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

## QUICK REFERENCE DATA

- $V_R = 1500 - 3000V$
- $I_F = 0.35A$
- $t_{rr} = 250ns$
- $I_R = 0.25\mu A$

## AXIAL LEADED HERMETICALLY SEALED HIGH VOLTAGE FAST RECTIFIER DIODE

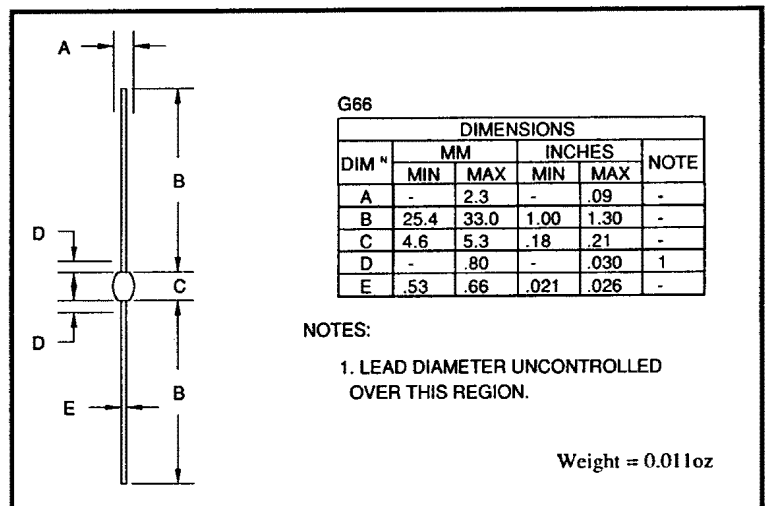
- Low reverse recovery time
- High thermal shock resistance
- Hermetically sealed with Metoxilite metal oxide
- Low switching losses
- Soft, non-snap off, recovery characteristics

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

	Symbol	F15	F20	F25	F30	Unit
Working reverse voltage	$V_{RWM}$	1500	2000	2500	3000	V
Repetitive reverse voltage	$V_{RRM}$	1500	2000	2500	3000	V
Average forward current (@ 55°C in oil)	$I_{F(AV)}$	← 0.35 →				A
Repetitive surge current (@ 55°C)	$I_{FRM}$	← 1.25 →				A
Non-repetitive surge current ( $t_p = 8.3ms$ , @ $V_R$ & $T_{jmax}$ )	$I_{FSM}$	← 5.0 →				A
Storage temperature range	$T_{STG}$	← -65 to +175 →				°C
Operating temperature range	$T_{OP}$	← -65 to +175 →				°C

### MECHANICAL

These products are available in Europe to DEF STAN 59-61 (PART 80)/034 to F and FX levels.



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**CHARACTERISTICS** (@ 25°C unless otherwise specified)

	Symbol	F15	F20	F25	F30	Unit
Average forward current max. (pcb mounted; T <sub>A</sub> = 55°C) for sine wave	I <sub>F(AV)</sub>	← 0.16 →				A
	I <sub>F(AV)</sub>	← 0.20 →				A
Average forward current max. (unstirred oil at 55°C) for sine wave	I <sub>F(AV)</sub>	← 0.33 →				A
	I <sub>F(AV)</sub>	← 0.35 →				A
I <sup>2</sup> t for fusing (t = 8.3mS) max.	I <sup>2</sup> t	← 0.10 →				A <sup>2</sup> S
Forward voltage drop max. @ I <sub>F</sub> = 0.10A, T <sub>j</sub> = 25°C	V <sub>F</sub>	← 5.00 →				V
Reverse current max. @ V <sub>RWM</sub> , T <sub>j</sub> = 25°C	I <sub>R</sub>	← 0.25 →				μA
	I <sub>R</sub>	← 10 →				μA
Reverse recovery time max. 50mA I <sub>F</sub> to 100mA I <sub>R</sub> . Recover to 25mA I <sub>RR</sub> .	t <sub>rr</sub>	← 250 →				nS
Junction capacitance typ. @ V <sub>R</sub> = 5V, f = 1MHz	C <sub>j</sub>	← 2.5 →				ρF
Thermal resistance - junction to oil Stirred oil	ReJO	← 30 →				°C/W
	ReJO	← 48 →				°C/W
Thermal resistance - junction to amb. on 0.06" thick pcb. 1oz copper.	ReJA	← 120 →				°C/W

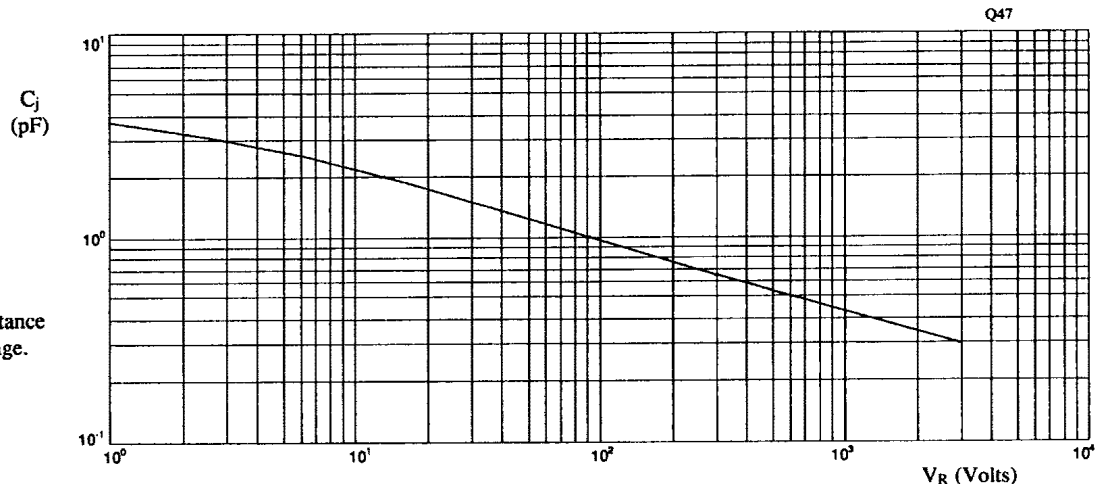


Fig 1. Junction capacitance against reverse voltage.

