

1N4007

AXIAL SILASTIC GUARD JUNCTION STANDARD RECTIFIER

1.0 Amp 1000V

Features

- Low cost construction
- Low forward voltage drop
- Low reverse leakage
- High forward surge current capability
- High temperature soldering guaranteed: 260°C/10 seconds/.375”(9.5mm)lead length at 5 lbs(2.3kg) tension
- RoHS compliant package

Mechanical Data

- Case: Transfer molded plastic
- Epoxy: UL94V-O rate flame retardant
- Polarity: Color band denotes cathode end
- Lead: Plated axial lead, solderable per MIL-STD-202E method 208C
- Mounting position: Any
- Weight: 0.012 ounce, 0.33 grams

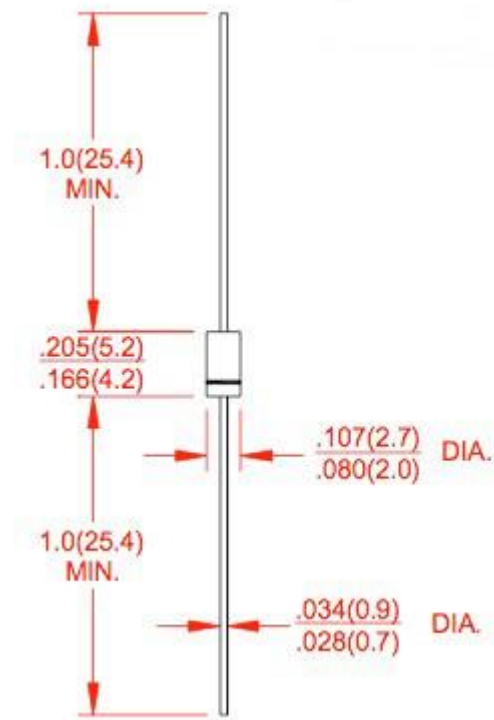
Package type : DO-41

Packaging & Order Information

5,000/T



**RoHS
COMPLIANT**



Graphic symbol



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Maximum Ratings

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%

Parameter	Symbol	1N4007	Unit
Maximum repetitive peak reverse voltage	VRRM	1000	V
RMS Voltage (Max.)	VRMS	700	V
Working peak reverse voltage	VRWM	1000	V
Maximum average forward rectified current	IF(AV)	1	A
Operating junction temperature range	TJ	-55 to +150	°C

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Maximum Ratings

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Parameter	Symbol	1N4007	Unit
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	IFSM	30	A
Storage temperature range	TSTG	-55 to +150	°C

Electrical characteristics (Tc=25°C unless otherwise noted)

Parameter	Symbol	Value		Unit
		Typical	Max	
Instantaneous forward voltage at IF=1A, Tj=25°C	VF	0.98	1.1	V
Maximum reverse current per leg Tj=25°C	IR	5		u'A
at working peak reverse voltage Tj=100°C		50		u'A

Thermal characteristics (Tc=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Typical thermal resistance	Symbol	1N4007	°C/W
	RθJA	50	

Notes :

- (1) Pulse test: 300 μs pulse width, 1 % duty cycle
- (2) Pulse test: Pulse width ≤ 40 ms

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■ Ratings and Characteristic Curves

