

RADIO TEST REPORT

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Report No: STS1712353W01

Issued for

Terry Electronics Technology Company Limited

2/F, Building D, Dingfeng Technology Park, Changcheng Road, Shuitian Community, Shiyan, Baoan, Shenzhen, China.

Product Name:	Shoe Beatz		
Brand Name:	N/A		
Model Name:	HTR-B1623-A		
Series Model:	N/A		
FCC ID:	2AOPF-TERRY201801		
Test Standard:	FCC Part 15.247		

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Report No.: STS1712353W01

TEST RESULT CERTIFICATION

Applicant'sname	Terry Electronics Technology Company Limited
Address	2/F, Building D, Dingfeng Technology Park, Changcheng Road, Shuitian Community, Shiyan,Baoan,Shenzhen,China.
Manufacture's Name	Terry Electronics Technology Company Limited
Address	2/F, Building D, Dingfeng Technology Park, Changcheng Road, Shuitian Community, Shiyan,Baoan,Shenzhen,China.
Product description	
Product Name:	Shoe Beatz
Brand Name:	N/A
Model Name:	HTR-B1623-A
Series Model	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 (s) of performance of tests : 28 Dec. 2017~05 Jan. 2018

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Date of Issue: 08 Jan. 2018

Test Result Pass

Testing Engineer

Technical Manager

Sean She

(Sean she) alim. hou



Authorized Signatory :

(Vita Li)

(Hakim.hou)

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Revision History

Rev.	Issue Date	Report NO.	Effect Page	Contents
00	08 Jan. 2018	STS1712353W01	ALL	Initial Issue



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1. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards: DA 00-705

FCC Part 15.247,Subpart C					
Standard Section	Test Item				
15.207	Conducted Emission	N/A			
15.247(a)(1)	Hopping Channel Separation	PASS			
15.247(a)(1)&(b)(1)	Output Power	PASS			
15.247(c)	Radiated Spurious Emission	PASS			
15.247(d)	Conducted Spurious & Band Edge Emission	PASS			
15.247(a)(iii)	Number of Hopping Frequency	PASS			
15.247(a)(iii)	Dwell Time	PASS			
15.247(a)(1)	Bandwidth	PASS			
15.205	Restricted Band Edge Emission	PASS			
Part 15.247(d)/part 15.209(a)	Band Edge Emission	PASS			
15.203					

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. : 1/F., Building B, Zhuoke Science Park, No.190, Chongqing Road, Fuyong Street, Bao'an District, Shenzhen, Guangdong, China CNAS Registration No.: L7649; FCC Registration No.: 625569 IC Registration No.: 12108A; A2LA Certificate No.: 4338.01;

1.2 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** % °

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No.	Item	Uncertainty
1	Conducted Emission (9KHz-150KHz)	±2.88dB
2	Conducted Emission (150KHz-30MHz)	±2.67dB
3	RF power, conducted	±0.71dB
4	Spurious emissions, conducted	±0.63dB
5	All emissions, radiated (9KHz-30MHz)	±3.02dB
6	All emissions, radiated (30MHz-200MHz)	±3.80dB
7	All emissions,radiated (200MHz-1000MHz)	±3.97dB
8	All emissions, radiated (>1G)	±3.03dB

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2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

Product Name	Shoe Beatz
Trade Name	N/A
Model Name	HTR-B1623-A
Series Model	N/A
Model Difference	N/A
Channel List	Please refer to the Note 2.
Bluetooth	Frequency:2402 – 2480 MHz Modulation: GFSK(1Mbps), π/4-DQPSK(2Mbps),
Potton	Rated Voltage: 3.7V
Battery	Capacity: 450mAh
Hardware version number	V1.0
Software version number	V1.0
Connecting I/O Port(s)	Please refer to the User's Manual

Note:

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

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2.

	Channel List						
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)		
00	2402	27	2429	54	2456		
01	2403	28	2430	55	2457		
02	2404	29	2431	56	2458		
03	2405	30	2432	57	2459		
04	2406	31	2433	58	2460		
05	2407	32	2434	59	2461		
06	2408	33	2435	60	2462		
07	2409	34	2436	61	2463		
08	2410	35	2437	62	2464		
09	2411	36	2438	63	2465		
10	2412	37	2439	64	2466		
11	2413	38	2440	65	2467		
12	2414	39	2441	66	2468		
13	2415	40	2442	67	2469		
14	2416	41	2443	68	2470		
15	2417	42	2444	69	2471		
16	2418	43	2445	70	2472		
17	2419	44	2446	71	2473		
18	2420	45	2447	72	2474		
19	2421	46	2448	73	2475		
20	2422	47	2449	74	2476		
21	2423	48	2450	75	2477		
22	2424	49	2451	76	2478		
23	2425	50	2452	77	2479		
24	2426	51	2453	78	2480		
25	2427	52	2454				
26	2428	53	2455				

3. Table for Filed Antenna

Ant	Brand	Model Name	Antenna Type	Connector	Gain (dBi)	NOTE
1	N/A	HTR-B1623-A	PIFA Antenna	N/A	3.3	BT Antenna



2.2 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.

Worst Mode	Description	Data Rate/Modulation	
Mode 1	TX CH00	1Mbps/GFSK	
Mode 2	TX CH39	1Mbps/GFSK	
Mode 3	TX CH78	1Mbps/GFSK	
Mode 4	TX CH00	2 Mbps/π/4-DQPSK	
Mode 5	TX CH39	2 Mbps/π/4-DQPSK	
Mode 6	TX CH78	2 Mbps/π/4-DQPSK	

Note:

(1) The measurements are performed at all Bit Rate of Transmitter, the worst data was reported

(2) We have be tested for all avaiable 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,50/60Hz is shown in the report

2.3 TABLE OF PARAMETERS OF TEXT SOFTWARE SETTING

During testing channel & power controlling software provided by the customer was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product power parameters of FHSS.

Test software Version	Test program: Bluetooth			
Frequency	2402 MHz 2441 MHz 2480 MH			
(Power control software) Parameters(1/2Mbps)	Power class: 1 M rate:4:27 2 M rate:11:183	Power class: 1 M rate:4:27 2 M rate:11:183	Power class: 1 M rate:4:27 2 M rate:11:183	

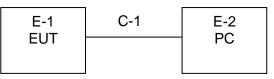


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2.4 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

During testing channel & power controlling software provided by the customer was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product power parameters of FHSS

Radiated Spurious EmissionTest



2.5 DESCRIPTION OF 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.

Item	Equipment	Mfr/Brand	Model/Type No.	Serial No.	Note
E-2	PC	HP	N/A	N/A	N/A

Item	Shielded Type	Ferrite Core	Length	Note
C-1	USB Cable shielded line	NO	100cm	N/A

Note:

- (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".



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2.6 EQUIPMENTS LIST FOR ALL TEST ITEMS

Radiation Test equipment

Radiation rest equipm	CIII				
Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
EMI Test Receiver	R&S	ESW	101535	2017.06.01	2018.05.31
Bilog Antenna	TESEQ	CBL6111D	34678	2017.03.24	2018.03.23
Horn Antenna	Schwarzbeck	BBHA 9120D	9120D-1343	2017.03.06	2018.03.05
SHF-EHF Horn Antenna (15G-40GHz)	BBHA 9170	SCHWARZBECK	BBHA9170367	2017.05.02	2018.05.01
Temperature & Humitidy	HH660	Mieo	N/A	2017.10.15	2018.10.14
Temperature & Humitidy	HH660	Mieo	N/A	2017.10.15	2018.10.14
Pre-mplifier (0.1M-3GHz)	EM	EM330	60538	2017.03.12	2018.03.11
PreAmplifier (1G-26.5GHz)	Agilent	8449B	60538	2017.10.15	2018.10.14
Pre-mplifier (18G-40G)	MINI-CIRCUITS	AP-040G	1382501	2017.05.15	2018.05.14
Operational Manual Passive Loop (9K30MHz)	ETS	6512	00165355	2017.03.06	2018.03.05
Low frequency cable	EM	R01	N/A	2017.03.12	2018.03.11
Low frequency cable	EM	R06	N/A	2017.03.12	2018.03.11
High frequency cable	SCHWARZBECK	R04	N/A	2017.03.12	2018.03.11
High frequency cable	SCHWARZBECK	R02	N/A	2017.03/12	2018.03.11
Semi-anechoic chamber	Changling	966	N/A	2017.10.15	2018.10.14
trun table	EM	SC100_1	60531	N/A	N/A
Antnna mast	EM	SC100	N/A	N/A	N/A
Max-full Antenna Corp	MF	MFA-440H	N/A	N/A	N/A

RF Connected Test

Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
USB RF power sensor	DARE	RPR3006W	15100041SNO03	2017.10.15	2018.10.14
Power Meter	R&S	NRP	100510	2017.10.15	2018.10.14
Spectrum Analyzer	Agilent	E4407B	MY50140340	2017.03.11	2018.03.10
Signal Analyzer	Agilent	N9020A	MY49100060	2017.03.11	2018.03.10

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3. EMC EMISSION TEST

3.1 CONDUCTED EMISSION MEASUREMENT

3.1.1 POWER LINE CONDUCTED EMISSION LIMITS

Operating frequency band. In case the emission fall within the restricted band specified on Part 207(a) limit in the table below has to be followed.

