January 9, 1998

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HIGH DENSITY, HIGH VOLTAGE, STANDARD RECOVERY RECTIFIER ASSEMBLY

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

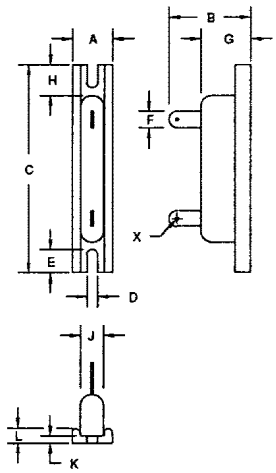
QUICK REFERENCE DATA

- V_R = 5kV - 15kV
- I_F = 1A
- t_{rr} = 2.0µS
- I_R = 1.0µA

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	$I_{F(AV)}$				
in air @ 25°C		←	1.0	→	A
in oil @ 55°C		←	1.0	→	A
Non-repetitive surge current t_p = 8.3mS, @ 25°C	I_{FSM}	←	50	→	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	4.04	inches

MECHANICAL



G22A

DIM"	DIMENSIONS MM MIN	MM MAX	INCHES MIN	INCHES MAX	NOTE
A	15.2	16.8	.60	.66	-
B	-	33.5	-	1.32	-
C	SEE TABLE				-
D	3.6	5.1	.14	.20	-
E	8.6	10.2	.34	.40	-
F	5.6	7.1	.22	.28	-
G	19.6	21.1	.77	.83	-
H	11.9	13.5	.47	.53	-
J	8.9	10.4	.35	.41	-
K	2.3	3.8	.09	.15	-
L	5.6	7.1	.22	.28	-
X	1.0	-	.04	-	DIA

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ELECTRICAL CHARACTERISTICS

	Symbol	SDH5KM	SDH10KM	SDH15KM	Unit
Max. forward voltage drop @ I_F = 1.0A, T_j = 25°C	V_F	6.6	13.2	19.8	V
Max. reverse leakage current @ V_{RWM}, T_j = 25°C	I_R	←	1.0	→	µA
@ V_{RWM}, T_j = 100°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

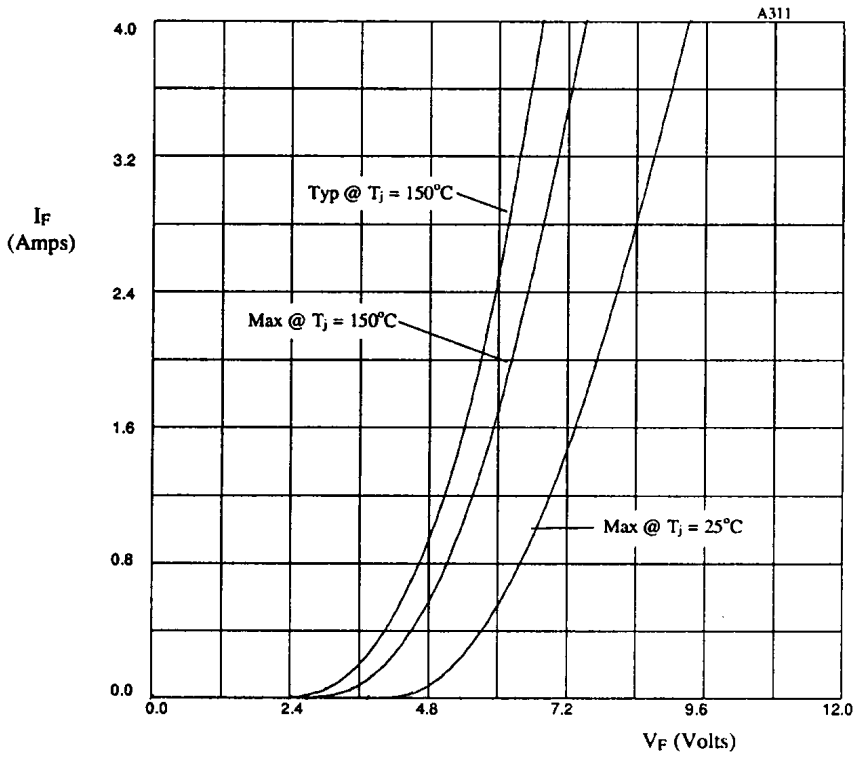

Fig 1. Forward voltage drop as a function of forward current for use with multiplication table 1.

Multiplication tables for fig 1.

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

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