

# ES2A THRU ES2J

## SURFACE MOUNT SUPER FAST RECOVERY RECTIFIER

Reverse Voltage - 50 to 600 Volts    Forward Current - 2.0 Ampere

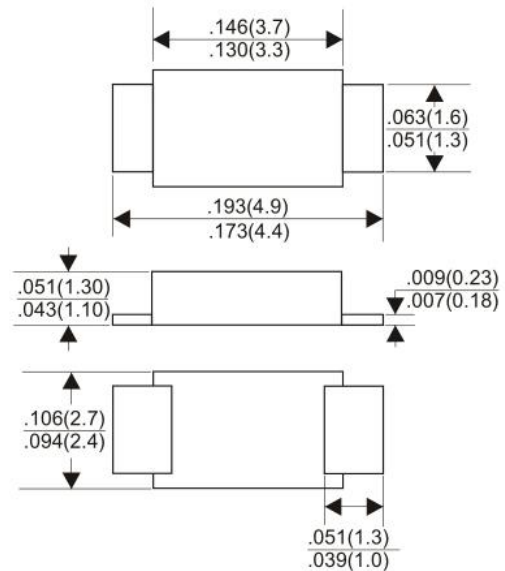
### FEATURES

- ◆ For surface mounted applications
- ◆ Low profile package
- ◆ Glass Passivated Chip Junction
- ◆ Superfast reverse recovery time
- ◆ Lead free in comply with EU RoHS 2011/65/EU directives

### Mechanical Data

- ◆ Case: SMAF
- ◆ Terminals: Solderable per MIL-STD-750, Method 2026
- ◆ Approx. Weight: 27mg / 0.00095oz

### SMAF



Dimensions in inches and (millimeters)

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25°C ambient temperature unless otherwise specified.

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

PARAMETER	SYMBOL	ES2A	ES2B	ES2C	ES2D	ES2E	ES2G	ES2J	UNIT
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	50	100	150	200	300	400	600	VOLTS
Maximum RMS Voltage	$V_{RMS}$	35	70	105	140	210	280	420	VOLTS
Maximum DC Blocking Voltage	$V_{DC}$	50	100	150	200	300	400	600	VOLTS
Maximum Average Forward Rectified Current At $T_A = 125^\circ\text{C}$	$I_{(AV)}$	2.0							Amps
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load	$I_{FSM}$	50							Amps
Maximum instantaneous forward voltage per at 2.0A	$V_F$	1				1.25		1.70	VOLTS
Maximum DC Reverse Current at Rated DC blocking voltage	$I_R$	$T_A = 25^\circ\text{C}$							uA
		5.0							
Maximum Reverse Recovery Time Test conditions $I_F = 0.5\text{A}$ , $I_R = 1.0\text{A}$ , $I_{RR} = 0.25\text{A}$	$t_{rr}$	$T_A = 125^\circ\text{C}$							nS
		100							
Typical Junction Capacitance (Measured at 1.0MHz and applied reverse voltage of 4.0V)	$C_J$	30							pF
Typical Thermal Resistance	$R_{\theta JA}$	65							$^\circ\text{C/W}$
	$R_{\theta JL}$	20							
Operating Junction Temperature	$T_J$	-55 to +150							$^\circ\text{C}$
Storage Temperature Rang	$T_{STG}$	-55 to +150							$^\circ\text{C}$

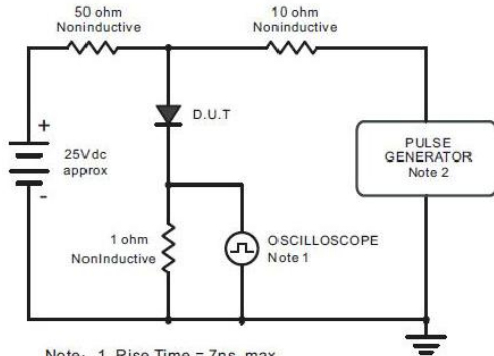
Note: 1. Thermal resistance from Junction to ambient and from junction to lead mounted on P.C.B. with  $2.0 \times 2.0''$  ( $5.0 \times 5.0\text{cm}$ ) copper pad areas.

