

TRaC Wireless Test Report : TRA-007055WJP2

Applicant

: Digi International Ltd.

Apparatus

: Wi-i.MX53

Specification

: Ordinance Regulating Radio Equipment Referenced under the Japanese Radio Law

John Charters

Authorised by

: Radio Product Manager

**Issue Date** 

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Section 1: Introduction

#### 1.1 General

Report author:

This report contains an assessment of an apparatus based upon tests carried out on samples submitted to the Laboratory.

Test performed by:	TRaC Telecoms & Radio Unit E South Orbital Trading Park Hedon Road Hull, HU9 1NJ. United Kingdom.		[X]
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Tests performed by:	A.J.Longley		

A.J.Longley

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#### 1.2 Tests Requested By

This testing in this report was requested by:

Digi International Ltd. Beacon House Riverside Business Park Leeds Road Ilkley West Yorkshire LS29 8JZ United Kingdom

#### 1.3 Manufacturer

Digi International 10000 W 75<sup>th</sup> Street Eden Prairie 55344 MN USA

#### 1.4 Apparatus Assessed

The following apparatus was assessed between 05/03/12 and 07/06/13

Wi-i.MX53

The above device is a Wi-Fi transmitter module capable of generating 802.11a and 802.11n HT20 signals.

#### 1.5 Test Result Summary

Full details of test results are contained within Appendix A. The following table summarises the results of the assessment.

The statements relating to compliance with the standards below apply ONLY as qualified in the notes and deviations stated in sections 1.6 to 1.7 of this test report.

Full details of test results are contained within Appendix A. The following table summarises the results of the assessment.

This report contains an assessment of an apparatus against the applicable articles of the Ordinance Regulating Radio Equipment based upon tests carried out on samples submitted to the Laboratory.

Test Type	Application	Ordinance Reference	Appendix no in this report	Mod no.	Result
Antenna Power 5180MHz to 5320MHz	Test Fixture	49.20, 3) (f) (2) & (3)	A1/A2	0	Pass
Antenna Power 5500MHz to 5700 MHz	Test Fixture	Article 49.20, 3-2) (d) (2) & (3)	A3/A4	0	Pass
Tolerances of Antenna Power	Test Fixture	14, 7 (5)	A5	0	Pass
Maximum EIRP	Antenna or Test Fixture	49.20, 3) g and 49.20, 3-2) e	A6	0	Pass
Tolerance Of Occupied Bandwidth 5180MHz to 5320MHz	Test Fixture	6 Table 2 Note XXX 2 (2)	A7/A8	0	Pass
Tolerance Of Occupied Bandwidth 5500MHz to 5700 MHz	Test Fixture	6 Table 2 Note XXX 3 (2)	A9/A10	0	Pass
Tolerance Of Unwanted Emission Intensity	Test Fixture	7 Table 3, note 28	A11 to A14	0	Pass
Secondary Emissions	Test Fixture	24 (1 & 2)	A15 to A18	0	Pass
Tolerance Of Frequency	Test Fixture	5 Table 1 row 7 Item 10	A19/A20	0	Pass
Adjacent channel power 5180MHz to 5320MHz	Test Fixture	Article 49.20, 3) j	A21/A22	0	Pass
Adjacent channel power 5500MHz to 5700 MHz	Test Fixture	Article 49.20, 3-2) f	A23/A24	0	Pass

#### 1.6 Summary Of Compliance

The samples, as assessed, satisfied the relevant articles of the Ordinance Regulating Radio Equipment, as detailed in section 2.1 of this test report.

#### 1.7 Notes Relating To The Assessment

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

The results contained in this report relate only to the items tested and were obtained in the period between the date of initial receipt of samples and the date of issue of the report.

The apparatus was set up and exercised using the configurations, modes of operation and arrangements defined in this report only.

Particular operating modes, apparatus monitoring methods and performance criteria required by the standards tested to have been performed except where identified in Section 1.7 of this test report (Deviations from Test Standards).

For emissions testing, throughout this test report, "Pass" indicates that the results for the sample as tested were below the specified limit (refer also to Section 2, Measurement Uncertainty).

All testing with the exception of testing at the Open Area Test Site was performed under the following environmental conditions:

Temperature	: 15 to 23 °C
Humidity	: 63 to 73 %
Barometric Pressure	: 86 to 106 kPa

Note that temperature and humidity conditions can be found in the relevant test results appendix A.

All dates used in this report are in the format dd/mm/yy.

#### 1.8 Deviations from Test Standards

No deviations were made from test standards

# Section 2:

# **Measurement Uncertainty**

#### 2.1 Measurement Uncertainty Values

For any test data recorded in accordance with note (iii) of Section 2.1 the following measurement uncertainty was calculated:

Test type	Quantity	Quantity frequency range	Uncertainty
		30MHz to 300MHz Horizontal	±4.6dB
Radiated electric field emissions		30MHz to 300MHz Vertical	±5.1dB
		300MHz to 1000MHz Horizontal	±5.2dB
Effective Radiated Power 3m alternative test site		300MHz to 1000MHz Vertical	±5.5dB
	Amplitude	1GHz to 26.5GHz Horizontal and Vertical	±4.1dB
Conducted emissions		N/A	±0.9 dB
Absolute RF power (via antenna connector)	olute RF power (via antenna ector)	N/A	±0.9 dB
PSD		N/A	±0.9 dB
Frequency Range	Frequency	9kHz to 26.5GHz	3.611kHz

# Section 3:

# Modifications

## 3.1 Modifications Performed During Assessment

No modifications were performed during the assessment

# Appendix A:

# **Formal Emission Test Results**

Abbreviations used in the tables in this appendix:

Spec Mod	: Specification : Modification	ALSR OATS ATS	: Absorber Lined Screened Room : Open Area Test Site : Alternative Test Site
EUT SE	: Equipment Under Test : Support Equipment	110	
		Ref Freq	: Reference : Frequency
		MD	: Measurement Distance
L N	: Live Power Line : Neutral Power Line	SD	: Spec Distance
E	: Earth Power Line	Pol	: Polarisation
		Н	: Horizontal Polarisation
Pk QP	: Peak Detector : Quasi-Peak Detector	V	: Vertical Polarisation
Av	: Average Detector	CDN	: Coupling & decoupling network

Test Details: Antenna Power Wi-Fi device 802.11a CH36, CH48 and CH64				
Standard	Ordinance Regulating Radio Equipment			
Reference clause	Article 49.20, 3) (f) (2) & (3)			
Frequency range	5180MHz – 5320MHz			
Application	Temporary Antenna Connector			
EUT sample number	TRA-007055S17			
Modification state	0			
SE in test environment	None			
SE isolated from EUT	None			
EUT set up	Refer to Appendix C			

	802.11a 6Mbps Antenna Port							
Freq (MHz)	RBW (MHz)	Power meter (dBm)	Signal generator (dBm)	Result (dBm)	Result (mW/MHz)	Limit (mW/MHz)	Margin (mW/MHz)	Summary
5180	1	-31.2	-0.24	-0.91	0.81096	10	9.1890	Pass
5240	1	-30.5	-0.04	-0.68	0.85507	10	9.1449	Pass
5320	1	-30.6	0.36	-0.30	0.93325	10	9.0667	Pass

802.11a 54Mbps Antenna Port								
Freq (MHz)	RBW (MHz)	Power meter (dBm)	Signal generator (dBm)	Result (dBm)	Result (mW/MHz)	Limit (mW/MHz)	Margin (mW/MHz)	Summary
5180	1	-30.8	0.06	-0.61	0.86896	10	9.1310	Pass
5240	1	-30.7	-0.14	-0.78	0.83560	10	9.1644	Pass
5320	1	-30.4	0.56	-0.11	0.97499	10	9.0250	Pass

СН	Freq (MHz)
36	5180
48	5240
64	5320

#### Article 49.20, 3) (f)

- (2) For the antenna power of the transmitting equipment which uses the modulation method prescribed in Item C, (1)(ii) above, the mean power shall be 10 mW or less.
- (3) For the antenna power of the transmitting equipment which uses the modulation method prescribed in Item C, (1)(iii) and (2) above, the mean power shall be as follows;
  - (i) For the Occupied Bandwidth is no greater than 19 MHz, the mean power within a bandwidth of 1 MHz shall be 10 mW or less.

(ii) For the Occupied Bandwidth is greater than 19 MHz to 38 MHz, the mean power within a bandwidth of 1 MHz shall be 5 mW or less.

#### A2 Antenna Power 5180MHz to 5320MHz 802.11n

Test Details: Antenna Power Wi-Fi device 802.11n CH36, CH48 and CH64				
Standard	Ordinance Regulating Radio Equipment			
Reference clause	Article 49.20, 3) (f) (2) & (3)			
Frequency range	5180MHz – 5320MHz			
Application	Temporary Antenna Connector			
EUT sample number	TRA-007055S17			
Modification state	0			
SE in test environment	None			
SE isolated from EUT	None			
EUT set up	Refer to Appendix C			

802.11n MCS0 Antenna Port										
Freq (MHz)	RBW (MHz)	Power meter (dBm)	Signal generator (dBm)	Result (dBm)	Result (mW/MHz)	Limit (mW/MHz)	Margin (mW/MHz)	Summary		
5180	1	-31.2	-0.24	-0.91	0.81096	10	9.1890	Pass		
5240	1	-30.4	0.16	-0.48	0.89536	10	9.1046	Pass		
5320	1	-30.7	0.36	-0.30	0.93325	10	9.0667	Pass		

802.11n MCS7 Antenna Port										
Freq (MHz)	RBW (MHz)	Power meter (dBm)	Signal generator (dBm)	Result (dBm)	Result (mW/MHz)	Limit (mW/MHz)	Margin (mW/MHz)	Summary		
5180	1	-31.2	-0.24	-0.91	0.81096	10	9.1890	Pass		
5240	1	-30.8	-0.14	-0.78	0.83560	10	9.1644	Pass		
5320	1	-30.4	0.56	-0.11	0.97499	10	9.0250	Pass		

СН	Freq (MHz)
36	5180
48	5240
64	5320

#### Article 49.20, 3) (f)

- (2) For the antenna power of the transmitting equipment which uses the modulation method prescribed in Item C, (1)(ii) above, the mean power shall be 10 mW or less.
- (3) For the antenna power of the transmitting equipment which uses the modulation method prescribed in Item C, (1)(iii) and (2) above, the mean power shall be as follows;
  - (i) For the Occupied Bandwidth is no greater than 19 MHz, the mean power within a bandwidth of 1 MHz shall be 10 mW or less.
  - (ii) For the Occupied Bandwidth is greater than 19 MHz to 38 MHz, the mean power within a bandwidth of 1 MHz shall be 5 mW or less.

## A3 Antenna Power 5500MHz to 5700MHz 802.11a

Test Details: Antenna Power Wi-Fi device 802.11a CH100, CH120 and CH140					
Standard	Ordinance Regulating Radio Equipment				
Reference clause	Article 49.20, 3-2) (d) (2) & (3)				
Frequency range	5500MHz – 5700MHz				
Application	Temporary Antenna Connector				
EUT sample number	TRA-007055S17				
Modification state	0				
SE in test environment	None				
SE isolated from EUT	None				
EUT set up	Refer to Appendix C				

802.11a 6Mbps Antenna Port										
Freq (MHz)	RBW (MHz)	Power meter (dBm)	Signal generator (dBm)	Result (dBm)	Result (mW/MHz)	Limit (mW/MHz)	Margin (mW/MHz)	Summary		
5500	1	-30.8	-0.94	-1.61	0.69024	10	9.3098	Pass		
5600	1	-33.0	-2.74	-3.46	0.45082	10	9.5492	Pass		
5700	1	-36.2	-6.24	-7.00	0.19953	10	9.8005	Pass		

802.11a 54Mbps Antenna Port										
Freq (MHz)	RBW (MHz)	Power meter (dBm)	Signal generator (dBm)	Result (dBm)	Result (mW/MHz)	Limit (mW/MHz)	Margin (mW/MHz)	Summary		
5500	1	-31.0	-0.94	-1.61	0.69024	10	9.3098	Pass		
5600	1	-33.1	-2.74	-3.46	0.45082	10	9.5492	Pass		
5700	1	-36.2	-6.24	-7.00	0.19953	10	9.8005	Pass		

СН	Freq (MHz)
100	5500
120	5600
140	5700

#### Limits from Article 49.20, 3-2)

d The antenna power of the transmitter shall be one of the items below.

- (1) For the antenna power of the transmitting equipment which uses the modulation method prescribed in Item b, (1)(i) above (the direct spread method), the mean power within a bandwidth of 1 MHz shall be 10 mW or less.
- (2) For the antenna power of the transmitting equipment which uses the modulation method prescribed in Item b, (1)(ii) above (The amplitude modulation method, phase

modulation method, frequency modulation method, pulse modulation method or combination of these methods), the mean power shall be 10 mW or less.

- (3) For the antenna power of the transmitting equipment which uses the modulation method prescribed in Item b, (1)(iii) and Item b, (2) above (OFDM), the mean power shall be as follows;
  - (i) For the Occupied Bandwidth is no greater than 19.7 MHz, the mean power within a bandwidth of 1 MHz shall be 10 mW or less.
  - (ii) For the Occupied Bandwidth is greater than 19.7 MHz to 38 MHz, the mean power within a bandwidth of 1 MHz shall be 5 mW or less.

#### A4 Antenna Power 5500MHz to 5700MHz 802.11n

Test Details: Antenna Power Wi-Fi device 802.11n CH100, CH120 and CH140					
Standard	Ordinance Regulating Radio Equipment				
Reference clause	Article 49.20, 3-2) (d) (2) & (3)				
Frequency range	5500MHz – 5700MHz				
Application	Temporary Antenna Connector				
EUT sample number	TRA-007055S17				
Modification state	0				
SE in test environment	None				
SE isolated from EUT	None				
EUT set up	Refer to Appendix C				

802.11n MCS0 Antenna Port										
Freq (MHz)	RBW (MHz)	Power meter (dBm)	Signal generator (dBm)	Result (dBm)	Result (mW/MHz)	Limit (mW/MHz)	Margin (mW/MHz)	Summary		
5500	1	-31.0	-0.94	-1.61	0.69024	10	9.3098	Pass		
5600	1	-32.9	-2.64	-3.36	0.46132	10	9.5387	Pass		
5700	1	-36.5	-6.44	-7.20	0.19055	10	9.8095	Pass		

802.11n MCS7 Antenna Port										
Freq (MHz)	RBW (MHz)	Power meter (dBm)	Signal generator (dBm)	Result (dBm)	Result (mW/MHz)	Limit (mW/MHz)	Margin (mW/MHz)	Summary		
5500	1	-31.1	-0.94	-1.61	0.69024	10	9.3098	Pass		
5600	1	-32.4	-1.64	-2.36	0.58076	10	9.4192	Pass		
5700	1	-35.3	-4.64	-5.39	0.28907	10	9.7109	Pass		

СН	Freq (MHz)
100	5500
120	5600
140	5700

#### Limits from Article 49.20, 3-2)

d The antenna power of the transmitter shall be one of the items below.

- (1) For the antenna power of the transmitting equipment which uses the modulation method prescribed in Item b, (1)(i) above (the direct spread method), the mean power within a bandwidth of 1 MHz shall be 10 mW or less.
- (2) For the antenna power of the transmitting equipment which uses the modulation method prescribed in Item b, (1)(ii) above (The amplitude modulation method, phase

modulation method, frequency modulation method, pulse modulation method or combination of these methods), the mean power shall be 10 mW or less.

- (3) For the antenna power of the transmitting equipment which uses the modulation method prescribed in Item b, (1)(iii) and Item b, (2) above (OFDM), the mean power shall be as follows;
  - (i) For the Occupied Bandwidth is no greater than 19.7 MHz, the mean power within a bandwidth of 1 MHz shall be 10 mW or less.
  - (ii) For the Occupied Bandwidth is greater than 19.7 MHz to 38 MHz, the mean power within a bandwidth of 1 MHz shall be 5 mW or less.

#### A5 Tolerances of Antenna Power

Software Setting used	TRaC max measured power (802.11n MCS7 mode)	Declared tolerance of power	-80% of Calculated Average	+20% of Calculated Average
53	1.0mW	5mW/MHz	1.0mW	6.0mW

## Limit Article 14, (7) (5)

The tolerance of antenna power shall have an upper limit = 20% and the lower limit = 80%

#### A6 Maximum Equivalent Isotropic Radiated power

The maximum measured antenna power was 1.0 mW/MHz

The maximum declared antenna gain for any antenna to be used with the EUT is 5dBi (3.2 numeric). Please refer to Annex D for Manufacturers data sheet.

Therefore the Maximum EIRP from the EUT is equal to 1.0 x antenna gain numeric.

Equal to 3.2mW/MHz EIRP

#### Limit Article 49.20, 3)

- g The equivalent isotropic radiated power within a bandwidth of 1 MHz shall be as follows:
  - (1) In case of the Occupied Bandwidth is no greater than 19 MHz;
    - (i) When using emissions of a frequency of 5,180 MHz, 5,200 MHz, 5,220 MHz, or 5,240 MHz :
      - 10 mW or lower
    - (ii) When using emissions of a frequency of 5,260 MHz, 5,280 MHz, 5,300 MHz or 5,320 MHz
      - (a) When equipped with a function that reduces the mean antenna power by 3 dB in the communication system specified in 1):
      - 10 mW or lower
      - (b) Cases other than (a):

5 mW or lower

#### Limit Article 49.20, 3-2)

The equivalent isotropic radiated power within a bandwidth of 1 MHz shall be as follows:

- (1) In case of the Occupied Bandwidth is no greater than 19.7 MHz;
  - (i) When equipped with a function that reduces the mean antenna power by 3 dB in the communication system specified in 1):
    - 50 mW or lower
  - (ii) Cases other than (i):

25 mW or lower

Test Details: Wi-Fi device 802.11a CH36, CH48 and CH64				
Standard	Ordinance Regulating Radio Equipment			
Reference clause	Article 6 Table 2 Note XXX 2(2)			
Frequency range	5180MHz – 5320MHz			
Application	Temporary Antenna Connector			
EUT sample number	TRA-007055S17			
Modification state	0			
SE in test environment	None			
SE isolated from EUT	None			
EUT set up	Refer to Appendix C			

## A7 Tolerance of Occupied Bandwidth 5180MHz to 5320MHz 802.11a.

Free (MHz)	Occupied bar	Pocult	
	6Mbps	54Mbps	Result
5180	16.4343	16.4307	Pass
5240	16.5194	16.5091	Pass
5320	16.3577	16.5327	Pass

## Limit Article 6 Table 2 Note XXX 2(2) of the Ordinance Regulating Radio Equipment

The occupied bandwidth shall be less than 19MHz

Test Details: Wi-Fi device 802.11n CH36, C48 and CH64			
Standard	Ordinance Regulating Radio Equipment		
Reference clause	Article 6 Table 2 Note XXX 2(2)		
Frequency range	5180MHz – 5320MHz		
Application	Temporary Antenna Connector		
EUT sample number	TRA-007055S17		
Modification state	0		
SE in test environment	None		
SE isolated from EUT	None		
EUT set up	Refer to Appendix C		

## A8 Tolerance of Occupied Bandwidth 5180MHz to 5320MHz 802.11n

Frog (MHz)	Occupied bar	Result	
r req (minz)	MCS0	MCS0 MCS7	
5180	17.6974	17.5931	Pass
5240	17.6024	17.3913	Pass
5320	17.5955	17.8620	Pass

# Limit Article 6 Table 2 Note XXX 2(2) of the Ordinance Regulating Radio Equipment

The occupied bandwidth shall be less than 19MHz

Test Details: Wi-Fi device 802.11a CH100, CH120 and CH140			
Standard	Ordinance Regulating Radio Equipment		
Reference clause	Article 6 Table 2 Note XXX 3(2)		
Frequency range	5500MHz – 5700MHz		
Application	Temporary Antenna Connector		
EUT sample number	TRA-007055S17		
Modification state	0		
SE in test environment	None		
SE isolated from EUT	None		
EUT set up	Refer to Appendix C		

## A9 Tolerance of Occupied Bandwidth 5500MHz to 5700MHz 802.11a.

Free (MHz)	Occupied bar	Rosult	
	6Mbps	54Mbps	Nesuit
5500	16.8398	16.6508	Pass
5600	16.4878	16.5203	Pass
5700	16.2996	16.3522	Pass

## Limit Article 6 Table 2 Note XXX 3(2) of the Ordinance Regulating Radio Equipment

The occupied bandwidth shall be less than 19.7MHz

Test Details: Wi-Fi device 802.11n CH100, CH120 and CH140			
Standard	Ordinance Regulating Radio Equipment		
Reference clause	Article 6 Table 2 Note XXX 3(2)		
Frequency range	5500MHz – 5700MHz		
Application	Temporary Antenna Connector		
EUT sample number	TRA-007055S17		
Modification state	0		
SE in test environment	None		
SE isolated from EUT	None		
EUT set up	Refer to Appendix C		

## A10 Tolerance of Occupied Bandwidth 5500MHz to 5700MHz 802.11n

Frog (MHz)	Occupied bar	Rosult		
	MCS0	MCS7	Result	
5500	18.6770	18.3106	Pass	
5600	17.6999	17.7306	Pass	
5700	17.5961	17.4779	Pass	

# Limit Article 6 Table 2 Note XXX 3(2) of the Ordinance Regulating Radio Equipment

The occupied bandwidth shall be less than 19.7MHz

Test Details: TX Mode: Wi-Fi device 802.11a CH36, CH48 and CH64			
Standard	Ordinance Regulating Radio Equipment		
Reference clause	Article 7 Table 3, Note 28		
Frequency range	9kHz to 16GHz		
Application	Temporary Antenna Connector		
EUT sample number	TRA-007055S17		
Modification state	0		
SE in test environment	None		
SE isolated from EUT	None		
EUT set up	Refer to Appendix C		

#### A11 Tolerance of Unwanted Emissions Intensity 5180MHz to 5320MHz 802.11a

## Transmitting Bottom Channel 36: 5180MHz @ 6Mbps

Freq range (MHz)		Measured	Detector (Peak or	RBW	Result	Limit	Margin dB	Summary
From	То	(MHz)	Sample)		(dBm)	dBm	Wargin ab	Cuminary
9kHz	150kHz	0.037670	Pk	200Hz	-101.29	-26	75.29	Pass
150kHz	30MHz	2.2900	Pk	9kHz	-97.85	-26	71.85	Pass
30MHz	1000MHz	503.70	Pk	1MHz	-84.29	-26	58.29	Pass
1000MHz	5000MHz	3453.0	Pk	1MHz	-60.69	-26	34.69	Pass
5000MHz	5140MHz	5140.0	Pk	1MHz	-55.49	-26	29.49	Pass
5360MHz	10000MHz	6907.0	Pk	1MHz	-65.58	-26	39.58	Pass
10000MHz	16000MHz	10360.0	Pk	1MHz	-70.79	-26	44.79	Pass

