FCC Part 15B
Measurement and Test Report

For

Bak USA Technologies Corp.

425 Michigan Avenue, Buffalo, New York 14203, USA

FCC ID: 2AEY7-S8A001

Test Rule(s):	FCC Part 15 Subpart B
Product Description:	Seal
Tested Model:	8
Report No.:	STR16058017-8
Tested Date:	2016-03-01 to 2016-06-15
Issued Date:	2016-06-16
Tested By:	Irving Liu / Engineer
Reviewed By:	Suan Su / Engineer
Approved & Authorized By:	Jandy so / PSQ Manager

Prepared By:

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Note: This test report is limited to the above client company and the product model only. It may not be duplicated without prior permitted by Shenzhen SEM.Test Technology Co., Ltd.

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1. GENERAL INFORMATION

1.1 Product Description for Equipment Under Test (EUT)

Client Information

Applicant:	Bak USA Technologies Corp.
Address of applicant:	425 Michigan Avenue, Buffalo, New York 14203, USA
Manufacturer:	Shenzhen Wisky Technology Co.,LTD.
Address of manufacturer:	5th Floor,W2-A Building,Hi-tech Park South 1st Road, Nanshan District,Shenzhen

General Description of EUT:	
Product Name:	Seal
Brand Name:	/
Model No.:	8
Hardware version:	T01-V1.1-0113
Software version:	Windows 10
IMEI:	826259502002440
Adapter Model:	SAP050200CN-C
	INPUT:100-240V,50/60Hz,0.6A; OUTPUT:DC5V,2A
Rated Voltage:	DC 3.7V Li-ion Battery
Device Category:	Portable Device
Note: The test data is gathered from a production sample provided by the manufacturer.	

Technical Characteristics of EUT	
Rated Voltage:	DC 3.7V Li-ion Battery
Rated Current:	/
Rated Power:	/
Lowest Internal Frequency:	32.768kHz
Highest Internal Frequency:	1.83GHz
Classification of ITE:	Class B

1.2 Test Standards

The following report is prepared on behalf of the Bak USA Technologies Corp. in accordance with Part 2, Subpart J, and Part 15, Subparts A and B of the Federal Communication Commissions rules.

The objective is to determine compliance with FCC Part 15, Subpart B, and section 15.205, 15.107, and 15.109 rules.

Maintenance of compliance is the responsibility of the manufacturer. Any modification of the product, which result in lowering the emission, should be checked to ensure compliance has been maintained.

1.3 Test Methodology

All measurements contained in this report were conducted with ANSI C63.4-2014, American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the range of 9 kHz to 40 GHz.

1.4 Test Facility

FCC – Registration No.: 934118

Shenzhen SEM.Test Technology Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files and the Registration is 934118.

Industry Canada (IC) Registration No.: 11464A

The 3m Semi-anechoic chamber of Shenzhen SEM.Test Technology Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 11464A.

CNAS Registration No.: L4062

Shenzhen SEM.Test Technology Co., Ltd. is a testing organization accredited by China National Accreditation Service for Conformity Assessment (CNAS) according to ISO/IEC 17025. The accreditation certificate number is L4062. All measurement facilities used to collect the measurement data are located at 1/F, Building A, Hongwei Industrial Park, Liuxian 2nd Road, Bao'an District, Shenzhen, P.R.C (518101).

1.5 EUT Setup and Operation Mode

The equipment under test (EUT) was configured to measure its highest possible emission level. The test modes were adapted according to the operation manual for use, more detailed description as follows:

Test Mode List:

Test Mode	Description	Remark
TM1	Charging & Playing	Connected to displayer, HDMI output
TM2	Downloading	With USB DISK
TM3	Camera On	/

EUT Cable List and Details

Cable Description	Length (M)	Shielded/Unshielded	With Core/Without Core
DC Cable	1.0	Unshielded	Without Ferrite

Auxiliary Equipment List and Details

Description	Manufacturer	Model	Serial Number
/	/	/	/

Special Cable List and Details

Cable Description	Length (M)	Shielded/Unshielded	With Core/Without Core
/	/	/	/

1.6 Measurement Uncertainty

Measurement uncertainty		
Parameter	Conditions	Uncertainty
Conducted Emissions	Conducted	±2.88dB
Transmitter Spurious Emissions	Radiated	±5.1dB

1.7 Test Equipment List and Details

No.	Description	Manufacturer	Model	Serial No.	Cal Date	Due Date
SEMT-1072	Spectrum Analyzer	Agilent	E4407B	MY41440400	2015-06-17	2016-06-16
SEMT-1031	Spectrum Analyzer	Rohde & Schwarz	FSP30	836079/035	2015-06-17	2016-06-16
SEMT-1007	EMI Test Receiver	Rohde & Schwarz	ESVB	825471/005	2015-06-17	2016-06-16
SEMT-1008	Amplifier	Agilent	8447F	3113A06717	2015-06-17	2016-06-16
SEMT-1043	Amplifier	C&D	PAP-1G18	2002	2015-06-17	2016-06-16
SEMT-1011	Broadband Antenna	Schwarz beck	VULB9163	9163-333	2015-06-17	2016-06-16
SEMT-1042	Horn Antenna	ETS	3117	00086197	2015-06-17	2016-06-16
SEMT-1121	Horn Antenna	ETS	3116B	00088203	2015-06-17	2016-06-16
SEMT-1069	Loop Antenna	Schwarz beck	FMZB 1516	9773	2015-06-17	2016-06-16
SEMT-1001	EMI Test Receiver	Rohde & Schwarz	ESPI	101611	2015-06-17	2016-06-16
SEMT-1003	L.I.S.N	Schwarz beck	NSLK8126	8126-224	2015-06-17	2016-06-16
SEMT-1002	Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100911	2015-06-17	2016-06-16

2. SUMMARY OF TEST RESULTS

FCC Rules	Description of Test Item	Result
§ 15.107 (a)	Conducted Emissions	Compliant
§ 15.109 (a)	Radiated Emissions	Compliant

