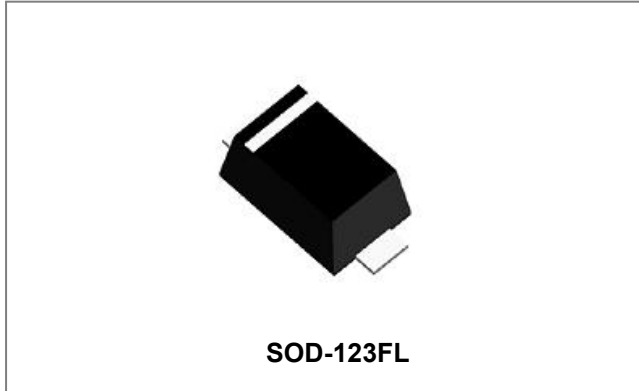


US1AL THRU US1ML SURFACE MOUNT HIGH EFFICIENCY RECTIFIER



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_A=25°C unless otherwise specified

Characteristic	Symbol	US1AL	US1BL	US1DL	US1GL	US1JL	US1KL	US1ML	Units	
Marking		UA	UB	UD	UG	UJ	UK	UM		
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V _{RRM} V _{RWM} V _{DC}	50	100	200	400	600	800	1000	V	
RMS Reverse Voltage	V _{RSM}	35	70	140	280	420	560	700		
Average Rectified Output Current @T _A =30 °C	I _O	1.0							A	
Peak Forward Surge Current 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC Method)	I _{FSM}	30							A	
Forward Voltage per element @I _F =1.0A	V _F	1		1.4		1.7			V	
Peak Reverse Current @T _A =25°C At Rated DC Blocking Voltage @T _A =100°C	I _R	5 100							µA	
Maximum Reverse Recovery Time (NOTE 1)	T _{rr}	50				75				ns
Typical Thermal Resistance	R _{ΘJA}	180							K/W	
Operating Junction and Storage Temperature Range	T _J , T _{STG}	-55 to +150							°C	

