APPLICATION CERTIFICATION
On Behalf of
Syntek Semiconductor Co., Ltd.

Syntek BlueW-2310 miniCard
Model No.: BlueW-2310 miniCard

FCC ID: V83BLUEW-2310M

Prepared for	:	Syntek Semiconductor Co., Ltd.
Address	:	10F, No. 1, Alley 30, Lane 358, Rueiguang Road, Neihu District, Taipei, Taiwan, R.O.C.
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
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Report Number	:	ATE20091643-1
Date of Test	:	August 19 - September 7, 2009
Date of Report	:	September 7, 2009

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Description Page

Test Report Certification

Applicant **:** Syntek Semiconductor Co., Ltd.

Manufacturer **:** Syntek Semiconductor Co., Ltd.

EUT Description **:** Syntek BlueW-2310 miniCard

(A) MODEL NO.: BlueW-2310 miniCard

(B) SERIAL NO.: N/A

(C) POWER SUPPLY: DC 3.3V

Measurement Procedure Used:

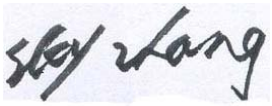
FCC Rules and Regulations Part 15 Subpart C Section 15.247
ANSI C63.4: 2003

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.

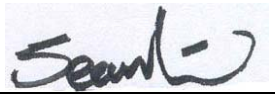
Date of Test : August 19 - September 7, 2009

Prepared by :



(Engineer)

Approved & Authorized Signer :



(Manager)

1. GENERAL INFORMATION

1.1.Description of Device (EUT)

EUT	:	Syntek BlueW-2310 miniCard
Model Number	:	BlueW-2310 miniCard
Frequency Band	:	2402MHz-2480MHz
Number of Channels	:	79
Antenna Gain	:	2.0dBi
Power Supply	:	DC 3.3V
Applicant	:	Syntek Semiconductor Co., Ltd.
Address	:	10F, No. 1, Alley 30, Lane 358, Rueiguang Road, Neihu District, Taipei, Taiwan, R.O.C.
Manufacturer	:	Syntek Semiconductor Co., Ltd.
Address	:	10F, No. 1, Alley 30, Lane 358, Rueiguang Road, Neihu District, Taipei, Taiwan, R.O.C.
Date of sample received	:	August 18, 2009
Date of Test	:	August 19 - September 7, 2009

1.2.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

1.3.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 until
EMI Test Receiver	Rohde&Schwarz	ESCS30	100307	03.28.2010
EMI Test Receiver	Rohde&Schwarz	ESPI3	101526/003	03.28.2010
Spectrum Analyzer	Agilent	E7405A	MY45115511	03.28.2010
Pre-Amplifier	Rohde&Schwarz	CBLU1183540-01	3791	03.30.2010
Loop Antenna	Schwarzbeck	FMZB1516	1516131	03.28.2010
Bilog Antenna	Schwarzbeck	VULB9163	9163-323	03.28.2010
Horn Antenna	Schwarzbeck	BBHA9120D	9120D-655	12.19.2009
Horn Antenna	Schwarzbeck	BBHA9170	9170-359	10.09.2009
LISN	Rohde&Schwarz	ESH3-Z5	100305	03.28.2010
LISN	Schwarzbeck	NSLK8126	8126431	03.28.2010

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

3.2.Configuration and peripherals

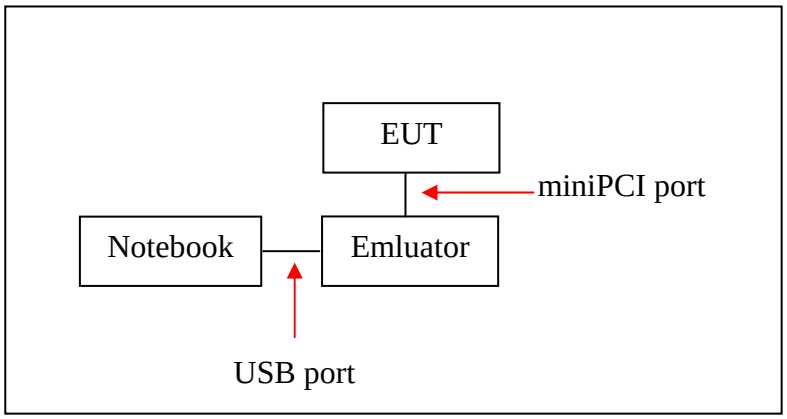


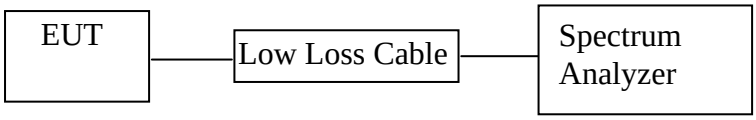
Figure 1 Setup: Transmitting mode

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: Syntek BlueW-2310 miniCard)

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.Syntek BlueW-2310 miniCard (EUT)

Model Number	**:**	BlueW-2310 miniCard
Serial Number	**:**	N/A
Manufacturer	**:**	Syntek Semiconductor Co., 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.

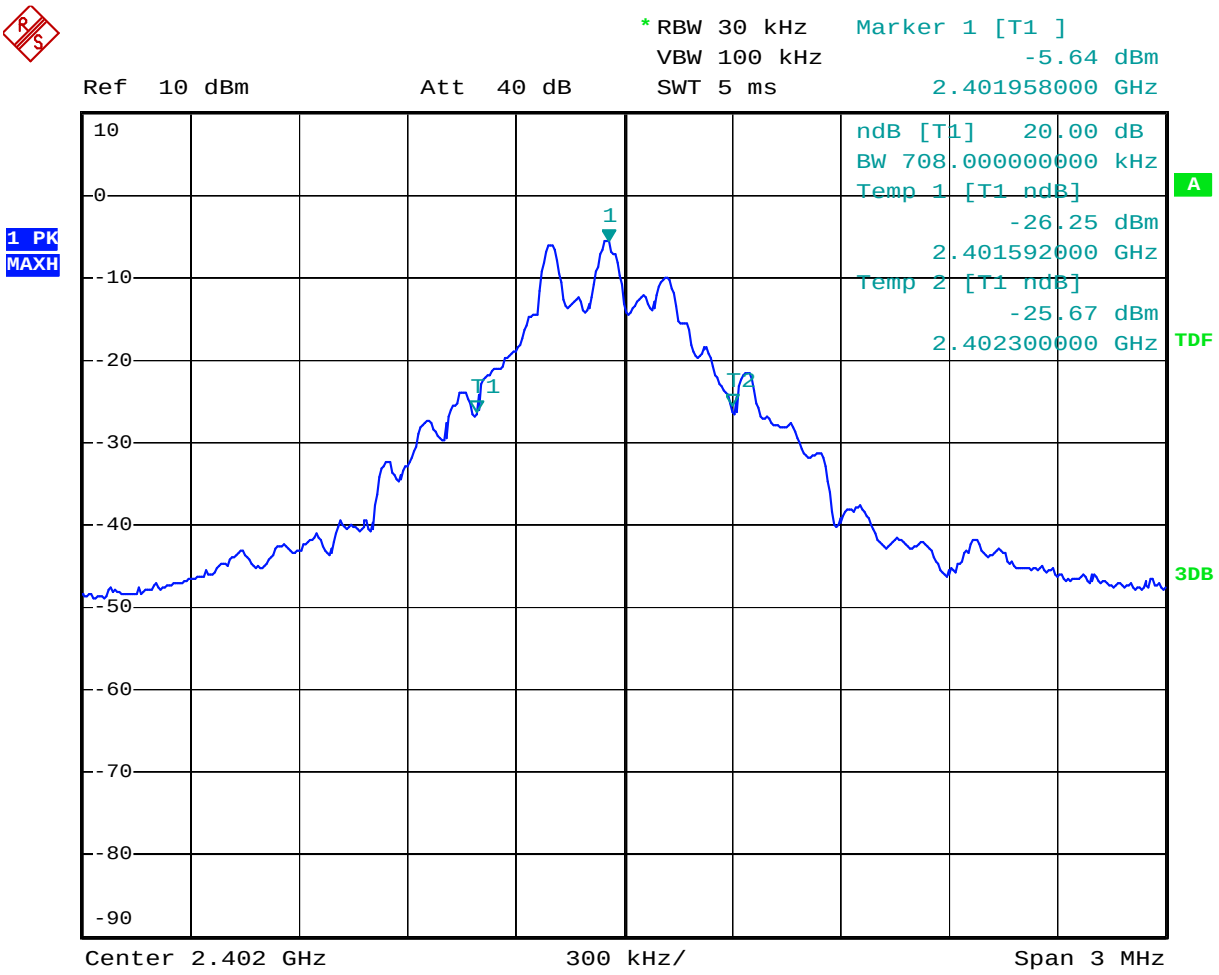
5.6. Test Result

PASS.

Date of Test:	August 20, 2009	Temperature:	25°C
EUT:	Syntek BlueW-2310 miniCard	Humidity:	50%
Model No.:	BlueW-2310 miniCard	Power Supply:	DC 3.3V
Test Mode:	TX	Test Engineer:	Joe

Channel	Frequency (MHz)	20dB Bandwidth (MHz)	Limit (MHz)
Low	2402	0.708	---
Middle	2441	0.714	---
High	2480	0.714	---

The spectrum analyzer plots are attached as below.



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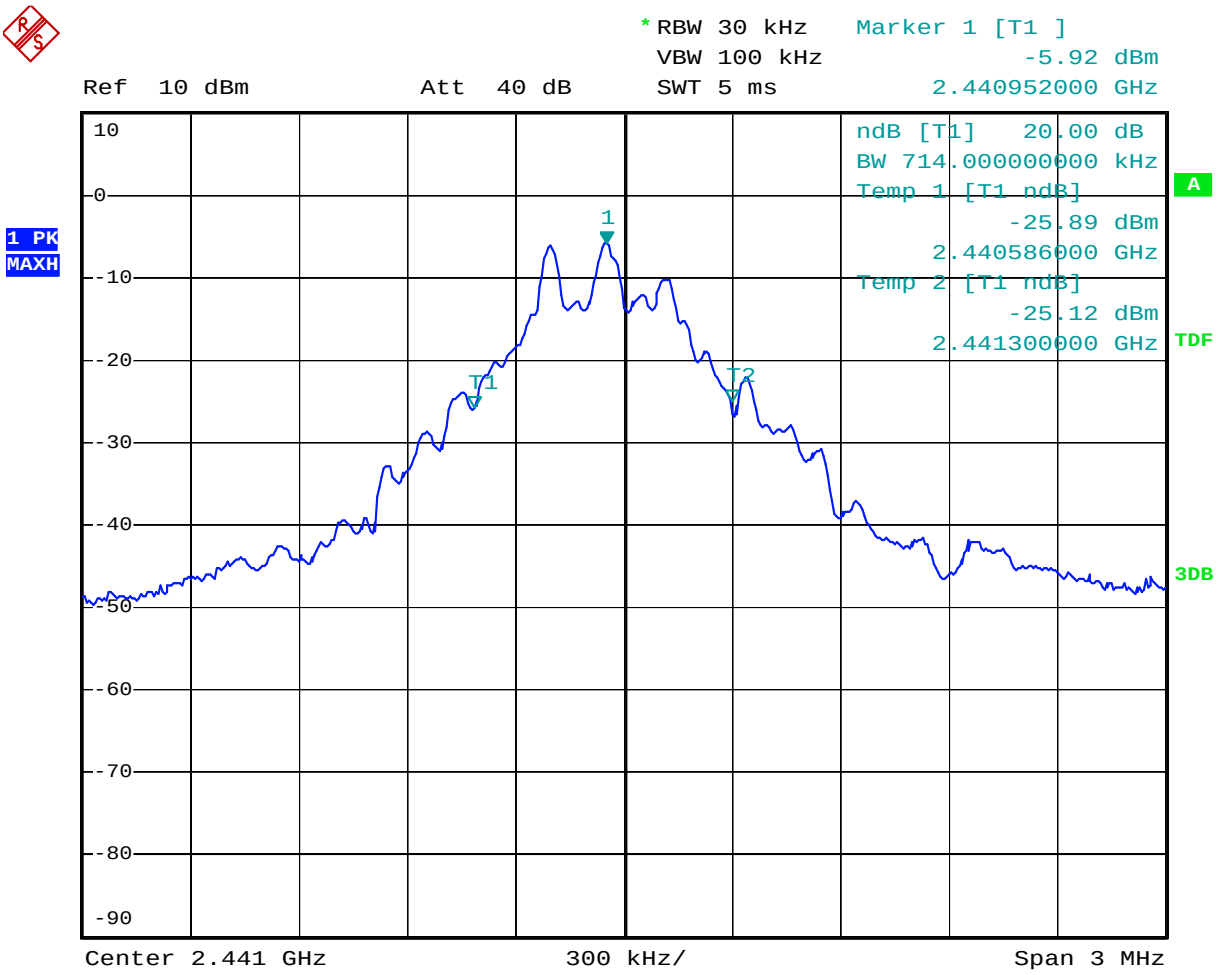

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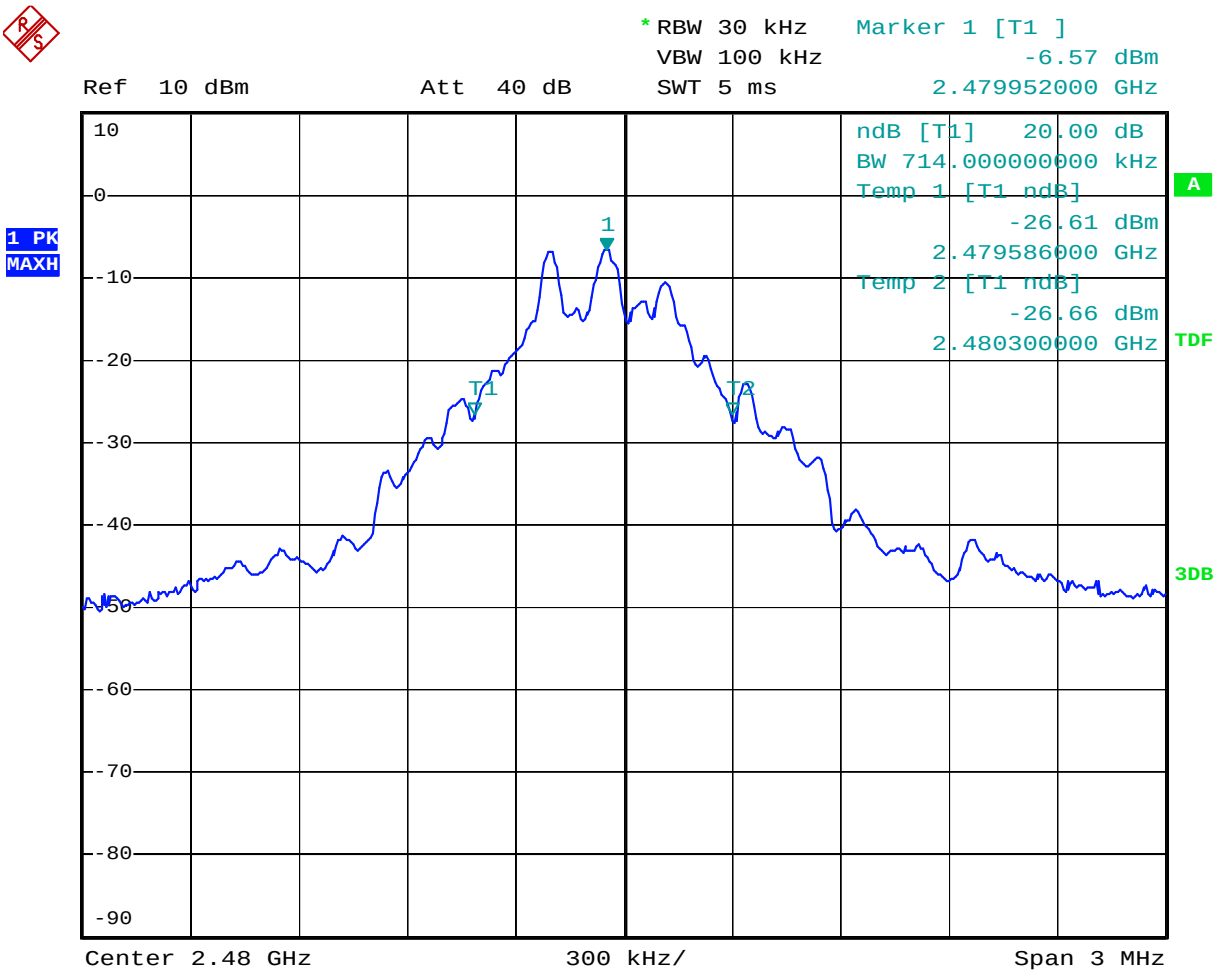

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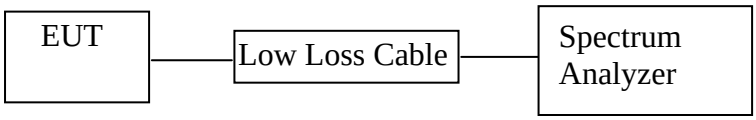
6. CARRIER FREQUENCY SEPARATION TEST

6.1.Block Diagram of Test Setup



(EUT: Syntek BlueW-2310 miniCard)

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.Syntek BlueW-2310 miniCard (EUT)

Model Number	**:**	BlueW-2310 miniCard
Serial Number	**:**	N/A
Manufacturer	**:**	Syntek Semiconductor Co., 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

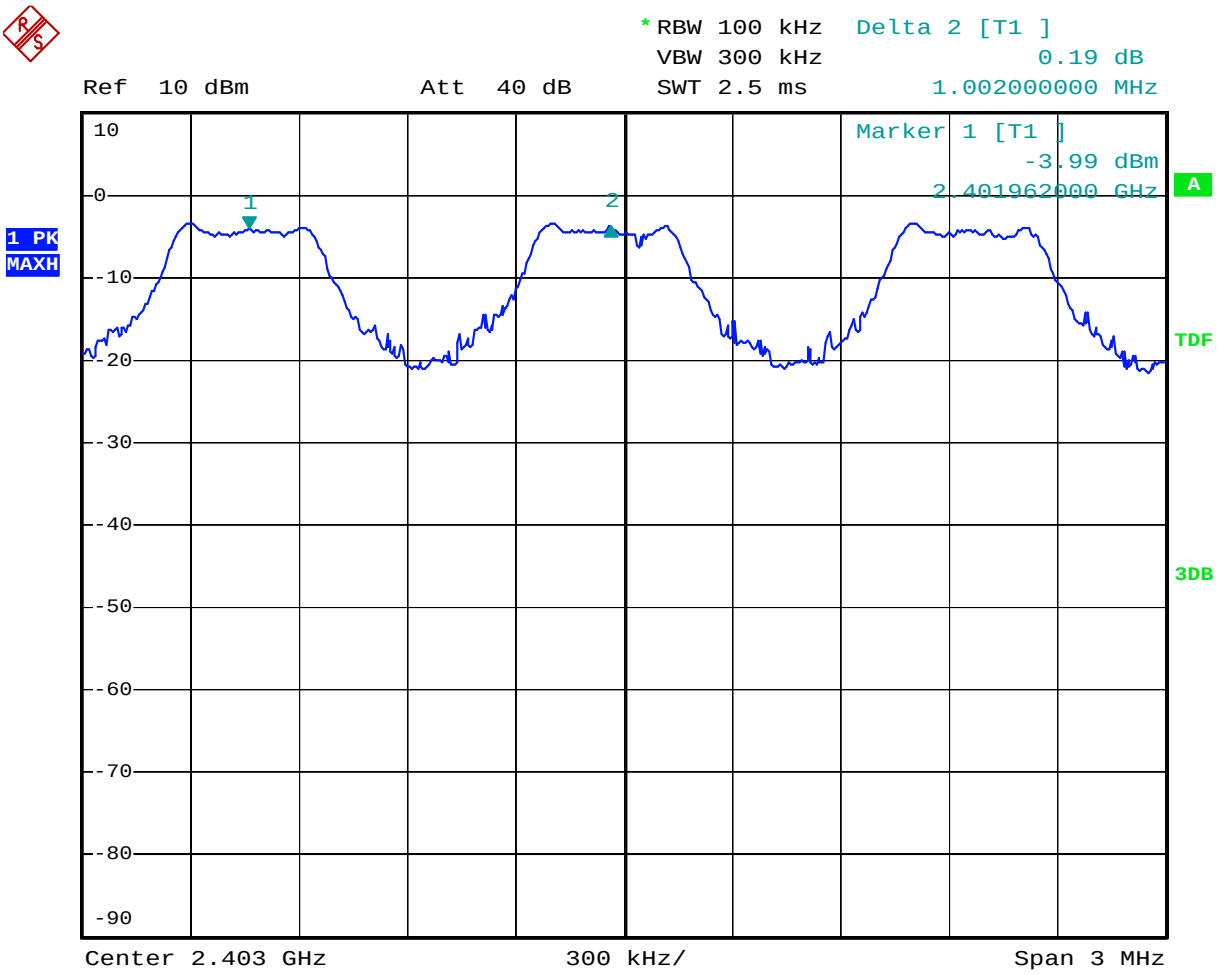
6.6.Test Result

PASS.

Date of Test:	August 20, 2009	Temperature:	25°C
EUT:	Syntek BlueW-2310 miniCard	Humidity:	50%
Model No.:	BlueW-2310 miniCard	Power Supply:	DC 3.3V
Test Mode:	Hopping	Test Engineer:	Joe

Channel	Channel Frequency (MHz)	Channel separation (MHz)	Limit
Low	2402	1.002	> the 20dB Bandwidth or 25kHz (whichever is greater)
Middle	2441	1.008	> the 20dB Bandwidth or 25kHz (whichever is greater)
High	2480	1.002	> the 20dB Bandwidth or 25kHz (whichever is greater)

The spectrum analyzer plots are attached as below.



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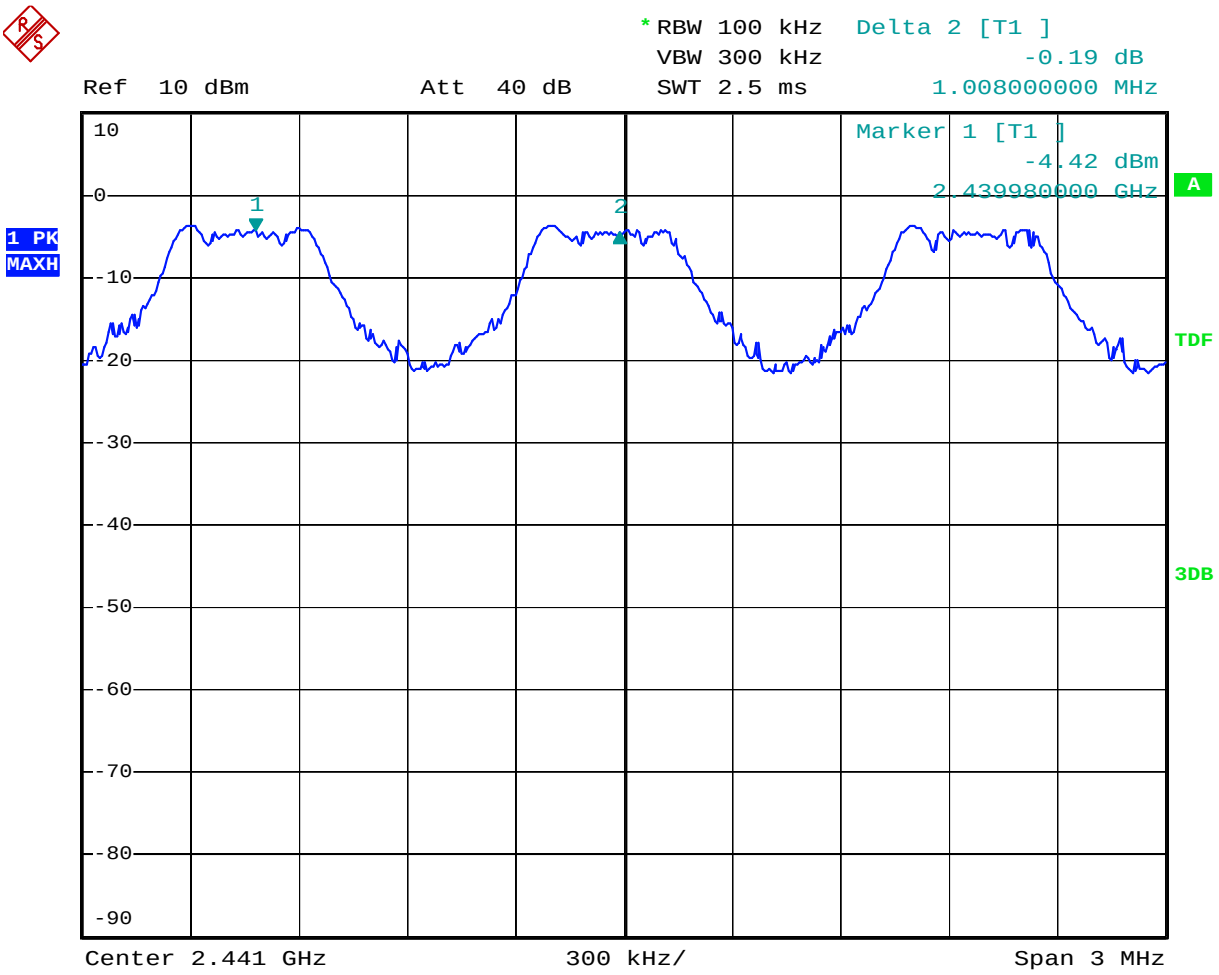

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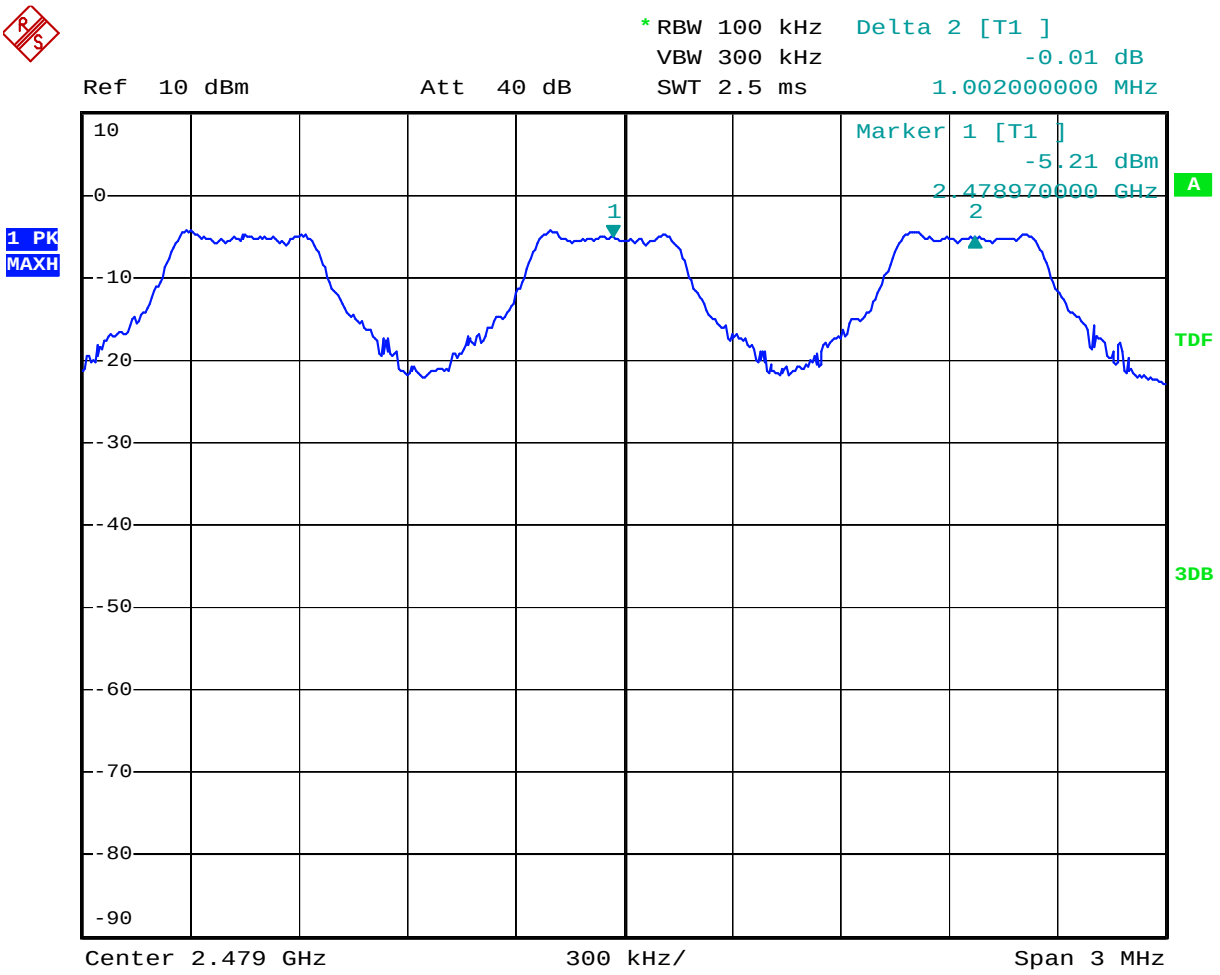

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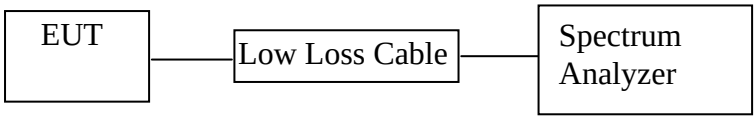
7. NUMBER OF HOPPING FREQUENCY TEST

7.1.Block Diagram of Test Setup



(EUT: Syntek BlueW-2310 miniCard)

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.Syntek BlueW-2310 miniCard (EUT)

Model Number	:	BlueW-2310 miniCard
Serial Number	:	N/A
Manufacturer	:	Syntek Semiconductor Co., 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.

