

RADIO TEST REPORT

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Report No.:STS2303086W03

Issued for

SHENZHEN REOSTUDIO TECHNOLOGY CO., LTD

Room 213-214, Internet of Things Demonstration Park, No. 6 Minhuan Road, Longhua District, Shenzhen, China

Product Name:	Keyboard
Brand:	Nuphy
Model Number:	Air96
Series Model(s):	N/A
FCC ID:	2A542-AIR96
Test Standard:	FCC Part 15.247

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TEST RESULT CERTIFICATION

Applicant's Name:	SHENZHEN REOSTUDIO TECHNOLOGY CO.,LTD
Address:	Room 213-214, Internet of Things Demonstration Park, No. 6 Minhuan Road, Longhua District, Shenzhen, China
Manufacturer's Name	SHENZHEN ARBITER TECHNOLOGY CO., LTD
Address	Floor 2, 3 and 4, Bldg. A, Meisheng Industrial Park, Chongqing Rd., Fuhai St., Baoan Dist.,Shenzhen, Guangdong, China
Product Description	
Product Name:	Keyboard
Brand:	Nuphy
Model Number:	. Air96
Series Model(s):	N/A
Test Standards	FCC Part15.247
Test Procedure:	ANSI C63.10-2013

This device described above has been tested by STS, 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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Date of Test

Date of receipt of test item 24 Mar. 2023

Testing Engineer

(Chris Chen)

Technical Manager

Sean She

(Sean she)



Authorized Signatory :

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(Bovey Yang)



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Revision History

Rev.	Issue Date	Report NO.	Effect Page	Contents
00	30 Mar. 2023	STS2303086W03	ALL	Initial Issue



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1. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards: KDB 558074 D01 15.247 Meas Guidance v05r02.

FCC Part 15.247,Subpart C				
Standard Section	Test Item	Judgment	Remark	
15.207	Conducted Emission	PASS		
15.247 (a)(2)	6dB Bandwidth	PASS		
15.247 (b)(3)	Output Power	PASS		
15.209	Radiated Spurious Emission	PASS		
15.247 (d)	Conducted Spurious & Band Edge Emission	PASS		
15.247 (e)	Power Spectral Density	PASS		
15.205	Restricted bands of operation PASS			
Part 15.247(d)/ Part 15.209(a)	Band Edge Emission	PASS		
15.203	Antenna Requirement	PASS		

NOTE:

(1) 'N/A' denotes test is not applicable in this Test Report.

(2) All tests are according to ANSI C63.10-2013.

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1.1 TEST FACTORY

SHENZHEN STS TEST SERVICES CO., LTD Add. : A 1/F, Building B, Zhuoke Science Park, No.190 Chongqing Road, HepingShequ, Fuyong Sub-District, Bao'an District, Shenzhen, Guang Dong, China FCC test Firm Registration Number: 625569 IC test Firm Registration Number: 12108A A2LA Certificate No.: 4338.01

1.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement $\mathbf{y} \pm \mathbf{U}$, where expended uncertainty \mathbf{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	RF output power, conducted	±1.197dB
2	Unwanted Emissions, conducted	±2.896dB
3	All emissions, radiated 9K-30MHz	±3.84dB
4	All emissions, radiated 30M-1GHz	±3.94dB
5	All emissions, radiated 1G-6GHz	±4.59dB
6	All emissions, radiated>6G	±5.22dB
7	Conducted Emission (9KHz-150KHz)	±2.14dB
8	Conducted Emission (150KHz-30MHz)	±2.54dB



2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF THE EUT

Product Name	Keyboard		
Brand	Nuphy		
Model Number	Air96		
Series Model(s)	N/A		
Model Difference	N/A		
	The EUT is a Keybo	bard	
	Operation Frequency:	2402~2480 MHz	
	Modulation Type:	GFSK	
	Radio Technology:	BLE	
Product Description	Bluetooth	LE (Support 1M DHV)	
	Configuration:	LE (Support 1M PHY)	
	Number Of Channel:	40	
	Antenna Type:	PCB	
	Antenna Gain (dBi)	2.34dBi	
Channel List	Please refer to the Note 3.		
Rating	Input: Wired: DC 5V; Wireless: DC 3.7V		
Battery	Rated Voltage:3.8V Charge Limit Voltage:4.2V Capacity: 4000mAh		
Hardware version number	F3-BT818 VER1.0		
Software version number	V0110		
Connecting I/O Port(s)	Please refer to the Note 1.		

Note:

1. For a more detailed features description, please refer to the manufacturer's specifications or the User Manual.

2. The antenna information refer the manufacturer provide report, applicable only to the tested sample identified in the report. Due to the incorrect antenna information, a series of problems such as the accuracy of the test results will be borne by the customer.

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			Chan	nel List			
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequenc y (MHz)
00	2402	10	2422	20	2442	30	2462
01	2404	11	2424	21	2444	31	2464
02	2406	12	2426	22	2446	32	2466
03	2408	13	2428	23	2448	33	2468
04	2410	14	2430	24	2450	34	2470
05	2412	15	2432	25	2452	35	2472
06	2414	16	2434	26	2454	36	2474
07	2416	17	2436	27	2456	37	2476
08	2418	18	2438	28	2458	38	2478
09	2420	19	2440	29	2460	39	2480



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2.2 DESCRIPTION OF THE TEST MODES

For conducted test items and radiated spurious emissions

Each of these EUT operation mode(s) or test configuration mode(s) mentioned below was evaluated respectively.

Worst Mode	Description	Data/Modulation
Mode 1	TX CH00(2402MHz)	1 Mbps/GFSK
Mode 2	TX CH19(2440MHz)	1 Mbps/GFSK
Mode 3	TX CH39(2480MHz)	1 Mbps/GFSK

Note:

(1) We tested for all available U.S. voltage and frequencies (For 120V, 50/60Hz and 240V, 50/60Hz) for which the device is capable of operation, and the worst case of 120V/ 60Hz is shown in the report.

(2) The battery is fully-charged during the radiated and RF conducted test.

For AC Conducted Emission

	Test Case
AC Conducted Emission	Mode 4 : Keeping BT TX

2.3 TEST SOFTWARE AND POWER LEVEL

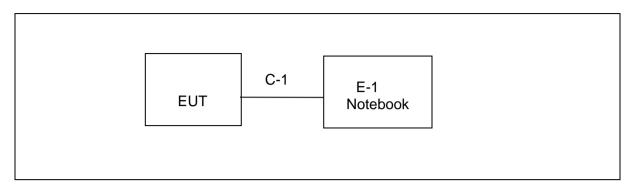
During testing channel & power controlling software provided by the customer was used to control the operating channel as well as the output power level.

RF Function	Туре	Mode Or Modulation type	ANT Gain(dBi)	Power Class	Software For Testing
BLE	BLE	GFSK	2.34	3	BK32xx RF Test_V1.9.1

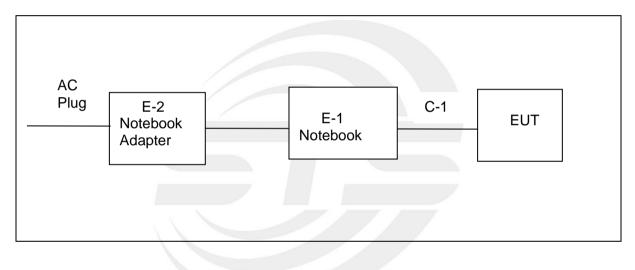


2.4 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

Radiated Spurious Emission Test



Conducted Emission Test







2.5 DESCRIPTION OF NECESSARY ACCESSORIES AND SUPPORT UNITS

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

	Necessary accessories				
Item	Equipment	Mfr/Brand	Model/Type No.	Length	Note
N/A	N/A	N/A	N/A	N/A	N/A

Support units

Item	Equipment	Mfr/Brand	Model/Type No.	Length	Note
E-2	Notebook Adapter	LENOVO	ADLX45DLC3A	N/A	N/A
E-1	Notebook	LENOVO	Think Pad E470	N/A	N/A
C-1	USB Cable	N/A	N/A	150cm	NO

Note:

- (1) For detachable type I/O cable should be specified the length in cm in ^CLength₂ column.
- (2) "YES" is means "with core"; "NO" is means "without core".



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2.6 EQUIPMENTS LIST

		RF Radiation Tes	t Equipment		
Kind of Equipment	Manufacturer	Type No.	Serial No.	Last Calibration	Calibrated Until
Temperature & Humidity	SW-108	SuWei	N/A	2023.03.03	2024.03.02
Pre-Amplifier (0.1M-3GHz)	EM	EM330	060665	2022.07.04	2023.07.03
Pre-Amplifier (1G-18GHz)	SKET	LNPA-01018G-45	SK2018080901	2022.09.29	2023.09.28
18GHz-40GHz Filter	XINGBO	XBLBQ-GTA44	22062003-1	2023.03.06	2024.03.05
Pre-mplifier (18G-40G)	SKET	LNPA_1840-50	SK2018101801	2023.03.06	2024.03.05
Positioning Controller	MF	MF-7802	MF-780208587	N/A	N/A
Signal Analyzer	R&S	FSV 40-N	101823	2022.09.29	2023.09.28
Switch Control Box	N/A	N/A	N/A	N/A	N/A
Filter Box	BALUN Technology	SU319E	BL-SZ1530051	N/A	N/A
Active loop Antenna	ZHINAN	ZN30900C	16035	2023.02.28	2024.02.27
Bilog Antenna	TESEQ	CBL6111D	34678	2022.09.30	2024.09.29
Horn Antenna	SCHWARZBE CK	BBHA 9120D	02014	2021.10.11	2023.10.10
Horn Antenna	A-INFOMW	LB-180400-KF	J211020657	2021.09.28	2023.09.27
Antenna Mast	MF	MFA-440H	N/A	N/A	N/A
Turn Table	MF	SC100_1	60531	N/A	N/A
AC Power Source	APC	KDF-11010G	F214050035	N/A	N/A
DC Power Supply	Zhaoxin	RXN 605D	20R605D11010081	N/A	N/A
Test SW	EZ-EMC		Ver.STSLAB-03A	1 RE	
		Conduction Test	equipment		
Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
Test Receiver	R&S	ESCI	101427	2022.09.29	2023.09.28
LISN	R&S	ENV216	101242	2022.09.28	2023.09.27
LISN	EMCO	3810/2NM	23625	2022.09.28	2023.09.27
Temperature & Humidity	HH660	Mieo	N/A	2022.09.30	2023.09.29
Test SW	EZ-EMC		Ver.STSLAB-03A	1 CE	
RF Connected Test					
Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
Signal Analyzer	Agilent	N9020A	MY51510623	2023.03.01	2024.02.28
Switch control box	MW	MW100-RFCB	N/A	N/A	N/A
Temperature & Humidity	HH660	Mieo	N/A	2022.09.30	2023.09.29
Test SW	MW		MTS 8310_2.0	.0.0	

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3. EMC EMISSION TEST

3.1 CONDUCTED EMISSION MEASUREMENT

3.1.1 POWER LINE CONDUCTED EMISSION LIMITS

The radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 kHz to 30 MHz, shall not exceed the limits in the following table.

