APPLICATION CERTIFICATION
On Behalf of
Creative Labs Inc.

Creative HanZpad
Model No.: PMT-ZZ0030

FCC ID: IBAPMT-ZZ0030

Prepared for	:	Creative Labs Inc.
Address	:	1901 McCarthy Blvd, Milpitas, California 95035, United States
Prepared by	:	ACCURATE TECHNOLOGY CO. LTD
Address	:	F1, Bldg. A, Changyuan New Material Port, Keyuan Rd. Science & Industry Park, Nanshan, Shenzhen, Guangdong P.R. China Tel: (0755) 26503290 Fax: (0755) 26503396

Report Number	:	ATE20120871
Date of Test	:	May 3-18, 2012
Date of Report	:	May 18, 2012

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Description Page

Test Report Certification

Applicant **:** Creative Labs Inc.

Manufacturer **:** Creative Technology Ltd

EUT Description **:** Creative HanZpad

(A) MODEL NO.: PMT-ZZ0030

(B) SERIAL NO.: N/A

(C) POWER SUPPLY: DC 3.7V (Lithium polymer battery 2×) or AC 120V/50Hz supplied form Adapter

Measurement Procedure Used:

FCC Rules and Regulations Part 15 Subpart C Section 15.247
ANSI C63.4: 2003

The device described above is tested by ACCURATE TECHNOLOGY CO. LTD to determine the maximum emission levels emanating from the device. The maximum emission levels are compared to the FCC Part 15 Subpart C Section 15.247 limits. The measurement results are contained in this test report and ACCURATE TECHNOLOGY CO. LTD is assumed full responsibility for the accuracy and completeness of these measurements. Also, this report shows that the Equipment Under Test (EUT) is to be technically compliant with the FCC requirements.

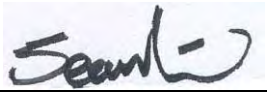
This report applies to above tested sample only. This report shall not be reproduced in part without written approval of ACCURATE TECHNOLOGY CO. LTD.

Date of Test : May 3-18, 2012

Prepared by :

(Engineer)

Approved & Authorized Signer :



(Manager)

1. GENERAL INFORMATION

1.1.Description of Device (EUT)

EUT	:	Creative HanZpad
Model Number	:	PMT-ZZ0030
Frequency Band (Bluetooth)	:	2402MHz-2480MHz
Frequency Band (WLAN)	:	802.11b/g/n(20MHz): 2412-2462MHz 802.11n(40MHz): 2422-2452MHz
Number of Channels	:	79
Data rate	:	GFSK (1Mbps), π/4 DQPSK (2Mbps) and 8DPSK (3Mbps)
Antenna Gain	:	0dBi
Power Supply	:	DC 3.7V (Lithium polymer battery 2×) or AC 120V/50Hz supplied form Adapter
Adapter	:	Model number: WA-10L05RU Input: AC 100-240V; 50/60Hz 0.5A Max. Output: DC 5V/2A
Applicant	:	Creative Labs Inc.
Address	:	1901 McCarthy Blvd, Milpitas, California 95035, United States
Manufacturer	:	Creative Technology Ltd
Address	:	31, International Business Park, Creative Resource, Singapore 609921
Date of sample received	:	May 3, 2012
Date of Test	:	May 3-18, 2012

1.2.Carrier Frequency of Channels

Channel No.	Frequency	Channel No.	Frequency
0	2402MHz	40	2442MHz
1	2403MHz	:	:
:	:	77	2479MHz
38	2440MHz	78	2480MHz
39	2441MHz		

1.3.Accessory and Auxiliary Equipment

n.a.

1.4.Description of Test Facility

EMC Lab	:	Accredited by TUV Rheinland Shenzhen Listed by FCC The Registration Number is 752051 Listed by Industry Canada The Registration Number is 5077A-2 Accredited by China National Accreditation Committee for Laboratories The Certificate Registration Number is L3193
Name of Firm	:	ACCURATE TECHNOLOGY CO. LTD
Site Location	:	F1, Bldg. A, Changyuan New Material Port, Keyuan Rd. Science & Industry Park, Nanshan, Shenzhen, Guangdong P.R. China

1.5.Measurement Uncertainty

Conducted Emission Expanded Uncertainty	=	2.23dB, k=2
Radiated emission expanded uncertainty (9kHz-30MHz)	=	3.08dB, k=2
Radiated emission expanded uncertainty (30MHz-1000MHz)	=	4.42dB, k=2
Radiated emission expanded uncertainty (Above 1GHz)	=	4.06dB, k=2

2. MEASURING DEVICE AND TEST EQUIPMENT

Table 1: List of Test and Measurement Equipment

Kind of equipment	Manufacturer	Type	S/N	Calibrated date	Calibrated until
EMI Test Receiver	Rohde&Schwarz	ESCS30	100307	Jan. 8, 2012	Jan. 7, 2013
EMI Test Receiver	Rohde&Schwarz	ESPI3	101526/003	Jan. 8, 2012	Jan. 7, 2013
Spectrum Analyzer	Agilent	E7405A	MY45115511	Jan. 8, 2012	Jan. 7, 2013
Pre-Amplifier	Rohde&Schwarz	CBLU1183540-01	3791	Jan. 8, 2012	Jan. 7, 2013
Loop Antenna	Schwarzbeck	FMZB1516	1516131	Jan. 8, 2012	Jan. 7, 2013
Bilog Antenna	Schwarzbeck	VULB9163	9163-323	Jan. 8, 2012	Jan. 7, 2013
Horn Antenna	Schwarzbeck	BBHA9120D	9120D-655	Jan. 8, 2012	Jan. 7, 2013
Horn Antenna	Schwarzbeck	BBHA9170	9170-359	Jan. 8, 2012	Jan. 7, 2013
LISN	Rohde&Schwarz	ESH3-Z5	100305	Jan. 8, 2012	Jan. 7, 2013
LISN	Schwarzbeck	NSLK8126	8126431	Jan. 8, 2012	Jan. 7, 2013

3. OPERATION OF EUT DURING TESTING

3.1.Operating Mode

The mode is used: Transmitting mode
Low Channel: 2402MHz
Middle Channel: 2441MHz
High Channel: 2480MHz
Hopping
Charging

3.2.Configuration and peripherals

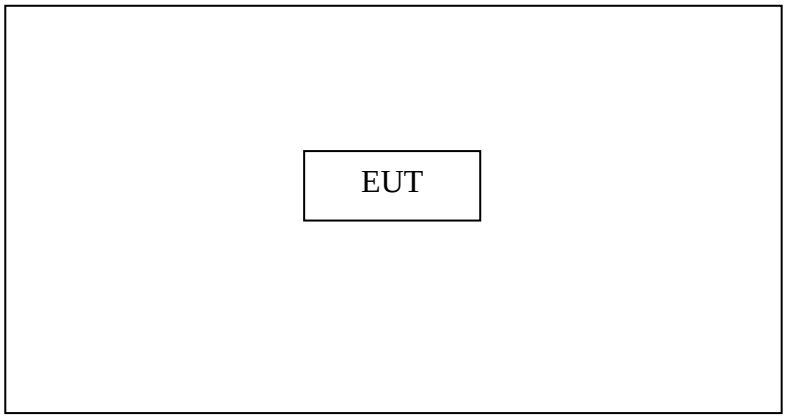


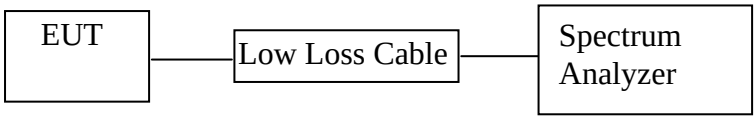
Figure 1 Setup: Transmitting mode

4. TEST PROCEDURES AND RESULTS

FCC Rules	Description of Test	Result
Section 15.247(a)(1)	20dB Bandwidth Test	Compliant
Section 15.247(a)(1)	Carrier Frequency Separation Test	Compliant
Section 15.247(a)(1)(iii)	Number Of Hopping Frequency Test	Compliant
Section 15.247(a)(1)(iii)	Dwell Time Test	Compliant
Section 15.247(b)(1)	Maximum Peak Output Power Test	Compliant
Section 15.247(d)	Band Edge Compliance Test	Compliant
Section 15.247(d) Section 15.209	Radiated Spurious Emission Test	Compliant
Section 15.247(d)	Conducted Spurious Emission Test	Compliant
Section 15.207	AC Power Line Conducted Emission Test	Compliant
Section 15.203	Antenna Requirement	Compliant

5. 20DB BANDWIDTH TEST

5.1.Block Diagram of Test Setup



(EUT: Creative HanZpad)

5.2.The Requirement For Section 15.247(a)(1)

Section 15.247(a)(1): Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater.

5.3.EUT Configuration on Measurement

The following equipment are installed on the emission measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

5.3.1.Creative HanZpad (EUT)

Model Number	**:**	PMT-ZZ0030
Serial Number	**:**	N/A
Manufacturer	**:**	Creative Technology Ltd

5.4.Operating Condition of EUT

5.4.1.Setup the EUT and simulator as shown as Section 5.1.

5.4.2.Turn on the power of all equipment.

5.4.3.Let the EUT work in TX(Hopping off) modes measure it. The transmit frequency are 2402-2480MHz. We select 2402MHz, 2441MHz, 2480MHz TX frequency to transmit.

5.5. Test Procedure

5.5.1. The transmitter output was connected to the spectrum analyzer through a low loss cable.

5.5.2. Set RBW of spectrum analyzer to 30kHz and VBW to 100kHz.

5.5.3. The 20dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 20dB.

5.6. Test Result

PASS.

Date of Test:	May 7, 2012	Temperature:	25°C
EUT:	Creative HanZpad	Humidity:	50%
Model No.:	PMT-ZZ0030	Power Supply:	DC 3.7V
Test Mode:	TX	Test Engineer:	Kai

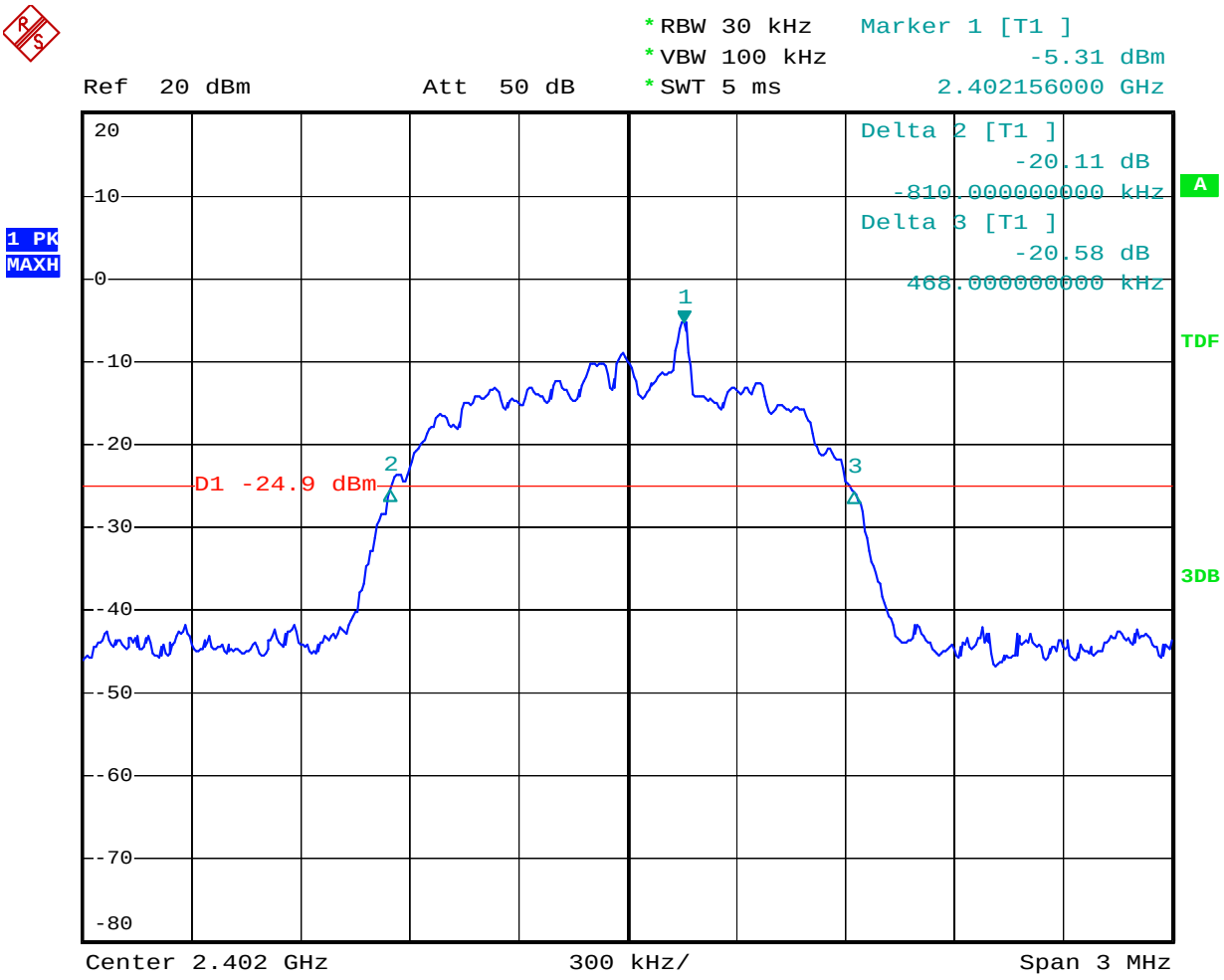
The data was shown the worst case 8DPSK (3Mbps)			
Channel	Frequency (MHz)	20dB Bandwidth (MHz)	Limit (MHz)
Low	2402	1.278	N/A
Middle	2441	1.272	N/A
High	2480	1.272	N/A

Note: N/A: 1) The 20 dB bandwidth of the hopping channel is not limit.

2) The data of 20 dB bandwidth of the hopping channel is limit of carrier frequencies separated

The spectrum analyzer plots are attached as below.

"Spectrum analyzer" is R/S



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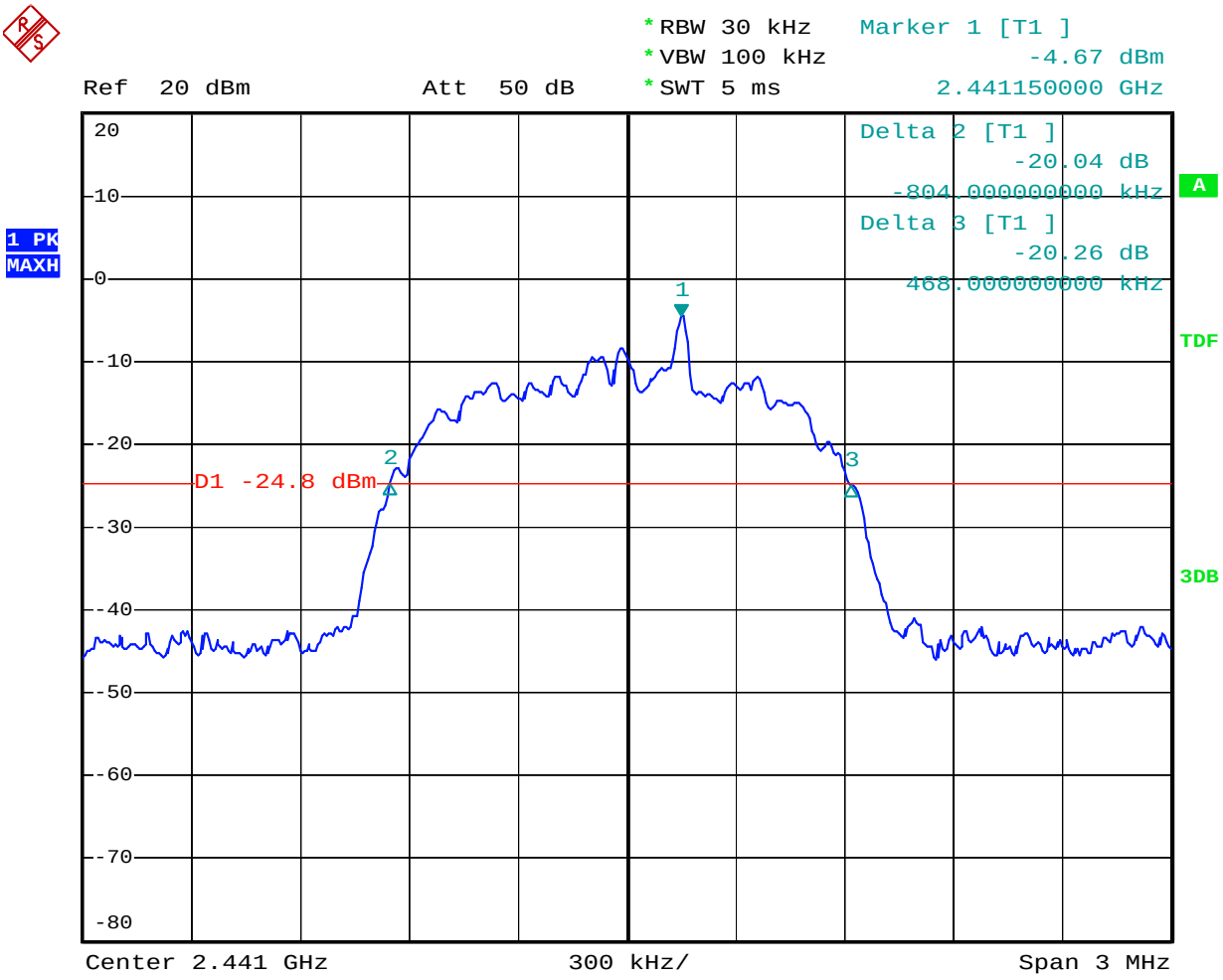

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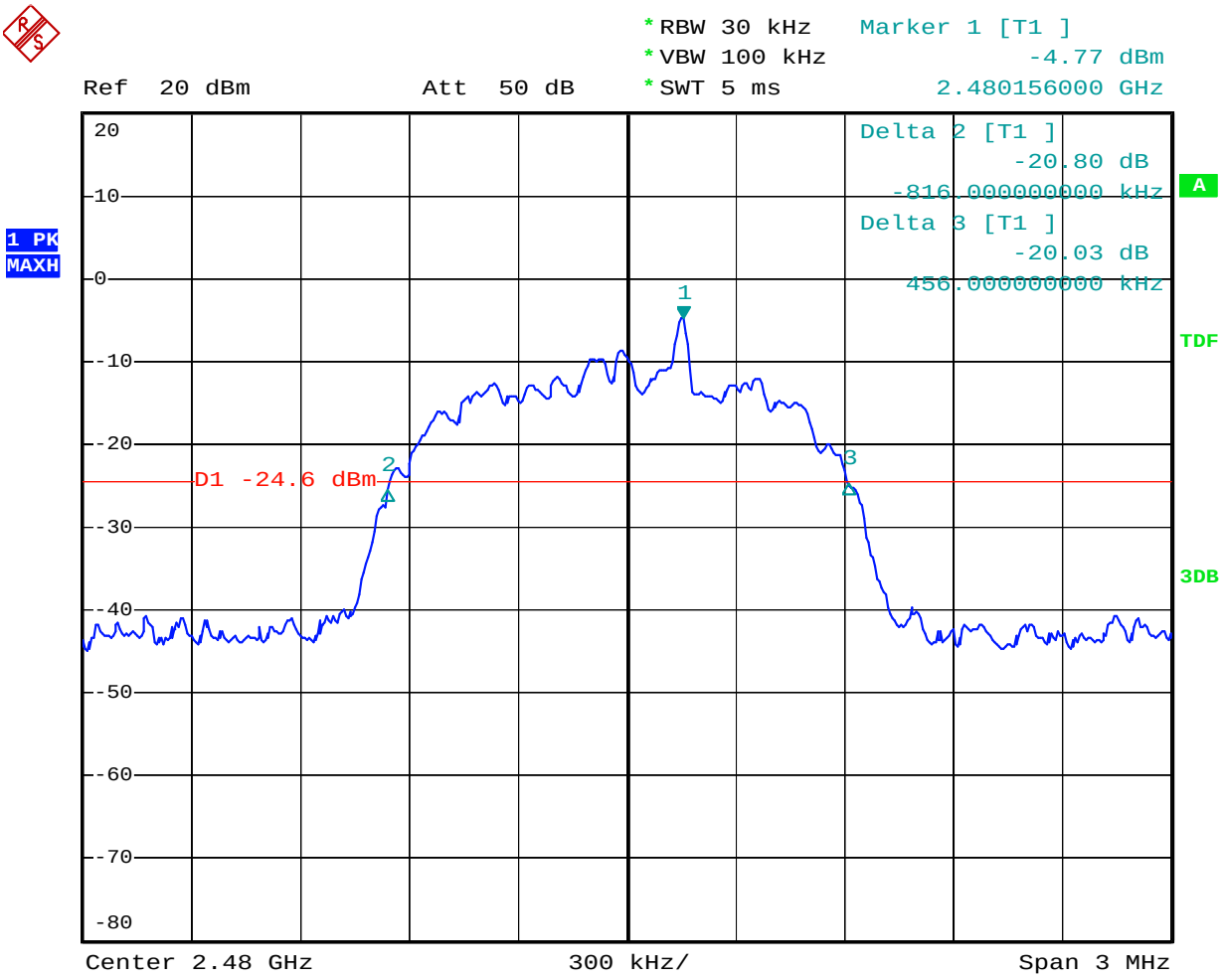

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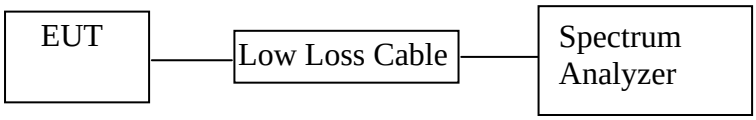
6. CARRIER FREQUENCY SEPARATION TEST

6.1.Block Diagram of Test Setup



(EUT: Creative HanZpad)

6.2.The Requirement For Section 15.247(a)(1)

Section 15.247(a)(1): Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater. Alternatively, frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than 125 mW. The system shall hop to channel frequencies that are selected at the system hopping rate from a pseudorandomly ordered list of hopping frequencies. Each frequency must be used equally on the average by each transmitter. The system receivers shall have input bandwidths that match the hopping channel bandwidths of their corresponding transmitters and shall shift frequencies in synchronization with the transmitted signals.

6.3.EUT Configuration on Measurement

The following equipment are installed on the emission measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

6.3.1.Creative HanZpad (EUT)

Model Number	**:**	PMT-ZZ0030
Serial Number	**:**	N/A
Manufacturer	**:**	Creative Technology Ltd

6.4.Operating Condition of EUT

6.4.1.Setup the EUT and simulator as shown as Section 6.1.

6.4.2.Turn on the power of all equipment.

6.4.3.Let the EUT work in TX (Hopping on) modes measure it. The transmit frequency are 2402-2480MHz. We select 2402MHz, 2441MHz, 2480MHz TX frequency to transmit.

6.5.Test Procedure

6.5.1.The transmitter output was connected to the spectrum analyzer through a low loss cable.

6.5.2.Set RBW of spectrum analyzer to 100kHz and VBW to 300kHz. Adjust Span to 3 MHz.

6.5.3.Set the adjacent channel of the EUT maxhold another trace.

6.5.4.Measurement the channel separation

6.6.Test Result

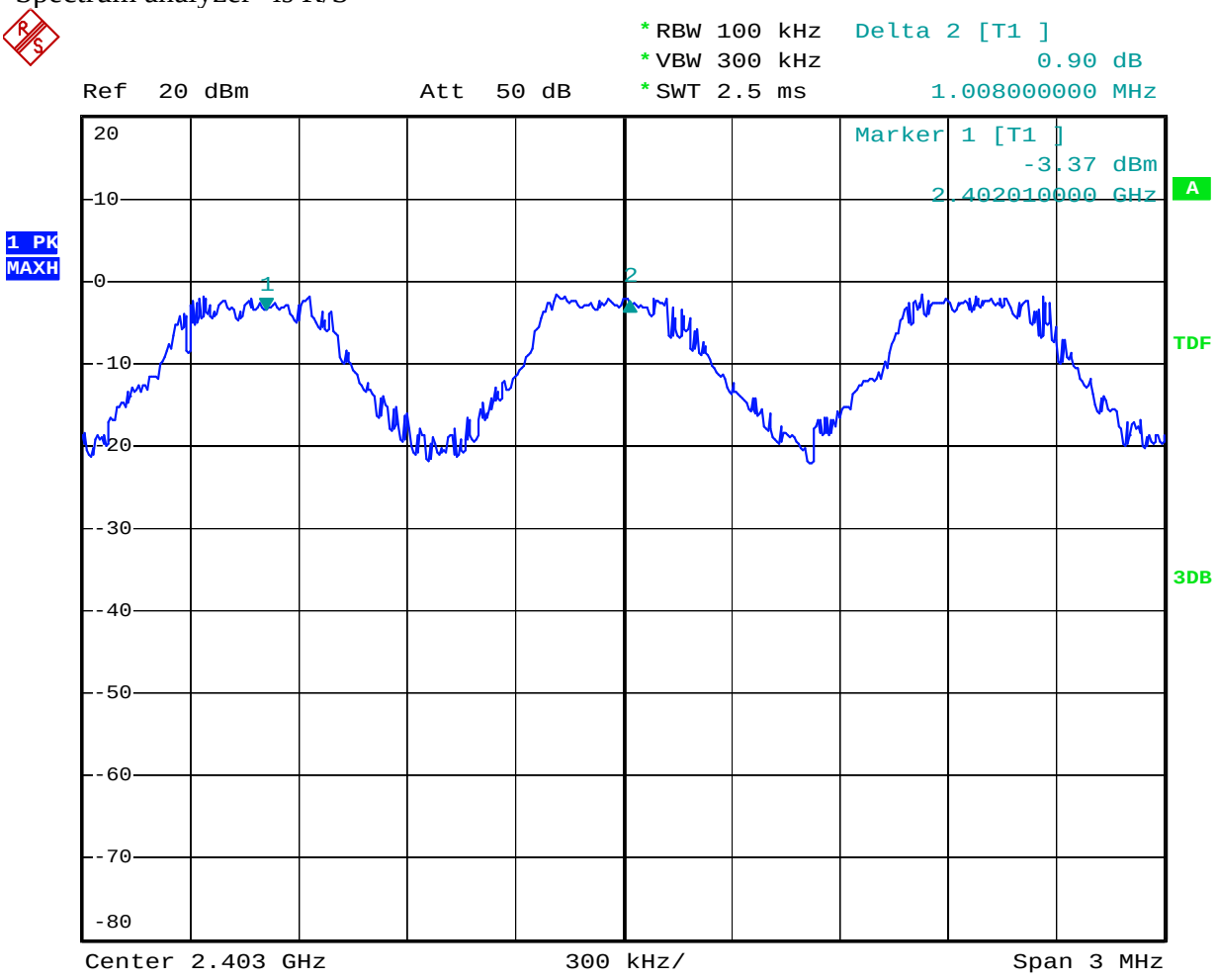
PASS.

Date of Test:	May 7, 2012	Temperature:	25°C
EUT:	Creative HanZpad	Humidity:	50%
Model No.:	PMT-ZZ0030	Power Supply:	DC 3.7V
Test Mode:	Hopping	Test Engineer:	Kai

The data was shown the worst case 8DPSK (3Mbps)			
Channel	Channel Frequency (MHz)	Channel separation (MHz)	Limit
Low	2402	1.008	> two-thirds of the 20 dB bandwidth (0.852MHz) or 25kHz (whichever is greater)
Middle	2441	1.002	> two-thirds of the 20 dB bandwidth (0.848MHz) or 25kHz(whichever is greater)
High	2480	1.008	> two-thirds of the 20 dB bandwidth (0.848MHz) or 25kHz(whichever is greater)

The spectrum analyzer plots are attached as below.

