

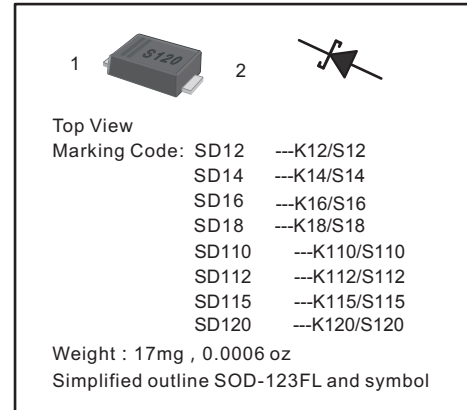
Surface Mount Schottky Barrier Rectifier
Reverse Voltage -20 to 200V
Forward Current - 1.0 A

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode

Features

- Metal silicon junction, majority carrier conduction
- For surface mounted applications
- Low power loss, high efficiency
- High forward surge current capability
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications



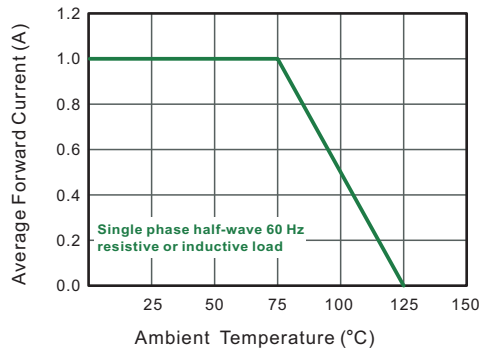
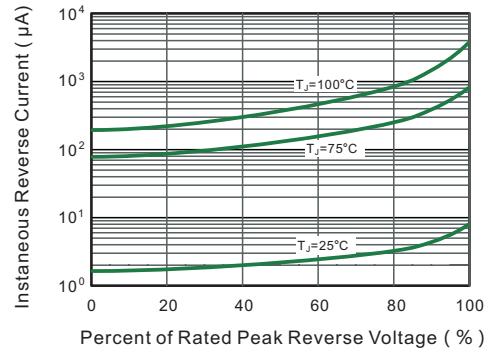
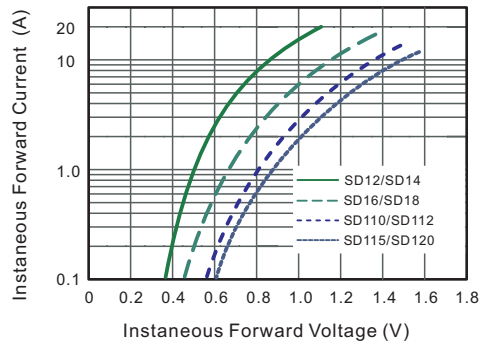
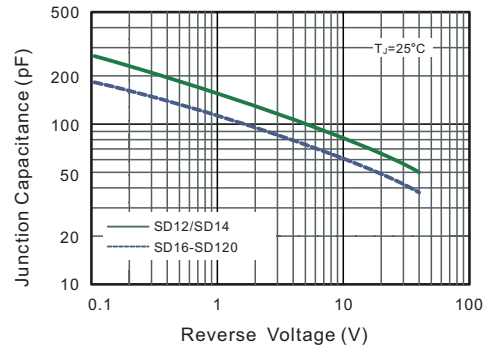
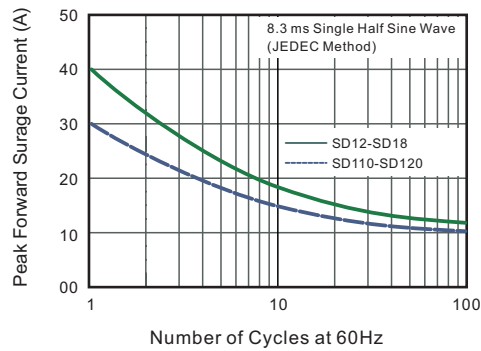
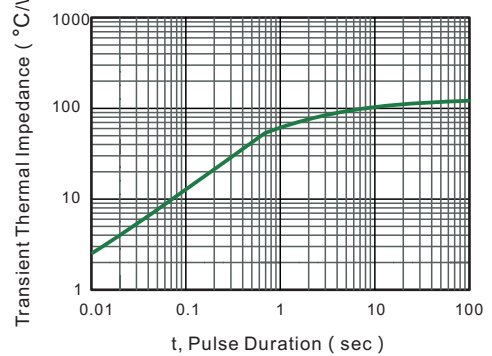
Absolute Maximum Ratings and Electrical characteristics

Ratings at 25 °C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz resistive or inductive load, for capacitive load, derate by 20 %

