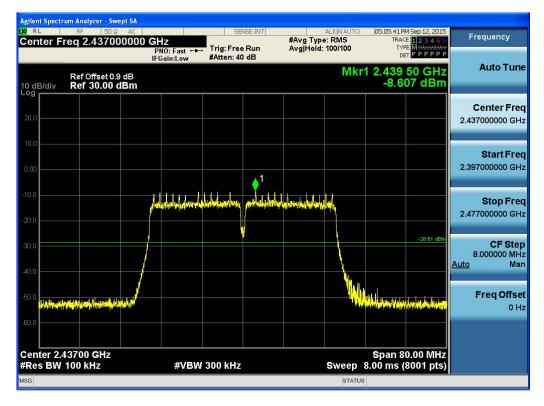
Agilent Spectrum Analyzer - Swept SA					
RL RF 50 Ω AC Center Freq 12.500000000	GHz	ASE:INT #Avg Typ		05:04:27 PM Sep 12, 2015 TRACE 1 2 3 4 5 5 TYPE M	Frequency
Ref Offset 0.9 dB	PNO: Fast +++ Trig: Free IFGain:Low #Atten: 30			4.903 750 GHz -53.665 dBm	Auto Tune
10.9					Center Freq 12.500000000 GHz
-9.10					Start Freq 10.000000000 GHz
-19.1				-28.43 dBm	<b>Stop Freq</b> 15.000000000 GHz
-39.1				A	CF Step 500.000000 MHz <u>Auto</u> Man
-69.1 <mark>- Lynter oll bei an d<sup>4</sup>Mittatel tal bei an dial bei an dia</mark>	n, daga paningka kapangan ng pangangan kapangan ng pangan kapangan kapangan kapangan ng pangangan kapangan ng p	t tal Doordoor (ale tal a tal barren an t An tal a tal barren an tal b	in a la l	, la persona de seconda de la contra de la con Contra de la contra d	Freq Offset 0 Hz
-69.1 Start 10.000 GHz #Res BW 100 kHz	#VBW 300 kHz		Swoon	Stop 15.000 GHz	
#Res BW 100 KHZ	#VBW 300 KH2		Sweep	478 ms (8001 pts)	

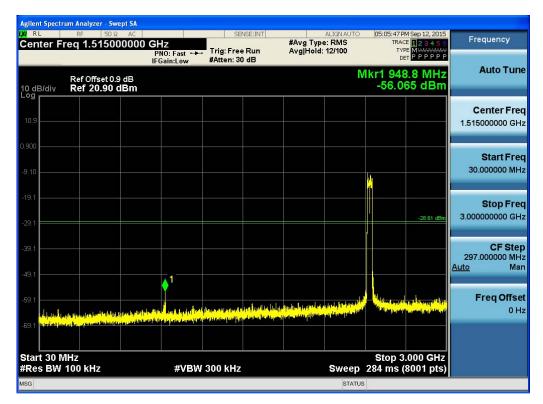
(Plot 4.6.4 A5: Channel 3: 2422MHz @ 802.11n HT40)

Center Freq 20.00000000 GHz IFGain:Low   Trig: Free Run #Atten: 32 dB   #Avg Type: RMS Avg Hold: 5/100   Trace II 23 4 5 5 Type P P P P Det P P P P P P P P Det P P P P P P P P P Det P P P P P P P P P P P P P P P P P P P	X/ RL	RF 50 Q AC		SE	NSE:INT		ALIGN AUTO	05:04:34 PM	Sep 12, 2015	
Ref Offset 0.9 dB   WIKT 1 24.61 20 GHz     10 dB/div   Ref 22.90 dBm   -44.557 dBm     12.9   -44.557 dBm   -44.557 dBm     12.9   -44.557 dBm   -44.557 dBm     12.9   -44.557 dBm   -44.557 dBm     2.90   -44.557 dBm   -44.557 dBm     2.91   -44.557 dBm   -44.557 dBm <th></th> <th></th> <th>PNO: Fast +&gt;</th> <th>Trig: Free</th> <th>e Run</th> <th></th> <th>e: RMS</th> <th>TRACE</th> <th>123456 Mwwwww</th> <th>Frequency</th>			PNO: Fast +>	Trig: Free	e Run		e: RMS	TRACE	123456 Mwwwww	Frequency
12.9	10 dB/div						Mkr1			Auto Tun
7.10 Image: Construction of the second of	12.9									Center Fre 20.000000000 GH
27.1 28.43 cm Stop 25.00000000   -37.1 -37.4 -37.4 -37.4 -37.4 -37.4   -47.1 -37.4 -37.4 -37.4 -37.4   -57.3 -37.4 -37.4 -37.4 -37.4										<b>Start Fre</b> 15.000000000 GH
-47.1 -57.1 -57.1									28.43 dBm	<b>Stop Fre</b> 25.000000000 GH
-57.1 Freq O	-47.1		The a base of a			, nutula,	a an		ditake pertentif	CF Ste 1.00000000 GH <u>Auto</u> Ma
-67.1			a da	lind data din particular Protective production of the						Freq Offse 0 ⊢
Start 15.000 GHz     Stop 25.000 GHz       #Res BW 100 kHz     #VBW 300 kHz     Sweep 956 ms (8001 pts)	Start 15.0		#\/B\A	/ 300 kHz			Sween	Stop 25.	000 GHz	

