TEST REPORT

		-
FCC ID :	2A4DZ-X228394	
Test Report No:	TCT220222E006	
Date of issue:	Mar. 29, 2022	
Testing laboratory:	SHENZHEN TONGCE TESTING	S LAB
Testing location/ address:	TCT Testing Industrial Park Fuqi Street, Bao'an District Shenzhen Republic of China	
Applicant's name: :	MITA EXPEDITIONS LLC	
Address:	3821 Bedford Avenue, Brooklyn,	New York, 11229, United State
Manufacturer's name :	MITA EXPEDITIONS LLC	
Address:	3821 Bedford Avenue, Brooklyn,	New York, 11229, United State
Standard(s):	FCC CFR Title 47 Part 15 Subpa	art C
Product Name:	Super Charging Station	
Trade Mark:	TECHSMARTER	
Model/Type reference :	X2 ()	
Rating(s):	Adapter Information: Model: X-12PD Input: AC 100-240V, 50/60Hz, 1 USB-C1 Output: DC 5V, 3A/DC DC 20V, 5A (100W MAX) Total Output: 100W(max)	
Date of receipt of test item	Feb. 22, 2022	(C)
Date (s) of performance of test:	Feb. 22, 2022 ~ Mar. 29, 2022	
Tested by (+signature) :	Aaron MO	Amon MONGCE
Check by (+signature) :	Beryl ZHAO	Boyl and TCT
Approved by (+signature):	Tomsin	Tom Sin 13 3
General disclaimer:		

General disclaimer:

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1. General Product Information

1.1.EUT description

Product Name	:	Super Cha	arging Stati	on				
Model/Type ref	erence:	X2	X2					
Sample Numbe	er:	TCT22022	22E006-01	01				
Operation Frec	quency:	127.77kHz 135.72kHz 326.54kHz	z(5W),	(C)				
Modulation Tec	chnology:	Load mod	ulation		(\vec{c})			
Antenna Type.	:	Inductive I	oop coil Ar	ntenna				
Rating(s)		Model: X- Input: AC USB-C1 C 3A/ DC 20 Total Outp	Adapter Information: Model: X-12PD Input: AC 100-240V, 50/60Hz, 1.5A USB-C1 Output: DC 5V, 3A/DC 9V, 3A/DC 12V, 3A/DC 1 3A/ DC 20V, 5A (100W MAX) Total Output: 100W(max)					
this parameter	gain listed in this re er.	eport is provid	ted by applic	ant, and the t	est laborato	ry is not resp	onsible for	
1.2.Model(s	s) list							
Hotline: 400	-6611-140 Tel· 8	36-755-27673	1339 Fax:	86-755-2767	3332 http	Page ://www.tct-la	e 3 of 31	



2. Test Result Summary

Requirement	CFR 47 Section	Result
Antenna requirement	§15.203	PASS
AC Power Line Conducted Emission	§15.207	PASS
Spurious Emission	§15.209(a)(f)	PASS

Note:

1. PASS: Test item meets the requirement.

2. Fail: Test item does not meet the requirement.

3. N/A: Test case does not apply to the test object.

4. The test result judgment is decided by the limit of test standard.



3. General Information

3.1. Test environment and mode

Operating Environment:

Condition	Conducted Emission	Radiated Emission						
Temperature:	25 °C	25.1 °C						
Humidity:	55 % RH	48 % RH						
Atmospheric Pressure:	1010 mbar	1010 mbar						

Test Mode:

Engineering mode:

Keep the EUT in continuous transmitting, And all 3 transmitters are in maximum output power mode.

The sample was placed 0.8m for the measurement below above the ground plane of 3m chamber. Measurements in both horizontal and vertical polarities were performed. 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

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.



