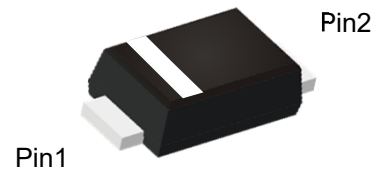


Surface Mount Superfast Recovery Rectifier

Feature

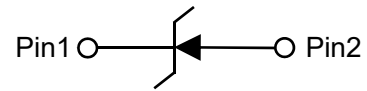
- Easy pick and place
- For surface mounted applications
- Low profile package
- Built-in strain relief
- Superfast recovery times for high efficiency



SOD-123FL(Top View)

Mechanical Characteristics

- Case: SOD-123FL
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight:15mg 0.00053oz



Circuit Diagram

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 current by 20%.

Parameter	Symbol	PES1 AW	PES1 BW	PES1 CW	PES1 DW	PES1 EW	PES1 GW	PES1 JW	Units
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	100	150	200	300	400	600	V
Maximum RMS voltage	V_{RMS}	35	70	105	140	210	280	420	V
Maximum DC blocking voltage	V_{DC}	50	100	150	200	300	400	600	V
Maximum Average Forward Rectified Current at $T_C=125^\circ\text{C}$	$I_{F(AV)}$	1.0							A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load	I_{FSM}	30							A
Maximum Forward Voltage at 1 A	V_F	1.0				1.25		1.68	V
Maximum DC Reverse Current at Rated DC Blocking Voltage	$T_a=25^\circ\text{C}$	5.0							μA
	$T_a=125^\circ\text{C}$	100							
Typical Junction Capacitance at $V_R=4\text{V}, f=1\text{MHz}$	C_J	15							pF
Maximum Reverse Recovery Time ¹⁾	t_{rr}	35							ns
Typical Thermal Resistance ²⁾	$R_{\theta JA}$	85							$^\circ\text{C}/\text{W}$
Operating and Storage Temperature Range	T_J, T_{stg}	-55~+150							$^\circ\text{C}$

Notes:

- 1) Measured with $I_F = 0.5\text{ A}$, $I_R = 1\text{ A}$, $I_{rr} = 0.25\text{ A}$.
- 2) P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper pad areas.

Typical Characteristics

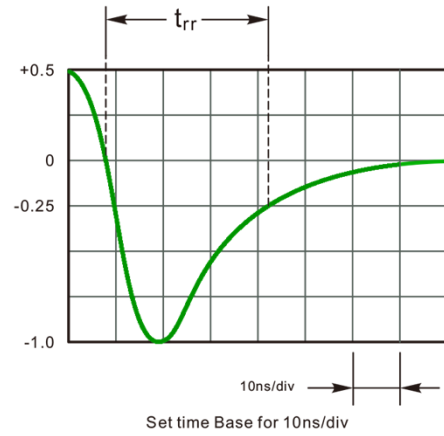
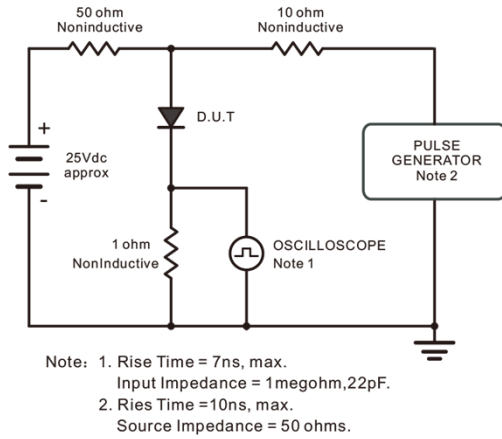


