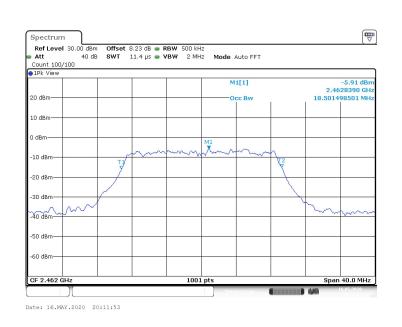
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2437 MHz



2462 MHz



Test Mode:	802.11n(HT40) Mode	*		
Channel frequency (MHz)	99% Bandwidth (MHz)	Limit (MHz)		
2422	36.044			
2437	35.964	>=0.5		
2452	36.044			
2422 MHz				



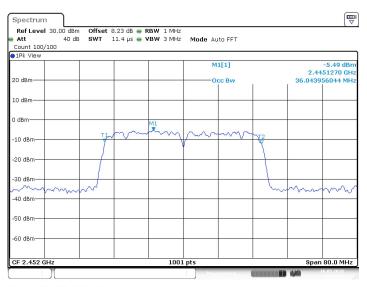
KSIGN<sup>®</sup>

2437 MHz **P** Spectrum 
 Ref Level 30.00 dBm
 Offset 8.23 dB
 RBW 1 MHz

 Att
 40 dB
 SWT
 11.4 µs
 YBW 3 MHz
 Mode Auto FFT

 Count 100/100
 100/100
 SWT
 11.4 µs
 YBW 3 MHz
 Mode Auto FFT
∋1Pk Vie M1[1] 2.4310860 GH 35.964035964 MH 20 dBm Occ Bw 10 dBm 0 dBn M1 -10 dBm -20 dBm -30 dBr 0 ~~ how -40 dBm -50 dBm 60 dBm 1001 pts Span 80.0 MHz CF 2.437 GH

2452 MHz



Date: 16.MAY.2020 20:22:57

Date: 16.MAY.2020 20:20:54

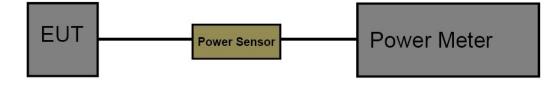


# 3.4. Peak Output Power

### Limit

Test Item	Limit	Frequency Range(MHz)
Peak Output Power	1 Watt or 30 dBm	2400~2483.5

Test Configuration



### Test Procedure

- 1. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram above.
- 2. The measurement is according to section 9.1.2 of KDB 558074 D01 15.247 DTS Meas Guidance v05.
- 3. Spectrum Setting:

Set analyser center frequency to DTS channel center frequency.

Set the RBW to: 1MHz

Set the VBW to: 3MHz

- Detector: peak
- Sweep time: auto

Allow trace to fully stabilize. Then use the peak marker function to determine the maximum amplitude level.

4. The power sensor video bandwidth is greater than or equal to the DTS bandwidth of the equipment.

### Test Mode

Please refer to the clause 2.3

### Test Result

Mode	Channel frequency (MHz)	Test Result (dBm)	Limit (dBm)
802.11b	2412	13.73	
	2437	13.69	
	2462	13.49	
802.11g	2412	11.35	
	2437	11.34	
	2462	11.23	20
	2412	9.27	30
802.11n (HT20)	2437	9.27	
	2462	9.19	
802.11n (HT40)	2422	9.58	
	2437	9.42	
	2452	9.39	

Result : PASS

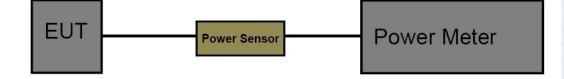


## 3.5. Power Spectral Density

### Limit

FCC Part 15 Subpart C(15.247)				
Test Item	Limit	Frequency Range(MHz)		
Power Spectral Density	8dBm(in any 3 kHz)	2400~2483.5		

## **Test Configuration**



### Test Procedure

- 1. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram above.
- The EUT was directly connected to the Spectrum Analyzer and antenna output port as show in the block diagram above. The measurement according to section 10.2 of KDB 558074 D01 15.247 DTS Meas Guidance v05.
- 3. Spectrum Setting:

Set analyser center frequency to DTS channel center frequency.

Set the span to 1.5 times the DTS bandwidth.

Set the RBW to: 10 kHz

- Set the VBW to: 30 kHz
- Detector: peak
- Sweep time: auto

Allow trace to fully stabilize. Then use the peak marker function to determine the maximum amplitude level.

