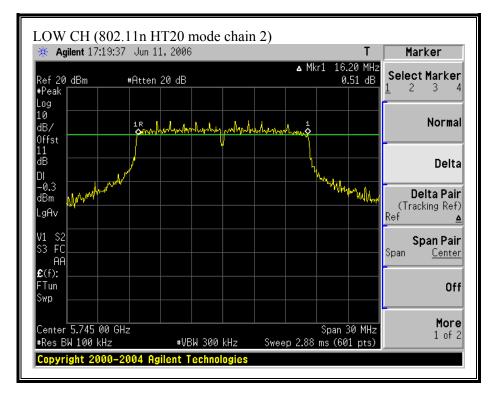


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(802.11 HT20 MODE CHAIN 2)



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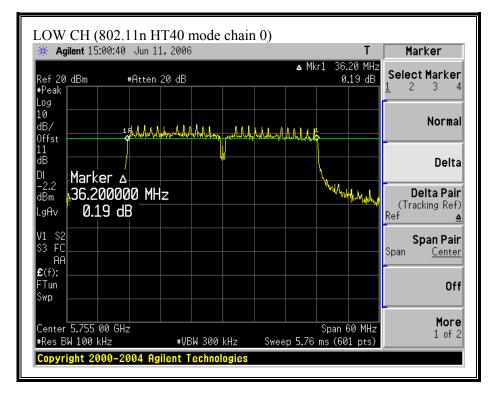
🔆 Agilent 17:2	21:15 Jun 11, 2006		T	Marker
Ref 20 dBm #Peak	#Atten 20 dB	▲ Mkr1 1 -	6.40 MHz 0.17 dB <u>1</u>	Select Marker
Log 10 dB/ 0ffst	1.R Anno por malinal marine	mhalapharan the the		Normal
11 dB DI Marke				Delta
	10000 MHz	h	₩ ₩₩₩ ₩₩ F	Delta Pair (Tracking Ref) Ref ▲
V1 S2 S3 FC AA			s	Span Pair Span <u>Center</u>
£(f): FTun Swp				Off
Center 5.785 0 #Res BW 100 kH		Spar KHz Sweep 2.88 ms (6	30 MHz	More 1 of 2

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🔆 Agil	ent 17:	22:58	Jun 11	, 2006						Т	Marker
Ref 20 (dBm	#	Atten	20 dB				∆ Mk		.35 MHz .44 dB	Select Marker
#Peak Log											±
10 dB/		:	LR Mul	phoneter	honny	prohentin	whethe	hul \$			Normal
Offst 11)					
dB DI	∣ Mark∉	ar A						η	human a.		Delta
		50000	0 MH	z					1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 -	Manyan	Delta Pair
LgAv [0.4	4 dB									(Tracking Ref) Ref <u>∆</u>
V1 S2 S3 FC											Span Pair
AA £(f):											Span <u>Center</u>
FTun											Off
Swp –											
Center S		00 GHz Hz					Swee	- 2.00		30 MHz	More 1 of 2

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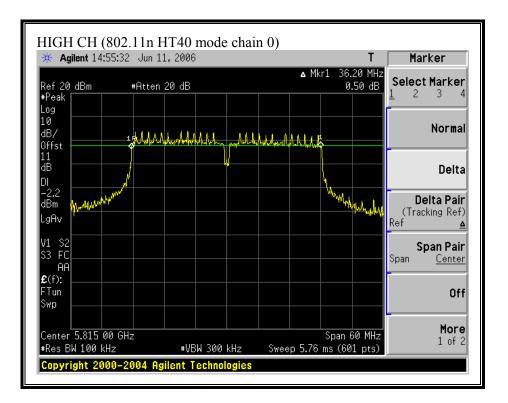
(802.11 HT40 MODE CHAIN 0)



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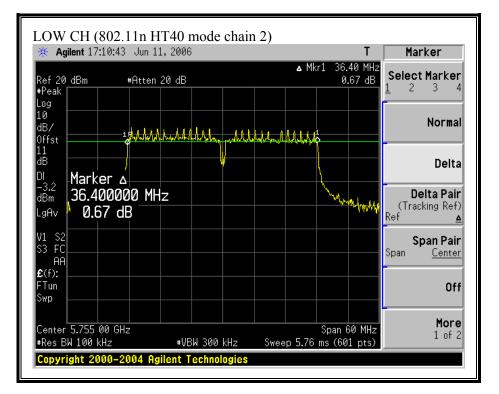
🔆 Agi	ilent 14	:58:08	Jun 11	L, 2006						T	Marker
Ref 20	dBm	+	Atten	20 dB				∆ Mk		.30 MHz .52 dB	Select Marker
#Peak [Log											<u>1</u> 234
10 10 dB/ Offst		1[h, h	dy And A	oldon	walate	heldwood	ahhh	L		Normal
11 dB	Mark	er ۵							\		Delta
	36.3	0000 52 dE		z					n wheel	monday	Delta Pair (Tracking Ref) Ref ≙
V1 S2 S3 FC AA											Span Pair Span <u>Center</u>
€(f): FTun Swp											Off
	5.785 W 100	00 GHz		#UE		kHz	Suee	n 5 76		60 MHz	More 1 of 2

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(802.11 HT40 MODE CHAIN 2)



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🔆 Agilent	t 17:12:29	UJun 1	1,2006					F	. ۲	Т	Marker
Ref 20 dB #Peak	m	#Atten	20 dB				∆ Mk	r1 36. -0	.20 N .30		Select Marker
Log 10 dB/ Offst		1. M.M	da Arhil	alla lullana.	moluly	hthad	LALA	1			Normal
11 dB	arker Z				ļ						Delta
dBm 36	6.2000 0.30 c	210 MH	z					N. WWW	NA.	.44 . ∦	Delta Pair (Tracking Ref) Ref <u>≜</u>
V1 S2 S3 FC AA											Span Pair Span <u>Center</u>
£ (f): FTun Swp											Off
Center 5.7 #Res BW 1		z	#VB	W 300	kHz	Swee	p 5.76	Span (ms (60			More 1 of 2

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🔆 Agilen	t 17:16:4	5 Jun 11	1,2006						Т	Marker
Ref 20 dB #Peak	m	#Atten	20 dB				∆ Mk	r1 36. -0.	10 MHz 22 dB	Select Marker
Log 10 dB/ Offst		13.U.M	utuntulah	t Alana	سالياليالين	thhad	hh.L.L.K			- Normal
11 dB	arker (Delta
-3.5 dBm 36	6.1000 -0.22	100 MH	z					Mary Mary	wrydyd	Delta Pair (Tracking Ref) Ref <u>≜</u>
V1 S2 S3 FC AA										Span Pair Span <u>Center</u>
£ (f): FTun Swp										Off
Center 5.0 #Res BW 1			#VBI	W 300	kHz	Swee	n 5.76	Span 6 ms (60)	60 MHz 1 pts)	More 1 of 2

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7.2.2. 99% BANDWIDTH AND 26 dB BANDWIDTH

<u>LIMIT</u>

None; for reporting purposes only.

TEST PROCEDURE

The transmitter output is connected to the spectrum analyzer. The RBW is set to 1% to 3% of the 99 % bandwidth. The VBW is set to 3 times the RBW. The sweep time is coupled. The spectrum analyzer internal 99% bandwidth and 26 dB bandwidth functions are utilized.

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RESULTS

No non-compliance noted:

Mode	Frequency	99% BW	99% BW	26 dB BW	26 dB BW
Channel		Chain 0	Chain 2	Chain 0	Chain 2
	(MHz)	(MHz)	(MHz)	(MHz)	(MHz)

802.11a Mode

Low	5745	16.455	16.4815	19.53	18.9570
Middle	5785	16.4608	16.4909	19.277	19.4210
High	5825	16.4745	16.4668	19.683	19.8760

802.11n HT20 Mode

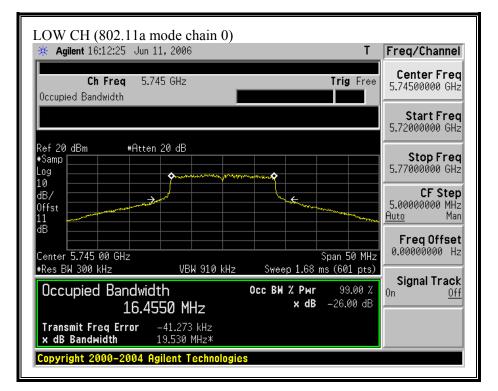
Low	5745	17.5472	16.4815	19.902	18.9570
Mid	5785	16.4608	16.4909	19.277	19.4210
High	5825	16.4745	16.4668	19.683	19.8760

802.11n HT40 Mode

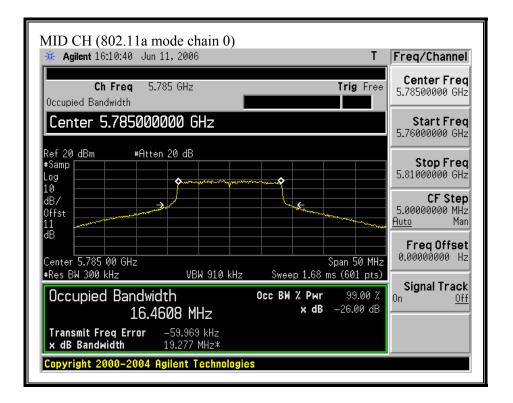
Low	5755	36.4234	36.4013	40.731	38.2290
Mid	5785	36.3285	36.2539	39.066	38.0290
High	5815	36.2112	36.3184	38.449	39.1360

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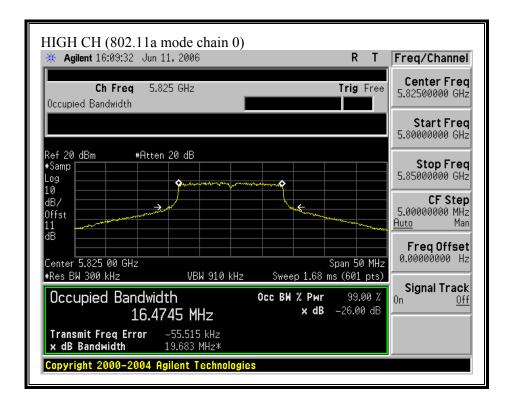
(802.11a MODE CHAIN 0)



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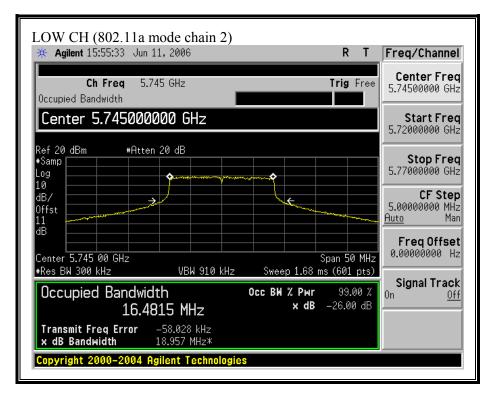


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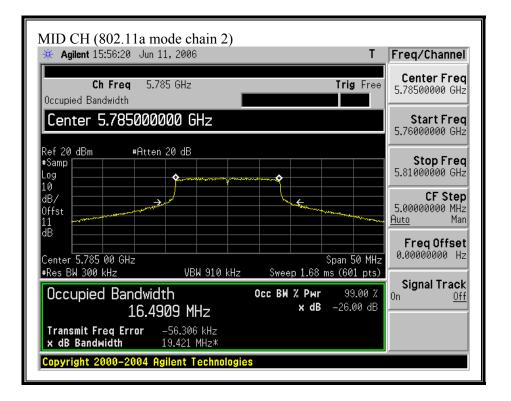


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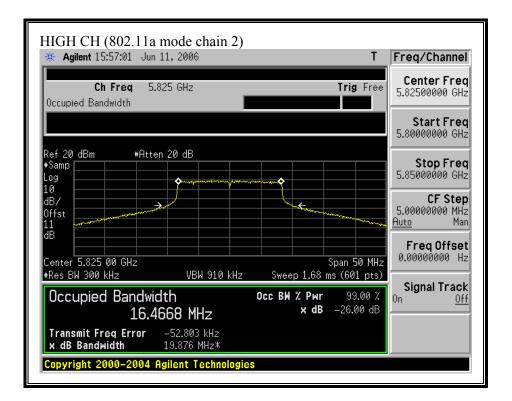
(802.11a MODE CHAIN 2)



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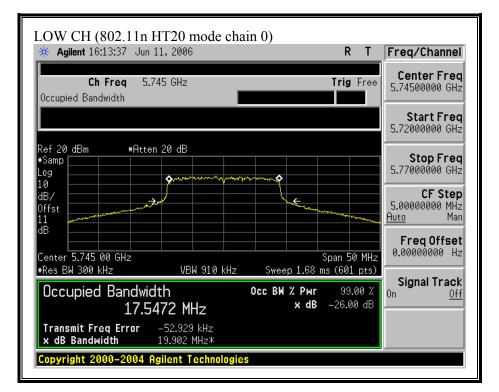


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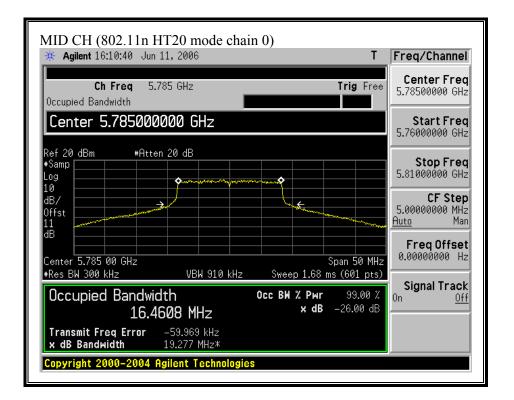


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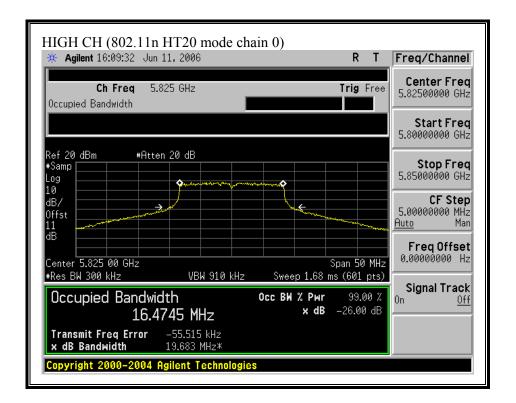
(802.11n HT20 MODE CHAIN 0)



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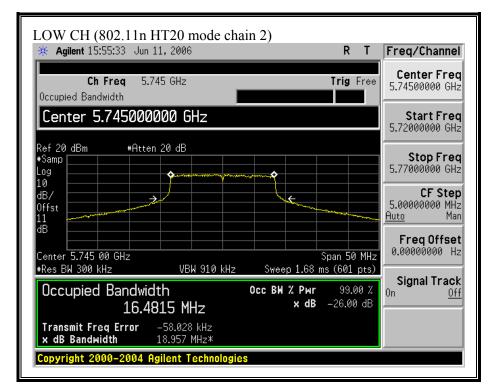


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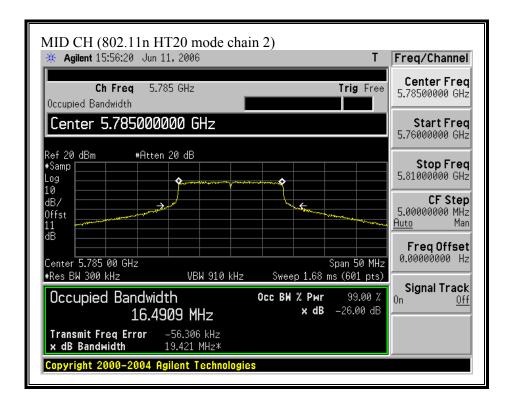


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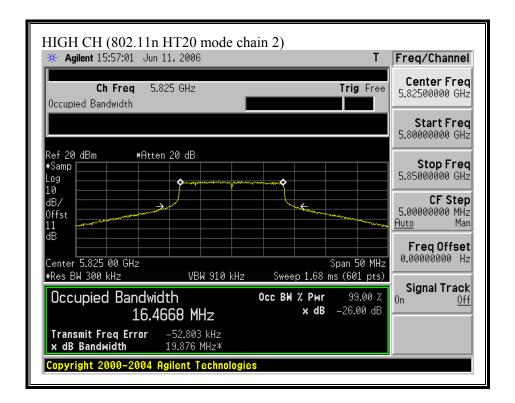
(802.11 HT20 MODE CHAIN 2)



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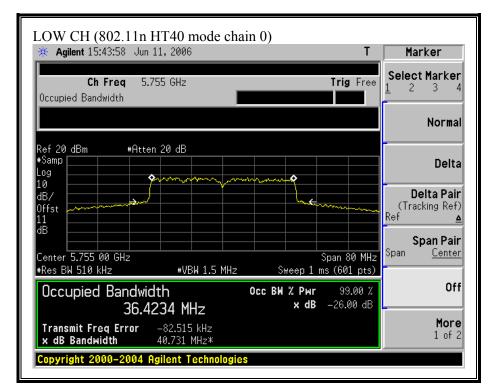


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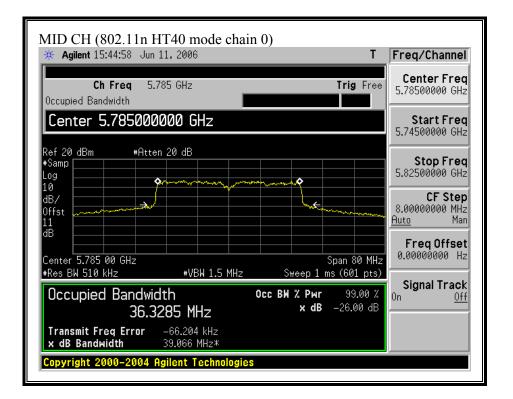


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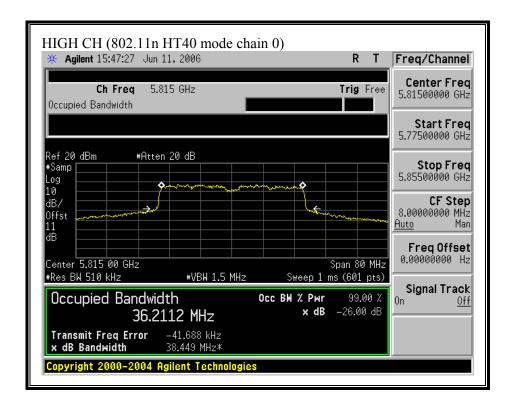
(802.11 HT40 MODE CHAIN 0)



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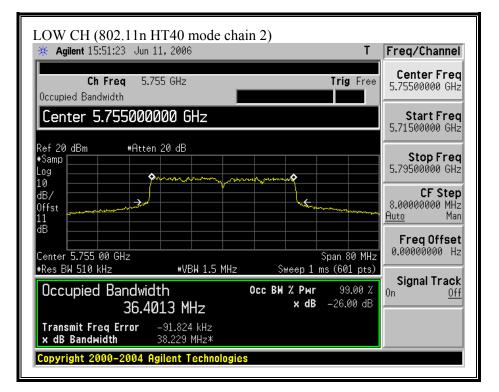


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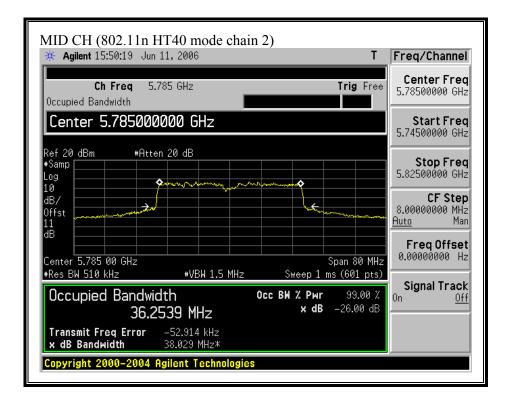


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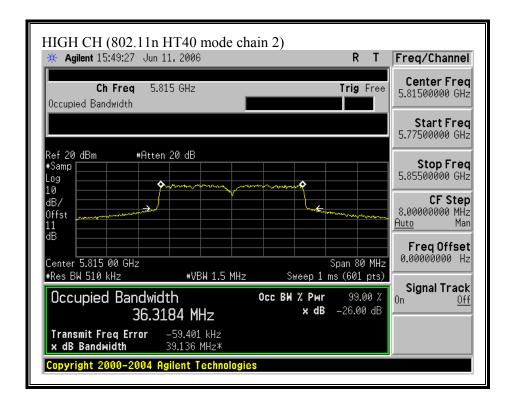
(802.11 HT40 MODE CHAIN 2)



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7.2.3. MAXIMUM OUTPUT POWER

<u>LIMIT</u>

§15.247 (b) The maximum peak output power of the intentional radiator shall not exceed the following:

§15.247 (b) (3) For systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands: 1 watt. As an alternative to a peak power measurement, compliance with the one Watt limit can be based on a measurement of the maximum conducted output power. Maximum Conducted Output Power is defined as the total transmit power delivered to all antennas and antenna elements averaged across all symbols in the signaling alphabet when the transmitter is operating at its maximum power control level. Power must be summed across all antennas and antenna elements. The average must not include any time intervals during which the transmitter is off or is transmitting at a reduced power level. If multiple modes of operation are possible (e.g., alternative modulation methods), the maximum conducted output power is the highest total transmit power occurring in any mode.

TEST PROCEDURE

The transmitter output is connected to a spectrum analyzer. The test is performed in accordance with Option 2 procedures in FCC document "Measurement of Digital Transmission Systems Operating under Section 15.247", March 23, 2005. The transmitter operates continuously therefore Method # 1 is used.

Each chain is measured separately and the total power is calculated using:

Total Power = $10 \log (10^{\circ} (Chain 0 Power / 10) + 10^{\circ} (Chain 2 Power / 10))$

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RESULTS

The maximum antenna gain is 4.76 dBi for other than fixed, point-to-point operations, therefore the limit is 30 dBm. In the legacy mode, the effective antenna gain is 4.76 + 10*Log(2) = 7.77 dBi.

No non-compliance noted:

Mode	Frequency	Max Power	Max Power	Max Power	Limit	Margin
Channel		Chain 0	Chain 2	Total		
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)

802.11a Mode

Low	5745	17.15	17.27	20.22	28.2	-8.01
Middle	5785	17.12	17.20	20.17	28.2	-8.06
High	5825	17.33	16.89	20.13	28.2	-8.10

802.11n HT20 Mode

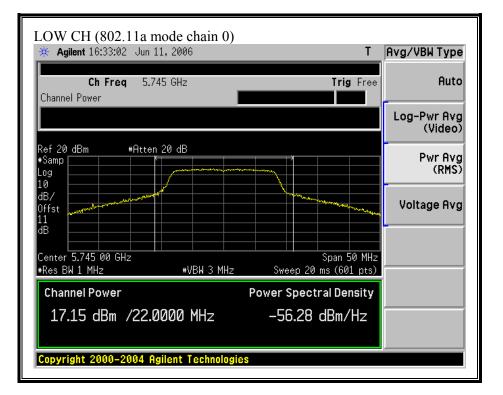
Low	5745	17.18	17.00	20.10	30.0	-9.90
Middle	5785	17.10	17.26	20.19	30.0	-9.81
High	5825	17.26	17.15	20.22	30.0	-9.78

802.11n HT40 Mode

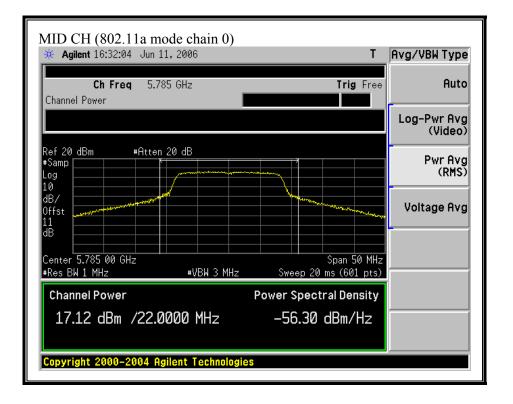
Low	5755	17.18	16.97	20.09	30.0	-9.91
Middle	5785	17.29	17.08	20.20	30.0	-9.80
High	5815	17.12	17.12	20.13	30.0	-9.87

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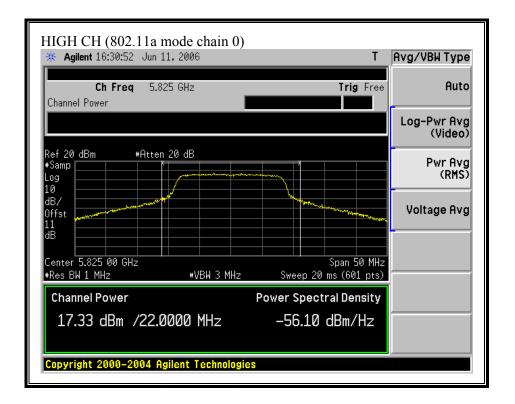
(802.11a MODE CHAIN 0)



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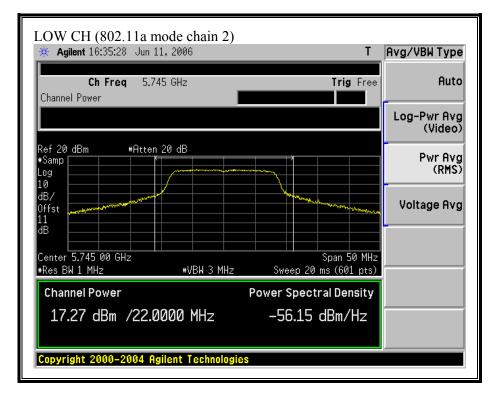


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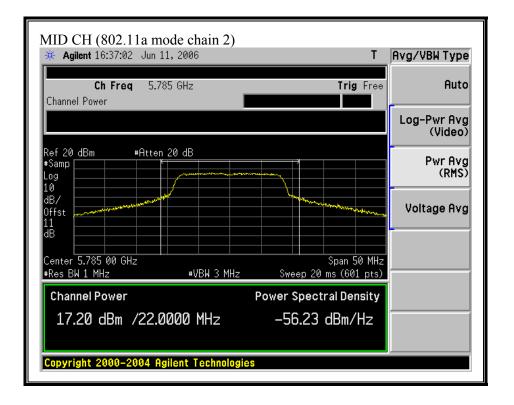