## Transmitting Bottom Channel 36: 5180MHz @ 54Mbps

Freq range (MHz)		Measured	Detector (Peak or	RBW	Result	Limit	Margin dB	Summary
From	То	(MHz)	Sample)		(dBm)	dBm	Margin ab	Cuminary
9kHz	150kHz	0.016990	Pk	200Hz	-100.69	-26	74.69	Pass
150kHz	30MHz	19.1500	Pk	9kHz	-97.61	-26	71.61	Pass
30MHz	1000MHz	647.60	Pk	1MHz	-86.43	-26	60.43	Pass
1000MHz	5000MHz	3453.0	Pk	1MHz	-61.59	-26	35.59	Pass
5000MHz	5140MHz	5140.0	Pk	1MHz	-57.29	-26	31.29	Pass
5360MHz	10000MHz	6907.0	Pk	1MHz	-66.05	-26	40.05	Pass
10000MHz	16000MHz	10360.0	Pk	1MHz	-70.14	-26	44.14	Pass

#### Transmitting Middle Channel 48: 5240MHz @ 6Mbps

Frec (N	q range ∕IHz)	Measured Frequency	Detector (Peak or	RBW	Result	Limit	Margin dB	Summary
From	То	(MHz)	Sample)		(dBm)	dBm	Margin ab	Cummury
9kHz	150kHz	0.011585	Pk	200Hz	-99.64	-26	73.64	Pass
150kHz	30MHz	25.8200	Pk	9kHz	-96.97	-26	70.97	Pass

30MHz	1000MHz	864.20	Pk	1MHz	-86.02	-26	60.02	Pass
1000MHz	5000MHz	3493.0	Pk	1MHz	-58.68	-26	32.68	Pass
5000MHz	5140MHz	5080.0	Pk	1MHz	-58.29	-26	32.29	Pass
5360MHz	10000MHz	5360.0	Pk	1MHz	-56.37	-26	30.37	Pass
10000MHz	16000MHz	10480.0	Pk	1MHz	-68.61	-26	42.61	Pass

Transmitting Middle Channel 48: 5240MHz @ 54Mbps

Freq range (MHz)		Measured	Detector (Peak or	RBW	Result	Limit	Margin dB	Summary
From	То	(MHz)	Sample)		(dBm)	dBm	Margin ab	Cuminary
9kHz	150kHz	0.010880	Pk	200Hz	-101.09	-26	75.09	Pass
150kHz	30MHz	0.4000	Pk	9kHz	-94.00	-26	68.00	Pass
30MHz	1000MHz	477.80	Pk	1MHz	-83.67	-26	57.67	Pass
1000MHz	5000MHz	3493.0	Pk	1MHz	-58.81	-26	32.81	Pass
5000MHz	5140MHz	5119.9	Pk	1MHz	-57.83	-26	31.83	Pass
5360MHz	10000MHz	5360.0	Pk	1MHz	-55.16	-26	29.16	Pass
10000MHz	16000MHz	10480.0	Pk	1MHz	-68.42	-26	42.42	Pass

## **Tolerance of Unwanted Emissions Intensity continued**

Freq range (MHz)		Measured	Detector (Peak or	RBW	Result	Limit	Margin dB	Summary
From	То	(MHz)	Sample)		(dBm)	dBm	incigin dD	Cuminary
9kHz	150kHz	0.020515	Pk	200Hz	-101.73	-26	75.73	Pass
150kHz	30MHz	1.6900	Pk	9kHz	-94.60	-26	68.60	Pass
30MHz	1000MHz	489.10	Pk	1MHz	-85.03	-26	59.03	Pass
1000MHz	5000MHz	3547.0	Pk	1MHz	-50.99	-26	24.99	Pass
5000MHz	5140MHz	5066.7	Pk	1MHz	-59.48	-26	33.48	Pass
5360MHz	10000MHz	5360.0	Pk	1MHz	-53.44	-26	27.44	Pass
10000MHz	16000MHz	10640.0	Pk	1MHz	-68.43	-26	42.43	Pass

Transmitting Top Channel 64: 5320MHz @ 6Mbps

## Transmitting Top Channel 64: 5320MHz @ 54Mbps

Freq range (MHz)		Measured	Detector (Peak or	RBW	Result	Limit	Margin dB	Summary
From	То	(MHz)	Sample)		(dBm)	dBm	indigin de	Canindry
9kHz	150kHz	0.047070	Pk	200Hz	-104.34	-26	78.34	Pass
150kHz	30MHz	7.5100	Pk	9kHz	-98.56	-26	72.56	Pass
30MHz	1000MHz	759.10	Pk	1MHz	-85.02	-26	59.02	Pass
1000MHz	5000MHz	3547.0	Pk	1MHz	-50.66	-26	24.66	Pass
5000MHz	5140MHz	5066.7	Pk	1MHz	-59.56	-26	33.59	Pass
5360MHz	10000MHz	5360.0	Pk	1MHz	-51.05	-26	25.05	Pass
10000MHz	16000MHz	10640.0	Pk	1MHz	-68.46	-26	42.46	Pass

## Limit Article 7 Table 3 Note 28 of the Ordinance Regulating Radio Equipment

Lower than 5,140 MHz and higher than 5,360 MHz
2.5µW

Test Details: T	Test Details: TX Mode: Wi-Fi device 802.11n CH36, CH48 and CH64								
Standard	Ordinance Regulating Radio Equipment								
Reference clause	Article 7 Table 3, Note 28								
Frequency range	9kHz to 16GHz								
Application	Temporary Antenna Connector								
EUT sample number	TRA-007055S17								
Modification state	0								
SE in test environment	None								
SE isolated from EUT	None								
EUT set up	Refer to Appendix C								

#### A12 Tolerance of Unwanted Emissions Intensity 5180MHz to 5320MHz 802.11n

## Transmitting Bottom Channel 36: 5180MHz (MCS0)

Freq range (MHz)		Measured	Detector (Peak or	RBW	Result	Limit	Margin dB	Summary
From	То	(MHz)	Sample)		(dBm)	dBm		Canindry
9kHz	150kHz	0.024040	Pk	200Hz	-102.86	-26	76.86	Pass
150kHz	30MHz	0.5500	Pk	9kHz	-95.26	-26	69.26	Pass
30MHz	1000MHz	500.40	Pk	1MHz	-83.85	-26	57.85	Pass
1000MHz	5000MHz	3453.0	Pk	1MHz	-60.51	-26	34.51	Pass
5000MHz	5140MHz	5140.0	Pk	1MHz	-53.98	-26	27.98	Pass
5360MHz	10000MHz	5414.0	Pk	1MHz	-62.86	-26	36.86	Pass
10000MHz	16000MHz	10360.0	Pk	1MHz	-69.99	-26	43.99	Pass

# Transmitting Bottom Channel 36: 5180MHz (MCS7)

Freq range (MHz)		Measured	Detector (Peak or	RBW	Result	Limit	Margin dB	Summary
From	То	(MHz)	Sample)		(dBm)	dBm	Margin db	Gummary
9kHz	150kHz	0.020045	Pk	200Hz	-102.40	-26	76.40	Pass
150kHz	30MHz	17.0200	Pk	9kHz	-96.31	-26	70.31	Pass
30MHz	1000MHz	578.00	Pk	1MHz	-85.55	-26	59.55	Pass
1000MHz	5000MHz	3453.0	Pk	1MHz	-61.17	-26	35.17	Pass
5000MHz	5140MHz	5139.8	Pk	1MHz	-53.36	-26	27.36	Pass
5360MHz	10000MHz	5414.0	Pk	1MHz	-62.60	-26	36.60	Pass
10000MHz	16000MHz	10360.0	Pk	1MHz	-70.80	-26	44.80	Pass

#### Transmitting Middle Channel 48: 5240MHz (MCS0)

Freq range (MHz)		Measured	Detector (Peak or	RBW	Result	Limit	Margin dB	Summary
From	То	(MHz)	Sample)		(dBm)	abm	0	
9kHz	150kHz	0.015580	Pk	200Hz	-101.06	-26	75.06	Pass
150kHz	30MHz	0.7500	Pk	9kHz	-92.99	-26	66.99	Pass

30MHz	1000MHz	764.00	Pk	1MHz	-83.40	-26	57.40	Pass
1000MHz	5000MHz	3493.0	Pk	1MHz	-58.63	-26	32.63	Pass
5000MHz	5140MHz	5119.7	Pk	1MHz	-58.30	-26	32.30	Pass
5360MHz	10000MHz	5360.0	Pk	1MHz	-56.15	-26	30.15	Pass
10000MHz	16000MHz	10480.0	Pk	1MHz	-66.94	-26	40.94	Pass

Transmitting Middle Channel 48: 5240MHz (MCS7)

Freq range (MHz)		Measured	Detector (Peak or	RBW	Result	Limit	Margin dB	Summary
From	То	(MHz)	Sample)		(dBm)	dBm	Margin ab	Cuminary
9kHz	150kHz	0.014405	Pk	200Hz	-99.13	-26	73.13	Pass
150kHz	30MHz	0.2000	Pk	9kHz	-95.04	-26	69.04	Pass
30MHz	1000MHz	479.40	Pk	1MHz	-85.28	-26	59.28	Pass
1000MHz	5000MHz	3493.0	Pk	1MHz	-58.85	-26	32.85	Pass
5000MHz	5140MHz	5119.9	Pk	1MHz	-59.10	-26	33.10	Pass
5360MHz	10000MHz	5360.0	Pk	1MHz	-55.68	-26	29.68	Pass
10000MHz	16000MHz	10480.0	Pk	1MHz	-69.40	-26	43.40	Pass

## **Tolerance of Unwanted Emissions Intensity continued**

Freq range (MHz)		Measured	Detector (Peak or	RBW	Result	Limit	Margin dB	Summary
From	То	(MHz)	Sample)		(dBm)	dBm		Caminary
9kHz	150kHz	0.010175	Pk	200Hz	-99.17	-26	73.17	Pass
150kHz	30MHz	13.8300	Pk	9kHz	-95.57	-26	69.57	Pass
30MHz	1000MHz	744.60	Pk	1MHz	-84.75	-26	58.75	Pass
1000MHz	5000MHz	3547.0	Pk	1MHz	-50.90	-26	24.90	Pass
5000MHz	5140MHz	5066.7	Pk	1MHz	-61.25	-26	35.25	Pass
5360MHz	10000MHz	5360.0	Pk	1MHz	-50.40	-26	24.40	Pass
10000MHz	16000MHz	10640.0	Pk	1MHz	-66.93	-26	40.93	Pass

Transmitting Top Channel 64: 5320MHz (MCS0)

## Transmitting Top Channel 64: 5320MHz (MCS7)

Freq range (MHz)		Measured	Detector (Peak or	RBW	Result	Limit	Margin dB	Summary
From	То	(MHz)	(MHz) Sample)		(dBm)	dBm	indigin dD	Communy
9kHz	150kHz	0.012290	Pk	200Hz	-100.98	-26	74.98	Pass
150kHz	30MHz	0.8000	Pk	9kHz	-94.08	-26	68.08	Pass
30MHz	1000MHz	482.70	Pk	1MHz	-84.07	-26	58.07	Pass
1000MHz	5000MHz	3547.0	Pk	1MHz	-50.64	-26	24.64	Pass
5000MHz	5140MHz	5066.7	Pk	1MHz	-59.21	-26	33.21	Pass
5360MHz	10000MHz	5360.0	Pk	1MHz	-49.73	-26	23.73	Pass
10000MHz	16000MHz	10640.0	Pk	1MHz	-68.01	-26	42.01	Pass

#### Limit Article 7 Table 3 Note 28 of the Ordinance Regulating Radio Equipment

Lower than 5,140 MHz and higher than 5,360 MHz

2.5µW

Test Details: TX	Test Details: TX Mode: Wi-Fi device 802.11a CH100, CH120 and CH140					
Standard	Ordinance Regulating Radio Equipment					
Reference clause	Article 7 Table 3, Note 28					
Frequency range	9kHz to 18GHz					
Application	Temporary Antenna Connector					
EUT sample number	TRA-007055S17					
Modification state	0					
SE in test environment	None					
SE isolated from EUT	None					
EUT set up	Refer to Appendix C					

#### A13 Tolerance of Unwanted Emissions Intensity 5500MHz to 5700MHz 802.11a

## Transmitting Bottom Channel 100: 5500MHz @ 6Mbps

Freq range (MHz)		Measured	Detector (Peak or	RBW	Result	Limit	Margin dB	Summary
From	То	(MHz)	(MHz) (MHz)		(dBm)	dBm	indigin dD	Communy
9kHz	150kHz	0.011820	Pk	200Hz	-100.26	-26	74.26	Pass
150kHz	30MHz	6.4200	Pk	9kHz	-97.99	-26	71.99	Pass
30MHz	1000MHz	233.70	Pk	1MHz	-85.92	-26	59.92	Pass
1000MHz	5000MHz	3667.0	Pk	1MHz	-48.00	-26	22.00	Pass
5000MHz	5460MHz	5460.0	Pk	1MHz	-50.36	-26	24.36	Pass
5740MHz	10000MHz	5740.0	Pk	1MHz	-69.29	-26	43.29	Pass
10000MHz	18000MHz	11000.0	Pk	1MHz	-68.15	-26	42.15	Pass

## Transmitting Bottom Channel 100: 5500MHz @ 54Mbps

Freq range (MHz)		Measured	Detector (Peak or	RBW	Result	Limit	Margin dB	Summary
From	То	(MHz)	(MHz) (NHz)		(dBm)	dBm		Cumulary
9kHz	150kHz	0.018870	Pk	200Hz	-100.99	-26	74.99	Pass
150kHz	30MHz	18.7100	Pk	9kHz	-97.35	-26	71.35	Pass
30MHz	1000MHz	633.00	Pk	1MHz	-85.89	-26	59.89	Pass
1000MHz	5000MHz	3667.0	Pk	1MHz	-47.85	-26	21.85	Pass
5000MHz	5460MHz	5460.0	Pk	1MHz	-50.67	-26	24.67	Pass
5740MHz	10000MHz	5740.0	Pk	1MHz	-70.56	-26	44.56	Pass
10000MHz	18000MHz	11000.0	Pk	1MHz	-66.19	-26	40.19	Pass

#### Transmitting Middle Channel 120: 5600MHz @ 6Mbps

Freq range (MHz)		Measured	Detector (Peak or	RBW	Result	Limit	Margin dB	Summary
From	То	(MHz)	Sample)		(dBm)	dBm	Ū	
9kHz	150kHz	0.013465	Pk	200Hz	-101.89	-26	75.89	Pass
150kHz	30MHz	0.0150	Pk	9kHz	-94.18	-26	68.18	Pass

30MHz	1000MHz	371.10	Pk	1MHz	-84.81	-26	58.81	Pass
1000MHz	5000MHz	3733.0	Pk	1MHz	-45.12	-26	19.12	Pass
5000MHz	5460MHz	5440.1	Pk	1MHz	-56.01	-26	30.01	Pass
5740MHz	10000MHz	5740.0	Pk	1MHz	-70.52	-26	44.52	Pass
10000MHz	18000MHz	11200.0	Pk	1MHz	-60.89	-26	34.89	Pass

Transmitting Middle Channel 120: 5600MHz @ 54Mbps

Freq range (MHz)		Measured	Detector (Peak or	RBW	Result	Limit	Margin dB	Summary
From	То	(MHz)	(MHz) Sample)		(dBm)	dBm		Camilary
9kHz	150kHz	0.016520	Pk	200Hz	-99.81	-26	73.81	Pass
150kHz	30MHz	1.3900	Pk	9kHz	-97.47	-26	71.47	Pass
30MHz	1000MHz	495.60	Pk	1MHz	-84.26	-26	58.26	Pass
1000MHz	5000MHz	3733.0	Pk	1MHz	-45.01	-26	19.01	Pass
5000MHz	5460MHz	5440.1	Pk	1MHz	-58.80	-26	32.80	Pass
5740MHz	10000MHz	5740.0	Pk	1MHz	-70.07	-26	44.07	Pass
10000MHz	18000MHz	11200.0	Pk	1MHz	-61.27	-26	35.27	Pass

#### **Tolerance of Unwanted Emissions Intensity continued**

Freq range (MHz)		Measured	Detector (Peak or	RBW	Result	Limit	Margin dB	Summary
From	То	(MHz)	(MHz) Sample)	(dBm)	dBm	margin db	Cuminary	
9kHz	150kHz	0.017695	Pk	200Hz	-100.85	-26	74.85	Pass
150kHz	30MHz	3.6300	Pk	9kHz	-97.41	-26	71.41	Pass
30MHz	1000MHz	487.50	Pk	1MHz	-84.38	-26	58.38	Pass
1000MHz	5000MHz	3800.0	Pk	1MHz	-42.29	-26	16.29	Pass
5000MHz	5460MHz	5240.0	Pk	1MHz	-61.79	-26	35.79	Pass
5740MHz	10000MHz	5740.0	Pk	1MHz	-66.92	-26	40.92	Pass
10000MHz	18000MHz	11400.0	Pk	1MHz	-64.19	-26	3819	Pass

Transmitting Top Channel 140: 5700MHz @ 6Mbps

## Transmitting Top Channel 140: 5700MHz @ 54Mbps

Freq range (MHz)		Measured	Detector (Peak or	RBW	Result	Limit	Margin dB	Summary
From	То	(MHz)	(MHz) Sample)		(dBm)	dBm		commany
9kHz	150kHz	0.010410	Pk	200Hz	-98.81	-26	72.81	Pass
150kHz	30MHz	0.5000	Pk	9kHz	-95.42	-26	69.42	Pass
30MHz	1000MHz	374.40	Pk	1MHz	-83.79	-26	57.79	Pass
1000MHz	5000MHz	3800.0	Pk	1MHz	-42.17	-26	16.17	Pass
5000MHz	5460MHz	5240.0	Pk	1MHz	-61.04	-26	35.04	Pass
5740MHz	10000MHz	5740.0	Pk	1MHz	-66.32	-26	40.32	Pass
10000MHz	18000MHz	11400.0	Pk	1MHz	-64.80	-26	38.80	Pass

## Limit Article 7 Table 3 Note 28 of the Ordinance Regulating Radio Equipment

Lower than 5,420 MHz and higher than 5,760 MHz	
2.5uW	

Test Details: TX	Mode: Wi-Fi device 802.11n CH100, CH120 and CH140
Standard	Ordinance Regulating Radio Equipment
Reference clause	Article 7 Table 3, Note 28
Frequency range	9kHz to 18GHz
Application	Temporary Antenna Connector
EUT sample number	TRA-007055S17
Modification state	0
SE in test environment	None
SE isolated from EUT	None
EUT set up	Refer to Appendix C

#### A14 Tolerance of Unwanted Emissions Intensity 5500MHz to 5700MHz 802.11n

## Transmitting Bottom Channel 100: 5500MHz (MCS0)

Freq range (MHz)		Measured	Detector (Peak or	RBW	Result	Limit	Margin dB	Summary
From	То	(MHz)	(MHz) Sample)		(dBm)	dBm	indigin dD	Cummary
9kHz	150kHz	0.055765	Pk	200Hz	-102.31	-26	76.31	Pass
150kHz	30MHz	1.6900	Pk	9kHz	-96.24	-26	70.24	Pass
30MHz	1000MHz	359.80	Pk	1MHz	-84.37	-26	58.37	Pass
1000MHz	5000MHz	3667.0	Pk	1MHz	-48.08	-26	22.08	Pass
5000MHz	5460MHz	5460.0	Pk	1MHz	-49.38	-26	23.68	Pass
5740MHz	10000MHz	5740.0	Pk	1MHz	-68.59	-26	42.59	Pass
10000MHz	18000MHz	11000.0	Pk	1MHz	-65.31	-26	39.31	Pass

# Transmitting Bottom Channel 100: 5500MHz (MCS7)

Freq range (MHz)		Measured	Detector (Peak or	RBW	Result	Limit	Margin dB	Summary
From	То	(MHz)	Sample)		(dBm)	dBm	Margin ab	Cuminary
9kHz	150kHz	0.021690	Pk	200Hz	-101.73	-26	75.73	Pass
150kHz	30MHz	0.4500	Pk	9kHz	-91.74	-26	65.74	Pass
30MHz	1000MHz	616.80	Pk	1MHz	-83.77	-26	57.77	Pass
1000MHz	5000MHz	3667.0	Pk	1MHz	-47.89	-26	21.89	Pass
5000MHz	5460MHz	5460.0	Pk	1MHz	-51.17	-26	25.17	Pass
5740MHz	10000MHz	5740.0	Pk	1MHz	-68.47	-26	42.47	Pass
10000MHz	18000MHz	11000.0	Pk	1MHz	-66.72	-26	40.72	Pass

#### Transmitting Middle Channel 120: 5600MHz (MCS0)

Frec (N	Freq range (MHz) Measured Frequency		Detector (Peak or	RBW	Result	Limit	Margin dB	Summary
From	То	(MHz)	Sample)		(dBm)	dBm	indigin de	Cumury
9kHz	150kHz	0.025450	Pk	200Hz	-101.18	-26	75.18	Pass
150kHz	30MHz	0.2000	Pk	9kHz	-92.81	-26	66.81	Pass

30MHz	1000MHz	413.20	Pk	1MHz	-83.51	-26	57.51	Pass
1000MHz	5000MHz	3733.0	Pk	1MHz	-45.26	-26	19.26	Pass
5000MHz	5460MHz	5440.1	Pk	1MHz	-56.85	-26	30.85	Pass
5740MHz	10000MHz	5740.0	Pk	1MHz	-70.06	-26	44.06	Pass
10000MHz	18000MHz	11200.0	Pk	1MHz	-64.52	-26	38.52	Pass

Transmitting Middle Channel 120: 5600MHz (MCS7)

Freq range (MHz)		Measured	Detector (Peak or	RBW	Result	Limit	Margin dB	Summary
From	То	(MHz)	Sample)		(dBm)	dBm	margin ab	Cuminary
9kHz	150kHz	0.010410	Pk	200Hz	-100.42	-26	74.42	Pass
150kHz	30MHz	0.3000	Pk	9kHz	-92.33	-26	66.33	Pass
30MHz	1000MHz	713.80	Pk	1MHz	-83.21	-26	57.21	Pass
1000MHz	5000MHz	3733.0	Pk	1MHz	-45.15	-26	19.15	Pass
5000MHz	5460MHz	5440.1	Pk	1MHz	-56.66	-26	30.66	Pass
5740MHz	10000MHz	5740.0	Pk	1MHz	-69.55	-26	43.55	Pass
10000MHz	18000MHz	11200.0	Pk	1MHz	-61.69	-26	35.69	Pass

## **Tolerance of Unwanted Emissions Intensity continued**

Freq range (MHz)		Measured	Detector (Peak or	RBW	Result	Limit	Maroin dB	Summary
From	То	(MHz)	Sample)		(dBm)	dBm	Margin ab	Cummury
9kHz	150kHz	0.013935	Pk	200Hz	-102.17	-26	76.17	Pass
150kHz	30MHz	1.5900	Pk	9kHz	-93.84	-26	67.84	Pass
30MHz	1000MHz	515.00	Pk	1MHz	-85.02	-26	59.02	Pass
1000MHz	5000MHz	3800.0	Pk	1MHz	-42.32	-26	16.32	Pass
5000MHz	5460MHz	5259.9	Pk	1MHz	-61.54	-26	35.54	Pass
5740MHz	10000MHz	5740.0	Pk	1MHz	-63.13	-26	37.13	Pass
10000MHz	18000MHz	11400.0	Pk	1MHz	-64.18	-26	38.18	Pass

Transmitting Top Channel 140: 5700MHz (MCS0)

# Transmitting Top Channel 140: 5700MHz (MCS7)

Freq range (MHz)		Measured	Detector (Peak or	RBW	Result	Limit	Margin dB	Summary
From	То	(MHz)	Sample)		(dBm)	dBm	Margin db	Gummary
9kHz	150kHz	0.012995	Pk	200Hz	-99.37	-26	73.37	Pass
150kHz	30MHz	18.8100	Pk	9kHz	-96.05	-26	70.05	Pass
30MHz	1000MHz	636.20	Pk	1MHz	-86.36	-26	60.36	Pass
1000MHz	5000MHz	3800.0	Pk	1MHz	-42.32	-26	16.32	Pass
5000MHz	5460MHz	5240.0	Pk	1MHz	-61.71	-26	35.71	Pass
5740MHz	10000MHz	5740.0	Pk	1MHz	-63.80	-26	37.80	Pass
10000MHz	18000MHz	11400.0	Pk	1MHz	-62.86	-26	36.86	Pass

# Limit Article 7 Table 3 Note 28 of the Ordinance Regulating Radio Equipment

Lower than 5,420 MHz and higher than 5,760 MHz
2.5µW

## A15 Limit of Secondary Emissions 5180MHz to 5320MHz 802.11a

Preview measurement of secondary radio emissions was performed using a peak detector with the RBW set to 100kHz and the VBW>RBW. Frequencies were scanned up through to the 4<sup>th</sup> harmonic with the EUT in receive mode on its lowest, centre and highest receive frequency in turn. Formal measurements were made using a RBW of 100 kHz for frequencies below 1 GHz and 1 MHz for frequencies above 1 GHz.

