

### Conducted Output Power (802.11n-CH 6) 6.5Mbps



### Conducted Output Power (802.11n-CH 6) 13Mbps



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### Conducted Output Power (802.11n-CH 6) 19.5Mbps



### Conducted Output Power (802.11n-CH 6) 26Mbps



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### Conducted Output Power (802.11n-CH 6) 39Mbps



### Conducted Output Power (802.11n-CH 6) 52Mbps



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### Conducted Output Power (802.11n-CH 6) 58.5Mbps



### Conducted Output Power (802.11n-CH 6) 65Mbps



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### Conducted Output Power (802.11n-CH 11) 6.5Mbps



### Conducted Output Power (802.11n-CH 11) 13Mbps



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### Conducted Output Power (802.11n-CH 11) 19.5Mbps



### Conducted Output Power (802.11n-CH 11) 26Mbps



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### Conducted Output Power (802.11n-CH 11) 39Mbps



### Conducted Output Power (802.11n-CH 11) 52Mbps



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### Conducted Output Power (802.11n-CH 11) 58.5Mbps



### Conducted Output Power (802.11n-CH 11) 65Mbps



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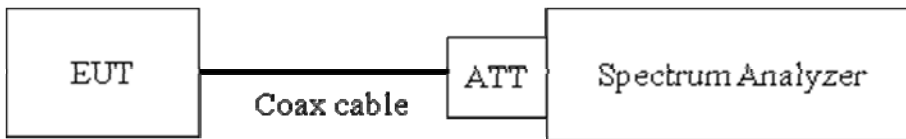
### 8.3 POWER SPECTRAL DENSITY (802.11b/g/n)

#### Test Requirements and limit, §15.247(e)

The peak power spectral density is measured with a spectrum analyzer connected to the antenna terminal while the EUT is operating in transmission mode at the appropriate frequencies.

**Minimum Standard – the 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 CONFIGURATION



#### ■ TEST PROCEDURE

We tested according to Procedure 9.1 Option1 in KDB 558074, issued 10/04/2012

The spectrum analyzer is set to :

Set analyzer center frequency to DTS channel center frequency.

Span = 1.5 times the DTS channel bandwidth

RBW ≥ 3 kHz

VBW ≥ 9 kHz

Sweep = Auto couple

Detector Mode = Peak

Trace Mode = Max hold

Allow trace to fully stabilize.

Use the peak marker function to determine the maximum amplitude level.

If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

#### ■ Sample Calculation

$$\begin{aligned}
 \text{PSD} &= \text{Reading Value} + \text{ATT loss} + \text{Cable loss}(1 \text{ ea}) \\
 &= -5 \text{ dBm} + 10 \text{ dB} + 0.8 \text{ dB} = 5.8 \text{ dBm}
 \end{aligned}$$

Note :

1. Spectrum reading values are not plot data. The PSD results in plot is already including the actual values of loss for the attenuator and cable combination.
2. Spectrum offset = Attenuator loss + Cable loss
3. We apply to the offset in the 2.4 GHz range that was rounded off to the closest tenth dB. Actual value of loss for the attenuator and cable combination is below table.

So, 10.1 dB is offset. And the offset gap in the 2.4 GHz range do not affect the power spectral density final result.

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Band	Frequency(MHz)	Loss(dB)
2.4 GHz	2412	10.11
	2437	10.10
	2462	10.12

(Actual value of loss for the attenuator and cable combination)

