



DESCRIPTION

The DS22W~DS220W are available in SOD-123FL package

ORDERING INFORMATION

Package Type	Part Number
SOD-123FL	DS22W
	DS24W
	DS26W
	DS28W
	DS210W
	DS212W
	DS215W
	DS220W
Note	SPQ: 3,000pcs/Reel
AiT provides all RoHS Compliant Products	

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
- Available in SOD-123FL package

PIN DESCRIPTION





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	Symbol	DS22W	DS24W	DS26W	DS28W	DS210W	DS212W	DS215W	DS220W	Unit
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	80	100	105	140	V
Maximum DC Blocking Voltage	V_{DC}	20	40	60	80	100	120	150	200	V
Maximum Average Forward Rectified Current	$I_{F(AV)}$	2.0								A
Peak Forward Surge Current 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC Method)	I_{FSM}	50				40				A
Max Instantaneous Forward Voltage at 2A	V_F	0.55		0.70		0.85		0.95		V
Maximum DC Reverse Current at Rated DC Blocking Voltage	I_R	0.5 10				0.3 5				mA
Typical Junction Capacitance ^{NOTE1}	C_J	220		80						pF
Operating Junction Temperature Range	T_J	-55 ~ +125								°C
Storage Temperature Range	T_{STG}	-55 ~ +150								°C

NOTE1: Measured at 1MHz and applied reverse voltage of 4V D.C.



TYPICAL CHARACTERISTICS

Figure. 1 Forward Current Derating Curve

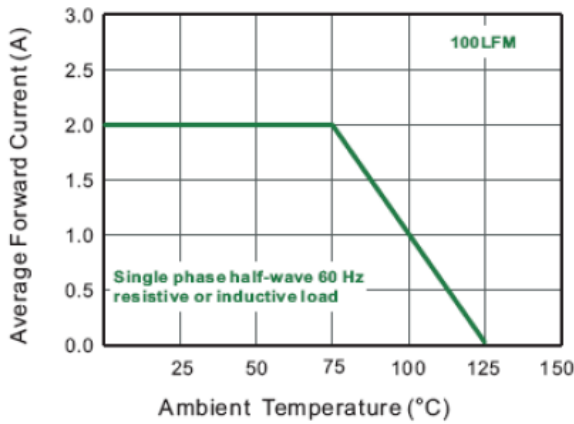


Figure. 2 Typical Reverse Characteristics

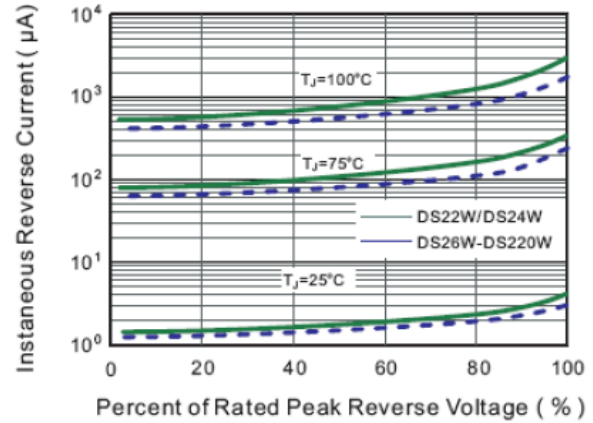


Figure. 3 Typical Forward Characteristic

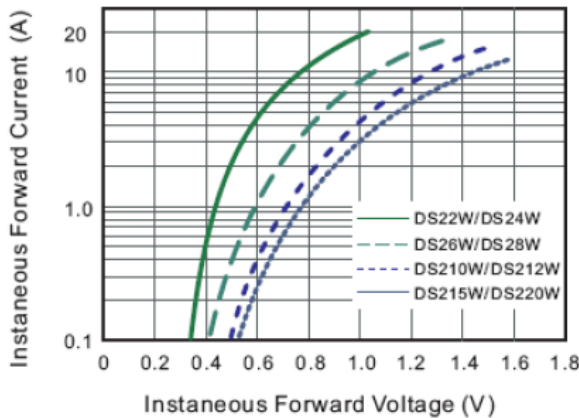


Figure. 4 Typical Junction Capacitance

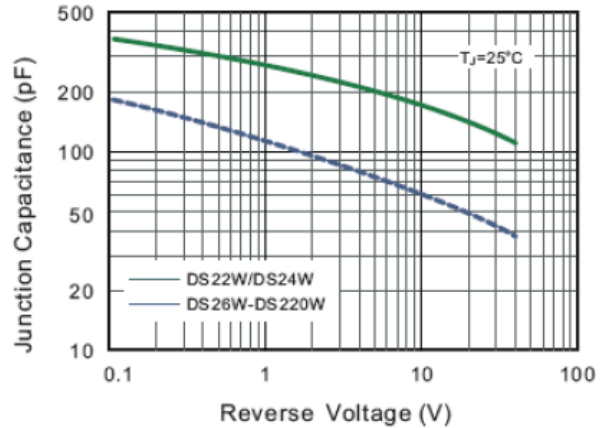
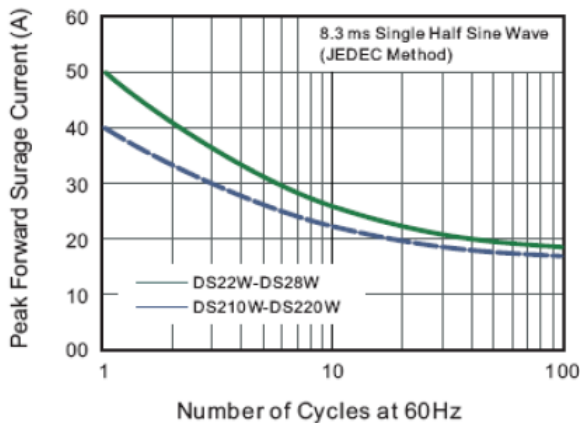
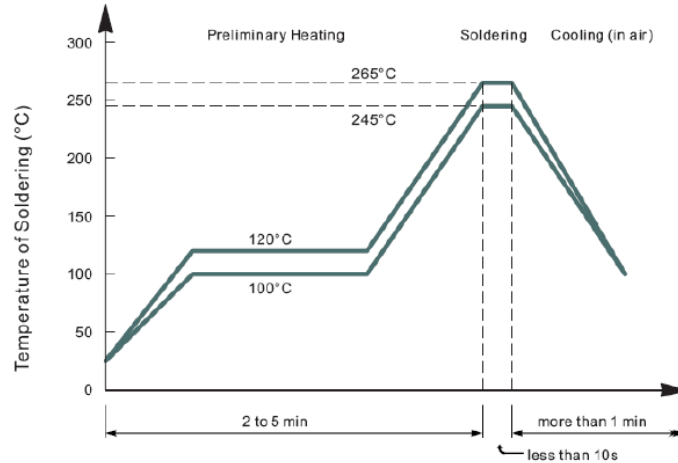


