DATA OF CONDUCTED EMISSION TEST

UL Japan, Inc. Shonan EMC Lab. No.1 Shielded Room
Date : 2011/08/11

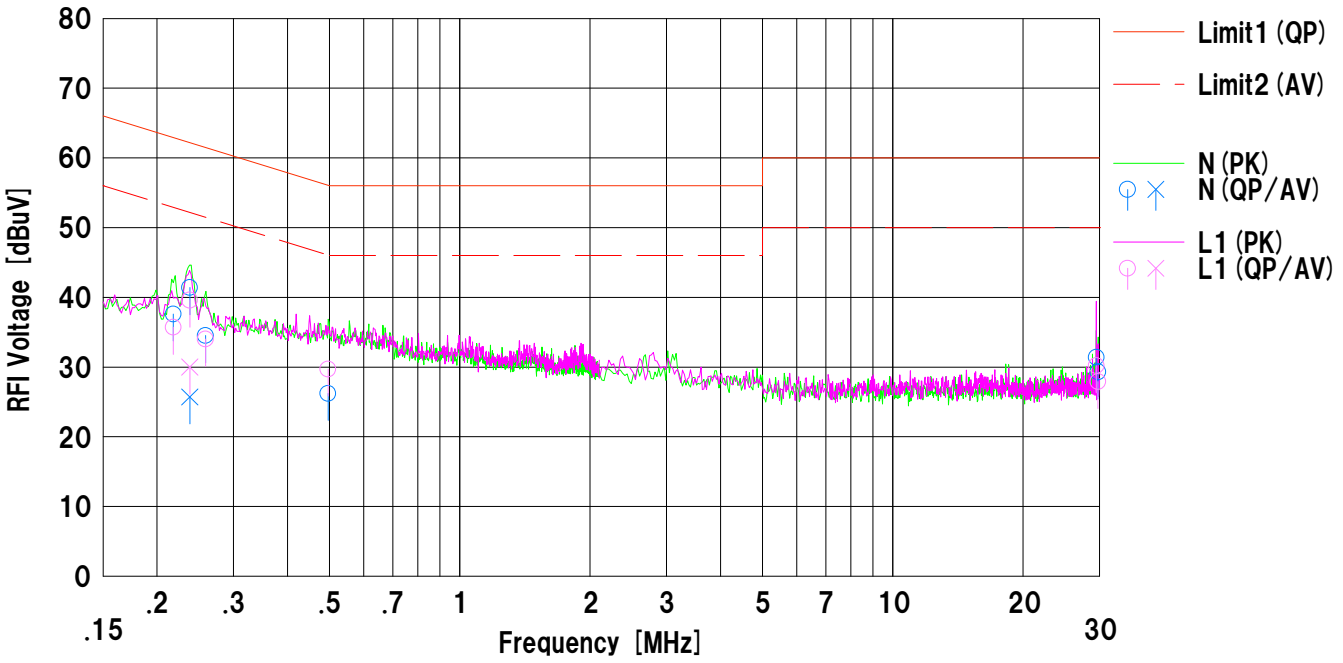
Company : Kyushukyohan Co., Ltd.
Kind of EUT : RF-Module
Model No. : KXN-RF24-01
Serial No. : 1

Mode : Transmitting 2442MHz
Report No. : 31KE0363-SH-01-A
Power : AC 120V / 60Hz
Temp./Humi. : 24deg.C. / 61%RH

Remarks : -

Limit1 : FCC 15C (15.207) QP
Limit2 : FCC 15C (15.207) AV

Engineer : Makoto Hosaka



No.	Freq.	Reading		C.Fac	Results		Limit		Margin		Phase	Comment
		<QP>	<AV>		<QP>	<AV>	<QP>	<AV>	<QP>	<AV>		
	[MHz]	[dBuV]	[dBuV]	[dB]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dB]	[dB]		
1	0.21800	25.0	---	12.6	37.6	---	62.8	52.8	25.2	---	N	
2	0.23800	28.8	13.1	12.6	41.4	25.7	62.1	52.1	20.7	26.4	N	
3	0.25872	21.9	---	12.6	34.5	---	61.4	51.4	26.9	---	N	
4	0.49641	13.5	---	12.7	26.2	---	56.0	46.0	29.8	---	N	
5	29.49430	17.5	---	13.9	31.4	---	60.0	50.0	28.6	---	N	
6	29.78470	15.4	---	13.9	29.3	---	60.0	50.0	30.7	---	N	
7	0.21800	23.1	---	12.6	35.7	---	62.8	52.8	27.1	---	L1	
8	0.23800	27.0	17.4	12.6	39.6	30.0	62.1	52.1	22.5	22.1	L1	
9	0.25872	21.4	---	12.6	34.0	---	61.4	51.4	27.4	---	L1	
10	0.49641	17.0	---	12.7	29.7	---	56.0	46.0	26.3	---	L1	
11	29.49430	16.3	---	13.9	30.2	---	60.0	50.0	29.8	---	L1	
12	29.78470	14.0	---	13.9	27.9	---	60.0	50.0	32.1	---	L1	

Calculation:Result [dBuV] =Reading [dBuV] +C.Fac (LISN+Cable+ATT) [dB]
LISN:SLS-01

DATA OF CONDUCTED EMISSION TEST

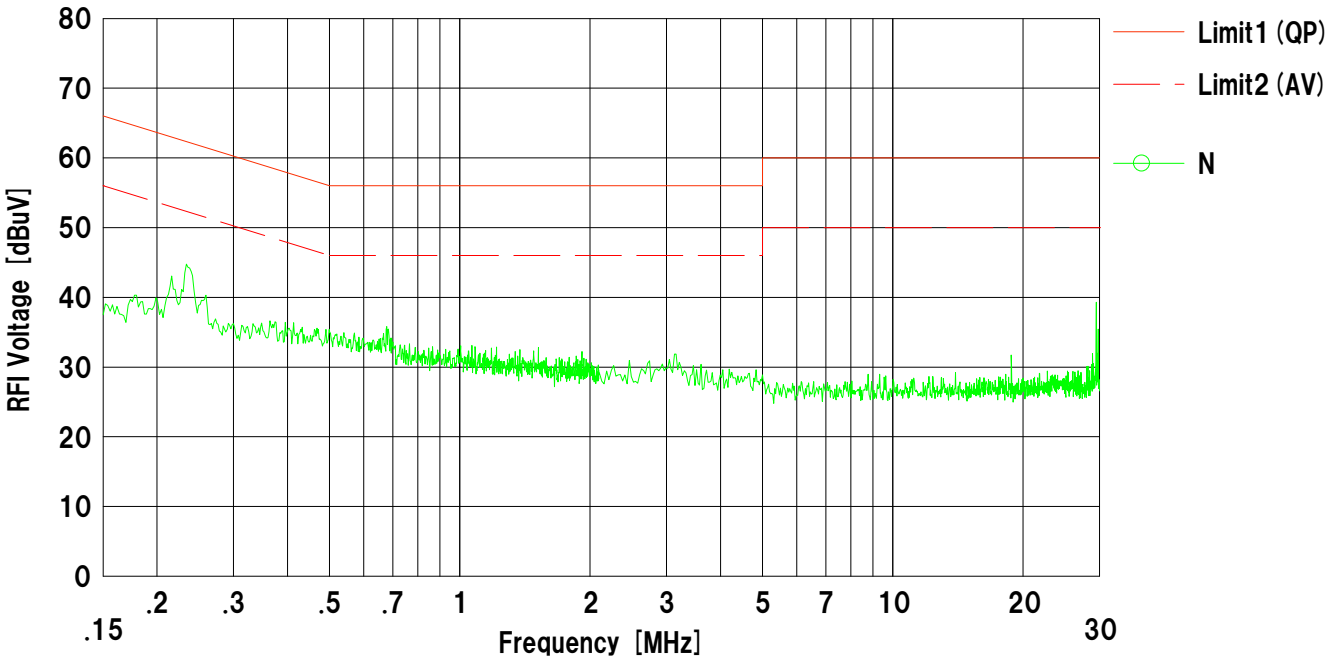
UL Japan, Inc. Shonan EMC Lab. No.1 Shielded Room
Date : 2011/08/11

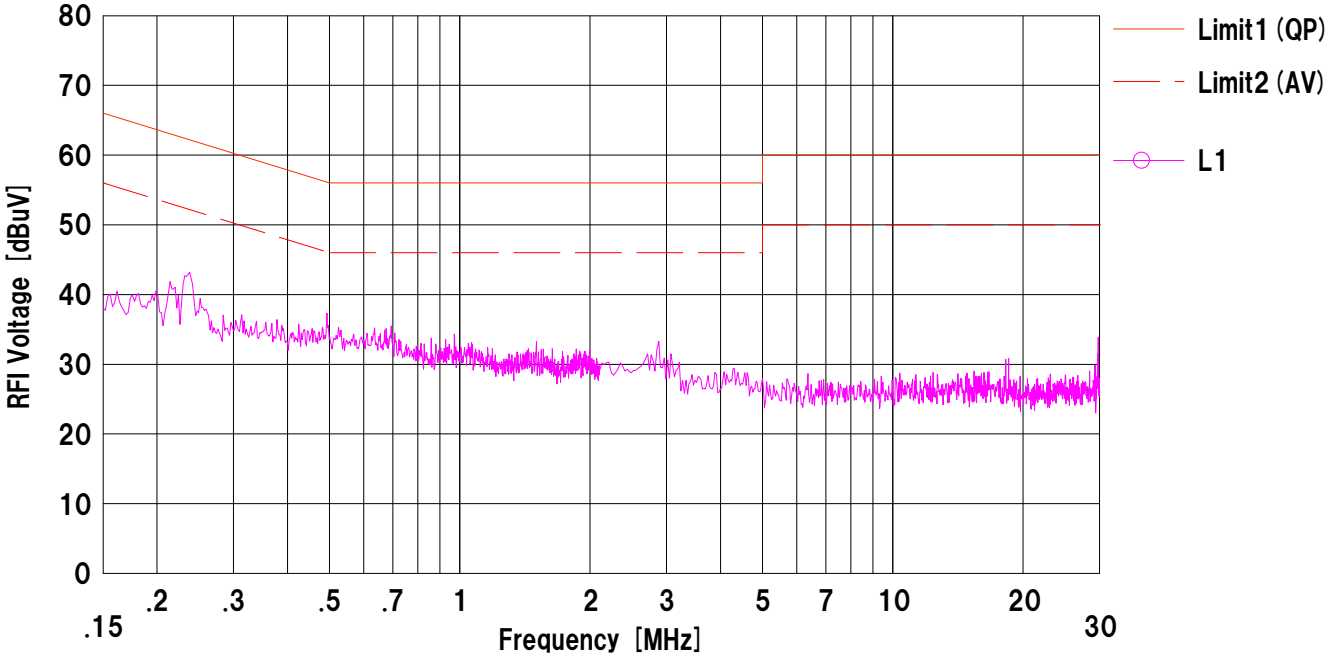
Company	: Kyushukyohan Co., Ltd.	Mode	: Transmitting 2402MHz
Kind of EUT	: RF-Module	Report No.	: 31KE0363-SH-01-A
Model No.	: KXN-RF24-01	Power	: AC 120V / 60Hz
Serial No.	: 1	Temp./Humi.	: 24deg.C. / 61%RH

