

Descriptions

The 1N4001~1N4007 is rectifier diode , DO-41 package.

Features

- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- Open Junction chip
- Low reverse leakage
- High forward surge current capability
- High temperature soldering guaranteed 250 C/10 seconds at terminals

Applications

General purpose

Equivalent Circuit & Pinning



DO-41

Maximum Ratings And Electrical Characteristics

Parameter	SYMBOLS	1N4001	1N4002	1N4003	1N4004	1N4005X	1N4006	1N4007	UNITS
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 at $T_L=100^\circ\text{C}$	I_{AV}	1.0							A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	30.0							A
Maximum instantaneous forward voltage at 1.0A	V_F	1.10							V
Maximum DC reverse current at rated DC blocking voltage	I_R	$T_A=25^\circ\text{C}$ 10.0 $T_A=125^\circ\text{C}$ 500							μA
Typical junction capacitance (Note1)	C_J	21.0							pF
Typical thermal resistance	$R_{\theta JA}$	65.0							$^\circ\text{C/W}$
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +150							$^\circ\text{C}$

Note:

1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

Electrical Characteristic Curve

FIG. 1- DERATING CURVE OUTPUT RECTIFIED CURRENT

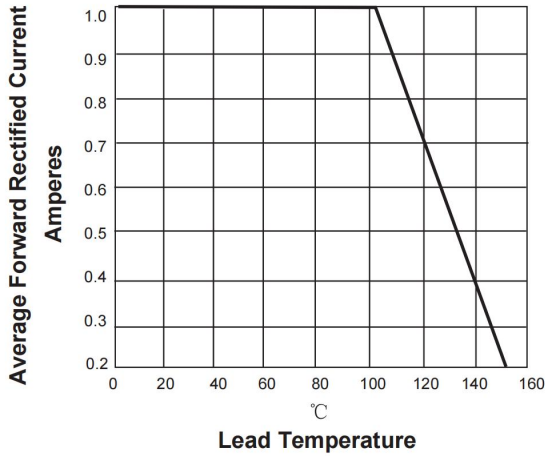


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PERLEG

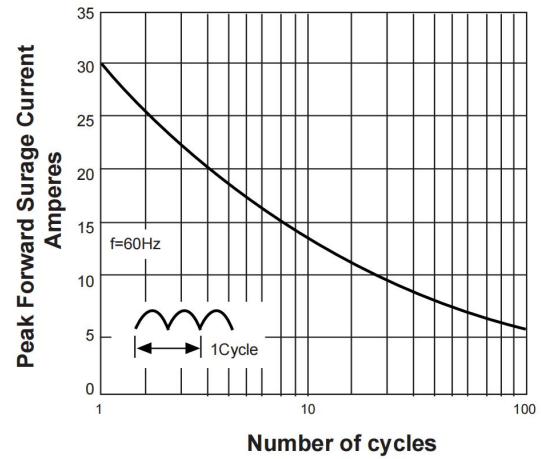


FIG. 3-TYPICAL FORWARD VOLTAGE CHARACTERISTICS

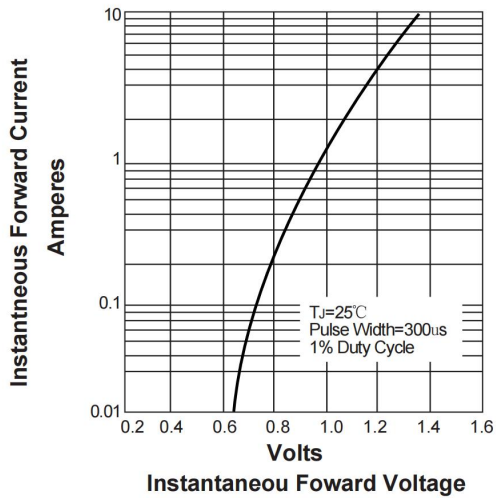
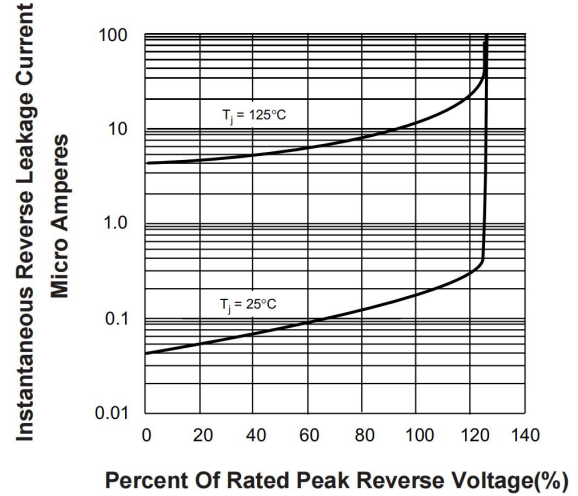
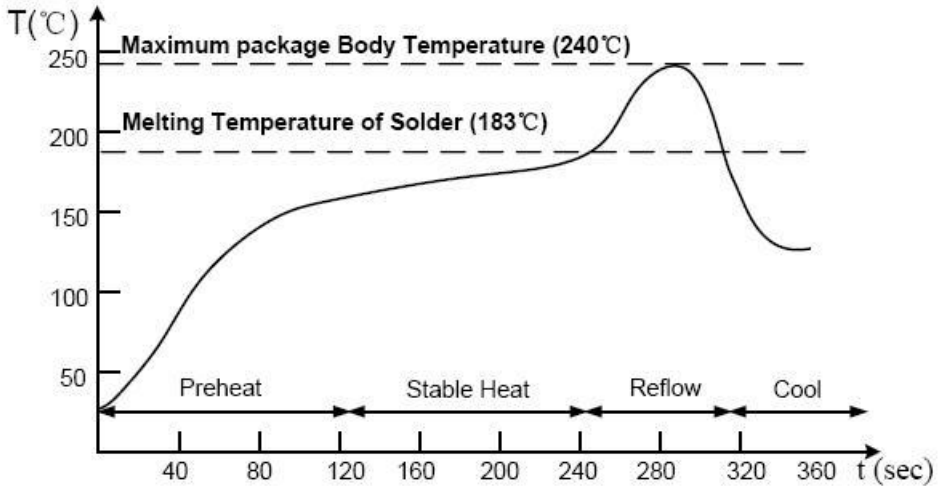


FIG. 4-TYPICAL REVERSE LEAKAGE CHARACTERISTICS



Suggested Soldering Temperature Profile**Note:**

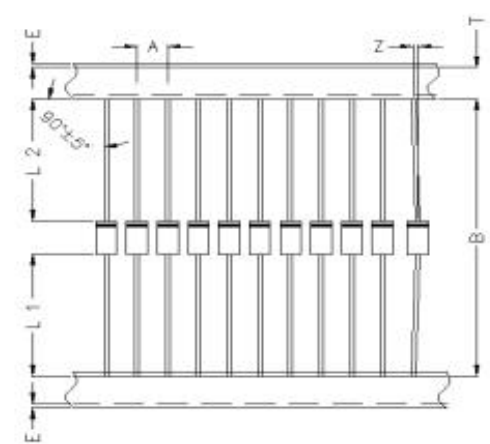
- Recommended reflow methods: IR, vapor phase oven, hot air oven, wave solder.
- The device can be exposed to a maximum temperature of 265 $^{\circ}\text{C}$ for 10 seconds.
- Devices can be cleaned using standard industry methods and solvents.
- If reflow temperatures exceed the recommended profile, devices may not meet the performance requirements.

Packaging SPEC

Package	Inner Box Size (mm)	QTY/Box (Kpcs)	Carton Size (mm)	Q'TY/Carton (Kpcs)
DO-41	255*150*75	5	420*276*312	50

Package Outline Dimensions

DO-41



Item	Symbol	Specifications(mm)
Component Pitch	A	5.0±0.5
Inner Tape Pitch	B	52.4±1.5
Component alignment	Z	1.2 Max
Tape width	T	6.0±0.5
Exposed adhesive	E	0.8 Max
Body eccentricity	L1-L2	1.0 Max