

Shenzhen Zhongjian Nanfang Testing Co., Ltd.

Report No: CCISE180906704

FCC REPORT (BLE)

Applicant: General Procurement, Inc

Address of Applicant: 800 E. Dyer Road, Santa Ana, California, United States

Equipment Under Test (EUT)

Product Name: Smart Phone

Model No.: Eternity H67

FCC ID: 2AQ7MH25568K

Applicable standards: FCC CFR Title 47 Part 15 Subpart C Section 15.247

Date of sample receipt: 15 Sep., 2018

Date of Test: 15 Sep., to 25 Oct., 2018

Date of report issued: 25 Oct., 2018

Test Result: PASS *

* In the configuration tested, the EUT complied with the standards specified above.

Authorized Signature:



Bruce Zhang Laboratory Manager

This report details the results of the testing carried out on one sample. The results contained in this test report do not relate to other samples of the same product and does not permit the use of the CCIS product certification mark. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.

This report may only be reproduced and distributed in full. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards.

This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.





2 Version

Version No.	Date	Description
00	25 Oct., 2018	This report was amended on FCC ID: 2AQ7MH25568K follow FCC Class II Permissive Change. The differences between them as below: Model number, Battery, Antenna welding board and removed the Fingerprint Identification. Base on the differences description, the Conducted Emission and Radiated Emission below 1GHz were re- tested.

Tested by: Date: 25 Oct., 2018

Reviewed by: Date: 25 Oct., 2018

Project Engineer

Test Engineer



3 Contents

			Page
1	CO	VER PAGE	1
2	VEF	RSION	2
3		NTENTS	
4		ST SUMMARY	
5	GE	NERAL INFORMATION	5
	5.1	CLIENT INFORMATION	
	5.2	GENERAL DESCRIPTION OF E.U.T	
	5.3	TEST ENVIRONMENT AND TEST MODE	
	5.4	DESCRIPTION OF SUPPORT UNITS	
	5.5	MEASUREMENT UNCERTAINTY	
	5.6	LABORATORY FACILITY	
	5.7	LABORATORY LOCATION	
	5.8	TEST INSTRUMENTS LIST	7
6	TES	ST RESULTS AND MEASUREMENT DATA	8
	6.1	ANTENNA REQUIREMENT:	8
	6.2	CONDUCTED EMISSION	9
	6.3	CONDUCTED OUTPUT POWER	12
	6.4	OCCUPY BANDWIDTH	13
	6.5	POWER SPECTRAL DENSITY	
	6.6	BAND EDGE	
	6.6.		
	6.6.		
	6.7	Spurious Emission	
	6.7.		
	6.7.	2 Radiated Emission Method	18
7	TES	ST SETUP PHOTO	23
8	FIIT	CONSTRUCTIONAL DETAILS	24
•		·	······





4 Test Summary

Test Items	Section in CFR 47	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 99% Occupied Bandwidth	15.247 (a)(2)	Pass*
Power Spectral Density	15.247 (e)	Pass*
Band Edge	15.247 (d)	Pass*
Spurious Emission	15.205 & 15.209	Pass

Pass: The EUT complies with the essential requirements in the standard.

Pass*: Please refer to the FCC ID: 2AQ7MH25568K

N/A: Not Applicable.



5 General Information

5.1 Client Information

Applicant:	General Procurement, Inc	
Address:	800 E. Dyer Road, Santa Ana, California, United States	
Manufacturer	SHENZHEN HENG DA INFINITE COMMUNICATION EQUIPMENTS LIMITED	
Address:	Rm 1301 Block D, Tian An Cloud Park Building 3rd, Bantian Street, Longgang District, Shenzhen. P. R. C.	
Factory:	HUIZHOU HENG DA INFINITE COMMUNICATION EQUIPMENTS LIMITED	
Address:	The Second Floor B01 No.15 Wanli Industrial Zone, Gan Po Hang, Huiyang Town, Huizhou	

