

TEST REPORT

Report No.: BCTC2104901287E

Applicant: Shenzhen SimDisk Technology Co., Ltd.

Product Name: SATA III SSD

Model/Type
reference: SATA

Tested Date: 2021-04-16 to 2021-04-21

Issued Date: 2021-04-21

Shenzhen BCTC Testing Co., Ltd.



Product Name: SATA III SSD
Trademark: N/A
Model /Type Ref.: SATA,
M.2 Satan,M.2 Pcie Ngff,M.2 Pcie Nvme
Prepared For: Shenzhen SimDisk Technology Co., Ltd.
Address: 304, 3rd Floor, No. A, Heping Industrial Park, Changyong Road,
Yucui Community, Longhua Street, Longhua District,
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Manufacturer: Shenzhen SimDisk Technology Co., Ltd.
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Shenzhen,China
Prepared By: Shenzhen BCTC Testing Co., Ltd.
Address: 1-2/F., Building B, Pengzhou Industrial Park, No.158, Fuyuan 1st
Road, Tangwei, Fuhai Subdistrict, Bao'an District, Shenzhen,
Guangdong, China
Sample Received Date: 2021-04-16
Sample tested Date: 2021-04-16 to 2021-04-21
Issue Date: 2021-04-21
Report No.: BCTC2104901287E
Test Standards FCC Part 15 Subpart B
Test Results PASS

Tested by:



Icey Chen/ Project Handler

Approved by:



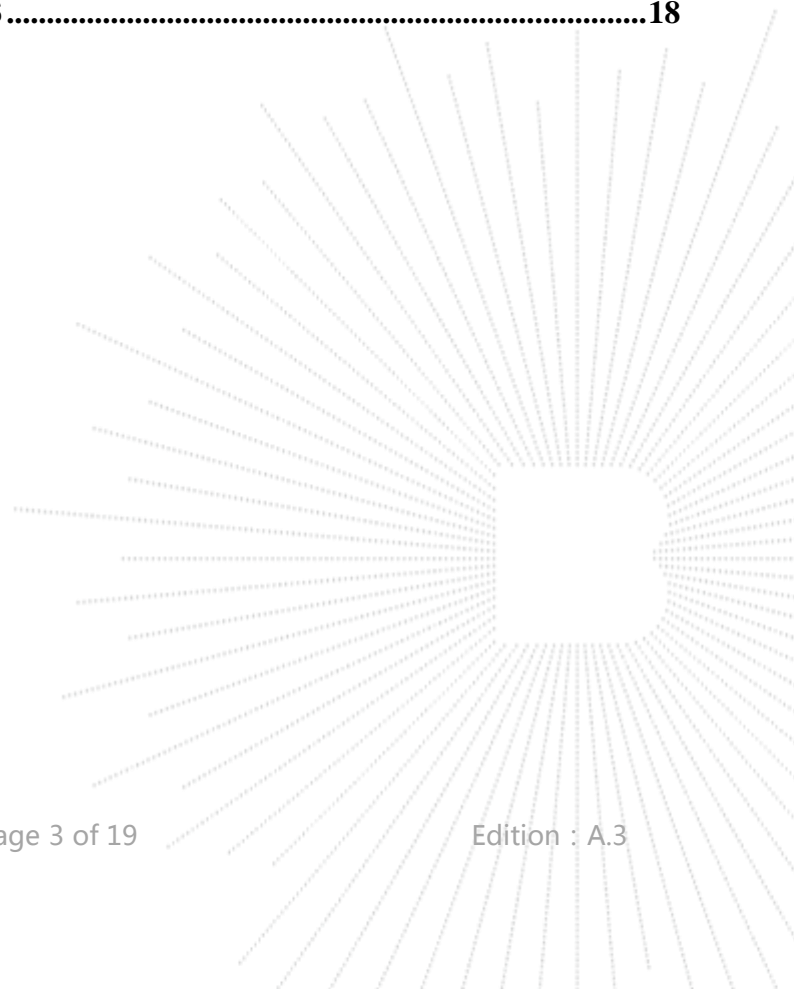
Zero Zhou/Reviewer

The test report is effective only with both signature and specialized stamp. This result(s) shown in this report refer only to the sample(s) tested. Without written approval of Shenzhen BCTC Testing Co., Ltd, this report can't be reproduced except in full. The tested sample(s) and the sample information are provided by the client.