"Spectrum analyzer" is R/S



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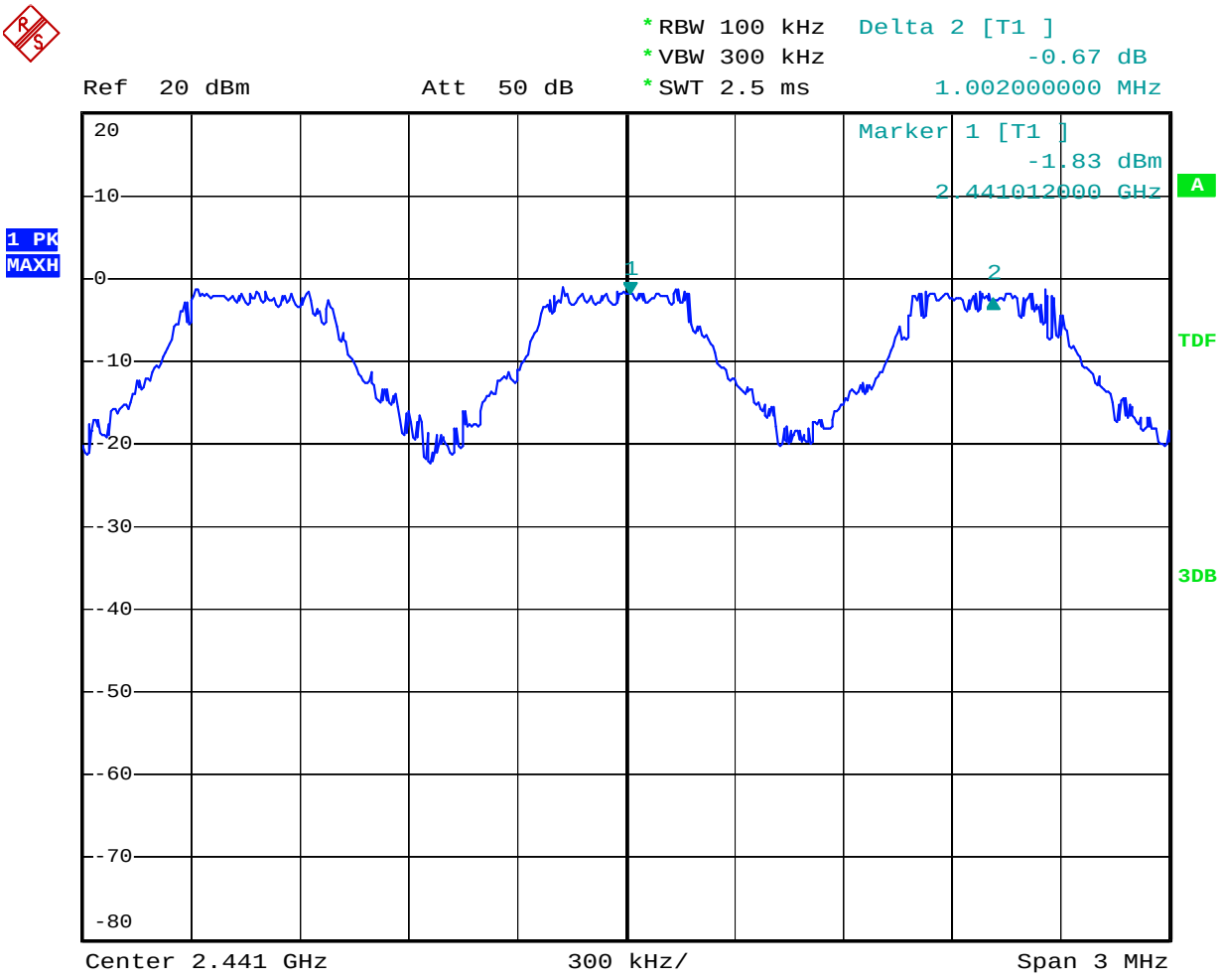

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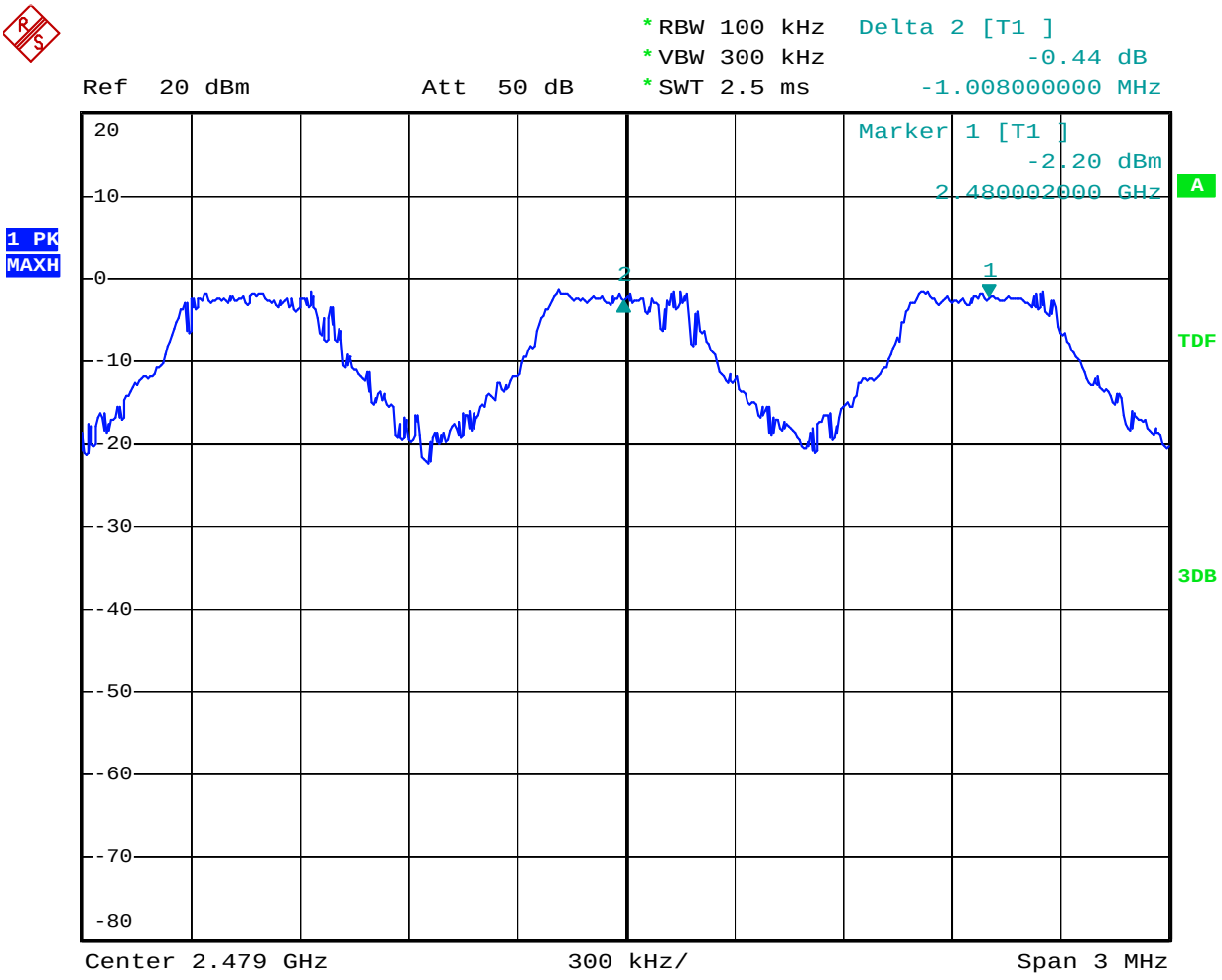

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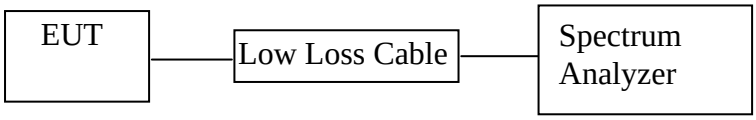
7. NUMBER OF HOPPING FREQUENCY TEST

7.1.Block Diagram of Test Setup



(EUT: Creative HanZpad)

7.2.The Requirement For Section 15.247(a)(1)(iii)

Section 15.247(a)(1)(iii): Frequency hopping systems in the 2400-2483.5 MHz band shall use at least 15 channels.

7.3.EUT Configuration on Measurement

The following equipment are installed on the emission measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

7.3.1.Creative HanZpad (EUT)

Model Number	:	PMT-ZZ0030
Serial Number	:	N/A
Manufacturer	:	Creative Technology Ltd

7.4.Operating Condition of EUT

7.4.1.Setup the EUT and simulator as shown as Section 7.1.

7.4.2.Turn on the power of all equipment.

7.4.3.Let the EUT work in TX (Hopping on) modes measure it.

7.5. Test Procedure

7.5.1. The transmitter output was connected to the spectrum analyzer through a low loss cable.

7.5.2. Set the spectrum analyzer as Span=30MHz, RBW=300kHz, VBW=300kHz.

7.5.3. Max hold, view and count how many channel in the band.

7.6. Test Result

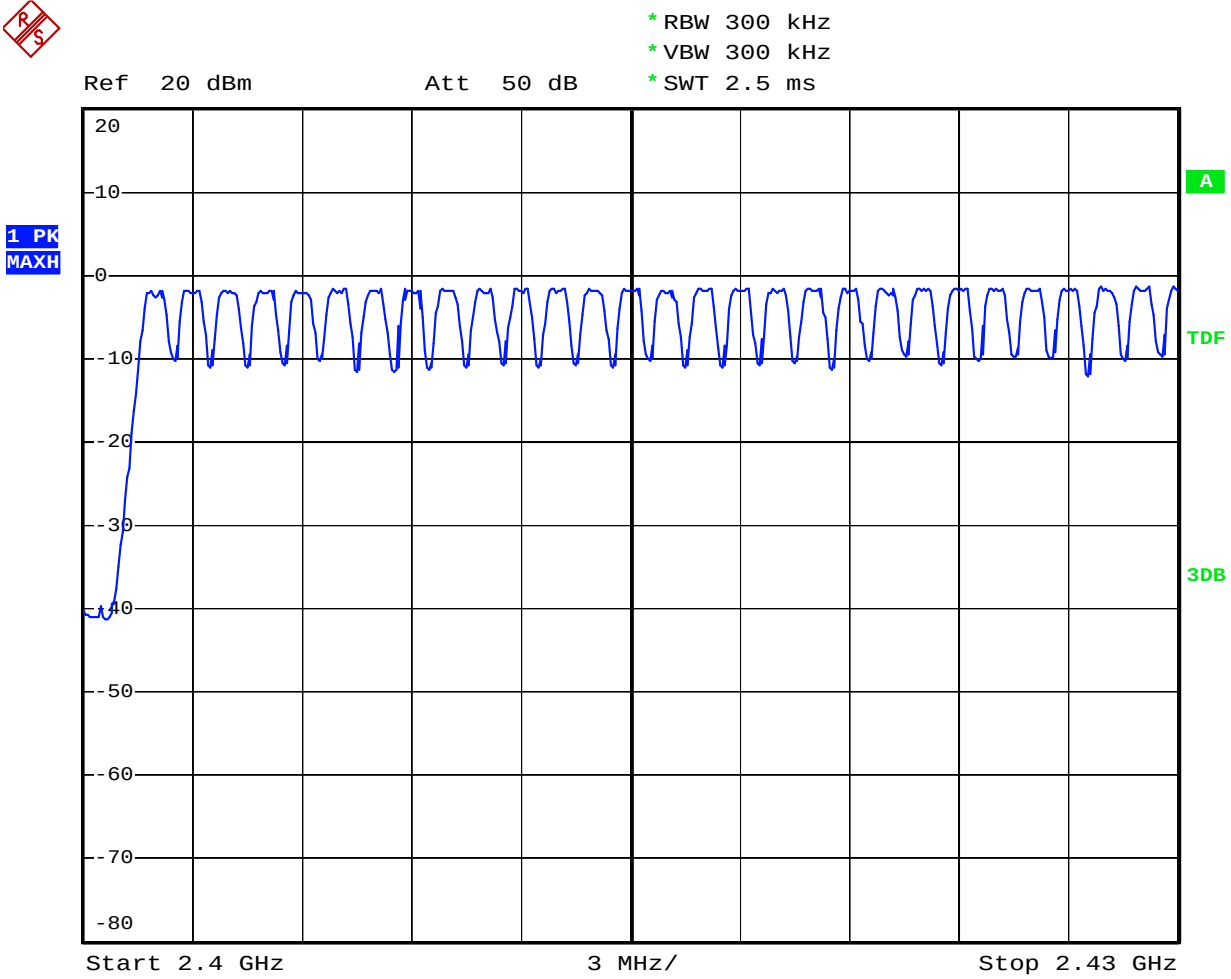
PASS.

Date of Test:	May 7, 2012	Temperature:	25°C
EUT:	Creative HanZpad	Humidity:	50%
Model No.:	PMT-ZZ0030	Power Supply:	DC 3.7V
Test Mode:	Hopping	Test Engineer:	Kai

The data was shown the worst case 8DPSK (3Mbps)		
Total number of hopping channel	Measurement result (CH)	Limit (CH)
	79	>15

The spectrum analyzer plots are attached as below.

"Spectrum analyzer" is R/S



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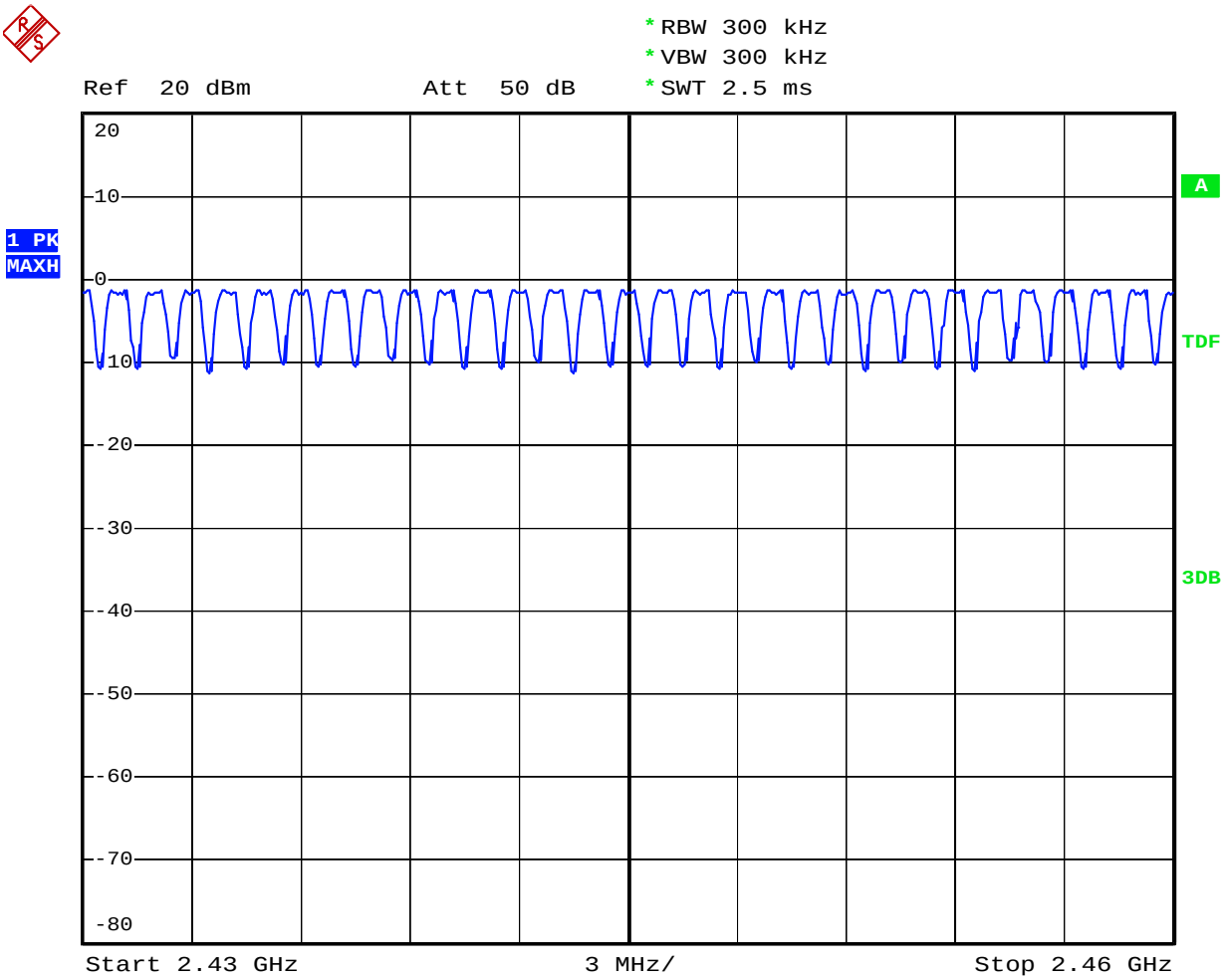

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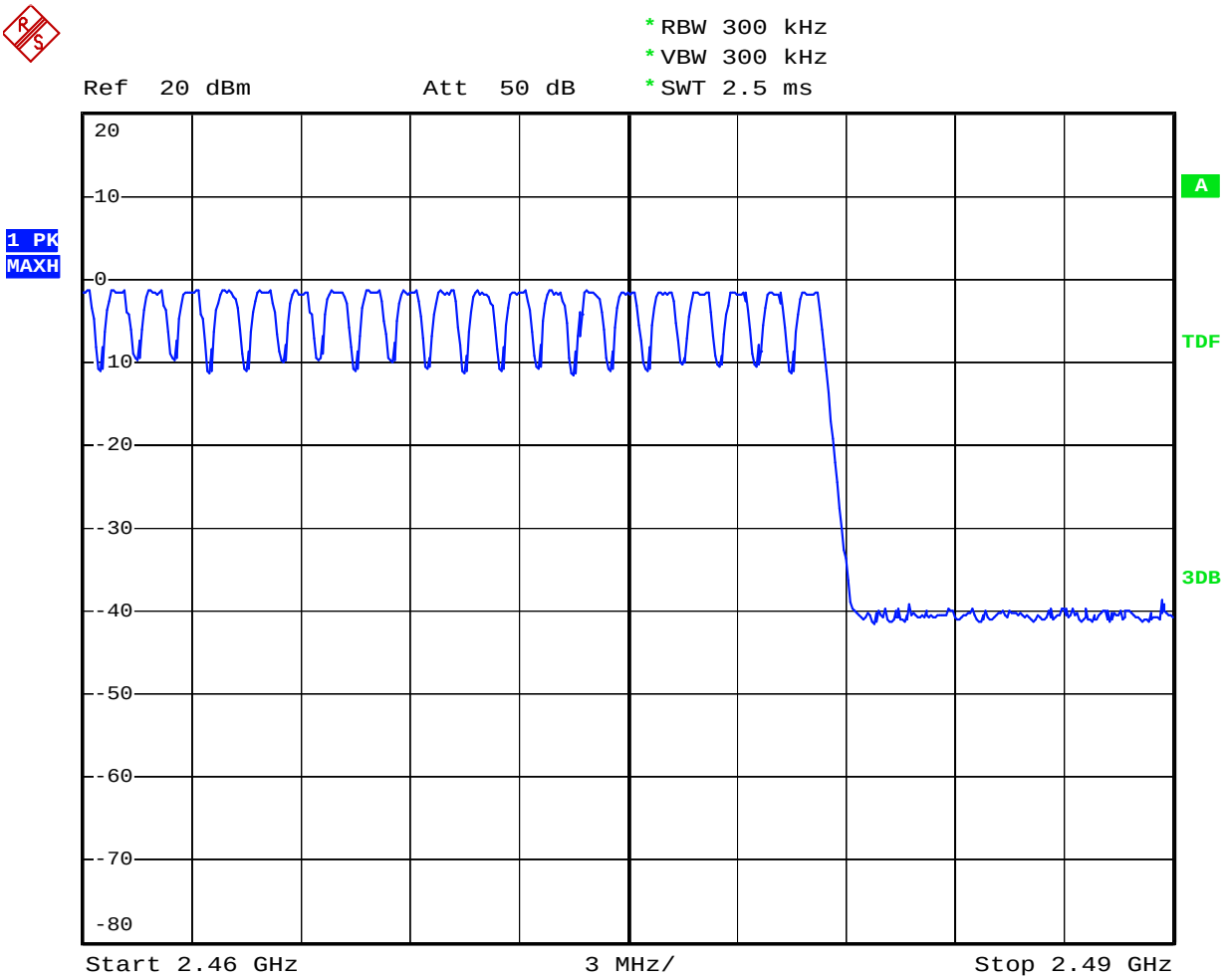

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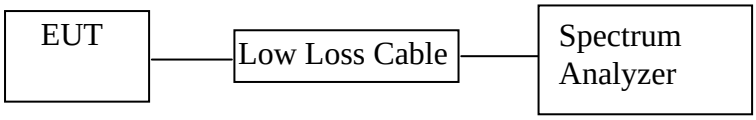
8. DWELL TIME TEST

8.1.Block Diagram of Test Setup



(EUT: Creative HanZpad)

8.2.The Requirement For Section 15.247(a)(1)(iii)

Section 15.247(a)(1)(iii): Frequency hopping systems in the 2400-2483.5 MHz band shall use at least 15 channels. The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed. Frequency hopping systems may avoid or suppress transmissions on a particular hopping frequency provided that a minimum of 15 channels are used.

8.3.EUT Configuration on Measurement

The following equipment are installed on the emission measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

8.3.1.Creative HanZpad (EUT)

Model Number	**:**	PMT-ZZ0030
Serial Number	**:**	N/A
Manufacturer	**:**	Creative Technology Ltd

8.4.Operating Condition of EUT

8.4.1.Setup the EUT and simulator as shown as Section 8.1.

8.4.2.Turn on the power of all equipment.

8.4.3.Let the EUT work in TX (Hopping on) modes measure it. The transmit frequency are 2402-2480MHz. We select 2402MHz, 2441MHz, 2480MHz TX frequency to transmit.

8.5. Test Procedure

8.5.1. The transmitter output was connected to the spectrum analyzer through a low loss cable.

8.5.2. Set center frequency of spectrum analyzer = operating frequency.

8.5.3. Set the spectrum analyzer as RBW=100kHz, VBW=300kHz, Span=0Hz, Adjust Sweep=31.6s.

8.5.4. Set the spectrum analyzer as RBW=1MHz, VBW=3MHz, Span=0Hz, Adjust Sweep=5ms. Get the pulse time.

8.5.5. Repeat above procedures until all frequency measured were complete.

8.6. Test Result

PASS.

Date of Test:	May 7, 2012	Temperature:	25°C
EUT:	Creative HanZpad	Humidity:	50%
Model No.:	PMT-ZZ0030	Power Supply:	DC 3.7V
Test Mode:	Hopping	Test Engineer:	Kai

The test was performed with GFSK (1Mbps)
A period transmit time = 0.4 × 79 = 31.6

Dwell time = pulse time × burst (in 31.6 sec.)

Channel	Channel Frequency (MHz)	Pulse Time (ms)	Burst (in 31.6 sec.)	Dwell Time (ms)	Limit (ms)
Low	2402	0.440	270	118.8	400
Middle	2441	0.430	261	112.2	400
High	2480	0.440	267	117.5	400

The test was performed with π/4 DQPSK (2Mbps)
A period transmit time = 0.4 × 79 = 31.6

Dwell time = pulse time × burst (in 31.6 sec.)

Channel	Channel Frequency (MHz)	Pulse Time (ms)	Burst (in 31.6 sec.)	Dwell Time (ms)	Limit (ms)
Low	2402	0.420	263	110.5	400
Middle	2441	0.470	258	121.3	400
High	2480	0.420	262	110.0	400

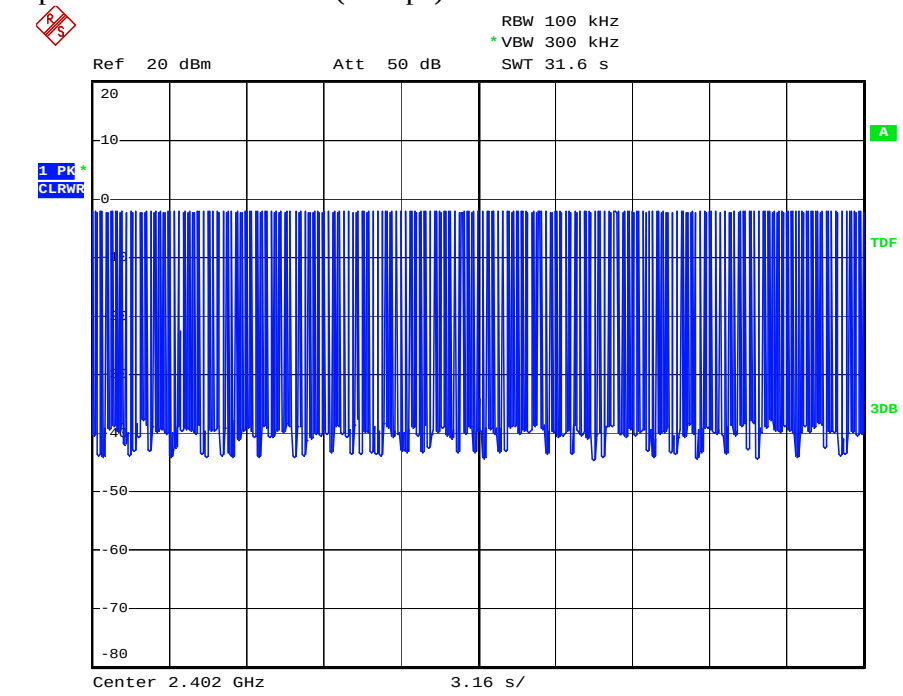
The test was performed with 8DPSK (3Mbps)
A period transmit time = 0.4 × 79 = 31.6

Dwell time = pulse time × burst (in 31.6 sec.)

Channel	Channel Frequency (MHz)	Pulse Time (ms)	Burst (in 31.6 sec.)	Dwell Time (ms)	Limit (ms)
Low	2402	0.430	260	111.8	400
Middle	2441	0.420	262	110.0	400
High	2480	0.410	268	109.9	400

The spectrum analyzer plots are attached as below.

