SGS-CSTC Standards Technical Services Co., Ltd.
Shenzhen Branch

No. 1 Workshop, M-10, Middle section, Science & Technology Park,
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TEST REPORT

Application No.:	SZEM1711011731CR
Applicant:	Shenzhen Reflying Electronic Co., Ltd.
Address of Applicant:	6 Bldg., Gaoxinjian Industrial Zone, Heping Villag Fuyong Town, Bao'an District, Shenzhen, Guangdong, China
Manufacturer/ Factory:	Shenzhen Reflying Electronic Co., Ltd.
Address of Manufacturer/ Factory:	6 Bldg., Gaoxinjian Industrial Zone, Heping Villag Fuyong Town, Bao'an District, Shenzhen, Guangdong, China
Equipment Under Test (EUT):	
EUT Name:	Magmount QI Car Charger
Model No.:	RCC71, CY2367ACVEN ♣
♣	Please refer to section 2 of this report which indicates which model was actually tested and which were electrically identical.
Standard(s) :	47 CFR Part 18: 2015
FCC ID	A7M-CY2367ACVEN
Date of Receipt:	2017-11-22
Date of Test:	2017-11-29 to 2017-11-30
Date of Issue:	2017-12-20
Test Result:	**Pass***

* In the configuration tested, the EUT complied with the standards specified above.

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Jack Zhang
EMC Laboratory Manager

The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards. Any mention of SGS International Electrical Approvals or testing done by SGS International Electrical Approvals in connection with, distribution or use of the product described in this report must be approved by SGS International Electrical Approvals in writing.

Revision Record				
Version	**Chapter**	**Date**	**Modifier**	**Remark**
01		2017-12-20		Original

Authorized for issue by:				
				
		Gray Gao /Project Engineer		
				
		Eric Fu /Reviewer		

2 Test Summary

Emission Part				
Item	**Standard**	**Method**	**Requirement**	**Result**
Radiated Emissions (30MHz-1GHz)	47 CFR Part 18: 2015	FCC OST/MP-5:1986	N/A	Pass
Radiated Emissions (Magnetic field Strength) (9kHz-30MHz)	47 CFR Part 18: 2015	FCC OST/MP-5:1986	N/A	Pass

N/A: Not applicable

Declaration of EUT Family Grouping:

Model No.: RCC71, CY2367ACVEN

Only the model CY2367ACVEN was tested, since the electrical circuit design, layout, components used, internal wiring and functions were identical for the above models, with only difference on model No..

3 Contents

4 General Information

4.1 Details of E.U.T.

	Power supply:	DC input: 5V 2A DC output: 5V 1.5A
	Cable:	USB cable: 100cm shielded.
	Sample Type:	Fix production
	Operation Frequency:	110KHz-175KHz

4.2 Description of Support Units

Description	Manufacturer	Model No.	Serial No.
Micro USB Cable	PHILIPS	SWR2101	REF. No.SEA0700
Resistance	provided by SGS	3.33 ohm	N/A
Mobile phone	Apple	A1863	N/A

4.3 Measurement Uncertainty

No.	Item	Measurement Uncertainty
1	Radiated emission	4.5dB (30MHz-1GHz)
2	Temperature test	1℃
3	Humidity test	3%

4.4 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen Branch

No. 1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, Guangdong, China. 518057.

Tel: +86 755 2601 2053 Fax: +86 755 2671 0594

No tests were sub-contracted.

4.5 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

• CNAS (No. CNAS L2929)

CNAS has accredited SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch EMC Lab to ISO/IEC 17025:2005 General Requirements for the Competence of Testing and Calibration Laboratories (CNAS-CL01 Accreditation Criteria for the Competence of Testing and Calibration Laboratories) for the competence in the field of testing.

• A2LA (Certificate No. 3816.01)

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory is accredited by the American Association for Laboratory Accreditation(A2LA). Certificate No. 3816.01.

• VCCI

The 10m Semi-anechoic chamber and Shielded Room of SGS-CSTC Standards Technical Services Co., Ltd. have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: G-823, R-4188, T-1153 and C-2383 respectively.

• FCC –Designation Number: CN1178

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been recognized as an accredited testing laboratory.

Designation Number: CN1178. Test Firm Registration Number: 406779.

