



180 Lafayette Road  
 North Hampton, NH 03862-2448  
 PH: 603-964-3165  
 FX: 603-964-3168  
 WWW.PDEELECTRONICS.COM

## High Voltage Rectifier Assembly

Fast Recovery  
 SHF5000, SHF7500, SHF10000, SHF12500, SHF15000, SHF20000, SHF25000

### FEATURES

- Low Reverse Recovery Time
- Low Reverse Leakage Current
- High Thermal Shock Resistance
- Corona Free Construction
- Low Distributed Capacitance

### QUICK REFERENCE DATA

- $V_R = 5000$  Volts – 25000 Volts
- $T_{rr} = 1 \mu S$
- $I_F = .5$  Amp
- $I_R = 0.1 \mu Amp$
- $I_{FSM} = 60$  Amp

### ABSOLUTE MAXIMUM RATINGS

Device Part Number	Working Reverse Voltage $V_{RWM}$	Average Rectified Current $I_{F(AV)}$ @ $T_A$		1 Cycle Surge Current $T_p = 8.3mS$ $I_{FSM}$ @ $T_C$		Operating & Storage Temperature Range $T_A$
		Amps		Amps		
	Volts	+55°C	+100°C	+25°C	+100°C	Degrees C
SHF5000	5000	0.50	0.33	60	30	-55 to +150
SHF7500	7500	0.50	0.33	60	30	-55 to +150
SHF10000	10000	0.50	0.33	60	30	-55 to +150
SHF12500	12500	0.50	0.33	60	30	-55 to +150
SHF15000	15000	0.50	0.33	60	30	-55 to +150
SHF20000	20000	0.50	0.33	60	30	-55 to +150
SHF25000	25000	0.50	0.33	60	30	-55 to +150

### ELECTRICAL CHARACTERISTICS

Device Part Number	Maximum Leakage Current Per Leg $I_R @ V_{RWM}$		Maximum Forward Voltage Per Leg $V_F @ I_F$ *1		Maximum Reverse Recovery $T_{RR}$ *2
	$T_C = +25^\circ C$	$T_C = +100^\circ C$	$T_A = +25^\circ C$		
	$\mu A$	$\mu A$	Volts	Amps	$\mu Sec$
SHF5000	0.10	15.0	7.0	0.5	1.0
SHF7500	0.10	15.0	10.0	0.5	1.0
SHF10000	0.10	15.0	14.0	0.5	1.0
SHF12500	0.10	15.0	17.0	0.5	1.0
SHF15000	0.10	15.0	20.0	0.5	1.0
SHF20000	0.10	15.0	27.0	0.5	1.0
SHF25000	0.10	15.0	33.0	0.5	1.0

\*1) Pulse Width = 300  $\mu Sec$ , Duty Cycle  $\leq 2\%$

\*2)  $I_F = 0.1A$ ,  $I_R = 0.2A$ ,  $I_{rr} = 0.05A$ , Tested on discrete rectifiers prior to assembly

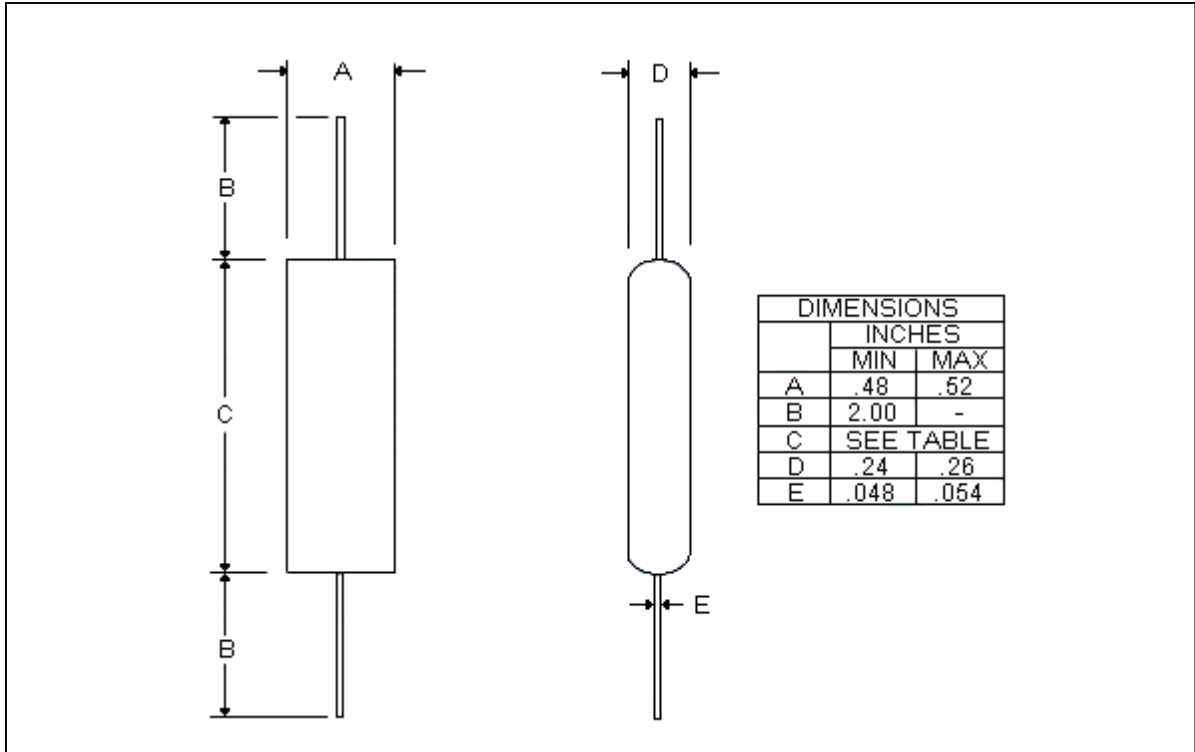


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### MECHANICAL CHARACTERISTICS



Part Number	Dimension C (Inches) $\pm$ .030
SHF5000	1.125
SHF7500	1.625
SHF10000	2.000
SHF12500	2.375
SHF15000	2.750
SHF20000	3.500
SHF25000	4.250