

# FCC CERTIFICATION REPORT

## ISED Canada. ICES-003

Test Report No. : E1/2016/B0082  
Applicant : Toshiba Corporation  
ICES Address : 2-5-1, Kasama, Sakae-Ku, Yokohama 247-8585, Japan  
FCC Address : Storage & Electronic Devices Solutions Company,  
2-5-1, Kasama, Sakae-Ku, Yokohama 247-8585, Japan  
Manufacturer : Toshiba Co. Storage & Electronic Devices Solutions Company  
Address : 2-5-1, Kasama, Sakae-Ku, Yokohama 247-8585, Japan

**Equipment Under Test (EUT) :**

Product Name : FlashAir  
Brand Name : Toshiba  
FCC Model No. : WLSDTHNSWCAE  
ICES Model No. : THNSW016GCA-E, THNSW032GCA-E, THNSW064GCA-E  
Added Model(s) : N/A  
FCC ID : ZVZP42350FA4  
IC ID : 9906A-P42350FA4

Standards : FCC Part 15:2016, Subpart B, Class B  
Canada ICES-003 Issue 6(June 2016), Class B

Date of Receipt : Nov. 16, 2016  
Date of Test : Nov. 16 ~ 26, 2016  
Date of Issue : Jan. 16, 2017

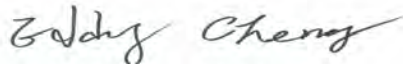
Test Result :	PASS
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In the configuration tested, the EUT complied with the standards specified above.

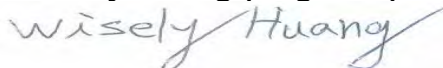
**Remarks :**

This report details the results of the testing carried out on one sample, the results contained in this test report do not relate to other samples of the same product. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.

This report shall not be reproduced except in full, without the written approval of the laboratory. 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.

**Tested By:****Date**

Jan. 16, 2017

**Eddy Cheng (Engineer)****Approved By****Date**

Jan. 16, 2017

**Wisely Huang  
(Assistant Supervisor)**

## Revision History

Report Number	Revision	Description	Issue Date
E1/2016/B0082	Rev.00	Initial creation of document	Jan. 16, 2017

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# 1. General Information

## 1.1 Applicant & Manufacturer Information

Applicant : Toshiba Corporation  
ICES Address of Applicant : 2-5-1, Kasama, Sakae-Ku, Yokohama 247-8585, Japan  
FCC Address of Applicant : Storage & Electronic Devices Solutions Company,  
2-5-1, Kasama, Sakae-Ku, Yokohama 247-8585, Japan  
Manufacturer : Toshiba Co. Storage & Electronic Devices Solutions  
Company  
Address of Manufacturer : 2-5-1, Kasama, Sakae-Ku, Yokohama 247-8585, Japan

## 1.2 General Description of EUT

Product Name : FlashAir  
Brand Name : Toshiba  
FCC Model No. : WLSDTHNSWCAE  
ICES Model No. : THNSW016GCA-E, THNSW032GCA-E, THNSW064GCA-E  
Added Model(s) : N/A  
ICES Model : Different capacity  
Difference

## 1.3 Details of EUT

Power Supply : Form System  
Modes/Function : Mode 1. R/W (64G)  
Mode 2. WiFi Link  
Worst case : CE Worst : Mode 1. R/W (64G)  
Mode 2. WiFi Link  
RE Worst : Mode 1. R/W (64G)  
Mode 2. WiFi Link  
Highest operate description : 2.4 GHz  
Adapter : N/A

## 1.4 Operation Procedure

### Mode 1:

1. Insert the EUT to NB.
2. Plug the NB Adapter into power input port and power supply.
3. Place periphery on the edge of the table and place 10 cm between them. Place the NB at the center of the table edge.
4. Turn on all peripheral power.
5. NB executes Windows.
6. Run My Win (H-Patten) to fill the screen with H.
7. Execute WINTHRAX (R / W program).
8. Start the test.

### Mode 2 :

1. Insert the EUT to NB.
2. Plug the NB Adapter into power input port and power supply.
3. Place periphery on the edge of the table and place 10 cm between them. Place the NB at the center of the table edge.
4. Turn on all peripheral power.
5. NB executes Windows
6. Open another NB No.2 and execute the Ping command in the DOS window.
7. Start the test.

PRODUCT	MANUFACTURER	MODEL NO.	SERIAL NO.
Mouse	DELL	MS111-T	CN-OKW2YH-71616-345-OL7T
Printer	HP	VCVRA-1004	CN33K19J3F
NB (No. 1) (by client)	TOSHIBA	PORTEGE R930 Series	PT-330N-0C703V
NB (No. 2) (by client)	TOSHIBA	PORTEGE R930 Series	PT-330N-0C703V

## 1.6 Modification List

No modification was made by SGS Taiwan Electronics & Communication Laboratory.

## 1.7 Cable List

Cable Type	Core	Length	Shielding/Non-shielding
N/A	N/A	N/A	N/A

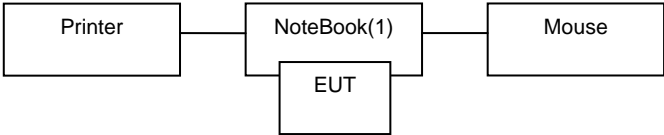
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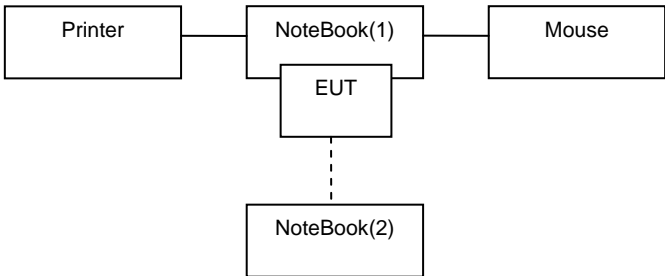


1.8 Test Set-Up Configuration

Mode\_1



Mode\_2



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## 1.9 Measurement Procedure

Conducted Emission Testing was performed according to ANSI C63.4:2014 in a shielded room with peripherals placed on a table, 0.8m high over a metal floor. It was located more than required distance away from the shielded room wall.

Radiated Emission Testing was performed according to ANSI C63.4:2014 at the 3/10m semi-anechoic chamber. The EUT was placed on a 0.8m high table along with the peripherals. The turn table was placed 10m distance from the antenna. Cables were placed in a position to produce maximum emissions as determined by experimentation, and operation mode was selected for production of maximum emission.

The frequencies and amplitudes of maximum emission were measured at varying azimuths, antenna heights and antenna polarities. Maximum emission levels are then reported.

## 1.10 Standards Applicable for Testing

Tests to be carried out under FCC Part 15, Subpart B

Test Standards	Status
FCC Part 15, Subpart B	Applicable
Deviation from Standard	No deviation

## 1.11 Summary of Results

Highest Emission					
Standard	Test Type	Result	Phase/Pol.	Frequency(MHz)	Margin(dB)
FCC Part 15 Subpart B Class B Canada ICES-003 Issue 6 (Jan.2016),Class B	Conducted Emission	PASS	Line	0.1700	-16.52 (QP)
			Neutral	0.1500	-15.32 (QP)
	Radiated Emission	PASS	Ver.	42.4400	-12.52 (QP)

## 2. EMISSION

### 2.1 Test Results

	Results
Conducted Emission	Pass
Radiated Emission	Pass

### 2.2 Frequency Range

Conducted Emission : 150 kHz - 30 MHz

Radiated Emission : See below table

Highest frequency generated or used in the device or on which the device operates or tunes (MHz)	Upper frequency of measurement range (MHz)
Below 1.705	30
1.705 - 108	1000
108 - 500	2000
500 - 1000	5000
Above 1000	5th harmonic of the highest frequency or 40 GHz, whichever is lower

### 2.3 Limits of Conducted and Radiated Emission

#### 2.3.1 Limits of Conducted Emission for FCC Part 15, Subpart B/CISPR 22

FREQUENCY (MHz)	Class A (dBuV)		Class B (dBuV)	
	Quasi - peak	Average	Quasi - peak	Average
0.15 - 0.5	79	66	66 - 56	56 - 46
0.50 - 5.0	73	60	56	46
5.0 - 30.0	73	60	60	50

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

(2) The limit decreases linearly with the logarithm of the frequency in the range 0.15 to 0.50 MHz.

