

QINGTIAN ZTENG METAL JEWELRY CO., LTD NO.7 INDUSTRIAL AREA, WENXI TOWN, LISHUI, China

Issued By:

Shenzhen Tongce Testing Lab. 1B/F., Building 1, Yibaolai Industrial Park, Qiaotou, Fuyong, Baoan District, Shenzhen, Guangdong, China TEL: +86-755-27673339

FAX: +86-755-27673332

Note: This report shall not be reproduced except in full, without the written approval of Shenzhen Tongce Testing Lab. This document may be altered or revised by Shenzhen Tongce Testing Lab. personnel only, and shall be noted in the revision section of the document. The test results in the report only apply to the tested sample.

TABLE OF CONTENTS

1. Test Certification		
2. Test Result Summary	5) <u>k</u>	
3. EUT Description		5
4. Genera Information		6
4.1. Test environment and mode	\sim	6
4.2. Description of Support Units		6
5. Facilities and Accreditations		
5.1. Facilities		7
5.2. Location		7
5.3. Measurement Uncertainty	<u>(O)</u>	7
6. Test Results and Measurement	Data	
6.1. Antenna requirement		
6.2. Conducted Emission		
6.3. Conducted Output Power		10
6.4. Emission Bandwidth		
6.5. Power Spectral Density	\sim	
6.6. Test Specification		16
6.7. Conducted Band Edge and Spurio	ous Emission Measu	rement19
6.8. Radiated Spurious Emission Mea	surement	
Appendix A: Photographs of Test S	Setup	
Appendix B: Photographs of EUT		

Test Certification 1.

Product:	BT Tracker
Model No.:	TRX2550-FD
Additional Model:	PCA9887-2-MEN
Trade Mark:	N/A
Applicant:	QINGTIAN ZTENG METAL JEWELRY CO., LTD
Address:	NO.7 INDUSTRIAL AREA, WENXI TOWN, LISHUI, China
Manufacturer:	QINGTIAN ZTENG METAL JEWELRY CO., LTD
Address:	NO.7 INDUSTRIAL AREA, WENXI TOWN, LISHUI, China
Date of Test:	Jun. 22, 2018 - Jun. 25, 2018
Applicable Standards:	FCC CFR Title 47 Part 15 Subpart C Section 15.247 KDB 558074 D01 DTS Meas Guidance v04

The above equipment has been tested by Shenzhen Tongce Testing Lab. and found compliance with the requirements set forth in the technical standards mentioned above. The results of testing in this report apply only to the product/system, which was tested. Other similar equipment will not necessarily produce the same results due to production tolerance and measurement uncertainties.

Tested By:	Rev	Date:	Jun. 25, 2018
	Rleo	(,	C)
Reviewed By:	Beny zhao	Date:	Jun. 26, 2018
	Beryl Zhao		
Approved By:	Tomsin	Date:	Jun. 26, 2018
	Tomsin	((c)

Page 3 of 36



2. Test Result Summary

noqui	rement		CFR 47 Se	ection		Result	
Antenna r	equirement	Şŕ	15.203/§15	.247 (c)	K)	PASS	K
	ne Conducted ssion		§15.20)7		N/A	
	onducted Peak Output Power		§15.247 (b)(3) §2.1046			PASS	
6dB Emissio	on Bandwidth	§15.247 (a)(2) §2.1049		Ś	PASS	X	
Power Spe	ctral Density		§15.247	(e)		PASS	
Banc	Edge		1§5.247 §2.1051, §2			PASS	ASS
				5 000			
2. Fail: Test iter	Emission tem meets the requir m does not meet the se does not apply to	rement. requirement.				PASS	
lote: 1. PASS: Test i 2. Fail: Test itel 3. N/A: Test ca	tem meets the requir	rement. requirement. the test object	§2.1053, §2	2.1057		PASS	
lote: 1. PASS: Test i 2. Fail: Test itel 3. N/A: Test ca	tem meets the requir n does not meet the se does not apply to	rement. requirement. the test object	§2.1053, §2	2.1057		PASS	
lote: 1. PASS: Test i 2. Fail: Test itel 3. N/A: Test ca	tem meets the requir n does not meet the se does not apply to	rement. requirement. the test object	§2.1053, §2	2.1057		PASS	
lote: 1. PASS: Test i 2. Fail: Test itel 3. N/A: Test ca	tem meets the requir n does not meet the se does not apply to	rement. requirement. the test object	§2.1053, §2	2.1057		PASS CO	



3. EUT Description

Product:	BT Tracker
Model No.:	TRX2550-FD
Additional Model:	PCA9887-2-MEN
Trade Mark:	N/A
Hardware Version:	V4.00
Software Version:	V4.0
BT Version:	V4.0
Operation Frequency:	2402MHz~2480MHz
Channel Separation:	2MHz
Number of Channel:	40
Modulation Technology:	GFSK
Antenna Type:	PCB Antenna
Antenna Gain:	0dBi
Power Supply:	Rechargeable Li-ion Battery DC 3.0V
Remark:	All models above are identical in interior structure, electrical circuits and components, and just model names are different for the marketing requirement.

Operation Frequency each of channel

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
0	2402MHz	10	2422MHz	20	2442MHz	30	2462MHz
1	2404MHz	11	2424MHz	21	2444MHz	31	2464MHz
<u> </u>	(,	<u> </u>	(<u>6</u>	(<u>6</u>	(.ć
8	2418MHz	18	2438MHz	28	2458MHz	38	2478MHz
9	2420MHz	19	2440MHz	29	2460MHz	39	2480MHz
Remark: Channel 0, 19 & 39 have been tested.							

4. Genera Information

4.1. Test environment and mode

Operating Environment:			
Temperature:	25.0 °C		
Humidity:	56 % RH		
Atmospheric Pressure:	1010 mbar		
Test Mode:			
Engineering mode:	Keep the EUT in continuous transmitting		

	by select channel and modulations(The value of duty cycle is 98.46%) with Fully-charged battery.
The sample was placed (0.1m below 1GH plane of 3m chamber. Measurements in be performed. During the test, each emission	oth horizontal and vertical polarities were

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 are shown in Test Results of the following pages.

