

TEST REPORT**Report number: DRTTEC1705-0062(1)****Issue Date: Jun. 5, 2017**

Applicant	: POINT MOBILE CO.,LTD B-9F Kabul Great Valley, 32, Digital-ro 9-gil, Gangcheon-gu, Seoul, Korea, 08512
Equipment under test	: MOBILE COMPUTER
Model Name	: PM80
Serial Number	: Identical prototype
Test Method	: The Ministry of Internal Affairs and Communications notification in Annex 43* of Article 88 *Annex 43 is the statement in the case of Bluetooth.
Date of Test	: 2017-03-28 ~ 2017-06-05
Test Place	: DT&C Co., Ltd. 42, Yurin-ro, 154beon-gil, Cheoin-gu, Yongin-si, Gyeonggi-do, Korea 449-935
Test Results	: PASS (Refer to attachment.)

The results in this reports are applicable only to the samples tested.
This report shall not be re-produced except in full without the written approval of
DT&C Co., Ltd.

Tested Engineer;

ChulMin Kim

Approval Person;

GeunKi Son

1. Test Results

Environment of Test Room	Test Date	2017-03-28 ~ 2017-06-05
	Temperature	20 ~ 23 °C
	Humidity	50 ~ 54 %

Peak Antenna Gain	-0.37	dBi
Declaration Output Power	0.60	mW/MHz
Declaration Output Power	-2.2185	dBm/MHz
E.I.R.P.	-2.5885	dBm/ MHz
Input Power Voltage	3.8	VDC

Tested Circuit Insertion Loss		0	dB
Frequency equal to the Transmission rate		1	MHz
Transmission Time	ON TIME	2.880	ms
	OFF TIME	0.870	ms
	Ratio	77%	%
Packet Type (Mode)		2DH5	mode
Transmit Speed		1	MHz

Note: The insertion loss was corrected during the test.

Test Category :	2.4GHz Band Wideband Low-Power Data Communication System Bluetooth $\pi/4$ -DQPSK
The reason why the tests are performed only at rated voltage :	When the input voltage to receiver RF circuit varies below $\pm 1\%$ as the input voltage from the external power supply to the receiver varies $\pm 10\%$ (excluding power supply).

Measurement Frequency		MHz	2402	2411	2421	Result	Limit	Note
Channel Number		Ch.	1	10	20	---	---	
Reading Frequency		MHz	2402.024750	2411.025050	2421.025538	---		
Frequency Tolerance		ppm	10.30391341	10.38987972	10.54832714	PASS	$\pm 50 \times 10^{-6}$ (50ppm)	
Occupied Bandwidth		MHz	20.019000			PASS	83.5MHz or below	
Spread Bandwidth		MHz	18.381000			PASS	500kHz or more	
RF Output Power		mW/MHz	0.355034	0.326791	0.468026	PASS	3mW/MHz or below	
RF Output Power Tolerance		%	-40.827708	-45.534889	-21.995727	PASS	+20 to -80%	
Tx Spurious Emission Strength	30 to 2387MHz	uW/MHz	0.133660			PASS	2.5uW/MHz or below	
		MHz	2381.500			----		
	2387 to 2400MHz	uW/MHz	2.924152			PASS	25uW/MHz or below	
		MHz	2399.957			----		
	2483.5 to 2496.5MHz	uW/MHz	0.098855			PASS	25uW/MHz or below	
		MHz	2494.485			----		
Rx Spurious Emission Strength	10 to 1000MHz	nW	0.032359			PASS	4nW or below	
		MHz	890.110			----		
	1000 to 5000MHz	nW	0.416869			PASS	20nW or below	
		MHz	3156.000			----		
	5000 to 12500MHz	nW	0.866962			PASS	20nW or below	
		MHz	12237.500			----		
Time of occupancy hopping frequency		sec	0.002880			PASS	0.4sec or below	
		sec	0.322560			PASS	0.4sec or below	0.4secxSpread rate
Spreading Factor		---	18.381000			PASS	5 or more	
Interference Prevention Function		----	Good	Good	Good	PASS		

2. List of Measuring Instruments

[illegible]

Note1: 測定機器の較正は、1 年間有効です。

The calibration of measurement equipment is valid for one year period

Note2: "X" は使用した測定機器です。

"X" used equipment.