Remarks : -

Limit1 : FCC 15C(15.207) QP
Limit2 : FCC 15C(15.207) AV

Engineer : Makoto Hosaka





Calculation:Result [dBuV] =Reading [dBuV] +C.Fac (LISN+Cable+ATT) [dB]
LISN:SLS-01

DATA OF CONDUCTED EMISSION TEST

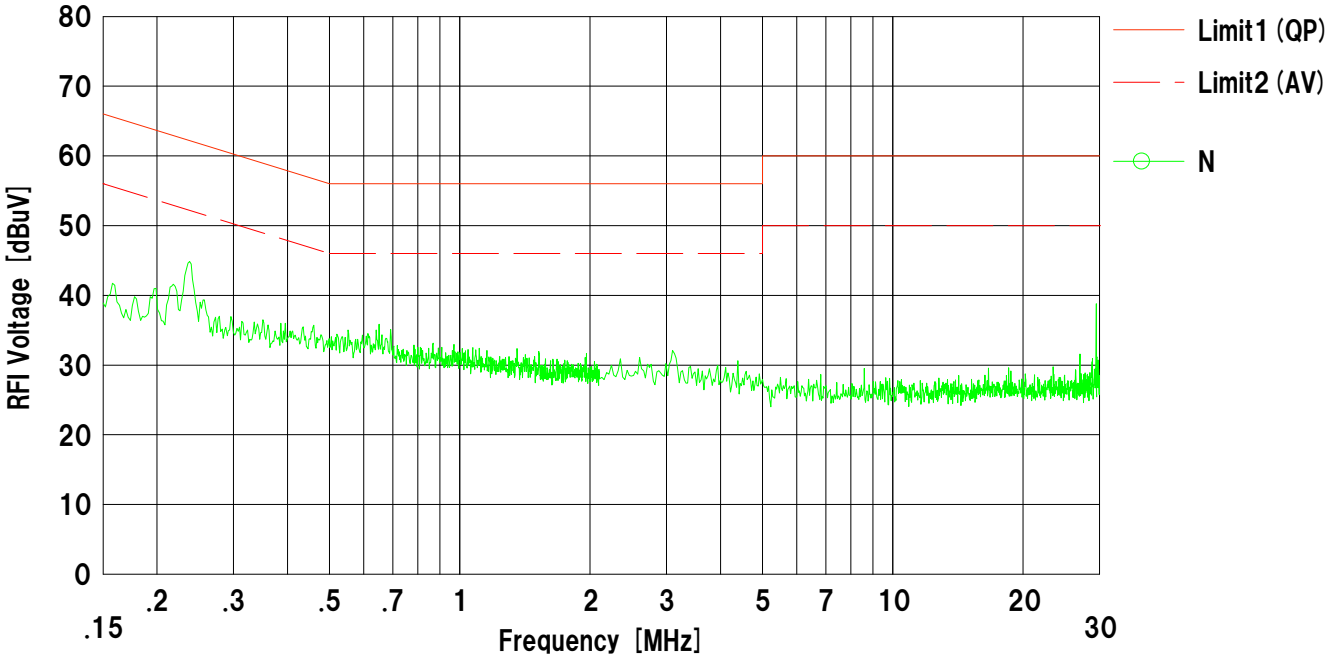
UL Japan, Inc. Shonan EMC Lab. No.1 Shielded Room
Date : 2011/08/11

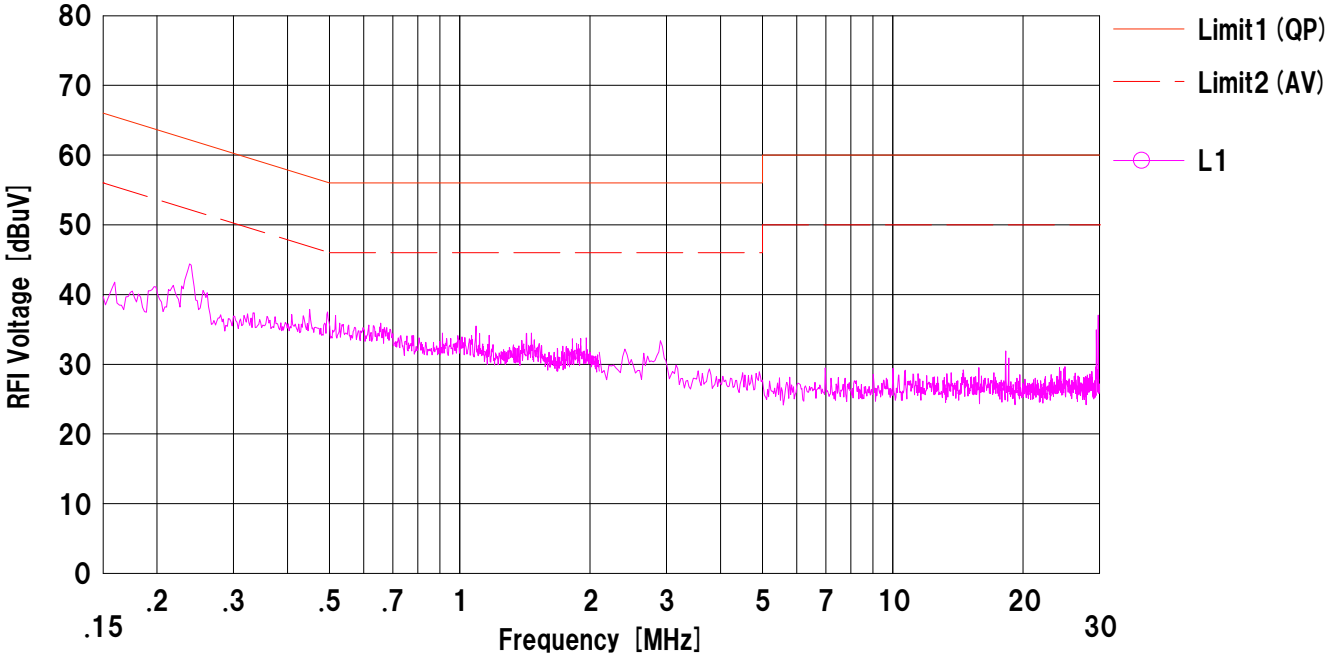
Company	: Kyushukyohan Co., Ltd.	Mode	: Transmitting 2482MHz
Kind of EUT	: RF-Module	Report No.	: 31KE0363-SH-01-A
Model No.	: KXN-RF24-01	Power	: AC 120V / 60Hz
Serial No.	: 1	Temp./Humi.	: 24deg.C. / 61%RH

Remarks : -

Limit1 : FCC 15C(15.207) QP
Limit2 : FCC 15C(15.207) AV

Engineer : Makoto Hosaka





Calculation:Result [dBuV] =Reading [dBuV] +C.Fac (LISN+Cable+ATT) [dB]
LISN:SLS-01

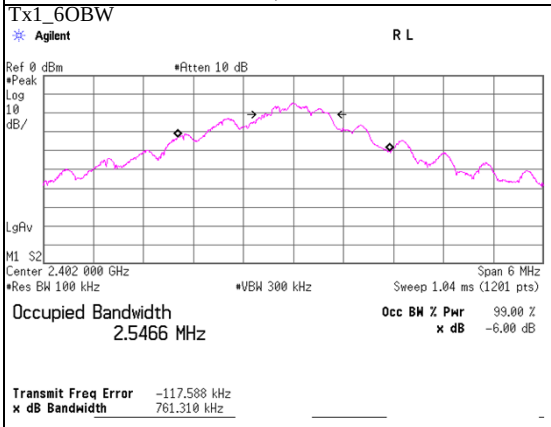
-6dB Bandwidth

Test place	UL Japan, Inc. Shonan EMC Lab.	No.5 Shielded Room
Date	August 12, 2011	
Temperature / Humidity	25deg.C , 52%RH	
Engineer	Kenichi Adachi	
Mode	Tx, PN9	

Freq. [MHz]	-6dB Bandwidth [MHz]	Limit [MHz]
2402.0000	0.761	> 0.500
2442.0000	0.768	> 0.500
2482.0000	0.787	> 0.500

