

FCC Part 15B Measurement and Test Report

For

Globe View Technology Limited

6F, No.129, Xin-Ann 5th Rd., Section 50, Baoan District, Shenzhen,

Guangdong Province, China.

FCC ID: 2AHCXGV720

Test Rule(s): FCC Part 15 Subpart B

Product Description: Camera

Tested Model: GV720

Report No.: STRD1611028E

Tested Date: 2016-11-08 to 2016-11-29

Issued Date: 2016-11-30

Tested By: Tink Zeng / Engineer

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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: Globe View Technology Limited
Address of applicant: 6F, No.129, Xin-Ann 5th Rd., Section 50, Baoan District, Shenzhen, Guangdong Province, China.

Manufacturer: Globe View Technology Limited
Address of manufacturer: 6F, No.129, Xin-Ann 5th Rd., Section 50, Baoan District, Shenzhen, Guangdong Province, China.

General Description of EUT	
Product Name:	Camera
Trade Name:	GVT
Model No.:	GV720
Adding Model(s):	GV720A, GV720B, GV720C, GV720D, GV720E, GV720F, GV720G, GV720H, SDV360A
<i>Note: The test data is gathered from a production sample, provided by the manufacturer. The appearance of others models listed in the report is different from main-test model GV720, but the circuit and the electronic construction do not change, declared by the manufacturer.</i>	

Technical Characteristics of EUT	
Rated Voltage:	Battery DC 3.7V; USB 5V From Adapter
Rated Current:	1.5A
Rated Power:	/
Power Adapter Model:	/
Highest Internal Frequency:	40MHz
Classification of ITE:	Class B

1.2 Test Standards

The following report is prepared on behalf of the Globe View Technology Limited 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 List		
Test Mode	Description	Remark
TM1	Downloading	Connected to PC
TM2	Charging	/

Accessories Equipment List and Details			
Description	Manufacturer	Model No.	Serial Number
Notebook	Lenovo	E10	LR-63C8R
Accessories Cable List and Details			
Cable Description	Length (m)	Shielded/Unshielded	With Core/Without Core
USB	1.0	Shielded	Without Core
EUT 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	$\pm 2.88\text{dB}$
Transmitter Spurious Emissions	Radiated	$\pm 5.1\text{dB}$

1.7 Test Equipment List and Details

No.	Description	Manufacturer	Model	Serial No.	Cal Date	Due Date
SEMT-1072	Spectrum Analyzer	Agilent	E4407B	MY41440400	2016-06-04	2017-06-03
SEMT-1031	Spectrum Analyzer	Rohde & Schwarz	FSP30	836079/035	2016-06-04	2017-06-03
SEMT-1007	EMI Test Receiver	Rohde & Schwarz	ESVB	825471/005	2016-06-04	2017-06-03
SEMT-1008	Amplifier	Agilent	8447F	3113A06717	2016-06-04	2017-06-03
SEMT-1043	Amplifier	C&D	PAP-1G18	2002	2016-06-04	2017-06-03
SEMT-1011	Broadband Antenna	Schwarz beck	VULB9163	9163-333	2016-06-04	2017-06-03
SEMT-1042	Horn Antenna	ETS	3117	00086197	2016-06-04	2017-06-03
SEMT-1121	Horn Antenna	ETS	3116B	00088203	2016-06-04	2017-06-03
SEMT-1069	Loop Antenna	Schwarz beck	FMZB 1516	9773	2016-06-04	2017-06-03
SEMT-1001	EMI Test Receiver	Rohde & Schwarz	ESPI	101611	2016-06-04	2017-06-03
SEMT-1003	L.I.S.N	Schwarz beck	NSLK8126	8126-224	2016-06-04	2017-06-03
SEMT-1002	Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100911	2016-06-04	2017-06-03