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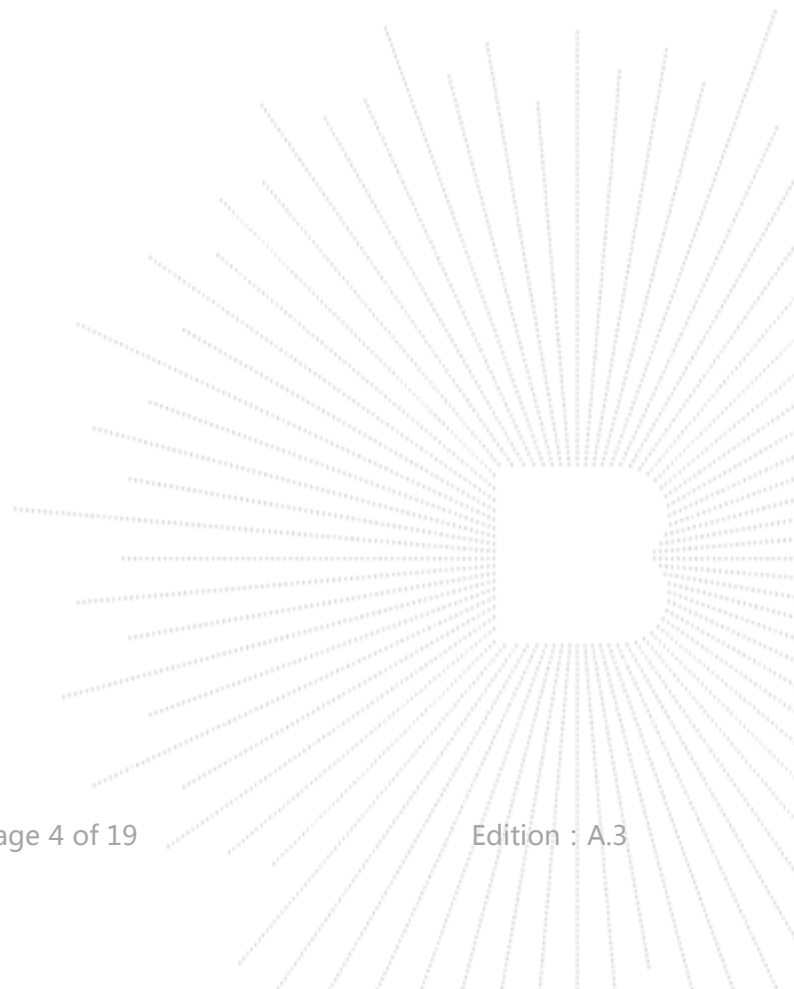
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(Note: N/A means not applicable)



1. VERSION

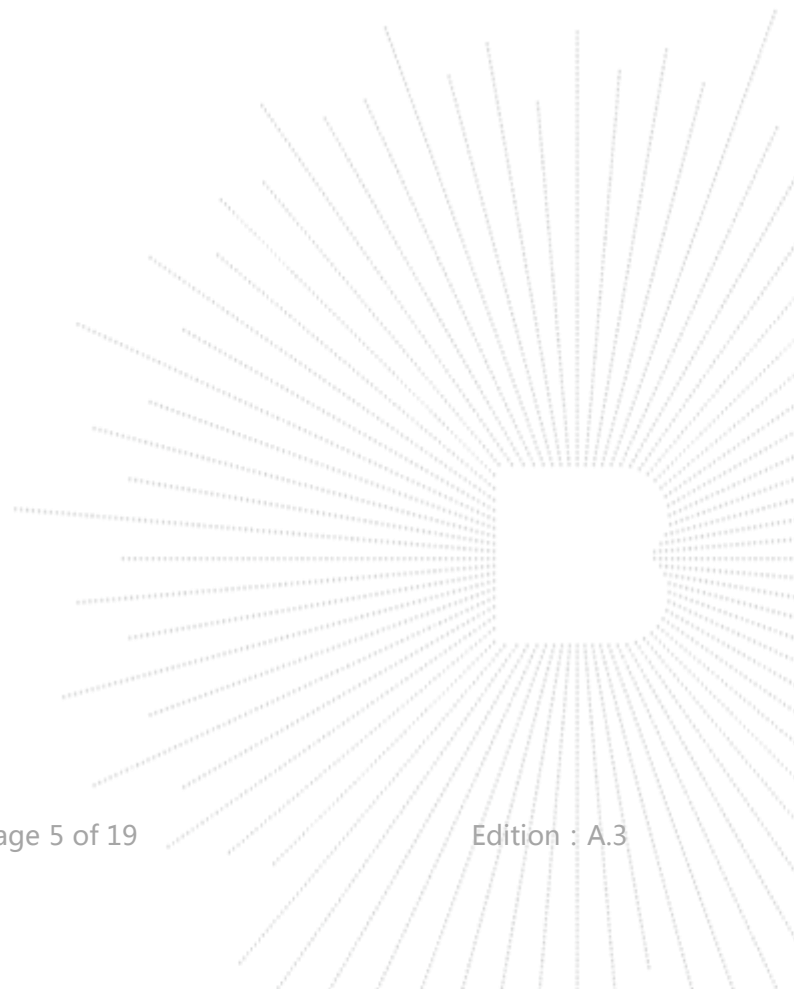
Report No.	Issue Date	Description	Approved
BCTC2104901287E	2021-04-21	Original	Valid



2. TEST SUMMARY

The Product has been tested according to the following specifications:

