

EMC TEST REPORT

Report No. : EME-040135
Model No. : BM56S
Issued Date : Mar. 4, 2004

Applicant : Socket Communications, Inc.
37400 Central Court, Newark, California, U.S.A., 94560

Test By : Intertek Testing Services Taiwan Ltd.
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Project Engineer

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Reviewed By

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Summary of Tests**Socket Bluetooth 56K Modem-Model: BM56S**
FCC ID: LUB-BM56S

Test	Reference	Results
Carrier Frequency Separation test	15.247(a)(1)	Complies
Number of hopping frequencies test	15.247(a)(1)	Complies
Time of Occupancy (dwell time) test	15.247(a)(1)	Complies
20dB Bandwidth test	15.247(a)(1)	Complies
Radiated Spurious Emission test	15.205, 15.209	Complies
Power Line Conducted Emission test	15.207	Complies

1. General information

1.1 Identification of the EUT

Applicant	: Socket Communications, Inc.
Product	: Socket Bluetooth 56K Modem
Model No.	: BM56S
FCC ID.	: LUB-BM56S
Frequency Range	: 2400MHz ~ 2483.5MHz
Channel Number	: 79 channels
Frequency of Each Channel	: 2402+k MHz; k=0~78
Type of Modulation	: FHSS
Rated Power	: 3.6Vdc from battery or 100-240Vac, 50-60Hz with adapter (PSC05R-050, SL05A105-U)
Power Cord	: N/A
Sample Received	: Feb. 19, 2004
Test Date(s)	: Feb. 19, 2004 ~ Mar. 2, 2004

A FCC DoC report has been generated for the client.

1.2 Additional information about the EUT

The EUT is a Socket Bluetooth 56k Modem, and was defined as information technology equipment.

There are 2 adapters and 2 transformers, the details please refer to the following table:

	Model No.
Adapter 1	PSC05R-100
Adapter 2	SL05A105-U

	Model No.
Transformer 1	632364
Transformer 2	P632017

For more detail features, please refer to User's manual as file name "Installation guide.pdf"

1.3 Antenna description

The EUT uses a permanently connected antenna.

Antenna Gain : 2dBi max

Antenna Type : Ceramic antenna

Connector Type : MMCX

1.4 Peripherals equipment

Peripherals	Manufacturer	Product No.	Serial No.
Notebook	Dell	PP01L	CN-06P83-48643-33V-0112
Notebook	Dell	PP01L	CN-03P83-48643-33O-3930

1.5 Supporting equipment

Peripherals	Manufacturer	Product No.	Serial No.
Exchange Board	Tentel	250-00193-07	94948

2. Test specifications

2.1 Test standard

The EUT was performed according to the procedures in FCC Part 15 Subpart C Section § 15.205 、 §15.207 、 §15.209 、 §15.247 and ANSI C63.4/2001.

The test of radiated measurements according to FCC Part15 Section 15.33(a) had been conducted and the field strength of this frequency band were all meet limit requirement, thus we evaluate the EUT pass the specified test.

2.2 Operation mode

During the radiated spurious, it worked in the status of continuously transmitting. While in other tests, it worked in normal hopping mode.

For radiated emission test, we verity 2 adapters and 2 transformers, the worst case comes up when the EUT is equipped with adapter 1 & transformer 1.

For conducted emission test, we conducted both adapter 1 & adapter 2.

2.3 Test equipment

Equipment	Brand	Frequency range	Model No.	Intertek ID No.	Last Cal. Date
EMI Test Receiver	Rohde & Schwarz	9kHz~2.75GHz	ESCS 30	EC303	6/16/2003
EMI Test Receiver	Rohde & Schwarz	20Hz~26.5GHz	ESMI	EC317	6/24/2003
Spectrum Analyzer	Rohde & Schwarz	9kHz~30GHz	FSP 30	EC353	7/19/2003
Spectrum Analyzer	Rohde & Schwarz	20Hz~40GHz	FSEK 30	EC365	10/20/2003
Horn Antenna	EMCO	1GHz~18GHz	3115	EC332	10/15/2003
Horn Antenna	SCHWARZBECK	15GHz~40GHz	BBHA 9170	EC351	6/21/2003
Bilog Antenna	SCHWARZBECK	25MHz~1.7GHz	VULB 9160	EC350	6/21/2003
Turn Table	HDGmbH	N/A	DS 420S	EP317-3	N/A
Antenna Tower	HDGmbH	N/A	MA 240	EP317-2	N/A
Pre-Amplifier	MITER	100MHz~26.5GHz	919981	EC373	5/13/2003
Pre-Amplifier	MITER	26GHz~40GHz	828825	EC374	5/13/2003
Crystal Detector	Agilent	10MHz~18GHz	8472B		N/A
Signal Generator	Rohde & Schwarz	20MHz~27GHz	SMR27	EC354	8/16/2003
Two Channel Digital Storage Oscilloscope	Tektronix	N/A	TDS1012		8/16, 2003
LISN	Rohde & Schwarz	9KHz~30MHz	ESH3-Z5	EC344	1/20, 2004

Note: The above equipments are within the valid calibration period.

3. 20dB Bandwidth test

3.1 Operating environment

Temperature: 22 °C
Relative Humidity: 58 %
Atmospheric Pressure 1023 hPa

3.2 Test setup & procedure

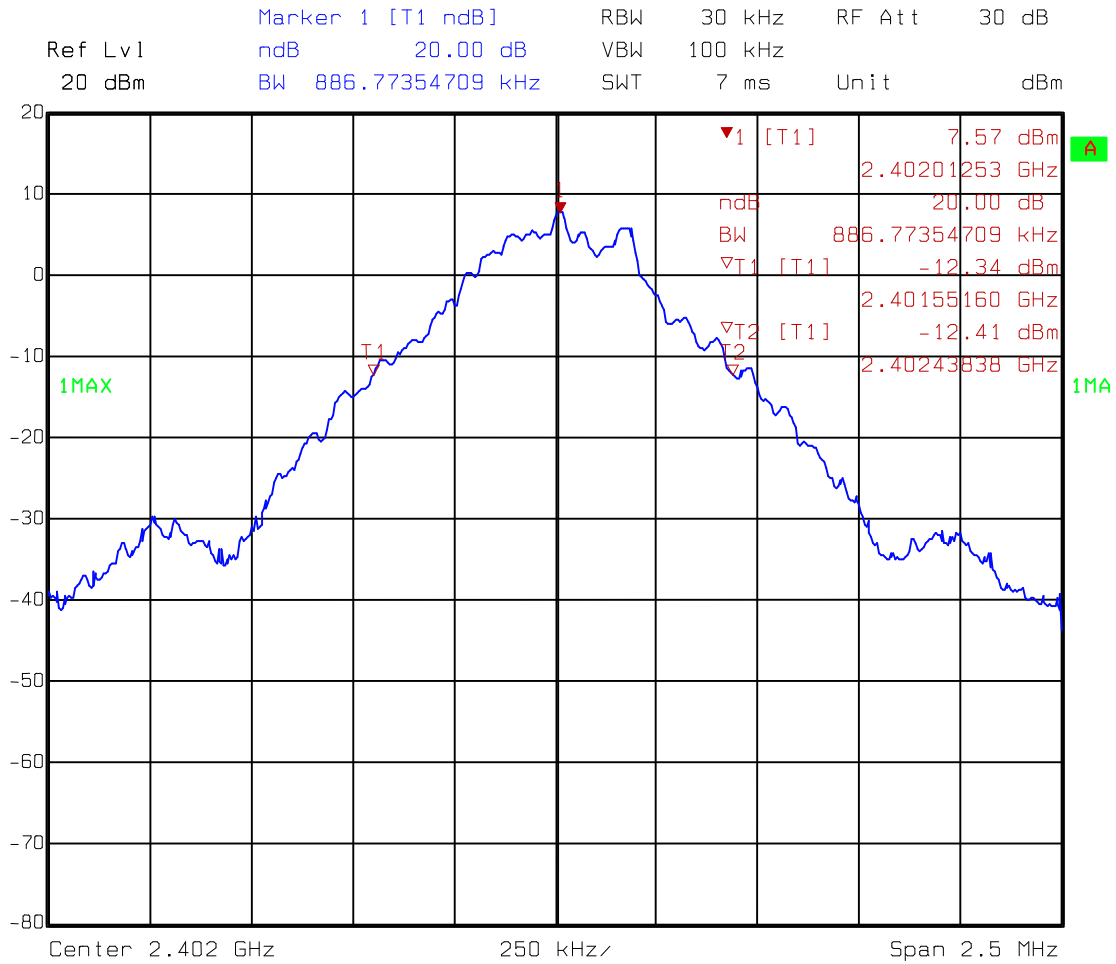
The 20dB bandwidth per FCC §15.247(a)(1)(i) was measured using a 50 ohm spectrum analyzer with the resolutions bandwidth set at 100 kHz, the video bandwidth $\geq$ RBW, and the SPAN may equal to approximately 2 to 3 times the 20dB bandwidth. The test was performed at 3 channels (lowest, middle and highest channel). The maximum 20dB modulation bandwidth is in the following Table.

