SEMTECH

RECTIFIER, up to 1kV, 2A, 2µs

1N5614	**S2M**
1N5616	**S4M**
1N5618	**S6M**
1N5620	**S8M**
1N5622	**S0M**

January 7, 1998

CHARACTERISTICS (@ 25°C unless otherwise specified)

	Symbol	1N5614 1N5616 1N5618 1N5620 1N5622 S2M S4M S6M S8M S0M	Unit
Average forward current (sine wave)			
- max. pcb mounted; $T_A = 55^oC$	$I_{F(AV)}$	← 1.0 →	A
- max. L = 3/8"; $T_L = 55^oC$	$I_{F(AV)}$	← 2.0 →	A
I^2t for fusing (t = 8.3mS) max.	I^2t	← 5.0 →	A^2S
Forward voltage drop max. @ $I_F = 1.0A$, $T_j = 25^oC$	V_F	← 1.1 →	V
Reverse current max.			
@ V_{RWM}, $T_j = 25^oC$	I_R	← 0.5 →	µA
@ V_{RWM}, $T_j = 100^oC$	I_R	← 25 →	µA
Reverse recovery time max. 0.5A I_F to 1.0A I_R. Recovers to 0.25A I_{RR}.	t_{rr}	← 2.0 →	µS
Junction capacitance typ. @ $V_R = 5V$, f = 1MHz	C_j	← 23 →	pF
Thermal resistance - junction to lead			
Lead length = 0.375"	$R_{\theta JL}$	← 36 →	°C/W
Lead length = 0"	$R_{\theta JL}$	← 7 →	°C/W
Thermal resistance - junction to amb. on 0.06" thick pcb. 1 oz. copper.	$R_{\theta JA}$	← 95 →	°C/W

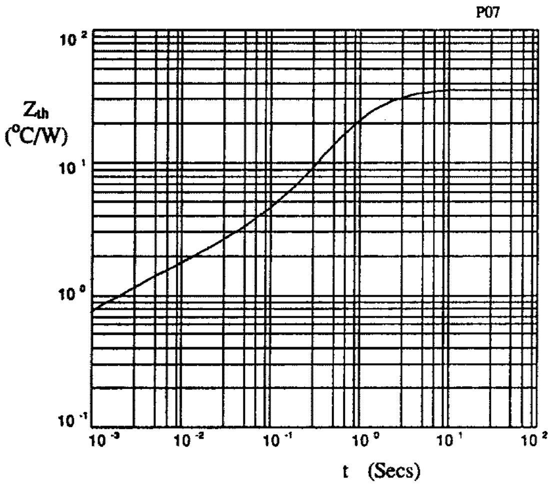

Fig 1. Transient thermal impedance characteristic.

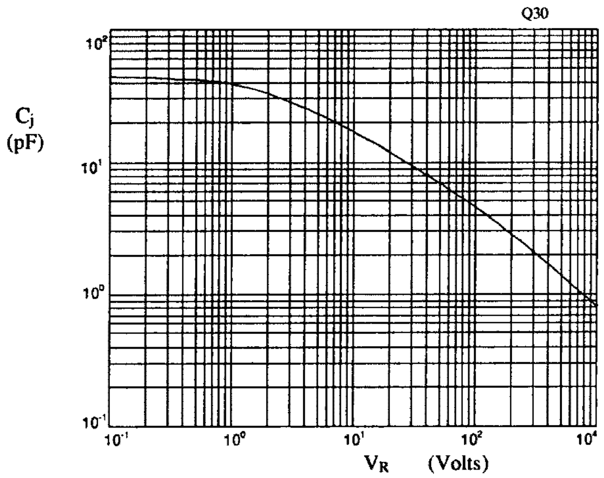

Fig 2. Typical junction capacitance as a function of reverse voltage.