	Conducted Emissionlimit (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

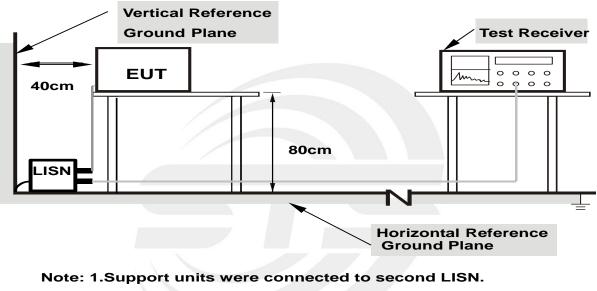
Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz





3.1.2 TEST PROCEDURE

- a. The EUT was 0.8 meters from the horizontal ground plane and 0.4 meters from the vertical ground plane with EUT being connected 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.
- 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 at least 80 cm from nearest part of EUT chassis.
- e. For the actual test configuration, please refer to the related Item -EUT Test Photos.



3.1.3 TEST SETUP

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

3.1.4 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.



3.1.5 TEST RESULT

Temperature:	26 ℃	Relative Humidity:	54%
Test Voltage:	AC 120V/60Hz	Phase:	L/N
Test Mode: N/A			

Note: The EUT is power by battery only, the test is not applicable.



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3.2 RADIATED EMISSION MEASUREMENT

3.2.1 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 (0.009MHz - 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 (1GHz-25 GHz)

	(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).

For Radiated Emission

Spectrum Parameter	Setting	
Attenuation	Auto	
Detector	Peak	
Start Frequency	1000 MHz(Peak/AV)	
Stop Frequency	10th carrier hamonic(Peak/AV)	
RB / VB (emission in restricted		
band)	PK=1MHz / 1MHz, AV=1 MHz /10 Hz	

For Band edge

Spectrum Parameter	Setting
Detector	Peak
01 1/01 5	Lower Band Edge: 2300 to 2403 MHz
Start/Stop Frequency	Upper Band Edge: 2479 to 2500 MHz
RB / VB (emission in restricted band)	PK=1MHz / 1MHz, AV=1 MHz / 10 Hz

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Receiver Parameter	Setting
Attenuation	Auto
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

3.2.2 TEST PROCEDURE

- a. The measuring distance of 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 meters(above 1GHz is 1.5 m) above the ground at a 3 meter anechoic chamber test site. The table was rotated 360 degrees 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 polarizations 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 then QuasiPeak detector mode re-measured.
- e. 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.
- 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

3.2.3 DEVIATION FROM TEST STANDARD

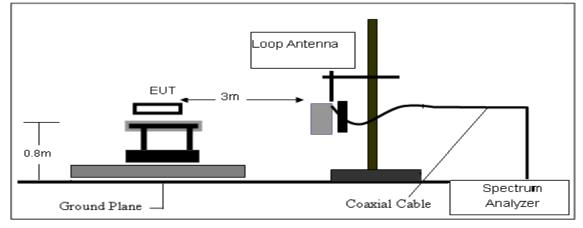
No deviation



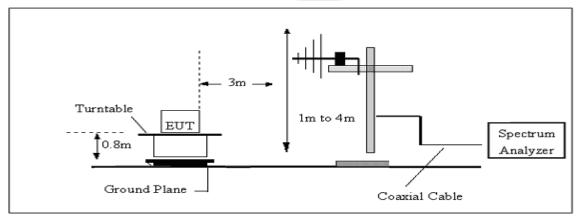


3.2.4 TESTSETUP

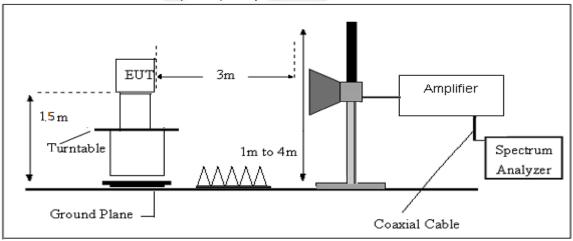
(A) Radiated Emission Test-Up Frequency Below 30MHz



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



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



3.2.5 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

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3.2.6 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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3.2.7 TEST RESULTS

(9KHz-30MHz)

Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	1010hPa	Test Mode:	TX Mode
Test Voltage:	DC 3.7V from battery		

Freq.	Reading	Limit	Margin	State	Test Result	
(MHz)	Hz) (dBuV/m) ((dB)	P/F	Test Result	
					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.





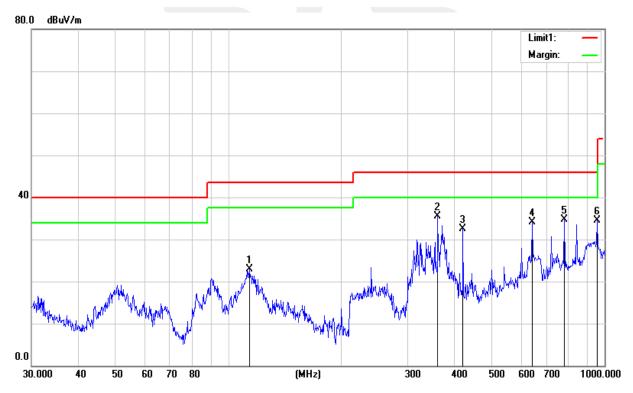
(30MHz-1000MHz)

Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	1010hPa	Phase:	Horizontal
Test Voltage:	DC 3.7V from battery		Mode 1/2/3/4/5/6 (Mode 1-1M worst mode)

Frequency	Reading	Correct	Result	Limit	Margin	Remark
(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
113.7142	41.07	-18.11	22.96	43.50	-20.54	QP
360.4476	48.61	-13.12	35.49	46.00	-10.51	QP
420.5803	43.44	-10.90	32.54	46.00	-13.46	QP
642.8613	40.44	-6.34	34.10	46.00	-11.90	QP
782.3451	37.95	-3.15	34.80	46.00	-11.20	QP
955.4380	34.68	-0.26	34.42	46.00	-11.58	QP

Remark:

1. Margin = Result (Result = Reading + Factor)–Limit



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Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	1010hPa	Phase:	Vertical
Test Voltage:	DC 3.7V from battery		Mode 1/2/3/4/5/6 (Mode 1-1M worst mode)

Frequency	Reading	Correct	Result	Limit	Margin	Remark
(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
119.8555	39.45	-17.70	21.75	43.50	-21.75	QP
239.9873	47.17	-17.76	29.41	46.00	-16.59	QP
366.8231	54.74	-12.96	41.78	46.00	-4.22	QP
420.5803	47.49	-10.90	36.59	46.00	-9.41	QP
601.4265	44.99	-7.12	37.87	46.00	-8.13	QP
782.3451	39.64	-3.15	36.49	46.00	-9.51	QP

Remark:

1. Margin = Result (Result = Reading + Factor)-Limit



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(1GHz~25GHz) Restricted band and Spurious emission Requirements

GFSK Low Channel

				Antenna	Corrected	Emission				
Frequency	Reading	Amplifier	Loss	Factor	Factor	Level	Limits	Margin	Detector	Comment
(MHz)	(dBµV)	(dB)	(dB)	(dB/m)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Туре	
				Low	Channel (2402 M	//Hz)				
3264.81	47.89	44.70	6.70	28.20	-9.80	38.09	74.00	-35.91	PK	Vertical
3264.81	37.85	44.70	6.70	28.20	-9.80	28.05	54.00	-25.95	AV	Vertical
3264.57	47.89	44.70	6.70	28.20	-9.80	38.09	74.00	-35.91	PK	Horizontal
3264.57	38.52	44.70	6.70	28.20	-9.80	28.72	54.00	-25.28	AV	Horizontal
4804.48	59.38	44.20	9.04	31.60	-3.56	55.82	74.00	-18.18	PK	Vertical
4804.48	38.46	44.20	9.04	31.60	-3.56	34.90	54.00	-19.10	AV	Vertical
4804.40	58.36	44.20	9.04	31.60	-3.56	54.80	74.00	-19.20	PK	Horizontal
4804.40	38.99	44.20	9.04	31.60	-3.56	35.43	54.00	-18.57	AV	Horizontal
5359.71	45.49	44.20	9.86	32.00	-2.34	43.15	74.00	-30.85	PK	Vertical
5359.71	38.35	44.20	9.86	32.00	-2.34	36.01	54.00	-17.99	AV	Vertical
5359.62	45.41	44.20	9.86	32.00	-2.34	43.07	74.00	-30.93	PK	Horizontal
5359.62	37.07	44.20	9.86	32.00	-2.34	34.73	54.00	-19.27	AV	Horizontal
7205.78	51.83	43.50	11.40	35.50	3.40	55.23	74.00	-18.77	PK	Vertical
7205.78	32.61	43.50	11.40	35.50	3.40	36.01	54.00	-17.99	AV	Vertical
7205.89	50.95	43.50	11.40	35.50	3.40	54.35	74.00	-19.65	PK	Horizontal
7205.89	33.61	43.50	11.40	35.50	3.40	37.01	54.00	-16.99	AV	Horizontal

Shenzhen STS Test Services Co., Ltd.