5.2 General Description of E.U.T.

Product Name:	Smart Phone
Model No.:	Eternity H67
Operation Frequency:	2402 MHz~2480 MHz
Channel numbers:	40
Channel separation:	2 MHz
Modulation technology:	GFSK
Data speed :	1Mbps
Antenna Type:	Internal Antenna
Antenna gain:	2.3 dBi
Power supply:	Rechargeable Li-ion Battery DC3.8V, 2300mAh
AC adapter:	Model: HJ-0501000E1-US Input: AC100-240V, 50/60Hz, 0.2A Output: DC 5.0V, 1000mA
Test Sample Condition:	The test samples were provided in good working order with no visible defects.

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
2	2406MHz	12	2426MHz	22	2446MHz	32	2466MHz
3	2408MHz	13	2428MHz	23	2448MHz	33	2468MHz
4	2410MHz	14	2430MHz	24	2450MHz	34	2470MHz
5	2412MHz	15	2432MHz	25	2452MHz	35	2472MHz
6	2414MHz	16	2434MHz	26	2454MHz	36	2474MHz
7	2416MHz	17	2436MHz	27	2456MHz	37	2476MHz
8	2418MHz	18	2438MHz	28	2458MHz	38	2478MHz
9	2420MHz	19	2440MHz	29	2460MHz	39	2480MHz

Note:

In section 15.31(m), regards to the operating frequency range over 10 MHz, the Lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test. Channel No. 0, 20 & 39 were selected as Lowest, Middle and Highest channel.

Shenzhen Zhongjian Nanfang Testing Co., Ltd.

No. B-C, 1/F., Building 2, Laodong No.2 Industrial Park, Xixiang Road,

Bao'an District, Shenzhen, Guangdong, China

Telephone: +86 (0) 755 23118282 Fax: +86 (0) 755 23116366



5.3 Test environment and test mode

Operating Environment:				
Temperature:	24.0 °C			
Humidity:	54 % RH			
Atmospheric Pressure:	1010 mbar			
Test mode:				
Transmitting mode	Keep the EUT in continuous transmitting with modulation			

Report No: CCISE180906704

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. Duty cycle setting during the transmission is 100% with maximum power setting for all modulations.

5.4 Description of Support Units

The EUT has been tested as an independent unit.

5.5 Measurement Uncertainty

Parameters	Expanded Uncertainty
Conducted Emission (9kHz ~ 30MHz)	±2.22 dB (k=2)
Radiated Emission (9kHz ~ 30MHz)	±2.76 dB (k=2)
Radiated Emission (30MHz ~ 1000MHz)	±4.28 dB (k=2)
Radiated Emission (1GHz ~ 18GHz)	±5.72 dB (k=2)
Radiated Emission (18GHz ~ 40GHz)	±2.88 dB (k=2)

5.6 Laboratory Facility

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

• FCC - Registration No.: 727551

Shenzhen Zhongjian Nanfang Testing Co., Ltd. has been accredited as a testing laboratory by FCC (Federal Communications Commission). The Registration No. is 727551.

IC - Registration No.: 10106A-1

The 3m Semi-anechoic chamber of Shenzhen Zhongjian Nanfang Testing Co., Ltd. has been Registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 10106A-1.

• CNAS - Registration No.: CNAS L6048

Shenzhen Zhongjian Nanfang Testing 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 L6048.

A2LA - Registration No.: 4346.01

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005 General requirements for the competence of testing and calibration laboratories. The test scope can be found as below link: https://portal.a2la.org/scopepdf/4346-01.pdf

5.7 Laboratory Location

Shenzhen Zhongjian Nanfang Testing Co., Ltd.

