



DC COMPONENTS CO., LTD.

RECTIFIER SPECIALISTS

1N4001A
THRU
1N4007A

TECHNICAL SPECIFICATIONS OF GENERAL PURPOSE SILICON RECTIFIER

VOLTAGE RANGE - 50 to 1000 Volts

CURRENT - 1.0 Ampere

FEATURES

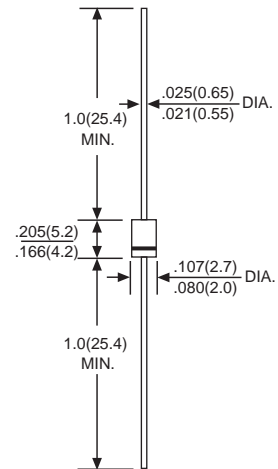
- * High reliability
- * Low cost
- * Low leakage
- * Low forward voltage drop
- * High current capability

MECHANICAL DATA

- * Case: Molded plastic
- * Epoxy: UL 94V-0 rated flame retardant
- * Lead: MIL-STD-202E, Method 208 guaranteed
- * Polarity: Color band denotes cathode end
- * Mounting position: Any
- * Weight: 0.33 gram approx.



A-405



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

	SYMBOL	1N4001A	1N4002A	1N4003A	1N4004A	1N4005A	1N4006A	1N4007A	UNITS
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage	V _{RMS}	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	V _{DC}	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Current at T _A = 55°C	I _O	1.0							Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}	30							Amps
Maximum Instantaneous Forward Voltage at 1.0A DC	V _F	1.1							Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage	I _R	@ T _A =25°C							μAmps
		@ T _A =100°C							
Maximum Full Load Reverse Current Average, Full Cycle .375"(9.5mm) lead length at T _L = 55°C		30							
Typical Junction Capacitance (Note 1)	C _J	15							pF
Typical Thermal Resistance (Note 2)	R _{θJA}	50							°C/W
Operating and Storage Temperature Range	T _J , T _{STG}	-55 to +150							°C

Note: 1. Measured at 1 MHz and applied reverse voltage of 4.0 volts.

2. Thermal resistance from junction to ambient.

RATING AND CHARACTERISTIC CURVES (1N4001A THRU 1N4007A)

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

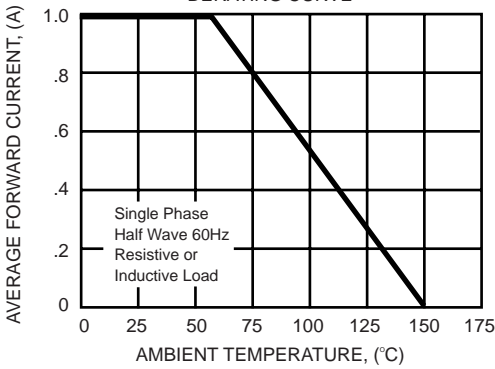


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

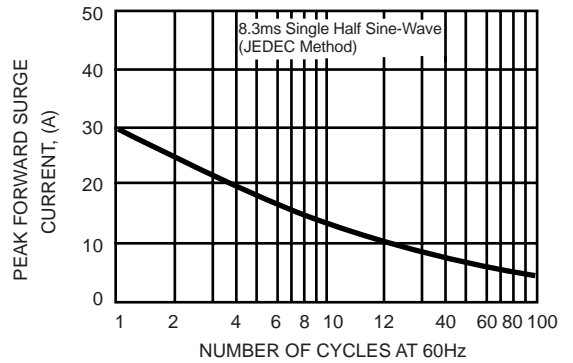


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

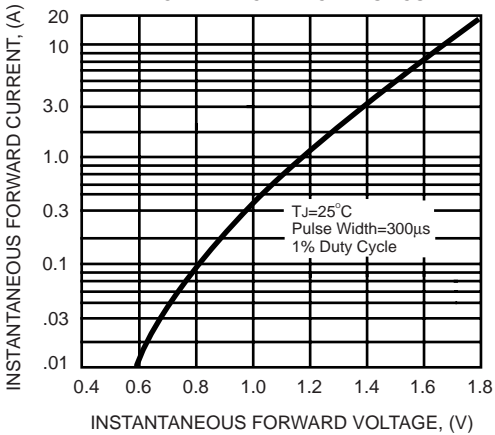


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

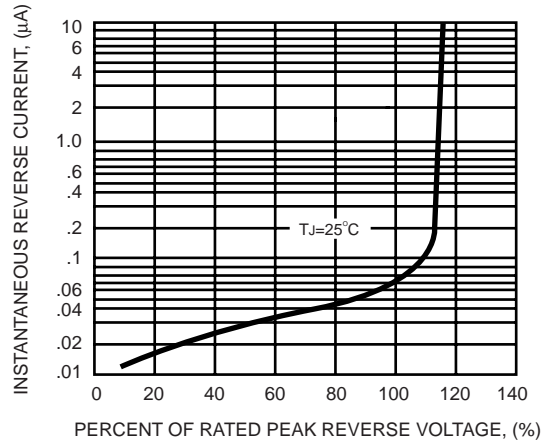
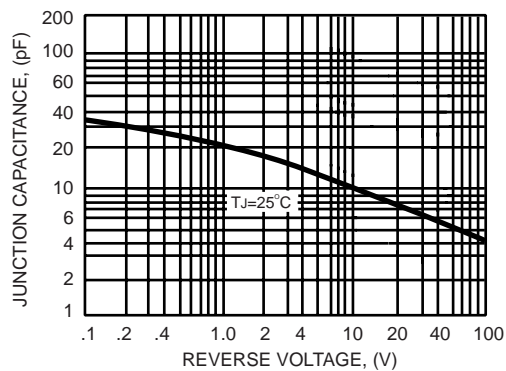


FIG. 5 - TYPICAL JUNCTION CAPACITANCE



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