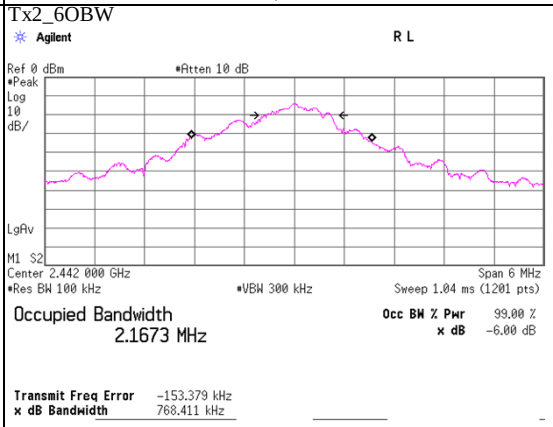
Tx, 2402MHz

Tx1_6OBW



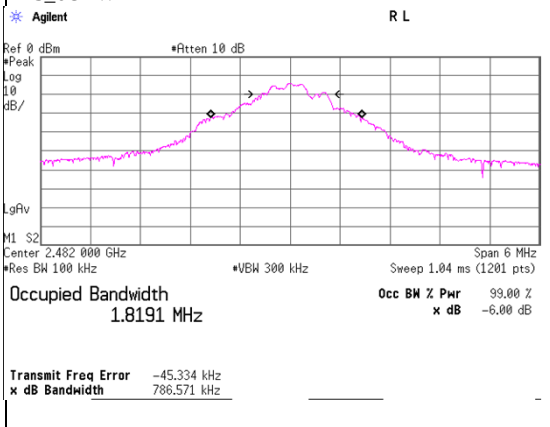
Tx, 2442MHz

Tx2_6OBW



Tx, 2482MHz

Tx3_6OBW



UL Japan, Inc.
Shonan EMC Lab.
1-22-3 Megumigaoka, Hiratsuka-shi, Kanagawa 259-1220 JAPAN
Telephone : +81 463 50 6400
Facsimile : +81 463 50 6401

Peak Output Power (Conducted)

Test place	UL Japan, Inc. Shonan EMC Lab.	No.5 Shielded Room
Date	August 12, 2011	
Temperature / Humidity	25deg.C , 52%RH	
Engineer	Kenichi Adachi	
Mode	Tx, PN9,	

(* P/M: Power Meter)

Ch	Freq.	P/M (Peak) Reading	Cable Loss	Atten. Loss	Result		Limit		Margin
	[MHz]	[dBm]	[dB]	[dB]	[dBm]	[mW]	[dBm]	[mW]	[dB]
Low	2402.0	-14.34	2.02	9.87	-2.45	0.57	30.00	1000	32.45
Mid	2442.0	-13.67	2.01	9.87	-1.79	0.66	30.00	1000	31.79
High	2482.0	-13.58	2.03	9.87	-1.68	0.68	30.00	1000	31.68

Sample Calculation:
Result = Reading + Cable Loss + Atten. Loss

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Shonan EMC Lab.

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Radiated Emission

Test place	UL Japan, Inc. Shonan EMC Lab. No.3 Semi Anechoic Chamber	
Date	August 9, 2011	August 11, 2011
Temperature / Humidity	25deg.C , 75%RH	26deg.C , 71%RH
Engineer	Tatsuya Arai	Makoto Hosaka
Mode	Tx, 2402 MHz	
	Tx, PN9	

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	178.116	QP	43.1	16.3	8.8	31.8	36.4	43.5	7.1	177	181	
Hori.	202.694	QP	42.9	16.9	9.0	31.7	37.1	43.5	6.4	160	0	
Hori.	215.124	QP	41.9	17.1	9.1	31.7	36.4	43.5	7.1	153	357	
Hori.	2390.000	PK	61.0	27.1	13.8	40.6	61.3	73.9	12.6	117	323	
Hori.	2423.245	PK	59.8	27.1	13.7	40.6	60.0	73.9	13.9	117	323	
Hori.	4804.000	PK	57.4	31.5	6.0	41.1	53.8	73.9	20.1	150	281	
Hori.	7206.000	PK	48.6	36.4	7.4	41.3	51.1	73.9	22.8	119	307	
Hori.	9608.000	PK	44.8	37.9	8.7	38.8	52.6	73.9	21.3	100	0	
Hori.	12010.000	PK	46.8	39.4	10.2	39.2	57.2	73.9	16.7	100	0	
Hori.	2390.000	AV	38.4	27.1	13.8	40.6	38.7	53.9	15.2	117	323	VBW:2.2kHz
Hori.	2423.245	AV	37.9	27.1	13.7	40.6	38.1	53.9	15.8	117	323	VBW:2.2kHz
Hori.	4804.000	AV	52.7	31.5	6.0	41.1	49.1	53.9	4.8	150	281	VBW:2.2kHz
Hori.	7206.000	AV	39.9	36.4	7.4	41.3	42.4	53.9	11.5	119	307	VBW:2.2kHz
Hori.	9608.000	AV	35.9	37.9	8.7	38.8	43.7	53.9	10.2	100	0	VBW:2.2kHz
Hori.	12010.000	AV	37.2	39.4	10.2	39.2	47.6	53.9	6.3	100	0	VBW:2.2kHz
Vert.	43.087	QP	42.1	13.2	7.2	31.8	30.7	40.0	9.3	100	48	
Vert.	55.227	QP	47.9	9.6	7.3	31.8	33.0	40.0	7.0	100	221	
Vert.	67.665	QP	48.7	7.1	7.5	31.8	31.5	40.0	8.5	100	274	
Vert.	79.810	QP	46.4	6.5	7.7	31.8	28.8	40.0	11.2	100	206	
Vert.	104.386	QP	44.9	11.3	8.0	31.8	32.4	43.5	11.1	100	304	
Vert.	116.813	QP	42.9	12.9	8.1	31.8	32.1	43.5	11.4	100	295	
Vert.	2390.000	PK	58.3	27.1	13.8	40.6	58.6	73.9	15.3	100	224	
Vert.	2423.169	PK	57.0	27.1	13.7	40.6	57.2	73.9	16.7	100	224	
Vert.	4804.000	PK	55.9	31.5	6.0	41.1	52.3	73.9	21.6	100	44	
Vert.	7206.000	PK	47.5	36.4	7.4	41.3	50.0	73.9	23.9	100	0	
Vert.	9608.000	PK	46.2	37.9	8.7	38.8	54.0	73.9	19.9	100	0	
Vert.	12010.000	PK	46.6	39.4	10.2	39.2	57.0	73.9	16.9	100	0	
Vert.	2390.000	AV	37.8	27.1	13.8	40.6	38.1	53.9	15.8	100	224	VBW:2.2kHz
Vert.	2423.169	AV	37.6	27.1	13.7	40.6	37.8	53.9	16.1	100	224	VBW:2.2kHz
Vert.	4804.000	AV	50.7	31.5	6.0	41.1	47.1	53.9	6.8	100	44	VBW:2.2kHz
Vert.	7206.000	AV	38.6	36.4	7.4	41.3	41.1	53.9	12.8	100	0	VBW:2.2kHz
Vert.	9608.000	AV	35.7	37.9	8.7	38.8	43.5	53.9	10.4	100	0	VBW:2.2kHz
Vert.	12010.000	AV	37.9	39.4	10.2	39.2	48.3	53.9	5.6	100	0	VBW:2.2kHz

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter-Distance factor(above 13GHz)) - Gain(Amprifier)

*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).

Distance factor: 13GHz-40GHz 20log(3.0m/1.0m)= 9.5dB

20dBc Data Sheet (RBW 100kHz, VBW 300kHz)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant Factor [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori.	2402.000	PK	98.0	27.1	13.8	40.6	98.3	-	-	Carrier
Hori.	2400.000	PK	65.2	27.1	13.8	40.6	65.5	78.3	12.8	
Vert.	2402.000	PK	95.1	27.1	13.8	40.6	95.4	-	-	Carrier
Vert.	2400.000	PK	63.9	27.1	13.8	40.6	64.2	75.4	11.2	

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter-Distance factor(above 13GHz)) - Gain(Amprifier)

UL Japan, Inc.
Shonan EMC Lab.
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Telephone : +81 463 50 6400
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Radiated Emission

Test place	UL Japan, Inc. Shonan EMC Lab.	No.3 Semi Anechoic Chamber
Date	August 9, 2011	August 11, 2011
Temperature / Humidity	25deg.C , 75%RH	26deg.C , 71%RH
Engineer	Tatsuya Arai	Makoto Hosaka
Mode	Tx, 2442 MHz	
	Tx, PN9	

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	190.553	QP	43.0	16.6	8.9	31.8	36.7	43.5	6.8	173	188	
Hori.	202.690	QP	43.5	16.9	9.0	31.7	37.7	43.5	5.8	161	0	
Hori.	215.136	QP	42.6	17.1	9.1	31.7	37.1	43.5	6.4	152	361	
Hori.	4884.000	PK	55.9	31.7	6.0	40.9	52.7	73.9	21.2	100	193	
Hori.	7326.000	PK	46.5	36.7	7.4	41.4	49.2	73.9	24.7	100	0	
Hori.	9768.000	PK	44.3	38.2	8.7	38.8	52.4	73.9	21.5	100	0	
Hori.	12210.000	PK	46.5	39.2	10.3	39.2	56.8	73.9	17.1	100	0	
Hori.	4884.000	AV	50.8	31.7	6.0	40.9	47.6	53.9	6.3	100	193	VBW:2.2kHz
Hori.	7326.000	AV	37.5	36.7	7.4	41.4	40.2	53.9	13.7	100	0	VBW:2.2kHz
Hori.	9768.000	AV	35.4	38.2	8.7	38.8	43.5	53.9	10.4	100	0	VBW:2.2kHz
Hori.	12210.000	AV	35.8	39.2	10.3	39.2	46.1	53.9	7.8	100	0	VBW:2.2kHz
Vert.	43.084	QP	42.3	13.2	7.2	31.8	30.9	40.0	9.1	100	9	
Vert.	55.228	QP	47.8	9.6	7.3	31.8	32.9	40.0	7.1	100	215	
Vert.	67.659	QP	48.6	7.1	7.5	31.8	31.4	40.0	8.6	100	345	
Vert.	79.807	QP	46.3	6.5	7.7	31.8	28.7	40.0	11.3	100	12	
Vert.	104.388	QP	45.0	11.3	8.0	31.8	32.5	43.5	11.0	100	1	
Vert.	116.815	QP	43.0	12.9	8.1	31.8	32.2	43.5	11.3	100	170	
Vert.	4884.000	PK	53.8	31.7	6.0	40.9	50.6	73.9	23.3	136	273	
Vert.	7326.000	PK	48.0	36.7	7.4	41.4	50.7	73.9	23.2	100	110	
Vert.	9768.000	PK	45.1	38.2	8.7	38.8	53.2	73.9	20.7	100	0	
Vert.	12210.000	PK	45.2	39.2	10.3	39.2	55.5	73.9	18.4	100	0	
Vert.	4884.000	AV	48.2	31.7	6.0	40.9	45.0	53.9	8.9	136	273	VBW:2.2kHz
Vert.	7326.000	AV	39.1	36.7	7.4	41.4	41.8	53.9	12.1	100	110	VBW:2.2kHz
Vert.	9768.000	AV	35.1	38.2	8.7	38.8	43.2	53.9	10.7	100	0	VBW:2.2kHz
Vert.	12210.000	AV	35.8	39.2	10.3	39.2	46.1	53.9	7.8	100	0	VBW:2.2kHz

