	と 知り LHNDLOGY						
	TEST REPC	DRT					
FCC ID :	2A646-T1151						
Test Report No:	TCT220525E014						
Date of issue:	Jun. 09, 2022						
Testing laboratory: :	SHENZHEN TONGCE TES	STING LAB					
Testing location/ address:		k Fuqiao 5th Industrial Zone, Fuhai Inzhen, Guangdong, 518103, People's					
Applicant's name: :	Shenzhen ChuangliJiachen	enzhen ChuangliJiacheng Technology Co., Ltd.					
Address:		1616X4 Building C, Huangdu Square, No.3008 Yitian Road, Huanggang Community, Futian Street, Shenzhen, China					
Manufacturer's name :	Dong guan Utopia-Originality Technology Co., Ltd						
Address:		NO.2, moushan Road, Chan'an Town, Dongguan City, Guangdong Province, China					
Standard(s):	FCC CFR Title 47 Part 15 S	Subpart C					
Product Name::	Power bank						
Trade Mark:	Vrurc						
Model/Type reference :	T1151						
Rating(s):	Rechargeable Li-ion Battery	y DC 3.85V					
Date of receipt of test item	May 25, 2022						
Date (s) of performance of test:	May 25, 2022 - Jun. 09, 202	22					
Tested by (+signature) :	Aaron MO	S Amon Aburge					
Check by (+signature) :	Beryl ZHAO	BoyCarton					
Approved by (+signature):	Tomsin	Toms the st					
General disclaimer:							

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1. General Product Information

1.1.EUT description

Product Name:	Power bank			
Model/Type reference:	T1151			
Sample Number:	TCT220525E014-0101			
Operation Frequency:	124.68kHz - 165.22kHz		$\langle \mathcal{O} \rangle$	
Modulation Technology:	Load modulation			
Max. Wireless Output Power:	15W			
Antenna Type:	Inductive loop coil Antenna			
Rating(s):	Rechargeable Li-ion Battery	DC 3.85V		
1.2 Model(s) list				

1.2.Model(s) list

None.



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2. Test Result Summary

Requirement	С	FR 47 Section	Result	
Antenna requireme	nt	§15.203	PASS	N.
AC Power Line Condu Emission	cted	§15.207	PASS	
Spurious Emission		§15.209(a)(f)	PASS	
Vote: 1. PASS: Test item meets the 2. Fail: Test item does not m				R.
3. N/A: Test case does not a 4. The test result judgment is		f test standard.		
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3. General Information

3.1. Test environment and mode

Operating	Environment:

Operating Environment.		
Condition	Conducted Emission	Radiated Emission
Temperature:	25.3 °C	25.0 °C
Humidity:	56 % RH	55 % RH
Atmospheric Pressure:	1010 mbar	1010 mbar
Tost Modo:		

Test Mode:

AC mode	Keep the EUT in max. wireless output power(15W)
Internal Battery Mode	Keep the EUT in max. wireless output power(15W)

The sample was placed 0.8m above the ground plane for the measurement from 9KHz to 30MHz in 3m chamber. During the test, each emission was maximized by: having the EUT continuously working, investigated all operating modes, rotated about all 3 axis (X, Y & Z) and considered typical configuration to obtain worst position, manipulating interconnecting cables, rotating the turntable, varying antenna height from 1m to 4m in both horizontal and vertical polarizations. The emissions worst-case(Z axis) are shown in Test Results of the following pages.

3.2. Description of Support Units

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Equipment	Model No.	Serial No.	FCC ID	Trade Name
Mobile Phone	SM-G9350	R28HA2ER3GT	/	SAMSUNG
Adapter	EP-TA20CBC	R37HAEY0DT1RT3	/	SAMSUNG

Note:

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.

