

January 7, 1998

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QUICK REFERENCE DATA

- $V_R = 2kV - 3kV$
- $I_F = 330mA$
- $t_{rr} = 2.0\mu s$
- $I_R = 0.25\mu A$

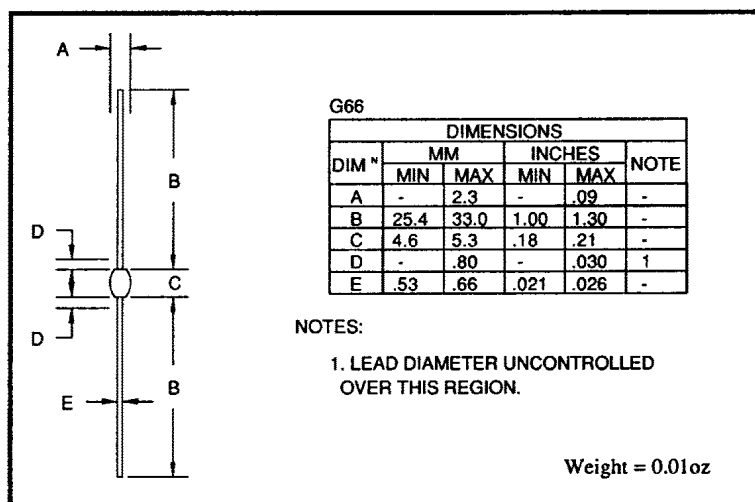
AXIAL LEADED HERMETICALLY SEALED HIGH VOLTAGE STANDARD RECOVERY RECTIFIER DIODE

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

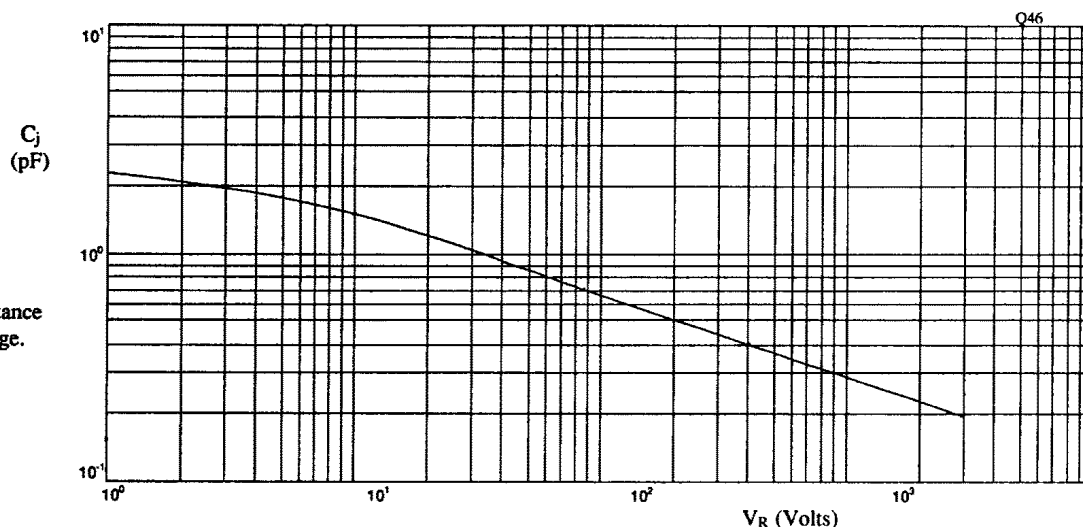


January 7, 1998

CHARACTERISTICS (@ 25°C unless otherwise specified)

	Symbol	M20	M30	Unit
Average forward current for sine wave - max. pcb mounted; $T_A = 55^\circ\text{C}$ - max. in unstirred oil	$I_{F(AV)}$ $I_{F(AV)}$	← 175 → ← 330 →		mA mA
I^2t for fusing ($t = 8.3\text{ms}$) max.	I^2t	← 0.2 →		A^2S
Forward voltage drop max. @ $I_F = 125\text{mA}$, $T_j = 25^\circ\text{C}$	V_F	← 5.0 →		V
Reverse current max. @ V_{RWM} , $T_j = 25^\circ\text{C}$ @ V_{RWM} , $T_j = 100^\circ\text{C}$	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. @ $V_R = 5\text{V}$, $f = 1\text{MHz}$	C_j	← 1.7 →		pF
Thermal resistance - junction to oil Unstirred @ 55°C Stirred @ 55°C	$R_{\theta JO}$ $R_{\theta JO}$	← 48 → ← 30 →		$^\circ\text{C/W}$ $^\circ\text{C/W}$
Thermal resistance - junction to amb. on 0.06" thick pcb. 1oz copper.	$R_{\theta JA}$	← 120 →		$^\circ\text{C/W}$

Fig 1. Junction capacitance
against reverse voltage.



