AXIAL LEADED HERMETICALLY SEALED HIGH VOLTAGE STANDARD RECOVERY RECTIFIER DIODE
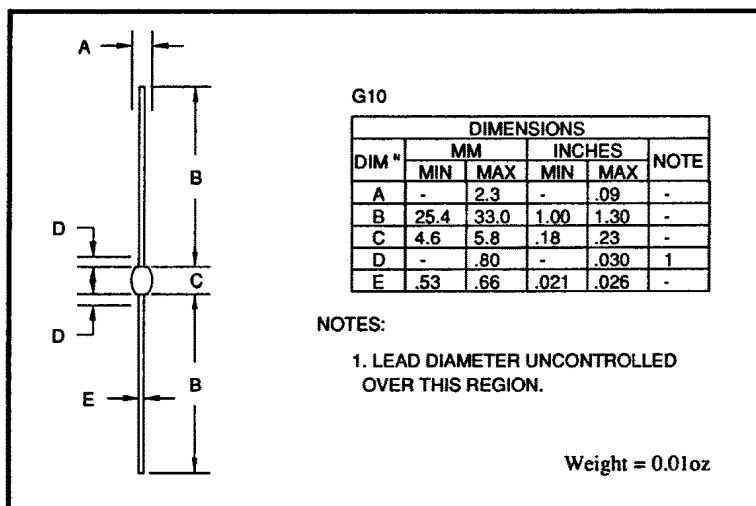
QUICK REFERENCE DATA

- 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} = 5µS
- I_R = 0.25µA

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		^{o}C
Operating temperature range	T_{OP}	-65 to +175		^{o}C

MECHANICAL

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DIM "	MM		INCHES		NOTE
	MIN	MAX	MIN	MAX	
A	-	2.3	-	.09	-
B	25.4	33.0	1.00	1.30	-
C	4.6	5.8	.18	.23	-
D	-	.80	-	.030	1
E	.53	.66	.021	.026	-

NOTES:

1. LEAD DIAMETER UNCONTROLLED OVER THIS REGION.

Weight = 0.01oz

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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°C - max. in unstirred oil @ 55°C	$I_{F(AV)}$ $I_{F(AV)}$	← 145 → ← 260 →	mA mA
I^2t for fusing (t = 8.3mS) max.	I^2t	← 0.10 →	A^2S
Forward voltage drop max. @ I_F = 50mA, T_j = 25°C	V_F	← 6.0 →	V
Reverse current max. @ V_{RWM}, T_j = 25°C @ V_{RWM}, T_j = 100°C	I_R I_R	← 0.25 → ← 10 →	µA 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 = 5V , f = 1MHz	C_j	← 1.6 →	ρF
Thermal resistance - junction to oil Stirred oil @ 55°C Unstirred oil @ 55°C	$R_{\theta JO}$ $R_{\theta JO}$	← 26 → ← 40 →	^{o}C/W ^{o}C/W
Thermal resistance - junction to amb. on 0.06" thick pcb. 1oz copper.	$R_{\theta JA}$	← 95 →	^{o}C/W
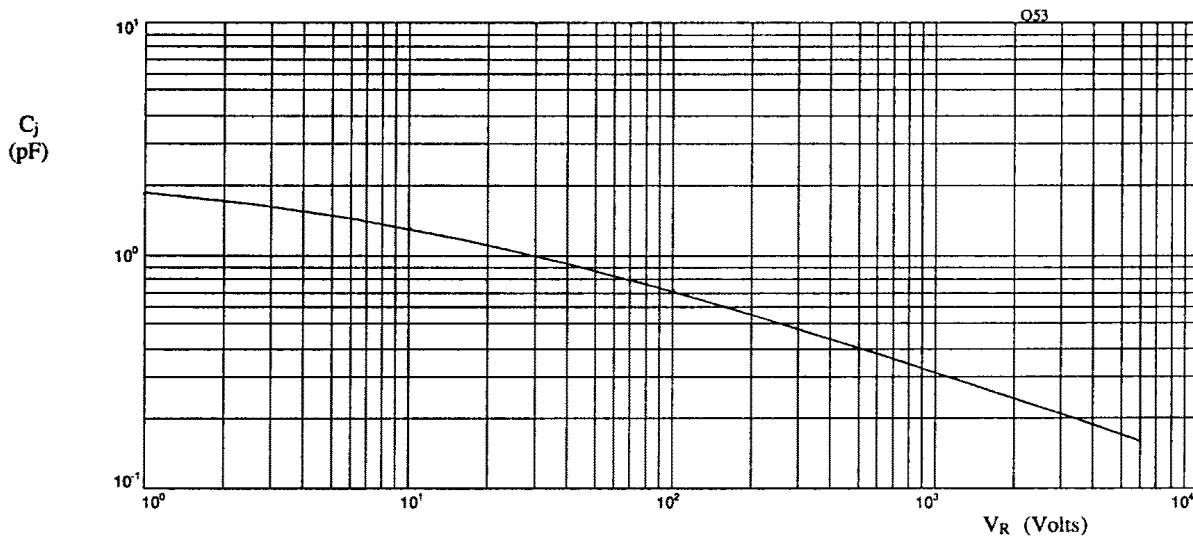
Fig 1. Typical junction capacitance as a function of reverse voltage.
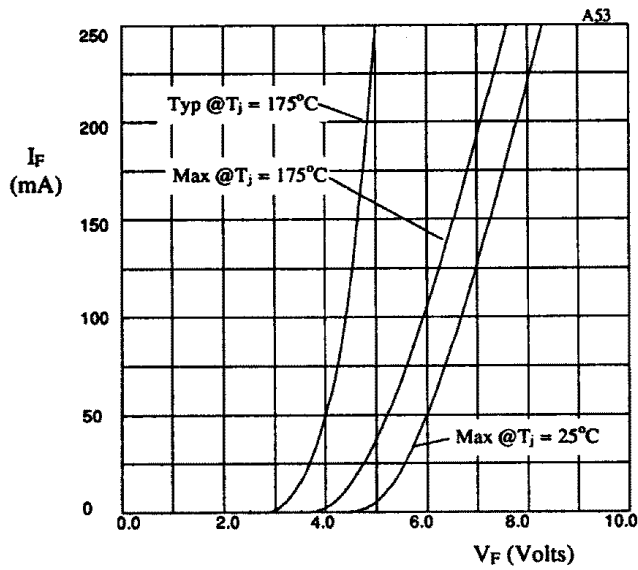
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Fig 2. Forward voltage drop as a function of forward current.
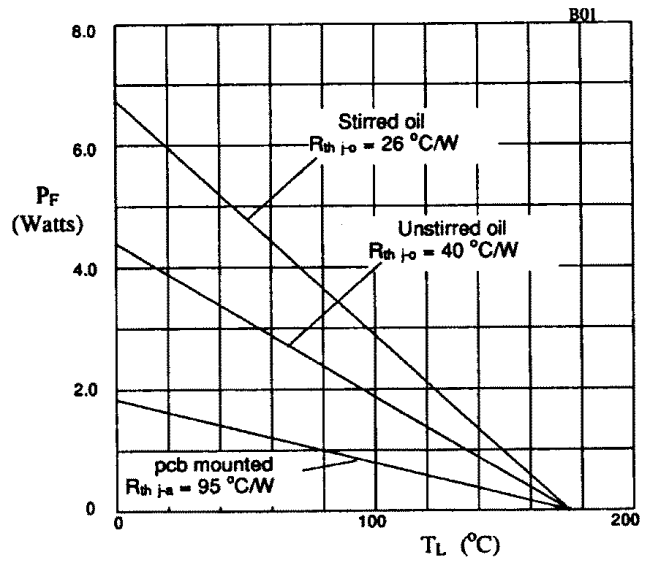

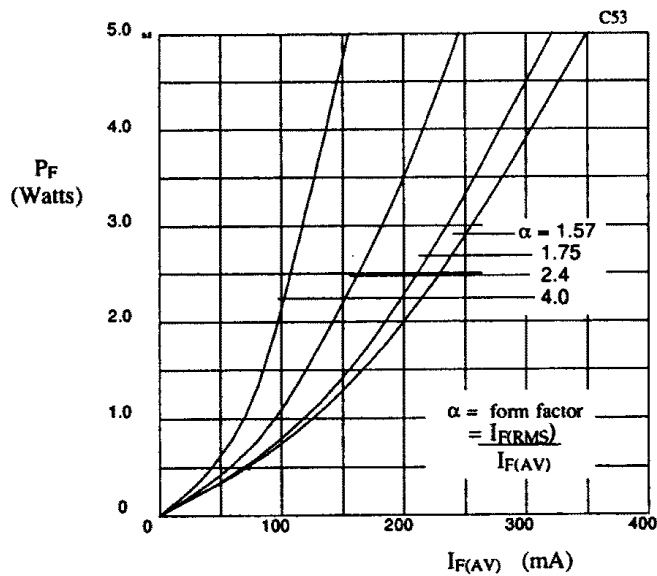Fig 3. Power derating in air and oil.

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