

## 1N4001FL THRU 1N4007FL General Purpose Plastic Rectifier



### Features

- Low forward voltage drop
- Low leakage current
- High forward surge capability
- Solder dip 260 ° C, 40 s
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC
- This is a Halogen Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

### Circuit Diagram



### Mechanical Data

- **Case:** SOD-123FL molded plastic
- **Terminals:** Plated leads solderable per MIL-STD-750, Method 2026
- **Polarity:** Color band denotes cathode end
- **Mounting Position:** Any
- **Weight:** 0.0007 ounce, 0.02 grams

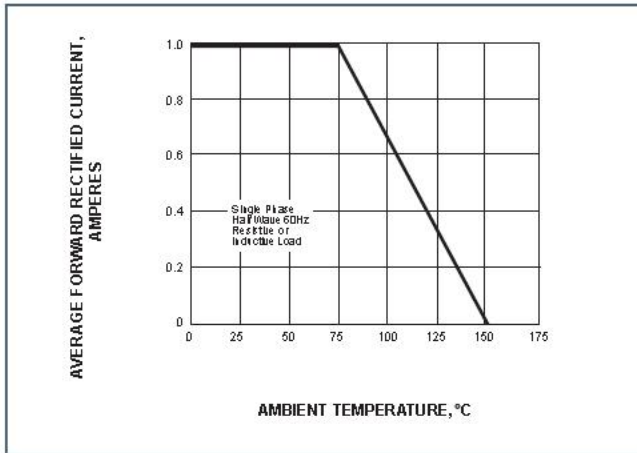
### Maximum Ratings and Electrical Characteristics @T<sub>A</sub>=25°C unless otherwise specified

Characteristic	Symbol	1N 4001FL	1N 4002FL	1N 4003FL	1N 4004FL	1N 4005FL	1N 4006FL	1N 4007FL	Units
<b>Marking code</b>		<b>A1</b>	<b>A2</b>	<b>A3</b>	<b>A4</b>	<b>A5</b>	<b>A6</b>	<b>A7</b>	
Maximum repetitive peak reverse voltage Maximum DC blocking voltage	V <sub>RRM</sub> V <sub>DC</sub>	<b>50</b>	<b>100</b>	<b>200</b>	<b>400</b>	<b>600</b>	<b>800</b>	<b>1000</b>	V
Maximum RMS voltage	V <sub>RMS</sub>	<b>35</b>	<b>70</b>	<b>140</b>	<b>280</b>	<b>420</b>	<b>560</b>	<b>700</b>	V
Maximum average forward rectified current @T <sub>A</sub> = 75°C	I <sub>(AV)</sub>	1.0							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	30.0							A
Maximum instantaneous forward voltage at 1.0A	V <sub>F</sub>	1.1							V
Maximum DC reverse current @T <sub>A</sub> = 25°C at rated DC blocking voltage @T <sub>A</sub> = 100°C	I <sub>R</sub>	5.0 50.0							µA
Typical Junction Capacitance (Note 1)	C <sub>J</sub>	15.0							pF
Typical Thermal Resistance (Note 2)	R <sub>θJA</sub>	75.0							°C/W
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-65 to +150							°C

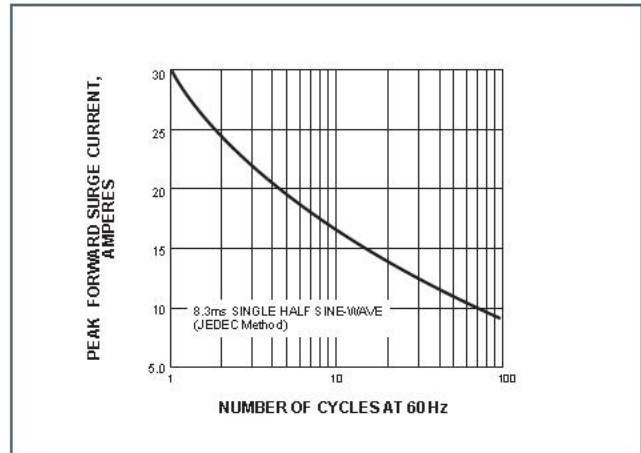
Note: 1. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.  
2. Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, P.C.B. mounted

