

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: 250°C/10 seconds at terminals,
0.375"(9.5mm) lead length, 5lbs.(2.3kg) tension

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, 60 Hz, resistive or inductive load. For capacitive load, derate by 20%.

	symbols	DS14W	volts
Maximum repetitive peak reverse voltage	VRRM	40	volts
Maximum RMS voltage	VRMS	28	volts
Maximum DC blocking voltage	VDC	40	volts
Maximum average forward rectified current (see Fig. 1)	IAV	1.0	Amp
peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	IFSM	40.0	Amps
Maximum instantaneous forward voltage at 1.0A (note 1)	VF	0.55	volts
Maximum instantaneous reverse current at rated DC blocking voltage (Note 1)	IR	0.2 10.0	mA
Typical thermal resistance (Note 2)	R _{JA} R _{JL}	88.0 28.0	°C/W
operating junction temperature range	TJ	-65 to +150	°C
storage temperature range	TSTG	-65 to +150	°C

NOTE: 1. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

2. Thermal resistance from junction to ambient.

FIG.1-FORWARD CURRENT DERATING CURVE

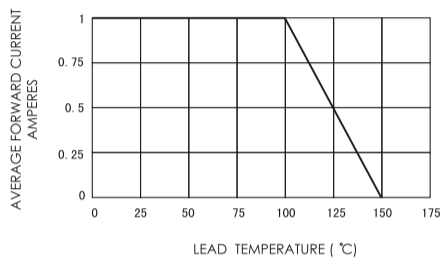


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

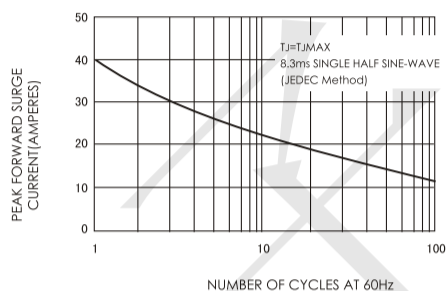


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

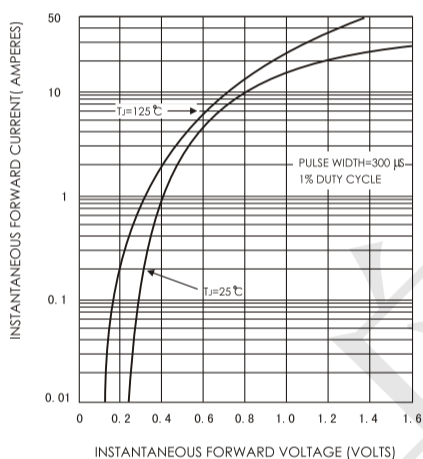


FIG.4-TYPICAL REVERSE CHARACTERISTICS

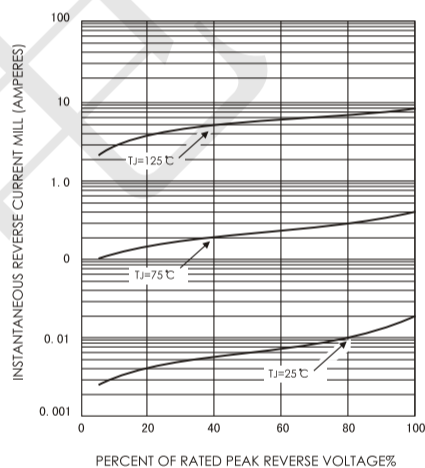


FIG.5-TYPICAL JUNCTION CAPACITANCE

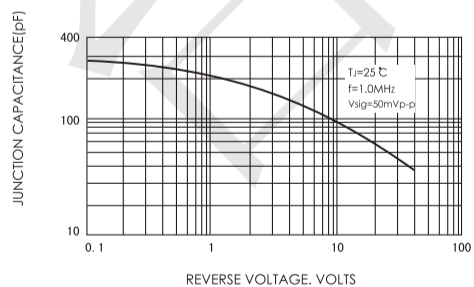
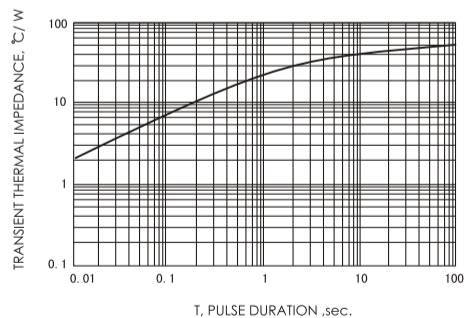
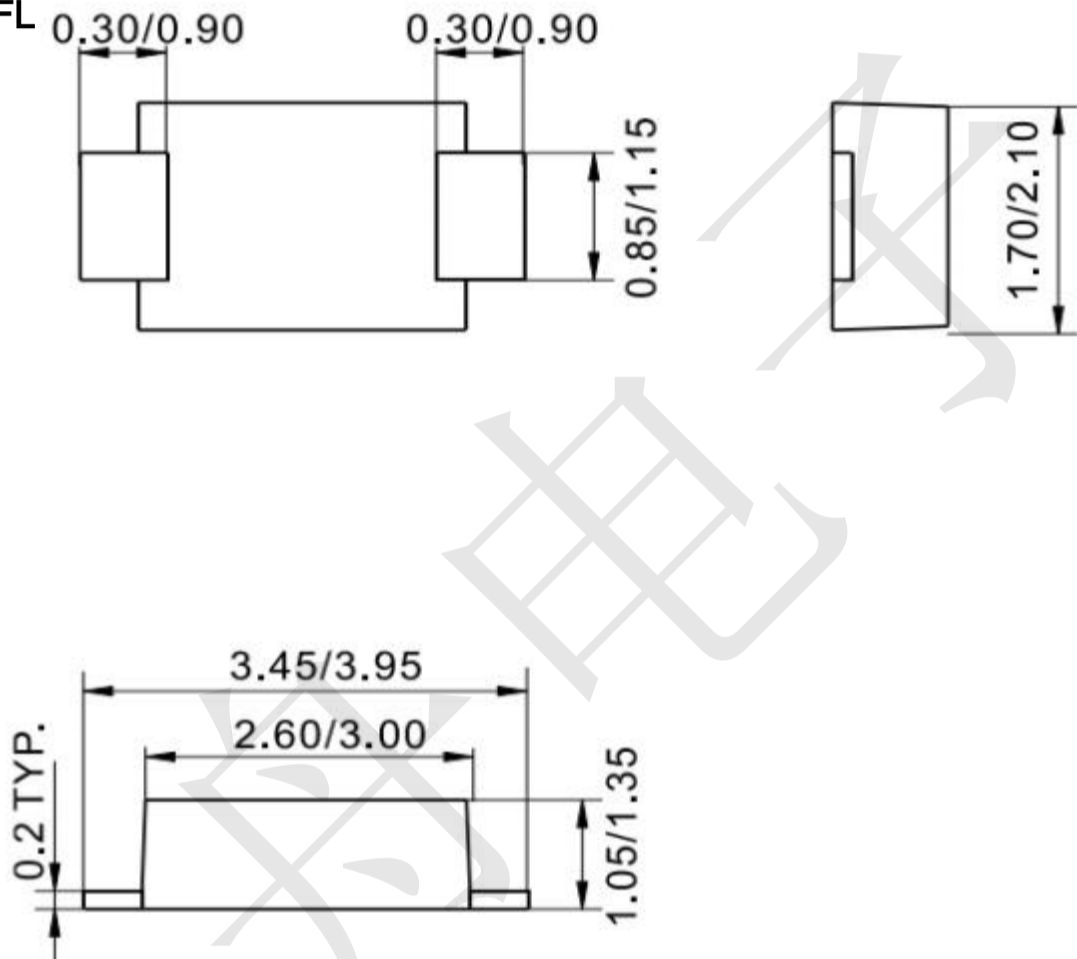


FIG.6-TYPICAL TRANSIENT THERMAL IMPEDANCE



Package information (Unit: mm)

SOD-123FL



Mounting Pad Layout (Unit: mm)

