

# 1N4007

## FEATURES

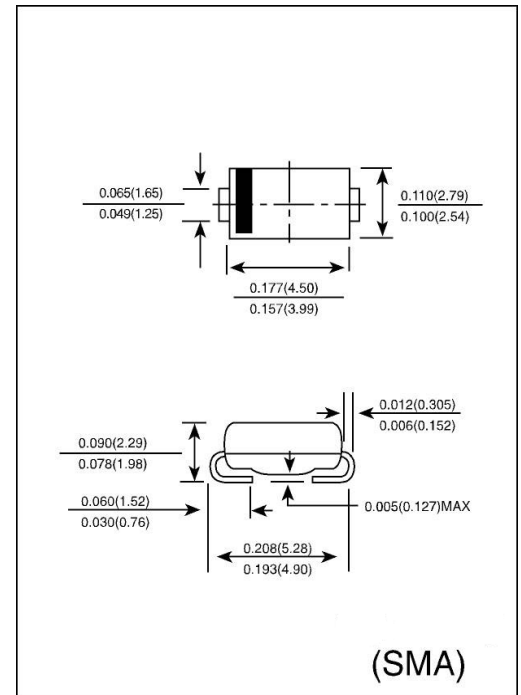
- Glass passivated chip junction
- Ideal for surface mounted applications
- Low leakage
- High forward surge current capability.
- High temperature soldering guaranteed:  
260°C/10 seconds at terminals.

## MECHANICAL DATA

- Case: Transfer molded plastic
- Epoxy: UL94V - 0 rate flame retardant.
- Polarity: Color band denotes cathode end
- Lead: Plated terminals solderable per MIL - STD - 202E  
method 208C
- Weight: 0.002 ounce, 0.057 gram

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

- Ratings at 25°C ambient temperature unless otherwise specified
- Single phase, half wave, 60Hz, resistive or inductive load.
- For capacitive load derate current by 20%



CatalogNumber	SYMBOLS	1N4007	UNITS
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	1000	Volts
Maximum RMS Voltage	$V_{RMS}$	700	Volts
Maximum DC Blocking Voltage	$V_{DC}$	1000	Volts
Maximum Average Forward Rectified Current, at $T_A = 75^\circ\text{C}$	$I_{(AV)}$	1.0	Amp
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	30	Amps
Maximum Instantaneous Forward Voltage Drop at 1.0A	$V_F$	1.1	Volts
Maximum DC Reverse Current at rated DC blocking voltage	$I_R$	$T_C = 25^\circ\text{C}$ 5.0	$\mu\text{A}$
		$T_A = 125^\circ\text{C}$ 50	
Maximum Full Load Reverse Current, full cycle average at $T_A = 75^\circ\text{C}$	$I_{R(AV)}$	30	$\mu\text{A}$
Typical Junction Capacitance (Note 1)	$C_J$	15	pF
Typical Thermal Resistane (Note 2)	$R_{\theta JA}$	75	$^\circ\text{C}/\text{w}$
Operating and Storage Temperature Range	$T_J, T_{STG}$	(-65 to +175)	$^\circ\text{C}$

## NOTES:

1. Measured at 1.0 MHz and applied average voltage of 4.0 volts.
2. 6.0 X 6.0mm<sup>2</sup> copper pads to each terminal.

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FIG.1-TYPICAL FORWARD CURRENT  
DERATING CURVE

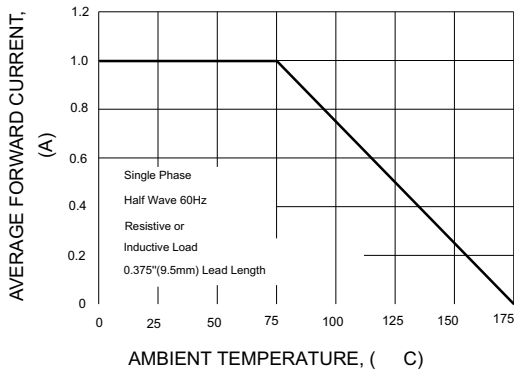


FIG.2-MAXIMUM NON-REPETITIVE PEAK  
FORWARD SURGE CURRENT

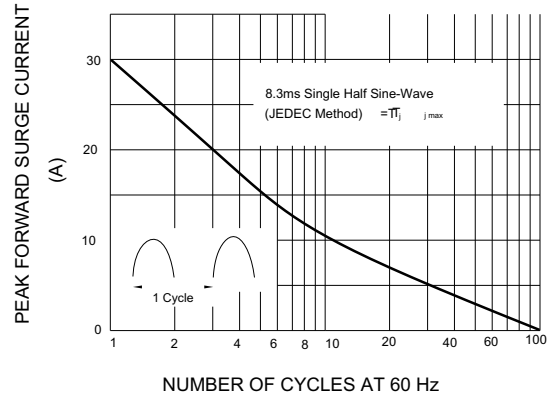


FIG.3-TYPICAL INSTANTANEOUS  
FORWARD CHARACTERISTICS

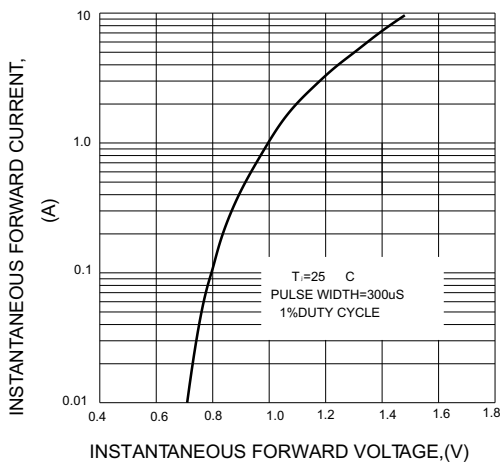


FIG.4-TYPICAL REVERSE  
CHARACTERISTICS

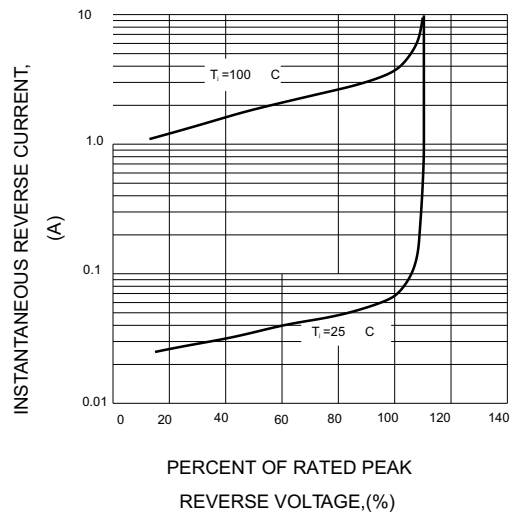


FIG.5-TYPICAL JUNCTION CAPACITANCE