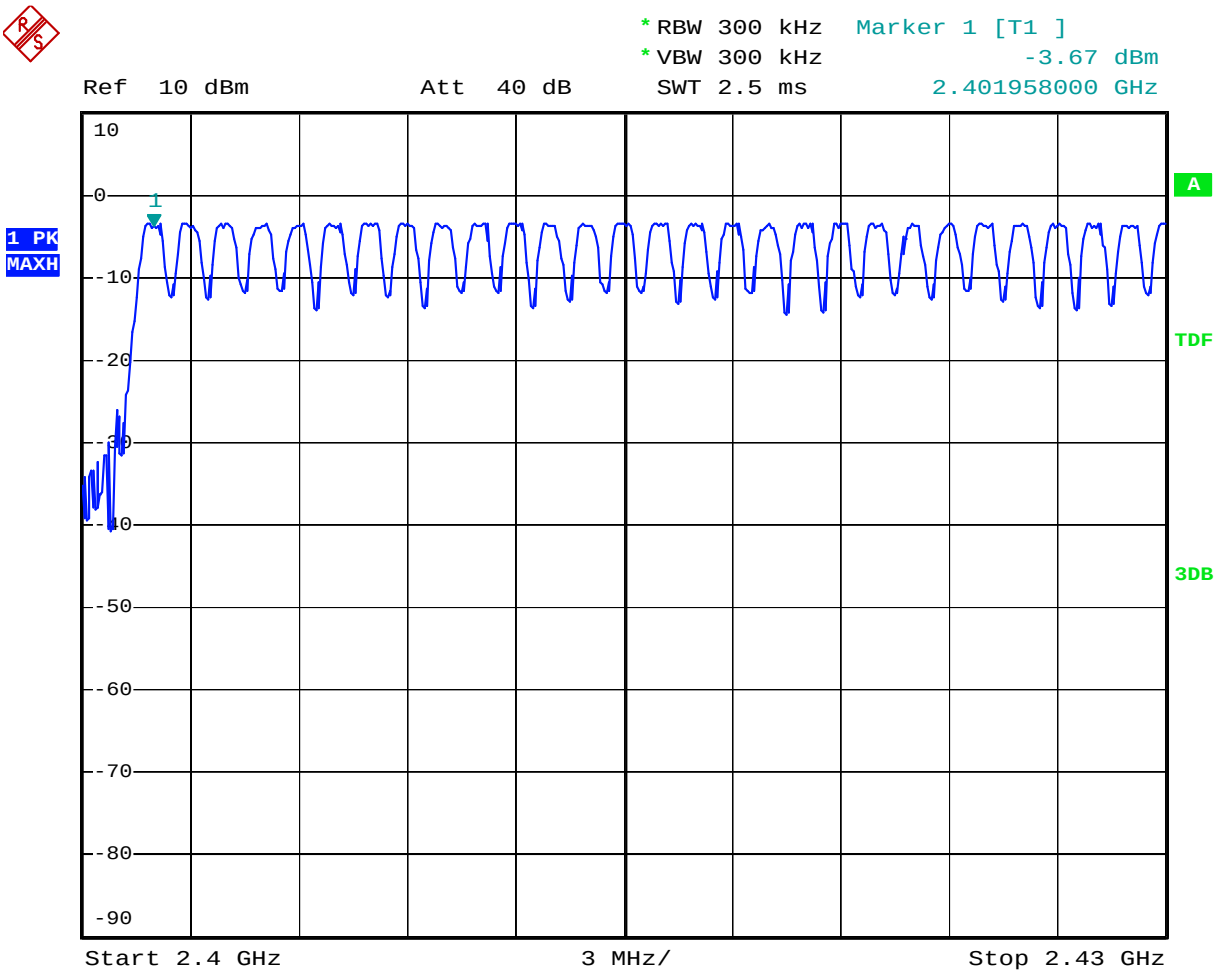
7.6. Test Result

PASS.

Date of Test:	August 20, 2009	Temperature:	25°C
EUT:	Syntek BlueW-2310 miniCard	Humidity:	50%
Model No.:	BlueW-2310 miniCard	Power Supply:	DC 3.3V
Test Mode:	Hopping	Test Engineer:	Joe

	Measurement result (CH)	Limit (CH)
Total number of hopping channel	79	>15

The spectrum analyzer plots are attached as below.



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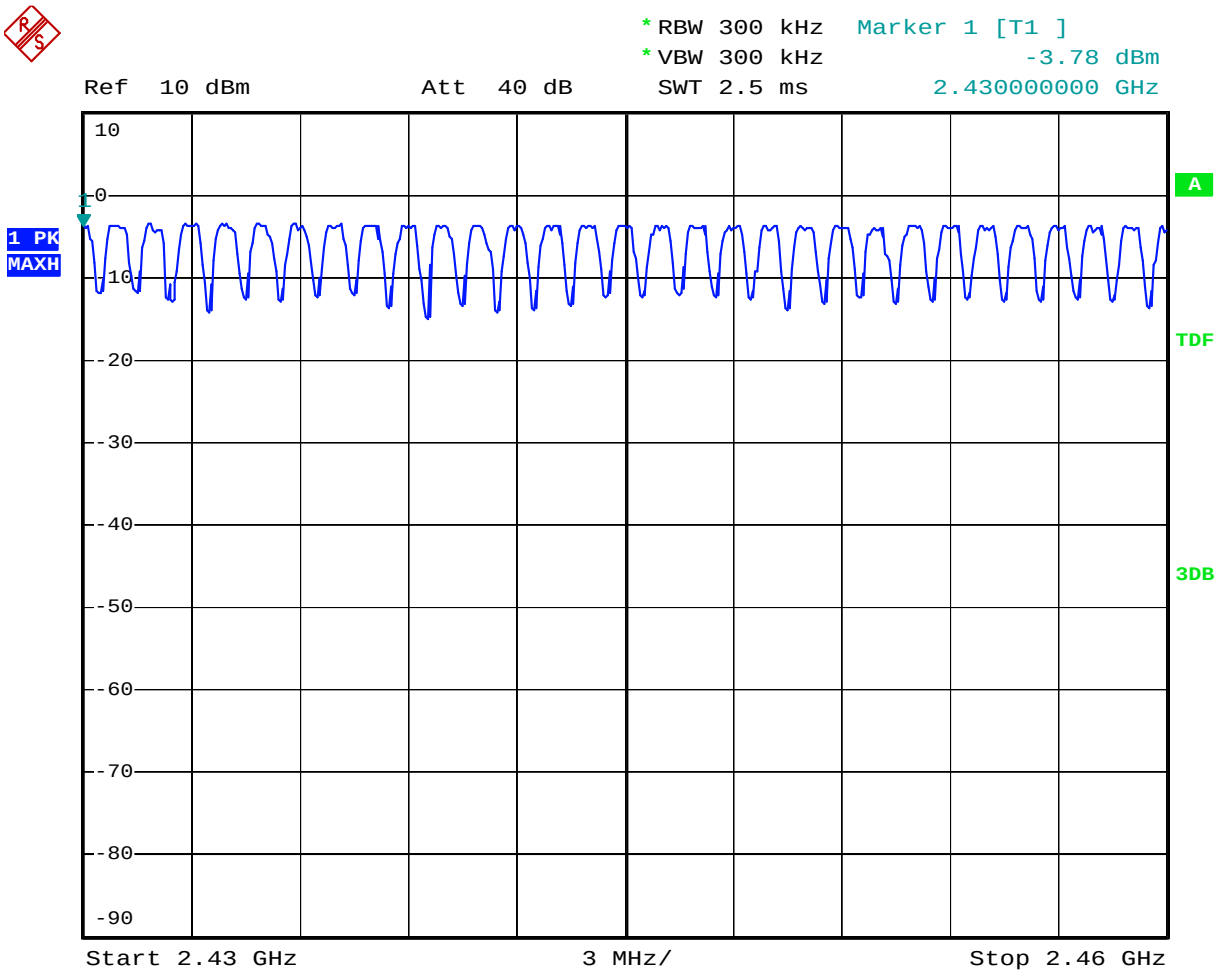

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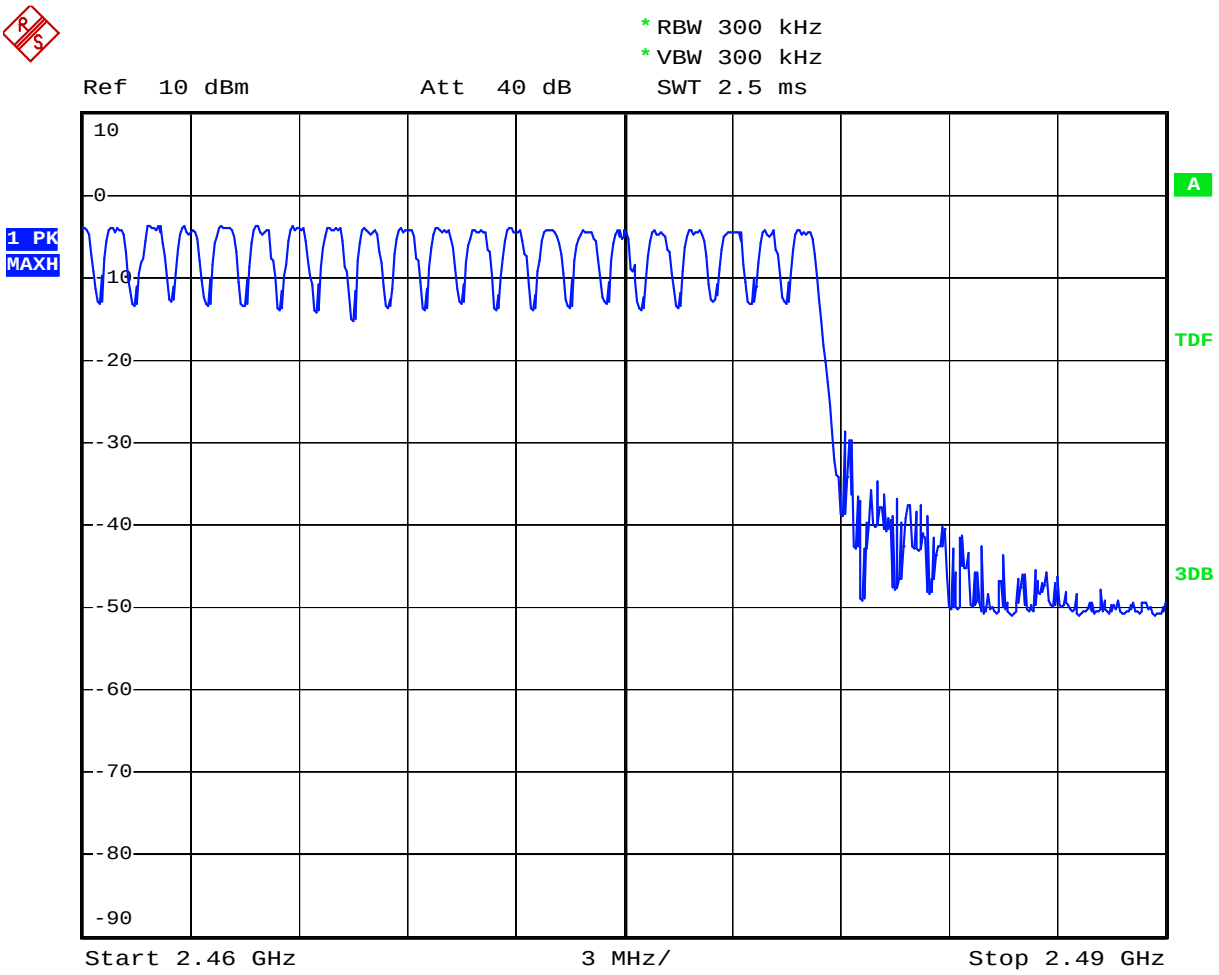

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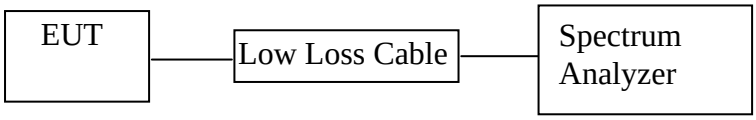
8. DWELL TIME TEST

8.1.Block Diagram of Test Setup



(EUT: Syntek BlueW-2310 miniCard)

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.Syntek BlueW-2310 miniCard (EUT)

Model Number	**:**	BlueW-2310 miniCard
Serial Number	**:**	N/A
Manufacturer	**:**	Syntek Semiconductor Co., 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=1s. Get the burst (in 1 sec.).

8.5.4. Set the spectrum analyzer as RBW=1MHz, VBW=3MHz, Span=0Hz, Adjust Sweep=2ms. Get the pulse time.

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

8.6. Test Result

PASS.

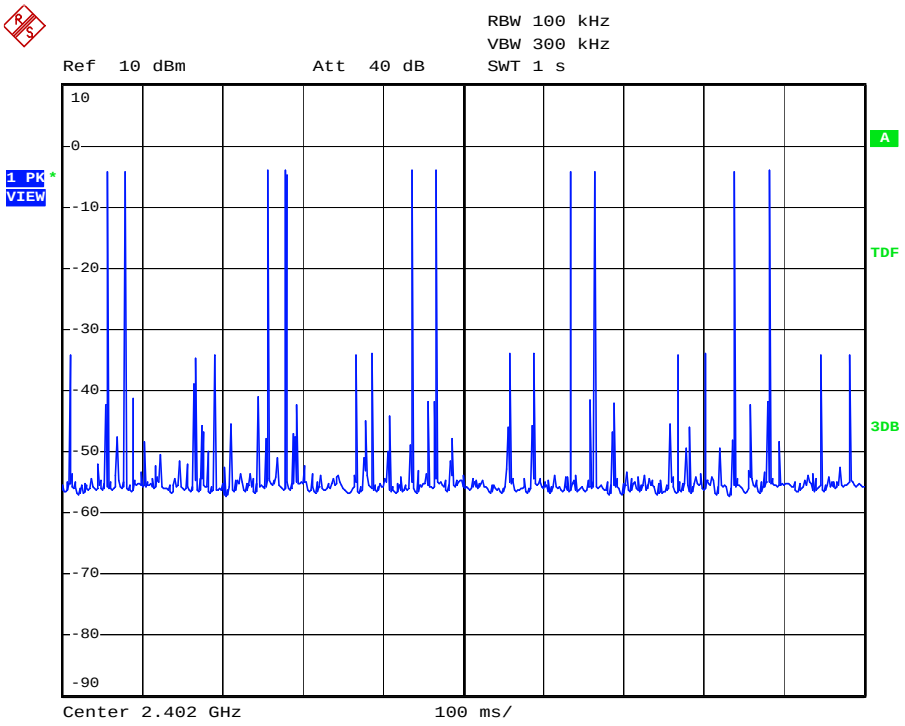
Date of Test:	September 7, 2009	Temperature:	25°C
EUT:	Syntek BlueW-2310 miniCard	Humidity:	50%
Model No.:	BlueW-2310 miniCard	Power Supply:	DC 3.3V
Test Mode:	Hopping	Test Engineer:	Joe

A period transmit time = 0.4 × 79 = 31.6

Dwell time = pulse time × burst (in 1 sec.)×31.6

Channel	Channel Frequency (MHz)	Pulse Time (ms)	Burst (in 1 sec.)	Dwell Time (ms)	Limit (ms)
Low	2402	0.128	10	40.4	400
Middle	2441	0.128	10	40.4	400
High	2480	0.128	10	40.4	400

The spectrum analyzer plots are attached as below.



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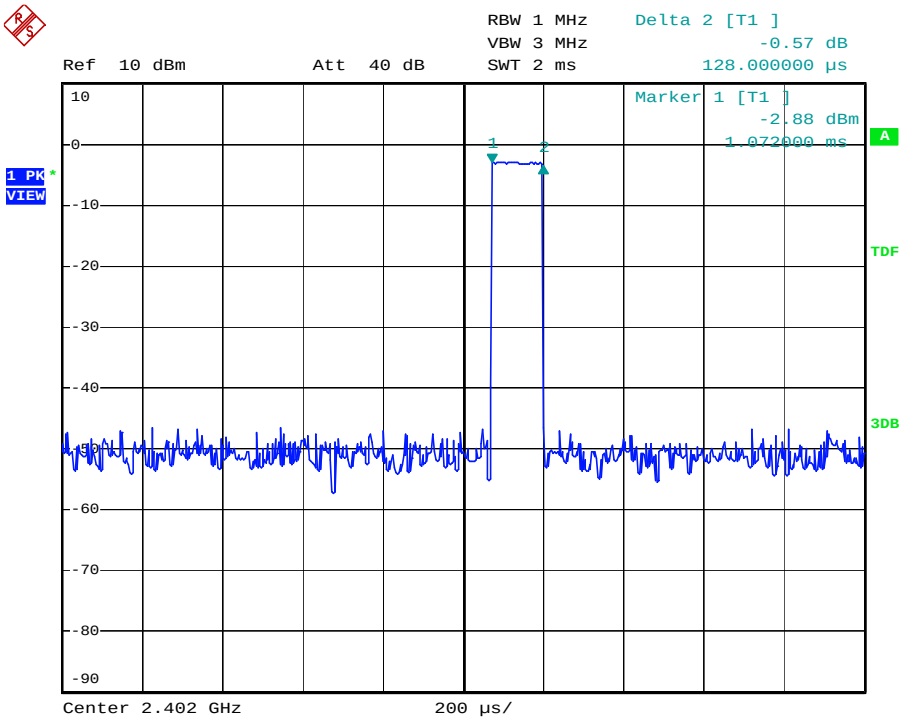

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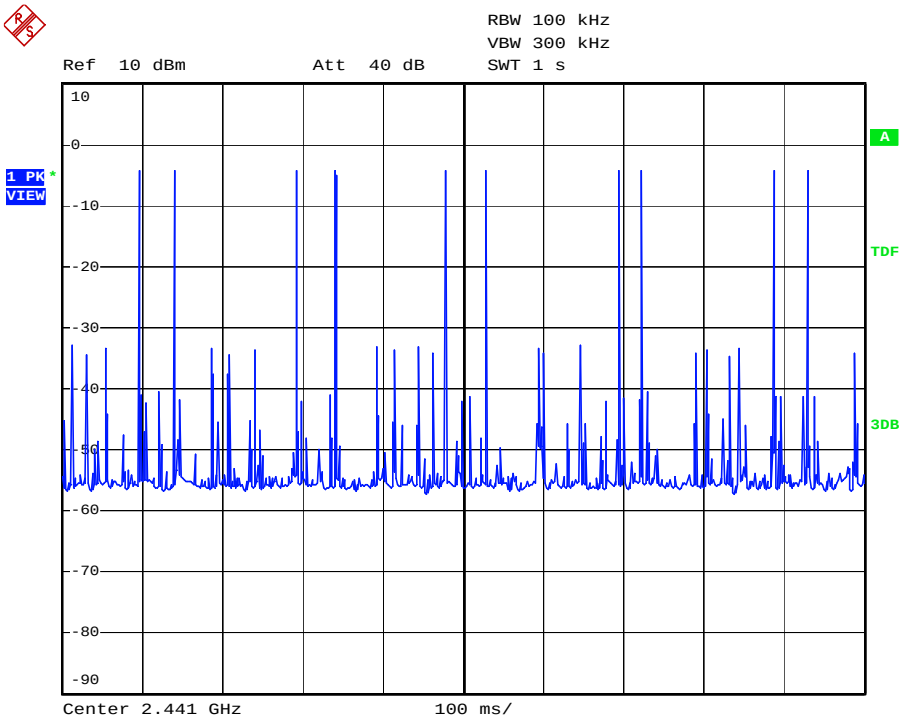

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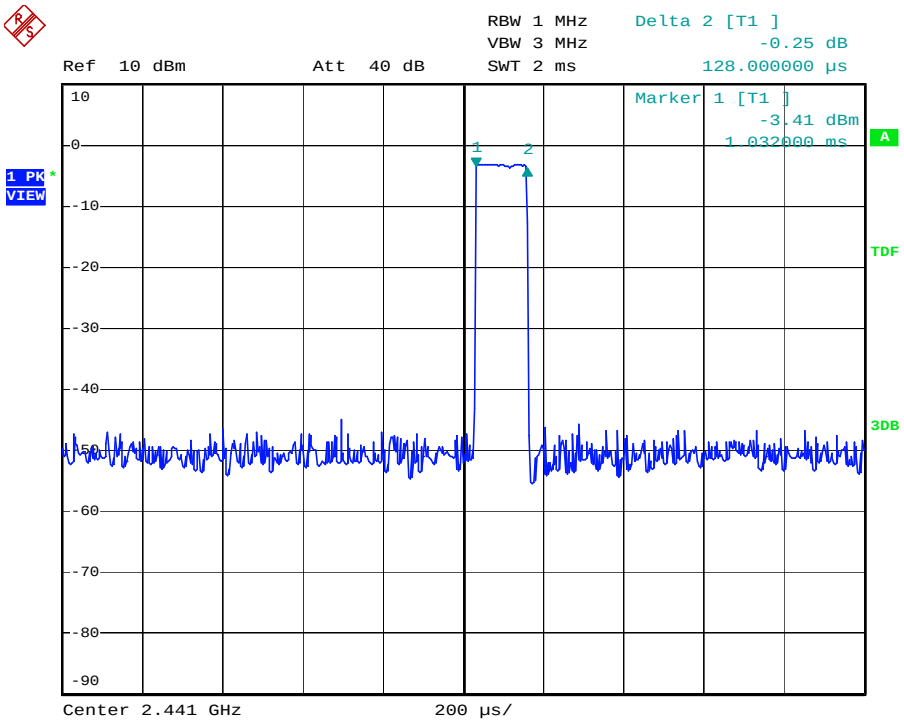

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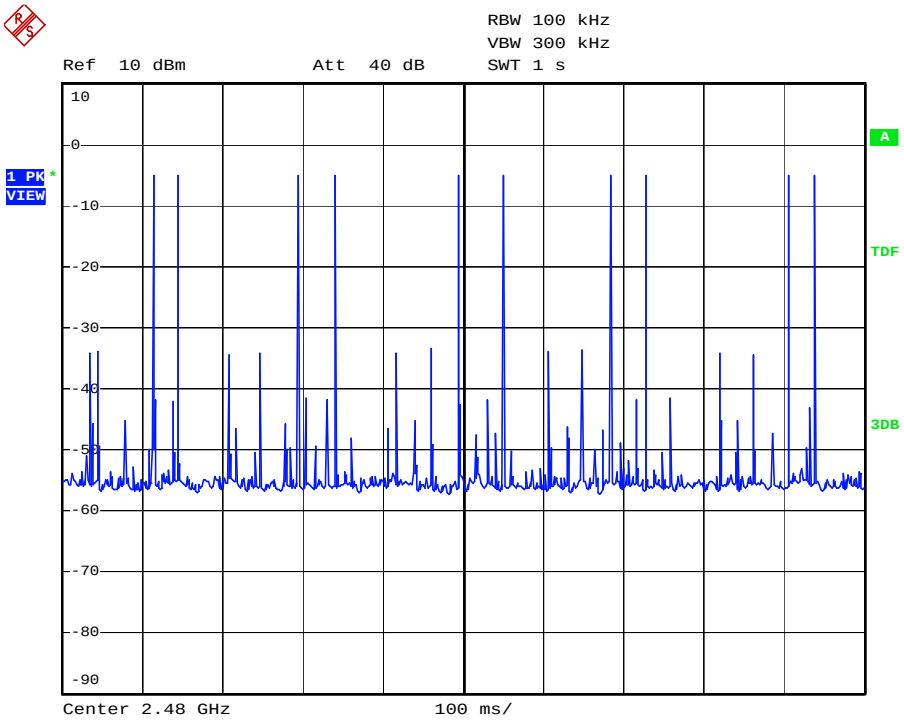

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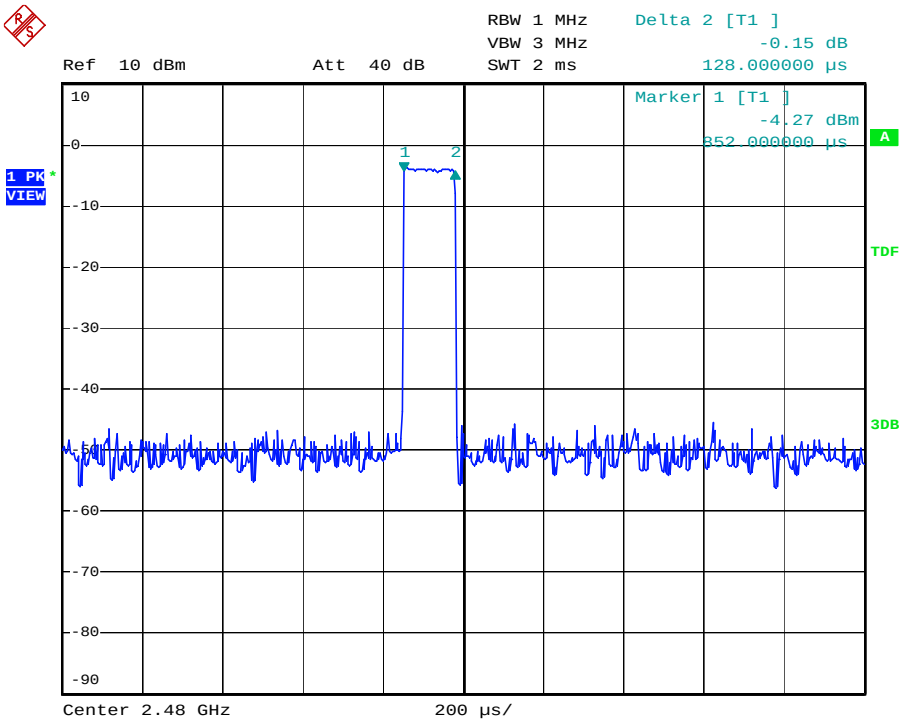

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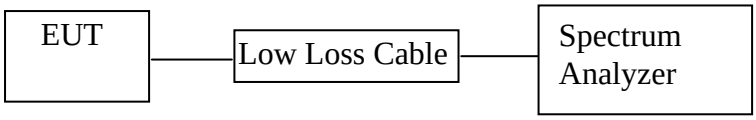
9. MAXIMUM PEAK OUTPUT POWER TEST

9.1.Block Diagram of Test Setup



(EUT: Syntek BlueW-2310 miniCard)

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.Syntek BlueW-2310 miniCard (EUT)

Model Number	**:**	BlueW-2310 miniCard
Serial Number	**:**	N/A
Manufacturer	**:**	Syntek Semiconductor Co., 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.