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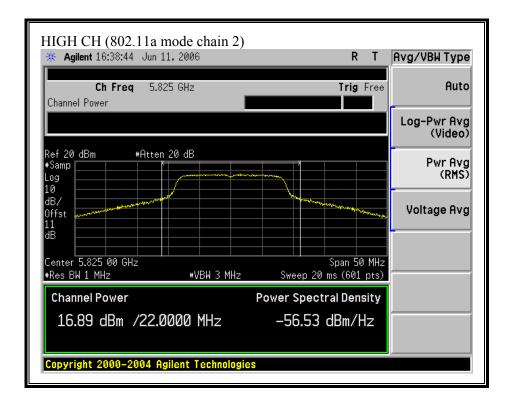
(802.11a MODE CHAIN 2)



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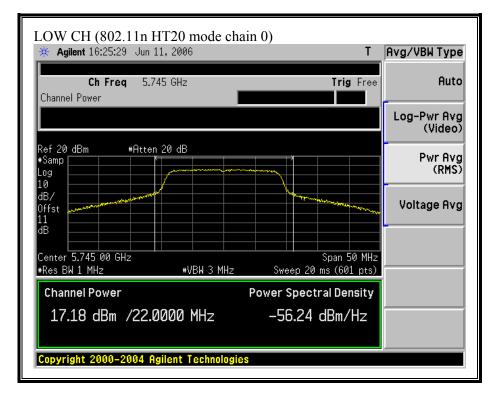


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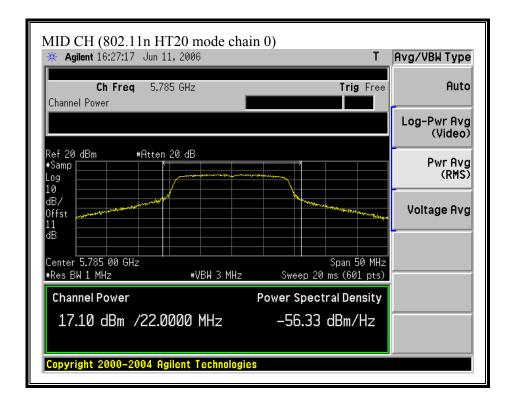


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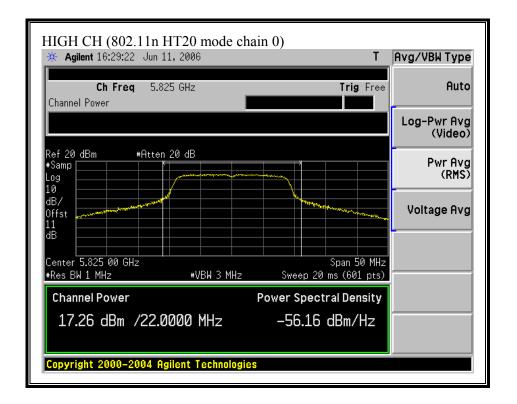
(802.11n HT20 MODE CHAIN 0)



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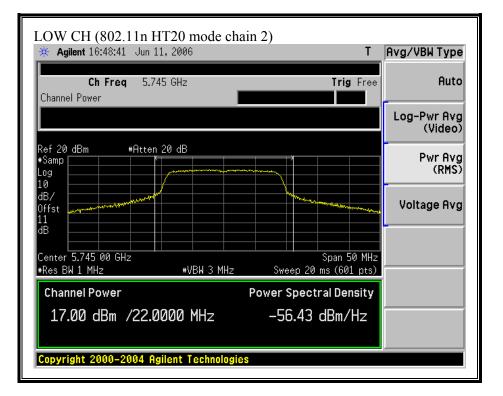


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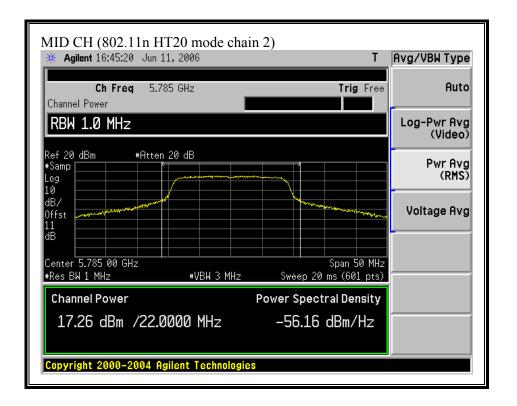


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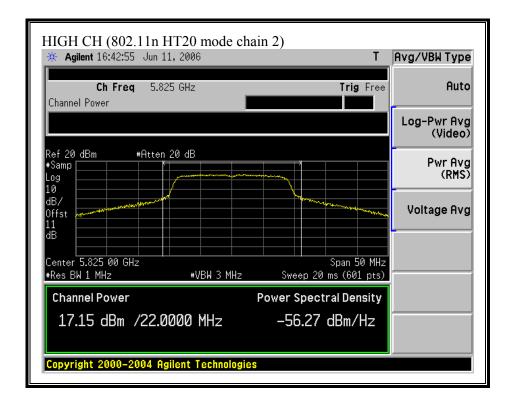
(802.11 HT20 MODE CHAIN 2)



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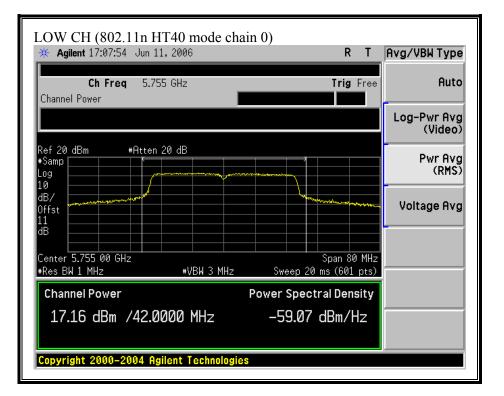


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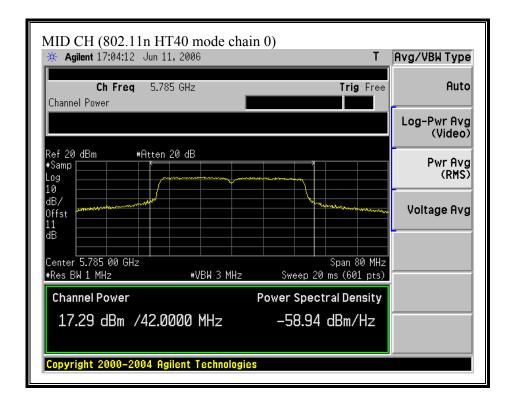


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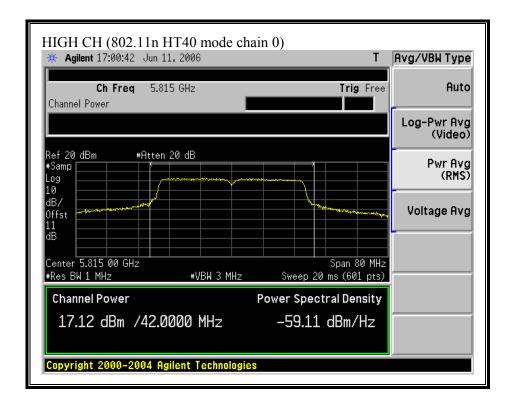
(802.11 HT40 MODE CHAIN 0)



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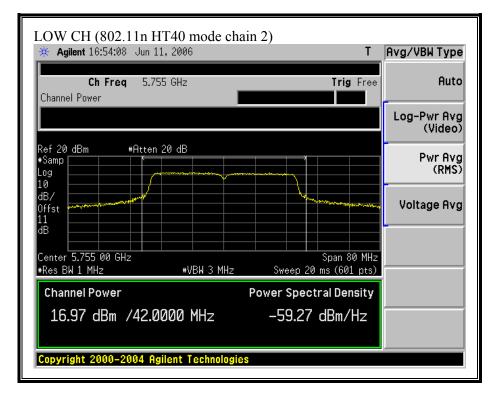


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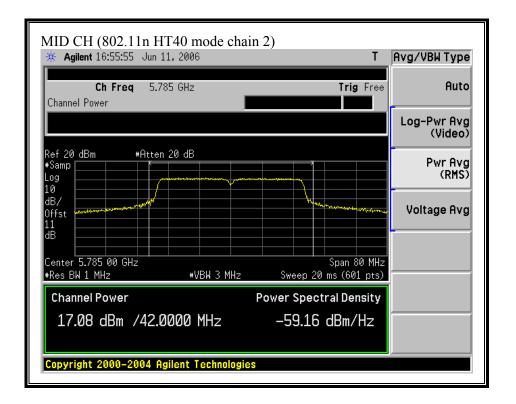


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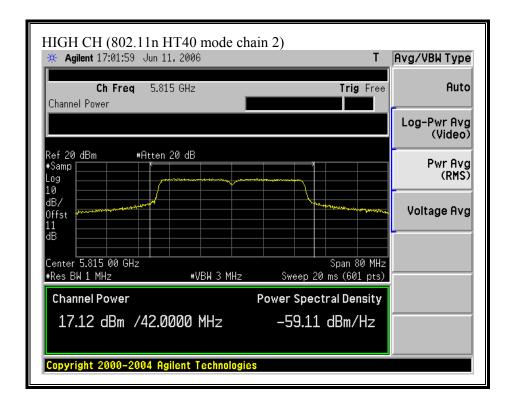
(802.11 HT40 MODE CHAIN 2)



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7.2.4. AVERAGE POWER

AVERAGE POWER LIMIT

None; for reporting purposes only.

TEST PROCEDURE

The transmitter output is connected to a power meter.

Each chain is measured separately and the total power is calculated using:

Total Power = $10 \log (10^{\circ} (Chain 0 Power / 10) + 10^{\circ} (Chain 2 Power / 10))$

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RESULTS

No non-compliance noted:

The cable assembly insertion loss of 11 dB (including 10 dB pad and 1 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

Mode	Frequency	Average Power	Average Power	Average Power
Channel		Chain 0	Chain 2	Total
	(MHz)	(dBm)	(dBm)	(dBm)

802.11a Mode

Low	5745	16.90	16.65	19.8
Middle	5785	16.85	16.74	19.8
High	5825	17.01	16.90	20.0

802.11n HT20 Mode

002010000				
Low	5745	16.79	16.40	19.6
Middle	5785	16.75	16.30	19.5
High	5825	16.86	16.25	19.6

802.11n HT40 Mode

Low	5755	16.35	16.95	19.7
Middle	5785	16.26	16.89	19.6
High	5815	16.25	16.85	19.6

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7.2.5. PEAK POWER SPECTRAL DENSITY

<u>LIMIT</u>

§15.247 (d) For direct sequence systems, the peak power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

TEST PROCEDURE

The transmitter output is connected to a spectrum analyzer. The test is performed in accordance with Option 2 procedures in FCC document "Measurement of Digital Transmission Systems Operating under Section 15.247", March 23, 2005. The conditions for sample detection are satisfied. The PPSD is the highest level found across the emission in any 3 kHz band.

Each chain is measured separately and the total PPSD is calculated using:

Total PPSD = $10 \log (10^{\circ} (Chain 0 PPSD / 10) + 10^{\circ} (Chain 2 PPSD / 10))$

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RESULTS

No non-compliance noted:

Mode	Frequency	PPSD	PPSD	PPSD	Limit	Margin
Channel		Chain 0	Chain 2	Total		
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)

802.11a Mode

Low	5745	-15.42	-17.37	-13.28	8	-21.28
Middle	5785	-15.77	-16.23	-12.98	8	-20.98
High	5825	-15.09	-17.06	-12.95	8	-20.95

802.11n HT20 Mode

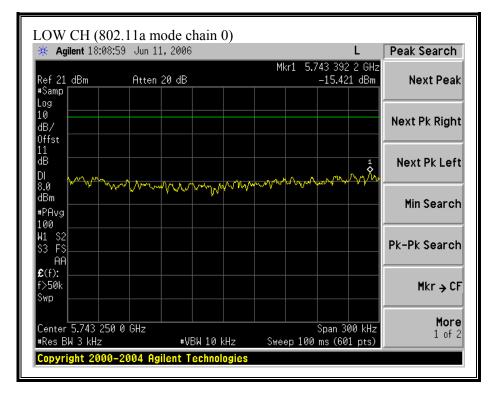
Low	5745	-15.82	-17.37	-13.52	8	-21.52
Middle	5785	-15.56	-18.34	-13.72	8	-21.72
High	5825	-15.09	-16.98	-12.92	8	-20.92

802.11n HT40 Mode

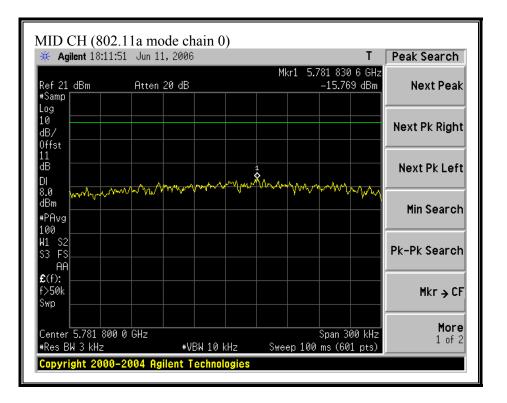
Low	5755	-16.24	-17.53	-13.82	8	-21.82
Middle	5785	-17.80	-16.77	-14.25	8	-22.25
High	5815	-17.31	-18.17	-14.70	8	-22.70

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(802.11a MODE CHAIN 0)



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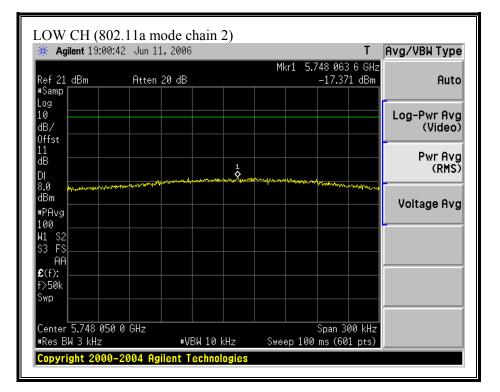


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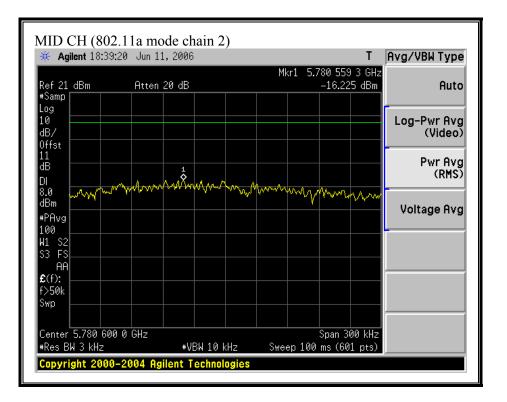
	02.11a mode chain 0) 3:55 Jun 11, 2006	T	Peak Search
Ref 21 dBm #Samp	Atten 20 dB	Mkr1 5.823 684 9 GHz -15.086 dBm	
Log 10 dB/ 0ffst			Next Pk Right
11 dB DI	1 1	and the second state of th	Next Pk Left
8.0 •••••••••••• dBm #PAvg 100			Min Search
W1 S2 S3 FS AA			Pk-Pk Search
£(f): f>50k Swp			Mkr → CF
Center 5.823 70 #Res BW 3 kHz		Span 300 kHz Sweep 100 ms (601 pts)	More 1 of 2

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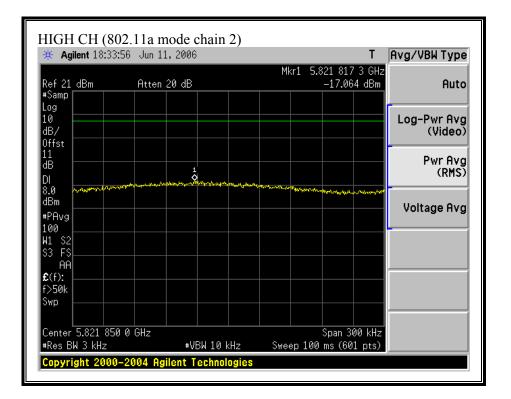
(802.11a MODE CHAIN 2)



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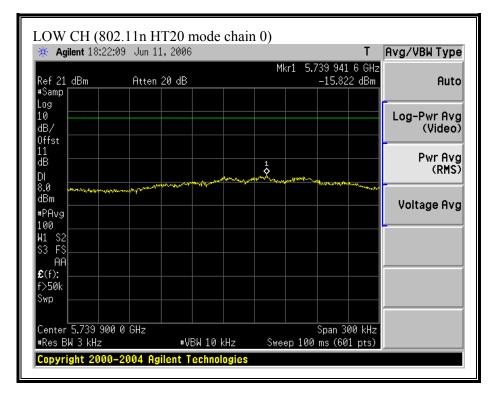


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(802.11n HT20 MODE CHAIN 0)



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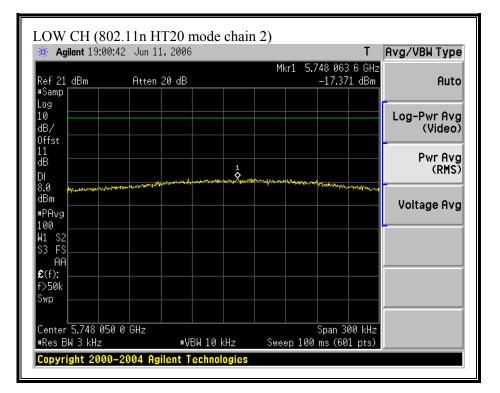
🔆 Agilent 18:1	8:58 Jun 11, 2	006			T F	Avg∕VBW Type
Ref 21 dBm	Atten 20	dB	М	kr1 5.786 19 –15.5	95 7 GHz 562 dBm	Auto
#Samp Log 10 dB/ 0ffst						Log-Pwr Avg (Video)
11 dB DI			man	1 2		Pwr Avg (RMS)
8.0 dBm #PAvg 100						Voltage Avg
W1 S2 S3 FS AA						
£(f): f>50k Swp						
Center 5.786 10 #Res BW 3 kHz	00 0 GHz	#VBW 10 kH;	z Swe	Span ep 100 ms (6	300 kHz 301 pts)	

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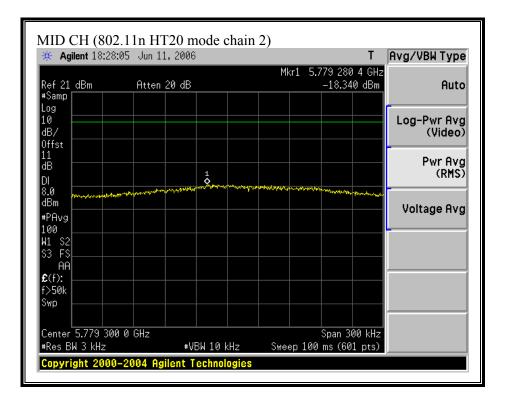
🔆 Agilent 18:1	3:55 Jun 11, 2006		T Peak Search
Ref 21 dBm #Samp	Atten 20 dB	Mkr1 5.823 684 -15.08	
Log 10 dB/ 0ffst			Next Pk Right
11 dB DI 8.0		Marrie Marriel and Marr	Next Pk Left
dBm #PAvg 100			Min Search
W1 S2 S3 FS AA			Pk-Pk Search
£(f): f>50k Swp			Mkr → CF
Center 5.823 70 #Res BW 3 kHz		Span 30 Hz Sweep 100 ms (60)	

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(802.11 HT20 MODE CHAIN 2)



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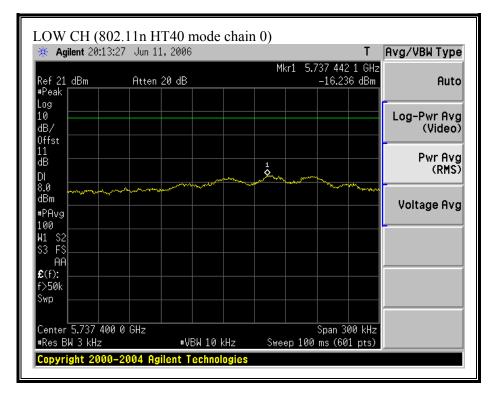


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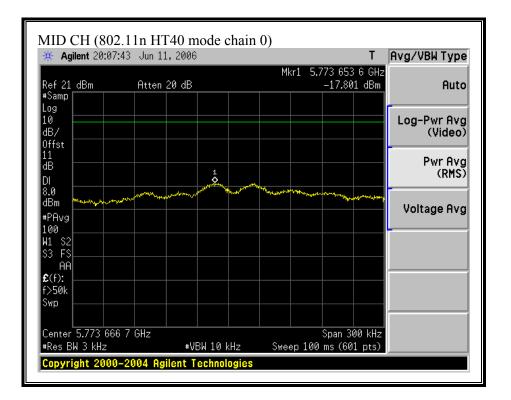
* Agilent 18:3	1:12 Jun 11, 20	90			T Av	g/VBW Type
Ref 21_dBm	Atten 20 d	3	Mkr1	5.824 342 -16.97	6 GHz 7 dBm	Auto
#Samp Log 10 dB/						og-Pwr Avg (Video)
Offst 11 dB			1			Pwr Avg (RMS)
dBm #PAvg	gununseproportin angelarian data ang	~y#~***********************************	na an a	pherony transformedy		Voltage Avg
100 W1 S2 S3 FS						
AA £(f): f>50k Swp						
Center 5.824 30	00 0 GHz			Span 3	00 kHz	

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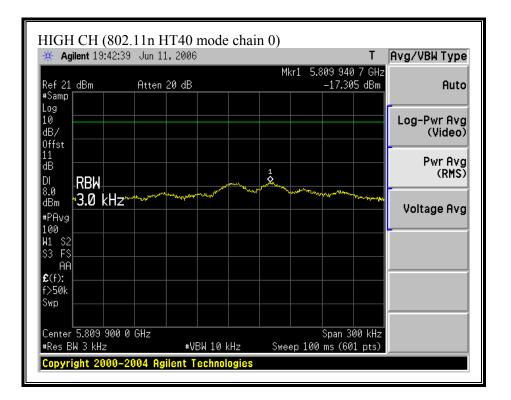
(802.11 HT40 MODE CHAIN 0)



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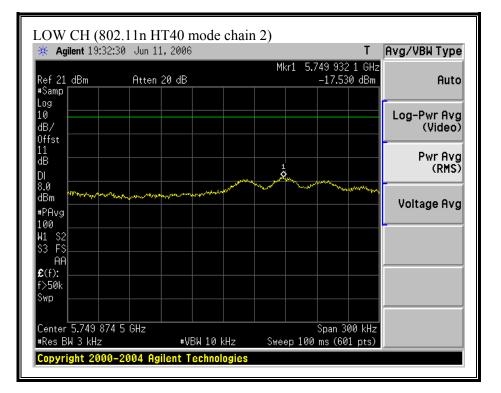


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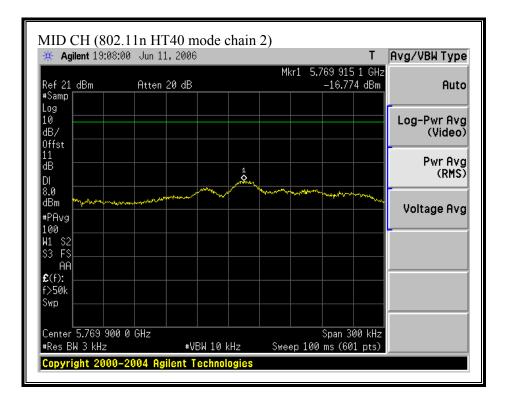


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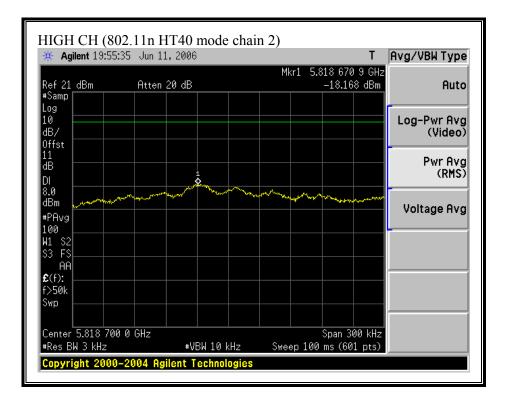
(802.11 HT40 MODE CHAIN 2)



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7.2.6. CONDUCTED SPURIOUS EMISSIONS

LIMITS

§15.247 (c) In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in§15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

Conducted power was measured using the Option 2 procedures, therefore the required attenuation is 30 dB.

TEST PROCEDURE

The transmitter output is connected to a spectrum analyzer. The resolution bandwidth is set to 100 kHz. The video bandwidth is set to 150 kHz.

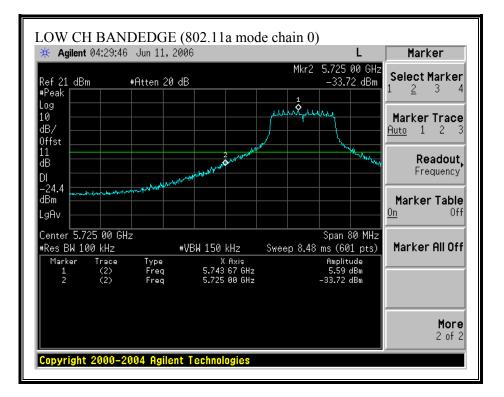
The spectrum from 30 MHz to 40 GHz is investigated with the transmitter set to the lowest, middle, and highest channels.

