

January 7, 1998

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QUICK REFERENCE DATA

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

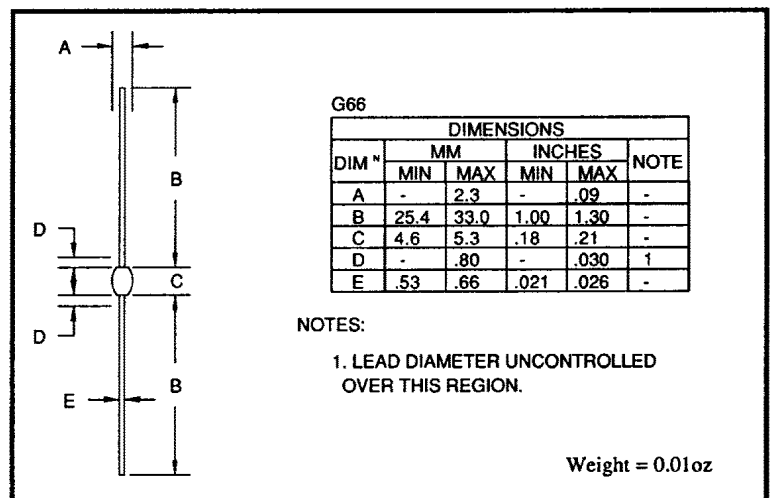
AXIAL LEADED HERMETICALLY SEALED HIGH VOLTAGE STANDARD RECOVERY RECTIFIER DIODE

- High thermal shock resistance
- Hermetically sealed with Metoxillite 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 ($t_p = 8.3\text{ms}$, @ 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

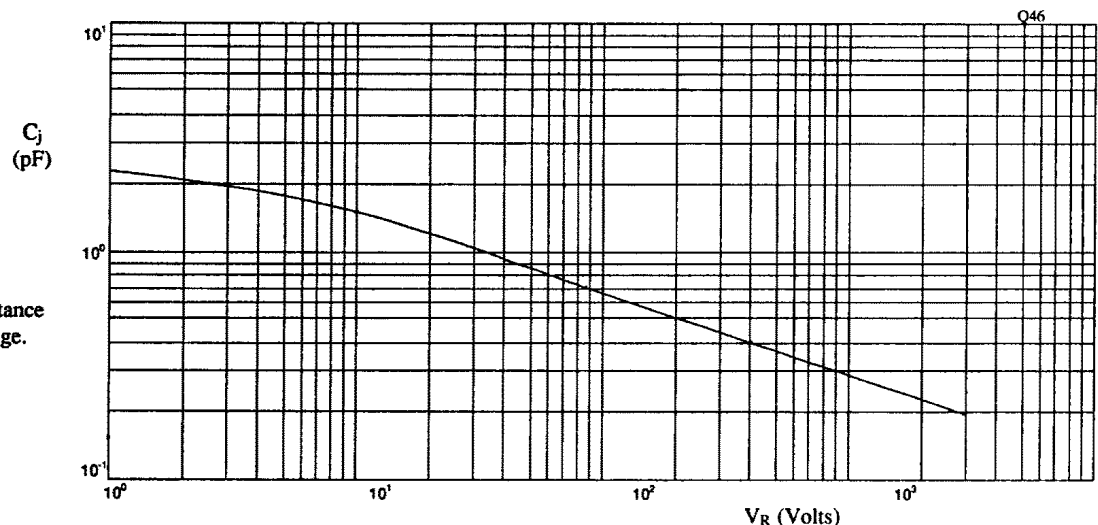


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CHARACTERISTICS (@ 25°C unless otherwise specified)

	Symbol	M20	M30	Unit
Average forward current for sine wave - max. pcb mounted; T _A = 55°C	I _{F(AV)}	← 175 →		mA
- max. in unstirred oil	I _{F(AV)}	← 330 →		mA
I ² t for fusing (t = 8.3mS) max.	I ² t	← 0.2 →		A ² S
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	I _R	← 0.25 →		μA
@ V _{RWM} , T _j = 100°C	I _R	← 10 →		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	R _{θJO}	← 48 →		°C/W
Stirred @ 55°C	R _{θJO}	← 30 →		°C/W
Thermal resistance - junction to amb. on 0.06" thick pcb. 1oz copper.	R _{θJA}	← 120 →		°C/W

Fig 1. Junction capacitance
against reverse voltage.



