



FCC Radio Test Report

Product Name:	Tablet PC
Trademark:	epik
FCC ID:	ZFN-ELT0801
Model Name :	S084H
Prepared For :	Huike Electronics(shenzhen)Co.,Ltd
Address :	Huike industrial park, Minying industrial park, Shui tian country, Shiyan, Baoan District, Shenzhen, China
Prepared By :	DongGuan Precise Testing Service Co., Ltd.
Address :	Building D, Baoding Technology Park, Guangming Road 2, Guangming Community, Dongcheng District, Dongguan, Guangdong, China
Test Date:	March. 13 - Apr. 05, 2016
Date of Report :	Apr. 05, 2016
Report No.:	PT800423160304E-FC01



VERIFICATION OF COMPLIANCE

	Huike industrial park. Minving industrial park. Shui tian country.			
,	Huike industrial park, Minying industrial park, Shui tian country, Shiyan, Baoan District, Shenzhen, China			
Manufacture's Name: I	Huike Electronics(shenzhen)Co.,Ltd			
	Huike industrial park, Minying industrial park, Shui tian country, Shiyan, Baoan District, Shenzhen, China			
Product description				
Product name :	Tablet PC			
Trademark:	epik			
Model Name:	S084H			
Test procedure	FCC Part15.247			
Standards	ANSI C63.10:2013			
	s been tested by PTS, and the test results show that the compliance with the FCC requirements. And it is applicable only the report.			
·	ed except in full, without the written approval of PTS, this sed by PTS, personal only, and shall be noted in the revision of			
Test Result	: Pass			
Testing Engineer : Technical Manager :	August Qiu) (August Qiu) Hack Ye (Hack Ye)			

DongGuan Precise Testing Service Co., Ltd.

(Chris Du)

Fax: 86-769-23368602 Tel: 86-769-23368601

Authorized Signatory:

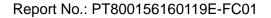




Table of Contents

	Page
1 . SUMMARY OF TEST RESULTS	5
1.1 TEST FACILITY	6
1.2 MEASUREMENT UNCERTAINTY	6
2 . GENERAL INFORMATION	7
2.1 GENERAL DESCRIPTION OF EUT	7
2.2 DESCRIPTION OF TEST MODES	9
2.3 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTE	D 10
2.4 EQUIPMENTS LIST FOR ALL TEST ITEMS	11
FOR RADIATED EMISSION TEST (BELOW 1GHZ)	11
FOR RADIATED EMISSION TEST (1GHZ ABOVE)	11
3 . EMC EMISSION TEST	13
3.1 CONDUCTED EMISSION MEASUREMENT	13
3.1.1 POWER LINE CONDUCTED EMISSION LIMITS	13
3.1.2 TEST PROCEDURE	14
3.1.3 DEVIATION FROM TEST STANDARD 3.1.4 TEST SETUP	14 14
3.1.5 EUT OPERATING CONDITIONS	14
3.1.6 TEST RESULTS	15
3.2 RADIATED EMISSION MEASUREMENT	19
3.2.1 RADIATED EMISSION LIMITS	19
3.2.2 TEST PROCEDURE	20
3.2.3 DEVIATION FROM TEST STANDARD	20
3.2.4 TEST SETUP	21
3.2.5 EUT OPERATING CONDITIONS	22
3.2.6 TEST RESULTS (BETWEEN 9KHZ – 30 MHZ) 3.2.7 TEST RESULTS (BETWEEN 30MHZ – 1GHZ)	23 24
3.2.8 TEST RESULTS (BETWEEN 30MHZ = 1GHZ) 3.2.8 TEST RESULTS (ABOVE 1000 MHZ)	24 26
4 . POWER SPECTRAL DENSITY TEST	34
4.1 APPLIED PROCEDURES / LIMIT	34
4.1.1 TEST PROCEDURE	34
4.1.2 DEVIATION FROM STANDARD	34
4.1.3 TEST SETUP	34
4.1.4 FUT OPERATION CONDITIONS	34

DongGuan Precise Testing Service Co., Ltd.

Building D, Baoding Technology Park, Guangming Road 2, Guangming Community, Dongcheng District, Dongguan, Guangdong, China

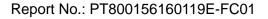




Table of Contents

	Page
4.1.5 TEST RESULTS	35
5 . BANDWIDTH TEST	38
5.1 APPLIED PROCEDURES / LIMIT	38
5.1.1 TEST PROCEDURE	38
5.1.2 DEVIATION FROM STANDARD	38
5.1.3 TEST SETUP	38
5.1.4 EUT OPERATION CONDITIONS	38
5.1.5 TEST RESULTS	39
6 . PEAK OUTPUT POWER TEST	42
6.1 APPLIED PROCEDURES / LIMIT	42
6.1.1 TEST PROCEDURE	42
6.1.2 DEVIATION FROM STANDARD	42
6.1.3 TEST SETUP	42
6.1.4 EUT OPERATION CONDITIONS	42
6.1.5 TEST RESULTS	43
7 . CONDUCTED SPURIOUS EMISSIONS AND BAND EDGES TEST	44
7.1 DEVIATION FROM STANDARD	45
7.2 TEST SETUP	45
7.3 EUT OPERATION CONDITIONS	45
7.4 TEST RESULTS FOR CONDUCTED SPURIOUS EMISSIONS TEST	45
7.5 TEST RESULTS FOR BAND EDGES TEST	48
8 . ANTENNA REQUIREMENT	50
8.1 STANDARD REQUIREMENT	50
8.2 EUT ANTENNA	50



1. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

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

NOTE:

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

Tel: 86-769-23368601



1.1 TEST FACILITY

FCC Registration No.: 371540, IC Registration No.: 12191A-1

Dongguan Precise Testing Service Co., Ltd.

Add.: Building D,Baoding Technology Park,Guangming Road2,Dongcheng District, Dongguan, Guangdong, China

Report No.: PT800156160119E-FC01

1.2 MEASUREMENT UNCERTAINTY

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

No.	Item	Uncertainty
1	Conducted Emission Test	±1.38dB
2	RF power,conducted	±0.16dB
3	Spurious emissions,conducted	±0.21dB
4	All emissions,radiated(<1G)	±4.68dB
5	All emissions,radiated(>1G)	±4.89dB
6	Temperature	±0.5°C
7	Humidity	±2%



2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

Equipment	Tablet PC			
Trade Name	epik			
Model Name	S084H			
Product Description	Modulation Type: Bit Rate of Transmitter Number Of Channel Antenna Designation: Antenna Gain (dBi) Based on the application User's Manual, the EUT Device. More details of the User's Manual.	802.11g: 6-54Mbps 802.11n-HT20: 6.5-65 Mbps BT LE: 1 Mbps 802.11b/g/n20MHz:11CH BT LE: 40CH Please see Note 3. 2.35dBi In, features, or specification exhibited in is considered as an ITE/Computing EUT technical specification, please refer to		
Channel List:	Please refer to the Note 2.			
Power supply:	DC 3.7V by 4000mAh battery; Charging voltage: DC 5V, 2.0A			
Connecting I/O Port(s)	Please refer to the User's Manual			

Note:

Fax: 86-769-23368602 http://www.pts-testing.com Tel: 86-769-23368601



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

Report No.: PT800156160119E-FC01

2.

	Channel List for 802.11b/g/n(20)						
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
01	2412	04	2427	07	2442	10	2457
02	2417	05	2432	08	2447	11	2462
03	2422	06	2437	09	2452		

3.

Table for Filed Antenna

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)	NOTE
Α	N/A	wifi-R65(F022- SLS)	PIFA Antenna	RF port	2.35	



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.

