

15.247(d) Radiated Spurious Emissions

Test Data Sheets

Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249 - 1170

Customer: Specification:	Digital Path FCC 15.247 (d) (FCC 15.205 restrict	ted band) (15.209)	
Work Order #:	92682	Date:	5/31/2012
Test Type:	Radiated Scan	Time:	17:20:17
Equipment:	5GHz Panel (23 dBi)	Sequence#:	212
Manufacturer:	Digital Path	Tested By:	E. Wong
Model:	G5RL10E		
S/N:	EMI 3		

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	AN02668	Spectrum Analyzer	E4446A	2/23/2011	2/23/2013
T2	AN02157	Horn Antenna-ANSI C63.5	3115	1/17/2011	1/17/2013
Т3	AN03302	Cable	32026-29094K- 29094K-72TC	3/21/2012	3/21/2014
T4	ANP01210	Cable	FSJ1P-50A-4A	3/15/2011	3/15/2013
T5	ANP05913	Cable	32022-29094K- 65TC	8/30/2011	8/30/2013
T6	AN03114	Preamp	AMF-7D- 00101800-30-10P	5/13/2011	5/13/2013
T7	AN01417	High Pass Filter	84300-80039	2/9/2012	2/9/2014
Τ8	AN02694	Active Horn Antenna-ANSI C63.5 Antenna Factors (dB)	AMFW-5F- 18002650-20-10P	11/10/2010	11/10/2012
	AN02695	Active Horn Antenna-ANSI C63.5 Antenna Factors (dB)	AMFW-5F- 260400-33-8P	11/10/2010	11/10/2012
Т9	ANP05911	Cable	32022-29094K- 65TC	8/30/2011	8/30/2013
	AN00730	Preamp		1/31/2011	1/31/2013
	AN00432	Loop Antenna	6502	3/31/2011	3/31/2013
	AN00852	Biconilog Antenna	CBL 6111C	11/16/2010	11/16/2012
	ANP05299	Cable	RG214	3/6/2011	3/6/2013
	ANP05300	Cable	RG214/U	3/7/2011	3/7/2013
	ANP05440	Cable		3/7/2011	3/7/2013



Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
5GHz Panel (23 dBi)*	Digital Path	G5RL10E	EMI 3
Support Devices:			
Function	Manufacturer	Model #	S/N
Laptop Computer	HP	ProBook 6565b	5CB13637ZF

Test Conditions / Notes:

The EUT installed on a pole as intended. DC power port is connected to a DC power supply via a CAT5 cable. The Ethernet port is connected to a remote laptop via unshielded twisted pair.

The Remote laptop is running test software to exercise the intended functionalities. Receiver circuit is active.

Vertical polarity of the antenna is connected to Card 1, Ant port 2 Horizontal polarity of the antenna is connected to Card 1, Ant port 0

Radio 0, OFF Radio 1, TX

Point to Point

5725-5850MHz Freq: 5735MHz, 5785MHz, 5840MHz. BW = 10 MHz 802.11a: 24Mbps, TX power setting= 21, 21,18.5 802.11n: 13MCS HT20 2S,TX power setting = 21,21,18.5

Freq: 5740MHz, 5785MHz, 5835MHz. BW= 20MHz

802.11a: 36 Mbps, TX power setting = 22, 20.5, 20.5 802.11n: 26MCS HT20 2S, TX power setting=22, 20.5, 20.5

Temperature: 21.9°C, Relative Humidity: 38-43%, Atmospheric Pressure: 101.5kPa

Frequency range of measurement = 9kHz-40GHz.

9 kHz -150 kHz; RBW=200 Hz, VBW=200 Hz;150 kHz-30 MHz; RBW=9 kHz, VBW=9 kHz;30 MHz-1000 MHz; RBW=120 kHz, VBW=120 kHz,1000 MHz-40,000 MHz; RBW=1 MHz, VBW=1 MHz.

Ext	Attn: 0 dB										
Meas	urement Data:	Re	eading list	ted by ma	argin.		Τe	est Distance	e: 3 Meters		
#	Freq	Rdng	T1	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
			T5	T6	T7	T8					
			T9								
	MHz	dBµV	dB	dB	dB	dB	Table	$dB\mu V/m$	$dB\mu V/m$	dB	Ant
1	11680.000	58.2	+0.0	+38.8	+2.4	+7.0	+0.0	52.1	54.0	-1.9	Vert
	Μ		+2.2	-56.5	+0.0	+0.0					
	Ave		+0.0						10MHz 80	2.11n	
									13MCSHT	202S	
^	11680.000	71.1	+0.0	+38.8	+2.4	+7.0	+0.0	65.0	54.0	+11.0	Vert
	Μ		+2.2	-56.5	+0.0	+0.0					
			+0.0						10MHz 80	2.11n	
									13MCSHT	202S	



3	11570.500	55.9	+0.0	+38.8	+2.4	+6.9	+0.0	49.5	54.0	-4.5	Vert
	Μ		+2.2	-56.7	+0.0	+0.0					
	Ave		+0.0						10MHz 802		
									13MCSHT2		
^	11570.500	68.2	+0.0	+38.8	+2.4	+6.9	+0.0	61.8	54.0	+7.8	Vert
	Μ		+2.2	-56.7	+0.0	+0.0					
			+0.0						10MHz 802		
									13MCSHT2		
5	22936.000	61.3	+0.0	+0.0	+0.0	+0.0	+0.0	49.0	54.0	-5.0	Vert
	. M		+0.0	+0.0	+0.0	-16.6			101 01 000		
	Ave		+4.3						10MHz 802	.11a	
	22026000			0.0		0.0	0.0		24Mbps	10.0	
^	22936.000	76.5	+0.0	+0.0	+0.0	+0.0	+0.0	64.2	54.0	+10.2	Vert
	М		+0.0	+0.0	+0.0	-16.6			101/11 002	. 1 1	
			+4.3						10MHz 802	.11a	
7	11467.600	54.6	+0.0	+38.7	+2.3	+6.9	+0.0	48.3	24Mbps 54.0	-5.7	Vert
'	M	54.0	+0.0 +2.2	+38.7 -56.4	+2.3 +0.0	+0.9 +0.0	± 0.0	40.3	54.0	-3.7	ven
	Ave		+2.2 +0.0	-30.4	± 0.0	± 0.0			10MHz 802	11n	
	1100		10.0						13MCSHT2		
^	11467.600	69.5	+0.0	+38.7	+2.3	+6.9	+0.0	63.2	54.0	+9.2	Vert
	M	07.5	+2.2	-56.4	+0.0	+0.0	10.0	05.2	54.0	19.2	vent
	111		+0.0	50.1	10.0	10.0			10MHz 802	.11n	
									13MCSHT2		
9	22936.000	58.2	+0.0	+0.0	+0.0	+0.0	+0.0	45.9	54.0	-8.1	Horiz
-	М		+0.0	+0.0	+0.0	-16.6				0.12	
	Ave		+4.3						10MHz 802	.11a	
									24Mbps		
^	22936.000	72.5	+0.0	+0.0	+0.0	+0.0	+0.0	60.2	54.0	+6.2	Horiz
	Μ		+0.0	+0.0	+0.0	-16.6					
			+4.3						10MHz 802	.11a	
									24Mbps		
11	11669.500	52.0	+0.0	+38.8	+2.4	+7.0	+0.0	45.8	54.0	-8.2	Vert
	Μ		+2.2	-56.6	+0.0	+0.0					
			+0.0						20MHz 802		
									26MCSHT2		
12	11569.100	52.0	+0.0	+38.8	+2.4	+6.9	+0.0	45.6	54.0	-8.4	Horiz
	M		+2.2	-56.7	+0.0	+0.0			A AA MA A A A A		
	Ave		+0.0						20MHz 802	.11a	
<u> </u>	11560 100	(5.2	.0.0	. 20. 0			.0.0	50.0	36Mbps	. 1.0	
^	11569.100	65.2	+0.0	+38.8	+2.4	+6.9	+0.0	58.8	54.0	+4.8	Horiz
	М		+2.2	-56.7	+0.0	+0.0			201411 002	11.	
			+0.0						20MHz 802	.11a	
1.4	11570.600	51.4		+38.8	12.4	160	+0.0	45.0	36Mbps 54.0	-9.0	Horiz
14	M	31.4	$^{+0.0}_{+2.2}$	+38.8 -56.7	+2.4 +0.0	+6.9 +0.0	+0.0	45.0	54.0	-9.0	HOLIZ
	Ave		+2.2 +0.0	-30.7	+0.0	+0.0			10MHz 802	11n	
	AVU		± 0.0						24Mbps		
^	11570.600	63.6	+0.0	+38.8	+2.4	+6.9	+0.0	57.2	24100ps 54.0	+3.2	Horiz
	M	05.0	+0.0 +2.2	+38.8 -56.7	+2.4 +0.0	+0.9 +0.0	± 0.0	51.2	54.0	<i>⊤J.</i> ∠	TIOUZ
	141		+2.2 +0.0	50.7	10.0	10.0			10MHz 802	.11n	
			. 0.0						24Mbps		
L									2 1110 ps		



16	11668.000	48.5	+0.0	+38.8	+2.4	+7.0	+0.0	42.3	54.0	-11.7	Vert
	М		+2.2	-56.6	+0.0	+0.0			20141 000		
	Ave		+0.0						20MHz 802	2.11a	
•	11660.000	(0.1	0.0	20.0	2.1		0.0		36Mbps	1.0	X 7 .
Λ	11668.000	62.1	+0.0	+38.8	+2.4	+7.0	+0.0	55.9	54.0	+1.9	Vert
	М		+2.2 +0.0	-56.6	+0.0	+0.0			20MHz 802	11.	
			+0.0						36Mbps	2.11a	
10	11571.400	48.6	+0.0	+38.8	12.4	16.0		42.2	54.0	11.0	Horiz
10	M	48.0	+0.0 +2.2	+38.8 -56.7	+2.4 +0.0	+6.9 +0.0	+0.0	42.2	54.0	-11.8	HOLIZ
	Ave		+2.2 +0.0	-30.7	± 0.0	± 0.0			10MHz 802) 11n	
	1100		10.0						13MCSHT		
۸	11571.400	62.0	+0.0	+38.8	+2.4	+6.9	+0.0	55.6	54.0	+1.6	Horiz
	M	02.0	+2.2	-56.7	+0.0	+0.0	10.0	55.0	54.0	11.0	HOHZ
	101		+0.0	50.7	10.0	10.0			10MHz 802	2.11n	
			10.0						13MCSHT		
20	11569.800	48.2	+0.0	+38.8	+2.4	+6.9	+0.0	41.8	54.0	-12.2	Horiz
10	М		+2.2	-56.7	+0.0	+0.0					
	Ave		+0.0						20MHz 802	2.11n	
									26MCSHT		
^	11569.800	65.3	+0.0	+38.8	+2.4	+6.9	+0.0	58.9	54.0	+4.9	Horiz
	Μ		+2.2	-56.7	+0.0	+0.0					
			+0.0						20MHz 802	2.11n	
									26MCSHT	202S	
22	11479.819	48.1	+0.0	+38.7	+2.3	+6.9	+0.0	41.7	54.0	-12.3	Horiz
	Μ		+2.2	-56.5	+0.0	+0.0					
	Ave		+0.0						20MHz 802		
									26MCSHT		
^	11479.819	63.8	+0.0	+38.7	+2.3	+6.9	+0.0	57.4	54.0	+3.4	Horiz
	М		+2.2	-56.5	+0.0	+0.0			20141 000		
			+0.0						20MHz 802		
24	11470.000	16.0	.0.0	. 20.7	. 2. 2		.0.0	10 5	26MCSHT		II!
24	11470.000	46.8	+0.0	+38.7	+2.3	+6.9	+0.0	40.5	54.0	-13.5	Horiz
	M Ave		+2.2 +0.0	-56.4	+0.0	+0.0			10MHz 802) 11n	
	Ave		+0.0						13MCSHT		
Δ	11470.000	60.8	+0.0	+38.7	+2.3	+6.9	+0.0	54.5	54.0	+0.5	Horiz
	M	00.0	+0.0 +2.2	+38.7 -56.4	+2.3 +0.0	+0.9 $+0.0$	10.0	54.5	J 4 .0	±0.3	TIOUT
	171		+2.2 +0.0	50.7	10.0	10.0			10MHz 802	2.11n	
			10.0						13MCSHT		
26	11670.000	45.9	+0.0	+38.8	+2.4	+7.0	+0.0	39.7	54.0	-14.3	Horiz
	М		+2.2	-56.6	+0.0	+0.0		- /			
	Ave		+0.0						20MHz 802	2.11a	
									36Mbps		
^	11670.000	59.3	+0.0	+38.8	+2.4	+7.0	+0.0	53.1	54.0	-0.9	Horiz
	Μ		+2.2	-56.6	+0.0	+0.0					
			+0.0						20MHz 802	2.11a	
<u>.</u>									36Mbps		
28	11669.800	45.7	+0.0	+38.8	+2.4	+7.0	+0.0	39.5	54.0	-14.5	Horiz
	М		+2.2	-56.6	+0.0	+0.0					
	Ave		+0.0						20MHz 802		
									26MCSHT	202S	



11669.800	61.3	+0.0	+38.8	+2.4	+7.0	+0.0	55.1	54.0	+1.1	Horiz
М		+2.2 +0.0	-56.6	+0.0	+0.0					
	45.2					+0.0	38.8	54.0	-15.2	Vert
			-30.7	± 0.0	± 0.0			20MHz 802	2.11a	
								36Mbps		
	56.9					+0.0	50.5	54.0	-3.5	Vert
М			-56./	+0.0	+0.0			201411- 202	0.11.	
		+0.0							2.11a	
11679.000	44.4	+0.0	+38.8	+2.4	+7.0	+0.0	38.3	<u>*</u>	-15.7	Horiz
						10.0	50.5	5110	10.7	HOLL
Ave		+0.0						10MHz 802	2.11n	
								24Mbps		
11679.000	58.7	+0.0	+38.8	+2.4	+7.0	+0.0	52.6	54.0	-1.4	Horiz
Μ			-56.5	+0.0	+0.0					
		+0.0							2.11n	
11495 246	44.4		129.7	12.4	16.0		29.1	<u>*</u>	15.0	Vert
	44.4					+0.0	36.1	54.0	-13.9	ven
			-50.5	10.0	10.0			20MHz 802	2.11n	
		1010								
11485.346	56.6	+0.0	+38.7	+2.4	+6.9	+0.0	50.3	54.0	-3.7	Vert
Μ		+2.2	-56.5	+0.0	+0.0					
		+0.0								
	10.0									
	43.8					+0.0	37.5	54.0	-16.5	Vert
			-30.4	+0.0	+0.0			10MU - 80) 11n	
AVC		± 0.0							2.1111	
11467.400	56.5	+0.0	+38.7	+2.3	+6.9	+0.0	50.2		-3.8	Vert
Μ		+2.2	-56.4	+0.0	+0.0					
		+0.0							2.11n	
								-		
	43.6				+6.9	+0.0	37.2	54.0	-16.8	Vert
			-56.7	+0.0	+0.0			10111-00	0.11m	
110		+0.0							2.1111	
11567.400	57.0	+0.0	+38.8	+2.4	+6.9	+0.0	50.6		-3.4	Vert
	21.0					10.0	20.0	0110	5.1	, 011
		+0.0						10MHz 802	2.11n	
								24Mbps		
11677.500	43.3	+0.0	+38.8	+2.4	+7.0	+0.0	37.2	54.0	-16.8	Horiz
			-56.5	+0.0	+0.0			101 (11 000		
Ave		+0.0						10MHz 802	2.11n	
								24Mbps		
11677 500	560		1200	104			100	510	/ 1	
11677.500 M	56.0	+0.0 +2.2	+38.8	+2.4	+7.0	+0.0	49.9	54.0	-4.1	Horiz
11677.500 M	56.0	+0.0 +2.2 +0.0	+38.8 -56.5	+2.4 +0.0	+7.0 +0.0	+0.0	49.9	54.0 10MHz 802		Horiz
	M 11569.000 M Ave 11569.000 M 11679.000 M 11485.346 M 11485.346 M 11467.400 M Ave 11467.400 M 11567.400 M 11567.400 M 11567.400 M 11567.400 M 11567.400 M	M 11569.000 45.2 M Ave 11569.000 56.9 M 11679.000 44.4 M Ave 11679.000 58.7 M 11485.346 44.4 M Ave 11485.346 56.6 M 11467.400 43.8 M Ave 11567.400 56.5 M 11567.400 57.0 M 11567.400 43.3	$\begin{array}{cccccccccccccccccccccccccccccccccccc$							



42	11680.380	42.7	+0.0	+38.8	+2.4	+7.0	+0.0	36.6	54.0	-17.4	Horiz
	Μ		+2.2	-56.5	+0.0	+0.0					
	Ave		+0.0						10MHz 802	2.11n	
									13MCSHT	202S	
۸	11680.380	57.5	+0.0	+38.8	+2.4	+7.0	+0.0	51.4	54.0	-2.6	Horiz
	М		+2.2	-56.5	+0.0	+0.0					
			+0.0						10MHz 802	2.11n	
									13MCSHT		
44	11480.000	42.0	+0.0	+38.7	+2.3	+6.9	+0.0	35.6	54.0	-18.4	Horiz
	М		+2.2	-56.5	+0.0	+0.0					
	Ave		+0.0						20MHz 802	2.11a	
									36Mbps		
٨	11480.000	55.5	+0.0	+38.7	+2.3	+6.9	+0.0	49.1	54.0	-4.9	Horiz
	M	55.5	+2.2	-56.5	+0.0	+0.0	10.0	17.1	51.0	1.2	HOLL
	101		+0.0	50.5	10.0	10.0			20MHz 802	2 119	
			10.0						36Mbps	2.11a	
16	11477.900	41.9	+0.0	+38.7	+2.3	+6.9	+0.0	35.5	54.0	-18.5	Vert
40	M	41.9	+0.0 +2.2	-56.5	+2.3 +0.0	+0.9 +0.0	± 0.0	55.5	54.0	-10.5	ven
	Ave		+2.2 +0.0	-50.5	± 0.0	± 0.0			20MHz 802	7 11 ₀	
	Ave		+0.0						36Mbps	2.11a	
^	11477.000	55 (10.0	1207	10.2		.0.0	40.2	<u> </u>	1.0	Vert
Х	11477.900	55.6	+0.0	+38.7	+2.3	+6.9	+0.0	49.2	54.0	-4.8	Vert
	М		+2.2	-56.5	+0.0	+0.0			20141 00	2 1 1	
			+0.0						20MHz 802	2.11a	
									36Mbps		
48	11570.000	41.9	+0.0	+38.8	+2.4	+6.9	+0.0	35.5	54.0	-18.5	Vert
	Μ		+2.2	-56.7	+0.0	+0.0					
	Ave		+0.0						20MHz 802		
									26MCSHT	202S	
^	11570.000	57.6	+0.0	+38.8	+2.4	+6.9	+0.0	51.2	54.0	-2.8	Vert
	Μ		+2.2	-56.7	+0.0	+0.0					
			+0.0						20MHz 802	2.11n	
									26MCSHT	202S	
50	11679.125	40.7	+0.0	+38.8	+2.4	+7.0	+0.0	34.6	54.0	-19.4	Vert
	М		+2.2	-56.5	+0.0	+0.0					
	Ave		+0.0						10MHz 802	2.11n	
									24Mbps		
^	11679.125	54.0	+0.0	+38.8	+2.4	+7.0	+0.0	47.9	54.0	-6.1	Vert
	M	2 110	+2.2	-56.5	+0.0	+0.0			2 110	0.1	
	-		+0.0	2010		. 0.0			10MHz 802	2.11n	
			10.0						24Mbps		
52	23358.000	71.6	+0.0	+0.0	+0.0	+0.0	+0.0	59.1	113.0	-53.9	Vert
52	23338.000 M	/1.0	+0.0 $+0.0$	$^{+0.0}_{+0.0}$	+0.0 $+0.0$	+0.0 -16.9	10.0	59.1	115.0	-55.7	vert
	111		+0.0 +4.4	± 0.0	± 0.0	-10.7			10MHz 802	7 11e	
			+4.4							2.11d	
50	17251 000	50 4		12.0	.20	+ 10.0	.0.0	55 A	24Mbps	57 6	V
55	17351.000	52.4	+0.0	+43.2	+3.0	+10.0	+0.0	55.4	113.0	-57.6	Vert
	М		+2.9	-56.9	+0.8	+0.0			101411 00	2.11	
	Ave		+0.0						10MHz 802	2.11n	
									24Mbps		



54	17520.000	51.1	+0.0	+44.3	+3.0	+10.4	+0.0	55.2	113.0	-57.8	Vert
	Μ		+3.0	-57.4	+0.8	+0.0					
	Ave		+0.0						10MHz 802 24Mbps	.11n	
^	17520.000	63.9	+0.0	+44.3	+3.0	+10.4	+0.0	68.0	113.0	-45.0	Vert
	Μ		+3.0	-57.4	+0.8	+0.0					
			+0.0						10MHz 802 24Mbps	.11n	
56	17501.500	48.4	+0.0	+44.2	+3.0	+10.4	+0.0	52.4	113.0	-60.6	Vert
	Μ		+3.0	-57.4	+0.8	+0.0					
	Ave		+0.0						20MHz 802	.11a	
	17501 500	(1.)	.0.0		.2.0	. 10.4	.0.0	(5.2	36Mbps	47.0	Mart
^	17501.500	61.2	$^{+0.0}_{+3.0}$	+44.2 -57.4	+3.0 +0.8	$^{+10.4}_{+0.0}$	+0.0	65.2	113.0	-47.8	Vert
	Μ		+5.0 +0.0	-37.4	+0.8	+0.0			20MHz 802	110	
			± 0.0						2010112 802 36Mbps	.11a	
58	17351.871	49.2	+0.0	+43.2	+3.0	+10.0	+0.0	52.2	113.0	-60.8	Vert
	М		+2.9	-56.9	+0.8	+0.0					
	Ave		+0.0						10MHz 802	.11n	
									13MCSHT2	202S	
^	17351.871	62.4	+0.0	+43.2	+3.0	+10.0	+0.0	65.4	113.0	-47.6	Vert
	Μ		+2.9	-56.9	+0.8	+0.0					
			+0.0						10MHz 802		
(0)	17500.000	16.0	0.0	44.2	2.0	10.4	0.0	50.0	13MCSHT2		
60		46.2	+0.0	+44.3	+3.0	+10.4	+0.0	50.3	113.0	-62.7	Horiz
	M Ave		+3.0 +0.0	-57.4	+0.8	+0.0			10MHz 802	11n	
	Ave		± 0.0						24Mbps		
^	17520.000	58.8	+0.0	+44.3	+3.0	+10.4	+0.0	62.9	113.0	-50.1	Horiz
	M	0010	+3.0	-57.4	+0.8	+0.0		02.0	11010	0011	110112
			+0.0						10MHz 802	.11n	
									24Mbps		
62	23358.000	62.6	+0.0	+0.0	+0.0	+0.0	+0.0	50.1	113.0	-62.9	Horiz
	Μ		+0.0	+0.0	+0.0	-16.9					
			+4.4						10MHz 802	.11a	
	17255 000	47.0	.0.0	. 42.2	.2.0	. 10.0	.0.0	50.0	24Mbps	(2.0	II. !
63	17355.000 M	47.0	+0.0	+43.2	+3.0	+10.0	+0.0	50.0	113.0	-63.0	Horiz
	M Ave		+2.9 +0.0	-56.9	+0.8	+0.0			10MHz 802	11n	
	AVU		+0.0						24Mbps		
^	17355.000	59.6	+0.0	+43.2	+3.0	+10.0	+0.0	62.6	113.0	-50.4	Horiz
	M		+2.9	-56.9	+0.8	+0.0				• •	
			+0.0						10MHz 802	.11n	
									24Mbps		
65	17504.750	45.9	+0.0	+44.2	+3.0	+10.4	+0.0	49.9	113.0	-63.1	Horiz
	М		+3.0	-57.4	+0.8	+0.0					
	Ave		+0.0						20MHz 802		
	48804 550				• •	40.4	0.0		26MCSHT2		
^	17501.750	59.5	+0.0	+44.2	+3.0	+10.4	+0.0	63.5	113.0	-49.5	Horiz
	М		+3.0 +0.0	-57.4	+0.8	+0.0			20MHz 802	11n	
			± 0.0						20MHZ 802 26MCSHT2		
									20101031112	2020	



	17240.000	1.5.0	0.0	10.1	a a	10.0	0.0	40.0	112.0	(2.2	* *
67	17348.000 M	46.9	+0.0	+43.1	+3.0	+10.0	+0.0	49.8	113.0	-63.2	Vert
	М		+2.9 +0.0	-56.9	+0.8	+0.0			20MHz 802	2 1 1 m	
	Ave		+0.0						20MH2 80. 26MCSHT		
٨	17348.000	60.4	+0.0	+43.1	+3.0	+10.0	+0.0	63.3	113.0	-49.7	Vert
	М		+2.9	-56.9	+0.8	+0.0				.,	
			+0.0						20MHz 802	2.11n	
									26MCSHT	202S	
69		48.5	+0.0	+42.1	+3.0	+9.8	+0.0	49.8	113.0	-63.2	Vert
	Μ		+2.9	-57.2	+0.7	+0.0					
	Ave		+0.0						10MHz 802	2.11n	
٨	17205 000	(1.0	.0.0	. 40.1	.2.0	.0.0	.0.0	(2.2	24Mbps	40.0	Maria
Λ	17205.000 M	61.9	$^{+0.0}_{+2.9}$	+42.1 -57.2	+3.0 +0.7	+9.8 +0.0	+0.0	63.2	113.0	-49.8	Vert
	IVI		+2.9 +0.0	-37.2	+0.7	+0.0			10MHz 802	7.11n	
			+0.0						24Mbps	2.1111	
71	17351.040	46.6	+0.0	+43.2	+3.0	+10.0	+0.0	49.6	113.0	-63.4	Vert
	М		+2.9	-56.9	+0.8	+0.0					
	Ave		+0.0						20MHz 802	2.11a	
									36Mbps		
۸	17551.000	64.6	+0.0	+43.2	+3.0	+10.0	+0.0	67.6	113.0	-45.4	Vert
	М		+2.9	-56.9	+0.8	+0.0					
			+0.0						10MHz 802	2.11n	
	15251 0.10	7 0.0		10.0	2.0	10.0	0.0	61.0	24Mbps		* *
^	17551.010	58.8	+0.0	+43.2	+3.0	+10.0	+0.0	61.8	113.0	-51.2	Vert
	М		+2.9 +0.0	-56.9	+0.8	+0.0			20MHz 802	2 1 1 0	
			+0.0						36Mbps	2.11a	
74	17519.500	45.3	+0.0	+44.3	+3.0	+10.4	+0.0	49.4	113.0	-63.6	Horiz
	М		+3.0	-57.4	+0.8	+0.0		.,			
	Ave		+0.0						10MHz 802	2.11n	
									24Mbps		
۸	17519.500	59.3	+0.0	+44.3	+3.0	+10.4	+0.0	63.4	113.0	-49.6	Horiz
	М		+3.0	-57.4	+0.8	+0.0					
			+0.0						10MHz 802	2.11n	
76	17518.100	110		+ 1 4 2	12.0	+ 10-4		10.0	24Mbps	611	II.
/0	1/518.100 M	44.8	$^{+0.0}_{+3.0}$	+44.3 -57.4	+3.0 +0.8	$^{+10.4}_{+0.0}$	+0.0	48.9	113.0	-64.1	Horiz
	Ave		+5.0 +0.0	-57.4	+0.0	± 0.0			10MHz 802	2.11n	
	1100		10.0						13MCSHT		
۸	17518.100	57.5	+0.0	+44.3	+3.0	+10.4	+0.0	61.6	113.0	-51.4	Horiz
	М		+3.0	-57.4	+0.8	+0.0					
			+0.0						10MHz 802	2.11n	
									13MCSHT	202S	
78	17517.500	44.6	+0.0	+44.3	+3.0	+10.4	+0.0	48.7	113.0	-64.3	Vert
	Μ		+3.0	-57.4	+0.8	+0.0					
	Ave		+0.0						10MHz 802		
	19518 500		0.0	44.0		10.4	0.0		13MCSHT		X 7
^	17517.500	57.8	+0.0	+44.3	+3.0	+10.4	+0.0	61.9	113.0	-51.1	Vert
	М		+3.0	-57.4	+0.8	+0.0			10MHz 802) 11n	
			+0.0						10MHZ 80. 13MCSHT		
									TUCOLL	2020	



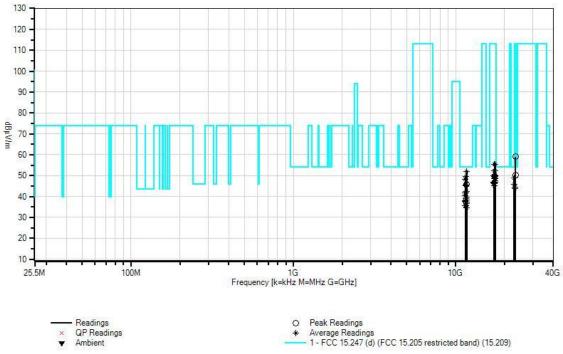
00	17354.300	45.7	+0.0	+43.2	+3.0	+10.0	+0.0	48.7	113.0	-64.3	Homia
80	17354.300 M	43.7	+0.0 +2.9	+43.2 -56.9	+3.0 +0.8	$^{+10.0}_{+0.0}$	+0.0	48./	115.0	-04.3	Horiz
	Ave		+0.0	50.7	10.0	10.0			10MHz 802	2.11n	
									13MCSHT2		
٨	17354.300	60.0	+0.0	+43.2	+3.0	+10.0	+0.0	63.0	113.0	-50.0	Horiz
	Μ		+2.9	-56.9	+0.8	+0.0					
			+0.0						10MHz 802		
	17000.010	47.0		10.2	.2.0		.0.0	10 6	13MCSHT2		Vert
82	17228.019 M	47.0	$^{+0.0}_{+2.9}$	+42.3 -57.2	+3.0 +0.8	+9.8 +0.0	+0.0	48.6	113.0	-64.4	Vert
	Ave		+2.9 +0.0	-51.2	+0.0	± 0.0			20MHz 802	2.11n	
			. 0.0						26MCSHT2		
^	17228.019	58.7	+0.0	+42.3	+3.0	+9.8	+0.0	60.3	113.0	-52.7	Vert
	Μ		+2.9	-57.2	+0.8	+0.0					
			+0.0						20MHz 802		
0.4	17240.012	45.4	.0.0	. 42.2	.2.0	. 10.0	.0.0	40.4	26MCSHT2		II.
84	17348.913 M	45.4	$^{+0.0}_{+2.9}$	+43.2 -56.9	+3.0 +0.8	$^{+10.0}_{+0.0}$	+0.0	48.4	113.0	-64.6	Horiz
	Ave		+2.9 +0.0	-30.9	+0.8	+0.0			20MHz 802	9 11a	
	1110		10.0						26Mhrz 802 36Mbps	u	
^	17348.913	57.3	+0.0	+43.2	+3.0	+10.0	+0.0	60.3	113.0	-52.7	Horiz
	М		+2.9	-56.9	+0.8	+0.0					
			+0.0						20MHz 802	2.11a	
	10010	10 -	<u> </u>		• •	40.4	0.0	1	36Mbps		
86	17510.113 M	43.5	+0.0	+44.3	+3.0	+10.4	+0.0	47.6	113.0	-65.4	Horiz
	M Ave		+3.0 +0.0	-57.4	+0.8	+0.0			20MHz 802) 119	
	AVU		+0.0						20101HZ 802 36Mbps	a	
^	17510.113	56.8	+0.0	+44.3	+3.0	+10.4	+0.0	60.9	113.0	-52.1	Horiz
	Μ		+3.0	-57.4	+0.8	+0.0					
			+0.0						20MHz 802	2.11a	
									36Mbps		
88	17204.200	45.6	+0.0	+42.1	+3.0	+9.8	+0.0	46.9	113.0	-66.1	Vert
	M Ave		+2.9 +0.0	-57.2	+0.7	+0.0			10MHz 802) 11n	
	AVE		± 0.0						13MCSHT2		
^	17204.200	59.2	+0.0	+42.1	+3.0	+9.8	+0.0	60.5	113.0	-52.5	Vert
	M	27.2	+2.9	-57.2	+0.7	+0.0		00.0	11010	02.0	
			+0.0						10MHz 802		
									13MCSHT2		
90	17511.000	42.6	+0.0	+44.3	+3.0	+10.4	+0.0	46.7	113.0	-66.3	Vert
	М		+3.0	-57.4	+0.8	+0.0			201 41 - 227	. 1 1	
1	Ave		+0.0						20MHz 802 26MCSHT2		
^	17511.000	55.3	+0.0	+44.3	+3.0	+10.4	+0.0	59.4	26MCSH12 113.0	-53.6	Vert
	M	55.5	+0.0 +3.0	+44.3 -57.4	+5.0 +0.8	+10.4 +0.0	± 0.0	59.4	113.0	-55.0	veit
	171		+0.0	57.7	10.0	10.0			20MHz 802	2.11n	
									26MCSHT2		
92	17214.819	45.1	+0.0	+42.2	+3.0	+9.8	+0.0	46.5	113.0	-66.5	Horiz
	Μ		+2.9	-57.2	+0.7	+0.0					
	Ave		+0.0						20MHz 802		
									26MCSHT2	202S	