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter-Distance factor(above 13GHz)) - Gain(Amprifier)

*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).

Distance factor: 13GHz-40GHz 20log(3.0m/1.0m)= 9.5dB

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Radiated Emission

Test place	UL Japan, Inc. Shonan EMC Lab.	No.3 Semi Anechoic Chamber
Date	August 9, 2011	August 11, 2011
Temperature / Humidity	25deg.C , 75%RH	26deg.C , 71%RH
Engineer	Tatsuya Arai	Makoto Hosaka
Mode	Tx, 2482 MHz	
	Tx, PN9	

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	190.552	QP	42.9	16.6	8.9	31.8	36.6	43.5	6.9	168	188	
Hori.	202.688	QP	43.5	16.9	9.0	31.7	37.7	43.5	5.8	163	1	
Hori.	215.122	QP	42.5	17.1	9.1	31.7	37.0	43.5	6.5	148	361	
Hori.	2455.330	PK	53.6	27.6	13.7	41.1	53.8	73.9	20.1	119	332	
Hori.	2516.497	PK	51.9	27.7	13.9	41.1	52.4	73.9	21.5	119	332	
Hori.	4964.000	PK	54.9	31.9	6.0	40.8	52.0	73.9	21.9	108	271	
Hori.	7446.000	PK	46.6	37.0	7.3	41.5	49.4	73.9	24.5	100	0	
Hori.	9928.000	PK	43.9	38.5	8.8	38.8	52.4	73.9	21.5	100	0	
Hori.	12410.000	PK	44.0	39.1	10.4	39.2	54.3	73.9	19.6	100	0	
Hori.	2455.330	AV	39.3	27.6	13.7	41.1	39.5	53.9	14.4	119	332	VBW:2.2kHz
Hori.	2516.497	AV	40.3	27.7	13.9	41.1	40.8	53.9	13.1	119	332	VBW:2.2kHz
Hori.	4964.000	AV	49.4	31.9	6.0	40.8	46.5	53.9	7.4	108	271	VBW:2.2kHz
Hori.	7446.000	AV	37.3	37.0	7.3	41.5	40.1	53.9	13.8	100	0	VBW:2.2kHz
Hori.	9928.000	AV	34.3	38.5	8.8	38.8	42.8	53.9	11.1	100	0	VBW:2.2kHz
Hori.	12410.000	AV	34.6	39.1	10.4	39.2	44.9	53.9	9.0	100	0	VBW:2.2kHz
Vert.	43.084	QP	42.3	13.2	7.2	31.8	30.9	40.0	9.1	100	357	
Vert.	55.231	QP	47.8	9.6	7.3	31.8	32.9	40.0	7.1	100	167	
Vert.	67.659	QP	48.5	7.1	7.5	31.8	31.3	40.0	8.7	100	268	
Vert.	79.809	QP	46.1	6.5	7.7	31.8	28.5	40.0	11.5	100	200	
Vert.	104.384	QP	44.8	11.3	8.0	31.8	32.3	43.5	11.2	100	333	
Vert.	116.820	QP	43.0	12.9	8.1	31.8	32.2	43.5	11.3	100	279	
Vert.	2455.088	PK	52.7	27.6	13.7	41.1	52.9	73.9	21.0	117	214	
Vert.	2515.939	PK	52.3	27.7	13.9	41.1	52.8	73.9	21.1	117	214	
Vert.	4960.000	PK	55.3	31.9	6.0	40.8	52.4	73.9	21.5	108	271	
Vert.	7446.000	PK	47.0	37.0	7.3	41.5	49.8	73.9	24.1	107	148	
Vert.	9928.000	PK	43.4	38.5	8.8	38.8	51.9	73.9	22.0	100	0	
Vert.	12410.000	PK	43.8	39.1	10.4	39.2	54.1	73.9	19.8	100	0	
Vert.	2455.088	AV	39.2	27.6	13.7	41.1	39.4	53.9	14.5	117	214	VBW:2.2kHz
Vert.	2515.939	AV	39.9	27.7	13.9	41.1	40.4	53.9	13.5	117	214	VBW:2.2kHz
Vert.	4960.000	AV	50.0	31.9	6.0	40.8	47.1	53.9	6.8	108	271	VBW:2.2kHz
Vert.	7446.000	AV	38.6	37.0	7.3	41.5	41.4	53.9	12.5	107	148	VBW:2.2kHz
Vert.	9928.000	AV	34.0	38.5	8.8	38.8	42.5	53.9	11.4	100	0	VBW:2.2kHz
Vert.	12410.000	AV	34.7	39.1	10.4	39.2	45.0	53.9	8.9	100	0	VBW:2.2kHz

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter-Distance factor(above 13GHz)) - Gain(Amprifier)

*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).

Distance factor: 13GHz-40GHz 20log(3.0m/1.0m)= 9.5dB

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Shonan EMC Lab.
1-22-3 Megumigaoka, Hiratsuka-shi, Kanagawa 259-1220 JAPAN
Telephone : +81 463 50 6400
Facsimile : +81 463 50 6401

Radiated emission (Band Edge Compliance)

(for Marker Delta Method)

Tx, 2482MHz

Marker Delta Method(Test distance 3meters)

Frequency of Band-edge:2483.500MHz

		Peak					Average				
		Polarity	Hor.		Ver.		Polarity	Hor.		Ver.	
		RBW / VBW	[dBuV] Reading	[dBuV/m] Result	[dBuV] Reading	[dBuV/m] Result	RBW / VBW	[dBuV] Reading	[dBuV/m] Result	[dBuV] Reading	[dBuV/m] Result
Step1	Fundamental(2482MHz)	1M / 3MHz	94.2	94.4	95.9	96.1	1M / 2.2kHz	92.9	93.1	94.6	94.8
Step2	Fundamental(2482MHz)	30k / 91kHz	92.4	92.6	94.4	94.6	-	-	-	-	-
	Band-edge(2483.5MHz)	30k / 91kHz	47.3	47.5	49.4	49.6	-	-	-	-	-
	Amplitude delta[dB]	-	45.1		45.0		-	45.1		45.0	
Step3	Field strength of band-edge	-	-	49.3	-	51.1	-	-	48.0	-	49.8
Step4	Dwell time factor	-	-	-	-	-	-	-	-		-
	Limit	-	-	73.9	-	73.9	-	-	53.9	-	53.9
	Margin[dB]	-	-	24.6	-	22.8	-	-	5.9	-	4.1

Result = Reading + Ant Factor + Loss (Cable+Attenuator) - Gain(Amprifier) (Refer to Radiated emission data sheets)

*1 Amplitude delta = Fundamental(RBW:30kHz,VBW:91kHz) - Band-edge(RBW:30kHz,VBW:91kHz)

*2 Field strength of band-edge = Fundamental(Peak or Average) - Amplitude delta - Dwell time factor

Marker Delta Method(Test distance 3meters)

Frequency of Band-edge:2483.63MHz

		Peak					Average				
		Polarity	Hor.		Ver.		Polarity	Hor.		Ver.	
		RBW / VBW	[dBuV] Reading	[dBuV/m] Result	[dBuV] Reading	[dBuV/m] Result	RBW / VBW	[dBuV] Reading	[dBuV/m] Result	[dBuV] Reading	[dBuV/m] Result
Step1	Fundamental(2482MHz)	1M / 3MHz	94.2	94.4	95.9	96.1	1M / 2.2kHz	92.9	93.1	94.6	94.8
Step2	Fundamental(2482MHz)	30k / 91kHz	92.4	92.6	94.4	94.6	-	-	-	-	-
	Band-edge(2483.63MHz)	30k / 91kHz	51.2	51.4	52.5	53.0	-	-	-	-	-
	Amplitude delta[dB]	-	41.2		41.6		-	41.2		41.6	
Step3	Field strength of band-edge	-	-	53.2	-	54.5	-	-	51.9	-	53.2
Step4	Dwell time factor	-	-	-	-	-	-	-	-		-
	Limit	-	-	73.9	-	73.9	-	-	53.9	-	53.9
	Margin[dB]	-	-	20.7	-	19.4	-	-	2.0	-	**0.7**

