

January 9, 1998

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### HIGH DENSITY, HIGH VOLTAGE, FAST RECOVERY RECTIFIER ASSEMBLY

### QUICK REFERENCE DATA

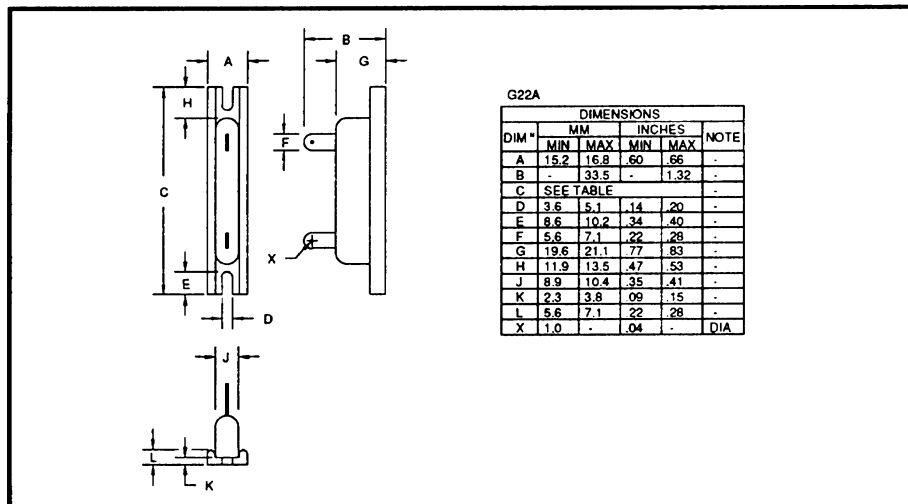
- Low reverse leakage current
- Low reverse recovery time
- Corona free design
- Easy aluminum base mount
- Low forward voltage drop

- $V_R = 2.5 - 7.5\text{kV}$
- $I_F = 1\text{A}$
- $t_{rr} = 150\text{nS}$
- $I_R = 1.0\mu\text{A}$

### ABSOLUTE MAXIMUM RATINGS

	Symbol	SDHF2.5KM	SDHF5KM	SDHF7.5KM	Unit
Working reverse voltage	$V_{RWM}$	2.5	5.0	7.5	kV
Surge reverse voltage	$V_{RSM}$	2.5	5.0	7.5	kV
Average forward current in air @ 25°C in oil @ 55°C	$I_{F(AV)}$	← 1.0 →			A
		← 1.0 →			A
Non-repetitive surge current $t_p = 8.3\text{mS}$ , @ 25°C	$I_{FSM}$	← 25 →			A
Storage temperature range	$T_{STG}$	← -55 to +150 →			°C
Operating temperature range	$T_{OP}$	← -55 to +150 →			°C
Body length ±0.030"	dim C	3.36	4.04	6.09	inches

### MECHANICAL

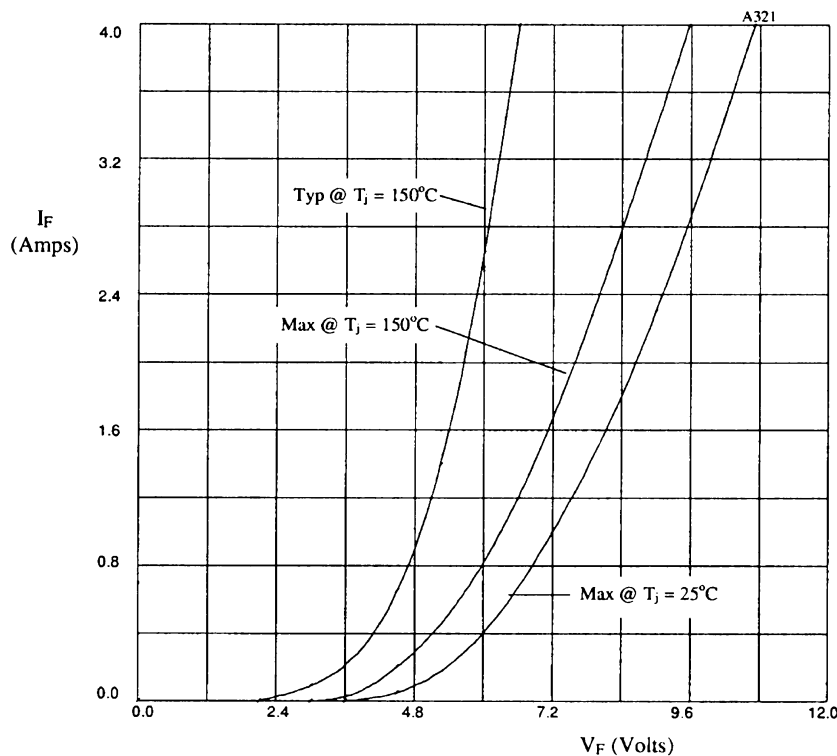


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### ELECTRICAL CHARACTERISTICS

	Symbol	SDHF2.5KM	SDHF5KM	SDHF7.5KM	Unit
Max. forward voltage drop @ $I_F = 1.0A$ , $T_j = 25^\circ C$	$V_F$	7.2	14.4	21.6	V
Max. reverse leakage current @ $V_{RWM}$ , $T_j = 25^\circ C$	$I_R$	←—————→	1.0	—————→	$\mu A$
@ $V_{RWM}$ , $T_j = 100^\circ C$	$I_R$	←—————→	25	—————→	$\mu A$
Max. reverse recovery time <sup>1</sup> 0.5A $I_F$ to 1.0A $I_R$ . Recovers to 0.25A $I_{RR}$ .	$t_{rr}$	←—————→	150	—————→	nS
Max. fusing current $t_p = 8.3mS$	$I^2t$	←—————→	2.6	—————→	$A^2S$

<sup>1</sup> Measured on discrete devices prior to assembly



Multiplication tables for fig 1.

SDHF2.5KM X-axis x1  
SDHF5KM X-axis x2  
SDHF7.5KM X-axis x3

Fig 1. Forward voltage drop as a function of forward current for use with multiplication table 1.