

Shenzhen Toby Technology Co., Ltd.

Report No.: TB-FCC153918

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FCC Radio Test Report FCC ID: 2AL64-WESTGATE

Original Grant

Report No. : TB-FCC153918

Applicant: Shenzhen qiuyu Electronic Co.,Ltd

Equipment Under Test (EUT)

EUT Name : Tablet PC

Model No. : PTV-R78-3288

Serial Model No. : Westgate Owner Tablet

Brand Name : Westgate Owner

Receipt Date : 2017-05-12

Test Date : 2017-05-13 to 2017-05-18

Issue Date : 2017-05-19

Standards : FCC Part 15: 2016, Subpart C(15.247)

Test Method : ANSI C63.10: 2013

Conclusions : PASS

In the configuration tested, the EUT complied with the standards specified above,

Test/Witness

Engineer

lerry.

Approved& Authorized Lougha

This report details the results of the testing carried out on one sample. The results contained in this test report do not relate to other samples of the same product. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in the report.

TB-RF-074-1.0



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1. General Information about EUT

1.1 Client Information

Applicant: Shenzhen qiuyu Electronic Co.,Ltd

Address 3F, E Building, Hongzhuyongqi Industrial Park, Lezhujiao village,

xixiang town, Bao'an District, Shenzhen, China

Manufacturer : Shenzhen qiuyu Electronic Co.,Ltd

Address : 3F, E Building, Hongzhuyongqi Industrial Park, Lezhujiao village,

xixiang town, Bao'an District, Shenzhen, China

1.2 General Description of EUT (Equipment Under Test)

EUT Name	1	Tablet PC	
Models No.	7	PTV-R78-3288, Westgat	te Owner Tablet
Model Difference			The state of the s
MUDE		Operation Frequency:	Bluetooth 4.0(BLE): 2402MHz~2480MHz
		Number of Channel:	Bluetooth 4.0(BLE): 40 channels see note(3)
Product		RF Output Power:	-3.54 dBm Conducted Power
Description	ď	Antenna Gain:	1.4 dBi FPC Antenna
		Modulation Type:	GFSK
		Bit Rate of Transmitter:	1Mbps(GFSK)
Power Supply		DC Voltage supplied by DC Voltage supplied by	
Power Rating			/60Hz, 0.35A.
Connecting I/O Port(S)	•		

Note:

This Test Report is FCC Part 15.247 for Bluetooth BLE, the test procedure follows the FCC KDB 558074 D01 DTS Means Guidance v04.

- (1) For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.
- (2) Antenna information provided by the applicant.
- (3) Channel List:

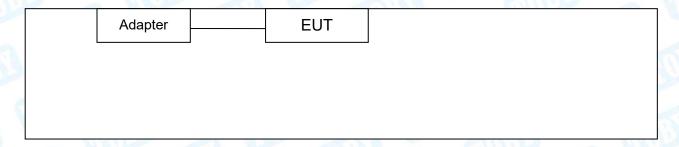


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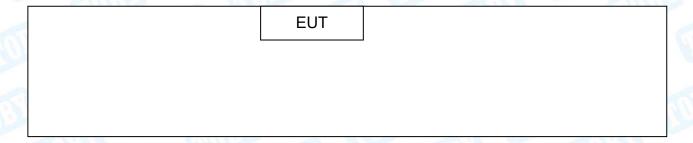
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
00	2402	14	2430	28	2458
01	2404	15	2432	29	2460
02	2406	16	2434	30	2462
03	2408	17	2436	31	2464
04	2410	18	2438	32	2466
05	2412	19	2440	33	2468
06	2414	20	2442	34	2470
07	2416	21	2444	35	2472
08	2418	22	2446	36	2474
09	2420	23	2448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

1.3 Block Diagram Showing the Configuration of System Tested

Charging + TX Mode



TX Mode





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1.4 Description of Support Units

		Equipment Inform	nation	
Name	Model	FCC ID/VOC	Manufacturer	Used "√"
Mary Control	W.	7	339	Mor
		Cable Information		
Number	Shielded Type	Ferrite Core	Length	Note
Cable 1	YES	NO	1.0M	

1.5 Description of Test Mode

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 follow was evaluated respectively.

For (Conducted Test
Final Test Mode	Description
Mode 1	Charging + TX Mode

For	Radiated Test
Final Test Mode	Description
Mode 2	TX Mode
Mode 3	TX Mode (Channel 00/20/39)

Note:

(1) For all test, we have verified the construction and function in typical operation. And all the test modes were carried out with the EUT in transmitting operation in maximum power with all kinds of data rate.

According to ANSI C63.10 standards, the measurements are performed at the highest, middle, lowest available channels, and the worst case data rate as follows:

BLE Mode: GFSK Modulation Transmitting mode.

- (2) During the testing procedure, the continuously transmitting with the maximum power mode was programmed by the customer.
- (3) The EUT is considered a portable unit; in normal use it was positioned on X-plane. The worst case was found positioned on X-plane. Therefore only the test data of this X-plane was used for radiated emission measurement test.



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1.6 Description of Test 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 RF setting.

Test Software Version	RTLBTAPP.exe		
Frequency	2402 MHz	2442MHz	2480 MHz
BLE GFSK	DEF	DEF	DEF

1.7 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 %.

Test Item	Parameters	Expanded Uncertainty (U _{Lab})
	Level Accuracy:	
Conducted Emission	9kHz~150kHz	±3.42 dB
	150kHz to 30MHz	±3.42 dB
Dedicted Emission	Level Accuracy:	14 60 dD
Radiated Emission	9kHz to 30 MHz	±4.60 dB
Radiated Emission	Level Accuracy:	±4.40 dB
Radiated Emission	30MHz to 1000 MHz	±4.40 db
Radiated Emission	Level Accuracy:	±4.20 dB
Radiated Emission	Above 1000MHz	±4.20 dB



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1.8 Test Facility

The testing was performed by the Shenzhen Toby Technology Co., Ltd., in their facilities located at:1A/F., Bldg.6, Yusheng Industrial Zone, The National Road No.107 Xixiang Section 467, Xixiang, Bao'an, Shenzhen, Guangdong, China.

At the time of testing, the following bodies accredited the Laboratory:

CNAS (L5813)

The Laboratory has been accredited by CNAS to ISO/IEC 17025: 2005 General Requirements for the Competence of Testing and Calibration Laboratories for the competence in the field of testing. And the Registration No.: CNAS L5813.

FCC List No.: (811562)

The Laboratory is listed in the United States of American Federal Communications Commission (FCC), and the registration number is 811562.

IC Registration No.: (11950A-1)

The Laboratory has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing. The site registration: Site# 11950A-1.



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2. Test Summary

Standard S	Section	Took House	71111	Damari
FCC	IC	Test Item	Judgment	Remark
15.203		Antenna Requirement	PASS	N/A
15.207(a)	RSS-GEN 7.2.4	Conducted Emission	PASS	N/A
15.205&15.247(d)	RSS-GEN 7.2.2	Band-Edge & Unwanted Emissions into Restricted Frequency	PASS	N/A
15.247(a)(2)	RSS 247 5.2 (1)	6dB Bandwidth	PASS	N/A
15.247(b)(3)	RSS 247 5.4 (4)	Conducted Max Output Power	PASS	N/A
15.247(e)	RSS 247 5.2 (2)	Power Spectral Density	PASS	N/A
15.205, 15.209&15.247(d)	RSS 247 5.5	Transmitter Radiated Spurious &Unwanted Emissions into Restricted Frequency	PASS	N/A

Note: N/A is an abbreviation for Not Applicable.



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3. Test Equipment

Conducte	d Emission Te	st			
Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Due Date
EMI Test Receiver	Rohde & Schwarz	ESCI	100321	Jul. 22, 2016	Jul. 21, 2017
RF Switching Unit	Compliance Direction Systems Inc	RSU-A4	34403	Jul. 22, 2016	Jul. 21, 2017
AMN	SCHWARZBECK	NNBL 8226-2	8226-2/164	Jul. 22, 2016	Jul. 21, 2017
LISN	Rohde & Schwarz	ENV216	101131	Jul. 22, 2016	Jul. 21, 2017
Radiation	Emission Tes	t			
Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Due Date
Spectrum Analyzer	Agilent	E4407B	MY45106456	Jul. 22, 2016	Jul. 21, 2017
EMI Test Receiver	Rohde & Schwarz	ESPI	100010/007	Jul. 22, 2016	Jul. 21, 2017
Bilog Antenna	ETS-LINDGREN	3142E	00117537	Mar.25, 2017	Mar. 24, 201
Bilog Antenna	ETS-LINDGREN	3142E	00117542	Mar.25, 2017	Mar. 24, 2018
Horn Antenna	ETS-LINDGREN	3117	00143207	Mar.24, 2017	Mar. 23, 2018
Horn Antenna	ETS-LINDGREN	3117	00143209	Mar.24, 2017	Mar. 23, 201
Loop Antenna	Laplace instrument	RF300	0701	Mar.24, 2017	Mar. 23, 2018
Pre-amplifier	Sonoma	310N	185903	Mar.24, 2017	Mar. 23, 201
Pre-amplifier	HP	8449B	3008A00849	Mar.25, 2017	Mar. 24, 2018
Cable	HUBER+SUHNER	100	SUCOFLEX	Mar.24, 2017	Mar. 23, 2018
Positioning Controller	ETS-LINDGREN	2090	N/A	N/A	N/A
Antenna C	Conducted Em	ission			
Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Due Date
Spectrum Analyzer	Agilent	E4407B	MY45106456	Jul. 22, 2016	Jul. 21, 2017
Spectrum Analyzer	Rohde & Schwarz	ESCI	100010/007	Jul. 22, 2016	Jul. 21, 2017
Power Meter	Anritsu	ML2495A	25406005	Jul. 22, 2016	Jul. 21, 2017
Power Sensor	Anritsu	ML2411B	25406005	Jul. 22, 2016	Jul. 21, 2017



