

1N4001S THRU 1N4007S

PLASTIC SILICON RECTIFIERS

Reverse Voltage – 50 to 1000 V

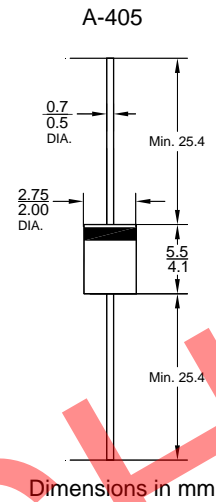
Forward Current – 1 A

Features

- Low forward voltage drop
- Low cost
- Low leakage
- High current capability

Mechanical Data

- **Case:** A-405, Molded plastic.
- **Terminals:** Axial leads, solderable per MIL-STD -202, method 208 guaranteed
- **Polarity:** Color band denotes cathode
- **Mounting Position:** Any



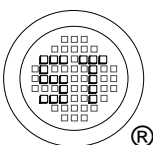
Absolute Maximum Ratings and Characteristics

Rating 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%.

Parameter	Symbols	1N4001S	1N4002S	1N4003S	1N4004S	1N4005S	1N4006S	1N4007S	Units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current 0.375" (9.5 mm) lead lengths at $T_A = 75^\circ\text{C}$	$I_{F(AV)}$	1							A
Peak Forward Surge Current 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC Method)	I_{FSM}	30							A
Maximum Forward Voltage at 1 A	V_F	1.1							V
Maximum DC Reverse Current at $T_A = 25^\circ\text{C}$ at Rated DC Blocking Voltage at $T_A = 100^\circ\text{C}$	I_R	5							μA
Typical Junction Capacitance ¹⁾	C_J	15							pF
Typical Thermal Resistance ²⁾	$R_{\theta JA}$	50							$^\circ\text{C/W}$
Operating and Storage Temperature Range	T_J, T_{Stg}	- 55 to + 150							$^\circ\text{C}$

¹⁾ Measured at 1 MHz and applied reverse voltage of 4V D.C.

²⁾ Thermal resistance from junction to ambient at 0.375" (9.5 mm) lead length.



SEMTECH ELECTRONICS LTD.
Subsidiary of Sino-Tech International (BVI) Limited



Dated : 17/01/2008 B

1N4001S THRU 1N4007S

FIG.1 – TYPICAL FORWARD CHARACTERISTIC

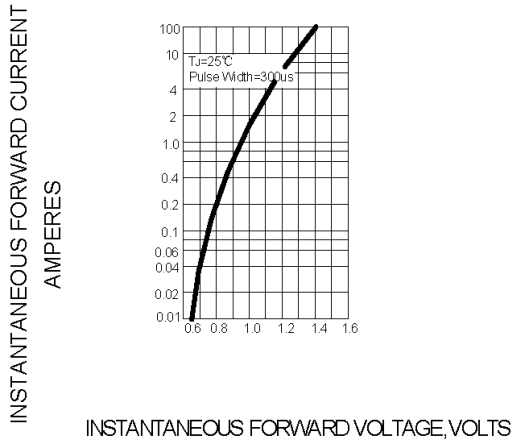


FIG.2 – TYPICAL JUNCTION CAPACITANCE

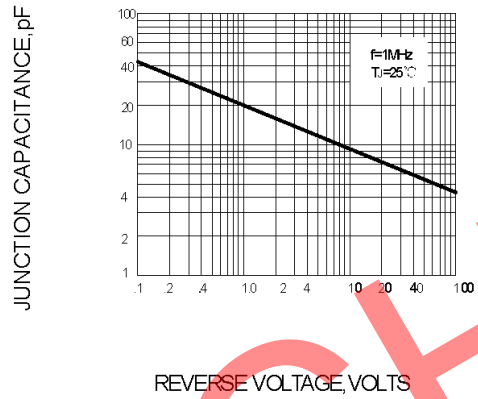


FIG.3 – PEAK FORWARD SURGE CURRENT

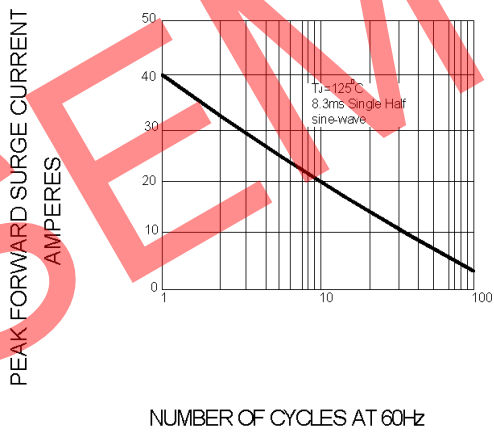
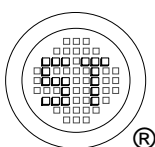
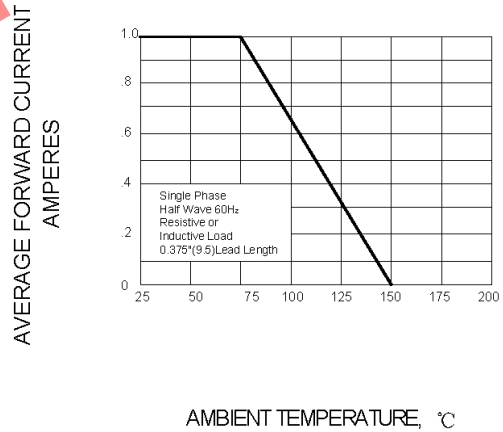


FIG.4 – FORWARD DERATING CURVE



SEMTECH ELECTRONICS LTD.
Subsidiary of Sino-Tech International (BVI) Limited



Dated : 17/01/2008 B