Parameter	Symbols	SD12	SD14	SD16	SD18	SD110	SD112	SD115	SD120	Units
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	20	40	60	80	100	120	150	200	V
Maximum RMS voltage	V_{RMS}	14	28	42	56	70	84	105	140	V
Maximum DC Blocking Voltage	V_{DC}	20	40	60	80	100	120	150	200	V
Maximum Average Forward Rectified Current	$I_{F(AV)}$	1.0								A
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	40				30				A
Max Instantaneous Forward Voltage at 1 A	V_F	0.55	0.70		0.85		0.90		V	
Maximum DC Reverse Current $T_a = 25^\circ\text{C}$ at Rated DC Reverse Voltage $T_a = 100^\circ\text{C}$	I_R	0.3 10			0.2 5		0.1 2		mA	
Typical Junction Capacitance ¹⁾	C_j	110	80							pF
Typical Thermal Resistance ²⁾	$R_{\theta JA}$	115								°C/W
Operating Junction Temperature Range	T_j	-55 ~ +125								°C
Storage Temperature Range	T_{stg}	-55 ~ +150								°C

1) Measured at 1MHz and applied reverse voltage of 4 V D.C.

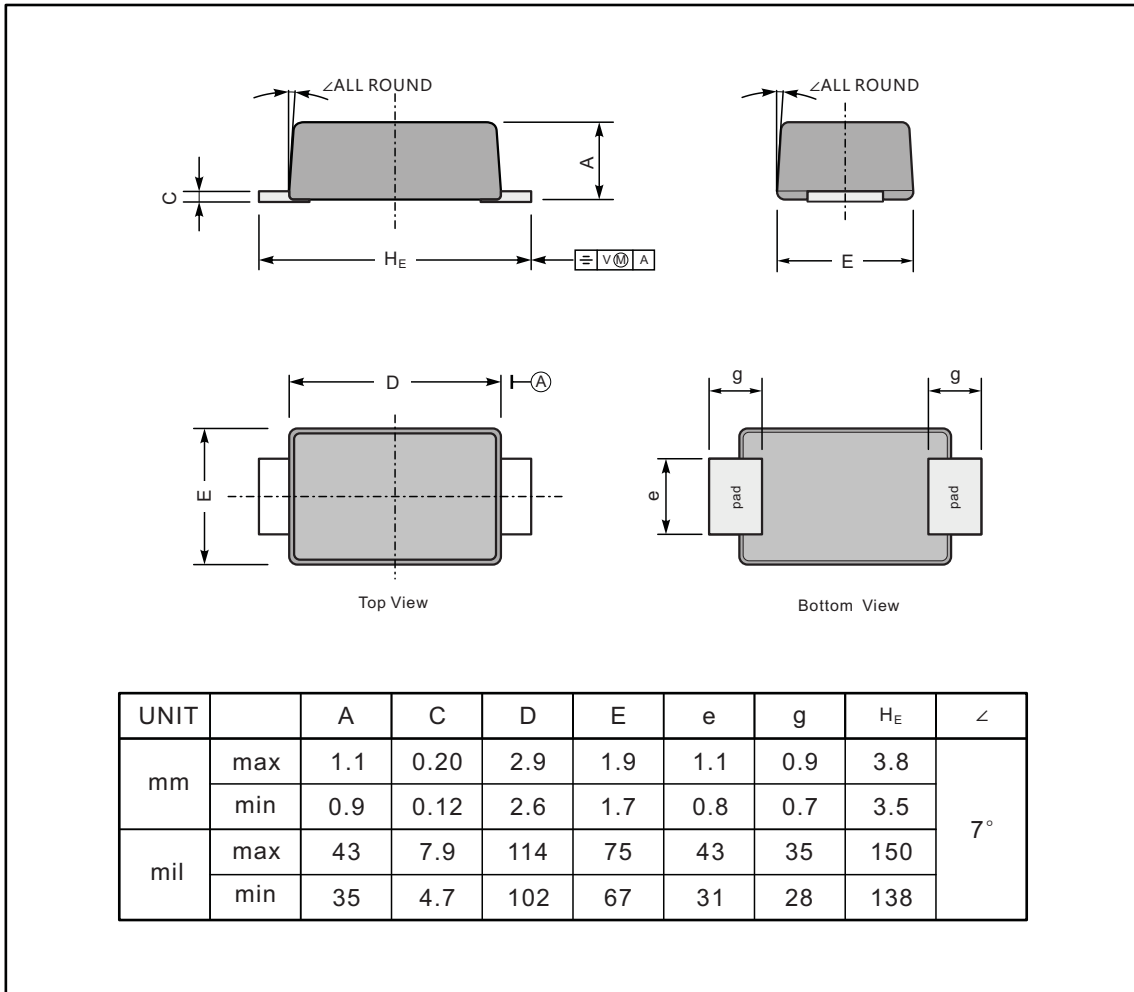
2) P.C.B. mounted with 0.2 X 0.2" (5 X 5 mm) copper pad areas.

