

SURFACE MOUNTSCHOTTKY RECTIFIERS

Reverse Voltage - 40V

Forward Current - 1.0 A

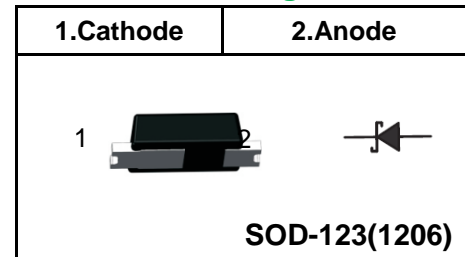
FEATURES

- ◆Metal silicon junction, majority carrier conduction
- ◆Heatsink structure
- ◆Low power loss, high efficiency
- ◆Super Low VF Schottky barrier diodes
- ◆For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications
- ◆LeadfreeincomplywithEUroHS2011/65/EUdirectives

MECHANICAL DATA

- ◆Case:SOD-123(1206)
- ◆Terminals: Solderable per MIL-STD-750, Method2026
- ◆Approx. Weight: 14mg /0.0005oz

Pinning



Marking Code

PS14	P14
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Maximum Ratings (TA = 25 °C unless otherwise noted)

Parameter	Symbols	PS14	Units
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	40	V
Maximum RMS voltage	V_{RMS}	28	V
Maximum DC Blocking Voltage	V_{DC}	40	V
Maximum Average Forward Rectified Current	$I_{F(AV)}$	1.0	A
Peak Forward Surge Current, 8.3ms Single Half Sine-waveSuperimposed On Rated Load	I_{FSM}	15	A
Operating junction temperature range	T_j	125	°C
Storage temperature range	T_{stg}	- 55 to +150	°C

Electrical Characteristics (TA = 25 °C unless otherwise noted)

Parameter	Test Conditions	Symbols	PS14	Units
Minimum Breakdown voltage	$T_a = 25^{\circ}C, I_R = 1mA$	V_{BR}	40	V
Maximum instantaneous forward voltage	$I_F = 1A, T_a = 25^{\circ}C$	V_F	0.58	V
Maximum DC reverse current at rated DC blocking voltage	$T_a = 25^{\circ}C$	I_R	50	uA
Typical junction capacitance	4.0 V, 1 MHz	C_J	60	pF

