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ISOA Thick Film Power Resistors Now Offer Multi-Resistor Capability with Optional PC-TIM

Vishay has expanded the functional integration of its ISOA series of thick film, non-inductive power resistors by bringing multi-resistor capability into the same rugged, high power package.



Already available with optional pre-applied phase-change thermal interface material (PC-TIM) and internal temperature monitoring via an NTC thermistor, the ISOA now supports up to three resistive elements within one housing — enabling compact resistor network implementations while maintaining high power density.

The device is AEC-Q200 qualified, designed for operation from -55 °C to +150 °C, and rated up to:

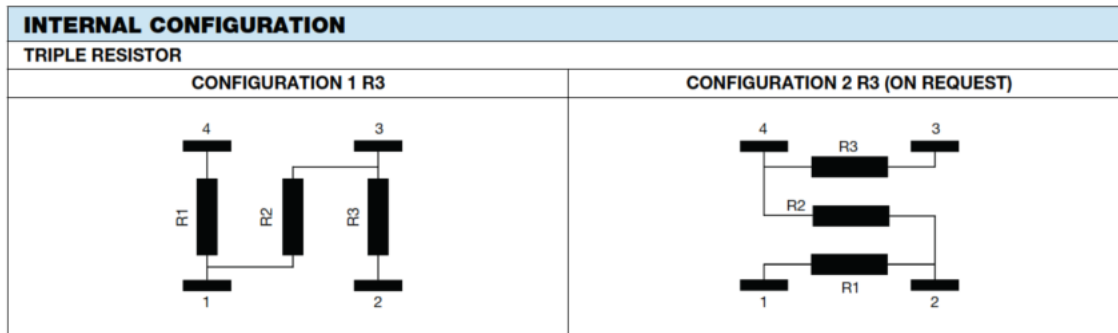
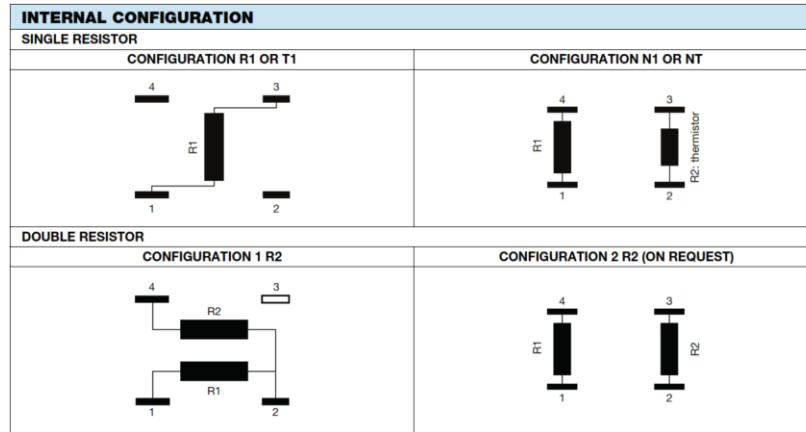
- 200 W at a 85 °C bottom case temperature (distributed as 200 W for single-, 2 x 100 W for dual-, or 3 x 66 W for triple-resistor versions), with cooling via an auxiliary heatsink for ISOA 200 and
- 100 W at a 85 °C bottom case temperature (distributed as 120 W for single-, 2 x 60 W for dual-, or 3 x 40 W for triple-resistor versions), with cooling via an auxiliary heatsink for ISOA 100.

Key Advantages

- ✓ Automotive Grade robustness: AEC-Q200 qualified
- ✓ Multi-resistor integration (up to three resistors in one package) to consolidate resistor networks and reduce component counts
- ✓ High power handling in a compact format
- ✓ Non-inductive design (low inductance specified) for fast switching power environments
- ✓ Optional thermal interface enhancement: pre-applied PC-TIM (optional), helping simplify thermal assembly steps
- ✓ Optional internal temperature sensing using an NTC thermistor (option available for single-resistor configuration)
- ✓ Wide resistance coverage (10 Ω up to 1 MΩ, depending on range) and high maximum operating voltage (1500 V)
- ✓ High dielectric strength and insulation for demanding power designs (e.g., 4000 V_{RMS} dielectric strength with terminals tied as one pole; insulation ≥ 10 GΩ at 1000 V_{DC})
- ✓ Flame-retardant materials: housing / potting compliant with UL 94 V-0
- ✓ Heatsink-based cooling concept (auxiliary heatsink not supplied), supporting high power / volume ratio designs



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Key Applications

- ✓ Automotive EV / HEV / PHEV, fuel cells
 - ✓ Precharge, discharge, and active discharge circuits
- ✓ Industrial and AMS (advanced metering / associated markets)
 - ✓ Power conversion and snubber applications

Useful Links

- [ISOA Product Page](#)
- [ISOA200 Product Page](#)

Contact Information

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