Address: No. B-C, 1/F., Building 2, Laodong No.2 Industrial Park, Xixiang Road,

Bao'an District, Shenzhen, Guangdong, China

Tel: +86-755-23118282, Fax: +86-755-23116366

Email: info@ccis-cb.com, Website: http://www.ccis-cb.com

Shenzhen Zhongjian Nanfang Testing Co., Ltd.
No. B-C, 1/F., Building 2, Laodong No.2 Industrial Park, Xixiang Road, Bao'an District, Shenzhen, Guangdong, China
Telephone: +86 (0) 755 23118282 Fax: +86 (0) 755 23116366

Page 6 of 24



5.8 Test Instruments list

Radiated Emission:						
Test Equipment	Manufacturer	Model No.	Serial No.	Cal. Date (mm-dd-yy)	Cal. Due date (mm-dd-yy)	
3m SAC	SAEMC	9m*6m*6m	966	07-22-2017	07-21-2020	
Loop Antenna	SCHWARZBECK	FMZB1519B	00044	03-16-2018	03-15-2019	
BiConiLog Antenna	SCHWARZBECK	VULB9163	497	03-16-2018	03-15-2019	
Horn Antenna	SCHWARZBECK	BBHA9120D	916	03-16-2018	03-15-2019	
Horn Antenna	SCHWARZBECK	BBHA9120D	1805	06-22-2017	06-21-2020	
Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170582	11-21-2017	11-20-2018	
EMI Test Software	AUDIX	E3	Version: 6.110919b		b	
Pre-amplifier	HP	8447D	2944A09358	03-07-2018	03-06-2019	
Pre-amplifier	CD	PAP-1G18	11804	03-07-2018	03-06-2019	
Spectrum analyzer	Rohde & Schwarz	FSP30	101454	03-07-2018	03-06-2019	
Spectrum analyzer	Rohde & Schwarz	FSP40	100363	11-21-2017	11-20-2018	
EMI Test Receiver	Rohde & Schwarz	ESRP7	101070	03-07-2018	03-06-2019	
Cable	ZDECL	Z108-NJ-NJ-81	1608458	03-07-2018	03-06-2019	
Cable	MICRO-COAX	MFR64639	K10742-5	03-07-2018	03-06-2019	
Cable	SUHNER	SUCOFLEX100	58193/4PE	03-07-2018	03-06-2019	
RF Switch Unit	MWRFTEST	MW200	N/A	N/A	N/A	
Test Software	MWRFTEST	MTS8200	Version: 2.0.0.0			

Conducted Emission:						
Test Equipment	Manufacturer	Model No.	Serial No.	Cal. Date (mm-dd-yy)	Cal. Due date (mm-dd-yy)	
EMI Test Receiver	Rohde & Schwarz	ESCI	101189	03-07-2018	03-06-2019	
Pulse Limiter	SCHWARZBECK	OSRAM 2306	9731	03-07-2018	03-06-2019	
LISN	CHASE	MN2050D	1447	03-19-2018	03-18-2019	
LISN	Rohde & Schwarz	ESH3-Z5	8438621/010	07-21-2018	07-20-2019	
Cable	HP	10503A	N/A	03-07-2018	03-06-2019	
EMI Test Software	AUDIX	E3	Version: 6.110919b			



6 Test results and Measurement Data

6.1 Antenna requirement:

Standard requirement:

FCC Part 15 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 BLE antenna is an Internal antenna which cannot replace by end-user, the best-case gain of the antenna is 2.3 dBi.