	Conducted Emission limit (dBuV)		
FREQUENCY (MHz)	Quasi-peak	Average	
0.15 -0.5	66 - 56 *	56 - 46 *	
0.50 -5.0	56.00	46.00	
5.0 -30.0	60.00	50.00	

Note:

(1) The tighter limit applies at the band edges.

(2) The limit of " * " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

The following table is the setting of the receiver

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz



3.2 TEST PROCEDURE

- a. The EUT is 0.8 m from the horizontal ground plane and 0.4 m from the vertical ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments are powered from additional LISN(s). The LISN provides 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- b. 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 40 cm long.
- c. 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.
- d. LISN is at least 80 cm from the nearest part of EUT chassis.
- e. For the actual test configuration, please refer to the related Item -EUT Test Photos.

Vertical Reference Ground Plane EUT 40cm EUT 80cm N Horizontal Reference Ground Plane

3.3 TEST SETUP

Note: 1. Support units were connected to second LISN.

2. Both of LISNs (AMN) are 80 cm from EUT and at least 80 cm from other units and other metal planes support units.

3.4 EUT OPERATING CONDITIONS

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.



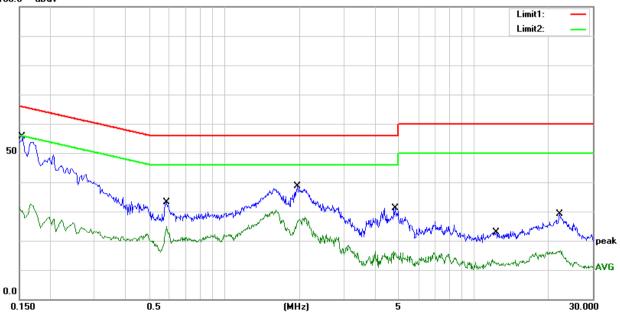
3.5 TEST RESULTS

Temperature:	25.6(C)	Relative Humidity:	45%RH
Test Voltage:	AC 120V/60Hz	Phase:	L
Test Mode:	Mode 4		

No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB)	(dBuV)	(dBuV)	(dB)	
1	0.1540	45.23	10.33	55.56	65.78	-10.22	QP
2	0.1540	22.25	10.33	32.58	55.78	-23.20	AVG
3	0.5860	22.79	10.46	33.25	56.00	-22.75	QP
4	0.5860	10.71	10.46	21.17	46.00	-24.83	AVG
5	1.9660	28.22	10.30	38.52	56.00	-17.48	QP
6	1.9660	17.79	10.30	28.09	46.00	-17.91	AVG
7	4.8460	20.73	10.45	31.18	56.00	-24.82	QP
8	4.8460	5.55	10.45	16.00	46.00	-30.00	AVG
9	12.2700	11.32	11.45	22.77	60.00	-37.23	QP
10	12.2700	1.92	11.45	13.37	50.00	-36.63	AVG
11	22.1380	16.33	12.77	29.10	60.00	-30.90	QP
12	22.1380	0.48	12.77	13.25	50.00	-36.75	AVG

Remark:

- 1. All readings are Quasi-Peak and Average values
- 2. Margin = Result (Result = Reading + Factor)-Limit
- 3. Factor=LISN factor+Cable loss+Limiter (10dB)
- 100.0 dBuV





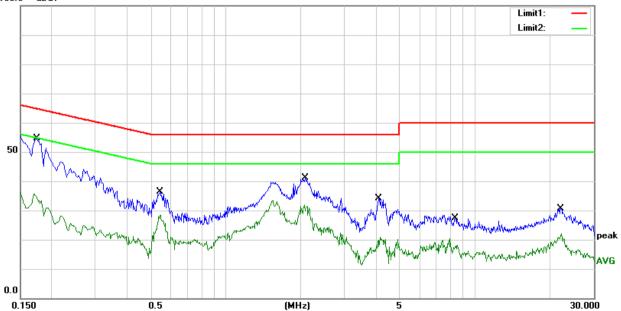
Temperature:	25.6(C)	Relative Humidity:	45%RH
Test Voltage:	AC 120V/60Hz	Phase:	Ν
Test Mode:	Mode 4		

No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB)	(dBuV)	(dBuV)	(dB)	
1	0.1740	44.36	10.33	54.69	64.77	-10.08	QP
2	0.1740	20.59	10.33	30.92	54.77	-23.85	AVG
3	0.5460	25.78	10.50	36.28	56.00	-19.72	QP
4	0.5460	15.49	10.50	25.99	46.00	-20.01	AVG
5	2.0980	30.87	10.30	41.17	56.00	-14.83	QP
6	2.0980	20.69	10.30	30.99	46.00	-15.01	AVG
7	4.1260	23.75	10.41	34.16	56.00	-21.84	QP
8	4.1260	9.65	10.41	20.06	46.00	-25.94	AVG
9	8.3660	16.59	10.86	27.45	60.00	-32.55	QP
10	8.3660	5.38	10.86	16.24	50.00	-33.76	AVG
11	22.1660	17.83	12.77	30.60	60.00	-29.40	QP
12	22.1660	7.53	12.77	20.30	50.00	-29.70	AVG

Remark:

- 2. Margin = Result (Result = Reading + Factor)-Limit
- 3. Factor=LISN factor+Cable loss+Limiter (10dB)

100.0 dBuV



^{1.} All readings are Quasi-Peak and Average values



4. RADIATED EMISSION MEASUREMENT

4.1 RADIATED EMISSION LIMITS

In any 100 kHz bandwidth outside the operating frequency band. In case the emission fall within the Restricted band specified on Part15.205(a)&209(a) limit in the table and according to ANSI C63.10-2013 below has to be followed.

LIMITS OF RADIATED EMISSION MEASUREMENT (Frequency Range 9kHz-1000MHz)

Frequencies	Field Strength	Measurement Distance
(MHz)	(micorvolts/meter)	(meters)
0.009~0.490	2400/F(KHz)	300
0.490~1.705	24000/F(KHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000MHz)

	(dBuV/m) (at 3M)		
FREQUENCY (MHz)	PEAK	AVERAGE	
Above 1000	74	54	

Notes:

(1) The limit for radiated test was performed according to FCC PART 15C.

(2) The tighter limit applies at the band edges.

(3) Emission level (dBuV/m)=20log Emission level (uV/m).

LIMITS OF RESTRICTED FREQUENCY BANDS

FREQUENCY (MHz)	FREQUENCY (MHz)	FREQUENCY (MHz)	FREQUENCY (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	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	Above 38.6
13.36-13.41			

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For Radiated Emission

Spectrum Parameter	Setting
Attenuation	Auto
Detector	Peak/QP/AV
Start Frequency	9 KHz/150KHz(Peak/QP/AV)
Stop Frequency	150KHz/30MHz(Peak/QP/AV)
	200Hz (From 9kHz to 0.15MHz)/
RB / VB (emission in restricted	9KHz (From 0.15MHz to 30MHz);
band)	200Hz (From 9kHz to 0.15MHz)/
	9KHz (From 0.15MHz to 30MHz)

Spectrum Parameter	Setting	
Attenuation	Auto	
Detector	Peak/QP	
Start Frequency	30 MHz(Peak/QP)	
Stop Frequency	1000 MHz (Peak/QP)	
RB / VB (emission in restricted band)	120 KHz / 300 KHz	

Spectrum Parameter	Setting	
Attenuation	Auto	
Detector	Peak/AV	
Start Frequency	1000 MHz(Peak/AV)	
Stop Frequency	10th carrier hamonic(Peak/AV)	
RB / VB (emission in restricted	1 MHz / 3 MHz(Peak)	
band)	1 MHz/1/T MHz(AVG)	

For Restricted band

Spectrum Parameter	Setting	
Detector	Peak/AV	
Stort/Stop Frequency	Lower Band Edge: 2310 to 2410 MHz	
Start/Stop Frequency	Upper Band Edge: 2475 to 2500 MHz	
	1 MHz / 3 MHz(Peak)	
RB / VB	1 MHz/1/T MHz(AVG)	

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Receiver Parameter	Setting
Start ~ Stop Frequency	9kHz~90kHz / RB 200Hz for PK & AV
Start ~ Stop Frequency	90kHz~110kHz / RB 200Hz for QP
Start ~ Stop Frequency	110kHz~490kHz / RB 200Hz for PK & AV
Start ~ Stop Frequency	490kHz~30MHz / RB 9kHz for QP
Start ~ Stop Frequency	30MHz~1000MHz / RB 120kHz for QP

4.2 TEST PROCEDURE

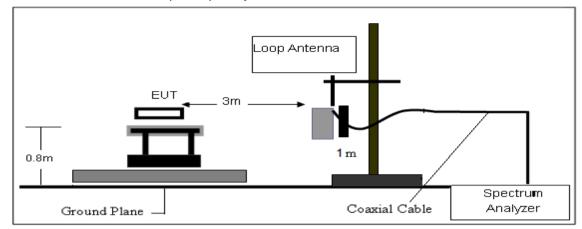
- a. The measuring distance at 3 m shall be used for measurements at frequency 0.009MHz up to 1GHz, and above 1GHz.
- b. The EUT was placed on the top of a rotating table 0.8 m (above 1GHz is 1.5 m) above the ground at a 3 m anechoic chamber test site. The table was rotated 360 degree to determine the position of the highest radiation.
- c. The height of the equipment shall be 0.8 m (above 1GHz is 1.5 m); the height of the test antenna shall vary between 1 m to 4 m. Horizontal and vertical polarization of the antenna are set to make the measurement.
- d. 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 QuasiPeak detector mode will be re-measured.
- e. If the Peak Mode measured value is compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and no additional QP Mode measurement was performed.
- f. 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.

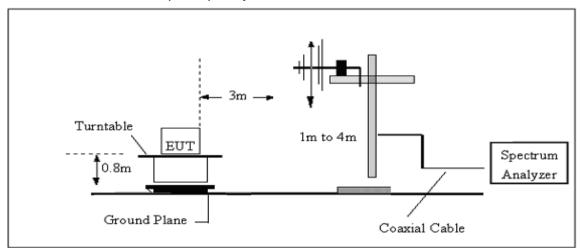


4.3 TEST SETUP

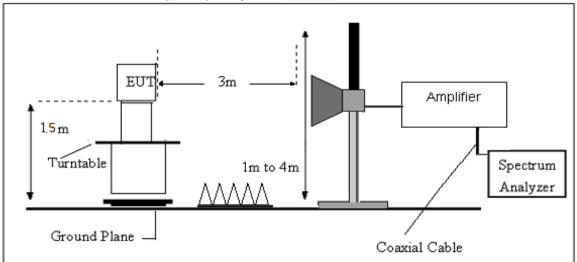
(A) Radiated Emission Test-Up Frequency Below 30MHz



(B) Radiated Emission Test-Up Frequency 30MHz~1GHz



(C) Radiated Emission Test-Up Frequency Above 1GHz



4.4 EUT OPERATING CONDITIONS Please refer to section 3.4 of this report.



4.5 FIELD STRENGTH CALCULATION

The field strength is calculated by adding the Antenna Factor and Cable Factor and subtracting the Amplifier Gain and Duty Cycle Correction Factor (if any) from the measured reading. The basic equation with a sample calculation is as follows:

FS = RA + AF + CL - AGWhere FS = Field Strength CL = Cable Attenuation Factor (Cable Loss) RA = Reading Amplitude AG = Amplifier Gain AF = Antenna Factor

For example

Frequency	FS	RA	AF	CL	AG	Factor
(MHz)	(dBµV/m)	(dBµV/m)	(dB)	(dB)	(dB)	(dB)
300	40	58.1	12.2	1.6	31.9	-18.1

Factor=AF+CL-AG



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4.6 TEST RESULTS

(Between 9KHz - 30 MHz)

Temperature:	23.1(C)	Relative Humidtity:	60%RH
Test Voltage:	DC 3.8V	Polarization:	
Test Mode:	TX Mode		

Freq.	Reading	Limit	Margin	State
(MHz)	(dBuV/m)	(dBuV/m)	(dB)	P/F
				PASS
				PASS

Note:

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

Distance extrapolation factor =40 log (specific distance/test distance)(dB); Limit line = specific limits(dBuv) + distance extrapolation factor.