(3) All emanation from a class A/B digital device or system, including any network of conductors and apparatus connected there to, shall not exceed the level of field strengths specified above.



## 2.3.2 Limits of Radiated Emissions for FCC Part 15, Subpart B/CISPR 22

### FCC Limit:

- Detector Function : Quasi – Peak

FREQUENCY (MHz)	Class A (at 10m)	Class B (at 3m)
	dBuV/m	dBuV/m
30~88	39	40
88~216	43.5	43.5
216~960	46.44	46
Above 960	49.54	54

- Detector Function : Peak , Average

FREQUENCY (MHz)	Class A (dBuV/m) (at 3m)		Class B (dBuV/m) (at 3m)	
	Peak	Average	Peak	Average
Above 1000-18000	79.3	59.3	73.9	53.9

### CISPR Limit:

- Detector Function : Quasi – Peak

FREQUENCY (MHz)	Class A (at 10m)	Class B (at 10m)
	dBuV/m	dBuV/m
30-230	40	30
230-1000	47	37

Note : The lower limit applies at the transition frequency.

## 2.4. Test of Conducted Emission

### 2.4.1 Test Equipments

SGS Conducted Emission HWAYA Conducted Room No.A EMC					
EQUIPMENT TYPE	Manufacturer	Model Number	Serial Number	Calibration Date	Calibration Due
EMI Test Receiver	R&S	ESCI 3	101311	2016/6/23	2017/6/22
Coaxial Cables	N/A	N30N30-1042-150	N/A	2016/2/6	2017/2/5
LISN	SCHWARZBECK	NSLK 8127	8127-648	2016/6/13	2017/6/12
Pulse Limiter	Narda S.T.S.	PMM PL01	1110X30602	2016/8/12	2017/8/11
LISN	Schwarzbeck	NSLK 8128	NSLK8127-300	2016/6/22	2017/6/21
Test S/W	Farad	EZ-EMC	Ver. SGS-03A2	N.C.R.	N.C.R.
SGS Taiwan LTD. Electronics & Communication Laboratory No.2, Keji 1st Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.) Measurement Uncertainty of Conducted Emission Expanded uncertainty (K=2) of conducted emission is 2.20 dB					

### 2.4.2 Operating Environment

Temperature : 22 degree C                      Humidity : 64 %RH  
Atmospheric Pressure : 992 mBar

### 2.4.3 Measurement Level Calculation

Factor = LISN insertion loss + Cable loss+ Pulse Limiter Insertion Loss  
Measurement Level = Reading Level + Factor  
Over (Margin) = Measurement Level – Limit

## 2.4.4 Measurement Data:

Model No.: WLS DTHNSWCAE

Mode\_1\_L

Site : Conduction Room  
Limit: FCC Class B Conduction(QP)  
Mode: Mode 1  
Note: AC 120V/60Hz

Phase: L1  
Power: From System

Temperature: 22 °C  
Humidity: 64 %

### Conducted Emission



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector	Comment
		MHz	dBuV	dB	dBuV	dBuV	dB		
1		0.1540	48.60	0.33	48.93	65.78	-16.85	QP	
2		0.1540	27.70	0.33	28.03	55.78	-27.75	AVG	
3 *		0.1700	48.10	0.34	48.44	64.96	-16.52	QP	
4		0.1700	27.80	0.34	28.14	54.96	-26.82	AVG	
5		0.2500	34.30	0.36	34.66	61.76	-27.10	QP	
6		0.2500	13.90	0.36	14.26	51.76	-37.50	AVG	
7		0.2900	30.20	0.36	30.56	60.52	-29.96	QP	
8		0.2900	13.90	0.36	14.26	50.52	-36.26	AVG	
9		0.4860	32.80	0.37	33.17	56.24	-23.07	QP	
10		0.4860	24.40	0.37	24.77	46.24	-21.47	AVG	
11		2.0300	25.00	0.39	25.39	56.00	-30.61	QP	
12		2.0300	18.70	0.39	19.09	46.00	-26.91	AVG	

\*:Maximum data x:Over limit l:over margin

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## Mode\_1\_N

Site : Conduction Room  
Limit: FCC Class B Conduction(QP)  
Mode: Mode 1  
Note: AC 120V/60Hz

Phase: **N**  
Power: From System

Temperature: 22 °C  
Humidity: 64 %

### Conducted Emission



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector	Comment
		MHz	dBuV	dB	dBuV	dBuV	dB		
1	*	0.1500	50.30	0.38	50.68	66.00	-15.32	QP	
2		0.1500	30.20	0.38	30.58	56.00	-25.42	AVG	
3		0.1780	47.70	0.39	48.09	64.58	-16.49	QP	
4		0.1780	28.40	0.39	28.79	54.58	-25.79	AVG	
5		0.2060	40.80	0.39	41.19	63.37	-22.18	QP	
6		0.2060	21.60	0.39	21.99	53.37	-31.38	AVG	
7		0.2220	39.80	0.39	40.19	62.74	-22.55	QP	
8		0.2220	21.50	0.39	21.89	52.74	-30.85	AVG	
9		0.4820	32.50	0.39	32.89	56.30	-23.41	QP	
10		0.4820	23.60	0.39	23.99	46.30	-22.31	AVG	
11		1.6100	25.70	0.42	26.12	56.00	-29.88	QP	
12		1.6100	17.60	0.42	18.02	46.00	-27.98	AVG	

\*:Maximum data x:Over limit l:over margin

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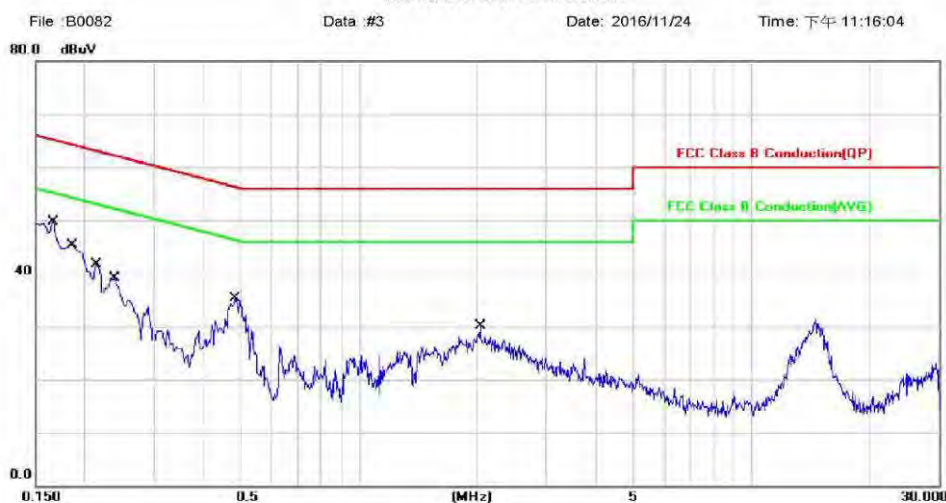
## Mode\_2\_L