"Spectrum analyzer" is R/S
The test was performed with GFSK (1Mbps)



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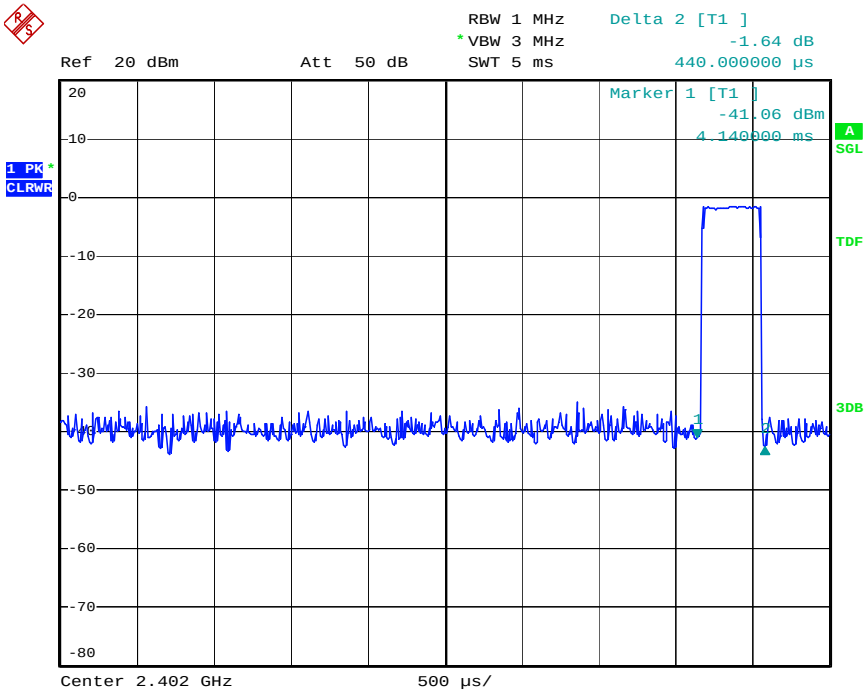

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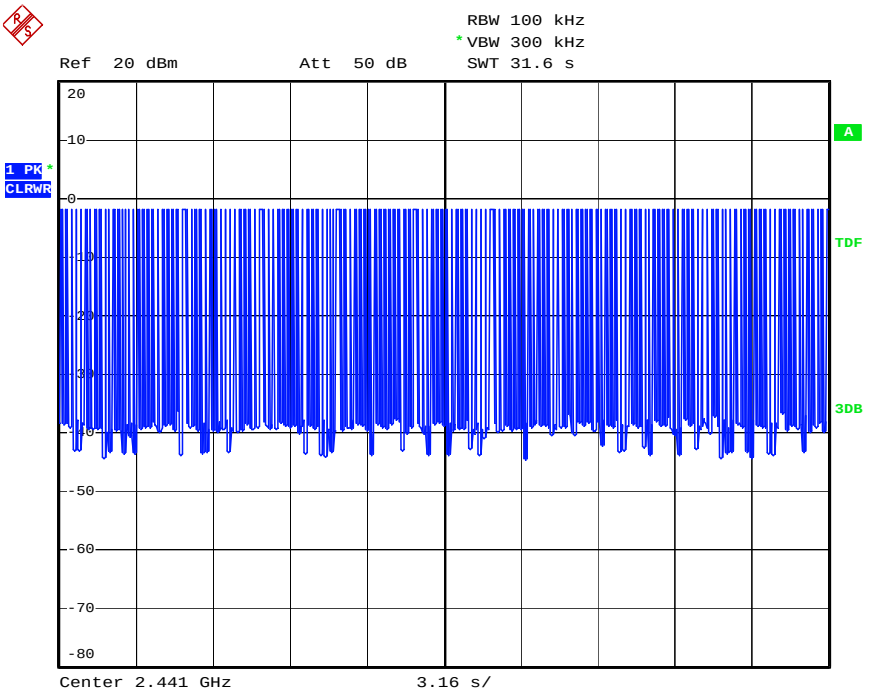

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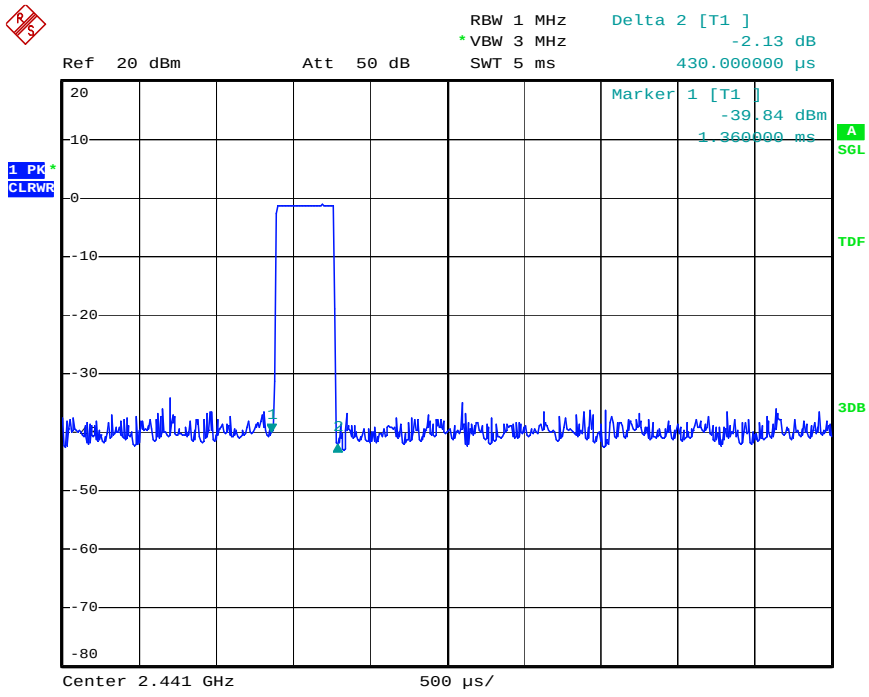

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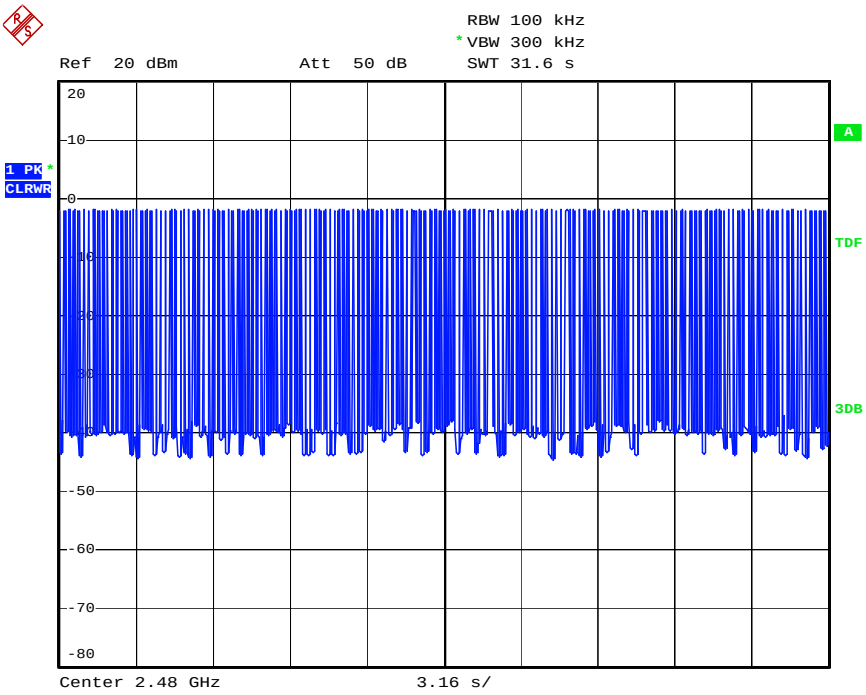

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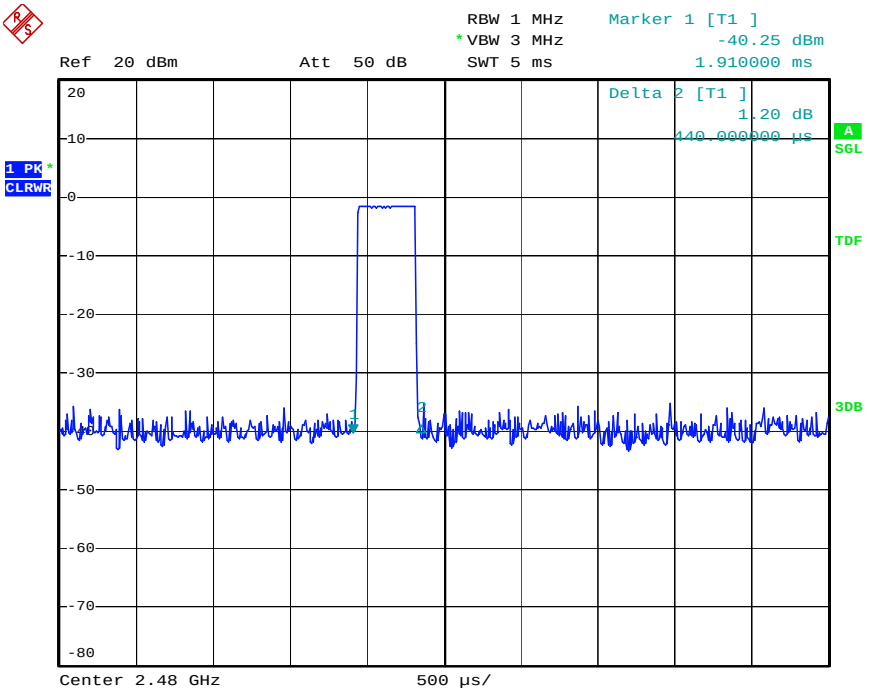

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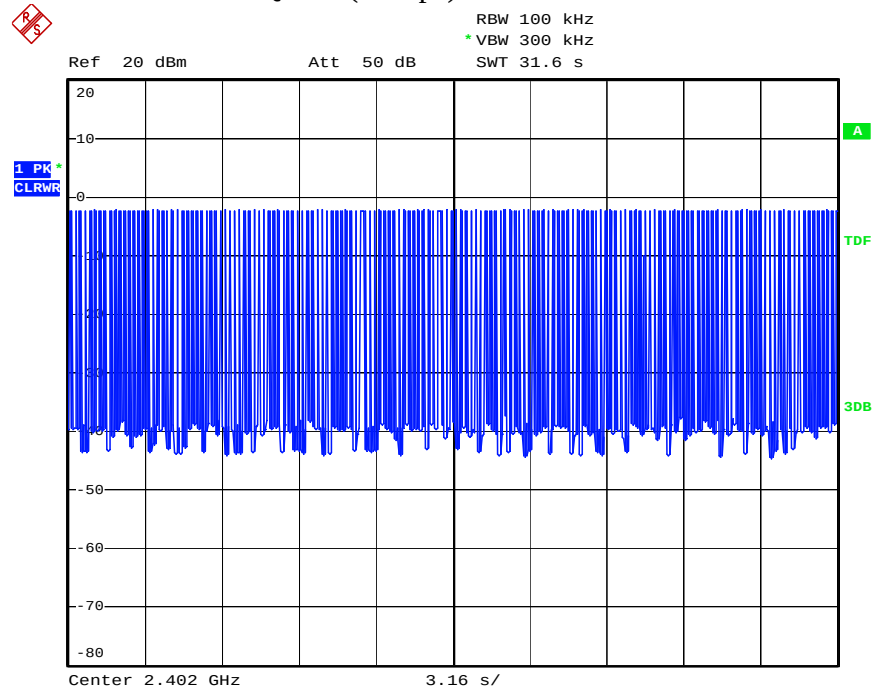
The test was performed with π/4 DQPSK (2Mbps)



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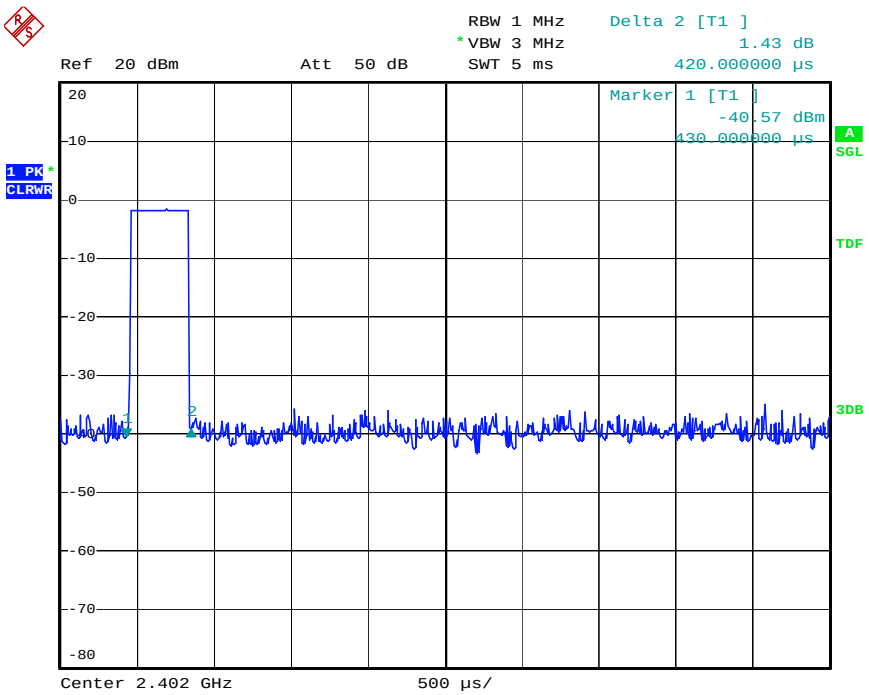

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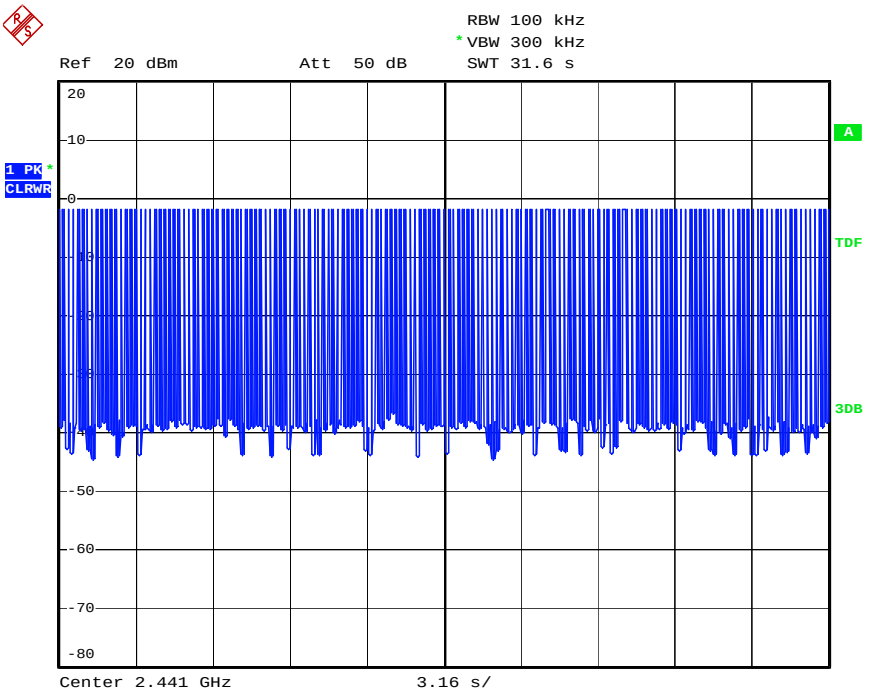
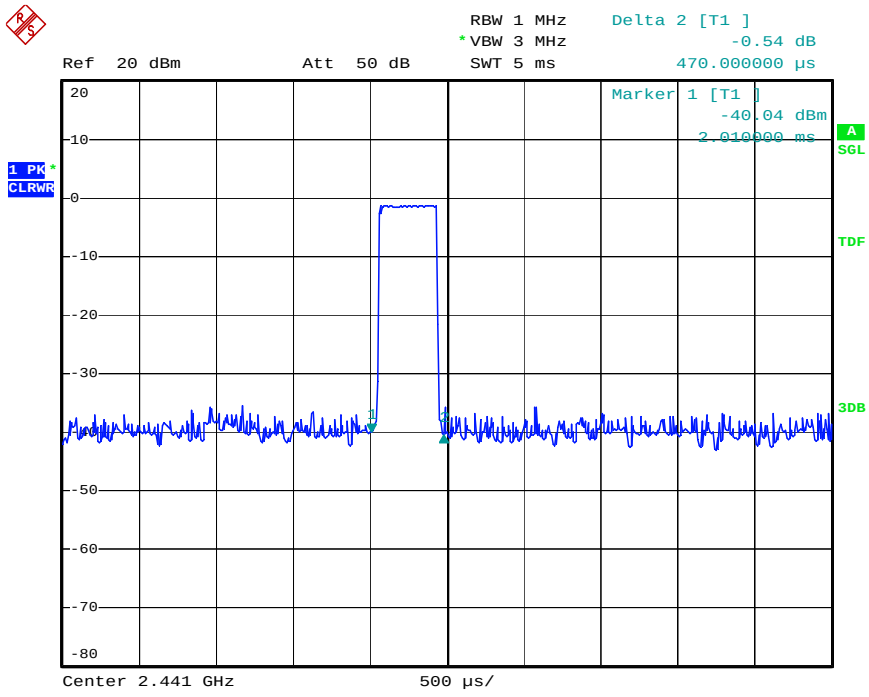
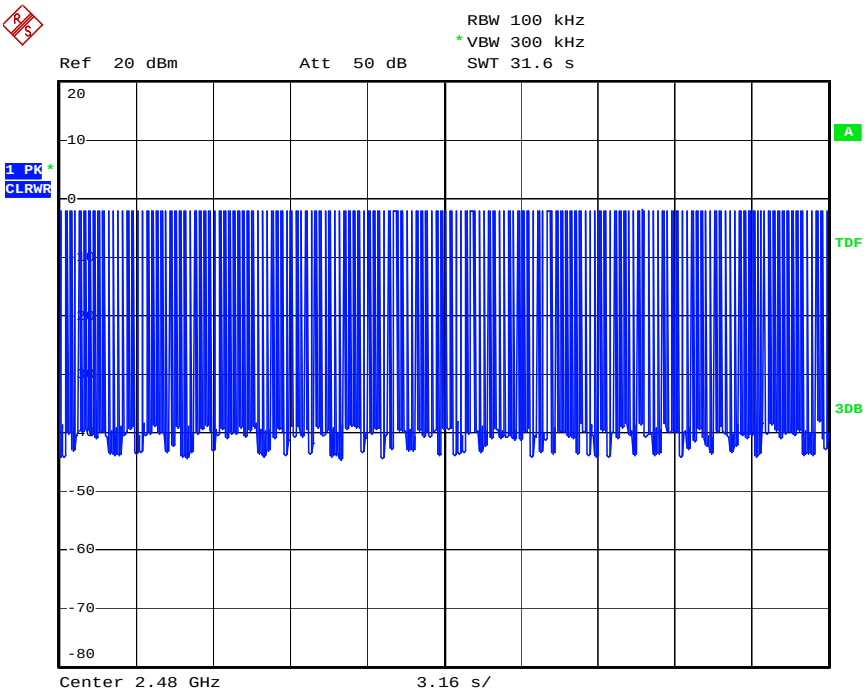


Date: 7.MAY.2012 18:56:54



Date: 7.MAY.2012 19:56:33



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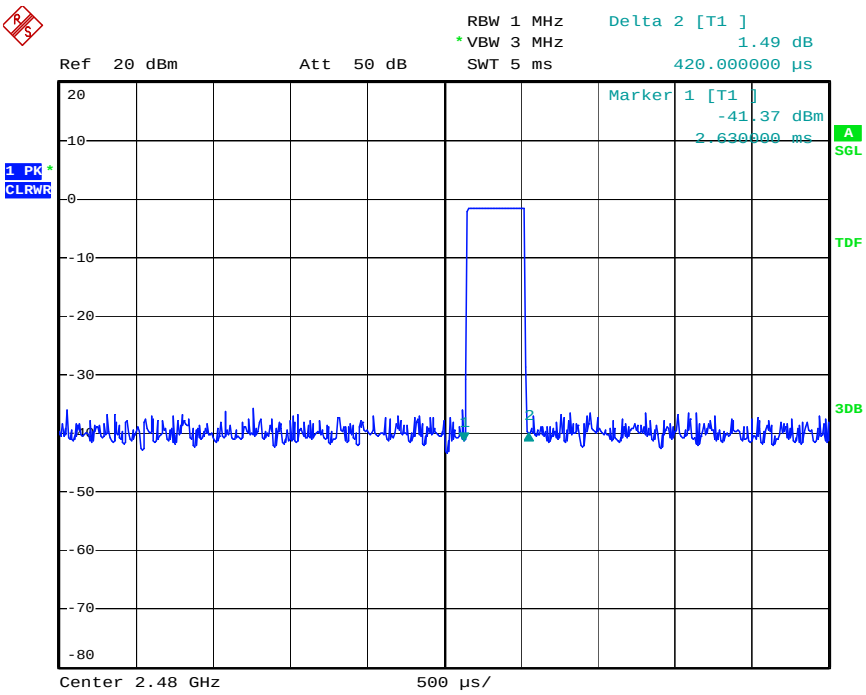
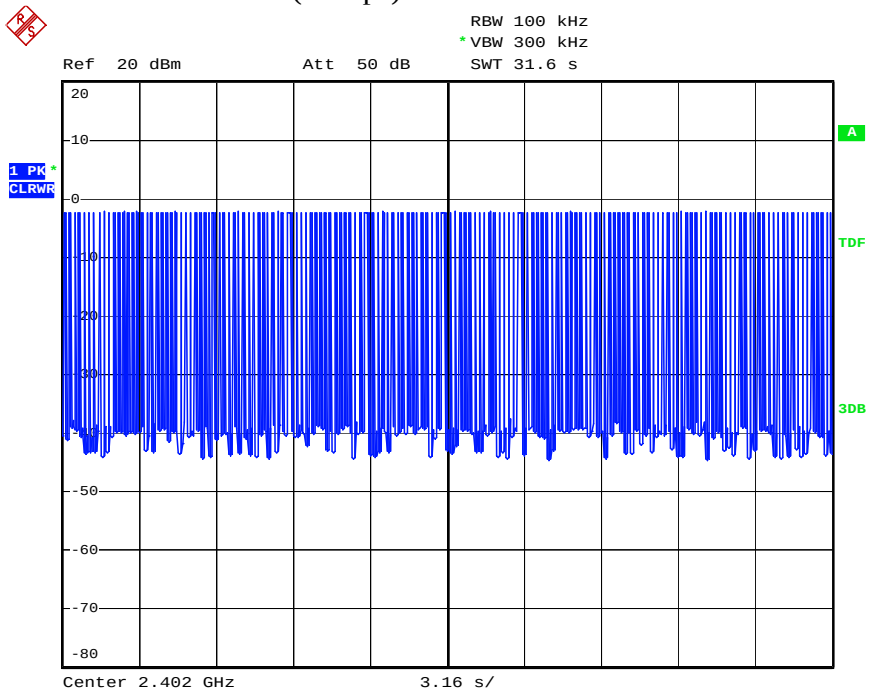
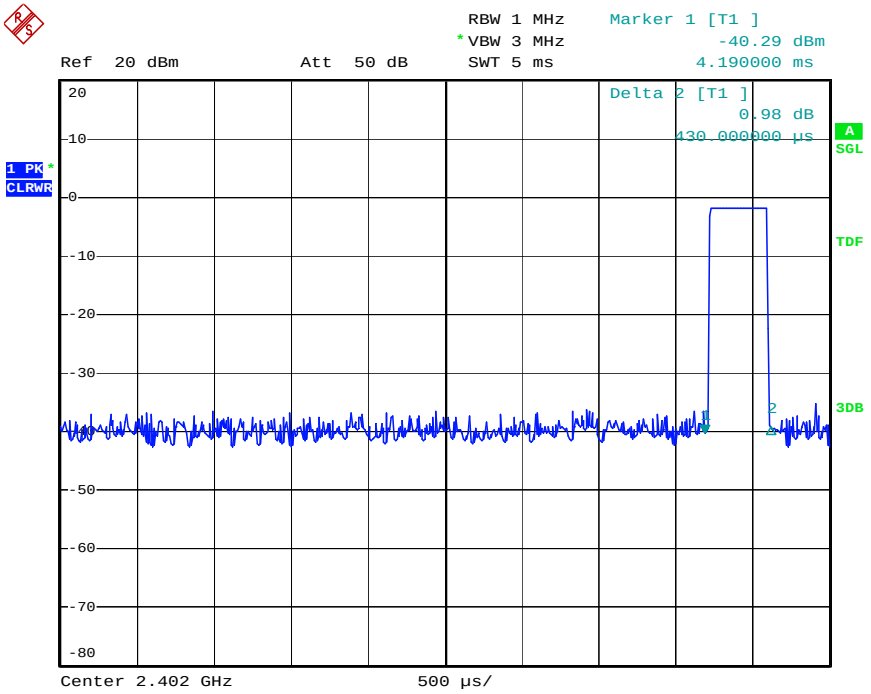


Date: 7.MAY.2012 19:09:31

The test was performed with 8DPSK (3Mbps)



Date: 7.MAY.2012 19:00:23



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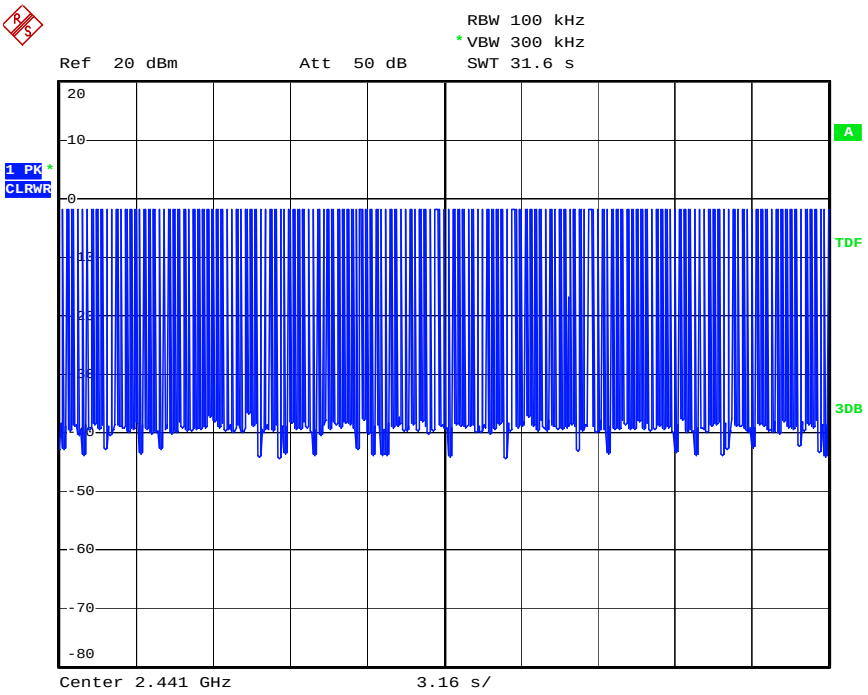

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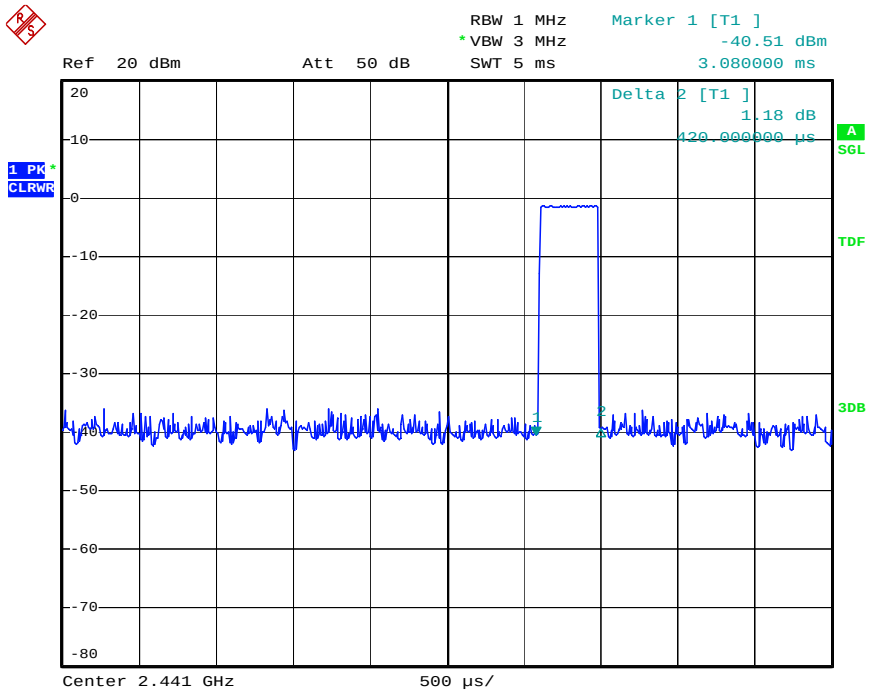

