

FCC ID: APYHRO00267 Report No.: MH/2018/90208

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# FCC CERTIFICATION REPORT

**Test Report No.** : MH/2018/90208

: Sharp Corporation, Mobile Communication B.U. **Applicant** 

**Address** : 2-13-1, Hachihonmatsu-lida, Higashi-hiroshima-shi, Hiroshima

739-0192, Japan

Manufacturer : Sharp Corporation

: 1 Takumi-cho, Sakai-ku, Sakai-Shi, Osaka 590-8522, Japan **Address** 

**Equipment Under Test (EUT): Product Name** : Smart Phone

**Standards** : FCC Part 15, Subpart B, Class B

FCC Designation Numbers: 916890 / TW1087

Date of Receipt: Sep. 20, 2018

Date of Test : Sep. 20 ~ Oct. 11, 2018

Date of Issue : Oct. 16, 2018

Test Result: **PASS** 

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

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:

Thomas Liu (Engineer)

Date

Oct. 16, 2018

Approved By

Date

Oct. 16, 2018

Eddy Cheng (Asst. Supervisor)





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# **Revision History**

Report Number	Revision	Description	Issue Date
MH/2018/90208	Rev.00	Initial creation of document	Oct. 16, 2018

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# 1. General Information

### 1.1 Applicant & Manufacturer Information

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shi, Hiroshima 739-0192, Japan

Manufacturer : Sharp Corporation

Address of Manufacturer: 1 Takumi-cho, Sakai-ku, Sakai-Shi, Osaka 590-

8522, Japan

### 1.2 General Description of EUT

Product Name : Smart Phone

#### 1.3 Details of EUT

Power Supply : AC 100~240V, 50/60Hz

Highest operate description : 2480 MHz

Battery : 3.85V, 2700mAh, 10.40Wh

Worst case : CE / Above RE worst case : Config 3

Below RE worst case: Config 1

	FCC ID : APYHRO00267
1 <sup>ST</sup> Source (eMCP memory, PCB, Shield, Sub camera)	V
2 <sup>nd</sup> Source (eMCP memory, PCB, Shield, Sub camera)	Worst case

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AC Charger : NA/SB-AC17-TCQC Data Cable : Luxshare-ICT/L6KU2007-CS-H Headset : Sony / MDR-EX15AP	Config 1	Config 2	Config 3
Applicable standard		FCC 15B	
Accessories	EUT + AC Adaptor +USB Cable +PHF	+USB Cable	EUT + AC Adaptor +USB Cable +PHF
Main function	Speech	Data Link	Camera
Additional function	BT+WiFI +GPS		PS
Description			
radiated emission	GSM 1900 WCDMA BII/IV LTE B2/4	Data R/W	MP3/ ;REC mode (Front/Back) ;play REC
conducted emission (DC Power)	NA	NA	NA
conducted emission (AC Power)	GSM 1900 WCDMA BII/IV LTE B2/4	Data R/W	MP3/ ;REC mode (Front/Back) ;play REC

#### 1.4 Operation Procedure

#### Config 1

- 1. Let EUT plug in SD Card & SIM Card, connect to Adapter with USB cable and turn it on.
- 2. Let EUT connect to the headphones and execute the 1K sound source.
- 3. NB & EUT Link AP-WiFi (5G/2.4G), NB performs ping EUT IP
- 4. Turn on BT function, Link BT Speaker and turn on NFC function.
- 5. Set up base station, set channel (GSM 1900, WCDMA B2/B4, LTE B2/B4) and transmit the data.
- 6. Set up GPS simulator and turn on GPS test app.
- 7. Start the test.

#### Config 2

- 1. Let EUT plug in SD Card & SIM Card, connect to NB\_1 with USB cable and turn it on
- 2. Let EUT connect to the headphones and execute the 1K sound source.
- 3. NB\_2 & EUT Link AP-WiFi Worst (5G/2.4G), NB performs ping EUT IP
- 4. Turn on BT function, Link BT Speaker and turn on NFC function.
- 5. Set up GPS simulator and turn on GPS test app.
- 6. NB 1 execute data Read/Write with EUT
- 7. Start the test.

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#### Config 3

- 1. Let EUT plug in SD Card & SIM Card, connect to Adapter with USB cable and turn it on.
- 2. Let EUT connect to the headphones and execute the 1K sound source.
- 3. NB\_2 & EUT Link AP-WiFi Worst (5G/2.4G), NB performs ping EUT IP
- 4. Turn on BT function, Link BT Speaker and turn on NFC function.
- 5. Set up GPS simulator and turn on GPS test app.
- 6. Turn on the CAMERA function, test the front and rear lens to record and play video files.
- 7. Start the test.

# 1.5 Description of Support Units

PRODUCT	MANUFACTURER	MODEL NO.	SERIAL NO.
SIM Card	R&S	CMW-Z05	8952530076180138474
BT Speaker	Creative	MF8090	YFMF8090245R00855Y
Radio Communication Analyzer	R&S	CMU200	102189
Radio Communication Analyzer	R&S	CMW500	1201.002K50-152303-Zr
AP	BUFFALO	WZR-HP-G300NH2	44066221202559[[G]]
GPS Signal Generator	Spectracom	GSG53 GNSS4	200218
Notebook (RE, HRE)	DELL	P56F	59WSJ72
Notebook (CE)	DELL	Latitude E5430	COVZYW1
Mouse (RE, HRE, CE)	Logitech	M-U0026	1738HS05FGU8
Printer (RE, HRE, CE)	HP	VCVRA-1004	CN33K19J3F
Micro SD	Transcend	Micro SDHC (Class4)	N/A
Adapter	NA	SB-AC17-TCQC	N/A

**Support Equipment Used in Tested Cable** 

Cable Type	Core	Length	Shielding/Non-shielding
USB Cable*2	N/A	1.8m	Shielding

#### 1.6 Modification List

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

#### 1.7 Accessories Cable List

Cable Type	Core	Length	Shielding/Non-shielding
USB Cable	N/A	1m	Shielding
Earphone Cable	N/A	1.25m	Non-shielding

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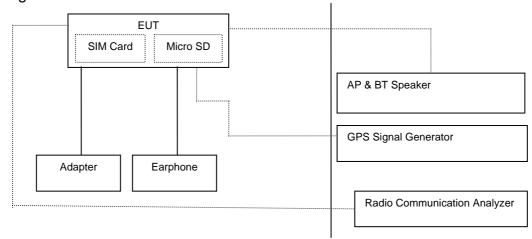


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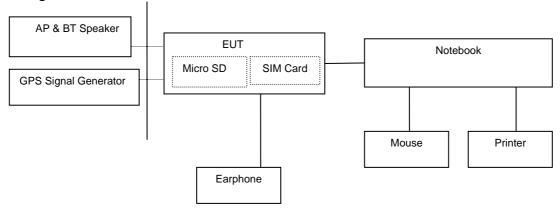


# 1.8 Test Set-Up Configuration

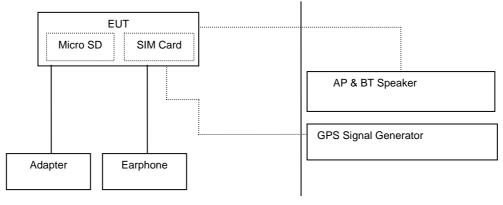
# Config 1



# Config 2



### Config 3



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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/CISPR 22

Test Standards	Status
FCC Part 15, Subpart B/ CISPR 22	Applicable
Deviation from Standard	No deviation

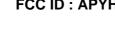
#### 1.11 Summary of Results

	Highes	t Emissio	on		
Standard Test Type Result Phase/Pol. Frequency(MHz) Margin(dB)					
ECC Dart 45 Culturant D	Candinated Emission	DACC	Line	0.5060	-5.86 (QP)
	Conducted Emission	PASS	Neutral	0.7900	-8.09 (QP)
Class B	Radiated Emission	PASS	Ver.	74.6200	-7.14 (QP)

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# 2. EMISSION

#### 2.1 Test Results

	Results
Conducted Emission	Pass
Radiated Emission	Pass

#### 2.2 Frequency Range

### FCC Part 15, Subpart B:

Conducted Emission : 150 kHz - 30 MHz
Radiated Emission : See below table

Highest frequency generated or Upper frequency of measurement used in the device or on which the range (MHz)

device operates or tunes (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

# FCC Part 15, Subpart B/CISPR 22:

FREQUENCY	Class A (dBuV)		Class B	(dBuV)
(MHz)	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.