Fig.1 Reverse Recovery Time Characteristic And Test Circuit Diagram

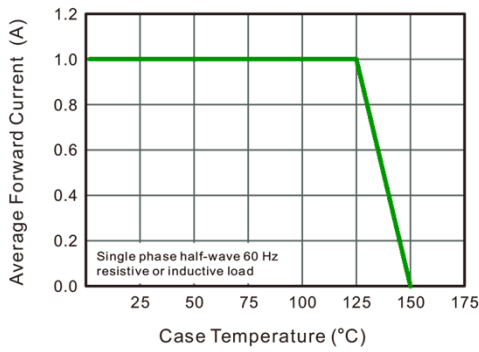


Fig.2 Maximum Average Forward Current Rating

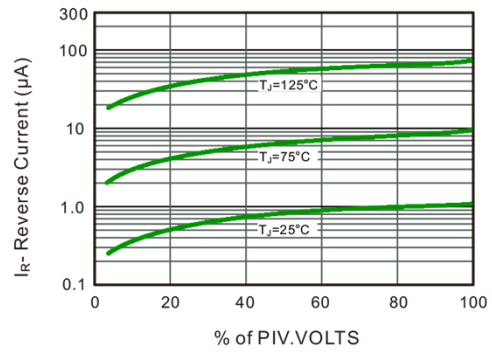


Fig.3 Typical Reverse Characteristics

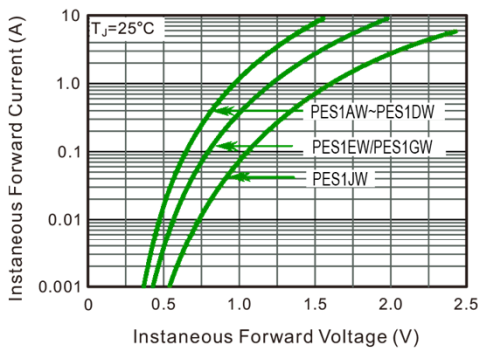


Fig.4 Typical Forward Characteristics

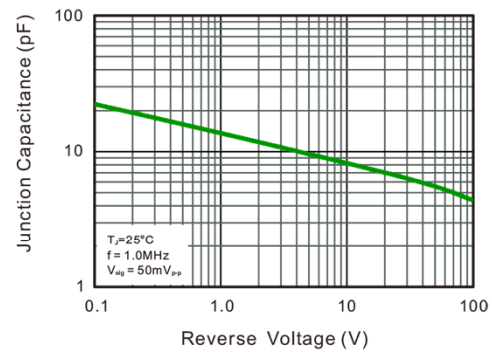


Fig.5 Typical Junction Capacitance

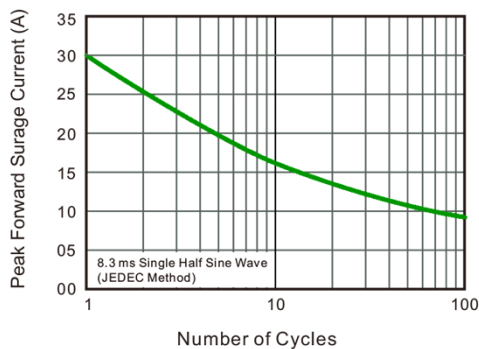
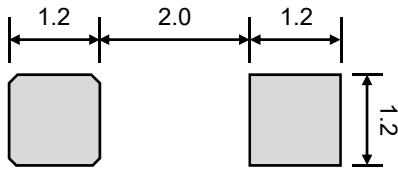
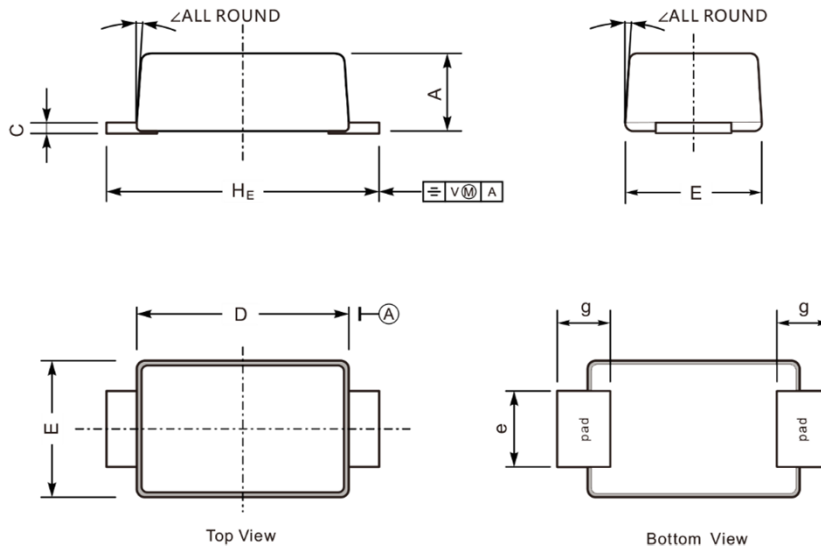


Fig.6 Maximum Non-Repetitive Peak Forward Surge Current

Surface Mount Superfast Recovery Rectifier

PES1AW~PES1JW

Product dimension (SOD-123FL)



