

TEST REPORT

Product : 8" Tablet PC
Trade mark :   
Model/Type reference : M8, M8X, M8 PLUS, M8X PLUS, T8, T8X, K8, K8X
Serial number : N/A
Ratings : Input: 5V \equiv 2A
(Class III, IPX0)
FCC ID : S5V-D07M80
Report number : EED32H000332-3
Date : Apr. 20, 2015
Regulations : See below

Test Standards	Results
<input checked="" type="checkbox"/> 47 CFR FCC Part 15 Subpart C 15.247: 2014	PASS

Prepared for:

Proexpress Distributor LLC

11011 GREENWOOD AVE.N APT 5, SEATTLE, WA 98103, United States

Prepared by:

Centre Testing International (Shenzhen) Corporation

Hongwei Industrial Zone, 70 Area, Bao'an District,

Shenzhen, Guangdong, China

TEL: +86-755-3368 3668

FAX: +86-755-3368 3385

Tested by: Christy Chen

Reviewed by: Louisa Lu

Approved by: Jimmy Li

Date: Apr. 20, 2015

Jimmy Li
Lab manager

Check No.: 1727836113



TABLE OF CONTENTS

1. GENERAL INFORMATION	4
2. TEST SUMMARY	4
3. PRODUCT INFORMATION	5
4. MEASUREMENT UNCERTAINTY	5
5. TEST EQUIPMENT LIST	5
6. SUPPORT EQUIPMENT LIST	5
7. 20DB / 99% BANDWIDTH MEASUREMENT	6
7.1. LIMITS	6
7.2. BLOCK DIAGRAM OF TEST SETUP	6
7.3. TEST PROCEDURE	6
7.4. TEST RESULT	6
8. CARRIER FREQUENCY SEPARATION	10
8.1. LIMITS	10
8.2. BLOCK DIAGRAM OF TEST SETUP	10
8.3. TEST PROCEDURE	10
8.4. TEST RESULT	10
9. NUMBER OF HOPPING FREQUENCY	14
9.1. LIMITS	14
9.2. BLOCK DIAGRAM OF TEST SETUP	14
9.3. TEST PROCEDURE	14
9.4. TEST RESULT	14
10. TIME OF OCCUPANCY (DWELL TIME)	16
10.1. LIMITS	16
10.2. BLOCK DIAGRAM OF TEST SETUP	16
10.3. TEST PROCEDURE	16
10.4. TEST RESULT	16
11. MAXIMUM PEAK CONDUCTED OUTPUT POWER MEASUREMENT	20

11.1.	LIMITS.....	20
11.2.	BLOCK DIAGRAM OF TEST SETUP.....	20
11.3.	TEST PROCEDURE.....	20
11.4.	TEST RESULT.....	20
12.	CONDUCTED BANDEDGE EMISSION MEASUREMENT.....	24
12.1.	LIMITS.....	24
12.2.	BLOCK DIAGRAM OF TEST SETUP.....	24
12.3.	TEST PROCEDURE.....	24
12.4.	TEST RESULT.....	24
13.	CONDUCTED SPURIOUS EMISSION MEASUREMENT.....	29
13.1.	LIMITS.....	29
13.2.	BLOCK DIAGRAM OF TEST SETUP.....	29
13.3.	TEST PROCEDURE.....	29
13.4.	TEST RESULT.....	29
14.	RADIATED BANDEDGE EMISSION / RADIATED SPURIOUS EMISSION MEASUREMENT.....	51
14.1.	LIMITS.....	51
14.2.	BLOCK DIAGRAM OF TEST SETUP.....	51
14.3.	TEST PROCEDURE.....	52
14.4.	TEST RESULT.....	53
15.	AC CONDUCTED EMISSION TEST.....	56
15.1.	LIMITS.....	56
15.2.	BLOCK DIAGRAM OF TEST SETUP.....	56
15.3.	PROCEDURE OF CONDUCTED EMISSION TEST.....	56
15.4.	GRAPHS AND DATA.....	57
	APPENDIX 1 PHOTOGRAPHS OF TEST SETUP.....	59
	APPENDIX 2 EXTERNAL PHOTOGRAPHS OF PRODUCT.....	61
	APPENDIX 3 INTERNAL PHOTOGRAPHS OF PRODUCT.....	65

N/A means not applicable.

1. GENERAL INFORMATION

Applicant: Proexpress Distributor LLC
 11011 GREENWOOD AVE.N APT 5, SEATTLE, WA 98103,
 United States

Manufacturer: SHENZHEN KAIDA TECHNOLOGY DIGITAL CO., LTD
 5F, A Block, Tongsheng Technology Building, Huahui Road,
 Dalang Street, Longhua Town, Bao'an District, Shenzhen

FCC ID: S5V-D07M80

Product: 8" Tablet PC

Model/Type reference: M8, M8X, M8 PLUS, M8X PLUS, T8, T8X, K8, K8X

Trade Name:



Serial Number: N/A

Report Number: EED32H000332-3

Sample Received Date: Mar. 20, 2015

Sample tested Date: Mar. 20, 2015 to Apr. 20, 2015

The above equipment was tested by Centre Testing International (Shenzhen) Corporation for compliance with the requirements set forth in the FCC Rules and Regulations Part 15, Subpart C and the measurement procedure according to ANSI C63.4:2009 and ANSI C63.10:2013.

2. TEST SUMMARY

No.	Test Item	Rule	Test Result
1	20dB Bandwidth	FCC 15.247(a)(1)	PASS
2	Carrier Frequency Separation	FCC15.247(a)(1)	PASS
3	Number of Hopping Frequency	FCC 15.247(a)(iii)	PASS
4	Time of Occupancy (Dwell Time)	FCC 15.247(a)(iii)	PASS
5	Maximum Peak Conducted Output Power	FCC 15.247(b)(1)	PASS
6	Conducted Bandedge Emission / Conducted Spurious Emission	FCC PART15.247(d)	PASS
7	Radiated Bandedge Emission / Radiated Spurious Emission	FCC PART15.247(d)	PASS
8	AC Conducted Emission	FCC PART15.207	PASS
9	Antenna Requirements *	FCC PART15.203	PASS (See Notes)

*: According to Section 15.203 and RSS-Gen 7.1.2, 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. The EUT has a built in antenna which is a short wire solder on the PCB, this is permanently attached antenna and meets the requirements of this section.

3. PRODUCT INFORMATION

Items	Description
Rating	Input: 5V $\overline{=}$ 2A (Class III, IPX0)
Type of Modulation	GFSK (1Mbps) , $\pi/4$ -DQPSK (2Mbps), 8DPSK (3Mbps)
Antenna Type	Integral antenna
Frequency Range	2402 ~ 2480 MHz
Gain	0dBi

4. MEASUREMENT UNCERTAINTY

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

Measurement items	Uncertainty
Conducted Emission Test	3.2 dB
Radiated Emissions / Bandedge Emission	4.5 dB

5. TEST EQUIPMENT LIST

Equipment	Manufacturer	Model	Serial No.	Due Date
3M Chamber & Accessory Equipment	TDK	SAC-3	---	06/01/2016
Receiver	R&S	ESCI	100435	07/08/2015
TRILOG Broadband Antenna	schwarzbeck	VULB 9163	618	06/17/2015
Multi device Controller	maturo	NCD/070/10711112	---	N/A
Horn Antenna	ETS-LINGREN	3117	00057407	07/07/2015
Microwave Preamplifier	Agilent	8449B	3008A02425	03/19/2016
Spectrum Analyzer	R&S	FSP40	100416	07/06/2015
Spectrum Analyzer	Agilent	N9010A	MY47230124	07/06/2015
Receiver	R&S	ESCI	100009	07/19/2015
LISN	R&S	ENV216	100098	07/19/2015

6. SUPPORT EQUIPMENT LIST

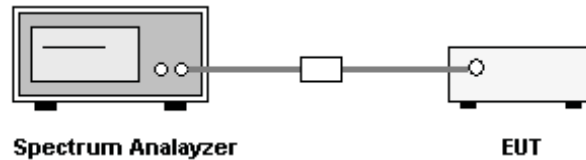
Device Type	Brand	Model	Data Cable	Remark
---	---	---	---	---
---	---	---	---	---

7. 20dB / 99% Bandwidth Measurement

7.1. LIMITS

None

7.2. BLOCK DIAGRAM OF TEST SETUP



7.3. TEST PROCEDURE

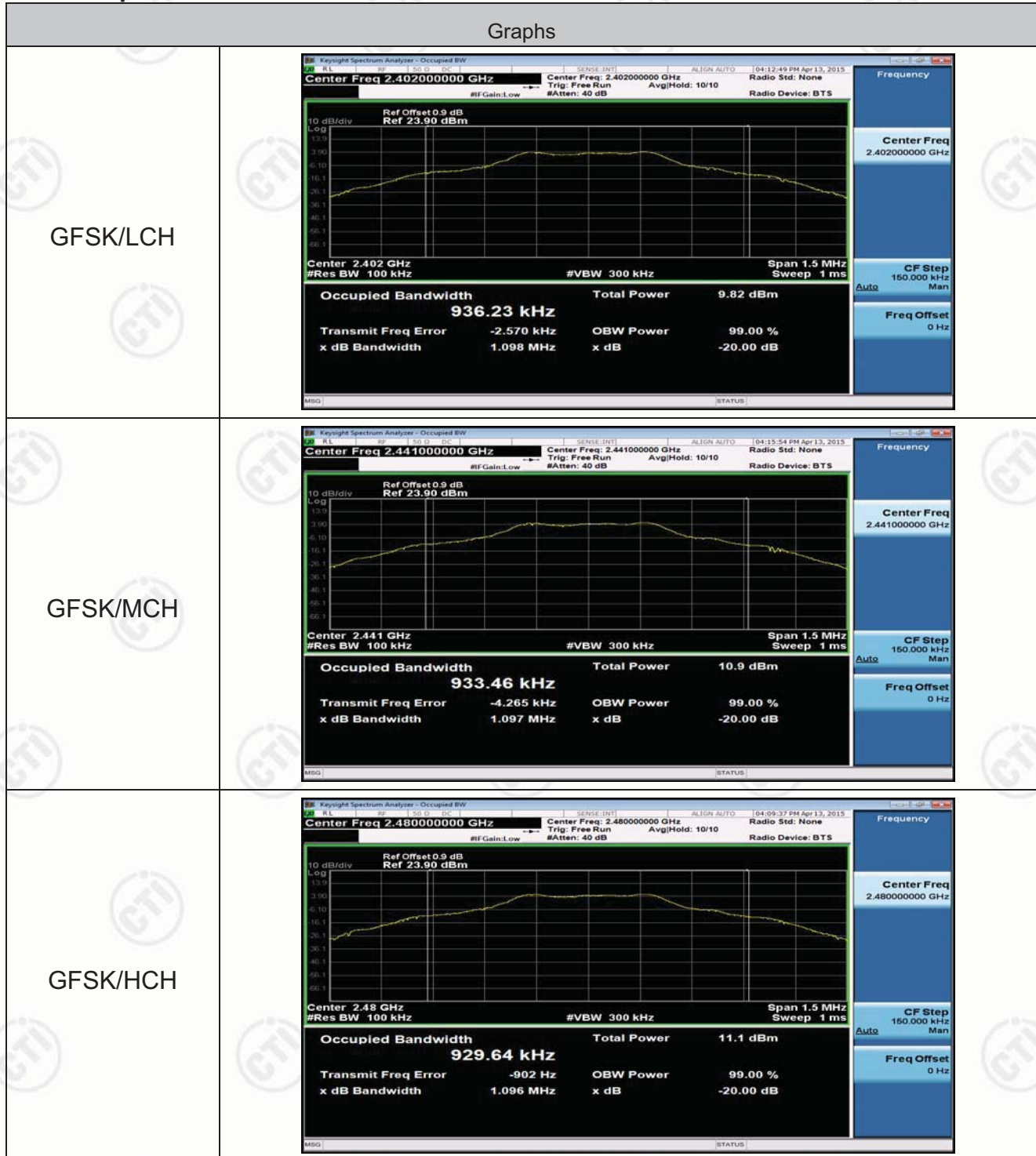
1. The RF output of EUT was connected to the spectrum analyzer by RF cable. The path loss was compensated to the results for each measurement.
2. Set to the maximum power setting and enable the EUT transmit continuously.
3. Use the following spectrum analyzer settings for 20dB Bandwidth measurement. Span = approximately 2 to 3 times the 20 dB bandwidth, centered on a hopping channel; RBW \geq 1% of the 20 dB bandwidth; VBW \geq RBW; Sweep = auto; Detector function = peak; Trace = max hold.
4. Use the following spectrum analyzer settings for 99 % Bandwidth measurement. For 99% Bandwidth measurement, the RBW=30 kHz, and VBW = 100 kHz. Sweep = auto; Detector function = peak. Trace = max hold.
5. Measure and record the results in the test report.

