

January 7, 1998

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QUICK REFERENCE DATA

- $V_R = 2000V$
- $I_F = 100mA$
- $t_{rr} = 200ns$
- $I_R = 0.25\mu A$

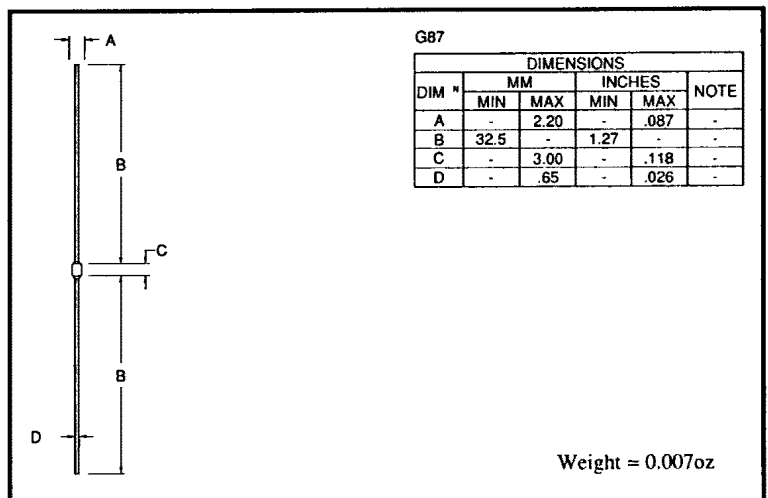
AXIAL LEADED HERMETICALLY SEALED HIGH VOLTAGE FAST RECTIFIER DIODE

- Very low reverse recovery time
- Avalanche capabilities
- Glass passivated for hermetic sealing
- Low switching losses
- Soft, non-snap off, recovery characteristics

ABSOLUTE MAXIMUM RATINGS (@ 25°C unless otherwise specified)

	Symbol	PF20	Unit
Working reverse voltage	V_{RWM}	2000	V
Repetitive reverse voltage	V_{RRM}	2200	V
Average forward current (@ 55°C in oil)	$I_{F(AV)}$	100	mA
Repetitive surge current (@ 55°C)	I_{FRM}	0.5	A
Non-repetitive surge current ($t_p = 8.3ms$, @ V_R & T_{jmax})	I_{FSM}	1.0	A
Storage temperature range	T_{STG}	-65 to +150	°C
Operating temperature range	T_{OP}	-65 to +150	°C

MECHANICAL

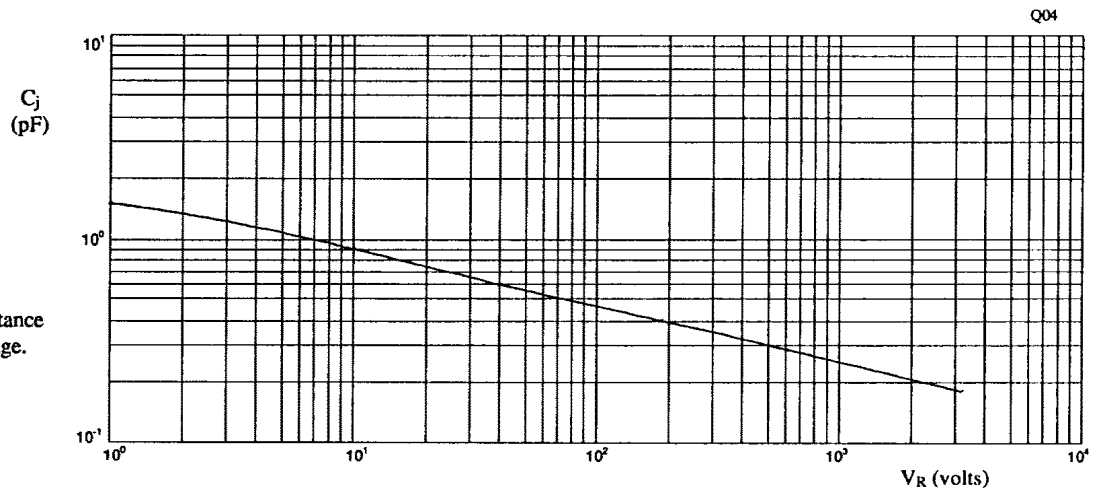


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CHARACTERISTICS (@ 25°C unless otherwise specified)

	Symbol	PF20	Unit
Average forward current max. (pcb mounted; T _A = 55°C) for sine wave	I _{F(AV)}	60	mA
for square wave (d = 0.5)	I _{F(AV)}	65	mA
Average forward current max. (unstirred oil at 55°C) for sine wave	I _{F(AV)}	90	mA
for square wave	I _{F(AV)}	100	mA
I ² t for fusing (t = 8.3mS) max.	I ² t	0.004	A ² S
Forward voltage drop max. @ I _F = 50mA, T _j = 25°C	V _F	11.0	V
Reverse current max. @ V _{RWM} , T _j = 25°C	I _R	0.25	μA
@ V _{RWM} , T _j = 100°C	I _R	3.0	μA
Reverse recovery time max. 50mA I _F to 100mA I _R . Recover to 25mA I _{RR} .	t _{rr}	200	nS
Junction capacitance typ. @ V _R = 5V, f = 1MHz	C _j	1.1	pF
Thermal resistance - junction to oil Stirred oil	R _{θJO}	55	°C/W
Unstirred oil	R _{θJO}	75	°C/W
Thermal resistance - junction to amb. on 0.06" thick pcb. 1oz copper.	R _{θJA}	155	°C/W

Fig 1. Junction capacitance against reverse voltage.



