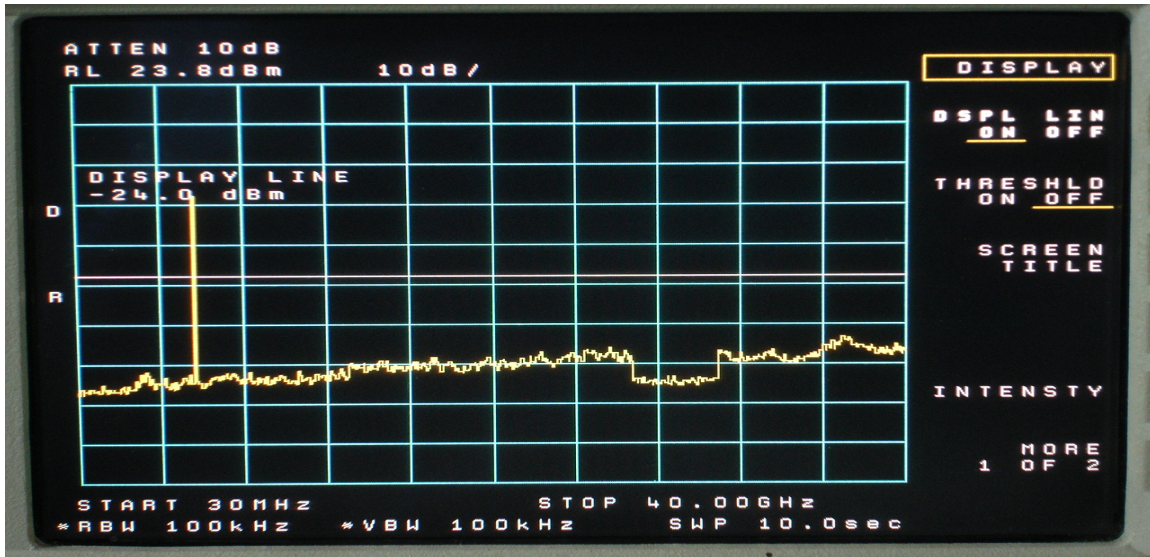


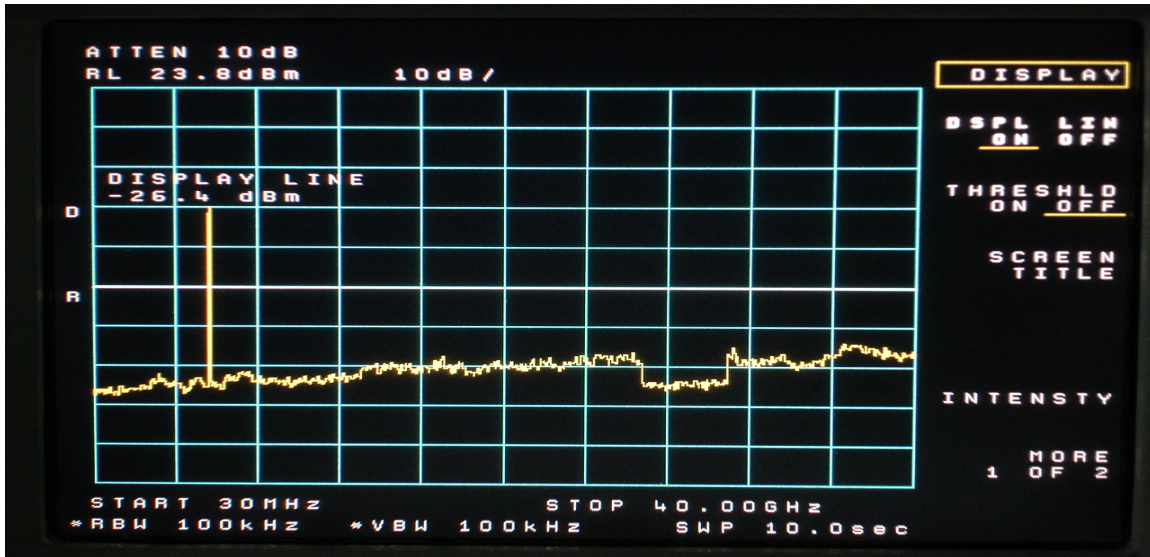
### 802.11n (HT40) Chain 0 CH151 5755MHz



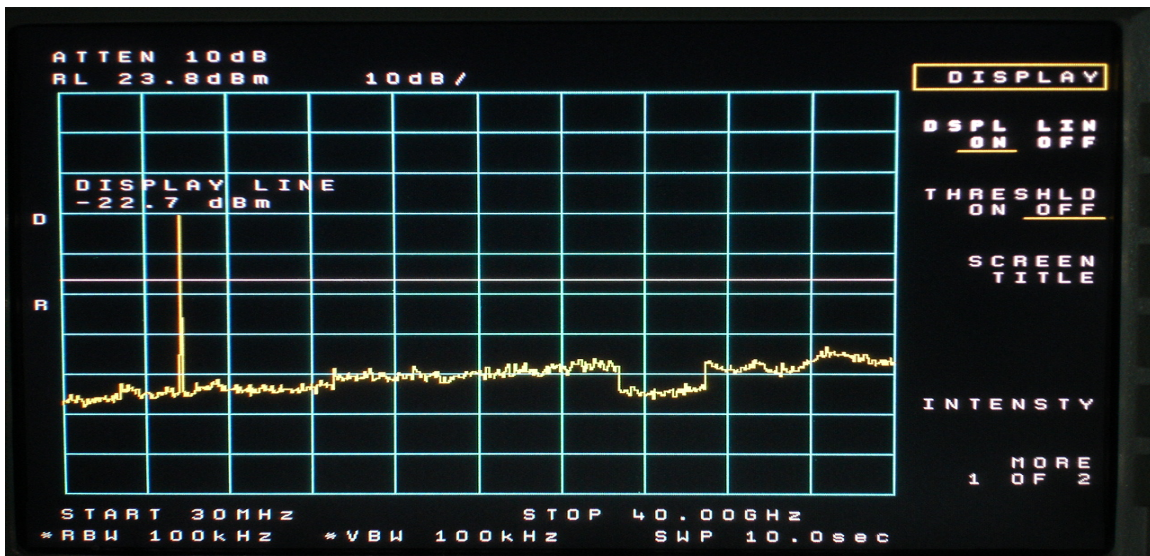
### 802.11n (HT40) Chain 0 CH159 5795MHz



### 802.11n (HT40) Chain 2 CH151 5755MHz



### 802.11n (HT40) Chain 2 CH159 5795MHz



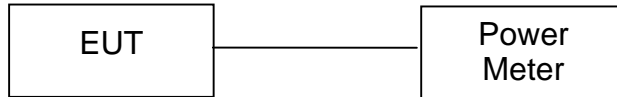
## 4 Maximum Peak output power test

### 4.1 Limit

According to FCC Part15.247 (b)(3) requirement :

For systems using digital modulation in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands: The maximum conducted output power shall be less than 1Watt.

### 4.2 Configuration of Measurement



### 4.3 Test Procedure

The EUT was setup to ANSI C63.4, 2003; tested to DTS test procedure of Oct 2002 KDB558074 for compliance to FCC 47CFR 15.247 requirements.

For FCC §15.247(b) the power output was measured on the EUT using a 50 ohm SMA cable connected to peak power meter via power sensor. Peak output power was read directly from power meter. The test was performed at 3 channels (lowest, middle and highest).

### 4.4 Test Result

**PASS.**

The final test data is shown on as following pages.

## Maximum output power

### Single Tx

<b>2.4G</b>					
<b>Mode : 802.11 b Chain 0</b>					
CH	Frq. MHz	Maximum transmit power (dBm)		Limit (dBm)	Margin (dB)
		AV	PK		
1	2412	16.69	19.10	30	-10.90
6	2437	17.76	19.86	30	-10.14
11	2462	16.96	19.17	30	-10.83

<b>Mode : 802.11 b Chain 2</b>					
CH	Frq. MHz	Maximum transmit power (dBm)		Limit (dBm)	Margin (dB)
		AV	PK		
1	2412	16.54	19.02	30	-10.98
6	2437	17.04	19.09	30	-10.91
11	2462	16.98	19.20	30	-10.80

<b>Mode : 802.11 g Chain 0</b>					
CH	Frq. MHz	Maximum transmit power (dBm)		Limit (dBm)	Margin (dB)
		AV	PK		
1	2412	17.19	25.34	30	-4.66
6	2437	17.86	25.45	30	-4.55
11	2462	17.90	25.26	30	-4.74

<b>Mode : 802.11 g Chain 2</b>					
CH	Frq. MHz	Maximum transmit power (dBm)		Limit (dBm)	Margin (dB)
		AV	PK		
1	2412	16.18	24.31	30	-5.69
6	2437	16.97	24.58	30	-5.42
11	2462	14.89	23.10	30	-6.90

<b>Mode : 802.11 n (HT20) Chain 0</b>					
CH	Frq. MHz	Maximum transmit power (dBm)		Limit (dBm)	Margin (dB)
		AV	PK		
1	2412	16.13	24.65	30	-5.35
6	2437	16.70	24.90	30	-5.03
11	2462	16.54	24.89	30	-5.11

<b>Mode : 802.11 n (HT20) Chain 2</b>					
CH	Frq. MHz	Maximum transmit power (dBm)		Limit (dBm)	Margin (dB)
		AV	PK		
1	2412	15.11	23.25	30	-6.75
6	2437	15.97	24.37	30	-5.63
11	2462	15.30	23.34	30	-6.66

<b>Mode : 802.11 n (HT40) Chain 0</b>					
CH	Frq. MHz	Maximum transmit power (dBm)		Limit (dBm)	Margin (dB)
		AV	PK		
3	2422	13.37	22.76	30	-7.24
6	2437	16.13	25.54	30	-4.46
9	2452	13.28	22.38	30	-7.62

<b>Mode : 802.11 n (HT40) Chain 2</b>					
CH	Frq. MHz	Maximum transmit power (dBm)		Limit (dBm)	Margin (dB)
		AV	PK		
3	2422	12.63	21.62	30	-8.38
6	2437	15.61	24.49	30	-5.51
9	2452	12.59	21.87	30	-8.13

<b>5G</b>					
<b>Mode : 802.11 a Chain 0</b>					
CH	Frq. MHz	Maximum transmit power (dBm)		Limit (dBm)	Margin (dB)
		AV	PK		
149	5745	16.40	22.20	30	-7.68
157	5785	15.94	22.78	30	-7.22
165	5825	15.58	22.70	30	-7.30

<b>Mode : 802.11 a Chain 2</b>					
CH	Frq. MHz	Maximum transmit power (dBm)		Limit (dBm)	Margin (dB)
		AV	PK		
149	5745	15.06	21.94	30	-8.06
157	5785	16.03	22.42	30	-7.85
165	5825	14.66	21.18	30	-8.82

<b>Mode : 802.11 n (HT20) Chain 0</b>					
CH	Frq. MHz	Maximum transmit power (dBm)		Limit (dBm)	Margin (dB)
		AV	PK		
149	5745	15.04	21.93	30	-8.07
157	5785	14.85	22.47	30	-7.53
165	5825	14.27	22.09	30	-7.91

<b>Mode : 802.11 n (HT20) Chain 2</b>					
CH	Frq. MHz	Maximum transmit power (dBm)		Limit (dBm)	Margin (dB)
		AV	PK		
149	5745	14.13	21.66	30	-8.34
157	5785	14.29	21.81	30	-8.19
165	5825	13.45	20.63	30	-9.37

