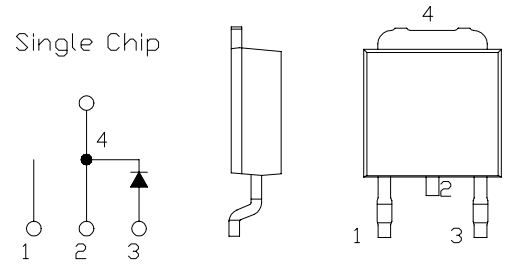


# FRD Type : EA31FS4-F

## OUTLINE DRAWING

### FEATURES

- \* TO-252AA Case, Surface Mounting Device
- \* Packaged in 16mm Tape and Reel
- \* Ultra – Fast Recovery
- \* Low Forward Voltage drop
- \* Low Power Loss
- \* High Surge Capability
- \* 200 Volts thru 600 Volts Types Available



### Maximum Ratings

Approx Net Weight:0.30g

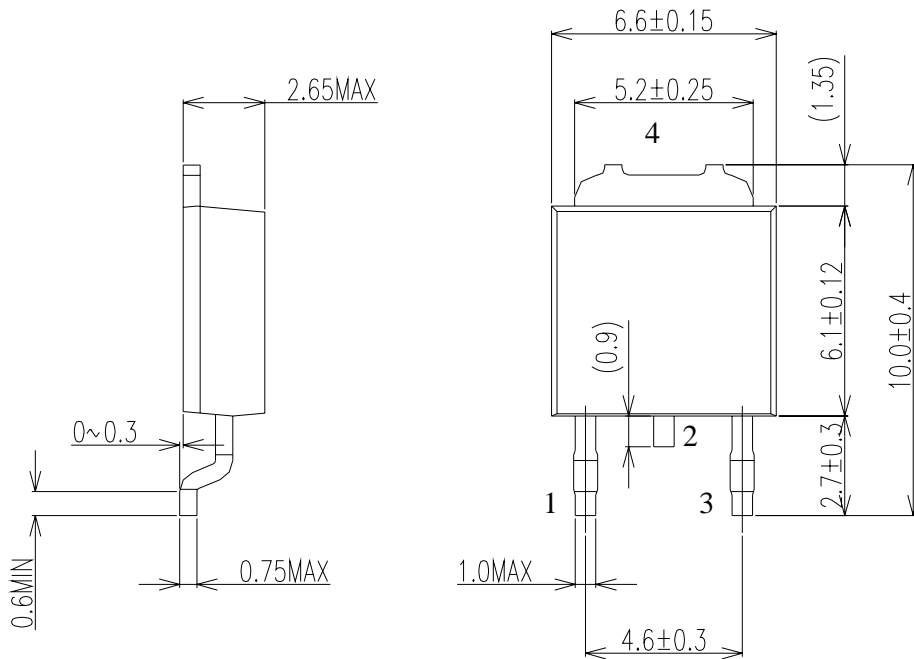
| Rating                              |                     | Symbol       | EA31FS4-F     |  |                                    | Unit        |
|-------------------------------------|---------------------|--------------|---------------|--|------------------------------------|-------------|
| Repetitive Peak Reverse Voltage     |                     | $V_{RRM}$    | 400           |  |                                    | V           |
| Non-repetitiv Peak Reverse Voltage  |                     | $V_{RSM}$    | 440           |  |                                    |             |
| Average Rectified Output Current    | P.C.Board mounted * | $I_O$        | 1.4           | $T_a=34^{\circ}C$                          | 50Hz Half Sine Wave Resistive Load | A           |
|                                     | -                   |              | 3.0           | $T_c=125^{\circ}C$                         |                                    |             |
| RMS Forward Current                 |                     | $I_{F(RMS)}$ | 4.71          |  |                                    | A           |
| Surge Forward Current               |                     | $I_{FSM}$    | 45            | 50Hz Half Sine Wave,1cycle, Non-repetitive |                                    | A           |
| Operating JunctionTemperature Range |                     | $T_{jw}$     | - 40 to + 150 |  |                                    | $^{\circ}C$ |
| Storage Temperature Range           |                     | $T_{stg}$    | - 40 to + 150 |  |                                    | $^{\circ}C$ |

