





RADIO TEST REPORT FCC ID: VLJ-SH032

Product: Bluetooth earphone Trade Mark: Motorola Model No.: SH032 Serial Model: VerveBuds 300 Report No.: S19051503704002 Issue Date: 05 Jun. 2019

Prepared for

Binatone Electronics International Ltd. Floor 23A, 9 Des Voeux Road West, Sheung Wan Hong Kong China

Prepared by

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NTEK北测



1 TEST RESULT CERTIFICATION

Applicant's name:	Binatone Electronics International Ltd.	
Address:	Floor 23A, 9 Des Voeux Road West, Sheung Wan Hong Kong China	
Manufacturer's Name:	Binatone Electronics International Ltd.	
Address:	Floor 23A, 9 Des Voeux Road West, Sheung Wan Hong Kong China	
Product description		
Product name:	Bluetooth earphone	
Model and/or type reference:	SH032	
Serial Model:	VerveBuds 300	
Measurement Procedure Used		

Measurement Procedure Used:

APPLICABLE STANDARDS

APPLICABLE STANDARD/ TEST PROCEDURE	TEST RESULT
FCC 47 CFR Part 2, Subpart J	
FCC 47 CFR Part 15, Subpart C	
KDB 174176 D01 Line Conducted FAQ v01r01	Complied
ANSI C63.10-2013	
KDB 558074 D01 15.247 Meas Guidance v05r02	

This device described above has been tested by Shenzhen NTEK Testing Technology Co., Ltd., and the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.

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The test results of this report relate only to the tested sample identified in this report.

Date of Test	: 16 May. 2019 ~ 05 Jun. 2019	
Testing Engineer	: (Allen Liu)	
Technical Manager	: Jason chen (Jason Chen)	
Authorized Signatory	:(Sam Chen)	





2 SUMMARY OF TEST RESULTS

FCC Part15 (15.247), Subpart C							
Standard Section Test Item Verdict Remark							
15.207	Conducted Emission	PASS					
15.247 (a)(2)	6dB Bandwidth	PASS					
15.247 (b) Peak Output Power		PASS					
15.209 (a) 15.205 (a)							
15.247 (e)	Power Spectral Density	PASS					
15.247 (d)	Band Edge Emission	PASS					
15.247 (d) Spurious RF Conducted Emission		PASS					
15.203 Antenna Requirement PASS							

Remark:

- 1. "N/A" denotes test is not applicable in this Test Report.
- 2. All test items were verified and recorded according to the standards and without any deviation during the test.
- 3. There are left and right ear plugs on the EUT. Both have been tested.





3 FACILITIES AND ACCREDITATIONS

3.1 FACILITIES

All measurement facilities used to collect the measurement data are located at

1/F, Building E, Fenda Science Park, Sanwei Community, Xixiang Street, Bao'an District, Shenzhen 518126 P.R. China.

The sites are constructed in conformance with the requirements of ANSI C63.7, ANSI C63.10 and CISPR Publication 22.

3.2 LABORATORY ACCREDITATIONS AND LISTINGS

Site Description	
CNAS-Lab.	 The Laboratory has been assessed and proved to be in compliance with CNAS-CL01:2006 (identical to ISO/IEC 17025:2005) The Certificate Registration Number is L5516.
IC-Registration	The Certificate Registration Number is 9270A-1.
FCC- Accredited	Test Firm Registration Number: 463705. Designation Number: CN1184
A2LA-Lab.	The Certificate Registration Number is 4298.01 This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005 General requirements for the competence of testing and calibration laboratories. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communiqué dated 8 January 2009).
Name of Firm Site Location	 Shenzhen NTEK Testing Technology Co., Ltd. 1/F, Building E, Fenda Science Park, Sanwei Community, Xixiang Street, Bao'an District, Shenzhen 518126 P.R. China.

3.3 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement $y\pm U$, where expended uncertainty U is based on a standard uncertainty multiplied by a coverage factor of k=2, providing a level of confidence of approximately 95 %.

No.	Item	Uncertainty
1	Conducted Emission Test	±2.80dB
2	RF power, conducted	±0.16dB
3	Spurious emissions, conducted	±0.21dB
4	All emissions, radiated(30MHz~1GHz)	±2.64dB
5	All emissions, radiated(1GHz~6GHz)	±2.40dB
6	All emissions, radiated(>6GHz)	±2.52dB
7	Temperature	±0.5°C
8	Humidity	±2%





4 GENERAL DESCRIPTION OF EUT

Product Feature and Specification					
Equipment Bluetooth earphone					
Trade Mark	Motorola				
FCC ID	VLJ-SH032				
Model No.	SH032				
Serial Model	VerveBuds 300				
Model Difference	All the model are the same circuit and RF module, except the model name.				
Operating Frequency	2402MHz~2480MHz				
Modulation	GFSK				
Number of Channels	40 Channels				
Bluetooth Version	BT V5.0				
Antenna Type	FPCB Antenna				
Antenna Gain	1 dBi				
	DC supply:				
Power supply	Earphone: DC 3.7V/60mAh from Battery or DC 3.7V form Charging case Charging case: DC 3.7V/200mAh from Battery or DC 5V from USB Port				
	Adapter supply:				
HW Version	v1.3				
SW Version	v0.80				

Note: Based on the application, features, or specification exhibited in User's Manual, the EUT is considered as an ITE/Computing Device. More details of EUT technical specification, please refer to the User's Manual.





Revision History

Revision history						
Report No.	Version	Description	Issued Date			
S19051503704002	Rev.01	Initial issue of report	Apr 30, 2019			
	-					
	-					
			-			
			-			
		I				





5 DESCRIPTION OF TEST MODES

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

The Transmitter was operated in the normal operating mode. The TX frequency was fixed which was for the purpose of the measurements.

Test of channel included the lowest and middle and highest frequency to perform the test, then record on this report.

Those data rates (1Mbps for GFSK modulation) were used for all test.

The EUT was pretested with 3 orientations placed on the table for the radiated emission measurement -X, Y, and Z-plane. The X-plane results were found as the worst case and were shown in this report.

Carrier Frequency and Channel list:

Channel	Frequency(MHz)
0	2402
1	2404
19	2440
20	2442
38	2478
39	2480

Note: fc=2402MHz+k×2MHz k=0 to 39

The following summary table is showing all test modes to demonstrate in compliance with the standard.

Test Cases				
Test Item	Data Rate/ Modulation			
Test tiem	BT V4.0 / GFSK			
AC Conducted Emission	Mode 1: normal link mode			
	Mode 1: normal link mode			
Radiated Test	Mode 2: Bluetooth Tx Ch00_2402MHz_1Mbps			
Cases	Mode 3: Bluetooth Tx Ch19_2440MHz_1Mbps			
	Mode 4: Bluetooth Tx Ch39_2480MHz_1Mbps			
Conducted Test	Mode 2: Bluetooth Tx Ch00_2402MHz_1Mbps			
Conducted Test	Mode 3: Bluetooth Tx Ch19_2440MHz_1Mbps			
Cases	Mode 4: Bluetooth Tx Ch39_2480MHz_1Mbps			

Note:

1. The engineering test program was provided and the EUT was programmed to be in continuously transmitting mode.

- 2. AC power line Conducted Emission was tested under maximum output power.
- 3. For radiated test cases, the worst mode data rate 1Mbps was reported only, because this data rate has the highest RF output power at preliminary tests, and no other significantly frequencies found in conducted spurious emission.
- 4. EUT is set to continuous transmission mode. duty cycle greater than 98%.
- 5. EUT built-in battery-powered, the battery is fully-charged.





SETUP OF EQUIPMENT UNDER TEST 6 6.1 BLOCK DIAGRAM CONFIGURATION OF TEST SYSTEM For AC Conducted Emission Mode AC PLUG C-1 AE-1 E-1 EUT Adapter For Radiated Test Cases EUT For Conducted Test Cases C-2 Measurement EUT Instrument Note: The temporary antenna connector is soldered on the PCB board in order to perform conducted tests and this temporary antenna connector is listed in the equipment list.





6.2 SUPPORT EQUIPMENT

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Item	Equipment	Mfr/Brand	Model/Type No.	Series No.	Note
AE-1	Adapter	SIMP	KSAPK0110500200D5	N/A	Peripherals

Item	Cable Type	Shielded Type	Ferrite Core	Length
C-1	USB cable	NO	NO	0.5m
C-2	RF cable	YES	NO	0.1m

Notes:

- (1) The support equipment was authorized by Declaration of Confirmation.
- (2) For detachable type I/O cable should be specified the length in cm in [Length] column.
- (3) "YES" is means "shielded" "with core"; "NO" is means "unshielded" "without core".





6.3 EQUIPMENTS LIST FOR ALL TEST ITEMS

Radiation& Conducted Test equipment

		estequipment					Calibrati
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until	on period
1	Spectrum Analyzer	Aglient	E4407B	MY45108040	2019.05.13	2020.05.12	1 year
2	Spectrum Analyzer	Agilent	N9020A	MY49100060	2018.10.08	2019.10.07	1 year
3	Spectrum Analyzer	R&S	FSV40	101417	2018.10.08	2019.10.07	1 year
4	Test Receiver	R&S	ESPI7	101318	2019.05.13	2020.05.12	1 year
5	Bilog Antenna	TESEQ	CBL6111D	31216	2019.04.07	2020.04.06	1 year
6	50Ω Coaxial Switch	Anritsu	MP59B	6200983705	2018.05.19	2020.05.18	2 year
7	Horn Antenna	EM	EM-AH-1018 0	2011071402	2019.04.07	2020.04.06	1 year
8	Amplifier	EMC	EMC051835 SE	980246	2018.12.11	2019.12.10	1 year
9	Active Loop Antenna	SCHWARZBE CK	FMZB 1519 B	055	2018.08.05	2019.08.04	1 year
10	Power Meter	DARE	RPR3006W	15I00041SN 084	2018.12.11	2019.12.10	1 year
11	Test Cable (9KHz-30MHz)	N/A	R-01	N/A	2018.08.05	2019.08.04	3 year
12	Test Cable (30MHz-1GHz)	N/A	R-02	N/A	2017.04.21	2020.04.20	3 year
13	High Test Cable(1G-40G Hz)	N/A	R-03	N/A	2017.04.21	2020.04.20	3 year
14	High Test Cable(1G-40G Hz)	N/A	R-04	N/A	2017.04.21	2020.04.20	3 year
15	Filter	TRILTHIC	2400MHz	29	2017.04.21	2020.04.20	3 year
16	temporary antenna connector (Note)	NTS	R001	N/A	2017.04.19	2020.04.18	N/A

Note:

We will use the temporary antenna connector (soldered on the PCB board) When conducted test And this temporary antenna connector is listed within the instrument list





AC Co	onduction Test	equipment					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until	Calibration period
1	Test Receiver	R&S	ESCI	101160	2019.05.13	2020.05.12	1 year
2	LISN	R&S	ENV216	101313	2019.04.18	2020.04.19	1 year
3	LISN	SCHWARZBE CK	NNLK 8129	8129245	2019.05.13	2020.05.12	1 year
4	50Ω Coaxial Switch	ANRITSU CORP	MP59B	6200983704	2018.05.19	2020.05.18	2 year
5	Test Cable (9KHz-30MH z)	N/A	C01	N/A	2017.04.21	2020.04.20	3 year
6	Test Cable (9KHz-30MH z)	N/A	C02	N/A	2017.04.21	2020.04.20	3 year
7	Test Cable (9KHz-30MH z)	N/A	C03	N/A	2017.04.21	2020.04.20	3 year

Note: Each piece of equipment is scheduled for calibration once a year except the Aux Equipment & Test Cable which is scheduled for calibration every 2 or 3 years.





7 TEST REQUIREMENTS

7.1 CONDUCTED EMISSIONS TEST

7.1.1 Applicable Standard

According to FCC Part 15.207(a) and KDB 174176 D01 Line Conducted FAQ v01r01

7.1.2 Conformance Limit

Fraguanov (MHz)	Conducted	Emission Limit	
Frequency(MHz)	Quasi-peak	Average	
0.15-0.5	66-56*	56-46*	
0.5-5.0	56	46	
5.0-30.0	60	50	

Note: 1. *Decreases with the logarithm of the frequency

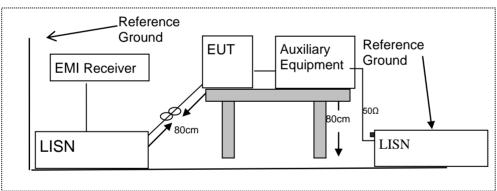
2. The lower limit shall apply at the transition frequencies

3. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

7.1.3 Measuring Instruments

The Measuring equipment is listed in the section 6.3 of this test report.

7.1.4 Test Configuration



7.1.5 Test Procedure

According to the requirements in Section 13.1.4.1 of ANSI C63.10-2013 Conducted emissions the EUT measured in the frequency range between 0.15 MHz and 30 MHz using CISPR Quasi-Peak and average detector mode.

- 1. The EUT was placed 0.4 meter from the conducting wall of the shielding room.
- 2. The EUT was placed on a table which is 0.8m above ground plane.
- 3. Connect EUT to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- 4. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40cm long.
- 5. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
- 6. LISN at least 80 cm from nearest part of EUT chassis.
- 7. The frequency range from 150KHz to 30MHz was searched.
- 8. Set the test-receiver system to Peak Detect Function and specified bandwidth(IF bandwidth=9KHz) with Maximum Hold Mode
- 9. For the actual test configuration, please refer to the related Item –EUT Test Photos.





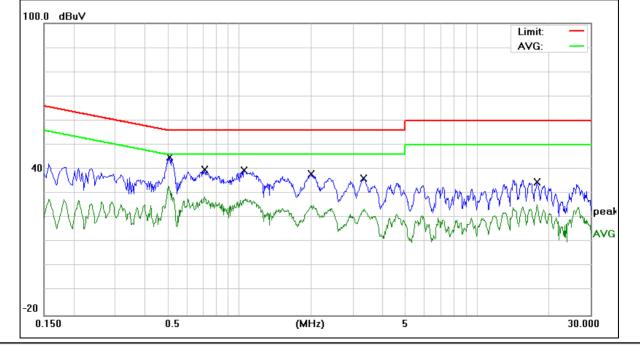
7.1.6 Test Results

EUT:		Bluetooth	earphone	Model Name	Model Name :		SH032		
Temperature:	emperature: 26 °C		Relative Humidi		nidity:	54%			
Pressure:		1010hPa		Phase :		L			
Test Voltage : DC 5V fro AC 120V		om Adapter /60Hz	Test Mode:		Mode	1			
	-			1					
Frequency	Rea	ding Level	Correct Factor	Measure-ment	Lim	its	Margin	Remark	
(MHz)	((dBµV)	(dB)	(dBµV)	(dBµ	ıV)	(dB)	Remain	
0.5100		35.25	9.74	44.99	56.0	00	-11.01	QP	
0.5100		23.09	9.74	32.83	46.0	00	-13.17	AVG	
0.7140		30.15	9.74	39.89	56.0	00	-16.11	QP	
0.7140		18.78	9.74	28.52	46.0	00	-17.48	AVG	
1.0460		29.68	9.74	39.42	56.0	00	-16.58	QP	
1.0460		19.38	9.74	29.12	46.0	00	-16.88	AVG	
2.0059		28.30	9.78	38.08	56.0	00	-17.92	QP	
2.0059		15.50	9.78	25.28	46.0	00	-20.72	AVG	
3.3140		26.30	9.84	36.14	56.0	00	-19.86	QP	
3.3140		16.74	9.84	26.58	46.0	00	-19.42	AVG	
17.8500		24.47	10.17	34.64	60.0	00	-25.36	QP	
17.8500		15.21	10.17	25.38	50.0	00	-24.62	AVG	

Remark:

1. All readings are Quasi-Peak and Average values.

2. Factor = Insertion Loss + Cable Loss.



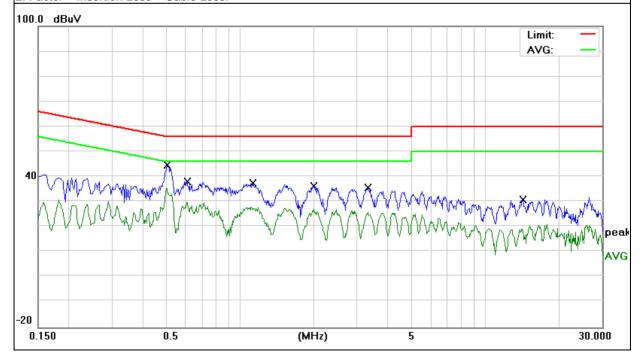




EUT: Bluetooth earphone			Model Na	me :	SH032			
Temperature:	erature: 26 °C Relative Humidity:		54%					
Pressure:	ssure: 1010hPa Ph		Phase :		N			
Test Voltage : DC 5V from Adapter AC 120V/60Hz			Test Mode:		Mode 1			
	<u> </u>							_
Frequency	Rea	ding Level	Correct Factor	Meas	sure-ment	Limits	Margin	Remark
(MHz)	((dBµV)	(dB)		(dBµV)	(dBµV)	(dB)	rtomant
0.5060		34.99	9.75		44.74	56.00	-11.26	QP
0.5060		25.63	9.75		35.38	46.00	-10.62	AVG
0.6100		28.43	9.75		38.18	56.00	-17.82	QP
0.6100		17.90	9.75		27.65	46.00	-18.35	AVG
1.1260		27.59	9.75		37.34	56.00	-18.66	QP
1.1260		16.84	9.75		26.59	46.00	-19.41	AVG
2.0100		26.53	9.79		36.32	56.00	-19.68	QP
2.0100		17.37	9.79		27.16	46.00	-18.84	AVG
3.3220		25.65	9.89		35.54	56.00	-20.46	QP
3.3220		15.69	9.89		25.58	46.00	-20.42	AVG
14.2220		20.65	10.09		30.74	60.00	-29.26	QP
14.2220		10.74	10.09		20.83	50.00	-29.17	AVG

Remark:

All readings are Quasi-Peak and Average values.
 Factor = Insertion Loss + Cable Loss.







