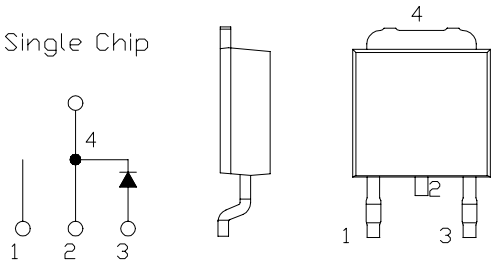


**FRD**    Type : **EA31FS6-F**

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

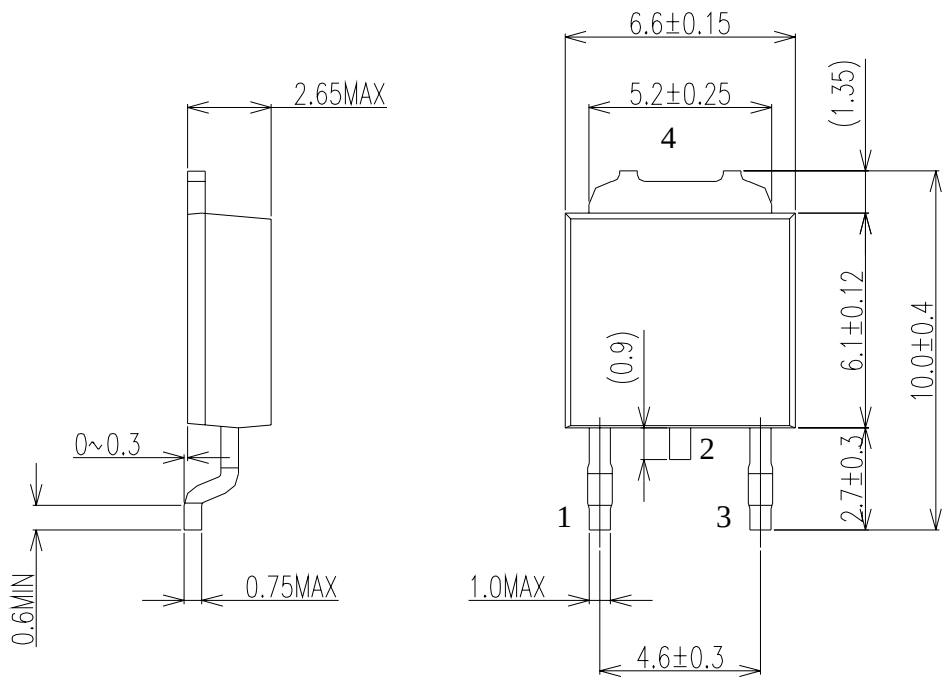
| Rating                              |                     | Symbol              | EA31FS6-F     |                                            |                                    | Unit |
|-------------------------------------|---------------------|---------------------|---------------|--------------------------------------------|------------------------------------|------|
| Repetitive Peak Reverse Voltage     |                     | V <sub>RRM</sub>    | 600           |                                            |                                    | V    |
| Average Rectified Output Current    | P.C.Board mounted * | I <sub>O</sub>      | 1.2           | Ta=29°C                                    | 50Hz Half Sine Wave Resistive Load | A    |
|                                     | -                   |                     | 3.0           | Tc=119°C                                   |                                    |      |
| RMS Forward Current                 |                     | I <sub>F(RMS)</sub> | 4.71          |                                            |                                    | A    |
| Surge Forward Current               |                     | I <sub>FSM</sub>    | 45            | 50Hz Half Sine Wave,1cycle, Non-repetitive |                                    | A    |
| Operating JunctionTemperature Range |                     | T <sub>jw</sub>     | - 40 to + 150 |                                            |                                    | °C   |
| Storage Temperature Range           |                     | T <sub>stg</sub>    | - 40 to + 150 |                                            |                                    | °C   |

