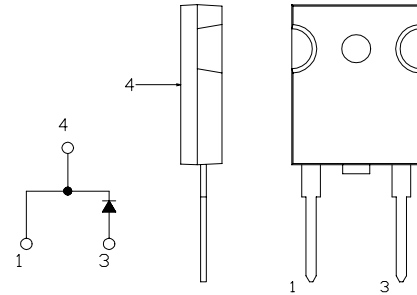


# SBD Type : KSH15A09

OUTLINE DRAWING

## FEATURES

- \* Similar to TO-247AC(TO-3P)Case
- \* Low Forward Voltage Drop
- \* Low Power Loss,High Efficiency
- \* High Surge Current Capability
- \* T<sub>j</sub>=150°C operation



## Maximum Ratings

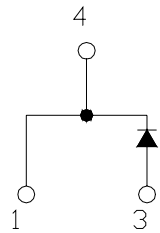
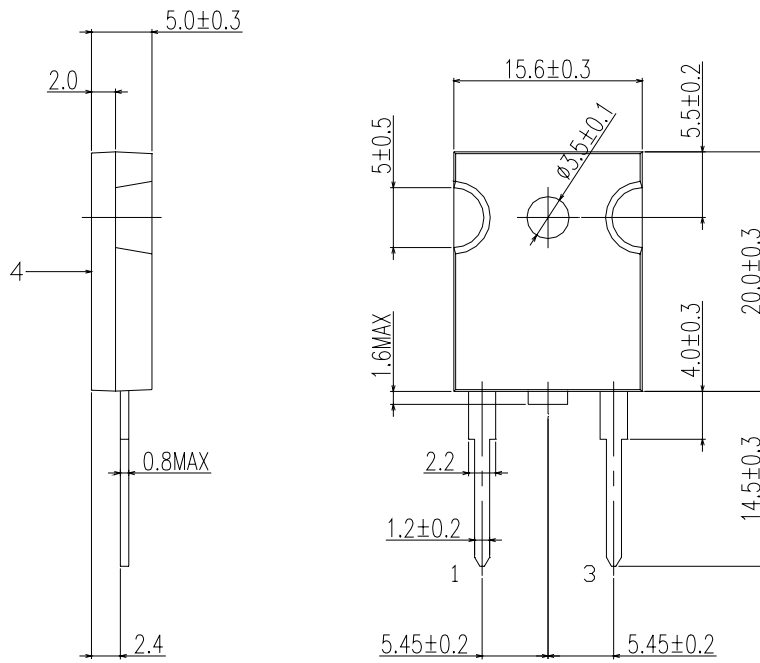
Approx Net Weight: 5.5g

| Rating                              | Symbol              | KSH15A09                 |   | Unit |
|-------------------------------------|---------------------|--------------------------|---|------|
| Repetitive Peak Reverse Voltage     | V <sub>RRM</sub>    | 90                       |   | V    |
| Average Rectified Output Current    | I <sub>O</sub>      | 15                       | T <sub>c</sub> =120°C<br>50 Hz half Sine Wave<br>Resistive Load | A    |
| RMS Forward Current                 | I <sub>F(RMS)</sub> | 23.5                     |   | A    |
| Surge Forward Current               | I <sub>FSM</sub>    | 250                      | 50Hz Half Sine Wave ,1cycle<br>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   |
| Mounting torque                     | F <sub>tor</sub>    | recommended torque = 0.5 |   | N•m  |