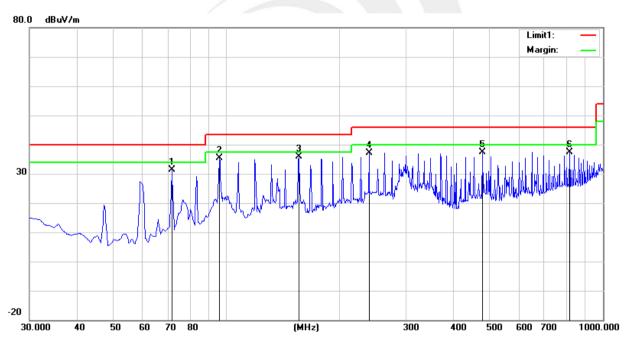
(30MHz -1000MHz)

Temperature:	23.1(C)	Relative Humidity:	60%RH		
Test Voltage:	DC 3.8V	Phase:	Horizontal		
Test Mode:	Mode 1/2/3 (Mode 2 worst mode)				

No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/ m)	(dBuV/m)	(dBuV/m)	(dB)	
1	71.7100	55.95	-24.56	31.39	40.00	-8.61	peak
2	95.9600	56.06	-20.67	35.39	43.50	-8.11	peak
3	156.1000	54.54	-18.66	35.88	43.50	-7.62	peak
4	239.5200	55.23	-18.10	37.13	46.00	-8.87	peak
5	480.0800	46.07	-8.65	37.42	46.00	-8.58	peak
6	816.6700	39.45	-1.97	37.48	46.00	-8.52	peak

Remark:

- 1. Margin = Result (Result = Reading + Factor)-Limit
- 2. Factor= Antenna factor+Cable attenuation factor(cable loss)-Amplifier gain





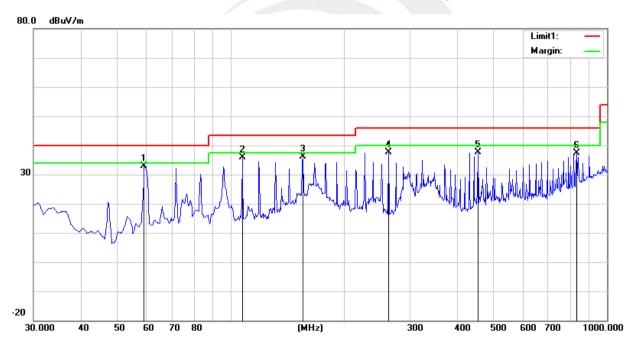
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Temperature:	23.1(C)	Relative Humidity:	60%RH		
Test Voltage:	DC 3.8V	Phase:	Vertical		
Test Mode:	Mode 1/2/3 (Mode 2 worst mode)				

No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/ m)	(dBuV/m)	(dBuV/m)	(dB)	
1	59.1000	58.59	-25.73	32.86	40.00	-7.14	peak
2	107.6000	55.09	-19.32	35.77	43.50	-7.73	peak
3	156.1000	54.70	-18.66	36.04	43.50	-7.46	peak
4	263.7700	52.48	-14.75	37.73	46.00	-8.27	peak
5	455.8300	47.18	-9.55	37.63	46.00	-8.37	peak
6	832.1900	38.13	-0.66	37.47	46.00	-8.53	peak

Remark:

- 1. Margin = Result (Result = Reading + Factor)-Limit
- 2. Factor= Antenna factor+Cable attenuation factor(cable loss)-Amplifier gain





(1GHz-25GHz) Spurious emission Requirements

GFSK

Frequency	Meter Reading	Amplifier	Loss	Antenna Factor	Corrected Factor	Emission Level	Limits	Margin	Detector	Comment
(MHz)	(dBµV)	(dB)	(dB)	(dB/m)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Туре	
				Low Ch	nannel (GFSK/2	2402 MHz)				
3264.75	61.86	44.70	6.70	28.20	-9.80	52.06	74.00	-21.94	PK	Vertical
3264.75	50.20	44.70	6.70	28.20	-9.80	40.40	54.00	-13.60	AV	Vertical
3264.61	60.98	44.70	6.70	28.20	-9.80	51.18	74.00	-22.82	PK	Horizontal
3264.61	50.84	44.70	6.70	28.20	-9.80	41.04	54.00	-12.96	AV	Horizontal
4804.49	59.58	44.20	9.04	31.60	-3.56	56.02	74.00	-17.98	PK	Vertical
4804.49	49.19	44.20	9.04	31.60	-3.56	45.63	54.00	-8.37	AV	Vertical
4804.32	59.24	44.20	9.04	31.60	-3.56	55.68	74.00	-18.32	PK	Horizontal
4804.32	50.09	44.20	9.04	31.60	-3.56	46.53	54.00	-7.47	AV	Horizontal
5359.81	48.92	44.20	9.86	32.00	-2.34	46.57	74.00	-27.43	PK	Vertical
5359.81	39.45	44.20	9.86	32.00	-2.34	37.11	54.00	-16.89	AV	Vertical
5359.77	47.77	44.20	9.86	32.00	-2.34	45.43	74.00	-28.57	PK	Horizontal
5359.77	38.21	44.20	9.86	32.00	-2.34	35.86	54.00	-18.14	AV	Horizontal
7205.74	53.52	43.50	11.40	35.50	3.40	56.92	74.00	-17.08	PK	Vertical
7205.74	44.06	43.50	11.40	35.50	3.40	47.46	54.00	-6.54	AV	Vertical
7205.76	54.47	43.50	11.40	35.50	3.40	57.87	74.00	-16.13	PK	Horizontal
7205.76	43.57	43.50	11.40	35.50	3.40	46.97	54.00	-7.03	AV	Horizontal
	•			Middle C	hannel (GFSK	/2440 MHz)				•
3263.13	61.37	44.70	6.70	28.20	-9.80	51.57	74.00	-22.43	PK	Vertical
3263.13	51.20	44.70	6.70	28.20	-9.80	41.40	54.00	-12.60	AV	Vertical
3262.96	61.65	44.70	6.70	28.20	-9.80	51.85	74.00	-22.15	PK	Horizontal
3262.96	49.96	44.70	6.70	28.20	-9.80	40.16	54.00	-13.84	AV	Horizontal
4880.10	58.30	44.20	9.04	31.60	-3.56	54.74	74.00	-19.26	PK	Vertical
4880.10	49.64	44.20	9.04	31.60	-3.56	46.08	54.00	-7.92	AV	Vertical
4880.14	58.16	44.20	9.04	31.60	-3.56	54.60	74.00	-19.40	PK	Horizontal
4880.14	49.22	44.20	9.04	31.60	-3.56	45.66	54.00	-8.34	AV	Horizontal
5357.22	48.95	44.20	9.86	32.00	-2.34	46.61	74.00	-27.39	PK	Vertical
5357.22	39.38	44.20	9.86	32.00	-2.34	37.03	54.00	-16.97	AV	Vertical
5357.39	48.11	44.20	9.86	32.00	-2.34	45.77	74.00	-28.23	PK	Horizontal
5356.99	38.95	44.20	9.86	32.00	-2.34	36.61	54.00	-17.39	AV	Horizontal
7320.85	54.56	43.50	11.40	35.50	3.40	57.96	74.00	-16.04	PK	Vertical
7320.85	44.88	43.50	11.40	35.50	3.40	48.28	54.00	-5.72	AV	Vertical
7320.40	54.70	43.50	11.40	35.50	3.40	58.10	74.00	-15.90	PK	Horizontal
7320.40	44.21	43.50	11.40	35.50	3.40	47.61	54.00	-6.39	AV	Horizontal

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				High Char	nnel (GFSK/	2480 MHz)				
3264.66	61.07	44.70	6.70	28.20	-9.80	51.27	74.00	-22.73	PK	Vertical
3264.66	50.32	44.70	6.70	28.20	-9.80	40.52	54.00	-13.48	AV	Vertical
3264.69	61.79	44.70	6.70	28.20	-9.80	51.99	74.00	-22.01	PK	Horizontal
3264.69	50.70	44.70	6.70	28.20	-9.80	40.90	54.00	-13.10	AV	Horizontal
4960.56	58.65	44.20	9.04	31.60	-3.56	55.09	74.00	-18.91	PK	Vertical
4960.56	49.39	44.20	9.04	31.60	-3.56	45.83	54.00	-8.17	AV	Vertical
4960.45	58.48	44.20	9.04	31.60	-3.56	54.92	74.00	-19.08	PK	Horizontal
4960.45	49.12	44.20	9.04	31.60	-3.56	45.56	54.00	-8.44	AV	Horizontal
5359.81	48.20	44.20	9.86	32.00	-2.34	45.85	74.00	-28.15	PK	Vertical
5359.81	39.10	44.20	9.86	32.00	-2.34	36.76	54.00	-17.24	AV	Vertical
5359.86	48.37	44.20	9.86	32.00	-2.34	46.03	74.00	-27.97	PK	Horizontal
5359.86	38.69	44.20	9.86	32.00	-2.34	36.35	54.00	-17.65	AV	Horizontal
7439.74	54.53	43.50	11.40	35.50	3.40	57.93	74.00	-16.07	PK	Vertical
7439.74	44.48	43.50	11.40	35.50	3.40	47.88	54.00	-6.12	AV	Vertical
7439.68	54.23	43.50	11.40	35.50	3.40	57.63	74.00	-16.37	PK	Horizontal
7439.68	44.92	43.50	11.40	35.50	3.40	48.32	54.00	-5.68	AV	Horizontal

Note:

1) Factor = Antenna Factor + Cable Loss – Pre-amplifier.

Emission Level = Reading + Factor

2) The frequency emission of peak points that did not show above the forms are at least 20dB below the limit, the frequency emission is mainly from the environment noise.

