Tyco / Electronics Raychem Circuit Protection

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PolySwitch® **PTC Devices**

Overcurrent Protection Device

PRODUCT: AGRF1000

DOCUMENT: SCD 25237 PCN: F47022

REV LETTER: A REV DATE: OCTOBER 28, 2004

PAGE NO.: 1 OF 2

Specification Status: RELEASED

Electrical Rating Voltage: 16V_{DC} MAX

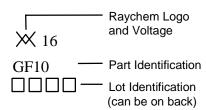
Insulating Material:

Cured, Flame Retardant Epoxy Polymer

Lead Material:

20 AWG Tin Plated Copper (0.8 mm [0.032] nom. diameter)

Part Marking:



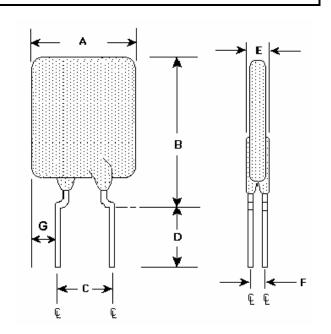


TABLE I. INSTALLATION ENVELOPE DIMENSIONS:

| | Α | | В | | С | | D | | Е | | F | G | |
|------|-----|--------|-----|--------|--------|--------|--------|-----|-----|--------|--------|-----|---------|
| | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | TYP | MIN | MAX |
| mm: | | 16.51 | | 25.7 | 4.3 | 5.8 | 7.6 | | | 3.0 | 1.0 | | 6.96 |
| in*: | | (0.65) | | (1.01) | (0.17) | (0.23) | (0.30) | | | (0.12) | (0.04) | | (0.274) |

^{*}Rounded off approximation

TABLE II. PERFORMANCE RATINGS:

| | 17.02.2.1 | | | | | | | |
|---|---|---------------------------------|-----------------|--------------------|-----------------|--|-------------------------|---------------------------------------|
| CURRENT RATINGS | | | TIME TO TRIP | _ | | R _{1 MAX} 1 HR. POST TRIP RESISTANCE STANDARD TRIP | R _{A MAX} | TRIPPED-STATE POWER DISSIPATION |
| AMPS AT 25°C HOLD HOLD TRIP AT AT R _{1 MAX} R _{A MAX} | | SECONDS AT 25°C, 50 A MAX | | HMS 25°C MAX | OHMS AT 25°C | OHMS AT 25°C | WATTS AT 25°C TYP | |
| 10.0 | 9.6 | 18.5 | 7.0 | 0.0034 | 0.0070 | 0.0102 | 0.0106 | 3.6 |

Reference Documents: PS400, PS300 (reference for R_{1 MAX})

Precedence: This specification takes precedence over documents referenced herein.

Effectivity: Reference documents shall be the issue in effect on the date of invitation for bid.

CAUTION: Operation beyond the rated voltage or current may result in rupture, electrical arcing or flame.

Materials Information

ROHS Compliant ELV Compliant

Directive 2002/95/EC

Directive 2000/53/EC Compliant



Pb-Free

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TABLE III. AUTOMOTIVE SPECIFIC STRESS TESTS AND TEST CONDITIONS:

| ELECTRICAL STRESS TESTS | TEST CONDITIONS (see note 2) |
|--|----------------------------------|
| ESD Voltage Withstand (see note 1) | 25kV |
| Short Circuit Fault Current Durability | 25 cycles, 16V, 200A |
| Fault Current Durability | 350 cycles, 16V/100A |
| End-of-life Mode Verification | 1750 cycles, 16V/100A |
| Jump Start Endurance (see note 1) | 3 cycles, 26V, 1 minute duration |
| Load Dump Endurance (see note 1) | 10 cycles, 86.5V |

Note 1: The PolySwitch devices are tested in series with a load resistance and the voltages specified in the test conditions are shared between the PolySwitch device and the load resistance as specified in PS400.

Note 2: Please refer to Appendix A of PS400 for the detailed test procedures