



Report No: FCC1509021 File reference No: 2015-09-14

Applicant: Haier International (HK) Limited

Product: Chromebook

Model No: HR-116R G2

Trademark: Haier

Test Standards: FCC Part 15 Subpart B: 2015

Test result:

It is herewith confirmed and found to comply with the requirements

set up by ANSI C63.4&FCC Part 15 regulations for the evaluation of

electromagnetic compatibility

Approved By

Jack Chung

Jack Chung

Manager

Dated: September 14, 2015

Results appearing herein relate only to the sample tested

The technical reports is issued errors and omissions exempt and is subject to withdrawal at

# SHENZHEN TIMEWAY TESTING LABORATORIES

Room 512-519, 5/F., East Tower, Building 4, Anhua Industrial Zone, Futian District, Shenzhen, Guangdong, China

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# **Test Report Conclusion**

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#### 1.0 **General Details**

1.1 Test Lab Details

> Name: SHENZHEN TIMEWAY TESTING LABORATORIES.

Address: Room 512-519,5/F., East Tower, Building 4, Anhua Industrial Zone,

Futian District, Shenzhen, Guangdong China

Telephone: (755) 83448688 Fax: (755) 83442996

Site on File with the Federal Communications Commission – United Sates

Registration Number: 899988

For 3m & 10 m OATS

Site Listed with Industry Canada of Ottawa, Canada

Registration Number: IC: 5205A-02

For 3m & 10 m OATS

1.2 **Applicant Details** 

> Applicant: Haier International (HK) Limited

Address: Room1908 Harbour Centre, 25 Harbour Road, Wanchai

0532-88937815 Telephone:

Fax:

1.3 Description of EUT

> Product: Chromebook

Manufacturer: DongGuan HuaBel Electronic Technology CO., LTD

Address: No.9 Industrial Northern Road, Songshan Lake National High-tech

Industrial Development Zone, Dongguan, Guangdong

Brand Name: Haier

Model Number: HR-116R G2

Additional Model Number: N/A

Power Supply: Model: HKA03619021-BC;

Input: 100-240V~, 50-60Hz, 1.0A; Output: DC19.0V, 2.1A.

Submitted Sample: 2 Samples 1.4

1.5 Test Duration: 2015-09-08 to 2015-09-14

The report refers only to the sample tested and does not apply to the bulk.

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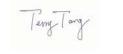


1.6 Test Uncertainty

Conducted Emissions Uncertainty =3.6dB Radiated Emissions Uncertainty =4.7dB

1.7 Test Engineer

The sample tested by



Print Name: Terry Tong

### 2.0 List of Measurement Equipment

#### 2.1 Conducted Emission Test

|                   |            |            |              | Calibration | Calibration |
|-------------------|------------|------------|--------------|-------------|-------------|
| Name              | Model No.  | Serial No. | Manufacturer | Date        | Cycle       |
| EMI Test Receiver | ESH3       | 860905/006 | RS           | 2015.08.22  | 1Year       |
| Spectrum Analyzer | ESA-L1500A | US37451154 | HP           | 2015.08.22  | 1Year       |
| PULSE LIMITER     | ESH3-Z2    | 100281     | RS           | 2015.08.22  | 1Year       |
| LISN              | ESH3-Z5    | 100294     | RS           | 2015.08.22  | 1Year       |
| LISN              | ESH3-Z5    | 100253     | RS           | 2015.08.22  | 1Year       |

### 2.2 Radiated electromagnetic disturbance test

|                   |            |             |              | Calibration | Calibration |
|-------------------|------------|-------------|--------------|-------------|-------------|
| Name              | Model No.  | Serial No.  | Manufacturer | Date        | Cycle       |
| EMI Test Receiver | ESVD       | 100008      | RS           | 2015.08.22  | 1Year       |
| Coaxial Switch    | MP59B      | M70585      | ANRITSU      | N/A         | N/A         |
| Amplifier         | 8447D      | 2727A05017  | HP           | 2015.08.22  | 1Year       |
| Bilog Antenna     | VULB9163   | 9163/340    | Schwarebeck  | 2015.08.23  | 1Year       |
| Horn Antenna      | BBHA 9120D | 9120D-631   | Schwarebeck  | 2015.08.24  | 1Year       |
| Horn Antenna      | BBHA 9170  | BBHA9170265 | Schwarebeck  | 2015.08.24  | 1Year       |
| Test Receiver     | ESI26      | 838786/013  | RS           | 2015.08.22  | 1Year       |

## 2.3 Auxiliary Equipment

|                  |           |            |              |               | FCC DOC/ |
|------------------|-----------|------------|--------------|---------------|----------|
| Name             | Model No. | Serial No. | Manufacturer | Cable         | ID       |
|                  |           |            |              | Data cable of |          |
| Monitor          | P2450     |            | SAMSUNG      | 1.5m length   | FCC DOC  |
| Passive Earphone |           |            |              |               |          |
| Mouse            | M-F105    |            | L.SEletron   |               | FCC DOC  |
| TF               |           |            |              |               |          |
| USB Disk         |           |            | Kingstone    |               | FCC DOC  |

The report refers only to the sample tested and does not apply to the bulk.

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#### 3.0 Technical Details

3.1 Investigations Requested

Perform Electromagnetic Interference [EMI] tests for FCC Requirement.

3.2 Test Standards

FCC Part 15 Subpart B: 2015

#### 3.3 Description of Test Modes

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

| Pre-test Mode | Description              |
|---------------|--------------------------|
| Mode1         | Camera On                |
| Mode2         | Play SD Card             |
| Mode3         | Play USB                 |
| Mode4         | Play Memory              |
| Mode5         | Running EMC test Program |

| For Conducted Emissions Test |                          |  |  |  |  |  |  |  |
|------------------------------|--------------------------|--|--|--|--|--|--|--|
| Final test Mode              | Description              |  |  |  |  |  |  |  |
| Mode1                        | Camera On                |  |  |  |  |  |  |  |
| Mode2                        | Play SD Card             |  |  |  |  |  |  |  |
| Mode3                        | Play USB                 |  |  |  |  |  |  |  |
| Mode4                        | Play Memory              |  |  |  |  |  |  |  |
| Mode5                        | Running EMC test Program |  |  |  |  |  |  |  |

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| For Radiated Emissions Test |                          |  |  |  |  |  |  |  |
|-----------------------------|--------------------------|--|--|--|--|--|--|--|
| Final test Mode             | Description              |  |  |  |  |  |  |  |
| Mode1                       | Camera On                |  |  |  |  |  |  |  |
| Mode2                       | Play SD Card             |  |  |  |  |  |  |  |
| Mode3                       | Play USB                 |  |  |  |  |  |  |  |
| Mode4                       | Play Memory              |  |  |  |  |  |  |  |
| Mode5                       | Running EMC test Program |  |  |  |  |  |  |  |

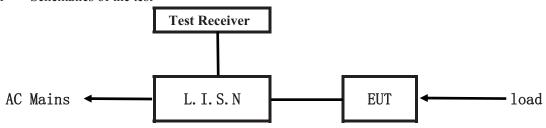
Remark: Only worse case is reported

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#### 4.0 Conducted Power line Test

#### 4.1 Schematics of the test



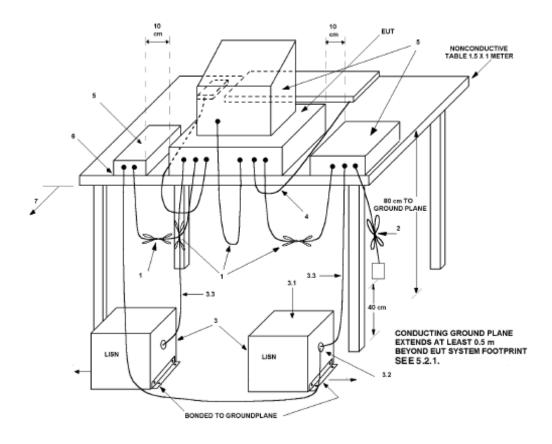
**EUT: Equipment Under Test** 

#### 4.2 Test Method and test Procedure

The EUT was tested according to ANSI C63.4-2014. The Frequency spectrum From 0.15MHz to 30MHz was investigated. The LISN used was 50ohm/50uH as specified by section 5.1 of ANSI C63.4 –2014. Cables and peripherals were moved to find the maximum emission levels for each frequency.

