## AXIAL LEADED HERMETICALLY SEALED SUPERFAST RECTIFIER DIODE
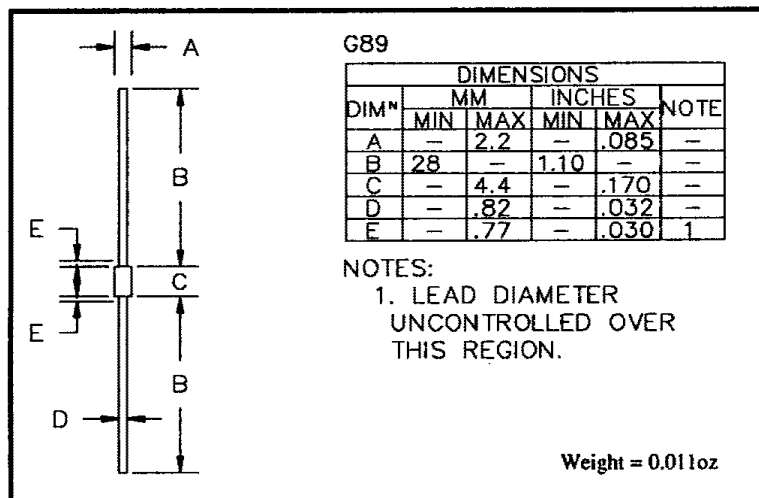
- Very low reverse recovery time
- Glass passivated for hermetic sealing
- Low switching losses
- Soft, non-snap off, recovery characteristics
- Avalanche capability

## QUICK REFERENCE DATA

- $V_R$ = 400V
- $I_F$ = 1.7A
- $t_{rr}$ = 50nS
- $I_R$ = 1µA

## ABSOLUTE MAXIMUM RATINGS (@ 25°C unless otherwise specified)

|  | Symbol | IPFF4 | Unit |
|---|---|---|---|
| Working reverse voltage | $V_{RWM}$ | 400 | V |
| Repetitive reverse voltage | $V_{RRM}$ | 400 | V |
| Average forward current (@ 55°C, lead length = 0.375") | $I_{F(AV)}$ | 1.7 | A |
| Repetitive surge current (@ 55°C in free air, lead length 0.375") | $I_{FRM}$ | 13.0 | A |
| Non-repetitive surge current ($t_p$ = 8.3mS, @ $V_R$ & $T_{jmax}$ ) | $I_{FSM}$ | 27.0 | A |
| Storage temperature range | $T_{STG}$ | -65 to +175 | °C |
| Operating temperature range | $T_{OP}$ | -65 to +175 | °C |

## MECHANICAL



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| DIMᴺ | MM MIN | MM MAX | INCHES MIN | INCHES MAX | NOTE |
|---|---|---|---|---|---|
| A | — | 2.2 | — | .085 | — |
| B | 28 | — | 1.10 | — | — |
| C | — | 4.4 | — | .170 | — |
| D | — | .82 | — | .032 | — |
| E | — | .77 | — | .030 | 1 |

NOTES:
1. LEAD DIAMETER UNCONTROLLED OVER THIS REGION.