2. SUMMARY OF TEST RESULTS

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

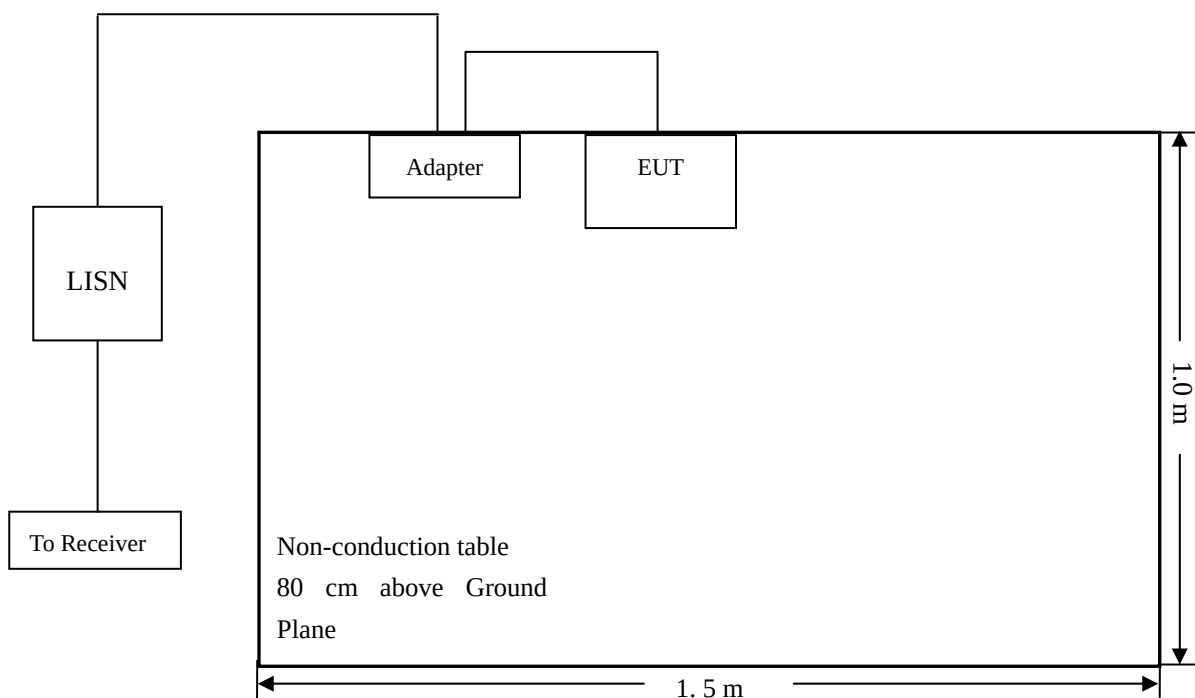
N/A: not applicable

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:

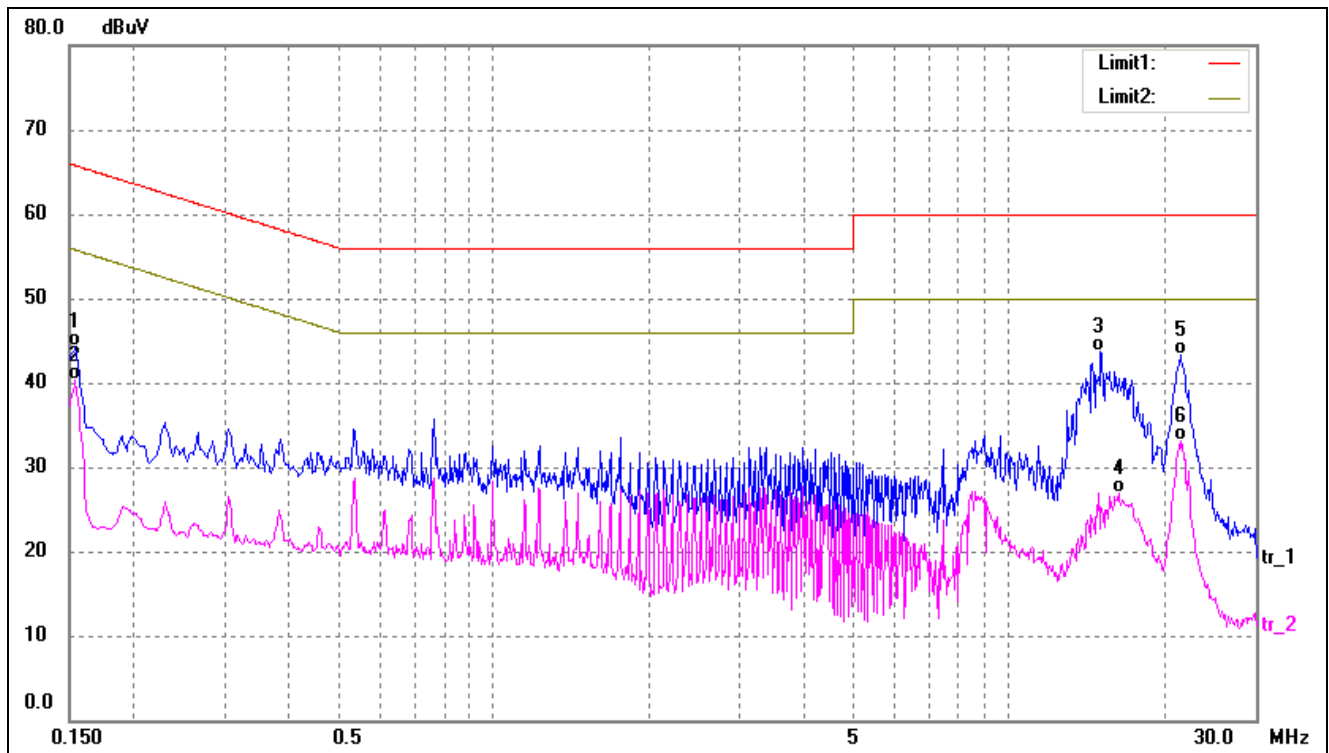
-7.97 dB at 0.5740 MHz in the Neutral at TM2, Average detector, 0.15-30MHz