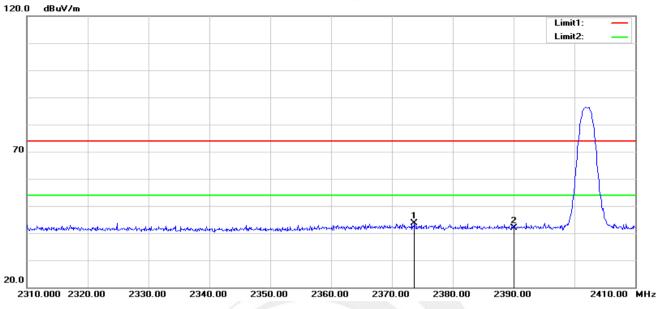




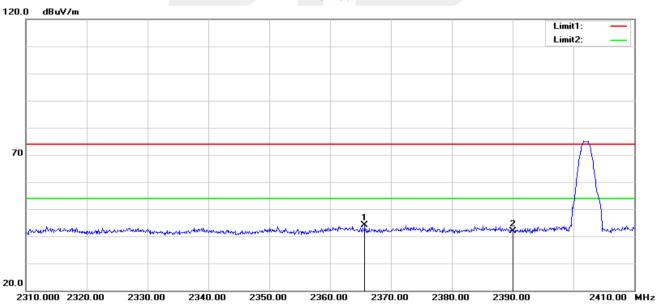
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4.6 TEST RESULTS (Restricted Bands Requirements) GFSK-Low





No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2373.700	39.51	4.09	43.60	74.00	-30.40	peak
2	2390.000	37.56	4.34	41.90	74.00	-32.10	peak



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2365.700	40.14	3.97	44.11	74.00	-29.89	peak
2	2390.000	37.50	4.34	41.84	74.00	-32.16	peak

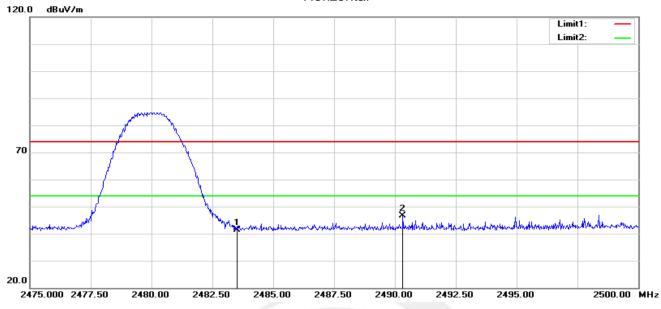
Vertical



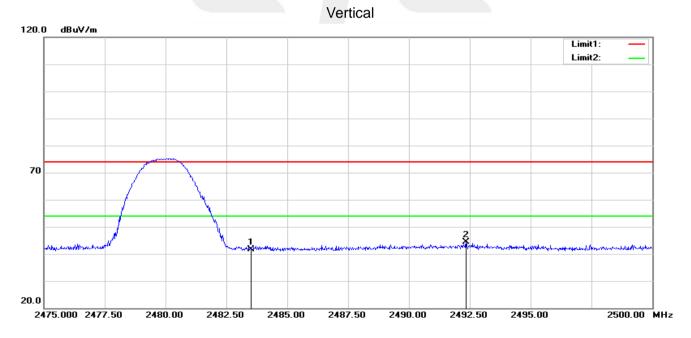
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GFSK-High Horizontal



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2483.500	36.75	4.60	41.35	74.00	-32.65	peak
2	2490.325	42.06	4.63	46.69	74.00	-27.31	peak



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2483.500	37.10	4.60	41.70	74.00	-32.30	peak
2	2492.350	39.80	4.63	44.43	74.00	-29.57	peak

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5. CONDUCTED SPURIOUS & BAND EDGE EMISSION

5.1 LIMIT

According to FCC section 15.247(d), in any 100kHz 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 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.

5.2 TEST PROCEDURE

Spectrum Parameter	Setting			
Detector	Peak			
Start/Stop Frequency	30 MHz to 10th carrier harmonic			
RB / VB (emission in restricted band)	100 KHz/300 KHz			
Trace-Mode:	Max hold			
For Band edge				
Spectrum Parameter	Setting			
Detector	Peak			
Start/Stan Fraguenay	Lower Band Edge: 2300 – 2407 MHz			
Start/Stop Frequency	Lower Band Edge: 2300 – 2407 MHz Upper Band Edge: 2475 – 2500 MHz			
Start/Stop Frequency RB / VB (emission in restricted band)	Ŭ			

5.3 TEST SETUP



The EUT is connected to the Spectrum Analyzer; the RF load attached to the EUT antenna termina is 50 Ohm: the path loss as the factor is calibrated to correct the reading. Make the measurement with the spectrum analyzer's resolution bandwidth(RBW) = 100 kHz. In order to make an accurate measurement, set the span greater than RBW.

5.4 EUT OPERATION CONDITIONS Please refer to section 3.4 of this report.

5.5 TEST RESULTS

Note: The test data please refer to APPENDIX 1.

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6. POWER SPECTRAL DENSITY TEST

6.1 LIMIT

FCC Part 15.247,Subpart C							
Section	Test Item	Limit	Frequency Range (MHz)	Result			
15.247(e)	Power Spectral Density	≤8 dBm (RBW≥3KHz)	2400-2483.5	PASS			

6.2 TEST PROCEDURE

- 1. Set analyzer center frequency to DTS channel center frequency.
- 2. Set the span to 1.5 times the DTS channel bandwidth.
- 3. Set the RBW to: 100 kHz \ge RBW \ge 3 kHz.
- 4. Set the VBW \geq 3 x RBW.
- 5. Detector = peak.
- 6. Sweep time = auto couple.
- 7. Trace mode = max hold.
- 8. Allow trace to fully stabilize.
- 9. Use the peak marker function to determine the maximum amplitude level.
- 10. If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

6.3 TEST SETUP

Specturm Analyzer		EUT
----------------------	--	-----

6.4 EUT OPERATION CONDITIONS Please refer to section 3.4 of this report.

6.5 TEST RESULTS

Note: The test data please refer to APPENDIX 1.



7. BANDWIDTH TEST

7.1 LIMIT

	FCC Part 15.247,Subpart C							
Section	Test Item	Limit	Frequency Range (MHz)	Result				
15.247(a)(2)	Bandwidth	>= 500KHz (6dB bandwidth)	2400-2483.5	PASS				

7.2 TEST PROCEDURE

The automatic bandwidth measurement capability of an instrument may be employed using the X dB bandwidth mode with X set to 6 dB, if the functionality described above (i.e., RBW = 100 kHz, VBW \geq 3RBW, peak detector with maximum hold) is implemented by the instrumentation function. When using this capability, care shall be taken so that the bandwidth measurement is not influenced by any intermediate power nulls in the fundamental emission that might be \geq 6 dB.

7.3 TEST SETUP



7.4 EUT OPERATION CONDITIONS Please refer to section 3.4 of this report.

7.5 TEST RESULTS

Note: The test data please refer to APPENDIX 1.



8. PEAK OUTPUT POWER TEST

8.1 LIMIT

FCC Part 15.247,Subpart C							
Section	Test Item	Limit	Frequency Range (MHz)	Result			
15.247(b)(3)	Output Power	1 watt or 30dBm	2400-2483.5	PASS			

8.2 TEST PROCEDURE

One of the following procedures may be used to determine the maximum peak conducted output power of a DTS EUT.

 $RBW \ge DTS$ bandwidth

The following procedure shall be used when an instrument with a resolution bandwidth that is greater than the DTS bandwidth is available to perform the measurement:

a) Set the RBW \geq DTS bandwidth.

b) Set VBW \geq [3 × RBW].

c) Set span \geq [3 × RBW].

d) Sweep time = auto couple.

e) Detector = peak.

f) Trace mode = max hold.

g) Allow trace to fully stabilize.

h) Use peak marker function to determine the peak amplitude level.

Integrated band power method:

The following procedure can be used when the maximum available RBW of the instrument is less than the

DTS bandwidth:

a) Set the RBW = 1 MHz.

b) Set the VBW \geq [3 \times RBW].

c) Set the span \geq [1.5 \times DTS bandwidth].

d) Detector = peak.

e) Sweep time = auto couple.

f) Trace mode = max hold.

g) Allow trace to fully stabilize.

h) Use the instrument's band/channel power measurement function with the band limits set equal to the DTS bandwidth edges (for some instruments, this may require a manual override to select the peak detector). If the instrument does not have a band power function, then sum the spectrum levels (in linear power units) at intervals equal to the RBW extending across the DTS channel bandwidth.

PKPM1 Peak power meter method:

The maximum peak conducted output power may be measured using a broadband peak RF power meter. The power meter shall have a video bandwidth that is greater than or equal to the DTS bandwidth and shall use a fast-responding diode detector.

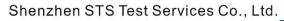




8.4 EUT OPERATION CONDITIONS Please refer to section 3.4 of this report.

8.5 TEST RESULTS

Note: The test data please refer to APPENDIX 1.





9. ANTENNA REQUIREMENT

9.1 STANDARD 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.

9.2 EUT ANTENNA

The EUT antenna is PCB Antenna. It comply with the standard requirement.



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APPENDIX 1-TEST DATA

1. Duty Cycle

Condition	Mode	Frequency (MHz)	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	BLE 1M	2402	27.07	5.68	3.46
NVNT	BLE 1M	2440	27.09	5.67	3.46
NVNT	BLE 1M	2480	27.17	5.66	3.45



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Duty Cycle NVNT BLE 1M 2480MHz 03 PM Mar 27, 2023 TRACE 1 2 3 4 5 6 TYPE WWWWWW DET P N N N N RL Center Freq 2.480000000 GHz Avg Type: Log-Pwr Trig: Free Run #Atten: 36 dB PNO: Fast IFGain:Low ⊷ Mkr1 1.017 ms -9.16 dBm Ref Offset 2.46 dB Ref 28.46 dBm I0 dB/div 8.4 $()^2$ $\langle \rangle$ 41.3 والفرارية سيتاعا والقوطية والعر أيوعه أبالعاري وأأور شاالتواس م ورويتك فالله طأ أأفك المأديدا. أن and halfs فأناد واللع وليناو بأط فقاذ أسر أأحد بأريد الاصة 51.9 . Del della del AND RELEASE OF A DESCRIPTION , A WERE AND A Center 2.480000000 GHz Res BW 1.0 MHz Span 0 Hz #VBW 3.0 MHz Sweep 5.000 ms (10001 pts) MKR MODE TRC SCL FUNCTION FUNCTION WIDTH FUNCTION VALUE Т -9.16 dBm -13.86 dBm -12.61 dBm 1.017 ms 1.794 ms 2.084 ms 1 N N N 234567891011 **I**STATUS sG

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2. Maximum Average Conducted Output Power

Condition	Mode	Frequency (MHz)	Conducted Power (dBm)	Duty Factor (dB)	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	BLE 1M	2402	-8.32	5.68	-2.64	<=30	Pass
NVNT	BLE 1M	2440	-8.62	5.67	-2.95	<=30	Pass
NVNT	BLE 1M	2480	-9.96	5.66	-4.3	<=30	Pass