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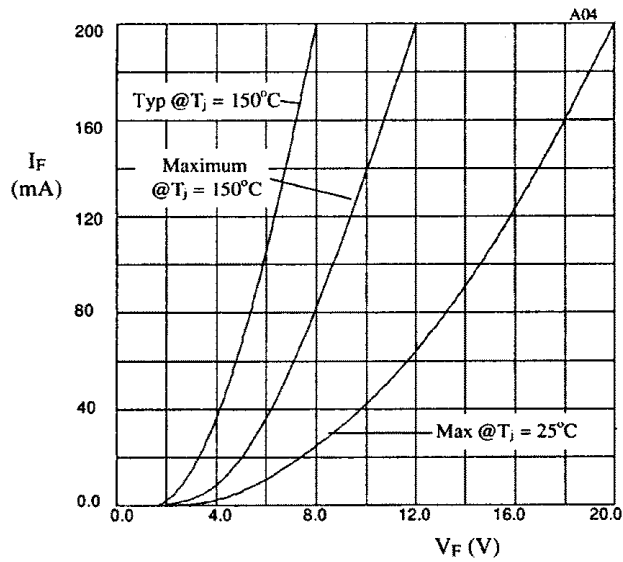


Fig 2. Forward voltage drop as a function of forward current.

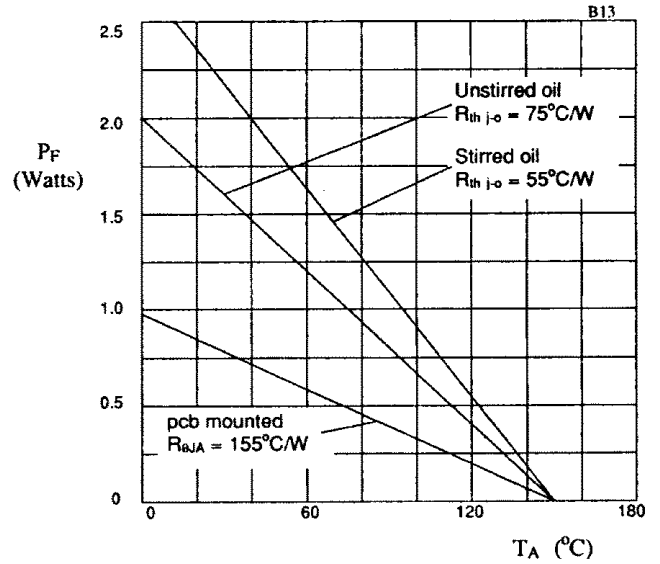


Fig 3. Power derating in air and oil.

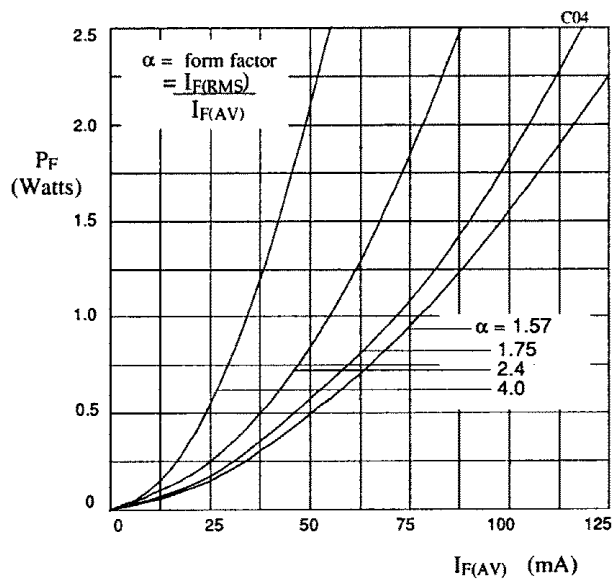


Fig 4. Forward power dissipation as a function of forward current, for sinusoidal operation.

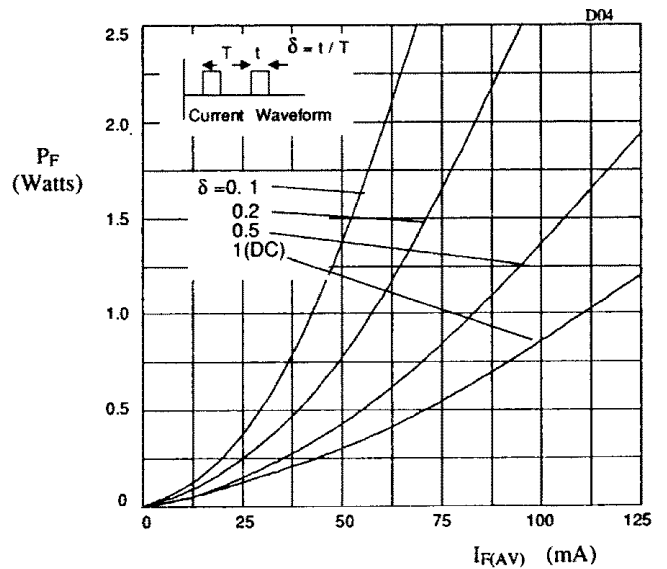


Fig 5. Forward power dissipation as a function of forward current, for square wave operation.