

Radio Intentional EMC Test Report: EDCS - 651967

For

C3205WMIC-A-K9

Against the following Specifications :

47CFR15

RSS-210

**Cisco Systems** 

**EMC** Laboratory

170 West Tasman Drive



Certificate Number : 1178-01

Author: Donald Foster Approved By: Title:

This report replaces any previously entered test report under EDCS - 651967

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#### Section 1: Overview

#### Test Summary

The samples were assessed against the tests detailed in section 3 under the requirements of the following standards:

Emission				
Specification	Туре	Applied To		
CFR47 Part 15.247(a)	Conducted Emissions	RF Ports		
CFR47 Part 15.247(a)(2)	Conducted Emissions	RF Ports		
CFR47 Part 15.247b3 (LP0002 3.10.1.2)	Conducted Emissions	RF Ports		
CFR47 Part 15.407(a)6	Conducted Emissions	RF Ports		
CFR47 Part 15.407a (LP0002 4.7.2, RSS210)	Conducted Emissions	RF Ports		
Conducted Spurious Emissions	Conducted Emissions	RF Ports		
Radiated Spurious Emissions	Radiated Emissions	Enclosure		
Restricted Bandedge Measurements	Radiated Emissions	Enclosure		

Immunity		
Specification	Туре	Applied To
N/A	N/A	N/A

#### Notes:

- 1) Where a specification listed on the front cover of this report has deviations from the basic standards listed above, the additional technical requirements of the specification were also assessed.
- Measurements were made in accordance with FCC docket #: DA-00705, DA-02-2138A1 & measurement method of spurious emission tolerance to the International Telecommunication Union (ITU) Recommendation SM329
- 3) Where appropriate, Cisco may have substituted a later revision of a basic standard to those referenced in the specification on the front sheet of this test report. This decision was based upon improved test methodology and repeatability and/or where the newer revision represented a more stringent test.

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Section 2: Assessment Information

2.1 General

The testing was performed by and for the use of Cisco systems Inc. This report must not be used to claim product certification, approval, or endorsement by A2LA, NIST, or any agency of the federal Government.

This report may contain data that is not enveloped by the scope of the A2LA accreditation (A2LA certificate number1178-01). Please refer to Appendix C for further details.

With regard to this assessment, the following points should be noted:

- a) The results contained in this report relate only to the items tested and were obtained in the period between the date of the initial assessment and the date of issue of the report. Manufactured products will not necessarily give identical results, due to production tolerances and measurement uncertainties.
- b) The apparatus was set up and exercised using the configuration and modes of operation defined in this report only.
- c) Where relevant, the apparatus was only assessed using the susceptibility criteria defined in this report and the Test Assessment Plan (TAP).
- d) All testing was performed under the following environmental conditions:

Temperature	15°C to 35°C (54°F to 95°F)
Atmospheric Pressure	860mbar to 1060mbar (25.4" to 31.3")
Humidity	10% to 75*%

- e) All AC testing was performed at one or more of the following supply voltages:
  - 110V 60 Hz (+/-20%)

220V 50 Hz (+/-20%)

 f) Cisco Systems, Inc. is accredited by the American Association for Laboratory Accreditation (A2LA).
The scope of accreditation, certificate number1178-01 is referenced in appendix C, along with further details.

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#### 2.2 Start Date of Testing

29-Jan-2008

#### 2.3 Report Issue Date

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#### 2.4 Testing facilities

This assessment was performed by:

#### **Testing Laboratory**

Cisco Systems, Inc., 170 West Tasman Drive San Jose, CA 95134, USA

#### **Registration Numbers for Industry Canada**

Cisco System Site	Site Identifier
Building P, 10m Chamber	Company #: 4624-2
Building P, 5m Chamber	Company #: 4624-1
Building N, 5m Chamber	Company #: 6111
Building I, 5m Chamber	Company #: 6112

#### **Test Engineers**

Donald Foster

2.5 Equipment Assessed (EUT) C3205WMIC-A-K9

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#### 2.6 EUT Description

The C3205WMIC-A-K9 is a standalone A radio module that is installed in the 3200 series mobile router. The end user can stack several of these radios into a single chassis and build a poit to point to point network with association to both client and Master devices.

#### 2.7 Justification of the worst case test configuration and mode of operation

This configuration meets the requirements for testing to the applicable countries

#### 2.8 Scope of Assessment

Tests have been performed in accordance with the relevant Test and Assessment Plan (TAP), a copy of which is contained in Appendix F of this report, and the relevant Cisco Systems, Inc. radio test procedures (EDCS-420238). This test report may not cover all of the tests highlighted in the test plan.

#### 2.9 Units of Measurement

The units of measurements defined in the appendices are reported in specific terms, which are test dependent. Where radiated measurements are concerned these are defined at a particular distance. Basic voltage measurements are defined in units of [dBuV]

As an example, the basic calculation for all measurements is as follows:

Emission level [dBuV] = Indicated voltage level [dBuV] + Cable Loss [dB] + Other correction factors

[dB]

The combinations of correction factors are dependent upon the exact test configurations [see test equipment lists for further details] and may include:-

Antenna Factors, Pre Amplifier Gain, LISN Loss, Pulse Limiter Loss and Filter Insertion Loss..

Note: to convert the results from dBuV/m to uV/m use the following formula:-

Level in uV/m = Common Antilogarithm [(X dBuV/m)/20] = Y uV/m

#### 2.10 Report Template Control No.

Revision: SJRIA 7.0

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### Section 3: Result Summary

#### 3.1 Results Summary Table

#### **Conducted emissions**

Test Number (Spec Id)	Basic Standard	Freq Range	Test Details / Comments	Mode	Systems Tested	Result
30202 (651)	CFR47 Part 15.247(a) Applied to: RF Ports Class: N/A	2400MHz - 5850MHz	26dB Bandwidth also complies wiht RSS 210, LP0002, HKTA1039	1	1	Pass
30414 (649)	CFR47 Part 15.407(a)6 <b>Applied to:</b> RF Ports <b>Class:</b> N/A	5150MHz - 5725MHz	Peak Excursion also complies with LP0002, RSS 210, HKTA1039	1	1	Pass
30382 (474)	CFR47 Part 15.407a (LP0002 4.7.2, RSS210) Applied to: RF Ports Class: N/A	5150MHz - 5725MHz	Peak Power Spectral Density (LP0002 limit 4dBm from 5250- 5350MHz)Also complies withHKTA1039	1	1	Pass
30380 (478)	CFR47 Part 15.407a (LP0002 4.7.2, RSS210) <b>Applied to:</b> RF Ports <b>Class:</b> N/A	5150MHz - 5725MHz	Peak Transmit Power (LP0002 limit 17dBm or formula from 5250- 5350MHz), Also complieswith HKTA1039	1	1	Pass
30379 (652)	Conducted Spurious Emissions Applied to: RF Ports Class: N/A	30MHz - xGHz	Also complies with RSS 210, LP0002, HKTA1039	1	1	Pass

#### **Radiated emissions**

Test Number (Spec Id)	Basic Standard	Freq Range	Test Details / Comments	Mode	Systems Tested	Result
30416 (966)	Radiated Spurious Emissions Applied to: Enclosure Class: N/A	30MHz - 40GHz	CFR47 Part 15.109, CFR47 Part 15.407, RSS-210, LP0002 HKTA1039	1	3	Pass

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30418	Restricted	2.4GHz -	CFR47 Part 15.205,CFR47 Part	1	3,4	Pass
(648)	Bandedge	5.825GHz	15.209,LP002, RSS210HKTA1039			
	Measurements					
	Applied to:					
	Enclosure					
	Class: B					

### Section 4: Sample Details

Note: Each sample was evaluated to ensure that its condition was suitable to be used as a test sample prior to the commencement of testing. Please also refer to the "Justification for worst Case test Configuration" section of this report for further details on the selection of EUT samples.