Site : Conduction Room  
Limit: FCC Class B Conduction(QP)  
Mode: Mode 2  
Note: AC 120V/60Hz

Phase: **L1**  
Power: From System

Temperature: 22 °C  
Humidity: 64 %

### Conducted Emission



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector	Comment
		MHz	dBuV	dB	dBuV	dBuV	dB		
1		0.1660	42.50	0.34	42.84	65.16	-22.32	QP	
2		0.1660	24.50	0.34	24.84	55.16	-30.32	AVG	
3		0.1860	41.30	0.35	41.65	64.21	-22.56	QP	
4		0.1860	24.80	0.35	25.15	54.21	-29.06	AVG	
5		0.2140	35.50	0.36	35.86	63.05	-27.19	QP	
6		0.2140	21.40	0.36	21.76	53.05	-31.29	AVG	
7		0.2380	33.00	0.36	33.36	62.17	-28.81	QP	
8		0.2380	16.50	0.36	16.86	52.17	-35.31	AVG	
9		0.4860	31.50	0.37	31.87	56.24	-24.37	QP	
10	*	0.4860	26.10	0.37	26.47	46.24	-19.77	AVG	
11		2.0420	26.90	0.39	27.29	56.00	-28.71	QP	
12		2.0420	18.60	0.39	18.99	46.00	-27.01	AVG	

\*:Maximum data x:Over limit l:over margin

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## Mode\_2\_N

Site : Conduction Room  
Limit: FCC Class B Conduction(QP)  
Mode: Mode 2  
Note: AC 120V/60Hz

Phase: **N**  
Power: From System

Temperature: 22 °C  
Humidity: 64 %

### Conducted Emission



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector	Comment
		MHz	dBuV	dB	dBuV	dBuV	dB		
1		0.1540	43.40	0.38	43.78	65.78	-22.00	QP	
2		0.1540	27.60	0.38	27.98	55.78	-27.80	AVG	
3		0.2020	36.60	0.39	36.99	63.53	-26.54	QP	
4		0.2020	22.70	0.39	23.09	53.53	-30.44	AVG	
5		0.2220	33.30	0.39	33.69	62.74	-29.05	QP	
6		0.2220	19.90	0.39	20.29	52.74	-32.45	AVG	
7		0.2420	31.50	0.39	31.89	62.03	-30.14	QP	
8		0.2420	19.40	0.39	19.79	52.03	-32.24	AVG	
9		0.4980	31.70	0.39	32.09	56.03	-23.94	QP	
10	*	0.4980	26.40	0.39	26.79	46.03	-19.24	AVG	
11		2.0660	23.90	0.42	24.32	56.00	-31.68	QP	
12		2.0660	19.00	0.42	19.42	46.00	-26.58	AVG	

\*:Maximum data x:Over limit l:over margin

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## 2.5 Test of Radiated Emission

### 2.5.1 Test Equipments

#### Below 1GHz

SGS Radiated_Below_1GHz HWAYA 10m_EMC					
EQUIPMENT TYPE	Manufacturer	Model Number	Serial Number	Calibration Date	Calibration Due
EMI Test Receiver	R&S	ESCI 3	101342	2016/3/5	2017/3/4
EMI Test Receiver	R&S	ESCI 3	101343	2015/12/25	2016/12/24
Broadband Antenna	SCHWAZBECK	VULB9168	9168-628	2016/9/22	2017/9/21
Broadband Antenna	SCHWAZBECK	VULB9168	9168-629	2016/9/22	2017/9/21
Pre Amplifier	EMC Instruments Corp.	EMC330	980178	2016/3/31	2017/3/30
Pre Amplifier	EMC Instruments Corp.	EMC330	980179	2016/3/31	2017/3/30
Coaxial Cable	EMC Instruments	EMCCFD400-NM-NM	150917	2016/9/18	2017/9/17
Coaxial Cable	EMC Instruments	EMCCFD400-NM-NM	150919	2016/9/18	2017/9/17
Coaxial Cable	EMC Instruments	EMCCFD400-NM-NM	150820	2016/9/18	2017/9/17
Coaxial Cable	EMC Instruments	EMCCFD400-NM-NM	150918	2016/9/18	2017/9/17
Coaxial Cable	EMC Instruments	EMCCFD400-NM-NM	150821	2016/9/18	2017/9/17
Coaxial Cable	EMC Instruments	EMCCFD400-NM-NM	150822	2016/9/18	2017/9/17
Controller	MF	MF-7802	N/A	N.C.R.	N.C.R.
Controller	MF	MF-7802	N/A	N.C.R.	N.C.R.
Antenna Master	MF	N/A	N/A	N.C.R.	N.C.R.
Antenna Master	MF	N/A	N/A	N.C.R.	N.C.R.
Antenna Master	MF	N/A	N/A	N.C.R.	N.C.R.
Turn Table	MF	N/A	N/A	N.C.R.	N.C.R.
Site NSA	Chance Most	10M Chamber	10M SAC	2015/12/31	2016/12/30
Test S/W	Farad	EZ-EMC	Ver. SGS-03A2	N.C.R.	N.C.R.
SGS Taiwan LTD. Electronics & Communication Laboratory No.2, Keji 1st Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.) Measurement Uncertainty of Radiated Emission Expanded uncertainty of radiated emission is 4.16 dB. (30MHz ~ 1000MHz)					

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### Above 1GHz

SGS Radiated_Above_1GHz HWAYA 966A EMC					
EQUIPMENT TYPE	Manufacturer	Model Number	Serial Number	Calibration Date	Calibration Due
Spectrum Analyzer	R&S	FSV 40	101419	2016/2/25	2017/2/24
EMI Test Receiver	R&S	ESR 7	101459	2016/2/22	2017/2/21
Horn Antenna	SCHWARZBECK	BBHA9120D	BBHA9120D673	2016/10/14	2017/10/13
Horn Antenna	Schwarzbeck	BBHA9170	BBHA9170-184	2015/12/11	2016/12/10
Pre Amplifier	EMC Instruments Corp.	EMC012645B	980216	2016/4/25	2017/4/24
Pre Amplifier	EMC Instruments Corp.	EMC184045B	980135	2016/10/27	2017/10/26
Coaxial Cable	JUNFLOW	MWX221-NMSNMS	J0778929	2016/4/23	2017/4/22
Coaxial Cable	Huber+Suhner	SUCCOFLEX 104PEA	30255/4PEA	N.C.R.	N.C.R.
Coaxial Cable	EMC Instruments	EMC104-SM-SM	140927	2016/4/23	2017/4/22
Coaxial Cable	Huber+Suhner	SUCOFLEX 102	MY 2152/2	2016/6/5	2017/6/4
Coaxial Cable	Huber+Suhner	SUCOFLEX 102	MY 2153/2	2016/6/5	2017/6/4
Controller	MF	MF-7802	N.C.R.	N.C.R.	N.C.R.
Antenna Master	MF	N/A	N/A	N.C.R.	N.C.R.
Turn Table	MF	N/A	N/A	N.C.R.	N.C.R.
Site VSWR	SGS	966 Chamber A	SAC-A	2016/1/12	2017/1/11
Test S/W	Farad	EZ-EMC	Ver. SGS-03A2	N.C.R.	N.C.R.
SGS Taiwan LTD. Electronics & Communication Laboratory No.2, Keji 1st Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.) Measurement Uncertainty of Radiated Emission Expanded uncertainty (k=2) of radiated emission measurement is 4.96 dB. (1-6GHz) Expanded uncertainty (k=2) of radiated emission measurement is 5.14 dB. (6-18GHz) Expanded uncertainty (k=2) of radiated emission measurement is 4.86 dB. (18-26GHz) Expanded uncertainty (k=2) of radiated emission measurement is 4.81 dB. (26-40GHz)					