Pretest Mode	Description
Mode 1	802.11b CH1/ CH6/ CH11
Mode 2	802.11g CH1/ CH6/ CH11
Mode 3	802.11n(HT20) CH1/ CH6/ CH11
Mode 4	BT LE CH1/ CH20/ CH40
Mode 5	Link Mode

For Conducted Emission			
Final Test Mode	Description		
Mode 5	Link Mode		

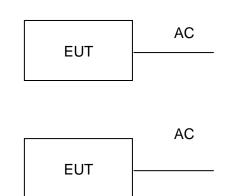
For Radiated Emission				
Final Test Mode	Description			
Mode 1	802.11b CH1/ CH6/ CH11			
Mode 2	802.11g CH1/ CH6/ CH11			
Mode 3	802.11n(HT20) CH1/ CH6/ CH11			
Mode 4	BT LE CH1/ CH20/ CH40			
Mode 5	Link Mode			

Note:

- (1) The measurements are performed at the highest, middle, lowest available channels.
- (2) The measurements are performed at all Bit Rate of Transmitter, the worst data was reported

2.3 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

<u> </u>	1 1	— ! !	T 1
Conc	uctea	Emission	Test



Radiated Spurious Emission Test

2.3.1 DESCRIPTION OF SUPPORT UNITS(CONDUCTED MODE)

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

Item	Equipment	Mfr/Brand	Model/Type No.	Series No.	Note

Item	Shielded Type	Ferrite Core	Length	Note
1	Shielded	With core	80	USB line

Note:

(2) For detachable type I/O cable should be specified the length in cm in 『Length』 column.

2.4 EQUIPMENTS LIST FOR ALL TEST ITEMS

FOR RADIATED EMISSION TEST (BELOW 1GHZ)

Name of Equipment	Manufacturer	Model	Serial No.	Last Cal.	Next Cal.
EMI Test Receiver	Rohde & Schwarz	ESCI	101417	July 4, 2	July 3, 2016
Trilog Broadband Antenna (25M-1GHz)	SCHWARZBECK	VULB9160	9160-3355	July 4, 2015	July 3, 2016
Signal Amplifier	SCHWARZBECK	BBV 9475	9745-0013	July 4, 2015	July 3, 2016
RF Cable	SCHWARZBECK	AK9515E	96221	July 4, 2015	July 3, 2016
3m Anechoic Chamber	CHENGYU	966	PTS-001	June 6, 2015	June 5, 2016
MULTI-DEVICE Positioning Controller	Max-Full	MF-7802	MF780208339	N/A	N/A
Active loop antenna (9K-30MHz)	Schwarzbeck	FMZB1519	1519-038	June 6, 2015	June 5, 2016
Spectrum analyzer	Agilent	E4407B	MY46185649	June 6, 2015	June 5, 2016

FOR RADIATED EMISSION TEST (1GHZ ABOVE)

Name of Equipment	Manufacturer	Model	Serial No.	Last Cal.	Next Cal.
EMI Test Receiver	Rohde & Schwarz	ESCI	101417	July 4, 2015	July 3, 2016
Horn Antenna (1G-18GHz)	SCHWARZBECK	BBHA9120D	9120D-1246	July 11, 2015	July 10, 2016
Spectrum Analyzer	Agilent	E4411B	MY4511453	July 4, 2015	July 3, 2016
Signal Amplifier	SCHWARZBECK	BBV 9718	9718-269	July 7, 2015	July 6, 2016
RF Cable	SCHWARZBECK	AK9515H	96220	July 8, 2015	July 7, 2016
3m Anechoic Chamber	CHENGYU	966	PTS-001	June 6, 2015	June 5, 2016
MULTI-DEVICE Positioning Controller	Max-Full	MF-7802	MF780208339	N/A	N/A

DongGuan Precise Testing Service Co., Ltd.

Page 12 of 50 Report No.: PT800156160119E-FC01

Horn Ant (18G-40GHz) Schwarzbeck	BBHA 9170	9170-181	June 6, 2015	June 5, 2016
----------------------------------	-----------	----------	--------------	--------------

Note: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to CEPREI/CHINA and NIM/CHINA

2. N/A = No Calibration Request.

FOR CONDUCTED EMISSION TEST:

Name of Equipment	Manufacturer	Model	Serial No.	Last Cal.	Next Cal.
EMI Test Receiver	Rohde & Schwarz	ESCI	101417	July 4, 2015	July 3, 2016
Signal analyzer	Agilent	N9020A	MY51550378	July 8, 2015	July 7, 2016
Signal analyzer	Agilent	E4407B	MY3486729	June 6, 2015	June 5, 2016
Artificial Mains Network	Narda	L2-16B	000WX31025	July 8, 2015	July 7, 2016
Artificial Mains Network (AUX)	Narda	L2-16B	000WX31026	July 8, 2015	July 7, 2016
RF Cable	SCHWARZBECK	AK9515E	96222	July 4, 2015	July 3, 2016
Shielded Room	CHENGYU	843	PTS-002	June 6, 2015	June 5, 2016
Power Meter	Rohde & Schwarz	NRVS	100432	June 6, 2015	June 5, 2016
Power Sensor	Rohde & Schwarz	NRV-Z51	10456	June 6, 2015	June 5, 2016
Power Sensor	Rohde & Schwarz	NRV-Z32	10084	June 6, 2015	June 5, 2016

Note: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to CEPREI/CHINA and NIM/CHINA



3. EMC EMISSION TEST

3.1 CONDUCTED EMISSION MEASUREMENT

3.1.1 POWER LINE CONDUCTED EMISSION Limits (Frequency Range 150KHz-30MHz)

FREQUENCY (MHz)	Class A (dBuV)		Class B (dBuV)		Standard
FREQUENCY (MIDZ)	Quasi-peak	Average	Quasi-peak	Average	Standard
0.15 -0.5	79.00	66.00	66 - 56 *	56 - 46 *	CISPR
0.50 -5.0	73.00	60.00	56.00	46.00	CISPR
5.0 -30.0	73.00	60.00	60.00	50.00	CISPR

0.15 -0.5	79.00	66.00	66 - 56 *	56 - 46 *	FCC
0.50 -5.0	73.00	60.00	56.00	46.00	FCC
5.0 -30.0	73.00	60.00	60.00	50.00	FCC

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 placed 0.8 meters from the horizontal 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.

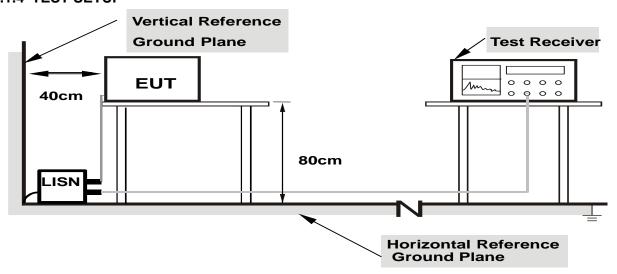
Report No.: PT800156160119E-FC01

- 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 DEVIATION FROM TEST STANDARD

No deviation

3.1.4 TEST SETUP



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

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

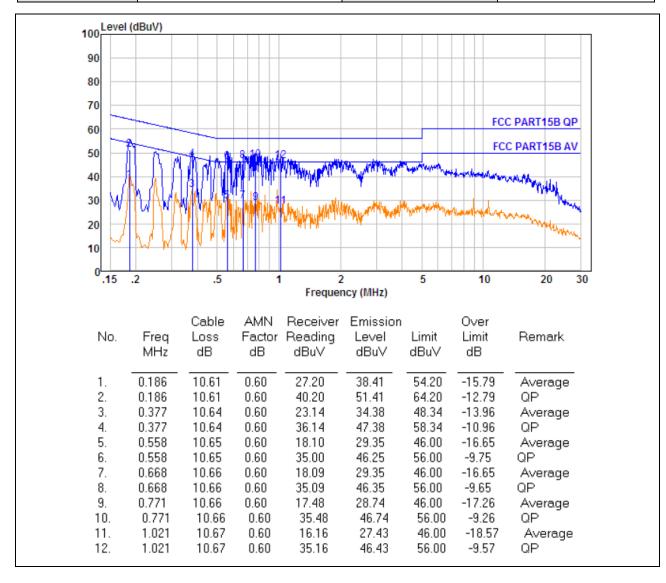
from other units and other metal planes

3.1.5 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.