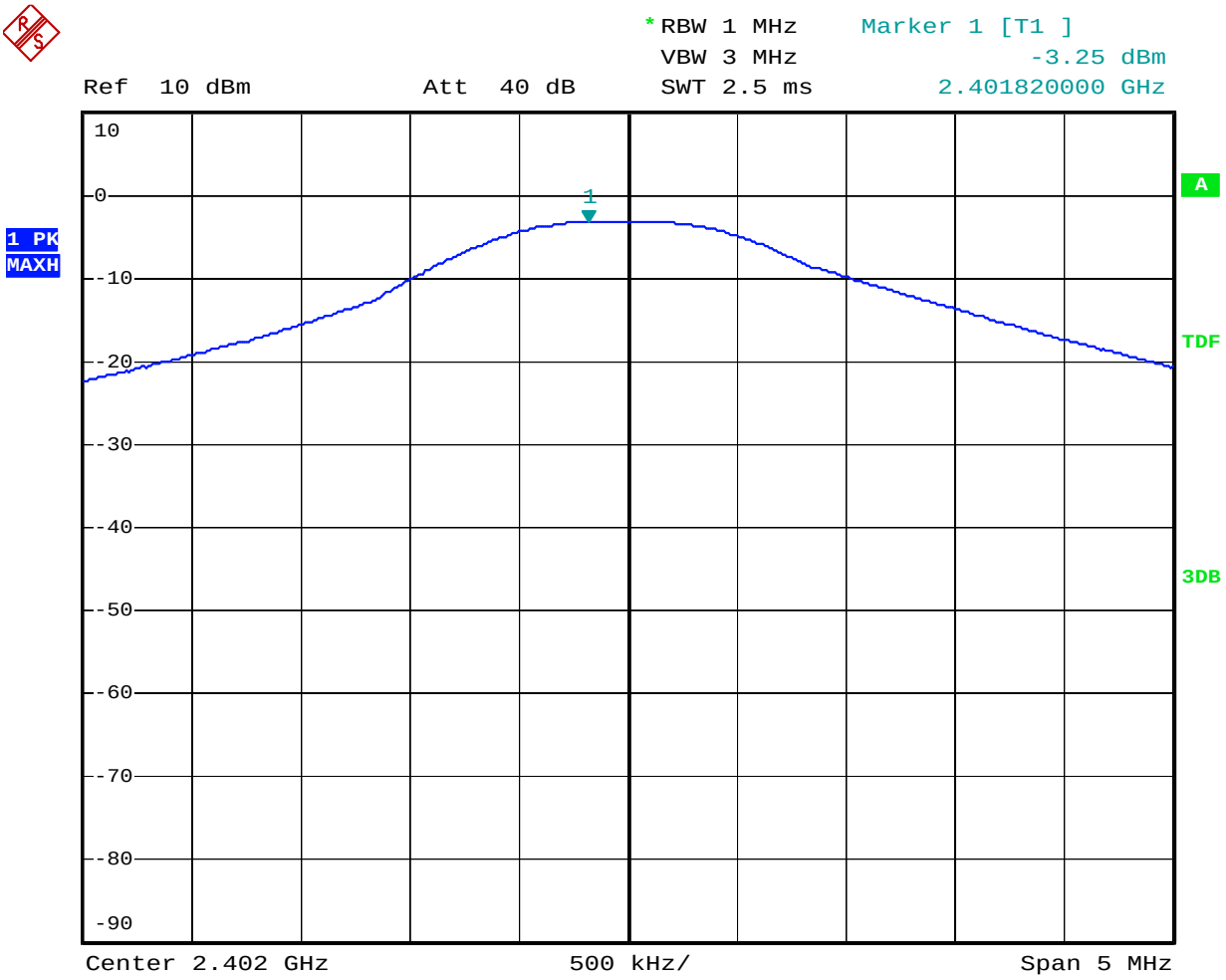
9.6. Test Result

PASS.

Date of Test:	August 20, 2009	Temperature:	25°C
EUT:	Syntek BlueW-2310 miniCard	Humidity:	50%
Model No.:	BlueW-2310 miniCard	Power Supply:	DC 3.3V
Test Mode:	TX	Test Engineer:	Joe

Channel	Frequency (MHz)	Peak Output Power (dBm)	Peak Output Power (mW)	Limits dBm / W
Low	2402	-3.25	0.473	30 dBm / 1 W
Middle	2441	-3.41	0.456	30 dBm / 1 W
High	2480	-4.05	0.394	30 dBm / 1 W

The spectrum analyzer plots are attached as below.



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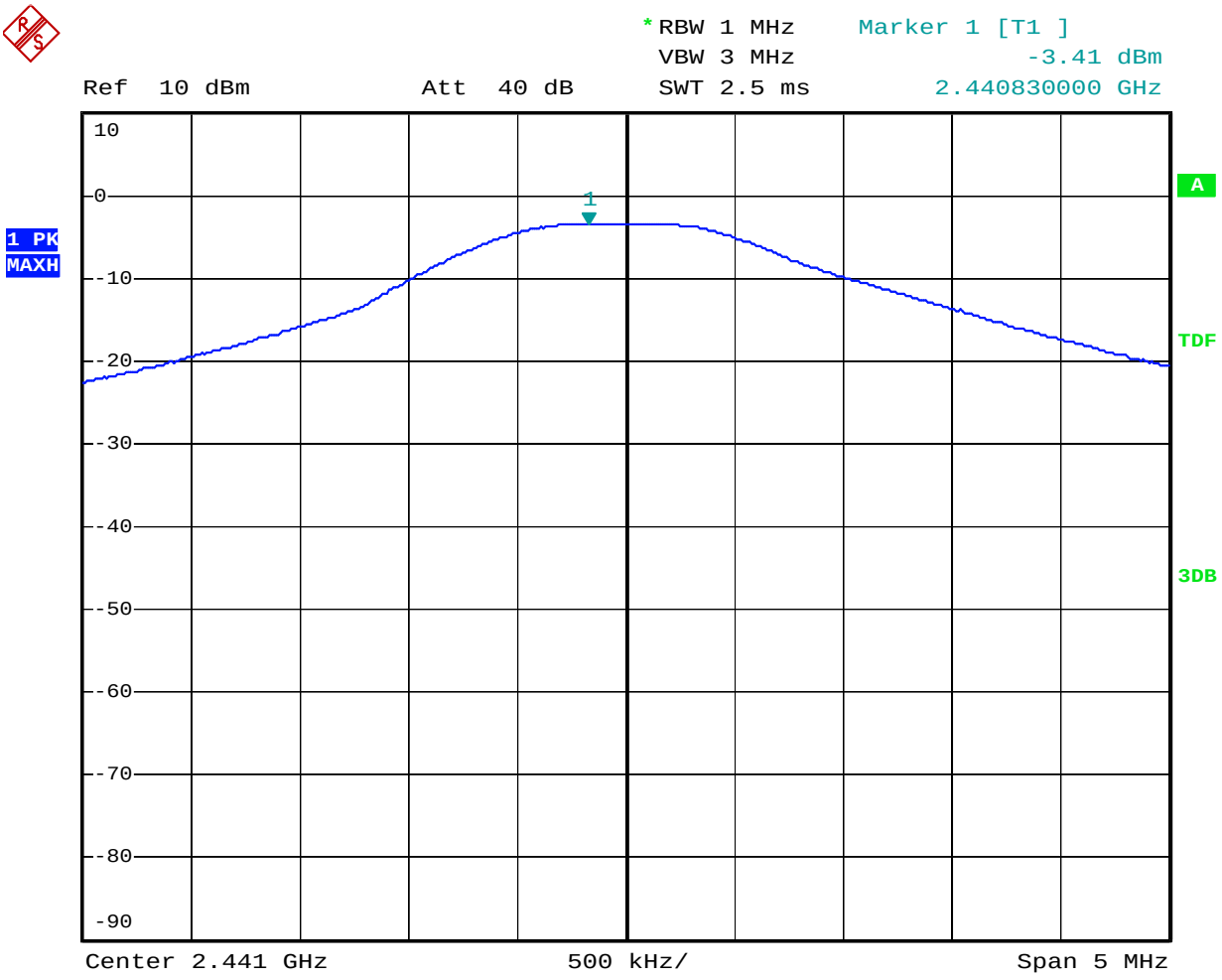
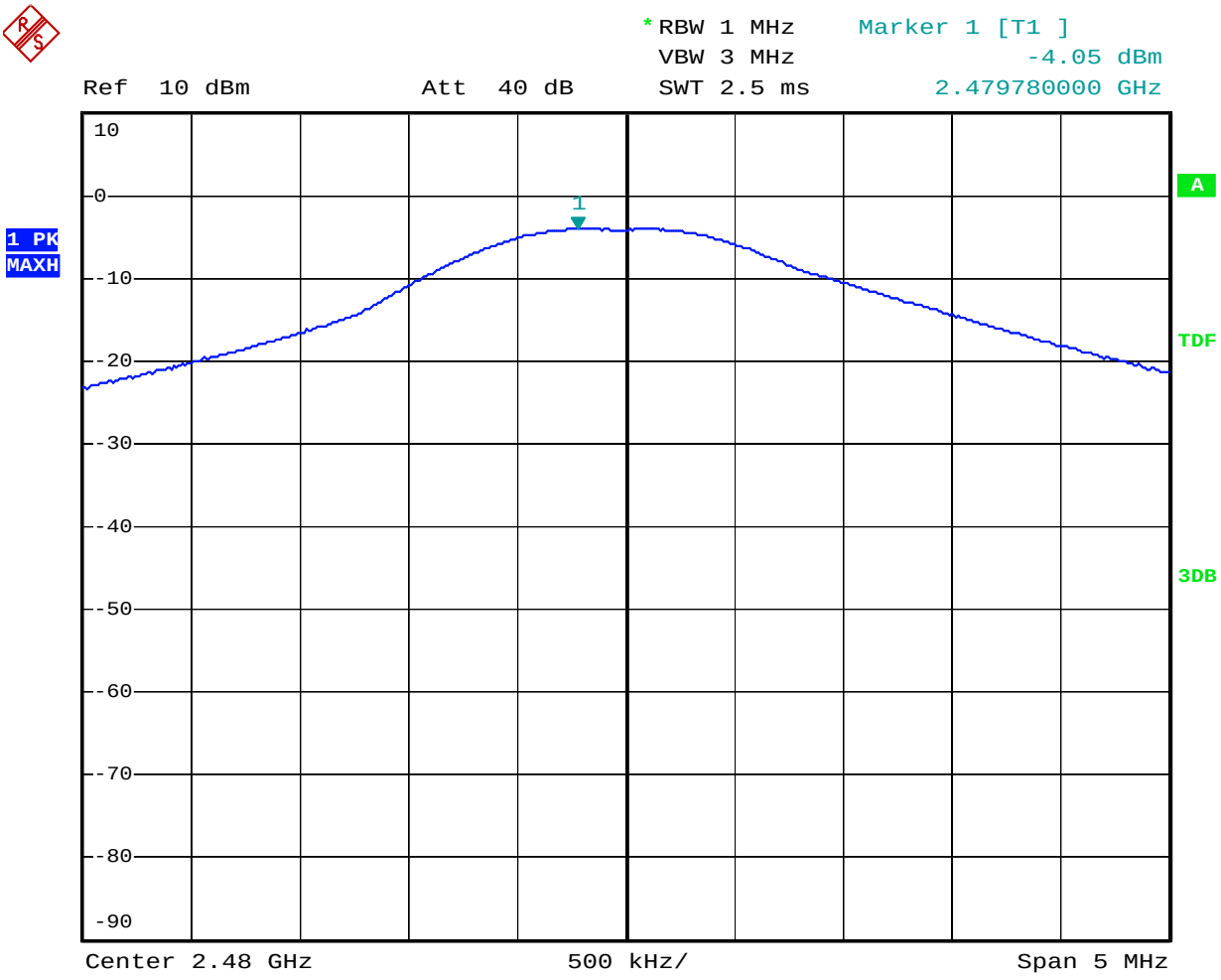


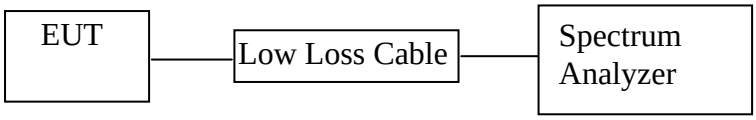
Date: 20.AUG.2009 10:39:35



Date: 20.AUG.2009 10:40:57

10. BAND EDGE COMPLIANCE TEST

10.1. Block Diagram of Test Setup



(EUT: Syntek BlueW-2310 miniCard)

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. Syntek BlueW-2310 miniCard (EUT)

Model Number	:	BlueW-2310 miniCard
Serial Number	:	N/A
Manufacturer	:	Syntek Semiconductor Co., 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

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.

10.5.3.The band edges was measured and recorded.

10.6.Test Result

Pass

Date of Test:	August 20, 2009	Temperature:	25°C
EUT:	Syntek BlueW-2310 miniCard	Humidity:	50%
Model No.:	BlueW-2310 miniCard	Power Supply:	DC 3.3V
Test Mode:	TX (Hopping off)	Test Engineer:	Joe

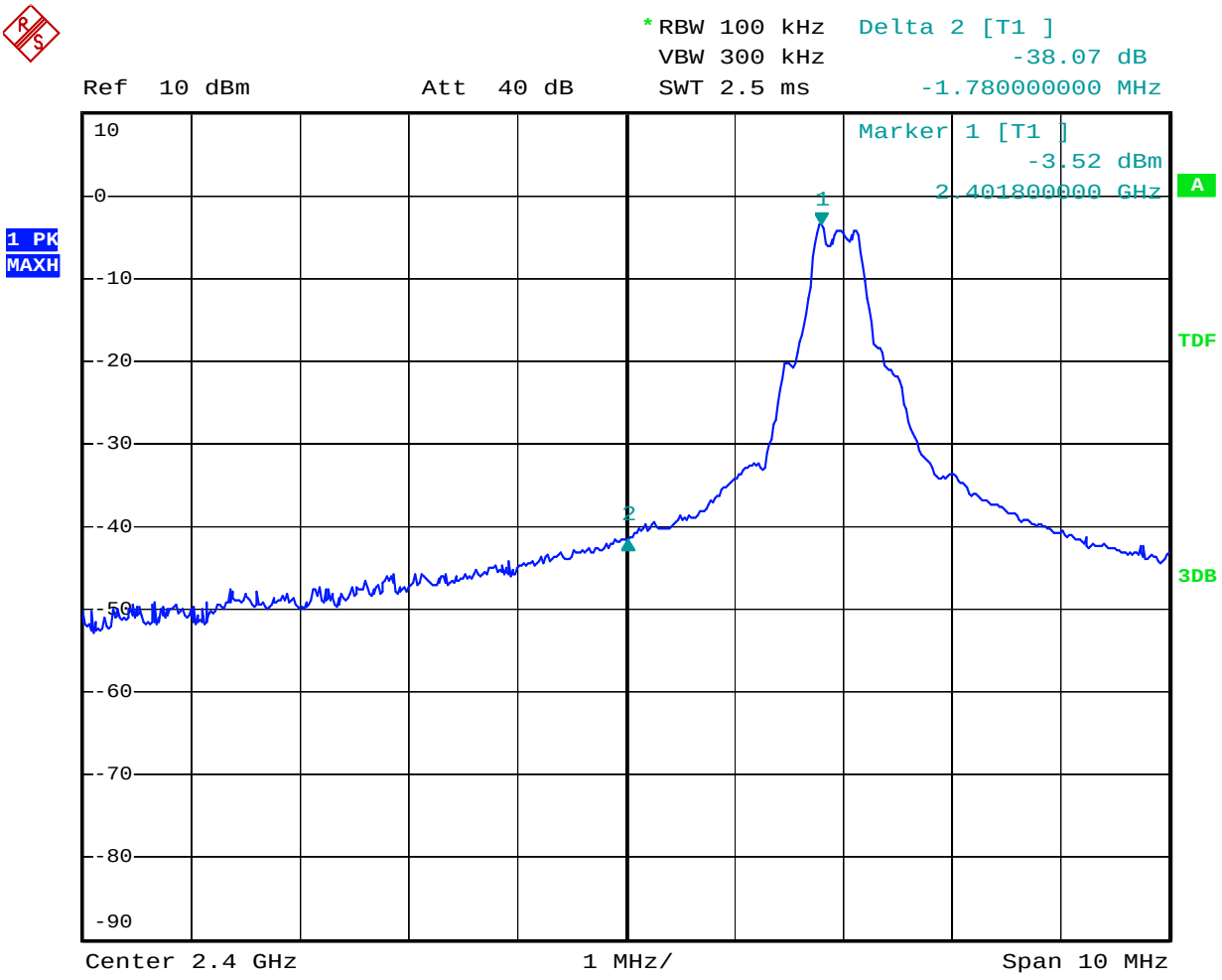
Conducted test

Frequency (MHz)	Result of Band Edge (dBc)	Limit of Band Edge (dBc)
2402	38.07	> 20dBc
2480	41.58	> 20dBc

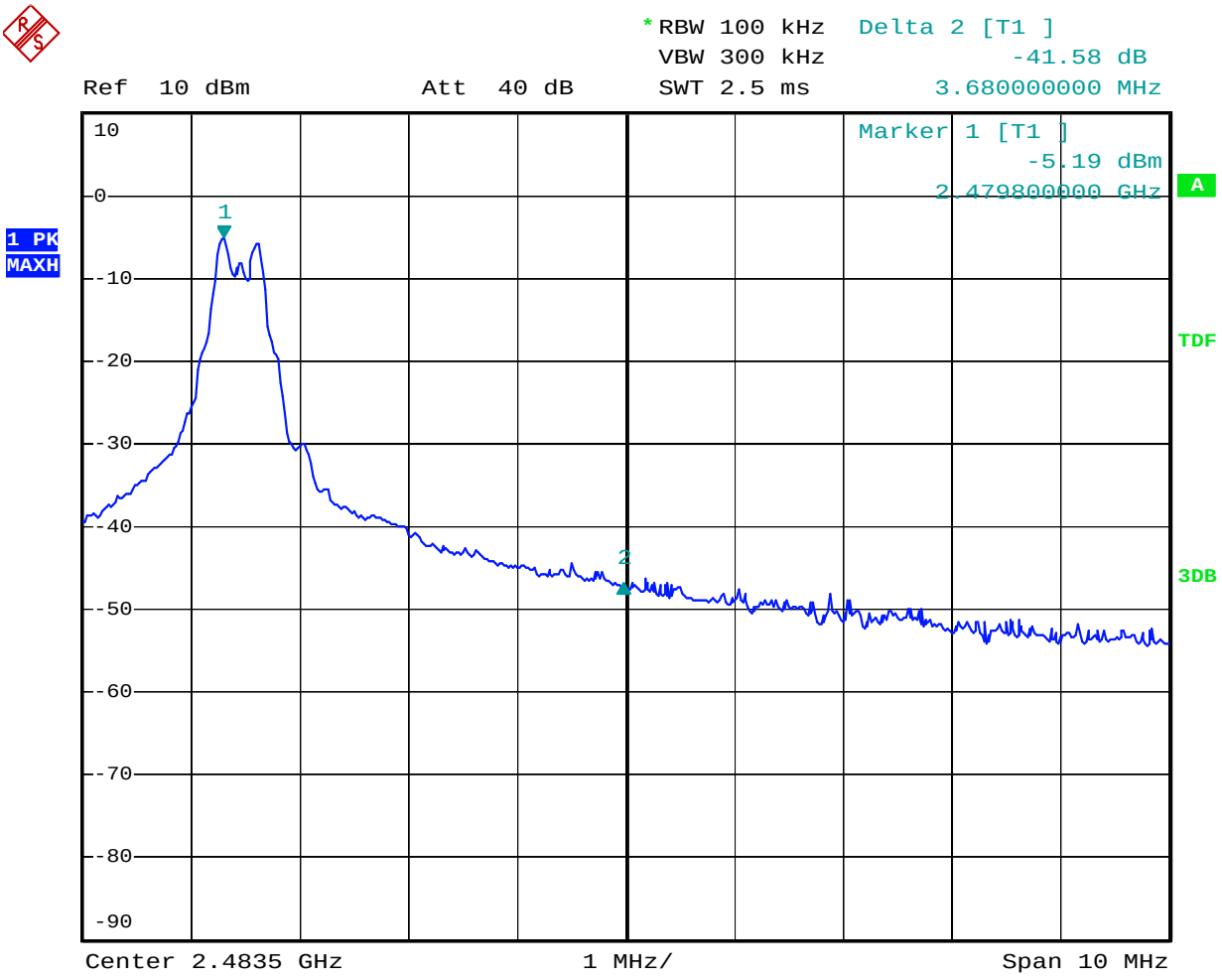
Date of Test:	August 20, 2009	Temperature:	25°C
EUT:	Syntek BlueW-2310 miniCard	Humidity:	50%
Model No.:	BlueW-2310 miniCard	Power Supply:	DC 3.3V
Test Mode:	TX (Hopping on)	Test Engineer:	Joe

Conducted test

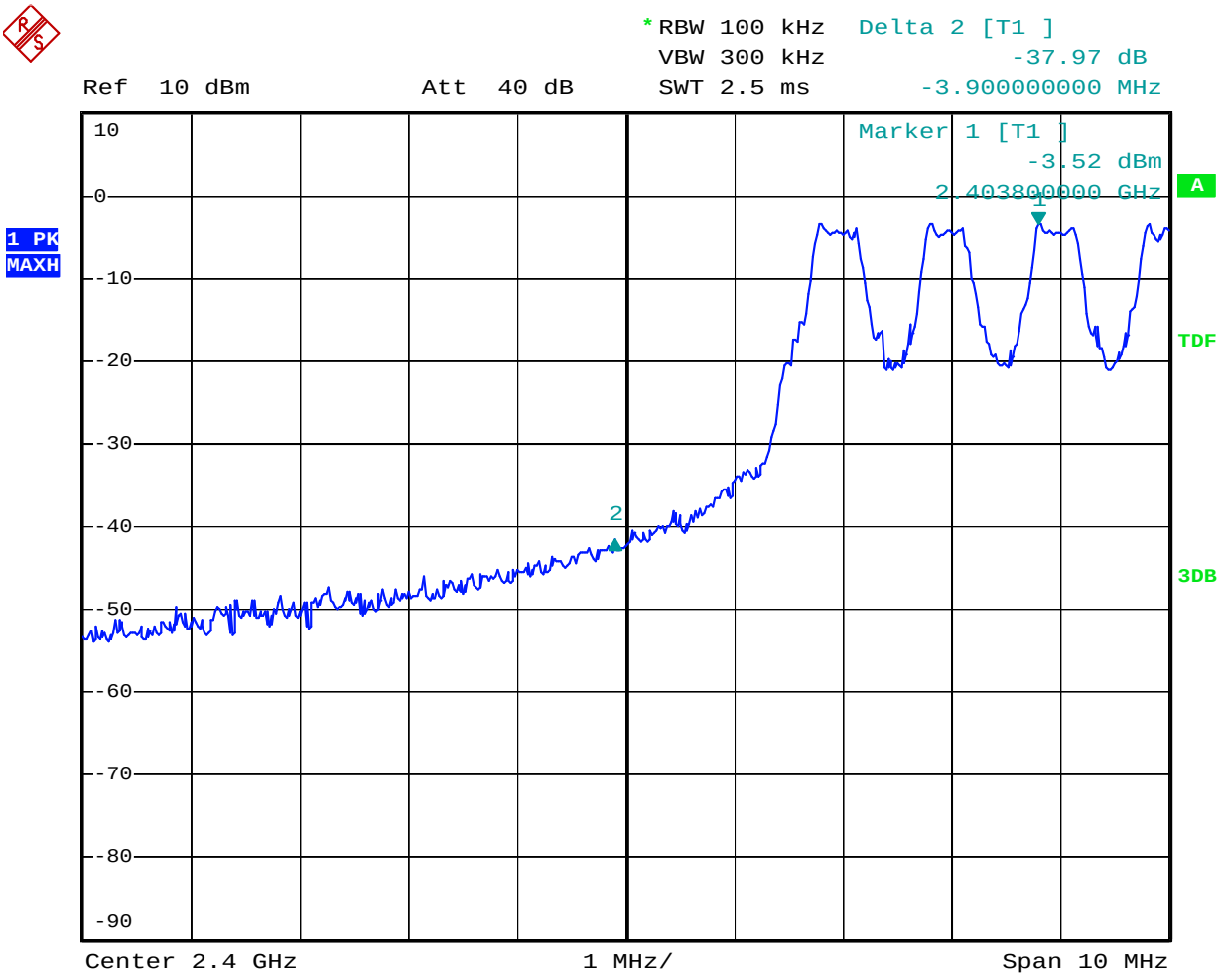
Frequency (MHz)	Result of Band Edge (dBc)	Limit of Band Edge (dBc)
2402	37.97	> 20dBc
2480	41.90	> 20dBc