3.3 Measured data of modulated bandwidth test results

Channel	Frequency (MHz)	Bandwidth (KHz)	Limit
Low	2402	886.7735	1MHz
Middle	2441	886.7735	1MHz
High	2480	886.7735	1MHz

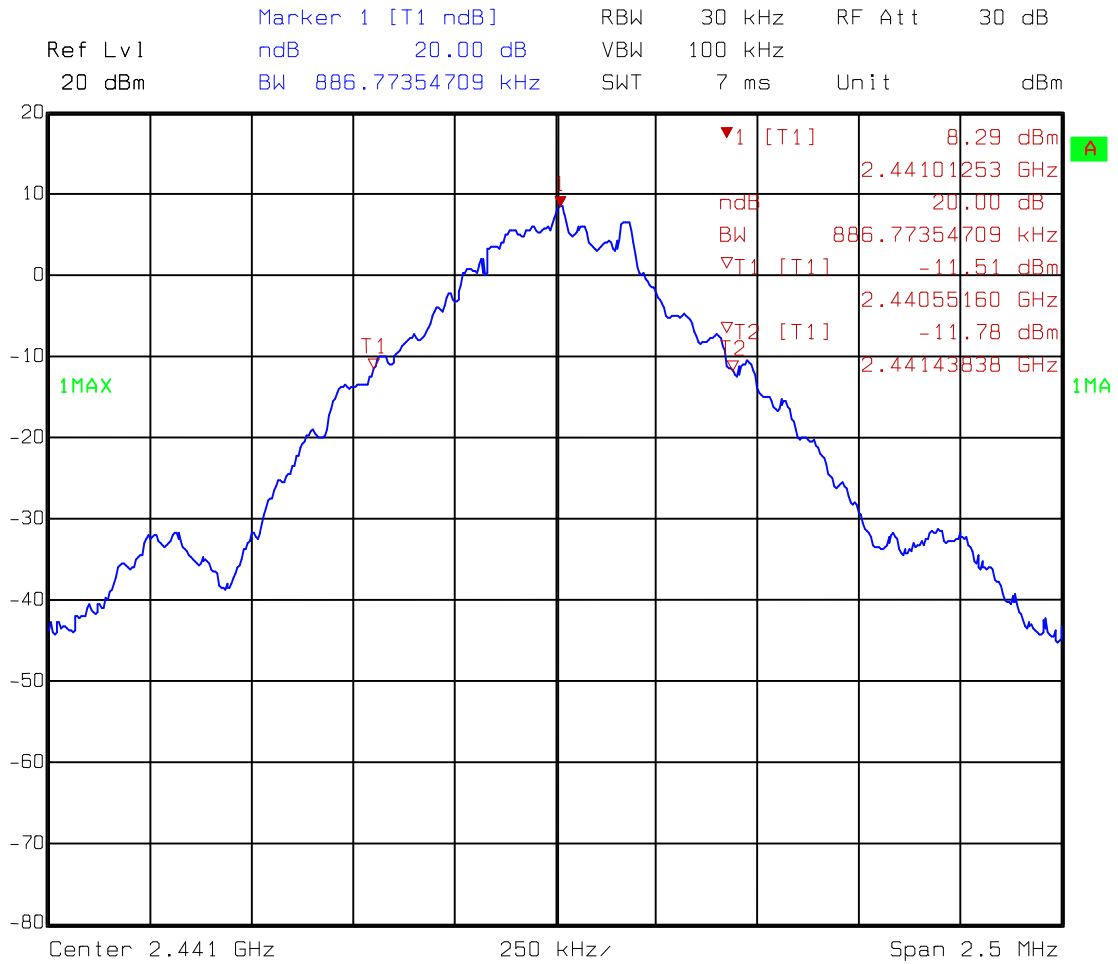
* The EUT has its hopping function disable.

Please see the plot below.