Actual Working Voltage and Frequency: 120V~, 60Hz

Block diagram of Test setup



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#### 4.3 Power line conducted Emission Limit

| Eraguanay (MUz)   | Class A Li                     | mits dB(μV) | Class B Limits dB(μV) |               |  |  |
|-------------------|--------------------------------|-------------|-----------------------|---------------|--|--|
| Frequency(MHz)    | Quasi-peak Level Average Level |             | Quasi-peak Level      | Average Level |  |  |
| 0.15 ~ 0.50       | 79.00                          | 66.00       | 66.00~56.00*          | 56.00~46.00*  |  |  |
| 0.50 ~ 5.00       | 73.00                          | 60.00       | 56.00                 | 46.00         |  |  |
| $5.00 \sim 30.00$ | $0 \sim 30.00$ $73.00$         |             | 60.00                 | 50.00         |  |  |

Notes: 1. \*decreasing linearly with logarithm of frequency.

2. The tighter limit shall apply at the transition frequencies

### 4.4 Test Results

The frequency spectrum from 0.15MHz to 30MHz was investigated. All reading are quasi-peak values with a resolution bandwidth of 9kHz.

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### A: Conducted Emission on Live Terminal (150kHz to 30MHz)

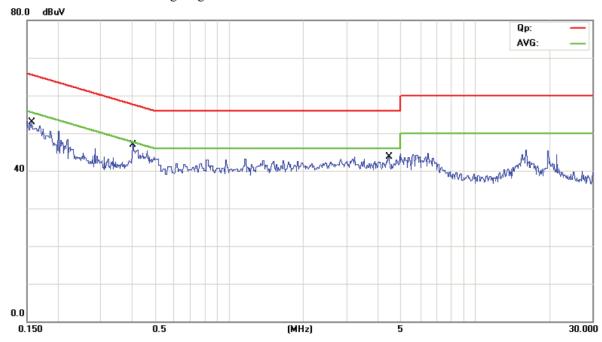
### **EUT Operating Environment**

Temperature: 26°C Humidity: 65%RH Atmospheric Pressure: 101 KPa

**EUT set Condition: Running EMC test Program** 

**Equipment Level: Class B** 

**Results: PASS** 



| No. Mk. | Freq.  | Reading<br>Level | Correct<br>Factor | Measure-<br>ment | Limit | Over   |          |         |
|---------|--------|------------------|-------------------|------------------|-------|--------|----------|---------|
|         | MHz    | dBuV             | dB                | dBuV             | dBuV  | dB     | Detector | Comment |
| 1 *     | 0.1570 | 37.20            | 11.01             | 48.21            | 65.62 | -17.41 | QP       |         |
| 2       | 0.1570 | 5.40             | 11.01             | 16.41            | 55.62 | -39.21 | AVG      |         |
| 3       | 0.4043 | 25.00            | 11.27             | 36.27            | 57.76 | -21.49 | QP       |         |
| 4       | 0.4043 | 15.90            | 11.27             | 27.17            | 47.76 | -20.59 | AVG      |         |
| 5       | 4.4162 | 17.30            | 13.27             | 30.57            | 56.00 | -25.43 | QP       |         |
| 6       | 4.4162 | 6.70             | 13.27             | 19.97            | 46.00 | -26.03 | AVG      |         |

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### B: Conducted Emission on Neutral Terminal (150kHz to 30MHz)

**EUT Operating Environment** 

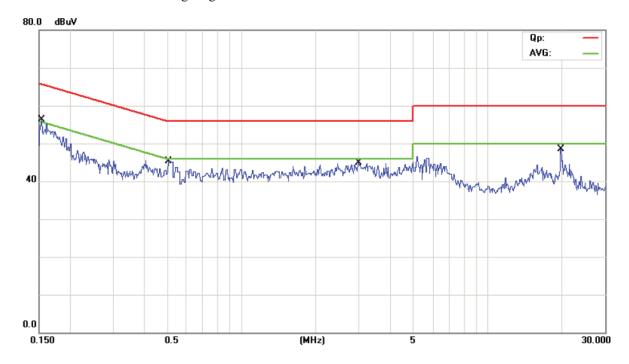
Temperature: 26°C Humidity: 65%RH Atmospheric Pressure: 101 KPa

**EUT set Condition: Running EMC test Program** 

**Equipment Level: Class B** 

**Results: Pass** 

Please refer to following diagram for individual



| No. Mk. | Freq.   | Reading<br>Level | Correct<br>Factor | Measure-<br>ment | Limit | Over   |          |         |
|---------|---------|------------------|-------------------|------------------|-------|--------|----------|---------|
|         | MHz     | dBuV             | dB                | dBuV             | dBuV  | dB     | Detector | Comment |
| 1       | 0.1527  | 37.40            | 11.00             | 48.40            | 65.85 | -17.45 | QP       |         |
| 2       | 0.1527  | 12.60            | 11.00             | 23.60            | 55.85 | -32.25 | AVG      |         |
| 3       | 0.5090  | 25.50            | 11.38             | 36.88            | 56.00 | -19.12 | QP       |         |
| 4       | 0.5090  | 18.80            | 11.38             | 30.18            | 46.00 | -15.82 | AVG      |         |
| 5       | 2.9800  | 22.00            | 12.69             | 34.69            | 56.00 | -21.31 | QP       |         |
| 6       | 2.9800  | 14.10            | 12.69             | 26.79            | 46.00 | -19.21 | AVG      |         |
| 7       | 19.7777 | 31.80            | 11.11             | 42.91            | 60.00 | -17.09 | QP       |         |
| 8 *     | 19.7777 | 28.10            | 11.11             | 39.21            | 50.00 | -10.79 | AVG      |         |

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### C: Conducted Emission on Live Terminal (150kHz to 30MHz)

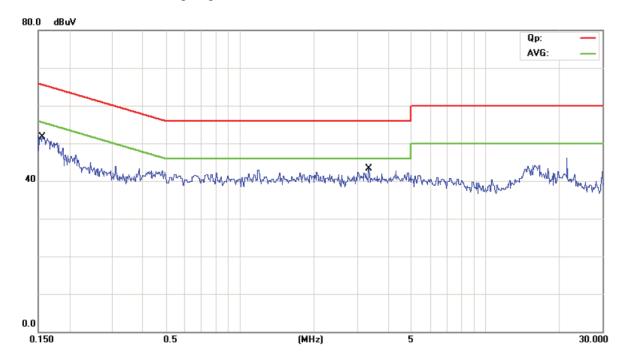
**EUT Operating Environment** 

Temperature: 26°C Humidity: 65%RH Atmospheric Pressure: 101 KPa

**EUT set Condition: Play Memory** 

**Equipment Level: Class B** 

**Results: PASS** 



| No. Mk. | Freq.  | Reading<br>Level | Correct<br>Factor | Measure-<br>ment | Limit | Over   |          |         |
|---------|--------|------------------|-------------------|------------------|-------|--------|----------|---------|
|         | MHz    | dBuV             | dB                | dBuV             | dBuV  | dB     | Detector | Comment |
| 1 *     | 0.1556 | 37.00            | 11.01             | 48.01            | 65.70 | -17.69 | QP       |         |
| 2       | 0.1556 | 5.50             | 11.01             | 16.51            | 55.70 | -39.19 | AVG      |         |
| 3       | 3.3175 | 10.10            | 12.83             | 22.93            | 56.00 | -33.07 | QP       |         |
| 4       | 3.3175 | 2.10             | 12.83             | 14.93            | 46.00 | -31.07 | AVG      |         |