Date: 20.AUG.2009 11:37:10



Date: 20.AUG.2009 15:04:57



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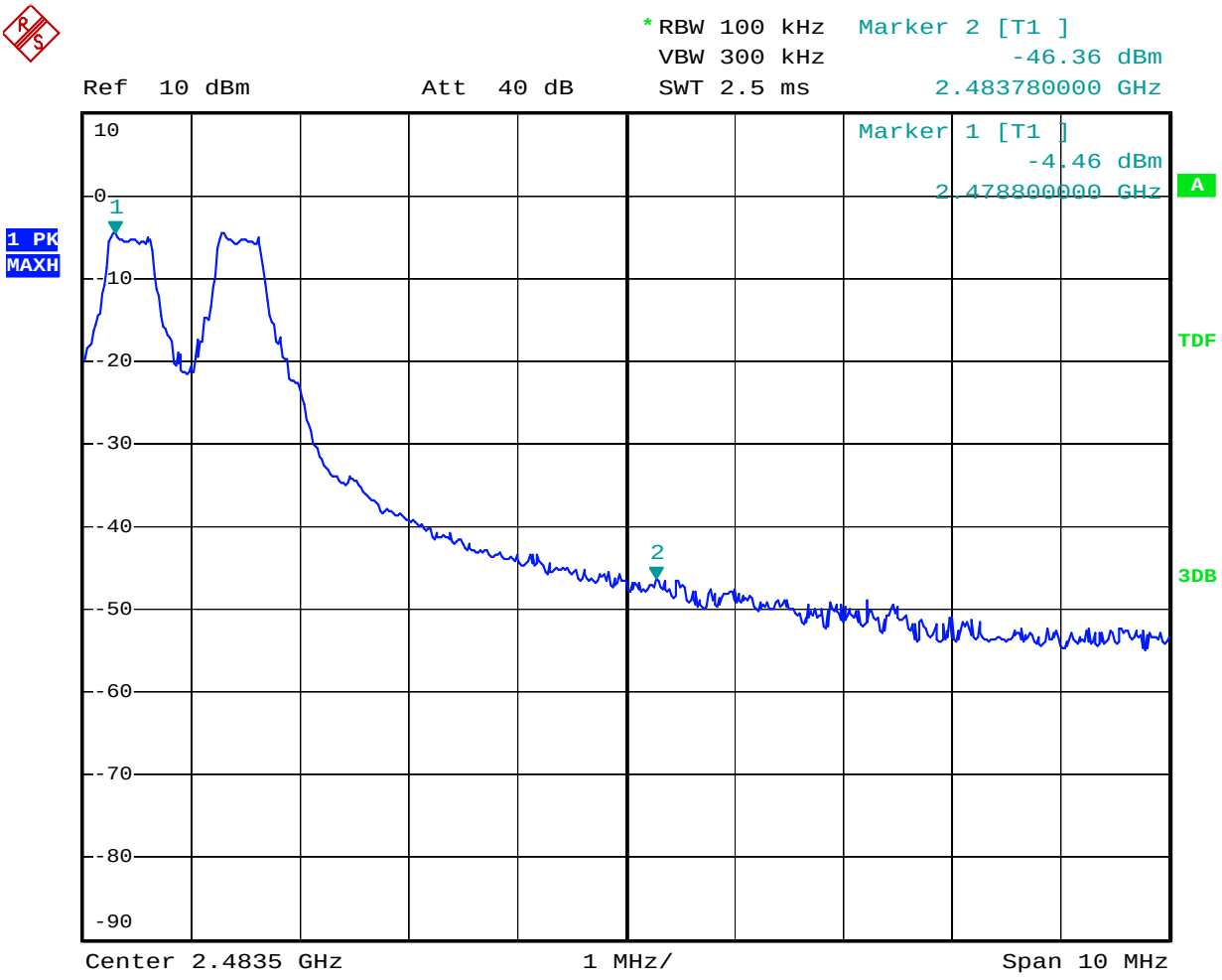
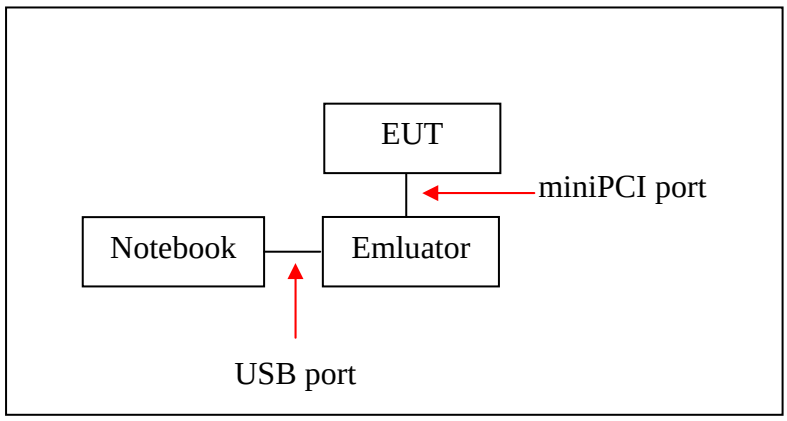


Date: 20.AUG.2009 11:47:14

11.RADIATED SPURIOUS EMISSION TEST

11.1.Block Diagram of Test Setup

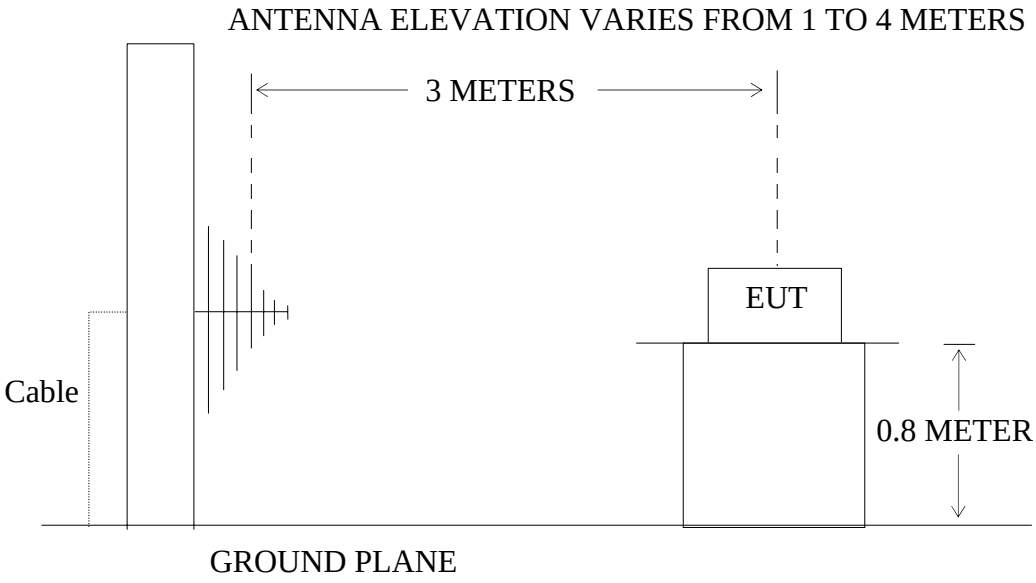
11.1.1.Block diagram of connection between the EUT and simulators



Setup: Transmitting mode

(EUT: Syntek BlueW-2310 miniCard)

11.1.2.Semi-Anechoic Chamber Test Setup Diagram



(EUT: Syntek BlueW-2310 miniCard)

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.Syntek BlueW-2310 miniCard (EUT)

Model Number	:	BlueW-2310 miniCard
Serial Number	:	N/A
Manufacturer	:	Syntek Semiconductor Co., 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 (R&S ESI26) is set at 120kHz in 30-1000MHz. and set at 1MHz in above 1000MHz.

The frequency range from 30MHz to 25000MHz 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:	August 27 – September 1, 2009	Temperature:	25°C
EUT:	Syntek BlueW-2310 miniCard	Humidity:	50%
Model No.:	BlueW-2310 miniCard	Power Supply:	DC 3.3V
Test Mode:	TX (2402MHz)	Test Engineer:	Joe

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
-	-	-	-	-	-	Vertical
-	-	-	-	-	-	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	
2400.00	40.12	45.87	-7.46	32.66	38.41	54	74	-21.34	-35.59	Vertical
2402.010	102.49	108.22	-7.45	95.04	100.77	-	-	-	-	Vertical
*4804.018	50.08	55.79	-0.30	49.78	55.49	54	74	-4.22	-18.51	Vertical
7206.026	40.61	46.47	2.97	43.58	49.44	54	74	-10.42	-24.56	Vertical
2400.00	40.07	45.73	-7.46	32.61	38.27	54	74	-21.39	-35.73	Horizontal
2402.010	103.31	109.08	-7.45	95.86	101.63	-	-	-	-	Horizontal
*4804.018	50.27	56.02	-0.30	49.97	55.72	54	74	-4.03	-18.28	Horizontal
7206.026	39.21	44.98	2.97	42.18	47.95	54	74	-11.82	-26.05	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:	August 27 – September 1, 2009	Temperature:	25°C
EUT:	Syntek BlueW-2310 miniCard	Humidity:	50%
Model No.:	BlueW-2310 miniCard	Power Supply:	DC 3.3V
Test Mode:	TX (2441MHz)	Test Engineer:	Joe

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	
-	-	-	-	-	-	Vertical
-	-	-	-	-	-	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	
2441.011	103.58	109.31	-7.35	96.23	101.96	-	-	-	-	Vertical
*4882.020	45.36	51.05	0.14	45.50	51.19	54	74	-8.50	-22.81	Vertical
2441.011	104.04	109.73	-7.35	96.69	102.38	-	-	-	-	Horizontal
*4882.020	48.16	53.82	0.14	48.30	53.96	54	74	-5.70	-20.04	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:	August 27 – September 1, 2009	Temperature:	25°C
EUT:	Syntek BlueW-2310 miniCard	Humidity:	50%
Model No.:	BlueW-2310 miniCard	Power Supply:	DC 3.3V
Test Mode:	TX (2480MHz)	Test Engineer:	Joe

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	
-	-	-	-	-	-	Vertical
-	-	-	-	-	-	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	
2480.010	104.32	110.04	-7.37	96.95	102.67	-	-	-	-	Vertical
2483.500	39.15	44.84	-7.37	31.78	37.47	54	74	-22.22	-36.53	Vertical
*4960.019	48.39	54.11	0.52	48.91	54.63	54	74	-5.09	-19.37	Vertical
*7440.027	41.80	47.52	3.69	45.49	51.21	54	74	-8.51	-22.79	Vertical
2480.010	103.57	109.30	-7.37	96.20	101.93	-	-	-	-	Horizontal
2483.500	39.02	44.69	-7.37	31.65	37.32	54	74	-22.35	-36.68	Horizontal
*4960.019	48.11	53.85	0.52	48.63	54.37	54	74	-5.37	-19.63	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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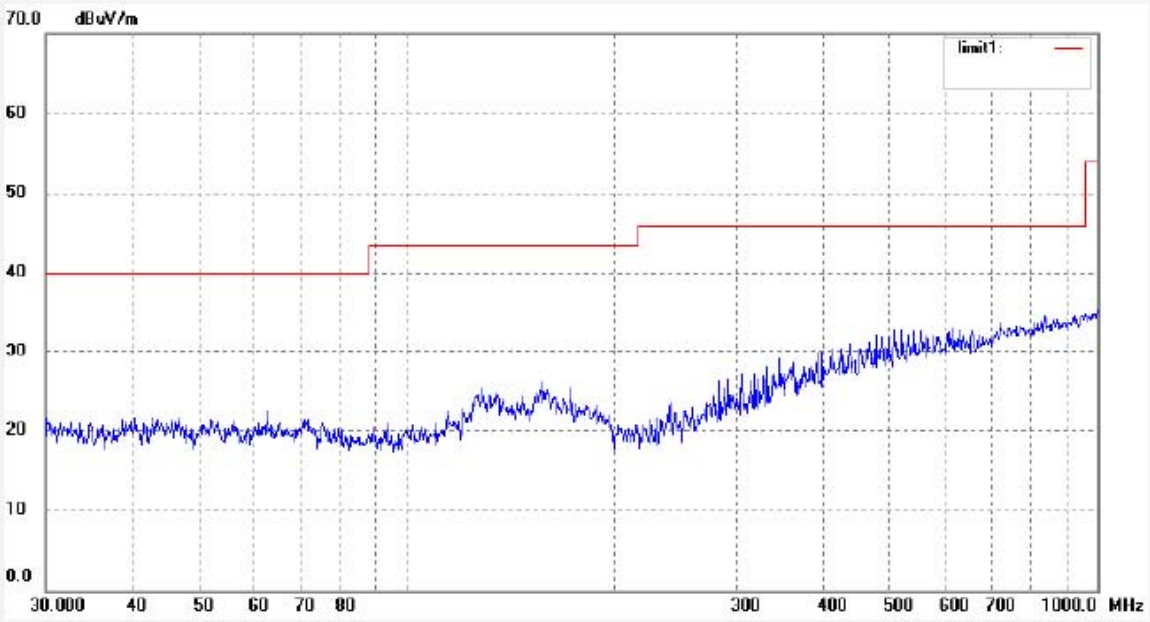
Site: 966 chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: RTTE #2727	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: DC 3.3V
Test item: Radiation Test	Date: 2009/08/27
Temp.(C)/Hum.(%) 25 C / 50 %	Time: 23:38:50
EUT: Syntek BlueW-2310 miniCard	Engineer Signature: Joe
Mode: TX 2402MHz	Distance: 3m
Model: BlueW-2310 miniCard	
Manufacturer: Syntek Semiconductor Co., Ltd.	

Note: Sample No.:091864 Report No.:ATE20091643



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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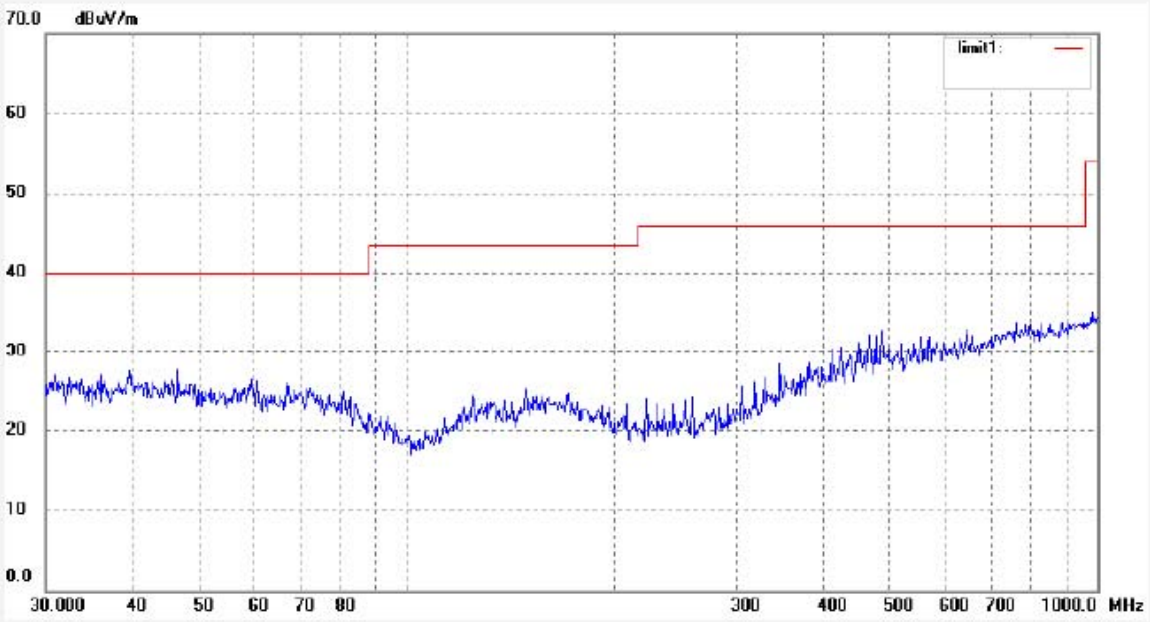
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: RTTE #2728	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: DC 3.3V
Test item: Radiation Test	Date: 2009/08/27
Temp.(C)/Hum.(%) 25 C / 50 %	Time: 23:41:51
EUT: Syntek BlueW-2310 miniCard	Engineer Signature: Joe
Mode: TX 2402MHz	Distance: 3m
Model: BlueW-2310 miniCard	
Manufacturer: Syntek Semiconductor Co., Ltd.	

Note: Sample No.:091864 Report No.:ATE20091643



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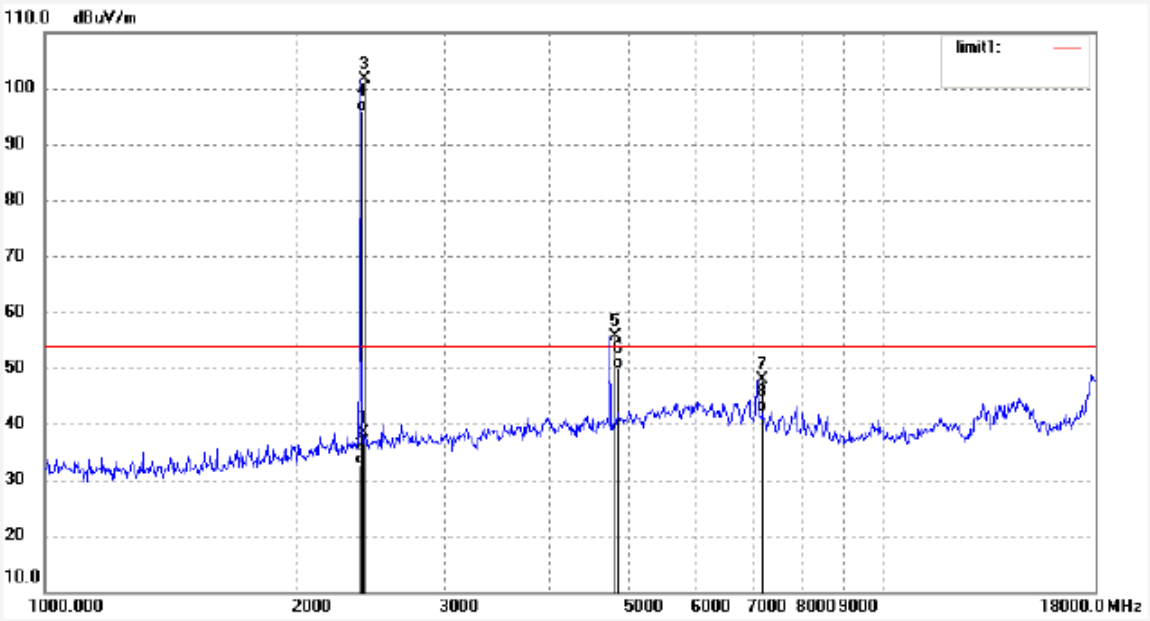
Site: 966 chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: RTTE #2830
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 50 %
EUT: Syntek BlueW-2310 miniCard
Mode: TX 2402MHz
Model: BlueW-2310 miniCard
Manufacturer: Syntek Semiconductor Co., Ltd.

Polarization: Horizontal
Power Source: DC 3.3V
Date: 2009/09/01
Time: 19:30:16
Engineer Signature: Joe
Distance: 3m

Note: Sample No.:091864 Report No.:ATE20091643



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2400.000	45.73	-7.46	38.27	74.00	-35.73	peak			
2	2400.000	40.07	-7.46	32.61	54.00	-21.39	AVG			
3	2402.010	109.08	-7.45	101.63	-	-	peak			
4	2402.010	103.31	-7.45	95.86	-	-	AVG			
5	4804.018	56.02	-0.30	55.72	74.00	-18.28	peak			
6	4804.018	50.27	-0.30	49.97	54.00	-4.03	AVG			
7	7206.026	44.98	2.97	47.95	74.00	-26.05	peak			
8	7206.026	39.21	2.97	42.18	54.00	-11.82	AVG			

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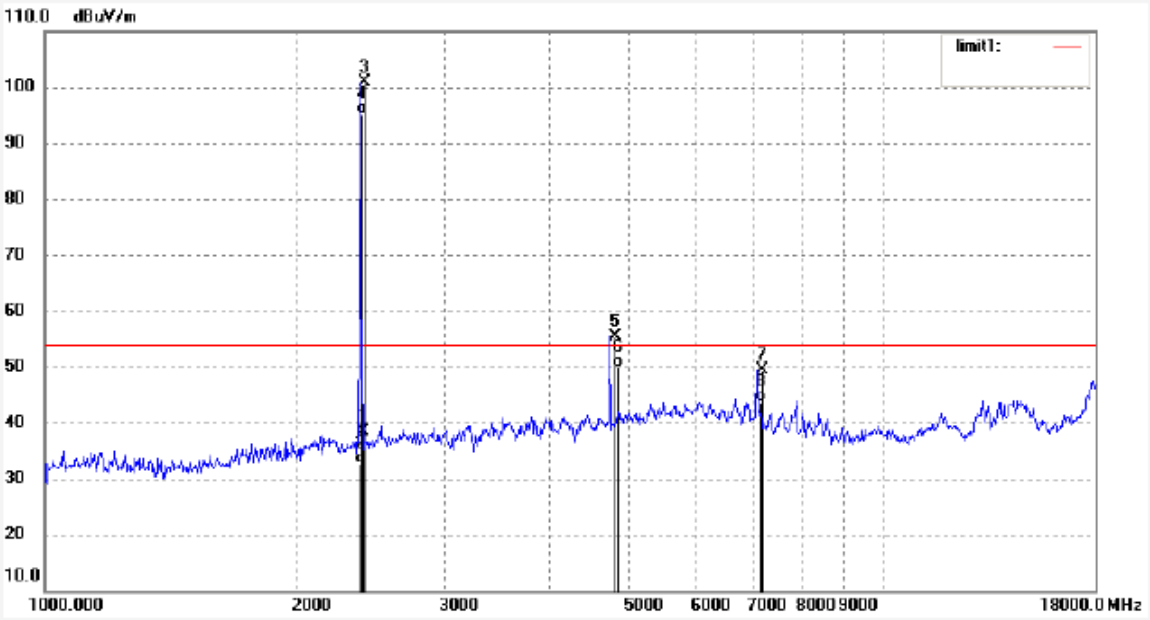
Fax:+86-0755-26503396

Job No.: RTTE #2829
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 50 %
EUT: Syntek BlueW-2310 miniCard
Mode: TX 2402MHz
Model: BlueW-2310 miniCard
Manufacturer: Syntek Semiconductor Co., Ltd.

Polarization: Vertical
Power Source: DC 3.3V
Date: 2009/09/01
Time: 19:27:07
Engineer Signature: Joe
Distance: 3m

Note: Sample No.:091864 Report No.:ATE20091643



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2400.000	45.87	-7.46	38.41	74.00	-35.59	peak			
2	2400.000	40.12	-7.46	32.66	54.00	-21.34	AVG			
3	2402.010	108.22	-7.45	100.77	-	-	peak			
4	2402.010	102.49	-7.45	95.04	-	-	AVG			
5	4804.018	55.79	-0.30	55.49	74.00	-18.51	peak			
6	4804.018	50.08	-0.30	49.78	54.00	-4.22	AVG			
7	7206.026	46.47	2.97	49.44	74.00	-24.56	peak			
8	7206.026	40.61	2.97	43.58	54.00	-10.42	AVG			

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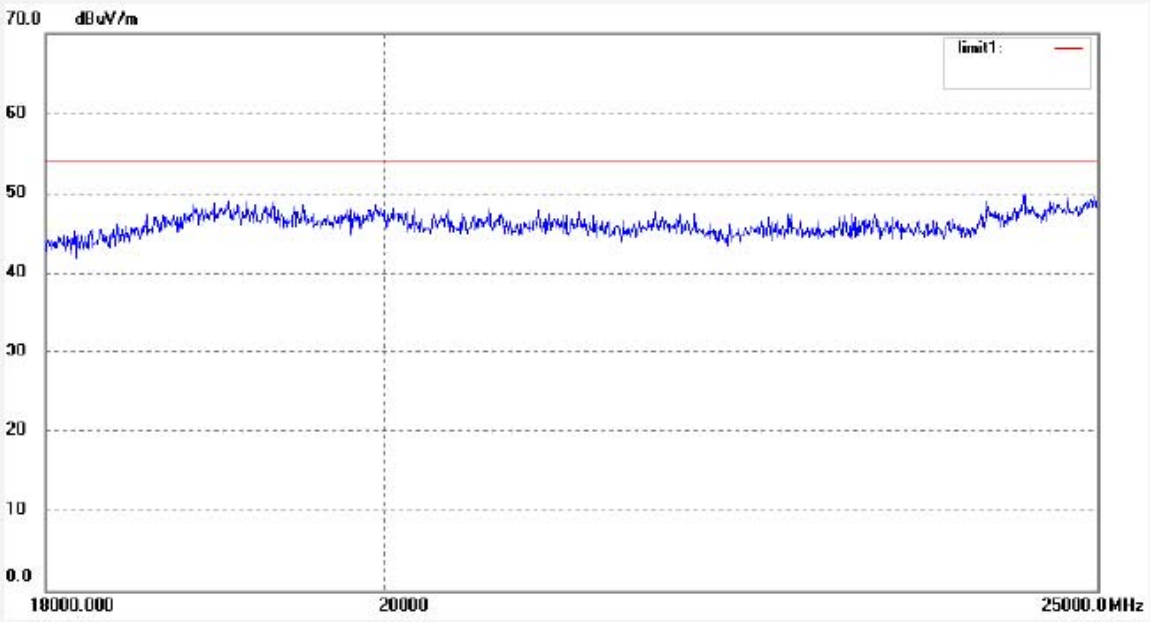
Fax:+86-0755-26503396

Job No.: RTTE #2835	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: DC 3.3V
Test item: Radiation Test	Date: 2009/09/01
Temp.(C)/Hum.(%) 25 C / 50 %	Time: 19:54:50
EUT: Syntek BlueW-2310 miniCard	Engineer Signature: Joe
Mode: TX 2402MHz	Distance: 3m
Model: BlueW-2310 miniCard	
Manufacturer: Syntek Semiconductor Co., Ltd.	