3.5 Conducted Emissions Test Data

Plot of Conducted Emissions Test Data

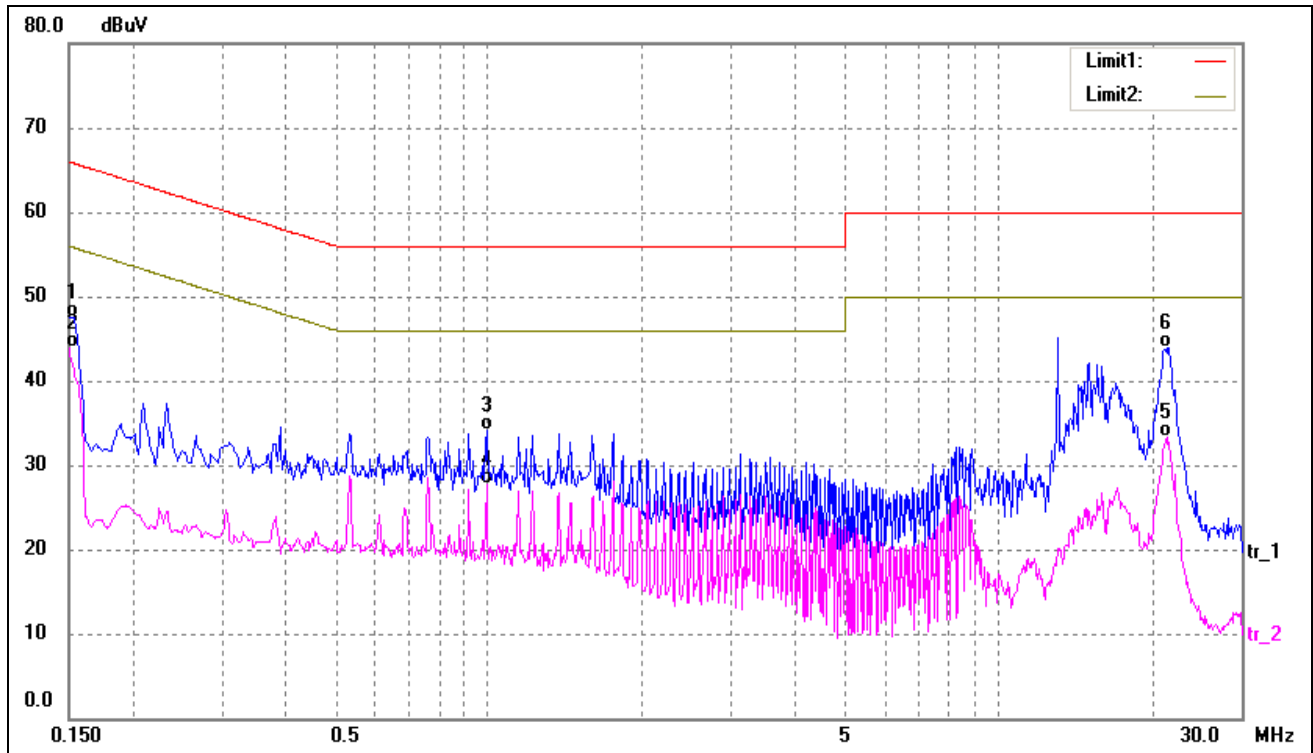
EUT: Camera
 Tested Model: GV720
 Operating Condition: TM1
 Comment: AC 120V/60Hz; USB 5V

 Test Specification: Neutral



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1540	34.44	9.85	44.29	65.78	-21.49	QP
2*	0.1540	30.37	9.85	40.22	55.78	-15.56	AVG
3	15.0420	34.07	9.61	43.68	60.00	-16.32	QP
4	16.2940	17.20	9.63	26.83	50.00	-23.17	AVG
5	21.4580	33.60	9.68	43.28	60.00	-16.72	QP
6	21.5340	23.41	9.68	33.09	50.00	-16.91	AVG

