

FCC SDoC REPORT

Canada ISED ICES-003 TEST REPORT

Test Report No. : T190304L03-F

Applicant : Huawei Technologies Co., Ltd.

Address : Administration Building, Headquarters of Huawei Technologies Co., Ltd., Bantian, Longgang District, Shenzhen, 518129, China (For FCC)
Administration Building, Headquarters of Huawei Technologies Co., Ltd., Bantian, Longgang District, Shenzhen, 518129, China (Peoples Republic Of) (For IC)

Manufacturer : Huawei Technologies Co., Ltd.

Address : Administration Building, Headquarters of Huawei Technologies Co., Ltd., Bantian, Longgang District, Shenzhen, 518129, China (For FCC)
Administration Building, Headquarters of Huawei Technologies Co., Ltd., Bantian, Longgang District, Shenzhen, 518129, China (Peoples Republic Of) (For IC)

Equipment Under Test (EUT) :

Product Name : Notebook Computer

Brand Name : HUAWEI; HONOR

Model No. : KPR-W19

Added Model(s) : KPR-WXXXXX (X=0-9,a-z,A-Z or blank); KPR-W29

Standards : FCC Part 15, Subpart B, Class B
Canada ICES-003 Issue 6, April 2017 Updated, Class B

Date of Receipt : Mar. 03, 2019

Date of Test : Mar. 03 ~ 19, 2019

Date of Issue : Mar. 21, 2019

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.

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Tested By:

James Shen
James Shen (Engineer)

Date:

Mar. 21, 2019

Approved By:

Hex Chiang

Date:

Mar. 21, 2019



Hex Chiang (Supervisor)

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Revision History

Report Number	Revision	Description	Issue Date
T190304L03-F	Rev.00	Initial creation of document	Mar. 21, 2019

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1. General Information

1.1 Applicant & Manufacturer Information

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1.2 General Description of EUT

Product Name : Notebook Computer
Brand Name : HUAWEI; HONOR
Model No. : KPR-W19
Added Model(s) : KPR-WXXXXXX (X=0-9,a-z,A-Z or blank); KPR-W29
Model Difference : Marketing purpose.

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1.3 Details of EUT

Power Supply	AC100~240V	
Highest operate description	4.0 GHz	
Adapter	HUAWEI	HW-200325YYY(Y=0-9,A-Z or blank)
Adapter Power Rating	I/P: 100-240VAC, 50/60Hz, 1.8A O/P: 5VDC, 2A; 9VDC, 2A; 12VDC, 2A; 15VDC, 3A; 20VDC, 3.25A	
DC Power Cable Type	Shielded, 1.8m (Detachable) at Power Adapter	
Memory	on Board	
CPU	AMD	Up to 4.0GHz
LCD Panel	BOE	TV14YYY-YYY(Y=0-9,A-Z or blank)
	INNOLUX	N14YYYY-YYY(Y=0-9,A-Z or blank)
WLAN+BT	Intel	8265HUW
Graphics	Integrated Graphic	
Storage	One PCIE/SATA storage Device	
Battery	One re-chargeable battery pack	
Camera	One Camera optional	

Pre-test Mode

Mode	Main Board	CPU	Memory	Panel	Storage	WLAN+BT	Battery	Adapter
1	Quanta H96P	AMD 2.3GHz up to 4.0GHz	DDR 4 8GB	INNOLUX N140HCA-EAC	SAMSUNG (512GB)	Intel 8265HUW	Huawei HB4593R1ECW	Huawei HW-200325UP0

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

Worst Case	
CE	Mode 1 (1920 x 1080 Resolution)
RE	Mode 1 (1920 x 1080 Resolution)

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1.4 Operation Procedure

Mode 1:

1. Turn on the power of all equipment.
2. The EUT communicates with Notebook PC by Bluetooth radio.
3. The EUT communicates with Wireless AP by WIFI radio.
4. The EUT will reads/writes disk through "BurnIn Test" test software .
5. EUT execute the "BurnIn Test" software to send "H" Pattern to display on the screen.
6. Setup the condition for test mode, and begin the test.

