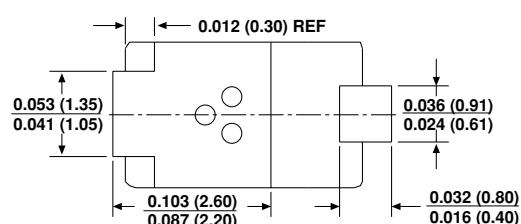
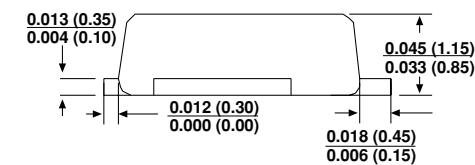
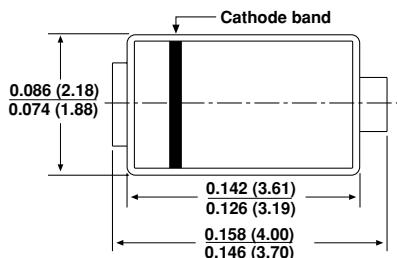



Case Style SMP

*Dimensions in inches
and (millimeters)*
**Reverse Voltage 50 to 600 V
Forward Current 1.0 A**

Features

- Very low profile - typical height of 1.0mm
- Ideal for automated placement
- Glass passivated chip junction
- For use in rectification, power supply, home appliances and telecommunication
- High temperature soldering:
260°C maximum/10 seconds at terminals
- Meets MSL level 1 per J-STD-020C

Mechanical Data

Case: SMP

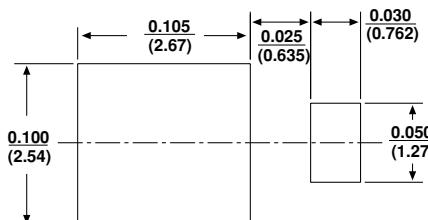
Terminals: Matte Tin plated (E3 Suffix) leads, solderable per J-STD-002B and MIL-STD-750, Method 2026

Polarity: Color band denotes cathode end

Weight: 0.0009 oz., 0.024 g

Epoxy meets UL 94V-0 flammability rating

Mounting Pad Layout



Maximum Ratings & Thermal Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	S1PA	S1PB	S1PD	S1PG	S1PJ	Unit
Device marking code		SA	SB	SD	SG	SJ	
Maximum reverse voltage	V _{RM}	50	100	200	400	600	V
Maximum average forward rectified current Fig.1	I _{F(AV)}			1			A
Peak forward surge current 10ms single half sine-wave superimposed on rated load	I _{FSM}			30			A
Typical thermal resistance ⁽¹⁾	R _{θJA} R _{θJL} R _{θJC}			105 15 20			°C/W
Operating junction temperature	T _J			150			°C
Storage temperature	T _{TG}			-55 to +150			°C

