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CHARACTERISTICS (@ 25°C unless otherwise specified)

	Symbol	1N3645 SM20	1N3646 SM25	1N3647 SM30	Unit
Average forward current for sine wave - max. pcb mounted - max. in unstirred oil	 $I_{F(AV)}$ $I_{F(AV)}$		 260 600		 mA mA
I^2t for fusing (t = 8.3mS) max.	I^2t		0.026		A^2S
Forward voltage drop max. @ I_F = 250mA, T_j = 25°C	V_F		5.00		V
Reverse current max. @ V_{RWM}, T_j = 25°C @ V_{RWM}, T_j = 100°C	 I_R I_R		 1.00 20.0		 µA µA
Reverse recovery time max. 50mA I_F to 100mA I_R. Recover to 25mA I_{RR}.	t_{rr}		2.5		µS
Junction capacitance typ. @ V_R = 5V , f = 1MHz	C_j		8.0		ρF
Thermal resistance - junction to oil Unstirred @ 55°C Stirred @ 55°C	 $R_{\theta JO}$ $R_{\theta JO}$		 30.0 18.0		 °C/W °C/W
Thermal resistance - junction to amb. on 0.06" thick pcb. 1oz copper.	$R_{\theta JA}$		90.0		°C/W

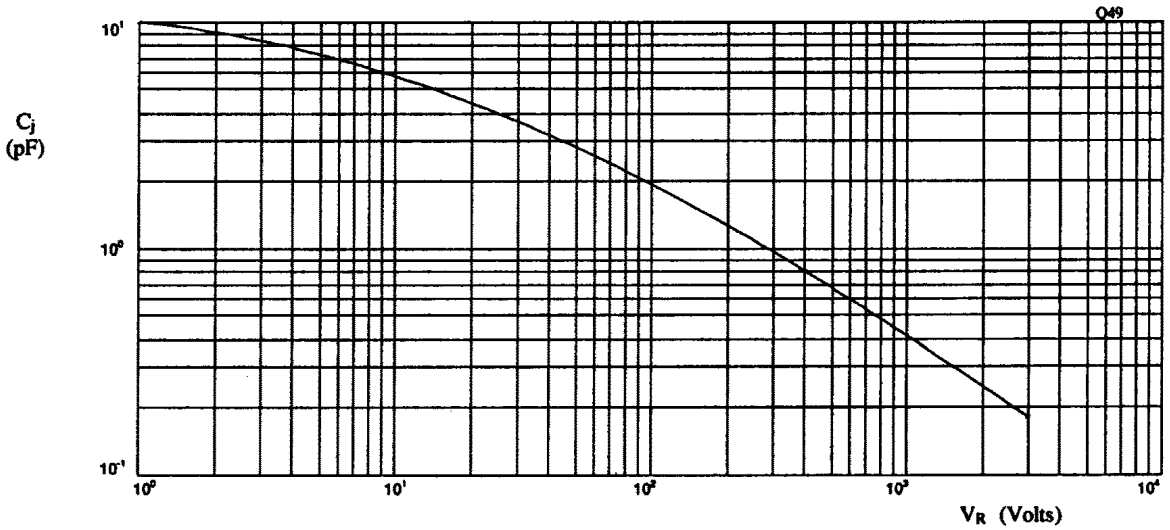

Fig 1. Typical junction capacitance as a function of reverse voltage.

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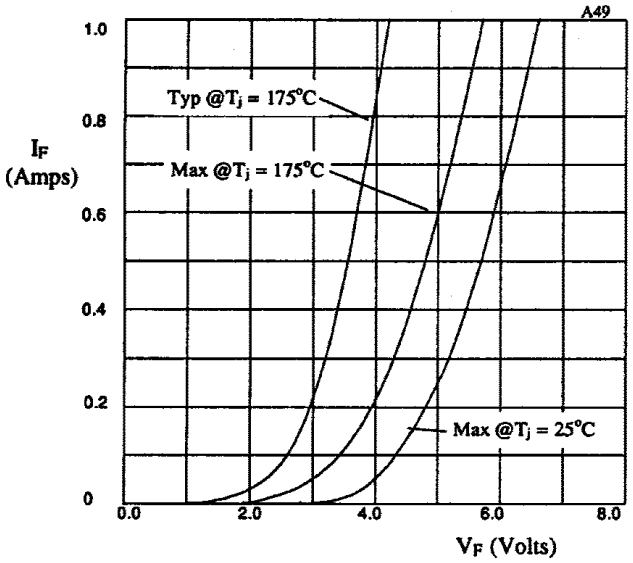

Fig 2. Forward voltage drop as a function of forward current.

