



TEST REPORT

Product Name: Displayport Cable
Trademark: N/A
Model Number: DP-1
DP-2 , DP-3, DP-4, DP-5
Prepared For: Zhongshan Zhiyuan Electronics Co., Ltd
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Zhongshan City, Guangdong Province, China.
Manufacturer: Zhongshan Zhiyuan Electronics Co., Ltd
Address: 4# Jialian Road, The First Industrial Area, Tanzhou Town,
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Prepared By: Shenzhen BCTC Testing Co., Ltd.
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Street, Bao'an District, Shenzhen, China
Sample Received Date: Dec. 10, 2019
Sample tested Date: Dec. 10, 2019 to Dec. 12, 2019
Issue Date: Dec. 12, 2019
Report No.: BCTC1912000680E
Test Standards: 47 CFR FCC Part 15 Subpart B
Test Results: PASS

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Eric Yang

Approved by:



Zero Zhou/Manager

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(Note: N/A means not applicable)



1. VERSION

Report No.	Issue Date	Description	Approved
BCTC1912000680E	Dec. 12, 2019	Original	Valid



2. TEST SUMMARY

The Product has been tested according to the following specifications:

Standard	Test Item	Test result
FCC 15.107	Conducted Emission	N/A*
FCC 15.109	Radiated Emission	Pass

Remark *: The EUT is powered by the DC only , the test item is not applicable.



3. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the Product as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k=2$.

Test item	Value (dB)
Radiated Emission(30MHz~1GHz)	4.80
Radiated Emission(1GHz~6GHz)	4.90



4. PRODUCT INFORMATION AND TEST SETUP

4.1 Product Information

Ratings: DC 5V from PC

Model difference: All models are identical except for the appearance color, the test model is DP-1 and the test results are applicable to other tests.

4.2 Test Setup Configuration

See test photographs attached in EUT TEST SETUP PHOTOGRAPHS for the actual connections between Product and support equipment.

4.3 Support Equipment

No.	Device Type	Brand	Model	Series No.	Data Cable	Power Cord
1.	PC	Lenovo	ThinkPad S2	---	---	---

Notes:

1. All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.
2. Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.

4.4 Test Mode

Test item	Test Mode	Test Voltage
Radiated mission(30MHz-1GHz) Class B	Working	DC 5V from PC
All test mode were tested and passed, only Radiated Emissions shows (*) is the worst case mode which were recorded in this report.		



5. TEST FACILITY AND TEST INSTRUMENT USED

5.1 Test Facility

All measurement facilities used to collect the measurement data are located at BCTC Building & 1-2F, East of B Building, Pengzhou Industrial, Fuyuan 1st Road, Qiaotou Community, Fuyong Street, Bao'an District, Shenzhen, China. The site and apparatus are constructed in conformance with the requirements of ANSI C63.4 and CISPR 16-1-1 other equivalent standards.