(Plot 4.6.4 A6: Channel 3: 2422MHz @ 802.11n HT40)



(Plot 4.6.4 B1: Channel 6: 2437MHz @ 802.11n HT40)



(Plot 4.6.4 B2: Channel 6: 2437MHz @ 802.11n HT40)

Agilent Spectrum Ana			-						
Center Freq 4	.000000000	GHz		VSE:INT	#Avg Type		TRAC	M Sep 12, 2015	Frequency
		PNO: Fast 🔸	#Atten: 30		Avg Hold:	12/100	DE	T P P P P P P	
	Dffset 0.9 dB 20.90 dBm					Mkr		75 GHz 19 dBm	Auto Tune
10.9			0						Center Freq 4.000000000 GHz
-9,10									Start Freq 3.00000000 GHz
-19.1								-28.61 dBm	<b>Stop Freq</b> 5.000000000 GHz
-39.1									CF Step 200.000000 MHz <u>Auto</u> Man
-59.1	statusta to all she show a plan and	and the state of t			a aktisi linda kada	telennu <mark>Alan II. a'i</mark>		itelen in this	Freq Offset
-69.1	يوني واريديا فلاريد ، كالاتينا الالا			a an	n ha dan Tita Tita da ka dan wasi ƙ	a fan se gegen gestek	- The state of the state	na njednost položi (kom	0 H2
Start 3.000 GH: #Res BW 100 k		#V <u>BW</u>	300 kHz			Sweep		.000 GHz 8001 pts)	
MSG						STATUS			

## (Plot 4.6.4 B3: Channel 6: 2437MHz @ 802.11n HT40)

Agilent Spectru	m Analyzer - Swept SA RF 50 Ω AC							10 10	
	eq 7.50000000			NSE:INT	#Avg Typ Avg Hold:		TRAC	M Sep 12, 2015 E 1 2 3 4 5 6 E M M A A A A A A	Frequency
	Ref Offset 0.9 dB	IFGain:Low	#Atten: 30	0 dB		Mkr1	7.670 6	25 GHz	Auto Tune
10 dB/div Log	Ref 20.90 dBm						-56.6	48 dBm	
									Center Freq
10.9									7.500000000 GHz
0.900									Start Freq
-9.10									5.000000000 GHz
-19.1									
								-28.61 dBm	Stop Freq 10.00000000 GHz
-29.1									
-39.1									CF Step 500.000000 MHz
-49.1				<b>1</b>					<u>Auto</u> Man
-59.1	iki a juli den dela bilande	أرابيه ومعالم والمراجع							Freq Offset
Made and Party of the Party	the second second second second second second	and the second secon	a she daga dan ayih						0 Hz
-69.1									
Start 5.000	GHz						Stop 10	.000 GHz	
#Res BW 1		#VBW	/ 300 kHz			Sweep	478 ms (	8001 pts)	
MSG						STATUS			

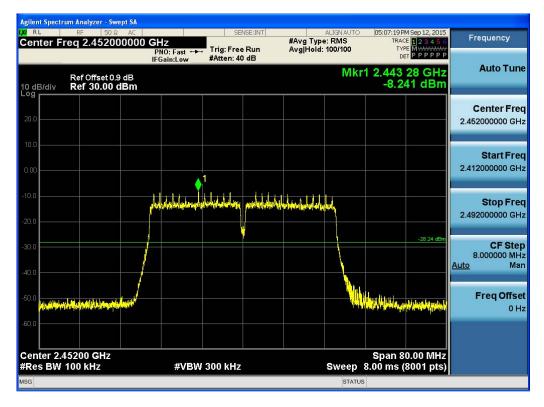
(Plot 4.6.4 B4: Channel 6: 2437MHz @ 802.11n HT40)

Agilent Spectr	um Analyzer - Swept								
	req 12.500000	0000 GHz		NSE:INT	#Avg Type		TRAC	A Sep 12, 2015	Frequency
10 dB/div	Ref Offset 0.9 dB Ref 20.90 dB		+ Trig: Free #Atten: 30		Avg Hold:		DE 4.993 7	TPPPPP	Auto Tune
10.9									Center Freq 12.500000000 GHz
-9.10									Start Fred 10.000000000 GHz
-19.1								-28,61 dBm	Stop Fred 15.000000000 GHz
-39.1								1	CF Step 500.000000 MHz <u>Auto</u> Mar
	t an faith aith i sid d féisgeach a féidir Na hann an sin ann an ann an sin ann an sin ann ann ann ann ann ann	s je stro donis pratoch se stal dist Second de compose program fondet d	din di di di ulti kata Napri di propio tan	h eifindiddiai "naphrifiagrayor			luind al lite dath th sile a sugar that firming a sugar	ini, bibilion tak 	Freq Offset 0 Hz
Start 10.0								000 GHz	
#Res BW	100 kHz	#VBV	/ 300 kHz			_	478 ms (	8001 pts)	
MSG						STATUS			

