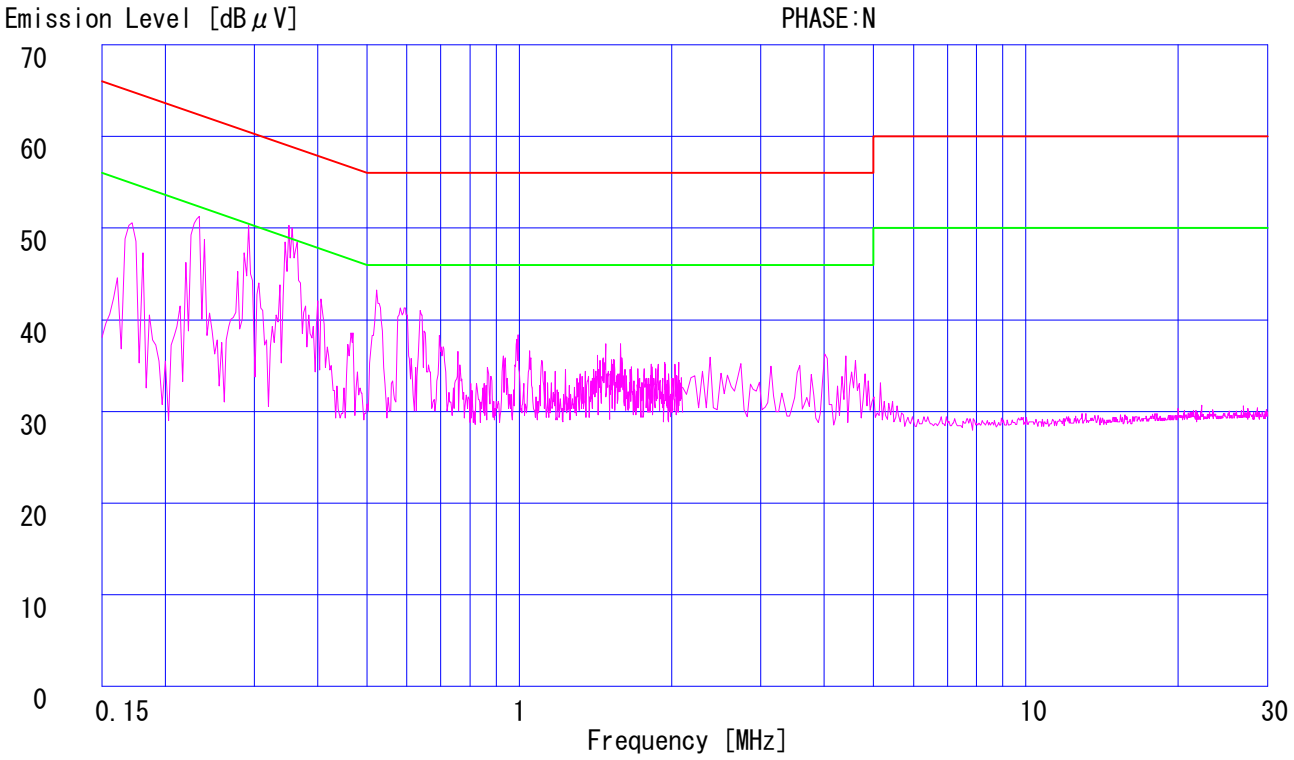


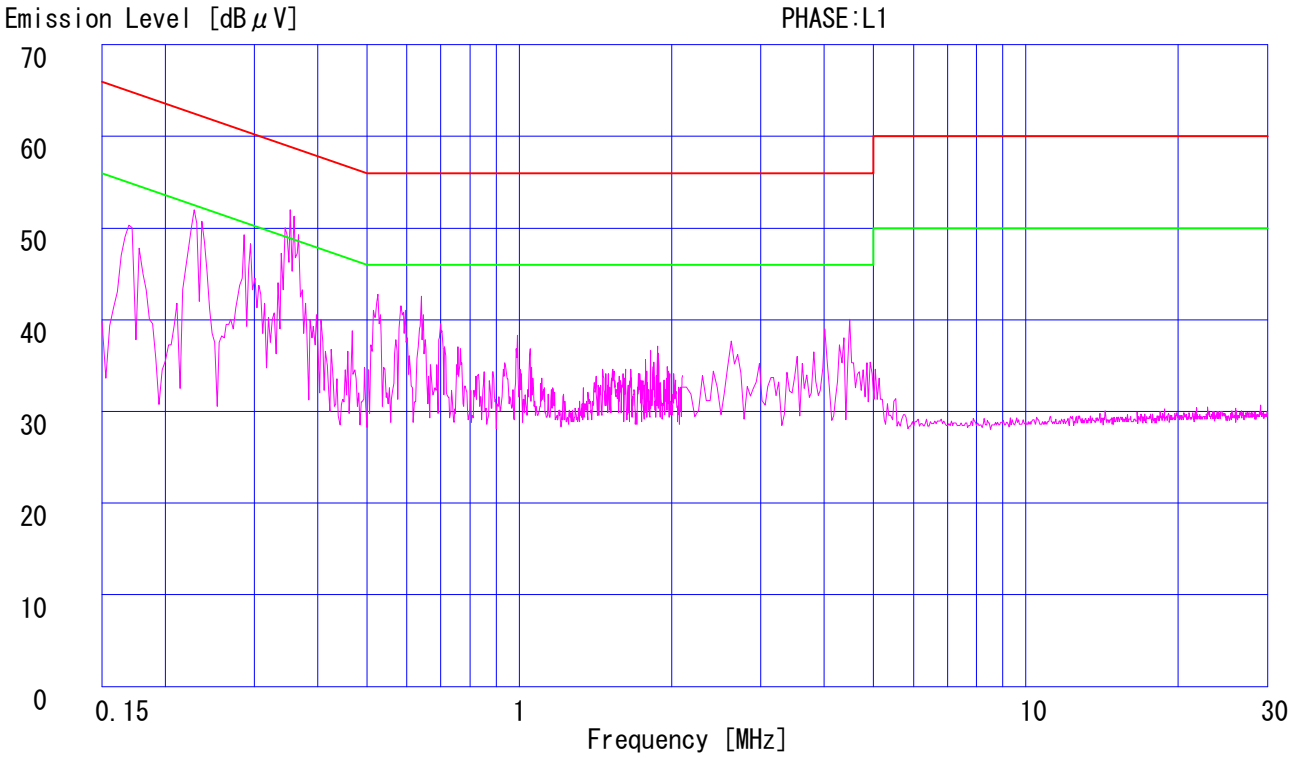


DATA OF CONDUCTION TEST CHART

UL Japan, Inc.
YAMAKITA No.2 SHIELD ROOM
Report No.: 29BE0200-YK-A

Applicant	: SUMITOMO PRECISION PRODUCTS CO., LTD.		
Kind of Equipment	: neoMOTE (IEEE802.15.4 2.4GHz RF Transceiver)		
Model No.	: WM-Z1110		
Serial No.	: C124801		
Power	: AC120V/60Hz		
Mode	: Transmitting (2480MHz)		
Remarks	: -		
Date	: 12/4/2008		
Phase	: Single Phase		
Temperature	: 24 ℃	Engineer	: Tatsuya Arai
Humidity	: 35 %		
Regulation 1	: FCC Part15C §15.207.(CISPR Pub.22)		
Regulation 2	: None		