Test Specification: Line

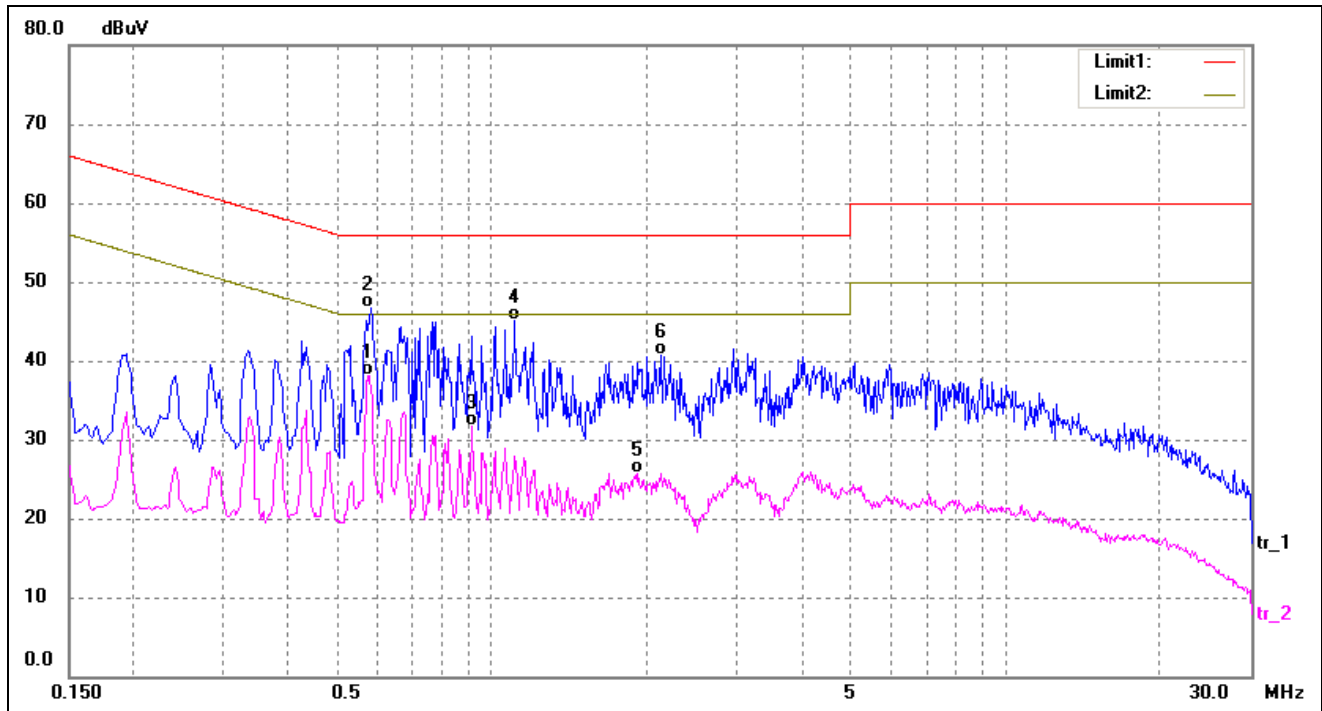


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1539	37.72	9.85	47.57	65.78	-18.21	QP
2*	0.1539	33.96	9.85	43.81	55.78	-11.97	AVG
3	0.9900	24.38	9.76	34.14	56.00	-21.86	QP
4	0.9900	17.94	9.76	27.70	46.00	-18.30	AVG
5	21.4300	23.53	9.68	33.21	50.00	-16.79	AVG
6	21.6580	34.19	9.68	43.87	60.00	-16.13	QP

Plot of Conducted Emissions Test Data

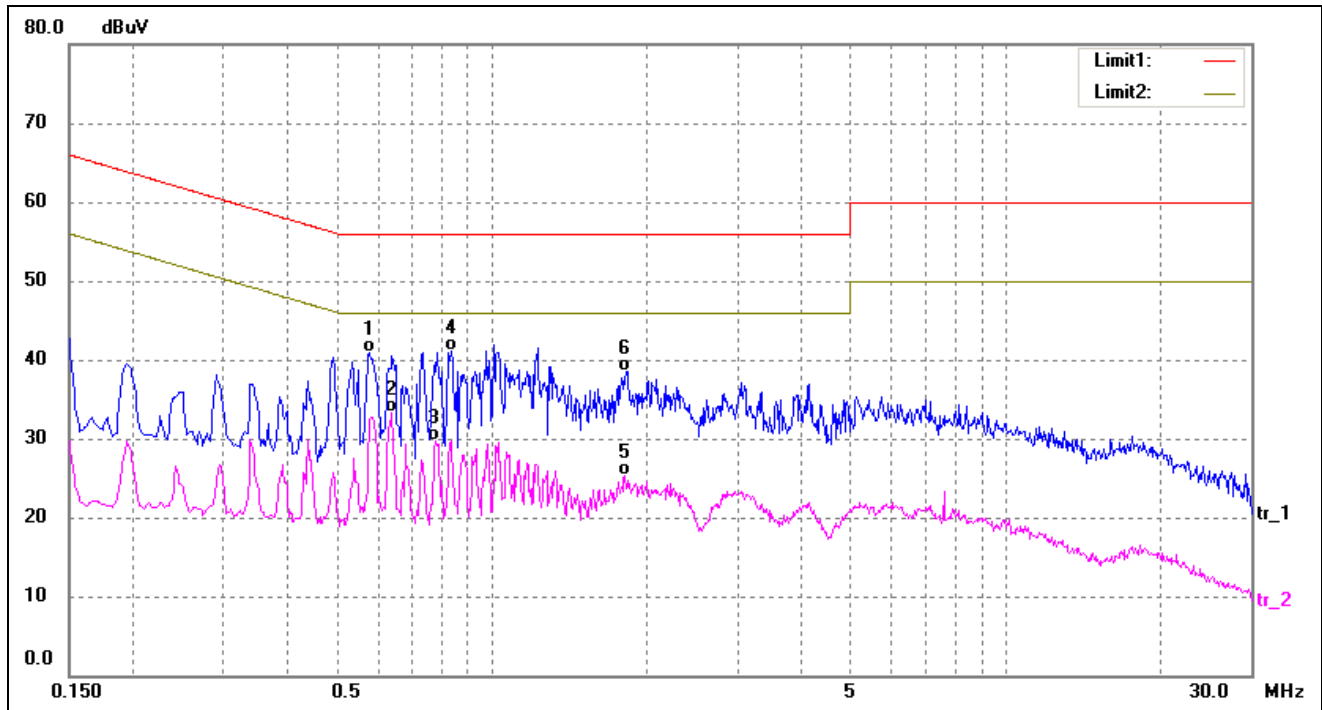
EUT: Camera
 Tested Model: GV720
 Operating Condition: TM2
 Comment: AC 120V/60Hz; Adapter DC 5V