4.2. 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
, 0	1			

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. For conducted measurements (Output Power, 6dB Emission Bandwidth, Power Spectral Density, Spurious Emissions), the antenna of EUT is connected to the test equipment via temporary antenna connector, the antenna connector is soldered on the antenna port of EUT, and the temporary antenna connector is listed in the Test Instruments.

5. Facilities and Accreditations

5.1. Facilities

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

• FCC - Registration No.: 645098

Shenzhen Tongce Testing Lab

The 3m Semi-anechoic chamber 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

The 3m Semi-anechoic chamber of Shenzhen TCT Testing Technology Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing

5.2. Location

Shenzhen Tongce Testing Lab

Address: 1B/F., Building 1, Yibaolai Industrial Park, Qiaotou, Fuyong, Baoan District, Shenzhen, Guangdong, China

TEL: +86-755-27673339

5.3. 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	±2.56dB
2	RF power, conducted	±0.12dB
3	Spurious emissions, conducted	±0.11dB
4	All emissions, radiated(<1G)	±3.92dB
5	All emissions, radiated(>1G)	±4.28dB
6	Temperature	±0.1°C
7	Humidity	±1.0%



6. Test Results and Measurement Data

6.1. Antenna requirement

FCC Part15 C Section 15.203 /247(c) **Standard requirement:** 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. 15.247(c) (1)(i) requirement: (i) Systems operating in the 2400-2483.5 MHz band that is used exclusively for fixed. Point-to-point operations may employ transmitting antennas with directional gain greater than 6dBi provided the maximum conducted output power of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6dBi. **E.U.T** Antenna: The Bluetooth antenna is PCB antenna which permanently attached, and the best case gain of the antenna is 0dBi. Antenna



6.2. Conducted Emission

6.2.1. Test Specification

Fest Method: A Frequency Range: 18 Receiver setup: R .imits:	CC Part15 C Section NSI C63.10:2013 50 kHz to 30 MHz BW=9 kHz, VBW=30 Frequency range (MHz) 0.15-0.5 0.5-5 5-30 Refere 40cm E.U.T Ada Test table/Insulation pla	0 kHz, Sweep time Limit Quasi-peak 66 to 56* 56 60 ence Plane	(dBuV) Average 56 to 46* 46 50 Ilter AC power
Frequency Range: 19 Receiver setup: R .imits:	50 kHz to 30 MHz BW=9 kHz, VBW=30 Frequency range (MHz) 0.15-0.5 0.5-5 5-30 Reference 40cm E.U.T Ada Test table/Insulation platest	Limit Quasi-peak 66 to 56* 56 60 ence Plane	(dBuV) Average 56 to 46* 46 50 Ilter AC power
Receiver setup: R .imits: Imits: Test Setup: Imits: Test Mode: C	BW=9 kHz, VBW=30 Frequency range (MHz) 0.15-0.5 0.5-5 5-30 Reference 40cm E.U.T Ada Test table/Insulation plate emarkc	Limit Quasi-peak 66 to 56* 56 60 ence Plane	(dBuV) Average 56 to 46* 46 50 Ilter AC power
-imits:	Frequency range (MHz) 0.15-0.5 0.5-5 5-30 Refere 40cm E.U.T Ada Test table/Insulation pla	Limit Quasi-peak 66 to 56* 56 60 ence Plane	(dBuV) Average 56 to 46* 46 50 1 1 1 1 1 1 1 1 1
Test Mode:	(MHz) 0.15-0.5 0.5-5 5-30 Refere 40cm E.U.T Ada Test table/Insulation pla	Quasi-peak 66 to 56* 56 60 ence Plane Norm LISN pter Fi EMI Receiver	Áverage 56 to 46* 46 50 Ilter AC power
Test Mode:	(MHz) 0.15-0.5 0.5-5 5-30 Refere 40cm E.U.T Ada Test table/Insulation pla	66 to 56* 56 60 ence Plane 80cm LISN Fi Pter EMI Receiver	56 to 46* 46 50 1 1 1 1 1 1 1 1
Test Mode:	0.5-5 5-30 Refere 40cm E.U.T Ada Test table/Insulation pla	56 60 ence Plane B0cm LISN Fi pter EMI Receiver	46 50 Ilter AC power
r E L T Test Mode: C	5-30 Refere 40cm E.U.T Ada Test table/Insulation pla	60 ence Plane 80cm LISN pter Fi EMI Receiver	J I Ilter AC power
r E L T Test Mode: C	Refere 40cm E.U.T Ada Test table/Insulation pla	ence Plane 80cm pter EMI Receiver	Ilter AC power
r E L T Test Mode: C	E.U.T Ada Test table/Insulation pla	80cm LISN Pter Fi EMI Receiver	 ilter AC power
r E L T Test Mode: C	E.U.T Ada Test table/Insulation pla	pter EMI Receiver	 ilter AC power
	SN: Line Impedence Stabilizatio est table height=0.8m	on Network	
1.	harging + Transmitti	ng Mode	
est Procedure:	provides a 50ohm/ measuring equipme The peripheral devi power through a L coupling impedance refer to the block photographs). Both sides of A.C conducted interfere emission, the relative the interface cable	zation network /50uH coupling in ent. ices are also conn LISN that provide e with 50ohm tern diagram of the c. line are check ence. In order to five positions of eques must be change	(L.I.S.N.). This npedance for the ected to the main s a 500hm/50uH mination. (Please test setup and ed for maximum ind the maximum uipment and all o ged according to
Fest Result: N	ANSI C63.10: 2013		