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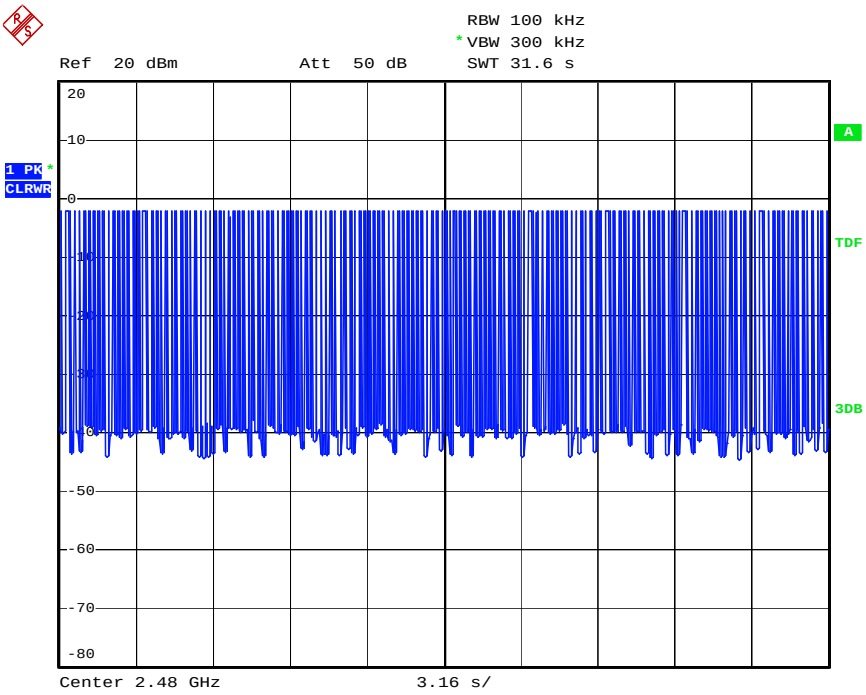
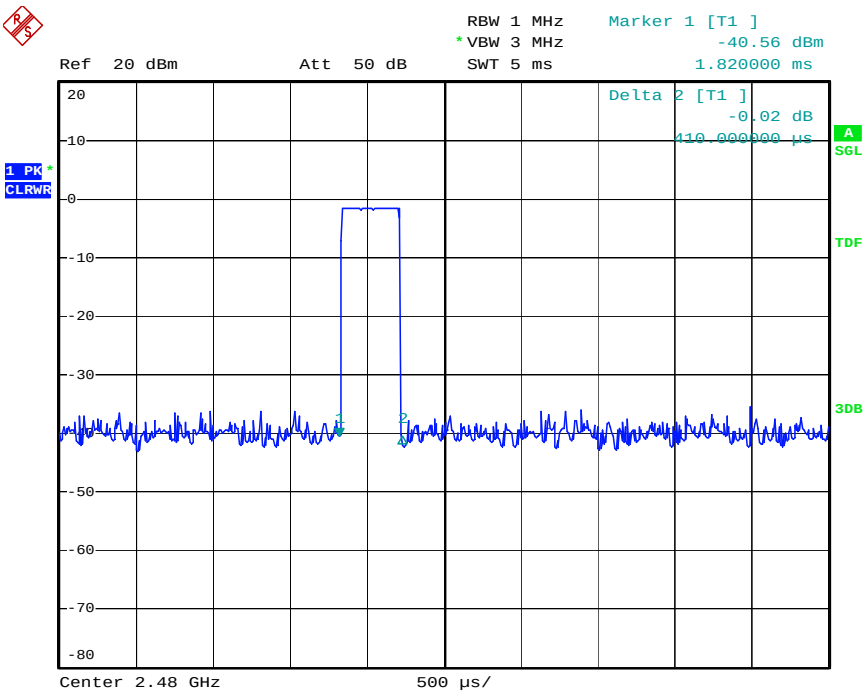


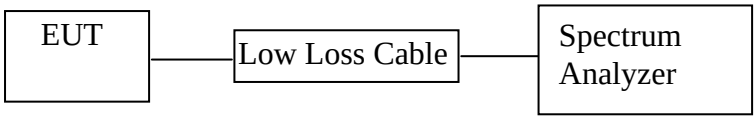
Date: 7.MAY.2012 19:03:13



Date: 7.MAY.2012 19:11:46

9. MAXIMUM PEAK OUTPUT POWER TEST

9.1.Block Diagram of Test Setup



(EUT: Creative HanZpad)

9.2.The Requirement For Section 15.247(b)(1)

Section 15.247(b)(1): For frequency hopping systems operating in the 2400-2483.5 MHz band employing at least 75 non-overlapping hopping channels, and all frequency hopping systems in the 5725-5850 MHz band: 1 watt. For all other frequency hopping systems in the 2400-2483.5 MHz band: 0.125 watts.

9.3.EUT Configuration on Measurement

The following equipment are installed on the emission Measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

9.3.1.Creative HanZpad (EUT)

Model Number	**:**	PMT-ZZ0030
Serial Number	**:**	N/A
Manufacturer	**:**	Creative Technology Ltd

9.4.Operating Condition of EUT

9.4.1.Setup the EUT and simulator as shown as Section 9.1.

9.4.2.Turn on the power of all equipment.

9.4.3.Let the EUT work in TX (Hopping off) modes measure it. The transmit frequency are 2402-2480MHz. We select 2402MHz, 2441MHz, 2480MHz TX frequency to transmit.

9.5. Test Procedure

9.5.1. The transmitter output was connected to the spectrum analyzer through a low loss cable.

9.5.2. Set RBW of spectrum analyzer to 1MHz and VBW to 3MHz.

9.5.3. Measurement the maximum peak output power.

9.6. Test Result

PASS.

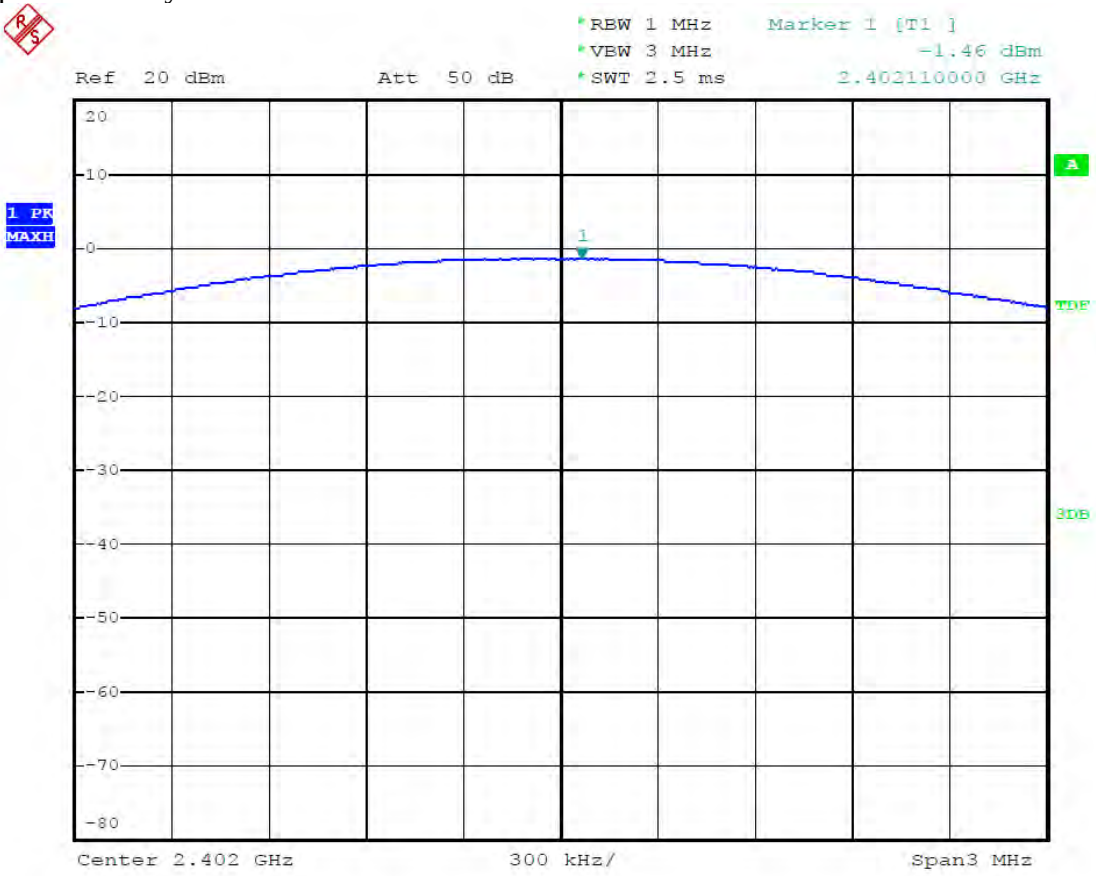
Date of Test:	May 7, 2012	Temperature:	25°C
EUT:	Creative HanZpad	Humidity:	50%
Model No.:	PMT-ZZ0030	Power Supply:	DC 3.7V
Test Mode:	TX	Test Engineer:	Kai

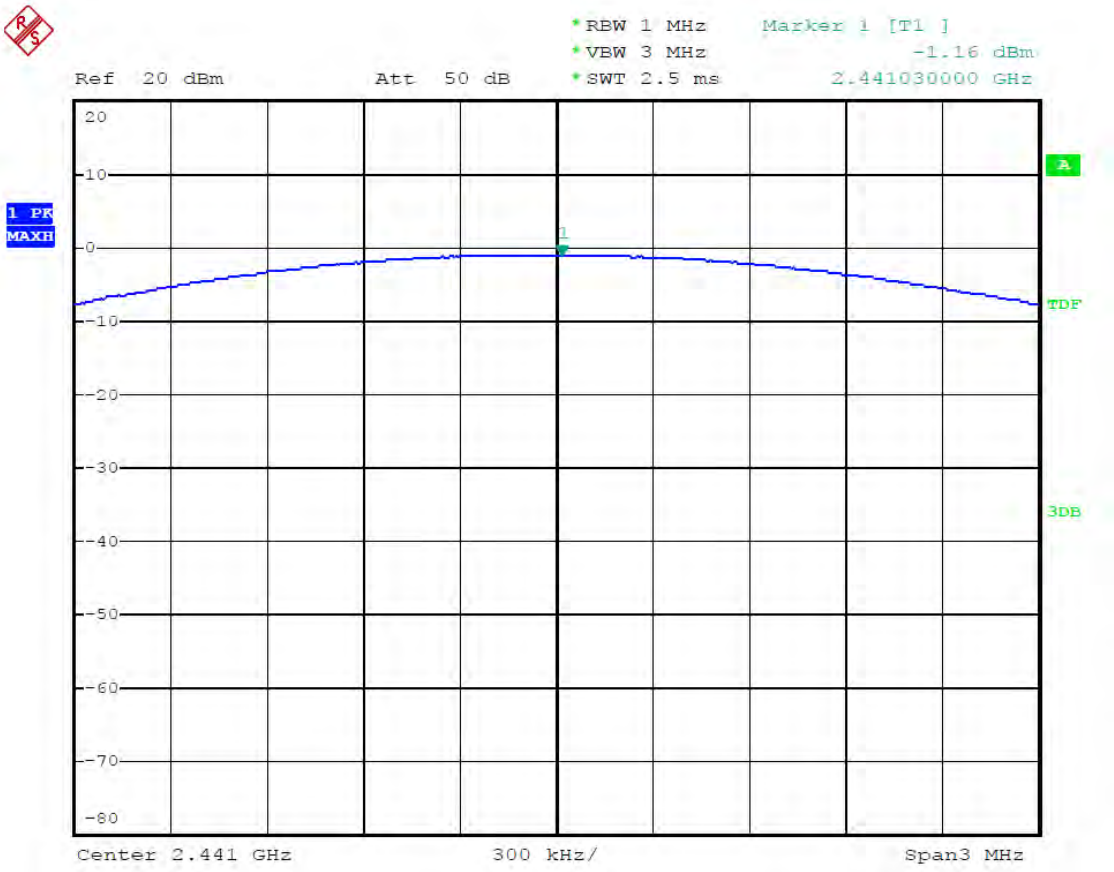
The data was shown the worst case GFSK (1Mbps)

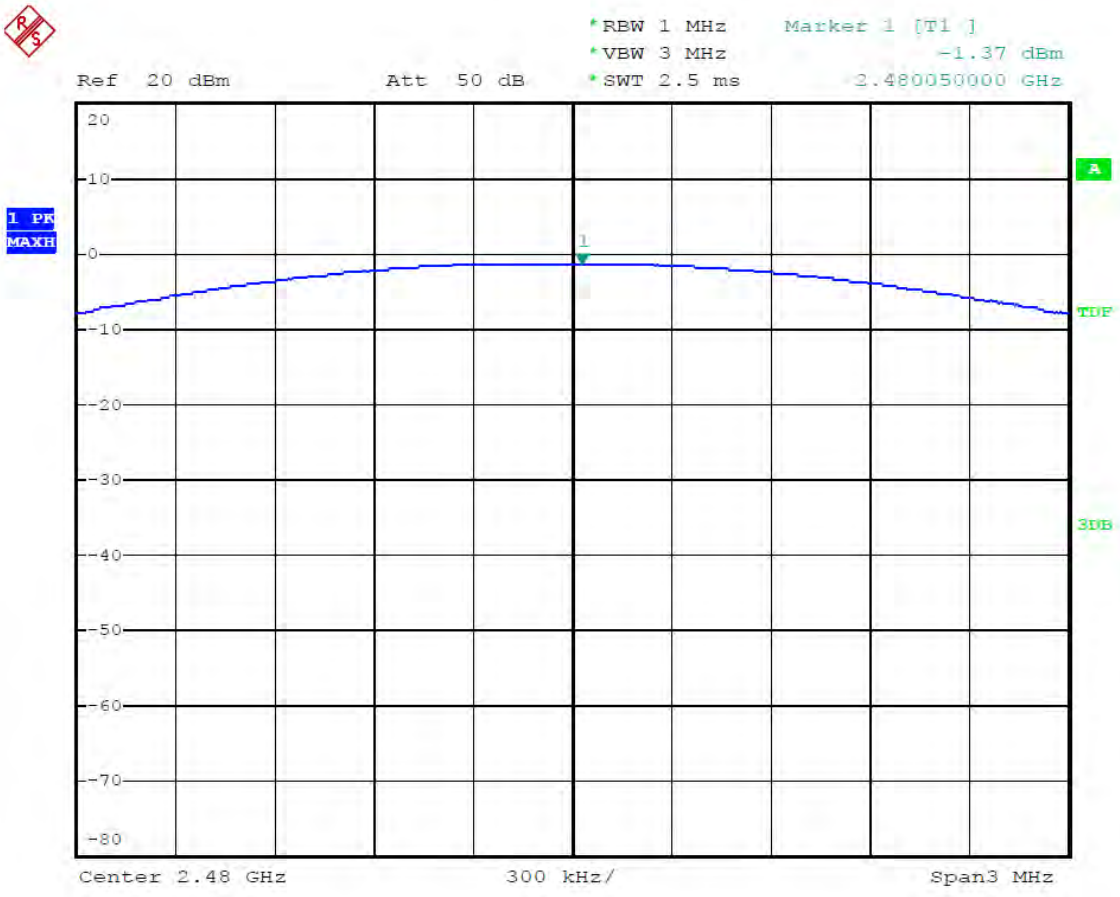
Channel	Frequency (MHz)	Peak Output Power (dBm)	Peak Output Power (mW)	Limits dBm / W
Low	2402	-1.46	0.714	21 dBm / 0.125 W
Middle	2441	-1.16	0.766	21 dBm / 0.125 W
High	2480	-1.37	0.729	21 dBm / 0.125 W

The spectrum analyzer plots are attached as below.

"Spectrum analyzer" is R/S

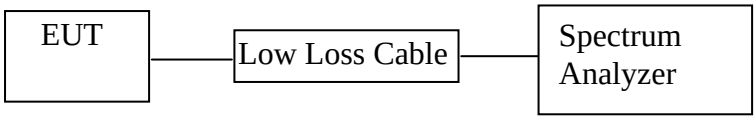



RBW 1 MHz
VBW 3 MHz
SWT 2.5 ms
Marker 1 [T1]
-1.16 dBm
2.441030000 GHz
Ref 20 dBm
Att 50 dB
1 PK
MAXH
A
TDF
3DB
Center 2.441 GHz
300 kHz/
Span3 MHz


RBW 1 MHz
VBW 3 MHz
SWT 2.5 ms
Marker 1 [T1]
-1.37 dBm
2.480050000 GHz
Ref 20 dBm
Att 50 dB
1 PK
MAXH
A
TDF
3DB
Center 2.48 GHz
300 kHz/
Span3 MHz

10. BAND EDGE COMPLIANCE TEST

10.1. Block Diagram of Test Setup



(EUT: Creative HanZpad)

10.2. The Requirement For Section 15.247(d)

Section 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 Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a).

10.3. EUT Configuration on Measurement

The following equipment are installed on the emission Measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

10.3.1. Creative HanZpad (EUT)

Model Number	:	PMT-ZZ0030
Serial Number	:	N/A
Manufacturer	:	Creative Technology Ltd

10.4.Operating Condition of EUT

10.4.1.Setup the EUT and simulator as shown as Section 10.1.

10.4.2.Turn on the power of all equipment.

10.4.3.Let the EUT work in TX (Hopping off, Hopping on) modes measure it. The transmit frequency are 2402-2480MHz. We select 2402MHz, 2480MHz TX frequency to transmit.

10.5.Test Procedure

Conducted Band Edge:

10.5.1.The transmitter output was connected to the spectrum analyzer via a low loss cable.

10.5.2.Set RBW of spectrum analyzer to 100kHz and VBW to 300kHz.

Radiate Band Edge:

10.5.3.The EUT is placed on a turntable, which is 0.8m above the ground plane and worked at highest radiated power.

10.5.4.The turntable was rotated for 360 degrees to determine the position of maximum emission level.

10.5.5.EUT is set 3m away from the receiving antenna, which is varied from 1m to 4m to find out the highest emission.

10.5.6.Set the spectrum analyzer in the following setting in order to capture the lower and upper band-edges of the emission:

RBW=1MHz, VBW=1MHz

10.5.7.The band edges was measured and recorded.

10.6.Test Result

Pass

Conducted test

Date of Test:	May 7, 2012	Temperature:	25°C
EUT:	Creative HanZpad	Humidity:	50%
Model No.:	PMT-ZZ0030	Power Supply:	DC 3.7V
Test Mode:	TX (Hopping off)	Test Engineer:	Kai

Conducted test

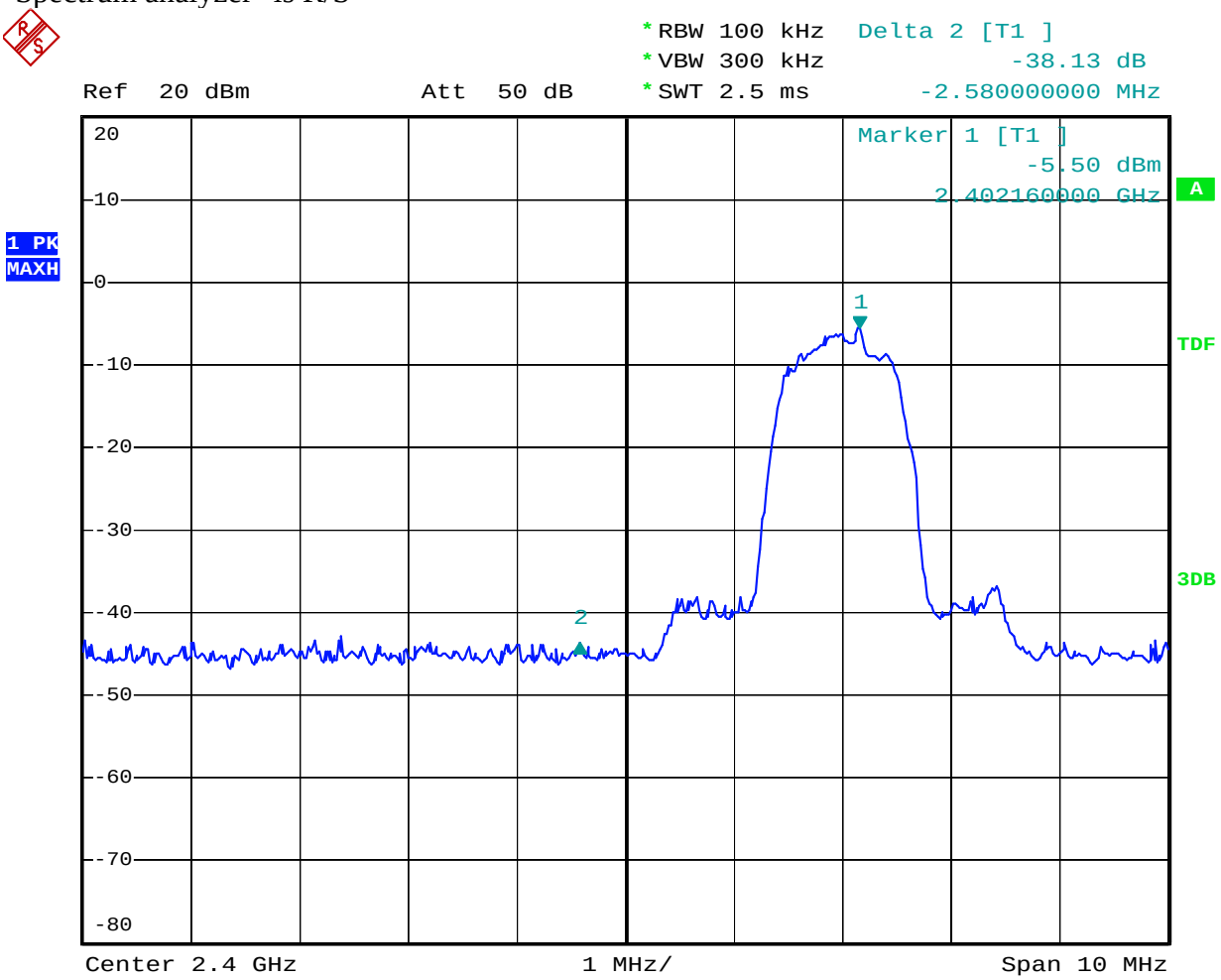
The data was shown the worst case GFSK (1Mbps)		
Frequency (MHz)	Result of Band Edge (dBc)	Limit of Band Edge (dBc)
2402	38.13	> 20dBc
2480	38.16	> 20dBc

Date of Test:	May 7, 2012	Temperature:	25°C
EUT:	Creative HanZpad	Humidity:	50%
Model No.:	PMT-ZZ0030	Power Supply:	DC 3.7V
Test Mode:	TX (Hopping on)	Test Engineer:	Kai

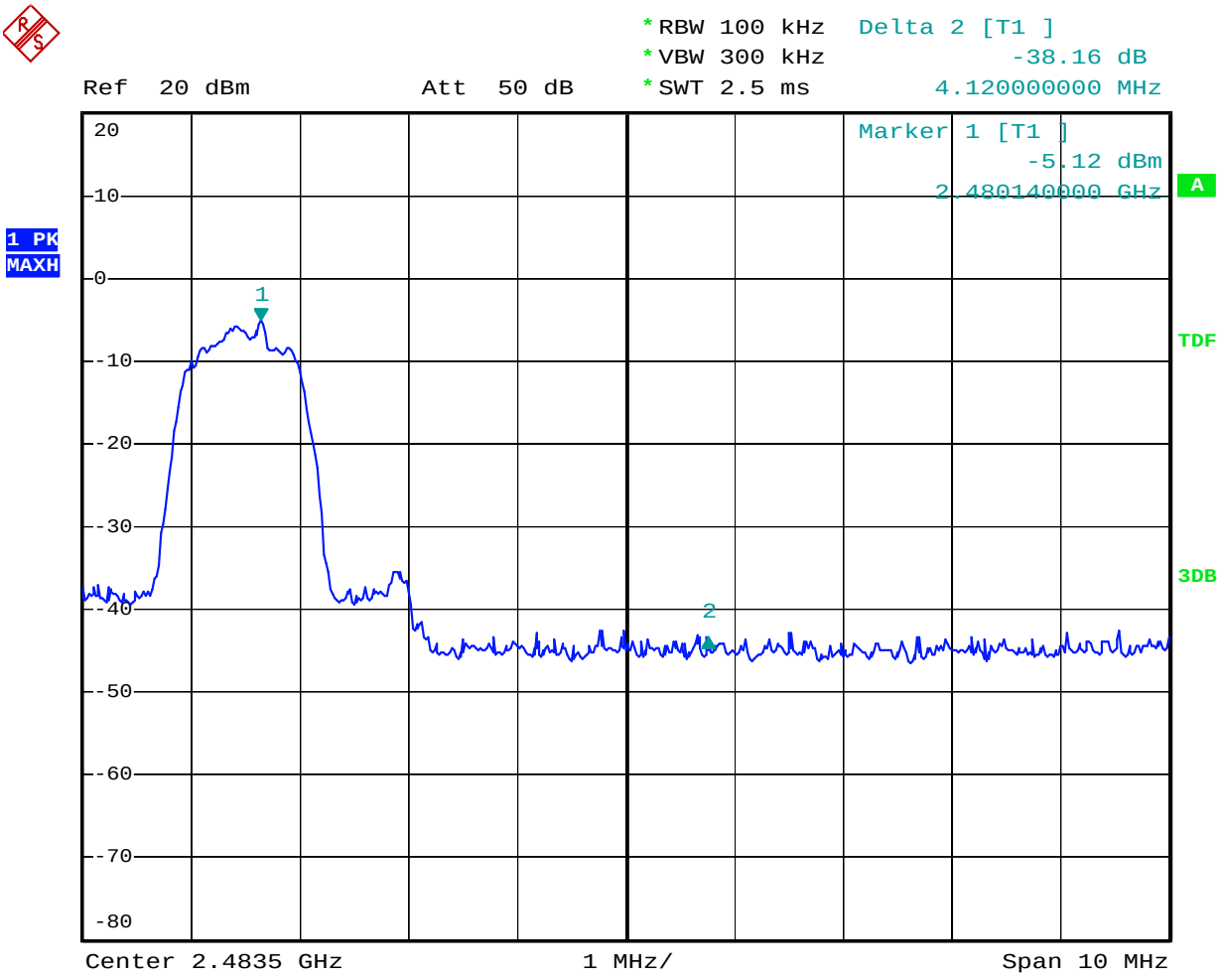
Conducted test

The data was shown the worst case GFSK (1Mbps)		
Frequency (MHz)	Result of Band Edge (dBc)	Limit of Band Edge (dBc)
2402	41.16	> 20dBc
2480	40.94	> 20dBc

