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# **FCC CERTIFICATION REPORT** Canada ISED ICES-003 TEST REPORT

**Test Report No.** : MH/2018/40078

**Applicant** : Quanta Computer Inc.

**Address** : No.188, Wenhua 2nd Rd., Guishan Dist., Taoyuan City 33377,

Taiwan (R.O.C.)

: Quanta Computer Inc. Manufacturer

**Address** : No.188, Wenhua 2nd Rd., Guishan Dist., Taoyuan City 33377,

Taiwan (R.O.C.)

**Equipment Under Test (EUT): Product Name** : QTAX53

: N/A **Brand Name** 

Model No. : QTAX53

Added Model(s) : N/A

: FCC Part 15:2017, Subpart B, Class B **Standards** 

Canada ICES-003 Issue 6(June 2016), Class B

Date of Receipt: Apr. 16, 2018

**Date of Test** : Apr. 16 ~ 18, 2018

**Date of Issue** : Apr. 27, 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.

Thomas Liu (Engineer) Tested By: Date: Apr. 27, 2018

Pall Chey Apr. 27, 2018 Approved By: Date:

Bill Cheng (Section Manager)

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0513



Report No.: MH/2018/40078 FCC ID: HFS-GW01

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# **Revision History**

Report Number	Revision	Description	Issue Date
MH/2018/40078	Rev.00	Initial creation of document	Apr. 27, 2018

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# 1. General Information

# 1.1 Applicant & Manufacturer Information

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Taiwan (R.O.C.)

Manufacturer : Quanta Computer Inc.

Address : No.188, Wenhua 2nd Rd., Guishan Dist., Taoyuan City 33377,

Taiwan (R.O.C.)

# 1.2 General Description of EUT

Product Name : QTAX53

Brand Name : N/A

Model No. : QTAX53

Added Model(s) : N/A

Model Difference: N/A

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#### 1.3 Details of EUT

Power Supply	AC100~240V			
Highest operate description	1.094GHz			
Adapter	PIE	AD2083320		
Adapter Power Rating	I/P: 100-240VAC, 50-60Hz, 0.2A O/P: 5VDC, 1.2A			
DC Power Cable Type	Unshielded, 0.8m (Detachable) at Power Adapter			
Memory	4GB			
eMMC	6GB			
CPU	QCT	MSM8909W (1.094GHz)		
LCD Panel	ADT	H130BLK01.3		
Battery	EVE	B672426GP01		
USB Cradle	PIC P82131A-17			
WLAN+BT	QCT WCN3620			
GPS	QCT	WTR2965		

Pre-test Mode

Mode 1: PC Link+USB Dock+Video Play Mode 2: Adapter+USB Dock+Video Play

Mode 3: Watch Only+Video Play

# 1.4 The worst case of the EUT

EUT will be carried out in the worst case as followings:

Worst Case	
CE	Mode 2
RE	Mode 1

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### 1.5 Description of Support Units

#### Mode 1, 2:

PRODUCT	MANUFACTURER	MODEL NO.	SERIAL NO.
Mouse	Logitech	M-U0026	1738HS05FGU8
Notebook	DELL	Latitude E6440	3VGS162
Printer	HP	VCVRA-1004	CN33K19J3F

# **Support Equipment Used in Tested Cable**

#### Mode 1. 2:

Cable Type	Core	Lenath	Shielding/Non-shielding
Mouse USB cable(2)	N/A	1.8m	Non-shielding
Printer USB cable(3)	N/A	1.8m	Non-shielding

### 1.6 Operation Procedure

#### Mode 1:

- 1. Notebook Installation ADB Driver EUT link PC.
- 2. Notebook executes customer-supplied test program.
- 3. Set continuous play video.
- Start testing.

#### Mode 2:

- 1. Set continuous play video.
- Charger USB cable connected to adapter charging
- Start testing.

#### 1.7 Modification List

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

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# 1.8 Test Set-Up Configuration

Mode 1 (RE, HRE) Printer **USB Dock** Notebook (EUT) **EUT** Mouse Mode 2 (CE) Adapter **USB Dock** 

> (EUT) EUT

# 1.9 Accessories Cable List

(EUT)

See clause 1.3 of this report

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#### 1.10 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.

