# **FCC Test Report**

Report No.: AGC06913160501FE03

FCC ID 2AIM7JAZZ6

**Original Equipment APPLICATION PURPOSE** 

**PRODUCT DESIGNATION** Bluetooth Headset

**BRAND NAME** BlueFit, Kavoxii

**MODEL NAME** See page 4

**CLIENT** Shenzhen Liangzi Zhineng Technology Co., Ltd.

**DATE OF ISSUE** May 27,2016

STANDARD(S)

FCC Part 15 Rules **TEST PROCEDURE(S)** 

REPORT VERSION : V1.0

> Gompliance (Shenzhen) Co., Ltd Attestation of Globa

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# Report Revise Record

Report Version	Revise Time	Issued Date	Valid Version	Notes
V1.0	1	May 27,2016	Valid	Original Report

### **TABLE OF CONTENTS**

1. VERIFICATION OF CONFORMITY	4
2. GENERAL INFORMATION	5
2.1. PRODUCT DESCRIPTION	5
2.2. TABLE OF CARRIER FREQUENCYS	
3. MEASUREMENT UNCERTAINTY	7
4. DESCRIPTION OF TEST MODES	7
5. SYSTEM TEST CONFIGURATION	8
5.1. CONFIGURATION OF EUT SYSTEM	8
5.2. EQUIPMENT USED IN EUT SYSTEM	8
5.3. SUMMARY OF TEST RESULTS	8
6. TEST FACILITY	9
TEST METHODOLOGY	9
7. ALL TEST EQUIPMENT LIST	9
8. RADIATED EMISSION	
8.1TEST LIMIT	11
8.2. MEASUREMENT PROCEDURE	12
8.3. TEST SETUP	14
8.4. TEST RESULT	16
9. BAND EDGE EMISSION	44
9.1. MEASUREMENT PROCEDURE	
9.2 TEST SETUP	44
9.3 RADIATED TEST RESULT	45
10. BANDWIDTH	53
10.1. MEASUREMENT PROCEDURE	53
10.2. TEST SET-UP	53
10.3. LIMITS AND MEASUREMENT RESULTS	53
11. FCC LINE CONDUCTED EMISSION TEST	62
11.1. LIMITS OF LINE CONDUCTED EMISSION TEST	62
11.2. BLOCK DIAGRAM OF LINE CONDUCTED EMISSION TEST	62
11.3. PRELIMINARY PROCEDURE OF LINE CONDUCTED EMISSION TEST	63
11.4. FINAL PROCEDURE OF LINE CONDUCTED EMISSION TEST	63
11.5. TEST RESULT OF LINE CONDUCTED EMISSION TEST	63
APPENDIX A: PHOTOGRAPHS OF TEST SETUP	64
APPENDIX B: PHOTOGRAPHS OF EUT	65

#### 1. VERIFICATION OF CONFORMITY

Applicant	Shenzhen Liangzi Zhineng Technology Co., Ltd.	
Address	#505, Building A2, Baoshan Industrial Dt., Minzhi Longhua District, Shenzhen, China	
Manufacturer Shenzhen Liangzi Zhineng Technology Co., Ltd.		
Address	#505, Building A2, Baoshan Industrial Dt., Minzhi Longhua District, Shenzhen, China	
Product Designation	Bluetooth Headset	
Brand Name	BlueFit , Kavoxii	
Test Model	BlueFit JAZZ 6	
Series Model	BlueFit JAZZ 7, BlueFit JAZZ 8, BlueFit JAZZ 9, BlueFit JAZZ 10,Kavoxii Blues 4, Kavoxii Blues 5, Kavoxii Blues 6, Kavoxii Blues 7, Kavoxii Blues 8	
Difference description	All the same except for model name	
Date of test	May 23, 2016 to May 25, 2016	
Deviation	None	
Condition of Test Sample	Normal	
Report Template	AGCRT-US-BR/RF	

We hereby certify that:

The above equipment was tested by Dongguan Precise Testing Service Co., Ltd. The test data, the energy emitted by the sample tested as described in this report is in compliance with the requirements of FCC Rules Part 15.249.

Tested By	Trinse Unang	
	Time Huang(Huang Nanhui)	May 27,2016
Reviewed By	Lowers ce	
	Forrest Lei(Lei Yonggang)	May 27,2016
Approved By	Selya shong	
	Solger Zhang(Zhang Hongyi) Authorized Officer	May 27,2016

#### 2. GENERAL INFORMATION

#### 2.1. PRODUCT DESCRIPTION

A major technical description of EUT is described as following

Operation Frequency	2.402 GHz to 2.480GHz		
RF Output Power	2.38dBm(Max)		
Bluetooth Version V4.1			
Modulation	GFSK, π /4-DQPSK, 8DPSK for BR/EDR;GFSK for BLE		
Number of channels	79 for BR/EDR, 40 for BLE		
Hardware Version	K6-0A		
Software Version	v3		
Antenna Designation	PCB Antenna		
Antenna Gain	0dBi		
Power Supply DC 3.7V			
Note: 1. The USB port only used for charging and can't be used to transfer data with PC.			

Note: 1. The USB port only used for charging and can't be used to transfer data with PC.

2. The EUT didn't work when charging.

#### 2.2. TABLE OF CARRIER FREQUENCYS

BR/EDR channel List

Frequency Band	Channel Number	Frequency
	0	2402MHZ
	1	2403MHZ
	:	:
	38	2440 MHZ
2400~2483.5MHZ	39	2441 MHZ
	40	2442 MHZ
	:	:
	77	2479 MHZ
	78	2480 MHZ

# **BLE Channel List**

Frequency Band	Channel Number	Frequency
	0	2402MHZ
	1	2404MHZ
2400~2483.5MHZ	:	:
	38	2478 MHZ
	39	2480 MHZ

#### 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 %  $\sim$ 

No.	Item	Uncertainty
1	Conducted Emission Test	±3.18dB
2	All emissions,radiated	±3.91dB
3	Temperature	±0.5°C
4	Humidity	±2%

#### 4. DESCRIPTION OF TEST MODES

1 Low channel GFSK 2 Middle channel GFSK 3 High channel GFSK 4 Low channel π /4-DQPSK 5 Middle channel π /4-DQPSK 6 High channel π /4-DQPSK 7 Low channel 8DPSK 8 Middle channel 8DPSK 9 High channel 8DPSK	NO.	TEST MODE DESCRIPTION	
3 High channel GFSK 4 Low channel π /4-DQPSK 5 Middle channel π /4-DQPSK 6 High channel π /4-DQPSK 7 Low channel 8DPSK 8 Middle channel 8DPSK	1	Low channel GFSK	
4 Low channel π /4-DQPSK 5 Middle channel π /4-DQPSK 6 High channel π /4-DQPSK 7 Low channel 8DPSK 8 Middle channel 8DPSK	2	Middle channel GFSK	
5 Middle channel π /4-DQPSK 6 High channel π /4-DQPSK 7 Low channel 8DPSK 8 Middle channel 8DPSK	3	High channel GFSK	
6 High channel π /4-DQPSK 7 Low channel 8DPSK 8 Middle channel 8DPSK	4	Low channel π /4-DQPSK	
7 Low channel 8DPSK 8 Middle channel 8DPSK	5	Middle channel π /4-DQPSK	
8 Middle channel 8DPSK	6	High channel π /4-DQPSK	
	7	Low channel 8DPSK	
9 High channel 8DPSK	8	Middle channel 8DPSK	
	9	High channel 8DPSK	
10 BT Link	10	BT Link	

#### Note:

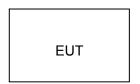
- 1. All the test modes can be supply by battery, only the result of the worst case was recorded in the report, if no other cases.
- 2. For Radiated Emission, 3axis were chosen for testing for each applicable mode.
- 3. The EUT used fully-charged battery when tested.

Page 8 of 70

#### 5. SYSTEM TEST CONFIGURATION

#### **5.1. CONFIGURATION OF EUT SYSTEM**

Configure 1: (Normal hopping)



Configure 2: (Control continuous TX)



#### **5.2. EQUIPMENT USED IN EUT SYSTEM**

ITEM	EQUIPMENT	MFR/BRAND	MODEL/TYPE NO.	REMARK
1	Bluetooth Headset	BlueFit , Kavoxii	BlueFit JAZZ 6	EUT
2	PC	Sony	E1412AYCW	A.E
3	Control box	CSR	N/A	A.E

#### **5.3. SUMMARY OF TEST RESULTS**

FCC RULES	DESCRIPTION OF TEST	RESULT
§15.249	Radiated Emission	Compliant
§15.249	Band Edges	Compliant
§15.207	Conduction Emission	N/A
§15.215	Bandwidth	Compliant

Note: N/A means it's not applicable to this item.

#### **6. TEST FACILITY**

Site Dongguan Precise Testing Service Co., Ltd.	
<b>Location</b> Building D,Baoding Technology Park,Guangming Road2,Dongcheng Distribution Dongguan, Guangdong, China,	
FCC Registration No.	371540
Description	The test site is constructed and calibrated to meet the FCC requirements in documents ANSI C63.10:2013.

#### **TEST METHODOLOGY**

All measurements contained in this report were conducted with ANSI C63.10-2013.

#### 7. ALL TEST EQUIPMENT LIST

FOR RADIATED EMISSION TEST (BELOW 1GHZ)

	Radiat	ted Emission Tes	t Site		
Name of Equipment	Manufacturer	Model Number	Serial Number	Last Calibration	Due Calibration
EMI Test Receiver	Rohde & Schwarz	ESCI	101417	July 4, 2015	July 3, 2016
Trilog Broadband Antenna (25M-1GHz)	SCHWARZBECK	VULB9160	9160-3355	July 4, 2015	July 3, 2016
Signal Amplifier	SCHWARZBECK	BBV 9475	9745-0013	July 4, 2015	July 3, 2016
RF Cable	SCHWARZBECK	AK9515E	96221	July 4, 2015	July 3, 2016
3m Anechoic Chamber	CHENGYU	966	PTS-001	June 6, 2015	June 5, 2016
MULTI-DEVICE Positioning Controller	Max-Full	MF-7802	MF780208339	N/A	N/A
Active loop antenna (9K-30MHz)	Schwarzbeck	FMZB1519	1519-038	June 6, 2015	June 5, 2016
Spectrum analyzer	Agilent	E4407B	MY46185649	June 6, 2015	June 5, 2016
Radiation Cable 1	MXT	RS1	R005	June 6, 2015	June 5, 2016
Radiation Cable 2	MXT	RS1	R006	June 6, 2015	June 5, 2016

FOR RADIATED EMISSION TEST (1GHZ ABOVE)

	Radiated Emission Test Site											
Name of Equipment	Manufacturer	Model Number	Serial Number	Last Calibration	Due Calibration							
EMI Test Receiver	Rohde & Schwarz	ESCI	101417	July 4, 2015	July 3, 2016							
Horn Antenna (1G-18GHz)	SCHWARZBECK	BBHA9120D	9120D-1246	July 11, 2015	July 10, 2016							
Spectrum Analyzer	Agilent	E4411B	MY4511453	July 4, 2015	July 3, 2016							
Signal Amplifier	SCHWARZBECK	BBV 9718	9718-269	July 7, 2015	July 6, 2016							
RF Cable	SCHWARZBECK	AK9515H	96220	July 8, 2015	July 7, 2016							
3m Anechoic Chamber	CHENGYU	966	PTS-001	June 6, 2015	June 5, 2016							
MULTI-DEVICE Positioning Controller	Max-Full	MF-7802	MF780208339	N/A	N/A							
Horn Ant (18G-40GHz)	Schwarzbeck	BBHA 9170	9170-181	June 6, 2015	June 5, 2016							
Radiation Cable 1	MXT	RS1	R005	June 6, 2015	June 5, 2016							
Radiation Cable 2	MXT	RS1	R006	June 6, 2015	June 5, 2016							

#### 8. RADIATED EMISSION

#### 8.1TEST LIMIT

#### Standard FCC15.249

Fundamental Frequency	Field Strength of Fundamental	Field Strength of Harmonics
	(millivolts/meter)	(microvolts/meter)
900-928MHz	50	500
2400-2483.5MHz	50	500
5725-5875MHz	50	500
24.0-24.25GHz	250	2500

#### Standard FCC 15.209

Frequency	Distance	Field	Strengths Limit
(MHz)	IHz) Meters		dB(μV)/m
0.009 ~ 0.490	300	2400/F(kHz)	
0.490 ~ 1.705	30	24000/F(kHz)	
1.705 ~ 30	30	30	
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	Other:74.0 dB(µV)/m	(Peak) 54.0 dB(μV)/m (Average)

Remark:

- (1) Emission level dB  $\mu$  V = 20 log Emission level  $\mu$  V/m
- (2) The smaller limit shall apply at the cross point between two frequency bands.
- (3) Distance is the distance in meters between the measuring instrument, antenna and the closest point of any part of the device or system.