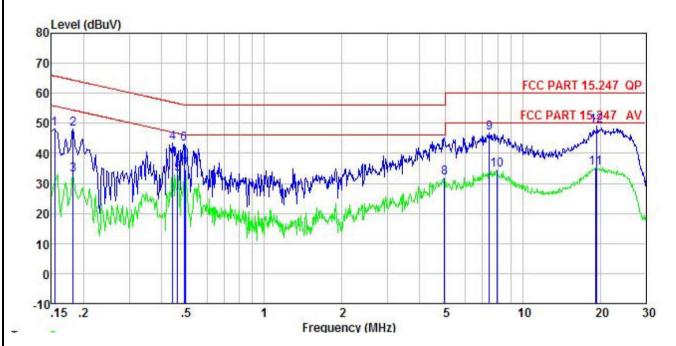
6.2 Conducted Emission

 - Conductor Emission					
Test Requirement:	FCC Part 15 C Section 15.207				
Test Method:	ANSI C63.10: 2013				
Test Frequency Range:	150 kHz to 30 MHz				
Class / Severity:	Class B				
Receiver setup:	RBW=9kHz, VBW=30kHz				
Limit:	Frequency range (MHz)	Limit	(dBuV)		
		Quasi-peak	Average		
	0.15-0.5 0.5-5	66 to 56* 56	56 to 46* 46		
	5-30	60	50		
	* Decreases with the logar		30		
Test procedure	 The E.U.T and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.), which 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 C63.4: 2014 on conducted measurement. 				
Test setup:	LISN 40cm		AC power		
Test Instruments:	Refer to section 5.8 for det	tails			
Test mode:	Refer to section 5.3 for det				
Test results:	Passed				



Measurement Data:

Product name:	Smart Phone	Product model:	Eternity H67
Test by:	Caffrey	Test mode:	BLE Tx mode
Test frequency:	150 kHz ~ 30 MHz	Phase:	Line
Test voltage:	AC 120 V/60 Hz	Environment:	Temp: 22.5℃ Huni: 55%



	Freq	Level	Factor	Loss	Level	Limit	Limit	Remark
	MHz	dBu∜	<u>dB</u>	<u>ap</u>	—dBu₹	dBu√	<u>dB</u>	
1	0.154	37.15	0.18	10.78	48.11	65.78	-17.67	QP
2	0.182	37.20	0.16	10.77	48.13	64.42	-16.29	QP
3	0.182	21.97	0.16	10.77	32.90	54.42	-21.52	Average
4	0.442	32.60	0.12	10.74	43.46	57.02	-13.56	QP
1 2 3 4 5 6 7 8 9	0.461	22.24	0.12	10.74	33.10	46.67	-13.57	Average
6	0.489	32.37	0.12	10.76	43.25	56.19	-12.94	QP
7	0.497	23.78	0.12	10.76	34.66	46.05	-11.39	Average
8	4.978	20.90	0.21	10.85	31.96	46.00	-14.04	Average
9	7.446	35.77	0.26	10.82	46.85	60.00	-13.15	QP
10	7.935	23.25	0.27	10.85	34.37	50.00	-15.63	Average
11	19.122	23.93	0.28	10.92	35.13			Average
12	19.428	38.04	0.28	10.93	49.25	60.00	-10.75	QP

Notes:

- 1. An initial pre-scan was performed on the line and neutral lines with peak detector.
- 2. Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.
- 3. Final Level =Receiver Read level + LISN Factor + Cable Loss.



Product name:	Smart Phone		Product model:	Eternity H67 BLE Tx mode Neutral		
Test by:	Caffrey		Test mode:			
Test frequency:	150 kHz ~ 30 MH	Z	Phase:			
Test voltage:	AC 120 V/60 Hz		Environment:	Temp: 22.5°C Huni: 55%		
Freq	.5 Read LISN Level Factor dBuV dB 37.61 0.99 36.42 0.94 20.81 0.94 21.05 0.97 22.83 0.97 36.41 0.97 24.79 0.97 31.78 0.97 24.79 0.97 31.78 0.97 22.72 0.97 20.91 1.02 35.67 1.02 34.96 0.70	1 2 Frequence	Limit Over 1 Line Limit The Line Limit The Limit	10 20 30 Remark QP QP Average Average Average QP Average QP Average QP Average QP Average QP Average QP		

Notes:

- 1. An initial pre-scan was performed on the line and neutral lines with peak detector.
- 2. Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.
- 3. Final Level =Receiver Read level + LISN Factor + Cable Loss.



