

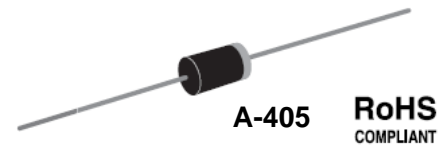


# GENERAL PURPOSE RECTIFIER 1N4001E~1N4007E

## General Purpose Rectifier

### Features

- Low reverse leakage
- High forward surge current capability
- High temperature soldering guaranteed 260°C/10 seconds  
/.0375" (9.5mm) lead length
- RoHS and REACH Compliance



### Mechanical Data

Case:	Transfer molded plastic
Epoxy:	Meets UL 94V-0 flammability rating
Terminals:	Plated axial leads, solderable per MIL-STD-202E, Method 208C
Polarity:	Color band denotes cathode end
Mounting position:	Any
Weight:	0.012 Ounce, 0. 33 gram

### Maximum Ratings ( $T_{Ambient}=25^{\circ}C$ unless noted otherwise)

Symbol	Description	1N4001E	1N4002E	1N4003E	1N4004E	1N4005E	1N4006E	1N4007E	Unit	Remark
$V_{RRM}$	Max Recurrent Peak Reverse Voltage	50	100	200	400	600	800	1000	V	
$V_{RMS}$	Max RMS Voltage	35	70	140	280	420	560	700	V	
$V_{DC}$	Max DC Blocking Voltage	50	100	200	400	600	800	1000	V	
$I_{F(AV)}$	Max Average Forward Rectified Current	1.0							A	
$I_{FSM}$	Peak Forward Surge Current	30							A	
$I_{R(AV)}$	Max Full Load Reverse Current	30							$\mu A$	
$T_J,$ $T_{STG}$	Operating and Storage Temperature	-65 to +175							$^{\circ}C$	

### Electrical Characteristics ( $T_{Ambient}=25^{\circ}C$ unless noted otherwise)

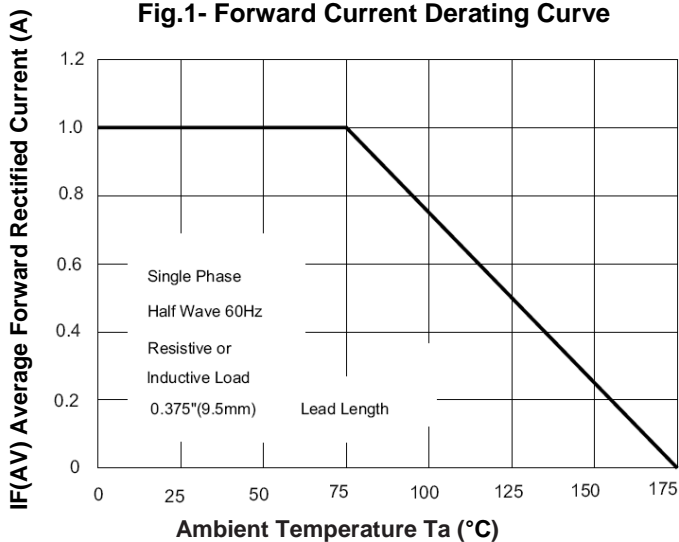
Symbol	Description	1N4001E	1N4002E	1N4003E	1N4004E	1N4005E	1N4006E	1N4007E	Unit	Conditions
$V_F$	Max Instantaneous Forward Voltage	1.1							V	$I_{F(AV)}=1.0A$
$I_R$	Max DC Reverse Current at Rated DC Blocking Voltage	5.0							$\mu A$	$T_A=25^{\circ}C$
		50								$T_A=100^{\circ}C$
$C_J$	Typical Junction Capacitance	15							pF	At 1MHz, reversed voltage of 4V
$R_{\theta-JA}$	Typical Thermal Resistance	50							$^{\circ}C/W$	Note 1

**Note:**

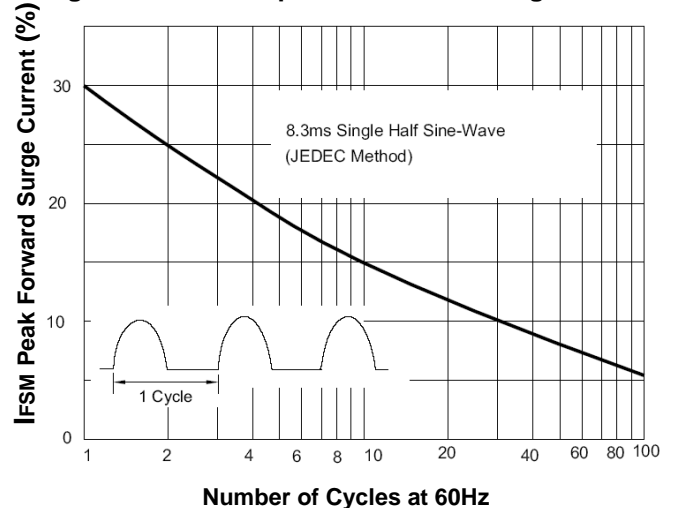
1. Thermal resistance from junction to ambient at .375" (9.5mm) lead length, PCB mounted with copper pad area of 0.2" x 0.2" (5x5mm).