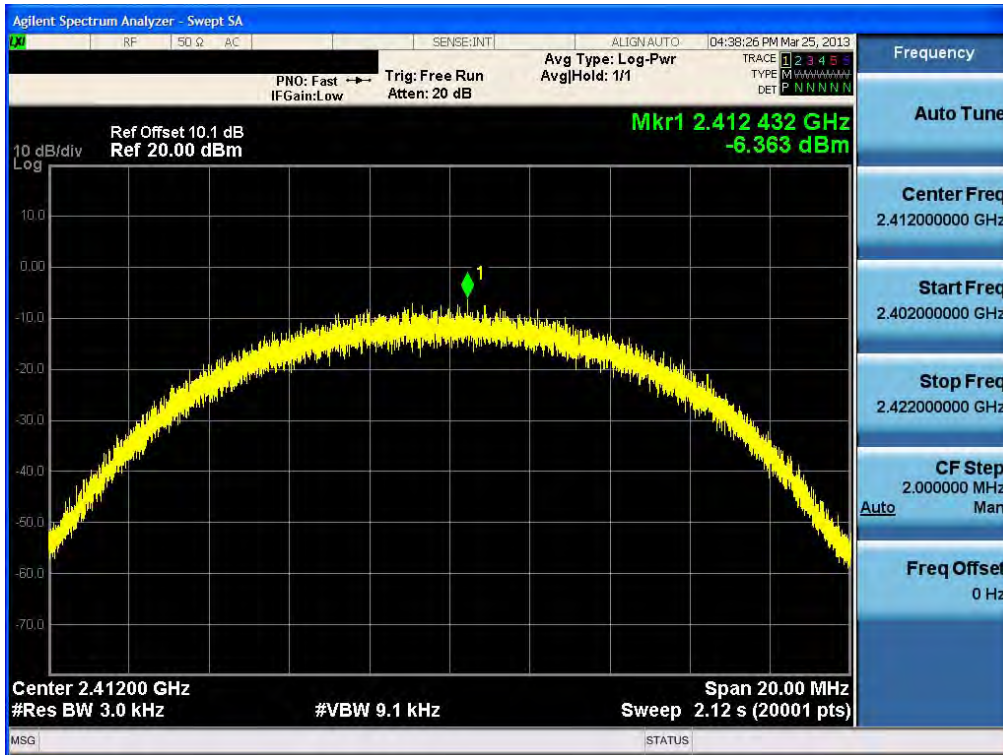
■ TEST RESULTS

Conducted Power Density Measurements

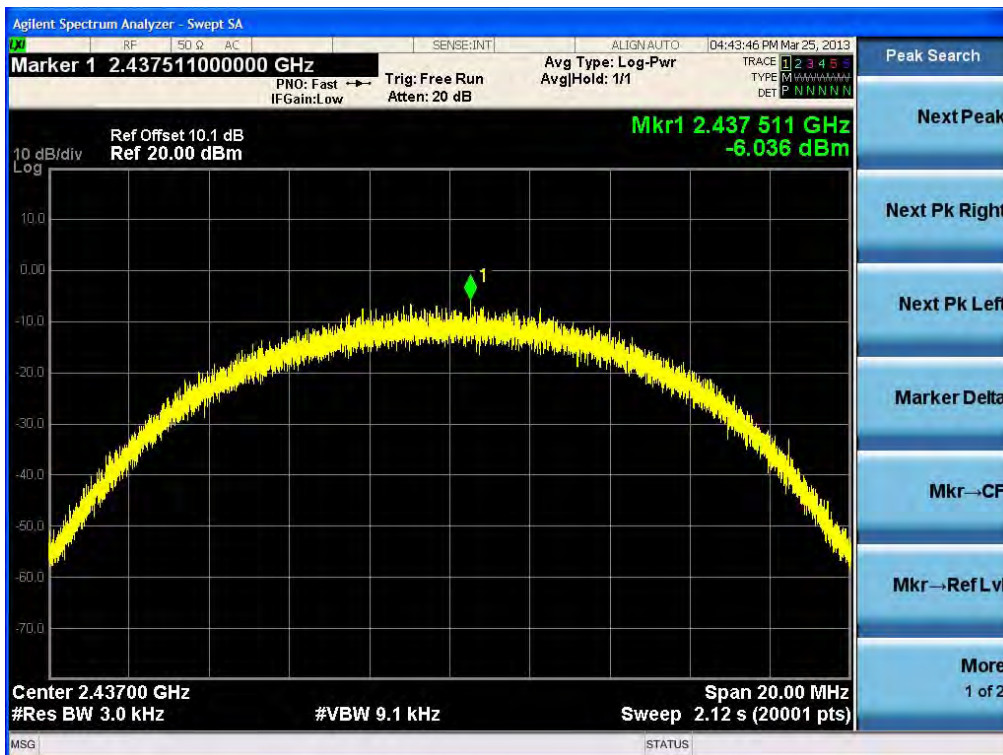
Frequency (MHz)	Channel No.	Mode	Test Result		
			PSD (dBm)	Limit (dBm)	Pass/Fail
2412	1	802.11b	-6.363	8	Pass
2437	6		-6.036	8	Pass
2462	11		-7.033	8	Pass
2412	1	802.11g	-10.977	8	Pass
2437	6		-12.276	8	Pass
2462	11		-11.609	8	Pass
2412	1	802.11n	-13.259	8	Pass
2437	6		-14.245	8	Pass
2462	11		-13.814	8	Pass

