

January 9, 1998

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

HIGH DENSITY, HIGH VOLTAGE, STANDARD RECOVERY RECTIFIER ASSEMBLY

QUICK REFERENCE DATA

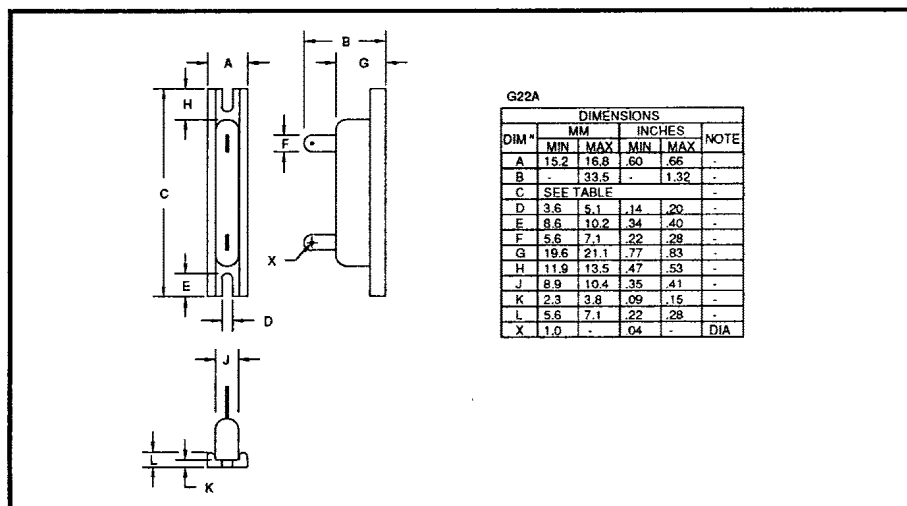
- Low reverse leakage current
- Low distributed and ground capacitance
- Corona free design
- Easy aluminium base mount
- Low forward voltage drop

- $V_R = 5\text{kV} - 15\text{kV}$
- $I_F = 1\text{A}$
- $t_{rr} = 2.0\mu\text{s}$
- $I_R = 1.0\mu\text{A}$

ABSOLUTE MAXIMUM RATINGS

	Symbol	SDH5KM	SDH10KM	SDH15KM	Unit
Working reverse voltage	V_{RWM}	5.0	10.0	15.0	kV
Surge reverse voltage	V_{RSM}	5.5	11.0	16.5	kV
Average forward current in air @ 25°C in oil @ 55°C	$I_{F(AV)}$	$\longleftrightarrow 1.0 \longrightarrow$ $\longleftrightarrow 1.0 \longrightarrow$			A
Non-repetitive surge current $t_p = 8.3\text{ms}$, @ 25°C	I_{FSM}	$\longleftrightarrow 50 \longrightarrow$			A
Storage temperature range	T_{STG}	$\longleftrightarrow -55 \text{ to } +150 \longrightarrow$			°C
Operating temperature range	T_{OP}	$\longleftrightarrow -55 \text{ to } +150 \longrightarrow$			°C
Body length $\pm 0.030"$	dim C	3.36	4.04	4.04	inches

MECHANICAL

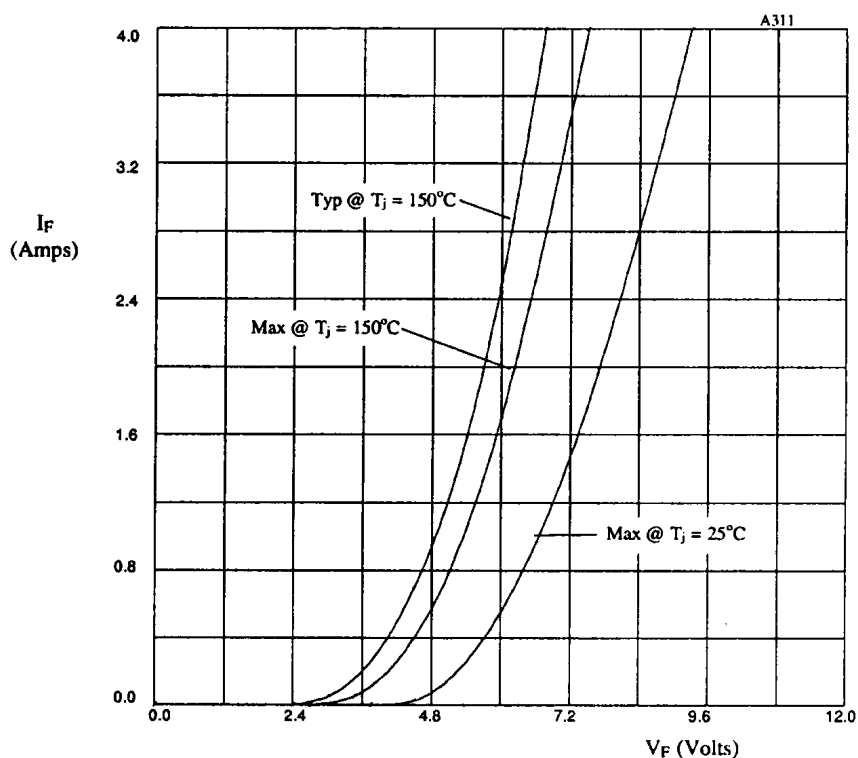


January 9, 1998

ELECTRICAL CHARACTERISTICS

	Symbol	SDH5KM	SDH10KM	SDH15KM	Unit
Max. forward voltage drop @ $I_F = 1.0A$, $T_j = 25^\circ C$	V_F	6.6	13.2	19.8	V
Max. reverse leakage current @ V_{RWM} , $T_j = 25^\circ C$	I_R	←	1.0	→	μA
@ V_{RWM} , $T_j = 100^\circ C$	I_R	←	25	→	μA
Max. reverse recovery time ¹ 0.5A I_F to 1.0A I_R . Recovers to 0.25A I_{RR} .	t_{rr}	←	2.0	→	μS
Max. fusing current $t_p = 8.3ms$	I^2t	←	10	→	A^2S

¹ Measured on discrete devices prior to assembly



Multiplication tables for fig 1.

SDH5KM	X-axis	x1
SDH10KM	X-axis	x2
SDH15KM	X-axis	x3

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