#### 4.1 Sample Details

Sample Number	Equipment Details	Serial Number	Part Number
S01	C3205WMIC-A-K9	FOC11384LT8	74-5121-02 01
S02	IBM laptop	78-WAYM9 00/01	n/a
S03	AC power adapter	11S02K6657Z1Z0ZR0645 N9	02k6657
S04	Mini-PCI extender card	eng proto	proto
S05	*AIR-ANT5175V-N 7.5dbi omni	n/a	74-4283-01
S06	*AIR-ANT5114P-N 14dbi patch	n/a	n/a

The following antennas are to be used with the C3205WMIC-A-K9 radio the highest gain for each antenna type is the test subject in this report.

AIR-ANT5114P-N 14dbi patch AIR-ANT5195P-R 9.5dbi patch AIR-ANT5170P-R 7dbi patch AIR-ANT 5180V-N 7.5dbi omni AIR-ANT5175V-N 7.5dbi omni AIR-ANT5160V-R 6dbi omni

#### 4.2 System Details

System #	Description	Samples
1	Conducted testing configuration	S01
2	Support equipment	S02, S03 and S04

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3	Radiated testing for the 7.5 Omni antenna	S01 and S05
4	Radiated testing for the 14dbi patch	S01 and S06

#### 4.3 Mode of Operation Details

Mode#	Description	Comments
1	Continuous Transmit	The system will be brought up in a continuous transmit mode via the ART diag program

#### Section 5: Modifications

#### 5.1 Sample Modifications Performed During Assessment

The firmware was adjusted to block the 5600-5640 range no hardware changes were made

#### Appendix A: Formal Test Results

During the course of the testing it was decided that the radios operation in the 5500-5700 range would be limited to exclude the channels in the 5600-5640 range these have been permanently blocked in the radios firmware and can not be enabled by the end user.

# Operational Frequency range: 5250-5350 5470-5580 5660-5725

### **Average Output Power**

Freq. in Mhz.	Data Rate	Average Output Power (dbm)
5260	36	11
5300	36	11.5
5320	36	10.9
5500	36	11.7
5600	36	10.5
5700	36	11.3

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### **Conducted emissions**

Test Number: 30202 Spec ID: 651							
Basic Standard	Applied to	Class	Freq Range	Test Details / Comments			
CFR47 Part 15.247(a)	RF Ports	N/A	2400MHz - 5850MHz	26dB Bandwidth also complies wiht RSS 210, LP0002, HKTA1039			
Operating Mode	Mode : 1, Continuous Transmit						
Power Input	5, DC (+/-20%)	5, DC (+/-20%)					
Overall Result	Pass	Pass					
Comments	No further comments						
Deviation	There were no c	There were no deviations from the specification					

System Number	Description	Samples	System under test	Support equipment
1	Conducted testing configuration	S01	K	
2	Support equipment	S02, S03 and S04		$\checkmark$

Subtest Number: 3020	2 - 1	Subtest Date: 29-Jan-2008	
Engineer	Donald Foster		
Lab Information	Building P, Shield Room 3		
Subtest Results	•		
Line Under Test	[A] Antenna port		
Transducer	Direct		
Subtest Result	Pass		
Highest Frequency	N/A		
Lowest Frequency	N/A		
Comments on the above Test Results	No further comments		

#### **Graphical Test Results**

Note that the data displayed on the plots detailed in this appendix were measured using a 'Peak Detector'. Please refer to the results table for the detectors used during formal measurements

Freq in MHz.	Data Rate	99% Occupied Bandwidth	26db Bandwidth
5260	36	16.55	22.23
5300	36	16.55	22.15
5320	36	16.52	22.11
5500	36	16.55	22.26
5600	36	16.54	22.22
5700	36	16.54	22.22

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ዡ Agilent 13:33:05 Nov 20, 200	7	Freq/Channel
<b>Ch Freq</b> 5.3 GHz Occupied Bandwidth		Trig Free Center Freq 5.30000000 GHz
Center 5.300000000	iHz	Start Freq 5.28000000 GHz
Ref 11.5 dBm Atten 20 dB #Peak Log 10		<b>Stop Freq</b> 5.32000000 GHz
dB/ Offst		CF Step 4.00000000 MHz <u>Auto</u> Man
dB Center 5.300 00 GHz #Res BW 160 kHz #V		Span 40 MHz <sup>°</sup> s (601 pts)
Occupied Bandwidth 16.5550 M	Occ BW % Pwr	Signal Track
Transmit Freq Error-36.27x dB Bandwidth22.156		
File Operation Status, A:\SCRE le: 26db Bandwidth @ 5300MHz.	N648.GIF file saved	

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🔆 Agilent 13:34:11 Nov	20,2007		Meas Setup
<b>Ch Freq</b> 5.3 Occupied Bandwidth	2 GHz	Trig	Free Avg Number
Center 5.320000	000 GHz		Avg Mode Exp Repeat
#Peak	n 20 dB ∲		Max Hold On Off
10 dB/ 0ffst 1.5			Occ BW % Pwr 99.00 %
dB Center 5.320 00 GHz		Span 40	and the second se
*Res BW 160 kHz Occupied Bandwic 16 54	*VBW 470 kHz Ith 0 229 MHz	#Sweep 5 s (601 сс ВЖ % Рмг 99.0 х dВ −26.00	00 % <b>x dB</b> −26.00 dB
LO.J. Transmit Freq Error x dB Bandwidth			Optimize Ref Level
File Operation Status, A	:\SCREN649.GIF file	saved	

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ዡ Agilent 13:31:48 Nov	20, 2007		Trace
<b>Ch Freq</b> 5. Occupied Bandwidth	26 GHz	Trig Fr	ee <u>1</u> 2 3
			Clear Write
Ref 11.5 dBm Atte #Peak Log 10	n 20 dB	****	Max Hold
dB/ Offst 1.5 dB			Min Hold
Center 5.260 00 GHz #Res BW 160 kHz	#VBW 470 kHz	Span 40 M #Sweep 5 s (601 pt	
	<b>503 MHz</b> -44.465 kHz	<b>Осс ВЖ % Рыг</b> 99.00 <b>х dB</b> —26.00 d	χ Blank
File Operation Status,		saved	

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🔆 Agilent 13:35:20 Nov	20, 2007		Meas Setup
<b>Ch Freq</b> 5 Occupied Bandwidth	5.5 GHz	Trig	Free Avg Number 100 0n <u>Off</u>
Center 5.50000	0000 GHz		Avg Mode Exp Repeat
#Peak	en 20 dB	****	Max Hold On Off
10 dB/ 0ffst 1.5		and the second s	Occ BW % Pwr 99.00 %
dB Center 5.500 00 GHz		Span 40	and the second se
*Res BW 160 kHz		#Sweep 5 s (601 )cc BW % Pwr 99.0 × dB -26.00	00 % −26.00 dB
Transmit Freq Error	5 <b>00 MHz</b> -57.909 kHz 22.268 MHz	<b>A GD</b> -20.00	Optimize Ref Level
File Operation Status,	A:\SCREN650.GIF file	saved	

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* Agilent 13:39:49 Nov	20, 2007		Freq/Chann	el
Ch Freq 5 Occupied Bandwidth	.6 GHz	T	rig Free Center Fre 5.60000000 G	
Center 5.60000	1000 GHz		Start Fro 5.58000000 G	
#Peak	en 20 dB	·····•	Stop Fro 5.62000000 G	
10 dB/ 0ffst 1.5			CF Sto 4.00000000 M <u>Auto</u> M	
dB Center 5.600 00 GHz^			Freq Offs 0.00000000	
#Res BW 160 kHz	₩VBW 470 kHz	#Sweep 5 s (	601 pts) Signal Tra	ck
Occupied Bandwi 16.5	dth     ⁰ i494 MHz	сс В₩ % Рwr xdB –2	99.00 % On (	Dff
	22.223 MHz			
File Operation Status,		saved		
le: 26db Bandwidth 5600 MH	Ζ.			