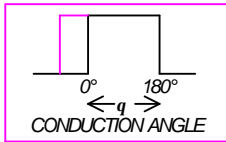
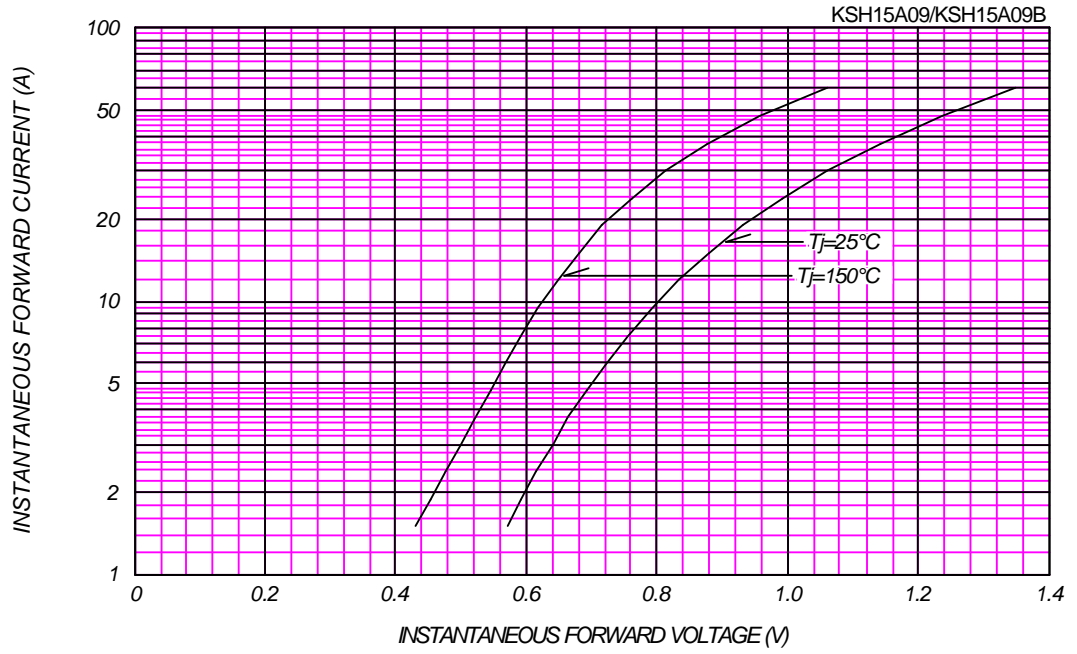
## Electrical • Thermal Characteristics

| Characteristics      | Symbol               | Conditions  | Min. | Typ. | Max. | Unit |
|----------------------|----------------------|---|------|------|------|------|
| Peak Reverse Current | I <sub>RM</sub>      | T <sub>j</sub> = 25°C, V <sub>RM</sub> = V <sub>RRM</sub> | -    | -    | 2.0  | mA   |
| Peak Forward Voltage | V <sub>FM</sub>      | T <sub>j</sub> = 25°C, I <sub>FM</sub> = 15 A             | -    | -    | 0.88 | V    |
| Thermal Resistance   | R <sub>th(j-c)</sub> | Junction to Case  | -    | -    | 2.0  | °C/W |

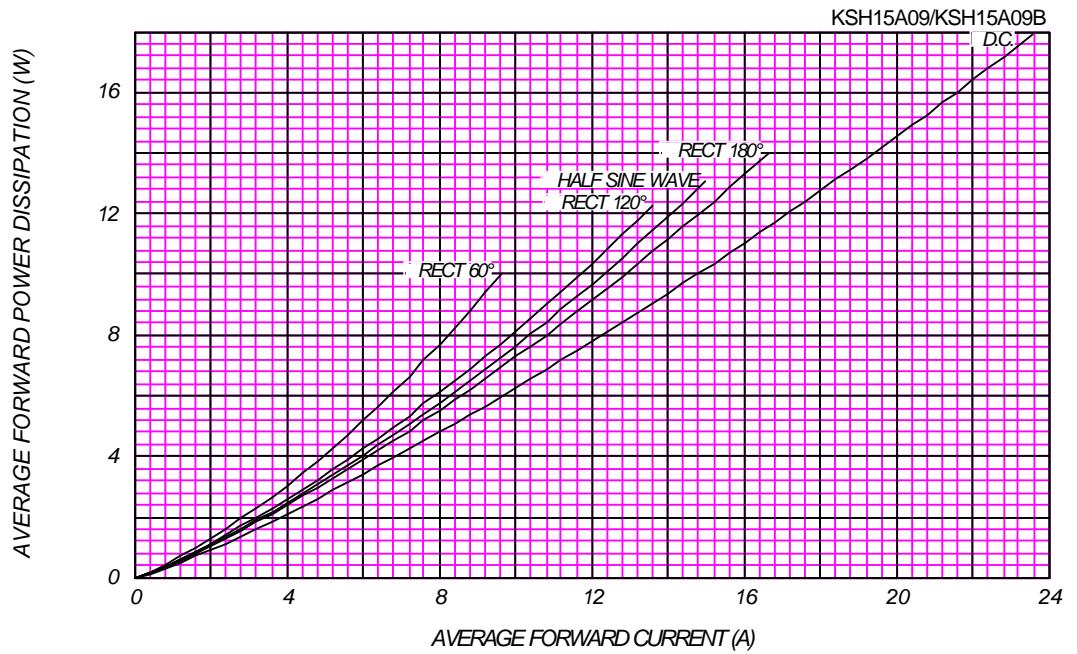
KSH15A09 OUTLINE DRAWING (Dimension in mm)