<b>Mode : 802.11 n (HT40) Chain 0</b>					
<b>CH</b>	<b>Frq. MHz</b>	<b>Maximum transmit power (dBm)</b>		<b>Limit (dBm)</b>	<b>Margin (dB)</b>
		<b>AV</b>	<b>PK</b>		
151	5755	14.92	22.35	30	-7.65
159	5795	14.69	23.03	30	-6.97

<b>Mode : 802.11 n (HT40) Chain 2</b>					
<b>CH</b>	<b>Frq. MHz</b>	<b>Maximum transmit power (dBm)</b>		<b>Limit (dBm)</b>	<b>Margin (dB)</b>
		<b>AV</b>	<b>PK</b>		
151	5755	13.63	21.92	30	-8.08
159	5795	14.14	21.97	30	-8.03

## Maximum output power

### Dual Tx

<b>2.4G</b>							
<b>Mode : 802.11 n (HT20)</b>							
<b>CH</b>	<b>Maximum transmit power (dBm)</b>				<b>Total Power (dBm)</b>	<b>Limit (dBm)</b>	<b>Margin (dB)</b>
	<b>Chain 0</b>		<b>Chain 2</b>				
	<b>AV</b>	<b>PK</b>	<b>AV</b>	<b>PK</b>			
1	16.16	24.49	16.14	24.14	27.33	30	-2.67
6	16.77	24.89	16.19	24.18	27.56	30	-2.44
11	16.51	24.62	15.92	23.93	27.30	30	-2.70

<b>Mode : 802.11 n (HT40)</b>							
<b>CH</b>	<b>Maximum transmit power (dBm)</b>				<b>Total Power (dBm)</b>	<b>Limit (dBm)</b>	<b>Margin (dB)</b>
	<b>Chain 0</b>		<b>Chain 2</b>				
	<b>AV</b>	<b>PK</b>	<b>AV</b>	<b>PK</b>			
3	13.37	23.09	12.43	22.07	25.62	30	-4.38
6	16.35	25.64	15.47	24.19	27.99	30	-2.01
9	13.34	23.06	12.84	21.90	25.53	30	-4.47



<b>5G</b>							
<b>Mode : 802.11 n (HT20)</b>							
<b>CH</b>	<b>Maximum transmit power (dBm)</b>				<b>Total Power (dBm)</b>	<b>Limit (dBm)</b>	<b>Margin (dB)</b>
	<b>Chain 0</b>		<b>Chain 2</b>				
	<b>AV</b>	<b>PK</b>	<b>AV</b>	<b>PK</b>			
149	15.05	21.96	14.17	21.44	24.72	30	-5.28
157	14.93	22.53	14.50	21.85	25.21	30	-4.79
165	14.43	22.05	13.69	20.69	24.43	30	-5.57

<b>Mode : 802.11 n (HT40)</b>							
<b>CH</b>	<b>Maximum transmit power (dBm)</b>				<b>Total Power (dBm)</b>	<b>Limit (dBm)</b>	<b>Margin (dB)</b>
	<b>Chain 0</b>		<b>Chain 2</b>				
	<b>AV</b>	<b>PK</b>	<b>AV</b>	<b>PK</b>			
151	15.09	22.31	14.29	21.78	25.06	30	-4.94
159	14.81	22.89	13.96	21.91	25.44	30	-4.56

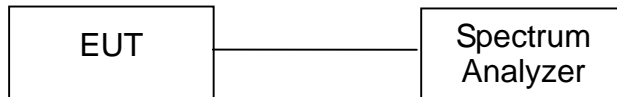
## 5 6dB Bandwidth

### 5.1 Limit

According to FCC Part15.247 (a)(2) requirement :

Systems using digital modulation techniques may operate in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands. The minimum 6dB bandwidth shall be at least 500 kHz.

### 5.2 Configuration of Measurement



### 5.3 Test Procedure

The EUT was setup to ANSI C63.4, 2003; tested to DTS test procedure of Oct 2002 KDB558074 for compliance to FCC 47CFR 15.247 requirements.

The minimum 6dB bandwidth was measured using a 50 ohm spectrum analyzer with the resolutions bandwidth set at 100kHz, the video bandwidth set  $\geq$ RBW, and the SPAN>>RBW. The test was performed at 3 channels (lowest, middle and highest).

### 5.4 Test Result

**PASS.**

The final test data is shown on as following pages.

## 6dB bandwidth

### 2.4G

Test Mode : 802.11b

Test Chain : 0

Test CH		6dB Bandwidth (MHz)	Limit (kHz)
CH No.	Freq. (MHz)		
1	2412	11.09	>500
6	2437	12.12	>500
11	2462	11.12	>500

Test Mode : 802.11b

Test Chain : 2

Test CH		6dB Bandwidth (MHz)	Limit (kHz)
CH No.	Freq. (MHz)		
1	2412	12.12	>500
6	2437	12.12	>500
11	2462	10.16	>500

Test Mode : 802.11g

Test Chain : 0

Test CH		6dB Bandwidth (MHz)	Limit (kHz)
CH No.	Freq. (MHz)		
1	2412	16.44	>500
6	2437	16.41	>500
11	2462	16.41	>500

Test Mode : 802.11g

Test Chain : 2

Test CH		6dB Bandwidth (MHz)	Limit (kHz)
CH No.	Freq. (MHz)		
1	2412	16.41	>500
6	2437	16.41	>500
11	2462	16.41	>500

Test Mode : 802.11n (HT20)  
 Test Chain : 0

Test CH		6dB Bandwidth (MHz)	Limit (kHz)
CH No.	Freq. (MHz)		
1	2412	17.66	>500
6	2437	17.66	>500
11	2462	17.66	>500

Test Mode : 802.11n (HT20)  
 Test Chain : 2

Test CH		6dB Bandwidth (MHz)	Limit (kHz)
CH No.	Freq. (MHz)		
1	2412	17.66	>500
6	2437	17.66	>500
11	2462	17.66	>500

Test Mode : 802.11n (HT40)  
 Test Chain : 0

Test CH		6dB Bandwidth (MHz)	Limit (kHz)
CH No.	Freq. (MHz)		
3	2422	36.54	>500
6	2437	36.47	>500
9	2452	36.54	>500

Test Mode : 802.11n (HT40)  
 Test Chain : 2

Test CH		6dB Bandwidth (MHz)	Limit (kHz)
CH No.	Freq. (MHz)		
3	2422	36.47	>500
6	2437	36.47	>500
9	2452	36.54	>500

**5G**

Test Mode : 802.11a

Test Chain : 0

Test CH		6dB Bandwidth (MHz)	Limit (kHz)
CH No.	Freq. (MHz)		
149	5745	16.41	>500
157	5785	16.41	>500
165	5825	16.44	>500

Test Mode : 802.11a

Test Chain : 2

Test CH		6dB Bandwidth (MHz)	Limit (kHz)
CH No.	Freq. (MHz)		
149	5745	16.41	>500
157	5785	16.41	>500
165	5825	16.44	>500

Test Mode : 802.11n (HT20)

Test Chain : 0

Test CH		6dB Bandwidth (MHz)	Limit (kHz)
CH No.	Freq. (MHz)		
149	5745	17.66	>500
157	5785	17.69	>500
165	5825	17.66	>500

Test Mode : 802.11n (HT20)

Test Chain : 2

Test CH		6dB Bandwidth (MHz)	Limit (kHz)
CH No.	Freq. (MHz)		
149	5745	17.63	>500
157	5785	17.66	>500
165	5825	17.66	>500

Test Mode : 802.11n (HT40)

Test Chain : 0

Test CH		6dB Bandwidth (MHz)	Limit (kHz)
CH No.	Freq. (MHz)		
151	5755	36.60	>500
159	5795	36.47	>500

Test Mode : 802.11n (HT40)

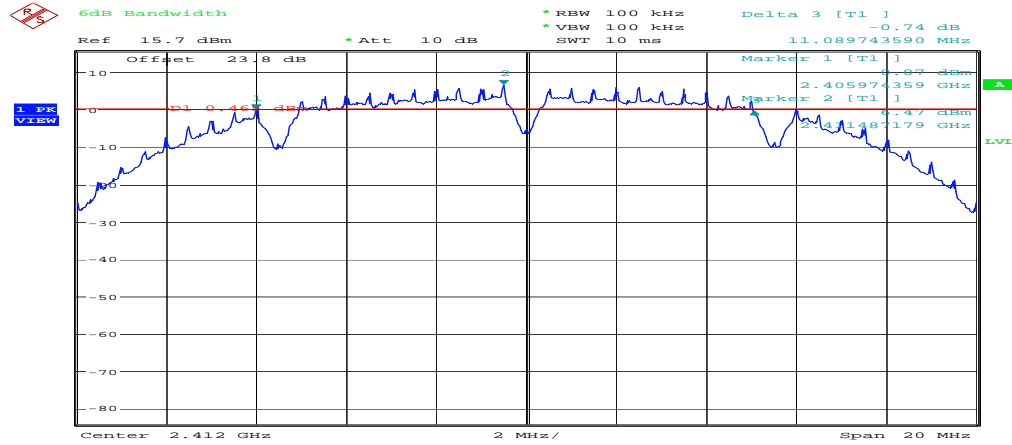
Test Chain : 2

Test CH		6dB Bandwidth (MHz)	Limit (kHz)
CH No.	Freq. (MHz)		
151	5755	36.54	>500
159	5795	36.47	>500

# 6dB Bandwidth

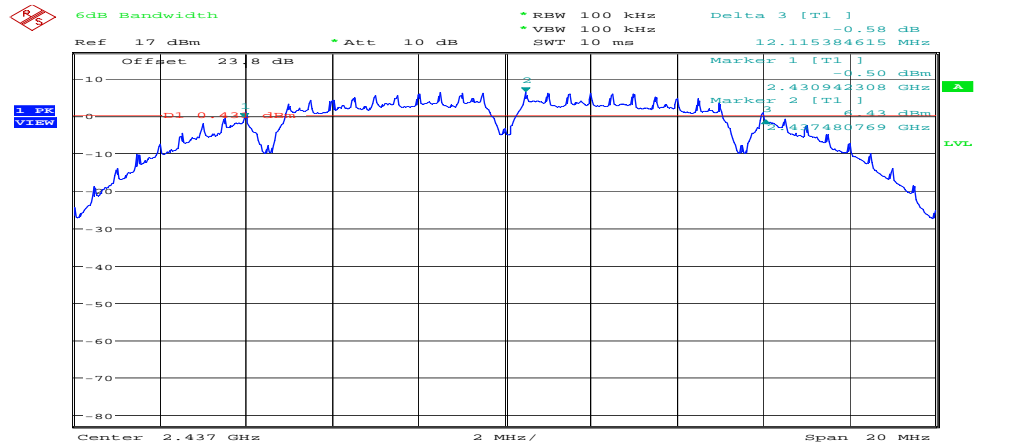
## 2.4G

### 802.11b Chain 0 CH01 2412MHz



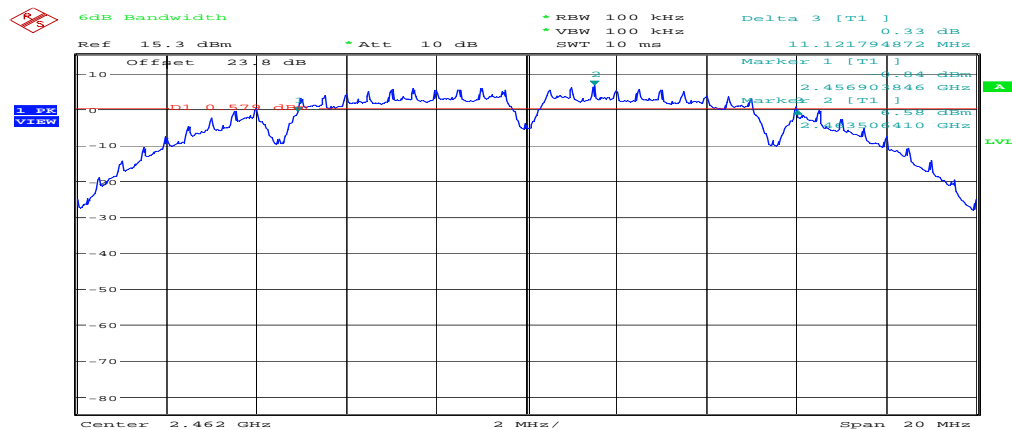
802.11b 2412MHz ()  
Date: 24.NOV.2007 16:03:07