Test Specification: Neutral



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1*	0.5740	28.24	9.79	38.03	46.00	-7.97	AVG
2	0.5820	36.85	9.79	46.64	56.00	-9.36	QP
3	0.9100	21.85	9.77	31.62	46.00	-14.38	AVG
4	1.1060	35.44	9.76	45.20	56.00	-10.80	QP
5	1.9220	16.00	9.74	25.74	46.00	-20.26	AVG
6	2.1220	31.06	9.73	40.79	56.00	-15.21	QP

Test Specification: Line



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.5780	31.03	9.79	40.82	56.00	-15.18	QP
2*	0.6380	23.56	9.79	33.35	46.00	-12.65	AVG
3	0.7780	19.97	9.78	29.75	46.00	-16.25	AVG
4	0.8340	31.38	9.77	41.15	56.00	-14.85	QP
5	1.8140	15.51	9.74	25.25	46.00	-20.75	AVG
6	1.8340	28.81	9.74	38.55	56.00	-17.45	QP

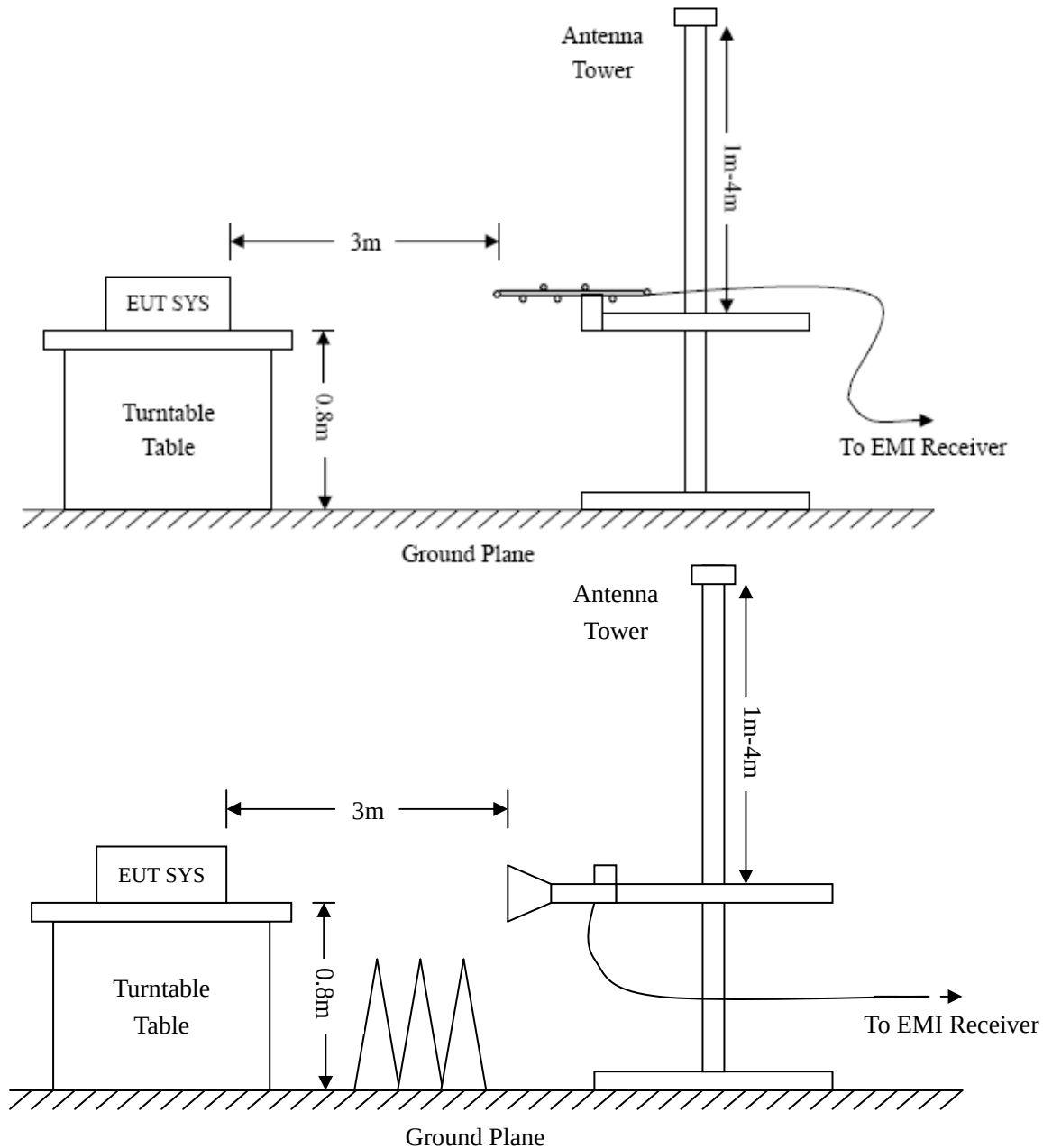
4. Radiated Emissions

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

RBW=10KHz,

VBW =30KHz

Sweep time= Auto

Trace = max hold

Detector function = peak

Frequency :30MHz-1GHz

RBW=120KHz,

VBW=300KHz

Sweep time= Auto

Trace = max hold

Detector function = peak, QP

Frequency :Above 1GHz

RBW=1MHz,

VBW=3MHz(Peak), 10Hz(AV)