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* Agilent 13:43:15 Nor Ch Freg		Trig	Freq/Channel
Occupied Bandwidth			5.70000000 GHz
Center 5.70000	0000 GHz		Start Freq 5.68000000 GHz
#Peak	en 20 dB	•	Stop Freq 5.72000000 GHz
10 dB/ 0ffst 1.5			<b>CF Step</b> 4.00000000 MHz <u>Auto</u> Man
dB Center 5.700 00 GHz #Res BW 160 kHz	#VBW 470 kHz	^ Span 40 #Sweep 5 s (601	
Occupied Bandw 16.	idth o 5484 MHz	жонеер 3 3 (001 Осс ВЖ % Рыг 99.0 х dB -26.00	00 % On Off
Transmit Freq Error × dB Bandwidth File Operation Status,	22.227 MHz	saved	
The operation others,	III. (SCREIIOSEI VII TIIC	30760	

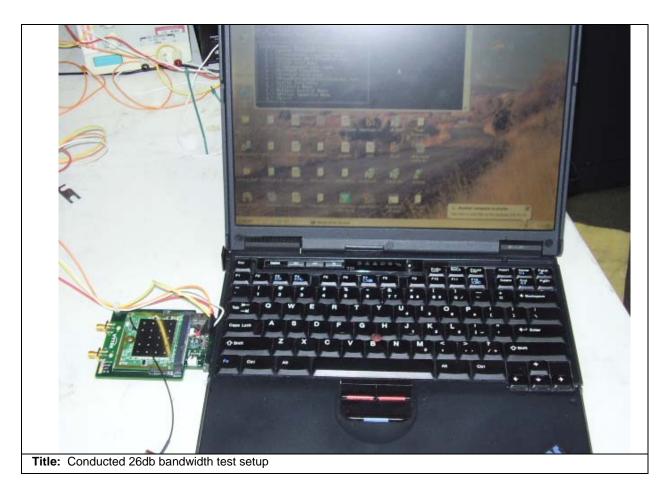
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Physical Test arrangement Photograph:

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Comments on the above Photograph:

No further comments

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### **Conducted emissions**

Test Number: 30414 Spec ID: 649							
Basic Standard	Applied to	Class	Freq Range	Test Details / Comments			
CFR47 Part 15.407(a)6	RF Ports	N/A	5150MHz - 5725MHz	Peak Excursion also complies with LP0002, RSS 210, HKTA1039			
Operating Mode	Mode: 1, Contin	Mode : 1, Continuous Transmit					
Power Input	5, DC (+/-20%)	5, DC (+/-20%)					
Overall Result	Pass	Pass					
Comments	No further comments						
Deviation	There were no deviations from the specification						

System Number	Description	Samples	System under test	Support equipment
1	Conducted testing configuration	S01		
2	Support equipment	S02, S03 and S04		$\checkmark$

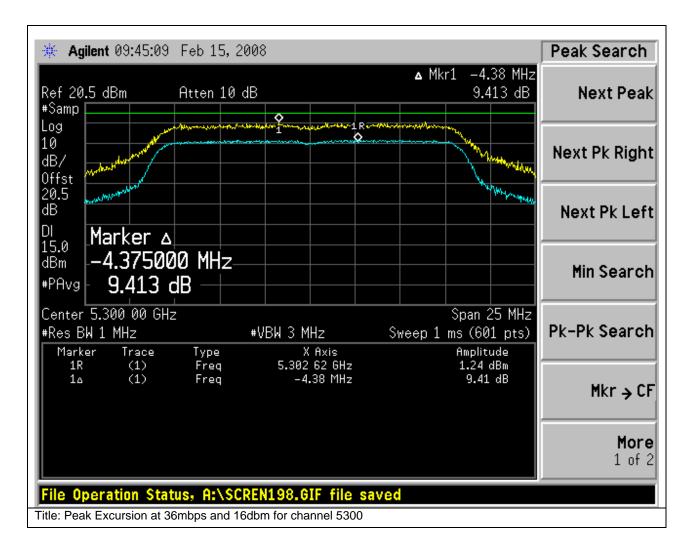
Subtest Number: 30414 - 1		Subtest Date: 15-Feb-2008	
Engineer	Donald Foster		
Lab Information	Building P, Shield Room 3		
Subtest Results			
Line Under Test	[A] Antenna port		
Transducer	Direct		
Subtest Result	Pass		
Highest Frequency	N/A		
Lowest Frequency	N/A		
Comments on the above Test Results	No further comments		

15.407: The ratio of the peak excursion of the modulation envelope (measured using a peak hold function) to the maximum conducted output power (measured as specified above) shall not exceed 13 dB across any 1 MHz bandwidth or the emission bandwidth whichever is less.

Freq. in MHz.	Data rate	Peak Excursion (dbm)	Limit (dbm)	Margin
5260	36	10.34	13	2.66
5300	36	9.41	13	3.59
5320	36	9.92	13	3.08
5500	36	8.8	13	4.2
5600	36	9.38	13	3.62
5700	36	10.19	13	2.81

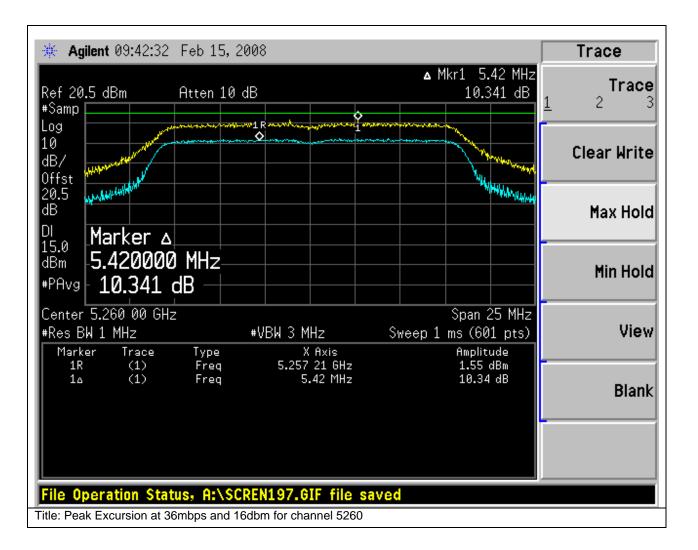
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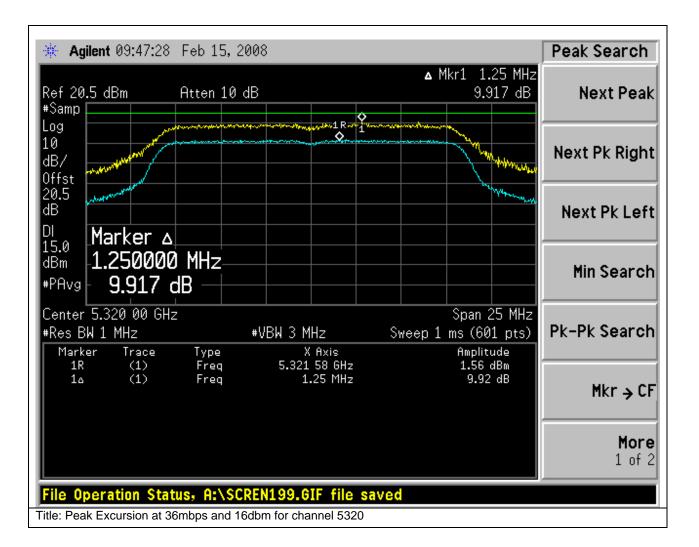
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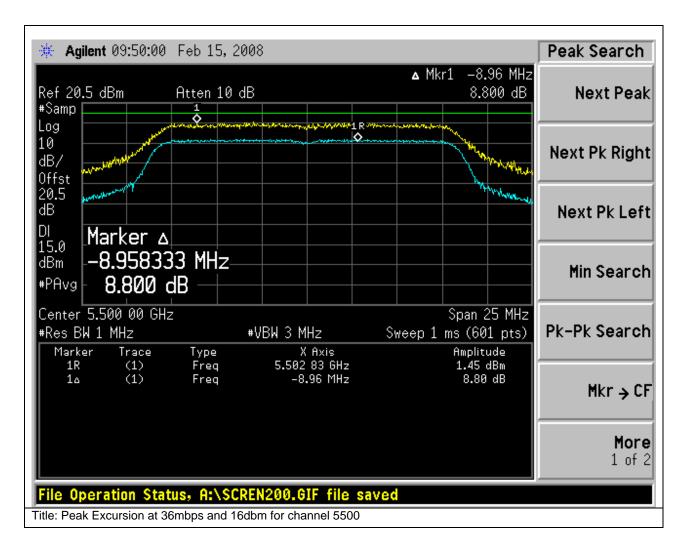


