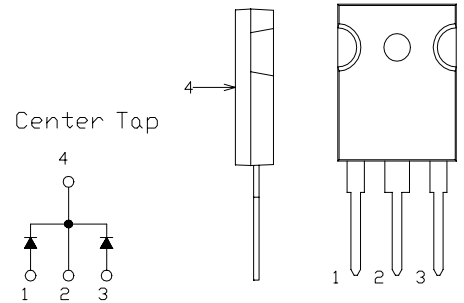


# SBD    Type : KCH30A10

OUTLINE DRAWING

## FEATURES

- \* Similar to TO-247AC(TO-3P)Case
- \* Dual Diodes – Cathode Common
- \* Low Forward Voltage Drop
- \* Low Power Loss,High Efficiency
- \* High Surge Current Capability
- \* Tj=150°C operation



## Maximum Ratings

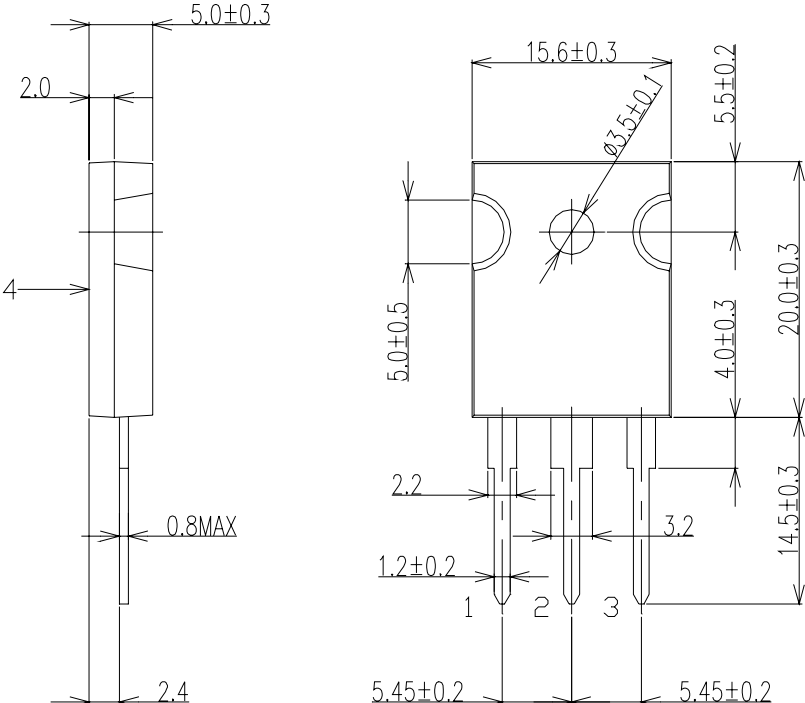
Approx Net Weight: 5.55g

| Rating                              | Symbol              | KCH30A10                 |                                               |                                        | Unit |
|-------------------------------------|---------------------|--------------------------|-----------------------------------------------|----------------------------------------|------|
| Repetitive Peak Reverse Voltage     | V <sub>RRM</sub>    | 100                      |                                               |                                        | V    |
| Average Rectified Output Current    | I <sub>O</sub>      | 30                       | T <sub>C</sub> =111℃                          | 50 Hz Full Sine Wave<br>Resistive Load | A    |
| RMS Forward Current                 | I <sub>F(RMS)</sub> | 33.3                     |                                               |                                        | A    |
| Surge Forward Current               | I <sub>FSM</sub>    | 250                      | 50Hz Full Sine Wave ,1cycle<br>Non-repetitive |                                        | A    |
| Operating JunctionTemperature Range | T <sub>jw</sub>     | -40 to +150              |                                               |                                        | ℃    |
| Storage Temperature Range           | T <sub>stg</sub>    | -40 to +150              |                                               |                                        | ℃    |
| Mounting torque                     | F <sub>tor</sub>    | recommended torque = 0.5 |                                               |                                        | N•m  |

