

SINGLE PHASE 1.0AMP SURFACE MOUNT GLASS PASSIVATED BRIDGE RECTIFIER

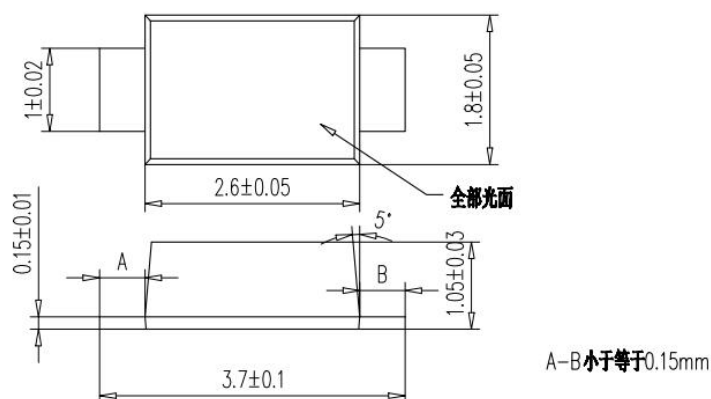
Features

- Glass passivated die construction
- Low forward voltage drop
- High current capability
- High surge current capability
- Designed for surface mount application
- Plastic material-UL flammability 94V-0

SOD-123FL

Mechanical Data

- Case: SOD-123FL, molded plastic
- Terminals: plated leads solderable per MIL-STD-202, Method 208
- Polarity: as marked on case
- Mounting position: Any
- Marking: type number
- Lead Free: For RoHS / Lead Free Version,



Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

Single Phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

Type Number	SYMBOL	ES1JL	unit
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	600	V
Maximum RMS Voltage	V_{RMS}	420	V
Maximum DC blocking Voltage	V_{DC}	600	V
Maximum Average Forward Rectified Current .at $T_A = 55^\circ\text{C}$	$I_{F(AV)}$	1	A
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	30.0	A
Maximum Forward Voltage at 1.5A DC	V_F	1.7	V
Maximum DC Reverse Current @ $T_A = 25^\circ\text{C}$	I_R	5.0	μA
At rated DC blocking voltage @ $T_A = 100^\circ\text{C}$		100.0	μA
Typical Junction Capacitance (Note1)	C_j	30	pF
Maximum reverserecovery tme (Note2)	t_{rr}	35	ns
Typical Thermal Resistance (Note 3)	$R_{(JA)}$	90	$^\circ\text{C}/\text{W}$
Storage Temperature	T_{STG}	-55 to +150	$^\circ\text{C}$
Operation Junction Temperature	T_J	-55 to +150	$^\circ\text{C}$

Note:1. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.

2. Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B

with 0.5×0.5"(13×13mm)copper pads.



AVERAGE FORWARD RECTIFIED CURRENT,
AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE

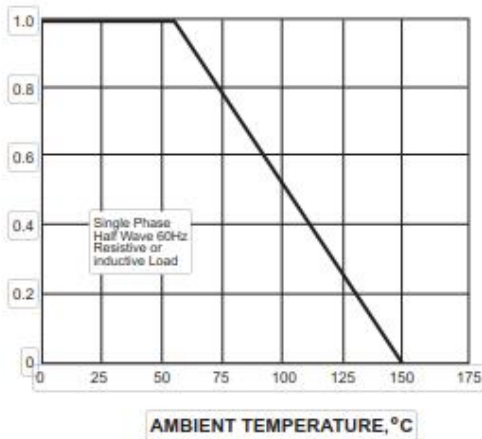
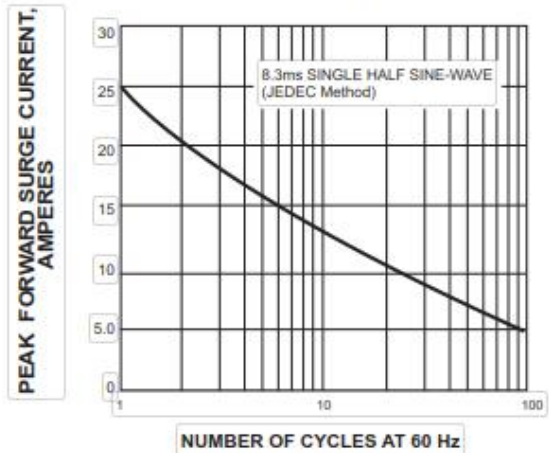
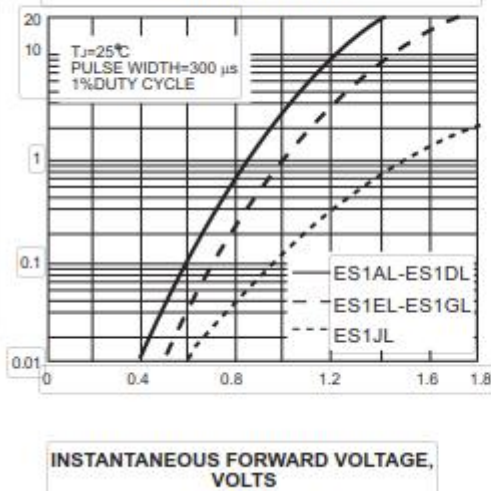


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT



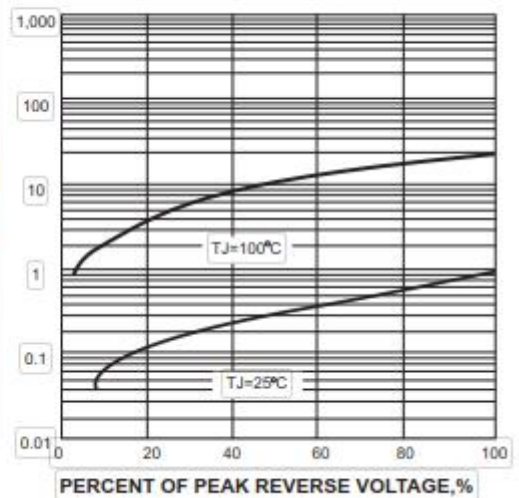
INSTANTANEOUS FORWARD
CURRENT, AMPERES

FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



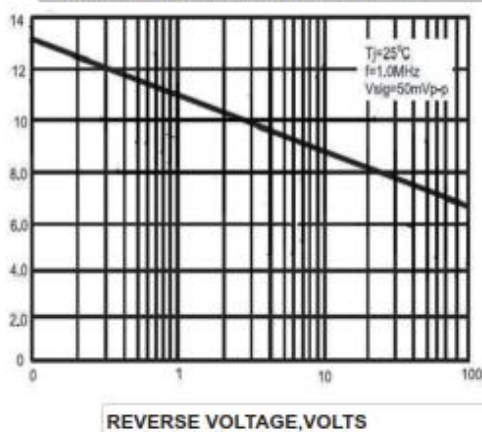
INSTANTANEOUS REVERSE CURRENT,
MICROAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS



JUNCTION CAPACITANCE, pF

FIG. 5-TYPICAL JUNCTION CAPACITANCE



TRANSIENT THERMAL IMPEDANCE,
°C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