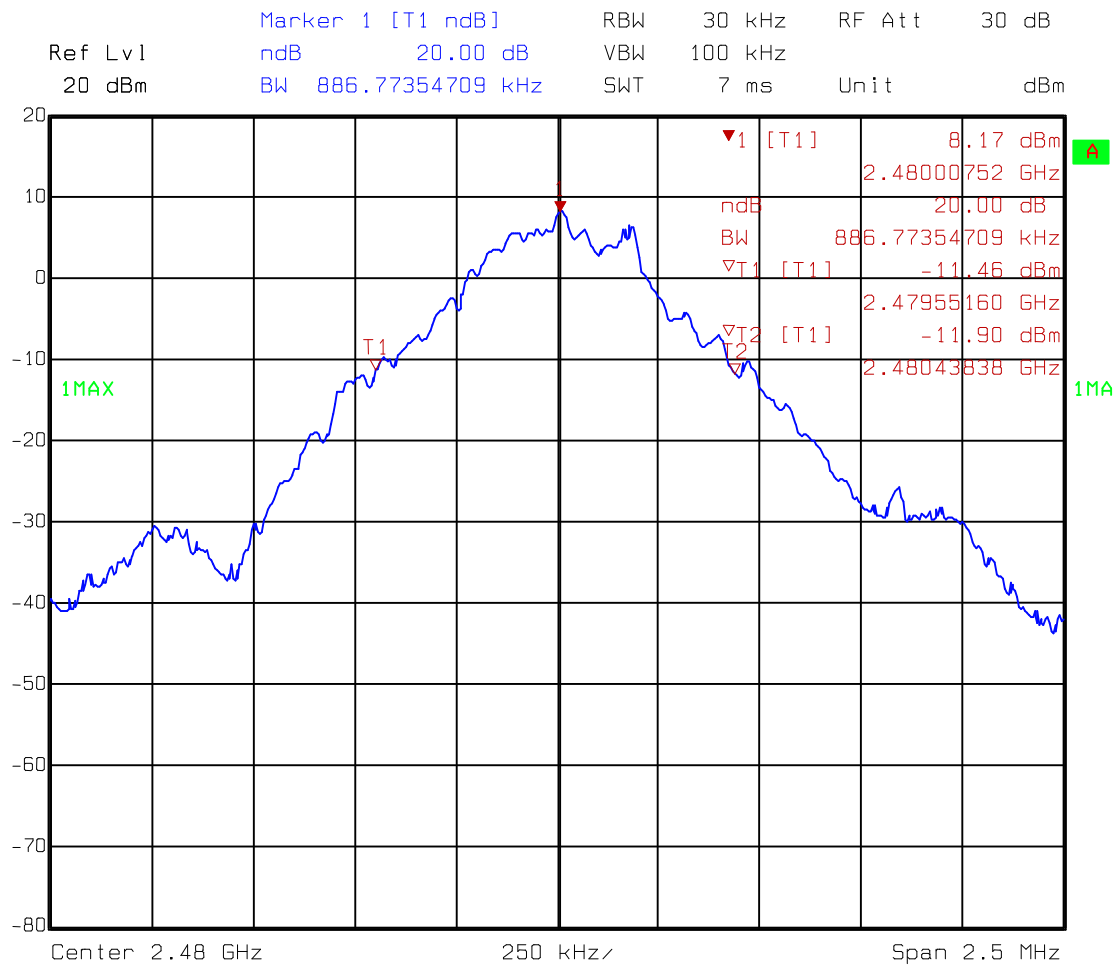


Comment A: 20dB bandwidth at low channel

Date: 26.FEB.2004 15:59:50



Comment A: 20dB bandwidth at middle channel
Date: 26.FEB.2004 16:02:35



Comment A: 20dB bandwidth at high channel

Date: 26.FEB.2004 16:01:32

4. Carrier Frequency Separation test

4.1 Operating environment

Temperature: 22 °C
Relative Humidity: 58 %
Atmospheric Pressure 1023 hPa

4.2 Test setup & procedure

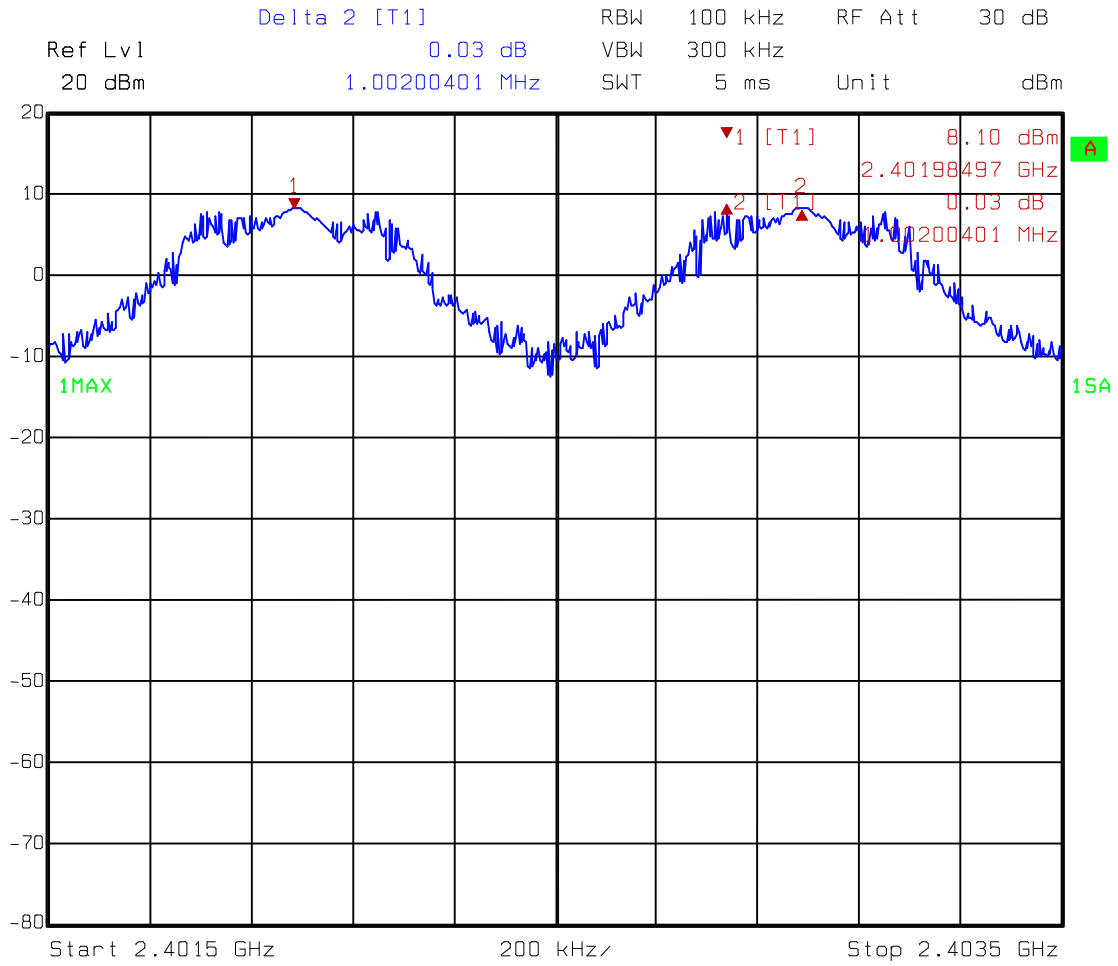
The carrier frequency separation per FCC §15.247(a)(1) was measured using a 50 ohm spectrum analyzer with the resolutions bandwidth set at $\geq 1\%$ of the span, the video bandwidth $\geq$ RBW, and the SPAN was wide enough to capture the peaks of two adjacent channels. The carrier frequency separation result is in the following Table.

4.3 Measured data of Carrier Frequency Separation test result

Channel	Frequency (MHz)	Measurement Frequency separation (MHz)
1	2401.98	1.002
2	2403.00	

* The EUT has its hopping function enable.

Please see the plot below.



Comment A: Carrier frequencies separation between CH1 and CH2

Date: 26.FEB.2004 15:23:03

5. Number of hopping frequencies test

5.1 Operating environment

Temperature: 22 °C
Relative Humidity: 58 %
Atmospheric Pressure 1023 hPa

5.2 Test setup & procedure

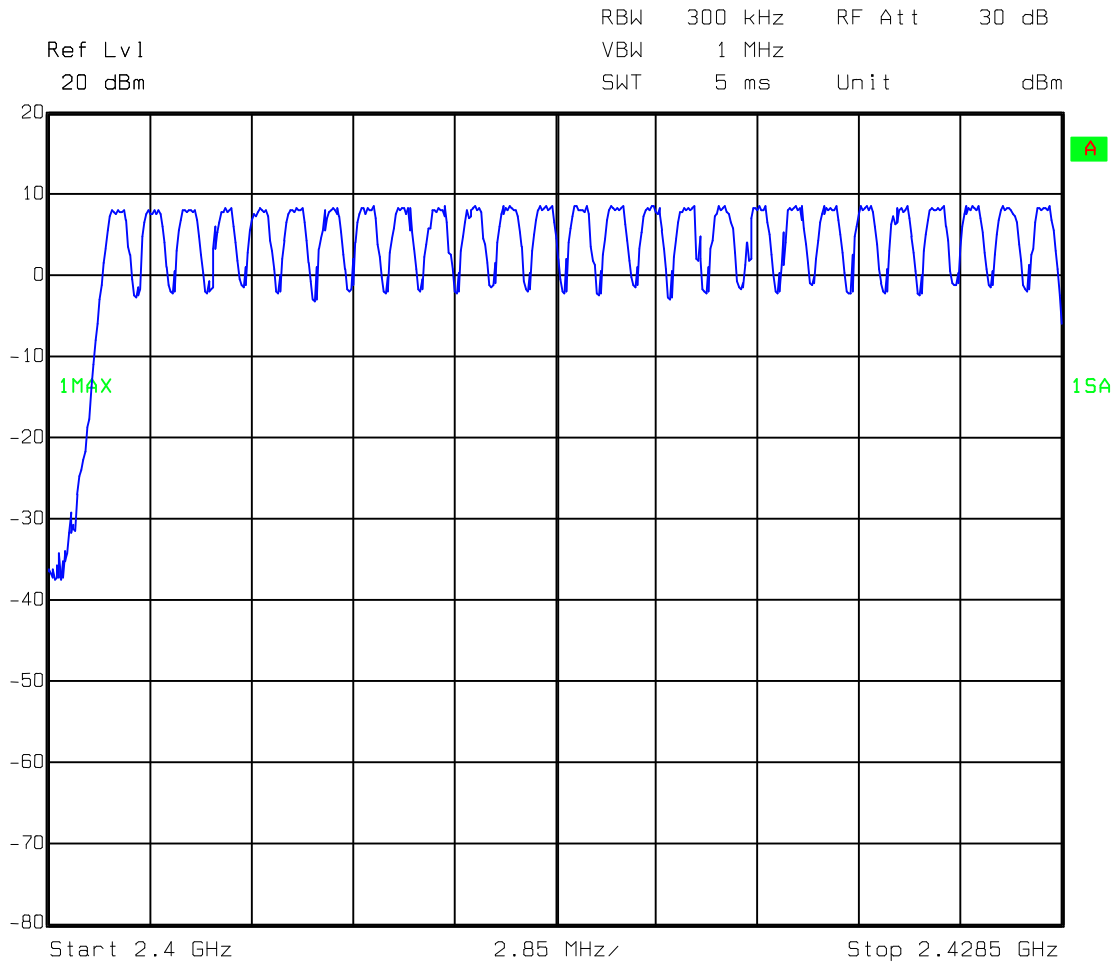
The number of hopping frequencies per FCC §15.247(a)(1) was measured using a 50 ohm spectrum analyzer with the resolutions bandwidth set at $\geq 1\%$ of the span, the video bandwidth $\geq$ RBW, and the SPAN was the frequency band of operation. The carrier frequency separation result is in the following Table.

5.3 Measured data of number of hopping frequencies test result

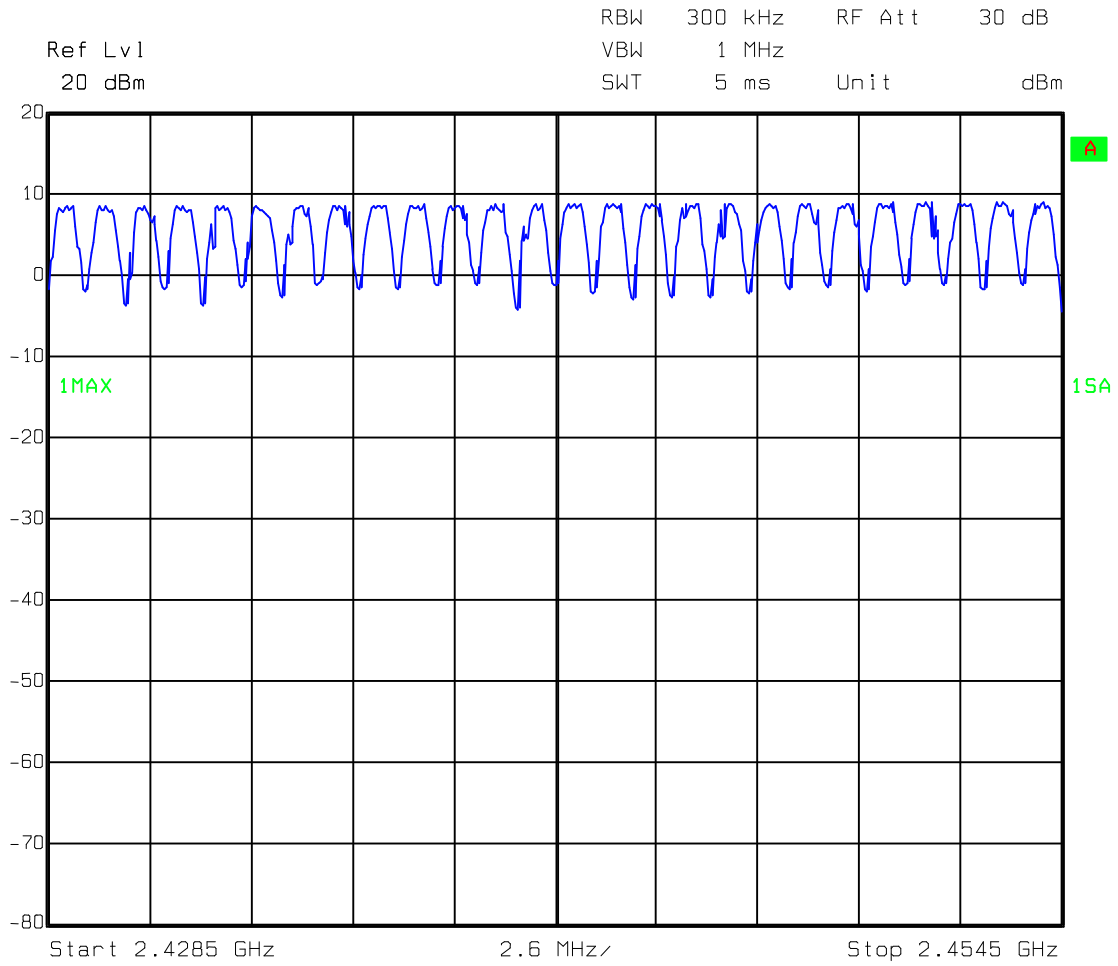
Frequency Range (MHz)	Number of hopping frequencies	Total hopping channels
2400 ~ 2428.5	27	79
2429 ~ 2454.5	26	
2455 ~ 2483.5	26	

* The EUT has its hopping function enable.

