

January 9, 1998

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HIGH CURRENT, HIGH DENSITY, STANDARD RECOVERY DOUBLER AND CENTER TAPS

- High power industrial and military applications
- High forward current applications
- Low thermal impedance
- Low forward voltage drop
- High forward surge ratings

QUICK REFERENCE DATA

- $V_R = 1000V$
- $I_F = 150A$
- $t_{rr} = 2\mu S$
- $I_{FSM} = 750A$

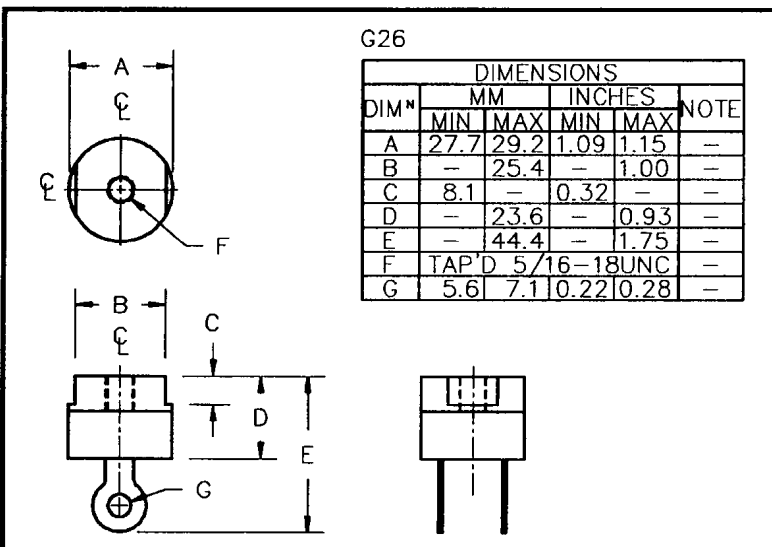
ABSOLUTE MAXIMUM RATINGS

| Device Type | Working Reverse Voltage V_{RWM} Volts | Average Rectified Current | | | 1 Cycle Surge Current $t_p = 8.3mS$ | |
|-------------|---|---------------------------|--------|---------|--|---------|
| | | @ 25°C | @ 55°C | @ 100°C | @ 25°C | @ 100°C |
| | | Amps | Amps | Amps | Amps | Amps |
| SCSDM0L | 1000 | 75 | 55 | 35 | | |
| SCSNM0L | 1000 | 150 | 110 | 70 | 750 | 600 |
| SCSPM0L | 1000 | 150 | 110 | 70 | | |

CHARACTERISTICS

| Reverse Current @ V_{RWM} | | Maximum Forward Voltages $V_F @ 18A @ 25°C$ Volts | Maximum Reverse Recovery Time $t_{rr} @ 25°C$ μS |
|-----------------------------|---------|---|---|
| @ 25°C | @ 100°C | | |
| μA | μA | | |
| 6.0 | 200 | 1.0 | |
| 6.0 | 200 | 1.0 | 2.0 |
| 6.0 | 200 | 1.0 | |

MECHANICAL



| Operating and Storage temperature range $T_{OP} \& T_{STC}$ Volts | Maximum junction - case thermal impedance $R_{\theta JC}$ °C/W |
|---|--|
| -55 to +150 | ↑ 0.50 ↓ |

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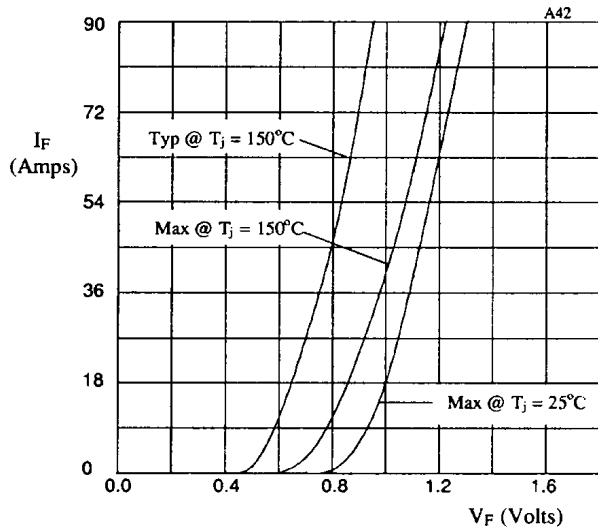


Fig 1. Forward voltage drop per leg as a function of forward current.