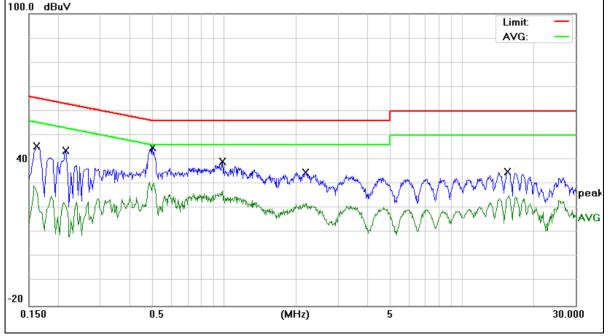
EUT:	Bluetooth earphone	Model Name :	SH032
Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	1010hPa	Phase :	L
Lest Voltage .	DC 5V from Adapter AC 240V/60Hz	Test Mode:	Mode 1

Frequency	Reading Level	Correct Factor	Measure-ment	Limits	Margin	Demente
(MHz)	(dBµV)	(dB)	(dBµV)	(dBµV)	(dB)	- Remark
0.1620	35.75	9.76	45.51	65.36	-19.85	QP
0.1620	21.26	9.76	31.02	55.36	-24.34	AVG
0.2140	34.05	9.76	43.81	63.04	-19.23	QP
0.2140	20.69	9.76	30.45	53.04	-22.59	AVG
0.4980	35.20	9.74	44.94	56.03	-11.09	QP
0.4980	21.05	9.74	30.79	46.03	-15.24	AVG
0.9820	29.62	9.74	39.36	56.00	-16.64	QP
0.9820	18.37	9.74	28.11	46.00	-17.89	AVG
2.1900	25.04	9.78	34.82	56.00	-21.18	QP
2.1900	12.22	9.78	22.00	46.00	-24.00	AVG
15.5220	25.09	10.11	35.20	60.00	-24.80	QP
15.5220	14.96	10.11	25.07	50.00	-24.93	AVG

Remark:

1. All readings are Quasi-Peak and Average values. 2. Factor = Insertion Loss + Cable Loss.

100.0 dBu∀



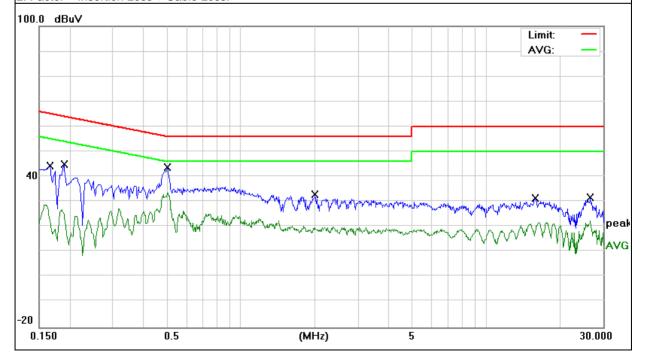




EUT: Bluetooth ea		earphone Model Nar		me :	SH032			
Temperature:	e: 26 °C Relative Humidity: 54%		54%	4%				
Pressure:	1010hPa Phase : N							
Test Voltage : DC 5V from AC 240V/60					ə:	Mode 1		
				1			I	1
Frequency	Readi	ing Level	Correct Factor	Meas	sure-ment	Limits	Margin	Remark
(MHz)	(d	BμV)	(dB)		(dBµV)	(dBµV)	(dB)	
0.1660	34	4.47	9.73		44.20	65.15	-20.95	QP
0.1660	2	2.29	9.73		32.02	55.15	-23.13	AVG
0.1900	3	5.30	9.73		45.03	64.03	-19.00	QP
0.1900	2	0.86	9.73		30.59	54.03	-23.44	AVG
0.5020	3	3.89	9.75		43.64	56.00	-12.36	QP
0.5020	23	3.84	9.75		33.59	46.00	-12.41	AVG
2.0100	2	3.05	9.79		32.84	56.00	-23.16	QP
2.0100	1	0.65	9.79		20.44	46.00	-25.56	AVG
15.8739	2	1.23	10.11		31.34	60.00	-28.66	QP
15.8739	1	0.47	10.11		20.58	50.00	-29.42	AVG
26.6180	2	1.09	10.59		31.68	60.00	-28.32	QP
26.6180	1	1.75	10.59		22.34	50.00	-27.66	AVG

Remark:

All readings are Quasi-Peak and Average values.
 Factor = Insertion Loss + Cable Loss.







7.2 RADIATED SPURIOUS EMISSION

7.2.1 Applicable Standard

According to FCC Part 15.247(d) and 15.209 and ANSI C63.10-2013

7.2.2 Conformance Limit

According to FCC Part 15.247(d): radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)). According to FCC Part15.205, Restricted bands

Recording to FOC Fait 13.200; Restricted bands						
MHz	MHz	MHz	GHz			
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15			
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	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)			
13.36-13.41						

20dBc in any 100 kHz bandwidth outside the operating frequency band. In case the emission fall within the restricted band specified on 15.205(a), then the 15.209(a) limit in the table below has to be followed.

Restricted Frequency(MHz)	Field Strength (µV/m)	Field Strength (dBµV/m)	Measurement Distance
0.009~0.490	2400/F(KHz)	20 log (uV/m)	300
0.490~1.705	24000/F(KHz)	20 log (uV/m)	30
1.705~30.0	30	29.5	30
30-88	100	40	3
88-216	150	43.5	3
216-960	200	46	3
Above 960	500	54	3

Limits of Radiated Emission Measurement(Above 1000MHz)

Frequency(MHz)	Class B (dBuV	/m) (at 3M)
	PEAK	AVERAGE
Above 1000	74	54

Remark: 1. Emission level in dBuV/m=20 log (uV/m)

2. Measurement was performed at an antenna to the closed point of EUT distance of meters.

3. Limit line=Specific limits(dBuV) + distance extrapolation factor.

a) At frequencies at or above 30 MHz:

Distance extrapolation factor =20log(Specific distance/ test distance)(dB);

b) At frequencies below 30 MHz:

Distance extrapolation factor =40log(Specific distance/ test distance)(dB);



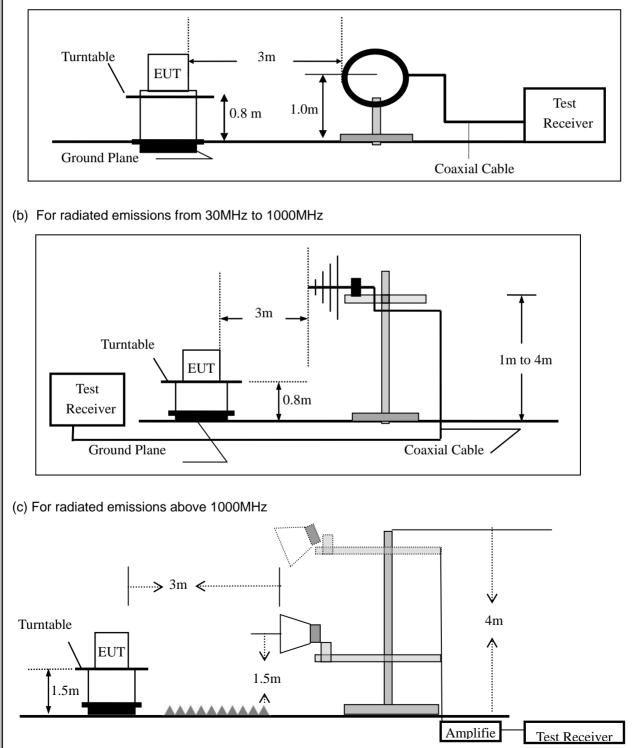


7.2.3 Measuring Instruments

The Measuring equipment is listed in the section 6.3 of this test report.

7.2.4 Test Configuration

(a) For radiated emissions below 30MHz







7.2.5 Test Procedure

The test site semi-anechoic chamber has met the requirement of NSA tolerance 4 dB according to the standards: ANSI C63.10-2013. The test distance is 3m. The setup is according to the requirements in Section 13.1.4.1 of ANSI C63.10-2013 and CAN/CSA-CEI/IEC CISPR 22.

This test is required for any spurious emission that falls in a Restricted Band, as defined in Section 15.205. It must be performed with the highest gain of each type of antenna proposed for use with the EUT. Use the following spectrum analyzer settings:

Spectrum Parameter	Setting					
Attenuation	Auto					
Start Frequency	1000 MHz					
Stop Frequency	10th carrier harmonic					
RB / VB (emission in restricted band)	1 MHz / 1 MHz for Peak, 1 MHz / 10Hz for Average					

Receiver Parameter	Setting
Attenuation	Auto
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

a. The measuring distance of at 3 m shall be used for measurements at frequency up to 1GHz. For frequencies above 1GHz, any suitable measuring distance may be used.

b. The EUT was placed on the top of a rotating table 0.8 m for below 1GHz and 1.5m for above 1GHz the ground at a 3 meter. The table was rotated 360 degrees to determine the position of the highest radiation.

- c. The height of the equipment or of the substitution antenna shall be 0.8 m for below 1GHz and 1.5m for above 1GHz; the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For the radiated emission test above 1GHz:

Place the measurement antenna away from each area of the EUT determined to be a source of emissions at the specified measurement distance, while keeping the measurement antenna aimed at the source of emissions at each frequency of significant emissions, with polarization oriented for maximum response. The measurement antenna may have to be higher or lower than the EUT, depending on the radiation pattern of the emission and staying aimed at the emission source for receiving the maximum signal. The final measurement antenna elevation shall be that which maximizes the emissions. The measurement antenna elevation for maximum emissions shall be restricted to a range of heights of from 1 m to 4 m above the ground or reference ground plane.

e. The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.

- f. If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed.
- g. For the actual test configuration, please refer to the related Item –EUT Test Photos.

Note:

Both horizontal and vertical antenna polarities were tested and performed pretest to three orthogonal axis. The worst case emissions were reported





During the radiated emission t	est, the Spectrum An	alyzer was set with the follow	ving configurations:		
Frequency Band (MHz)	Function	Resolution bandwidth	Video Bandwidth		
30 to 1000	QP	120 kHz	300 kHz		
Ab aug 4000	Peak	1 MHz	1 MHz		
Above 1000	Average	1 MHz	10 Hz		

Note: for the frequency ranges below 30 MHz, a narrower RBW is used for these ranges but the measured value should add a RBW correction factor (RBWCF) where RBWCF [dB] =10*lg(100 [kHz]/narrower RBW [kHz])., the narrower RBW is 1 kHz and RBWCF is 20 dB for the frequency 9 kHz to 150 kHz, and the narrower RBW is 10 kHz and RBWCF is 10 dB for the frequency 150 kHz to 30 MHz.

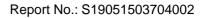
7.2.6 Test Results

■ Spurious Emission below 30MHz (9KHz to 30MHz)

EUT:	Bluetooth earphone	Model No.:	SH032
Temperature:	20 ℃	Relative Humidity:	48%
Test Mode:	Mode2/Mode3/Mode4	Test By:	Allen Liu

Freq.	Ant.Pol.	Emission L	.evel(dBuV/m)	Limit 3	m(dBuV/m)	Over(dB)		
(MHz)	H/V	PK	AV	PK	AV	PK	AV	

Note: the amplitude of spurious emission that is attenuated by more than 20dB below the permissible limit has no need to be reported.







■ Spurious Emission below 1GHz (30MHz to 1GHz)

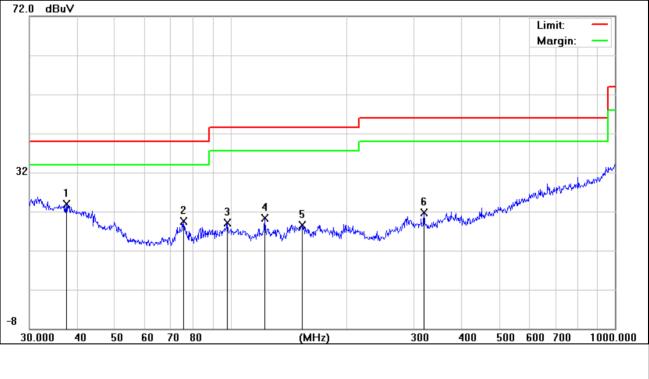
All the modulation modes have been tested, and the worst result was report as below:

EUT:	Bluetooth earphone	Model Name :	SH032
Temperature:	20 ℃	Relative Humidity:	48%
Pressure:	1010hPa	Test Mode:	Mode 1
Test Voltage :	DC 3.7V(Left)		

Polar	Frequency	Meter Reading	Factor		Limits	Margin	Remark
Polar (H/V)	(MHz)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
V	37.4164	7.62	16.30	23.92	40.00	-16.08	QP
V	75.4462	9.65	9.85	19.50	40.00	-20.50	QP
V	98.1418	8.50	10.65	19.15	43.50	-24.35	QP
V	122.8337	9.47	10.79	20.26	43.50	-23.24	QP
V	153.7384	6.51	12.02	18.53	43.50	-24.97	QP
V	318.8170	8.42	13.28	21.70	46.00	-24.30	QP

Remark:

Absolute Level= ReadingLevel+ Factor, Margin= Absolute Level - Limit







(H/V) (MHz) (dBuV) (dB) (dBuV/m) (dBuV/m) (dB) H 40.1347 6.08 14.65 20.73 40.00 -19.27 H 89.2762 9.42 9.88 19.30 43.50 -24.20 H 144.8417 7.42 11.43 18.85 43.50 -24.65 H 216.7828 6.95 11.13 18.08 46.00 -27.92 H 403.2500 7.76 14.88 22.64 46.00 -23.36 H 631.6883 8.17 20.15 28.32 46.00 -17.68 Remark: Absolute Level= ReadingLevel+ Factor, Margin= Absolute Level - Limit -17.68 -17.68 72.0 dBuV	Remark QP QP QP QP
H 89.2762 9.42 9.88 19.30 43.50 -24.20 H 144.8417 7.42 11.43 18.85 43.50 -24.65 H 216.7828 6.95 11.13 18.08 46.00 -27.92 H 403.2500 7.76 14.88 22.64 46.00 -23.36 H 631.6883 8.17 20.15 28.32 46.00 -17.68 Remark: Absolute Level= ReadingLevel+ Factor, Margin= Absolute Level - Limit -17.68 -17.68 72.0 dBuV	QP QP QP QP
H 144.8417 7.42 11.43 18.85 43.50 -24.65 H 216.7828 6.95 11.13 18.08 46.00 -27.92 H 403.2500 7.76 14.88 22.64 46.00 -23.36 H 631.6883 8.17 20.15 28.32 46.00 -17.68 Remark: Absolute Level= ReadingLevel+ Factor, Margin= Absolute Level - Limit 72.0 dBuV Limit: Margin: 32 32 46.00 46.00 46.00 46.00 46.00 Sector 32 46.00 -17.68 46.00 -17.68	QP QP QP
H 216.7828 6.95 11.13 18.08 46.00 -27.92 H 403.2500 7.76 14.88 22.64 46.00 -23.36 H 631.6883 8.17 20.15 28.32 46.00 -17.68 Remark: Absolute Level= ReadingLevel+ Factor, Margin= Absolute Level - Limit Yes Limit: Margin: 72.0 dBuV	QP QP
H 403.2500 7.76 14.88 22.64 46.00 -23.36 H 631.6883 8.17 20.15 28.32 46.00 -17.68 Remark: Absolute Level= ReadingLevel+ Factor, Margin= Absolute Level - Limit 72.0 dBuV Limit: Margin: 32 32 32 6 6 6 6	QP
H 631.6883 8.17 20.15 28.32 46.00 -17.68 Remark: Absolute Level= ReadingLevel+ Factor, Margin= Absolute Level - Limit 72.0 dBuV 32 Image: Constraint of the second secon	
Remark: Absolute Level= ReadingLevel+ Factor, Margin= Absolute Level - Limit 72.0 dBuV	
Absolute Level= ReadingLevel+ Factor, Margin= Absolute Level - Limit 72.0 dBuV Limit: Margin: 32 32 32 34 5 35 36 36 36 37 37 37 37 37 37 37	
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	with the second
-8	
<u>30.000 40 50 60 70 80 (MHz) 300 400 500 600 700</u>	1000.00



Γ



		Blue	etooth	earpho	ne	Model	Name :		S	H032			
Tempe	erature:	20 °				Relativ	e Humidit	y:	4	8%			
Pressu		101	0hPa			Test M		-	N	lode 1			
Test Vo	oltage :	DC	3.7V(F	Right)									
								r				- 1	
Polar (H/V)	Frequen	су		eter ding	Factor	r .	nission Level	Limits		s Margin		ו	Remark
(100)	(MHz)		(dB	BuV)	(dB)	(d	BuV/m)	(d	BuV/m)		(dB)		
V	31.5091			02	19.25		26.27		40.00		13.73		QP
<u>V</u>	43.6584			0.16	12.86		23.02		40.00		16.98		QP
V V	75.4462			. <u>65</u> .47	9.85 10.79		19.50		40.00		20.50		QP QP
 	122.833 318.817			47	13.28		20.26 22.70		<u>43.50</u> 46.00		23.24		
V	668.142			.09	21.05		30.14		46.00		-15.86		QP
Remark										1		1	
	Level= Rea	adingl	∟evel+	- Facto	r, Margin	= Abso	lute Level	- Lim	it				
72.0 dB	uV												
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-8		60	70 80			(MHz)		300	400	500	600	700	1000.00





Polar	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Remark	
(H/V)	(MHz)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)		
Н	33.2111	7.56	18.29	25.85	40.00	-14.15	QP	
Н	47.1597	8.85	10.28	19.13	40.00	-20.87	QP	
Н	89.2762	9.92	9.88	19.80	43.50	-23.70	QP	
Н	144.8417	8.42	11.43	19.85	43.50	-23.65	QP	
H	197.1999	7.28	11.63	18.91	43.50	-24.59	QP	
Н	687.1506	7.68	21.24	28.92	46.00	-17.08	QP	
Remark Absolute	: e Level= Reading	Level+ Factor	r, Margin= A	Absolute Level	- Limit			
72.0 dE			· •					
						Limit:	-	
						Margir	r. —	
32						- 6	1	
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EUT:	us Emissio		oth earpho			el No.:		SH	032		
Temperatu	re:	20 ℃				tive Humid	itv [.]	48%			
Test Mode			/Mode3/Mo	ode4	Test		ity.		en Liu		
Frequenc	Read	Cable	Antenna	Prea	amp	Emission	Limi	te	Margin		
у	Level	loss	Factor	Factor		Level			Inargin	Remark	Comment
(MHz)	(dBµV)	(dB)	dB/m	(dl	/	(dBµV/m)			(dB)		
			Low	Chan	nel (2	402 MHz)-	Above	1G			1
#######	61.82	5.21	35.59	44.	30	58.32	74.0	00	-15.68	Pk	Vertical
#######	42.51	5.21	35.59	44.	30	39.01	54.0	00	-14.99	AV	Vertical
######	61.25	6.48	36.27	44.	60	59.40	74.0	00	-14.60	Pk	Vertical
#######	40.18	6.48	36.27	44.	60	38.33	54.0	00	-15.67	AV	Vertical
#######	60.06	5.21	35.55	44.	30	56.52	74.00		-17.48	Pk	Horizontal
#######	41.44	5.21	35.55	44.	30	37.90	54.00		-16.10	AV	Horizontal
#######	59.92	6.48	36.27	44.	52	58.15	74.00		-15.85	Pk	Horizontal
#######	41.38	6.48	36.27	44.	52	39.61	54.00		-14.39	AV	Horizontal
Mid Channel (2440 MHz)-Above 1G											
#######	60.49	5.21	35.66	44.	20	57.16	74.00		-16.84	Pk	Vertical
#######	39.67	5.21	35.66	44.	20	36.34	54.00		-17.66	AV	Vertical
#######	60.54	7.10	36.50	44.	43	59.71	74.0	00	-14.29	Pk	Vertical
#######	39.64	7.10	36.50	44.	43	38.81	54.0	00	-15.19	AV	Vertical
#######	61.74	5.21	35.66	44.	20	58.41	74.0	00	-15.59	Pk	Horizontal
#######	42.91	5.21	35.66	44.	20	39.58	54.0	00	-14.42	AV	Horizontal
#######	60.85	7.10	36.50	44.	43	60.02	74.0	00	-13.98	Pk	Horizontal
#######	40.75	7.10	36.50	44.	43	39.92	54.0	00	-14.08	AV	Horizontal
			High	Chan	nel (2	480 MHz)-	Above	1G			
#######	60.43	5.21	35.52	44.	21	56.95	74.0	00	-17.05	Pk	Vertical
#######	40.14	5.21	35.52	44.	21	36.66	54.0	00	-17.34	AV	Vertical
#######	61.92	7.10	36.53	44.	60	60.95	74.0	00	-13.05	Pk	Vertical
#######	41.67	7.10	36.53	44.	60	40.70	54.0	00	-13.30	AV	Vertical
#######	62.41	5.21	35.52	44.	21	58.93	74.0	00	-15.07	Pk	Horizonta
#######	42.01	5.21	35.52	44.	21	38.53	54.0	00	-15.47	AV	Horizonta
#######	61.08	7.10	36.53	44.	60	60.11	74.0	00	-13.89	Pk	Horizonta
#######	42.68	7.10	36.53	44.	60	41.71	54.0	00	-12.29	AV	Horizonta

Note: (1) All Readings are Peak Value (VBW=3MHz) and AV Value (VBW=10Hz).
(2) Emission Level= Antenna Factor + Cable Loss + Read Level - Preamp Factor
(3) All other emissions more than 20dB below the limit.





EUT:		Blueto	oth earpho	ne	Mod	lel No.:		SH	032			
Temperatu	ature: 20 °C Relative Humidity: 48%				%							
Test Mode	:	Mode2 (Right)	Mode2/Mode3/Mo (Right)			Fest By: Alle			en Liu			
Frequenc y	Read Level	Cable loss	Antenna Factor	Prea Fac	-	Emission Level	Limits		Margin	Remark	Comment	
(MHz)	(dBµV)	(dB)	dB/m	(dE	/	(dBµV/m)		,	(dB)			
Low Channel (2402 MHz)-Above 1G												
4804.36	64.17	5.21	35.59	44.30		60.67	74.0	0	-13.33	Pk	Vertical	
4804.36	42.31	5.21	35.59	44.3	30	38.81	54.0	0	-15.19	AV	Vertical	
7206.13	61.47	6.48	36.27	44.6	60	59.62	74.0	0	-14.38	Pk	Vertical	
7206.13	42.19	6.48	36.27	44.6	60	40.34	54.0	0	-13.66	AV	Vertical	
4804.19	64.16	5.21	35.55	44.3	30	60.62	74.0	0	-13.38	Pk	Horizonta	
4804.19	42.68	5.21	35.55	44.30		39.14	54.00		-14.86	AV	Horizonta	
7206.24	62.20	6.48	36.27	44.52		60.43	74.00		-13.57	Pk	Horizonta	
7206.24	41.64	6.48	36.27	44.52		39.87	54.00		-14.13	AV	Horizonta	
Mid Channel (2440 M							Above 1	IG				
4880.5	65.00	5.21	35.66	44.20		61.67	74.00		-12.33	Pk	Vertical	
4880.5	45.31	5.21	35.66	44.2	20	41.98	54.0	0	-12.02	AV	Vertical	
7320.29	65.61	7.10	36.50	44.4	43	64.78	74.0	0	-9.22	Pk	Vertical	
7320.29	42.76	7.10	36.50	44.4	43	41.93	54.0	0	-12.07	AV	Vertical	
4880.39	63.72	5.21	35.66	44.2	20	60.39	74.0	0	-13.61	Pk	Horizonta	
4880.39	42.22	5.21	35.66	44.2	20	38.89	54.0	0	-15.11	AV	Horizonta	
7320.26	61.69	7.10	36.50	44.4	43	60.86	74.0	0	-13.14	Pk	Horizonta	
7320.26	44.59	7.10	36.50	44.4	43	43.76	54.0	0	-10.24	AV	Horizonta	
			High	Chanr	nel (2	480 MHz)-	Above	1G			•	
4960.46	63.43	5.21	35.52	44.2	21	59.95	74.0	0	-14.05	Pk	Vertical	
4960.46	41.10	5.21	35.52	44.2	21	37.62	54.0	0	-16.38	AV	Vertical	
7440.11	63.40	7.10	36.53	44.6	60	62.43	74.0	0	-11.57	Pk	Vertical	
7440.11	38.25	7.10	36.53	44.6	60	37.28	54.0	0	-16.72	AV	Vertical	
4960.3	61.80	5.21	35.52	44.2	21	58.32	74.0	0	-15.68	Pk	Horizonta	
4960.3	43.43	5.21	35.52	44.2	21	39.95	54.0	0	-14.05	AV	Horizonta	
7440.18	64.38	7.10	36.53	44.6	60	63.41	74.0	0	-10.59	Pk	Horizonta	
7440.18	44.99	7.10	36.53	44.6	60	44.02	54.0	0	-9.98	AV	Horizonta	





