Technical Data
Data Sheet N1666, Rev. A

RoHS HF

ES1ASL THRU ES1JSL
SURFACE MOUNT SUPER FAST RECTIFIER

SOD-123FL

Features

- **Glass passivated device**
- **Ideal for surface mouted 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**
- **Terminals finish: 100% Pure Tin**
- **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 guaranteed**
- **Polarity: Color band denotes cathode end**
- **Mounting Position: Any**

Maximum Ratings and Electrical Characteristics @T_A=25°C unless otherwise specified

Type Number	Symbol	ES1A SL	ES1B SL	ES1D SL	ES1G SL	ES1J SL	Units
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	50	100	200	400	600	V
Maximum RMS Voltage	$V_{R(RMS)}$	35	70	140	280	420	
Average Rectified Output Current @T_L =90°C	$I_{F(AV)}$	1.0					A
Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	30.0					A
Forward Voltage @I_F = 1.0A, T_J=25°C	V_F	0.95			1.25	1.7	V
Maximum DC reverse current T_A = 25°C at rated DC blocking voltage T_A = 125°C	I_R	5.0 100					μA
Typical junction capacitance (Note 1)	C_J	10					pF
Maximum Reverse Recovery Time (Note 2)	Trr	35					ns
Typical thermal resistance (Note 3)	$R_{\theta JA}$	85					°C/W
Operating junction and storage temperature range	T_J,T_{STG}	-55 to +150					°C

Note: 1. Measured at 1.0 MHZ and applied reverse voltage of 4.0 VDC
2. Measured with I_F=0.5A, I_R=1.0A, I_{rr}=0.25A,
3. 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