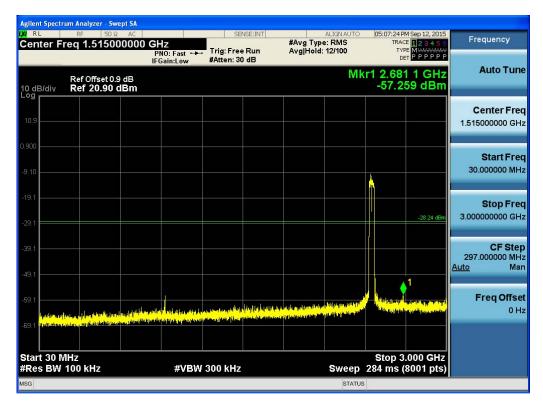
(Plot 4.6.4 B5: Channel 6: 2437MHz @ 802.11n HT40)

	rum Analyzer - Swept SA							
Center F	RF 50 Ω AC req 20.00000000	PNO: Fast +++	Trig: Free		#Avg Typ Avg Hold		05:06:14 PM Sep 12, 20 TRACE 1 2 3 4 TYPE M 4444 DET P P P P	Frequency
10 dB/div	Ref Offset 0.9 dB Ref 22.90 dBm	IFGain:Low	#Atten: 32	2 dB		Mkr1	23.947 50 GH -44.453 dB	z Auto Tune
12.9								Center Free 20.000000000 GH
-7.10								Start Fre 15.000000000 GH
-17.1							-28.61.6	Stop Fre 25.000000000 GH
-37.1							1	CF Ste 1.000000000 GH <u>Auto</u> Ma
		d on his start fi helder helse start oppgynt i nore i rysy by er ger ger	and Habitation in the second secon		da, a la da	n de stallen de stallen gegen versegen er sitte		Freq Offse
-67.1 Start 15.0 #Res BW		#\/B\M	300 kHz			Sween	Stop 25.000 GF 956 ms (8001 pt	
MSG	100 M 12	<i></i>	JUO KHZ			STATUS		

(Plot 4.6.4 B6: Channel 6: 2437MHz @ 802.11n HT40)



(Plot 4.6.4 C1: Channel 9 : 2452MHz @ 802.11n HT40)



(Plot 4.6.4 C2: Channel 9: 2452MHz @ 802.11n HT40)

Agilent Spectrum Analyzer - Swept SA					
M     RL     RF     50 Ω     AC       Center Freq 4.000000000	) GHz		ALIGN AUTO ype: RMS	05:07:31 PM Sep 12, 2015 TRACE 1 2 3 4 5 1	Frequency
	PNO: Fast +++ Trig: Free IFGain:Low #Atten: 30		old: 12/100		Auto Turre
Ref Offset 0.9 dB 10 dB/div Ref 20.90 dBm			IVIKE	1 3.666 25 GHz -55.364 dBm	
					Center Freq
10.9					4.000000000 GHz
0.900					Start Freq
-9.10					3.000000000 GHz
-19.1					Stop Freq
-29.1				-28.24 dBm	5.000000000 GHz
					CF Step
-39.1					200.000000 MHz Auto Man
-49.1	↓ 1				
-59.1			hilling a start of the section		Freq Offset 0 Hz
-69.1		and the second se	and a log buy so of a solution		
Start 3.000 GHz #Res BW 100 kHz	#VBW 300 kHz		Sween	Stop 5.000 GHz 191 ms (8001 pts)	
MSG			STATUS	to Fills (over prs	

### (Plot 4.6.4 C3: Channel 9: 2452MHz @ 802.11n HT40)

Agilent Spectrum Analyzer - Swept SA							
M RL RF 50Ω AC Center Freq 7.500000000	GHz PNO: Fast ↔	<b>.</b>	#Avg Typ Avg Hold:		TRACI TYP	1 Sep 12, 2015 1 2 3 4 5 6 M WWWWW T P P P P P P	Frequency
Ref Offset 0.9 dB 10 dB/div Ref 20.90 dBm	FGame	PAten. or		Mkr1	7.096 8	75 GHz 17 dBm	Auto Tune
10.9							Center Freq 7.500000000 GHz
-9,10							Start Freq 5.000000000 GHz
-19.1						-28.24 dBm	Stop Freq 10.000000000 GHz
-49.1							CF Step 500.000000 MHz <u>Auto</u> Mar
-59.1 The second	lan la bir na natisi di kang pinistan sal Ing tan bir pang tanggan sagan kapat	o <sup>1</sup> New Minute		linin listi po	n fels af state lifebre.	, Histori Diritanta Angenetika Productor	Freq Offset 0 Hz
-69.1 Start 5.000 GHz	#\/D\\\			<b>0</b>		000 GHz	
#Res BW 100 kHz <sup>MSG</sup>	#VBW	1 300 kHz		Sweep	478 ms (1	sour pts)	

