



PINGWEI ENTERPRISE

# ES07A THRU ES07J

## 1.0 AMP. SURFACE MOUNT SUPER FAST RECTIFIERS

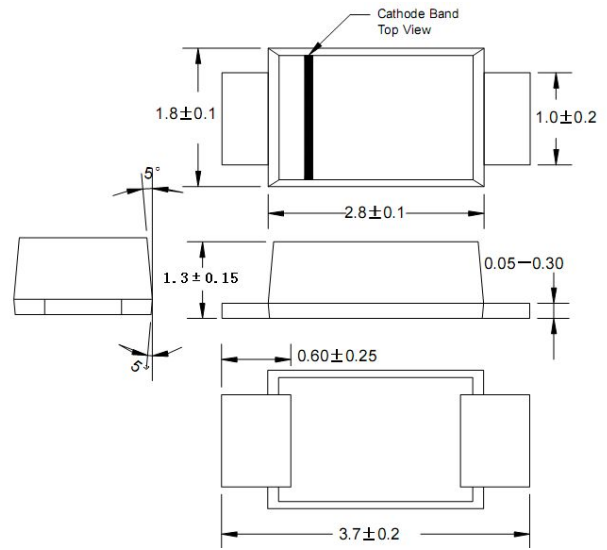
### FEATURES

- . Glass passivated device
- . Ideal for surface mounted applications
- . Low reverse leakage
- . Metallurgically bonded construction
- . Superfast recovery time for high efficiency
- . High temperature soldering guaranteed:  
250°C/10 seconds at terminals.

### MECHANICAL DATA

- . Case: Molded plastic
- . Epoxy: UL94V-0 rate flame retardant
- . Lead: MIL-STD- 202E, Method 208 guaranteed
- . Polarity: Color band denotes cathode end
- . Packaging: 12mm tape per EIA STD RS-481
- . Mounting position: Any

### SOD-123FL



Dimensions in millimeters

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

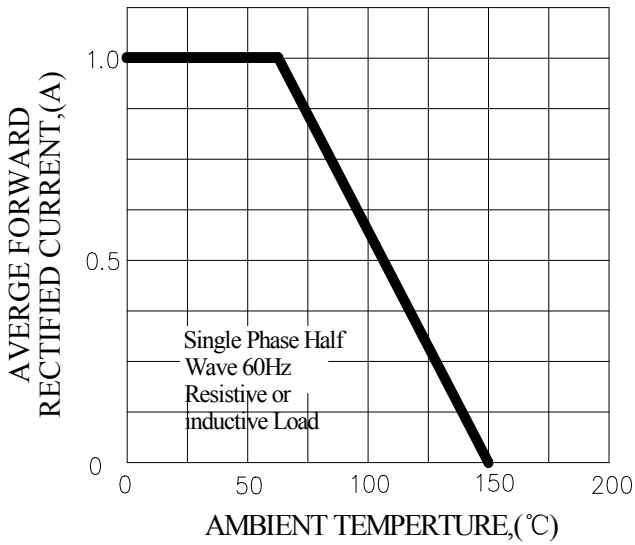
Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Type Number	SYM BOL	ES07A	ES07B	ES07D	ES07G	ES07J	units
	marking	EA	EB	ED	EG	EJ	
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	V
Maximum RMS Voltage	$V_{RMS}$	35	70	140	280	420	V
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	V
Maximum Average Forward rectified Current at $T_A = 65^\circ\text{C}$ (Note 1)	$I_{F(AV)}$	1.0					A
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rate load (JEDEC method)	$I_{FSM}$	25					A
Maximum Instantaneous forward Voltage at 1.0 A DC	$V_F$	0.95			1.3	1.7	V
Maximum DC Reverse Current @ $T_A = 25^\circ\text{C}$ at rated DC blocking voltage @ $T_A = 125^\circ\text{C}$	$I_R$	5.0					$\mu\text{A}$
		100.0					
Maximum Reverse Recovery Time (Note 2)	$t_{rr}$	35					nS
Typical Junction Capacitance (Note 3)	$C_J$	20			10		pF
Typical thermal resistance (Note 4)	$R_{(JA)}$	180					$^\circ\text{C}/\text{W}$
Storage Temperature Range	$T_{STG}$	-55 to +150					$^\circ\text{C}$
Operation Temperature Range	$T_J$	-55 to +150					$^\circ\text{C}$