Suggested PCB Layout

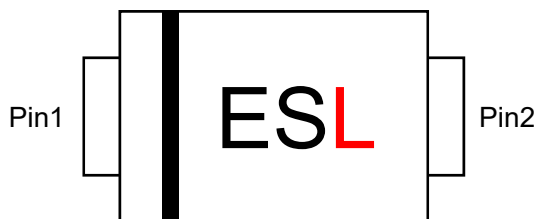
Unit:mm

Dim	Millimeters		Inches	
	Min	Max	Min	Max
A	0.90	1.10	0.035	0.043
C	0.12	0.20	0.005	0.008
D	2.60	2.90	0.102	0.114
E	1.70	1.90	0.067	0.075
e	0.80	1.10	0.031	0.043
g	0.70	0.90	0.028	0.035
H _E	3.50	3.80	0.138	0.150
\angle	7°			

Ordering information

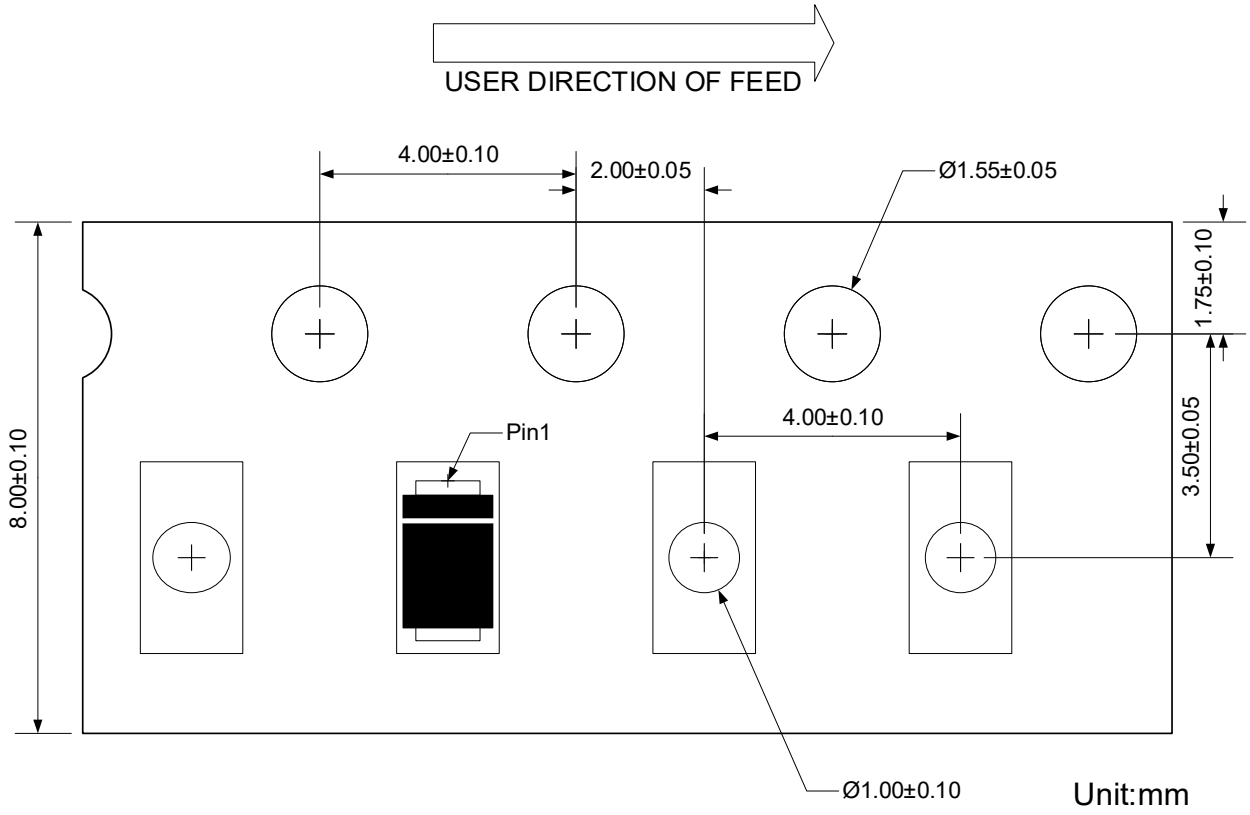
Device	Package	Shipping
PES1AW~PES1JW	SOD-123FL (Pb-Free)	3000 / Tape & Reel

Marking information




Device	Marking
PES1AW	ESL
PES1BW	
PES1CW	
PES1DW	
PES1EW	ESM
PES1GW	
PES1JW	ESH

Load with information




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