RESULT PLOTS

Power Spectral Density (802.11b-CH 1)

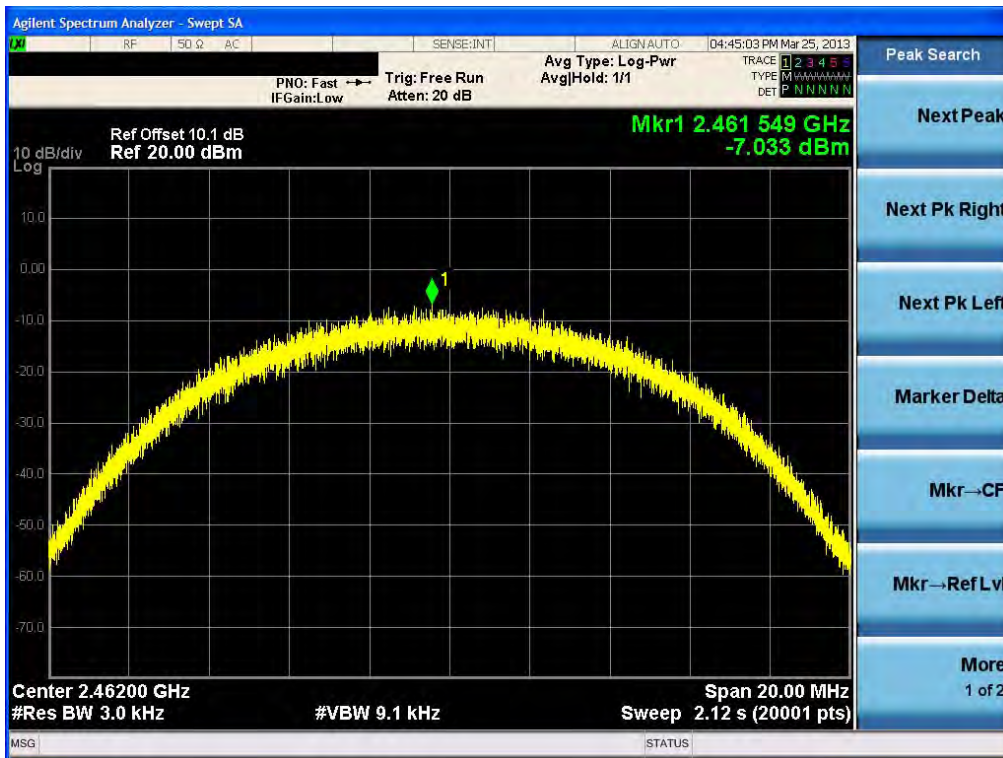


Power Spectral Density (802.11b-CH 6)



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### Power Spectral Density (802.11b-CH 11)