3.1.6 TEST RESULTS

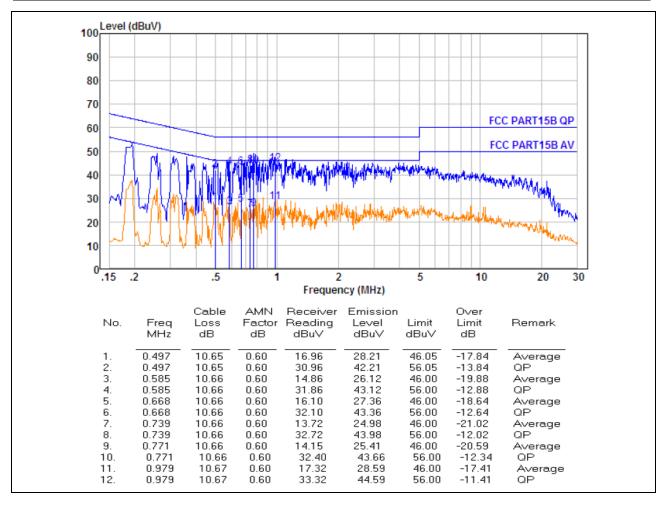
EUT:	Tablet PC	Model Name. :	S084H
Temperature :	26 ℃	Relative Humidity:	54%
Pressure :	1010hPa	Phase :	L
Test Voltage :	AC120V/60Hz	Test Mode :	Mode 5





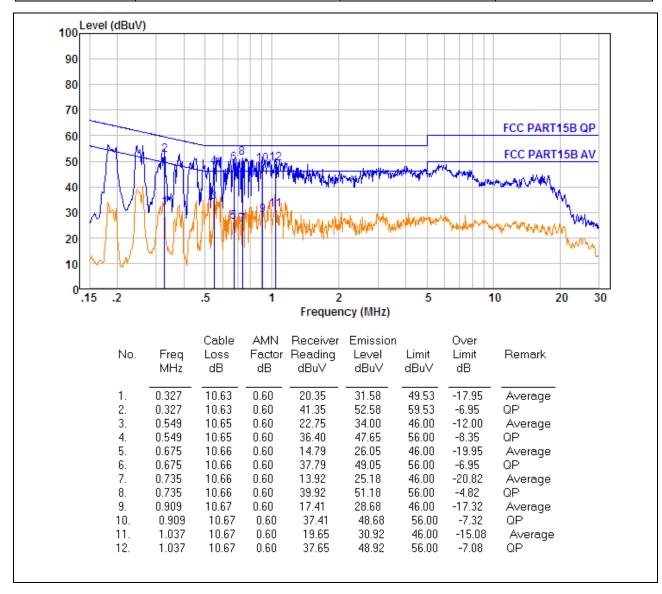
EUT :	Tablet PC	Model Name. :	S084H
Temperature :	26 ℃	Relative Humidity:	54%
Pressure :	1010hPa	Phase :	N
Test Voltage :	AC120V/60Hz	Test Mode :	Mode 5

Page 16 of 50





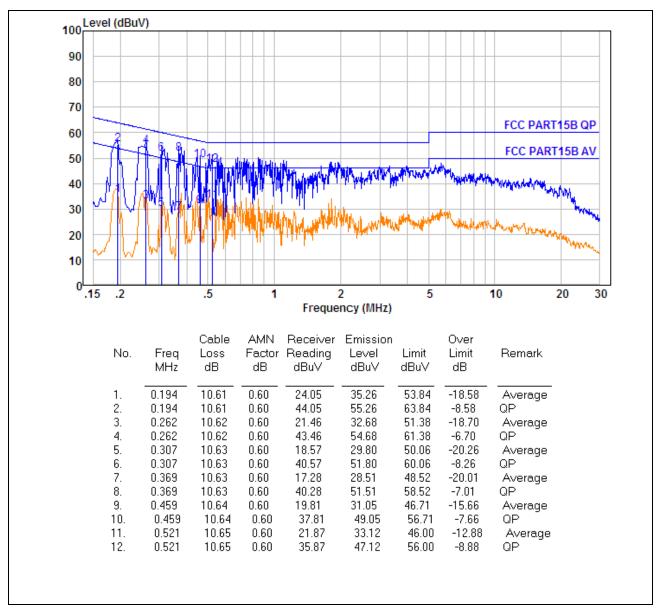
EUT:	Tablet PC	Model Name. :	S084H
Temperature :	26 ℃	Relative Humidity:	54%
Pressure :	1010hPa	Phase :	L
Test Voltage :	AC 240V/50Hz	Test Mode :	Mode 5





EUT:	Tablet PC	Model Name. :	S084H
Temperature :	26 ℃	Relative Humidity:	54%
Pressure :	1010hPa	Phase :	N
Test Voltage :	AC 240V/50Hz	Test Mode :	Mode 5

Page 18 of 50



3.2 RADIATED EMISSION MEASUREMENT

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

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

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

LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000MHz)

	Class A (dBu	ıV/m) (at 3M)	Class B (dBuV/m) (at 3M)		
FREQUENCY (MHz)	PEAK	AVERAGE	PEAK	AVERAGE	
Above 1000	80	60	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).

Spectrum Parameter	Setting		
Attenuation	Auto		
Start Frequency	1000 MHz		
Stop Frequency	10th carrier harmonic		
RB / VB (emission in restricted	4 Mile / 4 Mile for Dook 4 Mile / 40/Jefor Average		
band)	1 MHz / 1 MHz for Peak, 1 MHz / <i>10Hz</i> for Average		

Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~150kHz / RB 200Hz for QP
Start ~ Stop Frequency	150kHz~30MHz / RB 9kHz for QP
Start ~ Stop Frequency	30MHz~1000MHz / RB 120kHz for QP

DongGuan Precise Testing Service Co., Ltd.



3.2.2 TEST PROCEDURE

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

Report No.: PT800156160119E-FC01

- b. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter open area test site. The table was rotated 360 degrees to determine the position of the highest radiation.
- c. The height of the equipment or of the substitution antenna shall be 0.8 m; the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
- 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.