### 802.11b Chain 0 CH06 2437MHz



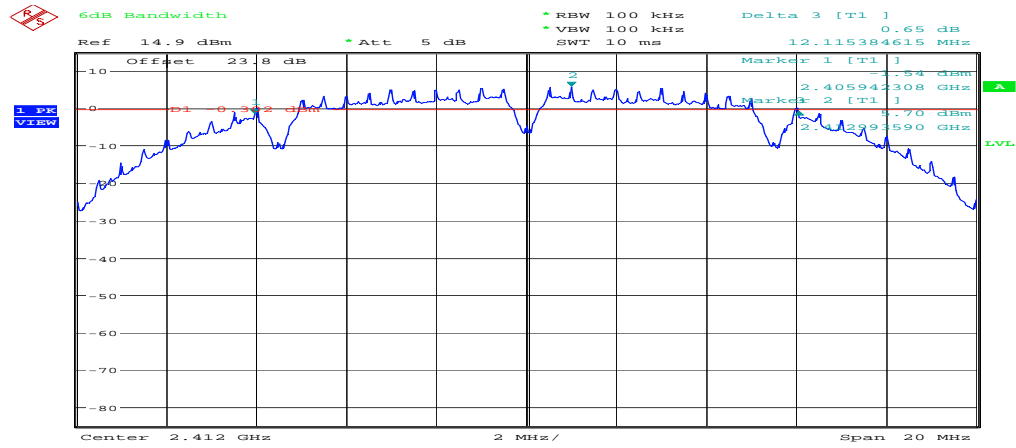
802.11b 2437MHz ()  
Date: 24.NOV.2007 16:08:43

### 802.11b Chain 0 CH11 2462MHz



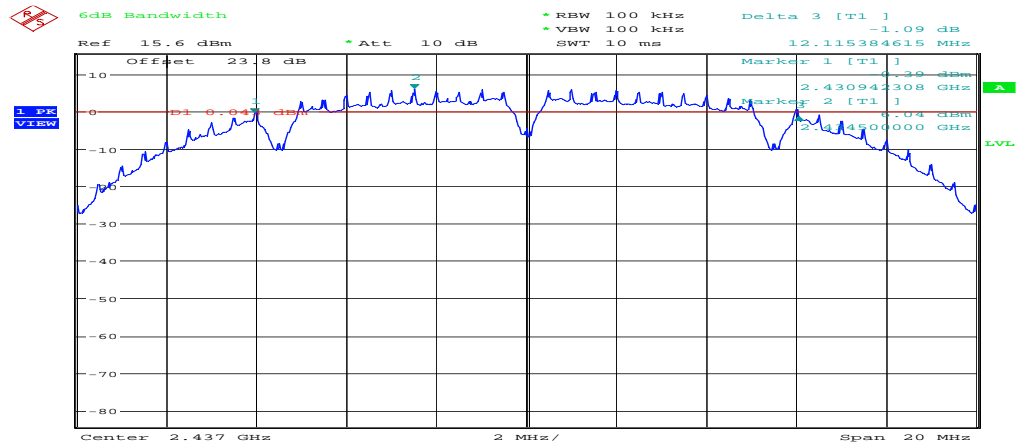
802.11b 2462MHz ()  
Date: 24.NOV.2007 16:15:56

### 802.11b Chain 2 CH01 2412MHz



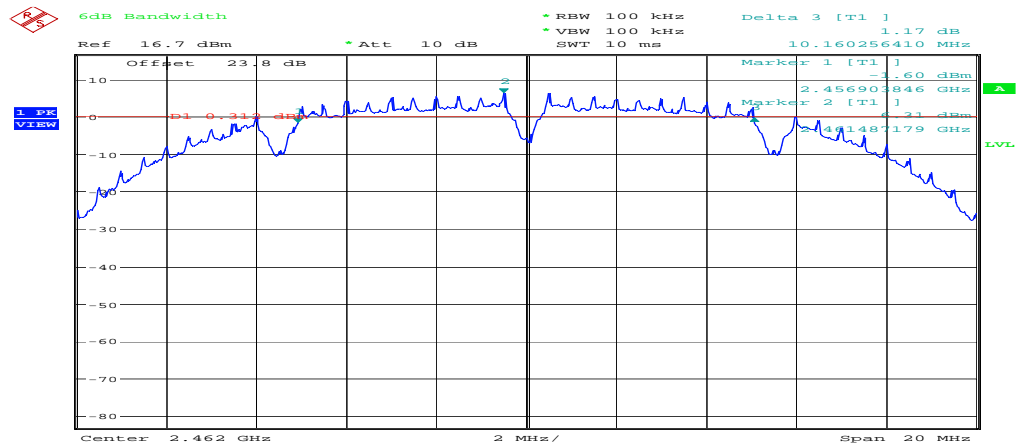
802.11b 2412MHz ( )  
Date: 24.NOV.2007 16:21:50

### 802.11b Chain 2 CH06 2437MHz



802.11b 2437MHz ( )  
Date: 24.NOV.2007 16:19:44

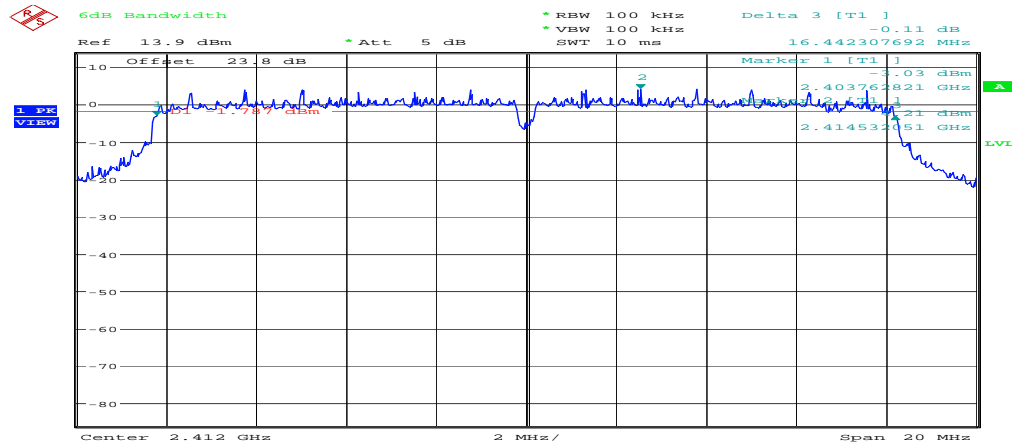
### 802.11b Chain 2 CH11 2462MHz



802.11b 2462MHz ( )  
Date: 24.NOV.2007 16:17:26

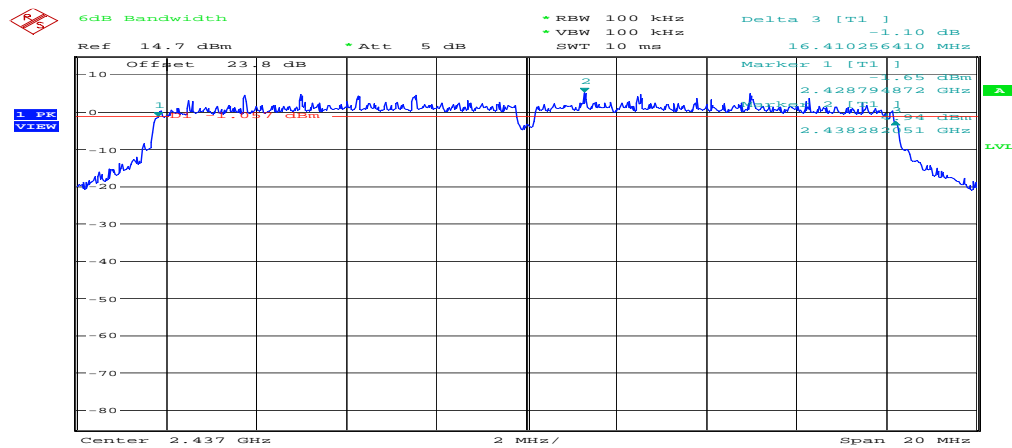


### 802.11g Chain 0 CH01 2412MHz



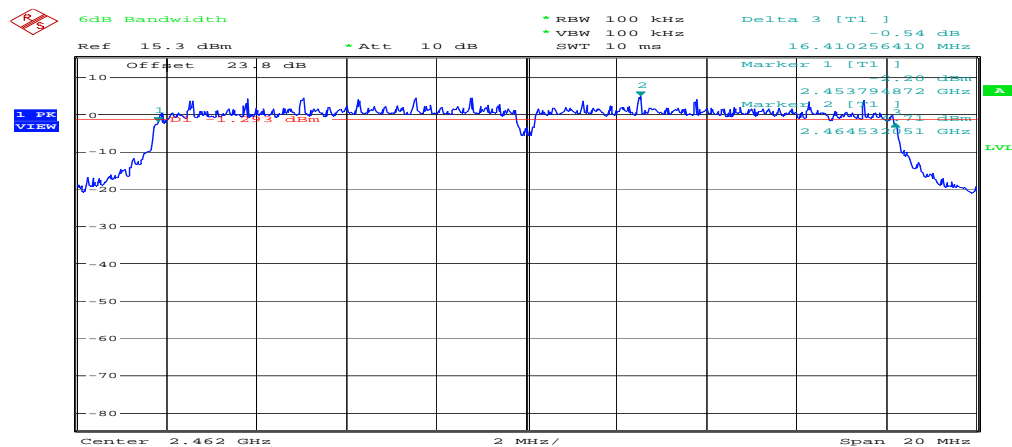
802.11g 2412MHz ()  
Date: 24.NOV.2007 16:36:09

### 802.11g Chain 0 CH06 2437MHz



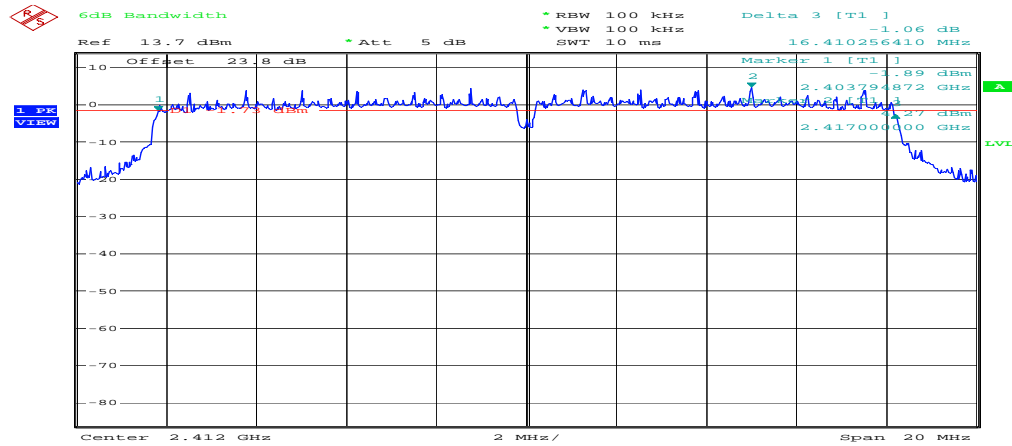
802.11g 2437MHz ()  
Date: 24.NOV.2007 16:33:54