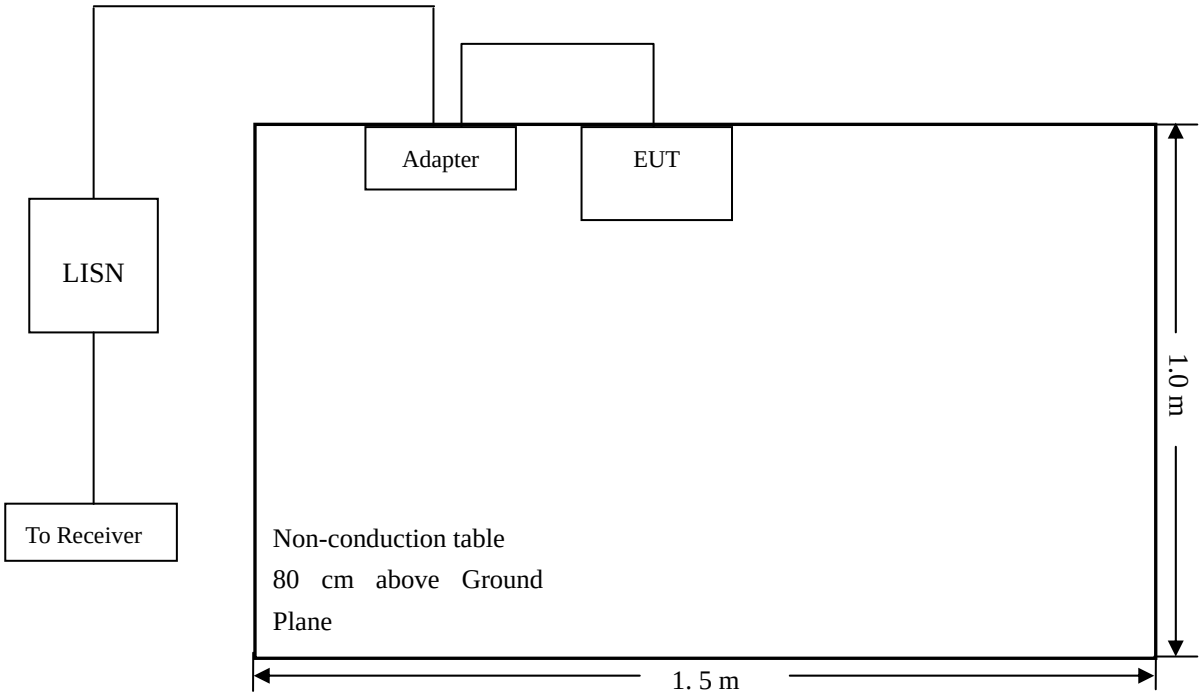
N/A: not applicable

3. Conducted Emissions

3.1 Test Procedure

Test is conducting under the description of ANSI C63.4-2014, American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the range of 9 kHz to 40 GHz.

3.2 Basic Test Setup Block Diagram



3.3 Environmental Conditions

Temperature:	23 °C
Relative Humidity:	52%
ATM Pressure:	1011 mbar

3.4 Summary of Test Results/Plots

According to the data in section 3.6, the EUT complied with the FCC Part 15.107(a) Conducted margin for a Class B device, with the *worst* margin reading of:

-6.71 dB at **0.1940 MHz** in the **Neutral**, TM1mode, **Peak** detector, 0.15-30MHz