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### D: Conducted Emission on Neutral Terminal (150kHz to 30MHz)

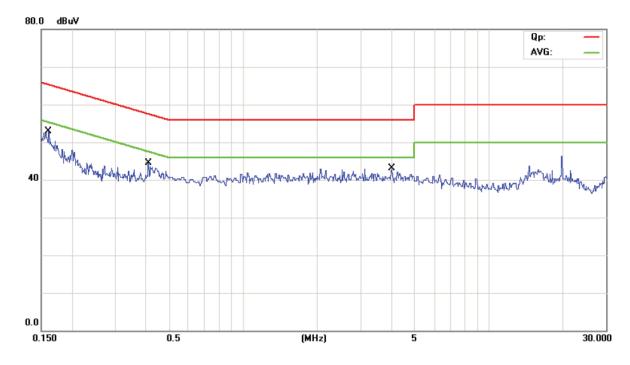
**EUT Operating Environment** 

Temperature: 26°C Humidity: 65%RH Atmospheric Pressure: 101 KPa

**EUT set Condition: Play Memory** 

**Equipment Level: Class B** 

**Results: Pass** 



| No. Mk. | Freq.  | Reading<br>Level | Correct<br>Factor | Measure-<br>ment | Limit | Over   |          |         |
|---------|--------|------------------|-------------------|------------------|-------|--------|----------|---------|
|         | MHz    | dBuV             | dB                | dBuV             | dBuV  | dB     | Detector | Comment |
| 1 *     | 0.1604 | 33.90            | 11.01             | 44.91            | 65.44 | -20.53 | QP       |         |
| 2       | 0.1604 | 9.50             | 11.01             | 20.51            | 55.44 | -34.93 | AVG      |         |
| 3       | 0.4080 | 19.80            | 11.27             | 31.07            | 57.69 | -26.62 | QP       |         |
| 4       | 0.4080 | 12.50            | 11.27             | 23.77            | 47.69 | -23.92 | AVG      |         |
| 5       | 4.0423 | 9.90             | 13.12             | 23.02            | 56.00 | -32.98 | QP       |         |
| 6       | 4.0423 | 2.50             | 13.12             | 15.62            | 46.00 | -30.38 | AVG      |         |

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### E: Conducted Emission on Live Terminal (150kHz to 30MHz)

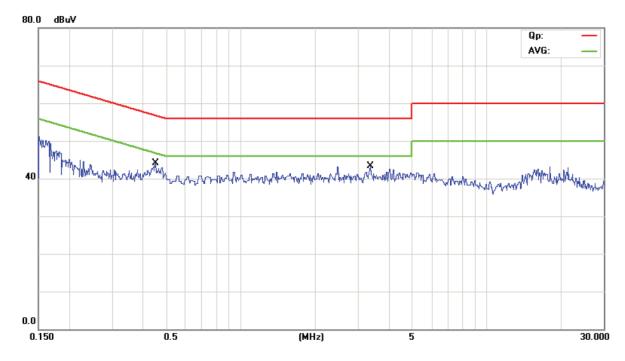
**EUT Operating Environment** 

Temperature: 26°C Humidity: 65%RH Atmospheric Pressure: 101 KPa

**EUT set Condition: Play SD Card** 

**Equipment Level: Class B** 

**Results: PASS** 



| No. Mk. | Freq.  | Reading<br>Level | Correct<br>Factor | Measure-<br>ment | Limit | Over   |          |         |
|---------|--------|------------------|-------------------|------------------|-------|--------|----------|---------|
|         | MHz    | dBu∀             | dB                | dBuV             | dBuV  | dB     | Detector | Comment |
| 1       | 0.4440 | 23.20            | 11.31             | 34.51            | 56.99 | -22.48 | QP       |         |
| 2 *     | 0.4440 | 14.00            | 11.31             | 25.31            | 46.99 | -21.68 | AVG      |         |
| 3       | 3.3832 | 8.50             | 12.85             | 21.35            | 56.00 | -34.65 | QP       |         |
| 4       | 3.3832 | -0.90            | 12.85             | 11.95            | 46.00 | -34.05 | AVG      |         |

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### F: Conducted Emission on Neutral Terminal (150kHz to 30MHz)

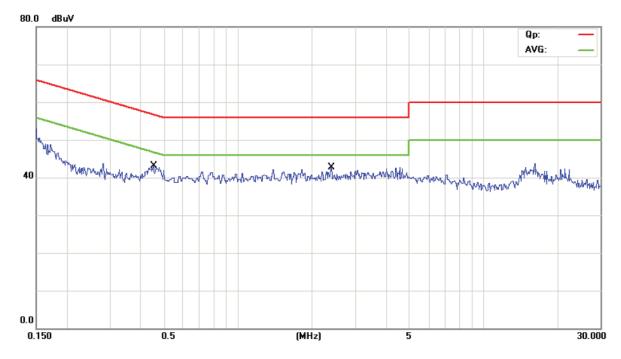
**EUT Operating Environment** 

Temperature: 26°C Humidity: 65%RH Atmospheric Pressure: 101 KPa

**EUT set Condition: Play SD Card** 

**Equipment Level: Class B** 

**Results: Pass** 



| No. M | lk. | Freq.  | Reading<br>Level | Correct<br>Factor | Measure-<br>ment | Limit | Over   |          |         |
|-------|-----|--------|------------------|-------------------|------------------|-------|--------|----------|---------|
|       |     | MHz    | dBuV             | dB                | dBu∀             | dBuV  | dB     | Detector | Comment |
| 1     | C   | ).4491 | 22.10            | 11.32             | 33.42            | 56.89 | -23.47 | QP       |         |
| 2 *   | C   | ).4491 | 15.20            | 11.32             | 26.52            | 46.89 | -20.37 | AVG      |         |
| 3     | 2   | 2.3978 | 5.10             | 12.46             | 17.56            | 56.00 | -38.44 | QP       |         |
| 4     | 2   | 2.3978 | -1.90            | 12.46             | 10.56            | 46.00 | -35.44 | AVG      |         |

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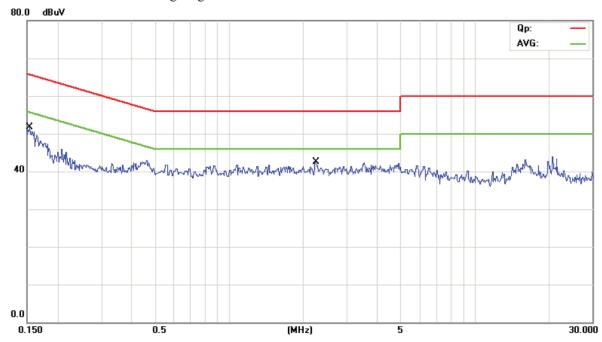
### G: Conducted Emission on Live Terminal (150kHz to 30MHz)