Note: Sample No.:091864 Report No.:ATE20091643

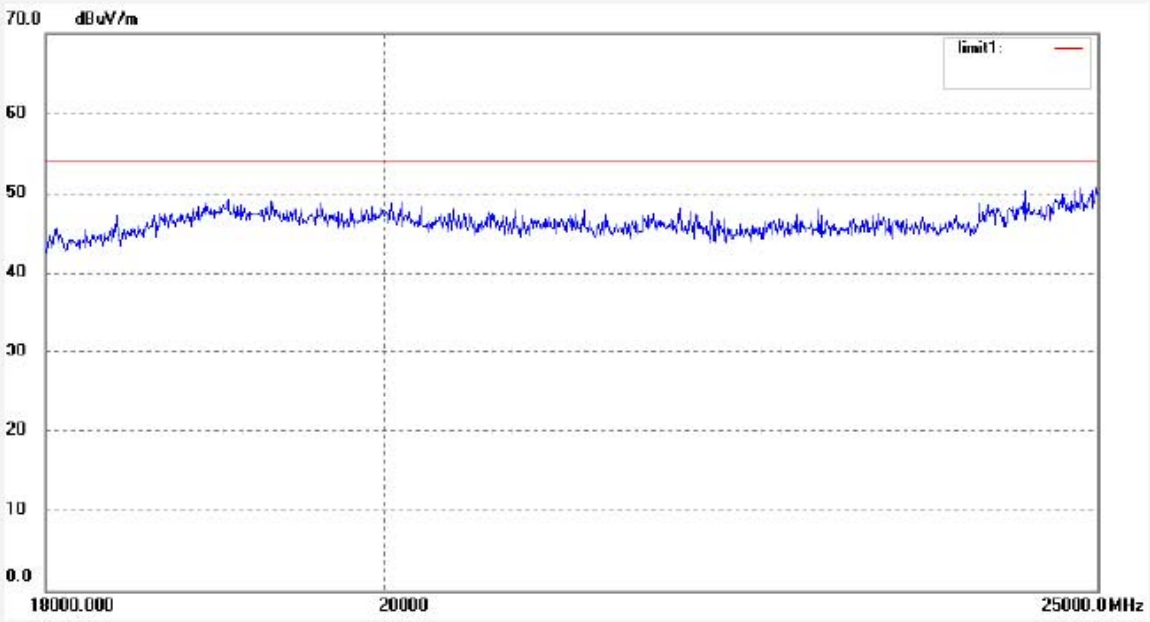


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark

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.: RTTE #2836	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: DC 3.3V
Test item: Radiation Test	Date: 2009/09/01
Temp.(C)/Hum.(%) 25 C / 50 %	Time: 19:57:47
EUT: Syntek BlueW-2310 miniCard	Engineer Signature: Joe
Mode: TX 2402MHz	Distance: 3m
Model: BlueW-2310 miniCard	
Manufacturer: Syntek Semiconductor Co., Ltd.	

Note: Sample No.:091864 Report No.:ATE20091643

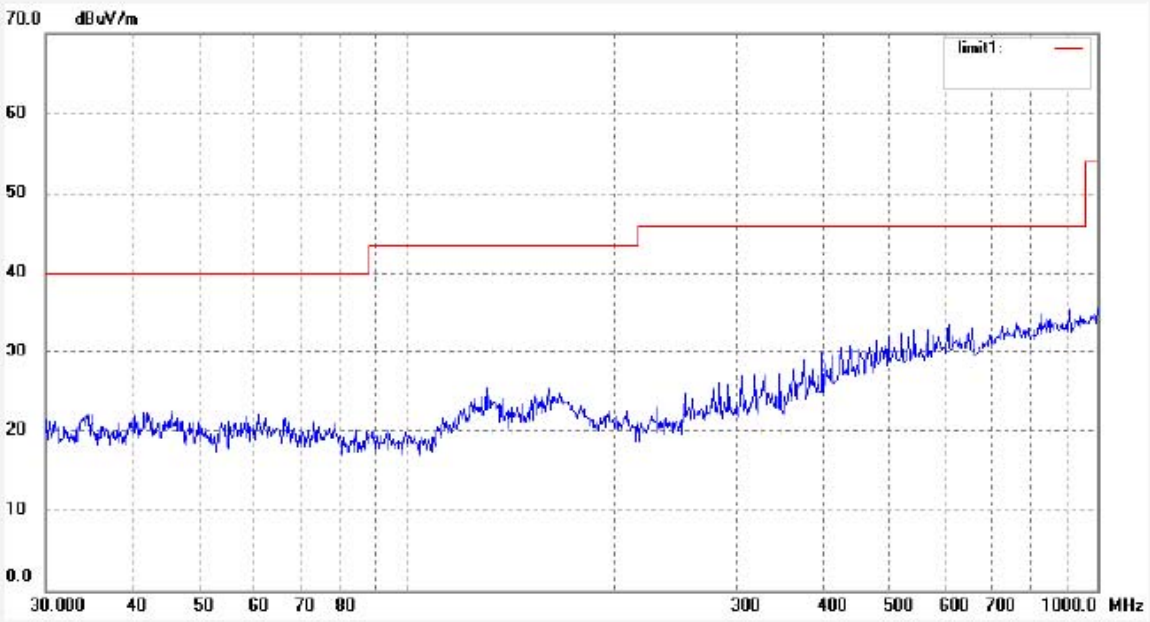


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark

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.: RTTE #2730	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: DC 3.3V
Test item: Radiation Test	Date: 2009/08/27
Temp.(C)/Hum.(%) 25 C / 50 %	Time: 23:48:15
EUT: Syntek BlueW-2310 miniCard	Engineer Signature: Joe
Mode: TX 2441MHz	Distance: 3m
Model: BlueW-2310 miniCard	
Manufacturer: Syntek Semiconductor Co., Ltd.	

Note: Sample No.:091864 Report No.:ATE20091643

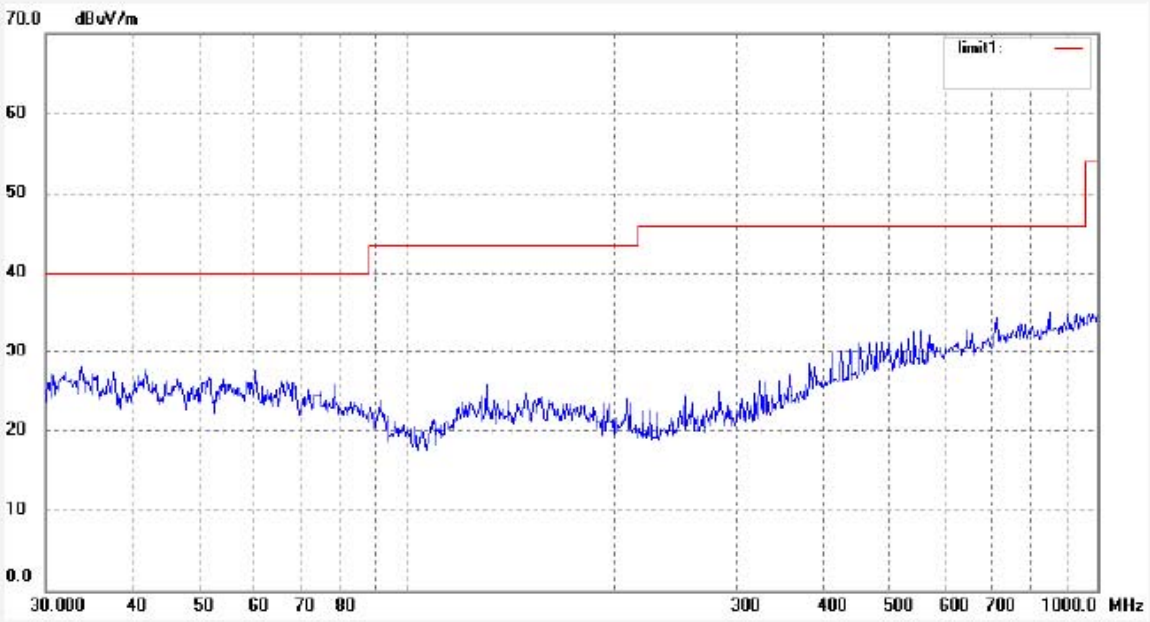


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark

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.: RTTE #2729	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: DC 3.3V
Test item: Radiation Test	Date: 2009/08/27
Temp.(C)/Hum.(%) 25 C / 50 %	Time: 23:45:10
EUT: Syntek BlueW-2310 miniCard	Engineer Signature: Joe
Mode: TX 2441MHz	Distance: 3m
Model: BlueW-2310 miniCard	
Manufacturer: Syntek Semiconductor Co., Ltd.	

Note: Sample No.:091864 Report No.:ATE20091643

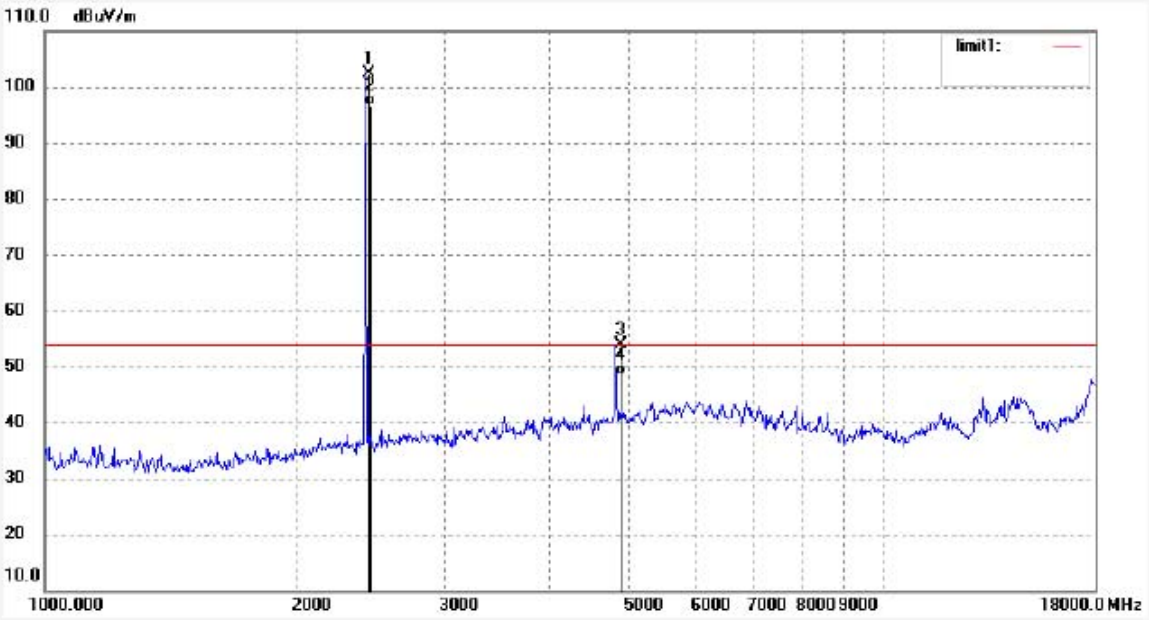


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark

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.: RTTE #2831	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: DC 3.3V
Test item: Radiation Test	Date: 2009/09/01
Temp.(C)/Hum.(%) 25 C / 50 %	Time: 19:34:22
EUT: Syntek BlueW-2310 miniCard	Engineer Signature: Joe
Mode: TX 2441MHz	Distance: 3m
Model: BlueW-2310 miniCard	
Manufacturer: Syntek Semiconductor Co., Ltd.	

Note: Sample No.:091864 Report No.:ATE20091643



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2441.011	109.73	-7.35	102.38	-	-	peak			
2	2441.011	104.04	-7.35	96.69	-	-	AVG			
3	4882.020	53.82	0.14	53.96	74.00	-20.04	peak			
4	4882.020	48.16	0.14	48.30	54.00	-5.70	AVG			

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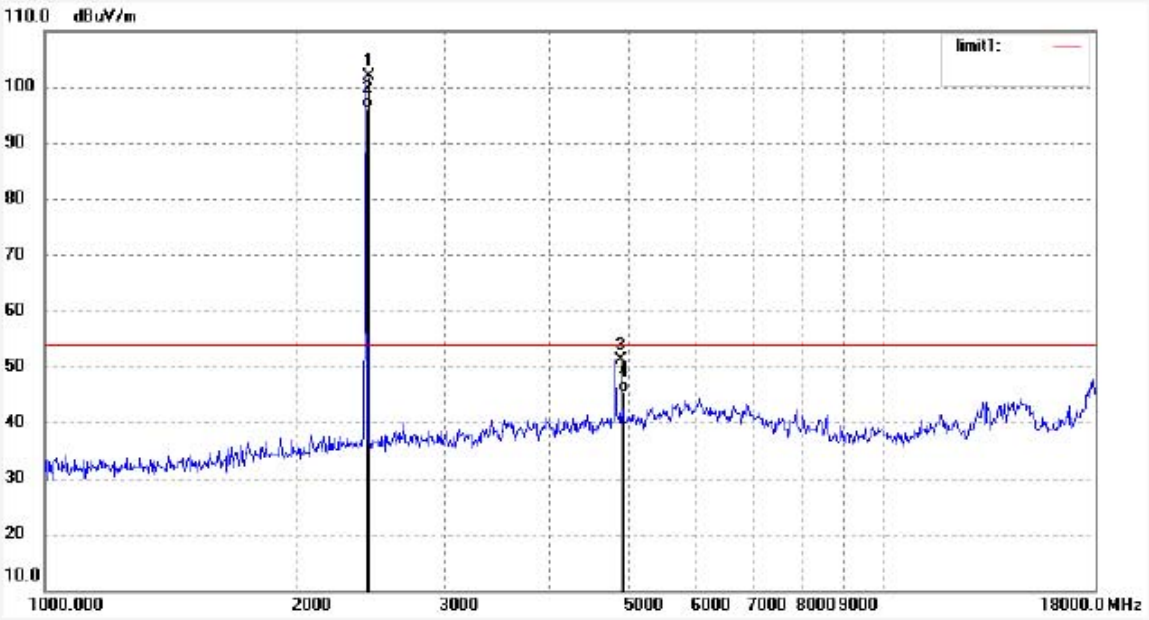
Fax:+86-0755-26503396

Job No.: RTTE #2832	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: DC 3.3V
Test item: Radiation Test	Date: 2009/09/01
Temp.(C)/Hum.(%) 25 C / 50 %	Time: 19:37:31
EUT: Syntek BlueW-2310 miniCard	Engineer Signature: Joe
Mode: TX 2441MHz	Distance: 3m
Model: BlueW-2310 miniCard	
Manufacturer: Syntek Semiconductor Co., Ltd.	

Note: Sample No.:091864 Report No.:ATE20091643



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2441.011	109.31	-7.35	101.96	-	-	peak			
2	2441.011	103.58	-7.35	96.23	-	-	AVG			
3	4882.020	51.05	0.14	51.19	74.00	-22.81	peak			
4	4882.020	45.36	0.14	45.50	54.00	-8.50	AVG			

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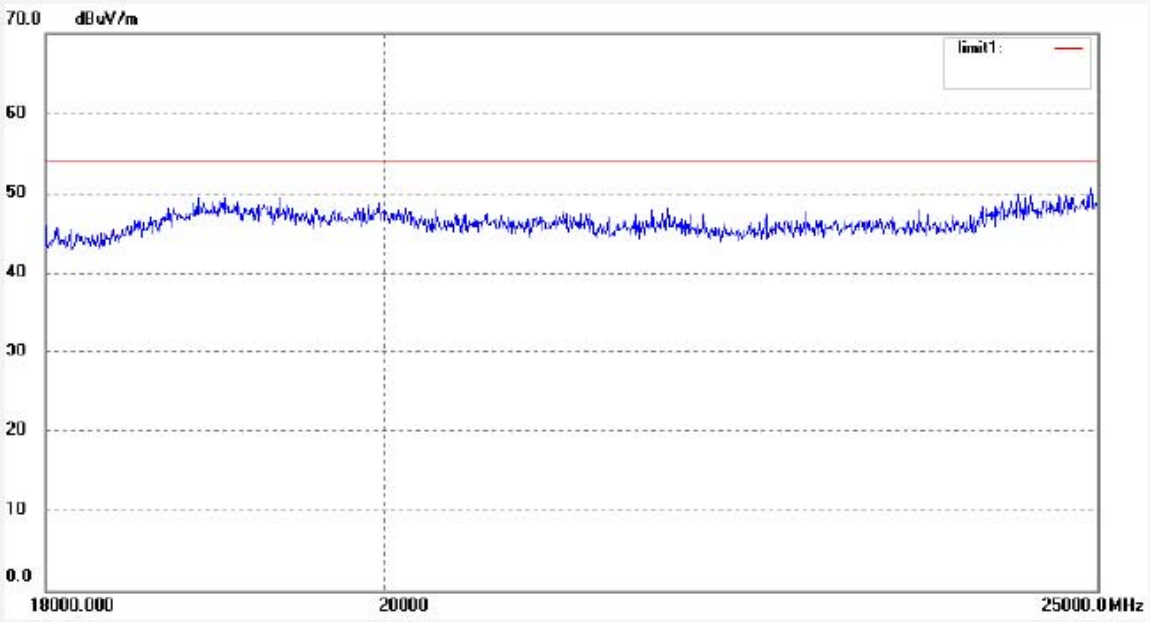
Fax:+86-0755-26503396

Job No.: RTTE #2838	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: DC 3.3V
Test item: Radiation Test	Date: 2009/09/01
Temp.(C)/Hum.(%) 25 C / 50 %	Time: 20:04:11
EUT: Syntek BlueW-2310 miniCard	Engineer Signature: Joe
Mode: TX 2441MHz	Distance: 3m
Model: BlueW-2310 miniCard	
Manufacturer: Syntek Semiconductor Co., Ltd.	

Note: Sample No.:091864 Report No.:ATE20091643

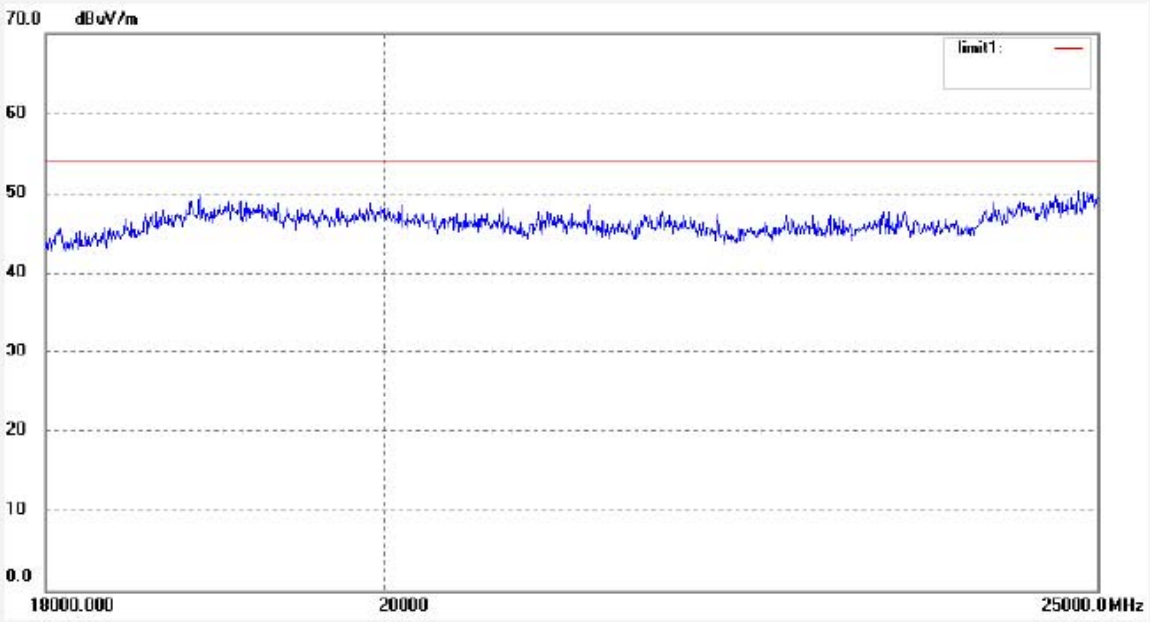


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark

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.: RTTE #2837	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: DC 3.3V
Test item: Radiation Test	Date: 2009/09/01
Temp.(C)/Hum.(%) 25 C / 50 %	Time: 20:01:10
EUT: Syntek BlueW-2310 miniCard	Engineer Signature: Joe
Mode: TX 2441MHz	Distance: 3m
Model: BlueW-2310 miniCard	
Manufacturer: Syntek Semiconductor Co., Ltd.	

Note: Sample No.:091864 Report No.:ATE20091643

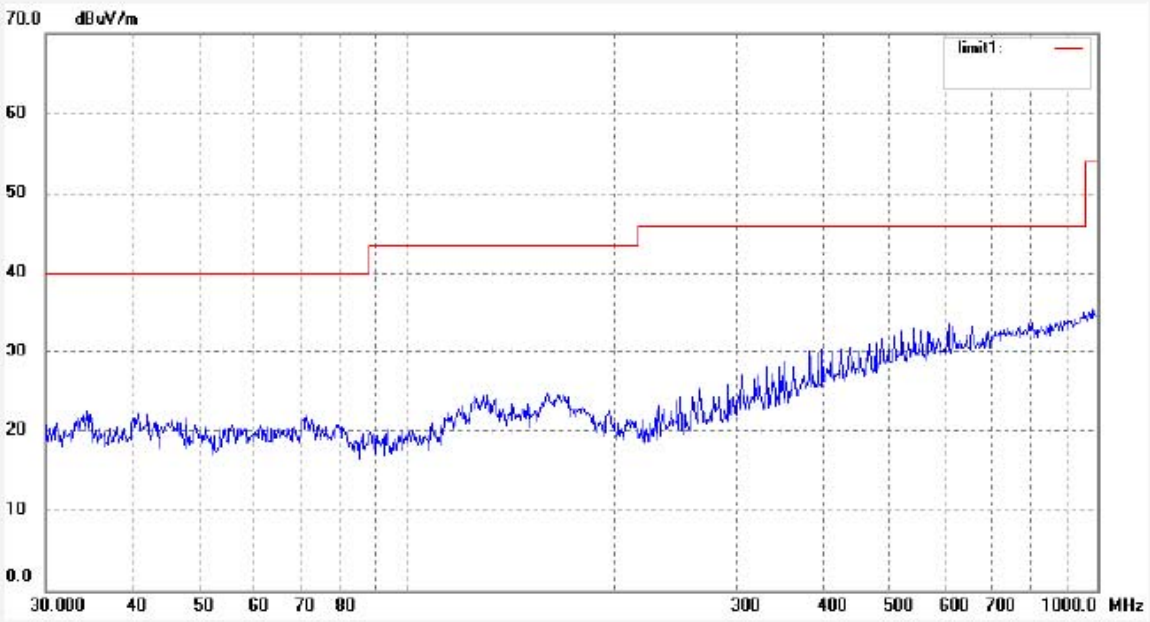


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark

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.: RTTE #2731	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: DC 3.3V
Test item: Radiation Test	Date: 2009/08/27
Temp.(C)/Hum.(%) 25 C / 50 %	Time: 23:51:36
EUT: Syntek BlueW-2310 miniCard	Engineer Signature: Joe
Mode: TX 2480MHz	Distance: 3m
Model: BlueW-2310 miniCard	
Manufacturer: Syntek Semiconductor Co., Ltd.	

Note: Sample No.:091864 Report No.:ATE20091643

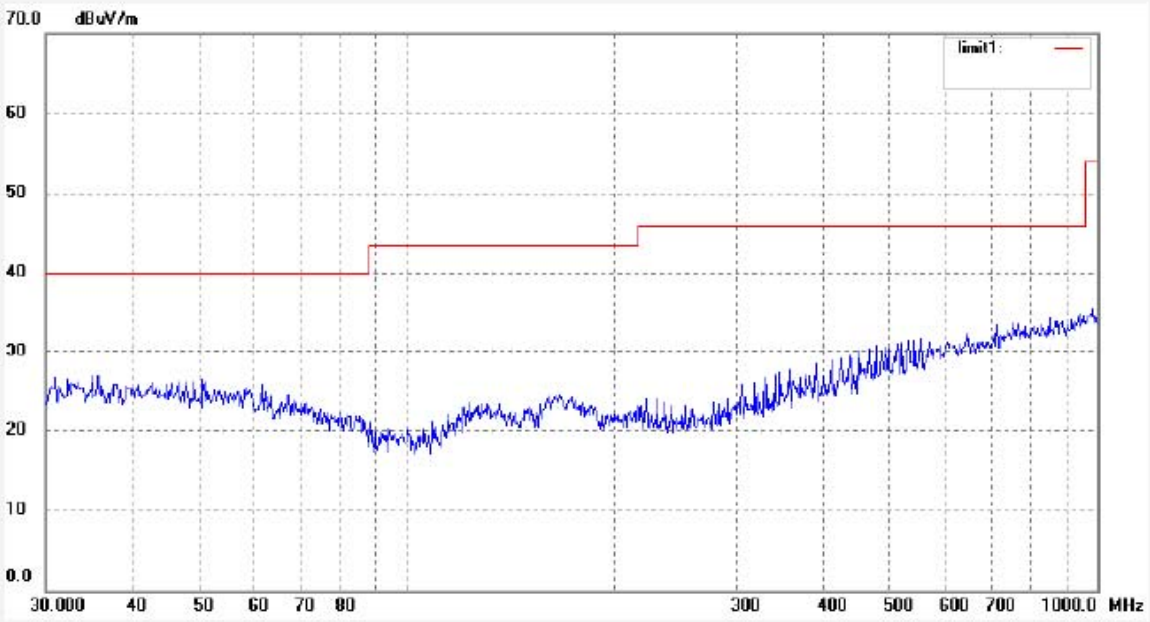


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark

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.: RTTE #2732	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: DC 3.3V
Test item: Radiation Test	Date: 2009/08/27
Temp.(C)/Hum.(%) 25 C / 50 %	Time: 23:54:40
EUT: Syntek BlueW-2310 miniCard	Engineer Signature: Joe
Mode: TX 2480MHz	Distance: 3m
Model: BlueW-2310 miniCard	
Manufacturer: Syntek Semiconductor Co., Ltd.	