Report No.:AGC06913160501FE03 Page 12 of 70

#### **8.2. MEASUREMENT PROCEDURE**

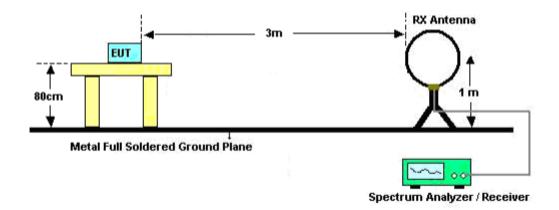
- 1. The measuring distance of 3m shall be used for measurements. The EUT was placed on the top of a rotating table 0.8 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation(below 1GHz)
- 2. The measuring distance of 3m shall used for measurements. The EUT was placed on the top of a rotating table 1.5 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation(above 1GHz)
- 3. The height of the test antenna shall vary between 1m to 4m.Both horizontal and vertical polarization Of the antenna are set to make the measurement.
- 4. The initial step in collecting radiated emission data is a receive peak detector mode. Pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
- 5. All readings are peak unless otherwise stated QP in column of Note. Peak denoted that the Peak reading compliance with the QP limits and then QP Mode measurement didn't perform(Below 1GHz)
- 6. All readings are Peak mode value unless otherwise stated AVG in column of Note. If the Peak mode measured value compliance with the Peak limits and lower than AVG Limits, the EUT shall be deemed to meet Peak & AVG limits and then only Peak mode was measured, but AVG mode didn't perform.(above 1GHz)

The following table is the setting of spectrum analyzer and receiver.

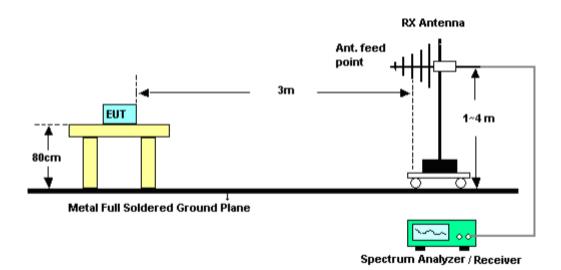
Spectrum Parameter	Setting
Start ~Stop Frequency	9KHz~150KHz/RB 200Hz for QP
Start ~Stop Frequency	150KHz~30MHz/RB 9KHz for QP
Start ~Stop Frequency	30MHz~1000MHz/RB 120KHz for QP
Start ~Stop Frequency	1GHz~26.5GHz 1MHz/3MHz for Peak, 1MHz/10Hz for Average
Receiver Parameter	Setting
Start ~Stop Frequency	9KHz~150KHz/RB 200Hz for QP
Start ~Stop Frequency	150KHz~30MHz/RB 9KHz for QP
Start ~Stop Frequency	30MHz~1000MHz/RB 120KHz for QP

#### 8.3. TEST SETUP

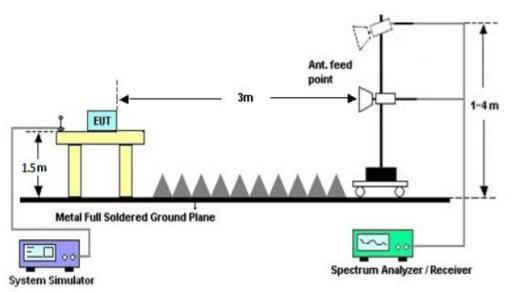
# Radiated Emission Test-Setup Frequency Below 30MHz



#### RADIATED EMISSION TEST SETUP 30MHz-1000MHz



# RADIATED EMISSION TEST SETUP ABOVE 1000MHz



#### 8.4. TEST RESULT

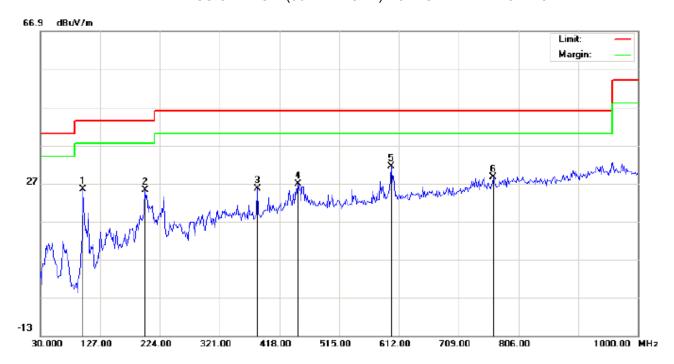
#### FOR BR/EDR (Worst modulation:GFSK)

#### **RADIATED EMISSION BELOW 30MHZ**

No emission found between lowest internal used/generated frequencies to 30MHz.

#### **RADIATED EMISSION BELOW 1GHZ**

RADIATED EMISSION TEST- (30MHZ-1GHZ)-LOW CHANNEL-HORIZONTAL



Limit: FCC Class B 3M Radiation

EUT: Bluetooth Headset M/N: BlueFit JAZZ 6

Mode: Low Channel TX

Note:

Site: site #1

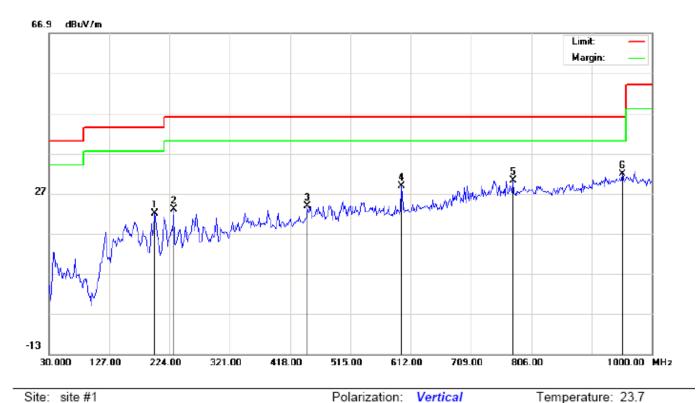
Polarization:	Horizontal	Temperatu	ıre: 23.7
Power:		Humidity:	55.6 %

Distance:

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
	-	MHz	dBu∀	dB/m	dBu∀/m	dBu∀/m	dB		cm	degree	
1		99.5167	15.37	10.00	25.37	43.50	-18.13	peak			
2		199.7500	13.22	11.99	25.21	43.50	-18.29	peak			
3		382.4333	6.56	18.95	25.51	46.00	-20.49	peak			
4		448.7167	6.25	20.55	26.80	46.00	-19.20	peak			
5	*	599.0667	7.60	23.71	31.31	46.00	-14.69	peak		·	
6		765.5833	1.86	26.84	28.70	46.00	-17.30	peak			

Humidity: 55.6 %

#### RADIATED EMISSION TEST- (30MHZ-1GHZ)-LOW CHANNEL -VERTICAL



Limit: FCC Class B 3M Radiation

EUT: Bluetooth Headset

M/N: BlueFit JAZZ 6 Mode: Low Channel TX

Note:

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height		Comment
	-	MHz	dBu∀	dB/m	dBuV/m	dBu∀/m	dB		cm	degree	
1		199.7500	12.86	9.06	21.92	43.50	-21.58	peak		·	
2		230.4667	11.06	11.99	23.05	46.00	-22.95	peak			
3		445.4833	3.43	20.45	23.88	46.00	-22.12	peak			
4		597.4500	5.99	22.72	28.71	46.00	-17.29	peak			
5		776.9000	3.25	27.00	30.25	46.00	-15.75	peak			

46.00

-14.11

peak

Power:

Distance:

#### **RESULT: PASS**

953.1167

1.92

6

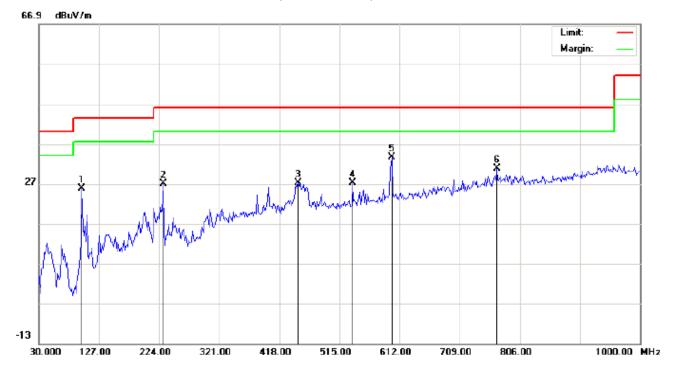
Note: 1. Factor=Antenna Factor + Cable loss, Margin=Measurement-Limit.

29.97

31.89

2. The "Factor" value can be calculated automatically by software of measurement system.

#### RADIATED EMISSION TEST- (30MHZ-1GHZ)-MIDDLE CHANNEL-HORIZONTAL



Site: site #1 Limit: FCC Class B 3M Radiation

EUT: Bluetooth Headset

M/N: BlueFit JAZZ 6 Mode: Middle Channel TX

Note:

Polarization: Horizontal Temperature: 23.7
Power: Humidity: 55.6 %

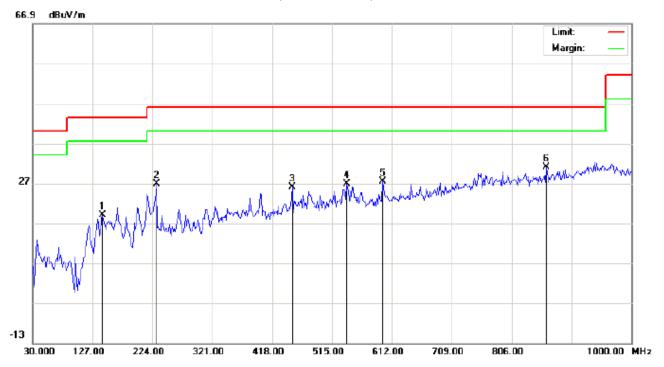
Distance:

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
	-	MHz	dBu∀	dB/m	dBu∀/m	dBu∀/m	dB		cm	degree	
1		99.5167	15.71	10.00	25.71	43.50	-17.79	peak			
2		230.4667	18.19	8.89	27.08	46.00	-18.92	peak			
3		448.7167	6.62	20.55	27.17	46.00	-18.83	peak			
4		536.0167	5.20	22.10	27.30	46.00	-18.70	peak			
5	*	599.0667	9.91	23.71	33.62	46.00	-12.38	peak			
6		768.8167	3.99	26.89	30.88	46.00	-15.12	peak			

Temperature: 23.7

Humidity: 55.6 %

#### RADIATED EMISSION TEST- (30MHZ-1GHZ)- MIDDLE CHANNEL -VERTICAL



Polarization:

Power:

Distance:

Vertical

Site: site #1

Limit: FCC Class B 3M Radiation

EUT: Bluetooth Headset

M/N: BlueFit JAZZ 6 Mode: Middle Channel TX

Note:

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
	-	MHz	dBu∀	dB/m	dBu∀/m	dBu∀/m	dB		cm	degree	
1		143.1666	3.81	15.22	19.03	43.50	-24.47	peak			
2		230.4667	14.77	11.99	26.76	46.00	-19.24	peak			
3		450.3333	5.42	20.59	26.01	46.00	-19.99	peak			
4		539.2500	4.69	22.19	26.88	46.00	-19.12	peak			
5		597.4500	4.77	22.72	27.49	46.00	-18.51	peak			
6	*	862.5833	3.36	27.64	31.00	46.00	-15.00	peak			

#### **RESULT: PASS**

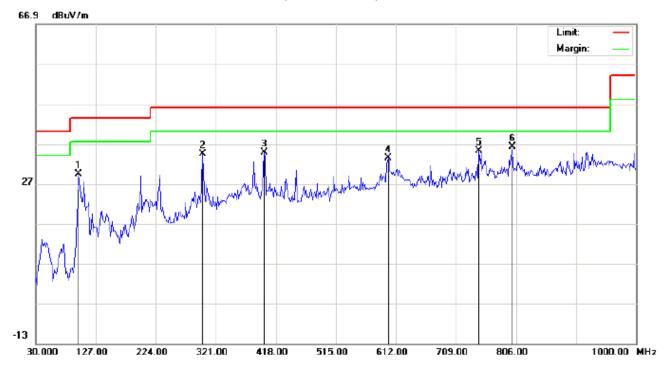
Note: 1. Factor=Antenna Factor + Cable loss, Margin=Measurement-Limit.