Sweep time= Auto

Trace = max hold

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:

$$\text{Corr. Ampl.} = \text{Indicated Reading} - \text{Corr. Factor}$$

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

$$\text{Margin} = \text{Corr. Ampl.} - \text{FCC Part 15.109(a) Limit}$$

4.4 Environmental Conditions

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

4.5 Summary of Test Results/Plots

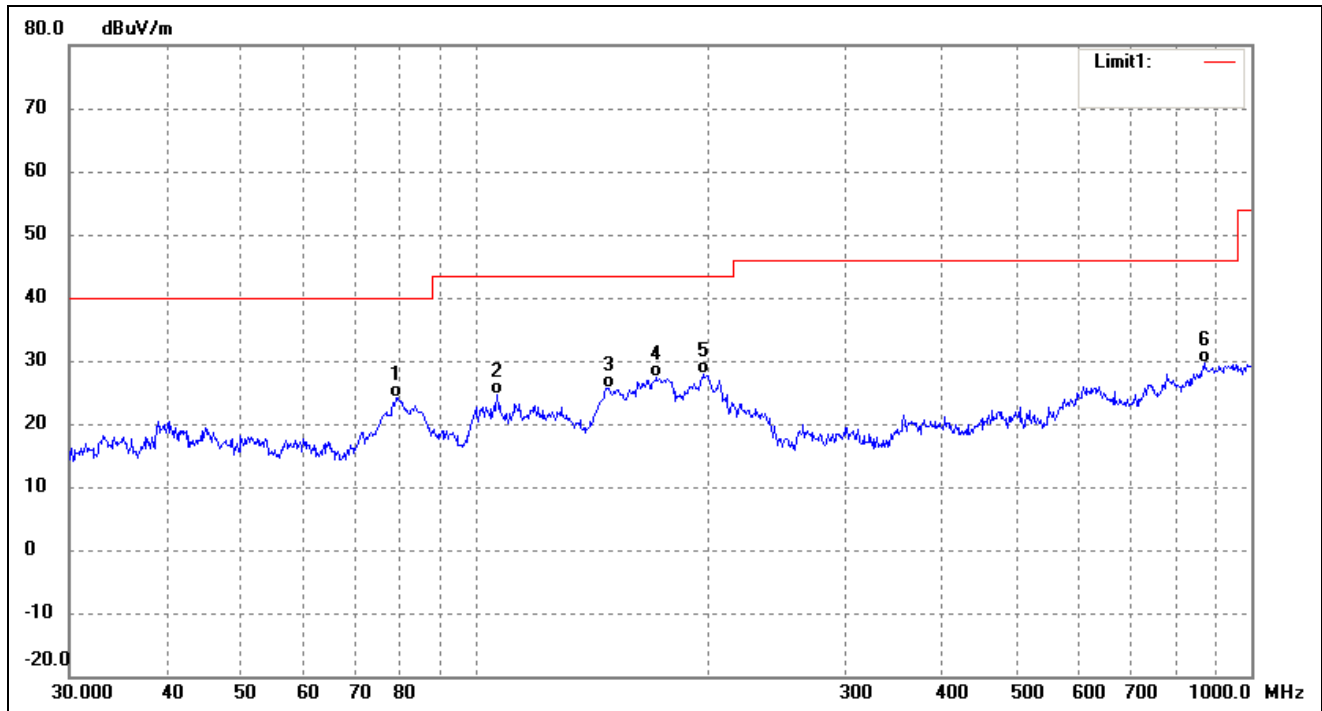
According to the data, the EUT complied with the FCC Part 15.109(a) rule, and had the worst margin of:

-0.91 dB at 768.7481 MHz in the Horizontal polarization, TM2 mode, 30MHz to 12.75 GHz, 3Meters