٨	17214 910	50 2		12.2	120	10.8		50.7	112.0	52.2	Harin
~	17214.819 M	58.3	$^{+0.0}_{+2.9}$	+42.2 -57.2	+3.0 +0.7	$^{+9.8}_{+0.0}$	+0.0	59.7	113.0	-53.3	Horiz
	101		+0.0	51.2	10.7	10.0			20MHz 802	.11n	
									26MCSHT2		
94	17204.000	45.1	+0.0	+42.1	+3.0	+9.8	+0.0	46.4	113.0	-66.6	Horiz
	Μ		+2.9	-57.2	+0.7	+0.0					
	Ave		+0.0						10MHz 802		
	17204 000	5 0 1		+ 40-1	+2.0	10.8	.0.0	50.4	13MCSHT2		II.a.e.!
~	17204.000 M	58.1	+0.0 +2.9	+42.1 -57.2	+3.0 +0.7	+9.8 +0.0	+0.0	59.4	113.0	-53.6	Horiz
	IVI		+2.9 +0.0	-57.2	± 0.7	± 0.0			10MHz 802	11n	
									13MCSHT2		
96	17353.300	43.4	+0.0	+43.2	+3.0	+10.0	+0.0	46.4	113.0	-66.6	Horiz
	М		+2.9	-56.9	+0.8	+0.0					
	Ave		+0.0						20MHz 802		
•	17252 200	57.0	.0.0	. 12.0	.2.0	10.0	.0.0	(0.0	26MCSHT2		TT
^	17353.300 M	57.0	+0.0 +2.9	+43.2 -56.9	+3.0 +0.8	$^{+10.0}_{+0.0}$	+0.0	60.0	113.0	-53.0	Horiz
	111		+2.9 +0.0	-30.9	+0.0	± 0.0			20MHz 802	11n	
			10.0						26MCSHT2		
98	17221.500	44.8	+0.0	+42.3	+3.0	+9.8	+0.0	46.3	113.0	-66.7	Horiz
	Μ		+2.9	-57.2	+0.7	+0.0					
	Ave		+0.0						20MHz 802	.11a	
				10.0	• •				36Mbps		
^	17221.500	57.5	$^{+0.0}_{+2.9}$	+42.3 -57.2	+3.0 +0.7	+9.8 +0.0	+0.0	59.0	113.0	-54.0	Horiz
	М		+2.9 +0.0	-57.2	+0.7	+0.0			20MHz 802	119	
			10.0						36Mbps	a	
100	17222.200	43.7	+0.0	+42.3	+3.0	+9.8	+0.0	45.2	113.0	-67.8	Vert
	Μ		+2.9	-57.2	+0.7	+0.0					
	Ave		+0.0						20MHz 802	.11a	
•	17222.200	561	.0.0	. 10.0	.2.0	.0.0	.0.0	57.6	36Mbps	55 A	X 7 4
^	17222.200 M	56.1	$^{+0.0}_{+2.9}$	+42.3 -57.2	+3.0 +0.7	+9.8 +0.0	+0.0	57.6	113.0	-55.4	Vert
	IVI		+2.9 +0.0	-57.2	± 0.7	± 0.0			20MHz 802	11a	
			10.0						36Mbps		
102	23136.000	56.8	+0.0	+0.0	+0.0	+0.0	+0.0	44.4	113.0	-68.6	Vert
	М		+0.0	+0.0	+0.0	-16.7					
	Ave		+4.3						10MHz 802	.11a	
	00106.000	<i>c</i> 0 <i>c</i>	.0.0	. 0. 0	. 0. 0	. 0. 0	.0.0	57 0	24Mbps	66.0	17 .
^	23130.000	69.6	+0.0	+0.0	+0.0	+0.0	+0.0	57.2	113.0	-55.8	Vert
	М		+0.0 +4.3	+0.0	+0.0	-16.7			10MHz 802	11a	
			17.5						24Mbps	u	
104	23136.000	56.1	+0.0	+0.0	+0.0	+0.0	+0.0	43.7	113.0	-69.3	Horiz
	Μ		+0.0	+0.0	+0.0	-16.7					
	Ave		+4.3						10MHz 802	.11a	
									24Mbps		
^	23136.000	69.4	+0.0	+0.0	+0.0	+0.0	+0.0	57.0	113.0	-56.0	Horiz
	М		+0.0	+0.0	+0.0	-16.7			10MHz 802	110	
			+4.3						24Mbps	1a	
L									2-101005		



CKC Laboratories, Inc. Date: 5/31/2012 Time: 17:20:17 Digital Path WO#: 92682 FCC 15:247 (d) (FCC 15:205 restricted band) (15:209) Test Distance: 3 Meters Sequence#: 212 Vert UNII Bands. 20MHz Channel width.



Ambient -



Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249 - 1170

Customer: Specification:	Digital Path FCC 15.247 (d) (FCC 15.205 restri	cted band) (15.209)	
Work Order #:	92682	Date:	6/2/2012
Test Type:	Radiated Scan	Time:	14:27:28
Equipment:	5GHz Parabolic (33 dBi)	Sequence#:	213
Manufacturer:	Digital Path	Tested By:	E. Wong
Model:	G5RL10E		
S/N:	EMI 3		

Test Equipment:

I est Equi	pment:				
ID	Asset #	Description	Model	Calibration I	Date Cal Due Date
T1	AN02668	Spectrum Analyzer	E4446A	2/23/2011	2/23/2013
T2	AN02157	Horn Antenna-ANSI C63.5	3115	1/17/2011	1/17/2013
T3	AN03302	Cable	32026-29094K- 29094K-72TC	3/21/2012	3/21/2014
T4	ANP01210	Cable	FSJ1P-50A-4A	3/15/2011	3/15/2013
T5	ANP05913	Cable	32022-29094K- 65TC	8/30/2011	8/30/2013
T6	AN03114	Preamp	AMF-7D- 00101800-30-10P	5/13/2011	5/13/2013
T7	AN01417	High Pass Filter	84300-80039	2/9/2012	2/9/2014
T8	AN02694	Active Horn Antenna-ANSI C63.5 Antenna Factors (dB)	AMFW-5F- 18002650-20-10P	11/10/2010	11/10/2012
	AN02695	Active Horn Antenna-ANSI C63.5 Antenna Factors (dB)	AMFW-5F- 260400-33-8P	11/10/2010	11/10/2012
Т9	ANP05911	Cable	32022-29094K- 65TC	8/30/2011	8/30/2013
T10	ANP05936	Attenuator	84A-6	10/19/2011	10/19/2013
	AN00730	Preamp		1/31/2011	1/31/2013
	AN00432	Loop Antenna	6502	3/31/2011	3/31/2013
	AN00852	Biconilog Antenna	CBL 6111C	11/16/2010	11/16/2012
	ANP05299	Cable	RG214	3/6/2011	3/6/2013
	ANP05300	Cable	RG214/U	3/7/2011	3/7/2013
	ANP05440	Cable		3/7/2011	3/7/2013
	nt Under Test (*				
Function		Manufacturer	Model #		S/N
5GHz Para	abolic (33 dBi)*	Digital Path	G5RL10E		EMI 3
Support I	Devices:				
Function		Manufacturer	Model #		S/N
Laptop Co		HP	ProBook 6565b)	5CB13637ZF
Laptop Po	wer Supply	HP	608428-002		F12941126327228



Test Conditions / Notes:

The EUT installed on a pole as intended. DC power port is connected to a DC power supply via a CAT5 cable. The Ethernet port is connected to a remote laptop via unshielded twisted pair.

The Remote laptop is running test software to exercise the intended functionalities. Receiver circuit is active.

Vertical polarity of the antenna is connected to Card 1, Ant port 2 Horizontal polarity of the antenna is connected to Card 1, Ant port 0

Radio 0, OFF Radio 1, TX

Point to Point

5725-5850MHz Freq: 5735MHz, 5785MHz, 5840MHz. BW = 10 MHz 802.11a: 24Mbps, TX power setting = 21, 21,18.5 802.11n: 13MCS HT20 2S,TX power setting = 21,21,18.5

Freq: 5740MHz, 5785MHz, 5835MHz. BW= 20MHz 802.11a: 36 Mbps, TX power setting = 22, 20.5, 20.5 802.11n: 26MCS HT20 2S, TX power setting=22, 20.5, 20.5

Temperature: 21.9°C, Relative Humidity: 38-43%, Atmospheric Pressure: 101.5kPa

Frequency range of measurement = 9kHz-40GHz. 9 kHz -150 kHz; RBW=200 Hz, VBW=200 Hz;150 kHz-30 MHz; RBW=9 kHz, VBW=9 kHz;30 MHz-1000 MHz; RBW=120 kHz, VBW=120 kHz,1000 MHz-40,000 MHz; RBW=1 MHz, VBW=1 MHz.

Ext Attn: 0 dB

urement Data:	Re	eading lis	ted by ma	argın.		Te	est Distance	e: 3 Meters				
Freq	Rdng	T1	T2	T3	T4	Dist	Corr	Spec	Margin	Polar		
-	-	T5	T6	T7	T8			-	•			
		T9	T10									
MHz	dBµV	dB	dB	dB	dB	Table	$dB\mu V/m$	$dB\mu V/m$	dB	Ant		
1 11570.000	53.3	+0.0	+38.8	+2.4	+6.9	+0.0	53.0	54.0	-1.0	Vert		
Μ		+2.2	-56.7	+0.0	+0.0							
Ave		+0.0	+6.1					20MHz 802.11n-				
								26MCSHT202S				
11570.000	68.8	+0.0	+38.8	+2.4	+6.9	+0.0	68.5	54.0	+14.5	Vert		
Μ		+2.2	-56.7	+0.0	+0.0							
		+0.0	+6.1					20MHz 80	2.11n-			
								26MCSHT	202S			
3 11471.000	50.9	+0.0	+38.7	+2.3	+6.9	+0.0	50.7	54.0	-3.3	Vert		
Μ		+2.2	-56.4	+0.0	+0.0							
Ave		+0.0	+6.1					10MHz 80	2.11a-			
								24Mbps				
11471.000	63.0	+0.0	+38.7	+2.3	+6.9	+0.0	62.8	54.0	+8.8	Vert		
Μ		+2.2	-56.4	+0.0	+0.0							
		+0.0	+6.1					10MHz 80	2.11a-			
								24Mbps				
	MHz 1 11570.000 M Ave ^ 11570.000 M 3 11471.000 M Ave	Freq Rdng MHz dBμV 1 11570.000 53.3 M Ave ^ 11570.000 68.8 M 68.8 M 50.9 M Ave ^ 11471.000 63.0	$\begin{array}{c ccccc} Freq & Rdng & T1 \\ & T5 \\ & T9 \\ \hline MHz & dB\mu V & dB \\ \hline 1 & 11570.000 & 53.3 & +0.0 \\ M & +2.2 \\ Ave & +0.0 \\ \hline & 11570.000 & 68.8 & +0.0 \\ M & +2.2 \\ H & +0.0 \\ \hline & 11471.000 & 50.9 & +0.0 \\ M & +2.2 \\ Ave & +0.0 \\ \hline & M & +2.2 \\ Ave & +0.0 \\ \hline & M & +2.2 \\ \hline & 11471.000 & 63.0 & +0.0 \\ M & +2.2 \\ \hline & & & & & & & \\ \end{array}$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$						



5 11478.900	50.9	+0.0	+38.7	+2.3	+6.9	+0.0	50.6	54.0	-3.4	Vert
М		+2.2	-56.5	+0.0	+0.0					
Ave		+0.0	+6.1					20MHz 802	2.11a-	
								36Mbps		
^ 11478.900	63.8	+0.0	+38.7	+2.3	+6.9	+0.0	63.5	54.0	+9.5	Vert
М		+2.2	-56.5	+0.0	+0.0					
		+0.0	+6.1					20MHz 802	2.11a-	
								36Mbps		
7 11574.000	50.4	+0.0	+38.8	+2.4	+6.9	+0.0	50.1	54.0	-3.9	Vert
М		+2.2	-56.7	+0.0	+0.0					
Ave		+0.0	+6.1					20MHz 802	2.11a-	
								36Mbps		
^ 11574.000	63.3	+0.0	+38.8	+2.4	+6.9	+0.0	63.0	54.0	+9.0	Vert
М	0010	+2.2	-56.7	+0.0	+0.0		0010	0.110		
		+0.0	+6.1					20MHz 802) 11a-	
		10.0	10.1					36Mbps	2.114	
9 11471.000	50.1	+0.0	+38.7	+2.3	+6.9	+0.0	49.9	54.0	-4.1	Horiz
М	20.1	+2.2	-56.4	+0.0	+0.0	10.0	17.7	5 110		HOLL
Ave		+0.0	+6.1	10.0	10.0			10MHz 802) 11n-	
Ave		10.0	10.1					13MCSHT2		
^ 11471.000	63.2	+0.0	+38.7	+2.3	+6.9	+0.0	63.0	54.0	+9.0	Horiz
M	05.2	+2.2	-56.4	+0.0	+0.9	10.0	05.0	54.0	17.0	TIONZ
101		+0.0	-50.4 +6.1	10.0	10.0			10MHz 802) 11n-	
		± 0.0	± 0.1					13MCSHT2		
11 11668.000	50.0	+0.0	+38.8	+2.4	+7.0	+0.0	49.9	54.0	-4.1	Vort
	30.0	+0.0				+0.0	49.9	54.0	-4.1	Vert
М		+2.2	-56.6	+0.0	+0.0			201411 002	11.	
Ave		+0.0	+6.1					20MHz 802		
A 11660.000	(2.6		20.0	2.4		0.0	60 5	26MCSHT2		T T T
^ 11668.000	62.6	+0.0	+38.8	+2.4	+7.0	+0.0	62.5	54.0	+8.5	Vert
Μ		+2.2	-56.6	+0.0	+0.0					
		+0.0	+6.1					20MHz 802		
								26MCSHT2	202S	
13 11480.100	49.6	+0.0	+38.7	+2.3	+6.9	+0.0	49.3	54.0	-4.7	Vert
М		+2.2	-56.5	+0.0	+0.0					
Ave		+0.0	+6.1					20MHz 802	2.11n-	
								26MCSHT2	202S	
^ 11480.100	67.5	+0.0	+38.7	+2.3	+6.9	+0.0	67.2	54.0	+13.2	Vert
М		+2.2	-56.5	+0.0	+0.0					
		+0.0	+6.1					20MHz 802	2.11n-	
								26MCSHT2		
15 11676.800	48.7	+0.0	+38.8	+2.4	+7.0	+0.0	48.7	54.0	-5.3	Horiz
М		+2.2	-56.5	+0.0	+0.0		- · ·			
Ave		+0.0	+6.1					20MHz 802	2.11a-	
								36Mbps		
^ 11676.800	62.0	+0.0	+38.8	+2.4	+7.0	+0.0	62.0	54.0	+8.0	Horiz
M	02.0	+2.2	-56.5	+0.0	+0.0	10.0	02.0	2110	10.0	110112
141		+2.2 +0.0	-50.5 +6.1	10.0	10.0			20MHz 802) 11a-	
		10.0	10.1					26Mhz 802 36Mbps	2.11a-	
								Jointoba		



									_		
17	11666.400	48.3	+0.0	+38.8	+2.4	+7.0	+0.0	48.2	54.0	-5.8	Horiz
	М		+2.2	-56.6	+0.0	+0.0			201411 002	11.	
	Ave		+0.0	+6.1					20MHz 802 26MCSHT2		
^	11666.400	63.4	+0.0	+38.8	+2.4	+7.0	+0.0	63.3	54.0	+9.3	Horiz
	М		+2.2	-56.6	+0.0	+0.0					
			+0.0	+6.1					20MHz 802 26MCSHT2		
19	11570.400	46.8	+0.0	+38.8	+2.4	+6.9	+0.0	46.5	54.0	-7.5	Horiz
	Μ		+2.2	-56.7	+0.0	+0.0					
	Ave		+0.0	+6.1					20MHz 802	2.11a-	
•	11570 400	50.1	.0.0	. 20. 0	. 0. 4		.0.0	50.0	36Mbps	. 1.0	
Λ	11570.400 M	59.1	+0.0	+38.8	+2.4	+6.9	+0.0	58.8	54.0	+4.8	Horiz
	М		+2.2 +0.0	-56.7 +6.1	+0.0	+0.0			20MHz 802) 110	
			+0.0	± 0.1					36Mbps	2.11a-	
21	11680.400	46.2	+0.0	+38.8	+2.4	+7.0	+0.0	46.2	54.0	-7.8	Horiz
	Μ		+2.2	-56.5	+0.0	+0.0					
	Ave		+0.0	+6.1					10MHz 802	2.11a-	
									24Mbps		
^	11680.400	61.1	+0.0	+38.8	+2.4	+7.0	+0.0	61.1	54.0	+7.1	Horiz
	М		+2.2	-56.5	+0.0	+0.0					
			+0.0	+6.1					10MHz 802	2.11a-	
									24Mbps		
23	11572.850	46.5	+0.0	+38.8	+2.4	+6.9	+0.0	46.2	54.0	-7.8	Horiz
	M Ave		+2.2 +0.0	-56.7 +6.1	+0.0	+0.0			10MHz 802) 11n	
	Ave		± 0.0	± 0.1					13MCSHT2		
٨	11572.850	59.9	+0.0	+38.8	+2.4	+6.9	+0.0	59.6	54.0	+5.6	Horiz
	M	57.7	+2.2	-56.7	+0.0	+0.0	10.0	59.0	2110	10.0	HOHE
			+0.0	+6.1					10MHz 802	2.11n-	
									13MCSHT2	202S	
25	11471.100	46.1	+0.0	+38.7	+2.3	+6.9	+0.0	45.9	54.0	-8.1	Vert
	Μ		+2.2	-56.4	+0.0	+0.0					
	Ave		+0.0	+6.1					10MHz 802		
									13MCSHT2		
^	11471.100	60.2	+0.0		+2.3	+6.9	+0.0	60.0	54.0	+6.0	Vert
	М		+2.2		+0.0	+0.0			101/11- 007) 11.	
			+0.0	+6.1					10MHz 802 13MCSHT2		
27	11677.000	45.9	+0.0	+38.8	+2.4	+7.0	+0.0	45.9	54.0	-8.1	Horiz
	M		+2.2	-56.5	+0.0	+0.0			20		
	Ave		+0.0	+6.1					10MHz 802	2.11n-	
									13MCSHT2		
28	22940.000	57.9	+0.0	+0.0	+0.0	+0.0	+0.0	45.6	54.0	-8.4	Horiz
	Μ		+0.0	+0.0	+0.0	-16.6			103 FT		
	Ave		+4.3	+0.0					10MHz 802	2.1a	
-	11 (70.000	1.8 -	0.0	20.0			0.0	4	24Mbps	<u> </u>	* 7
29	11679.900	45.6	+0.0	+38.8	+2.4	+7.0	+0.0	45.6	54.0	-8.4	Vert
	М		+2.2	-56.5	+0.0	+0.0			10MHz 802) 11.	
	Ave		+0.0	+6.1					10MHZ 802 13MCSHT2		
									1310051112	2020	



	1 (70,000	50.0		. 00. 0	A f			50 0	F 4 0	F 0	X 7
^ 1	1679.900	59.0	+0.0	+38.8	+2.4	+7.0	+0.0	59.0	54.0	+5.0	Vert
	М		+2.2 +0.0	-56.5	+0.0	+0.0			101/11- 007) 11n	
			+0.0	+6.1					10MHz 802 13MCSHT2		
31 1	1569.300	45.4	+0.0	+38.8	+2.4	+6.9	+0.0	45.1	54.0	-8.9	Vert
	М		+2.2	-56.7	+0.0	+0.0					
A	ve		+0.0	+6.1					10MHz 802 13MCSHT2		
^ 1	1569.300	58.2	+0.0	+38.8	+2.4	+6.9	+0.0	57.9	54.0	+3.9	Vert
	М		+2.2	-56.7	+0.0	+0.0					
			+0.0	+6.1					10MHz 802 13MCSHT2		
33 1	1573.400	45.3	+0.0	+38.8	+2.4	+6.9	+0.0	45.0	54.0	-9.0	Horiz
00 1	М	1010	+2.2	-56.7	+0.0	+0.0			0.110	210	110112
A	ve		+0.0	+6.1					10MHz 802	2.11a-	
									24Mbps		
^ 1	1573.400	58.0	+0.0	+38.8	+2.4	+6.9	+0.0	57.7	54.0	+3.7	Horiz
	М		+2.2	-56.7	+0.0	+0.0					
			+0.0	+6.1					10MHz 802	2.11a-	
25.2	20.40.000	<i></i>	.0.0	. 0. 0		. 0. 0	.0.0	447	24Mbps	0.2	
35 2	2940.000 M	57.0	+0.0	+0.0	+0.0	+0.0	+0.0	44.7	54.0	-9.3	Horiz
٨	M ve		+0.0 +4.3	$^{+0.0}_{+0.0}$	+0.0	-16.6			10MHz 802	9 11n	
A	ve		T 4 .3	+0.0					13MCSHT2		
^ 2	2940.000	69.3	+0.0	+0.0	+0.0	+0.0	+0.0	57.0	54.0	+3.0	Horiz
	М		+0.0	+0.0	+0.0	-16.6					
			+4.3	+0.0					10MHz 802	2.1a	
	0.000	65.0	.0.0			.0.0	.0.0	50 f	24Mbps	0.4	
^ 2	2940.000 M	65.9	+0.0	+0.0	+0.0	+0.0	+0.0	53.6	54.0	-0.4	Horiz
	М		+0.0	+0.0	+0.0	-16.6			10111- 001) 11n	
			+4.3	+0.0					10MHz 802 13MCSHT2		
38 1	1479.600	44.7	+0.0	+38.7	+2.3	+6.9	+0.0	44.4	54.0	-9.6	Horiz
	M		+2.2	-56.5	+0.0	+0.9	10.0	17.7	57.0	2.0	110112
A			+0.0	+6.1					20MHz 802	2.11n-	
									26MCSHT2		
^ 1	1479.600	60.4	+0.0	+38.7	+2.3	+6.9	+0.0	60.1	54.0	+6.1	Horiz
	Μ		+2.2	-56.5	+0.0	+0.0					
			+0.0	+6.1					20MHz 802 26MCSHT2		
40 1	1478.600	44.6	+0.0	+38.7	+2.3	+6.9	+0.0	44.3	26MCSH12 54.0	-9.7	Horiz
+0 1	M	44 .0	+0.0 +2.2	+38.7 -56.5	+2.3 +0.0	+0.9 +0.0	± 0.0	44 .3	54.0	-2.1	TIOUZ
A			+0.0	-50.5 +6.1	10.0	10.0			20MHz 802	2.11a-	
			10.0	10.1					36Mbps		
^ 1	1478.600	59.0	+0.0	+38.7	+2.3	+6.9	+0.0	58.7	54.0	+4.7	Horiz
	М		+2.2	-56.5	+0.0	+0.0					
			+0.0	+6.1					20MHz 802	2.11a-	
									36Mbps		
42 1	1568.180	44.5	+0.0	+38.8	+2.4	+6.9	+0.0	44.2	54.0	-9.8	Vert
	М		+2.2	-56.7	+0.0	+0.0			101/01 002	. 1 1	
A	ve		+0.0	+6.1					10MHz 802	.11a-	
									24Mbps		



A 11=-	0.100	50 1		. 20. 0			.0.0	FO 1	540		X 7 .
	8.180 M	58.4	$^{+0.0}_{+2.2}$	+38.8 -56.7	$^{+2.4}_{+0.0}$	+6.9 +0.0	+0.0	58.1	54.0	+4.1	Vert
ľ	V1		+2.2 +0.0	-56.7 +6.1	± 0.0	+0.0			10MHz 802	9 11a-	
			10.0	10.1					24Mbps	2.11a-	
44 1167	7.000	43.9	+0.0	+38.8	+2.4	+7.0	+0.0	43.9	54.0	-10.1	Horiz
	Ν		+2.2	-56.5	+0.0	+0.0					
Ave			+0.0	+6.1					10MHz 802	2.11a-	
									24Mbps		
^ 1167		61.0	+0.0	+38.8	+2.4	+7.0	+0.0	61.0	54.0	+7.0	Horiz
I N	M		+2.2	-56.5	+0.0	+0.0			101/11 002	11	
			+0.0	+6.1					10MHz 802 13MCSHT2		
^ 1167	7.000	59.8	+0.0	+38.8	+2.4	+7.0	+0.0	59.8	54.0	+5.8	Horiz
	7.000 M	59.0	+0.0 +2.2	+38.8 -56.5	+2.4 +0.0	$^{+7.0}_{+0.0}$	10.0	57.0	54.0	-5.0	TIOUZ
1			+0.0	+6.1	. 5.0				10MHz 802	2.11a-	
			- / -						24Mbps		
47 1157		43.9	+0.0	+38.8	+2.4	+6.9	+0.0	43.6	54.0	-10.4	Horiz
N	Μ		+2.2	-56.7	+0.0	+0.0					
Ave			+0.0	+6.1					20MHz 802		
A 1177	0.000	50.0	.0.0	. 20.0			.0.0	50 5	26MCSHT2		
	9.000	58.8	+0.0	+38.8	+2.4	+6.9	+0.0	58.5	54.0	+4.5	Horiz
ſ	M		+2.2 +0.0	-56.7 +6.1	+0.0	+0.0			20MHz 802) 11n	
			10.0	10.1					26MCSHT2		
49 1167	7.250	43.5	+0.0	+38.8	+2.4	+7.0	+0.0	43.5	54.0	-10.5	Vert
	M		+2.2	-56.5	+0.0	+0.0					
Ave			+0.0	+6.1					20MHz 802	2.11a-	
									36Mbps		
^ 1167		55.5	+0.0	+38.8	+2.4	+7.0	+0.0	55.5	54.0	+1.5	Vert
N	M		+2.2	-56.5	+0.0	+0.0			201411 002	11.	
			+0.0	+6.1					20MHz 802	2.11a-	
51 1167	8 180	41.9	+0.0	+38.8	+2.4	+7.0	+0.0	41.9	36Mbps 54.0	-12.1	Vert
	о.180 И	71.7	+0.0 +2.2	+38.8 -56.5	+2.4 +0.0	+7.0 +0.0	10.0	71.7	57.0	14.1	v 011
Ave	-		+0.0	+6.1					10MHz 802	2.11a-	
									24Mbps		
^ 1167	8.180	56.6	+0.0	+38.8	+2.4	+7.0	+0.0	56.6	54.0	+2.6	Vert
Ν	Ν		+2.2	-56.5	+0.0	+0.0					
			+0.0	+6.1					10MHz 802	2.11a-	
	0.000	52.0	.0.0		.0.0	.0.0	.0.0	41.7	24Mbps	10.5	
53 2296		53.8	+0.0	+0.0	+0.0	+0.0	+0.0	41.5	54.0	-12.5	Horiz
Ave	M		+0.0 +4.3	$^{+0.0}_{+0.0}$	+0.0	-16.6			20MHz 802) 11a	
Ave			++ .3	± 0.0					20MHZ 802 24Mbps	a	
54 2296	0.000	46.7	+0.0	+0.0	+0.0	+0.0	+0.0	34.4	54.0	-19.6	Horiz
	M		+0.0	+0.0	+0.0	-16.6			2		
Ave			+4.3	+0.0					20Mhz 802		
									6.5MCSHT	201S	
	0.000	65.8	+0.0	+0.0	+0.0	+0.0	+0.0	53.5	54.0	-0.5	Horiz
Ν	Ν		+0.0	+0.0	+0.0	-16.6			0 01 <i>1</i> 12 0.55		
			+4.3	+0.0					20MHz 802	2.11a	
									24Mbps		



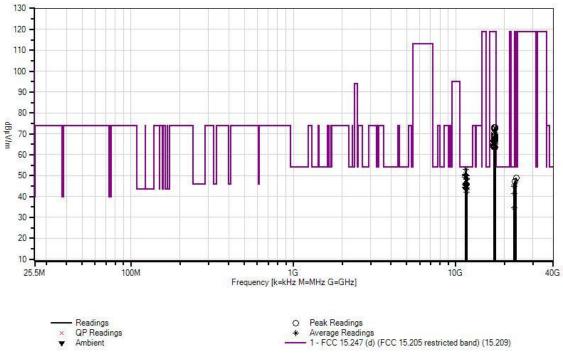
· ·	220 60 000	<i>(</i>) <i>(</i>)	0.0	0.0	0.0	~ ~ ~	0.0			<u> </u>	
^	22960.000 M	62.8	$^{+0.0}_{+0.0}$	$^{+0.0}_{+0.0}$	$^{+0.0}_{+0.0}$	+0.0 -16.6	+0.0	50.5	54.0	-3.5	Horiz
	М		+0.0 +4.3	$^{+0.0}_{+0.0}$	+0.0	-10.0			20Mhz 802.	11n	
			74.3	+0.0					6.5MCSHT		
57	17348.800	64.0	+0.0	+43.2	+3.0	+10.0	+0.0	73.2	119.0	-45.8	Horiz
	М		+2.9	-56.9	+0.8	+0.0					
			+0.0	+6.2					10MHz 802		
									13MCSHT2		
58		62.6	+0.0	+44.3	+3.0	+10.4	+0.0	72.9	119.0	-46.1	Horiz
	М		+3.0	-57.4	+0.8	+0.0			101/11 002	11.	
			+0.0	+6.2					10MHz 802 13MCSHT2		
50	17349.000	63.3	+0.0	+43.2	+3.0	+10.0	+0.0	72.5	119.0	-46.5	Horiz
39	M	05.5	+0.0 +2.9	-56.9	+0.8	+10.0 $+0.0$	± 0.0	12.5	119.0	-40.5	TIOTIZ
	101		+0.0	+6.2	10.0	10.0			20MHz 802	.11n-	
									26MCSHT2		
60	17519.000	62.0	+0.0	+44.3	+3.0	+10.4	+0.0	72.3	119.0	-46.7	Horiz
	Μ		+3.0	-57.4	+0.8	+0.0					
			+0.0	+6.2					10MHz 802	.11a-	
									24Mbps		
61	17353.680	61.2	+0.0	+43.2	+3.0	+10.0	+0.0	70.4	119.0	-48.6	Horiz
	М		+2.9	-56.9	+0.8	+0.0			10141 000	11	
			+0.0	+6.2					10MHz 802	.11a-	
67	17517.800	59.0	+0.0	+44.3	+3.0	+10.4	+0.0	69.3	24Mbps 119.0	-49.7	Horiz
02	1/51/.800 M	39.0	+0.0 +3.0	+44.3 -57.4	+3.0 +0.8	+10.4 +0.0	± 0.0	09.3	119.0	-47./	TIOUZ
	141		+0.0	+6.2	10.0	10.0			10MHz 802	.11a-	
									24Mbps		
63	17351.000	60.0	+0.0	+43.2	+3.0	+10.0	+0.0	69.2	119.0	-49.8	Horiz
	Μ		+2.9	-56.9	+0.8	+0.0					
			+0.0	+6.2					20MHz 802	.11a-	
	48848				- -				36Mbps	F O -	.
64	17513.500	58.5	+0.0	+44.3	+3.0	+10.4	+0.0	68.8	119.0	-50.2	Vert
	М		+3.0	-57.4	+0.8	+0.0			20MHz 802	110	
			+0.0	+6.2					20MHZ 802 36Mbps	.11a-	
65	17351.650	59.2	+0.0	+43.2	+3.0	+10.0	+0.0	68.4	119.0	-50.6	Vert
0.5	M	59.2	+0.0 +2.9	-56.9	+0.8	+10.0 $+0.0$	10.0	00.7	117.0	50.0	vert
			+0.0	+6.2	. 0.0	. 0.0			10MHz 802	.11a-	
									24Mbps		
66	17357.000	59.0	+0.0	+43.2	+3.0	+10.1	+0.0	68.3	119.0	-50.7	Vert
	Μ		+2.9	-56.9	+0.8	+0.0					
			+0.0	+6.2					20MHz 802	.11a-	
	18508 000					40.4	0.0		36Mbps	<i></i>	**
67	17502.000	57.4	+0.0	+44.2	+3.0	+10.4	+0.0	67.6	119.0	-51.4	Vert
	М		+3.0	-57.4	+0.8	+0.0			201411 002	11	
			+0.0	+6.2					20MHz 802		
68	17229.600	59.0	+0.0	+42.3	+3.0	+9.8	+0.0	66.8	26MCSHT2 119.0	-52.2	Horiz
00	M	59.0	+0.0 +2.9	+42.5	+5.0 +0.8	+9.8 +0.0	± 0.0	00.0	119.0	-52.2	TIOUZ
	171		+2.9 +0.0	+6.2	+0.0	± 0.0			20MHz 802	.11a-	
			10.0	10.2					26Mbps		
L									2011000		



