

January 9, 1998

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HIGH DENSITY, HIGH VOLTAGE, STANDARD RECOVERY RECTIFIER ASSEMBLY

QUICK REFERENCE DATA

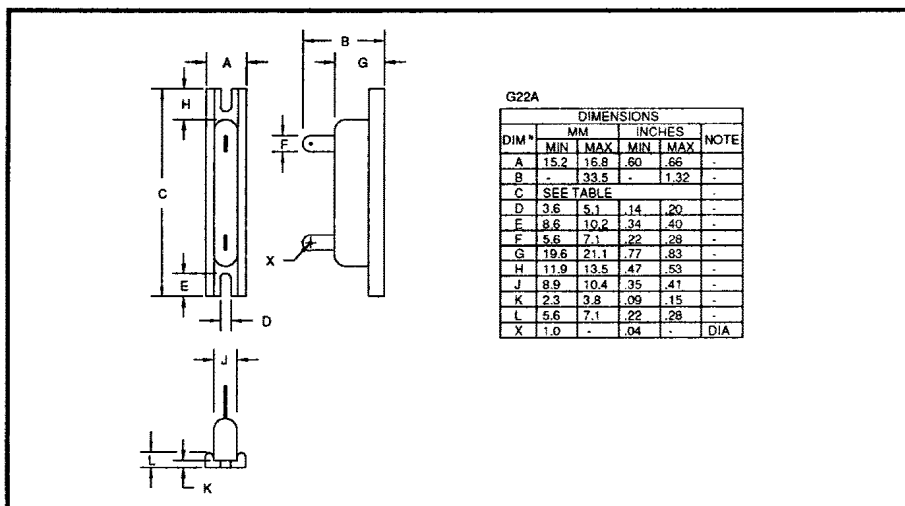
- Low reverse leakage current
- Corona free design
- Easy aluminum base mount
- Low forward voltage drop
- Up to 15kV reverse voltage

- $V_R = 7.5\text{kV} \ \& \ 15\text{kV}$
- $I_F = 400\text{mA}$
- $t_{rr} = 2.5\mu\text{s}$
- $I_R = 2.0\mu\text{A}$

ABSOLUTE MAXIMUM RATINGS

| | Symbol | SDH7.5K | SDH15K | Unit |
|--|-------------|-----------------|--------|--------|
| Working reverse voltage | V_{RWM} | 7.5 | 15.0 | kV |
| Surge reverse voltage | V_{RSM} | 8.25 | 16.50 | kV |
| Average forward current in air @ 25°C in oil @ 55°C | $I_{F(AV)}$ | ← 400 → | | mA |
| | | ← 400 → | | mA |
| Non-repetitive surge current $t_p = 8.3\text{mS}, @ 25^\circ\text{C}$ | I_{FSM} | ← 40.0 → | | A |
| Storage temperature range | T_{STG} | ← -55 to +150 → | | °C |
| Operating temperature range | T_{OP} | ← -55 to +150 → | | °C |
| Body length ±0.030" | dim C | 3.36 | 4.04 | inches |

MECHANICAL

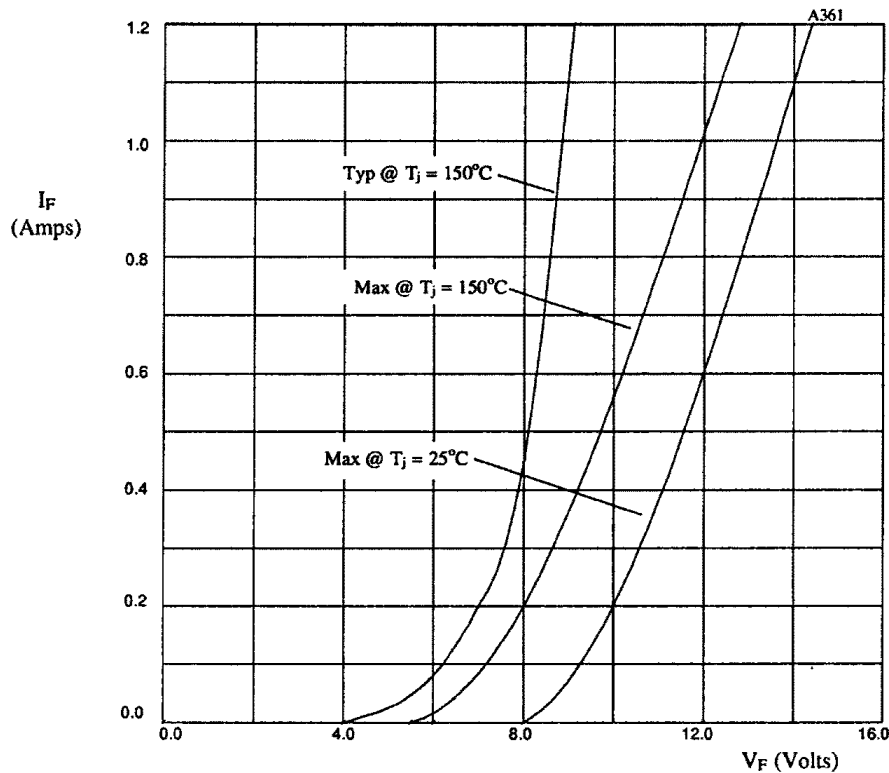


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ELECTRICAL CHARACTERISTICS

| | Symbol | SDH7.5K | SDH15K | Unit |
|---|----------|----------|--------|----------------------|
| Max. forward voltage drop @ $I_F = 200\text{mA}$, $T_j = 25^\circ\text{C}$ | V_F | 10.0 | 20.0 | V |
| Max. reverse leakage current @ V_{RWM} , $T_j = 25^\circ\text{C}$ | I_R | ← 2.0 → | ← → | μA |
| @ V_{RWM} , $T_j = 100^\circ\text{C}$ | I_R | ← 40 → | ← → | μA |
| Max. reverse recovery time ¹ 50mA I_F to 100mA I_R . Recovers to 25mA I_{RR} . | t_{rr} | ← 2.5 → | ← → | μS |
| Max. fusing current $t_p = 8.3\text{mS}$ | I^2t | ← 6.64 → | ← → | A^2S |

¹ Measured on discrete devices prior to assembly



Multiplication tables for fig 1.

SDH7.5K X-axis x1
SDH15K X-axis x2

Fig 1. Forward voltage drop as a function of forward current for use with multiplication table 1.