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4. Conducted Emission Test

4.1 Test Standard and Limit

4.1.1Test Standard FCC Part 15.207

4.1.2 Test Limit

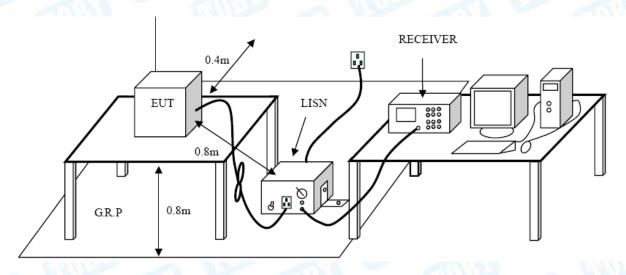
Conducted Emission Test Limit

Francis of Miles	Maximum RF Line Voltage (dBμV)		
Frequency	Quasi-peak Level	Average Level	
150kHz~500kHz	66 ~ 56 *	56 ~ 46 *	
500kHz~5MHz	56	46	
5MHz~30MHz	60	50	

Notes:

- (1) *Decreasing linearly with logarithm of the frequency.
- (2) The lower limit shall apply at the transition frequencies.
- (3) The limit decrease in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

4.2 Test Setup



4.3 Test Procedure

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.

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.



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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.

LISN at least 80 cm from nearest part of EUT chassis.

The bandwidth of EMI test receiver is set at 9 kHz, and the test frequency band is from 0.15MHz to 30MHz.

4.4 EUT Operating Mode

Please refer to the description of test mode.

4.5 Test Da5ta

Test data please refer the following pages.



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EUT:	Tablet	PC	Mo	odel:		PTV-R78-	-3288
Temperature:	25℃	Carl'	Re	lative Humidi	ity:	55%	ARTE
Test Voltage:	AC 12	0V/60 Hz	-	1	60	The same	
Terminal:	Line		Alte		6		
Test Mode:	TX GF	SK Mode 2	402 MHz	MILDS		1 N	MARKET
Remark:	Only w	orse case i	s reported		M	33	
40			production which was the		·MMANTA	QP:	
- [사 '[네 #Y	" \ _\ \" \\/}\ _\ }#\ _\ }#	May " Lar" Large	I MAY A	/ Y * ĭ			J.
-10 0.150 No. Mk.	o.s	Reading Level	(MHz) Correct Factor	mont	Limit	Over	30.000
0.150 No. Mk.	Freq.	Level dBuV	Correct Factor	Measure- ment L	dBuV	dB	30.000 Detector
0.150 No. Mk.	Freq. MHz 0.1819	dBuV 37.41	Correct Factor dB 10.12	Measure- ment L dBuV 47.53 6	dBuV 34.39	dB -16.86	30.000 Detector QP
0.150 No. Mk.	Freq. MHz 0.1819 0.1819	dBuV 37.41 22.00	Correct Factor dB 10.12 10.12	Measure- ment dBuV 47.53 6	dBuV 64.39 54.39	dB -16.86 -22.27	Detector QP AVG
0.150 No. Mk. 1 2 3 *	Freq. MHz 0.1819 0.1819 0.6660	dBuV 37.41 22.00 31.86	Correct Factor dB 10.12 10.12	Measure- ment dBuV 47.53 6 32.12 5 41.88 5	dBuV 54.39 54.39 56.00	dB -16.86 -22.27 -14.12	Detector QP AVG QP
0.150 No. Mk. 1 2 3 * 4	Freq. MHz 0.1819 0.1819 0.6660 0.6660	dBuV 37.41 22.00 31.86 16.78	Correct Factor dB 10.12 10.12 10.02	Measure- ment dBuV 47.53 6 32.12 5 41.88 5 26.80 4	dBuV 54.39 54.39 56.00	dB -16.86 -22.27 -14.12 -19.20	Detector QP AVG QP AVG
0.150 No. Mk. 1 2 3 * 4 5	Freq. MHz 0.1819 0.1819 0.6660 0.6660 3.3700	Level dBuV 37.41 22.00 31.86 16.78 26.75	Correct Factor dB 10.12 10.12 10.02 10.02	Measure- ment dBuV 47.53 6 32.12 5 41.88 5 26.80 4 36.81 5	dBuV 54.39 54.39 56.00 46.00	dB -16.86 -22.27 -14.12 -19.20 -19.19	Detector QP AVG QP AVG QP
0.150 No. Mk. 1 2 3 * 4 5 6	Freq. MHz 0.1819 0.1819 0.6660 0.6660 3.3700 3.3700	Level dBuV 37.41 22.00 31.86 16.78 26.75 12.54	Correct Factor dB 10.12 10.12 10.02 10.02 10.06	Measure- ment dBuV 47.53 6 32.12 5 41.88 5 26.80 4 36.81 5	dBuV 34.39 54.39 56.00 46.00 56.00	dB -16.86 -22.27 -14.12 -19.20 -19.19 -23.40	Detector QP AVG QP AVG QP AVG
0.150 No. Mk. 1 2 3 * 4 5	Freq. MHz 0.1819 0.1819 0.6660 0.6660 3.3700	Level dBuV 37.41 22.00 31.86 16.78 26.75	Correct Factor dB 10.12 10.12 10.02 10.02	Measure- ment dBuV 47.53 6 32.12 5 41.88 5 26.80 4 36.81 5	dBuV 34.39 54.39 56.00 46.00 56.00	dB -16.86 -22.27 -14.12 -19.20 -19.19	Detector QP AVG QP AVG QP
0.150 No. Mk. 1 2 3 * 4 5 6	Freq. MHz 0.1819 0.1819 0.6660 0.6660 3.3700 3.3700	Level dBuV 37.41 22.00 31.86 16.78 26.75 12.54	Correct Factor dB 10.12 10.12 10.02 10.02 10.06	Measure- ment dBuV 47.53 6 32.12 5 41.88 5 26.80 4 36.81 5 22.60 4 37.42 5	dBuV 34.39 54.39 56.00 46.00 46.00 56.00	dB -16.86 -22.27 -14.12 -19.20 -19.19 -23.40	Detector QP AVG QP AVG QP AVG
0.150 No. Mk. 1 2 3 * 4 5 6 7	Freq. MHz 0.1819 0.1819 0.6660 0.6660 3.3700 3.3700 4.8019	Level dBuV 37.41 22.00 31.86 16.78 26.75 12.54 27.36	Correct Factor dB 10.12 10.12 10.02 10.02 10.06 10.06	Measure- ment dBuV 47.53 6 32.12 5 41.88 5 26.80 4 36.81 5 22.60 4 37.42 5	dBuV 34.39 54.39 56.00 46.00 46.00 56.00 46.00	dB -16.86 -22.27 -14.12 -19.20 -19.19 -23.40 -18.58	Detector QP AVG QP AVG QP AVG
0.150 No. Mk. 1 2 3 * 4 5 6 7 8	Freq. MHz 0.1819 0.1819 0.6660 0.6660 3.3700 3.3700 4.8019 4.8019	Level dBuV 37.41 22.00 31.86 16.78 26.75 12.54 27.36 14.36	Correct Factor dB 10.12 10.12 10.02 10.02 10.06 10.06 10.06	Measure- ment dBuV 47.53 6 32.12 5 41.88 5 26.80 4 36.81 5 22.60 4 37.42 5 24.42 4 40.62 6	dBuV 64.39 54.39 56.00 46.00 56.00 46.00 46.00	dB -16.86 -22.27 -14.12 -19.20 -19.19 -23.40 -18.58 -21.58	Detector QP AVG QP AVG QP AVG QP AVG
0.150 No. Mk. 1 2 3 * 4 5 6 7 8 9 10	Freq. MHz 0.1819 0.1819 0.6660 0.6660 3.3700 4.8019 4.8019 8.4938	Level dBuV 37.41 22.00 31.86 16.78 26.75 12.54 27.36 14.36 30.51	Correct Factor dB 10.12 10.12 10.02 10.02 10.06 10.06 10.06 10.11	Measure- ment dBuV 47.53 6 32.12 5 41.88 5 26.80 4 36.81 5 22.60 4 37.42 5 24.42 4 40.62 6 25.68 5	dBuV 54.39 56.00 46.00 56.00 46.00 60.00 50.00	dB -16.86 -22.27 -14.12 -19.20 -19.19 -23.40 -18.58 -21.58 -19.38	Detector QP AVG QP AVG QP AVG QP AVG