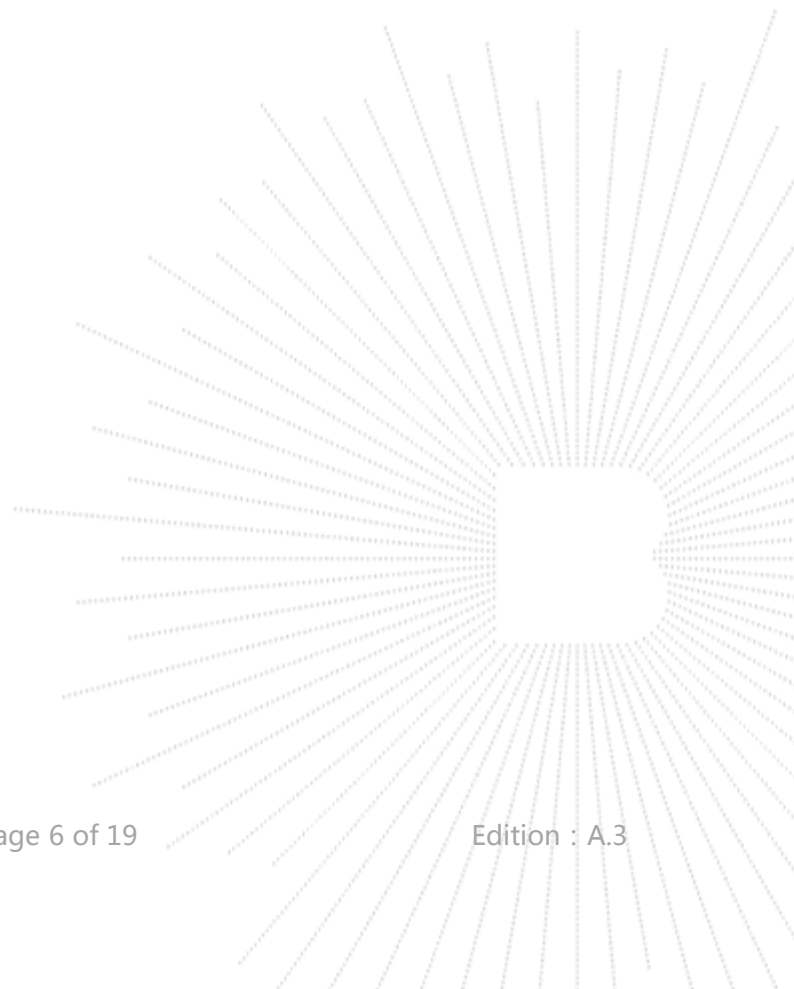
Standard	Test Item	Test result
FCC PART 15B	Conducted Emission	Pass
FCC PART 15B	Radiated Emission	Pass



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)
Conducted Emission (150kHz-30MHz)	3.20
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

The highest frequency of the internal sources of the EUT is (less than 108)MHz:

- less than 108 MHz, the measurement shall only be made up to 1 GHz.
- between 108 MHz and 500 MHz, the measurement shall only be made up to 2 GHz.
- between 500 MHz and 1 GHz, the measurement shall only be made up to 5 GHz.
- above 1 GHz, the measurement shall be made up to 5 times the highest frequency or 6 GHz, whichever is less.

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
	PC	Lenovo	ThinkPad S2	---	---	---

Notes:

- All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.
- 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
Conducted Emission (150KHz-30MHz) Class B	Data transmission	DC 5V from PC
Radiated Emission(30MHz-1GHz) Class B	Data transmission	DC 5V from PC
All test mode were tested and passed, only Conducted Emissions, 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 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

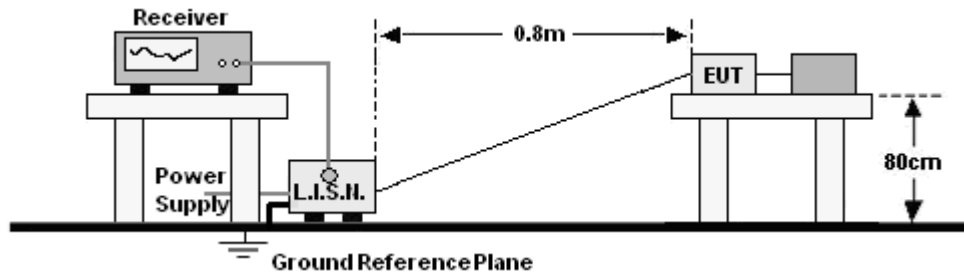
Conducted emissions Test					
Equipment	Manufacturer	Model#	Serial#	Last Cal.	Next Cal.
Receiver	R&S	ESR3	102075	Jun. 08, 2020	Jun. 07, 2021
LISN	R&S	ENV216	101375	Jun. 04, 2020	Jun. 03, 2021
ISN	HPX	ISN T800	S1509001	Jun. 04, 2020	Jun. 03, 2021
Software	Frad	EZ-EMC	EMC-CON 3A1	\	\

Radiated emissions Test (966 chamber)					
Equipment	Manufacturer	Model#	Serial#	Last Cal.	Next Cal.
966 chamber	ChengYu	966 Room	966	Jun. 06. 2020	Jun. 05, 2023
Receiver	R&S	ESR3	102075	Jun. 08, 2020	Jun. 07, 2021
Receiver	R&S	ESRP	101154	Jun. 08, 2020	Jun. 07, 2021
Amplifier	Schwarzbeck	BBV9718	9718-309	Jun. 04, 2020	Jun. 03, 2021
Amplifier	Schwarzbeck	BBV9744	9744-0037	Jun. 04, 2020	Jun. 03, 2021
TRILOG Broadband Antenna	schwarzbeck	VULB 9163	VULB9163-9 42	Jun. 08, 2020	Jun. 07, 2021
Horn Antenna	SCHWARZBEC K	BBHA9120D	1541	Jun. 10, 2020	Jun. 09, 2021
Software	Frad	EZ-EMC	FA-03A2 RE	\	\