Please see the plot below.

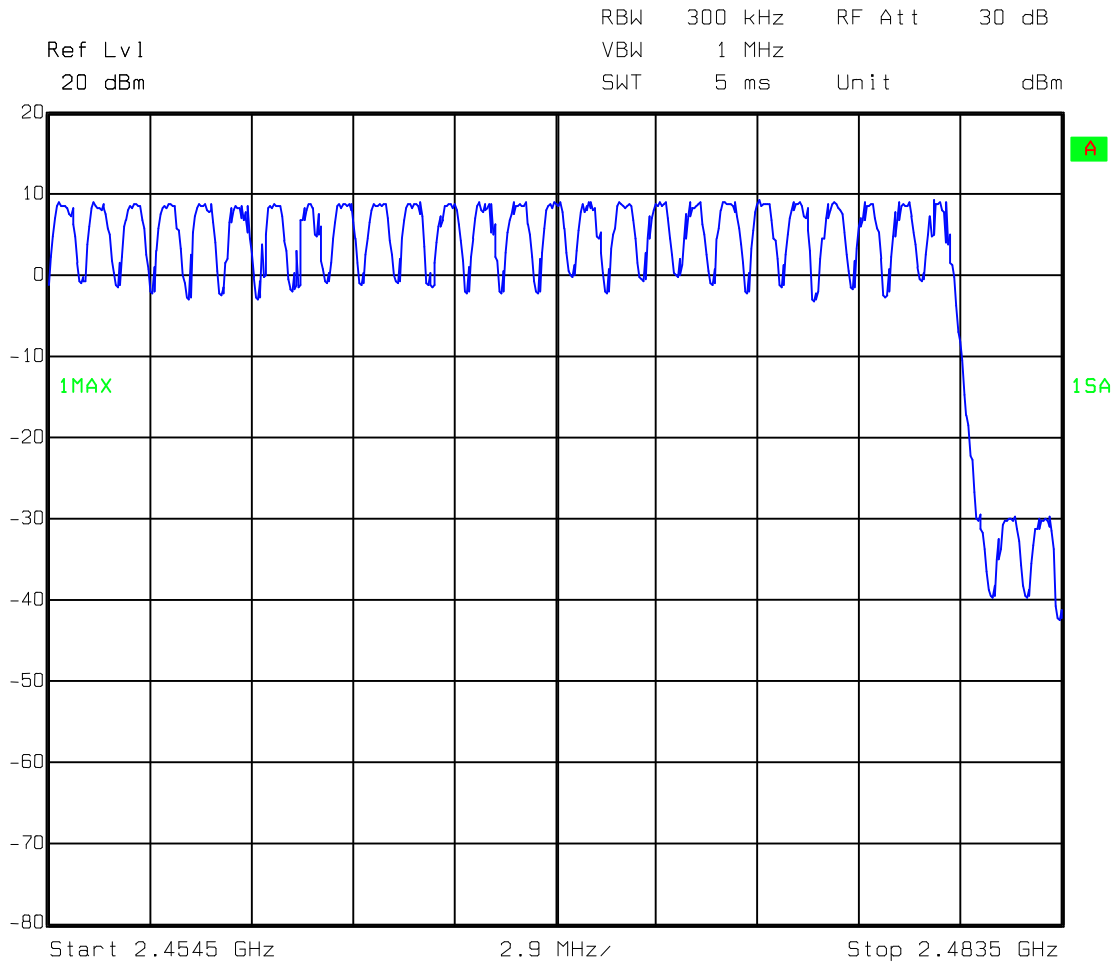


Comment A: Number of hopping channel
Date: 26.FEB.2004 15:37:41



Comment A: Number of hopping channel

Date: 26.FEB.2004 15:31:40



Comment A: Number of hopping channel
Date: 26.FEB.2004 15:34:02

6. Time of Occupancy (dwell time) test

6.1 Operating environment

Temperature: 22 °C
Relative Humidity: 58 %
Atmospheric Pressure 1023 hPa

6.2 Test setup & procedure

The time of occupancy (dwell time) per FCC §15.247(a)(1)(iii) was measured using a 50 ohm spectrum analyzer with the resolutions bandwidth set at 1MHz, the video bandwidth $\geq$ RBW, and the zero span function of spectrum analyzer was enable. The EUT has its hopping function enable.

The average time of occupancy on any channel shall not greater than 0.4 seconds within a period of 0.4 seconds multiplied by number of hopping channels employed.

The system makes worst case 1600 hops per second or 1 time slot has a length of 625 μ s with 79 channels. So, the calculation for a 31.6 second period is follows.

Dwell time = time slot length $\times$ hop rate / number of hopping channels $\times$ 31.6s.

Time of occupancy (dwell time) for DH1

A DH1 packet needs 1 time slot for transmit and 1 time slot for receice, then the hop rate is 1600/2 = 800 1/s

Dwell time = 420.841683 μ s $\times$ 800 1/s / 79 $\times$ 31.6s
= 134.67 ms (in a 31.6s period)

Time of occupancy (dwell time) for DH3

A DH3 packet needs 3 time slots for transmit and 1 time slot for receice, then the hop rate is 1600/4 = 400 1/s

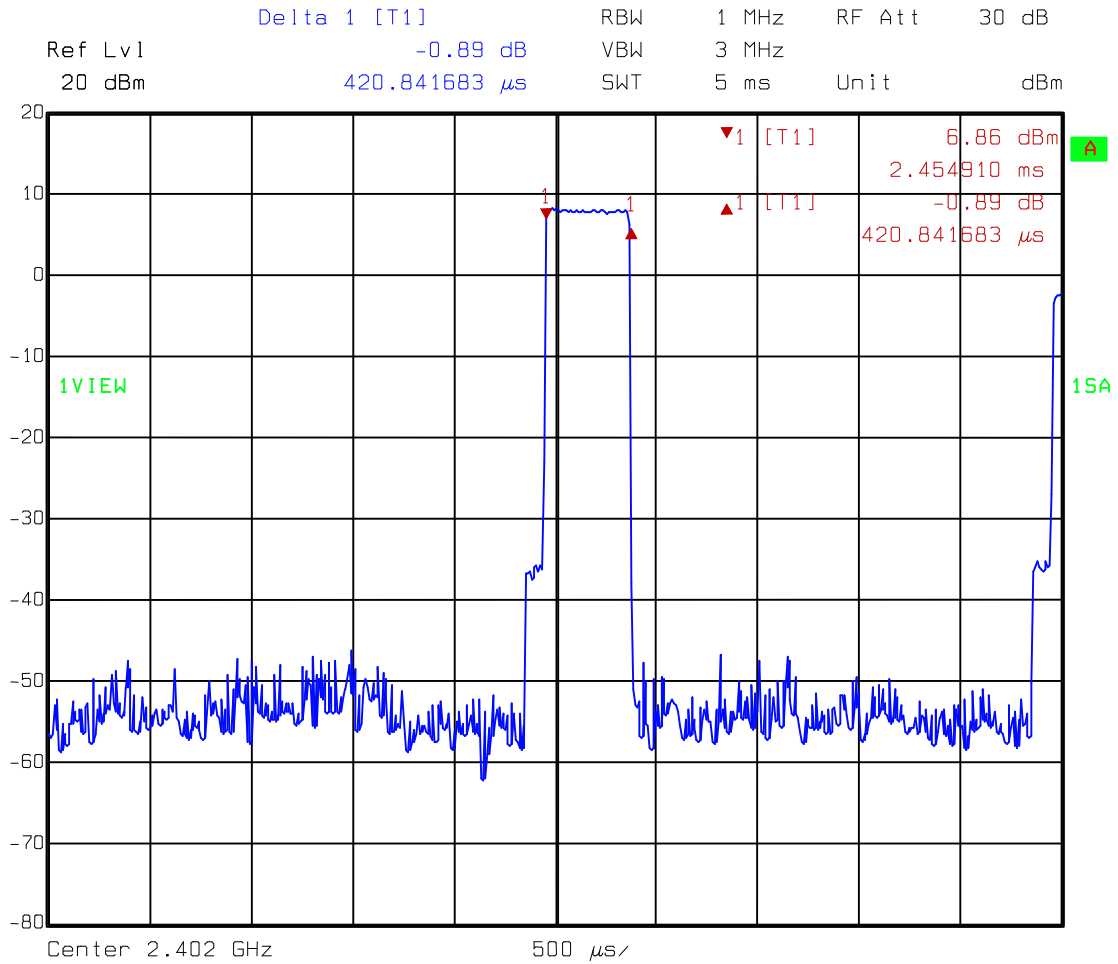
Dwell time = 1.673347 ms $\times$ 400 1/s / 79 $\times$ 31.6s
= 267.74 ms (in a 31.6s period)