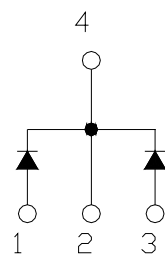
## Electrical • Thermal Characteristics

| Characteristics      | Symbol        | Conditions                                              | Min. | Typ. | Max. | Unit                        |
|----------------------|---------------|---------------------------------------------------------|------|------|------|-----------------------------|
| Peak Reverse Current | $I_{RM}$      | $T_j= 25^{\circ}\text{C}$ , $V_{RM}= V_{RRM}$ per Arm   | -    | -    | 2    | mA                          |
| Peak Forward Voltage | $V_{FM}$      | $T_j=25^{\circ}\text{C}$ , $I_{FM}= 15\text{A}$ per Arm | -    | -    | 0.88 | V                           |
| Thermal Resistance   | $R_{th(j-c)}$ | Junction to Case                                        | -    | -    | 1.3  | $^{\circ}\text{C}/\text{W}$ |

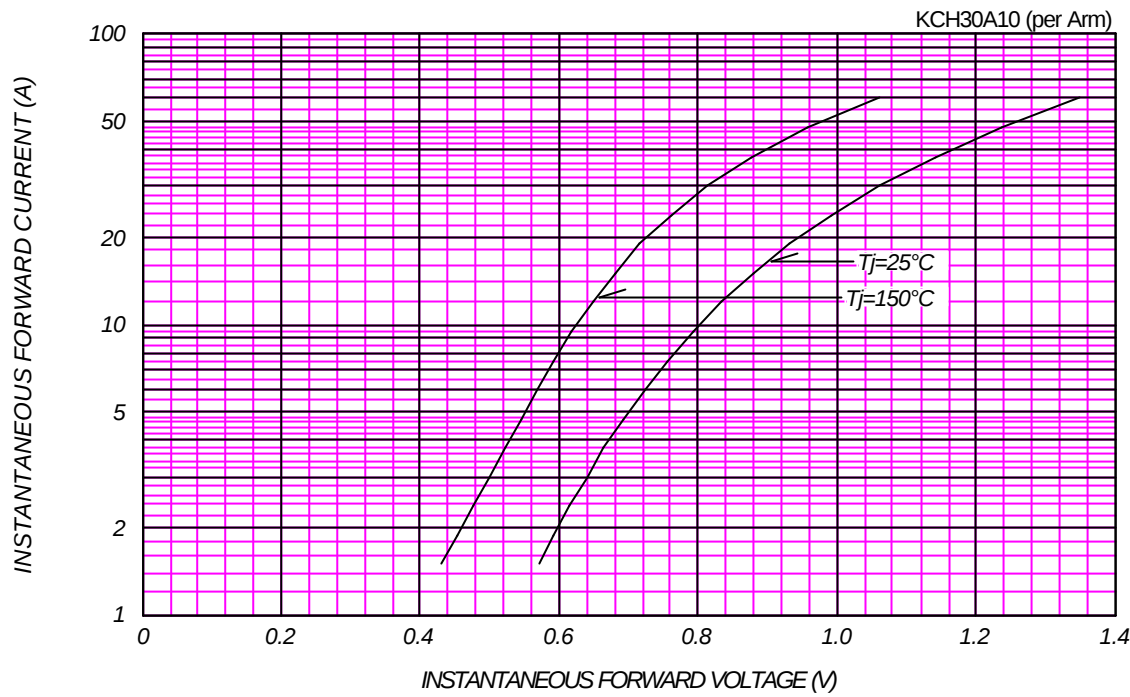
# KCH30A10 OUTLINE DRAWING (Dimentions in mm)