### 802.11g Chain 0 CH11 2462MHz



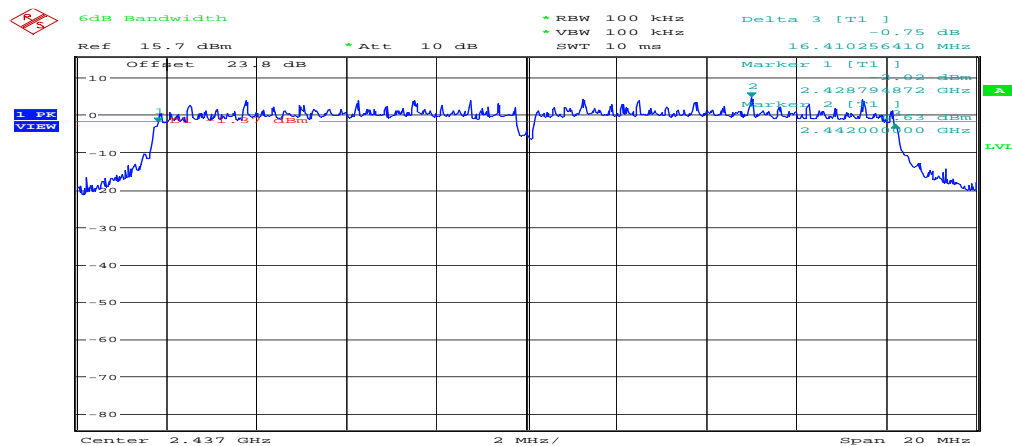
802.11g 2462MHz ()  
Date: 24.NOV.2007 16:31:47

### 802.11g Chain 2 CH01 2412MHz



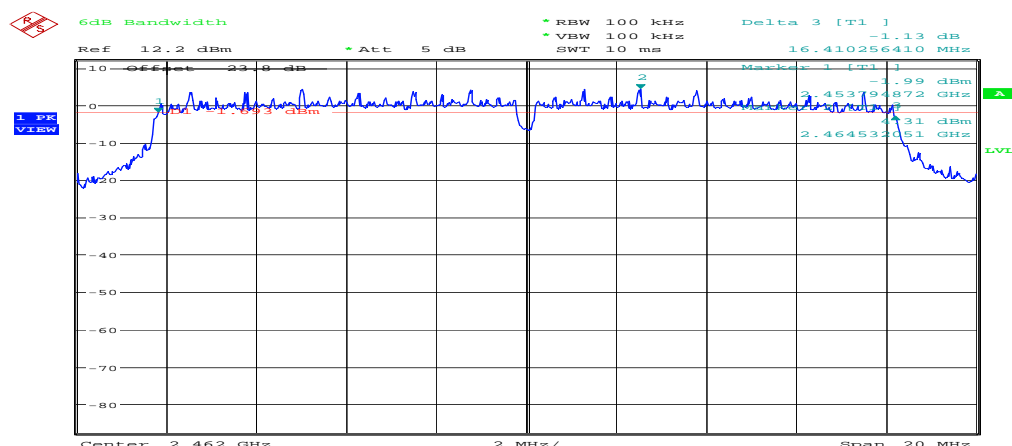
802.11g 2412MHz ()  
Date: 24.NOV.2007 16:24:47

### 802.11g Chain 2 CH06 2437MHz



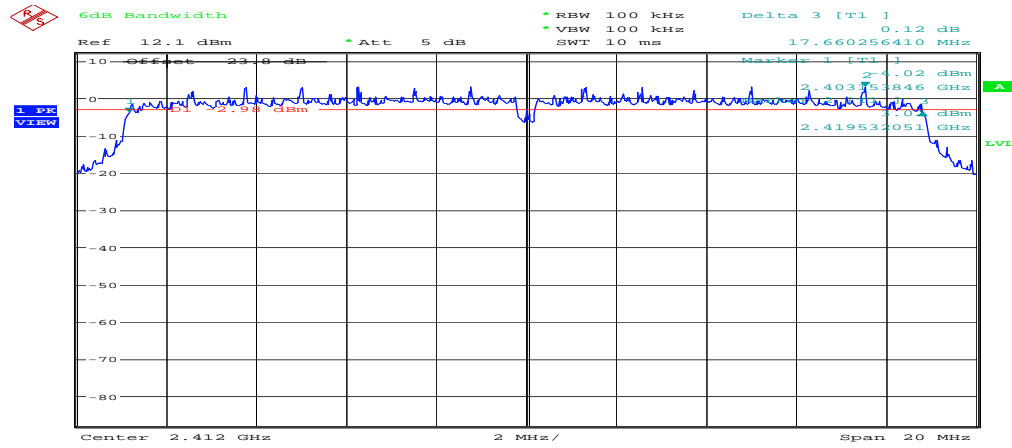
802.11g 2437MHz ()  
Date: 24.NOV.2007 16:26:56

### 802.11g Chain 2 CH11 2462MHz



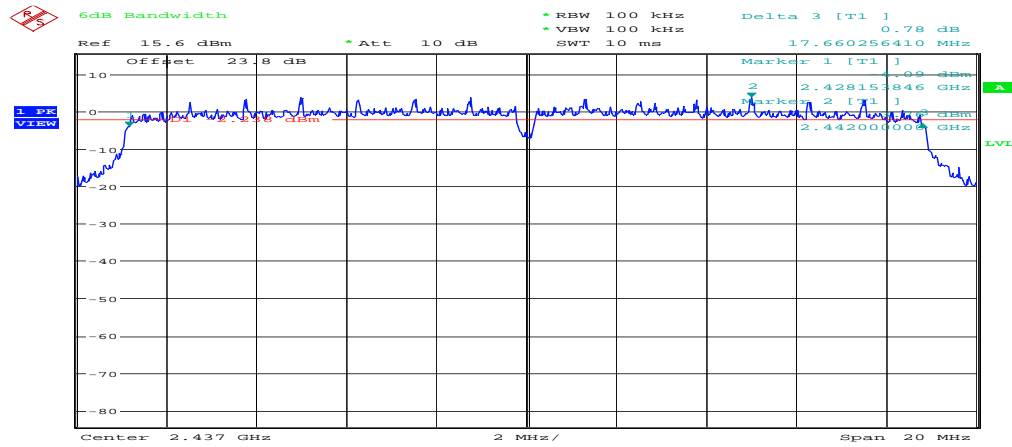
802.11g 2462MHz ()  
Date: 24.NOV.2007 16:29:07

### 802.11 n (HT20) Chain 0 CH01 2412MHz



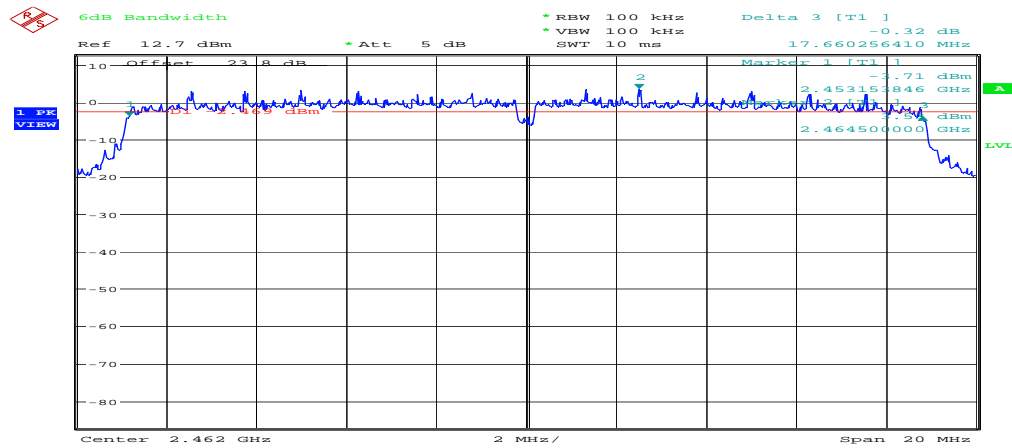
802.11n(20) 2412MHz ( )  
 Date: 24.NOV.2007 16:38:49

### 802.11 n (HT20) Chain 0 CH06 2437MHz



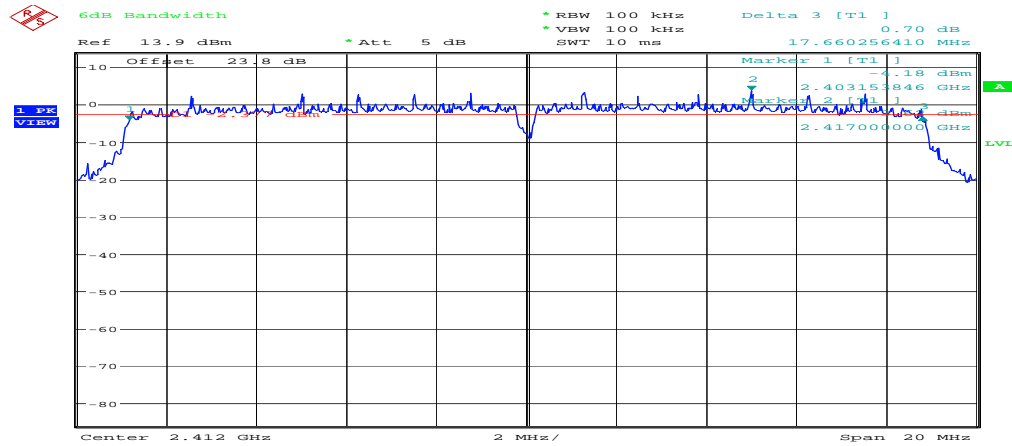
802.11n(20) 2437MHz ( )  
 Date: 24.NOV.2007 16:40:53

### 802.11 n (HT20) Chain 0 CH11 2462MHz



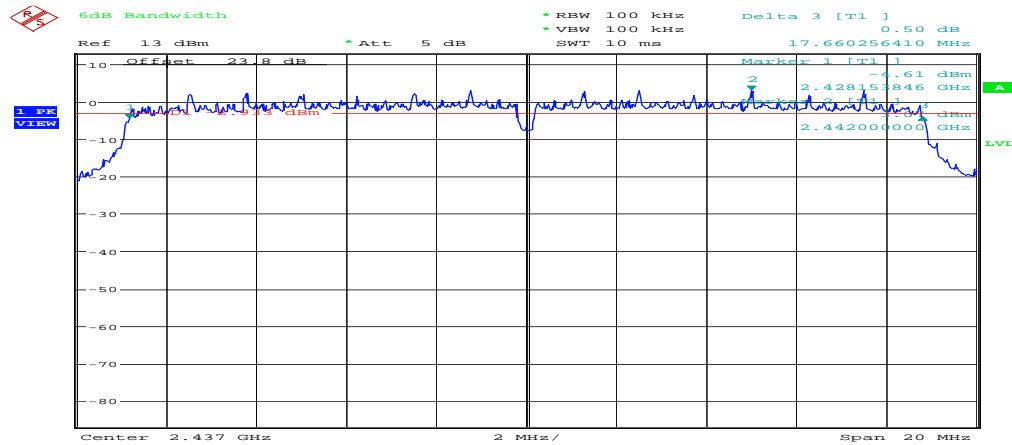
802.11n(20) 2462MHz ( )  
 Date: 24.NOV.2007 16:43:28