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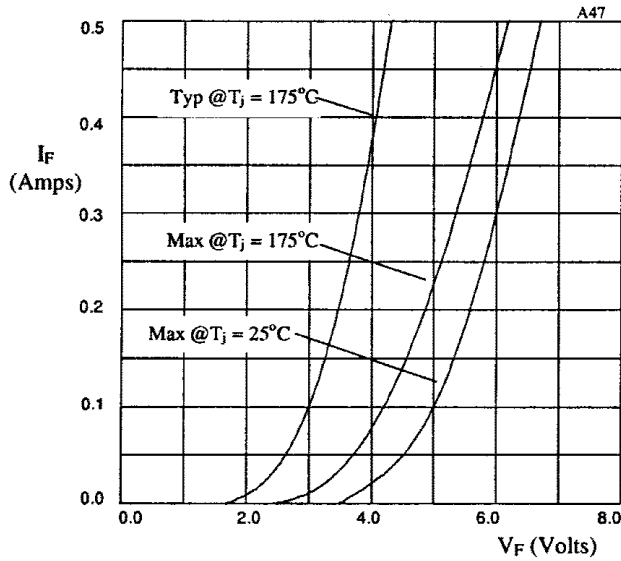


Fig 2. Forward voltage drop as a function of forward current.

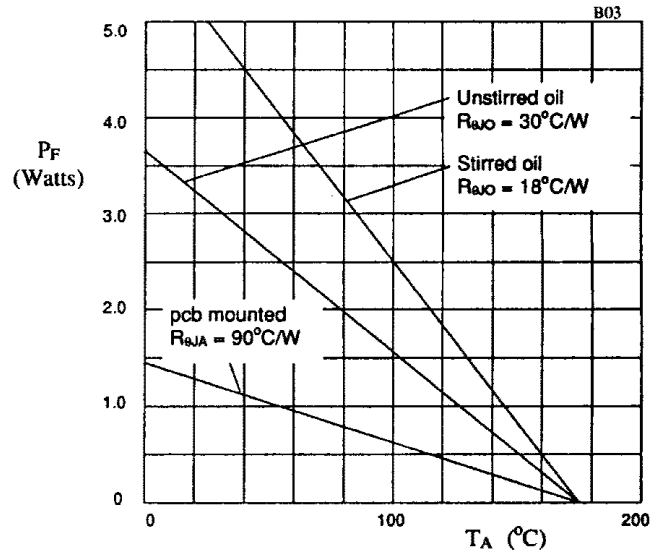


Fig 3. Power derating in air and oil.

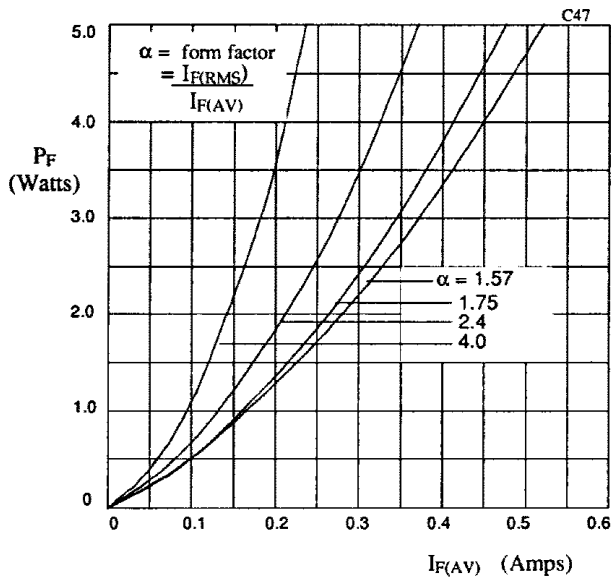


Fig 4. Forward power dissipation as a function of forward current, for sinusoidal operation.

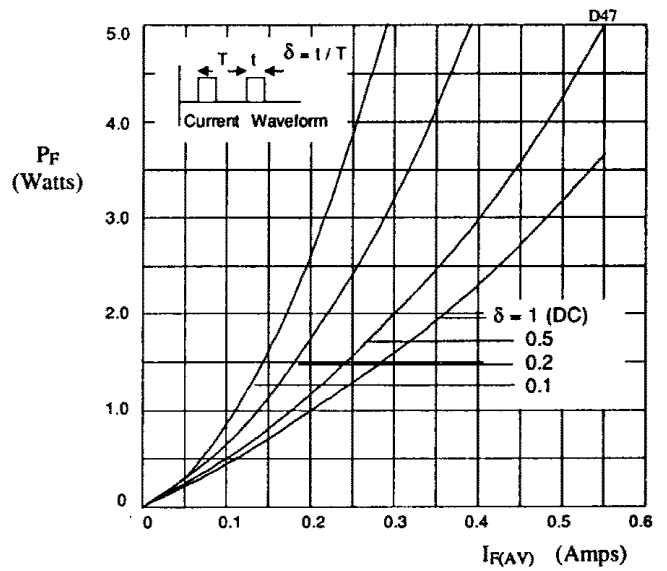


Fig 5. Forward power dissipation as a function of forward current, for square wave operation.