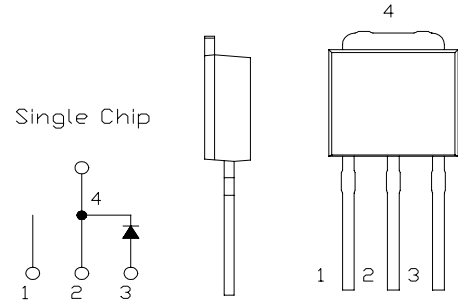


# SBD Type : EA30QS10

## OUTLINE DRAWING

### FEATURES

- \* TO-251AA Case
- \* Low Forward Voltage drop
- \* Low Power Loss
- \* High Surge Capability
- \* 40 Volts thru 100 Volts Types Available



### Maximum Ratings

Approx Net Weight:0.35g

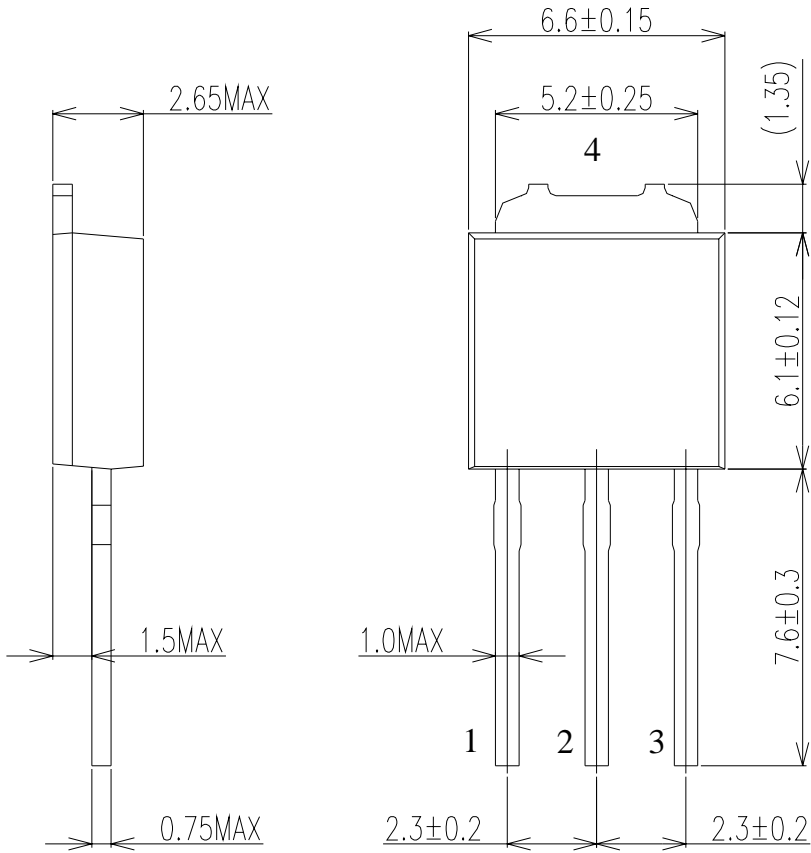
| Rating                               |                     | Symbol       | EA30QS10      |                                             |                                    | Unit        |
|--------------------------------------|---------------------|--------------|---------------|---------------------------------------------|------------------------------------|-------------|
| Repetitive Peak Reverse Voltage      |                     | $V_{RRM}$    | 90            |                                             |                                    | V           |
| Average Rectified Output Current     | P.C.Board mounted * | $I_O$        | 1.6           | $T_a=34^{\circ}C$                           | 50Hz Half Sine Wave Resistive Load | A           |
|                                      | -                   |              | 3.0           | $T_c=133^{\circ}C$                          |                                    |             |
| RMS Forward Current                  |                     | $I_{F(RMS)}$ | 4.71          |                                             |                                    | A           |
| Surge Forward Current                |                     | $I_{FSM}$    | 45            | 50Hz Half Sine Wave, 1cycle, Non-repetitive |                                    | A           |
| Operating Junction Temperature Range |                     | $T_{jw}$     | - 40 to + 150 |                                             |                                    | $^{\circ}C$ |
| Storage Temperature Range            |                     | $T_{stg}$    | - 40 to + 150 |                                             |                                    | $^{\circ}C$ |