Test Details: Rece	ive Mode: Wi-Fi device 802.11a CH36, CH48 and CH64
Standard	Ordinance Regulating Radio Equipment
Reference clause	Article 24 (1 & 2)
Frequency range	9kHz to 18 GHz
Application	Temporary Antenna Connector
EUT sample number	TRA-007055S17
Modification state	0
SE in test environment	REF1270
SE isolated from EUT	None
EUT set up	Refer to Appendix C

The worst-case emission measurements for spurious emissions and harmonics are listed below:

Freq range (MHz)		Measured	Detector (Peak or	RBW	Result	Limit	Margin dB	Summary
From	То	(MHz)	Sample)		(dBm)	dBm	Margin db	Gummary
	450111	0.000705	0	00011-	101 50	<b>F</b> 4	17.50	Б
9KHZ	150KHZ	0.032735	Sample	200HZ	-101.53	-54	47.53	Pass
9KHZ 150kHz	30MHz	7.0200	Sample	200Hz 9kHz	-101.53 -96.64	-54 -54	47.53 42.64	Pass Pass
150kHz 30MHz	30MHz 1000MHz	0.032735 7.0200 430.90	Sample Sample Sample	9kHz 100kHz	-101.53 -96.64 -84.21	-54 -54 -54	47.53 42.64 30.21	Pass Pass Pass
9kHz 150kHz 30MHz 1000MHz	150KHZ 30MHz 1000MHz 5000MHz	0.032735 7.0200 430.90 3253.0	Sample Sample Sample Sample	9kHz 100kHz 1MHz	-101.53 -96.64 -84.21 -80.53	-54 -54 -54 -47	47.53 42.64 30.21 33.53	Pass Pass Pass Pass
9KHZ 150kHz 30MHz 1000MHz 5000MHz	150KHZ 30MHz 1000MHz 5000MHz 10000MHz	0.032735 7.0200 430.90 3253.0 7108.0	Sample Sample Sample Sample Sample	200Hz 9kHz 100kHz 1MHz 1MHz	-101.53 -96.64 -84.21 -80.53 -80.65	-54 -54 -54 -47 -47	47.53 42.64 30.21 33.53 33.65	Pass Pass Pass Pass Pass

#### Limit Article 24 (1 & 2) of the Ordinance Regulating Radio Equipment

Frequency range	Limit
9kHz to 1 GHz	4 nW (-54dBm)
Above 1 GHz	20nW (-47dBm)

## A16 Limit of Secondary Emissions 5180MHz to 5320MHz 802.11n

Preview measurement of secondary radio emissions was performed using a peak detector with the RBW set to 100kHz and the VBW>RBW. Frequencies were scanned up through to the 4<sup>th</sup> harmonic with the EUT in receive mode on its lowest, centre and highest receive frequency in turn. Formal measurements were made using a RBW of 100 kHz for frequencies below 1 GHz and 1MHz for frequencies above 1 GHz.

Test Details: Receive Mode: Wi-Fi device 802.11n CH36, CH48 and CH64				
Standard	Ordinance Regulating Radio Equipment			
Reference clause	Article 24 (1 & 2)			
Frequency range	9kHz to 18 GHz			
Application	Temporary Antenna Connector			
EUT sample number	TRA-007055S17			
Modification state	0			
SE in test environment	REF1270			
SE isolated from EUT	None			
EUT set up	Refer to Appendix C			

The worst-case emission measurements for spurious emissions and harmonics are listed below:

Freq range (MHz)		Measured	Detector (Peak or	RBW	Result	Limit	Margin dB	Summary
From	То	(MHz)	Sample)		(dBm)	dBm	Margin db	Gummary
9kHz	150kHz	0.032735	Sample	200Hz	-101.53	-54	47.53	Pass
150kHz	30MHz	7.0200	Sample	9kHz	-96.64	-54	42.64	Pass
30MHz	1000MHz	430.90	Sample	100kHz	-84.21	-54	30.21	Pass
				4 8 41 1	00 50	47	00 50	
1000MHz	5000MHz	3253.0	Sample	1MHz	-80.53	-47	33.53	Pass
1000MHz 5000MHz	5000MHz 10000MHz	3253.0 7108.0	Sample	1MHz 1MHz	-80.53 -80.65	-47 -47	33.53	Pass Pass

#### Limit Article 24 (1 & 2) of the Ordinance Regulating Radio Equipment

Frequency range	Limit
9kHz to 1 GHz	4 nW (-54dBm)
Above 1 GHz	20nW (-47dBm)

## A17 Limit of Secondary Emissions 5500MHz to 5700MHz 802.11a

Preview measurement of secondary radio emissions was performed using a peak detector with the RBW set to 100kHz and the VBW>RBW. Frequencies were scanned up through to the 4<sup>th</sup> harmonic with the EUT in receive mode on its lowest, centre and highest receive frequency in turn. Formal measurements were made using a RBW of 100 kHz for frequencies below 1 GHz and 1 MHz for frequencies above 1 GHz.

Test Details: Receive Mode: Wi-Fi device 802.11a CH100, CH120 and CH140					
Standard	Ordinance Regulating Radio Equipment				
Reference clause	Article 24 (1 & 2)				
Frequency range	9kHz to 18 GHz				
Application	Temporary Antenna Connector				
EUT sample number	TRA-007055S17				
Modification state	0				
SE in test environment	REF1270				
SE isolated from EUT	None				
EUT set up	Refer to Appendix C				

The worst-case emission measurements for spurious emissions and harmonics are listed below:

Freq range (MHz)		Measured	Detector	RBW	Result	Limit	Margin dB	Summany
From	То	(MHz)	Sample)		(dBm)	dBm	Margin ub	Cuminary
	450111	0.000705	0	00011-	101 50	<b>F</b> 4	17.50	Б
9KHZ	150KHZ	0.032735	Sample	200HZ	-101.53	-54	47.53	Pass
9KHZ 150kHz	30MHz	7.0200	Sample	200Hz 9kHz	-101.53 -96.64	-54 -54	47.53 42.64	Pass Pass
150kHz 30MHz	30MHz 1000MHz	0.032735 7.0200 430.90	Sample Sample Sample	9kHz 100kHz	-101.53 -96.64 -84.21	-54 -54 -54	47.53 42.64 30.21	Pass Pass Pass
9kHz 150kHz 30MHz 1000MHz	150KHZ 30MHz 1000MHz 5000MHz	0.032735 7.0200 430.90 3253.0	Sample Sample Sample Sample	9kHz 100kHz 1MHz	-101.53 -96.64 -84.21 -80.53	-54 -54 -54 -47	47.53 42.64 30.21 33.53	Pass Pass Pass Pass
9KHZ 150kHz 30MHz 1000MHz 5000MHz	150KHZ 30MHz 1000MHz 5000MHz 10000MHz	0.032735 7.0200 430.90 3253.0 7108.0	Sample Sample Sample Sample Sample	200Hz 9kHz 100kHz 1MHz 1MHz	-101.53 -96.64 -84.21 -80.53 -80.65	-54 -54 -54 -47 -47	47.53 42.64 30.21 33.53 33.65	Pass Pass Pass Pass Pass

#### Limit Article 24 (1 & 2) of the Ordinance Regulating Radio Equipment

Frequency range	Limit
9kHz to 1 GHz	4 nW (-54dBm)
Above 1 GHz	20nW (-47dBm)
## A18 Limit of Secondary Emissions 5500MHz to 5700MHz 802.11n

Preview measurement of secondary radio emissions was performed using a peak detector with the RBW set to 100kHz and the VBW>RBW. Frequencies were scanned up through to the 4<sup>th</sup> harmonic with the EUT in receive mode on its lowest, centre and highest receive frequency in turn. Formal measurements were made using a RBW of 100 kHz for frequencies below 1 GHz and 1MHz for frequencies above 1 GHz.

Test Details: Receive Mode: Wi-Fi device 802.11n CH100, CH120 and CH140			
Standard	Ordinance Regulating Radio Equipment		
Reference clause	Article 24 (1 & 2)		
Frequency range	9kHz to 18 GHz		
Application	Temporary Antenna Connector		
EUT sample number	TRA-007055S17		
Modification state	0		
SE in test environment	REF1270		
SE isolated from EUT	None		
EUT set up	Refer to Appendix C		

The worst-case emission measurements for spurious emissions and harmonics are listed below:

Frec (N	eq range MHz) Measured Frequency		Detector (Peak or	RBW	Result	Limit	Margin dB	Summary
From	То	(MHz)	Sample)		(dBm)	dBm	Margin db	Gummary
	1 - 01 - 1	0.000705						-
9KHZ	150kHz	0.032735	Sample	200Hz	-101.53	-54	47.53	Pass
9KHZ 150kHz	150kHz 30MHz	7.0200	Sample	200Hz 9kHz	-101.53 -96.64	-54 -54	47.53 42.64	Pass Pass
9kHz 150kHz 30MHz	150kHz 30MHz 1000MHz	0.032735 7.0200 430.90	Sample Sample Sample	200Hz 9kHz 100kHz	-101.53 -96.64 -84.21	-54 -54 -54	47.53 42.64 30.21	Pass Pass Pass
9kHz 150kHz 30MHz 1000MHz	150kHz 30MHz 1000MHz 5000MHz	0.032735 7.0200 430.90 3253.0	Sample Sample Sample Sample	200Hz 9kHz 100kHz 1MHz	-101.53 -96.64 -84.21 -80.53	-54 -54 -54 -47	47.53 42.64 30.21 33.53	Pass Pass Pass Pass
9kHz 150kHz 30MHz 1000MHz 5000MHz	150kHz 30MHz 1000MHz 5000MHz 10000MHz	0.032735 7.0200 430.90 3253.0 7108.0	Sample Sample Sample Sample Sample	200Hz 9kHz 100kHz 1MHz 1MHz	-101.53 -96.64 -84.21 -80.53 -80.65	-54 -54 -54 -47 -47	47.53 42.64 30.21 33.53 33.65	Pass Pass Pass Pass Pass

## Limit Article 24 (1 & 2) of the Ordinance Regulating Radio Equipment

Frequency range	Limit
9kHz to 1 GHz	4 nW (-54dBm)
Above 1 GHz	20nW (-47dBm)

Test Details: Transmit			
Standard	Ordinance Regulating Radio Equipment		
Reference clause	Article 5 Table 1 Row 7 Item 10		
Application	Temporary Antenna Connector		
EUT sample number	TRA-007055S17		
Modification state	0		
SE in test environment	REF1270		
SE isolated from EUT	None		
EUT set up	Refer to Appendix C		

## A19 Tolerance of Frequency 5180MHz to 5320MHz 802.11a/n

Test Conditions	Channel 36	Channel 48	Channel 64
Wanted Frequency (MHz)	5180	5240	5320
Frequency Error (ppm)	19.4	19.8	19.2
Result	Pass	Pass	Pass
Limit		±50 ppm	

# Limit Article 5 Table 1 Row 7 Item 10 of the Ordinance Regulating Radio Equipment

 $\pm 50 \text{ ppm}$ 

Test Details: Transmit			
Standard	Ordinance Regulating Radio Equipment		
Reference clause	Article 5 Table 1 Row 7 Item 10		
Application	Temporary Antenna Connector		
EUT sample number	TRA-007055S17		
Modification state	0		
SE in test environment	REF1270		
SE isolated from EUT	None		
EUT set up	Refer to Appendix C		

## A20 Tolerance of Frequency 5500MHz to 5700MHz 802.11a/n

Test Conditions	Channel 100	Channel 120	Channel 140
Wanted Frequency (MHz)	5500	5600	5700
Frequency Error (ppm)	18.9	19.2	19.5
Result	Pass	Pass	Pass
Limit		$\pm 50 \text{ ppm}$	

# Limit Article 5 Table 1 Row 7 Item 10 of the Ordinance Regulating Radio Equipment

 $\pm 50 \text{ ppm}$ 

Test Details: Transmit Mode: Wi-Fi device 802.11a CH36, CH48 and CH64			
Standard	Ordinance Regulating Radio Equipment		
Reference clause	Article 49.20, 3) j		
Application	Temporary Antenna Connector		
EUT sample number	TRA-007055S17		
Modification state	0		
SE in test environment	REF1270		
SE isolated from EUT	None		
EUT set up	Refer to Appendix C		

## A21 Adjacent Channel Leakage Power 5180MHz to 5320MHz 802.11a

Carrier	Freq	6M	bps	54N	lbps		
Freq (MHz)	Offset (MHz)	Lower Channel (dBc)	Upper Channel (dBc)	Lower Channel (dBc)	Upper Channel (dBc)	Limit (dBc)	Result
5180	20	-31.48	-31.34	-31.09	-31.03	-25	Pass
5100	40	-49.02	-46.93	-50.14	-48.18	-40	Pass
5240	20	-29.51	-29.49	-30.48	-30.25	-25	Pass
5240	40	-47.55	-47.19	-48.56	-48.20	-40	Pass
5320	20	-28.21	-27.19	-30.10	-28.26	-25	Pass
5520	40	-47.40	-45.91	-48.04	-46.80	-40	Pass

#### Limit Article 49.20, 3)

- j The Adjacent Channel Leakage Power shall be as follows;
  - (1) In case of the Occupied Bandwidth is no greater than 18 MHz; The mean power radiated within a bandwidth of ±9 MHz of the frequencies 20 MHz and 40 MHz distant from the frequency of the carrier shall be lower than the mean power of the carrier by 25 dB and 40 dB.
  - (2) In case of the Occupied Bandwidth is greater than 18 MHz to 19 MHz; The mean power radiated within a bandwidth of ±9.5 MHz of the frequencies 20 MHz and 40 MHz distant from the frequency of the carrier shall be lower than the mean power of the carrier by 25 dB and 40 dB.
  - (3) In case of the Occupied Bandwidth is greater than 19 MHz to 38 MHz; The mean power radiated within a bandwidth of ±19 MHz of the frequencies 40 MHz and 80 MHz distant from the frequency of the carrier shall be lower than the mean power of the carrier by 25 dB and 40 dB.

Test Details: Transmit Mode: Wi-Fi device 802.11n CH36, CH48 and CH64			
Standard	Ordinance Regulating Radio Equipment		
Reference clause	Article 49.20, 3) j		
Application	Temporary Antenna Connector		
EUT sample number	TRA-007055S17		
Modification state	0		
SE in test environment	REF1270		
SE isolated from EUT	None		
EUT set up	Refer to Appendix C		

## A22 Adjacent Channel Leakage Power 5180MHz to 5320MHz 802.11n

Carrier	Freq	MC	S0	MC	S7		
Freq (MHz)	Offset (MHz)	Lower Channel (dBc)	Upper Channel (dBc)	Lower Channel (dBc)	Upper Channel (dBc)	Limit (dBc)	Result
5180	20	-31.17	-29.68	-30.67	-29.16	-25	Pass
5100	40	-47.93	-47.37	-47.26	-46.11	-40	Pass
5240	20	-28.80	-28.08	-29.19	-29.59	-25	Pass
5240	40	-47.25	-45.99	-47.16	-46.45	-40	Pass
5320	20	-29.40	-26.18	-28.76	-27.01	-25	Pass
5520	40	-46.26	-44.86	-46.75	-45.19	-40	Pass

## Limit Article 49.20, 3)

- j The Adjacent Channel Leakage Power shall be as follows;
  - (1) In case of the Occupied Bandwidth is no greater than 18 MHz; The mean power radiated within a bandwidth of ±9 MHz of the frequencies 20 MHz and 40 MHz distant from the frequency of the carrier shall be lower than the mean power of the carrier by 25 dB and 40 dB.
  - (2) In case of the Occupied Bandwidth is greater than 18 MHz to 19 MHz; The mean power radiated within a bandwidth of ±9.5 MHz of the frequencies 20 MHz and 40 MHz distant from the frequency of the carrier shall be lower than the mean power of the carrier by 25 dB and 40 dB.
  - (3) In case of the Occupied Bandwidth is greater than 19 MHz to 38 MHz; The mean power radiated within a bandwidth of ±19 MHz of the frequencies 40 MHz and 80 MHz distant from the frequency of the carrier shall be lower than the mean power of the carrier by 25 dB and 40 dB.

Test Details: Transmit Mode: Wi-Fi device 802.11a CH100, CH120 and CH140			
Standard	Ordinance Regulating Radio Equipment		
Reference clause	Article 49.20, 3-2) f		
Application	Temporary Antenna Connector		
EUT sample number	TRA-007055S17		
Modification state	0		
SE in test environment	REF1270		
SE isolated from EUT	None		
EUT set up	Refer to Appendix C		

## A23 Adjacent Channel Leakage Power 5500MHz to 5700MHz 802.11a

Carrier	Freq	6Mbps		54Mbps			
Freq (MHz)	Offset (MHz)	Lower Channel (dBc)	Upper Channel (dBc)	Lower Channel (dBc)	Upper Channel (dBc)	Limit (dBc)	Result
5500	20	-26.14	-26.51	-26.38	-25.87	-25	Pass
	40	-45.62	-45.94	-45.09	-45.29	-40	Pass
5600	20	-28.60	-28.03	-28.69	-28.78	-25	Pass
5000	40	-47.28	-48.17	-48.06	-49.11	-40	Pass
5700	20	-33.43	-34.49	-34.10	-34.76	-25	Pass
	40	-52.00	-52.69	-52.89	-53.04	-40	Pass

## Limit Article 49.20, 3-2)

- f The Adjacent Channel Leakage Power shall be as follows;
  - (1) In case of the modulation type is not OFDM; The mean power radiated within a bandwidth of  $\pm 9$  MHz of the frequencies 20 MHz and 40 MHz distant from the frequency of the carrier shall be lower than the mean power of the carrier by 25 dB and 40 dB.
  - (2) In case of the modulation type is OFDM, shall be as follows;
    - (i) In case of the Occupied Bandwidth is 19.7 MHz or less; The mean power radiated within a bandwidth of ±9.5 MHz of the frequencies 20 MHz and 40 MHz distant from the frequency of the carrier shall be lower than the mean power of the carrier by 25 dB and 40 dB.
    - (ii) In case of the Occupied Bandwidth is greater than 19.7 MHz to 38 MHz; The mean power radiated within a bandwidth of ±19 MHz of the frequencies 40 MHz and 80 MHz distant from the frequency of the carrier shall be lower than the mean power of the carrier by 25 dB and 40 dB.

Test Details: Transmit Mode: Wi-Fi device 802.11n CH100, CH120 and CH140			
Standard	Ordinance Regulating Radio Equipment		
Reference clause	Article 49.20, 3-2) f		
Application	Temporary Antenna Connector		
EUT sample number	TRA-007055S17		
Modification state	0		
SE in test environment	REF1270		
SE isolated from EUT	None		
EUT set up	Refer to Appendix C		

## A24 Adjacent Channel Leakage Power 5500MHz to 5700MHz 802.11n

Carrier	Freq	MCS0		MCS7			
Freq (MHz)	Offset (MHz)	Lower Channel (dBc)	Upper Channel (dBc)	Lower Channel (dBc)	Upper Channel (dBc)	Limit (dBc)	Result
5500	20	-25.01	-25.19	-25.58	-25.30	-25	Pass
	40	-44.69	-44.10	-45.27	-44.53	-40	Pass
5600	20	-27.02	-26.66	-27.43	-27.51	-25	Pass
5000	40	-46.27	-46.73	-46.22	-47.61	-40	Pass
5700	20	-32.58	-33.17	-32.28	-33.40	-25	Pass
	40	-50.96	-50.64	-51.59	-49.79	-40	Pass

## Limit Article 49.20, 3-2)

- f The Adjacent Channel Leakage Power shall be as follows;
  - (1) In case of the modulation type is not OFDM; The mean power radiated within a bandwidth of  $\pm 9$  MHz of the frequencies 20 MHz and 40 MHz distant from the frequency of the carrier shall be lower than the mean power of the carrier by 25 dB and 40 dB.
  - (2) In case of the modulation type is OFDM, shall be as follows;
    - (i) In case of the Occupied Bandwidth is 19.7 MHz or less; The mean power radiated within a bandwidth of ±9.5 MHz of the frequencies 20 MHz and 40 MHz distant from the frequency of the carrier shall be lower than the mean power of the carrier by 25 dB and 40 dB.
    - (ii) In case of the Occupied Bandwidth is greater than 19.7 MHz to 38 MHz; The mean power radiated within a bandwidth of  $\pm$ 19 MHz of the frequencies 40 MHz and 80 MHz distant from the frequency of the carrier shall be lower than the mean power of the carrier by 25 dB and 40 dB.

# Appendix B:

## **Supporting Graphical Data**

This appendix contains graphical data obtained during testing.

Notes:

- a) The graphical data in this appendix is preview data. For details of formal results, refer to Appendix A
- b) The time and date on the plots do not necessarily equate to the time of the test.
- c) Appendix C details the numbering system used to identify the sample and its modification state.
- d) The plots presented in this appendix may not be a complete record of the measurements performed, but are a representative sample, relative to the final assessment.