EUT:		Bluetoot	n earphone	Mode	Model No.: SI		SH032		
Temperatu	erature: 20 °C		Relat	ive Humidit	y: 48%	48%			
Test Mode):	Mode2/	Node4 (Lef	t) Test	By:	Aller	Liu		
					•				
Frequenc V	Meter Reading	Cable Loss	Antenna Factor	Preamp Factor	Emission Level	Limits	Margin	Detector	Comment
(MHz)	(dBµV)	(dB)	dB/m	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Туре	ŧ.
				G	SK				
2310.00	61.64	2.97	27.80	43.80	48.61	74	-25.39	Pk	Horizontal
2310.00	40.16	2.97	27.80	43.80	27.13	54	-26.87	AV	Horizonta
2310.00	59.65	2.97	27.80	43.80	46.62	74	-27.38	Pk	Vertical
2310.00	40.86	2.97	27.80	43.80	27.83	54	-26.17	AV	Vertical
2390.00	60.56	3.14	27.21	43.80	47.11	74	-26.89	Pk	Vertical
2390.00	42.01	3.14	27.21	43.80	28.56	54	-25.44	AV	Vertical
2390.00	61.47	3.14	27.21	43.80	48.02	74	-25.98	Pk	Horizonta
2390.00	42.01	3.14	27.21	43.80	28.56	54	-25.44	AV	Horizonta
2483.50	59.93	3.58	27.70	44.00	47.21	74	-26.79	Pk	Vertical
2483.50	42.27	3.58	27.70	44.00	29.55	54	-24.45	AV	Vertical
2483.50	60.56	3.58	27.70	44.00	47.84	74	-26.16	Pk	Horizonta
2483.50	39.86	3.58	27.70	44.00	27.14	54	-26.86	AV	Horizonta
	Jre:	Bluetootl 20 ℃	n earphone		l No.: ive Humidit	SH03 y: 48%	32		
EUT: Temperatu Test Mode		20 ℃	n earphone Mode4 (Rig	Relat	ive Humidit				
Temperatu		20 ℃	•	Relat	ive Humidit	y: 48%			
Temperatu	e: Meter	20 ℃ Mode2/ I Cable	Mode4 (Rig Antenna	Relat ht) Test Preamp	ive Humidit 3y: Emission	y: 48%		Detector	Comment
Temperatu Test Mode	e: Meter Reading	20 ℃ Mode2/ I	Mode4 (Rig	Relat ht) Test	ive Humidit By: Emission Level	y: 48% Aller Limits	Liu Margin		Comment
Temperatu Test Mode Frequenc y	e: Meter	20 °C Mode2/ I Cable Loss	Mode4 (Rig Antenna Factor	Relat	ive Humidit 3y: Emission	y: 48% Aller	i Liu	Detector Type	Comment
Temperatu Test Mode Frequenc y	e: Meter Reading	20 °C Mode2/ I Cable Loss	Mode4 (Rig Antenna Factor	Relat	ive Humidit By: Emission Level (dBµV/m)	y: 48% Aller Limits	Liu Margin		Comment
Temperatu Test Mode Frequenc y (MHz)	e: Meter Reading (dBμV)	20 °C Mode2/ I Cable Loss (dB)	Mode4 (Rig Antenna Factor dB/m	Relat ht) Test Preamp Factor (dB)	ive Humidit By: Emission Level (dBµV/m) SK	y: 48% Aller Limits (dBµV/m)	Liu Margin (dB)	Туре	
Temperatu Test Mode Frequenc y (MHz) 2310.00	Meter Reading (dBµV) 62.58	20 ℃ Mode2/ 1 Cable Loss (dB) 2.97	Mode4 (Rig Antenna Factor dB/m 27.80	Relat ht) Test Preamp Factor (dB) GI 43.80	ive Humidit By: Emission Level (dBµV/m) FSK 49.55	y: 48% Aller Limits (dBµV/m) 74	Liu Margin (dB) -24.45	Type Pk	Horizonta
Temperatu Test Mode Frequenc y (MHz) 2310.00 2310.00	e: Meter Reading (dBµV) 62.58 45.69	20 ℃ Mode2/ 1 Cable Loss (dB) 2.97 2.97	Mode4 (Rig Antenna Factor dB/m 27.80 27.80	Relat ht) Test Preamp Factor (dB) Gl 43.80 43.80	Emission Level (dBµV/m) SK 49.55 32.66	y: 48% Aller Limits (dBµV/m) 74 54	Liu Margin (dB) -24.45 -21.34	Type Pk AV	Horizonta Horizonta
Temperatu Test Mode Frequenc y (MHz) 2310.00 2310.00 2310.00	e: Meter Reading (dBμV) 62.58 45.69 60.25	20 °C Mode2/ 1 Cable Loss (dB) 2.97 2.97 2.97	Mode4 (Rig Antenna Factor dB/m 27.80 27.80 27.80	Relat ht) Test Preamp Factor (dB) GI 43.80 43.80 43.80	Emission Level (dBµV/m) SK 49.55 32.66 47.22	y: 48% Aller Limits (dBµV/m) 74 54 74	Liu Margin (dB) -24.45 -21.34 -26.78	Type Pk AV Pk	Horizonta Horizonta Vertical
Temperatu Test Mode Frequenc y (MHz) 2310.00 2310.00 2310.00 2310.00	e: Meter Reading (dBμV) 62.58 45.69 60.25 45.98	20 °C Mode2/ N Cable Loss (dB) 2.97 2.97 2.97 2.97 2.97	Mode4 (Rig Antenna Factor dB/m 27.80 27.80 27.80 27.80	Relat ht) Test Preamp Factor (dB) GI 43.80 43.80 43.80 43.80	ive Humidit By: Emission Level (dBµV/m) SK 49.55 32.66 47.22 32.95	y: 48% Aller Limits (dBµV/m) 74 54 74 54	Liu Margin (dB) -24.45 -21.34 -26.78 -21.05	Type Pk AV Pk AV	Horizonta Horizonta Vertical Vertical
Temperatu Test Mode Frequenc y (MHz) 2310.00 2310.00 2310.00 2390.00	e: Meter Reading (dBμV) 62.58 45.69 60.25 45.98 60.54	20 ℃ Mode2/ 1 Cable Loss (dB) 2.97 2.97 2.97 2.97 3.14	Mode4 (Rig Antenna Factor dB/m 27.80 27.80 27.80 27.80 27.80 27.21	Relat ht) Test Preamp Factor (dB) GI 43.80 43.80 43.80 43.80 43.80	ive Humidit Зу: Emission Level (dBµV/m) FSK 49.55 32.66 47.22 32.95 47.09	y: 48% Aller Limits (dBµV/m) 74 54 74 54 74	Liu Margin (dB) -24.45 -21.34 -26.78 -21.05 -26.91	TypePkAVPkAVPkAVPk	Horizonta Horizonta Vertical Vertical Vertical Vertical Horizonta
Temperatu Test Mode Frequenc y (MHz) 2310.00 2310.00 2310.00 2390.00 2390.00	 Meter Reading (dBμV) 62.58 45.69 60.25 45.98 60.54 48.54 	20 °C Mode2/ I Cable Loss (dB) 2.97 2.97 2.97 2.97 2.97 3.14 3.14	Mode4 (Rig Antenna Factor dB/m 27.80 27.80 27.80 27.80 27.21 27.21	Relat ht) Test Preamp Factor (dB) 43.80 43.80 43.80 43.80 43.80 43.80 43.80	ive Humidit 3y: Emission Level (dBμV/m) 5SK 49.55 32.66 47.22 32.95 47.09 35.09	y: 48% Aller Limits (dBµV/m) 74 54 74 54 74 54	Liu Margin (dB) -24.45 -21.34 -26.78 -21.05 -26.91 -18.91	TypePkAVPkAVPkAVAV	Horizonta Horizonta Vertical Vertical Vertical Vertical Horizonta
Temperatu Test Mode Frequenc y (MHz) 2310.00 2310.00 2310.00 2390.00 2390.00 2390.00	e: Meter Reading (dBμV) 62.58 45.69 60.25 45.98 60.54 48.54 61.58	20 °C Mode2/ N Cable Loss (dB) 2.97 2.97 2.97 2.97 2.97 3.14 3.14 3.14	Antenna Factor dB/m 27.80 27.80 27.80 27.80 27.21 27.21 27.21	Relat ht) Test Preamp Factor (dB) 43.80 43.80 43.80 43.80 43.80 43.80 43.80 43.80	ive Humidit ∃y: Emission Level (dBµV/m) ⁻ SK 49.55 32.66 47.22 32.95 47.09 35.09 48.13	y: 48% Aller Limits (dBµV/m) 74 54 74 54 74 54 74 54 74	Liu Margin (dB) -24.45 -21.34 -26.78 -21.05 -26.91 -18.91 -25.87	TypePkAVPkAVPkAVPkAVPk	Horizonta Horizonta Vertical Vertical Vertical Vertical Horizonta
Temperatu Test Mode Frequenc y (MHz) 2310.00 2310.00 2310.00 2390.00 2390.00 2390.00 2390.00	e: Meter Reading (dBμV) 62.58 45.69 60.25 45.98 60.25 45.98 60.54 48.54 61.58 50.48	20 ℃ Mode2/ N Cable Loss (dB) 2.97 2.97 2.97 2.97 3.14 3.14 3.14 3.14	Antenna Factor dB/m 27.80 27.80 27.80 27.80 27.21 27.21 27.21 27.21	Relat Int) Test Preamp Factor (dB) GI 43.80 43.80 43.80 43.80 43.80 43.80 43.80 43.80 43.80 43.80 43.80 43.80 43.80 43.80 43.80 43.80	ive Humidit By: Emission Level (dBµV/m) SK 49.55 32.66 47.22 32.95 47.09 35.09 48.13 37.03	y: 48% Aller Limits (dBµV/m) 74 54 74 54 74 54 74 54 74 54	Liu Margin (dB) -24.45 -21.34 -26.78 -21.05 -26.91 -18.91 -25.87 -16.97	Type Pk AV Pk AV Pk AV Pk AV	Horizonta Horizonta Vertical Vertical Vertical Vertical Horizonta
Temperatu Test Mode Frequenc y (MHz) 2310.00 2310.00 2310.00 2390.00 2390.00 2390.00 2390.00 2390.00	e: Meter Reading (dBμV) 62.58 45.69 60.25 45.98 60.25 45.98 60.54 48.54 61.58 50.48 56.97	20 ℃ Mode2/ 1 Cable Loss (dB) 2.97 2.97 2.97 2.97 3.14 3.14 3.14 3.14 3.14 3.21	Antenna Factor dB/m 27.80 27.80 27.80 27.80 27.21 27.21 27.21 27.21 27.21 27.33	Relat ht) Test Preamp Factor (dB) GI 43.80 43.80 43.80 43.80 43.80 43.80 43.80 43.80 43.80 43.80	ive Humidit By: Emission Level (dBµV/m) FSK 49.55 32.66 47.22 32.95 47.09 35.09 48.13 37.03 43.71	y: 48% Aller Limits (dBµV/m) 74 54 74 54 74 54 74 54 74 54 74	Liu Margin (dB) -24.45 -21.34 -26.78 -21.05 -26.91 -18.91 -25.87 -16.97 -30.29	TypePkAVPkAVPkAVPkAVPkAVPkAVPk	Horizonta Horizonta Vertical Vertical Vertical Horizonta Horizonta Vertical Vertical
Temperatu Test Mode Frequenc y (MHz) 2310.00 2310.00 2310.00 2390.00 2390.00 2390.00 2390.00 2390.00 2390.00 2400.00	e: Meter Reading (dBμV) 62.58 45.69 60.25 45.98 60.54 48.54 61.58 50.48 56.97 35.21	20 ℃ Mode2/ I Cable Loss (dB) 2.97 2.97 2.97 2.97 2.97 3.14 3.14 3.14 3.14 3.14 3.21 3.21	Antenna Factor dB/m 27.80 27.80 27.80 27.80 27.21 27.21 27.21 27.21 27.21 27.23 27.33	Relat Int) Test Preamp Factor (dB) GI 43.80 43.80 43.80 43.80 43.80 43.80 43.80 43.80 43.80 43.80 43.80 43.80 43.80 43.80 43.80 43.80 43.80 43.80 43.80 43.80 43.80 43.80 43.80 43.80	ive Humidit By: Emission Level (dBµV/m) FSK 49.55 32.66 47.22 32.95 47.09 35.09 48.13 37.03 43.71 21.95	y: 48% Aller Limits (dBµV/m) 74 54 74 54 74 54 74 54 74 54 74 54	Liu Margin (dB) -24.45 -21.34 -26.78 -26.78 -26.91 -18.91 -25.87 -16.97 -30.29 -32.05	TypePkAVPkAVPkAVPkAVPkAVPkAVAVPkAVAV	Horizonta Horizonta Vertical Vertical Vertical Horizonta Horizonta Vertical Horizonta
Temperatu Test Mode Frequenc y (MHz) 2310.00 2310.00 2310.00 2390.00 2390.00 2390.00 2390.00 2390.00 2390.00 2390.00 2400.00 2400.00	e: Meter Reading (dBµV) 62.58 45.69 60.25 45.98 60.54 48.54 61.58 50.48 56.97 35.21 50.42	20 °C Mode2/ I Cable Loss (dB) 2.97 2.97 2.97 2.97 3.14 3.14 3.14 3.14 3.14 3.21 3.21 3.21	Antenna Factor dB/m 27.80 27.80 27.80 27.80 27.21 27.21 27.21 27.21 27.21 27.33 27.33 27.33	Relat ht) Test Preamp Factor (dB) GI 43.80 43.80 43.80 43.80 43.80 43.80 43.80 43.80 43.80 43.80 43.80 43.80 43.80 43.80 43.80 43.80 43.80 43.80 43.80 43.80 43.80 43.80 43.80 43.80	ive Humidit ∃y: Emission Level (dBµV/m) SK 49.55 32.66 47.22 32.95 47.09 35.09 48.13 37.03 43.71 21.95 37.16	y: 48% Aller Limits (dBµV/m) 74 54 74 54 74 54 74 54 74 54 74 54 74 54 74	Liu Margin (dB) -24.45 -21.34 -26.78 -21.05 -26.91 -18.91 -25.87 -16.97 -30.29 -32.05 -36.84	TypePkAVPkAVPkAVPkAVPkAVPkAVPkAVPkAVPk	Horizonta Horizonta Vertical Vertical Vertical Horizonta Horizonta Vertical Horizonta
Temperatu Test Mode Frequenc y (MHz) 2310.00 2310.00 2310.00 2390.00 2390.00 2390.00 2390.00 2390.00 2390.00 2390.00 2400.00 2400.00	e: Meter Reading (dBμV) 62.58 45.69 60.25 45.98 60.25 45.98 60.54 48.54 61.58 50.48 56.97 35.21 50.42 31.26	20 °C Mode2/ I Cable Loss (dB) 2.97 2.97 2.97 2.97 3.14 3.14 3.14 3.14 3.14 3.21 3.21 3.21 3.21	Antenna Factor dB/m 27.80 27.80 27.80 27.80 27.21 27.21 27.21 27.21 27.21 27.21 27.33 27.33 27.33	Relat ht) Test Factor GI (dB) GI 43.80 43.80 43.80 43.80 43.80 43.80 43.80 43.80 43.80 43.80 43.80 43.80 43.80 43.80 43.80 43.80 43.80 43.80 43.80 43.80 43.80 43.80 43.80 43.80 43.80 43.80	ive Humidit By: Emission Level (dBµV/m) SK 49.55 32.66 47.22 32.95 47.09 35.09 48.13 37.03 43.71 21.95 37.16 18.00	y: 48% Aller Limits (dBµV/m) 74 54 74 54 74 54 74 54 74 54 74 54 74 54 74	Liu Margin (dB) -24.45 -21.34 -26.78 -21.05 -26.91 -18.91 -25.87 -16.97 -30.29 -32.05 -36.84 -36.00	Type Pk AV Pk AV Pk AV Pk AV Pk AV Pk AV	Horizonta Horizonta Vertical Vertical Vertical Horizonta Horizonta Vertical Vertical Horizonta Horizonta
Temperatu Test Mode Frequenc y (MHz) 2310.00 2310.00 2310.00 2390.00 2390.00 2390.00 2390.00 2390.00 2390.00 2400.00 2400.00 2400.00 2400.00	e: Meter Reading (dBμV) 62.58 45.69 60.25 45.98 60.25 45.98 60.54 48.54 61.58 50.48 50.48 56.97 35.21 50.42 31.26 59.68	20 ℃ Mode2/ 1 Cable Loss (dB) 2.97 2.97 2.97 2.97 3.14 3.14 3.14 3.14 3.14 3.14 3.21 3.21 3.21 3.21 3.21 3.58	Antenna Factor dB/m 27.80 27.80 27.80 27.80 27.21 27.21 27.21 27.21 27.21 27.21 27.33 27.33 27.33 27.33 27.33	Relat Int) Test Preamp Factor (dB) GI 43.80 43.80 43.80 43.80 43.80 43.80 43.80 43.80 43.80 43.80 43.80 43.80 43.80 43.80 43.80 43.80 43.80 43.80 43.80 43.80 43.80 43.80 43.80 43.80 43.80 43.80 43.80 43.80 43.80 43.80 43.80 43.80 43.80 43.80	ive Humidit By: Emission Level (dBµV/m) SK 49.55 32.66 47.22 32.95 47.09 35.09 48.13 37.03 43.71 21.95 37.16 18.00 46.96	y: 48% Aller Limits (dBµV/m) 74 54 74 54 74 54 74 54 74 54 74 54 74 54 74 54 74	Liu Margin (dB) -24.45 -21.34 -26.78 -21.05 -26.91 -18.91 -25.87 -16.97 -30.29 -32.05 -36.84 -36.00 -27.04	TypePkAVPkAVPkAVPkAVPkAVPkAVPkAVPkAVPkAVPkAVPk	Horizonta Horizonta Vertical Vertical Vertical Horizonta Horizonta Vertical Horizonta Horizonta Vertical

Note: (1) All other emissions more than 20dB below the limit.