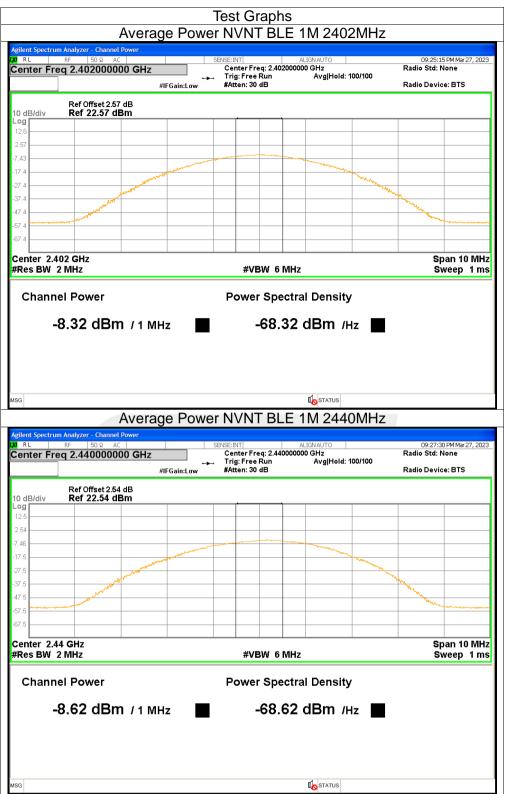


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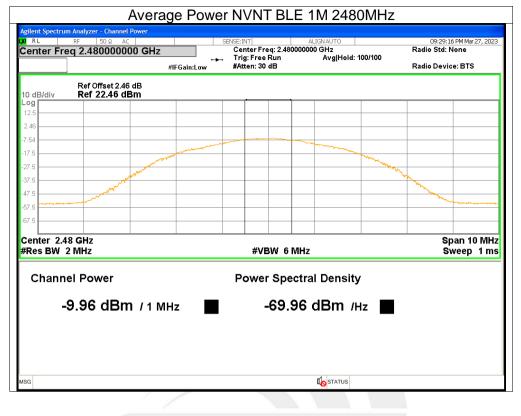


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3. Maximum Peak Conducted Output Power

Condition	Mode	Frequency (MHz)	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	BLE 1M	2402	0.04	<=30	Pass
NVNT	BLE 1M	2440	0.13	<=30	Pass
NVNT	BLE 1M	2480	-0.71	<=30	Pass



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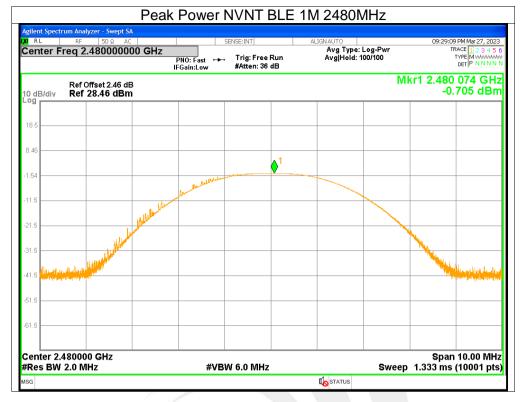


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	Doo		Test Graphs	1M 2402MHz	
gilent Spectrum Analyz		k Power	INVINI BLE		
RL RF	50 Ω AC		SENSE:INT	ALIGNAUTO Avg Type: Log-Pwr	09:25:09 PM Mar 27, 202
enter Freq 2.4	102000000 GHz	PNO: Fast ++- IFGain:Low	. Trig: Free Run #Atten: 36 dB	Avg Hold: 100/100	TRACE 12345 TYPE MWWWW DET P N N N N
D-608		IFGain:Low	PALEN. 00 4D	1	/kr1 2.402 275 GH
0 dB/div Ref 2	fset 2.57 dB 8.57 dBm				0.042 dBr
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3.57					
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0.4					
enter 2.402000	CH-7				Span 10.00 MH
Res BW 2.0 MH	z	#VB	W 6.0 MHz	Swee	
Res BW 2.0 MH				STATUS	
G gilent Spectrum Analyz	Pea zer - Swept SA	k Power	NVNT BLE	IM 2440MHz	ep 1.333 ms (10001 pt
g <mark>ilent Spectrum Analyz</mark> RL RF	Pea	k Power		STATUS	p 1.333 ms (10001 pt) 09:27:23 PM Mar 27, 202 TRACE 12 3 4 5 TYPE M Mar 27, 202
g <mark>ilent Spectrum Analyz</mark> R L RF	Реа zer - Swept SA	k Power	NVNT BLE	ALIGNAUTO Avg Type: Log-Pwr Avg Hold: 100/100	09:27:23 PM Mar 27, 202 TRACE 12.3 4 - 54 TYPE IM ward of the second sec
glent Spectrum Analyz RL RF enter Freq 2.4 Ref Off	Реа zer - Swept SA	k Power	NVNT BLE	ALIGNAUTO Avg Type: Log-Pwr Avg Hold: 100/100	29 1.333 ms (10001 pt 09:27:23 PM Mar 27, 202 TRACE 2:3:45 TYPE M PT P N N N Akr1 2.440 217 GH
Int Spectrum Analyz RL RF enter Freq 2.4 Ref Off O dB/div Ref 2:	Pea 50 2 AC 140000000 GHz fset 2.54 dB	k Power	NVNT BLE	ALIGNAUTO Avg Type: Log-Pwr Avg Hold: 100/100	29 1.333 ms (10001 pt 09:27:23 PM Mar 27, 202 TRACE 2:3:45 TYPE M PT P N N N Akr1 2.440 217 GH
Ilent Spectrum Analys RL RF enter Freq 2.4 O dB/div Ref 2: od	Pea 50 2 AC 140000000 GHz fset 2.54 dB	k Power	NVNT BLE	ALIGNAUTO Avg Type: Log-Pwr Avg Hold: 100/100	29 1.333 ms (10001 pt 09:27:23 PM Mar 27, 202 TRACE 2:3:45 TYPE M PT P N N N Akr1 2.440 217 GH
se glent Spectrum Analyz RL RF enter Freq 2.4 0 dB/div Ref 2: 0 dB/div Ref 2:	Pea 50 2 AC 140000000 GHz fset 2.54 dB	k Power	NVNT BLE	ALIGNAUTO Avg Type: Log-Pwr Avg Hold: 100/100	29 1.333 ms (10001 pt 09:27:23 PM Mar 27, 202 TRACE 2:3:45 TYPE M PT P N N N Akr1 2.440 217 GH
se glent Spectrum Analyz RL RF enter Freq 2.4 0 dB/div Ref 2: 0 dB/div Ref 2:	Pea 50 2 AC 140000000 GHz fset 2.54 dB	k Power	NVNT BLE SENSE:INT . Trig: Free Run #Atten: 36 dB	ALIGNAUTO Avg Type: Log-Pwr Avg Hold: 100/100	09:27:23 PM Mar 27, 202 TRACE 1 2 3 4 5 TYPE M MARKA DET P NINN Akr1 2.440 217 GH 0.133 dBr
se gient Spectrum Analyz RL RF enter Freq 2.4 C dB/div Ref 2: 9 9 18.5 1.54	Pea 50 2 AC 140000000 GHz fset 2.54 dB	k Power	NVNT BLE	ALIGNAUTO Avg Type: Log-Pwr Avg Hold: 100/100	29 1.333 ms (10001 pt 09:27:23 PM Mar 27, 202 TRACE 2:3:45 TYPE M PT P N N N Akr1 2.440 217 GH
signer Spectrum Analyz RL RF enter Freq 2.4 Ref Off O dB/div Ref 2: 9 9 18.5 .46	Pea	k Power	NVNT BLE SENSE:INT . Trig: Free Run #Atten: 36 dB	ALIGNAUTO Avg Type: Log-Pwr Avg Hold: 100/100	29 1.333 ms (10001 pt: 09:27:23 PM Mar 27, 202 TRACE 12 2 4 5 TYPE Mar 20 12 2 4 5 TYPE Mar 20 12 5 TYPE MAR 20 12 5 TYPE MAR 20 12 5 TYPE MAR 20 12 5 TYP
signer Spectrum Analyz RL RF enter Freq 2.4 Ref Off O dB/div Ref 2: 9 9 18.5 .46	Pea	k Power	NVNT BLE SENSE:INT . Trig: Free Run #Atten: 36 dB	ALIGNAUTO Avg Type: Log-Pwr Avg Hold: 100/100	29 1.333 ms (10001 pt 09:27:23 PM Mar 27, 202 TRACE 2:3:45 TYPE M PT P N N N Akr1 2.440 217 GH
RL RF enter Freq 2.4 Ref Off 0 dB/div Ref 2: 0	Pea 50 2 AC 140000000 GHz fset 2.54 dB	k Power	NVNT BLE SENSE:INT . Trig: Free Run #Atten: 36 dB	ALIGNAUTO Avg Type: Log-Pwr Avg Hold: 100/100	29 1.333 ms (10001 pt: 09:27:23 PM Mar 27, 202 TRACE 12 2 4 5 TYPE Mar 20 12 2 4 5 TYPE Mar 20 12 5 TYPE MAR 20 12 5 TYPE MAR 20 12 5 T
sc Ref glient Spectrum Analyz RF center Freq 2.4 Ref Off 0 dB/div Ref 2: og	Pea	k Power	NVNT BLE SENSE:INT . Trig: Free Run #Atten: 36 dB	ALIGNAUTO Avg Type: Log-Pwr Avg Hold: 100/100	29 1.333 ms (10001 pt: 09:27:23 PM Mar 27, 202 TRACE 12 2 4 5 TYPE Mar 20 12 2 4 5 TYPE Mar 20 12 5 TYPE MAR 20 12 5 TYPE MAR 20 12 5 T
se s	Pea	k Power	NVNT BLE SENSE:INT . Trig: Free Run #Atten: 36 dB	ALIGNAUTO Avg Type: Log-Pwr Avg Hold: 100/100	09:27:23 PM Mar 27, 202 TRACE 12 2 3 45 TYPE [Municipal Action of the second of the se
sc Ref glient Spectrum Analyz RF center Freq 2.4 Ref Off 0 dB/div Ref 2: og	Pea	k Power	NVNT BLE SENSE:INT . Trig: Free Run #Atten: 36 dB	ALIGNAUTO Avg Type: Log-Pwr Avg Hold: 100/100	29 1.333 ms (10001 pt: 09:27:23 PM Mar 27, 202 TRACE 12 2 4 5 TYPE Mar 20 12 2 4 5 TYPE Mar 20 12 5 TYPE MAR 20 12 5 TYPE MAR 20 12 5 T
se s	Pea	k Power	NVNT BLE SENSE:INT . Trig: Free Run #Atten: 36 dB	ALIGNAUTO Avg Type: Log-Pwr Avg Hold: 100/100	09:27:23 PM Mar 27, 202 TRACE 12 2 3 45 TYPE [Municipal Action of the second of the se
se se RL RF enter Freq 2.4 0 dB/div Ref 2: 0 dB/div	Pea	k Power	NVNT BLE SENSE:INT . Trig: Free Run #Atten: 36 dB	ALIGNAUTO Avg Type: Log-Pwr Avg Hold: 100/100	09:27:23 PM Mar 27, 202 TRACE 12 2 3 4 5 TYPE [1 2 3 4 5 TYPE
se se RL RF enter Freq 2.4 0 dB/div Ref Off 0 dB/div Ref 2: 0 dB/div Ref 2: 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5	Pea	k Power	NVNT BLE SENSE:INT . Trig: Free Run #Atten: 36 dB	ALIGNAUTO Avg Type: Log-Pwr Avg Hold: 100/100	09:27:23 PM Mar 27, 202 TRACE 12 2 3 4 5 TYPE [1 2 3 4 5 TYPE
IS Sectrum Analyz RL RF enter Freq 2.4 D dB/div Ref Off 0 dB/div Ref 2: 0 dB/div Ref 2: 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5	Pea	k Power	NVNT BLE SENSE:INT . Trig: Free Run #Atten: 36 dB	ALIGNAUTO Avg Type: Log-Pwr Avg Hold: 100/100	09:27:23 PM Mar 27, 202 TRACE 12 23 45 TYPE I Mar 27, 202 TRACE 12 23 45 TYPE I MAR DET P NNN Akr1 2.440 217 GH 0.133 dBr
RL RF enter Freq 2.4 RF 0 dB/div Ref 0f 1.5	Pea	k Power	NVNT BLE SENSE:INT . Trig: Free Run #Atten: 36 dB	ALIGNAUTO AVG Type: Log-Pwr Avg Hold: 100/100	09:27:23 PM Mar 27, 202 TRACE 12 2 3 4 5 TYPE [1 2 3 4 5 TYPE



