6. Band Edge

6.1. Test Equipment

The following test equipments are used during the band edge tests:

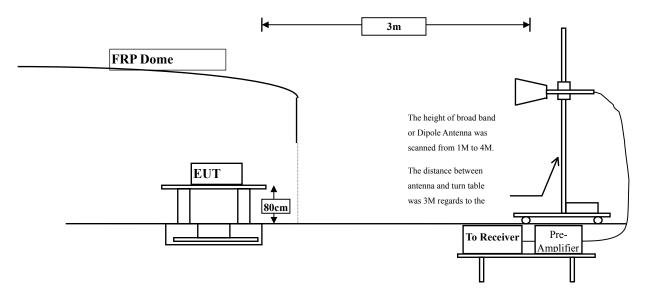
Test Site		Equipment	Manufacturer	Model No./Serial No.	Last Cal.
\Box Site # 3	Х	Bilog Antenna	Schaffner Chase	CBL6112B/2673	Sep., 2008
	Х	Pre-Amplifier	AGILENT	8447D/2944A09549	Sep., 2008
	X Test Receiver		R & S	ESCS 30/ 825442/018	Sep., 2008
	Х	Spectrum Analyzer	Advantest	R3162/91700283	Oct., 2008
	Х	Coaxial Cable	QuieTek	QTK-CABLE/ CAB5	Feb., 2009
	Х	Controller	QuieTek	QTK-CONTROLLER/ CTRL3	N/A
	Χ	Coaxial Switch	Anritsu	MP59B/6200265729	N/A

Note: 1. All instruments are calibrated every one year.

2. The test instruments marked by "X" are used to measure the final test results.

6.2. Test Setup

RF Radiated Measurement:



6.3. Limits

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 20dB below the level of the fundamental or to the general radiated emission limits in paragraph 15.209, whichever is the lesser attenuation.

6.4. Test Procedure

The EUT was setup according to ANSI C63.4, 2003 and tested according to DTS test procedure of Mar. 2005 KDB558074 for compliance to FCC 47CFR 15.247 requirements.

The EUT is placed on a turn table which is 0.8 meter above ground. The turn table is rotated 360 degrees to determine the position of the maximum emission level. The EUT was positioned such that the distance from antenna to the EUT was 3 meters.

The antenna is scanned from 1 meter to 4 meters to find out the maximum emission level. This is repeated for both horizontal and vertical polarization of the antenna. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.4:2003 on radiated measurement.

6.5. Uncertainty

- ± 3.9 dB above 1GHz
- ± 3.8 dB below 1GHz

6.6. Test Result of Band Edge

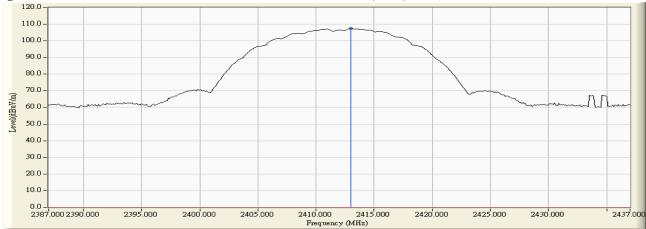
Product	:	HP Smart Wi-Fi Display
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit (802.11b 1Mbps)

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
01 (Peak)	2413.000	36.048	71.348	107.395			
01 (Average)	2412.700	36.046	67.189	103.234			

Figure Channel 01:

Horizontal (Peak)





Horizontal (Average)



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.

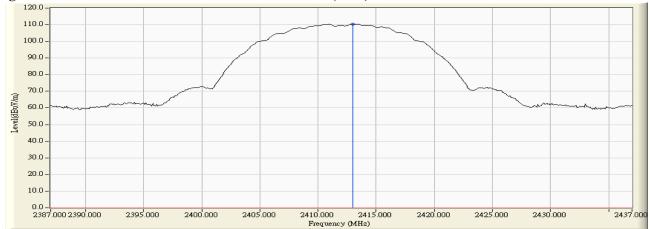
Product	:	HP Smart Wi-Fi Display
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit (802.11b 1Mbps)

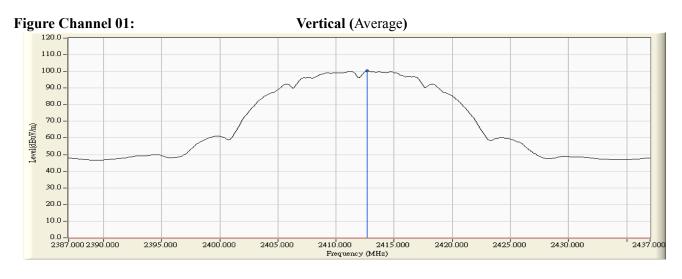
RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
01 (Peak)	2413.000	35.292	75.193	110.485			
01 (Average)	2412.700	35.288	64.934	100.221			

Figure Channel 01:

Vertical (Peak)





- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.