2. The "Factor" value can be calculated automatically by software of measurement system.

Temperature: 23.1

Humidity: 53.6 %

#### RADIATED EMISSION TEST- (30MHZ-1GHZ)-HIGH CHANNEL-HORIZONTAL



Polarization: Horizontal

Site: site #1

Limit: FCC Class B 3M Radiation EUT: Bluetooth Headset

M/N: BlueFit JAZZ 6

Mode: High Channel TX

Note:

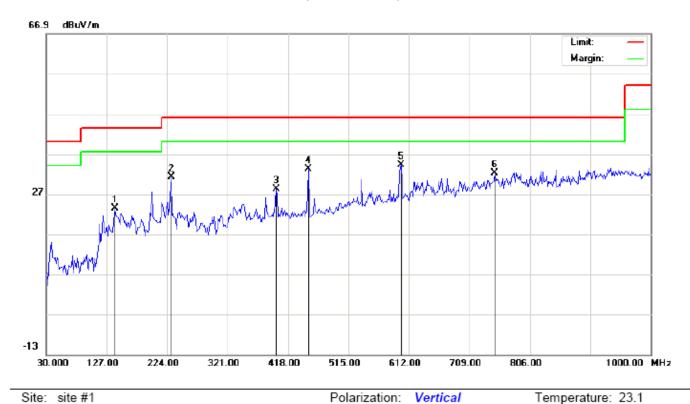
No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
	-	MHz	dBu∀	dB/m	dBuV/m	dBu∀/m	dB		cm	degree	
1		99.5167	19.33	10.00	29.33	43.50	-14.17	peak			
2		299.9833	19.09	15.41	34.50	46.00	-11.50	peak			
3		398.6000	15.80	19.06	34.86	46.00	-11.14	peak			
4		599.0667	9.63	23.71	33.34	46.00	-12.66	peak			
5		746.1833	8.72	26.52	35.24	46.00	-10.76	peak			
6	*	799.5333	8.93	27.31	36.24	46.00	-9.76	peak		·	

Power:

Distance:

Humidity: 53.6 %

#### RADIATED EMISSION TEST- (30MHZ-1GHZ)-HIGH CHANNEL -VERTICAL



Site: site #1 Limit: FCC Class B 3M Radiation

EUT: Bluetooth Headset

M/N: BlueFit JAZZ 6 Mode: High Channel TX

Note:

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
	-	MHz	dBu∀	dB/m	dBu∀/m	dBu∀/m	dB		cm	degree	
1		139.9333	8.17	15.17	23.34	43.50	-20.16	peak			
2		230.4667	19.24	11.99	31.23	46.00	-14.77	peak			
3		398.6000	9.21	19.06	28.27	46.00	-17.73	peak			
4		450.3333	12.56	20.59	33.15	46.00	-12.85	peak			
5	*	599.0667	11.55	22.73	34.28	46.00	-11.72	peak			
6		749.4167	5.69	26.61	32.30	46.00	-13.70	peak			

Power:

Distance:

#### **RESULT: PASS**

**Note:** 1. Factor=Antenna Factor + Cable loss, Margin=Measurement-Limit.

2. The "Factor" value can be calculated automatically by software of measurement system.

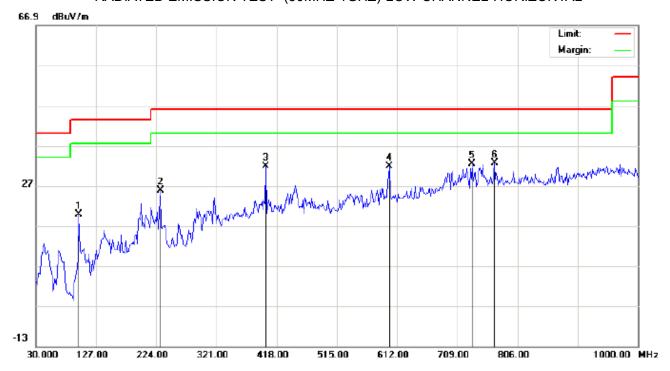
#### **FOR BLE**

#### **RADIATED EMISSION BELOW 30MHZ**

No emission found between lowest internal used/generated frequencies to 30MHz.

#### **RADIATED EMISSION BELOW 1GHZ**

RADIATED EMISSION TEST- (30MHZ-1GHZ)-LOW CHANNEL-HORIZONTAL



Site: site #1 Polarization: Horizontal Temperature: 23.7
Limit: FCC Class B 3M Radiation Power: Humidity: 55.6 %

EUT: Bluetooth Headset Distance:

M/N: BlueFit JAZZ 6
Mode: Low Channel TX

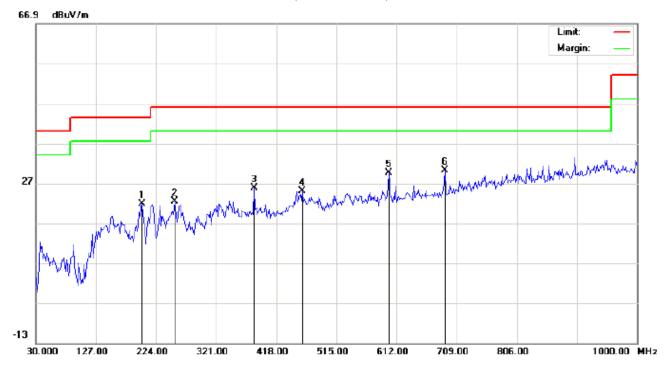
Note:

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
	-	MHz	dBu∀	dB/m	dBu∀/m	dBu∀/m	dB		cm	degree	
1		99.5167	9.86	10.00	19.86	43.50	-23.64	peak			
2		230.4667	17.01	8.89	25.90	46.00	-20.10	peak			
3		400.2167	12.78	19.08	31.86	46.00	-14.14	peak			
4		599.0667	8.10	23.71	31.81	46.00	-14.19	peak			
5		733.2500	6.30	26.15	32.45	46.00	-13.55	peak			
6	*	768.8167	5.63	26.89	32.52	46.00	-13.48	peak			

Temperature: 23.7

Humidity: 55.6 %

#### RADIATED EMISSION TEST- (30MHZ-1GHZ)-LOW CHANNEL -VERTICAL



Polarization: Vertical

Site: site #1

Limit: FCC Class B 3M Radiation

EUT: Bluetooth Headset

M/N: BlueFit JAZZ 6 Mode: Low Channel TX

Note:

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
	-	MHz	dBu∀	dB/m	dBu∀/m	dBu∀/m	dB		cm	degree	
1		201.3667	12.69	9.13	21.82	43.50	-21.68	peak			
2		254.7167	8.42	14.04	22.46	46.00	-23.54	peak			
3		382.4333	6.82	18.95	25.77	46.00	-20.23	peak			
4		460.0333	4.35	20.70	25.05	46.00	-20.95	peak			
5		599.0667	6.81	22.73	29.54	46.00	-16.46	peak			
6	*	689.6000	5.27	24.91	30.18	46.00	-15.82	peak			

Power:

Distance:

#### **RESULT: PASS**

Note: 1. Factor=Antenna Factor + Cable loss, Margin=Measurement-Limit.

2. The "Factor" value can be calculated automatically by software of measurement system.

Temperature: 23.7

Humidity: 55.6 %

#### RADIATED EMISSION TEST- (30MHZ-1GHZ)-MIDDLE CHANNEL-HORIZONTAL



Polarization: Horizontal

Site: site #1

Limit: FCC Class B 3M Radiation

EUT: Bluetooth Headset M/N: BlueFit JAZZ 6

Mode: Middle Channel TX

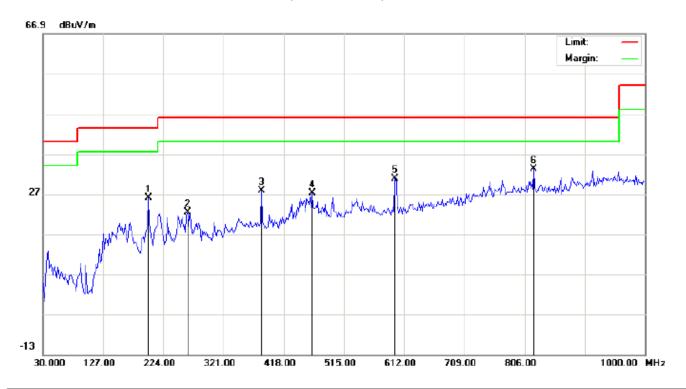
Note:

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
	-	MHz	dBu∀	dB/m	dBu∀/m	dBu∀/m	dB		cm	degree	
1		99.5167	10.19	10.00	20.19	43.50	-23.31	peak			
2		230.4667	18.66	8.89	27.55	46.00	-18.45	peak			
3	*	398.6000	14.18	19.06	33.24	46.00	-12.76	peak			
4		600.6833	8.03	23.73	31.76	46.00	-14.24	peak			
5		702.5333	6.07	25.26	31.33	46.00	-14.67	peak			
6		901.3833	2.87	28.65	31.52	46.00	-14.48	peak			

Power:

Distance:

#### RADIATED EMISSION TEST- (30MHZ-1GHZ)- MIDDLE CHANNEL -VERTICAL



Site: site #1

Limit: FCC Class B 3M Radiation

EUT: Bluetooth Headset

M/N: BlueFit JAZZ 6
Mode: Middle Channel TX

Note:

Polarization:	Vertical	Temperatu	ıre: 23.7
Power:		Humidity:	55.6 %

Distance:

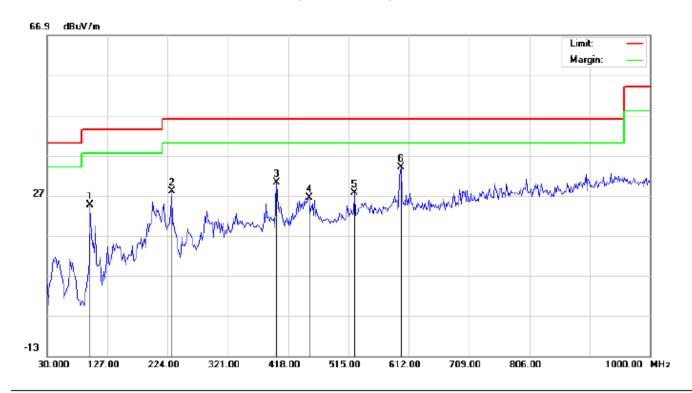
No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
	-	MHz	dBu∀	dB/m	dBu∀/m	dBu∀/m	dB		cm	degree	
1		199.7500	16.99	9.06	26.05	43.50	-17.45	peak			
2		262.8000	8.21	14.29	22.50	46.00	-23.50	peak			
3		382.4333	8.78	18.95	27.73	46.00	-18.27	peak			
4		463.2667	6.47	20.73	27.20	46.00	-18.80	peak			
5		597.4500	8.01	22.72	30.73	46.00	-15.27	peak			
6	*	820.5500	5.94	27.32	33.26	46.00	-12.74	peak			

#### **RESULT: PASS**

**Note:** 1. Factor=Antenna Factor + Cable loss, Margin=Measurement-Limit.

2. The "Factor" value can be calculated automatically by software of measurement system.

#### RADIATED EMISSION TEST- (30MHZ-1GHZ)-HIGH CHANNEL-HORIZONTAL



Site: site #1

Limit: FCC Class B 3M Radiation

EUT: Bluetooth Headset

M/N: BlueFit JAZZ 6 Mode: High Channel TX

Note:

Polarization:	Horizontal	Temperature: 23.7
Power:		Humidity: 55.6 %

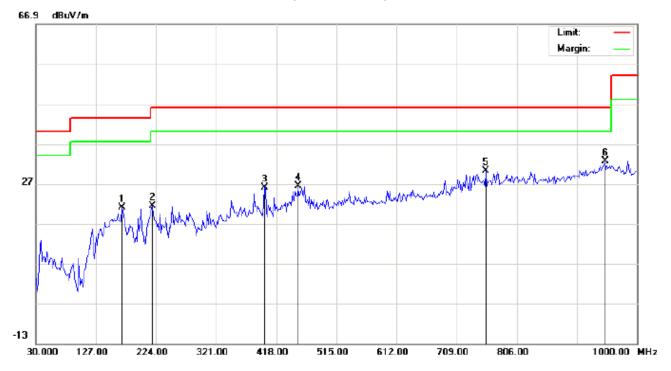
Distance:

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
	-	MHz	dBu∀	dB/m	dBu∀/m	dBu∀/m	dB		cm	degree	
1		99.5167	14.61	10.00	24.61	43.50	-18.89	peak			
2		230.4667	19.19	8.89	28.08	46.00	-17.92	peak			
3		398.6000	11.17	19.06	30.23	46.00	-15.77	peak			
4		451.9500	5.75	20.61	26.36	46.00	-19.64	peak			
5		524.7000	5.78	21.80	27.58	46.00	-18.42	peak		·	
6	*	599.0667	10.23	23.71	33.94	46.00	-12.06	peak			

Temperature: 23.7

Humidity: 55.6 %

#### RADIATED EMISSION TEST- (30MHZ-1GHZ)-HIGH CHANNEL -VERTICAL



Polarization: Vertical

Site: site #1

Limit: FCC Class B 3M Radiation

EUT: Bluetooth Headset

M/N: BlueFit JAZZ 6 Mode: High Channel TX

Note:

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
	-	MHz	dBu∀	dB/m	dBuV/m	dBu∀/m	dB		cm	degree	
1		169.0333	6.29	14.76	21.05	43.50	-22.45	peak			
2		217.5333	10.71	10.72	21.43	46.00	-24.57	peak			
3		398.6000	6.97	19.06	26.03	46.00	-19.97	peak			
4		453.5667	5.68	20.63	26.31	46.00	-19.69	peak			
5		755.8832	3.45	26.71	30.16	46.00	-15.84	peak			
6	*	948.2667	2.71	29.95	32.66	46.00	-13.34	peak			

Power:

Distance:

#### **RESULT: PASS**

Note: 1. Factor=Antenna Factor + Cable loss, Margin=Measurement-Limit.

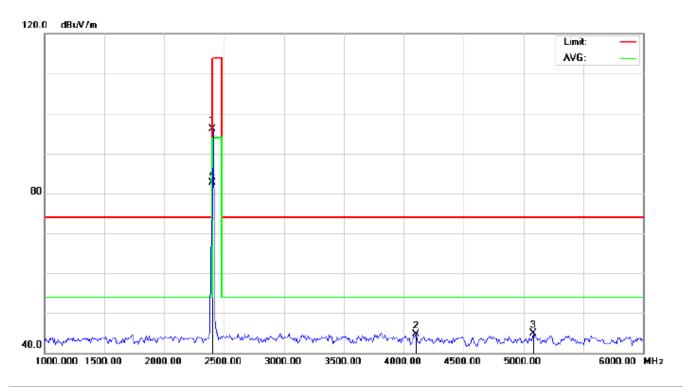
2. The "Factor" value can be calculated automatically by software of measurement system.

#### **RADIATED EMISSION ABOVE 1GHZ**

(Worst modulation: GFSK)

#### FOR BR/EDR

#### RADIATED EMISSION TEST- (ABOVE 1GHZ)-LOW CHANNEL-HORIZONTAL



Site: site #1 Polarization: Horizontal Temperature: 26
Limit: FCC Class B 3M Radiation above 1GHZ(PK)- Power: Humidity: 60 %

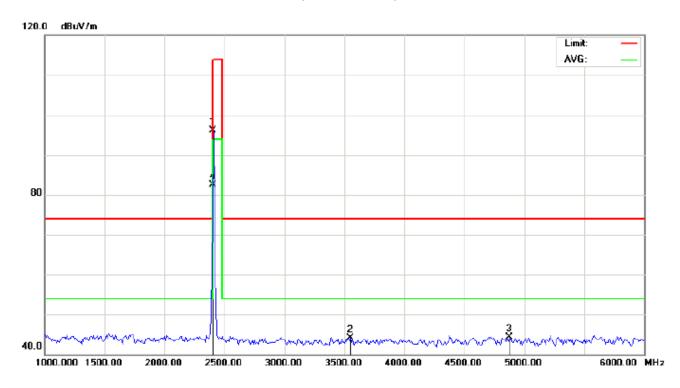
EUT: Bluetooth Headset Distance: 3m

M/N: BlueFit JAZZ 6
Mode: Low Channel TX

Note:

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
	-	MHz	dBu∀	dB/m	dBu∀/m	dBu∀/m	dB		cm	degree	
1		2402.000	105.69	-9.68	96.01	114.00	-17.99	peak			
2		4100.000	49.10	-4.47	44.63	74.00	-29.37	peak			
3		5083.333	46.77	-1.80	44.97	74.00	-29.03	peak			
4	*	2402.000	92.41	-9.68	82.73	94.00	-11.27	AVG	100	261	

#### RADIATED EMISSION TEST- (ABOVE 1GHZ)-LOW CHANNEL- VERTICAL



Site: site #1 Polarization: Vertical Temperature: 26
Limit: FCC Class B 3M Radiation above 1GHZ(PK)- Power: Humidity: 60 %

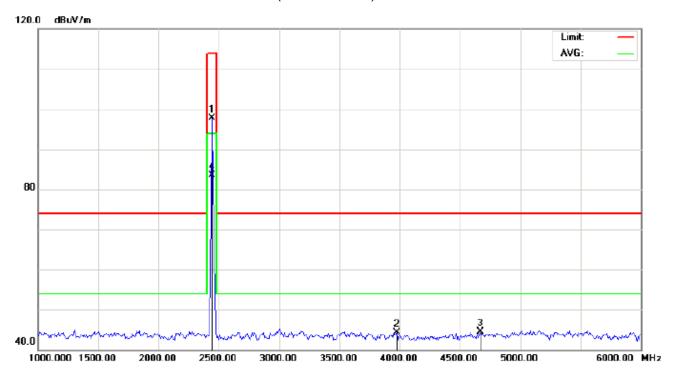
EUT: Bluetooth Headset Distance: 3m

M/N: BlueFit JAZZ 6 Mode: Low Channel TX

Note:

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height		Comment
	-	MHz	dBu∀	dB/m	dBu∀/m	dBu∀/m	dB		cm	degree	
1		2402.000	105.72	-9.68	96.04	114.00	-17.96	peak			
2		3550.000	51.72	-7.58	44.14	74.00	-29.86	peak			
3		4875.000	46.51	-2.13	44.38	74.00	-29.62	peak			
4	*	2402.000	92.26	-9.68	82.58	94.00	-11.42	AVG	100	179	

#### RADIATED EMISSION TEST- (ABOVE 1GHZ)-MIDDLE CHANNEL-HORIZONTAL



Site: site #1 Polarization: Horizontal Temperature: 26
Limit: FCC Class B 3M Radiation above 1GHZ(PK)- Power: Humidity: 60 %

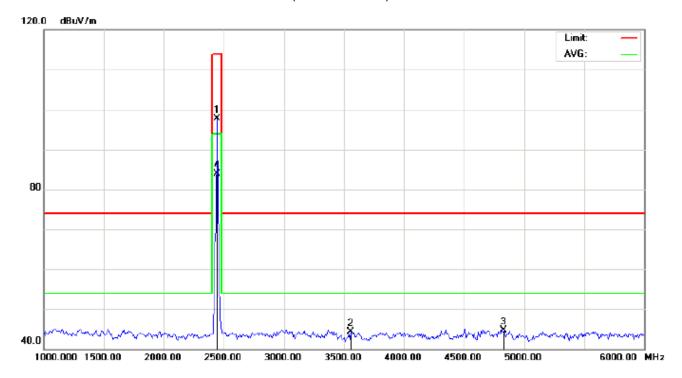
EUT: Bluetooth Headset Distance: 3m

M/N: BlueFit JAZZ 6
Mode: Middle Channel TX

Note:

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height		Comment
	-	MHz	dBu∀	dB/m	dBu\//m	dBu∀/m	dB		cm	degree	
1		2441.000	107.26	-9.63	97.63	114.00	-16.37	peak			
2		3975.000	49.22	-4.96	44.26	74.00	-29.74	peak			
3		4666.667	47.14	-2.67	44.47	74.00	-29.53	peak			
4	*	2441.000	93.22	-9.63	83.59	94.00	-10.41	AVG	100	263	

#### RADIATED EMISSION TEST- (ABOVE 1GHZ)-MIDDLE CHANNEL- VERTICAL



Site: site #1 Polarization: Vertical Temperature: 26

Limit: FCC Class B 3M Radiation above 1GHZ(PK)- Power: Humidity: 60 %

EUT: Bluetooth Headset Distance: 3m

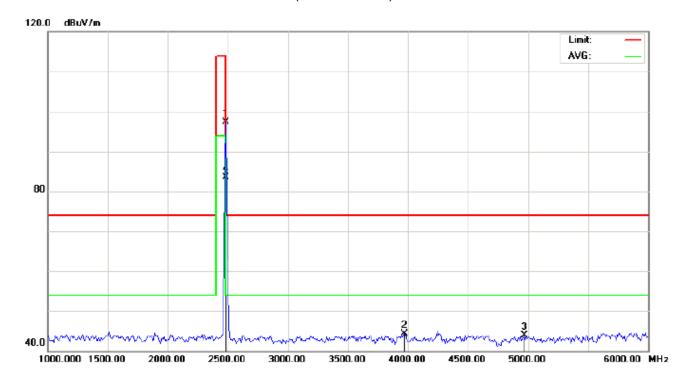
M/N: BlueFit JAZZ 6
Mode: Middle Channel TX

Mode: Middle Channel 17

Note:

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
	-	MHz	dBu∀	dB/m	dBu∀/m	dBu∀/m	dB		cm	degree	
1		2441.000	107.27	-9.63	97.64	114.00	-16.36	peak			
2		3558.333	51.78	-7.53	44.25	74.00	-29.75	peak			
3		4833.333	47.00	-2.24	44.76	74.00	-29.24	peak			
4	*	2441.000	93.49	-9.63	83.86	94.00	-10.14	AVG	100	179	

#### RADIATED EMISSION TEST- (ABOVE 1GHZ)-HIGH CHANNEL-HORIZONTAL



Site: site #1 Polarization: Horizontal Temperature: 26
Limit: FCC Class B 3M Radiation above 1GHZ(PK)- Power: Humidity: 60 %

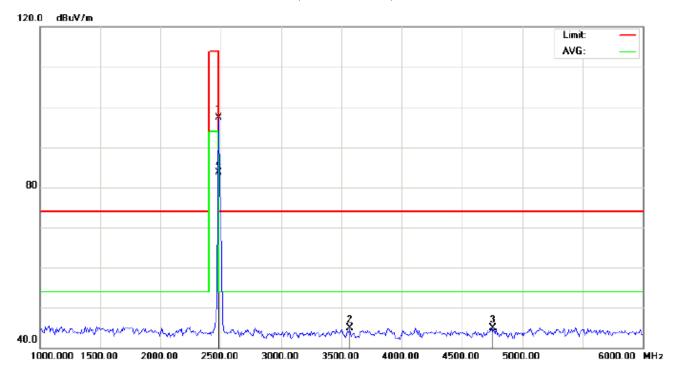
EUT: Bluetooth Headset Distance: 3m

M/N: BlueFit JAZZ 6 Mode: High Channel TX

Note:

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
	-	MHz	dBu∀	dB/m	dBu\//m	dBu∀/m	dB		cm	degree	
1		2480.000	106.85	-9.59	97.26	114.00	-16.74	peak			
2		3966.667	49.41	-5.02	44.39	74.00	-29.61	peak			
3		4966.667	45.79	-1.89	43.90	74.00	-30.10	peak			
4	*	2480.000	93.11	-9.59	83.52	94.00	-10.48	AVG	100	267	

#### RADIATED EMISSION TEST- (ABOVE 1GHZ)-HIGH CHANNEL- VERTICAL



Site: site #1 Polarization: Vertical Temperature: 26

Limit: FCC Class B 3M Radiation above 1GHZ(PK)- Power: Humidity: 60 %

EUT: Bluetooth Headset Distance: 3m

M/N: BlueFit JAZZ 6 Mode: High Channel TX

Note:

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
	-	MHz	dBu∀	dB/m	dBu\//m	dBu∀/m	dB		cm	degree	
1		2480.000	106.88	-9.59	97.29	114.00	-16.71	peak			
2		3566.667	52.39	-7.48	44.91	74.00	-29.09	peak			
3		4758.333	47.39	-2.43	44.96	74.00	-29.04	peak			
4	*	2480.000	93.28	-9.59	83.69	94.00	-10.31	AVG	100	187	

#### **RESULT: PASS**

Note: 6~25GHz at least have 20dB margin. No recording in the test report.