# ES2A THRU ES2J

## SURFACE MOUNT SUPER FAST RECOVERY RECTIFIER

Reverse Voltage - 50 to 600 Volts Forward Current - 2.0 Ampere

### RATING AND CHARACTERISTIC CURVES ES2A THRU ES2J



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

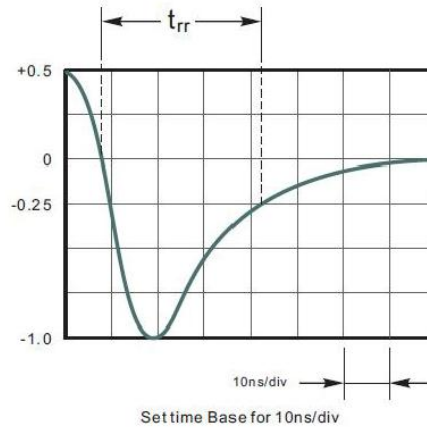


Fig.2 Maximum Average Forward Current Rating

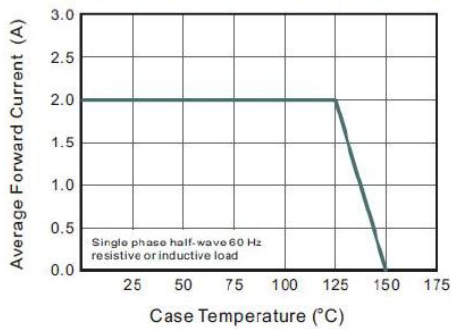


Fig.3 Typical Reverse Characteristics

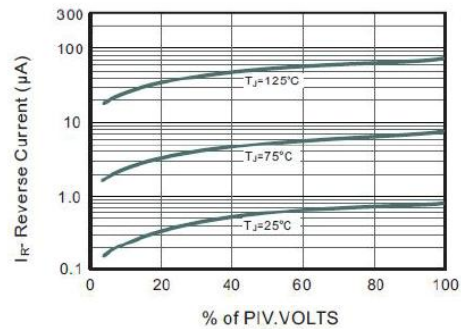


Fig.4 Typical Forward Characteristics

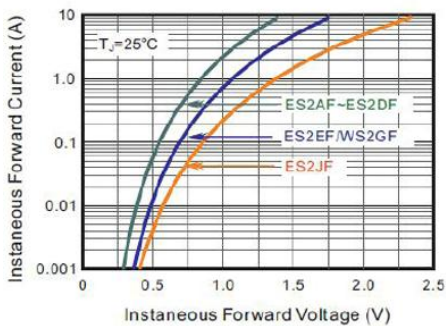


Fig.5 Typical Junction Capacitance

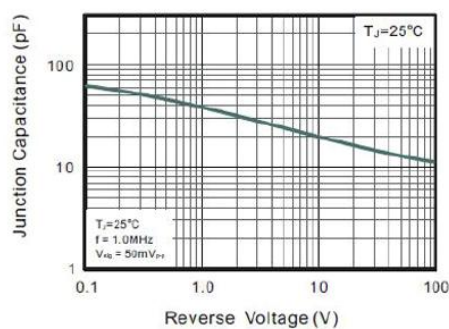
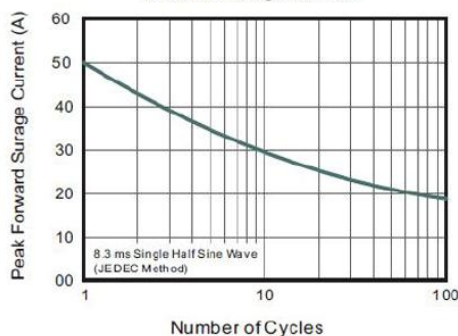


Fig.6 Maximum Non-Repetitive Peak Forward Surge Current



Note: Specifications are subject to change without notice. For more detail and update, please visit our website.