Note: 1. Measured with I_F=0.5A, I_R=1.0A, I_{rr}=0.25A

Ratings and Characteristics Curves

FIG. 1- FORWARD CURRENT DERATING CURVE

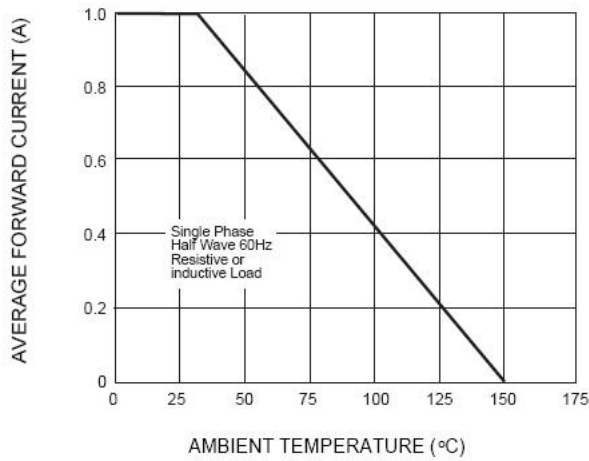


FIG. 2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

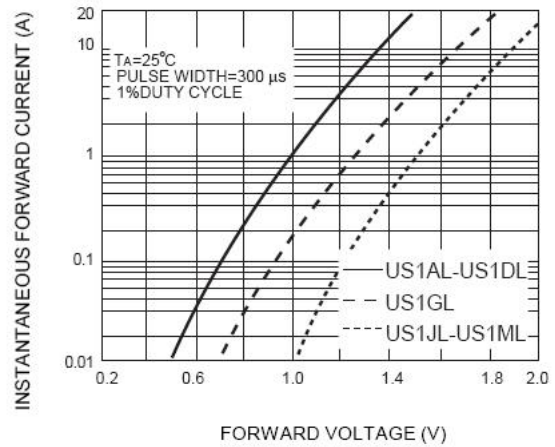


FIG. 3-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

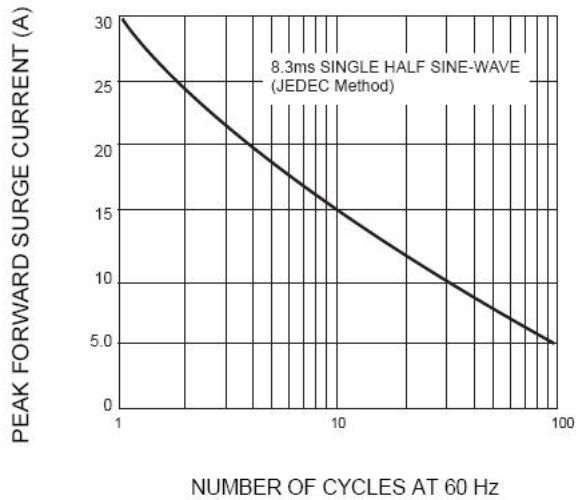
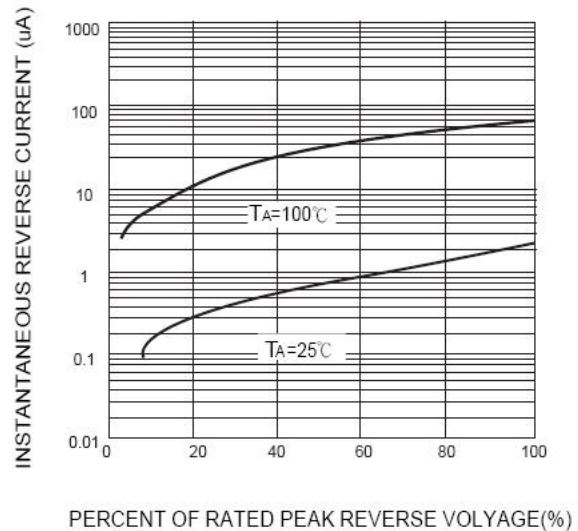
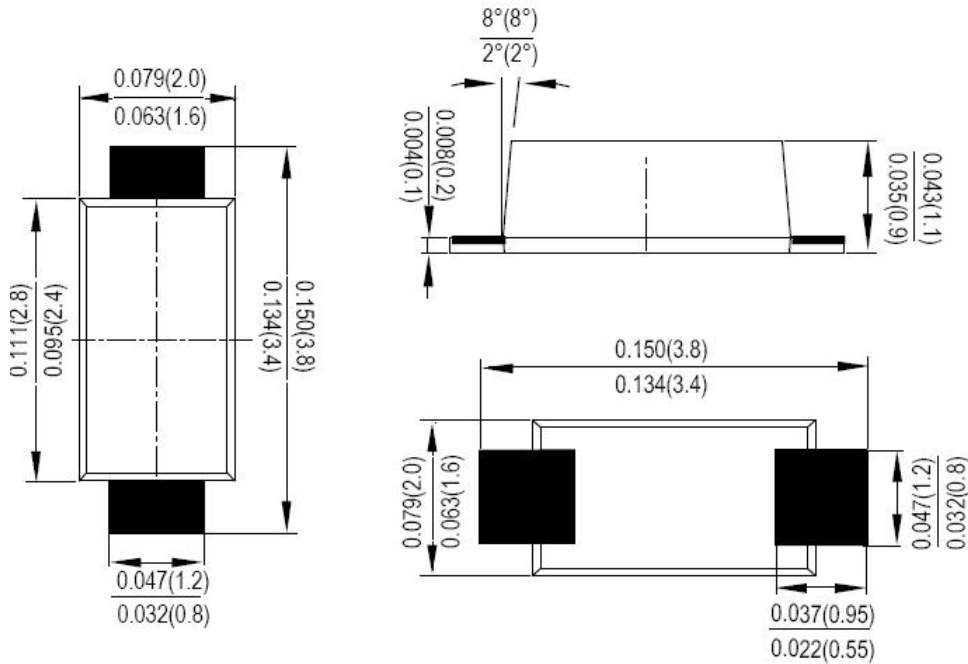


FIG. 4-TYPICAL REVERSE CHARACTERISTICS



Mechanical Dimensions SOD-123FL(Inches/Millimeters)

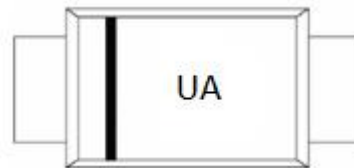


Ordering Information

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

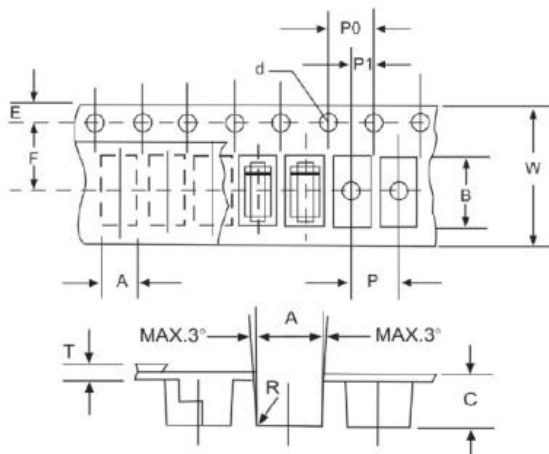
For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

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

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