
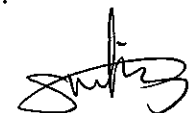


Prüfbericht - Nr.: 17017433 001		Seite 1 von 42	
<i>Test Report No.:</i>		<i>Page 1 of 42</i>	
Auftraggeber:		Wistron NeWeb Corporation.	
<i>Client:</i>		20 Park Avenue II, Hsinchu Science Park, Hsinchu 308, Taiwan, R.O.C.	
Gegenstand der Prüfung: Wireless Audio Embedded Module			
<i>Test item:</i>			
Bezeichnung:	SWA6	Serien-Nr.:	n.a.
<i>Identification:</i>		<i>Serial No.:</i>	
Wareneingangs-Nr.:	163064943	Eingangsdatum:	2010-06-22
<i>Receipt No.:</i>		<i>Date of receipt:</i>	
Prüfört:	TÜV Rheinland (Guangdong) Ltd.		
<i>Testing location:</i>	EMC Laboratory		
	Guangzhou Auto Market, Yuan Gang Section of Guangshan Road, Guangzhou, P.R. China		
	FCC Registration No.: 833845		
	Test site Industry Canada No.: 2932C-1		
Prüfgrundlage:	FCC CFR47 Part 15: Subpart C Section 15.247		
<i>Test specification:</i>	FCC CFR47 Part 15: Subpart C Section 15.207		
	FCC CFR47 Part 15: Subpart C Section 15.209		
	FCC CFR47 Part 15: Subpart B Section 15.107		
	FCC CFR47 Part 15: Subpart B Section 15.109		
	RSS-210 Issue 7 June 2007		
	RSS Gen Issue 2 June 2007		
	RSS-102 Issue 4 March, 2010		
Prüfergebnis:	Der Prüfgegenstand entspricht oben genannter Prüfgrundlage(n).		
<i>Test Result:</i>	<i>The test item passed the test specification(s).</i>		
Prüflaboratorium:	TÜV Rheinland (Shenzhen) Co., Ltd.		
<i>Testing Laboratory:</i>			
geprüft/ tested by:		kontrolliert/ reviewed by:	
			
2010-08-23	Winnie Hou/ Project Engineer	2010-08-24	Sam Lin / Technical Certifier
<i>Datum</i>	<i>Name/Stellung</i>	<i>Unterschrift</i>	<i>Datum</i>
<i>Date</i>	<i>Name/Position</i>	<i>Signature</i>	<i>Date</i>
Sonstiges/ Other Aspects:			
Abkürzungen:		Abbreviations:	
<i>P(ass)</i>	= entspricht Prüfgrundlage	<i>P(ass)</i>	= passed
<i>F(ail)</i>	= entspricht nicht Prüfgrundlage	<i>F(ail)</i>	= failed
<i>N/A</i>	= nicht anwendbar	<i>N/A</i>	= not applicable
<i>NIT</i>	= nicht getestet	<i>NIT</i>	= not tested
<p>Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens.</p> <p><i>This test report relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any safety mark on this or similar products.</i></p>			

TEST SUMMARY

5.1.1 ANTENNA REQUIREMENT*RESULT: Passed***5.1.2 PEAK OUTPUT POWER***RESULT: Passed***5.1.3 6DB BANDWIDTH***RESULT: Passed***5.1.4 99% BANDWIDTH***RESULT: Passed***5.1.5 CONDUCTED SPURIOUS EMISSION MEASURED IN 100KHz BANDWIDTH***RESULT: Passed***5.1.6 PEAK POWER DENSITY***RESULT: Passed***5.1.7 SPURIOUS EMISSION***RESULT: Passed***5.1.8 CONDUCTED EMISSIONS***RESULT: Passed***5.1.9 RADIATED EMISSIONS***RESULT: Passed***5.1.10 RESTRICTED BANDS***RESULT: Passed*

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1. General Remarks

1.1 Complementary Materials

All attachments are integral parts of this test report. This applies especially to the following appendix:

Appendix 1: Test Result

2. Test Sites

2.1 Test Facilities

TÜV Rheinland (Guangdong) Ltd.
EMC Laboratory

Guangzhou Auto Market,
Yuan Gang Section of Guangshan Road,
Guangzhou, P.R. China

FCC Registration No.: 833845

Test site Industry Canada No.: 2932C-1

2.2 List of Test and Measurement Instruments

Table 1: List of Test and Measurement Equipment

Kind of Equipment	Manufacturer	Type	S/N	Calibrated until
Spurious emission and Radiated emission				
EMI Test Receiver	Rohde & Schwarz	ESCI-3	100216	2010-11-26
Spectrum Analyzer	Rohde & Schwarz	FSP30	100286	2010-08-24
Trilog-Broadband Antenna	SCHWARZBECK MESS-ELEKTRONIK	VULB9168	209	2010-11-07
Double-Ridged Waveguide Horn Antenna	Rohde & Schwarz	HF906	100385	2010-08-18
Pre-amplifier	MITEQ	AFS42-00101800-25-S-42	1101599	2010-07-31
Standard Gain Horn Antenna	EMCO	3160-09	21642	N/A
Pre-amplifier	MITEQ	AFS33-18002650-30-8P-44	1108282	2010-07-31
3m Anechoic Chamber	Albatross GmbH	Project	N/A	N/A
Radio Test Suite				
Receiver	Rohde & Schwarz	ESCI	100178	2010-09-27
Conducted Emission				
EMI Test Receiver	Rohde & Schwarz	ESCS30	100316	2011-03-27
Artificial Mains Network	Rohde & Schwarz	ESH2-Z5	100114	2011-03-27
Spectrum analyzer	Agilent	E4407B	MY4144029 2	2011-05-08

2.3 Traceability

All measurement equipment calibrations are traceable to NIST or where calibration is performed outside the United States, to equivalent nationally recognized standards organizations.

2.4 Calibration

Equipment requiring calibration is calibrated periodically by the manufacturer or according to manufacturer's specifications. Additionally all equipment is verified for proper performance on a regular basis using in house standards or comparisons.

2.5 Measurement Uncertainty

The estimated combined standard uncertainty for radiated emissions and conducted emissions measurements are $\pm 3\text{dB}$.

2.6 Location of Original Data

The original copies of all test data taken during actual testing were attached at Appendix 1 of this report and delivered to the applicant. A copy has been retained in the TÜV Rheinland (Shenzhen) file for certification follow-up purposes.

2.7 Status of Facility Used for Testing

The TÜV Rheinland (Guangdong) Ltd. test facility located at Guangzhou Auto Market, Yuan Gang Section of Guangshan Road, Guangzhou, P.R. China is listed on the US Federal Communications Commission list of facilities approved to perform measurements.

3. General Product Information

3.1 Product Function and Intended Use

The EUT is a Wireless Audio Embedded Module, Rocketboost is expandable wireless digital audio, which is uncompressed digital audio compatible with all audio formats like Dolby True HD and DTS-HD master audio used with Blu-ray. Rocketboost technology connects your audio devices throughout your home to form a convenient home audio network. Each Rocketboost sender device sends audio signals around the network and any Rocketboost receiver can access or tune in to that audio, no matter who manufactures them.

The EUT is wireless radio module, which operates at 2.4GHz frequency band and with two printed monopole antenna.

The EUT is identical with original approved model RF-RBCARD except RF-RBCARD has an indicated LED lamp which no significant influence. Hence, the EUT is compliance the standards without additional testing, the test data for model RF-RBCARD was shown in below report. For details refer to the User Manual, technical description and Circuit Diagram.

3.2 Ratings and System Details

Table 2: Rating of EUT

Kind of Equipment:	Wireless Audio Embedded Module
Type Designation:	SWA6
FCC ID	NKR-SWA6
IC	4441A-SWA6

Table 3: Technical Specification of EUT

Technical Specification	Value
Operating Frequency band	2412 – 2462 MHz
Extreme Temperature Range	5°C to 35°C
Operation Voltage	DC 5V (via host equipment)
Channel number	3 (2412MHz, 2438MHz, 2462MHz)
Modulation	OFDM, pi/4 DQPSK
Antenna Type	Internal Antenna, Non-User Replaceable
Antenna Gain	2dBi
RF Output Power	0.276W (24.41dBm)

3.3 Independent Operation Modes

The basic operation modes are:

- A. Transmitting
 - 1. Low channel
 - 2. Middle channel
 - 3. High channel
- B. Standby
- C. Receiving
- D. Off

3.4 Noise Generating and Noise Suppressing Parts

Refer to the Circuit Diagram.

3.5 Submitted Documents

- Bill of Material
- PCB Layout
- Photo Document
- Technical Description
- Circuit Diagram
- Instruction Manual
- Rating Label

4. Test Set-up and Operation Modes

4.1 Principle of Configuration Selection

The equipment under test (EUT) was configured to measure its maximum power level. The test modes were adapted accordingly in reference to the instructions for use.

4.2 Test Operation and Test Software

Test operation refers to test setup in chapter 5. All testing were performed according to the procedures in ANSI C63.4: 2003.

4.3 Special Accessories and Auxiliary Equipment

Kind of Equipment	Type	Rating
AC/DC Adapter	ADS10-W050200	Input: AC100-240V, 50-60Hz 0.5A Output: DC5V 2A

4.4 Countermeasures to achieve EMC Compliance

The test sample which has been tested contained the noise suppression parts as described in the Constructional Data Form or the Technical Construction File. No additional measures were employed to achieve compliance.

4.5 Test Setup Diagram

Diagram of Measurement Configuration for Radiation Test

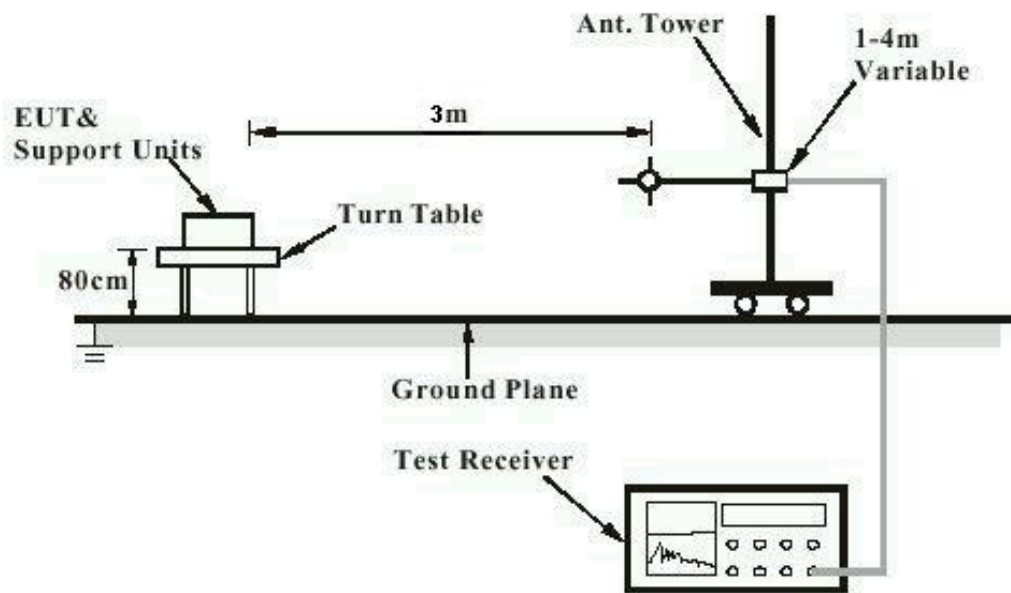


Diagram of Measurement Equipment Configuration for Conduction Measurement

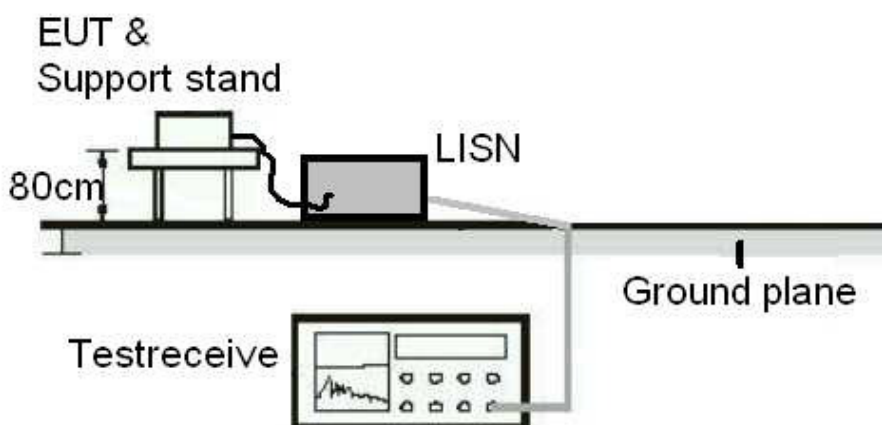
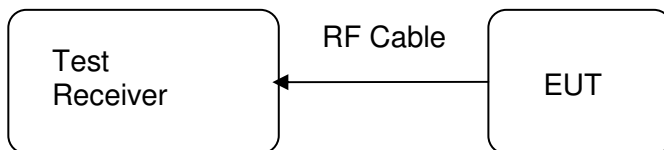


Diagram of Measurement Equipment Configuration for Transmitter Measurement



5. Test Results

5.1 Transmitter Requirement & Test Suites

5.1.1 Antenna Requirement

RESULT:**Passed**

Test date	:	2010-07-20
Test standard	:	FCC Part 15.247(b)(4) and Part 15.203 RSS Gen 7.1.4
Limit	:	the use of antennas with directional gains that do not exceed 6 dBi

According to the manufacturer declared, the EUT has an internal antenna, the directional gain of antenna is 2dBi, and the antenna connector is designed with permanent attachment and no consideration of replacement. Therefore the EUT is considered sufficient to comply the provision.

Refer to EUT photo for details.

5.1.2 Peak Output Power

RESULT:
Passed

Test date : 2010-07-20
 Test standard : FCC Part 15.247(b)(1)
 : RSS-210 A8.4 (2)
 Basic standard : ANSI C63.4: 2003
 Limit : 1 Watt
 Kind of test site : Shielded room

Test setup

Test Channel : Low/ Middle/ High
 Operation Mode : A
 Ambient temperature : 23°C
 Relative humidity : 50%
 Atmospheric pressure : 101 kPa

Table 4: Test result of Peak Output Power, Antenna 0

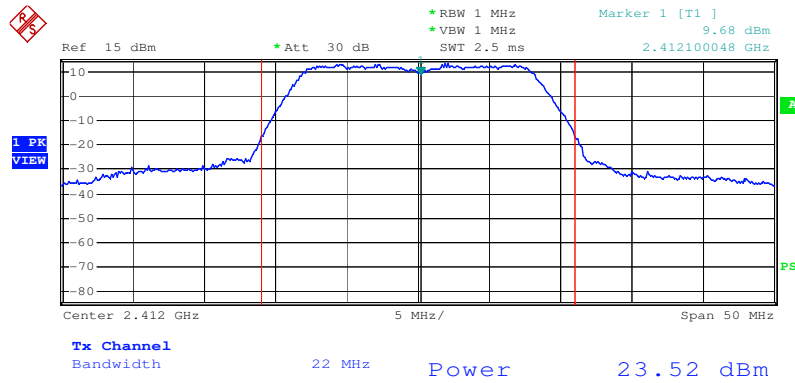
Channel	Channel Frequency (MHz)	Peak Output Power		Limit (W)
		(dBm)	(W)	
Low Channel	2412	23.52	0.225	1
Middle Channel	2438	23.18	0.208	1
High Channel	2462	22.94	0.197	1

Table 5: Test result of Peak Output Power, Antenna 1

Channel	Channel Frequency (MHz)	Peak Output Power		Limit (W)
		(dBm)	(W)	
Low Channel	2412	24.41	0.276	1
Middle Channel	2438	24.18	0.262	1
High Channel	2462	23.48	0.223	1

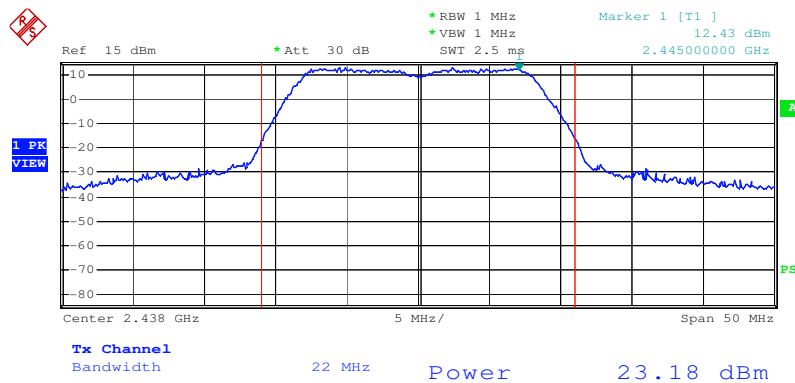
Test Plot of Peak Output Power, Antenna 0

Low Channel

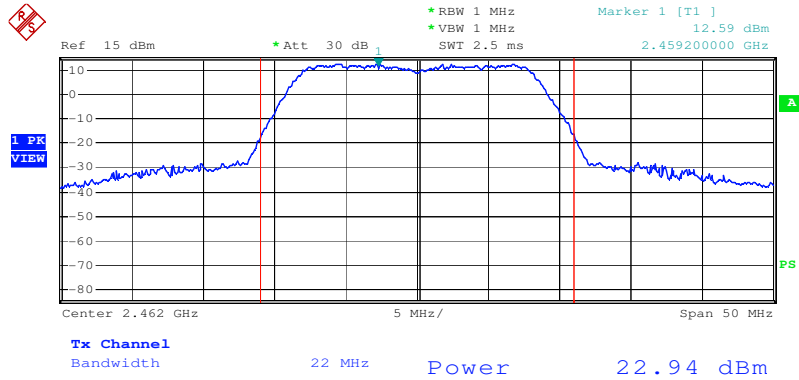


Date: 20.JUN.2010 12:25:06

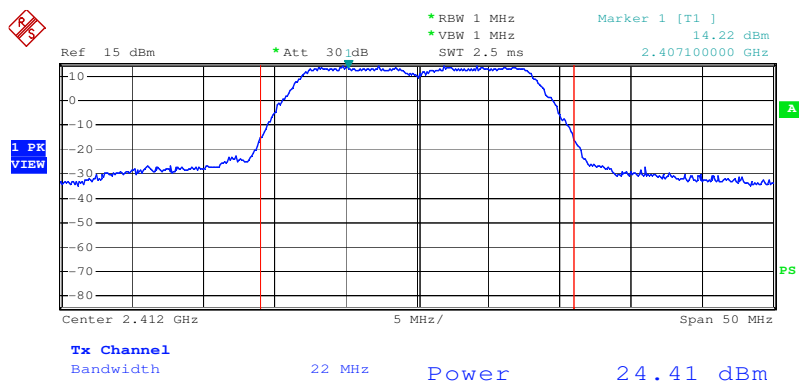
Middle Channel



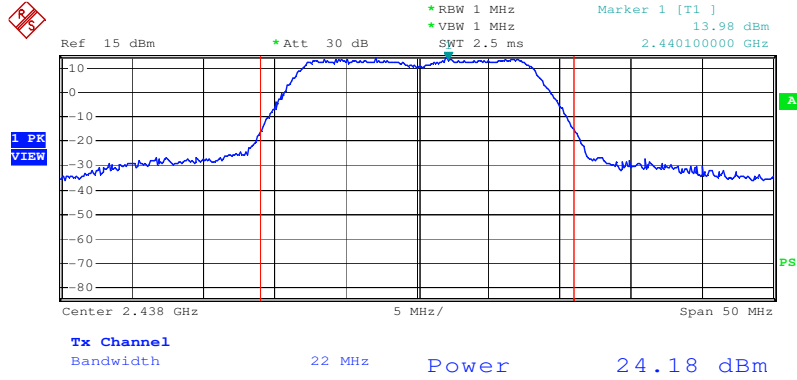
Date: 20.JUN.2010 12:32:23

High Channel


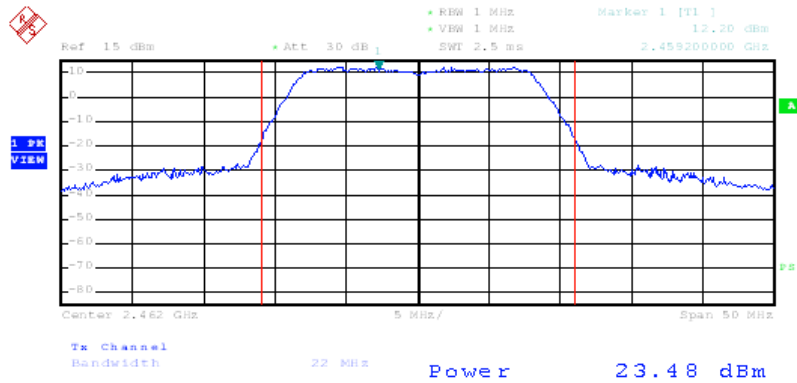
Date: 20.JUN.2010 12:31:33

Test Plot of Peak Output Power, Antenna 1
Low Channel


Date: 20.JUN.2010 13:08:40

Middle Channel


Date: 20.JUN.2010 13:07:58

High Channel


Date: 20.JUN.2010 12:33:31

5.1.3 6dB Bandwidth

RESULT:**Passed**

Date of testing : 2010-07-20
Test standard : FCC Part 15.247(a)(1)
RSS-210 A8.1 (a)
Basic standard : ANSI C63.4: 2003
Kind of test site : Shielded room

