

January 9, 1998

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HIGH DENSITY, HIGH VOLTAGE, FAST RECOVERY RECTIFIER ASSEMBLY

QUICK REFERENCE DATA

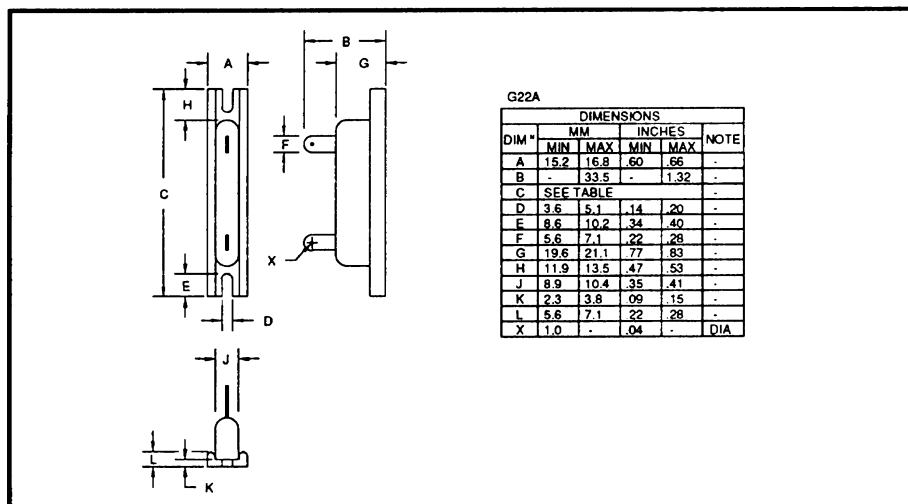
- Low reverse leakage current
- Low reverse recovery time
- Corona free design
- Easy aluminum base mount
- Low forward voltage drop

- $V_R = 2.5 - 7.5\text{kV}$
- $I_F = 1\text{A}$
- $t_{rr} = 150\text{nS}$
- $I_R = 1.0\mu\text{A}$

ABSOLUTE MAXIMUM RATINGS

| | Symbol | SDHF2.5KM | SDHF5KM | SDHF7.5KM | Unit |
|--|-------------|-----------|---------|-----------|--------|
| Working reverse voltage | V_{RWM} | 2.5 | 5.0 | 7.5 | kV |
| Surge reverse voltage | V_{RSM} | 2.5 | 5.0 | 7.5 | kV |
| Average forward current in air @ 25°C in oil @ 55°C | $I_{F(AV)}$ | | | | A |
| Non-repetitive surge current $t_p = 8.3\text{mS}, @ 25^\circ\text{C}$ | I_{FSM} | | | | A |
| Storage temperature range | T_{STG} | | | | °C |
| Operating temperature range | T_{OP} | | | | °C |
| Body length $\pm 0.030''$ | dim C | 3.36 | 4.04 | 6.09 | inches |

MECHANICAL

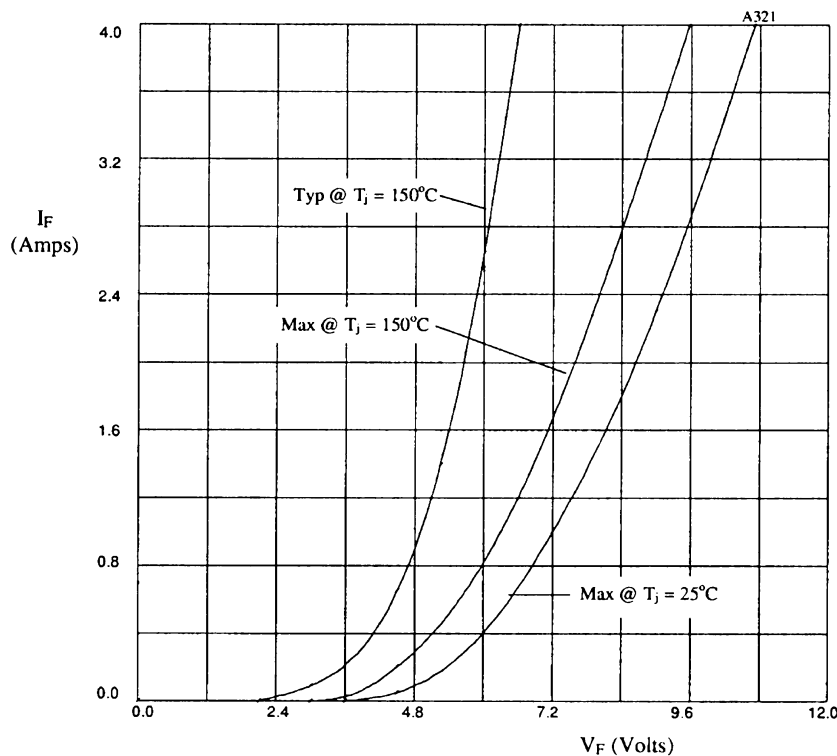


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ELECTRICAL CHARACTERISTICS

| | Symbol | SDHF2.5KM | SDHF5KM | SDHF7.5KM | Unit |
|---|----------|-----------|---------|-----------|---------|
| Max. forward voltage drop @ $I_F = 1.0A$, $T_j = 25^\circ C$ | V_F | 7.2 | 14.4 | 21.6 | V |
| Max. reverse leakage current @ V_{RWM} , $T_j = 25^\circ C$ | I_R | ←————— | 1.0 | —————→ | μA |
| @ V_{RWM} , $T_j = 100^\circ C$ | I_R | ←————— | 25 | —————→ | μA |
| Max. reverse recovery time ¹ 0.5A I_F to 1.0A I_R . Recovers to 0.25A I_{RR} . | t_{rr} | ←————— | 150 | —————→ | nS |
| Max. fusing current $t_p = 8.3mS$ | I^2t | ←————— | 2.6 | —————→ | A^2S |

¹ Measured on discrete devices prior to assembly



Multiplication tables for fig 1.

SDHF2.5KM X-axis x1
SDHF5KM X-axis x2
SDHF7.5KM X-axis x3

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