ዡ Agilent 11:27:24 Jun 14, 2013	Meas Control
<b>Ch Freq</b> 5.18 GHz Occupied Bandwidth	Trig RF B Restart
Center 5.180000000 GHz	Measure Mkr1 5.180 0 GHz
Ref 5.661 dBm #Atten 28 dB #Samp Log	-27.01 dBm Resume
Center 5.180 0 GHz #Res BW 30 kHz #VBW 30 kHz	Span 60 MHz Sweep 254.2 ms (601 pts)
Occupied Bandwidth 16.2367 MHz	ОСС ВЖ % Рыг 95.00 % х dB -26.00 dB
Transmit Freq Error-24.601 kHzx dB Bandwidth19.353 MHz*	
File Operation Status, A:\SBC14R11.GIF	file saved

#### 95% Spreading Bandwidth - 802.11a CH36 (5180MHz) 6Mbps



#### 95% Spreading Bandwidth - 802.11a CH36 (5180MHz) 54Mbps

ዡ Agilent 11:31:17 Jun 14, 2013	Meas Contro
<b>Ch Freq</b> 5.24 GHz Occupied Bandwidth	Trig RF B Restar
Center 5.240000000 GHz	Measur Mkr1 5.240 0 GHz Single <u>Co</u> u
Ref 5.661 dBm #Atten 28 dB #Samp Log	-21.96 dBm
Center 5.240 0 GHz #Res BW 30 kHz #VBW 30 kHz	Span 60 MHz
Occupied Bandwidth 15.8213 MHz	OCC BW % Pwr 95.00 % x dB -26.00 dB
Transmit Freq Error162.739 kHz× dB Bandwidth20.758 MHz*	
File Operation Status, A:\SBC36RS7.GIF	tile saved

#### 95% Spreading Bandwidth - 802.11a CH48 (5240MHz) 6Mbps



#### 95% Spreading Bandwidth - 802.11a CH48 (5240MHz) 54Mbps

ዡ Agilent 11:35:45 Jun 14, 2013	M	eas Control
Ch Freq 5.32 GHz Occupied Bandwidth	Trig RF B	Restart
Center 5.320000000 GHz		<b>Measure</b> Igle <u>Cont</u>
Ref 5.661 dBm #Atten 28 dB #Samp Log	-31.25 dBm	Resume
Center 5.320 0 GHz #Res BW 30 kHz #VBW 30 kHz	Span 60 MHz	
Occupied Bandwidth 15.2631 MHz	Осс ВЖ % Рыг 95.00 % х dB -26.00 dB	
Transmit Freq Error248.856 kHzx dB Bandwidth25.330 MHz*		
File Operation Status, A:\SBC48RS7.GIF	file saved	

95% Spreading Bandwidth - 802.11a CH64 (5320MHz) 6Mbps



95% Spreading Bandwidth - 802.11a CH64 (5320MHz) 54Mbps

🔆 Agilent 11:29:08 Jun 14, 2013	Meas Control
<b>Ch Freq</b> 5.18 GHz Occupied Bandwidth	Trig RF B Restart
	Mkr1 5.180 0 GHz
Ref 5.661 dBm #Atten 28 dB #Samp Log	-22.22 dBm Resume
	Man and a start an
Center 5.180 0 GHz	Span 60 MHz
Occupied Bandwidth 16.5744 MHz	Occ BW % Pwr 95.00 % x dB -26.00 dB
Transmit Freq Error177.590 kHzx dB Bandwidth20.359 MHz*	
File Operation Status, H:\SBC36R54.GIF	tile saved

#### 95% Spreading Bandwidth - 802.11n CH36 (5180MHz) MCS0



95% Spreading Bandwidth - 802.11n CH36 (5180MHz) MCS7

🔆 Agilent 11:33:34 Jun 14, 2013	Meas Control
Ch Freq 5.24 GHz Occupied Bandwidth	Trig RF B Restart
	Measure Mkr1 5.240 0 GHz
Ref 5.661 dBm #Atten 28 dB #Samp Log	-24.52 dBm Resume
Center 5.240 0 GHz	Span 60 MHz
Occupied Bandwidth 16.6190 MHz	Occ BW % Pwr 95.00 % x dB -26.00 dB
Transmit Freq Error     77.271 kHz       x dB Bandwidth     23.763 MHz*	
rile operation status, H:\SBC48R54.61F file	e saveq

#### 95% Spreading Bandwidth – 802.11n CH48 (5240MHz) MCS0



95% Spreading Bandwidth - 802.11n CH48 (5240MHz) MCS7

🔆 Agilent 11:38:30 Jun 14, 2013	Meas Control
<b>Ch Freq</b> 5.32 GHz Occupied Bandwidth	Trig RF B Restart
	Mkr1 5.320 0 GHz
Ref 5.661 dBm #Atten 28 dB #Samp Log	-36.41 dBm Resume
Center 5.320 0 GHz	Span 60 MHz
Occupied Bandwidth 16.8730 MHz	Occ BW % Pwr 95.00 % x dB -26.00 dB
Transmit Freq Error 220.091 kHz × dB Bandwidth 23.996 MHz*	
File Operation Status, A:\SCREN836.GIF	file saved

#### 95% Spreading Bandwidth – 802.11n CH64 (5320MHz) MCS0



95% Spreading Bandwidth - 802.11n CH64 (5320MHz) MCS7

🔆 Agilent 11:40:39 Jun 14, 2013	Meas Control
<b>Ch Freq</b> 5.5 GHz Occupied Bandwidth	Trig RF B Restart
Center 5.500000000 GHz	Mkr1 5.500 0 GHz
Ref 5.661 dBm #Atten 28 dB #Samp Log	-18.71 dBm
Center 5.500 0 GHz #Res BW 30 kHz #VBW 30 kHz	Span 60 MHz Sweep 254.2 ms (601 pts)
Occupied Bandwidth 15.8808 MHz	Осс ВЖ % Рыг 95.00 % х dB -26.00 dB
Transmit Freq Error –153.480 kHz × dB Bandwidth 29.774 MHz*	
File Operation Status, A:\SBC64RS7.GIF	file saved

#### 95% Spreading Bandwidth - 802.11a CH100 (5500MHz) 6Mbps



95% Spreading Bandwidth - 802.11a CH100 (5500MHz) 54Mbps

🔆 Agilent 11:44:44 Jun 14, 2013	Meas Control
Ch Freq 5.6 GHz Occupied Bandwidth	Trig RF B Restart
Center 5.60000000 GHz	Measure Mkr1 5.600 0 GHz
Ref 5.661 dBm #Atten 28 dB #Samp Log	-30.50 dBm
Center 5.600 0 GHz	Span 60 MHz
Occupied Bandwidth 15.9676 MHz	Occ BW % Pwr 95.00 % x dB -26.00 dB
Transmit Freq Error –58.291 kHz × dB Bandwidth 22.420 MHz*	
File Operation Status, A:\SB100RS7.GIF fil	e saved

#### 95% Spreading Bandwidth - 802.11a CH120 (5600MHz) 6Mbps



95% Spreading Bandwidth - 802.11a CH120 (5600MHz) 54Mbps

🔆 Agilent 11:49:04 Jun 14, 2013		Meas Control
Ch Freq 5.7 GHz Occupied Bandwidth	Trig RF B	Restart
Center 5.700000000 GHz	 Mkr1 5.700 0 GHz	<b>Measure</b> Single <u>Cont</u>
Ref 5.661 dBm #Atten 28 dB #Samp Log	-34.08 dBm	Resume
Center 5.700 0 GHz #Res BW 30 kHz #VBW 30 kHz	Span 60 MHz Sween 254.2 ms (601 nts)	
Occupied Bandwidth 15.4756 MHz	Осс ВЖ % Рыг 95.00 % х dB -26.00 dB	
Transmit Freq Error-87.001 kHz× dB Bandwidth18.185 MHz*		
File Operation Status, A:\SB120RS7.GIF	file saved	

#### 95% Spreading Bandwidth - 802.11a CH140 (5700MHz) 6Mbps



95% Spreading Bandwidth – 802.11a CH140 (5700MHz) 54Mbps

ዡ Agilent 11:42:09 Jun 14, 2013	Meas Control
Ch Freq 5.5 GHz Occupied Bandwidth	Trig RF B Restart
	Measure Mkr1 5.500 0 GHz Single <u>Cont</u>
Ref 5.661 dBm #Atten 28 dB #Samp Log	-19.16 dBm Resume
Center 5.500 0 GHz	Span 60 MHz
*Kes DM 30 KHZ         *VDM 30 KHZ         SWe           Occupied Bandwidth         0cc B           16.6837 MHz	<b>3W % Pwr</b> 95.00 % <b>x dB</b> -26.00 dB
Transmit Freq Error145.050 kHzx dB Bandwidth30.633 MHz*	
File Operation Status, A:\SB100R54.GIF file sav	ed

#### 95% Spreading Bandwidth – 802.11n CH100 (5500MHz) MCS0



95% Spreading Bandwidth - 802.11n CH100 (5500MHz) MCS7

🔆 Agilent 11:46:18 Jun 14, 2013	Meas Control
Ch Freq 5.6 GHz Occupied Bandwidth	Trig RF B Restart
	Measure Mkr1 5.600 0 GHz
Ref 5.661 dBm #Atten 28 dB #Samp Log	-30.09 dBm Resume
Center 5.600 0 GHz	Span 60 MHz
Occupied Bandwidth 16.6665 MHz	Sweep 254.2 ms (601 pts) Осс ВЖ % Ржг 95.00 % х dB -26.00 dB
Transmit Freq Error     9.574 kHz       x dB Bandwidth     27.450 MHz*	file equad
rite operation status, H:\SB120854.01F t	rile saveu

#### 95% Spreading Bandwidth - 802.11n CH120 (5600MHz) MCS0



95% Spreading Bandwidth - 802.11n CH120 (5600MHz) MCS7

🔆 Agilent 11:51:25 Jun 14, 2013		Meas Control
Ch Freq 5.7 GHz Occupied Bandwidth	Trig RF B	Restart
	 Mkr1 5.700 0 GHz	<b>Measure</b> Single <u>Cont</u>
Ref 5.661 dBm #Atten 28 dB #Samp Log	-31.90 dBm	Resume
Center 5.700 0 GHz	Span 60 MHz	
HKes BW 30 KHz +VBW 30 KHz Occupied Bandwidth 16.3857 MHz	2 Sweep 254.2 ms (601 pts) Occ BW % Pwr 95.00 % x dB -26.00 dB	
Transmit Freq Error -143.401 kHz × dB Bandwidth 19.765 MHz*		
File Operation Status, A:\SCREN837.GIF	file saved	

#### 95% Spreading Bandwidth – 802.11n CH140 (5700MHz) MCS0



95% Spreading Bandwidth - 802.11n CH140 (5700MHz) MCS7

🔆 Agilent 14:53:31 Jun 11, 2013		Meas Control
<b>Ch Freq</b> 5.18 GHz Occupied Bandwidth	Trig RF B	Restart
Center 5.180000000 GHz	 Mkr1 5.180 0 GHz	<b>Measure</b> Single <u>Cont</u>
Ref 5.661 dBm #Atten 28 dB #Samp Log	-20.43 dBm	Resume
Center 5.180 0 GHz #Res BW 30 kHz #VBW 30 kHz	Span 60 MHz Sween 254.2 ms (601 nts)	
Occupied Bandwidth         Occ BW % Pwr         99.00 %           16.4343 MHz         × dB         -26.00 dB		
Transmit Freq Error 6.759 kHz × dB Bandwidth 19.194 MHz*		
File Operation Status, A:\OBC14R11.GIF	file saved	

99.5% Occupied Bandwidth - 802.11a CH36 (5180MHz) 6Mbps



99.5% Occupied Bandwidth - 802.11a CH36 (5180MHz) 54Mbps

🔆 Agilent 14:58:04 Jun 11, 2013		Meas Control
Ch Freq 5.24 GHz Occupied Bandwidth	Trig RF B	Restart
Center 5.24000000 GHz	 Mkr1 5.240 0 GHz	<b>Measure</b> Single <u>Cont</u>
Ref 5.661 dBm #Atten 28 dB #Samp Log	-21.94 dBm	Resume
Center 5.240 0 GHz #Res BW 30 kHz #VBW 30 kHz	Span 60 MHz	
Occupied Bandwidth 16.5194 MHz	Осс ВW % Рыг 99.00 % х dB -26.00 dB	
Transmit Freq Error -49.693 kHz × dB Bandwidth 22.151 MHz*		
File Operation Status, A:\OBC36RS7.GIF	file saved	

#### 99.5% Occupied Bandwidth - 802.11a CH48 (5240MHz) 6Mbps



99.5% Occupied Bandwidth - 802.11a CH48 (5240MHz) 54Mbps

🔆 Agilent 15:02:37 Jun 11, 2013	Meas Control	
<b>Ch Freq</b> 5.32 GHz Occupied Bandwidth	Trig RF B Restart	
Center 5.320000000 GHz	Mkr1 5.320 0 GHz	
Ref 5.661 dBm #Atten 28 dB #Samp Log	-32.90 dBm	
Center 5.320 0 GHz	Span 60 MHz	
Occupied Bandwidth 16.3577 MHz	Occ BW % Pwr 99.00 % x dB -26.00 dB	
Transmit Freq Error-41.509 kHz× dB Bandwidth21.040 MHz*		
File Operation Status, A:\OBC48RS7.GIF file saved		

99.5% Occupied Bandwidth - 802.11a CH64 (5320MHz) 6Mbps



99.5% Occupied Bandwidth - 802.11a CH64 (5320MHz) 54Mbps

🔆 Agilent 14:55:54 Jun 11, 2013		Meas Control
<b>Ch Freq</b> 5.18 GHz Occupied Bandwidth	Trig RF B	Restart
		<b>Measure</b> Single <u>Cont</u>
Ref 5.661 dBm #Atten 28 dB #Samp Log	-29.24 dBm	Resume
Center 5.180 0 GHz	Span 60 MHz	
Occupied Bandwidth 17.6974 MHz	Осс ВЖ % Рыг 99.00 % х dB -26.00 dB	
Transmit Freq Error     -47.269 kHz       x dB Bandwidth     19.871 MHz*	file_equad	
rile operation status, H:\UBC36K54.6IF	THE SAVEQ	

#### 99.5% Occupied Bandwidth - 802.11n CH36 (5180MHz) MCS0



99.5% Occupied Bandwidth - 802.11n CH36 (5180MHz) MCS7

ዡ Agilent 15:00:24 Jun 11, 2013	Meas Control
Ch Freq 5.24 GHz Occupied Bandwidth	Trig RF B Restart
	Measure Mkr1 5.240 0 GHz
Ref 5.661 dBm #Atten 28 dB #Samp Log	-21.88 dBm Resume
Center 5.240 0 GHz	Span 60 MHz
*Kes DM 30 KH2         *VDM 30 KH2           Occupied Bandwidth         0           17.6024 MHz	ICC BW % Pwr 99.00 % x dB -26.00 dB
Transmit Freq Error     13.920 kHz       × dB Bandwidth     25.674 MHz*	
File operation Status, H:\UBC48854.61F file	saveq

#### 99.5% Occupied Bandwidth - 802.11n CH48 (5240MHz) MCS0



99.5% Occupied Bandwidth - 802.11n CH48 (5240MHz) MCS7

ዡ Agilent 15:04:32 Jun 11, 2013	Meas Control
Ch Freq 5.32 GHz Occupied Bandwidth	Trig RF B Restart
	Measure Mkr1 5.320 0 GHz
Ref 5.661 dBm #Atten 28 dB #Samp Log	-19.67 dBm Resume
	phone with the second sec
Center 5.320 0 GHz	Span 60 MHz
*Kes bit 30 kHz     *VDW 30 kHz     Sweet       Occupied Bandwidth     0cc B       17.5955 MHz	W % Pwr 99.00 % x dB -26.00 dB
Transmit Freq Error -91.383 kHz x dB Bandwidth 25.057 MHz*	
File Operation Status, A:\OBC64R54.GIF file save	ed

#### 99.5% Occupied Bandwidth - 802.11n CH64 (5320MHz) MCS0



99.5% Occupied Bandwidth - 802.11n CH64 (5320MHz) MCS7

🔆 Agilent 15:07:28 Jun 11, 2013	Meas Control
Ch Freq 5.5 GHz Occupied Bandwidth	Trig RF B Restart
Center 5.50000000 GHz Mkr1 5	5.500 0 GHz
Ref 5.661 dBm #Atten 28 dB	23.12 dBm Resume
Center 5.500 0 GHz Skeen 254 2 ms	pan 60 MHz
Occupied Bandwidth Occ BW % Pwr 16.8398 MHz × dB	99.00 % -26.00 dB
Transmit Freq Error189.860 kHzx dB Bandwidth32.537 MHz*	
File Operation Status, A:\OBC64RS7.GIF file saved	

#### 99.5% Occupied Bandwidth - 802.11a CH100 (5500MHz) 6Mbps



#### 99.5% Occupied Bandwidth - 802.11a CH100 (5500MHz) 54Mbps

🔆 Agilent 15:10:47 Jun 11, 2013	Meas Control
Ch Freq 5.6 GHz Occupied Bandwidth	Trig RF B Restart
Center 5.60000000 GHz	Measure Mkr1 5.600 0 GHz
Ref 5.661 dBm #Atten 28 dB #Samp Log	-28.30 dBm Resume
Center 5.600 0 GHz	Span 60 MHz
Occupied Bandwidth 16.4878 MHz	Осс ВЖ % Рыг 99.00 % х dB -26.00 dB
Transmit Freq Error -39.411 kHz × dB Bandwidth 24.686 MHz*	
File Operation Status, A:\OB100RS7.GIF fi	le saved

#### 99.5% Occupied Bandwidth - 802.11a CH120 (5600MHz) 6Mbps



#### 99.5% Occupied Bandwidth - 802.11a CH120 (5600MHz) 54Mbps

🔆 Agilent 15:35:16 Jun 11, 2013	Meas Control
Ch Freq 5.7 GHz Occupied Bandwidth	Trig RF B Restart
Center 5.70000000 GHz	Measure Mkr1 5.700 0 GHz
Ref 5.661 dBm #Atten 28 dB #Samp Log	-30.36 dBm Resume
Center 5.700 0 GHz	Span 60 MHz
Occupied Bandwidth 0ccupied Bandwidth 16.2996 MHz	c BW % Pwr 99.00 % x dB -26.00 dB
Transmit Freq Error-29.325 kHzx dB Bandwidth18.921 MHz*	
File Operation Status, A:\OB120RS7.GIF file s	aved

#### 99.5% Occupied Bandwidth - 802.11a CH140 (5700MHz) 6Mbps



#### 99.5% Occupied Bandwidth - 802.11a CH140 (5700MHz) 54Mbps

🔆 Agilent 15:08:58 Jun 11, 2013	Me	eas Control
Ch Freq 5.5 GHz Occupied Bandwidth	Trig RF B	Restart
	Mkr1 5.500 0 GHz	<b>Measure</b> gle <u>Cont</u>
Ref 5.661 dBm #Atten 28 dB #Samp Log	-23.21 dBm	Resume
Center 5.500 0 GHz	Span 60 MHz	
Occupied Bandwidth 18.6770 MHz	Occ BW % Pwr 99.00 % x dB -26.00 dB	
Transmit Freq Error     -36.619 kHz       x dB Bandwidth     34.523 MHz*	file anual	
File Operation Status, A:\OB100R54.GIF	file saved	

#### 99.5% Occupied Bandwidth - 802.11n CH100 (5500MHz) MCS0



99.5% Occupied Bandwidth - 802.11n CH100 (5500MHz) MCS7

🔆 Agilent 15:13:26 Jun 11, 2013	]	Meas Control
Ch Freq 5.6 GHz Occupied Bandwidth	Trig RF B	Restart
	Mkr1 5.600 0 GHz	<b>Measure</b> Single <u>Cont</u>
Ref 5.661 dBm #Atten 28 dB #Samp Log	-24.56 dBm	Resume
Center 5.600 0 GHz	Span 60 MHz	
Occupied Bandwidth 17.6999 MHz	OCC BW % Pwr 99.00 % × dB -26.00 dB	
Transmit Freq Error     -39.072 kHz       x dB Bandwidth     28.330 MHz*	<u> </u>	
rile operation Status, H:\UB120R54.GIF	THE SAVEQ	

## 99.5% Occupied Bandwidth - 802.11n CH120 (5600MHz) MCS0

🔆 Agilent 15:14:26 Jun 11, 2013	File
Ch Freq 5.6 GHz Trig RF B Occupied Bandwidth	Catalog•
Mkr1 5.600 0 GHz	Save⊦
Ref 5.661 dBm #Atten 28 dB -27.48 dBm #Samp Log	Load⊦
	Delete⊦
Center 5.600 0 GHz Span 60 MHz	Сорун
Image: Second	Rename⊦
Transmit Freq Error -48.384 kHz x dB Bandwidth 29.936 MHz*	More 1 of 2
File Operation Status, A:\OB120RS0.GIF file saved	

99.5% Occupied Bandwidth - 802.11n CH120 (5600MHz) MCS7

🔆 Agilent 15:39:42 Jun 11, 2013	Meas Control
Ch Freq 5.7 GHz Occupied Bandwidth	Trig RF B Restart
Mkr1	5.700 0 GHz Single Cont
Ref 5.661 dBm #Atten 28 dB #Samp Log	-26.55 dBm Resume
Center 5.700 0 GHz	Span 60 MHz
*Kes BW 30 KHz         *VBW 30 KHz         Sweep 254.2 r           Occupied Bandwidth         Occ BW % Pwr           17.5961 MHz         × dB	99.00 % -26.00 dB
Transmit Freq Error-108.834 kHzx dB Bandwidth19.309 MHz*	
File Operation Status, A:\OB140R54.GIF file saved	

#### 99.5% Occupied Bandwidth - 802.11n CH140 (5700MHz) MCS0



99.5% Occupied Bandwidth - 802.11n CH140 (5700MHz) MCS7







CH36 802.11a Tx Conducted Emissions @ 6Mbps

🔆 Ag	<b>ilent</b> 15	:39:32	Jun 3	, 2013							Marker
Ref — 3 #Samp	0 dBm		Atten	10 dB				Mk	r1 503 -84.2	3.7 MHz 9 dBm	Select Marker <u>1</u> 234
Log 10 dB/	тагк 503. 84.	er 7000 29 d	100 M Bm _	∣ 1Hz— 							Normal
											Delta
LgAv	walnut	marte Au	ponenteren	North-Waren	1 W + 1/1 W + 1	milionaria	and the second	hower	wyzwieko najmu	- ukryewe	<b>Delta Pair</b> (Tracking Ref) Ref▲
V1 S2 S3 FC AL											<b>Span Pair</b> Span <u>Center</u>
€(f): FTun Swp											Off
Start 3 #Res B	0.0 MH	z z		 #V!	 BW 10	 <hz< td=""><td>Sweep</td><td>Stop 239.2</td><td>) 1.000 ms (60</td><td>0 GHz 1 pts)</td><td>More 1 of 2</td></hz<>	Sweep	Stop 239.2	) 1.000 ms (60	0 GHz 1 pts)	More 1 of 2
File Op	peratio	n Stat	us, A:	\C36R	06P2.G	IF file	saved				





