January 7, 1998

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QUICK REFERENCE DATA

- V_R = 2kV - 3kV
- I_F = 330mA
- t_{rr} = 2.0µS
- I_R = 0.25µA

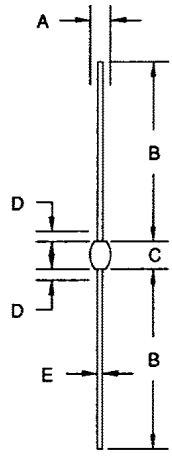
AXIAL LEADED HERMETICALLY SEALED HIGH VOLTAGE STANDARD RECOVERY RECTIFIER DIODE

- High thermal shock resistance
- Hermetically sealed with Metoxilite fused metal oxide
- Low reverse leakage currents
- Miniature packaging
- Monolythic cavity free

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

	Symbol	M20	M30	Unit
Working reverse voltage	V_{RWM}	2000	3000	V
Repetitive reverse voltage	V_{RRM}	2000	3000	V
Surge reverse voltage	V_{RSM}	2000	3000	V
Average forward current (@ 55°C in oil)	$I_{F(AV)}$	← 330 →		mA
Repetitive surge current (@ 55°C)	I_{FRM}	← 1.3 →		A
Non-repetitive surge current (t_p = 8.3mS, @ V_R & T_{jmax})	I_{FSM}	← 7.0 →		A
Storage temperature range	T_{STG}	-65 to +175		°C
Operating temperature range	T_{OP}	-65 to +175		°C

MECHANICAL



G66

DIM	DIMENSIONS MM MIN	MM MAX	INCHES MIN	INCHES MAX	NOTE
A	-	2.3	-	.09	-
B	25.4	33.0	1.00	1.30	-
C	4.6	5.3	.18	.21	-
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	M20 M30	Unit
Average forward current for sine wave - max. pcb mounted; T_A = 55°C - max. in unstirred oil	 $I_{F(AV)}$ $I_{F(AV)}$	 ← 175 → ← 330 →	 mA mA
I^2t for fusing (t = 8.3mS) max.	I^2t	← 0.2 →	A^2S
Forward voltage drop max. @ I_F = 125mA, T_j = 25°C	V_F	← 5.0 →	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}	← 2.0 →	µS
Junction capacitance typ. @ V_R = 5V , f = 1MHz	C_j	← 1.7 →	pF
Thermal resistance - junction to oil Unstirred @ 55°C Stirred @ 55°C	 $R_{\theta JO}$ $R_{\theta JO}$	 ← 48 → ← 30 →	 °C/W °C/W
Thermal resistance - junction to amb. on 0.06" thick pcb. 1oz copper.	$R_{\theta JA}$	← 120 →	°C/W

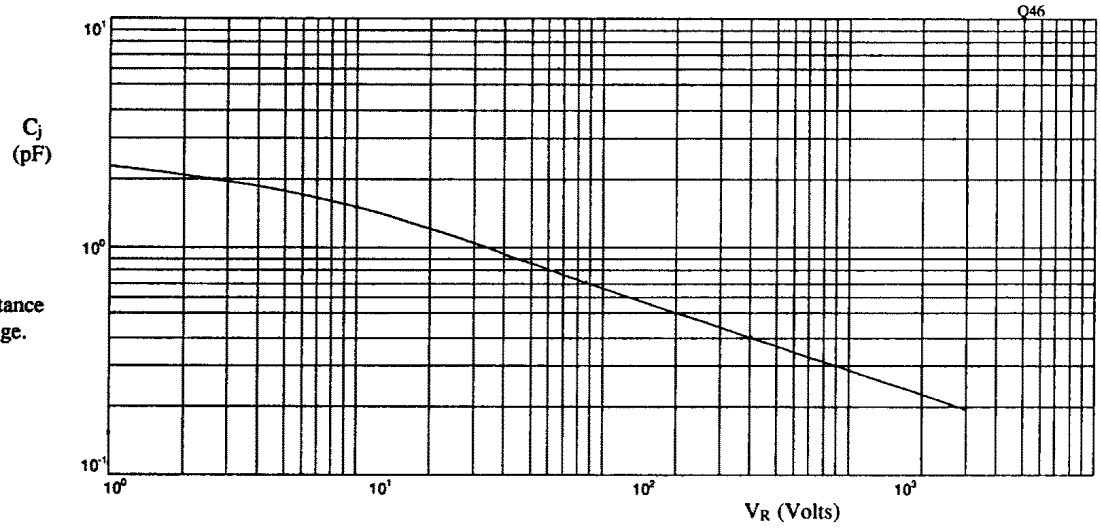

Fig 1. Junction capacitance against reverse voltage.