### FORWARD CURRENT VS. VOLTAGE



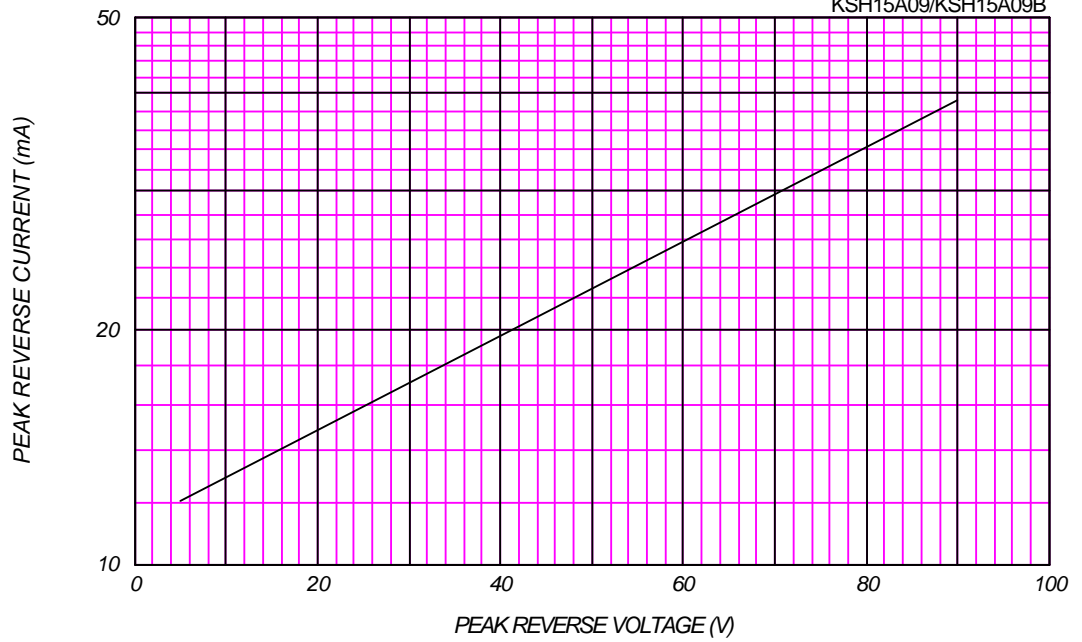
### AVERAGE FORWARD POWER DISSIPATION



PEAK REVERSE CURRENT VS. PEAK REVERSE VOLTAGE

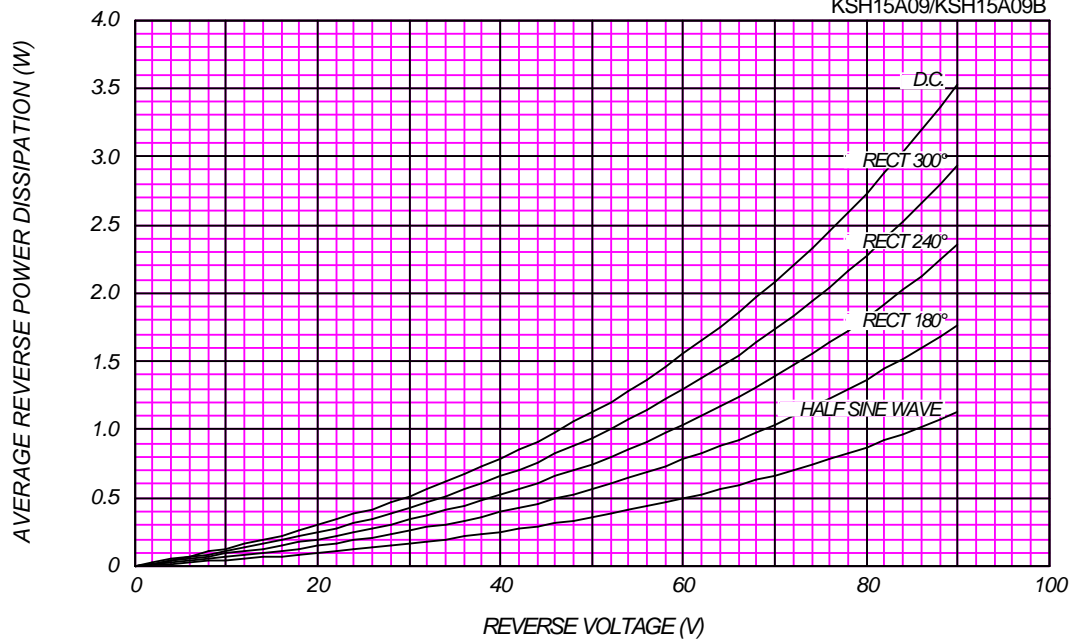