RESULTS

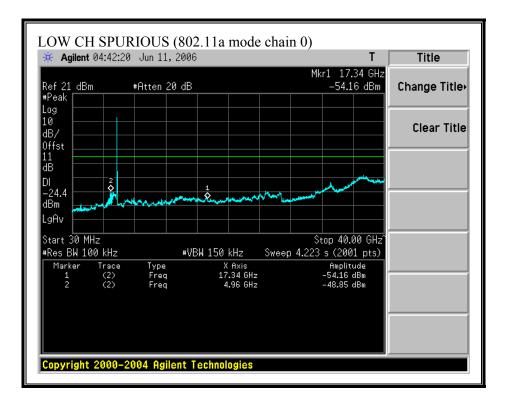
No non-compliance noted:

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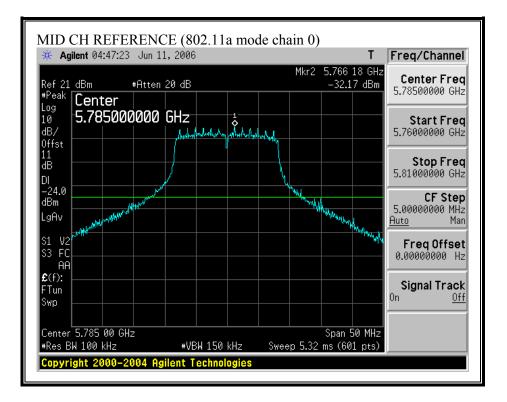
SPURIOUS EMISSIONS (802.11a MODE CHAIN 0)



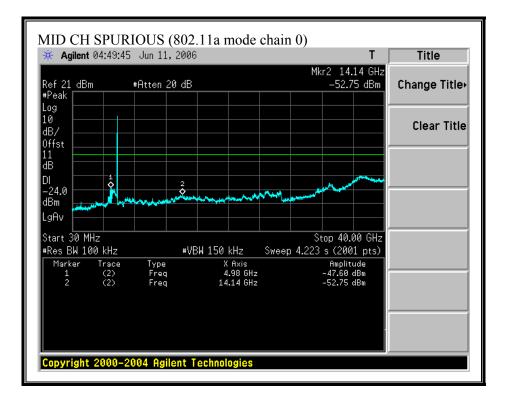
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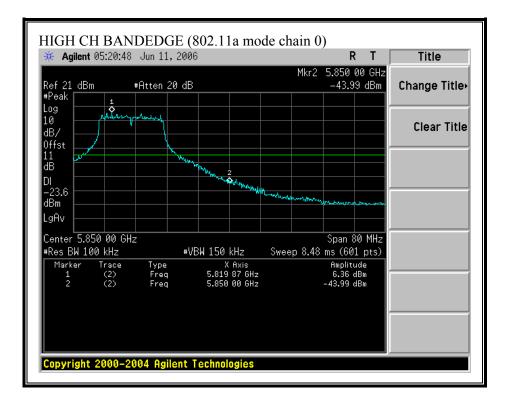
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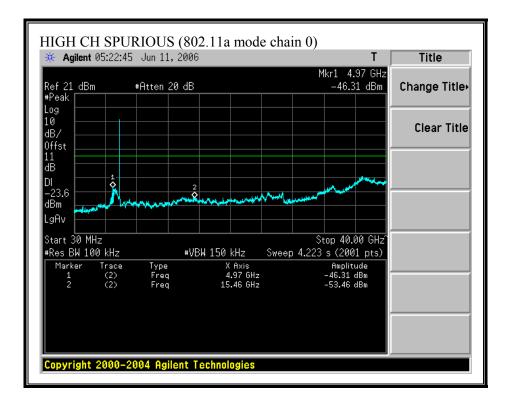
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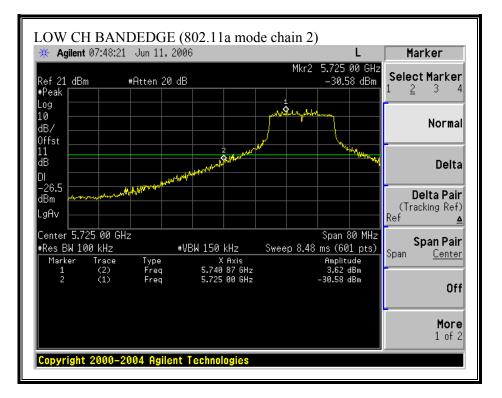


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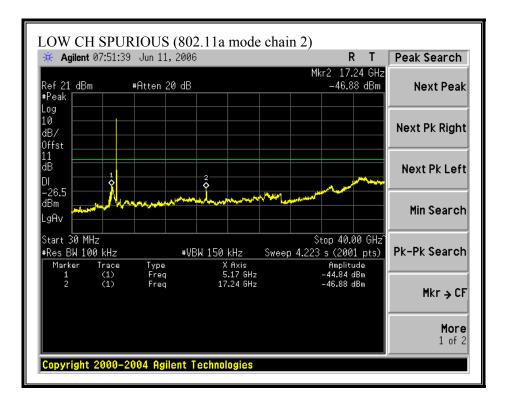


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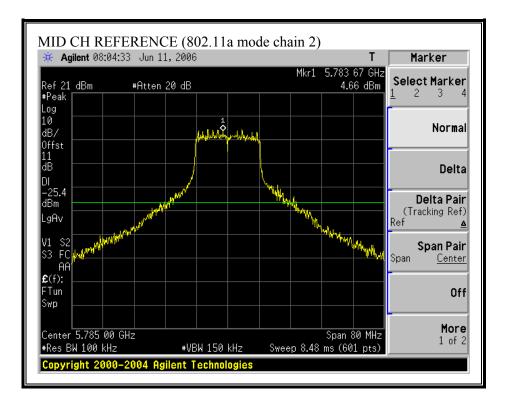
SPURIOUS EMISSIONS (802.11a MODE CHAIN 2)



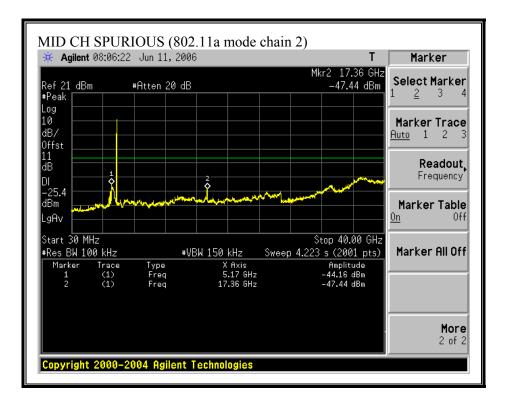
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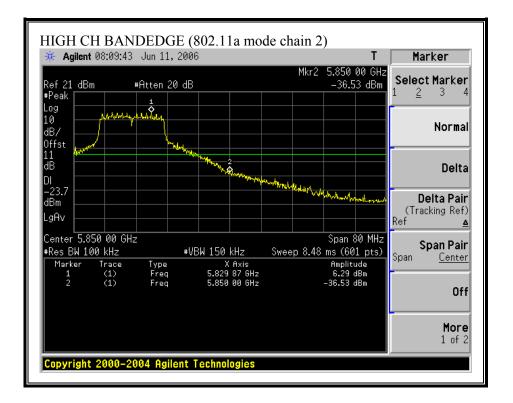
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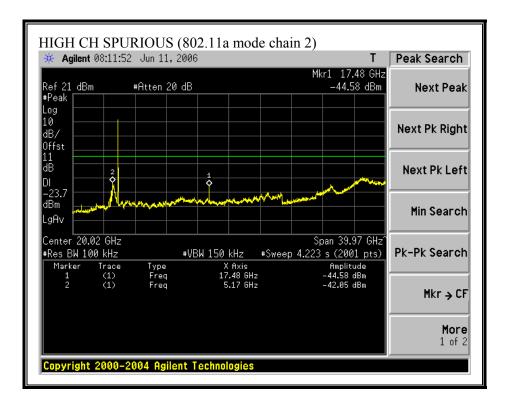
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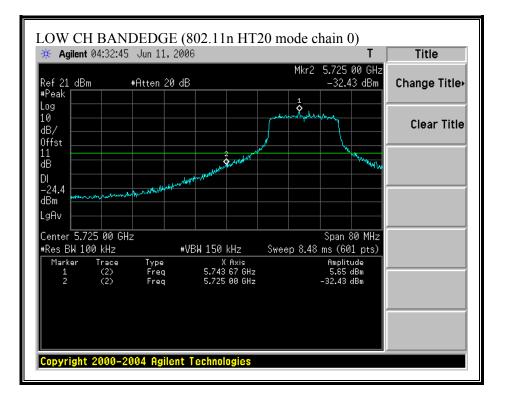


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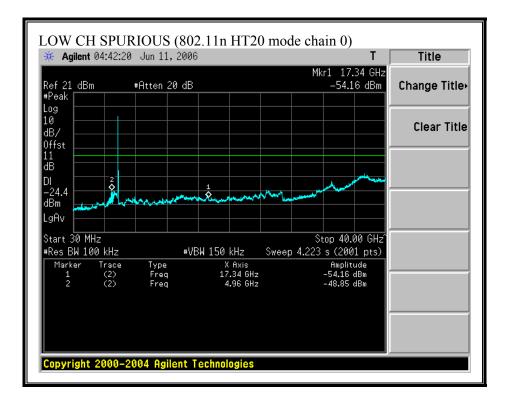


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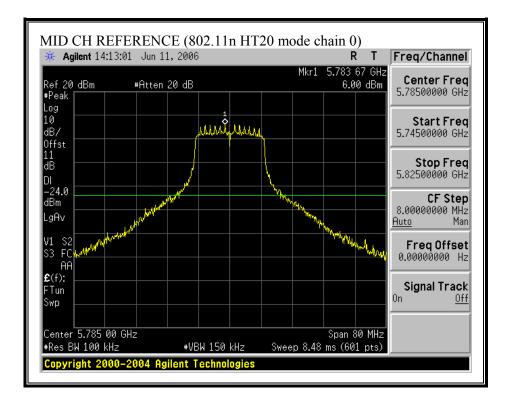
SPURIOUS EMISSIONS (802.11n HT20 MODE CHAIN 0)



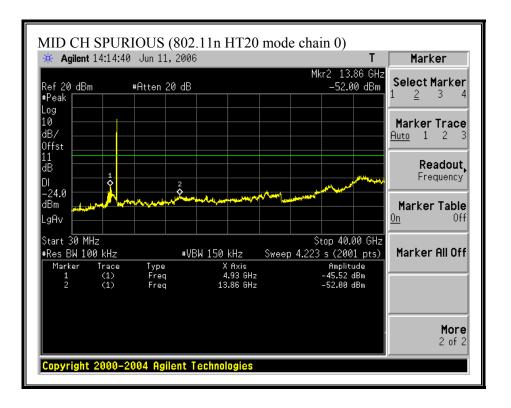
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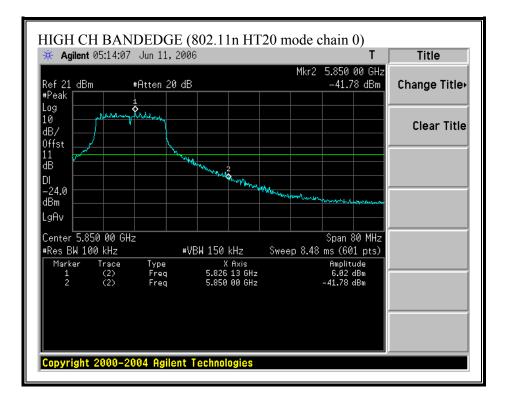
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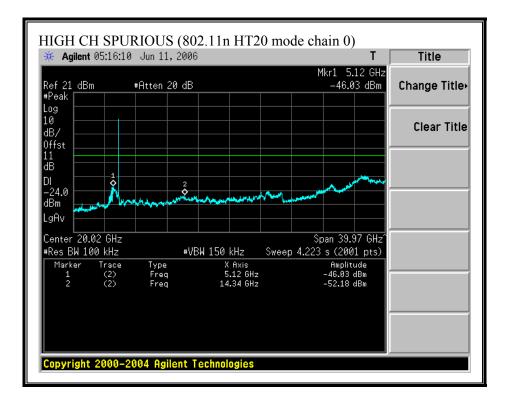
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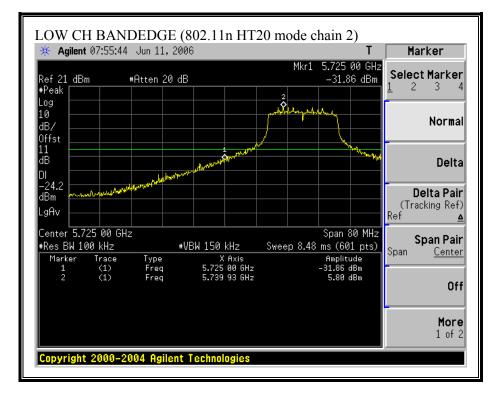


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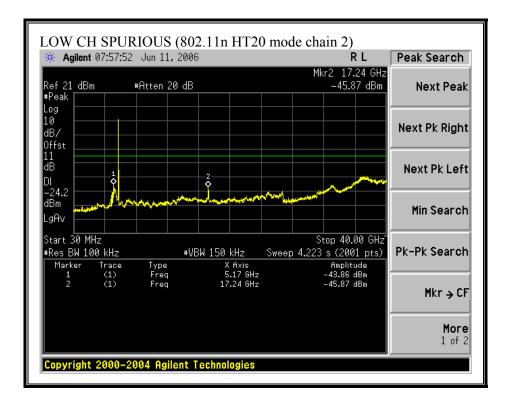


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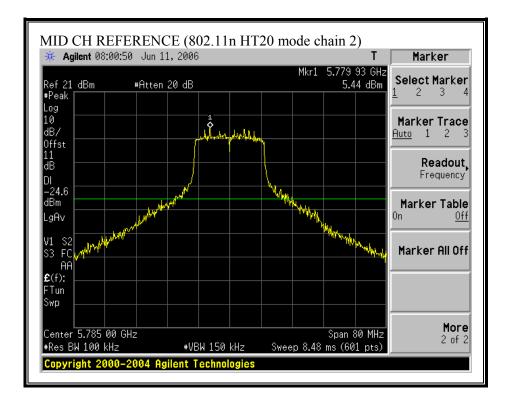
SPURIOUS EMISSIONS (802.11 HT20 MODE CHAIN 2)



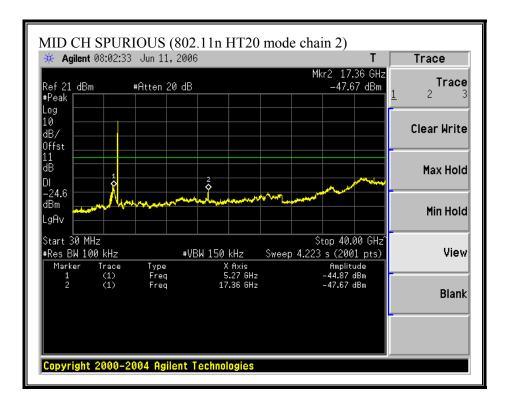
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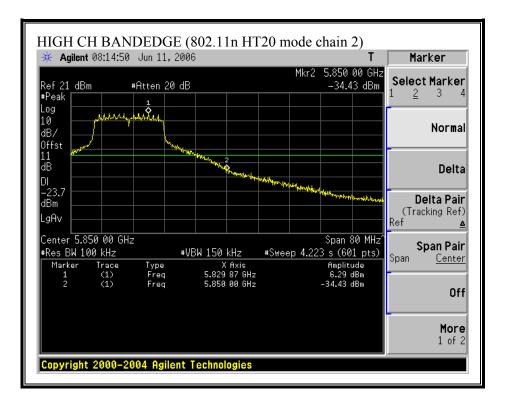
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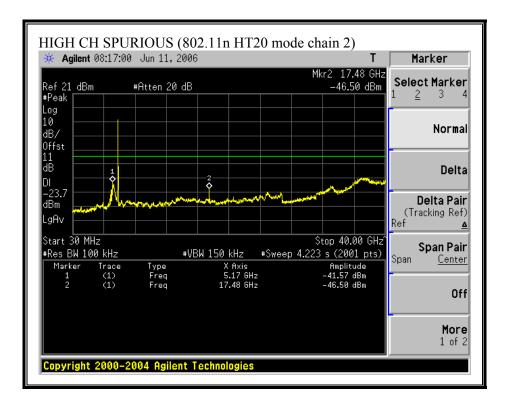
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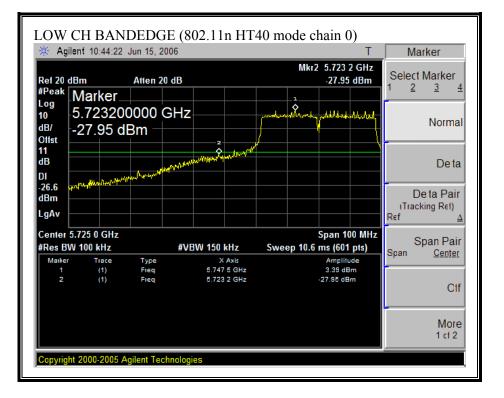


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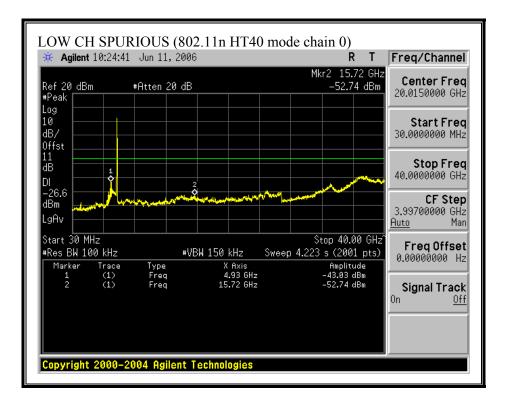


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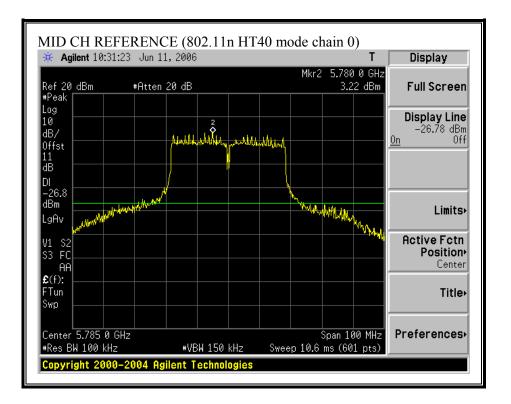
SPURIOUS EMISSIONS (802.11 HT40 MODE CHAIN 0)



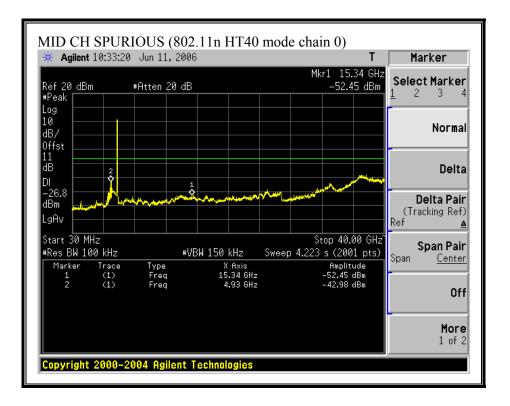
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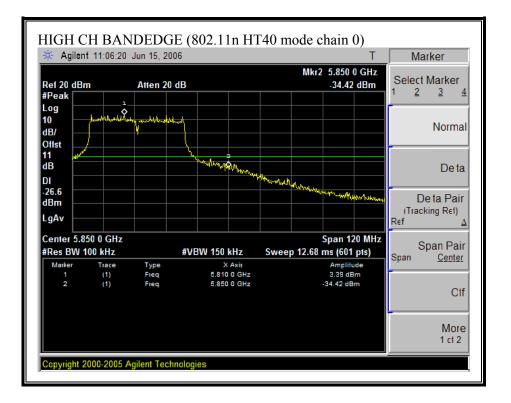
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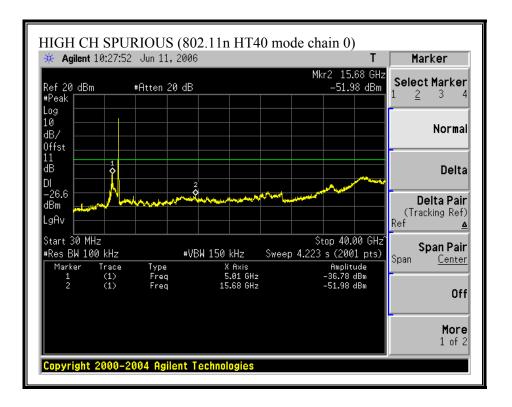
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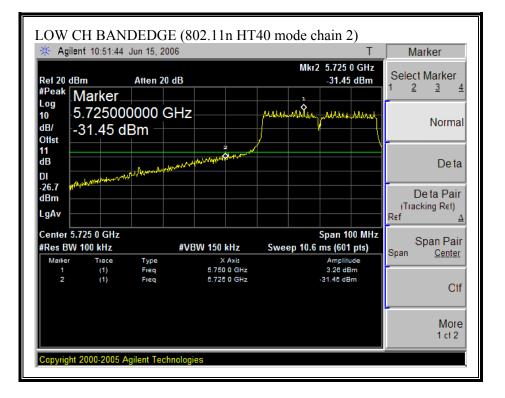


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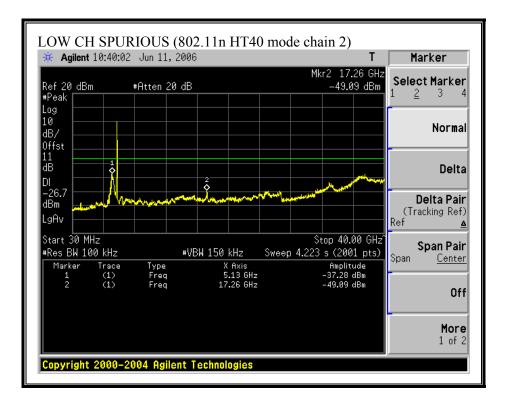


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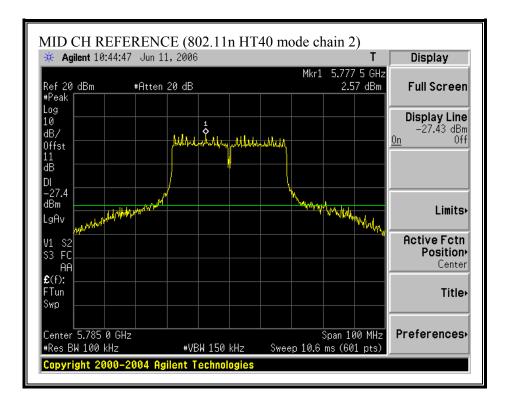
SPURIOUS EMISSIONS (802.11 HT40 MODE CHAIN 2)



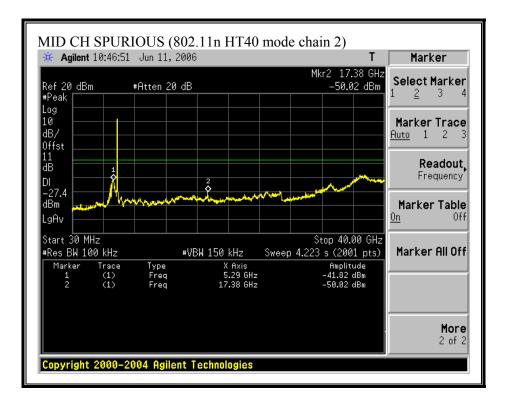
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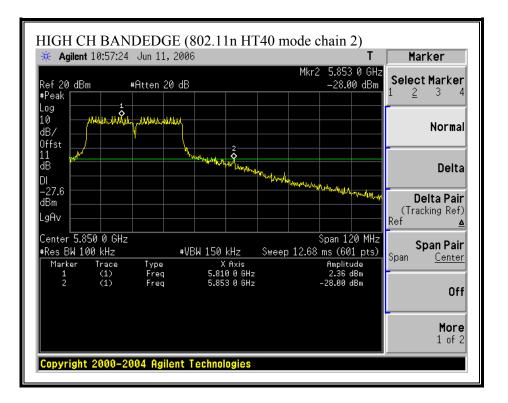
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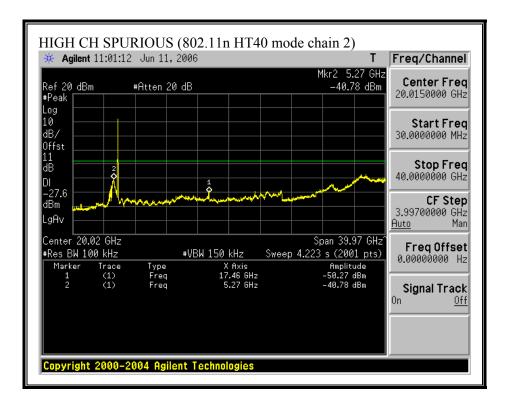
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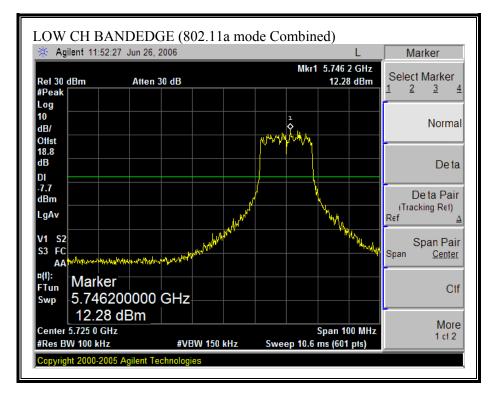


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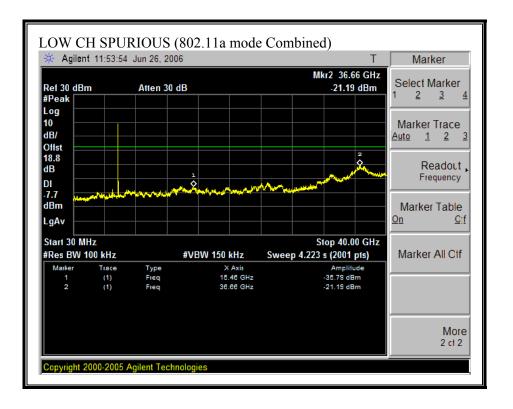


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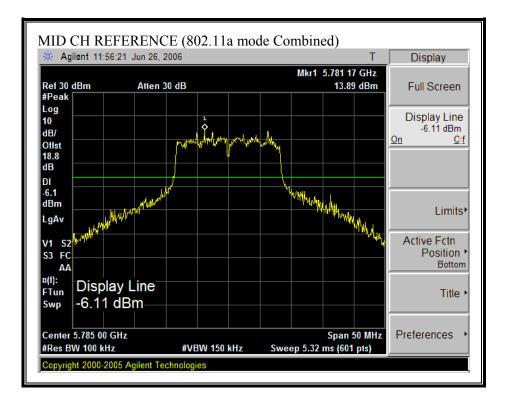
COMBINED SPURIOUS EMISSIONS (802.11a MODE)