Note3: 較正方法 ...

イ) 独立行政法人情報通信研究機構(以下「機構」という。)又は第百二条の十八第一項の指定較正機関が行う較正

a): Calibration conducted by the National Institute of Information and Communications Technology (NICT) (hereinafter referred to as "NICT") or a designated calibration agency under Article 102-18 paragraph (1)

ロ: 計量法（平成四年法律第五十一号）第百三十五条又は第百四十四条の規定に基づく校正

b): Correction conducted pursuant to the provisions of Article 135 or Article 144 of the Measurement Law (Law No. 51 of 1992)

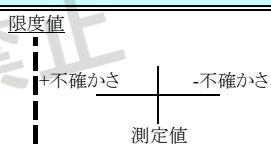
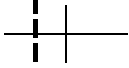
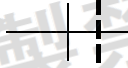
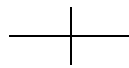
ハ)：外国において行う較正であつて、機構又は第二百二条の十八第一項の指定較正機関が行う較正に相当するもの

c): Calibration conducted in foreign countries, which shall be equivalent to the calibration conducted by the NICT or a designated calibration agency under Article 102-18 paragraph (1)

二)：別表第三の下欄に掲げる測定器その他の設備であつて、イからハまでのいずれかに掲げる較正等を受けたものを用いて行う較正等

d): Calibration conducted by using measuring instruments and other equipment listed in the right column of Table No. 3 attached hereto, which shall have been given any of calibration, etc. listed above from a) to c)

3. Uncertainty

判定	測定データにおける不確かさの判断とその範囲	
適合	例 A  <p>測定結果と不確かさは与えられた限度値内に入っています。 これを『適合』と呼びます。</p>	
	例 B  <p>完全には、限度値内でも限度値外でもありません。 この場合の適合性については、確実な結論を出すことは出来ません。</p>	
不適合	例 C  <p>完全には、限度値内でも限度値外でもありません。 この場合の適合性については、確実な結論を出すことは出来ません。</p>	
	例 D  <p>測定結果も不確かさも与えられた限度値内に入っていません。 これは『不適合』と呼びます。</p>	