(0)	17517.000	564	. 0. 0	. 11.2	2.0	. 10.4	. 0. 0		110.0	50.0	X <i>T</i> /
69	17517.800	56.4	+0.0	+44.3	+3.0	+10.4	+0.0	66.7	119.0	-52.3	Vert
	М		+3.0 +0.0	-57.4 +6.2	+0.8	+0.0			10MHz 802	11.	
			+0.0	+0.2					24Mbps	2.11a-	
70	17500.000	56.6	+0.0	+44.2	+3.0	+10.3	+0.0	66.7	119.0	-52.3	Horiz
70	M	50.0	+3.0	-57.4	+0.8	+0.0	10.0	00.7	117.0	-52.5	TIOTIZ
	101		+0.0	+6.2	10.0	10.0			20MHz 802	2.11n-	
									26MCSHT		
71	17205.000	59.0	+0.0	+42.1	+3.0	+9.8	+0.0	66.5	119.0	-52.5	Vert
	М		+2.9	-57.2	+0.7	+0.0					
			+0.0	+6.2					10MHz 802	2.11a-	
									24Mbps		
72	17356.000	56.5	+0.0	+43.2	+3.0	+10.1	+0.0	65.8	119.0	-53.2	Vert
	Μ		+2.9	-56.9	+0.8	+0.0					
			+0.0	+6.2					20MHz 802		
	1751 < 400	55.0	0.0	44.0	2.0	10.4	0.0	(5.0	26MCSHT		** •
73	17516.400	55.0	+0.0	+44.3	+3.0	+10.4	+0.0	65.3	119.0	-53.7	Horiz
	М		+3.0	-57.4	+0.8	+0.0			20111- 202	11.	
			+0.0	+6.2					20MHz 802 36Mbps	2.11a-	
74	17206.600	57.4	+0.0	+42.2	+3.0	+9.8	+0.0	65.0	119.0	-54.0	Vert
/-	M	57.4	+2.9	-57.2	+0.7	+0.0	10.0	05.0	117.0	-34.0	ven
	101		+0.0	+6.2	10.7	10.0			10MHz 802	2.11n-	
									13MCSHT		
75	17206.600	57.4	+0.0	+42.2	+3.0	+9.8	+0.0	65.0	119.0	-54.0	Horiz
	М		+2.9	-57.2	+0.7	+0.0					
			+0.0	+6.2					10MHz 802	2.11n-	
									13MCSHT2		
76	17353.000	54.9	+0.0	+43.2	+3.0	+10.0	+0.0	64.1	119.0	-54.9	Vert
	Μ		+2.9	-56.9	+0.8	+0.0					
			+0.0	+6.2					10MHz 802		
	1701 < 000	7 < 1	0.0	40.0	2.0	0.0	0.0	64.0	13MCSHT		** •
77	17216.000	56.4	+0.0	+42.2	+3.0	+9.8	+0.0	64.0	119.0	-55.0	Horiz
	М		+2.9 +0.0	-57.2 +6.2	+0.7	+0.0			20MHz 802) 11n	
			+0.0	+0.2					26MCSHT		
78	17517.500	53.3	+0.0	+44.3	+3.0	+10.4	+0.0	63.6	119.0	-55.4	Vert
70	M	55.5	+0.0 +3.0	-57.4	+0.8	+10.4 $+0.0$	10.0	05.0	117.0	55.4	VUIL
	1.1		+0.0	+6.2	10.0	10.0			10MHz 802	2.11n-	
									13MCSHT		
79	17224.000	55.6	+0.0	+42.3	+3.0	+9.8	+0.0	63.4	119.0	-55.6	Vert
	М		+2.9	-57.2	+0.8	+0.0					
			+0.0	+6.2					20MHz 802	2.11a-	
									36Mbps		
80	23590.000	61.7	+0.0	+0.0	+0.0	+0.0	+0.0	49.0	119.0	-70.0	Vert
	Μ		+0.0	+0.0	+0.0	-17.1					
			+4.4	+0.0					10MHz 802	2.11a	
	22125 222		0.0			0.0	0.0		24Mbps		**
81	23135.000	59.7	+0.0	+0.0	+0.0	+0.0	+0.0	47.3	119.0	-71.7	Vert
	М		+0.0	+0.0	+0.0	-16.7			101/11- 002	0.110	
			+4.3	+0.0					10MHz 802 24Mbps	2.11a	
									24mps		



CKC Laboratories, Inc. Date: 6/2/2012 Time: 14:27:28 Digital Path WO#: 92682 FCC 15.247 (d) (FCC 15.205 restricted band) (15.209) Test Distance: 3 Meters Sequence#: 213 Horiz UNII Bands. 20MHz Channel width.



Ambient Ŧ

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Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249 - 1170

Customer: Specification:	Digital Path 15.247(d) / 15.209 Radiated Spurious Em	issions	
Work Order #:	92682	Date:	6/16/2012
Test Type:	Radiated Scan	Time:	11:52:18
Equipment:	5GHz Panel (18dBi) + Omni (11dBi)	Sequence#:	217
Manufacturer:	Digital Path	Tested By:	C. Nicklas
Model:	G5RL10G		
S/N:	EMI 2		

Test Equipment:

I esi Equi	ument.					
ID	Asset #	Description		Calibration I		Cal Due Date
T1	AN02668	Spectrum Analyzer	E4446A	2/23/2011		2/23/2013
T2	AN02157	Horn Antenna-ANSI C63.5	3115	1/17/2011		1/17/2013
Т3	AN03302	Cable	32026-29094K- 29094K-72TC	3/21/2012		3/21/2014
T4	ANP01210	Cable	FSJ1P-50A-4A	3/15/2011		3/15/2013
T5	ANP05843	Cable	32022-2-29094K- 48TC	7/30/2010		7/30/2012
T6	AN03114	Preamp	AMF-7D- 00101800-30-10P	5/13/2011		5/13/2013
	ANP05935	Attenuator	84A-10	10/19/2011		10/19/2013
	ANP01211	Attenuator	23-10-34	4/15/2011		4/15/2013
T7	AN01417	High Pass Filter	84300-80039	2/9/2012		2/9/2014
Τ8	AN02694	Active Horn Antenna-ANSI C63.5 Antenna Factors (dB)	AMFW-5F- 18002650-20-10P	11/10/2010		11/10/2012
	AN02695	Active Horn Antenna-ANSI C63.5 Antenna Factors (dB)	AMFW-5F- 260400-33-8P	11/10/2010		11/10/2012
	AN00730	Preamp		1/31/2011		1/31/2013
	AN00432	Loop Antenna	6502	3/31/2011		3/31/2013
	AN00852	Biconilog Antenna	CBL 6111C	11/16/2010		11/16/2012
	ANP05299	Cable	RG214	3/6/2011		3/6/2013
	ANP05300	Cable	RG214/U	3/7/2011		3/7/2013
	ANP05440	Cable		3/7/2011		3/7/2013
T9	AN03143	Cable	32022-29094K- 144TC	8/30/2011		8/30/2013
	nt Under Test (*					
Function		Manufacturer	Model #		S/N	
5GHz Pane Omni (11d	el (18dBi) + Bi)*	Digital Path	G5RL10G		EMI 2	
Support D	Devices:					
Function		Manufacturer	Model #		S/N	
Laptop Cor		HP	ProBook 6565b	b	5CB136	
Laptop Pov	ver Supply	HP	608428-002		F12941	126327228



Test Conditions / Notes:

The EUT installed on a pole as intended. DC power port is connected to a DC power supply via a CAT5 cable. The Ethernet port is connected to a remote laptop via unshielded twisted pair. The Remote laptop is running test software to exercise the intended functionalities. Receiver circuit is active.

11dBi Omni antenna is connected to radio 0 (instance 1) 18 dBi panel antenna is connected to radio1 (instance 2)

this data sheet is for the EUT transmitting via 11dBi Omni antenna connected to radio 0 (instance 1)

Point to Multi-Point

Freq = 5725 - 5850 MHz

Freq: 5735MHz, 5785MHz, 5840MHz. BW = 10 MHz 802.11a: 24Mbps, TX power setting= 16, 16, 16 802.11n: 13MCS HT20 2S,TX power setting= 16, 16, 16

Freq: 5740MHz, 5785MHz, 5835MHz. BW= 20MHz 802.11a: 36 Mbps, TX power setting= 16, 16, 16 802.11n: 26MCS HT20 2S, TX power setting= 16, 16, 16

Temperature: 21.6-22.5°C, Relative Humidity: 37-40%, Atmospheric Pressure: 100.6-100.8kPa

Scans were performed with the RBW reduced as needed. Data all taken at the proper RBW setting. Above 18GHz, hand scan the unit at a 1/2 meter distance to determine if there are any signals. Any signals found are hand maximized at a 1/2 meter distance to ensure the maximum signal is found.

Frequency range of measurement = 9kHz-40GHz. 9 kHz -150 kHz; RBW=200 Hz, VBW=200 Hz;150 kHz-30 MHz; RBW=9 kHz, VBW=9 kHz;30 MHz-1000 MHz; RBW=120 kHz, VBW=120 kHz,1000 MHz-40,000 MHz; RBW=1 MHz, VBW=1 MHz.

Ext	Attn: 0 dB										
Meas	urement Data:	Re	eading list	ted by ma	argin.		Τe	est Distanc	e: 3 Meters	5	
#	Freq	Rdng	T1	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
	-	-	T5	T6	T7	T8			-	-	
			Т9								
	MHz	dBµV	dB	dB	dB	dB	Table	$dB\mu V/m$	$dB\mu V/m$	dB	Ant
1	17521.230	50.0	+0.0	+44.3	+3.0	+10.4	+0.0	53.2	54.0	-0.8	Horiz
	М		+2.1	-57.4	+0.8	+0.0					
	Ave		+0.0				222 10MHz 802.11a		2.11a	127	
									24Mbps		
^	17521.230	62.1	+0.0	+44.3	+3.0	+10.4	+0.0	65.3	54.0	+11.3	Horiz
	М		+2.1	-57.4	+0.8	+0.0					
			+0.0				222		10MHz 80	2.11a	127
									24Mbps		
3	3 17519.910	49.9	+0.0	+44.3	+3.0	+10.4	+0.0	53.1	54.0	-0.9	Horiz
	Μ		+2.1	-57.4	+0.8	+0.0					
	Ave		+0.0				224		10MHz 80	2.11n	126
									13MCSHT	202S	



^	17519.910	62.5	+0.0	+44.3	+3.0	+10.4	+0.0	65.7	54.0	+11.7	Horiz
	M	02.5	+0.0 +2.1	-57.4	+0.8	+10.4 +0.0	+0.0	05.7	54.0	+11.7	HOHZ
			+0.0				224		10MHz 802 13MCSHT2		126
5	23357.855	62.6	+0.0	+0.0	+0.0	+0.0	+0.0	52.7	54.0	-1.3	Vert
	Μ		+0.0	+0.0	+0.0	-16.9					
	Ave		+7.0						10MHz 802 24Mbps	.11a	
^	23357.855	75.5	+0.0	+0.0	+0.0	+0.0	+0.0	65.6	54.0	+11.6	Vert
	Μ		+0.0	+0.0	+0.0	-16.9					
			+7.0						10MHz 802	.11a	
	220.40.000	(1.0	0.0	0.0	0.0	0.0	0.0	52.2	24Mbps	1.7	** •
1	22940.800	61.8	+0.0	+0.0	+0.0	+0.0	+0.0	52.3	54.0	-1.7	Horiz
	М		+0.0	+0.0	+0.0	-16.6			101/11- 002	11.	
	Ave		+7.1						10MHz 802 24Mbps	.11a	
^	22940.800	77.8	+0.0	+0.0	+0.0	+0.0	+0.0	68.3	54.0	+14.3	Horiz
	M		+0.0	+0.0	+0.0	-16.6					
			+7.1						10MHz 802	.11a	
									24Mbps		
9	17519.260	49.0	+0.0	+44.3	+3.0	+10.4	+0.0	52.2	54.0	-1.8	Vert
	М		+2.1	-57.4	+0.8	+0.0					
	Ave		+0.0				179		10MHz 802 24Mbps	.11a	125
^	17519.260	61.7	+0.0	+44.3	+3.0	+10.4	+0.0	64.9	54.0	+10.9	Vert
	М		+2.1	-57.4	+0.8	+0.0					
			+0.0				179		10MHz 802 24Mbps	.11a	125
11	22940.595	61.5	+0.0	+0.0	+0.0	+0.0	+0.0	52.0	54.0	-2.0	Vert
	М		+0.0	+0.0	+0.0	-16.6					
	Ave		+7.1						10MHz 802 24Mbps	.11a	
^	22940.595	78.9	+0.0	+0.0	+0.0	+0.0	+0.0	69.4	54.0	+15.4	Vert
	M	10.5	+0.0	+0.0	+0.0	-16.6	10.0	07.1	5110	10.1	vent
			+7.1						10MHz 802 24Mbps	.11a	
13	17353.200	49.8	+0.0	+43.2	+3.0	+10.0	+0.0	51.9	54.0	-2.1	Horiz
	М		+2.0	-56.9	+0.8	+0.0					
	Ave		+0.0				255		10MHz 802	.11a	130
			<i>c</i> -				0.5		24Mbps		
^	17555.200	62.2	+0.0	+43.2	+3.0	+10.0	+0.0	64.3	54.0	+10.3	Horiz
	М		+2.0	-56.9	+0.8	+0.0	255		10101 000	11	120
			+0.0				255		10MHz 802 24Mbps		130
15	17357.100	49.4	+0.0	+43.2	+3.0	+10.1	+0.0	51.6	54.0	-2.4	Vert
	Μ		+2.0	-56.9	+0.8	+0.0					
	Ave		+0.0				179		10MHz 802 24Mbps	.11a	126
^	17357.100	62.0	+0.0	+43.2	+3.0	+10.1	+0.0	64.2	54.0	+10.2	Vert
	Μ		+2.0	-56.9	+0.8	+0.0					
			+0.0				179		10MHz 802 24Mbps	.11a	126



17	23359.915	61.4	+0.0	+0.0	+0.0	+0.0	+0.0	51.5	54.0	-2.5	Vert
	М		+0.0	+0.0	+0.0	-16.9			101/01 000		
	Ave		+7.0						10MHz 802 13MCSHT		
^	23359.915	78.5	+0.0	+0.0	+0.0	+0.0	+0.0	68.6	54.0	+14.6	Vert
	М		+0.0	+0.0	+0.0	-16.9					
			+7.0						10MHz 802		
									13MCSHT		
19	23139.170	61.2	+0.0	+0.0	+0.0	+0.0	+0.0	51.5	54.0	-2.5	Vert
	M Ave		$^{+0.0}_{+7.0}$	+0.0	+0.0	-16.7			10MHz 802	11.	
	Ave		+7.0						24Mbps	2.11a	
^	23139.170	77.5	+0.0	+0.0	+0.0	+0.0	+0.0	67.8	54.0	+13.8	Vert
	M	11.5	+0.0	+0.0	+0.0	-16.7	10.0	07.0	5110	15.0	vert
			+7.0						10MHz 802	2.11a	
									24Mbps		
21	17502.620	48.4	+0.0	+44.2	+3.0	+10.4	+0.0	51.4	54.0	-2.6	Horiz
	Μ		+2.0	-57.4	+0.8	+0.0					
	Ave		+0.0				222		20MHz 802	2.11a	119
	17502 (20	<i>c</i> 0 2	0.0	44.0	2.0	10.4	0.0	(2.2	36Mbps	0.2	
Λ	17502.620	60.3	+0.0	+44.2	+3.0	+10.4	+0.0	63.3	54.0	+9.3	Horiz
	М		$^{+2.0}_{+0.0}$	-57.4	+0.8	+0.0	222		20MHz 802) 110	119
			± 0.0						20MH2 802 36Mbps	2.11a	117
23	22942.050	60.8	+0.0	+0.0	+0.0	+0.0	+0.0	51.3	54.0	-2.7	Horiz
	Μ		+0.0	+0.0	+0.0	-16.6					
	Ave		+7.1						10MHz 802		
	220.42.050		.0.0	.0.0	.0.0		.0.0	(0.0	13MCSHT		TT '
X	22942.050 M	77.7	$^{+0.0}_{+0.0}$	$^{+0.0}_{+0.0}$	$^{+0.0}_{+0.0}$	+0.0 -16.6	+0.0	68.2	54.0	+14.2	Horiz
	IVI		+0.0 +7.1	+0.0	+0.0	-10.0			10MHz 802) 11n	
			± 1.1						13MCSHT		
25	22941.350	60.4	+0.0	+0.0	+0.0	+0.0	+0.0	50.9	54.0	-3.1	Vert
	M		+0.0	+0.0	+0.0	-16.6					
	Ave		+7.1						10MHz 802	2.11n	
									13MCSHT	20 2S	
^	22941.350	76.8	+0.0	+0.0	+0.0	+0.0	+0.0	67.3	54.0	+13.3	Vert
I	М		+0.0	+0.0	+0.0	-16.6			103		
			+7.1						10MHz 802		
27	23138.200	60.5		+0.0		10.0	+0.0	50.0	13MCSHT 54.0		Horiz
21	23138.200 M	60.5	$^{+0.0}_{+0.0}$	$^{+0.0}_{+0.0}$	$^{+0.0}_{+0.0}$	+0.0 -16.7	+0.0	50.8	54.0	-3.2	Horiz
	111			± 0.0	± 0.0	-10.7			10MHz 802) 11a	
1	Ave		+/11								
	Ave		+7.0						24Mbps		
		76.3	+0.0	+0.0	+0.0	+0.0	+0.0	66.6	24Mbps 54.0	+12.6	Horiz
		76.3	+0.0 +0.0	+0.0 +0.0	+0.0 +0.0	+0.0 -16.7	+0.0	66.6	54.0		Horiz
	23138.200	76.3	+0.0				+0.0	66.6	54.0 10MHz 802		Horiz
۸	23138.200 M		+0.0 +0.0 +7.0	+0.0	+0.0	-16.7			54.0 10MHz 802 24Mbps	2.11a	
۸	23138.200 M 17355.040	76.3	+0.0 +0.0 +7.0 +0.0	+0.0	+0.0	-16.7	+0.0	66.6 50.7	54.0 10MHz 802		Horiz
^ 29	23138.200 M		+0.0 +0.0 +7.0	+0.0	+0.0	-16.7			54.0 10MHz 802 24Mbps	2.11a -3.3	



$ \begin{array}{cccccccccccccccccccccccccccccccccccc$												
Ave +0.0 220 10MHz 802.11a (24Mbps) 136 (24Mbps) ^ 11467.700 M 70.3 +1.6 +0.0 +38.7 +0.0 +2.3 +0.0 +6.9 +0.0 +0.0 +0.0 63.4 54.0 (24Mbps) +9.4 Horiz Horiz 32 23139.155 M 59.8 +0.0 +0.0 +0.0	30		57.6				+6.9	+0.0	50.7	54.0	-3.3	Horiz
^ 11467.700 M 70.3 +1.6 +38.7 +0.0 +2.3 +0.0 +6.9 +0.0 +6.0 +0.0 63.4 54.0 (3.4) +9.4 Horiz Horiz 32 23139.155 59.8 +0.0 M +0.0 +0.0 +0.0 50.1 54.0 -3.9 Horiz Ave +7.0 -0.0 +0.0 +0.0 +0.0 -16.7 10MHz 802.11n 13MCSHT20 2S ^ 23139.155 57.5 +0.0		М		+1.6	-56.4	+0.0	+0.0					
^ 11467.700 M 70.3 +1.6 +38.7 +0.0 +2.3 +0.0 +6.9 +0.0 +0.0 +0.0 63.4 54.0 +0.0 +9.4 (32) Horiz M 32 23139.155 59.8 +0.0 M +0.0 +0.0 +0.0 +0.0 50.1 54.0 -3.9 Horiz 24Mbps 32 23139.155 59.8 +0.0 +0.0 +0.0 +0.0 +0.0 50.1 54.0 -3.9 Horiz Ave +7.0 - - 10MHz 802.11n 13MCSHT20 2S - ^ 23139.155 75.5 +0.0 +0.0 +0.0 +0.0 +0.0 +1.8 Horiz M +0.0 +0.		Ave		+0.0				220		10MHz 802	2.11a	136
$ \begin{tabular}{ c c c c c c c c c c c c c c c c c c c$												
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	۸	11467 700	70.3	+0.0	+38.7	+2.3	+69	+0.0	63.4		+9.4	Horiz
$\begin{array}{cccccccccccccccccccccccccccccccccccc$			70.5					10.0	05.1	51.0	1.2.1	TIONZ
32 23139.155 59.8 +0.0 +0.0 +0.0 +0.0 +0.0 +0.0 51.0 54.0 -3.9 Horiz Ave +7.0 - - 10MHz 802.11n 13MCSHT20 2S - ^23139.155 75.5 +0.0 +0.0 +0.0 +0.0 -66.7 - 10MHz 802.11n - 34 23136.950 59.7 +0.0 +0.0 +0.0 +0.0 -66.7 - 10MHz 802.11n - - - - 10MHz 802.11n - - - - - - - 0.0 +0.0 -0.16.7 - 20		111			-30.4	± 0.0	± 0.0	220		10MU ~ 800) 110	126
$\begin{array}{cccccccccccccccccccccccccccccccccccc$				± 0.0				220			2.11a	150
M +0.0 +0.0 +0.0 -16.7 10MHz 802.11n 13MCSHT20 2S ^ 23139.155 75.5 +0.0 +0.0 +0.0 +0.0 +0.0 65.8 54.0 +11.8 Horiz M +0.0 +0.0 +0.0 -16.7 10MHz 802.11n 13MCSHT20 2S 34 23136.950 59.7 +0.0 +0.0 +0.0 +0.0 50.0 54.0 -4.0 Horiz M +0.0 +0.0 +0.0 -16.7 20MHz 802.11a 36Mbps Ave +7.0 - - 20MHz 802.11a 36Mbps ^ 23136.950 73.4 +0.0 +0.0 +0.0 +0.0 -16.7 - -7.0 - - 20MHz 802.11a 36Mbps - - 36 17355.340 47.9 +0.0 +43.2 +3.0 +10.0 +0.0 50.0 54.0 +8.3 Horiz M +2.0 -56.9 +0.8 +0.0 -	20	22120 155	50.0	. 0. 0	. 0. 0	.0.0	. 0. 0	.0.0	50 1	<u> </u>	2.0	TT ·
Ave +7.0 10MHz 802.11n 13MCSHT20 28 ^ 23139.155 M 75.5 +0.0 +0.0 +0.0 +0.0 +0.0 +0.0 +0.0 +0.0 +0.0 +11.8 Horiz M +7.0 - - - 10MHz 802.11n 13MCSHT20 28 - </td <td>32</td> <td></td> <td>59.8</td> <td></td> <td></td> <td></td> <td></td> <td>+0.0</td> <td>50.1</td> <td>54.0</td> <td>-3.9</td> <td>Horiz</td>	32		59.8					+0.0	50.1	54.0	-3.9	Horiz
^* 23139.155 M 75.5 +0.0 +0.0 +0.0 +0.0 +0.0 +0.0 +0.0<					+0.0	+0.0	-16.7					
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$		Ave		+7.0								
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$										13MCSHT	20 2S	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	Λ	23139.155	75.5	+0.0	+0.0	+0.0	+0.0	+0.0	65.8	54.0	+11.8	Horiz
34 23136.950 M 59.7 +0.0 +0.0 +0.0 +0.0 +0.0 50.0 54.0 -4.0 Horiz Ave +7.0 -0.0 +0.0 +0.0 -16.7 - 20MHz 802.11a - 36Mbps ^A 23136.950 M 73.4 +0.0 +0.0 +0.0 +0.0 +0.0 63.7 54.0 +9.7 Horiz M +0.0 +0.0 +0.0 -16.7 - 20MHz 802.11a - 36Mbps 36 17355.340 47.9 +0.0 +43.2 +3.0 +10.0 +0.0 50.0 54.0 -4.0 Horiz M +2.0 -56.9 +0.8 +0.0 - 50.0 54.0 -4.0 Horiz M +2.0 -56.9 +0.8 +0.0 - - 36.0 - - - - - - - - - - - - - - - - -<		М		+0.0	+0.0	+0.0	-16.7					
$\begin{array}{cccccccccccccccccccccccccccccccccccc$				+7.0						10MHz 802	2.11n	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$										13MCSHT	20 2S	
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	34	23136.950	59.7	+0.0	+0.0	+0.0	+0.0	+0.0	50.0			Horiz
Ave +7.0 20MHz 802.11a 36Mbps ^ 23136.950 M 73.4 +0.0 +0.0 +0.0 +0.0 +0.0 +0.0 +0.0 +7.0 +0.0 +0.0 +0.0 +0.0 +0.0 +0.0 +0.0 +0.0 -16.7 +0.0 -16.7 63.7 54.0 54.0 54.0 +9.7 +9.7 Horiz 36 17355.340 M 47.9 +0.0 +2.0 -56.9 +3.0 +0.8 +10.0 +0.0 +0.0 50.0 54.0 54.0 -4.0 Horiz Horiz Ave +0.0 -56.9 +0.8 +0.0 +0.0 258 10MHz 802.11n 13MCSHT202S 135 13MCSHT202S ^ 17355.340 M 60.2 +0.0 +43.2 +3.0 +10.0 +0.0 62.3 54.0 +8.3 Horiz 38 17352.500 Ave 47.6 +0.0 +43.2 +3.0 +10.0 +0.0 49.7 54.0 +4.3 Horiz ^ 17352.500 M 59.4 +0.0 +43.2 +3.0 +10.0 +0.0 49.7 54.0 +7.5 Horiz ^ 17352.500 M 59.4 +0.0 +43.2 +3.0 +10.0 +0.0 61.5 54.0 +7.5 Horiz ^ 17352.500 M 59.4 +0.0 +43.2 +3.0	υ.		0,111						0010	0.110		110112
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$					10.0	10.0	10.7			20MHz 803) 11a	
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$		AVC		+7.0							2.11a	
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	^	22126.050	72 4			.0.0		.0.0	(27	<u> </u>	+0.7	II.
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	~		/3.4					+0.0	03.7	54.0	+9.7	HOLIZ
$\begin{array}{c c c c c c c c c c c c c c c c c c c $		М			+0.0	+0.0	-16.7			2 03 (1) 000		
$\begin{array}{cccccccccccccccccccccccccccccccccccc$				+7.0							2.11a	
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$										<u> </u>		
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	36		47.9				+10.0	+0.0	50.0	54.0	-4.0	Horiz
^ 17355.340 60.2 +0.0 +43.2 +3.0 +10.0 +0.0 62.3 54.0 +8.3 Horiz M +2.0 -56.9 +0.8 +0.0 - 258 10MHz 802.11n 135 38 17352.500 47.6 +0.0 +43.2 +3.0 +10.0 +0.0 49.7 54.0 -4.3 Horiz M +2.0 -56.9 +0.8 +0.0 - 227 20MHz 802.11a 129 38 17352.500 47.6 +0.0 +43.2 +3.0 +10.0 +0.0 49.7 54.0 -4.3 Horiz M +2.0 -56.9 +0.8 +0.0 - 227 20MHz 802.11a 129 36Mbps - - - 227 20MHz 802.11a 129 36Mbps +0.0 +43.2 +3.0 +10.0 +0.0 61.5 54.0 +7.5 Horiz M +2.0 -56.9 +0.8 +0.0 - 227 20MHz 802.11a 129 36Mbps - -		Μ		+2.0	-56.9	+0.8	+0.0					
$ \begin{tabular}{ c c c c c c c c c c c c c c c c c c c$		Ave		+0.0				258		10MHz 802	2.11n	135
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$										13MCSHT	202S	
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	Λ	17355.340	60.2	+0.0	+43.2	+3.0	+10.0	+0.0	62.3	54.0	+8.3	Horiz
+0.0 258 10MHz 802.11n 135 13MCSHT202S 38 17352.500 47.6 +0.0 +43.2 +3.0 +10.0 +0.0 49.7 54.0 -4.3 Horiz M +2.0 -56.9 +0.8 +0.0 Ave +0.0 227 20MHz 802.11a 129 36Mbps ^ 17352.500 59.4 +0.0 +43.2 +3.0 +10.0 +0.0 61.5 54.0 +7.5 Horiz M +2.0 -56.9 +0.8 +0.0 +0.0 227 20MHz 802.11a 129 36Mbps 40 17520.120 46.5 +0.0 +44.3 +3.0 +10.4 +0.0 49.7 54.0 -4.3 Vert		М		+2.0	-56.9	+0.8	+0.0					
38 17352.500 47.6 +0.0 +43.2 +3.0 +10.0 +0.0 49.7 54.0 -4.3 Horiz M +2.0 -56.9 +0.8 +0.0 227 20MHz 802.11a 129 Ave +0.0 227 20MHz 802.11a 129 129 ^ 17352.500 59.4 +0.0 +43.2 +3.0 +10.0 +0.0 61.5 54.0 +7.5 Horiz M +2.0 -56.9 +0.8 +0.0 227 20MHz 802.11a 129 M +2.0 -56.9 +0.8 +0.0 -0.0 61.5 54.0 +7.5 Horiz M +2.0 -56.9 +0.8 +0.0 227 20MHz 802.11a 129 M +2.0 -56.9 +0.8 +0.0 227 20MHz 802.11a 129 M +2.0 -56.9 +0.8 +0.0 227 20MHz 802.11a 129 36Mbps - - - 227 20MHz 802.11a 129 36Mbps - -								258		10MHz 802	2.11n	135
$\begin{array}{cccccccccccccccccccccccccccccccccccc$				10.0				200				100
M +2.0 -56.9 +0.8 +0.0 227 20MHz 802.11a 129 Ave +0.0 227 20MHz 802.11a 129 36Mbps ^ 17352.500 59.4 +0.0 +43.2 +3.0 +10.0 +0.0 61.5 54.0 +7.5 Horiz M +2.0 -56.9 +0.8 +0.0 227 20MHz 802.11a 129 -60.0 -56.9 +0.8 +0.0 -56.9 +0.8 +0.0 -56.9 -56.9 +0.8 +0.0 -56.9 +0.8 +0.0 -56.9 -56.9 +0.8 +0.0 -56.9 -56.9 +0.8 +0.0 -56.9 -56.9 +0.8 +0.0 -56.9 -56.9 -56.9 +0.8 +0.0 -56.9 </td <td>38</td> <td>17352 500</td> <td>17.6</td> <td>+0.0</td> <td>±13 2</td> <td>+3.0</td> <td>+10.0</td> <td>+0.0</td> <td>10.7</td> <td></td> <td></td> <td>Horiz</td>	38	17352 500	17.6	+0.0	±13 2	+3.0	+10.0	+0.0	10.7			Horiz
Ave +0.0 227 20MHz 802.11a 36Mbps 129 36Mbps ^ 17352.500 59.4 +0.0 +43.2 +3.0 +10.0 +0.0 61.5 54.0 +7.5 Horiz M +2.0 -56.9 +0.8 +0.0 227 20MHz 802.11a 36Mbps 129 40 17520.120 46.5 +0.0 +44.3 +3.0 +10.4 +0.0 49.7 54.0 -4.3 Vert	50		47.0					± 0.0	49.7	54.0	-4.5	TIOTIZ
^ 17352.500 59.4 +0.0 +43.2 +3.0 +10.0 +0.0 61.5 54.0 +7.5 Horiz M +2.0 -56.9 +0.8 +0.0 227 20MHz 802.11a 129 40 17520.120 46.5 +0.0 +44.3 +3.0 +10.4 +0.0 49.7 54.0 -4.3 Vert					-30.9	+0.0	+0.0	227		201411- 202	11-	120
^ 17352.500 59.4 +0.0 +43.2 +3.0 +10.0 +0.0 61.5 54.0 +7.5 Horiz M +2.0 -56.9 +0.8 +0.0 227 20MHz 802.11a 129 40 17520.120 46.5 +0.0 +44.3 +3.0 +10.4 +0.0 49.7 54.0 -4.3 Vert		Ave		+0.0				221			2.11a	129
M +2.0 -56.9 +0.8 +0.0 +0.0 227 20MHz 802.11a 129 36Mbps 40 17520.120 46.5 +0.0 +44.3 +3.0 +10.4 +0.0 49.7 54.0 -4.3 Vert			-			• •	10.0			-		
+0.0 227 20MHz 802.11a 129 36Mbps 40 17520.120 46.5 +0.0 +44.3 +3.0 +10.4 +0.0 49.7 54.0 -4.3 Vert	^		59.4					+0.0	61.5	54.0	+7.5	Horiz
36Mbps 40 17520.120 46.5 +0.0 +44.3 +3.0 +10.4 +0.0 49.7 54.0 -4.3 Vert		М			-56.9	+0.8	+0.0					
40 17520.120 46.5 +0.0 +44.3 +3.0 +10.4 +0.0 49.7 54.0 -4.3 Vert				+0.0				227		20MHz 802	2.11a	129
										36Mbps		
	40	17520.120	46.5	+0.0	+44.3	+3.0	+10.4	+0.0	49.7	54.0	-4.3	Vert
M $+2.1 -57.4 +0.8 +0.0$		М		+2.1	-57.4	+0.8	+0.0					
Ave +0.0 270 10MHz 802.11n 147								270		10MHz 802	2.11n	147
13MCSHT202S				. 510								
^ 17520.120 58.6 +0.0 +44.3 +3.0 +10.4 +0.0 61.8 54.0 +7.8 Vert	^	17520 120	58.6	+0.0	±11 3	±3.0	±10.4	+0.0	61.8			Vort
$\begin{array}{cccccccccccccccccccccccccccccccccccc$			50.0					± 0.0	01.0	54.0	±1.0	vert
		1V1		+2.1	-37.4	+0.0	+0.0					
+0.0 $2/0$ $10101112 802.111$ $14/1$								270		10M/II- 000) 11	1 4 7
13MCSHT202S				+0.0				270		10MHz 802		147



