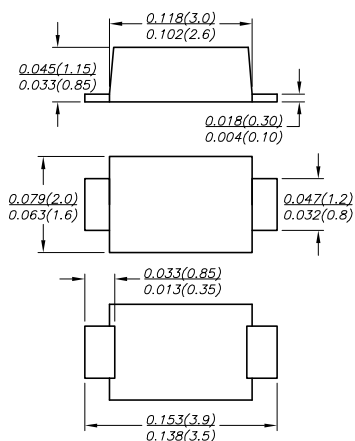


# ES1ASL THRU ES1JSL

## SURFACE MOUNT SUPER FAST RECTIFIER

Reverse Voltage - 50 to 600 Volts Forward Current - 1.0 Ampere

### SOD-123SL



### 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

### MECHANICAL DATA

**Case:** SOD-123SL molded plastic body over passivated chip  
**Terminals:** Plated axial leads, solderable per MIL-STD-750, Method 2026

**Polarity:** Color band denotes cathode end

**Mounting Position:** Any

**Weight :** 0.00058 ounce, 0.0165 grams

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

	SYMBOLS	ES1ASL	ES1BSL	ES1CSL	ES1DSL	ES1ESL	ES1GSL	ES1JSL	UNITS
Maximum repetitive peak reverse voltage	$V_{RRM}$	50	100	150	200	300	400	600	V
Maximum RMS voltage	$V_{RMS}$	35	70	105	140	210	280	420	V
Maximum DC blocking voltage	$V_{DC}$	50	100	150	200	300	400	600	V
Maximum average forward rectified current at $T_L=90^\circ\text{C}$ (NOTE 1)	$I_{(AV)}$	1.0							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load	$I_{FSM}$	25.0							A
Maximum instantaneous forward voltage at 1.0A	$V_F$	0.95				1.25		1.7	V
Maximum DC reverse current $T_A=25^\circ\text{C}$ at rated DC blocking voltage $T_A=100^\circ\text{C}$	$I_R$					5.0		100.0	$\mu\text{A}$
Maximum reverse recovery time (NOTE 2)	$t_{rr}$					35			ns
Typical junction capacitance (NOTE 3)	$C_J$					10			pF
Typical thermal resistance (NOTE 4)	$R_{\theta JA}$					100			$^\circ\text{C/W}$
Operating junction and storage temperature range	$T_J, T_{STG}$					-55 to +150			$^\circ\text{C}$

**Note:** 1. Averaged over any 20ms period.

2. Measured with  $I_F=0.5\text{A}$ ,  $I_R=1\text{A}$ ,  $I_{rr}=0.25\text{A}$ .

3. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

4. P.C.B. mounted with 0.2x0.2" (5.0x5.0mm) copper pad areas

# RATINGS AND CHARACTERISTIC CURVES ES1ASL THRU ES1JSL

FIG. 1- FORWARD CURRENT DERATING CURVE

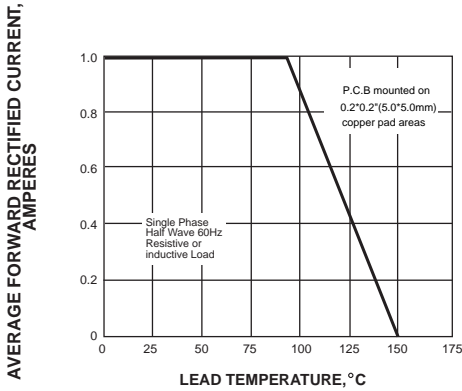


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

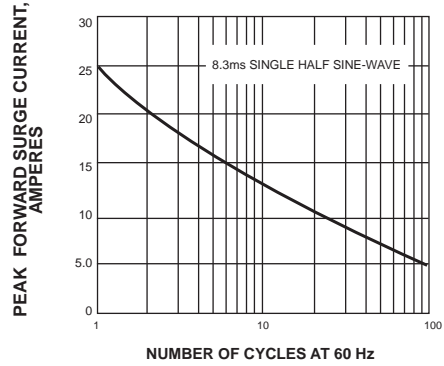


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

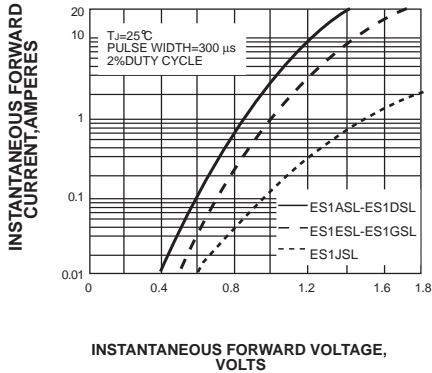


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

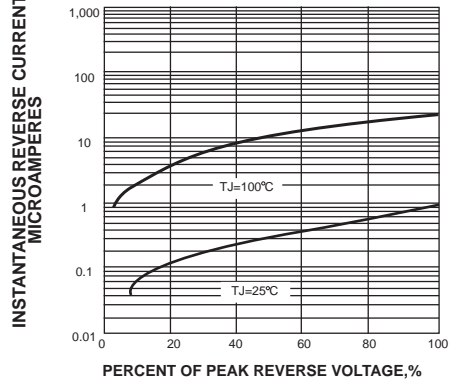


FIG. 5-TYPICAL JUNCTION CAPACITANCE

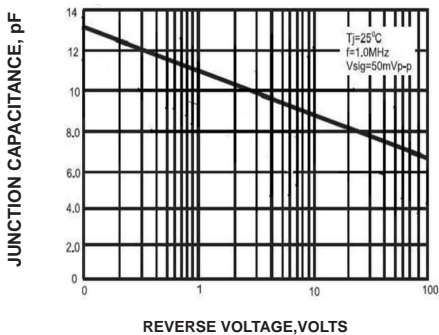


FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