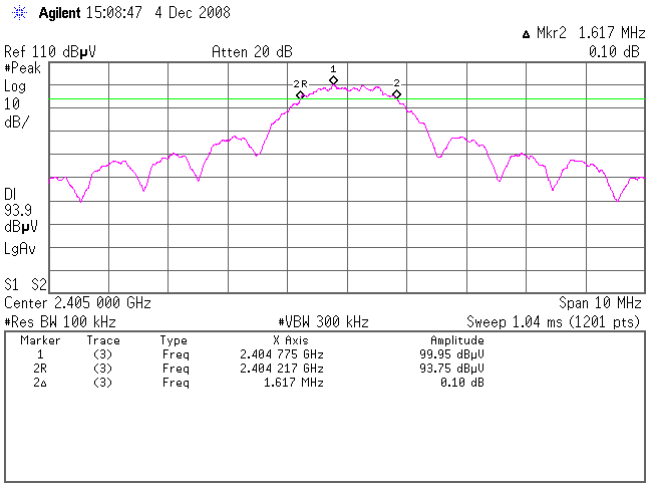




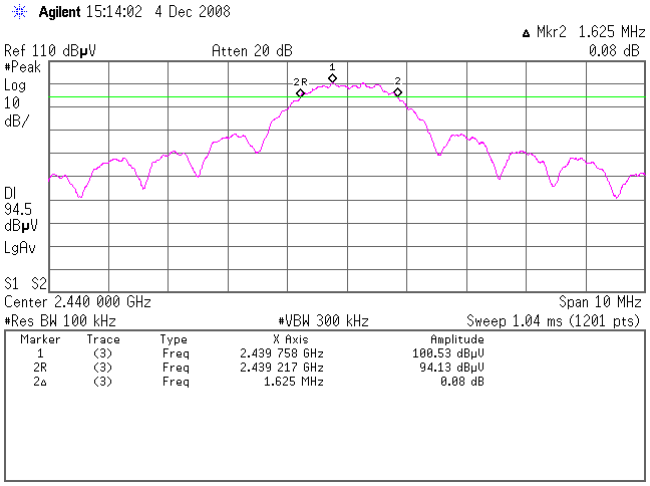
6dB Bandwidth (Regulation: FCC 15.247(a)(2))

UL Japan, Inc. Yamakita EMC lab.	No.2 shielded room
Date:	2008.12.4
Temp./Humid.:	25 deg. C. / 38 %
Engineer:	Tatsuya Arai
Test mode:	Transmitting

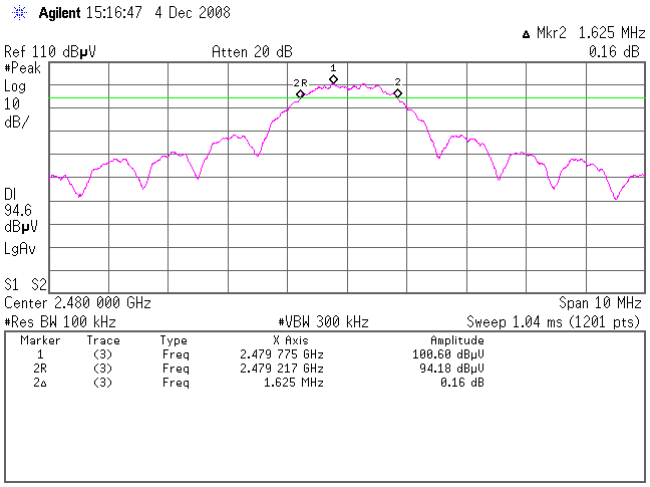
1. ch: 2405MHz/6dB Bandwidth:1.617MHz



2. ch: 2440MHz/6dB Bandwidth:1.625MHz



3. ch: 2480MHz/6dB Bandwidth:1.625MHz



Maximum Peak Conducted Output Power (Regulation: FCC 15.247(b)(3))

UL Japan, Inc Yamakita EMC lab.
No.2 Shielded Room

DATE: 2008.12.5
TEMP./HUMID.: 20deg.C/48%
TEST MODE: Transmitting

ENGINEER: Tatsuya Arai

CH	FREQ [GHz]	PM Reading [dBm]	Cable Loss [dB]	Results [dBm]	Limit (1W) [dBm]	MARGIN [dB]
Low	2405.00	-3.20	0.3	-2.87	30.0	32.87
Mid	2440.00	-3.37	0.3	-3.03	30.0	33.03
High	2480.00	-2.75	0.4	-2.40	30.0	32.40

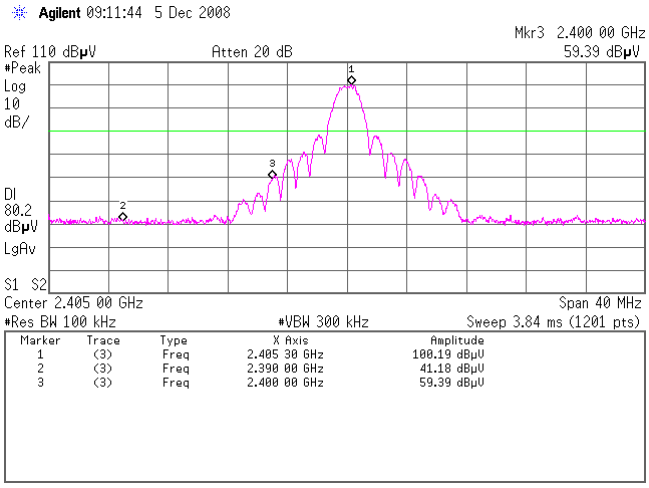
P/M: Power Meter
CABLE LOSS:KCC-D20

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

UL Japan, Inc. Yamakita EMC lab.	No.2 shielded room
Date:	2008.12.5
Temp./Humid.:	20 deg. C. / 48 %
Engineer:	Tatsuya Arai
Test mode:	Transmitting

Tx Ch:2405MHz

1.



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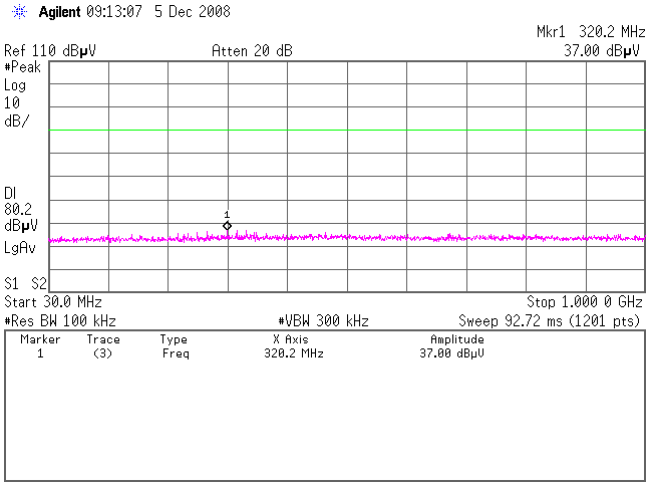