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Report No.: STS1712353W01

GFSK Mid Channel

				Antenna	Corrected	Emission				
Frequency	Reading	Amplifier	Loss	Factor	Factor	Level	Limits	Margin	Detector	
(MHz)	(dBµV)	(dB)	(dB)	(dB/m)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Туре	Comment
				Mid	Channel (2441 N	ЛНz)				
3264.85	48.13	44.70	6.70	28.20	-9.80	38.33	74.00	-35.67	PK	Vertical
3264.85	38.88	44.70	6.70	28.20	-9.80	29.08	54.00	-24.92	AV	Vertical
3264.74	48.54	44.70	6.70	28.20	-9.80	38.74	74.00	-35.26	PK	Horizontal
3264.74	39.26	44.70	6.70	28.20	-9.80	29.46	54.00	-24.54	AV	Horizontal
4882.40	59.12	44.20	9.04	31.60	-3.56	55.56	74.00	-18.44	PK	Vertical
4882.40	39.12	44.20	9.04	31.60	-3.56	35.56	54.00	-18.44	AV	Vertical
4882.56	59.59	44.20	9.04	31.60	-3.56	56.03	74.00	-17.97	PK	Horizontal
4882.56	38.58	44.20	9.04	31.60	-3.56	35.02	54.00	-18.98	AV	Horizontal
5359.67	45.96	44.20	9.86	32.00	-2.34	43.62	74.00	-30.38	PK	Vertical
5359.67	38.23	44.20	9.86	32.00	-2.34	35.89	54.00	-18.11	AV	Vertical
5359.65	45.10	44.20	9.86	32.00	-2.34	42.76	74.00	-31.24	PK	Horizontal
5359.65	37.58	44.20	9.86	32.00	-2.34	35.24	54.00	-18.76	AV	Horizontal
7313.78	50.55	43.50	11.40	35.50	3.40	53.95	74.00	-20.05	PK	Vertical
7313.78	33.51	43.50	11.40	35.50	3.40	36.91	54.00	-17.09	AV	Vertical
7313.87	51.89	43.50	11.40	35.50	3.40	55.29	74.00	-18.71	PK	Horizontal
7313.87	33.35	43.50	11.40	35.50	3.40	36.75	54.00	-17.25	AV	Horizontal

Shenzhen STS Test Services Co., Ltd.



GFSK High Channel

				Antenna	Corrected	Emission				
Frequency	Reading	Amplifier	Loss	Factor	Factor	Level	Limits	Margin	Detector	
(MHz)	(dBµV)	(dB)	(dB)	(dB/m)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Туре	Comment
				High	Channel (2480	MHz)				
3264.74	47.95	44.70	6.70	28.20	-9.80	38.15	74.00	-35.85	PK	Vertical
3264.74	38.39	44.70	6.70	28.20	-9.80	28.59	54.00	-25.41	AV	Vertical
3264.59	48.02	44.70	6.70	28.20	-9.80	38.22	74.00	-35.78	PK	Horizontal
3264.59	38.32	44.70	6.70	28.20	-9.80	28.52	54.00	-25.48	AV	Horizontal
4960.37	58.20	44.20	9.04	31.60	-3.56	54.64	74.00	-19.36	PK	Vertical
4960.37	39.33	44.20	9.04	31.60	-3.56	35.77	54.00	-18.23	AV	Vertical
4960.33	58.49	44.20	9.04	31.60	-3.56	54.93	74.00	-19.07	PK	Horizontal
4960.33	38.68	44.20	9.04	31.60	-3.56	35.12	54.00	-18.88	AV	Horizontal
5359.65	46.16	44.20	9.86	32.00	-2.34	43.82	74.00	-30.18	PK	Vertical
5359.65	37.92	44.20	9.86	32.00	-2.34	35.58	54.00	-18.42	AV	Vertical
5359.79	45.92	44.20	9.86	32.00	-2.34	43.58	74.00	-30.42	PK	Horizontal
5359.79	38.15	44.20	9.86	32.00	-2.34	35.81	54.00	-18.19	AV	Horizontal
7439.71	51.07	43.50	11.40	35.50	3.40	54.47	74.00	-19.53	PK	Vertical
7439.71	33.56	43.50	11.40	35.50	3.40	36.96	54.00	-17.04	AV	Vertical
7439.94	51.78	43.50	11.40	35.50	3.40	55.18	74.00	-18.82	PK	Horizontal
7439.94	32.77	43.50	11.40	35.50	3.40	36.17	54.00	-17.83	AV	Horizontal

Note:

3)

- 1) Scan with GFSK, π /4-DQPSK, the worst case is GFSK Mode
- 2) Factor = Antenna Factor + Cable Loss Pre-amplifier.

Emission Level = Reading + Factor

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.

Shenzhen STS Test Services Co., Ltd.



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Band edge Requirements

				Antenna	Corrected	Emission				
Frequency	Reading	Amplifier	Loss	Factor	Factor	Level	Limits	Margin	Detector	
(MHz)	(dBµV)	(dB)	(dB)	(dB/m)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Туре	Comment
					GFSK					
2390.00	68.56	43.80	4.91	25.90	-12.99	55.57	74.00	-18.43	PK	Vertical
2390.00	54.08	43.80	4.91	25.90	-12.99	41.09	54.00	-12.91	AV	Vertical
2390.00	68.52	43.80	4.91	25.90	-12.99	55.53	74.00	-18.47	PK	Horizontal
2390.00	53.33	43.80	4.91	25.90	-12.99	40.34	54.00	-13.66	AV	Horizontal
2483.50	69.43	43.80	5.12	25.90	-12.78	56.65	74.00	-17.35	PK	Vertical
2483.50	53.34	43.80	5.12	25.90	-12.78	40.56	54.00	-13.44	AV	Vertical
2483.50	69.67	43.80	5.12	25.90	-12.78	56.89	74.00	-17.11	PK	Horizontal
2483.50	52.43	43.80	5.12	25.90	-12.78	39.65	54.00	-14.35	AV	Horizontal
					π/4-DQPSK					
2390.00	68.57	43.80	4.91	25.90	-12.99	55.58	74.00	-18.42	PK	Vertical
2390.00	53.52	43.80	4.91 🗸	25.90	-12.99	40.53	54.00	-13.47	AV	Vertical
2390.00	68.95	43.80	4.91	25.90	-12.99	55.96	74.00	-18.04	PK	Horizontal
2390.00	52.63	43.80	4.91	25.90	-12.99	39.64	54.00	-14.36	AV	Horizontal
2483.50	69.19	43.80	5.12	25.90	-12.78	56.41	74.00	-17.59	PK	Vertical
2483.50	52.62	43.80	5.12	25.90	-12.78	39.84	54.00	-14.16	AV	Vertical
2483.50	70.12	43.80	5.12	25.90	-12.78	57.34	74.00	-16.66	PK	Horizontal
2483.50	53.23	43.80	5.12	25.90	-12.78	40.45	54.00	-13.55	AV	Horizontal
Low me	asurement f	frequencies	is range fr	om 2300 to 240	3 MHz, high me	easurement fre	quencies is ra	ange from	2479 to 250	00 MHz.

Only showthe worst point data of the emissions in the frequency 2300-2403 MHz and 2479-2500 MHz.

Shenzhen STS Test Services Co., Ltd.



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Hopping Band edge

				Antenna	Corrected	Emission				
Frequency	Reading	Amplifier	Loss	Factor	Factor	Level	Limits	Margin	Detector	
(MHz)	(dBµV)	(dB)	(dB)	(dB/m)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Туре	Comment
					GFSK					
2390.00	67.43	43.80	4.91	25.90	-12.99	54.44	74.00	-19.56	PK	Vertical
2390.00	54.13	43.80	4.91	25.90	-12.99	41.14	54.00	-12.86	AV	Vertical
2390.00	68.80	43.80	4.91	25.90	-12.99	55.81	74.00	-18.19	PK	Horizontal
2390.00	53.31	43.80	4.91	25.90	-12.99	40.32	54.00	-13.68	AV	Horizontal
2483.50	69.16	43.80	5.12	25.90	-12.78	56.38	74.00	-17.62	PK	Vertical
2483.50	53.48	43.80	5.12	25.90	-12.78	40.70	54.00	-13.30	AV	Vertical
2483.50	70.30	43.80	5.12	25.90	-12.78	57.52	74.00	-16.48	PK	Horizontal
2483.50	52.44	43.80	5.12	25.90	-12.78	39.66	54.00	-14.34	AV	Horizontal
					π/4-DQPSK					
2390.00	68.42	43.80	4.91	25.90	-12.99	55.43	74.00	-18.57	PK	Vertical
2390.00	53.99	43.80	4.91	25.90	-12.99	41.00	54.00	-13.00	AV	Vertical
2390.00	68.91	43.80	4.91	25.90	-12.99	55.92	74.00	-18.08	PK	Horizontal
2390.00	52.79	43.80	4.91	25.90	-12.99	39.80	54.00	-14.20	AV	Horizontal
2483.50	70.45	43.80	5.12	25.90	-12.78	57.67	74.00	-16.33	PK	Vertical
2483.50	52.64	43.80	5.12	25.90	-12.78	39.86	54.00	-14.14	AV	Vertical
2483.50	70.42	43.80	5.12	25.90	-12.78	57.64	74.00	-16.36	PK	Horizontal
2483.50	53.17	43.80	5.12	25.90	-12.78	40.39	54.00	-13.61	AV	Horizontal
Low me	asurement	frequencies	is range fr	om 2300 to 240	03 MHz,high me	asurement free	quencies is ra	ange from	2479 to 250	0 MHz.

