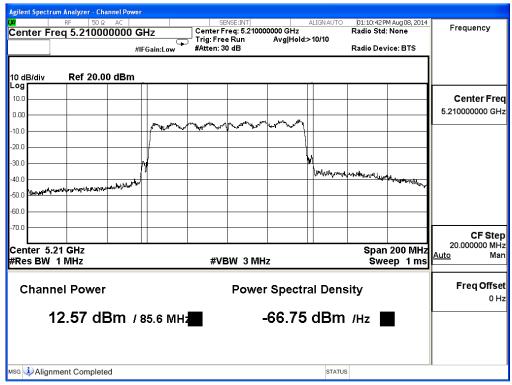
				1 100		e						
									alyzer - Sv			
Frequency	M Aug 07, 2014		ALIGNAUTO		NSE:INT	SE		2 AC		RF		LXI R
. requeries	2E 1 2 3 4 5 6 PE MWWWWW ET P N N N N N	TYF	e: Log-Pwr	Avg Ty		Trig: Free #Atten: 30	HZ NO: Fast Ģ Gain:Low	00000 GI	5.5300	Freq	nter	Cen
Auto Tune	7 4 GHz		Mk			Priten. or	Gain:Luw			7055 7		
	09 dBm	-31.0	1					dBm	f 20.00	Re	B/div	10 d Log
Center Freq 5.530000000 GHz				1	5							10.0 0.00
				~~~		a series	pure					-10.0
Start Freq 5.430000000 GHz	-30.11 dBm		3				2	•	01			-20.0 -30.0
3.43000000 3112	and and and and the	Anduhan	how					al and a start of the start	hendrand	who and	Ind. Prile	-40.0
Stop Fred												-50.0 -60.0
5.63000000 GHz												-70.0
CF Step 20.000000 MHz	00.0 MHz 1001 pts)		Sweep 1			1.0 MHz	#VBV			5.5300 N 820		
<u>Auto</u> Mar	IN VALUE	FUNCTIO	JNCTION WIDTH	CTION F		Y		×		TRC SC		
						-1.62 dl	8 GHz 4 GHz			1 f	N	1
Freq Offset						-31.86 di	0 GHz			1 f	N	3
0 Hz											_	5
			6									6 7
									10			8
							1					10
												11 12
			STATUS									MSG

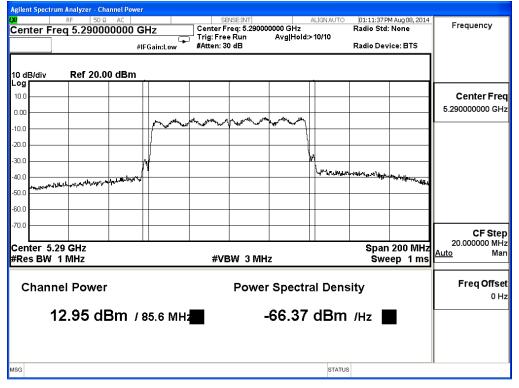
Agilent Spectrum Analyzer - Swept SA							
LX RL RF 50Ω AC		SENSE: INT		ALIGNAUTO Log-Pwr		1 Aug 07, 2014	Frequency
Center Freq 5.690000000 GH	O: East D Trig:	Free Run	Avg Type	. Log-rwi	TYP		
IFG	iain:Low #Atte	en: 30 dB			1994		Auto Tune
10 dB/div Ref 20.00 dBm				Mk	r2 5.647 -28.7	6 GHz 1 dBm	Auto Tune
10.0			1 4				Center Freq
0.00	A						5.69000000 GHz
-10.0		where w	00	- 120			
-20.0	2			<b>∂</b> <sup>3</sup>		-29.46 dBm	Start Fred
-30.0					200000		5.590000000 GHz
-50.0				a creative	and the second	Martal Mara	
-60.0		_					Stop Free
-70.0			_				5.79000000 GHz
Center 5.6900 GHz					Span 2	0.0 MHz	
#Res BW 820 kHz	#VBW 1.0 N	1Hz		Sweep	1.00 ms (1		CF Step 20.000000 MHz
MKR MODE TRC SCL X	Y		NCTION FUI	NCTION WIDTH	FUNCTIO	N VALUE	<u>Auto</u> Mar
1 N 1 f 5.707 ( 2 N 1 f 5.647 (	5 GHz -28.7	18 dBm 71 dBm					
3 N 1 f 5.7320 4 N 1 f 5.7250		10 dBm 94 dBm					Freq Offse
5	-2						0 H:
6 7							
8							
10	2						
11 12							
MSG				STATUS			

#### Maximum conducted output power:

Channel 42

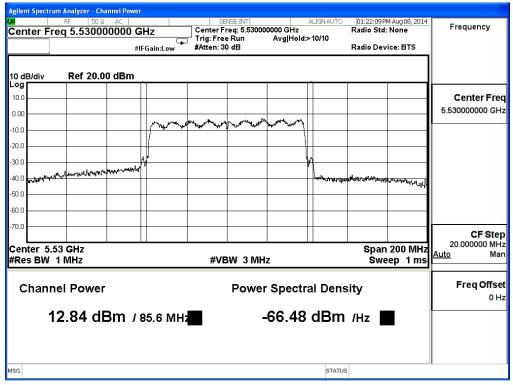


#### Maximum conducted output power:



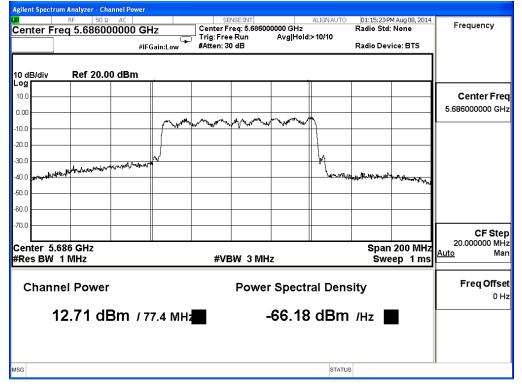
#### Maximum conducted output power:

Channel 106



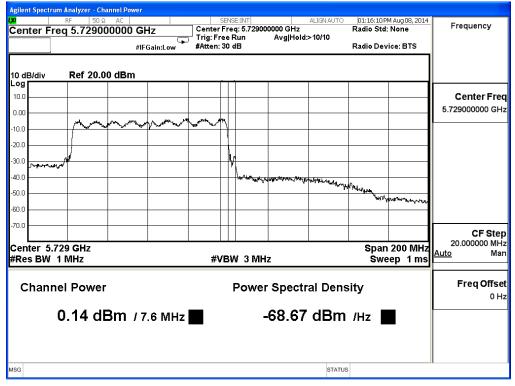
#### Maximum conducted output power:

Channel 138 (Band3)



#### Maximum conducted output power:

Channel 138 (Band4)



# 4. Peak Power Spectral Density

## 4.1. Test Equipment

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
	Spectrum Analyzer	R&S	FSP40 / 100170	Jun, 2014
	Spectrum Analyzer	Agilent	E4407B / US39440758	Jun, 2014
Х	Spectrum Analyzer	Agilent	N9010A / MY48030495	Apr, 2014

Note:

- 1. All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.
- 2. The test instruments marked with "X" are used to measure the final test results.

# 4.2. Test Setup



## 4.3. Limits

- (4) For the band 5.15-5.25 GHz, the peak power spectral density shall not exceed 4 dBm in any 1-MHz band. If transmitting antenna of directional gain greater than 6 dBi are used, the peak power spectral density shall be reduced by the amount in dB that directional gain of the antenna exceeds 6 dBi.
- (5) For the band 5.25-5.35 GHz, the peak power spectral density shall not exceed 11 dBm in any 1-MHz band. If transmitting antenna of directional gain greater than 6 dBi are used, the peak power spectral density shall be reduced by the amount in dB that directional gain of the antenna exceeds 6 dBi.
- (6) For the band 5.725-5.825 GHz, the peak power spectral density shall not exceed 17 dBm in any 1-MHz band. If transmitting antenna of directional gain greater than 6 dBi are used, the peak power spectral density shall be reduced by the amount in dB that directional gain of the antenna exceeds 6 dBi.

# 4.4. Test Procedure

The EUT was setup to ANSI C63.10, 2009; tested to DTS test procedure of FCC KDB-789033 for compliance to FCC 47CFR Subpart E requirements.

The Peak Power Spectral Density using KDB 789033 section F) procedure, Create an average power spectrum for the EUT operating mode being tested by following the instructions in section E)2) for measuring maximum conducted output power using a spectrum analyzer. SA-1 method is selected to run the test.

# 4.5. Uncertainty

± 1.27 dB

# 4.6. Test Result of Peak Power Spectral Density

:	802.11A/B/G/N/AC 1T1R WLAN USB Dongle
:	Peak Power Spectral Density
:	No.3 OATS
:	Mode 1: Transmit (802.11a-6Mbps)
	:

Channel Number	Frequency (MHz)	Measurement Level (dBm)	Required Limit (dBm)	Result
36	5180	3.244	<4	Pass
44	5220	0.540	<4	Pass
48	5240	2.480	<4	Pass
52	5260	2.170	<11	Pass
60	5300	0.790	<11	Pass
64	5320	1.050	<11	Pass
100	5500	0.880	<11	Pass
116	5580	1.250	<11	Pass
140	5700	2.000	<11	Pass

#### Channel 36:

Agilent Spectrum Analyzer - Swept SA							k.
X RF 50 Ω AC Center Freq 5.18000000		SENSE:INT	Avg Type:		TRAC	M Aug 07, 2014 E 1 2 3 4 5 6	Frequency
10 dB/div Ref 20.00 dBm	PNO: Fast 😱 IFGain:Low	Trig: Free Run #Atten: 30 dB	Avg Hold>		5.185 8	25 GHz 44 dBm	Auto Tun
10.0				<b>♦</b> <sup>1</sup>			Center Fre 5.180000000 GH
10.0		Ale and the second s					Start Fre 5.167500000 G⊦
20.0					- Vy	Mar Market	<b>Stop Fre</b> 5.192500000 GH
40.0							CF Ste 2.500000 Mi <u>Auto</u> Mi
60.0							Freq Offs 0 I
-70.0 Center 5.18000 GHz						5.00 MHz	
#Res BW 1.0 MHz	#VBW :	3.0 MHz*		Sweep	•	1001 pts)	
MSG				STATUS	·		



gilent Spectrum Analyzer - Swept SA RL RF 50 Ω AC		SENSE:IN	T ALIGN AUTO	09:31:22 PM Aug 06, 2014	
center Freq 5.22000000	PNO: Fast 😱	Trig: Free Run #Atten: 30 dB	#Avg Type: RMS	TRACE 1 2 3 4 5 6 TYPE A WWWWM DET A N N N N N	Frequency
0 dB/div Ref 20.00 dBm	IFGain:Low	#Allen: 30 dB	Mkr1	5.227 075 GHz 0.54 dBm	Auto Tun
10.0				1	Center Fre 5.220000000 GH
.00					Start Fre 5.207500000 G⊢
0.0				had how a way of a	Stop Fre 5.232500000 G⊦
0.0					CF Ste 2.500000 MH <u>Auto</u> Ma
0.0					Freq Offso 0 ⊦
enter 5.22000 GHz Res BW 1.0 MHz	#VBW	3.0 MHz	Sweep	Span 25.00 MHz 1.00 ms (1001 pts)	
sg		1210101001001	STATUS		

