January 7, 1998   TEL:805-498-2111 FAX:805-498-3804 WEB:http://www.semtech.com

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 N	MM		INCHES		NOTE
	MIN	MAX	MIN	MAX	
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

Q46

C_j
(pF)
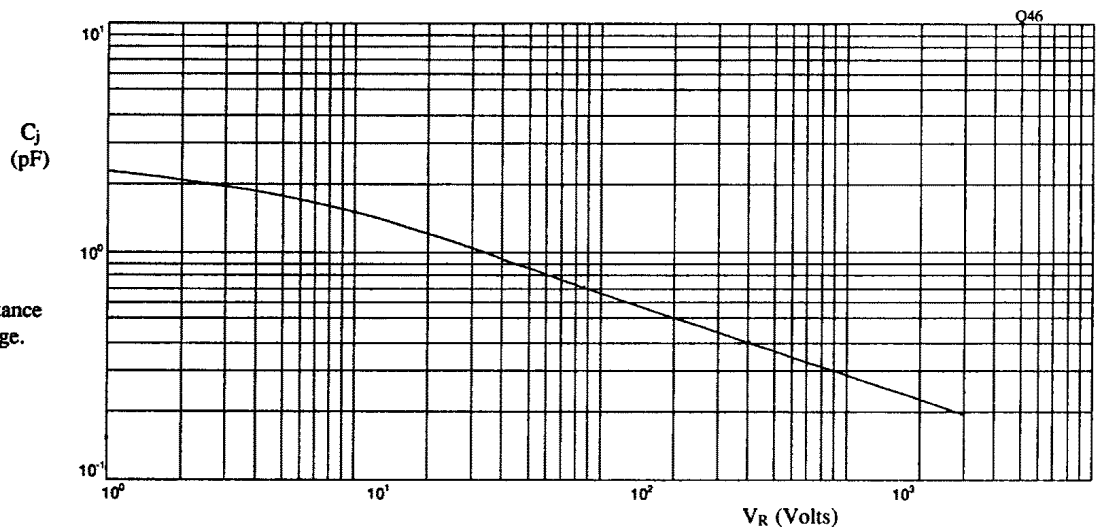
Fig 1. Junction capacitance
against reverse voltage.

V_R (Volts)
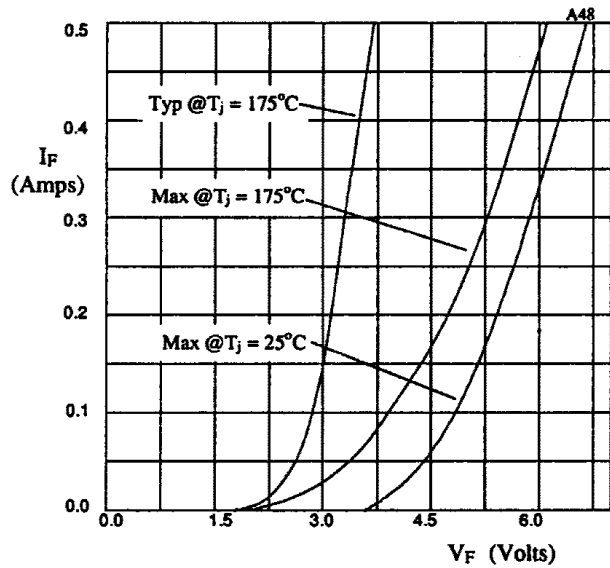
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Fig 2. Forward voltage drop as a function of
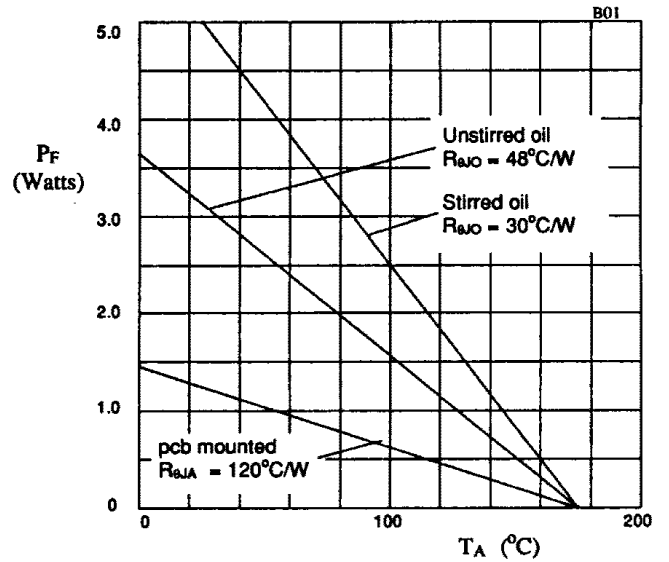forward current.

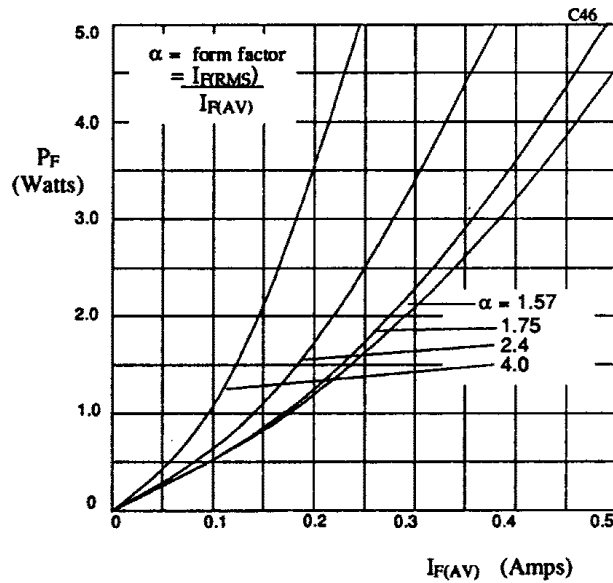

Fig 3. Power derating in air and oil.

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

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