Note: Sample No.:091864 Report No.:ATE20091643



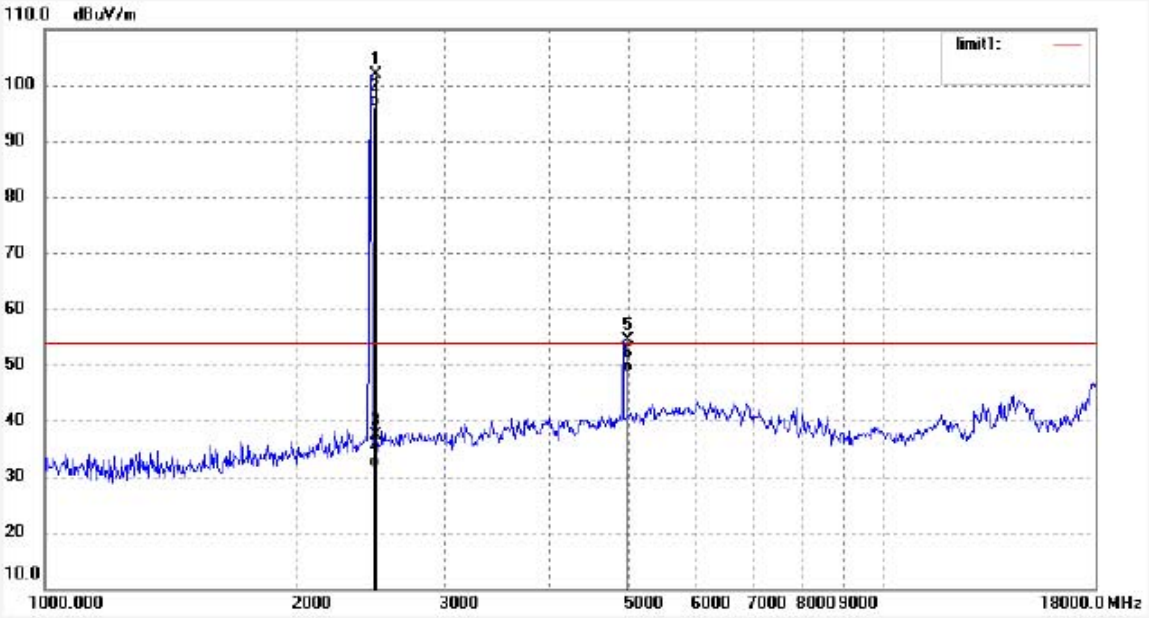
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark

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.: RTTE #2834
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 50 %
EUT: Syntek BlueW-2310 miniCard
Mode: TX 2480MHz
Model: BlueW-2310 miniCard
Manufacturer: Syntek Semiconductor Co., Ltd.

Polarization: Horizontal
Power Source: DC 3.3V
Date: 2009/09/01
Time: 19:44:40
Engineer Signature: Joe
Distance: 3m

Note: Sample No.:091864 Report No.:ATE20091643



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2480.010	109.30	-7.37	101.93	-	-	peak			
2	2480.010	103.57	-7.37	96.20	-	-	AVG			
3	2483.500	44.69	-7.37	37.32	74.00	-36.68	peak			
4	2483.500	39.02	-7.37	31.65	54.00	-22.35	AVG			
5	4960.019	53.85	0.52	54.37	74.00	-19.63	peak			
6	4960.019	48.11	0.52	48.63	54.00	-5.37	AVG			

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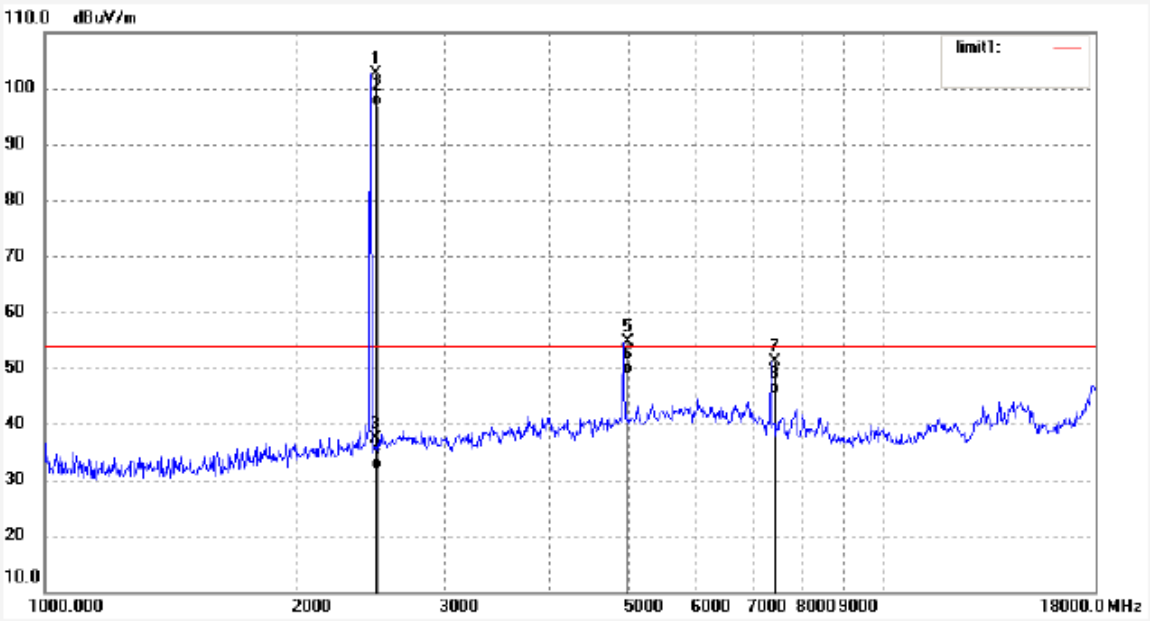
Science & Industry Park,Nanshan Shenzhen,P.R.China
Site: 966 chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: RTTE #2833
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 50 %
EUT: Syntek BlueW-2310 miniCard
Mode: TX 2480MHz
Model: BlueW-2310 miniCard
Manufacturer: Syntek Semiconductor Co., Ltd.

Polarization: Vertical
Power Source: DC 3.3V
Date: 2009/09/01
Time: 19:41:32
Engineer Signature: Joe
Distance: 3m

Note: Sample No.:091864 Report No.:ATE20091643



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2480.010	110.04	-7.37	102.67	-	-	peak			
2	2480.010	104.32	-7.37	96.95	-	-	AVG			
3	2483.500	44.84	-7.37	37.47	74.00	-36.53	peak			
4	2483.500	39.15	-7.37	31.78	54.00	-22.22	AVG			
5	4960.019	54.11	0.52	54.63	74.00	-19.37	peak			
6	4960.019	48.39	0.52	48.91	54.00	-5.09	AVG			
7	7440.027	47.52	3.69	51.21	74.00	-22.79	peak			
8	7440.027	41.80	3.69	45.49	54.00	-8.51	AVG			

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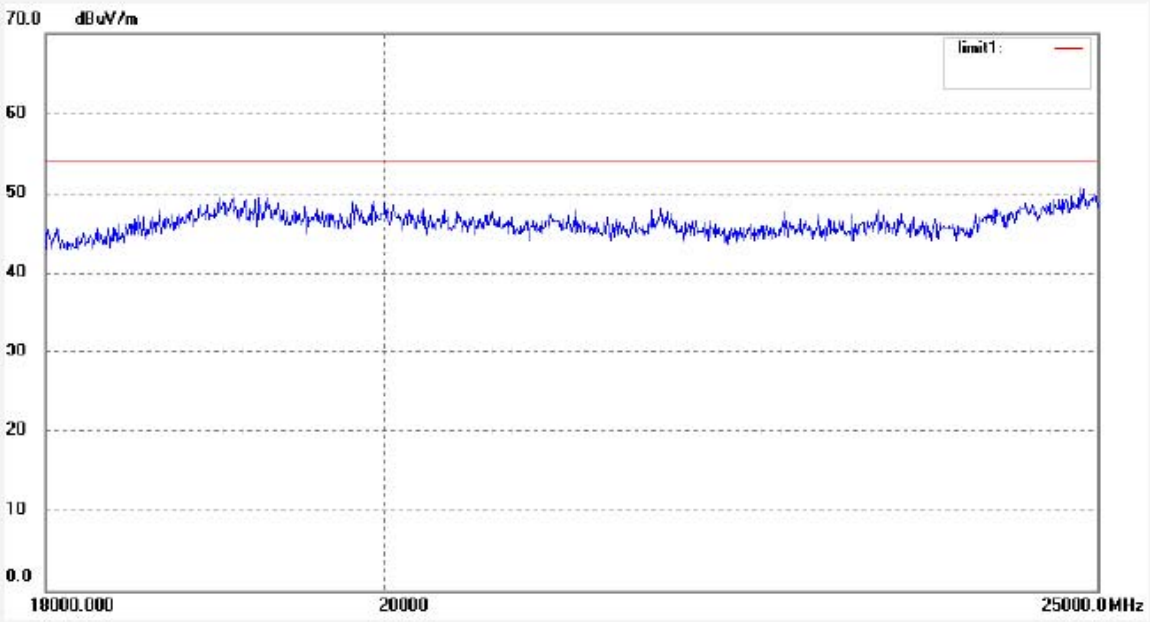
Science & Industry Park,Nanshan Shenzhen,P.R.China
Site: 966 chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: RTTE #2839	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: DC 3.3V
Test item: Radiation Test	Date: 2009/09/01
Temp.(C)/Hum.(%) 25 C / 50 %	Time: 20:08:10
EUT: Syntek BlueW-2310 miniCard	Engineer Signature: Joe
Mode: TX 2480MHz	Distance: 3m
Model: BlueW-2310 miniCard	
Manufacturer: Syntek Semiconductor Co., Ltd.	

Note: Sample No.:091864 Report No.:ATE20091643

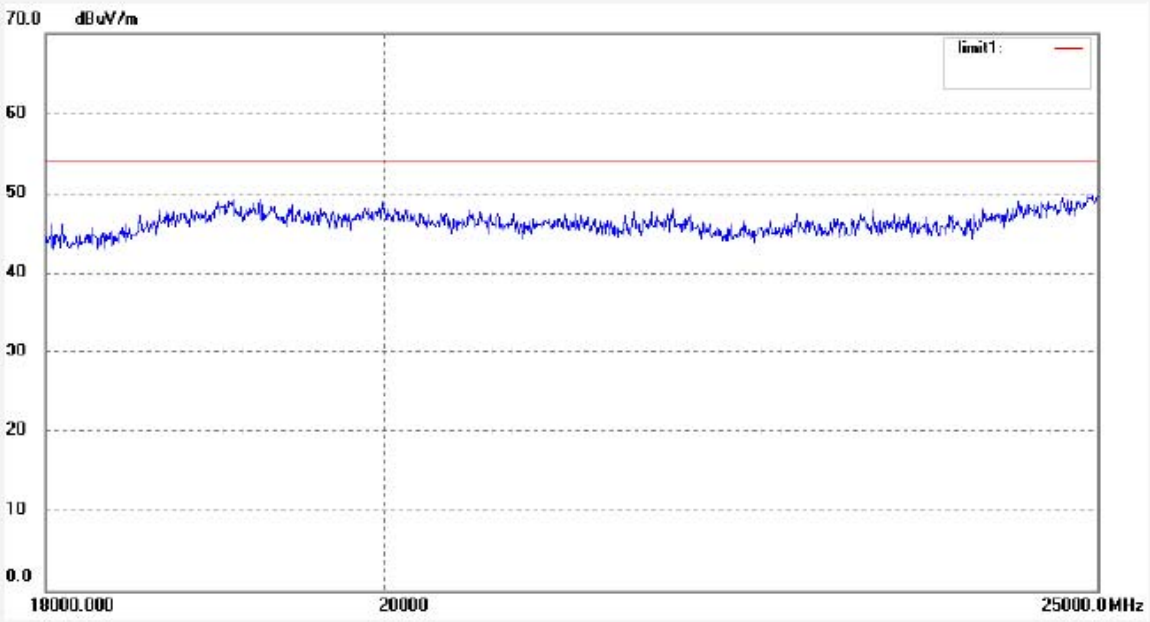


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark

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.: RTTE #2840	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: DC 3.3V
Test item: Radiation Test	Date: 2009/09/01
Temp.(C)/Hum.(%) 25 C / 50 %	Time: 20:11:17
EUT: Syntek BlueW-2310 miniCard	Engineer Signature: Joe
Mode: TX 2480MHz	Distance: 3m
Model: BlueW-2310 miniCard	
Manufacturer: Syntek Semiconductor Co., Ltd.	

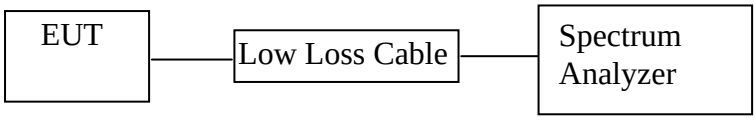
Note: Sample No.:091864 Report No.:ATE20091643



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: Syntek BlueW-2310 miniCard)

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. Syntek BlueW-2310 miniCard (EUT)

Model Number	:	BlueW-2310 miniCard
Serial Number	:	N/A
Manufacturer	:	Syntek Semiconductor Co., 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.

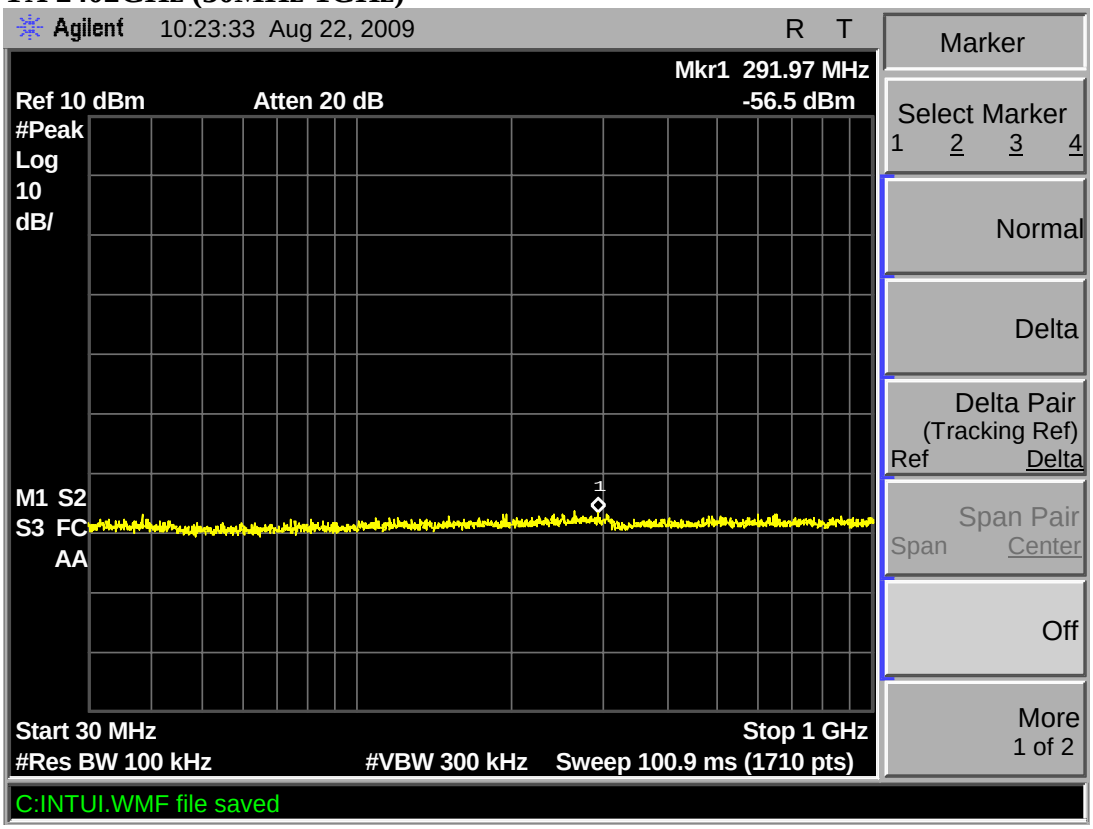
12.5.3.The Conducted Spurious Emission was measured and recorded.

12.6.Test Result

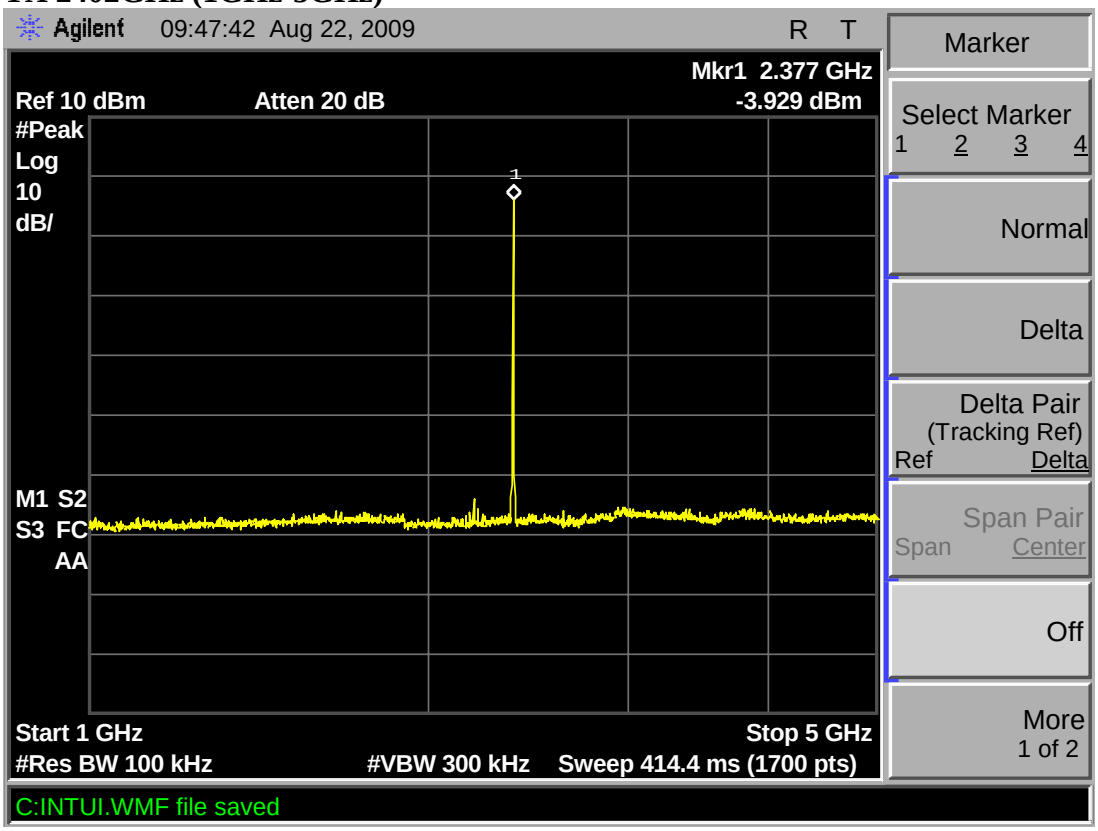
Pass.

The spectrum analyzer plots are attached as below.

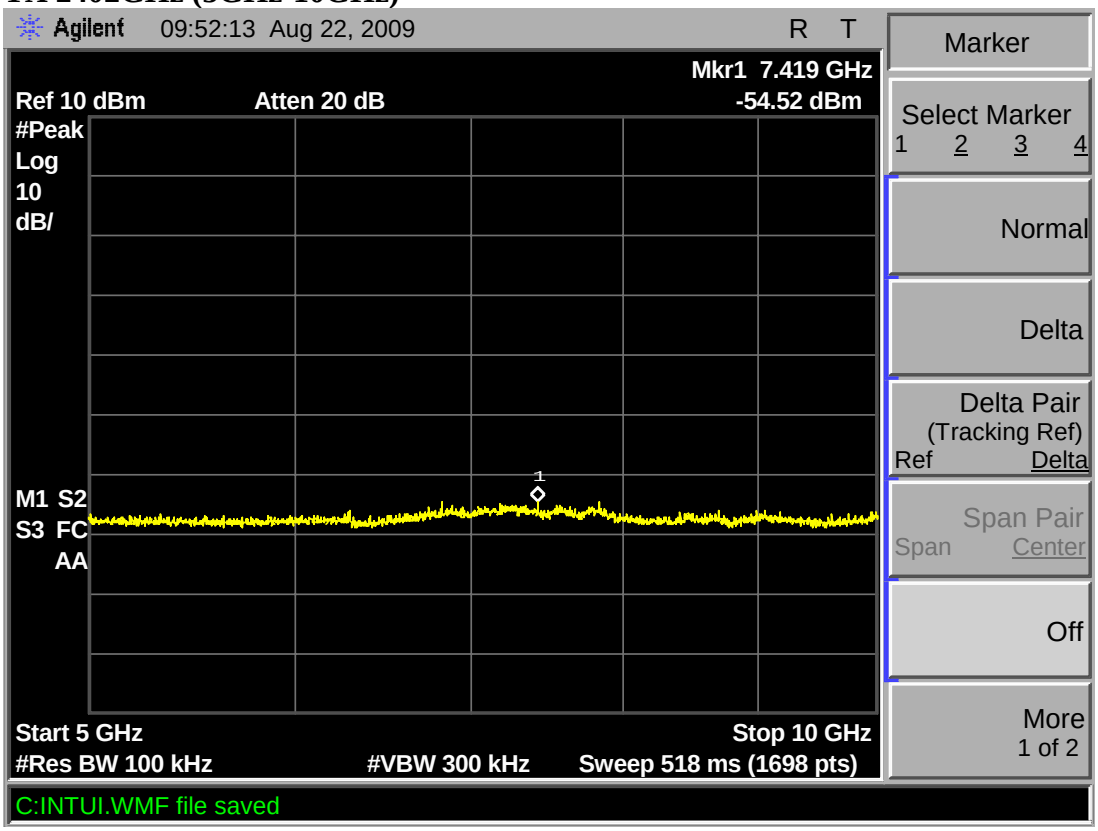
TX 2402GHz (30MHz-1GHz)



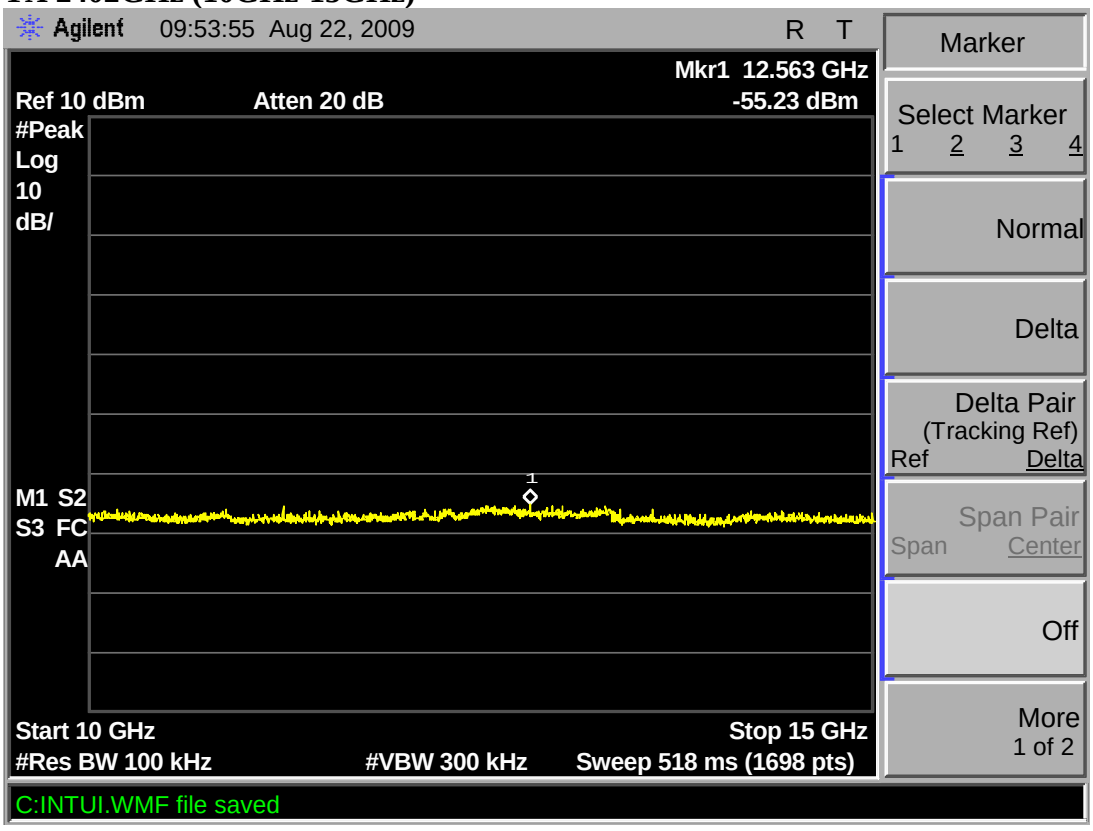
TX 2402GHz (1GHz-5GHz)



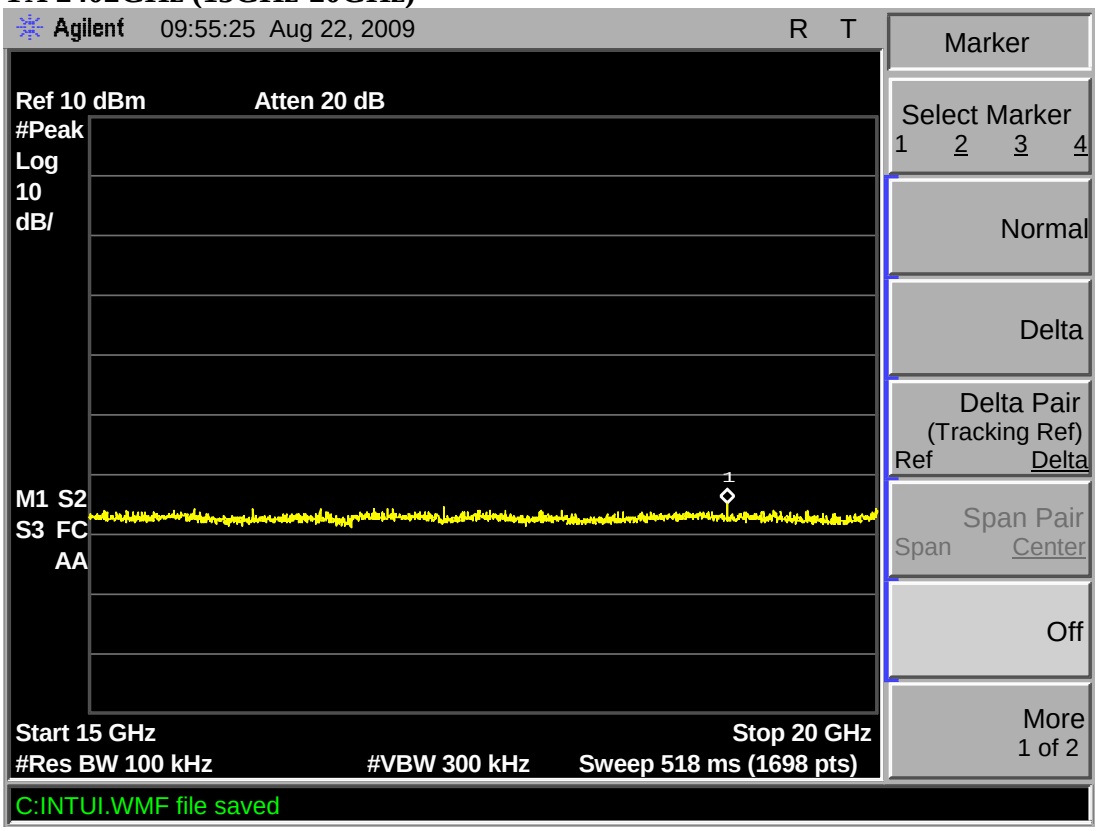
TX 2402GHz (5GHz-10GHz)