6.3 Conducted Output Power

Test Requirement:	FCC Part 15 C Section 15.247 (b)(3)					
Test Method:	ANSI C63.10:2013 and KDB 558074					
Limit:	30dBm					
Test setup:	Spectrum Analyzer E.U.T Non-Conducted Table Ground Reference Plane					
Test Instruments:	Refer to section 5.8 for details					
Test mode:	Refer to section 5.3 for details					
Test results:	Please refer to the FCC ID: 2AQ7MH25568K					



6.4 Occupy Bandwidth

Test Requirement:	FCC Part 15 C Section 15.247 (a)(2)					
Test Method:	ANSI C63.10:2013 and KDB 558074					
Limit:	>500kHz					
Test setup:	Spectrum Analyzer E.U.T Non-Conducted Table Ground Reference Plane					
Test Instruments:	Refer to section 5.8 for details					
Test mode:	Refer to section 5.3 for details					
Test results:	Please refer to the FCC ID: 2AQ7MH25568K					



6.5 Power Spectral Density

Test Requirement:	FCC Part 15 C Section 15.247 (e)
Test Method:	ANSI C63.10:2013 and KDB 558074
Limit:	8 dBm
Test setup:	Spectrum Analyzer E.U.T Non-Conducted Table Ground Reference Plane
Test Instruments:	Refer to section 5.8 for details
Test mode:	Refer to section 5.3 for details
Test results:	Please refer to the FCC ID: 2AQ7MH25568K



6.6 Band Edge

6.6.1 Conducted Emission Method

0.0.1 Oondacted Ennission							
Test Requirement:	FCC Part 15 C Section 15.247 (d)						
Test Method:	ANSI C63.10:2013 and KDB 558074						
Limit:	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.						
Test setup:	Spectrum Analyzer E.U.T Non-Conducted Table Ground Reference Plane						
Test Instruments:	Refer to section 5.8 for details						
Test mode:	Refer to section 5.3 for details						
Test results:	Please refer to the FCC ID: 2AQ7MH25568K						



6.6.2 Radiated Emission Method

0.0.Z R	adiated Emission i	retriou							
Test	Requirement:	FCC Part 15 C Section 15.205 and 15.209							
Test	Method:	ANSI C63.10:	2013 and	KDB 5	558074				
Test	Frequency Range:	2.3GHz to 2.5GHz							
Test	Distance:	3m							
Rece	eiver setup:	Frequency	Detecto	r	RBW	\	/BW	Remark	
		Above 1GHz	Peak		1MHz		MHz	Peak Value	
I insit	L.	Frequen	RMS	Limit	1MHz (dBuV/m @3		MHz I	Average Value Remark	
Limit	i.	•	_	LIIIII	54.00	111)	A۱	verage Value	
		Above 10	GHz -		74.00			Peak Value	
	Procedure:	the groun to determ 2. The EUT antenna, tower. 3. The anter the groun Both horiz make the 4. For each case and meters ar to find the 5. The test-r Specified 6. If the emite the limit so of the EU have 10 ce	ad at a 3 medine the possions was set 3 medine the possions was set 3 medine the control and the rotal expected then the arms was pected then the arms are ceiver system and the rotal expections are ceiver system and the pecified, the Towould be the possion of the pecified of the pecifi	eter ca dition of meters mount is varied in the vertical dent. emission tennal table vertical emission tennal table vertical dent. emission tennal table vertical dent. emission tennal table vertical dent. emission tennal table vertical dent. emission tennal table vertical dent. emission tennal table vertical dent. emission tennal table vertical dent.	mber. The table of the highest received from one me maximum valued from the top of the t	ble waradia and interest of a meter alue as of the was a being modern of the stopped the bloom of the bloom o	as rotation. erference variable to four of the fi he anter arrange ghts from degrees etect Funde e was 1 ped and e emission y one un	meters above field strength. Inna are set to d to its worst in 1 meter to 4 is to 360 degrees inction and d dB lower than d the peak values ons that did not sing peak, quasi-	
Test	setup:	AE (T	umtable) Test Rec	3m Ground Relere		Antenna T	Sower Sower		
Test	Instruments:	Refer to section	on 5.8 for de	etails					
Test	mode:	Refer to section	on 5.3 for de	etails					
Test	results:	Please refer to	the FCC I	D: 2A0	Q7MH25568K				