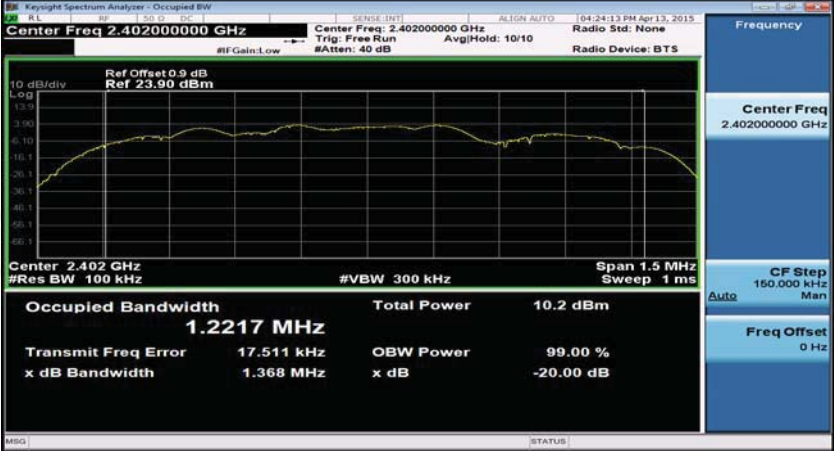
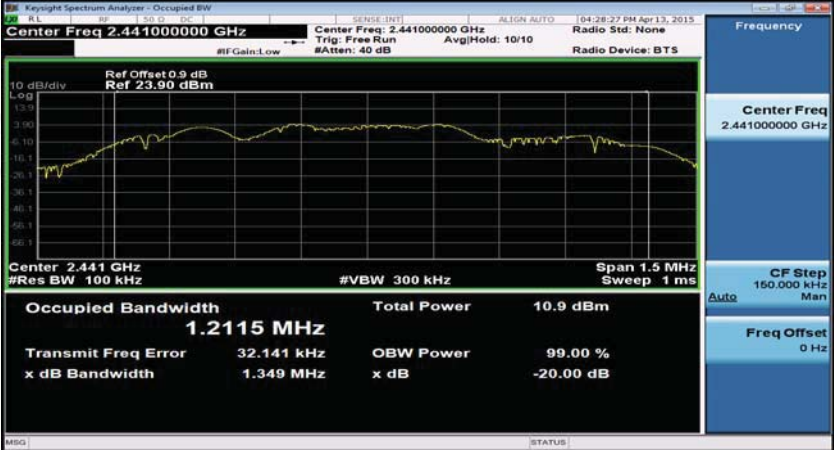
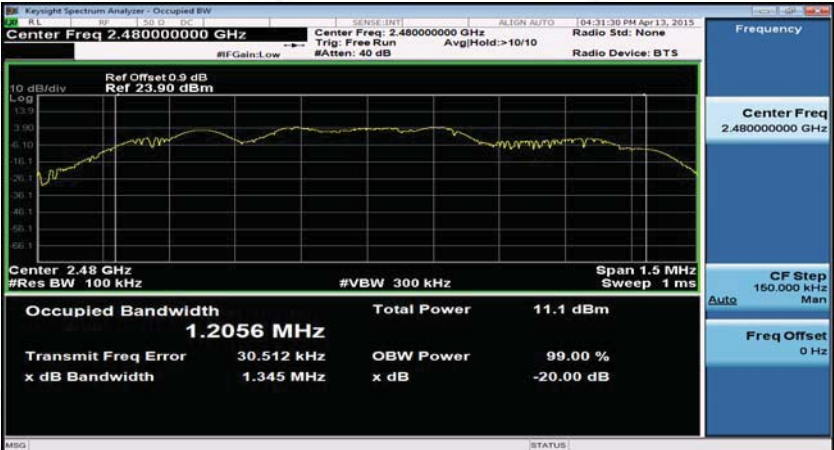
7.4. TEST RESULT

The test data of worst case are below: **EBW: 20dB BW ; OBW: 99% BW**

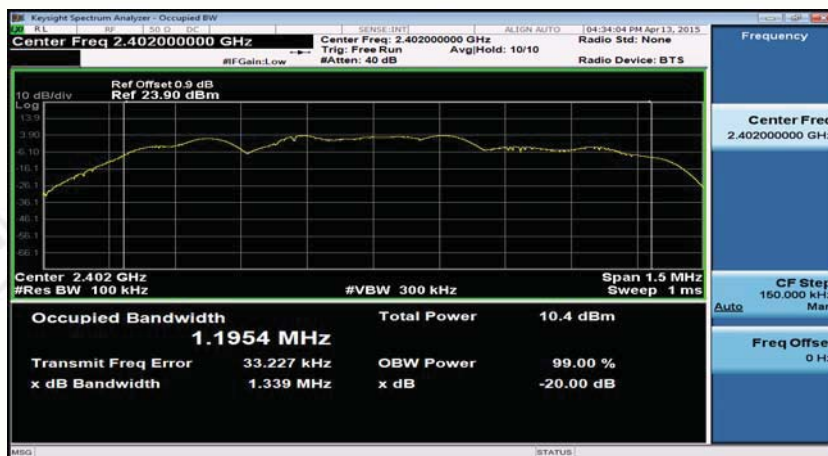
Mode	Channel.	EBW [MHz]	OBW [MHz]	Verdict
GFSK	LCH	1.098	0.93623	PASS
GFSK	MCH	1.097	0.93346	PASS
GFSK	HCH	1.096	0.92964	PASS
$\pi/4$ DQPSK	LCH	1.368	1.2217	PASS
$\pi/4$ DQPSK	MCH	1.349	1.2115	PASS
$\pi/4$ DQPSK	HCH	1.345	1.2056	PASS
8DPSK	LCH	1.339	1.1954	PASS
8DPSK	MCH	1.341	1.1939	PASS
8DPSK	HCH	1.341	1.1926	PASS

Test Graph

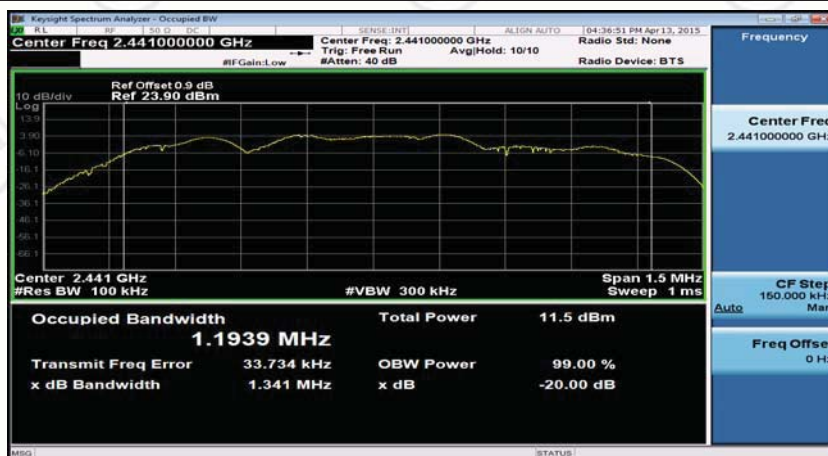


<p>$\pi/4$DQPSK/LCH</p>	 <p>KeySight Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.402000000 GHz</p> <p>Ref Offset 0.9 dB Ref 23.90 dBm</p> <p>Center 2.402 GHz #Res BW 100 kHz</p> <p>Occupied Bandwidth 1.2217 MHz</p> <p>Total Power 10.2 dBm</p> <p>Transmit Freq Error 17.511 kHz</p> <p>x dB Bandwidth 1.368 MHz</p> <p>OBW Power 99.00 %</p> <p>x dB -20.00 dB</p>
<p>$\pi/4$DQPSK/MCH</p>	 <p>KeySight Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.441000000 GHz</p> <p>Ref Offset 0.9 dB Ref 23.90 dBm</p> <p>Center 2.441 GHz #Res BW 100 kHz</p> <p>Occupied Bandwidth 1.2115 MHz</p> <p>Total Power 10.9 dBm</p> <p>Transmit Freq Error 32.141 kHz</p> <p>x dB Bandwidth 1.349 MHz</p> <p>OBW Power 99.00 %</p> <p>x dB -20.00 dB</p>
<p>$\pi/4$DQPSK/HCH</p>	 <p>KeySight Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.480000000 GHz</p> <p>Ref Offset 0.9 dB Ref 23.90 dBm</p> <p>Center 2.48 GHz #Res BW 100 kHz</p> <p>Occupied Bandwidth 1.2056 MHz</p> <p>Total Power 11.1 dBm</p> <p>Transmit Freq Error 30.512 kHz</p> <p>x dB Bandwidth 1.345 MHz</p> <p>OBW Power 99.00 %</p> <p>x dB -20.00 dB</p>

8DPSK/LCH



8DPSK/MCH



8DPSK/HCH

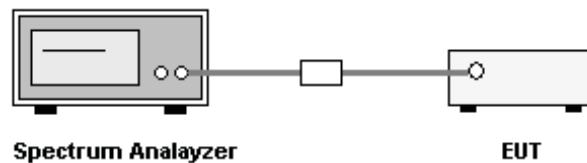


8. CARRIER FREQUENCY SEPARATION

8.1. LIMITS

Frequency hopping systems operating in the 2400-2483.5MHz 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 125mW.

8.2. BLOCK DIAGRAM OF TEST SETUP



8.3. TEST PROCEDURE

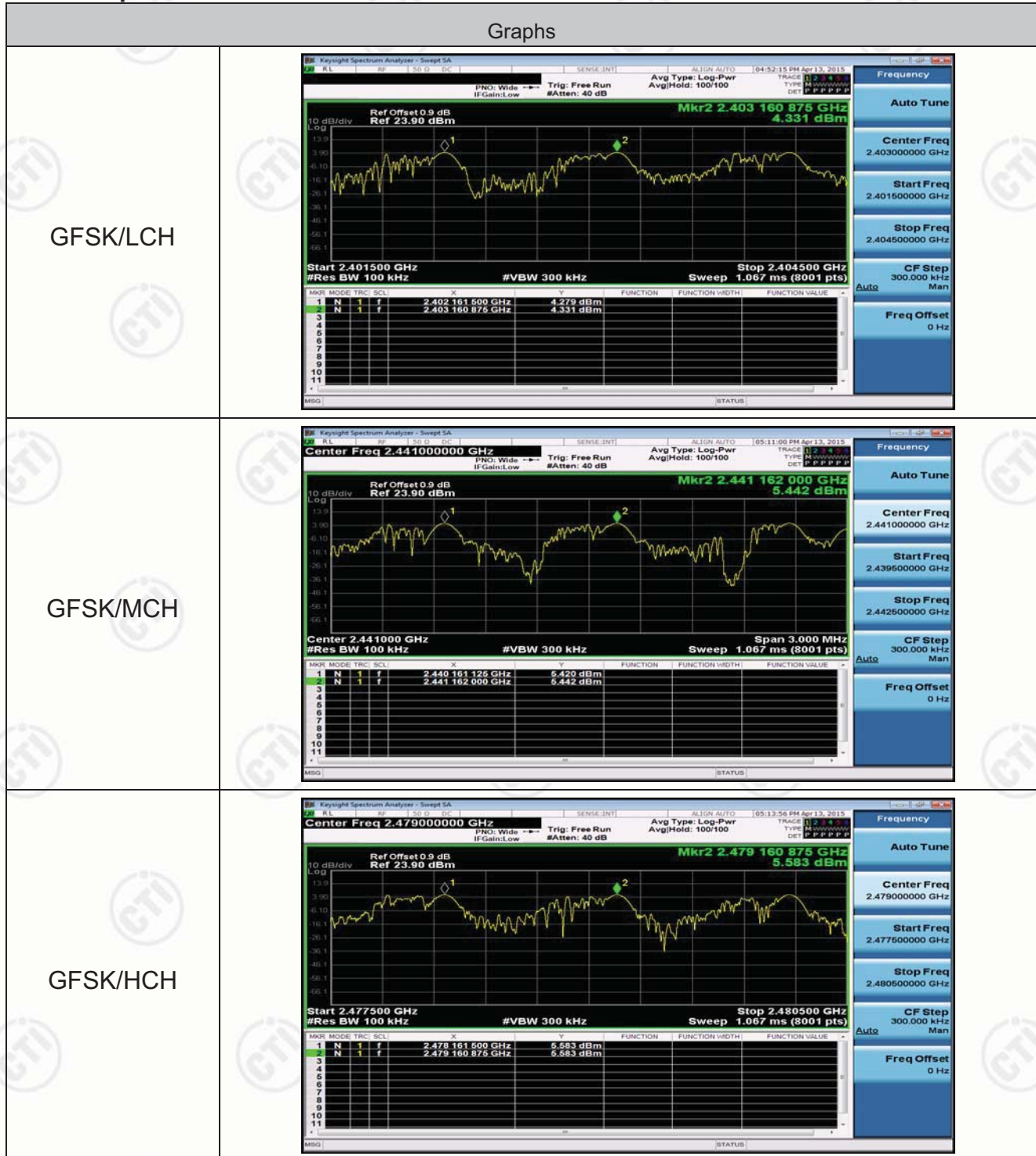
1. The RF output of EUT was connected to the spectrum analyzer by RF cable. The path loss was compensated to the results for each measurement.
2. Set to the maximum power setting and enable the EUT transmit continuously.
3. Enable the EUT hopping function.
4. Use the following spectrum analyzer settings: Span = wide enough to capture the peaks of two adjacent channels; RBW $\geq 1\%$ of the span; VBW \geq RBW; Sweep = auto; Detector function = peak; Trace = max hold.
5. Measure and record the results in the test report.

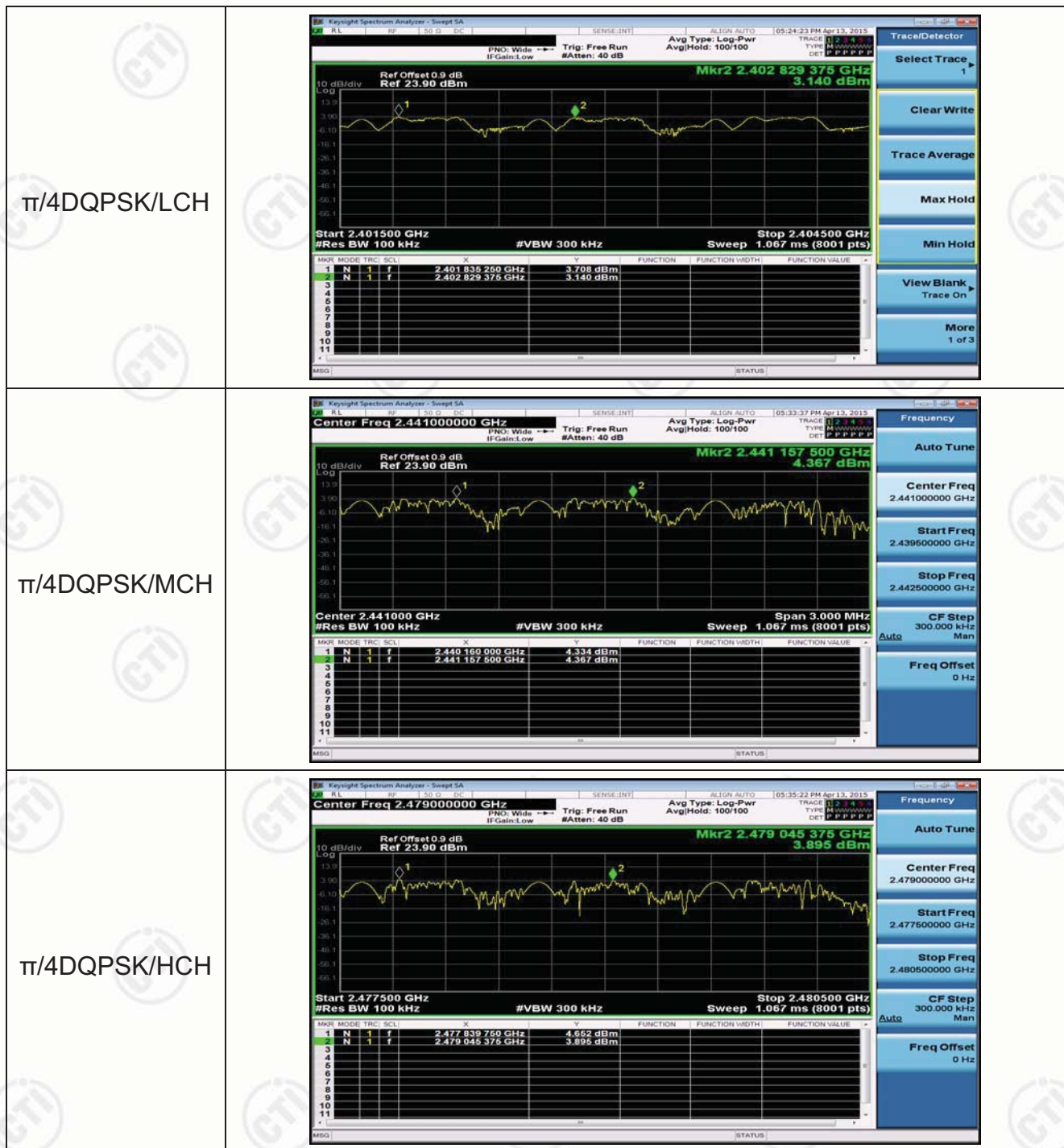
8.4. TEST RESULT

Carrier Frequency Separation: 1 MHz

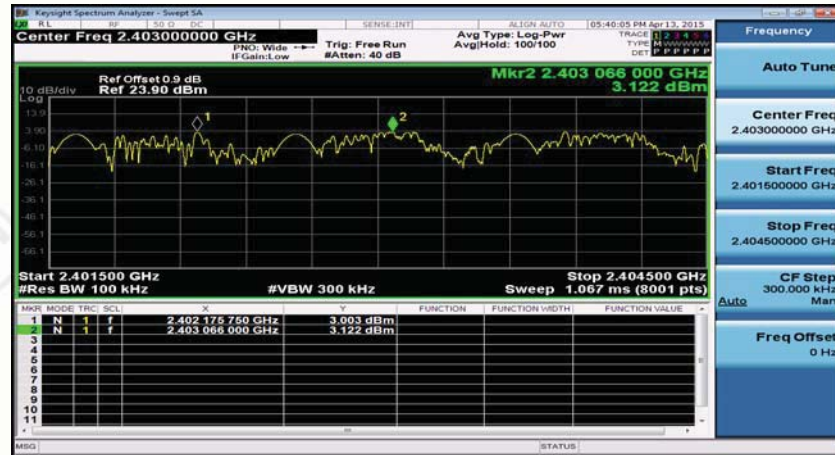
Mode	Channel.	Carrier Frequency Separation [MHz]	Verdict
GFSK	LCH	0.999	PASS
GFSK	MCH	1.001	PASS
GFSK	HCH	0.999	PASS
$\pi/4$ DQPSK	LCH	0.994	PASS
$\pi/4$ DQPSK	MCH	0.997	PASS
$\pi/4$ DQPSK	HCH	1.206	PASS
8DPSK	LCH	0.890	PASS
8DPSK	MCH	1.015	PASS
8DPSK	HCH	1.011	PASS