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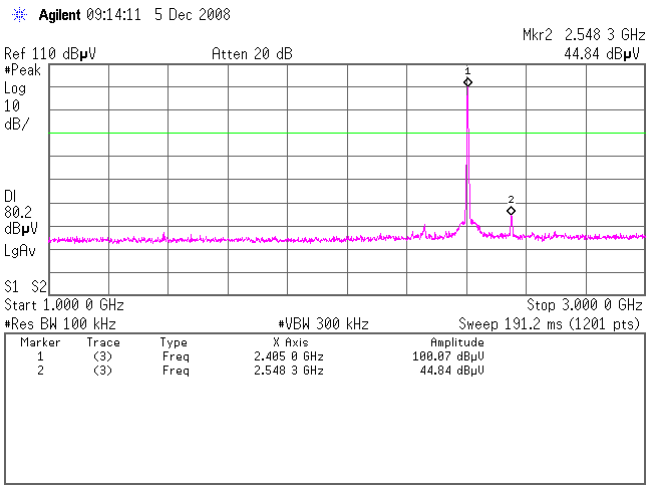
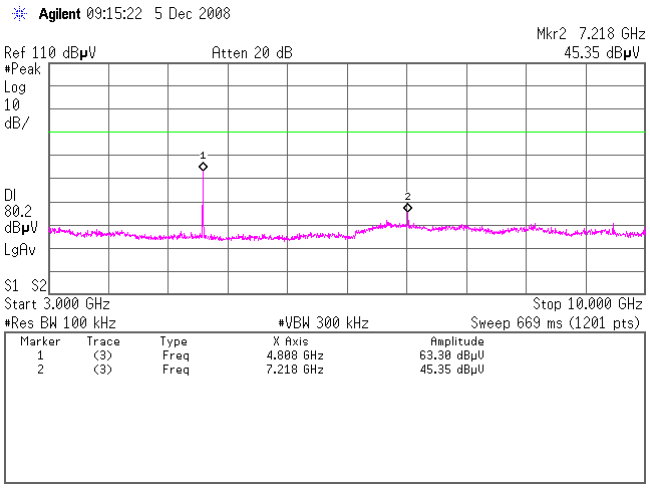


Tx Ch:2405MHz

4.



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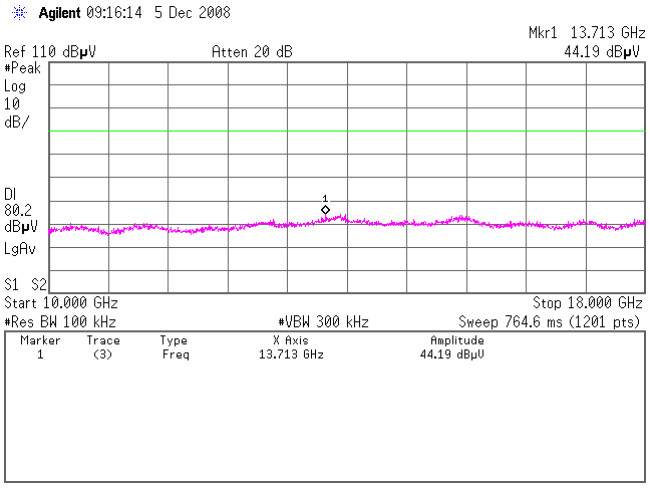

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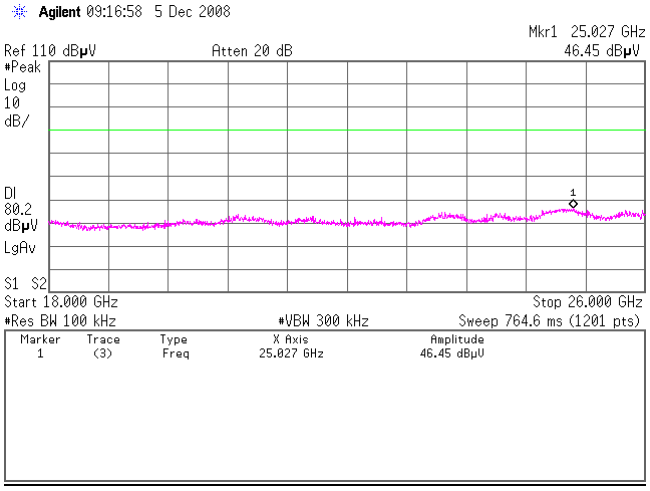
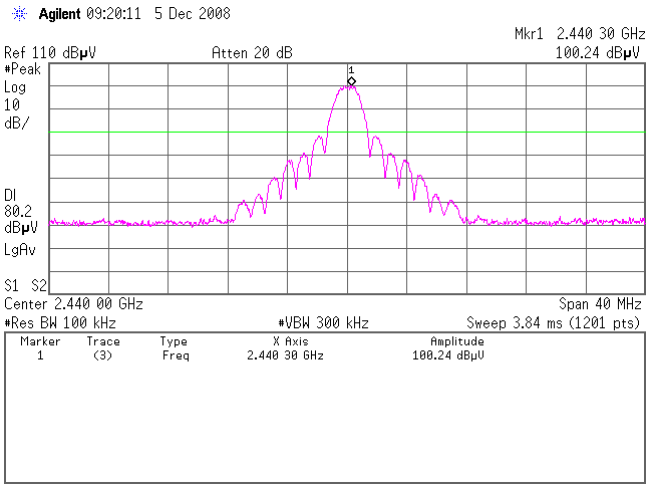


Tx Ch:2440MHz

1.



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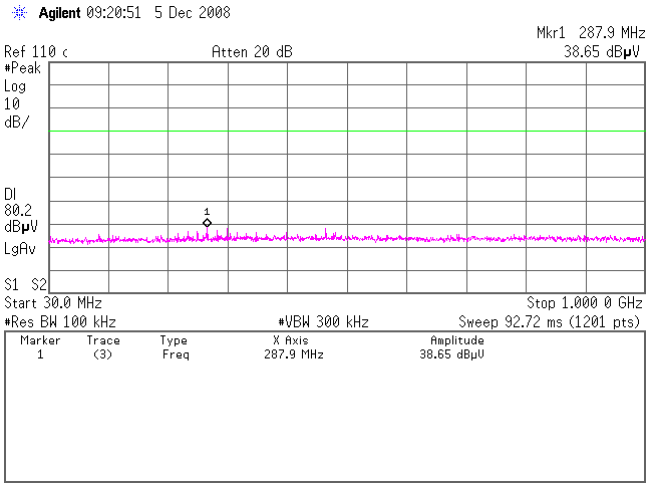

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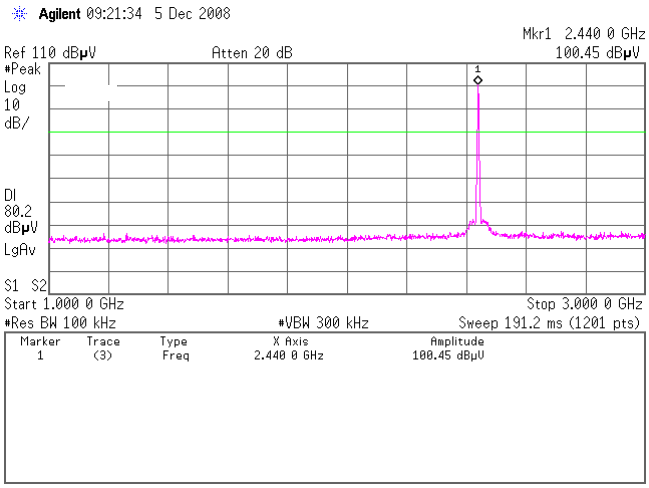