Electrical • Thermal Characteristics

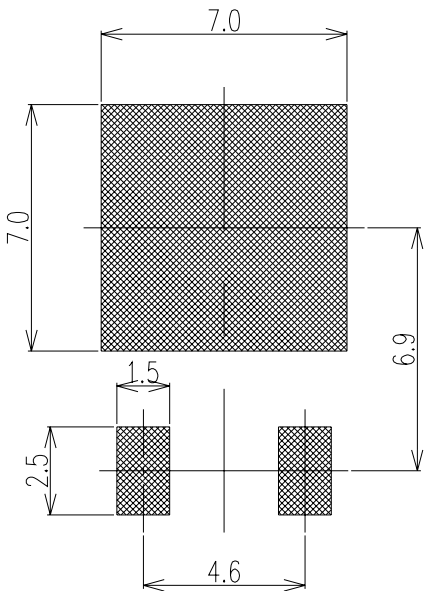
| Characteristics       |                     | Symbol        | Conditions                                               | Min | Typ | Max | Unit          |
|-----------------------|---------------------|---------------|----------------------------------------------------------|-----|-----|-----|---------------|
| 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                   | -   | -   | 1.7 | V             |
| Reverse Recovery Time |                     | $t_{rr}$      | $I_{FM}= 3 A,$<br>$-di/dt= 50 A/\mu s, T_a= 25^{\circ}C$ | -   | -   | 35  | 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

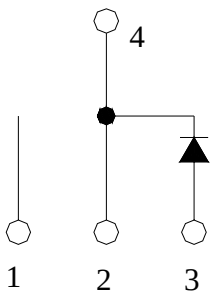
EA31FS6-F OUTLINE DRAWING (Dimensions in mm)



Soldering PAD



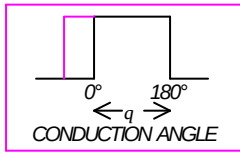
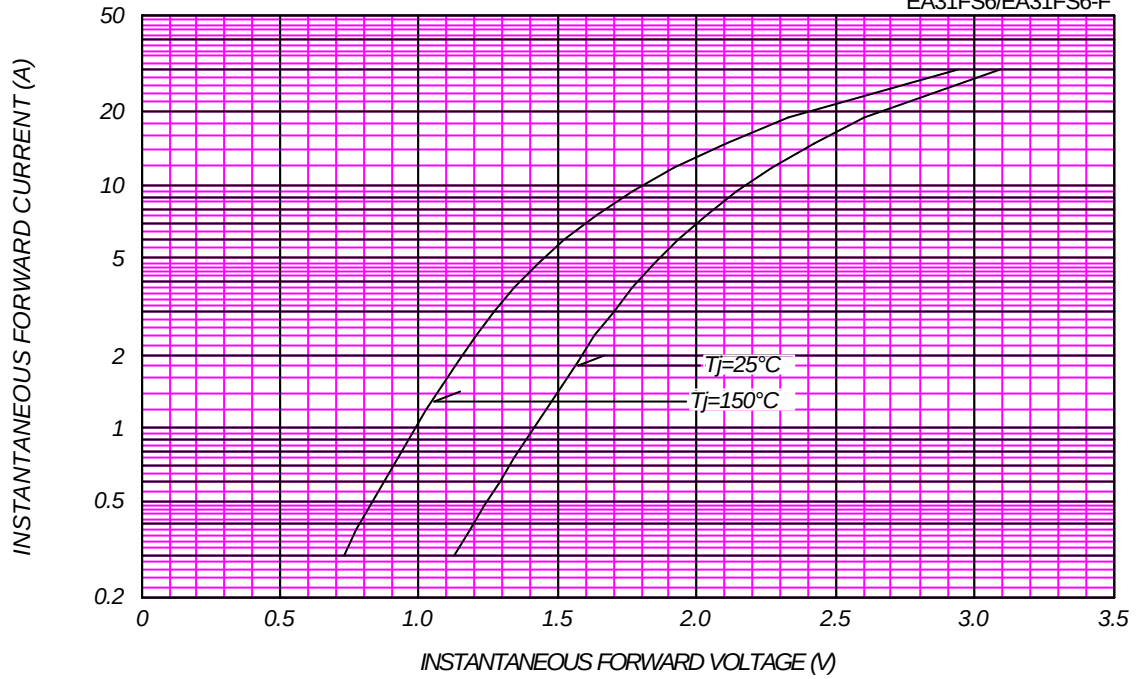
Single