### Electrical • Thermal Characteristics

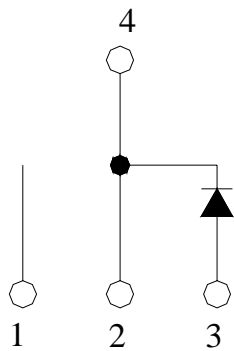
| Characteristics      |                     | Symbol        | Conditions                        | Min | Typ | Max  | Unit          |
|----------------------|---------------------|---------------|-----------------------------------|-----|-----|------|---------------|
| Peak Reverse Current |                     | $I_{RM}$      | $T_j=25^{\circ}C, V_{RM}=V_{RRM}$ | -   | -   | 1.0  | mA            |
| Peak Forward Voltage |                     | $V_{FM}$      | $T_j=25^{\circ}C, I_{FM}= 3 A$    | -   | -   | 0.85 | V             |
| 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

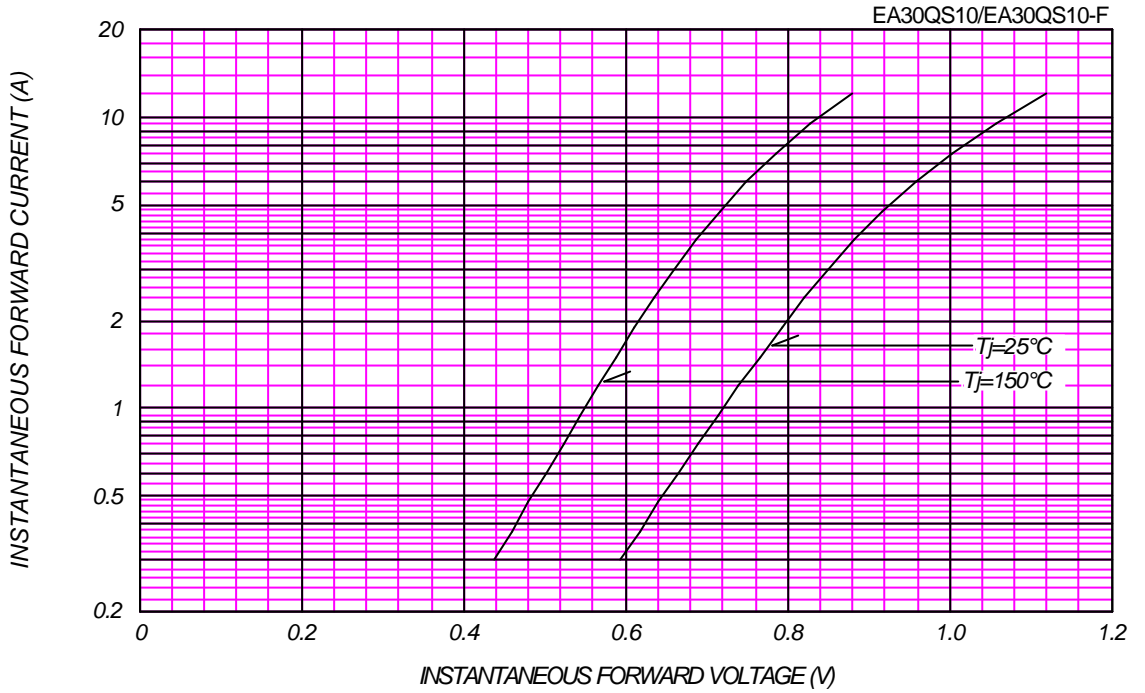
EA30QS10 OUTLINE DRAWING (Dimensions in mm)