Time of occupancy (dwell time) for DH5

A DH5 packet needs 5 time slots for transmit and 1 time slot for receice, then the hop rate is 1600/6 = 266.67 1/s

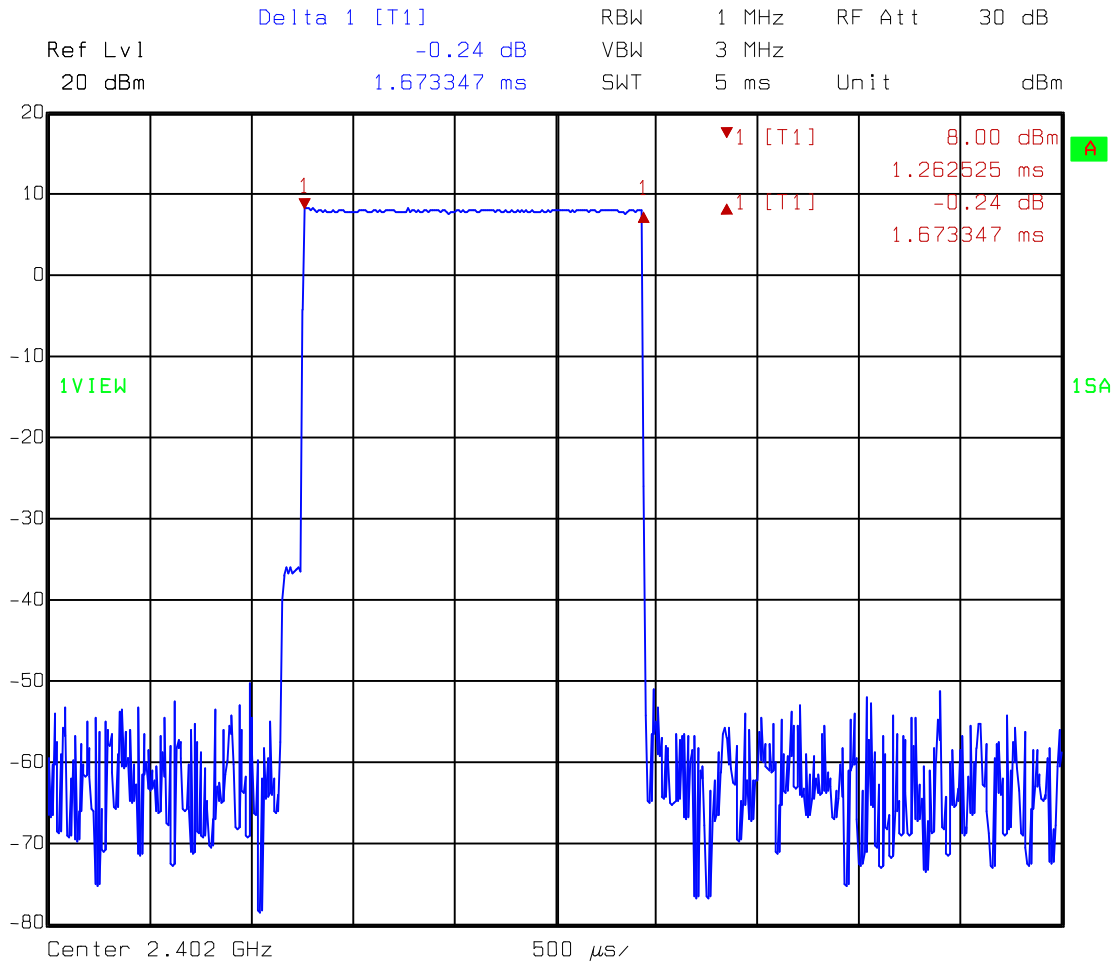
Dwell time = 2.921844 ms $\times$ 266.67 1/s / 79 $\times$ 31.6s
= 311.66 ms (in a 31.6s period)

Please see the plot below.



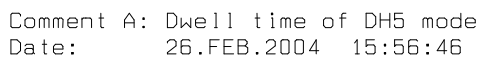
Comment A: Dwell time of DH1 mode

Date: 26.FEB.2004 15:47:12



Comment A: Dwell time of DH3 mode

Date: 26.FEB.2004 15:51:15



Date: 26.FEB.2004 15:56:46

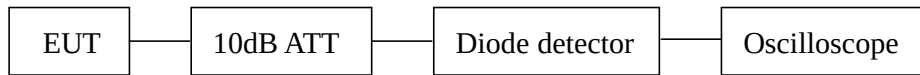
7. Maximum Output Power test

7.1 Operating environment

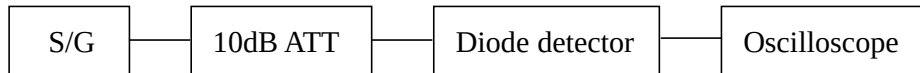
Temperature: 22 °C
 Relative Humidity: 60 %
 Atmospheric Pressure 1023 hPa

7.2 Test setup & procedure

A:



B:



1. The output of the transmitter via a 10 dB attenuator and coupled to a diode detector.
2. The output of the diode detector connected to the vertical channel of an oscilloscope. The observed trace of the oscilloscope shall be recorded as “A”.
3. The transmitter replaced by a signal generator. The output frequency of the signal made equal to the center of the frequency range occupied by the transmitter and unmodulated.
4. The output of the signal generator raised to reach the peak of trace “A” named X.
5. The signal generator output level X (dBm) is the transmitter peak output power.

7.3 Measured data of Maximum Output Power test results

Channel	Frequency (MHz)	Reading (dBm)	Output Power		Limit (W)
			(dBm)	(mW)	
Lowest	2412	11.58	11.58	14.39	1
Middle	2437	12.19	12.19	16.56	1
Highest	2462	12.56	12.56	18.03	1

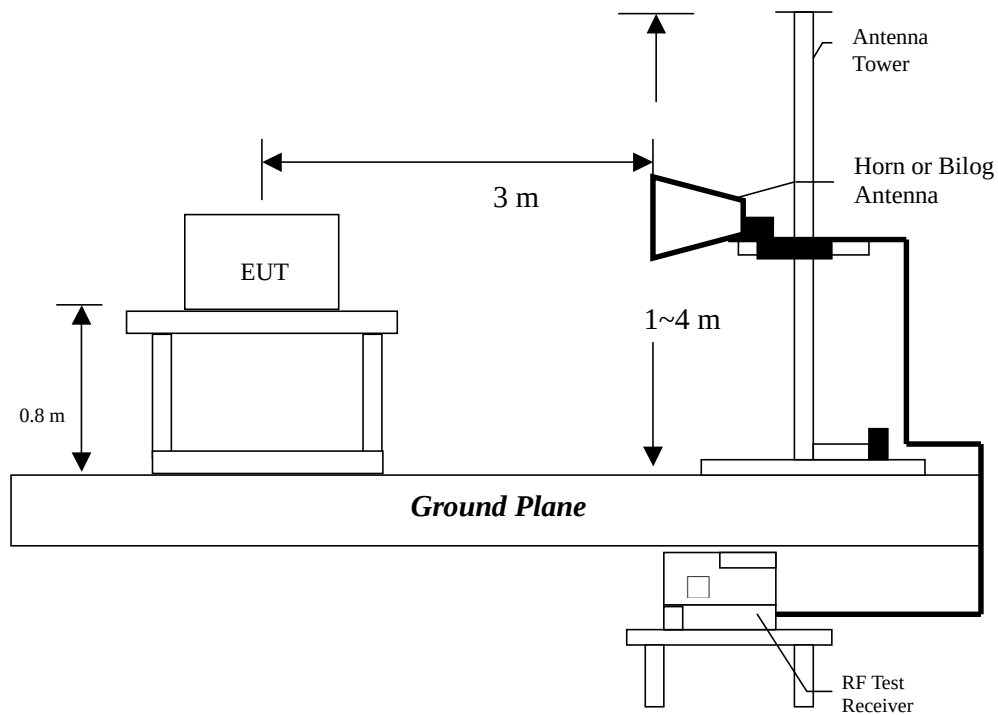
8. Radiated Emission test

8.1 Operating environment

Temperature:	23	°C	(10-40°C)
Relative Humidity:	58	%	(10-90%)
Atmospheric Pressure	1023	hPa	(860-1060hPa)

8.2 Test setup & procedure

The Diagram below shows the test setup, which is utilized to make these measurements.



Radiated emissions were investigated cover the frequency range from 30MHz to 1000MHz using a receiver RBW of 120kHz record QP reading, and the frequency over 1GHz using a spectrum analyzer RBW of 1MHz and 10Hz VBW record Average reading. (15.209 paragraph), the Peak reading (1MHz RBW/VBW) recorded also on the report.

The EUT for testing is arranged on a wooden turntable. If some peripherals apply to the EUT, the peripherals will be connected to EUT and the whole system. During the test, all cables were arranged to produce worst-case emissions. The signal is maximized through rotation. The height of antenna and polarization is changing constantly for exploring for maximum signal level. The height of antenna can be up to 4 meters and down to 1 meter.