**EUT Operating Environment** 

Temperature: 26°C Humidity: 65%RH Atmospheric Pressure: 101 KPa

**EUT set Condition: Play USB Equipment Level: Class B** 

**Results: PASS** 



| No. | Mk. | Freq.  | Reading<br>Level | Correct<br>Factor | Measure-<br>ment | Limit | Over   |          |         |
|-----|-----|--------|------------------|-------------------|------------------|-------|--------|----------|---------|
|     |     | MHz    | dBuV             | dB                | dBuV             | dBuV  | dB     | Detector | Comment |
| 1   | *   | 0.1536 | 35.50            | 11.00             | 46.50            | 65.80 | -19.30 | QP       |         |
| 2   |     | 0.1536 | 1.80             | 11.00             | 12.80            | 55.80 | -43.00 | AVG      |         |
| 3   |     | 2.2606 | 4.40             | 12.40             | 16.80            | 56.00 | -39.20 | QP       |         |
| 4   |     | 2.2606 | -3.00            | 12.40             | 9.40             | 46.00 | -36.60 | AVG      |         |

Date: 2015-09-14



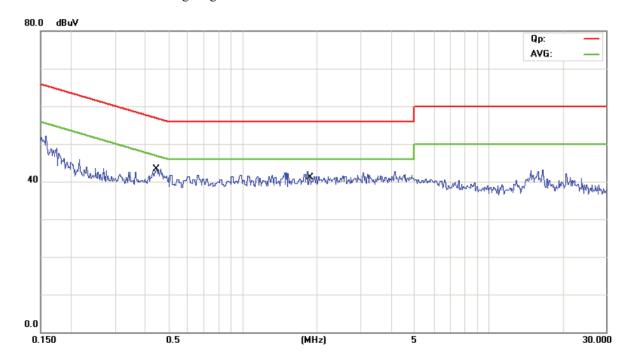
### H: Conducted Emission on Neutral Terminal (150kHz to 30MHz)

**EUT Operating Environment** 

Temperature: 26°C Humidity: 65%RH Atmospheric Pressure: 101 KPa

**EUT set Condition: Play USB Equipment Level: Class B** 

**Results: Pass** 



| No. | Mk. | Freq.  | Reading<br>Level | Correct<br>Factor | Measure-<br>ment | Limit | Over   |          |         |
|-----|-----|--------|------------------|-------------------|------------------|-------|--------|----------|---------|
|     |     | MHz    | dBuV             | dB                | dBu∀             | dBuV  | dB     | Detector | Comment |
| 1   | *   | 0.4427 | 24.90            | 11.31             | 36.21            | 57.01 | -20.80 | QP       |         |
| 2   |     | 0.4427 | 14.70            | 11.31             | 26.01            | 47.01 | -21.00 | AVG      |         |
| 3   |     | 1.8570 | 10.10            | 12.24             | 22.34            | 56.00 | -33.66 | QP       |         |
| 4   |     | 1.8570 | 0.60             | 12.24             | 12.84            | 46.00 | -33.16 | AVG      |         |

Date: 2015-09-14



### I: Conducted Emission on Live Terminal (150kHz to 30MHz)

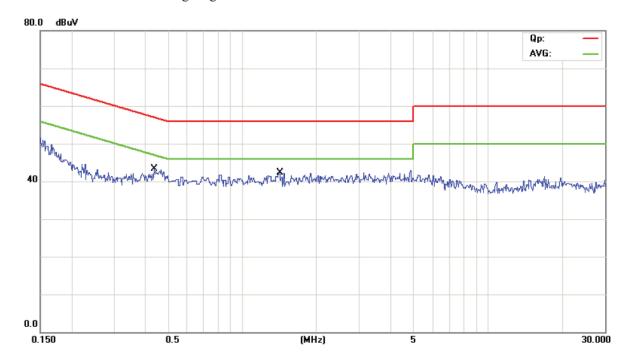
**EUT Operating Environment** 

Temperature: 26°C Humidity: 65%RH Atmospheric Pressure: 101 KPa

**EUT set Condition: Camera On** 

**Equipment Level: Class B** 

**Results: PASS** 



| No. Mk. | Freq.  | Reading<br>Level | Correct<br>Factor | Measure-<br>ment | Limit | Over   |          |         |
|---------|--------|------------------|-------------------|------------------|-------|--------|----------|---------|
|         | MHz    | dBuV             | dB                | dBu∀             | dBuV  | dB     | Detector | Comment |
| 1       | 0.4367 | 22.40            | 11.30             | 33.70            | 57.12 | -23.42 | QP       |         |
| 2 *     | 0.4367 | 13.20            | 11.30             | 24.50            | 47.12 | -22.62 | AVG      |         |
| 3       | 1.3991 | 8.20             | 12.06             | 20.26            | 56.00 | -35.74 | QP       |         |
| 4       | 1.3991 | -1.10            | 12.06             | 10.96            | 46.00 | -35.04 | AVG      |         |

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### J: Conducted Emission on Neutral Terminal (150kHz to 30MHz)

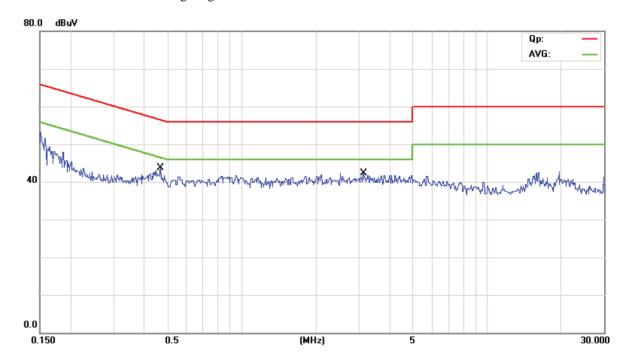
**EUT Operating Environment** 

Temperature: 26°C Humidity: 65%RH Atmospheric Pressure: 101 KPa

**EUT set Condition: Camera On** 

**Equipment Level: Class B** 

**Results: Pass** 



| No. Mk. | Freq.  | Reading<br>Level | Correct<br>Factor | Measure-<br>ment | Limit | Over   |          |         |
|---------|--------|------------------|-------------------|------------------|-------|--------|----------|---------|
|         | MHz    | dBuV             | dB                | dBu∀             | dBuV  | dB     | Detector | Comment |
| 1       | 0.4648 | 20.80            | 11.33             | 32.13            | 56.61 | -24.48 | QP       |         |
| 2 *     | 0.4648 | 12.80            | 11.33             | 24.13            | 46.61 | -22.48 | AVG      |         |
| 3       | 3.1061 | 6.50             | 12.74             | 19.24            | 56.00 | -36.76 | QP       |         |
| 4       | 3.1061 | -1.70            | 12.74             | 11.04            | 46.00 | -34.96 | AVG      |         |

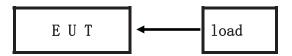
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#### 5.0 Radiated Disturbance Test

#### 5.1 Schematics of the test

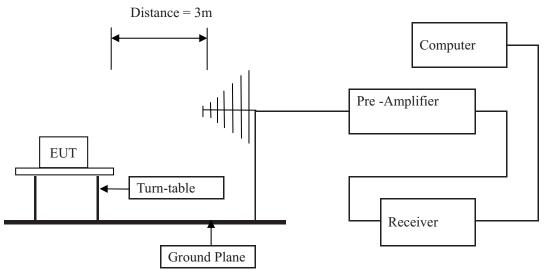


#### 5.2 Test Method and test Procedure:

The EUT was tested according to ANSI C63.4-2014; The frequency spectrum from 30MHz to 30GHz was investigated. All reading from 30MHz to 1GHz are quasi-peak values with a resolution bandwidth of 120kHz. For measurement above 1GHz, peak values with RBW=VBW=1MHz and PK detector. AV value with RBW=1MHz, VBW=10Hz and PK

