ES1AW THRU ES1JW

SURFACE MOUNT SUPERFAST RECOVERY RECTIFIER

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HORNBY ELECTRONIC

REVERSE VOLTAGE: **50 to 600 VOLTS**

FORWARD CURRENT: **1.0 AMPERE**

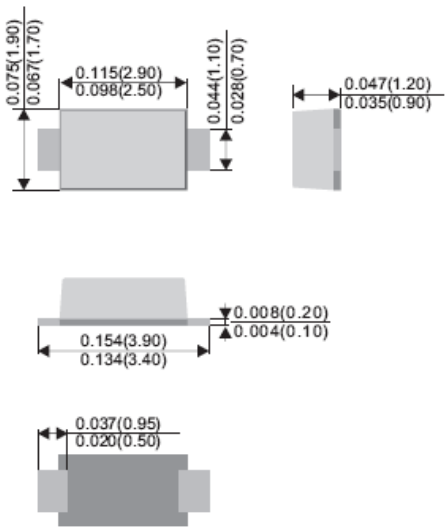
FEATURES

· Plastic package has Underwriters Laboratory Flammability Classification 94V-O
· For surface mounted applications
· Low profile package
· Easy pick and place
· Built-in strain relief
· Low forward voltage drop
· High temperature soldering : 250°C /10 seconds at terminals

MECHANICAL DATA

Case: Molded plastic, SOD-123FL
Terminals: Solder plated, solderable per MIL-STD-750, method 2026 guaranteed
Polarity: Color band denotes cathode end
Packaging: 12mm tape per EIA STD RS-481

SOD-123FL



Dimensions in inches and (millimeters)

Maximum Ratings and Electrical Characteristics

Ratings at 25℃ ambient temperature unless otherwise specified.
Single phase, half wave, 60H_Z, resistive or inductive load.
For capacitive load, derate current by 20%.

	Symbols	*ES1AW*	*ES1BW*	*ES1DW*	*ES1GW*	*ES1JW*	Units
Marking Code		E1	E2	E3	E4	E5	
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	**Volts**
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	**Volts**
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	**Volts**
Maximum Average Forward Rectified Current See Fig.2	$I_{(AV)}$	1.0					**Amp**
Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	30					**Amp**
Maximum Forward Voltage at 1.0A	V_F	0.95			1.25	1.70	**Volts**
Maximum Reverse Current at T_A=25℃	I_R	5.0					**μAmp**
at Rated DC Blocking Voltage T_A=100℃		100					
Typical Junction Capacitance (Note 1)	C_J	15					**pF**
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$	35					**℃/W**
Maximum Reverse Recovery Time (Note 3)	T_{RR}	35					**nS**
Operating Junction Temperature Range	T_J	-55 to +150					**℃**
Storage Temperature Range	Tstg	-55 to +150					**℃**

NOTES:

1- Measured at 1 MH_Z and applied reverse voltage of 4.0 VDC.

2- P.C.B. mounted with 5.0 x 5.0mm copper pad areas.

3- Reverse Recovery Test Conditions：I_F=.5A，I_R=1A，I_{RR}=.25A.

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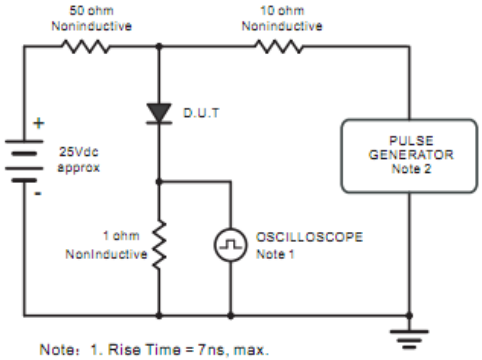
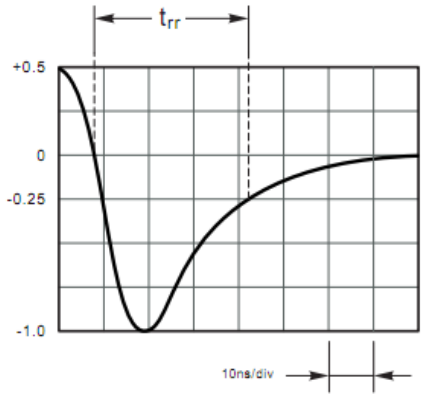
RATINGS AND CHARACTERISTIC CURVES

Fig.1 Reverse Recovery Time Characteristic And Test Circuit Diagram



Note: 1. Rise Time = 7ns, max.
Input Impedance = 1 megohm, 22pF.
2. Ries Time =10ns, max.
Source Impedance = 50 ohms.



Set time Base for 10ns/div

Fig.2 Maximum Average Forward Current Rating

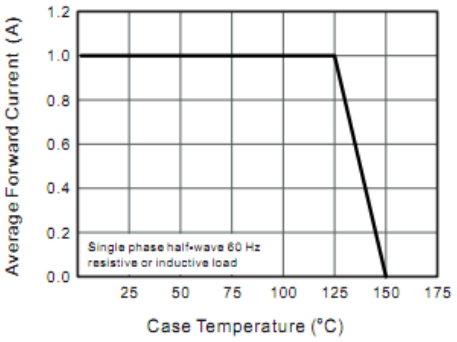


Fig.3 Typical Reverse Characteristics

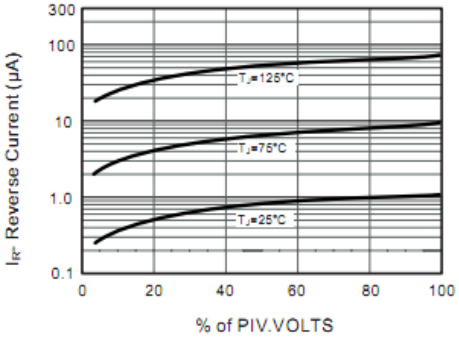


Fig.4 Typical Forward Characteristics

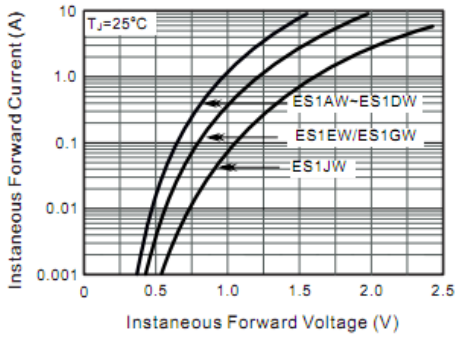


Fig.5 Typical Junction Capacitance

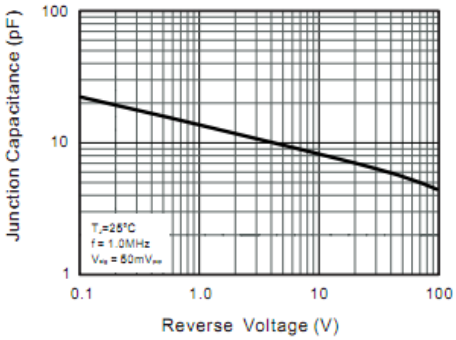


Fig.6 Maximum Non-Repetitive Peak Forward Surage Current