1.5 Description of Support Units

Mode 1:

PRODUCT	MANUFACTURER	MODEL NO.	SERIAL NO.
LCD Monitor	DELL	P2815QF	CN-0WJJGR-728272-454-AUYM
HDD	HP	pd 500a	WXQ1AC0R1874
Mouse	HP	MOAFUO	PSB1030013577
Earphone	APPLE	NA	NA
Wireless AP	D-Link	DIR-868L	R3X81D7000137
Notebook PC	HP	Pavilion dv6	CNF9491GLJ

Support Equipment Used in Tested Cable

Mode 1:

Cable Type	Core	Length	Shielding/Non-shielding
HDMI Cable (A)	N/A	1.8 m	Shielding
Type-C Cable(EUT) (B)	N/A	1.8 m	Shielding
USB HDD Cable (C)	N/A	0.6 m	Shielding
USB Mouse Cable (D)	N/A	1.8 m	Shielding
Earphone Cable (E)	N/A	1.0 m	Shielding

1.6 Modification List

No modification was made by Compliance Certification Services Inc. Wugu Laboratory.

1.7 Accessories Cable List

See clause 1.3 of this report

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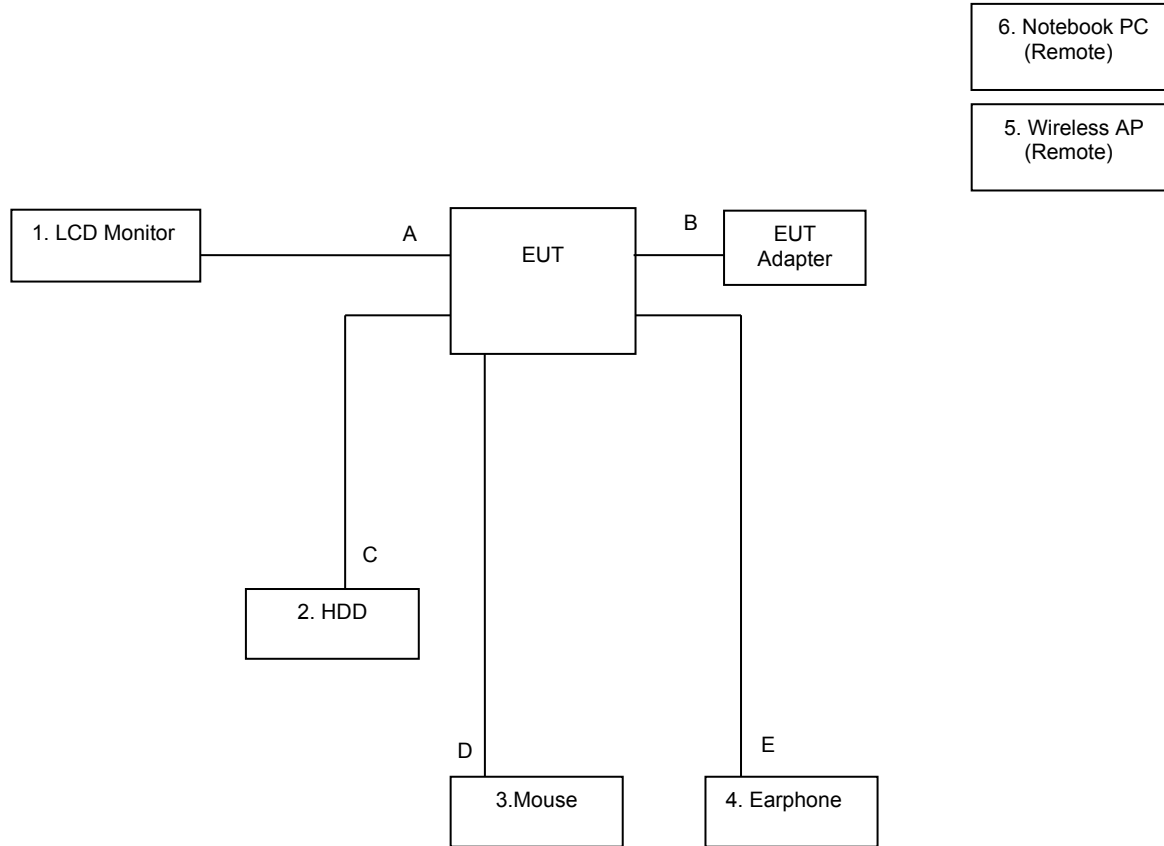
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1.8 Test Set-Up Configuration

Mode 1



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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

Highest Emission					
Standard	Test Type	Result	Phase/Pol.	Frequency(MHz)	Margin(dB)
FCC Part 15 Subpart B Class B Canada ICES-003 Issue 6, April 2017 Updated, Class B	Conducted Emission	PASS	Line	0.1580	-12.12 (QP)
			Neutral	0.1500	-12.39 (QP)
	Radiated Emission	PASS	Ver.	31.5040	-4.74 (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

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2.3 Limits of Conducted and Radiated Emission

2.3.1 Limits of Conducted Emission

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

FCC Part 15, Subpart B 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	79.3	59.3	73.9	53.9

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CISPR 22 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 1 The lower limit shall apply at the transition frequency.