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

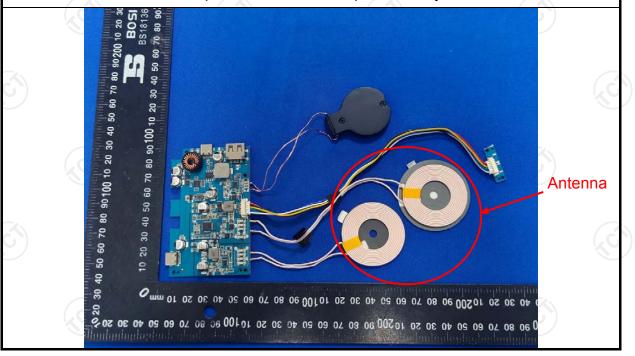
Standard requirement: FCC Part15 C Section 15.203

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.





5.2. Conducted Emission

5.2.1. Test Specification

Test Requirement:	FCC Part15 C Section	15.207	No.				
Test Method:	ANSI C63.10: 2013						
Frequency Range:	150 kHz to 30 MHz						
Receiver setup:	RBW=9 kHz, VBW=30	RBW=9 kHz, VBW=30 kHz, Sweep time=auto					
Limits:	Frequency range (MHz) 0.15-0.5 0.5-5 5-30	Quasi-peak Average 5 66 to 56* 56 to 56 56 56 4					
		nce Plane	50				
Test Setup:	E.U.T Adap		lter AC power				
	Test table/Insulation pla Remark: E.U.T: Equipment Under Test LISN: Line Impedence Stabilization Test table height=0.8m	ine					
Test Mode:	Remarkc E.U.T: Equipment Under Test	ine					
Test Mode: Test Procedure:	Remarkc E.U.T: Equipment Under Test LISN: Line Impedence Stabilization Test table height=0.8m	n Network ected to an adapte zation network 50uH coupling im nt. ces are also conne ISN that provides e with 50ohm tern diagram of the line are checkence. In order to fin re positions of equ s must be chang	(L.I.S.N.). This pedance for the ected to the main a 50ohm/50ul- nination. (Please test setup and ed for maximum nd the maximum ipment and all c ed according to				

5.2.2. Test Instruments

(Conducted Emission Shielding Room Test Site (843)							
N	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	тст	CE-05	N/A	Jul. 07, 2022			
N	EMI Test Software	Shurple Technology	EZ-EMC	N/A	N/A			











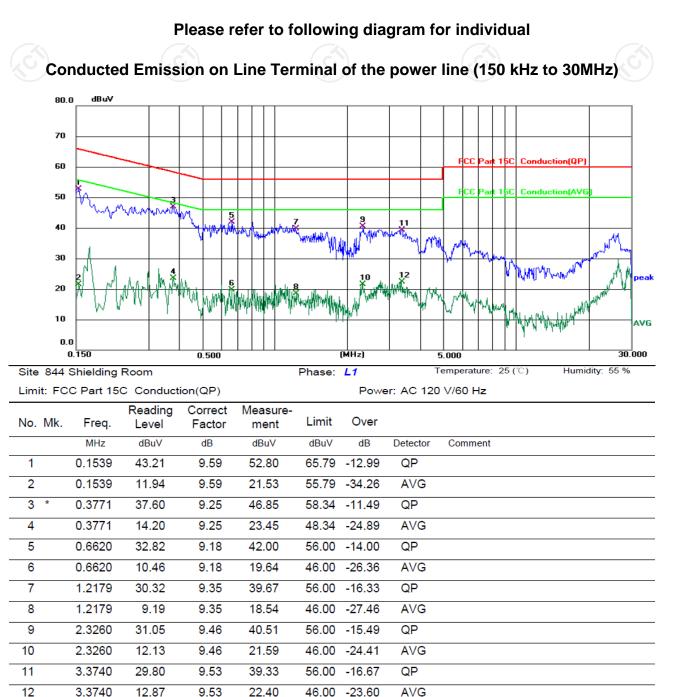






5.2.3. Test data

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Note:

 Freq. = Emission frequency in MHz

 Reading level (dBμV) = Receiver reading

 Corr. Factor (dB) = LISN factor + Cable loss

 Measurement (dBμV) = Reading level (dBμV) + Corr. Factor (dB)

 Limit (dBμV) = Limit stated in standard

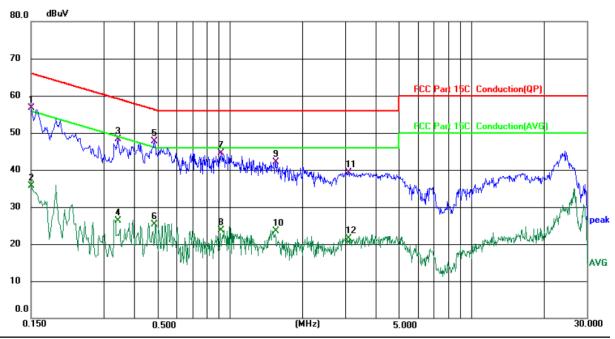
 Margin (dB) = Measurement (dBμV) - Limits (dBμV)

 Q.P. =Quasi-Peak

 AVG =average

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

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

Site 844 Shielding Room Phase: N Temperature: 25 (℃) Humidity: 55 % Power: AC 120 V/60 Hz

Limit: FCC Part 15C	Conduct	tion(QP)		

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No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1500	47.18	9.61	56.79	66.00	-9.21	QP	
2		0.1500	26.08	9.61	35.69	56.00	-20.31	AVG	
3		0.3420	38.93	9.31	48.24	59.15	-10.91	QP	
4		0.3420	16.91	9.31	26.22	49.15	-22.93	AVG	
5	*	0.4858	38.39	9.22	47.61	56.24	-8.63	QP	
6		0.4858	16.12	9.22	25.34	46.24	-20.90	AVG	
7		0.9220	35.31	9.28	44.59	56.00	-11.41	QP	
8		0.9220	14.43	9.28	23.71	46.00	-22.29	AVG	
9		1.5580	32.76	9.35	42.11	56.00	-13.89	QP	
10		1.5580	14.13	9.35	23.48	46.00	-22.52	AVG	
11		3.1059	29.95	9.42	39.37	56.00	-16.63	QP	
12		3.1059	12.13	9.42	21.55	46.00	-24.45	AVG	

Note:

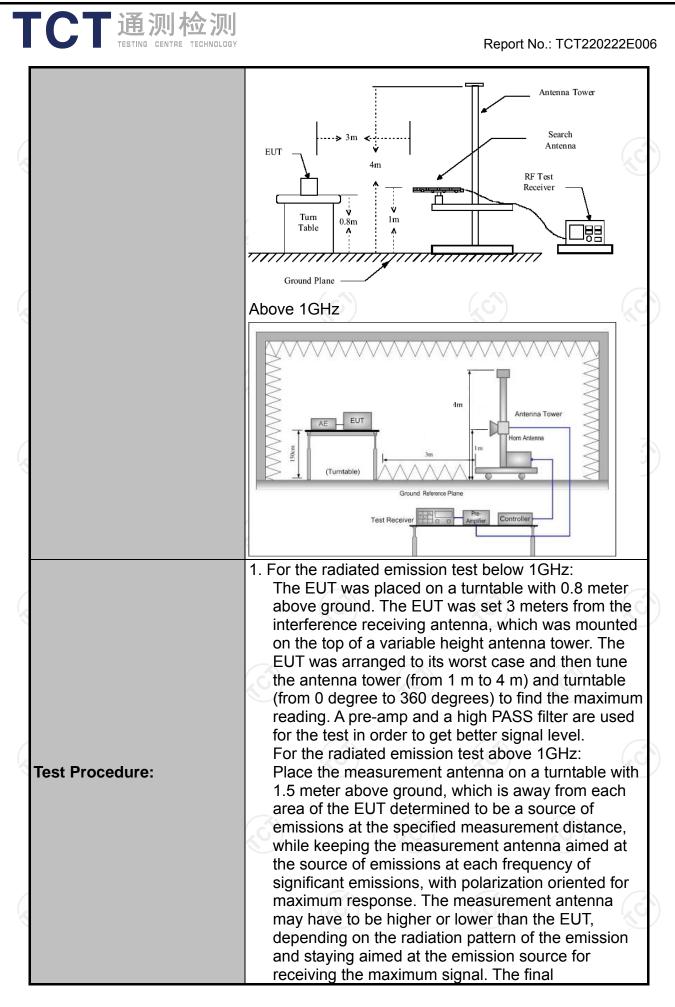
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	Freq. = Emission frequency in MHz	
	Reading level (dBµV) = Receiver reading	
	Corr. Factor (dB) = LISN factor + Cable loss	
	Measurement ($dB\mu V$) = Reading level ($dB\mu V$) + Corr. Factor (dB)	
	Limit (dB μ V) = Limit stated in standard	
	Margin (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 30M	Hz