Tx Ch:2440MHz

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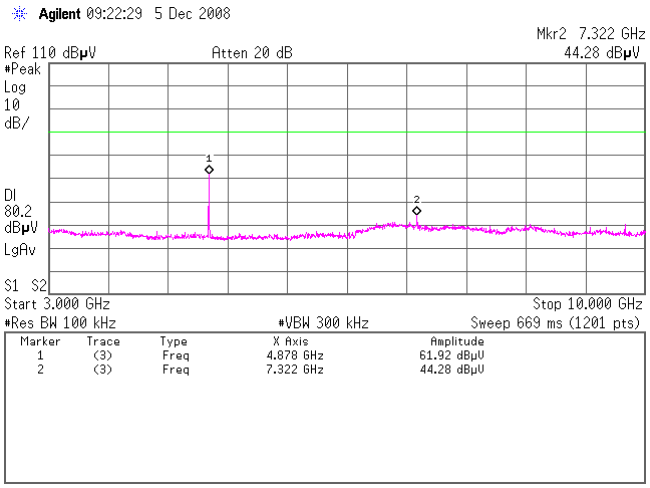

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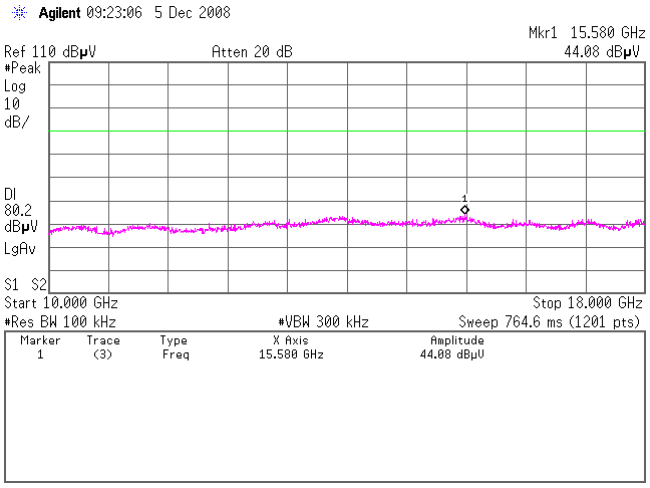

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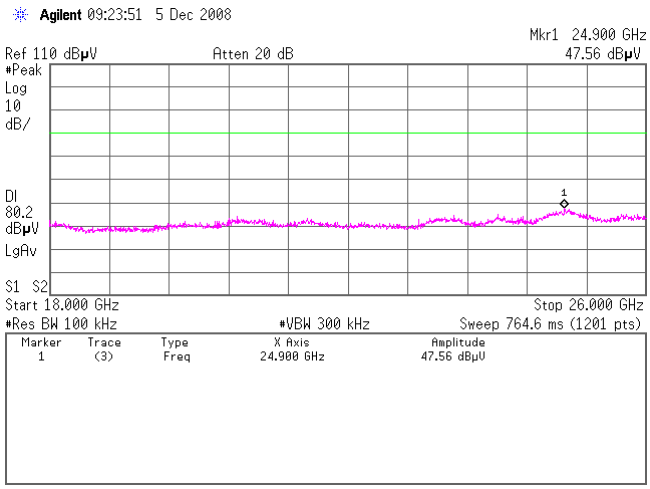

Tx Ch:2480MHz

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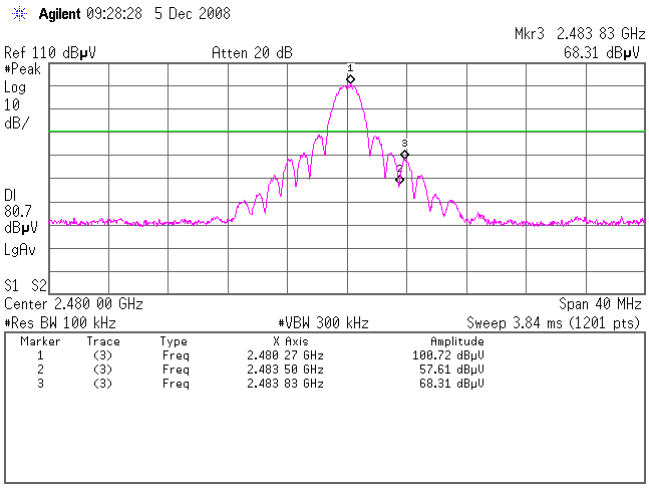

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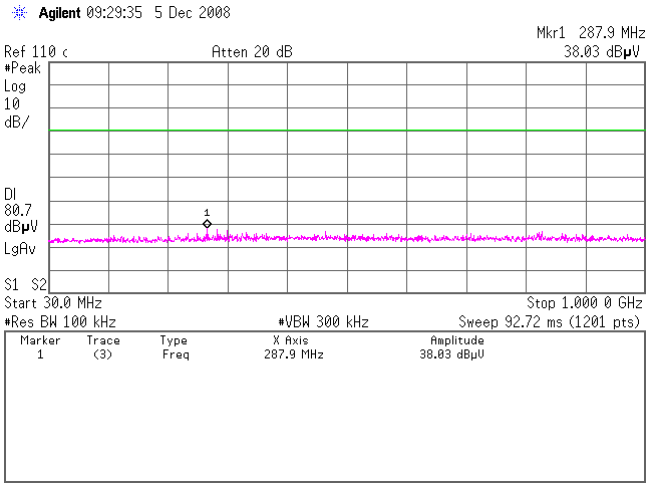

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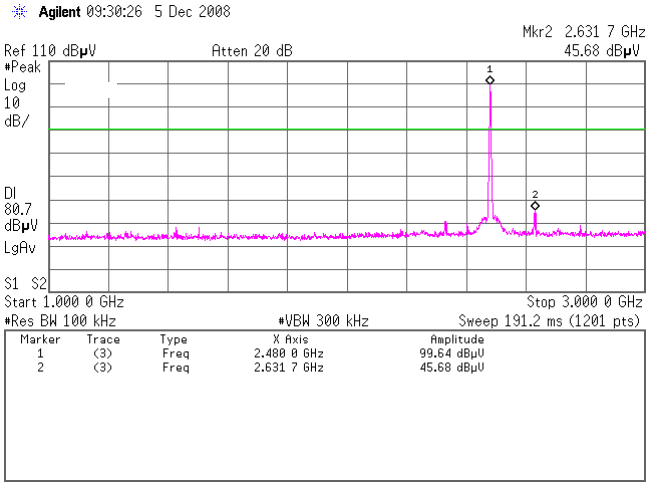

Tx Ch:2480MHz

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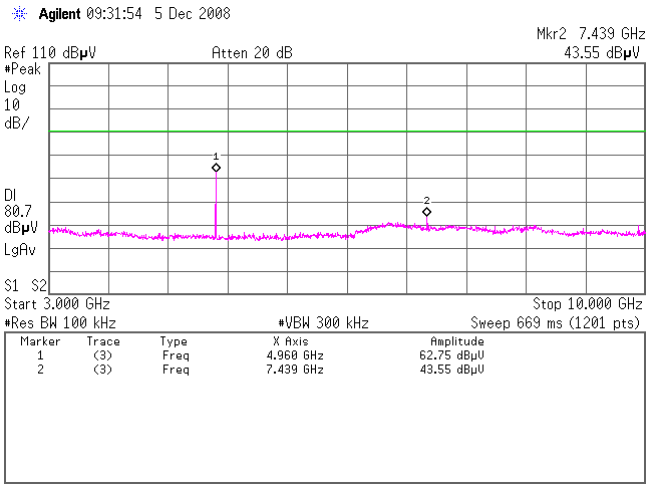