6.3. Conducted Output Power

6.3.1. Test Specification

Test Requirement:	FCC Part15 C Section 15.247 (b)(3)
Test Method:	KDB558074
Limit:	30dBm
Test Setup:	Spectrum Analyzer EUT
Test Mode:	Refer to item 4.1
Test Procedure:	 The testing follows the Measurement Procedure of FCC KDB No. 558074 DTS D01 Meas. Guidance v04. Set spectrum analyzer as following: a) Set the RBW ≥ DTS bandwidth. b) Set VBW ≥ 3 x RBW. c) Set span ≥ 3 x RBW d) Sweep time = auto couple. e) Detector = peak. f) Trace mode = max hold. g) Allow trace to fully stabilize. h) Use peak marker function to determine the peak amplitude level.
Test Result:	PASS

6.3.2. Test Instruments

Equipment	Manufacturer	Model	Serial Number	Calibration Due
Spectrum Analyzer	Agilent	N9020A	MY49100060	Sep. 27, 2018
RF cable (9kHz-26.5GHz)	тст	RE-06	N/A	Sep. 27, 2018
Antenna Connector	тст	RFC-01	N/A	Sep. 27, 2018

Note: The calibration interval of the above test instruments is 12 months and the calibrations are traceable to international system unit (SI).

6.3.3. Test Data

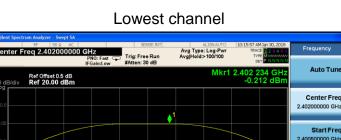
TCT通测检测 TESTING CENTRE TECHNOLOGY

BT LE mode			
Test channel	Maximum Conducted Output Power (dBm)	Limit (dBm)	Result
Lowest	-0.21	30.00	PASS
Middle	0.18	30.00	PASS
Highest	0.03	30.00	PASS

Test plots as follows:

Test plots as foll	lows:						
						Page	11 of 36
<u>Hotline: 400-66</u>	<u>11-140 Tel: 86</u>	-755-27673	339 Fax:	86-755-2767	<u>3332 http</u>	://www.tct-la	

BT LE mode



Start Free 2.400500000 GH Stop Fred 2.403500000 GH; CF Step 300.000 kHz Freq Offset 0 Hz enter 2.402000 GHz Res BW 1.0 MHz Span 3.000 MHz Sweep 1.000 ms (1001 pts) #VBW 3.0 MHz

Middle channel

eilent Spectrum Ana RF Center Freq 2	50 Q AC	GHz		ISE:INT		ALIGNAUTO : Log-Pwr	TRAC	MJan 30, 2018 E 1 2 3 4 5 6 E M WARKAN	Frequency
0 dB/div Ref	Offset 0.5 dB 20.00 dBm	PNO: Fast G IFGain:Low	#Atten: 30		righter.		2.440 2	85 GHz 82 dBm	Auto Tu
og 10.0					. 1				Center F 2.440000000
0.0									Start F 2.438500000
								and the second s	Stop F 2.441500000
0.0									CF S 300.000 Auto
0.0									FreqOff
0.0									
enter 2.44000 Res BW 1.0 N		#VBW	3.0 MHz			Sweep 1	.000 ms (.000 MHz 1001 pts)	

Highest channel



Page 12 of 36



Hotline: 400-6611-140 Tel: 86-755-27673339 Fax: 86-755-27673332 http://www.tct-lab.com



6.4. Emission Bandwidth

6.4.1. Test Specification

Test Requirement:	FCC Part15 C Section 15.247 (a)(2)
Test Method:	KDB558074
Limit:	>500kHz
Test Setup:	
	Spectrum Analyzer EUT
Test Mode:	Refer to item 4.1
Test Procedure:	 The testing follows FCC KDB Publication No. 558074 DTS D01 Meas. Guidance v04. Set to the maximum power setting and enable the EUT transmit continuously. Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 100 kHz. Set the Video bandwidth (VBW) = 300 kHz. In order to make an accurate measurement. The 6dB bandwidth must be greater than 500 kHz. Measure and record the results in the test report.
Test Result:	PASS

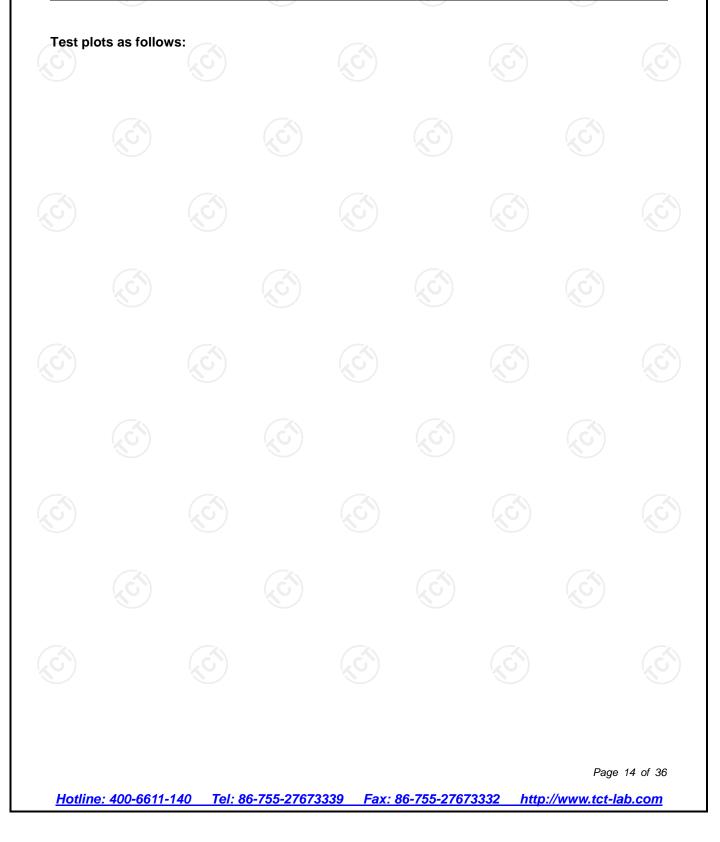
6.4.2. Test Instruments

	RI	F Test Room	I	
Equipment	Manufacturer	Model	Serial Number	Calibration Due
Spectrum Analyzer	Agilent	N9020A	MY49100060	Sep. 27, 2018
RF cable (9kHz-26.5GHz)	🕥 тст	RE-06	N/A	Sep. 27, 2018
Antenna Connector	ТСТ	RFC-01	N/A	Sep. 27, 2018

Note: The calibration interval of the above test instruments is 12 months and the calibrations are traceable to international system unit (SI).