Channel 44:

Channel 48:

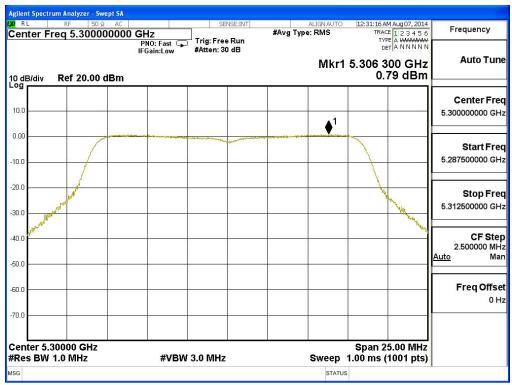




gilent Spectrum Analyzer - Swept SA RL RF 50 Ω AC		SENSE:INT	ALIGNAUTO	12:21:08 AM Aug 07, 2014	
enter Freq 5.26000000	) GHz PNO: Fast 😱 IFGain:Low	Trig: Free Run #Atten: 30 dB	#Avg Type: RMS	TRACE 1 2 3 4 5 6 TYPE A WAYAWA DET A N N N N N	Frequency
0 dB/div Ref 20.00 dBm	IFGain:Low	#Atten: 50 dB	Mkr1	5.267 100 GHz 2.17 dBm	Auto Tun
				1	Center Fre 5.260000000 GH
0.0	99999-56-00,00-00,00-00,00,00,00,00,00,00,00,00,	And Segmenting - Sugar Succession			Start Fre 5.247500000 G⊢
0.0				And the second	Stop Fre 5.272500000 GH
0.0					CF Ste 2.500000 MH Auto Ma
0.0					Freq Offs 0 F
enter 5.26000 GHz Res BW 1.0 MHz	#VPW	3.0 MHz		Span 25.00 MHz 1.00 ms (1001 pts)	
	#VDVV	3.0 IVITIZ	sweep		

Channel 52:

Channel 60:

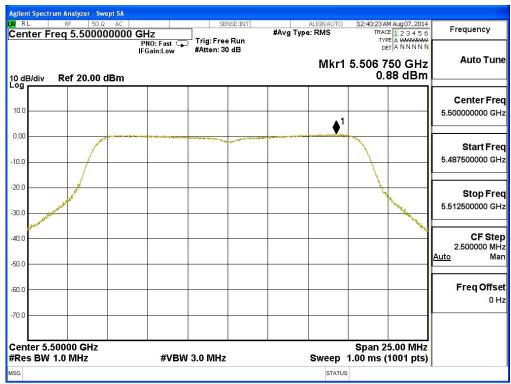




gilent Spectrum Analyzer - Swept SA G RL RF 50 Ω AC		SENSE:	ALC: NOT	ALIGN AUTO	12:35:23 AM Aug 07, 2	014
Center Freq 5.320000000	PNO: Fast 😱	Trig: Free Ru #Atten: 30 dB	#Avg Ty n	pe: RMS	TRACE 1 2 3 4 TYPE A WWW DET A N N N	56 Frequency
0 dB/div Ref 20.00 dBm	IFGain:Low	#Atten: 30 dB		Mkr1	5.326 725 GI 1.05 dB	Hz Auto Tun
10.0				1		Center Fre 5.320000000 GH
0.00			۵۵۵۹۵, ۵۰۰ <sub>م</sub> ینه <mark>میرند. بینه</mark>	<u></u>		Start Fre 5.307500000 GH
20.0					The start water the start wate	Stop Fre 5.332500000 G⊢
0.0 m <sup>44/44</sup>						CF Ste 2.500000 MH <u>Auto</u> Ma
0.0						Freq Offs 0 ⊦
20.0 Center 5.32000 GHz Res BW 1.0 MHz	#VBW	3.0 MHz		Sweep	Span 25.00 M 1.00 ms (1001 p	
sg				STATUS		,

Channel 64:

Channel 100:





-	52:09 AM Aug 07, 2014	12:52:09.	ALIGN AUTO		SENSE:INT		AC	RF 50 Ω	RL
Frequency	TRACE 1 2 3 4 5 6 TYPE A WWWWW DET A N N N N N	T	e: RMS	#Avg Typ	Trig: Free Run #Atten: 30 dB	Hz PNO: Fast 😱 FGain:Low	0000	eq 5.58000	enter Fi
Auto Tur	36 325 GHz 1.25 dBm		Mkr1				lBm	Ref 20.00 d	) dB/div
Center Fre									0.0
5.58000000 GH									
<b>Start Fre</b> 5.567500000 GH				and the second descent	and the second se				.00
Stop Fre		7							0.0
5.592500000 GH	The star								0.0
CF Ste 2.500000 MH Auto Ma									D.0 D.0
Freq Offs									0.0
									0.0
	an 25.00 MHz ms (1001 pts)		Sweep		3.0 MHz	#VBW	<u> </u>	8000 GHz .0 MHz	enter 5.4 Res BW

Channel 116:

Channel 140:

RL RF 50 Ω AC enter Freq 5.700000000	PNO: East ( ) I'l	g: Free Run ten: 30 dB	#Avg Typ	ALIGNAUTO	TYPE	ug 07, 2014 2 3 4 5 6 WWWWWW N N N N N	Frequency
dB/div Ref 20.00 dBm	IFGain:Low #A	ten. so de		Mkr1	5.707 22		Auto Tun
0.0					1		Center Fre 5.700000000 GH
.00	200-1-1-0-10-10-10-10-10-10-10-10-10-10-1	And for the second design of t	have a second	2000-1200-0200-7			<b>Start Fre</b> 5.687500000 GH
0.0					- An	Warman .	<b>Stop Fr</b> 5.712500000 GI
0.0							<b>CF St</b> 2.500000 M <u>Auto</u> M
							Freq Offs 0
0.0							
enter 5.70000 GHz Res BW 1.0 MHz	#VBW 3.0	MHz		Sweep	Span 25.0 1.00 ms (10	00 MHz 01 pts)	

Product	:	802.11A/B/G/N/AC 1T1R WLAN USB Dongle
Test Item	:	Peak Power Spectral Density
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit (802.11n-20BW 7.2Mbps)

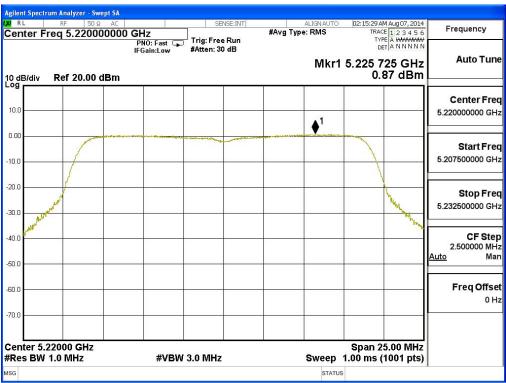
Channel Number	Frequency (MHz)	Measurement Level (dBm)	Required Limit (dBm)	Result
36	5180	1.410	<4	Pass
44	5220	0.870	<4	Pass
48	5240	1.470	<4	Pass
52	5260	1.380	<11	Pass
60	5300	1.240	<11	Pass
64	5320	3.777	<11	Pass
100	5500	0.810	<11	Pass
116	5580	1.310	<11	Pass
140	5700	2.220	<11	Pass



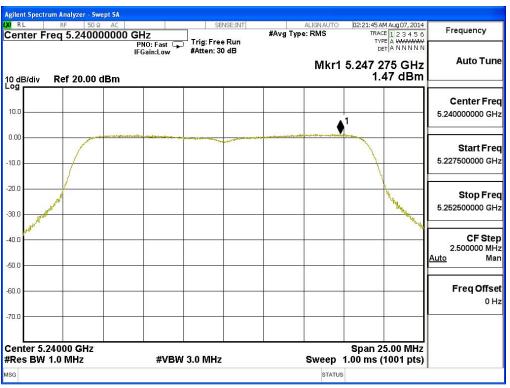
		0		
Agilent Spectrum Analyzer - Swept				
X RL RF 50Ω A Center Freq 5.1800000		ALIGNAUTO #Avg Type: RMS	TRACE 1 2 3 4 5 6 TYPE A WWWWW	Frequency
10 dB/div Ref 20.00 dB	IFGain:Low #Atten: 30 dB	Mkr1	5.185 850 GHz 1.41 dBm	Auto Tune
10.0				Center Freq 5.180000000 GHz
10.0	under all an annual second and the	an - Carrier and a state of the		Start Fred 5.167500000 GH2
20.0				Stop Fred 5.192500000 GHz
40.0				CFStep 2.500000 MH Auto Mar
50.0				Freq Offse
70.0				
Center 5.18000 GHz #Res BW 1.0 MHz	#VBW 3.0 MHz	Sweep	Span 25.00 MHz 1.00 ms (1001 pts)	
ISG		STATU	s	