(Plot 4.6.4 C4: Channel 9: 2452MHz @ 802.11n HT40)

	ectrum Analyzer - Swept SA								
LXI RL	RF 50 Ω AC		SEN	ISE:INT	#Avg Typ	ALIGN AUTO		M Sep 12, 2015	Frequency
Center	Freq 12.5000000	JU GHZ PNO: Fast ↔→→ IFGain:Low	Trig: Free #Atten: 30		Avg Hold:		TYF		
10 dB/div	Ref Offset 0.9 dB					Mkr1 1		50 GHz 14 dBm	Auto Tune
10.9									Center Freq 12.500000000 GHz
0.900									<b>Start Freq</b> 10.000000000 GHz
-19.1			<u>^</u>	ligning	<mark>1 of 2</mark>			-28.24 dBm	<b>Stop Freq</b> 15.000000000 GHz
-39.1								1	CF Step 500.000000 MHz <u>Auto</u> Man
-59.1 1	kileta y sport distabilita a nei myaka je projeka y sport distabilita a nei je a na je a	a katala distang distantan Pada pangang ang katalan kata	<mark>ar fra 1</mark> , an	<mark>diate-datediate</mark> Infineteriation	alahinyahin kit	Hora dan kerikalah Mana dan kerikalah Mana dan panjadi dan	ni potodialicada Na potodialicada	lipenska skolatio program (ostal program)	Freq Offset 0 Hz
Start 10	).000 GHz W 100 kHz		300 kHz				Stop 15	.000 GHz 8001 pts)	
MSG						STATUS			

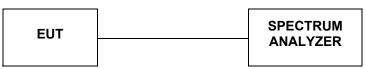
(Plot 4.6.4 C5: Channel 9: 2452MHz @ 802.11n HT40)

	um Analyzer - Swe	pt SA								
Center F	RF 50 Ω reg 20.0000		iHz	SE	NSE:INT	#Avg Typ		TRAC	M Sep 12, 2015	Frequency
		PI	NO: Fast 🔸	Trig: Free #Atten: 32		Avg[Hold:	5/100	TY	PE MWWWWWW T P P P P P P	
			Sain:Luw	Written. 02	. 40		Mkr1	24 113	75 GHz	Auto Tune
10 dB/div	Ref Offset 0.9 Ref 22.90 d						IVIIXI I	-44.0	12 dBm	
										Conton Eng
12.9			Ľ	<i>c</i>						Center Freq 20.000000000 GHz
										20.0000000000000
2.90			8							
										Start Freq 15.00000000 GHz
-7.10										15.00000000 GH2
-17.1			1							
										Stop Freq
-27.1									-28.24 dBm	25.00000000 GHz
										05.04
-37.1			2						<u>1</u>	CF Step 1.000000000 GHz
-47.1								يهريا وبالدين	allerter to the state	<u>Auto</u> Man
	All and a start	will be a state	an dialah dan da	and the deside it is a set				and the second second	Mark and the	
-57.1		pathilitich adding a		all	No.					Freq Offset
										0 Hz
-67.1										7
Start 15.0			40 (DM)	200 64			0	Stop 25	.000 GHz	
#Res BW	TOU KHZ		#VBW	300 kHz					8001 pts)	
MSG							STATUS			

(Plot 4.6.4 C6: Channel 9: 2452MHz @ 802.11n HT40)

## 4.7. 6dB Bandwidth

## TEST CONFIGURATION



## TEST PROCEDURE

The transmitter output was connected to the spectrum analyzer through an attenuator. The bandwidth of the fundamental frequency was measured by spectrum analyzer with RBW=100 KHz and VBW=300KHz. The 6dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 6dB. According to KDB558074 D01 V03 for one of the following procedures may be used to determine the modulated DTS device signal bandwidth.

1. Set RBW = 100 kHz.

2. Set the video bandwidth (VBW)  $\ge$  3 RBW.

- 3. Detector = Peak.
- 4. Trace mode = max hold.
- 5. Sweep = auto couple.
- 6. Allow the trace to stabilize.

7. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

## <u>LIMIT</u>

For digital modulation systems, the minimum 6 dB bandwidth shall be at least 500 kHz.