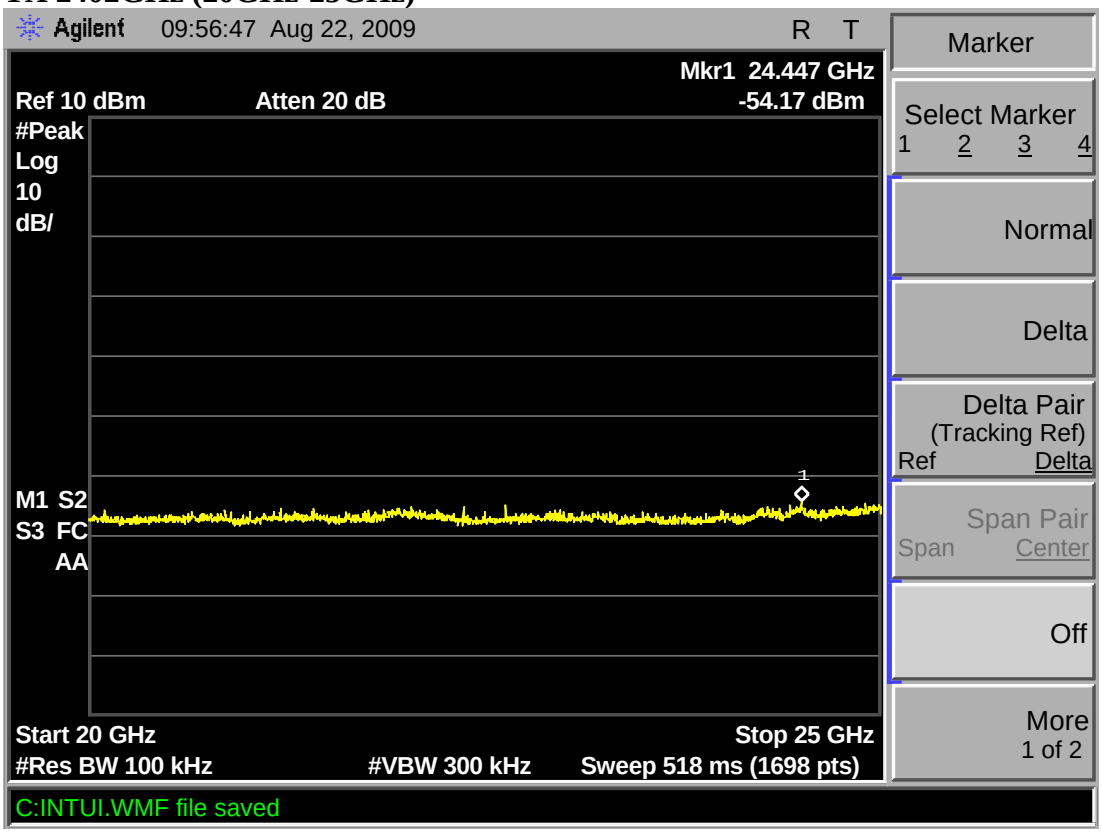
TX 2402GHz (10GHz-15GHz)



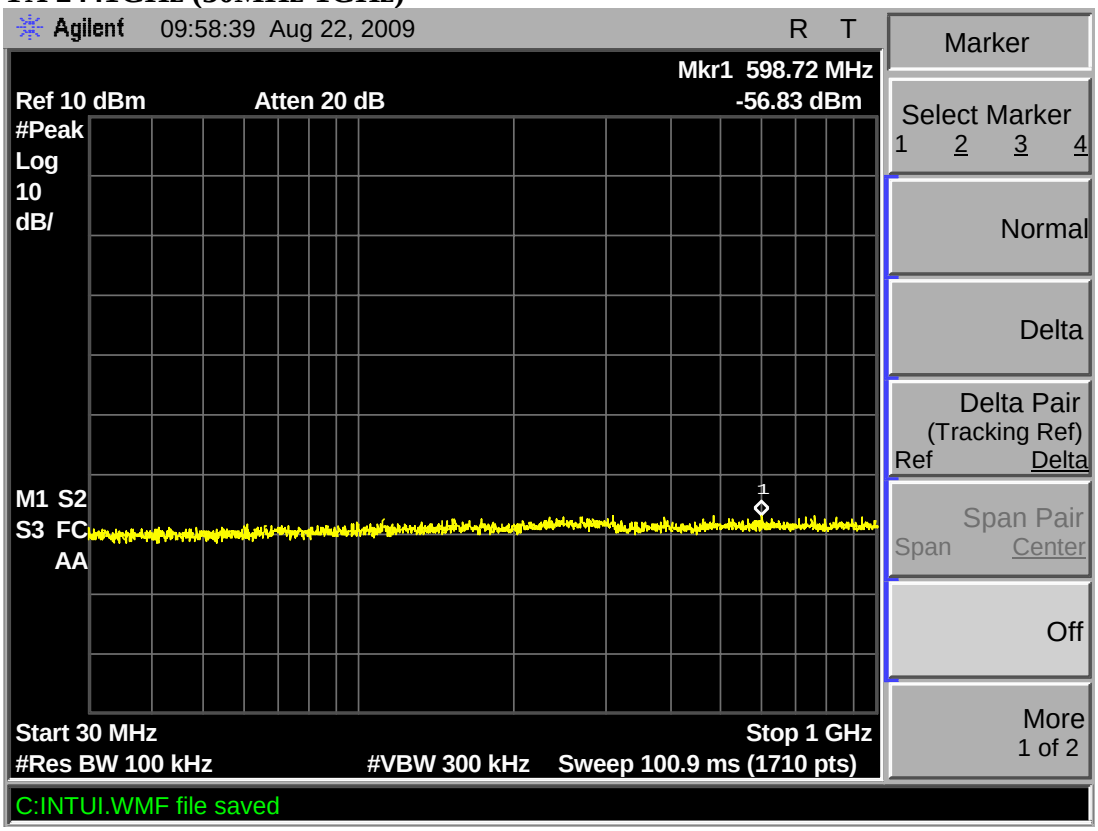
TX 2402GHz (15GHz-20GHz)



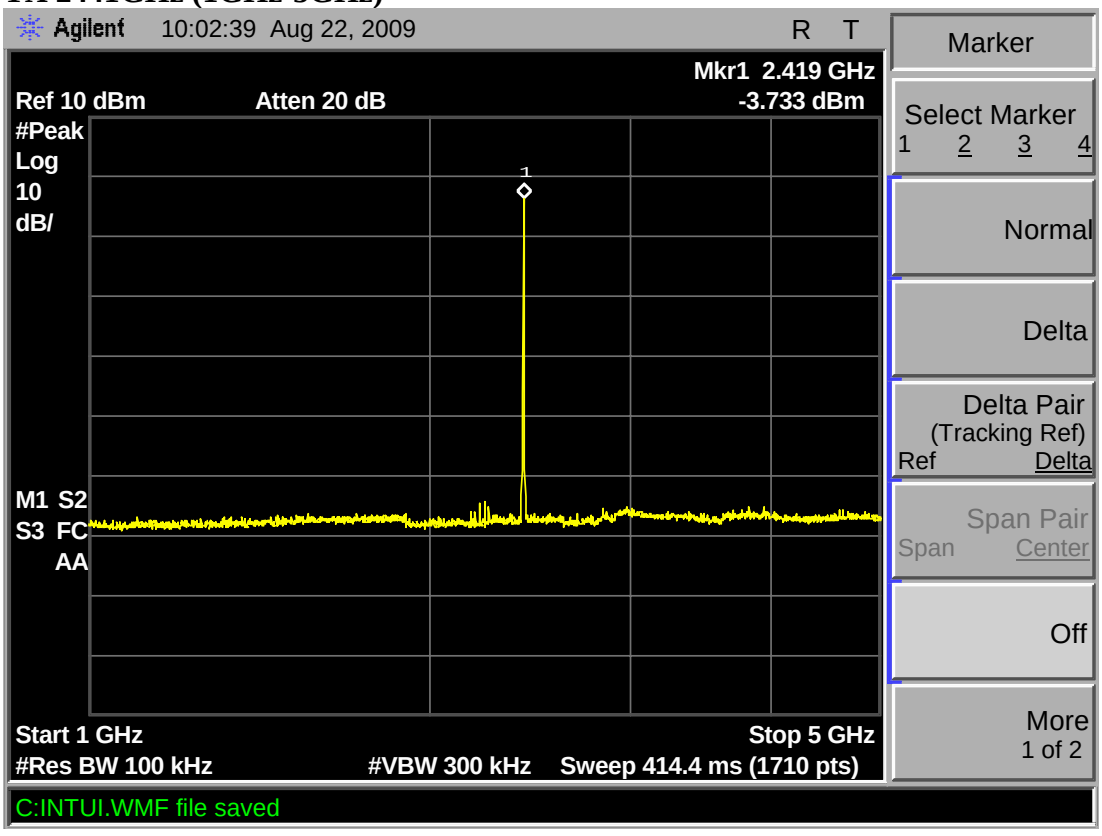
TX 2402GHz (20GHz-25GHz)



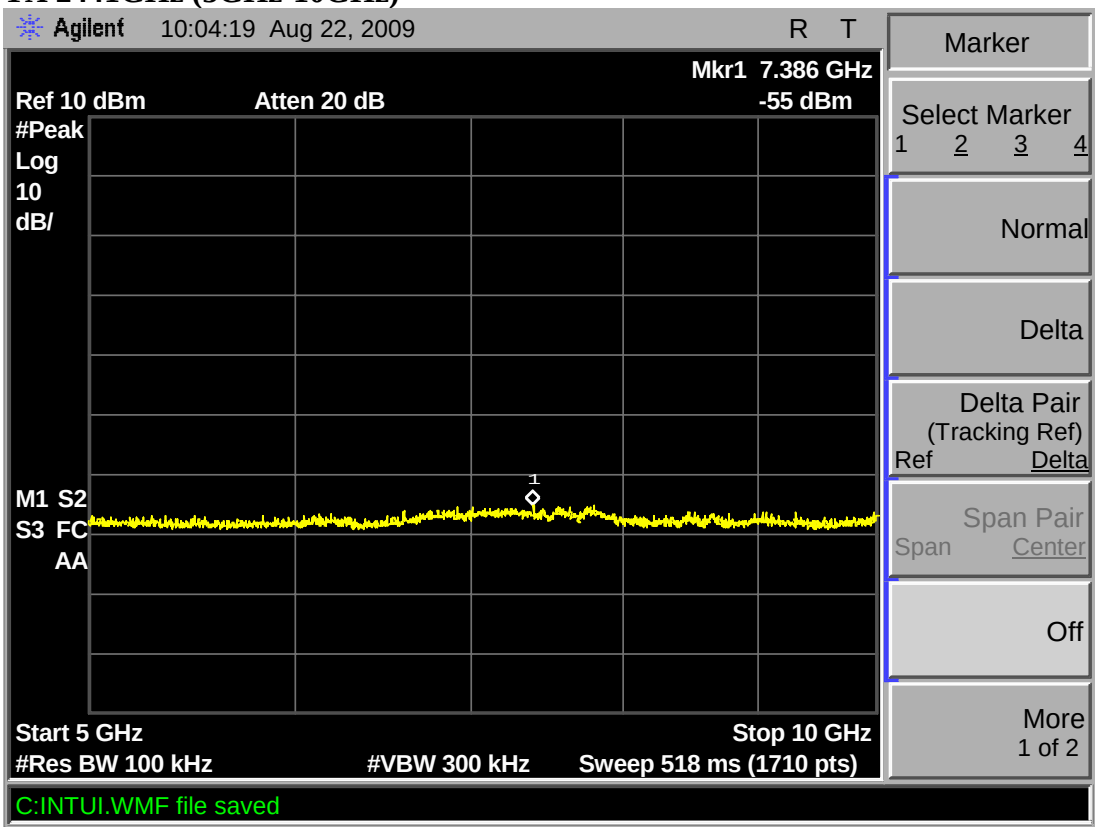
TX 2441GHz (30MHz-1GHz)



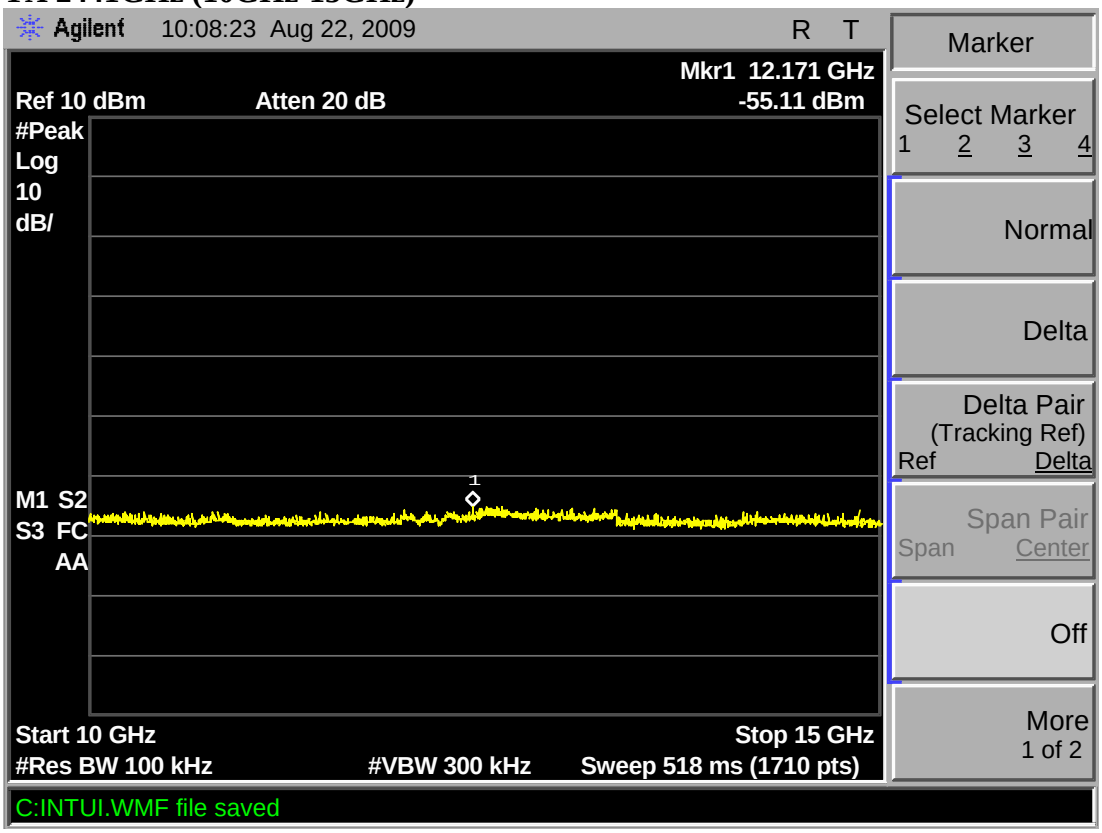
TX 2441GHz (1GHz-5GHz)



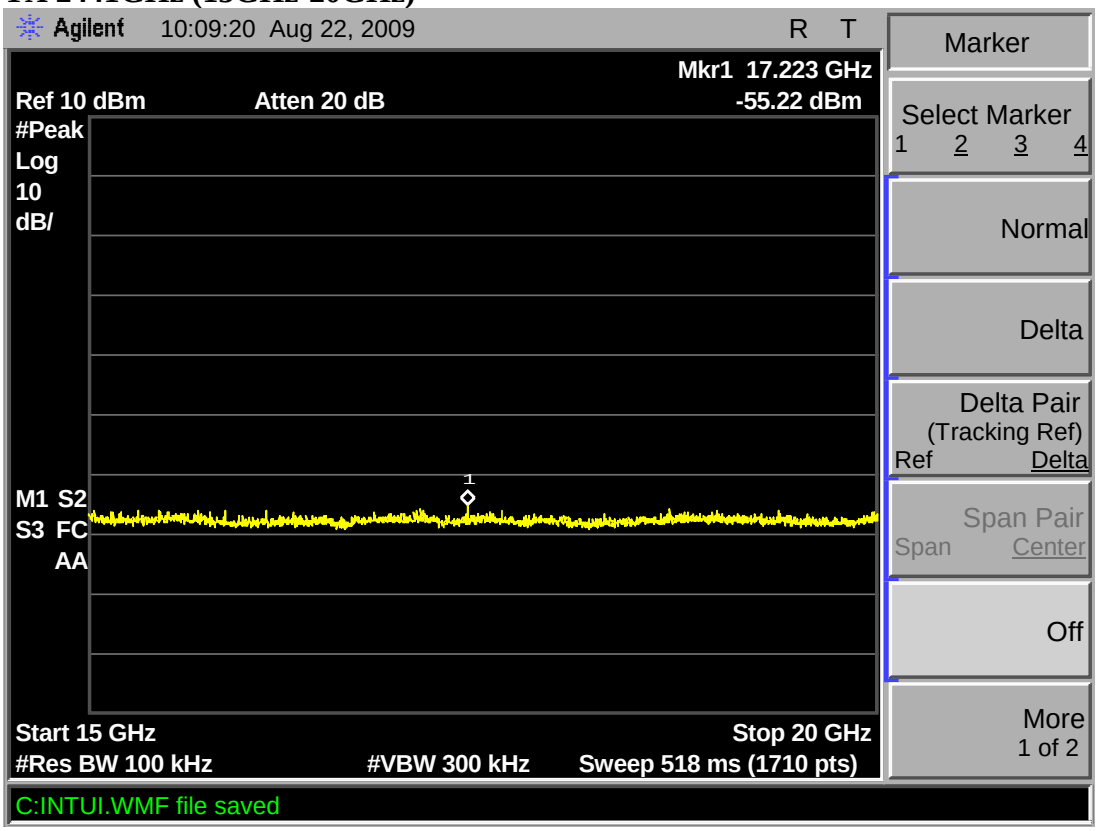
TX 2441GHz (5GHz-10GHz)



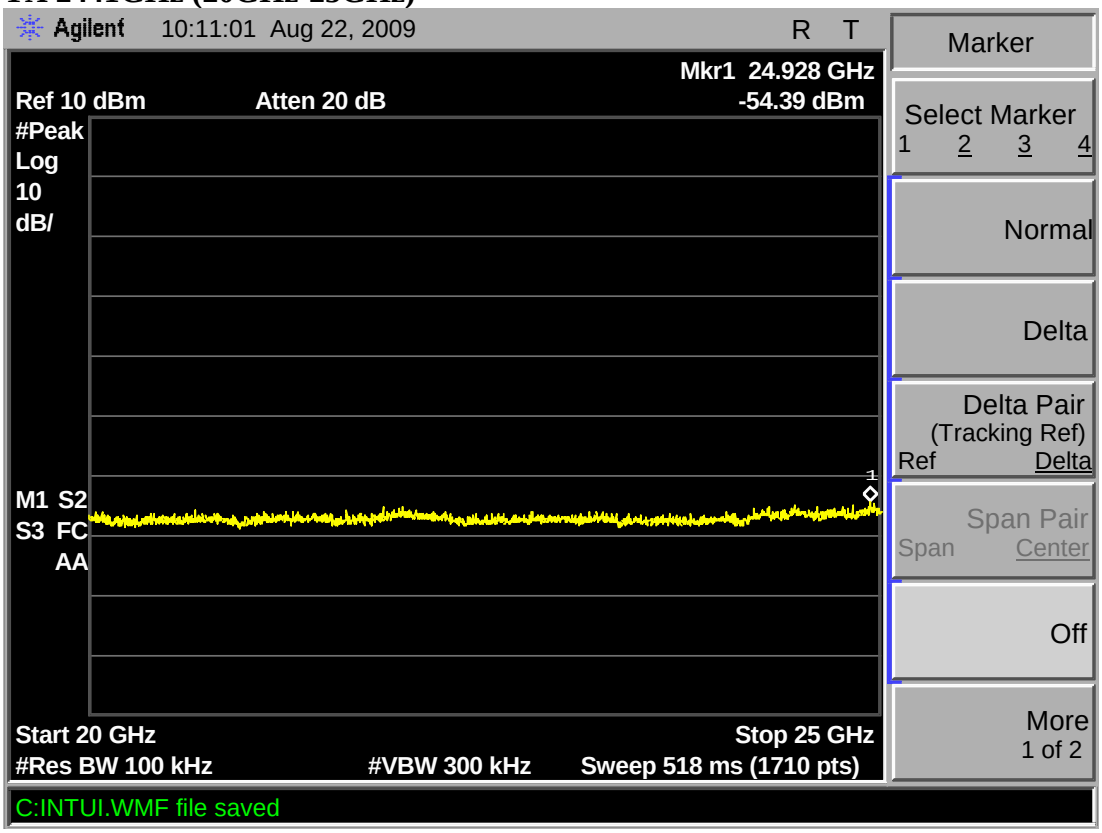
TX 2441GHz (10GHz-15GHz)



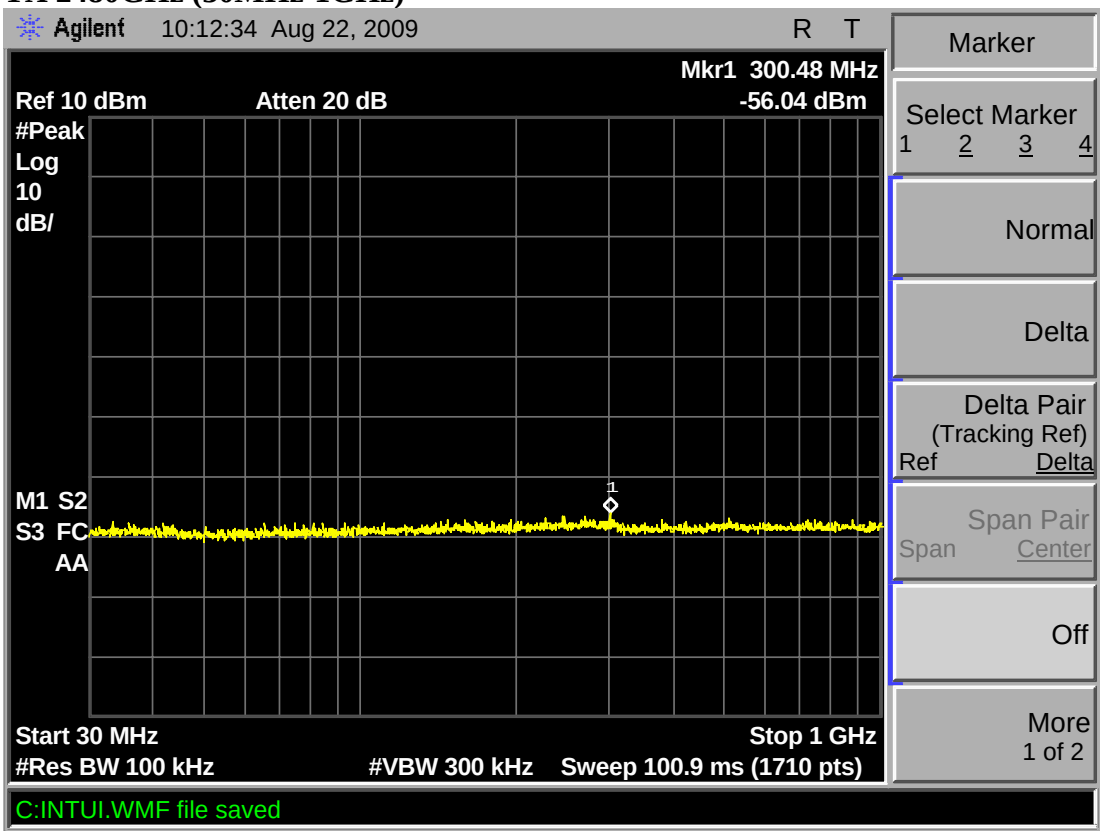
TX 2441GHz (15GHz-20GHz)



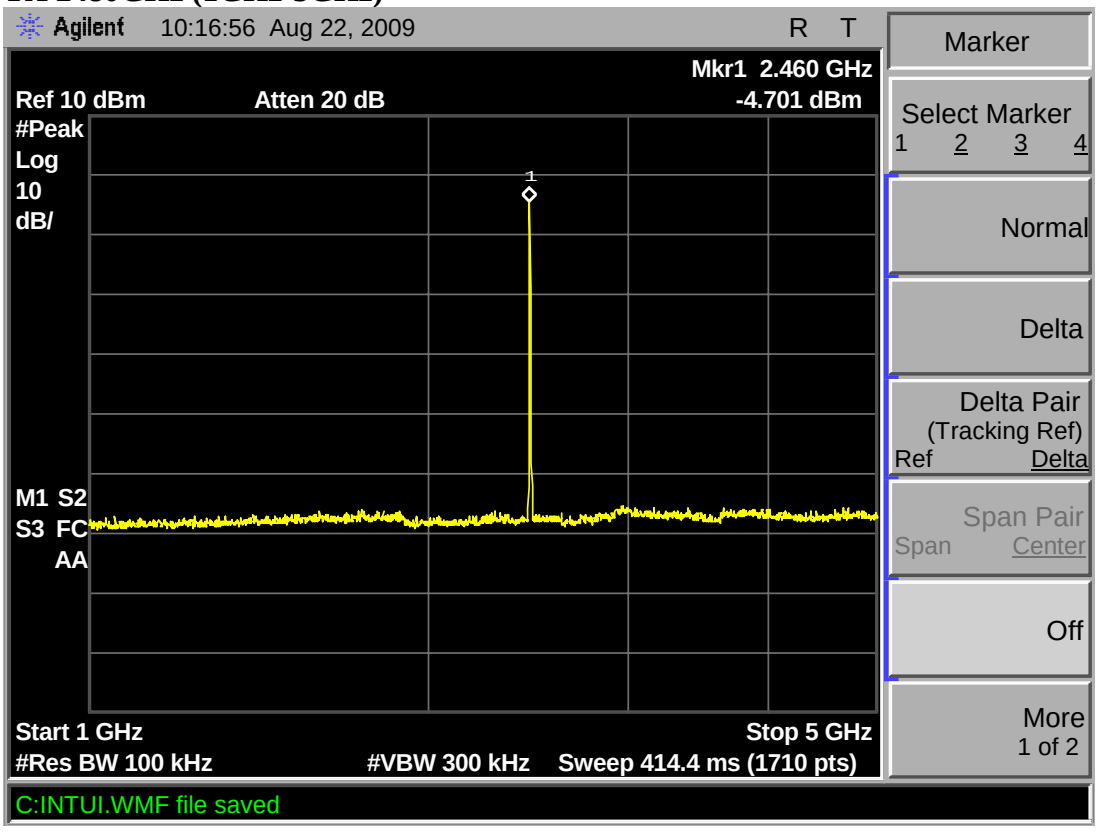
TX 2441GHz (20GHz-25GHz)