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EUT:	Tab	let PC	Me	odel:	F	PTV-R78-	3288
Temperature	e: 25°C		Re	elative Humidi	ity: 5	55%	
Test Voltage	: AC	120V/60 Hz				-0	ART
Terminal:	Neu	itral			(71)	11:05	
Test Mode:	TX	GFSK Mode	2402 MHz		180	600	m R.L.
Remark:	Only	y worse case	is reported	Million		a V	A Laboratory
90.0 dBuV							
						QP: AVG:	
×		V				Walter State Commencer	
40	1 1 1	MX	486 J. Jones J. 1864 J. 2	mentioned have broken the the property	purpherutande	Politica a .	
V V V	2 Valy May May May	My My My My Market	and the state of the				1
14.44	M /	J V \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	M pm M	$\Delta \mid \Delta \mid$	Samuel Cole	Carrie and the Company of the Company of the Company	
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) o ruha	7 7 7	VVV	V V V V V V V		W-4-1	
		7 7 7	VVV	VVVVV			
		7 7 7	VVV	VVVVV			
-10		7 7 7	VVV	V V V V V V V V V V V V V V V V V V V			
-10 0.150	0.5	7 7 7	(MHz)	5			
	0.5	Reading	(MHz)	5 Measure-			A
	o.5			Measure-	Limit	Over	A
0.150		Reading	Correct	Measure-	Limit	Over	30.000
0.150	Freq.	Reading Level	Correct Factor	Measure- ment dBuV		dB	30.000
0.150 No. Mk.	Freq.	Reading Level	Correct Factor	Measure- ment dBuV 44.69	dBuV 64.21	dB	30.000 Detector
0.150 No. Mk.	Freq. MHz 0.1860	Reading Level dBuV 34.70	Correct Factor dB 9.99	Measure- ment dBuV 44.69	dBuV 64.21 54.21	dB -19.52	Detector QP
0.150 No. Mk.	Freq. MHz 0.1860 0.1860	Reading Level dBuV 34.70 26.84	Correct Factor dB 9.99 9.99	Measure- ment dBuV 44.69 36.83 43.04	dBuV 64.21 54.21 56.00	dB -19.52 -17.38	Detector
0.150 No. Mk. 1 2 3	Freq. MHz 0.1860 0.1860 0.6700	Reading Level dBuV 34.70 26.84 32.94	Correct Factor dB 9.99 9.99 10.10	Measure- ment dBuV 44.69 36.83 43.04 36.58	dBuV 64.21 54.21 56.00 46.00	dB -19.52 -17.38 -12.96	Detector QP AVG

1		0.1860	34.70	9.99	44.69	64.21 -19.52	QP
- 2	2	0.1860	26.84	9.99	36.83	54.21 -17.38	AVG
3	3	0.6700	32.94	10.10	43.04	56.00 -12.96	QP
4	*	0.6700	26.48	10.10	36.58	46.00 -9.42	AVG
5	5	0.7539	31.43	10.11	41.54	56.00 -14.46	QP
6	6	0.7539	25.71	10.11	35.82	46.00 -10.18	AVG
7	7	2.1780	27.21	10.05	37.26	56.00 -18.74	QP
8	3	2.1780	21.25	10.05	31.30	46.00 -14.70	AVG
6)	17.1820	36.21	10.22	46.43	60.00 -13.57	QP
10)	17.1820	20.44	10.22	30.66	50.00 -19.34	AVG
11		19.2020	34.91	10.18	45.09	60.00 -14.91	QP
12	2	19.2020	19.24	10.18	29.42	50.00 -20.58	AVG



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EUT:	Tablet	PC		Model:		PTV-F	R78-3288
emperature:	25℃	6111	(A)	Relative Hu	ımidity:	55%	Alle
Test Voltage:	AC 24	0V/60 Hz		20	6	1000	
Terminal:	Line	3	A BAG				
Test Mode:	TX GF	SK Mode	2402 MHz	THE		-	ALL DE
Remark:	Only v	vorse case	is reported		6.00	1:33	
90.0 dBuV							
						QI A\	vG:
		×				.30	Market Market
40 ~ ~~~~~	WY ALAN	M.X.	. As Ather Awden	Antonia la francisco de la compansión de	pinyadpyprotest	the state of the s	The Vac
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MM	$\gamma \Psi V_{\Omega}$	V 44/M/W	WWWWW	White property was a series of the series of	between states as	Age - Company and the Company of the	
		1 1					4
0 150	0.5		640->				20,000
0.150	0.5		(MHz)	5			30.000
0.150		Reading	Correct	Measure-	Limit	Over	30.000
0.150 No. Mk.	Freq.	Level	Correct Factor	Measure- ment	Limit	Over	
0.150 No. Mk.	Freq. MHz	Level	Correct Factor	Measure- ment dBuV	dBuV	dB	Detector
0.150 No. Mk. F	Freq. MHz 2940	dBuV 29.95	Correct Factor dB 10.02	Measure- ment dBuV 39.97	dBuV 60.41	dB -20.44	Detector QP
0.150 No. Mk. F 1 0 2 0	Freq. MHz 2940 2940	dBuV 29.95 19.25	Correct Factor dB 10.02 10.02	Measure- ment dBuV 39.97 29.27	dBuV 60.41 50.41	dB -20.44 -21.14	Detector QP AVG
0.150 No. Mk. F 1 0 2 0 3 0	Freq. MHz 2940 2940 6460	dBuV 29.95 19.25 30.55	Correct Factor dB 10.02 10.02	Measure- ment dBuV 39.97 29.27 40.64	dBuV 60.41 50.41 56.00	dB -20.44 -21.14 -15.36	Detector QP AVG QP
0.150 No. Mk. F 1 0. 2 0. 3 0.	Freq. MHz 2940 2940	dBuV 29.95 19.25	Correct Factor dB 10.02 10.02	Measure- ment dBuV 39.97 29.27	dBuV 60.41 50.41 56.00	dB -20.44 -21.14	Detector QP AVG
0.150 No. Mk. F 1 0. 2 0. 3 0. 4 * 0.	Freq. MHz 2940 2940 6460	dBuV 29.95 19.25 30.55	Correct Factor dB 10.02 10.02	Measure- ment dBuV 39.97 29.27 40.64	dBuV 60.41 50.41 56.00 46.00	dB -20.44 -21.14 -15.36	Detector QP AVG QP
0.150 No. Mk. F 1	Freq. MHz 2940 2940 6460	Level dBuV 29.95 19.25 30.55 25.02	Correct Factor dB 10.02 10.02 10.09	Measure- ment dBuV 39.97 29.27 40.64 35.11	dBuV 60.41 50.41 56.00 46.00 56.00	dB -20.44 -21.14 -15.36 -10.89	Detector QP AVG QP AVG
0.150 No. Mk. 1	Freq. MHz 2940 2940 6460 6460 7900	Level dBuV 29.95 19.25 30.55 25.02 27.68	Correct Factor dB 10.02 10.02 10.09 10.09	Measure- ment dBuV 39.97 29.27 40.64 35.11 37.78	dBuV 60.41 50.41 56.00 46.00 56.00	dB -20.44 -21.14 -15.36 -10.89 -18.22	Detector QP AVG QP AVG QP
0.150 No. Mk. F 1	Freq. MHz 2940 2940 6460 6460 7900	Level dBuV 29.95 19.25 30.55 25.02 27.68 20.20	Correct Factor dB 10.02 10.02 10.09 10.10 10.10	Measure- ment dBuV 39.97 29.27 40.64 35.11 37.78 30.30	dBuV 60.41 50.41 56.00 46.00 56.00 56.00	dB -20.44 -21.14 -15.36 -10.89 -18.22 -15.70	Detector QP AVG QP AVG QP AVG
0.150 No. Mk. F 1	Freq. MHz 2940 2940 6460 6460 7900 7900 6420	Level dBuV 29.95 19.25 30.55 25.02 27.68 20.20 20.76	Correct Factor dB 10.02 10.02 10.09 10.09 10.10 10.10 10.01	Measure- ment dBuV 39.97 29.27 40.64 35.11 37.78 30.30 30.77	dBuV 60.41 50.41 56.00 46.00 56.00 46.00	dB -20.44 -21.14 -15.36 -10.89 -18.22 -15.70 -25.23	Detector QP AVG QP AVG QP AVG QP AVG
0.150 No. Mk. F 1	Freq. MHz 2940 2940 6460 6460 7900 6420 6420 3300	Level dBuV 29.95 19.25 30.55 25.02 27.68 20.20 20.76 14.52 22.23	Correct Factor dB 10.02 10.02 10.09 10.10 10.10 10.01 10.01 10.07	Measure- ment dBuV 39.97 29.27 40.64 35.11 37.78 30.30 30.77 24.53 32.30	dBuV 60.41 50.41 56.00 46.00 56.00 46.00 46.00 60.00	dB -20.44 -21.14 -15.36 -10.89 -18.22 -15.70 -25.23 -21.47 -27.70	Detector QP AVG QP AVG QP AVG QP AVG QP AVG
0.150 No. Mk. F 1	Freq. MHz 2940 2940 6460 6460 7900 6420 6420 3300 3300	Level dBuV 29.95 19.25 30.55 25.02 27.68 20.20 20.76 14.52 22.23 15.33	Correct Factor dB 10.02 10.02 10.09 10.10 10.10 10.01 10.01 10.07	Measure-ment dBuV 39.97 29.27 40.64 35.11 37.78 30.30 30.77 24.53 32.30 25.40	dBuV 60.41 50.41 56.00 46.00 56.00 46.00 60.00 50.00	dB -20.44 -21.14 -15.36 -10.89 -18.22 -15.70 -25.23 -21.47 -27.70 -24.60	Detector QP AVG QP AVG QP AVG QP AVG QP AVG
0.150 No. Mk. 1	Freq. MHz 2940 2940 6460 6460 7900 6420 6420 3300	Level dBuV 29.95 19.25 30.55 25.02 27.68 20.20 20.76 14.52 22.23	Correct Factor dB 10.02 10.02 10.09 10.10 10.10 10.01 10.01 10.07	Measure- ment dBuV 39.97 29.27 40.64 35.11 37.78 30.30 30.77 24.53 32.30	dBuV 60.41 50.41 56.00 46.00 56.00 46.00 60.00 50.00	dB -20.44 -21.14 -15.36 -10.89 -18.22 -15.70 -25.23 -21.47 -27.70	Detector QP AVG QP AVG QP AVG QP AVG QP AVG



