

RMS Voltage Calculator

Convert a measured or modeled peak voltage to RMS voltage; 0.7071 applies to a verified sinusoidal waveform.

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<https://www.elecatrrix.com/voltage-current-resistance/rms-voltage-calculator/>

Inputs

Input	Value	Unit
Peak voltage	169.706	V
Waveform factor	0.7071	x

Results

Result	Value	Unit
RMS voltage	120.0003	V
Waveform factor used	0.7071	x

Calculation details

Detail	Value	Unit
Calculation basis	RMS voltage is estimated as peak voltage multiplied by the entered waveform factor.	
Boundary	This is waveform arithmetic only. It does not identify waveform distortion, insulation stress, instrument category, or equipment suitability.	

Formulas

$$V_{RMS} = V_{Peak} \times F_{waveform}$$

$$F_{sine} = (1/\sqrt{2}) \text{ approx } 0.7071$$

Warnings and limitations

This is a signal arithmetic estimate. Confirm whether the source is sinusoidal, distorted, pulsed, or otherwise non-sinusoidal, and verify instrument bandwidth, measurement category, and equipment ratings before using the result for electrical work.