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#### 2.3.2 Limits of Radiated Emissions

# FCC Part 15, Subpart B Limit:

Detector Function : Quasi – Peak

FREQUENCY	Class A (at 10m)	Class B (at 3m)
(MHz)	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	Class A (dB	uV/m) (at 3m)	Class B (dBuV/m) (at 3m)			
(MHz)	Peak Average		Peak	Average		
Above 1000	79.3	59.3	73.9	53.9		

#### **CISPR 22 Limit:**

Detector Function : Quasi – Peak

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

NOTE 1 The lower limit shall apply at the transition frequency.

NOTE 2 Additional provisions may be required for cases where interference occurs.

FREQUENCY	Class A (dB	BuV/m) (at 3m)	Class B (dBuV/m) (at 3m)			
(GHz)	Average	Peak	Average	Peak		
1~3	56	76	50	70		
3~6	60	80	54	74		

NOTE The lower limit applies at the transition frequency.

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#### 2.4.Test of Conducted Emission

#### 2.4.1 Test Equipments

SG	S Conducted_Emis	ssion HWAYA Conducted	d Room No.A_E	MC	
EQUIPMENT TYPE	Manufacturer Model Number S		Serial Number	Calibration Date	Calibration Due
EMI Test Receiver	R&S	ESCI 3	101342	2018/1/31	2019/1/30
Coaxial Cables	EMC Instruments Corp	EMCRG58-BM-BM- 3000	160812	2018/8/12	2019/8/11
LISN	Schwarzbeck	NSLK 8127	8127-648	2018/7/9	2019/7/8
Pulse Limiter	Narda S.T.S.	PMM PL01	1110X30602	2018/8/12	2019/8/11
LISN	Schwarzbeck	NSLK 8128	NSLK8128- 300	2018/9/3	2019/9/2
Universal Digital Radio Communication Tester	R&S	CMU 200	119988	2018/2/22	2019/2/21
Wideband Radio Communication Tester	R&S	CMW 500	152303	2018/2/21	2019/2/20
Test S/W	Farad	EZ-EMC	Ver. SGS- 03A2	N.C.R.	N.C.R.

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Measurement Uncertainty of Conducted Emission

Expanded uncertainty Ulab(K=2) of conducted emission is 2.25 dB

Theory values uncertainty Ucispr 16-4-2 :2011+A1\_2014 (K=2) of AC mains conducted Emission is 3.44dB

#### 2.4.2 Operating Environment

Temperature: 26 degree C Humidity: 70 %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

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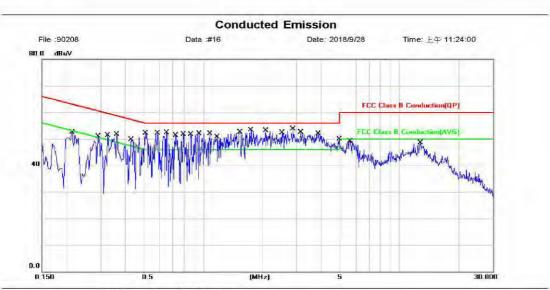


#### 2.4.4 Measurement Data:

# Config\_1\_L

26 0 Phase: Temperature: Site : Conduction Room L1 AC 120V/60Hz Humidity: Limit: FCC Class B Conduction(QP) Power:

Mode: Config 1 Note: GSM 1900



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.2140	43.50	0.03	43.53	63.05	-19.52	QP	
2		0.2140	23.20	0.03	23.23	53.05	-29.82	AVG	
3	/	0.2900	44.90	0.06	44.96	60.52	-15.56	QP	
4		0.2900	31.40	0.06	31.46	50.52	-19.06	AVG	
5		0.3260	38.20	0.08	38.28	59,55	-21.27	QP	
6		0.3260	20.00	0.08	20.08	49.55	-29.47	AVG	
7		0.3620	42.00	0.09	42.09	58.68	-16.59	QP	
8		0.3620	19.80	0.09	19.89	48.68	-28.79	AVG	
9		0.4300	40.40	0.12	40.52	57.25	-16.73	QP	
10		0.4300	18.30	0.12	18.42	47.25	-28.83	AVG	
11		0.5100	46.10	0.14	46.24	56.00	-9.76	QP	
12		0.5100	32.10	0.14	32.24	46.00	-13.76	AVG	
13		0.5860	40.80	0.16	40.96	56.00	-15.04	QP	

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

File :90208\Data :#16 Page: 1

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10.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
14		0.5860	19.50	0.16	19.66	46.00	-26.34	AVG	
15		0.6540	39.70	0.17	39.87	56.00	-16.13	QP	
16		0.6540	19.60	0.17	19.77	46.00	-26.23	AVG	
17		0.7260	39.90	0.20	40.10	56.00	-15.90	QP	
18		0.7260	23,70	0.20	23.90	46.00	-22.10	AVG	
19		0.7940	45,50	0.21	45.71	56.00	-10.29	QP	
20	1	0.7940	32.50	0.21	32.71	46.00	-13.29	AVG	
21		0.8620	44.30	0.22	44.52	56.00	-11.48	QP	
22		0.8620	25.50	0.22	25.72	46.00	-20.28	AVG	
23		0.9500	39.30	0.24	39.54	56.00	-16.46	QP	
24		0.9500	20.80	0.24	21.04	46.00	-24.96	AVG	
25		1.0820	16.60	0.25	16.85	56.00	-39.15	QP	
26	,	1.0820	33.00	0.25	33.25	46.00	-12.75	AVG	
27		1.1780	42.10	0.25	42.35	56.00	-13.65	QP	
28	+	1.1780	25.10	0.25	25.35	46.00	-20.65	AVG	
29	*	1.5380	46.10	0.26	46.36	56.00	-9.64	QP	
30		1.5380	32.50	0.26	32.76	46.00	-13.24	AVG	
31		1.7460	42.30	0.26	42.56	56.00	-13.44	QP	
32		1.7460	24.60	0.26	24.86	46.00	-21.14	AVG	
33		2.0820	40.80	0.27	41.07	56.00	-14.93	QP	
34		2.0820	23.70	0.27	23.97	46.00	-22.03	AVG	
35		2,5180	43.70	0.28	43.98	56.00	-12.02	QP	
36		2.5180	26.20	0.28	26.48	46.00	-19.52	AVG	
37		2.8780	41.90	0.29	42.19	56.00	-13.81	QP	
38		2.8780	26.80	0.29	27.09	46.00	-18.91	AVG	
39		3.1540	41.90	0.29	42.19	56.00	-13.81	QP	
40		3.1540	24.90	0.29	25.19	46.00	-20.81	AVG	
41		3.8500	42.20	0.31	42.51	56.00	-13.49	QP	
42		3.8500	28.30	0.31	28.61	46.00	-17.39	AVG	
43		4.9340	39.50	0.33	39.83	56.00	-16.17	QP	
44		4.9340	24.50	0.33	24.83	46.00	-21.17	AVG	
45		5.6060	40.00	0.35	40.35	60.00	-19.65	QP	
46		5.6060	24.80	0.35	25.15	50.00	-24.85	AVG	
47		12.8180	40.10	0.56	40.66	60.00	-19.34	QP	
48	1	12.8180	27.20	0.56	27.76	50.00	-22.24	AVG	