# 1.11 Standards Applicable for Testing

Tests to be carried out under FCC Part 15. Subpart B/CISPR 22

. 00.0 to 20 carried out arraor 1 00 1 arr 10, 000 part 2, 0.01 11 22				
Test Standards	Status			
FCC Part 15, Subpart B	Applicable			
Deviation from Standard	No deviation			

#### 1.12 Summary of Results

Highest Emission						
Standard	Standard Test Type Result Phase/Pol. Frequency(MHz) Margin(dB)					
FCC Part 15 Subpart B	Conducted Emission	PASS	Line	0.3500	-18.42 (AVG)	
Class B	Conducted Emission	PASS	Neutral	0.1540	-17.96 (QP)	
Canada ICES-003 Issue 6 (June 2016),Class B	Radiated Emission	PASS	Ver.	88.0660	-8.25 (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 - 1081000 108 - 500 2000 500 - 1000 5000

5th harmonic of the highest frequency or Above 1000

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

- Bototor Function: Quadr Four				
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 (dBuV/m) (at 3m)		Class B (dBuV/m) (at 3r	
(MHz)	Peak Average		Peak	Average
Above 1000-18000	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	suV/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

	SGS Conducted_	Emission HWAY	A Conducted Roo	m No.A_EMC	
EQUIPMENT TYPE	I Manufacturer		Serial Number	Calibration Date	Calibration Due
EMI Test Receiver	R&S	ESCI 3	101311	2017/6/23	2018/6/22
Coaxial Cables	EMC Instruments Corp	EMCRG58-BM- BM-3000	160812	2017/8/12	2018/8/11
LISN	SCHWARZBECK	NSLK 8127	8127-648	2017/6/18	2018/6/17
Pulse Limiter	Narda S.T.S.	PMM PL01	1110X30602	2017/8/12	2018/8/11
LISN	Schwarzbeck	NSLK 8128	NSLK8128-300	2017/9/4	2018/9/3
ISN	TESEQ	ISN T800	34384	2018/4/9	2019/4/8
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

Expanded uncertainty Ulab(K=2) of ISN conducted emission is 2.57 dB

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

Theory values uncertainty Ucispr 16-4-2 :2011+A1\_2014 (K=2) of ISN conducted Emission is 4.59dB

# 2.4.2 Operating Environment

Temperature: 21 degree C Humidity: 55%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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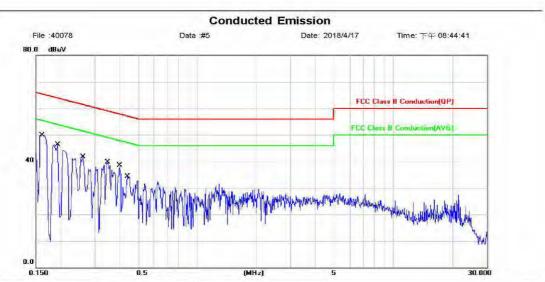
#### 2.4.4 Measurement Data:

Model No.: QTAX53 Mode 2 L

Site | Conduction Room Phase: L1 Temperature: 21 % Power: AC 120V/60Hz Humidity: 55 % Limit: FCC Class B Conduction(QP)

Mode: Mode 2

Note:



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1620	45.40	0.04	45.44	65.36	-19.92	QP	
2		0.1620	31.00	0.04	31.04	55.36	-24.32	AVG	
3		0.1940	41.10	0.03	41,13	63,86	-22.73	QP	
4		0.1940	26.00	0.03	26.03	53.86	-27.83	AVG	
5		0.2620	36.30	0.03	36.33	61.37	-25.04	QP	
6		0.2620	24.60	0.03	24.63	51.37	-26.74	AVG	
7		0.3500	37.80	0.04	37.84	58.96	-21.12	QP	
8	*	0.3500	30.50	0.04	30.54	48.96	-18.42	AVG	
9		0.4020	30.10	0.04	30.14	57.81	-27.67	QP	
10		0.4020	20.60	0.04	20.64	47.81	-27.17	AVG	
11		0.4420	30.40	0.04	30.44	57.02	-26.58	QP	
12		0.4420	21.40	0.04	21,44	47.02	-25.58	AVG	

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

File: 40078\Data: #5

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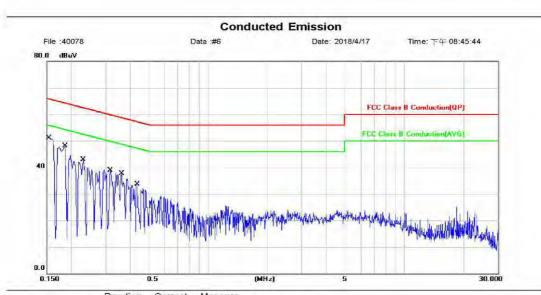
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### Mode\_2\_N