Test setup

Test Channel : Low/ Middle/ High
Operation Mode : A
Ambient temperature : 23°C
Relative humidity : 50%
Atmospheric pressure : 101 kPa

Table 6: Test result of 6dB Bandwidth, antenna 0

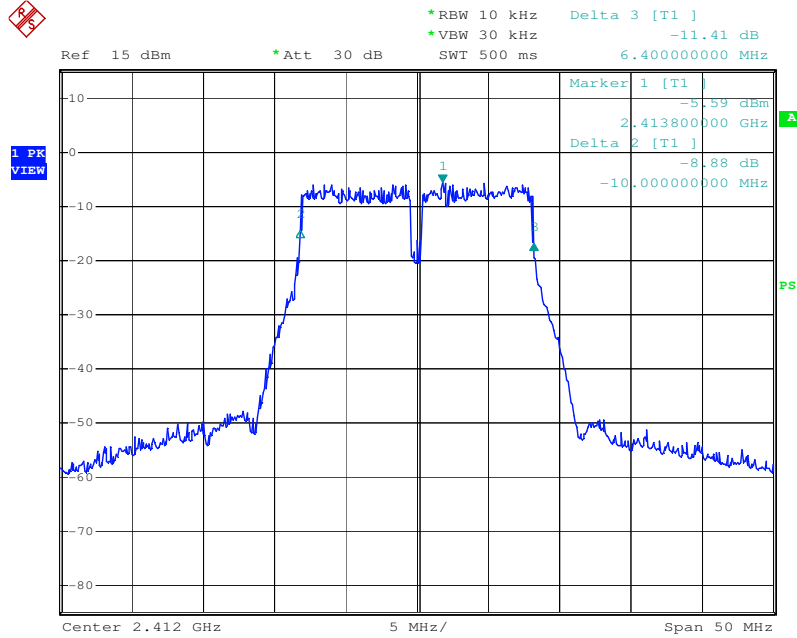
Channel	Channel Frequency (MHz)	6dB Bandwidth (MHz)
Low Channel	2412	16.4
Mid Channel	2438	16.4
High Channel	2462	16.4

Table 7: Test result of 6dB Bandwidth, antenna 1

Channel	Channel Frequency (MHz)	6dB Bandwidth (MHz)
Low Channel	2412	16.28
Mid Channel	2438	16.32
High Channel	2462	16.26

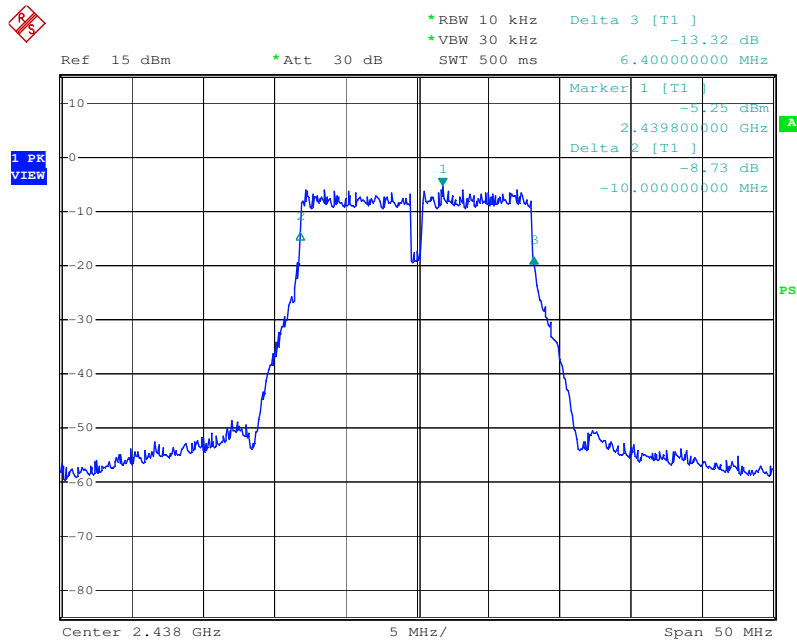
Test Plot of 6dB Bandwidth, Antenna 0

Low Channel

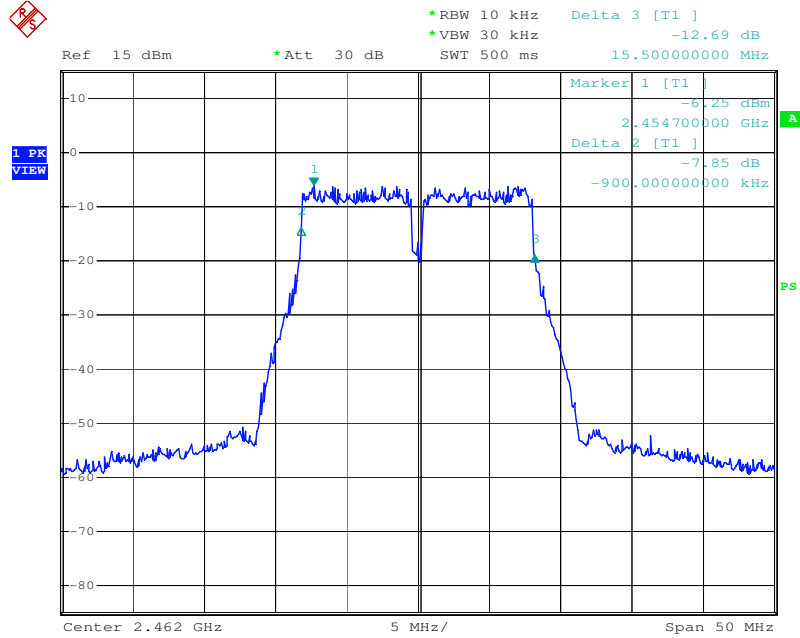


Date: 20.JUN.2010 12:27:38

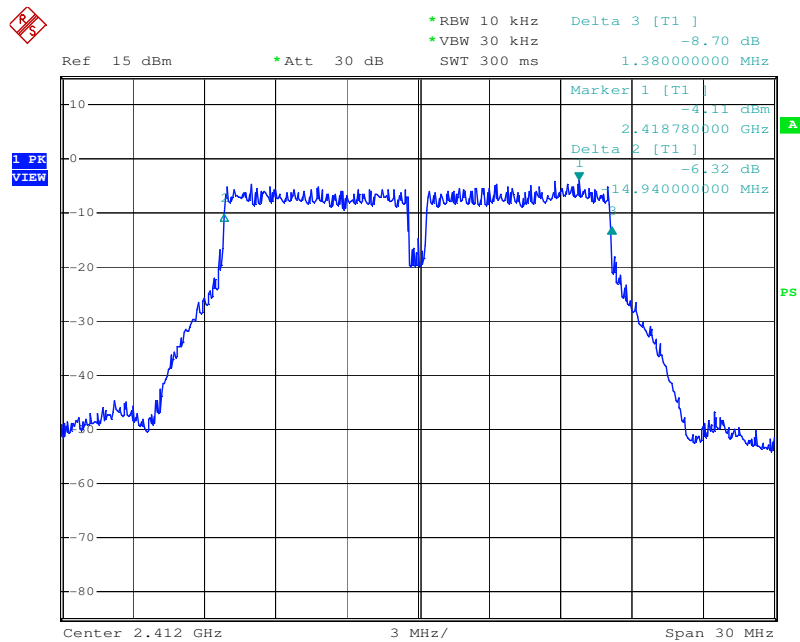
Middle Channel



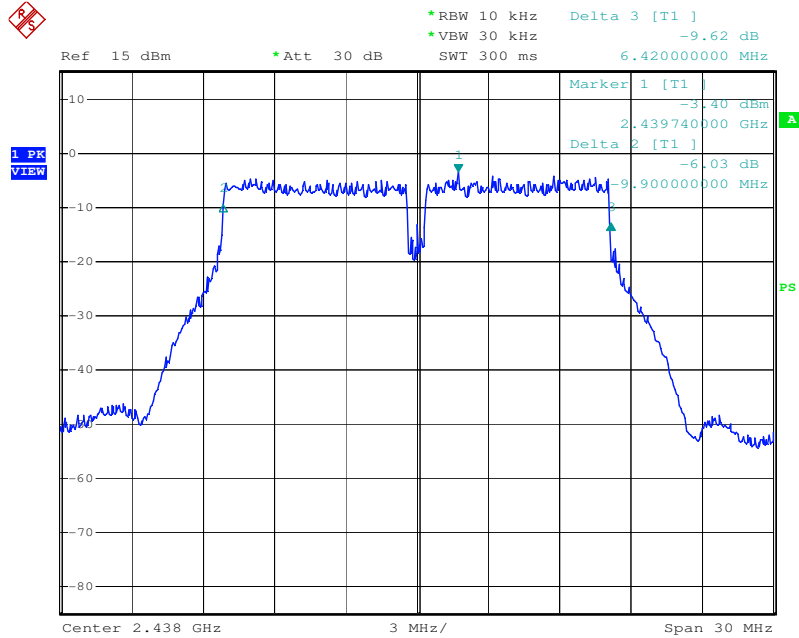
Date: 20.JUN.2010 12:29:03

High Channel


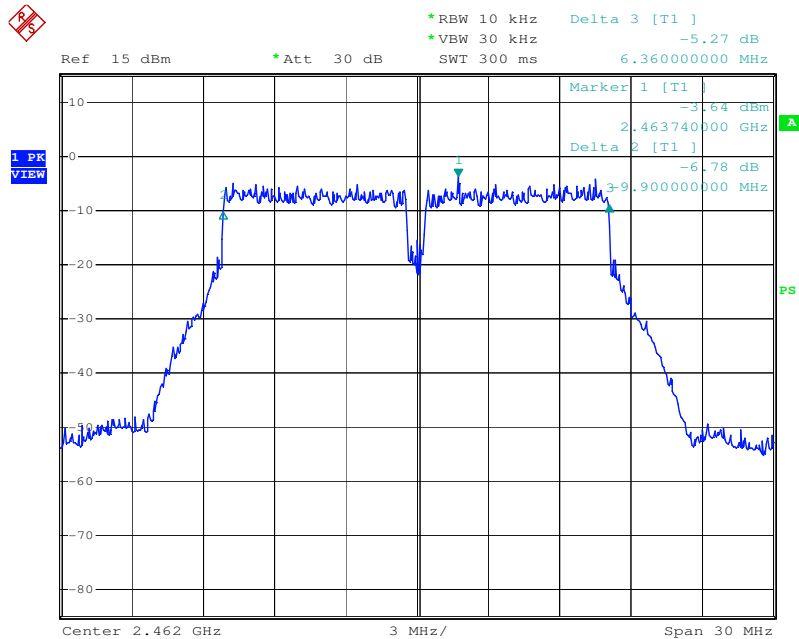
Date: 20.JUN.2010 12:30:22

Test Plot of 6dB Bandwidth, Antenna 1
Low Channel


Date: 20.JUN.2010 13:10:00

Middle Channel


Date: 20.JUN.2010 13:12:21

High Channel


Date: 20.JUN.2010 13:13:31

5.1.4 99% Bandwidth

RESULT:
Passed

Date of testing : 2010-07-27
 Test standard : RSS-Gen clause 4.6.1
 Basic standard : ANSI C63.4: 2003
 Kind of test site : Shielded room

Test setup

Test Channel : Low/ Middle/ High
 Operation Mode : A
 Ambient temperature : 22°C
 Relative humidity : 52%
 Atmospheric pressure : 101 kPa

Table 8: Test result of 99% Bandwidth, Antenna 0

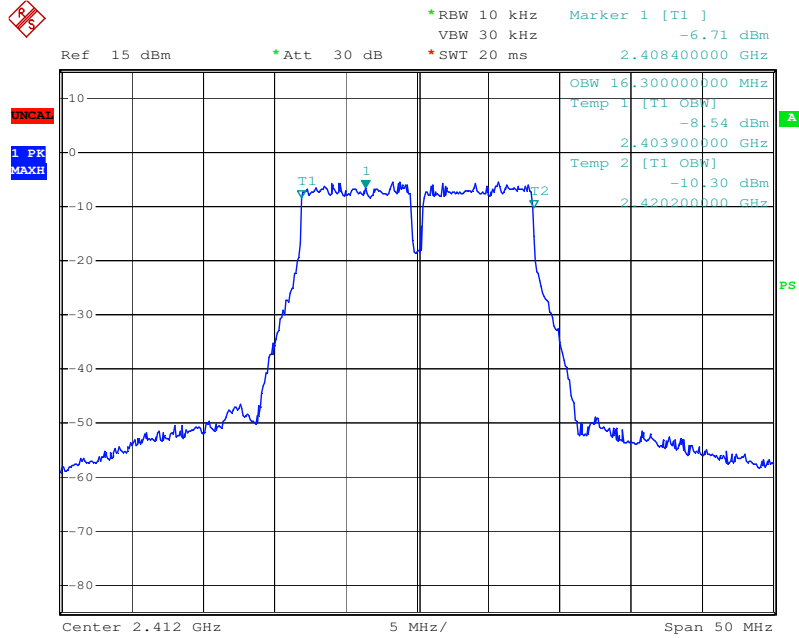
Channel	Channel Frequency (MHz)	99% Bandwidth (MHz)
Low Channel	2412	16.3
Mid Channel	2438	16.2
High Channel	2462	16.3

Table 9: Test result of 99% Bandwidth, Antenna 1

Channel	Channel Frequency (MHz)	99% Bandwidth (MHz)
Low Channel	2412	16.3
Mid Channel	2438	16.2
High Channel	2462	16.3