### Typical Characteristics Curves

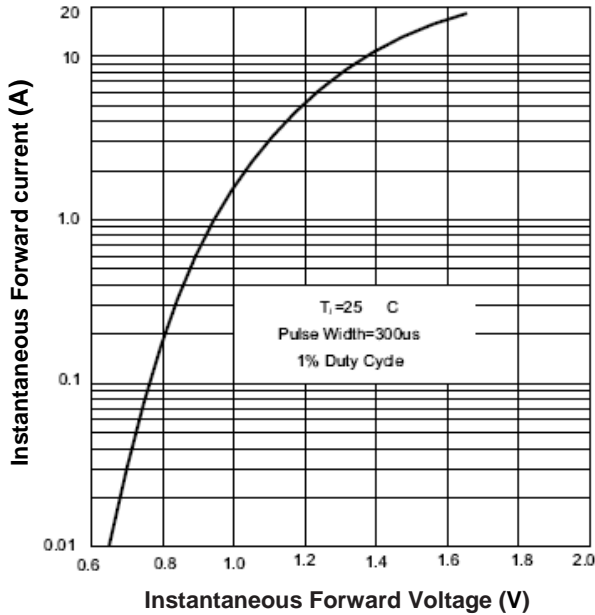
**Fig.1- Forward Current Derating Curve**



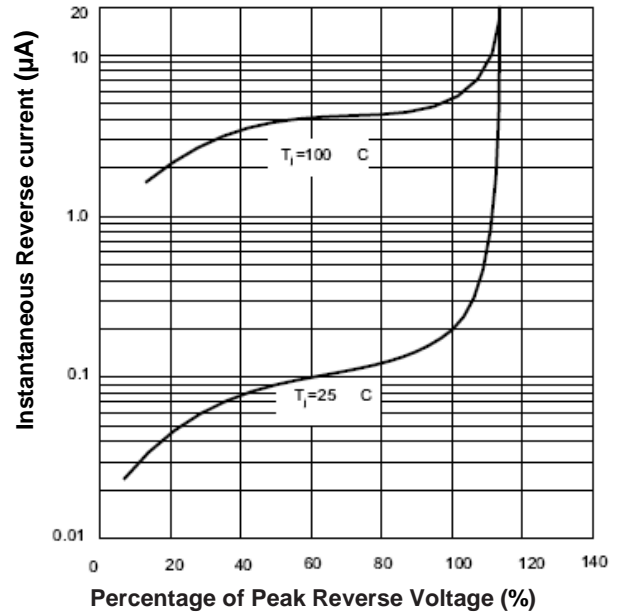
**Fig.2- Max. Non-Repetitive Forward Surge Current**



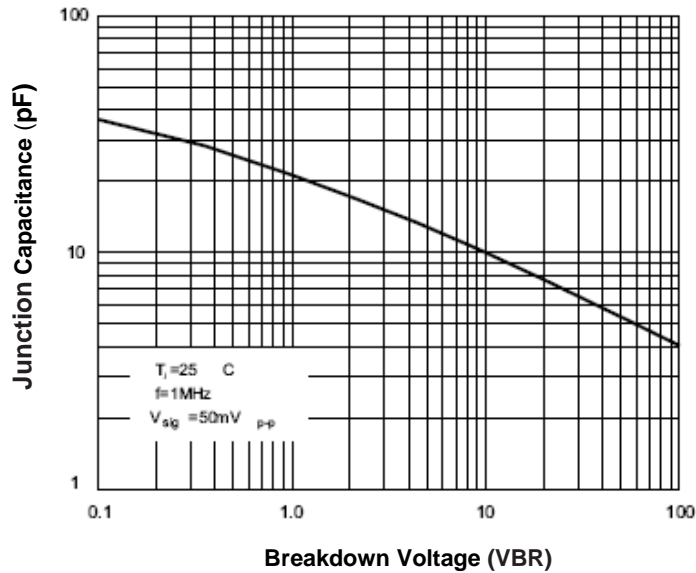
**Fig.3- Typical Instantaneous Forward Characteristics**