x:Over limit !:over margin

File :90208\Data :#16 Page: 2

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Report No.: MH/2018/90208

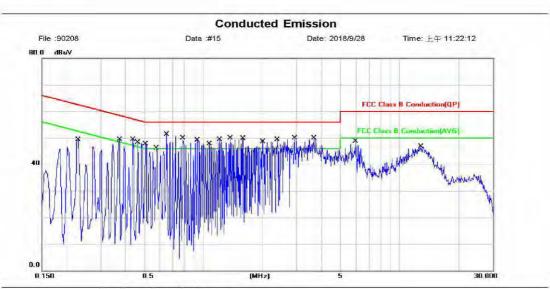
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# Config\_1\_N

Temperature: Conduction Room Phase: Site : Limit: FCC Class B Conduction(QP) AC 120V/60Hz Humidity: 70 % Power:

Mode: Config 1 Note: GSM 1900



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.2280	46.40	0.05	46.45	62.52	-16.07	QP	
2		0.2280	30.60	0.05	30.65	52.52	-21.87	AVG	
3	0	0.3740	40.90	0.10	41.00	58.41	-17.41	QP	
4		0.3740	16.90	0.10	17.00	48,41	-31.41	AVG	
5		0.4380	39.70	0.12	39.82	57.10	-17.28	QP	
6		0.4380	17.40	0.12	17.52	47.10	-29.58	AVG	
7		0.4620	42.80	0.13	42.93	56.66	-13.73	QP	
8		0.4620	24.30	0.13	24.43	46.66	-22.23	AVG	
9	*	0.5100	44.60	0.14	44.74	56.00	-11.26	QP	
10		0.5100	28.40	0.14	28.54	46.00	-17,46	AVG	
11		0.5780	40.00	0.16	40.16	56.00	-15.84	QP	
12		0.5780	21.20	0.16	21.36	46.00	-24.64	AVG	
13		0.6500	38.80	0.17	38.97	56.00	-17.03	QP	

<sup>\*:</sup>Maximum data x:Over limit !:over margin

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Vo.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
14		0.6500	14.50	0.17	14.67	46.00	-31.33	AVG	
15		0.7900	43.60	0.21	43.81	56.00	-12.19	QP	
16		0.7900	25.70	0.21	25.91	46.00	-20.09	AVG	
17		0.9340	38.30	0.24	38.54	56.00	-17.46	QP	
18		0.9340	15,30	0.24	15.54	46.00	-30.46	AVG	
19		1.0740	42.00	0.25	42.25	56.00	-13.75	QP	
20	1	1.0740	25.00	0.25	25.25	46.00	-20.75	AVG	
21		1.2140	38.40	0.25	38.65	56.00	-17.35	QP	
22	2	1.2140	18.50	0.25	18.75	46.00	-27.25	AVG	
23		1.3780	41.60	0.26	41.86	56.00	-14.14	QP	
24		1.3780	19.80	0.26	20.06	46.00	-25.94	AVG	
25		1.5900	41.60	0.26	41.86	56.00	-14.14	QP	
26		1.5900	25.40	0.26	25.66	46.00	-20.34	AVG	
27		2.0220	38.00	0.27	38.27	56.00	-17.73	QP	
28	1	2.0220	17.40	0.27	17.67	46.00	-28.33	AVG	
29		2.3860	41.30	0.28	41.58	56.00	-14.42	QP	
30		2.3860	24.10	0.28	24.38	46.00	-21.62	AVG	
31		2.9220	39.40	0.28	39.68	56.00	-16.32	QP	
32	4 6	2.9220	20.30	0.28	20.58	46.00	-25.42	AVG	
33		3.6740	40.20	0.30	40.50	56.00	-15.50	QP	
34		3,6740	21.40	0,30	21.70	46.00	-24.30	AVG	
35		5.9740	38,40	0.33	38.73	60.00	-21.27	QP	
36		5.9740	21 60	0.33	21.93	50.00	-28.07	AVG	
37		12.8980	40.00	0.46	40.46	60.00	-19.54	QP	
38		12.8980	29.90	0.46	30.36	50.00	-19.64	AVG	

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

File :90208\Data :#15 Page: 2

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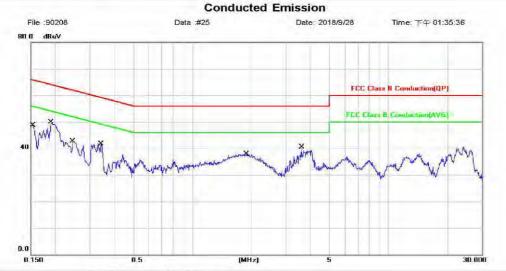
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# Config\_2\_L

Temperature: Conduction Room Phase: Site : L1 Limit: FCC Class B Conduction(QP) From System Humidity: 70 % Power:

Mode: Config 2

Note: Data Read (SD Card) AC 120V/60Hz



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1540	39.10	0.04	39.14	65.78	-26.64	QP	
2		0.1540	25.30	0.04	25.34	55.78	-30.44	AVG	
3	*	0.1900	47.10	0.03	47.13	64.04	-16.91	QP	
4	0	0.1900	34.40	0.03	34.43	54.04	-19.61	AVG	
5	1	0.2460	39.00	0.05	39.05	61.89	-22.84	QP	
6		0.2460	27.50	0.05	27.55	51.89	-24.34	AVG	
7		0.3420	36.70	0.09	36.79	59.15	-22.36	QP	
8	H.	0.3420	24.90	0.09	24.99	49.15	-24.16	AVG	
9		1.8900	34.60	0.27	34.87	56.00	-21.13	QP	
10		1.8900	23,60	0.27	23.87	46.00	-22.13	AVG	
11		3.6180	32.30	0.30	32.60	56.00	-23.40	QP	
12		3.6180	23.90	0.30	24.20	46.00	-21.80	AVG	

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

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# Config\_2\_N

Temperature: Conduction Room Phase: Site : N Limit: FCC Class B Conduction(QP) From System Humidity: 70 % Power:

Mode: Config 2

0.150

Note: Data Read (SD Card) AC 120V/60Hz

	Conduct	ted Emission	
File: 90208	Data :#26	Date: 2018/9/28	Time: 下午 01:36:45
10 dBuV			
		FCC Class	B Conduction(QP)
		ETT Charles	Combantion(AVS)
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LAMAN LONA			1
1 J. M. Collowski		V	
1 JAMAN MAN	White Mark Company	V	
1 J. M. Co Junto		<b>Y</b>	