Only showthe worst point data of the emissions in the frequency 2300-2403 MHz and 2479-2500 MHz.

Shenzhen STS Test Services Co., Ltd.



4. CONDUCTED SPURIOUS & BAND EDGE EMISSION

4.1 REQUIREMENT

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.

4.2 TEST PROCEDURE

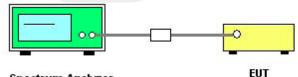
Spectrum Parameter	Setting
Detector	Peak
Start/Stop Frequency	30 MHz to 10th carrier harmonic
RB / VB (emission in restricted band)	100 KHz/300 KHz
Trace-Mode:	Max hold

For Band edge

Spectrum Parameter	Setting
Detector	Peak
Stort/Stop Eroguopou	Lower Band Edge: 2300– 2403 MHz
Start/Stop Frequency	Upper Band Edge: 2479 – 2500 MHz
RB / VB (emission in restricted band)	100 KHz/300 KHz
Trace-Mode:	Max hold

Remark : Hopping on and Hopping off mode all have been tested, only worst case hopping off is reported.

4.3 TEST SETUP



Spectrum Analyzer

The EUT is coupled to the Spectrum Analyzer; the RF load attached to the EUT antenna terminal is 500hm; 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.

4.4 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.3 Unless otherwise a special operating condition is specified in the follows during the testing.



4.5 TEST RESULTS

Temperature:	25 ℃	Relative Humidity:	50%
Pressure:	1012 hPa	Test Voltage:	DC 3.7V
Test Mode:	GFSK(1Mbps)-00/39/78 CH		

00 CH

	rum Analyzer - S						
RL Center F		5000000 GHz	SENSE:INT		ALIGNAUTO Avg Type:	Log-Pwr	11:10:12 AM Jan 05, 20 TRACE 1 2 3 4 5
		PN	0: Fast 😱 Trig: Fro ain:Low #Atten: 3				DET P P P I
) dB/div	Ref Offset					MI	r1 2.402 2 GH -8.868 dB
.87	0 1						
B.9							
3.9							-28.87 0
.9							4
3.9	\sim					المريادين فالمسالحة فالمريب المريب	John war
3.9 3.9							
.9							
3.9							
art 30 N	ИНZ						Stop 25.00 GI
Res BW	100 kHz		#VBW 300 ki	lz		Sweep	2.39 s (40001 p
R MODE TR		× 2.402 2 GHz	-8.868 dBm	JNCTION	FUNCTION WIDTH	FUNCT	ON VALUE
2 N 1 3 N 1	f	2.643 1 GHz 5.245 0 GHz	-55.738 dBm -54.313 dBm				
4 N 1		21.032 9 GHz	-48.279 dBm				
5							
7 B							
9 0							
1 2							
G					STATUS		

39 CH

		RF	50 Ω	AC	SE	INSE:INT	A	LIGNAUTO		11:25:0)7 AM Jan 05, 21
ent	er Fı	req 1	2.51500		NO: Fast 🖵 Gain:Low	Trig: Free #Atten: 30	Run dB	Avg Type:	Log-Pwr	Т	TYPE MWWW DET P P P P
0 dB	/div)ffset 0.5 c 2.20 dBr							Mkr1 2.4 -7.	40 9 GH 797 dB
°g 7.80		- 0	1								
7.8											
7.8											-27.80
7.8											
7.8				- () ³							
8	أحربان والن	and the second	V.	, I a hid to a short	THE REPORT						
.8 F											
.8											
7.8											
	30 N BW	/IHz 100 k	Hz		#VBV	/ 300 kHz			Sw	Stop veep 2.39 s	
les		100 k	Hz	×	Y	FUN		TION WIDTH			
Res 1 2 3 4	BW	100 k f f f	Hz	× 2.440 9 GHz 3.183 7 GHz 4.882 3 GHz 24.679 1 GHz		FUN Bm Bm Bm		TION WIDTH		reep 2.39 s	
2 8 2 8 3 1 5 5 7 8	BW N 1 N 1 N 1	100 k f f f	Hz	2.440 9 GHz 3.183 7 GHz 4.882 3 GHz	-7.797 d -55.288 d -53.043 d	FUN Bm Bm Bm		TION WIDTH		reep 2.39 s	
Res III	BW N 1 N 1 N 1	100 k f f f	Hz	2.440 9 GHz 3.183 7 GHz 4.882 3 GHz	-7.797 d -55.288 d -53.043 d	FUN Bm Bm Bm		TION WIDTH		reep 2.39 s	25.00 G (40001 p



78 CH

RL	ectrur	n Ana RF	lyzer - Swept S								
enter	· Fre		50 Ω AC 2.515000	000 GHz	PNO: Fast	Trig: Fre		ALIGNAUTO Avg Type:	Log-Pwr	11:2	7:24 AM Jan 05, 2 TRACE 1 2 3 4 TYPE M WANN
				IF	Gain:Low	#Atten: 3	0 dB				DETPPP
dB/di			Offset 0.5 dB -0.32 dBm								480 2 GH 0.324 dB
^g		(1								
1.3											
1.3											
											-41 91/
13			2		<mark>3</mark>						(
13	dunter	والقال		مروافل ويعاقبهم والعار	Y	المعربة المحرور وال		and the second second	A standard	Street and	
1.3		and the second sec	and the second								
0.3											
0.3											
art 3 Res B			Hz		#VB	W 300 kH	z		S	Sto weep 2.39	p 25.00 G s (40001 p
R MODE	E TRC	SCL		×	Ŷ		INCTION F	UNCTION WIDTH		FUNCTION VALUE	
1 N 2 N	1	f f		2.480 2 GHz 2.513 9 GHz	-10.324 -55.157						
	1	f		8.014 2 GHz	-55.586	dBm					
3 N	1	f		24.424 4 GHz	-48.331	авт					
3 N 4 N											
8 N 4 N 5											
3 N 4 N 5 7 8											
3 N 4 N 5 7 3 9 0											
3 N 4 N 5 7 3 9											
3 N 4 N 5 7 3 9 0								STATUS			



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Shenzhen STS Test Services Co., Ltd.

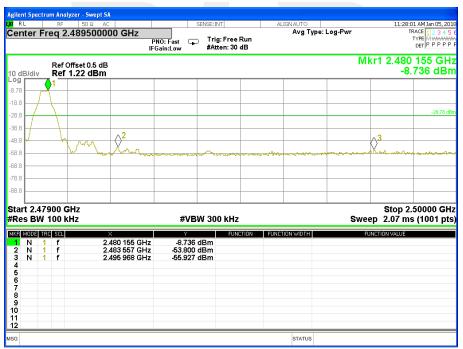


For Band edge

00 CH

	rum Analyzer						
enter F			PNO: East	E:INT Frig: Free Run #Atten: 30 dB	ALIGNAUTO Avg Type:	Log-Pwr	11:23:16 AM Jan 05, 2 TRACE 1 2 3 4 TYPE M WAAA DET P P P P
) dB/div	Ref Offse Ref 4.0					Μ	kr1 2.401 970 GI -5.964 dB
96							
5.0 5.0							-25.96
i.0		An and the second data is down	manuted in a	and a second second second	mon and and and and and and and and and an	hardnowning	montal and a find
.0		- mill i sentre catendrication					
6.0							
	0000 GHz 100 kHz	1	#VBW :	300 kHz	1	Swe	Stop 2.40300 G ep 9.87 ms (1001 p
R MODE T	RC SCL	×	Y	FUNCTION	FUNCTION WIDTH		FUNCTION VALUE
N 1 N 1 N 1	f	2.401 970 GHz 2.390 022 GHz 2.399 910 GHz	-58.230 dBr	n			
•							
4 5 7 8 9							
					STATUS		

78 CH



=





For Hopping Band edge

00 CH

	um Analyzer - S								
enter Fi	⊮ 50 req 2.351	500000 GHz	PNO: Fast G FGain:Low	SENSE:INT Trig: Free #Atten: 30	Run	LIGN AUTO Avg Type:	-	TI	7 AM Jan 05, 201 RACE 1 2 3 4 5 TYPE M WWWW DET P P P P P
10 dB/div	Ref Offset (Ref 4.06						М	kr1 2.402 -5.	897 GH 945 dBn
.0g 5.94									
15.9 25.9									-25.95 d
15.9									0
45.9							an 1, dala likia musika	h kuntuutikinikin	ANNAN AN
5.9 65.9	yr	all the man to have	moneth	JANARAAAA	ให้เกิดในประ	ovvolunikimi	Ardinellal research	dadrarår fra filt fra stori	
75.9									
85.9									
	000 GHz 100 kHz		#VB	W 300 kHz			Swe	Stop 2. ep 9.87 ms	40300 GH s (1001 pt
	IC SCL	X	Y FOLD		TION FUNC	CTION WIDTH	F	UNCTION VALUE	
1 N 1 2 N 1 3 N 1 4 5 6 7 8		2.402 897 GHz 2.390 022 GHz 2.399 910 GHz	-53.183	dBm					
8 9 10 11 12									
5G						STATUS			