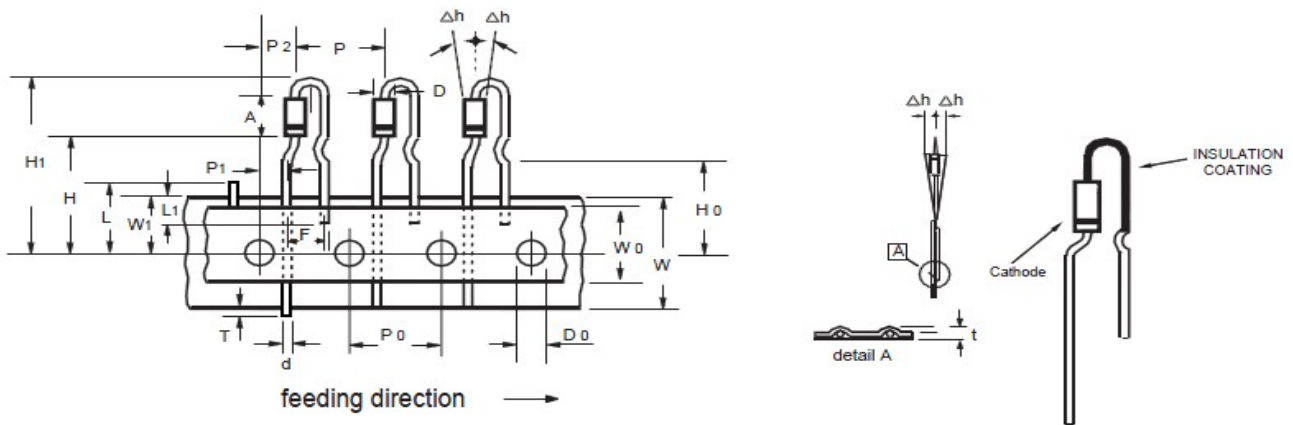
**Fig.5- Typical Reverse Characteristics**



**Fig.6- Typical Junction Capacitance**

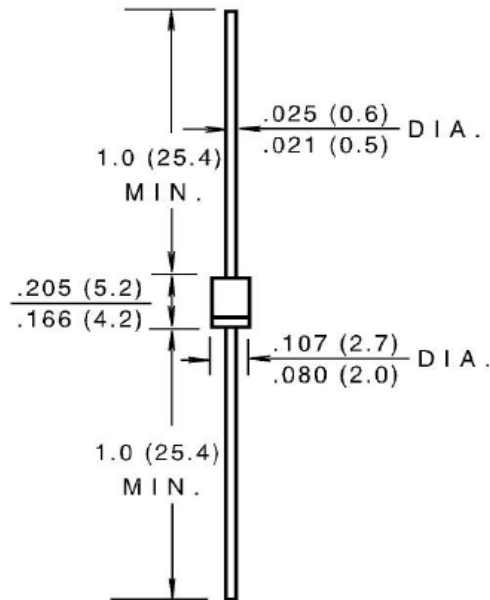


### Radial-Taping Specifications For Rectifiers-Panasert



ITEM	SYMBOL	SPECIFICATIONS(mm)	SPECIFICATIONS(inch)
Body diameter	D	2.7 Max.	0.107 Max.
Body height	A	5.2± 0.5	0.205± 0.020
Lead-wire diameter	d	0.6± 0.1	0.024± 0.004
Component pitch	P	12.7± 1.0	0.500± 0.040
Feed hole pitch	P <sub>0</sub>	12.7± 0.3	0.500± 0.012
Component lead spacing	F	5.0+0.4/-0.1	0.197+0.016/-0.004
Deflection	Δh	0.0± 1.0	0.000± 0.040
Tape width	W	18.0± 0.5	0.790± 0.020
Hold-down tape width	W <sub>0</sub>	12.5 Min.	0.492 Min.
Hole position	W <sub>1</sub>	9.0+0.75/-0.50	0.354+0.030/-0.020
Length from seating plane	H	19.5± 1.0	0.768± 0.040
Component height	H <sub>1</sub>	32.25 Max.	1.27 Max.
Feed hole diameter	D <sub>0</sub>	4.0± 0.2	0.157± 0.008
Total tape thickness	t	1.5 Max.	0.059 Max.
Cut out length	L	11.0 Max.	0.433 Max.
Lead-wire (taped portion)	L <sub>1</sub>	2.5 Min.	0.098 Min.
Lead protrusion	T	0.8 Max.	0.031 Max.
Lead-wire clinch height	H <sub>0</sub>	16.0± 0.5	0.630± 0.020
Feedhole center to lead	P <sub>1</sub>	3.85± 0.7	0.125± 0.028
Center of seating plane location	P <sub>2</sub>	6.35± 1.0	0.250± 0.040
STANDARD PACKAGING/(EA), T/R	-	2.5K / REEL	
STANDARD PACKAGING/(EA)	-	2K / AMMO BOX,	

Dimensions in inch (mm)

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