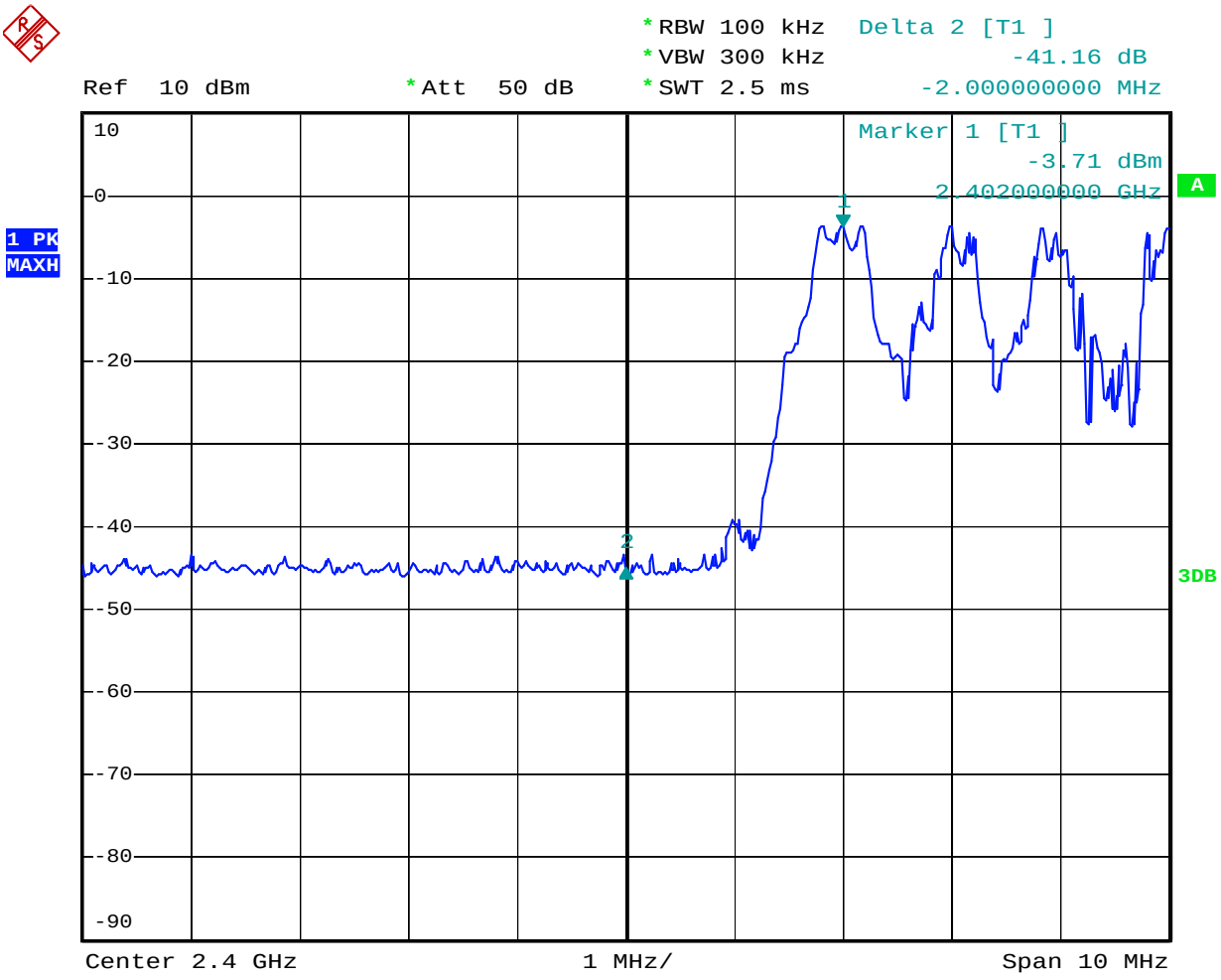
"Spectrum analyzer" is R/S

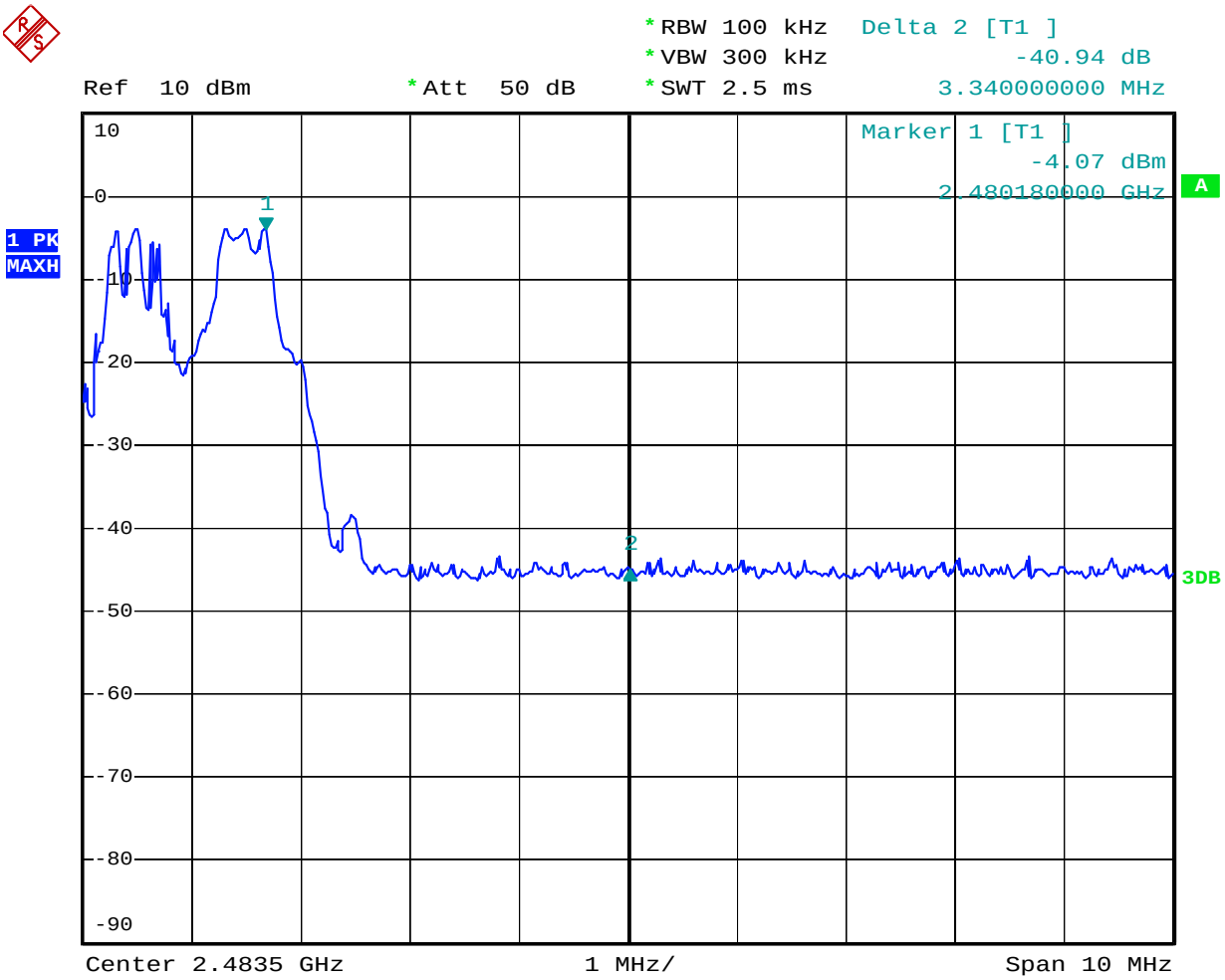


Date: 7.MAY.2012 19:28:22



Date: 7.MAY.2012 19:27:53


*RBW 100 kHz
*VBW 300 kHz
*SWT 2.5 ms
Delta 2 [T1]
-41.16 dB
-2.000000000 MHz
Ref 10 dBm
*Att 50 dB
Marker 1 [T1]
-3.71 dBm
2.402000000 GHz
1 PK
MAXH
A
3DB
10
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
Center 2.4 GHz
1 MHz/
Span 10 MHz


*RBW 100 kHz
*VBW 300 kHz
*SWT 2.5 ms
Delta 2 [T1]
-40.94 dB
3.340000000 MHz
Ref 10 dBm
*Att 50 dB
Marker 1 [T1]
-4.07 dBm
2.480180000 GHz
1 PK
MAXH
A
3DB
10
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
Center 2.4835 GHz
1 MHz/
Span 10 MHz

Radiated Band Edge Result

Date of Test:	May 15, 2012	Temperature:	25°C
EUT:	Creative HanZpad	Humidity:	50%
Model No.:	PMT-ZZ0030	Power Supply:	DC 3.7V
Test Mode:	TX (2402MHz)	Test Engineer:	Kai

The data was shown the worst case GFSK (1Mbps)

Frequency (MHz)	Reading(dBμV/m)		Factor(dB) Corr.	Result(dBμV/m)		Limit(dBμV/m)		Margin(dB)		Polarization
	AV	PEAK		AV	PEAK	AV	PEAK	AV	PEAK	
2310.000	32.00	45.00	-7.81	24.19	37.19	54	74	-29.81	-36.81	Vertical
2323.955	33.68	49.01	-7.81	25.87	41.20	54	74	-28.13	-32.80	Vertical
2390.000	32.28	43.99	-7.53	24.75	36.46	54	74	-29.25	-37.54	Vertical
2310.000	32.87	46.64	-7.81	25.06	38.83	54	74	-28.94	-35.17	Horizontal
2374.021	32.17	46.83	-7.63	24.54	39.20	54	74	-29.46	-34.80	Horizontal
2390.000	31.28	44.37	-7.53	23.75	36.84	54	74	-30.25	-37.16	Horizontal

Note:

1. Emissions attenuated more than 20 dB below the permissible value are not reported.
2. The field strength is calculated by adding the antenna factor, high pass filter loss(if used) and cable loss, and subtracting the amplifier gain(if any)from the measured reading. The basic equation calculation is as follows:

   Result = Reading + Corrected Factor
3. Display the measurement of peak values.

Date of Test:	May 15, 2012	Temperature:	25°C
EUT:	Creative HanZpad	Humidity:	50%
Model No.:	PMT-ZZ0030	Power Supply:	DC 3.7V
Test Mode:	TX (2480MHz)	Test Engineer:	Kai

The data was shown the worst case GFSK (1Mbps)

Frequency (MHz)	Reading(dBμV/m)		Factor(dB) Corr.	Result(dBμV/m)		Limit(dBμV/m)		Margin(dB)		Polarization
	AV	PEAK		AV	PEAK	AV	PEAK	AV	PEAK	
2483.395	34.89	48.54	-7.37	27.52	42.17	54	74	-26.48	-31.83	Vertical
2487.191	33.91	47.38	-7.38	26.53	40.00	54	74	-27.47	-34.00	Vertical
2500.000	30.48	43.68	-7.40	23.08	36.28	54	74	-30.92	-37.72	Vertical
2483.395	34.62	47.38	-7.37	27.25	40.01	54	74	-26.75	-33.99	Horizontal
2487.032	33.94	47.36	-7.38	26.56	39.98	54	74	-27.44	-34.02	Horizontal
2500.000	30.44	44.87	-7.40	23.04	37.47	54	74	-30.96	-36.53	Horizontal

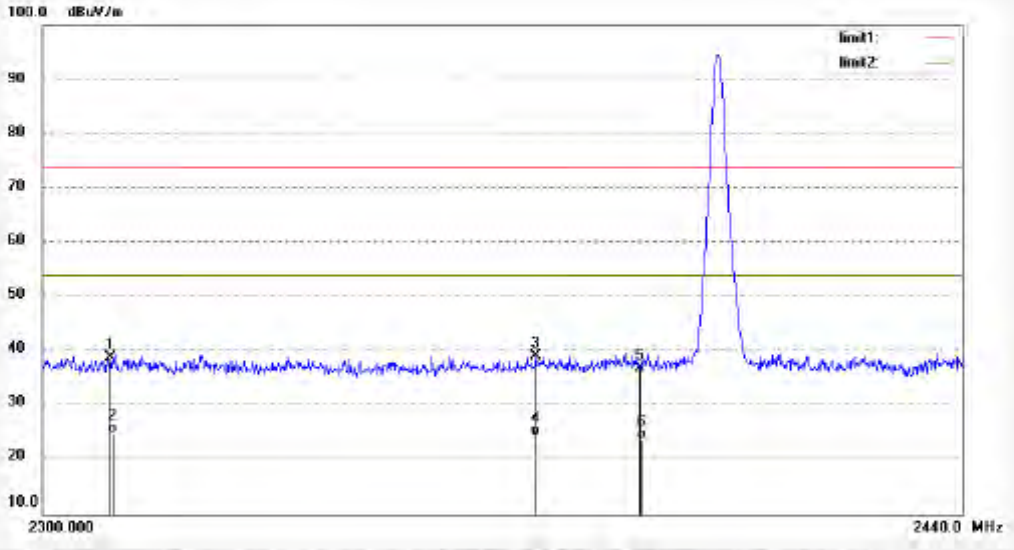
Note:

1. Emissions attenuated more than 20 dB below the permissible value are not reported.
2. The field strength is calculated by adding the antenna factor, high pass filter loss(if used) and cable loss, and subtracting the amplifier gain(if any)from the measured reading. The basic equation calculation is as follows:
   Result = Reading + Corrected Factor
3. Display the measurement of peak values.

ACCURATE TECHNOLOGY CO., LTD.
F1,Bldg.A,Changyuan New Material Port Keyuan Rd,
Science & Industry Park,Nanshan Shenzhen,P.R.China
Site: 966 chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: STAR #992	Polarization: Horizontal
Standard: FCC 15C PK	Power Source: DC 3.7V
Test item: Radiation Test	Date: 2012/05/15
Temp.(C)/Hum.(%) 24 C / 48 %	Time: 13:55:10
EUT: Creative HanZpad	Engineer Signature: Star
Mode: TX DH1(2402MHz)	Distance: 3m
Model: PMT-ZZ0030	
Manufacturer: Creative Technology Ltd	

Note: Report No.:ATE20120871



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2310.000	46.64	-7.81	38.83	74.00	-35.17	peak			
2	2310.000	32.87	-7.81	25.06	54.00	-28.94	AVG			
3	2374.021	46.83	-7.63	39.20	74.00	-34.80	peak			
4	2374.021	32.17	-7.63	24.54	54.00	-29.46	AVG			
5	2390.000	44.37	-7.53	36.84	74.00	-37.16	peak			
6	2390.000	31.28	-7.53	23.75	54.00	-30.25	AVG			

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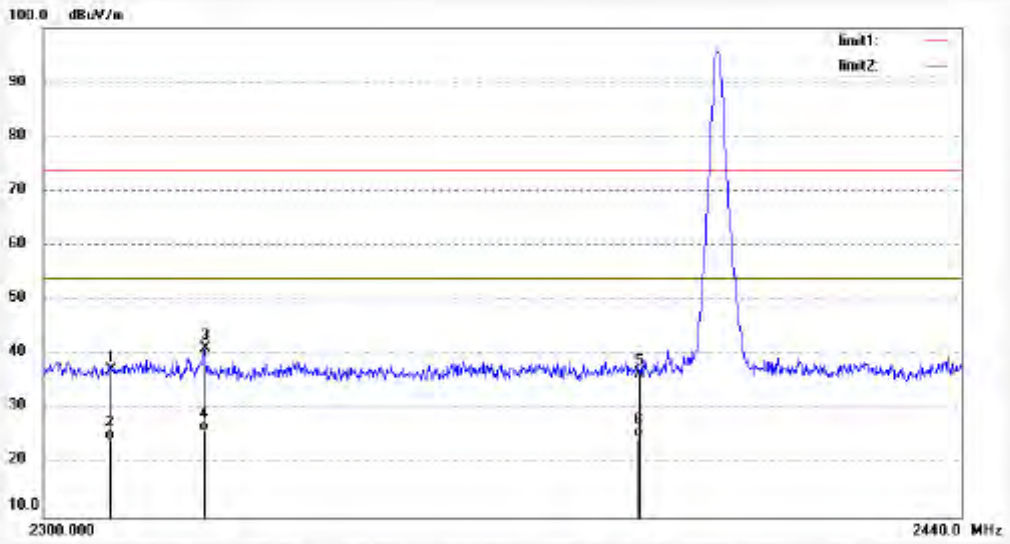
Site: 966 chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: STAR #993
Standard: FCC 15C PK
Test item: Radiation Test
Temp.(C)/Hum.(%) 24 C / 48 %
EUT: Creative HanZpad
Mode: TX DH1(2402MHz)
Model: PMT-ZZ0030
Manufacturer: Creative Technology Ltd

Polarization: Vertical
Power Source: DC 3.7V
Date: 2012/05/15
Time: 14:01:32
Engineer Signature: Star
Distance: 3m

Note: Report No.:ATE20120871



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2310.000	45.00	-7.81	37.19	74.00	-36.81	peak			
2	2310.000	32.00	-7.81	24.19	54.00	-29.81	AVG			
3	2323.955	49.01	-7.81	41.20	74.00	-32.80	peak			
4	2323.955	33.68	-7.81	25.87	54.00	-28.13	AVG			
5	2390.000	43.99	-7.53	36.46	74.00	-37.54	peak			
6	2390.000	32.28	-7.53	24.75	54.00	-29.25	AVG			

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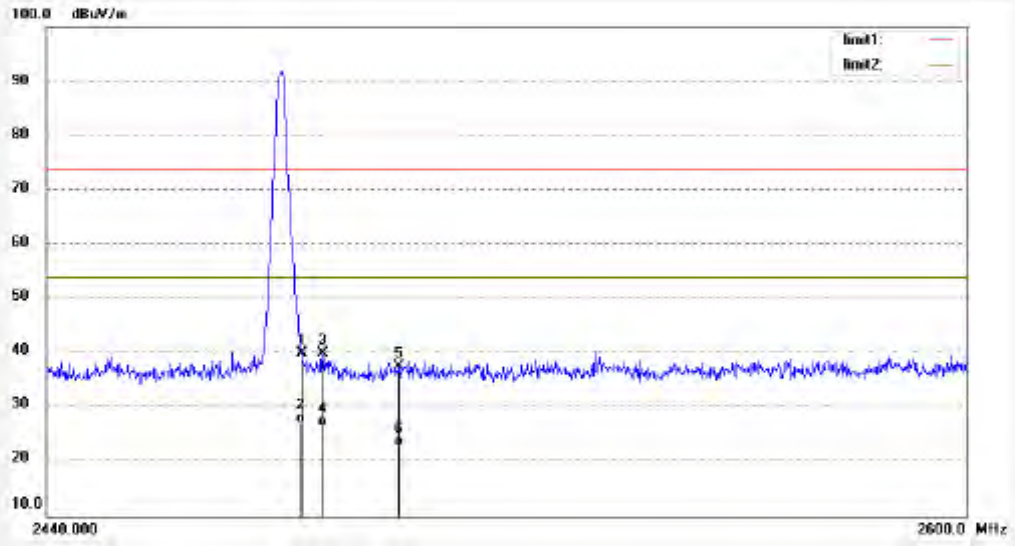
Fax:+86-0755-26503396

Job No.: STAR #995	Polarization: Horizontal
Standard: FCC 15C PK	Power Source: DC 3.7V
Test item: Radiation Test	Date: 2012/05/15
Temp.(C)/Hum.(%) 24 C / 48 %	Time: 14:15:28
EUT: Creative HanZpad	Engineer Signature: Star
Mode: TX DH1(2480MHz)	Distance: 3m
Model: PMT-ZZ0030	
Manufacturer: Creative Technology Ltd	

Note: Report No.:ATE20120871



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2483.395	47.38	-7.37	40.01	74.00	-33.99	peak			
2	2483.395	34.62	-7.37	27.25	54.00	-26.75	AVG			
3	2487.032	47.36	-7.38	39.98	74.00	-34.02	peak			
4	2487.032	33.94	-7.38	26.56	54.00	-27.44	AVG			
5	2500.000	44.87	-7.40	37.47	74.00	-36.53	peak			
6	2500.000	30.44	-7.40	23.04	54.00	-30.96	AVG			

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Site: 966 chamber
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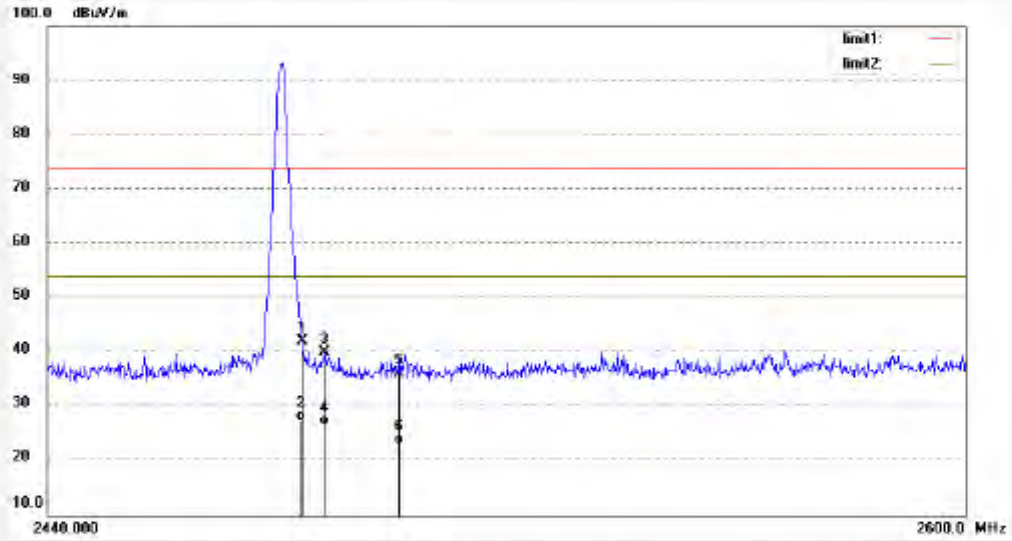
Fax:+86-0755-26503396

Job No.: STAR #994	Polarization: Vertical
Standard: FCC 15C PK	Power Source: DC 3.7V
Test item: Radiation Test	Date: 2012/05/15
Temp.(C)/Hum.(%) 24 C / 48 %	Time: 14:09:00
EUT: Creative HanZpad	Engineer Signature: Star
Mode: TX DH1(2480MHz)	Distance: 3m
Model: PMT-ZZ0030	
Manufacturer: Creative Technology Ltd	

Note: Report No.:ATE20120871

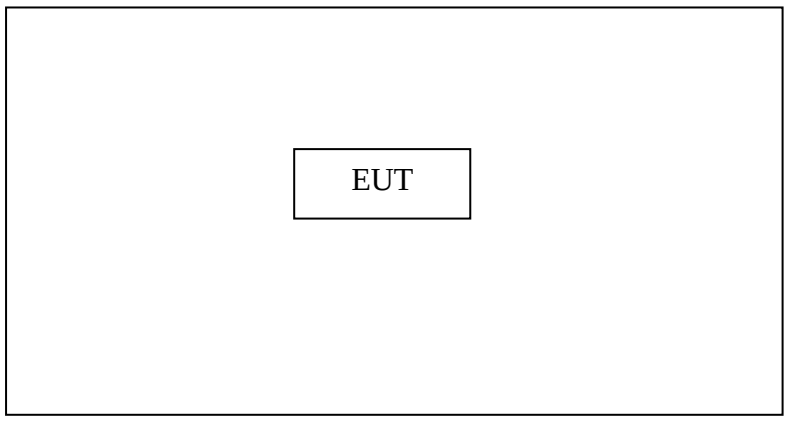


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2483.395	49.54	-7.37	42.17	74.00	-31.83	peak			
2	2483.395	34.89	-7.37	27.52	54.00	-26.48	AVG			
3	2487.191	47.38	-7.38	40.00	74.00	-34.00	peak			
4	2487.191	33.91	-7.38	26.53	54.00	-27.47	AVG			
5	2500.000	43.68	-7.40	36.28	74.00	-37.72	peak			
6	2500.000	30.48	-7.40	23.08	54.00	-30.92	AVG			

11.RADIATED SPURIOUS EMISSION TEST

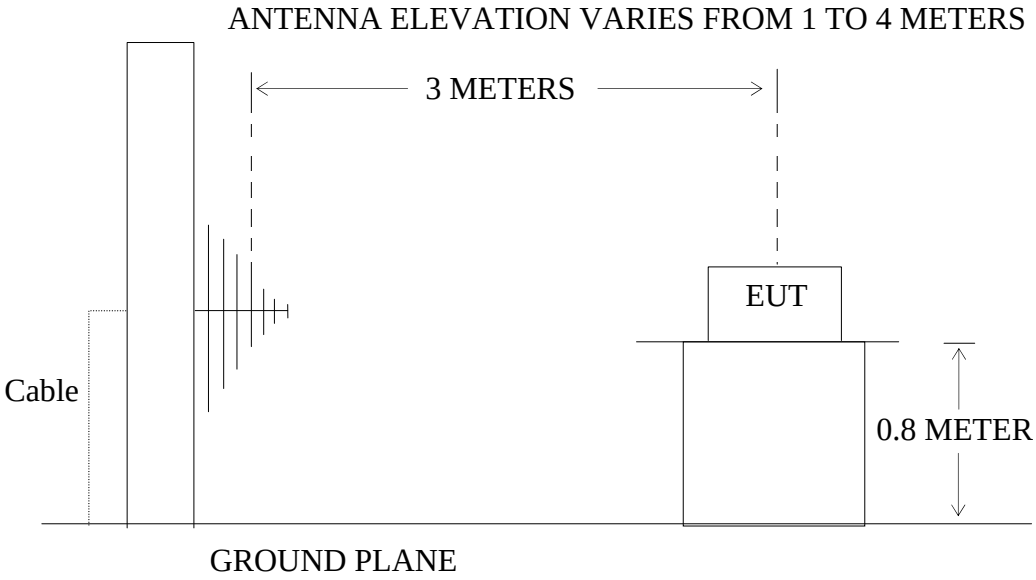
11.1.Block Diagram of Test Setup

11.1.1.Block diagram of connection between the EUT and simulators



(EUT: Creative HanZpad)

11.1.2.Semi-Anechoic Chamber Test Setup Diagram



(EUT: Creative HanZpad)

11.2.The Limit For Section 15.247(d)

Section 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 Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a).

11.3.Restricted bands of operation

11.3.1.FCC Part 15.205 Restricted bands of operation

(a) Except as shown in paragraph (d) of this section, Only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
[1]0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	([2])
13.36-13.41			

[1]Until February 1, 1999, this restricted band shall be 0.490-0.510

[2]Above 38.6

(b) Except as provided in paragraphs (d) and (e), the field strength of emission appearing within these frequency bands shall not exceed the limits shown in Section 15.209. At frequencies equal to or less than 1000MHz, Compliance with the limits in Section 15.209 shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Above 1000MHz, compliance with the emission limits in Section15.209 shall be demonstrated based on the average value of the measured emissions. The provisions in Section 15.35 apply to these measurements.

11.4.Configuration of EUT on Measurement

The following equipment are installed on Radiated Emission Measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

11.4.1.Creative HanZpad (EUT)

Model Number	**:**	PMT-ZZ0030
Serial Number	**:**	N/A
Manufacturer	**:**	Creative Technology Ltd

11.5.Operating Condition of EUT

11.5.1.Setup the EUT and simulator as shown as Section 11.1.