## TEST RESULTS

## 4.7.1 801.11b Test Mode

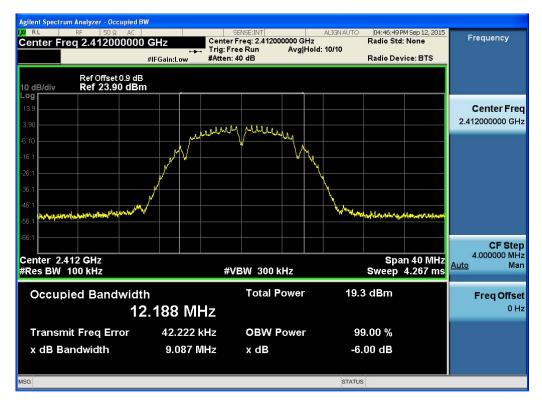
#### A. Test Verdict

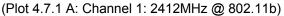
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Refer to Plot	Limits (kHz)	Verdict
1	2412	9.087	Plot 4.7.1 A	≥500	PASS
6	2437	9.094	Plot 4.7.1 B	≥500	PASS
11	2462	9.532	Plot 4.7.1 C	≥500	PASS

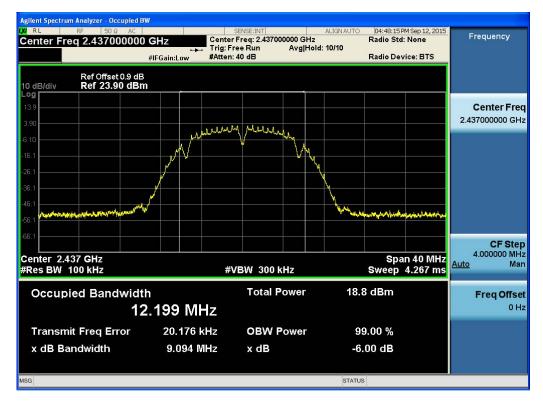
Note:

1. For 802.11b mode at finial test to get the worst-case emission at 1Mbps.

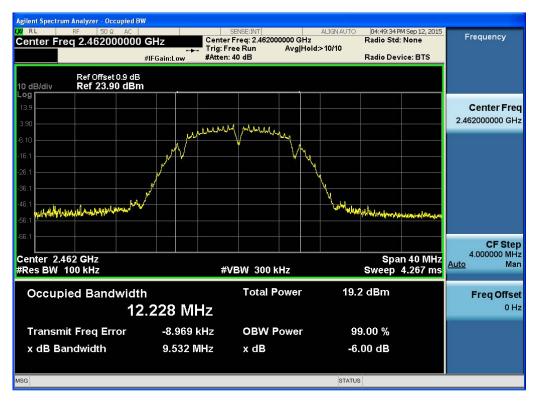
2. The test results including the cable lose.







(Plot 4.7.1 B: Channel 6: 2437MHz @ 802.11b)



(Plot 4.7.1 C: Channel 11: 2462MHz @ 802.11b)

#### 4.7.2 801.11g Test Mode

A. Test Verdict

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Refer to Plot	Limits (kHz)	Verdict
1	2412	15.12	Plot 4.7.2 A	≥500	PASS
6	2437	16.34	Plot 4.7.2 B	≥500	PASS
11	2462	16.38	Plot 4.7.2 C	≥500	PASS

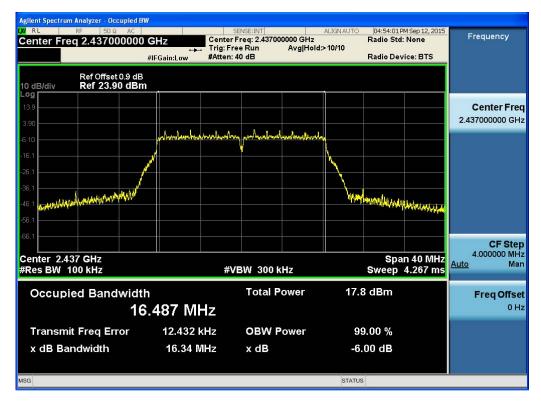
Note:

1. For 802.11g mode at finial test to get the worst-case emission at 6Mbps.

2. The test results including the cable lose.

Center Freq 2.412000000 GHz   Center Freq: 2.412000000 GHz   Radio Std: None   Frequency     #IFGain:Low   #IFGain:Low   Avg Hold: 10/10   Radio Device: BTS   Center Freq: 2.412000000 GHz   Radio Device: BTS     10 dB/div   Ref Offset 0.9 dB   Center Freq: 2.41200000 GHz   Center Freq: 2.41200000 GHz   Radio Device: BTS     10 dB/div   Ref 23.90 dBm   Center Freq: 2.412 GHz   Center Freq: 2.412 GHz   Center Freq: 2.412 GHz     48.1   Frequency   Frequency   Center Freq: 2.412 GHz   Span 40 MHz     WRes BW 100 kHz   #VBW 300 kHz   Sweep 4.267 ms   Auto Man     Occupied Bandwidth   Total Power   19.1 dBm   Freq Offset	Agilent Spectrum Analyzer - Occupied B	N				
10 dB/div   Ref 23.90 dBm     13 9   10 dB/div     14 1   10 dB/div     16 1   10 kHz     #VBW 300 kHz   Sweep 4.267 ms     Cccupied Bandwidth   15.12 MHz   0BW Power   99.00 %     x dB Bandwidth   15.12 MHz   x dB   -6.00 dB   Hz		GHz Center Trig: Fr	Freq: 2.412000000 GHz ee Run Avg Hold	Radio Std: : 10/10	None	Frequency
139   139   139   139   139   139   139   139   139   139   139   139   139   139   139   139   139   139   139   139   139   139   139   139   139   139   139   139   139   139   139   139   139   139   139   139   139   139   139   139   139   139   139   139   139   139   139   139   139   139   139   139   139   139   139   139   139   139   139   139   139   139   139   139   139   139   139   139   139   139   139   139   139   139   139   139   139   139   139   139   139   139   139   139   139   139   139   139   139   139   139   139   139   139   139   139   139   139   139   139   139   139   139   139   139   139   1	10 dB/div Ref 23.90 dBm					
16.1   10.1   10.1   10.1   10.1   10.1   10.1   10.1   10.1   10.1   10.1   10.1   10.1   10.1   10.1   10.1   10.1   10.1   10.1   10.1   10.1   10.1   10.1   10.1   10.1   10.1   10.1   10.1   10.1   10.1   10.1   10.1   10.1   10.1   10.1   10.1   10.1   10.1   10.1   10.1   10.1   10.1   10.1   10.1   10.1   10.1   10.1   10.1   10.1   10.1   10.1   10.1   10.1   10.1   10.1   10.1   10.1   10.1   10.1   10.1   10.1   10.1   10.1   10.1   10.1   10.1   10.1   10.1   10.1   10.1   10.1   10.1   10.1   10.1   10.1   10.1   10.1   10.1   10.1   10.1   10.1   10.1   10.1   10.1   10.1   10.1   10.1   10.1   10.1   10.1   10.1   10.1   10.1   10.1   10.1   10.1   10.1   10.1   10.1   10.1   10.1	13.9					
36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1		mbondonalone providention	an personal and the off	<b>\</b>		
36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1   36.1	26.1			Marthada Itur		
Center 2.412 GHz #Res BW 100 kHz   #VBW 300 kHz   Span 40 MHz Sweep 4.267 ms   4.00000 MHz 4.00000 MHz Sweep 4.267 ms     Occupied Bandwidth   Total Power   19.1 dBm   Freq Offset 0 Hz     Transmit Freq Error   20.690 kHz   OBW Power   99.00 %     x dB Bandwidth   15.12 MHz   x dB   -6.00 dB				Antipation of the second s	haddusing an an	
#Res BW 100 kHz #VBW 300 kHz Sweep 4.267 ms   Occupied Bandwidth Total Power 19.1 dBm Freq Offset   16.364 MHz 0 Hz   Transmit Freq Error 20.690 kHz OBW Power 99.00 %   x dB Bandwidth 15.12 MHz x dB -6.00 dB						
16.364 MHz 0Hz   Transmit Freq Error 20.690 kHz   X dB Bandwidth 15.12 MHz   X dB -6.00 dB		#V	/BW 300 kHz			<u>Auto</u> Man
x dB Bandwidth 15.12 MHz x dB -6.00 dB			Total Power	19.1 dBm		and the second
	Transmit Freq Error	20.690 kHz	OBW Power	99.00 %		
MSG STATUS	x dB Bandwidth	15.12 MHz	x dB	-6.00 dB		
	MSG			STATUS		





(Plot 4.7.2 B: Channel 6: 2437MHz @ 802.11g)

Agilent Spectrun	n Analyzer - Occupied BV RF 50 Q AC	V	SEN	ISE:INT		ALIGN AUTO	04:57:321	PM Sep 12, 2015		
	q 2.462000000	GHz	Center Fre	eq: 2.46200	0000 GHz Avg Hold:		Radio Std		Freque	ency
		#IFGain:Low	#Atten: 40		Arginola.		Radio Dev	vice: BTS		
10 dB/div	Ref Offset 0.9 dB Ref 23.90 dBm									
Log 13.9									Cent	er Freg
3.90									2.462000	
-6.10		mbruitmonton	Acortontes	who where t	warmetand					
-16.1		Mull a transferred and a set	a manufacture dates	an fan y sefer fan	antes la Veletina sertes	w L				
-26.1	,	yar				"MAR				
-36.1	/ /									
-46.1	maldinerran					ture 1	ngalifunntarishikan	and the second states were		
-56.1										
-66,1										F Step
Center 2.4 #Res BW 1			#VB	W 300 k	Hz		Spa Sweep	n 40 MHz 4.267 ms	4.000 <u>Auto</u>	000 MHz Man
Occupi	ied Bandwidth	า		Total P	ower	12.	0 dBm		Free	Offset
		.476 MI	Hz							0 Hz
Transmi	it Freq Error	-2.359	kHz	OBW P	ower	9	9.00 %			
x dB Ba	ndwidth	16.38 N	ЛНz	x dB		-6	.00 dB			
MSG						STATU	s			