3. Both AC mode and internal battery mode have been tested, only worse case (AC mode) is reported



4. Facilities and Accreditations

4.1. Facilities

The test facility is recognized, certified, or accredited by the following organizations:

• FCC - Registration No.: 645098

SHENZHEN TONGCE TESTING LAB

Designation Number: CN1205

The testing lab has been registered and fully described in a report with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files.

IC - Registration No.: 10668A-1

SHENZHEN TONGCE TESTING LAB CAB identifier: CN0031

The testing lab has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing.

4.2. Location

SHENZHEN TONGCE TESTING LAB

Address: TCT Testing Industrial Park Fuqiao 5th Industrial Zone, Fuhai Street, Bao'an District Shenzhen, Guangdong, 518103, People's Republic of China

TEL: +86-755-27673339

4.3. Measurement Uncertainty

The reported uncertainty of measurement $y \pm U$, where expended uncertainty U is based on a standard uncertainty multiplied by a coverage factor of k=2, providing a level of confidence of approximately 95 %.

No.	Item	MU
1	Conducted Emission	± 3.10 dB
2	RF power, conducted	± 0.12 dB
3	Spurious emissions, conducted	± 0.11 dB
4	All emissions, radiated(<1 GHz)	± 4.56 dB
5	All emissions, radiated(1 GHz - 18 GHz)	🕙 ± 4.22 dB 🔇
6	All emissions, radiated(18 GHz- 40 GHz)	± 4.36 dB



5. Test Results and Measurement Data

5.1. Antenna requirement

Standard requirement: FCC Part15 C Section 15.203

15.203 requirement:

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

E.U.T Antenna:

The antenna is inductive loop coil antenna which permanently attached.



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Frequency Range:	150 kHz to 30 MHz		(\mathcal{C})		
Receiver setup:	RBW=9 kHz, VBW=30	kHz, Sweep time	e=auto		
Limits:	Frequency range (MHz) 0.15-0.5 0.5-5 5-30	Limit (Quasi-peak 66 to 56* 56 60	dBuV) Average 56 to 46* 46 50		
Test Setup:	40cm E.U.T Adap Test table/Insulation plan <i>Remarkc</i>	ter EMI Receiver	ter AC power		
Test Mode:	E.U.T: Equipment Under Test LISN: Line Impedence Stabilization Test table height=0.8m Charging + Transmittin				
Test Procedure:	 The E.U.T is connected to an adapter through a line impedance stabilization network (L.I.S.N.). This provides a 50ohm/50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uH coupling impedance with 50ohm termination. (Please refer to the block diagram of the test setup and photographs). Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10: 2013 on conducted measurement. 				
Test Result:	PASS		C		

FCC Part15 C Section 15.207

ANSI C63.10:2013

5.2. Conducted Emission

TCT 通测检测 TESTING CENTRE TECHNOLOGY

5.2.1. Test Specification

Test Requirement:

Test Method:

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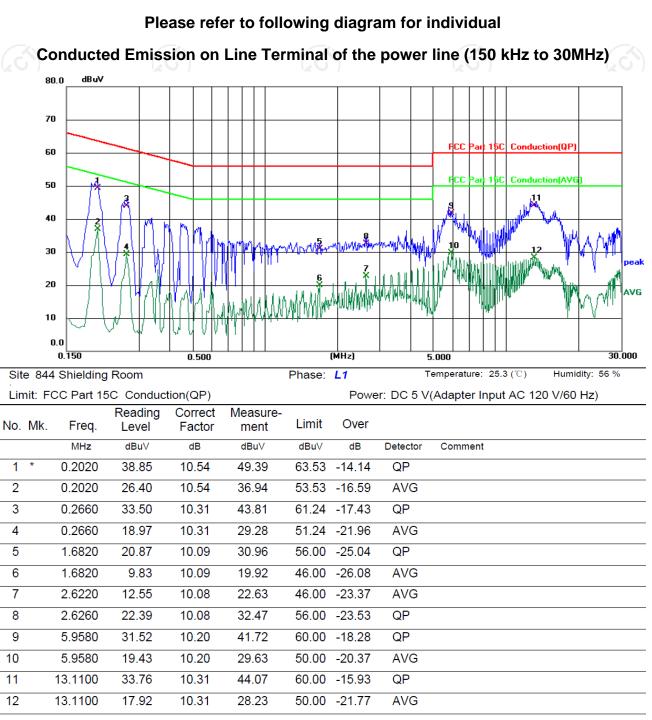
5.2.2. Test Instruments