11.5.2.Turn on the power of all equipment.

11.5.3.Let the EUT work in TX (Hopping off) modes measure it. The transmit frequency are 2402-2480MHz. We select 2402MHz, 2441MHz, 2480MHz TX frequency to transmit.

11.6.Test Procedure

The EUT and its simulators are placed on a turntable, which is 0.8 meter high above ground. The turntable can rotate 360 degrees to determine the position of the maximum emission level. EUT is set 3.0 meters away from the receiving antenna, which is mounted on an antenna tower. The antenna can be moved up and down between 1.0 meter and 4 meters to find out the maximum emission level. Broadband antenna (calibrated bilog antenna) is used as receiving antenna. Both horizontal and vertical polarizations of the antenna are set on measurement. In order to find the maximum emission levels, all of the interface cables must be manipulated according to ANSI C63.4: 2003 on radiated emission measurement. The EUT was tested in 3 orthogonal planes.

The bandwidth of test receiver is set at 9kHz in below 30MHz. and set at 120kHz in 30-1000MHz, and 1MHz in above 1000MHz.

The frequency range from 9kHz to 25GHz is checked.

The final measurement in band 9-90kHz, 110-490kHz and above 1000MHz is performed with Average detector. Except those frequency bands mention above, the final measurement for frequencies below 1000MHz is performed with Quasi Peak detector.
The field strength is calculated by adding the antenna factor, and cable loss, and subtracting the amplifier gain from the measured reading. The basic equation calculation is as follows:
Result = Reading + Corrected Factor
Where Corrected Factor = Antenna Factor + Cable Loss – Amplifier Gain

11.7.The Field Strength of Radiation Emission Measurement Results

PASS.

Date of Test:	May 9-10, 2012	Temperature:	25°C
EUT:	Creative HanZpad	Humidity:	50%
Model No.:	PMT-ZZ0030	Power Supply:	DC 3.7V
Test Mode:	TX (2402MHz)	Test Engineer:	Kai

The data was shown the worst case GFSK (1Mbps)

For Below 30MHz

Frequency (MHz)	Reading (dBμV/m) QP	Factor(dB) Corr.	Result (dBμV/m) QP	Limit (dBμV/m) QP	Margin (dB) QP	Polarization
-	-	-	-	-	-	X
-	-	-	-	-	-	Y
-	-	-	-	-	-	Z

For 30MHz-1000MHz

Corrected Factor = Antenna Factor + Cable Loss – Amplifier Gain

Frequency (MHz)	Reading (dBμV/m) QP	Factor Corr. (dB)	Result (dBμV/m) QP	Limit (dBμV/m) QP	Margin (dB) QP	Polarization
213.3000	14.39	16.48	30.87	43.50	-12.63	Vertical
533.3000	16.82	24.47	41.29	46.00	-4.71	Vertical
740.0000	14.23	27.51	41.74	46.00	-4.26	Vertical
213.3100	20.18	16.47	36.65	43.50	-6.85	Horizontal
355.5000	13.47	21.13	34.60	46.00	-11.40	Horizontal
740.0000	11.34	57.51	38.85	46.00	-7.15	Horizontal

For 1GHz-25GHz

Corrected Factor = Antenna Factor + Cable Loss – Amplifier Gain

Frequency (MHz)	Reading(dBμV/m)		Factor Corr. (dB)	Result(dBμV/m)		Limit(dBμV/m)		Margin(dBμV/m)		Polarization
	AV	PEAK		AV	PEAK	AV	PEAK	AV	PEAK	
-	-	-	-	-	-	-	-	-	-	Vertical
-	-	-	-	-	-	-	-	-	-	Horizontal

Note: 1. Emissions attenuated more than 20 dB below the permissible value are not reported.

2. *: Denotes restricted band of operation.

Date of Test:	May 9-10, 2012	Temperature:	25°C
EUT:	Creative HanZpad	Humidity:	50%
Model No.:	PMT-ZZ0030	Power Supply:	DC 3.7V
Test Mode:	TX (2441MHz)	Test Engineer:	Kai

The data was shown the worst case GFSK (1Mbps)

For Below 30MHz

Frequency (MHz)	Reading (dBμV/m)	Factor(dB) Corr.	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
	QP		QP	QP	QP	
-	-	-	-	-	-	X
-	-	-	-	-	-	Y
-	-	-	-	-	-	Z

For 30MHz-1000MHz

Corrected Factor = Antenna Factor + Cable Loss – Amplifier Gain

Frequency (MHz)	Reading (dBμV/m)	Factor Corr. (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
	QP		QP	QP	QP	
213.3100	14.75	16.48	31.23	43.50	-12.27	Vertical
533.3000	16.60	24.47	41.07	46.00	-4.93	Vertical
740.0000	13.87	27.51	41.38	46.00	-4.62	Vertical
213.3000	19.78	16.47	36.25	43.50	-7.25	Horizontal
533.3000	16.00	24.47	40.47	46.00	-5.53	Horizontal
740.1000	13.62	27.51	41.13	46.00	-4.87	Horizontal

For 1GHz-25GHz

Corrected Factor = Antenna Factor + Cable Loss – Amplifier Gain

Frequency (MHz)	Reading(dBμV/m)		Factor Corr. (dB)	Result(dBμV/m)		Limit(dBμV/m)		Margin(dBμV/m)		Polarization
	AV	PEAK		AV	PEAK	AV	PEAK	AV	PEAK	
-	-	-	-	-	-	-	-	-	-	Vertical
-	-	-	-	-	-	-	-	-	-	Horizontal

Note: 1. Emissions attenuated more than 20 dB below the permissible value are not reported.

2. *: Denotes restricted band of operation.

Date of Test:	May 9-10, 2012	Temperature:	25°C
EUT:	Creative HanZpad	Humidity:	50%
Model No.:	PMT-ZZ0030	Power Supply:	DC 3.7V
Test Mode:	TX (2480MHz)	Test Engineer:	Kai

The data was shown the worst case GFSK (1Mbps)

For Below 30MHz

Frequency (MHz)	Reading (dBμV/m)	Factor(dB) Corr.	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
	QP		QP	QP	QP	
-	-	-	-	-	-	X
-	-	-	-	-	-	Y
-	-	-	-	-	-	Z

For 30MHz-1000MHz

Corrected Factor = Antenna Factor + Cable Loss – Amplifier Gain

Frequency (MHz)	Reading (dBμV/m)	Factor Corr. (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
	QP		QP	QP	QP	
213.3000	16.05	16.48	32.53	43.50	-10.97	Vertical
533.3000	16.41	24.47	40.88	46.00	-5.12	Vertical
739.9000	11.83	27.51	39.34	46.00	-6.66	Vertical
213.3000	21.08	16.47	37.55	43.50	-5.95	Horizontal
640.5000	11.69	26.08	37.77	46.00	-8.23	Horizontal
740.1000	11.51	27.51	39.02	46.00	-6.98	Horizontal

For 1GHz-25GHz

Corrected Factor = Antenna Factor + Cable Loss – Amplifier Gain

Frequency (MHz)	Reading(dBμV/m)		Factor Corr. (dB)	Result(dBμV/m)		Limit(dBμV/m)		Margin(dBμV/m)		Polarization
	AV	PEAK		AV	PEAK	AV	PEAK	AV	PEAK	
-	-	-	-	-	-	-	-	-	-	Vertical
-	-	-	-	-	-	-	-	-	-	Horizontal

Note: 1. Emissions attenuated more than 20 dB below the permissible value are not reported.

2. *: Denotes restricted band of operation.

ACCURATE TECHNOLOGY CO., LTD.
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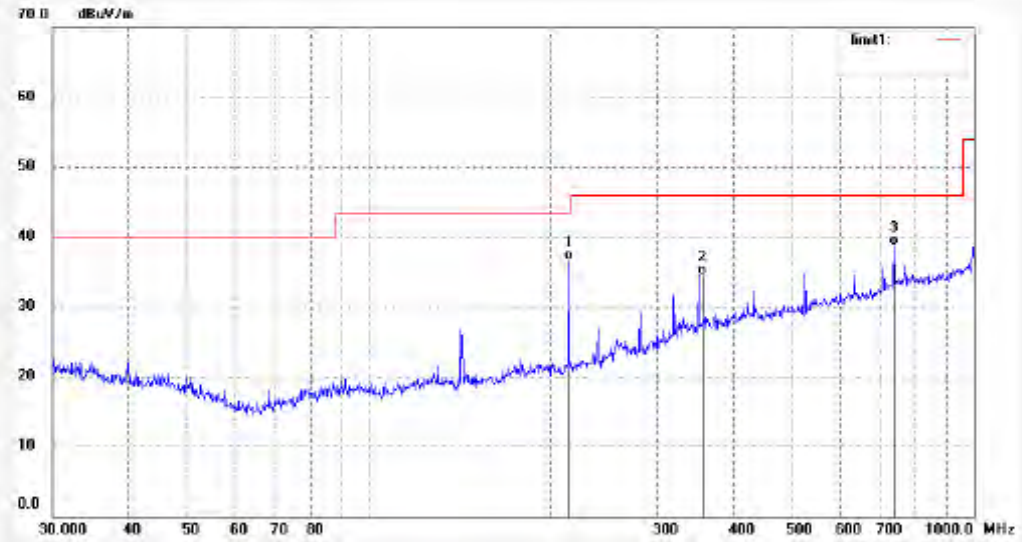
Site: 966 chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: star #790	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: DC 3.7V
Test item: Radiation Test	Date: 2012/05/09
Temp.(C)/Hum.(%) 25 C / 51 %	Time: 20:41:02
EUT: Creative HanZpad	Engineer Signature: Star
Mode: TX DH1(2402MHz)	Distance:
Model: PMT-ZZ0030	
Manufacturer: Creative Technology Ltd	

Note: Report No.:ATE20120871



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	213.3100	20.18	16.47	36.65	43.50	-6.85	QP			
2	355.5000	13.47	21.13	34.60	46.00	-11.40	QP			
3	740.0000	11.34	27.51	38.85	46.00	-7.15	QP			

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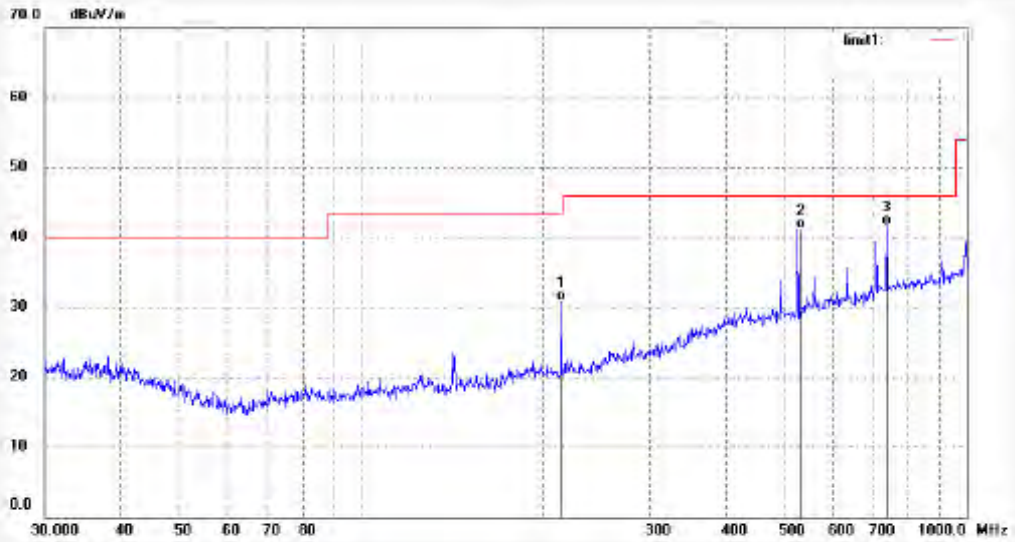
Fax:+86-0755-26503396

Job No.: star #791
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 51 %
EUT: Creative HanZpad
Mode: TX DH1(2402MHz)
Model: PMT-ZZ0030
Manufacturer: Creative Technology Ltd

Polarization: Vertical
Power Source: DC 3.7V
Date: 2012/05/09
Time: 20:42:13
Engineer Signature: Star
Distance:

Note: Report No.:ATE20120871



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	213.3000	14.39	16.48	30.87	43.50	-12.63	QP			
2	533.3000	16.82	24.47	41.29	46.00	-4.71	QP			
3	740.0000	14.23	27.51	41.74	46.00	-4.26	QP			

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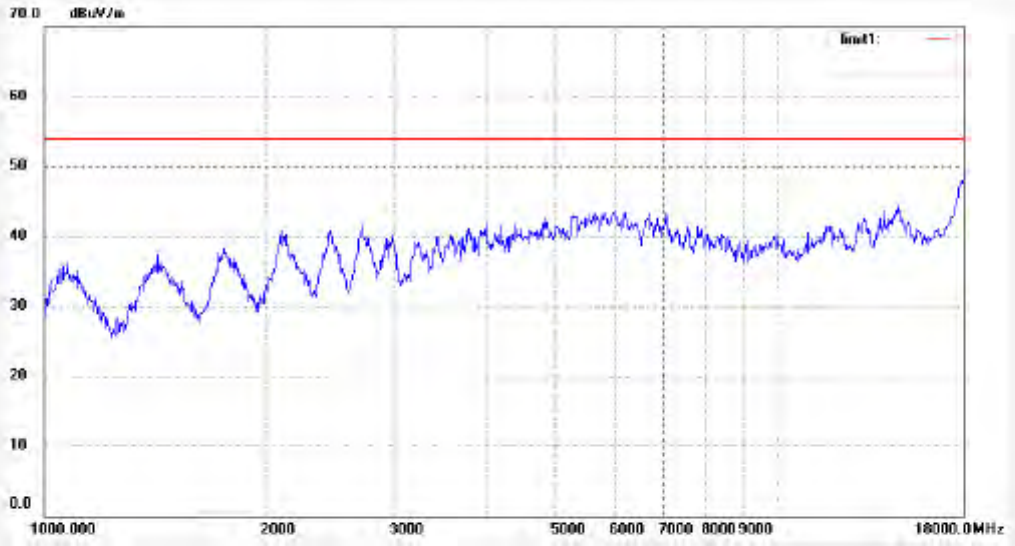
Fax:+86-0755-26503396

Job No.: star #832	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: DC 3.7V
Test item: Radiation Test	Date: 12/05/10/
Temp.(C)/Hum.(%) 25 C / 51 %	Time: 8/35/43
EUT: Creative HanZpad	Engineer Signature: Star
Mode: TX DH1(2402MHz)	Distance:
Model: PMT-ZZ0030	
Manufacturer: Creative Technology Ltd	

Note: Report No.:ATE20120871



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark

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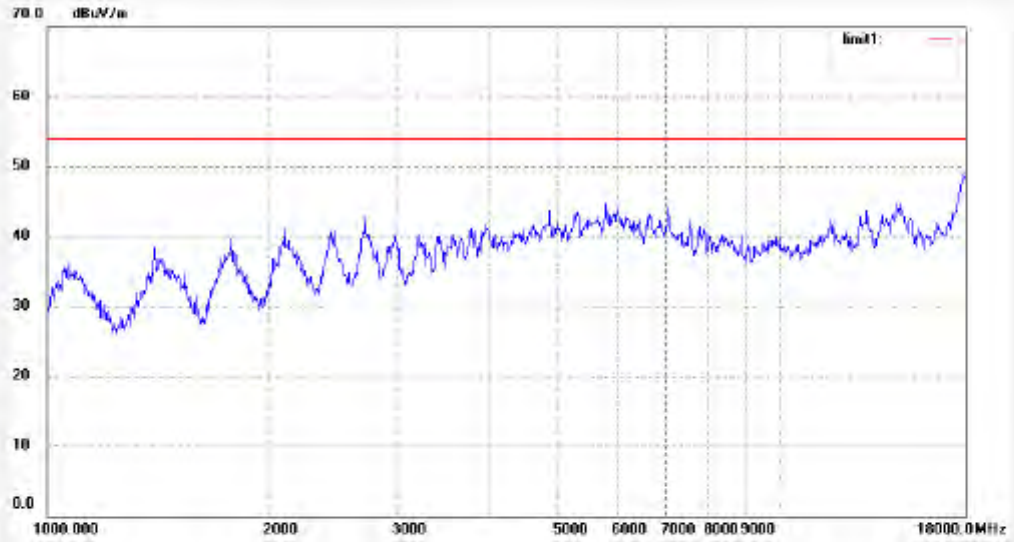
Fax:+86-0755-26503396

Job No.: star #833	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: DC 3.7V
Test item: Radiation Test	Date: 12/05/10/
Temp.(C)/Hum.(%) 25 C / 51 %	Time: 8/38/00
EUT: Creative HanZpad	Engineer Signature: Star
Mode: TX DH1(2402MHz)	Distance:
Model: PMT-ZZ0030	
Manufacturer: Creative Technology Ltd	

Note: Report No.:ATE20120871



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark

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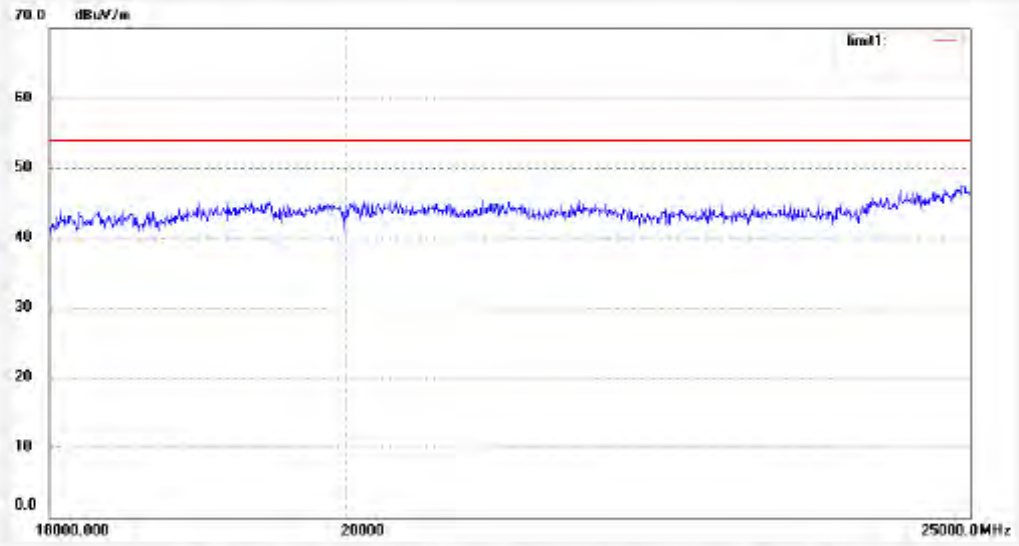
Fax:+86-0755-26503396

Job No.: star #875	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: DC 3.7V
Test item: Radiation Test	Date: 2012/05/10
Temp.(C)/Hum.(%) 25 C / 51 %	Time: 20:01:24
EUT: Creative HanZpad	Engineer Signature: Star
Mode: TX DH1(2402MHz)	Distance:
Model: PMT-ZZ0030	
Manufacturer: Creative Technology Ltd	

Note: Report No.:ATE20120871



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark

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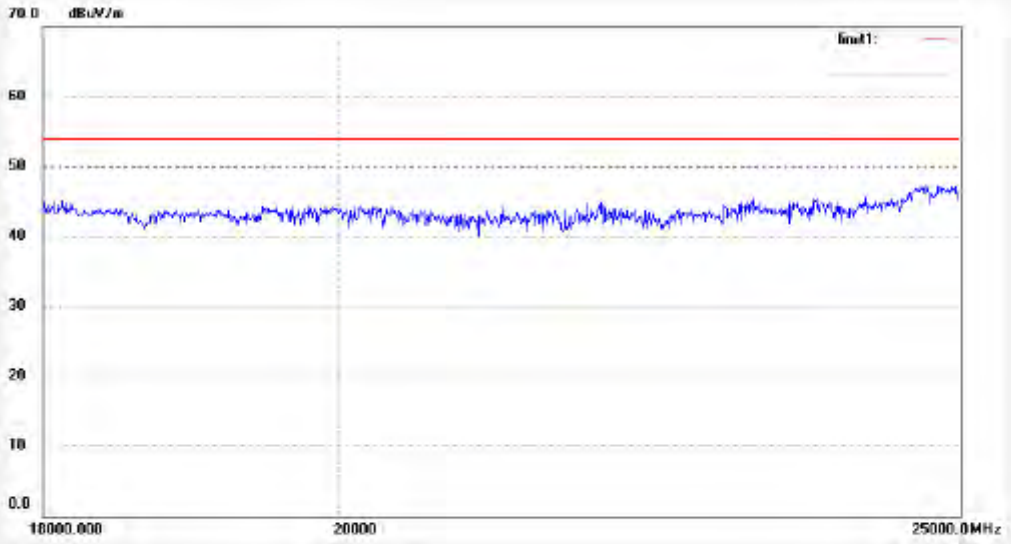
Fax:+86-0755-26503396

Job No.: star #874	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: DC 3.7V
Test item: Radiation Test	Date: 2012/05/10
Temp.(C)/Hum.(%) 25 C / 51 %	Time: 19:57:01
EUT: Creative HanZpad	Engineer Signature: Star
Mode: TX DH1(2402MHz)	Distance:
Model: PMT-ZZ0030	
Manufacturer: Creative Technology Ltd	

Note: Report No.:ATE20120871



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark

ACCURATE TECHNOLOGY CO., LTD.
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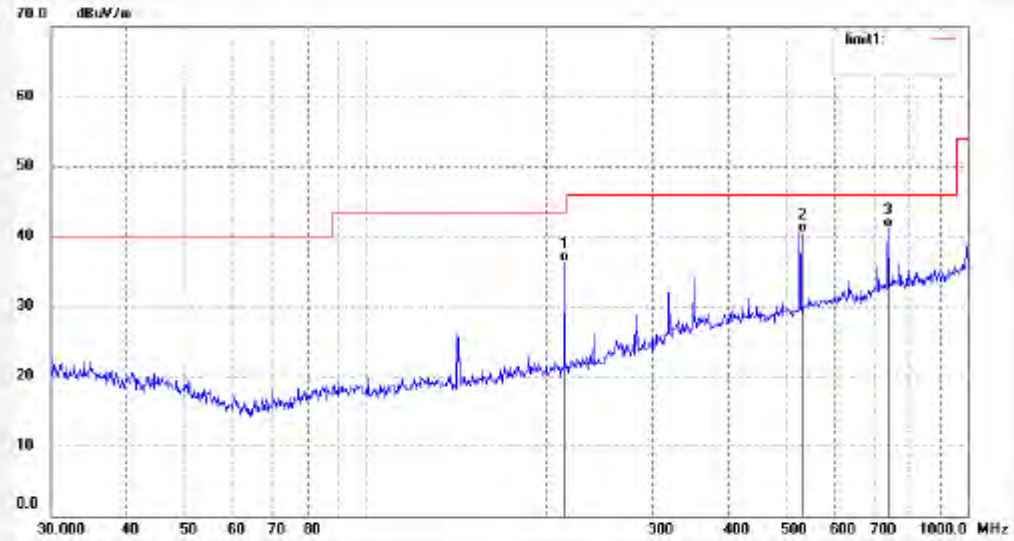
Site: 966 chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: star #792
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 51 %
EUT: Creative HanZpad
Mode: TX DH1(2441MHz)
Model: PMT-ZZ0030
Manufacturer: Creative Technology Ltd

Polarization: Horizontal
Power Source: DC 3.7V
Date: 2012/05/09
Time: 20:44:46
Engineer Signature: Star
Distance:

Note: Report No.:ATE20120871



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	213.3000	19.78	16.47	36.25	43.50	-7.25	QP			
2	533.3000	16.00	24.47	40.47	46.00	-5.53	QP			
3	740.1000	13.62	27.51	41.13	46.00	-4.87	QP			

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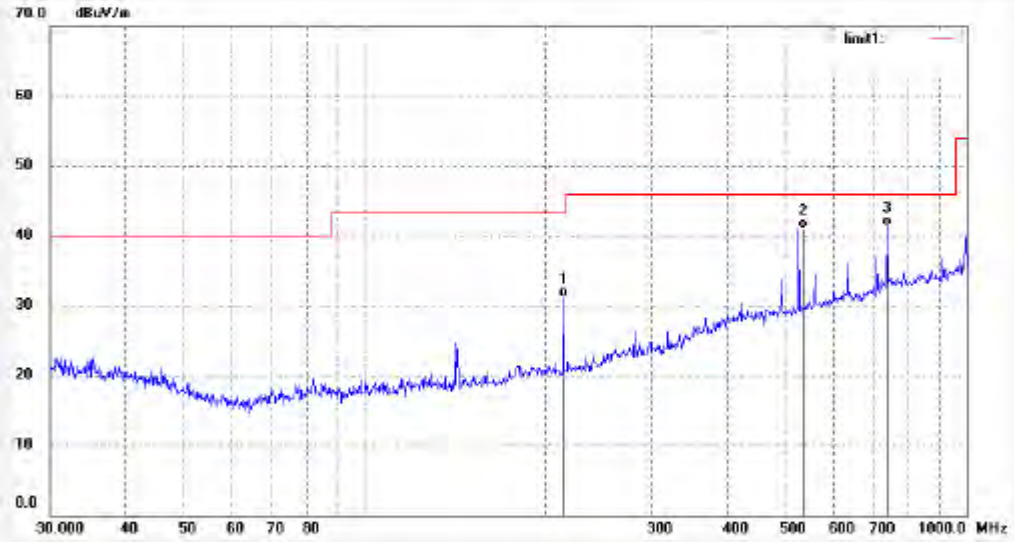
Fax:+86-0755-26503396

Job No.: star #793	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: DC 3.7V
Test item: Radiation Test	Date: 2012/05/09
Temp.(C)/Hum.(%) 25 C / 51 %	Time: 20:46:13
EUT: Creative HanZpad	Engineer Signature: Star
Mode: TX DH1(2441MHz)	Distance:
Model: PMT-ZZ0030	
Manufacturer: Creative Technology Ltd	

Note: Report No.:ATE20120871



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	213.3100	14.75	16.48	31.23	43.50	-12.27	QP			
2	533.3000	16.60	24.47	41.07	46.00	-4.93	QP			
3	740.0000	13.87	27.51	41.38	46.00	-4.62	QP			

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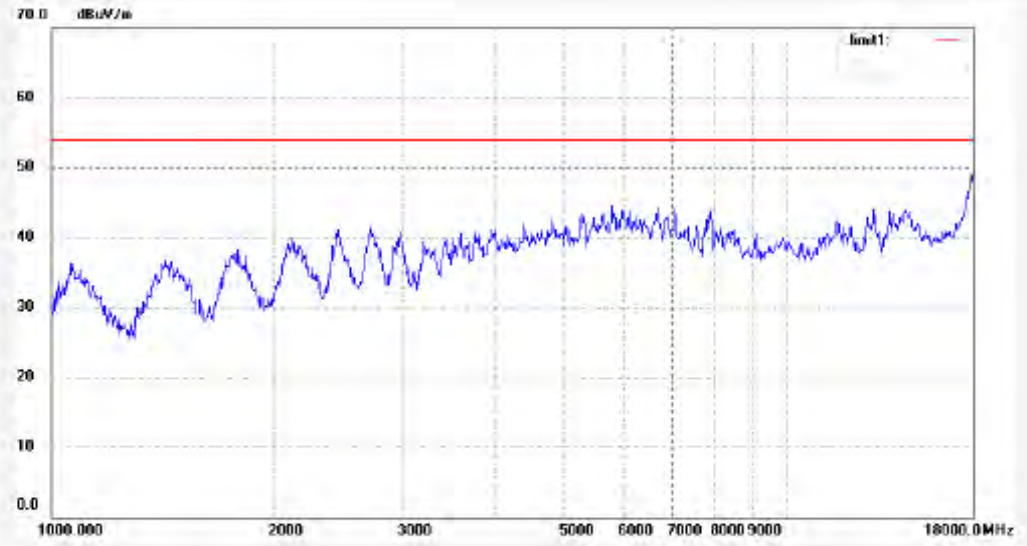
Fax:+86-0755-26503396