Factor=Antenna Factor + Cable loss - Amplifier gain, Margin=Measurement-Limit.

The "Factor" value can be calculated automatically by software of measurement system.

# Field strength of the fundamental signal

# 1Mbps Result:

#### Peak value

Frequency	Reading Level	Factor	Measurement	Limit	Over	Antenna
(MHz)	(dBuv)	(dB/m)	(dBuv/m)	(dBuv/m)	(dB)	Polarization
2402	105.69	-9.68	96.01	114.00	-17.99	Horizontal
2402	105.72	-9.68	96.04	114.00	-17.96	Vertical
2441	107.26	-9.63	97.63	114.00	-16.37	Horizontal
2441	107.27	-9.63	97.64	114.00	-16.36	Vertical
2480	106.85	-9.59	97.26	114.00	-16.74	Horizontal
2480	106.88	-9.59	97.29	114.00	-16.71	Vertical

# Average value

Frequency	Reading Level	Factor	Measurement	Limit	Over	Antenna
(MHz)	(dBuv)	(dB/m)	(dBuv/m)	(dBuv/m)	(dB)	Polarization
2402	92.41	-9.68	82.73	94.00	-11.27	Horizontal
2402	92.26	-9.68	82.58	94.00	-11.42	Vertical
2441	93.22	-9.63	83.59	94.00	-10.41	Horizontal
2441	93.49	-9.63	83.86	94.00	-10.14	Vertical
2480	93.11	-9.59	83.52	94.00	-10.48	Horizontal
2480	93.28	-9.59	83.69	94.00	-10.31	Vertical

# 2Mbps Result:

# Peak value

Frequency	Reading Level	Factor	Measurement	Limit	Over	Antenna
(MHz)	(dBuv)	(dB/m)	(dBuv/m)	(dBuv/m)	(dB)	Polarization
2402	104.19	-9.68	94.51	114	-19.49	Horizontal
2402	104.04	-9.68	94.36	114	-19.64	Vertical
2441	106.03	-9.68	96.35	114	-17.65	Horizontal
2441	105.82	-9.68	96.14	114	-17.86	Vertical
2480	105.39	-9.63	95.76	114	-18.24	Horizontal
2480	105.21	-9.63	95.58	114	-18.42	Vertical

#### Average value

Frequency	Reading Level	Factor	Measurement	Limit	Over	Antenna
(MHz)	(dBuv)	(dB/m)	(dBuv/m)	(dBuv/m)	(dB)	Polarization
2402	91.68	-9.63	82.05	94	-11.95	Horizontal
2402	91.50	-9.63	81.87	94	-12.13	Vertical
2441	93.43	-9.59	83.84	94	-10.16	Horizontal
2441	93.28	-9.59	83.69	94	-10.31	Vertical
2480	92.85	-9.59	83.26	94	-10.74	Horizontal
2480	92.66	-9.59	83.07	94	-10.93	Vertical

# 3Mbps Result:

# Peak value

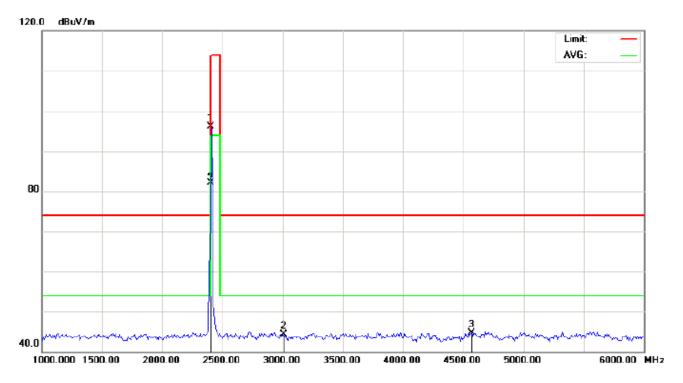
Frequency	Reading Level	Factor	Measurement	Limit	Over	Antenna
(MHz)	(dBuv)	(dB/m)	(dBuv/m)	(dBuv/m)	(dB)	Polarization
2402	104.09	-9.68	94.41	114	-19.59	Horizontal
2402	103.90	-9.68	94.22	114	-19.78	Vertical
2441	106.02	-9.68	96.34	114	-17.66	Horizontal
2441	105.85	-9.68	96.17	114	-17.83	Vertical
2480	105.28	-9.63	95.65	114	-18.35	Horizontal
2480	105.08	-9.63	95.45	114	-18.55	Vertical

# Average value

Frequency	Reading Level	Factor	Measurement	Limit	Over	Antenna
(MHz)	(dBuv)	(dB/m)	(dBuv/m)	(dBuv/m)	(dB)	Polarization
2402	91.57	-9.63	81.94	94	-12.06	Horizontal
2402	91.37	-9.63	81.74	94	-12.26	Vertical
2441	93.32	-9.59	83.73	94	-10.27	Horizontal
2441	93.21	-9.59	83.62	94	-10.38	Vertical
2480	92.77	-9.59	83.18	94	-10.82	Horizontal
2480	92.73	-9.59	83.14	94	-10.86	Vertical

**FOR BLE** 

# RADIATED EMISSION TEST- (ABOVE 1GHZ)-LOW CHANNEL-HORIZONTAL



Site: site #1 Polarization: Horizontal Temperature: 26
Limit: FCC Class B 3M Radiation above 1GHZ(PK)- Power: Humidity: 60 %

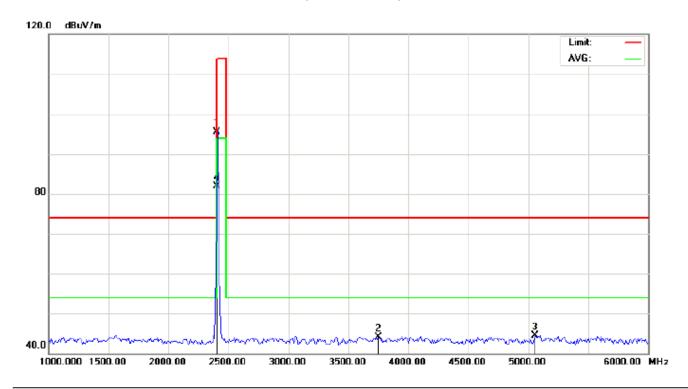
EUT: Bluetooth Headset Distance: 3m

M/N: BlueFit JAZZ 6
Mode: Low Channel TX

Note:

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height		Comment
	-	MHz	dBu∀	dB/m	dBu∀/m	dBu∀/m	dB		cm	degree	
1		2402.000	105.69	-9.68	96.01	114.00	-17.99	peak			
2		3008.333	52.69	-8.35	44.34	74.00	-29.66	peak			
3		4566.667	47.73	-2.94	44.79	74.00	-29.21	peak			
4	*	2402.000	91.83	-9.68	82.15	94.00	-11.85	AVG	100	79	

# RADIATED EMISSION TEST- (ABOVE 1GHZ)-LOW CHANNEL- VERTICAL



Site: site #1 Polarization: Vertical Temperature: 26
Limit: FCC Class B 3M Radiation above 1GHZ(PK)- Power: Humidity: 60 %

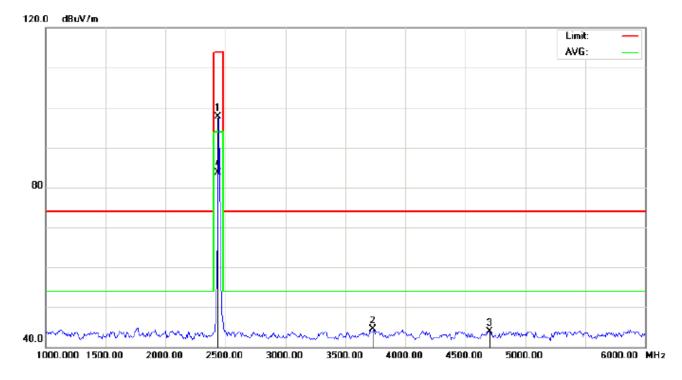
EUT: Bluetooth Headset Distance: 3m

M/N: BlueFit JAZZ 6 Mode: Low Channel TX

Note:

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
	-	MHz	dBu∀	dB/m	dBu∀/m	dBu∀/m	dB		cm	degree	
1		2402.000	105.26	-9.68	95.58	114.00	-18.42	peak			
2		3750.000	50.49	-6.35	44.14	74.00	-29.86	peak			
3		5058.333	46.32	-1.80	44.52	74.00	-29.48	peak			
4	*	2402.000	91.65	-9.68	81.97	94.00	-12.03	AVG	100	238	

# RADIATED EMISSION TEST- (ABOVE 1GHZ)-MIDDLE CHANNEL-HORIZONTAL



Site: site #1 Polarization: Horizontal Temperature: 26
Limit: FCC Class B 3M Radiation above 1GHZ(PK)- Power: Humidity: 60 %

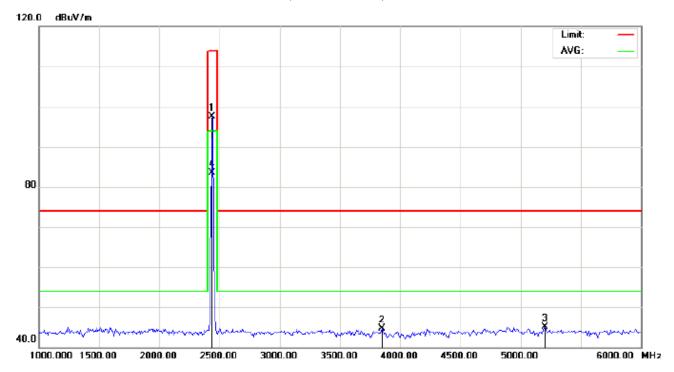
EUT: Bluetooth Headset Distance: 3m

M/N: BlueFit JAZZ 6
Mode: Middle Channel TX

Note:

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
	-	MHz	dBu∀	dB/m	dBu\//m	dBu∀/m	dB		cm	degree	
1		2440.000	107.28	-9.64	97.64	114.00	-16.36	peak			
2		3733.333	50.96	-6.45	44.51	74.00	-29.49	peak			
3		4700.000	46.49	-2.59	43.90	74.00	-30.10	peak			
4	*	2440.000	93.26	-9.64	83.62	94.00	-10.38	AVG	100	82	

# RADIATED EMISSION TEST- (ABOVE 1GHZ)-MIDDLE CHANNEL- VERTICAL



Site: site #1 Polarization: Vertical Temperature: 26

Limit: FCC Class B 3M Radiation above 1GHZ(PK)- Power: Humidity: 60 %

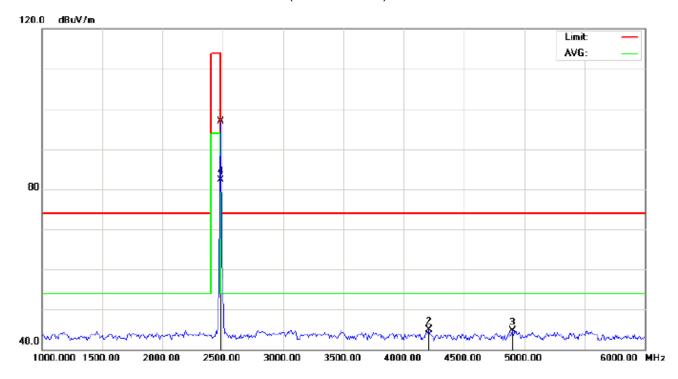
EUT: Bluetooth Headset Distance: 3m

M/N: BlueFit JAZZ 6
Mode: Middle Channel TX

Note:

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
	-	MHz	dBu∀	dB/m	dBu∀/m	dBu∀/m	dB		cm	degree	
1		2440.000	107.21	-9.64	97.57	114.00	-16.43	peak			
2		3850.000	50.40	-5.73	44.67	74.00	-29.33	peak			
3		5200.000	46.94	-1.80	45.14	74.00	-28.86	peak			
4	*	2440.000	93.13	-9.64	83.49	94.00	-10.51	AVG	100	241	

# RADIATED EMISSION TEST- (ABOVE 1GHZ)-HIGH CHANNEL-HORIZONTAL



Site: site #1 Polarization: Horizontal Temperature: 26
Limit: FCC Class B 3M Radiation above 1GHZ(PK)- Power: Humidity: 60 %

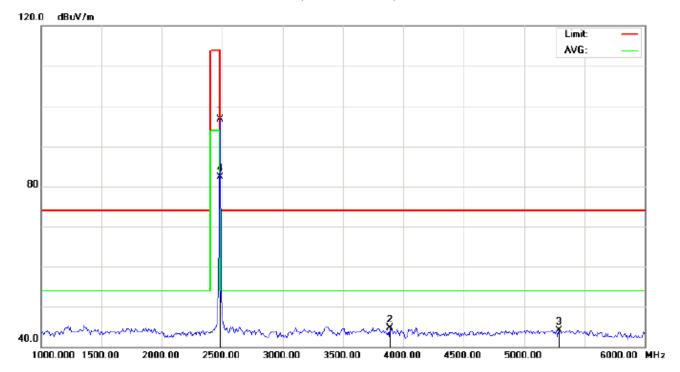
EUT: Bluetooth Headset Distance: 3m

M/N: BlueFit JAZZ 6 Mode: High Channel TX

Note:

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
		MHz	dBu∀	dB/m	dBu∀/m	dBu∀/m	dB		cm	degree	
1		2480.000	106.40	-9.59	96.81	114.00	-17.19	peak			
2		4208.333	49.04	-4.10	44.94	74.00	-29.06	peak			
3		4900.000	46.68	-2.06	44.62	74.00	-29.38	peak			
4	*	2480.000	91.97	-9.59	82.38	94.00	-11.62	AVG	100	235	

# RADIATED EMISSION TEST- (ABOVE 1GHZ)-HIGH CHANNEL- VERTICAL



Site: site #1 Polarization: Vertical Temperature: 26

Limit: FCC Class B 3M Radiation above 1GHZ(PK)- Power: Humidity: 60 %

EUT: Bluetooth Headset Distance: 3m

M/N: BlueFit JAZZ 6 Mode: High Channel TX

Note:

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height		Comment
	-	MHz	dBu∀	dB/m	dBu∀/m	dBu∀/m	dB		cm	degree	
1		2480.000	106.36	-9.59	96.77	114.00	-17.23	peak			
2		3891.667	50.21	-5.48	44.73	74.00	-29.27	peak			
3		5291.667	45.90	-1.81	44.09	74.00	-29.91	peak			
4	*	2480.000	91.95	-9.59	82.36	94.00	-11.64	AVG	100	75	

# **RESULT: PASS**

Note: 6~25GHz at least have 20dB margin. No recording in the test report.

Factor=Antenna Factor + Cable loss - Amplifier gain, Margin=Measurement-Limit.

The "Factor" value can be calculated automatically by software of measurement system.

# Field strength of the fundamental signal

# Peak value

Frequency	Reading Level	Factor	Measurement	Limit	Over	Antenna
(MHz)	(dBuv)	(dB/m)	(dBuv/m)	(dBuv/m)	(dB)	Polarization
2402	105.69	-9.68	96.01	114.00	-17.99	Horizontal
2402	105.26	-9.68	95.58	114.00	-18.42	Vertical
2440	107.28	-9.64	97.64	114.00	-16.36	Horizontal
2440	107.21	-9.64	97.57	114.00	-16.43	Vertical
2480	106.40	-9.59	96.81	114.00	-17.19	Horizontal
2480	106.36	-9.59	96.77	114.00	-11.64	Vertical

# Average value

Frequency	Reading Level	Factor	Measurement	Limit	Over	Antenna
(MHz)	(dBuv)	(dB/m)	(dBuv/m)	(dBuv/m)	(dB)	Polarization
2402	91.83	-9.68	82.15	94.00	-11.86	Horizontal
2402	91.65	-9.68	81.97	94.00	-12.03	Vertical
2440	93.26	-9.64	83.62	94.00	-10.38	Horizontal
2440	93.13	-9.64	83.49	94.00	-10.51	Vertical
2480	91.97	-9.59	82.38	94.00	-11.62	Horizontal
2480	91.95	-9.59	82.36	94.00	-11.64	Vertical

# 9. BAND EDGE EMISSION

# 9.1. MEASUREMENT PROCEDURE

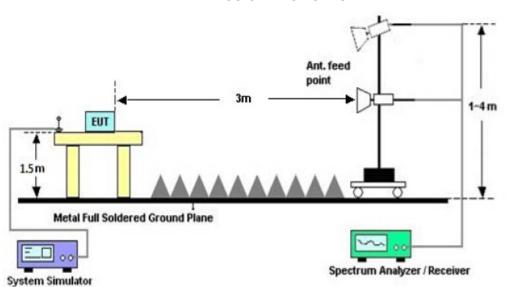
1The EUT operates at hopping-off test mode. The lowest or highest channels are tested to verify the largest transmission and spurious emissions power at the continuous transmission mode.

2Max hold the trace of the setp 1,and the EUT operates at hopping-on test mode to verify the largest spurious emissions power.

3Set the spectrum analyzer in the following setting in order to capture the lower and upper band-edges of the emission

# 9.2 TEST SETUP

#### RADIATED EMISSION TEST SETUP

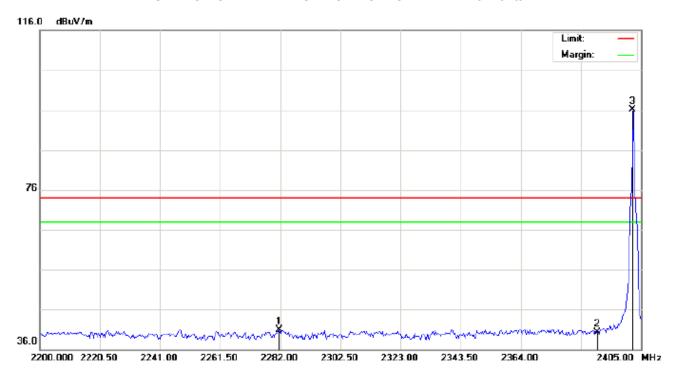


# 9.3 RADIATED TEST RESULT

(Worst modulation: GFSK)

FOR BR/EDR

# TEST PLOT OF BAND EDGE FOR LOW CHANNEL-Horizontal



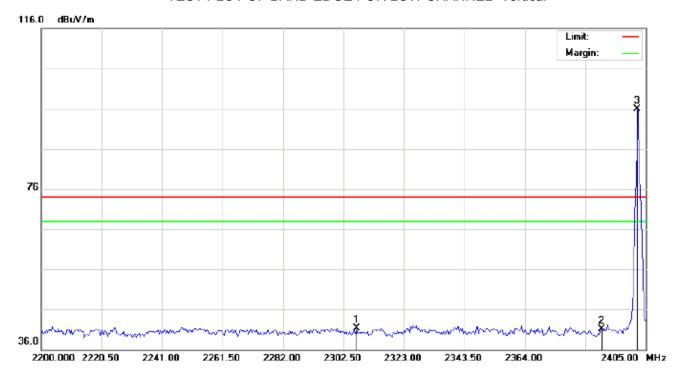
Site: site #1 Polarization: Horizontal Temperature: 26
Limit: FCC Class B 3M Radiation above 1GHZ(PK) Power: Humidity: 60 %

EUT: Bluetooth Headset Distance:

M/N: BlueFit JAZZ 6 Mode: Low Channel TX

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
	-	MHz	dBu∀	dB/m	dBu∀/m	dBu∀/m	dB		cm	degree	
1		2281.658	30.70	10.19	40.89	74.00	-33.11	peak			
2		2390.000	30.00	10.31	40.31	74.00	-33.69	peak			
3	*	2402.000	85.72	10.32	96.04	74.00	22.04	peak			

# TEST PLOT OF BAND EDGE FOR LOW CHANNEL -Vertical



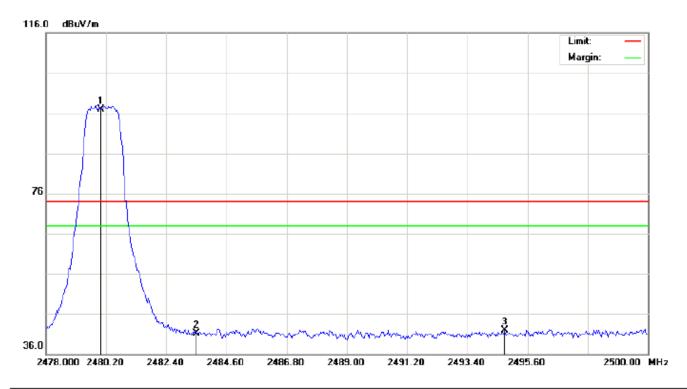
Site: site #1 Polarization: Vertical Temperature: 26
Limit: FCC Class B 3M Radiation above 1GHZ(PK) Power: Humidity: 60 %

EUT: Bluetooth Headset Distance:

M/N: BlueFit JAZZ 6 Mode: Low Channel TX

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
	-	MHz	dBu∀	dB/m	dBu∀/m	dBu∀/m	dB		cm	degree	
1		2306.942	31.05	10.22	41.27	74.00	-32.73	peak			
2		2390.000	30.71	10.31	41.02	74.00	-32.98	peak			
3	*	2402.000	85.59	10.32	95.91	74.00	21.91	peak			

# TEST PLOT OF BAND EDGE FOR HIGH CHANNEL -Horizontal



Site: site #1 Polarization: Horizontal Temperature: 26

Limit: FCC Class B 3M Radiation above 1GHZ(PK) Power: Humidity: 60 %

EUT: Bluetooth Headset Distance:

M/N: BlueFit JAZZ 6 Mode: High Channel TX

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height		Comment
	-	MHz	dBu∀	dB/m	dBu∀/m	dBu∀/m	dB		cm	degree	
1	*	2480.000	86.55	10.41	96.96	74.00	22.96	peak			
2		2483.500	30.69	10.41	41.10	74.00	-32.90	peak			
3		2494.757	31.41	10.42	41.83	74.00	-32.17	peak			

# TEST PLOT OF BAND EDGE FOR HIGH CHANNEL-Vertical



Site: site #1 Polarization: Vertical Temperature: 26
Limit: FCC Class B 3M Radiation above 1GHZ(PK) Power: Humidity: 60 %

EUT: Bluetooth Headset Distance:

M/N: BlueFit JAZZ 6 Mode: High Channel TX

Note:

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
	-	MHz	dBu∀	dB/m	dBu∀/m	dBu∀/m	dB		cm	degree	
1	*	2480.000	86.82	10.41	97.23	74.00	23.23	peak			
2		2483.500	30.76	10.41	41.17	74.00	-32.83	peak			
3		2493.913	30.44	10.42	40.86	74.00	-33.14	peak			

# **RESULT: PASS**

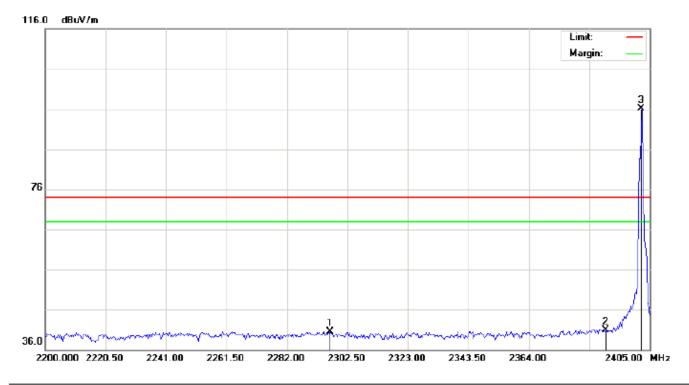
Note: The other modes radiation emission have enough 20dB margin.

Factor=Antenna Factor + Cable loss - Amplifier gain, Over=Measure-Limit.

