January 29, 1998

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## HIGH CURRENT, HIGH DENSITY, FAST RECOVERY DOUBLER AND CENTER TAPS

- Very low reverse recovery time
- Low thermal impedance
- Low forward voltage drop
- High forward current applications
- High forward surge ratings

## QUICK REFERENCE DATA

- $V_R$ = 1000V
- $I_F$ = 150A
- $t_{rr}$ = 30nS
- $I_{FSM}$ = 875A

## ABSOLUTE MAXIMUM RATINGS

| Device Type | Working Reverse Voltage $V_{RWM}$ | Average Rectified Current (x0.5 for doubler output) | | | 1 Cycle Surge Current $t_p$ = 8.3mS | |
|---|---|---|---|---|---|---|
| | | @ 25°C | @ 55°C | @ 100°C | @ 25°C | @ 100°C |
| | Volts | Amps | Amps | Amps | Amps | Amps |
| SCS*FF05L<br>SCS*FF10L<br>SCS*FF15L | 50<br>100<br>150 | 150 | 130 | -<br>85 | 875 | 700 |

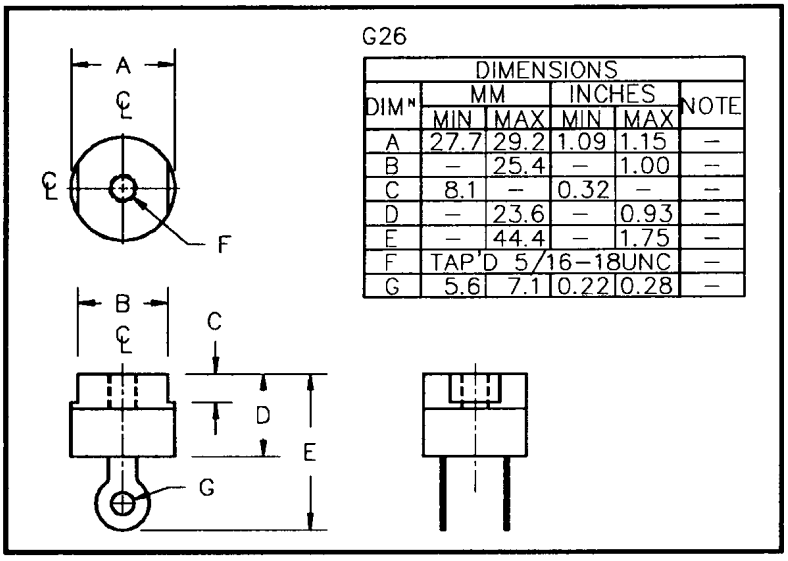
## CHARACTERISTICS

| Reverse Current @ $V_{RWM}$ | | Maximum Forward Voltages $V_F$ @ 30A @ 25°C | Maximum Reverse Recovery Time $t_{rr}$ @ 25°C |
|---|---|---|---|
| @ 25 °C | @ 100 °C | | |
| µA | mA | Volts | nS |
| 60 | 3.0 | 0.97 | 30 |

Add suffix for desired circuit arrangement
D = Doubler
N = Negative center tap
P = Positive center tap

| Operating and Storage temperature range $T_{OP}$ & $T_{STG}$ | Maximum junction - case thermal impedance $R_{\theta JC}$ |
|---|---|
| Volts | °C/W |
| -55 to +150 | < 0.5 |

## MECHANICAL




G26

| DIM | DIMENSIONS MM MIN | MM MAX | INCHES MIN | INCHES MAX | NOTE |
|---|---|---|---|---|---|
| A | 27.7 | 29.2 | 1.09 | 1.15 | – |
| B | – | 25.4 | – | 1.00 | – |
| C | 8.1 | – | 0.32 | – | – |
| D | – | 23.6 | – | 0.93 | – |
| E | – | 44.4 | – | 1.75 | – |
| F | TAP'D 5/16–18UNC | | | | – |
| G | 5.6 | 7.1 | 0.22 | 0.28 | – |