Marker Delta Method (Low band)

Fundamental Filed Strength

Antenna	Frequency	Correction Factor	Reading Level	Emission Level	Detector
Pole	[MHz]	[dB/m]	[dBuV]	[dBuV/m]	
Horizontal	2412	36.048	71.348	107.395	Peak
Horizontal	2412	36.046	67.189	103.234	Average
Vertical	2412	35.292	75.193	110.485	Peak
Vertical	2412	35.288	64.934	100.221	Average

Note: 1:Spectrum Analyzer setting:

Peak detector: RBW=1MHz, VBW=1MHz

Average detector: RBW=1MHz, VBW=10Hz

Band Edge Test Data

Antenna Pole	Test Frequency (MHz)	Fundamental (dBuV/m)	Δ (dB)	Band Edge Field Strength (dBuV/m)	Detector
Horizontal	2385.85	107.395	51.09	56.305	Peak
Horizontal	2386.7	103.234	53.9	49.334	Average
Vertical	2385.85	110.485	51.09	59.395	Peak
Vertical	2386.7	100.221	53.9	46.321	Average

Note:

The Band Edge Field Strength was calculated using the Fundamental and Conducted Band Edge measurements per the Marker-Delta Method with the following formula:

Band Edge field Strength = F - Δ

F = Fundamental field Strength (Peak or Average)

 Δ = Conducted Band Edge Delta (Peak or Average)

Aylani Specirum Analyzer - Swepi SA			📴 Agilani Specin	am Analyzer - Swept SA			
arker 3 2.385850000000 GHz Avg Type: Log-Per	10:10:00 AM 36/15, 2000	Merker	Marker 3 2	295 /00000000 CH3	our Time:	.og-Per 10:20:50 AM 3d15, 2000 .og-Per 10:00 AM 3d15, 2000	Merker
Inger 1972 Sector Control Cont	DET I'N N N N N	Marker Table		Input: RI PNO: Last C	Trig: Free Run Atten. 20 dB	DET I'N N N N N	Select Marker
0 dBldiv Ref 10.00 dBm	3 2.385 85 GHz -42.44 dBm	<u>0n</u> Off		Ref 10.00 dBm		Mkr3 2.386 70 GHz -47.75 dBm	3
		Marker Count	0 m -10 0				Norma
		Couple Markers	-20.0 -3010 -4010		• ³	/	Delt
		On <u>Off</u>	64111 64111		k2/ VV		
			800				Fixed
· · · · · · · · · · · · · · · · · · ·	8pan 50.00 MHz 500 ms (1001 pts)		Center 2.39 #Res BW 1.	0 MHz #VBV		Span 50.00 MHz Sweep 3.90 s (1001 pts)	0
20 CTL 010 RP31 2 Y TRANSFER TRANSFERENCES 00 1 N 1 f 2.410.95 GHz 0.65 dDm 2 N 1 f 2.390.00 GHz 48.07 dBm	TINKINANT		1 N 1 2 N 1	f 2.411 20 GI Iz	6.15 dBm -\$6.85 dBm	INVERT	
EIN 1 1 7 2395 85 GH7 - 42 44 dRm 4 6 6		All Markers Off	3 N 1		47 75 dBm		Properties
/ 0 9 0		More 2 of 2	0 9 10				M0 1 0
1 2 4 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5			11 12 855			STATUS	

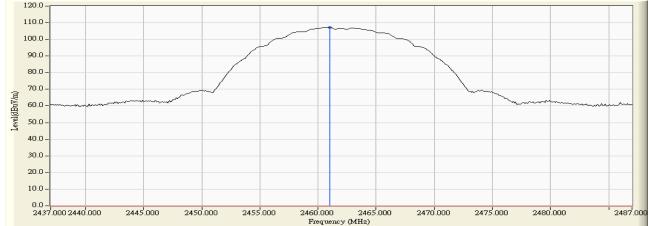
Product	:	HP Smart Wi-Fi Display
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit (802.11b 1Mbps)

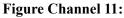
RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
11 (Peak)	2461.000	36.346	70.909	107.255			
11(Average)	2461.200	36.348	67.244	103.592			

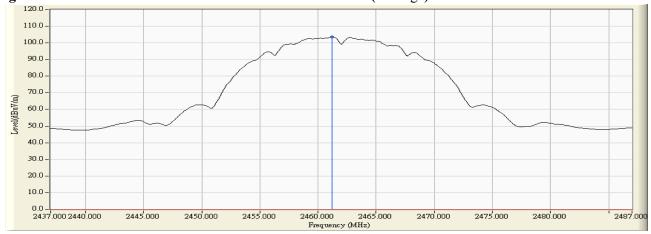
Figure Channel 11:

Horizontal (Peak)





Horizontal (Average)



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product	:	HP Smart Wi-Fi Display
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit (802.11b 1Mbps)

RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
11 (Peak)	2460.900	35.909	70.194	106.102	-		
11(Average)	2461.200	35.913	66.547	102.459			

Figure Channel 11:

Vertical (Peak)

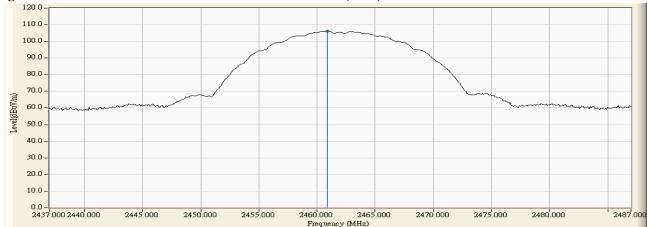
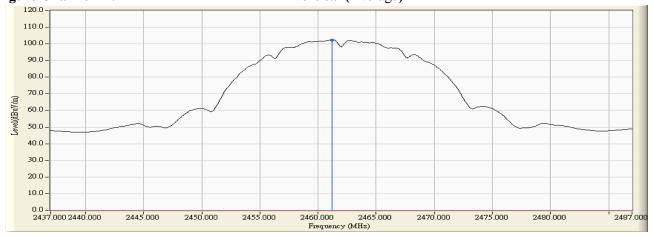


Figure Channel 11:

Vertical (Average)



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.