CH36 802.11a Tx Conducted Emissions @ 6Mbps

🔆 Ag	j <b>ilent</b> 15	:43:03	Jun 3,	2013							Marker
Ref —3 #Samp	0 dBm		Atten	10 dB				Mkr1	5.140 -55.4	00 GHz 9 dBm	Select Marker <u>1</u> 234
Log 10 dB/	Mark 5.14 55.	er 0000 49 d	)000 Bm _	GHz-						1	Normal
		mortem	walnum	MM K. Mar	a horan	y Andyson or	muntu	yrysseed	uniger	Harry Allen	Delta
LgAv											<b>Delta Pair</b> (Tracking Ref) Ref <u>▲</u>
V1 S2 S3 FC AL											<b>Span Pair</b> Span <u>Center</u>
<b>£</b> (f): FTun Swp											Off
Start 5 #Res B	L 5.000 0 W 1 MH	0 GHz z		 #V	 3W 10	(Hz	Sweep	Stop 34.56	5.140 0 ms (60)	10 GHz l pts)	More 1 of 2
File 0	peratio	in Stat	us, A:'	\C36R(	)6P4.G	IF file	saved				





CH36 802.11a Tx Conducted Emissions @ 6Mbps

🔆 Agilent 15:47:	02 Jun 3,	2013						Marker
Ref -30 dBm #Samp Manukan	Atten 1	L0 dB			Mkr	1 10. -70.7	36 GHz 9 dBm	Select Marker <u>1</u> 234
<sup>Log</sup> 10.360 <sup>dB/</sup> -70.79	000000 dBm	GHz						Normal
								Delta
LgAv Martin	warener	epermental present	What Year	adurate and the second seco	rran alarahiyin	₩₩₩₩	Aprilations	<b>Delta Pair</b> (Tracking Ref) Ref▲
V1 S2 S3 FC AL								<b>Span Pair</b> Span <u>Center</u>
£(†): FTun Swp								Off
Start 10.00 GHz #Res BW 1 MHz		#VBW	 10 kHz	Swe	St ep 1.48	op 16.0 S (60	)0 GHz^ 1 pts)	<b>More</b> 1 of 2
File Operation S	tatus, A:\	.C36R06P	6.GIF file	saved				

CH36 802.11a Tx Conducted Emissions @ 6Mbps



CH36 802.11a Tx Conducted Emissions @ 54Mbps


CH36 802.11a Tx Conducted Emissions @ 54Mbps



CH36 802.11a Tx Conducted Emissions @ 54Mbps

🔆 Ag	<b>ilent</b> 16:03:	37 Jun 3,	2013							Marker
Ref — 3 #Samp	0 dBm	Atten	10 dB				Mkr	1 3.4 -61.5	53 GHz 9 dBm	Select Marker <u>1</u> 234
Log 10 dB/	3.4530 -61.59	00000 dBm _	GHz-							Normal
						1 •			wheelow	Delta
LgAv	neterneting	human	alera da antes	water the second	Josephiniste	Anim	raground	hundred bin		<b>Delta Pair</b> (Tracking Ref) Ref▲
V1 S2 S3 FC AL										<b>Span Pair</b> Span <u>Center</u>
<b>£</b> (f): FTun Swp										Off
Start 1 #Res B	000 GHz W 1 MHz		 #V{	 3W 10	Hz	Sweep	St 986.4	op 5.00 ms (60:	)0 GHz 1 pts)	More 1 of 2
File 0	peration S	tatus, A:'	\C36R5	54P3.G	IF file	saved				





CH36 802.11a Tx Conducted Emissions @ 54Mbps

🔆 Agile	nt 16:08:21	Jun 3,	2013							Marker
Ref — 30 #Samp <b>∏</b> v	dBm larkar	Atten	10 dB				Mk	r1 6.9 -66.0	07 GHz 5 dBm	Select Marker <u>1</u> 234
Log 10 10 1 <b>6</b> dB/	5.907000 -66.05 d	1000 Bm _	GHz							Normal
~	~ <u>_</u>		1 \$							Delta
LgAv	montre	Maryno	ager lager they	yr <b>Y</b> mwerdy	4 <sup>1</sup> 774111111111111111111111111111111111	WMM-+1	there we want	-vanagut	manne	<b>Delta Pair</b> (Tracking Ref) Ref <u>▲</u>
V1 S2 S3 FC AL										<b>Span Pair</b> Span <u>Center</u>
£(f): FTun Swp										Off
Start 5.3 #Res BW	 60 GHz 1 MHz		#VE	3W 10 k	(Hz	Swee	Sto p 1.144	p 10.00 ¦s (60	00 GHz^ 1 pts)	More 1 of 2
File Ope	ration Stat	us, A:'	\C36R5	54P5.6	IF file	saved				

CH36 802.11a Tx Conducted Emissions @ 54Mbps



CH36 802.11a Tx Conducted Emissions @ 54Mbps



CH48 802.11a Tx Conducted Emissions @ 6Mbps



CH48 802.11a Tx Conducted Emissions @ 6Mbps

🔆 Agilent 16:20:56	Jun 3,	2013							Marker
Ref -30 dBm #Samp Morkor	Atten 1	0 dB				Mkı	r1 864 -86.0	l.2 MHz 2 dBm	Select Marker <u>1</u> 234
Log 10 864.2000 dB/ -86.02 d	100 MH Bm	-lz							Normal
									Delta
LgAv materimpt-turnetite	1.matrixAnter	wandream	with	жарата	kinerikaanin	Murriday	1 	N. MANNYA	<b>Delta Pair</b> (Tracking Ref) Ref <u>▲</u>
W1 S2 S3 FC AL									<b>Span Pair</b> Span <u>Center</u>
€(f): FTun Swp									Off
Start 30.0 MHz #Res BW 1 MHz		#VB	W 10 k	:Hz	Sweep	Stop 239.2	1.000 ms (60	0 GHz 1 pts)	<b>More</b> 1 of 2
File Operation Stat	us, A:\\	C48R0	6P2.6	IF file	saved				

CH48 802.11a Tx Conducted Emissions @ 6Mbps



CH48 802.11a Tx Conducted Emissions @ 6Mbps

🔆 Ag	<b>jilent</b> 16	:27:17	Jun 3,	2013							Marker
Ref — 3 #Samp	30 dBm		Atten	10 dB				Mkr1	5.080 -58.2	03 GHz 9 dBm	Select Marker <u>1</u> 234
Log 10 dB/	5.08 -58.	er 0030 29 d	)000 Bm _	GHz-							Normal
	ngular		white white		nt to per start a	t. Nganlar	vinhan Aur	providing	handher	muman	Delta
LgAv											<b>Delta Pair</b> (Tracking Ref) Ref <u>≜</u>
V1 S2 S3 FC AL											<b>Span Pair</b> Span <u>Center</u>
£(f): F⊤un Swp											Off
Start 5 #Res B	L 5.000 0 3W 1 MH	0 GHz z		 #V{	 3W 10 k	(Hz	Sweep	Stop 34.56	5.140 ( ms (60	00 GHz 1 pts)	<b>More</b> 1 of 2
File 0	peratio	n Stat	us, A:'	\C48R@	)6P4 <b>.G</b>	IF file	saved				





CH48 802.11a Tx Conducted Emissions @ 6Mbps

🔆 Agilent	<b>t</b> 16:31:02	Jun 3,	2013							Marker
Ref -30 d #Samp <b>M</b> a	Bm arkor	Atten 1	.0 dB				Mk	r1 10. -68.6	48 GHz 1 dBm	Select Marker <u>1</u> 234
Log 10 - <b>16</b> dB/ _ <b>-6</b>	0.48000 58.61 d	10000 Bm	GHz							Normal
	1									Delta
LgAv 🚧	w water	<del></del> ምምትላም	m garage	(materia) and a state	an of the design of the second second	naka mangkan	androdywa	<b>hander and and an</b>	ويتناقيهم	<b>Delta Pair</b> (Tracking Ref) Ref <u>▲</u>
V1 S2 S3 FC AL										<b>Span Pair</b> Span <u>Center</u>
£(f): FTun Swp										Off
Start 10.0 #Res BW 1	0 GHz MHz		#VE	3W 10 I	(Hz	Swe	St ep 1.48	op 16.0 3 s (60	00 GHz^ 1 pts)	More 1 of 2
File Oper	ation Stat	us, A:\	C48R0	6P6.0	IF file	saved				









CH48 802.11a Tx Conducted Emissions @ 54Mbps



CH48 802.11a Tx Conducted Emissions @ 54Mbps

🔆 Ag	<b>ilent</b> 16:4	13:06	Jun 3,	2013							Marker
Ref -3	0 dBm		Atten	10 dB		1		Mk	r1 3.4 -58.8	93 GHz 1 dBm	Select Marker
+Janip Log 10 dB/	Marke 3.493 	er 1000 11 d	1000 Bm	GHz							- Normal
							\$			herebyendent	Delta
LgAv	North Martine Col	ww.~644	mangeree		unterran		a mun	www.www.	wheel where	,	<b>Delta Pair</b> (Tracking Ref) Ref▲
V1 S2 S3 FC AL											<b>Span Pair</b> Span <u>Center</u>
£(f): F⊤un Swp											Off
Start 1 #Res B	000 GH: W 1 MHz	z		 #V{	 3W 10	 <hz< td=""><td>Sweep</td><td>St 986.4</td><td>op 5.00 ms (60</td><td>00 GHz 1 pts)</td><td>More 1 of 2</td></hz<>	Sweep	St 986.4	op 5.00 ms (60	00 GHz 1 pts)	More 1 of 2
File Op	peration	Stat	us, A:'	\C48R5	54P3.G	IF file	saved				







🔆 Agilent 16:48:49	Jun 3,	2013							Marker
Ref -30 dBm #Samp Morkor	Atten 1	.0 dB				Mk	r1 5.3 -55.1	60 GHz 6 dBm	Select Marker <u>1</u> 234
Log 10 5.360000 dB/ 1-55.16 d	1000 ( Bm	GHz							Normal
M.,									Delta
LgAv	Wytherrow	luulunn	ydymer maethol a	***~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	W-they	418-41-22 (MM)	villipublicum	Whentowership	<b>Delta Pair</b> (Tracking Ref) Ref <u>≜</u>
V1 S2 S3 FC AL									<b>Span Pair</b> Span <u>Center</u>
£(f): FTun Swp									Off
Start 5.360 GHz #Res BW 1 MHz		#VE	3W 10 k	Hz:	Swee	Sto p 1.144	p 10.00 4 s (60	00 GHz^ 1 pts)	More 1 of 2
File Operation Stat	us, A:\	C48R5	4P5.0	IF file	saved				









CH64 802.11a Tx Conducted Emissions @ 6Mbps



CH64 802.11a Tx Conducted Emissions @ 6Mbps

🔆 Agilent 09	:12:03 Jun 4	,2013					Marker
Ref -30 dBm #Samp <b>More</b>	Atten	10 dB			Mkr1 ;	489.1 MHz 85.03 dBm	Select Marker <u>1</u> 234
<sup>Log</sup> 489. <sup>dB/</sup> -85.	100000 M 03 dBm _	1Hz					Normal
							Delta
LgAv www.	generally all all all all all all all all all	anneration	1 Annonny		****	monten	<b>Delta Pair</b> (Tracking Ref) Ref <u>▲</u>
V1 S2 S3 FC AL							<b>Span Pair</b> Span <u>Center</u>
<b>£</b> (f): FTun Swp							Off
Start 30.0 MH #Res BW 1 MH	z z	+VBW 1	0 kHz	Sweep 2	Stop 1. 239.2 ms	000 0 GHz (601 pts)	More 1 of 2
File Operatio	n Status, A:	\C64R06P2	.GIF file	saved			

CH64 802.11a Tx Conducted Emissions @ 6Mbps



CH64 802.11a Tx Conducted Emissions @ 6Mbps

🔆 Ag	<b>jilent</b> 09	:15:47	Jun 4,	2013							Marker
Ref —3 #Samn	30 dBm		Atten	10 dB				Mkr1	5.066 -59.4	73 GHz 8 dBm	Select Marker <u>1</u> 234
Log 10 dB/	Mark 5.06 -59.	er 6730 48 d	1000 Bm _	GHz							Normal
	man from	www.	www	neknyen	1 1.000 - 1.000 - 1.000	ntrist-th-both	Myyyrw	Augentidayo	aget Malgerand	Lunder	Delta
LgAv											<b>Delta Pair</b> (Tracking Ref) Ref▲
V1 S2 S3 FC AL											<b>Span Pair</b> Span <u>Center</u>
£(f): FTun Swp											Off
Start 5 #Res B	5.000 00 3W 1 MH	0 GHz z		+V	 3W 10 k	:Hz	Sweep	Stop 34.56	5.140 ( ms (60	00 GHz 1 pts)	<b>More</b> 1 of 2
File 0	peratio	n Stat	us, A:'	\C64R@	06P4 <b>.G</b>	IF file	saved				





CH64 802.11a Tx Conducted Emissions @ 6Mbps

🔆 Agilent 0	9:28:44 Jun 4,	2013				Marker
Ref -30 dBm #Samp <b>Mor</b>	Atten	10 dB		Mki	1 10.64 -68.43 d	GHz Bm <u>1</u> 234
<sup>Log</sup> 10.6 <sup>dB/</sup> -68	540000000 .43 dBm _	) GHz				Normal
	1 \$					Delta
LgAv Howe	10 marshame	474474474474	in the wither the state of the second	uthan share through	<del>, '',</del>	<b>Delta Pair</b> (Tracking Ref) Ref▲
V1 S2 S3 FC AL						Span Pair Span <u>Center</u>
£(f): FTun Swp						Off
Start 10.00 ( #Res BW 1 M	 GHz Hz	 #VBW 10	) kHz	St Sweep 1.48	op 16.00 ( 3 s (601 p	GHz <sup>^</sup> More ts)
File Operati	on Status, A:	\C64R06P6	.GIF file sa	ved		

CH64 802.11a Tx Conducted Emissions @ 6Mbps



CH64 802.11a Tx Conducted Emissions @ 54Mbps



CH64 802.11a Tx Conducted Emissions @ 54Mbps



CH64 802.11a Tx Conducted Emissions @ 54Mbps

🔆 Ag	j <b>ilent</b> 09	:41:57	Jun 4,	2013							Marker
Ref — 3 #Samp	0 dBm		Atten	10 dB				Mk	r1 3.5 -50.6	47 GHz 6 dBm	Select Marker <u>1</u> 234
Log 10 dB/	-3.54 50.	.er 7000 66 d	1000 Bm _	GHz-							Normal
										Wylyn	Delta
LgAv	Inserve preserve	Apadlynno	nkvumere	man	4-1 <b>8</b> 2-1897-1997	Janual Wala	my lenn	wand on market	LANDAH ANA	0 <sup>0,4</sup> 1	<b>Delta Pair</b> (Tracking Ref) Ref <u>▲</u>
V1 S2 S3 FC AL											<b>Span Pair</b> Span <u>Center</u>
€(f): FTun Swp											Off
Start 1 #Res B	L.000 G W 1 MH	Hz z		 #V{	 3W 10 k	 <hz< td=""><td>Sweep</td><td>St 986.4</td><td>op 5.00 ms (60</td><td>00 GHz 1 pts)</td><td><b>More</b> 1 of 2</td></hz<>	Sweep	St 986.4	op 5.00 ms (60	00 GHz 1 pts)	<b>More</b> 1 of 2
File 0	peratio	in Stat	us, A:'	\C64R5	54P3.G	IF file	saved				







🔆 Agilent 09:45:05	Jun 4,	2013							Marker
Ref -30 dBm #Samp Morton	Atten 1	.0 dB				Mk	r1 5.3 -51.0	60 GHz 5 dBm	Select Marker <u>1</u> 234
Log 10 5.360000 dB/ å-51.05 d	000 ( Bm	5Hz-							Normal
Mu .									Delta
LgAv	Mr. Warner	hundes	de ser norden ge	1999. Marine and and a start and a start a st	www.	mpyoderate	www.hap-thy-a-he	wyzanitkiego	<b>Delta Pair</b> (Tracking Ref) Ref <u>≜</u>
V1 S2 S3 FC AL									<b>Span Pair</b> Span <u>Center</u>
£(f): FTun Swp									Off
Start 5.360 GHz #Res BW 1 MHz		#VE	3W 10 k	:Hz	Swee	Sto p 1.144	p 10.00 4 s (60	00 GHz^ 1 pts)	<b>More</b> 1 of 2
File Operation State	us, A:\	C64R5	i4P5.6	IF file	saved				













CH36 802.11n Tx Conducted Emissions (MCS0)

🔆 Ag	j <b>ilent</b> 10	:02:47	Jun 4	<b>,</b> 2013							Marker
Ref — 3 #Samp	0 dBm		Atten	10 dB				Mk	r1 500 -83.8	0.4 MHz 5 dBm	Select Marker <u>1</u> 234
Log 10 dB/	-500. 83.	.er 4000 85 d	100 1 Bm _	∣ Hz—							Normal
											Delta
LgAv	handrade	andruw Way	aparantasida	marina		e e	ykrostan jayah	www.	nonentra	www.werne	<b>Delta Pair</b> (Tracking Ref) Ref <u>▲</u>
V1 S2 S3 FC AL											<b>Span Pair</b> Span <u>Center</u>
€(f): FTun Swp											Off
Start 3 #Res B		z z		 #V	 BW 10	(Hz	Sweep	Stop 239.2	) 1.000 ms (60	0 GHz 1 pts)	More 1 of 2
File 0	peratio	in Stat	us, A	\C36R	50P2.G	IF file	saved				





CH36 802.11n Tx Conducted Emissions (MCS0)

🔆 Ag	jilent 10	:12:20	Jun 4,	2013							Marker
Ref — 3 #Samp	30 dBm		Atten	10 dB				Mkr1	5.140 -53.9	00 GHz 8 dBm	Select Marker <u>1</u> 234
Log 10 dB/	5.14 -53.	.ei 0000 98 d	)000 Bm	GHz						1	Normal
	man	de producerto	uh Arma	n some the	when	ghamp ya	Marina Autor	-v~qqqbVqmv	Ymynap Priddau	A AND	Delta
LgAv											<b>Delta Pair</b> (Tracking Ref) Ref <u>▲</u>
V1 S2 S3 FC AL											<b>Span Pair</b> Span <u>Center</u>
€(f): FTun Swp											Off
Start 5 #Res B	L 5.000 0 3W 1 MH	0 GHz z		 #V{	 3W 10	 <hz< td=""><td>Sweep</td><td>Stop 34.56</td><td>5.140 0 ms (60:</td><td>10 GHz l pts)</td><td>More 1 of 2</td></hz<>	Sweep	Stop 34.56	5.140 0 ms (60:	10 GHz l pts)	More 1 of 2
File 0	peratio	in Stat	us, A:`	\C36R\$	60P4.G	IF file	saved				





CH36 802.11n Tx Conducted Emissions	(MCS0)
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🔆 Agilent 10:1	7:01 Jun 4,	2013						Marker
Ref -30 dBm #Samp <b>Marke</b>	Atten 1	LØ dB			Mkı	1 10. -69.9	36 GHz 9 dBm	Select Marker <u>1</u> 234
Log 10 10.36 dB/ -69.9	0000000 9 dBm	GHz						Normal
								Delta
LgAv Myrlun	manyamberghistana	Marin and and	are the set of the set	allow and the second	<del>holenstery</del>	ghingthe yesters by	Menusa	<b>Delta Pair</b> (Tracking Ref) Ref▲
V1 S2 S3 FC AL								<b>Span Pair</b> Span <u>Center</u>
£(f): FTun Swp								Off
Start 10.00 GHz #Res BW 1 MHz		#VBW	10 kHz	Swe	St ep 1.48	op 16.0 3 s (60	)0 GHz^ 1 pts)	More 1 of 2
File Operation	Status, A:\	C36RS0	P6.GIF file	saved				













CH36 802.11n Tx Conducted Emissions (MCS7)

🔆 Agi	ilent 10:24:36	) Jun 4,	2013							Marker
Ref -30 #Samp [	0 dBm	Atten	10 dB				Mk	r1 3.4 -61.1	53 GHz 7 dBm	Select Marker
Log 10 dB/	Marker 3.45300 -61.17 (	0000 dBm	GHz-							Normal
						1 \$			Luddyn falla	Delta
LgAv	prosphylactopytopytopytop	r kaya manana	ularnively	ywaniu/nyyka	form	W hard wrong or	conserved by the	June Hand IN		<b>Delta Pair</b> (Tracking Ref) Ref▲
V1 S2 S3 FC AL										<b>Span Pair</b> Span <u>Center</u>
£(f): FTun Swp -										Off
Start 1. #Res Bl	.000 GHz W 1 MHz		 #V{	 3W 10	 <hz< td=""><td>Sweep</td><td>St 986.4</td><td>op 5.00 ms (60</td><td>00 GHz 1 pts)</td><td>More 1 of 2</td></hz<>	Sweep	St 986.4	op 5.00 ms (60	00 GHz 1 pts)	More 1 of 2
File Op	peration Sta	itus, A:	\C36R\$	67P <mark>3.</mark> G	IF file	saved				





CH36 802.11n Tx Conducted Emissions (MCS7)

🔆 Agilent 10:28:25	Jun 4, 2013		Marker
Ref -30 dBm #Samp <b>Marker</b>	Atten 10 dE	Mkr1 5.414 GHz -62.60 dBm 1	elect Marker 2 3 4
<sup>Log</sup> 5.414000 <sup>dB/</sup> -62.60 d	1000 GHz Bm		Normal
1 Mulun			Delta
LgAv	War war and war	Twee way and the second states and the second stat	<b>Delta Pair</b> (Tracking Ref) f <u>≜</u>
V1 S2 S3 FC AL		Sp	<b>Span Pair</b> an <u>Center</u>
£(f): FTun Swp			Off
Start 5.360 GHz #Res BW 1 MHz	#	Stop 10.000 GHz /BW 10 kHz Sweep 1.144 s (601 pts)	<b>More</b> 1 of 2
File Operation Stat	us, A:\C36	S7P5.GIF file saved	





CH36 802.11n Tx Conducted Emissions (MCS7)







CH48 802.11n Tx Conducted Emissions (MCS0)

🔆 Ag	jilent 10	:36:47	Jun 4	4,2013							Marker
Ref — 3 #Samp	0 dBm		Atter	n 10 dB	1			Mk	r1 764 -83.4	4.0 MHz 0 dBm	Select Marker <u>1</u> 234
Log 10 dB/	764. 83.	.er 0000 40 d	100 Bm -	MHz							Normal
											Delta
LgAv	uy.Aradaya	anna)	unit with the	mp.	and the second		ennyana	n na	an a	Harring	<b>Delta Pair</b> (Tracking Ref) Ref <u>▲</u>
V1 S2 S3 FC AL											<b>Span Pair</b> Span <u>Center</u>
€(f): FTun Swp											Off
Start 3 #Res B	L 30.0 MH W 1 MH	z z		 #V	 BW 10	 <hz< td=""><td>Sweep</td><td>Stop 239.2</td><td>) 1.000 ms (60</td><td>0 GHz 1 pts)</td><td>More 1 of 2</td></hz<>	Sweep	Stop 239.2	) 1.000 ms (60	0 GHz 1 pts)	More 1 of 2
File 0	peratio	in Stat	us, A	:\C48R	S0P2.6	IF file	saved				





CH48 802.11n Tx Conducted Emissions (MCS0)