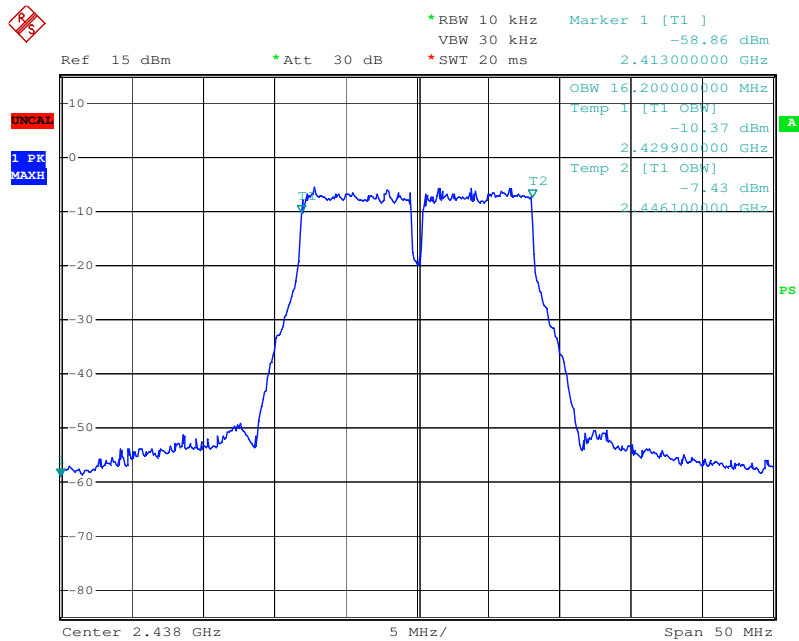
Test Plot of 99% Bandwidth, antenna 0

Low Channel

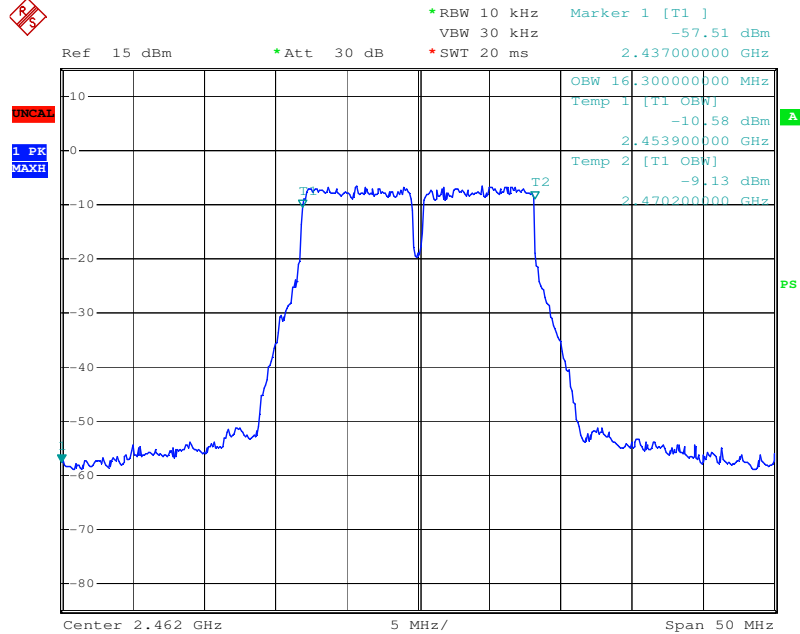


Date: 10.AUG.2010 12:42:13

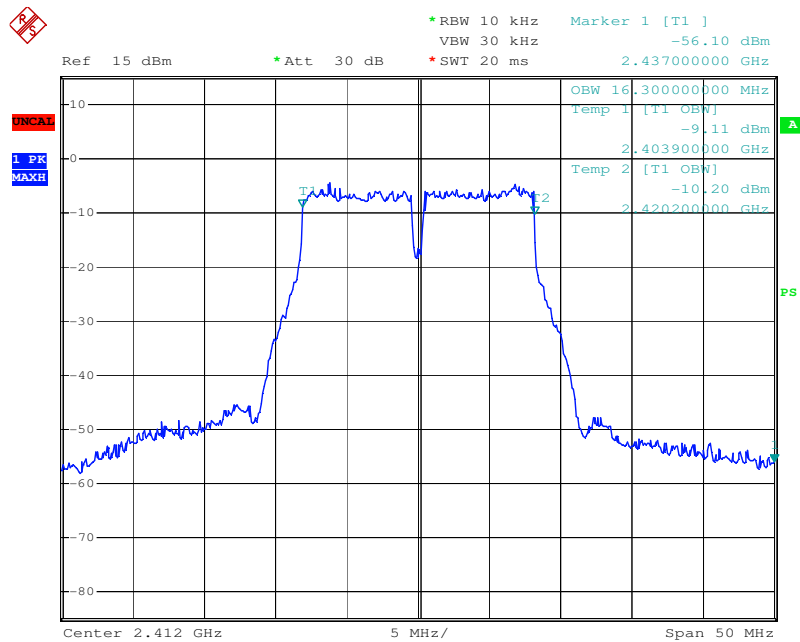
Middle Channel



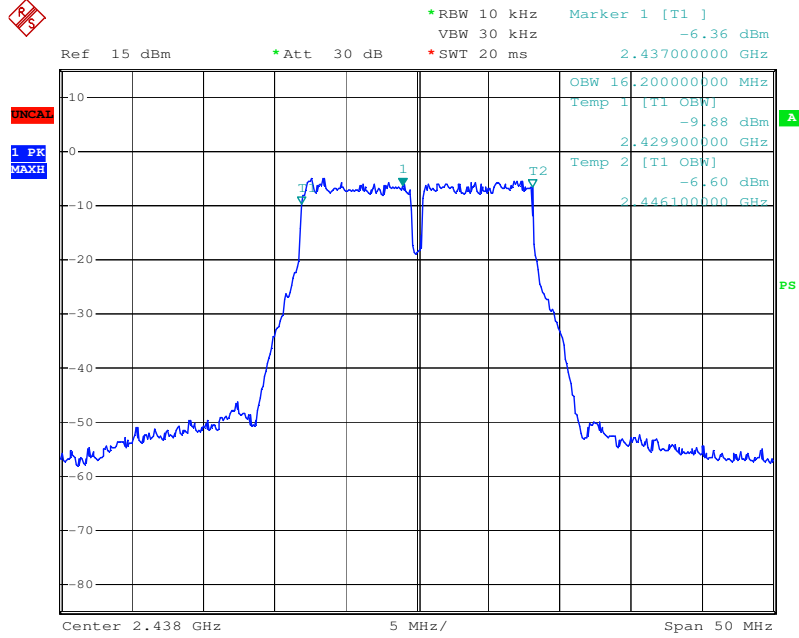
Date: 10.AUG.2010 12:43:54

High Channel


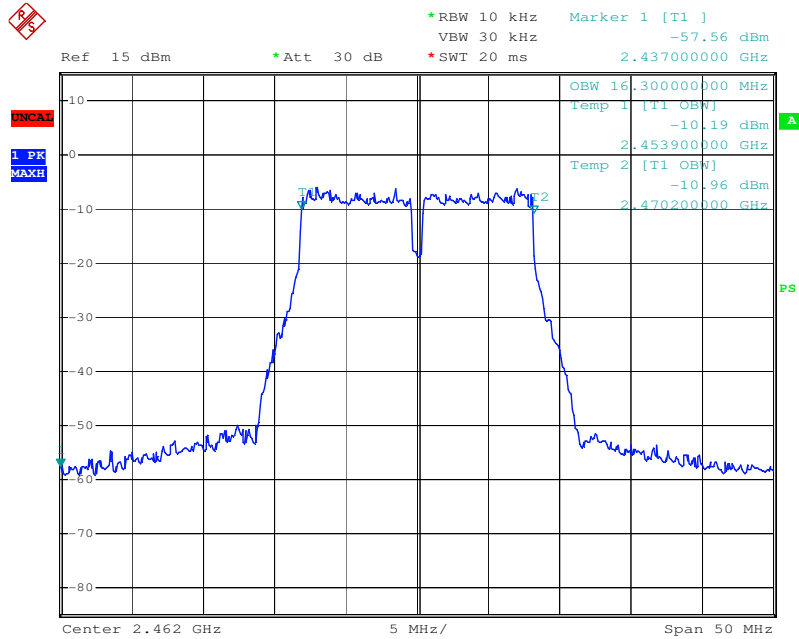
Date: 10.AUG.2010 12:45:17

Test Plot of 99% Bandwidth, antenna 1
Low Channel


Date: 10.AUG.2010 12:48:14

Middle Channel


Date: 10.AUG.2010 12:47:21

High Channel


Date: 10.AUG.2010 12:46:21

5.1.5 Conducted Spurious Emission measured in 100kHz Bandwidth

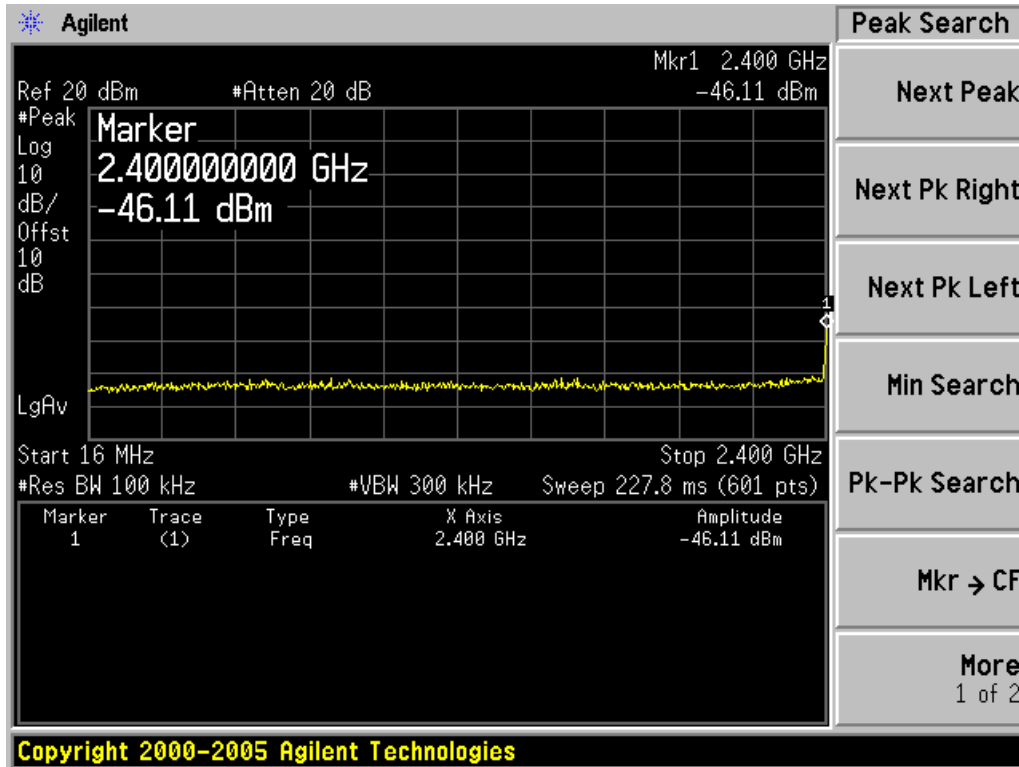
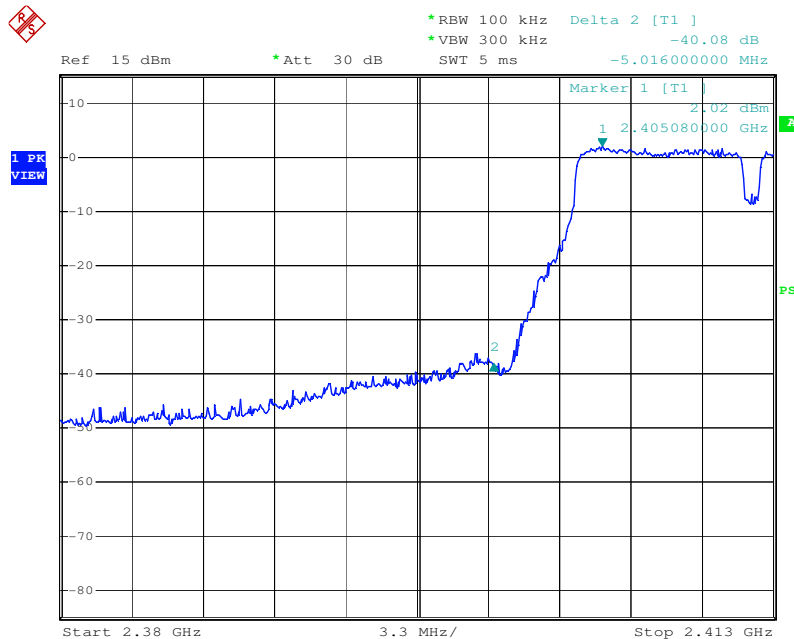
RESULT:**Passed**

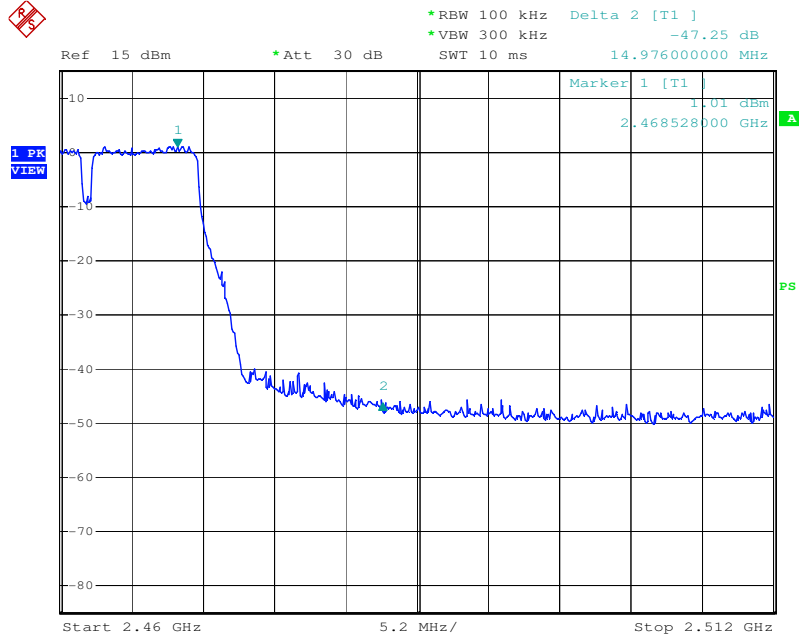
Date of testing	:	2010-07-20
Test standard	:	FCC part 15.247(d) RSS-210 A8.5
Basic standard	:	ANSI C63.4: 2003
Limit	:	20dB (below that in the 100kHz bandwidth within the band that contains the highest level of the desired power); In addition, radiated emissions which fall in the restricted bands, must also comply with the radiated emission limits specified in 15.209(a)
Kind of test site	:	Shield room

Test setup

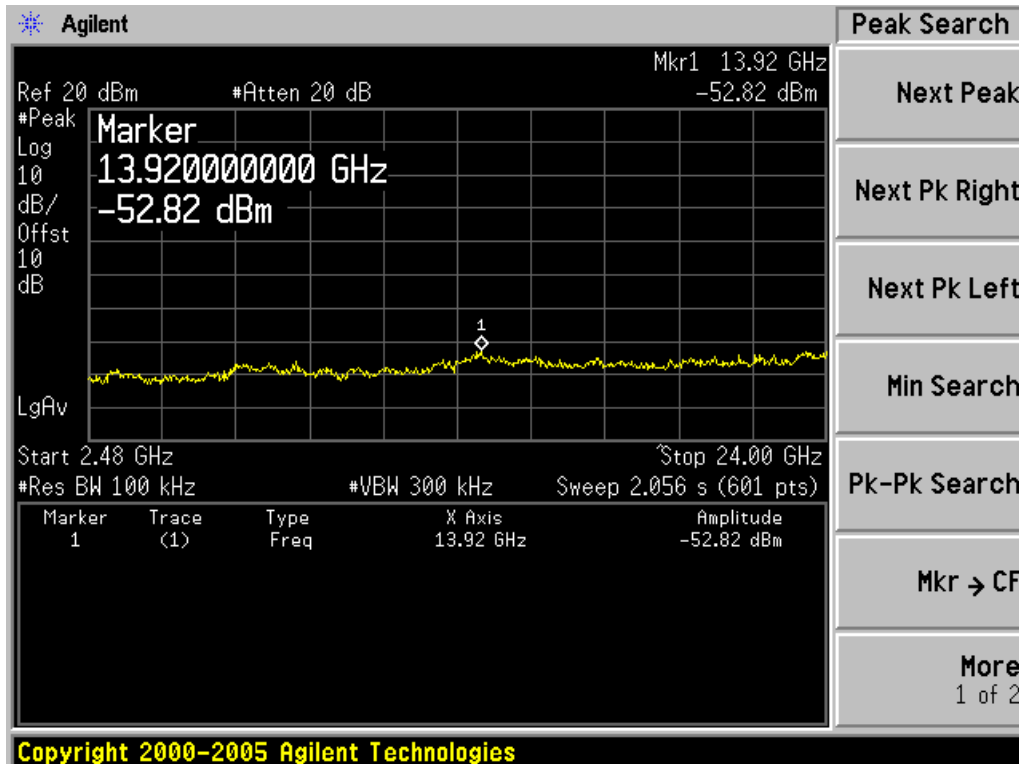
Test Channel	:	Low/ High
Operation mode	:	A
Ambient temperature	:	23°C
Relative humidity	:	50%
Atmospheric pressure	:	101 kPa

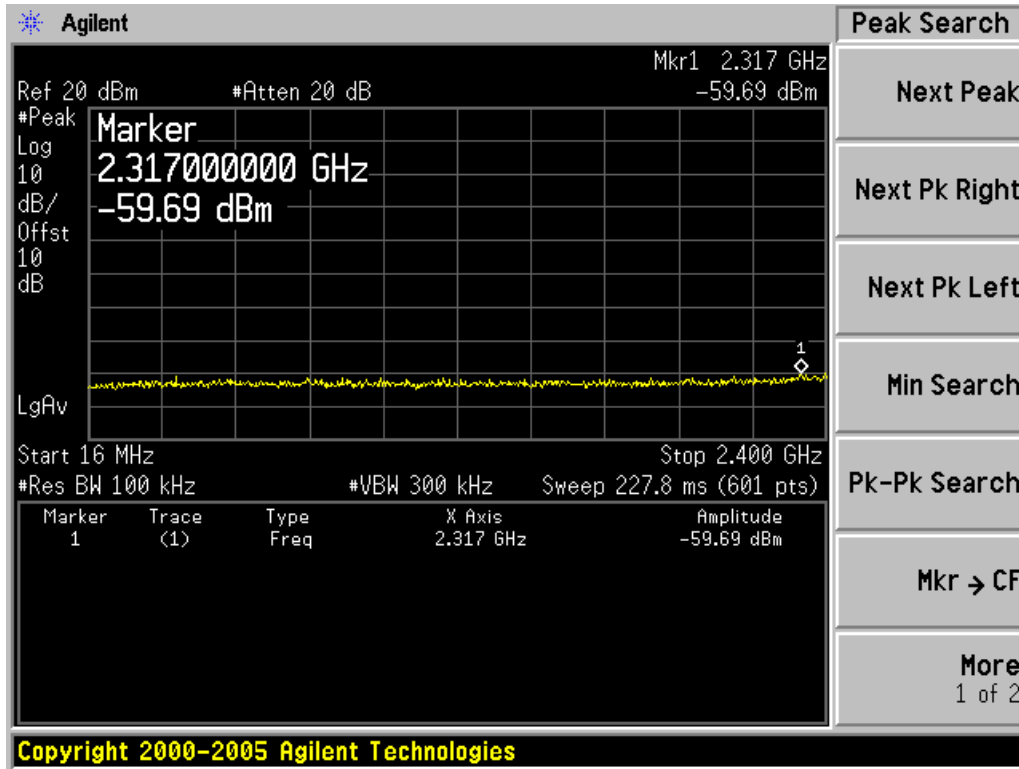
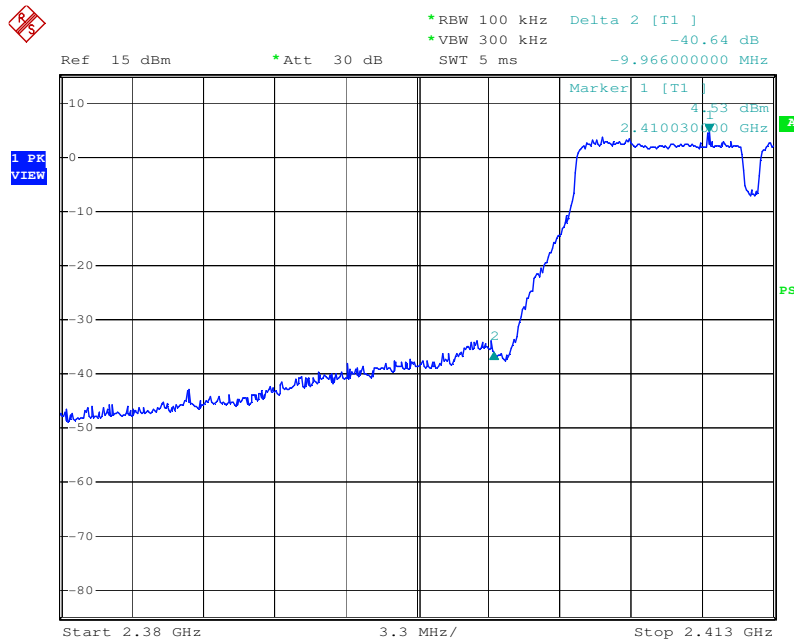
All emissions are more than 20dB below fundamental, details refer to following test plot, and compliance is achieved as well. Test was applied on both antenna 0 and antenna 1, worst case was found on antenna 1.

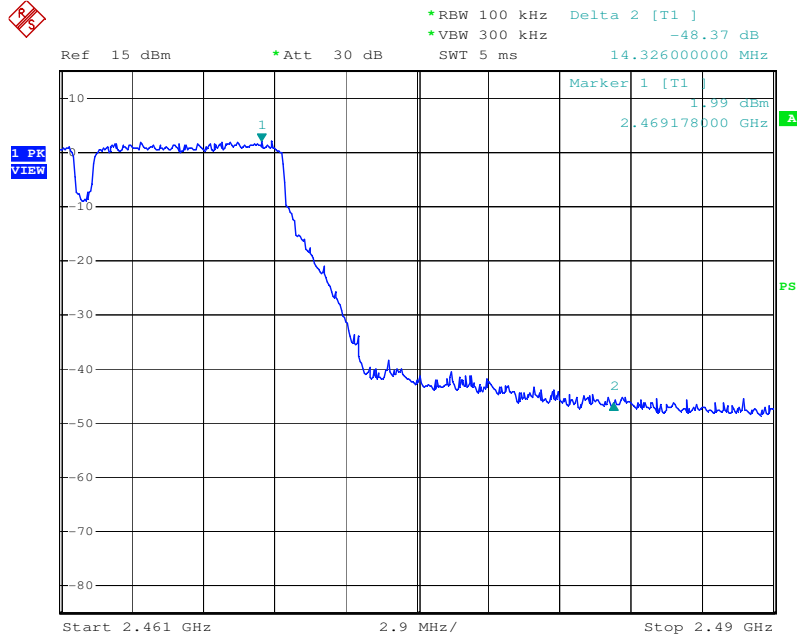
Test Plot of conducted spurious emission, antenna 1, low channel
16MHz to2.4GHz

2380MHz to2413MHz


2460MHz to 2512MHz


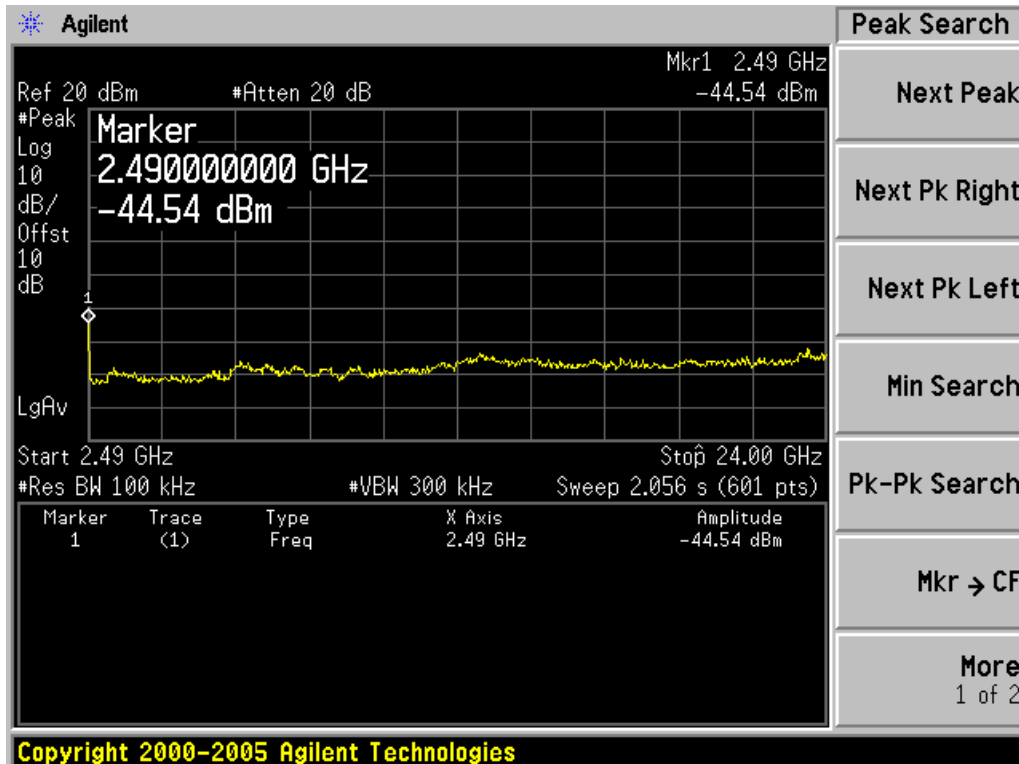
Date: 20.JUN.2010 13:01:07

2483MHz to 24GHz


Test Plot of conducted spurious emission, antenna 1, high channel
16MHz to 2.4GHz

2380MHz to 2413MHz


2461MHz to 2490MHz


Date: 20.JUN.2010 13:06:08

2490MHz to 24GHz


5.1.6 Peak Power Density

RESULT:
Passed

Test date : 2010-07-20
 Test standard : FCC Part 15.247(e)
 : RSS-210 A8.2(b)
 Basic standard : ANSI C63.4: 2003
 Limit : 8.0 dBm (in 3kHz band)
 Kind of test site : Shielded room

Test setup

Test Channel : Low/ Middle/ High
 Operation Mode : A
 Ambient temperature : 23°C
 Relative humidity : 50%
 Atmospheric pressure : 101 kPa

Table 10: Test result of Peak Power Density, Antenna 0

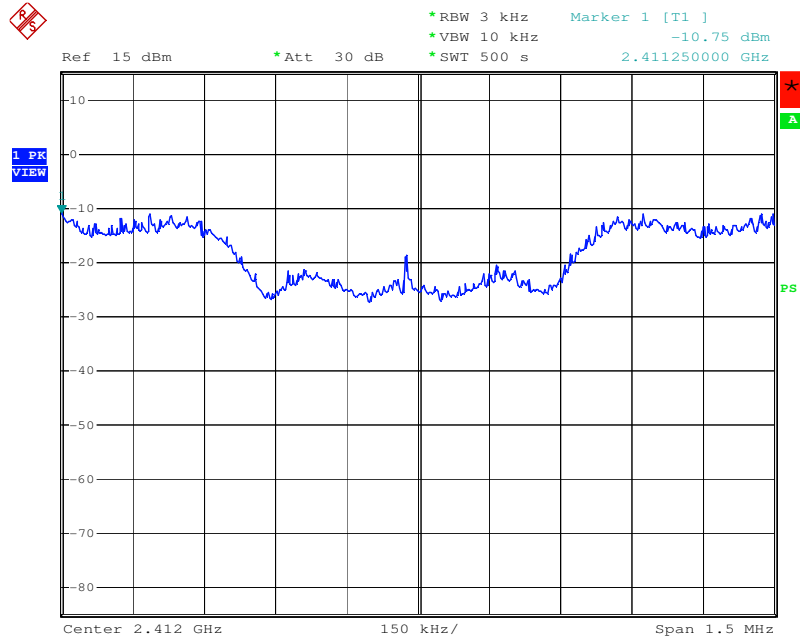
Channel	Channel Frequency (MHz)	Peak Power Density (dBm/3kHz)	Limit (dBm/3kHz)
Low Channel	2412	-10.75	8
Middle Channel	2438	-11.13	8
High Channel	2462	-11.17	8