Temperature: 21 % Site Conduction Room Phase: Limit: FCC Class B Conduction(QP) AC 120V/60Hz Humidity: 55 % Power:

Mode: Mode 2

Note:



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	*	0.1540	47.70	0.12	47.82	65.78	-17.96	QP	
2		0.1540	31,50	0.12	31.62	55.78	-24.16	AVG	
3		0.1860	42.70	0.11	42.81	64.21	-21.40	QP	
4		0.1860	26.80	0.11	26.91	54.21	-27.30	AVG	
5		0.2300	38.20	0.11	38.31	62.45	-24.14	QP	
6		0.2300	22.50	0.11	22.61	52.45	-29.84	AVG	
7		0.3180	33.60	0.12	33.72	59.76	-26.04	QP	
8		0.3180	19.60	0.12	19.72	49.76	-30.04	AVG	
9		0.3620	34.40	0.12	34.52	58.68	-24.16	QP	
10		0.3620	24.20	0.12	24.32	48.68	-24.36	AVG	
11		0.4340	30.40	0.12	30.52	57.18	-26.66	QP	
12		0.4340	17.40	0.12	17.52	47.18	-29.66	AVG	

\*:Maximum data x:Over limit

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### 2.5 Test of Radiated Emission

# 2.5.1 Test Equipments

#### **Below 1GHz**

Below IGHZ					
	SGS Radiated_Belov	w_1GHz HWAYA 1			
EQUIPMENT TYPE	Manufacturer	Model Number	Serial	Calibration	Calibration
EQUIPMENT TYPE	Manufacturer	Woder Number	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	2017/9/8	2018/9/7
Broadband Antenna	SCHWAZBECK	VULB9168	9168-629	2017/9/12	2018/9/11
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	2017/9/18	2018/9/17
Coaxial Cable	EMC Instruments	EMCCFD400-NM- NM	150919	2017/9/18	2018/9/17
Coaxial Cable	EMC Instruments	EMCCFD400-NM- NM	150820	2017/9/18	2018/9/17
Coaxial Cable	EMC Instruments	EMCCFD400-NM- NM	150918	2017/9/18	2018/9/17
Coaxial Cable	EMC Instruments	EMCCFD400-NM- NM	150821	2017/9/18	2018/9/17
Coaxial Cable	EMC Instruments	EMCCFD400-NM- NM	150822	2017/9/18	2018/9/17
Radio Communication Analyzer	Anritsu	MT8820C	6201465315	2017/12/10	2018/12/9
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_Ab	ove_1GHz HWAYA	4 966A_EMC		
EQUIPMENT TYPE	Manufacturer	Model Number	Serial Number	Calibration Date	Calibration Due
Spectrum Analyzer	R&S	FSV 40	100979	2017/12/21	2018/12/20
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	2017/4/25	2018/4/24
Pre Amplifier	EMC Instruments Corp.	EMC184045B	980135	2017/10/27	2018/10/26
Coaxial Cable	JUNFLOW	MWX221- NMSNMS	J0778929	2017/4/23	2018/4/22
Coaxial Cable	Huber+Suhner	SUCCOFLEX 104PEA	30255/4PEA	2017/4/23	2018/4/22
Coaxial Cable	EMC Instruments	EMC104-SM-SM	140927	2017/4/23	2018/4/22
Coaxial Cable	Huber+Suhner	SUCOFLEX 102	MY 2152/2	2017/6/5	2018/6/4
Coaxial Cable	Huber+Suhner	SUCOFLEX 102	MY 2153/2	2017/6/5	2018/6/4
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	2018/1/12	2019/1/11
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 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: 20 degree C Humidity: 52 %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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Temperature:

Time: 下午 06:40:28

20 C

# 2.5.4 Measurement Data **Below 1GHz**

Model No.: QTAX53 Mode\_1\_H

**Radiated Emission** 

Site SGS 10m Chamber

File:MH-2018-40078

80.0 dBuV/m

Limit: CISPR22 Class B 10M Radiation

Mode: Mode\_1

Note: PC Link+USB Dock+Video Play

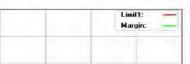
Polarization: Horizontal

Power: From System

Humidity: 52 %

Distance: 10m

# Data :#8 Date: 2018/4/17





No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	Comment
1		63.9500	25.99	-12.71	13.28	30.00	-16.72	QP	
2	*	88.0700	37.18	-17.33	19.85	30.00	-10.15	QP	
3		146.4000	24.22	-11.42	12.80	30.00	-17.20	QP	
4		256.9800	28.87	-12.13	16.74	37.00	-20.26	QP	
5	+ 1.0	924.3400	23.60	1.38	24.98	37.00	-12.02	QP	
6		980.6000	23.81	1.69	25.50	37.00	-11.50	QP	

