



*For more information, contact:
Shigeru Hidaka, PhD CTO
Nikkohm Co. Ltd..
3-31-2640 Minamicho, Misawa
Aomori 033-0036 JAPAN
+81 176 53 2105
info@nikkohm.co.jp*

Higher power rating, screw mount, high reliability...

NIKKOHM INTRODUCES SOT227 PACKAGED 900W POWER RESISTOR FOR INDUSTRIAL APPLICATIONS

Misawa, Japan (1 March 2017) — To provide design engineers with highly reliable, small size 900W power resistors in SOT227 package that shows lowest available reactance in the market Nikkohm has introduced RPK900 series for inverter applications. These unique resistors use Nikkohm's proprietary thin film process on aluminum nitride substrate and offer 900W rated power, 5kV insulation, low parallel capacitance of 13pF, low series inductance 13nH. Such a low reactance provides up to 10MHz high frequency operation and 1 μ s pulse operation.

“These are the high reliability resistors suitable for power electronics such as voltage divider of high voltage power source for medical and analysis equipment applications” said Shigeru Hidaka, CTO of Nikkohm. “The thermal resistance indicating the heat dissipation is only 0.11 °C/W which is exceptionally suitable for cooling system of the liquid or forced air.”

NIKKOHM INTRODUCES SOT227 PACKAGED 900W POWER RESISTOR, PG. 2

This resistor is a high performance power thin film resistor using a pre-stressed technology on the resistor element, the inside of the resistor has an improved structure for withstanding thermal stress with a rigid epoxy material allowing long-term operation under severe conditions.

Since the temperature of the flange is -55°C , $+85^{\circ}\text{C}$, $+155^{\circ}\text{C}$ and the rated power is 900 W, it is best to combine the cooling system of water cooling, liquid cooling and forced air cooling to ensure the best performance.

As the equivalent parallel capacitance is 13 pF and the equivalent series inductance is 13 nH and the reactance component is small, the terminals can be connected to the bus-bar with the M5 screw terminal, so it is a resistor that can convert a sharp pulse large current into heat.

The insulation withstand voltage is guaranteed by 100% inspection between terminals and metal flange at 2500V - 50 Hz - 2 mA.

Since the resistance value range is from $25\ \Omega$ to 1 k Ω , it is suitable for a wide range of applications such as voltage divider, current detection, snubber, load resistance, harmonic filter, bleeder resistance and discharge resistance of the large power electronics.

Applications include industrial equipment such as power supplies of X ray CT, MRI, excimer laser oscillator, and termination, load resistor and consumption resistor of HF radio communication system.

To request the electronic image, call +81 176 53 2105, or e-mail: info@nikkohm.co.jp

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