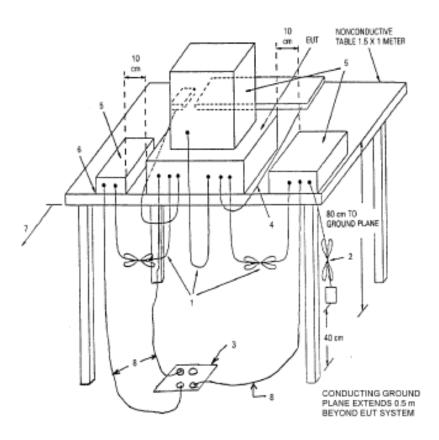
Actual Working Voltage and Frequency: 120V~, 60Hz

### **Block diagram of Test setup**



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#### 5.3 Radiated Emission Limit

| Frequency Range (MHz) | Distance (m) | Field strength (dB $\mu$ V/m) |
|-----------------------|--------------|-------------------------------|
| 30-88                 | 3            | 40.00                         |
| 88-216                | 3            | 43.50                         |
| 216-960               | 3            | 46.00                         |
| Above 960             | 3            | 54.00                         |

Note: 1. The lower limit shall apply at the transition frequencies

2. This is a handhold device. The radiated emissions should be tested under 3-axes position (Lying, Side, and Stand), After pre-test. It was found that the worse radiated emission was get at the lying position.

#### 5.4 Test result

The frequency spectrum from 30MHz to 30GHz was investigated. All reading from 30MHz to 1GHz are quasi-peak values with a resolution bandwidth of 120kHz. For measurement above 1GHz, peak values with RBW=VBW=1MHz and PK detector. AV value with RBW=1MHz, VBW=10Hz and PK. Measurements were made at 3 meters.

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#### Test result

### General Radiated Emission Data and Harmonics Radiated Emission Data

Radiated Emission In Horizontal/ In Vertical (30MHz----1000MHz)

**EUT set Condition:** Camera On

**Results: Pass** 

| Frequency (MHz) | Level@3m (dB \u03b4 V/m) | Antenna Polarity | Limit@3m (dB µ V/m) |
|-----------------|--------------------------|------------------|---------------------|
| 117.640         | 35.10                    | Н                | 43.50               |
| 211.640         | 39.07                    | Н                | 43.50               |
|                 |                          |                  |                     |
| 224.960         | 36.10                    | V                | 46.00               |
| 867.360         | 42.62                    | V                | 46.00               |
| 115.960         | 38.49                    | V                | 43.50               |

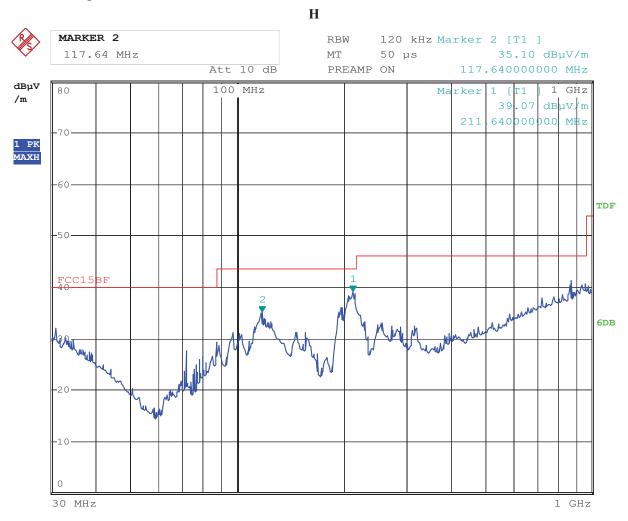
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### Test Figure:



Date: 10.SEP.2015 09:53:19

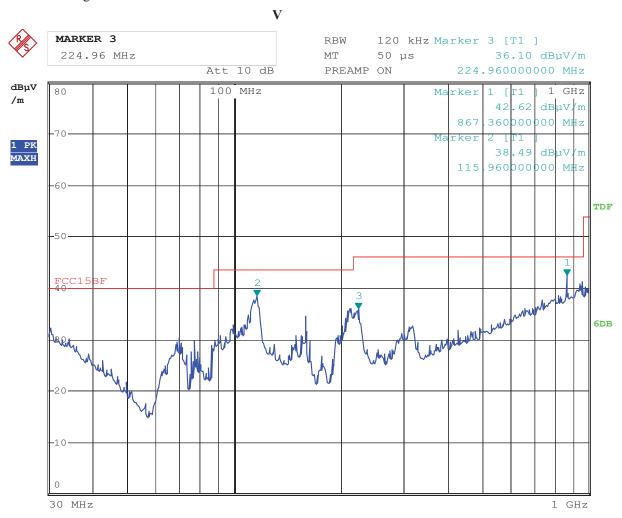
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### Test Figure:



Date: 10.SEP.2015 09:55:25

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#### Test result

#### General Radiated Emission Data and Harmonics Radiated Emission Data

Radiated Emission In Horizontal/ In Vertical (30MHz----1000MHz)

**EUT set Condition: Play SD Card** 

**Results: Pass** 

| Frequency (MHz) | Level@3m (dB \u03b4 V/m) | Antenna Polarity | Limit@3m (dB \( \mu \)V/m) |
|-----------------|--------------------------|------------------|----------------------------|
| 215.200         | 36.31                    | Н                | 43.50                      |
| 600.000         | 42.45                    | Н                | 46.00                      |
| 450.000         | 40.64                    | Н                | 46.00                      |
|                 |                          |                  |                            |
| 116.360         | 38.88                    | V                | 43.50                      |
| 866.200         | 43.51                    | V                | 46.00                      |
| 600.000         | 42.39                    | V                | 46.00                      |
| 450.000         | 41.78                    | V                | 46.00                      |

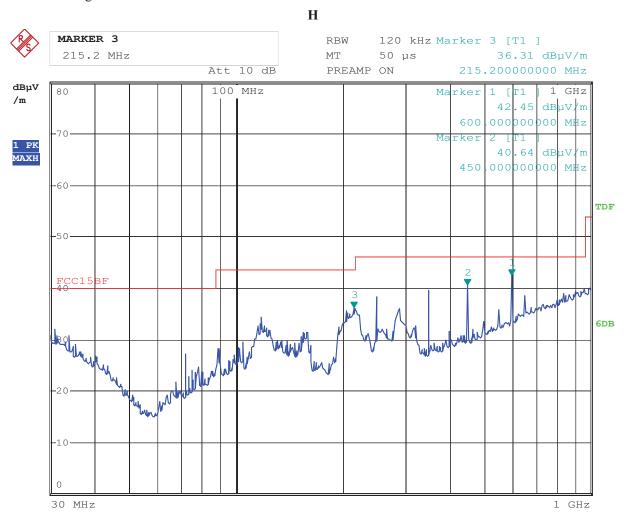
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### Test Figure:



Date: 10.SEP.2015 10:10:13

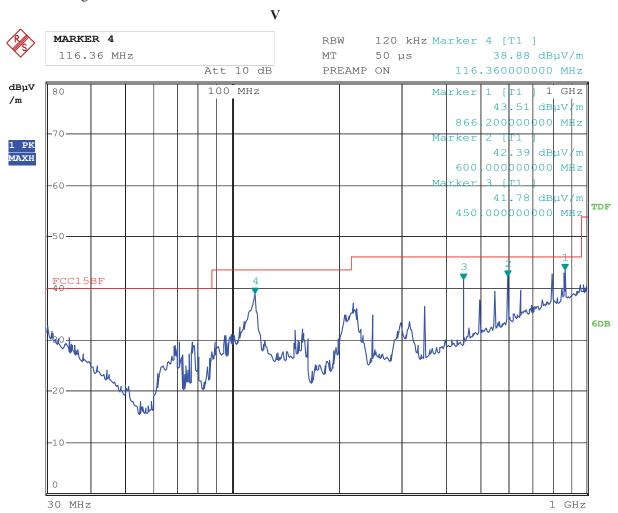
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### Test Figure:



Date: 10.SEP.2015 10:06:22

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#### Test result

### General Radiated Emission Data and Harmonics Radiated Emission Data

Radiated Emission In Horizontal/ In Vertical (30MHz----1000MHz)

**EUT set Condition: Play USB** 

**Results: Pass** 

| Frequency (MHz) | Level@3m (dB \u03b4 V/m) | Antenna Polarity | Limit@3m (dB µ V/m) |
|-----------------|--------------------------|------------------|---------------------|
| 114.640         | 31.55                    | Н                | 43.50               |
| 216.080         | 34.67                    | Н                | 46.00               |
|                 |                          |                  |                     |
| 867.000         | 43.21                    | V                | 46.00               |
| 112.160         | 38.29                    | V                | 43.50               |

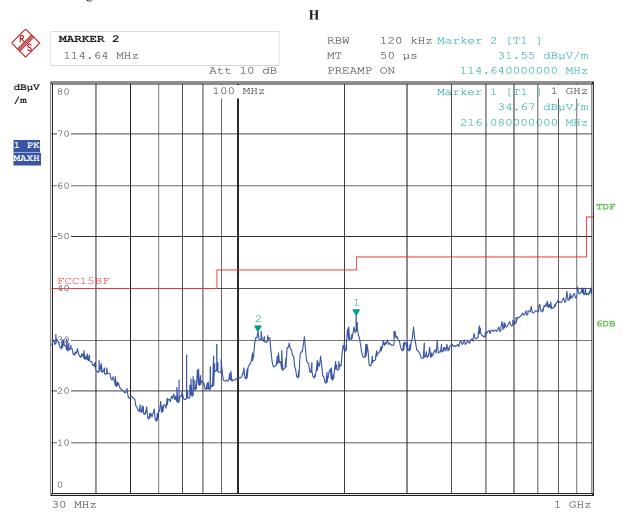
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### Test Figure:



Date: 10.SEP.2015 10:31:11

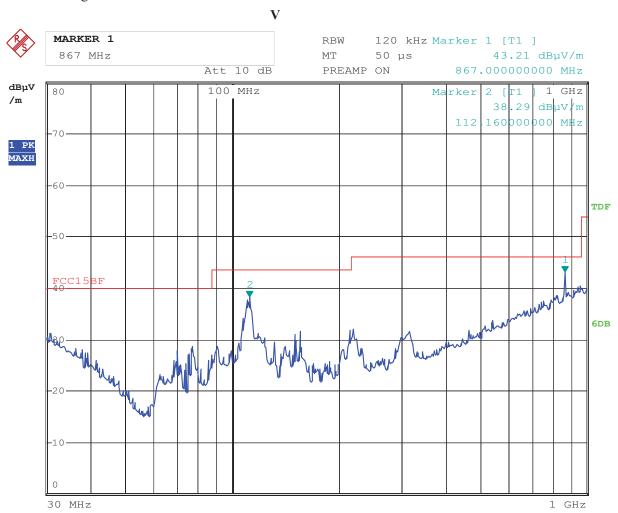
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### Test Figure:



Date: 10.SEP.2015 10:29:34

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#### Test result

#### General Radiated Emission Data and Harmonics Radiated Emission Data

Radiated Emission In Horizontal/ In Vertical (30MHz----1000MHz)

**EUT set Condition: Play Memory** 

**Results: Pass** 

| Frequency (MHz) | Level@3m (dB \u03b4 V/m) | Antenna Polarity | Limit@3m (dB \u03b4 V/m) |
|-----------------|--------------------------|------------------|--------------------------|
| 117.120         | 34.69                    | Н                | 43.50                    |
| 219.400         | 37.10                    | Н                | 46.00                    |
|                 |                          |                  |                          |
| 221.920         | 36.09                    | Н                | 46.00                    |
| 866.640         | 41.75                    | Н                | 46.00                    |
| 113.080         | 37.67                    | Н                | 43.50                    |

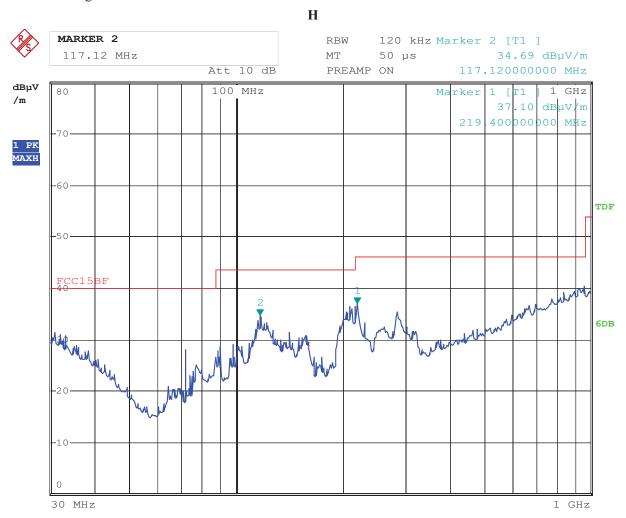
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### Test Figure:



Date: 10.SEP.2015 10:14:44

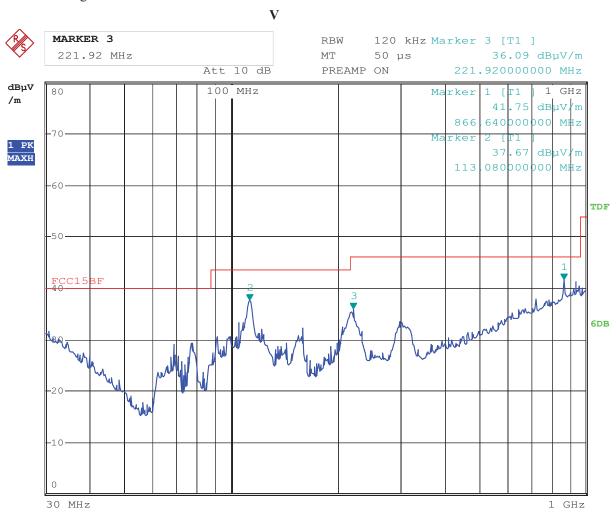
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### Test Figure:



Date: 10.SEP.2015 10:16:29

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#### Test result

### General Radiated Emission Data and Harmonics Radiated Emission Data

Radiated Emission In Horizontal/ In Vertical (30MHz----1000MHz)

**EUT set Condition: Running EMC test Program** 

**Results: Pass** 

| Frequency (MHz) | Level@3m (dB \u03b4 V/m) | Antenna Polarity | Limit@3m (dB \u03b4 V/m) |
|-----------------|--------------------------|------------------|--------------------------|
| 148.480         | 37.57                    | Н                | 43.50                    |
| 445.520         | 36.09                    | Н                | 46.00                    |
| 945.320         | 41.18                    | Н                | 46.00                    |
|                 |                          |                  |                          |
| 70.640          | 34.03                    | V                | 40.00                    |
| 891.000         | 41.54                    | V                | 46.00                    |
| 110.040         | 34.54                    | V                | 43.50                    |