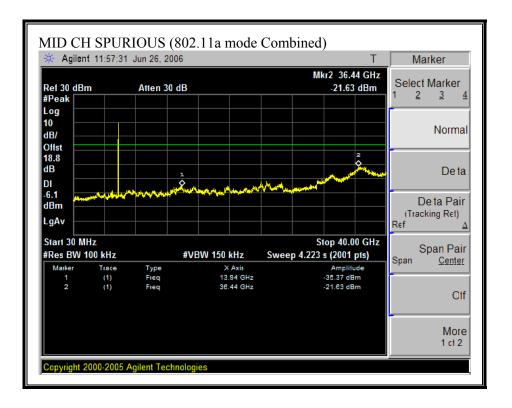
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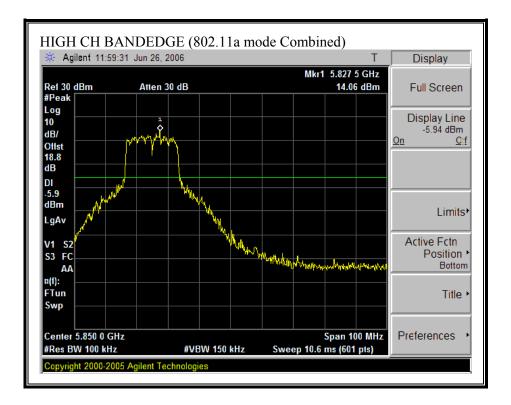
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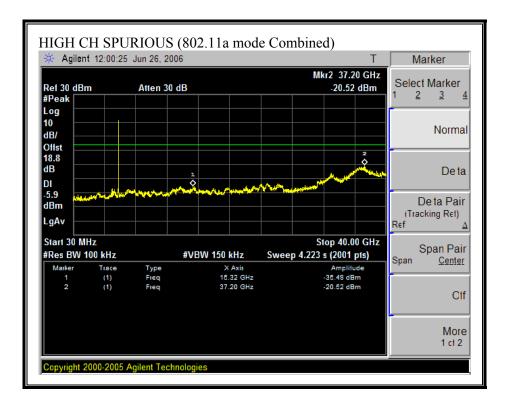
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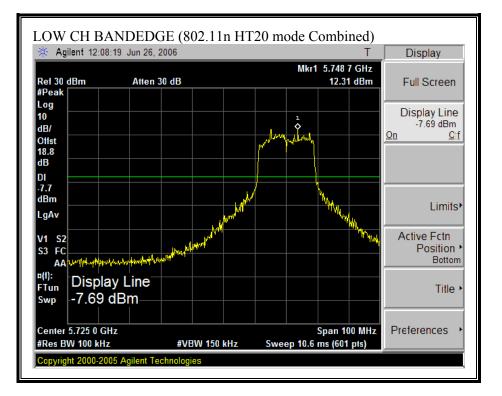


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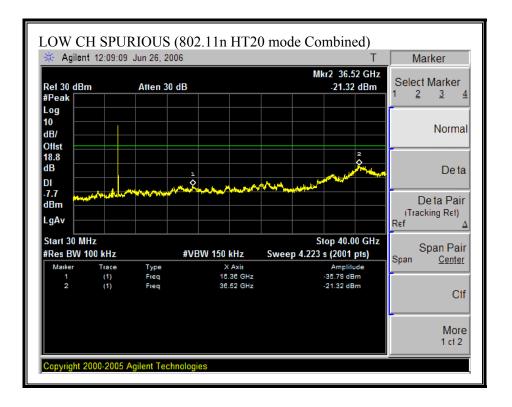


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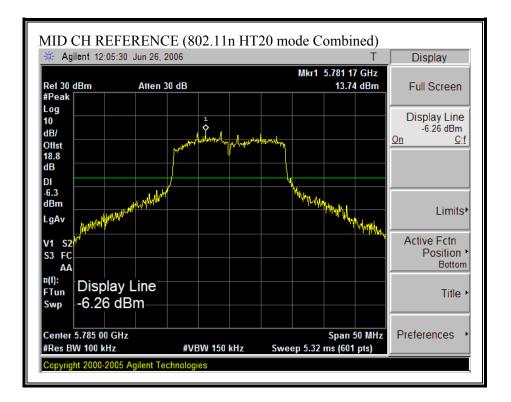
COMBINED SPURIOUS EMISSIONS (802.11n HT20 MODE)



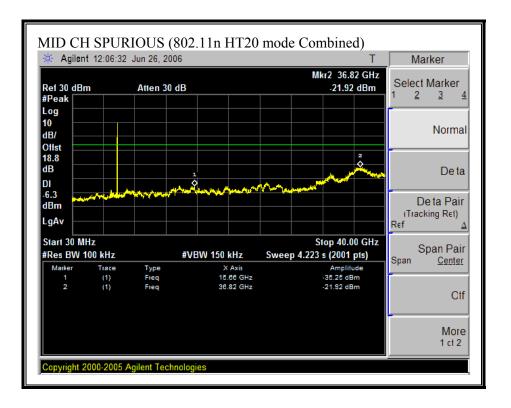
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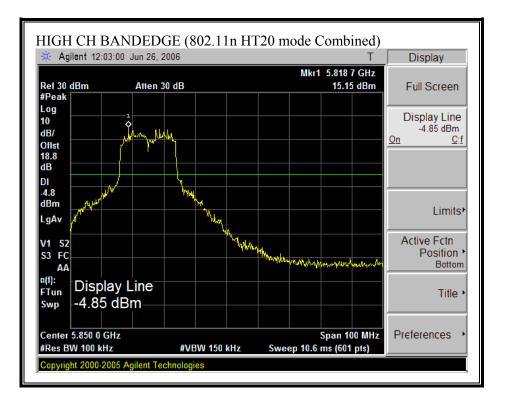
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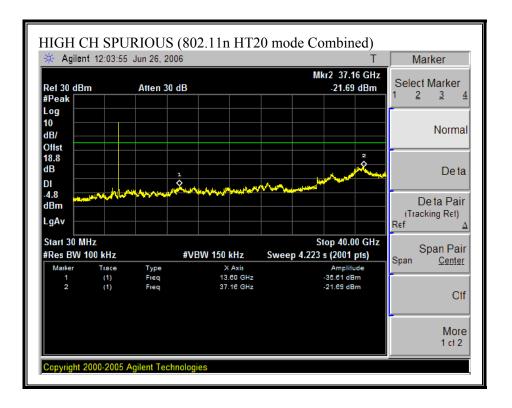
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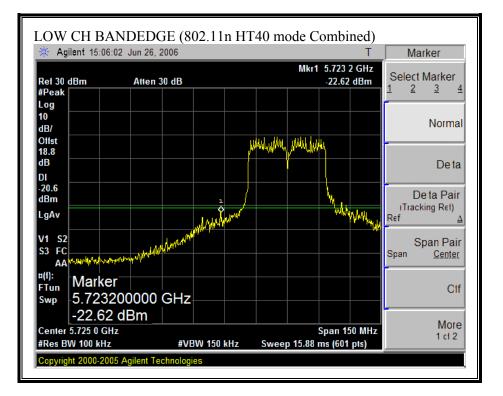


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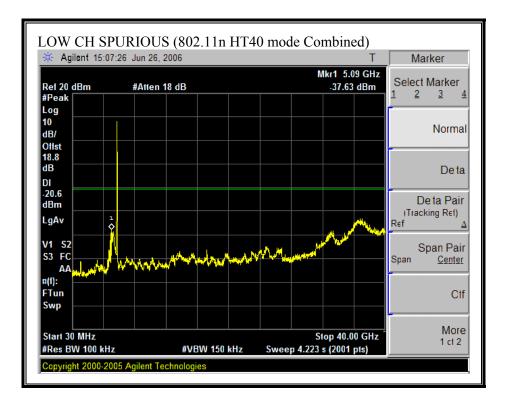


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COMBINED SPURIOUS EMISSIONS (802.11 HT40 MODE)

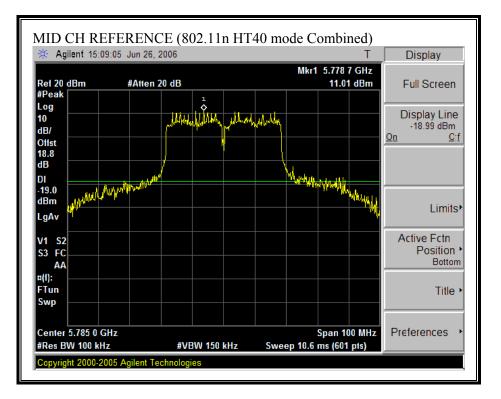


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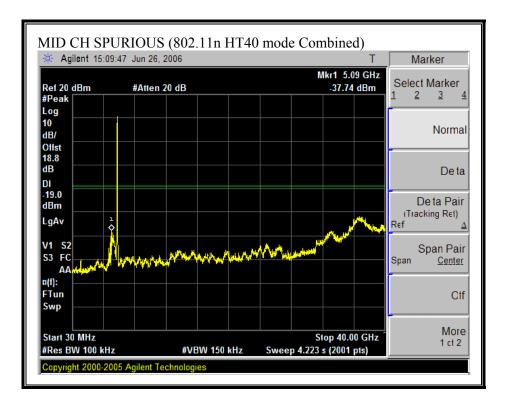


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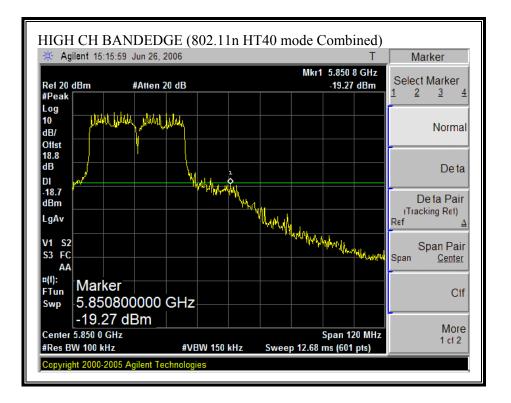
COMBINED SPURIOUS EMISSIONS (802.11 HT40 MODE)



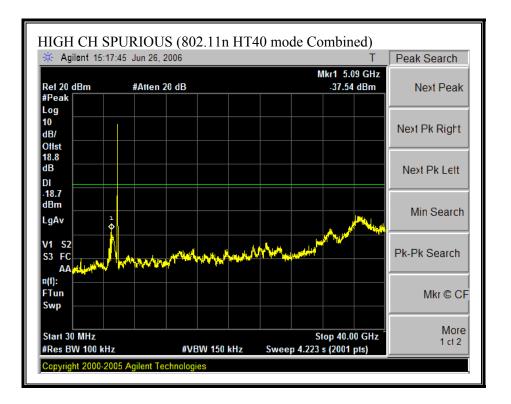
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7.3. MAXIMUM PERMISSIBLE EXPOSURE

LIMITS

\$1.1310 The criteria listed in Table 1 shall be used to evaluate the environmental impact of human exposure to radio-frequency (RF) radiation as specified in §1.1307(b), except in the case of portable devices which shall be evaluated according to the provisions of §2.1093 of this chapter.

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm²)	Averaging time (minutes)			
(A) Lim	its for Occupational	/Controlled Exposu	res				
0.3–3.0	614	1.63	*(100)	6			
3.0–30	1842/f	4.89/f	*(900/f²)	6			
30-300 61.4 0.163 1.0							
300–1500			f/300	6			
1500–100,000			5	6			
(B) Limits	for General Populati	on/Uncontrolled Exp	posure				
0.3–1.34	614	1.63	*(100)	30			
1.34–30	824 <i>/</i> f	2.19/f	*(180/f ²)	30			

TABLE 1—LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

TABLE 1-LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)-Continued

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm²)	Averaging time (minutes)
30–300 300–1500 1500–100,000	27.5	0.073	0.2 f/1500 1.0	30 30 30

f = frequency in MHz

f = frequency in MHz
 * = Plane-wave equivalent power density
 NOTE 1 TO TABLE 1: Occupational/controlled limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply in situations when an individual is transient through a location where occupational/controlled limits apply provided the or she is made aware of the potential for exposure. NOTE 2 TO TABLE 1: General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure.

exposure or can not exercise control over their exposure.

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CALCULATIONS

Given

 $E = \sqrt{(30 * P * G)} / d$

where

and

E = Field Strength in Volts/meter

P = Power in Watts

 $S = E^{2}/3770$

G = Numeric antenna gain

d = Distance in meters

S = Power Density in milliwatts/square centimeter

Combining equations yields: $S = (30 * P * G) / (3770 * (d^2))$

Changing to units of Power to mW and Distance to cm, using: P(W) = P(mW) / 1000 and

d(m) = d(cm) / 100

and substituting the logarithmic form of power and gain using:

 $P(mW) = 10^{(H)} (P(dBm) / 10)$ and $G(numeric) = 10^{(H)} (G(dBi) / 10)$

yields

 $S = 0.0795 * 10^{(P+G)} / 10) / (d^2)$

where

d = MPE distance in cm

P = Power in dBm

G = Antenna Gain in dBi

S = Power Density Limit in mW/cm^2

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LIMITS

From 1.1310 Table 1 (B), the maximum value of S = 1.0 mW/cm²

RESULTS

No non-compliance noted: (MPE distance equals 20 cm)

Band	MPE	Total	Antenna	Power
	Distance	Power	Gain	Density
(GHz)	(cm)	(dBm)	(dBi)	(mW/cm^2)
2.4	20.0	23.70	3.62	0.11
5.8	20.0	20.22	4.76	0.06

NOTE: For mobile or fixed location transmitters, the minimum separation distance is 20 cm, even if calculations indicate that the MPE distance would be less.

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7.4. RADIATED EMISSIONS

7.4.1. TRANSMITTER RADIATED SPURIOUS EMISSIONS

LIMITS

§15.205 (a) Except as shown in paragraph (d) of this section, only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
¹ 0.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.025 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	73 - 74.6	1645.5 - 1646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1660 - 1710	10.6 - 12.7
6.26775 - 6.26825	108 - 121.94	1718.8 - 1722.2	13.25 - 13.4
6.31175 - 6.31225	123 - 138	2200 - 2300	14.47 - 14.5
8.291 - 8.294	149.9 - 150.05	2310 - 2390	15.35 - 16.2
8.362 - 8.366	156.52475 - 156.52525	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	156.7 - 156.9	2655 - 2900	22.01 - 23.12
8.41425 - 8.41475	162.0125 - 167.17	3260 - 3267	23.6 - 24.0
12.29 - 12.293	167.72 - 173.2	3332 - 3339	31.2 - 31.8
12.51975 - 12.52025	240 - 285	3345.8 - 3358	36.43 - 36.5
12.57675 - 12.57725	322 - 335.4	3600 - 4400	(²)
13.36 - 13.41			

¹ Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz.

² Above 38.6

§15.205 (b) Except as provided in paragraphs (d) and (e), the field strength of emissions appearing within these frequency bands shall not exceed the limits shown in Section 15.209. At frequencies equal to or less than 1000 MHz, compliance with the limits in Section 15.209 shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Above 1000 MHz, compliance with the emission limits in Section 15.209 shall be demonstrated based on the average value of the measured emissions. The provisions in Section 15.35 apply to these measurements.

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\$15.209 (a) Except as provided elsewhere in this Subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
30 - 88	100 **	3
88 - 216	150 **	3
216 - 960	200 **	3
Above 960	500	3

** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this Section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this Part, e.g., Sections 15.231 and 15.241.

§15.209 (b) In the emission table above, the tighter limit applies at the band edges.

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TEST PROCEDURE

The EUT is placed on a non-conducting table 80 cm above the ground plane. The antenna to EUT distance is 3 meters. The EUT is configured in accordance with ANSI C63.4. The EUT is set to transmit in a continuous mode.

For measurements below 1 GHz the resolution bandwidth is set to 100 kHz for peak detection measurements or 120 kHz for quasi-peak detection measurements. Peak detection is used unless otherwise noted as quasi-peak.

For measurements above 1 GHz the resolution bandwidth is set to 1 MHz, then the video bandwidth is set to 1 MHz for peak measurements and 10 Hz for average measurements.

The spectrum from 30 MHz to 26 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in the 2.4 GHz band.

The spectrum from 30 MHz to 40 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in each 5 GHz band.

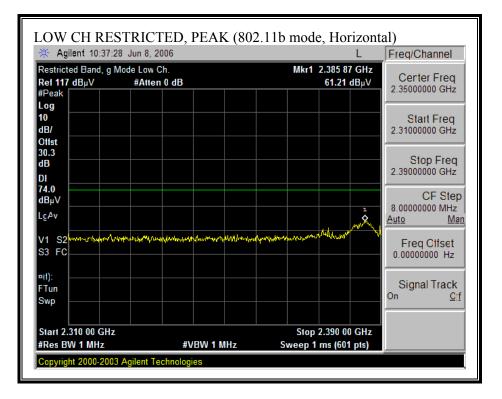
The frequency range of interest is monitored at a fixed antenna height and EUT azimuth. The EUT is rotated through 360 degrees to maximize emissions received. The antenna is scanned from 1 to 4 meters above the ground plane to further maximize the emission. Measurements are made with the antenna polarized in both the vertical and the horizontal positions.

Both transmitting chains were activated simultaneously and continuously during all radiated emissions tests.

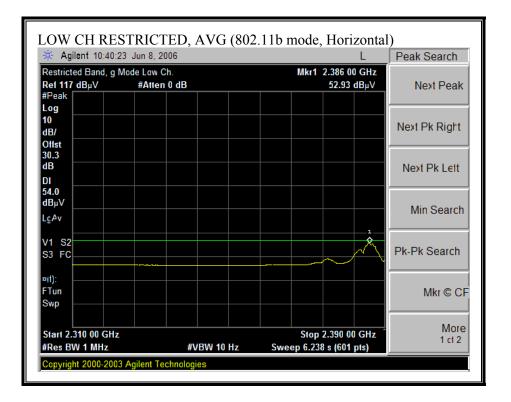
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7.4.2. TRANSMITTER ABOVE 1 GHz FOR 2400 TO 2483.5 MHz BAND WITH PIFA ANTENNAS

RESTRICTED BANDEDGE (b MODE, LOW CHANNEL, HORIZONTAL)

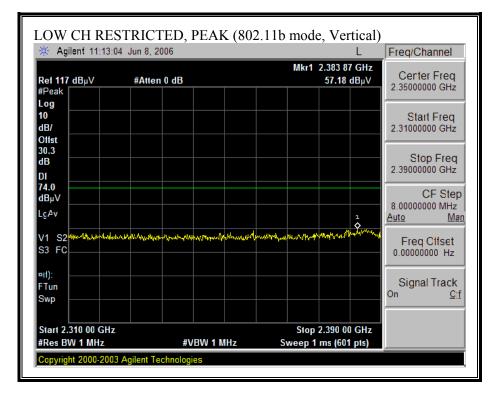


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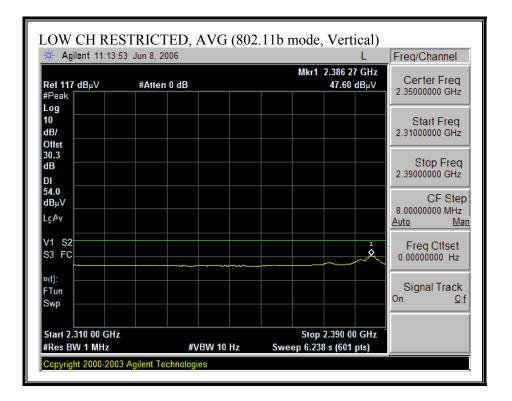


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RESTRICTED BANDEDGE (b MODE, LOW CHANNEL, VERTICAL)

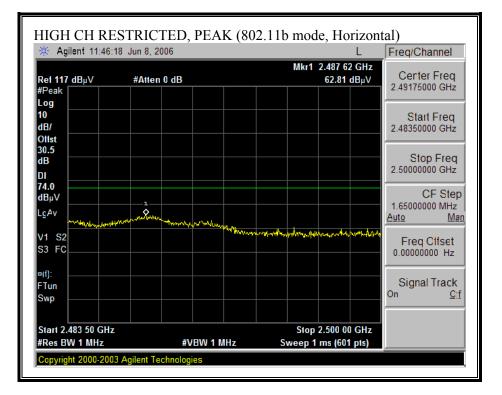


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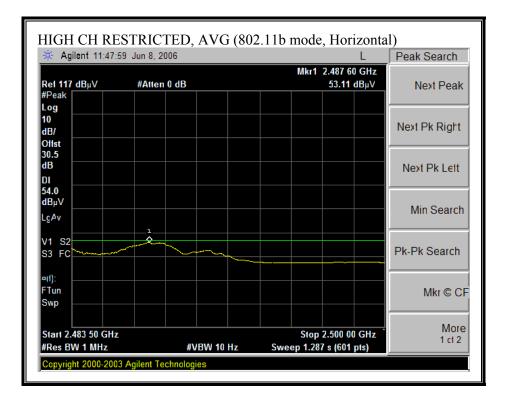


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RESTRICTED BANDEDGE (b MODE, HIGH CHANNEL, HORIZONTAL)

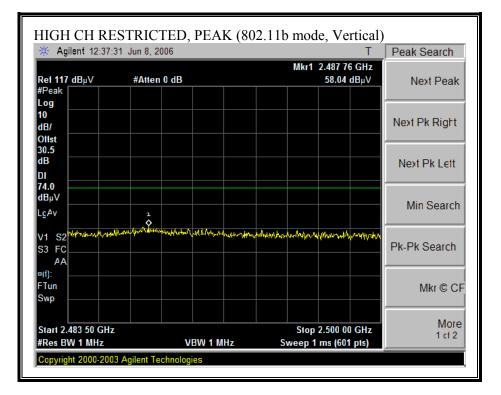


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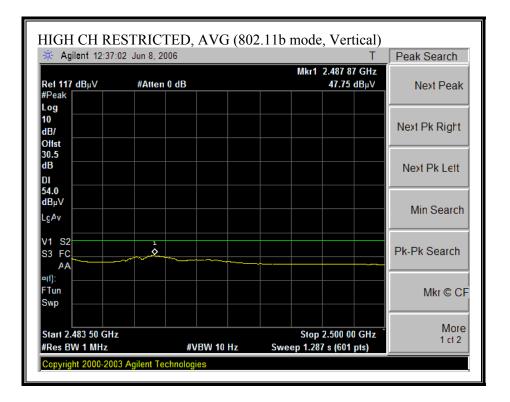


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RESTRICTED BANDEDGE (b MODE, HIGH CHANNEL, VERTICAL)



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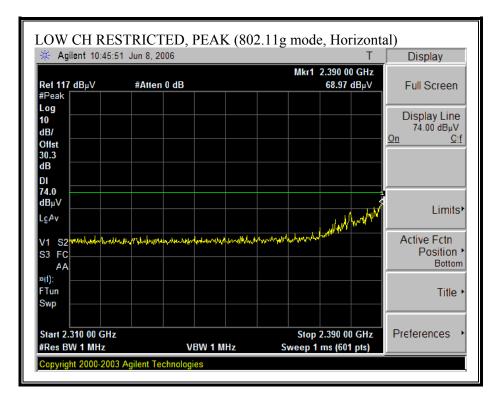
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HARMONICS AND SPURIOUS EMISSIONS (802.11b MODE)