🔆 Ag	j <b>ilent</b> 10	:40:54	Jun 4,	2013							Marker
Ref -3	0 dBm		Atten	10 dB				Mkr1	5.119 -58.3	70 GHz 0 dBm	Select Marker
+Samp Log 10 dB/	Mark 5.11 58.	er 9700 30 d	)000 Bm _	GHz							- Normal
	annerigen	yhandahaa	nnad Yangera	rwoniutu	philosophilosophilosophilosophilosophilosophilosophilosophilosophilosophilosophilosophilosophilosophilosophilos	antiqueer typ	manging	-United States	Ann Im	Maryman	Delta
LgAv											<b>Delta Pair</b> (Tracking Ref) Ref <u>≜</u>
V1 S2 S3 FC AL											<b>Span Pair</b> Span <u>Center</u>
£(f): FTun Swp											Off
Start 5 #Res B	L 5.000 0 W 1 MH	0 GHz z		 #V{	 3W 10 k	:Hz	Sweep	Stop 34.56	5.140 ( ms (60	00 GHz 1 pts)	More 1 of 2
File 0	peratio	in Stat	us, A:`	\C48R\$	60P4.G	IF file	saved				





CH48 802.11n Tx Conducted Emissions (MCS0)

🔆 Agilent 10:45:23	Jun 4, 2013				Marker
Ref -30 dBm #Samp Markor	Atten 10 dB		M	kr1 10.48 Gł -66.94 dBi	<b>Select Marker</b>
<sup>Log</sup> 10.48000 <sup>dB/</sup> -66.94 d	10000 GH: Bm	2   			Normal
					Delta
LgAv Marine Marine	han an a	an war war war wa	er-bahrerbereranger	- Angenerativyan geregetetetetetetetetetetetetetetetetete	<b>Delta Pair</b> (Tracking Ref) Ref <u>A</u>
V1 S2 S3 FC AL					<b>Span Pair</b> Span <u>Center</u>
<b>£</b> (f): FTun Swp					Off
Start 10.00 GHz #Res BW 1 MHz	#\	  BW 10 kHz	Sweep 1.4	 Stop 16.00 GH 48 s (601 pts	2 2 1 of 2
File Operation Stat	us, A:\C48R	S0P6.GIF file	saved		





CH48 802.11n Tx Conducted Emissions (MCS7)







CH48 802.11n Tx Conducted Emissions (MCS7)

🔆 Ag	j <b>ilent</b> 10:5	0:57	Jun 4,	2013							Marker
Ref -3	0 dBm		Atten	10 dB				Mkr	1 3.4 -58.8	93 GHz 5 dBm	Select Marker
Log 10 dB/	Marke 3.493 	r 000( 5 dE	000 3m	GHz							Normal
							1 \$			hallynddy	Delta
LgAv	n-hormoronapp	Kuntharanak	44/1-Mars	ymmet	wanta	www.	an pairson	h	<u></u>		<b>Delta Pair</b> (Tracking Ref) RefA
V1 S2 S3 FC AL											<b>Span Pair</b> Span <u>Center</u>
£(f): FTun Swp											Off
Start 1 #Res B	L.000 GHz W 1 MHz	2		#VE	3W 10 k	(Hz	Sweep	St 986.4	op 5.00 ms (60	00 GHz 1 pts)	More 1 of 2
File 0	peration	Statu	is, A:'	\C48R5	67P3.6	IF file	saved				



🔆 Ag	jilent 10	):51:52	Jun 4,	2013							Marker
Ref -3 #Samp	30 dBm	or	Atten	10 dB				Mkr1	5.119 -59.1	93 GHz 0 dBm	Select Marker <u>1</u> 234
Log 10 dB/	5.11 -59.	.9930 .10 d	)000 Bm _	GHz-							Normal
	Marina	www.	www	whitewww	manterior	w and	www.wheel	-pale-unitativity	t molu	et a grant grant and	Delta
LgAv											<b>Delta Pair</b> (Tracking Ref) Ref <b>≜</b>
V1 S2 S3 FC AL											<b>Span Pair</b> Span <u>Center</u>
<b>£</b> (f): FTun Swp											Off
Start 5 #Res B	L 5.000 0 3W 1 MH	0 GHz z		 #V{	 3W 10 k	(Hz	Sweep	Stop 34.56	5.140 ( ms (60	00 GHz 1 pts)	More 1 of 2
File 0	peratio	in Stat	us, A:'	\C48R\$	57P4.G	IF file	saved				

## CH48 802.11n Tx Conducted Emissions (MCS7)

🔆 Agilent 10:54:46	Jun 4,	2013							Marker
Ref -30 dBm #Samp Manukan	Atten 1	10 dB				Mk	r1 5.3 -55.6	60 GHz 8 dBm	Select Marker <u>1</u> 234
<sup>Log</sup> 10 5.36000 <sup>dB/</sup> 5.568 c	0000  Bm	GHz-							Normal
									Delta
LgAv	-	ymanadad	and the second	f <sup>urg</sup> walat dan	e-live-through	Heyward Mary	YNAVVANA	nwywania	<b>Delta Pair</b> (Tracking Ref) RefA
V1 S2 S3 FC AL									<b>Span Pair</b> Span <u>Center</u>
£(f): FTun Swp									Off
Start 5.360 GHz #Res BW 1 MHz		#VE	3W 10 k	(Hz	Swee	Sto p 1.144	p 10.00 4 s (60	00 GHz^ 1 pts)	<b>More</b> 1 of 2
File Operation Sta	tus, A:\	C48R5	7P5.6	IF file	saved				





CH48 802.11n Tx Condu	cted Emissions (MCS7)
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CH64 802.11n Tx Conducted Emissions (MCS0)

🔆 Agilent	11:06:59	Jun 4,	2013							Marker
Ref — 30 dE #Samp <b>M</b> —	Bm	Atten	10 dB				Mk	r1 744 -84.7	4.6 MHz 5 dBm	Select Marker <u>1</u> 234
Log 74 10 74 dB/ -8	14.6000 34.75 d	100 M Bm _	  Hz							Normal
										Delta
LgAv	, have a second s	-	aburnatra.	volgenadistra	Wayergan	nti sita	-1 Marrian	nomedation	rutionatile	<b>Delta Pair</b> (Tracking Ref) Ref <b>≜</b>
V1 S2 S3 FC AL										<b>Span Pair</b> Span <u>Center</u>
£(f): FTun Swp										Off
Start 30.0 #Res BW 1	Hz MHz MHz		 #V{	 3W 10	 <hz< td=""><td>Sweep</td><td>Stop 239.2</td><td>) 1.000 ms (60</td><td>0 GHz 1 pts)</td><td>More 1 of 2</td></hz<>	Sweep	Stop 239.2	) 1.000 ms (60	0 GHz 1 pts)	More 1 of 2
File Opera	ation Stat	us, A:'	\C64R\$	60P2.6	IF file	saved				





CH64 802.11n Tx Conducted Emissions	(MCS0)
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🔆 Agile	ent 11:11	:15 Jun 4,	, 2013							Marker
Ref —30 #Samp <b>∏</b>	dBm Morkor	Atten	10 dB				Mkr1	5.066 -61.2	73 GHz 5 dBm	Select Marker <u>1</u> 234
Log 10 - dB/ -	5.0667 -61.25	30000 dBm_	GHz							Normal
M	whrantwa	-	hattan	nerrow My	en portante	whenperson	mantfordersper	bushington	Longon	Delta
LgAv										<b>Delta Pair</b> (Tracking Ref) Ref <u>▲</u>
V1 S2 S3 FC AL										<b>Span Pair</b> Span <u>Center</u>
£(f): _ FTun Swp _										Off
Start 5.0 #Res BW	000 00 G 1 MHz	Hz	 #V	 BW 10 k	(Hz	Sweep	Stop 34.56	5.140 0 ms (60	)0 GHz 1 pts)	<b>More</b> 1 of 2
File Ope	eration 💲	Status, A:	\C64R\$	50P4.G	IF file	saved				





CH64 802.11n Tx Conducted Emissions	(MCS0)
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🔆 Ag	ilent 11:13:2	28 Jun 4,	2013							Marker
Ref —3 #Samp	0 dBm Markar	Atten 1	L0 dB				Mk	r1 10. -66.9	64 GHz 3 dBm	Select Marker <u>1</u> 234
Log 10 dB/	10.6400 -66.93	200000 dBm	GHz							Normal
										Delta
LgAv	durin a free freedo	whenter	hukunonyor	in an	nid Malling	*****	hayandik bayinay	<del>∊∊⋼⋴</del> ৵₩₩	WW THE WAY	<b>Delta Pair</b> (Tracking Ref) Ref <u>▲</u>
V1 S2 S3 FC AL										<b>Span Pair</b> Span <u>Center</u>
€(f): FTun Swp										Off
Start 1 #Res B	0.00 GHz W 1 MHz		#VE	3W 10 K	 (Hz	Swe	St ep 1.48	op 16.0 3 s (60	00 GHz^ 1 pts)	<b>More</b> 1 of 2
File Op	peration St	tatus, A:\	.C64RS	0P6.G	IF file	saved				













CH64 802.11n Tx Conducted Emissions (MCS7)
🔆 Ag	j <b>ilent</b> 11	:42:07	Jun 4,	, 2013							Marker
Ref -3 #Samp	0 dBm	or	Atten	10 dB				Mk	r1 3.5 -50.6	47 GHz 4 dBm	Select Marker <u>1</u> 234
Log 10 dB/	-3.54 50.	7000 64 d	)000 Bm _	GHz							Normal
										Malant	Delta
LgAv		www.ww	antonan min	mayara	entresity of the second	N-retholiki/Hali	ne m	e,leanerstal	sterend find	Mer.	<b>Delta Pair</b> (Tracking Ref) Ref▲
V1 S2 S3 FC AL											<b>Span Pair</b> Span <u>Center</u>
€(f): FTun Swp											Off
Start 1 #Res B	L .000 G W 1 MH	Hz z		 #V[	 3W 10	 <hz< td=""><td>Sweep</td><td>St 986.4</td><td>op 5.00 ms (60</td><td>00 GHz 1 pts)</td><td>More 1 of 2</td></hz<>	Sweep	St 986.4	op 5.00 ms (60	00 GHz 1 pts)	More 1 of 2
File 0	peratio	in Stat	us, A:	\C64R	67P3.6	IF file	saved				



🔆 Ag	jilent 11	:46:56	Jun 4,	2013							Marker
Ref -3 #Samp	30 dBm	or	Atten	10 dB				Mkr1	5.066 -59.2	73 GHz 1 dBm	Select Marker <u>1</u> 234
Log 10 dB/	5.06 -59.	6730 21 d	)000 Bm _	GHz							Normal
	www.www.w	wyterson	k.,14-16-4,1964	and	1 Martin My	ullinan they are the states	hi ny mana	enternations	in mark	Vitegermetere	Delta
LgAv											<b>Delta Pair</b> (Tracking Ref) Ref <u>▲</u>
V1 S2 S3 FC AL											<b>Span Pair</b> Span <u>Center</u>
<b>£</b> (f): FTun Swp											Off
Start 5 #Res B	5.000 0 3W 1 MH	0 GHz z		 #V{	 3W 10 k	(Hz	Sweep	Stop 34.56	5.140   ms (60	00 GHz 1 pts)	More 1 of 2
File 0	peratio	n Stat	us, A:'	\C64R\$	57P4.6	IF file	saved				

# CH64 802.11n Tx Conducted Emissions (MCS7)

🔆 Agilent 11:47:53	Jun 4, 2013			Marker
Ref - 30 dBm f #Samp Morkor	Atten 10 dB		Mkr1 5.360 GH -49.73 dBr	<b>Select Marker</b>
<sup>Log</sup> 10 5.360000 dB/ 4-49.73 dE	000 GHz 3m			Normal
W. Lyna				Delta
LgAv	manyanta	han and the second second second	nterneting and and the second	Delta Pair (Tracking Ref) Ref ▲
V1 S2 S3 FC AL				<b>Span Pair</b> Span <u>Center</u>
£(f): FTun Swp				0ff
Start 5.360 GHz #Res BW 1 MHz	#\	 BW 10 kHzS	Stop 10.000 GH weep 1.144 s (601 pts	2 2 1 of 2
File Operation Statu	is, A:\C64R	S7P5.GIF file sa	ved	





CH64 802.11n Tx Conducted Emissions	(MCS7)
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CH100 802.11a Tx Conducted Emissions @ 6Mbps



CH100 802.11a Tx Conducted Emissions @ 6Mbps

🔆 Agilent 14:04:08 Jun 4	2013		Marker
Ref-30 dBm Atten #Samp Marker	10 dB	Mkr1 233.7 MHz -85.92 dBm	Select Marker <u>1</u> 234
<sup>Log</sup> 10 233.700000 № <sup>dB/</sup> -85.92 dBm -	Hz		Normal
			Delta
LgAv		wanner mangementer and militaria	<b>Delta Pair</b> (Tracking Ref) Ref▲
V1 S2 S3 FC AL			<b>Span Pair</b> Span <u>Center</u>
£(f): FTun Swp			Off
Start 30.0 MHz #Res BW 1 MHz	#VBW 10 kHz	Stop 1.000 0 GHz Sweep 239.2 ms (601 pts)	More 1 of 2
File Operation Status, A:	100R06P2.GIF file	saved	

CH100 802.11a Tx Conducted Emissions @ 6Mbps



CH100 802.11a Tx Conducted Emissions @ 6Mbps

🔆 Ag	j <b>ilent</b> 14	:47:27	Jun 4,	2013							Marker
Ref -3	0 dBm		Atten	10 dB	1			Mkr1	5.460 -50.3	∣0 GHz 6 dBm	Select Marker
+Samp Log 10 dB/	Mark 5.46 50.	er 0000 36 d	) 0000  Bm	GHz-						1	- Normal
	hr-www	milina	mbydu	phanter	lannon	and the second	Ary Nr.A		utunt	when	Delta
LgAv											<b>Delta Pair</b> (Tracking Ref) Ref <u>≜</u>
V1 S2 S3 FC AL											<b>Span Pair</b> Span <u>Center</u>
£(f): FTun Swp											Off
Start 5 #Res B	L 5.000 0 W 1 MH	GHz z		 #V{	 BW 10	 <hz< td=""><td>Sweep</td><td>Stop 113.4</td><td>) 5.460 ms (60</td><td>0 GHz 1 pts)</td><td>More 1 of 2</td></hz<>	Sweep	Stop 113.4	) 5.460 ms (60	0 GHz 1 pts)	More 1 of 2
File 0	peratio	n Stat	us, A:'	\100R(	)6P1.G	IF file	saved				

CH100 802.11a Tx Conducted Emissions @ 6Mbps



CH100 802.11a Tx Conducted Emissions @ 6Mbps

✤ Agilent 14:10:13 Jun 4, 2013	Trace
Mkr1 11.000 GHz Ref -30 dBm Atten 10 dB -68.15 dBm #Samp1	<b>Trace</b> 2 3
Log 10 dB/	Clear Write
	Max Hold
LgAv munder munder warden and man all and	Min Hold
V1 S2 S3 FC AL	View
£(f):	Blank
Start 10.000 GHz  Stop 18.000 GHz    #Res BW 1 MHz  #VBW 10 kHz  Sweep 1.973 s (601 pts)	<b>More</b> 1 of 2

CH100 802.11a Tx Conducted Emissions @ 6Mbps







## CH100 802.11a Tx Conducted Emissions @ 54Mbps



### CH100 802.11a Tx Conducted Emissions @ 54Mbps

🔆 Ag	j <b>ilent</b> 14	:15:45	Jun 4,	2013							Marker
Ref -3 #Samp	0 dBm		Atten	10 dB				Mk	r1 3.6 -47.8	67 GHz 5 dBm	Select Marker 1 2 3 4
Log 10 dB/	Mark 3.66 -47.	er 7000 85 d	1000 Bm	GHz-							Normal
										h. hull	Delta
LgAv		44°1-44°-324	www.weyvee	whenever	www.	Ammin	dayuqad biya	r galige segments	HULL MA	ANON	<b>Delta Pair</b> (Tracking Ref) Ref <b>≙</b>
V1 S2 S3 FC AL											<b>Span Pair</b> Span <u>Center</u>
<b>£</b> (f): FTun Swp											Off
Start 1 #Res B	L 1.000 G W 1 MH	Hz z		 #V{	 3W 10	(Hz	Sweep	St 986.4	op 5.00 ms (60	00 GHz 1 pts)	More 1 of 2
File 0	peratio	n Stat	us, A:	\100R5	54P3.G	IF file	saved				

CH100 802.11a Tx Conducted Emissions @ 54Mbps



CH100 802.11a Tx Conducted Emissions @ 54Mbps

ዡ Agilent 14:17:43	Jun 4,	2013							Marker
Ref -30 dBm #Samp Monteer	Atten 1	.0 dB				Mkr1	5.740 -70.5	0 GHz 6 dBm	Select Marker <u>1</u> 234
<sup>Log</sup> 5.740000 <sup>dB/</sup> -70.56 d	1000 ( Bm	GHz							Normal
1 \$									Delta
LgAv	vww	www.whee	ᠬᢑᡵᢣᡐᡟᢣᡪ	gegenthe-eveloped	underne	er/larearates	minguna	hayaranayota	<b>Delta Pair</b> (Tracking Ref) Ref <u>▲</u>
V1 S2 S3 FC AL									<b>Span Pair</b> Span <u>Center</u>
<b>£</b> (f): FTun Swp									Off
Start 5.740 0 GHz #Res BW 1 MHz		#VE	3W 10 k	(Hz	Swee	Stop p 1.051	10.000 . s (60	0 GHz^ 1 pts)	<b>More</b> 1 of 2
File Operation Stat	us, A:\	100R5	4P5.6	IF file	saved				

CH100 802.11a Tx Conducted Emissions @ 54Mbps



CH100 802.11a Tx Conducted Emissions @ 54Mbps



CH120 802.11a Tx Conducted Emissions @ 6Mbps



CH120 802.11a Tx Conducted Emissions @ 6Mbps

🔆 Agilent 15:03:23	Jun 4, 20	013			Marker
Ref -30 dBm #Samp Mankan	Atten 10	I dB		Mkr1 371. -84.81	1 MHz dBm <u>1</u> 2 3 4
<sup>Log</sup> 10 371.100 dB/ -84.81 (	000 MH: JBm	z			Normal
					Delta
LgAv municipality	white the second	-1-	handraktion	mary brown have been been been been been been been be	Delta Pair (Tracking Ref) ™ahar Ref ▲
V1 S2 S3 FC AL					Span Pair Span <u>Center</u>
£(f): FTun Swp					Off
Start 30.0 MHz #Res BW 1 MHz		#VBW 10 kł	lz Sweep	Stop 1.000 ( 239.2 ms (601	0 GHz 1 of 2
File Operation Sta	tus, A:\12	20R06P2.GI	F file saved		

CH120 802.11a Tx Conducted Emissions @ 6Mbps



CH120 802.11a Tx Conducted Emissions @ 6Mbps

🔆 Ag	j <b>ilent</b> 15	:05:51	Jun 4,	2013							Marker
Ref -3	0 dBm		Atten	10 dB				Mkr1	5.440 -56.0	1 GHz 1 dBm	Select Marker
Log 10 dB/	Mark 5.44 56.	er 0100 01 d	1000 Bm _	GHz-						1	- Normal
	Monte	utra-hutr	havena	halforday	phantan	muluum	mmh	Nursha	hours	nun tut	Delta
LgAv											<b>Delta Pair</b> (Tracking Ref) Ref <u>≜</u>
V1 S2 S3 FC AL											<b>Span Pair</b> Span <u>Center</u>
£(f): FTun Swp											Off
Start 5 #Res B	L 5.000 0 W 1 MH	GHz z		 #V{	 BW 10	 (Hz	Sweep	Stop 113.4	) 5.460 ms (60	0 GHz 1 pts)	<b>More</b> 1 of 2
File 0	peratio	in Stat	us, A:'	\120R0	06P4 <b>.G</b>	IF file	saved				

CH120 802.11a Tx Conducted Emissions @ 6Mbps



CH120 802.11a Tx Conducted Emissions @ 6Mbps

🔆 Agilent 15:07:29 Jun 4,	2013			Marker
Ref — 30 dBm Atten : #Samp Marker	10 dB	MI	kr1 11.200 GHz -60.89 dBm	Select Marker <u>1</u> 234
Log 10 11.200000000 dB/60.89 dBm	GHz			Normal
				Delta
LgAv Martine Martine	Not year and a second		and an all an	<b>Delta Pair</b> (Tracking Ref) Ref <b>≜</b>
V1 S2 S3 FC AL				<b>Span Pair</b> Span <u>Center</u>
£(f): FTun Swp				Off
Start 10.000 GHz #Res BW 1 MHz	#VBW 10 kH	z Sweep 1.9	5top 18.000 GHz 73 s (601 pts)	More 1 of 2
File Operation Status, A:\	120R06P6.GI	file saved		

CH120 802.11a Tx Conducted Emissions @ 6Mbps



CH120 802.11a Tx Conducted Emissions @ 54Mbps



CH120 802.11a Tx Conducted Emissions @ 54Mbps



CH120 802.11a Tx Conducted Emissions	@	54Mbps
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🔆 Agilent 1	5:14:42	Jun 4,	2013							Marker
Ref — 30 dBr #Samp <b>M</b> — #	n Ivan	Atten	10 dB				Mki	r1 3.7 -45.0	33 GHz 1 dBm	Select Marker <u>1</u> 234
Log 10 - <b>3.7</b> dB/ - <b>4</b> 5	33000 5.01 dl	000 Bm	GHz			1 \$				Normal
									L. H.	Delta
LgAv	Americality	walk	www.	vanded workade	y <sup>ern</sup> eren h	marchenical (	veryphyment	while	hralen.	<b>Delta Pair</b> (Tracking Ref) Ref▲
V1 S2 S3 FC AL										<b>Span Pair</b> Span <u>Center</u>
£(f): FTun Swp										Off
Start 1.000 #Res BW 1 M	GHz Hz		 #V{	 3W 10	 (Hz	Sweep	St 986.4	op 5.00 ms (60	)0 GHz 1 pts)	<b>More</b> 1 of 2
File Operat	ion Statı	us, A:Y	\120R5	54P3.6	IF file	saved				

CH120 802.11a Tx Conducted Emissions @ 54Mbps



### CH120 802.11a Tx Conducted Emissions @ 54Mbps

🔆 Agilent 15:17:3	2 Jun 4,	2013							Marker
Ref -30 dBm #Samp Manukan	Atten	10 dB				Mkr1	5.740 -70.0	0 GHz 7 dBm	Select Marker <u>1</u> 234
<sup>Log</sup> 10 5.74000 <sup>dB/</sup> -70.07	10000 dBm	GHz-							Normal
1									Delta
LgAv	White a white the	N 9 WW A	to visit in the second states of the second states	phi <sup>n</sup> -bokenin	performation	the sector of th	phaterappy	the second states and	<b>Delta Pair</b> (Tracking Ref) Ref <u>▲</u>
V1 S2 S3 FC AL									<b>Span Pair</b> Span <u>Center</u>
£(f): FTun Swp									Off
Start 5.740 0 GHz #Res BW 1 MHz		#VE	3W 10 k	(Hz	Swee	Stop p 1.051	10.000 . s (60	0 GHz^ 1 pts)	More 1 of 2
File Operation St	atus, A:\	120R5	64P5.G	IF file	saved				

