

AUTOMOTIVE GLASS PASSIVATED SUPER FAST RECOVERY RECTIFIER

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

FEATURES

- Glass passivated junction
- For Surface Mount Applications, Easy to pick and place
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- High temperature soldering guaranteed:260°C/10 seconds at terminals,
- Component in accordance to RoHS 2015/863/EU
- AEC-Q101 qualified and PPAP capable



AEC-Q101 Qualified

SOD-123FL



MECHANICAL DATA

- Case: SOD-123FL molded plastic
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Mounting Position: Any
- Weight: 0.01 gram

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%.)

Parameter		Symbols	E1A-V	E1B-V	E1D-V	E1G-V	E1J-V	Units
Maximum Recurrent Peak Reverse Voltage		VRRM	50	100	200	400	600	Volts
Maximum RMS Voltage		VRMS	35	70	140	280	420	Volts
Maximum DC Blocking Voltage		VDC	50	100	200	400	600	Volts
Maximum Average Forward Rectified Current at TL=100°C		I(AV)	1.0					Amps
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)		IFSM	30.0					Amps
Maximum Instantaneous Forward Voltage at 1.0 A		VF	1.0			1.3	1.7	Volts
Maximum DC Reverse Current at rated DC blocking voltage	TA=25°C	IR	5.0					μA
	TA=125°C		100					
Thermal resistance from junction to ambient		RθJA	85					°C/W
Maximum reverse recovery time(Note1)		trr	35					ns
Typical junction capacitance(Note2)		CJ	15.0					pF
Operating junction and storage temperature range		TJ TSTG	-55 to+150					°C

Note: 1.Test conditions: $I_F=0.5A, I_R=1.0A, I_{RR}=0.25A$.

2.Measured at 1MHz and applied reverse voltage of 4.0 Volts D.C.

RATINGS AND CHARACTERISTIC CURVES E1A-V THRU E1J-V

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

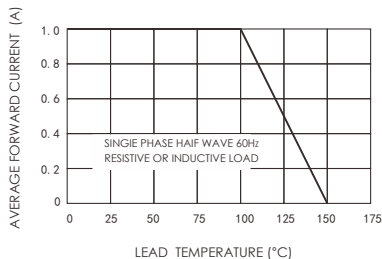


FIG.2-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

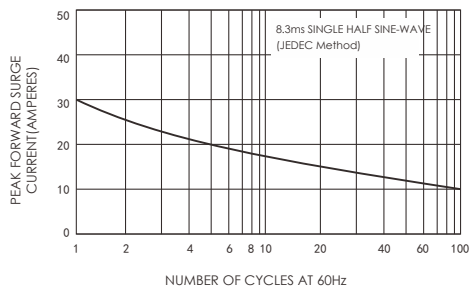


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

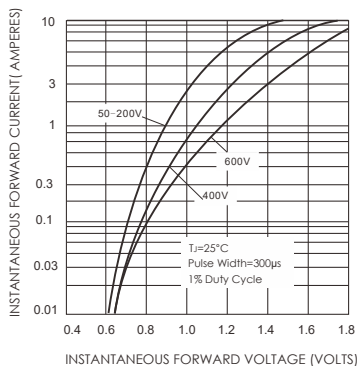


FIG.4-TYPICAL REVERSE CHARACTERISTICS

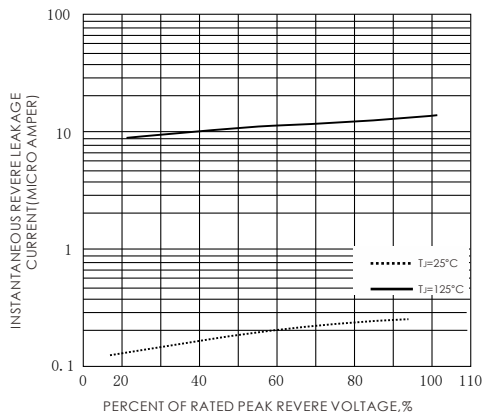


FIG.5-TYPICAL JUNCTION CAPACITANCE

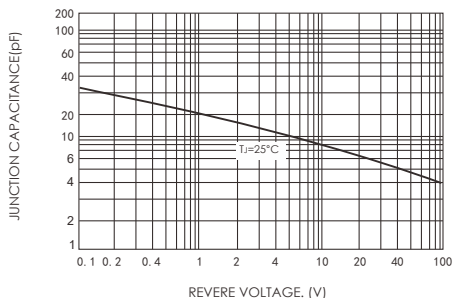
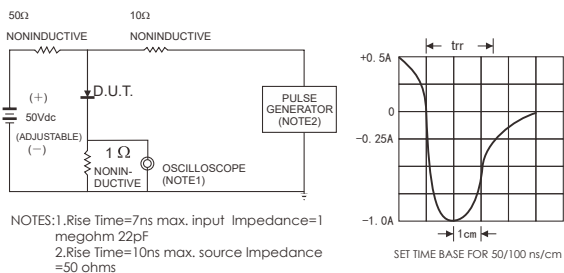
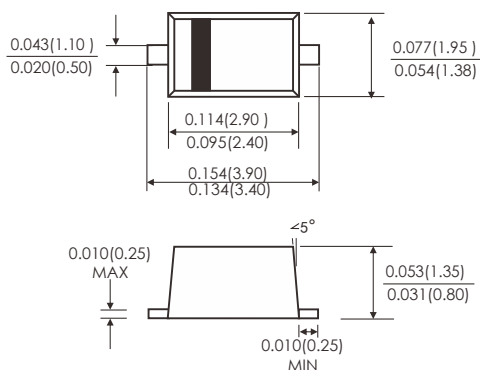


FIG.6-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



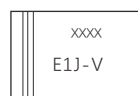
PACKAGE OUTLINE DIMENSIONS

SOD-123FL



Dimensions in inches and (millimeters)

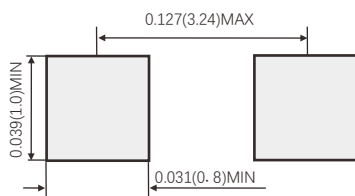
Marking



Marking:

xxxx: Tracing code
E1J-V: Type

Suggested PAD Layout



Dimensions in inches and (millimeters)