Technical Data
Data Sheet N1646, Rev. A

RoHS HF

1N4001FL THRU 1N4007FL
General Purpose Plastic Rectifier

SOD-123FL

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_A=25°C unless otherwise specified

Characteristic	Symbol	1N 4001FL	1N 4002FL	1N 4003FL	1N 4004FL	1N 4005FL	1N 4006FL	1N 4007FL	Units
Marking code		**A1**	**A2**	**A3**	**A4**	**A5**	**A6**	**A7**	
Maximum repetitive peak reverse voltage Maximum DC blocking voltage	V_{RRM} V_{DC}	**50**	**100**	**200**	**400**	**600**	**800**	**1000**	V
Maximum RMS voltage	V_{RMS}	**35**	**70**	**140**	**280**	**420**	**560**	**700**	V
Maximum average forward rectified current @T_A = 75°C	$I_{(AV)}$	1.0							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	30.0							A
Maximum instantaneous forward voltage at 1.0A	V_F	1.1							V
Maximum DC reverse current @T_A = 25°C at rated DC blocking voltage @T_A = 100°C	I_R	5.0 50.0							μA
Typical Junction Capacitance (Note 1)	C_J	15.0							pF
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$	75.0							°C/W
Operating and Storage Temperature Range	T_J, T_{STG}	-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

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Ratings and Characteristics Curves

FIG. 1- FORWARD CURRENT DERATING CURVE

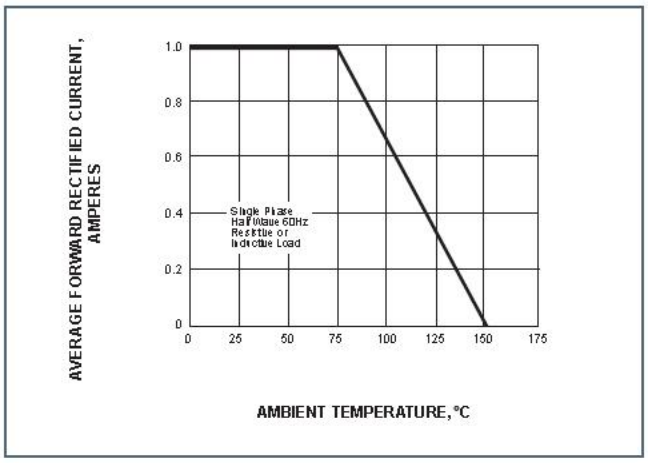


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

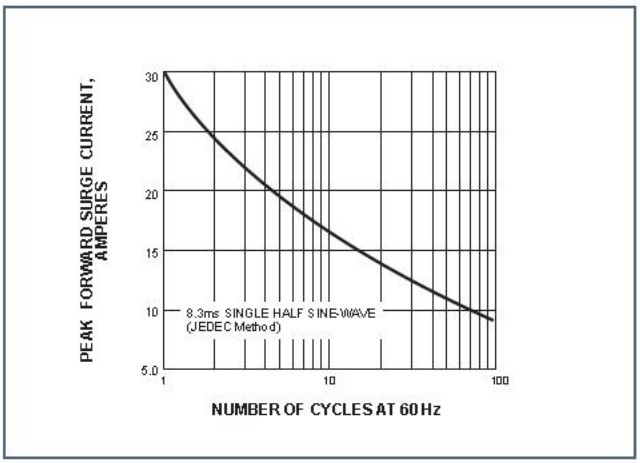


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

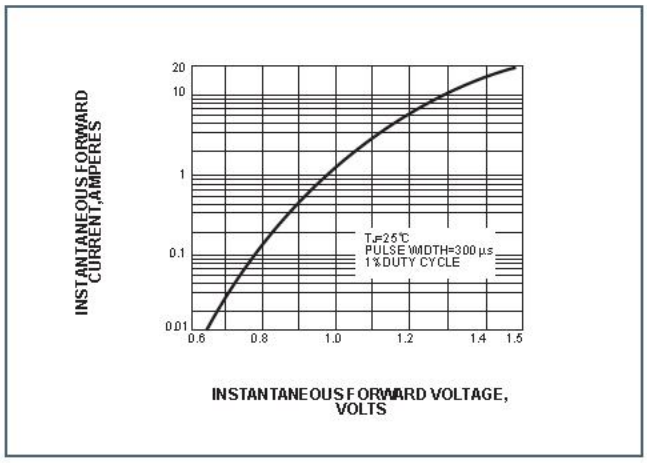
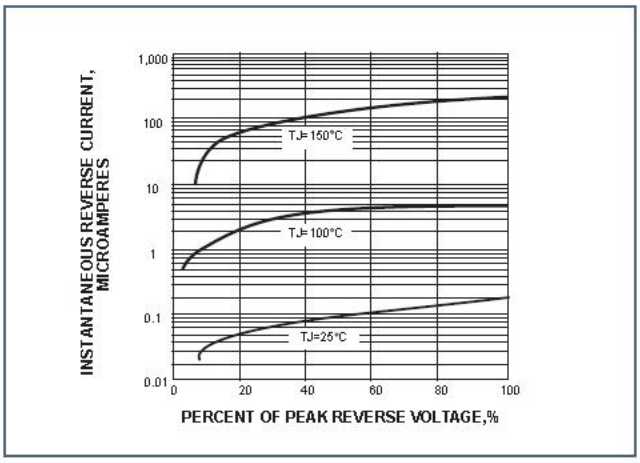


FIG. 4-TYPICAL REVERSE CHARACTERISTICS



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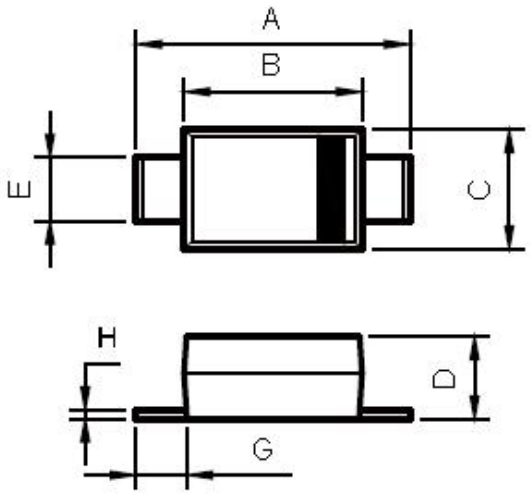
Mechanical Dimensions SOD-123FL(Inches/Millimeters)



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

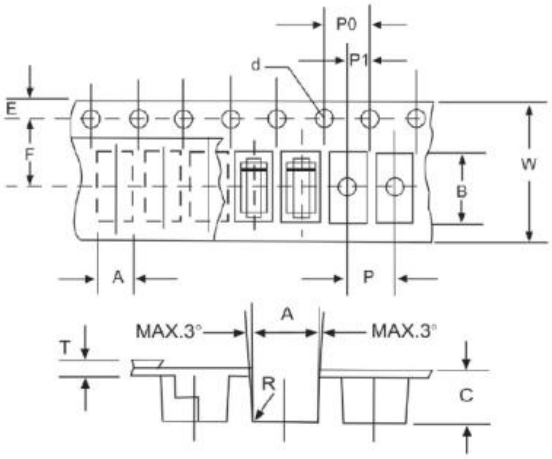
Device	Package	Shipping
1N4001FL THRU 1N4007FL	SOD-123FL	3000pcs / reel

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

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