Table 11: Test result of Peak Power Density, Antenna 1

Channel	Channel Frequency (MHz)	Peak Power Density (dBm/3kHz)	Limit (dBm/3kHz)
Low Channel	2412	-9.81	8
Middle Channel	2438	-10.26	8
High Channel	2462	-10.45	8

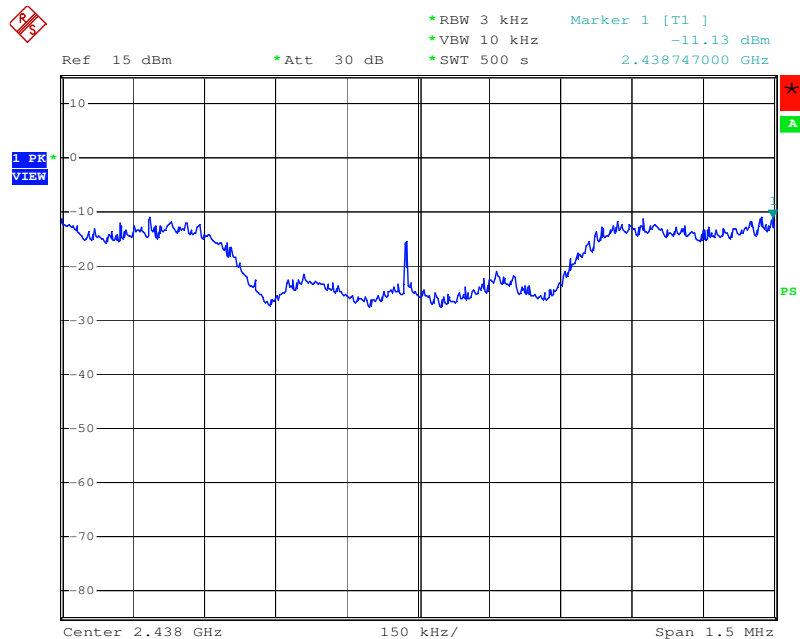
Test Plot of Peak Power Density, Antenna 0

Low Channel

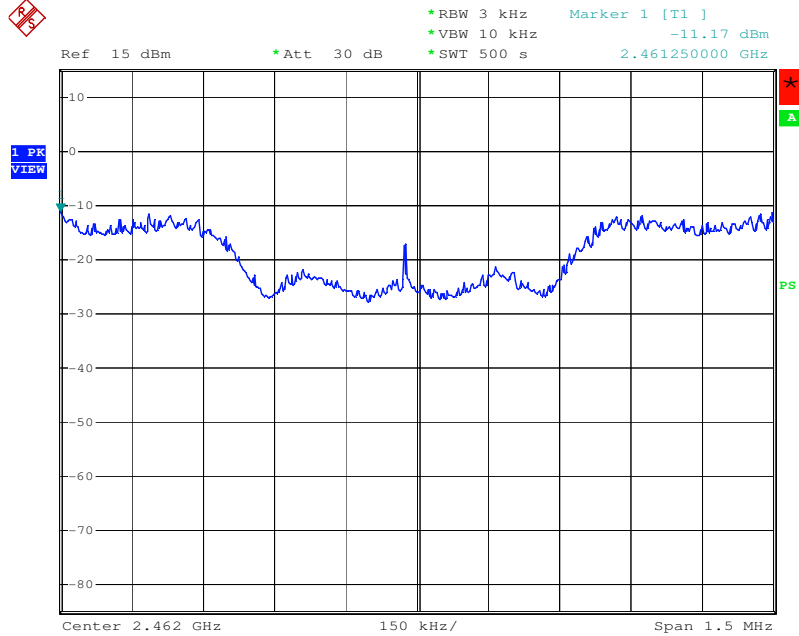


Date: 20.JUN.2010 12:50:31

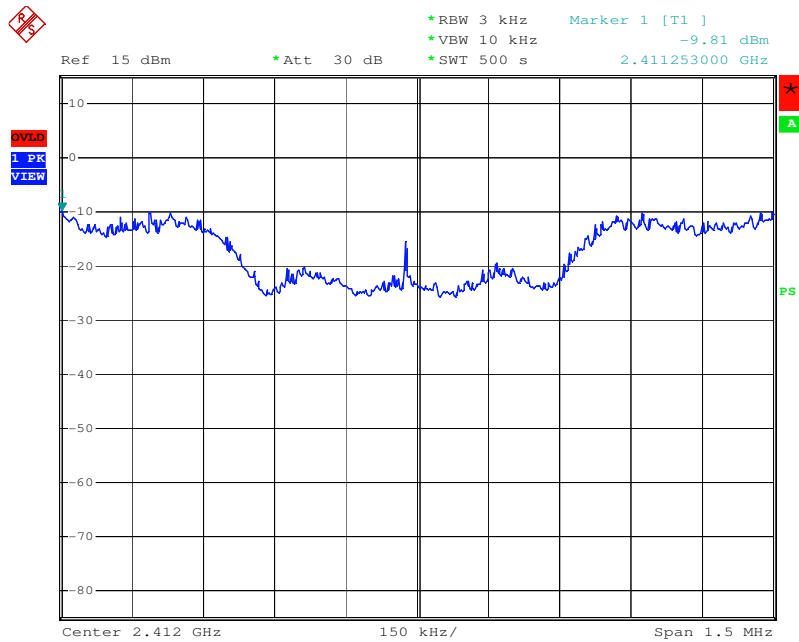
Middle Channel



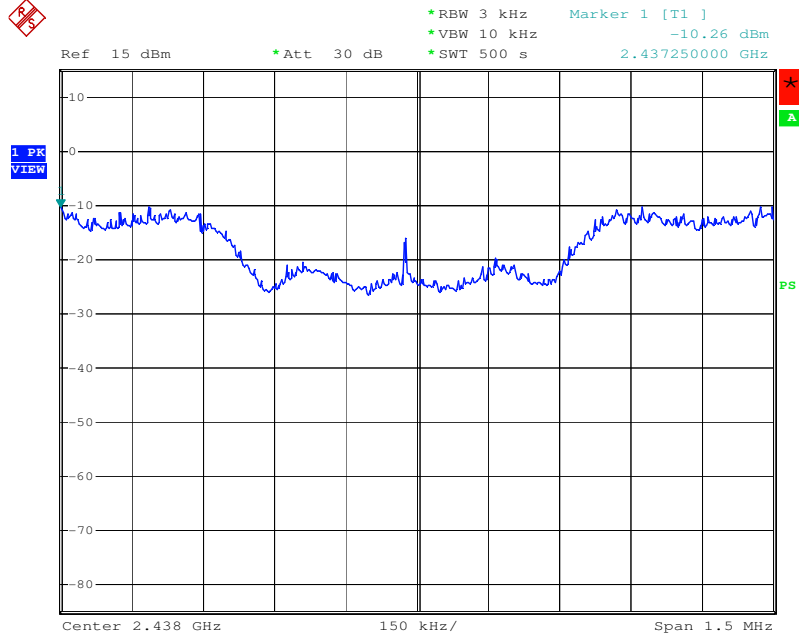
Date: 20.JUN.2010 12:42:24

High Channel


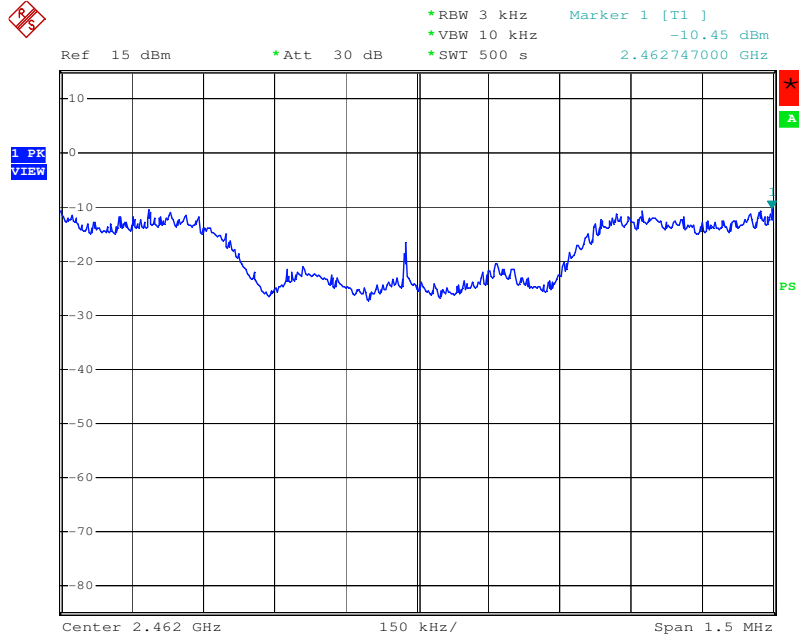
Date: 20.JUN.2010 12:59:28

Test Plot of Peak Power Density, Antenna 1
Low Channel


Date: 20.JUN.2010 13:43:23

Middle Channel


Date: 20.JUN.2010 13:34:28

High Channel


Date: 20.JUN.2010 13:25:29

5.1.7 Spurious Emission

RESULT:**Passed**

Date of testing : 2010-07-08 to 2010-07-12
Test standard : FCC part 15.247(d)
RSS-210 Clause 2.2
Basic standard : ANSI C63.4: 2003
Limits : Refer to 15.209(a) of FCC part 15.247(d)
Refer to RSS-210 Table 2&3
Kind of test site : 3m Semi-Anechoic Chamber

Test setup

Test Channel : Low/ Middle/ High
Operation mode : A, B
Ambient temperature : 23°C
Relative humidity : 50%
Atmospheric pressure : 101 kPa

Remark: Testing was carried out on both antenna 0 and antenna 1, but only worst case was shown in Appendix 1. The worst case was found in using antenna 1.

Prüfbericht - Nr.: 17016719 001

Test Report No.

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5.1.8 Conducted emissions

RESULT:**Passed**

Date of testing : 2010-07-09
Test standard : FCC Part 15.207(a)
FCC Part 15.107(a)
Basic standard : ANSI C63.4: 2003
Frequency range : 0.15 – 30MHz
Limits : FCC Part 15.207(a)
FCC Part 15.107(a)
Kind of test site : Shield room

Test setup

Input Voltage : AC 120V, 60Hz
(of Adapter)
Operation Mode : A+B
Earthing : Not connected
Ambient temperature : 22°C
Relative humidity : 50%
Atmospheric pressure : 101 kPa

Detailed test data refer to Appendix 1.

5.1.9 Radiated emissions

RESULT:**Passed**

Date of testing	:	2010-07-08
Test standard	:	FCC Part 15.209 FCC Part 15.109 RSS-210 Clause 2.6
Basic standard	:	ANSI C63.4: 2003
Frequency range	:	30 – 1000MHz
Limits	:	FCC Part 15.209(a) FCC Part 15.109(a) RSS-210 Table 2
Kind of test site	:	3m Semi-Anechoic Chamber

Test Setup

Input Voltage (of Adapter)	:	AC 120V, 60Hz
Operation Mode	:	A+B
Earthing	:	Not Connected
Ambient temperature	:	23°C
Relative humidity	:	50%
Atmospheric pressure	:	101 kPa

Detailed test data refer to Appendix 1.

Prüfbericht - Nr.: 17016719 001

Test Report No.

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5.1.10 Restricted bands

RESULT:**Passed**

Date of testing : 2010-07-08
Test standard : FCC Part 15.205
RSS-210 Clause 2.2
Basic standard : ANSI C63.4: 2003
Limits : FCC Part 15.205
RSS-210 Table 2 and 3
Kind of test site : 3m Semi-Anechoic Chamber

Test Setup

Test Channel : Low/ High
Input Voltage : AC 120V, 60Hz
(of Adapter)
Operation Mode : A
Earthing : Not Connected
Ambient temperature : 23°C
Relative humidity : 50%
Atmospheric pressure : 101 kPa

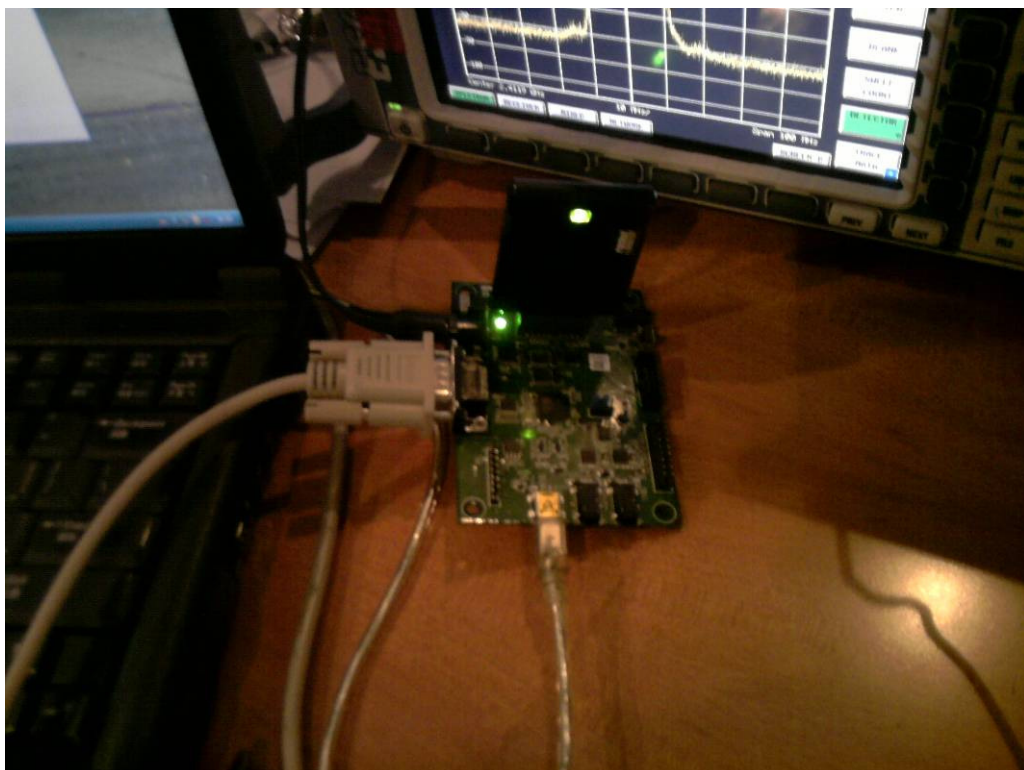
Detailed test data refer to Appendix 1.

6. Photographs of the Test Set-Up

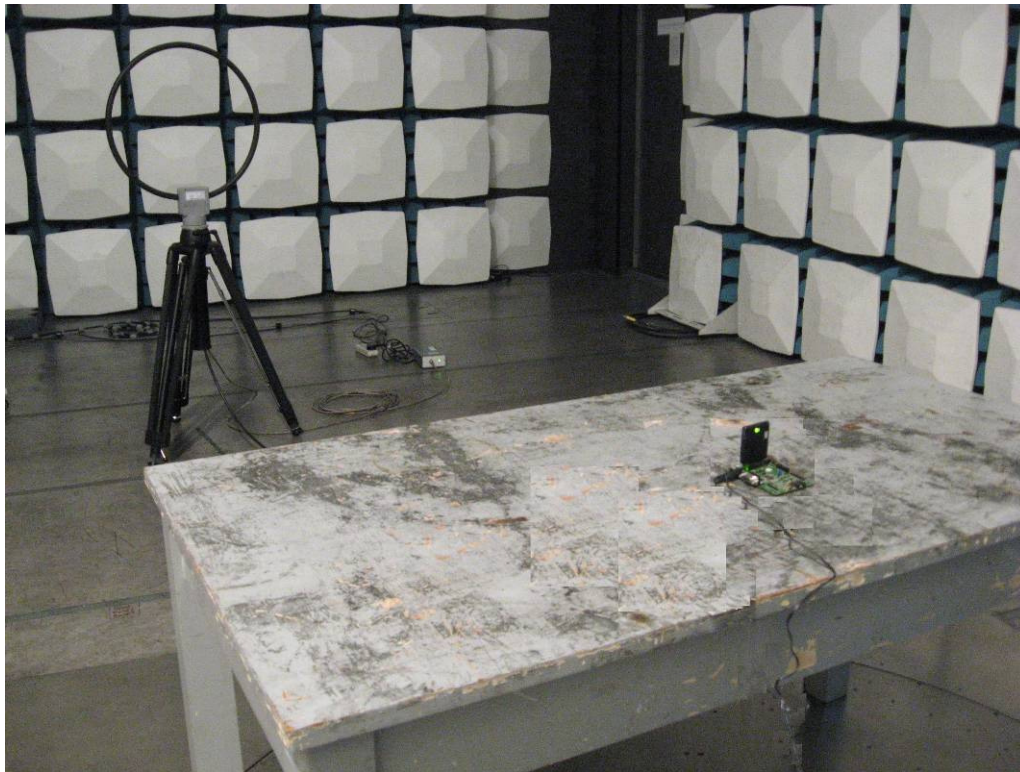
Photograph 1: Set-up for Radiated Emissions



Photograph 2: Set-up for Transmitter test



Photograph 3: Set-up for Spurious Emissions (9kHz-30MHz)



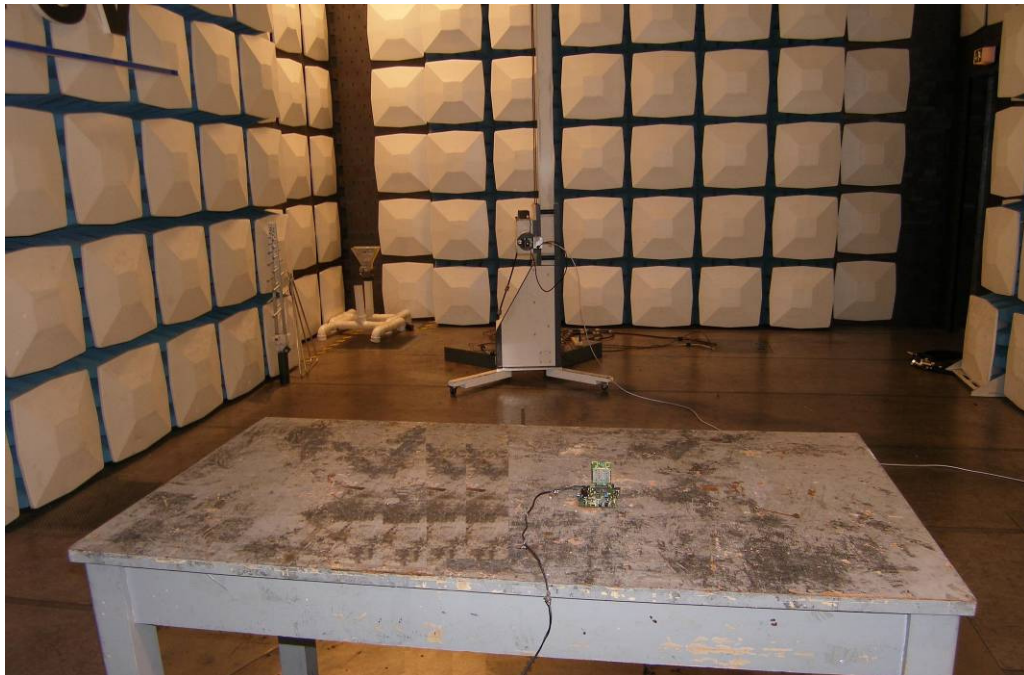
Photograph 4: Set-up for Spurious Emissions (30MHz-1GHz)



Photograph 5: Set-up for Spurious Emissions (1GHz-18GHz)



Photograph 6: Set-up for Spurious Emissions (18GHz-26GHz)



Photograph 7: Set-up for Conducted Emissions



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Test Plot of Spurious emission of A.1 – Horizontal (9kHz – 30MHz)

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

EMC Test Record (Emission)

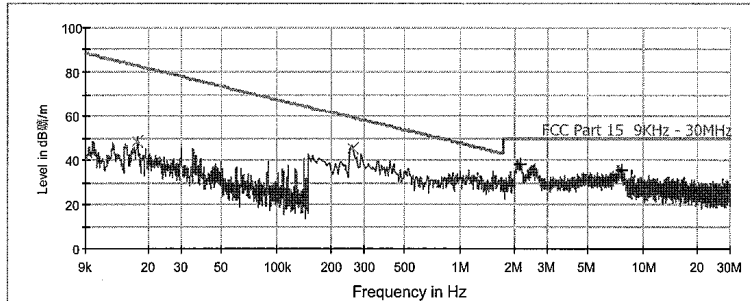
Test Information

Manufacturer: Wistron
 Test Item: ROCKETBOOST READY CARD-RF-RBCARD
 Identification: RF-RBCARD
 Test Standard: FCC Part 15
 Test Detail: RE
 Operation Mode: Tx @ Low channel
 Climate Condition: 23 °C; 50 %RH; 101 kPa.
 Test Voltage / Freq. : DC 5V via AC adapter
 Receipt No.: 163064942 100
 Report No.: 17016719 001
 Result: Pass
 Comment: Horizontal

Subrange 1

Frequency Range: 9kHz - 30MHz
 Receiver: TUV ESCI 3
 Transducer: TUV SAC Active Loop Antenna HFH2-Z2 / TUV ESCI3 -TUV SAC Active Loop Antenna HFH2-Z2

Pre TUV 9K to 30M HFH2-Z2



Result Table Single

Frequency (MHz)	QuasiPeak (dBµV/m)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Corr. (dB)	Comment
0.017320	---	48.5	1000.0	0.200	0.0	H	20.7	
0.258000	---	45.3	1000.0	9.000	0.0	H	20.9	
2.118000	38.0	---	1000.0	9.000	0.0	H	20.2	
7.606000	35.4	---	1000.0	9.000	0.0	H	21.9	