Conducted Emission Shielding Room Test Site (843)							
Equipment	Manufacturer	Model	Serial Number	Calibration Due			
EMI Test Receiver	R&S	ESCI3	100898	Jul. 07, 2022			
Line Impedance Stabilisation Newtork(LISN)	Schwarzbeck	NSLK 8126	8126453	Feb. 24, 2023			
Line-5	Line-5 TCT		Line-5 TCT CE-05		N/A	Jul. 07, 2022	
EMI Test Software	Shurple Technology	EZ-EMC	N/A	N/A			



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5.2.3. Test data



Note:

Freq. = Emission frequency in MHz

Reading level $(dB\mu V)$ = Receiver reading Corr. Factor (dB) = LISN factor + Cable loss

Measurement $(dB\mu V) = Reading level (dB\mu V) + Corr. Factor (dB)$

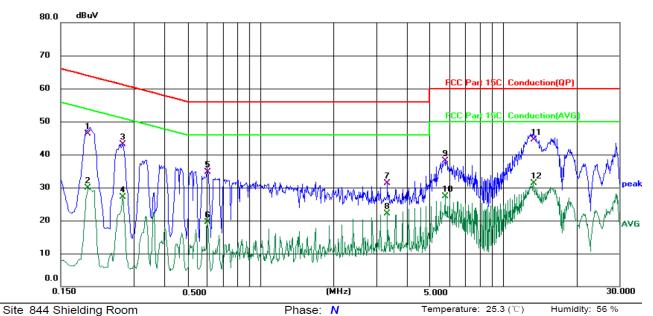
Limit ($dB\mu V$) = Limit stated in standard

Margin (dB) = Measurement (dB μ V) – Limits (dB μ V)

Q.P. =Quasi-Peak

AVG =average

* is meaning the worst frequency has been tested in the frequency range 150 kHz to 30MHz



Conducted Emission on Neutral Terminal of the power line (150 kHz to 30MHz)

Limit: FCC Part 15C Conduction(QP) Power: DC 5 V(Adapter Input AC 120 V/60 Hz) Reading Correct Measure-Limit Over No. Mk. Freq. Level Factor ment MHz dBu∨ dB dBu∨ dBu∨ dB Detector Comment QP 0.1940 35.84 10.53 46.37 63.86 -17.49 1 0.1940 19.28 10.53 29.81 53.86 -24.05 AVG 2 0.2700 32.89 10.30 QP 3 43.19 61.12 -17.93 0.2700 4 16.81 10.30 27.11 51.12 -24.01 AVG 0.6020 24.62 10.14 34.76 56.00 -21.24 QP 5 6 0.6020 9.38 10.14 19.52 46.00 -26.48 AVG 3.3380 21.05 10.18 31.23 56.00 -24.77 QP 7 8 3.3380 11.84 10.18 22.02 46.00 -23.98 AVG 27.81 10.24 38.05 60.00 -21.95 QP 9 5.7660 10.24 27.27 50.00 -22.73 10 5.7660 17.03 AVG 11 13.3340 34.05 10.42 44.47 60.00 -15.53 QP 12 13.3340 20.86 10.42 31.28 50.00 -18.72 AVG

Note:

Freq. = Emission frequency in MHz Reading level $(dB\mu V)$ = Receiver reading Corr. Factor (dB) = LISN factor + Cable loss Measurement $(dB\mu V)$ = Reading level $(dB\mu V)$ + Corr. Factor (dB)Limit $(dB\mu V)$ = Limit stated in standard Margin (dB) = Measurement $(dB\mu V)$ – Limits $(dB\mu V)$ Q.P. =Quasi-Peak AVG =average * is meaning the wart frequency has been total in the frequency re-

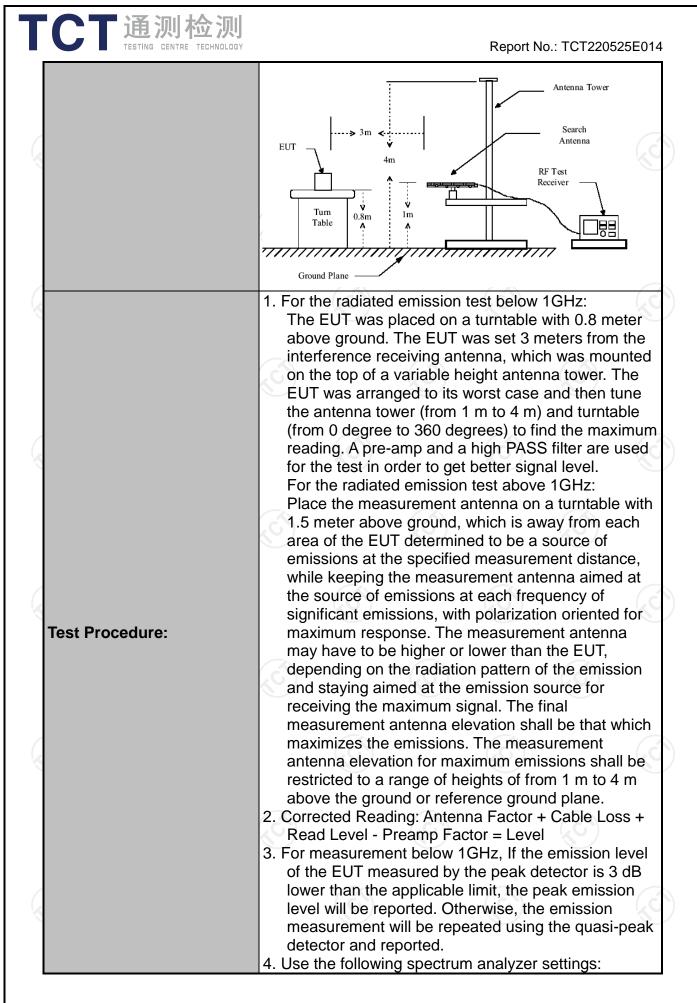
* is meaning the worst frequency has been tested in the frequency range 150 kHz to 30MHz.

5.3. Radiated Spurious Emission Measurement

5.3.1. Test Specification

TCT通测检测 TESTING CENTRE TECHNOLOGY

Test Requirement:	FCC Part15	C Section	15.209	S	No.
Test Method:	ANSI C63.10): 2013			
Frequency Range:	9 kHz to 25 (GHz			
Measurement Distance:	3 m		ソ		NO NO
Antenna Polarization:	Horizontal &	Vertical			
Operation mode:	Refer to item	3.1	(
	Frequency 9kHz- 150kHz	Detector Quasi-peak	RBW 200Hz	VBW 1kHz	Remark Quasi-peak Value
Receiver Setup:	150kHz- 30MHz	Quasi-peak	9kHz	30kHz	Quasi-peak Value
	30MHz-1GHz	Quasi-peak	120KHz	300KHz	Quasi-peak Value
	Frequen	су	Field Str (microvolts		Measurement Distance (meters)
	0.009-0.4		2400/F(300
1	0.490-1.7		24000/F		30
Limit:	1.705-3		30 30		30
	30-88		100		3
	216-960		200		3
			500		3
Test setup:	0.8m	Turn table Ground P	Im Im		Amplifier