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4. -6dB Bandwidth

Condition	Mode	Frequency (MHz)	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	BLE 1M	2402	0.7012	>=0.5	Pass
NVNT	BLE 1M	2440	0.7014	>=0.5	Pass
NVNT	BLE 1M	2480	0.6888	>=0.5	Pass



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n <mark>t Spectrum Analyzer - Occupie</mark> L RF 50 Ω A		SENSE:INT	ALIGNAUTO	09:25:24 PM Mar 27
ter Freq 2.4020000		Center Freq: 2.402000 Trig: Free Run #Atten: 36 dB		Radio Std: None Radio Device: BTS
Ref Offset 2.5 B/div Ref 32.57 d			IV	lkr3 2.4023533 C -7.1617 d
		01		
	$\int^2 n^{2}$	monorman	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	
	marannarty		Marine Marine Marine	m.
www.www.www.www.	ure -			www.www
ter 2.402 GHz			••	Span 2 I
s BW 100 kHz		#VBW 300 k		Sweep 1.333
ccupied Bandwi	dth	Total Power	5.04 dBm	
-	4 4 4 5 0 1 41 1		0.04 0.011	
	1.1152 MHz			
ransmit Freq Error	2.742 kHz	OBW Power	99.00 %	
ransmit Freq Error dB Bandwidth		x dB	99.00 % -6.00 dB	
ransmit Freq Error dB Bandwidth t Spectrum Analyzer - Occupit	2.742 kHz 701.2 kHz -6dB Bandwidt	x dB	99.00 % -6.00 dB	09:27:39 PM Mar 27
ransmit Freq Error dB Bandwidth t Spectrum Analyzer - Occupit	2.742 kHz 701.2 kHz -6dB Bandwidt	x dB	99.00 % -6.00 dB	09:27:39 PM Mar 27 Radio Std: None
ransmit Freq Error dB Bandwidth nt Spectrum Analyzer - Occupic L RF 50 Q A tter Freq 2.4400000	2.742 kHz 701.2 kHz -6dB Bandwidt	x dB	99.00 % -6.00 dB wstatus 1M 2440MHz ALIGNAUTO 2440MHz Avg Hold: 100/100	09:27:39 PM Mar 27 Radio Std: None Radio Device: BTS 1kr3 2.4403317 (
ransmit Freq Error dB Bandwidth nt Spectrum Analyzer - Occupic RF 50 Q A tter Freq 2.44000000	2.742 kHz 701.2 kHz -6dB Bandwidt	x dB	99.00 % -6.00 dB wstatus 1M 2440MHz ALIGNAUTO 2440MHz Avg Hold: 100/100	09:27:39 PM Mar 27 Radio Std: None Radio Device: BTS
ransmit Freq Error dB Bandwidth nt Spectrum Analyzer - Occupic L RF 50 Q A tter Freq 2.4400000	2.742 kHz 701.2 kHz -6dB Bandwidt	x dB	99.00 % -6.00 dB wstatus 1M 2440MHz ALIGNAUTO 2440MHz Avg Hold: 100/100	09:27:39 PM Mar 27 Radio Std: None Radio Device: BTS 1kr3 2.4403317 (
ransmit Freq Error dB Bandwidth nt Spectrum Analyzer - Occupic L RF 50 Q A tter Freq 2.4400000	2.742 kHz 701.2 kHz -6dB Bandwidt	x dB	99.00 % -6.00 dB wstatus 1M 2440MHz ALIGNAUTO 2440MHz Avg Hold: 100/100	09:27:39 PM Mar 27 Radio Std: None Radio Device: BTS 1kr3 2.4403317 (
ransmit Freq Error dB Bandwidth nt Spectrum Analyzer - Occupic L RF 50 Q A tter Freq 2.4400000	2.742 kHz 701.2 kHz -6dB Bandwidt	x dB	99.00 % -6.00 dB wstatus 1M 2440MHz ALIGNAUTO 2440MHz Avg Hold: 100/100	09:27:39 PM Mar 27 Radio Std: None Radio Device: BTS 1kr3 2.4403317 (
ransmit Freq Error dB Bandwidth	2.742 kHz 701.2 kHz -6dB Bandwidt	x dB	99.00 % -6.00 dB wstatus 1M 2440MHz ALIGNAUTO 2440MHz Avg Hold: 100/100	09:27:39 PM Mar 27 Radio Std: None Radio Device: BTS 1kr3 2.4403317 (
ransmit Freq Error dB Bandwidth tSpectrum Analyzer - Occupic Ref Offset 2.5	2.742 kHz 701.2 kHz -6dB Bandwidt	x dB	99.00 % -6.00 dB wstatus 1M 2440MHz ALIGNAUTO 2440MHz Avg Hold: 100/100	09:27:39 PM Mar 27 Radio Std: None Radio Device: BTS 1kr3 2.4403317 (
ransmit Freq Error dB Bandwidth	2.742 kHz 701.2 kHz -6dB Bandwidt	x dB	99.00 % -6.00 dB wstatus 1M 2440MHz ALIGNAUTO 2440MHz Avg Hold: 100/100	09:27:39 PM Mar 27 Radio Std: None Radio Device: BTS 1kr3 2.4403317 (
ransmit Freq Error dB Bandwidth	2.742 kHz 701.2 kHz -6dB Bandwidt	x dB	99.00 % -6.00 dB	09:27:39 PM Mar 27 Radio Std: None Radio Device: BTS Ikr3 2.4403317 C -7.2357 d
tspectrum Analyzer – Occupit RF 50 Q A ter Freq 2.4400000	2.742 kHz 701.2 kHz -6dB Bandwidt	x dB	99.00 % -6.00 dB 1M 2440MHz ALIGNAUTO 000 GHz Avg Hold: 100/100	09:27:39 PM Mar 27 Radio Std: None Radio Device: BTS Ikr3 2.4403317 C -7.2357 d
A Spectrum Analyzer – Occupied Bandwidth	2.742 kHz 701.2 kHz -6dB Bandwidt	x dB	99.00 % -6.00 dB	09:27:39 PM Mar 27 Radio Std: None Radio Device: BTS 1kr3 2.4403317 (
A Spectrum Analyzer – Occupied Bandwidth	2.742 kHz 701.2 kHz -6dB Bandwidt	x dB	99.00 % -6.00 dB 1M 2440MHz ALIGNAUTO 000 GHz Avg Hold: 100/100	09:27:39 PM Mar 27 Radio Std: None Radio Device: BTS Ikr3 2.4403317 C -7.2357 d

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ИSG			I STATUS	
x dB Bandwidth	688.8 kHz	x dB	-6.00 dB	
Transmit Freq Error	-5.238 kHz	OBW Power	99.00 %	
Occupied Bandwidth 1 1	232 MHz	Total Power	4.26 dBm	
Center 2.48 GHz #Res BW 100 kHz	·	#VBW 300 k	Hz	Span 2 MH Sweep 1.333 m
-47.5				
-27.5				
-7.54 -17.5	montradit		an shi al mbuda ana ana ana ana	Work
2.46	²	1	3	
22.5				
Ref Offset 2.46 dB 10 dB/div Ref 32.46 dBm			n	Wkr3 2.4803391 GH -7.4152 dBr
Center Freq 2.480000000 G	HZ #IFGain:Low	→ Trig: Free Run #Atten: 36 dB	Avg Hold: 100/100	Radio Device: BTS
Agilent Spectrum Analyzer - Occupied BW XI RF 50 Ω AC		SENSE:INT Center Freg: 2.480000		09:29:24 PM Mar 27, 202 Radio Std: None
-60	B Bandwidt	th NVNT BLE	1M 2480MH	Z



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5. Maximum Power Spectral Density Level

Condition	Mode	Frequency (MHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
NVNT	BLE 1M	2402	-15.48	<=8	Pass
NVNT	BLE 1M	2440	-15.05	<=8	Pass
NVNT	BLE 1M	2480	-15.88	<=8	Pass

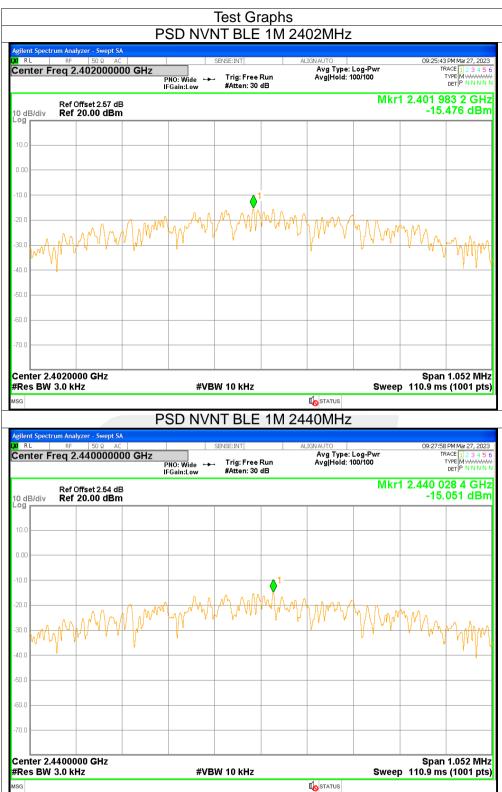


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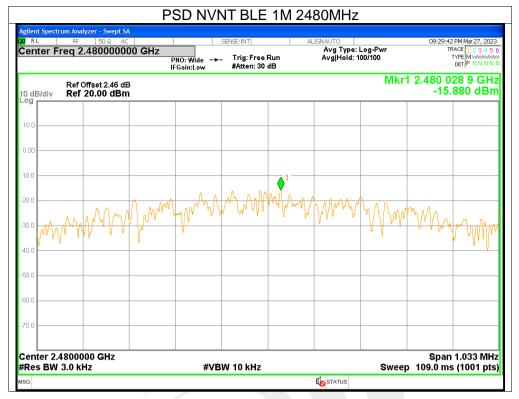
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6. Band Edge