### Electrical • Thermal Characteristics

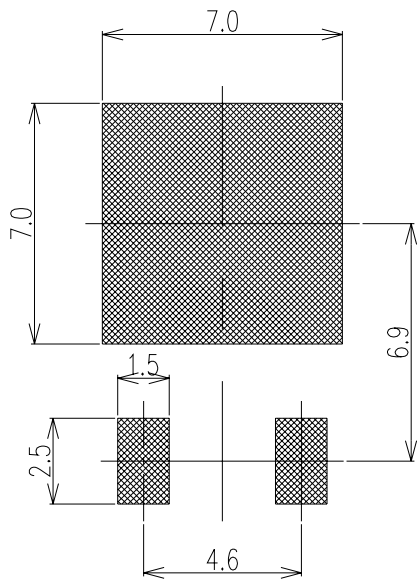
| Characteristics       |                     | Symbol        | Conditions   | Min | Typ | Max  | Unit          |
|-----------------------|---------------------|---------------|--|-----|-----|------|---------------|
| Peak Reverse Current  |                     | $I_{RM}$      | $T_j=25^{\circ}C, V_{RM}=V_{RRM}$ per Arm                | -   | -   | 20   | $\mu A$       |
| Peak Forward Voltage  |                     | $V_{FM}$      | $T_j=25^{\circ}C, I_{FM}= 3 A$ per Arm                   | -   | -   | 1.25 | V             |
| Reverse Recovery Time |                     | $t_{rr}$      | $I_{FM}= 3 A,$<br>$-di/dt= 50 A/\mu s, T_a= 25^{\circ}C$ | -   | -   | 30   | ns            |
| Thermal Resistance    | Junction to Ambient | $R_{th(j-a)}$ | P.C.Board mounted *                                      | -   | -   | 80   | $^{\circ}C/W$ |
|                       | Junction to Case    | $R_{th(j-c)}$ | -  | -   | -   | 6    | $^{\circ}C/W$ |

\* Print Land = 20x20 mm

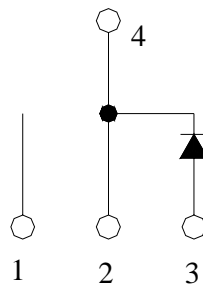
EA31FS4-F OUTLINE DRAWING (Dimensions in mm)



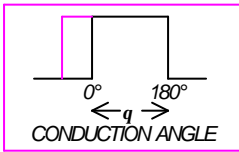
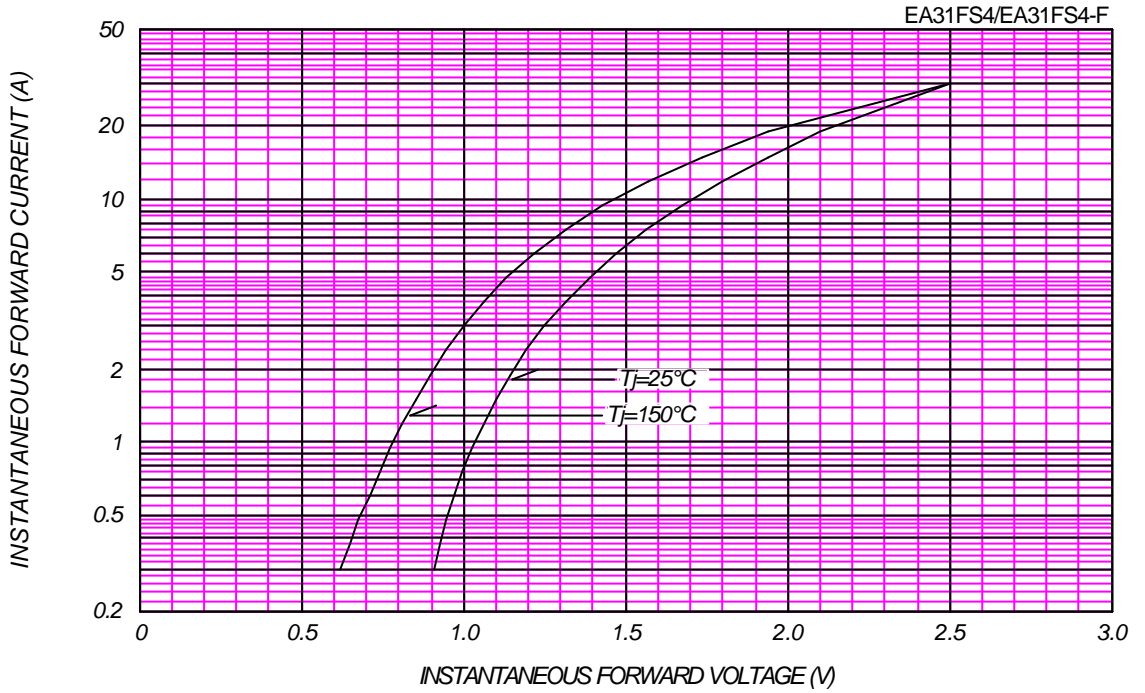
Soldering PAD