### 2.5.2 Operating Environment

Temperature : 22 degree C      Humidity : 73 %RH  
Atmospheric Pressure : 996 mBar

### 2.5.3 Measurement Level Calculation

Correction Factor = Antenna Factor + Cable loss- Amplifier Gain  
Measurement Level = Reading Level + Correction Factor  
Over (Margin) = Measurement Level – Limit



## 2.5.4 Measurement Data

### Below 1GHz

Model No.:WLSDTHNSWCAE

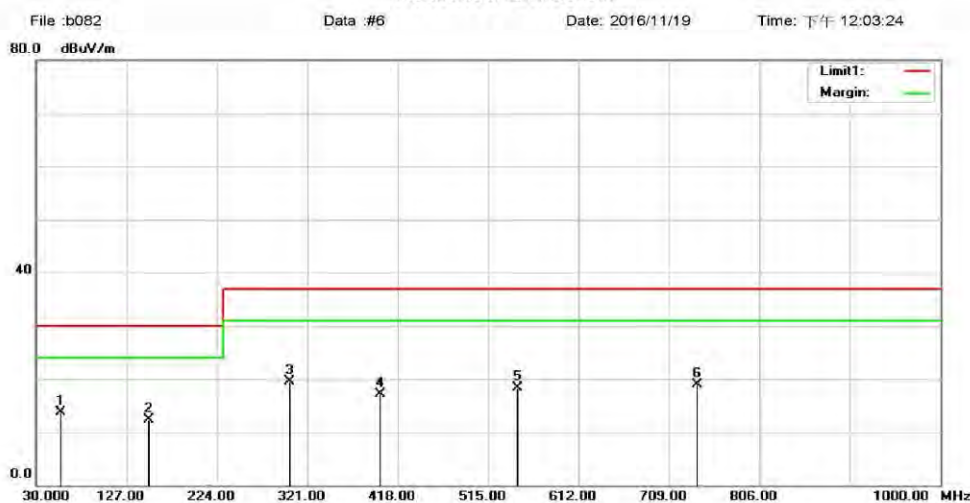
Mode\_1\_H

Site: SGS 10m Chamber  
Limit: CISPR22 Class B 10M Radiation  
Mode: Mode 1 (64G)  
Note: Power 120V /60HZ

Polarization: **Horizontal**  
Power: From System  
Distance: 10m

Temperature: 22 ℃  
Humidity: 73 %

### Radiated Emission



No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Over		
		MHz	Level	Factor	ment			Detector	Comment
			dBuV	dB	dBuV/m	dBuV/m	dB		
1	*	55.3620	25.57	-11.94	13.63	30.00	-16.37	QP	
2		150.1100	24.01	-11.75	12.26	30.00	-17.74	QP	
3		302.5620	30.36	-10.83	19.53	37.00	-17.47	QP	
4		398.5500	25.45	-8.43	17.02	37.00	-19.98	QP	
5		546.2600	24.13	-5.73	18.40	37.00	-18.60	QP	
6		738.1100	20.14	-1.24	18.90	37.00	-18.10	QP	

\*:Maximum data x:Over limit !:over margin

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## Mode\_1\_V

Site: SGS 10m Chamber  
Limit: CISPR22 Class B 10M Radiation  
Mode: Mode 1 (64G)  
Note: Power 120V /60HZ

Polarization: **Vertical**  
Power: From System  
Distance: 10m

Temperature: 22 °C  
Humidity: 73 %

## Radiated Emission



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	*	42.4400	28.78	-11.30	17.48	30.00	-12.52	QP	
2		137.4300	23.90	-12.00	11.90	30.00	-18.10	QP	
3		303.5000	32.11	-10.71	21.40	37.00	-15.60	QP	
4		399.6100	29.21	-8.31	20.90	37.00	-16.10	QP	
5		566.1200	22.45	-4.62	17.83	37.00	-19.17	QP	
6		728.3600	22.24	-1.20	21.04	37.00	-15.96	QP	

\*:Maximum data x:Over limit !:over margin

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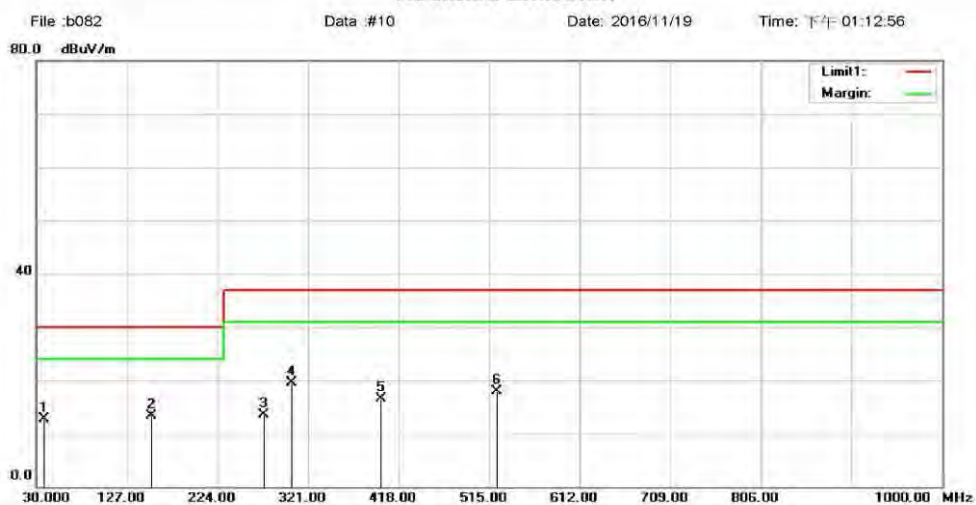
## Mode\_2\_H

Site: SGS 10m Chamber  
Limit: CISPR22 Class B 10M Radiation  
Mode: Mode 2 (64G)  
Note: Power 120V /60HZ

Polarization: **Horizontal**  
Power: From System  
Distance: 10m

Temperature: 22 °C  
Humidity: 73 %

### Radiated Emission



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		38.7300	24.48	-11.85	12.63	30.00	-17.37	QP	
2	*	152.4500	25.05	-11.69	13.36	30.00	-16.64	QP	
3		273.1500	25.31	-11.79	13.52	37.00	-23.48	QP	
4		303.2500	30.38	-10.82	19.56	37.00	-17.44	QP	
5		398.8900	24.95	-8.43	16.52	37.00	-20.48	QP	
6		522.1150	24.14	-6.29	17.85	37.00	-19.15	QP	

\*:Maximum data x:Over limit !:over margin

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## Mode\_2\_V

Site: SGS 10m Chamber  
Limit: CISPR22 Class B 10M Radiation  
Mode: Mode 2 (64G)  
Note: Power 120V /60HZ

Polarization: **Vertical**  
Power: From System  
Distance: 10m

Temperature: 22 °C  
Humidity: 73 %

### Radiated Emission



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measurement dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	*	42.6300	28.02	-11.29	16.73	30.00	-13.27	QP	
2		132.8000	24.90	-12.38	12.52	30.00	-17.48	QP	
3		166.8000	23.99	-11.47	12.52	30.00	-17.48	QP	
4		302.1500	30.87	-10.74	20.13	37.00	-16.87	QP	
5		398.4500	27.86	-8.34	19.52	37.00	-17.48	QP	
6		533.2600	23.95	-5.43	18.52	37.00	-18.48	QP	

