

**PLASTIC SILICON RECTIFIERS**

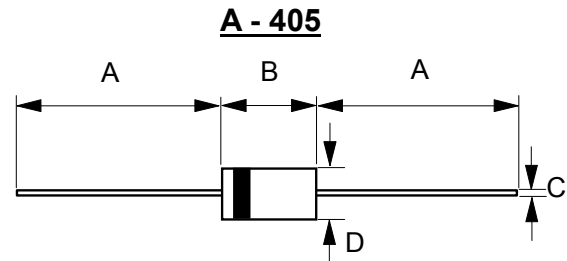
**REVERSE VOLTAGE – 50 to 1000 Volts  
FORWARD CURRENT – 1.0 Ampere**

**FEATURES**

- Low cost
- Diffused junction
- Low forward voltage drop
- Low reverse leakage current
- High current capability

**MECHANICAL DATA**

- Case: JEDEC A-405, molding compound has UL flammability classification 94V-0
- Polarity: Color band denotes cathode
- Weight: 0.008 ounces, 0.22 grams
- Mounting Position: Any



A - 405		
DIM	MIN	MAX
A	25.4	--
B	4.10	5.20
C	0.53 Ø	0.64 Ø
D	2.00 Ø	2.70 Ø
All dimension in millimeter		

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Ratings at 25°C ambient temperature unless otherwise specified.

**ABSOLUTE RATINGS**

PARAMETER	SYMBOL	1N4001L	1N4002L	1N4003L	1N4004L	1N4005L	1N4006L	1N4007L	UNIT
Maximum repetitive peak reverse voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Maximum DC blocking voltage	$V_{DC}$	50	100	200	400	600	800	1000	V
Average rectified output current per device @ $T_A=75^\circ\text{C}$	$I_{(AV)}$	1.0							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load	$I_{FSM}$	30							A
$I^2 t$ rating for fusing ( $t = 8.3\text{ms}$ )	$I^2 t$	3.7							$\text{A}^2\text{S}$
Operating temperature range	$T_J$	-55 to +125							$^\circ\text{C}$
Storage temperature range	$T_{STG}$	-55 to +150							$^\circ\text{C}$

**STATIC ELECTRICAL CHARACTERISTICS**

PARAMETER	TEST CONDITION	SYMBOL	MAX.	UNIT
Forward voltage	$I_F = 1.0\text{A}$ $T_J = 25^\circ\text{C}$	$V_F$	1.0	V
Leakage current	$V_R$ at rated $T_J = 25^\circ\text{C}$ $T_J = 100^\circ\text{C}$	$I_R$	5 50	$\mu\text{A}$
Typical junction capacitance (Note 1)		$C_J$	15	pF

**THERMAL CHARACTERISTICS**

PARAMETER	SYMBOL	TYP.	UNIT
Thermal resistance (Note 2)	$R_{thJA}$	50	$^\circ\text{C}/\text{W}$

**Note :**

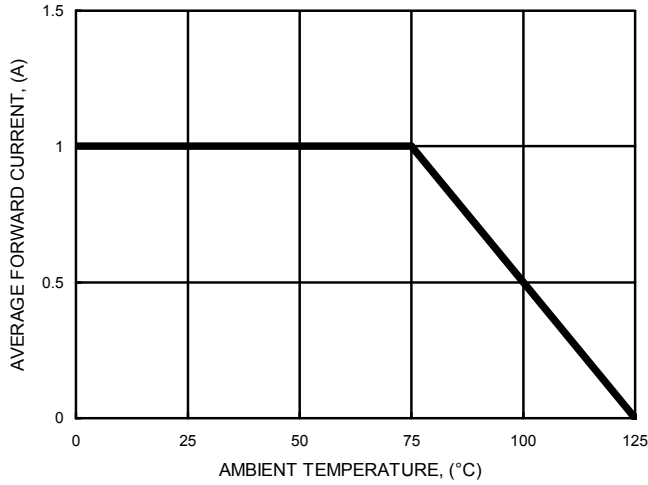
- (1) Measured at 1.0MHz and applied reverse voltage of 4.0V DC
- (2) Thermal resistance junction to ambient and case,