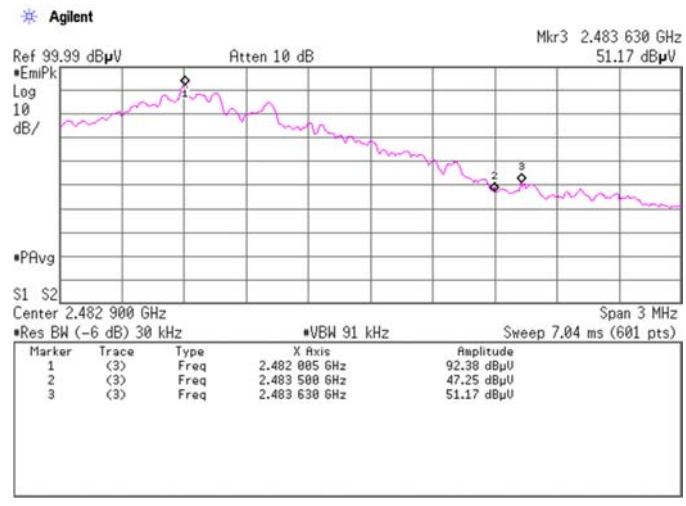
Result = Reading + Ant Factor + Loss (Cable+Attenuator) - Gain(Amprifier) (Refer to Radiated emission data sheets)

*1 Amplitude delta = Fundamental(RBW:30kHz,VBW:91kHz) - Band-edge(RBW:30kHz,VBW:91kHz)

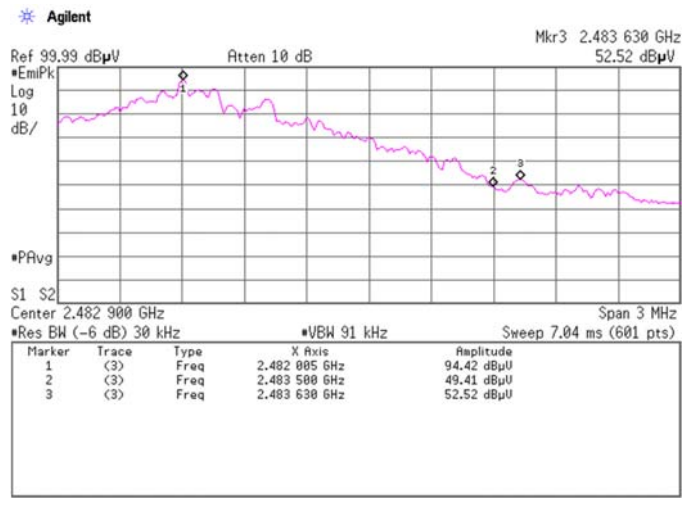
*2 Field strength of band-edge = Fundamental(Peak or Average) - Amplitude delta - Dwell time factor

Tx, 2482MHz

Horizontal

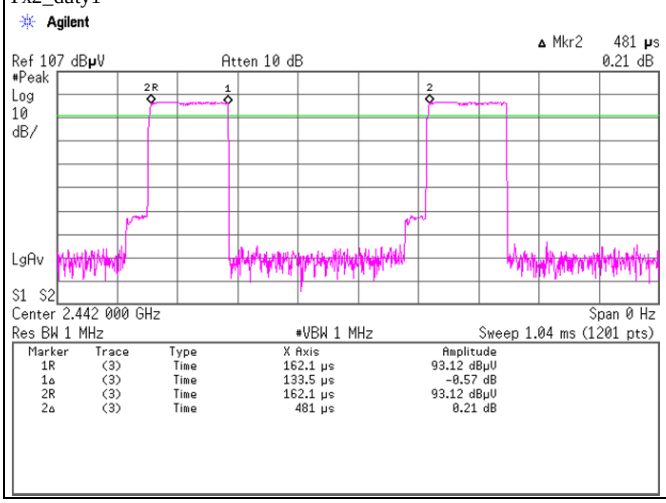


Vertical



VBW (AV) Calculation chart

Tx, PN9

VBW (AV) Calculation	
VBW: 1/x = 2079Hz<2200Hz **x: (Tx on+Tx off) =0.481ms**	
Tx2_duty1  	

* AV: Average

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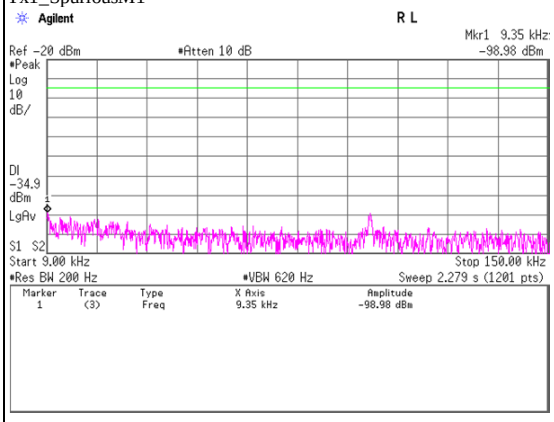
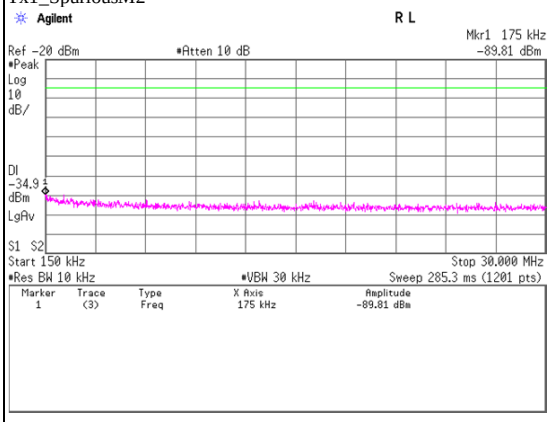
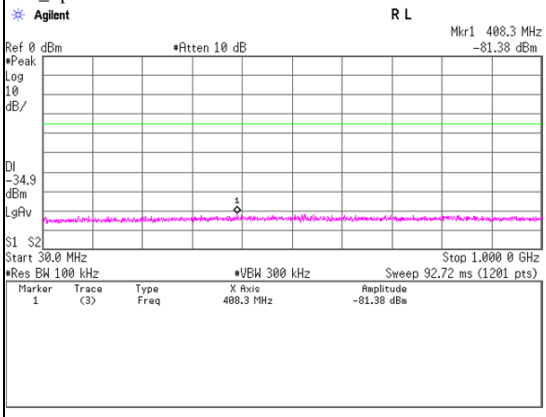
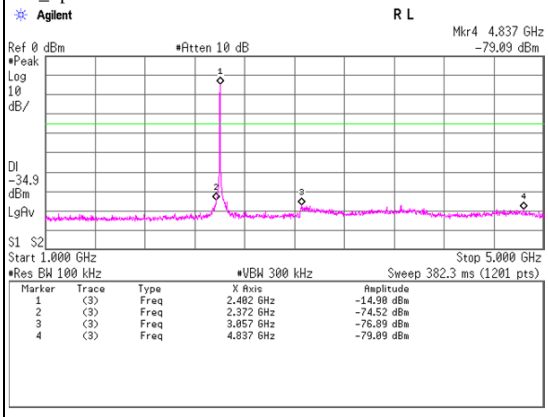
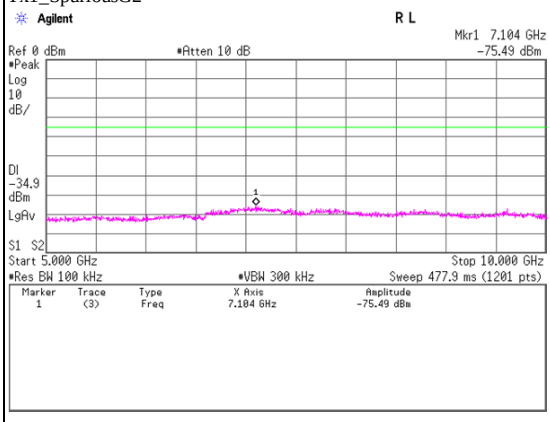
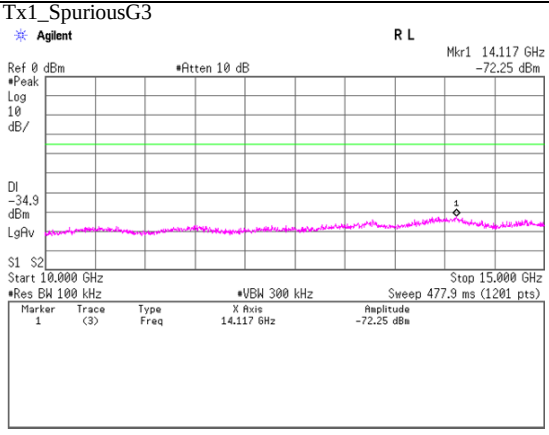
Spurious emission (Conducted)

Tx, PN9

Tx, 2402MHz (1/2)

9kHz - 150kHz	150kHz - 30MHz
Tx1_SpuriousM1	Tx1_SpuriousM2
	
30MHz - 1GHz	**1GHz - 5GHz**
Tx1_SpuriousM3	Tx1_SpuriousG1
	
5GHz - 10GHz	**10GHz - 15GHz**
Tx1_SpuriousG2	Tx1_SpuriousG3
	

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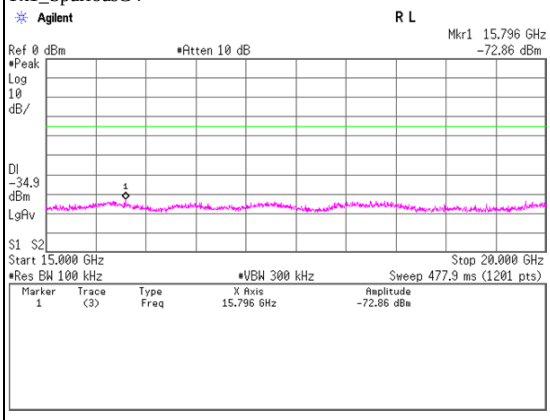
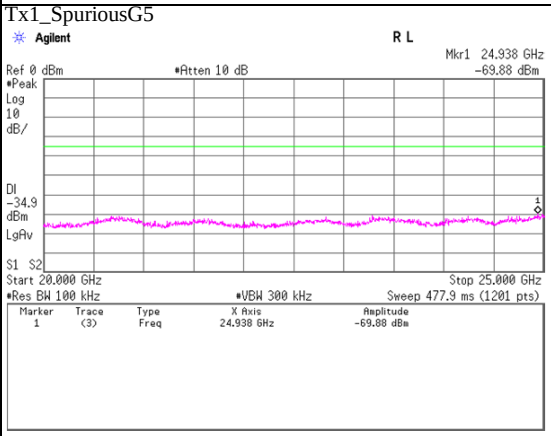
Shonan EMC Lab.
1-22-3 Megumigaoka, Hiratsuka-shi, Kanagawa 259-1220 JAPAN
Telephone : +81 463 50 6400
Facsimile : +81 463 50 6401