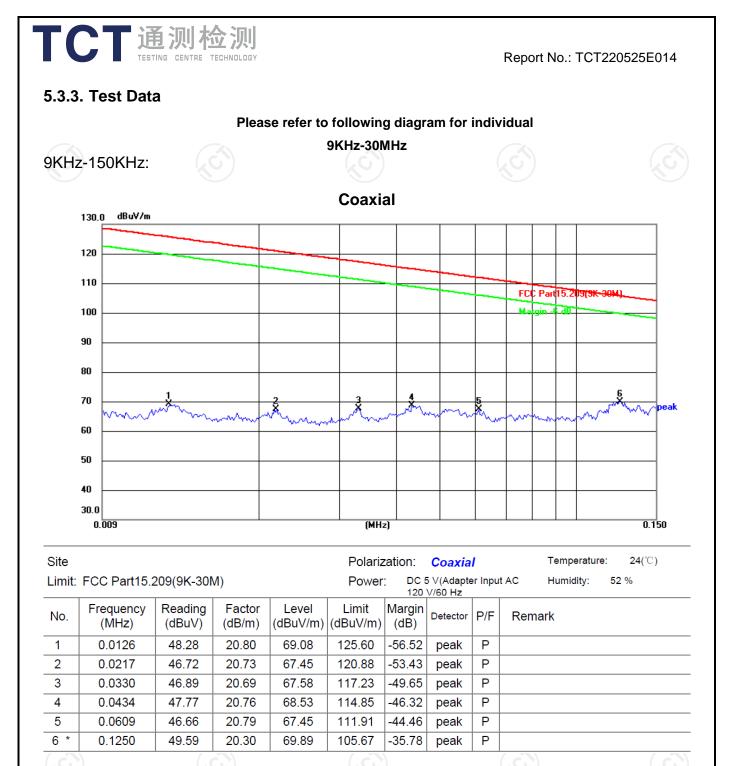


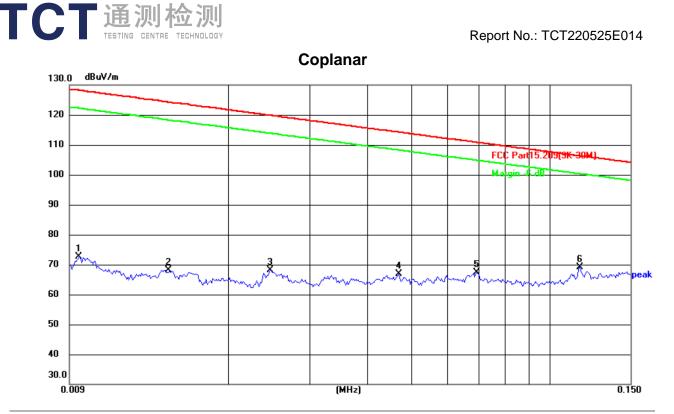
	Report No.: TCT220525E014
	 (1) Span shall wide enough to fully capture the emission being measured; (2) Set RBW=120 kHz for f < 1 GHz; VBW ≥RBW; Sweep = auto; Detector function = peak; Trace = max hold; For average measurement: VBW = 10 Hz, when duty cycle is no less than 98 percent. VBW ≥ 1/T, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.
Test mode:	Refer to section 3.1 for details
Test results:	PASS