**Ratings and Characteristics Curves**

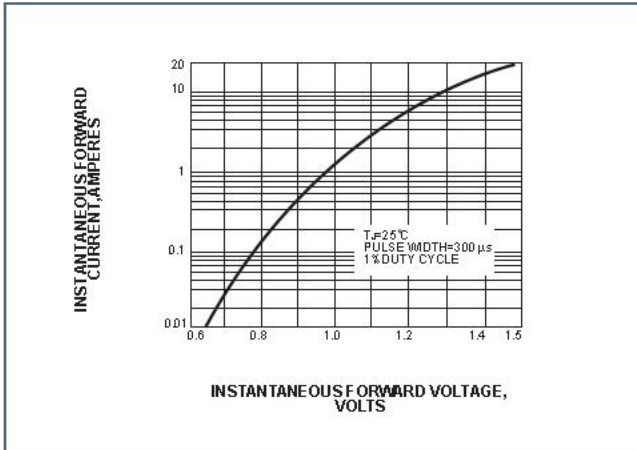
**FIG. 1- FORWARD CURRENT DERATING CURVE**



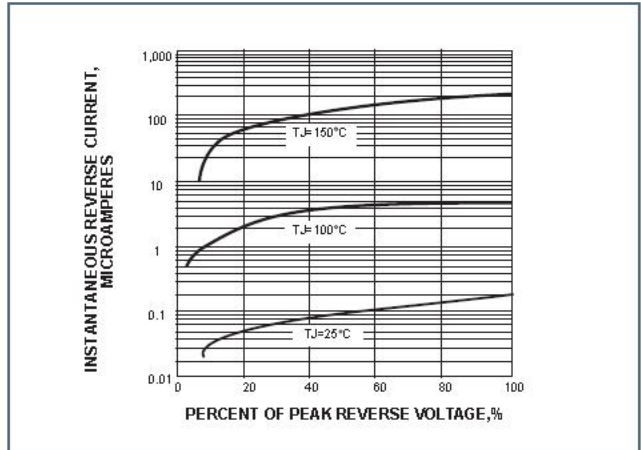
**FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**



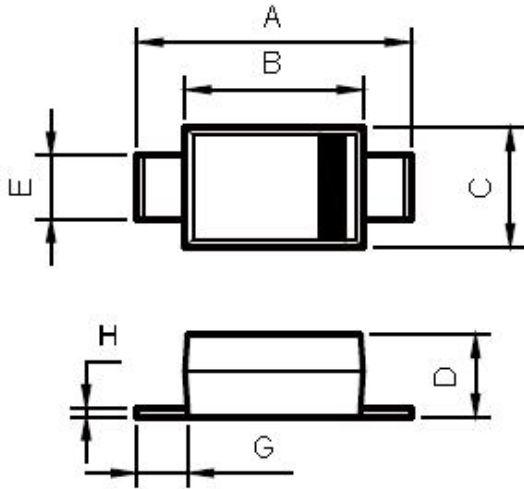
**FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**



**FIG. 4-TYPICAL REVERSE CHARACTERISTICS**



**Mechanical Dimensions SOD-123FL(Inches/Millimeters)**



DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.140	0.152	3.55	3.85	
B	0.102	0.114	2.60	2.90	
C	0.069	0.077	1.75	1.95	
D	0.047	0.055	1.20	1.40	
E	0.028	0.047	0.70	1.20	
G	0.010	—	0.25	—	

**Ordering Information**

Device	Package	Shipping
1N4001FL THRU 1N4007FL	SOD-123FL	3000pcs / reel

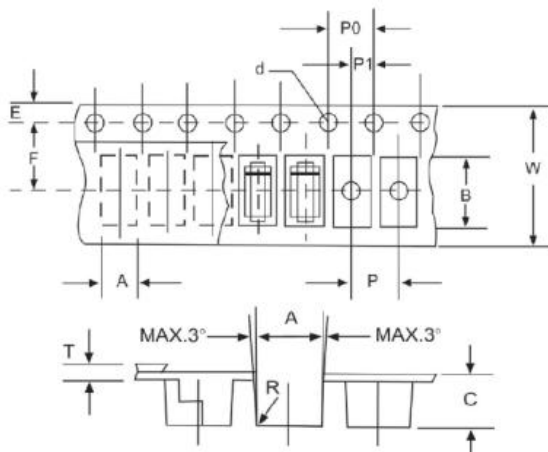
For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

**Marking Diagram**



A1 = Marking Code

**Carrier Tape Specification SOD-123FL**



SYMBOL	Millimeters	
	Min.	Max.
A	1.95	2.15
B	3.85	4.05
C	1.35	1.55
d	1.50	1.60
E	1.65	1.85
F	3.40	3.60
P	3.90	4.10
P0	3.90	4.10
P1	1.90	2.10
W	7.90	8.30



1N4001FL  
THRU  
1N4007FL

Technical Data  
Data Sheet N1646, Rev. A



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