6.4.3. Test data

	Test channel	6dB Emission I	Bandwidth (kHz))
6	Test channel	BT LE mode	Limit	Result
0	Lowest	709.1	>500k	C
	Middle	709.1	>500k	PASS
	Highest	717.3	>500k	



BT LE mode

TCT通测检测 TESTING CENTRE TECHNOLOGY

Lowest channel



Middle channel



Highest channel



Page 15 of 36

Report No.: TCT180621E006



6.5. Power Spectral Density

6.6. Test Specification

Test Demuinements	FCC Part15 C Section 15.247 (e)
Test Requirement:	
Test Method:	KDB558074
Limit:	The peak power spectral density shall not be greater than 8dBm in any 3kHz band at any time interval of continuous transmission.
Test Setup:	
	Spectrum Analyzer EUT
Test Mode:	Refer to item 4.1
Test Procedure:	 The testing follows Measurement Procedure 10.2 Method PKPSD of FCC KDB Publication No.558074 D01 DTS Meas. Guidance v04 The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement. Set to the maximum power setting and enable the EUT transmit continuously. Make the measurement with the spectrum analyzer's resolution bandwidth (RBW): 3 kHz ≤ RBW ≤ 100 kHz. Video bandwidth VBW ≥ 3 x RBW. In order to make an accurate measurement, set the span to 1.5 times DTS Channel Bandwidth. (6dB BW) Detector = peak, Sweep time = auto couple, Trace mode = max hold, Allow trace to fully stabilize. Use the peak marker function to determine the maximum power level. Measure and record the results in the test report.
Test Result:	PASS

6.6.1. Test Instruments

	RI	F Test Room		
Equipment	Manufacturer	Model	Serial Number	Calibration Due
Spectrum Analyzer	Agilent	N9020A	MY49100060	Sep. 27, 2018
RF cable (9kHz-26.5GHz)	тст	RE-06	N/A	Sep. 27, 2018
Antenna Connector	тст	RFC-01	N/A	Sep. 27, 2018

Note: The calibration interval of the above test instruments is 12 months and the calibrations are traceable to international system unit (SI).

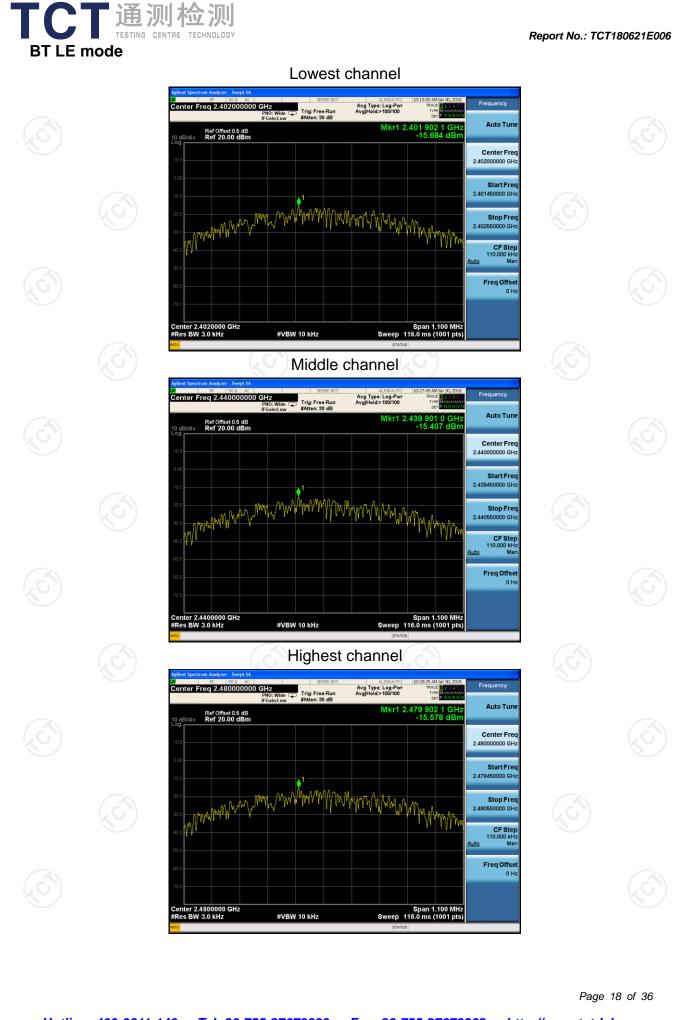
6.6.2. Test data

TCT通测检测 TESTING CENTRE TECHNOLOGY

Test channel	Power Spectral Density (dBm/3kHz)				
rest channel	BT LE mode	Limit	Result		
Lowest	-15.68	8 dBm/3kHz	No. Contraction of the second se		
Middle	-15.41	8 dBm/3kHz	PASS		
Highest	-15.58	8 dBm/3kHz			

Test plots as follows:

		s.						
<u>Hotline:</u>	<u>400-6611-</u>	<u>140 Tel: 8</u>	<u>6-755-27673</u>	339 Fax:	<u>86-755-2767</u>	<u>3332 http</u>	Page ://www.tct-la	17 of 36 1 b.com



Hotline: 400-6611-140 Tel: 86-755-27673339 Fax: 86-755-27673332 http://www.tct-lab.com