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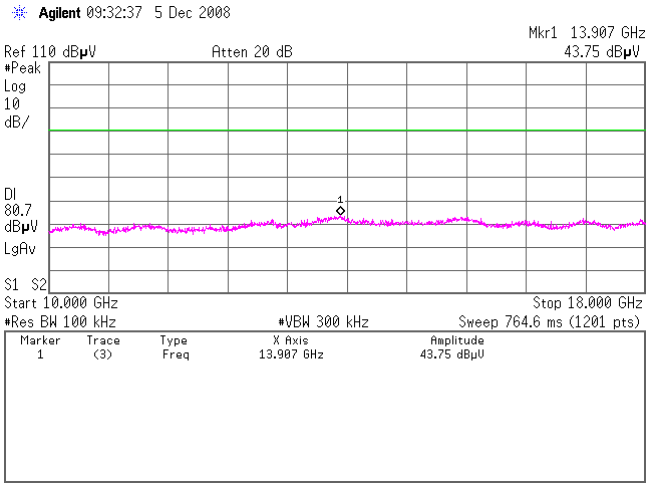

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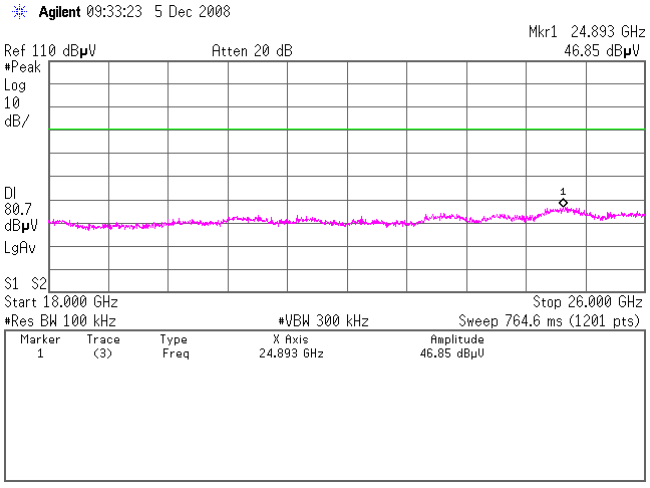


DATA OF RADIATION TEST

UL Japan, Inc.
YAMAKITA No.1 ANECHOIC CHAMBER
Report No.: 29BE0200-YK-A

Applicant : SUMITOMO PRECISION PRODUCTS CO., LTD.
Kind of Equipment : neoMOTE (IEEE802.15.4 2.4GHz RF Transceiver)
Model No. : WM-Z1110
Serial No. : C124801
Power : DC3.6V
Mode : Transmitting (2405Mhz)
Remarks : -
Date : 12/3/2008
Test Distance : 3 m
Temperature : 17 ℃ Engineer : Tatsuya Arai
Humidity : 40 %
Regulation : FCC Part15C §15.209

No.	FREQ. [MHz]	ANT TYPE	READING HOR [dBμV]	READING VER [dBμV]	ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT HOR [dBμV/m]	RESULT VER [dBμV/m]	LIMITS [dBμV/m]	MARGIN HOR [dB]	MARGIN VER [dB]
1.	44.24	BB	20.4	20.7	12.1	27.6	1.4	6.0	12.3	12.6	40.0	27.7	27.4
2.	147.47	BB	20.1	20.2	14.6	27.4	2.7	6.0	16.0	16.1	43.5	27.5	27.4
3.	648.91	BB	19.3	19.2	20.2	27.2	6.4	6.0	24.7	24.6	46.0	21.3	21.4

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

■ANTENNA:KBA-03(BBA9106)30-299.99MHz/KLA-03(USLP9143)300-1000MHz
■CABLE:KCC-30/31/32/34■PREAMP:KAF-08(MH648A)■EMI RECEIVER:KTR-04(ESVS10)

Page:

DATA OF RADIATION TEST

UL Japan, Inc.
YAMAKITA No.1 ANECHOIC CHAMBER
Report No.: 29BE0200-YK-A

Applicant : SUMITOMO PRECISION PRODUCTS CO., LTD.
Kind of Equipment : neoMOTE (IEEE802.15.4 2.4GHz RF Transceiver)
Model No. : WM-Z1110
Serial No. : C124801
Power : DC3.6V
Mode : Transmitting (2440MHz)
Remarks : -
Date : 12/3/2008
Test Distance : 3 m
Temperature : 17 ℃ Engineer : Tatsuya Arai
Humidity : 40 %
Regulation : FCC Part15C §15.209

No.	FREQ. [MHz]	ANT TYPE	READING HOR [dBμV]	READING VER [dBμV]	ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT HOR [dBμV/m]	RESULT VER [dBμV/m]	LIMITS [dBμV/m]	MARGIN HOR [dB]	MARGIN VER [dB]
1.	44.24	BB	20.9	20.6	12.1	27.6	1.4	6.0	12.8	12.5	40.0	27.2	27.5
2.	147.47	BB	20.1	20.1	14.6	27.4	2.7	6.0	16.0	16.0	43.5	27.5	27.5
3.	648.91	BB	19.2	19.2	20.2	27.2	6.4	6.0	24.6	24.6	46.0	21.4	21.4

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

■ANTENNA:KBA-03(BBA9106)30-299.99MHz/KLA-03(USLP9143)300-1000MHz
■CABLE:KCC-30/31/32/34■PREAMP:KAF-08(MH648A)■EMI RECEIVER:KTR-04(ESVS10)

DATA OF RADIATION TEST

UL Japan, Inc.
YAMAKITA No.1 ANECHOIC CHAMBER
Report No.: 29BE0200-YK-A

Applicant	:	SUMITOMO PRECISION PRODUCTS CO., LTD.	
Kind of Equipment	:	neoMOTE (IEEE802.15.4 2.4GHz RF Transceiver)	
Model No.	:	WM-Z1110	
Serial No.	:	C124801	
Power	:	DC3.6V	
Mode	:	Transmitting (2480MHz)	
Remarks	:	-	
Date	:	12/4/2008	
Test Distance	:	3 m	
Temperature	:	18 ℃	Engineer : Tatsuya Arai
Humidity	:	42 %	
Regulation	:	FCC Part15C §15.209	

No.	FREQ. [MHz]	ANT TYPE	READING HOR [dBμV]	READING VER [dBμV]	ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT HOR [dBμV/m]	RESULT VER [dBμV/m]	LIMITS [dBμV/m]	MARGIN HOR [dB]	MARGIN VER [dB]
1.	44.24	BB	20.5	20.9	12.1	27.6	1.4	6.0	12.4	12.8	40.0	27.6	27.2
2.	147.47	BB	20.1	20.1	14.6	27.4	2.7	6.0	16.0	16.0	43.5	27.5	27.5
3.	648.91	BB	19.1	19.1	20.2	27.2	6.4	6.0	24.5	24.5	46.0	21.5	21.5

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

■ANTENNA:KBA-03(BBA9106)30-299.99MHz/KLA-03(USLP9143)300-1000MHz
■CABLE:KCC-30/31/32/34■PREAMP:KAF-08(MH648A)■EMI RECEIVER:KTR-04(ESVS10)

Page:

DATA OF RADIATION TEST

UL Japan, Inc.
YAMAKITA No.1 ANECHOIC CHAMBER
Report No.: 29BE0200-YK-A

Applicant : SUMITOMO PRECISION PRODUCTS CO., LTD.
Kind of Equipment : neoMOTE (IEEE802.15.4 2.4GHz RF Transceiver)
Model No. : WM-Z1110
Serial No. : C124801
Power : DC3.6V
Mode : Transmitting (2405Mhz)
Remarks : PK (RBW:1MHz , VBW:1MHz)
Date : 12/3/2008
Test Distance : 3 m
Temperature : 17 ℃ Engineer : Tatsuya Arai
Humidity : 40 %
Regulation : FCC Part15C §15.209(PK Detection)