78 CH

PN0: Fast IFGain:Low Trig: Free Run #Atten: 30 dB 0 dB/div 87	RL	RF	50 Ω AC			SENSE:INT		ALIGN AUTO		11:34	k:51 AM Jan 05, 2
ABINITY Ref 1.31 dBm -8.687 d ABINITY Ref 1.31 dBm -8.687 d ABINITY ABINITY -8.687 dB ABINITY -8.687 dB -9.687 dB ABINITY -8.687 dB -9.687 dB ABINITY -9.687 dB -9.687 dB ABINITY	enter F	req 2	48950000	I				Avg Typ	e: Log-Pwr		TRACE 1 2 3 4 TYPE MWWW DET P P P P
66 67 68 <) dB/div								N		
37		<u> </u>									
7 7 3 7 2 3 7 3 3 7 3 3 7 3 3 7 3 3 7 3 3 7 3 3 7 3 3 7 3 3 7 3 3 7 3 3 7 3 3 7 3 3 7 3 3 7 3 3 7 3 3 7 3 3 7 3 3 1 5 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	7										
7 3 8 100 Hz	.7 V										-28.69
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Model Hall X Y Function with the state of the st	7	$-\mathbf{h}$	4.00	() ²				$\langle \rangle^3$			
Y Y Stop 2.50000 Sweep Stop 2.50000 Sweep Stop 2.00 ms (1001 arrt 2.47900 GHz es BW 100 kHz #VBW 300 kHz Stop 2.07 ms (1001 Image: SLI X Y FUNCTION N 1 f 2.479 168 GHz -8.687 dBm N 1 f 2.491 463 GHz -52.308 dBm N 1 f 2.491 463 GHz -52.308 dBm	7		www.ww	min	And	Marchan	montan	Ann	Amana	Lawar	mon
Viscous Viscous Viscous Viscous Stop 2.50000 es BW 100 kHz #VBW 300 kHz Sweep 2.07 ms (1001 Image: Stop 2.50000 Sweep 2.07 ms (1001	7										
Million Stop	7										
es BW 100 kHz #VBW 300 kHz Sweep 2.07 ms (1001 MODE TRC SCL X Y FUNCTION MOTH FUNCTION VALUE N 1 f 2.479 168 GHz -8.687 dBm N 1 f 2.484 460 GHz 552.308 dBm N 1 f 2.491 453 GHz -552.308 dBm	7										
Ees BW 100 kHz #VBW 300 kHz Sweep 2.07 ms (1001 N 1 f 2.479 168 GHz -8.687 dBm FUNCTION MIDTH FUNCTION VALUE N 1 f 2.484 460 GHz -8.687 dBm FUNCTION VALUE FUNCTION VALUE N 1 f 2.491 463 GHz -52.308 dBm FUNCTION VALUE FUNCTION VALUE	art 2 / 7	000 0	:H7							Stop '	2 50000 C
N 1 f 2.479 168 GHz -8.687 dBm N 1 f 2.484 460 GHz -52.687 dBm N 1 f 2.491 453 GHz -52.308 dBm					#VB	W 300 kHz	:		Sw		
N 1 f 2.484 460 GHz -52.687 dBm N 1 f 2.491 453 GHz -52.308 dBm							CTION FUI	NCTION WIDTH		FUNCTION VALUE	
	N 1										
	N 1										



Temperature:	25 ℃	Relative Humidity:	50%
Pressure:	1012 hPa	Test Voltage:	DC 3.7V
Test Mode:	π/4-DQPSK(2Mbps) –00/39/78	СН	

	RF	50 Q AC	C	SEN	SE:INT	ALIGN	IAUTO		11:36:	45 AM Jan 05, 20
enter	Freq 12	2.515000	F		Trig: Free Rur #Atten: 30 dB	1	Avg Type: I	Log-Pwr		TYPE M WAAWA DET P P P P
0 dB/div		offset 0.5 dB -0.81 dBm							Mkr1 2.4 -10	102 2 GH .811 dBr
og 10.8		1								
0.8										
0.8										-30.81 d
0.8				3					Q ⁴	
0.8	and and and and	V	and a strength of the strength of		and the second second			Second Second		
0.8		a second and the								
0.8										
0.8										
tart 30		47		#\/R\M	300 kHz			Su		
Res BV	N 100 k		×	#VBW	300 kHz	N FUNCTION	V WIDTH I		/eep 2.39 s	
Res BV 18 MODE 1 N 2 N 3 N	N 100 k 1 f 1 f 1 f 1 f		2.402 2 GHz 3.346 6 GHz 7.417 4 GHz	-10.811 dB -55.070 dB -56.235 dB	FUNCTION m m m	N FUNCTION	I WIDTH			
Res BV 1 N 2 N 3 N 4 N 5	N 100 k 1 f 1 f		2.402 2 GHz 3.346 6 GHz	-10.811 dB -55.070 dB	FUNCTION m m m	N FUNCTION	I WIDTH		/eep 2.39 s	
Res BV 1 N 2 N 3 N 4 N 5 6 7	N 100 k 1 f 1 f 1 f 1 f		2.402 2 GHz 3.346 6 GHz 7.417 4 GHz	-10.811 dB -55.070 dB -56.235 dB	FUNCTION m m m	N FUNCTION	NWIDTH		/eep 2.39 s	
Res BV 18 MODE 1 N 2 N 3 N	N 100 k 1 f 1 f 1 f 1 f		2.402 2 GHz 3.346 6 GHz 7.417 4 GHz	-10.811 dB -55.070 dB -56.235 dB	FUNCTION m m m	N FUNCTION	I WIDTH		/eep 2.39 s	
Res BV 1 N 2 N 3 N 4 N 5 6 7 8 9	N 100 k 1 f 1 f 1 f 1 f		2.402 2 GHz 3.346 6 GHz 7.417 4 GHz	-10.811 dB -55.070 dB -56.235 dB	FUNCTION m m m		N WIDTH		/eep 2.39 s	o 25.00 GH (40001 pt

00 CH

39 CH	

		Analyzer - RF 50		051105					0.00.4113
enter					rig: Free Run Atten: 30 dB	ALIGN AUT	⊖ g Type: Log-Pwi		0:28 AM Jan 05, 2 TRACE 1 2 3 4 TYPE M MAAAA DET P P P P
0 dB/div		ef Offset ef_3.48							440 9 GI 6.516 dB
.52		0 1							
5.5									
6.5									-26.52
1.5		A2							
.5		P	Q*	and a standard of the standard	-		aller	the second second	and so the second
.5									
6.5									
i.5 —									
art 30 Res Bl				#VBW 3	00 kHz		· ·	Sto Sweep 2.39	op 25.00 G s (40001 p
R MODE		CL f	× 2.440 9 GHz	-6.516 dBm	FUNCTION	FUNCTION WID	TH	FUNCTION VALUE	
2 N 3 N	1	f f	2.641 9 GHz 6.437 3 GHz	-54.470 dBm	1				
L N		f	24.993 1 GHz						
5 5 7									
3									
j I									
2									
						STA	TUS		



78 CH

		zer - Swept SA								
Center F	req 12	50 Ω AC 2.5150000	F	PNO: Fast G	SENSE:INT Trig: Free #Atten: 30	Run	IGN AUTO Avg Type:	Log-Pwr	TI	3 AM Jan 05, 2018 RACE 1 2 3 4 5 6 TYPE M WWWWW DET P P P P P
10 dB/div		ffset 0.5 dB I.00 dBm								79 6 GHz 003 dBm
-9.00	- 🔶	1								
-19.0										-29.00 dBm
-39.0										*
-49.0		2	3			دا ، ملت الدري		ر. برور الروم العربي العربي ال	and the state	<u>V</u>
-59.0		united and a second					and a state of the	the second second		
-79.0										
-89.0										
Start 30 M #Res BW		Ηz		#VB	W 300 kHz			Swe	Stop eep 2.39 s	25.00 GHz (40001 pts)
MKR MODE T		>		Y -9.003		CTION FUNCT	ION WIDTH	F	UNCTION VALUE	
1 N 1 2 N 1 3 N 1 4 N 1 5 6	f f		2.479 6 GHz 3.312 3 GHz 5.972 9 GHz 4.750 9 GHz	-9.003 -56.144 -56.216 -48.435	dBm dBm					
7 8 9 10 11 12										
MSG							STATUS			



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For Band edge

00 CH

		yzer - Swept S <i>l</i>									
RL	RF	50 Q AC			SENSE:INT		ALIGN	AUTO AVG Type: I	og Dwr		18 AM Jan 05, 20 RACE 1 2 3 4 5
tart Fre	q 2.3t	0000000		PNO: Fast 🕞 Gain:Low	Trig: Free #Atten: 30			Avg Type.	Log-P wi	ľ	TYPE MWWW DET P P P P F
0 dB/div)ffset 0.5 dB 1.09 dBm							N	1kr1 2.401 -8.	867 GH 909 dBi
og 3.91											-
18.9											
8.9											-28.91 d
8.9											
2.0									mannen		MAN
8.9	maunit	when an and the	mannannahan	rouncertant lage	engane ordered bas	mon	rhannelle a faithe	philosophic		hallen termiten	
8.9											
8.9											
tart 2.30 Res BW				#VB	W 300 kHz	:			Sw	Stop 2. eep 9.87 ms	40300 GH s (1001 pt
KR MODE TI			×	Y		CTION	FUNCTION	WIDTH		FUNCTION VALUE	
1 N 1 2 N 1 3 N 1 4 5	f	2.	401 867 GHz 390 022 GHz 398 159 GHz	-8.909 -63.474 -45.045	dBm						
5 7											
8											
4 5 6 7 8 9 0 1 2											