Fig.1 Forward Current Derating Curve

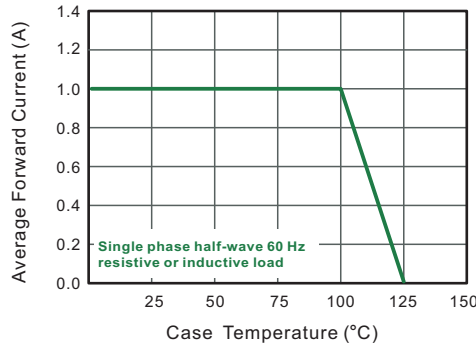


Fig.2 Typical Reverse Characteristics

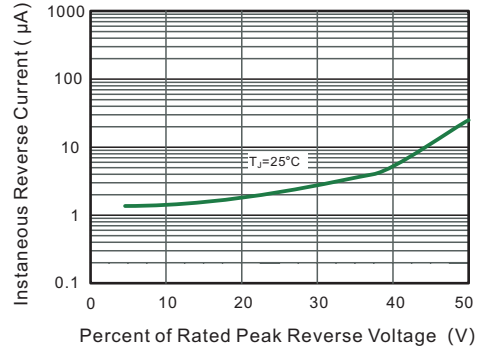


Fig.3 Typical Forward Characteristic

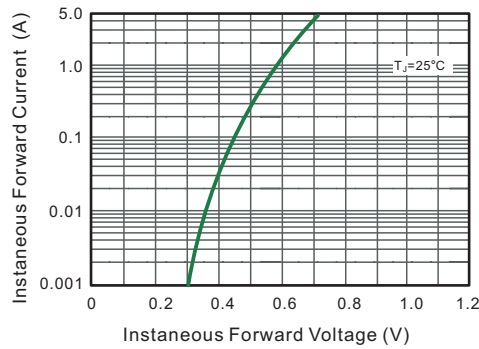


Fig.4 Typical Junction Capacitance

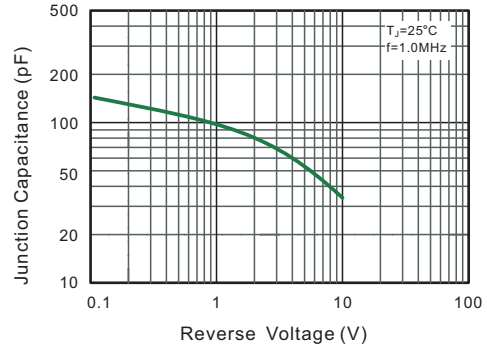
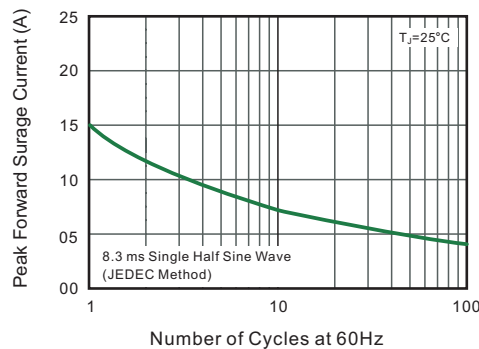
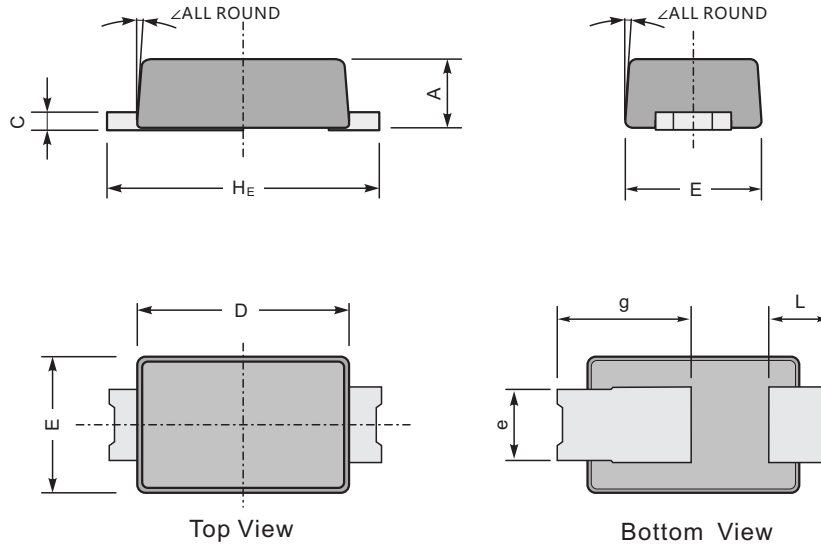


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current



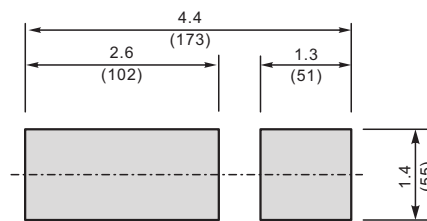
Package Outline SOD-123(1206)

Plastic surface mounted package; 2 leads



UNIT		A	C	D	E	e	g	L	H _E	\angle
mm	max	1.0	0.3	2.9	1.9	1.15	2.0	1.1	3.8	12°
	min	0.8	0.2	2.7	1.7	0.8	1.5	0.7	3.5	
mil	max	39	11.8	114	75	45	79	43	150	
	min	31	7.9	106	67	31	59	28	138	

The recommended mounting pad size



Unit: $\frac{\text{mm}}{\text{mil}}$

Summary of Packing Options

Package	Packing Description	Packing Quantity	Industry Standard
SOD-123(1206)	Tape/Reel, 7" reel	3000	EIA-481-1