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	*	0.1900	47.70	0.04	47.74	64.04	-16.30	QP	
2		0.1900	33.30	0.04	33.34	54.04	-20.70	AVG	
3	P	0.2700	36.20	0.06	36.26	61.12	-24.86	QP	
4		0.2700	26.50	0.06	26.56	51.12	-24.56	AVG	
5		0.3140	32.90	0.08	32.98	59.86	-26.88	QP	
6		0.3140	21.20	0.08	21.28	49.86	-28.58	AVG	
7		0.3500	30.50	0.09	30,59	58.96	-28.37	QP	
8		0.3500	18.30	0.09	18.39	48.96	-30.57	AVG	
9		15.7900	36.10	0.52	36.62	60.00	-23.38	QP	
10		15.7900	30.30	0.52	30.82	50.00	-19.18	AVG	
11		26.1820	33.10	0.83	33.93	60.00	-26.07	QP	
12		26.1820	27.90	0.83	28.73	50.00	-21.27	AVG	

(MHz)

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

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Power:

Conduction Room Site :

Limit: FCC Class B Conduction(QP)

Mode: Config 3 Note: MP3

Phase: L1

AC 120V/60Hz

Temperature:

Humidity: 70 %

**Conducted Emission** File: 90208 Date: 2018/9/28 Time: 下午 02:08:32 BOO ABOV (MHz)

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.2860	48.20	0.06	48.26	60.64	-12.38	QP	
2		0.2860	36.10	0.06	36.16	50.64	-14.48	AVG	
3		0.3580	49.20	0.09	49.29	58.77	-9.48	QP	
4		0.3580	35.30	0.09	35.39	48.77	-13.38	AVG	
5		0.4340	35.70	0.12	35.82	57.18	-21.36	QP	
6		0.4340	15.10	0.12	15.22	47.18	-31.96	AVG	
7	*	0.5060	50.00	0.14	50.14	56.00	-5.86	QP	
8		0.5060	35.40	0.14	35.54	46.00	-10.46	AVG	
9		0.5780	39.20	0.16	39.36	56.00	-16.64	QP	
10		0.5780	22.60	0.16	22.76	46.00	-23.24	AVG	
11		0.6420	48.90	0.17	49.07	56.00	-6.93	QP	
12		0.6420	31.80	0.17	31.97	46.00	-14.03	AVG	
13		0.7100	30.20	0.19	30.39	56.00	-25.61	QP	

<sup>\*:</sup>Maximum data x:Over limit I:over margin

File :90208\Data :#35

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Vo.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
14		0.7100	16.60	0.19	16.79	46.00	-29.21	AVG	
15		0.7820	36.00	0.21	36.21	56.00	-19.79	QP	
16		0.7820	20,90	0.21	21.11	46.00	-24.89	AVG	
17		0.9220	39.10	0.23	39.33	56.00	-16.67	QP	
18	+	0.9220	19.80	0.23	20.03	46.00	-25.97	AVG	
19	4	1.1580	47.70	0.25	47.95	56.00	-8.05	QP	
20		1.1580	30.20	0.25	30.45	46.00	-15.55	AVG	
21		1.3060	45.30	0.26	45.56	56.00	-10.44	QP	
22	1	1.3060	30.00	0.26	30.26	46.00	-15.74	AVG	
23		1.6500	45.60	0.26	45.86	56.00	-10.14	QP	
24		1.6500	31.60	0.26	31.86	46.00	-14.14	AVG	
25		1.8820	47.60	0.27	47.87	56.00	-8.13	QP	
26		1.8820	30.70	0.27	30.97	46.00	-15.03	AVG	
27		2.0900	46.90	0.27	47.17	56.00	-8.83	QP	
28	1	2.0900	30.00	0.27	30.27	46.00	-15.73	AVG	
29		2.7060	40.40	0.28	40.68	56.00	-15.32	QP	
30		2.7060	21.50	0.28	21.78	46.00	-24.22	AVG	
31		3.4300	46.60	0.30	46.90	56.00	-9.10	QP	
32		3,4300	31.40	0.30	31.70	46.00	-14.30	AVG	
33		3.8060	42.50	0.31	42.81	56.00	-13.19	QP	
34		3.8060	28.80	0,31	29.11	46.00	-16.89	AVG	
35		4.1900	45.50	0.31	45.81	56.00	-10.19	QP	
36		4.1900	31.70	0.31	32.01	46.00	-13.99	AVG	
37		4.7220	39.90	0.33	40.23	56.00	-15.77	QP	
38		4.7220	25.40	0.33	25.73	46.00	-20.27	AVG	
39		5.1820	41.90	0.34	42.24	60.00	-17.76	QP	
40	1	5.1820	27.30	0.34	27.64	50.00	-22.36	AVG	
41		12.6140	41.90	0.56	42.46	60.00	-17.54	QP	
42		12.6140	29.50	0.56	30.06	50.00	-19.94	AVG	

x:Over limit !:over margin

File :90208\Data :#35

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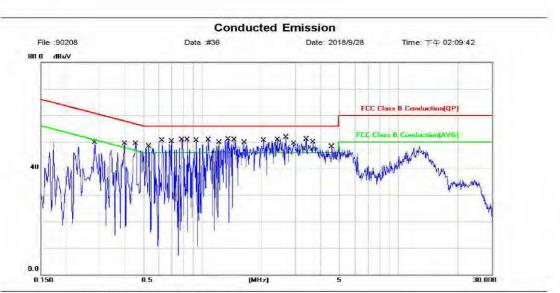
# Config\_3\_N

Temperature: Conduction Room Phase: Site :

Limit: FCC Class B Conduction(QP)

Mode: Config 3 Note: MP3

AC 120V/60Hz Humidity: 70 % Power:



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.2820	49.70	0.07	49.77	60.76	-10.99	QP	
2		0.2820	32.90	0.07	32.97	50.76	-17.79	AVG	
3		0.4020	39.00	0.11	39.11	57.81	-18.70	QP	
4		0.4020	18.60	0.11	18.71	47.81	-29.10	AVG	
5		0.4580	45.40	0.13	45.53	56.73	-11.20	QP	
6		0.4580	24.70	0.13	24.83	46.73	-21.90	AVG	
7		0.5340	27.90	0.15	28.05	56.00	-27.95	QP	
8		0.5340	10.70	0.15	10.85	46.00	-35.15	AVG	
9		0.6260	45.80	0.17	45.97	56.00	-10.03	QP	
10		0,6260	22.30	0.17	22.47	46.00	-23.53	AVG	
11		0.6980	29.40	0.18	29.58	56.00	-26.42	QP	
12		0.6980	13.40	0.18	13.58	46.00	-32.42	AVG	
13	*	0.7900	47.70	0.21	47.91	56.00	-8.09	QP	