### 802.11 n (HT20) Chain 2 CH01 2412MHz



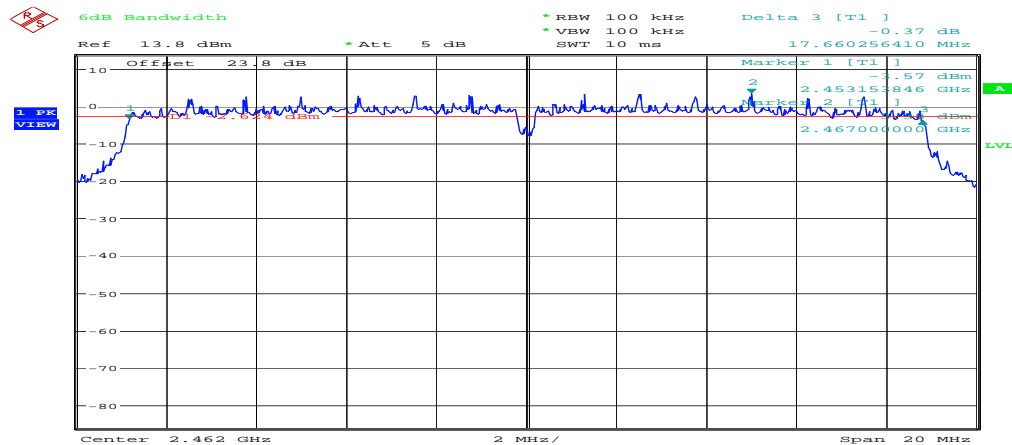
802.11n(20) 2412MHz ( )  
Date: 24.NOV.2007 16:49:54

### 802.11 n (HT20) Chain 2 CH06 2437MHz



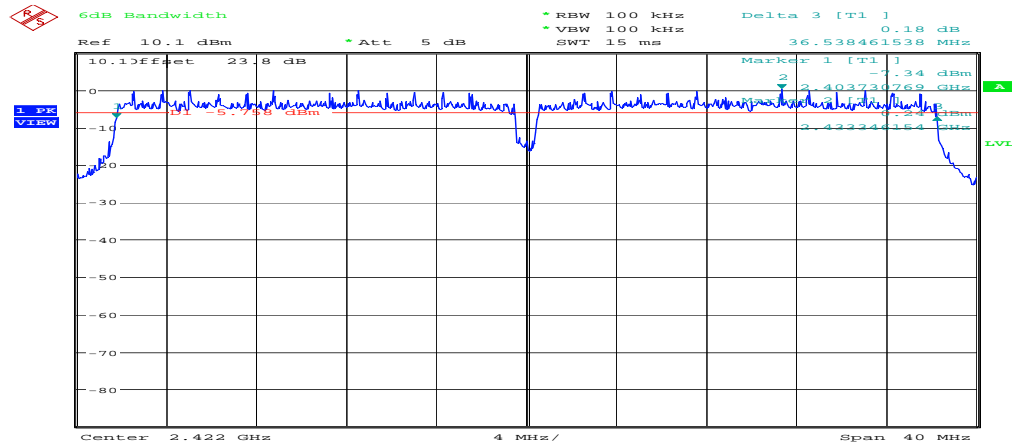
802.11n(20) 2437MHz ( )  
Date: 24.NOV.2007 16:47:56

### 802.11 n (HT20) Chain 2 CH11 2462MHz



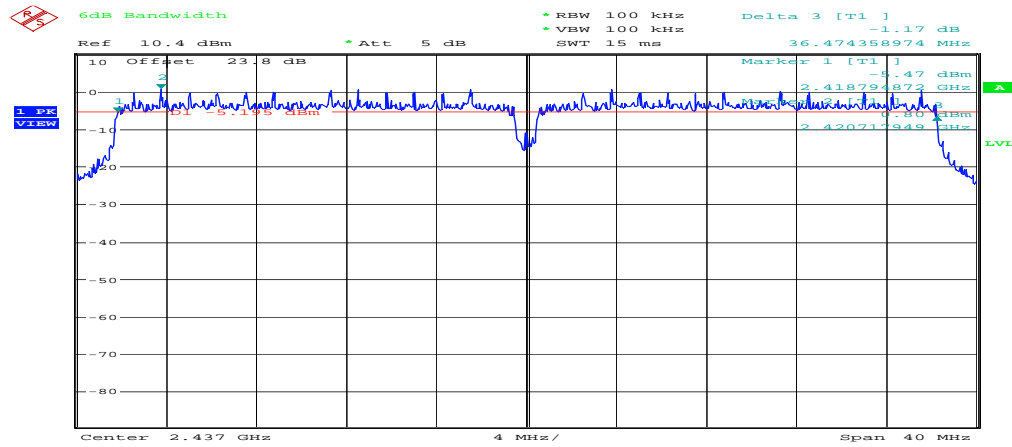
802.11n(20) 2462MHz ( )  
Date: 24.NOV.2007 16:46:02

### 802.11 n (HT40) Chain 0 CH03 2422MHz



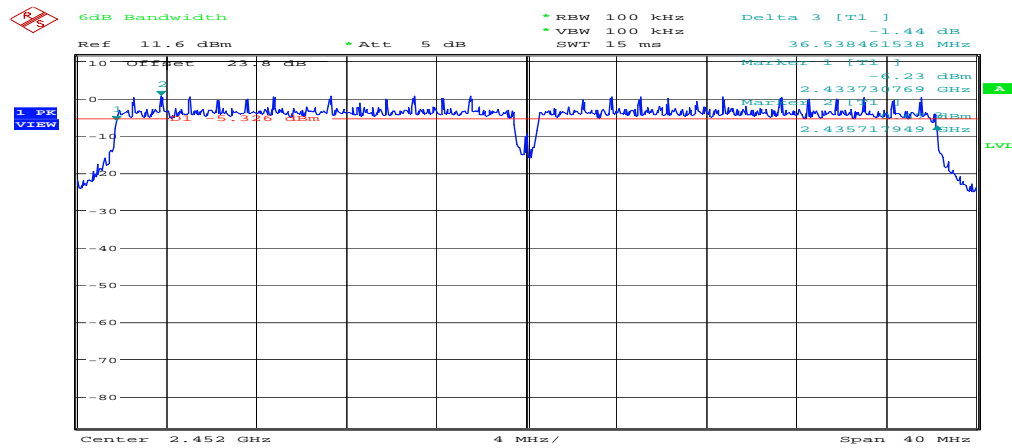
802.11n(40) 2422MHz ( )  
Date: 24.NOV.2007 17:03:34

### 802.11 n (HT40) Chain 0 CH06 2437MHz



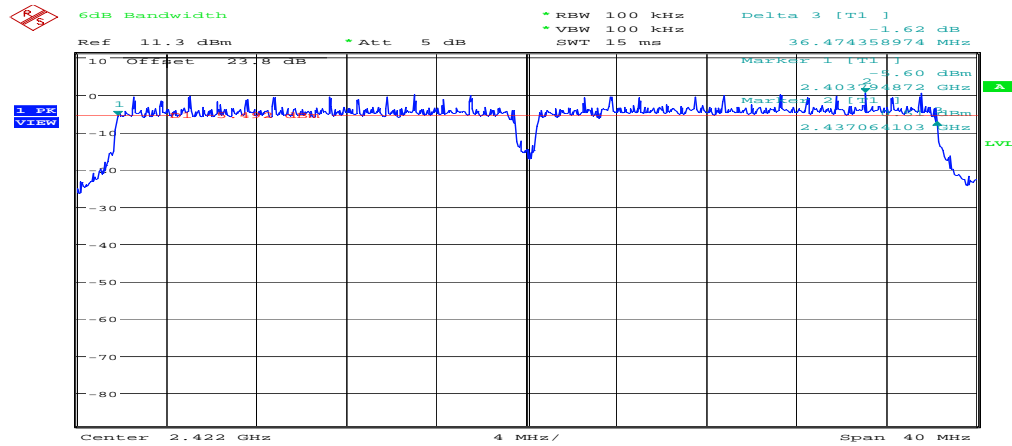
802.11n(40) 2437MHz ( )  
Date: 24.NOV.2007 17:01:33

### 802.11 n (HT40) Chain 0 CH09 2452MHz



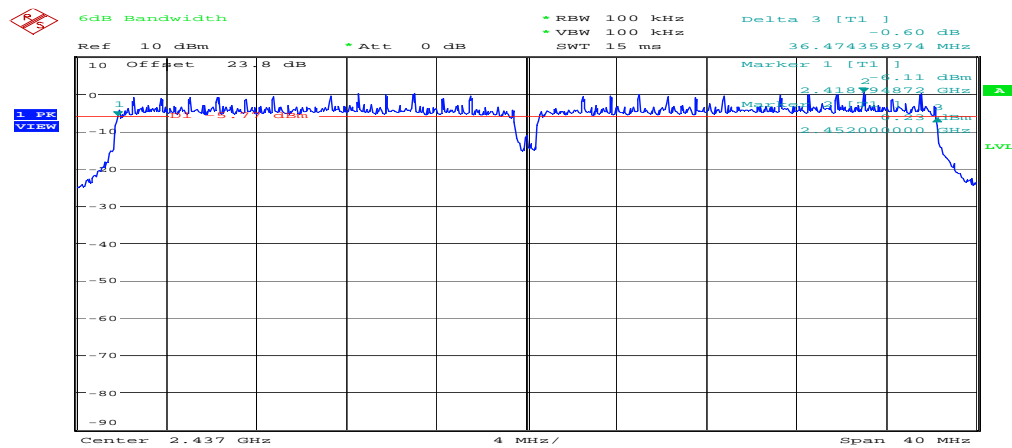
802.11n(40) 2452MHz ( )  
Date: 24.NOV.2007 16:59:17

### 802.11 n (HT40) Chain 2 CH03 2422MHz



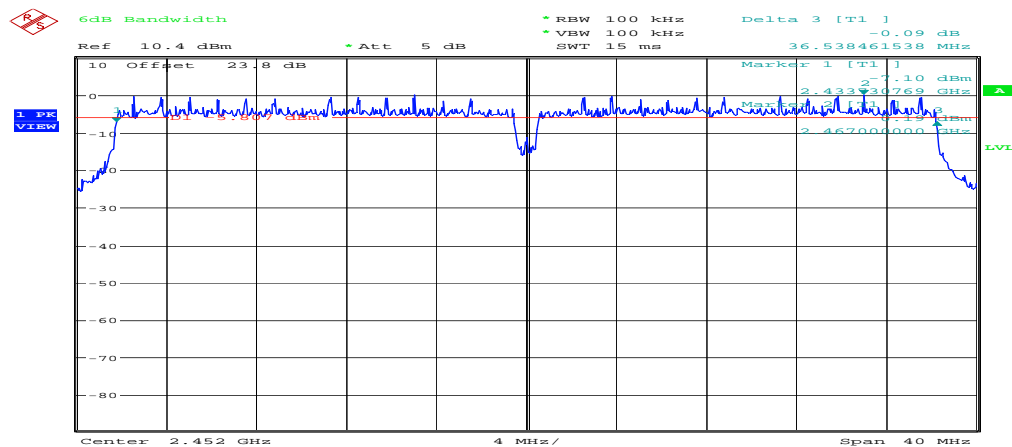
802.11n(40) 2422MHz ( )  
Date: 24.NOV.2007 16:54:05

