

SEMTECH

**STANDARD RECOVERY
HIGH VOLTAGE RECTIFIER
ASSEMBLY**

**SCH5000 SCH7500
SCH10000 SCH12500
SCH15000 SCH20000
SCH25000**

January 8, 1998

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QUICK REFERENCE DATA

- $V_R = 5000 - 25000V$
- $I_F = 0.5A$
- $I_R = 1\mu A$
- $I_{FSM} = 50A$

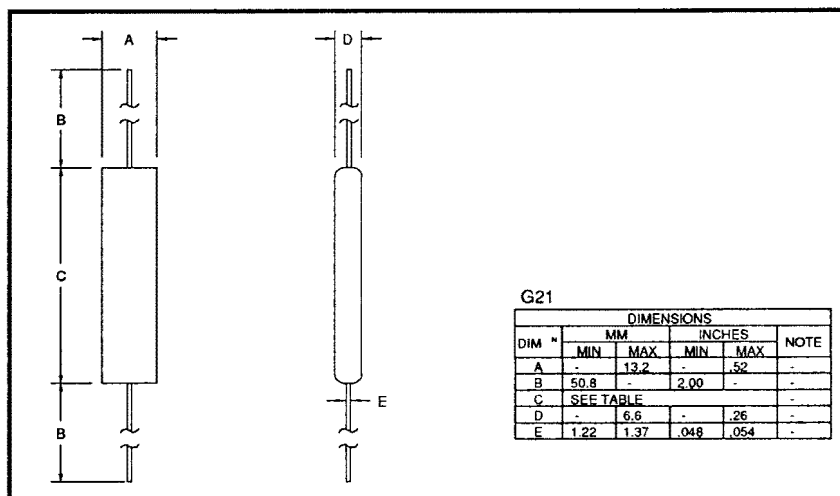
HIGH VOLTAGE, HIGH DENSITY, LEADED, SILICON RECTIFIER ASSEMBLY

- Low forward voltage drop
- Low reverse leakage current
- High thermal shock resistance
- Corona free construction
- Low distributed capacitance

ABSOLUTE MAXIMUM RATINGS

Device Type	Working Reverse Voltage V_{RWM}	Average Rectified Current $I_F(AV)$				1 Cycle Surge Current I_{FSM} $t_p = 8.3mS$ @ T_J MAX	I^2t $t_p = 8.3mS$ @ T_J MAX	Repetitive Surge Current I_{FRM} @ 25°C	Case Length dim. C Max
		@ 55 °C	@ 100 °C	Forced air @ 600CFM, 55°C	in still oil @ 55 °C				
	Volts	Amps	Amps	Amps	Amps	Amps	A ² S	Amps	Inches
SCH5000	5000	↑	↑	↑	↑	↑	↑	↑	1.145
SCH7500	7500	↑	↑	↑	↑	↑	↑	↑	1.645
SCH10000	10000	↑	↑	↑	↑	↑	↑	↑	2.020
SCH12500	12500	0.50	0.33	1.0	1.0	50	12	10	2.395
SCH15000	15000	↓	↓	↓	↓	↓	↓	↓	2.770
SCH20000	20000	↓	↓	↓	↓	↓	↓	↓	3.520
SCH25000	25000	↓	↓	↓	↓	↓	↓	↓	4.270

MECHANICAL



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ELECTRICAL CHARACTERISTICS

Device Type	Maximum Reverse Leakage Current I_R @ V_{RWM}		Maximum Forward Voltages V_F @ 1.0A @ 25°C	Maximum Reverse Recovery Time ⁽¹⁾ t_{rr} @ 25°C
	@ 25 °C	@ 100 °C		
	μA	μA	Volts	μS
SCH5000	↑	↑	5.0	↑
SCH7500			8.0	
SCH10000			10.0	
SCH12500	1.0	20	13.0	5.0
SCH15000	↓	↓	15.0	↓
SCH20000			20.0	
SCH25000			25.0	

1. Measured on discrete devices prior to assembly.

Operating temperature range -55 °C to +150 °C
Storage temperature range -55 °C to +150 °C

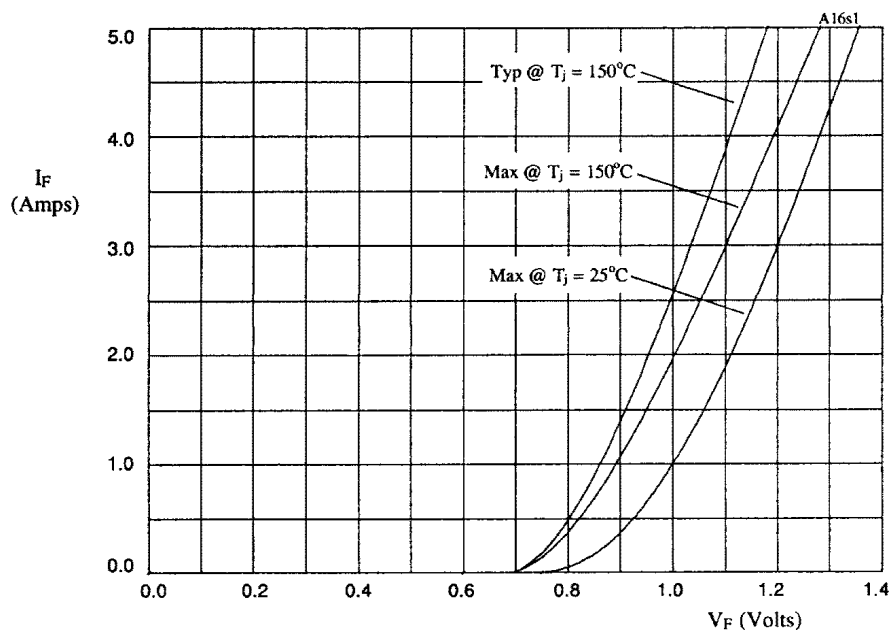


TABLE 1

DEVICE	X-AXIS
SCH5000	x5
SCH7500	x8
SCH10000	x10
SCH12500	x13
SCH15000	x15
SCH20000	x20
SCH25000	x25

Figure 1. Forward voltage drop as a function of forward current (see Table 1).