Spurious emission (Conducted)

Tx, PN9

Tx, 2402MHz (2/2)	
15GHz - 20GHz	**20GHz - 25GHz**
Tx1_SpuriousG4 	Tx1_SpuriousG5 
Tx1_SpuriousG6	Tx1_SpuriousG7
Tx1_SpuriousG8	

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Shonan EMC Lab.
1-22-3 Megumigaoka, Hiratsuka-shi, Kanagawa 259-1220 JAPAN
Telephone : +81 463 50 6400
Facsimile : +81 463 50 6401

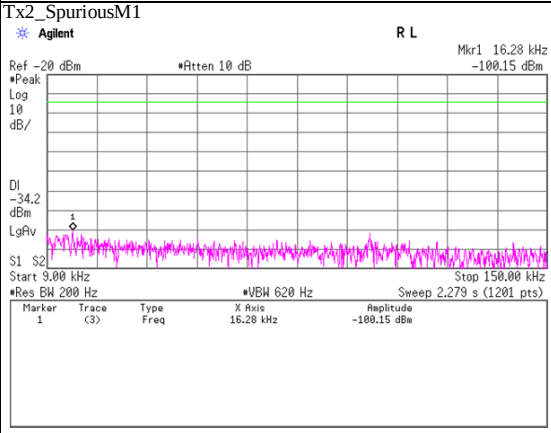
Spurious emission (Conducted)

Tx, PN9

Tx, 2442MHz (1/2)

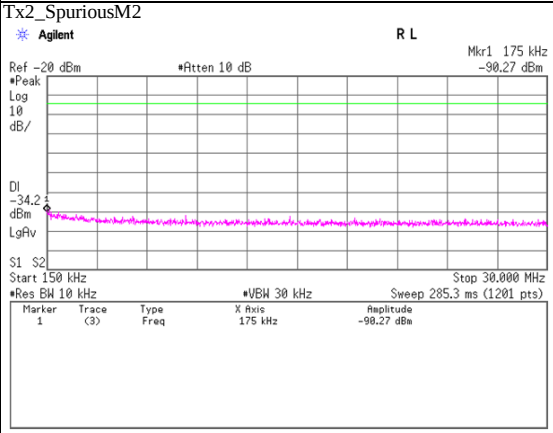
9kHz - 150kHz

Tx2_SpuriousM1



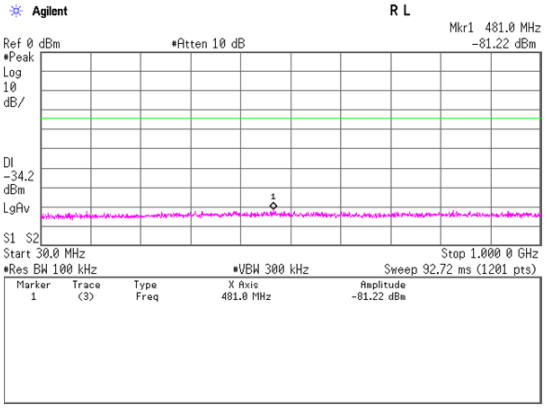
150kHz - 30MHz

Tx2_SpuriousM2



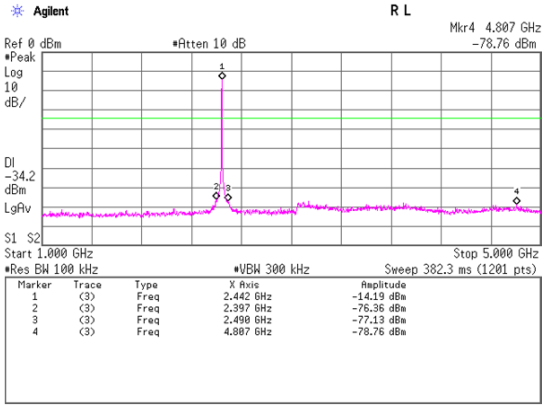
30MHz - 1GHz

Tx2_SpuriousM3



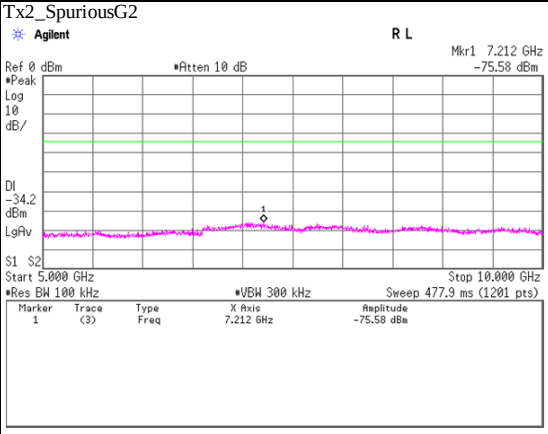
1GHz - 5GHz

Tx2_SpuriousG1



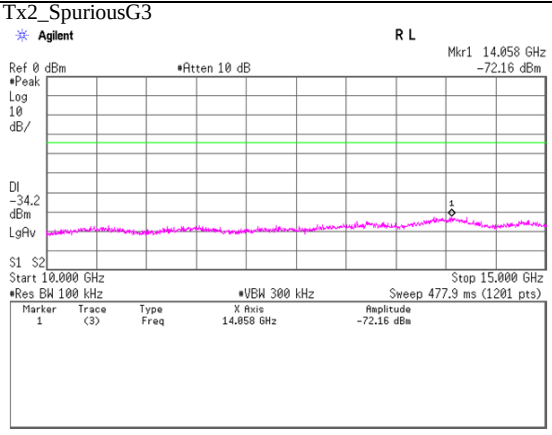
5GHz - 10GHz

Tx2_SpuriousG2



10GHz - 15GHz

Tx2_SpuriousG3



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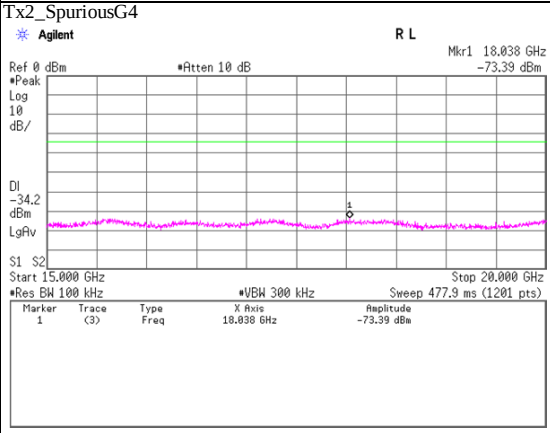
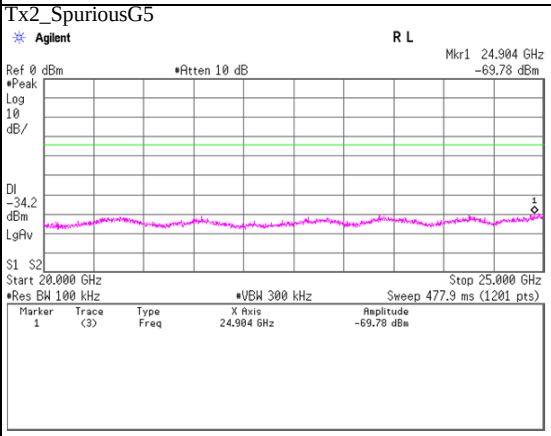
Shonan EMC Lab.
1-22-3 Megumigaoka, Hiratsuka-shi, Kanagawa 259-1220 JAPAN
Telephone : +81 463 50 6400
Facsimile : +81 463 50 6401

Spurious emission (Conducted)

Tx, PN9

Tx, 2442MHz (2/2)	
15GHz - 20GHz	**20GHz - 25GHz**
Tx2_SpuriousG4 	Tx2_SpuriousG5 
Tx2_SpuriousG6	Tx2_SpuriousG7
Tx2_SpuriousG8	

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1-22-3 Megumigaoka, Hiratsuka-shi, Kanagawa 259-1220 JAPAN
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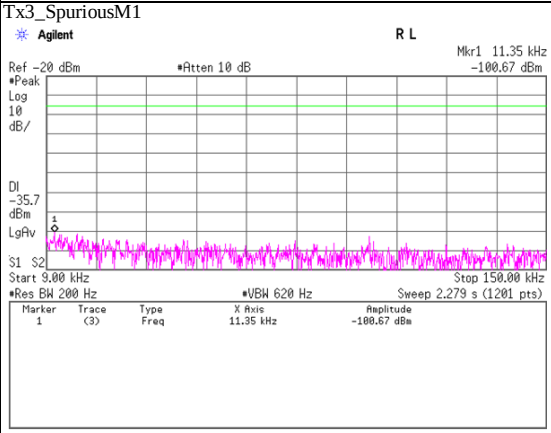
Spurious emission (Conducted)

Tx, PN9

Tx, 2482MHz (1/2)

