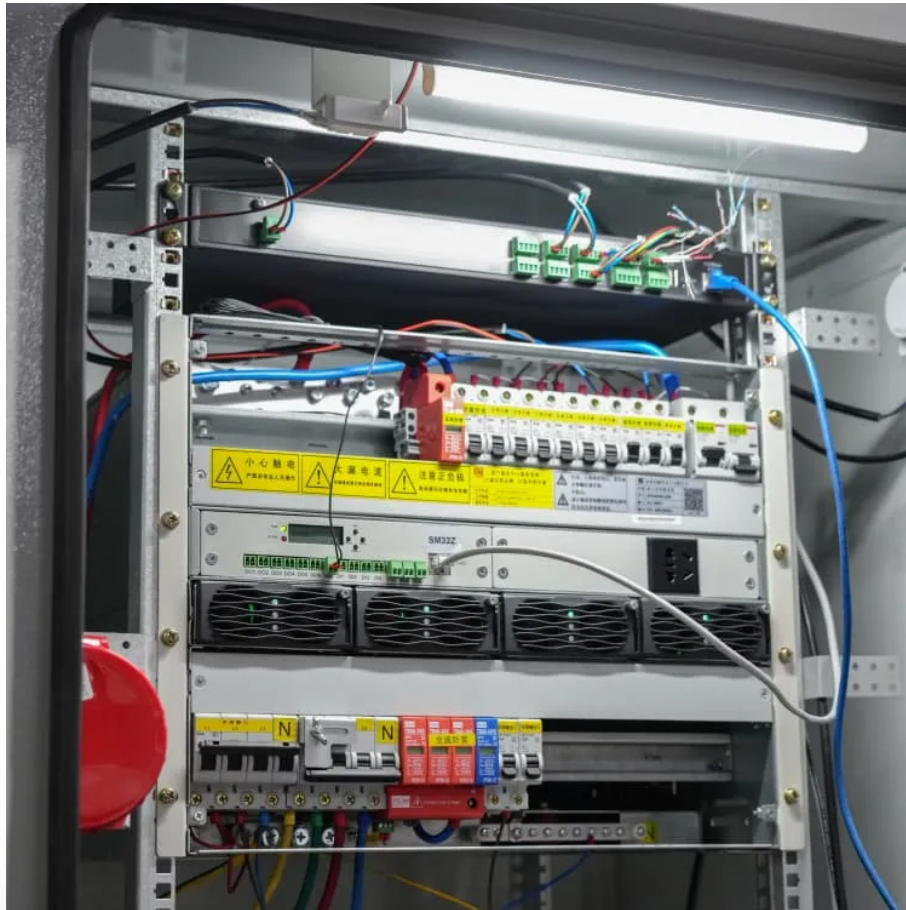


The inverter has reverse peak voltage





Overview

What is peak inverse voltage?

Peak inverse voltage is also referred to as reverse breakdown voltage or peak reverse voltage, which is defined as the maximum reverse voltage that a diode or PN-junction can withstand in a non-conducting state or reverse bias condition before breakdown. If this voltage exceeds, the diode might get damaged.

What is peak reverse voltage?

Peak Inverse Voltage Each diode in the full-wave rectifier is alternately forward-biased and then reverse-biased. The maximum reverse voltage that each diode must withstand is the peak secondary voltage V_p (sec).

What is the difference between PIV and peak inverse voltage?

The value of PIV for the diode is the specified value that should be mentioned by the manufacturers in the datasheet. Peak inverse voltage in the diode is the peak value of the inverse voltage across the diode in reverse bias condition. Consider the circuit shown below to calculate the PIV of the silicon diode or peak inverse voltage of the diode.

How to calculate peak inverse voltage of a diode?

$PIV = 2E_{sm} - 0.7$ The above formula is used because only one diode conducts at a time. The importance of peak inverse voltage is shown in the reverse bias condition of the diode. Because, if this value exceeds the diode might get damaged. When the diode is non-conducting, the reverse voltage gets across the diode.



The inverter has reverse peak voltage

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