6.7 Spurious Emission

6.7.1 Conducted Emission Method

Official Matrice							
Test Requirement:	FCC Part 15 C Section 15.247 (d)						
Test Method:	ANSI C63.10:2013 and KDB 558074						
Limit:	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.						
Test setup:	Spectrum Analyzer E.U.T Non-Conducted Table Ground Reference Plane						
Test Instruments:	Refer to section 5.8 for details						
Test mode:	Refer to section 5.3 for details						
Test results:	Please refer to the FCC ID: 2AQ7MH25568K						



6.7.2 Radiated Emission Method

Test Requirement:	FCC Part 15 C Section 15.205 and 15.209						
Test Method:	ANSI C63.10:2013						
Test Frequency Range:	9kHz to 25GHz						
Test Distance:	3m						
Receiver setup:						Remark	
Receiver setup.	30MHz-1GHz	Quasi-pe		120KHz		300KHz Quasi-peak	
		Peak		1MHz	3MHz		Peak Value
	Above 1GHz	RMS		1MHz	3M	Hz	Average Value
Limit:	Frequency	/	Lir	nit (dBuV/m @	3m)		Remark
	30MHz-88M	Hz		40.0		C	luasi-peak Value
	88MHz-216N	-		43.5			luasi-peak Value
	216MHz-960	1		46.0			luasi-peak Value
	960MHz-1G	Hz		54.0			Quasi-peak Value
	Above 1GF	lz -		54.0			Average Value
Test Procedure:	1. The EUT	was plac	od c	74.0	of a rot	tating	Peak Value table 0.8m(below
Test setup:	The table of highest rad 2. The EUT antenna, we tower. 3. The antennather ground Both horizon make the numbers and to find the numbers and the number	was rotated liation. It was set was height little deter ontal and heasurem suspected hen the additional little liberal lister on level ecified, the would be margin values.	is variance is variance vert. It em table is read yeter of the en te e repwould	eters away for the don't he to the maximulation in the Eding. In Maximum Hore EUT in peresting could be ported. Other in the total ported to the edition in the EUT in peresting could be ported. Other in the edition	or determination of determinations of the metrodiction of the metr	mine intervariate variate er to for the area as arracights degre k Det de wasped are e emisy one	a 3 meter camber. the position of the efference-receiving ple-height antenna four meters above the field strength. Intenna are set to anged to its worst from 1 meter to 4 es to 360 degrees ect Function and a 10 dB lower than and the peak values assions that did not using peak, quasi-reported in a data
Test setup:	Below 1GHz Turn Table Ground Plane	3m <				Antenna Search Antenn Test reiver —	1



	Above 1GHz
	AE EUT Horn Antenna Tower Ground Reference Plane Test Receiver Amplifer Controller
Test Instruments:	Refer to section 5.8 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed
Remark:	 Pre-scan all kind of the place mode (X-axis, Y-axis, Z-axis), and found the Y-axis is the worst case. 9 kHz to 30MHz is too low, so only shows the data of above 30MHz in this report.

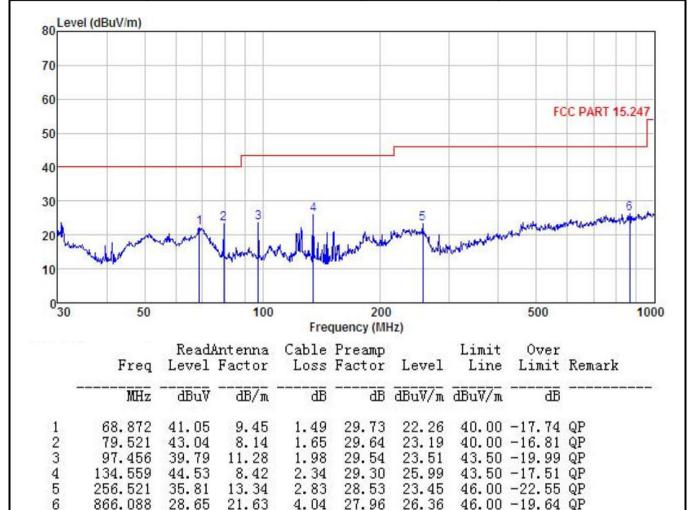




Measurement Data (worst case):