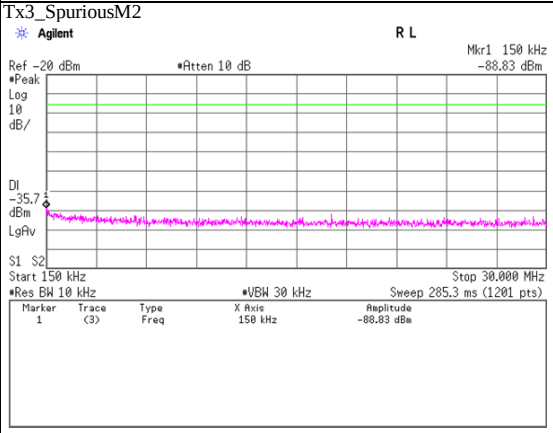
9kHz - 150kHz

Tx3_SpuriousM1



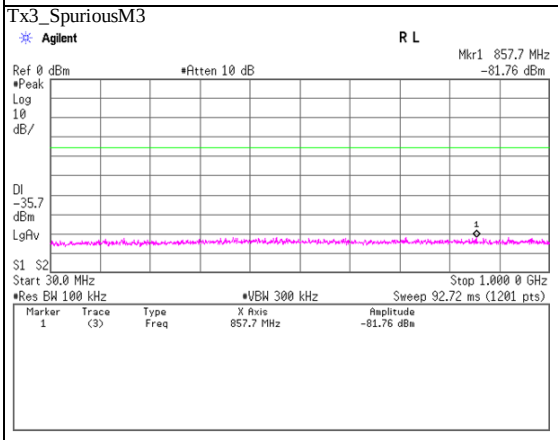
150kHz - 30MHz

Tx3_SpuriousM2



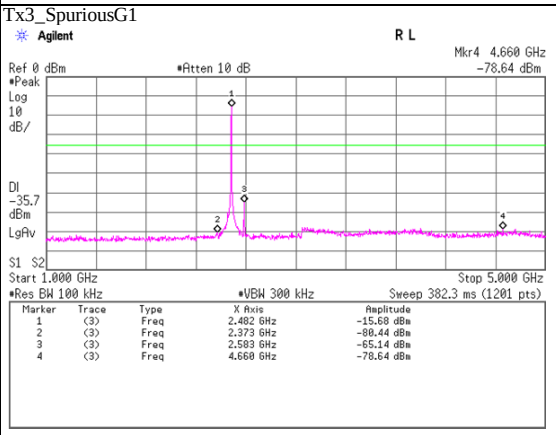
30MHz - 1GHz

Tx3_SpuriousM3



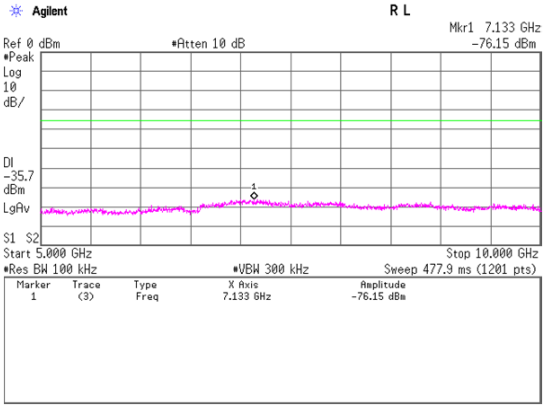
1GHz - 5GHz

Tx3_SpuriousG1



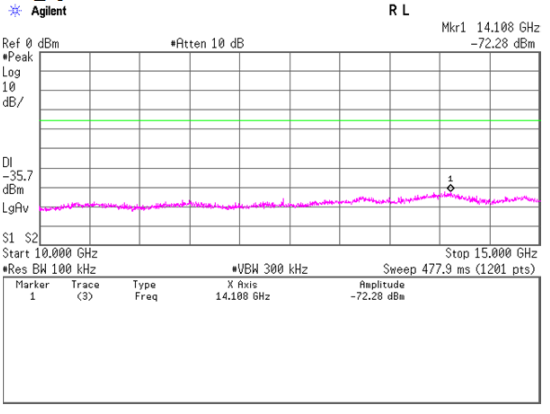
5GHz - 10GHz

Tx3_SpuriousG2



10GHz - 15GHz

Tx3_SpuriousG3



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Shonan EMC Lab.
1-22-3 Megumigaoka, Hiratsuka-shi, Kanagawa 259-1220 JAPAN
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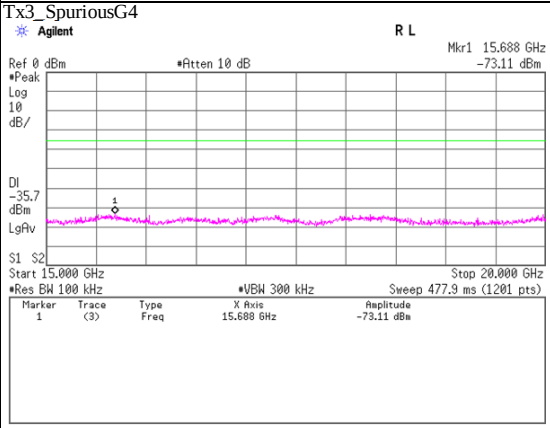
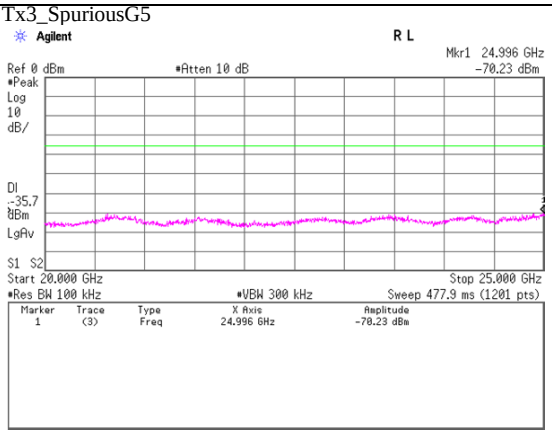
Facsimile : +81 463 50 6401

Spurious emission (Conducted)

Tx, PN9

Tx, 2482MHz (2/2)	
15GHz - 20GHz	**20GHz - 25GHz**
Tx3_SpuriousG4 	Tx3_SpuriousG5 
Tx3_SpuriousG6	Tx3_SpuriousG7
Tx3_SpuriousG8	

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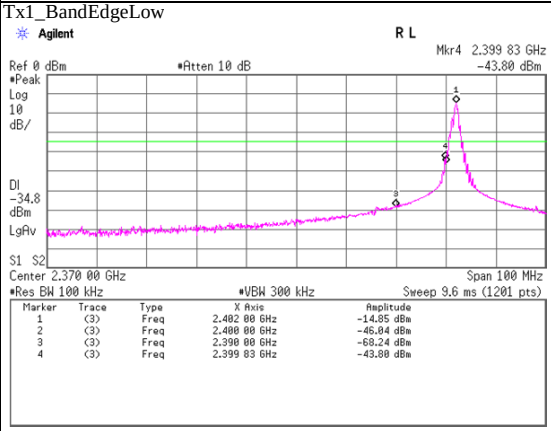
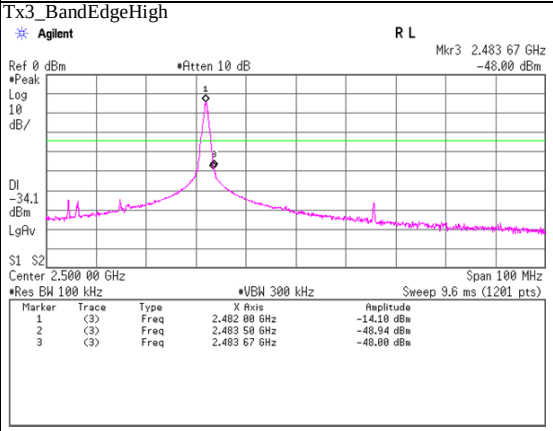
Spurious emission (Conducted)

Band Edge compliance

Tx, PN9	
Tx 2402MHz	**Tx 2482MHz**
Tx1_BandEdgeLow	Tx3_BandEdgeHigh





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Power Density

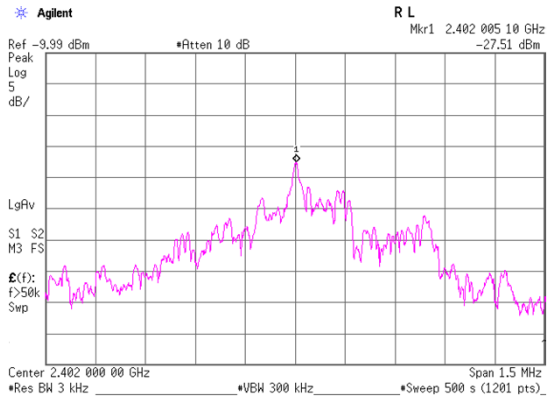
Test place	UL Japan, Inc. Shonan EMC Lab.	No.5 Shielded Room
Date	August 12, 2011	
Temperature / Humidity	25deg.C , 52%RH	
Engineer	Kenichi Adachi	
Mode	Tx, PN9	

Ch. Freq. [MHz]	Freq. Reading [MHz]	Reading [dBm]	Cable Loss [dB]	Atten. [dB]	Result [dBm]	Limit [dBm]	Margin [dB]
2402.0000	2402.0051	-27.51	2.02	9.87	-15.63	8.00	23.63
2442.0000	2442.0077	-26.55	2.01	9.87	-14.68	8.00	22.68
2482.0000	2482.0064	-25.87	2.03	9.87	-13.97	8.00	21.97