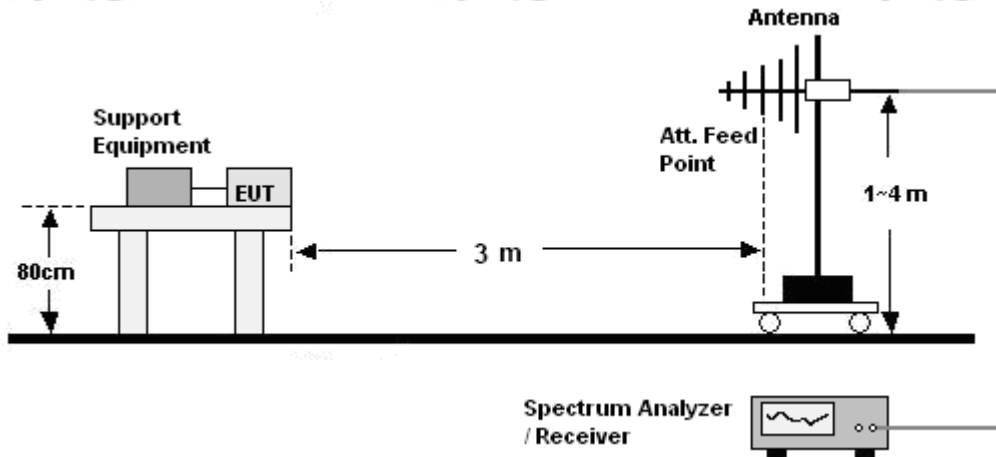
5.2 Test Instrument Used

Radiated emissions Test (966 chamber)					
Equipment	Manufacturer	Model#	Serial#	Last Cal.	Next Cal.
966 chamber	ChengYu	966 Room	966	Jun. 19, 2018	Jun. 18, 2021
Receiver	R&S	ESR3	102075	Jun. 13, 2019	Jun. 12, 2020
Receiver	R&S	ESRP	101154	Jun. 13, 2019	Jun. 12, 2020
Amplifier	Schwarzbeck	BBV9718	9718-309	Jun. 25, 2019	Jun. 24, 2020
Amplifier	Schwarzbeck	BBV9744	9744-0037	Jun. 25, 2019	Jun. 24, 2020
TRILOG Broadband Antenna	schwarzbeck	VULB 9163	VULB9163-942	Jun. 22, 2019	Jun. 21, 2020
Horn Antenna	SCHWARZBEC K	BBHA9120D	1541	Jun. 22, 2019	Jun. 21, 2020
Software	Frad	EZ-EMC	FA-03A2 RE	\	\

6. RADIATION EMISSION TEST

6.1 Block Diagram Of Test Setup

30MHz ~ 1GHz:



6.2 Limit

Limits for Class B devices

Frequency (MHz)	limits at 3m dB(μV/m)		
	QP Detector	PK Detector	AV Detector
30-88	40.0	--	--
88-216	43.5	--	--
216-960	46.0	--	--
960 to 1000	54.0	--	--
Above 1000	--	74.0	54.0

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



6.3 Test Procedure

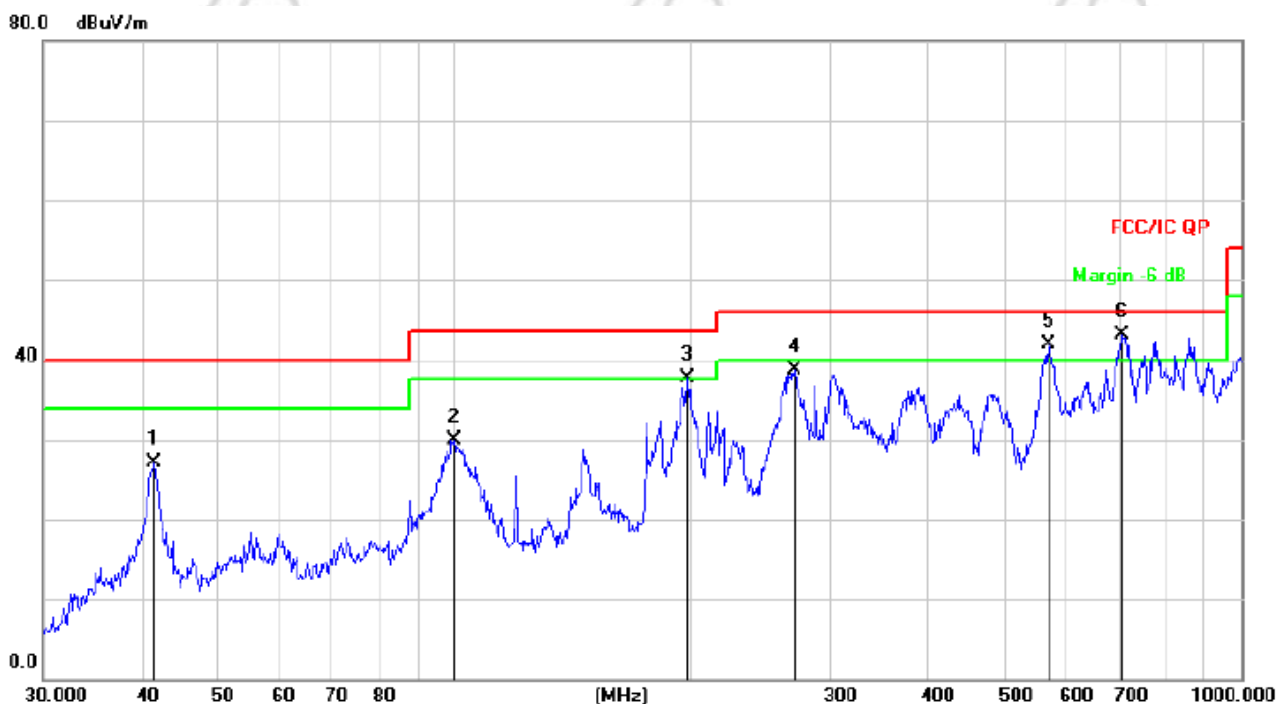
30MHz ~ 1GHz:

- a. The Product was placed on the nonconductive turntable 0.8 m above the ground at a chamber.
- b. Set the spectrum analyzer/receiver in Peak detector, Max Hold mode, and 120 kHz RBW. Record the maximum field strength of all the pre-scan process in the full band when the antenna is varied between 1~4 m in both horizontal and vertical, and the turntable is rotated from 0 to 360 degrees.
- c. For each frequency whose maximum record was higher or close to limit, measure its QP value: vary the antenna's height and rotate the turntable from 0 to 360 degrees to find the height and degree where Product radiated the maximum emission, then set the test frequency analyzer/receiver to QP Detector and specified bandwidth with Maximum Hold Mode, and record the maximum value.