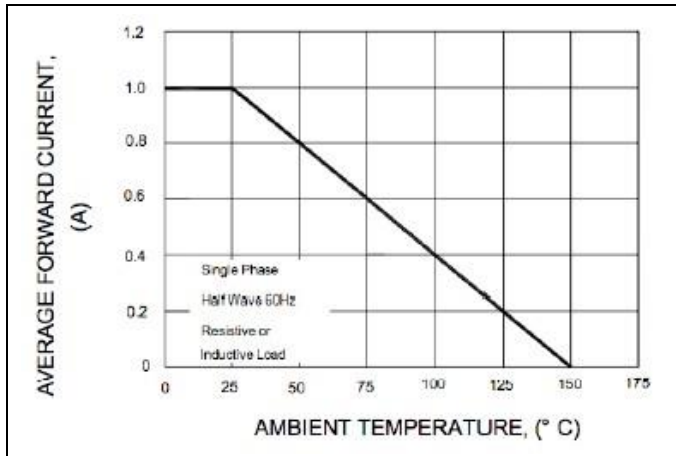


FIG.1- TYPICAL FORWARD CURRENT DERATING CURVE

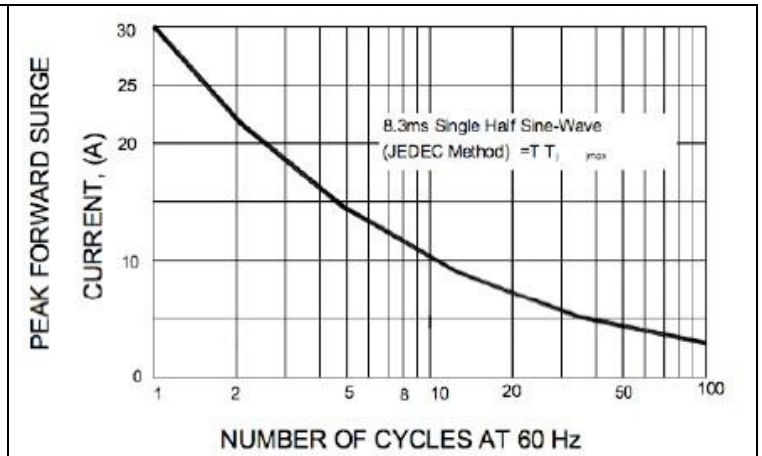


FIG.2- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

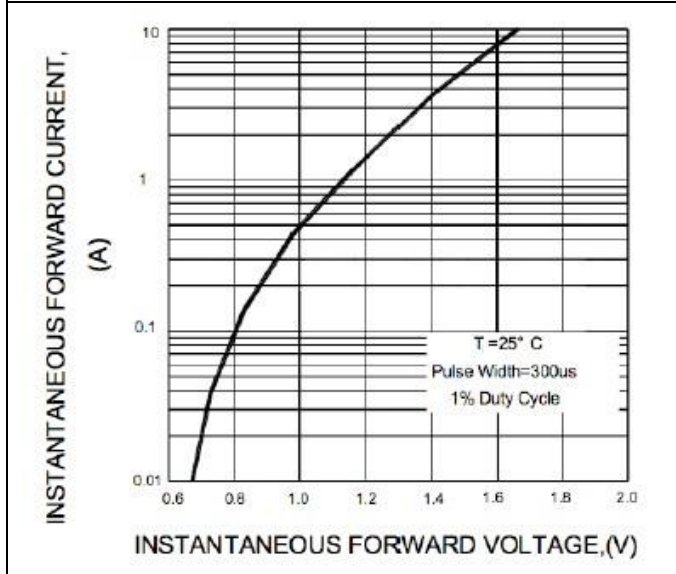


FIG.3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

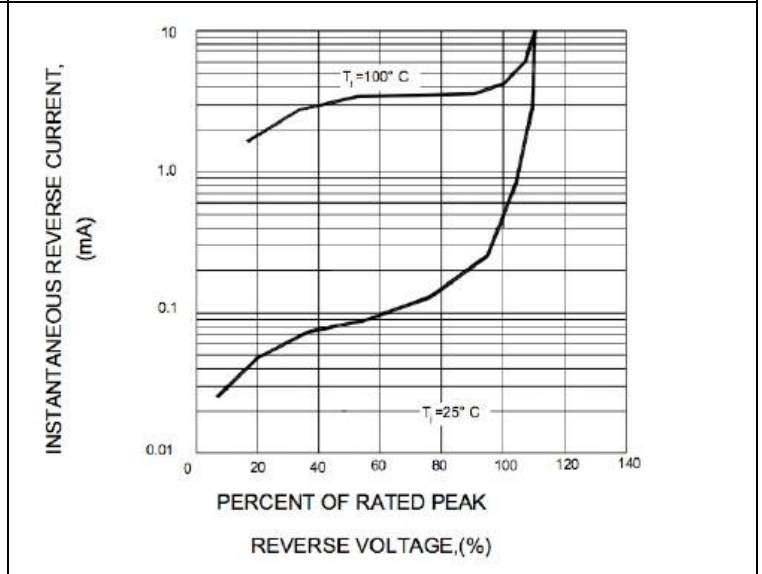


FIG.4- TYPICAL REVERSE CHARACTERISTICS

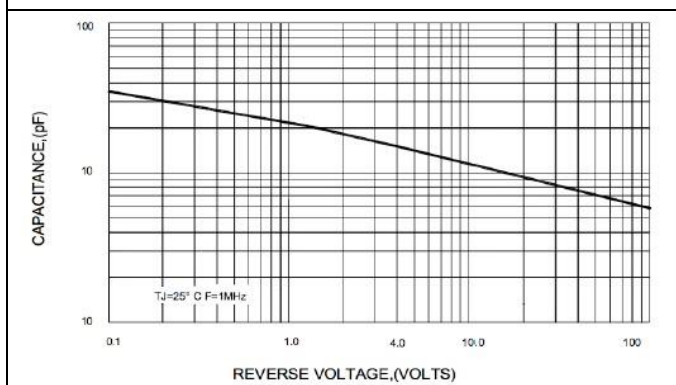


FIG.5- TYPICAL JUNCTION CHARACTERISTICS

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