No.	FREQ. [MHz]	ANT TYPE	READING HOR [dBμV]	READING VER [dBμV]	ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT HOR [dBμV/m]	RESULT VER [dBμV/m]	LIMITS [dBμV/m]	MARGIN HOR [dB]	MARGIN VER [dB]
1.	2390.00	BB	50.7	46.1	28.8	35.4	4.4	0.0	48.5	43.9	74.0	25.5	30.1
2.	2400.00	BB	49.7	46.4	28.8	35.3	4.5	0.0	47.7	44.4	74.0	26.3	29.6
3.	4810.00	BB	47.2	46.5	33.6	34.1	5.9	0.0	52.6	51.9	74.0	21.4	22.1
4.	7215.00	BB	44.1	43.8	36.2	34.7	7.1	0.0	52.7	52.4	74.0	21.3	21.6
5.	9620.00	BB	45.2	45.8	37.6	35.3	8.2	0.0	55.7	56.3	74.0	18.3	17.7
6.	12025.00	BB	44.4	45.6	39.8	35.0	8.9	0.0	58.1	59.3	74.0	15.9	14.7

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

■ANTENNA:KHA-01(SAS-200 571)1-18GHz/KHA-03(3160-09)18-26GHz
■CABLE:KCC-D16/D17■PREAMP:KAF-07(8449B)■EMI RECEIVER:KTR-01(ESI40)

Page:

DATA OF RADIATION TEST

UL Japan, Inc.
YAMAKITA No.1 ANECHOIC CHAMBER
Report No.: 29BE0200-YK-A

Applicant : SUMITOMO PRECISION PRODUCTS CO., LTD.
Kind of Equipment : neoMOTE (IEEE802.15.4 2.4GHz RF Transceiver)
Model No. : WM-Z1110
Serial No. : C124801
Power : DC3.6V
Mode : Transmitting (2405Mhz)
Remarks : AV (RBW:1MHz , VBW:10Hz)
Date : 12/3/2008
Test Distance : 3 m
Temperature : 17 ℃ Engineer : Tatsuya Arai
Humidity : 40 %
Regulation : FCC Part15C §15.209(AV Detection)

No.	FREQ. [MHz]	ANT TYPE	READING HOR [dBμV]	READING VER [dBμV]	ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT HOR [dBμV/m]	RESULT VER [dBμV/m]	LIMITS [dBμV/m]	MARGIN HOR [dB]	MARGIN VER [dB]
1.	2390.00	BB	34.2	32.7	28.8	35.4	4.4	0.0	32.0	30.5	54.0	22.0	23.5
2.	2400.00	BB	36.2	45.8	28.8	35.3	4.5	0.0	34.2	43.8	54.0	19.8	10.2
3.	4810.00	BB	37.3	37.6	33.6	34.1	5.9	0.0	42.7	43.0	54.0	11.3	11.0
4.	7215.00	BB	30.5	30.5	36.2	34.7	7.1	0.0	39.1	39.1	54.0	14.9	14.9
5.	9620.00	BB	31.8	31.7	37.6	35.3	8.2	0.0	42.3	42.2	54.0	11.7	11.8
6.	12025.00	BB	31.4	31.5	39.8	35.0	8.9	0.0	45.1	45.2	54.0	8.9	8.8

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

■ANTENNA:KHA-01(SAS-200 571)1-18GHz/KHA-03(3160-09)18-26GHz
■CABLE:KCC-D16/D17■PREAMP:KAF-07(8449B)■EMI RECEIVER:KTR-01(ESI40)

Page:

DATA OF RADIATION TEST

UL Japan, Inc.
YAMAKITA No.1 ANECHOIC CHAMBER
Report No.: 29BE0200-YK-A

Applicant : SUMITOMO PRECISION PRODUCTS CO., LTD.
Kind of Equipment : neoMOTE (IEEE802.15.4 2.4GHz RF Transceiver)
Model No. : WM-Z1110
Serial No. : C124801
Power : DC3.6V
Mode : Transmitting (2440MHz)
Remarks : PK (RBW:1MHz , VBW:1MHz)
Date : 12/3/2008
Test Distance : 3 m
Temperature : 17 ℃ Engineer : Tatsuya Arai
Humidity : 40 %
Regulation : FCC Part15C §15.209(PK Detection)

No.	FREQ. [MHz]	ANT TYPE	READING HOR [dBμV]	READING VER [dBμV]	ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT HOR [dBμV/m]	RESULT VER [dBμV/m]	LIMITS [dBμV/m]	MARGIN HOR [dB]	MARGIN VER [dB]
1.	4880.00	BB	46.7	47.8	33.8	34.1	6.0	0.0	52.4	53.5	74.0	21.6	20.5
2.	7320.00	BB	44.1	44.2	36.2	34.8	7.1	0.0	52.6	52.7	74.0	21.4	21.3
3.	9760.00	BB	44.4	45.2	37.6	35.4	8.2	0.0	54.8	55.6	74.0	19.2	18.4
4.	12200.00	BB	44.9	45.6	39.9	34.8	9.0	0.0	59.0	59.7	74.0	15.0	14.3

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

■ANTENNA:KHA-01(SAS-200 571)1-18GHz/KHA-03(3160-09)18-26GHz
■CABLE:KCC-D16/D17■PREAMP:KAF-07(8449B)■EMI RECEIVER:KTR-01(ESI40)

DATA OF RADIATION TEST

UL Japan, Inc.
YAMAKITA No.1 ANECHOIC CHAMBER
Report No.: 29BE0200-YK-A

Applicant : SUMITOMO PRECISION PRODUCTS CO., LTD.
Kind of Equipment : neoMOTE (IEEE802.15.4 2.4GHz RF Transceiver)
Model No. : WM-Z1110
Serial No. : C124801
Power : DC3.6V
Mode : Transmitting (2440MHz)
Remarks : AV (RBW:1MHz , VBW:10Hz)
Date : 12/3/2008
Test Distance : 3 m
Temperature : 17 ℃ Engineer : Tatsuya Arai
Humidity : 40 %
Regulation : FCC Part15C §15.209(AV Detection)

No.	FREQ. [MHz]	ANT TYPE	READING HOR [dBμV]	READING VER [dBμV]	ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT HOR [dBμV/m]	RESULT VER [dBμV/m]	LIMITS [dBμV/m]	MARGIN HOR [dB]	MARGIN VER [dB]
1.	4880.00	BB	36.5	40.5	33.8	34.1	6.0	0.0	42.2	46.2	54.0	11.8	7.8
2.	7320.00	BB	30.7	30.6	36.2	34.8	7.1	0.0	39.2	39.1	54.0	14.8	14.9
3.	9760.00	BB	31.9	31.5	37.6	35.4	8.2	0.0	42.3	41.9	54.0	11.7	12.1
4.	12200.00	BB	31.5	31.7	39.9	34.8	9.0	0.0	45.6	45.8	54.0	8.4	8.2

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

■ANTENNA:KHA-01(SAS-200 571)1-18GHz/KHA-03(3160-09)18-26GHz
■CABLE:KCC-D16/D17■PREAMP:KAF-07(8449B)■EMI RECEIVER:KTR-01(ESI40)