Marker Delta Method (Low band)

Fundamental Filed Strength

Antenna	Frequency	Correction Factor	Reading Level	Emission Level	Detector
Pole	[MHz]	[dB/m]	[dBuV]	[dBuV/m]	
Horizontal	2462	36.346	70.909	107.255	Peak
Horizontal	2462	36.348	67.244	103.592	Average
Vertical	2462	35.909	70.194	106.102	Peak
Vertical	2462	35.913	66.547	102.459	Average

Note: 1:Spectrum Analyzer setting:

Peak detector: RBW=1MHz, VBW=1MHz

Average detector: RBW=1MHz, VBW=10Hz

Band Edge Test Data

Antenna Pole	Test Frequency (MHz)	Fundamental (dBuV/m)	Δ (dB)	Band Edge Field Strength (dBuV/m)	Detector
Horizontal	2388.25	107.255	51.91	55.345	Peak
Horizontal	2487.6	103.592	55.4	48.192	Average
Vertical	2488.25	106.102	51.91	54.192	Peak
Vertical	2487.6	102.459	55.4	47.059	Average

Note:

The Band Edge Field Strength was calculated using the Fundamental and Conducted Band Edge measurements per the Marker-Delta Method with the following formula:

Band Edge field Strength = $F - \Delta$

F = Fundamental field Strength (Peak or Average)

 Δ = Conducted Band Edge Delta (Peak or Average)

Agilant Spectrum Analyzer - Sweyt SA		VSE TV/T				📕 Agilent S		Analyzer Swayt SA		NSEINTI	e 194 e ITO	10:12:10 AM 3 (15: 2021	E 66
Marker 3 2.48825000000		Ave	Type: Log-Pwr	TRACE 1 2 3 4 5 6	Marker	Marker	3 2.4	187600000000 GHz		A)	vg Type: Log-Pwr	TRACE 1 2 3 4 5 6	Marker
input va	IFGain.Low Atten: 20	48		UEI F NNNNN	Select Marker			IFGain.Lo	Atten: 20	48		UEI F NNNNN	Select Marker
10 dB/dly Ref 10.00 dBm			IVIKI	3 2.488 25 GHz -43.29 dBm	3			f 10.00 dBm			MKG	3 2.487 60 GHz -49.37 dBm	3
0.00			_		Normal	0.00	-1612-	·~~					Norma
200					Norma	10.0 20.0							Norme
30.0	4	2 3			Delta	-30.0 40.0							Delta
50.0		~~~		and share-	Dena	50.0				2			Den
80.0 70.0						-80.0 -70.0				M	\		
80.0			_		Fixed⊳	-80.0	_						Fixed
Center 2.48350 GHz				Span 50.00 MHz		Center :						Span 50.00 MHz	
#Res BW 1.0 MH7	#VBW 1.0 MH7	FUNCTION	#Sweep	500 ms (1001 pts)	01	#Res B)			/BW 10 H7		Sweep	3.90 s (1001 pts)	or
1 N 1 f 2/6	50 95 GHz 8.52 di 33 60 GHz -47.32 di	Bm	FUNCTION WORTH	FORE HOR REDE					6.03 di -64.90 di	Bm	PONCTION WOTH	FORE TON VIEWS	
SIN 1 t 2.48	8 26 GHz 43.29 di				Properties►	3 N 4	iii	2.487 60 GHz					Properties
6						6 6							
8					More	8 9							Mor
10					1 0[2	10 11				_			1 0[3
12 III III III III III III III III III I	1		STATUS			12 MSC	_	1	1	_	STATUS		

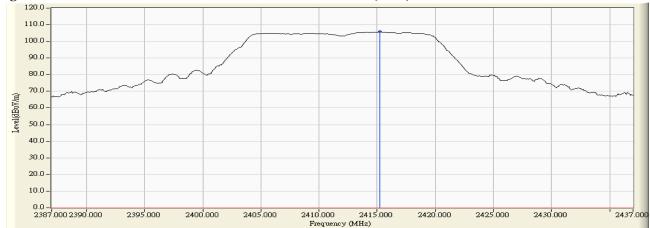
Product	:	HP Smart Wi-Fi Display
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit (802.11g 6Mbps)

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
01 (Peak)	2415.200	36.062	69.692	105.754			
01 (Average)	2415.500	36.064	55.453	91.517			

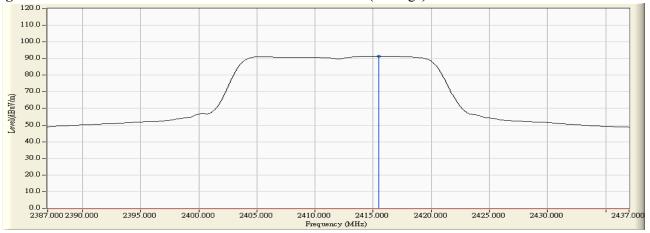
Figure Channel 01:

Horizontal (Peak)





Horizontal (Average)



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.

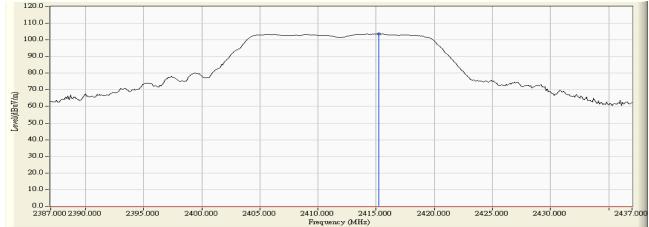
Product	:	HP Smart Wi-Fi Display
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit (802.11g 6Mbps)

RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
01 (Peak)	2415.200	35.322	68.377	103.699			
01 (Average)	2415.500	35.326	58.994	94.320			

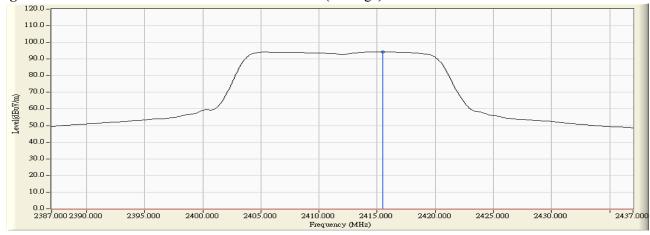
Figure Channel 01:

Vertical (Peak)





Vertical (Average)



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.