\*:Maximum data x:Over limit !:over margin

File :b082\Data :#8

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## Above 1GHz

Model No.:WLSDTHNSWCAE

Mode\_1\_H

Site: SGS 966 Chamber A  
Limit: FCC Class B 3M Radiation(1G-40G)(Pea  
Mode: Mode\_1  
Note:  
Polarization: **Horizontal**  
Power: From System  
Distance:  
Temperature: 25 ℃  
Humidity: 71 %

### Radiated Emission



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		2717.000	57.52	-16.42	41.10	74.00	-32.90	peak	
2		3601.000	57.60	-14.08	43.52	74.00	-30.48	peak	
3		4145.000	58.36	-12.79	45.57	74.00	-28.43	peak	
4		4723.000	57.46	-11.13	46.33	74.00	-27.67	peak	
5		4995.000	57.87	-10.31	47.56	74.00	-26.44	peak	
6 *		5437.000	57.73	-9.51	48.22	74.00	-25.78	peak	

\*:Maximum data x:Over limit !:over margin

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## Mode\_1\_V

Site: SGS 966 Chamber A  
Limit: FCC Class B 3M Radiation(1G-40G)(Pea  
Mode: Mode\_1  
Note:

Polarization: **Vertical**  
Power: From System  
Distance:

Temperature: 25 ℃  
Humidity: 71 %

### Radiated Emission



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		2054.000	62.65	-19.34	43.31	74.00	-30.69	peak	
2		3686.000	57.50	-13.89	43.61	74.00	-30.39	peak	
3		4587.000	57.81	-11.54	46.27	74.00	-27.73	peak	
4		4910.000	57.23	-10.57	46.66	74.00	-27.34	peak	
5		5522.000	56.96	-9.35	47.61	74.00	-26.39	peak	
6 *		5675.000	56.69	-8.97	47.72	74.00	-26.28	peak	

\*:Maximum data x:Over limit !:over margin

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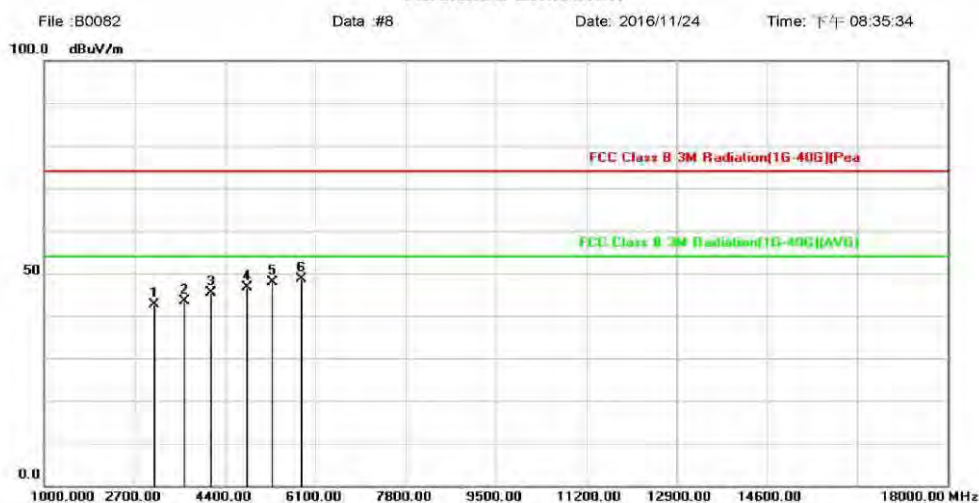
## Mode\_2\_H

Site: SGS 966 Chamber A  
Limit: FCC Class B 3M Radiation(1G-40G)(Pea  
Mode: Mode\_2  
Note:

Polarization: **Horizontal**  
Power: From System  
Distance:

Temperature: 25 °C  
Humidity: 71 %

## Radiated Emission



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1		3074.000	57.81	-15.24	42.57	74.00	-31.43	peak	
2		3635.000	57.31	-14.00	43.31	74.00	-30.69	peak	
3		4145.000	58.22	-12.79	45.43	74.00	-28.57	peak	
4		4808.000	57.52	-10.87	46.65	74.00	-27.35	peak	
5		5284.000	57.74	-9.78	47.96	74.00	-26.04	peak	
6 *		5828.000	57.23	-8.61	48.62	74.00	-25.38	peak	

\*:Maximum data x:Over limit !:over margin

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## Mode\_2\_V

Site: SGS 966 Chamber A  
Limit: FCC Class B 3M Radiation(1G-40G)(Pea  
Mode: Mode\_2  
Note:

Polarization: **Vertical**  
Power: From System  
Distance:

Temperature: 25 ℃  
Humidity: 71 %

### Radiated Emission



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		2037.000	63.68	-19.43	44.25	74.00	-29.75	peak	
2		3533.000	58.86	-14.23	44.63	74.00	-29.37	peak	
3		4145.000	57.64	-12.79	44.85	74.00	-29.15	peak	
4		4825.000	57.41	-10.83	46.58	74.00	-27.42	peak	
5		5539.000	57.34	-9.31	48.03	74.00	-25.97	peak	
6 *		5862.000	57.61	-8.53	49.08	74.00	-24.92	peak	

\*:Maximum data x:Over limit !:over margin

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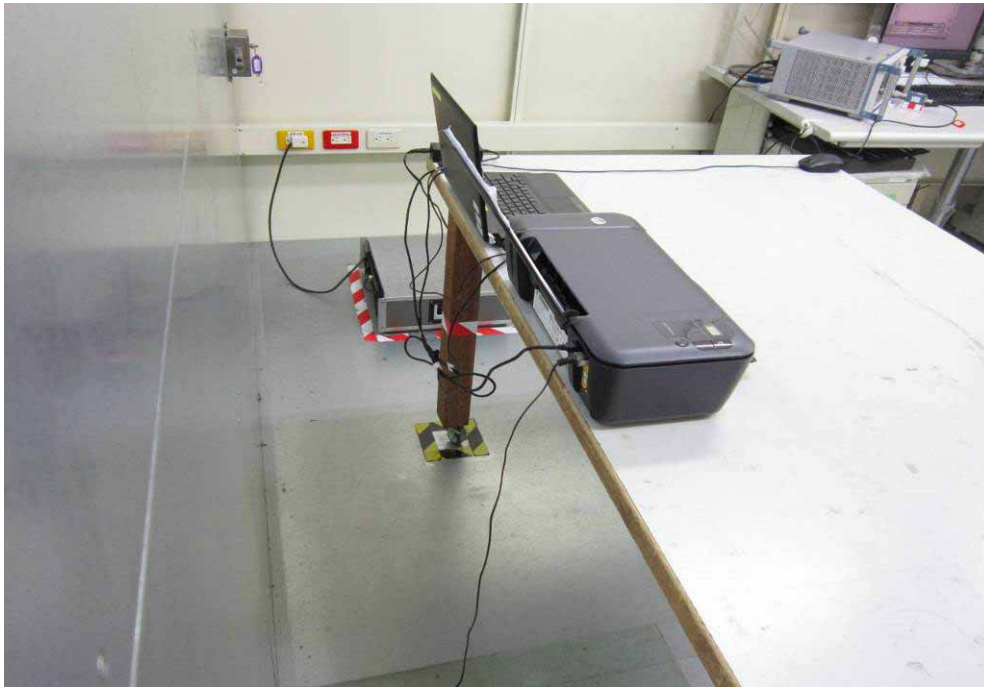
### 3. Photographs of Test

