January 7, 1998

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AXIAL LEADED HERMETICALLY SEALED HIGH VOLTAGE STANDARD RECOVERY RECTIFIER DIODE

- Low reverse leakage currents
- Hermetically sealed with Metoxilite fused metal oxide
- Good thermal shock resistance
- Subminiature packaging
- Multi-junction construction

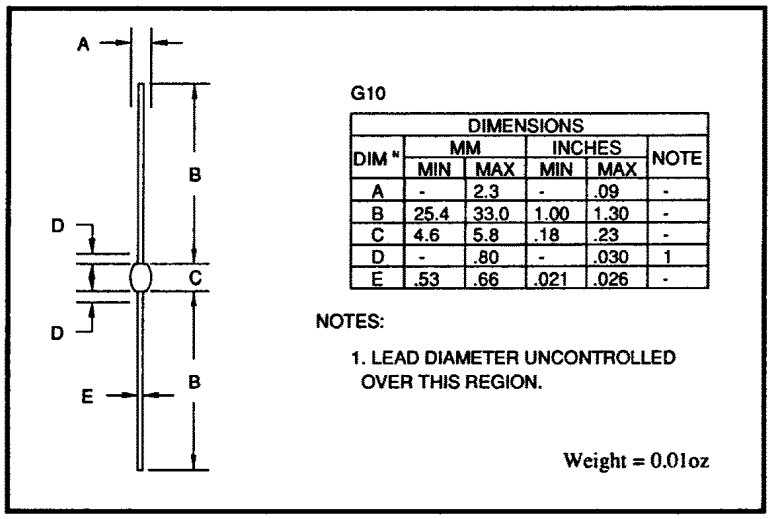
QUICK REFERENCE DATA

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

MECHANICAL



G10

DIMENSIONS					
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

January 7, 1998

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		pF
Thermal resistance - junction to oil Stirred oil @ 55°C Unstirred oil @ 55°C	 $R_{\theta JO}$ $R_{\theta JO}$	 26 40		 °C/W °C/W
Thermal resistance - junction to amb. on 0.06" thick pcb. 1oz copper.	$R_{\theta JA}$	95		°C/W

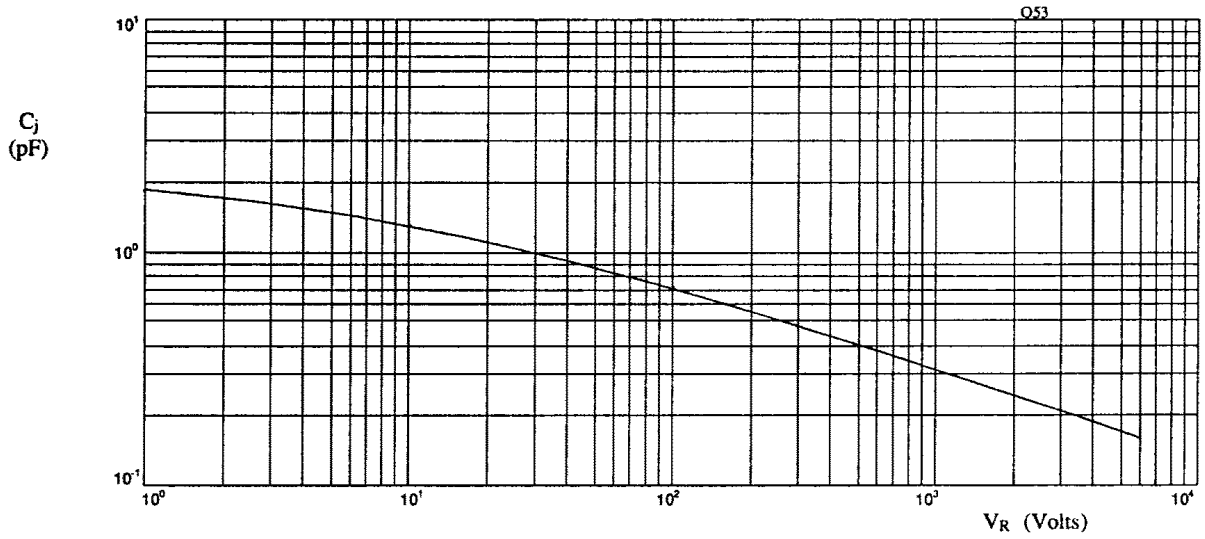


Fig 1. Typical junction capacitance as a function of reverse voltage.