### Test Mode

Please refer to the clause 2.3

### Test Result

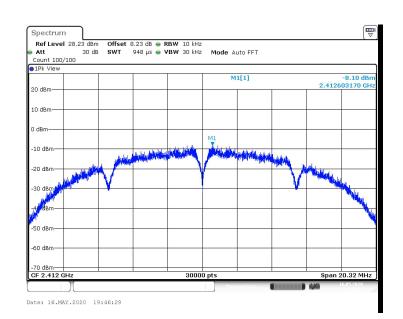
### Note:

Power Density(dBm/3kHz)=Power Density(dBm/10kHz)-10\*Log(10/3)

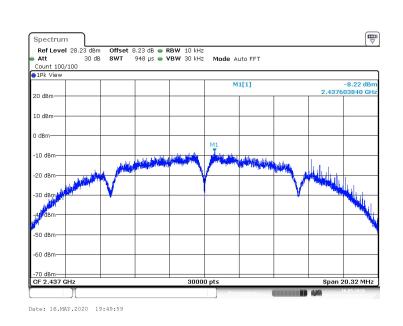
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WEIEN <sup>®</sup>	
KSIGN <sup>®</sup>	

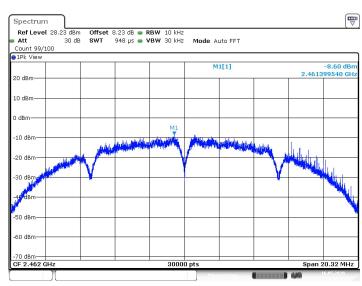
Test Mode:	de: 802.11b Mode				
Channel Freq (MHz)	luency	Power Density (dBm/10kHz)	Power Density (dBm/3kHz)	Limit (dBm)	
2412		-8.10	-13.33		
2437		-8.22	-13.45	8dBm/3kHz	
2462		-8.60	-13.83	-	
		2412 N	۱Hz		



2437 MHz



2462 MHz

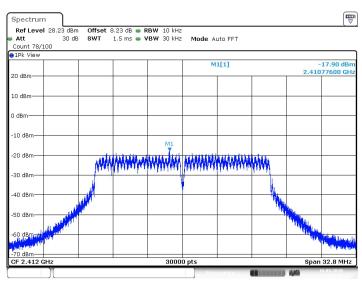


Date: 16.MAY.2020 19:52:39

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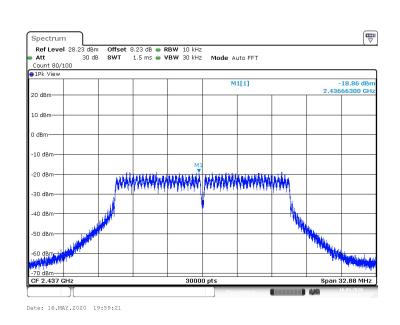
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Test Mode:	802.11g	Mode		
Channel Frec (MHz)		Power Density (dBm/10 kHz)	Power Density (dBm/3 kHz)	Limit (dBm)
2412		-17.90	-23.13	
2437		-18.86	-24.09	8dBm/3kHz
2462		-18.35	-23.58	
		2412 MHz		

