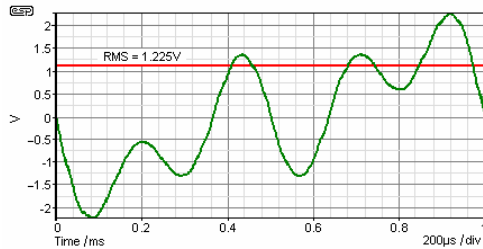


RMS Power vs Peak Power

David Edis-Bates (December 2007)

RMS and Peak power are the ratings often used to determine the overall performance of home audio products, such as speakers, subwoofers, and amplifiers. This article provides an overview of how these ratings can be used and abused.

RMS Power refers to Root-Means-Square power. The formula for determining RMS power is $70.7\% \times \text{Peak Power Rating}$. The RMS power rating is a measure of continuous power measured in watts, the higher the RMS power rating the better the equipment is able to provide or accept the specified power over a significant length of time without failure.



Many suppliers quote Peak Power ratings in their specifications. Peak Power does not reflect a product's capabilities under normal, every day

use. It is simply a measure of how much power can be generated or handled for a very short period of time. Speakers, subwoofers and amplifiers should really be compared using RMS power ratings to ensure that the right product is chosen for the application in question.

If a speaker has an RMS power rating of 100 watts and an amplifier has a RMS power rating of 100 watts, the speaker should theoretically, be a perfect match regarding power capabilities and result in optimum performance from both products. Don't be fooled by "Peak Power" or some of the more obscure figures often seen in trade literature to give the impression of higher power rating of a device. The RMS power rating indicates the realistic capability of an audio system during use and is a good rating method for comparing different equipment.

About the Author

David Edis-Bates, a chartered communications engineer has spent more than 30 years in export related activities around the world, lived in Taiwan for 4 years in the 70's and in China for the past 4 years. Currently CEO Edis Trading (HK) Limited <http://www.edistrading.hk>

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