<sup>\*:</sup>Maximum data x:Over limit

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Vo.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
14		0.7900	29.20	0.21	29.41	46.00	-16.59	AVG	
15		0.8380	41.90	0.22	42.12	56.00	-13.88	QP	
16		0.8380	17.40	0.22	17.62	46.00	-28.38	AVG	
17		0.9340	33.60	0.24	33.84	56.00	-22.16	QP	
18		0.9340	12.10	0.24	12.34	46.00	-33.66	AVG	
19		1.0740	46.60	0.25	46.85	56.00	-9.15	QP	
20	1	1.0740	27.90	0.25	28.15	46.00	-17.85	AVG	
21		1.2180	46.10	0.25	46.35	56.00	-9.65	QP	
22		1.2180	25.80	0.25	26.05	46.00	-19.95	AVG	
23		1.3580	44.60	0.26	44.86	56.00	-11.14	QP	
24		1.3580	25.00	0.26	25.26	46.00	-20.74	AVG	
25		1.4620	40.30	0.26	40.56	56.00	-15.44	QP	
26		1.4620	20.10	0.26	20.36	46.00	-25.64	AVG	
27		1.6380	41.40	0.26	41.66	56.00	-14.34	QP	
28		1.6380	23.20	0.26	23.46	46.00	-22.54	AVG	
29		2.0620	44.30	0.27	44.57	56.00	-11.43	QP	
30		2.0620	24.40	0.27	24.67	46.00	-21.33	AVG	
31		2.4100	39.10	0.28	39.38	56.00	-16.62	QP	
32		2,4100	18.10	0.28	18.38	46.00	-27.62	AVG	
33		2.6780	44.30	0.28	44.58	56.00	-11.42	QP	
34		2.6780	25.40	0.28	25.68	46.00	-20.32	AVG	
35		2,9460	39.60	0.28	39.88	56.00	-16.12	QP	
36		2.9460	21.90	0.28	22.18	46.00	-23.82	AVG	
37		3.3820	44.60	0.29	44.89	56.00	-11.11	QP	
38		3.3820	26.90	0.29	27.19	46.00	-18.81	AVG	
39		3.6620	39.40	0.29	39.69	56.00	-16.31	QP	
40	-	3.6620	20.00	0.29	20.29	46.00	-25.71	AVG	
41		4.5820	40.80	0,31	41.11	56.00	-14.89	QP	
42		4.5820	25.80	0.31	26.11	46.00	-19.89	AVG	

\*:Maximum data x:Over limit !: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	Calibration	Calibration						
EQUIPMENT TYPE	Manufacturer	woder wumber	Number	Date	Due						
EMI Test Receiver	R&S	ESCI 7	100950	2017/12/12	2018/12/11						
EMI Test Receiver	R&S	ESCI 3	101343	2018/1/31	2019/1/30						
Broadband Antenna	SCHWAZBECK	VULB9168	9168-628	2018/9/7	2019/9/6						
Broadband Antenna	SCHWAZBECK	VULB9168	9168-629	2018/9/7	2019/9/6						
Pre Amplifier	EMC Instruments Corp.	EMC330	980178	2018/3/31	2019/3/30						
Pre Amplifier	EMC Instruments Corp.	EMC330	980179	2018/3/31	2019/3/30						
Coaxial Cable	EMC Instruments	EMCCFD400-NM- NM	150917	2018/9/18	2019/9/17						
Coaxial Cable	EMC Instruments	EMCCFD400-NM- NM	150919	2018/9/18	2019/9/17						
Coaxial Cable	EMC Instruments	EMCCFD400-NM- NM	150820	2018/9/18	2019/9/17						
Coaxial Cable	EMC Instruments	EMCCFD400-NM- NM	150918	2018/9/18	2019/9/17						
Coaxial Cable	EMC Instruments	EMCCFD400-NM- NM	150821	2018/9/18	2019/9/17						
Coaxial Cable	EMC Instruments	EMCCFD400-NM- NM	150822	2018/9/18	2019/9/17						
Universal Digital Radio Communication Tester	R&S	CMU 200	119988	2018/2/22	2019/2/21						
Wideband Radio Communication Tester	R&S	CMW 500	152303	2018/2/21	2019/2/20						
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	2017/12/31	2018/12/30						
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 Ulab (K=2) of radiated emission is 4.09 dB. (30MHz ~ 1000MHz)

Theory values uncertainty Ucispr 16-4-2:2011+A1:2014 (K=2) of radiated emission is 5.22 dB. (30MHz ~ 1000MHz)

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#### **Above 1GHz**

SGS Radiated_Above_1GHz HWAYA 966A_EMC											
	Tadialeu_Abl	I TOOL OVATA	900A_EIVIC	Onlib andina	Onlib mating						
EQUIPMENT TYPE	Manufacturer	Model Number	Serial Number	Calibration	Calibration						
	500			Date	Due						
Spectrum Analyzer	R&S	FSV 40	101419	2018/5/15	2019/5/14						
EMI Test Receiver	R&S	ESR 7	101459	2018/2/21	2019/2/20						
Horn Antenna	SCHWARZBECK	BBHA9120D	BBHA9120D67 3	2017/10/16	2018/10/15						
Horn Antenna	Schwarzbeck	BBHA9170	BBHA9170-184	2017/12/12	2018/12/11						
Pre Amplifier	EMC Instruments Corp.	EMC012645B	980216	2018/3/31	2019/3/30						
Pre Amplifier	EMC Instruments Corp.	EMC184045B	980135	2017/10/27	2018/10/26						
Coaxial Cable	JUNFLOW	MWX221- NMSNMS	J0778929	2018/4/23	2019/4/22						
Coaxial Cable	Huber+Suhner	SUCCOFLEX 104PEA	30255/4PEA	2018/4/23	2019/4/22						
Coaxial Cable	EMC Instruments	EMC104-SM-SM	140927	2018/4/23	2019/4/22						
Coaxial Cable	Huber+Suhner	SUCOFLEX 102	MY 2651/2	2018/6/5	2019/6/4						
Coaxial Cable	Huber+Suhner	SUCOFLEX 102	MY 2153/2	2018/6/5	2019/6/4						
Universal Digital Radio Communication Tester	R&S	CMU 200	119988	2018/2/22	2019/2/21						
Wideband Radio Communication Tester	R&S	CMW 500	152303	2018/2/21	2019/2/20						
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	2018/1/12	2019/1/11						
Test S/W	Farad	EZ-EMC	Ver. SGS-03A2	N.C.R.	N.C.R.						
Test 5/VV	rara0	EZ-EIVIC	vei. 3G5-03A2	N.C.K.	IN.C.R.						

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Measurement Uncertainty of Radiated Emission

Expanded uncertainty (k=2) of radiated emission measurement is 5.05 dB. (1-6GHz)

Expanded uncertainty (k=2) of radiated emission measurement is 5.07 dB. (6-18GHz)

Expanded uncertainty Ulab (k=2) of radiated emission measurement is 5.19 dB. (18-26GHz)

Expanded uncertainty Ulab (k=2) of radiated emission measurement is 5.14 dB. (26-40GHz)

Theory values uncertainty Ucispr 16-4-2:2011+A1:2014 (K=2) of radiated emission measurement is 5.18 dB.(1-6GHz)

Theory values uncertainty Ucispr 16-4-2:2011+A1:2014 (K=2) of radiated emission measurement is 5.48 dB (6-18GHz)

Theory values uncertainty Ucispr 16-4-2:2011+A1:2014 (K=2) of radiated emission measurement is ---- dB.(18-26GHz)

Theory values uncertainty Ucispr 16-4-2:2011+A1:2014 (K=2) of radiated emission measurement is ---- dB.(26-40GHz)

#### 2.5.2 Operating Environment

Temperature: 24 degree C Humidity: 66 %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

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#### 2.5.4 Measurement Data

#### **Below 1GHz**

#### Config\_1\_H

Site SGS 10m Chamber

Limit: CISPR22 Class B 10M Radiation

Mode: Config 1 Note GSM900

30.000

Polarization: Horizontal Power: AC 120V/60Hz

Temperature: 24 °C

Humidity: 66 %

1000.00 MHz

Distance: 10m

Radiated Emission File: MH-2018-90208 Data #10 Date: 2018/9/28 Time: 下午 10:06:41 80.0 dBuV/m Limit1 Margin 0.0

No.	o. Mk.	lk. Freq.	Freq.	Freq.	k. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	Comment			
1		86.0700	32.80	-17.29	15.51	30.00	-14.49	QP				
2		137.6700	30.51	-11.93	18.58	30.00	-11.42	QP				
3		754.5900	23.75	0.77	24.52	37.00	-12.48	QP				
4	111	842.8600	23.94	1.44	25.38	37.00	-11.62	QP				
5		928.2200	23.63	2.89	26.52	37.00	-10.48	QP				
6	*	964.1100	23.86	3.13	26.99	37.00	-10.01	QP				