Test Graph

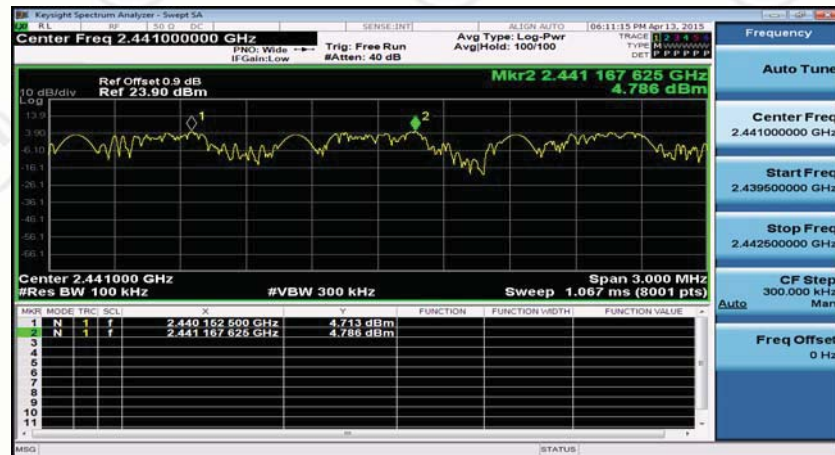




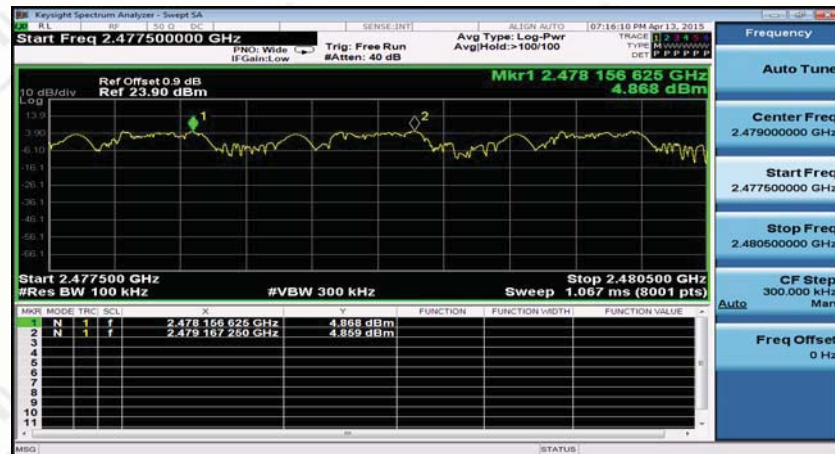
8DPSK/LCH



8DPSK/MCH



8DPSK/HCH

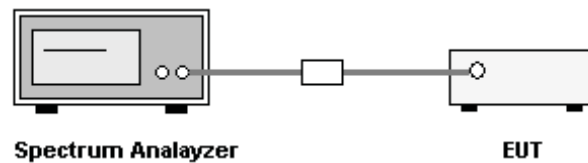


9. NUMBER OF HOPPING FREQUENCY

9.1. LIMITS

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

9.2. BLOCK DIAGRAM OF TEST SETUP



9.3. TEST PROCEDURE

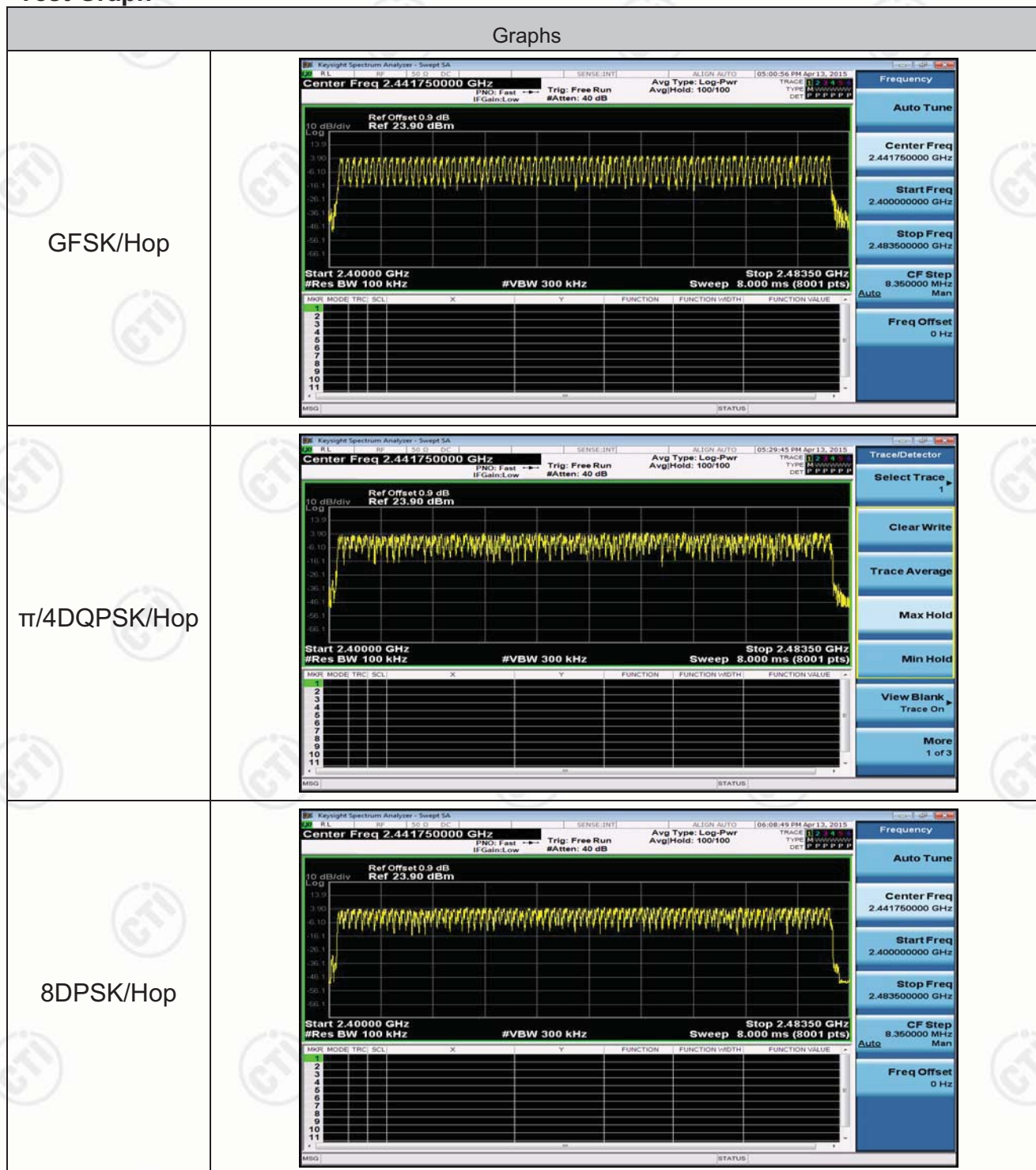
1. The RF output of EUT was connected to the spectrum analyzer by RF cable. The path loss was compensated to the results for each measurement.
2. Set to the maximum power setting and enable the EUT transmit continuously.
3. Enable the EUT hopping function.
4. Use the following spectrum analyzer settings: Span = the frequency band of operation; RBW \geq 1% of the span; VBW \geq RBW; Sweep = auto; Detector function = peak; Trace = max hold.
5. The number of hopping frequency used is defined as the number of total channel.
6. Record the measurement data derived from spectrum analyzer.

9.4. TEST RESULT

Number of Hopping Frequency is 79, with frequency space = 1MHz.

Mode	Channel.	Number of Hopping Channel	Verdict
GFSK	Hop	79	PASS
$\pi/4$ DQPSK	Hop	79	PASS
8DPSK	Hop	79	PASS

Test Graph

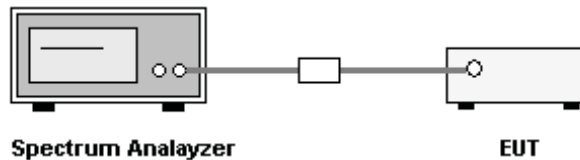


10. TIME OF OCCUPANCY (DWELL TIME)

10.1. LIMITS

The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed.

10.2. BLOCK DIAGRAM OF TEST SETUP



10.3. TEST PROCEDURE

1. The RF output of EUT was connected to the spectrum analyzer by RF cable.
The path loss was compensated to the results for each measurement.
2. Set to the maximum power setting and enable the EUT transmit continuously.
3. Enable the EUT hopping function.
4. Use the following spectrum analyzer settings: Span = zero span, centered on a hopping channel; RBW = 1 MHz; VBW \geq RBW; Sweep = as necessary to capture the entire dwell time per hopping channel; Detector function = peak; Trace = max hold.
5. Measure and record the results in the test report.

10.4. TEST RESULT

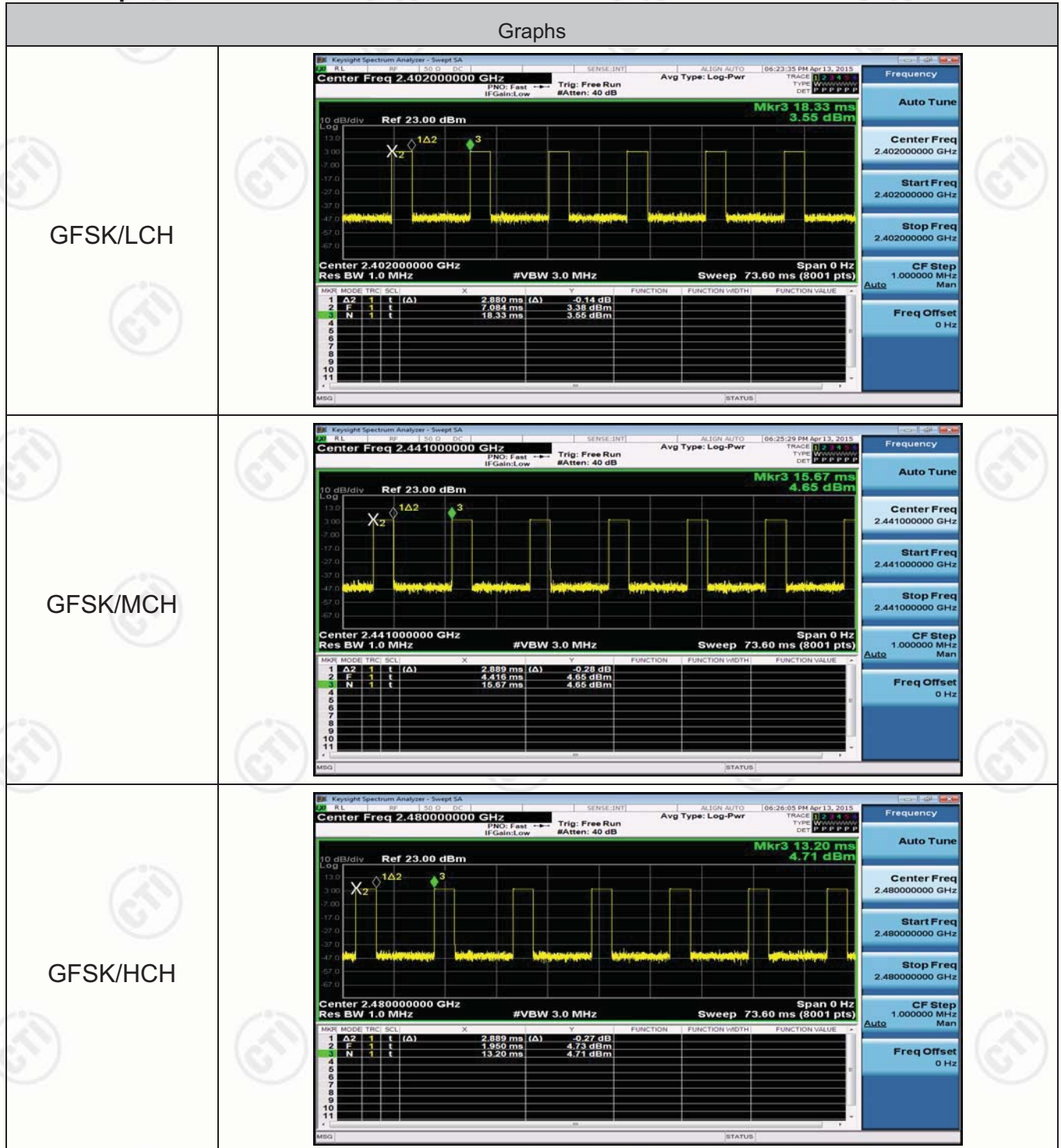
The Dwell Time=Burst Width*Total Hops. The detailed calculations are showed as follows:

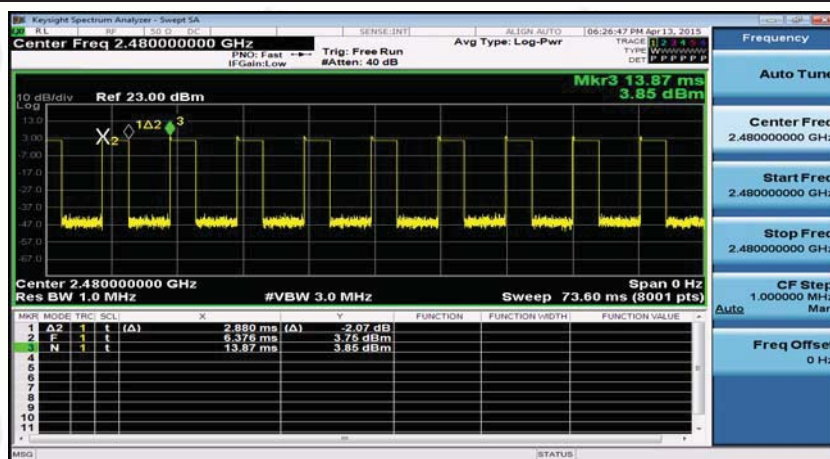
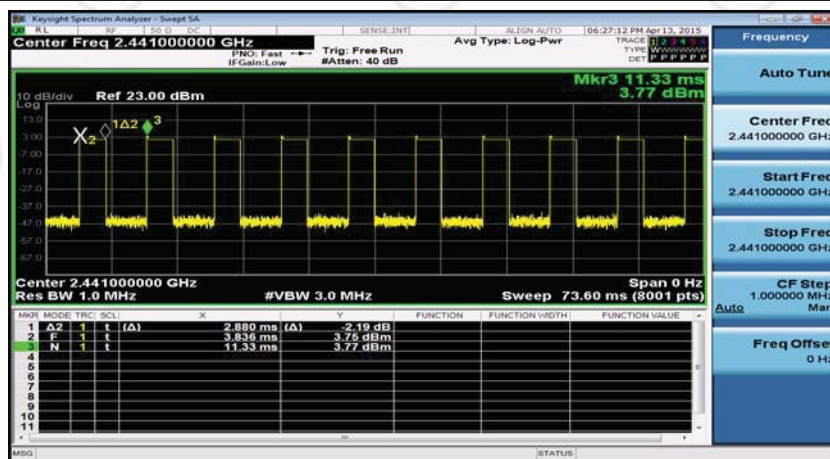
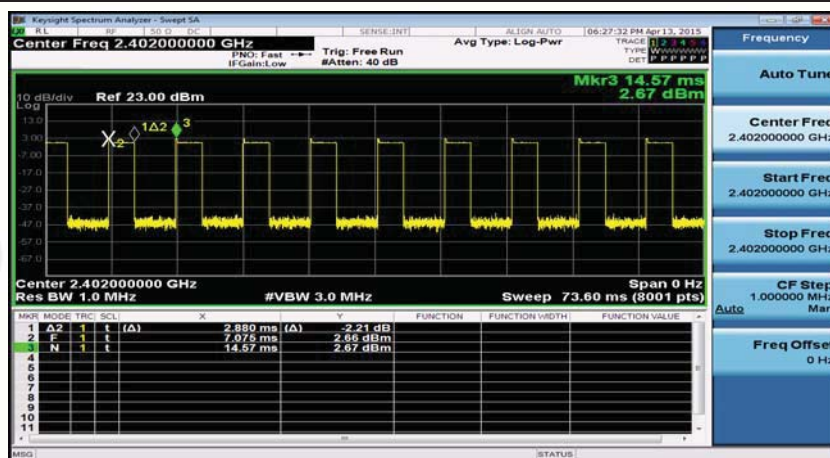
- The duration for dwell time calculation: $0.4[s] \times \text{hopping number} = 0.4[s] \times 79[\text{ch}] = 31.6[s \cdot \text{ch}]$;
- The burst width [ms/hop/ch], which is directly measured, refers to the duration on one channel hop.
- The hops per second for all channels: The selected EUT Conf uses a slot type of 5-Tx&1-Rx and a hopping rate of 1600 [ch*hop/s] for all channels. So the final hopping rate for all channels is $1600/6 = 266.67 [\text{ch} \cdot \text{hop/s}]$
- The hops per second on one channel: $266.67 [\text{ch} \cdot \text{hops/s}] / 79 [\text{ch}] = 3.38 [\text{hop/s}]$;
- The total hops for all channels within the dwell time calculation duration: $3.38 [\text{hop/s}] \times 31.6[s \cdot \text{ch}] = 106.67 [\text{hop} \cdot \text{ch}]$;
- The dwell time for all channels hopping: $106.67 [\text{hop} \cdot \text{ch}] \times \text{Burst Width} [\text{ms/hop/ch}]$.

Mode	Channel.	Burst Width [ms/hop/ch]	Total Hops[hop*ch]	Dwell Time[s]	Verdict
GFSK	LCH	2.88	106.67	307.21	PASS
GFSK	MCH	2.889	106.67	308.169	PASS
GFSK	HCH	2.889	106.67	308.169	PASS
$\pi/4$ DQPSK	LCH	2.88	106.67	307.21	PASS
$\pi/4$ DQPSK	MCH	2.88	106.67	307.21	PASS
$\pi/4$ DQPSK	HCH	2.88	106.67	307.21	PASS
8DPSK	LCH	2.82	106.67	300.81	PASS
8DPSK	MCH	2.822	106.67	301.02	PASS
8DPSK	HCH	2.82	106.67	300.81	PASS

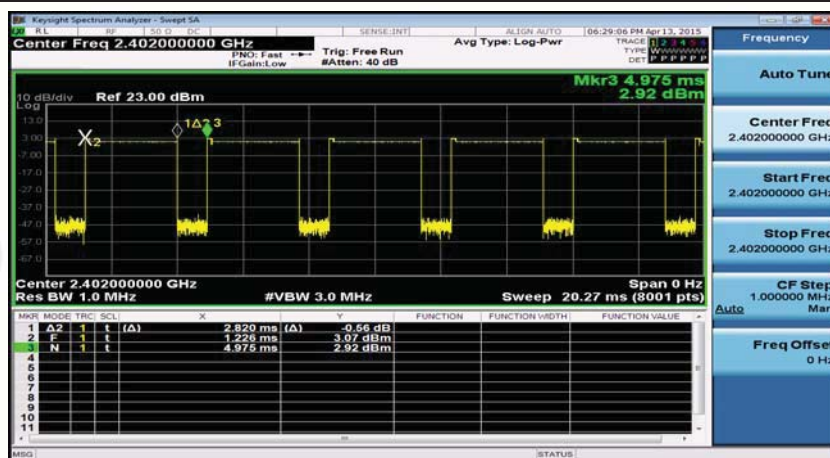
DH5 is the worse case and only reported.

Test Graph

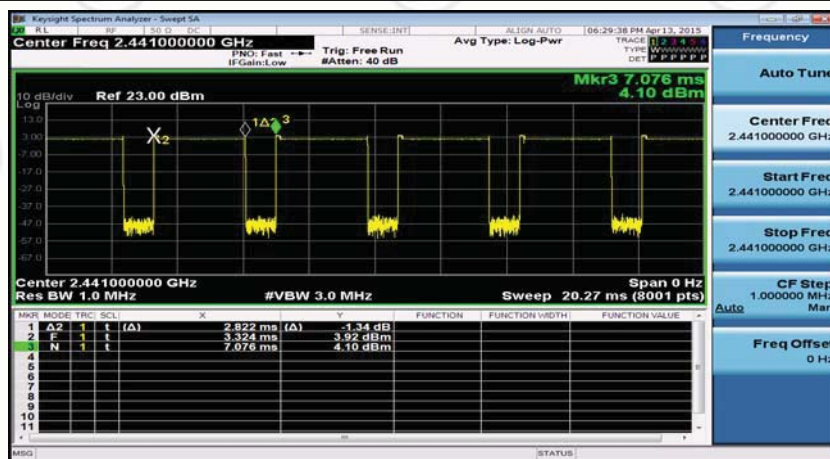




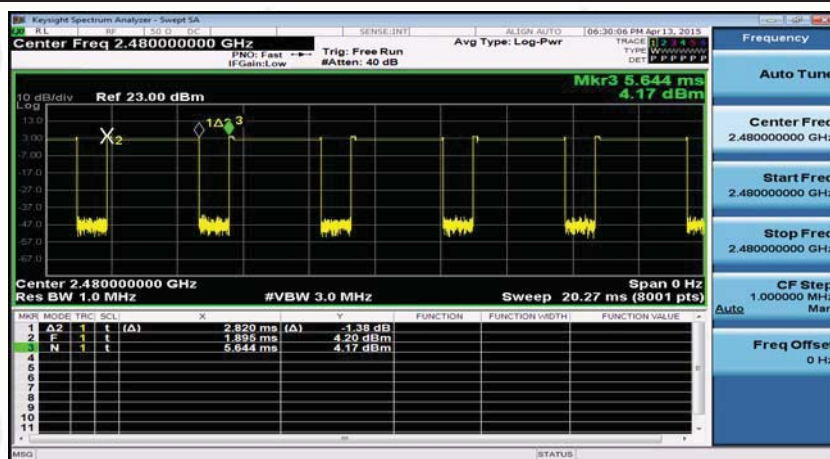
8DPSK/LCH



8DPSK/MCH



8DPSK/HCH

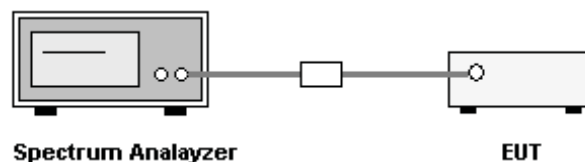


11. MAXIMUM PEAK CONDUCTED OUTPUT POWER MEASUREMENT

11.1. LIMITS

The limit for peak output power is 0.125Watt (21dBm).

