

TEST REPORT

FCC ID: 2AF7PSF01

Applicant : Sovogue technology Limited

Address : 9 PANTYGRAIGWEN ROAD PONTYPRIDD MID GLAMORGAN

UNITED KINGDOM CF37 2RR

Equipment Under Test (EUT):

Name : Smart watch

Model : SF01, SF09

Standards: FCC PART 15, SUBPART C: 2014 (Section 15.247)

ANSI C63.4:2014; ANSI C63.10:2013

Report No : T1851416 02

Date of Test: September 28- October 15, 2015

Date of Issue: October 16, 2015

Test Result : PASS

In the configuration tested, the EUT complied with the standards specified above Authorized Signature

(Mark Zhu)

Manager

The manufacture should ensure that all the products in series production are in conformity with the product sample detailed in this report. 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. Any mention of Shenzhen Alpha Product Testing Co., Ltd. Or test done by Shenzhen Alpha Product Testing Co., Ltd. Approvals in connection with, distribution or use of the product described in this report must be approved by Shenzhen Alpha Product Testing Co., Ltd. Approvals in writing.

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1. General Information

1.1. Description of Device (EUT)

EUT : Smart watch

Trade Name : N/A

Model No. : SF01, SF09

DIFF. : Only differ in model name.

Power supply : DC 3.7V Supply by battery or DC 5V from USB for charging

Adapter : N/A

Radio Technology : BT3.0+EDR

Operation frequency : 2402-2480MHz

Modulation : GFSK, $\pi/4$ DQPSK,8-DPSK

Antenna Type : Integrated Antenna, max gain -2dBi.

Applicant : Sovogue technology Limited

Address : 9 PANTYGRAIGWEN ROAD PONTYPRIDD MID GLAMORGAN

UNITED KINGDOM CF37 2RR

Manufacturer : Shenzhen Sovogue technology Co.,Ltd.

Address : C1102, Yinxing Tech. Building, No.1301, Guanguang Rd, Guanlan street,

Longhua District, Shenzhen, China

1.2. Accessories of device (EUT)

Description : N/A

Manufacturer : N/A

Model No. : N/A

Input : N/A

Output : N/A

1.3. Test Lab information

Shenzhen Alpha Product Testing Co., Ltd Building B, East Area of Nanchang Second, Industrial Zone, Gushu 2nd Road, Bao'an, Shenzhen, China

August 11, 2014 File on Federal Communication Commission

Registration Number: 203110

July 18, 2014 Certificated by IC Registration Number: 12135A

2. Summary of test

2.1. Summary of test result

Description of Test Item	Standard	Results
Maximum Peak Output Power	FCC Part 15: 15.247(b)(1) ANSI C63.4:2013	PASS
Bandwidth	FCC Part 15: 15.215 ANSI C63.4 :2013	PASS
Carrier Frequency Separation	FCC Part 15: 15.247(a)(1) ANSI C63.4:2013	PASS
Number Of Hopping Channel	FCC Part 15: 15.247(a)(1)(iii) ANSI C63.4 :2013	PASS
Dwell Time	FCC Part 15: 15.247(a)(1)(iii) ANSI C63.4 :2013	PASS
Radiated Emission	FCC Part 15: 15.209 FCC Part 15: 15.247(d) ANSI C63.4:2013	PASS
Band Edge Compliance	FCC Part 15: 15.247(d) ANSI C63.4 :2013	PASS
Power Line Conducted Emissions	FCC Part 15: 15.207 ANSI C63.4 :2013	PASS
Antenna requirement	FCC Part 15: 15.203	PASS

2.2. Assistant equipment used for test

Description	:	Notebook
Manufacturer	:	ACER
Model No.	:	ZQT
Remark: FCC DOC approved		

2.3. Block Diagram

1, For radiated emissions test: EUT was placed on a turn table, which is 0.8 meter high above ground. EUT was be set into BT test mode by engineer mode before test.

2, For Power Line Conducted Emissions Test: EUT was connected to notebook by 1.5m USB line



2.4. Test mode

The engineer mode was used to control EUT work in Continuous TX mode, and select test channel, wireless mode.

Tested mode, channel, and data rate information				
Mode	Frequency			
	(MHz)			
	Low :CH1			
GFSK	Middle: CH40	2441		
	High: CH79	2480		

Tested mode, channel, and data rate information					
Mode Channel Frequen					
	(MHz)				
	Low :CH1	2402			
π /4 DQPSK	Middle: CH40	2441			
	High: CH79	2480			

Tested mode, channel, and data rate information				
Mode Channel Frequency				
	(MHz)			
	Low :CH1	2402		
8- DPSK	Middle: CH40	2441		
	High: CH79	2480		

2.5. Test Conditions

Temperature range	21-25°C
Humidity range	40-75%
Pressure range	86-106kPa

2.6. Measurement Uncertainty (95% confidence levels, k=2)

Item	MU	Remark
Uncertainty for Power point Conducted Emissions Test	2.42dB	
Uncertainty for Radiation Emission test in 3m	2.13 dB	Polarize: V
chamber (below 30MHz)	2.57dB	Polarize: H
Uncertainty for Radiation Emission test in 3m	3.54dB	Polarize: V
chamber (30MHz to 1GHz)	4.1dB	Polarize: H
Uncertainty for Radiation Emission test in 3m	2.08dB	Polarize: H
chamber (1GHz to 25GHz)	2.56dB	Polarize: V
Uncertainty for radio frequency	1×10-9	
Uncertainty for conducted RF Power	0.65dB	
Uncertainty for temperature	0.2°C	
Uncertainty for humidity	1%	
Uncertainty for DC and low frequency voltages	0.06%	

2.7. Test Equipment

Equipment	Manufacture	Model No.	Serial No.	Cal. Due day	Cal Interval
3m Semi-Anechoic	ETS-LINDGREN	N/A	SEL0017	2016.01.19	1Year
Spectrum analyzer	Agilent	E4407B	MY49510055	2016.01.19	1 Year
Receiver	R&S	ESCI	101165	2016.01.19	1 Year
Bilog Antenna	SCHWARZBECK	VULB 9168	9168-438	2017.01.21	2Year
Horn Antenna	SCHWARZBECK	BBHA 9120 D	BBHA 9120 D(1201)	2017.01.21	2Year
Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA 9170 D(1432)	2017.01.21	2Year
Active Loop Antenna	Beijing Daze	ZN30900A	SEL0097	2016.01.19	1 Year
Cable	Resenberger	SUCOFLEX 104	MY6562/4	2016.01.19	1 Year
Cable	Resenberger	SUCOFLEX 104	309972/4	2016.01.19	1 Year
Cable	Resenberger	SUCOFLEX 104	329112/4	2016.01.19	1 Year
L.I.S.N.#1	Schwarzbeck	NSLK8126	8126466	2016.01.19	1 Year
L.I.S.N.#2	ROHDE&SCHWA RZ	ENV216	101043	2016.01.19	1 Year
Power Meter	Anritsu	ML2487A	6K00001491	2016.01.19	1 Year
Power sensor	Anritsu	ML2491A	32516	2016.01.19	1 Year
Pre-amplifier	SCHWARZBECK	BBV9743	9743-019	2016.01.19	1 Year
Pre-amplifier	Quietek	AP-180C	CHM-0602012	2016.01.19	1 Year

3. Maximum Peak Output power

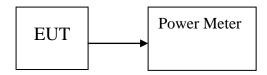
3.1. Limit

Please refer section 15.247.

3.2. Test Procedure

The transmitter output is connected to the RF Power Meter. The RF Power Meter is set to the peak power detection.

3.3. Test Setup



3.4. Test Result

EUT: Smart watch M/N: SF01							
Test date: 20	15-10-08	Test site: RF site Tested by: Peter					
Mode	Freq (MHz)	PK Output Power (dBm)	PK Output Power (mW)	Limit (dBm)	Margin (dB)		
	2402	6.313	4.279	21	14.687		
GFSK	2441	6.922	4.923	21	14.078		
	2480	7.337	5.416	21	13.663		
	2402	5.049	3.198	21	15.951		
π /4 DQPSK,	2441	5.682	3.700	21	15.318		
	2480	6.125	4.097	21	14.875		
	2402	5.646	3.669	21	15.354		
8- DPSK	2441	6.271	4.237	21	14.729		
	2480	6.562	4.531	21	14.438		
Conclusion: PASS							

4. Bandwidth

4.1. Limit

Please refer section 15.247.

4.2. Test Procedure

The transmitter output was coupled to a spectrum analyzer via a antenna. The bandwidth of the fundamental frequency was measured by spectrum analyzer with 30kHz RBW and 100kHz VBW. The 20dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 20dB.