6. CONDUCTED EMISSION AT THE MAINS TERMINALS TEST

6.1 Block Diagram Of Test Setup

For mains ports:



6.2 Limit

Limits for Class B devices

(MHz)	Limits dB(μ V)	
	Quasi-peak	Average
0,15 to 0,50	66 to 56*	56 to 46*
0,50 to 5	56	46
5 to 30	60	50

Notes: 1. *Decreasing linearly with logarithm of frequency.
2. The lower limit shall apply at the transition frequencies.

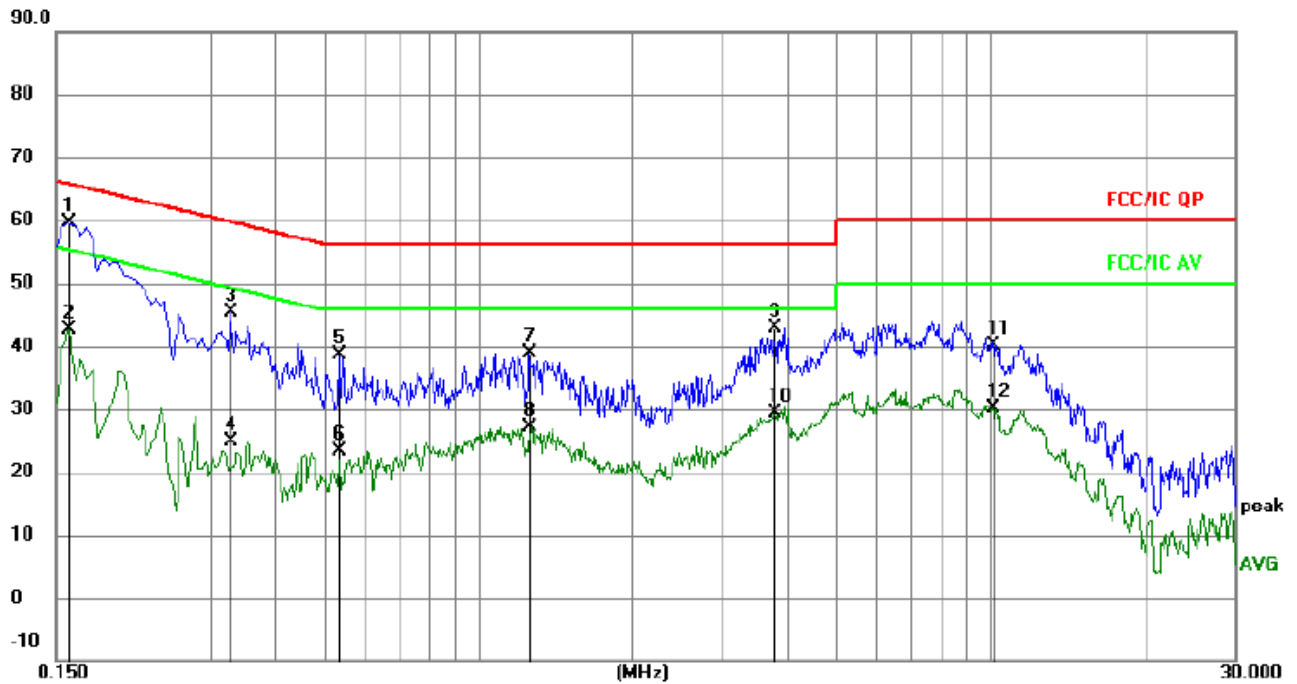
6.3 Test procedure

For mains ports:

- The Product was placed on a nonconductive table 0.8 m above the horizontal ground reference plane, and 0.4 m from the vertical ground reference plane, and connected to the main through Line Impedance Stability Network (L.I.S.N).
- The RBW of the receiver was set at 9 kHz in 150 kHz ~ 30MHz with Peak and AVG detector in Max Hold mode. Run the receiver's pre-scan to record the maximum disturbance generated from Product in all power lines in the full band.
- For each frequency whose maximum record was higher or close to limit, measure its QP and AVG values and record.