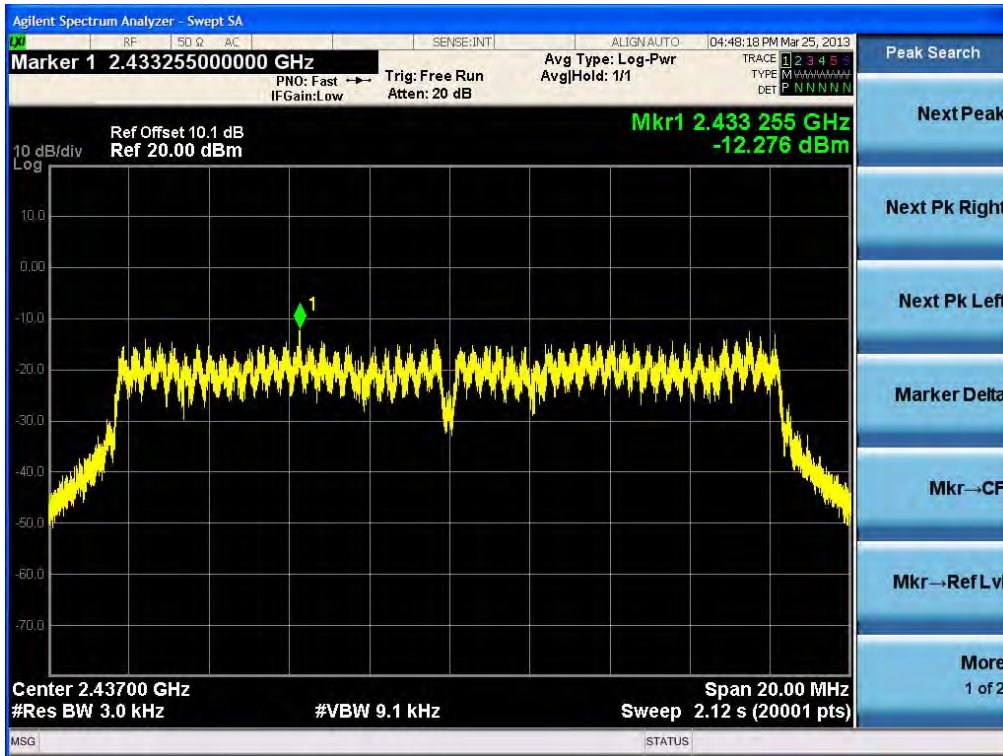


### Power Spectral Density (802.11g-CH 1)

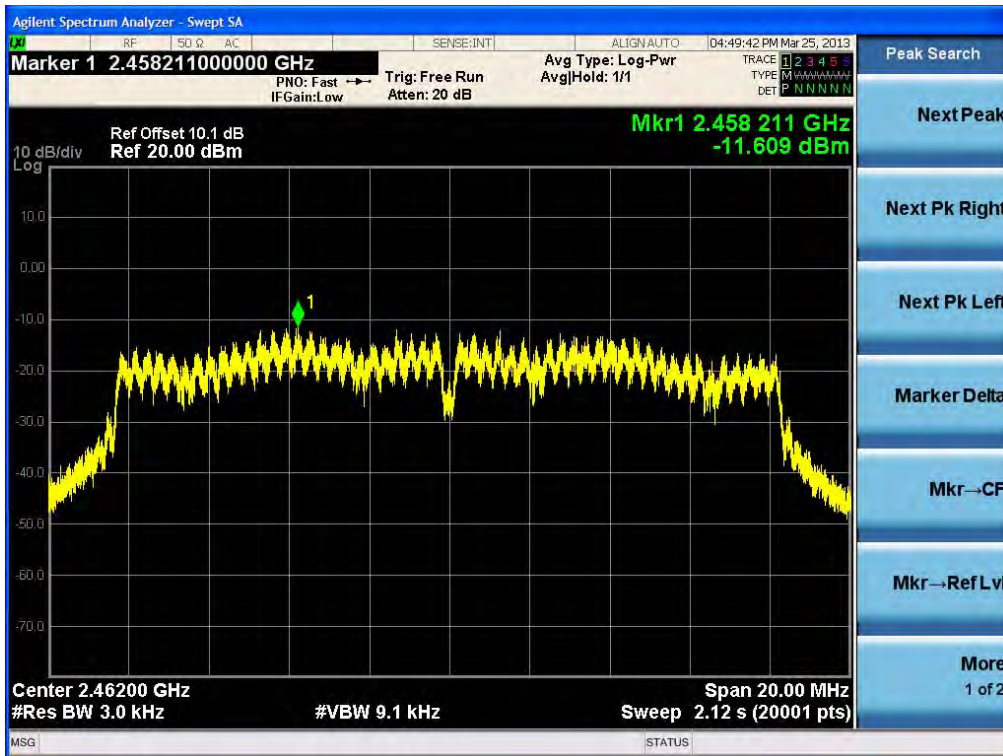


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### Power Spectral Density (802.11g-CH 6)