Date: 12/07/2010 - Time: 16:24:58

Tested by: _____ Reviewed by:

Test Plot of Spurious emission of A.1 – Vertical (9kHz – 30MHz)

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

EMC Test Record (Emission)

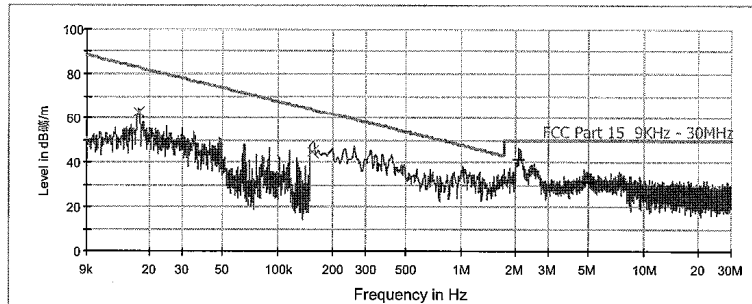
Test Information

Manufacturer: Wistron
 Test Item: ROCKETBOOST READY CARD-RF-RBCARD
 Identification: RF-RBCARD
 Test Standard: FCC Part 15
 Test Detail: RE
 Operation Mode: Tx @ Low channel
 Climate Condition: 23 °C; 50 %RH; 101 kPa.
 Test Voltage / Freq. : DC 5V via AC adapter
 Receipt No.: 163064942 100
 Report No. 17016719 001
 Result: Pass
 Comment: Vertical

Subrange 1

Frequency Range: 9kHz - 30MHz
 Receiver: TUV ESCI 3
 Transducer: TUV SAC Active Loop Antenna HFH2-Z2 / TUV ESCI3 -TUV SAC Active Loop Antenna HFH2-Z2

Pre TUV 9K to 30M HFH2-Z2



Result Table Single

Frequency (MHz)	QuasiPeak (dBµV/m)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Corr. (dB)	Comment
0.017320	---	62.9	1000.0	0.200	0.0	V	20.7	
0.154000	---	44.6	1000.0	9.000	0.0	V	20.7	
2.066000	41.0	---	1000.0	9.000	0.0	V	20.2	
4.926000	31.2	---	1000.0	9.000	0.0	V	21.8	

Date: 12/07/2010 - Time: 17:13:57

Tested by: _____ Reviewed by:

Test Plot of Spurious emission of A.1 – Horizontal (30MHz – 1GHz)

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

EMC Test Record (EMISSION)

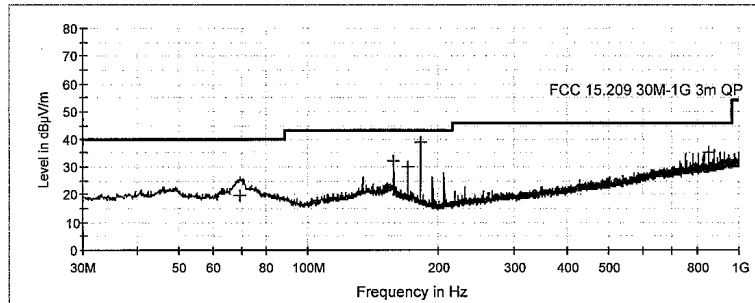
Test Information

Manufacturer: Wistron
 Test Item: ROCKETBOOST READY CARD-RF-RBCARD
 Identification: RF-RBCARD
 Test Standard: FCC Part 15
 Test Detail: RE
 Operation Mode: Tx @ Low channel
 Climate Condition: 23 °C; 50 %RH; 101 kPa.
 Test Voltage / Freq. : DC 5V via AC adapter
 Receipt No.: 163064942 100
 Report No.: 17016719 001
 Result: Pass
 Comment: Horizontal

Subrange 1

Frequency Range: 30MHz - 1GHz
 Receiver: TUV ESCI 3
 Transducer: TUV SAC UVLB 9168 / TUV ESCI3 -TUV SAC UVLB 9168

FCC 15.209 30M-1G sweep



Limit and Margin QP

Frequency (MHz)	QuasiPeak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
69.900000	19.7	11.8	20.3	40.0	H
158.500000	31.8	15.6	11.7	43.5	H
170.650000	29.9	14.7	13.6	43.5	H
182.850000	38.6	13.0	4.9	43.5	H
853.400000	35.2	25.0	10.8	46.0	H

Tested by:



Reviewed by:



Test Plot of Spurious emission of A.1 – Vertical (30MHz – 1GHz)

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

EMC Test Record (EMISSION)

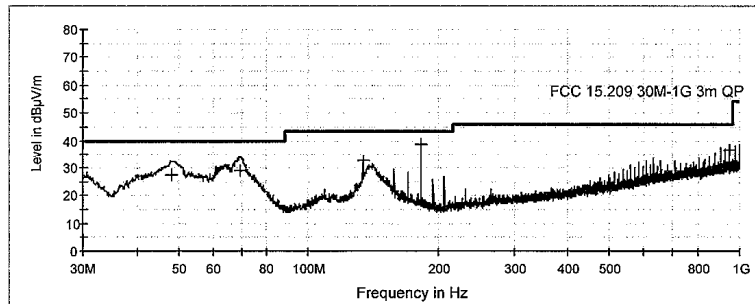
Test Information

Manufacturer: Wistron
 Test Item: ROCKETBOOST READY CARD-RF-RBCARD
 Identification: RF-RBCARD
 Test Standard: FCC Part 15
 Test Detail: RE
 Operation Mode: Tx @ Low channel
 Climate Condition: 23 °C; 50 %RH; 101 kPa.
 Test Voltage / Freq.: DC 5V via AC adapter
 Receipt No.: 163064942 100
 Report No.: 17016719 001
 Result: Pass
 Comment: Vertical

Subrange 1

Frequency Range: 30MHz - 1GHz
 Receiver: TUV ESCI 3
 Transducer: TUV SAC UVLB 9168 / TUV ESCI3 -TUV SAC UVLB 9168

FCC 15.209 30M-1G sweep



Limit and Margin QP

Frequency (MHz)	QuasiPeak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
48.300000	27.1	14.3	12.9	40.0	V
69.900000	28.7	11.8	11.3	40.0	V
134.100000	32.4	14.5	11.1	43.5	V
182.850000	38.9	13.0	4.6	43.5	V
950.850000	36.7	26.4	9.3	46.0	V

Tested by:



Reviewed by:



Test Plot of Spurious emission of A.1 – Horizontal (1GHz – 18GHz)

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

EMC Test Record (EMISSION)

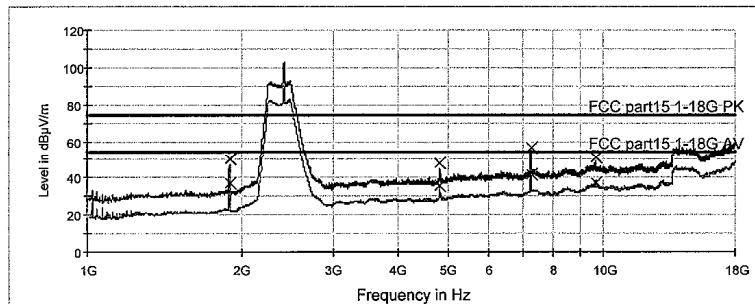
Test Information

Manufacturer: Wistron
 Test Item: ROCKETBOOST READY CARD-RF-RBCARD
 Identification: RF-RBCARD
 Test Standard: FCC Part 15
 Test Detail: RE
 Operation Mode: Tx @ Low channel
 Climate Condition: 23 °C; 50 %RH; 101 kPa.
 Test Voltage / Freq. : DC 5V via AC adapter
 Receipt No.: 163064942 100
 Report No. 17016719 001
 Result: Pass
 Comment: Horizontal

Subrange 1

Frequency Range: 1GHz – 18GHz
 Receiver: TUV FSP 30
 Transducer: TUV SAC HF906 / TUV FSP 30-TUV SAC HF906

Pre TUV 1 to 18G HF906



Limit and Margin PK

Frequency (MHz)	MaxPeak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
1890.000000	50.2	-12.4	23.8	74.0	H
4825.000000	47.9	-5.5	26.1	74.0	H
7241.000000	56.7	0.2	17.3	74.0	H
9666.000000	50.8	5.0	23.2	74.0	H

Limit and Margin AV

Frequency (MHz)	Average (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
1890.000000	36.8	-12.4	17.2	54.0	H
4825.000000	35.7	-5.5	18.3	54.0	H
7241.000000	41.5	0.2	12.5	54.0	H
9666.000000	37.4	5.0	16.6	54.0	H

Tested by:



Reviewed by:



Test Plot of Spurious emission of A.1 – Vertical (1GHz – 18GHz)

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

EMC Test Record (EMISSION)

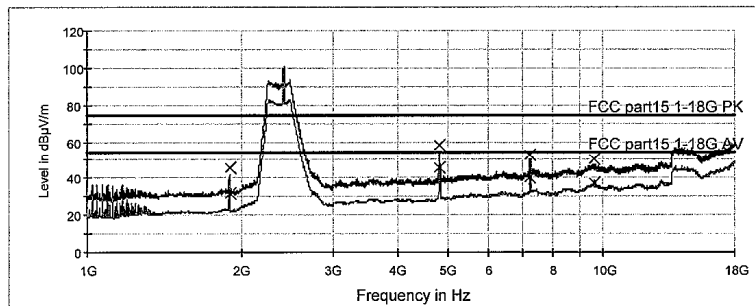
Test Information

Manufacturer: Wistron
 Test Item: ROCKETBOOST READY CARD-RF-RBCARD
 Identification: RF-RBCARD
 Test Standard: FCC Part 15
 Test Detail: RE
 Operation Mode: Tx @ Low channel
 Climate Condition: 23 °C; 50 %RH; 101 kPa.
 Test Voltage / Freq. : DC 5V via AC adapter
 Receipt No.: 163064942 100
 Report No.: 17016719 001
 Result: Pass
 Comment: Vertical

Subrange 1

Frequency Range: 1GHz – 18GHz
 Receiver: TUV FSP 30
 Transducer: TUV SAC HF906 / TUV FSP 30-TUV SAC HF906

Pre TUV 1 to 18G HF906





Limit and Margin PK

Frequency (MHz)	MaxPeak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
1890.000000	45.8	-12.4	28.2	74.0	V
4823.000000	58.4	-5.5	15.6	74.0	V
7233.000000	52.3	0.1	21.7	74.0	V
9649.000000	50.1	4.9	23.9	74.0	V

Limit and Margin AV

Frequency (MHz)	Average (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
1890.000000	31.5	-12.4	22.5	54.0	V
4823.000000	45.9	-5.5	8.1	54.0	V
7233.000000	40.2	0.1	13.8	54.0	V
9649.000000	37.4	4.9	16.6	54.0	V

Tested by:  Reviewed by: 

Test Plot of Spurious emission of A.1 – Horizontal (18GHz – 26GHz)

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

EMC Test Record (EMISSION)

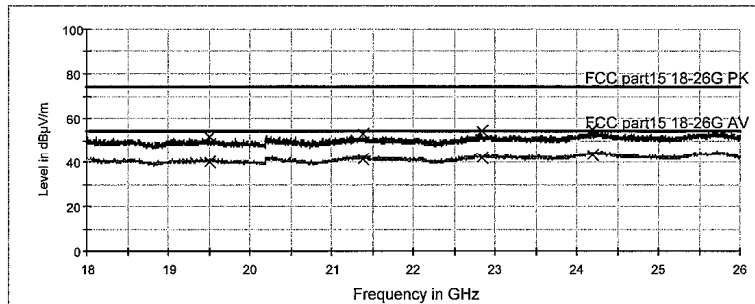
Test Information

Manufacturer: Wistron
 Test Item: ROCKETBOOST READY CARD-RF-RBCARD
 Identification: RF-RBCARD
 Test Standard: FCC Part 15
 Test Detail: RE
 Operation Mode: Tx @ Low channel
 Climate Condition: 23 °C; 50 %RH; 101 kPa.
 Test Voltage / Freq. : DC 5V via AC adapter
 Receipt No.: 163064942 100
 Report No.: 17016719 001
 Result: Pass
 Comment: Horizontal

Subrange 1

Frequency Range: 18GHz - 26GHz
 Receiver: TUV FSP 30
 Transducer: TUV SAC 3160-09 / TUV FSP 30-TUV SAC 3160-09

Pre TUV 18 to 26.5 3160-09





Limit and Margin PK

Frequency (MHz)	MaxPeak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
19509.000000	51.9	5.4	22.1	74.0	H
21388.000000	53.2	5.9	20.8	74.0	H
22849.000000	53.9	6.4	20.1	74.0	H
24194.000000	55.1	6.9	18.9	74.0	H

Limit and Margin AV

Frequency (MHz)	Average (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
19509.000000	39.9	5.4	14.1	54.0	H
21388.000000	41.2	5.9	12.8	54.0	H
22849.000000	41.7	6.4	12.3	54.0	H
24194.000000	43.2	6.9	10.8	54.0	H

Tested by: 

Reviewed by: 

Test Plot of Spurious emission of A.1 – Vertical (18GHz – 26GHz)

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

EMC Test Record (EMISSION)

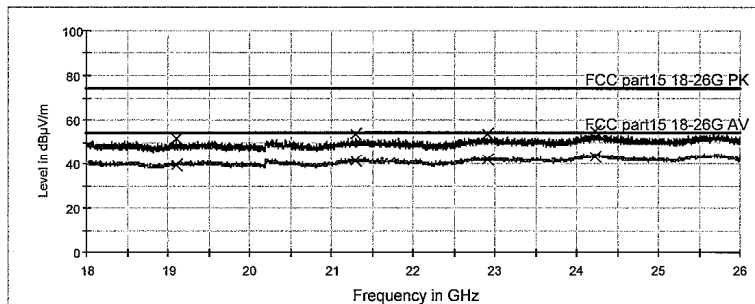
Test Information

Manufacturer: Wistron
 Test Item: ROCKETBOOST READY-CARD-RF-RBCARD
 Identification: RF-RBCARD
 Test Standard: FCC Part 15
 Test Detail: RE
 Operation Mode: Tx @ Low channel
 Climate Condition: 23 °C; 50 %RH; 101 kPa.
 Test Voltage / Freq.: DC 5V via AC adapter
 Receipt No.: 163064942 100
 Report No.: 17016719 001
 Result: Pass
 Comment: Vertical

Subrange 1

Frequency Range: 18GHz - 26GHz
 Receiver: TUV FSP 30
 Transducer: TUV SAC 3160-09 / TUV FSP 30-TUV SAC 3160-09

Pre TUV 18 to 26.5 3160-09





Limit and Margin PK

Frequency (MHz)	MaxPeak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
19104.000000	51.6	5.2	22.4	74.0	V
21303.000000	53.4	5.9	20.6	74.0	V
22910.000000	53.5	6.5	20.5	74.0	V
24231.000000	54.9	6.9	19.1	74.0	V

Limit and Margin AV

Frequency (MHz)	Average (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
19104.000000	39.5	5.2	14.5	54.0	V
21303.000000	41.0	5.9	13.0	54.0	V
22910.000000	41.9	6.5	12.1	54.0	V
24231.000000	43.3	6.9	10.7	54.0	V

Tested by:  2010 7 08

Reviewed by:  2010 7 09

Test Plot of Spurious emission of A.2 – Horizontal (9kHz – 30MHz)

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

EMC Test Record (Emission)

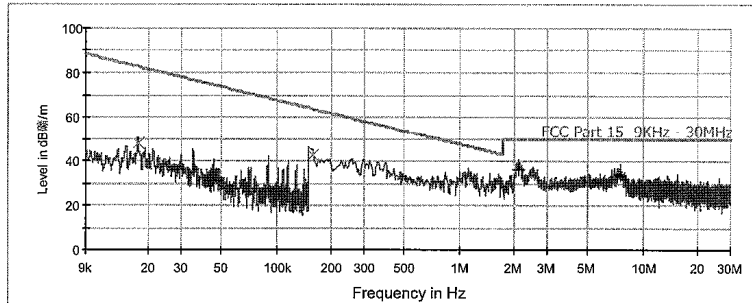
Test Information

Manufacturer: Wistron
 Test Item: ROCKETBOOST READY CARD-RF-RBCARD
 Identification: RF-RBCARD
 Test Standard: FCC Part 15
 Test Detail: RE
 Operation Mode: Tx @ Mid channel
 Climate Condition: 23 °C; 50 %RH; 101 kPa.
 Test Voltage / Freq. : DC 5V via AC adapter
 Receipt No.: 163064942 100
 Report No. 17016719 001
 Result: Pass
 Comment: Horizontal

Subrange 1

Frequency Range: 9kHz - 30MHz
 Receiver: TUV ESCI 3
 Transducer: TUV SAC Active Loop Antenna HFH2-Z2 / TUV ESCI3 -TUV SAC
 Active Loop Antenna HFH2-Z2

Pre TUV 9K to 30M HFH2-Z2



Result Table_Single

Frequency (MHz)	QuasiPeak (dBµV/m)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Corr. (dB)	Comment
0.017400	---	47.7	1000.0	0.200	0.0	H	20.7	
0.158000	---	42.8	1000.0	9.000	0.0	H	20.7	
2.094000	36.4	---	1000.0	9.000	0.0	H	20.2	
7.526000	33.7	---	1000.0	9.000	0.0	H	21.9	

Date: 12/07/2010 - Time: 16:33:51

Tested by: _____ Reviewed by:

Test Plot of Spurious emission of A.2 – Vertical (9kHz – 30MHz)

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

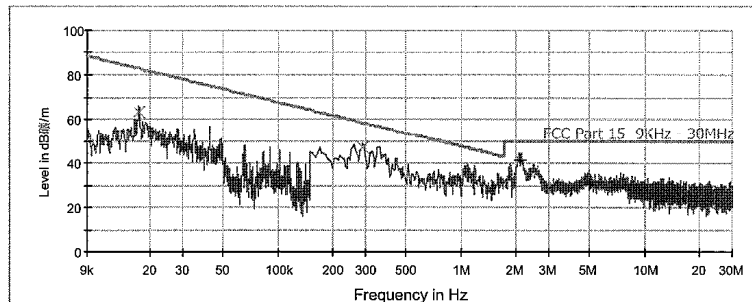
EMC Test Record (Emission)

Test Information

Manufacturer: Wistron
 Test Item: ROCKETBOOST READY CARD-RF-RBCARD
 Identification: RF-RBCARD
 Test Standard: FCC Part 15
 Test Detail: RE
 Operation Mode: Tx @ Mid channel
 Climate Condition: 23 °C; 50 %RH; 101 kPa.
 Test Voltage / Freq.: DC 5V via AC adapter
 Receipt No.: 163064942 100
 Report No.: 17016719 001
 Result: Pass
 Comment: Vertical

Subrange 1

Frequency Range: 9kHz - 30MHz
 Receiver: TUV ESCI 3
 Transducer: TUV SAC Active Loop Antenna HFH2-Z2 / TUV ESCI3 -TUV SAC Active Loop Antenna HFH2-Z2
 Pre TUV 9K to 30M HFH2-Z2



Result Table Single

Frequency (MHz)	QuasiPeak (dBμV/m)	Average (dBμV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Corr. (dB)	Comment
0.017320	---	63.2	1000.0	0.200	0.0	V	20.7	
0.290000	---	47.1	1000.0	9.000	0.0	V	20.9	
2.106000	41.2	---	1000.0	9.000	0.0	V	20.2	
4.986000	30.3	---	1000.0	9.000	0.0	V	21.9	

Date: 12/07/2010 - Time: 17:09:30

Tested by: _____ Reviewed by:

Test Plot of Spurious emission of A.2 – Horizontal (30MHz – 1GHz)

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

EMC Test Record (EMISSION)

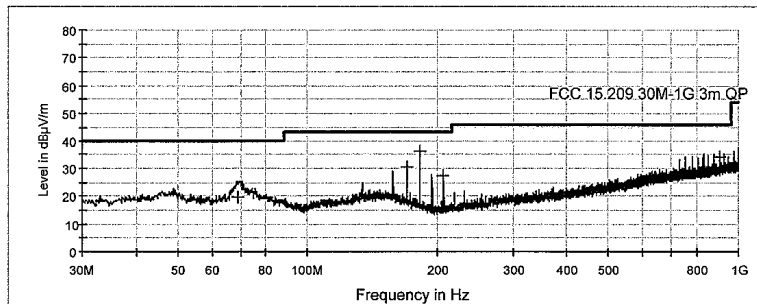
Test Information

Manufacturer: Wistron
 Test Item: ROCKETBOOST READY CARD-RF-RBCARD
 Identification: RF-RBCARD
 Test Standard: FCC Part 15
 Test Detail: RE
 Operation Mode: Tx @ Mid channel
 Climate Condition: 23 °C; 50 %RH; 101 kPa.
 Test Voltage / Freq. : DC 5V via AC adapter
 Receipt No.: 163064942 100
 Report No.: 17016719 001
 Result: Pass
 Comment: Horizontal

Subrange 1

Frequency Range: 30MHz - 1GHz
 Receiver: TUV ESCI 3
 Transducer: TUV SAC UVLB 9168 / TUV ESCI3 -TUV SAC UVLB 9168