4.3. Test Result

EUT: Smart watch M/N: SF01					
Test date: 20	15-10-08	Test site: RF site	Tested by: Pet	er	
Mode	Freq (MHz)	20dB Bandwidth (KHz)	Limit	Conclusion	
	2402	832.2	-	PASS	
GFSK	2441	832.1	-	PASS	
	2480	832.6	-	PASS	
	2402	1160.0	-	PASS	
π /4 DQPSK	2441	1170.0	-	PASS	
	2480	1190.0	-	PASS	
	2402	1164.0	-	PASS	
8- DPSK	2441	1162.0	-	PASS	
	2480	1165.0	-	PASS	

Orginal Test data

GFSK:







π /4 DQPSK







8- DPSK







5. Carrier Frequency Separation

5.1. Limit

Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater. Alternatively, frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than 125 mW

5.2. Test Procedure

The transmitter output was coupled to a spectrum analyzer via a antenna. The carrier frequency was measured by spectrum analyzer with 30kHz RBW and 100kHz VBW.

5.3. Test Result

EUT: Smart wat	tch M/N: SF01					
Test date: 201	5-10-08	Test site: RF site	Tested by:	ested by: Peter		
Mode/Channel Channel separation (KHz)		20dB Bandwidth (KHz)	Limit (KHz) 2/3 20dB bandwidth	Conclusion		
GFSK	1002	832.100	554.733	PASS		
π /4 DQPSK	1002	1170.000	780.000	PASS		
8- DPSK	1002	1162.000	774.667	PASS		

Orginal test data for channel separation

GFSK



π /4 DQPSK



8- DPSK



6. Number Of Hopping Channel

6.1. Limit

Frequency hopping systems in the 2400-2483.5 MHz band shall use at least 15 channels

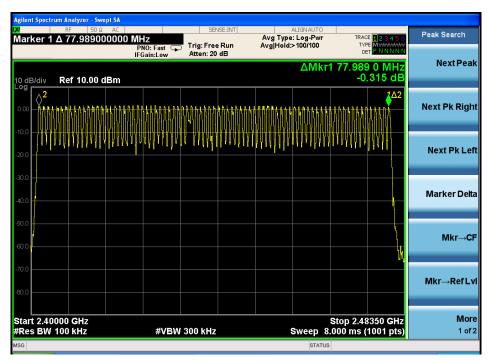
6.2. Test Procedure

The transmitter output was coupled to a spectrum analyzer via a antenna. The number of hopping channel was measured by spectrum analyzer with 300kHz RBW and 1MHz VBW.

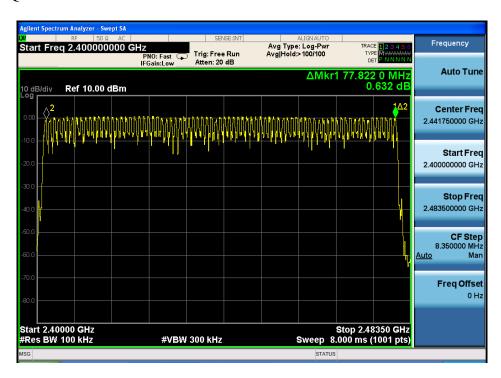
6.3. Test Result

EUT: Smart watch	M/N: SF01		
Test date: 2015-10-0	Test site: RF site	Tested by	y: Peter
Mode	Number of hopping channel	Limit	Conclusion
GFSK	79	>15	PASS
π /4 DQPSK	79	>15	PASS
8- DPSK	79	>15	PASS

Original test data for hopping channel number GFSK



π /4 DQPSK



8- DPSK



7. Dwell Time

7.1. Test limit

Please refer section 15.247.

7.2. Test Procedure

- 7.2.1. Place the EUT on the table and set it in transmitting mode.
- 7.2.2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.
- 7.2.3. Set center frequency of spectrum analyzer = operating frequency.
- 7.2.4. Set the spectrum analyzer as RBW, VBW=1MHz, Span = 0Hz, Sweep = auto.
- 7.2.5. Repeat above procedures until all frequency measured were complete.

7.3. Test Results

PASS.

Detailed information please see the following page.

EUT: Smart watch M/N: SF01							
Test date: 201	15-10-08	Test site: RF	site Te	sted by: Pete	r		
Mode Data Packet		Frequency (MHz) Pulse Duration (ms)		Dwell Time (s)	Limit (s)	Conclusion	
	DH1	2441	0.364	0.233	< 0.4	PASS	
GFSK	DH3	2441	1.644	0.351	< 0.4	PASS	
	DH5	2441	2.864	0.367	< 0.4	PASS	
	DH1	2441	0.371	0.237	< 0.4	PASS	
π /4 DQPSK	DH3	2441	1.617	0.345	< 0.4	PASS	
	DH5	2441	2.864	0.367	< 0.4	PASS	
8- DPSK	DH1	2441	0.374	0.239	< 0.4	PASS	
o- Drsk	DH3	2441	1.62	0.346	< 0.4	PASS	
	DH5	2441	0.364	0.233	< 0.4	PASS	

Note: 1 A period time = 0.4 (s) * 79 = 31.6(s)

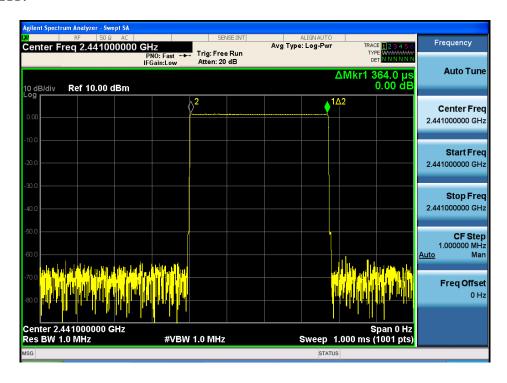
DH3 time slot = Pulse Duration * (1600/(3*79)) * A period time

DH5 time slot = Pulse Duration * (1600/(5*79)) * A period time

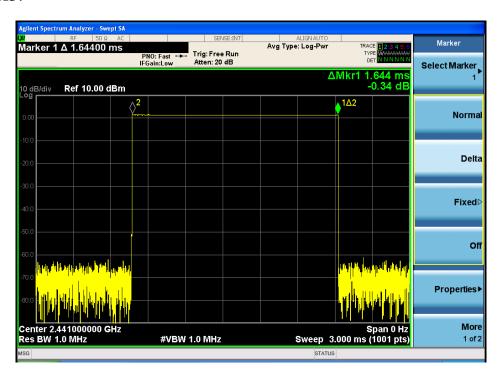
² DH1 time slot = Pulse Duration * (1600/(1*79)) * A period time

GFSK

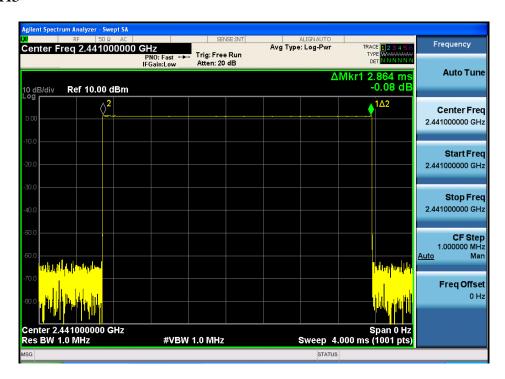
DH1:



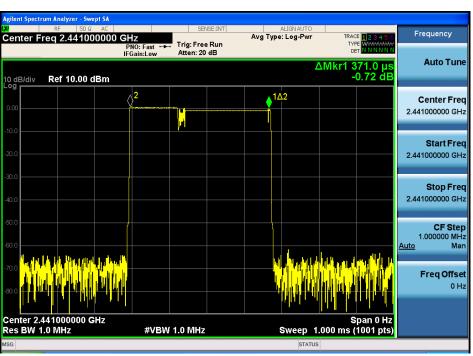
DH3:



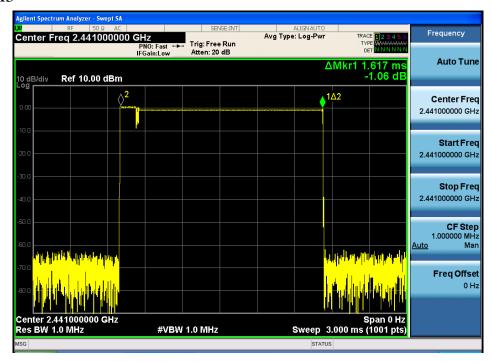
DH5



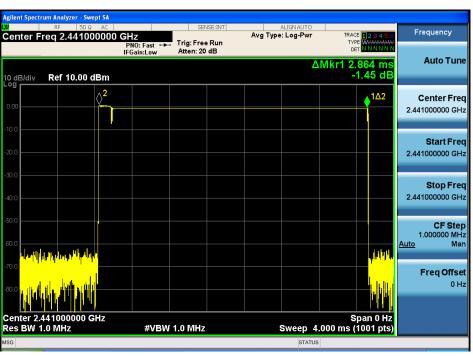
π /4 DQPSK DH1



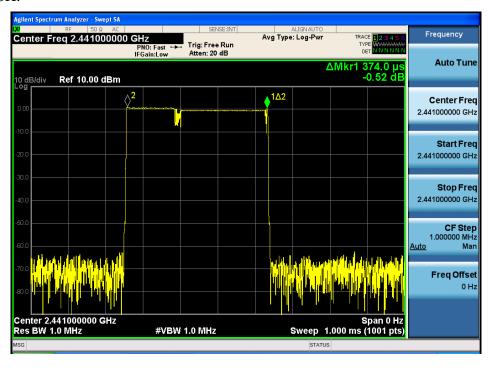
DH3

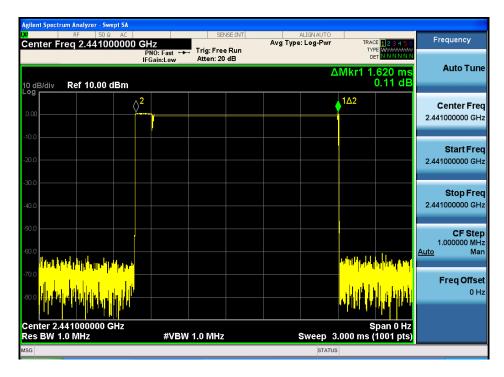


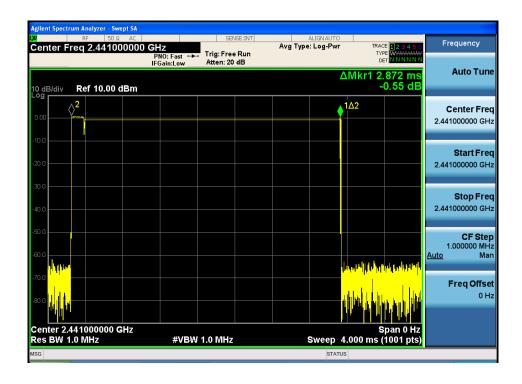
DH5



8- DPSK:







8. Radiated emissions

8.1. Limit

All the emissions appearing within RSS-GEN restricted frequency bands shall not exceed the limits shown in RSS-GEN, all the other emissions shall be at least 20dB below the fundamental emissions, or comply with RSS-GEN limits.

RSS-GEN Restricted frequency band

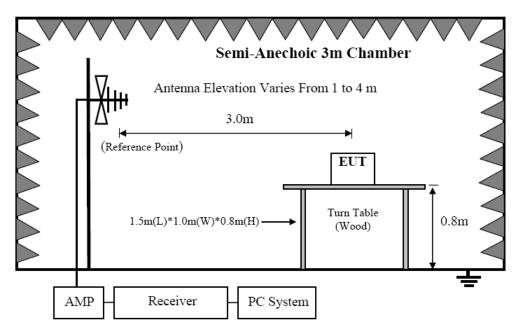
MHz	MHz	MHz	GHz
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
¹ 0.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.025 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	73 - 74.6	1645.5 - 1646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1660 - 1710	10.6 - 12.7
6.26775 - 6.26825	108 - 121.94	1718.8 - 1722.2	13.25 - 13.4
6.31175 - 6.31225	123 - 138	2200 - 2300	14.47 - 14.5
8.291 - 8.294	149.9 - 150.05	2310 - 2390	15.35 - 16.2
8.362 - 8.366	156.52475 - 156.52525	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	156.7 - 156.9	2690 - 2900	22.01 - 23.12
8.41425 - 8.41475	162.0125 - 167.17	3260 - 3267	23.6 - 24.0
12.29 - 12.293	167.72 - 173.2	3332 - 3339	31.2 - 31.8
12.51975 - 12.52025	240 - 285	3345.8 - 3358	36.43 - 36.5
12.57675 - 12.57725	322 - 335.4	3600 - 4400	(2)

RSS-GEN Limit

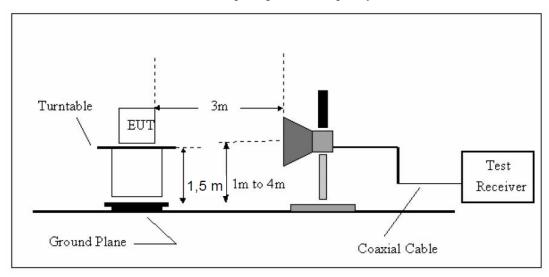
FREQUENCY	DISTANCE	FIELD STRENGTHS LIMIT		
MHz	Meters	$\mu V/m$	dB(µV)/m	
0.009-0.490	300	2400/F(KHz)	/	
0.490-1.705	30	24000/F(KHz)	/	
1.705-30	30	30	29.5	
30 ~ 88	3	100	40.0	
88 ~ 216	3	150	43.5	
216 ~ 960	3	200	46.0	
960 ~ 1000	3	500	54.0	
Above 1000	3	74.0 dB(µV)	/m (Peak)	
AUUVE 1000	3	54.0 dB(μV)/n	n (Average)	

8.2. Block Diagram of Test setup

8.2.1 In 3m Anechoic Chamber Test Setup Diagram for below 1GHz



8.2.2 In 3m Anechoic Chamber Test Setup Diagram for frequency above 1GHz



Note: For harmonic emissions test a appropriate high pass filter was inserted in the input port of AMP.

8.3. Test Procedure

- (1) EUT was placed on a non-metallic table, 80 cm above the ground plane inside a semi-anechoic chamber for below 1GHz testing, and 150cm for above 1GHz testing.
- (2) Setup EUT and simulator as shown in section 1.4 and 6.1
- (3) Test antenna was located 3m from the EUT on an adjustable mast. Below pre-scan procedure was first performed in order to find prominent radiated emissions.
- (a) Change work frequency or channel of device if practicable.
- (b) Change modulation type of device if practicable.
- (c) Rotated EUT though three orthogonal axes to determine the attitude of EUT arrangement produces highest emissions
- (4) Spectrum frequency from 9KHz to 25GHz (tenth harmonic of fundamental frequency) was investigated
- (5) For final emissions measurements at each frequency of interest, the EUT were rotated and the antenna height was varied between 1m and 4m in order to maximize the emission. Measurements in both horizontal and vertical polarities were made and the data was recorded. In order to find the maximum emission, the relative positions of equipments and all of the interface cables were changed according to ANSI C63.4 2014 on Radiated Emission test.
- (6) For emissions above 1GHz, both Peak and Average level were measured with Spectrum Analyzer, and the RBW is set at 1MHz, VBW is set at 3MHz for Peak measure; RBW is set at 1MHz, VBW is set at 10Hz for Average measure.

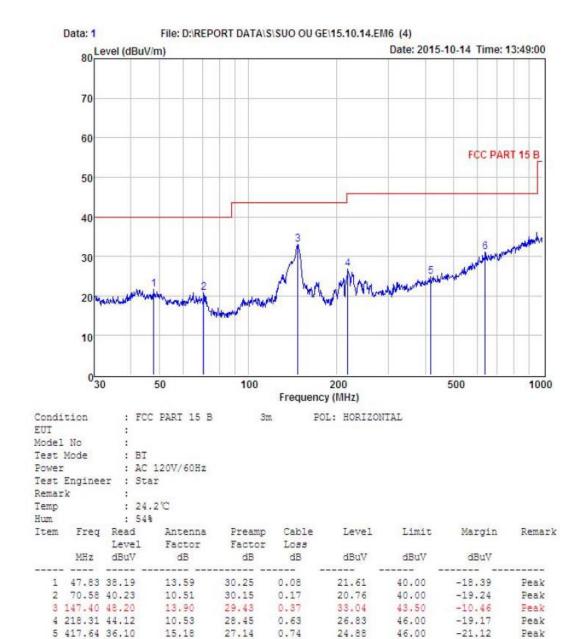
8.4. Test Result

We have scanned the 10th harmonic from 9KHz to the EUT. Detailed information please see the following page.