5.3.1. Test Specification

TCT 通测检测 TESTING CENTRE TECHNOLOGY

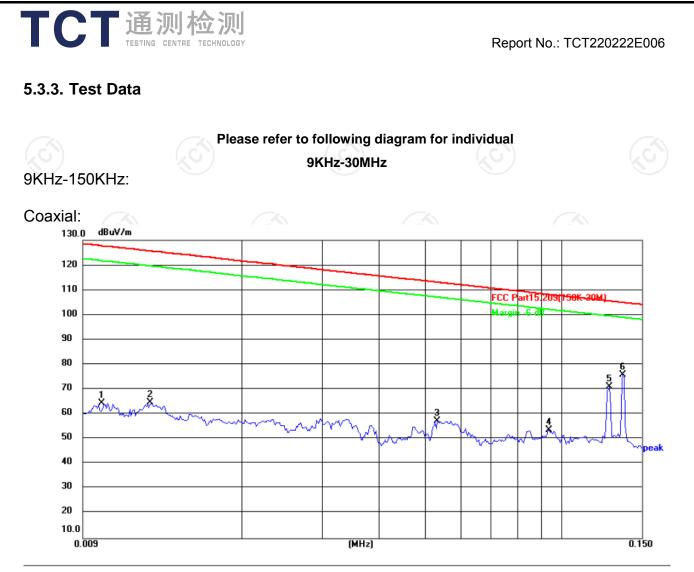
Test Requirement:	FCC Part15 C Section 15.209								
Test Method:	ANSI C63.10): 2013							
Frequency Range:	9 kHz to 25 (GHz			(ĉ	()			
Measurement Distance:	3 m				N.C.				
Antenna Polarization:	Horizontal &	Vertical							
Operation mode:	Refer to item	n 3.1	()	\mathbf{c}		(
	Frequency 9kHz- 150kHz	Detector Quasi-pea	RBW k 200Hz	VBW 1kHz		Remark si-peak Valu			
Receiver Setup:	150kHz- 30MHz	Quasi-pea	k 9kHz	30kHz		i-peak Value			
	30MHz-1GHz	Quasi-pea		300KHz		si-peak Valu			
	Above 1GHz	Peak Peak	1MHz 1MHz	3MHz 10Hz		eak Value erage Value			
					1				
	Frequen		Field Str (microvolts	/meter)		asurement nce (meters			
	0.009-0.4		2400/F(300				
	0.490-1.7		24000/F	(KHZ)	30 30				
	30-88		100		3				
_imit:	88-216		150			3			
	216-96		200			3			
	Above 9	60	500			3			
	Frequency		ld Strength ovolts/meter)	Measure Distan (meter	ce Detector				
		(500		Average				
	Above 1GHz	Z	5000			Peak			
	For radiated	emission	s below 30						
	Di	stance = 3m			Compu				
	Computer Pre -Amplifier								
Test setup:	EUT	,	$\forall \uparrow [$						
	0.8m	Turn table			leceiver				
	1.41	Groun	d Plane	ш Л. 1 – Г		,			
	30MHz to 1GHz								



