



SEMICONDUCTOR

# 1N5400 THRU 1N5408

## GENERAL PURPOSE PLASTIC RECTIFIER

Reverse Voltage - 50 to 1000 Volts

Forward Current -3.0Amperes

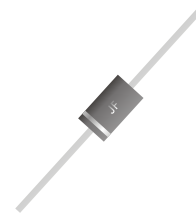
SILICON RECTIFIER

### FEATURES

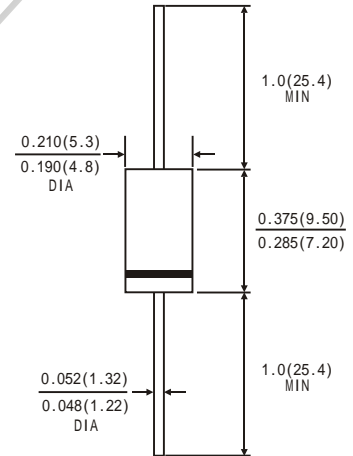
- The plastic package has Underwrites Laboratory Flammability Classification 94V-0
- Construction utilizes void-free molded plastic technique
- High surge current capability
- 3.0A operation at  $T_L=75^{\circ}\text{C}$  with no thermal runaway
- Typical  $I_R$  less than  $0.1\mu\text{A}$
- High temperature soldering guaranteed: 250 C/10 seconds,0.375"(9.5mm) lead length,5lbs.(2.3kg)tension

### MECHANICAL DATA

- Case: JEDEC DO-201AD molded plastic body
- Terminals: Lead solderable per MIL-STD-750,method 2026
- Polarity: Color band denotes cathode end
- Mounting Position: Any
- Weight: 0.042ounce, 1.19 grams



### DO-201AD



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(Ratings at  $25^{\circ}\text{C}$  ambient temperature unless otherwise specified ,Single phase ,half wave 60Hz,,resistive or inductive load. For capacitive load, derate by 20%.)

	Symbols	1N 5400	1N 5401	1N 5402	1N 5403	1N 5404	1N 5405	1N 5406	1N 5407	1N 5408	Units
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	50	100	200	300	400	500	600	800	1000	Volts
Maximum RMS Voltage	$V_{RMS}$	35	70	140	210	280	350	420	560	700	Volts
Maximum DC Blocking Voltage to $T_A=105^{\circ}\text{C}$	$V_{DC}$	50	100	200	300	400	500	600	800	1000	Volts
Maximum average Forward Rectified Current 0.5"(12.5mm)lead length at $T_L=105^{\circ}\text{C}$	$I_{(AV)}$	3.0									Amps
Peak Forward Surge Current (8.3ms half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	200.0									Amps
Maximum Instantaneous Forward Voltage at 3.0 A	$V_F$	1.1									Volts
Maximum Reverse current at rated DC Blocking Voltage	$I_R$	$T_A = 25^{\circ}\text{C}$									$\mu\text{A}$
		$T_A = 150^{\circ}\text{C}$									
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$	20.0									$^{\circ}\text{C/W}$
Typical Junction Capacitance (Note 1)	$C_J$	35.0									pF
Maximum DC Blocking Voltage temperature	$T_A$	+150.0									$^{\circ}\text{C}$
Operating and Storage temperature Range	$T_J$	-50 to+175									$^{\circ}\text{C}$
	$T_{STG}$										

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

2.Thermal resistance from junction to ambient and from junction to lead at 0.375"(9.5mm)lead length , P.C.B. mounted

# RATINGS AND CHARACTERISTIC CURVES 1N5400 THRU 1N5408

FIG.1-FORWARD CURRENT DERATING CURVE

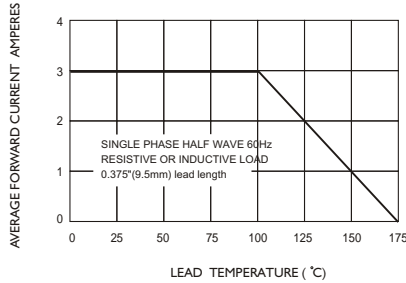


FIG.2-TYPICAL INSTANTANEOUS FORWARD VOLTAGE.(V)

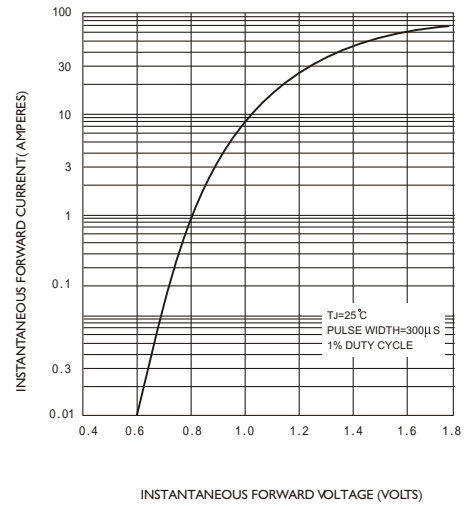


FIG.3-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

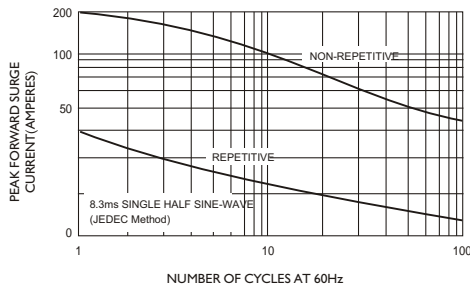


FIG.4-TYPICAL REVERSE CHARACTERISTICS

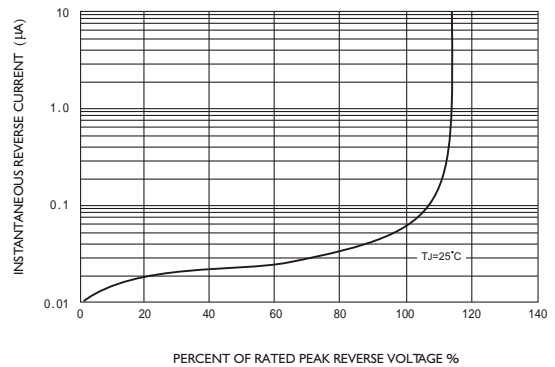


FIG.5-TYPICAL JUNCTION CAPACITANCE