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

FREQUENCY (GHz)	Class A (dBuV/m) (at 3m)		Class B (dBuV/m) (at 3m)	
	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

Conducted Emission Room_B					
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due
Coaxial Cable	EMCI	CFD300-NL	CE2	05/02/2018	05/01/2019
DC LISN	Schwarzbeck	NNBM 8124	629	03/08/2019	03/07/2020
DC LISN	Schwarzbeck	NNBM 8124	628	03/08/2019	03/07/2020
EMI Test Receiver	R&S	ESCI	101073	07/17/2018	07/16/2019
ISN	TESEQ	ISN ST08	36290	06/25/2018	06/24/2019
ISN	FCC	FCC-TLISN-T8-02-09	100106	09/18/2018	09/17/2019
LISN	R&S	ENV216	101054	05/02/2018	05/01/2019
LISN	Schwarzbeck	NSLK8128	5012	04/23/2018	04/22/2019
Software	CCS-3A1-CE				
Compliance Certification Services Inc. (Wugu Laboratory) No.139, Wugong Rd., Wugu Dist., New Taipei City 24886, Taiwan (R.O.C.) Measurement Uncertainty of Conducted Emission Expanded uncertainty (K=2) of conducted emission is 2.96 dB					

2.4.2 Operating Environment

Temperature : 24 degree C

Humidity : 50 %RH

Atmospheric Pressure : 992 mBar

2.4.3 Measurement Level Calculation

Factor = LISN insertion loss + Cable loss

Measurement Level = Reading Level + Factor

Over (Margin) = Measurement Level – Limit

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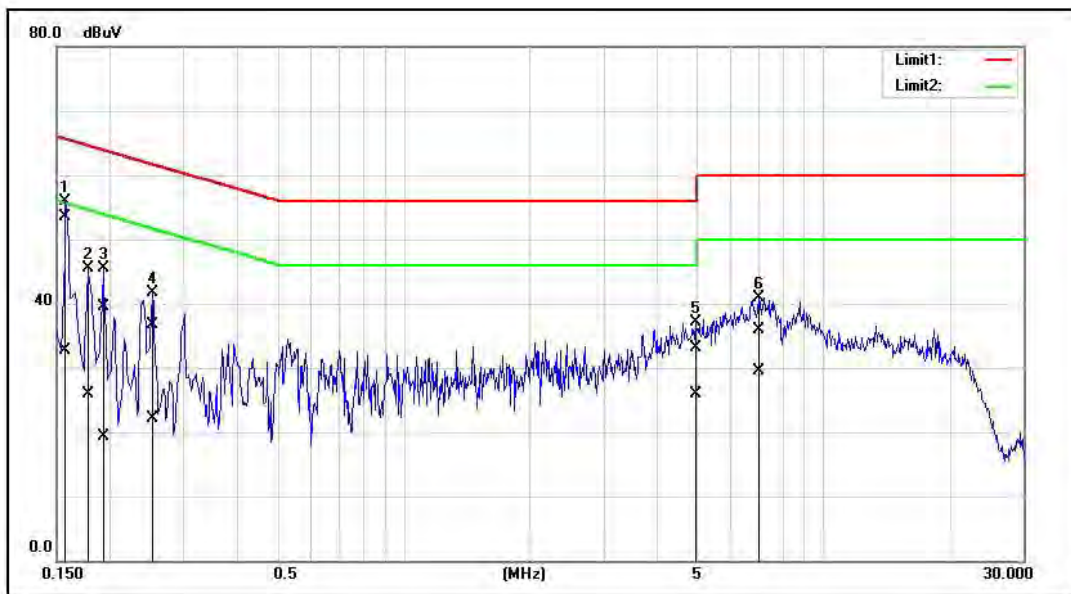
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2.4.4 Measurement Data:

Model No.: KPR-W19

Mode_1_L

Test site:	10M Conduction	Date:	2019/3/14
Standard:	FCC Part 15 B Class B(QP)	Time:	18:31:32
Test item:	L	Temp.(°C)/Hum.(%)	24(°C)/50%
Mode:	Mode 1	Test Voltage	AC 120V/60Hz
Description:			