3.5 Conducted Emissions Test Data

Plot of Conducted Emissions Test Data

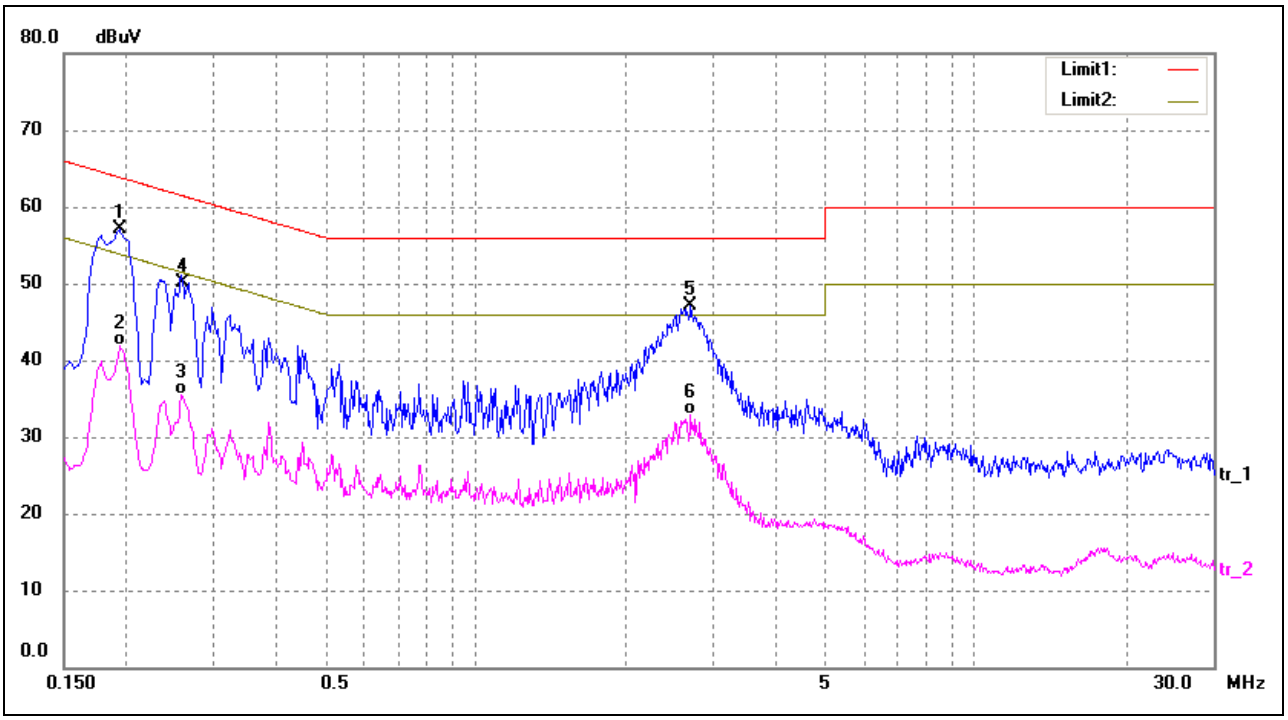
EUT: *Seal*

Tested Model: *8*

Operating Condition: *TM1*

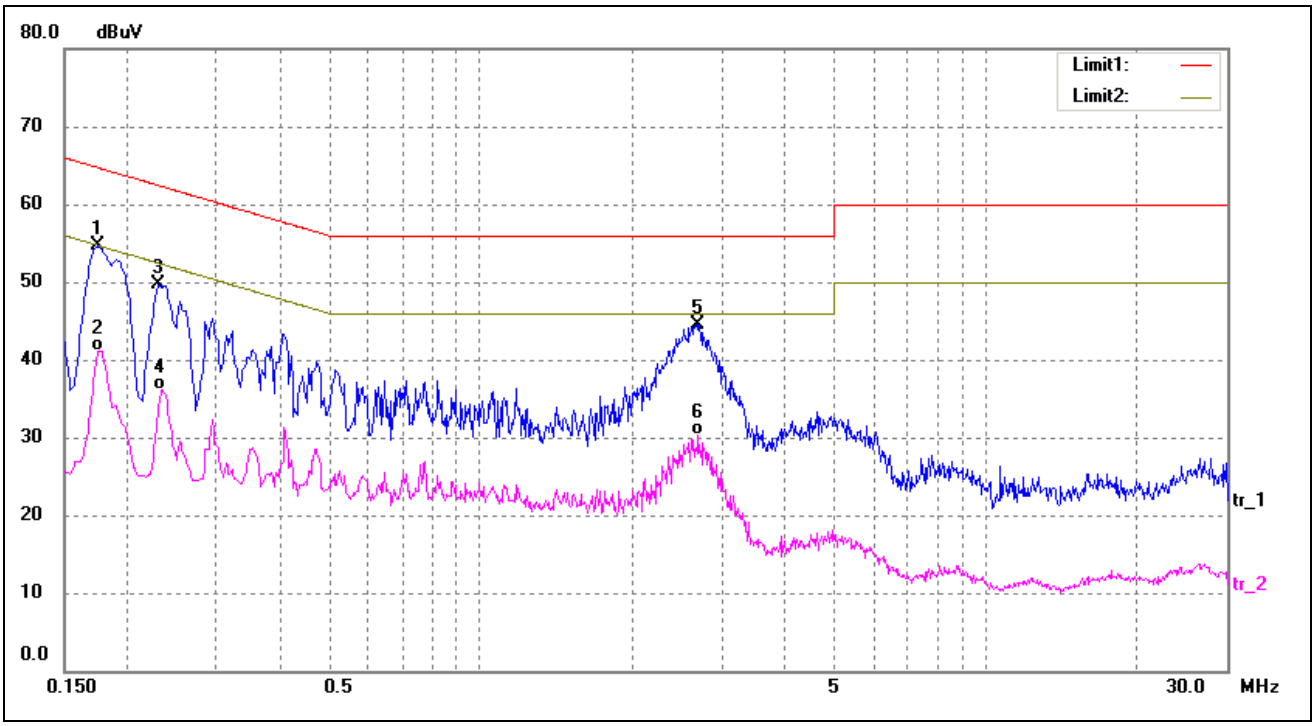
Comment: *AC 120V/60Hz; Adapter DC 5V*

Test Specification: *Neutral*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Detector
	(MHz)	(dBuV)	(dB/m)	(dBuV)	(dBuV)	(dB)	
1*	0.1940	44.65	12.50	57.15	63.86	-6.71	peak
2	0.1940	29.36	12.50	41.86	53.86	-12.00	AVG
3	0.2580	23.05	12.50	35.55	51.50	-15.95	AVG
4	0.2589	37.61	12.50	50.11	61.47	-11.36	peak
5	2.6980	34.10	13.00	47.10	56.00	-8.90	peak
6	2.6980	19.91	13.00	32.91	46.00	-13.09	AVG

Test Specification: *Line*

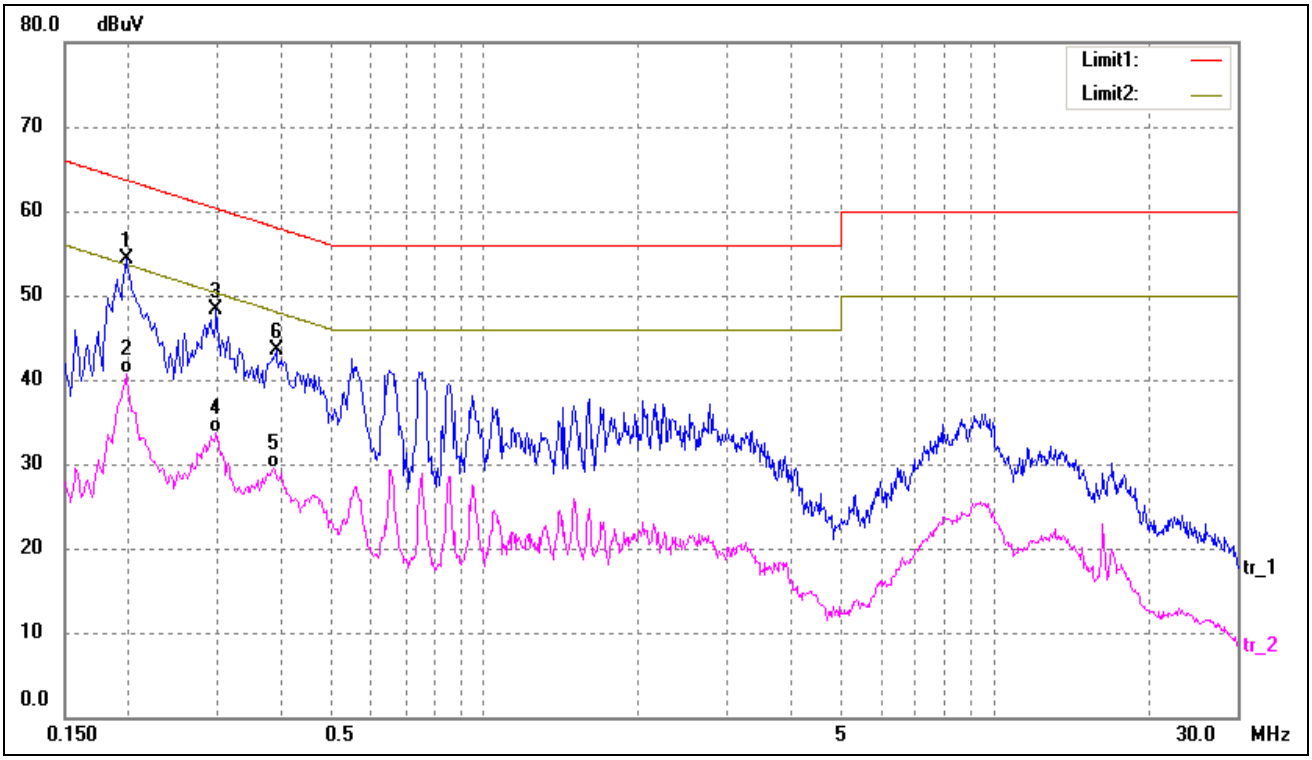


No.	Frequency	Reading	Correct	Result	Limit	Margin	Detector
	(MHz)	(dBuV)	(dB/m)	(dBuV)	(dBuV)	(dB)	
1*	0.1740	42.26	12.50	54.76	64.77	-10.01	peak
2	0.1740	28.61	12.50	41.11	54.77	-13.66	AVG
3	0.2300	37.21	12.50	49.71	62.45	-12.74	peak
4	0.2340	23.54	12.50	36.04	52.31	-16.27	AVG
5	2.6980	31.59	13.00	44.59	56.00	-11.41	peak
6	2.6980	17.33	13.00	30.33	46.00	-15.67	AVG