DATA OF RADIATION TEST

UL Japan, Inc.
YAMAKITA No.1 ANECHOIC CHAMBER
Report No.: 29BE0200-YK-A

Applicant : SUMITOMO PRECISION PRODUCTS CO., LTD.
Kind of Equipment : neoMOTE (IEEE802.15.4 2.4GHz RF Transceiver)
Model No. : WM-Z1110
Serial No. : C124801
Power : DC3.6V
Mode : Transmitting (2480MHz)
Remarks : PK (RBW:1MHz , VBW:1MHz)
Date : 12/3/2008
Test Distance : 3 m
Temperature : 17 ℃ Engineer : Tatsuya Arai
Humidity : 40 %
Regulation : FCC Part15C §15.209(PK Detection)

No.	FREQ. [MHz]	ANT TYPE	READING HOR [dBμV]	READING VER [dBμV]	ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT HOR [dBμV/m]	RESULT VER [dBμV/m]	LIMITS [dBμV/m]	MARGIN HOR [dB]	MARGIN VER [dB]
1.	2483.50	BB	58.9	61.8	28.8	35.3	4.5	0.0	56.9	59.8	74.0	17.1	14.2
2.	4960.00	BB	48.9	48.8	34.1	34.1	6.0	0.0	54.9	54.8	74.0	19.1	19.2
3.	7440.00	BB	44.4	45.4	36.3	34.8	7.1	0.0	53.0	54.0	74.0	21.0	20.0
4.	9920.00	BB	44.7	44.4	37.6	35.4	8.3	0.0	55.2	54.9	74.0	18.8	19.1
5.	12400.00	BB	44.9	45.9	40.2	34.6	9.0	0.0	59.5	60.5	74.0	14.5	13.5

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

■ANTENNA:KHA-01(SAS-200 571)1-18GHz/KHA-03(3160-09)18-26GHz
■CABLE:KCC-D16/D17■PREAMP:KAF-07(8449B)■EMI RECEIVER:KTR-01(ESI40)

Page:

DATA OF RADIATION TEST

UL Japan, Inc.
YAMAKITA No.1 ANECHOIC CHAMBER
Report No.: 29BE0200-YK-A

Applicant : SUMITOMO PRECISION PRODUCTS CO., LTD.
Kind of Equipment : neoMOTE (IEEE802.15.4 2.4GHz RF Transceiver)
Model No. : WM-Z1110
Serial No. : C124801
Power : DC3.6V
Mode : Transmitting (2480MHz)
Remarks : AV (RBW:1MHz , VBW:10Hz)
Date : 12/3/2008
Test Distance : 3 m
Temperature : 17 ℃ Engineer : Tatsuya Arai
Humidity : 40 %
Regulation : FCC Part15C §15.209(AV Detection)

No.	FREQ. [MHz]	ANT TYPE	READING HOR [dBμV]	READING VER [dBμV]	ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT HOR [dBμV/m]	RESULT VER [dBμV/m]	LIMITS [dBμV/m]	MARGIN HOR [dB]	MARGIN VER [dB]
1.	2483.50	BB	48.8	52.4	28.8	35.3	4.5	0.0	46.8	50.4	54.0	7.2	3.6
2.	4960.00	BB	43.2	44.5	34.1	34.1	6.0	0.0	49.2	50.5	54.0	4.8	3.5
3.	7440.00	BB	30.4	30.6	36.3	34.8	7.1	0.0	39.0	39.2	54.0	15.0	14.8
4.	9920.00	BB	30.9	31.0	37.6	35.4	8.3	0.0	41.4	41.5	54.0	12.6	12.5
5.	12400.00	BB	31.8	31.8	40.2	34.6	9.0	0.0	46.4	46.4	54.0	7.6	7.6

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

■ANTENNA:KHA-01(SAS-200 571)1-18GHz/KHA-03(3160-09)18-26GHz
■CABLE:KCC-D16/D17■PREAMP:KAF-07(8449B)■EMI RECEIVER:KTR-01(ESI40)

Page:

Power Density (Regulation: FCC 15.247(e))

UL Japan, Inc Yamakita EMC lab.
No.2 Shielded Room

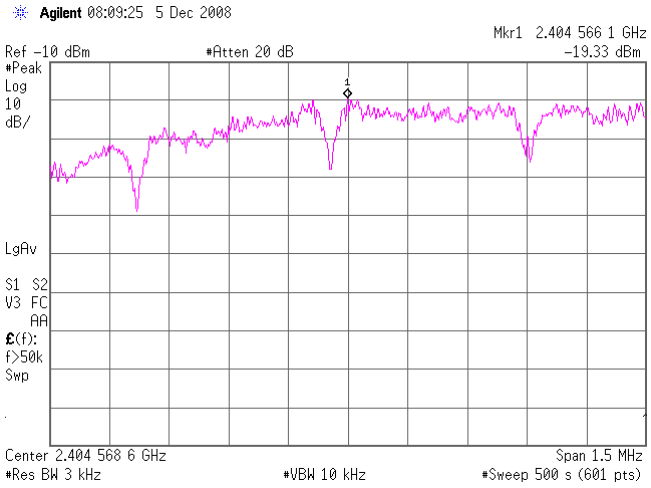
DATE: 2008.12.5
TEMP./HUMID.: 20deg.C/48%
TEST MODE: Transmitting

ENGINEER: Tatsuya Arai

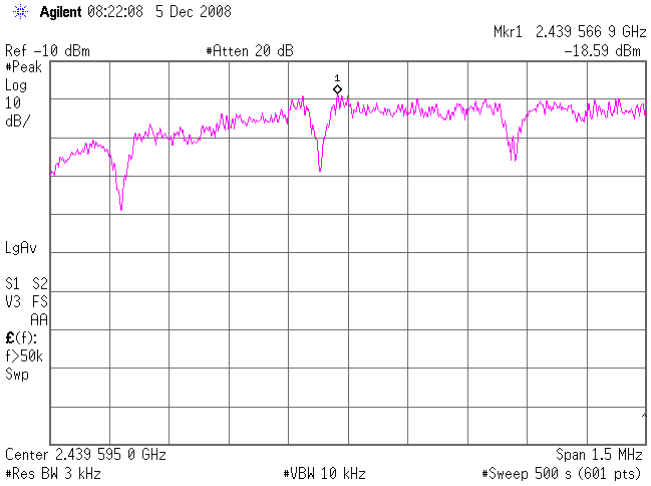
CH	FREQ [GHz]	SA Reading [dBm]	Cable Loss [dB]	Results [dBm]	Limit (1W) [dBm]	MARGIN [dB]
Low	2405.00	-19.33	0.3	-19.00	8.0	27.00
Mid	2440.00	-18.59	0.3	-18.25	8.0	26.25
High	2480.00	-18.60	0.4	-18.25	8.0	26.25