T60; S/N: 2238 @3m FCC 15.205 FFCC 15.205 FFCC 15.205 FFCC 15.205 FFC 15.205		m 1.4	18GHz	Pre-ar	nnlifer	1.260	3H7	Pre-am	nlifer	26-40GH	7	н	orn > 18(347		Limit
2 foot cable 3 foot cable 12 foot cable HPF Reject Filter Peak Measurements RBW=UBW=1MHz Average Measurements RBW=1MHz; VBW=10Hz f Dist Read Avg AF CL Amp D Corr Flr Peak Avg Pk Lin Avg Mar Notes GHz (m) dBuV dBuV dB dB dB dB dB (V/H) V0CH, 2412 MHz 30 650 0.0 0.6 50.3 46.1 74 54 -25.2 10.7 V 124 3.0 64.0 38.0 32 36.5 0.0 0.6 48.8 43.3 74 54 -25.2 10.7 V 104 3.0 45.0 38.0 33.1 3.2 36.5 0.0 0.6 48.8 43.3 74 54 -25.2 10.07 V 104 3.0 45.0 38.0 33.1 3.2 36.5 0.0 0.6 45.4 35.7 74 </td <td></td> <td></td> <td></td> <td></td> <td>· ·</td> <td></td> <td></td> <td>i i e-ain</td> <td>piner</td> <td>20-40 611</td> <td>-</td> <td></td> <td></td> <td>5112</td> <td>-</td> <td>ECC 45 395</td>					· ·			i i e-ain	piner	20-40 611	-			5112	-	ECC 45 395
Z 1001 Cable O 1001 Cable Chin 197538001 Chin 200354001 Chin 20036400 <	Hi Freque	ncy Cab	les													
f Dist Read Pk Read Avg. AF CL Amp D Corr Fitr Peak Avg Pk Lim Avg Lim Pk Mar Avg Mar Motes GBHz (m) dBuV dBuV dB dB dB dB dB dB dB dB dB (V/H) VCH, 2412 MHz -	2	foot	cable	3	footo	able		121	foot c	able		HPF	Re	ject Filte		
GHz (m) dBuV dBuV dB dB dB dB dB dB dB dB dB dV/m dBuV/m dBuV/m dB dB (V/H) DW CH, 2412 MHz 1				Chin	1975380	01	•	Chin 20	035400	⁰¹	HP	F_4.0GHz	•			
WCH,212 MHz Image: constraint of the second sec				0	1				1	1	-		· · ·			
124 3.0 48.5 43.0 33.0 3.2 .36.5 0.0 0.6 48.8 43.3 74 54 .25.2 .10.7 V D CH, 2437 MHz 0 46.0 38.0 33.1 3.2 .36.5 0.0 0.6 48.8 43.3 74 54 .25.2 .10.7 V D CH, 2437 MHz 0 46.0 38.0 33.1 3.2 .36.5 0.0 0.6 46.4 38.4 74 54 .25.2 .10.5 H 30 47.0 40.0 35.5 3.6 .36.2 0.0 0.6 45.4 35.4 74 54 .28.6 .18.6 V 31 3.0 43.5 32.2 .35.5 3.6 .36.2 0.0 0.6 47.0 35.7 74 54 .28.5 .19.7 H 24 3.0 45.0 33.8 33.1 3.2 .36.5 0.0 0.6 46.4 37.6 74 54 .28.5 .19.7 H 24 3.0 4		<u>` / :</u>		dBuV	dB/m	ďВ	dB.		(LB	dBuV/m	dBuV/m	dBuV/m	dBuV/m	dB.	dB	(V/H)
D CH, 2437 MHz 0	824 824															
311 30 47.0 40.0 35.5 3.6 -36.2 0.0 0.6 50.5 43.5 74 54 -23.5 -10.5 H 174 30 45.0 35.0 33.1 3.2 -36.5 0.0 0.6 45.4 35.4 74 54 -23.6 -18.6 V 11 3.0 43.5 32.2 35.5 3.6 -36.2 0.0 0.6 47.0 35.7 74 54 -28.6 -18.6 V 124 3.0 45.0 33.8 33.1 3.2 -36.5 0.0 0.6 47.0 35.7 74 54 -27.0 -18.3 V 124 3.0 45.0 33.8 33.1 3.2 -36.5 0.0 0.6 46.4 37.6 74 54 -28.5 -19.7 H 124 3.0 44.4 33.2 33.1 3.2 -36.2 0.0 0.6 46.6 37.6 74 54 -29.1 -20.3 V 126 3.0				430	33.0	34	-3025	0.0	0.0	40.0	400	/4	- 24	-202	-10.7	
30 450 350 33.1 3.2 -365 0.0 0.6 45.4 35.4 74 54 -28.6 -18.6 V 11 30 435 32.2 35.5 36 -36.2 0.0 0.6 45.4 35.7 74 54 -28.6 -18.6 V V1 30 43.5 32.2 35.5 36 -36.2 0.0 0.6 45.7 35.7 74 54 -28.6 -18.6 V V24 30 45.0 33.8 33.1 3.2 -36.5 0.0 0.6 45.5 34.3 74 54 -28.5 -19.7 H V24 3.0 44.4 33.2 33.1 3.2 -36.5 0.0 0.6 45.5 34.3 74 54 -28.5 -19.7 H V24 3.0 44.4 33.2 33.1 3.2 -36.5 0.0 0.6 44.9 33.7 74 54 -27.4 -16.4 H V24 3.0 31.0 35.6 <td>874</td> <td></td>	874															
311 30 43.5 32.2 35.5 3.6 -36.2 0.0 0.6 47.0 35.7 74 54 -27.0 -18.3 V CH, 2462 MHz 3.0 45.0 33.8 33.1 3.2 -36.5 0.0 0.6 45.5 34.3 74 54 -27.0 -18.3 V 224 3.0 45.0 33.8 33.1 3.2 -36.5 0.0 0.6 45.5 34.3 74 54 -27.6 -16.4 H 224 3.0 44.4 33.2 33.1 3.2 -36.5 0.0 0.6 46.6 37.6 74 54 -27.6 -16.4 H 224 3.0 44.4 33.2 33.1 3.2 -36.5 0.0 0.6 44.6 37.6 74 54 -29.1 -20.3 V 24 3.0 44.4 33.0 31.0 35.6 36 -36.2 0.0 0.6 46.6 34.6 74 54 -27.4 -19.4 V 26																
224 3.0 45.0 33.8 33.1 3.2 -36.5 0.0 0.6 45.5 34.3 74 54 -28.5 -19.7 H 186 3.0 42.8 34.0 35.6 36. -36.2 0.0 0.6 46.4 37.6 74 54 -28.5 -19.7 H 124 3.0 44.4 33.2 33.1 3.2 -36.5 0.0 0.6 44.4 37.6 74 54 -27.6 -16.4 H 124 3.0 44.4 33.2 33.1 3.2 -36.5 0.0 0.6 44.9 33.7 74 54 -27.4 -10.4 H 186 3.0 43.0 31.0 35.6 3.6 -36.2 0.0 0.6 46.6 34.6 74 54 -27.4 -19.4 V 186 3.0 43.0 31.0 35.6 3.6 -36.2 0.0 0.6 46.6 34.6 74 54 -27.4 -19.4 V V 186 <td< td=""><td>311</td><td>3.0</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>	311	3.0														
i86 30 42.8 34.0 35.6 3.6 -36.2 0.0 0.6 46.4 37.6 74 54 -27.6 -16.4 H 124 3.0 44.4 33.2 33.1 3.2 -36.5 0.0 0.6 44.9 33.7 74 54 -27.6 -16.4 H 186 3.0 44.4 33.2 33.1 3.2 -36.5 0.0 0.6 44.9 33.7 74 54 -29.1 -20.3 V 186 3.0 43.0 31.0 35.6 3.6 -36.2 0.0 0.6 46.6 34.6 74 54 -27.4 -19.4 V 1886 3.0 43.0 31.0 35.6 3.6 -36.2 0.0 0.6 46.6 34.6 74 54 -27.4 -19.4 V 19.0 No other emissions were detected above system noisre floor Average Field Strength N N N			45.0	AA 9			~~~	0.0	0.7	15.5			<i></i>		10.7	
1 1 <th1< th=""> 1 1 1 1<td>924 386</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></th1<>	924 386															
Image: No other emissions were detected above system noisre floor Average Field Strength Limit f Measurement Frequency Amp Preamp Gain Average Field Strength Limit Dist Distance to Antenna D Corr Distance Correct to 3 meters Pk Lim Peak Field Strength Limit Read Analyzer Reading Avg Average Field Strength @ 3 m Average Imit AF Antenna Factor Peak Calculated Peak Field Strength Pk Mar Margin vs. Peak Limit	924	3.0	44.4	33.2	33.1	3.2	-36.5	0.0	0.6	44.9	33.7	74	54	- 29.1	-20.3	v
f Measurement Frequency Amp Preamp Gain Avg Lim Average Field Strength Limit Dist Distance to Antenna D Corr Distance Correct to 3 meters Pk Lim Peak Field Strength Limit Read Analyzer Reading Avg Average Field Strength @ 3 m Avg Mar Margin vs. Average Limit AF Antenna Factor Peak Calculated Peak Field Strength Pk Mar Margin vs. Peak Limit	386	3.0	43.0	31.0	35.6	3.6	-36.2	0.0	6.0	46.6	34.6	74	54	-27.4	-19.4	V
Dist Distance to Antenna D Corr Distance Correct to 3 meters Pk Lim Peak Field Strength Limit Read Analyzer Reading Avg Average Field Strength @ 3 m Avg Mar Margin vs. Average Limit AF Antenna Factor Peak Calculated Peak Field Strength Pk Mar Margin vs. Peak Limit			No other er	nissions were	detected	above s	ystem noi:	sre floor								
Dist Distance to Antenna D Corr Distance Correct to 3 meters Pk Lim Peak Field Strength Limit Read Analyzer Reading Avg Average Field Strength @ 3 m Avg Mar Margin vs. Average Limit AF Antenna Factor Peak Calculated Peak Field Strength Pk Mar Margin vs. Peak Limit							A	Duranum	a.i.,				A and T inc	A	Calif Church and	. T
Read Analyzer Reading Avg Average Field Strength @ 3 m Avg Mar Margin vs. Average Limit AF Antenna Factor Peak Calculated Peak Field Strength Pk Mar Margin vs. Peak Limit					<i>y</i>			-		t to 3 mete	rs		-	-	-	
AF Antenna Factor Peak Calculated Peak Field Strength Pk Mar Margin vs. Peak Limit															-	
CL Cable Loss HPF High Pass Filter				-			-	-		- 0			-	-	-	
	~	T	Cable Loss				HPF				0			0		

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RESTRICTED BANDEDGE (g MODE, LOW CHANNEL, HORIZONTAL)

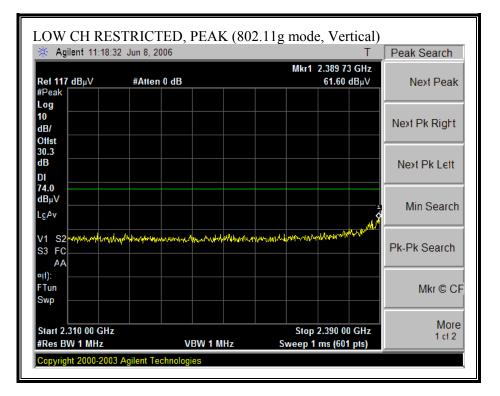


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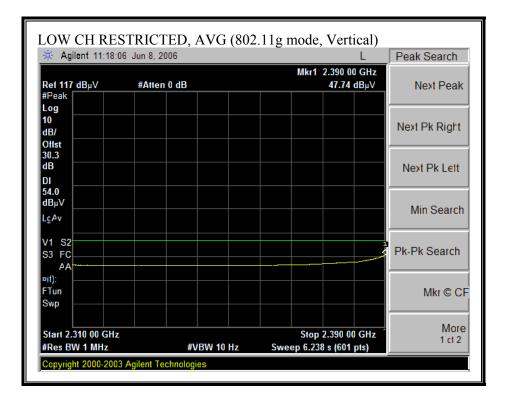
🔆 Agilent 10:44:5	0 Jun 8, 2006	L	Trace
Restricted Band, g N	Node Low Ch.	Mkr1 2.390 00 GHz	_
Ref 117 dB _µ V		52.71 dBµV	Trace
#Peak			<u>1 2 3</u>
Log			
10			Clear Write
dB/			olear white
Offst 30.3			
dB			Max Hold
DI			Max Holu
54.0			
dBμV			
LcAv			Min Hold
V1 S2			
S3 FC			View
AA			
¤(1):			
FTun			Blank
Swp			
Start 2.310 00 GHz		Stop 2.390 00 GHz	
#Res BW 1 MHz	#VBW 10 H	-	

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RESTRICTED BANDEDGE (g MODE, LOW CHANNEL, VERTICAL)

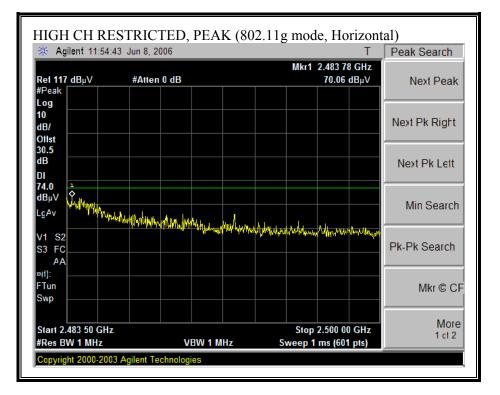


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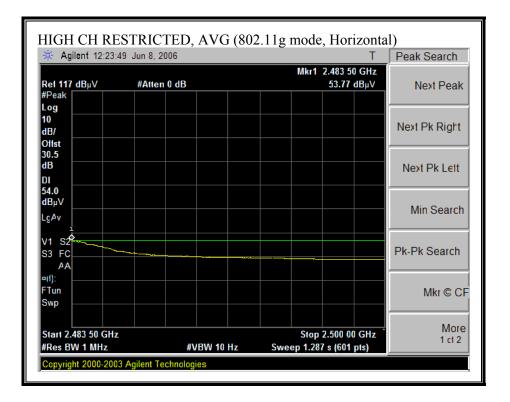


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RESTRICTED BANDEDGE (g MODE, HIGH CHANNEL, HORIZONTAL)

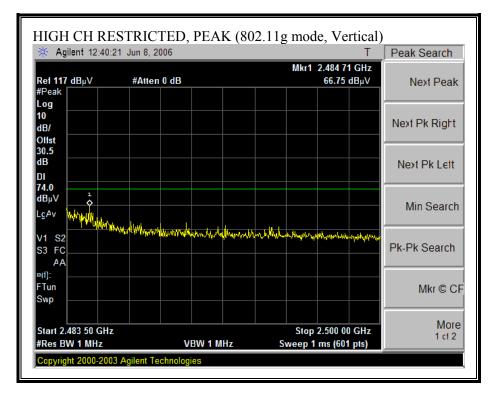


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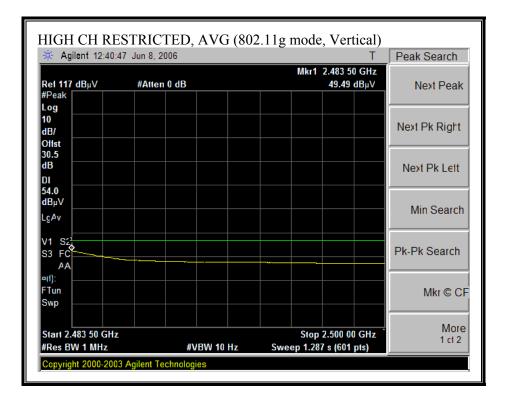


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RESTRICTED BANDEDGE (g MODE, HIGH CHANNEL, VERTICAL)



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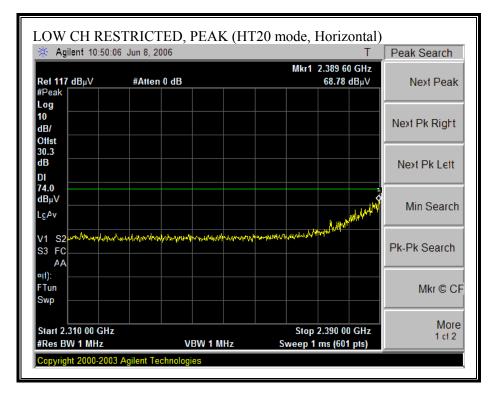
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HARMONICS AND SPURIOUS EMISSIONS (802.11g MODE)

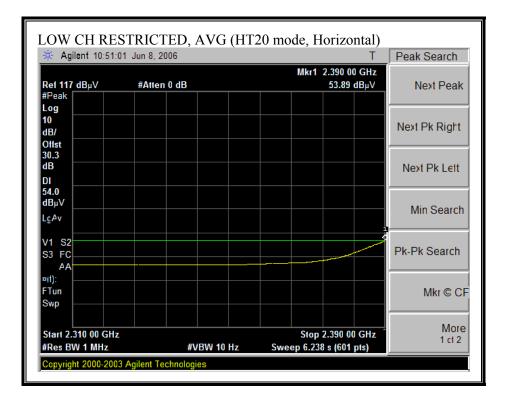
nfigu ode: g erage	ration:] g mode	Chin Pang EUT (XB72 with EBJ a Meter: Lo t:	2) ntenna	3m, Mid =	= 20 dE	8m, High	= 17 dBm										
		 18GHz	Pre-a	amplife	1-26	GHz	Pre-am	plifer	26-40GH	z	н	orn > 18	rn > 18GHz Lim				
T60; S/N: 2238 @3m					931 🗸		-		•				-	FCC 15.205			
Hi Freq	uency Cal 2 foot	y Cables 3 foot ca			able		12 foot cable				HPF	R	eject Filte		<u>k Measurements</u> W=VBW=1MHz		
			Chi	n 197538(001	•	Chin 20	03540	01 🗸	HP	F_4.0GHz	•		Avera	ge Measurements 1MHz ; VBW=10Hz		
f GHz	Dist (m)	Read Pk dBuV	Read Av dBuV	g. AF dB/m	CL dB	Amp dB	D Corr dB	Fltr dB	Peak dBuV/m	Avg dBuV/m	Pk Lim dBuV/m	Avg Lim dBuV/m	Pk Mar dB	Avg Mar dB	Notes (V/H)		
324	, 2412 M 3.0	47.0	35.0	33.0	3.2	-36.5	0.0	0.6	47.3	35.3	74	54	-26.7	-18.7	Н		
24 D CH, 1	3.0 2437 MH	46.2 z	34.0	33.0	3.2	-36.5	0.0	0.6	46.5	34.3	74	54	-27.5	-19.7	V		
74 11	3.0 3.0	46.0 46.3	34.7	33.1 35.5	3.2 3.6	-36.5	0.0 0.0	0.6 0.6	46.4	35.1	74 74	54 54	-27.6 -24.2	-18.9	H		
11 74	3.0	40.3 45.0	34.2 32.5	33.1	3.0	-36.2 -36.5	0.0	0.6	49.8 45.4	37.7 32.9	74 74	54 54	-24.2 -28.6	-16.3 -21.1	V		
S11 CH 24	3.0 62 MHz	43.0	32.0	35.5	3.6	-36.2	0.0	0.6	46.5	35.5	74	54	-27.5	-18.5	<u>v</u>		
924	3.0	43.5	32.6	33.1	3.2	-36.5	0.0	0.6	44.0	33.1	74	54	-30.0	-20.9	H		
386 924	3.0 3.0	43.0 43.0	32.0 31.5	35.6 33.1	3.6 3.2	-36.2 -36.5	0.0 0.0	0.6 0.6	46.6 43.5	35.6 32.0	74 74	54 54	-27.4 -30.5	-18.4 -22.0	<u>н</u> V		
924 386	3.0	43.0	31.5 31.3	35.6	3.2 3.6	-30.5	0.0	0.6	43.5 45.9	34.9	74 74	54 54	-30.5 -28.1	-22.0 -19.1	V		
		No other or	missions wei	n dotootod	aboro a		ano floor										
		Measureme Distance to Analyzer R Antenna Fa Cable Loss	Antenna eading actor	сy		Amp D Corr Avg Peak HPF	Average	Corre Field S d Peal	ct to 3 mete Strength @ k Field Stre	3 m		Pk Lim Avg Mar	Peak Fiel Margin vs	Field Strengt d Strength L 5. Average L 5. Peak Limit	imit imit		

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RESTRICTED BANDEDGE (HT20 MODE, LOW CHANNEL, HORIZONTAL)

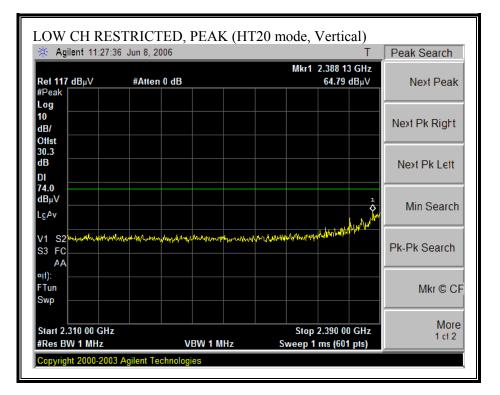


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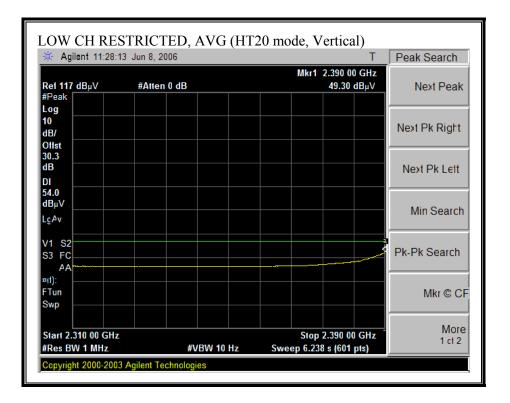


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RESTRICTED BANDEDGE (HT20 MODE, LOW CHANNEL, VERTICAL)

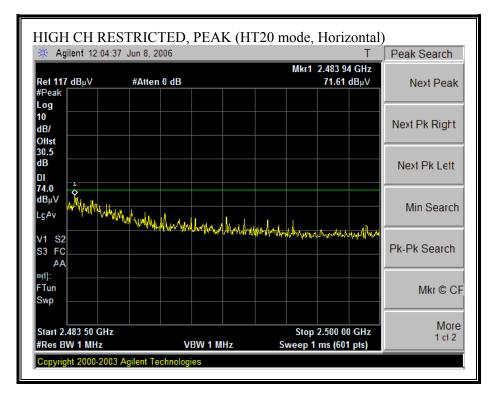


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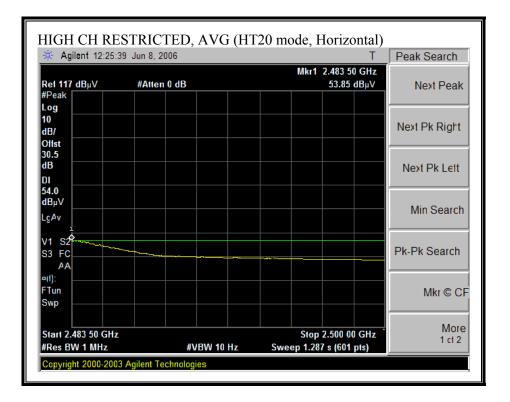


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RESTRICTED BANDEDGE (HT20 MODE, HIGH CHANNEL, HORIZONTAL)

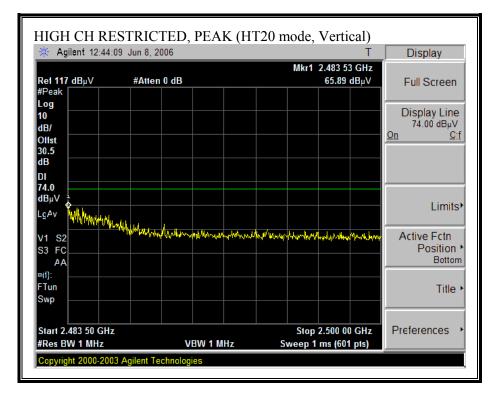


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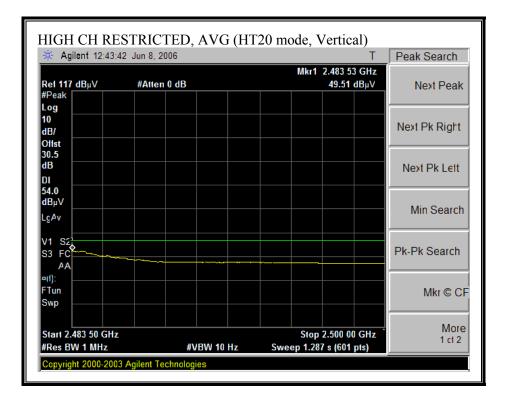


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RESTRICTED BANDEDGE (HT20 MODE, HIGH CHANNEL, VERTICAL)



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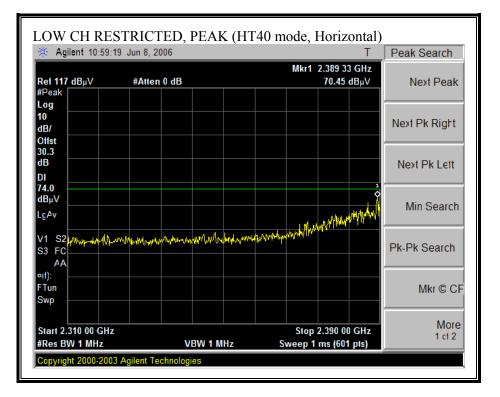
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HARMONICS AND SPURIOUS EMISSIONS (802.11n HT20 MODE)

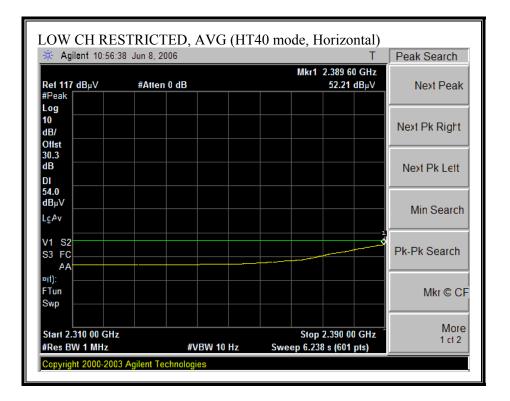
-	nce Ce	rtification	y Measuren Services, M		Hill O _I	oen Fiel	d Site											
Compan Project# Date: 06	#: 06U1	0365																
		Chin Pang	r -															
		EUT (XB7																
			BJ antenna w = 15 dBm	Mid = 2	0 dBm	. High =	14 dBm											
est Eq																		
Н	orn 1-	18GHz	Pre-a	mplifer	1-260	GHz	Pre-amplifer 26-40GHz					Н	orn > 180	GHz		Limit		
T60; S/N: 2238 @3m T144 Miteq 3008A00931						931 👻				•			•	FCC 15.205				
Hi Frequency Cables 2 foot cable 3 foot ca					able		12 foot cable					HPF	Reject Filter			<u>Peak Measurements</u> RBW=VBW=1MHz		
T			• Chin	Chin 197538001			Chin 200354001]	HPI	F_4.0GHz	•		Avera	werage Measurements BW=1MHz ; VBW=10Hz		
f	Dist	Read Pk	Read Avg.	AF	CL	Amp	D Corr	Fltr	Peak		Avg	Pk Lim	Avg Lim	Pk Mar	Avg Mar	Notes		
GHz	(m)	dBuV	dBuV	dB/m	dB	dB	dB	dB	1			dBuV/m	<u> </u>	dB	dB	(V/H)		
OW CH,	Y											- :						
.824 .824	3.0 3.0	46.5 46.0	35.0 34.4	33.0 33.0	3.2 3.2	-36.5 -36.5	0.0	0.6 0.6	46.8 46.3		35.3 34.7	74 74	54 54	-27.2 -27.7	-18.7 -19.3	H V		
ID CH, 2	2437 MH	z																
.874	3.0	47.5	34.3	33.1	3.2	-36.5	0.0	0.6	47.9		34.7	74	54	-26.1	-19.3	H		
.311 .874	3.0 3.0	45.6 45.3	33.4 32.0	35.5 33.1	3.6 3.2	-36.2 -36.5	0.0	0.6 0.6	49.1 45.7		36.9 32.4	74 74	54 54	-24.9 -28.3	-17.1 -21.6	H V		
.311	3.0	43.2	32.0	35.5	3.6	-36.2	0.0	0.6	46.7		35.5	74	54	-27.3	-18.5	v		
I CH, 24																		
.924 .386	3.0 3.0	43.4 44.0	32.0 32.3	33.1 35.6	3.2 3.6	-36.5 -36.2	0.0	0.6 0.6	43.9 47.6		32.5 35.9	74 74	54 54	-30.1 -26.4	-21.5 -18.1	H		
.924	3.0	44.0	31.4	33.1	3.0	-36.5	0.0	0.6	47.0		31.9	74 74	54 54	-20.4 -30.5	-10.1 -22.1	V		
.386	3.0	43.4	31.6	35.6	3.6	-36.2	0.0	0.6	47.0		35.2	74	54	-27.0	-18.8	v		
		No other o	missions were	detected	abore or	vstem noi	sre floor											
	L	ito otner e	missions were	actected	above S	stem noi	51 C 11001			L			LJ					
	f	Measurem	ent Frequenc	y		Amp	Preamp (Gain					Avg Lim	Average F	ield Strengt	h Limit		
	Dist	Distance to	-			D Corr	Distance	Corre	ct to 3 met	ers			-	-	l Strength L			
	Read	Analyzer R	-			Avg	-		Strength @				-	-	Average L			
	AF	Antenna F				Peak			k Field Stre	ngth	L		Pk Mar	Margin vs	Peak Limit	t		
	CL	Cable Los	s			HPF	High Pas	s Filter										

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RESTRICTED BANDEDGE (HT40 MODE, LOW CHANNEL, HORIZONTAL)

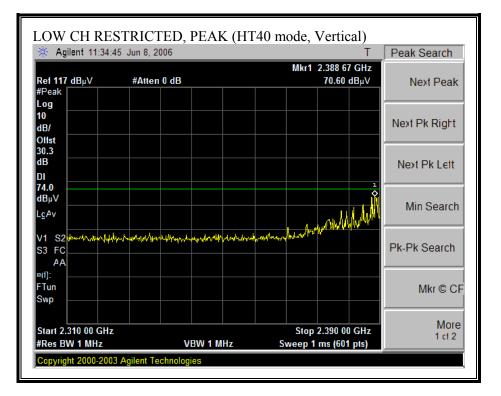


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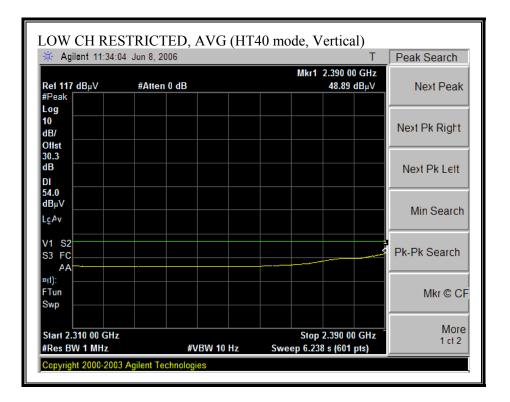