Channel 36

Channel 44

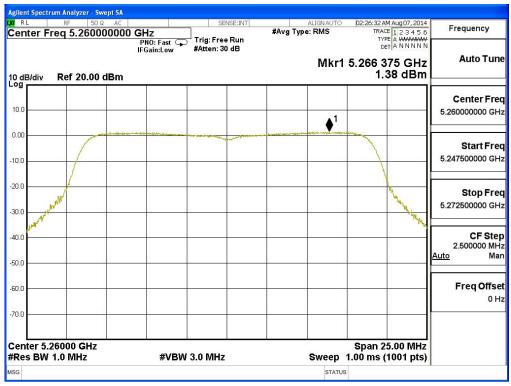






Channel 48

Channel 52

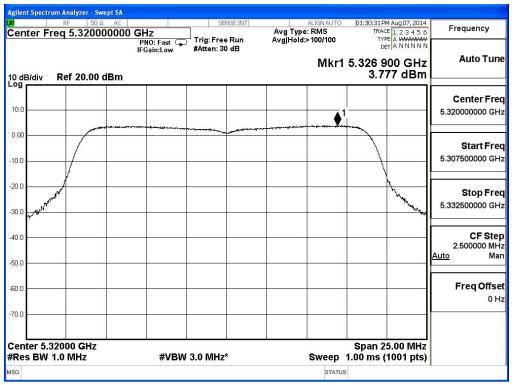




			-				
						n Analyzer - Swept SA	gilent Spectr
-	02:33:52 AM Aug 07, 2014	ALIGN AUTO		SENSE:INT		RF 50 Ω AC	RL
Frequency	TRACE 1 2 3 4 5 6	e: RMS	#Avg T			eq 5.30000000	enter F
	TYPE A WWWWW DET A N N N N N			<sup>1</sup> Trig: Free Run #Atten: 30 dB	PNO: Fast 😱 IFGain:Low		
Auto Tun	200 005 011-	Miland			II Gam.Low		
	.306 225 GHz 1.24 dBm	WIKET					
	1.24 UBIII					Ref 20.00 dBm	) dB/div
Center Fre							
							0.0
5.30000000 GH		<b>_1</b>					0.0
						1. March 1. March 1. March 1.	
Start Fre			*	and a second sec			.00
						1	
5.287500000 GH	1					1	0.0
						1	
Stop Fre	<u> </u>					/	0.0
5.312500000 GH	ma					ast.	
5.312500000 GH	Ture						0.0
	Mr.						MICH
CF Ste			_				0.0
2.500000 MH							
<u>Auto</u> Ma							0.0
							0.0
Freq Offse							0.0
0 H							0.0
•							
							0.0
	Span 25.00 MHz					0000 GHz	enter 5.
	00 ms (1001 pts)	Sweep 1		3.0 MHz	#VBW		Res BW
	/	STATUS					G
		SIAIOS					~

Channel 60

Channel 64





RL	u <mark>m Analyzer - Swept S</mark> RF 50 Ω AC		SENSE:INT	ALIGNAUTO		Frequency
enter Fr	eq 5.5000000	00 GHz PNO: Fast IFGain:Low	Trig: Free Run #Atten: 30 dB	#Avg Type: RMS	TRACE 1 2 3 4 5 TYPE A WWWW DET A N N N N	W IN
0 dB/div og	Ref 20.00 dBn	1		Mkr1	5.507 650 GH 0.81 dBr	
						Center Fre
10.0					•1	5.500000000 GH
).00	1	A Second of the second s	and the second	and and a second and		Start Fre
10.0	1					5.487500000 GH
30.0	www.				Multine	Stop Fre 5.512500000 GH
0.0					- Winny	CF Ste
0.0						2.500000 MH Auto Ma
0.0						Freq Offs
0.0						0+
enter 5.5 Res BW	0000 GHz 1.0 MHz	#VBW	3.0 MHz	Sweep	Span 25.00 MH 1.00 ms (1001 pts	
G				STATU		

**Channel 100** 

Channel 116

				•		
gilent Spec	trum Analyzer - Swept Si	Δ				
RL	RF 50 Ω AC		SENSE:INT	ALIGNAUTO		Fraguanay
enter	Freq 5.5800000	00 GHz PNO: Fast 🖵 IFGain:Low	] Trig: Free Run #Atten: 30 dB	#Avg Type: RMS	TRACE 1 2 3 4 5 6 TYPE A WWWWW DET A N N N N N	Frequency
0 dB/div	Ref 20.00 dBn	1		Mkr1	5.585 250 GHz 1.31 dBm	Auto Tu
g						Center Fr
0.0						5.580000000 G
				•1		0.000000000
.00		angen selde die Frankelen gesche Anderste Barren gesche	adamete ide college and address of			Start Fr
0.0					1	5.567500000 G
0.0					h.	Stop Fr
0.0	and the state of t				New You	5.592500000 G
And and a					- Internet	
0.0						CF St 2.500000 M
						Auto N
0.0						
0.0						Freq Offs
						0
0.0						
ontor 5	.58000 GHz				Span 25.00 MHz	
	/ 1.0 MHz	#VBW	3.0 MHz	Sweep	1.00 ms (1001 pts)	
G				STATU	s	1



0 GHz PNO: Fast 😱 IFGain:Low	Trig: Free Run #Atten: 30 dB	#Avg Type: RMS	TYP	E123456	Frequency
			DE		Auto Tun
		IVIK	r1 5.705 2 2.2	22 dBm	
					Center Fre
		1			5.700000000 GI
and and a second se	and a state of the second	and a second	- I -		Start Fr
			1		5.687500000 GI
				M.	Stop Fr
				What have been	5.712500000 G
					CF Sto 2.500000 M
					<u>Auto</u> M
					Freq Offs
			_		0
			Snap 24	5 00 MH-	
#VBW	3.0 MHz	Swee			
		#VBW 3.0 MHz	#VBW 3.0 MHz Swee	Span 2:	#VBW 3.0 MHz

Channel 140

Product	:	802.11A/B/G/N/AC 1T1R WLAN USB Dongle
Test Item	:	Peak Power Spectral Density
Test Site	:	No.3 OATS
Test Mode	:	Mode 3: Transmit (802.11n-40BW 15Mbps)

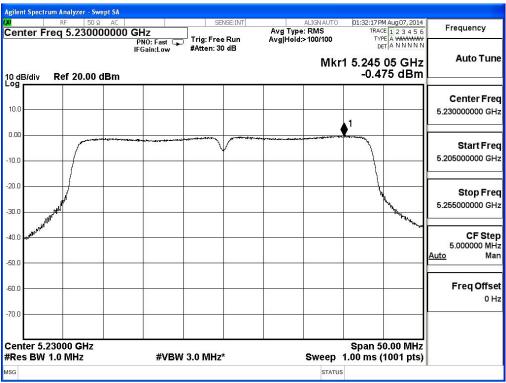
Channel Number	Frequency (MHz)	Measurement Level (dBm)	Required Limit (dBm)	Result
38	5190	-3.350	<4	Pass
46	5230	-0.475	<4	Pass
54	5270	-3.920	<11	Pass
62	5310	-4.220	<11	Pass
102	5510	-1.286	<11	Pass
110	5550	-0.510	<11	Pass
134	5670	-4.750	<11	Pass