Plot of Conducted Emissions Test Data

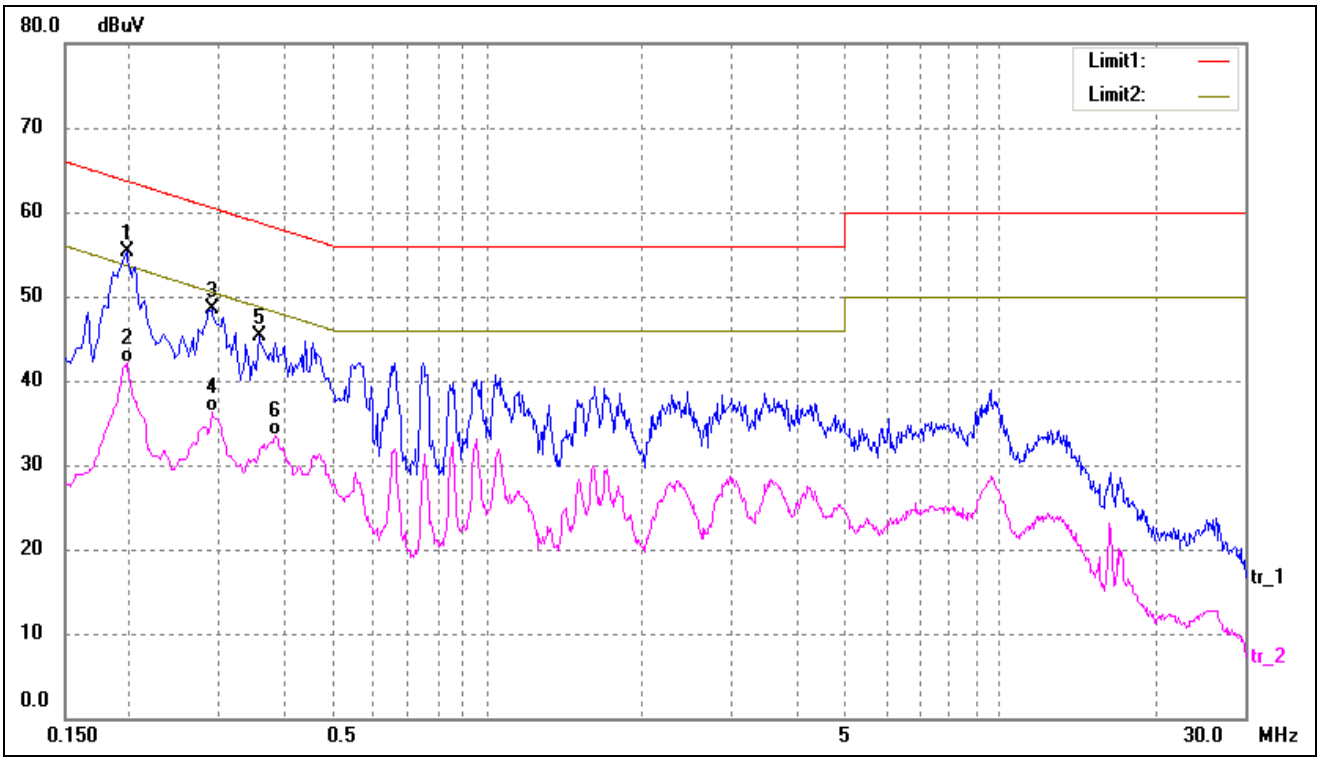
EUT: *Seal*
Tested Model: *8*
Operating Condition: *TM2*
Comment: *AC 120V/60Hz; Adapter DC 5V*

Test Specification: *Neutral*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Detector
	(MHz)	(dBuV)	(dB/m)	(dBuV)	(dBuV)	(dB)	
1*	0.1980	48.57	5.80	54.37	63.69	-9.32	peak
2	0.1980	34.88	5.80	40.68	53.69	-13.01	AVG
3	0.2980	42.41	5.80	48.21	60.30	-12.09	peak
4	0.2980	28.00	5.80	33.80	50.30	-16.50	AVG
5	0.3860	23.78	5.80	29.58	48.15	-18.57	AVG
6	0.3900	37.61	5.80	43.41	58.06	-14.65	peak