40	22220 500	50.4	0.0	0.0	10.0			10.5	54.0	15	Hanin
42	23339.500 M	59.4	$^{+0.0}_{+0.0}$	$^{+0.0}_{+0.0}$	$^{+0.0}_{+0.0}$	+0.0 -16.9	+0.0	49.5	54.0	-4.5	Horiz
				+0.0	+0.0	-10.9			20MHz 802	11.	
	Ave		+7.0							2.11a	
	23339.500	72.8		10.0	10.0	.0.0	.0.0	62.9	36Mbps	18.0	Haria
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		12.8	+0.0	+0.0	+0.0	+0.0 -16.9	+0.0	62.9	54.0	+8.9	Horiz
	М		$^{+0.0}_{+7.0}$	+0.0	+0.0	-10.9			20MHz 802	11.	
			+7.0						36Mbps	2.11a	
44	22957.160	59.0	+0.0	+0.0	+0.0	+0.0	+0.0	49.5	54.0	-4.5	Horiz
	M	59.0	+0.0 $+0.0$	+0.0 $+0.0$	+0.0 $+0.0$	-16.6	+0.0	49.5	54.0	-4.5	TIOTIZ
	Ave		+0.0 +7.1	$\pm 0.0$	$\pm 0.0$	-10.0			20MHz 802	) 11a	
	Ave		17.1						36Mbps	2.11a	
^	22957.160	74.3	+0.0	+0.0	+0.0	+0.0	+0.0	64.8	54.0	+10.8	Horiz
	M	7 110	+0.0	+0.0	+0.0	-16.6	10.0	0110	5 110	110.0	HOLL
			+7.1		1010	1010			20MHz 802	2.11a	
									36Mbps		
46	17204.170	48.9	+0.0	+42.1	+3.0	+9.8	+0.0	49.3	54.0	-4.7	Vert
	М		+2.0	-57.2	+0.7	+0.0					
	Ave		+0.0				180		10MHz 802	2.11a	132
									24Mbps		
^	17204.170	61.1	+0.0	+42.1	+3.0	+9.8	+0.0	61.5	54.0	+7.5	Vert
	Μ		+2.0	-57.2	+0.7	+0.0					
			+0.0				180		10MHz 802	2.11a	132
									24Mbps		
48	22962.290	58.1	+0.0	+0.0	+0.0	+0.0	+0.0	48.6	54.0	-5.4	Vert
	М		+0.0	+0.0	+0.0	-16.6					
	Ave		+7.1						20MHz 802	2.11a	
									36Mbps		
^	22962.290	73.4	+0.0	+0.0	+0.0	+0.0	+0.0	63.9	54.0	+9.9	Vert
	Μ		+0.0	+0.0	+0.0	-16.6					
			+7.1						20MHz 802	2.11a	
									36Mbps		
50	23139.930	58.1	+0.0	+0.0	+0.0	+0.0	+0.0	48.4	54.0	-5.6	Horiz
	Μ		+0.0	+0.0	+0.0	-16.7					
	Ave		+7.0						20MHz 802		
									26MCSHT		
^	23139.930	73.1	+0.0	+0.0	+0.0	+0.0	+0.0	63.4	54.0	+9.4	Horiz
	Μ		+0.0	+0.0	+0.0	-16.7					
			+7.0						20MHz 802		
									26MCSHT		
52	22960.260	57.8	+0.0	+0.0	+0.0	+0.0	+0.0	48.3	54.0	-5.7	Horiz
	Μ		+0.0	+0.0	+0.0	-16.6					
	Ave		+7.1						20MHz 802		
							0.5		26MCSHT		
^	22960.260	73.7	+0.0	+0.0	+0.0	+0.0	+0.0	64.2	54.0	+10.2	Horiz
	Μ		+0.0	+0.0	+0.0	-16.6					
			+7.1						20MHz 802		
									26MCSHT	20 2S	



		1= 0			• •			10.0			
54	17206.840	47.8	+0.0	+42.2	+3.0	+9.8	+0.0	48.3	54.0	-5.7	Horiz
	Μ		+2.0	-57.2	+0.7	+0.0					
	Ave		+0.0				255		10MHz 802	2.11a	136
									24Mbps		
^	17206.840	60.2	+0.0	+42.2	+3.0	+9.8	+0.0	60.7	54.0	+6.7	Horiz
	Μ		+2.0	-57.2	+0.7	+0.0					
			+0.0				255		10MHz 802	2.11a	136
									24Mbps		
56	17502.272	45.1	+0.0	+44.2	+3.0	+10.4	+0.0	48.1	54.0	-5.9	Horiz
	М		+2.0	-57.4	+0.8	+0.0					
	Ave		+0.0				244		20MHz 802	2.11n	130
									26MCSHT		
٨	17502.272	59.1	+0.0	+44.2	+3.0	+10.4	+0.0	62.1	54.0	+8.1	Horiz
	M	57.1	+2.0	-57.4	+0.8	+0.0	10.0	02.1	54.0	10.1	HOLL
	101		+0.0	-57.4	10.0	10.0	244		20MHz 802	) 11n	130
			$\pm 0.0$				244		26MCSHT		150
50	23137.600	57.7				+0.0	+0.0	100	54.0		Vert
58		57.7	+0.0	+0.0	+0.0		+0.0	48.0	54.0	-6.0	vert
	М		+0.0	+0.0	+0.0	-16.7			101.01		
	Ave		+7.0						10MHz 802		
									13MCSHT		
^	23137.600	73.3	+0.0	+0.0	+0.0	+0.0	+0.0	63.6	54.0	+9.6	Vert
	Μ		+0.0	+0.0	+0.0	-16.7					
			+7.0						10MHz 802	2.11n	
									13MCSHT	20 2S	
60	11470.250	54.9	+0.0	+38.7	+2.3	+6.9	+0.0	48.0	54.0	-6.0	Horiz
	М		+1.6	-56.4	+0.0	+0.0					
	Ave		+0.0				221		10MHz 802	2.11n	137
									13MCSHT	202S	
^	11470.250	66.9	+0.0	+38.7	+2.3	+6.9	+0.0	60.0	54.0	+6.0	Horiz
	М		+1.6	-56.4	+0.0	+0.0					
			+0.0	0011			221		10MHz 802	2.11n	137
			10.0				221		13MCSHT		107
62	23339.965	57.7	+0.0	+0.0	+0.0	+0.0	+0.0	47.8	54.0	-6.2	Horiz
02	23339.903 M	51.1	+0.0 $+0.0$	+0.0 $+0.0$	$^{+0.0}_{+0.0}$	+0.0 -16.9	10.0	т/.0	54.0	-0.2	TIOUZ
	Ave		+0.0 +7.0	$\pm 0.0$	$\pm 0.0$	-10.9			20MHz 802	) 11n	
	AVE		$\pm 1.0$						20MH2 802		
	0000000	70.7	.0.0	.0.0	.0.0		.0.0	(0.0			п. '
	23339.965	78.7	+0.0	+0.0	+0.0	+0.0	+0.0	68.8	54.0	+14.8	Horiz
	М		+0.0	+0.0	+0.0	-16.9			201 61		
			+7.0						20MHz 802		
									26MCSHT		
64		54.8	+0.0	+38.8	+2.4	+6.9	+0.0	47.8	54.0	-6.2	Vert
	Μ		+1.6	-56.7	+0.0	+0.0					
	Ave		+0.0				306		10MHz 802	2.11a	168
									24Mbps		
^	11569.525	66.2	+0.0	+38.8	+2.4	+6.9	+0.0	59.2	54.0	+5.2	Vert
	М		+1.6	-56.7	+0.0	+0.0					
			+0.0				306		10MHz 802	2.11a	168
									24Mbps		
L									- 1110Pb		



-											
66	17505.620 M	44.4	$^{+0.0}_{+2.1}$	+44.2 -57.4	+3.0 +0.8	$^{+10.4}_{+0.0}$	+0.0	47.5	54.0	-6.5	Vert
	Ave		+2.1 +0.0	-37.4	$\pm 0.8$	+0.0	293		20MHz 802.	11a	119
	Ave		10.0				275		26Mhiz 802.	114	11)
^	17505.620	57.2	+0.0	+44.2	+3.0	+10.4	+0.0	60.3	54.0	+6.3	Vert
	М		+2.1	-57.4	+0.8	+0.0					
			+0.0				293		20MHz 802.	11a	119
									36Mbps		
68	11469.447	54.4	+0.0	+38.7	+2.3	+6.9	+0.0	47.5	54.0	-6.5	Vert
	Μ		+1.6	-56.4	+0.0	+0.0					
	Ave		+0.0				300		10MHz 802.	.11a	169
	11460 447		0.0	20.7		6.0	0.0	50.1	24Mbps	<b>5</b> 1	X 7 .
Л	11469.447	66.0	+0.0	+38.7	+2.3	+6.9	+0.0	59.1	54.0	+5.1	Vert
	М		$^{+1.6}_{+0.0}$	-56.4	+0.0	+0.0	300		10MHz 802.	110	169
			+0.0				300		24Mbps	11a	109
70	17205.000	46.9	+0.0	+42.1	+3.0	+9.8	+0.0	47.3	54.0	-6.7	Horiz
	M		+2.0	-57.2	+0.7	+0.0					
	Ave		+0.0				259		10MHz 802.	11n	131
									13MCSHT2	02S	
^	17205.000	59.1	+0.0	+42.1	+3.0	+9.8	+0.0	59.5	54.0	+5.5	Horiz
	М		+2.0	-57.2	+0.7	+0.0					
			+0.0				259		10MHz 802.		131
									13MCSHT2		
72	17354.950	45.0	+0.0	+43.2	+3.0	+10.0	+0.0	47.1	54.0	-6.9	Vert
	М		+2.0	-56.9	+0.8	+0.0	202		20MIL- 802	11.	124
	Ave		+0.0				303		20MHz 802. 36Mbps	11a	134
^	17355.040	61.0	+0.0	+43.2	+3.0	+10.0	+0.0	63.1	54.0	+9.1	Vert
	М	01.0	+2.0	-56.9	+0.8	+0.0	10.0	05.1	54.0	17.1	ven
	101		+0.0	50.7	10.0	10.0	182		10MHz 802.	11n	135
									13MCSHT2		
^	17354.950	56.9	+0.0	+43.2	+3.0	+10.0	+0.0	59.0	54.0	+5.0	Vert
	Μ		+2.0	-56.9	+0.8	+0.0					
			+0.0				303		20MHz 802.	11a	134
									36Mbps		
75	17205.000	46.5	+0.0	+42.1	+3.0	+9.8	+0.0	46.9	54.0	-7.1	Vert
	М		+2.0	-57.2	+0.7	+0.0	100		101.01	11	100
	Ave		+0.0				180		10MHz 802.		129
^	17205.000	60.9		+ 40.1	+3.0	10.0		61.2	<u>13MCSHT2</u> 54.0		Vort
	17205.000 M	00.9	$^{+0.0}_{+2.0}$	+42.1 -57.2	+3.0 +0.7	+9.8 +0.0	+0.0	61.3	34.0	+7.3	Vert
	171		+2.0 +0.0	-31.2	+0.7	+0.0	180		10MHz 802.	11n	129
			10.0				100		13MCSHT2		127
77	17504.942	43.9	+0.0	+44.2	+3.0	+10.4	+0.0	46.9	54.0	-7.1	Vert
	M	,	+2.0	-57.4	+0.8	+0.0		,	2		
	Ave		+0.0				181		20MHz 802.	11n	132
									26MCSHT2		
^	17504.942	58.3	+0.0	+44.2	+3.0	+10.4	+0.0	61.3	54.0	+7.3	Vert
	Μ		+2.0	-57.4	+0.8	+0.0					
			+0.0				181		20MHz 802.		132
									26MCSHT2	02S	



79	11567.500	53.8	+0.0	+38.8	+2.4	+6.9	+0.0	46.8	54.0	-7.2	Horiz
	М		+1.6	-56.7	+0.0	+0.0					
	Ave		+0.0				222		10MHz 802	.11a	140
									24Mbps		
^	11567.500	66.2	+0.0	+38.8	+2.4	+6.9	+0.0	59.2	54.0	+5.2	Horiz
	Μ		+1.6	-56.7	+0.0	+0.0					
			+0.0				222		10MHz 802	.11a	140
									24Mbps		
81	23137.750	56.4	+0.0	+0.0	+0.0	+0.0	+0.0	46.7	54.0	-7.3	Vert
	М		+0.0	+0.0	+0.0	-16.7					
	Ave		+7.0						20MHz 802	.11a	
									36Mbps		
^	23137.750	70.6	+0.0	+0.0	+0.0	+0.0	+0.0	60.9	54.0	+6.9	Vert
	М		+0.0	+0.0	+0.0	-16.7					
			+7.0						20MHz 802	.11a	
									36Mbps		
83	11480.000	52.9	+0.0	+38.7	+2.3	+6.9	+0.0	45.9	54.0	-8.1	Horiz
0.5	M	02.9	+1.6	-56.5	+0.0	+0.0	10.0	1019	2110	0.1	HOLE
	Ave		+0.0	50.5	10.0	10.0	204		20MHz 802	11a	101
	1100		10.0				204		36Mbps	u	101
^	11480.000	65.5	+0.0	+38.7	+2.3	+6.9	+0.0	58.5	54.0	+4.5	Horiz
	M	05.5	+0.0 $+1.6$	-56.5	+2.3 +0.0	+0.9 +0.0	$\pm 0.0$	56.5	54.0	<b>----.</b> <i>J</i>	HOUL
	11/1		$^{+1.0}_{+0.0}$	-50.5	$\pm 0.0$	$\pm 0.0$	204		20MHz 802	11a	101
			$\pm 0.0$				204		2010112 802 36Mbps	a	101
05	22120.070	<i></i>	10.0	.0.0	.0.0		.0.0	15.0	-	0.2	Vert
85	23139.970	55.5	+0.0	+0.0	+0.0	+0.0	+0.0	45.8	54.0	-8.2	Vert
	М		+0.0	+0.0	+0.0	-16.7			201411- 202	11	
	Ave		+7.0						20MHz 802		
	22120.070	70.0	0.0	0.0	0.0	0.0	0.0	(1.0	26MCSHT2		<b>X</b> 7 .
~	23139.970	70.9	+0.0	+0.0	+0.0	+0.0	+0.0	61.2	54.0	+7.2	Vert
	М		+0.0	+0.0	+0.0	-16.7					
			+7.0						20MHz 802		
									26MCSHT2		
87	23343.000	55.7	+0.0	+0.0	+0.0	+0.0	+0.0	45.8	54.0	-8.2	Vert
	М		+0.0	+0.0	+0.0	-16.9					
	Ave		+7.0						20MHz 802	.11a	
									36Mbps		
^	23343.000	69.7	+0.0	+0.0	+0.0	+0.0	+0.0	59.8	54.0	+5.8	Vert
	М		+0.0	+0.0	+0.0	-16.9					
			+7.0						20MHz 802	.11a	
									36Mbps		
89	17355.175	43.7	+0.0	+43.2	+3.0	+10.0	+0.0	45.8	54.0	-8.2	Vert
	М		+2.0	-56.9	+0.8	+0.0					
	Ave		+0.0				179		20MHz 802	.11n	132
									26MCSHT2		
^	17355.175	57.3	+0.0	+43.2	+3.0	+10.0	+0.0	59.4	54.0	+5.4	Vert
	M	51.5	+2.0	-56.9	+0.8	+0.0	10.0	<i></i>	21.0		, 011
	141		+2.0 +0.0	50.7	10.0	10.0	179		20MHz 802	11n	132
			10.0				117		26MCSHT2		134
L									20101001112	2020	



91	22960.750 M	55.0	+0.0 +0.0	$^{+0.0}_{+0.0}$	$^{+0.0}_{+0.0}$	+0.0 -16.6	+0.0	45.5	54.0	-8.5	Vert
	Ave		+0.0 $+7.1$	+0.0	+0.0	-10.0			20MHz 802.	11n	
	Ave		$\pm 1.1$						26MCSHT2		
^	22960.750	70.4	+0.0	+0.0	+0.0	+0.0	+0.0	60.9	54.0	+6.9	Vert
	M	/0.1	+0.0	+0.0	+0.0	-16.6	10.0	00.9	5 110	10.9	vert
			+7.1						20MHz 802.	.11n	
									26MCSHT2	0 2S	
93	17223.225	44.9	+0.0	+42.3	+3.0	+9.8	+0.0	45.5	54.0	-8.5	Horiz
	Μ		+2.0	-57.2	+0.7	+0.0					
	Ave		+0.0				254		20MHz 802.	.11a	138
									36Mbps		
^	17223.225	57.8	+0.0	+42.3	+3.0	+9.8	+0.0	58.4	54.0	+4.4	Horiz
	М		+2.0	-57.2	+0.7	+0.0	254		20141 002	11	120
			+0.0				254		20MHz 802. 36Mbps	.11a	138
95	11569.510	52.5	+0.0	+38.8	+2.4	+6.9	+0.0	45.5	· · · ·	-8.5	Horiz
	М		+1.6	-56.7	+0.0	+0.0					
	Ave		+0.0				211		10MHz 802.	.11n	134
									13MCSHT2	02S	
^	11569.510	65.6	+0.0	+38.8	+2.4	+6.9	+0.0	58.6	54.0	+4.6	Horiz
	М		+1.6	-56.7	+0.0	+0.0					
			+0.0				211		10MHz 802.		134
									13MCSHT2		
97	17352.300	43.3	+0.0	+43.2	+3.0	+10.0	+0.0	45.4	54.0	-8.6	Horiz
	М		+2.0	-56.9	+0.8	+0.0	• • •		<b>201 (11 002</b>		101
	Ave		+0.0				240		20MHz 802.		124
	17252 200	567	.0.0	. 12.0	.2.0	10.0	. 0. 0	50.0	26MCSHT2		
~	17352.300	56.7	+0.0	+43.2	+3.0	+10.0	+0.0	58.8	54.0	+4.8	Horiz
	М		+2.0 +0.0	-56.9	+0.8	+0.0	240		20MHz 802.	11.	124
			$\pm 0.0$				240		26MCSHT2		124
99	11470.047	52.2	+0.0	+38.7	+2.3	+6.9	+0.0	45.3	54.0	-8.7	Vert
,,,	M	52.2	+1.6	-56.4	+0.0	+0.9	10.0	чэ.э	54.0	-0.7	ven
	Ave		+0.0	50.1	10.0	10.0	300		10MHz 802.	.11n	170
			1010				200		13MCSHT2		170
^	11470.047	65.3	+0.0	+38.7	+2.3	+6.9	+0.0	58.4	54.0	+4.4	Vert
	Μ		+1.6		+0.0	+0.0					
			+0.0				300		10MHz 802.	.11n	170
									13MCSHT2	02S	
101	23358.970	54.9	+0.0	+0.0	+0.0	+0.0	+0.0	45.0	54.0	-9.0	Horiz
	Μ		+0.0	+0.0	+0.0	-16.9					
	Ave		+7.0						10MHz 802.	.11a	
									24Mbps		
^	23358.970	67.5	+0.0	+0.0	+0.0	+0.0	+0.0	57.6	54.0	+3.6	Horiz
	Μ		+0.0	+0.0	+0.0	-16.9			101 07 07 07		
			+7.0						10MHz 802.	.11a	
400	10010 550		0.0		• •				24Mbps	<u> </u>	** :
103	17210.770	44.5	+0.0	+42.2	+3.0	+9.8	+0.0	45.0	54.0	-9.0	Horiz
	М		+2.0	-57.2	+0.7	+0.0	240		201411- 202	11	120
	Ave		+0.0				249		20MHz 802.		136
									26MCSHT2	023	



^	17210.770	57.4	+0.0	+42.2	+3.0	+9.8	+0.0	57.9	54.0	+3.9	Horiz
	М		+2.0	-57.2	+0.7	+0.0	240		201411 002	11.	126
			+0.0				249		20MHz 802. 26MCSHT20		136
105	11680.055	50.8	+0.0	+38.8	+2.4	+7.0	+0.0	44.1	54.0	-9.9	Horiz
	Μ		+1.6	-56.5	+0.0	+0.0	100		101 44 000		105
	Ave		+0.0				198		10MHz 802. 24Mbps	11a	105
^	11680.055	62.4	+0.0	+38.8	+2.4	+7.0	+0.0	55.7	54.0	+1.7	Horiz
	М		+1.6	-56.5	+0.0	+0.0	100		101411 002	11.	105
			+0.0				198		10MHz 802. 24Mbps	11a	105
107	23339.975	53.9	+0.0	+0.0	+0.0	+0.0	+0.0	44.0	54.0	-10.0	Vert
107	23339.975 M	55.9	+0.0 $+0.0$	$^{+0.0}_{+0.0}$	+0.0 $+0.0$	-16.9	$\pm 0.0$	44.0	54.0	-10.0	ven
	Ave		+7.0	10.0	10.0	10.9			20MHz 802.	11n	
									26MCSHT20		
٨	23339.975	72.7	+0.0	+0.0	+0.0	+0.0	+0.0	62.8	54.0	+8.8	Vert
	Μ		+0.0	+0.0	+0.0	-16.9					
			+7.0						20MHz 802.		
									26MCSHT20		
109	17220.000	42.6	+0.0	+42.3	+3.0	+9.8	+0.0	43.2	54.0	-10.8	Vert
	М		+2.0	-57.2	+0.7	+0.0	100		201411 002	11.	122
	Ave		+0.0				190		20MHz 802. 26MCSHT20		132
^	17220.000	55.2	+0.0	+42.3	+3.0	+9.8	+0.0	55.8	54.0	+1.8	Vert
	М		+2.0	-57.2	+0.7	+0.0					
			+0.0				190		20MHz 802.		132
111	11470 640	50.2		. 20.7	. 2. 2		.0.0	42.0	26MCSHT20		TT and
111	11479.640 M	50.2	$^{+0.0}_{+1.6}$	+38.7 -56.5	+2.3 +0.0	+6.9 +0.0	+0.0	43.2	54.0	-10.8	Horiz
	Ave		+1.0 $+0.0$	-30.5	+0.0	+0.0	201		20MHz 802.	11n	102
	Ave		10.0				201		26MCSHT20		102
^	11479.640	63.2	+0.0	+38.7	+2.3	+6.9	+0.0	56.2	54.0	+2.2	Horiz
	М		+1.6	-56.5	+0.0	+0.0					-
			+0.0				201		20MHz 802.	11n	102
									26MCSHT20	)2S	
113	23359.870	52.9	+0.0	+0.0	+0.0	+0.0	+0.0	43.0	54.0	-11.0	Horiz
	Μ		+0.0	+0.0	+0.0	-16.9			103		
	Ave		+7.0						10MHz 802.		
	22250 070	(7.2						57 A	13MCSHT20		II.
^	23337.010	67.3	+0.0	+0.0	+0.0	+0.0	+0.0	57.4	54.0	+3.4	Horiz
	М		$^{+0.0}_{+7.0}$	+0.0	+0.0	-16.9			10MHz 802.	11n	
									13MCSHT20	) 2S	
115	17221.925	42.3	+0.0	+42.3	+3.0	+9.8	+0.0	42.9	54.0	-11.1	Vert
	M		+2.0	-57.2	+0.7	+0.0	102		201411- 202	11.	124
	Ave		+0.0				193		20MHz 802. 36Mbps	11a	134
۸	17221.925	54.9	+0.0	+42.3	+3.0	+9.8	+0.0	55.5	54.0	+1.5	Vert
	Μ		+2.0	-57.2	+0.7	+0.0					
			+0.0				193		20MHz 802.	11a	134
									36Mbps		



117	11570.050	49.8	+0.0	+38.8	+2.4	+6.9	+0.0	42.8	54.0	-11.2	Horiz
	М		+1.6	-56.7	+0.0	+0.0	210		20141 00		1.4.4
	Ave		+0.0				218		20MHz 802	2.11a	144
									36Mbps		
^	11570.050	61.9	+0.0	+38.8	+2.4	+6.9	+0.0	54.9	54.0	+0.9	Horiz
	М		+1.6	-56.7	+0.0	+0.0					
			+0.0				218		20MHz 802	2.11a	144
									36Mbps		
119	11679.905	48.6	+0.0	+38.8	+2.4	+7.0	+0.0	41.9	54.0	-12.1	Horiz
	Μ		+1.6	-56.5	+0.0	+0.0					
	Ave		+0.0				200		10MHz 802	2.11n	104
									13MCSHT	202S	
^	11679.905	61.3	+0.0	+38.8	+2.4	+7.0	+0.0	54.6	54.0	+0.6	Horiz
	Μ		+1.6	-56.5	+0.0	+0.0					
			+0.0				200		10MHz 802	2.11n	104
									13MCSHT	202S	
121	11570.000	48.4	+0.0	+38.8	+2.4	+6.9	+0.0	41.4	54.0	-12.6	Vert
	М		+1.6	-56.7	+0.0	+0.0					
	Ave		+0.0				309		10MHz 802	2.11n	163
			10.0				207		13MCSHT		105
^	11570.000	62.9	+0.0	+38.8	+2.4	+6.9	+0.0	55.9	54.0	+1.9	Vert
	M	02.7	+1.6	-56.7	+0.0	+0.9	10.0	55.7	54.0	11.7	ven
	111		+0.0	-30.7	10.0	10.0	309		10MHz 802	7 11n	163
			$\pm 0.0$				309		13MCSHT		105
122	11569.700	48.3	+0.0	+38.8	+2.4	+6.9	+0.0	41.3	54.0	-12.7	Horiz
123		48.3			$^{+2.4}_{+0.0}$		+0.0	41.5	54.0	-12.7	HOUT
	М		+1.6	-56.7	+0.0	+0.0	201		201411 00	11.	104
	Ave		+0.0				201		20MHz 802		104
		<b>10</b> 0	0.0	20.0			0.0		26MCSHT		
~	11569.700	62.0	+0.0	+38.8	+2.4	+6.9	+0.0	55.0	54.0	+1.0	Horiz
	М		+1.6	-56.7	+0.0	+0.0					
			+0.0				201		20MHz 802		104
									26MCSHT		
125	11669.875	48.1	+0.0	+38.8	+2.4	+7.0	+0.0	41.3	54.0	-12.7	Horiz
	Μ		+1.6	-56.6	+0.0	+0.0					
	Ave		+0.0				275		20MHz 802	2.11a	141
									36Mbps		
^	11669.875	60.3	+0.0	+38.8	+2.4	+7.0	+0.0	53.5	54.0	-0.5	Horiz
	М		+1.6	-56.6	+0.0	+0.0					
			+0.0				275		20MHz 802	2.11a	141
									36Mbps		
127	11480.150	46.4	+0.0	+38.7	+2.3	+6.9	+0.0	39.4	54.0	-14.6	Vert
	М		+1.6	-56.5	+0.0	+0.0					
	Ave		+0.0	2 0.0			182		20MHz 802	2.11n	118
'	•		. 5.0						26MCSHT		
^	11480.150	64.3	+0.0	+38.7	+2.3	+6.9	+0.0	57.3	54.0	+3.3	Vert
	M	07.5	+1.6	-56.5	+0.0	+0.9	10.0	51.5	54.0	10.0	, ert
	141		+1.0 +0.0	-50.5	10.0	10.0	182		20MHz 802	2.11n	118
			10.0				102		26MCSHT		110
									201005111	2020	



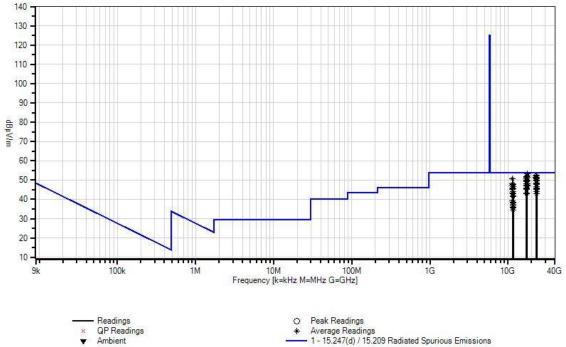
120	11480.625	46.3	+0.0	+38.7	+2.3	+6.9	+0.0	39.3	54.0	-14.7	Vert
129	M	+0.J	+0.0 $+1.6$	+38.7	+2.3 +0.0	+0.9 $+0.0$	$\pm 0.0$	57.5	54.0	-14./	vert
.	Ave		+0.0	2 0.0			193		20MHz 802	.11a	134
									36Mbps		
^	11480.625	58.6	+0.0	+38.7	+2.3	+6.9	+0.0	51.6	54.0	-2.4	Vert
	Μ		+1.6	-56.5	+0.0	+0.0	102		<b>0</b> 0) <b>(</b> ) 007		10.4
			+0.0				193		20MHz 802	.11a	134
121	11664.896	45.3	+0.0	+38.8	+2.4	+7.0	+0.0	38.5	36Mbps 54.0	-15.5	Horiz
151	M	43.5	$^{+0.0}_{+1.6}$	+38.8 -56.6	+2.4 +0.0	+7.0 +0.0	+0.0	36.5	54.0	-13.5	HOLIZ
	Ave		+0.0	-50.0	10.0	10.0	207		20MHz 802	.11n	137
									26MCSHT2		
^	11664.896	59.3	+0.0	+38.8	+2.4	+7.0	+0.0	52.5	54.0	-1.5	Horiz
	Μ		+1.6	-56.6	+0.0	+0.0					
			+0.0				207		20MHz 802		137
100	11/70 //0	447	.0.0	. 20.0	.0.1		.0.0	20.0	26MCSHT2		¥7 ·
133	11679.660 M	44.7	+0.0	+38.8	+2.4	+7.0	+0.0	38.0	54.0	-16.0	Vert
	M Ave		+1.6 +0.0	-56.5	+0.0	+0.0	317		10MHz 802	119	168
			+0.0				517		24Mbps	.11a	100
^	11679.660	57.0	+0.0	+38.8	+2.4	+7.0	+0.0	50.3	<u>2400ps</u> 54.0	-3.7	Vert
	М		+1.6	-56.5	+0.0	+0.0					
			+0.0				317		10MHz 802	.11a	168
									24Mbps		
135	11570.138	44.4	+0.0	+38.8	+2.4	+6.9	+0.0	37.4	54.0	-16.6	Vert
	М		+1.6	-56.7	+0.0	+0.0	210		201411 002	11	100
	Ave		+0.0				210		20MHz 802 26MCSHT2		122
^	11570.138	60.7	+0.0	+38.8	+2.4	+6.9	+0.0	53.7	54.0	-0.3	Vert
	M	00.7	+0.0 $+1.6$	-56.7	+2.4 +0.0	+0.9 +0.0	10.0	55.1	5-4.0	0.5	vert
			+0.0				210		20MHz 802	.11n	122
									26MCSHT2	202S	
137	11680.000	43.4	+0.0	+38.8	+2.4	+7.0	+0.0	36.7	54.0	-17.3	Vert
	М		+1.6	-56.5	+0.0	+0.0	100		101 01 000		1.40
	Ave		+0.0				190		10MHz 802		149
^	11680.000	59.4	+0.0	+38.8	+2.4	+7.0	+0.0	52.7	13MCSHT2 54.0		Vort
	11680.000 М	39.4	+0.0 +1.6	+38.8 -56.5	$^{+2.4}_{+0.0}$	$^{+1.0}_{+0.0}$	+0.0	52.1	54.0	-1.3	Vert
	TAT		+0.0	50.5	10.0	10.0	190		10MHz 802	.11n	149
									13MCSHT2		/
139	11670.050	42.6	+0.0	+38.8	+2.4	+7.0	+0.0	35.8	54.0	-18.2	Vert
	Μ		+1.6	-56.6	+0.0	+0.0					
.	Ave		+0.0				190		20MHz 802	.11a	122
									36Mbps		
140	11568.600	42.4	+0.0	+38.8	+2.4	+6.9	+0.0	35.4	54.0	-18.6	Vert
	М		$^{+1.6}_{+0.0}$	-56.7	+0.0	+0.0	208		20MHz 802	110	212
	Ave		$\pm 0.0$				200		20MH2 802 36Mbps	.11a	212
٨	11568.600	54.5	+0.0	+38.8	+2.4	+6.9	+0.0	47.5	54.0	-6.5	Vert
	M	21.2	+1.6	-56.7	+0.0	+0.0	10.0		2 1.0	0.0	, 011
			+0.0				208		20MHz 802	.11a	212
									36Mbps		



Ambient

142 11670.093	41.3	+0.0	+38.8	+2.4	+7.0	+0.0	34.5	54.0	-19.5	Vert
М		+1.6	-56.6	+0.0	+0.0					
Ave		+0.0				185		20MHz 802	2.11n	174
								26MCSHT	202S	
^ 11670.093	57.3	+0.0	+38.8	+2.4	+7.0	+0.0	50.5	54.0	-3.5	Vert
М		+1.6	-56.6	+0.0	+0.0					
		+0.0				185		20MHz 802	2.11n	174
								26MCSHT	202S	
^ 11670.050	55.1	+0.0	+38.8	+2.4	+7.0	+0.0	48.3	54.0	-5.7	Vert
М		+1.6	-56.6	+0.0	+0.0					
		+0.0				190		20MHz 802	2.11a	122
								36Mbps		

CKC Laboratories, Inc. Date: 6/16/2012 Time: 11:52:18 Digital Path WO#: 92682 15:247(d) / 15:209 Radiated Spurious Emissions Test Distance: 3 Meters Sequence#: 217 Vert UNII Bands. 20MHz Channel width.