No.	Frequency	QuasiPeak reading	Average reading	Correction factor	QuasiPeak result	Average result	QuasiPeak limit	Average limit	QuasiPeak margin	Average margin	Remark
	(MHz)	(dBuV)	(dBuV)	(dB)	(dBuV)	(dBuV)	(dBuV)	(dBuV)	(dB)	(dB)	
1*	0.1580	43.68	22.99	9.76	53.44	32.75	65.56	55.57	-12.12	-22.82	Pass
2	0.1780	35.84	16.24	9.76	45.60	26.00	64.57	54.58	-18.97	-28.58	Pass
3	0.1940	29.74	9.51	9.76	39.50	19.27	63.86	53.86	-24.36	-34.59	Pass
4	0.2540	26.85	12.42	9.76	36.61	22.18	61.62	51.63	-25.01	-29.45	Pass
5	4.9580	23.24	15.98	9.84	33.08	25.82	56.00	46.00	-22.92	-20.18	Pass
6	7.0340	25.93	19.56	9.90	35.83	29.46	60.00	50.00	-24.17	-20.54	Pass

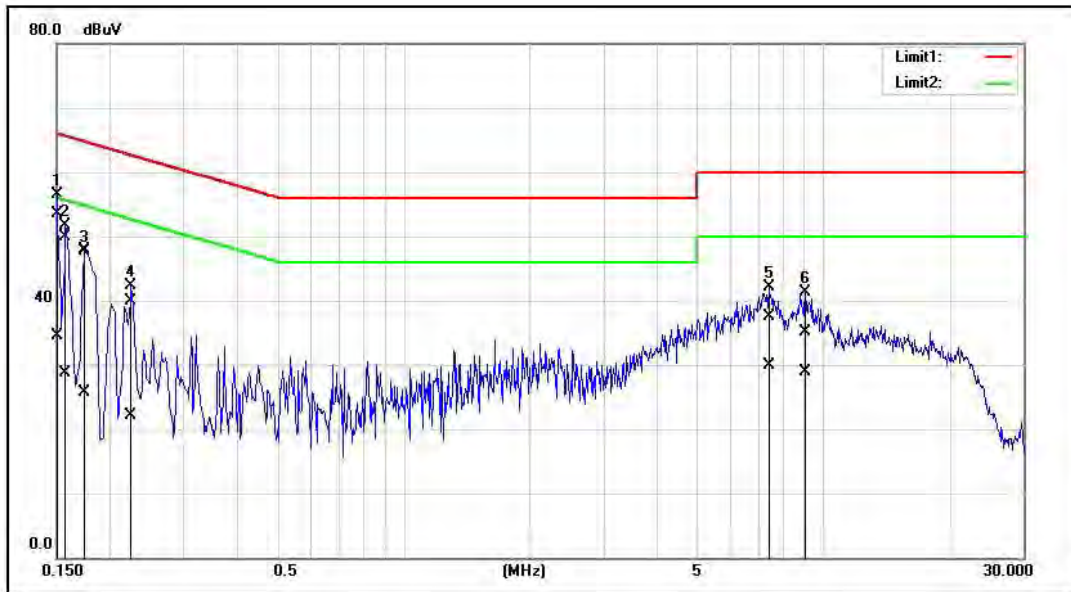
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Mode_1_N

Test site:	10M Conduction	Date:	2019/3/14
Standard:	FCC Part 15 B Class B(QP)	Time:	18:33:46
Test item:	N	Temp.(°C)/Hum.(%)	24(°C)/50%
Mode:	Mode 1	Test Voltage:	AC 120V/60Hz
Description:			



No.	Frequency	QuasiPeak reading	Average reading	Correction factor	QuasiPeak result	Average result	QuasiPeak limit	Average limit	QuasiPeak margin	Average margin	Remark
	(MHz)	(dBμV)	(dBμV)	(dB)	(dBμV)	(dBμV)	(dBμV)	(dBμV)	(dB)	(dB)	
1*	0.1500	43.87	24.78	9.73	53.60	34.51	65.99	56.00	-12.39	-21.49	Pass
2	0.1580	40.19	19.06	9.73	49.92	28.79	65.56	55.57	-15.64	-26.78	Pass
3	0.1740	38.27	15.97	9.73	48.00	25.70	64.76	54.77	-16.76	-29.07	Pass
4	0.2260	30.21	12.39	9.73	39.94	22.12	62.59	52.60	-22.65	-30.48	Pass
5	7.4140	27.53	20.04	9.89	37.42	29.93	60.00	50.00	-22.58	-20.07	Pass
6	9.0700	25.16	18.98	9.94	35.10	28.92	60.00	50.00	-24.90	-21.08	Pass

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2.5 Test of Radiated Emission