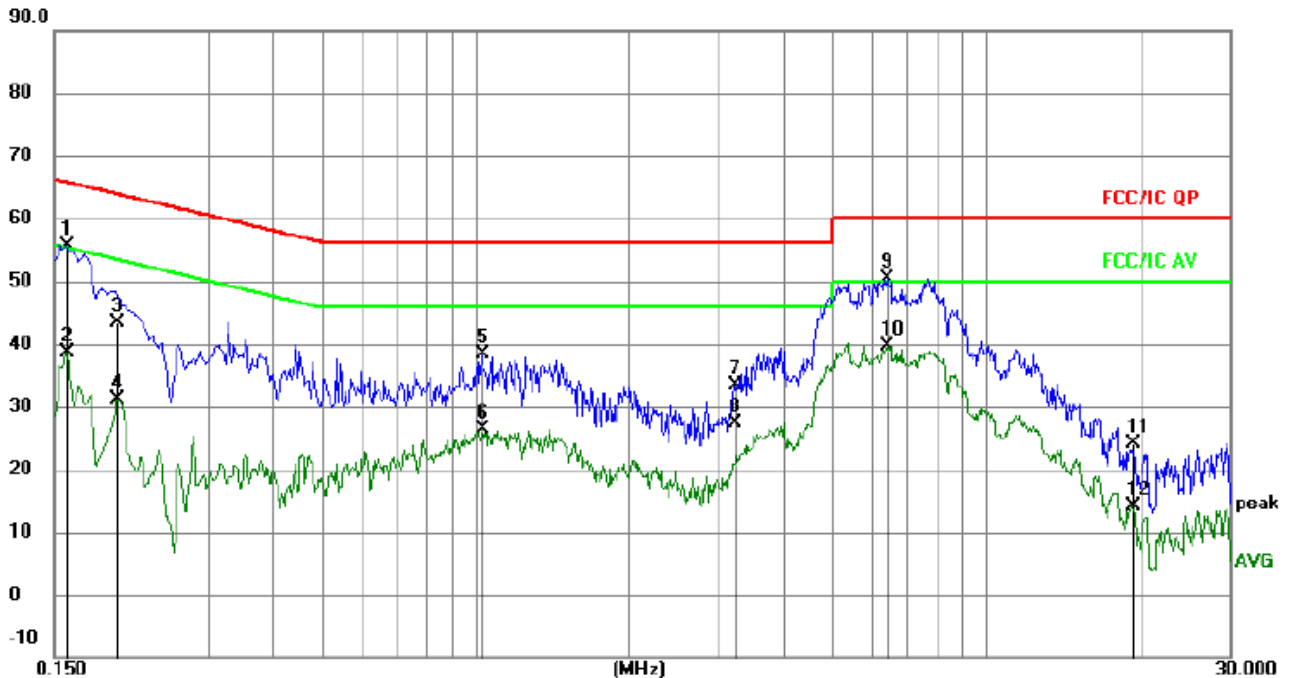
6.4 Test Result

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



No.	Mk.	Freq. MHz	Reading Level	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector
1	*	0.1590	50.03	9.51	59.54	65.52	-5.98	QP
2		0.1590	33.04	9.51	42.55	55.52	-12.97	AVG
3		0.3300	35.80	9.56	45.36	59.45	-14.09	QP
4		0.3300	15.36	9.56	24.92	49.45	-24.53	AVG
5		0.5370	28.81	9.74	38.55	56.00	-17.45	QP
6		0.5370	13.56	9.74	23.30	46.00	-22.70	AVG
7		1.2570	29.34	9.58	38.92	56.00	-17.08	QP
8		1.2570	17.48	9.58	27.06	46.00	-18.94	AVG
9		3.7905	33.04	9.72	42.76	56.00	-13.24	QP
10		3.7905	19.63	9.72	29.35	46.00	-16.65	AVG
11		10.1040	30.45	9.69	40.14	60.00	-19.86	QP
12		10.1040	20.48	9.69	30.17	50.00	-19.83	AVG

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



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector
		MHz		dB	dBuV	dBuV	dB	
1		0.1590	46.03	9.51	55.54	65.52	-9.98	QP
2		0.1590	29.04	9.51	38.55	55.52	-16.97	AVG
3		0.1995	33.90	9.46	43.36	63.63	-20.27	QP
4		0.1995	21.77	9.46	31.23	53.63	-22.40	AVG
5		1.0274	28.88	9.57	38.45	56.00	-17.55	QP
6		1.0274	16.90	9.57	26.47	46.00	-19.53	AVG
7		3.2189	23.72	9.68	33.40	56.00	-22.60	QP
8		3.2189	17.73	9.68	27.41	46.00	-18.59	AVG
9	*	6.4050	40.74	9.74	50.48	60.00	-9.52	QP
10		6.4050	29.84	9.74	39.58	50.00	-10.42	AVG
11		19.3470	14.29	9.78	24.07	60.00	-35.93	QP
12		19.3470	4.39	9.78	14.17	50.00	-35.83	AVG

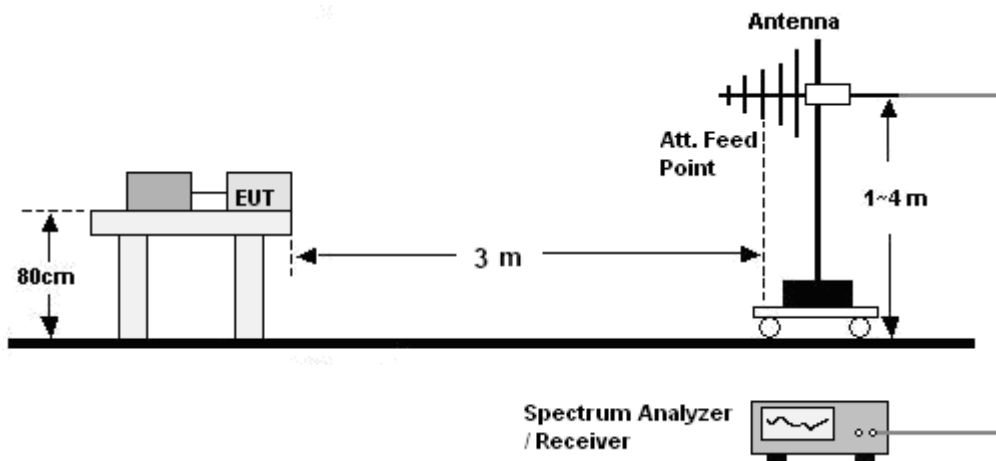
Remark:

- All readings are Quasi-Peak and Average values.
- Factor = Insertion Loss + Cable Loss.