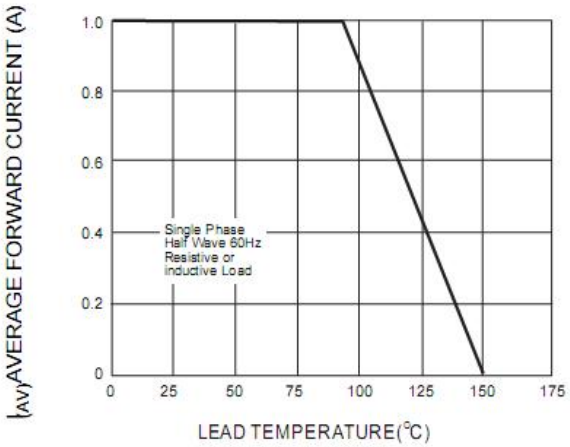


FIG. 2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

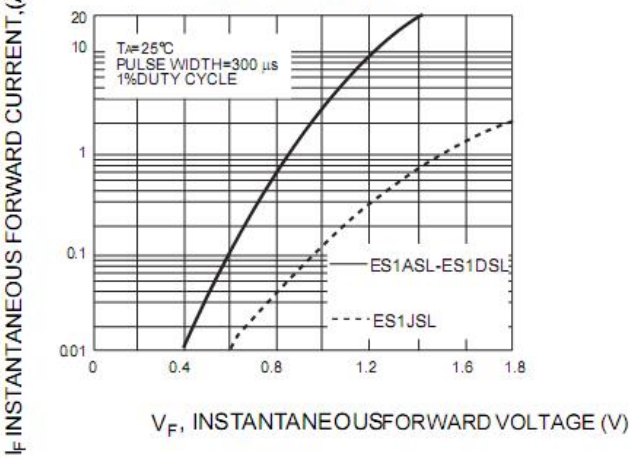


FIG. 3-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

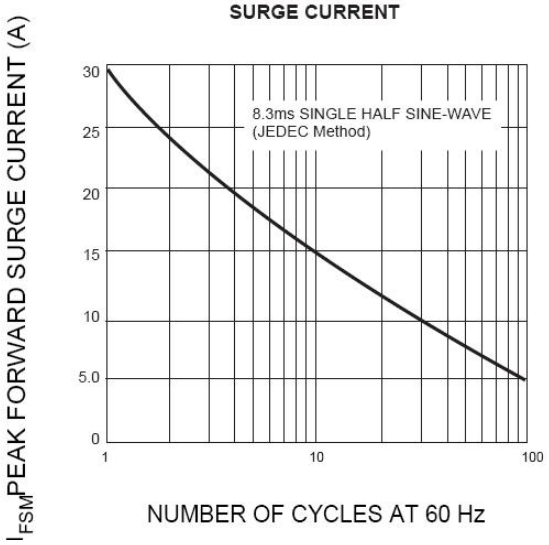


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

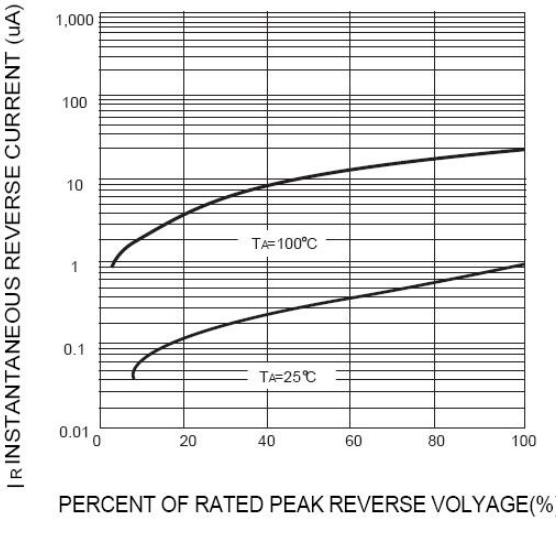
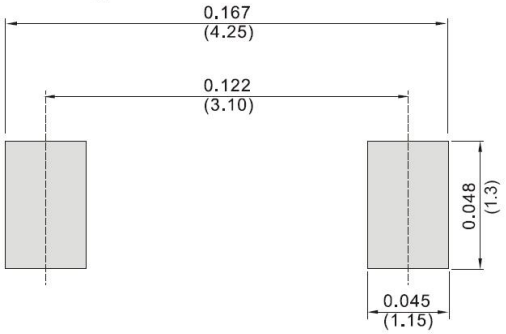


Fig.5 TYPICAL CAPACITANCE



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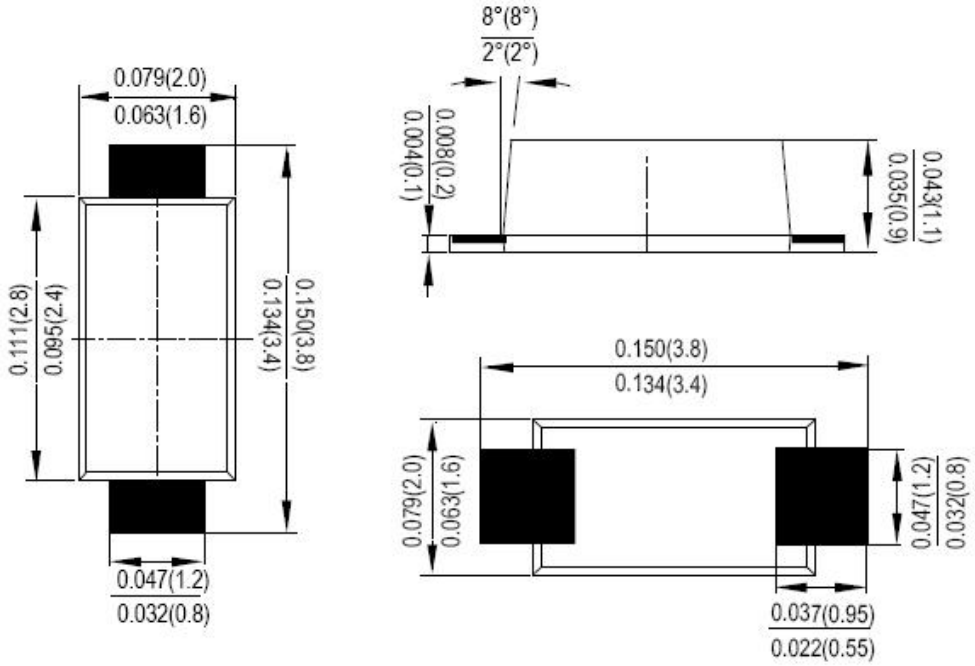
Mechanical Dimensions SOD-123FL(Inches/Millimeters)

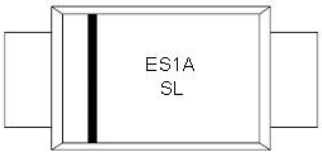


Ordering Information

Device	Package	Shipping
ES1ASL THRU ES1JSL	SOD-123FL (Pb-Free)	3000pcs / reel

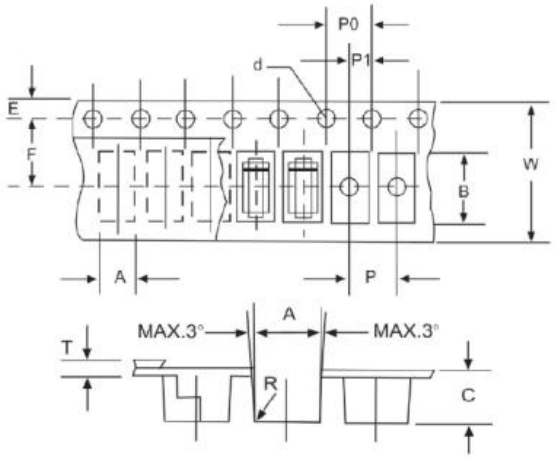
For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

Marking Diagram



ES1ASL = Part Name

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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