#### CE Testing Set-up

Model No.: WLSDTHNSWCAE  
Mode\_1\_+



Mode\_1\_-



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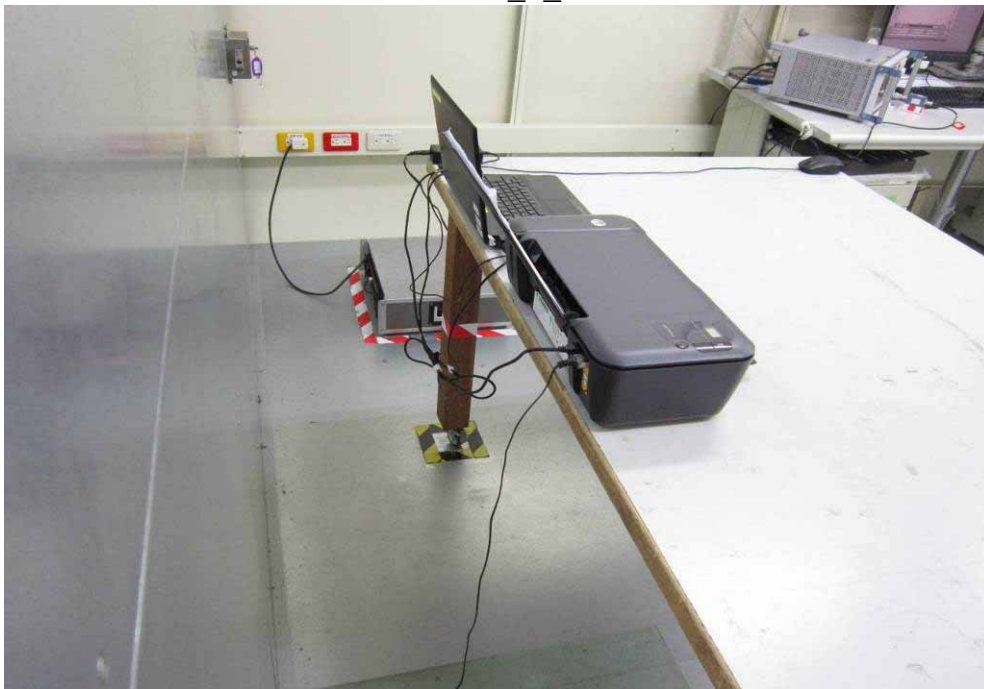
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**Mode\_2\_+**



**Mode\_2\_-**



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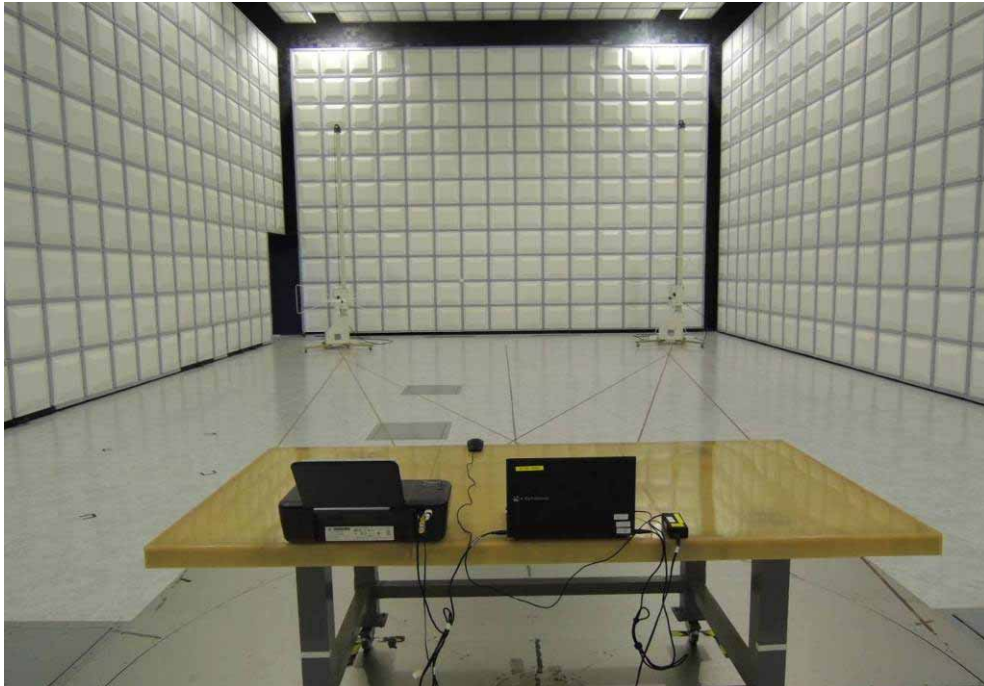
**RE Testing Set-up  
Below 1GHz**

