

1N4001 THRU 1N4007

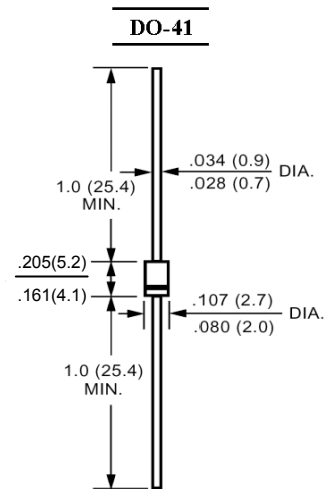
General Purpose Plastic Silicon Rectifier
Reverse Voltage – 50 to 1000 V
Forward Current – 1 A

Features

- Low forward voltage drop
- High current capability
- High surge current capability

Mechanical Data

- Case: Molded plastic, DO-41
- Epoxy: UL 94V-0 rate flame retardant
- Lead: Axial leads, solderable per MIL-STD-202 method 208 guaranteed
- Polarity: Color band denotes cathode end
- Mounting position: Any



Dimensions in inches and (millimeters)

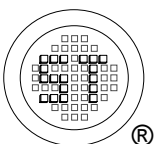
Absolute Maximum Ratings and Characteristics

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%.

Parameter	Symbols	1N4001	1N4002	1N4003	1N4004	1N4005	1N4006	1N4007	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 Length at $T_A = 75^\circ\text{C}$	$I_{(AV)}$	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 DC and 25°C	V_F	1.1							V
Maximum Full Load Reverse Current, Full Cycle Average at 75°C Ambient	$I_{R(AV)}$	30							μA
Maximum Reverse Current at Rated DC Blocking Voltage $T_A = 25^\circ\text{C}$ $T_A = 100^\circ\text{C}$	I_R	5 500							μA
Typical Junction Capacitance ¹⁾	C_J	15							pF
Typical Thermal Resistance ²⁾	$R_{\theta JA}$	50							$^\circ\text{C/W}$
Operating Junction Temperature Range	T_J	- 55 to + 150							$^\circ\text{C}$
Storage Temperature Range	T_{stg}	- 55 to + 150							$^\circ\text{C}$

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

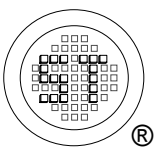
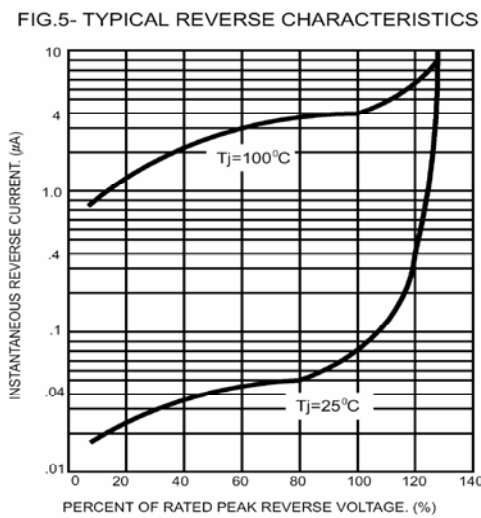
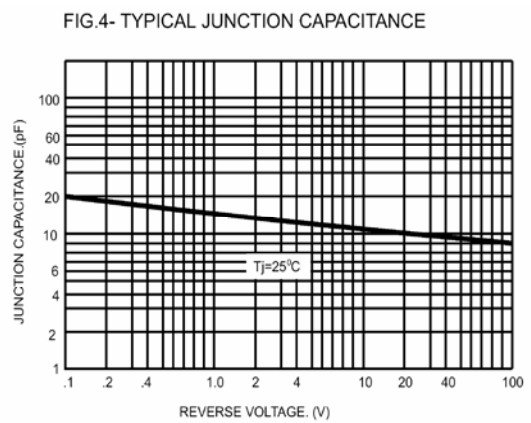
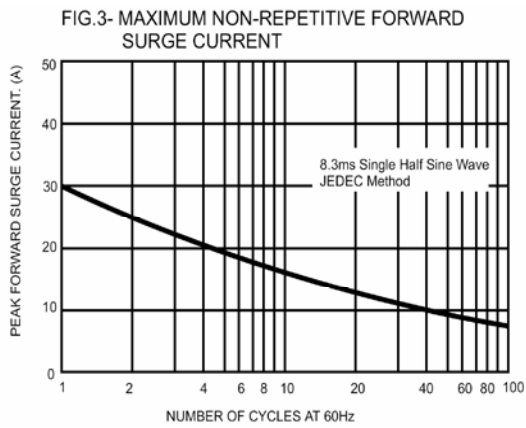
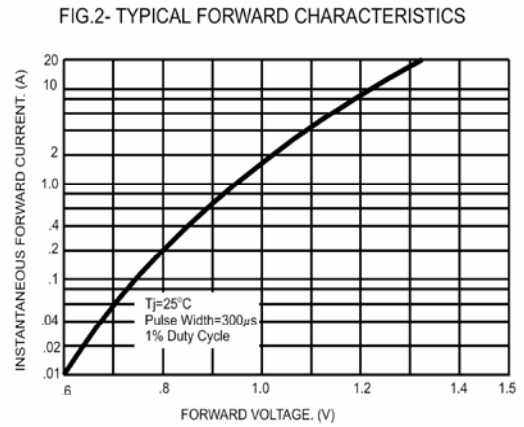
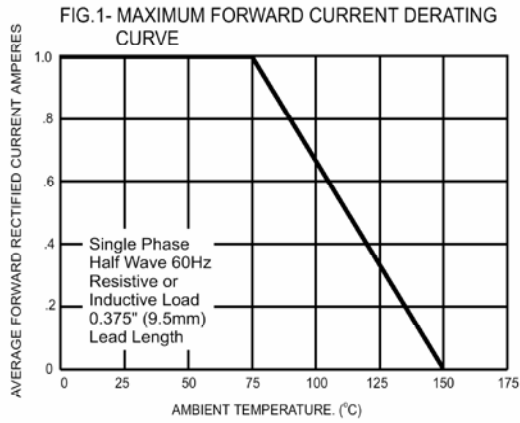
²⁾ Thermal resistance junction to ambient 0.375" (9.5 mm) lead length P.C.B mounted.



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