7. RADIATION EMISSION TEST

7.1 Block Diagram Of Test Setup

30MHz ~ 1GHz:



7.2 Limit

Limits for Class B devices

Frequency (MHz)	limits at 3m dB(μ V/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.

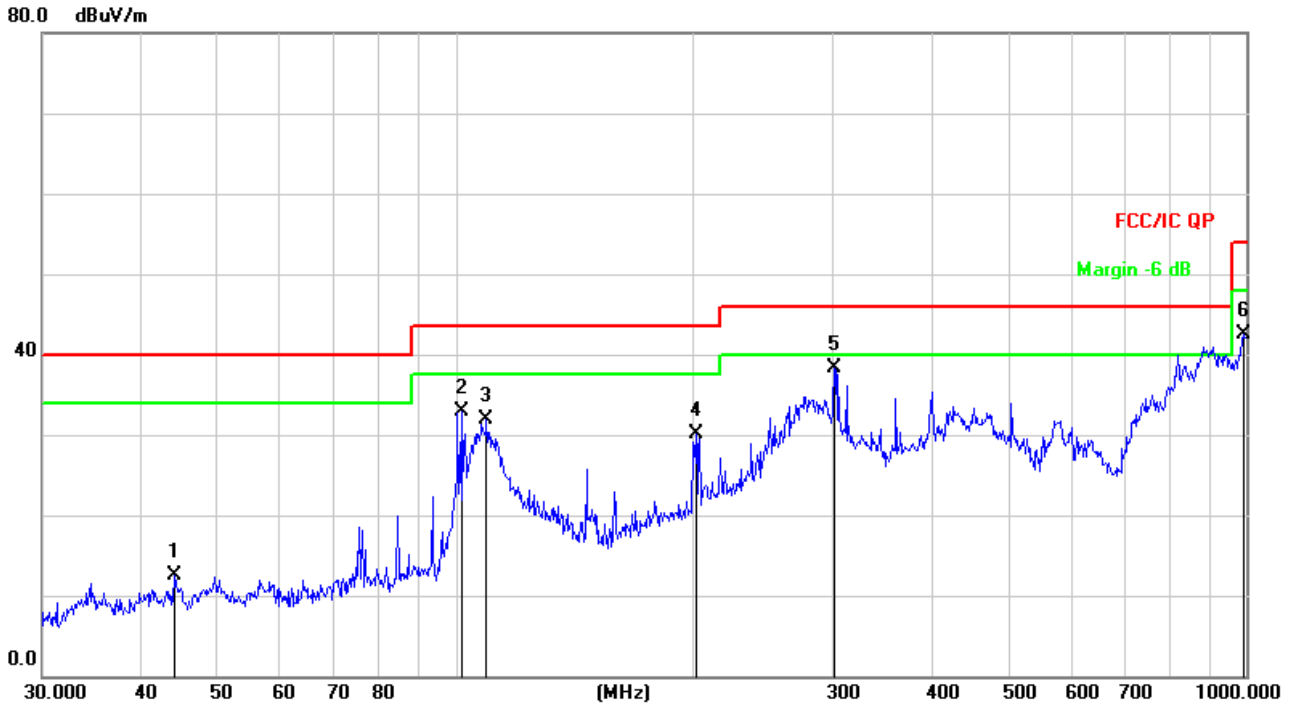
7.3 Test Procedure

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.