The "Factor" value can be calculated automatically by software of measurement system.

# **FOR BLE**

# TEST PLOT OF BAND EDGE FOR LOW CHANNEL-Horizontal



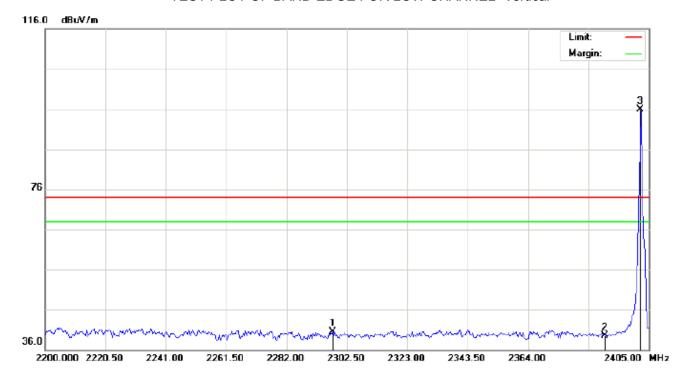
Site: site #1 Polarization: Horizontal Temperature: 26
Limit: FCC Class B 3M Radiation above 1GHZ(PK) Power: Humidity: 60 %

EUT: Bluetooth Headset Distance:

M/N: BlueFit JAZZ 6
Mode: Low Channel TX

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
	-	MHz	dBu∀	dB/m	dBu∀/m	dBu∀/m	dB		cm	degree	
1		2296.692	30.21	10.21	40.42	74.00	-33.58	peak			
2		2390.000	30.50	10.31	40.81	74.00	-33.19	peak			
3	*	2402.000	85.72	10.32	96.04	74.00	22.04	peak			

# TEST PLOT OF BAND EDGE FOR LOW CHANNEL -Vertical



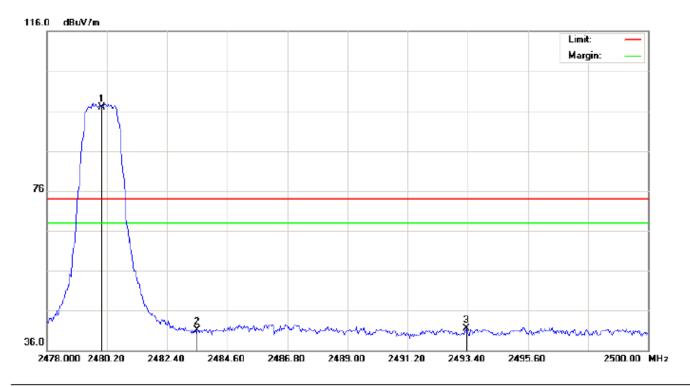
Site: site #1 Polarization: Vertical Temperature: 26
Limit: FCC Class B 3M Radiation above 1GHZ(PK) Power: Humidity: 60 %

EUT: Bluetooth Headset Distance:

M/N: BlueFit JAZZ 6 Mode: Low Channel TX

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
	-	MHz	dBu∀	dB/m	dBu\//m	dBu∀/m	dB		cm	degree	
1		2297.717	30.34	10.21	40.55	74.00	-33.45	peak			
2		2390.000	29.21	10.31	39.52	74.00	-34.48	peak			
3	*	2402.000	85.59	10.32	95.91	74.00	21.91	peak			

# TEST PLOT OF BAND EDGE FOR HIGH CHANNEL -Horizontal



Site: site #1 Polarization: Horizontal Temperature: 26
Limit: FCC Class B 3M Radiation above 1GHZ(PK) Power: Humidity: 60 %

Limit: FCC Class B 3M Radiation above 1GHZ(PK) Power: Humidity
EUT: Bluetooth Headset Distance:

EUT: Bluetooth Headset M/N: BlueFit JAZZ 6

Mode: High Channel TX

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
	-	MHz	dBu∀	dB/m	dBu∀/m	dBu∀/m	dB		cm	degree	
1	*	2480.000	86.55	10.41	96.96	74.00	22.96	peak			
2		2483.500	30.69	10.41	41.10	74.00	-32.90	peak			
3		2493.363	31.02	10.42	41.44	74.00	-32.56	peak			

#### TEST PLOT OF BAND EDGE FOR HIGH CHANNEL-Vertical



Site: site #1 Polarization: Vertical Temperature: 26

Limit: FCC Class B 3M Radiation above 1GHZ(PK) Power: Humidity: 60 %

EUT: Bluetooth Headset Distance:

M/N: BlueFit JAZZ 6 Mode: High Channel TX

Note:

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
	-	MHz	dBu∀	dB/m	dBu\//m	dBu∀/m	dB		cm	degree	
1	*	2480.000	86.32	10.41	96.73	74.00	22.73	peak			
2		2483.500	29.76	10.41	40.17	74.00	-33.83	peak			
3		2490.943	31.06	10.42	41.48	74.00	-32.52	peak			

# **RESULT: PASS**

Note: The other modes radiation emission have enough 20dB margin.

Factor=Antenna Factor + Cable loss - Amplifier gain, Over=Measure-Limit.

The "Factor" value can be calculated automatically by software of measurement system.

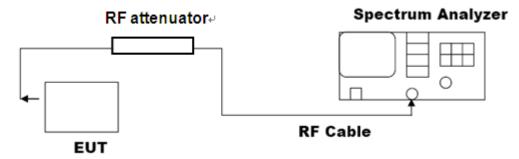
# 10. BANDWIDTH

# 10.1. MEASUREMENT PROCEDURE

- 1. Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator
- 2. Set the EUT Work on the top, the middle and the bottom operation frequency individually.
- 3. Set Span = approximately 2 to 3 times the 20 dB bandwidth, centered on a hoping channel RBW  $\geq$  1% of the 20 dB bandwidth, VBW  $\geq$  RBW; Sweep = auto; Detector function = peak
- 4. Set SPA Trace 1 Max hold, then View.

#### 10.2. TEST SET-UP

# (BLOCK DIAGRAM OF CONFIGURATION)



Note: The EUT has been used temporary antenna connector for testing.

# 10.3. LIMITS AND MEASUREMENT RESULTS

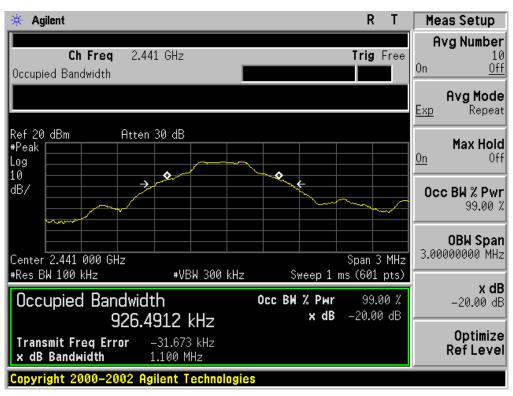
#### FOR BR/EDR

BLUETOOTH 1MBPS LIMITS AND MEASUREMENT RESULT								
	Measurement Result							
Applicable Limits		Test Data (MHz)						
		99%OBW (MHz)	-20dB BW(MHz)	Result				
	Low Channel	0.934	1.105	PASS				
N/A	Middle Channel	0.926	1.100	PASS				
	High Channel	0.934	1.103	PASS				

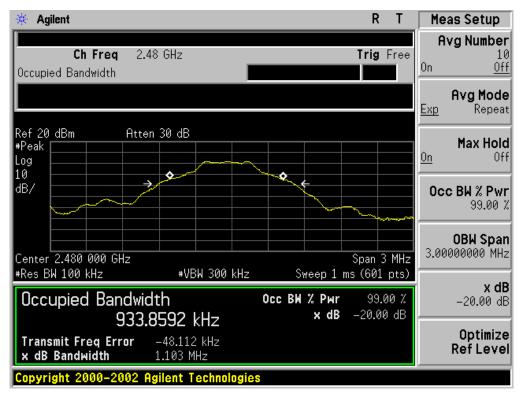
#### TEST PLOT OF BANDWIDTH FOR LOW CHANNEL



#### TEST PLOT OF BANDWIDTH FOR MIDDLE CHANNEL

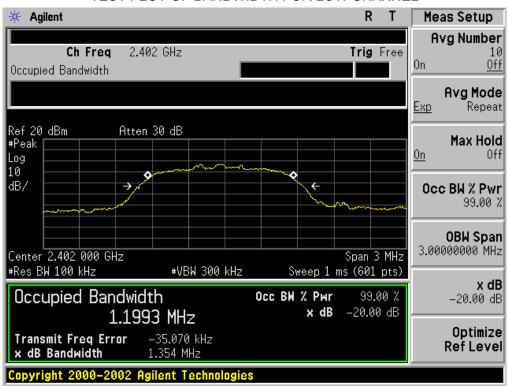


#### TEST PLOT OF BANDWIDTH FOR HIGH CHANNEL

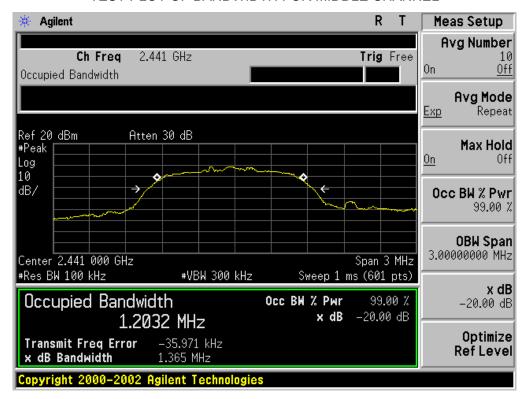


BLUETOOTH 2MBPS LIMITS AND MEASUREMENT RESULT								
	Measurement Result							
Applicable Limits		Decult						
		99%OBW (MHz)	-20dB BW(MHz)	Result				
	Low Channel	1.199	1.354	PASS				
N/A	Middle Channel	1.203	1.365	PASS				
	High Channel	1.185	1.353	PASS				

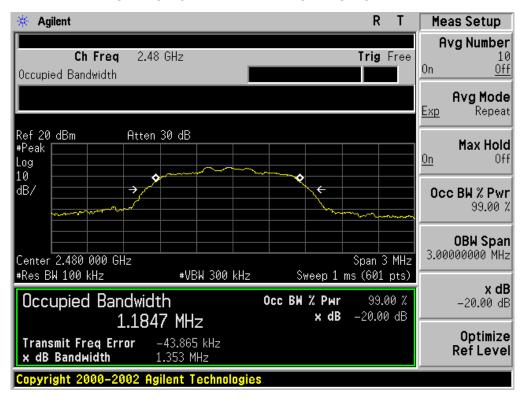
# TEST PLOT OF BANDWIDTH FOR LOW CHANNEL



#### TEST PLOT OF BANDWIDTH FOR MIDDLE CHANNEL

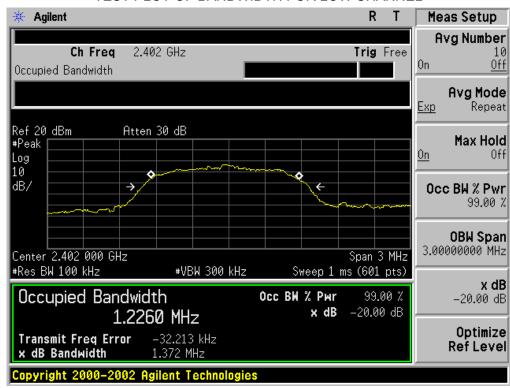


#### TEST PLOT OF BANDWIDTH FOR HIGH CHANNEL

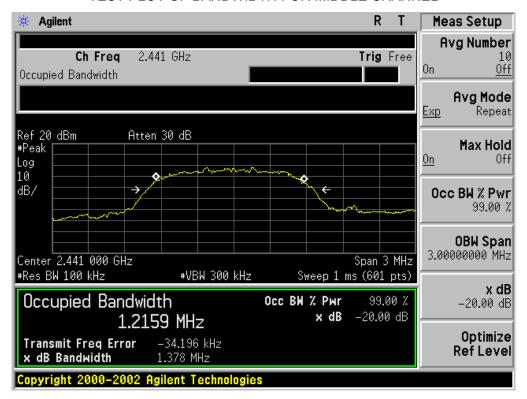


BLUETOOTH 3MBPS LIMITS AND MEASUREMENT RESULT							
		Measur	ement Result				
Applicable Limits		Danill					
		99%OBW (MHz)	-20dB BW(MHz)	Result			
	Low Channel	1.226	1.372	PASS			
N/A	Middle Channel	1.216	1.378	PASS			
	High Channel	1.208	1.359	PASS			

