

TEST REPORT

FCC ID: 2ACSTHRM303

Product: Heart Rate Monitor

Model No.: HRM303

Additional Model: N/A

Trade Mark: N/A

Report No.: TCT160622E013

Issued Date: July 06, 2016

Issued for:

NCI Technology, Inc.

R108 Jiu Zhu Rd, Jiang Ning Eco.&Tech. Development Zone Nanjing, Jiang su Province, 211102 China

Issued By:

Shenzhen Tongce Testing Lab.

1F, Leinuo Watch Building, Fuyong Town, Baoan Dist, Shenzhen, 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.

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





TABLE OF CONTENTS

1. Test Certification	,		3
2. Test Result Summary		(0)	4
3. EUT Description			
4. Genera Information			
4.1. Test environment and mode			6
4.2. Description of Support Units			6
5. Facilities and Accreditations			7
5.1. Facilities			7
5.2. Location			
5.3. Measurement Uncertainty	(0)	(0)	7
6. Test Results and Measurement Data	a		8
6.1. Antenna requirement			
6.2. Conducted Emission			9
6.3. Conducted Output Power			
6.4. Emission Bandwidth	(<u>6</u> 1)	(6)	13
6.5. Power Spectral Density			16
6.6. Test Specification			16
6.7. Conducted Band Edge and Spurious			
6.8. Radiated Spurious Emission Measure	ement	·····	22
Appendix A: Photographs of Test Setu	up		
Appendix B: Photographs of EUT			



1. Test Certification

Applicable

Standards:

Product:	Heart Rate Monitor
Model No.:	HRM303
Additional Model No.:	N/A
Applicant:	NCI Technology, Inc.
Address:	R108 Jiu Zhu Rd, Jiang Ning Eco.&Tech. Development Zone Nanjing, Jiang su Province, 211102 China
Manufacturer:	NCI Technology, Inc.
Address:	R108 Jiu Zhu Rd, Jiang Ning Eco.&Tech. Development Zone Nanjing, Jiang su Province, 211102 China
Date of Test:	Jun. 22 - July 05, 2016

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.

FCC CFR Title 47 Part 15 Subpart C Section 15.247

KDB 558074 D01 DTS Meas Guidance v03r05

Tested By: July 05, 2016

Garen

Reviewed By: Date: July 06, 2016

Joe Zhou

Approved By: July 06, 2016

Tomsin

Report No.: TCT160622E013



2. Test Result Summary

Requirement	CFR 47 Section	Result
Antenna requirement	§15.203/§15.247 (c)	PASS
AC Power Line Conducted Emission	§15.207	PASS
Conducted Peak Output Power	§15.247 (b)(3)	PASS
6dB Emission Bandwidth	§15.247 (a)(2)	PASS
Power Spectral Density	§15.247 (e)	PASS
Band Edge	1§5.247(d)	PASS
Spurious Emission	§15.205/§15.209	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. EUT Description

Product Name:	Heart Rate Monitor
Model:	HRM303
Additional Model:	N/A
Trade Mark:	N/A
Operation Frequency:	2402MHz~2480MHz
Channel Separation:	2MHz
Number of Channel:	40
Modulation Technology:	GFSK
Antenna Type:	PCB inverted F antenna
Antenna Gain:	0dBi
Power Supply:	DC 3V (The button battery *1)
Remark:	N/A

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
(C)	(,(···	((<u>() </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.							



Page 5 of 28



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%)

The sample was placed (0.8m below 1GHz, 1.5m above 1GHz) 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 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
1 (5)	1		5) 1	(C)

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.: 572331

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

CNAS - Registration No.: CNAS L6165
 Shenzhen TCT Testing Technology Co., Ltd. is accredited to ISO/IEC 17025:2005
 General Requirements for the Competence of Testing and Calibration laboratories for the competence of testing. The Registration No. is CNAS L6165.

5.2. Location

Shenzhen Tongce Testing Lab

Address: 1F, Leinuo Watch Building, Fuyong Town, Baoan Dist, Shenzhen, China

Tel: 86-755-36638142

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%

Report No.: TCT160622E013



6. Test Results and Measurement Data

6.1. Antenna requirement

Standard requirement: FCC Part15 C Section 15.203 /247(c)

15.203 requirement:

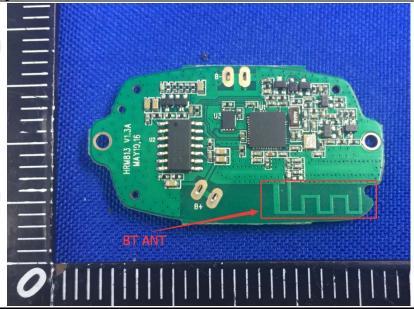
An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit 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 inverted F antenna which permanently attached, and the best case gain of the antenna is 0dBi.





