

January 9, 1998

TEL:805-498-2111 FAX:805-498-3804 WEB:<http://www.semtech.com>**HIGH DENSITY, HIGH VOLTAGE, STANDARD
RECOVERY RECTIFIER ASSEMBLY**

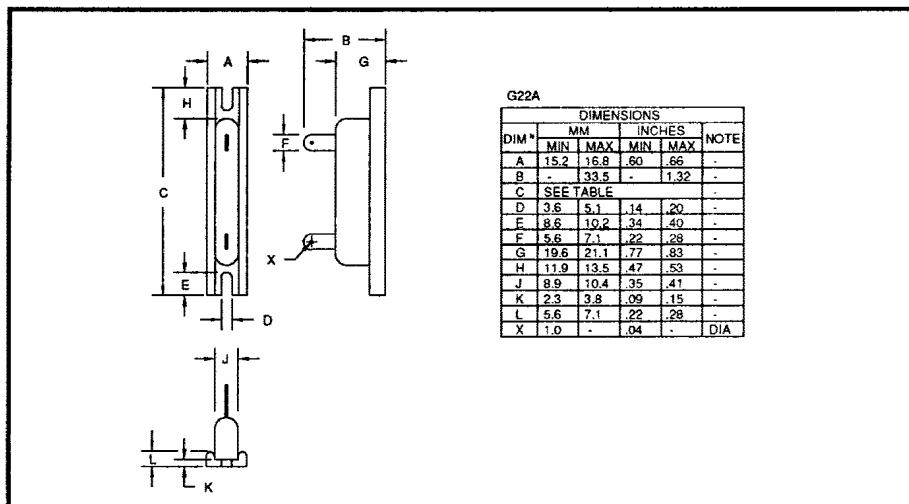
- Low reverse leakage current
- Corona free design
- Easy aluminum base mount
- Low forward voltage drop
- Up to 15kV reverse voltage

**QUICK REFERENCE
DATA**

- $V_R = 7.5\text{kV} \& 15\text{kV}$
- $I_F = 400\text{mA}$
- $t_{rr} = 2.5\mu\text{s}$
- $I_R = 2.0\mu\text{A}$

ABSOLUTE MAXIMUM RATINGS

	Symbol	SDH7.5K	SDH15K	Unit
Working reverse voltage	V_{RWM}	7.5	15.0	kV
Surge reverse voltage	V_{RSM}	8.25	16.50	kV
Average forward current in air @ 25°C in oil @ 55°C	$I_{F(AV)}$	400	400	mA
Non-repetitive surge current $t_p = 8.3\text{mS}, @ 25^\circ\text{C}$	I_{FSM}	40.0	40.0	A
Storage temperature range	T_{STG}	-55 to +150	-55 to +150	°C
Operating temperature range	T_{OP}	-55 to +150	-55 to +150	°C
Body length $\pm 0.030"$	dim C	3.36	4.04	inches

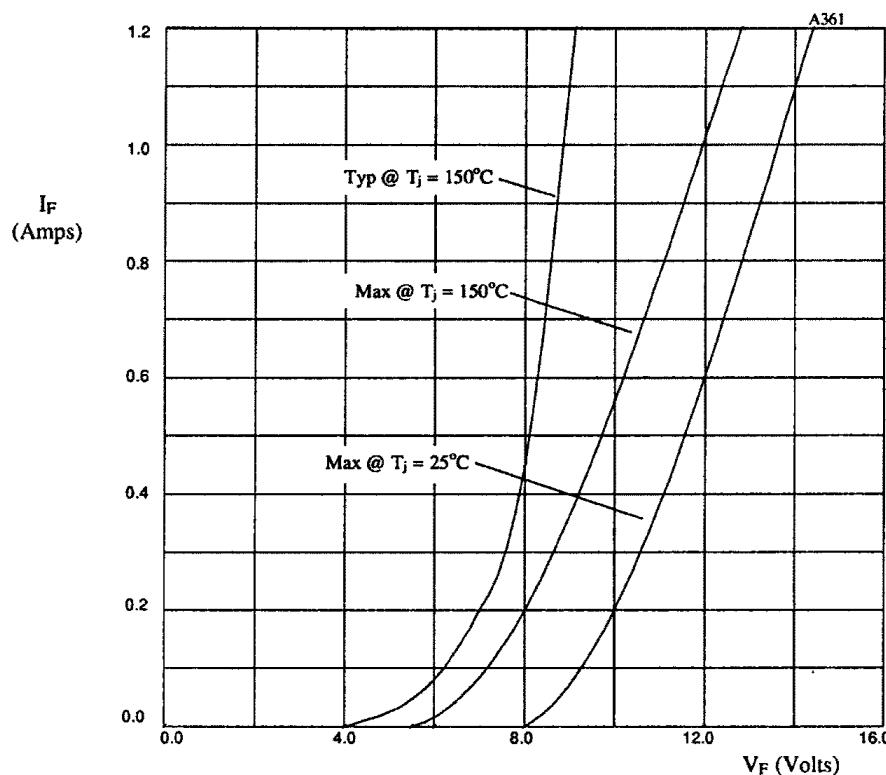
MECHANICAL

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ELECTRICAL CHARACTERISTICS

	Symbol	SDH7.5K	SDH15K	Unit
Max. forward voltage drop @ $I_F = 200\text{mA}$, $T_j = 25^\circ\text{C}$	V_F	10.0	20.0	V
Max. reverse leakage current @ V_{RWM} , $T_j = 25^\circ\text{C}$	I_R	2.0		μA
@ V_{RWM} , $T_j = 100^\circ\text{C}$	I_R	40		μA
Max. reverse recovery time ¹ 50mA I_F to 100mA I_R . Recover to 25mA I_R .	t_{rr}	2.5		μs
Max. fusing current $t_p = 8.3\text{mS}$	I^2t	6.64		A^2s

¹ Measured on discrete devices prior to assembly



Multiplication tables for fig 1.

SDH7.5K	X-axis x1
SDH15K	X-axis x2

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