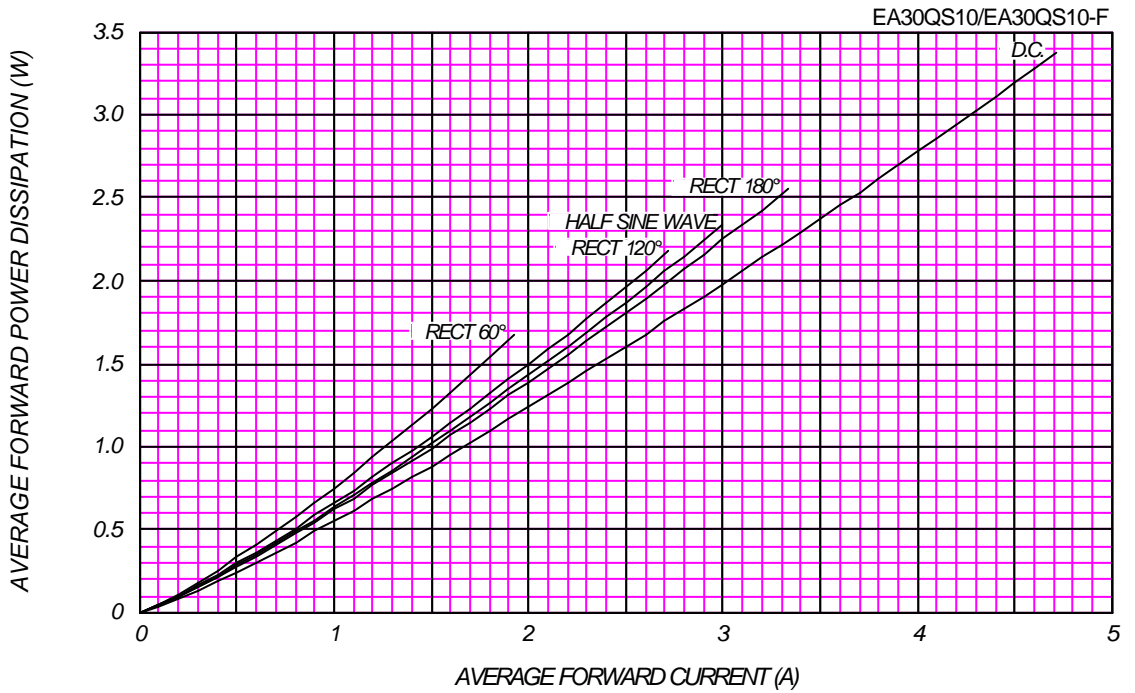
Single



FORWARD CURRENT VS. VOLTAGE



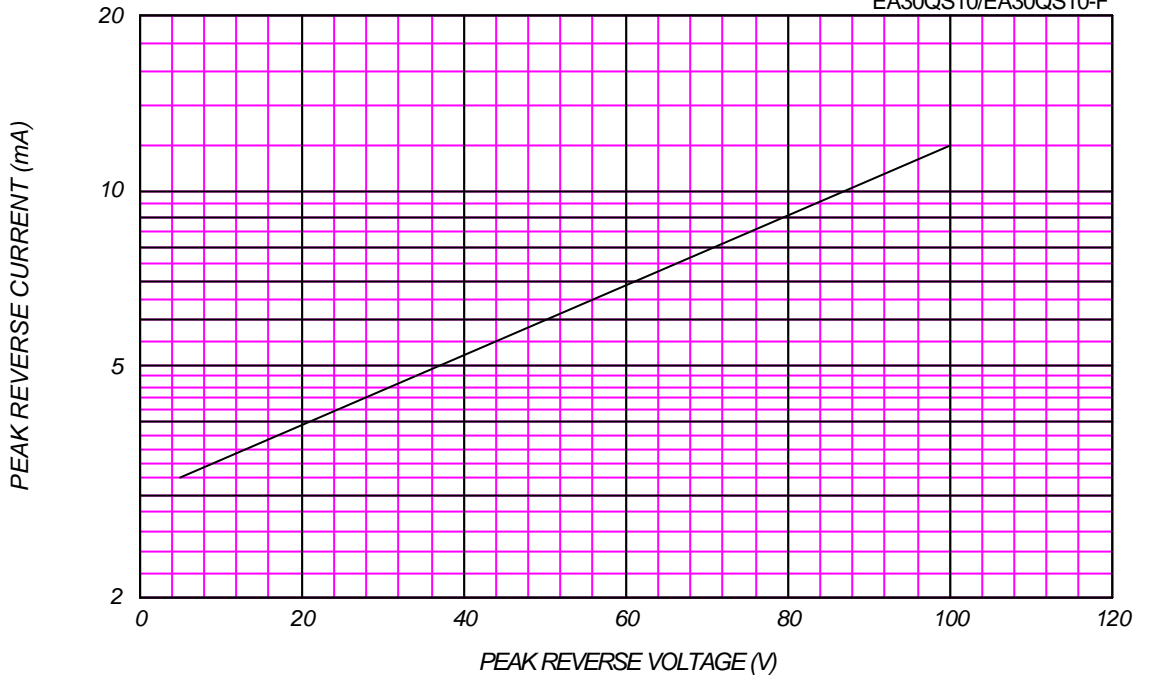
AVERAGE FORWARD POWER DISSIPATION