Test Specification: *Line*

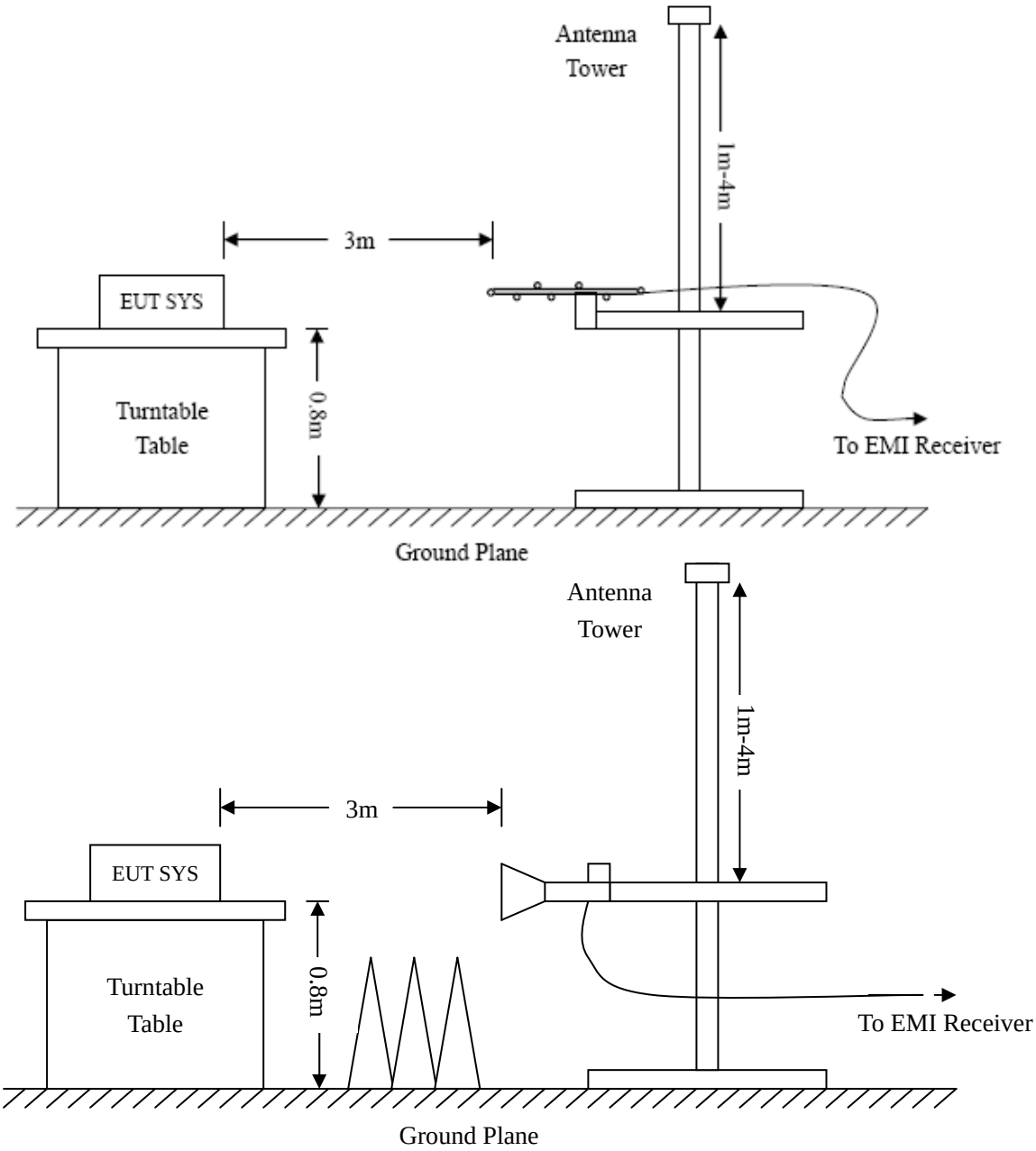


No.	Frequency	Reading	Correct	Result	Limit	Margin	Detector
	(MHz)	(dBuV)	(dB/m)	(dBuV)	(dBuV)	(dB)	
1*	0.1980	49.45	5.80	55.25	63.69	-8.44	peak
2	0.1980	36.27	5.80	42.07	53.69	-11.62	AVG
3	0.2900	42.65	5.80	48.45	60.52	-12.07	peak
4	0.2900	30.44	5.80	36.24	50.52	-14.28	AVG
5	0.3580	39.58	5.80	45.38	58.77	-13.39	peak
6	0.3860	27.67	5.80	33.47	48.15	-14.68	AVG

4. Radiated Emissions

4.1 Test Procedure

The setup of EUT is according with per ANSI C63.4-2014 measurement procedure. The specification used was with the FCC Part 15.109 Limit.
The external I/O cables were draped along the test table and formed a bundle 30 to 40 cm long in the middle.
The spacing between the peripherals was 10 cm.



4.2 Test Receiver Setup

Frequency :9kHz-30MHz	Frequency :30MHz-1GHz	Frequency :Above 1GHz
RBW=10KHz,	RBW=120KHz,	RBW=1MHz,
VBW =30KHz	VBW=300KHz	VBW=3MHz(Peak), 10Hz(AV)
Sweep time= Auto	Sweep time= Auto	Sweep time= Auto
Trace = max hold	Trace = max hold	Trace = max hold
Detector function = peak	Detector function = peak, QP	Detector function = peak, AV

4.3 Corrected Amplitude & Margin Calculation

The Corrected Amplitude is calculated by adding the Antenna Factor and the Cable Factor, and subtracting the Amplifier Gain from the Amplitude reading. The basic equation is as follows:

Corr. Ampl. = Indicated Reading – Corr. Factor

The "**Margin**" column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of -6dBμV means the emission is 6dBμV below the maximum limit for a Class B device. The equation for margin calculation is as follows:

Margin = Corr. Ampl. – FCC Part 15.109(a) Limit

4.4 Environmental Conditions

Temperature:	23 °C
Relative Humidity:	55 %
ATM Pressure:	1011 mbar

4.5 Summary of Test Results/Plots

According to the data, the EUT complied with the FCC Part 15.109(a) rule, and had the worst margin of:

-4.06 dB at **361.7139 MHz** in the **Vertical** polarization, TM2 mode, **9kHz** to **10 GHz**, **3Meters**

