ES1AS THRU ES1JS

1.0 AMP SUPER FAST RECTIFIERS

Features

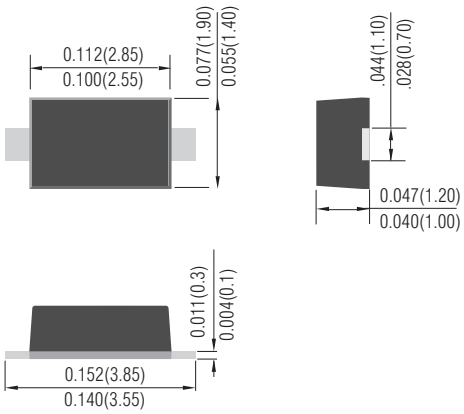
- Low profile space
- Ideal for automated placement
- Glass passivated chip junctions
- Low forward voltage drop
- Low leakage current
- High forward surge capability
- High temperature soldering:
  260℃/10 seconds at terminals
- Component in accordance to
  RoHS 2002/95/1 and WEEE 2002/96/EC
- Lead free Finish/ROHS Compliant

Mechanical Date

- **Case:** JEDEC SOD-123FL molded plastic body over glass passivated chip
- **Terminals:** Solder plated, solderable per J-STD-002B and JESD22-B102D
- **Polarity:** Laser band denotes cathode end
- **Weight:** 0.0092gram

VOLTAGE RANGE
50 to 600 Volts
CURRENT
1.0 Ampere

SOD-123FL



Dimensions in inches and (millimeters)

Maximum Ratings & Thermal Characteristics & Electrical Characteristics

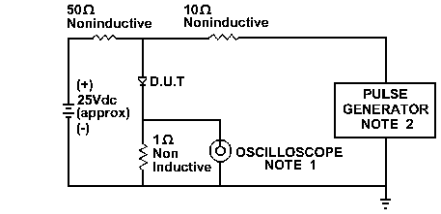
(T_A = 25 °C unless otherwise noted)

	Symbol	ES1AS	ES1BS	ES1CS	ES1DS	ES1ES	ES1GS	ES1JS	UNIT
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	$I_{F(AV)}$	1							A
Peak forward surge current 8.3 mS single half sine-wave superimposed on rated load	I_{FSM}	30							A
Maximum instantaneous forward voltage at 1.0A	V_F	0.95				1.25		1.70	V
Maximum DC reverse current T_A = 25 ℃ at Rated DC blocking voltage T_A = 100℃	I_R	5.0 150							μ A
Maximum reverse recovery time at I_F = 0.5 A , I_R = 1.0 A , I_{rr} = 0.25 A	t_{rr}	35							nS
Typical thermal resistance	$R_{\theta JA}$	150							℃/W
Operating junction and storage temperature range	T_J, T_{STG}	–55 to +150							℃

Note1: Mounted on FR-4 P.C.B. With 0.9x1.5 mm copper pad areas (≈35 μm thick)

RATING AND CHARACTERISTIC CURVES

ES1AS THRU ES1JS



NOTE:1.Rise Time = 7ns max.
Input Impedance = 1 megohm. 22pF
2.Rise Time = 10ns max.
Source Impedance = 50 Ohms

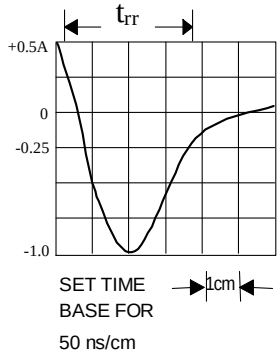


Fig. 1-REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

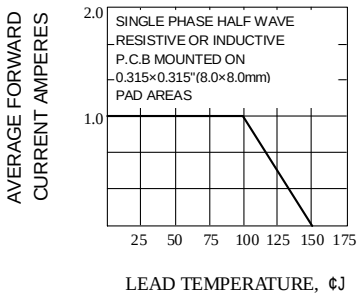


Fig. 2-MAXIMUM AVERAGE FORWARD CURRENT RATING

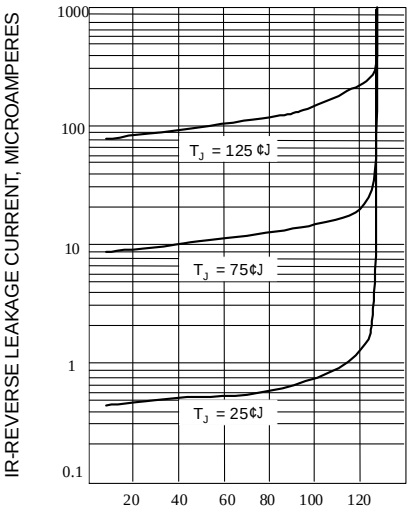


Fig. 3-TYPICAL REVERSE CHARACTERISTICS

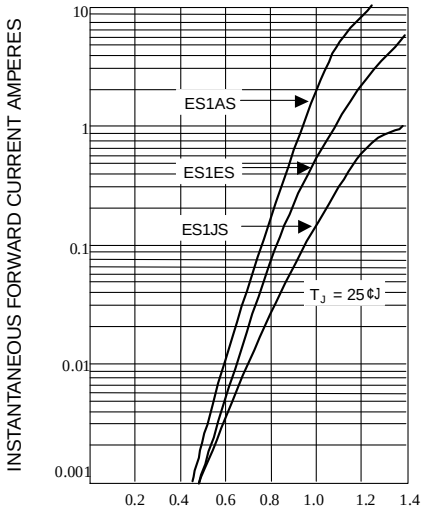


Fig. 4-TYPICAL FORWARD CHARACTERISTICS

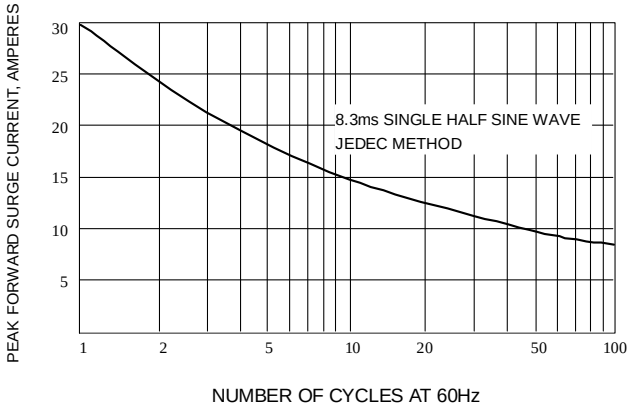


Fig. 5-MAXIMUM NON-REPETITIVE SURGE CURRENT

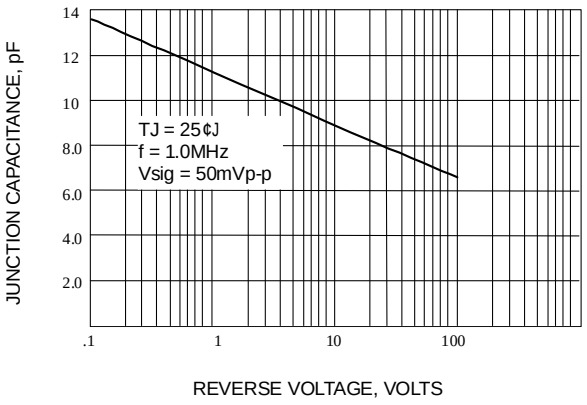


Fig. 6-TYPICAL JUNCTION CAPACITANCE