11.2. BLOCK DIAGRAM OF TEST SETUP



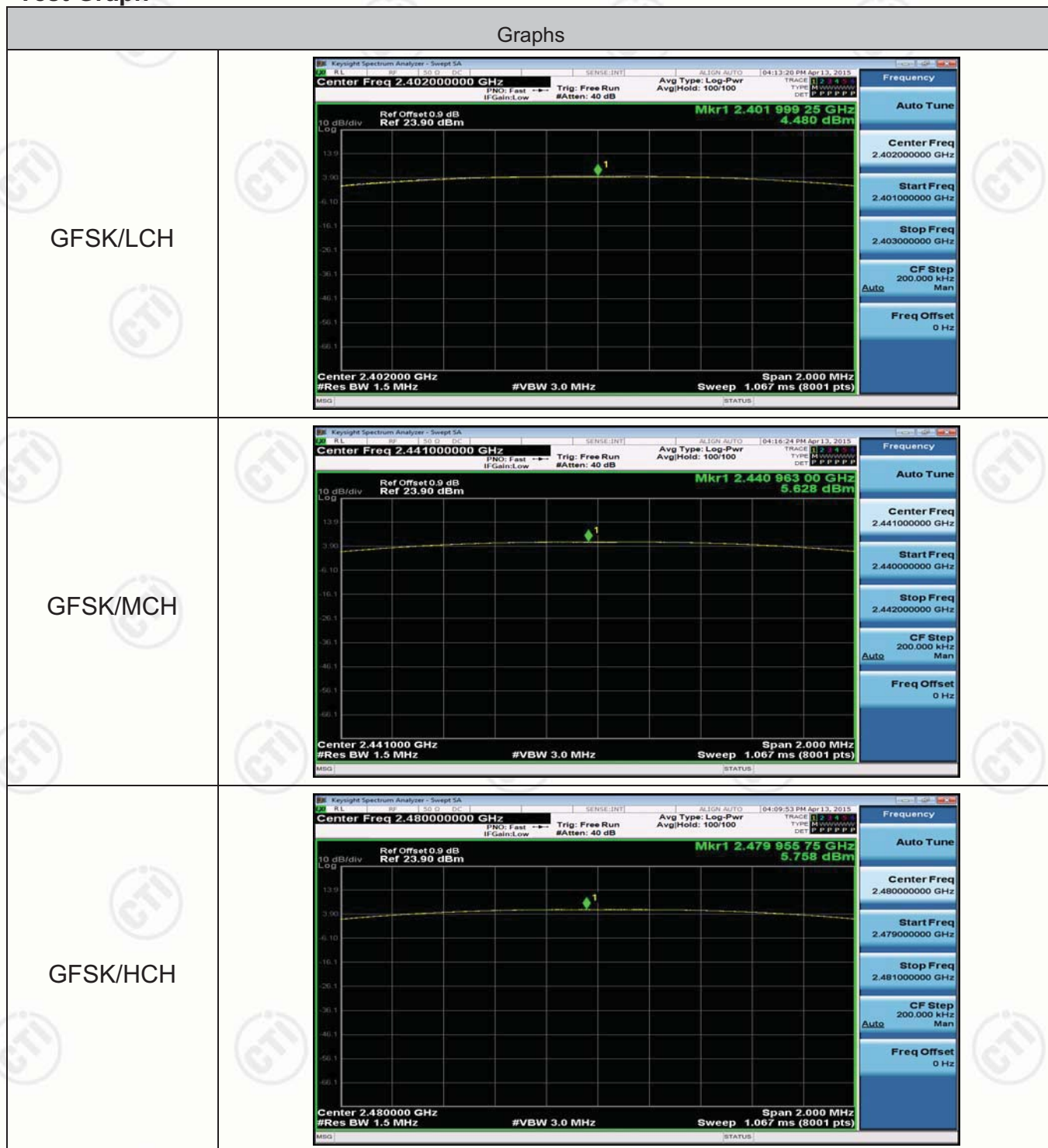
11.3. TEST PROCEDURE

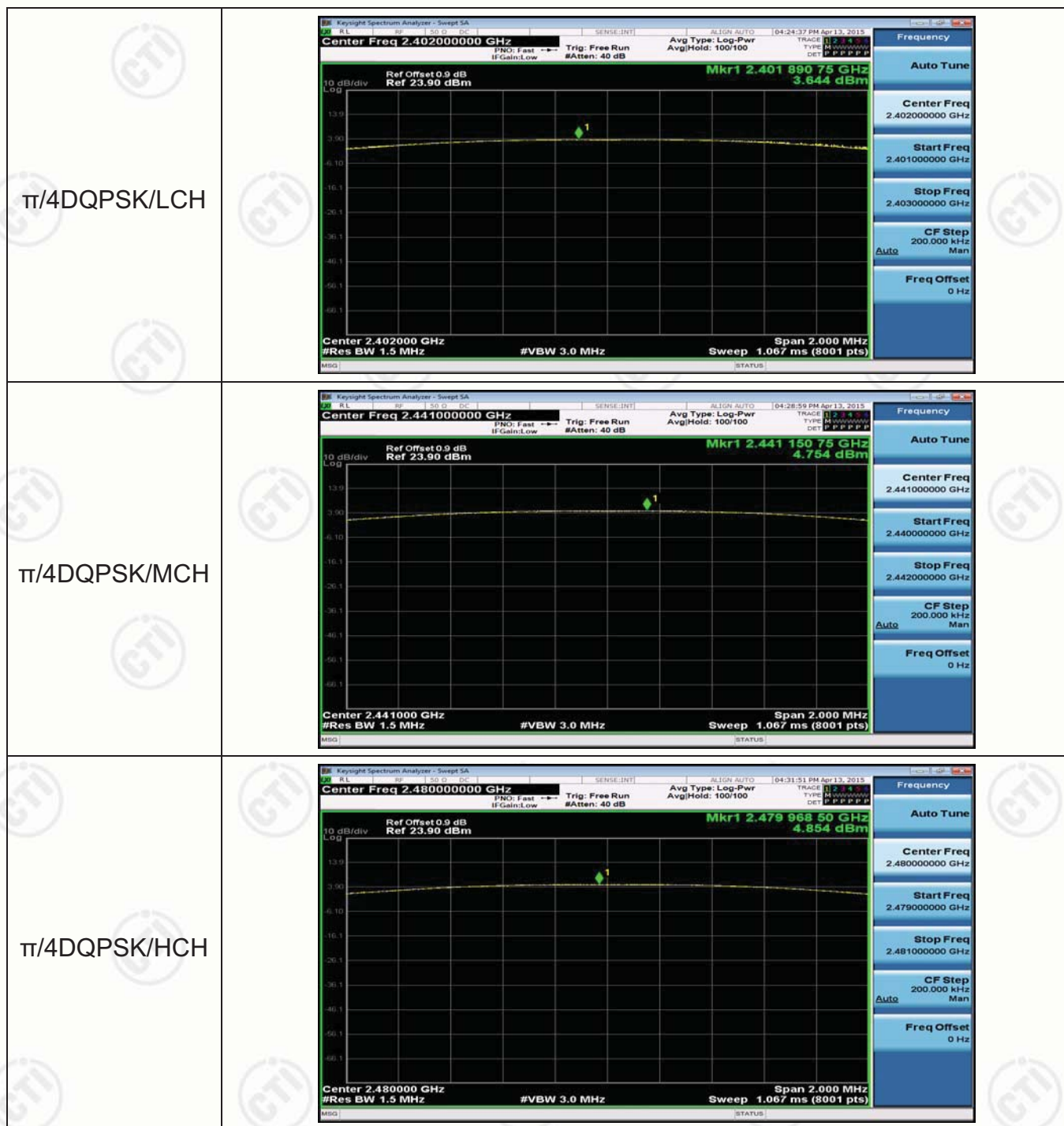
1. The RF output of EUT was connected to the power meter by RF cable and attenuator. The path loss was compensated to the results for each measurement.
2. Set to the maximum power setting and enable the EUT transmit continuously.
3. Measure the conducted output power with cable loss and record the results in the test report.
4. Measure and record the results in the test report.

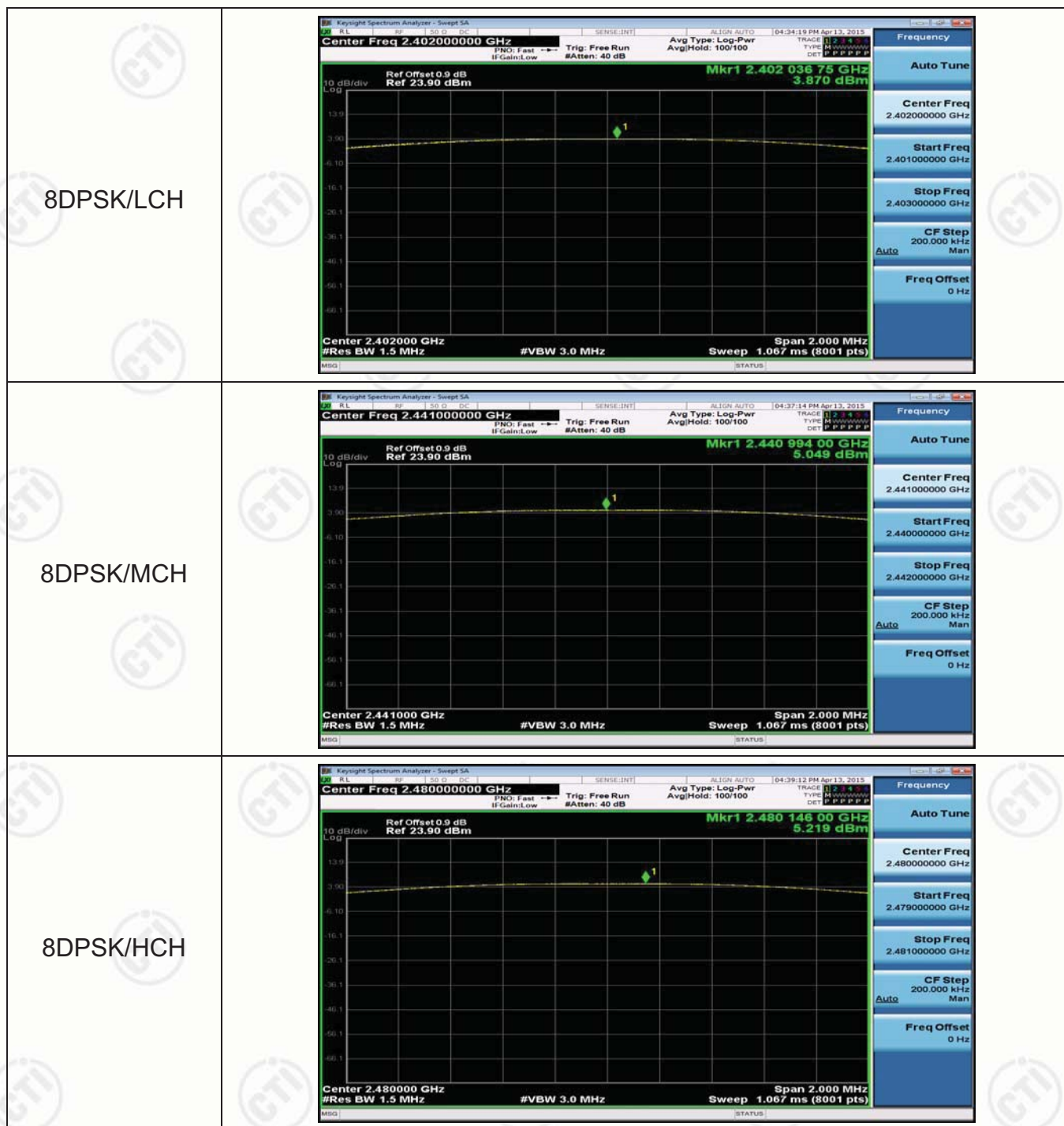
11.4. TEST RESULT

Mode	Channel.	Maximum Peak Output Power [dBm]	Verdict
GFSK	LCH	4.48	PASS
GFSK	MCH	5.63	PASS
GFSK	HCH	5.76	PASS
$\pi/4$ DQPSK	LCH	3.64	PASS
$\pi/4$ DQPSK	MCH	4.75	PASS
$\pi/4$ DQPSK	HCH	4.85	PASS
8DPSK	LCH	3.87	PASS
8DPSK	MCH	5.05	PASS
8DPSK	HCH	5.22	PASS

Test Graph





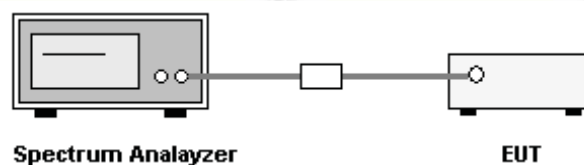


12. CONDUCTED BANDEDGE EMISSION MEASUREMENT

12.1. LIMITS

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a).

12.2. BLOCK DIAGRAM OF TEST SETUP



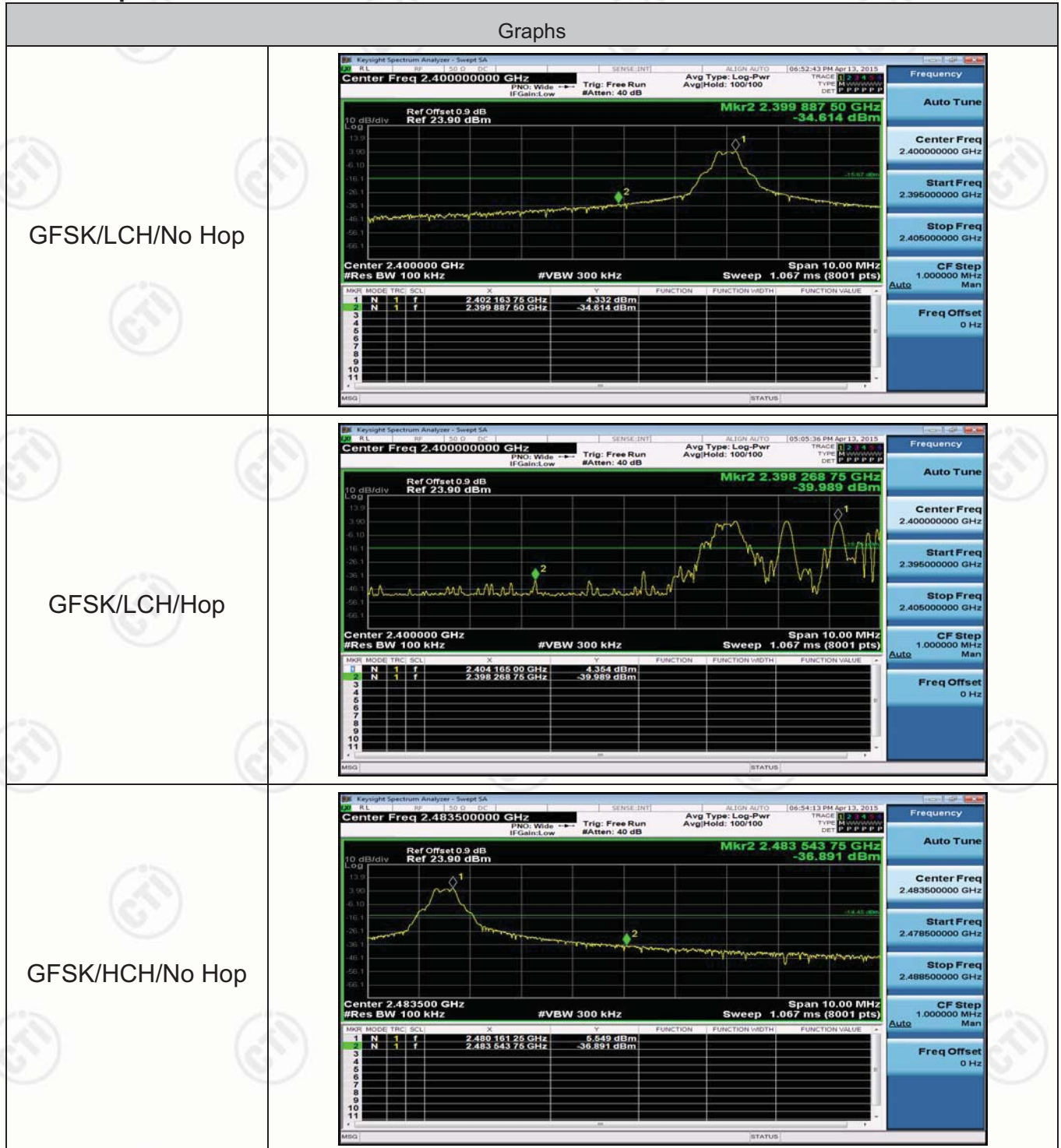
12.3. TEST PROCEDURE

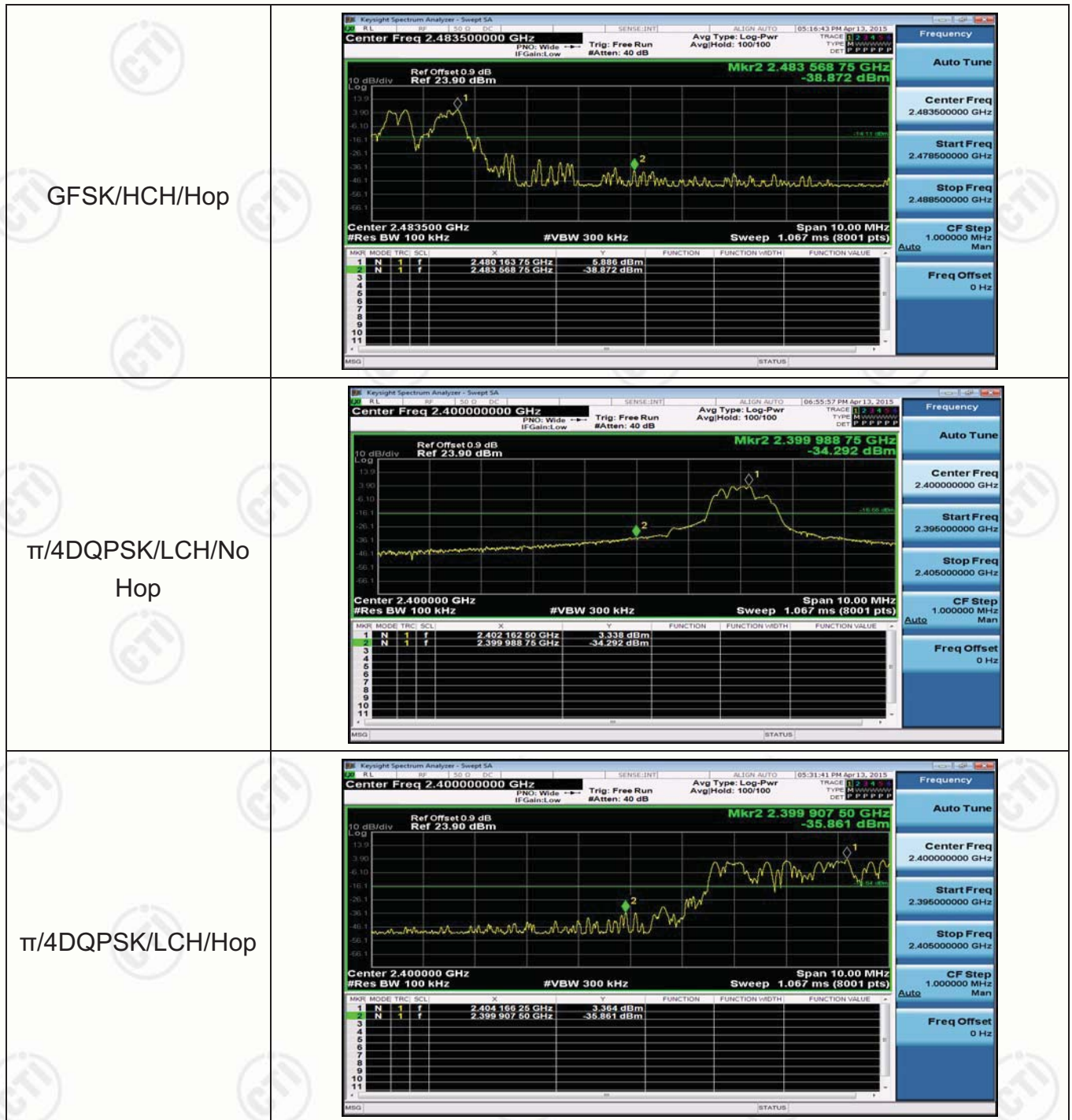
1. Set to the maximum power setting and enable the EUT transmit continuously.
2. Set RBW = 100 kHz, VBW = 300 kHz (\geq RBW). Band edge emissions must be at least 20 dB down from the highest emission level within the authorized band as measured with a 100 kHz RBW.
3. Enable hopping function of the EUT and then repeat step 1 and 2.
4. Measure and record the results in the test report.