2.5.1 Test Equipments

Below 1GHz

Radiated Emission_966C (Below 1GHz)					
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due
Bilog Antenna	Sunol Sciences	JB1	A100209-1	10/22/2018	10/21/2019
Coaxial Cable	Huber+Suhner	104PEA	34418/4PEA	05/02/2018	05/01/2019
Coaxial Cable	Huber+Suhner	104PEA	34376/4PEA	05/02/2018	05/01/2019
Coaxial Cable	Huber+Suhner	104PEA	33954/4PEA	05/02/2018	05/01/2019
EMI Test Receiver	R&S	ESCI	100312	05/07/2018	05/06/2019
Pre-Amplifier	MITEQ	1625-3000	1490938	05/02/2018	05/01/2019
Spectrum Analyzer	Agilent	E4407B	MY44212686	04/09/2018	04/08/2019
Thermo-Hygro Meter	ROTRONIC	M800	0GYM	04/18/2018	04/17/2019
AC POWER SOURE	APE	AFC-130	991265	N.C.R	N.C.R
Antenna Tower	CCS	CC-A-1F	N/A	N.C.R	N.C.R
Controller	CCS	CC-C-1F	N/A	N.C.R	N.C.R
Turn Table	CCS	CC-T-1F	N/A	N.C.R	N.C.R
Software	EZ-EMC (CCS-3A1RE)				
Compliance Certification Services Inc. (Wugu Laboratory)					
No.139, Wugong Rd., Wugu Dist., New Taipei City 24886, Taiwan (R.O.C.)					
Measurement Uncertainty of Radiated Emission					
Expanded uncertainty of radiated emission is 4.22 dB. (30MHz ~ 200MHz)					
Expanded uncertainty of radiated emission is 4.72 dB. (200MHz ~ 1000MHz)					

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Above 1GHz

Radiated Emission_10m (Above 1GHz)					
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due
Bilog Antenna	TESEQ	CBL 6112D	31674	03/06/2019	03/05/2020
Bilog Antenna	TESEQ	CBL 6112D	31675	03/29/2018	03/28/2019
Coaxial Cable	Huber+Suhner	SUCOFLEX 104PEA	330029	05/02/2018	05/01/2019
Coaxial Cable	Huber+Suhner	SUCOFLEX 104PEA	329383	05/02/2018	05/01/2019
Coaxial Cable	Huber+Suhner	104PEA	33949/4PEA	05/02/2018	05/01/2019
Coaxial Cable	Huber+Suhner	104PEA	33948/4PEA	05/02/2018	05/01/2019
EMI Test Receiver	R&S	ESCI	100961	07/04/2018	07/03/2019
EMI Test Receiver	R&S	ESCI	100962	07/10/2018	07/09/2019
Horn Antenna	ETS LINDGREN	3116	00026370	12/26/2018	12/25/2019
Horn Antenna	EMCO	3117	00055167	12/24/2018	12/23/2019
Pre-Amplifier	HP	8447D	2944A07754	05/02/2018	05/01/2019
Pre-Amplifier	HP	8447D	2944A08150	05/02/2018	05/01/2019
Pre-Amplifier	EMCI	EMC051845	980040	05/02/2018	05/01/2019
Pre-Amplifier	MITEQ	AMF-6F-260400-40-8P	985646	06/21/2018	06/20/2019
Spectrum Analyzer	Agilent	E4446A	MY48250297	08/30/2018	08/29/2019
AC POWER SOURE	APE	AFC-130	991259	N.C.R	N.C.R
Antenna Tower	CCS	CC-A-1F	N/A	N.C.R	N.C.R
Antenna Tower	Sunol Sciences	TLT2	031010-5	N.C.R	N.C.R
Controller	Sunol Sciences	SC104V	031010-1	N.C.R	N.C.R
Controller	CCS	CC-C-1F	N/A	N.C.R	N.C.R
Turn Table	CCS	CC-T-1F	N/A	N.C.R	N.C.R
Software	EZ-EMC (CCS-3A1RE)				
Compliance Certification Services Inc. (Wugu Laboratory)					
No.139, Wugong Rd., Wugu Dist., New Taipei City 24886, Taiwan (R.O.C.)					
Measurement Uncertainty of Radiated Emission					
Expanded uncertainty of radiated emission is 4.80 dB. (1000MHz ~ 6000MHz)					
Expanded uncertainty of radiated emission is 5.25 dB. (6000MHz ~ 18000MHz)					
Expanded uncertainty of radiated emission is 3.93 dB. (18000MHz ~ 26000MHz)					
Expanded uncertainty of radiated emission is 3.97 dB. (26000MHz ~ 40000MHz)					