	purious Emi	ission in F	vesilicie			000011112						
EUT:		Blue	etooth ea	rphone	Model N	Model No.:			SH032			
Temp	erature:	20 °	C		Relative	e Humidity:	48%	, o				
Test N	Node:	Mod	le2/ Mod	e4(Left)	Test By		Alle	n Liu				
	Frequenc v	Readin g Level	Cable Loss	Antenn a	Preamp Factor	Emission Level	Limits	Margin	Detecto r			
	(MHz)	(dBµV)	(dB)	dB/m	(dB)	(dBµ V/m)	(dBµ V/m)	(dB)	Туре	Comment		
ļ	3260	60.49	4.04	29.57	44.70	49.40	74	-24.60	Pk	Vertical		
	3260	51.20	4.04	29.57	44.70	40.11	54	-13.89	AV	Vertical		
	3260	61.93	4.04	29.57	44.70	50.84	74	-23.16	Pk	Horizontal		
	3260	51.19	4.04	29.57	44.70	40.10	54	-13.90	AV	Horizontal		
	3332	61.94	4.26	29.87	44.40	51.67	74	-22.33	Pk	Vertical		
	3332	51.51	4.26	29.87	44.40	41.24	54	-12.76	AV	Vertical		
	3332	62.21	4.26	29.87	44.40	51.94	74	-22.06	Pk	Horizontal		
	3332	49.87	4.26	29.87	44.40	39.60	54	-14.40	AV	Horizontal		
	17797	39.66	10.99	43.95	43.50	51.10	74	-22.90	Pk	Vertical		
F	17797	30.00	10.99	43.95	43.50	41.44	54	-12.56	AV	Vertical		
		00.00	·					· · · · ·				
	17788	40.83	11.81	43.69	44.60	51.73	74	-22.27	Pk	Horizontal		
				43.69 43.69	44.60 44.60	51.73 41.04	74 54	-22.27 -12.96	Pk AV	Horizontal		
	17788	40.83 30.14	11.81 11.81	43.69	44.60	41.04	54	-12.96				
EUT:	17788	40.83 30.14	11.81	43.69		41.04		-12.96				
	17788	40.83 30.14	11.81 11.81 etooth ea	43.69	44.60 Model N	41.04	54 SH0	-12.96)32				
	17788 17788 berature:	40.83 30.14 Blue 20 °C	11.81 11.81 etooth ea	43.69	44.60 Model N Relative	41.04 No.: e Humidity:	54 SH(48%	-12.96)32				
Temp	17788 17788 berature:	40.83 30.14 Blue 20 °C	11.81 11.81 etooth ea	43.69 arphone	44.60 Model N Relative	41.04 No.: Humidity: Emission Level	54 SH0 48% Alle Limits	-12.96 032 6		Horizontal		
Temp	17788 17788 berature: Mode: Frequenc	40.83 30.14 Blue 20 °C Moo	11.81 11.81 etooth ea C de2/ Mod Cable	43.69 Irphone e4(Right) Antenn	44.60 Model N Relative Test By Preamp	41.04 No.: Humidity: : Emission	54 SH(48% Alle	-12.96 032 6 n Liu	AV	Horizontal		
Temp	17788 17788 berature: Mode: Frequenc y	40.83 30.14 Blue 20 °C Moc Readin g Level	11.81 11.81 C de2/ Mod Cable Loss	43.69 arphone e4(Right) Antenn a	44.60 Model N Relative Test By Preamp Factor	41.04 No.: Humidity: : Emission Level (dBµ	54 SH(48% Alle Limits (dBµ	-12.96 032 6 n Liu Margin	AV Detecto r	Horizontal		
Temp	17788 17788 berature: Mode: Frequenc y (MHz)	40.83 30.14 20 ℃ Moc Readin g Level (dBµV)	11.81 11.81 c de2/ Mod Cable Loss (dB)	43.69 arphone e4(Right) Antenn a dB/m	44.60 Model N Relative Test By Preamp Factor (dB)	41.04 No.: Humidity: Emission Level (dBµ V/m)	54 SHC 48% Alle Limits (dBµ V/m)	-12.96 032 6 n Liu Margin (dB)	AV Detecto r Type	Comment		
Temp	17788 17788 erature: Mode: Frequenc y (MHz) 3260	40.83 30.14 Blue 20 °C Moo Readin g Level (dBµV) 64.79	11.81 11.81 etooth ea C de2/ Mod Cable Loss (dB) 4.04	43.69 arphone e4(Right) Antenn a dB/m 29.57	44.60 Model N Relative Test By Preamp Factor (dB) 44.70	41.04 No.: Humidity: Emission Level (dBµ V/m) 53.70	54 SH0 48% Alle Limits (dBµ V/m) 74	-12.96 032 6 n Liu Margin (dB) -20.30	AV Detecto r Type Pk	Comment		
Temp	17788 17788 berature: Mode: Frequenc y (MHz) 3260 3260	40.83 30.14 Blue 20 ℃ Moc Readin g Level (dBµV) 64.79 45.96	11.81 11.81 etooth ea C de2/ Mod Cable Loss (dB) 4.04 4.04	43.69 arphone e4(Right) Antenn a dB/m 29.57 29.57	44.60 Model N Relative Test By Preamp Factor (dB) 44.70 44.70	41.04 No.: Humidity: Emission Level (dBµ V/m) 53.70 34.87	54 SH0 48% Alle Limits (dBµ V/m) 74 54	-12.96 032 6 n Liu Margin (dB) -20.30 -19.13	AV Detecto r Type Pk AV	Comment Vertical		
Temp	17788 17788 berature: Mode: Frequenc y (MHz) 3260 3260 3260	40.83 30.14 Blue 20 °C Moo Readin g Level (dBµV) 64.79 45.96 63.97	11.81 11.81 etooth ea C de2/ Mod Cable Loss (dB) 4.04 4.04 4.04	43.69 arphone e4(Right) Antenn a dB/m 29.57 29.57 29.57	44.60 Model N Relative Test By Preamp Factor (dB) 44.70 44.70	41.04 No.: Humidity: Emission Level (dBµ V/m) 53.70 34.87 52.88	54 SH0 48% Alle Limits (dBµ V/m) 74 54 74	-12.96 032 6 n Liu Margin (dB) -20.30 -19.13 -21.12	AV Detecto r Type Pk AV Pk	Horizontal Comment Vertical Vertical Horizontal		
Temp	17788 17788 berature: Wode: Frequenc y (MHz) 3260 3260 3260 3260	40.83 30.14 Blue 20 ℃ Moo Readin g Level (dBµV) 64.79 45.96 63.97 49.25	11.81 11.81 etooth ea C de2/ Mod Cable Loss (dB) 4.04 4.04 4.04	43.69 arphone e4(Right) Antenn a dB/m 29.57 29.57 29.57 29.57	44.60 Model N Relative Test By Preamp Factor (dB) 44.70 44.70 44.70	41.04 No.: Humidity: Emission Level (dBµ V/m) 53.70 34.87 52.88 38.16	54 SH0 48% Alle Limits (dBµ V/m) 74 54 74 54	-12.96 032 6 n Liu Margin (dB) -20.30 -19.13 -21.12 -15.84	AV Detecto r Type Pk AV Pk AV	Horizontal Comment Vertical Vertical Horizontal Horizontal		
Temp	17788 17788 berature: Mode: Frequenc y (MHz) 3260 3260 3260 3260 3260 3332	40.83 30.14 Blue 20 °C Moo Readin g Level (dBµV) 64.79 45.96 63.97 49.25 66.96	11.81 11.81 etooth ea C de2/ Mod Cable Loss (dB) 4.04 4.04 4.04 4.04 4.04	43.69 arphone e4(Right) Antenn a dB/m 29.57 29.57 29.57 29.57 29.87	44.60 Model N Relative Test By Preamp Factor (dB) 44.70 44.70 44.70 44.70	41.04 No.: Humidity: Emission Level (dBµ V/m) 53.70 34.87 52.88 38.16 56.69	54 SH0 48% Alle Limits (dBµ V/m) 74 54 74 54	-12.96 032 6 n Liu Margin (dB) -20.30 -19.13 -21.12 -15.84 -17.31	AV Detecto r Type Pk AV Pk AV Pk	Horizontal Comment Vertical Vertical Horizontal Horizontal Vertical		
Temp	17788 17788 werature: Mode: Frequenc y (MHz) 3260 3260 3260 3260 3260 3332 3332	40.83 30.14 Blue 20 ℃ Moo Readin g Level (dBµV) 64.79 45.96 63.97 49.25 66.96 50.5	11.81 11.81 etooth ea C de2/ Mod Cable Loss (dB) 4.04 4.04 4.04 4.04 4.04 4.26 4.26	43.69 arphone e4(Right) Antenn a dB/m 29.57 29.57 29.57 29.57 29.87 29.87	44.60 Model N Relative Test By Preamp Factor (dB) 44.70 44.70 44.70 44.70 44.40	41.04 No.: Humidity: Emission Level (dBµ V/m) 53.70 34.87 52.88 38.16 56.69 40.23	54 SH0 48% Alle Limits (dBµ V/m) 74 54 74 54 74 54	-12.96 032 6 n Liu Margin (dB) -20.30 -19.13 -21.12 -15.84 -17.31 -13.77	AV Detecto r Type Pk AV Pk AV Pk AV	Horizontal Comment Vertical Vertical Horizontal Horizontal Vertical Vertical		
Temp	17788 17788 herature: Wode: Frequenc y (MHz) 3260 3260 3260 3260 3260 3332 3332 3332	40.83 30.14 Blue 20 ℃ Moo Readin g Level (dBµV) 64.79 45.96 63.97 49.25 66.96 50.5 67.81	11.81 11.81 etooth ea C de2/ Mod Cable Loss (dB) 4.04 4.04 4.04 4.04 4.04 4.04 4.26 4.26 4.26	43.69 arphone e4(Right) Antenn a dB/m 29.57 29.57 29.57 29.57 29.87 29.87 29.87	44.60 Model N Relative Test By Preamp Factor (dB) 44.70 44.70 44.70 44.70 44.40	41.04 No.: Humidity: Emission Level (dBµ V/m) 53.70 34.87 52.88 38.16 56.69 40.23 57.54	54 SH0 48% Alle Limits (dBµ V/m) 74 54 74 54 74 54 74	-12.96 032 6 n Liu Margin (dB) -20.30 -19.13 -21.12 -15.84 -17.31 -13.77 -16.46	AV Detecto r Type Pk AV Pk AV Pk AV Pk	Horizontal Comment Vertical Vertical Horizontal Horizontal Vertical Vertical Vertical Horizontal		
Temp	17788 17788 werature: Mode: Frequenc y (MHz) 3260 3260 3260 3260 3260 3332 3332 3332	40.83 30.14 Blue 20 ° Moo Readin g Level (dBµV) 64.79 45.96 63.97 49.25 66.96 50.5 67.81 50.36	11.81 11.81 ctooth ea C de2/ Mod Cable Loss (dB) 4.04 4.04 4.04 4.04 4.04 4.04 4.26 4.26 4.26 4.26	43.69 arphone e4(Right) Antenn a dB/m 29.57 29.57 29.57 29.57 29.87 29.87 29.87 29.87	44.60 Model N Relative Test By Preamp Factor (dB) 44.70 44.70 44.70 44.40 44.40 44.40	41.04 No.: Humidity: Emission Level (dBµ V/m) 53.70 34.87 52.88 38.16 56.69 40.23 57.54 40.09	54 SH(48% Alle Limits (dBµ V/m) 74 54 74 54 74 54 74 54	-12.96 32 6 n Liu Margin (dB) -20.30 -19.13 -21.12 -15.84 -17.31 -13.77 -16.46 -13.91	AV Detecto r Type Pk AV Pk AV Pk AV Pk AV	Horizontal Comment Vertical Vertical Horizontal Horizontal Vertical Vertical Horizontal Horizontal		
Temp	17788 17788 werature: Mode: Frequenc y (MHz) 3260 3260 3260 3260 3260 3332 3332 3332	40.83 30.14 Blue 20 ℃ Moo 20 ℃ Moo 40.79 45.96 63.97 49.25 66.96 50.5 66.96 50.5 67.81 50.36 46.89	11.81 11.81 etooth ea C de2/ Mod Cable Loss (dB) 4.04 4.04 4.04 4.04 4.04 4.04 4.26 4.26 4.26 10.99	43.69 arphone e4(Right) Antenn a dB/m 29.57 29.57 29.57 29.57 29.87 29.87 29.87 29.87 29.87 29.87 29.87 29.87 29.87	44.60 Model N Relative Test By Preamp Factor (dB) 44.70 44.70 44.70 44.70 44.40 44.40 44.40 44.40	41.04 No.: Humidity: Emission Level (dBµ V/m) 53.70 34.87 52.88 38.16 56.69 40.23 57.54 40.09 58.33	54 SH(48% Alle Limits (dBµ V/m) 74 54 74 54 74 54 74 54 74	-12.96 32 6 n Liu Margin (dB) -20.30 -19.13 -21.12 -15.84 -17.31 -13.77 -16.46 -13.91 -15.67	AV Detecto r Type Pk AV Pk AV Pk AV Pk AV Pk AV Pk	Horizontal Comment Vertical Vertical Horizontal Horizontal Vertical Horizontal Horizontal Vertical Vertical		

Note: (1) All other emissions more than 20dB below the limit.





7.3 6DB BANDWIDTH

7.3.1 Applicable Standard

According to FCC Part 15.247(a)(2) and KDB 558074 D01 15.247 Meas Guidance v05r02 Section 8.2.

7.3.2 Conformance Limit

The minimum permissible 6dB bandwidth is 500 kHz.

7.3.3 Measuring Instruments

The Measuring equipment is listed in the section 6.3 of this test report.

7.3.4 Test Setup

Please refer to Section 6.1 of this test report.

7.3.5 Test Procedure

The testing follows Subclause 11.8 of ANSI C63.10

The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator.

The path loss was compensated to the results for each measurement.

Set to the maximum power setting and enable the EUT transmit continuously.

The EUT was operating in controlled its channel.

Use the following spectrum analyzer settings:

- a) Set RBW = 100 kHz.
- b) Set the video bandwidth (VBW) \geq 3*RBW.
- c) Detector = Peak.
- d) Trace mode = max hold.
- e) Sweep = auto couple.
- f) Allow the trace to stabilize.

g) Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

7.3.6 Test Results

EUT:	Bluetooth earphone	Model No.:	SH032
Temperature:	20 ℃	Relative Humidity:	48%
Test Mode:	Mode2/Mode3/Mode4	Test By:	Allen Liu

l off	Channel	Frequency (MHz)	6dB bandwidth (kHz)	Limit (kHz)	Result
Left	Low	2402	665.838	≥500	Pass
	Middle	2440	663.287	≥500	Pass
	High	2480	668.632	≥500	Pass

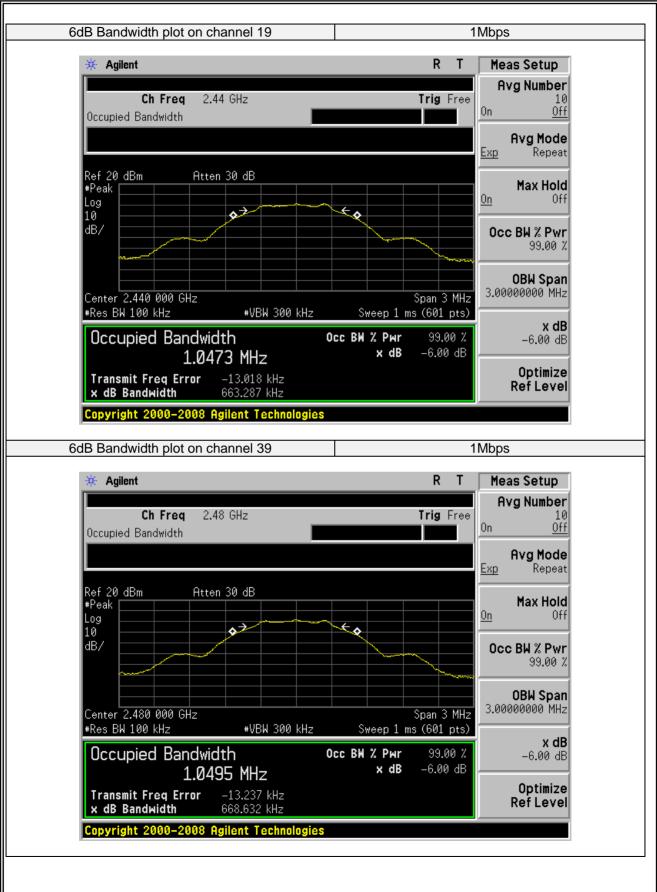




		Frequency	6dB bandwidth	Limit	
Diakt	Channel	(MHz)	(kHz)	(kHz)	Result
Right	Low	2402	663.768	≥500	Pass
	Middle	2440	664.709	≥500	Pass
	High	2480	666.818	≥500	Pass
	6dB Bandwidt	th plot on channel 00	est Plot (Left)	1Mbps	
	🔆 Agilent			R TS Meas Se	+up
	Agilent			Avg Nu	-
		h Freq 2.402 GHz		Trig Free On	10 Off
	Occupied Bar	ndwidth			
					Mode Repeat
	Ref 20 dBm	Atten 30 dB		How	Hold
	#Peak			<u>On</u>	Off
	10 dB/	\$ ²		Occ BW 2	/ D
					6 PWF 9.00 %
					<u> </u>
	Center 2.402	000 GHz		Span 3 MHz 3.0000000	Span 0 MHz
	#Res BW 100				
	Occupie	d Bandwidth	Осс ВW % Рwr		x dB 00 dB
		1.0448 MHz	× dB	-6.00 dB	
	Transmit F x dB Band	req Error –16.280 kHz width 665.838 kHz		Refl	imize Level
	-	000-2008 Agilent Techno	lagios		
	Copyright 2	000-2008 Agilent Techno	logies		

