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Subject: Peak Watts meaning

Posted by [chatzy02](#) on Tue, 04 Apr 2017 20:06:51 GMT

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There are some speakers that I'm looking to buy, and I noticed that it's written 40W maximum peak. What does this mean?

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Subject: Re: Peak Watts meaning

Posted by [gofar99](#) on Tue, 04 Apr 2017 22:52:12 GMT

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Hi, For speakers it would usually mean do not feed them more than that power level. Either severe distortion would occur or damage. The problem becomes one of how are you to know? Amplifier power ratings will not provide a suitable answer. An amp "rated" at 40 watts can be either more powerful or less powerful than the indicated level. Vintage high quality amps (like the Marantz playing above my head right now) are quite conservative and even after nearly 50 years it will deliver around twice what they rated it at. New inexpensive amps are often listed at considerably more than they can deliver before serious distortion set in. They tend to show "peak" watts and that can mean nearly anything. So amp size is not really a good guide on how to know. Considering the 40 watt limit on your speakers I will make a few assumptions (yes I know dangerous to do). First that is generally a really low value for speakers in general. So I would expect them to be actually comfortable with half that amount. Unless they are some super efficient ones then the actual sound level you can get will be on the low side before distortion. Since it is typical to listen at levels well below max ratings as long as you don't push them too hard they will probably be OK. A thing to watch out for is bass response and if you use tone controls how much you boost it. It is quite easy to exceed ratings while trying to get enough bass output. A few clicks on the control will easily get to the max level.

Without further information it is difficult to be more specific, but unless the speakers are high quality and efficient they are likely to be small, inefficient and probably not all that great. Just my 2 cents.

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Subject: Re: Peak Watts meaning

Posted by [Wayne Parham](#) on Wed, 05 Apr 2017 14:23:33 GMT

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"Peak" power rating has a technically standardized meaning in electronics, but it is rarely accurate when advertised as a loudspeaker specification.

Peak power is the power dissipated at the peak of a sinusoidal signal.

Peak-to-peak is double this.

RMS is 70.7% of this.

Loudspeakers are usually rated at the RMS power level they can sustain for an unlimited duration without thermal failure.

Any other rating should be considered suspicious.

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Subject: Re: Peak Watts meaning  
Posted by [Kingfish](#) on Wed, 05 Apr 2017 18:19:48 GMT  
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When something peaks, it means that it cannot get higher than that peak. In this case, 40W. It doesn't go to 41 or higher without consequences.

Unless you're a hardcore metal-head though, I wouldn't worry about blowing the speakers out. 40W should be enough for the average listener.

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Subject: Re: Peak Watts meaning  
Posted by [chatzy02](#) on Mon, 10 Apr 2017 22:48:42 GMT  
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Thanks for explaining that in so much detail guys. I totally understand what it means now. Funny how some of these things that seem so simple can actually be hard to understand for some noobs.

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Subject: Re: Peak Watts meaning  
Posted by [cwemoy](#) on Tue, 11 Apr 2017 07:14:01 GMT  
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I have never bothered to look at anything on a speaker or any audio system. It looks like a good idea to always check and seek clarification where something isn't clear. Thank you for this guys.

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Subject: Re: Peak Watts meaning  
Posted by [chatzy02](#) on Mon, 08 May 2017 20:47:10 GMT  
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I know what you mean, Cwemoy. Up until I came across this forum I was like that, too. I never used to worry about what all that writing on the speakers meant but now I'm learning so much. It's really amazing.

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