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2.5.2 Operating Environment

Temperature : 22 degree C

Humidity : 54 %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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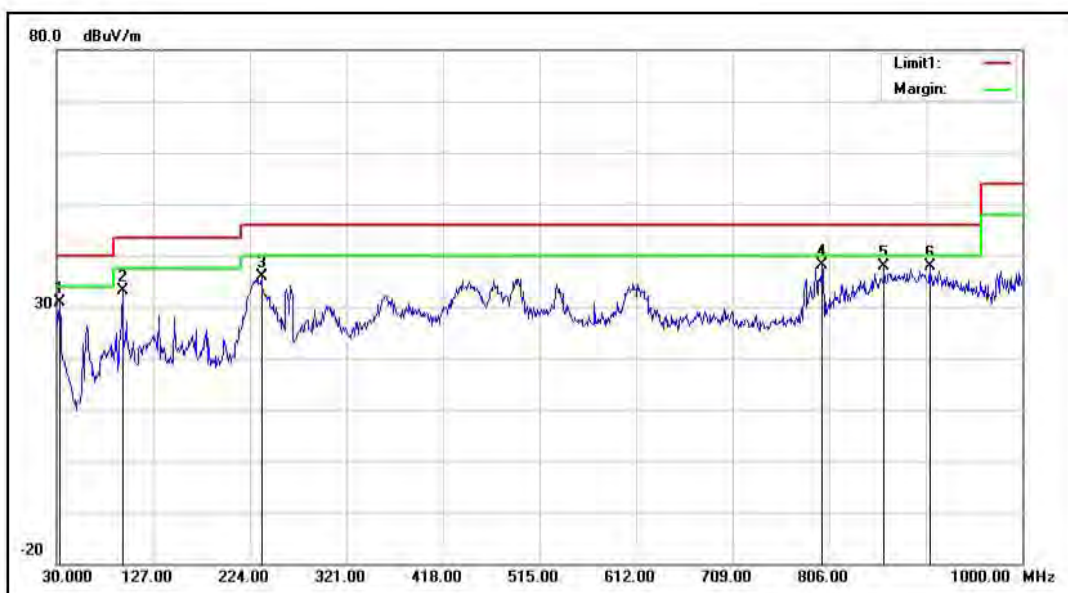
2.5.4 Measurement Data

Below 1GHz

Model No.: KPR-W19

Mode_1_H

Test site:	966C Chamber	Ant.Polar.:	Horizontal
Standard:	FCC Part 15 B 3M Class B	Test Distance:	3m
Test item:	Radiation Test	Power:	AC 120V/60Hz
Temp.(°C)/Hum.(%RH):	22(°C)/54%RH	Date: 2019/3/15	Time: 20:08:31
Mode:	Mode 1		
Description:			



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (°)	Remark
1	32.9100	48.90	-18.11	30.79	40.00	-9.21	200	145	QP
2	95.9600	61.49	-28.27	33.22	43.50	-10.28	200	49	QP
3	235.6400	61.49	-25.57	35.92	46.00	-10.08	200	141	QP
4	799.2100	52.70	-14.53	38.17	46.00	-7.83	200	230	QP
5	861.2900	51.54	-13.71	37.83	46.00	-8.17	100	337	QP
6	906.8800	51.05	-13.13	37.92	46.00	-8.08	103	0	QP

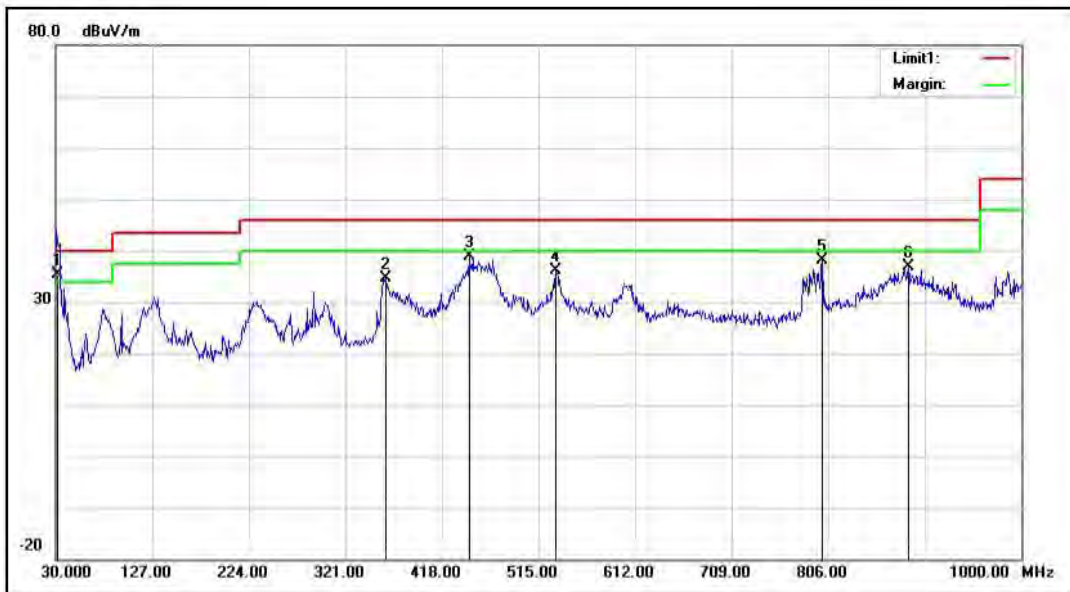
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Mode_1_V