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RESTRICTED BANDEDGE (HT40 MODE, LOW CHANNEL, VERTICAL)

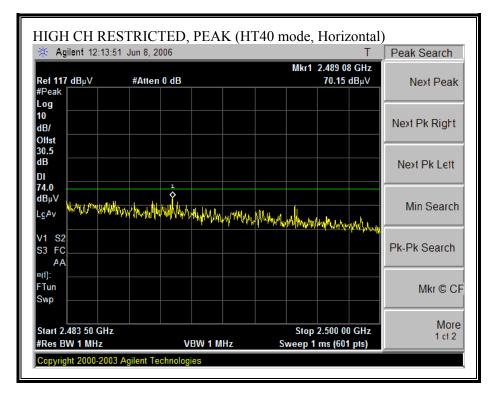


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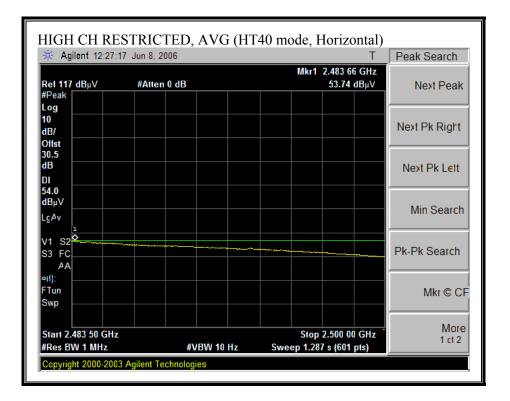


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RESTRICTED BANDEDGE (HT40 MODE, HIGH CHANNEL, HORIZONTAL)

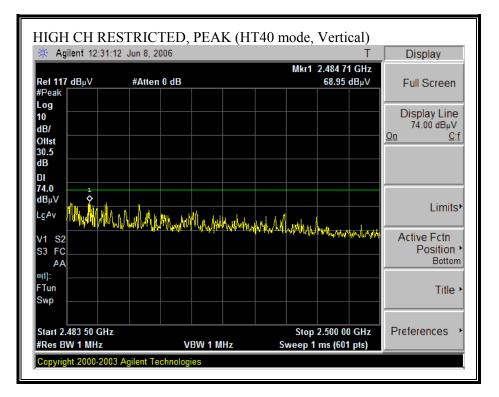


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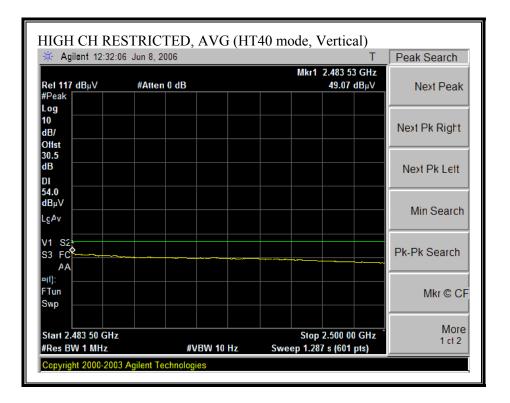


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RESTRICTED BANDEDGE (HT40 MODE, HIGH CHANNEL, VERTICAL)



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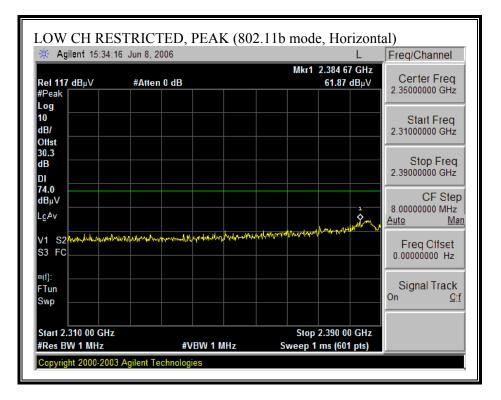
HARMONICS AND SPURIOUS EMISSIONS (802.11n HT40 MODE)

mpliaı	_	Frequency rtification				Hill O _l	pen Fiel	d Site										
oject # te: 06/ st Eng nfigura ode: H	ation: 1 IT40 m	0365 6 Chin Pang EUT (XB72 ode with E	2) BJ ai															
2	Power iipmen	Meter: Lo <u>t:</u>	ow = 1	5 dBm,	Mid = 2	0 dBm	ı, High =	14 dBm										
Но	orn 1-	18GHz		Pre-an	nplifer	1-26	GHz	Pre-am	plifer	26-40GH	z	н	Horn > 18GHz Limit					
T60; S/N: 2238 @3m 🗸 T144 Miteq 3008A00931 🗸						931 🗸				•				-	FCC 15.205			
Hi Frequency Cables					3 foot cable			12 foot cable				HPF	Re			e <mark>ak Measurements</mark> BW=VBW=1MHz		
			•	Chin 1	1975380	01	•	Chin 20	03540	D1 🗸	HPI	F_4.0GHz	•			ige <u>Measurements</u> 1MHz ; VBW=10Hz		
f GHz	Dist (m)	Read Pk dBuV		d Avg. BuV	AF dB/m	CL dB	Amp dB	D Corr dB	Fltr dB	Peak dBuV/m	Avg dBuV/m	Pk Lim dBuV/m	-	Pk Mar dB	Avg Mar dB	Notes (V/H)		
W CH, 24	2422 M 3.0	Hz 45.5	3	3.0	33.0	3.2	-36.5	0.0	0.6	45.8	33.3	74	54	-28.2	-20.7	Н		
24	3.0 437 MH	43.7	3	2.0	33.0	3.2	-36.5	0.0	0.6	44.0	32.3	74	54	-30.0	-21.7	V		
74	3.0	46.6		4.0	33.1	3.2	-36.5	0.0	0.6	47.0	34.4	74	54	-27.0	-19.6	H		
11 74	3.0 3.0	43.8 45.5		2.0 3.5	35.5 33.1	3.6 3.2	-36.2 -36.5	0.0 0.0	0.6 0.6	47.3 45.9	35.5 33.9	74 74	54 54	-26.7 -28.1	-18.5 -20.1	H V		
11	3.0	44.0		1.3	35.5	3.6	-36.2	0.0	0.6	47.5	34.8	74	54	-26.5	-19.2	v		
CH, 245 04	52 MHz 3.0	45.8	3	3.5	33.1	3.2	-36.5	0.0	0.6	46.3	34.0	74	54	-27.7	-20.0	Н		
56	3.0	44.0	3	2.0	35.5	3.6	-36.2	0.0	0.6	47.5	35.5	74	54	- 26.5	-18.5	H		
04 56	3.0 3.0	43.5 42.0		1.7 2.0	33.1 35.5	3.2 3.6	-36.5 -36.2	0.0 0.0	0.6 0.6	44.0 45.5	32.2 35.5	74 74	54 54	-30.0 -28.5	-21.8 -18.5	V V		
	5.0							1			000			-20.0	-10.0			
		No other e	missio	ns were	detected	above s	ystem noi	sre floor	L				<u> </u>	L				
	Dist Read AF	Measureme Distance to Analyzer R Antenna Fa Cable Loss	Ante eadinț actor	nna	ÿ		Amp D Corr Avg Peak HPF	Average	Corre Field S d Peal	ct to 3 mete Strength @ c Field Stre	3 m		Pk Lim Avg Mar	Peak Fiel Margin vs	Field Strengt d Strength L 5. Average L 5. Peak Limit	imit imit		

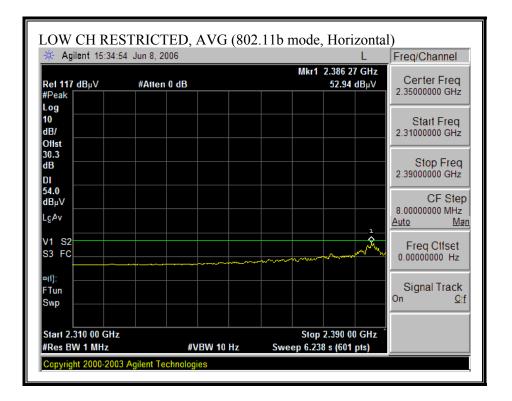
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7.4.3. TRANSMITTER ABOVE 1 GHz FOR 2400 TO 2483.5 MHz BAND WITH MONOPOLE ANTENNAS

RESTRICTED BANDEDGE (b MODE, LOW CHANNEL, HORIZONTAL)

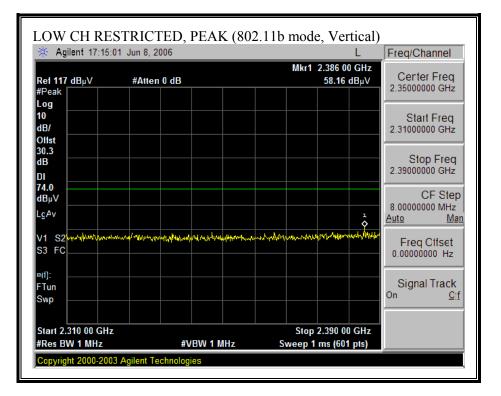


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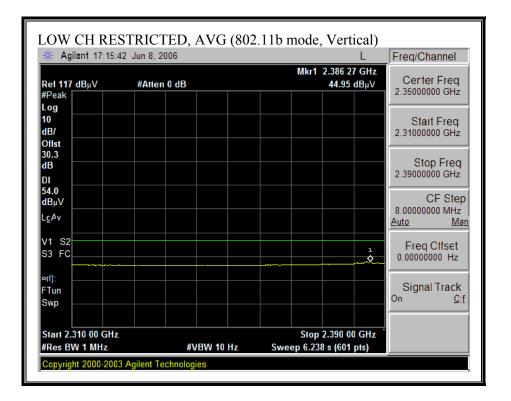


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RESTRICTED BANDEDGE (b MODE, LOW CHANNEL, VERTICAL)

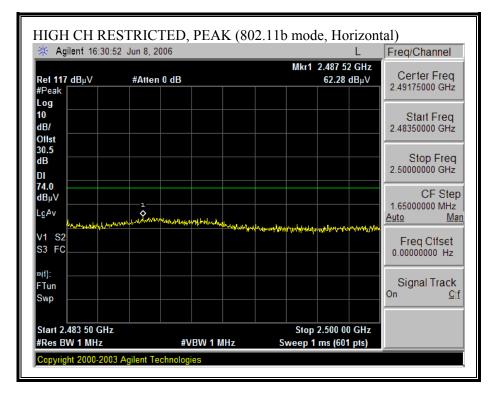


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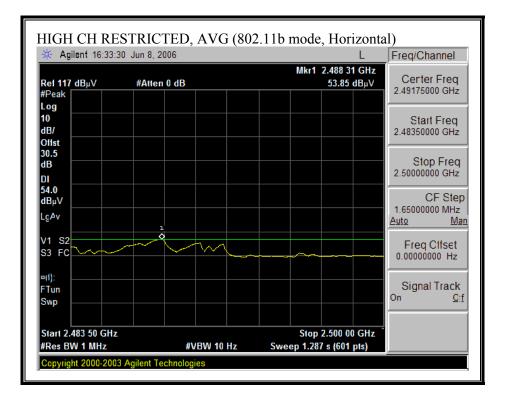


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RESTRICTED BANDEDGE (b MODE, HIGH CHANNEL, HORIZONTAL)

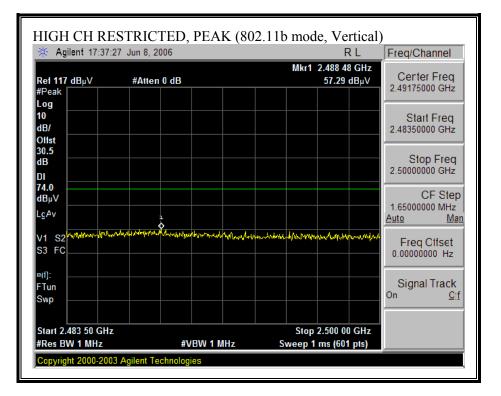


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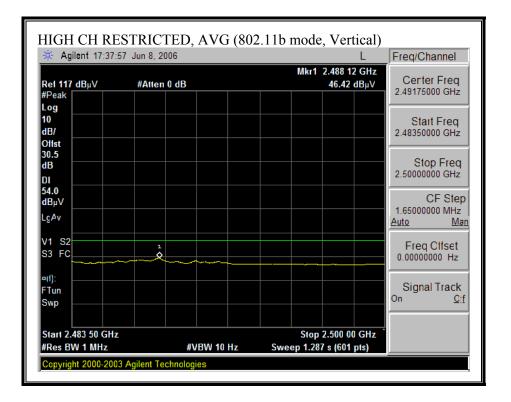


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RESTRICTED BANDEDGE (b MODE, HIGH CHANNEL, VERTICAL)



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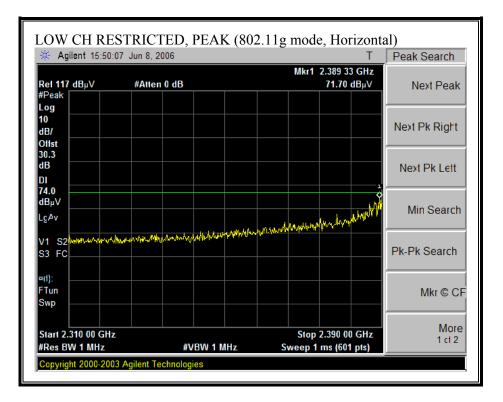
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HARMONICS AND SPURIOUS EMISSIONS (802.11b MODE)

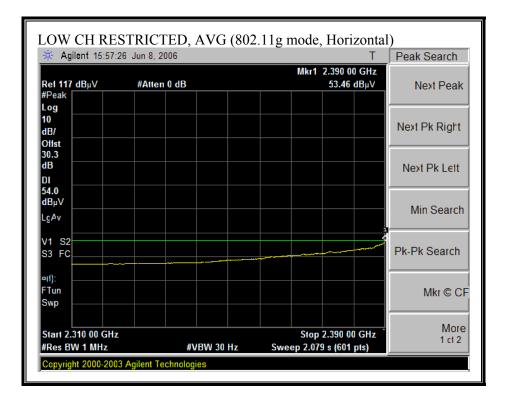
Company: Atheros Project #:06U10365-1 Jate: June 24, 2006 Cest Engineer: Chin Pang Configuration: EUT/Foxconn antenna Mode: TX, b mode Average Power Meter: Low =16.5 dBm, Mid = 17dBm, High = 17dBm Test Equipment: Horn 1-18GHz Pre-amplifer 1-26GHz T60; S/N: 2238 @3m T144 Miteq 3008A00931 # IFrequency Cables T144 Miteq 3008A00931 Chin 197538001 I2 foot cable Chin 197538001 Chin 200354001 f Dist Read Avg. AF CL Amp D Corr Fltr Peak GHz (m) dBuV dB/m dB dB dB dB dB uV/m dBuV/m	- I (lorn > 180	iHz	Ţ	Limit FCC 15.205	
Iode: TX, b mode verage Power Meter: Low =16.5 dBm, Mid = 17dBm, High = 17dBm est Equipment: Horn 1-18GHz T60; S/N: 2238 @3m v High = 17dBm, High = 17dBm Pre-amplifer 1-26GHz T144 Miteq 3008A00931 v - High = 17dBm Pre-amplifer 26-40GHz T144 Miteq 3008A00931 v - High = 17dBm Pre-amplifer 26-40GHz - V - High = 17dBm Pre-amplifer 26-40GHz - V - V - High = 17dBm Pre-amplifer 26-40GHz - V - V - V - High = 17dBm - V - V - V - V - V - V - V - V	HPF		iHz	Ţ	ECC 4E 20E	
est Equipment: Horn 1-18GHz Pre-amplifer 1-26GHz Pre-amplifer 26-40GHz T60; S/N: 2238 @3m T144 Miteq 3008A00931 T H Frequency Cables 3 foot cable 12 foot cable Chin 197538001 Chin 200354001 T f Dist Read Avg. AF CL Amp D Corr Flt Peak GHz (m) dBuV dBuV dB dB </td <td>HPF</td> <td></td> <td>iHz</td> <td>•</td> <td>ECC 4E 20E</td>	HPF		iHz	•	ECC 4E 20E	
T60; S/N: 2238 @3m T144 Miteq 3008A00931 IF Frequency Cables 2 foot cable 3 foot cable 12 foot cable Chin 197538001 Chin 200354001 Chin 200354001 f Dist Read Avg. AF CL Amp D Corr Fltr Peak GHz dBuV dBuV dBuV dB dB dB dB dB dB dB dBuV/m d	HPF		iHz	T	ECC 4E 20E	
Hi Frequency Cables 2 foot cable 3 foot cable 12 foot cable Chin 197538001 Chin 200354001 f Dist Read Pk GHz (m) dBuV	HPF	Rej		•	FCC 15.205 🗸	
2 foot cable 3 foot cable 12 foot cable Chin 197538001 Chin 200354001 Image: Chin 200354001 f Dist Read Avg. AF CL Amp D Corr Fltr Peak GHz (m) dBuV dBuV dB/m dB <		Rej				
f Dist Read Pk Read Avg. AF CL Amp D Corr Fltr Peak GHz (m) dBuV dBuV dB/m dB dB </td <td>HPF_4.0GHz</td> <td></td> <td colspan="2"></td> <td colspan="2">eak Measurements RBW=VBW=1MHz</td>	HPF_4.0GHz				eak Measurements RBW=VBW=1MHz	
GHz (m) dBuV dBuV dB/m dB dB dB dB dB dBuV/m d	1	•			ige Measurements 1MHz ; VBW=10Hz	
	Avg Pk Lim dBuV/m dBuV/m	Avg Lim dBuV/m	Pk Mar dB	Avg Mar dB	Notes (V/H)	
wr Ch 824 3.0 47.0 42.0 33.0 3.2 -36.5 0.0 0.6 47.3	42.3 74	54	-26.7	-11.7	v	
324 3.0 48.0 43.0 33.0 3.2 -36.5 0.0 0.6 48.3	43.3 74	54	-25.7	-10.7	H	
d Ch	42.0 74	54	-26.8	-12.0	v	
311 3.0 42.5 31.5 35.5 3.6 -36.2 0.0 0.6 46.0	35.0 74	54	-28.0	-19,0	<u>v</u>	
874 3.0 47.8 42.0 33.1 3.2 -36.5 0.0 0.6 48.2 311 3.0 43.4 32.0 35.5 3.6 -36.2 0.0 0.6 46.9	42.4 74 35.5 74	54 54	-25.8 -27.1	-11.6 -18.5	H H	
igh Ch						
924 3.0 48.0 42.0 33.1 3.2 -36.5 0.0 0.6 48.5 386 3.0 43.0 31.6 35.6 3.6 -36.2 0.0 0.6 46.6	42.5 74 35.2 74	54 54	-25.5 -27.4	-11.5 -18.8	V V	
924 3.0 47.6 41.5 33.1 3.2 -36.5 0.0 0.6 48.1	42.0 74	54	-25.9	-12.0	H	
386 3.0 44.3 33.2 35.6 3.6 -36.2 0.0 0.6 47.9	36.8 74	54	-26.1	-17.2	H	
x. 5.1.6				<u> </u>		
te: No other emissions were detected above the system noise floor.						
f Measurement Frequency Amp Preamp Gain		-	-	ield Strengt		
Dist Distance to Antenna D Corr Distance Correct to 3 meters				i Strength L		
Read Analyzer Reading Avg Average Field Strength @ 3				. Average L		
AF Antenna Factor Peak Calculated Peak Field Strens	gth	Pk Mar	Margin vs	. Peak Limit	;	
CL Cable Loss HPF High Pass Filter						

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RESTRICTED BANDEDGE (g MODE, LOW CHANNEL, HORIZONTAL)

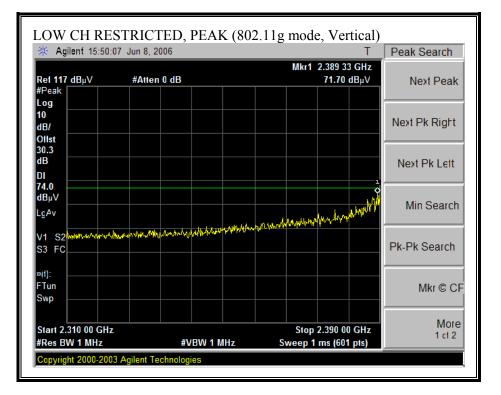


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RESTRICTED BANDEDGE (g MODE, LOW CHANNEL, VERTICAL)

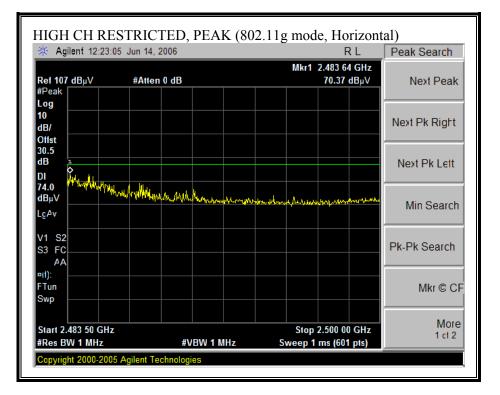


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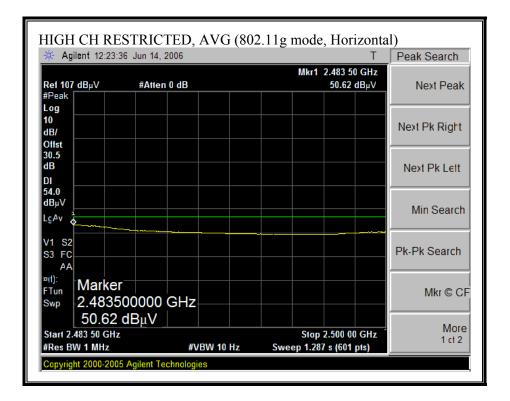
🔆 Agilent 17:28:	22 Jun 8, 2006			L	Peak Search
Ret 117 dBµV #Peak	#Atten 0 dB		Mkr1 2.39 45.	0 00 GHz .59 dBµ∨	Next Peak
Log 10 dB/ Ollst					Next Pk Right
30.3 dB DI 54.0					Next Pk Lett
dBμV LgAv					Min Search
V1 S2 S3 FC AA					Pk-Pk Search
¤(1): FTun Swp					Mkr © CF
Start 2.310 00 GHz #Res BW 1 MHz		10 Hz		0 00 GHz 601 pts)	More 1 ct 2

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RESTRICTED BANDEDGE (g MODE, HIGH CHANNEL, HORIZONTAL)

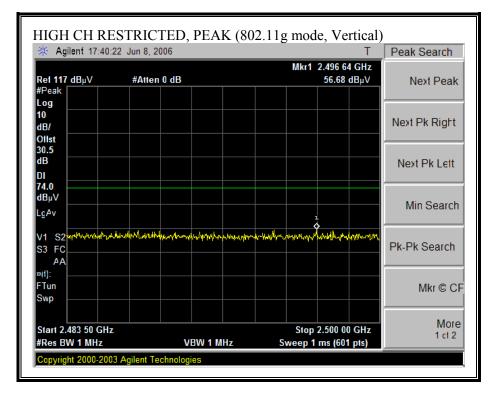


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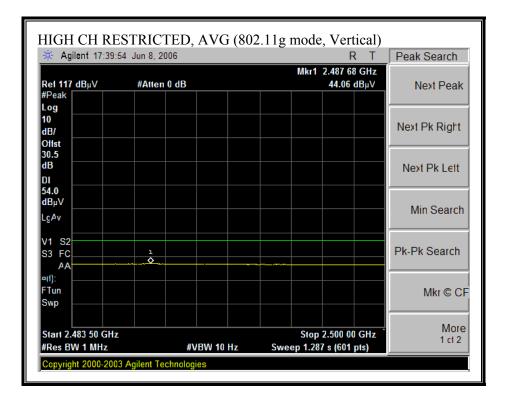


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RESTRICTED BANDEDGE (g MODE, HIGH CHANNEL, VERTICAL)



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HARMONICS AND SPURIOUS EMISSIONS (802.11g MODE)

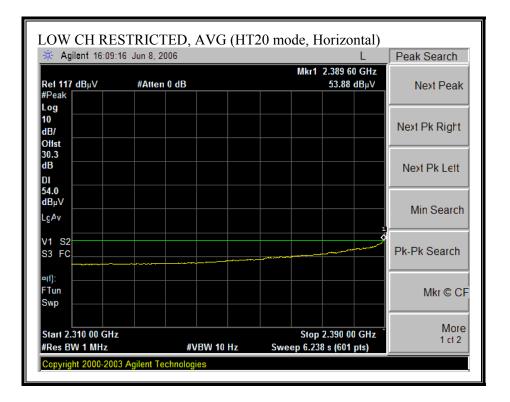
omplia	_		/ Measurem Services, M		Hill Oı	oen Fiel	d Site								
ompany															
		0365-1													
	1e 14, 2	2006 Chin Pang													
-			nn antenna												
	X, g mo		14.6 10	201	00 ID	TT' 1	10.5 10								
-			w = 14.5 dBr	m, Ivna -		n, rugn -	- 13.5 dBf	n							
est Equ		_			4.00		D						ou -		1 :
	orn 1- /N: 223	18GHz 8 @3m		mplifer Miteq 30			Pre-am	pliter	26-40GH	z	н	orn > 180	GHZ	•	Limit FCC 15.205
	Jency Cal	-												·	
:	2 foot	cable	3	6 foot o	able		12	foot o	able		HPF	Re	eject Filte		<u>k Measurements</u> W=VBW=1MHz
			Chin	1975380	01	•	Chin 20	03540	01	HP	F_4.0GHz	•		Avera	age Measurements =1MHz ; VBW=10Hz
f GHz	Dist (m)	Read Pk dBuV	Read Avg. dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	Fltr dB	Peak dBuV/m	Avg dBuV/m	Pk Lim dBuV/m	-	1	Avg Mar dB	Notes (V/H)
ow Ch															
824 824	3.0 3.0	48.3 46.3	35.0 34.0	33.0 33.0	3.2 3.2	-36.5 -36.5	0.0 0.0	0.6 0.6	48.7 46.6	35.3 34.3	74 74	54 54	-25.3 -27.4	-18.7 -19.7	V H
	5.0	40.3	34.0	33.0	3.4	-30.3	0.0	0.0	40.0	34.3	/4	24	-27.4	-19.7	п
id Ch 874	3.0	50.0	38.0	33.1	3.2	-36.5	0.0	0.6	50.4	38.4	74	54	-23.6	-15.6	v
311	3.0	42.0	31.3	35.5	3.6	-36.2	0.0	0.6	45.5	34.8	74	54 54	-23.0	-15.0	v
.874	3.0	47.5	35.0	33.1	3.2	-36.5	0.0	0.6	47.9	35.4	74	54	-26.1	-18.6	H
.311	3.0	48.6	34.3	35.5	3.6	-36.2	0.0	0.6	52.1	37.8	74	54	-21.9	-16.2	Н
igh Ch		*	•								.				
924 386	3.0 3.0	48.0 43.0	35.0 31.0	33.1 35.6	3.2 3.6	-36.5 -36.2	0.0	0.6 0.6	48.5 46.6	35.5 34.6	74 74	54 54	-25.5 -27.4	-18.5 -19.4	V
.380 .924	3.0	43.0 45.0	31.0	35.0	3.0	-30.2	0.0	0.6	40.0	34.0 33.1	74	54 54	-27.4 -28.5	-19.4 -20.9	H
386	3.0	52.0	35.0	35.6	3.6	-36.2	0.0	0.6	55.6	38.6	74	54	-18.4	-15.4	H
		 		1										1	
ev. 5.1.6			_			_									
			detected above		m noise										
	f		ent Frequenc	у		Amp	Preamp					-	-	Field Strengt	
		Distance to							ct to 3 mete					d Strength L	
		Analyzer R Antenna Fa	<u> </u>			Avg Peak	-		Strength @ k Field Stre					s. Average L s. Peak Limit	
	ΛE	Antenna Fa								ngm		PK IVIAI	iviargin Vs	. reak Limi	L
	AF CL	Cable Loss				HPF	High Pas								