**Model No.:WLSDTHNSWCAE**

**Mode \_1\_+**



**Mode \_1\_-**

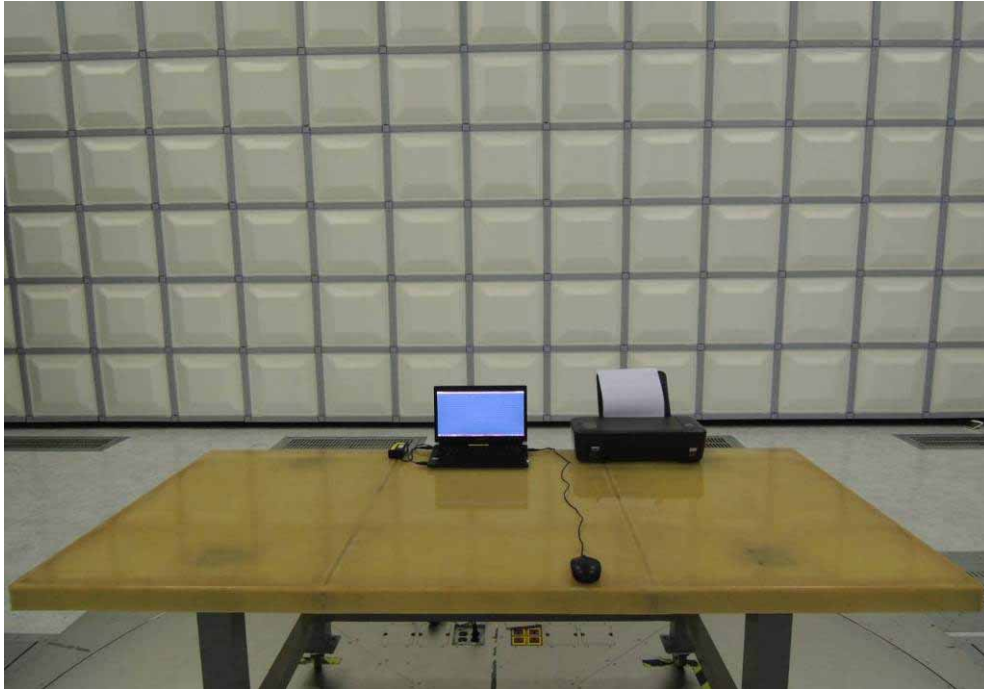


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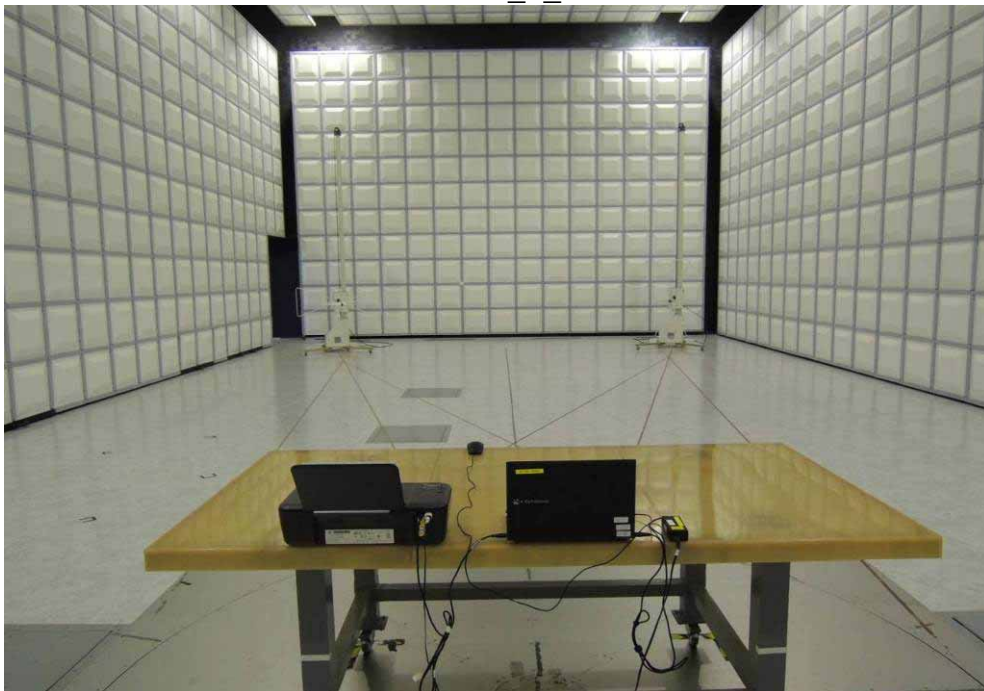
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Above 1GHz

Model No.:WLSDTHNSWCAE

Mode\_1\_+



Mode\_1\_-



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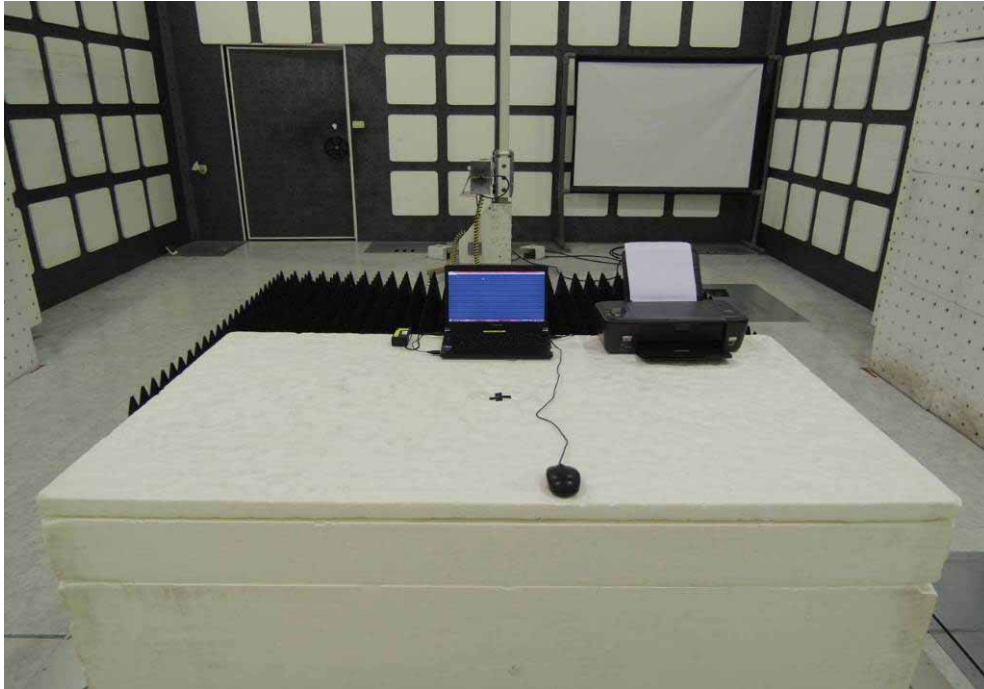
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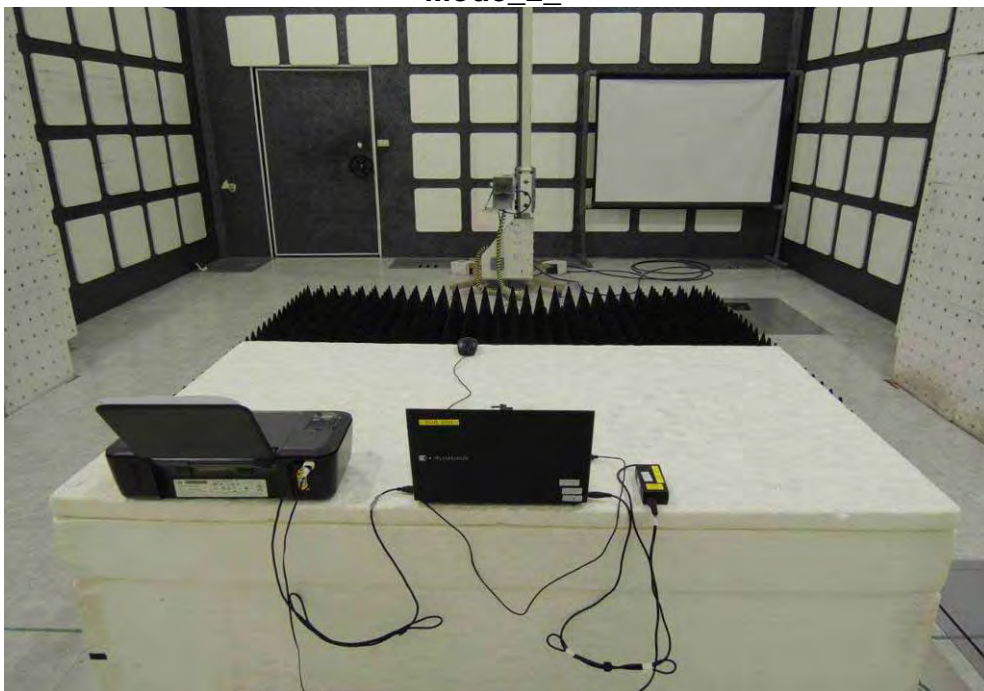
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## 4. Photographs of Product

