

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**



AEC-Q101 Qualified

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)

SOD-123FL



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 at 1.0 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	100			20				µA
	T _A =100°C	5			-				mA
	T _A =125°C	-			3				
Typical thermal resistance (Note 2)	R _{θJA}	75.0							°C/W
Typical Junction Capacitance per leg(Note 3)	C _j	110							pF
Operating junction and Storage temperature range	T _j 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

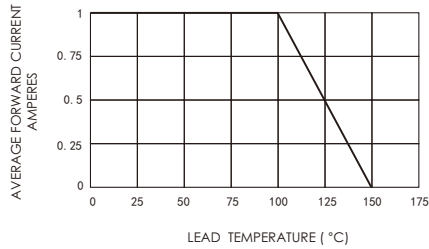


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

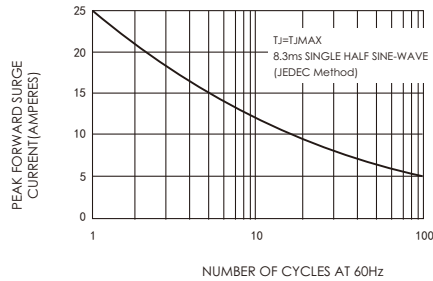


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

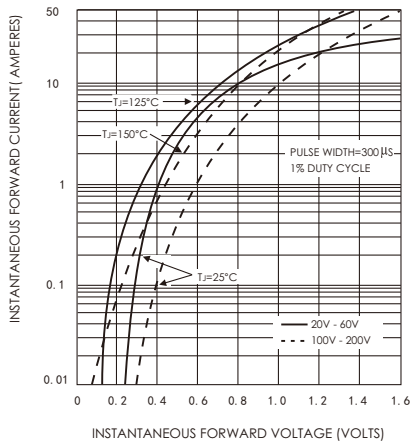


FIG.4-TYPICAL REVERSE CHARACTERISTICS

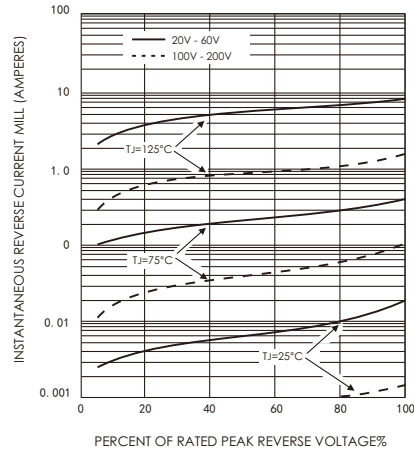
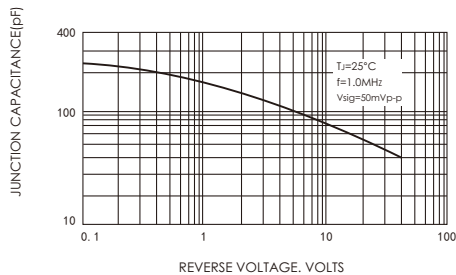


FIG.5-TYPICAL JUNCTION CAPACITANCE



SOD-123FL