78 CH

	50 Ω AC	SENSE:INT		ALIGN AUTO			AM Jan 05, 2
nter Freq 2.48	P	NO: Fast 😱 Trig: F Gain:Low #Atten	ree Run : 30 dB	Avg Type:	Log-Pwr	т	ACE 1 2 3 4 YPE MWWW DET P P P F
dB/div Ref Offso					MI	kr1 2.479 -8.8	861 G 353 dE
							-28.85
Y V	\wedge^2						
,	- Anone			-	᠕ᡥᡊᡁ᠆᠋ᡧᡘ᠆ᠺ	Armon	-
rt 2.47900 GHz es BW 100 kHz		#VBW 300 k	ίHz		Swee	Stop 2.5 ep 2.07 ms	0000 G 1001 (
MODE TRC SCL	× 2.479 861 GHz	Y -8.853 dBm	FUNCTION	FUNCTION WIDTH	FL	INCTION VALUE	
N 1 f	2.473 551 GHz 2.483 557 GHz 2.487 988 GHz	-53.875 dBm -55.751 dBm					
	2.487 988 GHZ	-05.751 0.611					





For Hopping Band edge

00 CH

ilent Spect R L	trum Analy RF	<mark>/zer - Swept S</mark> 50 Ω A(SENSE:INT		ALIGNAUTO		11-57:	45 AM Jan 05, 21
		9700000	000 GHz	PNO: Fast G	Tailar Fas		Avg Type	: Log-Pwr		RACE 1 2 3 4 TYPE M WAAWA DET P P P P
) dB/div		ffset 0.5 dB 1.03 dBm	4					М	kr1 2.401 -8	970 GH .974 dB
.97										
						_				
.0										-28.97
.0										
.0						-		11	Lables non	Mangerie
.0	manul	بتدمر أنعيه المعامرة فيصور	and the second state of the	mennent	hundred	Anna You	, and the second second	AM MANYA MANA	elintelaneterinakantu	(h)
.0										
	0000 G / 100 kl			#VE	W 300 kH	z		Swe	Stop 2 ep 9.87 m	.40300 GI s (1001 pi
r Mode 1			×	Y		NCTION	FUNCTION WIDTH	F	UNCTION VALUE	
	1 f 1 f 1 f	2	.401 970 GHz .390 022 GHz .399 910 GHz	-56.731	dBm					
) }										
9 1										
9) 2										

78 CH



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5. NUMBER OF HOPPING CHANNEL

5.1 APPLIED PROCEDURES / LIMIT

FCC Part 15.247,Subpart C					
Section	Test Item	Limit	FrequencyRange (MHz)	Result	
15.247 (a)(1)(iii)	Number of Hopping Channel	≥15	2400-2483.5	PASS	

Spectrum Parameters	Setting
Attenuation	Auto
Span Frequency	> Operating FrequencyRange
RB	100KHz
VB	100KHz
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

5.2 TEST PROCEDURE

- a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,
- b. Spectrum Setting : RBW= 100KHz, VBW=100KHz, Sweep time = Auto.

5.3 TEST SETUP

EUT	SPECTRUM
	ANALYZER

5.4 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.



5.5 TEST RESULTS

Temperature:	25 ℃	Relative Humidity:	60%
Pressure:	1015 hPa	Test Voltage:	DC 3.7V
Test Mode:	Hopping Mode		

Number of Hopping Channel

79

Hopping channel

	RF !	50 Ω AC	SE	ENSE:INT	ALIGN AUTO		11:30:23 AM Jan 05,3
nter F	req 2.44 [.]	1750000 GHz	PNO: Fast 😱 IFGain:Low	Trig: Free Run #Atten: 30 dB	Avg Type: L	og-Pwr	TRACE 1 2 3 4 TYPE M WWW DET A A A A
dB/div	Ref Offse Ref 4.40					Mkr2 2.4	480 160 0 G -8.88 dE
' <u></u>							
						*****	*****
; 							
i							
; 							
; <u> </u>							
						5	Stop 2.48350 G
rt 2.40	0000 GHz						
	0000 GHz 1.0 MHz		#VBV	V 1.0 MHz		Sweep 1	.00 ms (1001 p
es BW	1.0 MHz	×	Y	FUNCTION	FUNCTION WIDTH	Sweep 1	
N N N N	1.0 MHz	2.402 171 0 GH	iz -5.83 d	FUNCTION	FUNCTION WIDTH	Sweep 1	.00 ms (1001 p
es BW	1.0 MHz		Y 1z -5.83 d	FUNCTION	FUNCTION WIDTH	Sweep 1	
SBW	1.0 MHz	2.402 171 0 GH	iz -5.83 d	FUNCTION	FUNCTION WIDTH	Sweep 1	
es BW	1.0 MHz	2.402 171 0 GH	iz -5.83 d	FUNCTION	FUNCTION WIDTH	Sweep 1	
es BW	1.0 MHz	2.402 171 0 GH	iz -5.83 d	FUNCTION	FUNCTION WIDTH	Sweep 1	
es BW	1.0 MHz	2.402 171 0 GH	iz -5.83 d	FUNCTION	FUNCTION WIDTH	Sweep 1	
es BW	1.0 MHz	2.402 171 0 GH	iz -5.83 d	FUNCTION	FUNCTION WIDTH	Sweep 1	
es BW	1.0 MHz	2.402 171 0 GH	iz -5.83 d	FUNCTION	FUNCTION WIDTH	Sweep 1	

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6. AVERAGE TIME OF OCCUPANCY

6.1 APPLIED PROCEDURES / LIMIT

FCC Part 15.247,Subpart C					
Section	Test Item	Limit	FrequencyRange (MHz)	Result	
15.247 (a)(1)(iii)	Average Time of Occupancy	0.4sec	2400-2483.5	PASS	

6.2 TEST PROCEDURE

- a. The transmitter output (antenna port) was connected to the spectrum analyzer
- b. Set RBW =1MHz/VBW =3MHz.
- c. Use a video trigger with the trigger level set to enable triggering only on full pulses.
- d. Sweep Time is more than once pulse time.
- Set the center frequency on any frequency would be measure and set the frequency span to e. zero span.
- f. Measure the maximum time duration of one single pulse.
- g. Set the EUT for DH5, DH3 and DH1 packet transmitting.
- \tilde{h} . Measure the maximum time duration of one single pulse.
- i. DH5 Packet permit maximum 1600/ 79 / 6 = 3.37 hops per second in each channel (5 time slots RX, 1 time slot TX). So he dwell time is the time duration of the pulse times 3.37 x 31.6 = 106.6 within 31.6 seconds.
- j. DH3 Packet permit maximum 1600 / 79 / 4 = 5.06 hops per second in each channel (3 time slots RX, 1 time slot TX). So he dwell time is the time duration of the pulse times $5.06 \times 31.6 = 160$ within 31.6 seconds.
- k. DH1 Packet permit maximum 1600 / 79 / 2 = 10.12 hops per second in each channel (1 time slot RX, 1 time slot TX). So the dwell time is the time duration of the pulse times $10.12 \times 31.6 = 320$ within 31.6 seconds.

6.3 TEST SETUP



6.4 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.



Report No.: STS1712353W01

6.5 TEST RESULTS

Temperature:	25 ℃	Relative Humidity:	50%
Pressure:	1012 hPa	Test Voltage:	DC 3.7V
Test Mode:	GFSK(1Mbps)-DH1/DH3/DH5		

Data Packet	Frequency	Pulse Duration(ms)	Dwell Time(s)	Limits(s)
DH1	2441 MHz	0.400	0.128	0.4
DH3	2441 MHz	1.600	0.256	0.4
DH5	2441 MHz	2.790	0.298	0.4

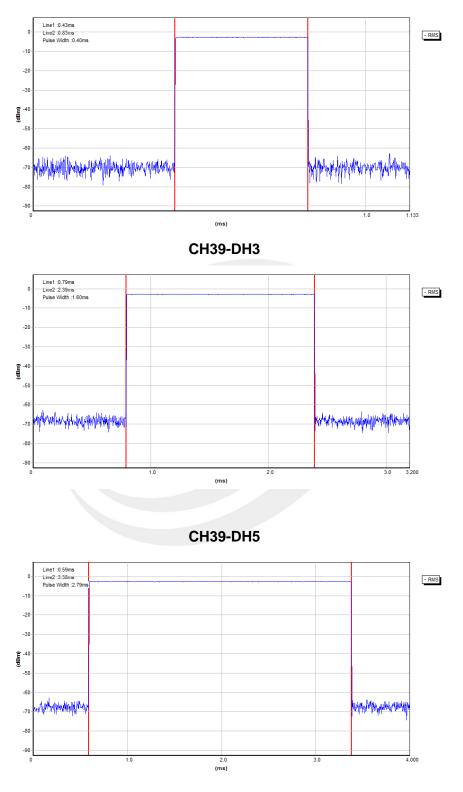


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CH39-DH1



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Report No.: STS1712353W01

Temperature:	25 ℃	Relative Humidity:	50%
Pressure:	1012 hPa	Test Voltage:	DC 3.7V
Test Mode:	π/4-DQPSK(2Mbps) –2DH1/2DH3/2DH5		