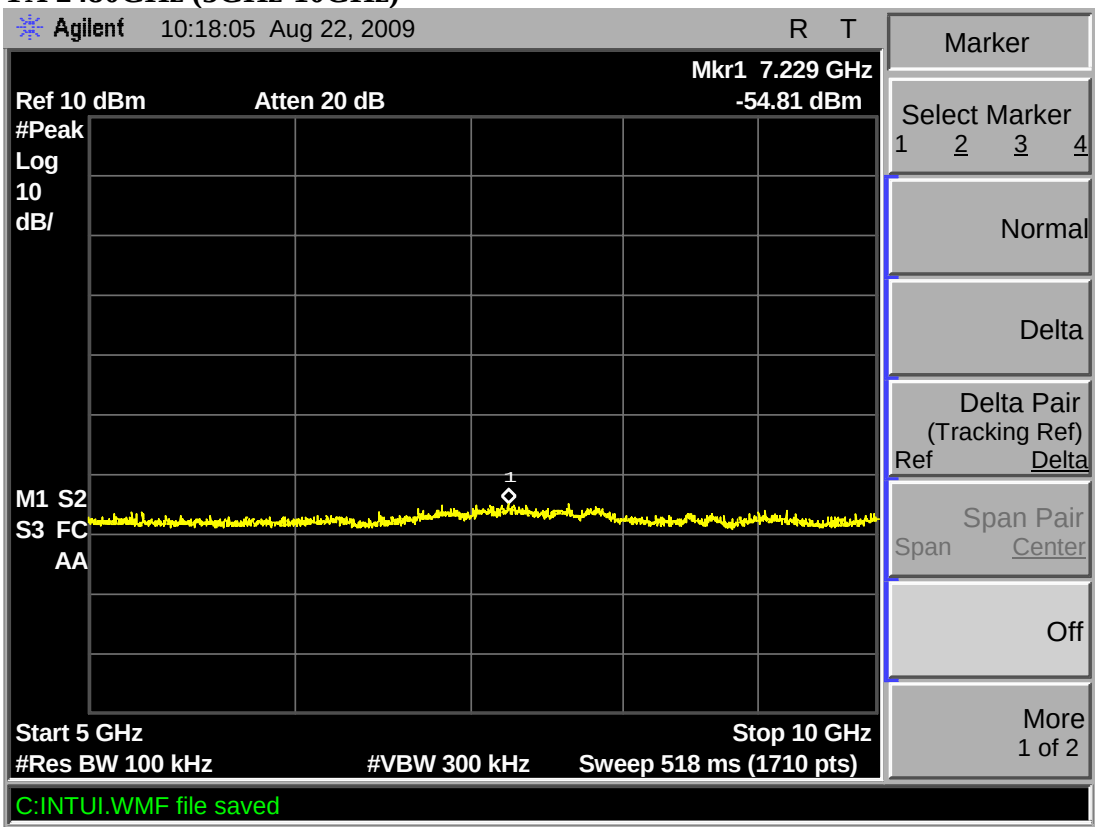
TX 2480GHz (30MHz-1GHz)



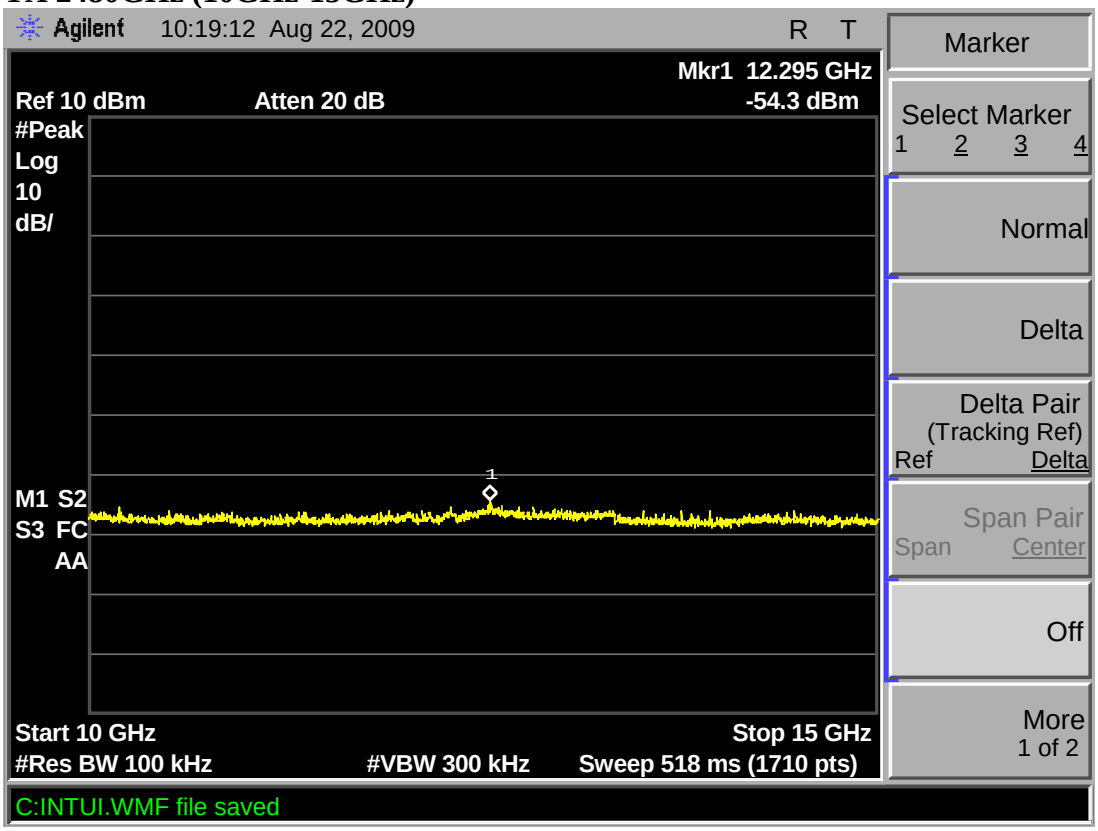
TX 2480GHz (1GHz-5GHz)



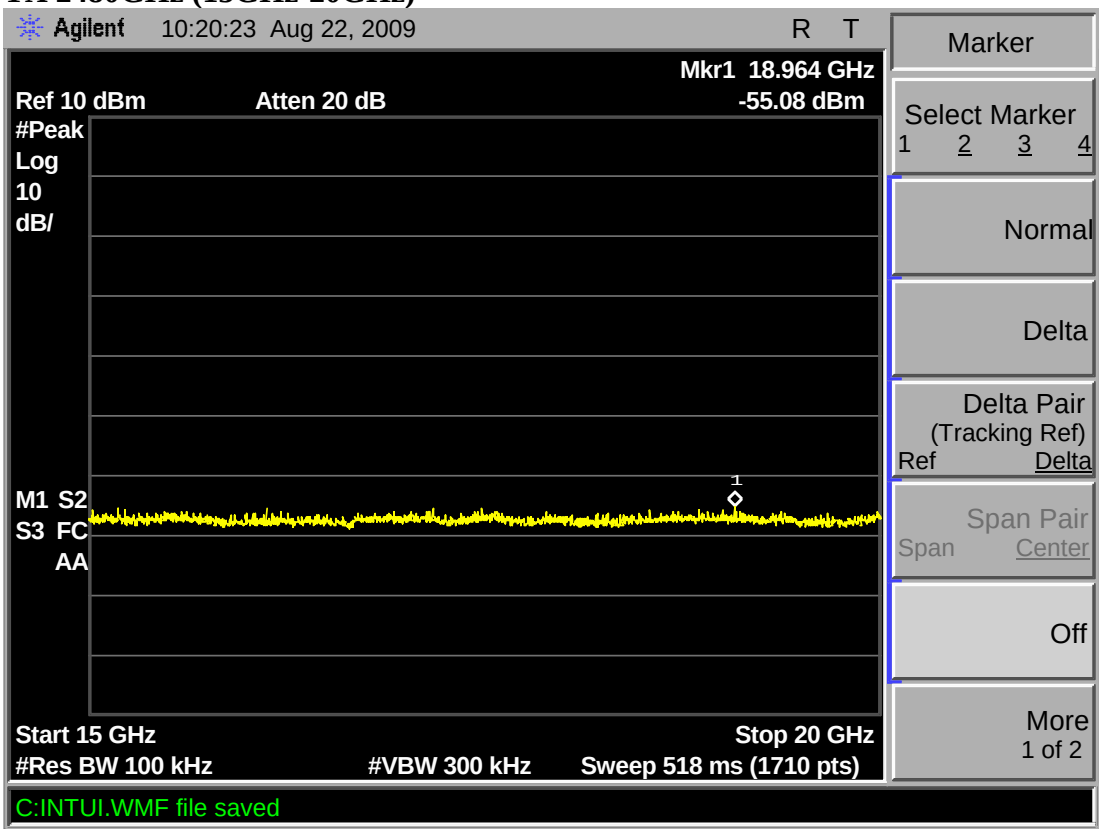
TX 2480GHz (5GHz-10GHz)



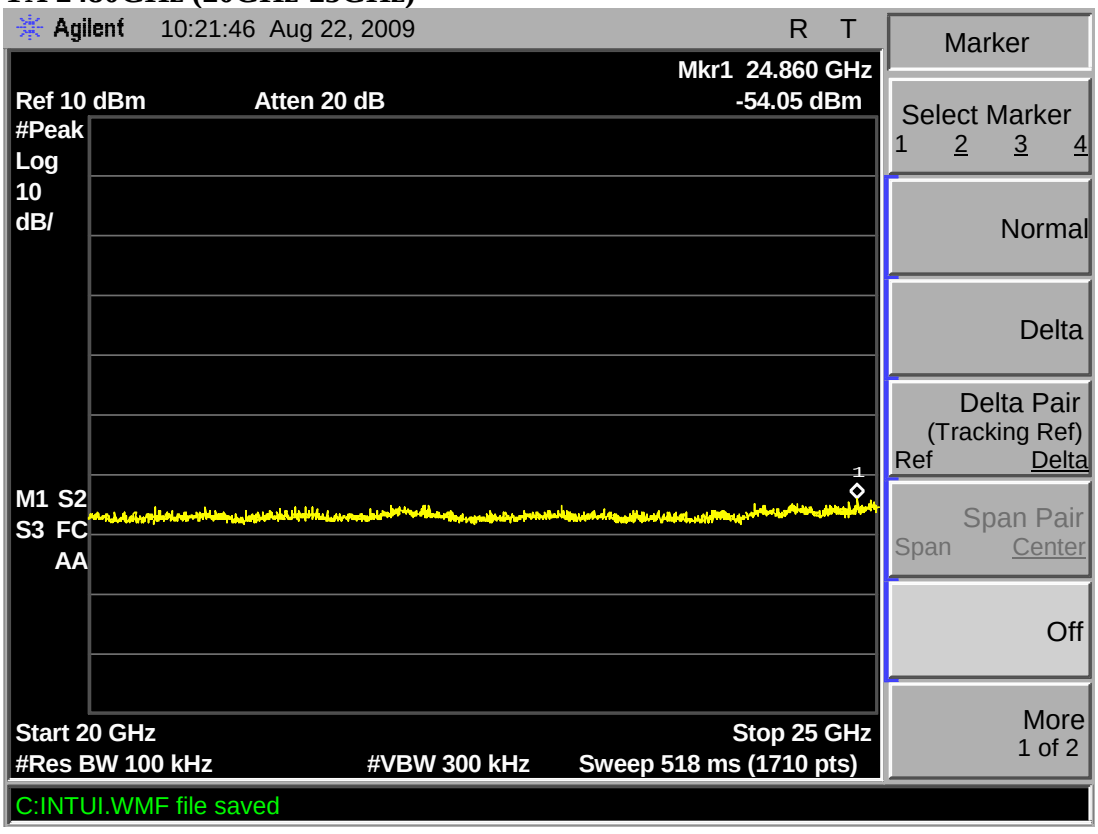
TX 2480GHz (10GHz-15GHz)



TX 2480GHz (15GHz-20GHz)



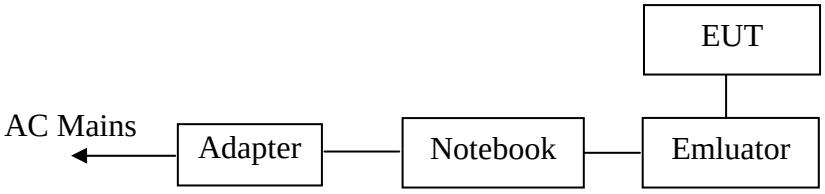
TX 2480GHz (20GHz-25GHz)



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

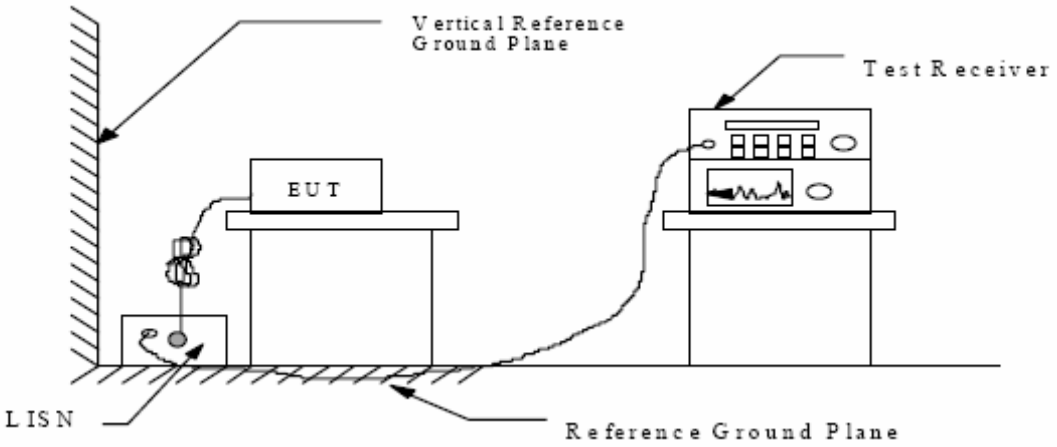
13.1. Block Diagram of Test Setup

13.1.1. Block diagram of connection between the EUT and simulators



(EUT: Syntek BlueW-2310 miniCard)

13.1.2. Shielding Room Test Setup Diagram



(EUT: Syntek BlueW-2310 miniCard)

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.Syntek BlueW-2310 miniCard (EUT)

Model Number	**:**	BlueW-2310 miniCard
Serial Number	**:**	N/A
Manufacturer	**:**	Syntek Semiconductor Co., 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 TX 2441MHz 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:	August 28, 2009	Temperature:	25°C
EUT:	Syntek BlueW-2310 miniCard	Humidity:	50%
Model No.:	BlueW-2310 miniCard	Power Supply:	AC 120V/ 60Hz
Test Mode:	TX 2441MHz	Test Engineer:	Joe

Frequency (MHz)	Result (dBμV)	Limit (dBμV)	Margin (dB)	Detector	Line
0.190505	46.10	64	-17.9	QP	Neutral
0.515791	38.20	56	-17.8	QP	
0.879689	36.90	56	-19.1	QP	
0.188993	39.10	54	-15.0	AV	
0.572085	30.80	46	-15.2	AV	
0.952653	28.70	46	-17.3	AV	
0.188993	45.30	64	-18.8	QP	Live
0.515791	38.00	56	-18.0	QP	
0.975700	37.10	56	-18.9	QP	
0.188993	37.80	54	-16.3	AV	
0.629487	30.40	46	-15.6	AV	
1.048241	29.20	46	-16.8	AV	

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

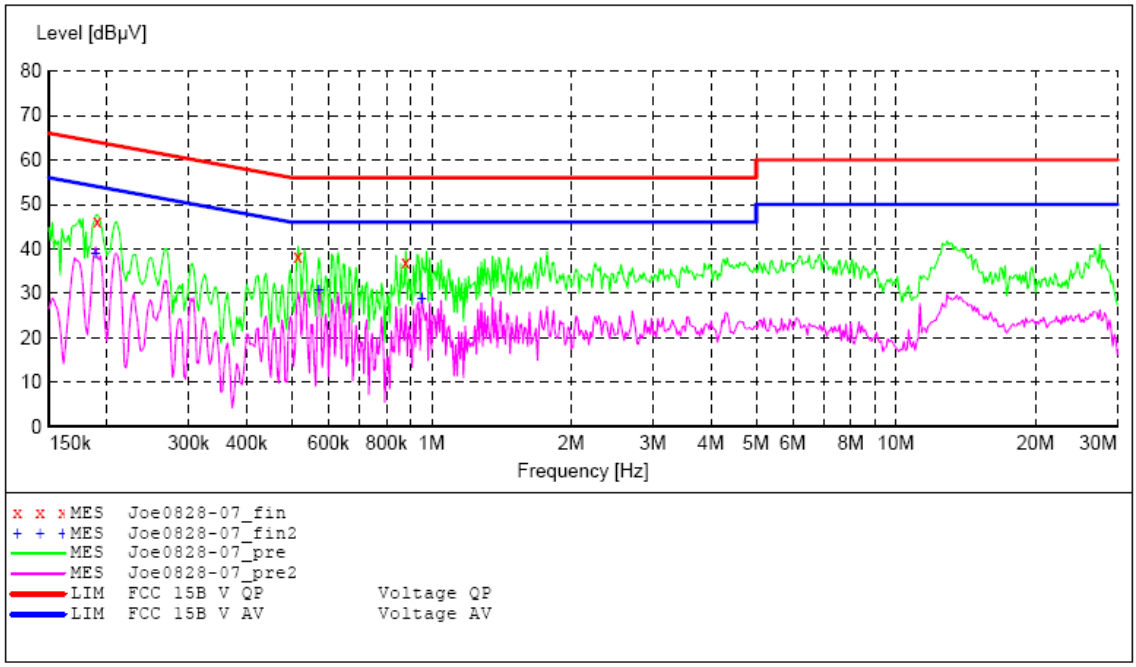
ACCURATE TECHNOLOGY CO.,LTD

CONDUCTED EMISSION STANDARD FCC PART 15B

```
EUT:                  Syntek BlueW-2310 miniCard   M/N:BlueW-2310 miniCard
Manufacturer:         Syntek Semiconductor Co., Ltd.
Operating Condition:  Bluetooth (2441MHz)
Test Site:            1#Shielding Room
Operator:             Joe
Test Specification:   Va 120V/60Hz
Comment:              Sample No.:091864  Report No.:ATE20091643
Start of Test:        8/28/2009 / 3:15:45PM
```

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: "Joe0828-07_fin"

8/28/2009 3:17PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.190505	46.10	11.2	64	17.9	QP	N	GND
0.515791	38.20	12.0	56	17.8	QP	N	GND
0.879689	36.90	11.9	56	19.1	QP	N	GND

MEASUREMENT RESULT: "Joe0828-07_fin2"

8/28/2009 3:17PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.188993	39.10	11.2	54	15.0	AV	N	GND
0.572085	30.80	12.0	46	15.2	AV	N	GND
0.952653	28.70	11.8	46	17.3	AV	N	GND

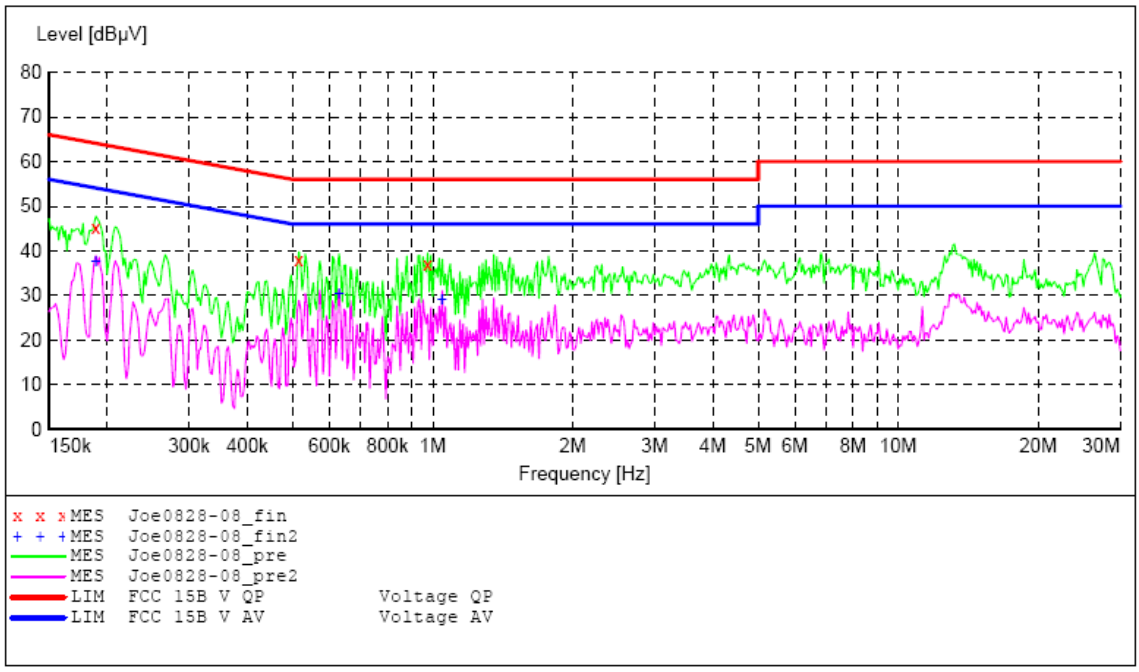
ACCURATE TECHNOLOGY CO.,LTD

CONDUCTED EMISSION STANDARD FCC PART 15B

```
EUT:                  Syntek BlueW-2310 miniCard   M/N:BlueW-2310 miniCard
Manufacturer:         Syntek Semiconductor Co., Ltd.
Operating Condition:  Bluetooth (2441MHz)
Test Site:            1#Shielding Room
Operator:             Joe
Test Specification:   Vb 120V/60Hz
Comment:              Sample No.:091864  Report No.:ATE20091643
Start of Test:        8/28/2009 / 3:18:32PM
```

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: "Joe0828-08_fin"

8/28/2009 3:20PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.188993	45.30	11.2	64	18.8	QP	L1	GND
0.515791	38.00	12.0	56	18.0	QP	L1	GND
0.975700	37.10	11.8	56	18.9	QP	L1	GND

MEASUREMENT RESULT: "Joe0828-08_fin2"

8/28/2009 3:20PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.188993	37.80	11.2	54	16.3	AV	L1	GND
0.629487	30.40	11.9	46	15.6	AV	L1	GND
1.048241	29.20	11.8	46	16.8	AV	L1	GND

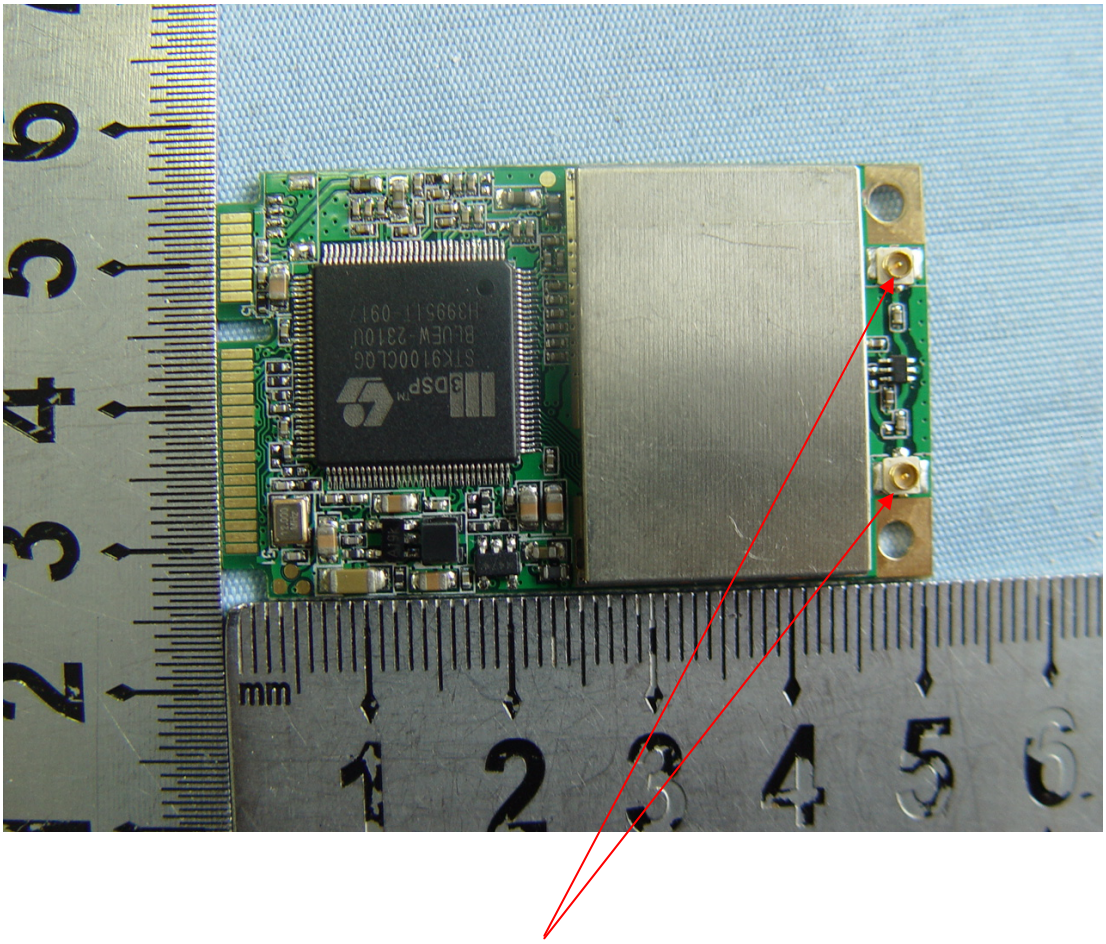
14. ANTENNA REQUIREMENT

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 connector. Therefore, the equipment complies with the antenna requirement of Section 15.203.



Antenna connector