Plot of Radiated Emissions Test Data

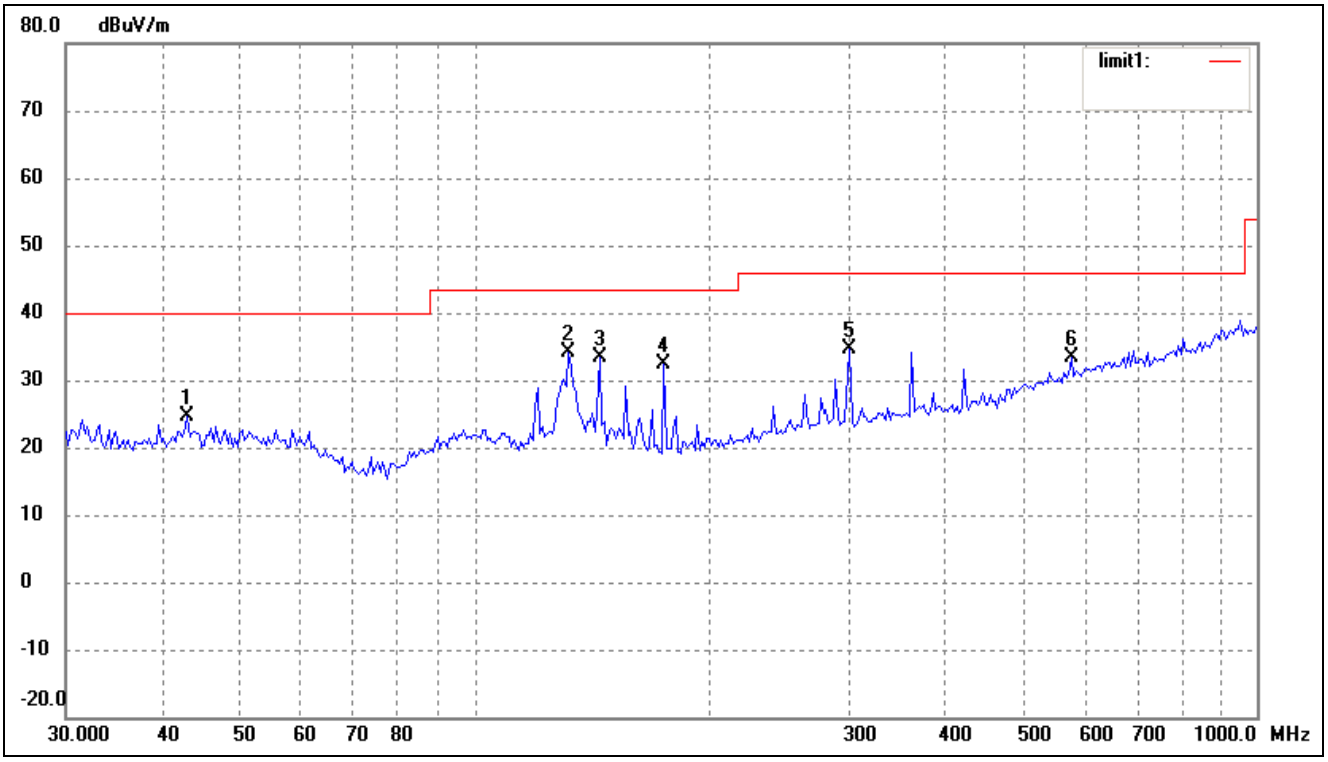
EUT: *Seal*

Tested Model: *8*

Operating Condition: *TM1*

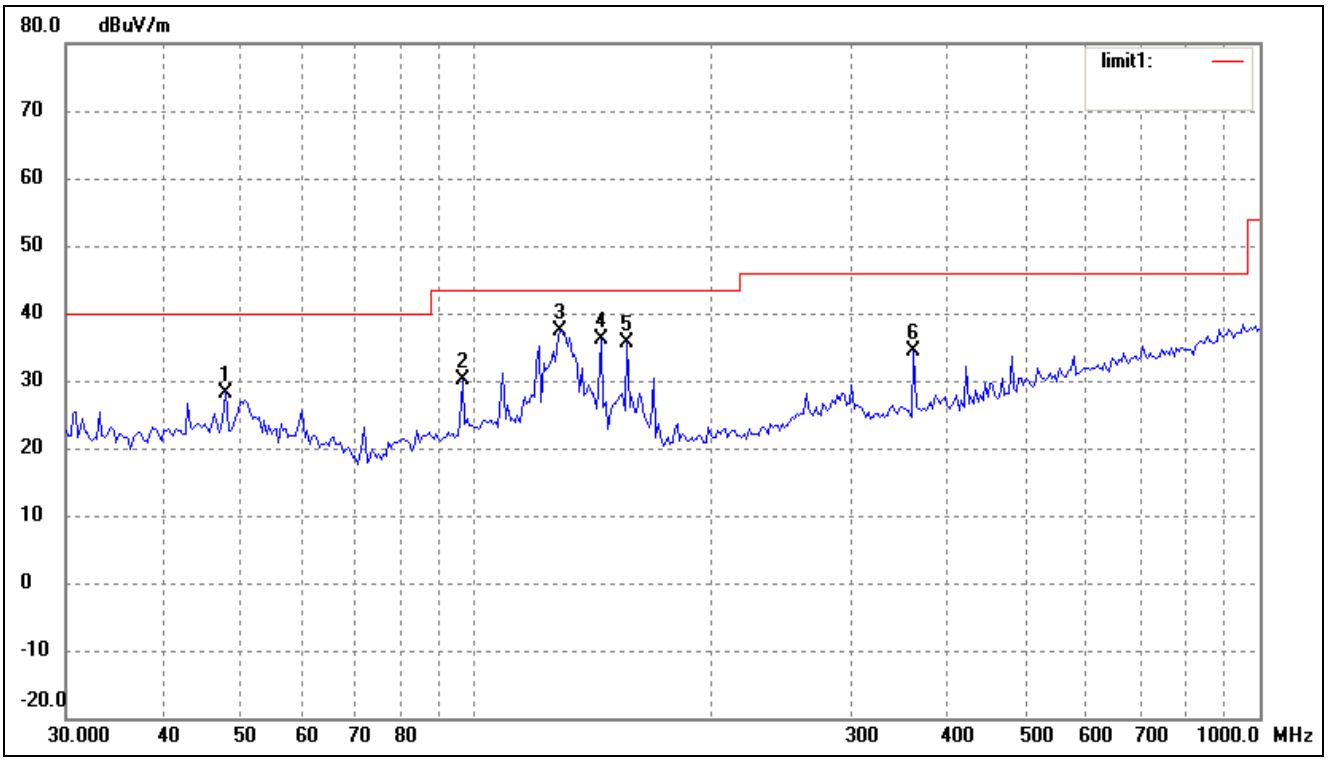
Comment: *AC 120V/60Hz; Adapter DC 5V*

Test Specification: *Horizontal*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	42.8998	16.47	8.20	24.67	40.00	-15.33	112	100	peak
2	131.7577	29.65	4.46	34.11	43.50	-9.39	112	100	peak
3	144.3348	29.40	4.01	33.41	43.50	-10.09	112	100	peak
4	174.4241	27.09	5.22	32.31	43.50	-11.19	112	100	peak
5	301.4224	24.86	9.78	34.64	46.00	-11.36	112	100	peak
6	578.6699	17.10	16.18	33.28	46.00	-12.72	112	100	peak

Test Specification: *Vertical*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	47.9940	20.18	8.07	28.25	40.00	-11.75	41	100	peak
2	96.0986	21.94	8.14	30.08	43.50	-13.42	41	100	peak
3	128.1130	32.51	4.82	37.33	43.50	-6.17	41	100	peak
4	144.3348	32.23	4.01	36.24	43.50	-7.26	41	100	peak
5	155.9101	31.23	4.35	35.58	43.50	-7.92	41	100	peak
6	361.7139	23.41	10.91	34.32	46.00	-11.68	41	100	peak