*



Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249 - 1170

Customer: Specification:	Digital Path 15.247(d) / 15.209 Radiated Spurious En	nissions	
Work Order #:	92682	Date:	6/16/2012
Test Type:	Radiated Scan	Time:	10:45:22
Equipment:	5GHz Panel (18dBi) + Omni (11dBi)	Sequence#:	218
Manufacturer:	Digital Path	Tested By:	C. Nicklas
Model:	G5RL10G		
S/N:	EMI 2		

#### Test Equipment:

Test Equi	<u> </u>		<b>M</b> 11		
ID	Asset #	Description	Model	Calibration D	
	AN02668	Spectrum Analyzer	E4446A	2/23/2011	2/23/2013
T1	AN02157	Horn Antenna-ANSI	3115	1/17/2011	1/17/2013
		C63.5			
T2	AN03302	Cable	32026-29094K-	3/21/2012	3/21/2014
		~	29094K-72TC		
T3	ANP01210	Cable	FSJ1P-50A-4A	3/15/2011	3/15/2013
T4	ANP05843	Cable	32022-2-29094K-	7/30/2010	7/30/2012
			48TC	<b>5</b> (1.2 (2.0.1.1	5/10/2010
T5	AN03114	Preamp	AMF-7D-	5/13/2011	5/13/2013
	1.200000		00101800-30-10P		10/10/2012
	ANP05935	Attenuator	84A-10	10/19/2011	10/19/2013
	ANP01211	Attenuator	23-10-34	4/15/2011	4/15/2013
T6	AN01417	High Pass Filter	84300-80039	2/9/2012	2/9/2014
T7	AN02694	Active Horn	AMFW-5F-	11/10/2010	11/10/2012
		Antenna-ANSI	18002650-20-10P	1	
		C63.5 Antenna			
		Factors (dB)			
	AN02695	Active Horn	AMFW-5F-	11/10/2010	11/10/2012
		Antenna-ANSI	260400-33-8P		
		C63.5 Antenna			
-	1 100720	Factors (dB)		1/21/2011	1/21/2012
	AN00730	Preamp	6502	1/31/2011	1/31/2013
	AN00432	Loop Antenna		3/31/2011	3/31/2013
	AN00852	Biconilog Antenna	CBL 6111C	11/16/2010	11/16/2012
	ANP05299	Cable	RG214	3/6/2011	3/6/2013
	ANP05300	Cable	RG214/U	3/7/2011	3/7/2013
	ANP05440	Cable		3/7/2011	3/7/2013
T8	AN03143	Cable	32022-29094K-	8/30/2011	8/30/2013
			144TC		
Equipmer	nt Under Test (*	= <b>EUT</b> ):			
Function	(	Manufacturer	Model #		S/N
	el (18dBi) +	Digital Path	G5RL10G		EMI 2
Omni (11d	lBi)*	-			
Support L	Devices:				
Function		Manufacturer	Model #		S/N
Laptop Co	mputer	HP	ProBook 65651		5CB13637ZF
	wer Supply	HP	608428-002		F12941126327228
	······································				



#### Test Conditions / Notes:

The EUT installed on a pole as intended. DC power port is connected to a DC power supply via a CAT5 cable. The Ethernet port is connected to a remote laptop via unshielded twisted pair.

The Remote laptop is running test software to exercise the intended functionalities. Receiver circuit is active.

11dBi Omni antenna is connected to radio 0 (instance 1) 18 dBi panel antenna is connected to radio1 (instance 2)

this data sheet is for the EUT transmitting via 18dBi panel antenna connected to radio 1 (instance 2)

Point to Multi-Point

Freq = 5725 - 5850 MHz

Freq: 5735MHz, 5785MHz, 5840MHz. BW = 10 MHz 802.11a: 24Mbps, TX power setting = 14.5, 14.5, 14.5 802.11n: 13MCS HT20 2S,TX power setting = 14.5, 14.5, 14.5

Freq: 5740MHz, 5785MHz, 5835MHz. BW= 20MHz 802.11a: 36 Mbps, TX power setting = 14.5, 14.5, 14.5 802.11n: 26MCS HT20 2S, TX power setting = 14.5, 14.5, 14.5

Temperature: 21.5-23.6°C, Relative Humidity: 36-40%, Atmospheric Pressure: 100.6-100.8kPa

Scans were performed with the RBW reduced as needed. Data all taken at the proper RBW setting. Above 18GHz, hand scan the unit at a 1/2 meter distance to determine if there are any signals. Any signals found are hand maximized at a 1/2 meter distance to ensure the maximum signal is found.

Frequency range of measurement = 9kHz-40GHz. 9 kHz -150 kHz; RBW=200 Hz, VBW=200 Hz;150 kHz-30 MHz; RBW=9 kHz, VBW=9 kHz;30 MHz-1000 MHz; RBW=120 kHz, VBW=120 kHz,1000 MHz-40,000 MHz; RBW=1 MHz, VBW=1 MHz.

Ext A	ttn: 0 dB										
Measu	rement Data:	Reading listed by margin.		Test Distance: 3 Meters							
#	Freq	Rdng	T1	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
			T5	T6	T7	T8					
	MHz	dBµV	dB	dB	dB	dB	Table	$dB\mu V/m$	$dB\mu V/m$	dB	Ant
1	11470.004	54.4	+38.7	+2.3	+6.9	+1.6	+0.0	47.5	54.0	-6.5	Horiz
	Μ		-56.4	+0.0	+0.0	+0.0					
						Noise Floor			97		
2	23360.060	56.3	+0.0	+0.0	+0.0	+0.0	+0.0	46.4	54.0	-7.6	Vert
	Μ		+0.0	+0.0	-16.9	+7.0					
	Ave					10MHz 802.11a					
									24Mbps		
3	11469.998	52.9	+38.7	+2.3	+6.9	+1.6	+0.0	46.0	54.0	-8.0	Vert
	Μ		-56.4	+0.0	+0.0	+0.0					
									Noise Floo	r	97
4	11679.998	52.1	+38.8	+2.4	+7.0	+1.6	+0.0	45.4	54.0	-8.6	Horiz
	Μ		-56.5	+0.0	+0.0	+0.0					
									Noise Floo	r	97



5	11570.001	52.3	+38.8	+2.4	+6.9	+1.6	+0.0	45.3	54.0	-8.7	Horiz
	М		-56.7	+0.0	+0.0	+0.0			Noise Floor		97
6	23340.000	54.0	+0.0	+0.0	+0.0	+0.0	+0.0	44.1	54.0	-9.9	Vert
	М		+0.0	+0.0	-16.9	+7.0			20MHz 802	110	
F	Ave								20101HZ 802 36Mbps	.11a	
7	23360.005	54.0	+0.0	+0.0	+0.0	+0.0	+0.0	44.1	54.0	-9.9	Vert
	M		+0.0	+0.0	-16.9	+7.0			101.01		
F	Ave								10MHz 802 13MCSHT2		
٨	23360.060	70.3	+0.0	+0.0	+0.0	+0.0	+0.0	60.4	54.0	+6.4	Vert
	М		+0.0	+0.0	-16.9	+7.0			101.01		
									10MHz 802 24Mbps	.11a	
^	23360.005	68.7	+0.0	+0.0	+0.0	+0.0	+0.0	58.8	54.0	+4.8	Vert
	М		+0.0	+0.0	-16.9	+7.0					
									10MHz 802 13MCSHT2		
10	22937.030	53.5	+0.0	+0.0	+0.0	+0.0	+0.0	44.0	54.0	-10.0	Vert
	М		+0.0	+0.0	-16.6	+7.1					
A	Ave								10MHz 802	.11a	
^	22937.030	68.1	+0.0	+0.0	+0.0	+0.0	+0.0	58.6	24Mbps 54.0	+4.6	Vert
	М	0011	+0.0	+0.0	-16.6	+7.1	1010	0010	0.110		
									10MHz 802	.11a	
12	23339.920	53.4	+0.0	+0.0	+0.0	+0.0	+0.0	43.5	24Mbps 54.0	-10.5	Vert
12	M	5511	+0.0	+0.0	-16.9	+7.0	10.0	10.0	2110	10.5	vert
A	Ave								20MHz 802		
^	23339.920	70.2	+0.0	+0.0	+0.0	+0.0	+0.0	60.3	26MCSHT2 54.0	+6.3	Vert
	M	70.2	+0.0	+0.0	-16.9	+7.0	10.0	00.5	51.0	10.5	Vert
									20MHz 802		
^	23340.000	64.4	+0.0	+0.0	+0.0	+0.0	+0.0	54.5	26MCSHT2 54.0	+0.5	Vert
	23340.000 M	04.4	+0.0	+0.0	-16.9	+7.0	10.0	54.5	54.0	10.5	ven
									20MHz 802	.11a	
15	23357.540	53.2	+0.0	+0.0	+0.0	+0.0	+0.0	43.3	36Mbps 54.0	-10.7	Horiz
15	23337.340 M	55.2	+0.0 $+0.0$	+0.0 $+0.0$	-16.9	+0.0 +7.0	+0.0	45.5	54.0	-10.7	HOHZ
A	Ave								10MHz 802	.11a	
	23357.540	67.0		10.0		+0.0		57.2	24Mbps	+3.3	Ucria
~	23357.540 M	67.2	$^{+0.0}_{+0.0}$	$^{+0.0}_{+0.0}$	+0.0 -16.9	$^{+0.0}_{+7.0}$	+0.0	57.3	54.0	+3.3	Horiz
					- 317				10MHz 802	.11a	
									24Mbps		
17	11(70,000	50.0	. 20. 0		. 7 0	. 1 /		10.0	E 1 0	107	X7 ·
17	11679.998 M	50.0	+38.8 -56.5	+2.4 +0.0	+7.0 +0.0	$^{+1.6}_{+0.0}$	+0.0	43.3	54.0	-10.7	Vert



18	11570.001	49.9	+38.8	+2.4	+6.9	+1.6	+0.0	42.9	54.0	-11.1	Vert
10	M	-77.7	-56.7	+0.0	+0.9	+0.0	10.0	72.7	54.0	11.1	ven
									Noise Floor		97
19	17519.995	39.3	+44.3	+3.0	+10.4	+2.1	+0.0	42.5	54.0	-11.5	Horiz
	М		-57.4	+0.8	+0.0	+0.0					07
	Ave	51.0	. 44.2	.2.0	. 10.4	.0.1	.0.0	<i>EE</i> 1	Noise Floor		<u>97</u>
Х	17520.002 M	51.9	+44.3 -57.4	+3.0 +0.8	$^{+10.4}_{+0.0}$	+2.1 +0.0	+0.0	55.1	54.0	+1.1	Horiz
	111		-57.4	$\pm 0.8$	$\pm 0.0$	$\pm 0.0$			Noise Floor		97
21	22936.730	51.9	+0.0	+0.0	+0.0	+0.0	+0.0	42.4	54.0		Horiz
	Μ		+0.0	+0.0	-16.6	+7.1					
	Ave								10MHz 802	.11a	
	22026 520		0.0						24Mbps	4.0	
~	22936.730	67.5	+0.0	+0.0	+0.0	+0.0	+0.0	58.0	54.0	+4.0	Horiz
	М		+0.0	+0.0	-16.6	+7.1			10MHz 802	119	
									24Mbps	.11a	
23	17520.003	39.1	+44.3	+3.0	+10.4	+2.1	+0.0	42.3	-	-11.7	Vert
	Μ		-57.4	+0.8	+0.0	+0.0					
	Ave								Noise Floor		97
^	17519.996	51.2	+44.3	+3.0	+10.4	+2.1	+0.0	54.4	54.0	+0.4	Vert
	М		-57.4	+0.8	+0.0	+0.0			Noise Floor		97
25	22959.960	51.7	+0.0	+0.0	+0.0	+0.0	+0.0	42.2	54.0	-11.8	Vert
25	M	51.7	+0.0	+0.0	-16.6	+7.1	10.0	72.2	54.0	-11.0	ven
	Ave								20MHz 802	.11n	
									26MCSHT2		
^	22959.960	65.2	+0.0	+0.0	+0.0	+0.0	+0.0	55.7	54.0	+1.7	Vert
	М		+0.0	+0.0	-16.6	+7.1			201411- 202	11	
									20MHz 802. 26MCSHT2		
27	17354.995	40.0	+43.2	+3.0	+10.0	+2.0	+0.0	42.1	54.0		Horiz
	М		-56.9		+0.0	+0.0					
	Ave								Noise Floor		97
^	17355.000	52.2	+43.2	+3.0	+10.0	+2.0	+0.0	54.3	54.0	+0.3	Horiz
	М		-56.9	+0.8	+0.0	+0.0					07
20	23359.910	51.0	+0.0		+0.0			42.0	Noise Floor 54.0		97 Horiz
29	25559.910 M	51.9	+0.0 +0.0	$^{+0.0}_{+0.0}$	+0.0 -16.9	+0.0 +7.0	+0.0	42.0	34.0	-12.0	HOLIZ
	Ave		10.0	10.0	10.9	17.0			10MHz 802	.11n	
	· -								13MCSHT2		
^	23359.910	66.3	+0.0	+0.0	+0.0	+0.0	+0.0	56.4	54.0	+2.4	Horiz
	М		+0.0	+0.0	-16.9	+7.0					
									10MHz 802		
21	17355.001	39.9	+43.2	+3.0	+10.0	+2.0	+0.0	42.0	13MCSHT2 54.0	-12.0	Vert
51	1/355.001 M	37.7	+43.2 -56.9	+3.0 +0.8	+10.0 +0.0	+2.0 +0.0	+0.0	42.0	54.0	-12.0	vert
	Ave		20.7	10.0	10.0	10.0			Noise Floor		97
	17354.996	52.4	+43.2	+3.0	+10.0	+2.0	+0.0	54.5	54.0	+0.5	Vert
	М		-56.9	+0.8	+0.0	+0.0					
1									Noise Floor		97



33 23140.860 M	51.6	$^{+0.0}_{+0.0}$	+0.0 +0.0	+0.0 -16.7	+0.0 +7.0	+0.0	41.9	54.0	-12.1	Vert
Ave								10MHz 802 24Mbps	.11a	
^ 23140.860	67.2	+0.0	+0.0	+0.0	+0.0	+0.0	57.5	54.0	+3.5	Vert
M	07.2	+0.0	+0.0	-16.7	+7.0	1010	0710	0.110	1010	, 011
								10MHz 802 24Mbps	.11a	
35 23340.775	51.8	+0.0	+0.0	+0.0	+0.0	+0.0	41.9	54.0	-12.1	Horiz
М		+0.0	+0.0	-16.9	+7.0					
Ave								20MHz 802 36Mbps	.11a	
^ 23340.775	64.9	+0.0	+0.0	+0.0	+0.0	+0.0	55.0	54.0	+1.0	Horiz
М		+0.0	+0.0	-16.9	+7.0					
								20MHz 802 36Mbps	.11a	
37 22954.150	51.1	+0.0	+0.0	+0.0	+0.0	+0.0	41.6	54.0	-12.4	Vert
М		+0.0	+0.0	-16.6	+7.1					
Ave								20MHz 802 36Mbps	.11a	
^ 22954.150	65.7	+0.0	+0.0	+0.0	+0.0	+0.0	56.2	54.0	+2.2	Vert
М		+0.0	+0.0	-16.6	+7.1					
								20MHz 802	.11a	
								36Mbps		
39 22938.225	50.8	+0.0	+0.0	+0.0	+0.0	+0.0	41.3	54.0	-12.7	Vert
М		+0.0	+0.0	-16.6	+7.1					
Ave								10MHz 802	.11n	
								13MCSHT2	0 2S	
^ 22938.225	67.9	+0.0	+0.0	+0.0	+0.0	+0.0	58.4	54.0	+4.4	Vert
М		+0.0	+0.0	-16.6	+7.1					
								10MHz 802		
								13MCSHT2		
41 23139.910	50.8	+0.0	+0.0	+0.0	+0.0	+0.0	41.1	54.0	-12.9	Vert
М		+0.0	+0.0	-16.7	+7.0			101 61 000		
Ave								10MHz 802 13MCSHT2		
42 17204.997	40.5	+42.1	+3.0	+9.8	+2.0	+0.0	40.9	54.0	-13.1	Horiz
М		-57.2	+0.7	+0.0	+0.0					
Ave						0.7		Noise Floor		97
^ 17205.004	52.5	+42.1	+3.0	+9.8	+2.0	+0.0	52.9	54.0	-1.1	Horiz
М		-57.2	+0.7	+0.0	+0.0			Noise Floor		97
44 23339.995	50.4	+0.0	+0.0	+0.0	+0.0	+0.0	40.5	54.0	-13.5	Horiz
М		+0.0	+0.0	-16.9	+7.0					
Ave								20MHz 802 26MCSHT2		
^ 23339.995	66.1	+0.0	+0.0	+0.0	+0.0	+0.0	56.2	54.0	+2.2	Horiz
М		+0.0	+0.0	-16.9	+7.0					
								20MHz 802	.11n	
								26MCSHT2	0 2S	



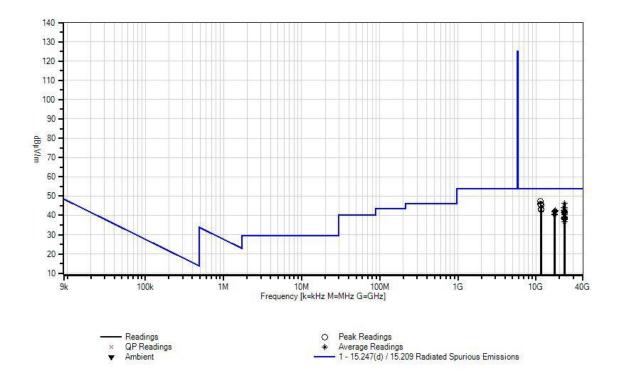
16	17204.997	40.1	+42.1	+3.0	+9.8	+2.0	+0.0	40.5	54.0	-13.5	Vert
40	17204.997 M	40.1	+42.1 -57.2	+5.0 +0.7	+9.8 +0.0	+2.0 +0.0	+0.0	40.5	34.0	-15.5	ven
	Ave		57.2	10.7	10.0	10.0			Noise Floor		97
	17205.001	52.8	+42.1	+3.0	+9.8	+2.0	+0.0	53.2	54.0	-0.8	Vert
	Μ		-57.2	+0.7	+0.0	+0.0					
									Noise Floor		97
48	23139.880	50.1	+0.0	+0.0	+0.0	+0.0	+0.0	40.4	54.0	-13.6	Vert
	M		+0.0	+0.0	-16.7	+7.0			<b>201 (11 002</b>		
	Ave								20MHz 802.		
٨	23139.910	65.6	+0.0	+0.0	+0.0	+0.0	+0.0	55.9	26MCSHT2 54.0	+1.9	Vert
	25159.910 M	05.0	+0.0	+0.0	-16.7	+7.0	10.0	55.7	54.0	11.7	ven
	111		10.0	10.0	10.7	17.0			10MHz 802.	11n	
									13MCSHT2		
^	23139.880	62.3	+0.0	+0.0	+0.0	+0.0	+0.0	52.6	54.0	-1.4	Vert
	Μ		+0.0	+0.0	-16.7	+7.0					
									20MHz 802.		
<b>5</b> 1	22140 125	40.1	0.0	0.0	0.0	0.0	0.0	20.4	26MCSHT2		<b>X</b> 7 .
51	23140.125 M	49.1	+0.0	$^{+0.0}_{+0.0}$	+0.0 -16.7	$^{+0.0}_{+7.0}$	+0.0	39.4	54.0	-14.6	Vert
	Ave		+0.0	+0.0	-10.7	+7.0			20MHz 802.	119	
	Ave								26Mhrz 802.	11a	
٨	23140.125	62.1	+0.0	+0.0	+0.0	+0.0	+0.0	52.4	54.0	-1.6	Vert
	М		+0.0	+0.0	-16.7	+7.0					
									20MHz 802.	11a	
									36Mbps		
53	23140.000	48.8	+0.0	+0.0	+0.0	+0.0	+0.0	39.1	54.0	-14.9	Horiz
	M Ave		+0.0	+0.0	-16.7	+7.0			10MHz 802.	11.	
	Ave								24Mbps	11a	
54	22958.500	48.3	+0.0	+0.0	+0.0	+0.0	+0.0	38.8	54.0	-15.2	Horiz
51	M	10.5	+0.0	+0.0	-16.6	+7.1	10.0	20.0	5 110	10.2	HOLL
	Ave								20MHz 802.	11a	
									36Mbps		
۸	22958.500	62.7	+0.0	+0.0	+0.0	+0.0	+0.0	53.2	54.0	-0.8	Horiz
	М		+0.0	+0.0	-16.6	+7.1					
									20MHz 802.	11a	
56	23139.960	48.2	+0.0	+0.0	+0.0	+0.0	+0.0	38.5	36Mbps 54.0	-15.5	Horiz
50	25159.900 M	40.2	+0.0 +0.0	+0.0 +0.0	+0.0 -16.7	+0.0 +7.0	$\pm 0.0$	50.5	54.0	-13.3	TIOUZ
	Ave		10.0	10.0	10.7	17.0			10MHz 802.	.11n	
									13MCSHT2		
57	22940.450	47.9	+0.0	+0.0	+0.0	+0.0	+0.0	38.4	54.0	-15.6	Horiz
	Μ		+0.0	+0.0	-16.6	+7.1					
	Ave								10MHz 802.		
	00040 450	64.4	.0.0	.0.0	.0.0	.0.0	.0.0	<b>5</b> 4 - 6	13MCSHT2		
~	22940.450 M	64.1	+0.0	+0.0	+0.0	+0.0	+0.0	54.6	54.0	+0.6	Horiz
	М		+0.0	+0.0	-16.6	+7.1			10MHz 802.	11n	
									13MCSHT2		
									15111051112	5 20	



59	22959.925	47.7	+0.0	+0.0	+0.0	+0.0	+0.0	38.2	54.0	-15.8	Horiz
	Μ		+0.0	+0.0	-16.6	+7.1					
	Ave								20MHz 802		
									26MCSHT		
^	22959.925	61.8	+0.0	+0.0	+0.0	+0.0	+0.0	52.3	54.0	-1.7	Horiz
	Μ		+0.0	+0.0	-16.6	+7.1					
									20MHz 802		
									26MCSHT	20 2S	
61	23140.250	47.3	+0.0	+0.0	+0.0	+0.0	+0.0	37.6	54.0	-16.4	Horiz
	Μ		+0.0	+0.0	-16.7	+7.0					
	Ave								20MHz 802	2.11a	
									36Mbps		
^	23140.250	60.1	+0.0	+0.0	+0.0	+0.0	+0.0	50.4	54.0	-3.6	Horiz
	Μ		+0.0	+0.0	-16.7	+7.0					
									20MHz 802	2.11a	
									36Mbps		
63	23140.000	46.4	+0.0	+0.0	+0.0	+0.0	+0.0	36.7	54.0	-17.3	Horiz
	Μ		+0.0	+0.0	-16.7	+7.0					
	Ave								20MHz 802		
									26MCSHT		
^	23140.000	62.4	+0.0	+0.0	+0.0	+0.0	+0.0	52.7	54.0	-1.3	Horiz
	Μ		+0.0	+0.0	-16.7	+7.0					
									10MHz 802	2.11a	
									24Mbps		
^	23140.000	62.3	+0.0	+0.0	+0.0	+0.0	+0.0	52.6	54.0	-1.4	Horiz
	М		+0.0	+0.0	-16.7	+7.0					
									20MHz 802		
									26MCSHT	20 2S	
^	23139.960	61.7	+0.0	+0.0	+0.0	+0.0	+0.0	52.0	54.0	-2.0	Horiz
	М		+0.0	+0.0	-16.7	+7.0					
									10MHz 802		
									13MCSHT	20 2S	



CKC Laboratories, Inc. Date: 6/16/2012 Time: 10:45:22 Digital Path WO#: 92682 15:247(d) / 15:209 Radiated Spurious Emissions Test Distance: 3 Meters Sequence#: 218 Vert UNII Bands. 20MHz Channel width.





Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249 - 1170

Customer: Specification:	Digital Path 15.247(d) / 15.209 Radiated Spurious Emi	ssions	
Work Order #:	92682	Date:	6/15/2012
Test Type:	Radiated Scan	Time:	17:53:51
Equipment:	5GHz Sector (20 dBi)	Sequence#:	219
Manufacturer:	Digital Path	Tested By:	C. Nicklas
Model:	G5RL10E		
S/N:	EMI 5		

#### Test Equipment:

Laptop Power Supply

HP

1 est Equ	ipmeni:					
ID	Asset #	Description	Model	Calibration I	Date	Cal Due Date
T1	AN02668	Spectrum Analyzer	E4446A	2/23/2011		2/23/2013
T2	AN02157	Horn Antenna-ANSI C63.5	3115	1/17/2011		1/17/2013
T3	AN03302	Cable	32026-29094K- 29094K-72TC	3/21/2012		3/21/2014
T4	ANP01210	Cable	FSJ1P-50A-4A	3/15/2011		3/15/2013
T5	ANP05843	Cable	32022-2-29094K- 48TC	7/30/2010		7/30/2012
T6	AN03114	Preamp	AMF-7D- 00101800-30-10P	5/13/2011		5/13/2013
	ANP05935	Attenuator	84A-10	10/19/2011		10/19/2013
	ANP01211	Attenuator	23-10-34	4/15/2011		4/15/2013
T7	AN01417	High Pass Filter	84300-80039	2/9/2012		2/9/2014
Τ8	AN02694	Active Horn Antenna-ANSI C63.5 Antenna Factors (dB)	AMFW-5F- 18002650-20-10P	11/10/2010		11/10/2012
	AN02695	Active Horn Antenna-ANSI C63.5 Antenna Factors (dB)	AMFW-5F- 260400-33-8P	11/10/2010		11/10/2012
	AN00730	Preamp		1/31/2011		1/31/2013
	AN00432	Loop Antenna	6502	3/31/2011		3/31/2013
	AN00852	Biconilog Antenna	CBL 6111C	11/16/2010		11/16/2012
	ANP05299	Cable	RG214	3/6/2011		3/6/2013
	ANP05300	Cable	RG214/U	3/7/2011		3/7/2013
	ANP05440	Cable		3/7/2011		3/7/2013
T9	AN03143	Cable	32022-29094K- 144TC	8/30/2011		8/30/2013
	nt Under Test (*					
Function		Manufacturer	Model #		S/N	
5GHz Sec	tor (20 dBi)*	Digital Path	G5RL10E		EMI 5	
Support	Devices:					
Function		Manufacturer	Model #		S/N	
Laptop Co		HP	ProBook 65651	b	5CB136	
n	C 1	UD	CO0 400 000		T10041	10(007000

608428-002

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### Test Conditions / Notes:

The EUT installed on a metal pole as intended. DC power port is connected to a DC power supply via a CAT5 cable. The Ethernet port is connected to a remote laptop via unshielded twisted pair.

The Remote laptop is running test software to exercise the intended functionalities. Receiver circuit is active. Vertical polarity of the antenna is connected to Card 1, Ant port 2 Horizontal polarity of the antenna is connected to Card 1, Ant port 0

Radio 0, OFF Radio 1, TX

5725-5850MHz, Point to Multi-Point

Freq: 5735MHz, 5785MHz, 5840MHz. BW = 10 MHz 802.11a: 24Mbps, TX power = 15, 15, 15 802.11n: 13MCS HT20 2S,TX power = 15, 15, 15

Freq: 5740MHz, 5785MHz, 5835MHz. BW= 20MHz 802.11a: 36 Mbps, TX power= 15, 15, 15 802.11n: 26MCS HT20 2S, TX power= 15, 15, 15

Temperature: 21.8-22.5°C, Relative Humidity: 37-39%, Atmospheric Pressure: 100.7kPa

Scans were performed with the RBW reduced as needed. Data all taken at the proper RBW setting. Above 18GHz, hand scan the unit at a 1/2 meter distance to determine if there are any signals. Any signals found are hand maximized at a 1/2 meter distance to ensure the maximum signal is found.

Frequency range of measurement = 9kHz-40GHz.

9 kHz -150 kHz; RBW=200 Hz, VBW=200 Hz;150 kHz-30 MHz; RBW=9 kHz, VBW=9 kHz;30 MHz-1000 MHz; RBW=120 kHz, VBW=120 kHz,1000 MHz-40,000 MHz; RBW=1 MHz, VBW=1 MHz.