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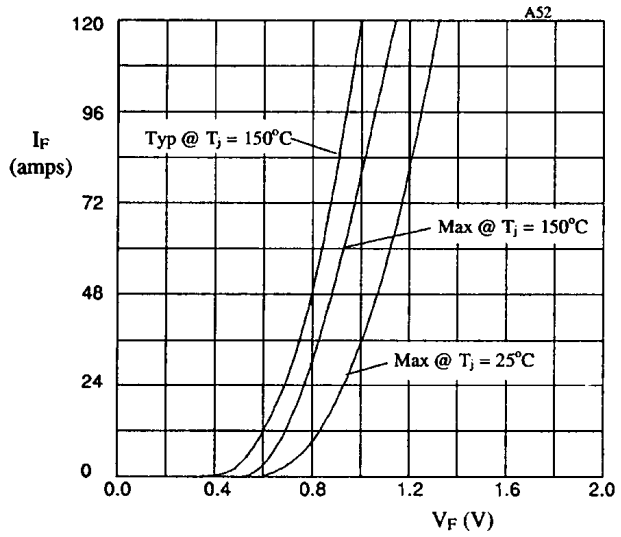



Fig 1. Maximum and typical forward voltage drop per leg as a function of forward current ($T_j$ = 25°C & 150°C).

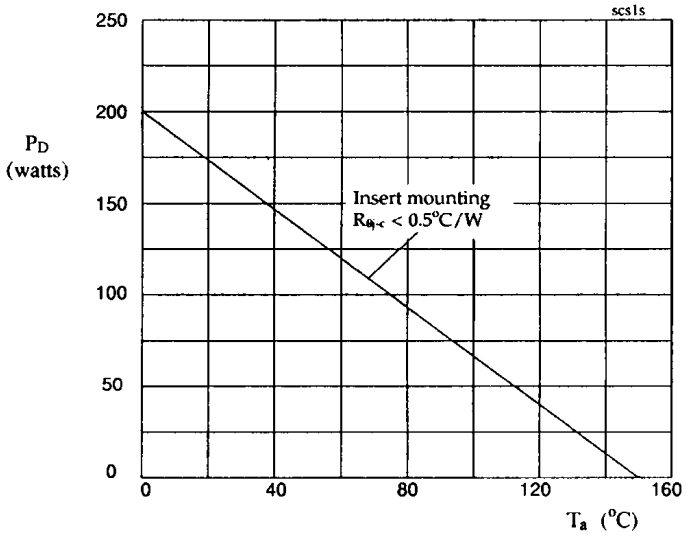



Fig 2. Power dissipation as a function of ambient temperature for different mountings.

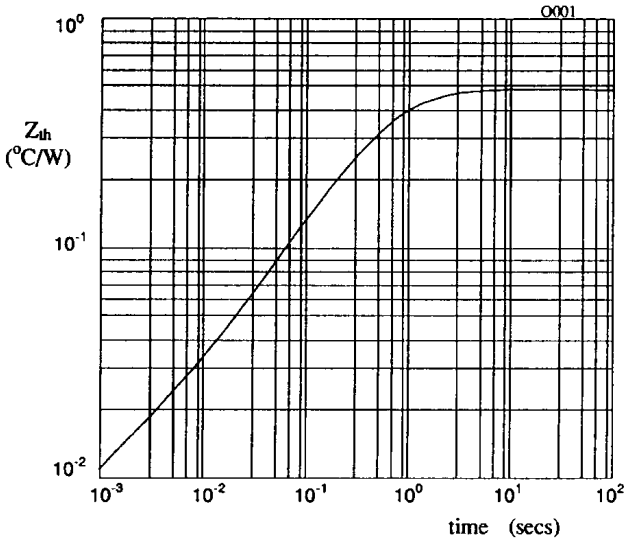



Figure 3. Transient thermal impedance characteristic when insert mounted.

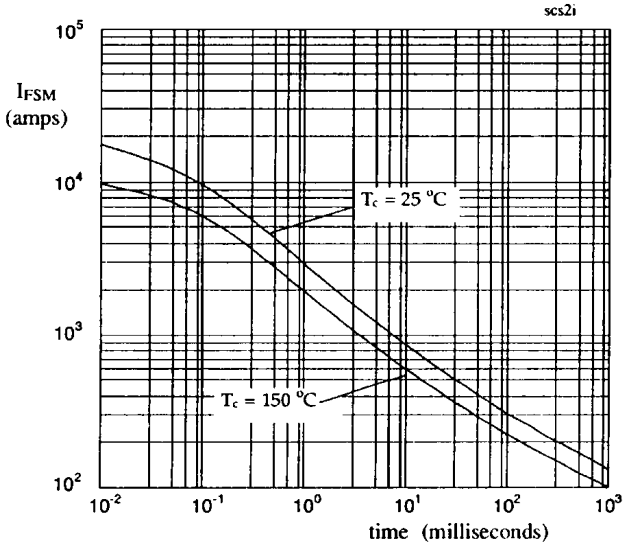



Figure 4. Maximum non-repetitive surge current against pulse width for 25°C and 150°C.

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