### 802.11 n (HT40) Chain 2 CH06 2437MHz



802.11n(40) 2437MHz ( )  
Date: 24.NOV.2007 16:55:00

### 802.11 n (HT40) Chain 2 CH09 2452MHz

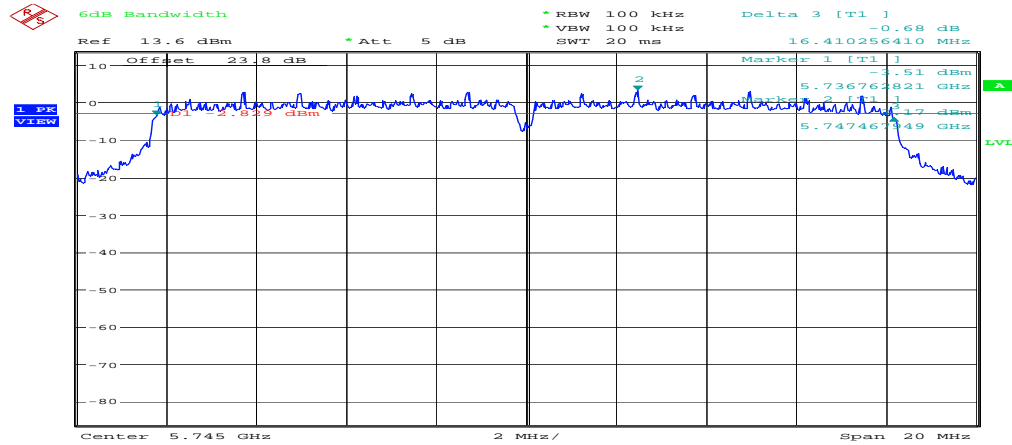


802.11n(40) 2452MHz ( )  
Date: 24.NOV.2007 16:56:57

# 6dB Bandwidth

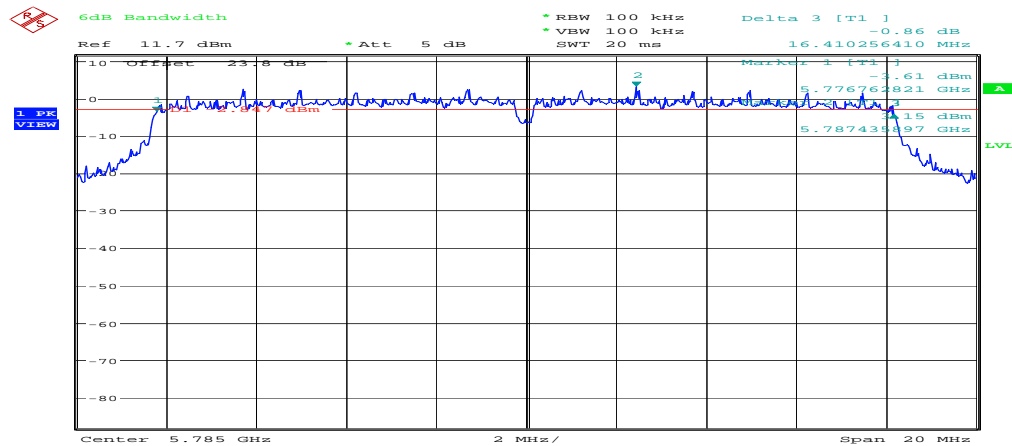
## 5G

### 802.11a Chain 0 CH149 5745MHz



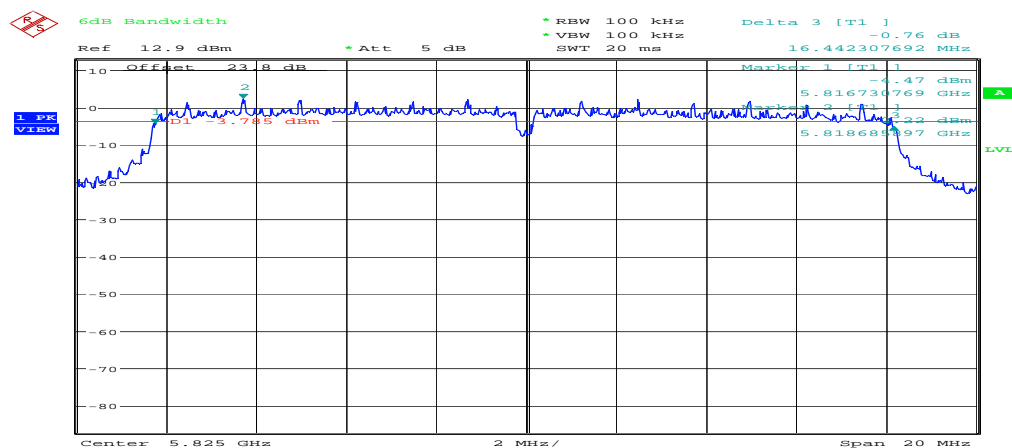
802.11a 5745MHz ()  
Date: 25.NOV.2007 17:05:06

### 802.11a Chain 0 CH157 5785MHz



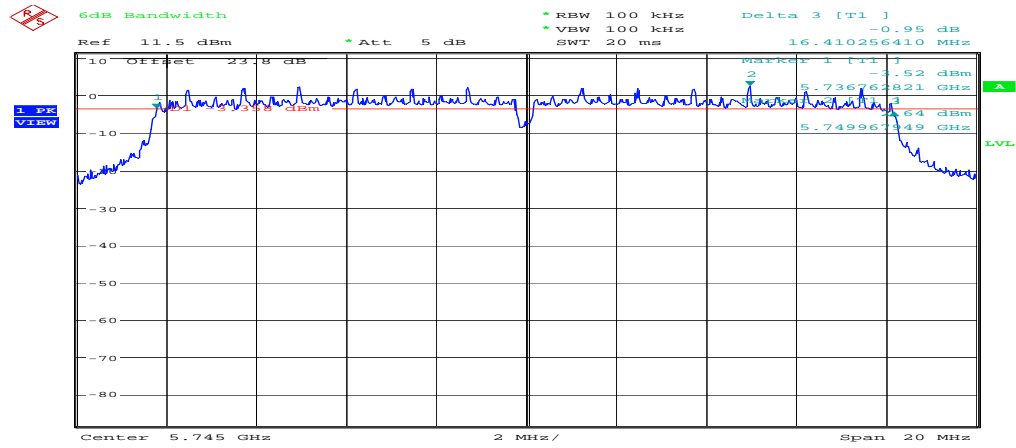
802.11a 5785MHz ()  
Date: 25.NOV.2007 17:07:18

### 802.11a Chain 0 CH165 5825MHz



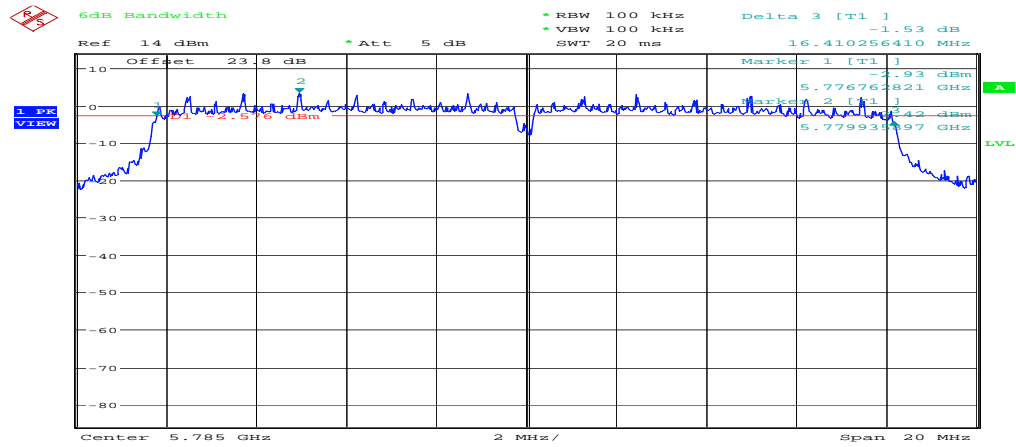
802.11a 5825MHz ()  
Date: 25.NOV.2007 17:10:15

### 802.11a Chain 2 CH149 5745MHz



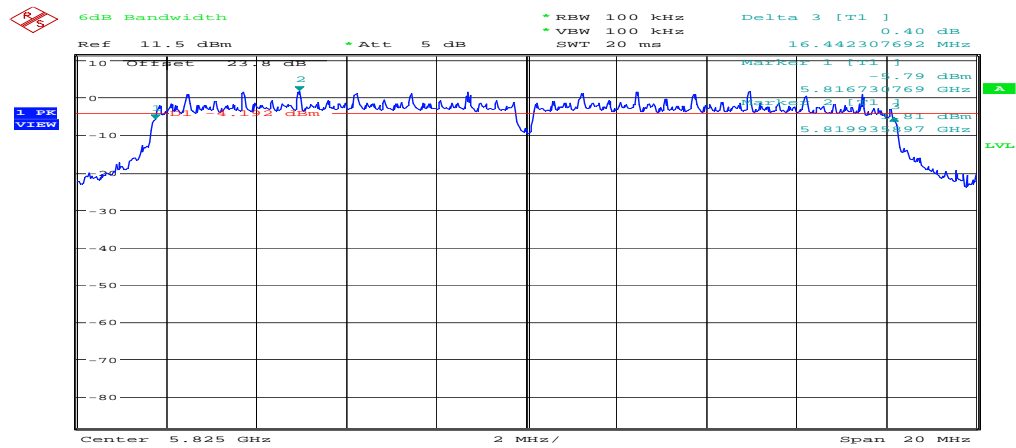
802.11a 5745MHz ()  
Date: 25.NOV.2007 17:16:45