6.4 Test Result

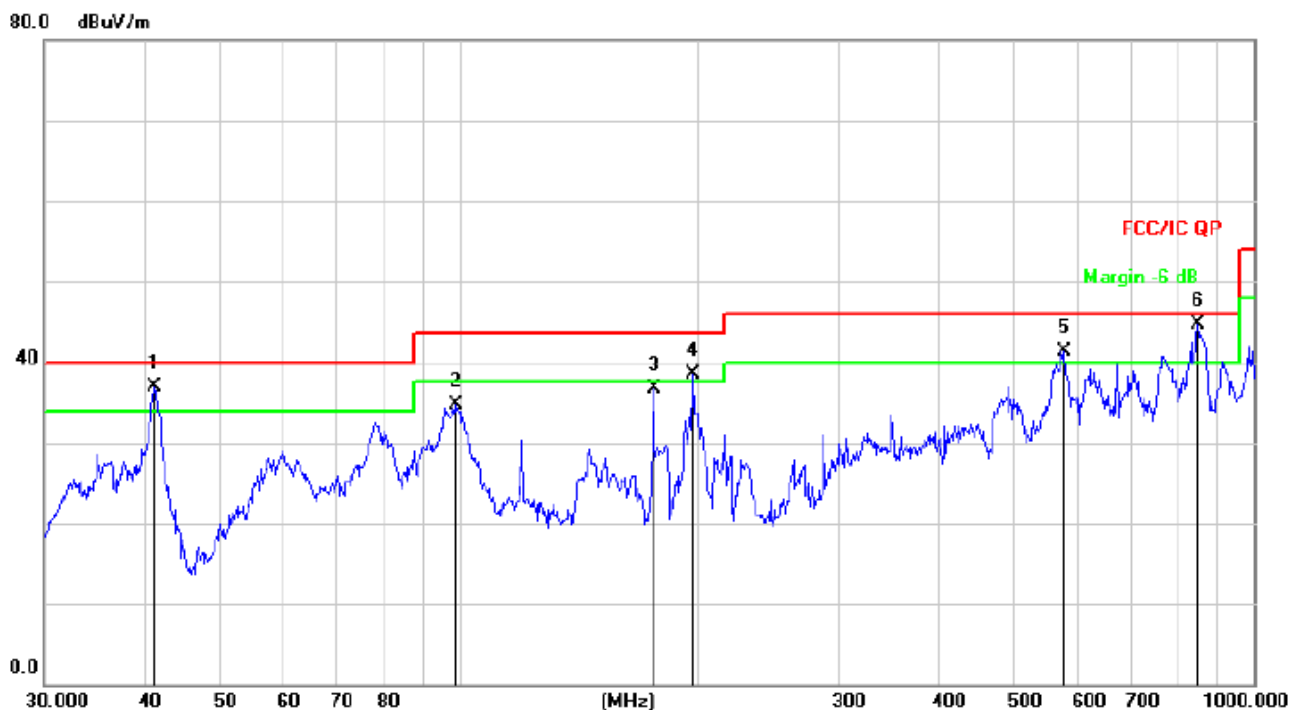
Temperature:	26 °C	Relative Humidity:	54%
Pressure:	101kPa	Phase :	Horizontal
Test Voltage :	DC 5V from PC	Test Mode:	Working



No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Over	Antenna	Table	
		MHz	Level	Factor	ment			Height	Degree	
			dBuV	dB	dBuV/m	dB/m	dB	cm	degree	Comment
1		41.5670	42.35	-15.32	27.03	40.00	-12.97	QP		
2		99.8777	46.27	-16.30	29.97	43.50	-13.53	QP		
3	I	197.8928	54.11	-16.43	37.68	43.50	-5.82	QP		
4		270.3748	53.20	-14.52	38.68	46.00	-7.32	QP		
5	I	568.6127	49.23	-7.25	41.98	46.00	-4.02	QP		
6	*	706.6999	48.10	-5.03	43.07	46.00	-2.93	QP		



Temperature:	26 °C	Relative Humidity:	54%
Pressure:	101kPa	Phase :	Vertical
Test Voltage :	DC 5V from PC	Test Mode:	Working