The measurement for radiated emission will be done at the distance of three meters unless the signal level is too low to measure at that distance. In the case of the reading under noise floor, a pre-amplifier is used and/or the test is conducted at a closer distance. And then all readings are extrapolated back to the equivalent three meter reading using inverse scaling with distance.

The EUT configuration please refer to the “Spurious set-up photo.pdf”.

8.3 Emission limits

The spurious Emission shall test through the 10th harmonic. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a).

Frequency (MHz)	Limits (dB μ V/m@3m)
30-88	40
88-216	43.5
216-960	46
Above 960	54

Remark:

1. In the above table, the tighter limit applies at the band edges.
2. Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system

Uncertainty was calculated in accordance with NAMAS NIS 81.

Expanded uncertainty (k=2) of radiated emission measurement is ± 4.98 dB.

Expanded uncertainty (k=2) of conducted emission measurement is ± 2.02 dB.

8.4 Radiated spurious emission test data

8.4.1 Measurement results: frequencies equal to or less than 1 GHz

EUT : BM56S

Worst Case Condition : hopping frequency mode

Frequency (MHz)	Spectrum Analyzer Detector	Antenna Polariz. (H/V)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Level (dBuV)	Limit @ 3 m (dBuV)	Margin (dB)	Antenna high (cm)	Turn Table angle (degree)
47.280	QP	V	13.05	15.31	28.36	40.00	-11.64	100	56
62.860	QP	V	13.22	15.57	28.79	40.00	-11.21	101	255
133.100	QP	V	13.34	8.30	21.64	43.50	-21.86	100	160
176.940	QP	V	14.29	6.19	20.48	43.50	-23.02	100	293
233.940	QP	V	11.82	2.31	14.13	46.00	-31.87	101	0
254.700	QP	V	12.85	6.14	18.99	46.00	-27.01	102	177
110.980	QP	H	11.80	7.01	18.81	43.50	-24.69	225	265
132.690	QP	H	13.34	10.36	23.70	43.50	-19.80	228	96
176.930	QP	H	14.29	14.09	28.38	43.50	-15.12	153	99
192.060	QP	H	12.03	8.43	20.46	43.50	-23.04	193	95
223.990	QP	H	11.82	8.51	20.33	46.00	-25.67	127	201
398.980	QP	H	16.40	4.11	20.51	46.00	-25.49	263	127

Remark:

1. Corrected Level = Reading Level + Correction Factor – Preamp

2. Correction Factor = Antenna Factor + Cable Loss

8.4.2 Measurement results: frequency above 1GHz

The radiated spurious emissions at

Frequency(MHz)	Margin
4804	-4.36

are less than uncertainty. This is within the stated measurement uncertainty, this may affect compliance determined in other test arrangements.

EUT : BM56S

Test Condition : Tx at low channel

Frequency (MHz)	Spectrum Analyzer Detector	Antenna Polariz. (H/V)	Preamp (dB)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Level (dBuV)	Limit @ 3 m (dBuV)	Margin (dB)	Antenna high (cm)	Turn Table angle (degree)
4804	PK	V	32.265	35.742	41.243	44.72	74	-29.28	122	111
4804	AV	V	32.265	35.742	37.603	41.08	54	-12.92	122	111
7206	PK	V	34.17	39.966	42.034	47.83	74	-26.17	148	115
7206	AV	V	34.17	39.966	36.224	42.02	54	-11.98	148	115
9608	PK	V	35.753	43.384	37.5985	45.23	74	-28.77	103	105
9608	AV	V	35.753	43.384	25.1885	32.82	54	-21.18	103	105
4804	PK	H	32.265	35.742	47.823	51.3	74	-22.7	177	111
4804	AV	H	32.265	35.742	46.163	49.64	54	-4.36	177	111
7206	PK	H	34.17	39.966	42.164	47.96	74	-26.04	135	101
7206	AV	H	34.17	39.966	37.554	43.35	54	-10.65	135	101
9608	PK	H	35.753	43.384	41.8385	49.47	74	-24.53	143	105
9608	AV	H	35.753	43.384	35.9485	43.58	54	-10.42	143	105

Remark:

1. Corrected Level = Reading Level + Correction Factor – Preamp
2. Correction Factor = Antenna Factor + Cable Loss
3. The frequency measured ranges from 1GHz to 25GHz. The data value listed above which is higher than the noise floor, the others please refer to noise floor level.

For PK:

1GHz-3GHz: 20dBuV
3GHz-14GHz: 27dBuV
14GHz-26.5GHz: 39dBuV

For AV:

1GHz-3GHz: 10dBuV
3GHz-14GHz: 16dBuV
14GHz-26.5GHz: 28dBuV

The radiated spurious emissions at

Frequency(MHz)	Margin
4882	-0.16

are less than uncertainty. This is within the stated measurement uncertainty, this may affect compliance determined in other test arrangements.

EUT : BM56S

Test Condition : Tx at middle channel

Frequency (MHz)	Spectrum Analyzer Detector	Antenna Polariz. (H/V)	Preamplifier (dB)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Level (dBuV)	Limit @ 3 m (dBuV)	Margin (dB)	Antenna height (cm)	Turn Table angle (degree)
4882	PK	V	32.265	35.742	43.933	47.41	74	-26.59	161	18
4882	AV	V	32.265	35.742	40.773	44.25	54	-9.75	161	18
7324	PK	V	34.17	39.966	44.544	50.34	74	-23.66	155	115
7324	AV	V	34.17	39.966	40.894	46.69	54	-7.31	155	115
4882	PK	H	32.265	35.742	52.623	56.1	74	-17.9	152	113
4882	AV	H	32.265	35.742	50.363	53.84	54	-0.16	152	113
7324	PK	H	34.17	39.966	44.814	50.61	74	-23.39	147	111
7324	AV	H	34.17	39.966	41.244	47.04	54	-6.96	147	111

Remark:

1. Corrected Level = Reading Level + Correction Factor – Preamp
2. Correction Factor = Antenna Factor + Cable Loss
3. The frequency measured ranges from 1GHz to 25GHz. The data value listed above which is higher than the noise floor, the others please refer to noise floor level.

For PK:

1GHz-3GHz: 20dBuV
3GHz-14GHz: 27dBuV
14GHz-26.5GHz: 39dBuV

For AV:

1GHz-3GHz: 10dBuV
3GHz-14GHz: 16dBuV
14GHz-26.5GHz: 28dBuV

The radiated spurious emissions at

Frequency(MHz)	Margin
4960	-1.09

are less than uncertainty. This is within the stated measurement uncertainty, this may affect compliance determined in other test arrangements.

EUT : BM56S

Test Condition : Tx at high channel

Frequency (MHz)	Spectrum Analyzer Detector	Antenna Polariz. (H/V)	Preamp (dB)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Level (dBuV)	Limit @ 3 m (dBuV)	Margin (dB)	Antenna high (cm)	Turn Table angle (degree)
4960	PK	V	32.265	35.742	45.083	48.56	74	-25.44	115	109
4960	AV	V	32.265	35.742	42.663	46.14	54	-7.86	115	109
7440	PK	V	34.17	39.966	43.294	49.09	74	-24.91	105	110
7440	AV	V	34.17	39.966	37.294	43.09	54	-10.91	105	110
4960	PK	H	32.265	35.742	52.163	55.64	74	-18.36	139	108
4960	AV	H	32.265	35.742	49.433	52.91	54	-1.09	139	108
7440	PK	H	34.17	39.966	42.854	48.65	74	-25.35	148	109
7440	AV	H	34.17	39.966	36.904	42.7	54	-11.3	148	109

Remark:

1. Corrected Level = Reading Level + Correction Factor – Preamp
2. Correction Factor = Antenna Factor + Cable Loss
3. The frequency measured ranges from 1GHz to 25GHz. The data value listed above which is higher than the noise floor, the others please refer to noise floor level.

For PK:

1GHz-3GHz: 20dBuV
3GHz-14GHz: 27dBuV
14GHz-26.5GHz: 39dBuV

For AV:

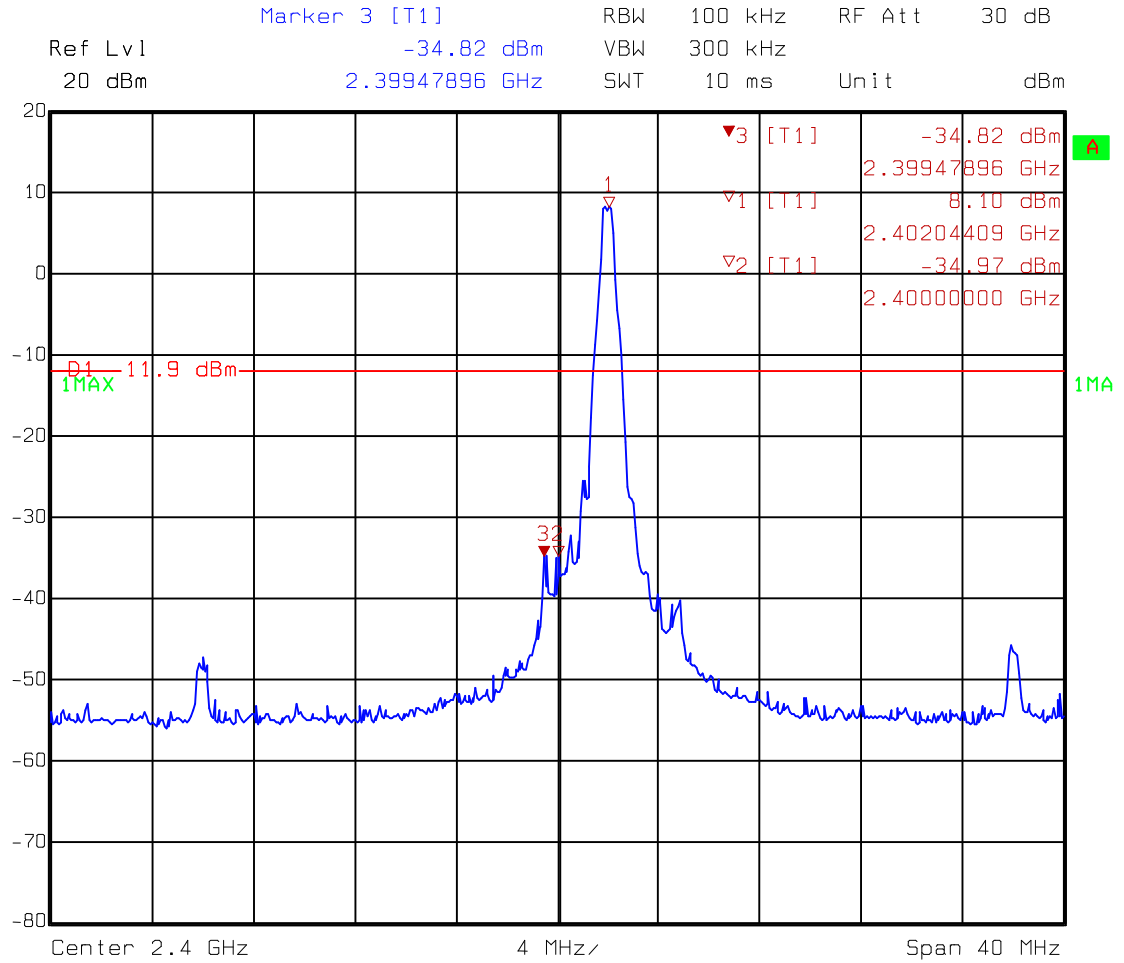
1GHz-3GHz: 10dBuV
3GHz-14GHz: 16dBuV
14GHz-26.5GHz: 28dBuV

9. Emission on the band edge §FCC 15.247(C)

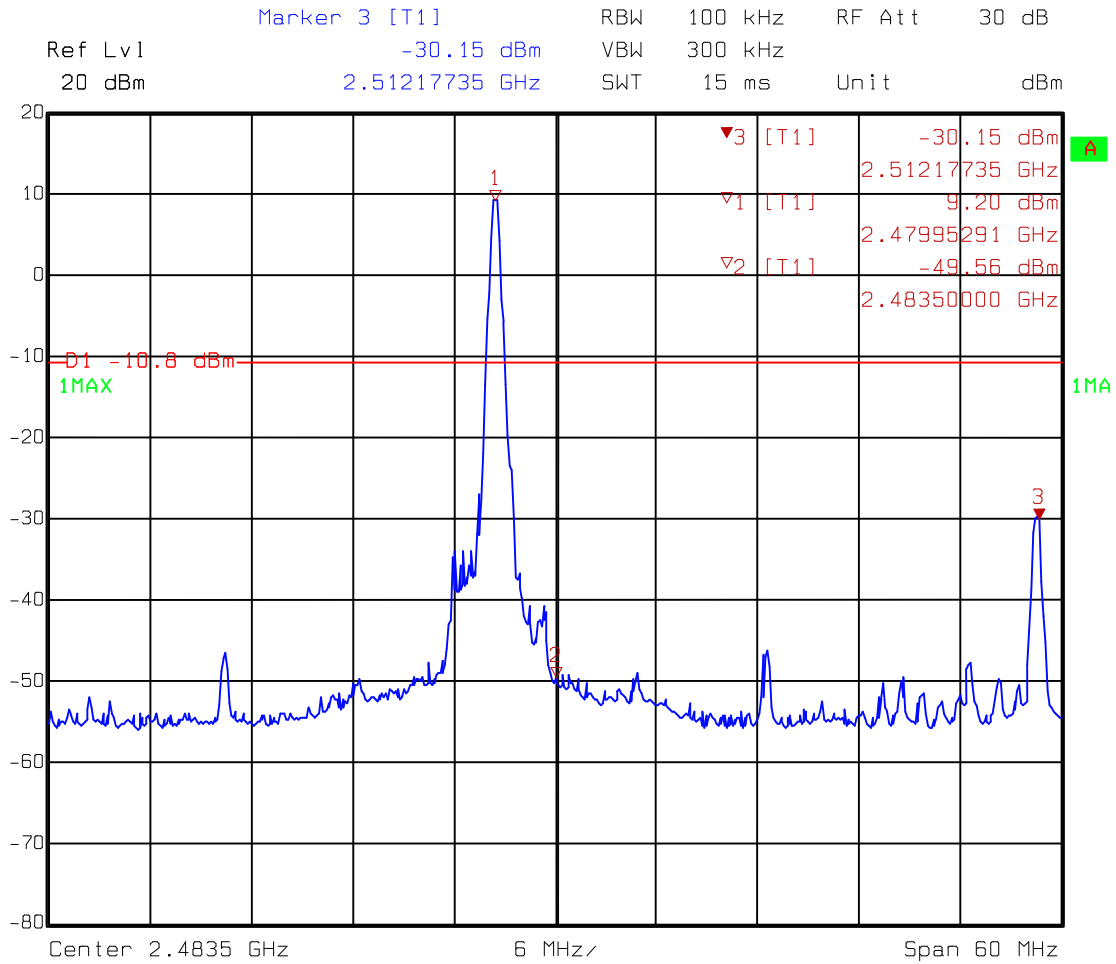
In any 100kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.

Please see the plot below.

7.1 Band-edge (Conducted method)



Comment A: Band-edge at low channel
 Date: 26.FEB.2004 16:54:38

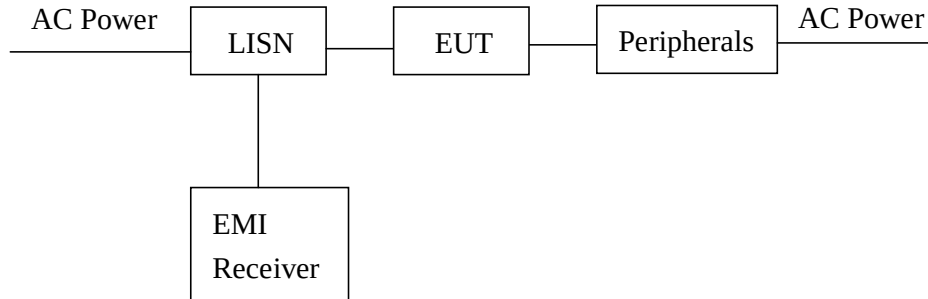


10. Power Line Conducted Emission test §FCC 15.207

10.1 Operating environment

Temperature:	21	°C	(10-40°C)
Relative Humidity:	52	%	(10-90%)
Atmospheric Pressure	1023	hPa	(860-1061hPa)

10.2 Test setup & procedure



The EUT are connected to the main power through a line impedance stabilization network (LISN). This provides a 50 ohm/50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uH coupling impedance with 50ohm termination.

Both sides (Line and Neutral) of AC line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.4/1992 on conducted measurement. The AC power conducted emissions was investigated over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9kHz. (15.207 paragraph)

The EUT configuration please refer to the “Conducted set-up photo.pdf”.

Please see the plot below.

Emission Limit

Freq. (MHz)	Conducted Limit (dBuV)	
	Q.P.	Ave.
0.15~0.50	66 – 56*	56 – 46*
0.50~5.00	56	46
5.00~30.0	60	50

*Decreases with the logarithm of the frequency.