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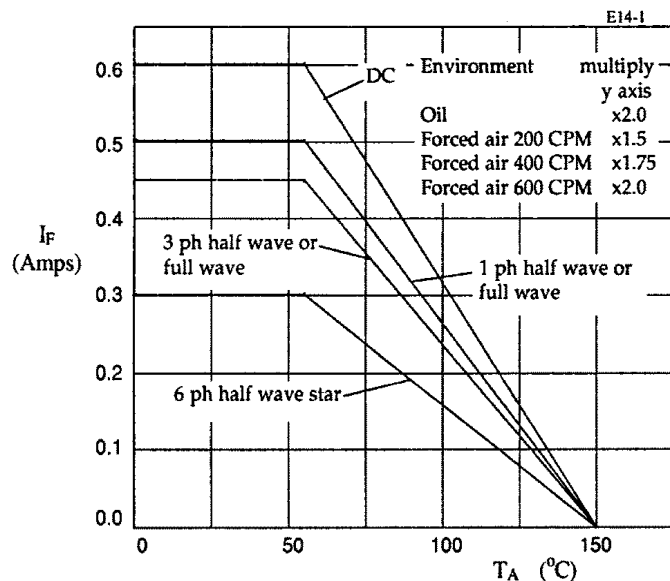


Figure 2. Maximum forward current against ambient temperature.

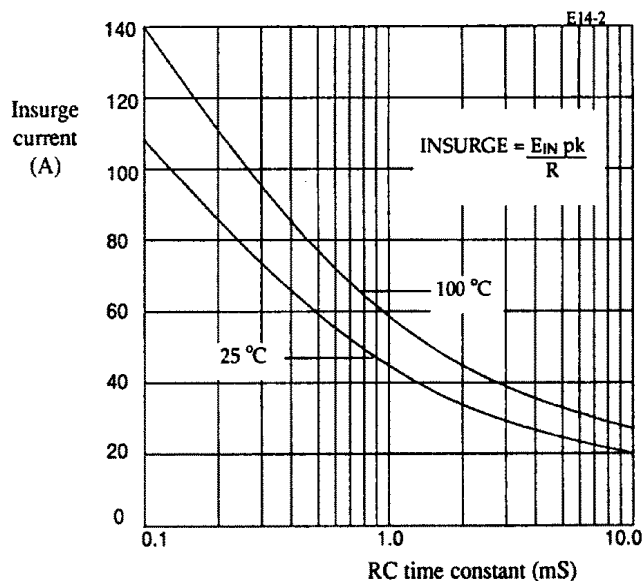


Figure 3. Maximum ratings for capacitive loads. Insurge current versus RC time constant

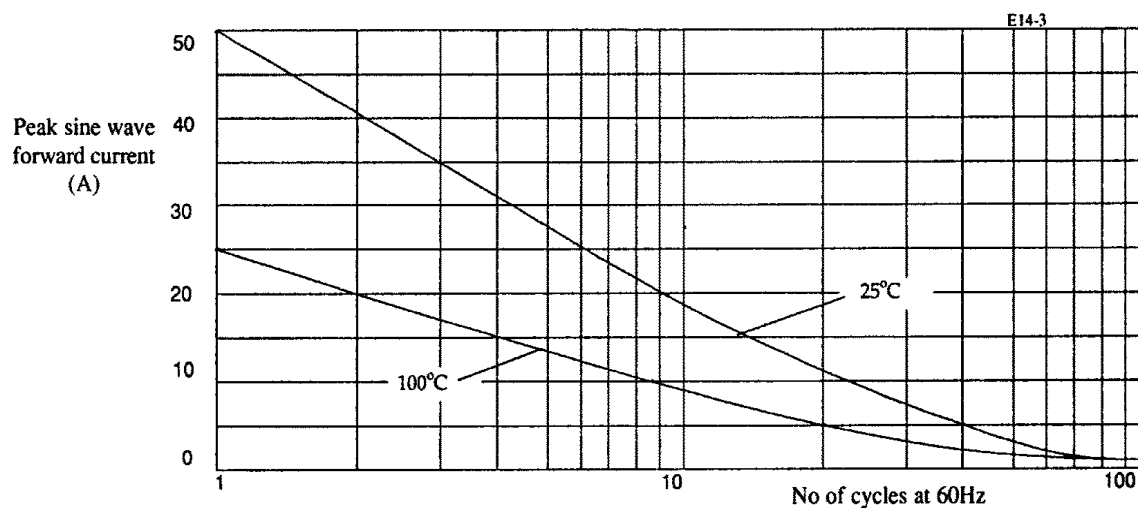


Figure 4. Non repetitive forward current surge curves.