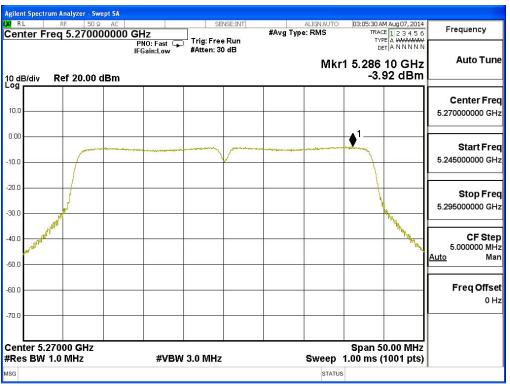
							lyzer - Swept SA	t Spectrun
Frequency	57:26 AM Aug 07, 2014		ALIGN AUTO		SENSE:INT		50 Ω AC	L
	TRACE 1 2 3 4 5 6 TYPE A WWWWW DET A N N N N N		e: RMS	#Avg Ty	Trig: Free Run #Atten: 30 dB	) GHz PNO: Fast ⊊ IFGain:Low	5.190000000	ter Fre
Auto Tur	205 50 GHz -3.35 dBm	1 5.20 -3	Mkr				20.00 dBm	3/div
Center Fre								
5.190000000 GH								
Start Fre	~	•1	and a construction of the second	and and an arguest	marginer paral	and the second second	Denter and the stand of the	
5.165000000 GH		}					1	
Stop Fre								
5.215000000 GI								
CF Ste	Munay.							A MARTIN
5.000000 M Auto M	and the second se							-Aller Pres
Freq Offs				_				
01								
	oan 50.00 MHz ms (1001 pts)		Sweep		3.0 MHz	#VBW		ter 5.19 s BW 1.
			STATUS					

**Channel 38** 

Channel 46







Channel 54

Channel 62

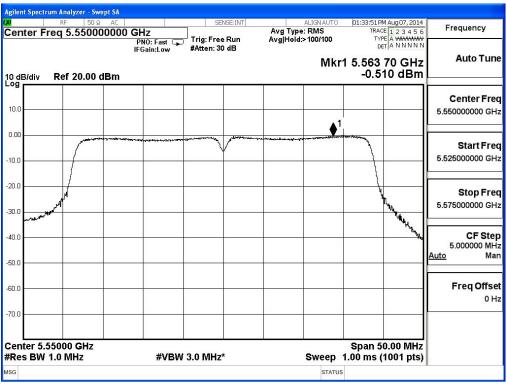




nem spectrum	n Analyzer - Swept S RF 50 Ω A		SENSE:INT	ALIGN AUT		
enter Fre	q 5.5100000	00 GHz PNO: Fast G IFGain:Low	Trig: Free Run #Atten: 30 dB	Avg Type: RMS Avg Hold:>100/100	TRACE 1 2 3 4 5 6 TYPE A WAYNAM DET A N N N N N	
dB/div I	Ref 20.00 dBn	1		МІ	kr1 5.524 70 GHz -1.286 dBm	
						Center Fre
					<b>▲</b> 1	5.510000000 GH
00						Start Fre
).0						5.485000000 GH
.0	کیل					Stop Fre
0 martine	<sup>10</sup>					5.535000000 GH
0					لرير الريمي	CF Ste 5.000000 MH
.0						<u>Auto</u> Ma
0						Freq Offs
.0						01
enter 5.51 Res BW 1.		#VBV	V 3.0 MHz*	Sweep	Span 50.00 MHz 1.00 ms (1001 pts)	
i				STA	TUS	

Channel 102

Channel 110







Channel 134

Product	:	802.11A/B/G/N/AC 1T1R WLAN USB Dongle
Test Item	:	Peak Power Spectral Density
Test Site	:	No.3 OATS
Test Mode	:	Mode 4: Transmit (802.11ac-20BW-7.2Mbps)

Channel Number	Frequency (MHz)	PPSD/MHz (dBm)	Total PPSD/MHz (dBm)1	Required Limit (dBm)	Result
144	5720(Band3)	3.460	3.460	<11	Pass
144	5720(Band4)	3.240	3.240	<17	Pass

	Ω AC	SENSE:INT	ALIGN AUTO	09:22:30 PM Aug 07, 2014	Frequency
enter Freq 5.7200	100000 GHz PNO: Fast G IFGain:Low	Trig: Free Run Atten: 30 dB	Avg Type: RMS Avg Hold:>100/100	TRACE 123456 TYPE A <del>MWWWW</del> DET A P N N N N	
dB/div Ref 20.00	dBm		Mkr3	5.725 600 GHz 2.611 dBm	Auto Tur
<b>g</b> 1.0	2		<b>1_3</b>		Center Fr
					5.720000000 G
0				25.12 dBm	Start Fr
.0					5.707500000 G
.0					Stop Fr
.0					5.732500000 G
enter 5.72000 GHz es BW 1.0 MHz	#VB\	V 3.0 MHz*	Sweep	Span 25.00 MHz 1.00 ms (1001 pts)	CF St 2.500000 M
R MODE TRC SCL	× 5,725 000 GHz	2.667 dBm	UNCTION FUNCTION WIDTH	FUNCTION VALUE	Auto N
N 1 f	5.712 950 GHz 5.725 600 GHz	2.309 dBm 2.611 dBm			Freq Offs
					0