January 7, 1998

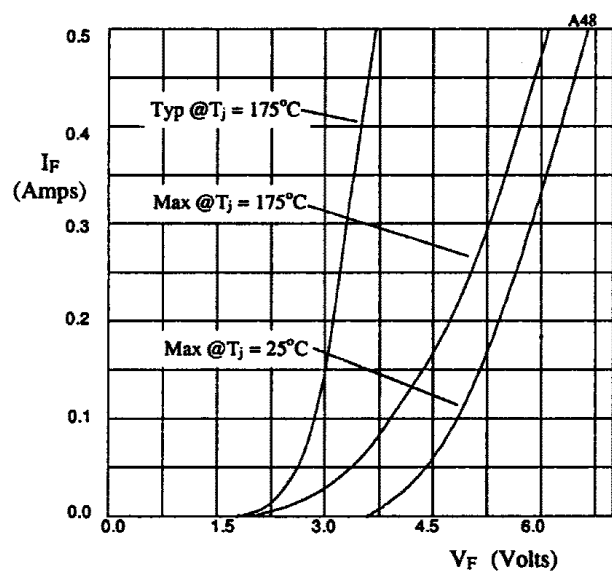


Fig 2. Forward voltage drop as a function of forward current.

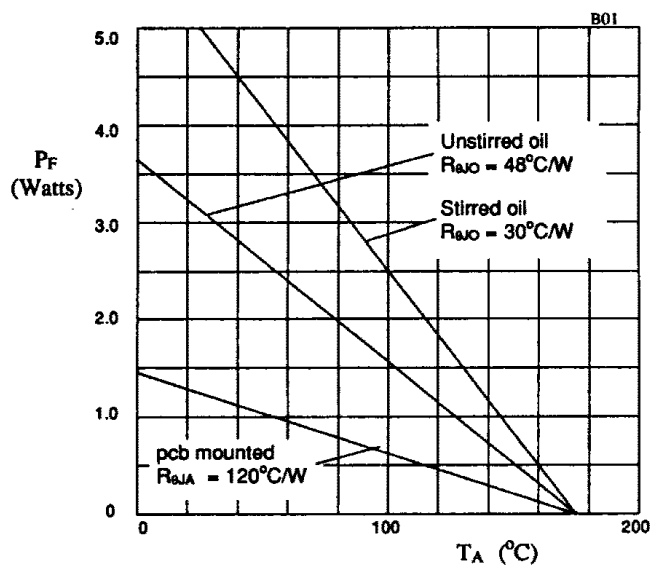


Fig 3. Power derating in air and oil.

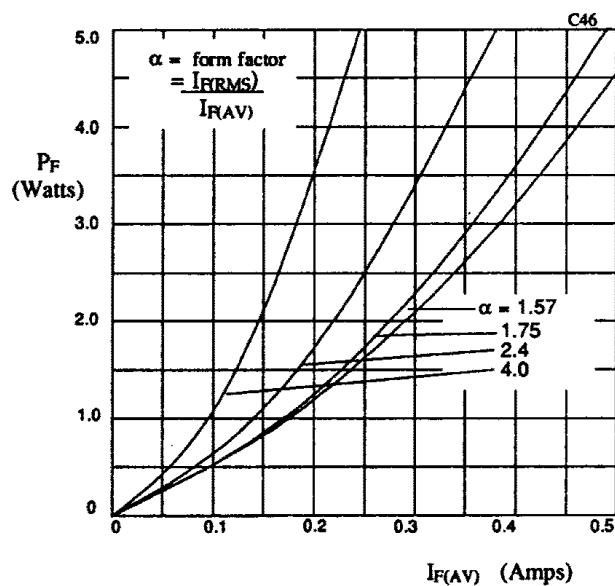


Fig 4. Forward power dissipation as a function of forward current, for sinusoidal operation.