6.2. Conducted Emission

6.2.1. Test Specification

<u> </u>					
Test Requirement:	FCC Part15 C Section 15.207				
Test Method:	ANSI C63.4:2014				
Frequency Range:	150 kHz to 30 MHz				
Receiver setup:	RBW=9 kHz, VBW=30	RBW=9 kHz, VBW=30 kHz, Sweep time=auto			
	Frequency range Limit (dBuV)				
	(MHz)	Quasi-peak	Average		
Limits:	0.15-0.5	66 to 56*	56 to 46*		
	0.5-5	56	46		
	5-30	60	50		
	Reference	e Plane	1201		
Test Setup:	Test table/Insulation plane Remark E U T Equipment Under Test LISN: Line Impedence Stabilization Ne	EMI Receiver	—— AC power		
Test Mode:	Charging + Transmitting Mode				
Test Procedure:	1. The E.U.T and simulation power through a line (L.I.S.N.). This proimpedance for the magnetic power through a LI coupling impedance refer to the block photographs). 3. Both sides of A.C. conducted interferer emission, the relative the interface cables ANSI C63.4: 2009 or	e impedance stable impedance stable vides a 50 ohm leasuring equipm les are also connects. With 50 ohm term diagram of the line are checked ince. In order to fine positions of equipments are change in the change in the change in the change in the change impediate in the change in t	bilization network n/50uH coupling ent. ected to the main a 50ohm/50uH nination. (Please test setup and ed for maximum nd the maximum ipment and all of led according to		
Test Result:	N/A: The EUT powered not applicable	d by battery, so th	is test item is		



6.3. Conducted Output Power

6.3.1. Test Specification

Test Requirement:	FCC Part15 C Section 15.247 (b)(3)		
Test Method:	ANSI C63.10:2013 and 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 v03r05. Set spectrum analyzer as following: a) Set the RBW ≥ DTS bandwidth. b) Set VBW ≥ 3 × 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. 12, 2016
RF cable	тст	RE-06	N/A	Sep. 12, 2016
Antenna Connector	TCT	RFC-01	N/A	Sep. 12, 2016

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

Page 10 of 28



6.3.3. Test Data

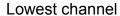
BT LE mode			
Test channel	Maximum Conducted Output Power (dBm)	Limit (dBm)	Result
Lowest	-7.22	30.00	PASS
Middle	-6.07	30.00	PASS
Highest	-5.41	30.00	PASS

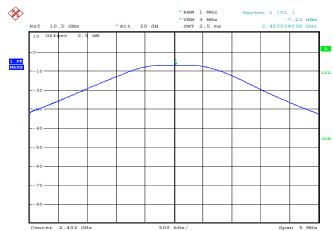
Test plots as follows:





BT LE mode





Middle channel

Date: 5.JUL.2016 12:08:14

Date: 5.JUL.2016 12:09:04



Highest channel



Date: 5.JUL.2016 12:09:50



6.4. Emission Bandwidth

6.4.1. Test Specification

Test Requirement:	FCC Part15 C Section 15.247 (a)(2)						
Test Method:	ANSI C63.10:2013	ANSI C63.10:2013 and KDB558074					
Limit:	>500kHz		(c ¹)				
Test Setup:	Spectrum Analyzer		EUT				
Test Mode:	Refer to item 4.1						
Test Procedure:	DTS D01 Meas 2. The testing follo DTS D01 Meas 3. Set to the maxin EUT transmit c 4. Make the measu resolution band Video bandwidt an accurate me be greater than	s. Guidance vows FCC KDB s. Guidance vonum power secontinuously. urement with the liwidth (RBW) th (VBW) = 30 easurement. To	Publication No. 558	8074 e zer's nake must			
Test Result:	PASS		(d)	(,c			

6.4.2. Test Instruments

RF Test Room						
Equipment	Manufacturer	Model	Serial Number	Calibration Due		
Spectrum Analyzer	Agilent	N9020A	MY49100060	Sep. 12, 2016		
RF cable	TCT	RE-06	N/A	Sep. 12, 2016		
Antenna Connector	TCT	RFC-01	N/A	Sep. 12, 2016		