Job No.: star #835	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: DC 3.7V
Test item: Radiation Test	Date: 12/05/10/
Temp.(C)/Hum.(%) 25 C / 51 %	Time: 8/45/16
EUT: Creative HanZpad	Engineer Signature: Star
Mode: TX DH1(2441MHz)	Distance:
Model: PMT-ZZ0030	
Manufacturer: Creative Technology Ltd	

Note: Report No.:ATE20120871

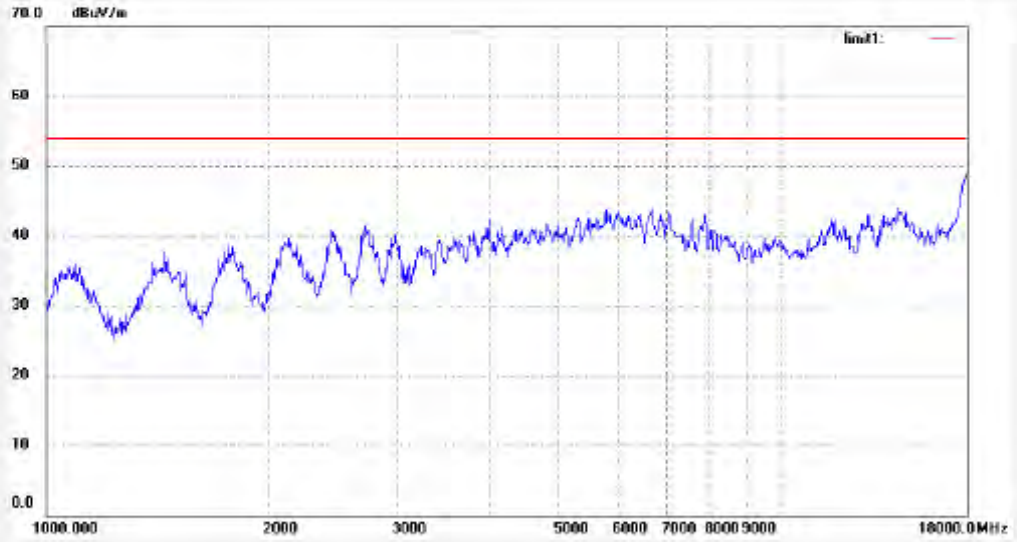


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark

ACCURATE TECHNOLOGY CO., LTD.
F1,Bldg.A,Changyuan New Material Port Keyuan Rd,
Science & Industry Park,Nanshan Shenzhen,P.R.China
Site: 966 chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: star #834	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: DC 3.7V
Test item: Radiation Test	Date: 12/05/10/
Temp.(C)/Hum.(%) 25 C / 51 %	Time: 8/41/24
EUT: Creative HanZpad	Engineer Signature: Star
Mode: TX DH1(2441MHz)	Distance:
Model: PMT-ZZ0030	
Manufacturer: Creative Technology Ltd	

Note: Report No.:ATE20120871

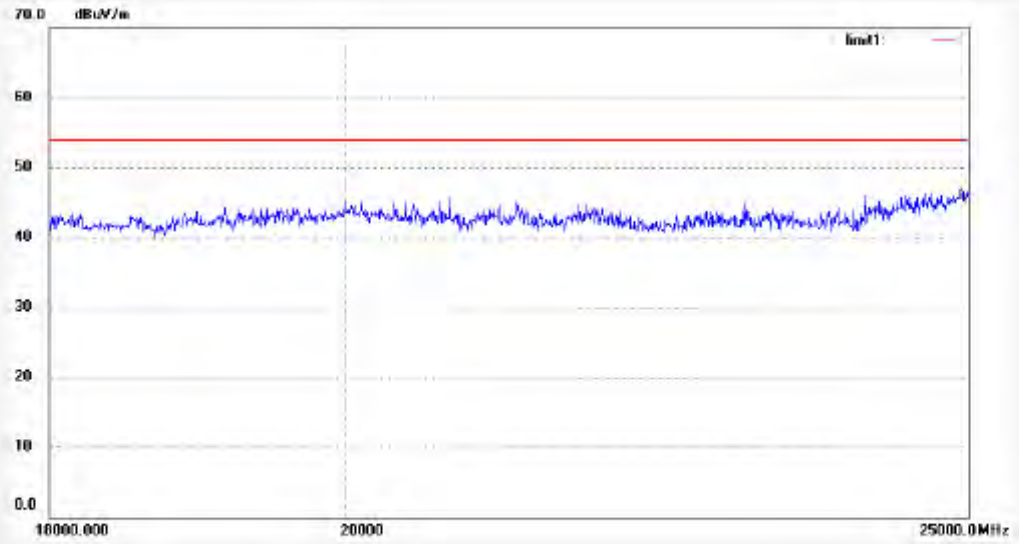


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark

ACCURATE TECHNOLOGY CO., LTD.
F1,Bldg.A,Changyuan New Material Port Keyuan Rd,
Science & Industry Park,Nanshan Shenzhen,P.R.China
Site: 966 chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: star #880	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: DC 3.7V
Test item: Radiation Test	Date: 2012/05/10
Temp.(C)/Hum.(%) 25 C / 51 %	Time: 20:20:32
EUT: Creative HanZpad	Engineer Signature: Star
Mode: TX DH1(2441MHz)	Distance:
Model: PMT-ZZ0030	
Manufacturer: Creative Technology Ltd	

Note: Report No.:ATE20120871

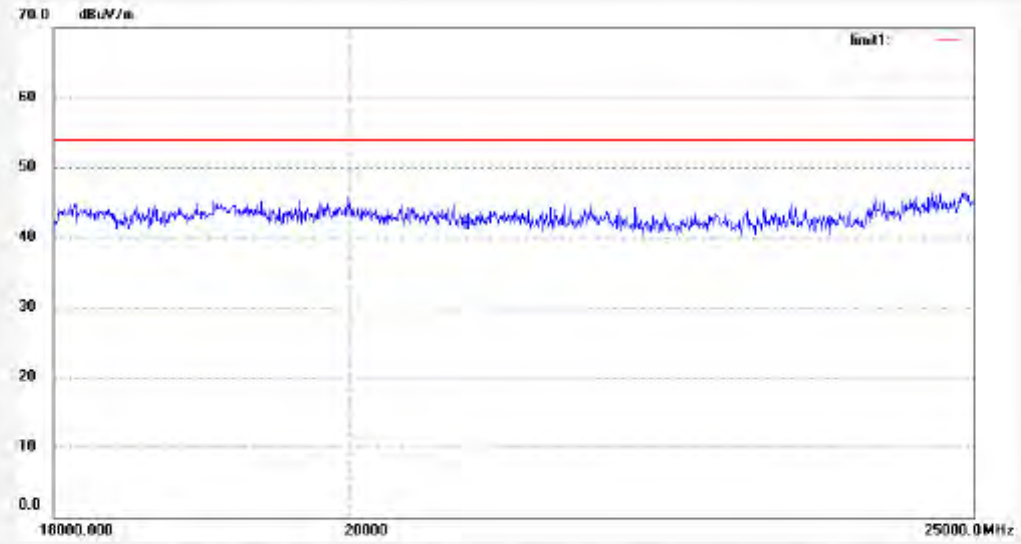


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark

ACCURATE TECHNOLOGY CO., LTD.
F1,Bldg.A,Changyuan New Material Port Keyuan Rd,
Science & Industry Park,Nanshan Shenzhen,P.R.China
Site: 966 chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: star #881	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: DC 3.7V
Test item: Radiation Test	Date: 2012/05/10
Temp.(C)/Hum.(%) 25 C / 51 %	Time: 20:23:43
EUT: Creative HanZpad	Engineer Signature: Star
Mode: TX DH1(2441MHz)	Distance:
Model: PMT-ZZ0030	
Manufacturer: Creative Technology Ltd	

Note: Report No.:ATE20120871

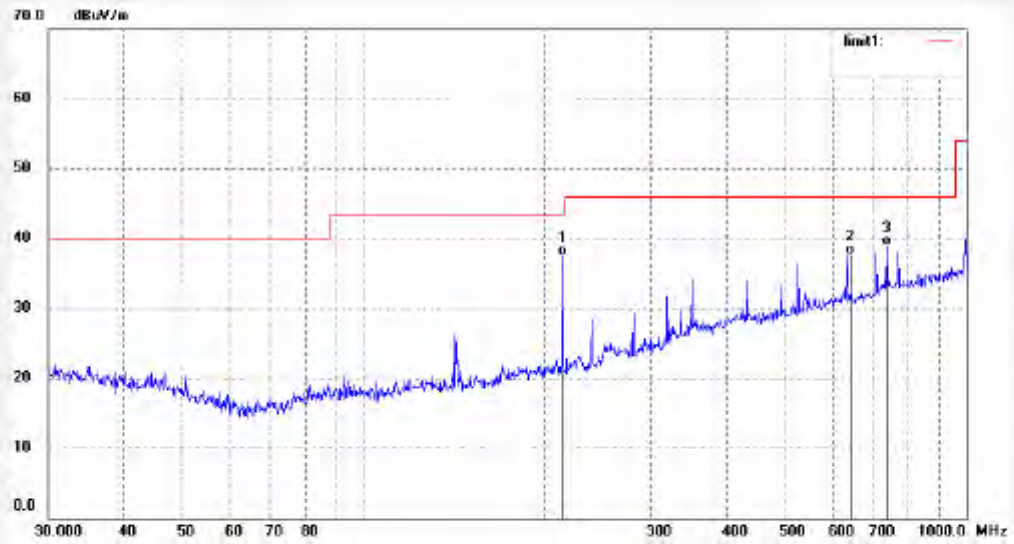


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark

ACCURATE TECHNOLOGY CO., LTD.
F1,Bldg.A,Changyuan New Material Port Keyuan Rd,
Science & Industry Park,Nanshan Shenzhen,P.R.China
Site: 966 chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: star #795	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: DC 3.7V
Test item: Radiation Test	Date: 2012/05/09
Temp.(C)/Hum.(%) 25 C / 51 %	Time: 20:50:09
EUT: Creative HanZpad	Engineer Signature: Star
Mode: TX DH1(2480MHz)	Distance:
Model: PMT-ZZ0030	
Manufacturer: Creative Technology Ltd	

Note: Report No.:ATE20120871



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	213.3000	21.08	16.47	37.55	43.50	-5.95	QP			
2	640.5000	11.69	26.08	37.77	46.00	-8.23	QP			
3	740.1000	11.51	27.51	39.02	46.00	-6.98	QP			

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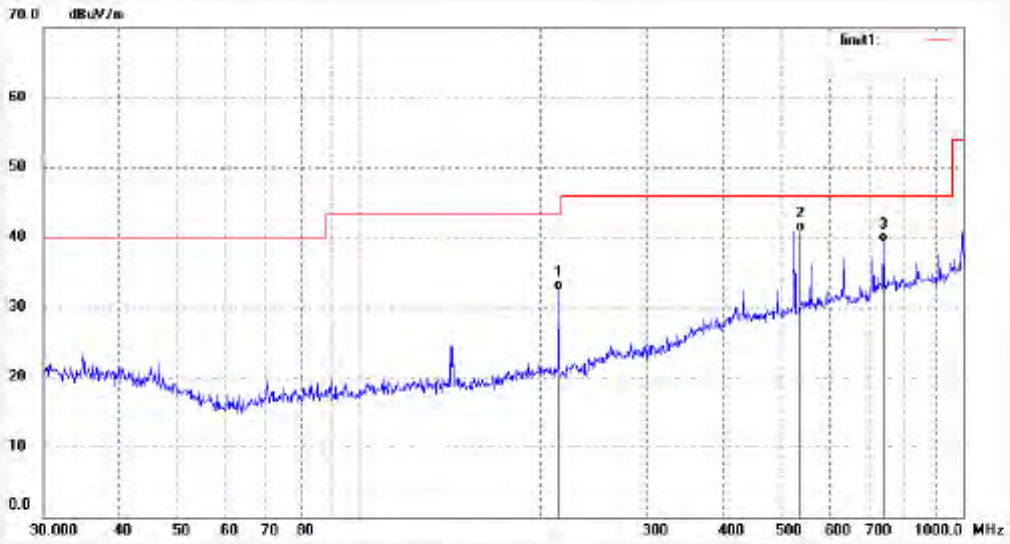
Science & Industry Park,Nanshan Shenzhen,P.R.China
Site: 966 chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: star #794
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 51 %
EUT: Creative HanZpad
Mode: TX DH1(2480MHz)
Model: PMT-ZZ0030
Manufacturer: Creative Technology Ltd

Polarization: Vertical
Power Source: DC 3.7V
Date: 2012/05/09
Time: 20:48:17
Engineer Signature: Star
Distance:

Note: Report No.:ATE20120871



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	213.3000	16.05	16.48	32.53	43.50	-10.97	QP			
2	533.3000	16.41	24.47	40.88	46.00	-5.12	QP			
3	739.9000	11.83	27.51	39.34	46.00	-6.66	QP			

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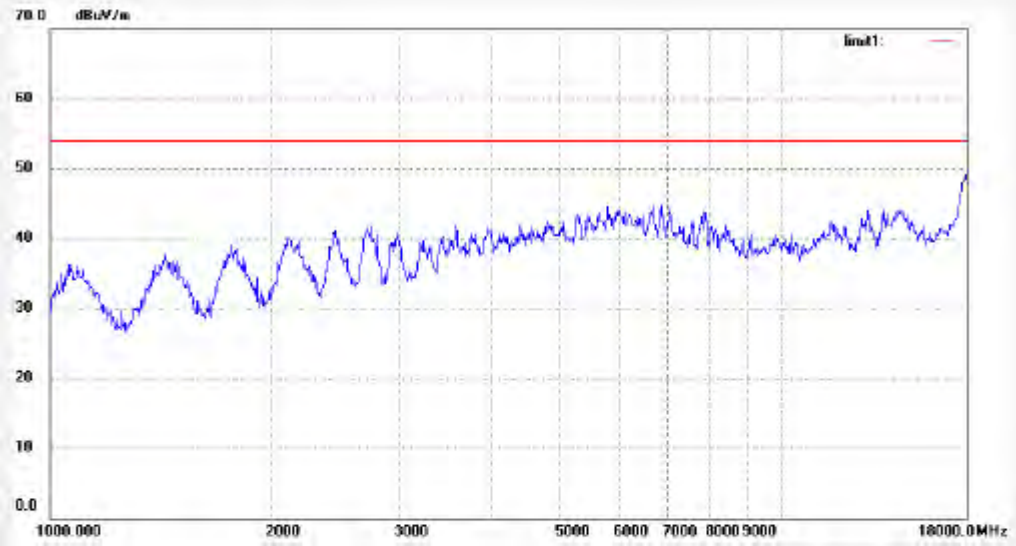
Science & Industry Park,Nanshan Shenzhen,P.R.China
Site: 966 chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: star #836	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: DC 3.7V
Test item: Radiation Test	Date: 12/05/10/
Temp.(C)/Hum.(%) 25 C / 51 %	Time: 8/49/09
EUT: Creative HanZpad	Engineer Signature: Star
Mode: TX DH1(2480MHz)	Distance:
Model: PMT-ZZ0030	
Manufacturer: Creative Technology Ltd	

Note: Report No.:ATE20120871

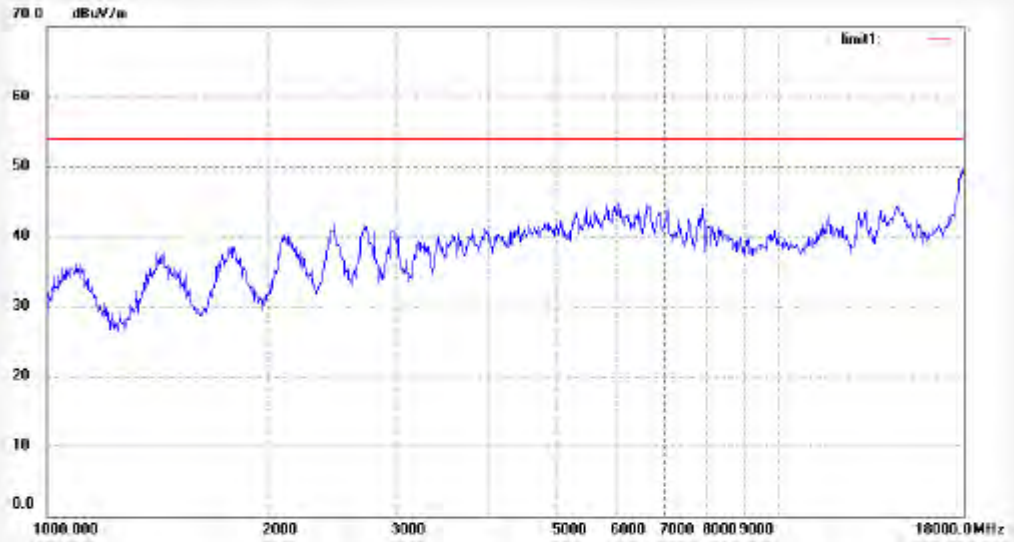


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark

ACCURATE TECHNOLOGY CO., LTD.
F1,Bldg.A,Changyuan New Material Port Keyuan Rd,
Science & Industry Park,Nanshan Shenzhen,P.R.China
Site: 966 chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: star #837	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: DC 3.7V
Test item: Radiation Test	Date: 12/05/10/
Temp.(C)/Hum.(%) 25 C / 51 %	Time: 8/52/30
EUT: Creative HanZpad	Engineer Signature: Star
Mode: TX DH1(2480MHz)	Distance:
Model: PMT-ZZ0030	
Manufacturer: Creative Technology Ltd	

Note: Report No.:ATE20120871

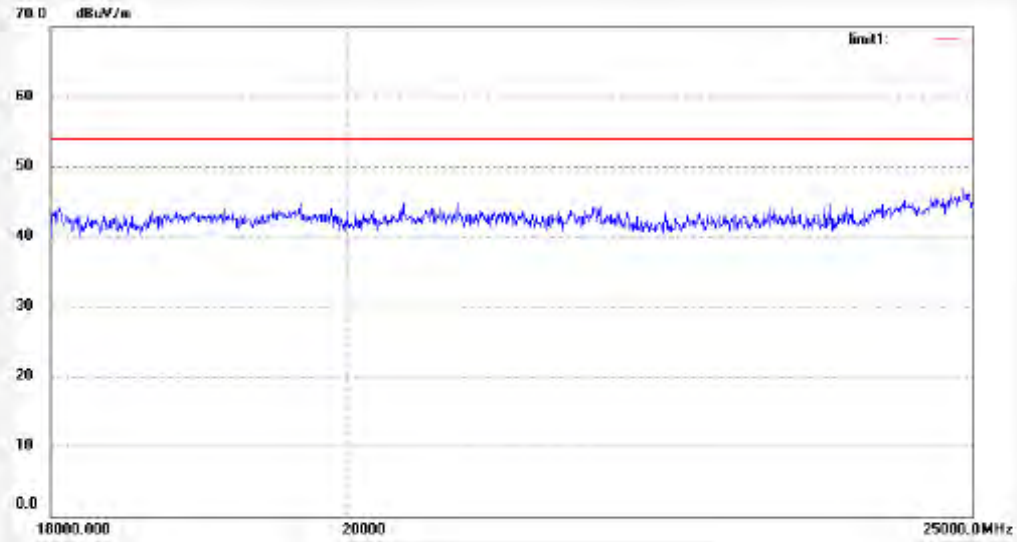


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark

ACCURATE TECHNOLOGY CO., LTD.
F1,Bldg.A,Changyuan New Material Port Keyuan Rd.
Science & Industry Park,Nanshan Shenzhen,P.R.China
Site: 966 chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: star #887	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: DC 3.7V
Test item: Radiation Test	Date: 2012/05/10
Temp.(C)/Hum.(%) 25 C / 51 %	Time: 20:45:16
EUT: Creative HanZpad	Engineer Signature: Star
Mode: TX DH1(2480MHz)	Distance:
Model: PMT-ZZ0030	
Manufacturer: Creative Technology Ltd	

Note: Report No.:ATE20120871

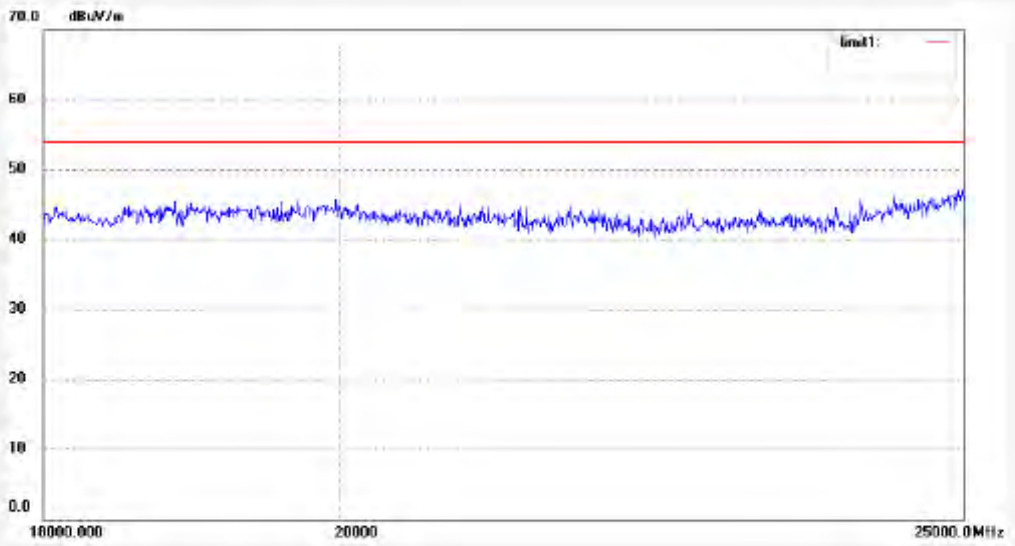


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark

ACCURATE TECHNOLOGY CO., LTD.
F1,Bldg,A,Changyuan New Material Port Keyuan Rd,
Science & Industry Park,Nanshan Shenzhen,P.R.China
Site: 966 chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: star #886	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: DC 3.7V
Test item: Radiation Test	Date: 2012/05/10
Temp.(C)/Hum.(%) 25 C / 51 %	Time: 20:41:55
EUT: Creative HanZpad	Engineer Signature: Star
Mode: TX DH1(2480MHz)	Distance:
Model: PMT-ZZ0030	
Manufacturer: Creative Technology Ltd	

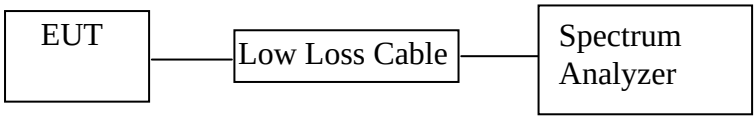
Note: Report No.:ATE20120871



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark

12. CONDUCTED SPURIOUS EMISSION COMPLIANCE TEST

12.1. Block Diagram of Test Setup



(EUT: Creative HanZpad)

12.2. The Requirement For Section 15.247(d)

Section 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 Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a).

12.3. EUT Configuration on Measurement

The following equipment are installed on the emission measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

12.3.1. Creative HanZpad (EUT)

Model Number	:	PMT-ZZ0030
Serial Number	:	N/A
Manufacturer	:	Creative Technology Ltd

12.4.Operating Condition of EUT

12.4.1.Setup the EUT and simulator as shown as Section 12.1.

12.4.2.Turn on the power of all equipment.

12.4.3.Let the EUT work in TX (Hopping off) modes measure it. The transmit frequency are 2402-2480MHz. We select 2402MHz, 2441MHz, 2480MHz TX frequency to transmit.

12.5.Test Procedure

12.5.1.The transmitter output was connected to the spectrum analyzer via a low loss cable.

12.5.2.Set RBW of spectrum analyzer to 100kHz and VBW to 300kHz (below 1GHz).

12.5.3.Set RBW of spectrum analyzer to 1MHz and VBW to 3MHz (above 1GHz).

12.5.4.The Conducted Spurious Emission was measured and recorded.

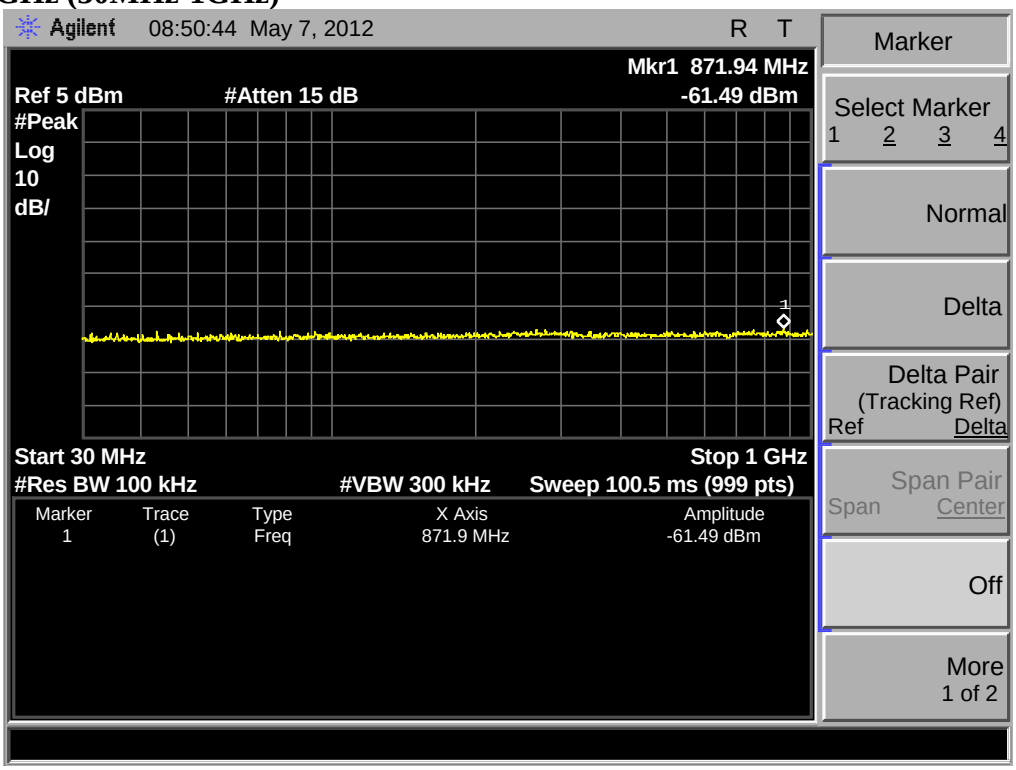
12.6.Test Result

Pass.