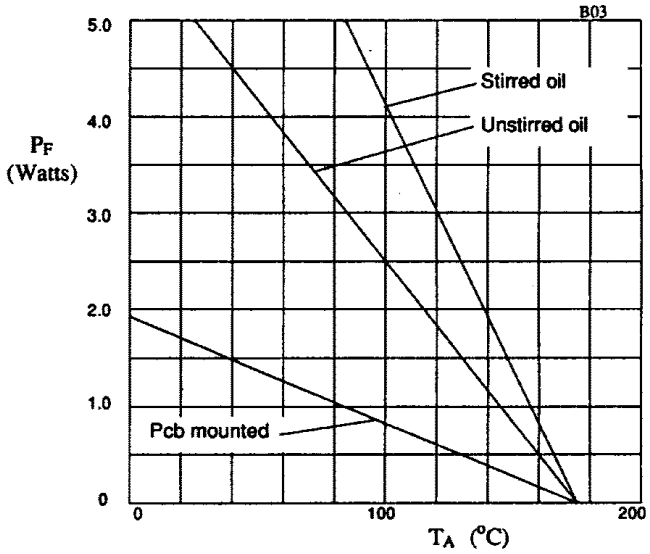

Fig 3. Power derating in oil and air.

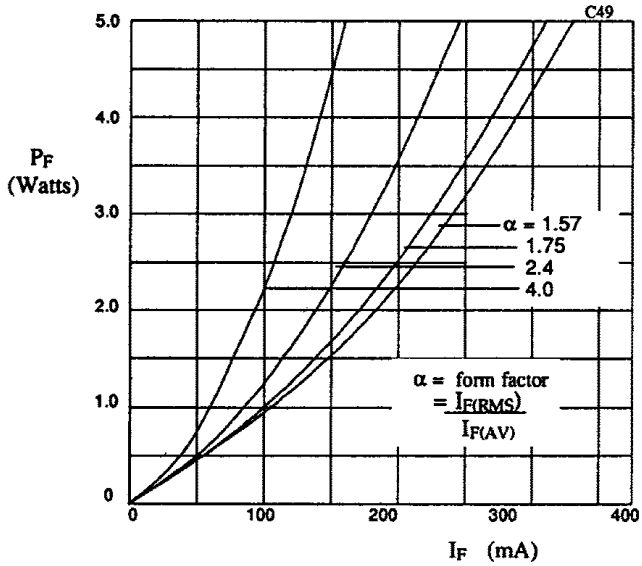

Fig 4. Forward power dissipation as a function of forward current, for sinusoidal operation.

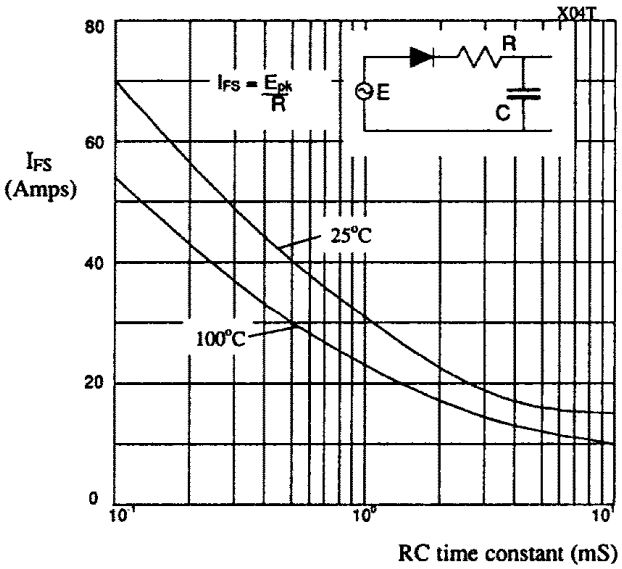

Fig 5. Maximum ratings for capacitive loads.