FCC 15.209 30M-1G sweep



Limit and Margin QP

Frequency (MHz)	QuasiPeak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
68.900000	19.5	11.9	20.5	40.0	H
170.650000	30.5	14.7	13.0	43.5	H
182.850000	36.3	13.0	7.2	43.5	H
207.250000	27.5	11.8	16.0	43.5	H
902.100000	34.2	25.7	11.8	46.0	H

Tested by:



Reviewed by: _____



Test Plot of Spurious emission of A.2 – Vertical (30MHz – 1GHz)

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

EMC Test Record (EMISSION)

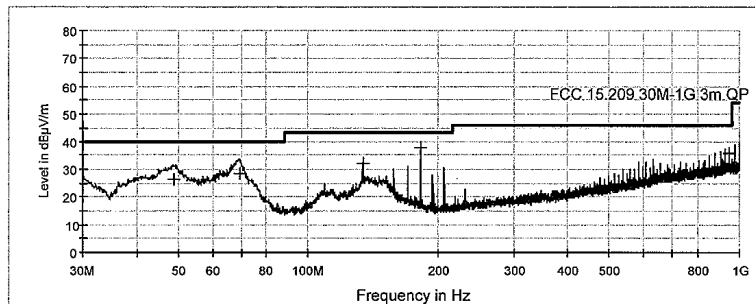
Test Information

Manufacturer: Wistron
 Test Item: ROCKETBOOST READY CARD-RF-RBCARD
 Identification: RF-RBCARD
 Test Standard: FCC Part 15
 Test Detail: RE
 Operation Mode: Tx @ Mid channel
 Climate Condition: 23 °C; 50 %RH; 101 kPa.
 Test Voltage / Freq. : DC 5V via AC adapter
 Receipt No.: 163064942 100
 Report No.: 17016719 001
 Result: Pass
 Comment: Vertical

Subrange 1

Frequency Range: 30MHz - 1GHz
 Receiver: TUV ESCI 3
 Transducer: TUV SAC UVLB 9168 / TUV ESCI3 -TUV SAC UVLB 9168

FCC 15.209 30M-1G sweep



Limit and Margin QP

Frequency (MHz)	QuasiPeak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
48.900000	26.5	14.3	13.5	40.0	V
69.600000	28.3	11.8	11.7	40.0	V
134.100000	32.0	14.5	11.5	43.5	V
182.850000	37.6	13.0	5.9	43.5	V
950.850000	35.4	26.4	10.6	46.0	V

Tested by:



Reviewed by:



Test Plot of Spurious emission of A.2 –Horizontal (1GHz – 18GHz)

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

EMC Test Record (EMISSION)

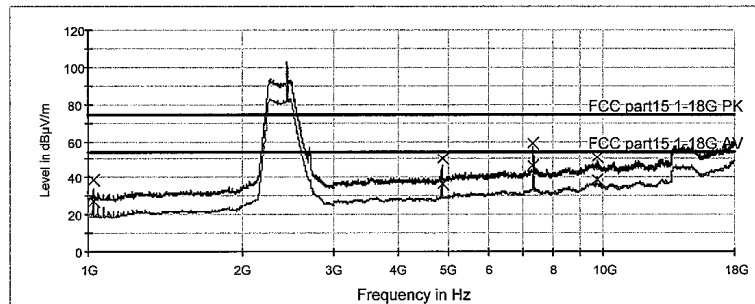
Test Information

Manufacturer: Wistron
 Test Item: ROCKETBOOST READY CARD-RF-RBCARD
 Identification: RF-RBCARD
 Test Standard: FCC Part 15
 Test Detail: RE
 Operation Mode: Tx @ Mid channel
 Climate Condition: 23 °C; 50 %RH; 101 kPa.
 Test Voltage / Freq.: DC 5V via AC adapter
 Receipt No.: 163064942 100
 Report No.: 17016719 001
 Result: Pass
 Comment: Horizontal

Subrange 1

Frequency Range: 1GHz – 18GHz
 Receiver: TUV FSP 30
 Transducer: TUV SAC HF906 / TUV FSP 30-TUV SAC HF906

Pre TUV 1 to 18G HF906



Limit and Margin PK

Frequency (MHz)	MaxPeak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
1023.000000	38.7	-16.4	35.3	74.0	H
4874.000000	50.2	-5.6	23.8	74.0	H
7313.000000	59.0	0.4	15.0	74.0	H
9753.000000	51.4	5.0	22.6	74.0	H

Limit and Margin AV

Frequency (MHz)	Average (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
1023.000000	26.8	-16.4	27.2	54.0	H
4874.000000	36.7	-5.6	17.3	54.0	H
7313.000000	46.4	0.4	7.6	54.0	H
9753.000000	38.9	5.0	15.1	54.0	H

Tested by:



Reviewed by:



Test Plot of Spurious emission of A.2 –Vertical (1GHz – 18GHz)

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

EMC Test Record (EMISSION)

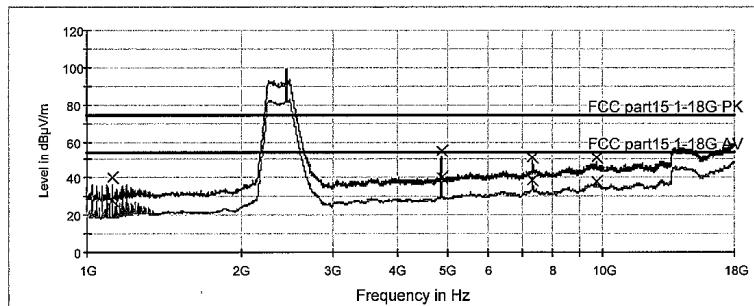
Test Information

Manufacturer: Wistron
 Test Item: ROCKETBOOST READY CARD-RF-RBCARD
 Identification: RF-RBCARD
 Test Standard: FCC Part 15
 Test Detail: RE
 Operation Mode: Tx @ Mid channel
 Climate Condition: 23 °C; 50 %RH; 101 kPa.
 Test Voltage / Freq.: DC 5V via AC adapter
 Receipt No.: 163064942 100
 Report No.: 17016719 001
 Result: Pass
 Comment: Vertical

Subrange 1

Frequency Range: 1GHz – 18GHz
 Receiver: TUV FSP 30
 Transducer: TUV SAC HF906 / TUV FSP 30-TUV SAC HF906

Pre TUV 1 to 18G HF906





Limit and Margin PK

Frequency (MHz)	MaxPeak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
1121.000000	40.1	-16.5	33.9	74.0	V
4876.000000	54.6	-5.6	19.4	74.0	V
7316.000000	51.4	0.4	22.6	74.0	V
9755.000000	50.8	5.0	23.2	74.0	V

Limit and Margin AV

Frequency (MHz)	Average (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
1121.000000	27.9	-16.5	26.1	54.0	V
4876.000000	40.2	-5.6	13.8	54.0	V
7316.000000	39.1	0.4	14.9	54.0	V
9755.000000	38.1	5.0	15.9	54.0	V

Tested by: 

Reviewed by: 

Test Plot of Spurious emission of A.2 – Horizontal (18GHz – 26GHz)

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

EMC Test Record (EMISSION)

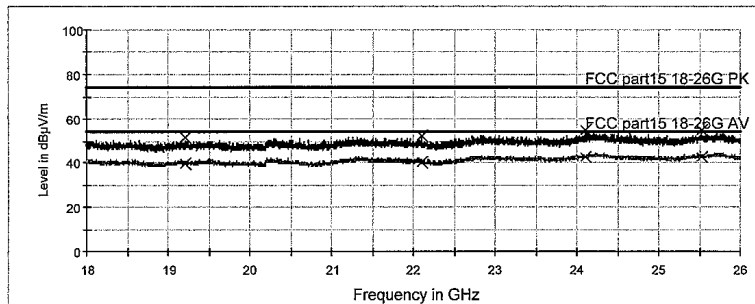
Test Information

Manufacturer: Wistron
 Test Item: ROCKETBOOST READY CARD-RF-RBCARD
 Identification: RF-RBCARD
 Test Standard: FCC Part 15
 Test Detail: RE
 Operation Mode: Tx @ Mid channel
 Climate Condition: 23 °C; 50 %RH; 101 kPa.
 Test Voltage / Freq. : DC 5V via AC adapter
 Receipt No.: 163064942 100
 Report No.: 17016719 001
 Result: Pass
 Comment: Horizontal

Subrange 1

Frequency Range: 18GHz - 26GHz
 Receiver: TUV FSP 30
 Transducer: TUV SAC 3160-09 / TUV FSP 30-TUV SAC 3160-09

Pre TUV 18 to 26.5 3160-09



Limit and Margin PK

Frequency (MHz)	MaxPeak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
19213.000000	51.5	5.3	22.5	74.0	H
22103.000000	52.4	6.1	21.6	74.0	H
24113.000000	54.9	6.8	19.1	74.0	H
25526.000000	54.7	7.2	19.3	74.0	H

Limit and Margin AV

Frequency (MHz)	Average (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
19213.000000	39.6	5.3	14.4	54.0	H
22103.000000	40.2	6.1	13.8	54.0	H
24113.000000	42.8	6.8	11.2	54.0	H
25526.000000	42.7	7.2	11.3	54.0	H

Tested by:



Reviewed by:



Test Plot of Spurious emission of A.2 – Vertical (18GHz – 26GHz)

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

EMC Test Record (EMISSION)

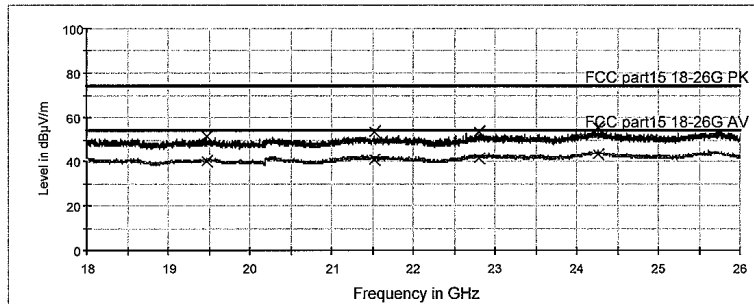
Test Information

Manufacturer: Wistron
 Test Item: ROCKETBOOST READY CARD-RF-RBCARD
 Identification: RF-RBCARD
 Test Standard: FCC Part 15
 Test Detail: RE
 Operation Mode: Tx @ Mid channel
 Climate Condition: 23 °C; 50 %RH; 101 kPa.
 Test Voltage / Freq. : DC 5V via AC adapter
 Receipt No.: 163064942 100
 Report No.: 17016719 001
 Result: Pass
 Comment: Vertical

Subrange 1

Frequency Range: 18GHz - 26GHz
 Receiver: TUV FSP 30
 Transducer: TUV SAC 3160-09 / TUV FSP 30-TUV SAC 3160-09

Pre TUV 18 to 26.5 3160-09



Limit and Margin PK

Frequency (MHz)	MaxPeak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
19476.000000	51.9	5.4	22.2	74.0	V
21519.000000	53.6	5.9	20.4	74.0	V
22799.000000	53.5	6.4	20.5	74.0	V
24256.000000	55.4	6.9	18.6	74.0	V

Limit and Margin AV

Frequency (MHz)	Average (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
19476.000000	39.8	5.4	14.2	54.0	V
21519.000000	40.4	5.9	13.6	54.0	V
22799.000000	41.5	6.4	12.5	54.0	V
24256.000000	43.4	6.9	10.6	54.0	V

Tested by:



Reviewed by:



Test Plot of Spurious emission of A.3 – Horizontal (9kHz – 30MHz)

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

EMC Test Record (Emission)

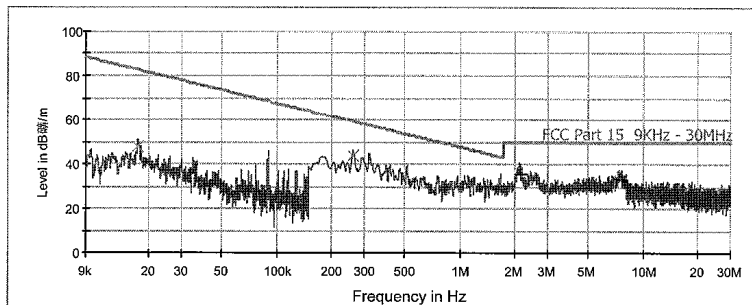
Test Information

Manufacturer: Wistron
 Test Item: ROCKETBOOST READY CARD-RF-RBCARD
 Identification: RF-RBCARD
 Test Standard: FCC Part 15
 Test Detail: RE
 Operation Mode: Tx @ High channel
 Climate Condition: 23 °C; 50 %RH; 101 kPa.
 Test Voltage / Freq. : DC 5V via AC adapter
 Receipt No.: 163064942 100
 Report No. 17016719 001
 Result: Pass
 Comment: Horizontal

Subrange 1

Frequency Range: 9kHz - 30MHz
 Receiver: TUV ESCI 3
 Transducer: TUV SAC Active Loop Antenna HFH2-Z2 / TUV ESCI3 -TUV SAC Active Loop Antenna HFH2-Z2

Pre TUV 9K to 30M HFH2-Z2



Result Table Single

Frequency (MHz)	QuasiPeak (dBµV/m)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Corr. (dB)	Comment
0.017320	---	47.9	1000.0	0.200	0.0	H	20.7	
0.262000	---	43.7	1000.0	9.000	0.0	H	20.9	
2.146000	35.7	---	1000.0	9.000	0.0	H	20.2	
7.610000	33.1	---	1000.0	9.000	0.0	H	21.9	

Date: 12/07/2010 - Time: 16:44:49

Tested by: _____ Reviewed by:

Test Plot of Spurious emission of A.3 – Vertical (9kHz – 30MHz)

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

EMC Test Record (Emission)

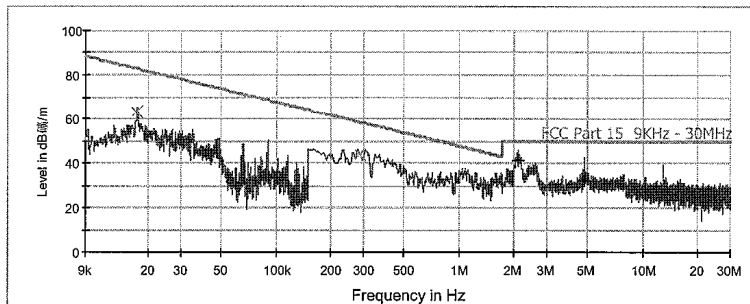
Test Information

Manufacturer: Wistron
 Test Item: ROCKETBOOST READY CARD-RF-RBCARD
 Identification: RF-RBCARD
 Test Standard: FCC Part 15
 Test Detail: RE
 Operation Mode: Tx @ High channel
 Climate Condition: 23 °C; 50 %RH; 101 kPa.
 Test Voltage / Freq. : DC 5V via AC adapter
 Receipt No.: 163064942 100
 Report No. 17016719 001
 Result: Pass
 Comment: Vertical

Subrange 1

Frequency Range: 9kHz - 30MHz
 Receiver: TUV ESCI 3
 Transducer: TUV SAC Active Loop Antenna HFH2-Z2 / TUV ESCI3 -TUV SAC Active Loop Antenna HFH2-Z2

Pre TUV 9K to 30M HFH2-Z2



Result Table Single

Frequency (MHz)	QuasiPeak (dBµV/m)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Corr. (dB)	Comment
0.017320	---	63.3	1000.0	0.200	0.0	V	20.7	
0.282000	---	43.9	1000.0	9.000	0.0	V	20.9	
2.106000	41.6	---	1000.0	9.000	0.0	V	20.2	
4.782000	32.4	---	1000.0	9.000	0.0	V	21.7	

Date: 12/07/2010 - Time: 17:05:01

Tested by: _____ Reviewed by:

Test Plot of Spurious emission of A.3 – Horizontal (30MHz – 1GHz)

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

EMC Test Record (EMISSION)

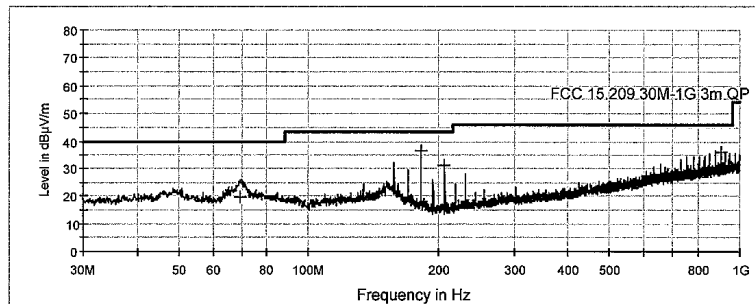
Test Information

Manufacturer: Wistron
 Test Item: ROCKETBOOST READY CARD-RF-RBCARD
 Identification: RF-RBCARD
 Test Standard: FCC Part 15
 Test Detail: RE
 Operation Mode: Tx @ High channel
 Climate Condition: 23 °C; 50 %RH; 101 kPa.
 Test Voltage / Freq. : DC 5V via AC adapter
 Receipt No.: 163064942 100
 Report No.: 17016719 001
 Result: Pass
 Comment: Horizontal

Subrange 1

Frequency Range: 30MHz - 1GHz
 Receiver: TUV ESCI 3
 Transducer: TUV SAC UVLB 9168 / TUV ESCI3 -TUV SAC UVLB 9168

FCC 15.209 30M-1G sweep



Limit and Margin QP

Frequency (MHz)	QuasiPeak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
69.900000	19.5	11.8	20.5	40.0	H
182.850000	36.5	13.0	7.0	43.5	H
207.250000	30.8	11.8	12.7	43.5	H
902.100000	36.2	25.7	9.8	46.0	H

Tested by:



Reviewed by:



Test Plot of Spurious emission of A.3 – Vertical (30MHz – 1GHz)

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

EMC Test Record (EMISSION)

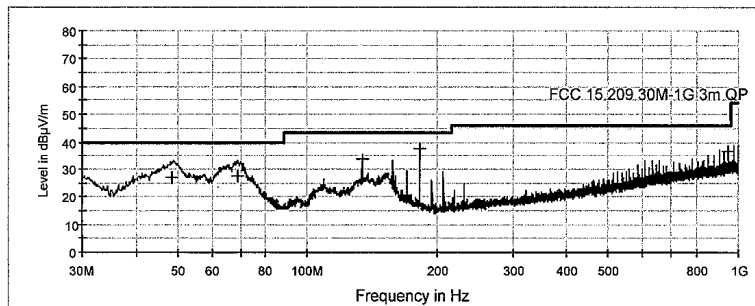
Test Information

Manufacturer: Wistron
 Test Item: ROCKETBOOST READY CARD-RF-RBCARD
 Identification: RF-RBCARD
 Test Standard: FCC Part 15
 Test Detail: RE
 Operation Mode: Tx @ High channel
 Climate Condition: 23 °C; 50 %RH; 101 kPa.
 Test Voltage / Freq. : DC 5V via AC adapter
 Receipt No.: 163064942 100
 Report No.: 17016719 001
 Result: Pass
 Comment: Vertical

Subrange 1

Frequency Range: 30MHz - 1GHz
 Receiver: TUV ESCI 3
 Transducer: TUV SAC UVLB 9168 / TUV ESCI3 -TUV SAC UVLB 9168

FCC 15.209 30M-1G sweep



Limit and Margin QP

Frequency (MHz)	QuasiPeak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
48.600000	27.0	14.3	13.0	40.0	V
68.900000	27.2	11.9	12.8	40.0	V
134.100000	33.4	14.5	10.1	43.5	V
182.850000	37.8	13.0	5.7	43.5	V
950.850000	36.9	26.4	9.1	46.0	V

Tested by:



Reviewed by: _____



Test Plot of Spurious emission of A.3 – Horizontal (1GHz – 18GHz)

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

EMC Test Record (EMISSION)

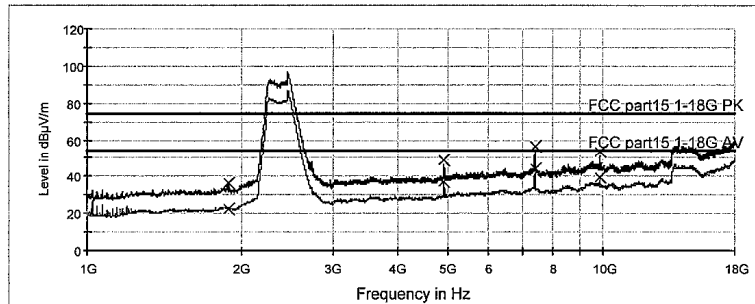
Test Information

Manufacturer: Wistron
 Test Item: ROCKETBOOST READY CARD-RF-RBCARD
 Identification: RF-RBCARD
 Test Standard: FCC Part 15
 Test Detail: RE
 Operation Mode: Tx @ High channel
 Climate Condition: 23 °C; 50 %RH; 101 kPa.
 Test Voltage / Freq. : DC 5V via AC adapter
 Receipt No.: 163064942 100
 Report No.: 17016719 001
 Result: Pass
 Comment: Horizontal

Subrange 1

Frequency Range: 1GHz – 18GHz
 Receiver: TUV FSP 30
 Transducer: TUV SAC HF906 / TUV FSP 30-TUV SAC HF906