# FORWARD CURRENT VS. VOLTAGE

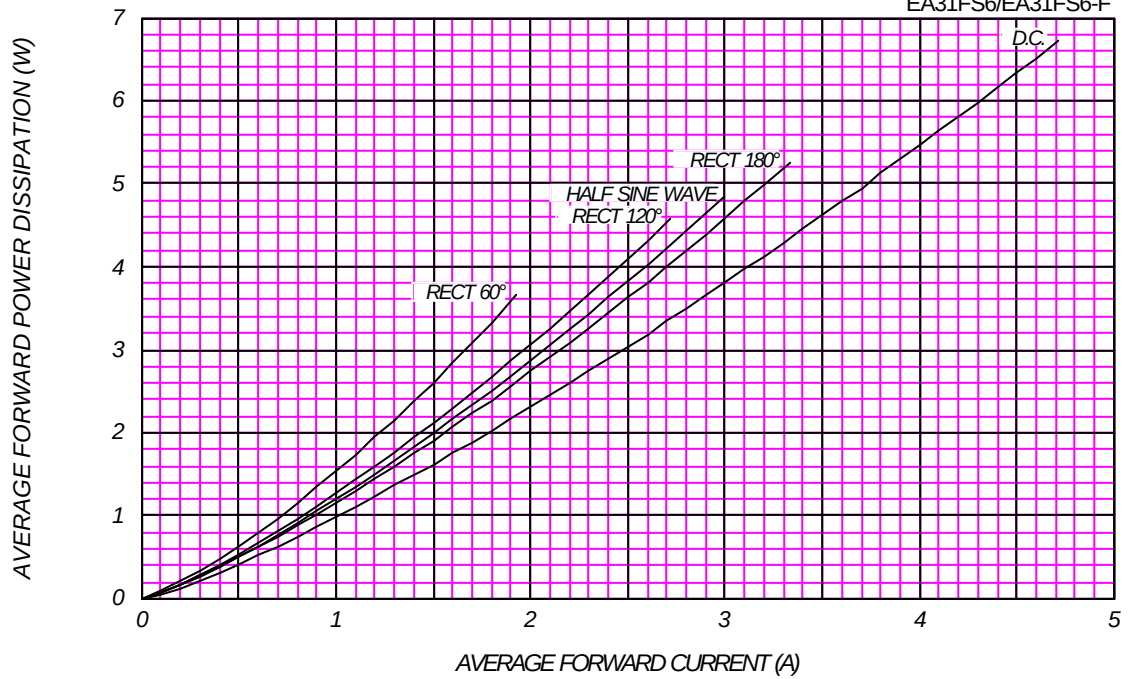
10ms Sine Wave Single Pulse

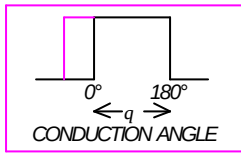
EA31FS6/EA31FS6-F



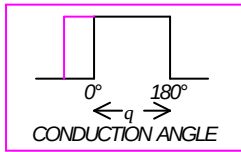
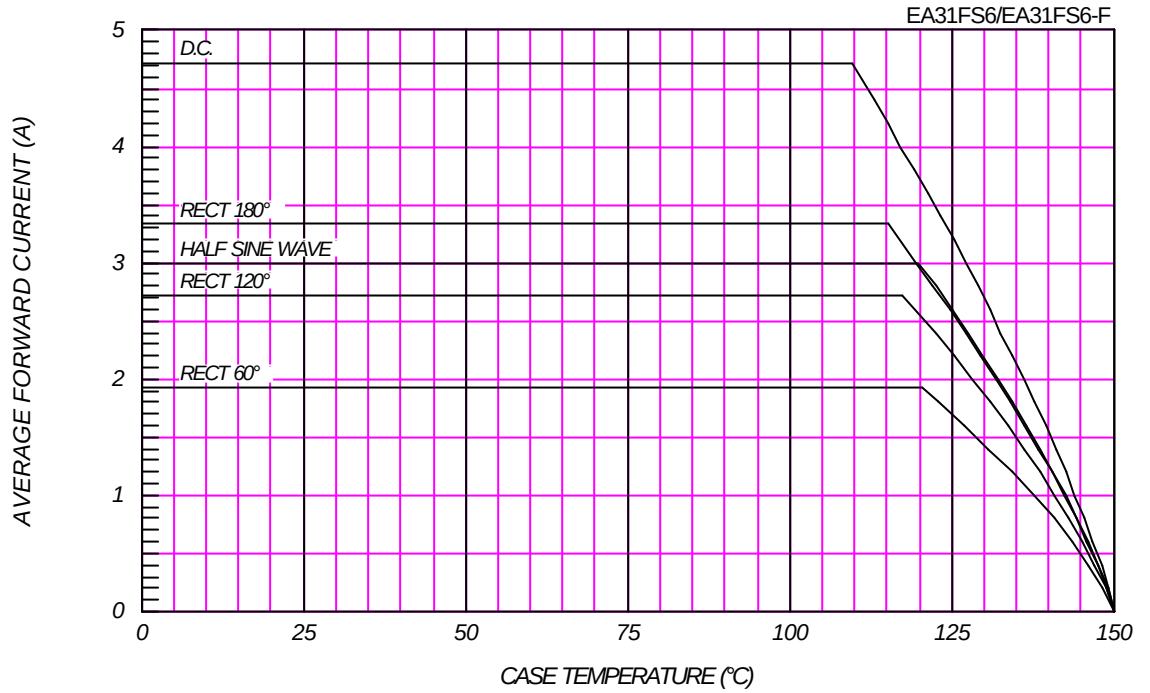
# AVERAGE FORWARD POWER DISSIPATION