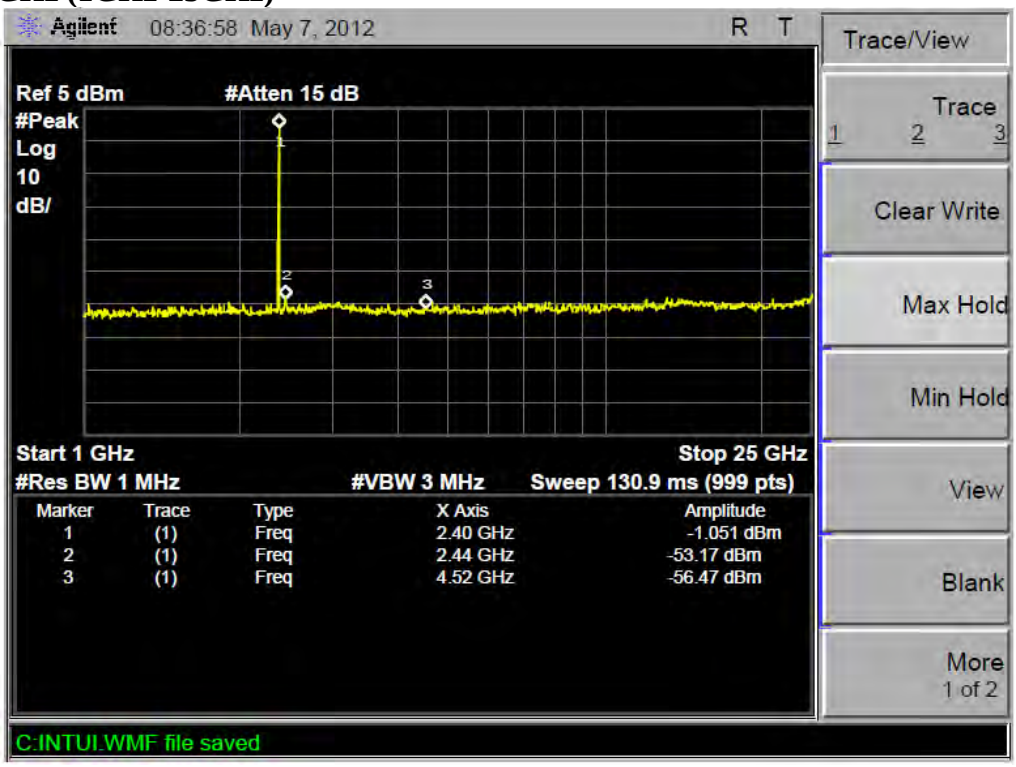
The spectrum analyzer plots are attached as below.

"Spectrum analyzer" is Agilent
The data was shown the worst case GFSK (1Mbps)

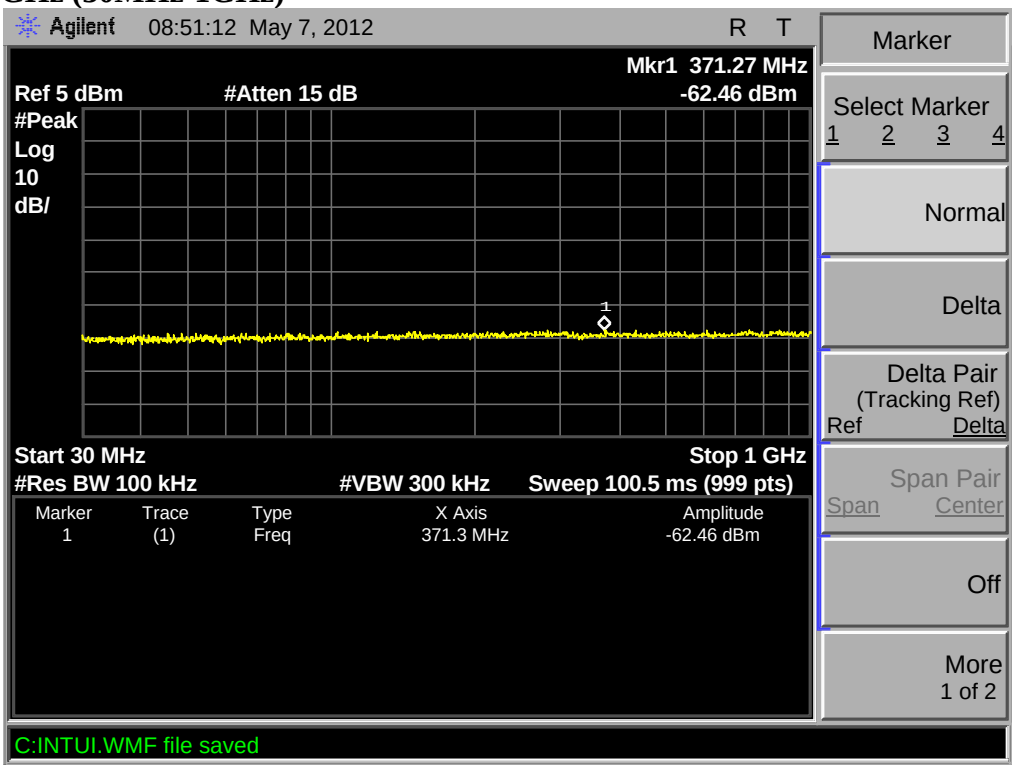
TX 2402GHz (30MHz-1GHz)



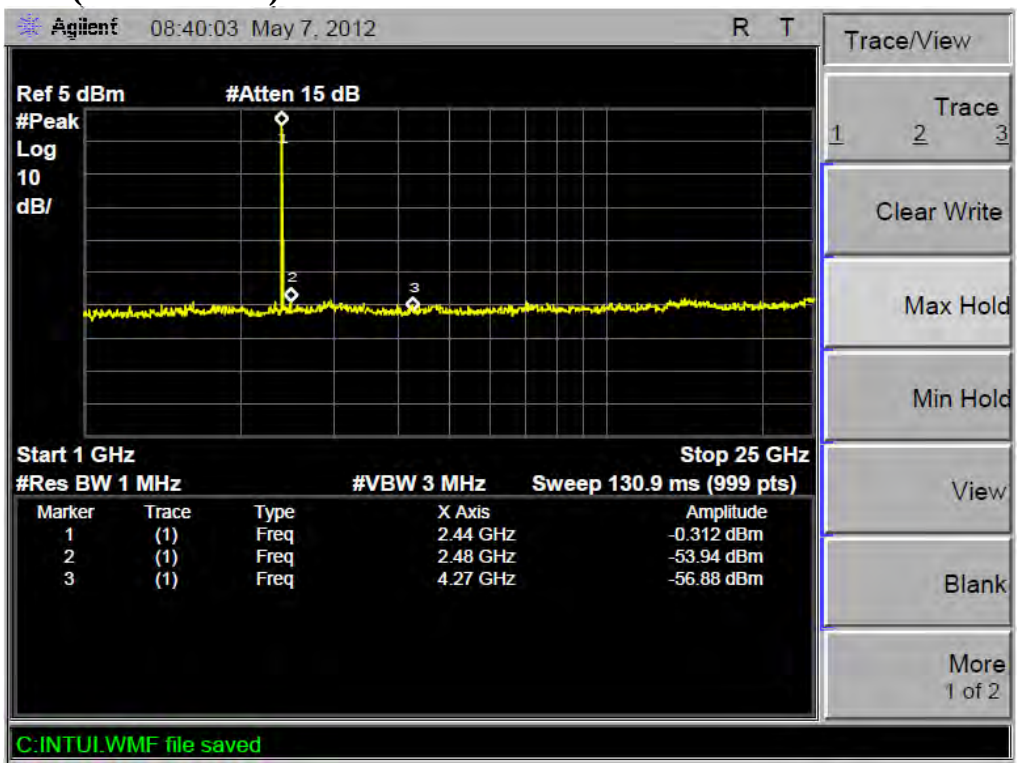
TX 2402GHz (1GHz-25GHz)



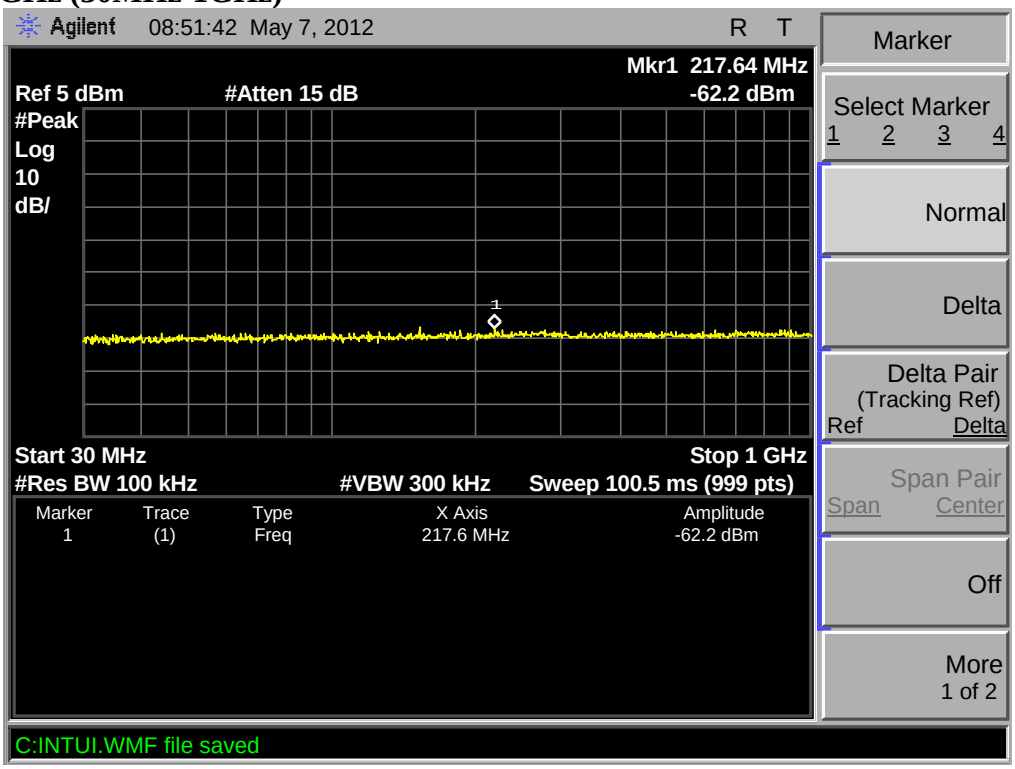
TX 2441GHz (30MHz-1GHz)



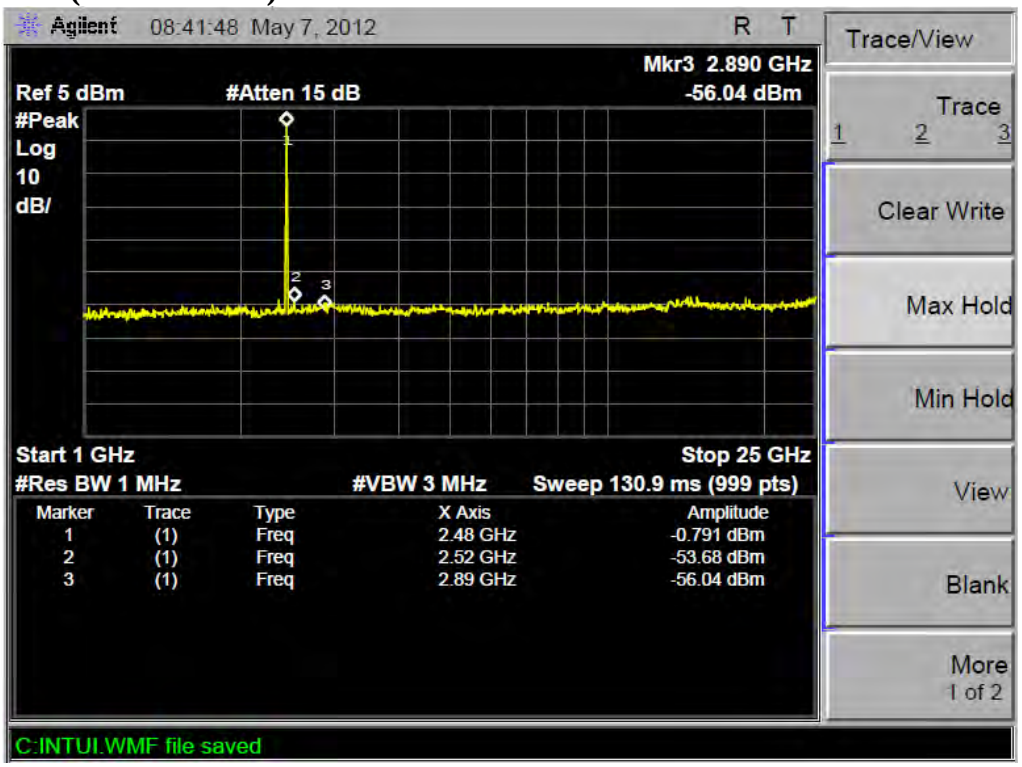
TX 2441GHz (1GHz-25GHz)



TX 2480GHz (30MHz-1GHz)



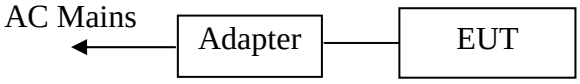
TX 2480GHz (1GHz-25GHz)



13. AC POWER LINE CONDUCTED EMISSION FOR FCC PART 15 SECTION 15.207(A)

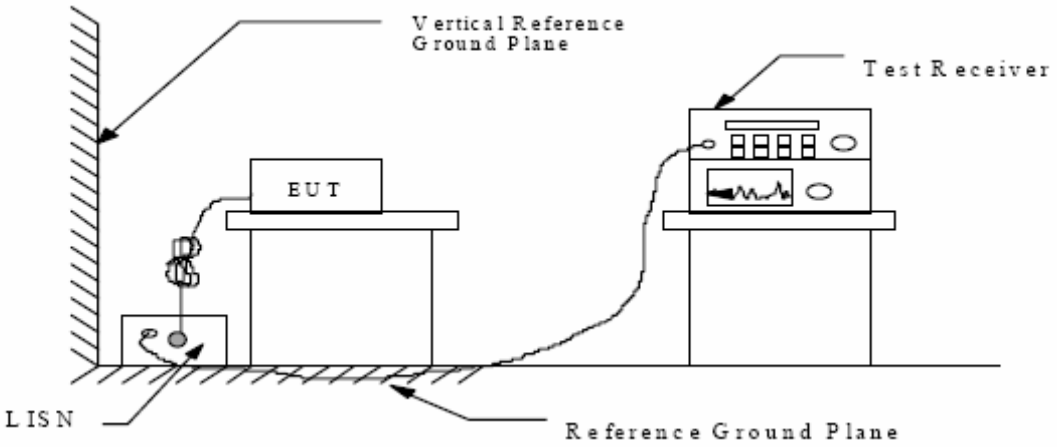
13.1. Block Diagram of Test Setup

13.1.1. Block diagram of connection between the EUT and simulators



(EUT: Creative HanZpad)

13.1.2. Shielding Room Test Setup Diagram



(EUT: Creative HanZpad)

13.2. The Emission Limit

13.2.1. Conducted Emission Measurement Limits According to Section 15.207(a)

Frequency (MHz)	Limit dB(μV)	
	Quasi-peak Level	Average Level
0.15 - 0.50	66.0 – 56.0 *	56.0 – 46.0 *
0.50 - 5.00	56.0	46.0
5.00 - 30.00	60.0	50.0

* Decreases with the logarithm of the frequency.

13.3.Configuration of EUT on Measurement

The following equipment are installed on the Conducted Emission Measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

13.3.1.Creative HanZpad (EUT)

Model Number	**:**	PMT-ZZ0030
Serial Number	**:**	N/A
Manufacturer	**:**	Creative Technology Ltd

13.4.Operating Condition of EUT

13.4.1.Setup the EUT and simulator as shown as Section 13.1.

13.4.2.Turn on the power of all equipment.

13.4.3.Let the EUT work in (Charging) mode measure it.

13.5.Test Procedure

The EUT is put on the plane 0.8m high above the ground by insulating support and is connected to the power mains through a line impedance stabilization network (L.I.S.N.). This provides a 50ohm coupling impedance for the EUT system. Please refer the block diagram of the test setup and photographs. Both sides of AC lines are checked to find out the maximum conducted emission. In order to find the maximum emission levels, the relative positions of equipment and all of the interface cables shall be changed according to ANSI C63.4: 2003 on Conducted Emission Measurement.

The bandwidth of test receiver (R & S ESCS30) is set at 9kHz.

The frequency range from 150kHz to 30MHz is checked.

13.6.Power Line Conducted Emission Measurement Results

PASS.

The frequency range from 150kHz to 30MHz is checked.

Date of Test:	May 8, 2012	Temperature:	25°C
EUT:	Creative HanZpad	Humidity:	50%
Model No.:	PMT-ZZ0030	Power Supply:	AC 120V/ 60Hz
Test Mode:	Charging	Test Engineer:	Kai

Frequency (MHz)	Result (dBμV)	Limit (dBμV)	Margin (dB)	Detector	Line
0.184605	44.90	64.3	-19.4	QP	Neutral
0.254063	46.60	61.6	-15.0	QP	
0.325410	43.50	59.6	-16.1	QP	
0.184605	35.40	54.3	-18.9	AV	
0.249042	32.60	51.8	-19.2	AV	
0.315182	30.40	49.8	-19.4	AV	
0.187577	43.90	64.1	-20.2	QP	Live
0.252043	44.80	61.7	-16.9	QP	
0.318980	42.10	59.7	-17.6	QP	
0.189080	34.10	54.1	-20.0	AV	
0.252043	31.70	51.7	-20.0	AV	
0.316443	30.00	49.8	-19.8	AV	

Emissions attenuated more than 20 dB below the permissible value are not reported.
The spectral diagrams are attached as below.

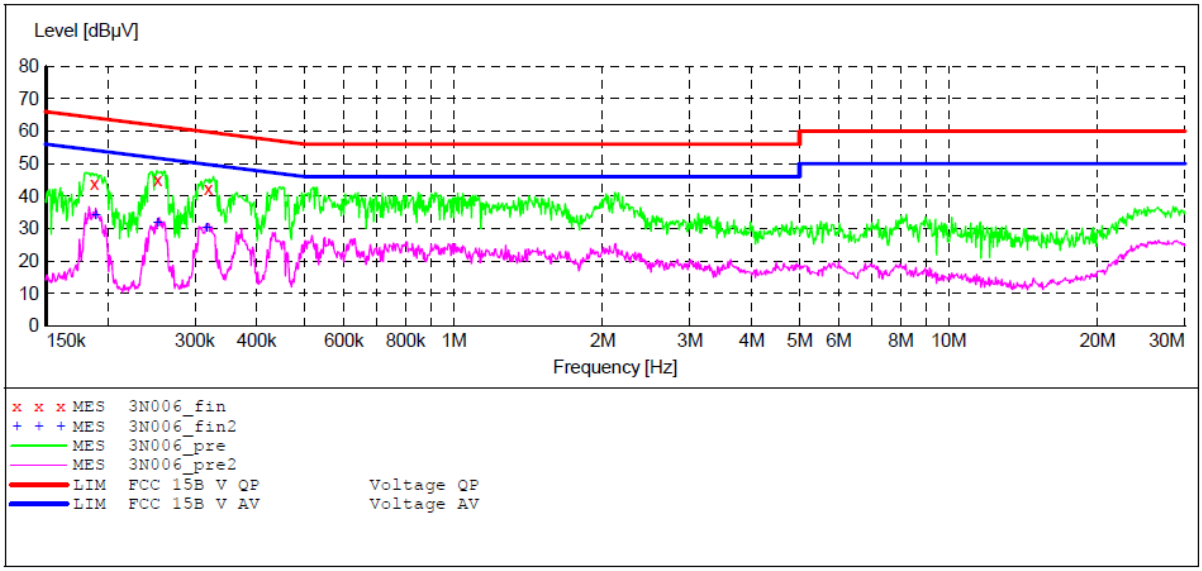
ACCURATE TECHNOLOGY CO.,LTD

CONDUCTED EMISSION STANDARD FCC PART 15 B

```
EUT:                  Creative HanZpad    M/N:PMT-ZZ0030
Manufacturer:         Creative
Operating Condition:  Charging
Test Site:            1#Shielding Room
Operator:             Star
Test Specification:   L 120V/60Hz
Comment:              Report No.:ATE20120871
Start of Test:        5/8/2012 / 3:33:22PM
```

SCAN TABLE: "V 150K-30MHz fin"

```
  Short Description:              _SUB_STD_VTERM2 1.70
  Start      Stop       Step      Detector  Meas.     IF       Transducer
  Frequency  Frequency  Width               Time      Bandw.
  150.0 kHz  30.0 MHz   0.8 %     QuasiPeak 1.0 s     9 kHz    NSLK8126 2008
                                  Average
```



MEASUREMENT RESULT: "3N006_fin"

5/8/2012 3:35PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.187577	43.90	11.2	64.1	20.2	QP	L1	GND
0.252043	44.80	11.4	61.7	16.9	QP	L1	GND
0.318980	42.10	11.6	59.7	17.6	QP	L1	GND

MEASUREMENT RESULT: "3N006_fin2"

5/8/2012 3:35PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.189080	34.10	11.2	54.1	20.0	AV	L1	GND
0.252043	31.70	11.4	51.7	20.0	AV	L1	GND
0.316443	30.00	11.6	49.8	19.8	AV	L1	GND

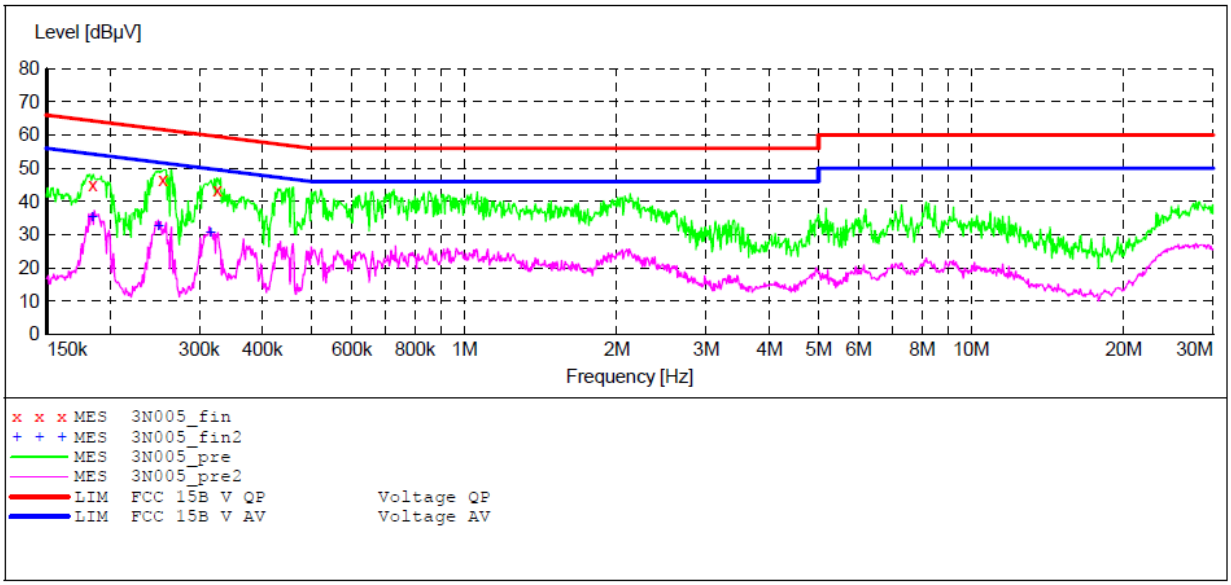
ACCURATE TECHNOLOGY CO.,LTD

CONDUCTED EMISSION STANDARD FCC PART 15 B

```
EUT:                  Creative HanZpad    M/N:PMT-ZZ0030
Manufacturer:         Creative
Operating Condition:  Charging
Test Site:            1#Shielding Room
Operator:             Star
Test Specification:   N 120V/60Hz
Comment:              Report No.:ATE20120871
Start of Test:        5/8/2012 / 3:30:47PM
```

SCAN TABLE: "V 150K-30MHz fin"

```
  Short Description:              _SUB_STD_VTERM2 1.70
  Start      Stop       Step      Detector  Meas.     IF       Transducer
  Frequency  Frequency  Width               Time      Bandw.
  150.0 kHz  30.0 MHz   0.8 %     QuasiPeak 1.0 s     9 kHz    NSLK8126 2008
                                  Average
```



MEASUREMENT RESULT: "3N005_fin"

5/8/2012 3:32PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.184605	44.90	11.2	64.3	19.4	QP	N	GND
0.254063	46.60	11.4	61.6	15.0	QP	N	GND
0.325410	43.50	11.6	59.6	16.1	QP	N	GND

MEASUREMENT RESULT: "3N005_fin2"

5/8/2012 3:32PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.184605	35.40	11.2	54.3	18.9	AV	N	GND
0.249042	32.60	11.4	51.8	19.2	AV	N	GND
0.315182	30.40	11.6	49.8	19.4	AV	N	GND

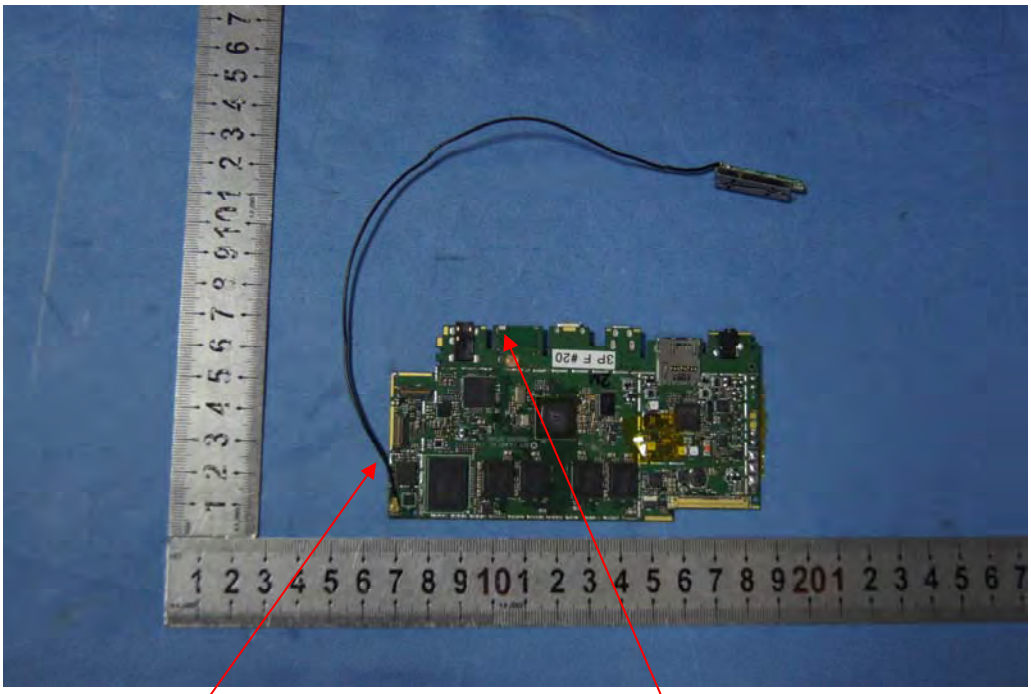
14. ANTENNA REQUIREMENT

14.1. The Requirement

According to Section 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.

14.2. Antenna Construction

Device is equipped with unique antenna, which isn't displaced by other antenna. Therefore, the equipment complies with the antenna requirement of Section 15.203.



GPS Antenna

Both Bluetooth and WLAN use the Antenna