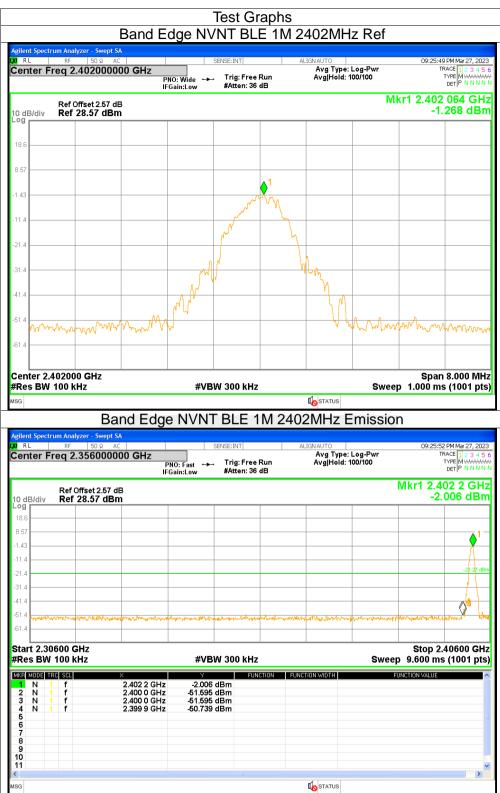
Condition	Mode	Frequency (MHz)	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE 1M	2402	-49.46	<=-20	Pass
NVNT	BLE 1M	2480	-48.44	<=-20	Pass



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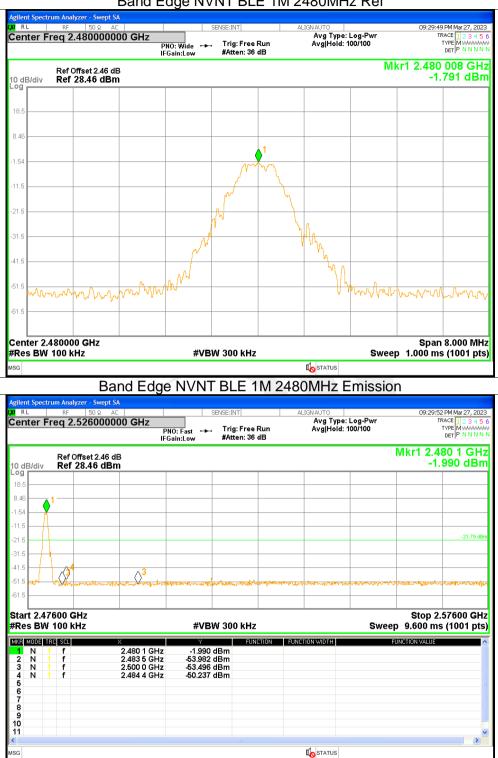


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Band Edge NVNT BLE 1M 2480MHz Ref

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7. Conducted RF Spurious Emission

Condition	Mode	Frequency (MHz)	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE 1M	2402	-38.44	<=-20	Pass
NVNT	BLE 1M	2440	-38.77	<=-20	Pass
NVNT	BLE 1M	2480	-37.87	<=-20	Pass