Ext Attn: 0 dB Reading listed by margin. Measurement Data: Test Distance: 0.5 Meters T4 # Rdng T1 T2 T3 Dist Corr Spec Margin Polar Freq T5 T6 T7 **T**8 Т9 dB dB dB dB Table dBµV/m dBµV/m dB MHz dBµV Ant 1 17203.290 +0.048.1 +42.1+3.0+9.8+0.048.5 54.0 -5.5 Horiz -57.2 +2.0+0.7+0.0Μ +0.059 10MHz 802.11a 122 Ave 24Mbps ^ 17203.290 63.6 +0.0+42.1+3.0+9.8+0.064.0 54.0 +10.0Horiz Μ +2.0-57.2 +0.7+0.0+0.059 10MHz 802.11a 122 24Mbps 3 11670.000 +7.054.0 54.8 +0.0+38.8+2.4+0.048.0 -6.0 Vert -56.6 +0.0+0.0Μ +1.6+0.0359 131 Noise Floor, 20MHz 802.11a 36Mbps



4	17203.120 M	47.5	$^{+0.0}_{+2.0}$	+42.1 -57.2	+3.0 +0.7	+9.8 +0.0	+0.0	47.9	54.0 -6.	1 Horiz
	Ave		+0.0	0112			49		10MHz 802.11n 13MCS HT20 2S	116
^	17203.120	64.0	+0.0	+42.1	+3.0	+9.8	+0.0	64.4	54.0 +10.	4 Horiz
	Μ		+2.0	-57.2	+0.7	+0.0				
			+0.0				49		10MHz 802.11n 13MCS HT20 2S	116
6	11480.000	54.8	+0.0	+38.7	+2.3	+6.9	+0.0	47.8	54.0 -6.2	2 Vert
	Μ		+1.6	-56.5	+0.0	+0.0				
			+0.0				360		Noise Floor,	135
									20MHz 802.11n	
									26MCS HT20 2S	
7	17205.405	46.6	+0.0	+42.2	+3.0	+9.8	+0.0	47.1	54.0 -6.9	9 Vert
	Μ		+2.0	-57.2	+0.7	+0.0				
	Ave		+0.0				35		10MHz 802.11a	122
									24Mbps	
^	17205.405	61.0	+0.0	+42.2	+3.0	+9.8	+0.0	61.5	54.0 +7.	5 Vert
	М		+2.0	-57.2	+0.7	+0.0	25		101/01 000 11	100
			+0.0				35		10MHz 802.11a	122
	11 (00,000	50.7	0.0	20.0	2.1		0.0	17.0	24Mbps	
9	11680.000	53.7	+0.0	+38.8	+2.4	+7.0	+0.0	47.0	54.0 -7.0	) Horiz
	М		+1.6	-56.5	+0.0	+0.0				T 115
			+0.0						Noise floor, 10MI	Hz 115
									802.11n 13MCS HT20 2S	
10	11570.000	54.0	+0.0	+38.8	+2.4	+6.9	+0.0	47.0	54.0 -7.0	) Vert
10	M	54.0	+0.0 $+1.6$	+38.8 -56.7	+2.4 +0.0	+0.9 +0.0	+0.0	47.0	54.0 -7.0	J ven
	IVI		$^{+1.0}_{+0.0}$	-30.7	+0.0	+0.0			Noise floor, 10MI	Iz 118
			$\pm 0.0$						802.11n 13MCS	12 110
									HT20 2S	
11	17216.500	46.4	+0.0	+42.2	+3.0	+9.8	+0.0	46.9	54.0 -7.	1 Horiz
11	M	<del>т</del> 0. <del>т</del>	+2.0	-57.2	+0.7	+0.0	10.0	40.7	54.0 -7.	I HOHZ
	Ave		+0.0	57.2	10.7	10.0	14		20MHz 802.11a	136
									36Mbps	100
^	17216.500	59.6	+0.0	+42.2	+3.0	+9.8	+0.0	60.1	54.0 +6.	1 Horiz
	M	- /	+2.0	-57.2	+0.7	+0.0				
			+0.0				14		20MHz 802.11a	136
									36Mbps	
13	11470.000	53.7	+0.0	+38.7	+2.3	+6.9	+0.0	46.8	54.0 -7.2	2 Vert
	М		+1.6	-56.4	+0.0	+0.0				
			+0.0				360		Noise floor, 10MI	Hz 132
									802.11a 24Mbps	
14	11670.150	53.5	+0.0	+38.8	+2.4	+7.0	+0.0	46.7	54.0 -7.	3 Horiz
	Μ		+1.6	-56.6	+0.0	+0.0				
			+0.0				359		Noise Floor,	133
									20MHz 802.11n	
1									26MCS HT20 2S	



15 17353	.875 44.6	+0.0	+43.2	+3.0	+10.0	+0.0	46.7	54.0	-7.3	Horiz
N N		+2.0	-56.9	+0.8	+0.0	10.0	10.7	51.0	7.5	110112
Ave		+0.0				360		10MHz 802.1 13MCS HT20		113
^ 17353	.875 60.5	+0.0	+43.2	+3.0	+10.0	+0.0	62.6	54.0	+8.6	Horiz
N		+2.0	-56.9	+0.8	+0.0		0210	0.110	1010	110112
		+0.0				360		10MHz 802.1 13MCS HT20		113
17 11570	.000 53.7	+0.0	+38.8	+2.4	+6.9	+0.0	46.7	54.0	-7.3	Horiz
M	[	+1.6	-56.7	+0.0	+0.0					
		+0.0						Noise floor, 1 802.11a 24M		123
18 17203			+42.1	+3.0	+9.8	+0.0	46.7	54.0	-7.3	Vert
M.	[	+2.0	-57.2	+0.7	+0.0			10101 000 1		1.40
Ave		+0.0				55		10MHz 802.1 13MCS HT20	0 2S	140
^ 17203			+42.1	+3.0	+9.8	+0.0	61.7	54.0	+7.7	Vert
M	[	+2.0	-57.2	+0.7	+0.0			10101 000 1		1.40
		+0.0				55		10MHz 802.1 13MCS HT20		140
20 17354			+43.2	+3.0	+10.0	+0.0	46.6	54.0	-7.4	Horiz
M	[	+2.0	-56.9	+0.8	+0.0	15		101 01 000		10.4
Ave		+0.0				17		10MHz 802.1 24Mbps		126
^ 17354			+43.2	+3.0	+10.0	+0.0	61.5	54.0	+7.5	Horiz
N	l	+2.0	-56.9	+0.8	+0.0	17		101/11 002 1	1.	100
		+0.0				17		10MHz 802.1 24Mbps		126
22 11470			+38.7	+2.3	+6.9	+0.0	46.6	54.0	-7.4	Vert
N.		+1.6	-56.4	+0.0	+0.0	260				112
		+0.0				360		Noise floor, 1 802.11n 13M HT20 2S		113
23 11480	.000 53.5	+0.0	+38.7	+2.3	+6.9	+0.0	46.5	54.0	-7.5	Horiz
M		+1.6	-56.5	+0.0	+0.0					
		+0.0						Noise Floor, 20MHz 802.1 26MCS HT20		131
24 11470	.000 53.4	+0.0	+38.7	+2.3	+6.9	+0.0	46.5	54.0	-7.5	Horiz
N N		+1.6	-56.4	+0.0	+0.9	. 5.0		20		
		+0.0						Noise floor, 1 802.11n 13M HT20 2S		116
25 11570	0.000 53.5	+0.0	+38.8	+2.4	+6.9	+0.0	46.5	54.0	-7.5	Vert
N		+1.6	-56.7	+0.0	+0.0					
		+0.0						Noise Floor, 20MHz 802.1 26MCS HT20		135



26	17518.735	43.3	+0.0	+44.3	+3.0	+10.4	+0.0	46.5	54.0 -7.5	Horiz
	М		+2.1	-57.4	+0.8	+0.0				
	Ave		+0.0				307		10MHz 802.11n	113
									13MCS HT20 2S	-
^	17518.735	58.4	+0.0	+44.3	+3.0	+10.4	+0.0	61.6	54.0 +7.6	Horiz
	М		+2.1	-57.4	+0.8	+0.0				
			+0.0	0,11			307		10MHz 802.11n	113
							207		13MCS HT20 2S	110
28	11570.000	53.4	+0.0	+38.8	+2.4	+6.9	+0.0	46.4	54.0 -7.6	Horiz
20	M	0011	+1.6	-56.7	+0.0	+0.0	10.0	10.1	51.0 7.0	HOHL
	1,1		+0.0	20.7	10.0	10.0	359		Noise Floor,	133
			10.0				557		20MHz 802.11n	155
									26MCS HT20 2S	
29	11570.000	53.2	+0.0	+38.8	+2.4	+6.9	+0.0	46.2	54.0 -7.8	Horiz
	М	0012	+1.6	-56.7	+0.0	+0.0				110112
	1,1		+0.0	50.7	10.0	10.0	360		Noise floor, 10MHz	126
			10.0				200		802.11n 13MCS	120
									HT20 2S	
30	17520.150	42.9	+0.0	+44.3	+3.0	+10.4	+0.0	46.1	54.0 -7.9	Horiz
00	M	,	+2.1	-57.4	+0.8	+0.0			0110 715	110112
	Ave		+0.0				49		10MHz 802.11a	116
							-		24Mbps	
^	17520.150	58.4	+0.0	+44.3	+3.0	+10.4	+0.0	61.6	54.0 +7.6	Horiz
	М		+2.1	-57.4	+0.8	+0.0				
			+0.0				49		10MHz 802.11a	116
									24Mbps	
32	11680.000	52.8	+0.0	+38.8	+2.4	+7.0	+0.0	46.1	54.0 -7.9	Horiz
	М		+1.6	-56.5	+0.0	+0.0				
			+0.0				105		Noise floor, 10MHz	116
									802.11a 24Mbps	
33	17518.500	42.8	+0.0	+44.3	+3.0	+10.4	+0.0	46.0	54.0 -8.0	Vert
	М		+2.1	-57.4	+0.8	+0.0				
	Ave		+0.0						10MHz 802.11n	124
									13MCS HT20 2S	
^	17518.500	57.4	+0.0	+44.3	+3.0	+10.4	+0.0	60.6	54.0 +6.6	Vert
	Μ		+2.1	-57.4	+0.8	+0.0				
			+0.0						10MHz 802.11n	124
									13MCS HT20 2S	
35	11470.000	52.9	+0.0	+38.7	+2.3	+6.9	+0.0	46.0	54.0 -8.0	Horiz
	Μ		+1.6	-56.4	+0.0	+0.0				
			+0.0						Noise floor, 10MHz	123
									802.11a 24Mbps	
36	11670.000	52.8	+0.0	+38.8	+2.4	+7.0	+0.0	46.0	54.0 -8.0	Horiz
	М		+1.6	-56.6	+0.0	+0.0				
			+0.0				159		Noise Floor,	128
									20MHz 802.11a	
1									36Mbps	



07	10050 450	10.1	0.0	12.0	2.0	10.0	0.0	15.5	54.0	0.5	×7 .
37	17353.450	43.4	+0.0	+43.2	+3.0	+10.0	+0.0	45.5	54.0	-8.5	Vert
	Μ		+2.0	-56.9	+0.8	+0.0					
	Ave		+0.0				306		10MHz 802.		133
									13MCS HT2		
^	17353.450	59.2	+0.0	+43.2	+3.0	+10.0	+0.0	61.3	54.0	+7.3	Vert
	Μ		+2.0	-56.9	+0.8	+0.0					
			+0.0				306		10MHz 802.	11n	133
									13MCS HT2	20 2S	
39	17354.375	43.3	+0.0	+43.2	+3.0	+10.0	+0.0	45.4	54.0	-8.6	Vert
	Μ		+2.0	-56.9	+0.8	+0.0					
	Ave		+0.0				359		10MHz 802.	11a	128
									24Mbps		
۸	17354.375	57.2	+0.0	+43.2	+3.0	+10.0	+0.0	59.3	54.0	+5.3	Vert
	М		+2.0	-56.9	+0.8	+0.0					
			+0.0	0017			359		10MHz 802.	11a	128
			10.0				227		24Mbps	114	120
41	17517.900	41.6	+0.0	+44.3	+3.0	+10.4	+0.0	44.8	54.0	-9.2	Vert
11	M	11.0	+2.1	-57.4	+0.8	+0.0	10.0	11.0	51.0	7.2	vert
	Ave		+0.0	57.4	10.0	10.0	360		10MHz 802.	119	130
	Ave		10.0				500		24Mbps	114	150
^	17517.900	56.6	+0.0	+44.3	+3.0	+10.4	+0.0	59.8	54.0	+5.8	Vert
	M	50.0	+0.0 +2.1	+44.5 -57.4	+5.0 +0.8	+10.4 +0.0	+0.0	39.0	54.0	+3.8	ven
	IVI			-57.4	+0.8	+0.0	200		101411- 002	11.	120
			+0.0				360		10MHz 802.	11a	130
10	17252 200	40.1		40.0	2.0	10.0	0.0	44.0	24Mbps	0.0	
43	17353.200	42.1	+0.0	+43.2	+3.0	+10.0	+0.0	44.2	54.0	-9.8	Horiz
	Μ		+2.0	-56.9	+0.8	+0.0					
	Ave		+0.0				271		20MHz 802.		130
									26MCS HT2		
^	17353.200	55.3	+0.0	+43.2	+3.0	+10.0	+0.0	57.4	54.0	+3.4	Horiz
	Μ		+2.0	-56.9	+0.8	+0.0					
			+0.0				271		20MHz 802.	11n	130
									26MCS HT2	20 2S	
45	17500.600	41.2	+0.0	+44.2	+3.0	+10.3	+0.0	44.1	54.0	-9.9	Horiz
	Μ		+2.0	-57.4	+0.8	+0.0					
	Ave		+0.0				253		20MHz 802.	11a	141
									36Mbps		
^	17500.600	53.9	+0.0	+44.2	+3.0	+10.3	+0.0	56.8	54.0	+2.8	Horiz
	М		+2.0	-57.4	+0.8	+0.0		'			
	-		+0.0				253		20MHz 802.	11a	141
									36Mbps		- • •
47	17221.475	43.4	+0.0	+42.3	+3.0	+9.8	+0.0	44.0	54.0	-10.0	Vert
.,	M	1.5.1	+2.0	-57.2	+0.7	+0.0	10.0	11.0	21.0	10.0	, 011
	Ave		+2.0 $+0.0$	51.2	10.7	10.0	57		20MHz 802.	11a	140
	1110		10.0				51		2010112 802. 36Mbps	114	140
^	17221.475	57.1	+0.0	+42.3	+3.0	+9.8	+0.0	57.7	-	+3.7	Vert
		57.1					+0.0	51.1	54.0	+3.7	ven
	М		+2.0	-57.2	+0.7	+0.0	57		201411- 202	110	140
			+0.0				57		20MHz 802.	11a	140
									36Mbps		



49	17353.750 M	41.8	$^{+0.0}_{+2.0}$	+43.2 -56.9	+3.0 +0.8	$^{+10.0}_{+0.0}$	+0.0	43.9	54.0	-10.1	Horiz
	Ave		+0.0				255		20MHz 802 36Mbps	2.11a	134
^	17555.750	54.0	+0.0	+43.2	+3.0	+10.0	+0.0	56.1	54.0	+2.1	Horiz
	М		+2.0 +0.0	-56.9	+0.8	+0.0	255		20MHz 802	<b>7</b> 11a	124
									36Mbps		134
51	17356.250 M	41.5	$^{+0.0}_{+2.0}$	+43.2 -56.9	+3.0 +0.8	$^{+10.1}_{+0.0}$	+0.0	43.7	54.0	-10.3	Vert
	Ave		+2.0 +0.0	-30.9	$\pm 0.8$	$\pm 0.0$	306		20MHz 802	2.11a	134
			1010				200		36Mbps		10.
^	17550.250	55.0	+0.0	+43.2	+3.0	+10.1	+0.0	57.2	54.0	+3.2	Vert
	Μ		+2.0	-56.9	+0.8	+0.0					
			+0.0				306		20MHz 802 36Mbps	2.11a	134
53	17505.000	40.5	+0.0	+44.2	+3.0	+10.4	+0.0	43.5	54.0	-10.5	Horiz
	Μ		+2.0	-57.4	+0.8	+0.0					
	Ave		+0.0						Noise Floo		133
									20MHz 802 26MCS H7		
^	17505.000	53.7	+0.0	+44.2	+3.0	+10.4	+0.0	56.7	54.0	+2.7	Horiz
	M	0011	+2.0	-57.4	+0.8	+0.0	1010	0017	0.110	,	110112
			+0.0						Noise Floo		133
									20MHz 802		
55	17505.000	40.4		+44.2	+3.0	+10.4		12.4	26MCS HT 54.0		Vart
55	17303.000 M	40.4	$^{+0.0}_{+2.0}$	+44.2 -57.4	+5.0 +0.8	+10.4 +0.0	+0.0	43.4	54.0	-10.6	Vert
	Ave		+0.0	57.1	10.0	10.0	368		Noise Floo	r,	140
									20MHz 802		
									26MCS HT		
56	22941.200	68.4	+0.0	+0.0	+0.0	+0.0	-15.6	43.3	54.0	-10.7	Horiz
	М		$^{+0.0}_{+7.1}$	+0.0	+0.0	-16.6			10MHz 802	2.11n	
			$\pm 7.1$						13MCS HT		
57	22937.600	68.3	+0.0	+0.0	+0.0	+0.0	-15.6	43.2	54.0	-10.8	Horiz
	Μ		+0.0	+0.0	+0.0	-16.6					
			+7.1						10MHz 802 24Mbps	2.11a	
58	17219.400	42.6	+0.0	+42.2	+3.0	+9.8	+0.0	43.1	54.0	-10.9	Horiz
	М		+2.0	-57.2	+0.7	+0.0					
	Ave		+0.0				14		20MHz 802		110
^	17219.400	56.1	+0.0	+42.2	+3.0	+9.8	+0.0	56.6	26MCS HT 54.0	+2.6	Horiz
	17219.400 M	50.1	+0.0 +2.0	+42.2 -57.2	+3.0 +0.7	+9.8	$\pm 0.0$	50.0	54.0	+∠.0	TIOUZ
	±•±		+0.0	27.2		. 0.0	14		20MHz 802	2.11n	110
									26MCS HT		
60	23145.300	67.9	+0.0	+0.0	+0.0	+0.0	-15.6	42.6	54.0	-11.4	Horiz
	М		+0.0	+0.0	+0.0	-16.7			101/11 00/	2 1 1	
			+7.0						10MHz 802 13MCS H7		
L									1314105111	20 20	



61	17505.000	39.5	+0.0	+44.2	+3.0	+10.4	+0.0	42.5	54.0	-11.5	Vert
	М		+2.0	-57.4	+0.8	+0.0	201		Noise Floor	_	140
	Ave		+0.0				321		20MHz 802	,	140
									36Mbps	2.114	
^	17505.000	53.7	+0.0	+44.2	+3.0	+10.4	+0.0	56.7	54.0	+2.7	Vert
	Μ		+2.0	-57.4	+0.8	+0.0					
			+0.0						Noise Floor		140
									20MHz 802 26MCS HT		
^	17505.000	52.6	+0.0	+44.2	+3.0	+10.4	+0.0	55.6	<u>20MCS H1</u> 54.0	+1.6	Vert
	M	52.0	+2.0	-57.4	+0.8	+0.0	10.0	55.0	5 110	11.0	vert
			+0.0				321		Noise Floor	r,	140
									20MHz 802	2.11a	
									36Mbps		
64	23145.800 M	67.6	+0.0	+0.0	+0.0	+0.0	-15.6	42.3	54.0	-11.7	Horiz
	IVI		$^{+0.0}_{+7.0}$	+0.0	+0.0	-16.7			10MHz 802	) 11a	
			17.0						24Mbps	2.114	
65	17219.500	41.8	+0.0	+42.2	+3.0	+9.8	+0.0	42.3	54.0	-11.7	Vert
	М		+2.0	-57.2	+0.7	+0.0					
	Ave		+0.0				50		20MHz 802		134
	17219.500	55.0		+42.2	+2.0	+9.8	+0.0	55.5	26MCS HT 54.0	+1.5	Vert
	17219.300 M	55.0	+0.0 +2.0	+42.2 -57.2	+3.0 +0.7	+9.8 +0.0	+0.0	55.5	34.0	+1.3	ven
	101		+0.0	51.2	10.7	10.0	50		20MHz 802	2.11n	134
									26MCS HT		
67	17355.000	40.1	+0.0	+43.2	+3.0	+10.0	+0.0	42.2	54.0	-11.8	Vert
	М		+2.0	-56.9	+0.8	+0.0	102				125
	Ave		+0.0				193		Noise Floor 20MHz 802		135
									26MCS HT		
^	17355.000	52.7	+0.0	+43.2	+3.0	+10.0	+0.0	54.8	54.0	+0.8	Vert
	М		+2.0	-56.9	+0.8	+0.0					
			+0.0				193		Noise Floor		135
									20MHz 802 26MCS HT		
69	23360.500	67.5	+0.0	+0.0	+0.0	+0.0	-15.6	42.0	54.0	-12.0	Horiz
07	25500.500 M	57.5	+0.0	+0.0	+0.0	-16.9	10.0	12.0	51.0	12.0	110112
			+7.0						10MHz 802	2.11a	
									24Mbps		
70	23339.900	67.0	+0.0	+0.0	+0.0	+0.0	-15.6	41.5	54.0	-12.5	Vert
	М		$^{+0.0}_{+7.0}$	+0.0	+0.0	-16.9			20MHz 802	) 11n	
			$\pm 1.0$						20MH2 802 26MCS HT		
71	23337.100	66.8	+0.0	+0.0	+0.0	+0.0	-15.6	41.3	54.0	-12.7	Horiz
	М		+0.0	+0.0	+0.0	-16.9					
1			+7.0						20MHz 802	2.11a	
									36Mbps		
	220.40.000			0.0	~ ~	~ ~			<b>F</b> 4 0	10.0	<b>T</b> 7
72	22940.000 M	66.1	+0.0	+0.0	+0.0	+0.0	-15.6	41.0	54.0	-13.0	Vert
72	22940.000 M	66.1	+0.0 +0.0 +7.1	+0.0 +0.0	+0.0 +0.0	+0.0 -16.6	-15.6	41.0	54.0 10MHz 802		Vert



73	23361.000	66.4	+0.0	+0.0	+0.0	+0.0	-15.6	40.9	54.0	-13.1	Horiz
	М		+0.0	+0.0	+0.0	-16.9			10141 00	<b>N</b> 11	
			+7.0						10MHz 802		
7.4	220 (7 400	<i>(</i> <b>7 7</b>	.0.0	.0.0	. 0. 0	. 0. 0	15.6	10.0	13MCS HT		
/4	22967.400	65.7	+0.0	+0.0	+0.0	+0.0	-15.6	40.6	54.0	-13.4	Horiz
	М		$^{+0.0}_{+7.1}$	+0.0	+0.0	-16.6			20MHz 802	2 1 1 0	
			+/.1						36Mbps	2.11a	
75	22938.900	65.7	+0.0	+0.0	+0.0	+0.0	-15.6	40.6	54.0	-13.4	Vert
15	22938.900 M	05.7	+0.0 $+0.0$	+0.0 $+0.0$	+0.0 $+0.0$	+0.0 -16.6	-15.0	40.0	54.0	-13.4	ven
	111		+0.0 +7.1	$\pm 0.0$	$\pm 0.0$	-10.0			10MHz 802	2 1 1 2	
			1 / . 1						24Mbps	2.114	
76	22964.000	65.3	+0.0	+0.0	+0.0	+0.0	-15.6	40.2	54.0	-13.8	Horiz
,,,	M	00.0	+0.0	+0.0	+0.0	-16.6	10.0	10.2	5110	10.0	HOLE
			+7.1						20MHz 802	2.11n	
									26MCS HT		
77	23339.800	65.7	+0.0	+0.0	+0.0	+0.0	-15.6	40.2	54.0	-13.8	Horiz
	М		+0.0	+0.0	+0.0	-16.9					
			+7.0						20MHz 802	2.11n	
									26MCS HT	20 2S	
78	23145.900	65.3	+0.0	+0.0	+0.0	+0.0	-15.6	40.0	54.0	-14.0	Horiz
	Μ		+0.0	+0.0	+0.0	-16.7					
			+7.0						20MHz 802	2.11a	
									36Mbps		
79	23359.900	65.5	+0.0	+0.0	+0.0	+0.0	-15.6	40.0	54.0	-14.0	Vert
	Μ		+0.0	+0.0	+0.0	-16.9					
			+7.0						10MHz 802		
	222 60 000	64.1	0.0	0.0	0.0	0.0	15 6	20.6	13MCS HT		X 7 .
80	23360.000	64.1	+0.0	+0.0	+0.0	+0.0	-15.6	38.6	54.0	-15.4	Vert
	М		+0.0	+0.0	+0.0	-16.9			10 <b>) /</b> [1_ 90/	<b>1</b> 1.	
			+7.0						10MHz 802	2.11a	
01	11571.750	45.5		+38.8	+2.4	16.0	+0.0	38.5	24Mbps 54.0	-15.5	Vert
01	M	43.3	+0.0 +1.6	+38.8 -56.7	$^{+2.4}_{+0.0}$	+6.9 +0.0	+0.0	38.3	54.0	-13.3	ven
	Ave		$^{+1.0}_{+0.0}$	-30.7	+0.0	+0.0	360		20MHz 802	7 119	136
	AVC		+0.0				500		36Mbps	2.11a	150
^	11571.750	58.5	+0.0	+38.8	+2.4	+6.9	+0.0	51.5	54.0	-2.5	Vert
	M	50.5	+0.0 $+1.6$	-56.7	+2.4 +0.0	+0.9 $+0.0$	10.0	51.5	57.0	2.5	ven
			+0.0	2 0.1		. 0.0	360		20MHz 802	2.11a	136
							200		36Mbps		
83	23143.800	63.6	+0.0	+0.0	+0.0	+0.0	-15.6	38.3	54.0	-15.7	Vert
	М		+0.0	+0.0	+0.0	-16.7					
			+7.0						10MHz 802	2.11a	
									24Mbps		
84	23141.600	63.4	+0.0	+0.0	+0.0	+0.0	-15.6	38.1	54.0	-15.9	Vert
	Μ		+0.0	+0.0	+0.0	-16.7					
			+7.0						10MHz 802		
									13MCS HT		
85		63.0	+0.0	+0.0	+0.0	+0.0	-15.6	37.7	54.0	-16.3	Vert
	М		+0.0	+0.0	+0.0	-16.7					
			+7.0						20MHz 802	2.11a	
1									36Mbps		



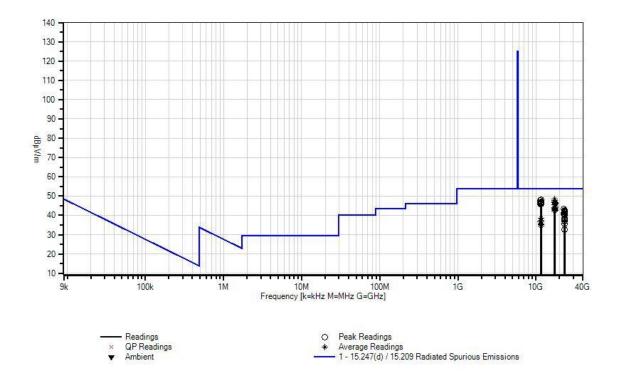
86	23332.100	63.2	+0.0	+0.0	+0.0	+0.0	-15.6	37.7	54.0	-16.3	Vert
	Μ		+0.0	+0.0	+0.0	-16.9					
			+7.0						20MHz 802	2.11a	
									36Mbps		
87	11679.800	44.0	+0.0	+38.8	+2.4	+7.0	+0.0	37.3	54.0	-16.7	Vert
	М		+1.6	-56.5	+0.0	+0.0					
	Ave		+0.0				359		10MHz 80	2.11n	112
									13MCS HT	Г20 2S	
^	11679.800	57.4	+0.0	+38.8	+2.4	+7.0	+0.0	50.7	54.0	-3.3	Vert
	М		+1.6	-56.5	+0.0	+0.0					
			+0.0				359		10MHz 80	2.11n	112
									13MCS HT	Г20 2S	
89	22955.700	62.1	+0.0	+0.0	+0.0	+0.0	-15.6	37.0	54.0	-17.0	Vert
	М		+0.0	+0.0	+0.0	-16.6					
			+7.1						20MHz 80	2.11n	
									26MCS HT		
90	22966.100	62.0	+0.0	+0.0	+0.0	+0.0	-15.6	36.9	54.0	-17.1	Vert
	M		+0.0	+0.0	+0.0	-16.6					
			+7.1			1010			20MHz 80	2.11a	
									36Mbps		
91	11477.630	43.8	+0.0	+38.7	+2.3	+6.9	+0.0	36.8	54.0	-17.2	Vert
	М	1010	+1.6	-56.5	+0.0	+0.0		2010	0.110	1,12	
	Ave		+0.0	0010			359		20MHz 80	2.11a	139
			1010				007		36Mbps		107
^	11477.630	56.9	+0.0	+38.7	+2.3	+6.9	+0.0	49.9	54.0	-4.1	Vert
	M	50.7	+1.6	-56.5	+0.0	+0.9	10.0	17.7	51.0		ven
			+0.0	0010			359		20MHz 80	2.11a	139
			1010				007		36Mbps		107
93	11483.800	43.5	+0.0	+38.7	+2.4	+6.9	+0.0	36.6	54.0	-17.4	Horiz
10	M	1010	+1.6	-56.5	+0.0	+0.0		2010	0.110	1,11	110112
	Ave		+0.0	0010			170		20MHz 80	2.11a	136
	11,0		10.0				170		36Mbps	2.114	100
^	11483.800	56.4	+0.0	+38.7	+2.4	+6.9	+0.0	49.5	54.0	-4.5	Horiz
	M	50.4	+1.6	-56.5	+0.0	+0.9	10.0	77.5	54.0	7.5	HOLL
	111		+0.0	50.5	10.0	10.0	170		20MHz 80	2 11a	136
			10.0				170		36Mbps	2.114	150
95	11679.500	43.3	+0.0	+38.8	+2.4	+7.0	+0.0	36.6	54.0	-17.4	Vert
, ,,,	M	-5.5	+0.0 +1.6	+38.8 -56.5	+2.4 +0.0	+7.0 $+0.0$	10.0	50.0	54.0	-1/.4	vert
	Ave		+1.0 $+0.0$	50.5	10.0	10.0			10MHz 80	2 119	130
	1110		10.0						24Mbps	2.11d	150
^	11679.500	56.8	+0.0	+38.8	+2.4	+7.0	+0.0	50.1	<u>24M0ps</u> 54.0	-3.9	Vert
	M	50.0	+0.0 $+1.6$	+38.8 -56.5	+2.4 +0.0	+7.0 +0.0	$\pm 0.0$	50.1	54.0	-3.7	VCIL
	111		$^{+1.0}_{+0.0}$	-50.5	$\pm 0.0$	$\pm 0.0$			10MHz 80	2 119	130
			$\pm 0.0$						24Mbps	2.11d	150
07	23135.900	61.0					-15.6	257	24Mbps 54.0	-18.3	Homin
97		61.0	+0.0	+0.0	+0.0	+0.0	-13.0	35.7	34.0	-18.3	Horiz
	М		+0.0	+0.0	+0.0	-16.7			20MHz 80	<b>7</b> 11m	
			+7.0						20MHZ 80		
									20IVICS H	12023	



98 11572.075	42.6	+0.0	+38.8	+2.4	+6.9	+0.0	35.6	54.0	-18.4	Horiz
М		+1.6	-56.7	+0.0	+0.0					
Ave		+0.0				78		20MHz 802	2.11a	149
								36Mbps		
^ 11572.075	55.9	+0.0	+38.8	+2.4	+6.9	+0.0	48.9	54.0	-5.1	Horiz
М		+1.6	-56.7	+0.0	+0.0					
		+0.0				78		20MHz 802	2.11a	149
								36Mbps		
100 11569.600	42.2	+0.0	+38.8	+2.4	+6.9	+0.0	35.2	54.0	-18.8	Vert
М		+1.6	-56.7	+0.0	+0.0					
Ave		+0.0						10MHz 802	2.11a	125
								24Mbps		
^ 11569.600	55.7	+0.0	+38.8	+2.4	+6.9	+0.0	48.7	54.0	-5.3	Vert
М		+1.6	-56.7	+0.0	+0.0					
		+0.0						10MHz 802	2.11a	125
								24Mbps		
102 11670.149	41.3	+0.0	+38.8	+2.4	+7.0	+0.0	34.5	54.0	-19.5	Vert
М		+1.6	-56.6	+0.0	+0.0					
Ave		+0.0				365		Noise Floo	r.	133
								20MHz 80	,	
								26MCS HT	720 2S	
^ 11670.149	55.6	+0.0	+38.8	+2.4	+7.0	+0.0	48.8	54.0	-5.2	Vert
М		+1.6	-56.6	+0.0	+0.0		-			
		+0.0						Noise Floo	r.	133
								20MHz 802	,	
								26MCS HT		
104 23139.600	57.9	+0.0	+0.0	+0.0	+0.0	-15.6	32.6	54.0	-21.4	Vert
М		+0.0	+0.0	+0.0	-16.7					
		+7.0						20MHz 802	2.11n	
								26MCS HT		
									, =	



CKC Laboratories, Inc. Date: 6/15/2012 Time: 17:53:51 Digital Path WO#: 92682 15.247(d) / 15.209 Radiated Spurious Emissions Test Distance: 0.5 Meters Sequence#: 219 Horiz UNII Bands. 20MHz Channel width.





Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249 - 1170

Customer: Specification:	Digital Path 15.247(d) / 15.209 Radiated Spurious	Emissions	
Work Order #:	92682	Date:	6/16/2012
Test Type:	Radiated Scan	Time:	15:54:19
Equipment:	5GHz Tri-Sector (17dBi)	Sequence#:	220
Manufacturer:	Digital Path	Tested By:	C. Nicklas
Model:	G5RL10T		
S/N:	EMI 1		

### Test Equipment:

Test Equ	<b>^</b>	<b>D</b>	27.11	a 111		
ID	Asset #	Description	Model	Calibration 1		Cal Due Date
	AN02668	Spectrum Analyzer		2/23/2011		2/23/2013
T1	AN02157	Horn Antenna-ANSI	3115	1/17/2011		1/17/2013
		C63.5				
T2	AN03302	Cable	32026-29094K-	3/21/2012		3/21/2014
			29094K-72TC			
T3	ANP01210	Cable	FSJ1P-50A-4A	3/15/2011		3/15/2013
T4	ANP05843	Cable	32022-2-29094К- 48TC	7/30/2010		7/30/2012
T5	AN03114	Preamp	AMF-7D- 00101800-30-10P	5/13/2011		5/13/2013
	ANP05935	Attenuator	84A-10	10/19/2011		10/19/2013
	ANP01211	Attenuator	23-10-34	4/15/2011		4/15/2013
T6	AN01417	High Pass Filter	84300-80039	2/9/2012		2/9/2014
T7	AN02694	Active Horn	AMFW-5F-	11/10/2010		11/10/2012
		Antenna-ANSI	18002650-20-10P			
		C63.5 Antenna				
		Factors (dB)				
	AN02695	Active Horn	AMFW-5F-	11/10/2010		11/10/2012
		Antenna-ANSI	260400-33-8P			
		C63.5 Antenna				
		Factors (dB)				
	AN00730	Preamp		1/31/2011		1/31/2013
	AN00432	Loop Antenna	6502	3/31/2011		3/31/2013
	AN00852	Biconilog Antenna	CBL 6111C	11/16/2010		11/16/2012
	ANP05299	Cable	RG214	3/6/2011		3/6/2013
	ANP05300	Cable	RG214/U	3/7/2011		3/7/2013
	ANP05440	Cable		3/7/2011		3/7/2013
T8	AN03143	Cable	32022-29094K- 144TC	8/30/2011		8/30/2013
	nt Under Test (*					
Function		Manufacturer	Model #		S/N	
5GHz Tri-	-Sector (17dBi)*	Digital Path	G5RL10T		EMI 1	
Support 1	Devices:					
Function		Manufacturer	Model #		S/N	
Laptop Co		HP	ProBook 6565t	)	5CB136	
Laptop Po	ower Supply	HP	608428-002		F12941	126327228



### Test Conditions / Notes:

The EUT installed on a metal pole as intended. DC power port is connected to a DC power supply via a CAT5 cable. The Ethernet port is connected to a remote laptop via unshielded twisted pair.

The Remote laptop is running test software to exercise the intended functionalities. Receiver circuit is active. Vertical polarity of the antenna is connected to Card 1, Ant port 2 Horizontal polarity of the antenna is connected to Card 1, Ant port 0

Radio 0, TX Radio 1, OFF

5725-5850MHz, Point to Multi-Point

Freq: 5735MHz, 5785MHz, 5840MHz. BW = 10 MHz 802.11a: 24Mbps, TX power setting = 15.5, 15.5, 15.5 802.11n: 13MCS HT20 2S,TX power setting = 15.5, 15.5, 15.5

Freq: 5740MHz, 5785MHz, 5835MHz. BW= 20MHz 802.11a: 36 Mbps, TX power setting = 15.5, 15.5, 15.5 802.11n: 26MCS HT20 2S, TX power setting = 15.5, 15.5, 15.5

Temperature: 22.2-23.5°C, Relative Humidity: 37%, Atmospheric Pressure: 100.7kPa

Scans were performed with the RBW reduced as needed. Data all taken at the proper RBW setting. Above 18GHz, hand scan the unit at a 1/2 meter distance to determine if there are any signals. Any signals found are hand maximized at a 1/2 meter distance to ensure the maximum signal is found.

Frequency range of measurement = 9kHz-40GHz. 9 kHz -150 kHz; RBW=200 Hz, VBW=200 Hz;150 kHz-30 MHz; RBW=9 kHz, VBW=9 kHz;30 MHz-1000 MHz; RBW=120 kHz, VBW=120 kHz,1000 MHz-40,000 MHz; RBW=1 MHz, VBW=1 MHz.

Ext Attn: 0 dB Reading listed by margin. Measurement Data: Test Distance: 3 Meters Rdng T1 T2 T3 T4 Dist Corr Spec Margin Polar # Freq T5 T6 T7 **T**8 MHz dBµV dB dB dB dB Table  $dB\mu V/m \ dB\mu V/m$ dB Ant 1 11470.000 54.8 +38.7+2.3+6.9+1.6+0.047.9 54.0 -6.1 Horiz -56.4 +0.0+0.0+0.0Μ 360 Noise Floor 134 2 11680.000 53.8 +38.8+2.4+7.0+1.6+0.047.154.0 -6.9 Horiz Μ -56.5 +0.0+0.0+0.04 Noise Floor 134 3 11480.000 54.0 +38.7+2.3+6.9+1.6+0.047.0 54.0 -7.0 Vert +0.0+0.0+0.0Μ -56.5 359 134 Noise Floor 4 11680.000 53.6 +38.8+2.4+7.0+1.6+0.046.9 54.0 -7.1 Vert -56.5 +0.0+0.0+0.0Μ 359 Noise Floor 134 5 11680.000 53.6 +38.8+2.4+7.0+1.6+0.046.9 54.0 -7.1 Vert Μ -56.5 +0.0+0.0+0.0360 Noise Floor 134



6 11680.000	53.3	+38.8	+2.4	+7.0	+1.6	+0.0	46.6	54.0	-7.4	Horiz
М		-56.5	+0.0	+0.0	+0.0	360		Noice Eleca		124
7 11470.000	53.3	+38.7	+2.3	+6.9	+1.6	+0.0	46.4	Noise Floor 54.0	-7.6	134 Vert
M	55.5	-56.4	+2.3 +0.0	+0.9 +0.0	$^{+1.0}_{+0.0}$	$\pm 0.0$	40.4	54.0	-7.0	ven
		50.1	10.0	10.0	10.0	360		Noise Floor		134
8 11480.000	53.3	+38.7	+2.3	+6.9	+1.6	+0.0	46.3		-7.7	Horiz
М		-56.5	+0.0	+0.0	+0.0					
								Noise Floor		134
9 11570.000	53.2	+38.8	+2.4	+6.9	+1.6	+0.0	46.2	54.0	-7.8	Vert
М		-56.7	+0.0	+0.0	+0.0	260				124
10 11570 000	52.0	. 20. 0	.2.4		.1.6	360		Noise Floor	7.0	134
10 11570.000 M	53.2	+38.8 -56.7	+2.4 +0.0	+6.9 +0.0	$^{+1.6}_{+0.0}$	+0.0	46.2	54.0	-7.8	Horiz
111		-50.7	$\pm 0.0$	$\pm 0.0$	+0.0	360		Noise Floor		134
11 17505.000	39.4	+44.2	+3.0	+10.4	+2.0	+0.0	42.4		-11.6	Vert
M	37.1	-57.4	+0.8	+0.0	+0.0	10.0	12.1	2110	11.0	vert
Ave								Noise Floor		134
^ 17505.000	51.4	+44.2	+3.0	+10.4	+2.0	+0.0	54.4	54.0	+0.4	Vert
М		-57.4	+0.8	+0.0	+0.0					
								Noise Floor		134
13 17505.000	39.4	+44.2	+3.0	+10.4	+2.0	+0.0	42.4	54.0	-11.6	Horiz
М		-57.4	+0.8	+0.0	+0.0			N Floor		124
Ave ^ 17505.000	52.9	+44.2	+3.0	+ 10.4	+2.0	+0.0	55.0	Noise Floor 54.0		134 Usria
M	52.9	+44.2 -57.4	+5.0 +0.8	$^{+10.4}_{+0.0}$	+2.0 +0.0	+0.0	55.9	54.0	+1.9	Horiz
111		57.4	10.0	10.0	10.0			Noise Floor		134
15 17520.000	39.0	+44.3	+3.0	+10.4	+2.1	+0.0	42.2	54.0	-11.8	Horiz
М		-57.4	+0.8	+0.0	+0.0					
Ave						360		Noise Floor		134
^ 17520.000	52.7	+44.3	+3.0	+10.4	+2.1	+0.0	55.9	54.0	+1.9	Horiz
М		-57.4	+0.8	+0.0	+0.0	2.50				101
17, 17520,000	20.0	44.0	2.0	10.4	0.1	360	12.2	Noise Floor	11.0	134
17 17520.000 M	39.0	+44.3 -57.4	+3.0 +0.8	$^{+10.4}_{+0.0}$	+2.1 +0.0	+0.0	42.2	54.0	-11.8	Vert
Ave		-37.4	+0.8	+0.0	+0.0			Noise Floor		134
^ 17520.000	52.8	+44.3	+3.0	+10.4	+2.1	+0.0	56.0		+2.0	Vert
M				+0.0			50.0	51.0	12.0	vert
								Noise Floor		134
19 17355.000	39.9	+43.2	+3.0	+10.0	+2.0	+0.0	42.0	54.0	-12.0	Horiz
М		-56.9	+0.8	+0.0	+0.0					
Ave						359		Noise Floor		134
^ 17355.000	53.1	+43.2	+3.0	+10.0	+2.0	+0.0	55.2	54.0	+1.2	Horiz
М		-56.9	+0.8	+0.0	+0.0	250		Noice Elec		124
21 17255 000	39.7	12 2	120	+10.0	12.0	359	11 0	Noise Floor 54.0	12.2	134 Vort
21 17355.000 M	39.1	+43.2 -56.9	+3.0 +0.8	$^{+10.0}_{+0.0}$	+2.0 +0.0	+0.0	41.8	54.0	-12.2	Vert
Ave		50.7	10.0	10.0	10.0			Noise Floor		134
^ 17355.000	53.2	+43.2	+3.0	+10.0	+2.0	+0.0	55.3	54.0	+1.3	Vert
M		-56.9	+0.8	+0.0	+0.0					
								Noise Floor		134



23	17220.000	40.2	+42.3	+3.0	+9.8	+2.0	+0.0	40.8	54.0	-13.2	Horiz
	М		-57.2	+0.7	+0.0	+0.0					
	Ave					• •			Noise Floor		134
^	17220.000 M	52.0	+42.3 -57.2	+3.0 +0.7	+9.8 +0.0	+2.0 +0.0	+0.0	52.6	54.0	-1.4	Horiz
	IVI		-57.2	+0.7	+0.0	+0.0			Noise Floor		134
25	17220.000	40.1	+42.3	+3.0	+9.8	+2.0	+0.0	40.7	54.0	-13.3	Vert
	М		-57.2	+0.7	+0.0	+0.0					10.1
	Ave 17220.000	53.5	+42.3	+3.0	+9.8	+2.0	+0.0	54.1	Noise Floor 54.0	+0.1	134 Vert
	M	55.5	+42.3 -57.2	+3.0	+9.8 +0.0	+2.0 +0.0	+0.0	34.1	54.0	+0.1	ven
									Noise Floor		134
27	17205.000	39.8	+42.1	+3.0	+9.8	+2.0	+0.0	40.2	54.0	-13.8	Horiz
	М		-57.2	+0.7	+0.0	+0.0	260		Naina Eleco		124
-	Ave 17205.000	51.4	+42.1	+3.0	+9.8	+2.0	360 +0.0	51.8	Noise Floor 54.0	-2.2	134 Horiz
	M	51.4	-57.2	+0.7	+0.0	+0.0	10.0	51.0	54.0	-2.2	HOHZ
							360		Noise Floor		134
29	22945.100	65.1	+0.0	+0.0	+0.0	+0.0	-15.6	40.0	54.0	-14.0	Horiz
	М		+0.0	+0.0	-16.6	+7.1			10MHz 802	110	
									24Mbps	.11a	
30	17205.000	39.6	+42.1	+3.0	+9.8	+2.0	+0.0	40.0	54.0	-14.0	Vert
	Μ		-57.2	+0.7	+0.0	+0.0					
	Ave 17205.000	52.0	+42.1	+3.0	+9.8	+2.0	360 +0.0	52.4	Noise Floor 54.0	-1.6	134 Vort
~	17203.000 M	52.0	+42.1 -57.2	+5.0	+9.8 +0.0	+2.0 +0.0	+0.0	32.4	34.0	-1.0	Vert
	111		07.2	10.7	10.0	10.0	360		Noise Floor		134
32	22944.950	64.4	+0.0	+0.0	+0.0	+0.0	-15.6	39.3	54.0	-14.7	Vert
	М		+0.0	+0.0	-16.6	+7.1			101411 002	11.	
									10MHz 802 24Mbps	.11a	
33	23140.150	63.5	+0.0	+0.0	+0.0	+0.0	-15.6	38.2	54.0	-15.8	Horiz
	Μ		+0.0	+0.0	-16.7	+7.0					
									10MHz 802 24Mbps	.11a	
34	23355.260	63.5	+0.0	+0.0	+0.0	+0.0	-15.6	38.0	54.0	-16.0	Horiz
51	M	00.0			-16.9		10.0	20.0	5 110	10.0	HOLL
									10MHz 802	.11a	
25	22120 220	62.0					15.0	27 6	24Mbps	16.4	II.ai.=
55	23138.230 M	62.9	$^{+0.0}_{+0.0}$	$^{+0.0}_{+0.0}$	+0.0 -16.7	+0.0 +7.0	-15.6	37.6	54.0	-16.4	Horiz
	141		10.0	10.0	10.7	17.0			10MHz 802	.11n	
									13MCSHT2	20 2S	
36	22940.990	62.4	+0.0	+0.0	+0.0	+0.0	-15.6	37.3	54.0	-16.7	Horiz
	М		+0.0	+0.0	-16.6	+7.1			10MHz 802	11n	
									13MCSHT2		
37	23359.550	62.6	+0.0	+0.0	+0.0	+0.0	-15.6	37.1	54.0	-16.9	Horiz
	М		+0.0	+0.0	-16.9	+7.0			100 07 075		
									10MHz 802 13MCSHT2		
L										.u 2.3	

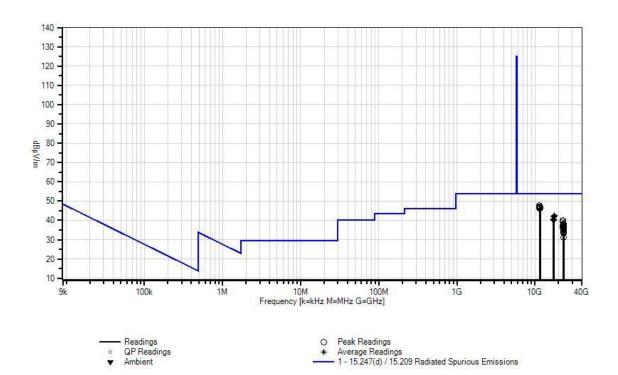


38	23140.720	62.3	+0.0	+0.0	+0.0	+0.0	-15.6	37.0	54.0	-17.0	Vert
	М		+0.0	+0.0	-16.7	+7.0			10MHz 802	2.11a	
									24Mbps		
39	23140.100 M	62.2	$^{+0.0}_{+0.0}$	$^{+0.0}_{+0.0}$	+0.0 -16.7	+0.0 +7.0	-15.6	36.9	54.0	-17.1	Horiz
									20MHz 802 26MCSHT2		
40	23357.750	62.0	+0.0	+0.0	+0.0	+0.0	-15.6	36.5	54.0	-17.5	Vert
	М		+0.0	+0.0	-16.9	+7.0					
									10MHz 802 13MCSHT2		
41	22941.140	61.4		+0.0	+0.0		15.6	36.3	54.0		Vert
41	22941.140 M	01.4	$^{+0.0}_{+0.0}$	+0.0 +0.0	+0.0 -16.6	+0.0 +7.1	-15.6	30.5	54.0	-17.7	ven
	171		10.0	10.0	10.0	17.1			10MHz 802		
42	22126.050	61.6	+0.0	+0.0			15.6	26.2	13MCSHT2	-17.7	Homia
42	23136.050 M	61.6	$^{+0.0}_{+0.0}$	$^{+0.0}_{+0.0}$	+0.0 -16.7	+0.0 +7.0	-15.6	36.3	54.0	-1/./	Horiz
	111		10.0	10.0	10.7	17.0			20MHz 802	2.11a	
									36Mbps		
43	22960.050	61.0	+0.0	+0.0	+0.0	+0.0	-15.6	35.9	54.0	-18.1	Horiz
	М		+0.0	+0.0	-16.6	+7.1			<b>201 (11 00</b>		
									20MHz 802 26MCSHT2		
44	22959.700	60.7	+0.0	+0.0	+0.0	+0.0	-15.6	35.6	54.0	-18.4	Vert
	М		+0.0	+0.0	-16.6	+7.1			<b>201 (11 00</b>		
									20MHz 802 26MCSHT2		
45	23340.650	61.0	+0.0	+0.0	+0.0	+0.0	-15.6	35.5	54.0	-18.5	Horiz
15	M	01.0	+0.0	+0.0	-16.9	+7.0	15.0	55.5	51.0	10.5	HOHZ
									20MHz 802	2.11a	
									36Mbps		
46	23340.050	60.7	+0.0	+0.0	+0.0	+0.0	-15.6	35.2	54.0	-18.8	Horiz
	М		+0.0	+0.0	-16.9	+7.0			20111- 202	) 11	
									20MHz 802 26MCSHT2		
47	23140.570	60.4	+0.0	+0.0	+0.0	+0.0	-15.6	35.1	54.0	-18.9	Vert
	М		+0.0	+0.0	-16.7	+7.0					
									10MHz 802		
10	00140.000	<i>c</i> c <b>c</b>	0.0	0.0	0.0		1.5 -	210	13MCSHT		X Z
48	23142.200	60.2	+0.0	+0.0	+0.0	+0.0	-15.6	34.9	54.0	-19.1	Vert
	М		+0.0	+0.0	-16.7	+7.0			20MHz 802	) 11a	
									26Mbps	u	
49	23362.820	60.2	+0.0	+0.0	+0.0	+0.0	-15.6	34.7	54.0	-19.3	Vert
	М		+0.0	+0.0	-16.9	+7.0					
									10MHz 802 24Mbps	2.11a	
50	22965.950	59.3	+0.0	+0.0	+0.0	+0.0	-15.6	34.2	54.0	-19.8	Vert
	М		+0.0	+0.0	-16.6	+7.1					
									20MHz 802	2.11a	
									36Mbps		



51	23139.900	59.0	+0.0	+0.0	+0.0	+0.0	-15.6	33.7	54.0	-20.3	Vert
51		39.0					-15.0	55.7	54.0	-20.5	ven
	М		+0.0	+0.0	-16.7	+7.0					
									20MHz 80	2.11n	
									26MCSHT	20 2S	
52	22961.150	58.7	+0.0	+0.0	+0.0	+0.0	-15.6	33.6	54.0	-20.4	Horiz
	Μ		+0.0	+0.0	-16.6	+7.1					
									20MHz 80	2.11a	
									36Mbps		
53	23340.050	58.8	+0.0	+0.0	+0.0	+0.0	-15.6	33.3	54.0	-20.7	Vert
	Μ		+0.0	+0.0	-16.9	+7.0					
									20MHz 80	2.11a	
									36Mbps		
54	23339.650	56.6	+0.0	+0.0	+0.0	+0.0	-15.6	31.1	54.0	-22.9	Vert
	Μ		+0.0	+0.0	-16.9	+7.0					
									20MHz 80	2.11n	
									26MCSHT	20 2S	

CKC Laboratories, Inc. Date: 6/16/2012 Time: 15:54:19 Digital Path WO#: 92682 15:247(d) / 15:209 Radiated Spurious Emissions Test Distance: 3 Meters Sequence#: 220 Vert UNII Bands. 20MHz Channel width.

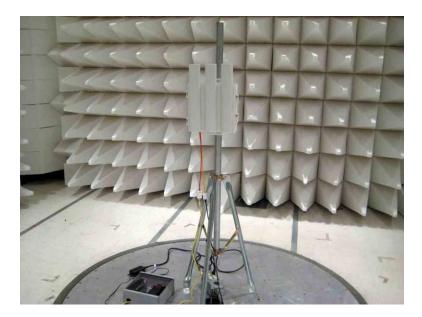




# Test Setup Photos

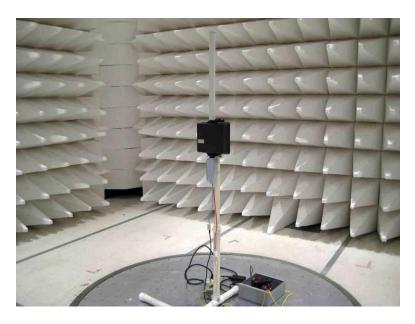


17dBi Sector

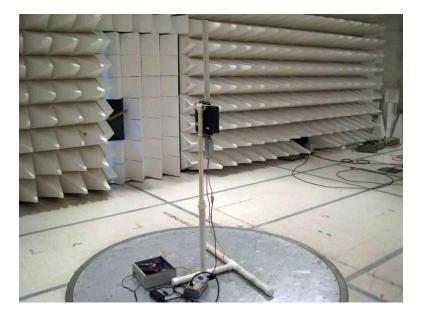


17dBi Sector



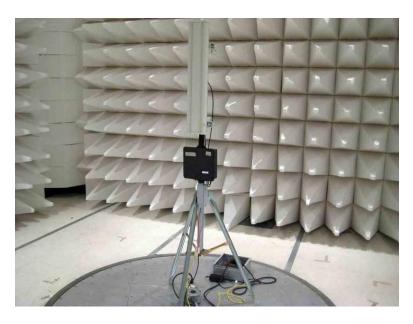


18dBi, 11dBi

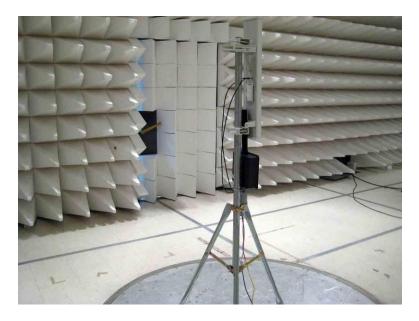


18dBi, 11dBi



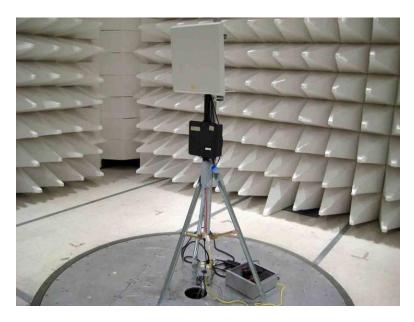


20dBi Sector



20dBi Sector





23dBi Panel

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33 dBi Parabolic



33 dBi Parabolic



# **15.247(e)** Power Spectral Density

## Test Conditions / Setup

The Power Spectral Density measurements were made using the methods set out in KDB "558704 D01 DTS Meas Guidance v01", Section 5.3.1 Measurement Procedure PKPSD. The Power Spectral Density Plots are already corrected for both the cable and attenuator loss and the -15.2dB correction factor to correct from the 100kHz of the measurement to the 3kHz bandwidth of the requirement. The correction was made by setting the reference level offset in the spectrum analyzer. The correction factor of -4.3 was determined by the following equation Cable Loss + Attenuator + Correction Factor 100kHz to 3kHz with

Cable Loss: 1.1dB Attenuator: 9.8dB Correction Factor 100kHz to 3kHz: -15.2

The units are in dBm. The limit is 8dBm.

Engineer Name:

	Test Equipment											
Asset/Serial #	Description	Model	Manufacturer	Cal Date	Cal Due							
02668	Spectrum Analyzer	E4446A	Agilent	2/23/2011	2/23/2013							
P05843	Cable	32022-2-29094K-48TC	AstroLab	7/30/2010	7/30/2012							
P05935	Attenuator	84A-10	Weinschel	10/19/2011	10/19/2013							

### Plot Name Key

C1 – Chain 0 C2 – Chain 2 LO – LO Channel MID – MID Channel HI – HI Channel a – 802.11a n – 802.11n 10M – System 10MHz Channel Width 20 M– System 20MHz Channel Width



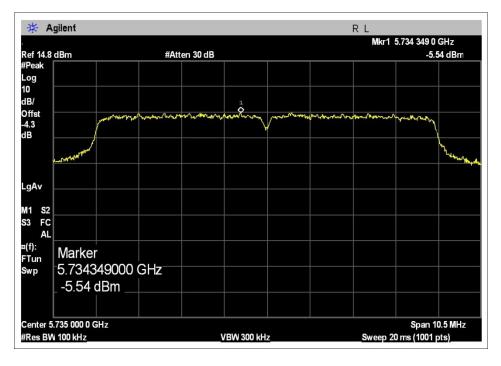
### <u>Test Data</u>

Power Spectral Density: 15.247, 10MHz											
Channel	802.11a (dBm)		802.11n (dBm)								
Channel	Chain 0	Chain 2	Chain 0	Chain 2							
LO	-5.54	-6.20	-3.84	-4.52							
MID	-5.91	-6.16	-4.8	-4.63							
Н	-8.56	-10.19	-6.59	-9.48							

Maximum Power Input 20.5 dBm for LO and MID channels and 18dBm for HI Channel. Worst Case 802.11a data rate is 24 Mbps, worst case 802.11n data rate is 13MCS HT20 2S.

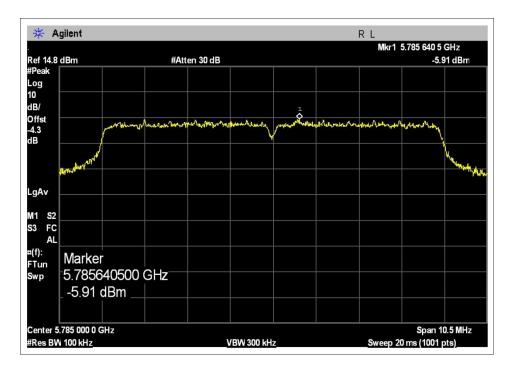
Power Spectral Density: 15.247, 20MHz				
Channel	802.11a (dBm)		802.11n (dBm)	
	Chain 0	Chain 2	Chain 0	Chain 2
LO	-10.46	-11.96	-8.53	-11.81
MID	-7.70	-7.38	-6.93	-7.31
н	-9.90	-11.90	-9.17	-11.47

Maximum Power Input 20.5 dBm for MID channels and 18dBm for LO and HI Channels. Worst Case 802.11a data rate is 36 Mbps, worst case 802.11n data rate is 26MCS HT20 2S.

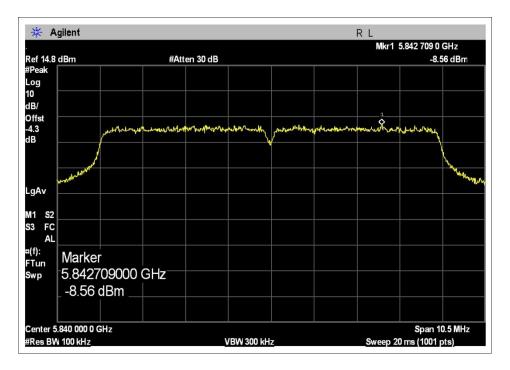


C0 10MHz, LOW CHANNEL, 802.11a



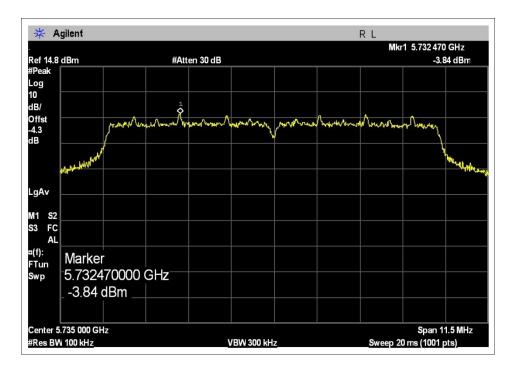


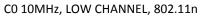


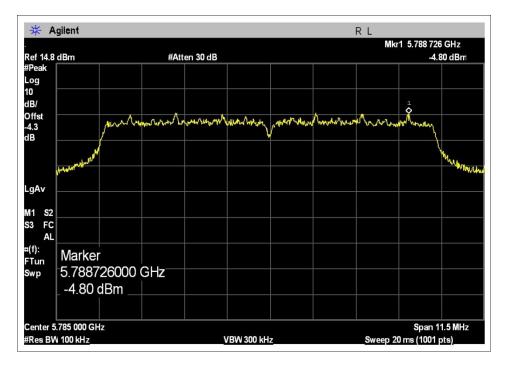


C0 10MHz, HIGH CHANNEL, 802.11a

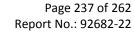




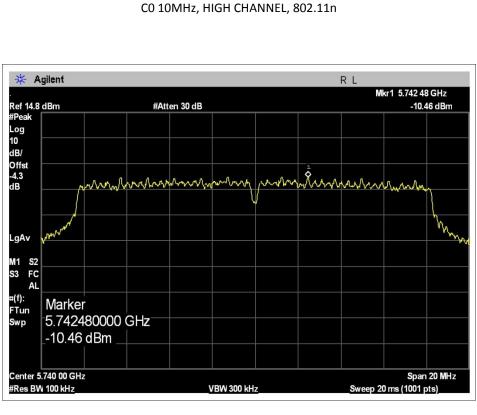


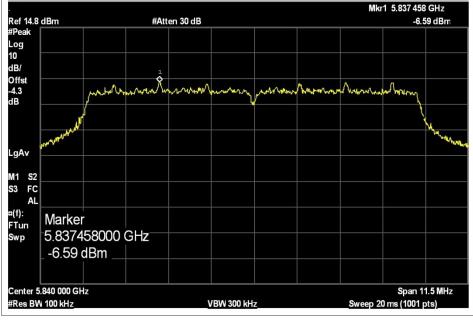


C0 10MHz, MID CHANNEL, 802.11n









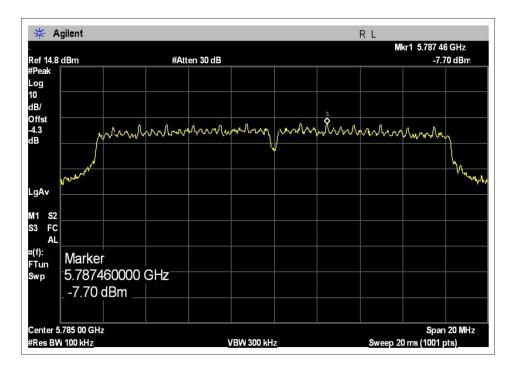
RL

C0 10MHz, HIGH CHANNEL, 802.11n

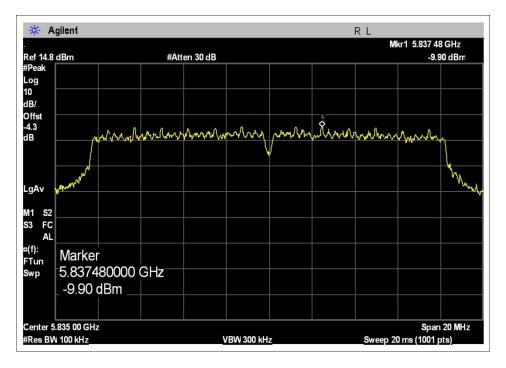
C **Testing the Future** ABORATORIES, INC.