From 9KHz to 30MHz: Conclusion: PASS

Note: The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

From 30MHz to 1000MHz: Conclusion: PASS



Remark: Level = Read Level + Antenna Factor - Freamp Factor + Cable Loss

31.06

46.00

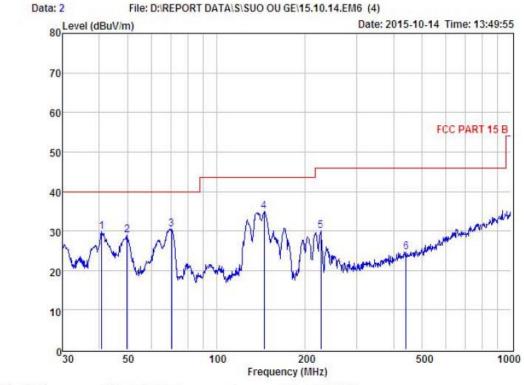
-14.94

Peak

25.59 1.22

6 638.37 36.49

18.94



Condition : FCC PART 15 B 3m POL: VERTICAL

EUT : Model No : Test Mode : BT

Power : AC 120V/60Hz

Test Engineer : Star Remark : Temp : 24.2°C Hum : 54%

Item	Freq	Read Level	Antenna Factor	Preamp Factor		Level	Limit	Margin	Remark
	MHz	dBuV	dB	dB	dB	dBuV	dBuV	dBuV	
1	40.70	46.46	14.07	30.85	0.18	29.86	40.00	-10.14	Peak
2	49.71	45.62	13.54	30.39	0.10	28.87	40.00	-11.13	Peak
3	70.34	49.72	10.82	30.15	0.17	30.56	40.00	-9.44	Peak
4	144.84	50.06	13.77	29.41	0.46	34.88	43.50	-8.62	Peak
5	226.10	46.88	10.98	28.24	0.51	30.13	46.00	-15.87	Peak
6	440.20	35.52	15.72	27.36	0.88	24.76	46.00	-21.24	Peak

Remark: Level = Read Level + Antenna Factor - Preamp Factor + Cable Loss

		1GF	Iz—25GI	Hz Radi	ated en	nissison Te	st result		
EUT	EUT: Smart watch M/N: SF01								
Pow	er: DC 3.	.7V from ba	ittery						
Test	date: 2	015-10-08	Test si	te: 3m (Chambe	er Tested	by: Peter		
Test	mode: G	FSK Tx CF	H1 2402M	IHz					
Ante	enna pola	rity: Vertica	al						
No	Freq (MHz)	Read Level (dBuV/m)	Antenna Factor (dB/m)	Cable loss(d B)	Amp Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4804	43.52	33.95	10.18	34.26	53.39	74	20.61	PK
2	4804	34.14	33.95	10.18	34.26	44.01	54	9.99	AV
3	7206	/							
4	9608	/							
5	12010	/							
Ante	enna Pola	rity: Horizo	ontal						
1	4804	44.41	33.95	10.18	34.26	54.28	74	19.72	PK
2	4804	33.35	33.95	10.18	34.26	43.22	54	10.78	AV
3	7206	/							
4	9608	/							
5	12010	/							

Note:

- 1, Measuring frequency from 1GHz to 25GHz
- 2, Spectrum Set for PK measure: RBW=1MHz, VBW=1MHz, Sweep time=Auto, Detector: PK
- 2, Spectrum Set for AV measure: RBW=1MHz, VBW=10Hz, Sweep time=Auto, Detector: PK
- 3, Result = Read level + Antenna factor + cable loss-Amp factor
- 4, All the other emissions not reported were too low to read and deemed to comply with FCC limit.

1GHz—25GHz Radiated emissison Test result

EUT: Smart watch M/N: SF01

Power: DC 3.7V from battery

Test date: 2015-10-08 Test site: 3m Chamber Tested by: Peter

Test mode: GFSK Tx CH40 2441MHz

Anten	Antenna polarity: Vertical								
	Freq	Read	Antenna	Cable	Amp	Result	Limit	Margin	
No	(MHz)	Level	Factor	loss(d	Factor	(dBuV/m)	(dBuV/	(dB)	Remark
	(IVIIIZ)	(dBuV/m)	(dB/m)	B)	(dB)	(uDu v/III)	m)	(ub)	
1	4882	44.17	33.93	10.2	34.29	54.01	74	19.99	PK
2	4882	33.97	33.93	10.2	34.29	43.81	54	10.19	AV
3	7323	/							
4	9764	/							
5	12205	/							
Anten	ına Polari	ty: Horizon	tal						
1	4882	44	33.93	10.2	34.29	53.84	74	20.16	PK
2	4882	33.55	33.93	10.2	34.29	43.39	54	10.61	AV
3	7323	/							

5 Note:

9764

12205

- 1, Measuring frequency from 1GHz to 25GHz
- 2, Spectrum Set for PK measure: RBW=1MHz, VBW=1MHz, Sweep time=Auto, Detector: PK
- 2, Spectrum Set for AV measure: RBW=1MHz, VBW=10Hz, Sweep time=Auto, Detector: PK
- 3, Result = Read level + Antenna factor + cable loss-Amp factor
- 4, All the other emissions not reported were too low to read and deemed to comply with FCC limit.

1GHz—25GHz Radiated emissison Test result

EUT: Smart watch M/N: SF01

Power: DC 3.7V from battery

Test date: 2015-10-08 Test site: 3m Chamber Tested by: Peter

Test mode: GFSK Tx CH79 2480MHz

Antenna polarity: Vertical

	Freq	Read	Antenna	Cable	Amp	Result	Limit	Morgin	
No	-	Level	Factor	loss(d	Factor		(dBuV/	Margin	Remark
	(MHz)	(dBuV/m)	(dB/m)	B)	(dB)	(dBuV/m)	m)	(dB)	
1	4960	44.45	33.98	10.22	34.25	54.4	74	19.6	PK
2	4960	33.67	33.98	10.22	34.25	43.62	54	10.38	AV
3	7440	/							
4	9920	/							
5	12400	/							
Ant	enna Pola	arity: Horizo	ontal						
1	4960	44.48	33.98	10.22	34.25	54.43	74	19.57	PK
2	4960	33.9	33.98	10.22	34.25	43.85	54	10.15	AV
3	7440	/							
4	9920	/							

Note:

12400

- 1, Measuring frequency from 1GHz to 25GHz
- 2, Spectrum Set for PK measure: RBW=1MHz, VBW=1MHz, Sweep time=Auto, Detector: PK
- 2, Spectrum Set for AV measure: RBW=1MHz, VBW=10Hz, Sweep time=Auto, Detector: PK
- 3, Result = Read level + Antenna factor + cable loss-Amp factor
- 4, All the other emissions not reported were too low to read and deemed to comply with FCC limit.

	1GHz—	-25GHz	Radiated	emissison	Test resul
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EUT: Smart watch M/N: SF01

Power: DC 3.7V from battery

Test date: 2015-10-08 Test site: 3m Chamber Tested by: Peter

Test mode: π /4 DQPSK Tx CH1 2402MHz

Antenna polarity: Vertical

7 11110	mia poia	iity. Vertice	41						
No	Freq (MHz)	Read Level (dBuV/m)	Antenna Factor (dB/m)	Cable loss(d B)	Amp Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4804	44.06	33.95	10.18	34.26	53.93	74	20.07	PK
2	4804	33.55	33.95	10.18	34.26	43.42	54	10.58	AV
3	7206	/							
4	9608	/							
5	12010	/							
Ante	enna Pola	rity: Horizo	ontal						
1	4804	44.08	33.95	10.18	34.26	53.95	74	20.05	PK
2	4804	33.83	33.95	10.18	34.26	43.7	54	10.3	AV
3	7206	/							
4	9608	/						·	·
5	12010	/							

- 1, Measuring frequency from 1GHz to 25GHz
- 2, Spectrum Set for PK measure: RBW=1MHz, VBW=1MHz, Sweep time=Auto, Detector: PK
- 2, Spectrum Set for AV measure: RBW=1MHz, VBW=10Hz, Sweep time=Auto, Detector: PK
- 3, Result = Read level + Antenna factor + cable loss-Amp factor
- 4, All the other emissions not reported were too low to read and deemed to comply with FCC limit.

1GHz—25GHz Radiated emissison Test result

EUT: Smart watch M/N: SF01

Power: DC 3.7V from battery

Test date: 2015-10-08 Test site: 3m Chamber Tested by: Peter

Test mode: π /4 DQPSK Tx CH40 2441MHz

Antenna polarity: Vertical

Amer	Antenna polarity. Vertical										
No	Freq (MHz)	Read Level (dBuV/m)	Antenna Factor (dB/m)	Cable loss(d B)	Amp Factor (dB)	Result (dBuV/m)	Limit (dBuV/ m)	Margin (dB)	Remark		
1	4882	44.18	33.93	10.2	34.29	54.02	74	19.98	PK		
2	4882	33.76	33.93	10.2	34.29	43.6	54	10.4	AV		
3	7323	/									
4	9764	/									
5	12205	/									
Anter	Antenna Polarity: Horizontal										
1	4882	44.18	33.93	10.2	34.29	54.02	74	19.98	PK		
2	4882	33.55	33.93	10.2	34.29	43.39	54	10.61	AV		
3	7323	/					·				

5 Note:

9764

12205

- 1, Measuring frequency from 1GHz to 25GHz
- 2, Spectrum Set for PK measure: RBW=1MHz, VBW=1MHz, Sweep time=Auto, Detector: PK
- 2, Spectrum Set for AV measure: RBW=1MHz, VBW=10Hz, Sweep time=Auto, Detector: PK
- 3, Result = Read level + Antenna factor + cable loss-Amp factor
- 4, All the other emissions not reported were too low to read and deemed to comply with FCC limit.