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EUT:	Tal	blet PC		Model:		PT\	V-R78-328
Temperature	: 25	$^{\circ}$	130	Relative	Humidit	t y: 55%	6
Test Voltage:	AC	240V/60 Hz	Z	2.1	(Time.	9
Terminal:	Ne	eutral	J W		9	6.3	
Test Mode:	TX	GFSK Mod	e 2402 MHz				RATE
Remark:	On	nly worse cas	se is reporte	ed	61	1:33	
40			JWWWwwwwwwwwwwwwwwwwwwwww	Mary Mary Mary Mary Mary Mary Mary Mary	had a garage of the factor	A	VG: —
			. 14 4				
0.150		Reading	(MHz)	Measure-			30.000
	Freq.	Reading Level	(MHz) Correct Factor	Measure- ment	Limit	Over	
0.150 No. Mk.	Freq.	Reading Level	(MHz) Correct Factor dB	Measure- ment dBuV	dBuV	dB	Detector
0.150 No. Mk.	Freq. MHz 0.3620	Reading Level dBuV 30.80	Correct Factor dB	Measure- ment dBuV 40.87	dBuV 58.68	dB -17.81	Detector QP
0.150 No. Mk.	Freq.	Reading Level	(MHz) Correct Factor dB	Measure- ment dBuV	dBuV 58.68	dB	Detector
0.150 No. Mk. 1 0 2 0	Freq. MHz 0.3620	Reading Level dBuV 30.80	Correct Factor dB	Measure- ment dBuV 40.87	dBuV 58.68 48.68	dB -17.81	Detector QP
0.150 No. Mk. 1 0 2 0 3 * 0	Freq. MHz 0.3620	Reading Level dBuV 30.80 19.16	Correct Factor dB 10.07	Measure- ment dBuV 40.87 29.23	dBuV 58.68 48.68 56.00	dB -17.81 -19.45	Detector QP AVG
0.150 No. Mk. 1 0 2 0 3 * 0 4 0	Freq. MHz 0.3620 0.3620 0.6540	Reading Level dBuV 30.80 19.16 34.14	Correct Factor dB 10.07 10.07	Measure- ment dBuV 40.87 29.23 44.16	dBuV 58.68 48.68 56.00 46.00	dB -17.81 -19.45 -11.84	Detector QP AVG QP
0.150 No. Mk. 1 0 2 0 3 * 0 4 0 5 0	Freq. MHz 0.3620 0.3620 0.6540	Reading Level dBuV 30.80 19.16 34.14 20.59	(MHz) Correct Factor dB 10.07 10.07 10.02	Measure- ment dBuV 40.87 29.23 44.16 30.61	dBuV 58.68 48.68 56.00 46.00 56.00	dB -17.81 -19.45 -11.84 -15.39	Detector QP AVG QP AVG QP
0.150 No. Mk. 1 0 2 0 3 * 0 4 0 5 0 6 0	Freq. MHz 0.3620 0.3620 0.6540 0.6540 0.7940	Reading Level dBuV 30.80 19.16 34.14 20.59 31.54	(MHz) Correct Factor dB 10.07 10.07 10.02 10.02 10.06	Measure- ment dBuV 40.87 29.23 44.16 30.61 41.60	dBuV 58.68 48.68 56.00 46.00 46.00	dB -17.81 -19.45 -11.84 -15.39 -14.40	Detector QP AVG QP AVG QP
0.150 No. Mk. 1 0 2 0 3 * 0 4 0 5 0 6 0 7 1	Freq. MHz 0.3620 0.3620 0.6540 0.6540 0.7940 0.7940	Reading Level dBuV 30.80 19.16 34.14 20.59 31.54 16.07	(MHz) Correct Factor dB 10.07 10.07 10.02 10.02 10.06	Measure- ment dBuV 40.87 29.23 44.16 30.61 41.60 26.13	dBuV 58.68 48.68 56.00 46.00 46.00 56.00	dB -17.81 -19.45 -11.84 -15.39 -14.40 -19.87	Detector QP AVG QP AVG QP AVG QP
0.150 No. Mk. 1 0 2 0 3 * 0 4 0 5 0 6 0 7 1 8 1	Freq. MHz 0.3620 0.3620 0.6540 0.6540 0.7940 0.7940 0.2260	Reading Level dBuV 30.80 19.16 34.14 20.59 31.54 16.07 28.01	(MHz) Correct Factor dB 10.07 10.07 10.02 10.02 10.06 10.06 10.14	Measure- ment dBuV 40.87 29.23 44.16 30.61 41.60 26.13 38.15	dBuV 58.68 48.68 56.00 46.00 56.00 46.00 46.00	dB -17.81 -19.45 -11.84 -15.39 -14.40 -19.87 -17.85	Detector QP AVG QP AVG QP AVG
0.150 No. Mk. 1 0 2 0 3 * 0 4 0 5 0 6 0 7 1 8 1 9 17	Freq. MHz 0.3620 0.3620 0.6540 0.6540 0.7940 0.7940 0.2260	Reading Level dBuV 30.80 19.16 34.14 20.59 31.54 16.07 28.01 13.52	(MHz) Correct Factor dB 10.07 10.02 10.02 10.06 10.06 10.14 10.14	Measure-ment dBuV 40.87 29.23 44.16 30.61 41.60 26.13 38.15 23.66	dBuV 58.68 48.68 56.00 46.00 56.00 46.00 46.00 60.00	dB -17.81 -19.45 -11.84 -15.39 -14.40 -19.87 -17.85 -22.34	Detector QP AVG QP AVG QP AVG AVG

Emission Level= Read Level+ Correct Factor

20.96

10.06

31.02

20.6220

12

AVG

50.00 -18.98



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5. Radiated Emission Test

5.1 Test Standard and Limit

5.1.1 Test Standard FCC Part 15.247(d)

5.1.2 Test Limit

Radiated Emission Limits (9kHz~1000MHz)

Frequency (MHz	Field Strength (microvolt/meter)	Measurement Distance (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

Radiated Emission Limit (Above 1000MHz)

Frequency	Distance Met	ers(at 3m)
(MHz)	Peak (dBuV/m)	Average (dBuV/m)
Above 1000	74	54

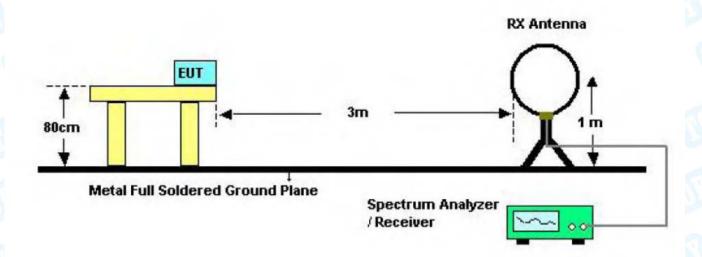
Note:

- (1) The tighter limit applies at the band edges.
- (2) Emission Level (dBuV/m)=20log Emission Level (uV/m)