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

Page 13 of 28



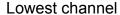
6.4.3. Test data

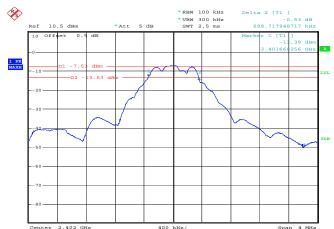
Toot shannal	6dB Emission Bandwidth (kHz)				
Test channel	BT LE mode	Limit	Result		
Lowest	698.72	>500k			
Middle	692.31	>500k	PASS		
Highest	666.67	>500k			

Test plots as f	follows:			



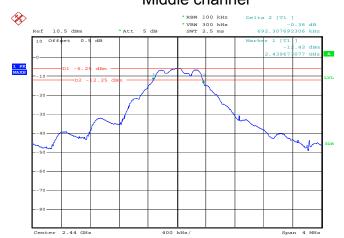
BT LE mode





Date: 5.JUL.2016 11:54:54

Middle channel



Date: 5.JUL.2016 11:57:25

Highest channel



Date: 5.JUL.2016 11:59:17



6.5. Power Spectral Density

6.6. Test Specification

Test Requirement:	FCC Part15 C Section 15.247 (e)
Test Method:	ANSI C63.10:2013 and 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 v03r05 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.

6.6.1. Test Instruments

RF Test Room						
Equipment	Manufacturer	Model	Serial Number	Calibration Due		
Spectrum Analyzer	Agilent	N9020A	MY49100060	Sep. 12, 2016		
RF cable	тст	RE-06	N/A	Sep. 12, 2016		
Antenna Connector	TCT	RFC-01	N/A	Sep. 12, 2016		

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

Toot channel	Power Spectral Density (dBm/3kHz)					
Test channel	BT LE mode	Limit	Result			
Lowest	-21.79	8 dBm/3kHz				
Middle	-19.87	8 dBm/3kHz	PASS			
Highest	-19.98	8 dBm/3kHz				

Test plots as follows				

Report No.: TCT160622E013

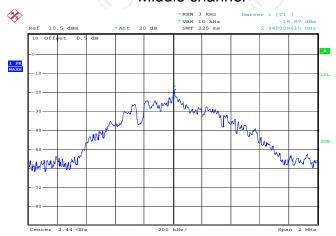


Lowest channel



Date: 5.JUL.2016 12:33:22

Middle channel



Date: 5.JUL.2016 12:32:33

Highest channel



Date: 5.JUL.2016 12:31:33



6.7. Conducted Band Edge and Spurious Emission Measurement

6.7.1. Test Specification

Test Requirement:	FCC Part15 C Section	n 15.247 (d)
Test Method:	ANSI C63.10:2013 an	nd KDB558074
Limit:	frequency band, the non-restricted bands of 30dB relative to the n RF conducted meas which fall in the restr	ndwidth outside of the authorized e emissions which fall in the shall be attenuated at least 20 dB / maximum PSD level in 100 kHz by surement and radiated emissions icted bands, as defined in Section comply with the radiated emission tion 15.209(a).
Test Setup:		EUT
Test Mode:	Spectrum Analyzer Refer to item 4.1	(6)
Test Procedure:	D01 DTS Meas. G 2. The RF output of E analyzer by RF ca was compensated measurement. 3. Set to the maximum EUT transmit conti 4. Set RBW = 100 kH. Unwanted Emissic bandwidth outside shall be attenuated maximum in-band maximum peak co used. If the transm power limits based a time interval, the paragraph shall be 15.247(d). 5. Measure and record 6. The RF fundamenta	UT was connected to the spectrum ble and attenuator. The path loss to the results for each n power setting and enable the
Test Result:	PASS	