515.00

612.00

709.00

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

224.00

321.00

418.00

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# Config\_1\_V

Site SGS 10m Chamber

Limit: CISPR22 Class B 10M Radiation

Mode: Config\_1 Note GSM900

Polarization Vertical

Power: AC 120V/60Hz

Distance: 10m

Temperature: 24 °C

Humidity: 66 %

					Limit Marg		
							-
- 3	3 4					5 X	6 X
4							

No.	lo. Mk.	Freq.	Level	Factor	ment	Limit	Over		
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	Comment
1		30.4800	29.09	-12.10	16.99	30.00	-13.01	QP	
2	*	74.6200	37.17	-14.31	22.86	30.00	-7.14	QP	
3		110.1700	35.90	-14.20	21.70	30.00	-8.30	QP	
4	1	137.6700	31.21	-12.04	19.17	30.00	-10.83	QP	
5	100	926.2800	23.03	1.87	24.90	37.00	-12.10	QP	
6		986.4200	22.78	2.07	24.85	37.00	-12.15	QP	
_									

Measure-

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

Reading Correct

File :MH-2018-90208\Data #9

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# Config\_2\_H

Site SGS 10m Chamber

Limit: CISPR22 Class B 10M Radiation

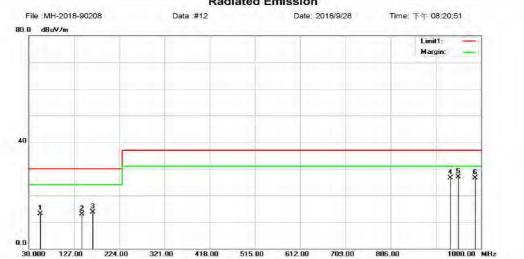
Mode: Config\_2 Note Data Write Polarization: Horizontal

Power: From System

Temperature: 24 °C Humidity: 66 %

Distance: 10m

Radiated Emission



No.	Mk.	Freq.	Level	Factor	ment	Limit	Over			
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	Comment	
1		55.2200	24.48	-11.36	13.12	30.00	-16.88	QP		
2		144.4600	24.13	-11.26	12.87	30.00	-17.13	QP		
3		167.7400	24.95	-11.28	13.67	30.00	-16.33	QP		
4		934.0400	23.60	2.98	26.58	37.00	-10.42	QP		
5	*	951.5000	23.67	3.22	26.89	37.00	-10.11	QP		
6		987.3900	23.69	2.90	26.59	37.00	-10.41	QP		

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

File :MH-2018-90208\Data :#12

Page: 1

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# Config\_2\_V

Site SGS 10m Chamber

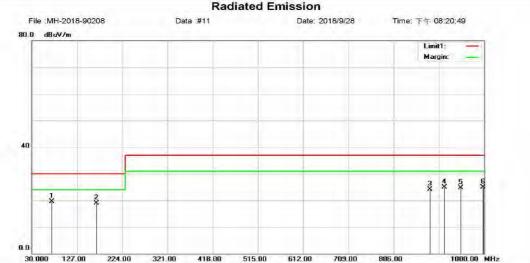
Limit: CISPR22 Class B 10M Radiation

Mode: Config\_2 Note Data Write Polarization Vertical Power: From System

Temperature: 24 0

Humidity: 66 %

Distance: 10m



o. Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	Comment
*	72.0100	32.94	-13.52	19.42	30.00	-10.58	QP	
	168.0000	30.25	-11.36	18.89	30.00	-11.11	QP	
	883.6000	23.07	0.94	24.01	37.00	-12.99	QP	
1 1 1	914.6400	23.06	1.80	24.86	37.00	-12.14	QP	
	949.5600	22.86	1.90	24.76	37.00	-12.24	QP	
	998.0600	22.74	2.26	25.00	37.00	-12.00	QP	
	2.500	* 72.0100 168.0000 883.6000 914.6400 949.5600	MHz dBuV  * 72.0100 32.94 168.0000 30.25 883,6000 23.07 914.6400 23.06 949.5600 22.86	MHz dBuV dB/m  * 72.0100 32.94 -13.52 168.0000 30.25 -11.36 883.6000 23.07 0.94 914.6400 23.06 1.80 949.5600 22.86 1.90	MHz dBuV dB/m dBuV/m  * 72.0100 32.94 -13.52 19.42 168.0000 30.25 -11.36 18.89 883.6000 23.07 0.94 24.01 914.6400 23.06 1.80 24.86 949.5600 22.86 1.90 24.76	MHz dBuV dB/m dBuV/m dBuV/m  * 72.0100 32.94 -13.52 19.42 30.00 168.0000 30.25 -11.36 18.89 30.00 883.6000 23.07 0.94 24.01 37.00 914.6400 23.06 1.80 24.86 37.00 949.5600 22.86 1.90 24.76 37.00	MHz dBuV dB/m dBuV/m dBuV/m dB * 72.0100 32.94 -13.52 19.42 30.00 -10.58 168.0000 30.25 -11.36 18.89 30.00 -11.11 883.6000 23.07 0.94 24.01 37.00 -12.99 914.6400 23.06 1.80 24.86 37.00 -12.14 949.5600 22.86 1.90 24.76 37.00 -12.24	MHz         dBuV         dB/m         dBuV/m         dBuV/m         dB uV/m         dD uV/m         dD uV/m         dD uV/m         dB uV/m

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

File :MH-2018-90208\Data :#11

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### Config\_3\_H

Site SGS 10m Chamber

Limit: CISPR22 Class B 10M Radiation

Mode: Config\_3 Note REC (Back) Polarization Horizontal

Temperature: 24 °C Humidity: 66 %

Power: AC 120V/60Hz

Distance: 10m

Radiated Emission



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over			
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	Comment	
1		53.2800	24.60	-11.13	13.47	30.00	-16.53	QP		
2		125.0600	28.70	-13.24	15.46	30.00	-14.54	QP		
3		160.9500	24.83	-11.51	13.32	30.00	-16.68	QP		
4		834.1300	23.91	1.27	25.18	37.00	-11.82	QP		
5	*	951.5000	23.76	3.22	26.98	37.00	-10.02	QP		
6		986.4200	23.84	2.90	26.74	37.00	-10.26	QP		

File :MH-2018-90208\Data :#14

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<sup>\*:</sup> Maximum data x:Over limit !:over margin



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# Config\_3\_V

Site SGS 10m Chamber

Limit: CISPR22 Class B 10M Radiation

Mode: Config\_3 Note REC (Back) Polarization Vertical

Temperature: 24 °C Humidity: 66 %

Power: AC 120V/60Hz

Distance: 10m

Radiated Emission File : MH-2018-90208 Data :#13 Date: 2018/9/28 Time: 下午 09:28:41 80.0 dBuV/m Margin:

No.	o. Mk.	Freq.	Level	Factor	ment	Limit	Over		
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	Comment
1		30.5700	28.95	-12.11	16.84	30.00	-13.16	QP	
2	*	75.5900	35.89	-14.45	21.44	30.00	-8.56	QP	
3	1	85.2900	37.90	-16.72	21.18	30.00	-8.82	QP	
4	111	113.9900	31.87	-13.72	18.15	30.00	-11.85	QP	
5		123.2800	33.48	-12.90	20.58	30.00	-9.42	QP	
6		935.0100	23.98	1.99	25.97	37.00	-11.03	QP	