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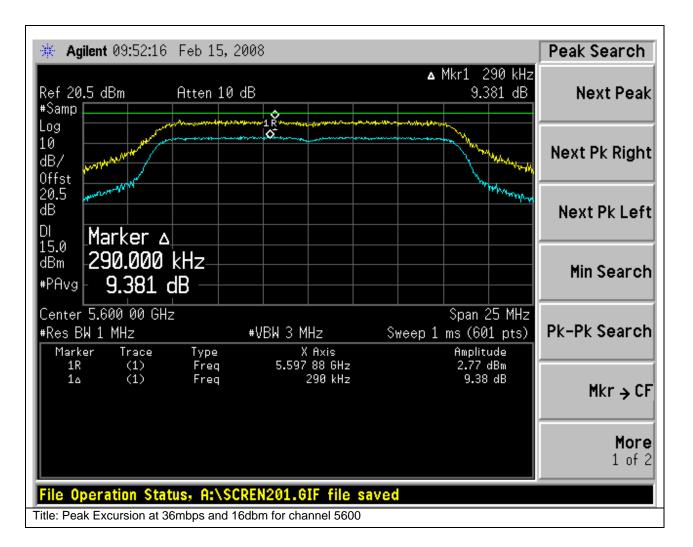
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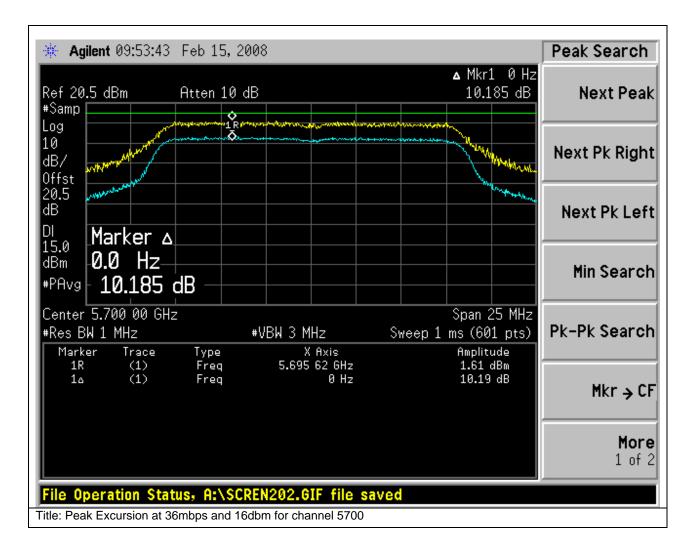
# rijuiju cisco



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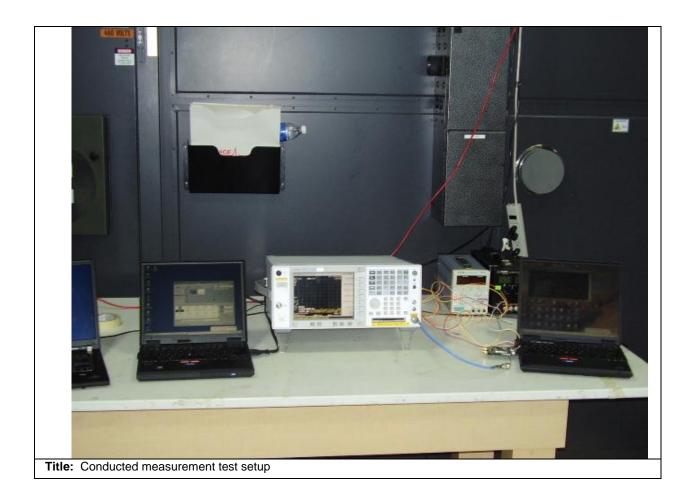
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# cisco



**Physical Test arrangement Photograph:** 

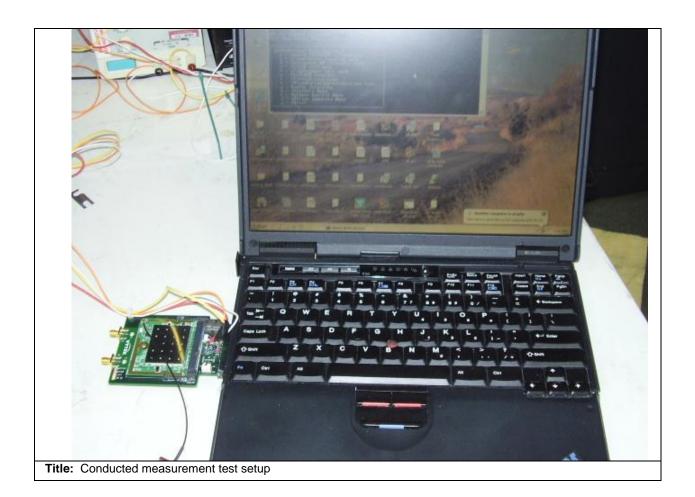
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#### **Conducted emissions**

Test Number: 3	Test Number: 30382     Spec ID: 474				
Basic Standard	Applied to Class Freq Range Test Details / Comments				
CFR47 Part 15.407a (LP0002 4.7.2, RSS210)	RF Ports N/A 5150MHz - 5725MHz Peak Power Spectral Density				
Operating Mode	Mode : 1, Continuous Transmit				
Power Input	5, DC (+/-20%)				
Overall Result	Pass				
Comments	No further commer	No further comments			
Deviation	There were no dev	iations from th	e specification		

System Number	Description	Samples	System under test	Support equipment
1	Conducted testing configuration	S01	K	
2	Support equipment	S02, S03 and S04		$\triangleleft$

Subtest Number: 30382 - 1		Subtest Date: 12-Feb-2008	
Engineer	Donald Foster		
Lab Information	Building P, Shield Room 3		
Subtest Results			
Line Under Test	[A] Antenna port		
Transducer	Direct		
Subtest Result	Pass		
Highest Frequency	N/A		
Lowest Frequency	N/A		
Comments on the above Test Results	No further comments		

15.407: For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the peak power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

