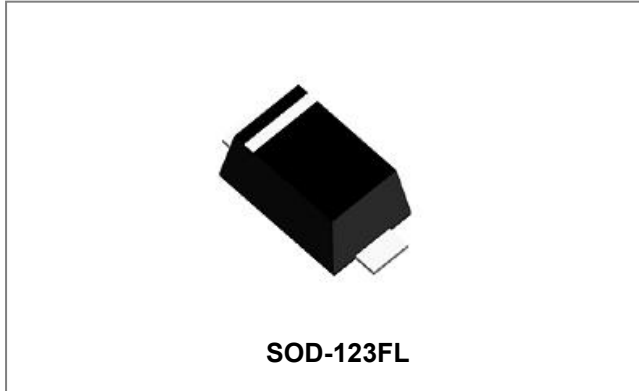


## US1AL THRU US1ML SURFACE MOUNT HIGH EFFICIENCY RECTIFIER



### Features

- Glass passivated device
- Ideal for surface mounted applications
- Low reverse leakage
- Metallurgically bonded construction
- High temperature soldering guaranteed: 260 C/10 seconds, 0.375" (9.5mm) lead length, 5 lbs. (2.3kg) Tension
- Plastic material-UL flammability 94V-0
- 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

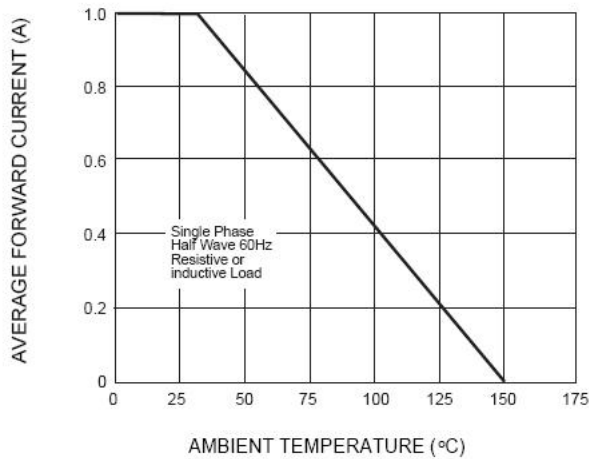
### Maximum Ratings and Electrical Characteristics @T<sub>A</sub>=25°C unless otherwise specified

Characteristic	Symbol	US1AL	US1BL	US1DL	US1GL	US1JL	US1KL	US1ML	Units	
<b>Marking</b>		<b>UA</b>	<b>UB</b>	<b>UD</b>	<b>UG</b>	<b>UJ</b>	<b>UK</b>	<b>UM</b>		
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V <sub>RRM</sub> V <sub>RWM</sub> V <sub>DC</sub>	50	100	200	400	600	800	1000	V	
RMS Reverse Voltage	V <sub>RSM</sub>	35	70	140	280	420	560	700		
Average Rectified Output Current @T <sub>A</sub> =30 °C	I <sub>O</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							A	
Forward Voltage per element @I <sub>F</sub> =1.0A	V <sub>F</sub>	1		1.4		1.7			V	
Peak Reverse Current @T <sub>A</sub> =25°C At Rated DC Blocking Voltage @T <sub>A</sub> =100°C	I <sub>R</sub>	5 100							µA	
Maximum Reverse Recovery Time (NOTE 1)	T <sub>rr</sub>	50				75				ns
Typical Thermal Resistance	R <sub>θJA</sub>	180							K/W	
Operating Junction and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-55 to +150							°C	

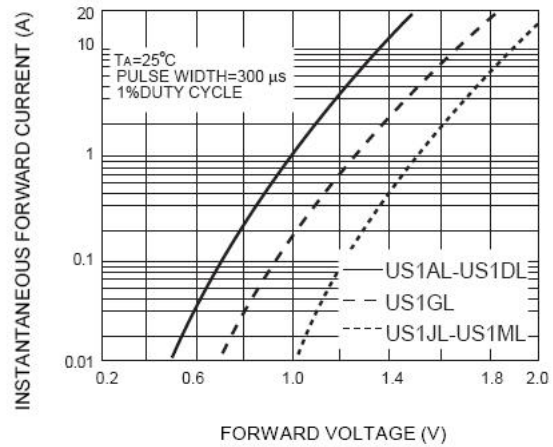
**Note:** 1. Measured with I<sub>F</sub>=0.5A, I<sub>R</sub>=1.0A, I<sub>rr</sub>=0.25A

**Ratings and Characteristics Curves**

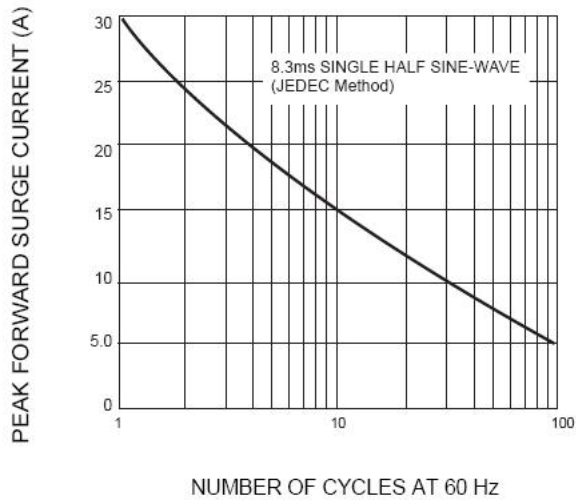
**FIG. 1- FORWARD CURRENT DERATING CURVE**