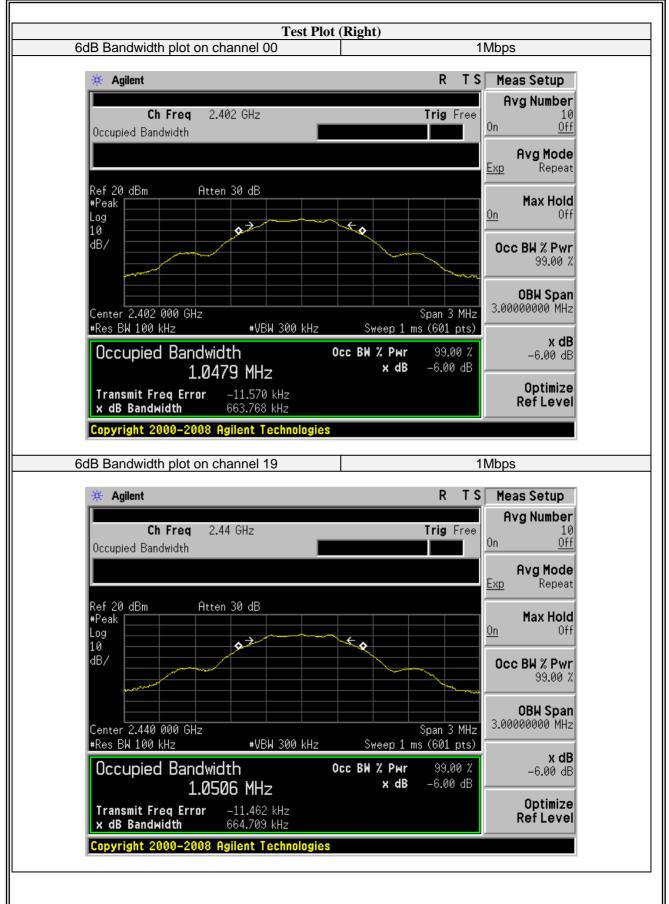
















6dB Bandwidth plot on channel 39 1Mbps Maglient R T S General 2.48 GHz Trig Free 0 0 Peak Agilent Ref 20 dBm Atten 30 dB Peak Max Hold Center 2.480 000 GHz NDBH Span Ref 20 dBm Occupied Bandwidth Occ BH 7 Pur 93.00 // 3.000 KHz Syeep 1 ms (601 pts) Cocupied Bandwidth Occ BH 7 Pur 1.1.179 KHz x dB Bandwidth Occ BH 7 Pur Optimize Copyright 2000-2008 Agilent Technologies	** Agilent R T S Meas Setup Ch Freq 2.48 GHz Trig Free 0ccupied Bandwidth 0 0 **Peak 0 0 **Peak 0 0 0dB/ 0 0	** Agilent R T S Meas Setup Ch Freq 2.48 GHz Trig Free Occupied Bandwidth Image: Character of the set		
Ch Freq 2.48 GHz Trig Free Occupied Bandwidth 0n 0ff Ref 20 dBm Atten 30 dB Atten 30 dB *Peak 0 0 0ff Log 0 0 0ff 10 0 0 0ff 0 0 0 0ff 0 0 0 0ff 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Ch Freq 2.48 GHz Trig Free Occupied Bandwidth Image: Comparison of the system	Ch Freq 2.48 GHz Trig Free Occupied Bandwidth I0 Off Ref 20 dBm Atten 30 dB Repeat Peak Image: Complex of the second sec	6dB Bandwidth plot on channel 39	1Mbps
Ch Freq 2.48 GHz Trig Free Occupied Bandwidth Image: Comparison of the system Image: Com	Ch Freq 2.48 GHz Trig Free Occupied Bandwidth Image: Constraint of the second sec	Ch Freq 2.48 GHz Trig Free Occupied Bandwidth Image: Constraint of the second sec	* Agilent	R TS Meas Setup
Ref 20 dBm Atten 30 dB **Peak **Peak Log **Peak 0 **O dB/ **O Center 2.480 000 GHz **VBW 300 kHz **Res BW 100 kHz **VBW 300 kHz Sweep 1 ms (601 pts) Occ BM % Pwr 99.00 % 1.0481 MHz Transmit Freq Error -11.179 kHz × dB Bandwidth 0ct BM % Pwr 99.00 % Center 2.480 000 GHz **Res BW 100 kHz **Res BW 100 kHz **WBW 300 kHz Sweep 1 ms (601 pts)	Ref 20 dBm Atten 30 dB **Peak **Peak Log **Peak 0 **O dB/ **O Center 2.480 000 GHz **VBW 300 kHz **Res BW 100 kHz **VBW 300 kHz Sweep 1 ms (601 pts) Occ BM % Pwr 99.00 % 1.0481 MHz Transmit Freq Error -11.179 kHz × dB Bandwidth 0ct BM % Pwr 99.00 % Center 2.480 000 GHz **Res BW 100 kHz **Res BW 100 kHz **WBW 300 kHz Sweep 1 ms (601 pts)	Ref 20 dBm Atten 30 dB **Peak **Peak Log **Peak 0 **O dB/ **O Center 2.480 000 GHz **VBW 300 kHz **Res BW 100 kHz **VBW 300 kHz Sweep 1 ms (601 pts) Occ BM % Pwr 99.00 % 1.0481 MHz Transmit Freq Error -11.179 kHz × dB Bandwidth 0ct BM % Pwr 99.00 % Center 2.480 000 GHz **Res BW 100 kHz **Res BW 100 kHz **WBW 300 kHz Sweep 1 ms (601 pts)		Trig Free 10 0n 0ff
Center 2.480 000 GHz Span 3 MHz 3.0000000 MHz *Res BW 100 kHz *VBW 300 kHz Sweep 1 ms (601 pts) 3.0000000 MHz Occupied Bandwidth Occ BW % Pwr 99.00 % -6.00 dB -6.00 dB 1.0481 MHz × dB -6.00 dB Optimize Ref Level Transmit Freq Error -11.179 kHz Ref Level	Center 2.480 000 GHz Span 3 MHz 3.0000000 MHz *Res BW 100 kHz *VBW 300 kHz Sweep 1 ms (601 pts) 3.0000000 MHz Occupied Bandwidth Occ BW % Pwr 99.00 % -6.00 dB 1.0481 MHz × dB -6.00 dB Optimize Ref Level Transmit Freq Error -11.179 kHz Ref Level Ref Level	Center 2.480 000 GHz Span 3 MHz 3.0000000 MHz *Res BW 100 kHz *VBW 300 kHz Sweep 1 ms (601 pts) 3.0000000 MHz Occupied Bandwidth Occ BW % Pwr 99.00 % x dB 1.0481 MHz × dB -6.00 dB 0ptimize Transmit Freq Error -11.179 kHz Ref Level	#Peak Log 10	Exp Repeat On Max Hold Off Occ BW % Pwr
Uccupied Bandwidth Occ BW % Pwr 99.00 % -6.00 dB 1.0481 MHz x dB -6.00 dB Optimize Transmit Freq Error -11.179 kHz Pwr 99.00 % -6.00 dB x dB Bandwidth 666.818 kHz Optimize Ref Level	Uccupied Bandwidth Occ BW % Pwr 99.00 % -6.00 dB 1.0481 MHz x dB -6.00 dB Optimize Transmit Freq Error -11.179 kHz Pwr 99.00 % -6.00 dB x dB Bandwidth 666.818 kHz Optimize Ref Level	Uccupied Bandwidth Occ BW % Pwr 99.00 % -6.00 dB 1.0481 MHz x dB -6.00 dB Optimize Transmit Freq Error -11.179 kHz Pwr 99.00 % -6.00 dB x dB Bandwidth 666.818 kHz Optimize Ref Level		Span 3 MHz 3.00000000 MHz Hz Sweep 1 ms (601 pts)
Transmit Freq Error x dB Bandwidth-11.179 kHzOptimize Ref Level	Transmit Freq Error x dB Bandwidth-11.179 kHzOptimize Ref Level	Transmit Freq Error x dB Bandwidth-11.179 kHzOptimize Ref Level	Occupied Bandwidth 1.0481 MHz	Осс ВЖ % Ржг 99.00 %6.00 dB
Copyright 2000–2008 Agilent Technologies	Copyright 2000-2008 Agilent Technologies	Copyright 2000–2008 Agilent Technologies	Transmit Freq Error -11.179 kHz	Optimize Ref Level
			Copyright 2000–2008 Agilent Technolog	gies





7.4 PEAK OUTPUT POWER

7.4.1 Applicable Standard

According to FCC Part 15.247(b)(3) and KDB 558074 D01 15.247 Meas Guidance v05r02 Section 8.3.1.

7.4.2 Conformance Limit

The maximum peak conducted output power of the intentional radiator for systems using digital modulation in the 2400 - 2483.5 MHz bands shall not exceed: 1 Watt (30dBm). If transmitting antenna of directional gain greater than 6dBi is used, the peak output power from the intentional radiator shall be reduced below the above stated value by the amount in dB that the directional gain of the antenna exceeds 6 dBi. In case of point-to-point operation, the limit has to be reduced by 1dB for every 3dB that the directional gain of the antenna exceeds 6dBi.

7.4.3 Measuring Instruments

The Measuring equipment is listed in the section 6.3 of this test report.

7.4.4 Test Setup

Please refer to Section 6.1 of this test report.

7.4.5 Test Procedure

The testing follows Subclause 11.9.1.1 of ANSI C63.10 The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement. Set to the maximum power setting and enable the EUT transmit continuously. The EUT was operating in controlled its channel. Use the following spectrum analyzer settings: Set the RBW \geq DTS bandwidth. Set VBW =3*RBW. Set the span \geq 3*RBW. Set sweep time = auto couple. Set Detector = peak. Set Trace mode = max hold. Allow trace to fully stabilize. Use peak marker function to determine the peak amplitude level.

7.4.6 Test Results

Bluetoot	h earphone	Model No.:	SH0	32	
20 ℃		Relative Humidity:	48%	,	
Mode2/N	lode3/Mode4	Test By:	Aller	n Liu	
Frequency (MHz)	Power Setting	g Peak Output Pov (dBm)	wer	LIMIT (dBm)	Verdict
		1Mbps			
2402	Default	-0.03		30	PASS
2440	Default	1.15		30	PASS
2480	Default	1.49		30	PASS
	20 ℃ Mode2/M Frequency (MHz) 2402 2440	Mode2/Mode3/Mode4Frequency (MHz)Power Setting2402Default2440Default	20 °C Relative Humidity: Mode2/Mode3/Mode4 Test By: Frequency (MHz) Power Setting Peak Output Pov (dBm) 2402 Default -0.03 2440 Default 1.15	20 °C Relative Humidity: 48% Mode2/Mode3/Mode4 Test By: Aller Frequency (MHz) Power Setting Peak Output Power (dBm) 2402 Default -0.03 2440 Default 1.15	20 °C Relative Humidity: 48% Mode2/Mode3/Mode4 Test By: Allen Liu Frequency (MHz) Power Setting Peak Output Power (dBm) LIMIT (dBm) 2402 Default -0.03 30 2440 Default 1.15 30

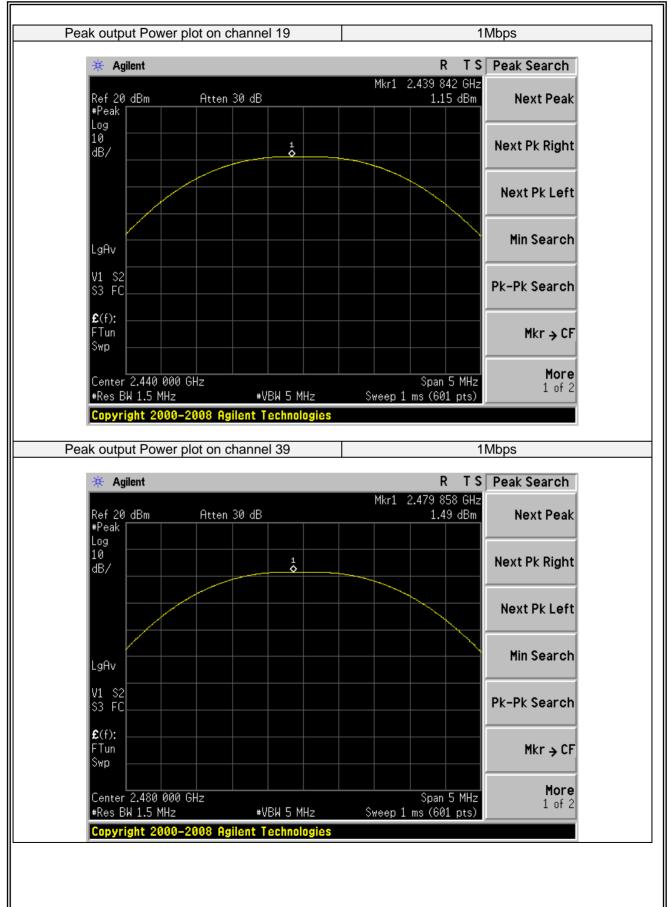




Test Channel Power Setting Power Set	ght:	Frequency		Peak Output Power	LIMIT	
1Mbps 00 2402 Default 1.31 30 PASS 19 2440 Default 1.93 30 PASS 39 2480 Default 1.93 30 PASS 39 2480 Default 1.99 30 PASS Test Plot (Left) Peak output Power plot on channel 00 1Mbps Kagilent R T S Peak Search Ref 20 dBm Atten 30 dB -0.03 dBm Next Peak Log -0.03 dBm Next Pk Right Next Pk Right Ug -0.03 dBm Next Pk Right Next Pk Right VI S2 -0.03 dBm -0.03 dBm Next Pk Left Ug AV -0.03 dBm -0.03 dBm Next Pk Left VI S2 -0.03 dBm -0.03 dBm Next Pk Left VI S2 -0.03 dBm -0.03 dBm Next Pk Left VI S2 -0.03 dBm Next Pk Left Min Search K(f): -0.03 dBm	Fest Channel		Power Setting			Verdict
00 2402 Default 1.31 30 PASS 19 2440 Default 1.93 30 PASS 39 2480 Default 1.99 30 PASS Test Plot (Left) Peak output Power plot on channel 00 1Mbps		(-)			()	
19 2440 Default 1.93 30 PASS 39 2480 Default 1.99 30 PASS Test Plot (Left) Peak output Power plot on channel 00 1Mbps R T S Peak Search Next Peak Log 0 0 Next Peak Log 0 4 0 0 Next Peak LgRv 0 4 0 0 Next Pk Right VI S2 0 0 0 0 Next Pk Search K(f): Fun 0 0 0 0 Next Pk Left Win Search Kkr + CF Min Search Nkr + CF More 1 of 2 VBM 5 MHz VBM 5 MHz Sweep 1 ms (601 pts) 1 of 2 1 of 2	00	2402	Default		30	PASS
Test Plot (Left) Peak output Power plot on channel 00 Mkr1 2.401 892 GHz Next Peak Search R f S Peak Search Peak Atten 30 dB Mkr1 2.401 892 GHz Next Peak Next Peak Log Next Pk Right Dd Atten 30 dB Next Pk Right Log Next Pk Right Next Pk Left Usg Min Search Min Search V1 S2 Pk-Pk Search Mkr ÷ CF Center 2.402 000 GHz •VBW 5 MHz Sweep 1 ms (601 pts) More 1 of 2	19	2440		1.93	30	PASS
Peak output Power plot on channel 00 Mission Peak Search Mission Peak Search R T S Peak Search Next Peak Log Output Next Peak Log Output Next Pk Right BE/ 4 Output Next Pk Right UgAv Min Search Min Search V1 S2 S3 FC Pk-Pk Search Swp Mkr > CF More Center 2.402 000 GHz *VBH 5 MHz Sweep 1 ms (601 pts) Min zearch	39		Default		30	
Peak output Power plot on channel 00 Mission Peak Search Mission Peak Search R T S Peak Search Next Peak Log Output Next Peak Log Output Next Pk Right BE/ 4 Output Next Pk Right UgAv Min Search Min Search V1 S2 S3 FC Pk-Pk Search Swp Mkr > CF More Center 2.402 000 GHz *VBH 5 MHz Sweep 1 ms (601 pts) Min zearch						
Agilent R T Peak Search Ref 20 dBm Atten 30 dB -0.03 dBm Next Peak Log -0.03 dBm Next Pk Right 0 4 Next Pk Right Ug 4 Next Pk Right Next Pk Right Next Pk Left UgAv Next Pk Left LgAv Next Pk Search V1 \$2 Next Pk Search C(f): Next Pk Search FTun Mkr -> CF Swp Span 5 MHz Center 2.402 000 GHz *VBH 5 MHz Sweep 1 ms (601 pts)				st Plot (Left)	4.5.41	
Ref 20 dBm Atten 30 dB -0.03 dBm Next Peak Log -0.03 dBm Next Pk Right Next Pk Right Next Pk Left VI S2 Next Pk Search FTun Pk-Pk Search Swp Mkr -> CF -Center 2.402 000 GHz +VBM 5 MHz Sweep 1 ms (601 pts)	Peak ou	tput Power plot	on channel 00		1 Mbps	
Ref 20 dBm Atten 30 dB -0.03 dBm Next Peak Log -0.03 dBm Next Pk Right Next Pk Right Next Pk Left VI S2 Next Pk Search FTun Pk-Pk Search Swp Mkr -> CF -Center 2.402 000 GHz +VBM 5 MHz Sweep 1 ms (601 pts)		Aailent		R	T S Peak Search	1
Ref 20 dBm Atten 30 dB -0.03 dBm Next Peak Ugg 10 1 1 1 Next Pk Right Ug 10 1 1 Next Pk Right Next Pk Left UgAv 1 1 1 Next Pk Left Next Pk Left UgAv 1 1 1 1 Next Pk Left V1 S2 1 1 1 1 Next Pk Search £(f): 1 1 1 1 1 Swp 1 1 1 1 1 Center 2.402 000 GHz *VBW 5 MHz Sweep 1 ms (601 pts) More 1 of 2	215 A					
*Peak Image: Constraint of the second se	Ref	20 dBm f	Atten 30 dB			k
10 dB/ 1 1 Next Pk Right Next Pk Left Next Pk Left LgAv Min Search V1 S2 S3 FC Pk-Pk Search £(f): Pk-Pk Search FTun Swp Mkr ÷ CF Center 2.402 000 GHz #VBW 5 MHz Sweep 1 ms (601 pts)		k 📃 🗌				
dB/ 1 Next Pk Right LgAv Next Pk Left LgAv Min Search V1 S2 Pk-Pk Search £(f): Pk-Pk Search FTun Mkr -> CF Center 2.402 000 GHz #VBW 5 MHz Sweep 1 ms (601 pts)	L09 10					
LgAv V1 S2 S3 FC É(f): FTun Swp Center 2.402 000 GHz *Res BW 1.5 MHz *VBW 5 MHz Sweep 1 ms (601 pts)	dB/				Next Pk Righ	it
LgAv Min Search V1 S2 Pk-Pk Search S3 FC Mkr + CF FTun Mkr + CF Swp Span 5 MHz Center 2.402 000 GHz #VBW 5 MHz Sweep 1 ms (601 pts)						
LgAv Min Search V1 S2 Pk-Pk Search S3 FC Mkr + CF FTun Mkr + CF Swp Span 5 MHz Center 2.402 000 GHz #VBW 5 MHz Sweep 1 ms (601 pts)					Next Pk Let	ft
LgHv V1 S2 Pk-Pk Search S3 FC Pk-Pk Search £(f): Mkr → CF FTun Mkr → CF Swp Span 5 MHz Center 2.402 000 GHz #VBW 5 MHz Sweep 1 ms (601 pts)						
LgHv V1 S2 Pk-Pk Search S3 FC Pk-Pk Search £(f): Mkr → CF FTun Mkr → CF Swp Span 5 MHz Center 2.402 000 GHz #VBW 5 MHz Sweep 1 ms (601 pts)						
V1 S2 S3 FC Pk-Pk Search £(f): FTun Swp Mkr + CF Center 2.402 000 GHz #Res BW 1.5 MHz WDW 5 MHz Sweep 1 ms (601 pts)	L aBy				Min Searc	h
£(f): Mkr → CF Swp Mkr → CF Center 2.402 000 GHz Span 5 MHz #Res BW 1.5 MHz #VBW 5 MHz Sweep 1 ms (601 pts)						
£(f): Mkr → CF Swp Mkr → CF Center 2.402 000 GHz Span 5 MHz #Res BW 1.5 MHz #VBW 5 MHz Sweep 1 ms (601 pts)	V1	S2			Pk-Pk Searce	h
FTun Swp Mkr → CF Center 2.402 000 GHz Span 5 MHz #Res BW 1.5 MHz #VBW 5 MHz Sweep 1 ms (601 pts)	\$3				PRPR Searc	"
FTun Swp Mkr → CF Center 2.402 000 GHz Span 5 MHz #Res BW 1.5 MHz #VBW 5 MHz Sweep 1 ms (601 pts)	£ (f)					
Center 2.402 000 GHz Span 5 MHz More #Res BW 1.5 MHz #VBW 5 MHz Sweep 1 ms (601 pts)	FTur				Mkr → C	F
Center 2.402 000 GHz Span 5 MHz Span 5 MHz 1 of 2 #Res BW 1.5 MHz #VBW 5 MHz Sweep 1 ms (601 pts) 1 of 2	Swp					
Center 2.402 000 GHz Span 5 MHz Span 5 MHz 1 of 2 #Res BW 1.5 MHz #VBW 5 MHz Sweep 1 ms (601 pts) 1 of 2					Mor	е
					MHZ 1 of	
Cupyright 2000-2000 Agnent rechnologies					5167	
		yright 2000–200	o Agnent Technon	nollez		