PEAK REVERSE CURRENT VS. PEAK REVERSE VOLTAGE

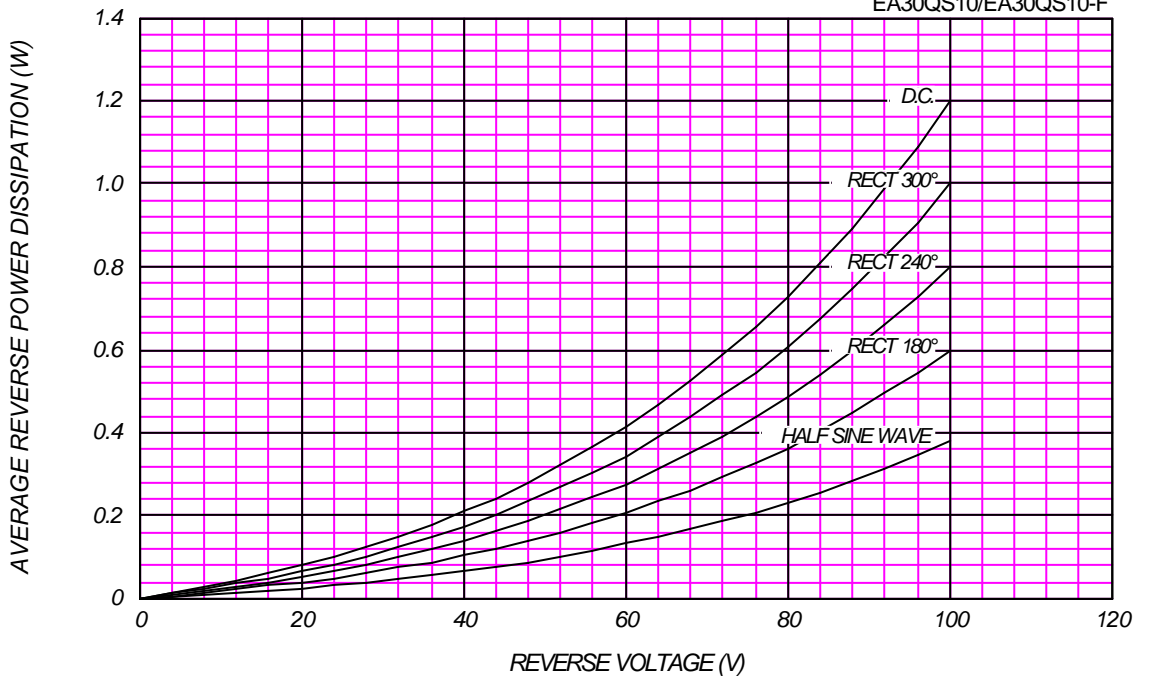
T<sub>j</sub> = 150 °C

EA30QS10/EA30QS10-F



AVERAGE REVERSE POWER DISSIPATION