January 7, 1998

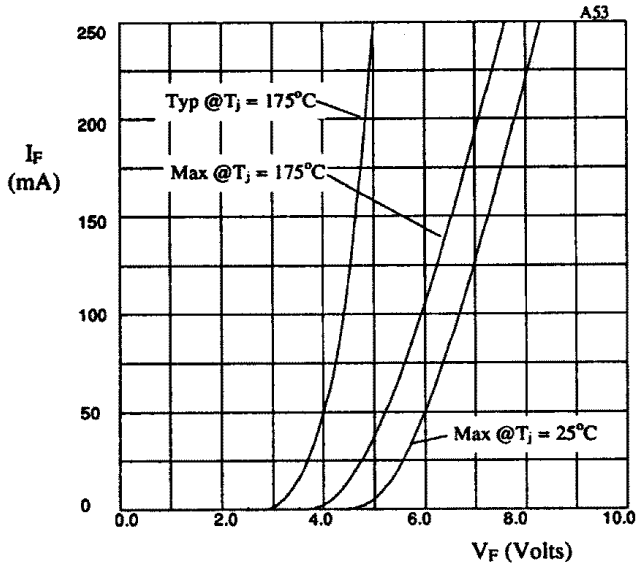


Fig 2. Forward voltage drop as a function of forward current.

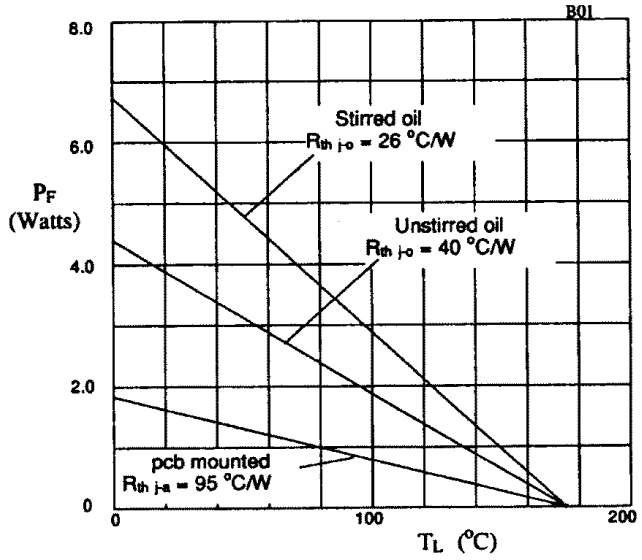


Fig 3. Power derating in air and oil.

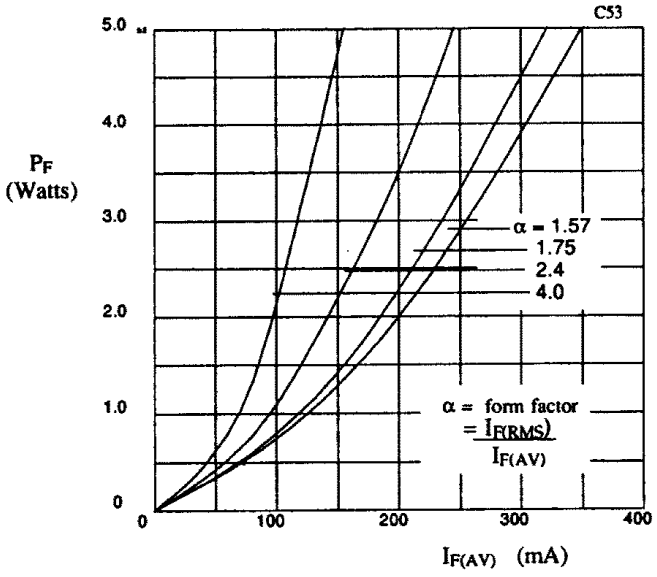


Fig 4. Forward power dissipation as a function of forward current, for sinusoidal operation.