

# ES2AF THRU ES2JF

## 2.0 AMP SURFACE MOUNT SUPER FAST RECTIFIERS

### FEATURES

- \* Ideal for surface mount applications
- \* Easy pick and place
- \* Built-in strain relief
- \* Low forward voltage drop

### MECHANICAL DATA

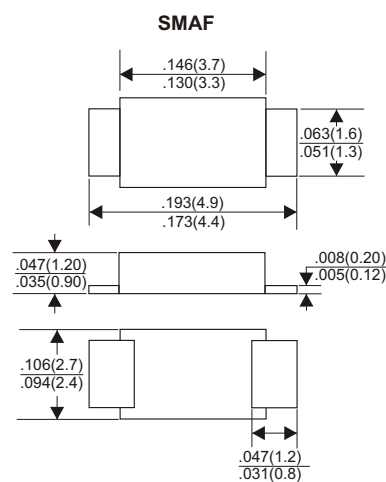
- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Metallurgically bonded construction
- \* Polarity: Color band denotes cathode end
- \* Mounting position: Any

### VOLTAGE RANGE

50 to 600 Volts

### CURRENT

2.0 Amperes



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating 25°C ambient temperature unless otherwise specified.  
 Single phase half wave, 60Hz, resistive or inductive load.  
 For capacitive load, derate current by 20%.

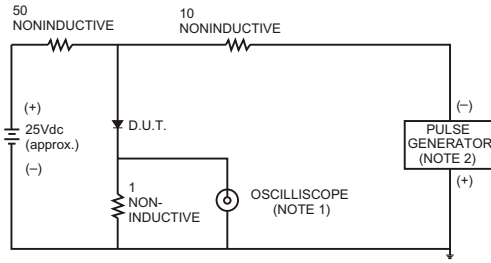
| TYPE NUMBER                                                                                           | ES2AF      | ES2BF | ES2CF | ES2DF | ES2EF | ES2GF | ES2JF | UNITS |
|-------------------------------------------------------------------------------------------------------|------------|-------|-------|-------|-------|-------|-------|-------|
| Maximum Recurrent Peak Reverse Voltage                                                                | 50         | 100   | 150   | 200   | 300   | 400   | 600   | V     |
| Maximum RMS Voltage                                                                                   | 35         | 70    | 105   | 140   | 210   | 280   | 420   | V     |
| Maximum DC Blocking Voltage                                                                           | 50         | 100   | 150   | 200   | 300   | 400   | 600   | V     |
| Maximum Average Forward Rectified Current<br>.375"(9.5mm) Lead Length at Ta=55°C                      | 2.0        |       |       |       |       |       |       | A     |
| Peak Forward Surge Current, 8.3 ms single half sine-wave<br>superimposed on rated load (JEDEC method) | 50         |       |       |       |       |       |       | A     |
| Maximum Instantaneous Forward Voltage at 2.0A                                                         | 0.95       |       |       |       | 1.25  |       | 1.70  | V     |
| Maximum DC Reverse Current Ta=25°C                                                                    | 5.0        |       |       |       |       |       |       | μA    |
| at Rated DC Blocking Voltage Ta=100°C                                                                 | 500        |       |       |       |       |       |       | μA    |
| Maximum Reverse Recovery Time (Note 1)                                                                | 35         |       |       |       |       |       |       | nS    |
| Typical Junction Capacitance (Note 2)                                                                 | 60         |       |       |       |       |       |       | pF    |
| Operating and Storage Temperature Range Tj, Tstg                                                      | -65 — +150 |       |       |       |       |       |       | °C    |

#### NOTES:

1. Reverse Recovery Time test condition: IF=0.5A, IR=1.0A, IRR=0.25A
2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

## RATING AND CHARACTERISTIC CURVES (ES2AF THRU ES2JF)

FIG.1- 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.



FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

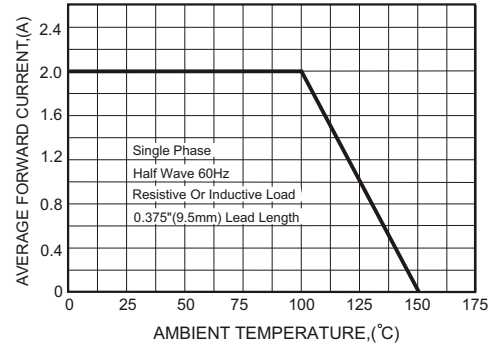


FIG.3-TYPICAL FORWARD CHARACTERISTICS

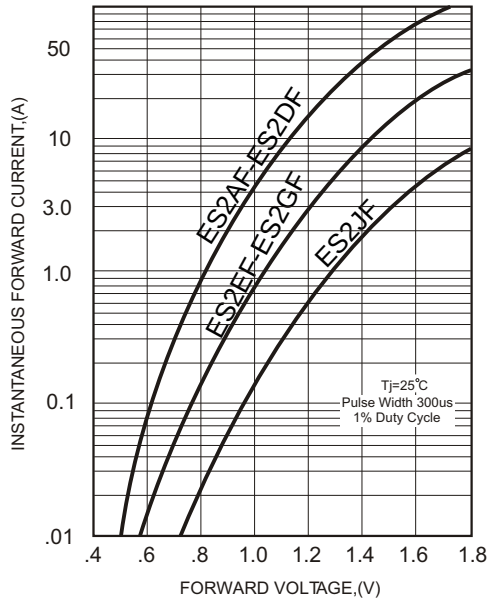


FIG.4-TYPICAL REVERSE CHARACTERISTICS

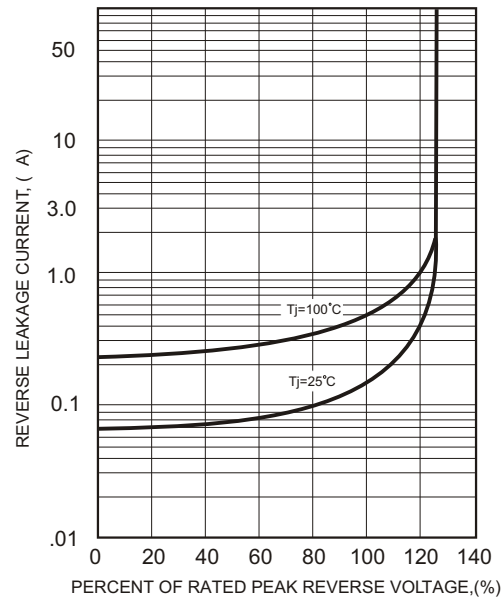


FIG.5-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

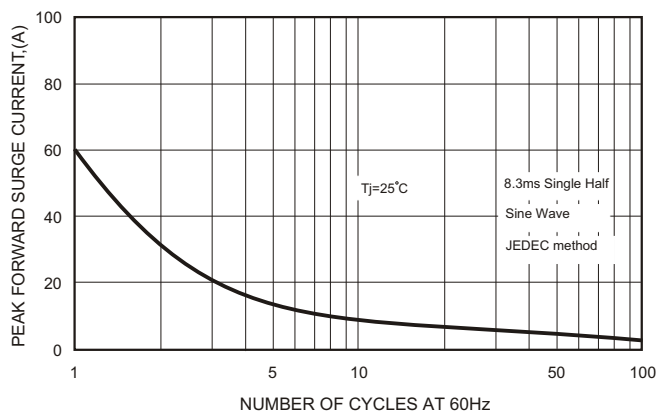


FIG.6-TYPICAL JUNCTION CAPACITANCE