Weight = 0.011oz

January 7, 1998

## CHARACTERISTICS  (@ 25°C unless otherwise specified)

| | Symbol | IPFF4 | Unit |
|---|---|---|---|
| Average forward current max. (pcb mounted; $T_A = 55°C$) | | | |
| for sine wave | $I_{F(AV)}$ | 1.0 | A |
| for square wave (d = 0.5) | $I_{F(AV)}$ | 1.1 | A |
| Average forward current max. ($T_L = 55°C$; L = 3/8") | | | |
| for sine wave | $I_{F(AV)}$ | 1.6 | A |
| for square wave | $I_{F(AV)}$ | 1.7 | A |
| $I^2t$ for fusing (t = 8.3mS) typ. | $I^2t$ | 3.0 | $A^2S$ |
| Forward voltage drop max. @ $I_F = 1.0A$, $T_j = 25°C$ | $V_F$ | 1.05 | V |
| Reverse current max. @ $V_{RWM}$, $T_j = 25°C$ | $I_R$ | 1.0 | μA |
| @ $V_{RWM}$, $T_j = 100°C$ | $I_R$ | 10 | μA |
| Reverse recovery time max. 0.5A $I_F$ to 1.0A $I_R$. Recovers to 0.25A $I_{RR}$. | $t_{rr}$ | 50 | nS |
| Junction capacitance typ. @ $V_R = 5V$, f = 1MHz | $C_j$ | 20 | ρF |
| Thermal resistance Junction to lead - lead length = 0.375" | $R_{θJL}$ | 60 | °C/W |
| Junction to amb. on 0.06" thick pcb 1oz copper. | $R_{θJA}$ | 120 | °C/W |

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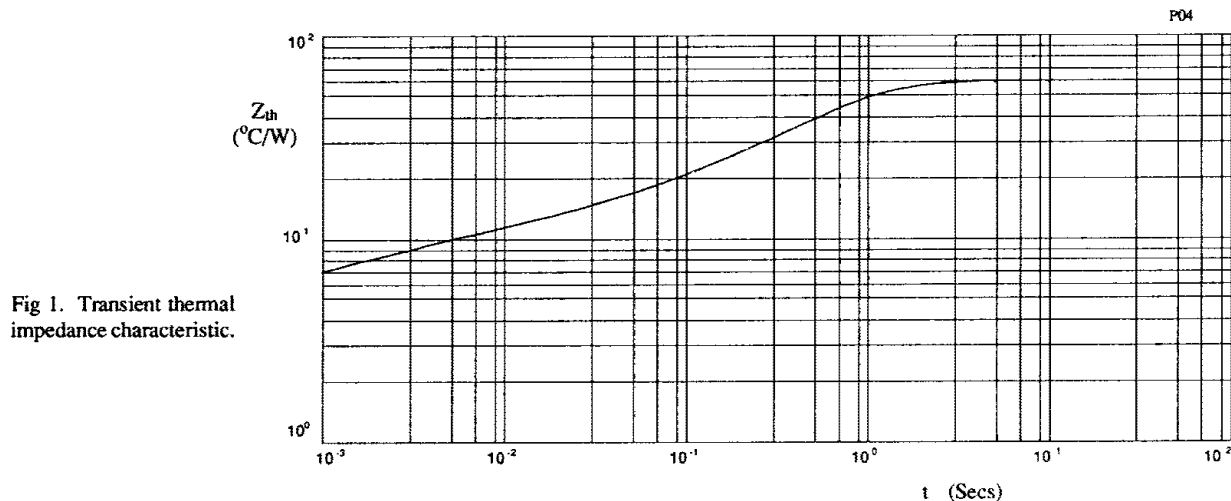


Fig 1. Transient thermal impedance characteristic.
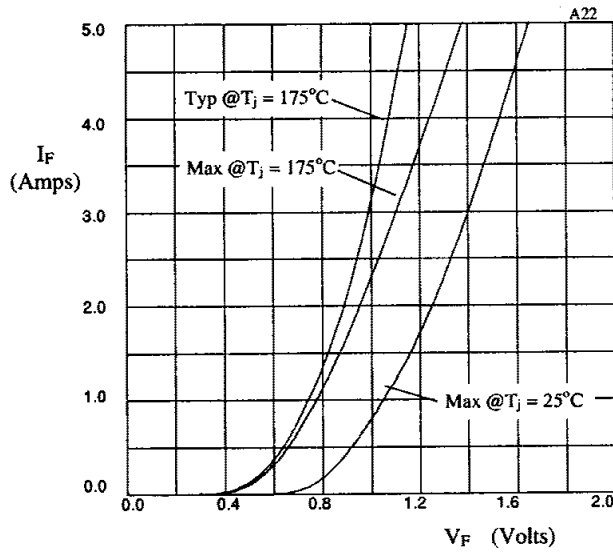
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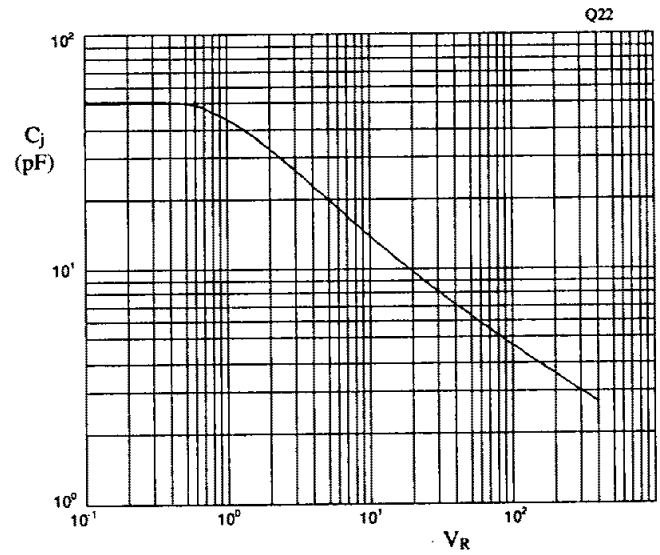Fig 2. Forward voltage drop as a function
of forward current.



Fig 3. Typical junction capacitance as a function of
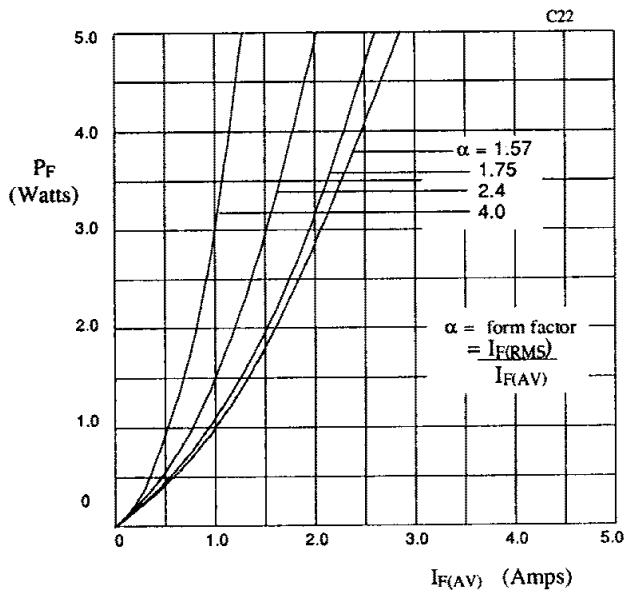reverse voltage.



Fig 4. Forward power dissipation as a function of
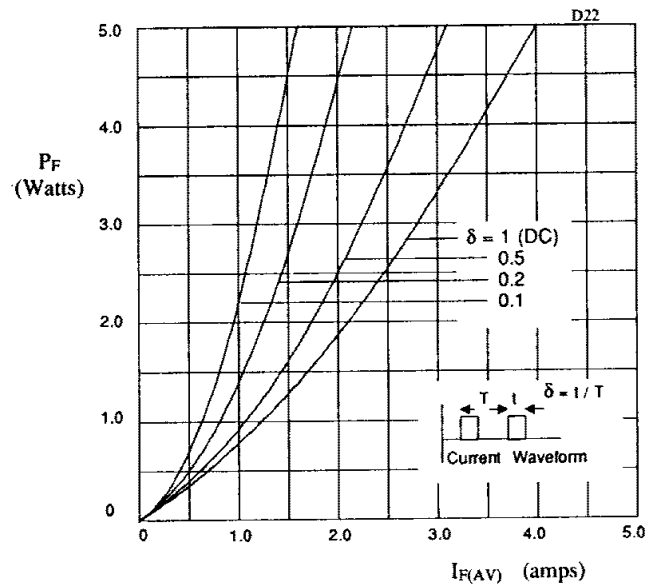forward current, for sinusoidal operation.



Fig 5. Forward power dissipation as a function of
forward current, for square wave operation.