5.3.2. Test Instruments

	Radiated En	nission Test Site	e (966)			
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due		
EMI Test Receiver	R&S	ESIB7	100197	Jul. 07, 2022		
Spectrum Analyzer	R&S	FSQ40	200061	Jul. 07, 2022		
Pre-amplifier	SKET	LNPA_0118G- 45	SK2021012 102	Feb. 24, 2023		
Pre-amplifier	SKET	LNPA_1840G- 50	SK2021092 03500	Feb. 24, 2023		
Pre-amplifier	HP	8447D	2727A05017	Jul. 07, 2022		
Loop antenna	ZHINAN	ZN30900A	12024	Sep. 05, 2022		
Broadband Antenna	Schwarzbeck	VULB9163	340	Sep. 04, 2022		
Antenna Mast	Keleto	RE-AM	N/A	N/A		
Coaxial cable	SKET	RC_DC18G-N	N/A	Feb. 24, 2023		
Coaxial cable	SKET	RC-DC18G-N	N/A	Feb. 24, 2023		
Coaxial cable	SKET	RC-DC40G-N	N/A	Jul. 07, 2022		
EMI Test Software	Shurple Technology	EZ-EMC	N/A	N/A		

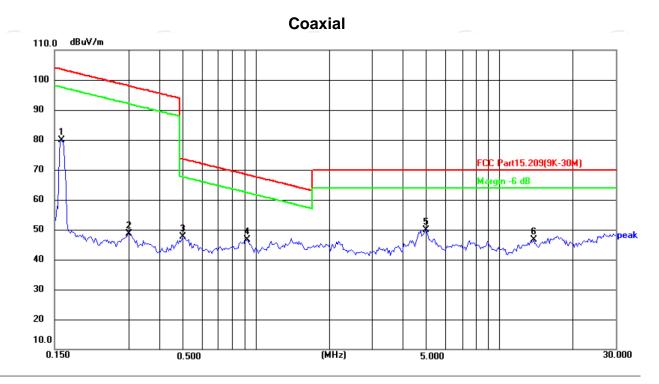




Site					Polar	ization:	Copla	nar		Temperature	e: 24(°℃)
Limit: FCC Part15.209(9K-30M)					Power: DC 5 V(Adapter Input AC 120 V/60 Hz						52 %
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F	Remar	k	
1	0.0094	52.00	20.61	72.61	128.14	-55.53	peak	Ρ			
2	0.0148	47.45	20.78	68.23	124.20	-55.97	peak	Ρ			
3	0.0246	47.42	20.70	68.12	119.79	-51.67	peak	Ρ			
4	0.0470	46.03	20.79	66.82	114.16	-47.34	peak	Ρ			
5	0.0694	46.59	20.76	67.35	110.78	-43.43	peak	Ρ			
6 *	0.1160	48.64	20.51	69.15	106.32	-37.17	peak	Ρ			

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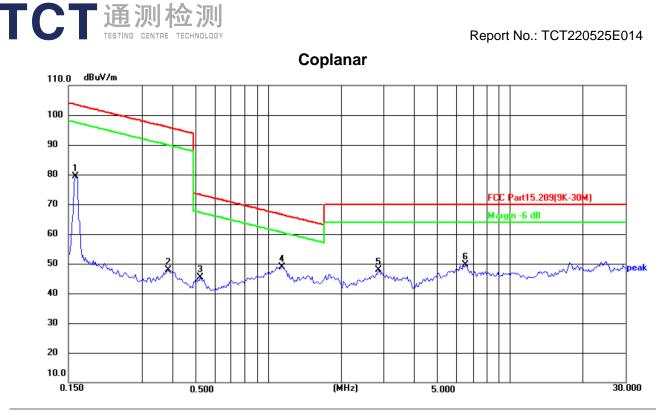
150KHz-30MHz:



Site					Polar	ization:	Coaxi	ial		Temperature	: 24(°C)
Limit: FCC Part15.209(9K-30M) Power:								oter Inp	out AC	Humidity:	52 %
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F	Remark		
1	0.1597	59.41	20.55	79.96	103.54	-23.58	peak	Ρ			
2	0.3027	27.60	21.00	48.60	97.98	-49.38	peak	Ρ			
3	0.5039	25.94	21.64	47.58	73.56	-25.98	peak	Ρ			
4	0.9251	24.11	22.43	46.54	68.30	-21.76	peak	Ρ			
5 *	5.0217	19.03	30.77	49.80	70.00	-20.20	peak	Ρ			
6	13.7980	26.96	19.59	46.55	70.00	-23.45	peak	Ρ			
	~	,					~				