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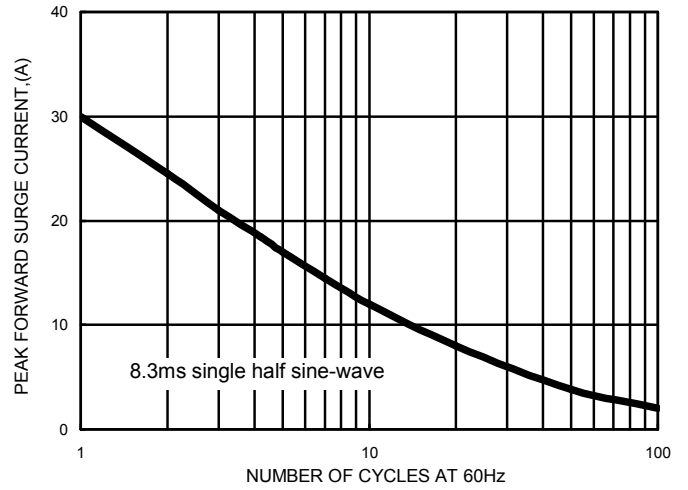
**RATING AND CHARACTERISTIC CURVES**  
**1N4001L thru 1N4007L**



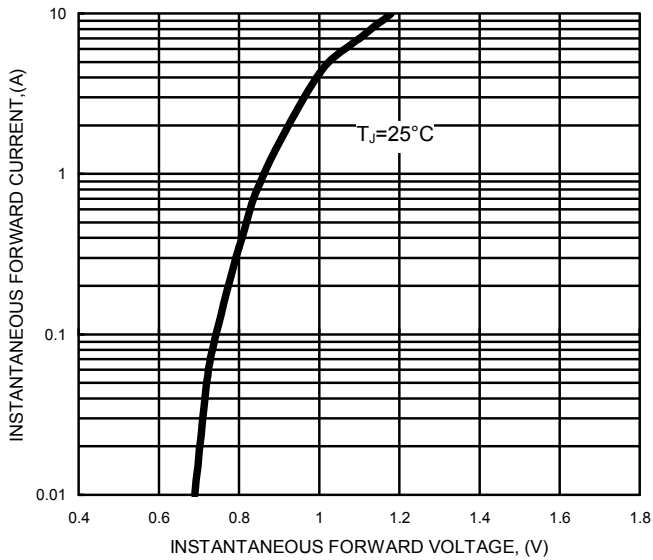
**FIG.1- FORWARD CURRENT DERATING CURVE**



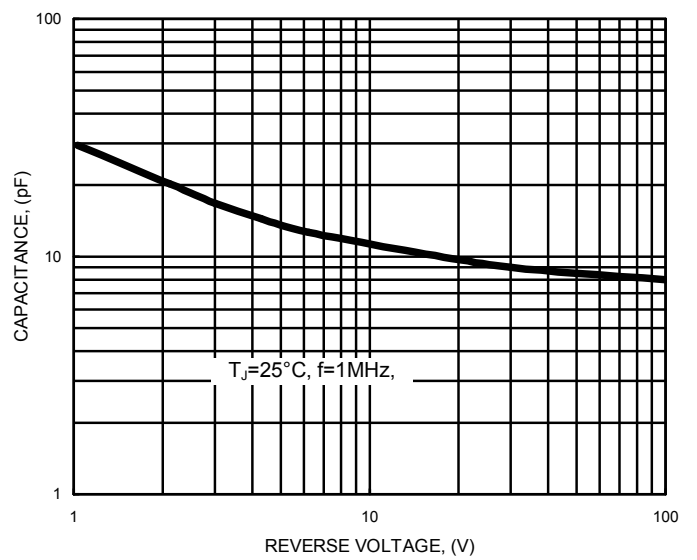
**FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT**



**FIG.3- TYPICAL FORWARD CHARACTERISTICS**



**FIG.4- TYPICAL JUNCTION CAPACITANCE**



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