• Industry Canada (IC)

Two 3m Semi-anechoic chambers and the 10m Semi-anechoic chamber of SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch EMC Lab have been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 4620C-1, 4620C-2, 4620C-3.

4.6 Deviation from Standards

None

4.7 Abnormalities from Standard Conditions

None

5 Equipment List

Radiated Emissions (30MHz-1GHz)					
Equipment	**Manufacturer**	**Model No**	**Inventory No**	**Cal Date**	**Cal Due Date**
3m Semi-Anechoic Chamber	ETS-LINDGREN	N/A	SEM001-01	2017-08-05	2020-08-04
Measurement Software	AUDIX	e3 V8.2014-6-27	N/A	N/A	N/A
Coaxial Cable	SGS	N/A	SEM025-01	2017-07-13	2018-07-12
EMI Test Receiver	Agilent Technologies	N9038A	SEM004-05	2017-09-27	2018-09-26
BiConiLog Antenna (26-3000MHz)	ETS-LINDGREN	3142C	SEM003-01	2017-06-27	2020-06-26
Pre-amplifier (0.1-1300MHz)	Agilent Technologies	8447D	SEM005-01	2017-04-14	2018-04-13

Radiated Emissions (Magnetic field Strength) (9kHz-30MHz)					
Equipment	**Manufacturer**	**Model No**	**Inventory No**	**Cal Date**	**Cal Due Date**
10m Semi-Anechoic Chamber	SAEMC	FSAC1018	SEM001-03	2017-05-10	2018-05-09
Measurement Software	AUDIX	e3 V8.2014-6-27	N/A	N/A	N/A
Coaxial Cable	SGS	N/A	SEM029-01	2017-07-13	2018-07-12
EMI Test Receiver (9kHz-3GHz)	Rohde & Schwarz	ESR	SEM004-03	2017-04-14	2018-04-13
Trilog-Broadband Antenna (30MHz-1GHz)	Schwarzbeck	VULB9168	SEM003-18	2016-06-29	2019-06-28
Pre-amplifier	Sonoma Instrument Co	310N	SEM005-04	2017-06-05	2018-06-04
Active.Loop Antenna	ETS-LINDGREN	6502	SEM003-08	2017-08-22	2020-08-21

General used equipment					
Equipment	**Manufacturer**	**Model No**	**Inventory No**	**Cal Date**	**Cal Due Date**
Humidity/ Temperature Indicator	Shanghai Meteorological Industry Factory	ZJ1-2B	SEM002-03	2017-09-29	2018-09-28
Humidity/ Temperature Indicator	Shanghai Meteorological Industry Factory	ZJ1-2B	SEM002-04	2017-09-29	2018-09-28
Humidity/ Temperature Indicator	Mingle	N/A	SEM002-08	2017-09-29	2018-09-28
Barometer	Changchun Meteorological Industry Factory	DYM3	SEM002-01	2017-04-18	2018-04-17

6 Emission Test Results

6.1 Radiated Emissions (30MHz-1GHz)

Test Requirement: 47 CFR Part 18: 2015
Test Method: FCC OST/MP-5:1986
Frequency Range: 30MHz to 1GHz
Measurement Distance: 3m

6.1.1 E.U.T. Operation

Operating Environment:

Temperature: 23.6 °C Humidity: 58 % RH Atmospheric Pressure: 1005 mbar

Test Procedure:

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 10 meter semi-anechoic chamber(30MHz-1000MHz) and 10 meter semi-anechoic chamber(9kHz-30MHz). The table was rotated 360 degrees to determine the position of the highest radiation.

b. The EUT was set 10 meters(30MHz-1000MHz) and 10 meter(9kHz-30MHz) away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

c. Above 30MHz:The Analyzer/Receiver scanned from 30MHz to 1000MHz.The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

d. Below 30MHz: The Analyzer/Receiver scanned from 9kHz to 30MHz.The antenna height is 2 meters above the ground to determine the maximum value of the field strength.

e. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 2 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

f. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

g. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

h. Repeat above procedures until all frequencies measured was complete.

i. Measurement Requirement:

According to the clause 18.305(c)notes 2.

At frequencies at or above 30MHz:

Limit3m(dBuV)=Limitxm(dBuV)+20log(xm/3m)

At frequencies below 30MHz:

Limit10m(dBuV)=Limitxm(dBuV)+20log(xm/3m)

Remark: x replace the number 10,30,300.

