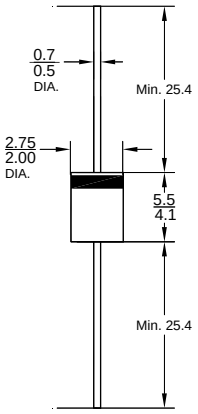
1N4001S THRU 1N4007S

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

A-405



Dimensions in mm

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 °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 °C at Rated DC Blocking Voltage at T_A = 100 °C	I_R	5 50							µA
Typical Junction Capacitance [1]	C_J	15							pF
Typical Thermal Resistance [2]	$R_{\theta JA}$	50							°C/W
Operating and Storage Temperature Range	T_J ,T_{Stg}	- 55 to + 150							°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.

FIG.1 – TYPICAL FORWARD CHARACTERISTIC

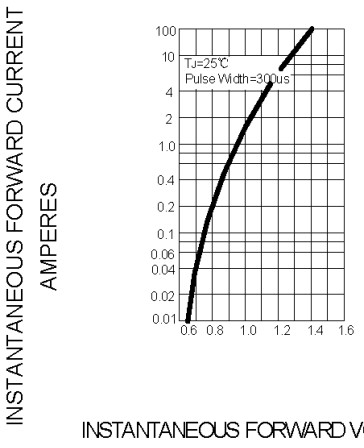


FIG.2 – TYPICAL JUNCTION CAPACITANCE

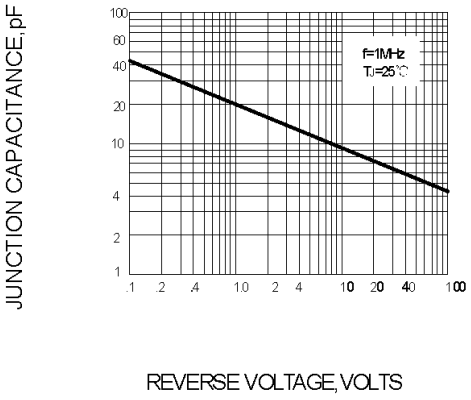


FIG.3 – PEAK FORWARD SURGE CURRENT

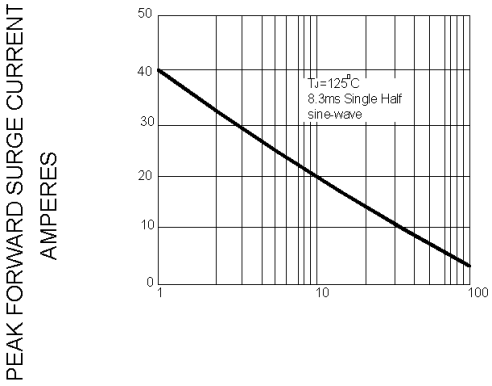


FIG.4 – FORWARD DERATING CURVE