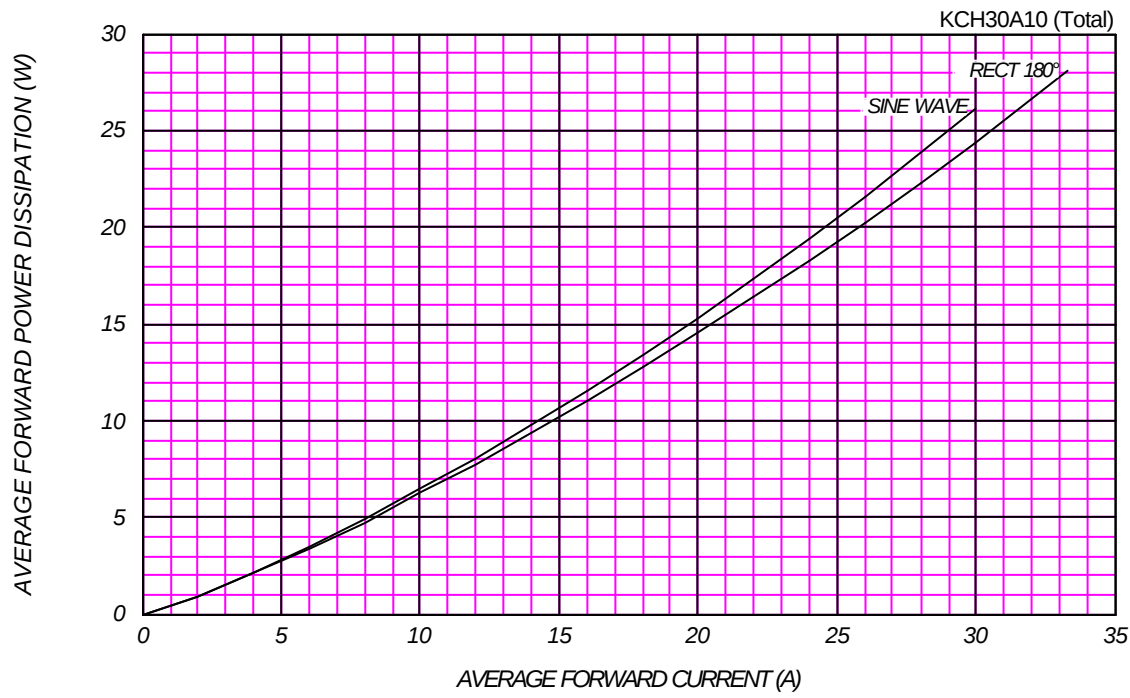
Center Tap



FORWARD CURRENT VS. VOLTAGE

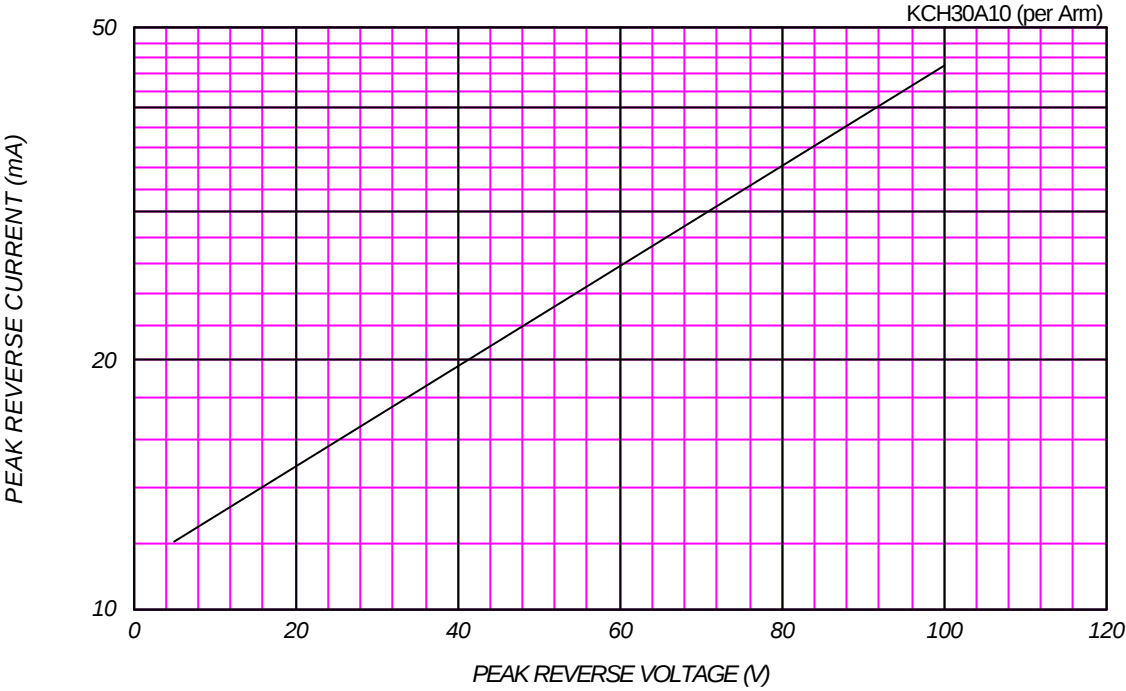


AVERAGE FORWARD POWER DISSIPATION