Marker Delta Method (Low band)

Fundamental Filed Strength

Antenna	Frequency	Correction Factor	Reading Level	Emission Level	Detector
Pole	[MHz]	[dB/m]	[dBuV]	[dBuV/m]	
Horizontal	2412	36.062	69.692	105.754	Peak
Horizontal	2412	36.064	55.453	91.517	Average
Vertical	2412	35.322	68.377	103.699	Peak
Vertical	2412	35.326	58.994	94.320	Average

Note: 1:Spectrum Analyzer setting:

Peak detector: RBW=1MHz, VBW=1MHz

Average detector: RBW=1MHz, VBW=10Hz

Band Edge Test Data

Antenna Pole	Test Frequency (MHz)	Fundamental (dBuV/m)	Δ (dB)	Band Edge Field Strength (dBuV/m)	Detector
Horizontal	2388.95	105.754	34.835	70.919	Peak
Horizontal	2390.0	91.517	41.39	50.127	Average
Vertical	2388.95	103.699	34.835	68.864	Peak
Vertical	2390.0	94.320	41.39	52.93	Average

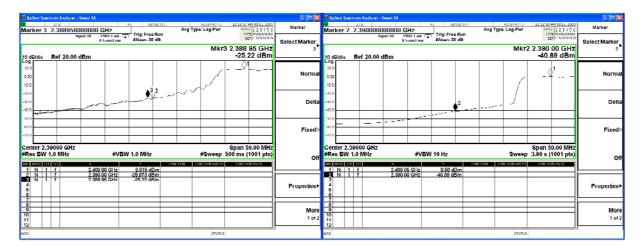
Note:

The Band Edge Field Strength was calculated using the Fundamental and Conducted Band Edge measurements per the Marker-Delta Method with the following formula:

Band Edge field Strength = $F - \Delta$

F = Fundamental field Strength (Peak or Average)

 Δ = Conducted Band Edge Delta (Peak or Average)



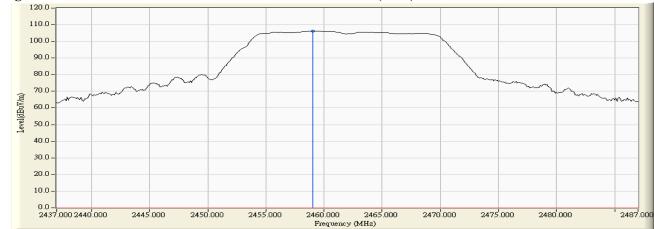
Product	:	HP Smart Wi-Fi Display
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit (802.11g 6Mbps)

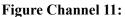
RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
11 (Peak)	2459.000	36.327	69.972	106.299			
11 (Average)	2459.800	36.334	60.567	96.901			

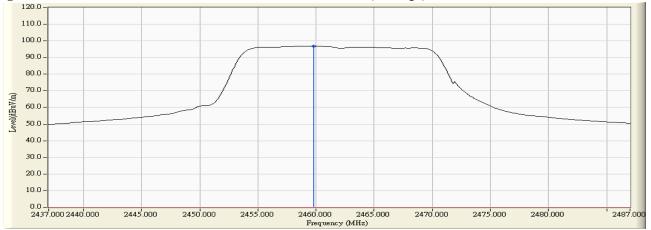
Figure Channel 11:

Horizontal (Peak)





Horizontal (Average)



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.

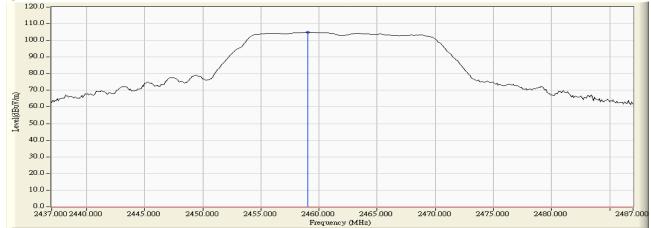
Product	:	HP Smart Wi-Fi Display
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit (802.11g 6Mbps)

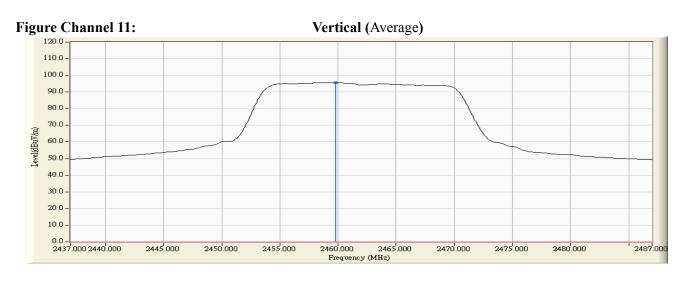
RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
11 (Peak)	2459.000	35.878	69.110	104.988			
11(Average)	2459.800	35.890	59.713	95.603			

Figure Channel 11:

Vertical (Peak)





- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.