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

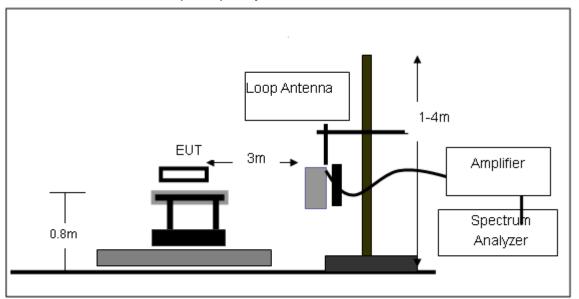
3.2.3 DEVIATION FROM TEST STANDARD

No deviation

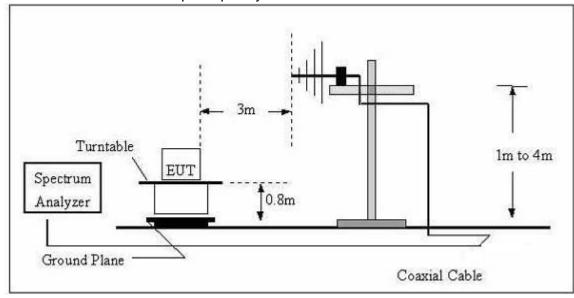


3.2.4 TEST SETUP

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

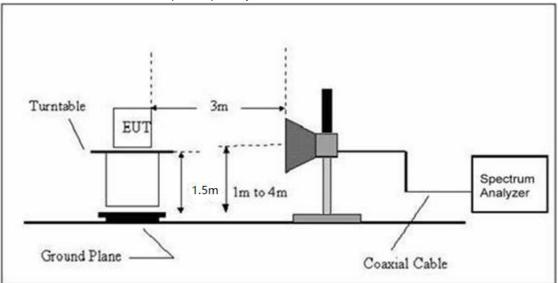


(B) Radiated Emission Test-Up Frequency 30MHz~1GHz





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



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.



3.2.6 TEST RESULTS (BETWEEN 9KHZ - 30 MHZ)

EUT:	Tablet PC	Model Name. :	S084H
Temperature:	20 ℃	Relative Humidtity:	48%
Pressure:	1010 hPa	Test Voltage:	DC 3.7V
Test Mode:	TX	Polarization :	

Report No.: PT800156160119E-FC01

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

NOTE:

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

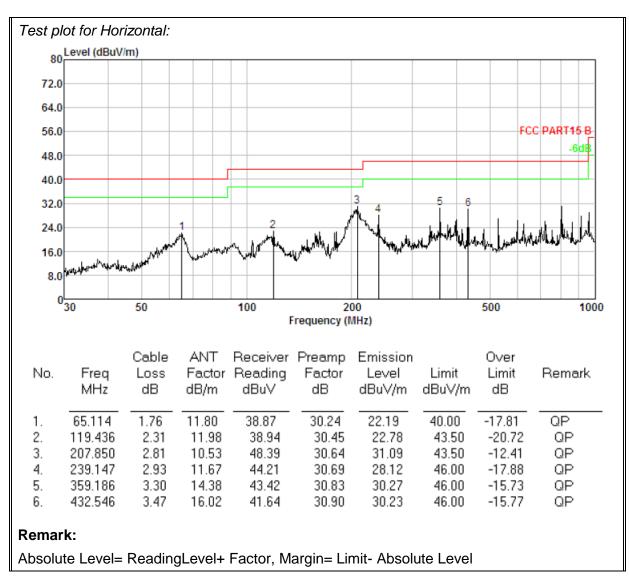
Distance extrapolation factor =40 log (specific distance/test distance)(dB);

Limit line = specific limits(dBuv) + distance extrapolation factor.



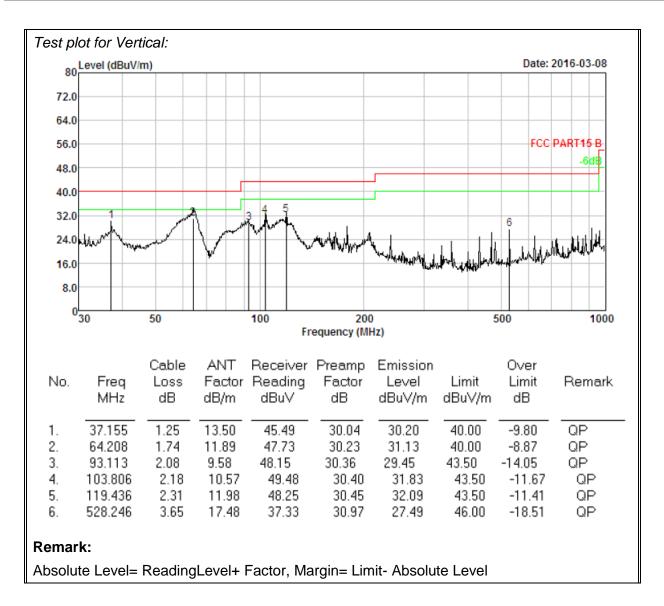
3.2.7 TEST RESULTS (BETWEEN 30MHZ - 1GHZ)

EUT:	Tablet PC	Model Name. :	S084H
Temperature :	20 ℃	Relative Humidity:	48%
Pressure:	1010 hPa	Test Voltage:	DC 3.7V
Test Mode:	Mode 1		



DongGuan Precise Testing Service Co., Ltd.





DongGuan Precise Testing Service Co., Ltd.



3.2.8 TEST RESULTS (ABOVE 1000 MHZ)

802.11b

Report No.: PT800156160119E-FC01

Normal Voltage

Polar	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector
(H/V)	(MHz)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	Туре
		op	eration fre	quency:2412			
V	4824.32	61.04	-3.60	57.44	74.00	-16.56	Pk
V	4824.32	45.71	-3.60	42.11	54.00	-11.89	AV
Н	4824.32	63.94	-3.60	60.34	74.00	-13.66	Pk
Н	4824.32	48.44	-3.60	44.84	54.00	-9.16	AV

Remark:

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

802.11b

Normal Voltage

Polar	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector
(H/V)	(MHz)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	Туре
		ор	eration fre	quency:2437			
V	4874.21	60.98	-3.64	57.34	74.00	-16.66	Pk
V	4874.21	45.89	-3.64	42.25	54.00	-11.75	AV
Н	4874.21	64.08	-3.64	60.44	74.00	-13.56	Pk
Н	4874.21	48.06	-3.64	44.42	54.00	-9.58	AV

Remark:

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

802.11b

Normal Voltage

Polar	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector	
(H/V)	(MHz)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	Туре	
	operation frequency:2462							
V	4924.44	61.95	-3.66	58.29	74.00	-15.71	Pk	
V	4924.44	45.83	-3.66	42.17	54.00	-11.83	AV	
Н	4924.44	63.11	-3.66	59.45	74.00	-14.55	Pk	
Н	4924.44	47.98	-3.66	44.32	54.00	-9.68	AV	

Remark:

802.11g

Normal Voltage

Polar (H/V)	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(11/4)	(MHz)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	Турс
		ор	eration fre	quency:2412			
V	4824.33	59.49	-3.60	55.89	74.00	-18.11	Pk
V	4824.33	45.15	-3.60	41.55	54.00	-12.45	AV
Н	4824.33	62.53	-3.60	58.93	74.00	-15.07	Pk
Н	4824.33	47.17	-3.60	43.57	54.00	-10.43	AV

Remark:

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

802.11g

Normal Voltage

Polar	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector
(H/V)	(MHz)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	Туре
		ор	eration fre	quency:2437			
V	4874.13	59.98	-3.64	56.34	74.00	-17.66	Pk
V	4874.13	44.75	-3.64	41.11	54.00	-12.89	AV
Н	4874.13	61.96	-3.64	58.32	74.00	-15.68	Pk
Н	4874.13	47.50	-3.64	43.86	54.00	-10.14	AV

Remark:

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

802.11g

Normal Voltage

Polar	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector			
(H/V)	(MHz)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	Туре			
	operation frequency:2462									
V	4924.45	60.10	-3.66	56.44	74.00	-17.56	Pk			
V	4924.45	45.39	-3.66	41.73	54.00	-12.27	AV			
Н	4924.45	61.82	-3.66	58.16	74.00	-15.84	Pk			
Н	4924.45	47.30	-3.66	43.64	54.00	-10.36	AV			