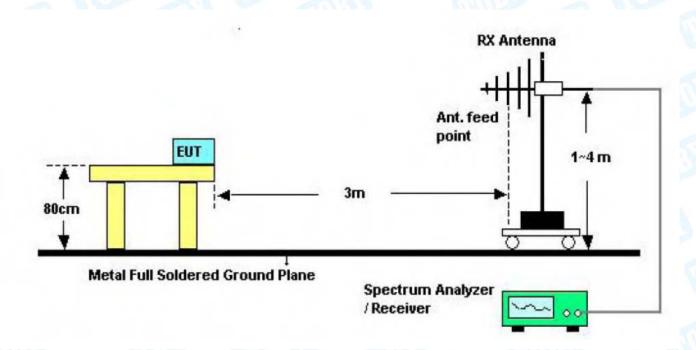


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5.2 Test Setup



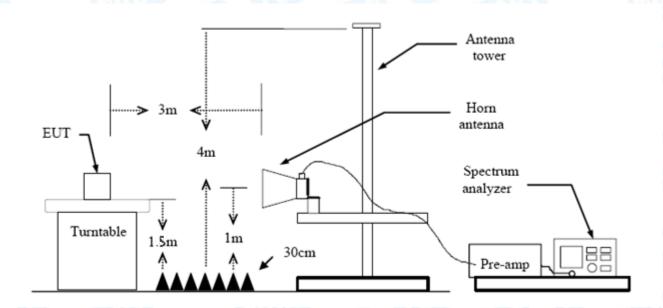
Below 30MHz Test Setup



Below 1000MHz Test Setup



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Above 1GHz Test Setup

5.3 Test Procedure

- (1) The measuring distance of 3m shall be used for measurements at frequency up to 1GHz and above 1 GHz. The EUT was placed on a rotating 0.8m high above ground, the table was rotated 360 degrees to determine the position of the highest radiation.
- (2) Measurements at frequency above 1GHz. The EUT was placed on a rotating 1.5m high above the ground. RF absorbers covered the ground plane with a minimum area of 3.0m by 3.0m between the EUT and measurement receiver antenna. The RF absorber shall not exceed 30cm in high above the conducting floor. The table was rotated 360 degrees to determine the position of the highest radiation.
- (3) The Test antenna shall vary between 1m and 4m, Both Horizontal and Vertical antenna are set to make measurement.
- (4) 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.
- (5) If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit Bellow 1 GHz, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed. But the Peak Value and average value both need to comply with applicable limit above 1 GHz.
- (6) Testing frequency range below 1GHz the measuring instrument use VBW=120 kHz with Quasi-peak detection.
- (7) Testing frequency range above 1GHz the measuring instrument use RBW=1 MHz and VBW=3 MHz with Peak Detector for Peak Values, and use RBW=1 MHz and VBW=10 Hz with Peak Detector for Average Values.
- (8) For the actual test configuration, please see the test setup photo.



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5.4 EUT Operating Condition

The Equipment Under Test was set to Continual Transmitting in maximum power.

5.5 Test Data

Remark: During testing above 1GHz the measuring instrument use RBW=1 MHz and VBW=3 MHz with Peak Detector for Peak Values, and use RBW=1 MHz and VBW=10 Hz with Peak Detector for Average Values.

Test data please refer the following pages.



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9 KHz~30 MHz

From 9 KHz to 30 MHz: Conclusion: PASS

Note: The amplitude of spurious emissions which are attenuated by more than 20dB

below the permissible value has no need to be reported.

30MHz~1GHz

EUT:	Tablet P	C		Model:		PTV-R78	3-3288
Temperature:	25℃	1300		Relative Hum	nidity:	55%	
Гest Voltage:	AC 120/	60Hz	(HIII)		1	-	11
Ant. Pol.	ol. Horizontal						
Test Mode:	e: BLE TX 2402 Mode						
Remark:	Only wo	rse case is	reported	A Y	N. Carrie		1
80.0 dBuV/m							
					(RF)FCC 15	C 3M Radiation Margin -6	
				2 34			
1				- 1 .// ² *\\		5 6 X X	
30		λ		Mayor hand	WANT I	Jahran Alakhadi	man
Who I was	\	J MUM	MAIN A	γ"	ןע יוי	MA An	A. A.M.A.M
W. M. Mary Market Market	MULHUM	Mary					
	1 1						
-20 30.000 40 50	60 70 8	80	(MHz)	300	400 50	00 600 700	1000.00
-20 30.000 40 50					400 50	00 600 700	1000.00
30.000 40 50	F	Reading	Correct	Measure-			1000.00
30.000 40 50 No. Mk. Fr	F req.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
30.000 40 50 No. Mk. Fr	Feq.	Reading Level dBuV	Correct Factor	Measure- ment dBuV/m	Limit dBuV/m	Over	Detecto
No. Mk. Fr M 1 47.9	Feq. Hz	Reading Level dBuV 55.87	Correct Factor dB/m -23.65	Measure- ment dBuV/m 32.22	Limit dBuV/m 40.00	Over dB -7.78	Detector peak
No. Mk. Fr M 1 47.9 2 239.9	Feq. Hz 9938 9874	Reading Level dBuV 55.87	Correct Factor dB/m -23.65 -18.18	Measure- ment dBuV/m 32.22 38.93	Limit dBuV/m 40.00 46.00	Over dB -7.78 -7.07	Detector peak
No. Mk. Fr M 1 47.9 2 239.9	Feq. Hz	Reading Level dBuV 55.87	Correct Factor dB/m -23.65	Measure- ment dBuV/m 32.22	Limit dBuV/m 40.00	Over dB -7.78	Detector peak
No. Mk. Fr M 1 47.9 2 239.9 3 * 292.0	Feq. Hz 9938 9874	Reading Level dBuV 55.87	Correct Factor dB/m -23.65 -18.18	Measure- ment dBuV/m 32.22 38.93	Limit dBuV/m 40.00 46.00	Over dB -7.78 -7.07	Detector peak
No. Mk. Fr M 1 47.9 2 239.9 3 * 292.0 4 305.0	Feq. Hz 9938 9874 0581	Reading Level dBuV 55.87 57.11	Correct Factor dB/m -23.65 -18.18 -16.81	Measure- ment dBuV/m 32.22 38.93 41.53	Limit dBuV/m 40.00 46.00 46.00	Over dB -7.78 -7.07 -4.47	Detector peak peak
No. Mk. Fr M 1 47.9 2 239.9 3 * 292.9 4 305.9 5 677.9	Feq. Hz 9938 9874 0581 6800	Reading Level dBuV 55.87 57.11 58.34 56.41	Correct Factor dB/m -23.65 -18.18 -16.81 -16.43	Measure- ment dBuV/m 32.22 38.93 41.53 39.98	Limit dBuV/m 40.00 46.00 46.00 46.00	Over dB -7.78 -7.07 -4.47 -6.02	peak peak peak peak



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UT:	Tablet PC		Model:		PTV-R78-	3288	
emperature:	e: 25°C Relative Humidity:				55%	A British	
est Voltage:	AC 120/60I	G	1111111				
Ant. Pol.	Vertical						
est Mode:	BLE TX 24	2402 Mode					
Remark:	Only worse	case is repo	is reported				
80.0 dBuV/m							
30		2 3 ************************************	Abrah In Manager	(REJEC	CC 15C 3M Radiation Margin -6		
30.000 40 5			rect Measu		500 600 700	1000.00	
No. Mk.	Freq. L	evel Fa	ctor men	t Limi	t Over		
	MHz o	lBuV dB	/m dBuV/	m dBuV	//m dB	Detecto	
1 48	3.1625 5	6.13 -23	.72 32.4	1 40.0	00 -7.59	peak	
2 10	6.7587 5	7.86 -21	.85 36.0	1 43.5	-7.49	peak	
3 * 14	3.8291 5	9.78 -21	.51 38.2	7 43.5	50 -5.23	peak	
4 19	1.7450 5	7.11 -20	.45 36.6	6 43.5	50 -6.84	peak	
5 29		6.09 -16	.85 39.2	4 46.0	00 -6.76	peak	
		9.95 -11				peak	
		er margin					



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Above 1GHz

EUT:	Tablet PC	Model:	PTV-R78-3288			
Temperature:	25℃	Relative Humidity:	55%			
Test Voltage:	AC 120/60Hz					
Ant. Pol.	Horizontal					
Test Mode:	BLE Mode TX 2402 MHz					
Remark:	No report for the emission which more than 10 dB below the					
	prescribed limit.					

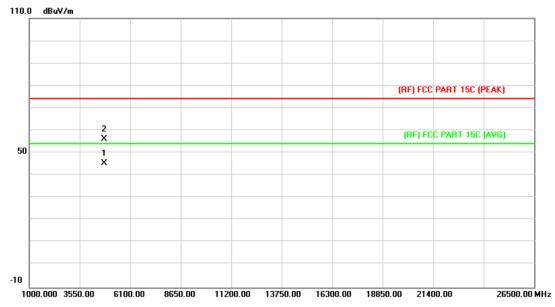


No	. Mk	Freq.	Reading Level		Measure- ment	Limit	Over	
		MHz	dBu∨	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4805.000	44.68	13.44	58.12	74.00	-15.88	peak
2	*	4807.425	31.70	13.47	45.17	54.00	-8.83	AVG



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EUT:	Tablet PC	Model:	PTV-R78-3288
Temperature:	25℃	Relative Humidity:	55%
Test Voltage:	AC 120/60Hz		
Ant. Pol.	Vertical		
Test Mode:	BLE Mode TX 2402 MHz	MILLER	THE PARTY OF THE P
Remark:	No report for the emission	which more than 10 dl	B below the
	prescribed limit.		