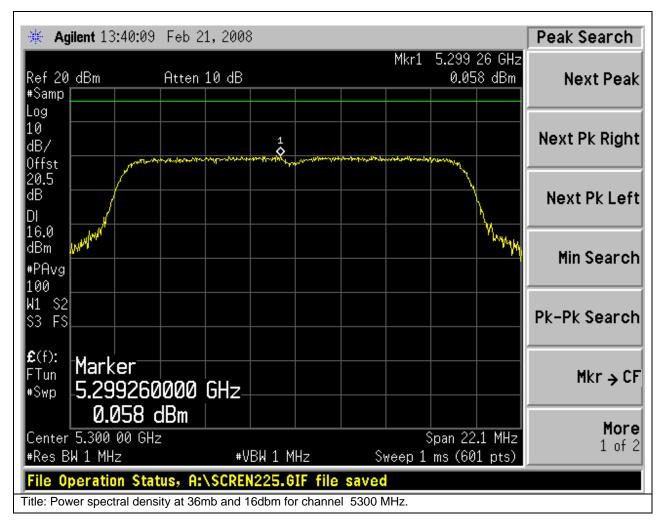
The maximum supported antenna gain is 14 dBi. Therefore the maximum allowable peak power spectral density must be reduced by 14dBi-6dbi = 8dBi.

Freq. in MHz.	Data Rate	PPSD (dbm)	Limit (dbm)	Margin
5260	36	0.5	3	2.5
5300	36	0.05	3	2.95
5320	36	-0.19	3	3.81

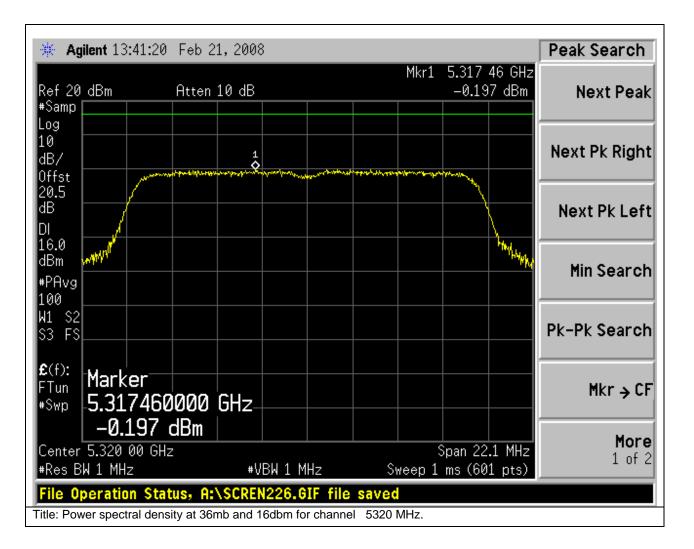
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5500	36	0.39	3	3.61
5600	36	0.32	3	2.68
5700	36	1.17	3	1.83



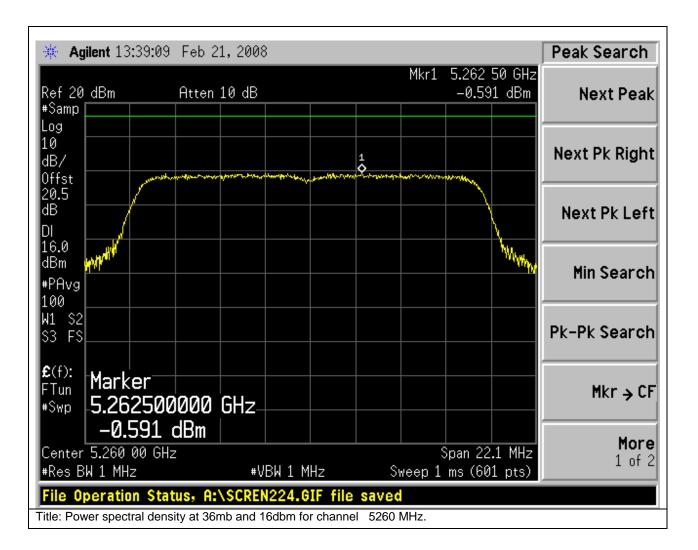
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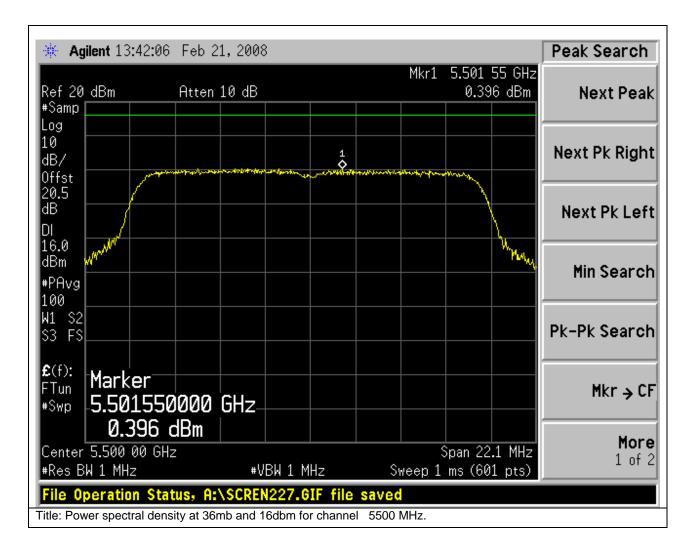
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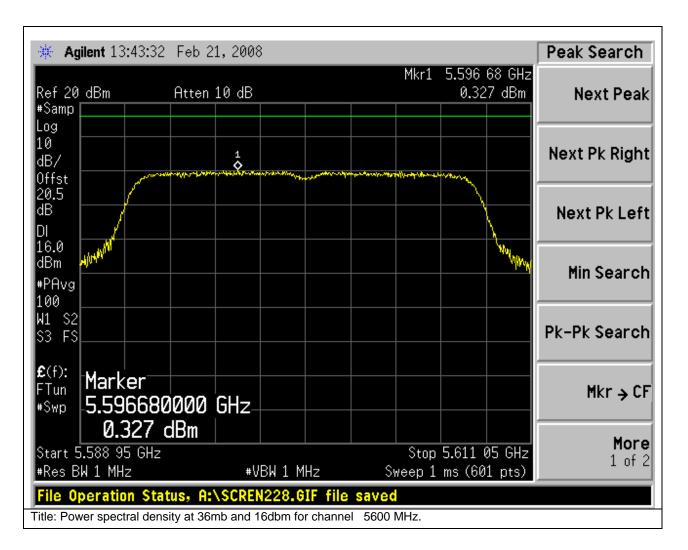
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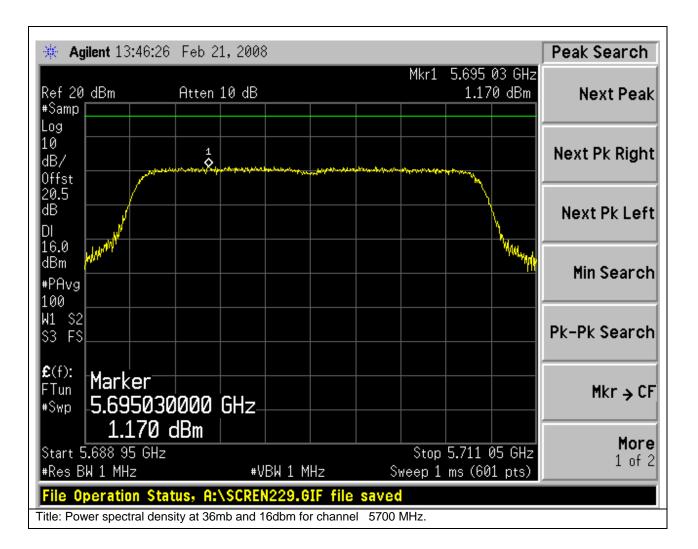
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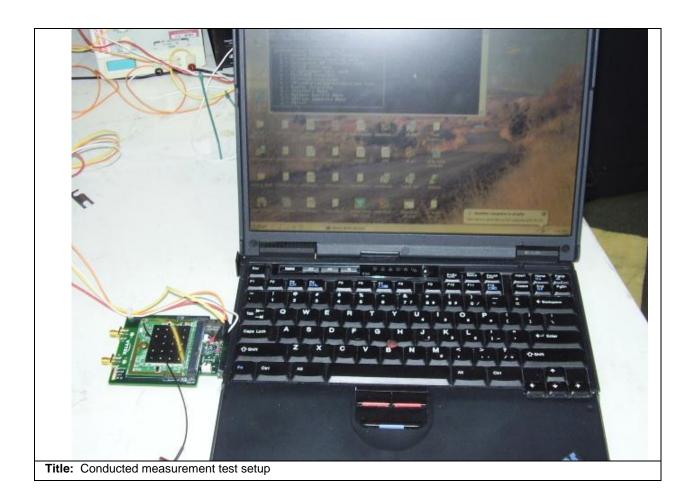
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Physical Test arrangement Photograph:

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#### **Conducted emissions**

Test Number: 3	Test Number: 30380     Spec ID: 478			
Basic Standard	Applied to	Class	Freq Range	Test Details / Comments
CFR47 Part 15.407a (LP0002 4.7.2, RSS210)	RF Ports	N/A	5150MHz - 5725MHz	Peak Transmit Power (LP0002 limit 17dBm or formula from 5250-5350MHz), Also complieswith HKTA1039
Operating Mode	Mode: 1, Continue	Mode : 1, Continuous Transmit		
Power Input	5, DC (+/-20%)	5, DC (+/-20%)		
Overall Result	Pass			
Comments	No further comments			
Deviation	There were no dev	iations from th	e specification	

System Number	Description	Samples	System under test	Support equipment
1	Conducted testing configuration	S01	K	
2	Support equipment	S02, S03 and S04		$\triangleleft$

Subtest Number: 30380 - 1		Subtest Date: 12-Feb-2008	
Engineer	Donald Foster		
Lab Information	Building P, Shield Room 3		
Subtest Results			
Line Under Test	[A] Antenna port		
Transducer	Direct		
Subtest Result	Pass		
Highest Frequency	N/A		
Lowest Frequency	N/A		
Comments on the above Test Results	No further comments		

15.407: For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in megahertz. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

The smallest 26dB bandwidth for all channels is 22.1 MHz. The maximum conducted output power is calculated as 11dBm+10\*log(22.1MHz) = 24.4dBm therefore the limit of 24dbm shall be used

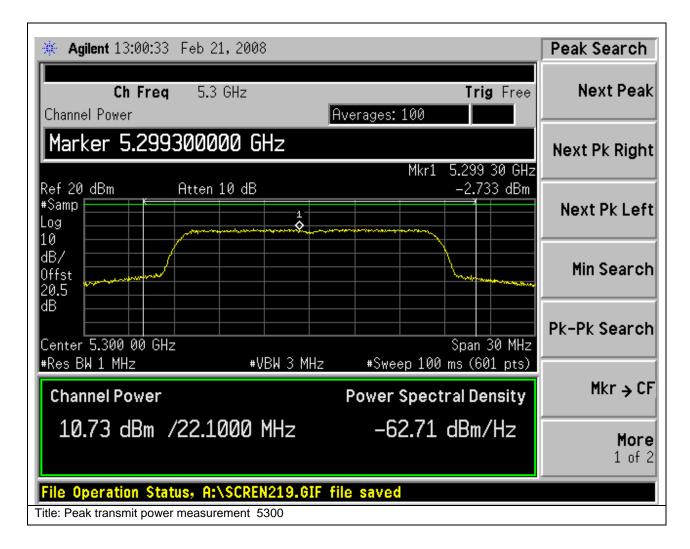
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The maximum supported antenna gain for all bands is 14dBi. Therefore the maximum allowable output power for all bands must be reduced by 14dBi-6dbi = 8dBi.

Frequency (MHz)	Data Rate (Mbps)	Peak Output Power (dBm)	Limit (dBm)	Margin (dB)
5260	36	10.62	16	5.38
5300	36	10.73	16	5.27
5320	36	10.52	16	5.48
5500	36	11.09	16	4.91
5600	36	11.98	16	4.02
5700	36	11.73	16	4.27



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<b>Agilent</b> 13:02:09 Feb 21, 2008		Peak Search
Ch Freq 5.32 GHz Channel Power	Trig Free Averages: 100	Next Peak
Marker 5.320500000 GHz	Mkr1 5.320 50 GHz	Next Pk Right
Ref 20 dBm Atten 10 dB #Samp Log	-2.302 dBm	Next Pk Left
10 dB/ 0ffst 20.5		Min Search
dB Center 5.320 00 GHz #Res BW 1 MHz #VBW 3 MHz	Span 30 MHz #Sweep 100 ms (601 pts)	Pk-Pk Search
Channel Power	Power Spectral Density	Mkr → CF
10.52 dBm /22.1000 MHz	-62.93 dBm/Hz	<b>More</b> 1 of 2
File Operation Status, A:\SCREN220.GIF f Title: Peak transmit power measurement 5320	ile saved	

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🔆 Agilent 12:58:48 Feb 21, 2008		Peak Search
Ch Freq 5.26 GHz	Trig Free	Next Peak
Channel Power	Averages: 100	
Marker 5.256250000 GHz		Next Pk Right
	Mkr1 5.256 25 GHz	
Ref 20 dBm Atten 10 dB	-1.796 dBm	
#Samp K 1 Log ♦		Next Pk Left
10		
		Min Search
20.5	Contraction of the second seco	Thin Sear off
dB		
		Pk-Pk Search
Center 5.260 00 GHz	Span 30 MHz	
#Res BW 1 MHz #VBW 3 MHz	#Sweep 100 ms (601 pts)	
Channel Power	Power Spectral Density	Mkr→CF
10.62 dBm /22.1000 MHz	-62.82 dBm/Hz	
		More 1 of 2
		1 01 2
File Operation Status, A:\SCREN218.GIF	file saved	
Title: Peak transmit power measurement 5260		

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✤ Agilent 13:04:37 Feb 21, 2008		Peak Search
Ch Freg 5.5 GHz	Trig Free	Next Peak
Channel Power	Averages: 100	
Marker 5.493400000 GHz		Next Pk Right
	Mkr1 5.493 40 GHz	
Ref 20 dBm Atten 10 dB #Samp	-1.794 dBm	Next Pk Left
Log		Next FK Left
10 dB/		
20.5		Min Search
dB		
Center 5.500 00 GHz		Pk-Pk Search
#Res BW 1 MHz #VBW 3	Span 30 MHz 3 MHz #Sweep 100 ms (601 pts)	
Channel Power	Power Spectral Density	Mkr → CF
11.09 dBm /22.1000 MHz	z -62.35 dBm/Hz	
		More 1 of 2
File Operation Status, A:\SCREN221	LGIF file saved	
Title: Peak transmit power measurement 5500		