515.00

612.00

709.00

806.00

1000.00 MHz

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

224.00

File :MH-2018-90208\Data :#13

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#### **Above 1GHz**

# 1GMz-18GMz Config 1 H

Site SGS 966 Chamber A

Limit: FCC Class B 3M Radiation(1G-40G)(Pea

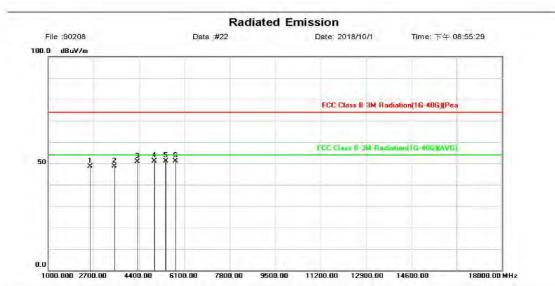
Mode: Config 1

Note:

Polarization: Horizontal Power: AC 120V/60Hz

Temperature: 24 °C Humidity: 60 %

Distance:



No.	lo. Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	Comment
1		2564.000	59.98	-11.32	48.66	74.00	-25.34	peak	
2	400	3482.000	59.32	-10.66	48.66	74.00	-25.34	peak	
3		4332.000	58.76	-7.91	50.85	74.00	-23.15	peak	
4	*	4978.000	58.29	-7.12	51.17	74.00	-22.83	peak	
5		5403.000	57.42	-6.30	51.12	74.00	-22.88	peak	
6		5760.000	56.45	-5.33	51.12	74.00	-22.88	peak	
_									

\*: Maximum data x:Over limit Lover margin

File: 90208\Data:#22

Page: 1

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### Config\_1\_V

Distance:

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

Mode: Config 1

Note:

Polarization: Vertical Power: AC 120V/60Hz

Temperature: 24 °C

Humidity: 60 %

18000.00 MHz

Radiated Emission File:90208 Time: 下午 07:53:16 Data :#21 Date: 2018/10/1 100.0 dBuV/m FCC Class B 3M Radiation(16-40G)(Pea FCC Class B 3M Radiation/IG-40GWAVG 50

No.	o. Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	Comment
1		2615.000	60.04	-11.41	48.63	74.00	-25.37	peak	
2	-	2853.000	59.43	-11.84	47.59	74.00	-26.41	peak	
3		3584.000	58.91	-10.22	48.69	74.00	-25.31	peak	
4	- 9 -	4536.000	57.61	-7.65	49.96	74.00	-24.04	peak	
5		5029.000	56.84	-7.04	49.80	74.00	-24.20	peak	
6	*	5726.000	57.04	-5.41	51.63	74.00	-22.37	peak	

9500.00

11200.00

7800 OO

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

File :90208\Data :#21

Page: 1

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### Config\_2\_H

Site SGS 966 Chamber A

Limit: FCC Class B 3M Radiation(1G-40G)(Pea

Mode: Config 2

Note:

Polarization: Horizontal Power: AC 120V/60Hz

Temperature: 24 °C

18000.00 MHz

Humidity: 60 %

Distance:

Radiated Emission File:90208 Time: 下午 08:04:57 Data :#24 Date: 2018/10/1 100.0 dBuV/m FCC Class B 3M Radiation(16-40G)(Pea FCC Class B 3M Radiation(IG-40GNAVG) 50

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	Comment
1		2241.000	59.43	-14.31	45.12	74.00	-28.88	peak	
2	- 4-	2632.000	58.76	-11.44	47.32	74.00	-26.68	peak	
3		4332.000	57.76	-7.91	49.85	74.00	-24.15	peak	
4	- 0 -	4978.000	57.79	-7.12	50.67	74.00	-23.33	peak	
5		5403.000	57.42	-6.30	51.12	74.00	-22.88	peak	
6	*	5760.000	56.95	-5.33	51.62	74.00	-22.38	peak	

9500 00

11200.00

7800 OO

\*:Maximum data x:Over limit Lover margin

File :90208\Data :#24

Page: 1

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24 °C

18000.00 MHz

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### Config\_2\_V

Site SGS 966 Chamber A

Limit: FCC Class B 3M Radiation(1G-40G)(Pea

Mode: Config 2

Note:

Polarization: Vertical Power: AC 120V/60Hz

Temperature: Humidity: 60 %

Distance:

Radiated Emission File:90208 Time: 下午 08:02:15 Data :#23 Date: 2018/10/1 100.0 dBuV/m FCC Class B 3M Radiation(16-40G)(Pea FCC Class B 3M Radiation/IG-40GWAVG

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	Comment
1		2615.000	59.54	-11.41	48.13	74.00	-25.87	peak	
2		3584.000	59.41	-10.22	49.19	74.00	-24.81	peak	
3		4094.000	58.12	-8.19	49.93	74.00	-24.07	peak	
4		4536.000	58.11	-7.65	50.46	74.00	-23.54	peak	
5		5029.000	56.84	-7.04	49.80	74.00	-24.20	peak	
6	*	5726.000	57.04	-5.41	51.63	74.00	-22.37	peak	

9500 00

11200.00

12900.00

7800 OO

\*:Maximum data x:Over limit Lover margin

File: 90208\Data: #23

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### Config\_3\_H

Distance:

Site SGS 966 Chamber A

1000.000 2700.00

Limit: FCC Class B 3M Radiation(1G-40G)(Pea

Mode: Config 3

Note:

Polarization: Horizontal Power: AC 120V/60Hz

Temperature: 24 °C

Humidity: 60 %

Radiated Emission File:90208 Time: 下午 07:51:41 Data :#20 Date: 2018/10/1 100.0 dBuV/m FCC Class B 3M Radiation(16-40G)(Pea FCC Class B 3M Radiation(IG-40GNAVG) 50

No.	lo. Mk.		Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	Comment
1		2632.000	58.26	-11.44	46.82	74.00	-27.18	peak	
2		4060.000	57.79	-8.23	49.56	74.00	-24.44	peak	
3		4332.000	58.26	-7.91	50.35	74.00	-23.65	peak	
4	- 9 -	4978.000	58.29	-7.12	51.17	74.00	-22.83	peak	
5		5403.000	57.92	-6.30	51.62	74.00	-22.38	peak	
6	*	5760.000	57.45	-5.33	52.12	74.00	-21.88	peak	

9500.00

11200.00

12900.00

14600.00

18000.00 MHz

7800 OO

\*:Maximum data x:Over limit Lover margin

File: 90208\Data:#20

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### Config\_3\_V

Site SGS 966 Chamber A

Limit: FCC Class B 3M Radiation(1G-40G)(Pea

Mode: Config 3

Note:

Polarization: Vertical Power: AC 120V/60Hz

Temperature:

Humidity: 60 %

Distance:

					Ra	adiated E	mission				
File 00.0	:90208 dBuV/m				Data #19		Date: 2018/10/1	18/10/1 Time: 下午 07:50:13			
								D. J. C. HO ADOND			
			3	<b>.</b> 5 6				Radiation(16-406)(Pea			
50	*	2	×	* 111							
1.0											

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	Comment
1		2615.000	58.54	-11.41	47.13	74.00	-26.87	peak	
2		3584.000	58.41	-10.22	48.19	74.00	-25.81	peak	
3	- 1	4536.000	58.61	-7.65	50.96	74.00	-23.04	peak	
4	- 1	5284.000	57.61	-6.53	51.08	74.00	-22.92	peak	
5	111	5726.000	58.04	-5.41	52.63	74.00	-21.37	peak	
6	*	6032.000	57.05	-4.37	52.68	74.00	-21.32	peak	