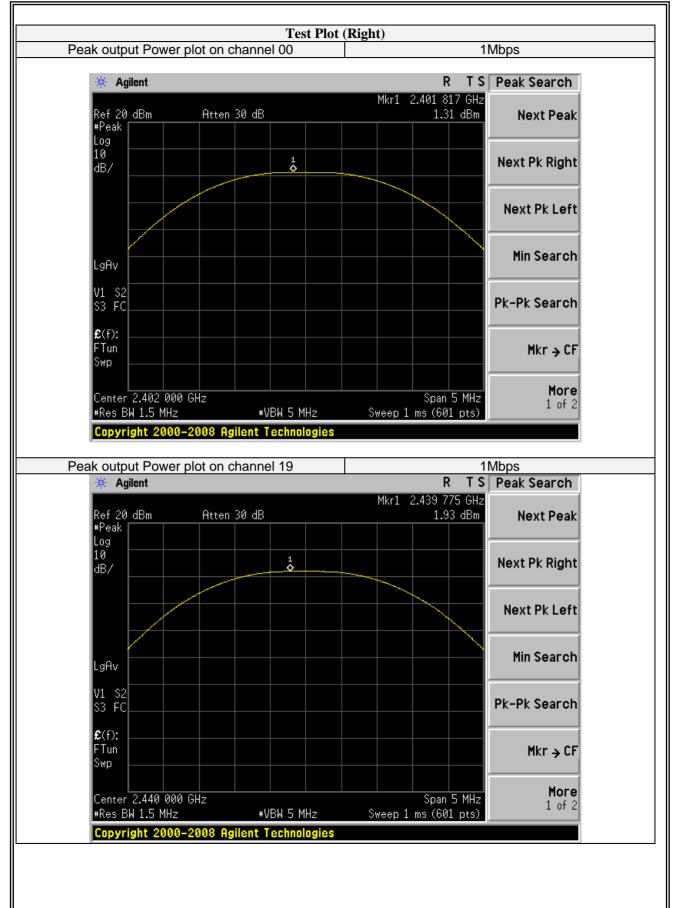






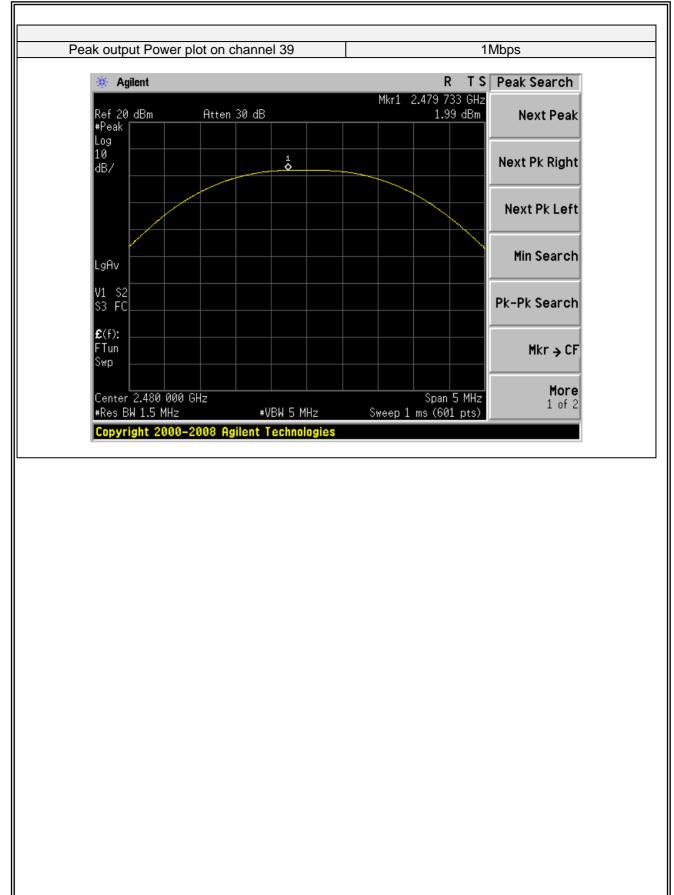
















7.5 POWER SPECTRAL DENSITY

7.5.1 Applicable Standard

According to FCC Part 15.247(e) and KDB 558074 D01 15.247 Meas Guidance v05r02 Section 8.4.

7.5.2 Conformance Limit

The transmitter power spectral density conducted from the transmitter to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

7.5.3 Measuring Instruments

The Measuring equipment is listed in the section 6.3 of this test report.

7.5.4 Test Setup

Please refer to Section 6.1 of this test report.

7.5.5 Test Procedure

The testing follows Measurement Procedure Subclause 11.10.2 of ANSI C63.10 This procedure shall be used if maximum peak conducted output power was used to demonstrate compliance, and is optional if the maximum conducted (average) output power was used to demonstrate compliance.

The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator.

The path loss was compensated to the results for each measurement.

Set to the maximum power setting and enable the EUT transmit continuously.

The EUT was operating in controlled its channel.

a) Set analyzer center frequency to DTS channel center frequency.

- b) Set the span to 1.5*DTS bandwidth.
- c) Set the RBW to: $3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}$.
- d) Set the VBW \geq 3 RBW.
- e) Detector = peak.
- f) Sweep time = auto couple.
- g) Trace mode = max hold.
- h) Allow trace to fully stabilize.
- i) Use the peak marker function to determine the maximum amplitude level within the RBW.
- j) If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.





7.5.6 Test Results

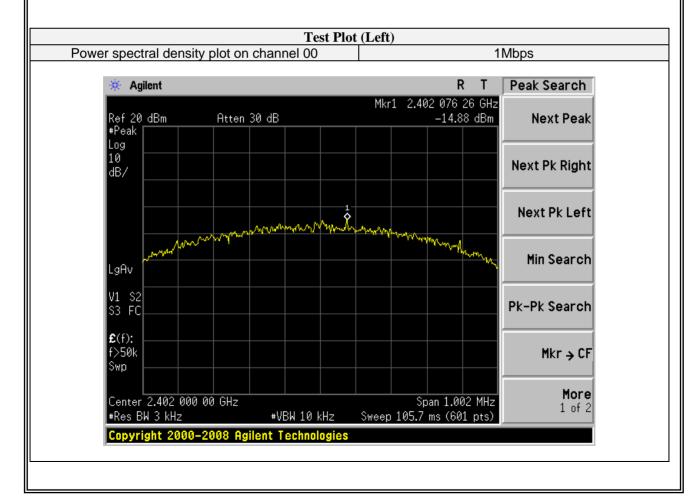
EUT:	Bluetooth earphone	Model No.:	SH032
Temperature:	20 ℃	Relative Humidity:	48%
Test Mode:	Mode2/Mode3/Mode4	Test By:	Allen Liu

Left:

Test Channel	Frequency (MHz)	Power Density (dBm/3KHz)	Limit (dBm/3KHz)	Verdict		
	1Mbps					
00	2402	-14.88	8	PASS		
19	2440	-12.78	8	PASS		
39	2480	-13.09	8	PASS		

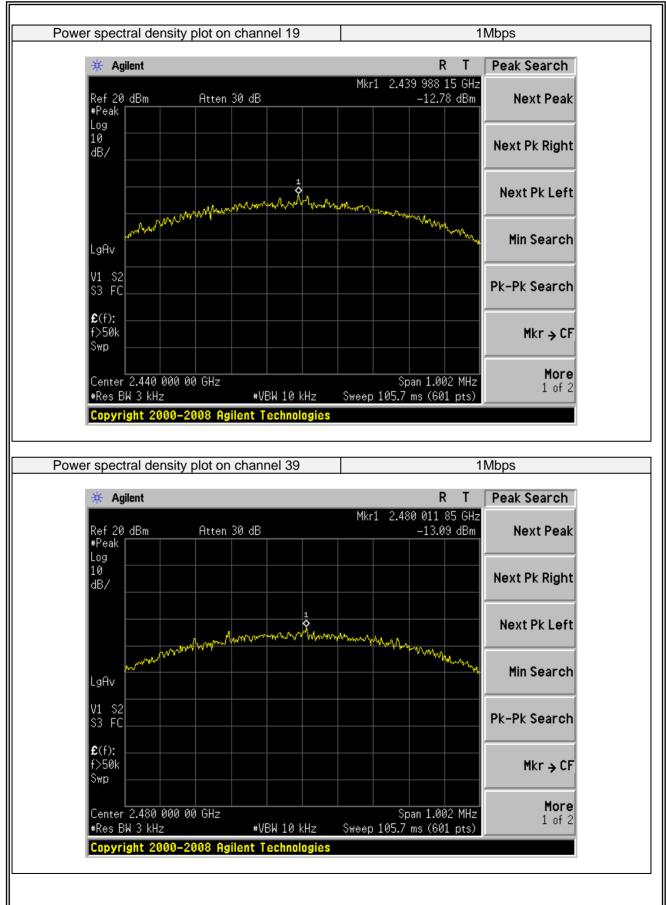
Right:

Test Channel	Frequency (MHz)	Power Density (dBm/3KHz)	Limit (dBm/3KHz)	Verdict		
	1Mbps					
00	2402	-14.71	8	PASS		
19	2440	-12.9	8	PASS		
39	2480	-13.07	8	PASS		



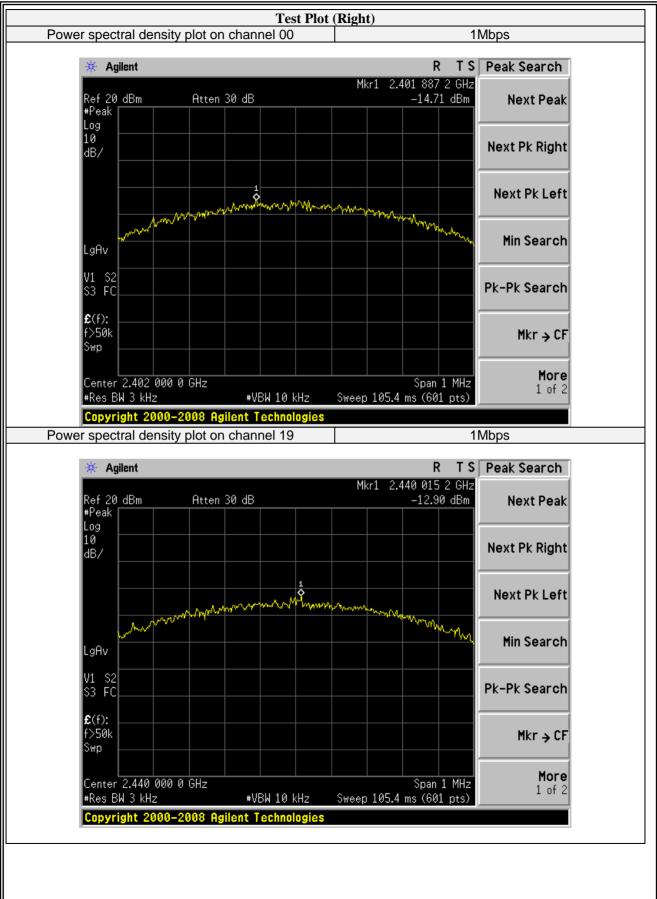






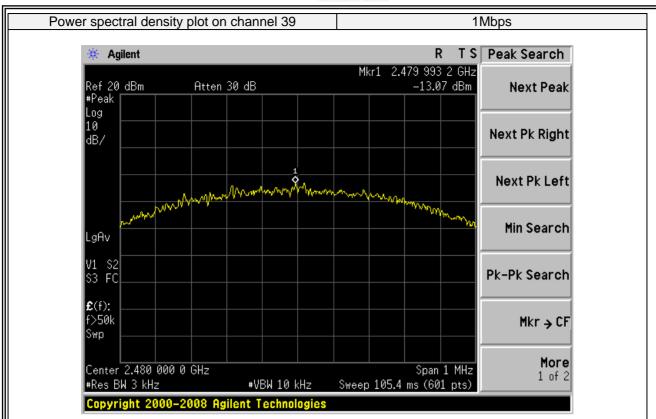
















7.6 CONDUCTED BAND EDGE MEASUREMENT

7.6.1 Applicable Standard

According to FCC Part 15.247(d) and KDB 558074 D01 15.247 Meas Guidance v05r02 Section 8.7.

