

January 9, 1998

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

### QUICK REFERENCE DATA

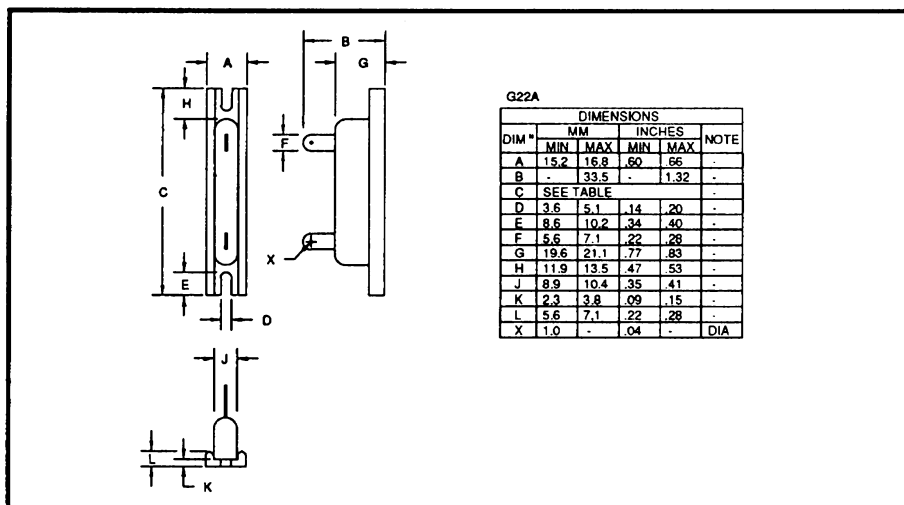
- Low reverse recovery time
- Low reverse leakage current
- Corona free design
- Easy aluminum base mount
- Low forward voltage drop

- $V_R = 2.5\text{kV} \ \& \ 5\text{kV}$
- $I_F = 2.5\text{A}$
- $t_{rr} = 150\text{nS}$
- $I_R = 1.0\mu\text{A}$

### ABSOLUTE MAXIMUM RATINGS

	Symbol	SDHF2.5KS	SDHF5KS	Unit
Working reverse voltage	$V_{RWM}$	2.5	5.0	kV
Surge reverse voltage	$V_{RSM}$	2.5	5.0	kV
Average forward current in air @ 25°C in oil @ 55°C	$I_{F(AV)}$	← 2.5 →	← 2.5 →	A
Non-repetitive surge current $t_p = 8.3\text{mS}, @ 25^\circ\text{C}$	$I_{FSM}$	← 150 →		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	inches

### MECHANICAL

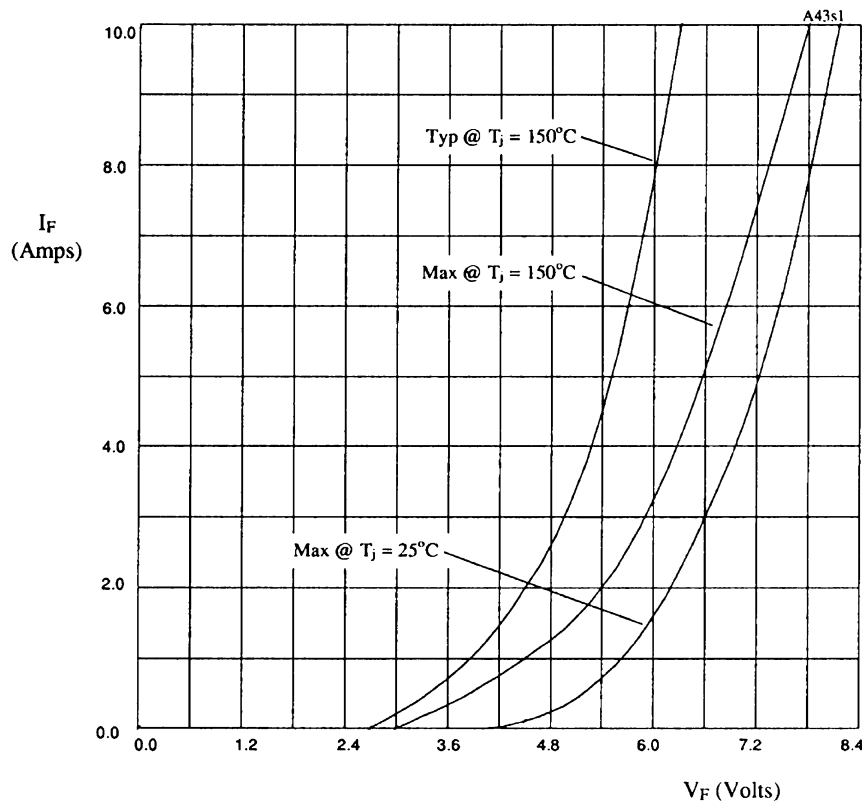


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### ELECTRICAL CHARACTERISTICS

	Symbol	SDHF2.5KS	SDHF5KS	Unit
Max. forward voltage drop @ $I_F = 3.0A$ , $T_j = 25^\circ C$	$V_F$	6.6	13.2	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 $t_p = 8.3mS$	$I^2t$	← 93 →		$A^2S$

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



Multiplication tables for fig 1.

SDHF2.5KS X-axis x1  
SDHF5KS X-axis x2

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