

# ES2A THUR ES2J

## ES2A THUR ES2J Super-Fast Surface Mount Rectifiers

### General description

Super-Fast Surface Mount Rectifiers  
 Reverse Voltage: 50 to 600V  
 Forward Current: 2.0A  
 SMB/DO214AA package

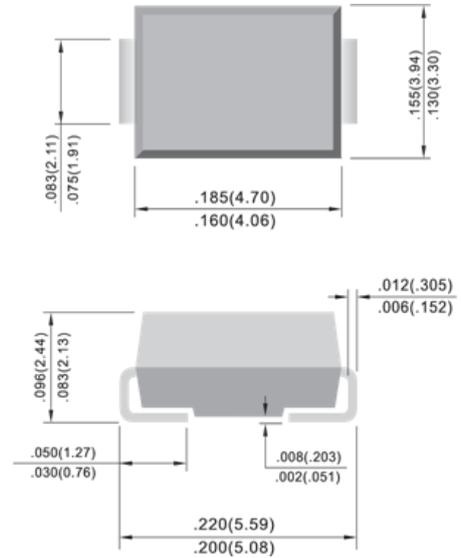
### FEATURES

- The plastic package carries Underwriters Laboratory
- Flammability Classification 94V-0
- For surface mounted applications
- Low reverse leakage
- Built-in strain relief ideal for automated placement
- High forward surge current capability
- High temperature soldering guaranteed
- 250 °C/10 seconds at terminal

### MECHANICAL DATA

- Case: JEDEC DO-214AA molded plastic
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Mounting Position: Any
- Weight: 0.005 ounce, 0.138 gram

### SMB/DO-214AA



Unit: inch (mm)

### Maximum Ratings & Thermal Characteristics (Ratings at 25°C ambient temperature unless otherwise specified.)

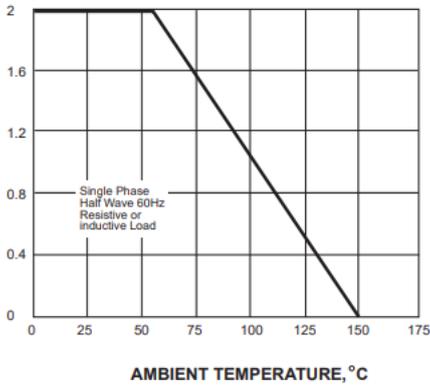
Characteristic	Symbol	ES2A	ES2B	ES2C	ES2D	ES2E	ES2G	ES2J	Unit
Marking Code	Mark	ES2A	ES2B	ES2C	ES2D	ES2E	ES2G	ES2J	N/A
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>	50	100	150	200	300	400	600	V
Working Peak Reverse Voltage	V <sub>RWM</sub>								
DC Blocking Voltage	V <sub>R</sub>								
RMS Reverse Voltage	V <sub>R(RMS)</sub>	35	70	105	140	210	280	420	V
Average Rectified Output Current @T <sub>L</sub> = 75°C	I <sub>o</sub>	2.0							A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	50							A
Forward Voltage @I <sub>F</sub> = 3.0A	V <sub>FM</sub>	0.95			1.25		1.7		V
Peak Reverse Current @T <sub>A</sub> = 25°C	I <sub>RM</sub>	5.0							µA
At Rated DC Blocking Voltage @T <sub>A</sub> = 100°C		50							
Reverse Recovery Time (Note 1)	t <sub>rr</sub>	35							nS
Typical Junction Capacitance (Note 2)	C <sub>j</sub>	60							pF
Typical Thermal Resistance (Note 3)	R <sub>JL</sub>	40							°C/W
Operating and Storage Temperature Range	T <sub>j</sub> , T <sub>STG</sub>	-55 to +150							°C

Note: 1. Measured with I<sub>F</sub> = 0.5 A, I<sub>R</sub> = 1 A, I<sub>rr</sub> = 0.25 A

## RATING AND CHARACTERISTIC CURVES

AVERAGE FORWARD RECTIFIED CURRENT, AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



PEAK FORWARD SURGE CURRENT, AMPERES

FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

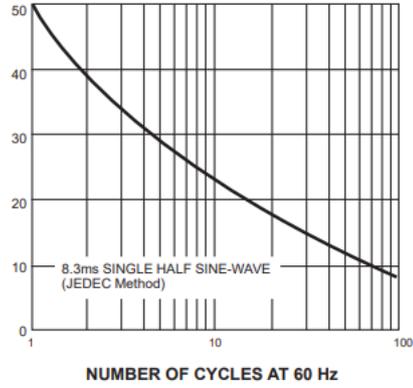
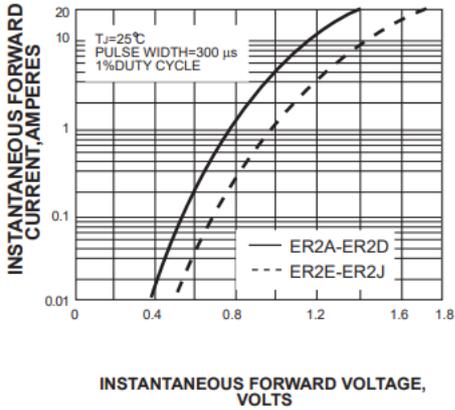


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



INSTANTANEOUS REVERSE CURRENT, MICROAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS

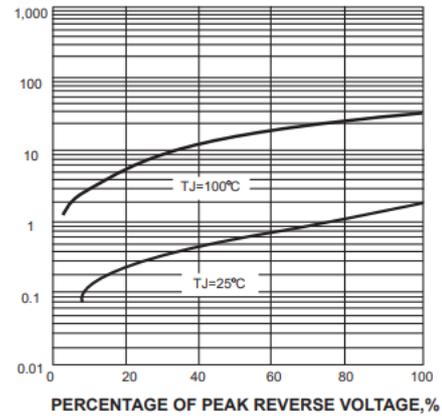
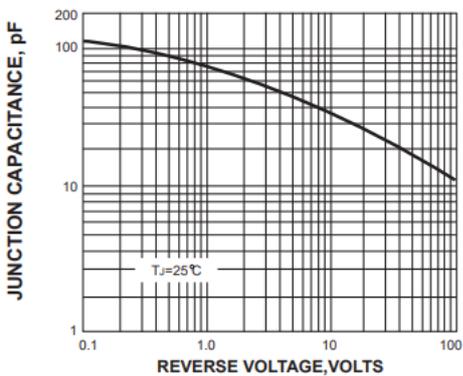
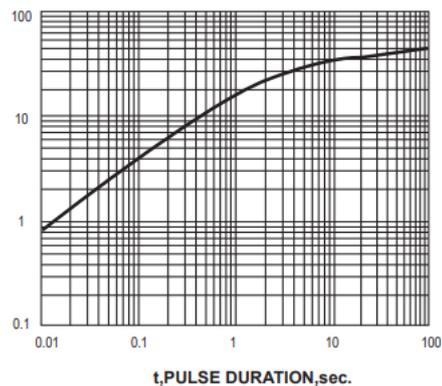


FIG. 5-TYPICAL JUNCTION CAPACITANCE



TRANSIENT THERMAL IMPEDANCE, °C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



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