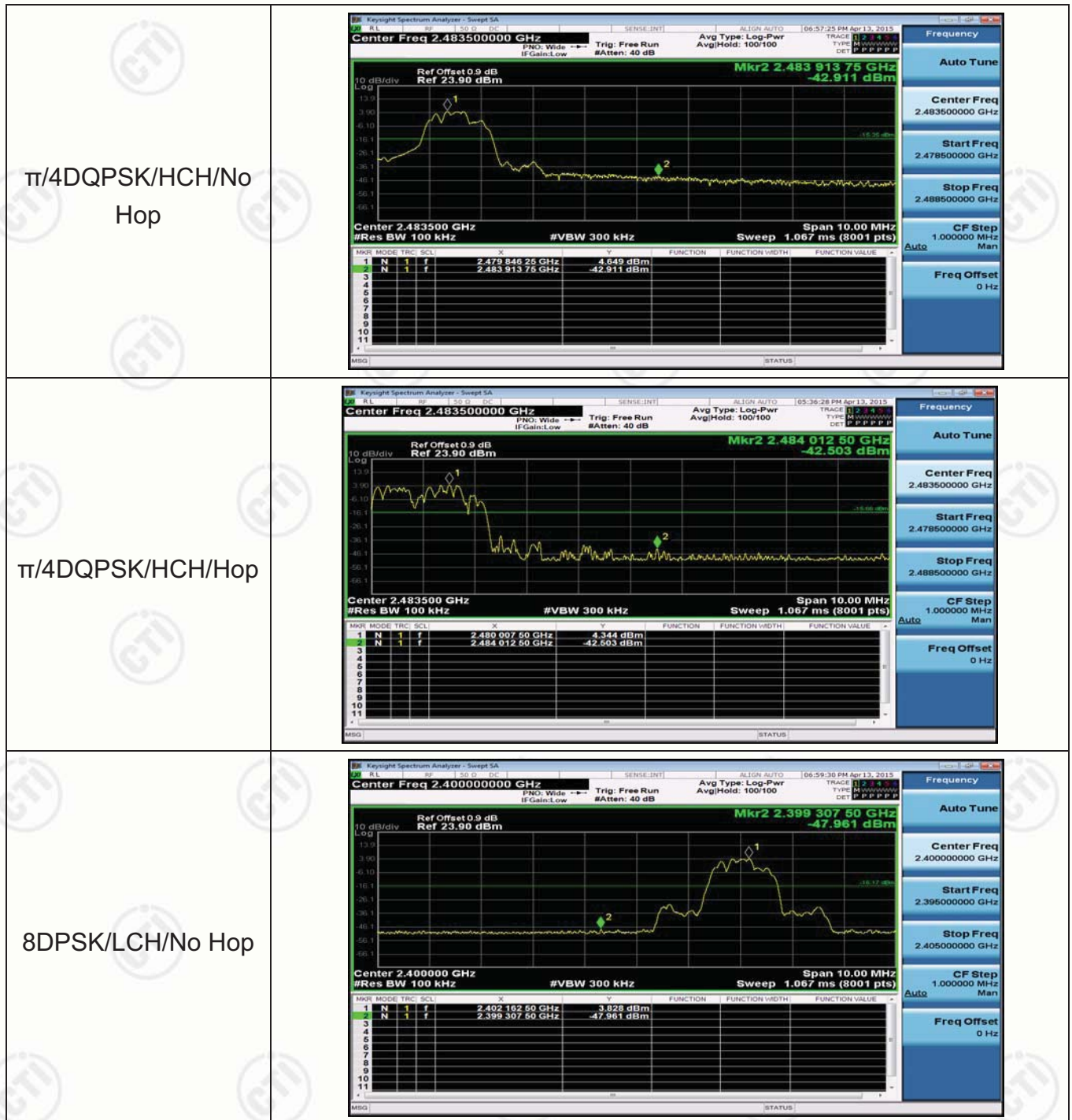
12.4. TEST RESULT

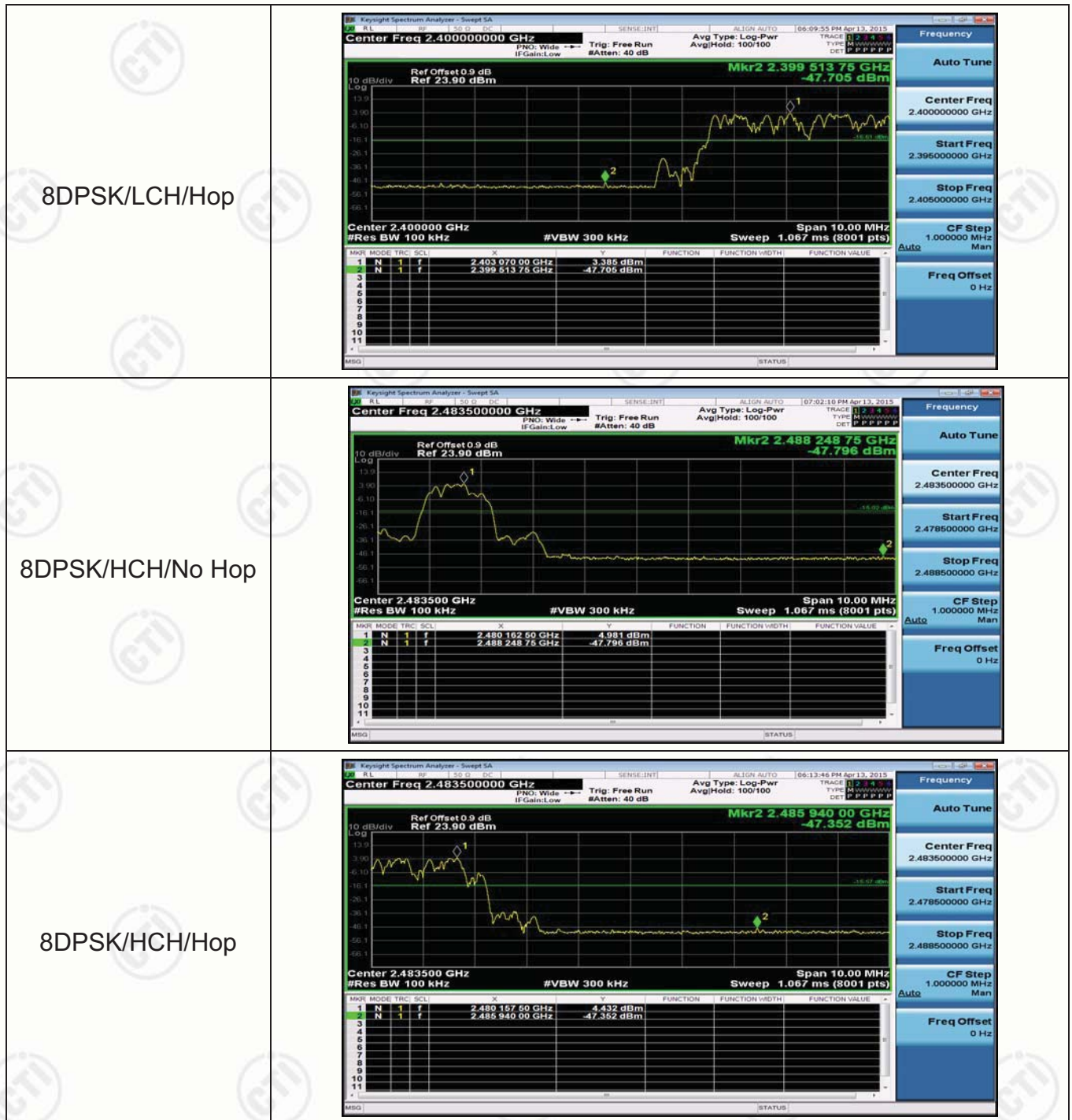
Mode	Channel	Carrier Frequency [MHz]	Carrier Power [dBm]	Frequency Hopping	Max Spurious Level [dBm]	Limit [dBm]	Verdict
GFSK	LCH	2402	4.33	Off	-34.614	-15.67	PASS
			4.35	On	-39.989	-15.65	PASS
GFSK	HCH	2480	5.55	Off	-36.891	-14.45	PASS
			5.89	On	-38.872	-14.11	PASS
π /4DQPSK	LCH	2402	3.34	Off	-34.292	-16.66	PASS
			3.36	On	-35.861	-16.64	PASS
π /4DQPSK	HCH	2480	4.65	Off	-42.911	-15.35	PASS
			4.34	On	-42.503	-15.66	PASS
8DPSK	LCH	2402	3.83	Off	-47.961	-16.17	PASS
			3.39	On	-47.705	-16.61	PASS
8DPSK	HCH	2480	4.98	Off	-47.796	-15.02	PASS
			4.43	On	-47.352	-15.57	PASS

Test Graph









13. RADIATED BANDEDGE EMISSION / RADIATED SPURIOUS EMISSION MEASUREMENT

13.1. LIMITS

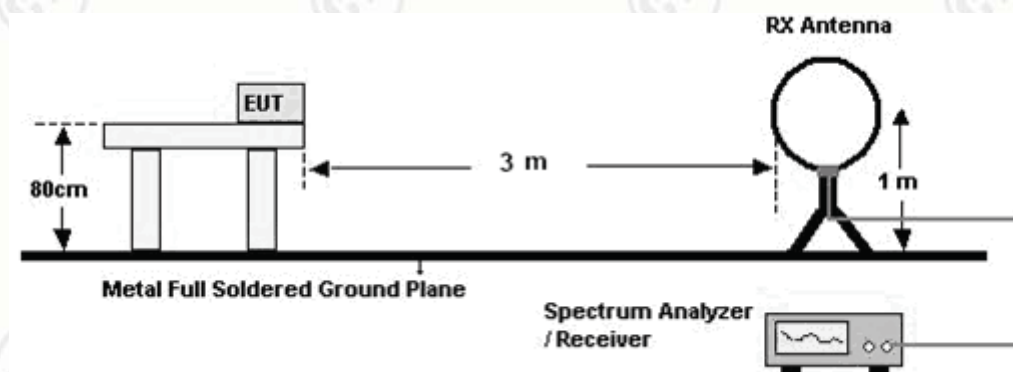
The field strength of any emissions, which appear outside of operating frequency band and restricted band specified on FCC 15.205(a), shall not exceed the general radiated emission limits as below.

Frequency (MHz)	Field strength ($\mu\text{V/m}$)	Distance (m)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

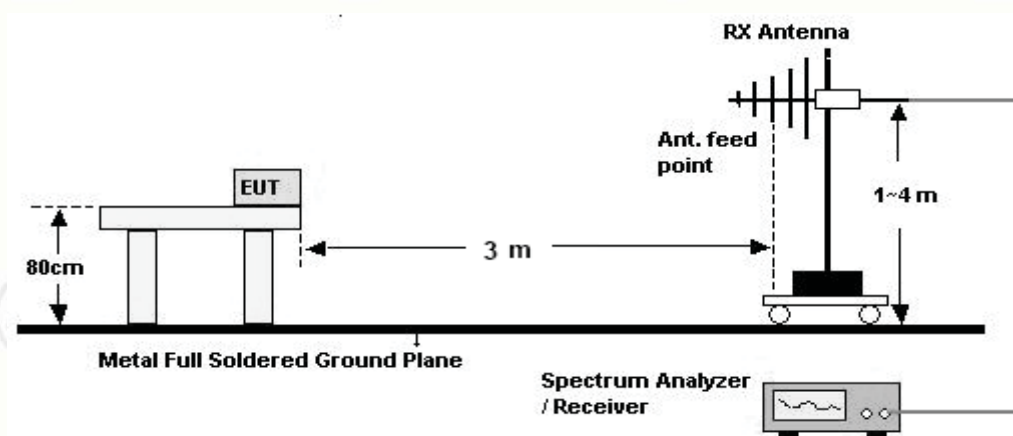
Note: the tighter limit applies at the band edges.

13.2. BLOCK DIAGRAM OF TEST SETUP

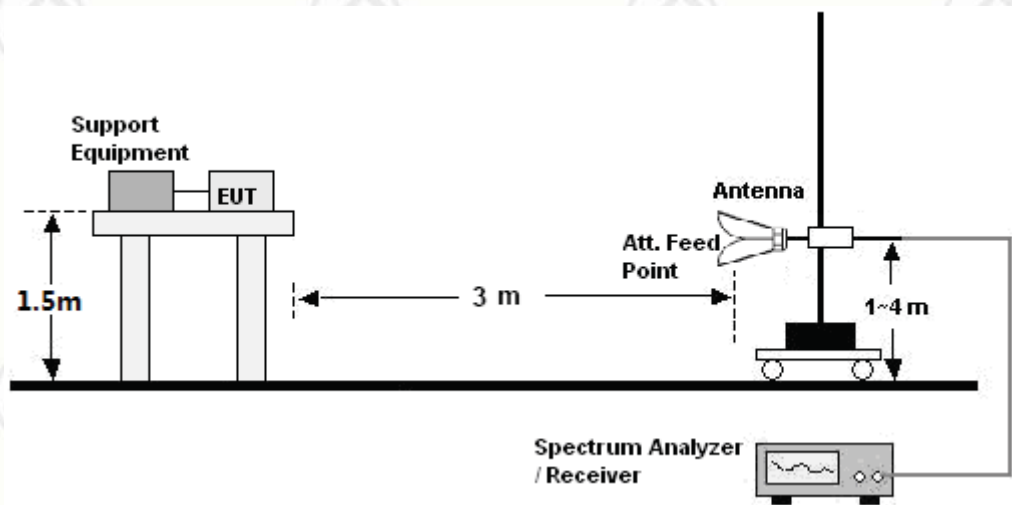
For radiated emissions from 9kHz to 30MHz



For radiated emissions from 30 - 1000MHz



For radiated emissions from 1GHz to 25GHz



13.3. TEST PROCEDURE

Below 30MHz

- The Product is placed on a turntable 0.8 meters above the ground in the chamber, 3 meter away from the antenna (loop antenna). The maximum values of the field strength are recorded by adjusting the polarizations of the test antenna and rotating the turntable.
- For each suspected emission, the Product was arranged to its worst case and then turn table was turned from 0 degrees to 360 degrees to find the maximum reading.
- The test frequency analyzer system was set to Peak Detect (300Hz RBW in 9kHz to 150kHz and 10kHz RBW in 150kHz to 30MHz) Function and Specified Bandwidth with Maximum Hold Mode.