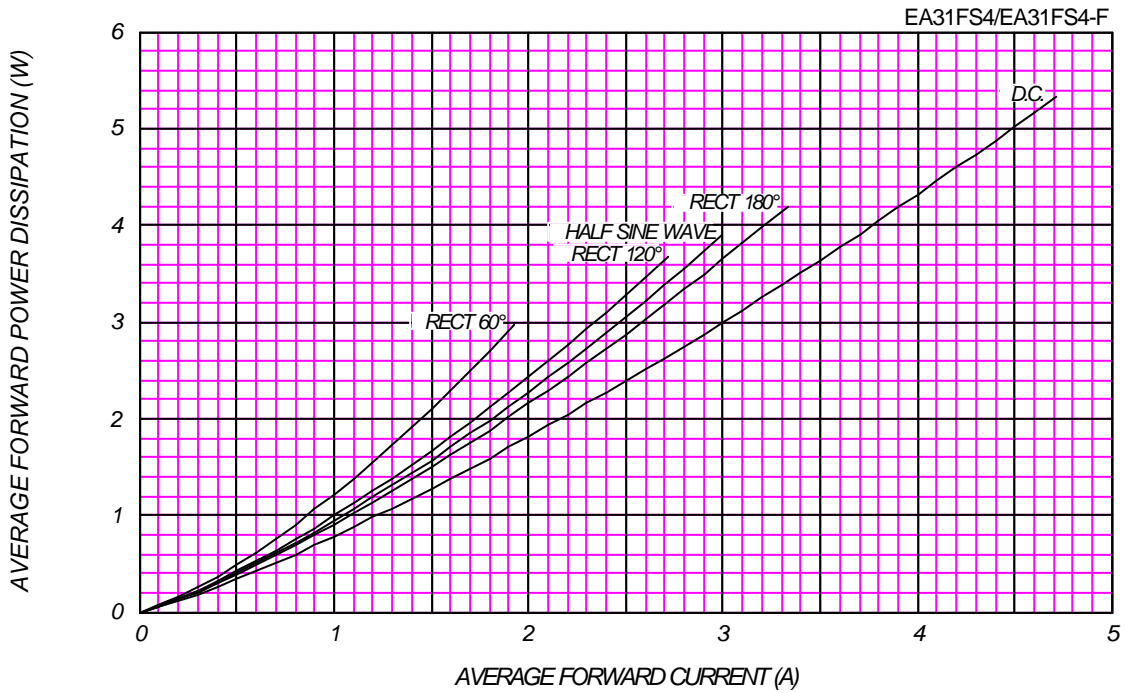
Single

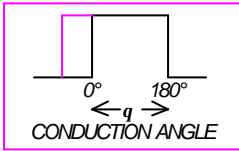


FORWARD CURRENT VS. VOLTAGE

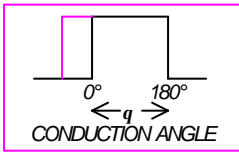
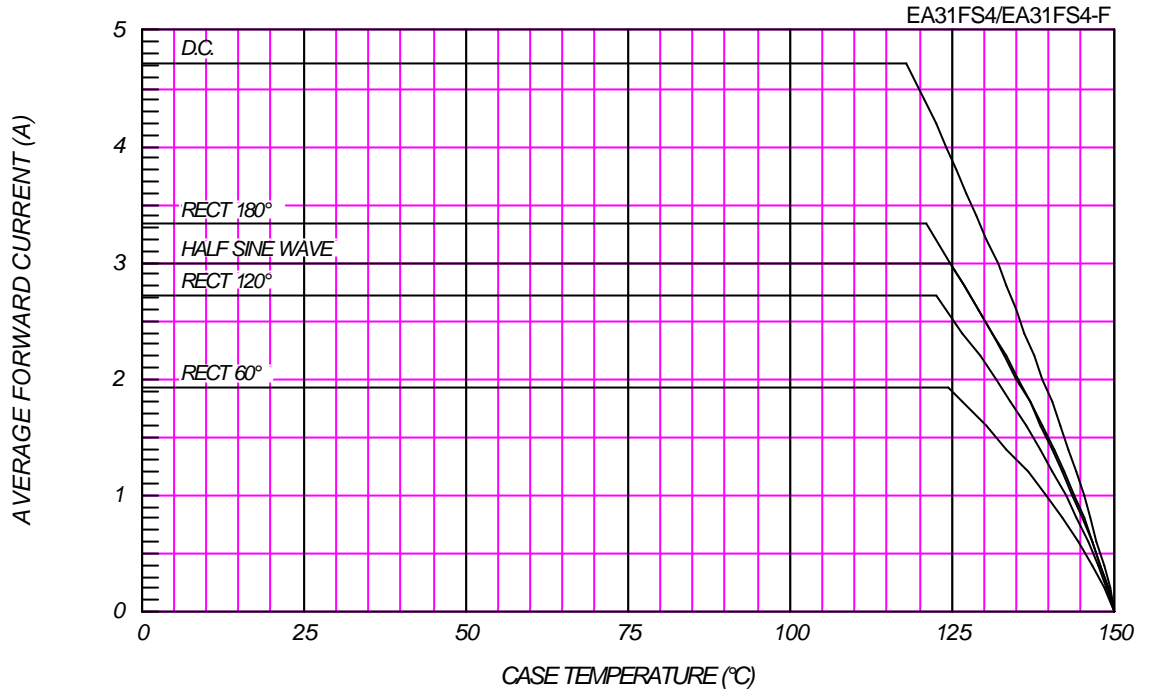


AVERAGE FORWARD POWER DISSIPATION