Marker Delta Method (Low band)

Fundamental Filed Strength

Antenna	Frequency	Correction Factor	Reading Level	Emission Level	Detector
Pole	[MHz]	[dB/m]	[dBuV]	[dBuV/m]	
Horizontal	2462	36.327	69.972	106.299	Peak
Horizontal	2462	36.334	60.567	96.901	Average
Vertical	2462	35.878	69.110	104.988	Peak
Vertical	2462	35.890	59.713	95.603	Average

Note: 1:Spectrum Analyzer setting:

Peak detector: RBW=1MHz, VBW=1MHz

Average detector: RBW=1MHz, VBW=10Hz

Band Edge Test Data

Antenna Pole	Test Frequency (MHz)	Fundamental (dBuV/m)	Δ (dB)	Band Edge Field Strength (dBuV/m)	Detector
Horizontal	2483.5	106.299	37.95	68.349	Peak
Horizontal	2483.5	96.901	44.14	52.761	Average
Vertical	2483.5	104.988	37.95	67.038	Peak
Vertical	2483.5	95.603	44.14	51.463	Average

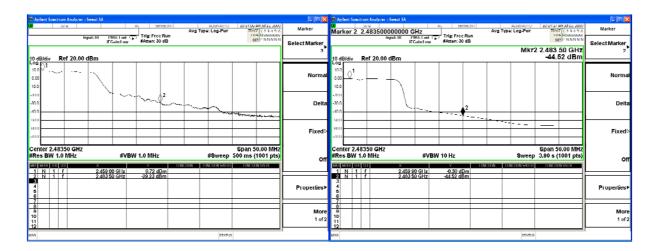
Note:

The Band Edge Field Strength was calculated using the Fundamental and Conducted Band Edge measurements per the Marker-Delta Method with the following formula:

Band Edge field Strength = F - Δ

F = Fundamental field Strength (Peak or Average)

 Δ = Conducted Band Edge Delta (Peak or Average)



7. Occupied Bandwidth

7.1. Test Equipment

The following test equipments are used during the radiated emission tests:

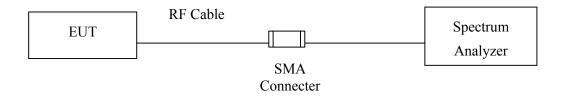
	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
	Spectrum Analyzer	R&S	FSP40 / 100170	Nov, 2008
	Spectrum Analyzer	Agilent	E4407B / US39440758	May, 2009
Х	Spectrum Analyzer	Agilent	N9010A / MY48030495	Apr., 2009

Note: 1. All instruments are calibrated every one year.

2. The test instruments marked by "X" are used to measure the final test results.

7.2. Test Setup

_



7.3. Limits

The minimum bandwidth shall be at least 500 kHz.

7.4. Test Procedure

The EUT was setup according to ANSI C63.4, 2003; tested according to DTS test procedure of Mar. 2005 KDB558074 for compliance to FCC 47CFR 15.247 requirements. Set RBW = 100 kHz, Span greater than RBW.

7.5. Uncertainty

 \pm 150Hz

7.6. Test Result of Occupied Bandwidth

Product	:	HP Smart Wi-Fi Display
Test Item	:	Occupied Bandwidth Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit (802.11b 1Mbps) (2412MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
1	2412.00	9950	>500	Pass

Figure Channel 1:

	DOOOOO GHz uput: RF PNO: Fast IEGain:Low	AC SENSE:INT	ALIGNAUTO Avg Type: Log-Pwr	09:50:08 AM Jul 15, 2009 TRACE 1 2 3 4 5 6 TYPE M WWWWW DET P N N N N N	Marker
		#Atten: 30 dB	Mkr	3 2.416 95 GHz -1.39 dBm	
0 dB/div Ref 20.00 (dBm	120	1	-1.39 uBill	
0.0		2 January June	³	-1.92 dBm	Marker Coun
0.0		ry h	- Maria		[Off
0.0					Cour Marke
0.0	win /				On g
D.O Manufacture Marking An				Marin when the week	
0.0					
enter 2.41200 GHz			~ ~ ~	Span 50.00 MHz	
	40.0	BW 100 kHz	#Sweep	500 ms (1001 pts)	
Res BW 100 kHz	#V.				
(R MODE TRC SCL	#V		FUNCTION FUNCTION WIDTH	FUNCTION VALUE	n.
KR MODE TRC SCL 1 N 1 f 2 N 1 f 3 N 1 f	×	Y	FUNCTION FUNCTION WIDTH	FUNCTION VALUE	
KR MODE TRC SCL 1 N 1 f 2 N 1 f 3 N 1 f 4	× 2.412 45 GHz 2.407 00 GHz	¥ 4.08 dBm -1.16 dBm	FUNCTION FUNCTION WIDTH	FUNCTION VALUE	All Markers (
KFI MODE TRC SCL 1 N 1 f 2 N 1 f 3 N 1 f 4 - - 5 - - 6 - -	× 2.412 45 GHz 2.407 00 GHz	¥ 4.08 dBm -1.16 dBm	FUNCTION FUNCTION WIDTH	FUNCTION VALUE	All Markers (
2 N 1 f	× 2.412 45 GHz 2.407 00 GHz	¥ 4.08 dBm -1.16 dBm	FUNCTION FUNCTION WIDTH	FUNCTION VALUE	All Markers C Mo 2 o

Product	:	HP Smart Wi-Fi Display
Test Item	:	Occupied Bandwidth Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit (802.11b 1Mbps) (2437MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
6	2437.00	10050	>500	Pass

Figure Channel 6:

Marker	AM Jul 15, 2009	TRACE	ALIGNAUTO : Log-Pwr	Avg Ty	SENSE:INT	AC S	00000 GHz	Ω 14200000	
Marker Ta	E MWWWWW T P N N N N N	TYP					ut: RF PNO: Fast IFGain:Lov		01 0 2.
	00 GHz 10 dBm		Mkr			~	Bm	ef 20.00 di	div R
Marker Cour				-	∆1				
Marker Cour [Of	-1.84.dBm			♦ ³	y mone	2 moura			
[0]				May	V	~\[`	ابر		
Cou				° ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	_		- Martin		
Marke				-	_		{		
On		202	1 mina	_	_		man /		
	WWW WWWW	why hunner	W r				/V	marine	and your and
	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	30							964~
					-				
	0.00 MHz	Span 5			57	-0		00 GHz	er 2.437
			#Sweep		Iz	BW 100 kH	#V	kHz	<b>BW 100</b>
1	N VALUE	FUNCTIO	NCTION WIDTH	ICTION		Y	×		de tro so
	1 m m					4.16	2.436 45 GHz		N 1 f N 1 f
					UDIII	-1.23	2.431 95 GHz		
All Markors			1			-1.40	2.442 00 GHz		<u>v</u> 1 f
All Markers									N 1 f
All Markers									N 1 f
All Markers ( Markers )									

:	HP Smart Wi-Fi Display
:	Occupied Bandwidth Data
:	No.3 OATS
:	Mode 1: Transmit (802.11b 1Mbps) (2462MHz)
	•

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
11	2462.00	9950	>500	Pass

## Figure Channel 11:

1	M Jul 15, 2009	09:56:28 A	ALIGN AUTO		NSE:INT	AC SE		1	2	50 \$			
Marker Marker Tal	E 123456 E MWWWWW T P N N N N N	TYPE	: Log-Pwr	Avg Typ		Trig: Free #Atten: 30	Hz NO: Fast	00000 G		2.4	r 3	kei	arl
	95 GHz I1 dBm	3 2.466 9 -1.4	Mkr					IBm	f 20.00 c	Ref	iv	B/di	
Marker Cour				3	,1								9 0.0
[Of	-1.97 dBm			<b>*</b>	many	Jananna				_			00
				1mg		V	Maril						0
Cou				- Vr			1						0
Marke On			m				ſ	any 1					0
	WALL HAR	- Connor	V			_		$\checkmark$	man /2	and .		1700	0
	Mar				-					·	~~~		0
													0
	0.00 MHz 1001 pts)	Span 50 500 ms (1	#Sweep			N 100 kHz	#VE		0 GHz kHz	620 100			
	N VALUE	FUNCTIO	NCTION WIDTH	CTION   FL	l F	Y		×		C  SCL	E  TRC	MODE	3 1
						4.03 d -1.27 d		2.461 4		f	1	N N	-
All Markers						-1.41 d		2.466 9		f	1	N	
All Walkers													
M0 2 0					_					-	_		
							6		2		_		

Product	:	HP Smart Wi-Fi Display
Test Item	:	Occupied Bandwidth Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit (802.11g 6Mbps) (2412MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
1	2412.00	16200	>500	Pass

## Figure Channel 1:

Marker	09:59:57 AM Jul 15, 2009 TRACE 1 2 3 4 5 6 TYPE MWWWWW	ALIGNAUTO be: Log-Pwr	Avg	AC SENSE:		200000000	50 Ω ker 3 2.42
Marker Ta	DET P N N N N N			Trig: Free Ru #Atten: 30 dE	PNO: Fast IFGain:Low	Input: RF	
<u>On</u>	2.420 00 GHz -4.88 dBm	Mkr3				f 20.00 dBm	3/div <b>Ref</b>
Marker Cour				1			
[Of	-6.03 dBm			monenimining	2		
					j		
Cou					~ Nor		
On Marke	whank the when a start	- manufatura			amagy Y	hunna	
	and the providence of the property of the					<u>4</u> 4	At Minicath at
	Span 50.00 MHz	#Sween 5		√ 100 kHz	#\/F		ter 2.41200 s BW 100 k
	00 mc (1001 nte)			TOO KITZ			
	00 ms (1001 pts)		FUNCTION			¥	
	00 ms (1001 pts)		FUNCTION	-0.03 dBm	409 20 GHz	2.	MODE TRC SCL N 1 f
			FUNCTION	-0.03 dBm -3.76 dBm -4.88 dBm		2.	
All Markers			FUNCTION	-3.76 dBm	409 20 GHz 403 80 GHz	2.	N 1 f N 1 f
All Markers (			Function	-3.76 dBm	409 20 GHz 403 80 GHz	2.	N 1 f N 1 f
			FUNCTION	-3.76 dBm	409 20 GHz 403 80 GHz	2.	N 1 f N 1 f
All Markers ( Markers 2)			FUNCTION	-3.76 dBm	409 20 GHz 403 80 GHz	2.	N 1 f N 1 f

Product	:	HP Smart Wi-Fi Display
Test Item	:	Occupied Bandwidth Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit (802.11g 6Mbps) (2437MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
6	2437.00	16250	>500	Pass