Test site:	966C Chamber	Ant.Polar.:	Vertical
Standard:	FCC Part 15 B 3M Class B	Test Distance:	3m
Test item:	Radiation Test	Power:	AC 120V/60Hz
Temp.(°C)/Hum.(%RH):	22(°C)/54%RH	Date: 2019/3/15	Time: 19:59:33
Mode:	Mode 1		
Description:			



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (°)	Remark
1	31.5040	52.41	-17.15	35.26	40.00	-4.74	100	256	QP
2	361.7400	56.63	-22.03	34.60	46.00	-11.40	117	360	QP
3	445.1600	58.39	-19.53	38.86	46.00	-7.14	100	34	QP
4	532.4600	54.27	-18.14	36.13	46.00	-9.87	100	22	QP
5	800.1800	52.74	-14.52	38.22	46.00	-7.78	272	0	QP
6	886.5100	50.23	-13.35	36.88	46.00	-9.12	145	360	QP

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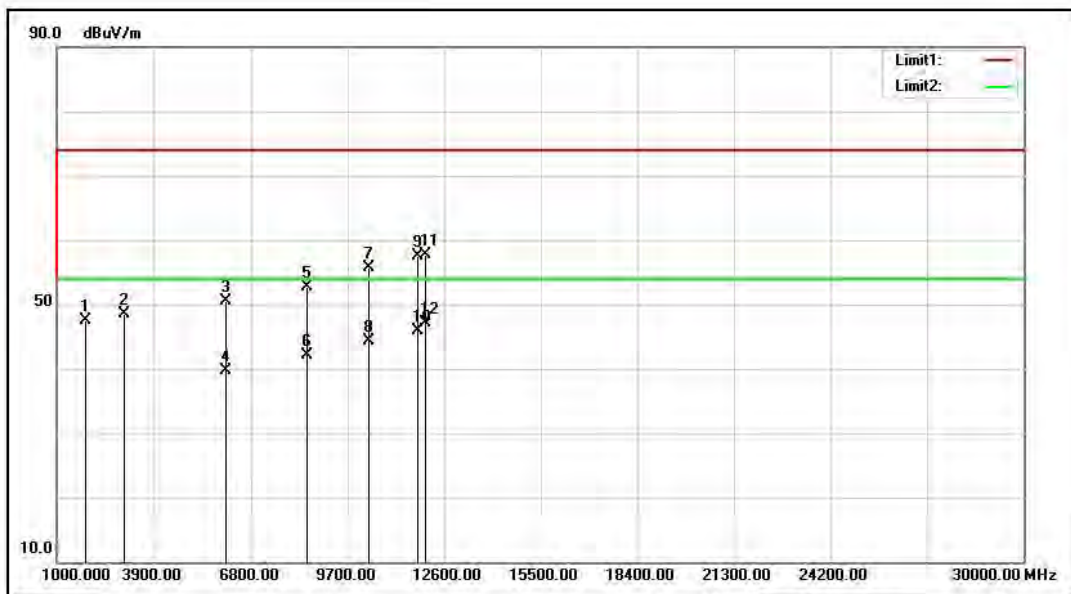
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Above 1GHz

Model No.: KPR-W19

Mode_1_H

Test site:	10M Chamber	Ant.Polar.:	Horizontal
Standard:	FCC Part 15B 3M Class B	Test Distance:	3m
Test item:	Radiation Test	Power:	AC 120V/60Hz
Temp.(°C)/Hum.(%RH):	26(°C)/60%RH	Date:2019/3/15	Time:08:21:25
Mode:	Mode 1		
Description:			