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Site					Polari	zation:	Coplai	nar		Temperature	e: 24(°℃)
Limit:	FCC Part15.2		Power: DC 5 V(Adapter Input AC 120 V/60 Hz					C Humidity: 52 %			
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F	Remar	k	
1	0.1597	58.91	20.55	79.46	103.54	-24.08	peak	Ρ			
2	0.3865	26.48	21.28	47.76	95.86	-48.10	peak	Ρ			
3	0.5262	23.74	21.69	45.43	73.18	-27.75	peak	Ρ			
4 *	1.1444	26.15	22.84	48.99	66.45	-17.46	peak	Ρ			
5	2.8574	21.53	26.31	47.84	70.00	-22.16	peak	Ρ			
6	6.5521	15.89	33.62	49.51	70.00	-20.49	peak	Ρ			

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30MHz-1GHz dBu¥/m FCC Part 15C RE_3m dR nin.

Limit: FCC Part 15C RE_3m

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F	Remark
1	40.8446	7.82	13.70	21.52	40.00	-18.48	QP	Ρ	
2	116.1321	12.17	11.27	23.44	43.50	-20.06	QP	Ρ	
3	160.3456	11.98	13.35	25.33	43.50	-18.17	QP	Ρ	
4!	192.4186	28.19	10.64	38.83	43.50	-4.67	QP	Ρ	
5!	221.3919	30.62	10.98	41.60	46.00	-4.40	QP	Ρ	
6 *	271.3245	30.18	12.76	42.94	46.00	-3.06	QP	Ρ	
	L N	J		KY /		1	XY /		XV /

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Horizontal:

80.0

70

60

50

40

30

20

10

0.0

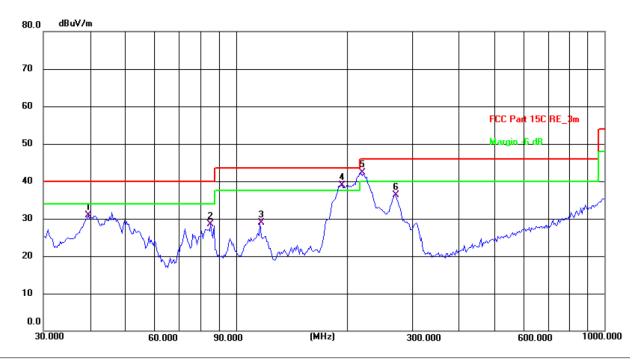
30.000

Report No.: TCT220525E014



Month (MHz) 1000.000 60.000 90.000 300.000 600.000 Temperature: 25(C) Humidity: 55 % Site #1 3m Anechoic Chamber Polarization: Horizontal Power: DC 5 V(Adapter Input AC 120 V/60 Hz) Frequency Reading Factor Level Limit Margin Т

Vertical:



Site #1 3m Anechoic ChamberPolarization:VerticalTemperature: 25(C)Humidity: 55 %Limit: FCC Part 15C RE_3mPower: DC 5 V(Adapter Input AC 120 V/60 Hz)

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F	Remark
1	39.7146	17.25	13.70	30.95	40.00	-9.05	QP	Ρ	
2	85.2980	19.79	8.68	28.47	40.00	-11.53	QP	Ρ	
3	116.1321	17.62	11.27	28.89	43.50	-14.61	QP	Ρ	
4 !	192.4186	28.32	10.64	38.96	43.50	-4.54	QP	Ρ	
5 *	218.3085	31.43	10.83	42.26	46.00	-3.74	QP	Ρ	
6	269.4284	23.71	12.69	36.40	46.00	-9.60	QP	Ρ	

Note:

Emission Level=Peak Reading + Correction Factor; Correction Factor= Antenna Factor + Cable loss - Pre-amplifier

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