SA: Spectrum Analyzer
CABLE LOSS:KCC-D20

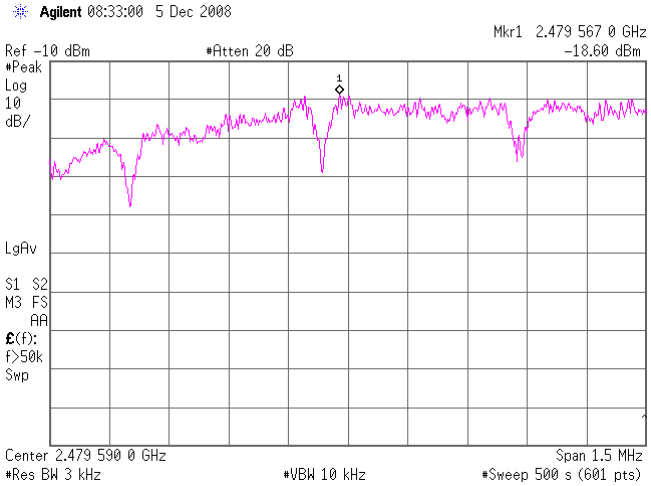
1. ch : 2405MHz



2. ch : 2440MHz



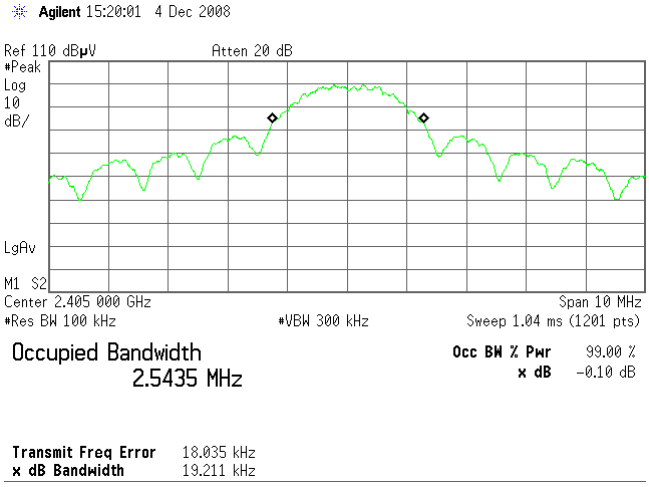
3. ch : 2480MHz



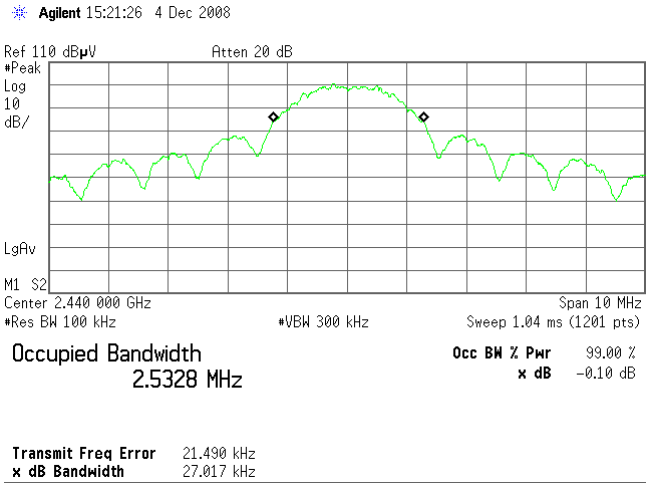
Occupied Bandwidth (99%) (Regulation: RSS-Gen 4.6.1)

UL Japan, Inc. Yamakita EMC lab.	No.2 shielded room
Date:	2008.12.4
Temp./Humid.:	25 deg. C. / 38 %
Engineer:	Tatsuya Arai
Test mode:	Transmitting

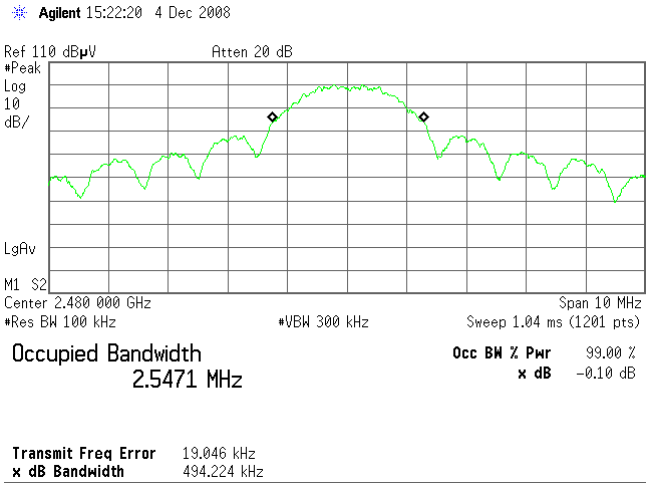
1. ch: 2405MHz/ Occupied Bandwidth:2.544MHz



2. ch: 2440MHz/ Occupied Bandwidth:2.533MHz



3. ch: 2480MHz/ Occupied Bandwidth:2.547MHz



APPENDIX 3
Test Instruments

EMI test equipment

Control No.	Instrument	Manufacturer	Model No	Serial No	Test Item	Calibration Date * Interval(month)
YA-CE	Conducted emission(software)	UL Japan	CE(Ver.1.6)	-	CE	-
KCC-33/34/KRM-03	Coaxial Cable/RF Relay Matrix	Fujikura/Suhner/TSJ	5D-2W/S04272B/RFM-E421	-/01055	CE	2008/10/22 * 12
KLS-02	LISN(AMN)	Schwarzbeck	NSLK8127	8127344	CE	2008/08/01 * 12
KOS-01	Humidity Indicator	Custom	CTH-190	K-01	CE	2008/07/14 * 12
MSA-02	Spectrum Analyzer	Advantest	R3265A	55060359	CE/RE	Pre Check
KTR-03	Test Receiver	Rohde & Schwarz	ESHS10	839698/014	CE	2008/02/18 * 12
KJM-07	Measure	KOMELON	KMC-36	-	CE/RE	-
YA-RE	Radiated emission(software)	UL Japan	RE(Ver.1.5)	-	RE	-
KAEC-01	Anechoic Chamber	JSE	Semi 3m	1	RE	2008/08/06 * 12
KAF-08	Pre Amplifier	Anritsu	MH648A	M90147	RE	2008/06/03 * 12
KAT6-01	Attenuator	INMET	18N-6dB	-	RE	2008/03/17 * 12
KBA-03	Biconical Antenna	Schwarzbeck	BBA9106	1926	RE	2007/12/27 * 12
KCC-30/31/32/34/KRM-03	Coaxial Cable/RF Relay Matrix	Fujikura/Suhner/TSJ	5D-2W/S04272B/RFM-E421	-/01055	RE	2008/10/22 * 12
KLA-03	Logperiodic Antenna	Schwarzbeck	USLP9143	170	RE	2007/12/27 * 12
KOS-02	Humidity Indicator	Custom	CTH-190	K-02	RE/AT all	2008/07/07 * 12
KTR-01	Test Receiver	Rohde & Schwarz	ESI40	100054/040	RE/AT 1,3,4	2008/04/18 * 12
KAF-07	Pre Amplifier	Hewlett Packard	8449B	3008A01002	RE	2007/12/10 * 12
KCC-D16/D17	Coaxial Cable	INSULATED WIRE INC	KPS-1501-200-KPS/KPS-1501-2000-KPS	04202005	RE	2008/02/21 * 12
KCC-D20	Coaxial Cable	SUHNER	SUCOFLEX102	31110/2	AT all	2008/07/09 * 12
KHA-01	Horn Antenna	A.H.Systems	SAS-200/571	354	RE	2008/08/11 * 12
KHA-03	Horn Antenna	EMCO	3160-09	1239	RE	2008/04/30 * 12
KPM-05	Power meter	Agilent	E4417A	GB41290718	AT 2	2008/03/21 * 12
KPSS-01	Power sensor	Agilent	E9327A	US40440544	AT 2	2008/03/27 * 12
KTR-04	Test Receiver	Rohde & Schwarz	ESVS10	825475/006	RE	2008/10/20 * 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 :

- **CE: Conducted Emission**
- **RE: Out of Band Emission (Radiated)**
- **AT: Antenna terminal conducted test**
  - **1: 6dB Bandwidth**
  - **2: Maximum Peak Output Power**
  - **3: Out of Band Emission (Conducted)**
  - **4: Peak Power Density**