6.7. Conducted Band Edge and Spurious Emission Measurement

6.7.1. Test Specification

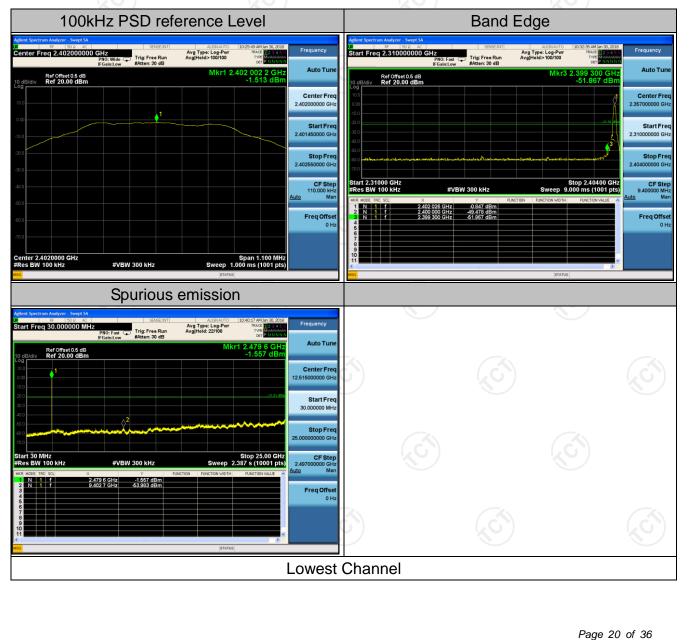
Test Requirement:	FCC Part15 C Section 15.247 (d)
Test Method:	KDB558074
Limit:	In any 100 kHz bandwidth outside of the authorized frequency band, the emissions which fall in the non-restricted bands shall be attenuated at least 20 dB / 30dB relative to the maximum PSD level in 100 kHz by RF conducted measurement and radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a).
Test Setup:	
	Spectrum Analyzer EUT
Test Mode:	Refer to item 4.1
	 The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement. Set to the maximum power setting and enable the EUT transmit continuously. Set RBW = 100 kHz, VBW=300 kHz, Peak Detector. Unwanted Emissions measured in any 100 kHz bandwidth outside of the authorized frequency band
Test Procedure:	 shall be attenuated by at least 20 dB relative to the maximum in-band peak PSD level in 100 kHz when maximum peak conducted output power procedure is used. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, the attenuation required under this paragraph shall be 30 dB instead of 20 dB per 15.247(d). 4. Measure and record the results in the test report. 5. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

6.7.2. Test Instruments

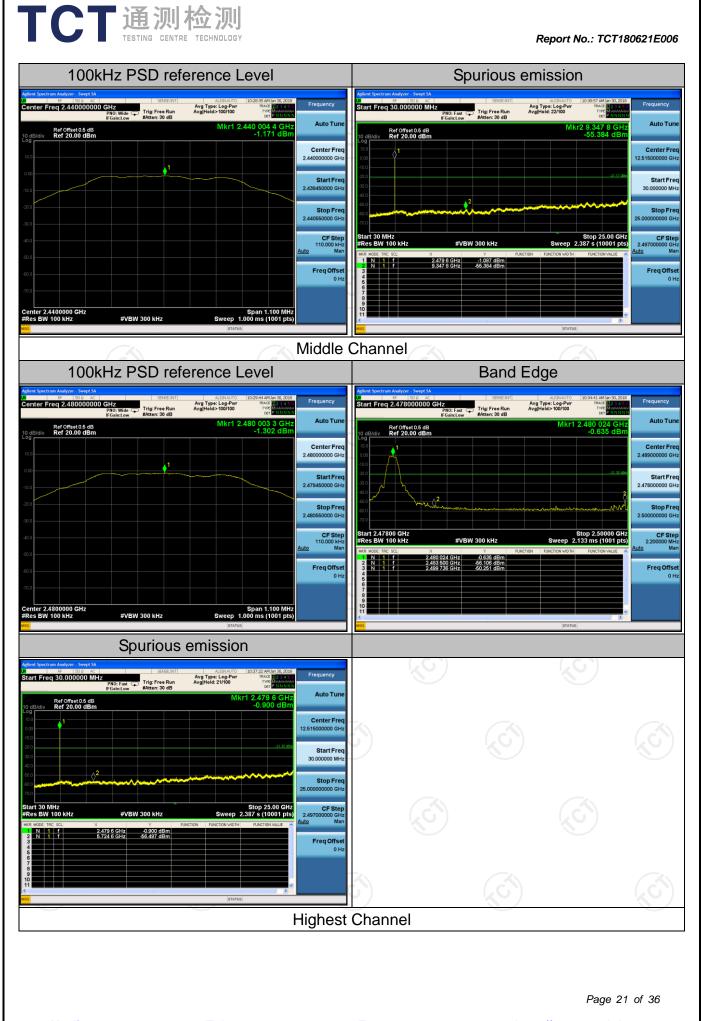
	RF Test Room												
Equipment	Manufacturer	Model	Serial Number	Calibration Due									
Spectrum Analyzer	Agilent	N9020A	MY49100060	Sep. 27, 2018									
Spectrum Analyzer	ROHDE&SCH WARZ	FSQ	200061	Sep. 27, 2018									
RF cable (9kHz-26.5GHz)	тст	RE-06	N/A	Sep. 27, 2018									
Antenna Connector	тст	RFC-01	N/A	Sep. 27, 2018									

Note: The calibration interval of the above test instruments is 12 months and the calibrations are traceable to international system unit (SI).