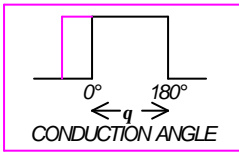
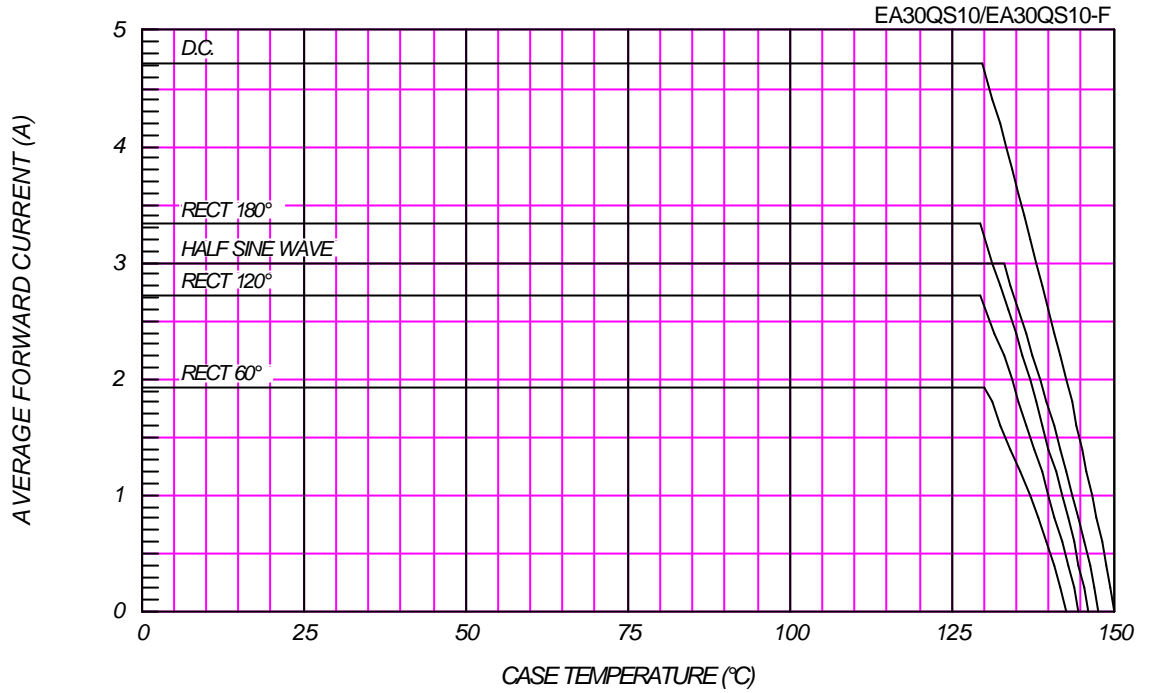
EA30QS10/EA30QS10-F





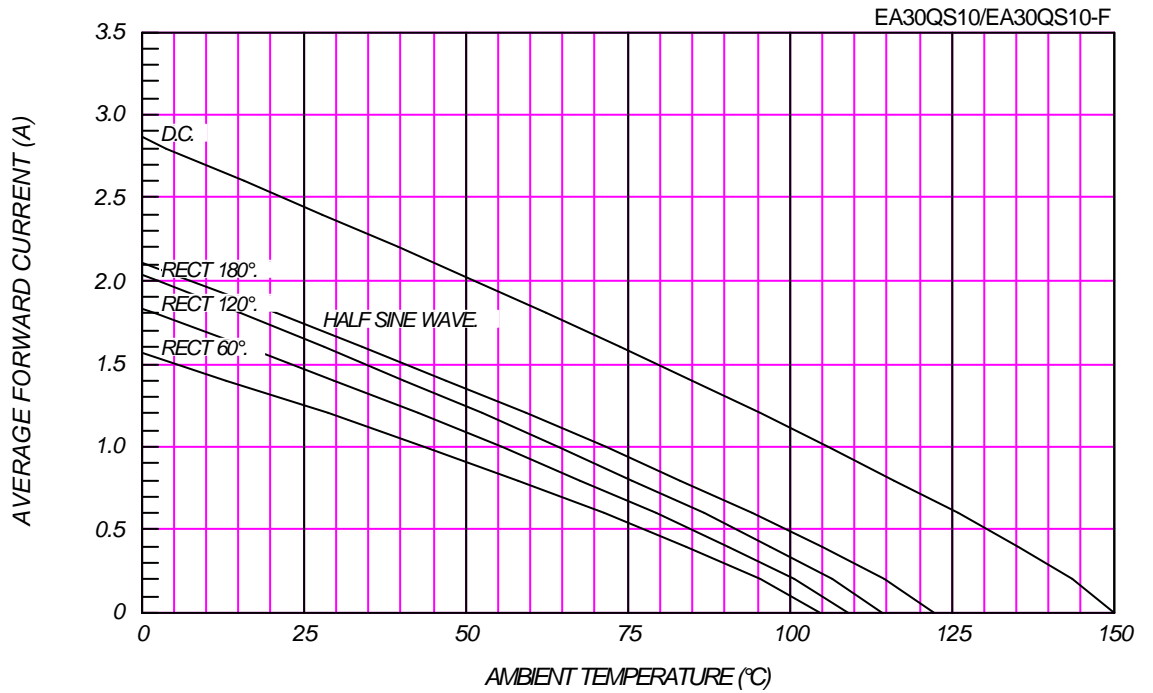
AVERAGE FORWARD CURRENT VS. CASE TEMPERATURE