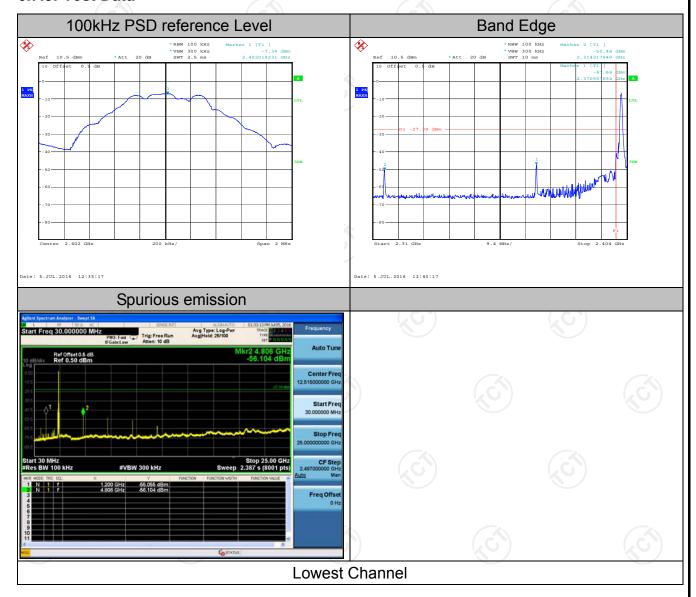


6.7.2. Test Instruments

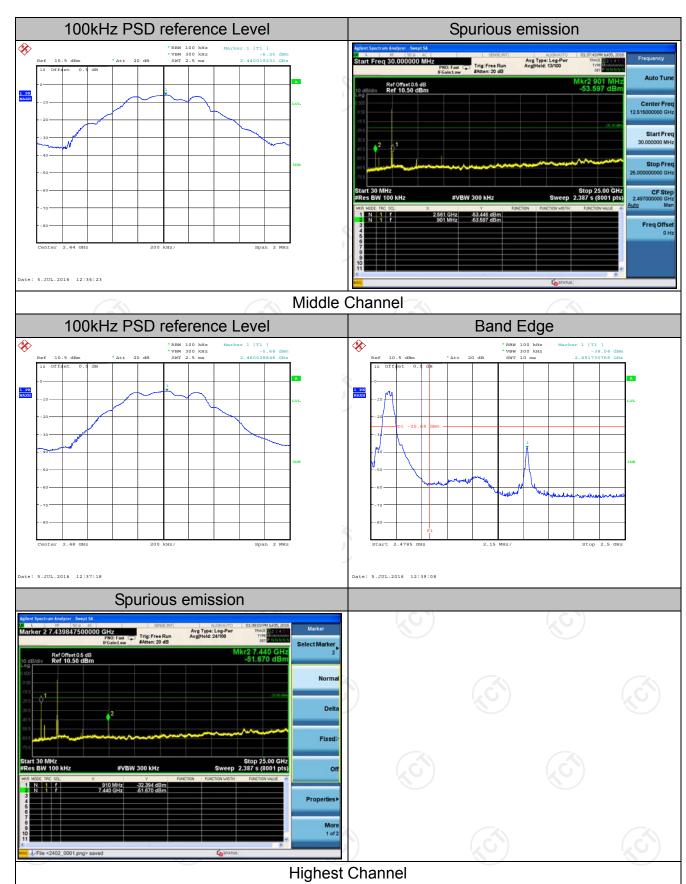
RF Test Room						
Equipment	Manufacturer	Model	Serial Number	Calibration Due		
Spectrum Analyzer	Agilent	N9020A	MY49100060	Sep. 12, 2016		
Spectrum Analyzer	R&S	FSU	200054	Sep. 11, 2016		
RF cable	TCT	RE-06	N/A	Sep. 12, 2016		
Antenna Connector	TCT	RFC-01	N/A	Sep. 12, 2016		

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







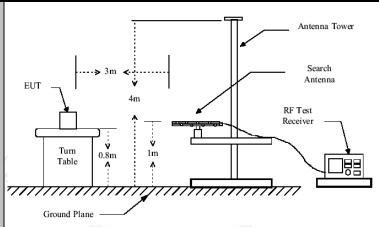




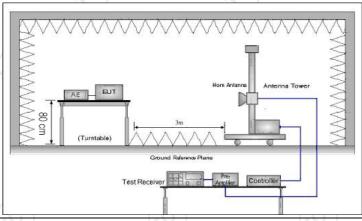
6.8. Radiated Spurious Emission Measurement