Electrical Characteristics

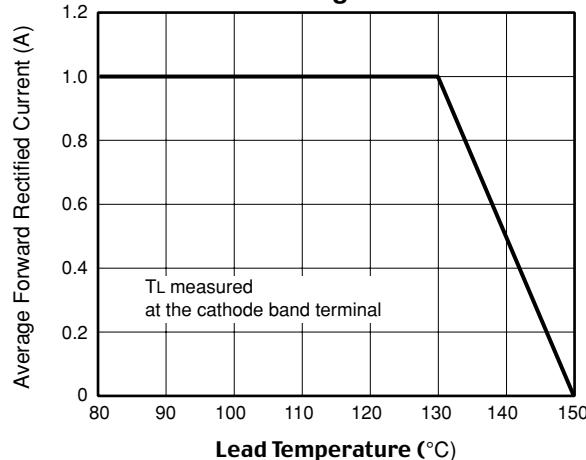
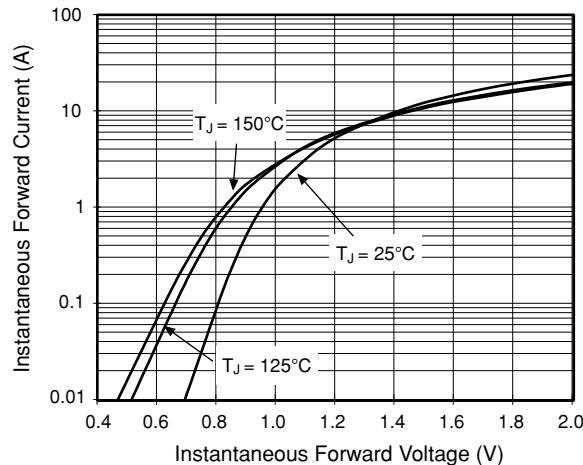
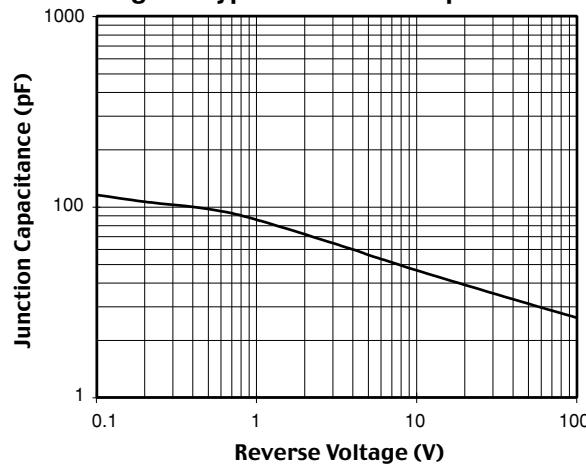
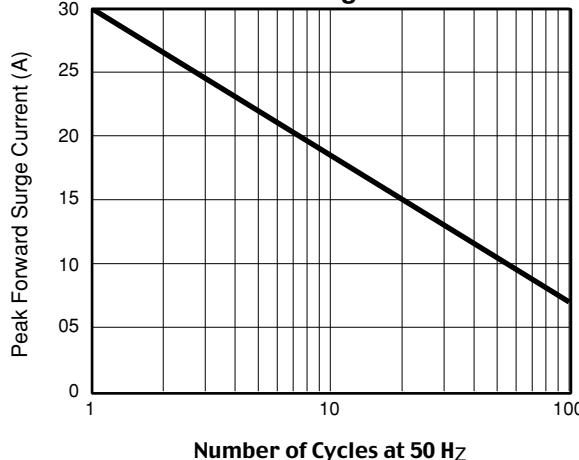
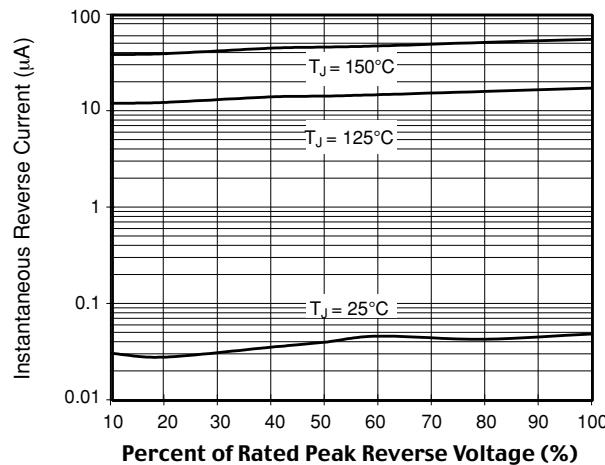
Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	Value	Unit
Maximum instantaneous forward voltage ⁽²⁾ at I _F =1A, T _J =25°C at I _F =1A, T _J =125°C	V _F	1.1 0.95	V
Maximum reverse current at rated VR ⁽²⁾	I _R	1.0 50	µA
Typical reverse recovery time at at I _F = 0.5A, I _R = 1.0A, I _{rr} = 0.25A	t _{rr}	1.8	µs
Typical junction capacitance at 4.0V, 1MHz	C _J	6.0	pF

Notes: (1) Thermal resistance from junction to ambient and junction to lead mounted on P.C.B. with 5.0 x 5.0mm copper pad areas. R_{θJL} is measured at the terminal of cathode band. R_{θJC} is measured at the top centre of the body

(2) Pulse test: 300µs pulse width, 1% duty cycle

**Ratings and
Characteristic Curves** ($T_A = 25^\circ\text{C}$ unless otherwise noted)

**Fig. 1 – Maximum Forward Current
Derating Curve**

**Fig. 3 – Typical Instantaneous
Forward Characteristics**

Fig. 5 – Typical Junction Capacitance

**Fig. 2 – Maximum Non-Repetitive Peak
Forward Surge Current**

**Fig. 4 – Typical Reverse Leakage
Characteristics**

**Fig. 6 – Typical Transient Thermal
Impedance**