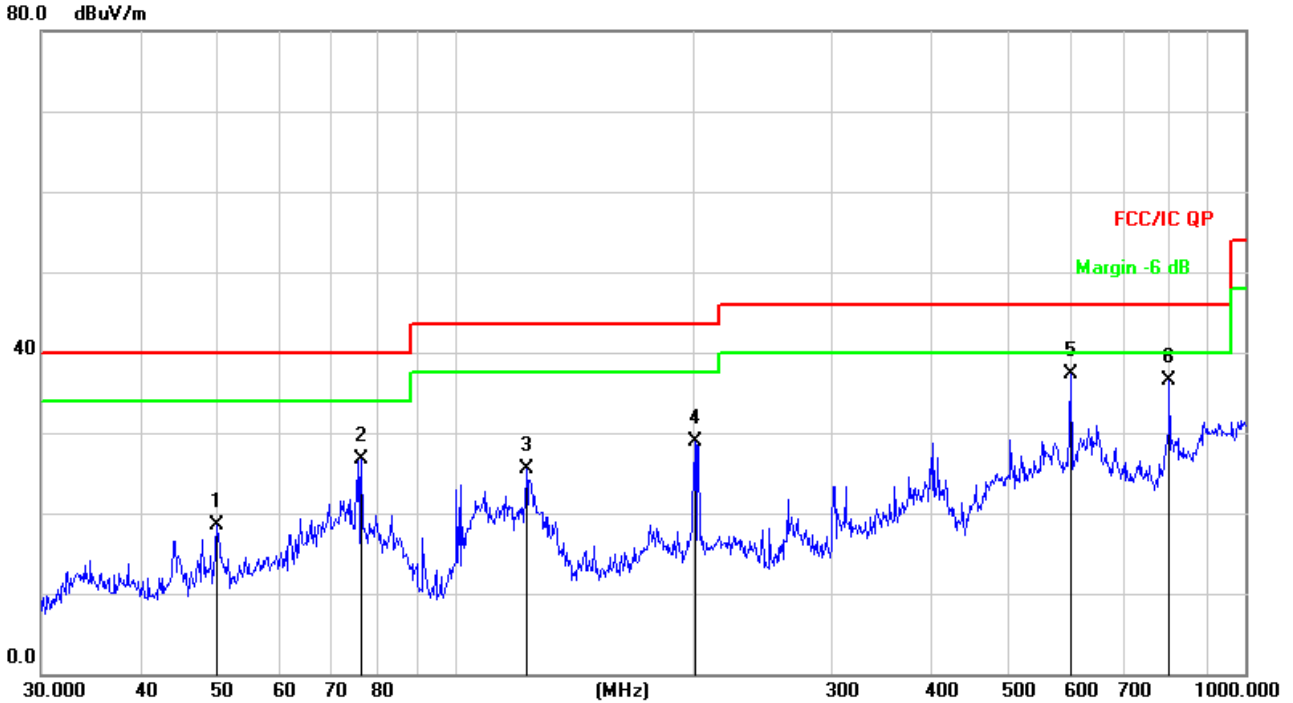
7.4 Test Result

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



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector
		MHz	dBuV	dB	dBuV/m	dB/m	dB	
1		44.1202	27.13	-14.59	12.54	40.00	-27.46	QP
2		101.6443	48.51	-15.58	32.93	43.50	-10.57	QP
3		109.4116	48.02	-16.08	31.94	43.50	-11.56	QP
4		201.3930	45.42	-15.23	30.19	43.50	-13.31	QP
5	*	301.4224	50.72	-12.36	38.36	46.00	-7.64	QP
6		993.0114	43.52	-0.98	42.54	54.00	-11.46	QP

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



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dB/m	Over dB	Detector
1		50.0566	32.58	-14.08	18.50	40.00	-21.50	QP
2		76.2442	45.46	-18.66	26.80	40.00	-13.20	QP
3		123.2655	42.46	-16.98	25.48	43.50	-18.02	QP
4		201.3930	44.14	-15.23	28.91	43.50	-14.59	QP
5	*	601.4265	42.29	-5.02	37.27	46.00	-8.73	QP
6		801.7863	38.44	-1.95	36.49	46.00	-9.51	QP

Remark:

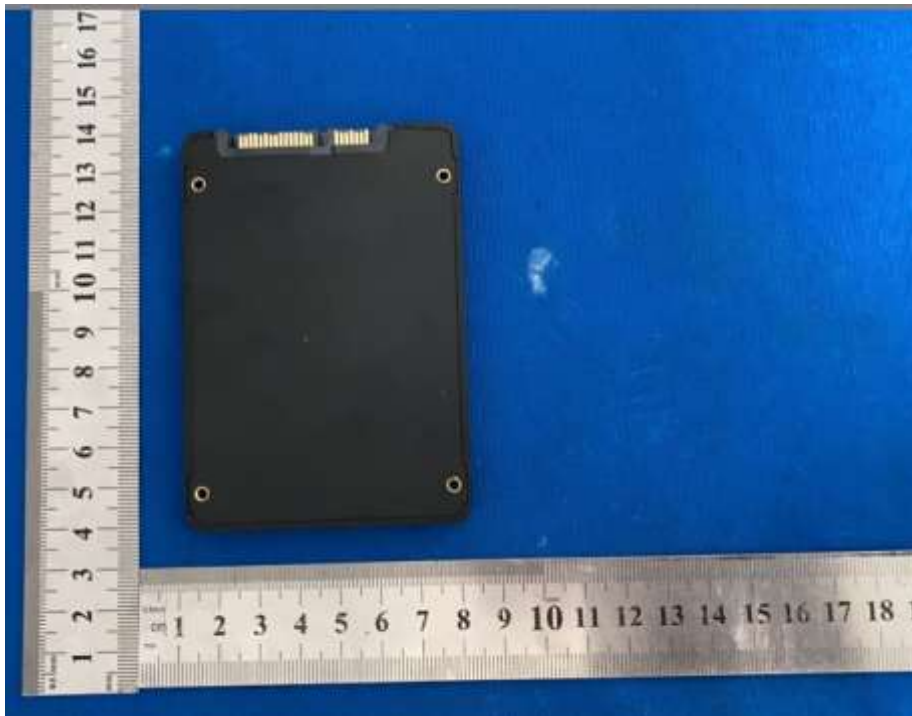
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