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dB/m	Over dB	Antenna Height cm	Table Degree	Comment
1	I	41.2765	52.16	-15.34	36.82	40.00	-3.18	QP		
2		98.8326	51.15	-16.49	34.66	43.50	-8.84	QP		
3		175.6516	54.49	-17.86	36.63	43.50	-6.87	QP		
4	I	197.2001	54.97	-16.48	38.49	43.50	-5.01	QP		
5	I	576.6443	48.30	-7.06	41.24	46.00	-4.76	QP		
6	*	851.0353	47.16	-2.50	44.66	46.00	-1.34	QP		

Remark:

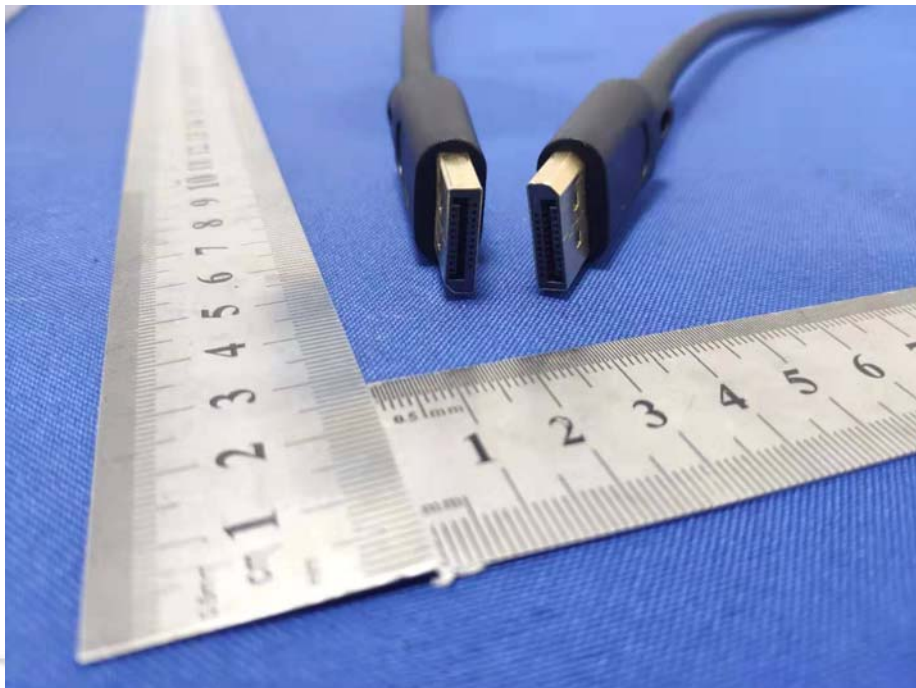
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

7. EUT PHOTOGRAPHS

EUT Photo 1



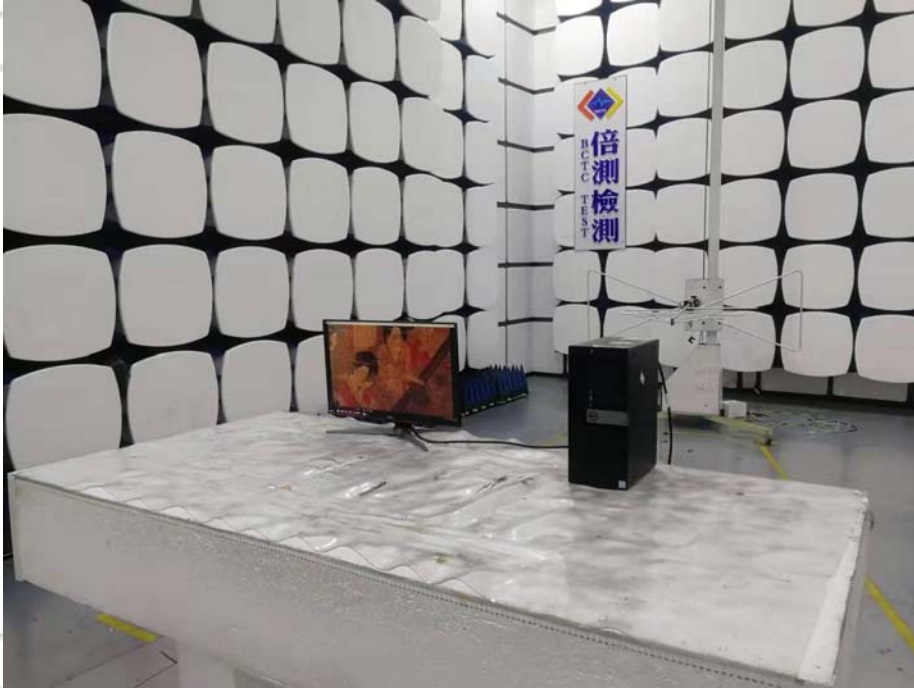
EUT Photo 2





8. EUT TEST SETUP PHOTOGRAPHS

Radiated emission



***** END OF REPORT *****