

# ES2A THRU ES2J

## SURFACE MOUNT FAST ULTRAFAST RECTIFIER

VOLTAGE: 50 TO 600V

CURRENT: 2.0A



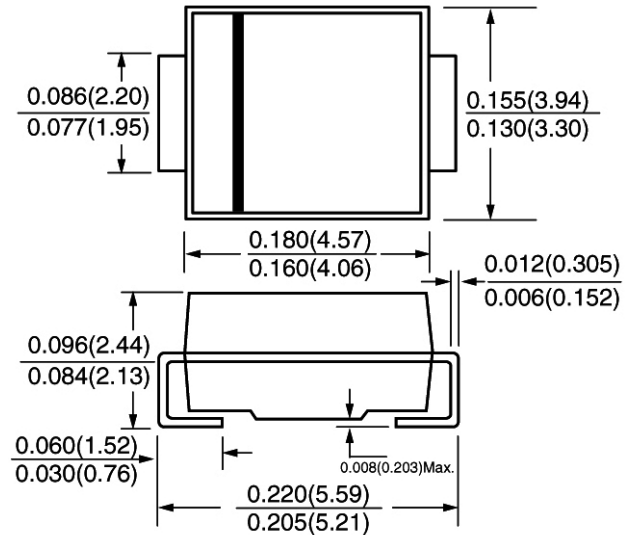
### FEATURE

Ideal for surface mount pick and place application  
 Low profile package  
 Built-in strain relief  
 High surge capability  
 High temperature soldering guaranteed  
 260°C/10sec/at terminals  
 Glass passivated chip  
 Ultrafast recovery time for high efficiency

### MECHANICAL DATA

Terminal: Solder plated, solderable per MIL-STD-750, Method 2026  
 Case: JEDEC DO-214AC molded plastic body over passivated chip  
 Polarity: color band denotes cathode

### SMB / DO-214AA



Dimensions in inches and (millimeters)

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(single-phase, half-wave, 60HZ, resistive or inductive load rating at 25°C, unless otherwise stated, for capacitive load, derate current by 20%)

	SYMBOL	ES2A	ES2B	ES2C	ES2D	ES2G	ES2J	units
Maximum Recurrent Peak Reverse Voltage	V <sub>rrm</sub>	50	100	150	200	400	600	V
Maximum RMS Voltage	V <sub>rms</sub>	35	70	105	140	280	420	V
Maximum DC blocking Voltage	V <sub>dc</sub>	50	100	150	200	400	600	V
Maximum Average Forward Rectified at T <sub>L</sub> = 100°C	I <sub>f(av)</sub>	2.0						A
Peak Forward Surge Current 8.3ms single half sine- wave superimposed on rated load	I <sub>fsm</sub>	50.0						A
Maximum Instantaneous Forward Voltage at rated forward current 2.0A	V <sub>f</sub>	0.92			1.25		1.7	V
Maximum DC Reverse Current Ta = 25°C at rated DC blocking voltage Ta = 125°C	I <sub>r</sub>	2.0 / 50.0						µA
Maximum Reverse Recovery Time (Note 1)	T <sub>rr</sub>	20			25		35	nS
Typical Junction Capacitance (Note 2)	C <sub>j</sub>	18.0						pF
Typical Thermal Resistance (Note 3)	R <sub>th(jl)</sub>	20.0						°C/W
Storage and Operating Junction Temperature	T <sub>stg</sub> , T <sub>j</sub>	-55 to +150						°C

#### Note:

- Reverse Recovery Condition I<sub>f</sub> = 0.5A, I<sub>r</sub> = 1.0A, I<sub>rr</sub> = 0.25A
- Measured at 1.0 MHz and applied reverse voltage of 4.0V<sub>dc</sub>
- Thermal Resistance from Junction to terminal mounted on 5×5mm copper pad area