(Plot 4.7.2 C: Channel 11: 2462MHz @ 802.11g)

### 4.7.3 801.11n HT20 Test Mode

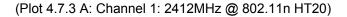
A. Test Verdict

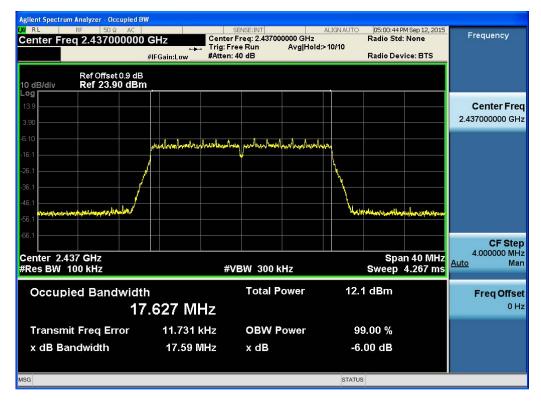
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Refer to Plot	Limits (kHz)	Verdict
1	2412	17.57	Plot 4.7.3 A	≥500	PASS
6	2437	17.59	Plot 4.7.3 B	≥500	PASS
11	2462	17.59	Plot 4.7.3 C	≥500	PASS

Note:

1. For 802.11n HT20 mode at finial test to get the worst-case emission at 6.5Mbps. 2.The test results including the cable lose.

		n <mark>Analyzer</mark> - Oc										
Cen		RF 50 G	2 AC	GHz	Center	SENSE:INT		ALIGN AUTO	04:59:10 Radio Sto	PM Sep 12, 2015 <b>1: None</b>	Frequ	ency
-					Trig: Fi #Atten:	ree Run 40 dB	Avg Hol	d:>10/10	Radio De	vice: BTS		
10 di	B/div	Ref Offsei Ref 23.9										
Log 13.9 3.90												<b>ter Freq</b> 0000 GHz
-6.10 -16.1				munu	ano antronto	on molecular	lusoburumb	hung				
-26.1 -36.1								N N				
-46.1												
-56.1	nton delandy.	cherrostation por terro	n And					¥•	hadden of the second of the	eyeyledizi dalaya di maya yangan		
-66,1												CF Step
		12 GHz 100 kHz			#\	/BW 3001	κHz			an 40 MHz 4.267 ms	4.000 <u>Auto</u>	000 MHz Man
0	ccupi	ed Banc	lwidth			Total F	ower	11	.9 dBm		Fre	q Offset
	-			639 N	1Hz							0 Hz
T	ransmi	it Freq Er	ror	22.274	l kHz	OBW F	ower	ç	99.00 %			
x	dB Ba	ndwidth		17.57	MHz	x dB		-6	6.00 dB			
MSG								STAT	IS			





(Plot 4.7.3 B: Channel 6: 2437MHz @ 802.11n HT20)

	n Analyzer - Occu									
Center Fre	RF 50 Ω		Hz		ENSE:INT req: 2.46200	0000 GHz	ALIGN AUTO	05:02:06 P Radio Std	M Sep 12, 2015 : None	Frequency
			Gain:Low	Trig: Fre #Atten: 4		Avg Hold:	: 10/10	Radio Dev	vice: BTS	
			Gam.E0W							
10 dB/div	Ref Offset 0 Ref 23.90									
Log										
13.9										Center Freq 2.462000000 GHz
3.90										2.462000000 GH2
-6.10			antrantin	Martinana	- motiver treat	molountemat	4.MR. 1			
-16.1					V					
-26.1		-/-					<u> </u>			
-36.1		-					<b>│                                    </b>			
-46.1		_								
-56.1	hometing to the book	N/					<b>1</b> 40	Musshmann	rentelliterstation	
-66.1			5							
										CF Step
Center 2.4				-40.6	BW/ 0001			Spa	n 40 MHz	4.000000 MHz <u>Auto</u> Man
#Res BW 1	IUU KHZ			#V	BW 300 k	HZ		sweep	4.267 ms	
Occupi	ed Bandw	/idth			Total P	ower	11.	9 dBm		Freq Offset
		17.6	\$53 M	Hz						0 Hz
Transmi	it Freq Erro	r	7.165	kHz	OBW P	ower	9	9.00 %		
x dB Ba	ndwidth		17.59	ЛНz	x dB		-6	.00 dB		
MSG							STATU	s		
							onno			

(Plot 4.7.3 C: Channel 11: 2462MHz @ 802.11n HT20)