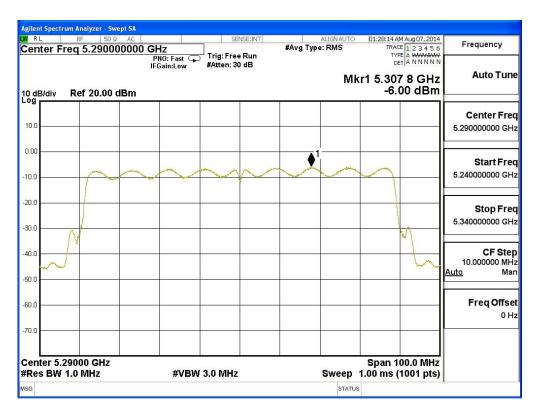
Product	:	802.11A/B/G/N/AC 1T1R WLAN USB Dongle
Test Item	:	Peak Power Spectral Density
Test Site	:	No.3 OATS
Test Mode	:	Mode 5: Transmit (802.11ac-40BW-15Mbps)

Channel Number	Frequency (MHz)	PPSD/MHz (dBm)	Total PPSD/MHz (dBm)1	Required Limit (dBm)	Result
140	5710(Band3)	1.180	1.180	<11	Pass
142	5710(Band4)	-2.130	-2.130	<17	Pass

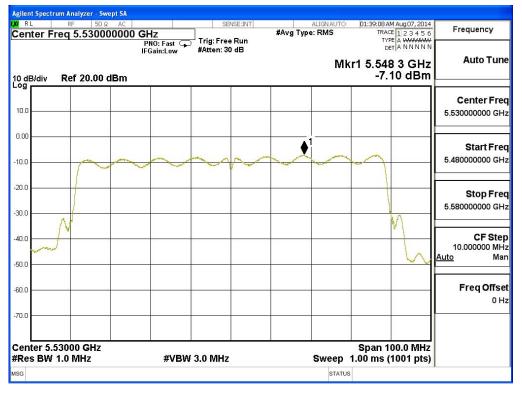
g <mark>ilent Spectrum Analyzer - Sw</mark> RL RF 50Ω		SENSE:INT	ALIGNAUTO	01:07:04 AM Aug 07, 2014	
enter Freq 5.71000			#Avg Type: RMS	TRACE 1 2 3 4 5 6 TYPE A WWWWW DET A N N N N N	Frequency
0 dB/div <b>Ref 20.00</b> d	dBm		Mkr	3 5.725 05 GHz -3.66 dBm	Auto Tun
og 10.0 0.00				3	Center Fre 5.710000000 G⊦
0.0					Start Fre 5.685000000 G⊦
50.0 50.0 70.0					Stop Fre 5.735000000 GH
enter 5.71000 GHz Res BW 1.0 MHz	#VBI	W 3.0 MHz	Sweep	Span 50.00 MHz 1.00 ms (1001 pts)	CF Ste 5.000000 MH
KR MODE TRC SCL 1 N 1 f 2 N 1 f	× 5.725 00 GHz 5.724 60 GHz	-4.00 dBm -3.68 dBm	JNCTION FUNCTION WIDTH	FUNCTION VALUE	<u>Auto</u> M:
3 N 1 f 4 5 6 8	5.725 05 GHz	-3.66 dBm			Freq Offs 0 I
7 8 9 0					
12					

Product	:	802.11A/B/G/N/AC 1T1R WLAN USB Dongle
Test Item	:	Peak Power Spectral Density
Test Site	:	No.3 OATS
Test Mode	:	Mode 5: Transmit (802.11ac-40BW-15Mbps)

Channel Number	Frequency (MHz)	PPSD/MHz (dBm)	Total PPSD/MHz (dBm)ı	Required Limit (dBm)	Result
42	5210	-8.660	-8.660	<4	Pass
58	5290	-6.920	-6.920	<4	Pass
106	5530	-7.890	-7.890	<11	Pass
138	5690 (Band3)	-3.190	-3.190	<11	Pass
138	5690 (Band4)	-8.110	-8.110	<17	Pass







Channel 58

**Channel 106** 





		0			
Agilent Spectrum Analyzer	- Swept SA				
	50 Ω AC	SENSE:INT	ALIGN AUTO	02:04:45 AM Aug 07, 2014	Frequency
Center Freq 5.69	0000000 GHz PNO: Fast IFGain:Low		#Avg Type: RMS	TRACE 1 2 3 4 5 6 TYPE A WWWWW DET A N N N N N	
	00 dBm		Mk	r3 5.726 3 GHz -7.52 dBm	Auto Tune
-og 10.0 0.00 -10.0			2	3	Center Free 5.690000000 GH
20.0				h	Start Fre 5.640000000 GH
50.0 50.0 70.0					Stop Fre 5.740000000 G⊢
enter 5.69000 GH Res BW 1.0 MHz		3W 3.0 MHz		Span 100.0 MHz 1.00 ms (1001 pts)	CF Ste 10.000000 M⊦
KR MODE TRC SCL	× 5.725 0 GHz	-8.10 dBm	FUNCTION FUNCTION WIDTH	FUNCTION VALUE	<u>Auto</u> Ma
2 N 1 f 3 N 1 f 4 5 6 6	5.708 6 GHz 5.726 3 GHz	-7.15 dBm -7.52 dBm			Freq Offse 0 H
7 8 9 10 11 12					
sg	J,		STATUS	<u> </u>	

Channel 138

# 5. Peak Excursion

# 5.1. Test Equipment

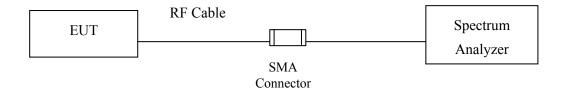
	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
	Spectrum Analyzer	R&S	FSP40 / 100170	Jun, 2014
	Spectrum Analyzer	Agilent	E4407B / US39440758	Jun, 2014
Х	Spectrum Analyzer	Agilent	N9010A / MY48030495	Apr., 2014

Note:

- 1. All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.
- 2. The test instruments marked with "X" are used to measure the final test results.