6.8.1. Test Specification

Test Requirement:	FCC Part15	C Section	n 15.209	(0)		(6	
Test Method:	ANSI C63.4:	2014 an	d ANSI C6	3.10: 20	13		
Frequency Range:	9 kHz to 25	9 kHz to 25 GHz					
Measurement Distance:	3 m				100		
Antenna Polarization:	Horizontal &	Vertical					
Operation mode:	Refer to item	1 4.1	((C)		Ć	
	Frequency 9kHz- 150kHz 150kHz-	Detector Quasi-pea Quasi-pea		VBW 1kHz 30kHz	Quas	si-peak Value	
Receiver Setup:	30MHz 30MHz-1GHz	Quasi-pea	(6)	300KHz	(,C		
	Above 1GHz	Peak Peak	1MHz	3MHz 10Hz	V Remark Z Quasi-peak Value Z Quasi-peak Value Z Peak Value Z Average Value Z Average Value Z Measurement Distance (meters) 300 30 30 30 30 30 30 30 30 30 30 30 30	eak Value	
	Frequency		Field Strength (microvolts/meter)		Measurement		
Limit:	0.009-0.490 0.490-1.705		2400/F(KHz) 24000/F(KHz)				
	1.705-30		30				
	30-88 88-216		100 150				
	216-960		200				
	Above 9	60	500			3	
	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	J`)		(O)		(20	
Limit:	II Frequency I		eld Strength crovolts/meter) Dist		nce	Detector	
	Above 1GH	z	500			Average	
	For radiated	emission	s below 30	·		Реак	
Test setup:							
	EUT	Turn table			 [_		
	30MHz to 10		Ground Plane				



Above 1GHz



- The testing follows FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v03r05.
- 2. For the radiated emission test below 1GHz: The EUT was placed on a turntable with 0.8 meter above ground. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high PASS filter are used for the test in order to get better signal level. For the radiated emission test above 1GHz: Place the measurement antenna on a turntable with 0.8 meter above ground, which is away from each area of the EUT determined to be a source of emissions at the specified measurement distance. while keeping the measurement antenna aimed at the source of emissions at each frequency of significant emissions, with polarization oriented for maximum response. The measurement antenna may have to be higher or lower than the EUT, depending on the radiation pattern of the emission

and staying aimed at the emission source for

Test Procedure:

Report No.: TCT160622E01	3
--------------------------	---

TESTING CENTRE TECHNOLOGY	Report No.: TCT160622E0
	receiving the maximum signal. The final 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. 3. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level 4. 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. 5. 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 Em	Radiated Emission Test Site (966)									
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due							
ESPI Test Receiver	ROHDE&SCHW ARZ	ESVD	100008	Sep. 11, 2016							
Spectrum Analyzer	ROHDE&SCHW ARZ	FSEM	848597/001	Sep. 11, 2016							
Pre-amplifier	EM Electronics Corporation CO.,LTD	EM30265	07032613	Sep. 11, 2016							
Pre-amplifier	HP	8447D	2727A05017	Sep. 11, 2016							
Loop antenna	ZHINAN	ZN30900A	12024	Sep. 13, 2016							
Broadband Antenna	Schwarzbeck	VULB9163	340	Sep. 13, 2016							
Horn Antenna	Schwarzbeck	BBHA 9120D	631	Sep. 13, 2016							
Horn Antenna	Schwarzbeck	BBHA 9170	373	Sep. 13, 2016							
Antenna Mast	ccs	CC-A-4M	N/A	N/A							
Coax cable	TCT	RE-low-01	N/A	Sep. 11, 2016							
Coax cable	TCT	RE-high-02	N/A	Sep. 11, 2016							
Coax cable	TCT	RE-low-03	N/A	Sep. 11, 2016							
Coax cable	тст	RE-high-04	N/A	Sep. 11, 2016							
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).



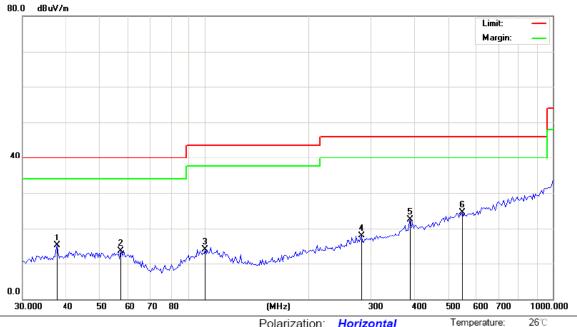


6.8.3. Test Data

Please refer to following diagram for individual

Below 1GHz

Horizontal:



Site Limit: FCC Part 15B Class B RE_3 m Polarization: Horizontal

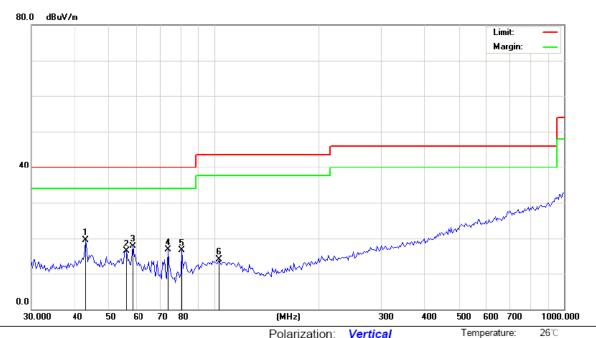
Power: DC 3V Humidity: 53 %

	No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		Antenna Height	Table Degree	
_			MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
_	1		37.5648	27.87	-12.78	15.09	40.00	-24.91	QP		0	
	2		57.2654	26.11	-12.59	13.52	40.00	-26.48	QP		0	
	3		100.4712	25.35	-11.46	13.89	43.50	-29.61	QP		0	_
_	4		282.2702	26.71	-8.86	17.85	46.00	-28.15	QP		0	
_	5		389.9874	28.89	-6.40	22.49	46.00	-23.51	QP		0	
-	6	*	550.2902	26.92	-2.45	24.47	46.00	-21.53	QP		0	

Report No.: TCT160622E013



Vertical:



Site	Polarization: Vertical	Temperature:	26℃
Limit: FCC Part 15B Class B RE_3 m	Power: DC 3V	Humidity:	53 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	42.9305	31.84	-12.34	19.50	40.00	-20.50	QP		0	
2		56.0708	28.77	-12.52	16.25	40.00	-23.75	QP		0	
3		58.4855	30.47	-12.69	17.78	40.00	-22.22	QP		0	
4		73.7496	33.12	-16.45	16.67	40.00	-23.33	QP		0	
5		80.8042	32.59	-16.07	16.52	40.00	-23.48	QP		0	
6	,	103.3353	25.48	-11.62	13.86	43.50	-29.64	QP		0	

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 (Highest channel) was submitted only.



Above 1GHz

Modulation	Modulation Type: GFSK									
Low chann	Low channel: 2402 MHz									
Frequency (MHz)	Ant. Pol. H/V	Peak reading (dBµV)	AV reading (dBuV)	Correction Factor (dB/m)	Emissic Peak (dBµV/m)	AV	Peak limit (dBµV/m)	AV limit (dBµV/m)	Margin (dB)	
2390	Н	41.36		-8.23	33.13		74	54	-20.87	
4804	Н	40.48		0.66	41.14		74	54	-12.86	
7206	Н	39.39		9.5	48.89		74	54	-5.11	
	$\chi(C_s)$		70	*)	()	(0)		('Q')		
2390	V	40.16		-8.23	31.93		74	54	-22.07	
4804	V	38.86		0.66	39.52		74	54	-14.48	
7206	V	40.51		9.5	50.01		74	54	-3.99	

Middle cha	nnel: 2440) MHz							
Frequency (MHz)	Ant. Pol. H/V	Peak reading (dBµV)	AV reading (dBµV)	Correction Factor (dB/m)	Peak		Peak limit (dBµV/m)	AV limit (dBµV/m)	Margin (dB)
4880	Н	37.66	- (.G	0.99	38.65	. G -}-	74	54	-15.35
7323	H	40.47		9.87	50.34	<u></u>	74	54	-3.66
4880	V	38.61		0.99	39.6		74	54	-14.4
7323	V	41.33		9.87	51.2		74	54	-2.80

High chann	nel: 2480 N	ЛHz							
Frequency (MHz)	Ant. Pol. H/V	Peak reading (dBµV)	AV reading (dBµV)	Correction Factor (dB/m)	Emissic Peak (dBµV/m)	AV	Peak limit (dBµV/m)	AV limit (dBµV/m)	Margin (dB)
2483.5	H	40.15	1	-7.52	32.63	>	74	54	-21.37
4960	Н	38.13		1.33	39.46		74	54	-14.54
7440	Н	41.45		10.22	51.67		74	54	-2.33
					X 1				
2483.5	V	41.65		-7.52	34.13		74	54	-19.87
4960	V	38.32	-	1.33	39.65	-	74	54	-14.35
7440	V	40.33	-	10.22	50.55		74	54	-3.45

Note:

- 1. Emission Level=Peak Reading + Correction Factor; Correction Factor= Antenna Factor + Cable loss Pre-amplifier
- 2. $Margin (dB) = Emission Level (Peak) (dB\mu V/m)-Average limit (dB\mu V/m)$
- 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.

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