### 4.7.4 801.11n HT40 Test Mode

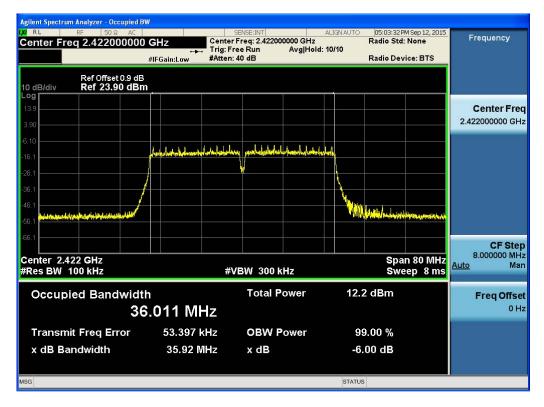
A. Test Verdict

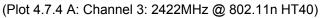
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Refer to Plot	Limits (kHz)	Verdict
3	2422	35.92	Plot 4.7.4 A	≥500	PASS
6	2437	36.05	Plot 4.7.4 B	≥500	PASS
9	2452	36.00	Plot 4.7.4 C	≥500	PASS

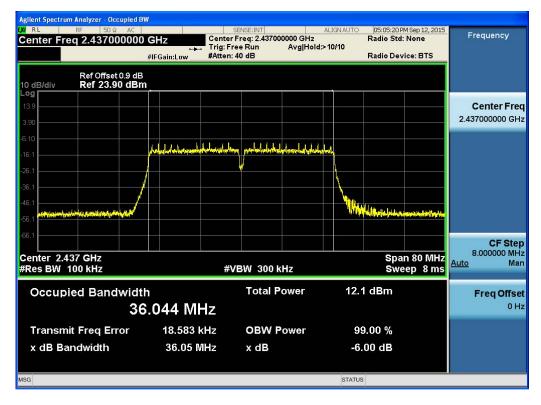
Note:

For 802.11n HT40 mode at finial test to get the worst-case emission at 13.5Mbps.
The test results including the cable lose.

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(Plot 4.7.3 B: Channel 6: 2437MHz @ 802.11n HT40

LXI RL	n Analyzer - Occupied B RF 50 & AC eq 2.452000000	GHz			00000 GHz Avg Hold:	ALIGN AU' 10/10	TO 05:06:501 Radio Std Radio Dev		Frequency
10 dB/div	Ref Offset 0.9 dB Ref 23.90 dBn								
Log 13.9 3.90									Center Freq 2.452000000 GHz
-6.10		phaladaphaladaa	Nulmburburburb	, rentechedreter	hatanalaphala	,hvd			
-26.1 -36.1 -46.1							hin .		
-56.1	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~						h <mark>y ny ha</mark> fiyanin jangolain.	odreta gradin	
Center 2.4: #Res BW 1			#V	BW 300 I	kHz			an 80 MHz eep 8 ms	CF Step 8.000000 MHz <u>Auto</u> Man
Occupi	ed Bandwidt 36	<sup>h</sup> 8.004 N	lHz	Total F	ower	1	2.2 dBm		<b>Freq Offset</b> 0 Hz
	it Freq Error	-7.925		OBW F	Power		99.00 %		
	ndwidth	36.00	MHz	x dB			-6.00 dB		
MSG						STA	TUS		

(Plot 4.7.4 C: Channel 9: 2452MHz @ 802.11n HT40)

## 4.8. Antenna Requirement

#### Standard Applicable

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

And according to FCC 47 CFR Section 15.247 (c), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

#### Refer to statement below for compliance.

The manufacturer may design the unit so that the user can replace a broken antenna, but the use of a standard antenna jack or electrical connector is prohibited. Further, this requirement does not apply to intentional radiators that must be professionally installed.

#### Measurement

The antenna gain of the complete system is calculated by the difference of radiated power in EIRP and the conducted power of the module.For normal WLAN devices, the DSSS mode is used.

#### Measurement parameters

Measurement parameter						
Detector:	Peak					
Sweep time:	Auto					
Resolution bandwidth:	1MHz					
Video bandwidth:	3MHz					
Trace-Mode:	Max hold					

#### Limits

FCC	IC
Antenr	na Gain
60	dBi

#### Results

T <sub>nom</sub>	V <sub>nom</sub>	Lowest Channel 2412 MHz	Middle Channel 2437 MHz	Highest Channel 2462 MHz
	oower [dBm] )SSS modulation	5.26	4.96	5.26
	ower [dBm] )SSS modulation	6.80	5.58	7.02
Gain [dBi] Calculated		1.54	1.62	1.76
Measuremer	nt uncertainty	± 0.6	dB (cond.) / ± 2.56 dB	(rad.)

# 5. Test Setup Photos of the EUT

Please refer to separated files for Test Setup Photos of the EUT.

## 6. External Photos of the EUT

Please refer to separated files for External Photos of the EUT.

# 7. Internal Photos of the EUT

Please refer to separated files for Internal Photos of the EUT.

.....End of Report.....