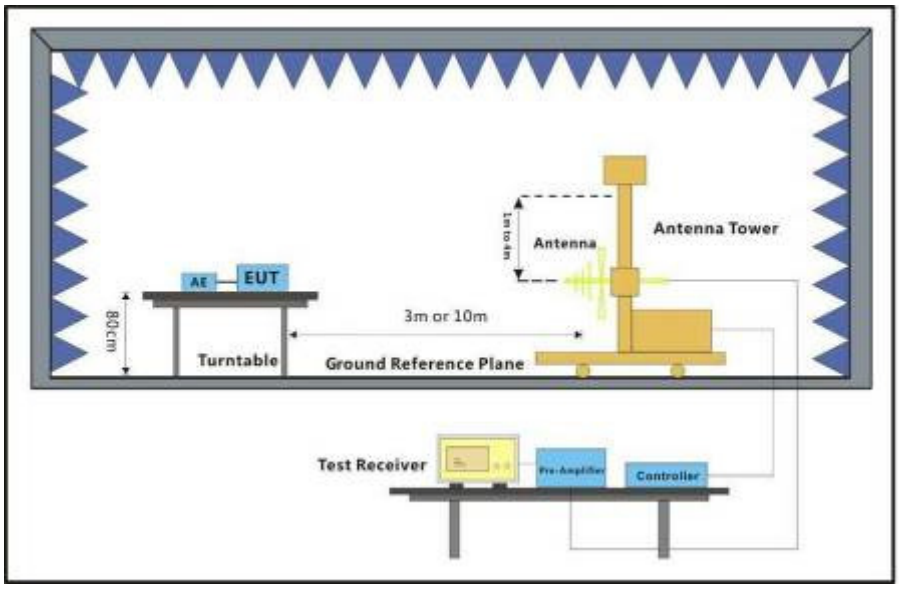
Test Mode: DC 5.0V

1) Less than 1% of current
2) Less than 50% of current
3) 100% full of current

Instruments Used: Refer to section 5 for details

Test Results: Pass

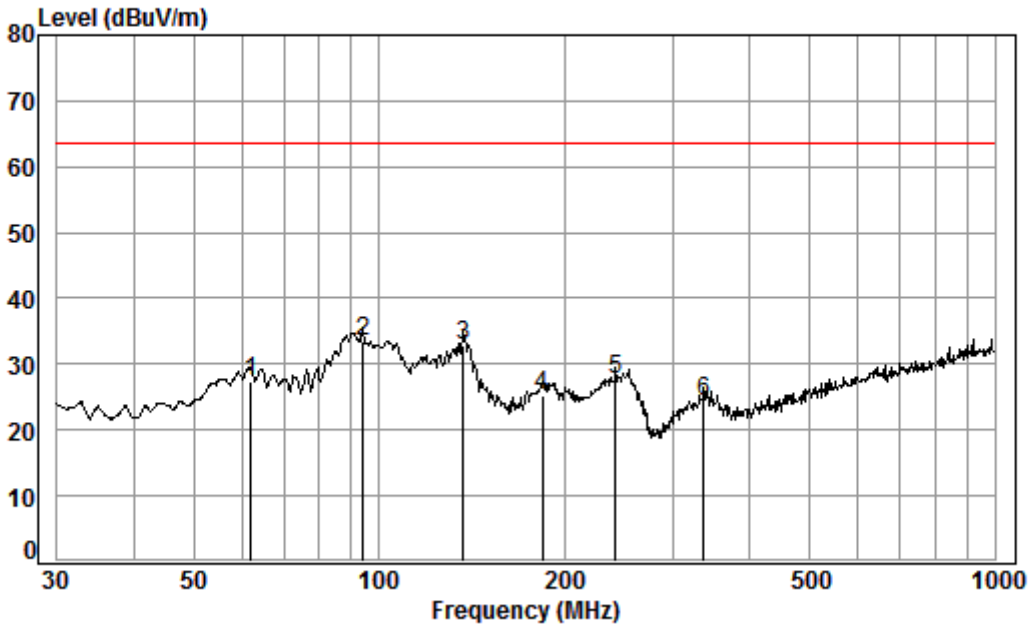
6.1.2 Test Setup Diagram



6.1.3 Measurement Data

An initial pre-scan was performed in the chamber using the spectrum analyser in peak detection mode. Quasi-peak measurements were conducted based on the peak sweep graph. The EUT was measured by BiConiLog antenna with 2 orthogonal polarities.