ТСТ	通测检测 TESTING CENTRE TECHNOLOGY	Report No.: TCT220222E006
		 measurement antenna elevation shall be that which maximizes the emissions. The measurement antenna elevation for maximum emissions shall be restricted to a range of heights of from 1 m to 4 m above the ground or reference ground plane. 2. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level 3. For measurement below 1GHz, If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission
¢.		 level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported. 4. Use the following spectrum analyzer settings: (1) Span shall wide enough to fully capture the emission being measured;
C I		 (2) Set RBW=120 kHz for f < 1 GHz; VBW ≥RBW; Sweep = auto; Detector function = peak; Trace = max hold; (3) Set RBW = 1 MHz, VBW= 3MHz for f 1 GHz for peak measurement.
		For average measurement: VBW = 10 Hz, when duty cycle is no less than 98 percent. VBW \ge 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 mod	e:	Refer to section 3.1 for details
Test resu	lts:	PASS (C) (C)

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	Apr. 08, 2022
Pre-amplifier	HP	8447D	2727A05017	Jul. 07, 2022
Loop antenna	ZHINAN	ZN30900A	12024	Sep. 05, 2022
Broadband Antenna	Schwarzbeck	VULB9163	340	Sep. 04, 2022
Horn Antenna	Schwarzbeck	BBHA 9120D	631	Sep. 04, 2022
Horn Antenna	Schwarzbeck	BBHA 9170	00956	Apr. 10, 2023
Antenna Mast	Keleto	RE-AM	N/A	N/A
Coaxial cable	SKET	RC_DC18G-N	N/A	Apr. 08, 2022
Coaxial cable	SKET	RC-DC18G-N	N/A	Apr. 08, 2022
Coaxial cable	SKET	RC-DC40G-N	N/A	Jul. 07, 2022
EMI Test Software	Shurple Technology	EZ-EMC	N/A	N/A

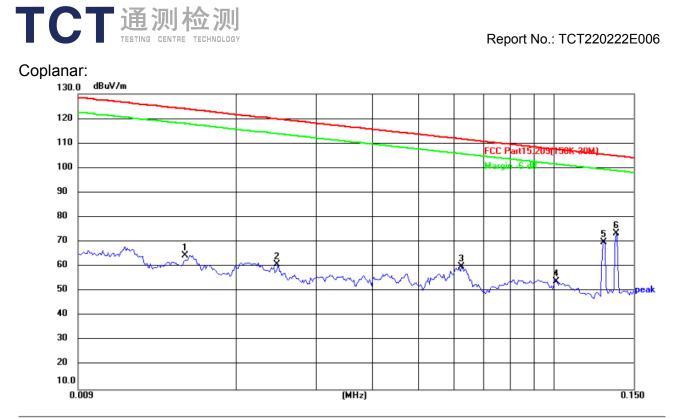


Site		Polarization: coaxial							Temperature: 25(°C)
Limit:	FCC Part15.2		Power: AC 120 V/60 Hz			Hz	Humidity: 55 %		
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F	Remark
1	0.0100	43.59	20.85	64.44	127.60	-63.16	peak	Ρ	
2	0.0126	43.89	20.82	64.71	125.60	-60.89	peak	Ρ	
3	0.0534	36.50	20.85	57.35	113.05	-55.70	peak	Ρ	
4	0.0936	32.73	21.00	53.73	108.18	-54.45	peak	Ρ	
5	0.1274	75.80	-4.73	71.07	105.50	-34.43	peak	Ρ	
6 *	0.1358	80.57	-4.70	75.87	104.95	-29.08	peak	Ρ	
	7	0				/			