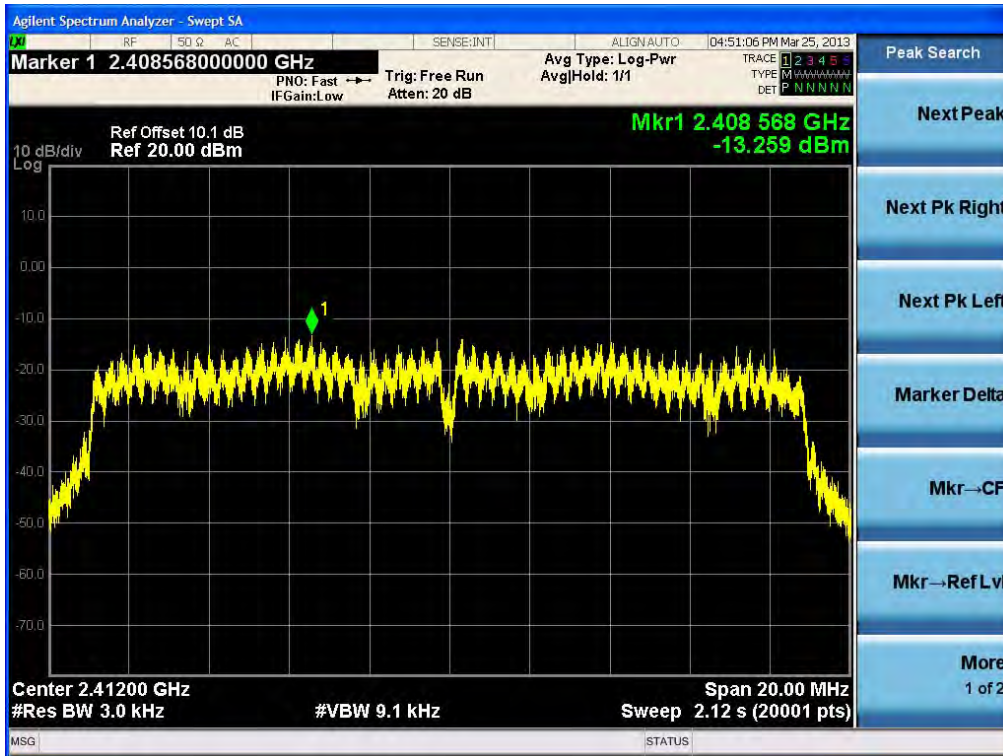


### Power Spectral Density (802.11g-CH11)

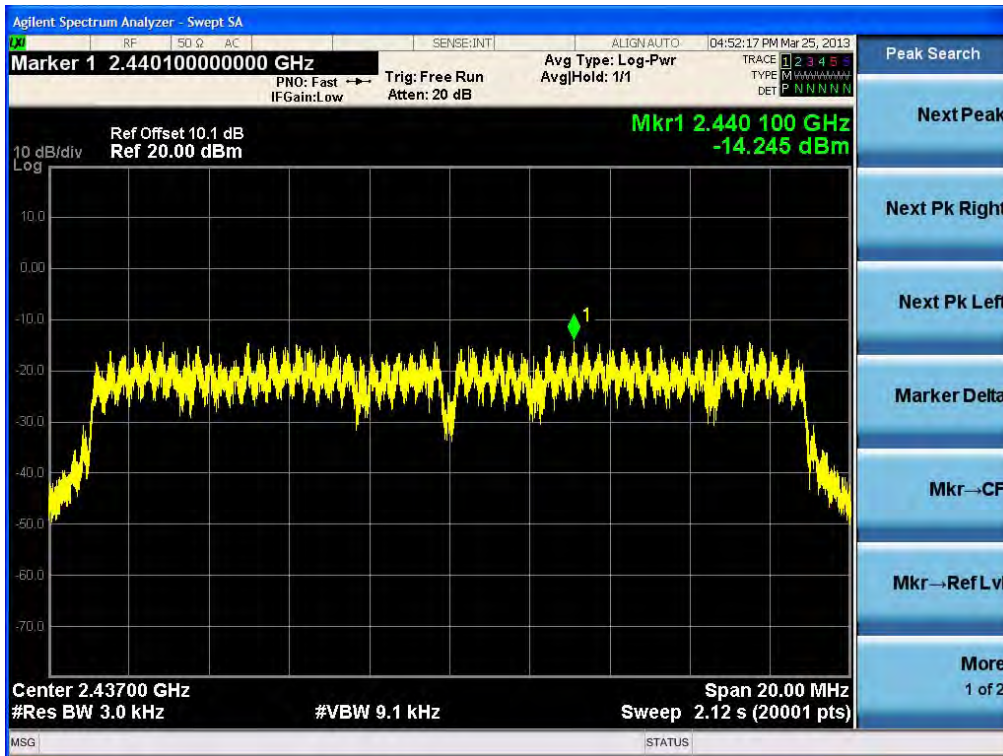


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### Power Spectral Density (802.11n-CH 1)



### Power Spectral Density (802.11n-CH 6)



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### Power Spectral Density (802.11n-CH11)



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