Remark:

802.11n-HT20

Normal Voltage

Polar	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector			
(H/V)	(MHz)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	Туре			
	operation frequency:2412									
V	4824.34	59.38	-3.60	55.78	74.00	-18.22	Pk			
V	4824.34	45.23	-3.60	41.63	54.00	-12.37	AV			
Н	4824.34	61.26	-3.60	57.66	74.00	-16.34	Pk			
Н	4824.34	47.43	-3.60	43.83	54.00	-10.17	AV			

Remark:

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

802.11n-HT20

Normal Voltage

Polar	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector			
(H/V)	(MHz)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	Туре			
	operation frequency:2437									
V	4874.52	58.75	-3.64	55.11	74.00	-18.89	Pk			
V	4874.52	45.20	-3.64	41.56	54.00	-12.44	AV			
Н	4874.52	61.06	-3.64	57.42	74.00	-16.58	Pk			
Н	4874.52	46.77	-3.64	43.13	54.00	-10.87	AV			

Remark:

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

802.11n-HT20

Normal Voltage

Polar	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector			
(H/V)	(MHz)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	Туре			
	operation frequency:2462									
V	4924.33	59.47	-3.66	55.81	74.00	-18.19	Pk			
V	4924.33	44.85	-3.66	41.19	54.00	-12.81	AV			
Н	4924.33	61.23	-3.66	57.57	74.00	-16.43	Pk			
Н	4924.33	46.90	-3.66	43.24	54.00	-10.76	AV			

Remark:



BT LE

Normal Voltage

Polar	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector		
(H/V)	(MHz)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	Туре		
	operation frequency:2412								
V	4804.34	55.28	-1.06	54.22	74.00	-19.78	Pk		
V	4804.34	40.51	-1.06	39.45	54.00	-14.55	AV		
Н	4804.34	56.28	-1.06	55.22	74.00	-18.78	Pk		
Н	4804.34	41.63	-1.06	40.57	54.00	-13.43	AV		

Remark:

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

BT LE

Normal Voltage

Polar	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector		
(H/V)	(MHz)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	Туре		
	operation frequency:2437								
V	4880.34	55.89	-0.93	54.96	74.00	-19.04	Pk		
V	4880.34	40.17	-0.93	39.24	54.00	-14.76	AV		
Н	4880.34	56.26	-0.93	55.33	74.00	-18.67	Pk		
Н	4880.34	41.57	-0.93	40.64	54.00	-13.36	AV		

Remark:

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

BT LE

Normal Voltage

Polar	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector			
(H/V)	(MHz)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	Туре			
	operation frequency:2462									
V	4960.55	54.97	-0.87	54.10	74.00	-19.90	Pk			
V	4960.55	40.70	-0.87	39.83	54.00	-14.17	AV			
Н	4960.55	56.54	-0.87	55.67	74.00	-18.33	Pk			
Н	4960.55	41.40	-0.87	40.53	54.00	-13.47	AV			

Remark:

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

The measurements were more than 20 dB below the limit and not reported

Note: 1. Measuring frequencies from 9k~26.5GHz, No emission found between lowest internal used/generated frequency to 30MHz.

2. Radiated emissions measured in frequency range from 9k~26.5GHz were made with an instrument using Peak detector mode.

DongGuan Precise Testing Service Co., Ltd.



Results of Restricted band Test:

802.11b

Normal Voltage

Polar	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector
(H/V)	(MHz)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	Туре
		ор	eration fre	quency:2412			
V	2390.00	56.43	-3.62	52.81	74.00	-21.19	Pk
V	2390.00	41.05	-3.62	37.43	54.00	-16.57	AV
V	2400.00	56.84	-3.62	53.22	74.00	-20.78	Pk
V	2400.00	42.28	-3.62	38.66	54.00	-15.34	AV
Н	2390.00	56.15	-3.62	52.53	74.00	-21.47	Pk
Н	2390.00	40.86	-3.62	37.24	54.00	-16.76	AV
Н	2400.00	57.48	-3.62	53.86	74.00	-20.14	Pk
Н	2400.00	42.07	-3.62	38.45	54.00	-15.55	AV

Remark:

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

802.11b

Normal Voltage

Polar	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector			
(H/V)	(MHz)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	Туре			
	operation frequency:2462									
V	2483.50	55.04	-3.59	51.45	74.00	-22.55	Pk			
V	2483.50	40.42	-3.59	36.83	54.00	-17.17	AV			
Н	2483.50	55.51	-3.59	51.92	74.00	-22.08	Pk			
Н	2483.50	40.16	-3.59	36.57	54.00	-17.43	AV			

Remark:



802.11g

Normal Voltage

Polar	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector
(H/V)	(MHz)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	Туре
		ор	eration fre	equency:2412			
V	2390.00	56.05	-3.62	52.43	74.00	-21.57	Pk
V	2390.00	40.63	-3.62	37.01	54.00	-16.99	AV
V	2400.00	57.29	-3.62	53.67	74.00	-20.33	Pk
V	2400.00	42.55	-3.62	38.93	54.00	-15.07	AV
Н	2390.00	56.08	-3.62	52.46	74.00	-21.54	Pk
Н	2390.00	40.74	-3.62	37.12	54.00	-16.88	AV
Н	2400.00	57.30	-3.62	53.68	74.00	-20.32	Pk
Н	2400.00	41.86	-3.62	38.24	54.00	-15.76	AV

Remark:

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

802.11g

Normal Voltage

Polar	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector	
(H/V)	(MHz)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	Туре	
	operation frequency:2462							
V	2483.50	55.04	-3.59	51.45	74.00	-22.55	Pk	
V	2483.50	39.58	-3.59	35.99	54.00	-18.01	AV	
Н	2483.50	54.70	-3.59	51.11	74.00	-22.89	Pk	
Н	2483.50	40.12	-3.59	36.53	54.00	-17.47	AV	

Remark:



802.11n-HT20

Normal Voltage

Polar	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector
(H/V)	(MHz)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	Туре
		ор	eration fre	quency:2412			
V	2390.00	55.75	-3.62	52.13	74.00	-21.87	Pk
V	2390.00	40.83	-3.62	37.21	54.00	-16.79	AV
V	2400.00	56.07	-3.62	52.45	74.00	-21.55	Pk
V	2400.00	40.70	-3.62	37.08	54.00	-16.92	AV
Н	2390.00	55.65	-3.62	52.03	74.00	-21.97	Pk
Н	2390.00	41.37	-3.62	37.75	54.00	-16.25	AV
Н	2400.00	56.55	-3.62	52.93	74.00	-21.07	Pk
Н	2400.00	41.08	-3.62	37.46	54.00	-16.54	AV

Remark:

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

802.11n-HT20

Normal Voltage

Polar (H/V)	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type	
(11/4)	(MHz)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	туре	
	operation frequency:2462							
V	2483.50	54.81	-3.59	51.22	74.00	-22.78	Pk	
V	2483.50	39.45	-3.59	35.86	54.00	-18.14	AV	
Н	2483.50	55.35	-3.59	51.76	74.00	-22.24	Pk	
Н	2483.50	39.60	-3.59	36.01	54.00	-17.99	AV	

Remark:

BT LE

Normal Voltage

Polar	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector
(H/V)	(MHz)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	Туре
		ор	eration fre	quency:2412			
V	2390.00	53.79	-3.62	50.17	74.00	-23.83	Pk
V	2390.00	40.45	-3.62	36.83	54.00	-17.17	AV
V	2400.00	54.84	-3.62	51.22	74.00	-22.78	Pk
V	2400.00	40.25	-3.62	36.63	54.00	-17.37	AV
Н	2390.00	54.90	-3.62	51.28	74.00	-22.72	Pk
Н	2390.00	40.39	-3.62	36.77	54.00	-17.23	AV
Н	2400.00	55.15	-3.62	51.53	74.00	-22.47	Pk
Н	2400.00	40.11	-3.62	36.49	54.00	-17.51	AV

Remark:

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

BT LE

Normal Voltage

Polar	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector	
(H/V)	(MHz)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	Туре	
	operation frequency:2462							
V	2483.50	54.02	-3.59	50.43	74.00	-23.57	Pk	
V	2483.50	39.25	-3.59	35.66	54.00	-18.34	AV	
Н	2483.50	55.01	-3.59	51.42	74.00	-22.58	Pk	
Н	2483.50	40.52	-3.59	36.93	54.00	-17.07	AV	

Remark:



4. POWER SPECTRAL DENSITY TEST

4.1 APPLIED PROCEDURES / LIMIT

FCC Part15 (15.247) , Subpart C							
Section	Test Item	Limit	Frequency Range (MHz)	Result			
15.247	Power Spectral Density	8 dBm (in any 3KHz)	2400-2483.5	PASS			

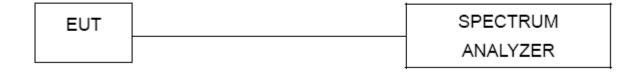
4.1.1 TEST PROCEDURE

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

4.1.2 DEVIATION FROM STANDARD

No deviation.

4.1.3 TEST SETUP



4.1.4 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.1 Unless otherwise a special operating condition is specified in the follows during the testing.

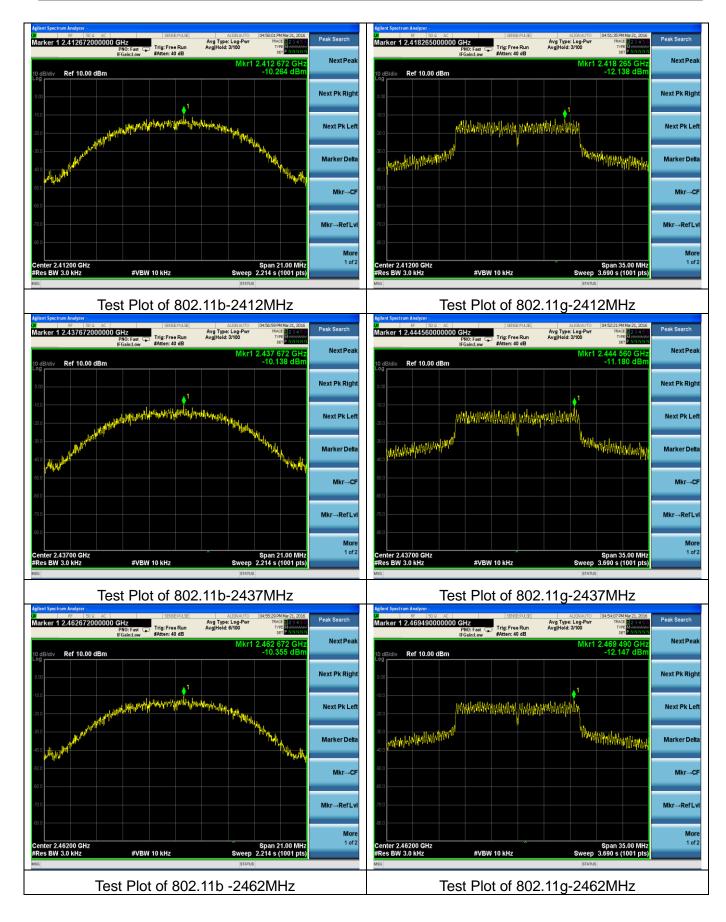


4.1.5 TEST RESULTS

EUT:	Tablet PC	Model Name :	S084H
Temperature :	25 ℃	Relative Humidity:	60%
Pressure :	1015 hPa	Test Voltage :	DC 3.7V
Test Mode : TX b Mode /CH01, CH06, CH11			

Test Mode	Frequency	Power Density (dBm/3kHz)	Limit (dBm/3kHz)	Result
	2412 MHz	-10.264	8	PASS
802.11b	2437 MHz	-10.138	8	PASS
	2462 MHz	-10.355	8	PASS
	2412 MHz	-12.138	8	PASS
802.11g	2437 MHz	-11.180	8	PASS
	2462 MHz	-12.147	8	PASS
	2412 MHz	-12.474	8	PASS
802.11n-HT20	2437 MHz	-13.589	8	PASS
	2462 MHz	-13.056	8	PASS
	2402 MHz	-9.974	8	PASS
BT LE	2440 MHz	-7.870	8	PASS
	2480 MHz	-6.968	8	PASS

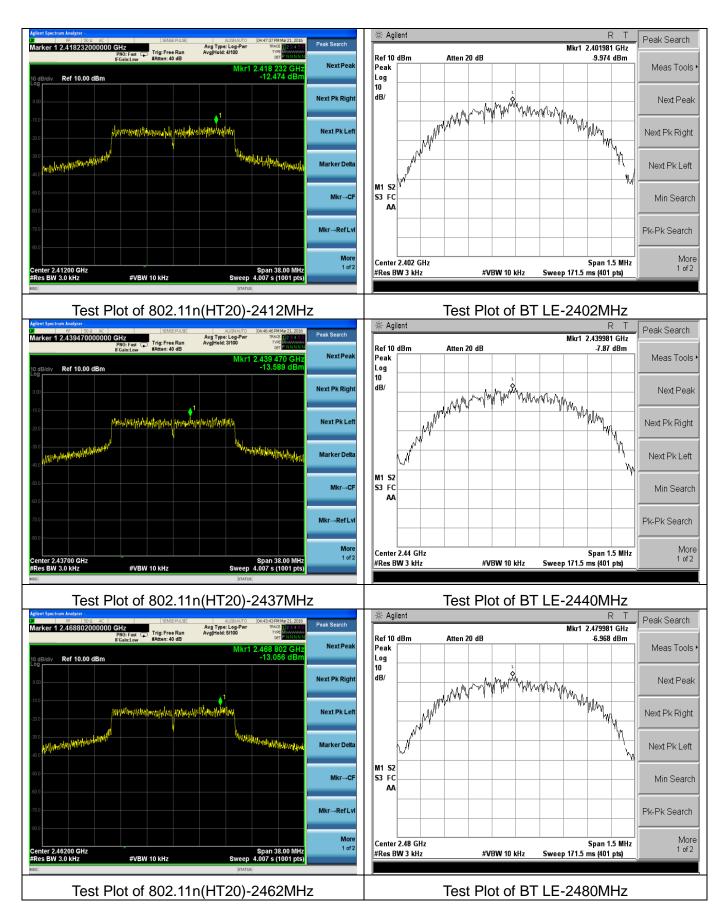




DongGuan Precise Testing Service Co., Ltd.

Building D, Baoding Technology Park, Guangming Road 2, Guangming Community, Dongcheng District, Dongguan, Guangdong, China







5. BANDWIDTH TEST

5.1 APPLIED PROCEDURES / LIMIT

FCC Part15 (15.247) , Subpart C				
Section Test Item Limit Frequency Range (MHz) Result				
15.247(a)(2)	Bandwidth	>= 500KHz (6dB bandwidth)	2400-2483.5	PASS

Report No.: PT800156160119E-FC01

5.1.1 TEST PROCEDURE

- 1. Set resolution bandwidth (RBW) = 100 kHz.
- 2. Set the video bandwidth (VBW) \geq 3 x RBW.
- 3. Detector = Peak.
- 4. Trace mode = max hold.
- 5. Sweep = auto couple.
- 6. Allow the trace to stabilize.
- 7. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

5.1.2 DEVIATION FROM STANDARD

No deviation.