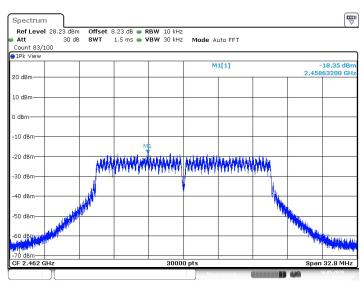


Date: 16.MAY.2020 19:55:49

2437 MHz



#### 2462 MHz

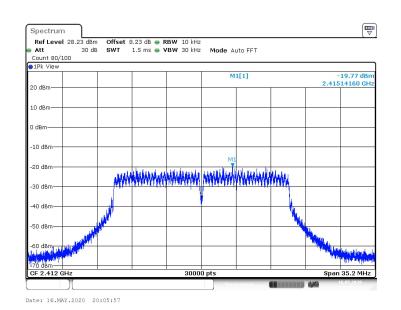


Date: 16.MAY.2020 20:01:23

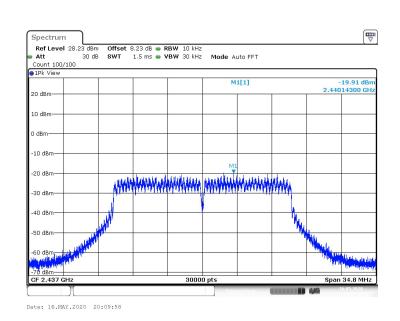
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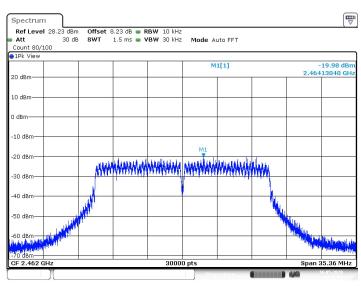
Test Mode:	802.1	1n(HT20) Mode			
Channel Frequ (MHz)	ency	Power Density (dBm/10kHz)	Power Density (dBm/3 kHz)	Limit (dBm)	
2412		-19.77	-25.00		
2437		-19.91	-25.14	8dBm/3kHz	
2462		-19.98	-25.21		
		2412 M	Hz		



2437 MHz



#### 2462 MHz



Date: 16.MAY.2020 20:12:08

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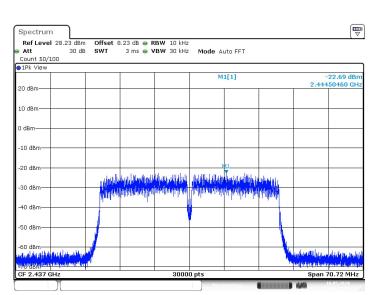
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**Test Mode:** 802.11n(HT40) Mode **Channel Frequency Power Density** Limit (MHz) (dBm/10 kHz) **Power Density** (dBm) (dBm/3 kHz) 2422 -22.42 -27.65 2437 -22.69 8dBm/3kHz -27.92 2452 -22.36 -27.59 2422 MHz

#### ₽ Spectrum Ref Level 28.23 dBm Att 30 dB Offse SWT 23 dB 👄 3 ms 👄 RBW 10 kHz VBW 30 kHz Mode Auto FFT 49/100 Count -22.42 d 2.41200280 ∋1Pk Vi M1[1] 20 dBm 10 dBm 0 dBi -10 dBm -20 dBm -30 dBm turn double A STATE OF A and a second state of the second s 40 dBm -50 dBm -60 dBr Span 70.56 MHz 30000 pts Date: 16.MAY.2020 20:17:26

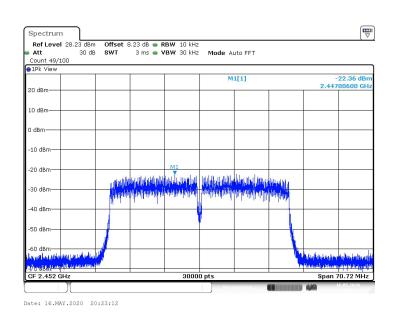
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2437 MHz



Date: 16.MAY.2020 20:21:09

#### 2452 MHz





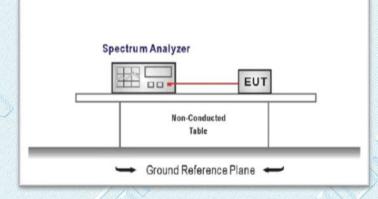
## 3.6. Band edge and Spurious Emission (conducted)

### Limit

### FCC CFR Title 47 Part 15 Subpart C Section15.247 (d):

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.

### **Test Configuration**



### Test Procedure

- 1. Connect the antenna port(s) to the spectrum analyzer input.
- Establish a reference level by using the following procedure Center frequency=DTS channel center frequency The span = 1.5 times the DTS bandwidth. RBW = 100 kHz, VBW ≥ 3 x RBW Detector = peak, Sweep time = auto couple, Trace mode = max hold Allow trace to fully stabilize Use the peak marker function to determine the maximum PSD level

Note: the channel found to contain the maximum PSD level can be used to establish the reference level.

3. Emission level measurement

Set the center frequency and span to encompass frequency range to be measured RBW = 100 kHz, VBW  $\ge$  3 x RBW Detector = peak, Sweep time = auto couple, Trace mode = max hold Allow trace to fully stabilize Use the peak marker function to determine the maximum amplitude level.

Place the radio in continuous transmit mode, allow the trace to stabilize, view the transmitter waveform on

- the spectrum analyzer.
- 5. Ensure that the amplitude of all unwanted emissions outside of the authorized frequency band excluding restricted frequency bands) are attenuated by at least the minimum requirements specified (at least 20 dB relative to the maximum in-band peak PSD level in 100 kHz). Report the three highest emissions relative to the limit.

### Test Mode

Please refer to the clause 2.3.

### **Test Results**

802.11b