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

File:MH-2018-40078\Data:#8

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# Mode\_1\_V

Site SGS 10m Chamber

Limit: CISPR22 Class B 10M Radiation

Mode: Mode\_1

Note: PC Link+USB Dock+Video Play

Polarization: Vertical

Power: From System

Distance: 10m

Temperature: 20 C

Humidity: 52 %

Radiated Emission Data #7 Date: 2018/4/17 Time: 下午 06:40:26 Limit1:



No.	Mk.	Freq.	Level	Factor	ment	Limit	Over		
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	Comment
1	1 000	38.9280	30.06	-11.61	18.45	30.00	-11.55	QP	
2		51.1900	31.02	-10.79	20.23	30.00	-9.77	QP	
3	*	88.0660	38.68	-16.93	21.75	30.00	-8.25	QP	
4		153.1900	23.94	-10.73	13.21	30.00	-16.79	QP	
5		946.6500	22.78	1.48	24.26	37.00	-12.74	QP	
6		992.2400	23.07	1.66	24.73	37.00	-12.27	QP	

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

File :MH-2018-40078\Data :#7

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#### **Above 1GHz**

Model No.: QTAX53 Mode\_1\_H

Site SGS 966 Chamber A

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

Mode: Mode 1

Note:

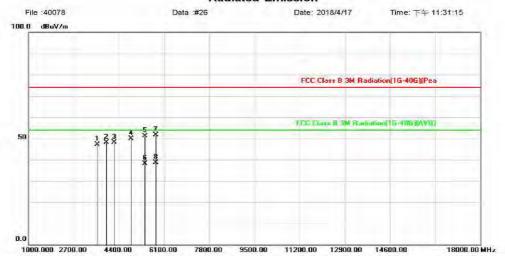
Polarization: Horizontal From NB Power:

Temperature: 21 °C

Humidity: 65 %

Distance

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	9 - 6	3584.000	58.44	-11.25	47.19	74.00	-26.81	peak	
2		3941.000	57.94	-9.75	48.19	74.00	-25.81	peak	
3		4230.000	57.59	-9,44	48.15	74.00	-25.85	peak	
4		4859.000	57.82	-7.83	49.99	74.00	-24.01	peak	
5		5386.000	58.00	-6.89	51.11	74.00	-22.89	peak	
6	1 1.5	5386.000	45.00	-6.89	38.11	54.00	-15.89	AVG	
7		5794,000	57.62	-6.09	51.53	74.00	-22.47	peak	
8	*	5794.000	44.77	-6.09	38.68	54.00	-15.32	AVG	

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

File 40078\Data #26

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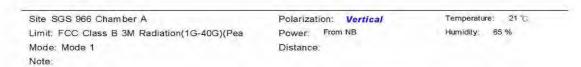
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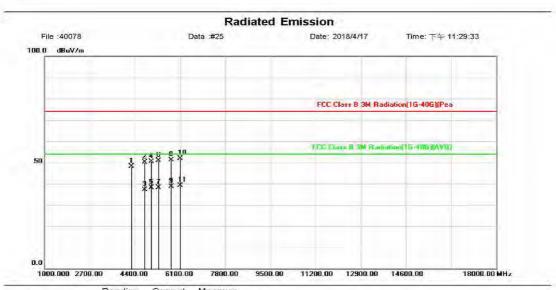
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### Mode\_1\_V





No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	Comment
1	1 - 1	4264.000	57.64	-9.45	48.19	74.00	-25.81	peak	
2		4774.000	58.27	-8.21	50.06	74.00	-23.94	peak	
3		4774.000	45.34	-8.21	37.13	54.00	-16.87	AVG	
4		5029.000	57.63	-7.18	50.45	74.00	-23.55	peak	
5		5029.000	45.23	-7.18	38.05	54.00	-15.95	AVG	
6	1	5301.000	57.93	-6.96	50.97	74.00	-23.03	peak	
7		5301.000	45.10	-6.96	38,14	54.00	-15.86	AVG	
8	177	5777.000	57.35	-6.14	51.21	74.00	-22.79	peak	
9	1 1.2	5777.000	44.69	-6.14	38.55	54.00	-15.45	AVG	
10		6100.000	56.87	-4.92	51.95	74.00	-22.05	peak	
11	*	6100.000	43.94	-4.92	39.02	54.00	-14.98	AVG	

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

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