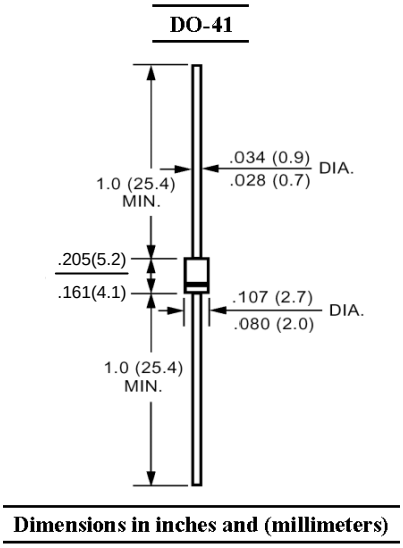
1N4001 THRU 1N4007

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

Absolute Maximum Ratings and Characteristics

Ratings at 25℃ 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℃	$I_{(AV)}$	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℃	V_F	1.1							V
Maximum Reverse Current T_A = 25℃ at Rated DC Blocking Voltage T_A = 125℃	I_R	5 50							μA
Typical Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	55							°C/W
Typical Thermal Resistance, Junction to Lead	$R_{\theta JL}$	25							°C/W
Operating Junction Temperature Range	T_J	- 55 to + 125							℃
Storage Temperature Range	T_{stg}	- 55 to + 150							℃

FIG.1: FORWARD CURRENT DERATING CURVE

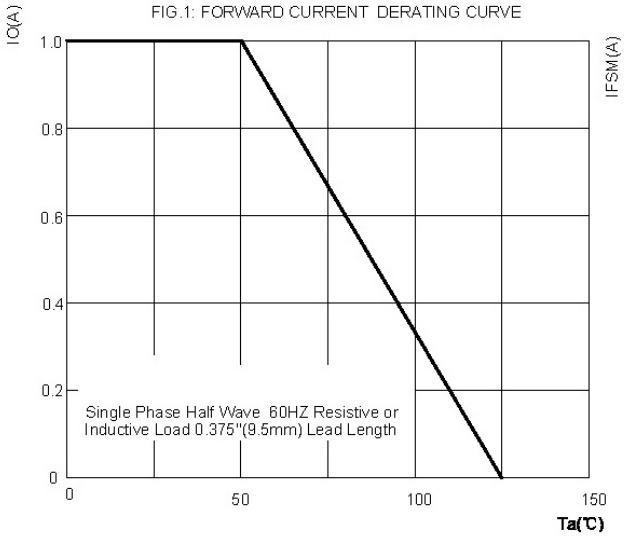


FIG.2:MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

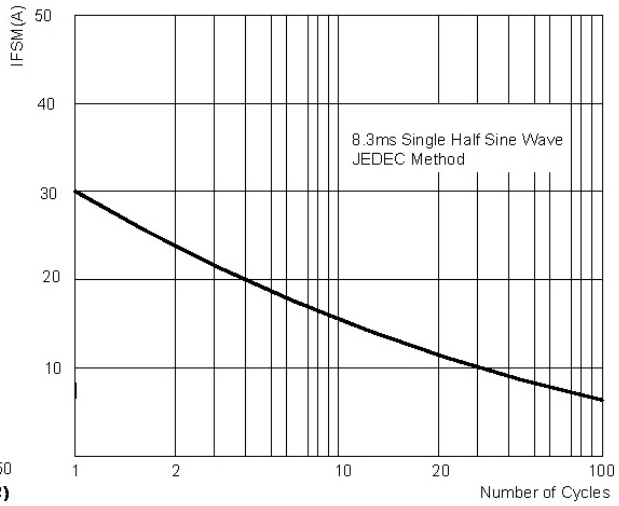


FIG.3:TYPICAL FORWARD CHARACTERISTICS

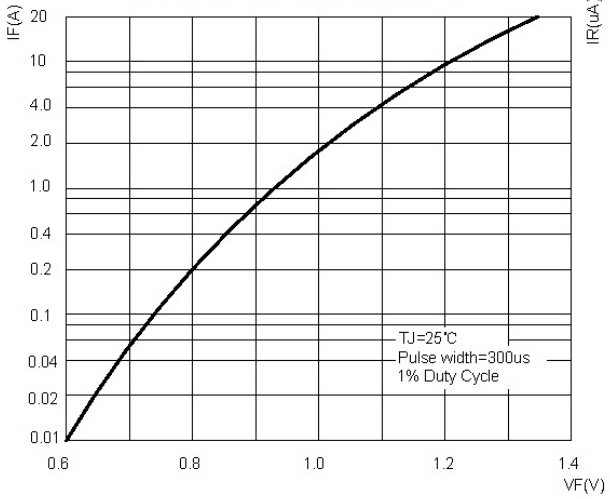


FIG.4:TYPICAL REVERSE CHARACTERISTICS