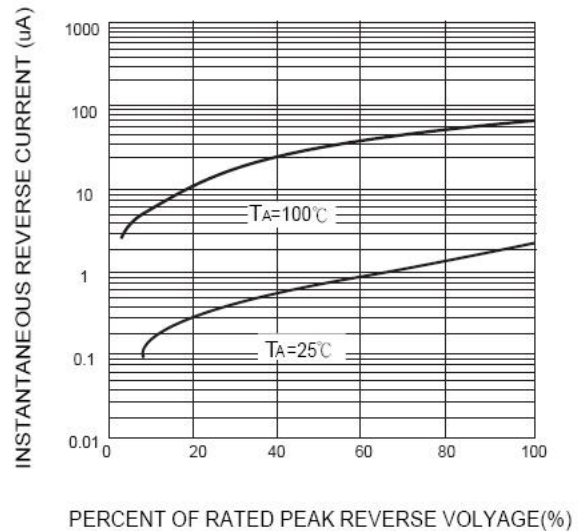
**FIG. 2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**



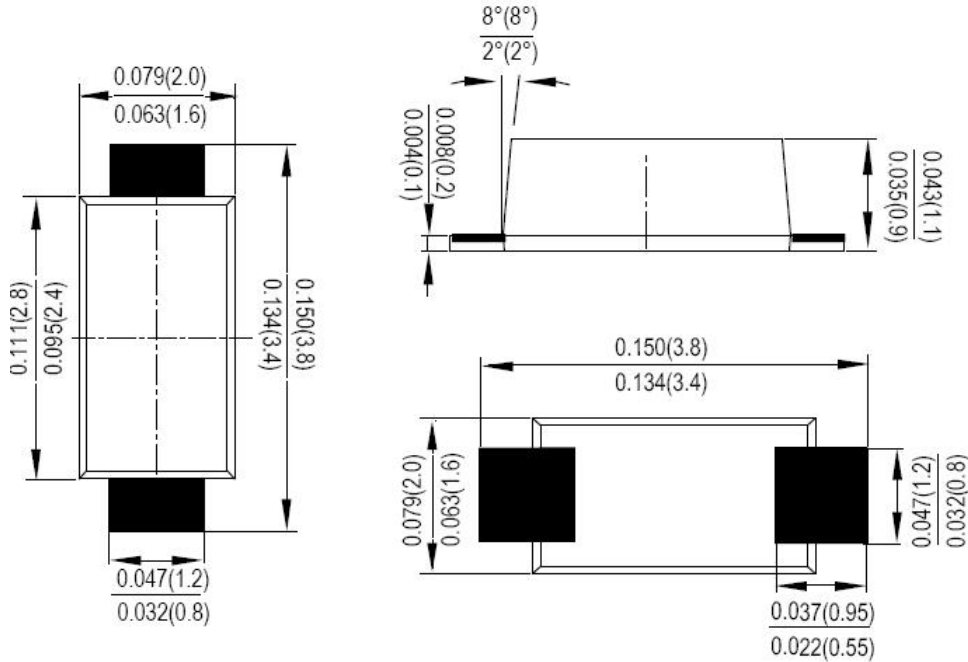
**FIG. 3-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**



**FIG. 4-TYPICAL REVERSE CHARACTERISTICS**



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



**Ordering Information**

Device	Package	Shipping
US1AL THRU US1ML	SOD-123FL	3000pcs / reel
US1ALTR THRU US1MLTR	SOD-123FL	3000pcs / reel

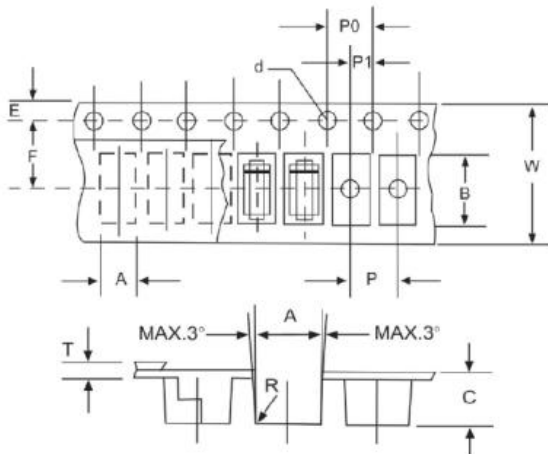
For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

**Marking Diagram**



UA = 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



US1AL  
THRU  
US1ML

Technical Data  
Data Sheet N1956, Rev. -



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