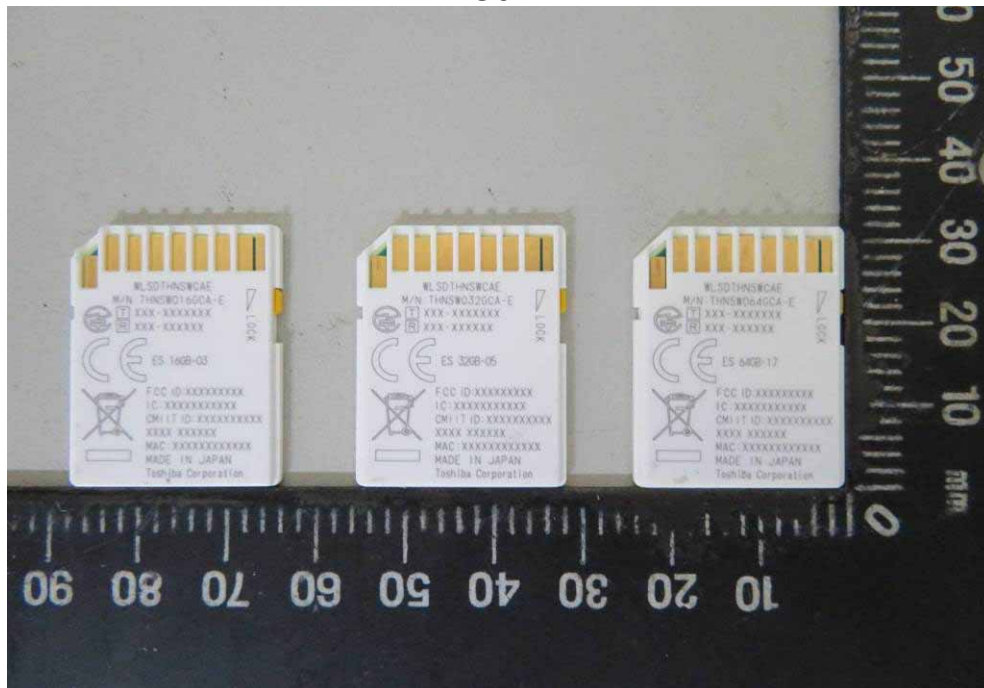
### Exterior

Model No.:WLSDTHNSWCAE

O01



O02



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O03



O04



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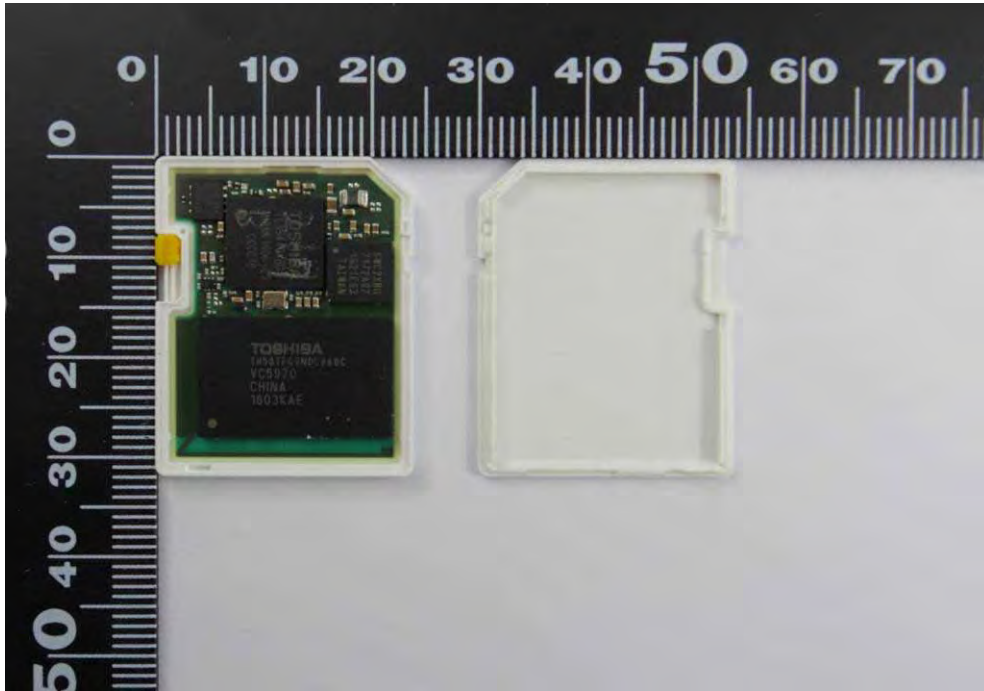
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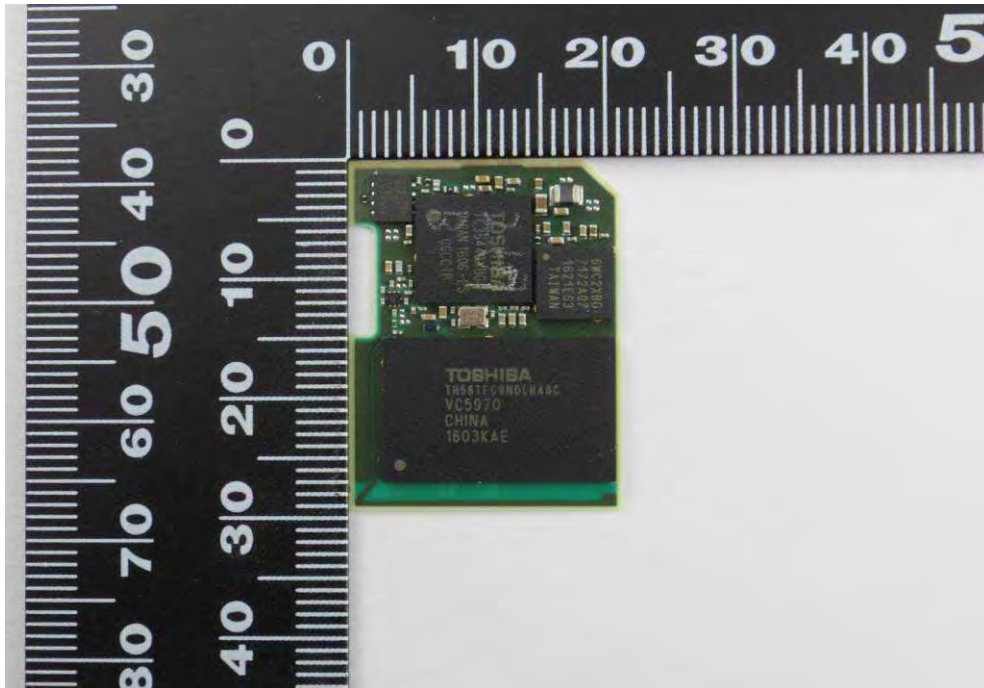
## Interior

Model No.:WLSDTHNSWCAE

I01



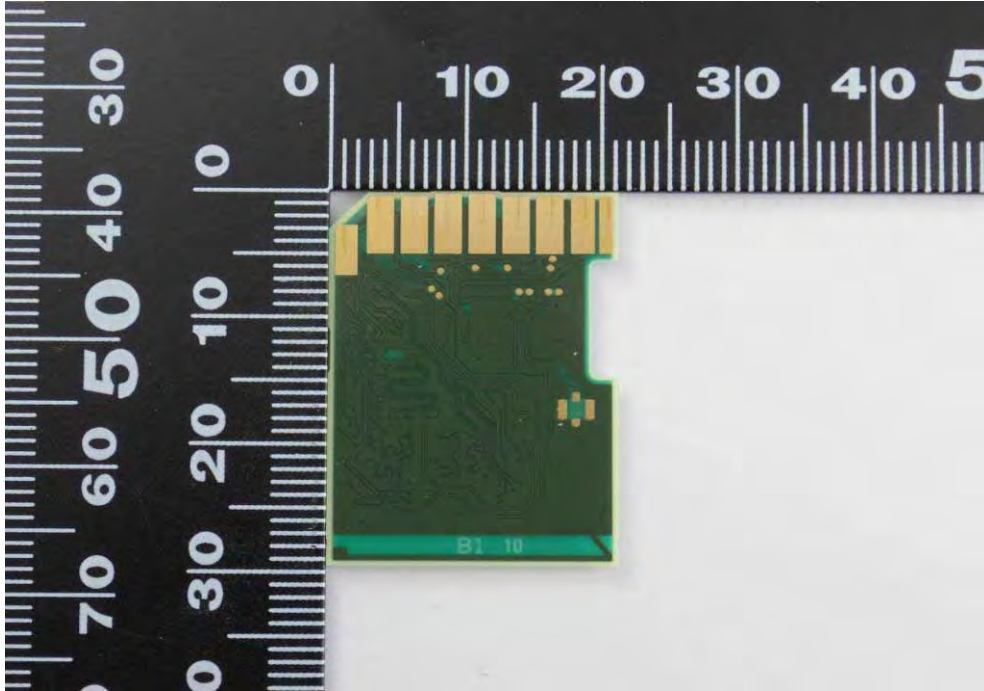
I02



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I03

**\*\* End of Report \*\***

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