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<mark>gilent Spectrum Analyzer - Swe</mark> RL RF 50Ω	pt SA		E:INT	M 2402MH		09:25:59 PM Mar 27, 20
enter Freq 2.40200	0000 GHz	IO: Wide ↔ 1	ſrig: Free Run	ALIGNAUTO Avg Type: L Avg Hold: 10		TRACE 1 2 3 4 1 TYPE MWWW
	IFC	Gain:Low #	Atten: 36 dB			DET P NNNI 1 2.402 048 0 GH
Ref Offset 2.5 dB/div Ref 28.57 d					IVIKI	-1.313 dB
pg						
8.6						
.57						
.43			∮ ¹			
	٨٨	want	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	and work was	mar a	
1.4 h Aproprofile	manne				- ho borna	a particular of the second of
1.4 The second s						"Vh
1.4						يمالوسع
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enter 2.4020000 GHz						Span 1.500 Mł
						Span 1.500 Mi
		#VBW (300 kHz	-1	Swee	p 1.000 ms (1001 pt
G	v Spuriou					p 1.000 ms (1001 pt
re T	•			Kostatus 2402MHz E		p 1.000 ms (1001 pt
rg gilent Spectrum Analyzer - Swe R L RF 50 Ω	pt SA	s NVNT		2402MHz E	Emissic	p 1.000 ms (1001 pt DD 09:26:31 PM Mar 27, 20 TRACE 1 2 3 4
G ilent Spectrum Analyzer - Swe R L RF 50 Ω	pt SA AC 000000 GHz		BLE 1M 2	2402MHz E	Emissic	p 1.000 ms (1001 pt)N
G ilent Spectrum Analyzer - Swo RL RF 50 Ω enter Freq 13.2650 Ref Offset 2.6	pt SA AC 000000 GHz Pi IFC 7 dB		BLE 1M 2	2402MHz E Alignauto Avg Type: L	Emissic	p 1.000 ms (1001 pt 0) 09:26:31 PM Mar 27, 20 TRACE [1 2 3 4 4 TYPE [M war DET P N N N1 Mkr1 2.401 7 GH
rs glent Spectrum Analyzer - Swe RL RF 50 Q enter Freq 13.26500 Ref Offset 2.6 0 dB/div Ref 28.57 c	pt SA AC 000000 GHz Pi IFC 7 dB		BLE 1M 2	2402MHz E Alignauto Avg Type: L	Emissic	p 1.000 ms (1001 pt DD 09:26:31 PM Mar 27, 20 TRACE [1 2 3 4 TYPE M WWWW DET [P N N N
G Jent Spectrum Analyzer - Swe RL RF 50 Ω enter Freq 13.26500 Ref Offset 2.5 0 dB/div Ref 28.57 c	pt SA AC 000000 GHz Pi IFC 7 dB		BLE 1M 2	2402MHz E Alignauto Avg Type: L	Emissic	p 1.000 ms (1001 pt 0) 09:26:31 PM Mar 27, 20 TRACE [1 2 3 4 4 TYPE [M war DET P N N N1 Mkr1 2.401 7 GH
G Jent Spectrum Analyzer - Swe RL RF 50 Q enter Freq 13.26500 AB/div Ref 28.57 c og 0.4B/div Ref 28.57 c	pt SA AC 000000 GHz Pi IFC 7 dB		BLE 1M 2	2402MHz E Alignauto Avg Type: L	Emissic	p 1.000 ms (1001 pt 0) 09:26:31 PM Mar 27, 20 TRACE [1 2 3 4 4 TYPE [M war DET P N N N1 Mkr1 2.401 7 GH
rg glent Spectrum Analyzer - Swe RL RF 50 Ω enter Freq 13.26500 0 dB/div Ref 28.57 c 0 dB/div 1 Ref 0ffset 2.6 0 dB/div 1 1.4 1.4	pt SA AC 000000 GHz Pi IFC 7 dB		BLE 1M 2	2402MHz E Alignauto Avg Type: L	Emissic	p 1.000 ms (1001 pt 0) 09:26:31 PM Mar 27, 20 TRACE 1 2 3 4 TYPE IM WAR DET IP NN NI Mkr1 2.401 7 GH -3.074 dBr
silent Spectrum Analyzer - Swe RL RF 50 Q enter Freq 13.2650 Ref Offset 2.6 0 dB/div Ref 28.57 c 99 1 1.43 1 1.43 1	pt SA AC 000000 GHz Pi IFC 7 dB		BLE 1M 2	2402MHz E Alignauto Avg Type: L	Emissic	p 1.000 ms (1001 pt 09:26:31 PM Mar 27, 20 TRACE [1 2 3 4 4 TYPE [M war 27, 20 TRACE [1 2 3 4 4 TYPE [M war 27, 20 TRACE [1 2 3 4 4 TYPE [M war 27, 20 TRACE [1 2 3 4 4 TYPE [M war 27, 20 TRACE [1 2 3 4 4 TYPE [M war 27, 20 TRACE [1 2 3 4 4 TYPE [M war 27, 20 TRACE [1 2 3 4 4 TYPE [M war 27, 20 TRACE [1 2 3 4 4 TYPE [M war 27, 20 TRACE [1 2 3 4 4 TYPE [M war 27, 20 TYPE [M war 27, 20
rg glent Spectrum Analyzer - Swe RL RF 50 Ω enter Freq 13.26500 0 dB/div Ref 28.57 c 0 dB/div 1 Ref 0ffset 2.6 0 dB/div 1 1.4 1.4	pt SA AC 000000 GHz Pi IFC 7 dB		BLE 1M 2	ALIGNAUTO Avg Type: L Avg Hold: 10	emissic	p 1.000 ms (1001 pt 0) 09:26:31 PM Mar 27, 20 TRACE 1 2 3 4 TYPE IM WAR DET IP NN NI Mkr1 2.401 7 GH -3.074 dBr
Ref Offset 2.6 0 dB/div Ref 28.57 c 0 dB/div Ref 28.57 c 1.43 1.4 1.43 1.4	pt SA AC 000000 GHz Pi IFC 7 dB		BLE 1M 2	ALIGNAUTO Avg Type: L Avg Hold: 10	Emissic	p 1.000 ms (1001 pt 09:26:31 PM Mar 27, 20 TRACE [1 2 3 4 4 TYPE [M war 27, 20 TRACE [1 2 3 4 4 TYPE [M war 27, 20 TRACE [1 2 3 4 4 TYPE [M war 27, 20 TRACE [1 2 3 4 4 TYPE [M war 27, 20 TRACE [1 2 3 4 4 TYPE [M war 27, 20 TRACE [1 2 3 4 4 TYPE [M war 27, 20 TRACE [1 2 3 4 4 TYPE [M war 27, 20 TRACE [1 2 3 4 4 TYPE [M war 27, 20 TRACE [1 2 3 4 4 TYPE [M war 27, 20 TYPE [M war 27, 20
sg T glent Spectrum Analyzer - Swe Ref SG Q RL RF SG Q OdB/div Ref Offset 2.6 Ref 28.57 c OdB/div Ref 28.57 c 14 1.4 14 14 1.4 14 14	pt SA AC 000000 GHz Pi IFC 7 dB		BLE 1M 2	ALIGNAUTO Avg Type: L Avg Hold: 10	emissic	p 1.000 ms (1001 pt 09:26:31 PM Mar 27, 20 TRACE [1 2 3 4 4 TYPE [M war 27, 20 TRACE [1 2 3 4 4 TYPE [M war 27, 20 TRACE [1 2 3 4 4 TYPE [M war 27, 20 TRACE [1 2 3 4 4 TYPE [M war 27, 20 TRACE [1 2 3 4 4 TYPE [M war 27, 20 TRACE [1 2 3 4 4 TYPE [M war 27, 20 TRACE [1 2 3 4 4 TYPE [M war 27, 20 TRACE [1 2 3 4 4 TYPE [M war 27, 20 TRACE [1 2 3 4 4 TYPE [M war 27, 20 TYPE [M war 27, 20
Right Right Signal RL RF Signal RL RF Signal OdB/div Ref Offset 2.5 OdB/div Ref 28.57 Ref 28.57 Ref 28.57 Ref 28.57 Ref 28.57 Ref 28.57 Ref 28.57 Ref 28.57 Ref 28.57 <	pt SA AC 000000 GHz Pi IFC 7 dB	S NVNT	BLE 1M 2	ALIGNAUTO Avg Type: L Avg Hold: 10	eg-Pwr 2/10	p 1.000 ms (1001 pt 09:26:31 PM Mar 27, 20 TRACE [1 2 3 4 TYPE [MWAR 27, 20 TYPE [M
Right Ref Offset 2.5 0 dB/div Ref Offset 2.5 0 0 dB/div Ref 28.57 0 10.4 1.4 1.4 11.4 1.4 1.4 11.4 1.4 1.4 11.4 1.4 1.4 11.4 1.4 1.4 11.4 1.4 1.4 11.4 1.4 1.4 11.4 1.4 1.4 11.4 1.4 1.4 12.4 1.4 1.4 13.4 1.4 1.4 14.4 1.4 1.4 15.4 1.4 1.4 16.6 1.4 1.4	pt SA AC 000000 GHz Pi IFC 7 dB		BLE 1M 2	ALIGNAUTO Avg Type: L Avg Hold: 10	Emissic	p 1.000 ms (1001 pt 09:26:31 PM Mar 27, 20 TRACE [1 2 3 4 4 TYPE [M war 27, 20 TRACE [1 2 3 4 4 TYPE [M war 27, 20 TRACE [1 2 3 4 4 TYPE [M war 27, 20 TRACE [1 2 3 4 4 TYPE [M war 27, 20 TRACE [1 2 3 4 4 TYPE [M war 27, 20 TRACE [1 2 3 4 4 TYPE [M war 27, 20 TRACE [1 2 3 4 4 TYPE [M war 27, 20 TRACE [1 2 3 4 4 TYPE [M war 27, 20 TRACE [1 2 3 4 4 TYPE [M war 27, 20 TRACE [1 2 3 4 4 TYPE [M war 27, 20 TRACE [1 2 3 4 4 TYPE [M war 27, 20 TRACE [1 2 3 4 4 TYPE [M war 27, 20 TRACE [1 2 3 4 4 TYPE [M war 27, 20 TRACE [1 2 3 4 4 TYPE [M war 27, 20 TRACE [1 2 3 4 4 TYPE [M war 27, 20 TRACE [1 2 3 4 4 TYPE [M war 27, 20 TYPE [M war 27, 20 TRACE [1 2 3 4 4 TYPE [M war 27, 20 TRACE [1 2 3 4 4 TYPE [M war 27, 20 TRACE [1 2 3 4 4 TYPE [M war 27, 20 TRACE [1 2 3 4 4 TYPE [M war 27, 20 TRACE [1 2 3 4 4 TYPE [M war 27, 20 TRACE [1 2 3 4 4 TYPE [M war 27, 20 TRACE [1 2 3 4 4 TYPE [M war 27, 20 TRACE [1 2 3 4 4 TYPE [M war 27, 20 TRACE [1 2 3 4 4 TYPE [M war 27, 20 TRACE [1 2 3 4 TRACE [1 2 3 4 4 TYPE [M war 27, 20 TRACE [1 2 3 4 4 TYPE [M w
T. gilent Spectrum Analyzer - Swo RL RL RF 50 Q enter Freq 13.26500 0 dB/div Ref Offset 2.5 0 dB/div Ref 28.57 c 99 1 18.6 1 3.57 1 14.3 1 14.4 1 14.4 1 14.4 1 14.4 1 14.4 1 14.4 1 14.4 1 14.4 1 14.4 1 14.4 1 15.4 1 16.5 1	pt SA AC 000000 GHz Pi IFC 7 dB	S NVNT	BLE 1M 2	ALIGNAUTO AVG TYPE: L Avg Hold: 10	Emissic	p 1.000 ms (1001 pt 09:26:31 PM Mar 27, 20 TRACE [1 2 3 4 TYPE [MWAR 27, 20 TYPE [MWAR 27, 20 TYPE [MWAR 27, 20 TRACE [1 2 3 4 TYPE [MWAR 27, 20 TYPE [MWAR 27, 20 TRACE [1 2 3 4 TYPE [MWAR 27, 20 TYPE [MWAR 27, 20 TYPE [MWAR 27, 20 TYPE [MWAR 27, 20 TYPE [MWAR 27, 20 TRACE [1 2 3 4 TYPE [MWAR 27, 20 TYPE [MWAR 27, 2
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IFGain:Low #Atten: 36 dB DET	
IFGain:Low #Atten: 36 dB DET	4ar 27, 2023
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8.54	
-1.46	
-11.5 MMM	
-21.5 m Mh M	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
-31.5	M
-41.5	
-51.5	
-61.5	
Center 2.4400000 GHz Span 1.5 #Res BW 100 kHz #VBW 300 kHz Sweep 1.000 ms (1	
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X RL RF 50 Ω AC SENSE:INT ALIGNAUTO 09:28:35 PM M Center Freq 13.265000000 GHz Trig: Free Run IFGain:Low Trig: Free Run #Atten: 36 dB Avg Type: Log-Pwr Avg Hold: 10/10 TRACE TYPE Bef Offset 2.54 dB Mkr1 2.440	123456 MWWWW PNNNNN 5 GHz
RL RF 50 Ω AC SENSE:INT ALIGNAUTO 09:28:35 PMI Center Freq 13.265000000 GHz Trig: Free Run IF6ain:Low Trig: Free Run #Atten: 36 dB Avg Type: Log-Pwr Avg Hold: 10/10 Trive Der Ref Offset 2.54 dB 1 Mkr1 2.440 1.85 1 IF and the sense interval	123456 MWWWW PNNNNN 5 GHz
M RF 50 Ω AC SENSE:INT ALIGNAUTO 09:28:35 PMI Center Freq 13.265000000 GHz PN0: Fast IF6ain:Low Trig: Free Run #Atten: 36 dB Avg Type: Log-Pwr Avg Hold: 10/10 Trace Tree Der Ref Offset 2.54 dB 10 dB/div Ref 28.54 dBm 1.897 18.5 Image: Auge and	123456 MMMMM PNNNNN 5 GHz 7 dBm
Mark RF 50 Ω AC SENSE:INT ALIGNAUTO 09:28:35 PMI Center Freq 13.265000000 GHz PN0: Fast → Trig: Free Run #Atten: 36 dB Åvg Type: Log-Pwr Avg Hold: 10/10 Trace Der Ref Offset 2.54 dB Mkr1 2.440 -1.89) 10 dB/div Ref 28.54 dBm -1.89)	123456 MWWWW PNNNNN 5 GHz
M RF ISO 20 AC SENSE:INT ALIGNAUTO 09:28:35 PMI Center Freq 13.265000000 GHz PRO: Fast IFGain:Low → Trig: Free Run #Atten: 36 dB Avg Type: Log-Pwr Avg Hold: 10/10 Trig: Tree Run Avg Hold: 10/10 Ref Offset 2.54 dB Mkr1 2.440 -1.897 Log -1.897 -1.897 18.5 -1.897 -1.897 11.5 -1.46 -1.99 -1.46 -1.99 -1.897 -1.5 -1.45 -1.99	123456 MMMMM 5 GHz 7 dBm
MRL RF 50 Ω AC SENSE:INT ALIGNAUTO 09:28:35 PM Center Freq 13.265000000 GHz PN0: Fast IFGain:Low → Trig: Free Run #Atten: 36 dB Aug Type: Log-Pwr Avg Typ	123456 MMMMM 5 GHz 7 dBm
M RL RF S0 x AC SENSE:INT ALIGNAUTO 09:28:35 PMI Center Freq 13.265000000 GHz Arg Type: Log-Pwr Arg Type: Log-Pwr PN0: Fast → Trig: Free Run Aug Type: Log-Pwr Arg Type: Log-Pwr Ref Offset 2.54 dB Mkr1 2.440 -1.897 10 dB/div Ref 28.54 dBm -1.897 18.5 -1.46 -1.99 14.6 -1.46 -1.99 14.6 -1.46 -1.99 14.6 -1.46 -1.99 15.5 -1.6 -1.99 21.5 -1.6 -1.99 21.5 -1.6 -1.99 21.6 -1.6 -1.99 21.6 -1.6 -1.99 21.6 -1.6 -1.99 21.6 -1.6 -1.99 21.6 -1.6 -1.99 21.6 -1.6 -1.99 21.6 -1.6 -1.99 21.6 -1.6 -1.99 21.6 -1.6 -1.99 21.6 -1.6 -1.99 21.6 -1.6 -1.99 21.6 -1.6 -1.99 21.6 -1.99	12345 6 MWWWWWWWWW PNNNN 5 GHz 7 dBm -2122 dBm -2122 dBm -2122 dBm -2122 dBm
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		rious NVN	T BLE 1	Л 2480MHz	Ref	
A <mark>gilent Spectrum Analyzer -</mark> X/ R L RF 50	Swept SA DΩ AC	SENSE:	INT	ALIGNAUTO		9:29:59 PM Mar 27, 202
Center Freq 2.480	P	NO: Wide 🛶 Tri Gain:Low #A	g: Free Run tten: 36 dB	Avg Type: Lo Avg Hold: 100/	g-Pwr 100	TRACE 1 2 3 4 5 TYPE M WWWW DET P N N N N
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enter 2.4800000 G	Hz	#\/D\M_20	0 KU-			pan 1.500 MH
Res BW 100 kHz		#VBW 30		STATUS	Sweep 1.00	0 ms (1001 pt
Agilent Spectrum Analyzer - R RL RF 50 Center Freq 13.26	ο Ω AC 5000000 GHz	110.1 0.00	g: Free Run	ALIGNAUTO Avg Type: Log Avg Hold: 10/1	g-Pwr	9:30:30 PM Mar 27, 202 TRACE 1 2 3 4 5 TYPE M WWWW DET P N N N N
Ref Offset		Gain:Low #A	tten: 36 dB		Mkr1	2.480 2 GH
0 dB/div Ref 28.4						-4.849 dBr
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51.5	, XI was X					
61.5						
Start 30 MHz Res BW 100 kHz		#VBW 30	0 kHz			Stop 26.50 GH 10 s (30001 pt
1KR MODE TRC SCL	× 2.480 2 GHz	-4.849 dBm	FUNCTION	FUNCTION WIDTH	FUNCTION V	ALUE
2 N 1 f 3 N 1 f	26.273 2 GHz 4.917 2 GHz	-39.927 dBm -50.052 dBm				
4 N 1 f 5 N 1 f 6	7.440 7 GHz 10.099 2 GHz	-47.914 dBm -50.074 dBm				
6 7 8						
9 10						
						>
SG				STATUS		

Tx. Spurious NVNT BLE 1M 2480MHz Ref



APPENDIX 2- EUT TEST PHOTO

Note: See test photos in setup photo document for the actual connections between Product and support equipment.



Shenzhen STS Test Services Co., Ltd.