

January 7, 1998

TEL:805-498-2111 FAX:805-498-3804 WEB:http://www.semtech.com

QUICK REFERENCE DATA

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

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

G66

DIM #	DIMENSIONS				NOTE
	MM		INCHES		
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

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°C	I _{F(AV)}	← 175 →	← 330 →	mA
- max. in unstirred oil	I _{F(AV)}	← 330 →	← 330 →	mA
I ² t for fusing (t = 8.3mS) max.	I ² t	← 0.2 →	← 0.2 →	A ² S
Forward voltage drop max. @ I _F = 125mA, T _j = 25°C	V _F	← 5.0 →	← 5.0 →	V
Reverse current max. @ V _{RWM} , T _j = 25°C	I _R	← 0.25 →	← 0.25 →	μA
@ V _{RWM} , T _j = 100°C	I _R	← 10 →	← 10 →	μA
Reverse recovery time max. 50mA I _F to 100mA I _R . Recover to 25mA I _{RR} .	t _{rr}	← 2.0 →	← 2.0 →	μS
Junction capacitance typ. @ V _R = 5V, f = 1MHz	C _j	← 1.7 →	← 1.7 →	ρF
Thermal resistance - junction to oil Unstirred @ 55°C	R _{θJO}	← 48 →	← 48 →	°C/W
Stirred @ 55°C	R _{θJO}	← 30 →	← 30 →	°C/W
Thermal resistance - junction to amb. on 0.06" thick pcb. 1oz copper.	R _{θJA}	← 120 →	← 120 →	°C/W

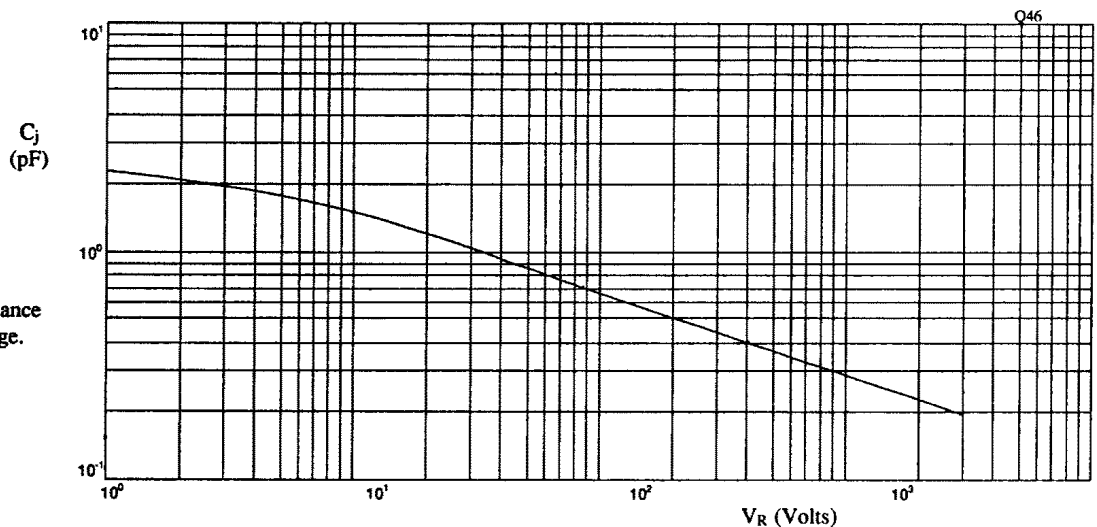


Fig 1. Junction capacitance against reverse voltage.

January 7, 1998

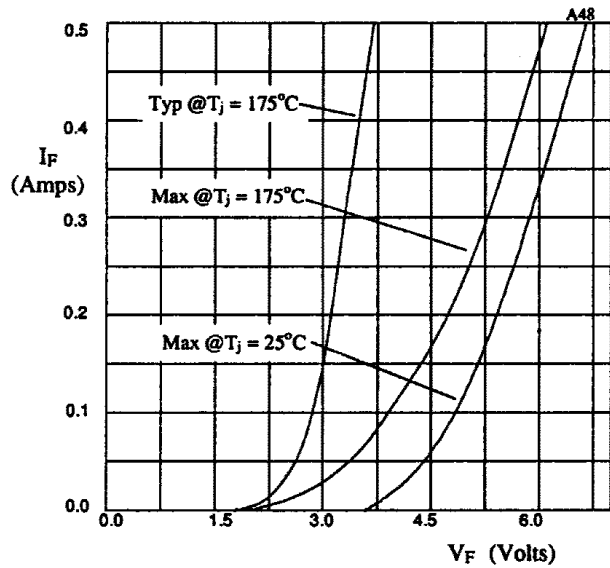


Fig 2. Forward voltage drop as a function of forward current.

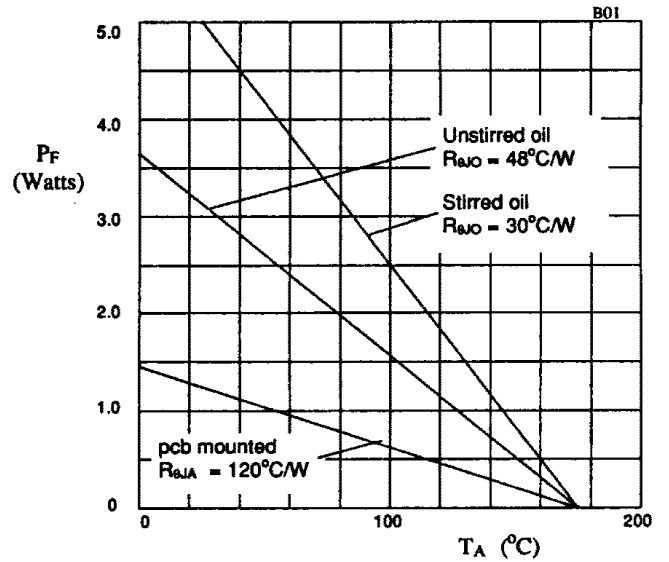


Fig 3. Power derating in air and oil.

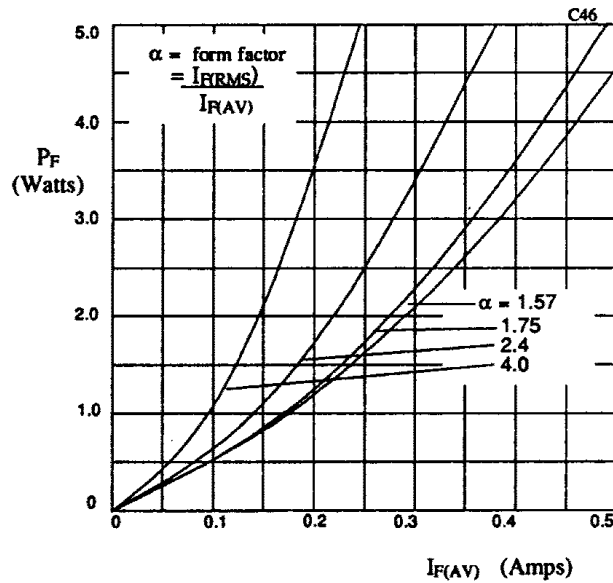


Fig 4. Forward power dissipation as a function of forward current, for sinusoidal operation.