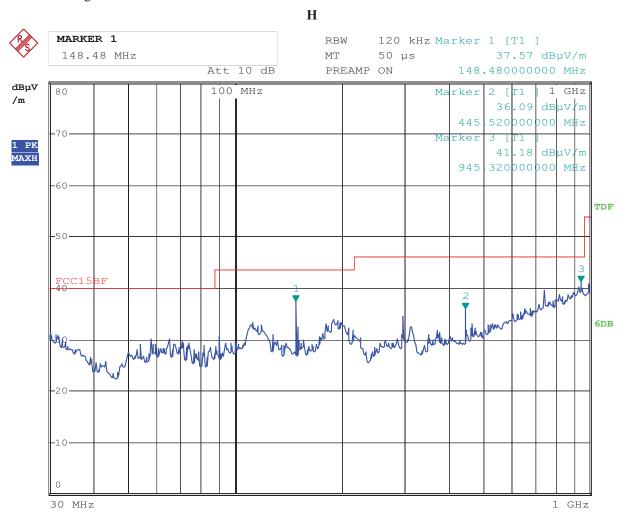
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### Test Figure:



Date: 10.SEP.2015 10:24:50

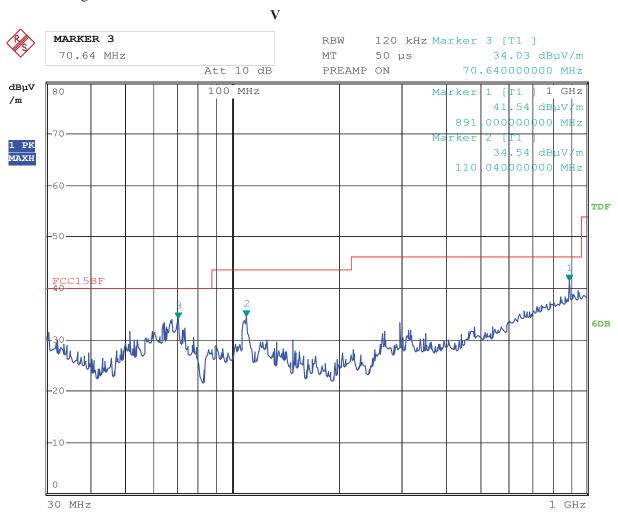
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#### Test Figure:



Date: 10.SEP.2015 10:27:56

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### Radiated Disturbance (1000MHz----18000MHz)

**EUT Operating Environment** 

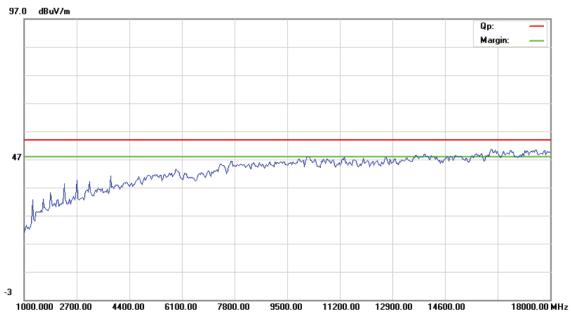
Temperature:25℃ Humidity: 75%RH Atmospheric Pressure: 101 KPa

**EUT set Condition: Camera On** 

**Equipment Level: Class B** 

**Results: Pass** 

Please refer to following diagram for individual



| Frequency (MHz) | Level@3m (dBμV/m) | Antenna Polarity | Limit@3m (dBµV/m) |
|-----------------|-------------------|------------------|-------------------|
|                 |                   | Н                | 54(AV)            |

Note: 1.PK value is lower than AV limit ,only PK plot is shown as above

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### Radiated Disturbance (1000MHz----18000MHz)

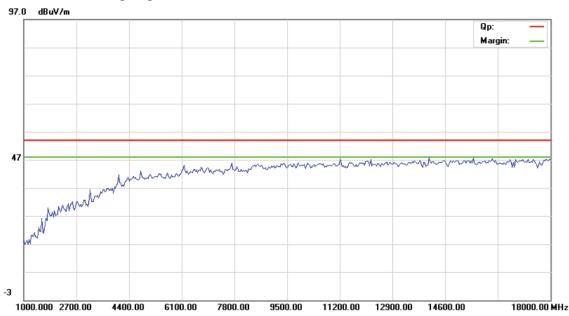
### **EUT Operating Environment**

Temperature:25 ℃ Humidity: 75%RH Atmospheric Pressure: 101 KPa

**EUT set Condition: Camera On Equipment Level: Class B** 

**Results: Pass** 

Please refer to following diagram for individual



| Frequency (MHz) | Level@3m ( $dB\mu V/m$ ) | Antenna Polarity | Limit@3m (dBµV/m) |
|-----------------|--------------------------|------------------|-------------------|
|                 | 1                        | V                | 54(AV)            |

Note: 1.PK value is lower than AV limit ,only PK plot is shown as above

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### Radiated Disturbance (1000MHz----18000MHz)

**EUT Operating Environment** 

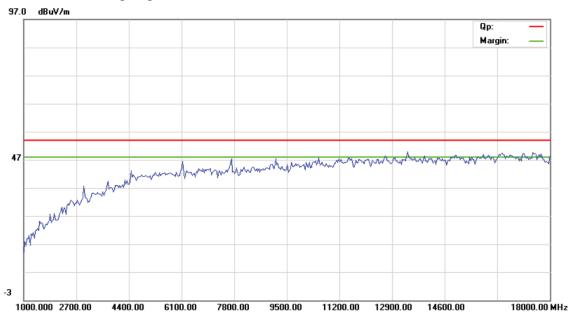
Temperature:25℃ Humidity: 75%RH Atmospheric Pressure: 101 KPa

**EUT set Condition: Play SD Card** 

**Equipment Level: Class B** 

**Results: Pass** 

Please refer to following diagram for individual



| Frequency (MHz) | Level@3m (dBμV/m) | Antenna Polarity | Limit@3m (dBµV/m) |
|-----------------|-------------------|------------------|-------------------|
|                 |                   | Н                | 54(AV)            |

Note: 1.PK value is lower than AV limit, only PK plot is shown as above

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### Radiated Disturbance (1000MHz----18000MHz)

### **EUT Operating Environment**

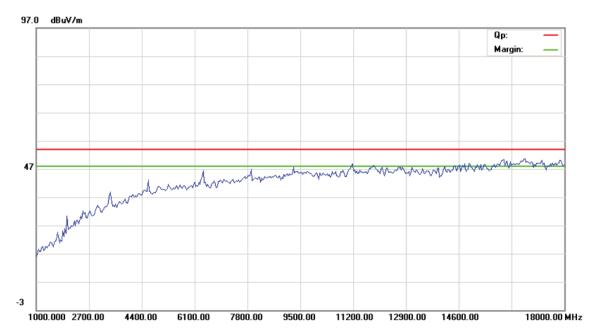
Temperature:25°C Humidity: 75%RH Atmospheric Pressure: 101 KPa

**EUT set Condition: Play SD Card** 

**Equipment Level: Class B** 

**Results: Pass** 

Please refer to following diagram for individual



| Frequency (MHz) | Level@3m ( $dB\mu V/m$ ) | Antenna Polarity | Limit@3m (dBµV/m) |
|-----------------|--------------------------|------------------|-------------------|
|                 | -                        | V                | 54(AV)            |

Note: 1.PK value is lower than AV limit ,only PK plot is shown as above

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### Radiated Disturbance (1000MHz----18000MHz)