Pre TUV 1 to 18G HF906





Limit and Margin PK

Frequency (MHz)	MaxPeak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
1888.000000	36.2	-12.4	37.8	74.0	H
4921.000000	49.1	-5.7	24.9	74.0	H
7386.000000	56.8	0.5	17.2	74.0	H
9849.000000	53.2	5.4	20.8	74.0	H

Limit and Margin AV

Frequency (MHz)	Average (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
1888.000000	22.1	-12.4	31.9	54.0	H
4921.000000	36.8	-5.7	17.2	54.0	H
7386.000000	44.0	0.5	10.0	54.0	H
9849.000000	39.4	5.4	14.6	54.0	H

Tested by: 

Reviewed by: 

Test Plot of Spurious emission of A.3 – Vertical (1GHz – 18GHz)

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

EMC Test Record (EMISSION)

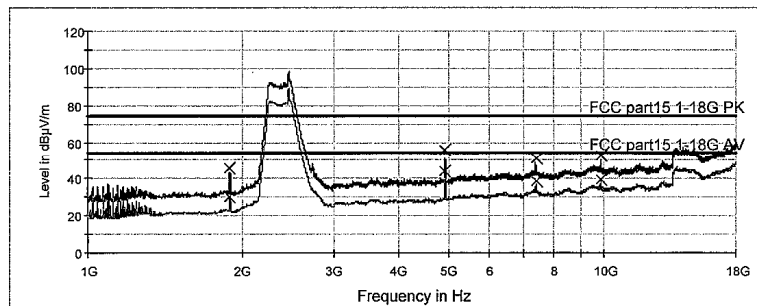
Test Information

Manufacturer: Wistron
 Test Item: ROCKETBOOST READY CARD-RF-RBCARD
 Identification: RF-RBCARD
 Test Standard: FCC Part 15
 Test Detail: RE
 Operation Mode: Tx @ High channel
 Climate Condition: 23 °C; 50 %RH; 101 kPa.
 Test Voltage / Freq. : DC 5V via AC adapter
 Receipt No.: 163064942 100
 Report No. 17016719 001
 Result: Pass
 Comment: Vertical

Subrange 1

Frequency Range: 1GHz – 18GHz
 Receiver: TUV FSP 30
 Transducer: TUV SAC HF906 / TUV FSP 30-TUV SAC HF906

Pre TUV 1 to 18G HF906



Limit and Margin PK

Frequency (MHz)	MaxPeak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
1888.000000	45.8	-12.4	28.2	74.0	V
4923.000000	55.8	-5.7	18.2	74.0	V
7386.000000	51.0	0.5	23.0	74.0	V
9849.000000	52.4	5.4	21.6	74.0	V

Limit and Margin AV

Frequency (MHz)	Average (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
1888.000000	30.2	-12.4	23.8	54.0	V
4923.000000	43.8	-5.7	10.2	54.0	V
7386.000000	38.4	0.5	15.6	54.0	V
9849.000000	39.5	5.4	14.5	54.0	V

Tested by:



Reviewed by: _____



Test Plot of Spurious emission of A.3 – Horizontal (18GHz – 26GHz)

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

EMC Test Record (EMISSION)

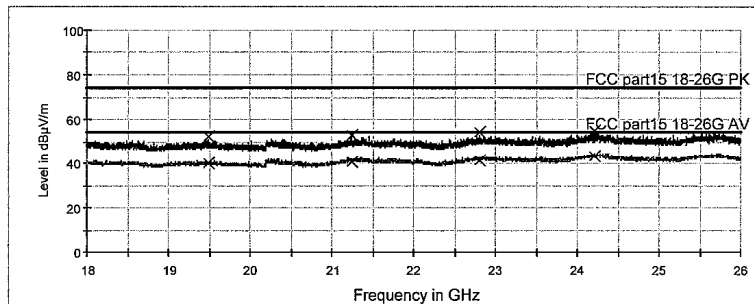
Test Information

Manufacturer: Wistron
 Test Item: ROCKETBOOST READY CARD-RF-RBCARD
 Identification: RF-RBCARD
 Test Standard: FCC Part 15
 Test Detail: RE
 Operation Mode: Tx @ High channel
 Climate Condition: 23 °C; 50 %RH; 101 kPa.
 Test Voltage / Freq. : DC 5V via AC adapter
 Receipt No.: 163064942 100
 Report No. 17016719 001
 Result: Pass
 Comment: Horizontal

Subrange 1

Frequency Range: 18GHz - 26GHz
 Receiver: TUV FSP 30
 Transducer: TUV SAC 3160-09 / TUV FSP 30-TUV SAC 3160-09

Pre TUV 18 to 26.5 3160-09





Limit and Margin PK

Frequency (MHz)	MaxPeak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
19484.000000	52.1	5.4	21.9	74.0	H
21252.000000	53.0	5.9	21.0	74.0	H
22808.000000	54.0	6.4	20.0	74.0	H
24203.000000	54.8	6.9	19.2	74.0	H

Limit and Margin AV

Frequency (MHz)	Average (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
19484.000000	39.7	5.4	14.3	54.0	H
21252.000000	40.9	5.9	13.1	54.0	H
22808.000000	41.6	6.4	12.4	54.0	H
24203.000000	43.2	6.9	10.8	54.0	H

Tested by: 

Reviewed by: 

Test Plot of Spurious emission of A.3 – Vertical (18GHz – 26GHz)

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

EMC Test Record (EMISSION)

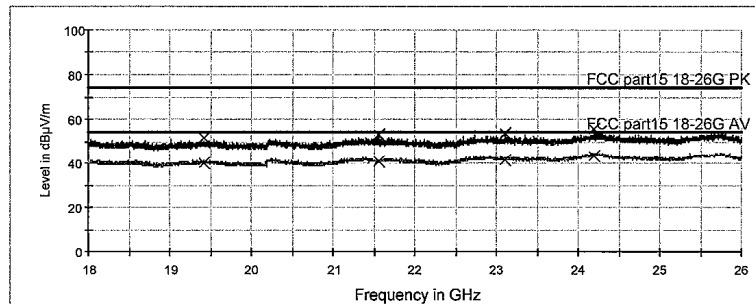
Test Information

Manufacturer: Wistron
 Test Item: ROCKETBOOST READY CARD-RF-RBCARD
 Identification: RF-RBCARD
 Test Standard: FCC Part 15
 Test Detail: RE
 Operation Mode: Tx @ High channel
 Climate Condition: 23 °C; 50 %RH; 101 kPa.
 Test Voltage / Freq. : DC 5V via AC adapter
 Receipt No.: 163064942 100
 Report No.: 17016719 001
 Result: Pass
 Comment: Vertical

Subrange 1

Frequency Range: 18GHz - 26GHz
 Receiver: TUV FSP 30
 Transducer: TUV SAC 3160-09 / TUV FSP 30-TUV SAC 3160-09

Pre TUV 18 to 26.5 3160-09



Limit and Margin PK

Frequency (MHz)	MaxPeak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
19413.000000	51.6	5.4	22.4	74.0	V
21567.000000	53.1	6.0	20.9	74.0	V
23114.000000	53.3	6.6	20.7	74.0	V
24200.000000	55.7	6.9	18.3	74.0	V

Limit and Margin AV

Frequency (MHz)	Average (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
19413.000000	39.7	5.4	14.3	54.0	V
21567.000000	40.5	6.0	13.5	54.0	V
23114.000000	41.4	6.6	12.6	54.0	V
24200.000000	43.2	6.9	10.8	54.0	V

Tested by:



Reviewed by:



Test Plot of Spurious emission of C – Horizontal (9kHz – 30MHz)

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

EMC Test Record (Emission)

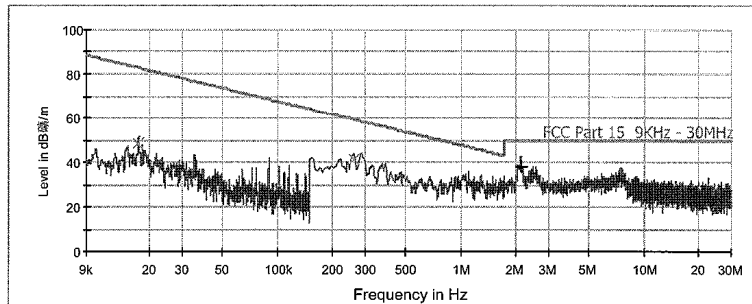
Test Information

Manufacturer: Wistron
 Test Item: ROCKETBOOST READY CARD-RF-RBCARD
 Identification: RF-RBCARD
 Test Standard: FCC Part 15
 Test Detail: RE
 Operation Mode: Rx @ Mid channel
 Climate Condition: 23 °C; 50 %RH; 101 kPa.
 Test Voltage / Freq.: DC 5V via AC adapter
 Receipt No.: 163064942 100
 Report No.: 17016719 001
 Result: Pass
 Comment: Horizontal

Subrange 1

Frequency Range: 9kHz - 30MHz
 Receiver: TUV ESCI 3
 Transducer: TUV SAC Active Loop Antenna HFH2-Z2 / TUV ESCI3 -TUV SAC Active Loop Antenna HFH2-Z2

Pre TUV 9K to 30M HFH2-Z2



Result Table Single

Frequency (MHz)	QuasiPeak (dBµV/m)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Corr. (dB)	Comment
0.017320	---	48.3	1000.0	0.200	0.0	H	20.7	
0.258000	---	41.2	1000.0	9.000	0.0	H	20.9	
2.142000	37.8	---	1000.0	9.000	0.0	H	20.2	
7.530000	31.5	---	1000.0	9.000	0.0	H	21.9	

Date: 12/07/2010 - Time: 16:50:07

Tested by: _____ Reviewed by:

Test Plot of Spurious emission of C – Vertical (9kHz – 30MHz)

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

EMC Test Record (Emission)

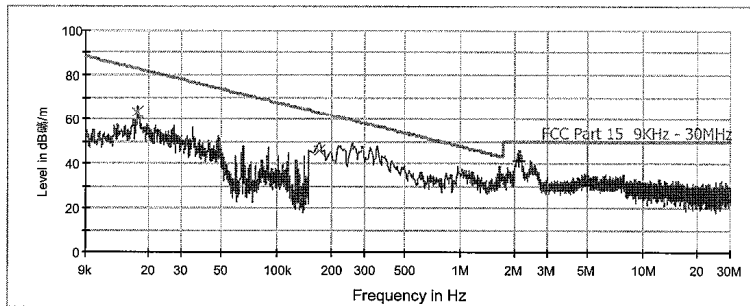
Test Information

Manufacturer: Wistron
 Test Item: ROCKETBOOST READY CARD-RF-RBCARD
 Identification: RF-RBCARD
 Test Standard: FCC Part 15
 Test Detail: RE
 Operation Mode: Rx @ Mid channel
 Climate Condition: 23 °C; 50 %RH; 101 kPa.
 Test Voltage / Freq. : DC 5V via AC adapter
 Receipt No.: 163064942 100
 Report No.: 17016719 001
 Result: Pass
 Comment: Vertical

Subrange 1

Frequency Range: 9kHz - 30MHz
 Receiver: TUV ESCI 3
 Transducer: TUV SAC Active Loop Antenna HFH2-Z2 / TUV ESCI3 -TUV SAC Active Loop Antenna HFH2-Z2

Pre TUV 9K to 30M HFH2-Z2



Result Table Single

Frequency (MHz)	QuasiPeak (dBµV/m)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Corr. (dB)
0.017320	---	63.2	1000.0	0.200	0.0	V	20.7
0.170000	---	45.8	1000.0	9.000	0.0	V	20.7
2.106000	41.3	---	1000.0	9.000	0.0	V	20.2
4.974000	30.1	---	1000.0	9.000	0.0	V	21.9

Date: 12/07/2010 - Time: 16:58:45

Tested by: _____ Reviewed by:

Test Plot of Spurious emission of C – Horizontal (30MHz – 1GHz)

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

EMC Test Record (EMISSION)

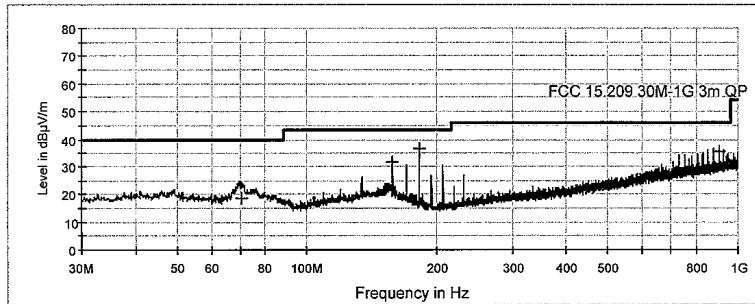
Test Information

Manufacturer: Wistron
 Test Item: ROCKETBOOST READY CARD-RF-RBCARD
 Identification: RF-RBCARD
 Test Standard: FCC Part 15
 Test Detail: RE
 Operation Mode: Rx @ Mid channel
 Climate Condition: 23 °C; 50 %RH; 101 kPa.
 Test Voltage / Freq. : DC 5V via AC adapter
 Receipt No.: 163064942 100
 Report No.: 17016719 001
 Result: Pass
 Comment: Horizontal

Subrange 1


Frequency Range: 30MHz - 1GHz
 Receiver: TUV ESCI 3
 Transducer: TUV SAC UVLB 9168 / TUV ESCI3 -TUV SAC UVLB 9168


FCC 15.209 30M-1G sweep



Limit and Margin QP

Frequency (MHz)	QuasiPeak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
70.600000	18.5	11.7	21.5	40.0	H
158.500000	31.6	15.6	11.9	43.5	H
182.850000	36.5	13.0	7.0	43.5	H
902.100000	35.4	25.7	10.6	46.0	H

Tested by: 

Reviewed by: 

Test Plot of Spurious emission of C – Vertical (30MHz – 1GHz)

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

EMC Test Record (EMISSION)

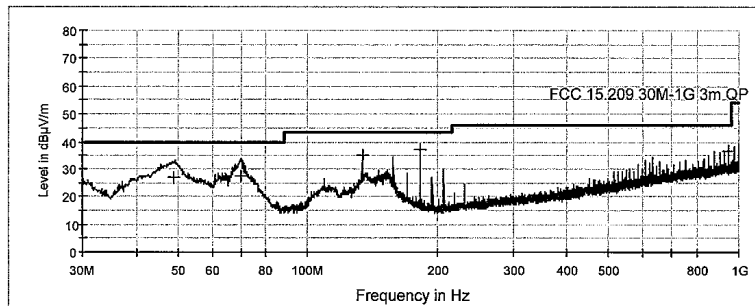
Test Information

Manufacturer: Wistron
 Test Item: ROCKETBOOST READY CARD-RF-RBCARD
 Identification: RF-RBCARD
 Test Standard: FCC Part 15
 Test Detail: RE
 Operation Mode: Rx @ Mid channel
 Climate Condition: 23 °C; 50 %RH; 101 kPa.
 Test Voltage / Freq. : DC 5V via AC adapter
 Receipt No.: 163064942 100
 Report No.: 17016719 001
 Result: Pass
 Comment: Vertical

Subrange 1

Frequency Range: 30MHz - 1GHz
 Receiver: TUV ESCI 3
 Transducer: TUV SAC UVLB 9168 / TUV ESCI3 -TUV SAC UVLB 9168

FCC 15.209 30M-1G sweep



Limit and Margin QP

Frequency (MHz)	QuasiPeak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
49.100000	26.9	14.3	13.1	40.0	V
70.000000	27.3	11.7	12.7	40.0	V
134.100000	35.1	14.5	8.4	43.5	V
182.850000	37.2	13.0	6.3	43.5	V
950.850000	36.7	26.4	9.3	46.0	V

Tested by:



Reviewed by: _____



Test Plot of Spurious emission of C – Horizontal (1GHz – 18GHz)

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

EMC Test Record (EMISSION)

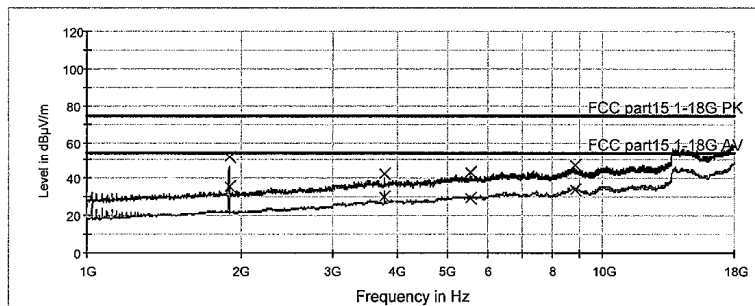
Test Information

Manufacturer: Wistron
 Test Item: ROCKETBOOST READY CARD-RF-RBCARD
 Identification: RF-RBCARD
 Test Standard: FCC Part 15
 Test Detail: RE
 Operation Mode: Rx @ Mid channel
 Climate Condition: 23 °C; 50 %RH; 101 kPa.
 Test Voltage / Freq.: DC 5V via AC adapter
 Receipt No.: 163064942 100
 Report No. 17016719 001
 Result: Pass
 Comment: Horizontal

Subrange 1

Frequency Range: 1GHz – 18GHz
 Receiver: TUV FSP 30
 Transducer: TUV SAC HF906 / TUV FSP 30-TUV SAC HF906

Pre TUV 1 to 18G HF906





Limit and Margin PK

Frequency (MHz)	MaxPeak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
1890.000000	51.9	-13.2	22.1	74.0	H
3780.000000	42.7	-7.8	31.3	74.0	H
5533.000000	43.6	-4.5	30.4	74.0	H
8829.000000	47.3	2.7	26.7	74.0	H

Limit and Margin AV

Frequency (MHz)	Average (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
1890.000000	35.3	-13.2	18.7	54.0	H
3780.000000	30.4	-7.8	23.6	54.0	H
5533.000000	29.8	-4.5	24.2	54.0	H
8829.000000	34.3	2.7	19.7	54.0	H

Tested by: 

Reviewed by: 

Test Plot of Spurious emission of C – Vertical (1GHz – 18GHz)

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

EMC Test Record (EMISSION)

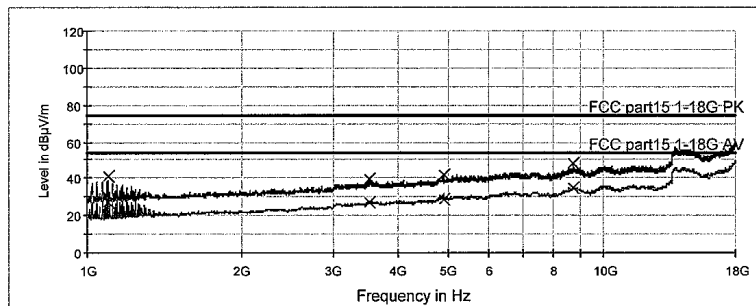
Test Information

Manufacturer: Wistron
 Test Item: ROCKETBOOST READY CARD-RF-RBCARD
 Identification: RF-RBCARD
 Test Standard: FCC Part 15
 Test Detail: RE
 Operation Mode: Rx @ Mid channel
 Climate Condition: 23 °C; 50 %RH; 101 kPa.
 Test Voltage / Freq. : DC 5V via AC adapter
 Receipt No.: 163064942 100
 Report No.: 17016719 001
 Result: Pass
 Comment: Vertical

Subrange 1

Frequency Range: 1GHz – 18GHz
 Receiver: TUV FSP 30
 Transducer: TUV SAC HF906 / TUV FSP 30-TUV SAC HF906

Pre TUV 1 to 18G HF906





Limit and Margin PK

Frequency (MHz)	MaxPeak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
1098.000000	40.7	-16.7	33.3	74.0	V
3533.000000	39.8	-7.7	34.2	74.0	V
4923.000000	41.9	-6.0	32.1	74.0	V
8754.000000	48.2	2.9	25.8	74.0	V

Limit and Margin AV

Frequency (MHz)	Average (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
1098.000000	26.8	-16.7	27.2	54.0	V
3533.000000	26.8	-7.7	27.2	54.0	V
4923.000000	28.7	-6.0	25.3	54.0	V
8754.000000	34.6	2.9	19.4	54.0	V

Tested by:  2010 7 08
Checked

Reviewed by:  2010 7 09
Checked

Test Plot of Spurious emission of C – Horizontal (18GHz – 26GHz)

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

EMC Test Record (EMISSION)

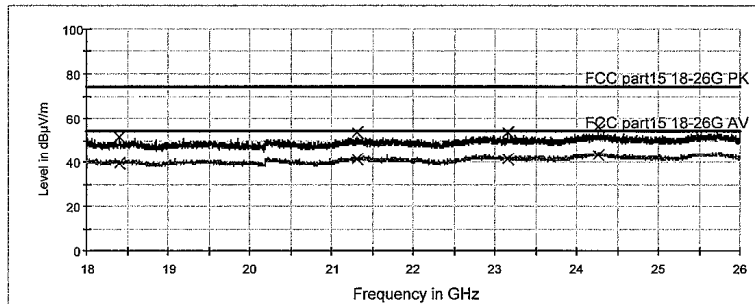
Test Information

Manufacturer: Wistron
 Test Item: ROCKETBOOST READY CARD-RF-RBCARD
 Identification: RF-RBCARD
 Test Standard: FCC Part 15
 Test Detail: RE
 Operation Mode: Rx @ Mid channel
 Climate Condition: 23 °C; 50 %RH; 101 kPa.
 Test Voltage / Freq. : DC 5V via AC adapter
 Receipt No.: 163064942 100
 Report No. 17016719 001
 Result: Pass
 Comment: Horizontal