Report No.: T1850909 02

1GHz—25GHz Radiated emissison Test result										
EUT: Smart watch	M/N: SF01									
Power: DC 3.7V from batt	ery									
Test date: 2015-10-08	Test site: 3m Chamber Tested by: Peter									
Test mode: π /4 DQPSK	Tx CH79 2480MHz									

Antenna polarity: Vertical

No	Freq (MHz)	Read Level (dBuV/m)	Antenna Factor (dB/m)	Cable loss(d B)	Amp Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark		
1	4960	44.08	33.98	10.22	34.25	54.03	74	19.97	PK		
2	4960	33.93	33.98	10.22	34.25	43.88	54	10.12	AV		
3	7440	/									
4	9920	/									
5	12400	/									
Ant	Antenna Polarity: Horizontal										
1	4960	44.46	33.98	10.22	34.25	54.41	74	19.59	PK		
2	4960	34.03	33.98	10.22	34.25	43.98	54	10.02	AV		
3	7440	/									

Note:

4 99205 12400

- 1, Measuring frequency from 1GHz to 25GHz
- 2, Spectrum Set for PK measure: RBW=1MHz, VBW=1MHz, Sweep time=Auto, Detector: PK
- 2, Spectrum Set for AV measure: RBW=1MHz, VBW=10Hz, Sweep time=Auto, Detector: PK
- 3, Result = Read level + Antenna factor + cable loss-Amp factor
- 4, All the other emissions not reported were too low to read and deemed to comply with FCC limit.

1GHz—25GHz Radiated emissison	n Test	result
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EUT: Bluetooth earphone M/N: MDS-800X

Power: DC 5.0V From notebook

Test date: 2015-01-07 Test site: 3m Chamber Tested by: Peter

Test mode: 8- DQPSK Tx CH1 2402MHz

Antenna polarity: Vertical

MIII	zima pora	inty. Vertice	A1						
No	Freq (MHz)	Read Level (dBuV/m)	Antenna Factor (dB/m)	Cable loss(d B)	Amp Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4804	44.07	33.95	10.18	34.26	53.94	74	20.06	PK
2	4804	33.46	33.95	10.18	34.26	43.33	54	10.67	AV
3	7206	/							
4	9608	/							
5	12010	/							
Ante	enna Pola	rity: Horizo	ontal						
1	4804	43.75	33.95	10.18	34.26	53.62	74	20.38	PK
2	4804	33.12	33.95	10.18	34.26	42.99	54	11.01	AV
3	7206	/							
4	9608	/						·	
5	12010	/						·	

- 1, Measuring frequency from 1GHz to 25GHz
- 2, Spectrum Set for PK measure: RBW=1MHz, VBW=1MHz, Sweep time=Auto, Detector: PK
- 2, Spectrum Set for AV measure: RBW=1MHz, VBW=10Hz, Sweep time=Auto, Detector: PK
- 3, Result = Read level + Antenna factor + cable loss-Amp factor
- 4, All the other emissions not reported were too low to read and deemed to comply with FCC limit.

1GHz—	-25GHz	Radiated	emissison	Test result
IOIL	23 O112	Nauraicu	CIIIIOOIOOII	1 Cot 1 Court

EUT: Bluetooth earphone M/N: MDS-800X

Power: DC 5.0V From notebook

Test date: 2015-01-07 Test site: 3m Chamber Tested by: Peter

Test mode: 8- DQPSK Tx CH40 2441MHz

Antenna polarity: Vertical

Anter	ına potarı	ty: Verticai							
No	Freq (MHz)	Read Level (dBuV/m)	Antenna Factor (dB/m)	Cable loss(d B)	Amp Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4882	43.88	33.93	10.2	34.29	53.72	74	20.28	PK
2	4882	33.55	33.93	10.2	34.29	43.39	54	10.61	AV
3	7323	/							
4	9764	/							
5	12205	/							
Anter	nna Polari	ty: Horizon	ıtal						
1	4882	44.06	33.93	10.2	34.29	53.9	74	20.1	PK
2	4882	33.67	33.93	10.2	34.29	43.51	54	10.49	AV
3	7323	/							
4	9764	/							
5	12205	/							

- 1, Measuring frequency from 1GHz to 25GHz
- 2, Spectrum Set for PK measure: RBW=1MHz, VBW=1MHz, Sweep time=Auto, Detector: PK
- 2, Spectrum Set for AV measure: RBW=1MHz, VBW=10Hz, Sweep time=Auto, Detector: PK
- 3, Result = Read level + Antenna factor + cable loss-Amp factor
- 4, All the other emissions not reported were too low to read and deemed to comply with FCC limit.

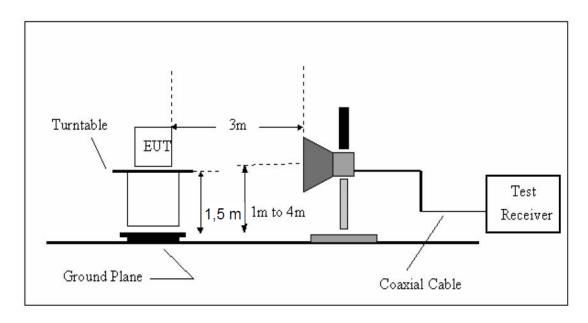
Report No.: T1850909 02

		1GI	Hz—25G	Hz Rad	iated en	nissison Tes	st result		
EU'.	Γ: Blueto	oth earphon	ie	M/	N: MD	S-800X			
Pow	er: DC	5.0V From	notebool	ζ.					
Test	t date: 20	15-01-07	Test site	e: 3m C	hamber	Tested by	y: Peter		
Test	t mode: 8	- DQPSK	Гх СН79	2480M	Hz				
Ant	enna pola	rity: Vertic	al						
No	Freq (MHz)	Read Level (dBuV/m)	Antenna Factor (dB/m)	Cable loss(d B)	Amp Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4960	43.86	33.98	10.22	34.25	53.81	74	20.19	PK
2	4960	35.08	33.98	10.22	34.25	45.03	54	8.97	AV
3	7440	/							
4	9920	/							
5	12400	/							
Ant	enna Pola	arity: Horizo	ontal						
1	4960	44.18	33.98	10.22	34.25	54.13	74	19.87	PK
2	4960	33.55	33.98	10.22	34.25	43.5	54	10.5	AV
3	7440	/							
4	9920	/							
5	12400	/							

- 1, Measuring frequency from 1GHz to 25GHz
- 2, Spectrum Set for PK measure: RBW=1MHz, VBW=1MHz, Sweep time=Auto, Detector: PK
- 2, Spectrum Set for AV measure: RBW=1MHz, VBW=10Hz, Sweep time=Auto, Detector: PK
- 3, Result = Read level + Antenna factor + cable loss-Amp factor
- 4, All the other emissions not reported were too low to read and deemed to comply with FCC limit.

9. Band Edge Compliance

9.1. Block Diagram of Test Setup



9.2. Limit

All the lower and upper band-edges emissions appearing within restricted frequency bands shall not exceed the limits shown in RSS-GEN, all the other emissions outside operation shall be at least 20dB below the fundamental emissions, or comply with RSS-GEN limits.

9.3. Test Procedure

All restriction band and non- restriction band have been tested $\,$, only worse case is reported.

9.4. Test Result

PASS. (See below detailed test data)

Radiated Method

GFSK (CH Low)

Band Edge Test result												
EUT: Smart v	EUT: Smart watch M/N: SF01											
Power: DC 3.	Power: DC 3.7V from battery											
Test date: 201	Test date: 2015-10-08 Test site: 3m Chamber Tested by: Peter											
Test mode: Tx CH Low 2402MHz												
Antenna polarity: Vertical												
Freq (MHz)	$(MHz) \qquad (dBuV/m) \qquad (dB/m) \qquad B) \qquad (dB) \qquad (dBuV/m) \qquad (dBuV/m) \qquad (dB)$											
2390	44.64	27.62	3.92	34.97	41.21	74	32.79	PK				
2390		27.62	3.92	34.97		54		AV				
2400	43.97	27.62	3.94	34.97	40.56	74	33.44	PK				
2400		27.62	3.94	34.97		54		AV				
Antenna Pola	rity: Horizo	ontal										
2390	44.13	27.62	3.92	34.97	40.7	74	33.3	PK				
2390		27.62	3.92	34.97		54		AV				
2400	44.34	27.62	3.94	34.97	40.93	74	33.07	PK				
2400		27.62	3.94	34.97		54		AV				
Note:												

- 1, Spectrum Set for PK measure: RBW=1MHz, VBW=1MHz, Sweep time=Auto, Detector: PK
- 2, Spectrum Set for AV measure: RBW=1MHz, VBW=10Hz, Sweep time=Auto, Detector: PK
- 3, Result = Read level + Antenna factor + cable loss-Amp factor
- 4, All the other emissions not reported were too low to read and deemed to comply with FCC limit.