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RESTRICTED BANDEDGE (HT20 MODE, LOW CHANNEL, HORIZONTAL)

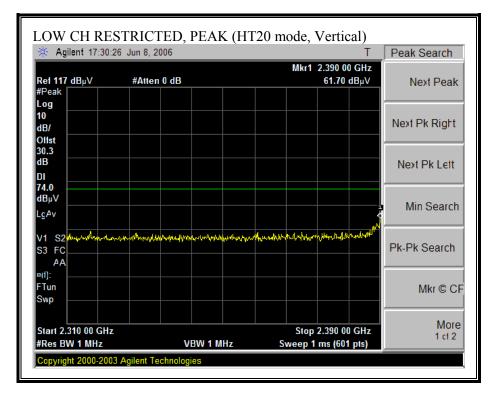


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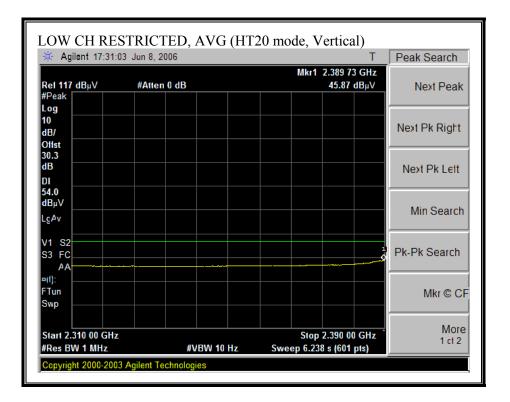


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RESTRICTED BANDEDGE (HT20, LOW CHANNEL, VERTICAL)

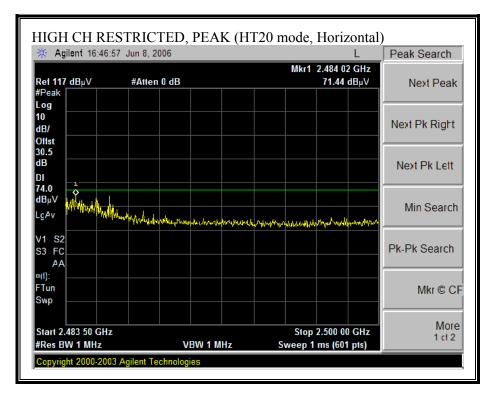


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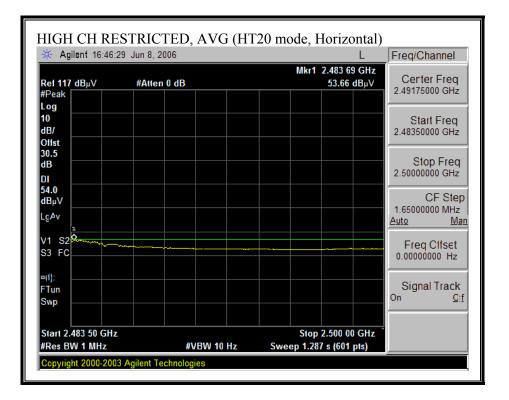


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RESTRICTED BANDEDGE (HT20 MODE, HIGH CHANNEL, HORIZONTAL)

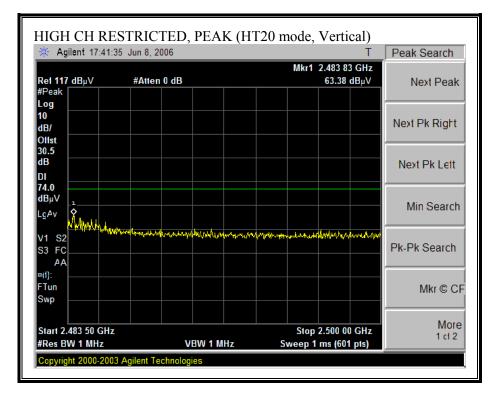


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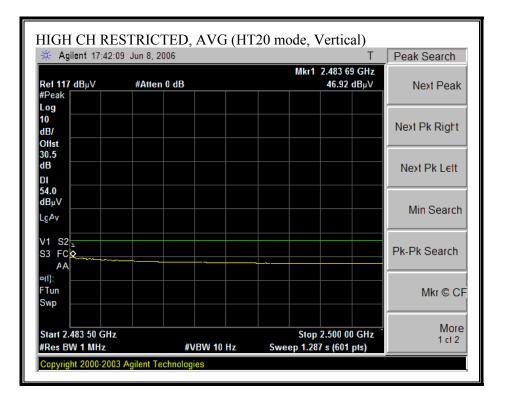


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RESTRICTED BANDEDGE (HT20 MODE, HIGH CHANNEL, VERTICAL)



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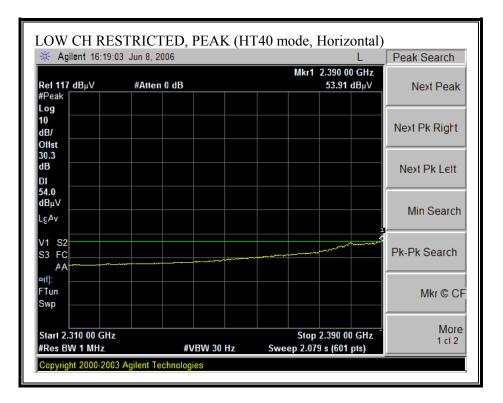
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HARMONICS AND SPURIOUS EMISSIONS 802.11n (HT20 MODE)

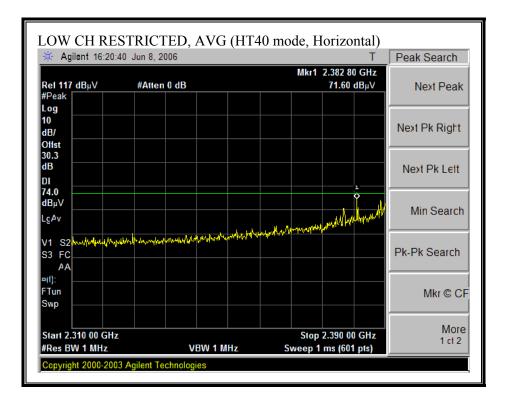
onfigui lode: 7 verage	ration:H TX, HT	Chin Pang EUT/Foxcon 20 mode	n antenna												
verage															
Test Ea		Meter: Lov	w = 14.5 dBn	n, Mid =	20dBr	n, High =	= 12.5 d Bm	I							
	uipmen	_													
		18GHz		mplifer			Pre-am	plifer	26-40GH	IZ	H	orn > 180	GHz		Limit
T60; S	S/N: 223	3 @3m	, T144 N	Aiteq 30	08A009	J31 👻				-				•	FCC 15.205
	uency Cal 2 foot		3	3 foot c	able		12	foot c	able		HPF	Re	eject Filte		k Measurements
		Ţ	Chin	1975380	01	•	Chin 20)03540(01 💌	HP	F_4.0GHz	•		RB Avera	W=VBW=1MHz ge Measurements 1MHz ; VBW=10Hz
f GHz	Dist (m)	Read Pk 1 dBuV	Read Avg. dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	Fltr dB	Peak dBnV/m	Avg dBuV/m	Pk Lim dBuV/m		Pk Mar dB	Avg Mar dB	Notes (V/H)
low Ch															
.824	3.0 3.0	48.0 45.4	35.0 33.4	33.0 33.0	3.2 3.2	-36.5 -36.5	0.0 0.0	0.6 0.6	48.3 45.7	35.3 33.7	74 74	54 54	-25.7 -28.3	-18.7 -20.3	V H
.824	3.0	45.4	33.4	33.0	3.4	-30.5	0.0	0.0	45.7	33.7	74	54	-28.3	-20.3	п
fid Ch															••
4.874 7.311	3.0 3.0	52.0 42.0	36.5 32.3	33.1 35.5	3.2 3.6	-36.5 -36.2	0.0	0.6 0.6	52.4 45.5	36.9 35.8	74 74	54 54	-21.6 -28.5	-17.1 -18.2	<u>v</u>
.874	3.0	47.8	35.5	33.1	3.2	-36.5	0.0	0.6	48.2	35.9	74	54 54	-25.8	-18.1	Н
.311	3.0	49.6	34.0	35.5	3.6	-36.2	0.0	0.6	53.1	37.5	74	54	-20.9	-16.5	H
ligh Ch		ļ			ļ			-							
.924	3.0	47.0	34.3	33.1	3.2	-36.5	0.0	0.6	47.5	34.8	74	54	-26.5	-19.2	V
.386	3.0	45.0	31.0	35.6	3.6	-36.2	0.0	0.6	48.6	34.6	74	54	-25.4	-19.4	V
.924	3.0	45.0	33.0	33.1	3.2	-36.5	0.0	0.6	45.5	33.5	74	54	-28.5	-20.5	H
.386	3.0	51.0	34.5	35.6	3.6	-36.2	0.0	0.6	54.6	38.1	74	54	-19.4	-15.9	H
Rev. 5.1.6															
		issions were de	etected above t	the system	m noise	floor.									
	f	Measuremen	nt Frequency	v		Amp	Preamp (Gain				Avg Lim	Average F	ield Strengt	h Limit
	Dist	Distance to J		,			-		ct to 3 mete	ers		-	-	d Strength L	
		Analyzer Re				Avg			Strength @					. Average L	
		-				Peak			k Field Stre					Peak Limit	
	AF	Antenna Fac				HPF	High Pas			5			0		

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RESTRICTED BANDEDGE (HT40 MODE, LOW CHANNEL, HORIZONTAL)

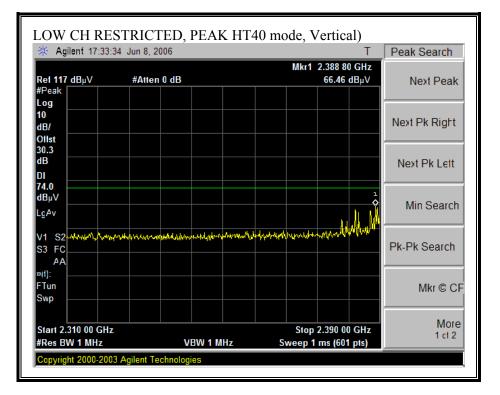


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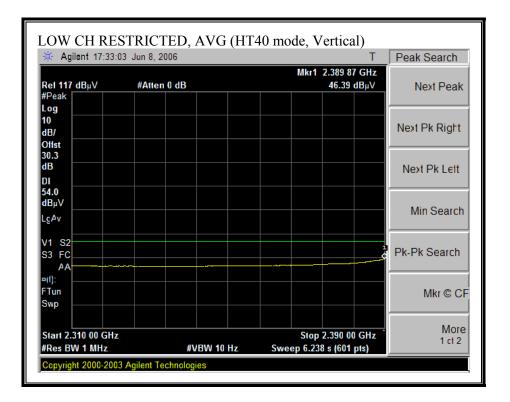


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RESTRICTED BANDEDGE (HT40 MODE, LOW CHANNEL, VERTICAL)

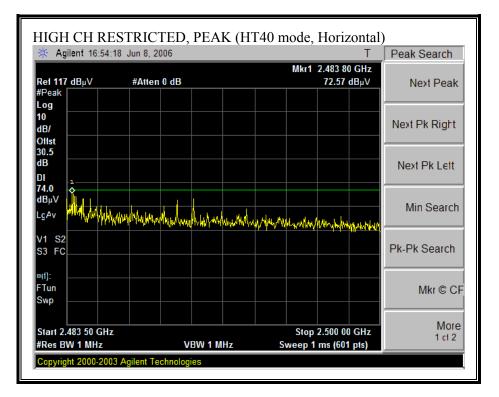


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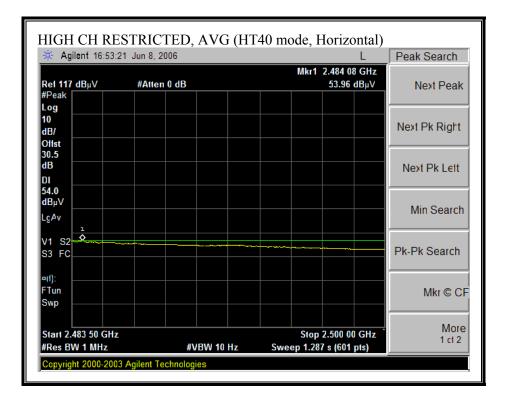


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RESTRICTED BANDEDGE (HT40 MODE, HIGH CHANNEL, HORIZONTAL)

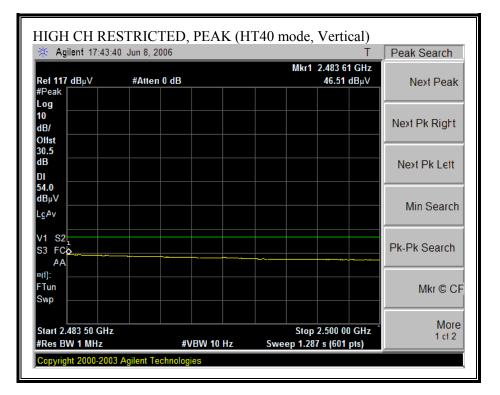


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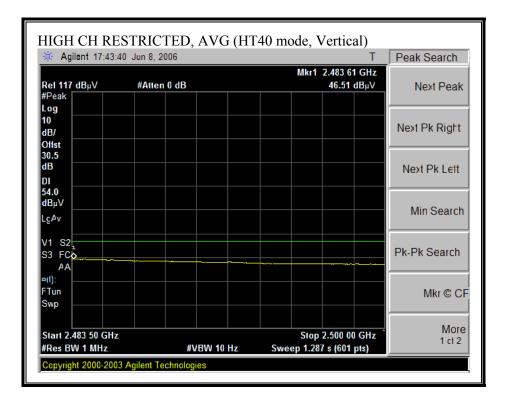


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RESTRICTED BANDEDGE (HT40 MODE, HIGH CHANNEL, VERTICAL)



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HARMONICS AND SPURIOUS EMISSIONS (802.11n HT40 MODE)

mpli			Measurem Services, M		Hill O _I	oen Fiel	d Site								
	ny:Ather #:06U1														
te:Ju	ine 14, 2	006													
	<u> </u>	Chin Pang UT/Foxco	nn antenna												
ode:]	ГХ, НТ4	0 mode													
verag	e Power	Meter: Lo	w = 12 dBm,	Mid = 1	18 dBm	, High =	10dBm								
est Ec	uipmen	<u>t:</u>													
н	lorn 1-	18GHz	Pre-ar	nplifer	1-260	GHz	Pre-am	plifer	26-40GH	IZ	н	orn > 18	GHz		Limit
	S/N: 223	-	▼ T144 N	Aiteq 30	08A009)31 🗸				-				•	FCC 15.205
Hi Fre	quency Cal		3	foot c	able		12	foot c	able		HPF	Pa	is of Filto	Peal	k Measurements
	21001	Cable										Re	eject Filte	RB	W=VBW=1MHz
			• Chin	1975380	101	•	Chin 20	03540	•		F_4.0GHz	•			age Measurements =1MHz ; VBW=10Hz
f	Dist	Read Pk	Read Avg.	AF	CL	Amp	D Corr	Fltr	Peak	Avg	Pk Lim	Avg Lim	Pk Mar	Avg Mar	Notes
GHz	(m)	dBuV	dBuV	dB/m	dB	dB	dB	dB	dBuV/m	dBuV/m	dBuV/m	dBuV/m	dB	dB	(V/H)
ow Ch, 2 844	2422MHz 3.0	47.7	34.4	33.0	3.2	-36.5	0.0	0.6	48.1	34.8	74	54	-25.9	-19.2	V
844	3.0	45.6	33.4	33.0	3.2	-36.5	0.0	0.6	46.0	33.8	74	54	-28.0	-20.2	H
id Ch, 2	2437MHz														
874	3.0	50.0	36.5	33.1	3.2	-36.5	0.0	0.6	50.4	36.9	74	54	-23.6	-17.1	V
	3.0	43.0 46.0	31.2 33.4	35.5 33.1	3.6 3.2	-36.2 -36.5	0.0 0.0	0.6 0.6	46.5 46.4	34.7 33.8	74 74	54 54	-27.5 -27.6	-19.3 -20.2	V H
	3.0		33.5	35.5	3.6	-36.2	0.0	0.6	50.3	37.0	74	54	-23.7	-17.0	H
874	3.0 3.0	46.8					+								
.874 .311	3.0					1									
.874 .311 igh Ch, .904	3.0 2452MH 3.0	z 47.5	33.0	33.1	3.2	-36.5	0.0	0.6	48.0	33.5	74	54	- 26.0	-20.5	v
.874 .311 igh Ch, .904 .356	3.0 2452MH 3.0 3.0	z 47.5 42.0	33.0 31.0	35.5	3.6	-36.2	0.0	0.6	45.5	34.5	74	54	-28.5	-19.5	V
.874 .311 ligh Ch, .904 .356 .904	3.0 2452MH 3.0	z 47.5	33.0												
.874 .311 ligh Ch, .904 .356 .904	3.0 2452MH 3.0 3.0 3.0	z 47.5 42.0 44.0	33.0 31.0 32.6	35.5 33.1	3.6 3.2	-36.2 -36.5	0.0 0.0	0.6 0.6	45.5 44.5	34.5 33.1	74 74	54 54	-28.5 -29.5	-19.5 -20.9	V H
.311 .874 .311 ligh Ch, .904 .356 .904 .356	3.0 2452MH 3.0 3.0 3.0	z 47.5 42.0 44.0	33.0 31.0 32.6	35.5 33.1	3.6 3.2	-36.2 -36.5	0.0 0.0	0.6 0.6	45.5 44.5	34.5 33.1	74 74	54 54	-28.5 -29.5	-19.5 -20.9	V H
.874 .311 ligh Ch, .904 .356 .904 .356 ev. 5.1.6	3.0 2452MH 3.0 3.0 3.0 3.0 3.0	z 47.5 42.0 44.0 46.4	33.0 31.0 32.6	35.5 33.1 35.5	3.6 3.2 3.6	-36.2 -36.5 -36.2	0.0 0.0	0.6 0.6	45.5 44.5	34.5 33.1	74 74	54 54	-28.5 -29.5	-19.5 -20.9	V H
874 311 (igh Ch, 904 356 904 356 ev. 5.1.6	3.0 2452MH 3.0 3.0 3.0 3.0 3.0	z 47.5 42.0 44.0 46.4 ssions were o	33.0 31.0 32.6 32.3	35.5 33.1 35.5 the syste	3.6 3.2 3.6	-36.2 -36.5 -36.2	0.0 0.0	0.6 0.6 0.6	45.5 44.5	34.5 33.1	74 74	54 54 54	-28.5 -29.5 -24.1	-19.5 -20.9	V H H
.874 .311 ligh Ch, .904 .356 .904 .356 ev. 5.1.6	3.0 2452MH 3.0 3.0 3.0 3.0 3.0 5 other emi	z 47.5 42.0 44.0 46.4 ssions were o Measureme Distance to	33.0 31.0 32.6 32.3 detected above to ent Frequency o Antenna	35.5 33.1 35.5 the syste	3.6 3.2 3.6 em noise	-36.2 -36.5 -36.2 -36.2 -36.2 	0.0 0.0 0.0 Preamp (Distance	0.6 0.6 0.6 Gain	45.5 44.5 49.9 ct to 3 mete	34.5 33.1 35.8 ers	74 74	54 54 54 Avg Lim Pk Lim	-28.5 -29.5 -24.1 Average F Peak Field	-19.5 -20.9 -18.2 Field Strengt	V H H
874 311 igh Ch, 904 356 904 356 ev. 5.1.6	3.0 2452MH 3.0 3.0 3.0 3.0 3.0 5 other emi f Dist Read	z 47.5 42.0 44.0 46.4 Ssions were 6 Measureme Distance to Analyzer R	33.0 31.0 32.6 32.3 detected above to ent Frequency Antenna eading	35.5 33.1 35.5 the syste	3.6 3.2 3.6 em noise	-36.2 -36.5 -36.2 -36.2 -36.2 -36.2 	0.0 0.0 0.0 Preamp (Distance Average	0.6 0.6 0.6 Gain Correc Field S	45.5 44.5 49.9 ct to 3 mete Strength @	34.5 33.1 35.8 ers 3 m	74 74	54 54 54 Avg Lim Pk Lim Avg Mar	-28.5 -29.5 -24.1 Average F Peak Field Margin vs	-19.5 -20.9 -18.2 Field Strengt d Strength L . Average L	V H H
874 311 (igh Ch, 904 356 904 356 ev. 5.1.6	3.0 2452MH 3.0 3.0 3.0 3.0 3.0 5 other emi	z 47.5 42.0 44.0 46.4 ssions were o Measureme Distance to	33.0 31.0 32.6 32.3 detected above to ent Frequency Antenna eading actor	35.5 33.1 35.5 the syste	3.6 3.2 3.6 em noise	-36.2 -36.5 -36.2 -36.2 -36.2 	0.0 0.0 0.0 Preamp (Distance Average	0.6 0.6 0.6 Gain Correc Field S	45.5 44.5 49.9 ct to 3 mete Strength @ k Field Stre	34.5 33.1 35.8 ers 3 m	74 74	54 54 54 Avg Lim Pk Lim Avg Mar	-28.5 -29.5 -24.1 Average F Peak Field Margin vs	-19.5 -20.9 -18.2 Field Strengt	V H H

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7.4.4. TRANSMITTER ABOVE 1 GHz FOR 5725 TO 5850 MHz BAND WITH PIFA ANTENNAS

HARMONICS AND SPURIOUS EMISSIONS (802.11a MODE)

roject	ıy:ATH #:06U1 scrip:8	0365														
est Er	gineer:	Devin Chai														
		EBJ antenn 5.8GHz	a													
est Eq	uipmen	<u>t:</u>														
н	orn 1-	18GHz	Pre-an	nplifer	1-260	GHz	Pre-am	plifer	26-40GH	z	н	orn > 18	GHz		Limit	
T119;	S/N: 293	301 @3m	▼ T34 HP	9 8449B		-				1				-	FCC 15.209	-
- Hi Fre	juency Cal	ples ——														
	2 foot		3	foot c	able		12	foot c	able		HPF		eject Filte		k Measurements	
				1001.0	abic								eject Fille	RB	W=VBW=1MHz	
Goi	don 187	207002	-			-	Gordon	1 20313	4001			•			i <mark>ge Measuremen:</mark> 1MHz ; VBW=10I	
	D:			4.77	CT.		D.C.				DI T	. T.	79.7.6			
f GHz	Dist (m)	dBuV	Read Avg. dBuV	AF dB/m	CL طلک	Amp dB	D Corr dB	Fltr dB	Peak dBuV/m	Avg dBuV/m	Pk Lim dBuV/m	-	1	Avg Mar dB	Notes (V/H)	
ow Ch. :	5745MHz															
.660 1.490	3.0 3.0	43.8 50.7	39.5 39.1	35.2 37.2	3.6 3.7	-34.0 -32.5	0.0 0.0	0.0 0.0	48.6 59.1	44.3 47.4	74 74	54 54	-25.4 -14.9	-9.7 -6.6	v v	
660	3.0	44.7	35.3	35.2	3.6	-34.0	0.0	0.0	49.5	40.0	74	54	-24.5	-14.0	н	
.490	3.0	47.0	34.5	37.2	3.7	-32.5	0.0	0.0	55.4	42.8	74	54	-18.6	-11.2	Н	
id Ch, ś 713	785MHz 3.0	45.8	39.2	35.2	3.6	-33.9	0.0	0.0	50.6	44.0	74	54	-23.4	-10.0	v	
1.570	3.0	50.3	39.6	37.2	3.7	-32.5	0.0	0.0	58.7	479	74	54	-15.3	- <mark>6.1</mark>	v	
.713 1.570	3.0 3.0	42.2 46.4	35.7 35.7	35.2 37.2	3.6 3.7	-33.9 -32.5	0.0 0.0	0.0 0.0	47.0 54.8	40 <i>.5</i> 44.1	74 74	54 54	-27.0 -19.2	-13 <i>5</i> -99	H H	
	1													,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
igh Ch. 767	5825MHz 3.0	43.7	38.1	35.2	3.6	-33.9	۵0	0.0	48.5	43.0	74	54	-25.5	-11.0	v	
1.650 .767	3.0 3.0	52.3 43.5	38.6 37.2	37.2 35.2	3.7 3.6	-32.5 -33.9	0.0 0.0	0.0 0.0	60.8 48.3	47.0 42.0	74 74	54 54	-13.2 -25.7	-7.0 -12.0	V H	
1.650	3.0	45.5	37.2 35.2	35.2 37.2	3.7	-32.5	0.0	0.0	46-5 54 <i>-</i> 5	43.6	74	54 54	-19.5	-12.0 -10.4	H H	
	P	lo other emis	sions were dete	ected abo	ve syste	m noise f	loor									
	1			1				1					1			
ev. 5.1.6																
							_	~ .								
	f Dist	Measureme Distance to	ent Frequency Antenna	7		Amp D.Corr	Preamp (Distance		ct to 3 mete	-rc		Avg Lım Pk Lim		Field Strengt d Strength L		
		Analyzer R				Avg			Strength @					. Average L		
	AF	Antenna Fa				Peak			c Field Stre	ngth		Pk Mar	Margin vs	. Peak Limit	t	
	CL	Cable Loss	\$			HPF	High Pas	s Filter								