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✤ Agilent 13:06:47 Feb 21, 2008		Peak Search
Ch Freq 5.6 GHz	Trig Free	Next Peak
Channel Power	Averages: 100	
Marker 5.596150000 GHz		Next Pk Right
p	Mkr1 5.596 15 GHz	
Ref 20 dBm Atten 10 dB	-0.805 dBm	
#Samp Log		Next Pk Left
10		
		Min Search
20.5	And a start of the	
dB		
		Pk-Pk Search
Center 5.600 00 GHz #Res BW 1 MHz #VBW 3 MHz	Span 30 MHz #Sweep 100 ms (601 pts)	
	*Sweep 100 MS (001 pts)	NI 05
Channel Power	Power Spectral Density	Mkr→CF
11.98 dBm /22.1000 MHz	-61.46 dBm/Hz	Mana
		More 1 of 2
		1 01 2
File Operation Status, A:\SCREN222.GIF	file saved	
Title: Peak transmit power measurement 5600		

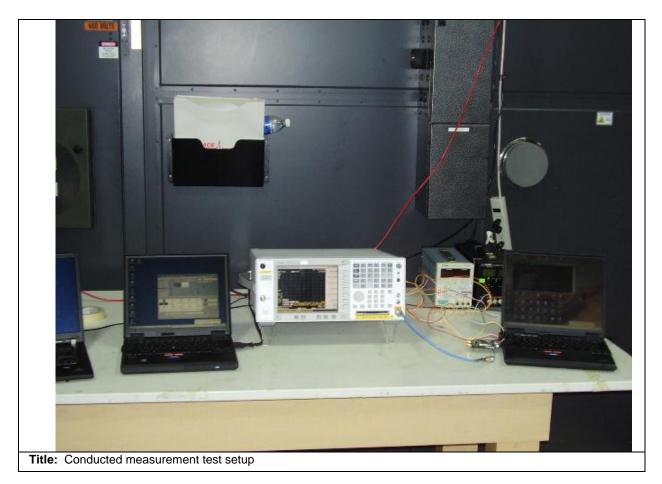
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<b>Agilent</b> 13:08:02 Feb 21, 2008	Peak Search
Ch Freq 5.7 GHz Trig Free Channel Power Averages: 100	Next Peak
Marker 5.705150000 GHz Mkr1 5.705 15 GHz	Next Pk Right
Ref 20 dBm Atten 10 dB -1.331 dBm #Samp Log	Next Pk Left
10 dB/ 0ffst 20.5	Min Search
dB Center 5.700 00 GHz #Res BW 1 MHz #VBW 3 MHz #Sweep 100 ms (601 pts)	Pk-Pk Search
Channel Power Power Spectral Density	Mkr → CF
11.73 dBm /22.1000 MHz -61.72 dBm/Hz	More 1 of 2
File Operation Status, A:\SCREN223.GIF file saved       Title: Peak transmit power measurement 5700	

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Physical Test arrangement Photograph:

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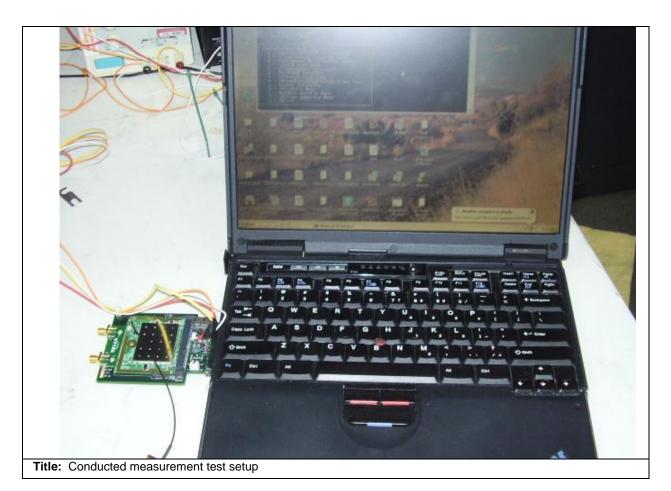


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## Comments on the above Photograph:

No further comments

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## Comments on the above Photograph:

No further comments

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#### Conducted emissions

Test Number:	Test Number: 30379 Spec ID: 652					
Basic Standard	Applied to	Class	Freq Range	Test Details / Comments		
Conducted Spurious Emissions	RF Ports	N/A	30MHz - xGHz	Also complies with RSS 210, LP0002, HKTA1039		
Operating Mode	Mode: 1, Conti	Mode : 1, Continuous Transmit				
Power Input	5, DC (+/-20%)	5, DC (+/-20%)				
Overall Result	Pass	Pass				
Comments	No further comr	No further comments				
Deviation	There were no deviations from the specification					

System Number	Description	Samples	System under test	Support equipment
1	Conducted testing configuration	S01	K	
2	Support equipment	S02, S03 and S04		$\checkmark$

Subtest Number: 3037	<b>'</b> 9 - 1	Subtest Date: 12-Feb-2008	
Engineer	Donald Foster		
Lab Information	Building P, Shield Room 3		
Subtest Results	•		
Line Under Test	[A] Antenna port		
Transducer	Direct		
Subtest Result	Pass		
Highest Frequency	N/A		
Lowest Frequency	N/A		
Comments on the above Test Results	No further comments		

# **Conducted Spurious Emissions**

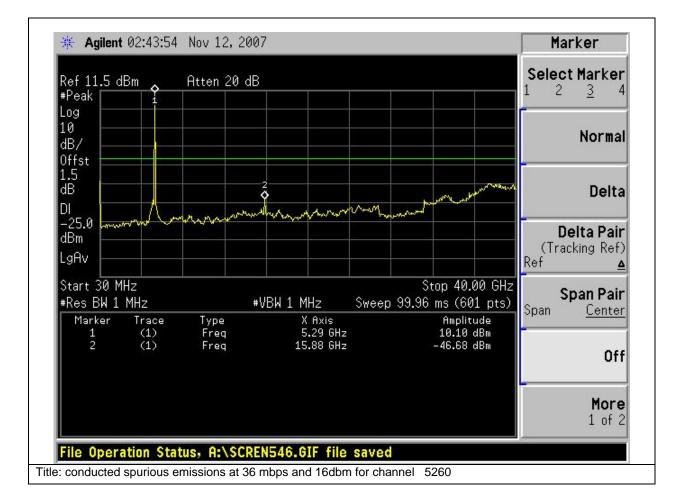
15.407: For transmitters operating in the 5.25-5.35 GHz band: all emissions outside of the 5.15-5.35 GHz band shall not exceed an EIRP of -27dBm/MHz. Devices operating in the 5.25-5.35 GHz band that generate emissions in the 5.15-5.25 GHz band must meet all applicable technical requirements for operation in the 5.15-5.25 GHz band (including indoor use) or alternatively meet an out-of-band emission EIRP limit of -27 dBm/MHz in the 5.15-5.25 GHz band.

For transmitters operating in the 5.47-5.725 GHz band: all emissions outside of the 5.47-5.725 GHz band shall not exceed an EIRP of -27dBm/MHz.

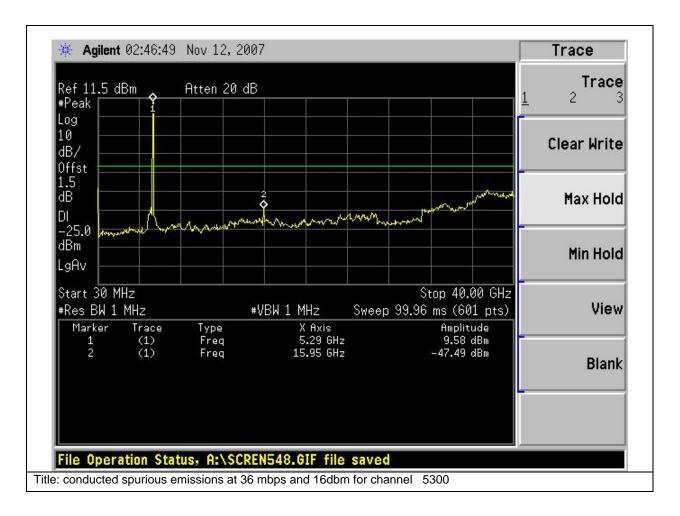
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The maximum supported antenna gain for all bands is 14dBi. Therefore the maximum allowable conducted spurious emissions for all bands is -27dBm/MHz-14dBi = -41dbm/MHz.