GFSK (CH High)

			Band Ed	dge Test	result			
EUT: Smart v	watch		M/N: \$	SF01				
Power: DC 3.7V from battery								
Test date: 201	15-10-08	Test site	: 3m Cł	namber	Tested by	: Peter		
Test mode: T	x CH High	2480MH	Z					
Antenna pola	rity: Vertica	al						
Freq (MHz)	Read Level (dBuV/m)	Antenna Factor (dB/m)		Amp Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
2483.5	43.97	27.89	4	34.97	40.89	74	33.11	PK
2483.5						54		AV
Antenna Pola	rity: Horizo	ontal						
2483.5	44.16	27.89	4	34.97	41.08	74	32.92	PK
2483.5						54		AV

- 1, Spectrum Set for PK measure: RBW=1MHz, VBW=1MHz, Sweep time=Auto, Detector: PK
- 2, Spectrum Set for AV measure: RBW=1MHz, VBW=10Hz, Sweep time=Auto, Detector: PK
- 3, Result = Read level + Antenna factor + cable loss-Amp factor
- 4, All the other emissions not reported were too low to read and deemed to comply with FCC limit.

GFSK (Hopping Low)

		Band Ed	dge Test	result				
watch		M/N: S	SF01					
Power: DC 3.7V from battery								
15-10-08	Test site	: 3m Cł	namber	Tested by	: Peter			
X								
rity: Vertica	al							
Read Level (dBuV/m)	Factor		Amp Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	
42.97	27.62	3.92	34.97	39.54	74	34.46	PK	
	27.62	3.92	34.97		54		AV	
rity: Horizo	ontal							
43.92	27.62	3.92	34.97	40.49	74	33.51	PK	
	27.62	3.92	34.97		54		AV	
	rity: Vertica Read Level (dBuV/m) 42.97	.7V from battery 15-10-08 Test site ix rity: Vertical Read Antenna Level Factor (dBuV/m) (dB/m) 42.97 27.62 27.62 arity: Horizontal 43.92 27.62	watch M/N: \$.7V from battery 15-10-08 Test site: 3m Ch x rity: Vertical Read Antenna Cable Level Factor loss(d (dBuV/m) (dB/m) B) 42.97 27.62 3.92 27.62 3.92 arity: Horizontal 43.92 27.62 3.92	watch M/N: SF01 .7V from battery 15-10-08 Test site: 3m Chamber x rity: Vertical Read Antenna Cable Amp Level Factor loss(d Factor (dBuV/m) (dB/m) B) (dB) 42.97 27.62 3.92 34.97 27.62 3.92 34.97 arity: Horizontal 43.92 27.62 3.92 34.97	.7V from battery 15-10-08 Test site: 3m Chamber Tested by x rity: Vertical Read Antenna Cable Amp Level Factor (dBuV/m) (dB/m) B) (dB) 42.97 27.62 3.92 34.97 39.54 27.62 3.92 34.97 rity: Horizontal 43.92 27.62 3.92 34.97 40.49	Note	Note	

- 1, Spectrum Set for PK measure: RBW=1MHz, VBW=1MHz, Sweep time=Auto, Detector: PK
- 2, Spectrum Set for AV measure: RBW=1MHz, VBW=10Hz, Sweep time=Auto, Detector: PK
- 3, Result = Read level + Antenna factor + cable loss-Amp factor
- 4, All the other emissions not reported were too low to read and deemed to comply with FCC limit.

GFSK (Hopping High)

			Band Ed	lge Test	result			
EUT: Smart v	watch		M/N: S	SF01				
Power: DC 3.	.7V from ba	ittery						
Test date: 20	15-10-08	Test site	: 3m Cł	namber	Tested by	: Peter		
Test mode: T	X							
Antenna pola	rity: Vertica	al						
Freq (MHz)	Read Level (dBuV/m)	Antenna Factor (dB/m)		Amp Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
2483.5	43.44	27.89	4	34.97	40.36	74	33.64	PK
2483.5						54		AV
Antenna Pola	rity: Horizo	ntal						
2483.5	43.66	27.89	4	34.97	40.58	74	33.42	PK
2483.5						54		AV

- 1, Spectrum Set for PK measure: RBW=1MHz, VBW=1MHz, Sweep time=Auto, Detector: PK
- 2, Spectrum Set for AV measure: RBW=1MHz, VBW=10Hz, Sweep time=Auto, Detector: PK
- 3, Result = Read level + Antenna factor + cable loss-Amp factor
- 4, All the other emissions not reported were too low to read and deemed to comply with FCC limit.

$\pi/4$ DQPSK (CH Low)

		,	Band Ed	dge Test	result			
EUT: Smart watch M/N: SF01								
Power: DC 3.7V from battery								
Test date: 201	15-10-08	Test site	: 3m Cł	namber	Tested by	: Peter		
Test mode: T	x CH Low 2	2402MHz						
Antenna pola	rity: Vertica	al						
Freq (MHz)	Read Level (dBuV/m)	Antenna Factor (dB/m)	Cable loss(d B)	Amp Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
2390	43.74	27.62	3.92	34.97	40.31	74	33.69	PK
2390		27.62	3.92	34.97		54		AV
Antenna Pola	rity: Horizo	ontal						
2390	44.06	27.62	3.92	34.97	40.63	74	33.37	PK
2390		27.62	3.92	34.97		54		AV

- 1, Spectrum Set for PK measure: RBW=1MHz, VBW=1MHz, Sweep time=Auto, Detector: PK
- 2, Spectrum Set for AV measure: RBW=1MHz, VBW=10Hz, Sweep time=Auto, Detector: PK
- 3, Result = Read level + Antenna factor + cable loss-Amp factor
- 4, All the other emissions not reported were too low to read and deemed to comply with FCC limit.

π /4 DQPSK (CH High)

			Band Ed	ige Test	result			
EUT: Smart watch M/N: SF01								
Power: DC 3.7V from battery								
Test date: 201	15-10-08	Test site	: 3m Cl	namber	Tested by	: Peter		
Test mode: T	x CH High	2480MH	Z					
Antenna pola	rity: Vertica	al						
Freq (MHz)	Read Level (dBuV/m)	Antenna Factor (dB/m)		Amp Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
2483.5	43.15	27.89	4	34.97	40.07	74	33.93	PK
2483.5						54		AV
Antenna Pola	rity: Horizo	ontal						
2483.5	43.59	27.89	4	34.97	40.51	74	33.49	PK
2483.5						54		AV
Note:								

- 1, Spectrum Set for PK measure: RBW=1MHz, VBW=1MHz, Sweep time=Auto, Detector: PK
- 2, Spectrum Set for AV measure: RBW=1MHz, VBW=10Hz, Sweep time=Auto, Detector: PK
- 3, Result = Read level + Antenna factor + cable loss-Amp factor
- 4, All the other emissions not reported were too low to read and deemed to comply with FCC limit.

π /4 DQPSK (Hopping Low)

			Band Ed	dge Test	result			
EUT: Smart watch M/N: SF01								
Power: DC 3.7V from battery								
Test date: 201	15-10-08	Test site	: 3m Cł	namber	Tested by	: Peter		
Test mode:								
Antenna pola	rity: Vertica	al						
Freq (MHz)	Read Level (dBuV/m)	Antenna Factor (dB/m)	Cable loss(d B)	Amp Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
2390	43.74	27.62	3.92	34.97	40.31	74	33.69	PK
2390		27.62	3.92	34.97		54		AV
Antenna Pola	rity: Horizo	ontal		I	I		I	
2390	43.7	27.62	3.92	34.97	40.27	74	33.73	PK
2390		27.62	3.92	34.97		54		AV
Note:								

- 1, Spectrum Set for PK measure: RBW=1MHz, VBW=1MHz, Sweep time=Auto, Detector: PK
- 2, Spectrum Set for AV measure: RBW=1MHz, VBW=10Hz, Sweep time=Auto, Detector: PK
- 3, Result = Read level + Antenna factor + cable loss-Amp factor
- 4, All the other emissions not reported were too low to read and deemed to comply with FCC limit.

 π /4 DQPSK (Hopping High)

			Band Ed	dge Test	result			
EUT: Smart v	watch		M/N: \$	SF01				
Power: DC 3.	.7V from ba	ittery						
Test date: 20	15-10-08	Test site	: 3m Cl	namber	Tested by	: Peter		
Test mode: T	X							
Antenna pola	rity: Vertica	al						
Freq (MHz)	Read Level (dBuV/m)	Antenna Factor (dB/m)	Cable loss(d B)	Amp Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
2483.5	42.99	27.89	4	34.97	39.91	74	34.09	PK
2483.5						54		AV
Antenna Pola		1	Γ	T	1	Г	1	
2483.5	44.24	27.89	4	34.97	41.16	74	32.84	PK
2483.5						54		AV
NT. 4								

- 1, Spectrum Set for PK measure: RBW=1MHz, VBW=1MHz, Sweep time=Auto, Detector: PK
- 2, Spectrum Set for AV measure: RBW=1MHz, VBW=10Hz, Sweep time=Auto, Detector: PK
- 3, Result = Read level + Antenna factor + cable loss-Amp factor
- 4, All the other emissions not reported were too low to read and deemed to comply with FCC limit.