Data Packet	Frequency	Pulse Duration(ms)	Dwell Time(s)	Limits(s)
2DH1	2441 MHz	0.380	0.122	0.4
2DH3	2441 MHz	1.750	0.280	0.4
2DH5	2441 MHz	2.960	0.316	0.4

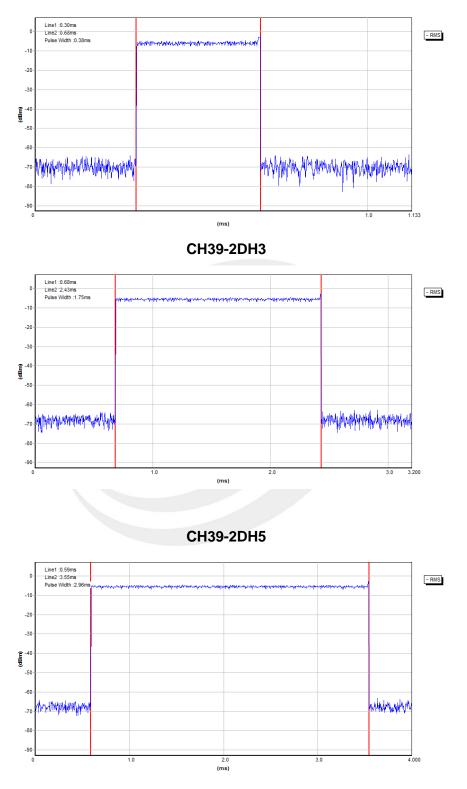


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CH39-2DH1



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7. HOPPING CHANNEL SEPARATION MEASUREMEN

7.1 APPLIED PROCEDURES / LIMIT

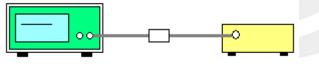
Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater. Alternatively, frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that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

Spectrum Parameter	Setting		
Attenuation	Auto		
Span Frequency	> 20 dB Bandwidth or Channel Separation		
RB	30 kHz (20dB Bandwidth) / 30 kHz (Channel Separation)		
VB	100 kHz (20dB Bandwidth) / 100 kHz (Channel Separation)		
Detector	Peak		
Trace	Max Hold		
Sweep Time	Auto		

7.2 TEST PROCEDURE

- a. The transmitter output (antenna port) was connected to the spectrum analyser in peak hold mode.
- b. The resolution bandwidth of 30 kHz and the video bandwidth of 100 kHz were utilised for 20 dB bandwidth measurement.
- c. The resolution bandwidth of 30 kHz and the video bandwidth of 100 kHz were utilised for channel separation measurement.

7.3 TEST SETUP



Spectrum Analayzer

EUT

7.4 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.



Report No.: STS1712353W01

7.5 TEST RESULTS

Temperature:	25 ℃	Relative Humidity:	50%
Pressure:	1012 hPa	Test Voltage:	DC 3.7V
Test Mode:	CH00 / CH39 / CH78 (GFSK(1Mbps) Mode)		

Frequency	Ch. Separation (MHz)	Limit	Result
2402 MHz	0.999	0.587	Complies
2441 MHz	1.002	0.586	Complies
2480 MHz	0.999	0.585	Complies

For GFSK: Ch. Separation Limits: > two-thirds 20dB bandwidth

CH00 -1Mbps

RL					ALIGN AUTO			8 AM Jan 05, 3
nter Er		500000 GHz	SENSE: If	1		e: Log-Pwr		ACE 1 2 3 4
	CQ 2.402	PI	IO: Wide 😱 Trig Gain:Low #At	g: Free Run ten: 30 dB				DET P P P F
dB/div	Ref Offset Ref 2.40					MI	(r2 2.402 -7.:	848 G 555 dE
		()1			2			
		M	\sim		\sim	\sim		
6		~~~	~	5	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	- h		
6		~~~~		- And		-	m	
5 	~~~~	v					~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	~
s⊢								~~
; 								
nter 2.4	102500 GH 30 kHz	łz	#VBW 10	0 kHz		Swee	Span ep 3.20 ms	3.000 N (1001 p
nter 2.4 es BW	30 kHz TC SCL	×	Y		FUNCTION WIDTH		Span ep 3.20 ms	3.000 M (1001 p
nter 2.4 es BW MODE TR N 1	30 kHz f	× 2.401 849 GHz	¥ -7.58 dBm		FUNCTION WIDTH		ep 3.20 ms	3.000 N (1001 p
nter 2.4 es BW MODE TR N 1	30 kHz f	×	Y		FUNCTION WIDTH		ep 3.20 ms	3.000 ₪ (1001 µ
nter 2.4 es BW MODE TR N 1	30 kHz f	× 2.401 849 GHz	¥ -7.58 dBm		FUNCTION WIDTH		ep 3.20 ms	3.000 N (1001 p
nter 2.4 es BW	30 kHz f	× 2.401 849 GHz	¥ -7.58 dBm		FUNCTION WIDTH		ep 3.20 ms	3.000 N (1001 p
nter 2.4 es BW	30 kHz f	× 2.401 849 GHz	¥ -7.58 dBm		FUNCTION WIDTH		ep 3.20 ms	3.000 № (1001 p
es BW	30 kHz f	× 2.401 849 GHz	¥ -7.58 dBm		FUNCTION WIDTH		ep 3.20 ms	3.000 M
nter 2.4 es BW	30 kHz f	× 2.401 849 GHz	¥ -7.58 dBm		FUNCTION WIDTH		ep 3.20 ms	3.000 N (1001 p



CH39 -1Mbps

RF 50 Ω AC	SENSE:INT	ALIGNAUTO	11:25:47 AM Ja
r Freq 2.441500000 GHz PNO IFGa	Wide Trig: Free Run n:Low #Atten: 30 dB	Avg Type: Log-Pwr	TRACE 1 TYPE M DET P
Ref Offset 0.5 dB		Μ	kr2 2.441 848 -8.295
		2	
	\sim	m	
			m
			-V
[.] 2.441500 GHz SW 30 kHz	#VBW 100 kHz	Swe	Span 3.00 ep 3.20 ms (10)
E TRC SCL ×	Y FUNCTION		UNCTION VALUE
1 f 2.440 846 GHz 1 f 2.441 848 GHz	-8.30 dBm -8.29 dBm		
1 f 2.441 848 GHZ	-8.29 dBm		
		STATUS	

CH78 -1Mbps



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Report No.: STS1712353W01

Temperature:	25 ℃	Relative Humidity:	50%		
Pressure:	1012 hPa	Test Voltage:	DC 3.7V		
Test Mode:	CH00 / CH39 / CH78 (π/4-DQPSK(2Mbps) Mode)				

Frequency	Ch. Separation (MHz)	Limit	Result
2402 MHz	0.999	0.837	Complies
2441 MHz	0.999	0.842	Complies
2480 MHz	0.999	0.837	Complies

For π /4-DQPSK(2Mbps): Ch. Separation Limits: > two-thirds 20dB bandwidth

RL RF	50 Ω AC	SENSE:INT	ALIGNAUTO	11:38:30 AM Jan 05, 2
enter Freq 2.	402500000 GHz P IF	NO: Wide 😱 Trig: Free Gain:Low #Atten: 30	Avg Type: Log-l Run dB	PWF TRACE 1 2 3 4 TYPE M WAR DET P P P F
	offset 0.5 dB 2.40 dBm			Mkr2 2.402 848 G -7.525 dE
				1.010 41
.60	——————————————————————————————————————		× ~ ~	
7.6		V mm		m
7.6				
7.6				
N /				
7.6 1 .6				
7.6				
7.6				
7.6				
7.6				
				Span 3.000 M
enter 2.40250 Res BW 30 kH		#VBW 100 kHz	!	Sweep 3.20 ms (1001 p
Res BW 30 kH KR MODE TRO SCL		Y FUN	CTION FUNCTION WIDTH	Sweep 3.20 ms (1001 p
Res BW 30 kH	z × 2.401 849 GHz	Y FUX -7.60 dBm		
Res BW 30 kH R Mode TRC SCL 1 N 1 f 2 N 1 f	Z	Y FUN		
Res BW 30 kH R MODE TRC SCL 1 N 1 f 2 N 1 f 3 4	z × 2.401 849 GHz	Y FUX -7.60 dBm		
Res BW 30 kH R MODE TRC SCL 1 N 1 f 2 N 1 f 3 4 5	z × 2.401 849 GHz	Y FUX -7.60 dBm		
Res BW 30 kH 1 N 1 f 2 N 1 f 3 - - f 4 - - - 6 - - -	z × 2.401 849 GHz	Y FUX -7.60 dBm		
Res BW 30 kH I N 1 f 2 N 1 f 3 4 5 5 6 7 8 8	z × 2.401 849 GHz	Y FUX -7.60 dBm		
Res BW 30 kH	z × 2.401 849 GHz	Y FUX -7.60 dBm		
Res BW 30 kH I N 1 f 1 N 1 f 2 N 1 f 3 N 1 f 4 5 6 6 7 8 9 0 1 1 1 f	z × 2.401 849 GHz	Y FUX -7.60 dBm		
Res BW 30 kH 1 N 1 f 2 N 1 f 3 4 5 5 6 7 8 9 0 0 1 1	z × 2.401 849 GHz	Y FUX -7.60 dBm		• • •