Channel	Data Rate	Max Emission	Limit	Margin
5260	36	-46.6	-41	5.6
5300	36	-47.4	-41	6.4
5320	36	-43.5	-41	2.5
5500	36	-44.5	-41	3.5
5600	36	-45.3	-41	4.3
5700	36	-47.0	-41	6.0



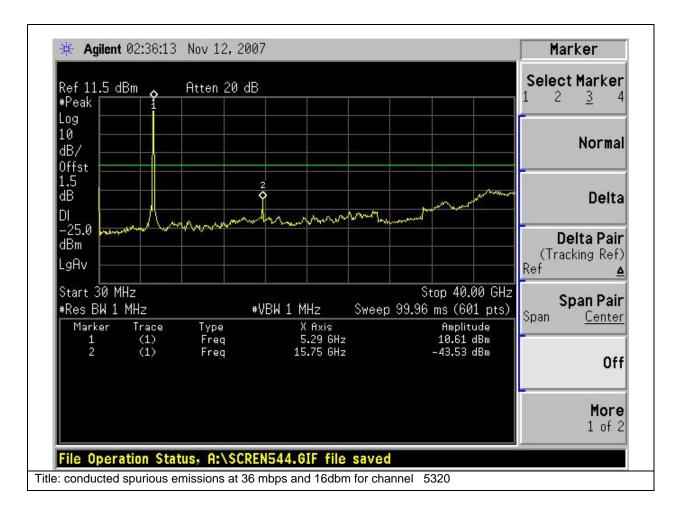
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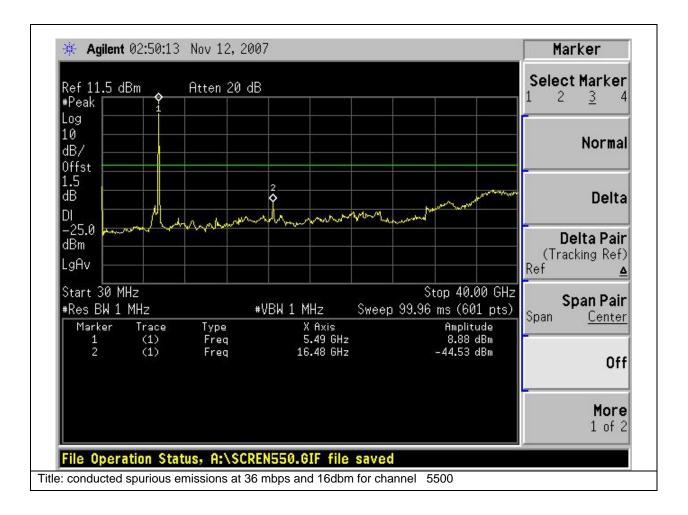
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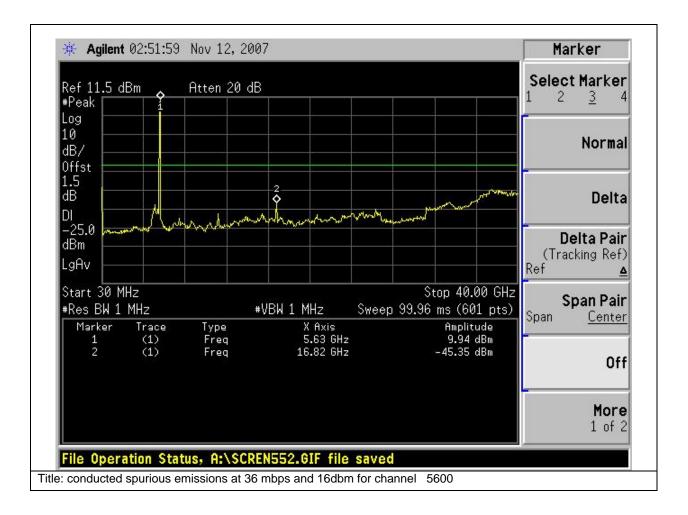
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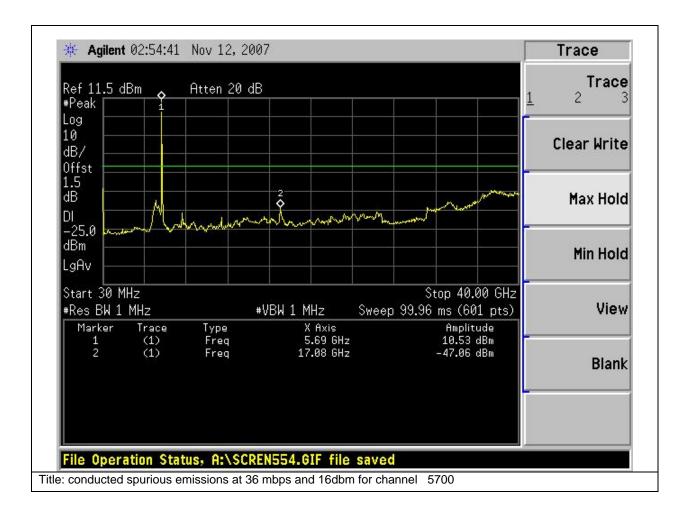
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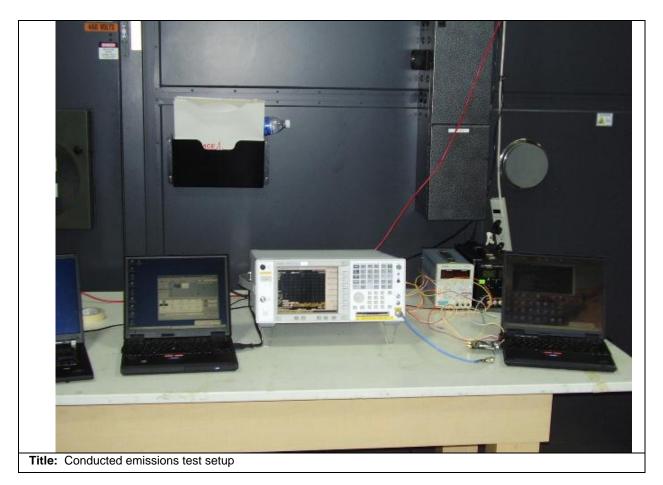


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**Physical Test arrangement Photograph:** 

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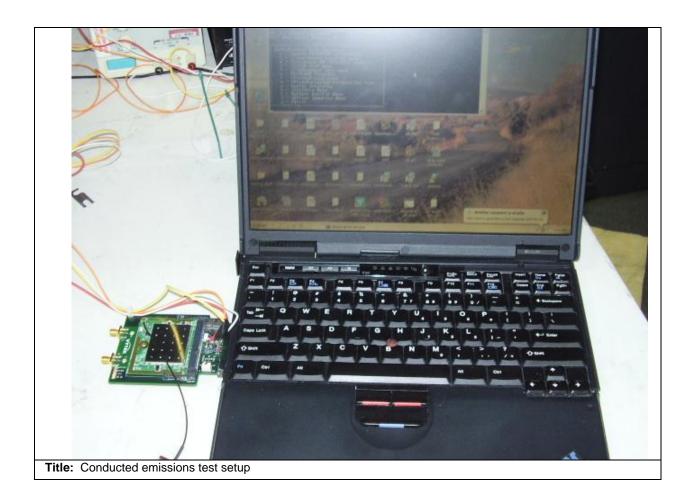


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## Comments on the above Photograph:

No further comments

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