AUTOMOTIVE SCHOTTKY BARRIER RECTIFIER

Reverse Voltage - 20 to 100 Volts
Forward Current - 1.0Ampere

FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Metal silicon junction ,majority carrier conduction
- Guard ring for overvoltage protection
- Low power loss ,high efficiency
- High current capability ,Low forward voltage drop
- High surge capability
- For use in low voltage ,high frequency inverters, free wheeling ,and polarity protection applications
- High temperature soldering guaranteed:260 °C/10 seconds at terminals, 0.375"(9.5mm)lead length,5lbs.(2.3kg)tension
- **AEC-Q101 qualified and PPAP capable**

IATF16949认证

AEC-Q101 Qualified

SOD-123FL

MECHANICAL DATA

- Case: SOD-123FL molded plastic body
- Lead Finish: 100% Matte Sn (Tin)
- Polarity: color band denotes cathode end
- Mounting Position: Any
- Weight: 11.7 mg(approximately)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(Ratings at 25°C ambient temperature unless otherwise specified ,Single phase ,half wave ,resistive or inductive load. For capacitive load,derate by 20%.)

Parameter		Symbols	K12-V	K13-V	K14-V	K16-V	K1A-V	K1B-V	K1D-V	Volts
Maximum repetitive peak reverse voltage		V_{RRM}	20	30	40	60	100	150	200	Volts
Maximum RMS voltage		V_{RMS}	14	21	28	42	71	105	140	Volts
Maximum DC blocking voltage		V_{DC}	20	30	40	60	100	150	200	Volts
Maximum average forward rectified current (See Fig. 1)		$I_{(AV)}$	1.0							Amp
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)		I_{FSM}	25. 0							Amps
Maximum instantaneous forward voltage at1.0 A(note 1)		V_F	0.55			0.75	0.85	0.90	0.95	Volts
Maximum instantaneous reverse current at rated DC blocking voltage(Note 1)	T_A=25°C	I_R	100				20			μA
	T_A=100°C		5				–			mA
	T_A=125°C		–				3			
Typical thermal resistance (Note 2)		$R_{\theta JA}$	75. 0							°C/W
Typical Junction Capacitance per leg(Note 3)		Cj	110							pF
Operating junction and Storage temperature range		Tj T_{STG}	-55 to+150							°C

Notes: 1.Pulse test: 300μs pulse width,1% duty cycle

2. P.C.B. mounted with 0.24 X 0.24"(6.0 X 6.0mm)copper pad areas

3.Measured at 1.0 MHZ and applied reverse voltage of 4.0V D.C.

FIG.1-FORWARD CURRENT DERATING CURVE

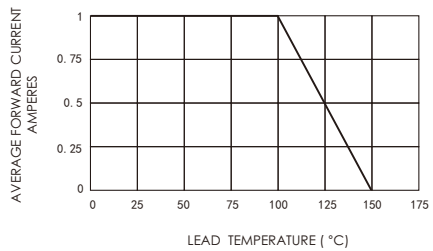


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

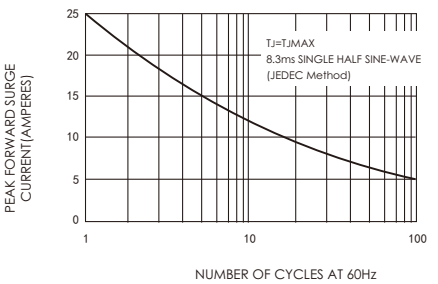


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

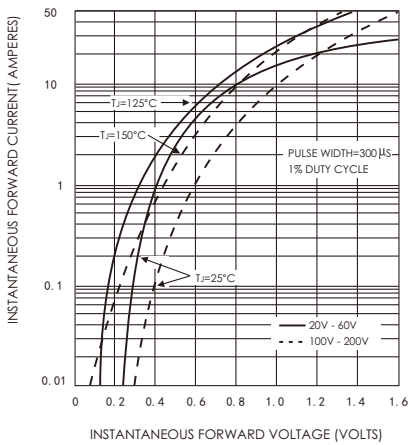


FIG.4-TYPICAL REVERSE CHARACTERISTICS

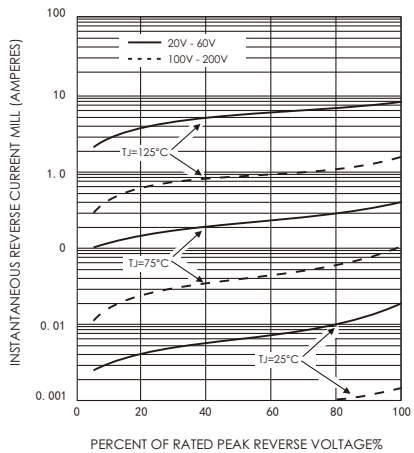
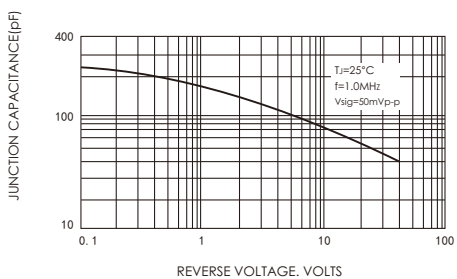
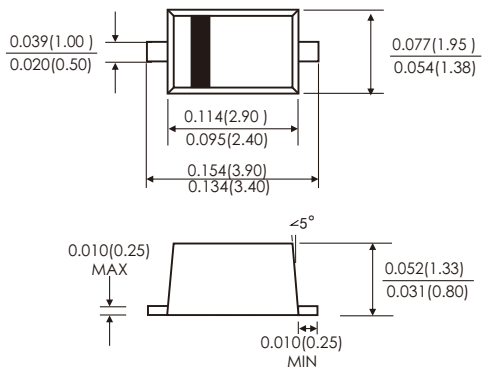


FIG.5-TYPICAL JUNCTION CAPACITANCE



SOD-123FL



Dimensions in inches and (millimeters)