6.7.3. Test Data



Hotline: 400-6611-140 Tel: 86-755-27673339 Fax: 86-755-27673332 http://www.tct-lab.com



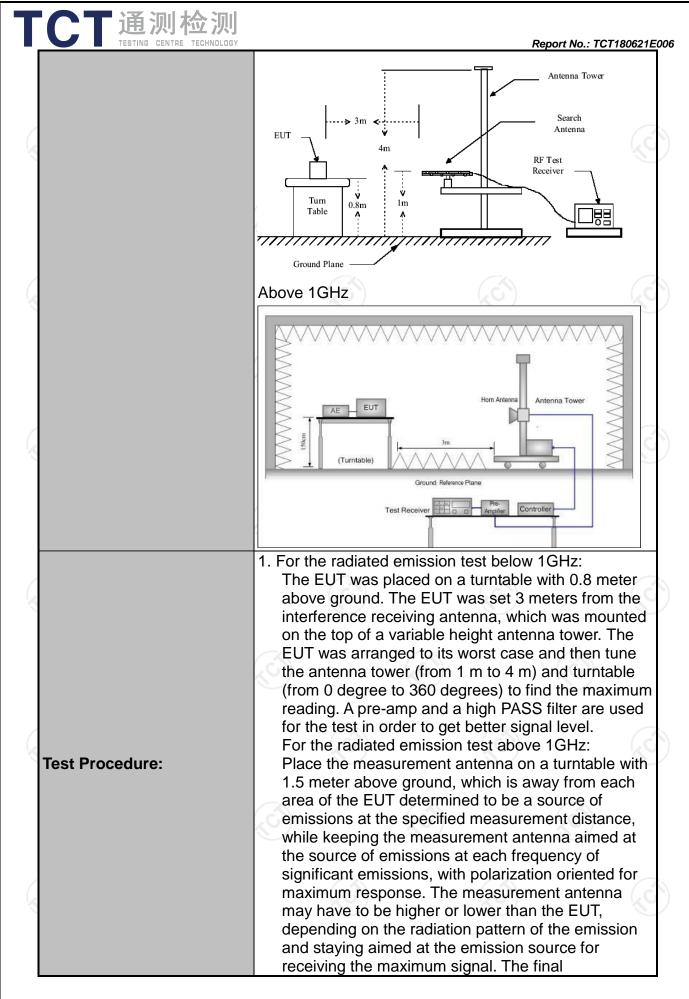


6.8.1. Test Specification

TCT通测检测 TESTING CENTRE TECHNOLOGY

Test Requirement:	FCC Part15	C Section	15.209			No.				
Test Method:	ANSI C63.10): 2013								
Frequency Range:	9 kHz to 25 GHz									
Measurement Distance:	3 m									
Antenna Polarization:	Horizontal & Vertical									
Operation mode:	Refer to item	14.1	(<u>(</u>)						
	Frequency 9kHz- 150kHz	Detector Quasi-peal		VBW 1kHz	Quas	Remark si-peak Value				
Receiver Setup:	150kHz- 30MHz	Quasi-peal	9kHz	30kHz	Quas	si-peak Value				
	30MHz-1GHz Above 1GHz	Quasi-peak Peak Peak	100KHz 1MHz 1MHz	300KHz 3MHz 10Hz	P	si-peak Value eak Value erage Value				
	Frequer 0.009-0.4	су	Field Stre (microvolts 2400/F(I	ength /meter)	Me	asurement nce (meters) 300				
	0.490-1.7		24000/F(KHz)		30					
	1.705-3		30		30					
	30-88		100		3					
Limit:	88-216 216-96		150 200		3					
Linint.	Above 9		500			3				
	Frequency		d Strength volts/meter)	Measurer Distan (meter	се	Detector				
	Above 1GH	. (500	3		Average				
	Above TGH	2	5000	3 Pea		Peak				
Test setup:	For radiated	Distance = 3m	s below 30)MHz		Computer -				

Hotline: 400-6611-140 Tel: 86-755-27673339 Fax: 86-755-27673332 http://www.tct-lab.com



	Report No.: TCT180621E
	 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. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level 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 level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported. Use the following spectrum analyzer settings: (1) Span shall wide enough to fully capture the emission being measured; (2) Set RBW=100 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 ≥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 4.1 for details
Test results:	PASS



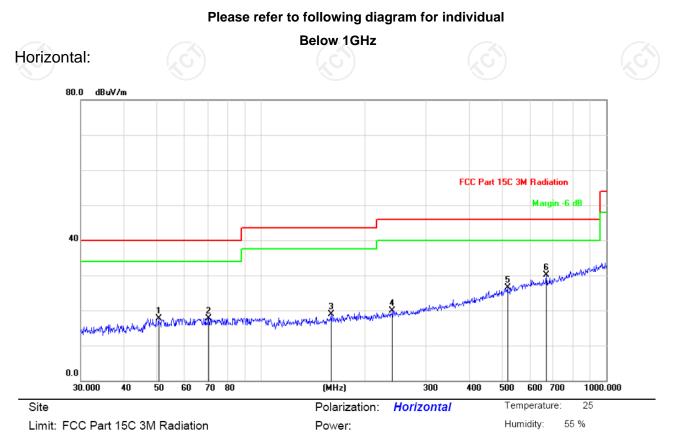


6.8.2. Test Instruments

Radiated Emission Test Site (966)											
Name of Equipment	Manufacturer	Manufacturer Model Serial Numbe									
Test Receiver	ROHDE&SCHW ARZ	ESVD	100008	Sep. 27, 2018							
Spectrum Analyzer	ROHDE&SCHW ARZ	FSQ	200061	Sep. 27, 2018							
Pre-amplifier	EM Electronics Corporation CO.,LTD	EM30265	07032613	Sep. 27, 2018							
Pre-amplifier	HP	8447D	2727A05017	Sep. 27, 2018							
Loop antenna	ZHINAN	ZN30900A	12024	Sep. 27, 2018							
Broadband Antenna	Schwarzbeck	VULB9163	340	Sep. 27, 2018							
Horn Antenna	Schwarzbeck	BBHA 9120D	631	Sep. 27, 2018							
Horn Antenna	Schwarzbeck	BBH 9170	582	Jun. 07, 2018							
Antenna Mast	Keleto	CC-A-4M	N/A	N/A							
Coax cable (9KHz-1GHz)	тст	RE-low-01	N/A	Sep. 27, 2018							
Coax cable (9KHz-40GHz)	тст	RE-high-02	N/A	Sep. 27, 2018							
Coax cable (9KHz-1GHz)	тст	RE-low-03	N/A	Sep. 27, 2018							
Coax cable (9KHz-40GHz)	тст	RE-high-04	N/A	Sep. 27, 2018							
EMI Test Software	Shurple Technology	EZ-EMC	N/A	N/A							