5.1.3 TEST SETUP



5.1.4 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.



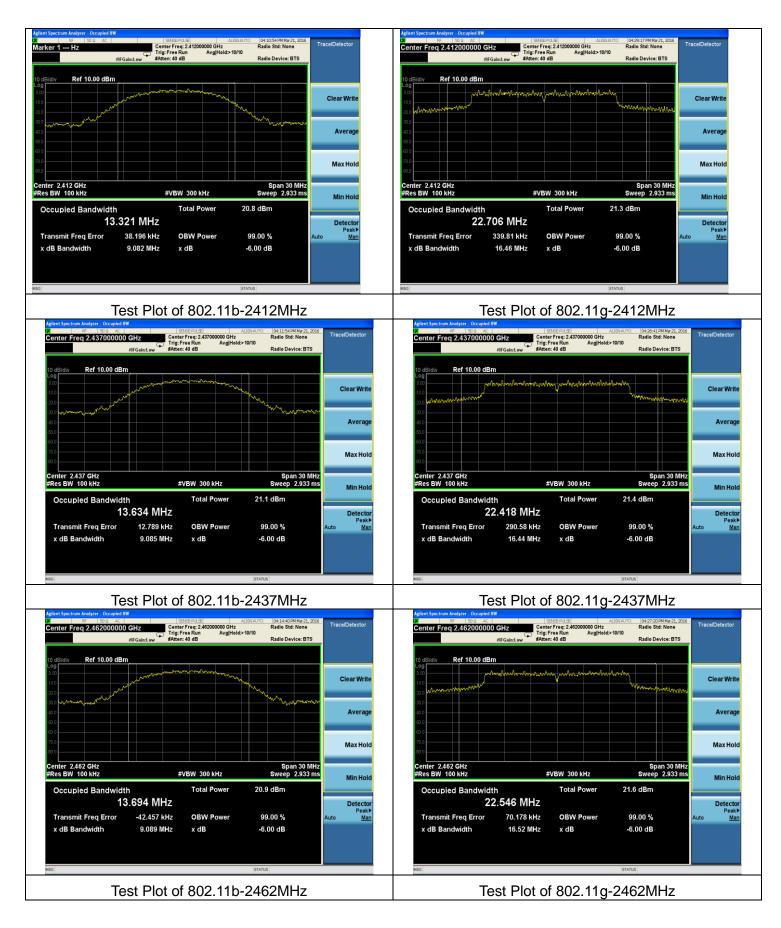
5.1.5 TEST RESULTS

EUT:	Intel Braswell Fanless Mini PC	Model Name :	NGC-1
Temperature :	25 ℃	Relative Humidity:	60%
Pressure :	1012 hPa	Test Voltage :	DC 3.7V

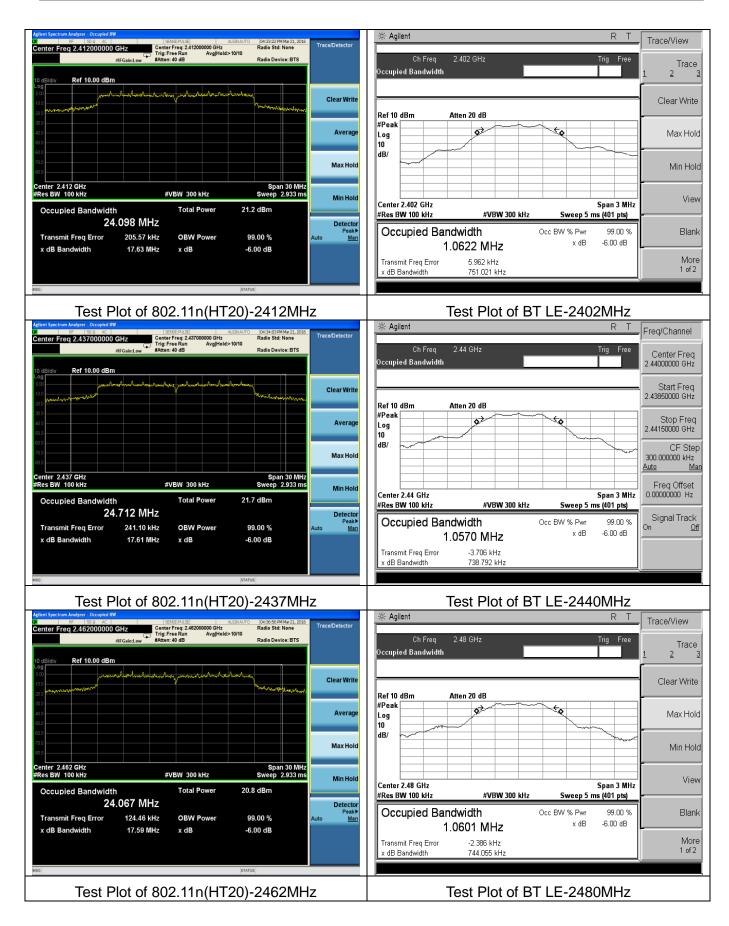
Report No.: PT800156160119E-FC01

Test Mode	Frequency	6dB bandwidth (MHz)	Limit (kHz)	Result
	2412 MHz	9.082	500	PASS
802.11b	2437 MHz	9.085	500	PASS
	2462 MHz	9.089	500	PASS
	2412 MHz	16.460	500	PASS
802.11g	2437 MHz	16.440	500	PASS
	2462 MHz	16.520	500	PASS
	2412 MHz	17.630	500	PASS
802.11n-HT20	2437 MHz	17.620	500	PASS
	2462 MHz	17.590	500	PASS
	2402 MHz	0.751	500	PASS
BT LE	2440 MHz	0.739	500	PASS
	2480 MHz	0.744	500	PASS











6. PEAK OUTPUT POWER TEST

6.1 APPLIED PROCEDURES / LIMIT

FCC Part15 (15.247), Subpart C				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247(b)(3)	Peak Output Power	1 watt or 30dBm	2400-2483.5	PASS

6.1.1 TEST PROCEDURE

a. The EUT was directly connected to the Power meter

6.1.2 DEVIATION FROM STANDARD

No deviation.

6.1.3 TEST SETUP



6.1.4 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.: PT800156160119E-FC01



6.1.5 TEST RESULTS

EUT:	Tablet PC	Model Name :	S084H
Temperature :	25 ℃	Relative Humidity:	60%
Pressure :	1012 hPa	Test Voltage :	DC 3.7V
Test Mode :	TX b/g/n		

Test Mode	Frequency	Conducted Output Power(Peak)	LIMIT
	MHz	dBm	dBm
	2412	18.90	30
802.11b	2437	19.04	30
	2462	19.13	30
	2412	21.78	30
802.11g	2437	22.52	30
	2462	21.10	30
	2412	22.36	30
802.11n-HT20	2437	21.85	30
	2462	22.11	30
	2402	5.124	30
BT LE	2440	6.821	30
	2480	7.696	30

NOTE: During the test the EUT is in 100% duty cycle transmitting.



7. CONDUCTED SPURIOUS EMISSIONS AND BAND EDGES TEST

APPLICABLE STANDARD

According to §15.247 (d):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) (see §15.205(c)).

