

Silicon Diode

1N5405

500V / 3A

DATASHEET

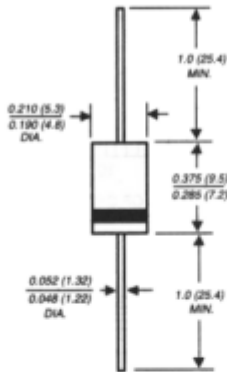
OEM – General Semiconductor

Source: General Semiconductor Databook 1998

1N5400 THRU 1N5408

GENERAL PURPOSE PLASTIC RECTIFIER
Reverse Voltage - 50 to 1000 Volts Forward Current - 3.0 Amperes

DO-201AD



Dimensions in inches and (millimeters)

FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- High surge current capability
- Construction utilizes void-free molded plastic technique
- 3.0 Ampere operation at $T_L=105^{\circ}\text{C}$ with no thermal runaway
- Typical I_R less than $0.1\mu\text{A}$
- High temperature soldering guaranteed: $250^{\circ}\text{C}/10$ seconds, $0.375"$ (9.5mm) lead length, 5 lbs. (2.3kg) tension

MECHANICAL DATA

Case: JEDEC DO-201AD molded plastic body
Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026
Polarity: Color band denotes cathode end
Mounting Position: Any
Weight: 0.04 ounce, 1.1 grams

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

	SYMBOLS	1N 5400	1N 5401	1N 5402	1N 5403	1N 5404	1N 5405	1N 5406	1N 5407	1N 5408	UNITS
*Maximum repetitive 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 $T_A=150^{\circ}\text{C}$	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 single half sine-wave superimposed on rated load (JEDEC Method) at $T_L=105^{\circ}\text{C}$	I_{FSM}	200.0									Amps
*Maximum instantaneous forward voltage at 3.0A	V_F	1.2									Volts
*Maximum DC reverse current $T_A=25^{\circ}\text{C}$ at rated DC blocking voltage $T_A=150^{\circ}\text{C}$	I_R	10.0 500.0									μA
*Maximum full load reverse current full cycle average, $0.5"$ (12.5mm) lead length at $T_L=105^{\circ}\text{C}$	$I_{R(AV)}$	500.0									μA
Typical junction capacitance (NOTE 1)	C_J	30.0									pF
*Typical thermal resistance (NOTE 2)	$R_{\theta JA}$	20.0									$^{\circ}\text{C}/\text{W}$
Maximum DC blocking voltage temperature	T_A	+150									$^{\circ}\text{C}$
*Operating junction temperature range	T_J	-50 to +170									$^{\circ}\text{C}$
*Storage temperature range	T_{STG}	-50 to +170									$^{\circ}\text{C}$

NOTES:

- (1) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts
 - (2) Thermal resistance from junction to ambient at $0.375"$ (9.5mm) lead length, P.C.B. mounted with $0.8 \times 0.8"$ (20 x 20mm) copper heatsinks
- *JEDEC registered value

RATINGS AND CHARACTERISTIC CURVES 1N5400 THRU 1N5408

