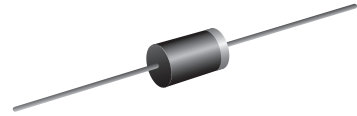


## General Purpose Plastic Rectifier in DO-41

### Features

- Low reverse leakage
- High forward surge current capability



### Mechanical Data

- **Case:** JEDEC DO-41 molded plastic Lead free; RoHS compliant
- **Molding Compound Flammability Rating:** UL 94 V-0
- **Terminals:** High temperature soldering guaranteed: 260 °C/10 sec. at terminals

### Absolute Maximum Ratings

Ratings at 25 °C, ambient temperature unless otherwise specified

PARAMETER	SYMBOL	1N4001	1N4002	1N4003	1N4004	1N4005	1N4006	1N4007	UNIT
Maximum repetitive 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 $T_A = 55\text{ °C}$	$I_{F(AV)}$	1.0							A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	$I_{FSM}$	30							A
Operating junction and storage temperature range	$T_J, T_{STG}$	- 55 to + 150							°C

### Electrical Characteristics

( $T_A = 25\text{ °C}$  unless otherwise specified)

PARAMETER	TEST CONDITIONS	SYMBOL	1N4001	1N4002	1N4003	1N4004	1N4005	1N4006	1N4007	UNIT
Maximum instantaneous forward voltage	1.0 A	$V_F^{(1)}$	1.1							V
Maximum DC reverse current at rated DC blocking voltage	$T_A = 25\text{ °C}$	$I_R$	5							$\mu\text{A}$
	$T_A = 100\text{ °C}$		50							
Maximum reverse recovery time	$I_{FM} = 20\text{ mA}$ , $I_{RM} = 1\text{ mA}$	$t_{rr}$	1.0							us
Typical junction capacitance	4.0 V, 1 MHz	$C_J$	15							pF