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

File: 90208\Data:#19

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# 18GMz-30GMz Config\_1\_H

Site SGS 966 Chamber A

Limit: FCC Class B 1M Radiation(1G-40G)(Pea

Mode: Config 1

Note:

Polarization: Horizontal Power: AC 120V/60Hz

Temperature: 24 °C

Humidity: 60 %

Distance:

Radiated Emission File:90208 Time: 下午 07:18:48 Data :#8 Date: 2018/10/1 100.0 dBuV/m FCC Class B 1M Radiation(16-40G)(Pea CCC Class D 1M Redistron(1G-40GBAVG) 50 22800.00 24000.00 25200.00 26400.00 30000.00 MHz

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	1	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	Comment
1		18408.000	52.33	1.27	53.60	83.50	-29.90	peak	
2	- 6	19392.000	53.31	1.62	54.93	83.50	-28.57	peak	
3		20016.000	52.70	2.70	55.40	83.50	-28.10	peak	
4		21960.000	51.93	4.93	56.86	83.50	-26.64	peak	
5		22536.000	51.76	5.41	57,17	83.50	-26.33	peak	
6	*	25224.000	53.71	5.81	59.52	83.50	-23.98	peak	

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

File :90208\Data :#8

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### Config\_1\_V

Distance:

Site SGS 966 Chamber A Limit: FCC Class B 1M Radiation(1G-40G)(Pea

Mode: Config 1

Note:

Polarization: Vertical Power: AC 120V/60Hz

Temperature: 24 °C

Humidity: 60 %

Radiated Emission File:90208 Time: 下午 07:16:22 Data :#7 Date: 2018/10/1 100.0 dBuV/m FCC Class B 1M Radiation(16-40G)(Pea FCC Clase D 1M Redistron(1G-40GBAVG) 50

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	Comment
1		18408.000	52.11	1.27	53.38	83.50	-30.12	peak	
2	4	20028.000	51.78	2.70	54.48	83.50	-29.02	peak	
3	. 7	21420.000	50.89	3.96	54.85	83.50	-28.65	peak	
4		22608.000	50.54	5.42	55.96	83.50	-27.54	peak	
5		23724.000	49.33	5.91	55.24	83.50	-28.26	peak	
6	*	24672.000	50.64	6,23	56.87	83.50	-26.63	peak	

24000.00

25200.00

26400.00

27600.00

30000.00 MHz

21600.00

22800.00

\*:Maximum data x:Over limit Lover margin

File :90208\Data :#7

Page: 1

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### Config\_2\_H

Distance:

Site SGS 966 Chamber A

Limit: FCC Class B 1M Radiation(1G-40G)(Pea

Mode: Config 2

File:90208

100.0 dBuV/m

50

Note:

Polarization: Horizontal Power: AC 120V/60Hz

Temperature: 24 °C

Humidity: 60 %

Radiated Emission Time: 下午 07:30:25 Data :#10 Date: 2018/10/1 FCC Class B 1M Radiation(16-40G)(Pea FCC Class D 1M Redistron(1G-40GBAVG)

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over			
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	Comment	
1	1	18804.000	52.82	1.26	54.08	83.50	-29.42	peak		
2	2	20016.000	52.20	2.70	54.90	83.50	-28.60	peak		
3	2	21384.000	51.42	3.89	55.31	83.50	-28.19	peak		
4	2	21960.000	51.43	4.93	56.36	83.50	-27.14	peak		
5	2	24636.000	50.52	6.23	56.75	83.50	-26.75	peak		
6	* 2	25224.000	51.71	5.81	57.52	83.50	-25.98	peak		

\*:Maximum data x:Over limit Lover margin

File :90208\Data :#10

Page: 1

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### Config\_2\_V

Site SGS 966 Chamber A Polarization: Vertical Temperature: 24 °C Power: AC 120V/60Hz Humidity: 60 % Limit: FCC Class B 1M Radiation(1G-40G)(Pea Mode: Config 2 Distance:

Note:

# Radiated Emission File:90208 Time: 下午 07:29:10 Data :#9 Date: 2018/10/1 100.0 dBuV/m FCC Class B 1M Radiation(16-40G)(Pea FEC Class D 1M Redistron [1G-40G BAVG] 50 21600.00 22800.00 24000.00 25200.00 26400.00 27600.00 30000.00 MHz

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	Comment
1		18408.000	52.61	1.27	53.88	83.50	-29.62	peak	
2		19392.000	52.93	1.62	54.55	83.50	-28.95	peak	
3	4	20028.000	52.28	2.70	54.98	83.50	-28.52	peak	
4		21948.000	52.50	4.90	57.40	83.50	-26.10	peak	
5		23724.000	51.33	5.91	57.24	83.50	-26.26	peak	
6	*	24672.000	52.64	6,23	58.87	83.50	-24.63	peak	

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

File :90208\Data :#9

Page: 1

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### Config\_3\_H

Site SGS 966 Chamber A

Limit: FCC Class B 1M Radiation(1G-40G)(Pea

Mode: Config 3

Note:

Polarization: Horizontal Power: AC 120V/60Hz

Temperature: 24 °C

Humidity: 60 %

30000.00 MHz

Distance:

Radiated Emission File:90208 Data :#12 Time: 下午 07:39:02 Date: 2018/10/1 100.0 dBuV/m FCC Class B 1M Radiation(16-40G)(Pea FCC Class D 1M Redistron(1G-40GBAVG) 50

No.	Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	Comment
1		18408.000	52.83	1.27	54.10	83.50	-29.40	peak	
2		19392.000	53.31	1.62	54.93	83.50	-28.57	peak	
3		21960.000	51.43	4.93	56.36	83.50	-27.14	peak	
4		24636.000	51.52	6.23	57.75	83.50	-25.75	peak	
5	*	25224.000	52.21	5.81	58.02	83.50	-25.48	peak	
6		26280.000	51.88	5,94	57.82	83.50	-25.68	peak	

24000.00

25200.00

\*:Maximum data x:Over limit Lover margin

File :90208\Data :#12

Page: 1

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21600.00

22800.00

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### Config\_3\_V

Radiated Emission

Site SGS 966 Chamber A Limit: FCC Class B 1M Radiation(1G-40G)(Pea Distance:

Mode: Config 3

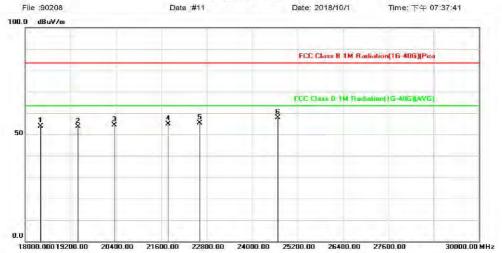
Note:

Polarization: Vertical Power: AC 120V/60Hz

Temperature: 24 °C

Humidity: 60 %

Time: 下午 07:37:41 Data :#11 Date: 2018/10/1



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	Comment
1	10	18408.000	52.61	1.27	53.88	83.50	-29.62	peak	
2	2	19392.000	51.93	1.62	53.55	83.50	-29.95	peak	
3	- 0	20364.000	51.74	2.70	54.44	83.50	-29.06	peak	
4	- 3	21780.000	50.28	4.60	54.88	83.50	-28.62	peak	
5		22608.000	50.04	5.42	55.46	83.50	-28.04	peak	
6	*	24672.000	51.64	6,23	57.87	83.50	-25.63	peak	

\*:Maximum data x:Over limit Lover margin

File :90208\Data :#11

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