Below 1GHz:

Product Name:	Smart Phone	Product model:	Eternity H67	
Test By:	Caffrey	Test mode:	BLE Tx mode	
Test Frequency:	30 MHz ~ 1 GHz	Polarization:	Vertical	
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24℃ Huni: 57%	



Remark:

- 1. Final Level = Receiver Read level + Antenna Factor + Cable Loss Preamplifier Factor.
- 2. The emission levels of other frequencies are very lower than the limit and not show in test report.



roduct Name:	Smart Phone	Smart Phone		Product model:		Eternity H67		
est By:	Caffrey 30 MHz ~ 1 GHz		Test mode: Polarization: Environment:		BLE Tx mode Horizontal			
est Frequency:								
est Voltage:	AC 120/60Hz	Temp: 24℃			Huni: 57%			
80 Level (dBuV/m)								
70								
60					FCC	PART 15.247		
50								
40								
30		2 3	4	5		6		
20 Mayordan Joseph Mary	may	A CONTRACTOR OF THE PARTY OF TH	Mary Sharen	Mark Mark	wolfer for white head of the	March Charles and		
030 5	0	100 Frequence	200 ev (MHz)		500	1000		

dB dBuV/m dBuV/m

17.89

20.90

22.62

23.22

21.29

25.61

dB

40.00 -22.11 QP

43.50 -22.60 QP

43.50 -20.88 QP

46.00 -22.78 QP

46.00 -24.71 QP

46.00 -20.39 QP

Remark:

2

4

5

MHz

71.080

121.549

149.486

220.617

322.189

739.661

dBuV

37.07

38.13

40.75

36.78

32.72

29.05

dB/m

8.99

9.96

8.58

12.29

14.06

20.76

dB

29.71

29.38

29.22

28.70

28.50

28.52

1.54

2.19

2.51

2.85

3.01

4.32

^{1.} Final Level = Receiver Read level + Antenna Factor + Cable Loss - Preamplifier Factor.

^{2.} The emission levels of other frequencies are very lower than the limit and not show in test report.



Above 1GHz

Above 1GHz								
			Test ch	annel: Lowe	est channel			
			De	tector: Peak	Value			
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4804.00	45.95	31.60	6.80	41.81	46.02	74.00	-27.98	Vertical
4804.00	46.84	31.60	6.80	41.81	46.76	74.00	-27.24	Horizontal
Detector: Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4804.00	35.21	31.60	6.80	41.81	35.28	54.00	-18.72	Vertical
4804.00	35.48	31.60	6.80	41.81	35.40	54.00	-18.60	Horizontal
Test channel: Middle channel								
Detector: Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4884.00	47.09	31.72	6.86	41.84	47.31	74.00	-26.69	Vertical
4884.00	46.19	31.72	6.86	41.84	46.26	74.00	-27.74	Horizontal
Detector: Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4884.00	37.11	31.72	6.86	41.84	37.33	54.00	-16.67	Vertical
4884.00	36.34	31.72	6.86	41.84	33.08	54.00	-20.92	Horizontal
Test channel: Highest channel								
Detector: Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4960.00	47.86	31.84	6.91	41.87	48.08	74.00	-25.92	Vertical
4960.00	46.90	31.84	6.91	41.87	47.12	74.00	-26.88	Horizontal
Detector: Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4960.00	38.24	31.84	6.91	41.87	38.46	54.00	-15.54	Vertical
				•			•	i e

Remark:

4960.00

36.45

6.91

41.87

36.67

54.00

-17.33

31.84

Project No.: CCISE1809067

Horizontal

^{1.} Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.

^{2.} The emission levels of other frequencies are very lower than the limit and not show in test report.