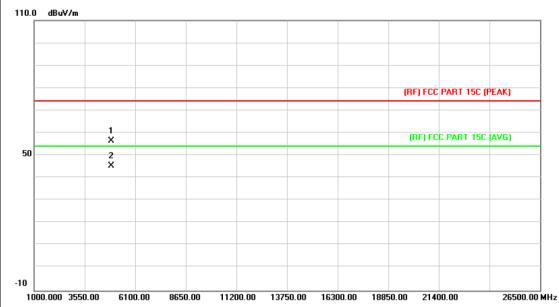


N	o. Mk	. Freq.	_		Measure- ment	Limit	Over	
		MHz	dBu∀	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	4804.250	31.84	13.44	45.28	54.00	-8.72	AVG
2		4806.210	42.75	13.46	56.21	74.00	-17.79	peak



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EUT:	Tablet PC	Model:	PTV-R78-3288					
Temperature:	25℃	Relative Humidity:	55%					
Test Voltage:	AC 120/60Hz	10 T	100					
Ant. Pol.	Horizontal	U						
Test Mode:	BLE Mode TX 2442 MHz	WIID S	2					
Remark:	No report for the emission v	No report for the emission which more than 10 dB below the						
	prescribed limit.							
ĺ								

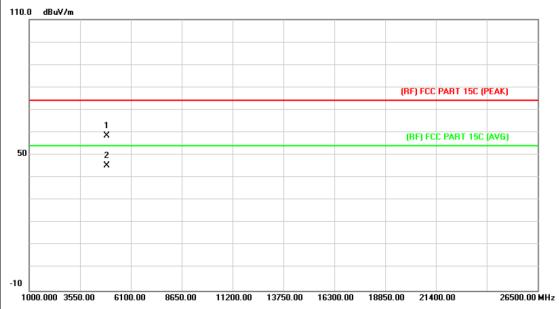


No	. Mk	. Freq.	Reading Level		Measure- ment	Limit	Over	
		MHz	dBu∀	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4881.182	42.47	13.90	56.37	74.00	-17.63	peak
2	*	4882.065	31.36	13.90	45.26	54.00	-8.74	AVG



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EUT:	Tablet PC	Model:	PTV-R78-3288				
Temperature:	25 ℃	Relative Humidity:	55%				
Test Voltage:	AC 120/60Hz	TO 01	1133				
Ant. Pol.	Vertical	O					
Test Mode:	BLE Mode TX 2442 MHz		a William				
Remark:	No report for the emission v	No report for the emission which more than 10 dB below the					
	prescribed limit.						
110.0 dp.4//-							

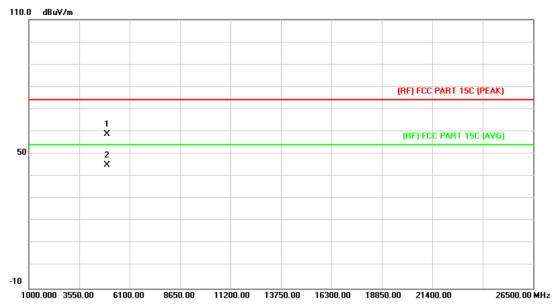


N	No.	Mk.	Freq.	Reading Level		Measure- ment	Limit	Over	
			MHz	dBu∀	dB/m	dBuV/m	dBuV/m	dB	Detector
1			4881.721	44.74	13.90	58.64	74.00	-15.36	peak
2		*	4882.576	31.37	13.90	45.27	54.00	-8.73	AVG



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EUT:	Tablet PC	Model:	PTV-R78-3288				
Temperature:	25℃	Relative Humidity:	55%				
Test Voltage:	AC 120/60Hz	11					
Ant. Pol.	Horizontal	O					
Test Mode:	BLE Mode TX 2480 MHz		A VIII				
Remark:	No report for the emission v	No report for the emission which more than 10 dB below the					
	prescribed limit.						
i							

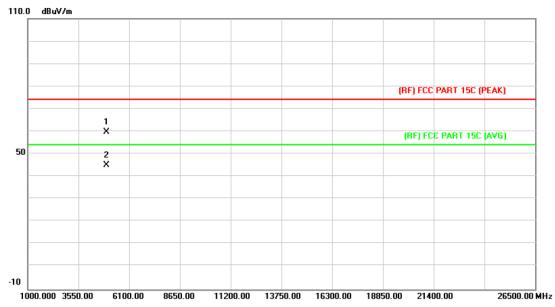


No	o. Mk	. Freq.	Reading Level		Measure- ment	Limit	Over	
		MHz	dBu∀	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4959.595	44.57	14.36	58.93	74.00	-15.07	peak
2	*	4960.432	30.77	14.36	45.13	54.00	-8.87	AVG



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Tablet PC	Model:	PTV-R78-3288			
25℃	Relative Humidity:	55%			
AC 120/60Hz	30 60	100			
Vertical					
BLE Mode TX 2480 MHz		2			
No report for the emission which more than 10 dB below the prescribed limit.					
	25°C AC 120/60Hz Vertical BLE Mode TX 2480 MHz	25°C Relative Humidity: AC 120/60Hz Vertical BLE Mode TX 2480 MHz No report for the emission which more than 10 dB			



No	. Mk	. Freq.	Reading Level		Measure- ment	Limit	Over	
		MHz	dBu∨	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4958.893	45.35	14.35	59.70	74.00	-14.30	peak
2	*	4960.102	30.71	14.36	45.07	54.00	-8.93	AVG



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6. Restricted Bands Requirement

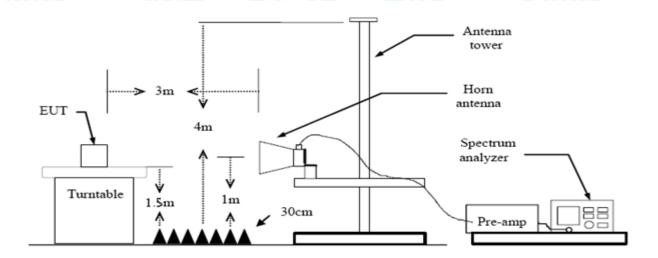
6.1 Test Standard and Limit

6.1.1 Test Standard FCC Part 15.247(d) FCC Part 15.205

6.1.2 Test Limit

Restricted Frequency	Distance Mo	eters(at 3m)
Band (MHz)	Peak (dBuV/m)	Average (dBuV/m)
2310 ~2390	74	54
2483.5 ~2500	74	54

6.2 Test Setup



6.3 Test Procedure

- (1) The measuring distance of 3m shall be used for measurements at frequency up to 1GHz and above 1 GHz. The EUT was placed on a rotating 0.8m high above ground, the table was rotated 360 degrees to determine the position of the highest radiation.
- (2) Measurements at frequency above 1GHz. The EUT was placed on a rotating 1.5m high above the ground. RF absorbers covered the ground plane with a minimum area of 3.0m by 3.0m between the EUT and measurement receiver antenna. The RF absorber shall not exceed 30cm in high above the conducting floor. The table was rotated 360 degrees to determine the position of the highest radiation.
- (3) The Test antenna shall vary between 1m and 4m, Both Horizontal and Vertical antenna are set to make measurement.
- (4) The initial step in collecting conducted emission data is a spectrum analyzer peak detector



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mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.

- (5) If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit Bellow 1 GHz, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed. But the Peak Value and average value both need to comply with applicable limit above 1 GHz.
- (6) Testing frequency range below 1GHz the measuring instrument use VBW=120 kHz with Quasi-peak detection.
- (7) Testing frequency range above 1GHz the measuring instrument use RBW=1 MHz and VBW=3 MHz with Peak Detector for Peak Values, and use RBW=1 MHz and VBW=10 Hz with Peak Detector for Average Values.
- (8) For the actual test configuration, please see the test setup photo.

6.4 EUT Operating Condition

The Equipment Under Test was set to Continual Transmitting in maximum power.

6.5 Test Data

Remark: During testing above 1GHz the measuring instrument use RBW=1 MHz and VBW=3 MHz with Peak Detector for Peak Values, and use RBW=1 MHz and VBW=10 Hz with Peak Detector for Average Values.

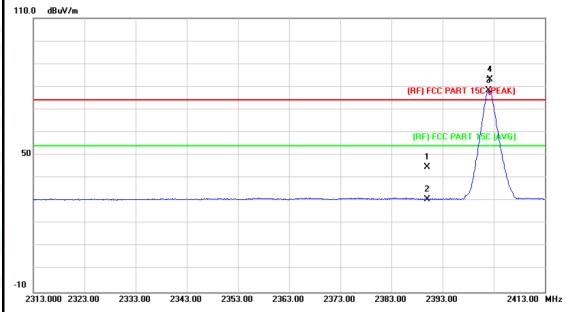
Test data please refer the following pages.



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(1) Radiation Test

EUT:	Tablet PC	Model:	PTV-R78-3288
Temperature:	25℃	Relative Humidity:	55%
Test Voltage:	AC 120/60Hz	U. A.	
Ant. Pol.	Horizontal	COLUMN TO SERVICE SERV	NAME OF THE PERSON OF THE PERS
Test Mode:	BLE Mode TX 2402 MHz		133
Remark:	N/A		
110.0 dBuV/m			



No.	Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBu∨	dB/m	dBuV/m	dBuV/m	dB	Detector
1		2390.000	43.97	0.77	44.74	74.00	-29.26	peak
2		2390.000	29.94	0.77	30.71	54.00	-23.29	AVG
3	*	2402.000	77.55	0.82	78.37	Fundamenta	I Frequency	AVG
4	Χ	2402.300	82.45	0.82	83.27	Fundamenta	I Frequency	peak



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EUT	Γ:		Tablet PC			Model:		PTV-R78-3288		
Гem	peratur	e:	25℃	CILI		Relative Hui	midity:	55%		
[es	t Voltag	e:	AC 12	0/60Hz		30 1	GU	11:30		
A nt	. Pol.		Vertica	al	Like		a v		M	
Tes	t Mode:		BLE M	lode TX 240	2 MHz	THE STATE OF THE S		a W	No.	
Ren	nark:		N/A	A STATE		1		13		
110.0	dBuV/m									
							(RF) FCC	PART 15C PEAK	()	
50							(RF) FC	C PART 15C (AVC	i)	
							× 2 ×	\ 		
10 23	13.000 2323	3.00	2333.00	2343.00 235	3.00 2363.0	0 2373.00	2383.00 2393	3.00 2	2413.00 MF	
1	No. Mk.	. F	req.	Reading Level	Correct Factor		- Limit	Over		
		N	ИНZ	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detecto	
1		239	0.000	42.10	0.77	42.87	74.00	-31.13	peak	
		239	0.000	30.05	0.77	30.82	54.00	-23.18	AVG	
2							— Eundamont			
2	*	240	2.100	76.34	0.82	77.16	i unuameni	al Frequency	AVG	