Plot of Radiated Emissions Test Data

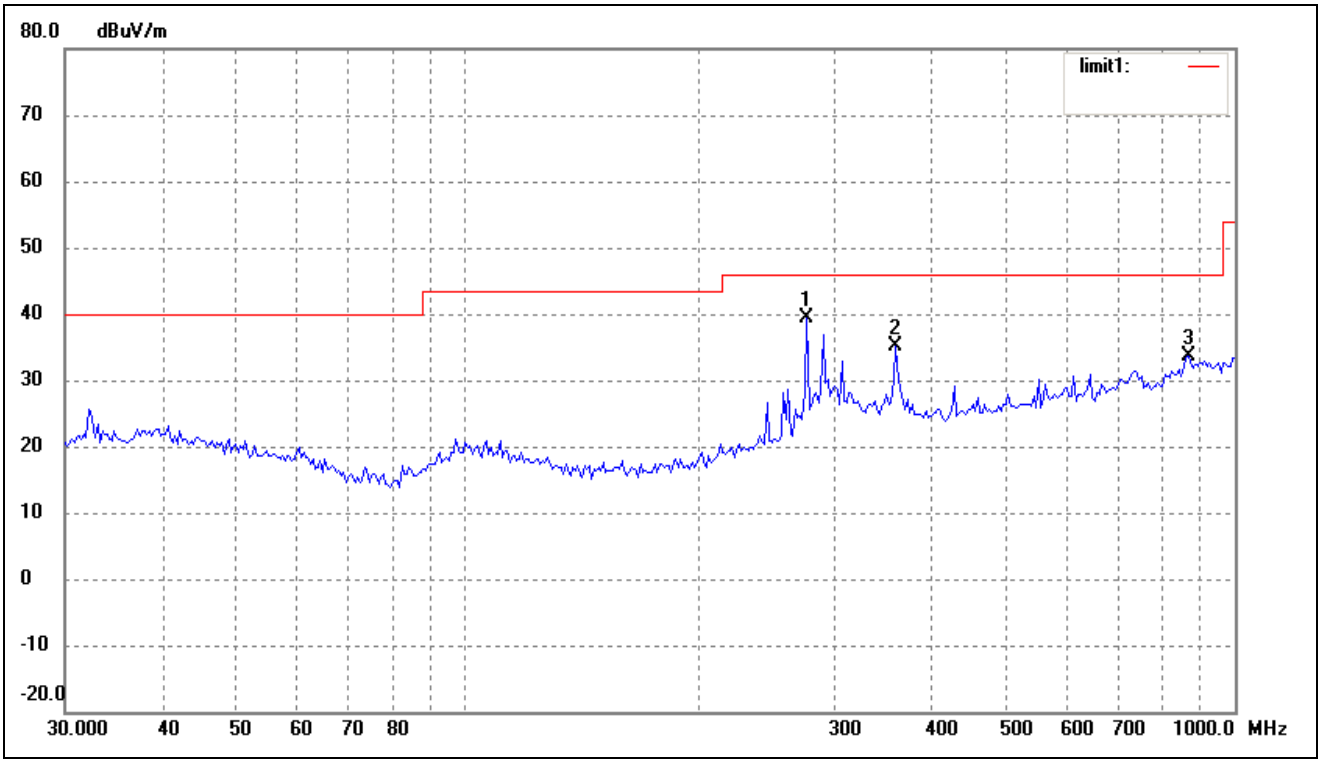
EUT: *Seal*

Tested Model: *8*

Operating Condition: *TM2*

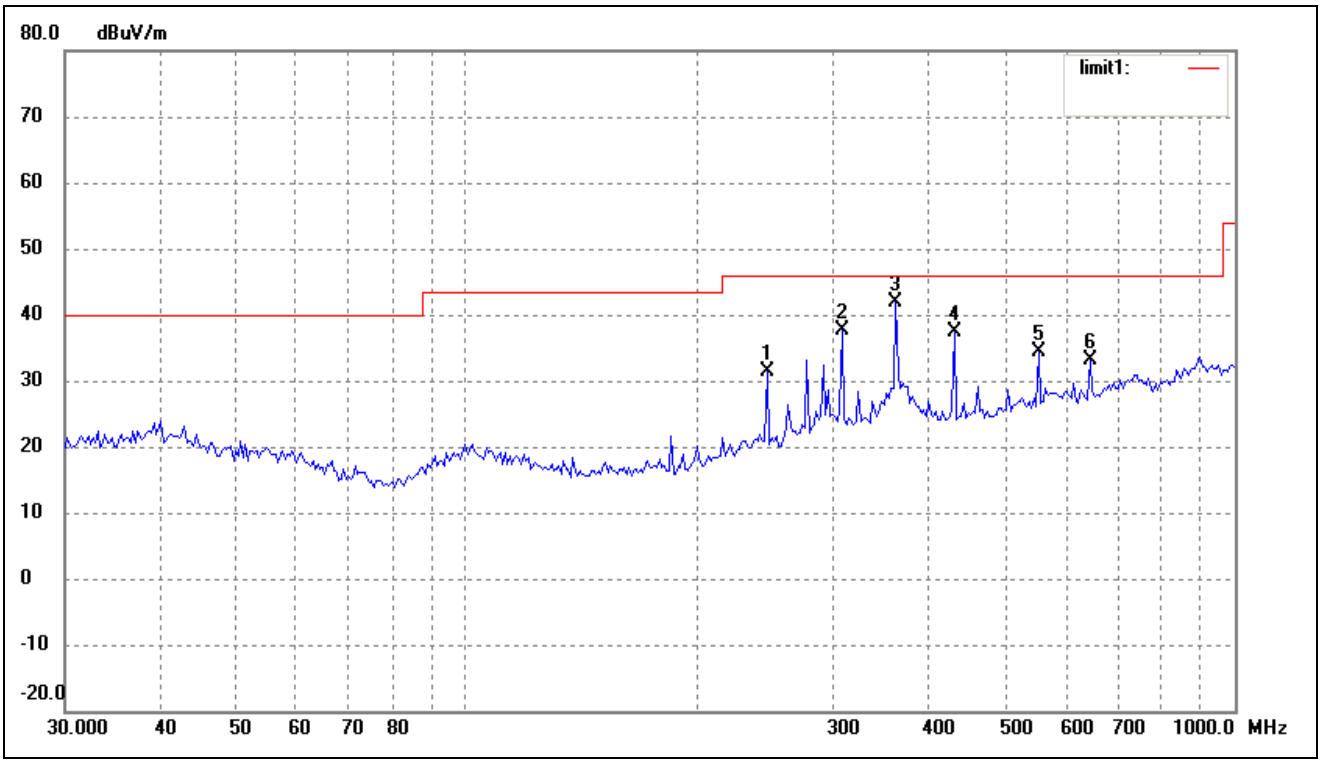
Comment: *AC 120V/60Hz; Adapter DC 5V*

Test Specification: *Horizontal*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(•)	(cm)	
1	277.0935	31.21	8.13	39.34	46.00	-6.66	360	100	peak
2	361.7139	25.80	9.26	35.06	46.00	-10.94	360	100	peak
3	869.1302	17.21	16.46	33.67	46.00	-12.33	360	100	peak

Test Specification: *Vertical*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(•)	(cm)	
1	245.9509	24.98	6.47	31.45	46.00	-14.55	360	100	peak
2	307.8313	28.46	9.20	37.66	46.00	-8.34	360	100	peak
3	361.7139	32.68	9.26	41.94	46.00	-4.06	360	100	peak
4	431.0316	27.70	9.74	37.44	46.00	-8.56	360	100	peak
5	554.8254	22.97	11.42	34.39	46.00	-11.61	360	100	peak
6	647.3856	20.82	12.37	33.19	46.00	-12.81	360	100	peak