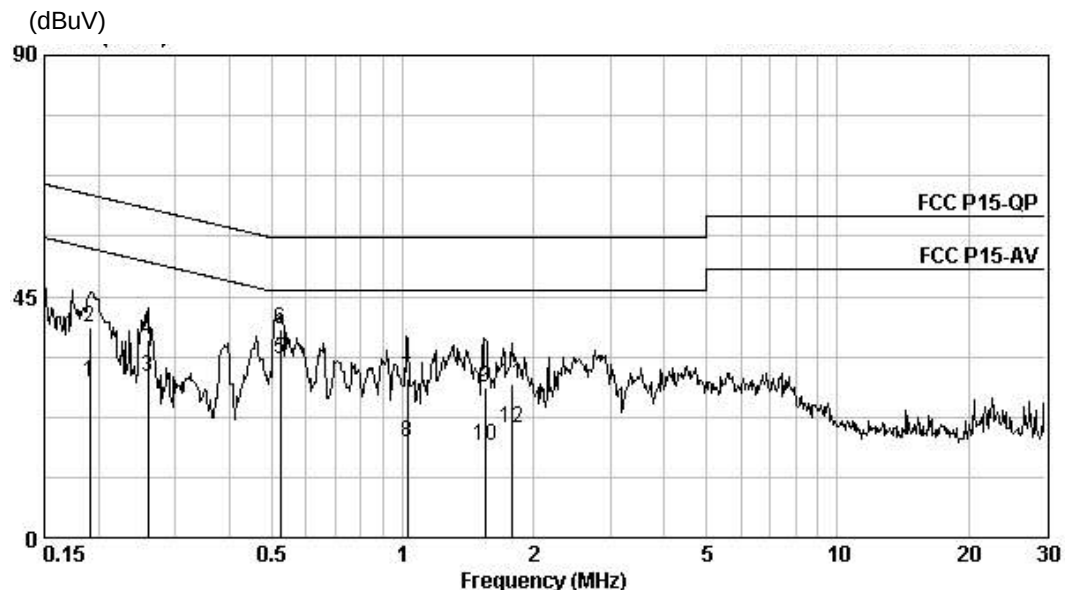
10.3 Power Line Conducted Emission test data

Phase: Line
Model No.: BM56S
Test Condition: Normal operation mode with adapter 1

Freq. (MHz)	Correction Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
0.191	0.10	39.30	64.01	-24.71	QP
0.191	0.10	29.10	54.01	-24.91	AVERAGE
0.260	0.10	36.82	61.43	-24.61	QP
0.260	0.10	29.88	51.43	-21.55	AVERAGE
0.524	0.10	38.82	56.00	-17.18	QP
0.524	0.10	33.24	46.00	-12.76	AVERAGE
1.023	0.10	29.56	56.00	-26.44	QP
1.023	0.10	17.82	46.00	-28.18	AVERAGE
1.549	0.10	27.88	56.00	-28.12	QP
1.549	0.10	17.14	46.00	-28.86	AVERAGE
1.788	0.10	28.57	56.00	-27.43	QP
1.788	0.10	20.38	46.00	-25.62	AVERAGE

Remark:

1. Correction Factor (dB)= LISN Factor (dB) + Cable Loss (dB)
2. Margin (dB) = Level (dBuV) – Limit (dBuV)

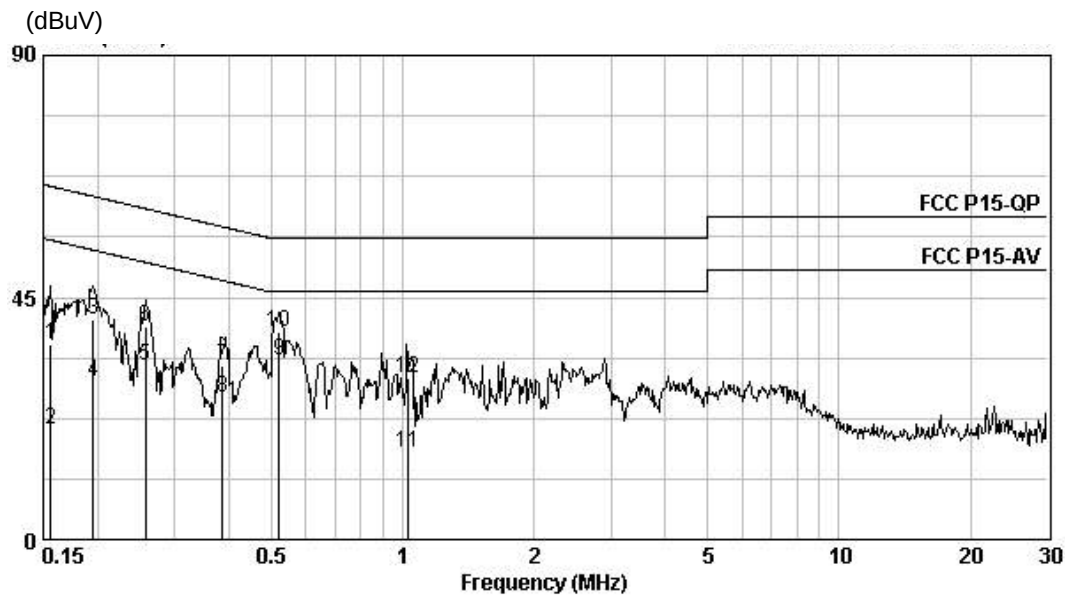


Phase: Neutral
 Model No.: BM56S
 Test Condition: Normal operation mode with adapter 1

Freq. (MHz)	Correction Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
0.156	0.10	36.29	65.67	-29.38	QP
0.156	0.10	20.59	55.67	-35.08	AVERAGE
0.195	0.10	40.96	63.82	-22.86	QP
0.195	0.10	29.35	53.82	-24.47	AVERAGE
0.258	0.10	39.58	61.50	-21.92	QP
0.258	0.10	32.47	51.50	-19.03	AVERAGE
0.387	0.10	32.40	58.12	-25.72	QP
0.387	0.10	26.32	48.12	-21.80	AVERAGE
0.520	0.10	38.72	56.00	-17.28	QP
0.520	0.10	33.15	46.00	-12.85	AVERAGE
1.023	0.10	29.93	56.00	-26.07	QP
1.023	0.10	16.15	46.00	-29.85	AVERAGE

Remark:

1. Correction Factor (dB)= LISN Factor (dB) + Cable Loss (dB)
2. Margin (dB) = Level (dBuV) – Limit (dBuV)

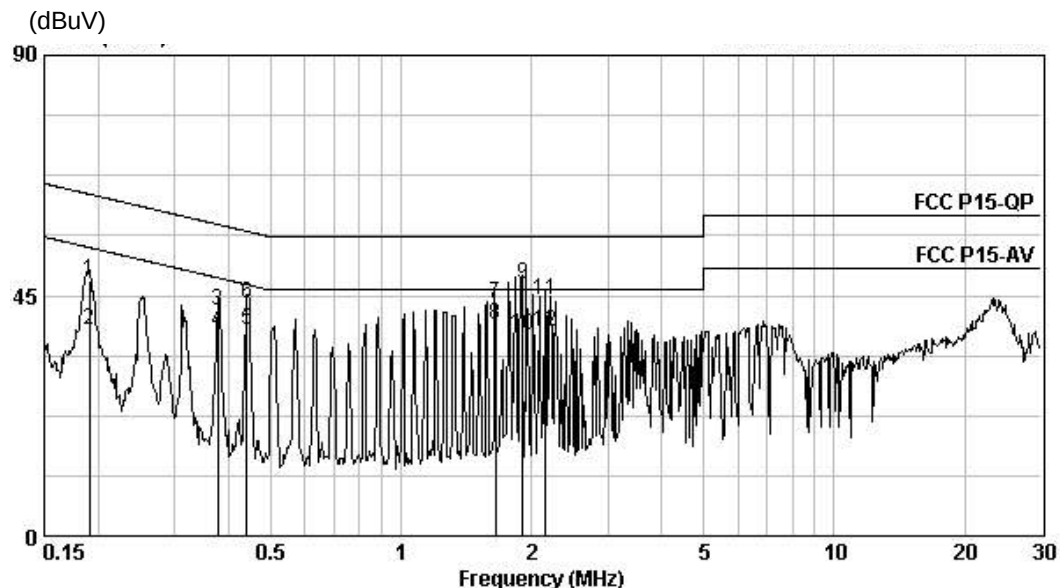


Phase: Line
 Model No.: BM56S
 Test Condition: Normal operation mode with adapter 2

Freq. (MHz)	Correction Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
0.191	0.10	47.87	64.01	-16.14	QP
0.191	0.10	38.58	54.01	-15.43	AVERAGE
0.378	0.10	42.25	58.32	-16.07	QP
0.378	0.10	38.10	48.32	-10.22	AVERAGE
0.440	0.10	43.54	57.07	-13.53	QP
0.440	0.10	38.58	47.07	-8.49	AVERAGE
1.651	0.10	43.49	56.00	-12.51	QP
1.651	0.10	39.57	46.00	-6.43	AVERAGE
1.905	0.10	47.00	56.00	-9.00	QP
1.905	0.10	37.62	46.00	-8.38	AVERAGE
2.148	0.11	44.33	56.00	-11.67	QP
2.148	0.11	38.27	46.00	-7.73	AVERAGE

Remark:

1. Correction Factor (dB)= LISN Factor (dB) + Cable Loss (dB)
2. Margin (dB) = Level (dBuV) – Limit (dBuV)



Phase: Neutral
 Model No.: BM56S
 Test Condition: Normal operation mode with adapter 2

Freq. (MHz)	Correction Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
0.189	0.10	47.69	64.08	-16.39	QP
0.189	0.10	39.51	54.08	-14.57	AVERAGE
0.378	0.10	41.34	58.32	-16.98	QP
0.378	0.10	36.53	48.32	-11.79	AVERAGE
0.443	0.10	44.93	57.00	-12.07	QP
0.443	0.10	44.40	47.00	-2.60	AVERAGE
1.774	0.10	44.94	56.00	-11.06	QP
1.774	0.10	41.95	46.00	-4.05	AVERAGE
1.967	0.10	46.81	56.00	-9.19	QP
1.967	0.10	21.70	46.00	-24.30	AVERAGE
2.031	0.10	46.02	56.00	-9.98	QP
2.031	0.10	44.91	46.00	-1.09	AVERAGE

Remark:

1. Correction Factor (dB)= LISN Factor (dB) + Cable Loss (dB)
2. Margin (dB) = Level (dBuV) – Limit (dBuV)