8- DPSK (CH Low)

			Band Ed	dge Test	result				
EUT: Smart v	watch		M/N: \$	SF01					
Power: DC 3.7V from battery									
Test date: 201	15-10-08	Test site	: 3m Cł	namber	Tested by	: Peter			
Test mode: T	x CH Low 2	2402MHz	Z						
Antenna pola	rity: Vertica	al							
Freq (MHz)	Read Level (dBuV/m)	Antenna Factor (dB/m)		Amp Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	
2390	43.92	27.62	3.92	34.97	40.49	74	33.51	PK	
2390		27.62	3.92	34.97		54		AV	
Antenna Pola	rity: Horizo	ntal		<u> </u>			<u> </u>		
2390	44.13	27.62	3.92	34.97	40.7	74	33.3	PK	
2390		27.62	3.92	34.97		54		AV	

- 1, Spectrum Set for PK measure: RBW=1MHz, VBW=1MHz, Sweep time=Auto, Detector: PK
- 2, Spectrum Set for AV measure: RBW=1MHz, VBW=10Hz, Sweep time=Auto, Detector: PK
- 3, Result = Read level + Antenna factor + cable loss-Amp factor
- 4, All the other emissions not reported were too low to read and deemed to comply with FCC limit.

8- DPSK (CH High)

		Band Ed	ige Test	result				
EUT: Smart watch M/N: SF01								
Power: DC 3.7V from battery								
15-10-08	Test site	: 3m Cł	namber	Tested by	: Peter			
x CH High	2480MH	Z						
rity: Vertica	ıl							
Read Level (dBuV/m)	Factor		Amp Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	
42.97	27.89	4	34.97	39.89	74	34.11	PK	
					54		AV	
rity: Horizo	ontal							
44.32	27.89	4	34.97	41.24	74	32.76	PK	
					54		AV	
	.7V from ba 15-10-08 x CH High rity: Vertica Read Level (dBuV/m) 42.97	.7V from battery 15-10-08 Test site x CH High 2480MHz rity: Vertical Read Antenna Level Factor (dBuV/m) (dB/m) 42.97 27.89	watch M/N: S 7V from battery 15-10-08 Test site: 3m Ch x CH High 2480MHz rity: Vertical Read Antenna Cable Level Factor loss(d (dBuV/m) (dB/m) B) 42.97 27.89 4 rity: Horizontal	watch M/N: SF01 .7V from battery 15-10-08 Test site: 3m Chamber x CH High 2480MHz rity: Vertical Read Antenna Cable Amp Level Factor (dBuV/m) (dB/m) B) (dB) 42.97 27.89 4 34.97	.7V from battery 15-10-08 Test site: 3m Chamber Tested by x CH High 2480MHz rity: Vertical Read Antenna Cable Amp Level Factor loss(d Factor (dBuV/m) (dB/m) B) (dB) 42.97 27.89 4 34.97 39.89	Note	Note	

- 1, Spectrum Set for PK measure: RBW=1MHz, VBW=1MHz, Sweep time=Auto, Detector: PK
- 2, Spectrum Set for AV measure: RBW=1MHz, VBW=10Hz, Sweep time=Auto, Detector: PK
- 3, Result = Read level + Antenna factor + cable loss-Amp factor
- 4, All the other emissions not reported were too low to read and deemed to comply with FCC limit.

8- DPSK (Hopping Low)

			Band Ed	dge Test	result			
EUT: Smart v	watch		M/N: \$	SF01				
Power: DC 3.	7V from ba	ittery						
Test date: 201	15-10-08	Test site	: 3m Cł	namber	Tested by	: Peter		
Test mode: T	X							
Antenna pola	rity: Vertica	al						
Freq (MHz)	Read Level (dBuV/m)	Antenna Factor (dB/m)		Amp Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
2390	43.64	27.62	3.92	34.97	40.21	74	33.79	PK
2390		27.62	3.92	34.97		54		AV
Antenna Pola	rity: Horizo	ntal						
2390	44.17	27.62	3.92	34.97	40.74	74	33.26	PK
2390		27.62	3.92	34.97		54		AV
Note:								

- 1, Spectrum Set for PK measure: RBW=1MHz, VBW=1MHz, Sweep time=Auto, Detector: PK
- 2, Spectrum Set for AV measure: RBW=1MHz, VBW=10Hz, Sweep time=Auto, Detector: PK
- 3, Result = Read level + Antenna factor + cable loss-Amp factor
- 4, All the other emissions not reported were too low to read and deemed to comply with FCC limit.

8- DPSK (Hopping High)

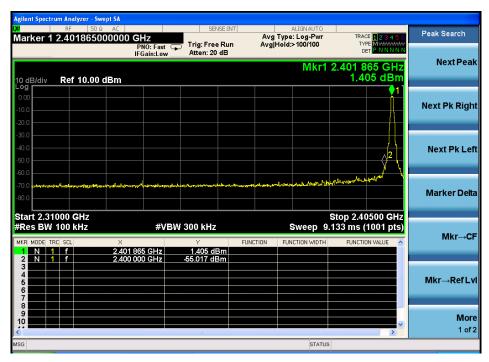
	pping mgn	. /			1.			
				dge Test	result			
EUT: Smart v	watch		M/N: 5	SF01				
Power: DC 3.	7V from ba	ittery						
Test date: 201	15-10-08	Test site	: 3m Cl	namber	Tested by	: Peter		
Test mode: T	X							
Antenna pola	rity: Vertica	al						
Freq (MHz)	Read Level (dBuV/m)	Antenna Factor (dB/m)	Cable loss(d B)	Amp Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
2483.5	43.06	27.89	4	34.97	39.98	74	34.02	PK
2483.5						54		AV
Antenna Pola	rity: Horizo	ontal						
2483.5	43.77	27.89	4	34.97	40.69	74	33.31	PK
2483.5						54		AV

- 1, Spectrum Set for PK measure: RBW=1MHz, VBW=1MHz, Sweep time=Auto, Detector: PK
- 2, Spectrum Set for AV measure: RBW=1MHz, VBW=10Hz, Sweep time=Auto, Detector: PK
- 3, Result = Read level + Antenna factor + cable loss-Amp factor
- 4, All the other emissions not reported were too low to read and deemed to comply with FCC limit.

Conducted Method

GFSK

CH LOW:

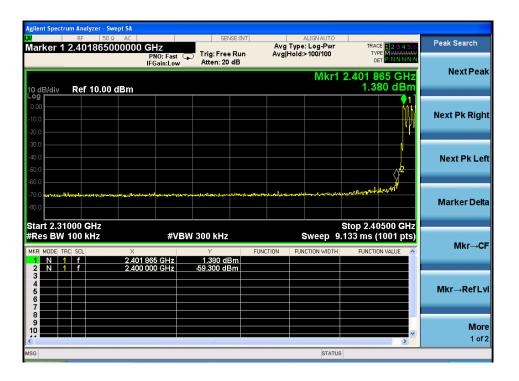


CH High:

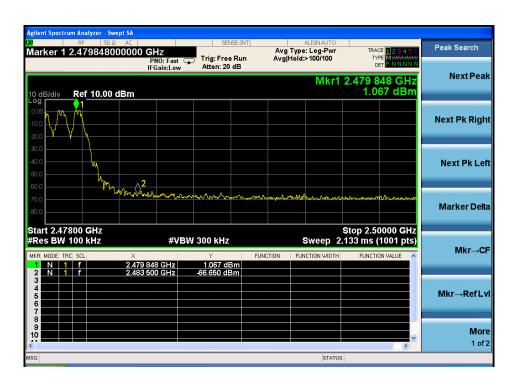


Hopping

Low



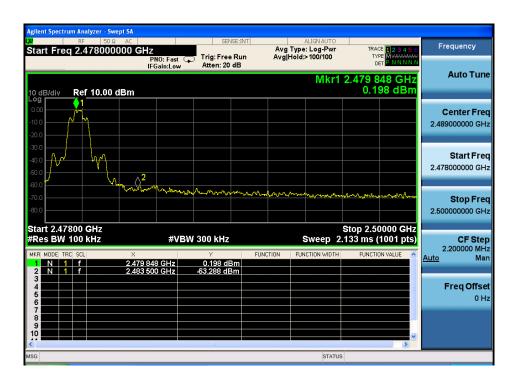
High



π /4 DQPSK

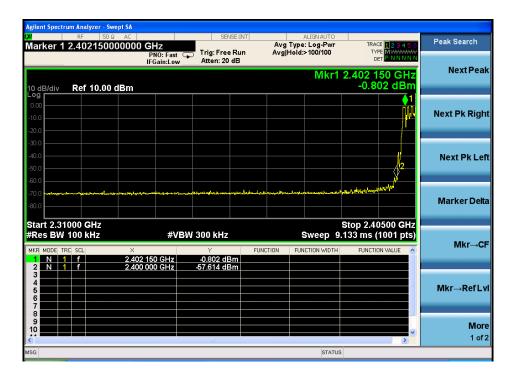
Low





Hopping

Low

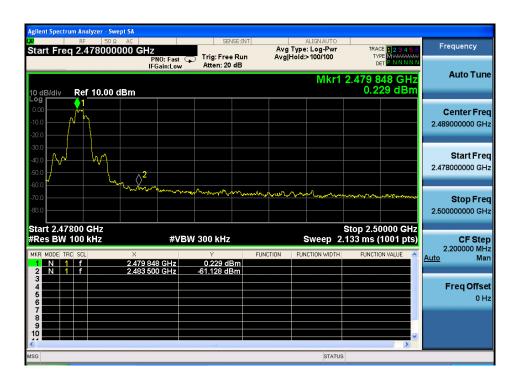




8- DPSK:

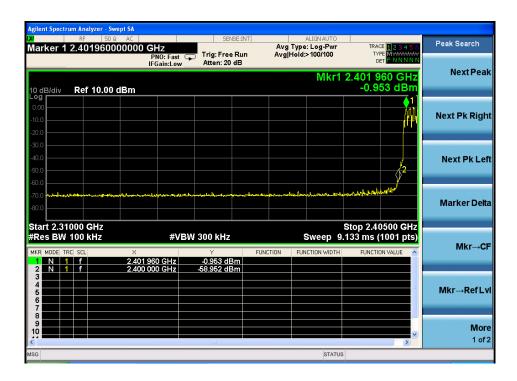
Low





Hopping

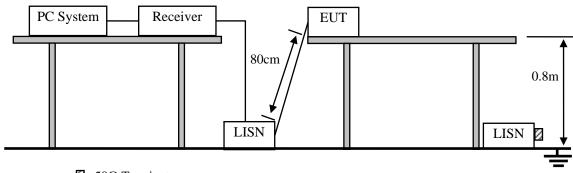
Low





10. Power Line Conducted Emissions

10.1.Block Diagram of Test Setup



:50Ω Terminator

10.2.Limit

	Maximum R	F Line Voltage
Frequency	Quasi-Peak Level	Average Level
	$dB(\mu V)$	$dB(\mu V)$
150kHz ~ 500kHz	66 ~ 56*	56 ~ 46*
500kHz ~ 5MHz	56	46
5MHz ~ 30MHz	60	50

Notes: 1. * Decreasing linearly with logarithm of frequency.

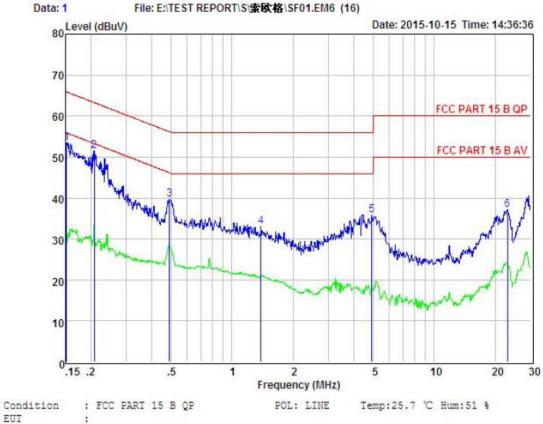
2. The lower limit shall apply at the transition frequencies.

10.3.Test Procedure

- (1) The EUT was placed on a non-metallic table, 80cm above the ground plane.
- (2) Setup the EUT and simulator as shown in 10.1
- (3) The EUT Power connected to the power mains through a power adapter and a line impedance stabilization network (L.I.S.N1). The other peripheral devices power cord connected to the power mains through a line impedance stabilization network (L.I.S.N2), this provided a 50-ohm coupling impedance for the EUT (Please refer to the block diagram of the test setup and photographs). Both sides of power line were checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipments and all of the interface cables were changed according to ANSI C63.4 2014 on conducted Emission test.
- (4) The bandwidth of test receiver is set at 10KHz.
- (5) The frequency range from 150 KHz to 30MHz is checked.

10.4. Test Result

PASS. (See below detailed test data)



Model No : SF01

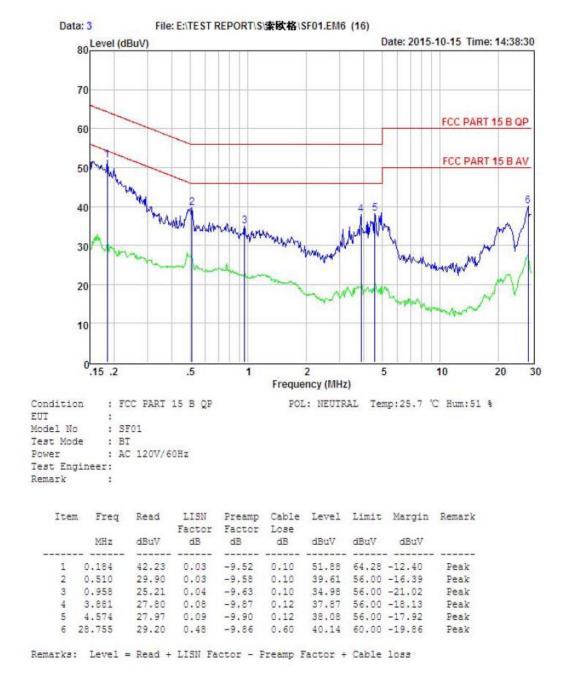
: BT Test Mode

: AC 120V/60Hz Power Test Engineer:

Remark

Item		Read	LISN Factor	Preamp Factor	Lose	Level		Margin	Remark
	MHz	dBuV	dB	dB	dB	dBuV	dBuV	dBuV	
1	0.152	43.71	0.03	-9.52	0.10	53.36	65.91	-12.55	Peak
2	0.208	41.75	0.03	-9.52	0.10	51.40	63.27	-11.87	Peak
3	0.491	30.02	0.03	-9.58	0.10	39.73	56.14	-16.41	Peak
4	1.388	23.17	0.05	-9.66	0.10	32.98	56.00	-23.02	Peak
5	4.900	25.76	0.10	-9.92	0.12	35.90	56.00	-20.10	Peak
6	23.018	26.37	0.42	-9.82	0.43	37.04	60.00	-22.96	Peak

Remarks: Level = Read + LISN Factor - Preamp Factor + Cable loss



Note: If QP Result comply with AV limit, AV Result is deemed to comply with AV limit

Report No.: T1850909 02

11. Antenna Requirements

11.1.Limit

For intentional device, according to RSS-GEN, 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. And according to RSS-GEN, if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

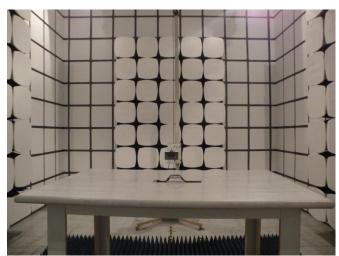
11.2.Result

The antennas used for this product are PCB Antenna for Bluetooth, no antenna other than that furnished by the responsible party shall be used with the device, the maximum peak gain of the transmit antenna is only -2dBi.

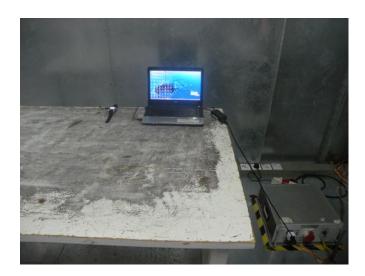
12. Test setup photo

12.1.Photos of Radiated emission





12.2.Photos of Conducted Emission test



13.Photos of EUT









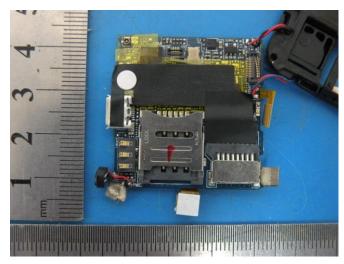


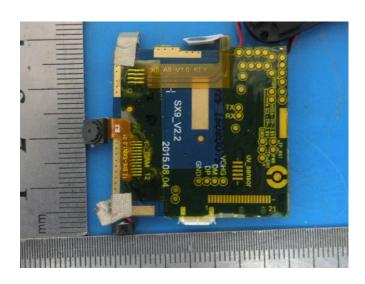


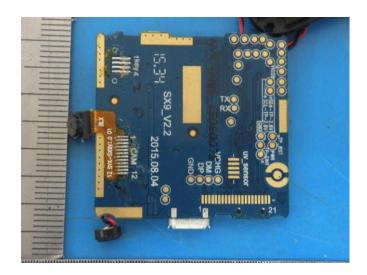


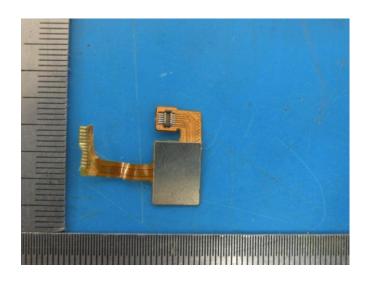


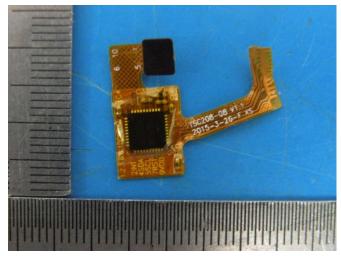












-----END OF THE REPORT-----