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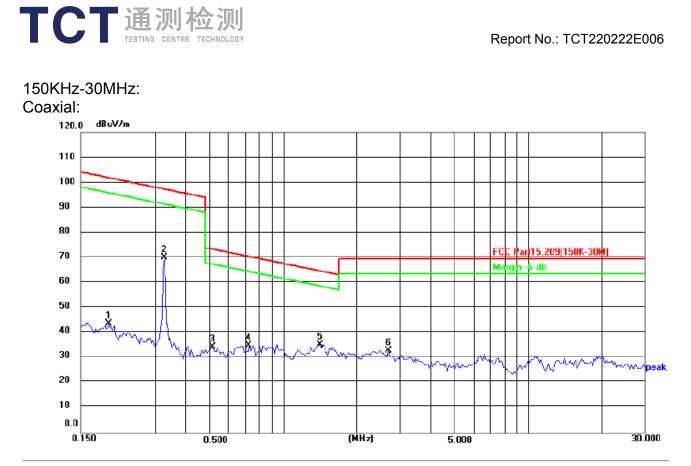






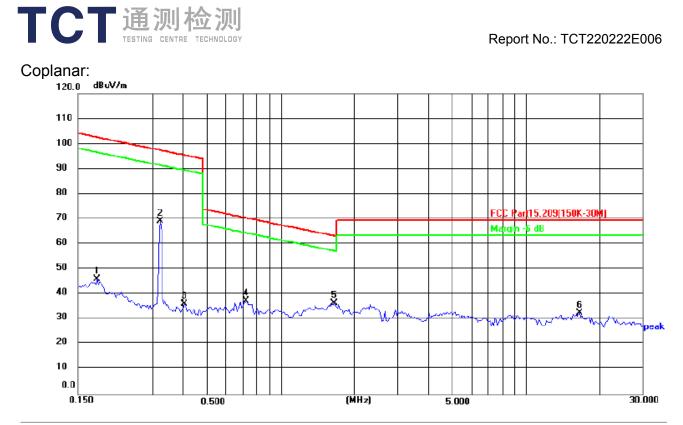
Site					Polari	zation:	Copla	nar	Temperature: 25(°C)
Limit: FCC Part15.209(150K-30M)					Power: AC 120 V/60 Hz			Humidity: 55 %	
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F	Remark
1	0.0154	43.64	20.80	64.44	123.85	-59.41	peak	Ρ	
2	0.0246	40.24	20.71	60.95	119.79	-58.84	peak	Ρ	
3	0.0625	38.98	20.84	59.82	111.69	-51.87	peak	Ρ	
4	0.1005	58.09	-4.11	53.98	107.56	-53.58	peak	Ρ	
5	0.1287	74.65	-4.77	69.88	105.41	-35.53	peak	Ρ	
6 *	0.1365	78.22	-4.69	73.53	104.90	-31.37	peak	Ρ	

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Site					Polar	ization:	coaxi	al	Те	mperature	: 25(°C)
Limit:	FCC Part15.2	Powe	r: AC	120 V/60	Hu	midity:	55 %				
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F	Remark		
1	0.1952	48.21	-4.43	43.78	101.79	-58.01	peak	Ρ			
2 *	0.3285	74.24	-4.25	69.99	97.27	-27.28	peak	Ρ			
3	0.5181	38.19	-3.84	34.35	73.32	-38.97	peak	Р			
4	0.7273	38.47	-3.66	34.81	70.38	-35.57	peak	Р			
5	1.4173	37.78	-2.57	35.21	64.60	-29.39	peak	Ρ			
6	2.7067	32.96	0.01	32.97	69.50	-36.53	peak	Ρ			