### 802.11a Chain 2 CH157 5785MHz



802.11a 5785MHz ()  
Date: 25.NOV.2007 17:14:41

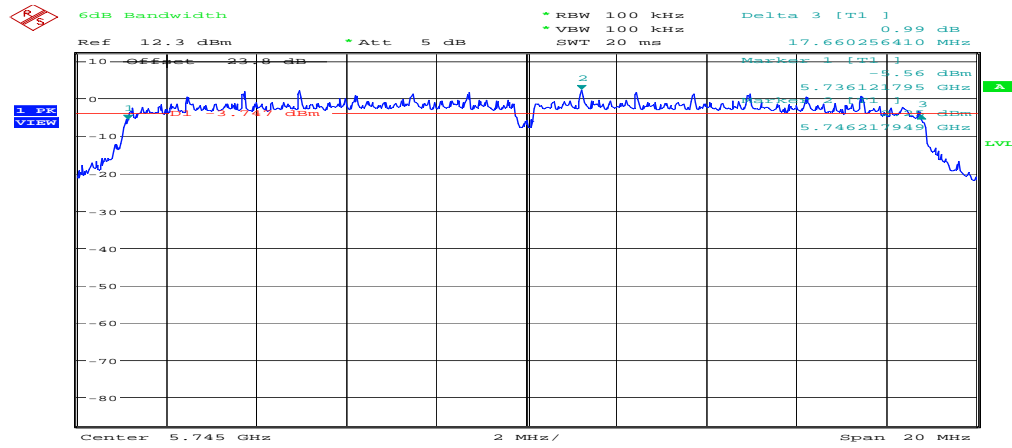
### 802.11a Chain 2 CH165 5825MHz



802.11a 5825MHz ()  
Date: 25.NOV.2007 17:12:37

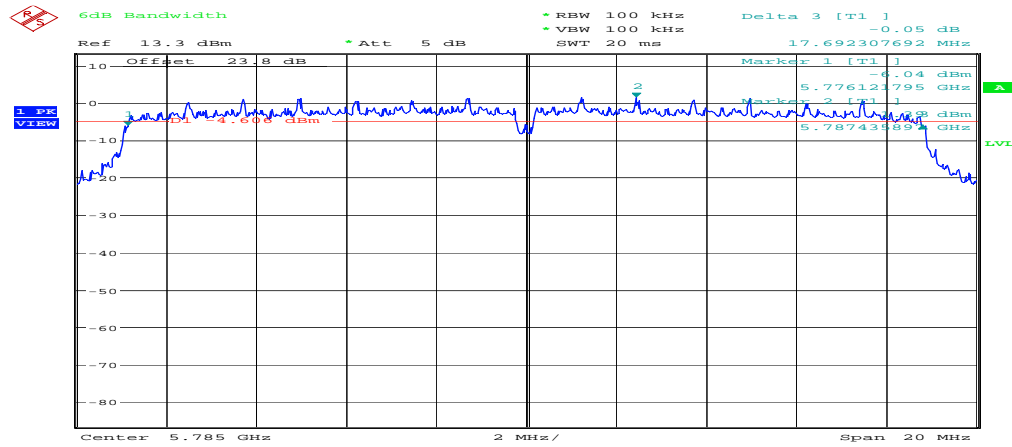


### 802.11n (HT20) Chain 0 CH149 5745MHz



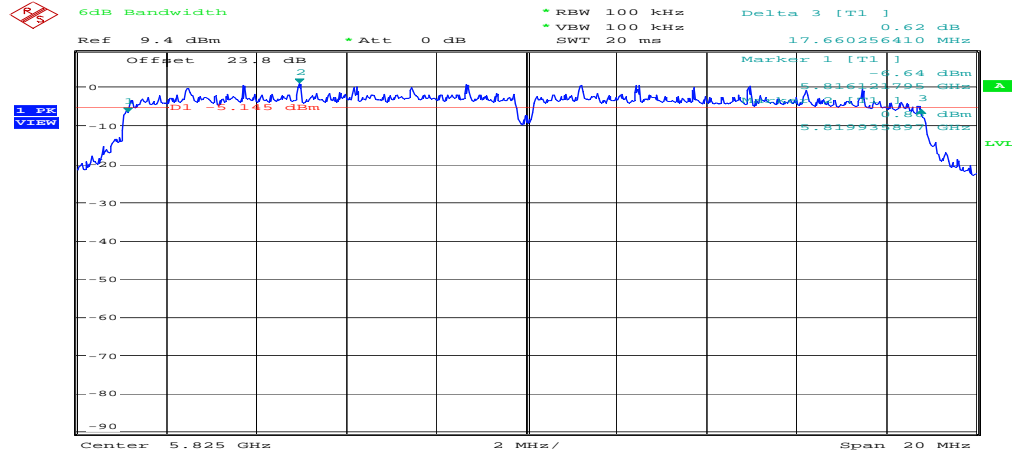
802.11n(20) 5745MHz ()  
Date: 25.NOV.2007 17:19:56

### 802.11n (HT20) Chain 0 CH157 5785MHz



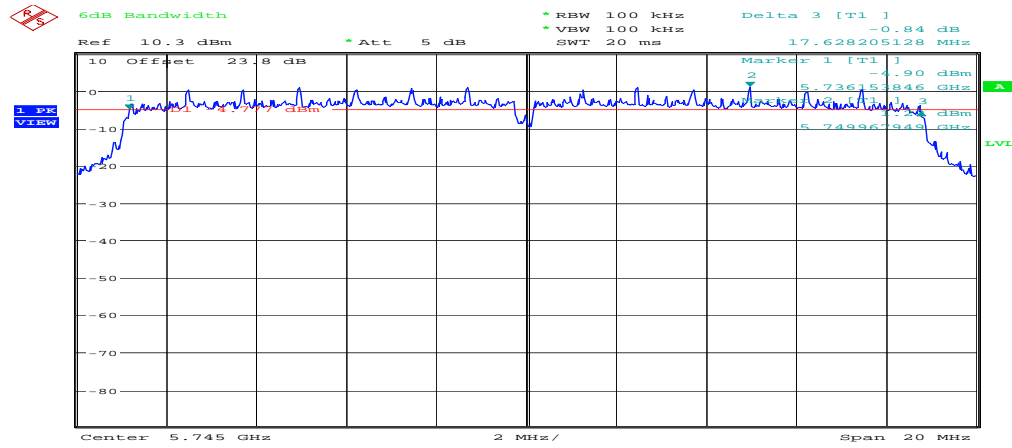
802.11n(20) 5785MHz ()  
Date: 25.NOV.2007 17:22:15

### 802.11n (HT20) Chain 0 CH165 5825MHz



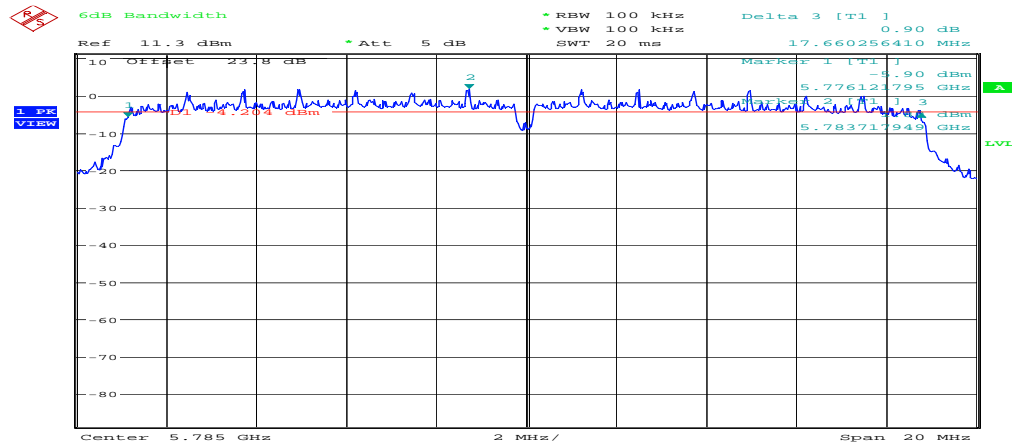
802.11n(20) 5825MHz ()  
Date: 25.NOV.2007 17:24:17

### 802.11n (HT20) Chain 2 CH149 5745MHz



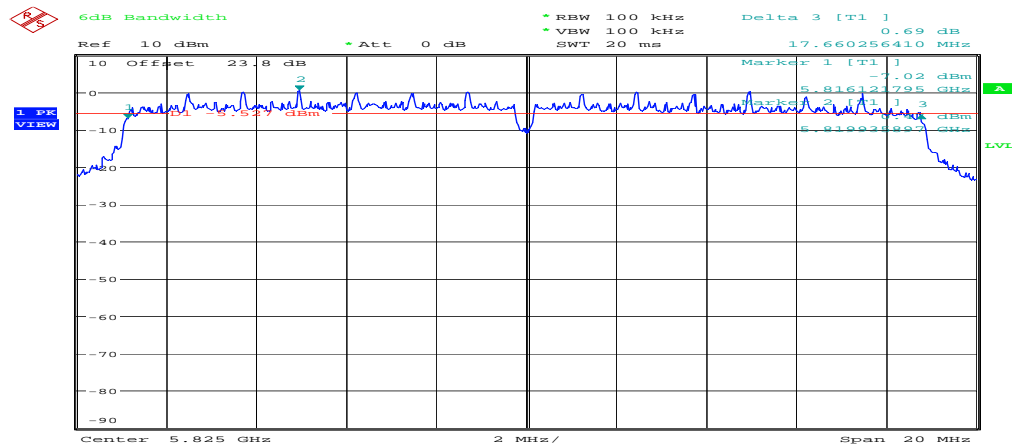
802.11n(20) 5745MHz ( )  
Date: 25.NOV.2007 17:30:51

### 802.11n (HT20) Chain 2 CH157 5785MHz



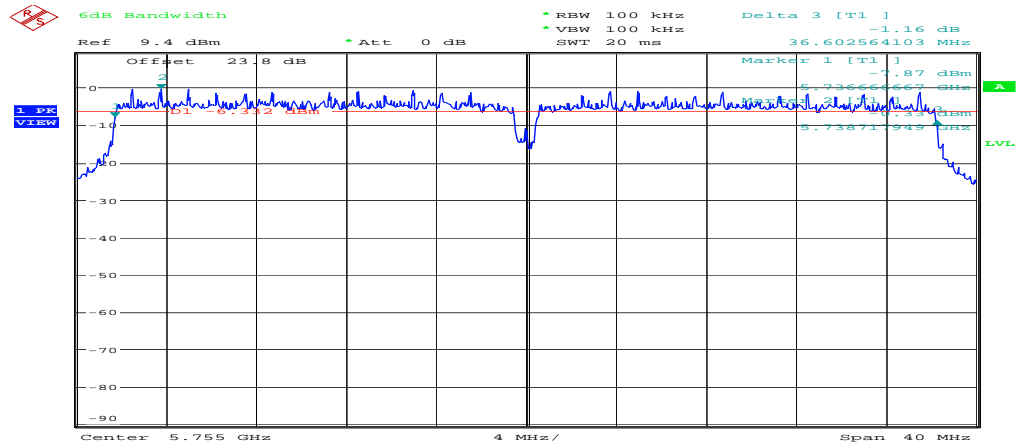
802.11n(20) 5785MHz ( )  
Date: 25.NOV.2007 17:28:45

### 802.11n (HT20) Chain 2 CH165 5825MHz



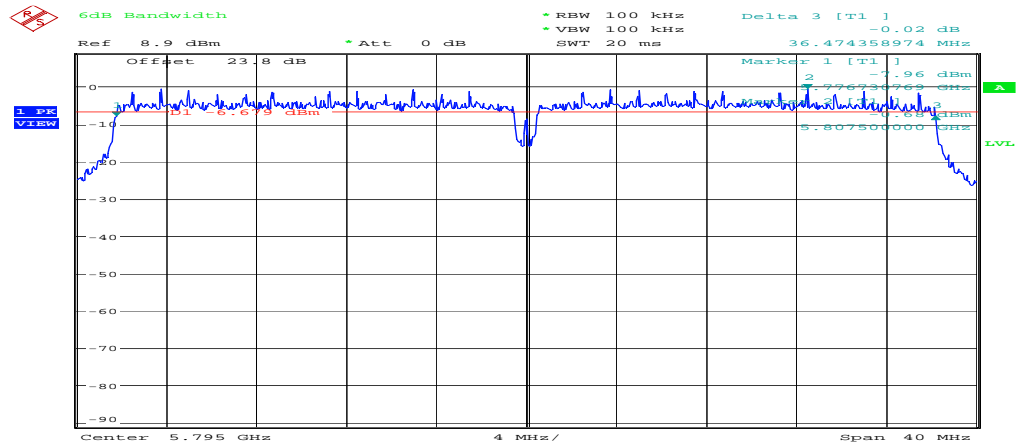
802.11n(20) 5825MHz ( )  
Date: 25.NOV.2007 17:26:35

