

PolySwitch® PTC Devices

Devices Doc

Overcurrent Protection Device

PRODUCT: TRF250-184

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Additional Application Fault Ratings at 20°C

I) Power contact: 250 V_{RMS}, 10Ω load in series with TRF250-184, 1 application, t = 15 min (see Test Schematic 1 below).
 Meets Acceptance Criterion A or B of ITU-T K.20, K.21.



II) Power contact: 250 V_{RMS}, sequentially testing at 10Ω, 20Ω, 40Ω, 80Ω, 160Ω, 300Ω, 600Ω, in series with TRF250-184 & SiBar[™] devices,

- total 7 applications, t = 2 min at each load, 5 min wait between applications (see Test Schematic 2 below).
- Tested (a) to (b) with ungrounded circuit.

Τ2

- Tested either transversely [a- terminal and ground together to b- terminal,
- b-terminal and ground together to a- terminal], or port-to-earth [(a and b) together to ground with grounded circuit.
 Meets Acceptance Criterion A or B of ITU-T K.20, K.21.
- Test Schematic 2: 250 V_{RMS}, 10Ω to 600Ω load in series with TRF250-184 & SiBar devices:



Note:

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Timing Circuit

1) SiBar device (TVB275NSB-L): $V_{DM} = 275V$ maximum, $V_{BO} = of 350V$ maximum, $I_{PP} = 100A$ ($V_{OC} 10/700\mu$ s).

III) Power induction (10A²s): 447_{RMS} (t = 2.0s) to 1500 V_{RMS} (t=0.18s), 200Ω load in series with TRF250-184 & SiBar devices with primary protection, 5 applications, 1 min wait between applications (see Test Schematic 3 below).

- Tested (a) to (b) with ungrounded circuit.
- Tested either transversely [a- terminal and ground together to b- terminal,
- b-terminal and ground together to a- terminal], or port-to-earth [(a and b) together to ground with grounded circuit.
 Meets Acceptance Criterion A or B of ITU-T K.20, K.21.

Test Schematic 3: 447_{RMS} (t = 2.0s) to 1500 V_{RMS} (t=0.18s), 200 Ω load in series with TRF250-184, SiBar, GDT devices:



Note:

- 1) SiBar device (TVB275NSB-L): V_{DM} = 275V maximum, V_{BO} = of 350V maximum, I_{PP} = 100A (V_{OC} 10/700µs)
- 2) GDT device (GTCA28-421M-R10 for ungrounded circuit and GTCR(A)38-421M-R10 for grounded circuit): Nominal DC sparkover voltage = 420V @100V/s



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