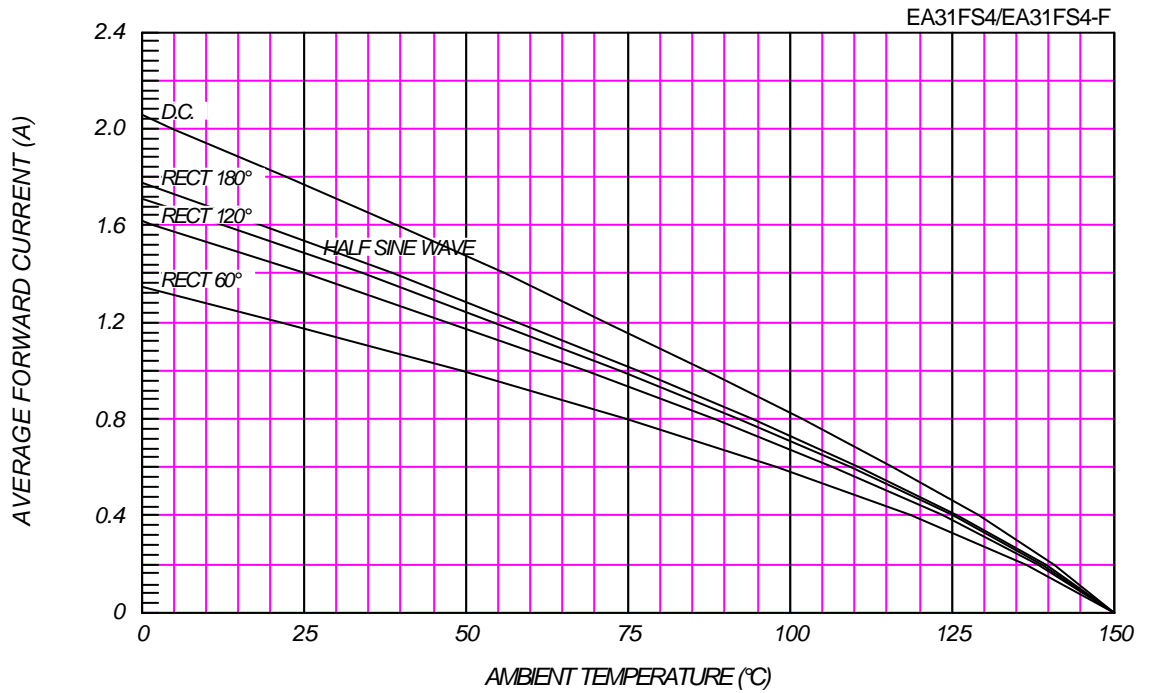


AVERAGE FORWARD CURRENT VS. CASE TEMPERATURE



AVERAGE FORWARD CURRENT VS. AMBIENT TEMPERATURE

P.C. Board mounted (Print land=20x20mm)



# SURGE CURRENT RATINGS

f=50Hz, Half Sine Wave, Non-Repetitive, No Load

EA31FS4/EA31FS4-F