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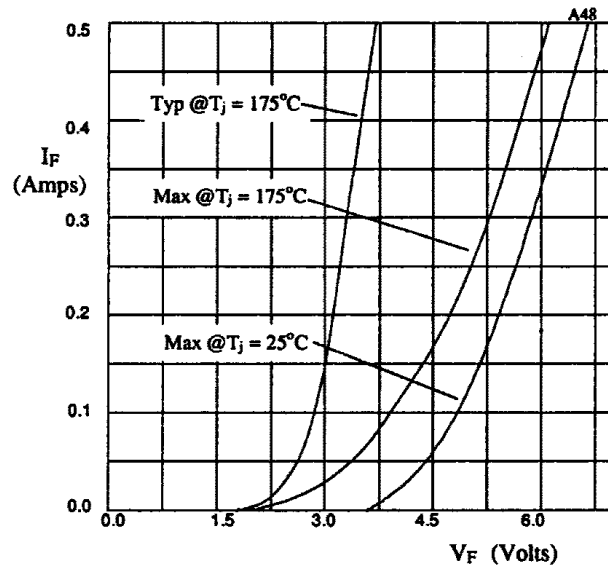


Fig 2. Forward voltage drop as a function of forward current.

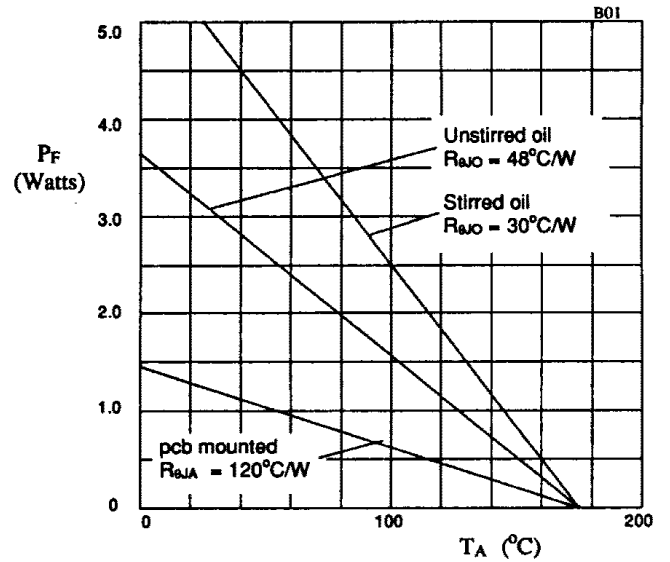


Fig 3. Power derating in air and oil.

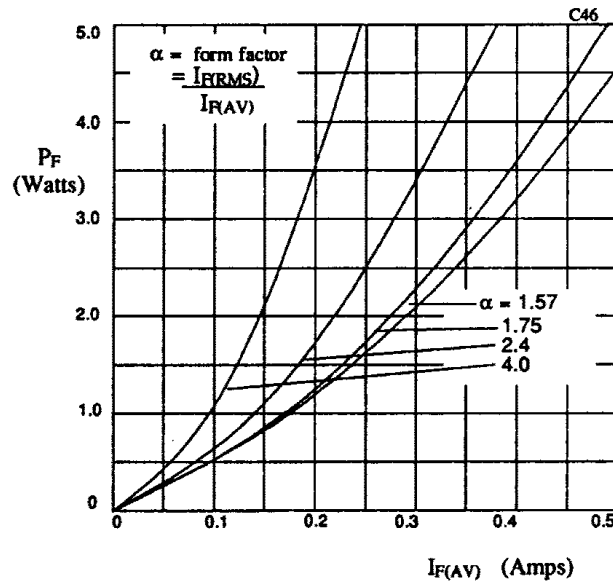


Fig 4. Forward power dissipation as a function of forward current, for sinusoidal operation.