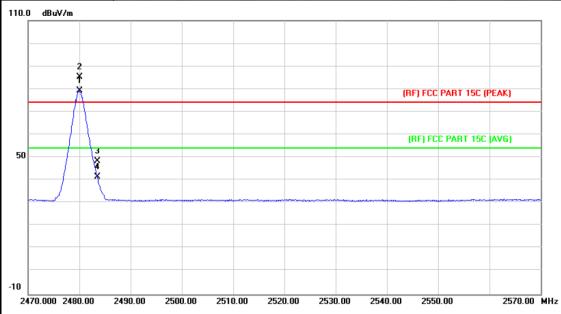
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EUT:	:		Table	et PC		111	Mod	del:		PTV-R	78-3288
Гет	peratu	re:	25 ℃	(-1	ATT.	9	Rela	ative H	umidity:	55%	A British
Гest	Voltag	e:	AC 1	20/60Hz	7						
۹nt.	Pol.		Horiz	ontal		AND		1			ANII
Гest	Mode:		BLE	Mode T	X 2480	MHz	- 6	4/10		a W	Marie
Rem	ark:		N/A	ABA			7			33	
10.0	dBuV/m										
50		3								PART 15C (PEA	
10											
	0.000 2480 lo. Mk		90.00 ∋q.	Readi Leve	_	2520.00 Correct Factor	Mea	asure- ient	Limit	Over	2570.00 MH
				dBu\	,		dB	BuV/m	dBuV/m	dB	Detecto
		MH	1Z	abuv		dB/m					
1	*	2480.		76.1		1.15		7.34	Fundament	al Frequency	AVG
	* X		000		9		7		_	al Frequency al Frequency	AVG
1		2480.	200	76.1	9	1.15	83	7.34	_	al Frequency	



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1	EUT:	Tablet PC	Model:	PTV-R78-3288		
	Temperature:	25℃	Relative Humidity:	55%		
	Test Voltage:	AC 120/60Hz	01 - 0			
l	Ant. Pol.	Vertical				
	Test Mode:	BLE Mode TX 2480 MHz				
	Remark:	N/A				

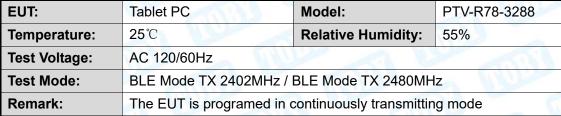


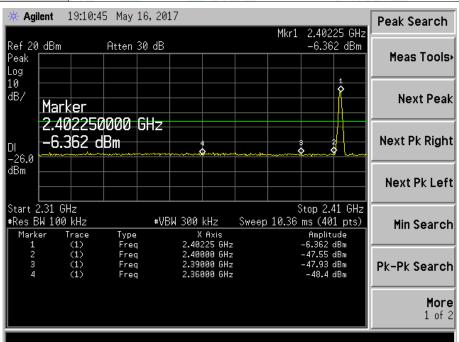
No.	. Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBu∨	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	2480.000	78.17	1.15	79.32	Fundamental Frequency		AVG
2	X	2480.100	84.19	1.15	85.34	Fundamental	Frequency	peak
3		2483.500	47.09	1.17	48.26	74.00	-25.74	peak
4		2483.500	40.26	1.17	41.43	54.00	-12.57	AVG

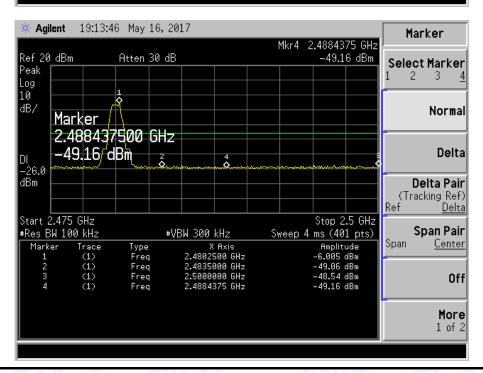


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(2) Conducted Test









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7. Bandwidth Test

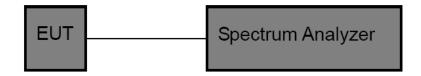
7.1 Test Standard and Limit

7.1.1 Test Standard FCC Part 15.247 (a)(2)

7.1.2 Test Limit

FCC P	art 15 Subpart C(15.247)	/RSS-247
Test Item	Limit	Frequency Range(MHz)
Bandwidth	>=500 KHz (6dB bandwidth)	2400~2483.5

7.2 Test Setup



7.3 Test Procedure

- (1) The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram above.
- (2) The bandwidth is measured at an amplitude level reduced 6dB from the reference level. The reference level is the level of the highest amplitude signal observed from the transmitter at the fundamental frequency. Once the reference level is established, the equipment is conditioned with typical modulating signal to produce the worst –case (i.e the widest) bandwidth.
- (3)Measure the channel separation the spectrum analyzer was set to Resolution Bandwidth:100 kHz, and Video Bandwidth:300 kHz, Detector: Peak, Sweep Time set auto.

7.4 EUT Operating Condition

The EUT was set to continuously transmitting in each mode and low, middle and high channel for the test.



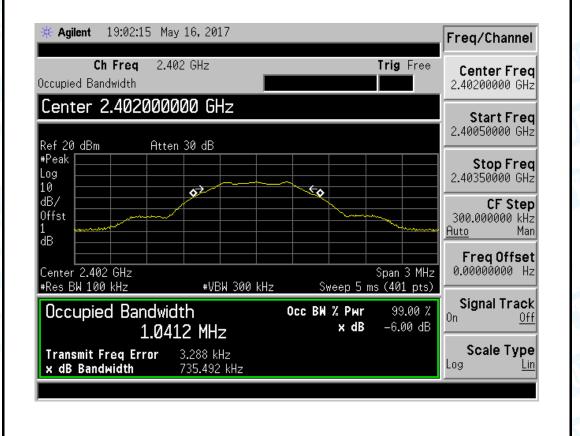
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7.5 Test Data

EUT: Table		et PC	Model:	PTV-R78-3288			
Temperature:	25 ℃		Relative Humidity:	55%			
Test Voltage:	AC 1	20/60Hz	MILLER	a war			
Test Mode:	BLE	TX Mode					
Channel freque	ncy	6dB Bandwidth	99% Bandwidth	Limit			
(MHz)		(kHz)	(kHz)	(kHz)			
2402		735.492 1041.2					
2442		725.260	1039.0	>=500			
2480		741.714 1042.0		-			
BLE Mode							

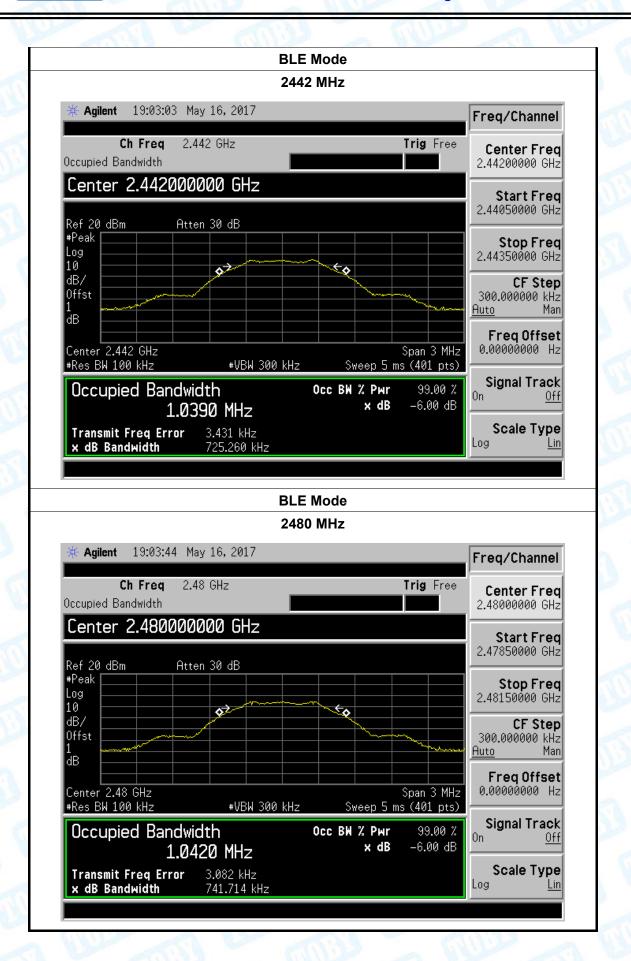
BLE Mode

2402 MHz





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8. Peak Output Power Test

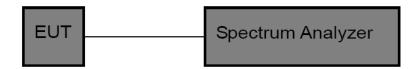
8.1 Test Standard and Limit

8.1.1 Test Standard FCC Part 15.247 (b)(3)

8.1.2 Test Limit

FCC Part 15 Subpart C(15.247)/RSS-247				
Test Item	Limit	Frequency Range(MHz)		
Peak Output Power	1 Watt or 30 dBm	2400~2483.5		

8.2 Test Setup



8.3 Test Procedure

The EUT was directly connected to the Spectrum Analyzer and antenna output port as show in the block diagram above. The measurement is according to section 9.1.1 of KDB 558074 D01 DTS Meas Guidance v04.