Plot of Radiated Emissions Test Data

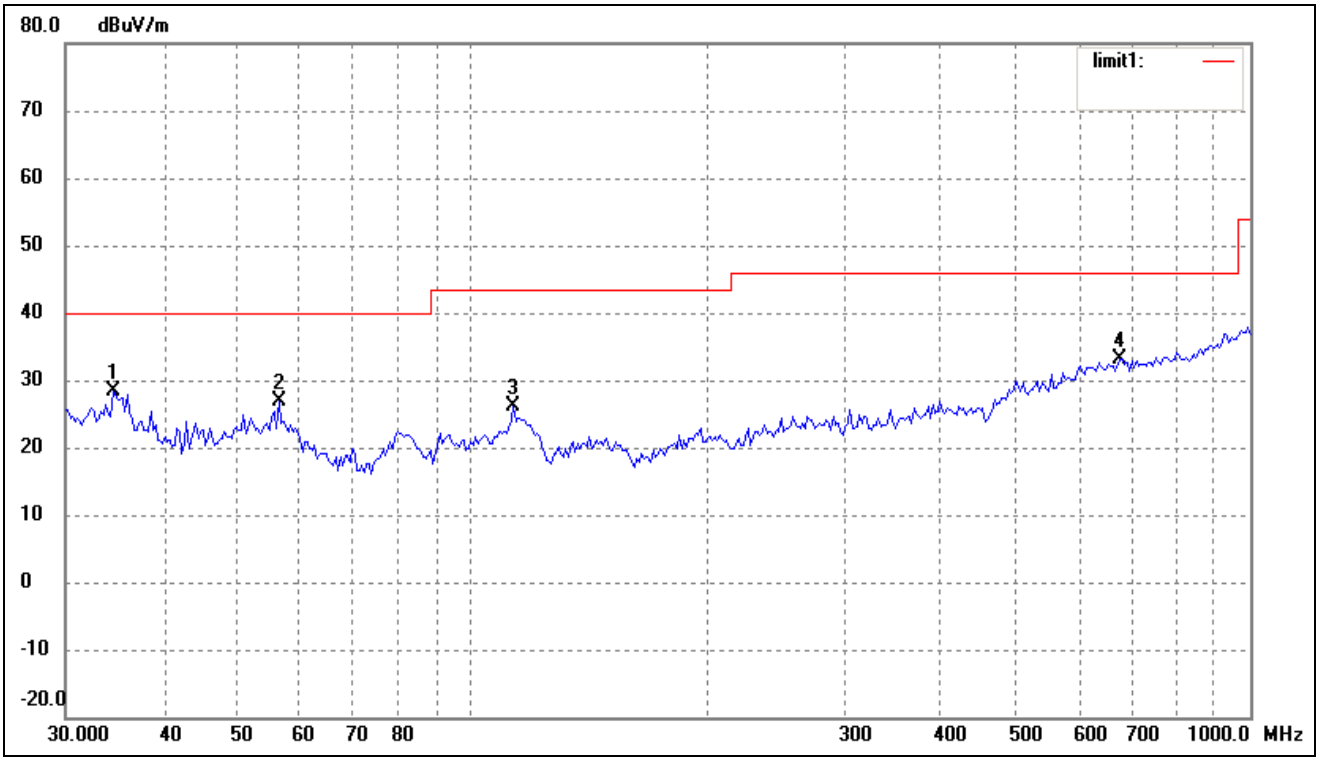
EUT: *Seal*

Tested Model: *8*

Operating Condition: *TM3*

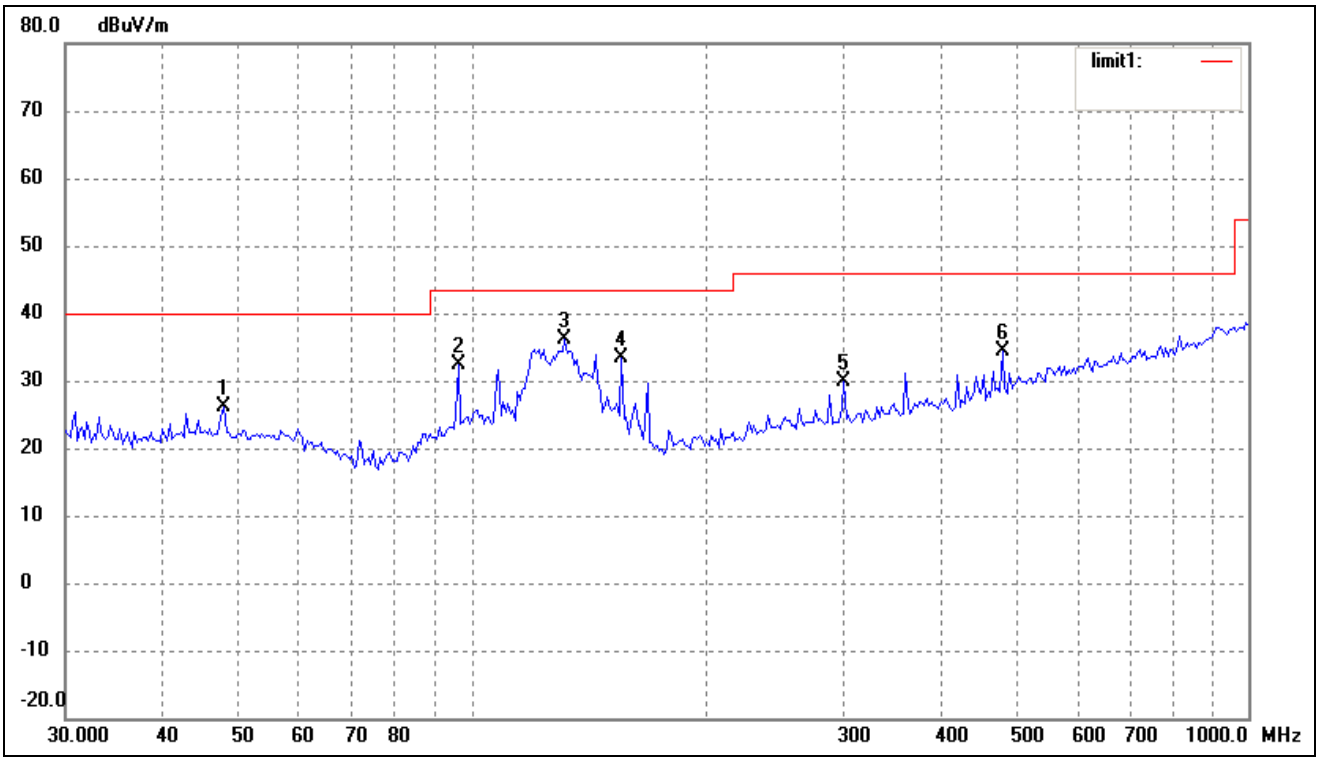
Comment: *DC 3.7V*

Test Specification: *Horizontal*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	(•)	(cm)	
1	34.5172	21.65	6.77	28.42	40.00	-11.58	157	100	peak
2	56.3947	19.18	7.70	26.88	40.00	-13.12	157	100	peak
3	112.9196	18.93	7.11	26.04	43.50	-17.46	157	100	peak
4	679.9600	15.73	17.33	33.06	46.00	-12.94	157	100	peak

Test Specification: *Vertical*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	(•)	(cm)	
1	47.9940	18.14	8.07	26.21	40.00	-13.79	54	100	peak
2	96.0986	24.35	8.14	32.49	43.50	-11.01	54	100	peak
3	131.7577	31.71	4.46	36.17	43.50	-7.33	54	100	peak
4	155.9101	29.06	4.35	33.41	43.50	-10.09	54	100	peak
5	301.4224	20.06	9.78	29.84	46.00	-16.16	54	100	peak
6	482.2156	21.65	12.67	34.32	46.00	-11.68	54	100	peak

Note: Testing is carried out with frequency rang 9kHz to the 10GHz, which below 30MHz and above 1GHz are attenuated more than 20 dB below the permissible value and are not showed in the test report.

******* END OF REPORT *******