### 802.11n (HT40) Chain 0 CH151 5755MHz



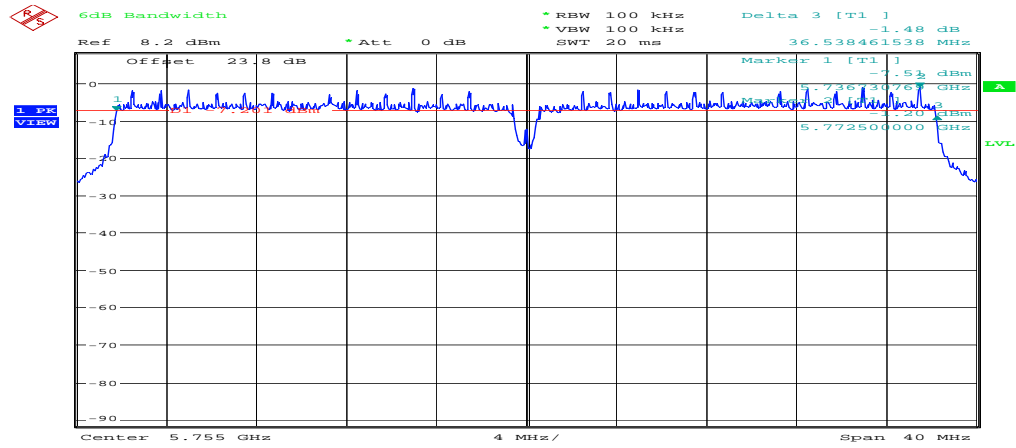
802.11n(40) 5755MHz ( )  
Date: 25.NOV.2007 17:33:54

### 802.11n (HT40) Chain 0 CH159 5795MHz



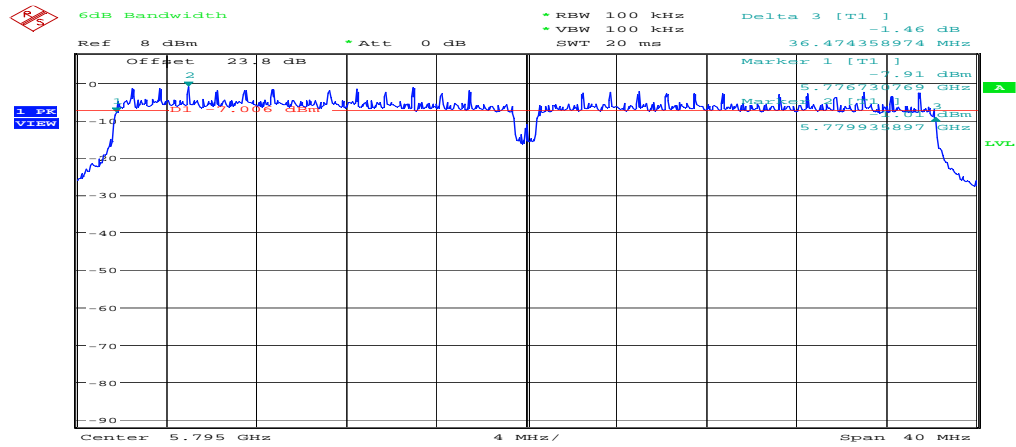
802.11n(40) 5795MHz ( )  
Date: 25.NOV.2007 17:36:04

### 802.11n (HT40) Chain 2 CH151 5755MHz



802.11n(40) 5755MHz ( )  
Date: 25.NOV.2007 17:40:21

### 802.11n (HT40) Chain 2 CH159 5795MHz



802.11n(40) 5795MHz ( )  
Date: 25.NOV.2007 17:38:12

### 99%Occupied bandwidth

#### 2.4G

Test Mode : 802.11b  
Test Chain : 0

Test CH		Occupied Bandwidth (MHz)
CH No.	Freq. (MHz)	
1	2412	15.35
6	2437	15.26
11	2462	15.26

Test Mode : 802.11b  
Test Chain : 2

Test CH		Occupied Bandwidth (MHz)
CH No.	Freq. (MHz)	
1	2412	15.42
6	2437	15.32
11	2462	15.32

Test Mode : 802.11g  
Test Chain : 0

Test CH		Occupied Bandwidth (MHz)
CH No.	Freq. (MHz)	
1	2412	16.51
6	2437	16.47
11	2462	16.44

Test Mode : 802.11g  
Test Chain : 2

Test CH		Occupied Bandwidth (MHz)
CH No.	Freq. (MHz)	
1	2412	16.47
6	2437	16.44
11	2462	16.44

Test Mode : 802.11n (HT20)  
 Test Chain : 0

Test CH		Occupied Bandwidth (MHz)
CH No.	Freq. (MHz)	
1	2412	17.66
6	2437	17.66
11	2462	17.66

Test Mode : 802.11n (HT20)  
 Test Chain : 2

Test CH		Occupied Bandwidth (MHz)
CH No.	Freq. (MHz)	
1	2412	17.69
6	2437	17.66
11	2462	17.66

Test Mode : 802.11n (HT40)  
 Test Chain : 0

Test CH		Occupied Bandwidth (MHz)
CH No.	Freq. (MHz)	
3	2422	36.28
6	2437	36.28
9	2452	36.28

Test Mode : 802.11n (HT40)  
 Test Chain : 2

Test CH		Occupied Bandwidth (MHz)
CH No.	Freq. (MHz)	
3	2422	36.28
6	2437	36.28
9	2452	36.28

### 99%Occupied bandwidth

#### 5G

Test Mode : 802.11a  
Test Chain : 0

Test CH		Occupied Bandwidth (MHz)
CH No.	Freq. (MHz)	
149	5745	16.47
157	5785	16.47
165	5825	16.47

Test Mode : 802.11a  
Test Chain : 2

Test CH		Occupied Bandwidth (MHz)
CH No.	Freq. (MHz)	
149	5745	16.47
157	5785	16.44
165	5825	16.47

Test Mode : 802.11n (HT20)  
Test Chain : 0

Test CH		Occupied Bandwidth (MHz)
CH No.	Freq. (MHz)	
149	5745	17.63
157	5785	17.63
165	5825	17.66

Test Mode : 802.11n (HT20)  
Test Chain : 2

Test CH		Occupied Bandwidth (MHz)
CH No.	Freq. (MHz)	
149	5745	17.66
157	5785	17.66
165	5825	17.66

Test Mode : 802.11n (HT40)

Test Chain : 0

Test CH		Occupied Bandwidth (MHz)
CH No.	Freq. (MHz)	
151	5755	36.28
159	5795	36.22

Test Mode : 802.11n (HT40)

Test Chain : 2

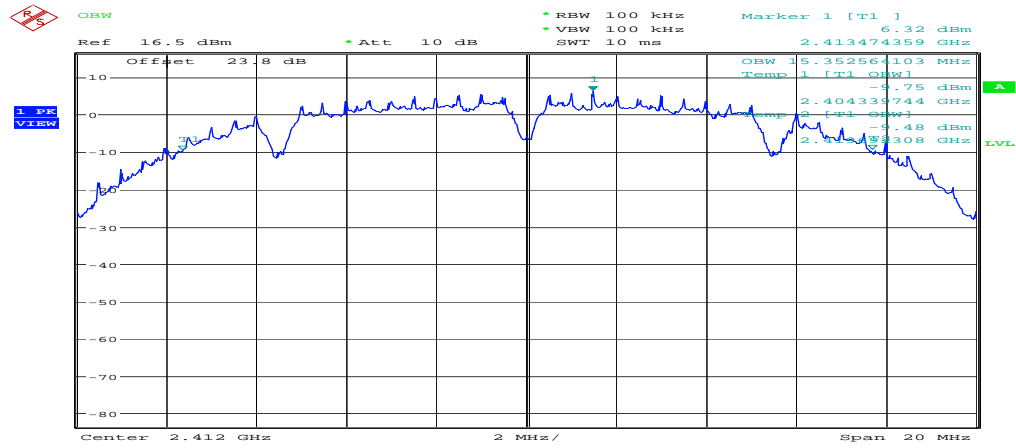
Test CH		Occupied Bandwidth (MHz)
CH No.	Freq. (MHz)	
151	5755	36.35
159	5795	36.22



# 99%Occupied bandwidth

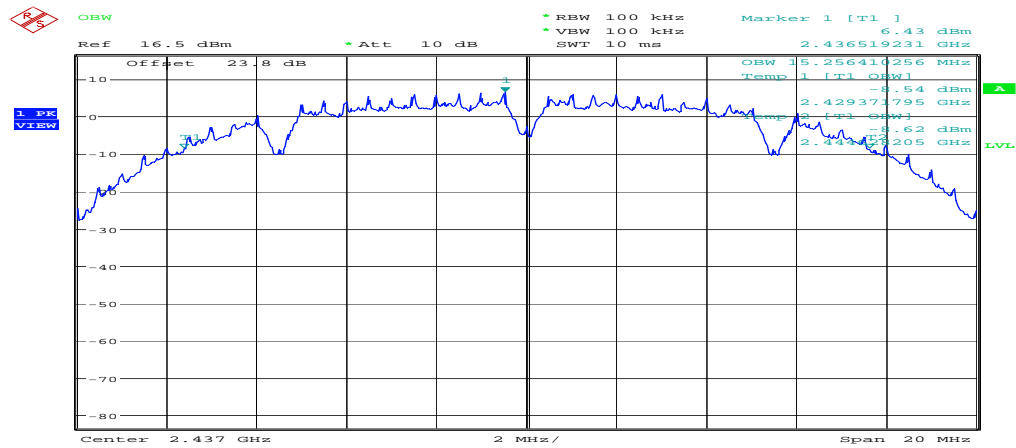
## 2.4G

### 802.11b Chain 0 CH01 2412MHz



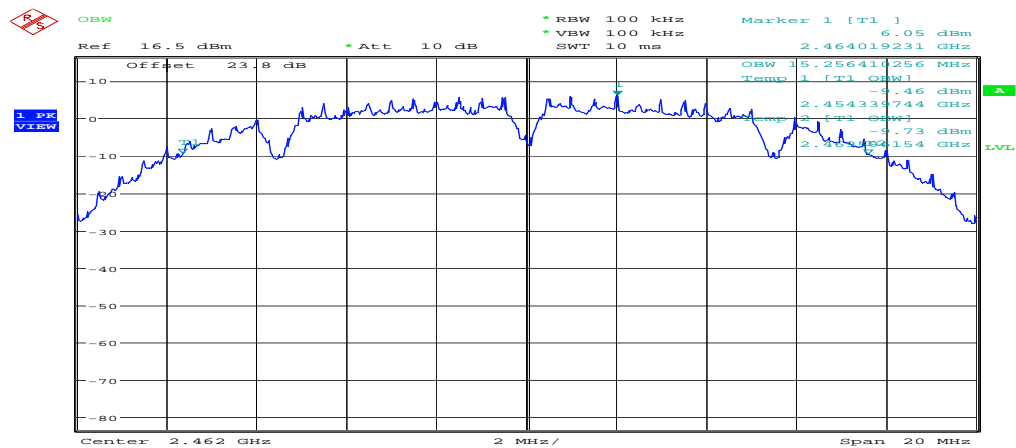
802.11b 2412MHz ( )  
Date: 24.NOV.2007 16:04:13

### 802.11b Chain 0 CH06 2437MHz



802.11b 2437MHz ( )  
Date: 24.NOV.2007 16:09:48

### 802.11b Chain 0 CH11 5825MHz



802.11b 2462MHz ( )  
Date: 24.NOV.2007 16:14:17