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HARMONICS AND SPURIOUS EMISSIONS (802.11n HT20 MODE)

н	orn 1-	18GHz	Pre-an	nplifer	1-260	GHz	Pre-am	plifer	26-40GH	Iz	H	orn > 18(GHz		Limit
T119;	S/N: 29	301 @3m	▼ T34 HF	98449B		-				-				•	FCC 15.209
	quency Ca 2 foot		3	foot c	able		121	foot c	able		HPF	Re	ject Filte		Measurements V=VBW=1MHz
Gor	don 187	207002	•			•	Gordon	i 20313	4001			•			<u>ge Measurements</u> MHz ; VBW=10Hz
f GHz	Dist (m)	Read Pk dBuV	Read Avg. dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	Fltr dB	Peak dBuV/m	Avg dBuV/m		Avg Lim dBuV/m	Pk Mar dB	Avg Mar dB	Notes (V/H)
.ow Ch. 5	5745MH	6													
7.660 1.490	3.0 3.0	44.7 50.2	38.5 38.2	35.2 37.2	3.6 3.7	-34.0 -32.5	0.0 0.0	0.0 0.0	49.5 58.5	43.3 46.5	74 74	54 54	-24.5 -15.5	-10.7 -7.5	v v
.660	3.0	42.6	-34.0	0.0	0.0	47.4	39.8	74	54	- 26.6	-14.2	H			
1.490	3.0	49.0	37.9	37.2	3.7	-32.5	0.0	0.0	57.4	46.3	74	54	-16.6	-7.7	H
	5785MHz	48.2	39.8	35.2	3.6	-33.9	0.0	0.0	53.1	44.7	74	£4	-20.9	-9.3	v
7.713 1.570	3.0 3.0	48.2 49.8	39.8 38.4	35.2 37.2	3.6 3.7	-33.9 -32.5	0.0 0.0	0.0 0.0	53.1 58.2	44.7 46.8	74 74	54 54	-20.9 -15.8	-93 -72	v
7.713	3.0	43.3	35.6	35.2	3.6	-33.9	0.0	0.0	48.1	40.4	74	54	- 25.9	- 13.6	Н
11.570	3.0	50.0	37.9	37.2	3.7	-32.5	0.0	0.0	58.4	46.3	74	54	-15.6	-7.7	Н
	5825MH		AF :					<u> </u>				<u>.</u> .		10-	
7.767	3.0 3.0	44.3 51.4	38.4 38.3	35.2 37.2	3.6 3.7	-33.9 -32.5	0.0 0.0	0.0 0.0	49.1 59.8	43.3 46.7	74 74	54 54	-24.9 -14.2	-10.7 -7.3	v v v v
7.767	3.0	44.2	38.0	35.2	3.6	-33.9	0.0	0.0	49.1	42.8	74	54	- 24.9	-11.2	Н
1.650	3.0	52.5	40.1	37.2	3.7	-32.5	0.0	0.0	60.9	48.5	74	54	-13.1	-5.5	Н
	I	No other emis	sions were det	cted abo	ve syste	m noise f	loor								
Rev. 5.1.6		1				I	1		1	1		1			
	f		ent Frequency	7		Amp	Preamp (ield Strength	
	Dist Road	Distance to							t to 3 mete					I Strength Lir	
	Kead AF	Analyzer R Antenna Fa				Avg Peak			Strength @ c Field Stre					. Average Lir . Peak Limit	III.
	CL	Cable Loss				HPF	High Pas						2.200 801 00	. a onic ionifit	

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HARMONICS AND SPURIOUS EMISSIONS (802.11n HT40 MODE)

		11140 2.00	Hz												
	uipmen	_													
		18GHz 301 @3m	Pre-ar	nplifer 8449B			Pre-am	plifer	26-40GH		н	orn > 18	GHz		Limit FCC 15.209
		-	• 134 H	° 8449D		•				•				•	FCC 15.209
	uency Cal <mark>2 foot</mark>		3	footo	able		121	foot c	able		HPF	Re	eject Filte		<u>k Measurements</u> W=VBW=1MHz
Gor	don 187	207002	-			•	Gordon	20313	4001 🗸			•			age Measurements =1MHz ; VBW=10Hz
f GHz	Dist (m)	Read Pk dBuV	Read Avg. dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	Fltr dB	Peak dBuV/m	Avg dBuV/m	Pk Lim dBuV/m	-	Pk Mar dB	Avg Mar dB	Notes (V/H)
ow Ch. 5	755MHz												l		
.673 1.510	3.0 3.0	46.5 47.1	39.0 36.1	35.2 37.2	3.6 3.7	-34.0 -32.5	0.0 0.0	0.0 0.0	51.3 55.5	43.8 44.5	74 74	54 54	-22.7 -18.5	-10.2 -9.5	V V
.673	3.0	47.5	34.3	35.2	3.6	-34.0	0.0	0.0	52 <i>3</i>	39.1	74	54	-21.7	-14.9	Н
1.510	3.0	44.6	33.8	37.2	3.7	-32.5	0.0	0.0	53.0	42.1	74	54	-21.0	-11.9	Н
	785MHz 3.0	45.5	38.5	35.2	3.6	-33.9	0.0	0.0	50.3	43.3	74	54	-23.7	-10.7	v
.713 1.570	3.0	43.5 50.3	38.5 35.2	37.2	3.0	-33.9	0.0	0.0 0.0	50.3 58.7	43.5	74 74	54 54	-23.7 -15.3	-10.7	v
7.713	3.0	43.6	35.9	35.2	3.6	-33.9	0.0	0.0	48.4	40.7	74	54	-25.6	-13.3	H
1.570	3.0	46.8	33.5	37.2	3.7	-32.5	0.0	0.0	55.2	41.9	74	54	-18.8	-12.1	Н
ligh Ch.5 .753	815MH 3.0	44.7	37.2	35.2	3.6	-33.9	0.0	0.0	49.6	42.0	74	54	-24.4	-12.0	v
1.630	3.0	44.7	37.2	37.2	3.7	-32.5	0.0	0.0	49.0 55.6	41.8	74	54 54	-18.4	-12.0	v
.753 1.630	3.0 3.0	43.9 45.7	38.2 33.6	35.2 37.2	3.6	-33.9 -32.5	0.0 0.0	0.0 0.0	48.7 54.1	43.1	74 74	54	-25.3 -19.9	-10.9	H H
1.030	3.0	45./	33.0	37.2	3.7	-325	UU	ບມ	54.1	42.0	74	54	-19.9	-12.0	н
			sions were det				1								
	1	10 other emis	sions were dev	ected and	we sysu	em noise i	100r								
lev. 5.1.6	f	Maagwama	ent Frequency			Amp	Preamp					Arra Lim	Average E	ield Strengt	1. Timit
		Distance to		,		-	-		t to 3 mete	rs		-		l Strength L	
		Analyzer R				Avg			strength @					Average L	
	AF	Antenna Fa				Peak			c Field Stre	ngth		Pk Mar	Margin vs	Peak Limit	t
	CL	Cable Loss				HPF	High Pas	s Filter							

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7.4.5. TRANSMITTER ABOVE 1 GHz FOR 5725 TO 5850 MHz BAND WITH MOMOPOLE ANTENNAS

HARMONICS AND SPURIOUS EMISSIONS (802.11a MODE)

Company Project # EUT De: Test Eng Configur	nce Ce y:ATH #:06U1 scrip:8 gineer: ration:1	ertification S EROS 0365 02.11 n Devin Chan Toxcon ante			Hill Op	oen Fiel	d Site								
Mode: T															
<u>Test Eq</u> u	uipmen	<u>t:</u>													
		18GHz		nplifer		GHz	Pre-am	plifer	26-40GH	IZ	н	orn > 18	GHz		Limit
T119;	S/N: 29	301 @3m	▼ T34 HI	P 8449B		-				-				-	FCC 15.209
Hi Frequ	uency Ca	bles	1												
:	2 foot	cable	3	foot c	able		12	foot c	able		HPF	R	eject Filte		<u>k Measurements</u> 3W=VBW=1MHz
Gore	don 187	207002	-			•	Gordor	n 20313	4001 🚽	í 🗂		•			age Measurements
				_										KBW=	=1MHz ; VBW=10Hz
f GHz	Dist (m)	Read Pk dBuV	Read Avg. dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	Fltr dB	Peak dBuV/m	Avg dBuV/m	Pk Lim dBuV/m	Avg Lim dBuV/m		Avg Mar dB	Notes (V/H)
Low Ch. 5'			шыцу	uD/In	ш	<u>ub</u>	<u>шь</u>	шь	abuv/m	ubu v/m	abu v/m	and and a second second	чь		(V/H)
.660	3.0	44.3	36.3	35.2	3.6	-34.0	0.0	0.0	49.1	41.0	74	54	-24.9	-13.0	v
1.490 .660	3.0 3.0	47.2 47.8	35.5 34.8	37.2 35.2	3.7 3.6	-32.5 -34.0	0.0 0.0	0.0 0.0	55.5 52.6	43.9 39.6	74 74	54 54	-18.5 -21.4	-10.1 -14.4	V H
1.490	3.0	48.6	36.4	37.2	3.7	-32.5	0.0	0.0	57.0	44.8	74	54	-17.0	-9.2	H
lid Ch, 57 .713	785MHz 3.0	43.7	36.2	35.2	3.6	-33.9	0.0	0.0	48.5	41.0	74	54	-25.5	-13.0	v
1.570	3.0	45.7	35.5	37.2	3.7	-32.5	0.0	0.0	54.1	43.9	74	54	-19.9	-10.1	v
.713	3.0	48.5	34.3	35.2	3.6	-33.9	0.0	0.0	53.3	39.1	74	54	-20.7	-14.9	Н
1.570	3.0	49.9	38.5	37.2	3.7	-32.5	0.0	0.0	58.3	46.9	74	54	-15.7	-7.1	H
ligh Ch.5	825MH	ι													
.767	3.0	43.8	36.5	35.2	3.6	-33.9	0.0	0.0	48.6	41.4	74	54	-25.4	-12.6	v
1.650	3.0	46.7	35.0	37.2	3.7	-32.5	0.0	0.0	55.1	43.4	74	54	-18.9	-10.6	 Н
.767 1.650	3.0 3.0	43.5 48.3	35.0 35.9	35.2 37.2	3.6 3.7	-33.9 -32.5	0.0 0.0	0.0 0.0	48.4 56.7	39.9 44.4	74 74	54 54	-25.6 -17.3	-14.1 -9.6	H H
													.	•	
		lo other owic	sions were det	agtad aba	vo cvoto	w voico f	leer								
			SIGHS WELE UEL		ve syste	III IIUISC I	1001								
Rev. 5.1.6								-							
	<u>۔</u>					A	D	a				A T :-	A	2-14 Char -	di T linch
	f Dist	Measureme Distance to	nt Frequency	у		Amp D.Corr	Preamp (ct to 3 mete	***		Avg Lim Pk Lim		Field Streng d Strength I	
		Analyzer Re				Avg			ct to 5 mete Strength @					: Average I	
	AF	Antenna Fa				Peak.			c Field Stre			-	_	. Average 1 . Peak Limi	
	CL	Cable Loss				HPF	High Pas			3					

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HARMONICS AND SPURIOUS EMISSIONS (802.11n HT20 MODE)

		on ante 20 5.8G													
est Equip	<u>pment:</u> n 1-18G	2LI-7	Pre-an	nnlifer	1-260	247	Pre-am	nlifer	26-40GH	-	ц	orn > 18(247		Limit
	N: 29301 (9 8449B		- TIL		pinor	20 40 011					-	FCC 15.209
- Hi Frequen	ncy Cables -														
2 f	foot cab	le	3	foot c	able		12	foot c	able		HPF	Re	ject Filte		<u>k Measurements</u> W=VBW=1MHz
Gordo	n 1872070	02	-			•	Gordon	20313	4001			•			<u>ge Measurements</u> 1MHz ; VBW=10Hz
		ad Pk BuV	Read Avg. dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	Fltr dB	Peak dBuV/m	Avg dBuV/m	Pk Lim dBuV/m		Pk Mar dB	Avg Mar dB	Notes (V/H)
ow Ch. 574	5MHz	44.1	36.6	35.2	3.6	-34.0	0.0	0.0	48.9	41.3	74	54	-25.1	-12.7	v
		44.1 46 <i>.</i> 3	36.0 36.1	35.2	3.0	-34.0	0.0	0.0 0.0	48.9 54.6	44.5	74	54 54	-19.4	-9.5	v
		44.0 50.8	35.0 38.4	35.2 37.2	3.6 3.7	-34.0 -32.5	0.0 0.0	0.0 0.0	48.7 59.1	39.8 46.8	74 74	54 54	-25.3 -14.9	-14.2 -7.2	H H
		50.5	30,4	37.2		-322		0.0		40.8			-145	-/2	
id Ch, 5785 713		43.7	36.1	35.2	3.6	-33.9	0.0	0.0	48.5	40.9	74	54	-25.5	-13.1	v
1.570	3.0 4	49.2	36.7	37.2	3.7	-32.5	0.0	0.0	57.6	45.1	74	54	-16.4	-8.9	v
		42.7 50.0	34.0 38.4	35.2 37.2	3.6 3.7	-33.9 -32.5	0.0 0.0	0.0 0.0	47.5 58.4	38.9 46.7	74 74	54 54	-26.5 -15.6	-15.1 -7.3	<u>н</u> н
							•								
igh Ch.582 .767		44.6	37.2	35.2	3.6	-33.9	0.0	0.0	49.5	42.1	74	54	-24.5	-11.9	v
		47.1	35.2	37.2	3.7	-32.5	0.0	0.0	55 <i>5</i>	43.7	74	54	-18.5	-10.3	V
		43.6 48.4	35.0 35.5	35.2 37.2	3.6 3.7	-33.9 -32.5	0.0 0.0	0.0 0.0	48.4 56.9	39.8 43.9	74 74	54 54	-25.6 -17.1	-14.2 -10.1	<u>н</u> Н
	Ne etl	ter emis:	sions were dete	ected abo	we syste	em noise f	loor								
ev. 5.1.6															
_		tance to	ent Frequency Antenna eading	7		Amp D Corr Avg		Correc	ct to 3 mete Strength @			Pk Lim	Peak Fiel	Field Strengt d Strength L . Average L	imit
A	F Ant	enna Fa ole Loss	ictor			Peak HPF	-	d Peal	c Field Stre			-	_	. Peak Limit	

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HARMONICS AND SPURIOUS EMISSIONS (802.11n HT40 MODE)

Com			y Measurem Services, M		Hill Oj	pen Fiel	d Site								
Proje EUT Test Confi	iguration:	10365	enna												
Test	Equipme	<u>nt:</u>													
	Horn 1	-18GHz	Pre-ar	nplifer	1-26	GHz	Pre-am	plifer	26-40GH	z	н	orn > 1	BGHz		Limit
T1	19; S/N: 2)301 @3m	- T34 HI	P 8449B		•				-				-	FCC 15.209
HI	Frequency C 2 foo	ables	3	foot c	able		12	foot c	able		HPF	F	leject Filte		<u>« Measurements</u> W=VBW=1MHz
	Gordon 18	7207002	•			•	Gordor	n 20313	4001			•		Avera	ge Measurements 1MHz ; VBW=10Hz
f GH		Read Pk dBuV	Read Avg. dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	Fltr dB	Peak dBuV/m	Avg dBuV/m	Pk Lim dBuV/m	· · ·	n Pk Mar ndB	Avg Mar dB	Notes (V/H)
Low C 7.673	h. 5755MH 3.0	z 44.2	37.8	35.2	3.6	-34.0	0.0	0.0	49.0	42.6	74	54	-25.0	-11.4	v
11.510	0 3.0	45.4	33.7	37.2	3.7	-32.5	0.0	0.0	53.8	42.0	74	54	-20.2	-12.0	v
7.673 11.510		43.1 49.0	43.2 36.9	35.2 37.2	3.6 3.7	-34.0 -32.5	0.0 0.0	0.0 0.0	47.9 57.4	48.0 45.2	74 74	54 54	-26.1 -16.6	-6.0 -8.8	H H
Mid C	h, 5785MH	7													
7.713	3.0	43.5	35.6	35.2	3.6	-33.9	0.0	0.0	48.4	40.4	74	54	-25.6	-13.6	v
11.570 7.713		45.7 43.2	33.9 33.1	37.2 35.2	3.7 3.6	-32.5 -33.9	0.0 0.0	0.0 0.0	54.1 48.0	42.3 37.9	74 74	54 54	-19.9 -26.0	-11.7 -16.1	<u>v</u> н
11.570	0 3.0	50.9	36.7	37.2	3.7	-32.5	0.0	0.0	59.3	45.D	74	54	-14.7	-9.0	H
	Ch.5815MI														
7.753		42.5	38.7 31.9	35.2 37.2	3.6 3.7	-33.9 -32.5	0.0 0.0	0.0 0.0	47.3 53.1	43.5 40.3	74 74	54 54	-26.7 -20.9	-10.5 -13.7	v v
7.753	3.0	44.4	34.6	35.2	3.6	-33.9	0.0	0.0	49.2	39.5	74	54	- 24.8	-14.5	H
11.630	0 3.0	49.0	34.9	37.2	3.7	-32.5	0.0	0.0	57 A	43.3	74	54	-16.6	-10.7	H
		No other emis	sions were det	ected abo	we syste	em noise i	loor								
					(1							
Rev. 5	.1.6														
	f Dist		ent Frequenc Antenna	à		Amp D Corr	Preamp (Distance		ct to 3 mete	rs		Avg Lim Pk Lim		Field Strengt d Strength L	
		Analyzer R	-			Avg	-		Strength @			-	_	Average L	
	AF CL	Antenna F Cable Los				Peak HPF	Calculate High Pas		c Field Stre ·	ngth		rk Mar	Margin vs	: Peak Limit	
			-				0								

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7.4.6. WORST-CASE RADIATED EMISSIONS BELOW 1 GHz WITH PIFA ANTENNAS

SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION, HORIZONTAL)

HORIZON	TAL DATA							
Test Compa Proje Model Confi	ition: FCC Operator: any: ect #: L: iguration: of Operati	: Chi : Ath : 060 : AR5 : EUT	n Pang ero <i>s</i> 10365 BXB72 /Laptor)	Ch with	ED4 Ani	tennas)	
		Read			Limit	Over		Page: 1
	Freq	Level	Factor	Level			Remark	
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1	251.160	25.63	13.93	39.56	46.00	-6.44	Peak	
2	373.380	21.29	17.46	38.75	46.00	-7.25	Peak	
3	456.800	19.55	19.36	38.91	46.00	-7.09	Peak	
4	609.090	22.14	21.66	43.80	46.00	-2.20	Peak	
5	708.030	15.71	23.23	38.94	46.00	-7.06	Peak	
6	807.940	17.99	24.69	42.68	46.00	-3.32	Peak	

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SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION, VERTICAL)

VERTICAL DATA

Condition: FCC CLASS-B VERTICAL Test Operator: : Chin Pang Company: : Atheros Project #: : 06U10365 Model: : AR5EXE72 Model: : AR5BXB72 Configuration: : EUT/Laptop Mode of Operation: TX (b mode Mid Ch with ED4 Antennas) Page: 1 Read Limit Over Freq Level Factor Level Line Limit Remark MHz dBuV dB dBuV/m dBuV/m dB 48.430 28.04 10.29 38.33 40.00 -1.67 Peak 1 177.440 25.04 13.11 38.15 43.50 -5.35 Peak 2 3 371.440 22.16 17.44 39.60 46.00 -6.40 Peak 407.330 21.65 18.21 39.86 46.00 -6.14 Peak 4 567.380 19.12 21.12 40.24 46.00 -5.76 Peak 806.000 16.55 24.64 41.19 46.00 -4.81 Peak 5 6

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7.4.7. WORST-CASE RADIATED EMISSIONS BELOW 1 GHz WITH MONOPOLE ANTENNAS

SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION, HORIZONTAL

HORIZO	NTAL DAT	A							
Test Compa Proje Model Confi	ition: FCC Operator: any: ect #: l: iguration: of Operati	: Chi : Ath : 06U : AR5 : EUT	n Pang ero <i>s</i> 10365 BXB72 /Laptop	,	h with	Foxcont	1 Antenna)		
								Page: 1	
		Read			Limit				
	Freq	Level	Factor	Level	Line	Limit	Remark		
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB			
1	150.280	22.34	14.10	36.44	43.50	-7.06	Peak		
2	239.520								
3	239.520	31.57	13.47	45.03	46.00	-0.97	Peak		
4	303.540								
5	303.540								
6	371.440						~		
7	371.440								
8	405.390								
9	606.180								
10 11	707.060 853.530								
11	055.550	1/.1/	25.50	44.4/	40.00	-3.55	rean		
1									

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SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION, VERTICAL

VERTICAL DATA Condition: FCC CLASS-B VERTICAL Test Operator: : Chin Pang Company: : Atheros Project #: : 06010365 Model: : AR5BXB72 Configuration: : EUT/Laptop Mode of Operation: TX (b mode Mid Ch with Foxconn Antenna) Page: 1 Read Limit Over Freq Level Factor Level Line Limit Remark dBuV MHz dB dBuV/m dBuV/m dв 48.430 26.78 10.29 37.07 40.00 -2.93 Peak 1 305.480 24.68 15.80 40.48 46.00 -5.52 Peak 2 373.380 22.00 17.46 39.46 46.00 -6.54 Peak з 403.450 21.55 18.12 39.67 46.00 -6.33 Peak 4 606.180 16.46 21.63 38.09 46.00 -7.91 Peak 5 706.090 17.19 23.17 40.36 46.00 -5.64 Peak 6 924.340 14.47 26.20 40.67 46.00 -5.33 Peak 7

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7.5. POWERLINE CONDUCTED EMISSIONS

<u>LIMIT</u>

\$15.207 (a) Except as shown in paragraphs (b) and (c) of this section, for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table, as measured using a 50 μ H/50 ohms line impedance stabilization network (LISN). Compliance with the provisions of this paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal.

The lower limit applies at the boundary between the frequency ranges.

Frequency of Emission (MHz)	Conducted Limit (dBuV)			
	Quasi-peak	Average		
0.15-0.5	66 to 56 °	56 to 46 *		
0.5-5	56	46		
5-30	60	50		

Decreases with the logarithm of the frequency.

TEST PROCEDURE

The EUT is placed on a non-conducting table 40 cm from the vertical ground plane and 80 cm above the horizontal ground plane. The EUT is configured in accordance with ANSI C63.4.

The resolution bandwidth is set to 9 kHz for both peak detection and quasi-peak detection measurements. Peak detection is used unless otherwise noted as quasi-peak.

Line conducted data is recorded for both NEUTRAL and HOT lines.

RESULTS

No non-compliance noted:

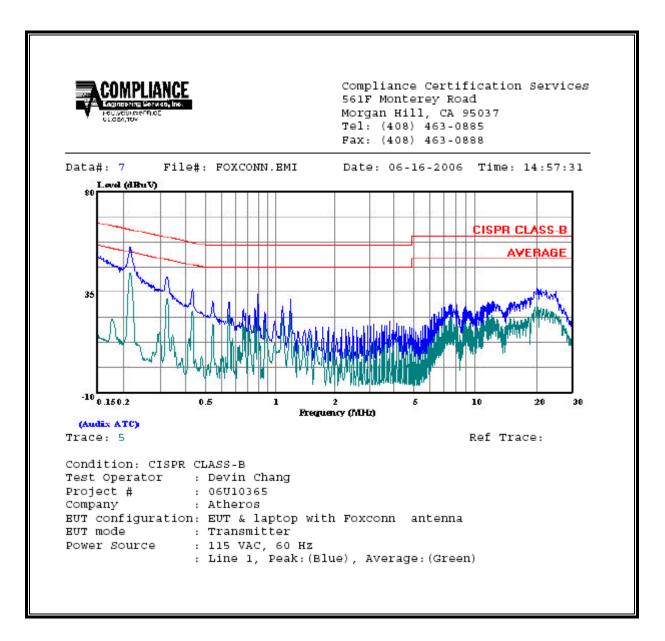
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<u>6 WORST EMISSIONS</u>

CONDUCTED EMISSIONS DATA (115VAC 60Hz)										
Freq.	Reading		Closs	Limit	EN_B	Margin		Remark		
(MHz)	PK (dBuV)	QP (dBuV)	AV (dBuV)	(dB)	QP	AV	QP (dB)	AV (dB)	L1 / L2	
0.22	54.94		42.83	0.00	62.82	52.82	-7.88	-9.99	L1	
0.33	45.00		31.89	0.00	59.45	49.45	-14.45	-17.56	L1	
0.89	33.94		33.94	0.00	56.00	46.00	-22.06	-12.06	L1	
0.22	50.22		39.72	0.00	62.82	52.82	-12.60	-13.10	L2	
0.33	39.44		30.03	0.00	59.45	49.45	-20.01	-19.42	L2	
0.89	34.90		33.89	0.00	56.00	46.00	-21.10	-12.11	L2	
6 Worst I	Data									

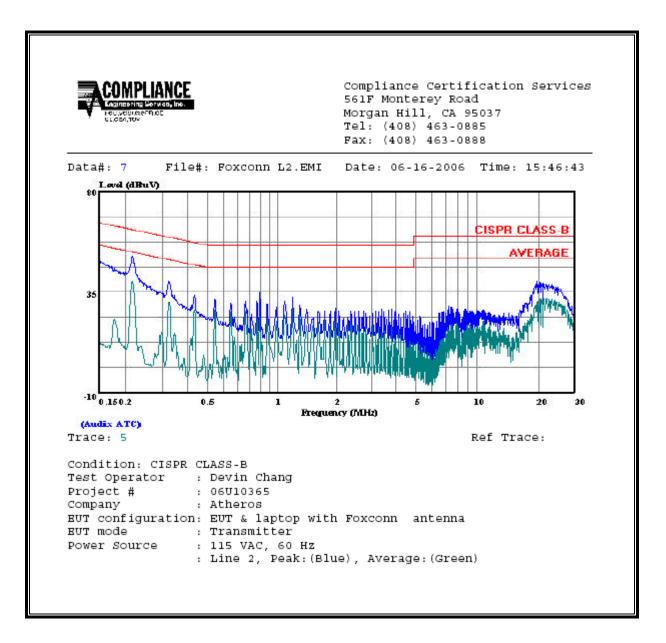
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LINE 1 RESULTS



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LINE 2 RESULTS



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