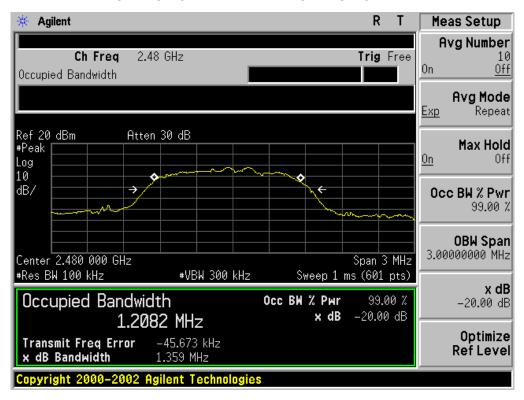
# TEST PLOT OF BANDWIDTH FOR LOW CHANNEL



#### TEST PLOT OF BANDWIDTH FOR MIDDLE CHANNEL



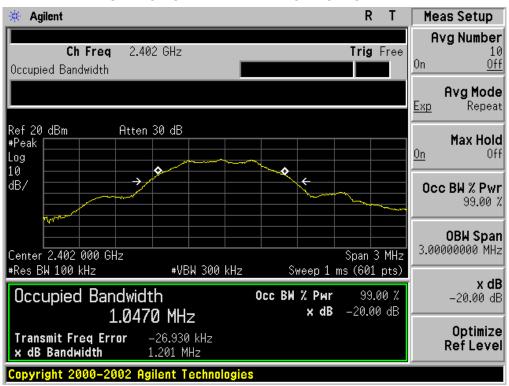
#### TEST PLOT OF BANDWIDTH FOR HIGH CHANNEL



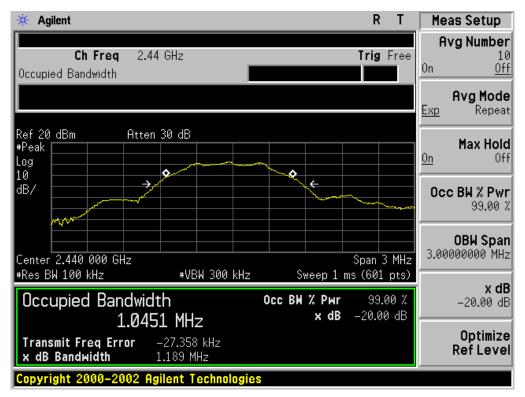
# **FOR BLE**

BLUETOOTH 1MBPS LIMITS AND MEASUREMENT RESULT								
	Measurement Result							
Applicable Limits		Test Data (MHz)						
		99%OBW (MHz) -20dB BW(MHz)		Result				
	Low Channel	1.047	1.201	PASS				
N/A	Middle Channel	1.045	1.189	PASS				
	High Channel	1.042	1.209	PASS				

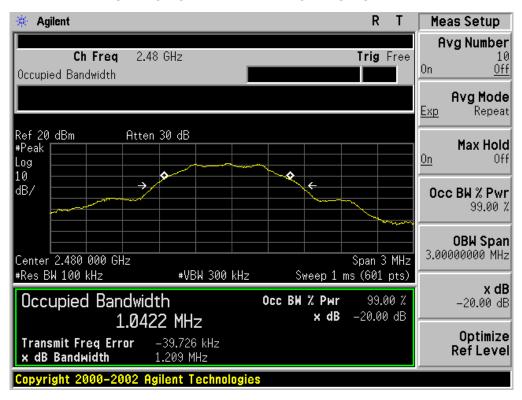
#### TEST PLOT OF BANDWIDTH FOR LOW CHANNEL



#### TEST PLOT OF BANDWIDTH FOR MIDDLE CHANNEL



#### TEST PLOT OF BANDWIDTH FOR HIGH CHANNEL



# 11. FCC LINE CONDUCTED EMISSION TEST

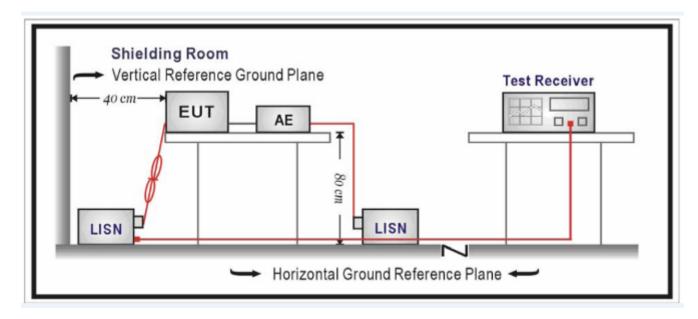
# 11.1. LIMITS OF LINE CONDUCTED EMISSION TEST

Francisco	Maximum RF Line Voltage				
Frequency	Q.P.( dBuV)	Average( dBuV)			
150kHz~500kHz	66-56	56-46			
500kHz~5MHz	56	46			
5MHz~30MHz	60	50			

# Note:

- 1. The lower limit shall apply at the transition frequency.
- 2. The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz.

# 11.2. BLOCK DIAGRAM OF LINE CONDUCTED EMISSION TEST



#### 11.3. PRELIMINARY PROCEDURE OF LINE CONDUCTED EMISSION TEST

- 1. The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. When the EUT is a tabletop system, a wooden table with a height of 0.8 meters is used and is placed on the ground plane as per ANSI C63.10 (see Test Facility for the dimensions of the ground plane used). When the EUT is a floor-standing equipment, it is placed on the ground plane which has a 3-12 mm non-conductive covering to insulate the EUT from the ground plane.
- 2. Support equipment, if needed, was placed as per ANSI C63.10.
- 3. All I/O cables were positioned to simulate typical actual usage as per ANSI C63.10.
- 4. All support equipments received AC120V/60Hz power from a LISN, if any.
- 5. The EUT received DC charging voltage by adapter or PC which received 120V/60Hzpower by a LISN.
- 6. The test program was started. Emissions were measured on each current carrying line of the EUT using a spectrum Analyzer / Receiver connected to the LISN powering the EUT. The LISN has two monitoring points: Line 1 (Hot Side) and Line 2 (Neutral Side). Two scans were taken: one with Line 1 connected to Analyzer / Receiver and Line 2 connected to a 50 ohm load; the second scan had Line 1 connected to a 50 ohm load and Line 2 connected to the Analyzer / Receiver.
- 7. Analyzer / Receiver scanned from 150 kHz to 30MHz for emissions in each of the test modes.
- 8. During the above scans, the emissions were maximized by cable manipulation.
- 9. The test mode(s) were scanned during the preliminary test.

Then, the EUT configuration and cable configuration of the above highest emission level were recorded for reference of final testing.

# 11.4. FINAL PROCEDURE OF LINE CONDUCTED EMISSION TEST

- 1. EUT and support equipment was set up on the test bench as per step 2 of the preliminary test.
- 2. A scan was taken on both power lines, Line 1 and Line 2, recording at least the six highest emissions. Emission frequency and amplitude were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit. If EUT emission level was less –2dB to the A.V. limit in Peak mode, then the emission signal was re-checked using Q.P and Average detector.
- 3. The test data of the worst case condition(s) was reported .

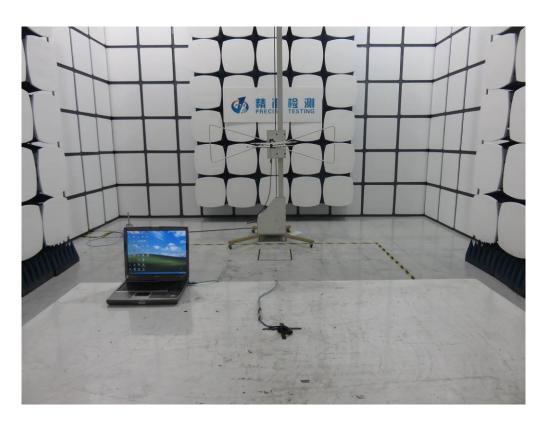
#### 11.5. TEST RESULT OF LINE CONDUCTED EMISSION TEST

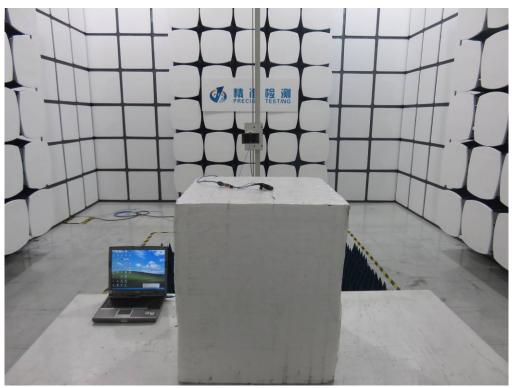
N/A

Note: The EUT doesn't work when charging.

# **APPENDIX A: PHOTOGRAPHS OF TEST SETUP**

FCC RADIATED EMISSION TEST SETUP





APPENDIX B: PHOTOGRAPHS OF EUT
TOTAL VIEW OF EUT



TOP VIEW OF EUT



**BOTTOM VIEW OF EUT** 



FRONT VIEW OF EUT



**BACK VIEW OF EUT** 



LEFT VIEW OF EUT



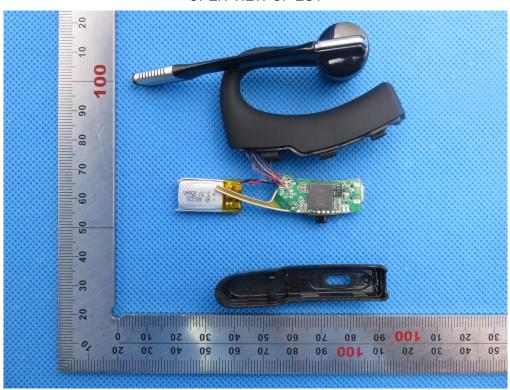
# RIGHT VIEW OF EUT



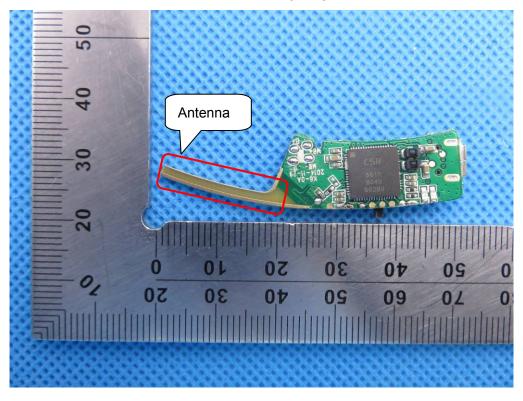
VIEW OF EUT (PORT)



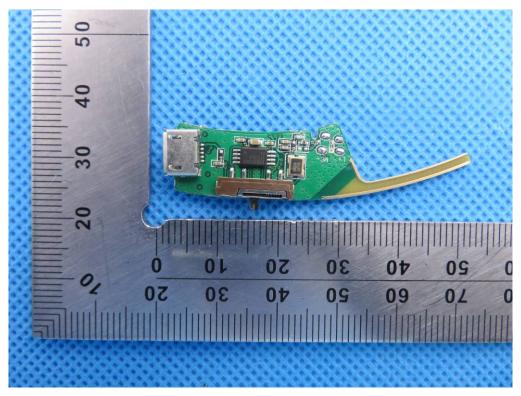
**OPEN VIEW OF EUT** 



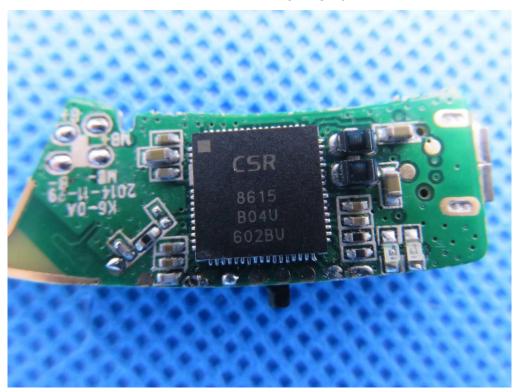
**INTERNAL VIEW OF EUT-1** 



# **INTERNAL VIEW OF EUT-2**



**INTERNAL VIEW OF EUT-3** 



----END OF REPORT----