Plot of Radiated Emissions Test Data

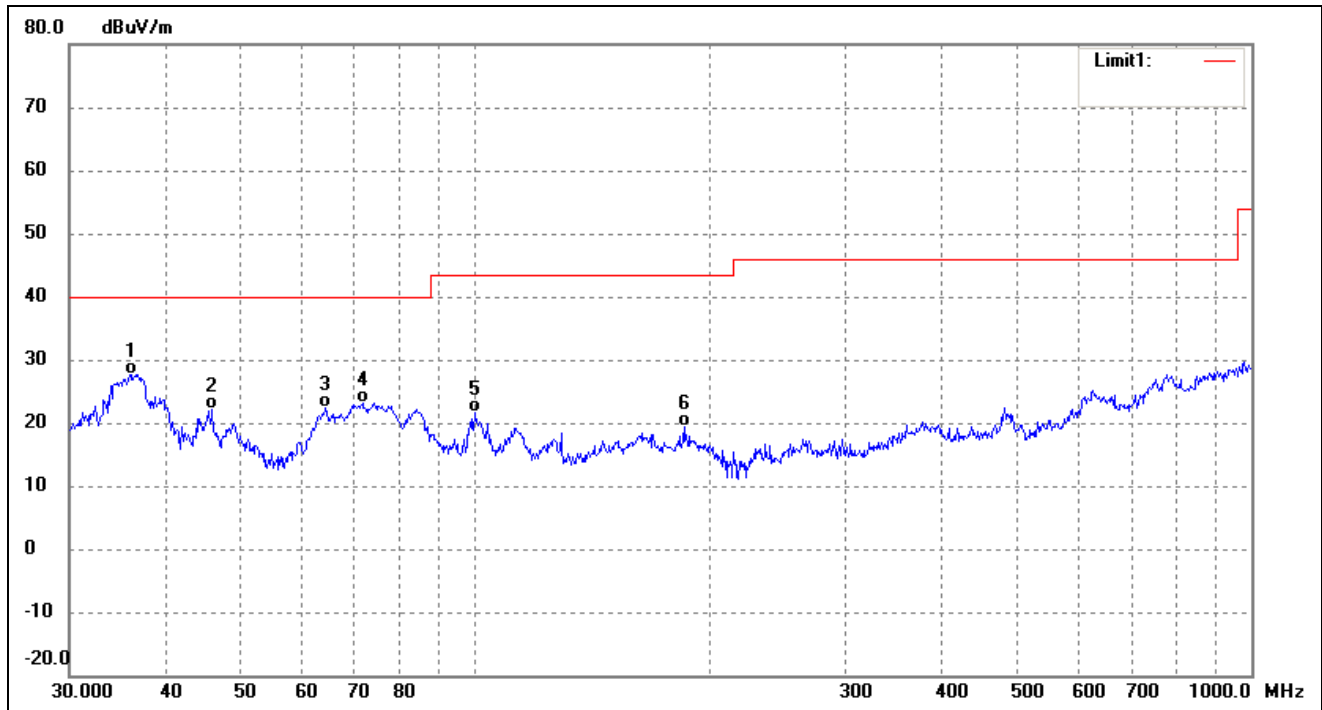
EUT: Camera
Tested Model: GV720
Operating Condition: TM1
Comment: AC 120V/60Hz; USB 5V

Test Specification: Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	78.9651	40.58	-16.35	24.23	40.00	-15.77	0	100	QP
2	106.7587	36.71	-12.17	24.54	43.50	-18.96	0	100	QP
3	148.4410	40.57	-14.93	25.64	43.50	-17.86	0	100	QP
4	171.3925	41.84	-14.58	27.26	43.50	-16.24	0	100	QP
5	196.5098	39.93	-12.05	27.88	43.50	-15.62	0	100	QP
6	872.1832	28.26	1.31	29.57	46.00	-16.43	0	100	QP

Test Specification: Vertical

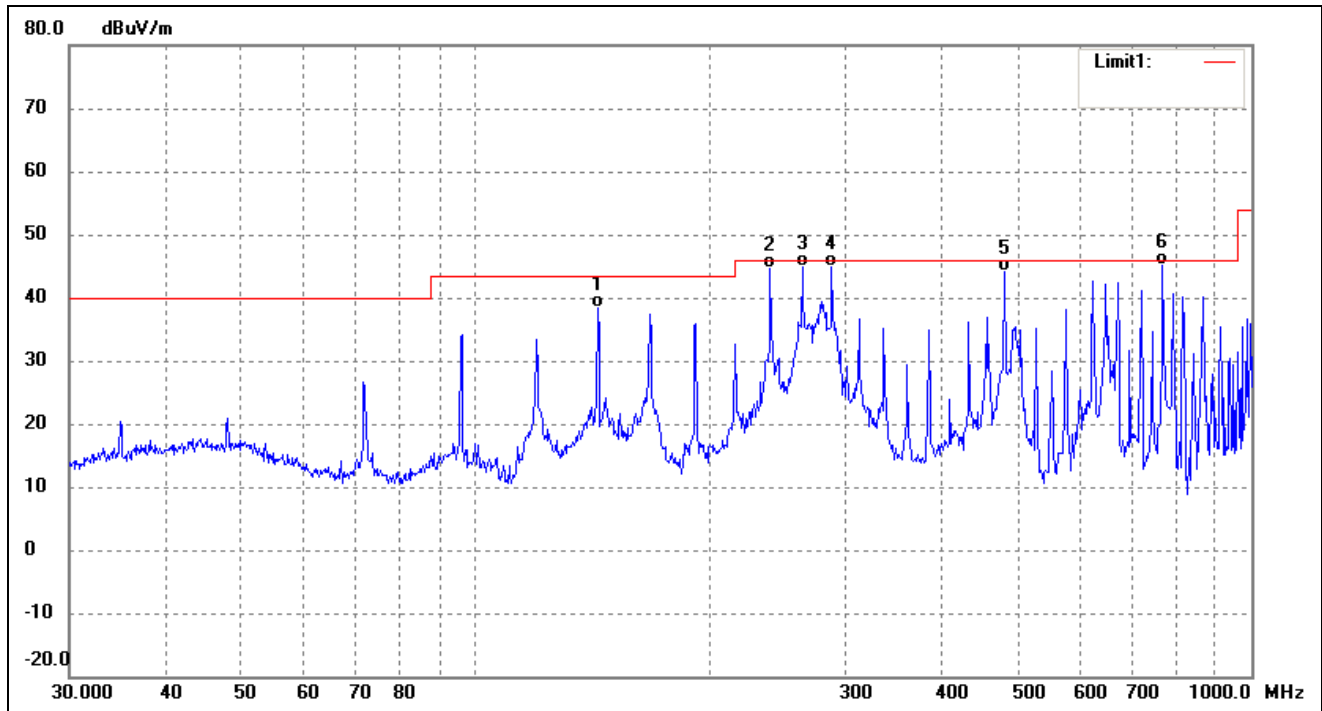


No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	36.1272	38.90	-11.29	27.61	40.00	-12.39	0	100	QP
2	45.8552	32.65	-10.44	22.21	40.00	-17.79	0	100	QP
3	64.2074	37.06	-14.76	22.30	40.00	-17.70	0	100	QP
4	71.5806	39.63	-16.56	23.07	40.00	-16.93	0	100	QP
5	99.8777	33.03	-11.43	21.60	43.50	-21.90	0	100	QP
6	185.7881	32.88	-13.46	19.42	43.50	-24.08	0	100	QP