CH00 -2Mbps

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CH39 -2Mbps

		lyzer - Swept SA							
Center F	_R ⊧ req 2	50 Ω AC .441500000 G	Hz PNO: W IFGain:I		ig: Free Run tten: 30 dB	ALIGNAUTO Avg Ty	oe: Log-Pwr	TF	4 AM Jan 05, 2018 RACE 1 2 3 4 5 (TYPE M WWWWW DET P P P P P
10 dB/div		Offset 0.5 dB 1.62 dBm					М	kr2 2.441 -8.	848 GHz 333 dBm
-8.38				~~~~	\sim	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	~~~~~	~~~	
-28.4 -38.4 -48.4	\sim								Tunh
-58.4 -68.4 -78.4									
-88.4 Center 2.4 #Res BW				#VBW 10	00 kHz		Swe	Span ep 3.20 ms	3.000 MH; (1001 pts
MKB MODE 11 1 N 1 2 N 1 3 4 5	f		49 GHz 48 GHz	¥ -8.33 dBm -8.33 dBm		FUNCTION WIDTH	F	UNCTION VALUE	
4 5 7 8 9 10 11									
12 //SG						STATUS			

CH78 -2Mbps

	RF	50 Ω AC		SENSE:INT		ALIGN AUTO		11:44:21 AM Jan C
er F	req 2.47	'9500000 GH	1z PNO: Wide IFGain:Low		ree Run 30 dB	Avg Type:	Log-Pwr	TRACE 1 2 TYPE MW DET P P
3/div		et 0.5 dB 67 dBm					Mkr	2 2.479 848 (-10.674 c
			λ^1					
		m		\sim	\sim		m	\sim
	\bigwedge	~						~
1	m							~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
V								
	479500 (30 kHz	έHZ	;	#VBW 100 k	Hz		Sweep	Span 3.000 3.20 ms (1001
iode Ti N 1		× 2.478 84	0.CH= 1	Y 0.55 dBm	FUNCTION	UNCTION WIDTH	FUNC	TION VALUE
N 1		2.479 84		0.67 dBm				

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8. BANDWIDTH TEST

8.1 APPLIED PROCEDURES / LIMIT

FCC Part15 15.247,Subpart C					
Section	Test Item	Limit	FrequencyRange (MHz)	Result	
15.247 (a)(1)	Bandwidth	(20dB bandwidth)	2400-2483.5	PASS	

Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	> Measurement Bandwidth or Channel Separation
RB	30 kHz (20dB Bandwidth) / 30 kHz (Channel Separation)
VB	100 kHz (20dB Bandwidth) / 100 kHz (Channel Separation)
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

8.2 TEST PROCEDURE

a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,

b. Spectrum Setting : RBW= 30KHz, VBW=100KHz, Sweep time = Auto.

8.3 TEST SETUP

EUT	SPECTRUM
	ANALYZER

8.4 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

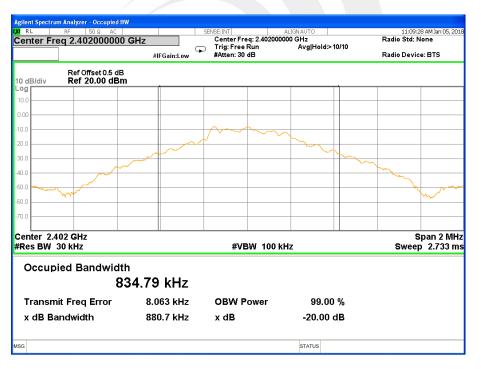


8.5 TEST RESULTS

Temperature:	25 ℃	Relative Humidity:	50%	
Pressure:	1012 hPa	Test Voltage:	DC 3.7V	
Test Mode:	GFSK(1Mbps)CH00 / CH39 / C78			

Frequency	20dB Bandwidth (MHz)	Result
2402 MHz	0.881	PASS
2441 MHz	0.879	PASS
2480 MHz	0.878	PASS

CH00 -1Mbps





CH39 -1Mbps



CH78 -1Mbps





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Report No.: STS1712353W01

Temperature:	25 ℃	Relative Humidity:	50%
Pressure:	1012 hPa	Test Voltage:	DC 3.7V
Test Mode:	π/4-DQPSK(2Mbps)CH00 / CH39 / C78		

Frequency	20dB Bandwidth(MHz)	Result
2402 MHz	1.255	PASS
2441 MHz	1.263	PASS
2480 MHz	1.255	PASS

CH00 -2Mbps

RL RF 50 Q AC		SENSE:INT	ALIGNAUTO	11:36:01 AM Jan 05, 2
nter Freg 2.402000000	GHz	Center Freq: 2.402000	000 GHz	Radio Std: None
		Trig: Free Run #Atten: 30 dB	Avg Hold:>10/10	Radio Device: BTS
	#IFGain:Low	#Atten: 30 db		Radio Device: B15
Ref Offset 0.5 dB				
dB/div Ref 20.00 dBm				
9				
0				
0				
D				
0	\sim	$\downarrow \sim \mid \sim \mid \sim \mid$	Jun	
D				
D				
nter 2.402 GHz es BW 30 kHz		#VBW 100 k	u-,	Span 2 M Sweep 2.733 I
ES BW JUKHZ		#VDW 100K	nz	Sweep 2.7551
Occupied Bandwidth				
1.1	1627 MHz			
Transmit Freq Error	3.774 kHz	OBW Power	99.00 %	
x dB Bandwidth	1.255 MHz	x dB	-20.00 dB	
			STATUS	

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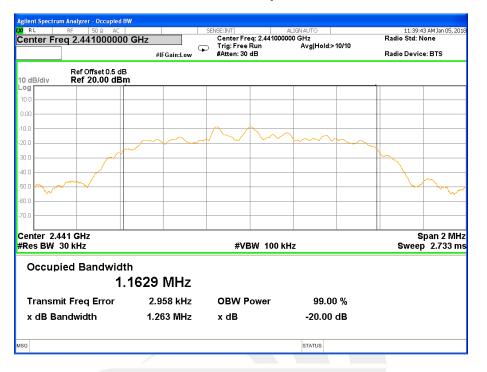
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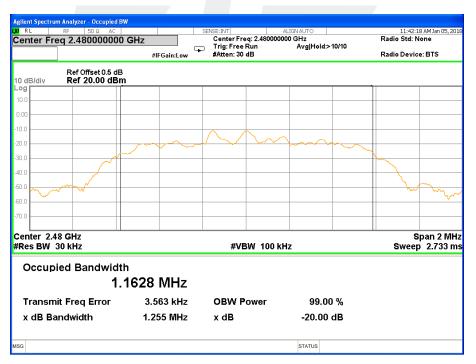
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CH39 -2Mbps



CH78 -2Mbps





9. OUTPUT POWER TEST

9.1 APPLIED PROCEDURES / LIMIT

FCC Part 15.247,Subpart C				
Section	Test Item	Limit	FrequencyRange (MHz)	Result
15.247 (a)(1)&(b)(1)	Output Power	1 W or 0.125W if channel separation > 2/3 bandwidthprovided thesystems operatewith an	2400-2483.5	PASS
		output power no greater than125 mW(20.97dBm)		

9.2 TEST PROCEDURE

a. The EUT was directly connected to the Power Meter

9.3 TEST SETUP

EUT		. Y
EUI	Power meter	

9.4 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.



Report No.: STS1712353W01

9.5 TEST RESULTS

Temperature:	25 ℃	Relative Humidity:	60%
Pressure:	1012 hPa	Test Voltage:	DC 3.7V

GFSK(1Mbps)					
Test Channel	Frequency	Conducted Output Power Peak (dBm) AVG (dBm)		LIMIT	
	(MHz)			dBm	
CH00	2402	-5.72	-9.76	20.97	
CH39	2441	-6.24	-10.21	20.97	
CH78	2480	-7.65	-11.63	20.97	

Note: the channel separation >2/3 bandwidth

π/4QPSK(2Mbps)					
Test Channel	Frequency	LIMIT			
	(MHz) Peak (dBm) AVG (dBm)		dBm		
CH00	2402	-7.15	-11.18	20.97	
CH39	2441	-6.78	-10.75	20.97	
CH78	2480	-6.33	-10.34	20.97	

Note: the channel separation >2/3 bandwidth

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10. ANTENNA REQUIREMENT

10.1 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.

10.2 EUT ANTENNA

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



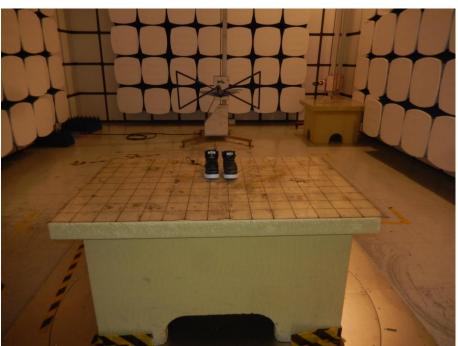
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APPENDIX-PHOTOS OF TEST SETUP



Radiated Measurement Photos



* * * * * END OF THE REPORT * * * *

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