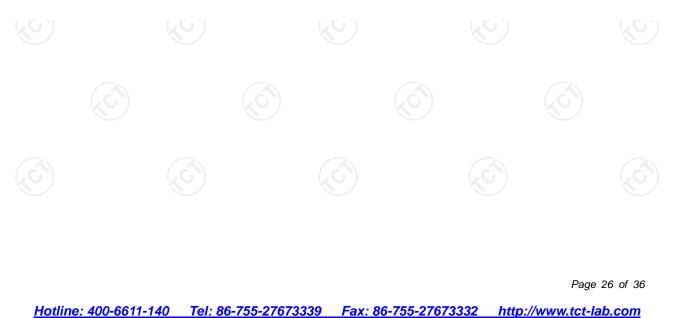
Note: The calibration interval of the above test instruments is 12 months and the calibrations are traceable to international system unit (SI).

6.8.3. Test Data

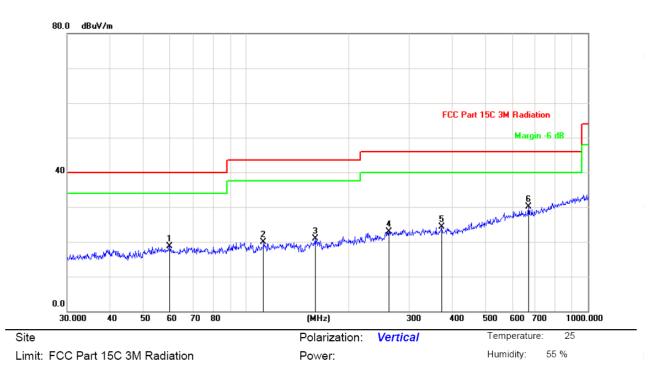


Report No.: TCT180621E006

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector	cm	degree	Comment
1		50.4089	30.39	-12.66	17.73	40.00	-22.27	peak			
2		70.3365	35.02	-17.24	17.78	40.00	-22.22	peak			
3		159.2251	34.08	-15.24	18.84	43.50	-24.66	peak			
4		239.9874	31.09	-11.20	19.89	46.00	-26.11	peak			
5		517.2480	29.29	-2.70	26.59	46.00	-19.41	peak			
6	*	670.4893	30.26	-0.24	30.02	46.00	-15.98	peak			



Vertical:



No.	Mk.	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector	cm	degree	Comment
1		59.8588	32.24	-13.44	18.80	40.00	-21.20	peak			
2		112.5244	32.76	-12.91	19.85	43.50	-23.65	peak			
3		159.2251	36.08	-15.24	20.84	43.50	-22.66	peak			
4		261.9753	33.16	-10.30	22.86	46.00	-23.14	peak			
5		373.3112	30.80	-6.56	24.24	46.00	-21.76	peak			
6	*	670.4893	30.26	-0.24	30.02	46.00	-15.98	peak			

Note: 1. The low frequency, which started from 9KHz~30MHz, was pre-scanned and the result which was 20dB lower than the limit line per 15.31(o) was not reported

2. Measurements were conducted in all three channels (high, middle, low), and the worst case Mode (Middle channel) was submitted only.

Page 27 of 36

Report No.: TCT180621E006

Hotline: 400-6611-140 Tel: 86-755-27673339 Fax: 86-755-27673332 http://www.tct-lab.com

Above 1GHz

Low channe	el: 2402 N	lHz							
Frequency (MHz)	Ant. Pol. H/V	Peak reading (dBµV)	AV reading (dBuV)	Correction Factor (dB/m)	Peak	n Level AV (dBµV/m)	Peak limit (dBµV/m)	AV limit (dBµV/m)	Margin (dB)
2390	Н	44.96		-8.27	36.69		74	54	-17.31
4804	Н	45.35		0.66	46.01		74	54	-7.99
7206	Н	40.01		9.50	49.51		74	54	-4.49
	H								
			(.C)		(G		(\mathbf{c})	
2390	V	44.64		-8.27	36.37		74	54	-17.63
4804	V	43.13		0.66	43.79		74	54	-10.21
7206	V	37.42		9.50	46.92		74	54	-7.08
~~	V			(×				
<u>(</u> U)					5)		(λG)		5

Middle channel: 2440 MHz

Frequency	Ant Pol	Peak	AV	Correction	Emissic	on Level	Peak limit	AV limit	Margin	
(MHz)	H/V	reading (dBµV)	reading (dBµV)	Factor (dB/m)	Peak (dBµV/m)			(dBµV/m)	(dB)	
4880	(GH)	41.73	-4,0	0.99	42.72	<u>, C]</u>	74	54	-11.28	
7320	H	38.83		9.87	48.7	<u> </u>	74	54	-5.30	
	Н									
4880	V	43.64		0.99	44.63		74	54	-9.37	
7320	V	41.76		9.87	51.63		74	54	-2.37	
	V			/						

High channel: 2480 MHz

Frequency		Peak	AV	Correction	Emissic	on Level	Peak limit	AV limit	Margin	
(MHz)	H/V	reading (dBµV)	reading (dBµV)	Factor (dB/m)	Peak (dBµV/m)	AV (dBµV/m)		(dBµV/m)	(dB)	
2483.5	Н	44.61		-7.83	36.78		74	54	-17.22	
4960	Н	49.47		1.33	50.80		74	54	-3.20	
7440	Н	41.30		10.22	51.52		74	54	-2.48	
<u> </u>	Н			8)					
2483.5	V	47.36		-7.83	39.53		74	54	-14.47	
4960	V	49.64		1.33	50.97		74	54	-3.03	
7440	S V	40.21		10.22	50.43	$\langle G^{-} \rangle$	74	54	-3.57	
	V									