CH120 802.11a Tx Conducted Emissions @ 54Mbps



CH120 802.11a Tx Conducted Emissions @ 54Mbps



CH140 802.11a Tx Conducted Emissions @ 6Mbps



CH140 802.11a Tx Conducted Emissions @ 6Mbps

🔆 Agilent 15:5	7:22 Jun 4,	2013				Marker				
Ref -30 dBm #Samp Manuka	Atten 1	10 dB		Mkr1 4 -84	87.5 MHz .38 dBm	Select Marker <u>1</u> 234				
<sup>Log</sup> 10 487.5 dB/ -84.3	r 00000 M 8 dBm	Hz				Normal				
						Delta				
LgAv Junear	in the letter water for	1		Werth wert a new series	manumumutan	<b>Delta Pair</b> (Tracking Ref) Ref▲				
V1 S2 S3 FC AL						<b>Span Pair</b> Span <u>Center</u>				
£(f): FTun Swp						Off				
Start 30.0 MHz #Res BW 1 MHz		#VBW 10	kHz Swee	Stop 1.00 p 239.2 ms (6	0 0 GHz 01 pts)	<b>More</b> 1 of 2				
<b>File Operation</b>	File Operation Status, A:\140R06P2.GIF file saved									

CH140 802.11a Tx Conducted Emissions @ 6Mbps



CH140 802.11a Tx Conducted Emissions @ 6Mbps

🔆 Ag	j <b>ilent</b> 15	:59:33	Jun 4,	2013							Marker
Ref — 3 #Samp	0 dBm		Atten	10 dB				Mkr1	5.240 -61.7	0 GHz 9 dBm	Select Marker <u>1</u> 234
Log 10 dB/	-5.24 61.	er 0000 79 d	)000 Bm	GHz-							Normal
	www.	monte	woodher		nghunna	1 Mondu	hours	(/horner	and the spill for the	Junjudanu	Delta
LgAv											<b>Delta Pair</b> (Tracking Ref) Ref <u>≜</u>
V1 S2 S3 FC AL											<b>Span Pair</b> Span <u>Center</u>
<b>£</b> (f): FTun Swp											Off
Start 5 #Res B	L 5.000 0 W 1 MH	GHz z		 #V	 3W 10	 <hz< td=""><td>Sweep</td><td>Stop 113.4</td><td>) 5.460 ms (60</td><td>0 GHz 1 pts)</td><td>More 1 of 2</td></hz<>	Sweep	Stop 113.4	) 5.460 ms (60	0 GHz 1 pts)	More 1 of 2
File 0	File Operation Status, A:\140R06P4.GIF file saved										

CH140 802.11a Tx Conducted Emissions @ 6Mbps



CH140 802.11a Tx Conducted Emissions @ 6Mbps

🔆 Agilent 16:02:	:23 Jun 4,	2013							Marker
Ref -30 dBm #Samp <b>Morker</b>	Atten 1	L0 dB				Mkr1	11.4 -64.1	00 GHz 9 dBm	Select Marker <u>1</u> 234
<sup>Log</sup> 11.400 <sup>dB/</sup> -64.19	1000000 1 dBm	GHz							Normal
	_1 ♦								Delta
LgAv Manager LgAv	No conserver	Winter	<sup>And</sup> erett	wardan ya wa	e <del>yl a</del> yg, ewl <sub>e</sub> r	a a palificante a parte	<del>~18</del> ~~~~184~~	ormatana ayan	<b>Delta Pair</b> (Tracking Ref) Ref <u>≜</u>
V1 S2 S3 FC AL									<b>Span Pair</b> Span <u>Center</u>
£(f): FTun Swp									Off
Start 10.000 GHz #Res BW 1 MHz		#VB	W 10 k	Hz	Swee	Sto p 1.973	p 18.00 3 s (60	00 GHz^ 1 pts)	<b>More</b> 1 of 2
File Operation S	itatus, A:\	140R0	6P6.G	IF file	saved				

CH140 802.11a Tx Conducted Emissions @ 6Mbps







CH140 802.11a Tx Conducted Emissions @ 54Mbps



CH140 802.11a Tx Conducted Emissions @ 54Mbps

🔆 Agilent 16:06:14	Jun 4,	2013							Marker
Ref -30 dBm #Samp Manulana	Atten 1	10 dB				Mk	r1 3.8 -42.1	00 GHz 7 dBm	Select Marker <u>1</u> 234
<sup>Log</sup> 10 3.800000 dB/ -42.17 d	000   Bm	GHz-				<b>`</b>			Normal
								ulullul	Delta
LgAv	repondence	harmana	riger and an	Jahrensedag	n kursen sedas d	www.withited	hladdhald	MUAhuri.	<b>Delta Pair</b> (Tracking Ref) Ref▲
V1 S2 S3 FC AL									<b>Span Pair</b> Span <u>Center</u>
£(f): FTun Swp									Off
Start 1.000 GHz #Res BW 1 MHz		#VE	3W 10 k	(Hz	Sweep	St 986.4	op 5.00 ms (60	00 GHz 1 pts)	More 1 of 2
File Operation State	us, A:\	140R5	i4P3.G	IF file	saved				

CH140 802.11a Tx Conducted Emissions @ 54Mbps



### CH140 802.11a Tx Conducted Emissions @ 54Mbps

🔆 Agilent 16:08:5	7 Jun 4,	2013							Marker
Ref -30 dBm #Samp Lu	Atten	10 dB				Mkr1	5.740 -66.3	0 GHz 2 dBm	Select Marker 1 2 3 4
<sup>Log</sup> 10 5.74000 <sup>dB/</sup> -66.32	10000 dBm	GHz							Normal
1 \$									Delta
LgAv	and the second	wither the second	-	*****	n waaraa ku k	the service of the second	nderskirknigt	at Alexandra	<b>Delta Pair</b> (Tracking Ref) Ref <u>▲</u>
V1 S2 S3 FC AL									<b>Span Pair</b> Span <u>Center</u>
£(f): FTun Swp									Off
Start 5.740 0 GHz #Res BW 1 MHz		#V{	 3W 10 F	 <hz< td=""><td>Swee</td><td>Stop 9p 1.051</td><td>10.000 L s (60</td><td>0 GHzî 1 pts)</td><td><b>More</b> 1 of 2</td></hz<>	Swee	Stop 9p 1.051	10.000 L s (60	0 GHzî 1 pts)	<b>More</b> 1 of 2
File Operation St	atus, A:'	140R5	54P5.G	IF file	saved				

CH140 802.11a Tx Conducted Emissions @ 54Mbps



### CH140 802.11a Tx Conducted Emissions @ 54Mbps



CH100 802.11n Tx Conducted Emissions (MCS0)



CH100 802.11n Tx Conducted Emissions (MCS0)

✤ Agilent 14:22:43 Jun 4, 2013	File									
Mkr1 359.8 MHz Ref -30 dBm Atten 10 dB -84.37 dBm #Samp Marker	Catalog•									
<sup>Log</sup> 10 359.800000 MHz dB/ -84.37 dBm	Save⊦									
	Load⊦									
LgAv	Delete•									
V1 S2 S3 FC AL	Сору									
£(f):	Rename⊦									
Start 30.0 MHz  Stop 1.000 0 GHz    #Res BW 1 MHz  #VBW 10 kHz  Sweep 239.2 ms (601 pts)	<b>More</b> 1 of 2									
ile Operation Status, A:\100RS0P2.GIF file saved										





CH100 802.11n Tx Conducted Emissions (MCS0)

🔆 Agilen	t 14:25:07	Jun 4,	2013							Marker
Ref -30 d	lBm	Atten	10 dB				Mkr1	5.460 -49.3	0 GHz 8 dBm	Select Marker
<sup>#Samp</sup> Ma Log 10 5. dB//	arker .460000 49.38 d	1000 Bm _	GHz							Normal
lash	when a superior	where	uhuun	handreder	hand	Waymani	nuMunW	ruthingh	Marken	Delta
LgAv										<b>Delta Pair</b> (Tracking Ref) Ref <u>≜</u>
V1 S2 S3 FC AL										<b>Span Pair</b> Span <u>Center</u>
£(†): FTun Swp										Off
Start 5.00 #Res BW 1	 10 0 GHz . MHz		 #V{	 3W 10 k	(Hz	Sweep	Stop 113.4	) 5.460 ms (60	0 GHz 1 pts)	<b>More</b> 1 of 2
File Oper	ile Operation Status, A:\100RS0P4.GIF file saved									

CH100 802.11n Tx Conducted Emissions (MCS0)



CH100 802.11n Tx Conducted Emissions (MCS0)

🔆 Agilent	14:27:22	Jun 4,	2013							Marker
Ref -30 dB #Samp Ma	im rkor	Atten 1	L0 dB				Mkr:	1 11.0 -65.3	00 GHz 1 dBm	Select Marker <u>1</u> 234
Log 10 11 dB/ -6	.00000 5.31 d	0000 Bm	GHz							Normal
	\$									Delta
LgAv Marin	Arned Marildon	N. Jackson, Mark	Yunnahad	<del>hanforn</del> h <del>e a</del> n	-	-		A.,	nt <del>o kontre</del>	<b>Delta Pair</b> (Tracking Ref) Ref▲
V1 S2 S3 FC AL										<b>Span Pair</b> Span <u>Center</u>
<b>£</b> (f): FTun Swp										Off
Start 10.00 #Res BW 1	0 GHz MHz		#VE	3W 10 I	 <hz< td=""><td>Swee</td><td>Sto p 1.973</td><td>p 18.00 3 s (60</td><td>00 GHz^ 1 pts)</td><td><b>More</b> 1 of 2</td></hz<>	Swee	Sto p 1.973	p 18.00 3 s (60	00 GHz^ 1 pts)	<b>More</b> 1 of 2
File Opera	tion Stat	us, A:\	100RS	0P6.G	IF file	saved				

CH100 802.11n Tx Conducted Emissions (MCS0)



CH100 802.11n Tx Conducted Emissions (MCS7)



## CH100 802.11n Tx Conducted Emissions (MCS7)



#### CH100 802.11n Tx Conducted Emissions (MCS7)

🔆 Ag	j <b>ilent</b> 14	:37:22	Jun 4,	2013							Marker
Ref — 3 #Samp	0 dBm		Atten	10 dB				Mk	r1 3.6 -47.8	67 GHz 9 dBm	Select Marker <u>1</u> 234
Log 10 dB/	магк 3.66 47.	er 7000 89 d	)000 Bm _	GHz-							Normal
											Delta
LgAv	www.mw	wy mana	rallording	anappinter		pr <sup>eth</sup> rin <sup>yan</sup> ny	mark	w.h.y. wight	1/1.JMW/4	Whee.	<b>Delta Pair</b> (Tracking Ref) Ref▲
V1 S2 S3 FC AL											<b>Span Pair</b> Span <u>Center</u>
€(f): FTun Swp											Off
Start 1 #Res B	L .000 G W 1 MH	Hz z		 #V{	 BW 10	 <hz< td=""><td>Sweep</td><td>  St 986.4</td><td>op 5.00 ms (60</td><td>00 GHz 1 pts)</td><td>More 1 of 2</td></hz<>	Sweep	 St 986.4	op 5.00 ms (60	00 GHz 1 pts)	More 1 of 2
File 0	peratio	in Stat	us, A:	\100R\$	67P3.0	IF file	saved				





CH100 802.11n Tx Conducted Emissions (MCS7)

🔆 Agilent 14:39:49 Ju	un 4,2013				Marker
Ref—30 dBm At #Samp M. I	tten 10 dB		Mkr1	5.740 0 GHz -68.47 dBm	Select Marker <u>1</u> 234
<sup>Compo</sup> 10 5.74000000 <sup>dB/</sup> -68.47 dBn	00 GHz- m				Normal
1 ¢					Delta
LgAv	And an and the second the	and a subscription of the state	where the second se	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	<b>Delta Pair</b> (Tracking Ref) Ref <u>▲</u>
V1 S2 S3 FC AL					<b>Span Pair</b> Span <u>Center</u>
£(f): FTun Swp					Off
Start 5.740 0 GHz #Res BW 1 MHz	 #VE	 3W 10 kHz	Stop Sweep 1.051	 10.000 0 GHz^ . s (601 pts)	More 1 of 2
File Operation Status	, A:\100RS	7P5.GIF file	saved		





CH100 802.11n Tx Conducted Emissions	(MCS7)
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CH120 802.11n Tx Conducted Emissions (MCS0)



CH120 802.11n Tx Conducted Emissions (MCS0)

🔆 Agilent 15:23:43	L Jun 4,	2013							Marker
Ref -30 dBm #Samp <b>Markar</b>	Atten	10 dB				Mk	r1 413 -83.5	3.2 MHz 1 dBm	Select Marker <u>1</u> 234
<sup>Log</sup> 413.200 <sup>dB/</sup> -83.51	000 M dBm	Hz							Normal
									Delta
LgAv webarra	****	1 (////////////////////////////////////		bynan Jacquel	harmanaan	Mananan	gyerener	norm	<b>Delta Pair</b> (Tracking Ref) Ref <u>▲</u>
V1 S2 S3 FC AL									<b>Span Pair</b> Span <u>Center</u>
£(f): FTun Swp									Off
Start 30.0 MHz #Res BW 1 MHz		#VE	3W 10 k	 (Hz	Sweep	Stop 239.2	) 1.000 ms (60	0 GHz 1 pts)	More 1 of 2
File Operation Sta	atus, A:\	120RS	0P2.6	IF file	saved				





CH120 802.11n Tx Conducted Emissions	(MCS0)
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🔆 Agil	lent 15	:25:54	Jun 4,	2013							Marker
Ref -30	0 dBm		Atten	10 dB				Mkr1	5.440 -56.8	1 GHz 5 dBm	Select Marker
≢Samp Log 10 dB∕	Mark 5.44 -56.	er 0100 85 d	1000 Bm _	GHz						1	Normal
-	wheren	therefore	numm	wainte	whenthe	milion	numpeulo	www	y yyrwynuw	\$ ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	Delta
LgAv											<b>Delta Pair</b> (Tracking Ref) Ref <u>≜</u>
V1 S2 S3 FC AL											<b>Span Pair</b> Span <u>Center</u>
£(f): - FTun Swp -											Off
Start 5. #Res Bk	.000 0 V 1 MH:	GHz z		+V{	3W 10 k	(Hz	Sweep	Stop 113.4	) 5.460 ms (60	0 GHz 1 pts)	More 1 of 2
File Op	eratio	n Stat	us, A:'	120R	60P4.6	IF file	saved				





CH120 802.11n Tx Conducted Emissions	(MCS0)
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🔆 Agilent 15:27:45 🕔	Jun 4, 2013				Marker
Ref-30 dBm F #Samp <b>Markar</b>	Atten 10 dB		Mk	r1 11.200 G -64.52 dB	Hz m <u>1</u> 2 3 4
Log 10 11.200000 dB/ -64.52 dB	0000 GHz Im				Normal
					Delta
LgAv manus man	where the man	Kenseren in the state	and the second second second second	muter	<b>Delta Pair</b> ਆ ref (Tracking Ref) Ref ▲
V1 S2 S3 FC AL					Span Pair Span <u>Center</u>
£(f): FTun Swp					0ff
Start 10.000 GHz #Res BW 1 MHz	+VI	 BW 10 kHz	Steep 1.9	 :op 18.000 GH 73 s (601 pts	More    1zî    1 of 2
File Operation Status	s, A:\120R\$	50P6.GIF file	saved		





CH120 802.11n Tx Conducted Emissions (MCS7)



## CH120 802.11n Tx Conducted Emissions (MCS7)



CH120 802.11n Tx Conducted Emissions (MCS7)

🔆 Ag	j <b>ilent</b> 15	:36:07	Jun 4,	2013							Marker
Ref — 3 #Samp	0 dBm	~~	Atten	10 dB				Mkı	1 3.7 -45.1	33 GHz 5 dBm	Select Marker <u>1</u> 234
Log 10 dB/	-45.	9000 15 d	1000 Bm _	GHz-			1 \$				Normal
											Delta
LgAv		adamente de la contra	ydyperpersond	purpers	When we we we we	Arrent	manana	Maymurut	polyhallallallallallalla	Ultudio Jos	<b>Delta Pair</b> (Tracking Ref) Ref▲
V1 S2 S3 FC AL											<b>Span Pair</b> Span <u>Center</u>
€(f): FTun Swp											Off
Start 1 #Res B	L.000 G W 1 MH	Hz z		 #V{	 BW 10	 <hz< td=""><td>Sweep</td><td>St 986.4</td><td>op 5.00 ms (60</td><td>00 GHz 1 pts)</td><td><b>More</b> 1 of 2</td></hz<>	Sweep	St 986.4	op 5.00 ms (60	00 GHz 1 pts)	<b>More</b> 1 of 2
File Op	peratio	n Stat	us, A:'	\120R\$	\$7P3.6	IF file	saved				



🔆 Ag	j <b>ilent</b> 15	:38:37	Jun 4,	2013							Marker
Ref — 3 #Samp	0 dBm		Atten	10 dB				Mkr1	5.440 -56.6	1 GHz 6 dBm	Select Marker <u>1</u> 234
Log 10 dB/	5.44 -56.	er 0100 .66 d	)000  Bm	GHz-							Normal
	wheneve	Munking	Anna	mount	an water	enalyma	angengter	entrution	menyad	¢ Martinada	Delta
LgAv											<b>Delta Pair</b> (Tracking Ref) Ref <u>▲</u>
V1 S2 S3 FC AL											<b>Span Pair</b> Span <u>Center</u>
<b>£</b> (f): FTun Swp											Off
Start 5 #Res B	5.000 0 W 1 MH	GHz z		 #V{	 3W 10	(Hz	Sweep	Stop 113.4	) 5.460 ms (60	0 GHz 1 pts)	More 1 of 2
File 0	peratio	in Stat	us, A:'	\120R\$	\$7P4.6	IF file	saved				

CH120 802.11n Tx Conducted Emissions (MCS7)
🔆 Agilent 15:40:29	Jun 4,	2013							Marker
Ref -30 dBm #Samp Manukan	Atten	10 dB				Mkr1	5.740 -69.5	0 GHz 5 dBm	Select Marker <u>1</u> 234
<sup>Log</sup> 10 5.74000 <sup>dB/</sup> -69.55 c	0000 18m _	GHz							Normal
1									Delta
LgAv	-	yldalada ayar dahar dahar	AndropenWha	gert-grantes	an the street of	awaythadayt	Vormen	www.www.	<b>Delta Pair</b> (Tracking Ref) Ref <u>▲</u>
V1 S2 S3 FC AL									<b>Span Pair</b> Span <u>Center</u>
£(f): FTun Swp									Off
Start 5.740 0 GHz #Res BW 1 MHz		#V[	3W 10 I	 <hz< td=""><td>Swee</td><td>Stop p 1.051</td><td>10.000 . s (60</td><td>0 GHz^ 1 pts)</td><td><b>More</b> 1 of 2</td></hz<>	Swee	Stop p 1.051	10.000 . s (60	0 GHz^ 1 pts)	<b>More</b> 1 of 2
File Operation Sta	tus, A:'	\120RS	67P5.6	IF file	saved				





CH120 802.11n Tx Conducted Emissions	(MCS7)
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CH140 802.11n Tx Conducted Emissions (MCS0)



CH140 802.11n Tx Conducted Emissions (MCS0)

🔆 Agile	<b>ent</b> 16:14:5	6 Jun 4,	2013							Marker
Ref —30 #Samp <b>∏</b>	dBm Markar	Atten	10 dB				Mk	r1 515 -85.0	5.0 MHz 2 dBm	Select Marker <u>1</u> 234
Log 10 - dB/ -	515.000 -85.02	000 M dBm	Hz							Normal
										Delta
LgAv 🙀		run proprietade	a.	wanter	Rowynum	4. margaret	want	n y Anglyn	manport	<b>Delta Pair</b> (Tracking Ref) Ref▲
V1 S2 S3 FC_ AL										<b>Span Pair</b> Span <u>Center</u>
£(f): _ FTun Swp _										Off
Start 30 #Res BW	).0 MHz 1 MHz		#V{	 3W 10	 <hz< td=""><td>Sweep</td><td>Stop 239.2</td><td>1.000 ms (60</td><td>0 GHz 1 pts)</td><td>More 1 of 2</td></hz<>	Sweep	Stop 239.2	1.000 ms (60	0 GHz 1 pts)	More 1 of 2
File Ope	eration St	atus, A:`	140R	60P2.6	IF file	saved				





CH140 802.11n Tx Conducted Emissions	(MCS0)
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🔆 Agiler	nt 16:17:26	Jun 4,	2013							Trace
Ref -30 (	dBm	Atten	10 dB				Mkr1	5.25% -61.5	9 GHz 54 dBm	Trace
*Samp <b>M</b> Log 10 5 dB/ -	arker .259900 61.54 d	1000 Bm	GHz							≟ Clear Write
	marina		punter	many	ndhan Midin	Annanger	han an a	adoresta	Numer	Max Hold
LgAv										Min Hold
V1 S2 S3 FC AL										View
£(f): FTun Swp										Blank
Start 5.00 #Res BW 1	00 0 GHz 1 MHz		 #V	 3W 10 k	(Hz	Sweep	Stop 113.4	) 5.460 ms (60	0 GHz 1 pts)	More 1 of 2
File Oper	ration Stat	us, A:'	\140R\$	60P4.G	IF file	saved				





CH140 802.11n Tx Conducted Emissions (MCS0)

🔆 Agilent 16:19:44 🛛 Ju	un 4,2013		Marker
Ref-30 dBm At #Samp Morkor	ten 10 dB	Mkr1 	11.400 GHz -64.18 dBm <u>1</u> 2 3 4
<sup>Log</sup> 11.4000000 <sup>dB/</sup> -64.18 dBm	200 GHz		Normal
			Delta
LgAv WWW.yt.+m-m-yter WWW.	hand a fair and the a grant and		Caracking Ref) Ref ▲
V1 S2 S3 FC AL			Span Pair Span <u>Center</u>
£(f): FTun Swp			Off
Start 10.000 GHz #Res BW 1 MHz	#VBW 10 k	Stop Hz Sweep 1.973	More           18.000 GHz <sup>2</sup> 3 (601 pts)
File Operation Status,	A:\140RS0P6.G	IF file saved	

CH140 802.11n Tx Conducted Emissions (MCS0)