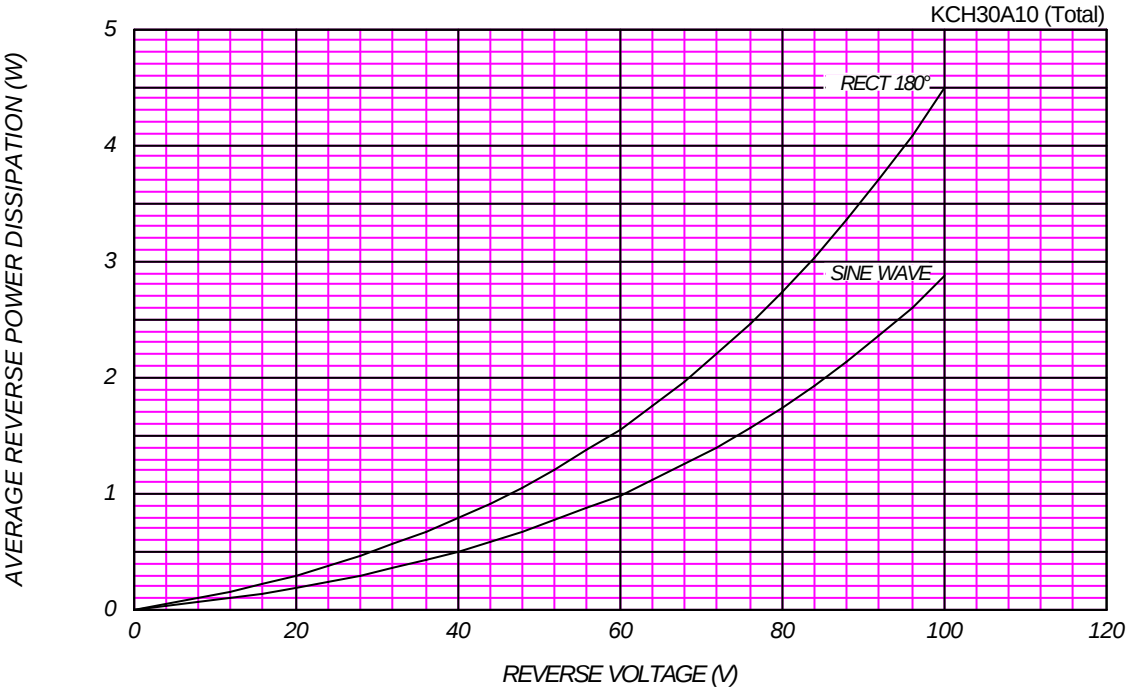


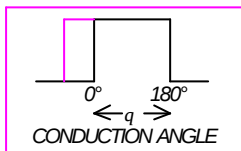
PEAK REVERSE CURRENT VS. PEAK REVERSE VOLTAGE

Tj= 150 °C



AVERAGE REVERSE POWER DISSIPATION

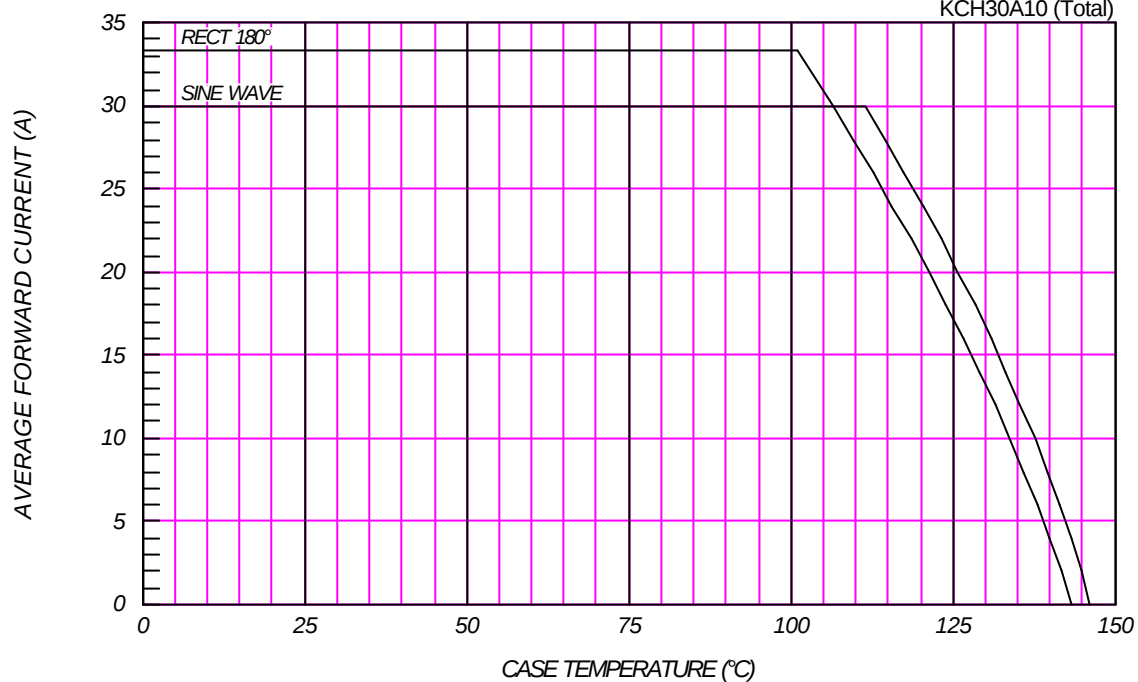




# AVERAGE FORWARD CURRENT VS. CASE TEMPERATURE

$V_{RM}=100V$

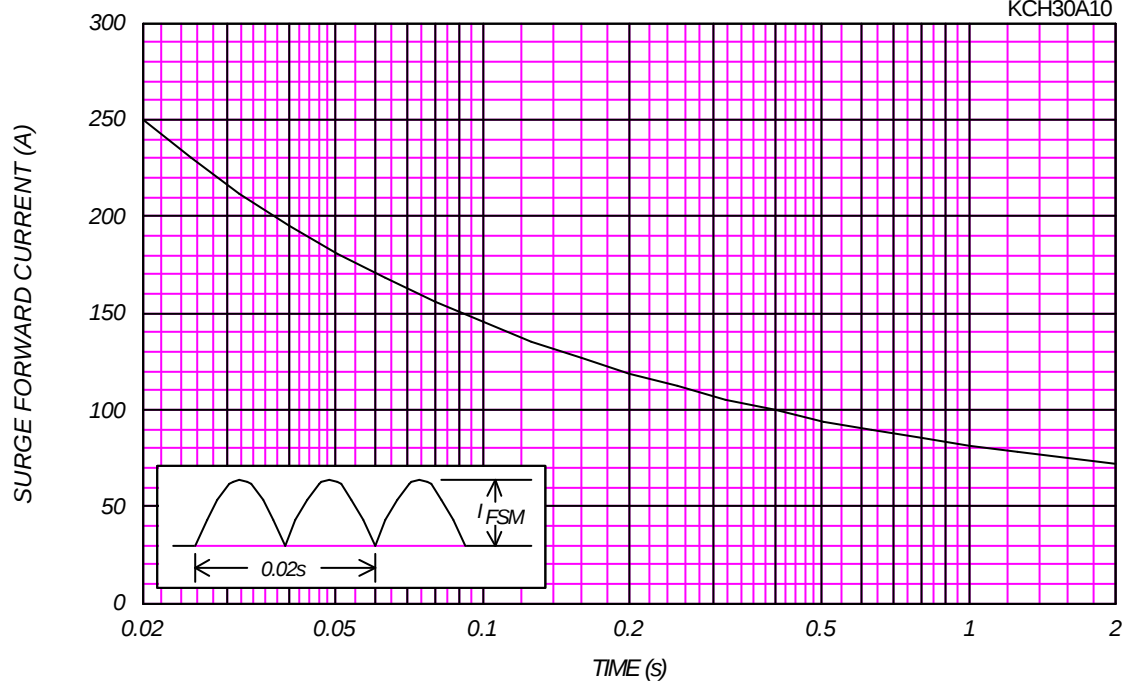
KCH30A10 (Total)



# SURGE CURRENT RATINGS

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

KCH30A10



# JUNCTION CAPACITANCE VS. REVERSE VOLTAGE

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

KCH30A10 (per Arm)