RATINGS AND CHARACTERISTIC CURVES ES2A THRU ES2J

Fig. 1 – Maximum Forward Current Derating Curve

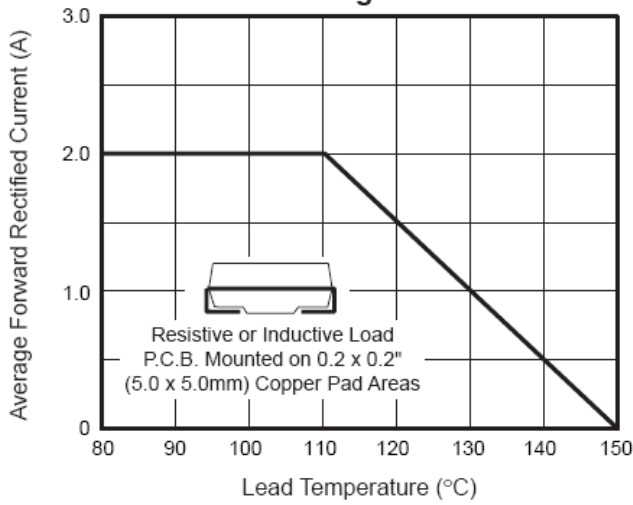


Fig. 2 – Maximum Non-Repetitive Peak Forward Surge Current

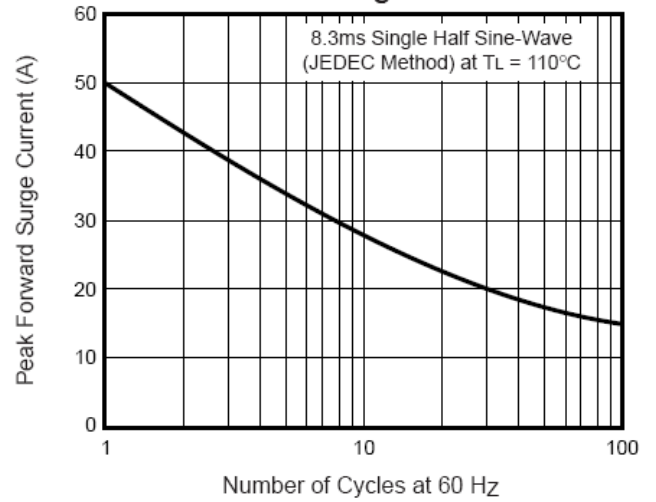


Fig. 3 – Typical Instantaneous Forward Characteristics

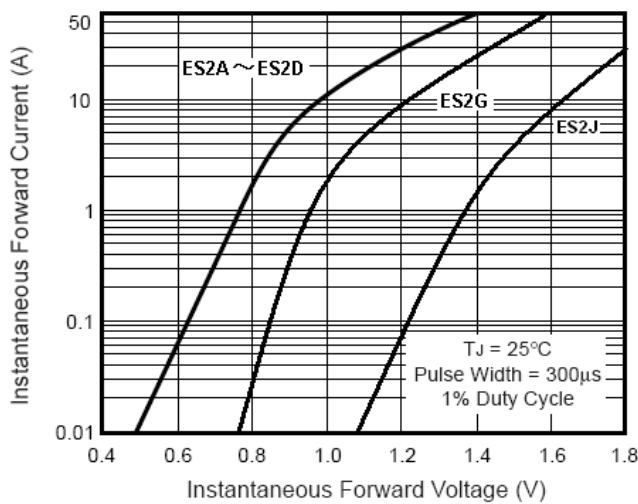


Fig.4- Typical Reverse Current

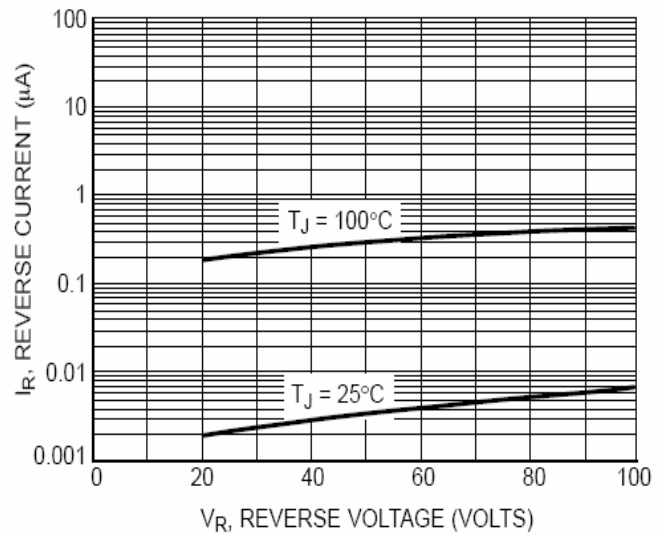


Fig. 5 – Typical Junction Capacitance