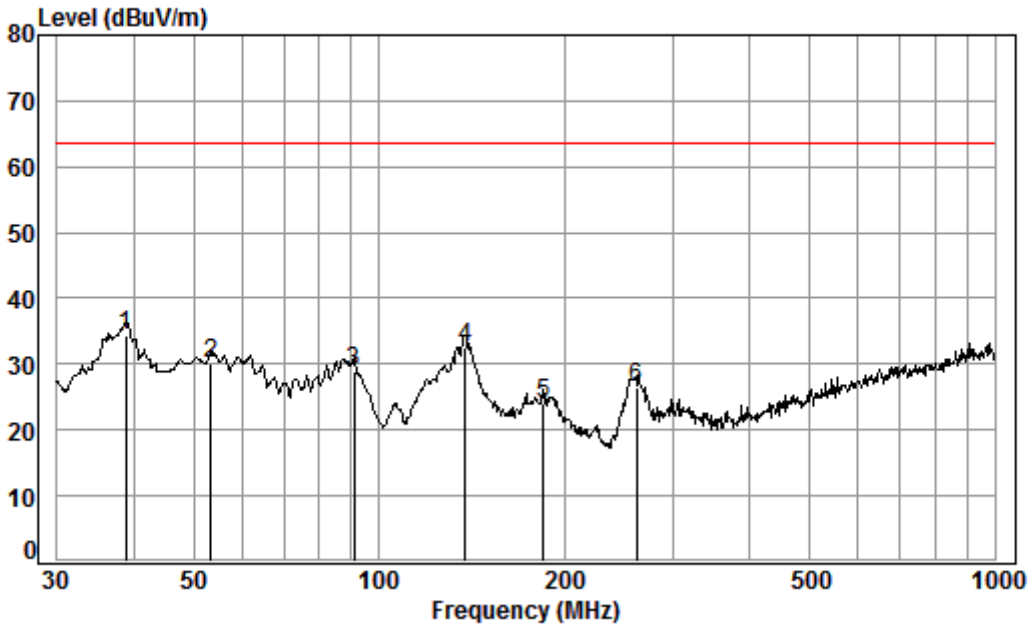
Mode:a; Polarization:Horizontal



Condition: 3m HORIZONTAL
Job No. : 11731CR
Test mode: a

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	62.00	0.80	13.12	27.26	40.84	27.50	63.52	-36.02
2 pp	94.10	1.14	13.48	27.21	46.13	33.54	63.52	-29.98
3	136.94	1.29	13.61	26.97	44.98	32.91	63.52	-30.61
4	184.49	1.38	16.04	26.75	34.70	25.37	63.52	-38.15
5	242.53	1.64	18.84	26.56	33.64	27.56	63.52	-35.96
6	336.04	2.02	20.70	26.68	28.33	24.37	63.52	-39.15

Mode:a; Polarization:Vertical



Condition: 3m VERTICAL
Job No. : 11731CR
Test mode: a

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1 pp	38.75	0.60	18.05	27.32	43.13	34.46	63.52	-29.06
2	53.32	0.80	13.85	27.28	42.65	30.02	63.52	-33.50
3	91.17	1.11	13.21	27.21	41.90	29.01	63.52	-34.51
4	137.90	1.29	13.64	26.97	44.55	32.51	63.52	-31.01
5	185.14	1.38	16.06	26.75	33.45	24.14	63.52	-39.38
6	261.98	1.73	19.07	26.50	32.08	26.38	63.52	-37.14

Note:

Frequency (MHz)	Polarity	Measured level at 3m (dBuV/m)	Creast factor (dB)	Result at 300m (dBuV/m)	Limit at 300m (dBuV/m)	Verdict
64.89	Horizontal	27.50	-40.00	-12.5	23.52	Pass
142.32	Horizontal	33.54	-40.00	-6.46	23.52	Pass
222.17	Horizontal	32.91	-40.00	-7.09	23.52	Pass
296.18	Horizontal	25.37	-40.00	-14.63	23.52	Pass
406.09	Horizontal	27.56	-40.00	-12.44	23.52	Pass
925.76	Horizontal	24.37	-40.00	-15.63	23.52	Pass
59.03	Vertical	34.46	-40.00	-5.54	23.52	Pass
88.34	Vertical	30.02	-40.00	-9.98	23.52	Pass
145.35	Vertical	29.01	-40.00	-10.99	23.52	Pass
198.59	Vertical	32.51	-40.00	-7.49	23.52	Pass
221.39	Vertical	24.14	-40.00	-15.86	23.52	Pass
297.22	Vertical	26.38	-40.00	-13.62	23.52	Pass

1.Level=Read Level+Cable loss+Ant Factor-Preamp Factor

2.All modes have been tested and only record the worst test result of DC 5.0V output with 100% current.

6.2 Radiated Emissions (Magnetic field Strength) (9kHz-30MHz)

Test Requirement: 47 CFR Part 18: 2015
Test Method: FCC OST/MP-5:1986
Frequency Range: 9kHz to 30MHz
Measurement Distance: 10m

6.2.1 E.U.T. Operation

Operating Environment:

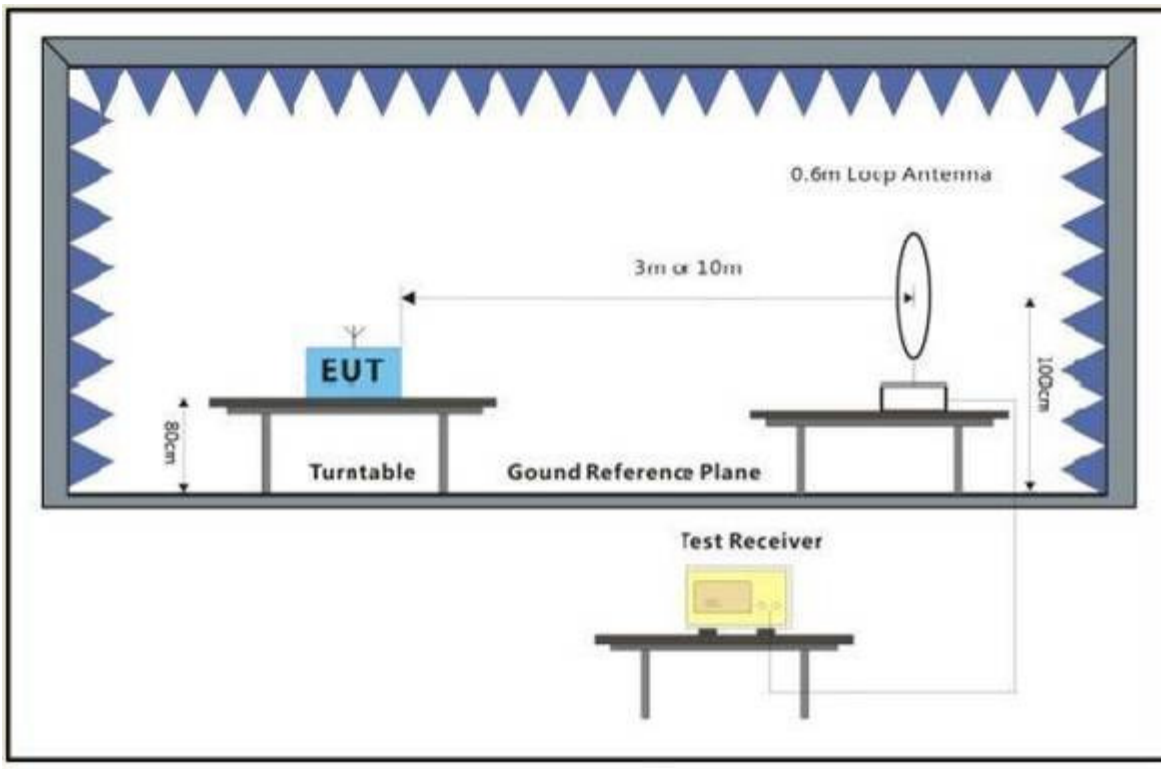
Temperature: 23.6 °C Humidity: 64.7 % RH Atmospheric Pressure: 1005 mbar

Test mode a:Normal Working mode,keep EUT working with full load.
b:Normal Working mode,keep EUT working with half load
c:Normal Working mode,keep EUT working with no load

Test Worse case a:Normal Working mode,keep EUT working with full load.