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (°)	Remark
1	1867.000	63.30	-15.77	47.53	74.00	-26.47	100	295	peak
2	3023.000	61.30	-12.73	48.57	74.00	-25.43	100	193	peak
3	6032.000	56.31	-5.82	50.49	74.00	-23.51	200	59	peak
4	6032.000	45.45	-5.82	39.63	54.00	-14.37	200	59	AVG
5	8480.000	55.98	-3.35	52.63	74.00	-21.37	300	199	peak
6	8480.000	45.38	-3.35	42.03	54.00	-11.97	300	199	AVG
7	10316.000	54.60	1.18	55.78	74.00	-18.22	240	0	peak
8	10316.000	43.06	1.18	44.24	54.00	-9.76	240	0	AVG
9	11803.500	53.59	3.88	57.47	74.00	-16.53	115	360	peak
10	11803.500	42.12	3.88	46.00	54.00	-8.00	115	360	AVG
11	12033.000	53.52	4.12	57.64	74.00	-16.36	100	341	peak
12	12033.000	42.90	4.12	47.02	54.00	-6.98	100	341	AVG

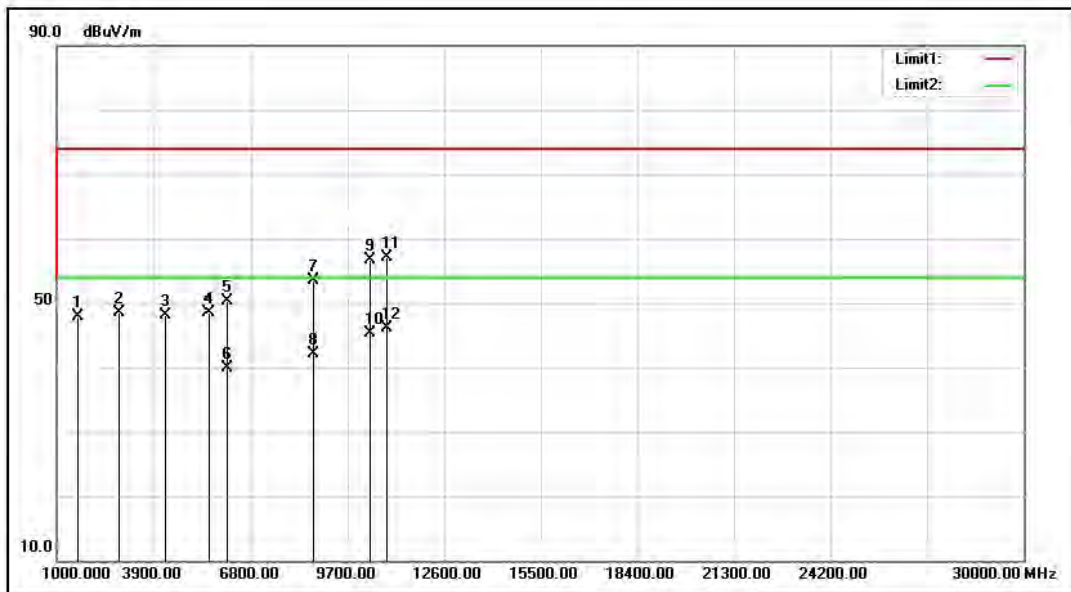
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Mode_1_V

Test site:	10M Chamber	Ant.Polar.:	Vertical
Standard:	FCC Part 15B 3M Class B	Test Distance:	3m
Test item:	Radiation Test	Power:	AC 120V/60Hz
Temp.(°C)/Hum.(%RH):	26(°C)/60%RH	Date:2019/3/15	Time:08:21:25
Mode:	Mode 1		
Description:			



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (°)	Remark
1	1620.500	65.40	-17.55	47.85	74.00	-26.15	100	314	peak
2	2870.000	61.33	-12.87	48.46	74.00	-25.54	101	0	peak
3	4255.500	58.22	-10.06	48.16	74.00	-25.84	200	73	peak
4	5539.000	55.53	-6.97	48.56	74.00	-25.44	200	186	peak
5	6049.000	55.82	-5.43	50.39	74.00	-23.61	133	0	peak
6	6049.000	45.40	-5.43	39.97	54.00	-14.03	133	0	AVG
7	8641.500	55.95	-2.38	53.57	74.00	-20.43	200	352	peak
8	8641.500	44.49	-2.38	42.11	54.00	-11.89	200	352	AVG
9	10341.500	54.93	1.83	56.76	74.00	-17.24	117	0	peak
10	10341.500	43.51	1.83	45.34	54.00	-8.66	117	0	AVG
11	10868.500	54.02	3.13	57.15	74.00	-16.85	200	360	peak
12	10868.500	42.92	3.13	46.05	54.00	-7.95	200	360	AVG

** End of Report **

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