EA31FS6/EA31FS6-F



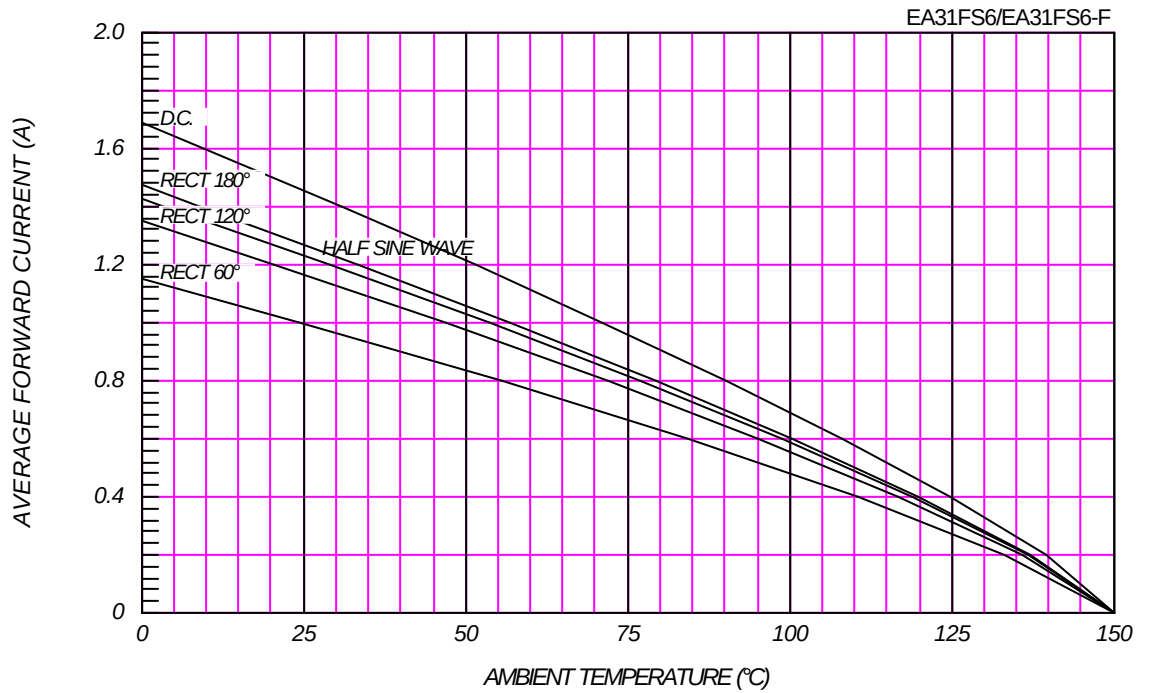


AVERAGE FORWARD CURRENT VS. CASE TEMPERATURE



AVERAGE FORWARD CURRENT VS. AMBIENT TEMPERATURE

P.C. Board mounted Print land=20×20mm



# SURGE CURRENT RATINGS

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

EA31FS6/EA31FS6-F