## Figure Channel 6:

Marker	AM Jul 15, 2009 E 1 2 3 4 5 6	TRACI	ALIGNAUTO E: Log-Pwr	Avg Ty	SENSE:II	ر ا Hz	00000 G	Ω 4450500		lark
Marker Tat		TYP			Trig: Free Rui #Atten: 30 dB	0: Fast 🕞 ain:Low		In		
On O	05 GHz 63 dBm		Mkr				lBm	ef 20.00 (	/div F	0 dE
MarkarCour					4					og 10.0
Marker Coun				3	$\Delta'$	2				.00
Lou	-6.89 dBm			monutaines	www.	Yourson				0.0
Court				L		/				0.0
Coup Marke			1AL			x ^r	And a strong of the			0.0
On g	Antonia M. M. M.	manulan	19199 4000				Jahran and the	Mary and	an and the second	0.0
									rap	0.0
										0.0
										0.0
	0.00 MHz 1001 pts)		#Sweep		00 kHz	#VBW			er 2.437 BW 10	
	1001 pts)	500 ms (*	-		00 kHz	#VBW	~	) kHz	BW 10	Res
	1001 pts)	500 ms (*	#Sweep	FUNCTION	Y -0.89 dBm	GHz	× 2.434 20	) kHz	BW 10	Res KR M
	1001 pts)	500 ms (*	-	FUNCTION	Y	GHz GHz		) kHz	BW 10 009 160 8 N 1 N 1	Res 1
All Markers (	1001 pts)	500 ms (*	-	FUNCTION	-0.89 dBm -4.50 dBm	GHz GHz	2.434 20 2.428 80	) kHz	BW 10 009 080 8 N 1 N 1	Res 1 2 3
All Markers (	1001 pts)	500 ms (*	-	FUNCTION F	-0.89 dBm -4.50 dBm	GHz GHz	2.434 20 2.428 80	) kHz	BW 10 009 080 8 N 1 N 1	Res 1 2 3 4 5 6
All Markers (	1001 pts)	500 ms (*	-	FUNCTION F	-0.89 dBm -4.50 dBm	GHz GHz	2.434 20 2.428 80	) kHz	BW 10 009 080 8 N 1 N 1	Res 1 2 3 4 5 6 7
All Markers ( Ma	1001 pts)	500 ms (*	-	FUNCTION	-0.89 dBm -4.50 dBm	GHz GHz	2.434 20 2.428 80	) kHz	BW 10 009 080 8 N 1 N 1	Res 1 2

Product	:	HP Smart Wi-Fi Display
Test Item	:	Occupied Bandwidth Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit (802.11g 6Mbps) (2462MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
11	2462.00	16250	>500	Pass

## Figure Channel 11:

Manlana	AM Jul 15, 2009		ALIGN AUTO		NSE:INT	AC SE				ectrum 50 Ω	-	
Marker Marker Ta	E 1 2 3 4 5 6 E MWWWWW T P N N N N N	TYP	: Log-Pwr	Avg Ty		Trig: Fre #Atten: 3	Hz 10: Fast 🕞 iain:Low	00000 G out: RF Pl IFC		3 2.4	ker 3	ark
	05 GHz 01 dBm		Mkr					1Bm	20.00	Ref	3/div	
Marker Cour				▲3		() ¹	2					00
[0]	-7.25 dBm			mannen	neeswiter	Lawren Marrian	Jonations					0.0
				1			1					0.0
Cou Mark			14.	,			or ^{of}					
On		Mary Mar	an half and arment					Margary .	In Month			0.0
	nor-united	- W 1979						Mylow		י וריעעאיז	white	0.0 0.0
												0.0
												0.0
												0.0
	0.00 MHz 1001 pts)		#Sweep			( 100 kHz	#VBW		0 GHz kHz	4620 100		
			INCTION WIDTH	INCTION		~		×		RC SCL		
	IT VALUE	reneme				-1.25 d		2.459 2		1 f	N	1
						<u>-4.94 d</u> -5.01 d		2.453 8		1 f 1 f		
All Markers						0.01 0		2.4100				4
					-						-	5 6
									-		_	7 B
												9
Me												
M( 2 (				-					1			0

## 8. **Power Density**

#### 8.1. Test Equipment

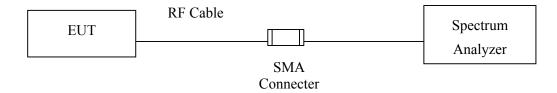
The following test equipments are used during the radiated emission tests:

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
	Spectrum Analyzer	R&S	FSP40 / 100170	Nov, 2008
	Spectrum Analyzer	Agilent	E4407B / US39440758	May, 2009
Х	Spectrum Analyzer	Agilent	N9010A / MY48030495	Apr., 2009

Note: 1. All equipments are calibrated every one year.

2. The test instruments marked by "X" are used to measure the final test results.

### 8.2. Test Setup



### 8.3. Limits

The transmitted power density averaged over any 1 second interval shall not be greater +8dBm in any 3kHz bandwidth.

### 8.4. Test Procedure

The EUT was setup according to ANSI C63.4, 2003; tested according to DTS test procedure of Mar. 2005 KDB558074 for compliance to FCC 47CFR 15.247 requirements. Set RBW= 3 kHz, VBW=10KHz, Sweep time=(SPAN/3KHz), detector=Peak detector

### 8.5. Uncertainty

 $\pm$  1.27 dB

# 8.6. Test Result of Power Density

Product	:	HP Smart Wi-Fi Display
Test Item	:	Power Density Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit (802.11b 1Mbps) (2412MHz)

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
1	2412.00	-15.284	< 8dBm	Pass

## Figure Channel 1:

SENSE:INT  ALIGN AUTO  09:52:11 AM Jul 15, 2009  Peak    Avg Type: Log-Pwr  TRACE 1/2 3 4 5 6  Free Run  Avg Hold: 1/100  TYPE  TYPE IM WWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWW	eak Search
Mkr1 2.412 560 1 GHz -15.284 dBm	NextPe
N	Next Rig
	Next L
Mar	Marker De
	Mkr→
Mkr	Mkr→Ref
Span 300.0 kHz Hz #Sweep 100 s (1001 pts)	<b>M</b> ( 1 (

