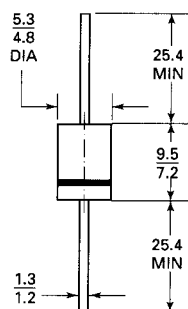


# R30A...R30M FAST SILICON RECTIFIERS

## FEATURES

- \* Low forward voltage
- \* High current capability
- \* Low leakage current
- \* High surge capability
- \* Low cost

DO - 201AD



## VOLTAGE RANGE

50 to 1000 Volts

## CURRENT

3.0 Amperes

Dimensions in mm

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.

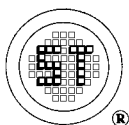
Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

	R30A	R30B	R30D	R30G	R30J	R30K	R30M	UNITS
Maximum Recurrent Peak Reverse Voltage	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current .375". 9.5mm Lead Length at T <sub>A</sub> = 60 °C	3.0							A
Peak Forward Surge Current 8.3 ms single half sine-wave	150							A
Maximum Forward Voltage at 3.0A Peak	1.3							V
Maximum Full Load Reverse Current, Full Cycle Average. .375", (9.5mm) Lead Length at T <sub>A</sub> = 55 °C	50							μA
Maximum DC Reverse Current, at Rated DC Blocking Voltage	5							μA
Maximum Reverse Recovery Time (Note 1)	150	150	150	150	250	500	500	ns
Typical Junction Capacitance (Note 2)	65							pF
Operating and Storage Temperature Range	-65 to + 175							°C

### NOTES:

1. Reverse Recovery Test Conditions: I<sub>F</sub> = .5A, I<sub>R</sub> = 1.0A, I<sub>r</sub> = .25A
2. Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts

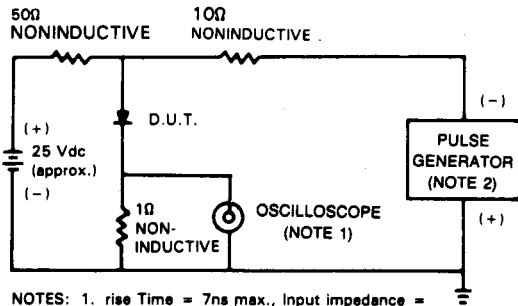


**SEMTECH ELECTRONICS LTD.**  
( wholly owned subsidiary of HONEY TECHNOLOGY LTD. )



# R30A...R30M FAST SILICON RECTIFIERS

Fig. 1—REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM



NOTES: 1. rise Time = 7ns max., Input impedance = 1 megohm, 22pF  
2. Rise Time = 10ns max., Source Impedance = 50 ohms.

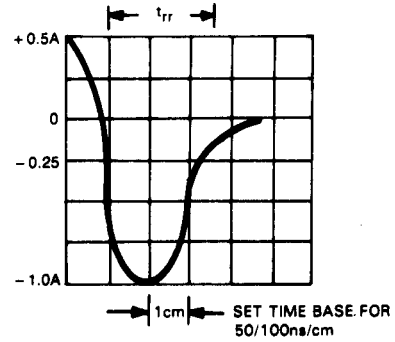


Fig. 2—FORWARD CURRENT DERATING CURVE

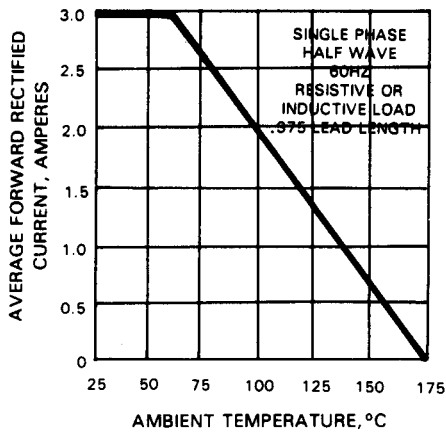
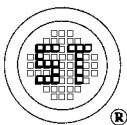
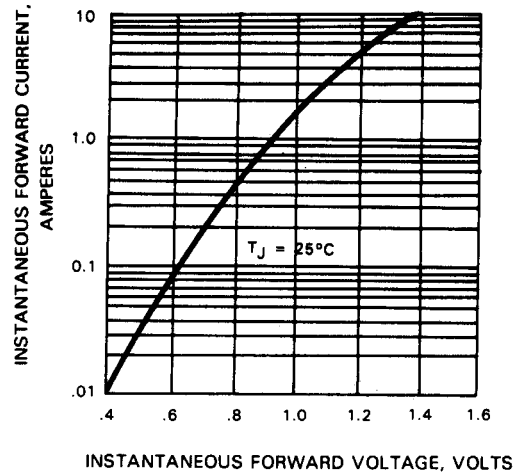


Fig. 3—TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



**SEMTECH ELECTRONICS LTD.**  
( wholly owned subsidiary of HONEY TECHNOLOGY LTD. )



# R30A...R30M FAST SILICON RECTIFIERS

Fig. 4—TYPICAL JUNCTION CAPACITANCE

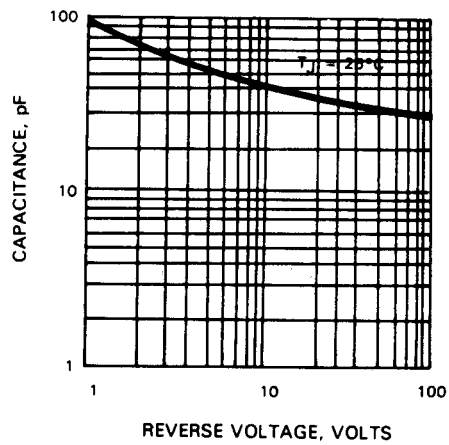
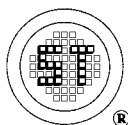
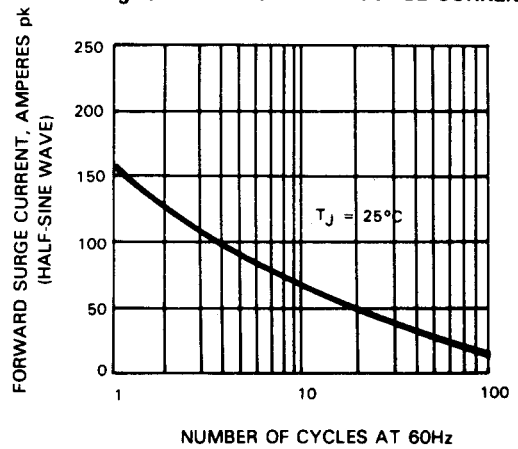


Fig. 5—PEAK FORWARD SURGE CURRENT



**SEMTECH ELECTRONICS LTD.**  
( wholly owned subsidiary of HONEY TECHNOLOGY LTD. )