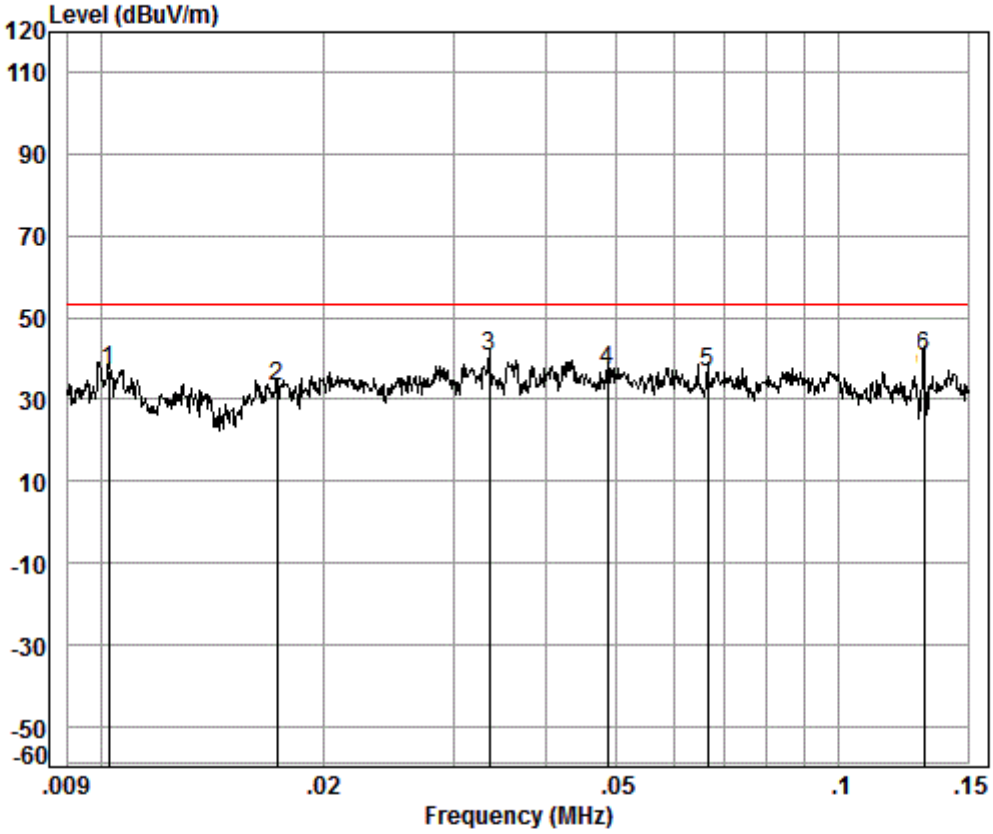
6.2.2 Measurement Data

An initial pre-scan was performed in the chamber using the spectrum analyser in peak detection mode. Quasi-peak measurements were conducted based on the peak sweep graph. The EUT was measured by BiConiLog antenna with 2 orthogonal polarities.