- (1) Set the RBW≥DTS Bandwidth
- (2) Set VBW≥3*RBW
- (3) Set Span≥3*RBW
- (4) Sweep time=auto
- (5) Detector= peak
- (6) Trace mode= maxhold.
- (7) Allow trace to fully stabilize, and then use peak marker function to determine the peak amplitude level.

8.4 EUT Operating Condition

The EUT was set to continuously transmitting in the max power during the test.



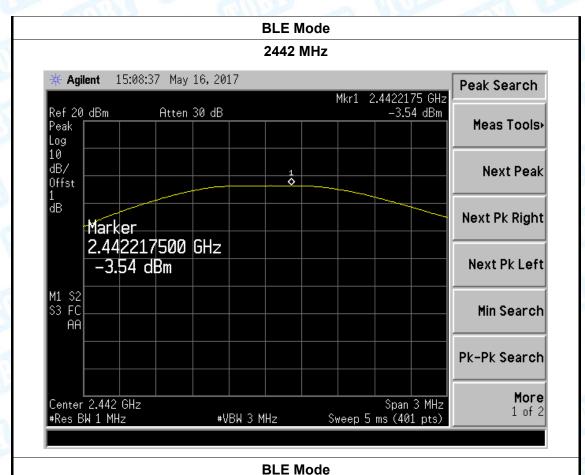
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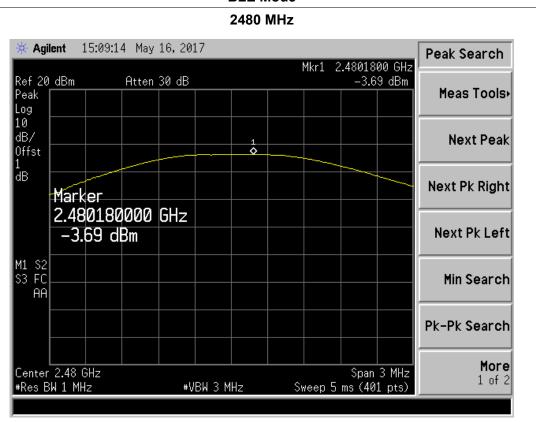
8.5 Test Data

UT:	IT: Tablet PC Model:		PTV-R78-3288		
emperature:	25℃	A V	Relative Hui	midity:	55%
est Voltage:	AC 120/6	0Hz	THE PARTY		CO VIDE
est Mode:	BLE TX N	/lode	01.0	(III)	333
hannel freque	ncy (MHz)	Test Re	esult (dBm)		Limit (dBm)
2402			4.115		
2442		-;	3.540		30
2480		-:	3.690		
		BL	E Mode		
		240	02 MHz		
* Agilent 1	5:08:02 May 1	c 2017			
Aglient 1.	J.00.02 May 1	0, 2017	Mkr1 2.4	4022475 GHz	Peak Search
Ref 20 dBm	Atten 3	0 dB		-4.115 dBm	Meas Tools
Peak Log					rieas 100is
10 dB/					Next Peak
Offst			\$		Nextreak
1					
dB dB					Novt Dk Dight
1 dB Mark e					Next Pk Right
1 dB Marke 2.402	2247500 E	iHz			
1 dB Marke 2.402		iHz			Next Pk Right Next Pk Left
1 dB Marke 2.402 -4.11	2247500 E	iHz			Next Pk Left
1 Marke 2.402 -4.11	2247500 E	iHz			
1 dB Marke 2.402 -4.11	2247500 E	GHz			Next Pk Left Min Search
1 dB Marke 2.402 -4.11	2247500 E	iHz			Next Pk Left
1 dB Marke 2.402 -4.11	2247500 G L5 dBm	iHz		Span 3 MHz	Next Pk Left Min Search



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9. Power Spectral Density Test

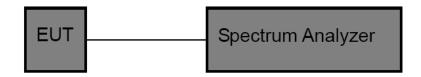
9.1 Test Standard and Limit

9.1.1 Test Standard FCC Part 15.247 (e)

9.1.2 Test Limit

FCC Part 15 Subpart C(15.247)					
Test Item Limit Frequency Range(N					
Power Spectral Density	8dBm(in any 3 kHz)	2400~2483.5			

9.2 Test Setup



9.3 Test Procedure

The EUT was directly connected to the Spectrum Analyzer and antenna output port as show in the block diagram above. The measurement according to section 10.2 of KDB 558074 D01 DTS Meas Guidance v04.

- (1) The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram above.
- (2) Set analyser center frequency to DTS channel center frequenyc.
- (3) Set the span to 1.5 times the DTS bandwidth.
- (4) Set the RBW to: 3 kHz(5) Set the VBW to: 10 kHz
- (6) Detector: peak (7) Sweep time: auto
- (8) Allow trace to fully stabilize. Then use the peak marker function to determine the maximum amplitude level.

9.4 EUT Operating Condition

The EUT was set to continuously transmitting in each mode and low, Midle and high channel for the test.



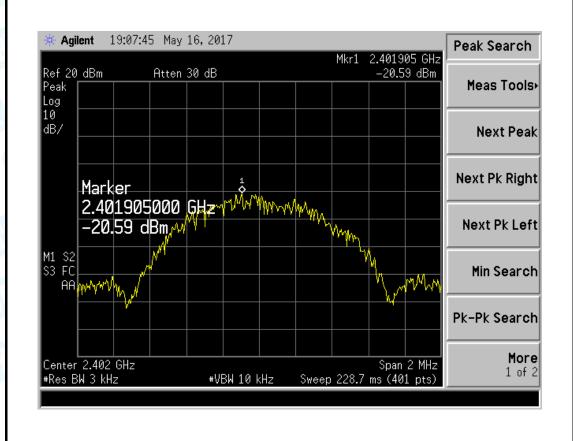
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9.5 Test Data

EUT:	Tablet PC	Model:			PTV-	R78-3288
Temperature:	25℃		Relative Humidity: 55%			
Test Voltage:	AC 120/6	0Hz				ani'b
Test Mode:	BLE TX N	BLE TX Mode				
Channel Frequency		Power Density		Lim	it	Pocult
(MHz)		(dBm)		(dBr	n)	Result
2402		-20.5	59			
2442		-19.95		8	8	
2480		-20.04				
		DIEM	a d a		L	

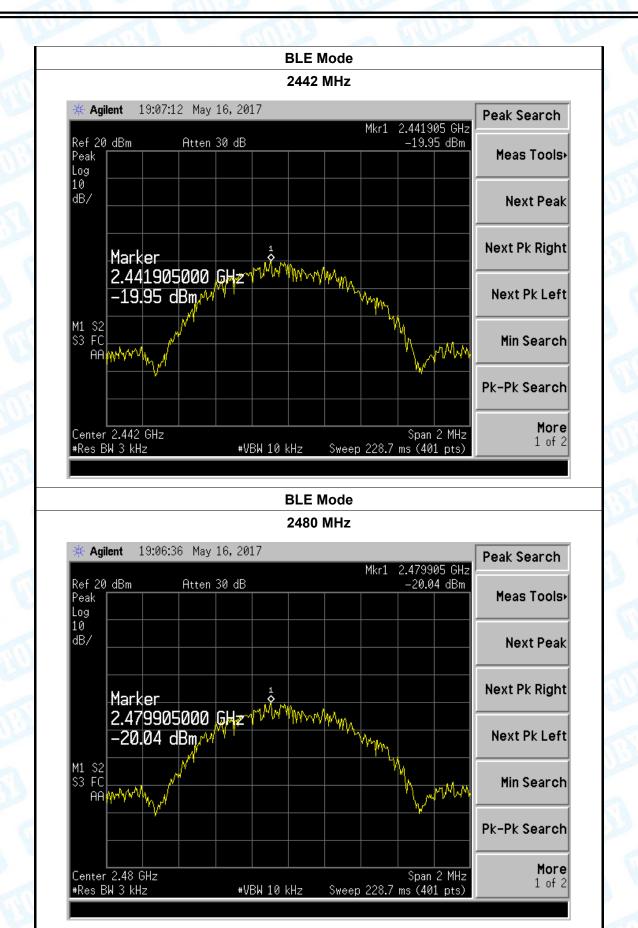
BLE Mode

2402 MHz





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10. Antenna Requirement

10.1 Standard Requirement

10.1.1 Standard FCC Part 15.203

10.1.2 Requirement

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 use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this Section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

10.2 Antenna Connected Construction

The directional gains of the antenna used for transmitting is 1.4dBi, and the antenna de-signed with permanent attachment and no consideration of replacement. Please see the EUT photo for details.

10.3 Result

The EUT antenna is a FPC Antenna. It complies with the standard requirement.

Antenna Type
Permanent attached antenna
⊠Unique connector antenna
☐Professional installation antenna

----END OF REPORT-----