8. EUT PHOTOGRAPHS

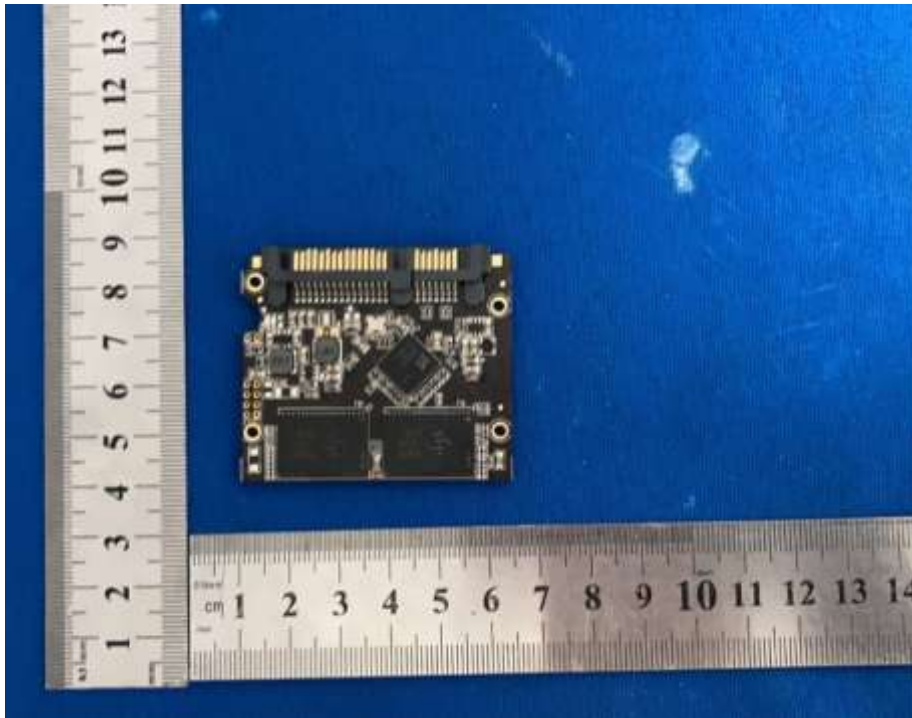
EUT Photo 1



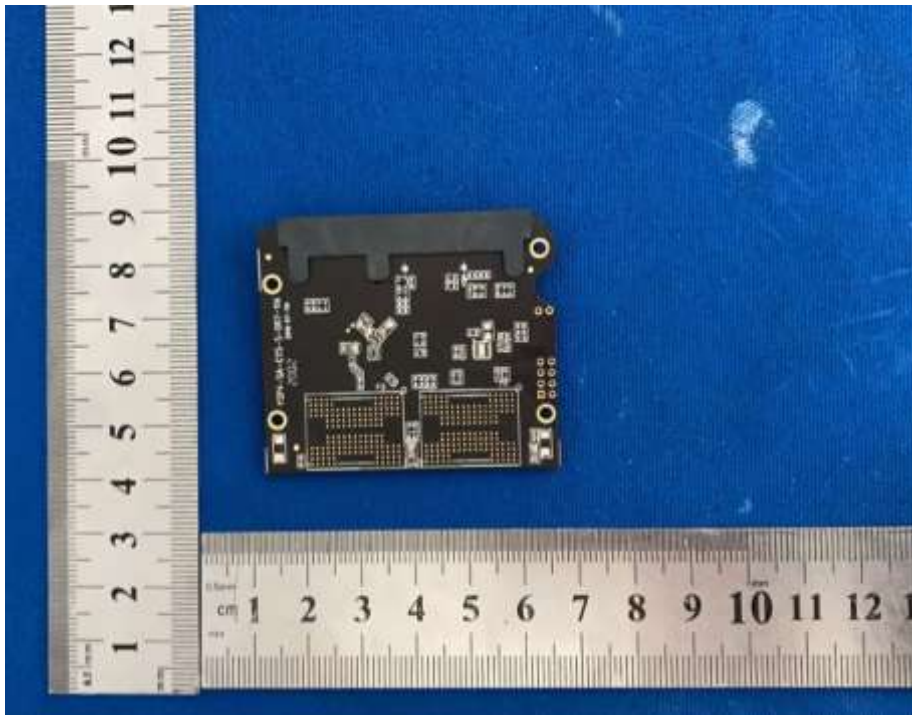
EUT Photo 2



EUT Photo 3



EUT Photo 4



9. EUT TEST SETUP PHOTOGRAPHS

Conducted emissions



Radiated emissions



STATEMENT

The equipment lists are traceable to the national reference standards.

The test report can not be partially copied unless prior written approval is issued from our lab.

The test report is invalid without stamp of laboratory.

The test report is invalid without signature of person(s) testing and authorizing.

The test process and test result is only related to the Unit Under Test.

The quality system of our laboratory is in accordance with ISO/IEC17025.

If there is any objection to report, the client should inform issuing laboratory within 15 days from the date of receiving test report.

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1-2/F., Building B, Pengzhou Industrial Park, No.158, Fuyuan 1st Road, Tangwei, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, China

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***** END *****