SEMTECH

RECTIFIER, up to 1kV, 2A, 2µs

1N5614	S2M
1N5616	S4M
1N5618	S6M
1N5620	S8M
1N5622	S0M

January 7, 1998

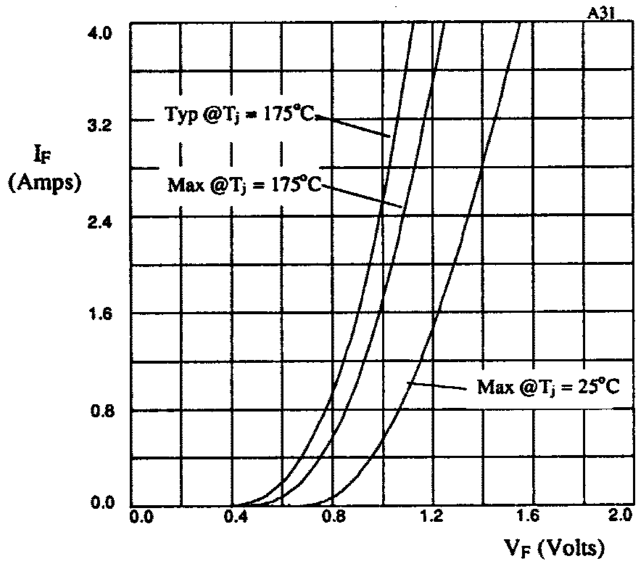

Fig 3. Forward voltage drop as a function of forward current.

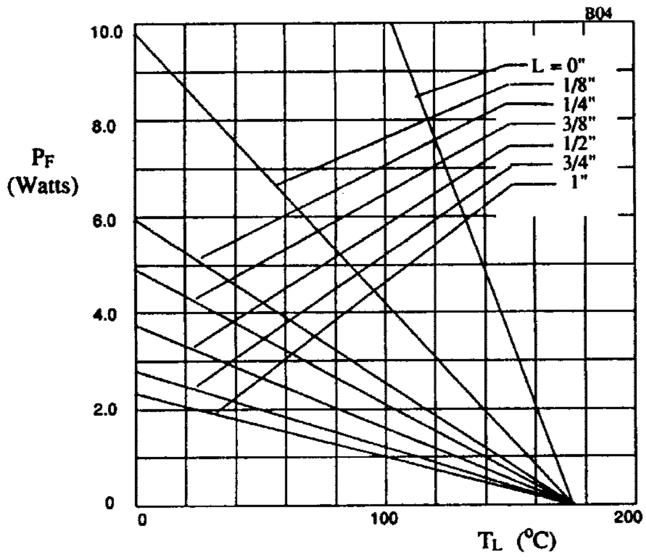

Fig 4. Maximum power versus lead temperature.

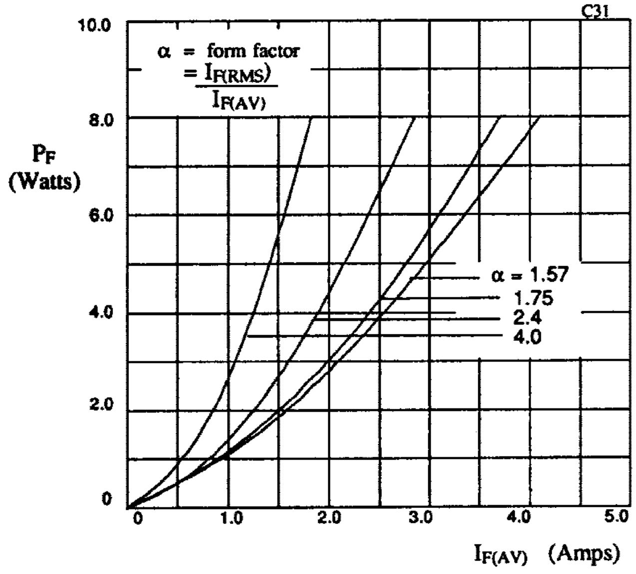

Fig 5. Forward power dissipation as a function of forward current, for sinusoidal operation.

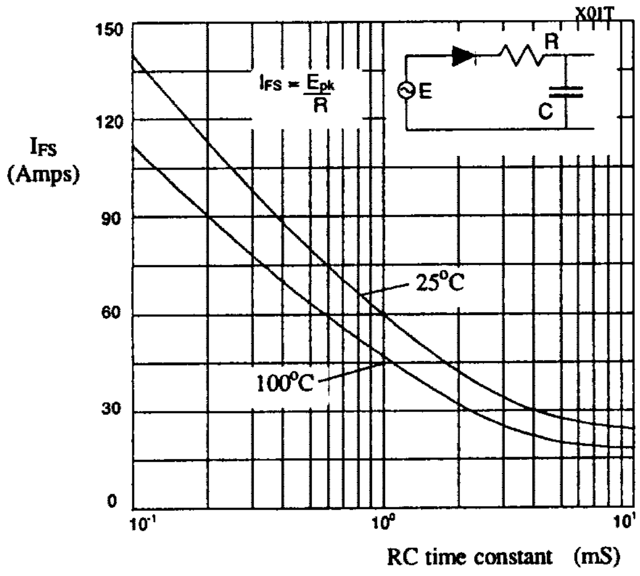

Fig 6. Maximum ratings for capacitive loads.