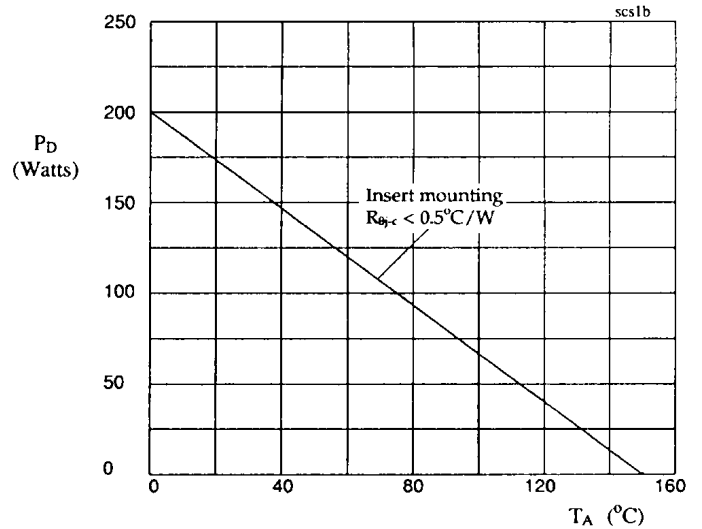


Fig 2. Power dissipation as a function of ambient temperature.

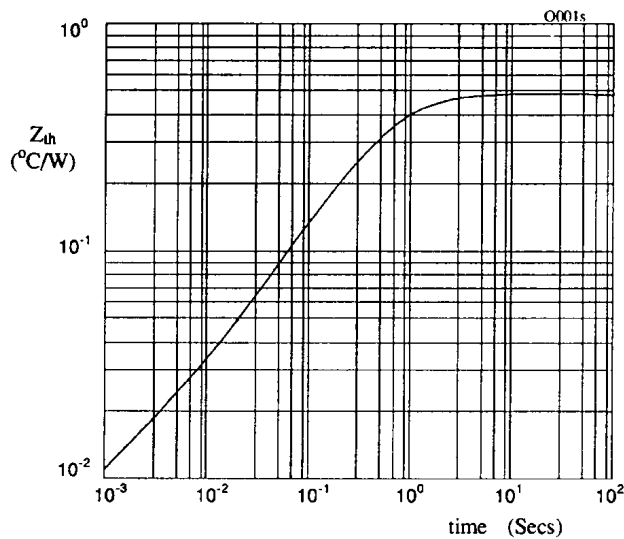


Figure 3. Transient thermal impedance characteristic when insert mounted.

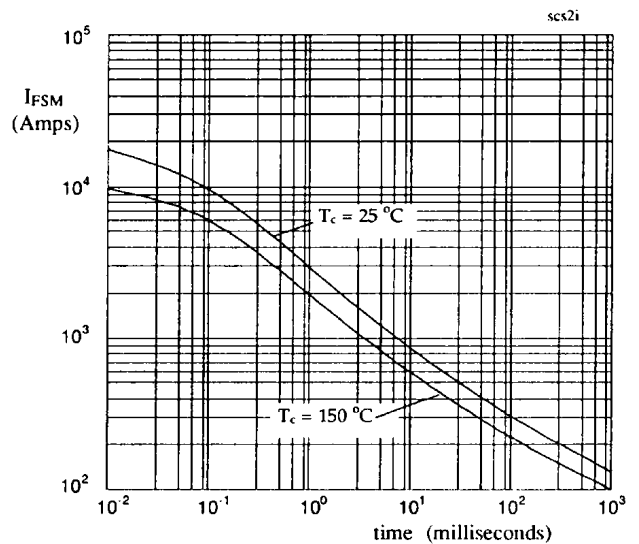


Figure 4. Maximum non-repetitive surge current against pulse width for 25°C and 150°C .