7.6.2 Conformance Limit

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB.

7.6.3 Measuring Instruments

The Measuring equipment is listed in the section 6.3 of this test report.

7.6.4 Test Setup

Please refer to Section 6.1 of this test report.

7.6.5 Test Procedure

The testing follows FCC KDB 558074 D01 15.247 Meas Guidance v05r02 Section 8.7.

The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator.

The path loss was compensated to the results for each measurement.

Set to the maximum power setting and enable the EUT transmit continuously.

The EUT was operating in controlled its channel.

Set RBW to 100 kHz and VBW of spectrum analyzer to 300 kHz with a convenient frequency span including 100 kHz bandwidth from band edge.

Measure the highest amplitude appearing on spectral display and set it as a reference level. Plot the graph with marking the highest point and edge frequency.

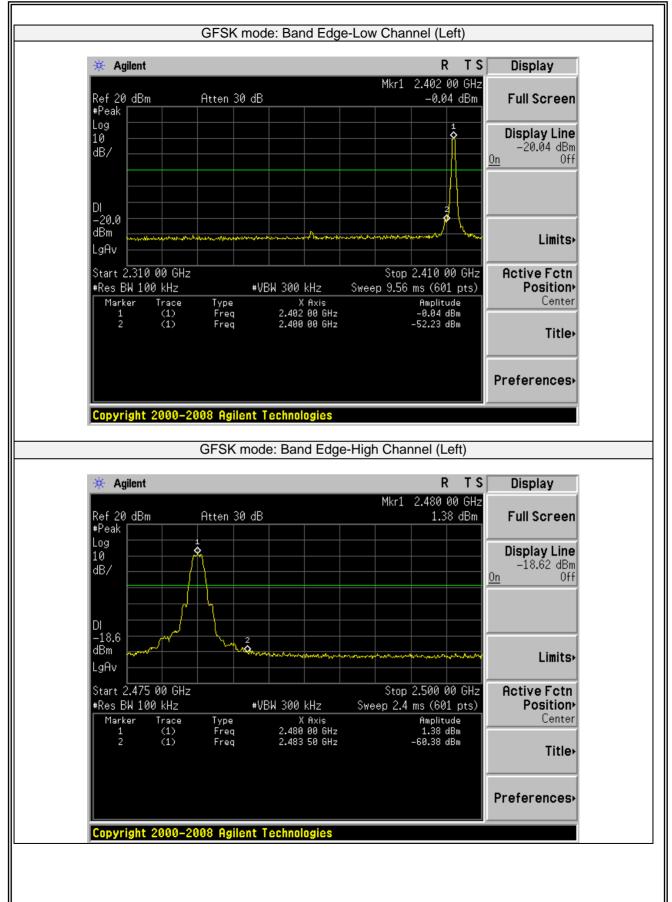
Repeat above procedures until all measured frequencies were complete.

7.6.6 Test Results

EUT:	Bluetooth earphone	Model No.:	SH032
Temperature:	20 ℃	Relative Humidity:	48%
Test Mode:	Mode2/Mode4	Test By:	Allen Liu

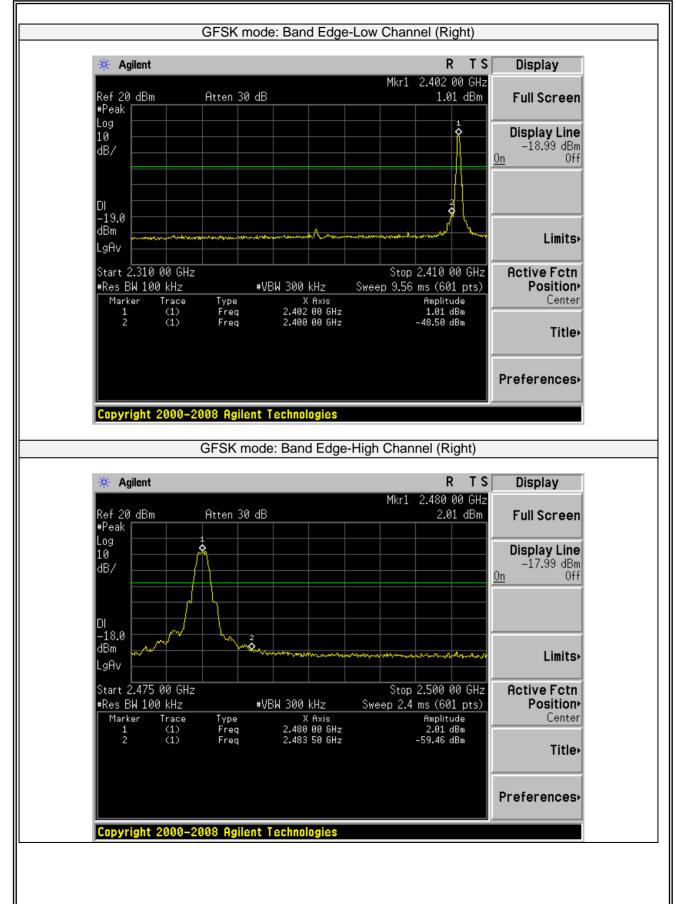








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7.7 SPURIOUS RF CONDUCTED EMISSIONS

7.7.1 Conformance Limit

1. Below -20dB of the highest emission level in operating band.

2. Fall in the restricted bands listed in section 15.205. The maximum permitted average field strength is listed in section 15.209.

7.7.2 Measuring Instruments

The Measuring equipment is listed in the section 6.3 of this test report.

7.7.3 Test Setup

Please refer to Section 6.1 of this test report.

7.7.4 Test Procedure

The Spurious RF conducted emissions compliance of RF radiated emission should be measured by following the guidance in ANSI C63.10-2013 with respect to maximizing the emission by rotating the EUT, measuring the emission while the EUT is situated in three orthogonal planes (if appropriate), adjusting the measurement antenna height and polarization etc. Set RBW=100kHz and VBW= 300KHz to measure the peak field strength , and measure frequeny range from 9KHz to 26.5GHz.

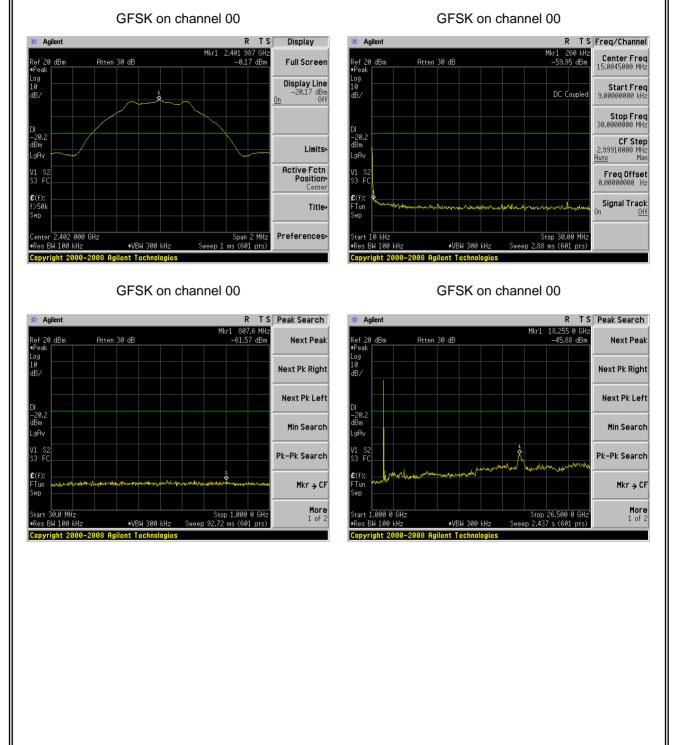
7.7.5 Test Results

Remark: The measurement frequency range is from 9KHz to the 10th harmonic of the fundamental frequency. The lowest, middle and highest channels are tested to verify the spurious emissions and bandege measurement data.





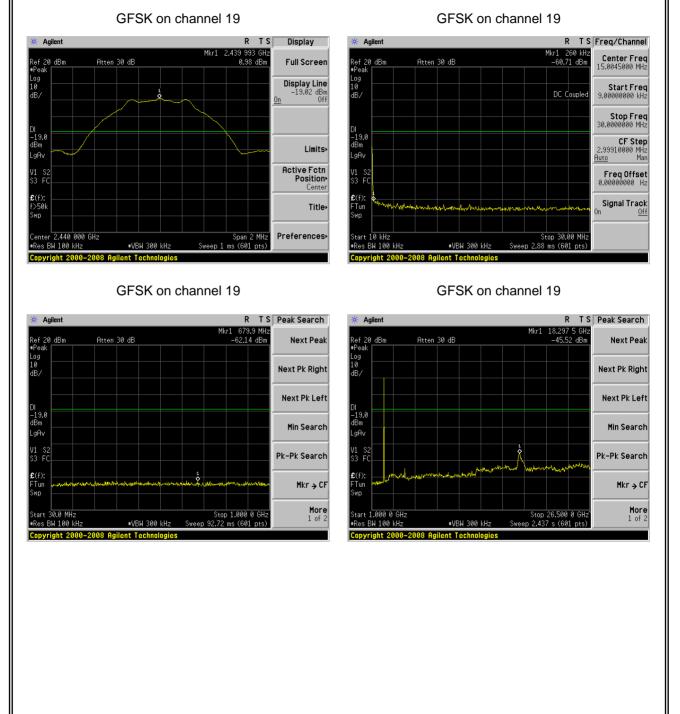
Test Plot (Left)







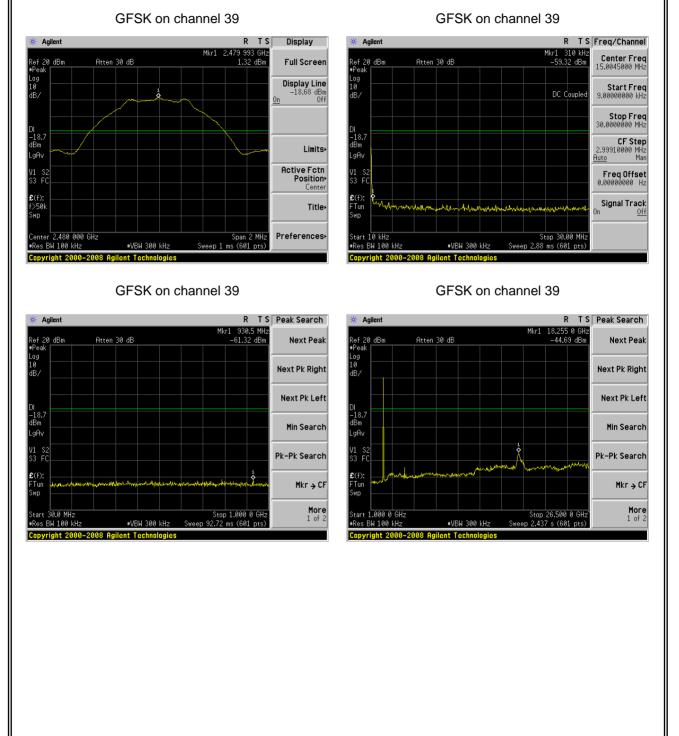
Test Plot (Left)

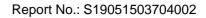






Test Plot (Left)



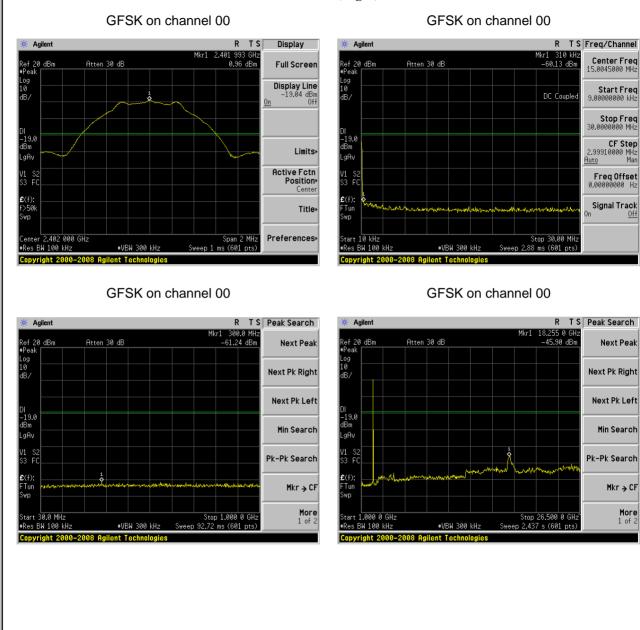


<u>Off</u>

More 1 of 2



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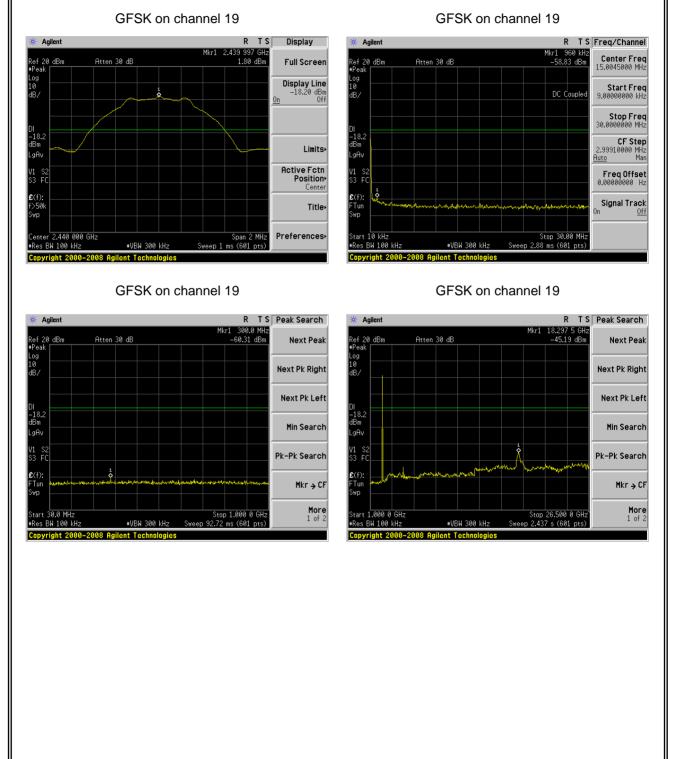
Test Plot (Right)

Version.1.2





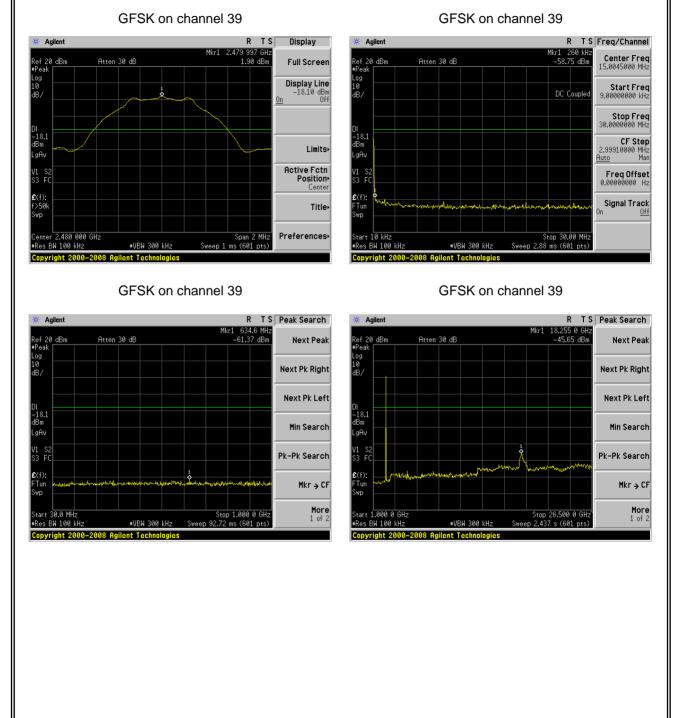
Test Plot (Right)







Test Plot (Right)







7.8 ANTENNA APPLICATION

7.8.1 Antenna Requirement

15.203 requirement: For intentional device, according to 15.203: 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.

7.8.2 Result

The EUT antenna is permanent attached FPCB Antenna (Gain: 1dBi) It comply with the standard requirement.

END OF REPORT