4. Configuration Photographs

Conducted Measurement Photo



5. Trace Data

5.1 Frequency Tolerance

Ch.1: 2402MHz



Ch.10: 2411MHz

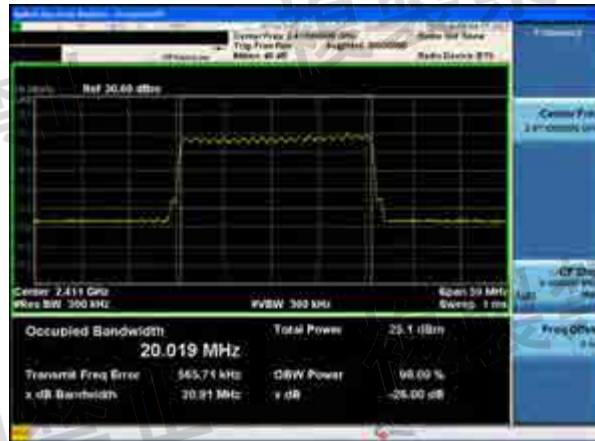


Ch.20: 2421MHz



5.2 Occupied and Spread Bandwidth

Occupied Bandwidth

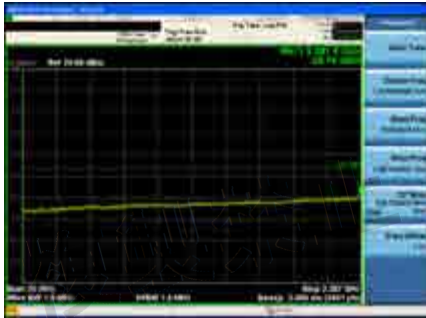


Spread Bandwidth



5.3 Tx Spurious Emission Strength

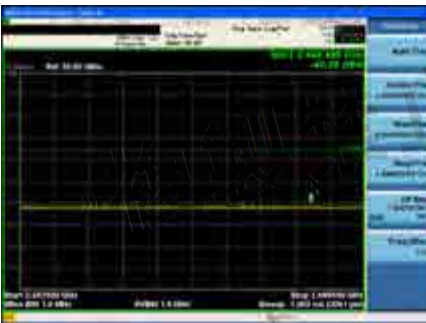
30-2387MHz



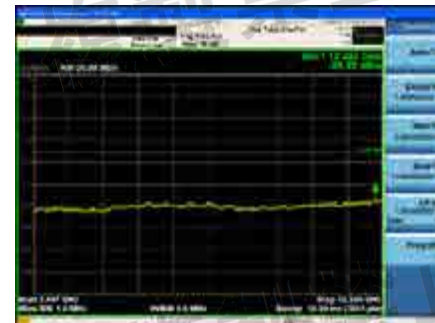
2387-2400MHz



2483.5-2496.5MHz



2496.5-12500MHz



5.4 RF Output Power

Ch.1: 2402MHz



Ch.10: 2411MHz

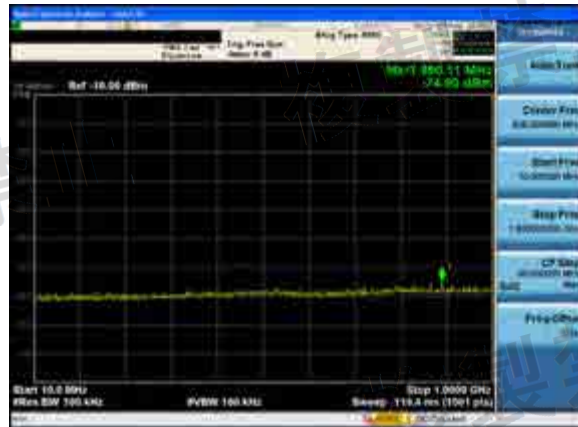


Ch.20: 2421MHz

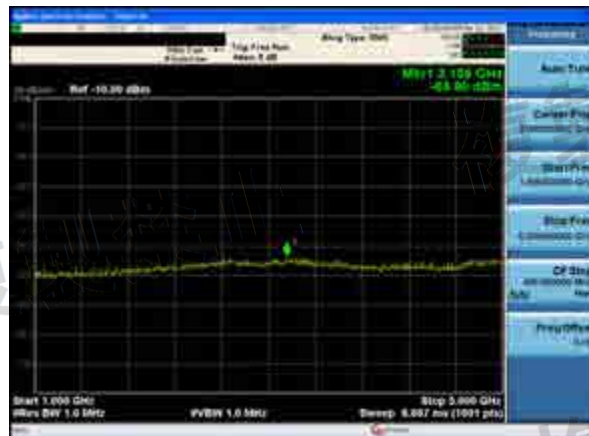


5.5 Rx Spurious Emission Strength

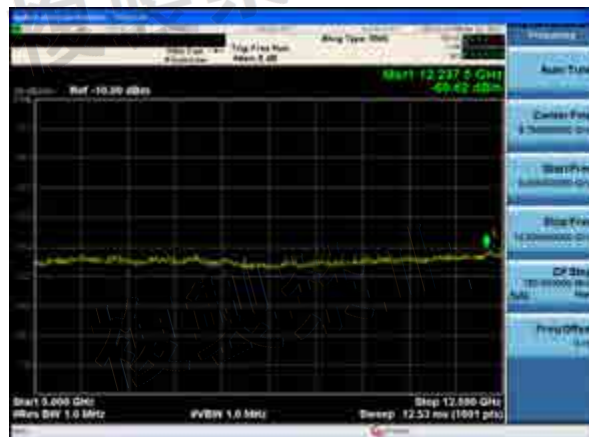
10MHz-1GHz



1-5GHz



5-12.5GHz



5.6 Hopping Frequency Dwell Time

ON/OFF