Subrange 1

Frequency Range: 18GHz - 26GHz
 Receiver: TUV FSP 30
 Transducer: TUV SAC 3160-09 / TUV FSP 30-TUV SAC 3160-09

Pre TUV 18 to 26.5 3160-09




Limit and Margin PK

Frequency (MHz)	MaxPeak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
18405.000000	51.5	4.9	22.5	74.0	H
21314.000000	53.6	5.9	20.4	74.0	H
23165.000000	53.4	6.6	20.6	74.0	H
24269.000000	55.8	6.9	18.2	74.0	H

Limit and Margin AV

Frequency (MHz)	Average (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
18405.000000	39.5	4.9	14.5	54.0	H
21314.000000	41.0	5.9	13.0	54.0	H
23165.000000	41.4	6.6	12.6	54.0	H
24269.000000	43.3	6.9	10.7	54.0	H

Tested by: 

Reviewed by: 

Test Plot of Spurious emission of C – Vertical (18GHz – 26GHz)

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

EMC Test Record (EMISSION)

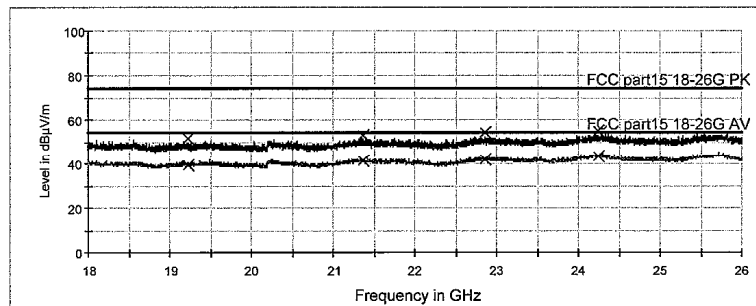
Test Information

Manufacturer: Wistron
 Test Item: ROCKETBOOST READY CARD-RF-RBCARD
 Identification: RF-RBCARD
 Test Standard: FCC Part 15
 Test Detail: RE
 Operation Mode: Rx @ Mid channel
 Climate Condition: 23 °C; 50 %RH; 101 kPa.
 Test Voltage / Freq. : DC 5V via AC adapter
 Receipt No.: 163064942 100
 Report No.: 17016719 001
 Result: Pass
 Comment: Vertical

Subrange 1

Frequency Range: 18GHz - 26GHz
 Receiver: TUV FSP 30
 Transducer: TUV SAC 3160-09 / TUV FSP 30-TUV SAC 3160-09

Pre TUV 18 to 26.5 3160-09





Limit and Margin PK

Frequency (MHz)	MaxPeak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
19234.000000	51.8	5.3	22.2	74.0	V
21368.000000	53.1	5.9	20.9	74.0	V
22857.000000	54.0	6.4	20.0	74.0	V
24243.000000	55.0	6.9	19.0	74.0	V

Limit and Margin AV

Frequency (MHz)	Average (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
19234.000000	39.4	5.3	14.6	54.0	V
21368.000000	41.0	5.9	13.0	54.0	V
22857.000000	42.0	6.4	12.0	54.0	V
24243.000000	43.3	6.9	10.7	54.0	V

Tested by: 

Reviewed by: 

Test Plot of Conducted emissions

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

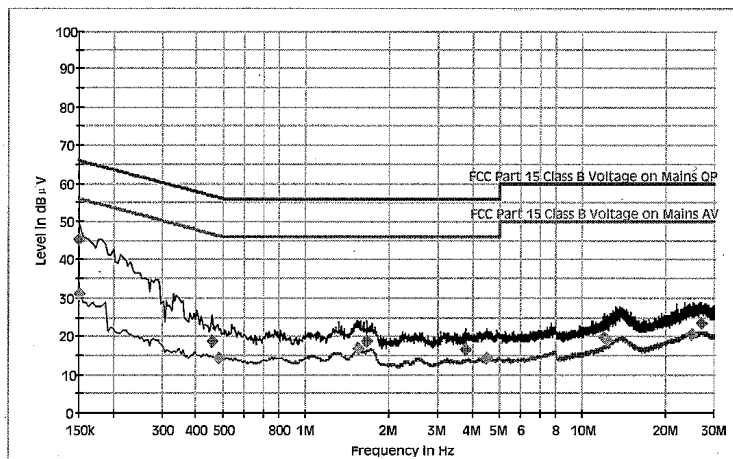
EMC Test Record (EMISSION)

Test Information

Manufacturer: Wistron
Test Item: ROCKETBOOST READY CARD-RF-RBCARD
Identification: RF-RBCARD
Test Standard: FCC Part 15
Test Detail: Conducted Emission
Operation Mode: A
Climate Condition: 22°C; 50 %RH; 101 kPa.
Test Voltage/ Freq.: AC120 V/ 60 Hz
Port / Line: AC Mains
Receipt No.: 163064942 100
Report No.: 17016719 001
Result: Pass
Comment: /

Hardware Setup: 1phase LISN ESH3-Z5 to ESCS30
Level Unit: dB μ V

Subrange	Detectors	IF Bandwidth	Step Size	Meas. Time	Receiver
150kHz - 30MHz	Peak; Average	9kHz	4.5kHz	10ms	ESCS 30



2010-7-8, 23:51:30

Tested by: _____ Reviewed by: _____



TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

Final Measurement Detector 1

Frequency (MHz)	QuasiPeak (dB µV)	Meas. Time (ms)	Bandwidth (kHz)	PE	Line
0.150000	45.4	1000.000	9.000	GND	L1
0.456000	18.5	1000.000	9.000	GND	N
1.666500	18.4	1000.000	9.000	GND	L1
3.772500	16.6	1000.000	9.000	GND	N
11.980500	19.8	1000.000	9.000	GND	L1
27.163500	23.3	1000.000	9.000	GND	L1

(continuation of the "Final Measurement Detector 1" table from column 6 ...)

Frequency (MHz)	Corr. (dB)	Margin (dB)	Limit (dB µV)	Comment
0.150000	10.1	20.6	66.0	
0.456000	9.9	38.2	56.8	
1.666500	10.1	37.6	56.0	
3.772500	10.2	39.4	56.0	
11.980500	10.7	40.2	60.0	
27.163500	11.6	36.7	60.0	

Final Measurement Detector 2

Frequency (MHz)	Average (dB µV)	Meas. Time (ms)	Bandwidth (kHz)	PE	Line
0.150000	31.0	1000.000	9.000	GND	L1
0.487500	14.4	1000.000	9.000	GND	N
1.549500	16.6	1000.000	9.000	GND	L1
4.515000	14.3	1000.000	9.000	GND	L1
12.192000	18.9	1000.000	9.000	GND	L1
24.823500	20.4	1000.000	9.000	GND	L1

(continuation of the "Final Measurement Detector 2" table from column 6 ...)

Frequency (MHz)	Corr. (dB)	Margin (dB)	Limit (dB µV)	Comment
0.150000	10.1	25.0	56.0	
0.487500	10.0	31.9	46.2	
1.549500	10.0	29.4	46.0	
4.515000	10.2	31.7	46.0	
12.192000	10.7	31.1	50.0	
24.823500	11.6	29.6	50.0	

2010-7-8, 23:51:30

Tested by: _____ Reviewed by: _____



Test Plot of Radiated emissions, Horizontal

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

EMC Test Record (EMISSION)

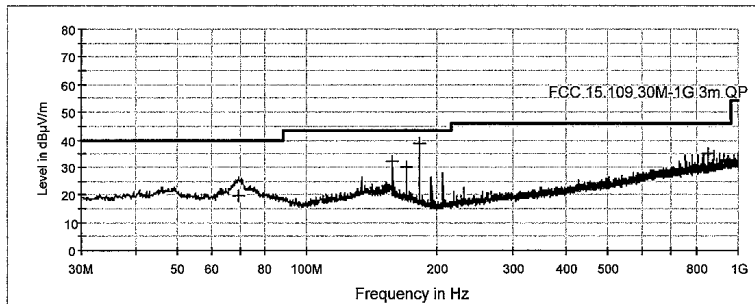
Test Information

Manufacturer: Wistron
 Test Item: ROCKETBOOST READY CARD-RF-RBCARD
 Identification: RF-RBCARD
 Test Standard: FCC Part 15
 Test Detail: RE
 Operation Mode: A
 Climate Condition: 23 °C; 50 %RH; 101 kPa.
 Test Voltage / Freq. : DC 5V via AC adapter
 Receipt No.: 163064942 100
 Report No.: 17016719 001
 Result: Pass
 Comment: Horizontal

Subrange 1

Frequency Range: 30MHz - 1GHz
 Receiver: TUV ESCI 3
 Transducer: TUV SAC UVLB 9168 / TUV ESCI3 -TUV SAC UVLB 9168

FCC 15.109 30M-1G sweep



Limit and Margin QP

Frequency (MHz)	QuasiPeak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
69.900000	19.7	11.8	20.3	40.0	H
158.500000	31.8	15.6	11.7	43.5	H
170.650000	29.9	14.7	13.6	43.5	H
182.850000	38.6	13.0	4.9	43.5	H
853.400000	35.2	25.0	10.8	46.0	H

Tested by:



Reviewed by: _____



Test Plot of Radiated emissions, Vertical

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

EMC Test Record (EMISSION)

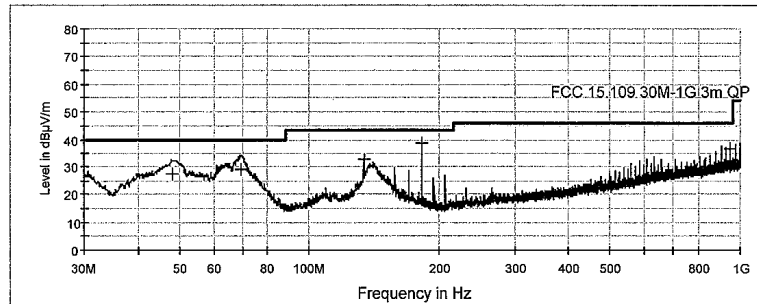
Test Information

Manufacturer: Wistron
 Test Item: ROCKETBOOST READY CARD-RF-RBCARD
 Identification: RF-RBCARD
 Test Standard: FCC Part 15
 Test Detail: RE
 Operation Mode: A
 Climate Condition: 23 °C; 50 %RH; 101 kPa.
 Test Voltage / Freq. : DC 5V via AC adapter
 Receipt No.: 163064942 100
 Report No.: 17016719 001
 Result: Pass
 Comment: Vertical

Subrange 1

Frequency Range: 30MHz - 1GHz
 Receiver: TUV ESCI 3
 Transducer: TUV SAC UVLB 9168 / TUV ESCI3 -TUV SAC UVLB 9168

FCC 15.109 30M-1G sweep



Limit and Margin QP

Frequency (MHz)	QuasiPeak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
48.300000	27.1	14.3	12.9	40.0	V
69.900000	28.7	11.8	11.3	40.0	V
134.100000	32.4	14.5	11.1	43.5	V
182.850000	38.9	13.0	4.6	43.5	V
950.850000	36.7	26.4	9.3	46.0	V

Tested by:

WDZ
2010 7 08
Checked

Reviewed by: _____

DW
2010 7 09
Checked

Test Plot of Radiated emissions in restricted bands, Horizontal, Mode A.1

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

EMC Test Record (EMISSION)

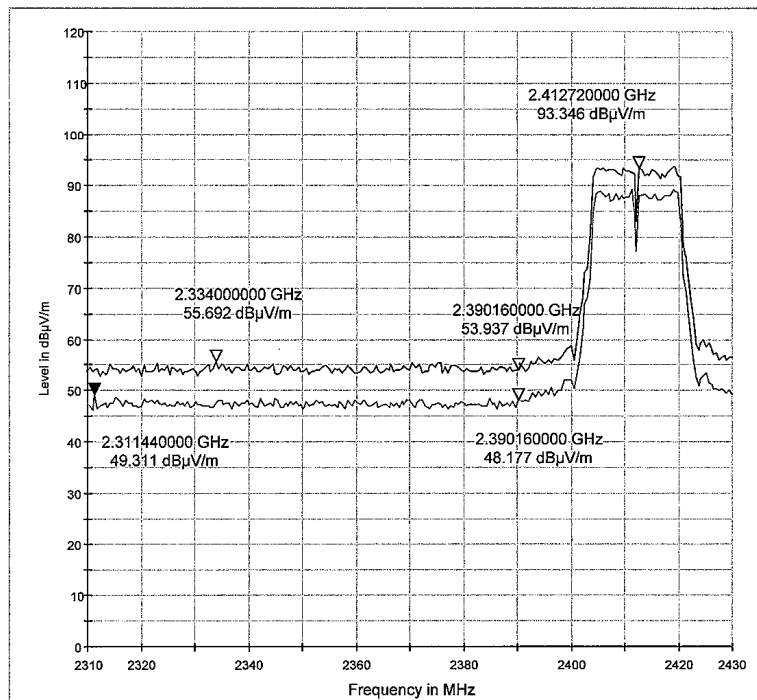
Test Information


Manufacturer:	Wistron
Test Item:	ROCKETBOOST READY CARD-RF-RBCARD
Identification	RF-RBCARD
Test Standard:	FCC Part 15
Test Detail:	Band edge
Operation Mode:	Tx @ Low channel
Climate Condition:	23 °C; 50 %RH; 101 kPa.
Test Voltage / Freq. :	DC 5V via AC adapter
Receipt No.:	163064942 100
Report No.	17016719 001
Result:	Pass
Comment:	Horizontal


Subrange 1

Frequency Range:	2GHz – 3GHz
Receiver:	TUV FSP 30
Transducer:	TUV SAC HF906 / TUV FSP 30-TUV SAC HF906

Pre TUV 1 to 18G HF906



Tested by: 

Reviewed by: 

Test Plot of Radiated emissions in restricted bands, Vertical, Mode A.1

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

EMC Test Record (EMISSION)

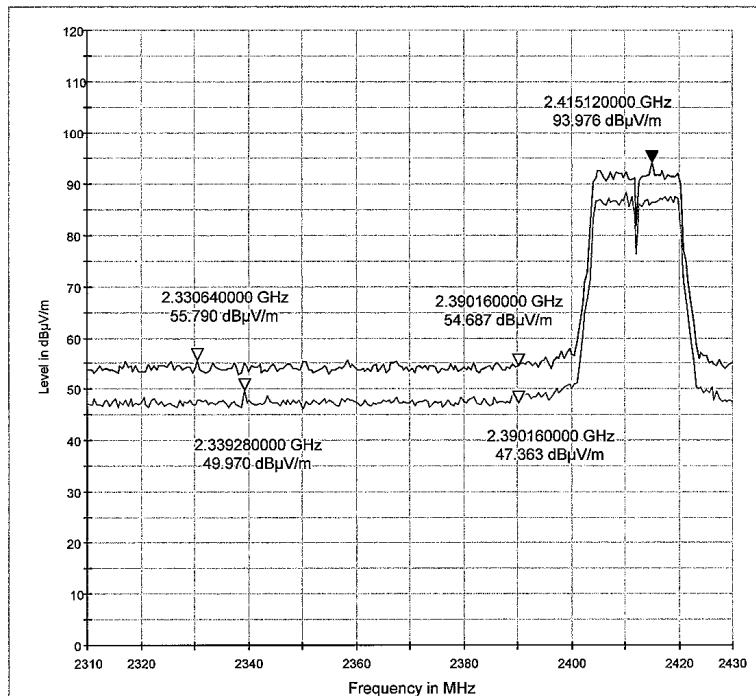
Test Information


Manufacturer:	Wistron
Test Item:	ROCKETBOOST READY CARD-RF-RBCARD
Identification:	RF-RBCARD
Test Standard:	FCC Part 15
Test Detail:	Band edge
Operation Mode:	Tx @ Low channel
Climate Condition:	23 °C; 50 %RH; 101 kPa.
Test Voltage / Freq. :	DC 5V via AC adapter
Receipt No.:	163064942 100
Report No.:	17016719 001
Result:	Pass
Comment:	Vertical


Subrange 1

Frequency Range:	2GHz – 3GHz
Receiver:	TUV FSP 30
Transducer:	TUV SAC HF906 / TUV FSP 30-TUV SAC HF906

Pre TUV 1 to 18G HF906



Tested by:  2010 7 08
Checked

Reviewed by:  2010 7 09
Checked

Test Plot of Radiated emissions in restricted bands, Horizontal, Mode A.3

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

EMC Test Record (EMISSION)

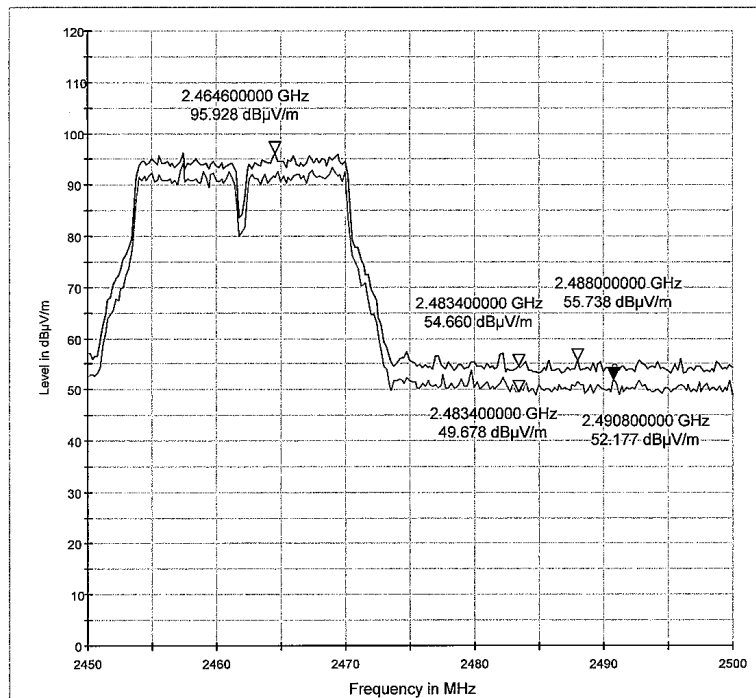
Test Information


Manufacturer:	Wistron
Test Item:	ROCKETBOOST READY CARD-RF-RBCARD
Identification	RF-RBCARD
Test Standard:	FCC Part 15
Test Detail:	Band edge
Operation Mode:	Tx @ High channel
Climate Condition:	23 °C; 50 %RH; 101 kPa.
Test Voltage / Freq. :	DC 5V via AC adapter
Receipt No.:	163064942 100
Report No.	17016719 001
Result:	
Comment:	Horizontal


Subrange 1

Frequency Range:	2GHz – 3GHz
Receiver:	TUV FSP 30
Transducer:	TUV SAC HF906 / TUV FSP 30-TUV SAC HF906

Pre TUV 1 to 18G HF906



Tested by:  2010 708
Checked

Reviewed by:  2010 709
Checked

Test Plot of Radiated emissions in restricted bands, Vertical, Mode A.3

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

EMC Test Record (EMISSION)

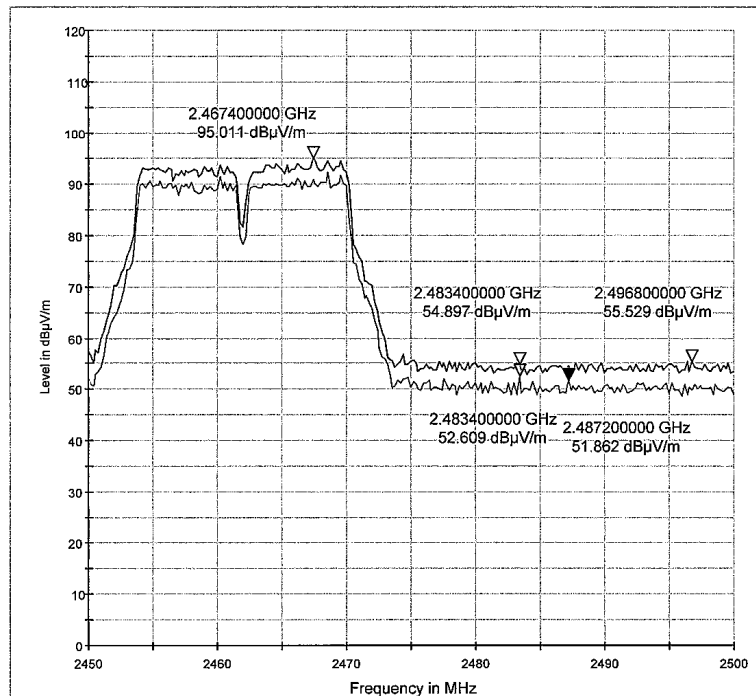
Test Information

Manufacturer:	Wistron
Test Item:	ROCKETBOOST READY CARD-RF-RBCARD
Identification:	RF-RBCARD
Test Standard:	FCC Part 15
Test Detail:	Band edge
Operation Mode:	Tx @ High channel
Climate Condition:	23 °C; 50 %RH; 101 kPa.
Test Voltage / Freq. :	DC 5V via AC adapter
Receipt No.:	163064942 100
Report No.:	17016719 001
Result:	
Comment:	Vertical

Subrange 1

Frequency Range:	2GHz – 3GHz
Receiver:	TUV FSP 30
Transducer:	TUV SAC HF906 / TUV FSP 30-TUV SAC HF906

Pre TUV 1 to 18G HF906



Tested by:



Reviewed by:

