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AXIAL LEADED HERMETICALLY SEALED HIGH VOLTAGE STANDARD RECOVERY RECTIFIER DIODE

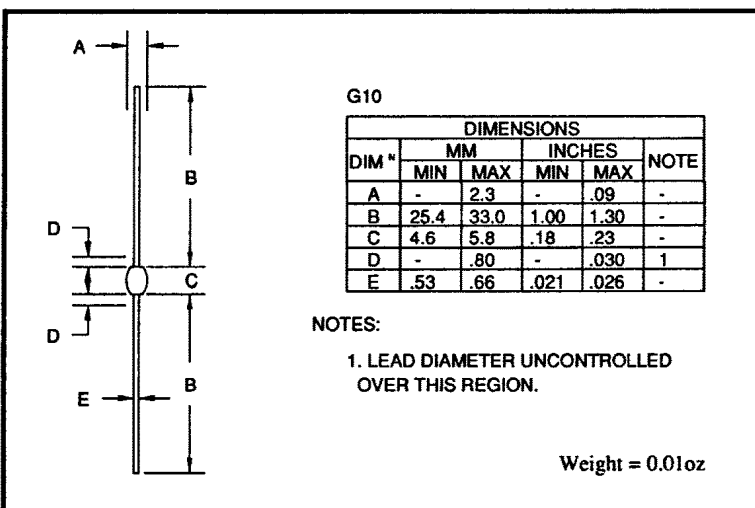
QUICK REFERENCE DATA

- Low reverse leakage currents
- Hermetically sealed with Metoxilite fused metal oxide
- Good thermal shock resistance
- Subminiature packaging
- Multi-junction construction
- $V_R = 5kV - 6kV$
- $I_F = 260mA$
- $t_{rr} = 5\mu s$
- $I_R = 0.25\mu A$

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

	Symbol	M50A	M60A	Unit
Working reverse voltage	V_{RWM}	5000	6000	V
Repetitive reverse voltage	V_{RRM}	5000	6000	V
Surge reverse voltage	V_{RSM}	5000	6000	V
Average forward current (@ 55°C in oil)	$I_{F(AV)}$	← 260 →		mA
Repetitive surge current (@ 55°C in oil, lead length 0.375")	I_{FRM}	← 1.0 →		A
Non-repetitive surge current ($t_p = 8.3ms$, @ V_R & T_{jmax})	I_{FSM}	← 5.0 →		A
Storage temperature range	T_{STG}	-65 to +175		°C
Operating temperature range	T_{OP}	-65 to +175		°C

MECHANICAL



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CHARACTERISTICS (@ 25°C unless otherwise specified)

	Symbol	M50A	M60A	Unit
Average forward current for sine wave				
- max. pcb mounted $T_A = 55^\circ\text{C}$	$I_F(\text{AV})$	← 145 →		mA
- max. in unstirred oil @ 55°C	$I_F(\text{AV})$	← 260 →		mA
I^2t for fusing ($t = 8.3\text{ms}$) max.	I^2t	← 0.10 →		A^2S
Forward voltage drop max. @ $I_F = 50\text{mA}$, $T_j = 25^\circ\text{C}$	V_F	← 6.0 →		V
Reverse current max. @ V_{RWM} , $T_j = 25^\circ\text{C}$	I_R	← 0.25 →		μA
@ V_{RWM} , $T_j = 100^\circ\text{C}$	I_R	← 10 →		μA
Reverse recovery time max. 50mA I_F to 100mA I_R . Recover to 25mA I_{RR} .	t_{rr}	← 5.0 →		μS
Junction capacitance typ. @ $V_R = 5\text{V}$, $f = 1\text{MHz}$	C_j	← 1.6 →		pF
Thermal resistance - junction to oil				
Stirred oil @ 55°C	$R_{\theta\text{JO}}$	← 26 →		$^\circ\text{C/W}$
Unstirred oil @ 55°C	$R_{\theta\text{JO}}$	← 40 →		$^\circ\text{C/W}$
Thermal resistance - junction to amb. on 0.06" thick pcb. 1oz copper.	$R_{\theta\text{JA}}$	← 95 →		$^\circ\text{C/W}$

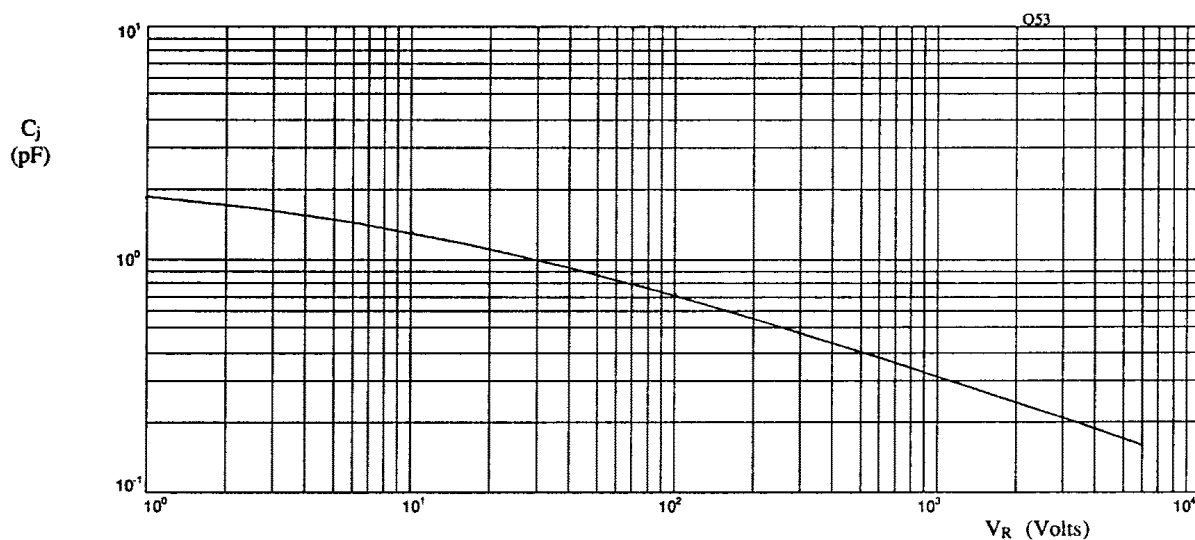


Fig 1. Typical junction capacitance as a function of reverse voltage.

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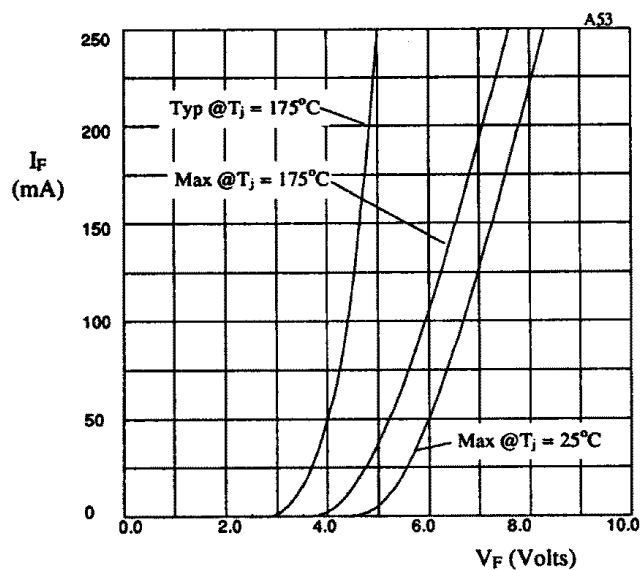


Fig 2. Forward voltage drop as a function of forward current.

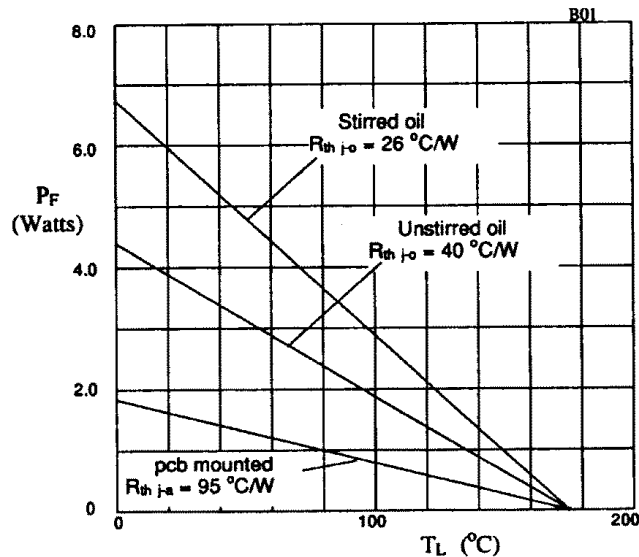


Fig 3. Power derating in air and oil.

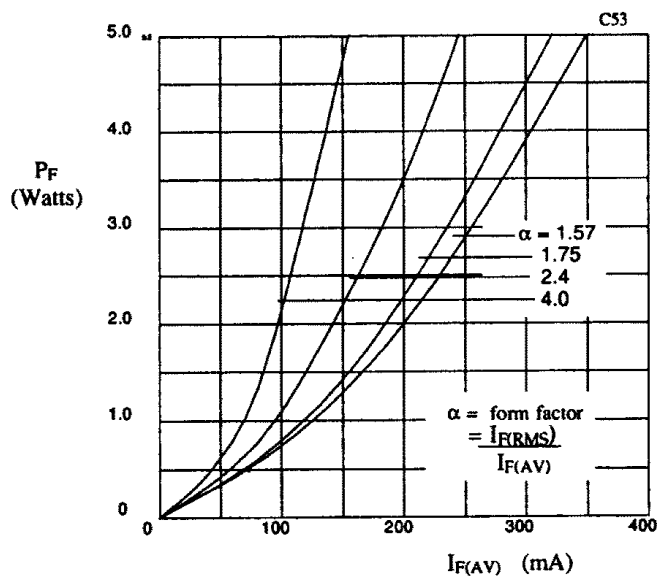


Fig 4. Forward power dissipation as a function of forward current, for sinusoidal operation.