# 5.2. Test Setup

### **Conduction Power Measurement**



## 5.3. Limits

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

# 5.4. Test Procedure

The EUT was setup to ANSI C63.10, 2009; tested to DTS test procedure of FCC KDB-789033 for compliance to FCC 47CFR Subpart E requirements.

Step 1: Set the spectrum analyzer or EMI receiver span to view the entire emission bandwidth.

Step 2: Find the maximum of the peak-max-hold spectrum.

(Set RBW = 1 MHz, VBW  $\geq$  3 MHz, Detector = peak, Trace mode = max-hold, Allow the sweeps to continue until the trace stabilizes,Use the peak search function to find the peak of the spectrum.)

Step 3: Use the procedure found under KDB-789033 F) to measure the PPSD.

Step 4: Compute the ratio of the maximum of the peak-max-hold spectrum to the PPSD.

## 5.5. Uncertainty

± 1.27 dB

### Test Result of Peak Excursion

Product : 802.11A/B/G/N/AC 1T1R WLAN USB Dongle

Test Item	:	Peak Excursion
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit (802.11a-6Mbps)

Channel No.	Frequency	Data Rate	Measurement Level	Required Limit	Result
	(MHz)	(Mbps)	(dB)	(dB)	ittosuit
	5500	6	7.660	<13	Pass
100		12	8.640	<13	Pass
100		24	8.850	<13	Pass
		54	8.530	<13	Pass

# Channel 100:

Agilent Spectrum Analyzer - Swe					
X RL RF 50 Ω Center Freq 5.50000		SENSE:INT	ALIGNAUTO #Avg Type: RMS	12:40:54 AM Aug 07, 2014 TRACE 1 2 3 4 5 6 TYPE A MWWWW	Frequency
10 dB/div <b>Ref 20.00 d</b>	IFGain:Low	#Atten: 30 dB	Mkr1	5.506 000 GHz 8.43 dBm	Auto Tune
Log 10.0 -10.0 -20.0 Thereadle and the second se			¢1_2	and	Center Freq 5.500000000 GHz
-20.0					Start Freq 5.487500000 GHz
-50.0					Stop Fred 5.512500000 GHz
Center 5.50000 GHz #Res BW 1.0 MHz	#VB\	N 3.0 MHz		Span 25.00 MHz 1.00 ms (1001 pts) EUNCTION VALUE	
1 N 2 f   2 N 1 f   3 - - -   4 - - -   5 - - 6	5.506 000 GHz 5.506 750 GHz	8.43 dBm 0.88 dBm			Freq Offset
7 8 9 10 11 12					
MSG			STATU	3	1



RL	r <mark>um Analyzer - Sw</mark> RF 50 Ω		SENSE: IN	ALIGNAUTO	12:44:48 AM Aug 07, 2014	-
enter F	req 5.5000			#Avg Type: RMS	TRACE 1 2 3 4 5 6 TYPE A MWWWW DET A P N N N N	Frequency
dB/div	Ref 20.00	dBm		Mkr1	5.495 200 GHz 10.51 dBm	
99 0.0 00 0.0	TOTAL OF OUR OF THE OWNER	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	and the second	2	and the second second	Center Fre 5.500000000 GH
0.0 0.0 0.0					- Villing	Start Fre 5.487500000 G⊦
0.0 0.0 0.0						Stop Fre 5.512500000 GH
	.50000 GHz / 1.0 MHz	#VI	BW 3.0 MHz	Sweep	Span 25.00 MHz 1.00 ms (1001 pts)	
	RESCL	× 5.495 200 GHz 5.506 500 GHz	10.51 dBm 1.87 dBm	FUNCTION FUNCTION WIDTH	FUNCTION VALUE	Auto M
3 4 5 5		0.000 000 0112				Freq Offs 0
7 3 9 0 1 2						
3				STATU		

RL RF 50 Ω	AC	SENSE:INT	ALIGNAUTO	12:45:46 AM Aug 07, 2014	-
nter Freq 5.5000	DOOOO GHz PNO: Fast G IFGain:Low	Trig: Free Run #Atten: 30 dB	#Avg Type: RMS	TRACE 1 2 3 4 5 6 TYPE A MWWWW DET A P N N N N	Frequency
Mkr1 5.505 675 GHz طB/div Ref 20.00 dBm 10.22 dBm					Auto Tu
9 0 00 0 0 0 0 0 0 0 0 0 0		~ U(II	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		Center F 5.500000000 (
0					Start Fi 5.487500000 0
0					Stop F 5.512500000 (
nter 5.50000 GHz es BW 1.0 MHz		V 3.0 MHz		Span 25.00 MHz 1.00 ms (1001 pts)	CF S 2.500000 M
MODE TRC SCL N 2 f N 1 f	× 5.505 675 GHz 5.506 875 GHz	10.22 dBm 1.37 dBm	UNCTION FUNCTION WIDTH	FUNCTION VALUE	Auto 1
					Freq Off (