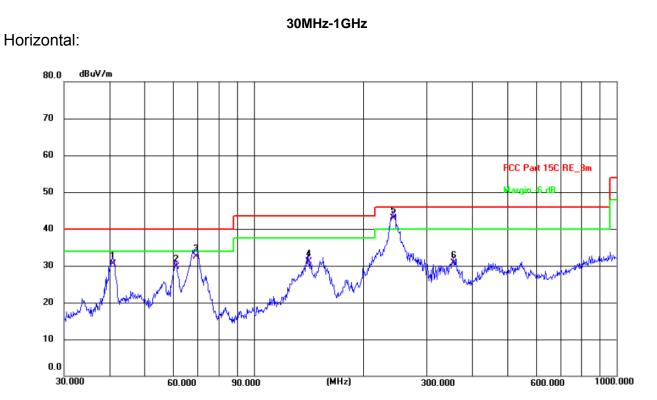
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Site					Polari	ization:	Copla	nar		Temperature	: 25(°C)
Limit:	FCC Part15.2	Powe	r: AC	120 V/60	Hz		Humidity:	55 %			
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F	Remark		
1	0.1796	50.38	-4.46	45.92	102.52	-56.60	peak	Р			
2	0.3251	73.28	-4.24	69.04	97.36	-28.32	peak	Р			
3	0.4061	40.31	-4.07	36.24	95.43	-59.19	peak	Р			
4	0.7273	40.97	-3.66	37.31	70.38	-33.07	peak	Р			
5 *	1.6624	38.56	-2.09	36.47	63.22	-26.75	peak	Р			
6	16.5731	39.06	-6.64	32.42	69.50	-37.08	peak	Ρ			

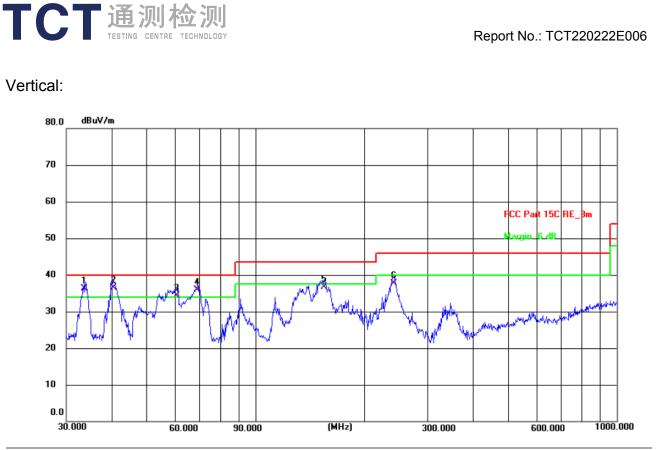
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Site #	2 3m Anecho	ic Chambe	r	Polarization: Horizontal					Temperature: 25.1(C)	Humidity: 48 %
Limit:	FCC Part 150	CRE_3m		Power: AC 120 V/60 Hz						
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F	Remark	
1	40.8446	16.52	13.98	30.50	40.00	-9.50	QP	Ρ		
2	60.9176	16.85	12.95	29.80	40.00	-10.20	QP	Ρ		
3	69.1141	21.32	11.28	32.60	40.00	-7.40	QP	Ρ		
4	141.3298	17.84	13.26	31.10	43.50	-12.40	QP	Ρ		
5 *	241.6763	30.14	12.76	42.90	46.00	-3.10	QP	Ρ		
6	355.4273	15.11	15.69	30.80	46.00	-15.20	QP	Ρ		
	(()					()	

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Site #	2 3m Anecho	ic Chambe	Polarization: Vertical					Temperature: 25.1(C)	Humidity: 48 %	
Limit:	FCC Part 150	CRE_3m			Pov	wer: AC	120 V/6	0 Hz		
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F	Remark	
1!	33.6802	23.45	12.85	36.30	40.00	-3.70	QP	Ρ		
2 *	40.5591	22.61	13.99	36.60	40.00	-3.40	QP	Ρ		
3!	60.2801	21.22	13.08	34.30	40.00	-5.70	QP	Ρ		
4 !	69.1140	24.62	11.28	35.90	40.00	-4.10	QP	Ρ		
5	154.8204	23.33	13.37	36.70	43.50	-6.80	QP	Ρ		
6	240.8303	24.92	12.78	37.70	46.00	-8.30	QP	Ρ		

Note:

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