30MHz ~ 1GHz:

- The Product was placed on the non-conductive turntable 0.8m above the ground at a chamber.
- Set the spectrum analyzer/receiver in Peak detector, Max Hold mode, and 100 kHz RBW. Record the maximum field strength of all the pre-scan process in the full band when the antenna is varied between 1~4 m in both horizontal and vertical, and the turntable is rotated from 0 to 360 degrees.
- For each frequency whose maximum record was higher or close to limit, measure its QP value (120 kHz RBW): vary the antenna's height and rotate the turntable from 0 to 360 degrees to find the height and degree where Product radiated the maximum emission, then set the test frequency analyzer/receiver to QP Detector and specified bandwidth with Maximum Hold Mode, and record the maximum value.

Above 1GHz:

- The EUT was placed on the non-conductive turntable 1.5 m above the ground at a chamber.
- Set the spectrum analyzer/receiver in Peak detector, Max Hold mode, and 1MHz RBW. Record the maximum field strength of all the pre-scan process in the full band when the

antenna is varied in both horizontal and vertical, and the turntable is rotated from 0 to 360 degrees.

13.4. TEST RESULT

All the modes of operation (X, Y, Z) were investigated and the worst-case emissions are reported.

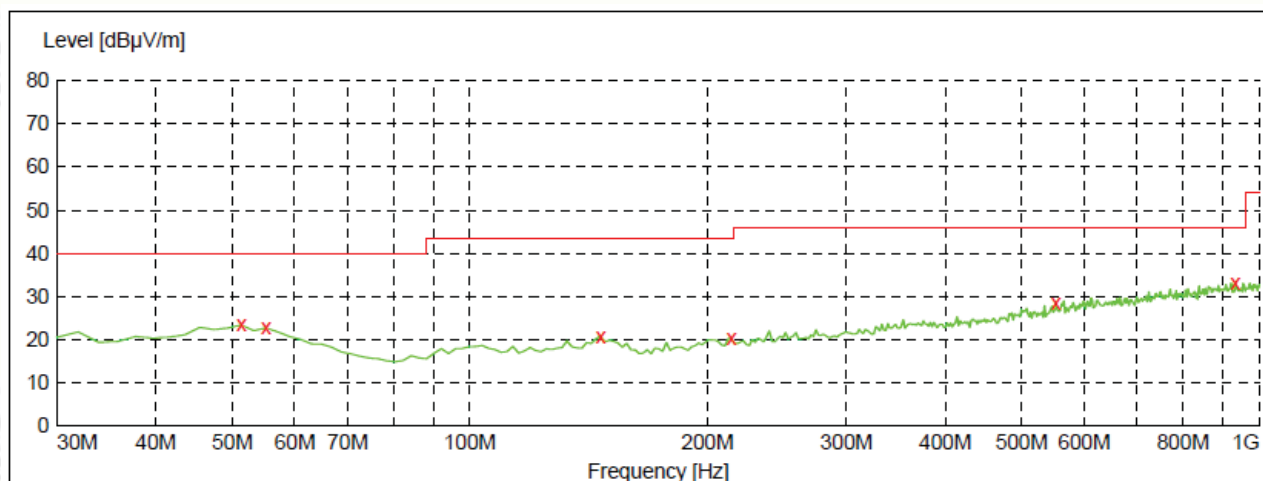
A. Below 30MHz:

No emissions were found higher than the background below 30MHz and background is lower than the limit, so it deems to compliance with the limit without recorded.

B. 30MHz ~ 1GHz:

The test data of low channel, middle channel and high channel are almost same in frequency bands 30MHz to 1GHz, and the data of middle channel (GFSK mode) are chosen as representative in below:

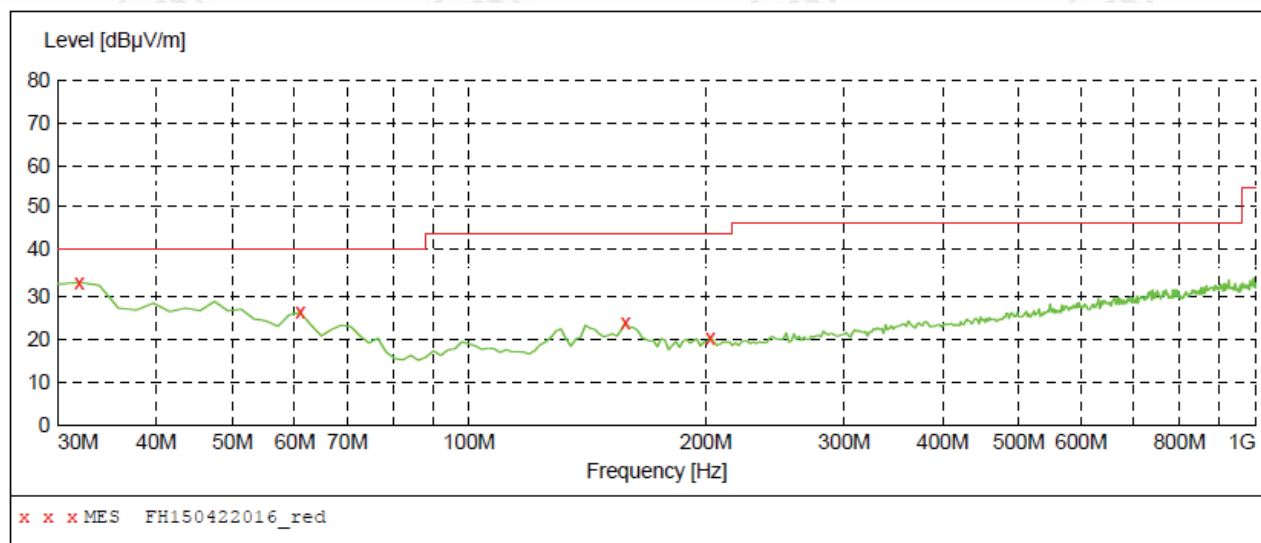
H:



x x x MES FH150422013_red

Frequency MHz	Level dBuV/m	Transd dB	Limit dBuV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
51.340000	23.40	15.9	40.0	16.6	QP	200.0	369.00	HORIZONTAL
55.220000	22.70	15.4	40.0	17.3	QP	200.0	370.00	HORIZONTAL
146.400000	20.80	10.4	43.5	22.7	QP	200.0	351.00	HORIZONTAL
214.300000	20.30	14.6	43.5	23.2	QP	200.0	142.00	HORIZONTAL
551.860000	28.50	21.8	46.0	17.5	QP	100.0	54.00	HORIZONTAL
932.100000	33.30	27.2	46.0	12.7	QP	200.0	203.00	HORIZONTAL

V:



Frequency MHz	Level dBμV/m	Transd dB	Limit dBμV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
31.940000	33.20	13.0	40.0	6.8	QP	100.0	205.00	VERTICAL
61.040000	26.30	14.5	40.0	13.7	QP	100.0	195.00	VERTICAL
158.040000	23.90	10.9	43.5	19.6	QP	100.0	38.00	VERTICAL
202.660000	20.30	14.4	43.5	23.2	QP	200.0	130.00	VERTICAL

C. Above 1GHz:
Test Results-(Measurement Distance: 3m)_Channel low_2402MHz_GFSK mode:

Frequency (MHz)	Measurement (dBuV/m)	Limit (dBuV/m)	Detector Type	Antenna (H/V)	Result (P/F)
2390.0	36.26	74	PK	H	P
2400.0	46.96	74	PK	H	P
2402.0*	86.96	---	PK	H	P
4804.0	45.12	74	PK	H	P
2390.0	35.26	74	PK	V	P
2400.0	45.26	74	PK	V	P
2402.0*	87.99	---	PK	V	P
4804.0	44.26	74	PK	V	P

*: fundamental frequency

Test Results-(Measurement Distance: 3m)_Channel middle_2441MHz_GFSK mode:

Frequency (MHz)	Measurement (dBuV/m)	Limit (dBuV/m)	Detector Type	Antenna (H/V)	Result (P/F)
2441.0*	87.36	---	PK	H	P
4882.0	46.96	74	PK	H	P
2441.0*	88.25	---	PK	V	P
4882.0	45.38	74	PK	V	P

*: fundamental frequency

Test Results-(Measurement Distance: 3m)_Channel high_2480MHz_GFSK mode:

Frequency (MHz)	Measurement (dBuV/m)	Limit (dBuV/m)	Detector Type	Antenna (H/V)	Result (P/F)
2480.0*	86.96	---	PK	H	P
2483.5	43.63	74	PK	H	P
4960.0	45.23	74	PK	H	P
2480.0*	87.99	---	PK	V	P
2483.5	42.69	74	PK	V	P
4960.0	46.21	74	PK	V	P

*: fundamental frequency

Remark:

1. The above tables show that the frequencies peak data are all below the average limit, so the average data of these frequencies are deemed to fulfill the average limits and not reported.
2. All the modes of GFSK, $\pi/4$ -DQPSK and 8DPSK have been tested. The worst case is GFSK mode, and the worst data of GFSK mode are chosen as above.
3. No emission found from 18GHz to 25GHz.
4. All outside of operating frequency band and restricted band specified are below 15.209.

14 .AC CONDUCTED EMISSION TEST

14.1. LIMITS

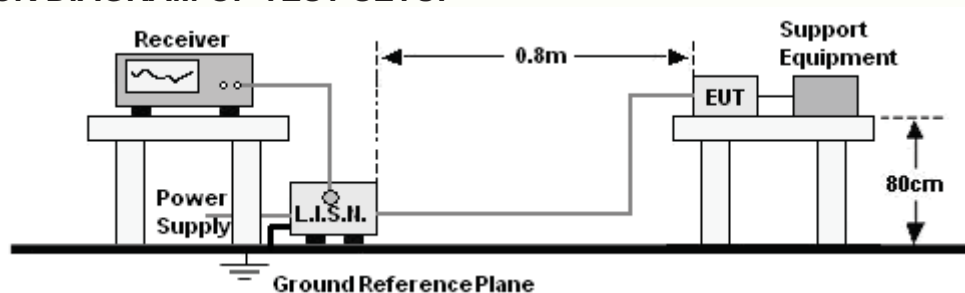
Limits for Class B digital devices

Frequency range (MHz)	Limits dB(μV)	
	Quasi-peak	Average
0,15 to 0,50	66 to 56	56 to 46
0,50 to 5	56	46
5 to 30	60	50

NOTE: 1. The lower limit shall apply at the transition frequencies.

2. The limit decreases linearly with the logarithm of the frequency in the range 0.15 to 0.50 MHz.

14.2. BLOCK DIAGRAM OF TEST SETUP



14.3. PROCEDURE OF CONDUCTED EMISSION TEST

- The Product was placed on a nonconductive table above the horizontal ground reference plane, and 0.4 m from the vertical ground reference plane, and connected to the main through Line Impedance Stability Network (L.I.S.N).
- The RBW of the receiver was set at 9 kHz in 150 kHz ~ 30MHz with Peak and AVG detector in Max Hold mode. Run the receiver's pre-scan to record the maximum disturbance generated from Product in all power lines in the full band.
- For each frequency whose maximum record was higher or close to limit, measure its QP and AVG values and record.

14.4. GRAPHS AND DATA

Product : 8" Tablet PC

Power : AC 120V/60Hz

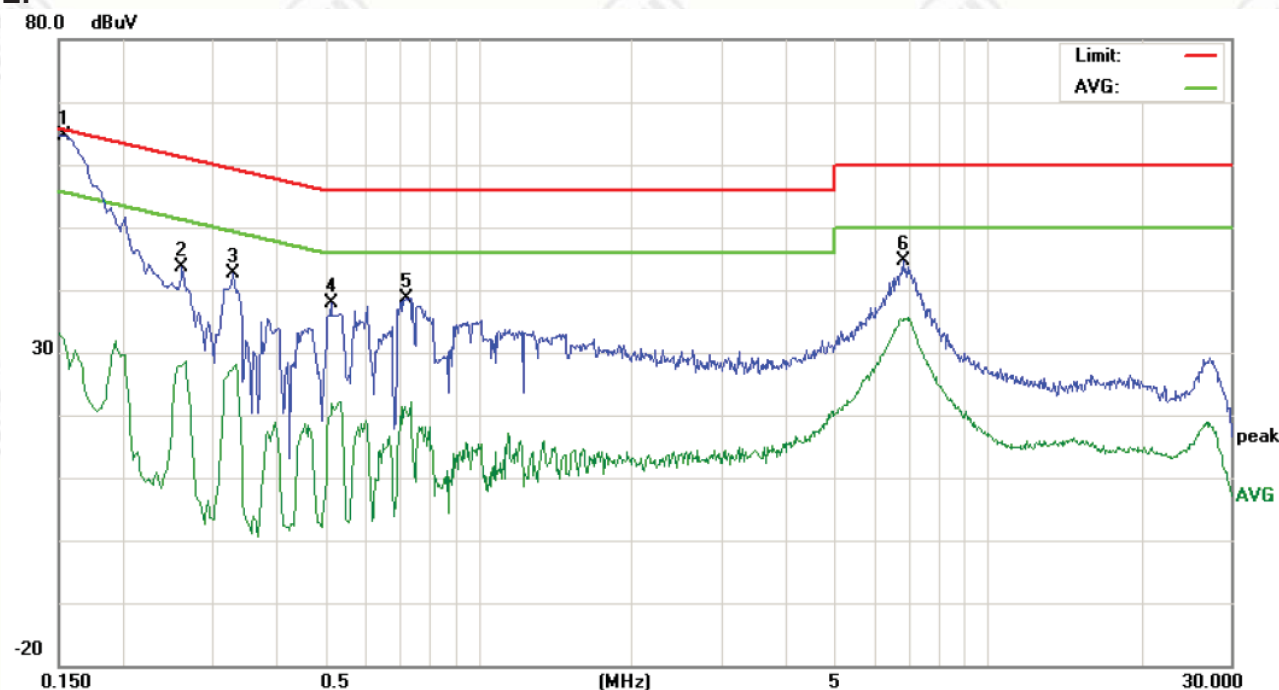
Mode : Keeping TX (BT3.0)