Note:

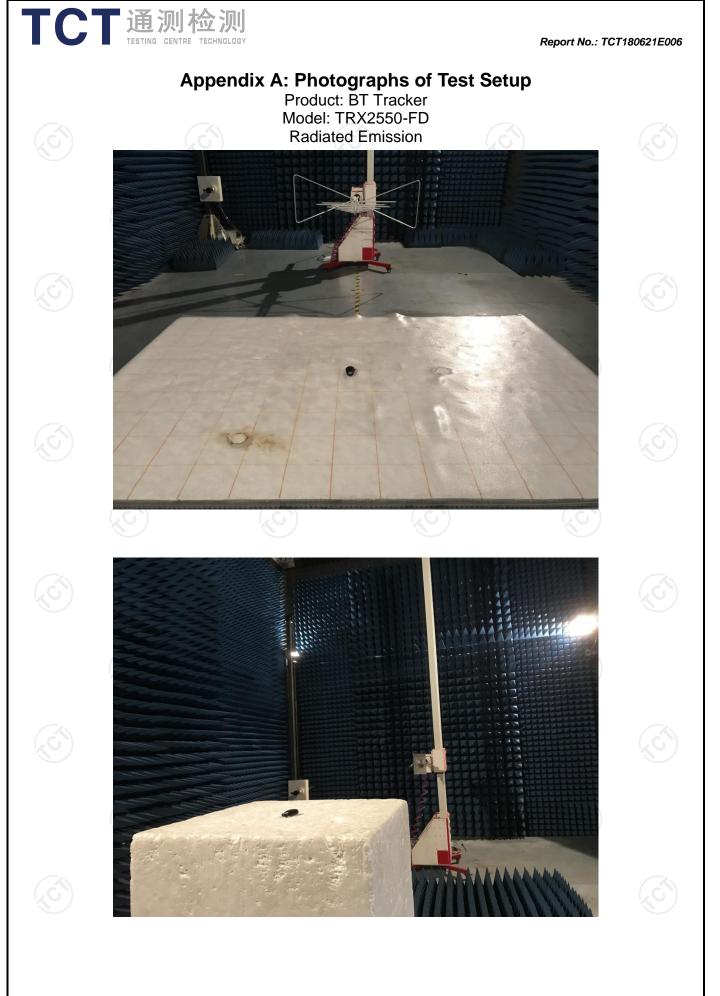
1. Emission Level=Peak Reading + Correction Factor; Correction Factor= Antenna Factor + Cable loss - Pre-amplifier

2. Margin (dB) = Emission Level (Peak) (dB μ V/m)-Average limit (dB μ V/m)

3. The emission levels of other frequencies are very lower than the limit and not show in test report.

4. Measurements were conducted from 1 GHz to the 10th harmonic of highest fundamental frequency.

5. Data of measurement shown "---"in the above table mean that the reading of emissions is attenuated more than 20 dB below the limits or the field strength is too small to be measured.



Page 29 of 36

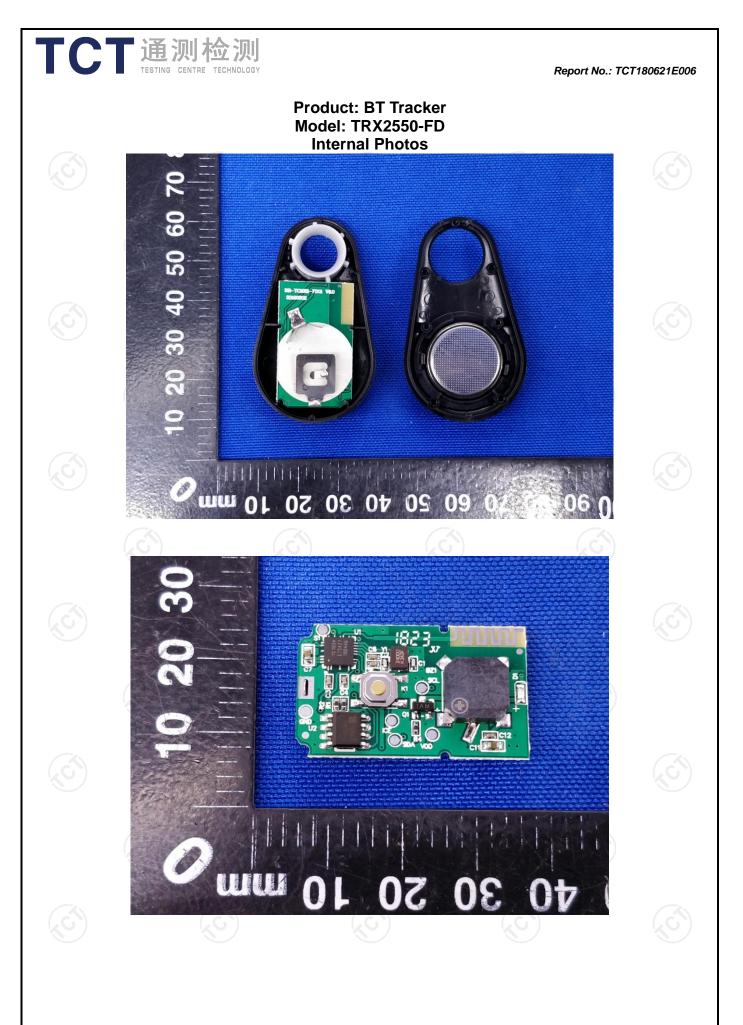


Page 30 of 36









Page 34 of 36