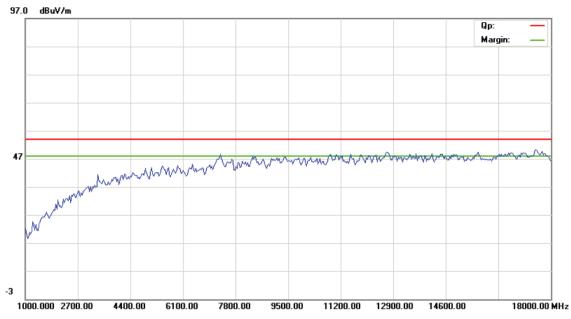
**EUT Operating Environment** 

Temperature:25℃ Humidity: 75%RH Atmospheric Pressure: 101 KPa

**EUT set Condition: Play USB Equipment Level: Class B** 

**Results: Pass** 

Please refer to following diagram for individual



| Frequency (MHz) | Level@3m (dBµV/m) | Antenna Polarity | $Limit@3m (dB\mu V/m)$ |
|-----------------|-------------------|------------------|------------------------|
|                 |                   | Н                | 54(AV)                 |

Note: 1.PK value is lower than AV limit, only PK plot is shown as above

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### Radiated Disturbance (1000MHz----18000MHz)

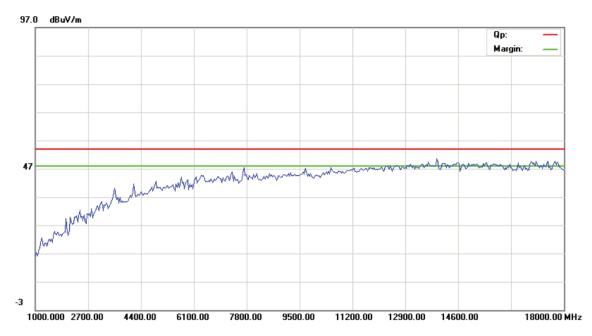
### **EUT Operating Environment**

Temperature:25°C Humidity: 75%RH Atmospheric Pressure: 101 KPa

**EUT set Condition: Play USB Equipment Level: Class B** 

**Results: Pass** 

Please refer to following diagram for individual



| Frequency (MHz) | Level@3m (dBµV/m) | Antenna Polarity | Limit@3m (dBµV/m) |
|-----------------|-------------------|------------------|-------------------|
|                 |                   | V                | 54(AV)            |

Note: 1.PK value is lower than AV limit, only PK plot is shown as above

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### Radiated Disturbance (1000MHz----18000MHz)

**EUT Operating Environment** 

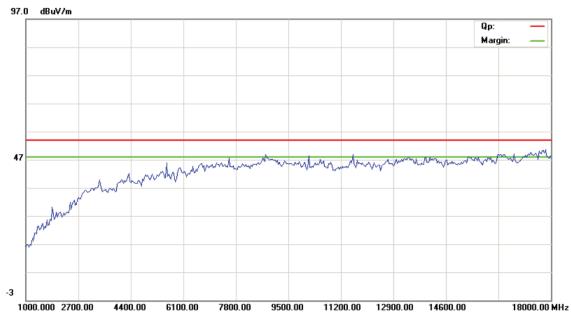
Temperature:25℃ Humidity: 75%RH Atmospheric Pressure: 101 KPa

**EUT set Condition: Play Memory** 

**Equipment Level: Class B** 

**Results: Pass** 

Please refer to following diagram for individual



| Frequency (MHz) | Level@3m (dBµV/m) | Antenna Polarity | $Limit@3m (dB\mu V/m)$ |
|-----------------|-------------------|------------------|------------------------|
|                 |                   | Н                | 54(AV)                 |

Note: 1.PK value is lower than AV limit, only PK plot is shown as above

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### Radiated Disturbance (1000MHz----18000MHz)

### **EUT Operating Environment**

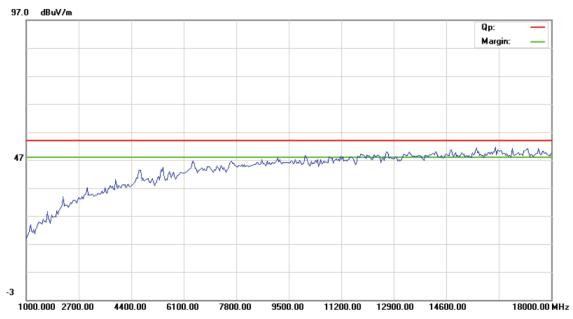
Temperature:25 ℃ Humidity: 75%RH Atmospheric Pressure: 101 KPa

**EUT set Condition: Play Memory** 

**Equipment Level: Class B** 

**Results: Pass** 

Please refer to following diagram for individual



| Frequency (MHz) | Level@3m (dBµV/m) | Antenna Polarity | Limit@3m (dBµV/m) |
|-----------------|-------------------|------------------|-------------------|
|                 |                   | V                | 54(AV)            |

Note: 1.PK value is lower than AV limit, only PK plot is shown as above

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### Radiated Disturbance (1000MHz----18000MHz)

**EUT Operating Environment** 

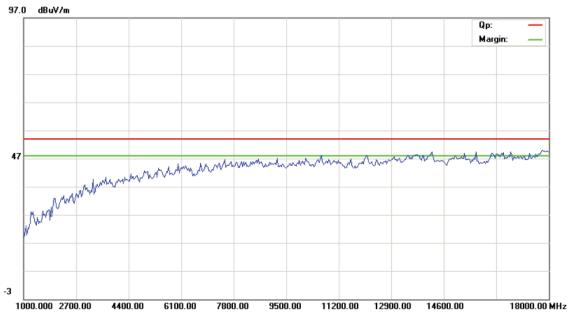
Temperature:25℃ Humidity: 75%RH Atmospheric Pressure: 101 KPa

**EUT set Condition: Running EMC test Program** 

**Equipment Level: Class B** 

**Results: Pass** 

Please refer to following diagram for individual



| Frequency (MHz) | Level@3m (dBµV/m) | Antenna Polarity | $Limit@3m (dB\mu V/m)$ |
|-----------------|-------------------|------------------|------------------------|
|                 |                   | Н                | 54(AV)                 |

Note: 1.PK value is lower than AV limit, only PK plot is shown as above

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### Radiated Disturbance (1000MHz----18000MHz)

### **EUT Operating Environment**

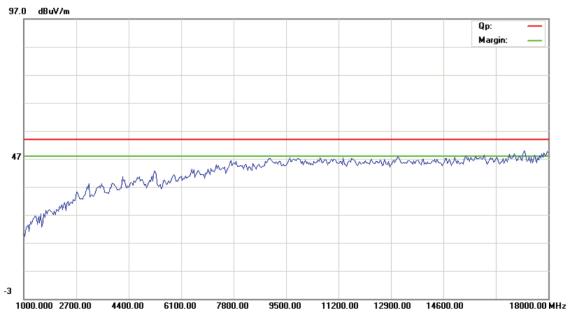
Temperature:25°C Humidity: 75%RH Atmospheric Pressure: 101 KPa

**EUT set Condition: Running EMC test Program** 

**Equipment Level: Class B** 

**Results: Pass** 

Please refer to following diagram for individual



| Frequency (MHz) | Level@3m (dBµV/m) | Antenna Polarity | Limit@3m ( $dB\mu V/m$ ) |
|-----------------|-------------------|------------------|--------------------------|
|                 |                   | V                | 54(AV)                   |

Note: 1.PK value is lower than AV limit ,only PK plot is shown as above