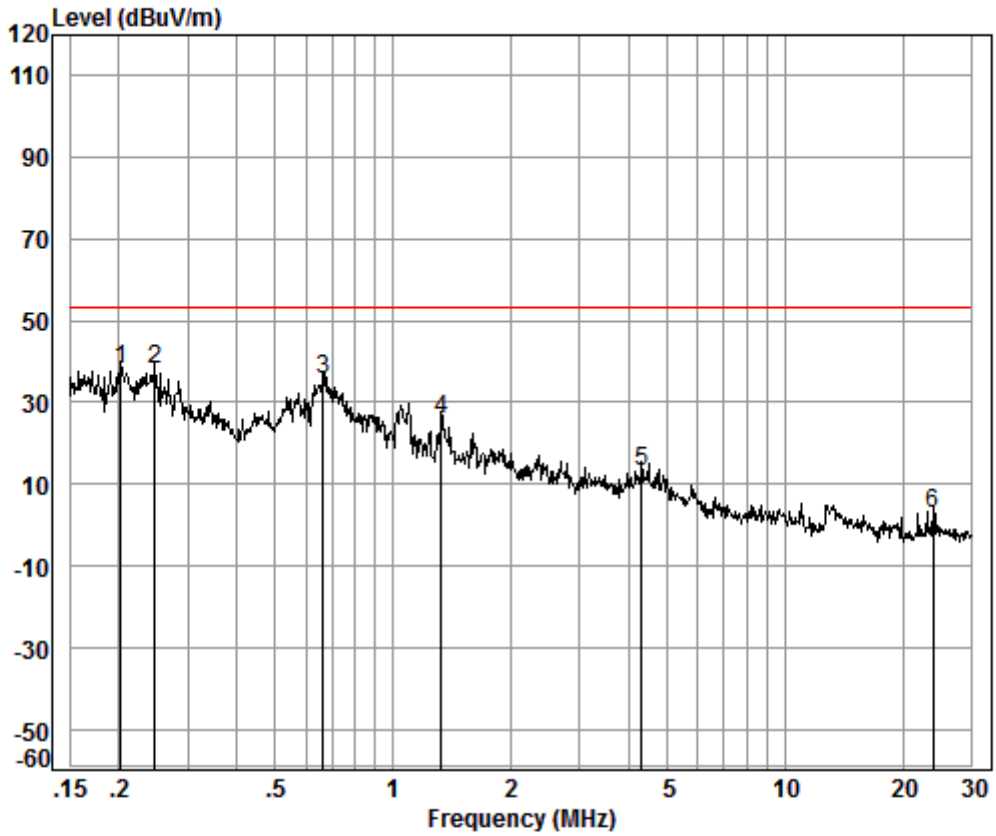
Below 30MHz

Mode:a; Polarization:X



Condition: 10m
Job No. : 11731CR
Test Mode: a

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	0.01	0.29	19.15	32.48	50.35	37.31	53.06	-15.75
2	0.02	0.23	15.89	32.49	49.39	33.02	53.06	-20.04
3 pp	0.03	0.16	13.53	32.50	59.24	40.43	53.06	-12.63
4	0.05	0.12	12.48	32.51	56.94	37.03	53.06	-16.03
5	0.07	0.09	12.19	32.51	57.09	36.86	53.06	-16.20
6	0.13	0.06	11.80	32.51	66.99	46.34	53.06	-6.72



Condition: 10m
Job No. : 11731CR
Test Mode: a

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	0.20	0.08	11.87	32.51	58.45	37.89	53.06	-15.17
2 pp	0.25	0.08	11.99	32.51	58.50	38.06	53.06	-15.00
3	0.66	0.16	11.91	32.47	55.91	35.51	53.06	-17.55
4	1.33	0.28	12.04	32.45	45.89	25.76	53.06	-27.30
5	4.31	0.41	12.03	32.48	33.34	13.30	53.06	-39.76
6	23.89	0.72	8.94	32.53	25.69	2.82	53.06	-50.24

Frequency (MHz)	Measured level at 10m (dBuV/m)	Creast factor (dB)	Result at 300m (dBuV/m)	Limit at 300m (dBuV/m)	Verdict
0.01	37.31	-29.54	7.77	23.52	Pass
0.02	33.02	-29.54	3.48	23.52	Pass
0.03	40.43	-29.54	10.89	23.52	Pass
0.05	37.03	-29.54	7.49	23.52	Pass
0.07	36.86	-29.54	7.32	23.52	Pass
0.13(Fundamental)	46.34	-29.54	16.8	23.52	Pass
0.20	37.89	-29.54	8.35	23.52	Pass
0.25	38.06	-29.54	8.52	23.52	Pass
0.66	35.51	-29.54	5.97	23.52	Pass
1.33	25.76	-29.54	-3.78	23.52	Pass
4.30	13.30	-29.54	-16.24	23.52	Pass
23.89	2.82	-29.54	-26.72	23.52	Pass

Remark:

1.The loop antenna rotated about both Vertical and Horizontal to find the maximum emission,So only the worst position(Horizontal) was report.

2.All modes have been tested and only record the worst test result of DC 5.0V output with 100% current.

7 Photographs

7.1 EUT Constructional Details (EUT Photos)

Refer to Appendix A - Photographs of EUT Constructional Details for SZEM1710010731CR.

- End of the Report -