$V_{RM} = 100V$



AVERAGE FORWARD CURRENT VS. AMBIENT TEMPERATURE

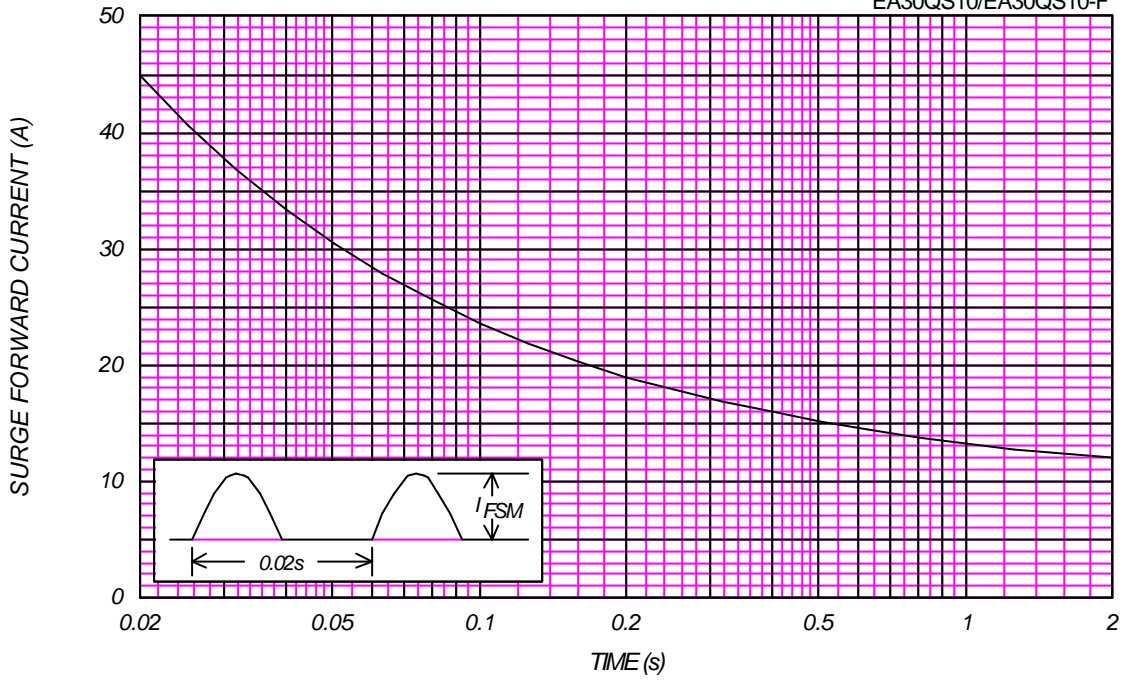
P.C. Board mounted (Print land=20x20mm)



### SURGE CURRENT RATINGS

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

EA30QS10/EA30QS10-F



### JUNCTION CAPACITANCE VS. REVERSE VOLTAGE

$T_j=25^\circ\text{C}$ ,  $V_m=20\text{mV}_{\text{RMS}}$ ,  $f=100\text{kHz}$ , Typical Value

EA30QS10/EA30QS10-F