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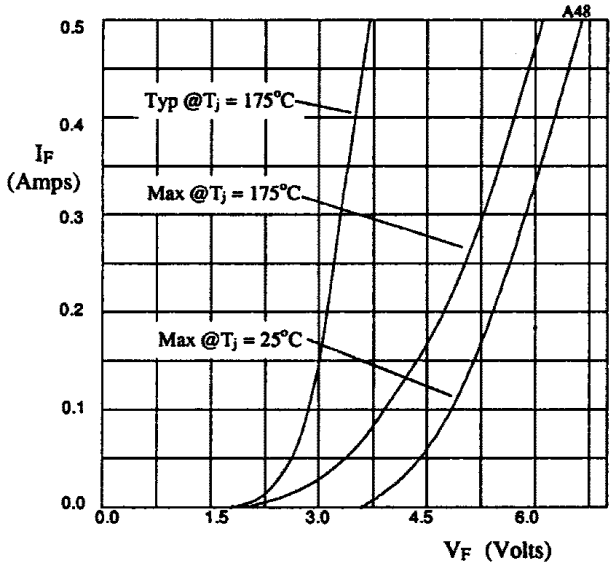

Fig 2. Forward voltage drop as a function of forward current.

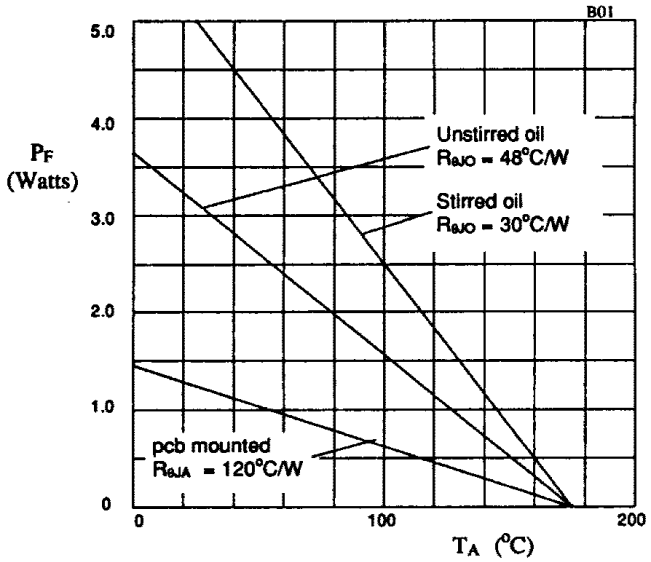

Fig 3. Power derating in air and oil.

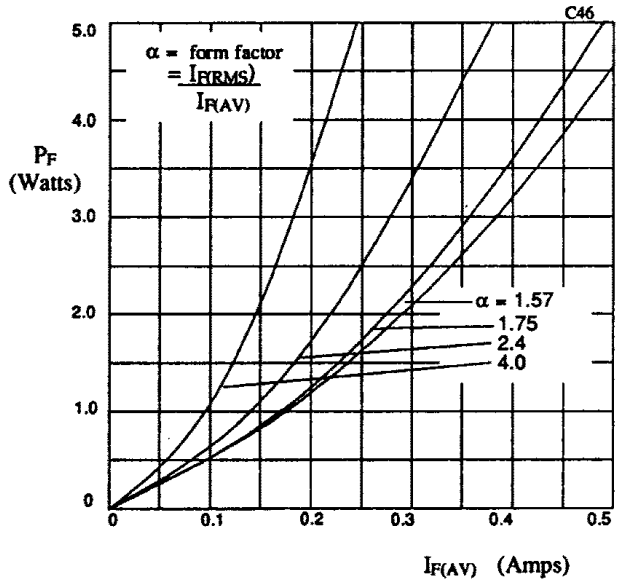

Fig 4. Forward power dissipation as a function of forward current, for sinusoidal operation.