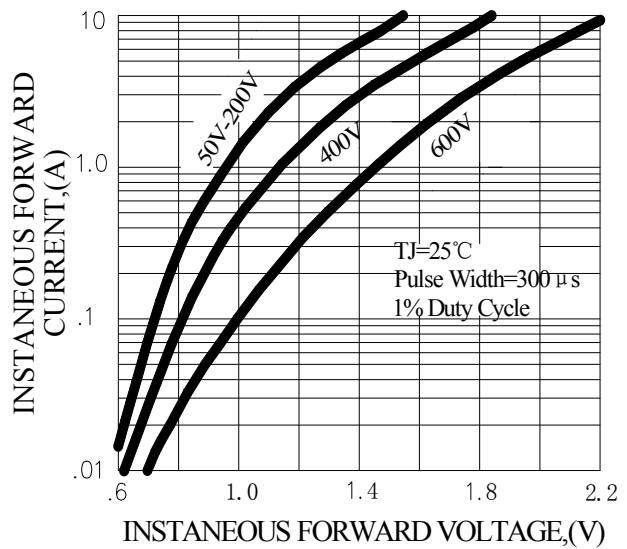
- Note:**
1. Averaged over any 20 ms period.
  2. Test Conditions:  $I_F=0.5\text{A}$ ,  $I_R=1.0\text{A}$ ,  $I_{RR}=0.25\text{A}$
  3. Measured at 1MHz and applied reverse voltage of 4.0 volts d.c.
  4. Measured on P.C.Board with  $0.2 \times 0.2'' (5.0 \times 5.0\text{mm})$  Copper Pad Areas

**RATING AND CHARACTERISTIC CURVES (ES07A THRU ES07J)**

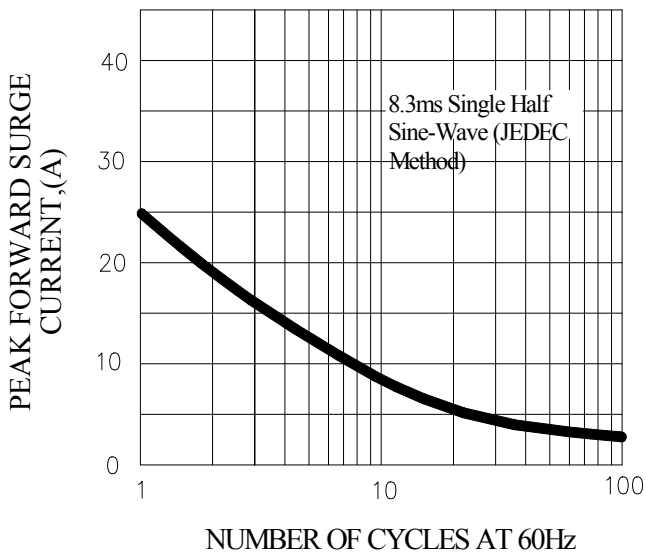
**FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE**



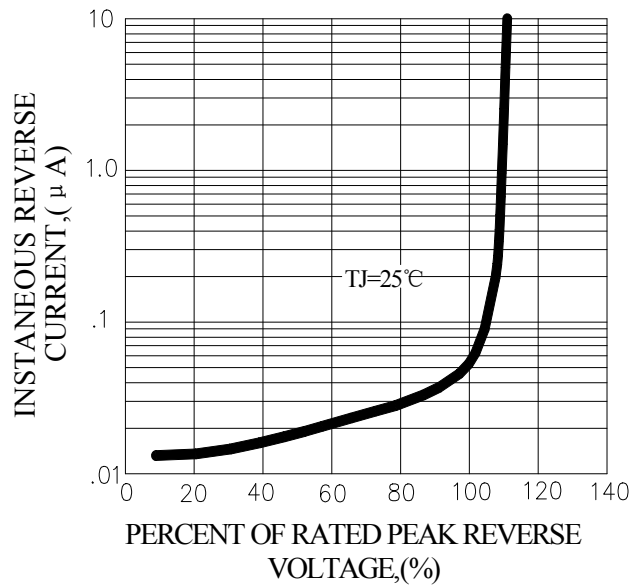
**FIG.2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**



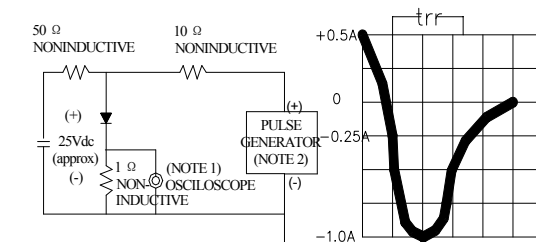
**FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT**



**FIG.4-TYPICAL REVERSE CHARACTERISTICS**



**FIG.5-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC**



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

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