🔆 Agilent



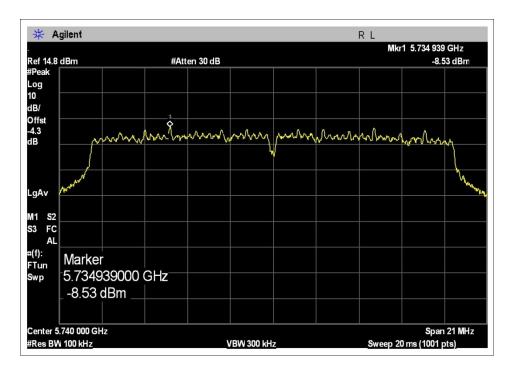




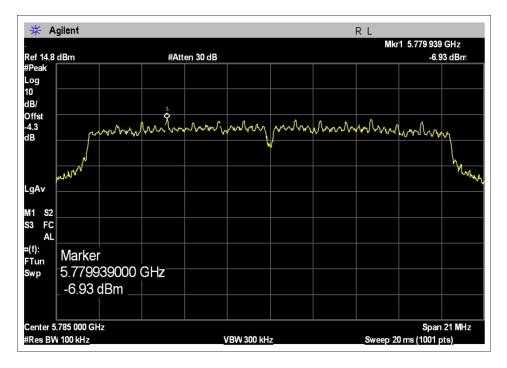


C0 20MHz, HIGH CHANNEL, 802.11a



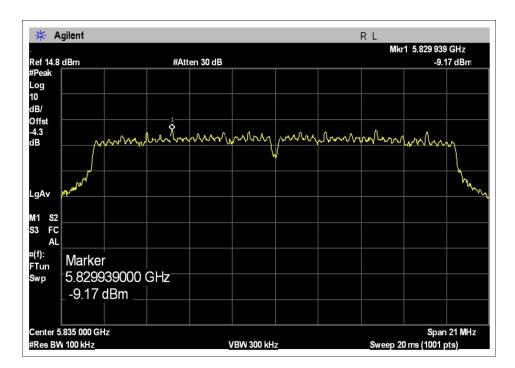






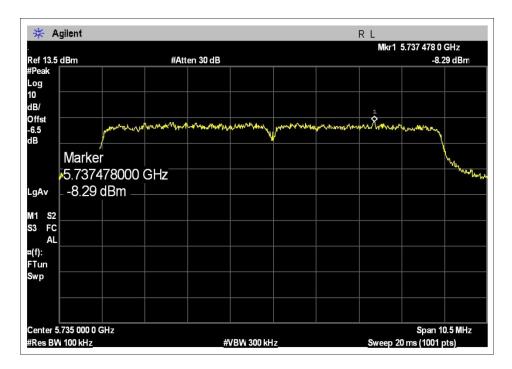
C0 20MHz, MID CHANNEL, 802.11n



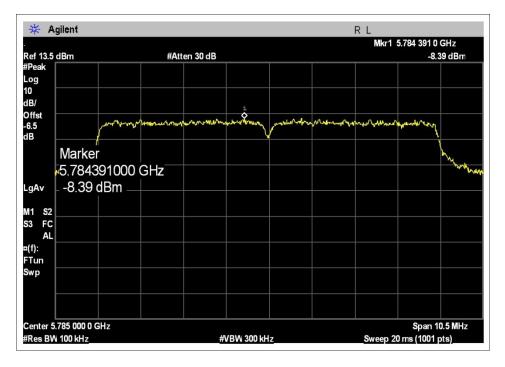


C0 20MHz, HIGH CHANNEL, 802.11n



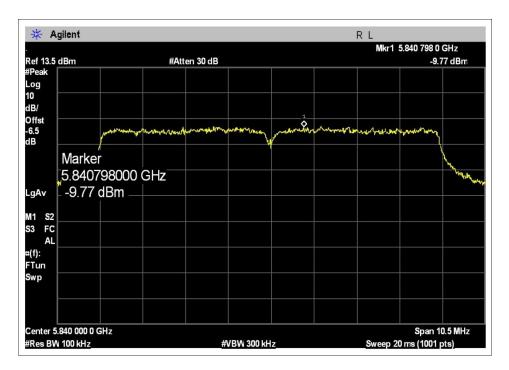




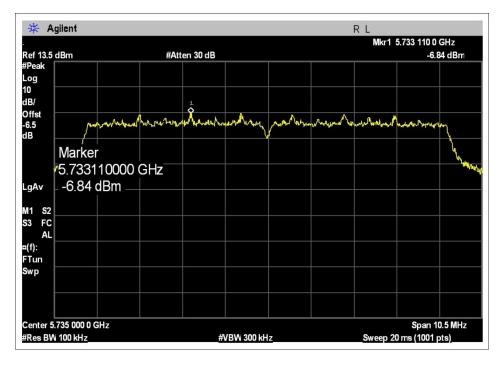


C2 10MHz, MID CHANNEL, 802.11a



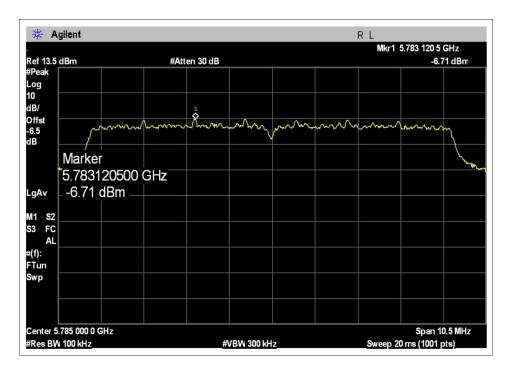




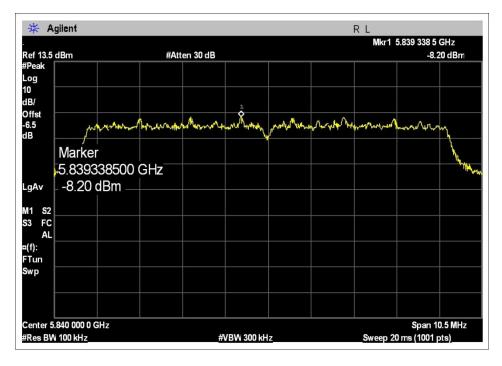


C2 10MHz, LOW CHANNEL, 802.11n



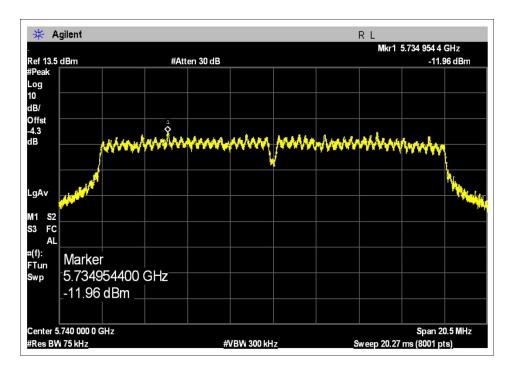




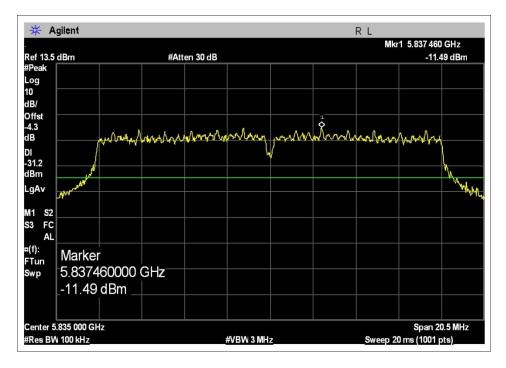


C2 10MHz, HIGH CHANNEL, 802.11n



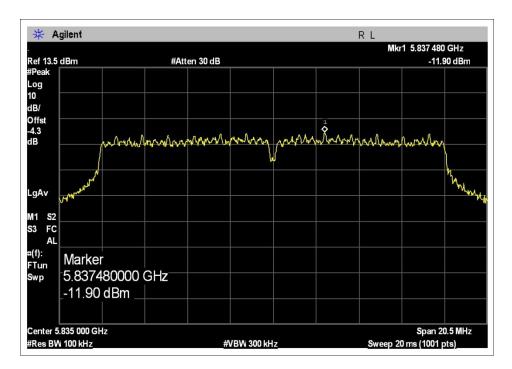


C2 20MHz, LOW CHANNEL, 802.11a

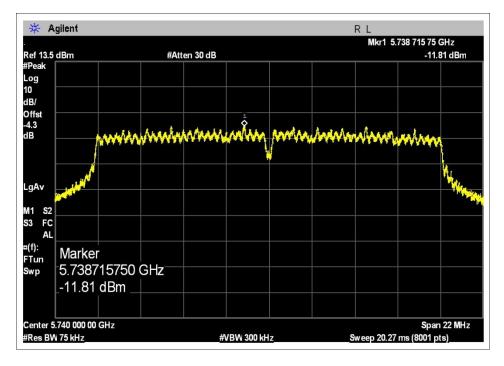


C2 20MHz, MID CHANNEL, 802.11a



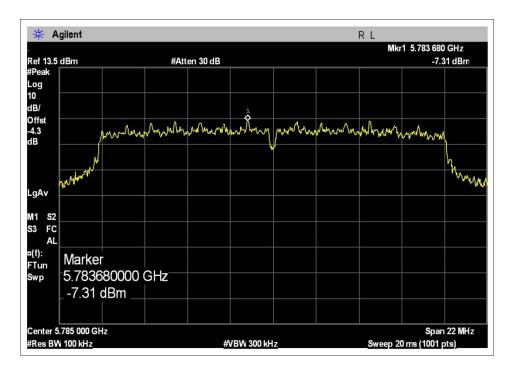


C2 20MHz, HIGH CHANNEL, 802.11a

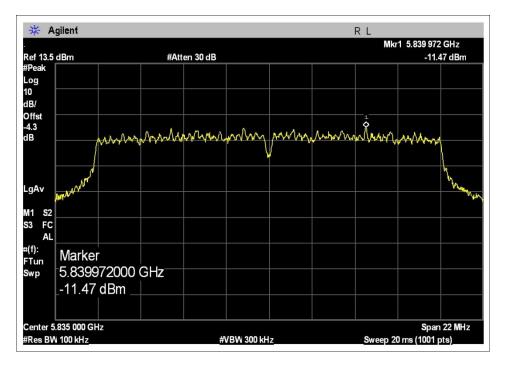


C2 20MHz, LOW CHANNEL, 802.11n





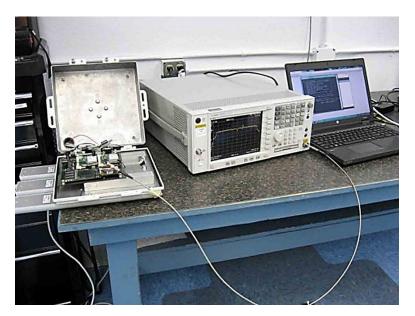




C2 20MHz, HIGH CHANNEL, 802.11n



## Test Setup Photos





# APPENDIX A CUSTOMER PROVIDED INFORMATION

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## **EUT Software Settings During Testing**

Final Power Settings, LO, MID HI Channels and worst case data rates/modulations to comply with Radiated Spurious, Conducted Power, Conducted Spurious and bandedge compliance. The TX power settings are the power level entered in the ART Software to set the output power of the radio.

#### FCC15.247

**5GHz Omni (11 dBi)** Point to Multi-Point Freq = 5725-5850MHz Freq: 5735MHz, 5785MHz, 5840MHz. BW = 10 MHz 802.11a: 24Mbps, TX power setting = 16, 16, 16 802.11n: 13MCS HT20 2S, TX power setting = 16, 16, 16

Freq: 5740MHz, 5785MHz, 5835MHz. BW= 20MHz 802.11a: 36 Mbps, TX power setting = 16, 16, 16 802.11n: 26MCS HT20 2S, TX power setting = 16, 16, 16

## 5GHz Panel (18 dBi)

Point to Multipoint 5725-5850MHz Freq: 5735MHz, 5785MHz, 5840MHz. BW = 10 MHz 802.11a: 24Mbps, TX power setting= 12, 12.5, 14.5 802.11n: 13MCS HT20 2S, TX power setting= 12, 12, 14.5

Freq: 5740MHz, 5785MHz, 5835MHz. BW= 20MHz 802.11a: 36 Mbps, TX power setting= 14.5, 12.5, 14.5 802.11n: 26MCS HT20 2S, TX power setting= 14, 12.5, 14.5

## 5GHz Sector (20 dBi)

Point to Multi-Point 5725-5850MHz, Freq: 5735MHz, 5785MHz, 5840MHz. BW = 10 MHz 802.11a: 24Mbps, TX power= 10,10.5,12.5 802.11n: 13MCS HT20 2S,TX power= 10,10,12.5

Freq: 5740MHz, 5785MHz, 5835MHz. BW= 20MHz 802.11a: 36 Mbps, TX power= 13,10.5, 13 802.11n: 26MCS HT20 2S, TX power= 12,10.5, 12.5



## 5GHz Tri-Sector (17dBi)

Point to Multi-Point 5725-5850MHz, Freq: 5735MHz, 5785MHz, 5840MHz. BW = 10 MHz 802.11a: 24Mbps, TX power setting= 13, 13.5, 15.5 802.11n: 13MCS HT20 2S,TX power setting= 13, 13, 15.5

Freq: 5740MHz, 5785MHz, 5835MHz. BW= 20MHz 802.11a: 36 Mbps, TX power setting= 15.5, 13.5, 15.5 802.11n: 26MCS HT20 2S, TX power setting= 15, 13.5, 15.5

### 5GHz Panel (23 dBi)

Point to Point 5725-5850MHz Freq: 5735MHz, 5785MHz, 5840MHz. BW = 10 MHz 802.11a: 24Mbps, TX power setting= 20.5, 20.5, 18 802.11n: 13MCS HT20 2S,TX power setting = 20.5, 20.5, 18

Freq: 5740MHz, 5785MHz, 5835MHz. BW= 20MHz 802.11a: 36 Mbps, TX power setting = 18, 20.5, 18 802.11n: 26MCS HT20 2S, TX power setting=18, 20.5, 18

#### 5GHz Parabolic (33 dBi)

Point to Point 5725-5850MHz Freq: 5735MHz, 5785MHz, 5840MHz. BW = 10 MHz 802.11a: 24Mbps, TX power setting= 20.5, 20.5, 18 802.11n: 13MCS HT20 2S,TX power setting = 20.5, 20.5, 18 Freq: 5740MHz, 5785MHz, 5835MHz. BW= 20MHz 802.11a: 36 Mbps, TX power setting= 18, 20.5, 18 802.11n: 26MCS HT20 2S, TX power setting=18, 20.5, 18



# **APPENDIX B**

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## DATE(S) OF TESTING: April 24, 2013

## Standard / Specification: FCC Part 15 Subpart C Sections 15.247

Description	Test Procedure/Method	Results
Radiated Spurious Emissions	FCC Part 15 Subpart C Section 15.247(d) KDB 558074 V01	Pass

# **Conditions During Testing**

This list is a summary of the conditions noted for or modifications made to the equipment during testing.

## Summary of Conditions

Purpose of new testing 4/24/2013:

1). To show the new case design of the EUT performs as well as the original case design.

2). The second purpose of the appendix is to show the new 17dB Sector antenna designed for Digital Path does not have worst antenna performance than the original 17dB Sector antenna the full testing was completed with.

Verifying the antenna design was done by looking at the 2nd, 3rd and 4th harmonics of the worst case spurious emissions of the original 17dBi Sector antenna. The worst case spurious emissions of the original 17dB Sector antenna were found at the following frequency and settings.

Transmitting Operation Frequency= 5785MHz Channel Width=10MHz ART setting = 15.5 Modulation= 24Mbps

For the original antenna, the 4th harmonic was the only spurious signal seen. The  $2^{nd}$  and  $3^{rd}$  harmonics for the original antenna were system noise floor. The  $2^{nd}$ ,  $3^{rd}$  and  $4^{th}$  harmonics were all looked at with the new antenna design to ensure the antenna does not radiate these harmonics. The <u>Modifications to Unit</u> required for the FCC 15.109 testing were still installed. For the new antenna, the  $2^{nd}$ ,  $3^{rd}$  and  $4^{th}$  harmonic were all noise floor. The  $2^{nd}$  and  $3^{rd}$  harmonic were all noise floor. The  $2^{nd}$  and  $3^{rd}$  harmonic were all noise floor. The  $2^{nd}$  and  $3^{rd}$  harmonic were all noise floor. The  $2^{nd}$  and  $3^{rd}$  harmonic peak noise floor readings were similar to those initially taken with the original antenna. The  $4^{th}$  harmonic peak noise floor readings are at least 6dB lower than the reading from the original antenna. These results validate the new 17dB Sector antenna.

<u>Modifications to Unit</u>: Add 2 ferrites (Steward 28A 2024-0A0), one on the RJ45 power cable with one pass through and another on the RJ45 power and data cables together at the EUT with one pass through.



# **EQUIPMENT UNDER TEST (EUT)**

## **EQUIPMENT UNDER TEST**

5GHz Sector (17dBi)

Manuf: Digital Path Model: G5RL102X Serial: ENG1

## **PERIPHERAL DEVICES**

The EUT was tested with the following peripheral device(s):

## Laptop Power Supply

Manuf: HP Model: 608428-002 Serial: F12941126327228

## Power Supply

Manuf: Condor Model: STD-2427P Serial: None

## <u>Laptop</u>

Manuf: HP Model: ProBook 6565b Serial: 5CB13637ZF



# 15.247(d) Radiated Spurious Emissions

## Test Data Sheets

Test Location: CKC Laboratories, Inc. • 1120 Fulton Places • Fremont, CA 94539 • (510) 249-1170

Customer: Specification:	Digital Path 15.247(d) / 15.209 Radiated Spurio	ous Emissions	
Work Order #:	92682	Date:	4/24/2013
Test Type:	Radiated Scan	Time:	16:11:02
Equipment:	5GHz Sector (17dBi)	Sequence#:	6
Manufacturer:	Digital Path	Tested By:	Hieu Song Nguyenpham
Model:	G5RL102X		
S/N:	ENG1		

## Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
	AN02668	Spectrum Analyzer	E4446A	2/22/2013	2/22/2015
T1	AN03114	Preamp	AMF-7D-	4/11/2013	4/11/2015
			00101800-30-10P		
T2	AN02157	Horn Antenna-ANSI	3115	1/23/2013	1/23/2015
		C63.5			
T3	AN03302	Cable	32026-29094K-	3/21/2012	3/21/2014
			29094K-72TC		
T4	ANP01210	Cable	FSJ1P-50A-4A	2/19/2013	2/19/2015
T5	ANP05843	Cable	32022-2-29094K-	8/7/2012	8/7/2014
			48TC		
T6	AN01417	High Pass Filter	84300-80039	2/9/2012	2/9/2014

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
5GHz Sector (17dBi)*	Digital Path	G5RL102X	ENG1

## Support Devices:

Function	Manufacturer	Model #	S/N
Laptop Power Supply	HP	608428-002	F12941126327228
Laptop	HP	ProBook 6565b	5CB13637ZF
Power Supply	Condor	STD-2427P	None



Test Conditions / Notes:

Radiated Spurious Emission

Temperature: 20. 8°C Humidity: 40 % Atmospheric Pressure: 100.9 kPa High Clock: 500MHz Software: ART software

Mode: TX

Transmitting Operation Frequency= 5785MHz

Channel Width=10MHz ART setting = 15.5 Modulation= 24Mbps

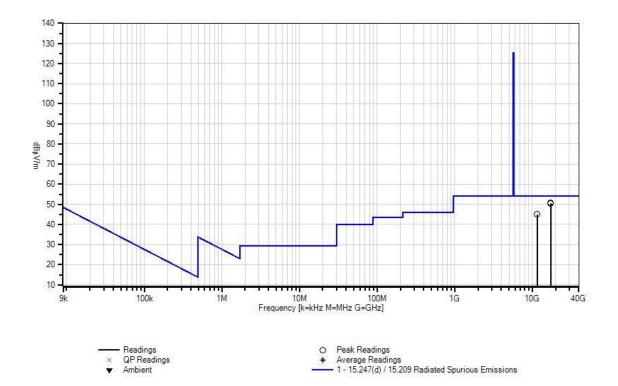
Note: ar9160 chip w/ 17db sectors & aluminum case model # G5RL102X takes off the plastic in the front and put 2 ferrite (Steward 28A 2024-0A0): one is on the RJ 45 power cable with one pass through at around one foot from the EUT and another one is on RJ 45 power and data cables with one pass through at the EUT.

Ext Attn: 0 dB

_/// / ·											
Measu	surement Data: Reading listed by margin.		Test Distance: 3 Meters								
#	Freq	Rdng	T1	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
	-	•	T5	T6					-	•	
	MHz	dBµV	dB	dB	dB	dB	Table	$dB\mu V/m$	$dB\mu V/m$	dB	Ant
1	17355.000	50.1	-57.7	+43.2	+3.0	+8.7	+0.0	50.7	54.0	-3.3	Vert
	М		+2.6	+0.8							
									Third Harn	nonic.	
									Noise Floo	or only	
2	17355.000	49.7	-57.7	+43.2	+3.0	+8.7	+0.0	50.3	54.0	-3.7	Horiz
	Μ		+2.6	+0.8							
									Third Harn	nonic.	
									Nothing sh	ows up.	
									Noise Floo	r	
3	11569.500	51.5	-56.2	+39.1	+2.4	+6.2	+0.0	45.1	54.0	-8.9	Vert
	Μ		+2.1	+0.0							
									Second Ha	rmonic.	
									Noise floor	r	
4	11569.500	51.5	-56.2	+39.1	+2.4	+6.2	+0.0	45.1	54.0	-8.9	Horiz
	М		+2.1	+0.0							
									Second Ha	rmonic.	
									Noise floor	r	



CKC Laboratories, Inc Date: 4/24/2013 Time: 16:11:02 Digital Path WO#: 92682 Test Distance: 3 Meters Sequence#: 6





Test Location: CKC Laboratories, Inc. • 1120 Fulton Places • Fremont, CA 94539 • (510) 249-1170

Customer: Specification:	Digital Path 15.247(d) / 15.209 Radiated Spurior	us Emissions	
Work Order #:	92682	Date:	4/24/2013
Test Type:	Radiated Scan	Time:	16:52:09
Equipment:	5GHz Sector (17dBi)	Sequence#:	7
Manufacturer:	Digital Path	Tested By:	Hieu Song Nguyenpham
Model:	G5RL102X		
S/N:	ENG1		

#### Test Equipment:

1000 2900					
ID	Asset #	Description	Model	Calibration Date	Cal Due Date
	AN02668	Spectrum Analyzer	E4446A	2/22/2013	2/22/2015
T1	AN02694	Horn Antenna-ANSI	AMFW-5F-	2/4/2013	2/4/2015
		C63.5 Antenna	18002650-20-10P		
		Factors (dB)			
T2	ANP00929	Cable	various	2/16/2012	2/16/2014
T3	ANP05843	Cable	32022-2-29094K-	8/7/2012	8/7/2014
			48TC		
T4	ANP06127	Cable	32022-29094K-	9/7/2011	9/7/2013
			29094K-132TC		

## Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
5GHz Sector (17dBi)*	Digital Path	G5RL102X	ENG1

### Support Devices:

Support Derices.			
Function	Manufacturer	Model #	S/N
Laptop Power Supply	HP	608428-002	F12941126327228
Laptop	HP	ProBook 6565b	5CB13637ZF
Power Supply	Condor	STD-2427P	None

## Test Conditions / Notes:

Radiated Spurious Emission

Temperature: 20.8°C Humidity: 40 % Atmospheric Pressure: 100.9 kPa High Clock: 500MHz Software: ART software

Mode: TX

Transmitting Operation Frequency= 5785MHz

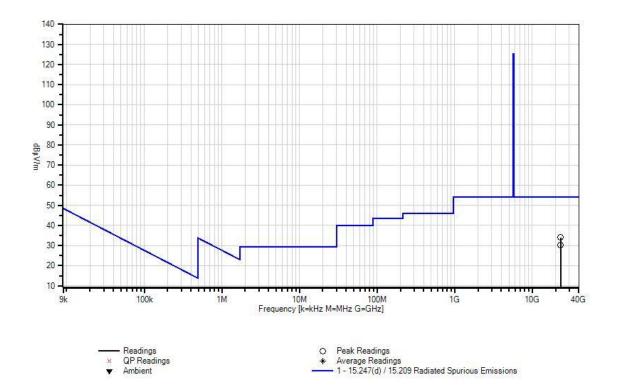
Channel Width=10MHz ART setting = 15.5 Modulation= 24Mbps Note: ar9160 chip w/ 17db sectors & aluminum case model # G5RL102X takes off the plastic in the front and put 2 ferrite (Steward 28A 2024-0A0): one is on the RJ 45 power cable with one pass through at around one foot from the EUT and another one is on RJ 45 power and data cables with one pass through at the EUT.



Ext Attn: 0 dB

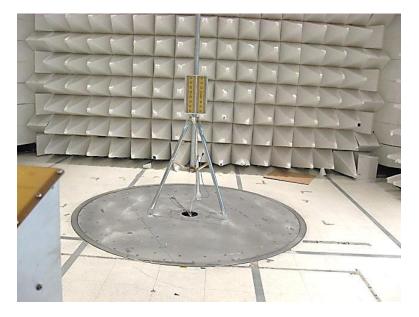
Meast	urement Data:	Re	ading lis	ted by ma	rgin.		Τe	est Distance	e: 3 Meters		
#	Freq	Rdng	T1	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
	MHz	dBµV	dB	dB	dB	dB	Table	$dB\mu V/m$	$dB\mu V/m$	dB	Ant
1	23140.000 M	41.7	-17.8	+2.9	+2.9	+4.3	+0.0	34.0	54.0	-20.0	Vert
									The Fourth	1	
									Harmonic.	Noise	
									Floor only		
2	23140.000 M	37.8	-17.8	+2.9	+2.9	+4.3	+0.0	30.1	54.0	-23.9	Horiz
									The Fourth	1	
									Harmonic.	Noise	
									Floor only		

CKC Laboratories, Inc Date: 4/24/2013 Time: 16:52:09 Digital Path WO#: 92682 Test Distance: 3 Meters Sequence#: 7

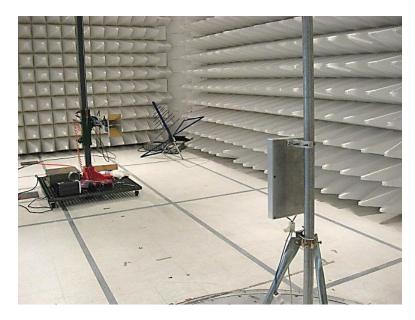




## Test Setup Photos

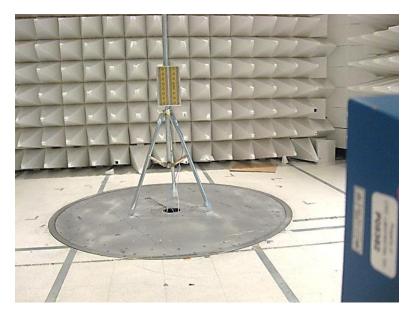


Radiated Spurious, Second and Third Harmonic

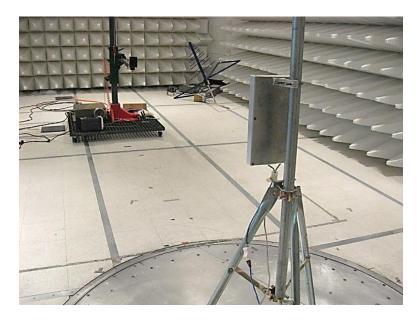


Radiated Spurious, Second and Third Harmonic





Radiated Spurious, Fourth Harmonic



Radiated Spurious, Fourth Harmonic



# SUPPLEMENTAL INFORMATION

## **Measurement Uncertainty**

Uncertainty Value	Parameter
4.73 dB	Radiated Emissions
3.34 dB	Mains Conducted Emissions
3.30 dB	Disturbance Power

The reported measurement uncertainties are calculated based on the worst case of all laboratory environments from CKC Laboratories, Inc. test sites. Only those parameters which require estimation of measurement uncertainty are reported. The reported worst case measurement uncertainty is less than the maximum values derived in CISPR 16-4-2. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k=2. Compliance is deemed to occur provided measurements are below the specified limits.

## **Emissions Test Details**

## **TESTING PARAMETERS**

Unless otherwise indicated, the following configuration parameters are used for equipment setup: The cables were routed consistent with the typical application by varying the configuration of the test sample. Interface cables were connected to the available ports of the test unit. The effect of varying the position of the cables was investigated to find the configuration that produced maximum emissions. Cables were of the type and length specified in the individual requirements. The length of cable that produced maximum emissions was selected.

The equipment under test (EUT) was set up in a manner that represented its normal use, as shown in the setup photographs. Any special conditions required for the EUT to operate normally are identified in the comments that accompany the emissions tables.

The emissions data was taken with a spectrum analyzer or receiver. Incorporating the applicable correction factors for distance, antenna, cable loss and amplifier gain, the data was reduced as shown in the table below. The corrected data was then compared to the applicable emission limits. Preliminary and final measurements were taken in order to ensure that all emissions from the EUT were found and maximized.

#### **CORRECTION FACTORS**

The basic spectrum analyzer reading was converted using correction factors as shown in the highest emissions readings in the tables. For radiated emissions in dB $\mu$ V/m, the spectrum analyzer reading in dB $\mu$ V was corrected by using the following formula. This reading was then compared to the applicable specification limit.



SAMPLE CALCULATIONS				
	Meter reading	(dBµV)		
+	Antenna Factor	(dB)		
+	Cable Loss	(dB)		
-	Distance Correction	(dB)		
-	Preamplifier Gain	(dB)		
=	Corrected Reading	(dBµV/m)		

### TEST INSTRUMENTATION AND ANALYZER SETTINGS

The test instrumentation and equipment listed were used to collect the emissions data. A spectrum analyzer or receiver was used for all measurements. Unless otherwise specified, the following table shows the measuring equipment bandwidth settings that were used in designated frequency bands. For testing emissions, an appropriate reference level and a vertical scale size of 10 dB per division were used.

MEASURING EQUIPMENT BANDWIDTH SETTINGS PER FREQUENCY RANGE				
TEST	BEGINNING FREQUENCY	ENDING FREQUENCY	BANDWIDTH SETTING	
CONDUCTED EMISSIONS	150 kHz	30 MHz	9 kHz	
RADIATED EMISSIONS	9 kHz	150 kHz	200 Hz	
RADIATED EMISSIONS	150 kHz	30 MHz	9 kHz	
RADIATED EMISSIONS	30 MHz	1000 MHz	120 kHz	
RADIATED EMISSIONS	1000 MHz	>1 GHz	1 MHz	

#### SPECTRUM ANALYZER/RECEIVER DETECTOR FUNCTIONS

The notes that accompany the measurements contained in the emissions tables indicate the type of detector function used to obtain the given readings. Unless otherwise noted, all readings were made in the "positive peak" detector mode. Whenever a "quasi-peak" or "average" reading was recorded, the measurement was annotated with a "QP" or an "Ave" on the appropriate rows of the data sheets. In cases where quasi-peak or average limits were employed and data exists for multiple measurement types for the same frequency then the peak measurement was retained in the report for reference, however the numbering for the affected row was removed and an arrow or carrot ("^") was placed in the far left-hand column indicating that the row above takes precedence for comparison to the limit. The following paragraphs describe in more detail the detector functions and when they were used to obtain the emissions data.

#### Peak

In this mode, the spectrum analyzer or receiver recorded all emissions at their peak value as the frequency band selected was scanned. By combining this function with another feature called "peak hold," the measurement device had the ability to measure intermittent or low duty cycle transient emission peak levels. In this mode the measuring device made a slow scan across the frequency band selected and measured the peak emission value found at each frequency across the band.

#### Quasi-Peak

Quasi-peak measurements were taken using the quasi-peak detector when the true peak values exceeded or were within 2 dB of a quasi-peak specification limit. Additional QP measurements may have been taken at the discretion of the operator.

## Average

Average measurements were taken using the average detector when the true peak values exceeded or were within 2 dB of an average specification limit. Additional average measurements may have been taken at the discretion of the operator. If the specification or test procedure requires trace averaging, then the averaging was performed using 100 samples or as required by the specification. All other average measurements are performed using video bandwidth averaging. To make these measurements, the test engineer reduces the video bandwidth on the measuring device until the modulation of the signal is filtered out. At this point the measuring device is set into the linear mode and the scan time is reduced.