Plot of Radiated Emissions Test Data

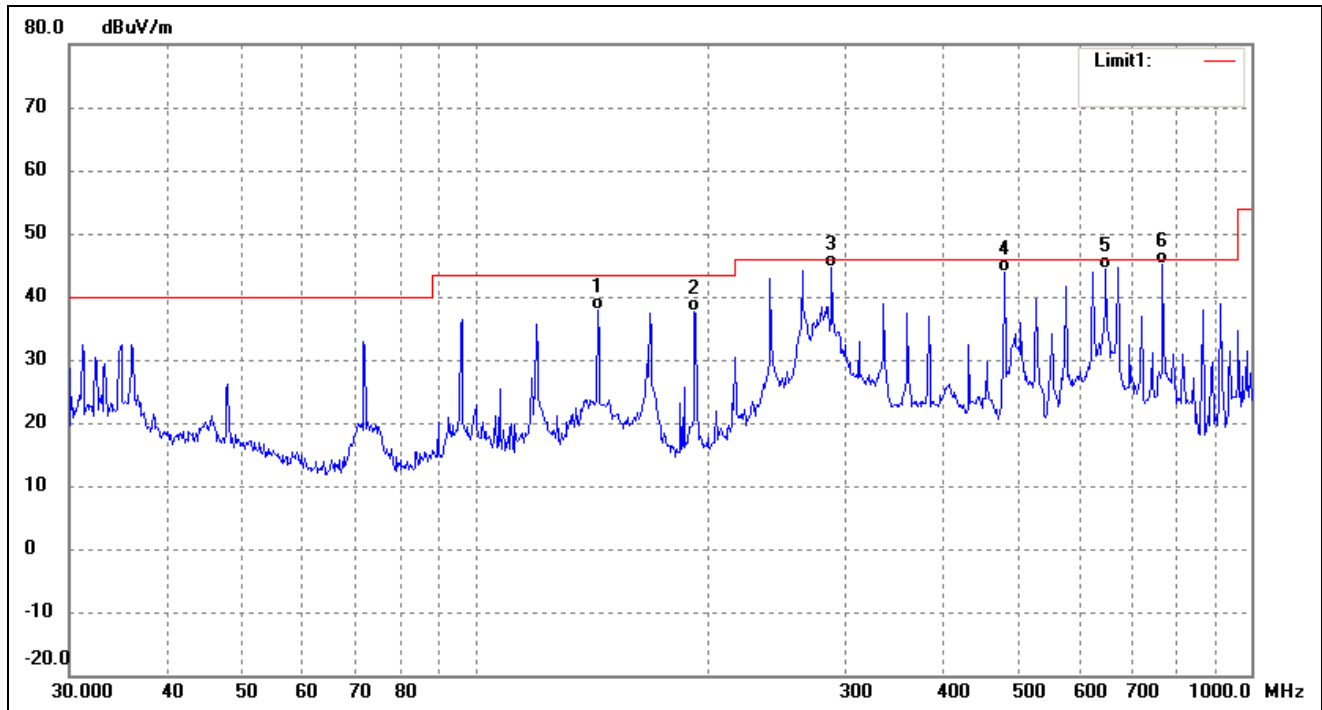
EUT: Camera
Tested Model: GV720
Operating Condition: TM2
Comment: AC 120V/60Hz; Adapter DC 5V

Test Specification: Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	143.8294	53.15	-14.86	38.29	43.50	-5.21	0	100	QP
2	239.9874	55.67	-10.96	44.71	46.00	-1.29	0	100	QP
3	263.8190	54.73	-9.96	44.77	46.00	-1.23	0	100	QP
4	287.9904	54.55	-9.60	44.95	46.00	-1.05	0	100	QP
5	480.5276	49.56	-5.36	44.20	46.00	-1.80	0	100	QP
6	768.7481	45.54	-0.45	45.09	46.00	-0.91	0	100	QP

Test Specification: Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	143.8293	52.83	-14.86	37.97	43.50	-5.53	0	100	QP
2	191.7450	50.19	-12.68	37.51	43.50	-5.99	0	100	QP
3	287.9904	54.27	-9.60	44.67	46.00	-1.33	0	100	QP
4	480.5276	49.30	-5.36	43.94	46.00	-2.06	0	100	QP
5	649.6597	47.89	-3.44	44.45	46.00	-1.55	0	100	QP
6	768.7481	45.51	-0.45	45.06	46.00	-0.94	0	100	QP

Note: Testing is carried out with frequency rang 30MHz to the 12.75GHz, which above 1GHz are attenuated more than 20 dB below the permissible value and are not showed in the test report.

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