Model/Type reference : M8

Temperature : 22°C

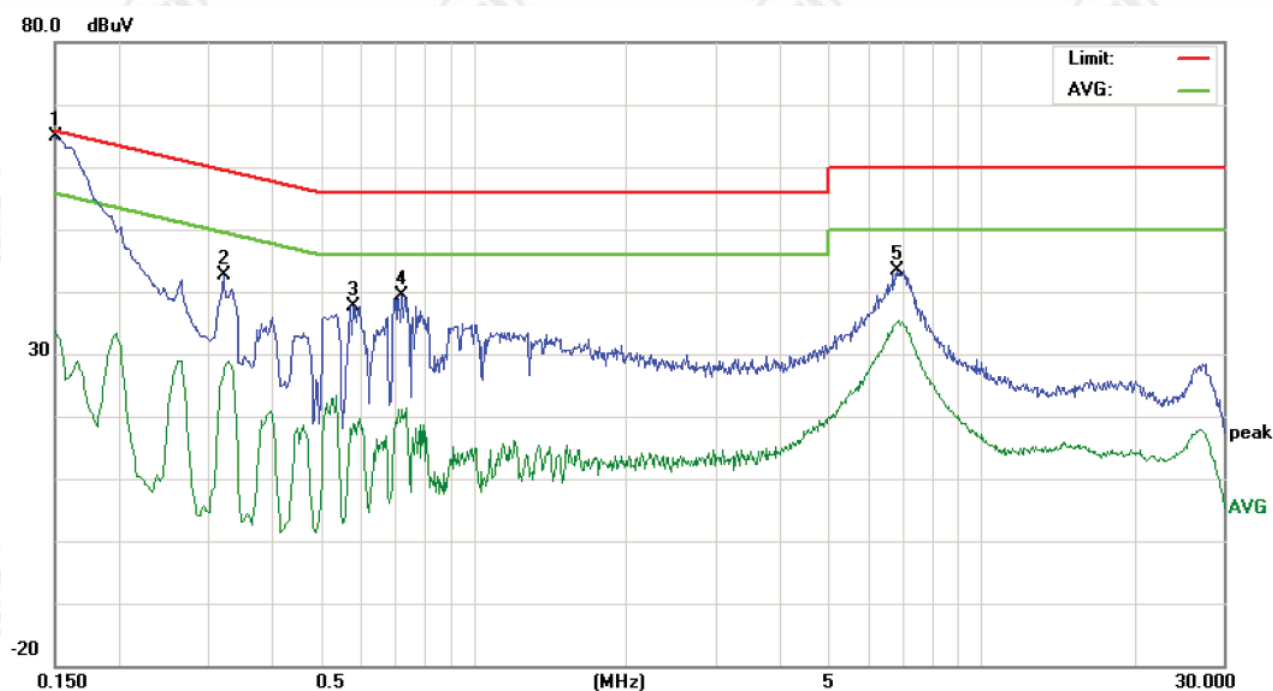
Humidity : 52%

L:



No.	Freq. MHz	Reading_Level (dBuV)			Correct Factor dB	Measurement (dBuV)			Limit (dBuV)		Margin (dB)		P/F	Comment
		Peak	QP	AVG		peak	QP	AVG	QP	AVG	QP	AVG		
1	0.1539	54.83	48.34	18.43	9.90	64.73	58.24	28.33	65.78	55.78	-7.54	-27.45	P	
2	0.2620	33.77		18.01	9.90	43.67		27.91	61.36	51.36	-17.69	-23.45	P	
3	0.3300	32.63		17.41	9.90	42.53		27.31	59.45	49.45	-16.92	-22.14	P	
4	0.5140	27.95		10.15	9.90	37.85		20.05	56.00	46.00	-18.15	-25.95	P	
5	0.7260	28.73		10.77	9.90	38.63		20.67	56.00	46.00	-17.37	-25.33	P	
6	6.8380	34.73		25.42	9.90	44.63		35.32	60.00	50.00	-15.37	-14.68	P	

N:

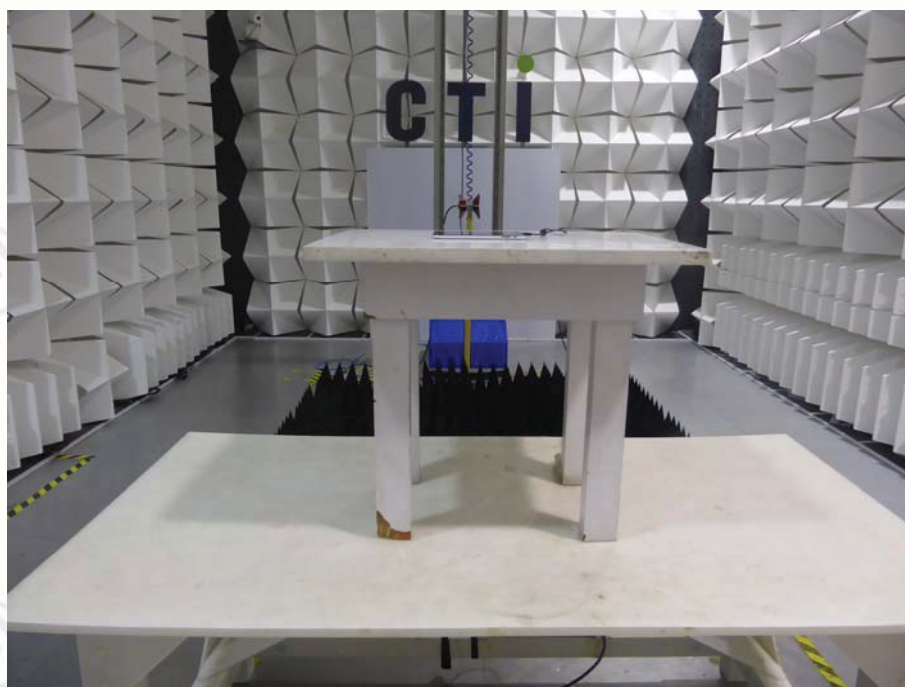


No.	Freq. MHz	Reading_Level (dBuV)			Correct Factor dB	Measurement (dBuV)			Limit (dBuV)		Margin (dB)		P/F	Comment
		Peak	QP	AVG		peak	QP	AVG	QP	AVG	QP	AVG		
1	0.1500	54.86	48.39	20.35	9.90	64.76	58.29	30.25	65.99	55.99	-7.70	-25.74	P	
2	0.3220	32.65		16.85	9.90	42.55		26.75	59.65	49.65	-17.10	-22.90	P	
3	0.5820	27.80		9.02	9.90	37.70		18.92	56.00	46.00	-18.30	-27.08	P	
4	0.7260	29.52		11.25	9.90	39.42		21.15	56.00	46.00	-16.58	-24.85	P	
5	6.8460	33.56		25.16	9.90	43.46		35.06	60.00	50.00	-16.54	-14.94	P	

APPENDIX 1 PHOTOGRAPHS OF TEST SETUP



TEST SETUP OF RADIATED EMISSION (30MHz-1GHz)



TEST SETUP OF RADIATED EMISSION (above 1GHz)



TEST SETUP OF CONDUCTED EMISSION

APPENDIX 2 EXTERNAL PHOTOGRAPHS OF PRODUCT



External View of product-1



External View of product-2



External View of product-3



External View of product-4



External View of product-5



External View of product-6



External View of product-7

APPENDIX 3 INTERNAL PHOTOGRAPHS OF PRODUCT



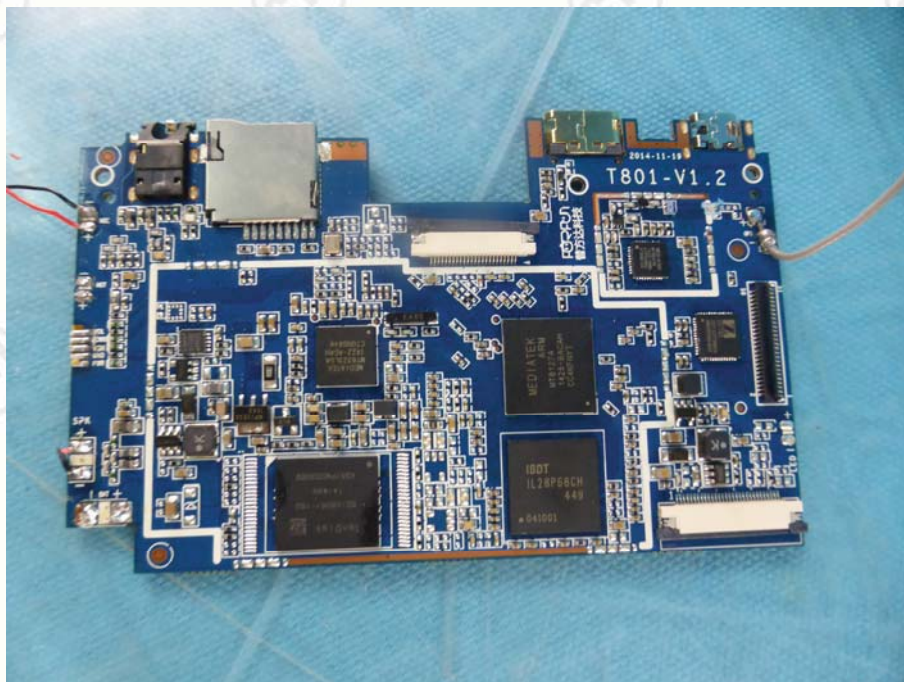
Internal View of product-1



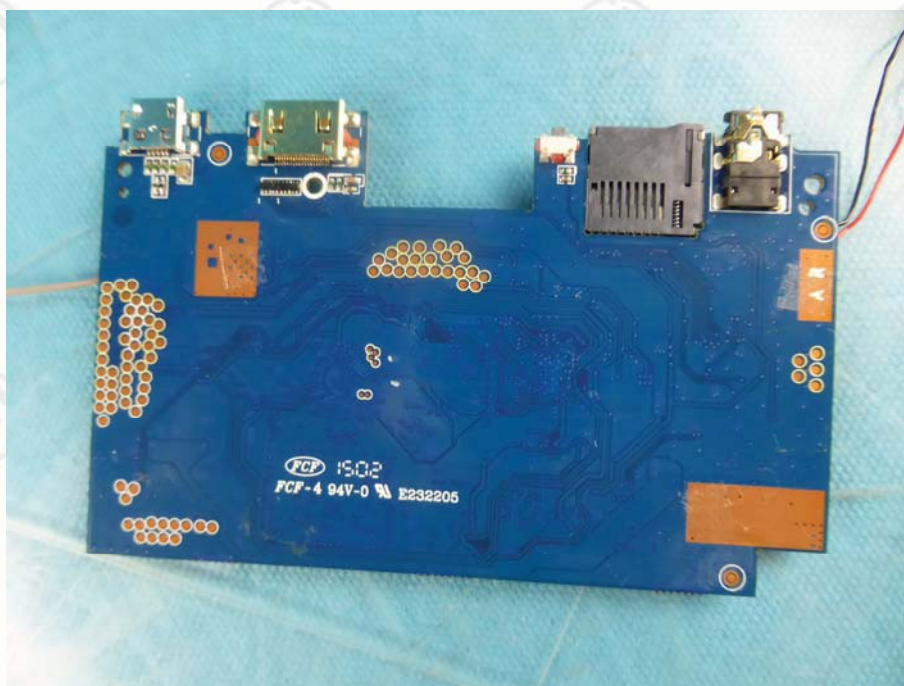
Internal View of product-2



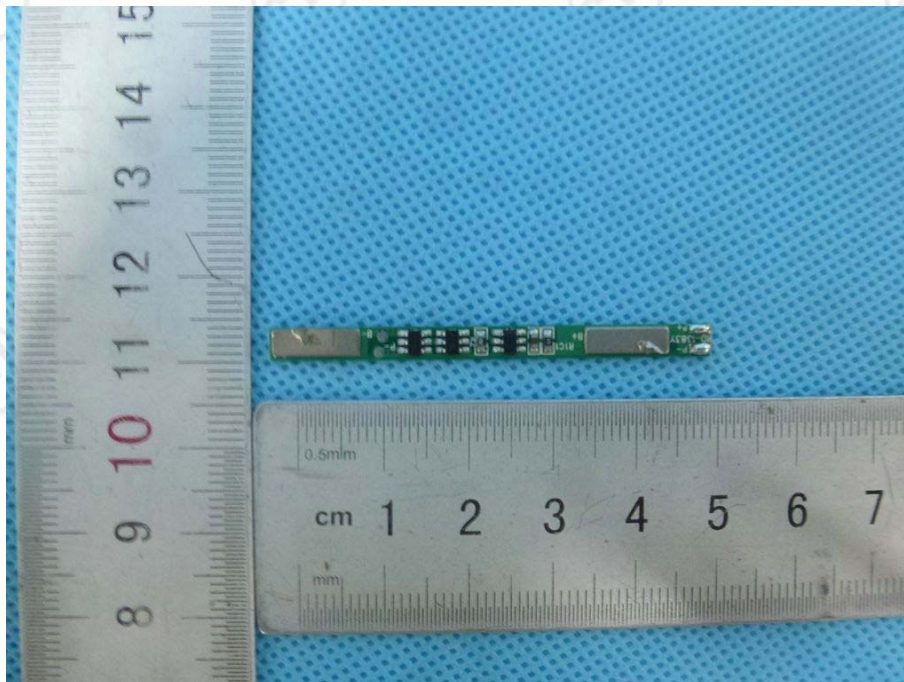
Internal View of product-3



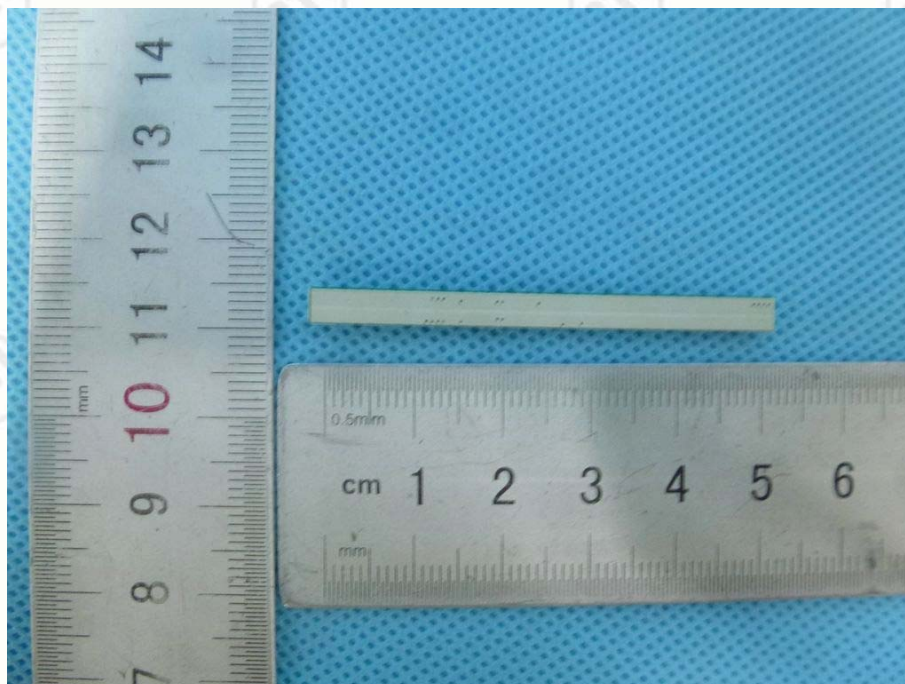
Internal View of product-4



Internal View of product-5



Internal View of product-6



Internal View of product-7



Internal View of product-8

*** End of Report ***

The test report is effective only with both signature and specialized stamp, The result(s) shown in this report refer only to the sample(s) tested. Without written approval of CTI, this report can't be reproduced except in full.