#### Note

(1) Pulse test: 300  $\mu\text{s}$  pulse width, 1 % duty cycle

**Typical Characteristics** ( $T_{amb} = 25\text{ }^{\circ}\text{C}$  unless otherwise specified)

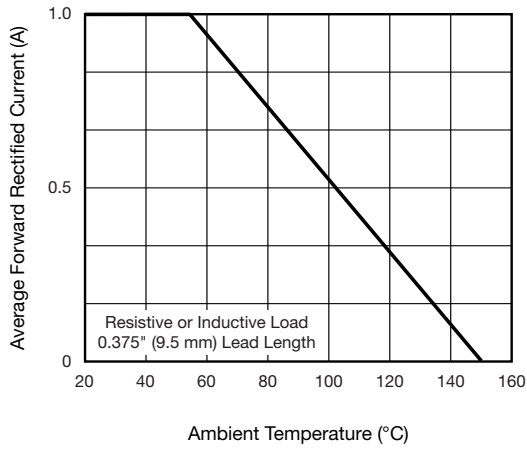


Fig. 1 - Maximum Forward Current Derating Curve

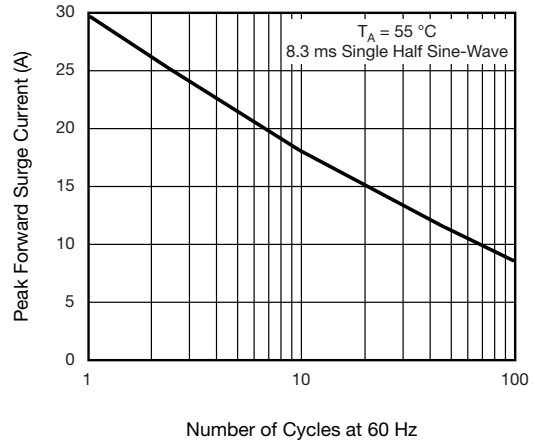


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

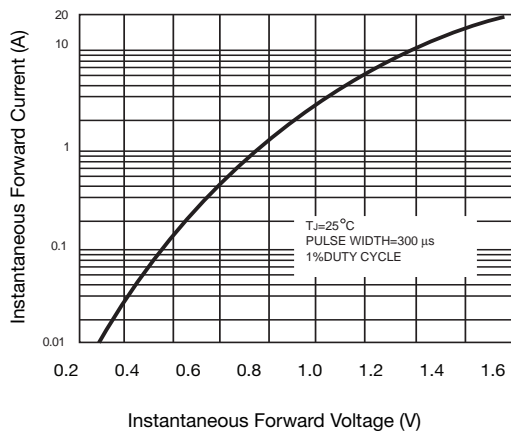


Fig. 3 - Typical Instantaneous Forward Characteristics

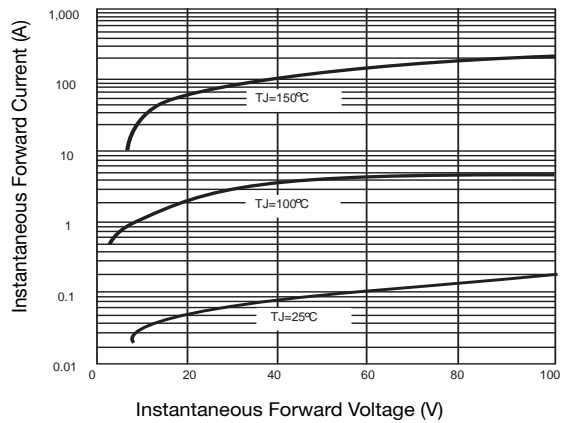


Fig. 4 - Typical Reverse Leakage Characteristics

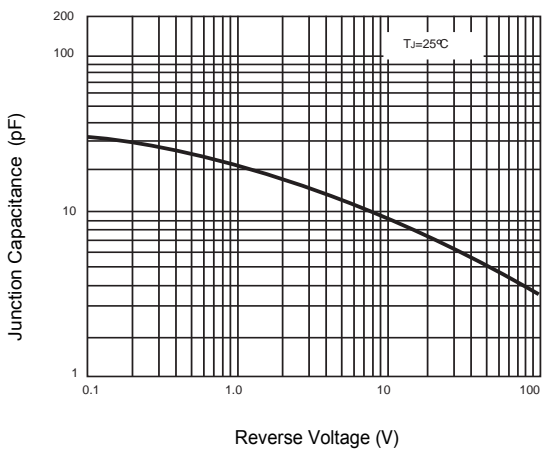


Fig. 5 - Typical Junction Capacitance

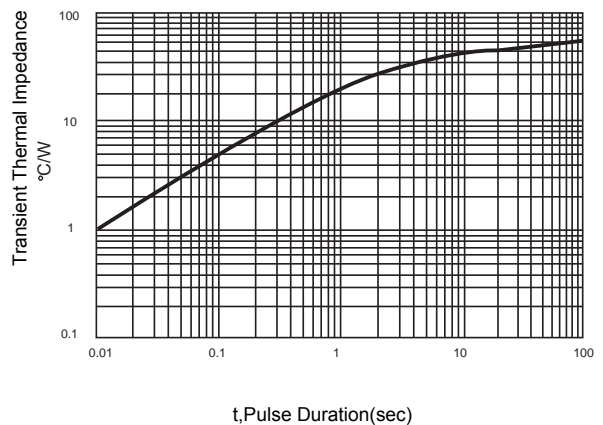
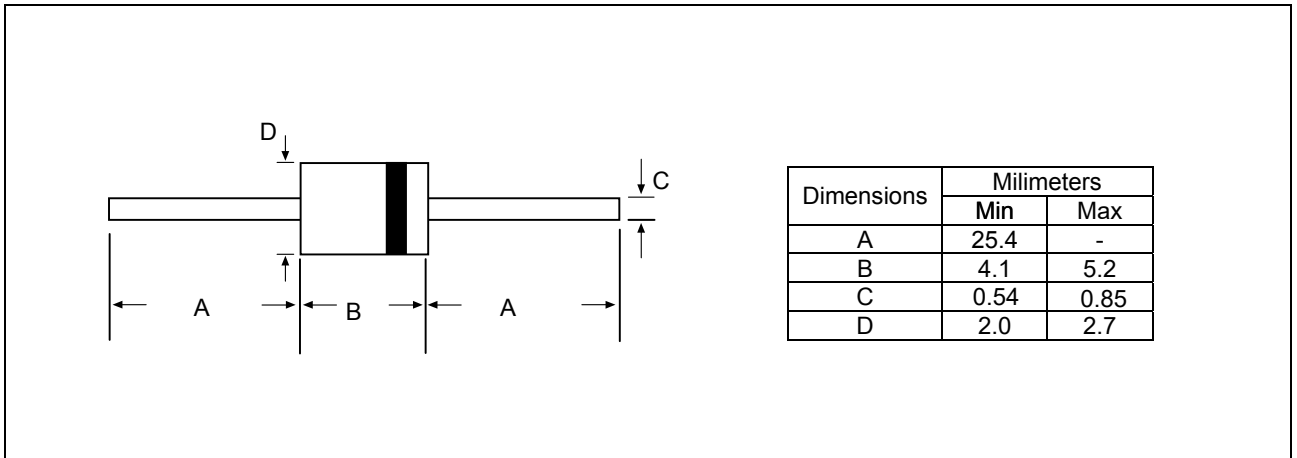


Fig. 6 - Typical Transient Thermal Impedance

**Package Dimensions**



**Ordering information**

Order code	Package	Packaging option	Base quantity	Packaging specification
1N4001 thru 1N4007	DO-41	Tape and BOX	5000pcs	EIA STD RS-481

**Revision history**

Date	Revision	Changes
23-May-2020	1.0	Initial release

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