Sample Calculation:
Result = Reading + Cable Loss + Atten. Loss

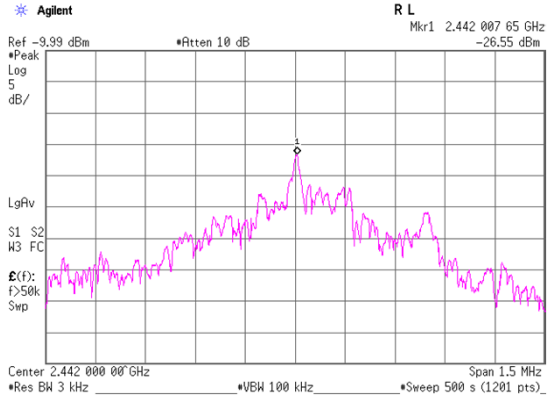
Tx, 2402MHz

Tx1_DensityChart



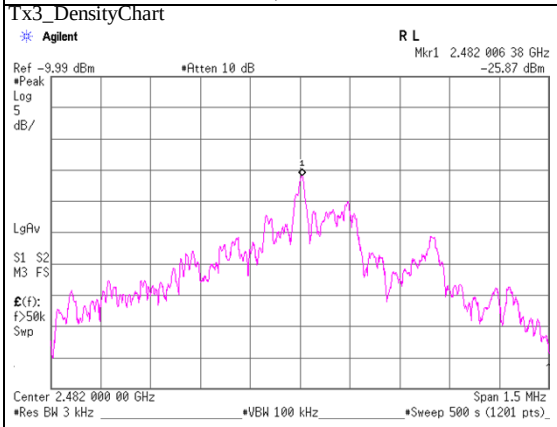
Tx, 2442MHz

Tx2_DensityChart



Tx, 2482MHz

Tx3_DensityChart



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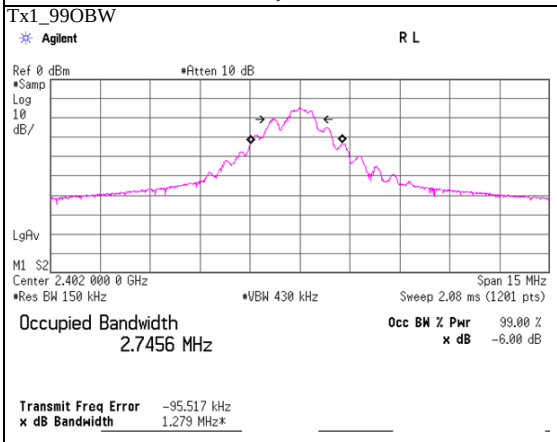
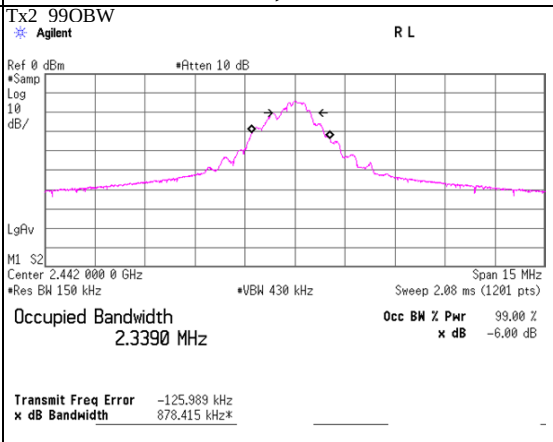
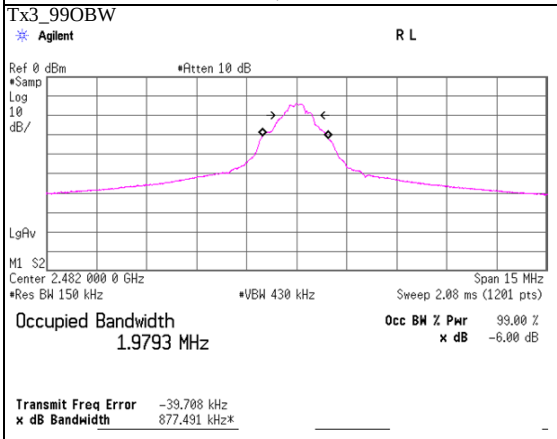
99% Occupied Bandwidth

Tx, PN9	
Tx, 2402MHz	**Tx, 2442MHz**
Tx1_99OBW 	Tx2_99OBW 
Tx, 2482MHz	
Tx3_99OBW 	

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APPENDIX 3
Test Instruments

EMI test equipment (1/2)

Control No.	Instrument	Manufacturer	Model No	Serial No	Test Item	Calibration Date * Interval(month)
SAF-04	Pre Amplifier	TOYO Corporation	TPA0118-36	1440489	RE	2011/03/23 * 12
SCC-G01	Coaxial Cable	Suhner	SUCOFLEX 104A	46497/4A	RE	2011/04/28 * 12
SCC-G21	Coaxial Cable	Suhner	SUCOFLEX 104	296169/4	RE	2011/05/27 * 12
SHA-01	Horn Antenna	Schwarzbeck	BBHA9120D	9120D-725	RE	2010/08/08 * 12
SOS-01	Humidity Indicator	A&D	AD-5681	4062555	RE	2011/02/23 * 12
SSA-02	Spectrum Analyzer	Agilent	E4448A	MY48250106	RE, AT	2011/03/07 * 12
SJM-12	Measure	PROMART	SEN1935	-	RE, CE	-
COTS-SEMI-1	EMI Software	TSJ	TEPTO-DV(RE,CE, RFI,MF)	-	RE, CE	-
SCC-G11	Coaxial Cable	Suhner	SUCOFLEX 102	31595/2	AT	2011/03/23 * 12
SAT10-04	Attenuator(above1GHz)	Agilent	8493C-010	74863	RE, AT	2010/12/15 * 12
SFL-02	Highpass Filter	MICRO-TRONICS	HPM50111	051	RE	2010/12/15 * 12
SAF-06	Pre Amplifier	TOYO Corporation	TPA0118-36	1440491	RE	2011/07/19 * 12
SCC-G03	Coaxial Cable	Suhner	SUCOFLEX 104A	46499/4A	RE	2011/04/28 * 12
SCC-G23	Coaxial Cable	Suhner	SUCOFLEX 104	297342/4	RE	2011/05/27 * 12
SHA-03	Horn Antenna	Schwarzbeck	BBHA9120D	9120D-739	RE	2010/08/17 * 12
SOS-05	Humidity Indicator	A&D	AD-5681	4062518	RE	2011/02/23 * 12
STR-03	Test Receiver	Rohde & Schwarz	ESI40	100054/040	RE	2011/07/28 * 12
SJM-10	Measure	PROMART	SEN1935	-	RE	-
SHA-05	Horn Antenna	ETS LINDGREN	3160-09	LM4210	RE	2011/03/15 * 12
SAF-09	Pre Amplifier	TOYO Corporation	HAP18-26W	00000018	RE	2011/03/16 * 12
SCC-G18	Coaxial Cable	Suhner	SUCOFLEX 104A	46292/4A	RE	2011/03/16 * 12
SAF-03	Pre Amplifier	SONOMA	310N	290213	RE	2011/02/17 * 12
SAT6-03	Attenuator	JFW	50HF-006N	-	RE	2011/02/17 * 12
SBA-03	Biconical Antenna	Schwarzbeck	BBA9106	91032666	RE	2010/10/15 * 12
SCC-C1/C2/C3/C4/C5/C10/SRSE-03	Coaxial Cable&RF Selector	Fujikura/Fujikura/Suhner/Suhner/Suhner/TOYO	8D2W/12DSFA/141PE/141PE/141PE/141PE/NS4906	-/0901-271(RF Selector)	RE	2011/04/28 * 12
SLA-03	Logperiodic Antenna	Schwarzbeck	UHALP9108A	UHALP 9108-A 0901	RE	2010/10/15 * 12
SAEC-03(NSA)	Semi-Anechoic Chamber	TDK	SAEC-03(NSA)	3	RE	2010/09/13 * 12
SCC-A12/A13/SRSE-01	Coaxial Cable&RF Selector	Suhner/Suhner/TOYO	RG223U/141PE/NS4906	-/0901-269(RF Selector)	CE	2011/04/28 * 12

The expiration date of the calibration is the end of the expired month .
As for some calibrations performed after the tested dates , those test equipment have been controlled by means of an unbroken chains of calibrations .

All equipment is calibrated with valid calibrations . Each measurement data is traceable to the national or international standards.
Test Item :
CE: Conducted emission,
RE: Radiated emission,
AT: Antenna terminal conducted test

APPENDIX 3
Test Instruments

EMI test equipment (2/2)

Control No.	Instrument	Manufacturer	Model No	Serial No	Test Item	Calibration Date * Interval(month)
SLS-01	LISN	Rohde & Schwarz	ENV216	100511	CE	2011/02/22 * 12
SAT3-05	Attenuator	JFW	50HF-003N	-	CE	2011/02/17 * 12
SOS-02	Humidity Indicator	A&D	AD-5681	4063343	CE	2011/03/02 * 12
STR-01	Test Receiver	Rohde & Schwarz	ESU40	100093	CE	2010/10/29 * 12
SPM-06	Power Meter	Anritsu	ML2495A	0850009	AT	2011/04/12 * 12
SPSS-03	Power sensor	Anritsu	MA2411B	0917063	AT	2011/04/12 * 12
SSA-03	Spectrum Analyzer	Agilent	E4448A	MY48250152	AT	2010/11/16 * 12
SAT10-08	Attenuator	Weinschel	W54-10	-	AT	2011/03/23 * 12
SCC-G14	Coaxial Cable	Suhner	SUCOFLEX 102	31600/2	AT	2011/03/23 * 12
SCC-H2	Microwave cable	Hirose Electric	U.FL-2LP-066J1-A-(200)	-	AT	Pre Check
SOS-09	Humidity Indicator	A&D	AD-5681	4061484	AT	2011/03/02 * 12

The expiration date of the calibration is the end of the expired month .
As for some calibrations performed after the tested dates , those test equipment have been controlled by means of an unbroken chains of calibrations .
All equipment is calibrated with valid calibrations . Each measurement data is traceable to the national or international standards.
Test Item :
CE: Conducted emission,
RE: Radiated emission,
AT: Antenna terminal conducted test