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

Fig.6- Typical Transient Thermal Impedance


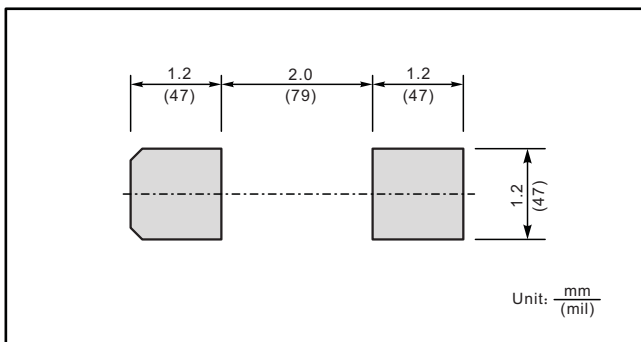
PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SOD123FL



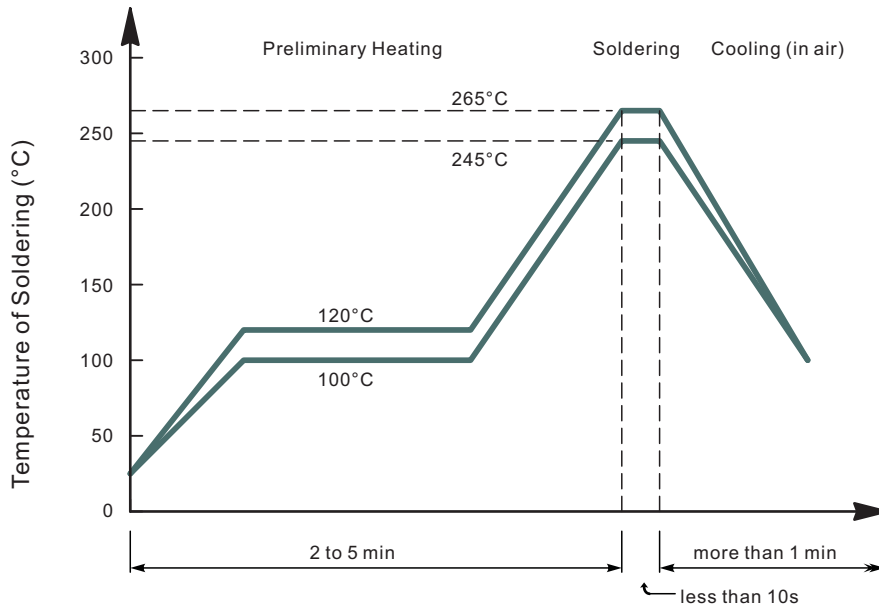
The recommended mounting pad size



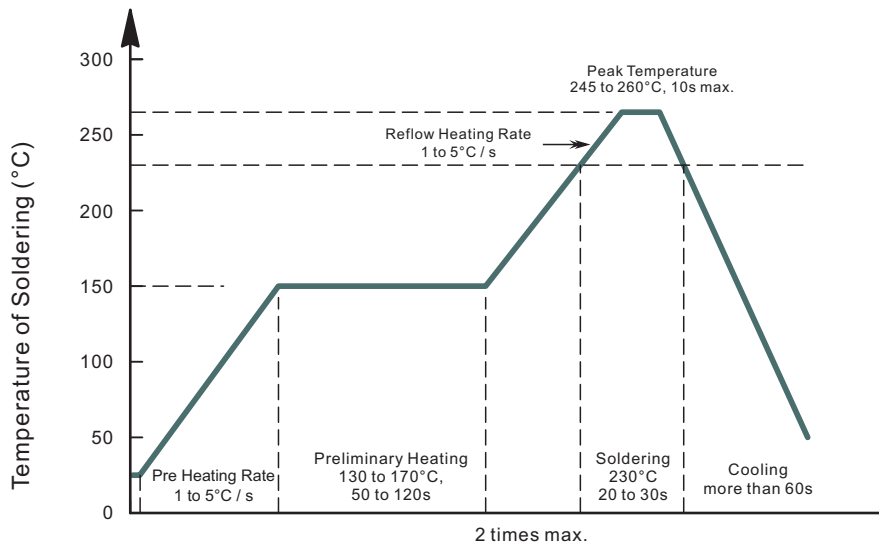
Marking

Type number	Marking code
SD12	K12/S12
SD14	K14/S14
SD16	K16/S16
SD18	K18/S18
SD110	K110/S110
SD112	K112/S112
SD115	K115/S115
SD120	K120/S120

• Recommended condition of flow soldering



• Recommended condition of reflow soldering



Recommended peak temperature is over 245 °C. If peak temperature is below 245 °C, you may adjust the following parameters; time length of peak temperature (longer), time length of soldering (longer), thickness of solder paste (thicker)

• Condition of hand soldering

Temperature: 350°C
Time: 3s max.
Times: one time

• Remark:

Lead free solder paste (96.5Sn/3.0Ag/0.5Cu)

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