Figure. 5 Maximum Non-Repetitive Peak Forward Surge Current

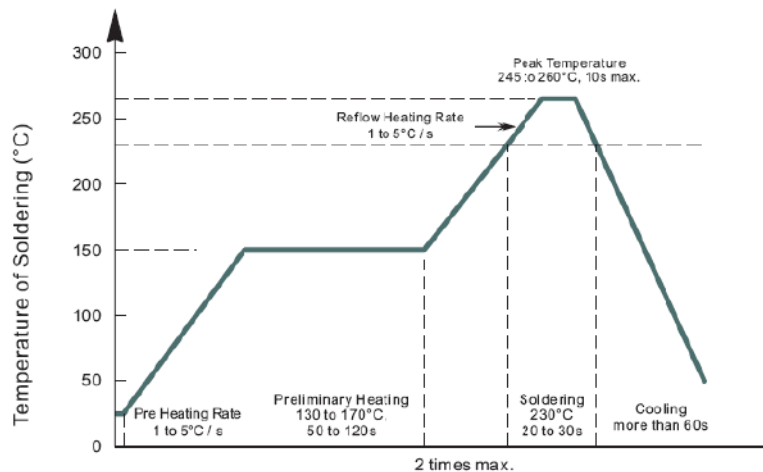




Recommended condition of flow soldering



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:

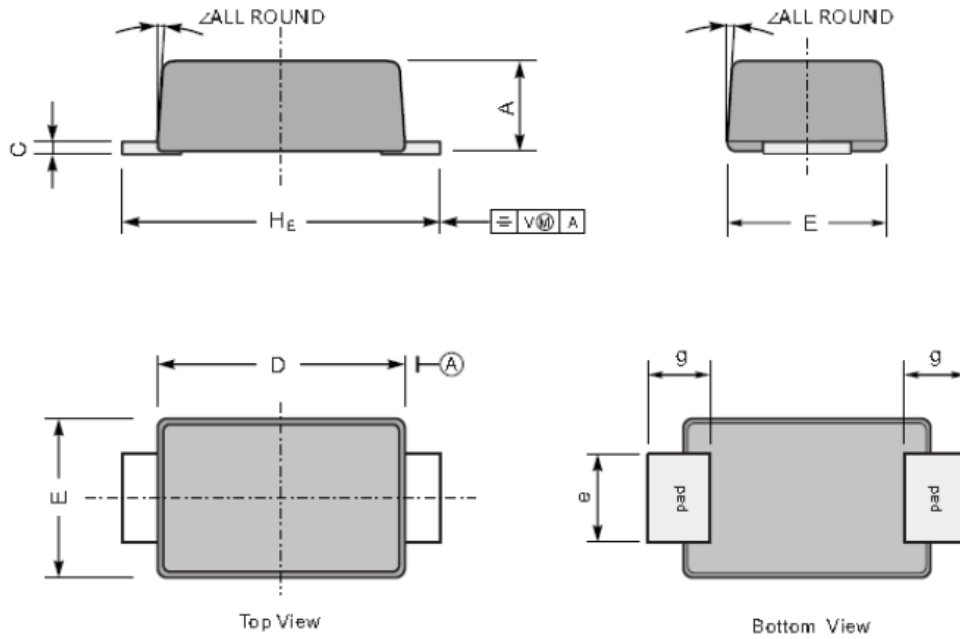
Lead free folder paste (96.5Sn/3.0Ag/0.5Cu)



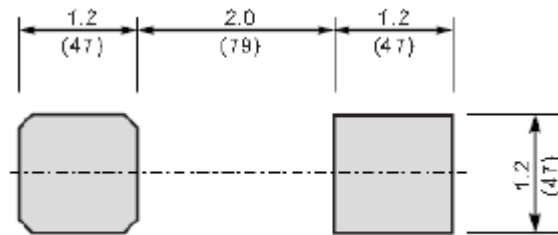
PACKAGE INFORMATION

Dimension in SOD-123FL (Unit: mm)

Plastic surface mounted package; 2 leads



The recommended mounting pad size



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

UNIT		A	C	D	E	e	g	H _E	∠
mm	Max	1.1	0.20	2.9	1.9	1.1	0.9	3.8	7°
	Min	0.9	0.12	2.6	1.7	0.8	0.7	3.5	
mil	Max	43	7.9	114	75	43	35	150	
	Min	35	4.7	102	67	31	23	138	



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