Product	:	HP Smart Wi-Fi Display
Test Item	:	Power Density Data
Test Site	:	No.3OATS
Test Mode	:	Mode 1: Transmit (802.11b 1Mbps) (2437MHz)

Channel No.	Frequency (MHz)	Measurement Level (dBm)	Required Limit (dBm)	Result
6	2437.000	-15.208	< 8dBm	Pass

## Figure Channel 6:

Agilent Spe	ectrum Analyzer - Swept SA 50 Ω	A	SENSE:INT	ALIGN AUTO	09:55:20 AM Jul 15, 2009	
	2.43630030000 Input: RF		Trig: Free Run #Atten: 30 dB	Avg Type: Log-Pwr Avg Hold: 1/100	TRACE 1 2 3 4 5 6 TYPE MWWWWW DET P N N N N N	Peak Search
0 dB/div	Ref 20.00 dBm			Mkr1 2.4	136 300 3 GHz -15.208 dBm	Next Pea
og 10.0						Next Rig
0.00 <b></b>						Next L
0.0						Marker De
0.0						Mkr→
0.0						Mkr→Refl
	4364500 GHz 3.0 kHz	#VBW	10 kHz	#Sween	Span 300.0 kHz 100 s (1001 pts)	<b>Мс</b> 1 с
G			IV HILL	#OWEEP	100 3 (1001 pt3)	

Product	:	HP Smart Wi-Fi Display
Test Item	:	Power Density Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit (802.11b 1Mbps) (2462MHz)

Channel No.	Frequency (MHz)	Measurement Level (dBm)	Required Limit (dBm)	Result
11	2462.00	-15.403	< 8dBm	Pass

## Figure Channel 11:

50 Ω arker 1 2.461351900 Input:		SENSE:INT Trig: Free Run #Atten: 30 dB	ALIGNAUTO Avg Type: Log-Pwr Avg Hold: 1/100	09:58:21 AM Jul 15, 2009 TRACE 1 2 3 4 5 6 TYPE MWWWW DET P N N N N N	Peak Search
dB/div Ref 20.00 dB		Pricelli OV UB	Mkr1 2.4	461 351 9 GHz -15.403 dBm	Next Pea
g .0					Next Rig
.01					Next Le
.0	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~				Marker De
.0				F	Mkr→
.0				F	Mkr→Refl
entêr 2.4614500 GHz es BW 3.0 kHz	#VBW	10 kHz	#Sweep	Span 300.0 kHz 100 s (1001 pts)	<b>M</b> a 1 o

Product	:	HP Smart Wi-Fi Display
Test Item	:	Power Density Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit (802.11g 6Mbps) (2412MHz)

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
1	2412.00	-15.502	< 8dBm	Pass

## Figure Channel 1:

50 Ω arker 1 2.4091751000 Input: F		Aug Type: Log-Pwr Avg Hold: 1/100	10:01:55 AM Jul 15, 2009 TRACE 1 2 3 4 5 6 TYPE MWWWWW DET P N N N N N	Peak Search
dB/div Ref 20.00 dBm		Mkr1 2.4	09 175 1 GHz -15.502 dBm	Next Pea
0.0				Next Rig
0.0	1			Next Lo
	where he had a second s	- warden ward	~~~~	Marker De
0.0			[	Mkr→
0.0				Mkr→Refl
enter 2.4092000 GHz Res BW 3.0 kHz	#VBW 10 kHz	#Sween	Span 300.0 kHz 100 s (1001 pts)	<b>M</b> o 1 o

Product	:	HP Smart Wi-Fi Display
Test Item	:	Power Density Data
Test Site	:	No.3OATS
Test Mode	:	Mode 2: Transmit (802.11g 6Mbps) (2437MHz)

Channel No.	Frequency (MHz)	Measurement Level (dBm)	Required Limit (dBm)	Result
6	2437.000	-15.918	< 8dBm	Pass

## Figure Channel 6:

50 Q	wept SA	AC SENSE:INT	ALIGN AUTO	10:05:00 AM Jul 15, 2009	
larker 1 2.4341742	00000 GHz ut: RF PNO: >30k G IFGain:Low		Avg Type: Log-Pwr Avg Hold: 1/100	TRACE 1 2 3 4 5 6 TYPE MWWWWW DET P N N N N N	Peak Search
0 dB/div <b>Ref 20.00</b> d			Mkr1 2.4	434 174 2 GHz -15.918 dBm	Next Pea
10.0					Next Rig
0.00		1			Next L
0.0	rwww		- Andrew Contraction of the second se	wwwv	Marker De
0.0					Mkr→
0.0					Mkr→Refl
enter 2.4342000 GHz Res BW 3.0 kHz		V 10 kHz	#Sweep	Span 300.0 kHz 100 s (1001 pts)	<b>M</b> c 1 c

Product	:	HP Smart Wi-Fi Display
Test Item	:	Power Density Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit (802.11g 6Mbps) (2462MHz)

Channel No.	Frequency (MHz)	Measurement Level (dBm)	Required Limit (dBm)	Result
11	2462.00	-16.380	< 8dBm	Pass

## Figure Channel 11:

IFGain:Low	#Atten: 30 dB		Mkr1 2.4		3 6 GHz 80 dBm 	Next Pe Next Rig Next L
	1					
	1					Next Lo
0.0 mananana						
	www.	www	~~~~	$\sim$	~~	Marker De
0.0						Mkr→
.0						Mkr→Ref
enter 2.4592000 GHz Res BW 3.0 kHz #VBW 1	0 kHz		#Sween		300.0 kHz 1001 pts)	<b>M</b> c 1 c

## 9. EMI Reduction Method During Compliance Testing

No modification was made during testing.