## CH140 802.11n Tx Conducted Emissions (MCS7)



## CH140 802.11n Tx Conducted Emissions (MCS7)

🔆 Agi	ilent 16:24:	24 Jun 4,	2013							Marker
Ref — 3 #Samp	0 dBm Mankan	Atten	10 dB				Mk	r1 3.8 -42.3	00 GHz 2 dBm	Select Marker <u>1</u> 234
Log 10 dB/	3.8000 -42.32	00000 dBm _	GHz-			<	>			Normal
									11111111	Delta
LgAv		, alphaniper And you	vyterowysky	whom	uhm Man	-page day	harran watara	philipple	Mindaux	<b>Delta Pair</b> (Tracking Ref) Ref <b>≜</b>
V1 S2 S3 FC AL										<b>Span Pair</b> Span <u>Center</u>
£(f): FTun Swp										Off
Start 1 #Res B	.000 GHz W 1 MHz		 #V{	3W 10 I	 <hz< td=""><td>Sweep</td><td>St 986.4</td><td>op 5.00 ms (60</td><td>00 GHz 1 pts)</td><td><b>More</b> 1 of 2</td></hz<>	Sweep	St 986.4	op 5.00 ms (60	00 GHz 1 pts)	<b>More</b> 1 of 2
File Op	peration S	tatus, A:'	\140R\$	\$7P3.6	IF file	saved				

CH140 802.11n Tx Conducted Emissions (MCS7)

🔆 Ag	<b>jilent</b> 16	6:25:19	Jun 4,	2013							Marker
Ref -3 #Samp	0 dBm	or	Atten	10 dB				Mkr1	5.240 -61.7	0 GHz 1 dBm	<b>Select Marker</b> <u>1</u> 2 3 4
Log 10 dB/	5.24 -61.	0000 71 d	0000  Bm	GHz-							Normal
	mound	generies Aut	nnundru	the stand and the	hertywow	1 Muranak	www.	www.wh	mhanphanda	Maria	Delta
LgAv											<b>Delta Pair</b> (Tracking Ref) Ref <u>▲</u>
V1 S2 S3 FC AL											<b>Span Pair</b> Span <u>Center</u>
€(f): FTun Swp											Off
Start 5 #Res B	5.000 0 W 1 MH	GHz z		 #V	 BW 10	 <hz< td=""><td>Sweep</td><td>Stop 113.4</td><td>) 5.460 ms (60</td><td>0 GHz 1 pts)</td><td>More 1 of 2</td></hz<>	Sweep	Stop 113.4	) 5.460 ms (60	0 GHz 1 pts)	More 1 of 2
File 0	peratio	n Stat	us, A:	\140R\$	S7P4.G	IF file	saved				

# CH140 802.11n Tx Conducted Emissions (MCS7)

🔆 Agilent 16:26	6:16 Jun 4,	2013							Marker
Ref -30 dBm #Samp IN I	Atten	10 dB				Mkr1	5.740 -63.8	0 GHz 0 dBm	Select Marker 1 2 3 4
<sup>Log</sup> 10 5.7400 <sup>dB/</sup> -63.80	- 000000 0 dBm _	GHz							Normal
¢									Delta
LgAv	war and the second s	polapy graphics	mythe ghat in	er yn hander	**	h-vitesterter	ng kanang panang banang panang pa	white	<b>Delta Pair</b> (Tracking Ref) Ref <u>▲</u>
V1 S2 S3 FC AL									<b>Span Pair</b> Span <u>Center</u>
£(f): FTun Swp									Off
Start 5.740 0 GH #Res BW 1 MHz	  z	+VE	3W 10 k	(Hz	Swee	Stop p 1.051	10.000 L s (60	0 GHz^ 1 pts)	More 1 of 2
File Operation	Status, A:	\140RS	7P5.0	IF file	saved				





CH140 802.11n Tx Conducted Emissions	(MCS7)
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**Rx** Conducted Emissions



Rx Conducted Emissions

🔆 Ag	jilent 14	:03:40	Jun !	5,2013							Marker
Ref — 3 #Samp	30 dBm		Atter	n 10 dB				Mk	r1 430 -84.2	0.9 MHz 1 dBm	Select Marker <u>1</u> 234
Log 10 dB/	-430. 84.	.9000 .21 d	)00  Bm _	MHz—							Normal
											Delta
LgAv	manany	colora of the second	mum	man	1 \$ \$	horregion	anterio de la	hanternation	afridanseria	anistany Upra	<b>Delta Pair</b> (Tracking Ref) Ref <b>≜</b>
V1 S2 S3 FC AL											<b>Span Pair</b> Span <u>Center</u>
<b>£</b> (f): FTun Swp											Off
Start 3 #Res B	L 30.0 MH 3W 1 MH	z z		 #V	 BW 10	 <hz< td=""><td>Sweep</td><td>Stop 239.2</td><td>) 1.000 ms (60</td><td>0 GHz 1 pts)</td><td>More 1 of 2</td></hz<>	Sweep	Stop 239.2	) 1.000 ms (60	0 GHz 1 pts)	More 1 of 2
File 0	peratio	in Stat	us, A	:\B10FF	P2.GI	file s	saved				

## **Rx** Conducted Emissions



## Rx Conducted Emissions

🔆 Ag	jilent 14:0	09:23	Jun 5,	2013							Marker
Ref -3 #Samp	0 dBm		Atten	10 dB				Mk	r1 7.1 -80.6	08 GHz 5 dBm	Select Marker <u>1</u> 234
Log 10 dB/	7.108 -80.8	er 3000 55 d	1000 Bm _	GHz-							Normal
											Delta
LgAv	hat not many here a	Amanaa	har ya a waa waa waa waa waa waa waa waa wa	work works	1 19/114-148-4-	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	44.447.4.+	yer and	noter inn tikenp	hanpanteler	<b>Delta Pair</b> (Tracking Ref) Ref▲
V1 S2 S3 FC AL											<b>Span Pair</b> Span <u>Center</u>
£(f): FTun Swp											Off
Start 5 #Res B	5.000 GH	z		 #V{	3W 10	 <hz< th=""><th>Swee</th><th>Sto p 1.233</th><th>p 10.00 3 s (60</th><th>00 GHz^ 1 pts)</th><th>More 1 of 2</th></hz<>	Swee	Sto p 1.233	p 10.00 3 s (60	00 GHz^ 1 pts)	More 1 of 2
File 0	peration	Stat	us, A:'	B10FF	P4.GI	file s	saved				

## **Rx** Conducted Emissions



## Rx Conducted Emissions







CH36 802.11a Adjacent Channel Leakage Power (54Mbps)



CH48 802.11a Adjacent Channel Leakage Power (6Mbps)



CH48 802.11a Adjacent Channel Leakage Power (54Mbps)







CH64 802.11a Adjacent Channel Leakage Power (54Mbps)

₩ Agilent 10:05:53 Jun 7, 2013	Meas View
Ch Freq 5.18 GHz Trig Free Adj Channel Power PASS	Spectrum
▲ Mkr1 -31.03 MHz	Bar Graph
Ref 2.567 dBm         #Atten 28 dB         25.92 dB           #Avg	Combined
	Combined View Units <u>Rel</u> Abs
Center 5.180 00 GHz Span 100 MHz	
#Res         BW         300         kHz         Sweep         4.24         ms         (601         pts)           RMS         Results         Freq         Offset         Ref         BW         dBc         Lower         dBm         dBc         Upper         dBm           Carrier         Power         20.00         MHz         18.00         MHz         -31.17         -18.97         -29.68         -17.47           12.20         ABm         40.00         MHz         18.00         MHz         -35.72         -47.37         -35.16	
20.0000 MHz	Trace
File Operation Status, A:\BWC36R54.GIF file saved	





CH36 802.11n Adjacent Channel Leakage Power (MCS7)

🔆 Agilent 10:15:46 Jun 7, 2013	Meas View
Ch Freq 5.24 GHz Trig Free Adj Channel Power PASS	Spectrum
▲ Mkr1 28.97 MHz	Bar Graph
Ref 2.567 dBm         #Atten 28 dB         27.98 dB           #Avg	Combined
dB/	Combined View Units <u>Rel</u> Abs
Center 5.240 00 GHz Span 100 MHz	
#Res         BW         300         kHz         \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$	
20.0000 MHz	Trace
File Operation Status, A:\BWC48R54.GIF file saved	





CH48 802.11n Adjacent Channel Leakage Power (MCS7)

🔆 Agilent 10:30:40 Jun 7, 2013	Meas View
Ch Freq 5.32 GHz Trig Free Adj Channel Power PASS	Spectrum
▲ Mkr1 108.97 MHz	Bar Graph
Ref 2.567 dBm #Atten 28 dB 22.11 dB #Avg Log	Combined
	Combined View Units <u>Rel</u> Abs
Center 5.320 00 GHz Span 100 MHz	
#Kes BW 300 kHz         #VBW 300 kHz         Sweep 4.24 ms (601 pts)           RMS Results         Freq Offset         Ref BW         dBc         Lower dBm         dBc         Upper dBm           Carrier Power         20.00 MHz         18.00 MHz         -29.40         -16.99         -26.18         -13.77           12 41 dBm         40.00 MHz         18.00 MHz         -46.26         -33.85         -44.85         -32.45	
20.0000 MHz	Trace
File Operation Status, A:\BWC64R54.GIF file saved	





CH64 802.11n Adjacent Channel Leakage Power (MCS7)

🔆 Agilent 11:14:50 Jun 7, 2013	Meas Control
Ch Freq 5.5 GHz Trig Free Adj Channel Power PASS	Restart
Center 5.50000000 GHz	<b>Measure</b> Single <u>Cont</u>
Ref 2.567 dBm         #Atten 28 dB         27.53 dB           #Avg	Resume
Center 5.500 00 GHz Span 100 MHz	
*Kes DW 300 KH2         *VDW 300 KH2         Sweep 4.24 ms (601 pts)           RMS Results         Freq Offset         Ref BW         dBc         Lower dBm         dBc         Upper dBm           Carrier         Power         20.00 MHz         18.00 MHz         -26.14         -14.59         -26.51         -14.96           11         55 dBm         49.00 MHz         18.00 MHz         -45.62         -34.07         -45.94         -34.39	
20.0000 MHz	
File Operation Status, A:\BWC64RS7.GIF file saved	





CH100 802.11a Adjacent Channel Leakage Power (54Mbps)

🔆 Agilent 11:21:06 Jun 7, 2013	Meas Control
Ch Freq 5.6 GHz Trig Free Adj Channel Power PASS	Restart
Center 5.60000000 GHz	<b>Measure</b> Single <u>Cont</u>
Ref 2.567 dBm         #Atten 28 dB         26.17 dB           #Avg	Resume
Center 5.600 00 GHz Span 100 MHz	
*Kes BW 300 KHZ         *VBW 300 KHZ         Sweep 4.24 ms (601 pts)           RMS Results Freq Offset         Ref BW         dBc         Lower dBm         dBc         Upper dBm           Carrier Power         20.00 MHz         18.00 MHz         -28.60         -19.04         -28.03         -18.48           G ES dBm         48.00 MHz         18.00 MHz         -28.60         -19.04         -28.03         -18.48	
20.0000 MHz	
File Operation Status, A:\BW100RS7.GIF file saved	





CH120 802.11a Adjacent Channel Leakage Power (54Mbps)

🔆 Agilent 11:32:09 Jun 7, 2013	[	Meas Control
Ch Freq 5.7 GHz Adj Channel Power	Trig Free PASS	Restart
Start 5.65000000 GHz	▲ Mkr1 488.97 MHz	<b>Measure</b> Single <u>Cont</u>
Ref 2.567 dBm #Atten 28 dB #Avg	24.36 dB	Resume
	Maryon washing on a way on the	
Start 5.650 00 GHz	Stop 5.750 00 GHz	
*Kes BW 300 KHZ         #VBW 300 KHZ           RMS Results Freq Offset         Ref BW         dBc           Carrier Power         20.00 MHz         18.00 MHz         -33.43           5 11 dBm         49.00 MHz         18.00 MHz         -52.00	z Sweep 4.24 ms (601 pts) Lower dBm dBc Upper dBm -27.32 -34.49 -28.39 -45.90 -52.69 -46.58	
20.0000 MHz		
File Operation Status, 0:\RW120RS7 GIE	file saved	





CH140 802.11a Adjacent Channel Leakage Power (54Mbps)

ዡ Agilent 11:17:13 Jun 7, 2013		Meas Control
Ch Freq 5.5 GHz Adj Channel Power	Trig Free PASS	Restart
	▲ Mkr1 288.97 MHz	<b>Measure</b> Single <u>Cont</u>
Ref 2.567 dBm #Atten 28 dB #Avg Log	30.73 dB	Resume
	The second secon	
Center 5.500 00 GHz	Span 100 MHz	
#Res         BW         300         KHZ         #VBW         300         KHZ           RMS         Results         Freq         Offset         Ref         BW         dBc         Loc           Carrier         Power         20.00         MHz         18.00         MHz         -25.01           11         20         APP         44.60         MHz         19.00         MHz         -25.01	Sweep 4.24 ms (601 pts) wer dBm dBc Upper dBm -13.31 -25.19 -13.49 -23.49 -23.48	
20.0000 MHz	-33.00 -44.10 -32.40	
File Operation Status, A:\BW100R54.GIF f	ile saved	





CH100 802.11n Adjacent Channel Leakage Power (MCS7)

₩ Agilent 11:27:24 Jun 7, 2013	Meas Control
Ch Freq 5.6 GHz Trig Free Adj Channel Power PASS	Restart
▲ Mkr1 388.97 MHz	<b>Measure</b> Single <u>Cont</u>
Ref 2.567 dBm         #Atten 28 dB         24.63 dB           #Avg	Resume
Center 5.600 00 GHz Span 100 MHz	
*Res DW 300 KH2         *VDW 300 KH2         Sweep 4.24 ms (001 pts)           RMS Results         Freq Offset         Ref BW         dBc         Lower dBm         dBc         Upper dBm           Carrier Power         20.00 MHz         18.00 MHz         -27.02         -17.42         -26.66         -17.06           0 F0 dPm         48.00 MHz         18.00 MHz         -27.02         -27.42         -26.66         -17.06	
20.0000 MHz	
File Operation Status, A:\RW120R54 GIF file saved	





CH120 802.11n Adjacent Channel Leakage Power (MCS7)

₩ Agilent 11:41:43 Jun 7, 2013	Meas Control
Ch Freq 5.7 GHz Trig Free Adj Channel Power PASS	Restart
▲ Mkr1 488.97 MHz	<b>Measure</b> Single <u>Cont</u>
Ref 2.567 dBm         #Atten 28 dB         21.25 dB           #Avg	Resume
Start 5.650 00 GHz Stop 5.750 00 GHz	
#Kes BW 300 KHZ         #VBW 300 KHZ         Sweep 4.24 ms (601 pts)           RMS Results Freq Offset         Ref BW         dBc         Lower dBm         dBc         Upper dBm           Carrier Power         20.00 MHz         18.00 MHz         -32.58         -26.10         -33.17         -26.69           Carrier Power         40.00 MHz         18.00 MHz         -30.98         -44.49         -56.64         -44.17	
20.0000 MHz	
File Operation Status, A:\BW140R54.GIF file saved	





CH140 802.11n Adjacent Channel Leakage Power (MCS7)

# Appendix C:

# Additional Test and Sample Details

This appendix contains details of:

- 1. The samples submitted for testing.
- 2. Details of EUT operating mode(s)
- 3. Details of EUT configuration(s) (see below).
- 4. EUT arrangement (see below).

Throughout testing, the following numbering system is used to identify the sample and it's modification state:

Sample No:	Sxx Mod w
------------	-----------

where:

хх	= sample number	eg. S01
w	= modification number	eg. Mod 2

The following terminology is used throughout the test report:

**Support Equipment (SE)** is any additional equipment required to exercise the EUT in the applicable operating mode. Where relevant SE is divided into two categories:

SE in test environment: The SE is positioned in the test environment and is not isolated from the EUT (e.g. on the table top during REFE testing).

SE isolated from the EUT: The SE is isolated via filtering from the EUT. (e.g. equipment placed externally to the ALSR during REFE testing).

EUT configuration refers to the internal set-up of the EUT. It may include for example:

Positioning of cards in a chassis. Setting of any internal switches. Circuit board jumper settings. Alternative internal power supplies.

Where no change in EUT configuration is **possible**, the configuration is described as "single possible configuration".

**EUT arrangement** refers to the termination of EUT ports / connection of support equipment, and where relevant, the relative positioning of samples (EUT and SE) in the test environment.

For further details of the test procedures and general test set ups used during testing please refer to the related document "EMC Test Methods - An Overview", which can be supplied by TRaC telecoms & Radio upon request.

# C1) Test samples

The following samples of the apparatus were submitted by the client for testing :

Sample No.	Description	Identification
TRA-007055S17	Wi-i.MX53	55001661-01
TRA-007055S18	Bec In-Line PSU	AP1212-1 01 Rev.B

The following samples of apparatus were supplied by TRaC Telecoms & Radio as support or drive equipment (auxiliary equipment):

Identification	Description
REF1270	Variac

# C2) EUT Operating Mode During Testing.

During testing, the EUT was exercised as described in the following tables :

Test	Description of Operating Mode
	EUT was transmitting on software power setting 53, 100% duty cycle using the following operating modes :
	Operating band: 5.150 to 5.250GHz band, 5.250 GHz to 5.350 GHz, 5.470 to 5.725 GHz and 5.725 to 5.825GHz bands
All tests detailed in this report excluding: RX emissions	802.11a (OFDM): Channels 36, 48 and 64 with data rates: 6Mbps & 54Mbps 802.11n (20MHz): (OFDM):Channels 36, 48 and 64 using a single spatial stream with a modulation and coding scheme (MCS) 0 & 7
	802.11a (OFDM): Channels 100, 120 and 140 with data rates: 6Mbps & 54Mbps 802.11n (20MHz): (OFDM): Channels 100, 120 and 140 using a single spatial stream with a modulation and coding scheme (MCS) 0 & 7
RX emissions	The EUT was in continuous Receive mode

# C3) EUT Configuration Information.

The EUT was submitted for testing in one single possible configuration.

## C4) List of EUT Ports.

Sample	: TRA-007055S17
Tests	: All tests listed within this test report.

Port	Description of Cable Attached	Cable length	Equipment Connected
Power, control and signals	None	N/A	None
dc power port	2 core unscreened	1m	PSU
Ethernet 1	None	N/A	None
Ethernet 2	Cat 5e UTP	>3m	Laptop
USB	None	N/A	None
Serial	None	N/A	None
BAT IN	None	N/A	None

The only active interface that is used by the EUT under normal operation is the Ethernet port. The other interfaces are only used to set up the support board, which is not EUT.

# C5) Details of Equipment Used.

TRAC Ref	Туре	Description	Manufacturer	Date Calibrated.
RFG031/032/171	436A/8482A/8481D	Power Meter/Head	HP	04/10/10
REF845	E8257D	PSG Signal generator	Agilent	19/02/10
REF837	E4440A	PSA Spectrum Analyser	Agilent	10/05/13
REF847	ESU	EMI Test Receiver (Spectrum analyser)	Rhode & Schwarz	14/06/10
RFG454	SMA	HF cable (SMA to SMA)	Utiflex	04/05/10
REF887	34405A	Digital Multi-meter	Agilent	25/08/10
REF1270	N/A	VARIAC	TRaC	CAL date N/A

# **Appendix D: Additional Information**

Manufacturer's data sheet detailing the maximum gain used by the EUT.



### Application

This tri-band high-gain dipole antenna is an ideal solution for dual or tri-band WLAN access points operating in the ISM 2.45GHz or UNII/III 5.2/5.8GHz bands.

Two antennas may be deployed for diversity antenna applications/requirements.

These antennas are available in a variety of standard coaxial terminations or optionally as a "snap-in" mounted version. Please contact <u>wireless@worldproducts.com</u> with your specific requirements.

#### Figure 1. Return Loss (2.4GHz)



#### Figure 2. V.S.W.R (2.4GHz)



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### Figure 3. Return Loss (5.0GHz)



# WPANTE3 Series



Figure 5. Return Loss (2.0 & 5.0GHz)

20 dB 2.5	GHz						- 8:	-12.01 dB
								5.85 GHz
							¥1:	-25.60 dB
								2.4 GHz
							V2:	-17.91 dB
								2,45 942
$\sim$				$\sim$	-		V3:	-12.04 dB
	<u>^</u>	$\sim$	$\sim$		- \			2.5 GHz
	$\sim$		~				V44 /	-28,48 dB
					(	-		5 15 (20)
						∲ ≦	Ve.	V
17								-17.24 dB
11								5.35 GHz
1						$M \rightarrow$	*6:	-15.77 dB
. V						4	_	5.25 GHz
-10 dB/								-13.37 dB
								5.725 GHz
								1
-80 dB								
Date:	16.JUL.03	12:43:56						

## Figure 6. V.S.W.R (2.0 & 5.0GHz)



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**WPANTE3 Series** 



Figure 11. H-Plane (2.0 & 5.0GHz)



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**WPANTE3 Series** 



### **Mechanical Properties**

Item	Property			
Color	Black/Gray			
Coaxial-Cable	RG-178			
Plastic Cover	TPU			
Antenna Base	PC			
Connector	SMA/TNC/BNC			
Operation Temperature : -20~+65°C				

Storage Temperature : -20~+65°C

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# **WPANTE3 Series**

## **Environmental Characteristics**

Item	Test Condition	Specification
High Temperature/Humidity Operating test	1. Temperature: +60 ± 2°C 2. Humidity: 90~95%RH 3. Time: 24hrs	1. Normal function. Test must be satisfied after the test.
Low Temperature/Humidity Operating test	1. Temperature: +20 ± 2°C 2. Humidity: 0%RH 3. Time: 24hrs	2. No material deformation is allowed.
High Temperature/Humidity Storage	1. Temperature: +65 ± 2°C 2. Humidity: 90~95%RH 3. Time: 72hrs	
Low Temperature/Humidity Storage	<ol> <li>Temperature: +20 ± 2°C</li> <li>Humidity: 0%RH</li> <li>Time: 24hrs</li> </ol>	
Temperature Cycle Operating Test	<ol> <li>Temperature: -40~+75°C</li> <li>Duration:         <ul> <li>88 Hours</li> <li>45min./dwelling@-40°C</li> <li>10°C per min./transition from 40~75°C</li> <li>45min./dwelling@ 75°C</li> </ul> </li> </ol>	-
Temperature Shock Test	<ol> <li>Temperature: -40~+85°C</li> <li>TIME: 30min./dwelling,</li> <li>5minutes/transition, 24 cycles</li> </ol>	

## **Physical Dimensions**



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Software settings used for both modes of modulation to determine the maximum power used by the device. Antenna port A and B was assed for the highest output power to determine the software settings within this test report.

Antenna Port A/B: Operating mode 802.11a			
Software Output Power settings			
Mode	Declared operating frequency (MHz)	Software Output Power settings	
802.11a			
CH36	5180MHz	53	
CH48	5240MHz	53	
CH64	5320MHz	53	
CH100	5500MHz	53	
CH120	5600MHz	53	
CH140	5700MHz	53	

# Antenna Port A/B: Operating mode 802.11n

# Software Output Power settings

Mode 802.11n	Declared operating frequency (MHz)	Software Output Power settings
CH36	5180MHz	53
CH48	5240MHz	53
CH64	5320MHz	53
CH100	5500MHz	53
CH120	5600MHz	53
CH140	5700MHz	53

## Appendix E:

### **Photographs and Figures**

- 1. Photo of the EUT Front view -length dimension
- 2. Photo of the DUT Rear view
- 3. Photo of the DUT Side view
- 4. Photo of the EUT Front view width dimension



Photograph 1



Photograph 2



Photograph 3



Photograph 4



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