TEST PROCEDURE

- a) Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
- b) Position the EUT without connection to measurement instrument. Turn on the EUT and connect its antenna terminal to measurement instrument via a low loss cable. Then set it to any one measured frequency within its operating range, and make sure the instrument is operated in its linear range.

For Conducted Spurious Emissions:

- c) The transmitter output is connected to a spectrum analyzer. The resolution bandwidth is set to 100 kHz. The video bandwidth is set to 300 kHz
- d) The spectrum from 9kHz to 25GHz is investigated with the transmitter set to the lowest, middle, and highest channels.

For Band Edges Test:

- e) Set RBW to 100 kHz and VBW of spectrum analyzer to 300 kHz with a convenient frequency span including 100 kHz bandwidth from band edge.
- f) Measure the highest amplitude appearing on spectral display and set it as a reference level. Plot the graph with marking the highest point and edge frequency.
- g) Repeat above procedures until all measured frequencies were complete.

Tel: 86-769-23368601 Fax: 86-769-23368602 http://www.pts-testing.com



7.1 DEVIATION FROM STANDARD

No deviation.

7.2 TEST SETUP

EUT	SPECTRUM
	ANALYZER

7.3 EUT OPERATION CONDITIONS

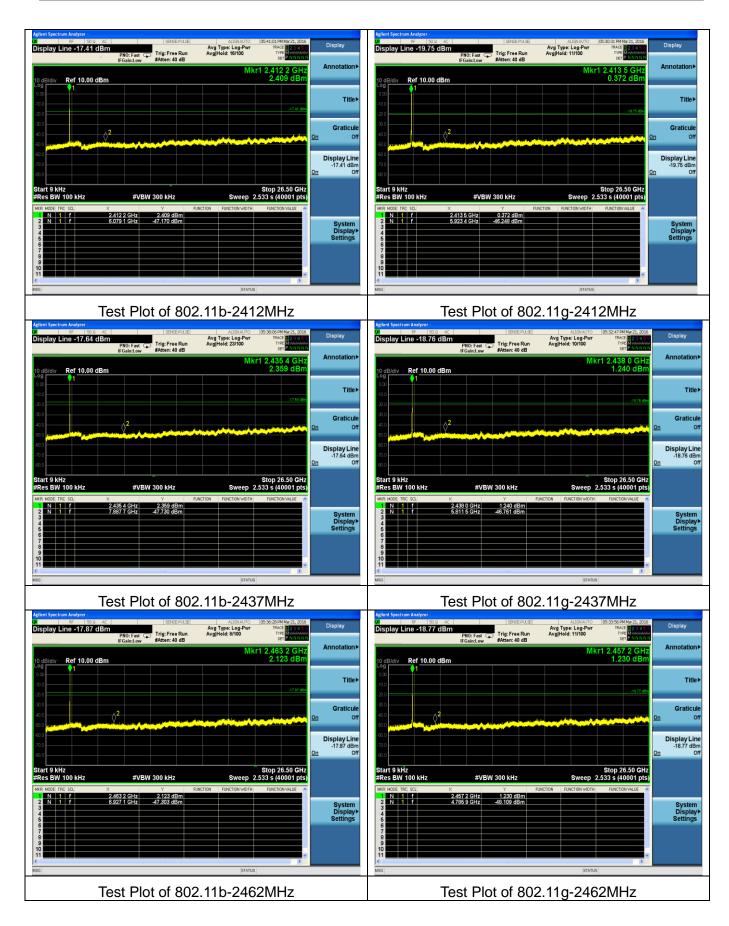
The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

7.4 TEST RESULTS FOR CONDUCTED SPURIOUS EMISSIONS TEST

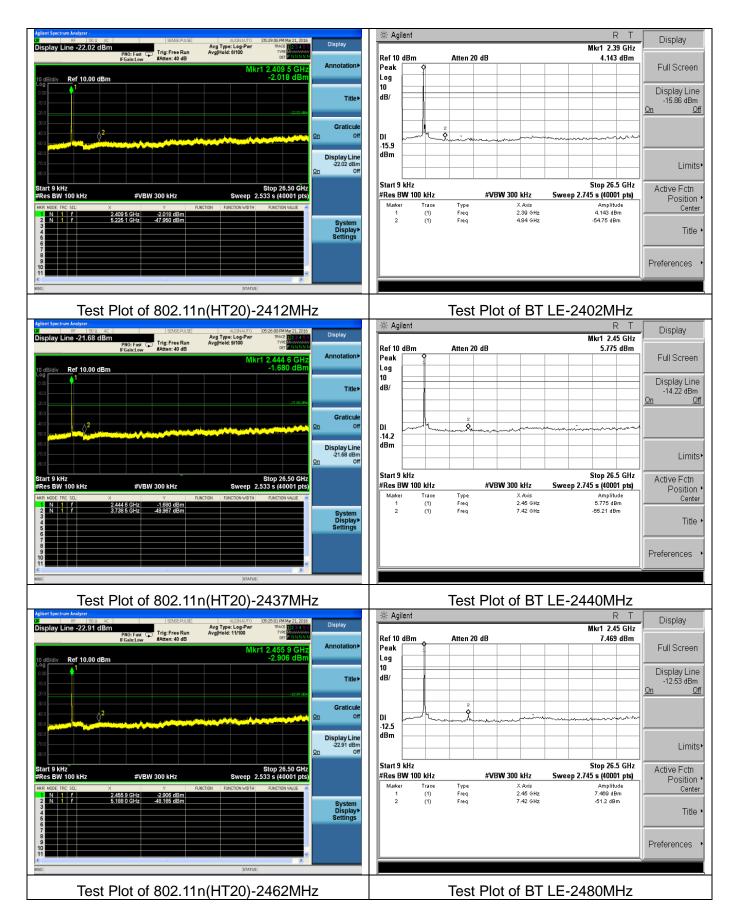
EUT:	Intel Braswell Fanless Mini PC	Model Name :	NGC-1
Temperature :	25 ℃	Relative Humidity:	60%
Pressure :	1012 hPa	Test Voltage :	DC 3.7V

Test plot: Please refer to the fellowing page.



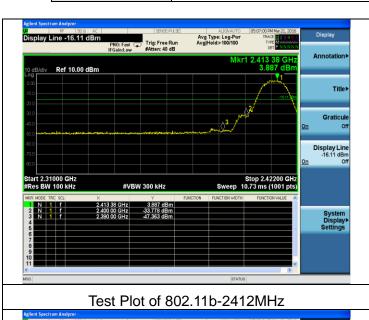






7.5 TEST RESULTS FOR BAND EDGES TEST

EUT:	Tablet PC	Model Name :	S084H
Temperature :	25 ℃	Relative Humidity:	60%
Pressure :	1012 hPa	Test Voltage :	DC 3.7V



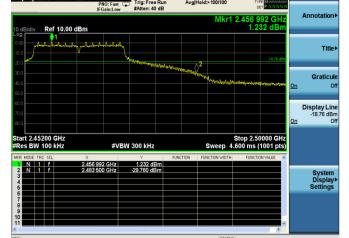


Test Plot of 802.11g-2412MHz

| April | Spectrum Analyzer | Spectr



Test Plot of 802.11b-2462MHz



Test Plot of 802.11g-2462MHz





8. ANTENNA REQUIREMENT

8.1 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.

8.2 EUT ANTENNA

The EUT antenna is PIFA antenna and the gain is 2.35dBi. It's permanent attached antenna. It comply with the standard requirement.

Tel: 86-769-23368601 Fax: 86-769-23368602 http://www.pts-testing.com