$T_j = 150^\circ\text{C}$

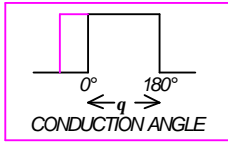
KSH15A09/KSH15A09B



AVERAGE REVERSE POWER DISSIPATION

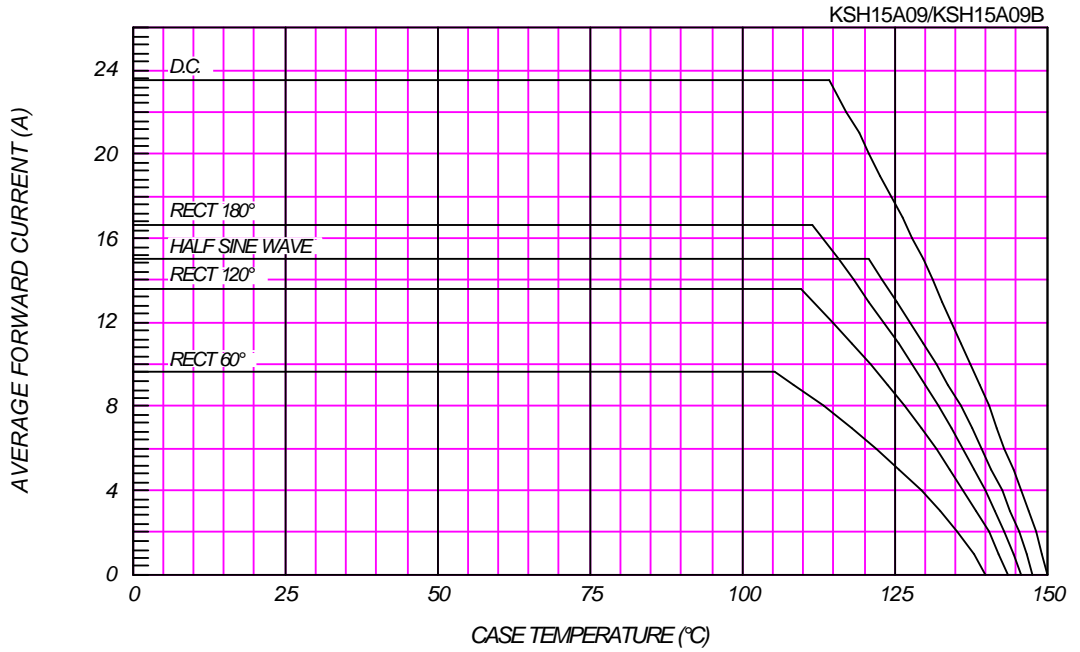
KSH15A09/KSH15A09B





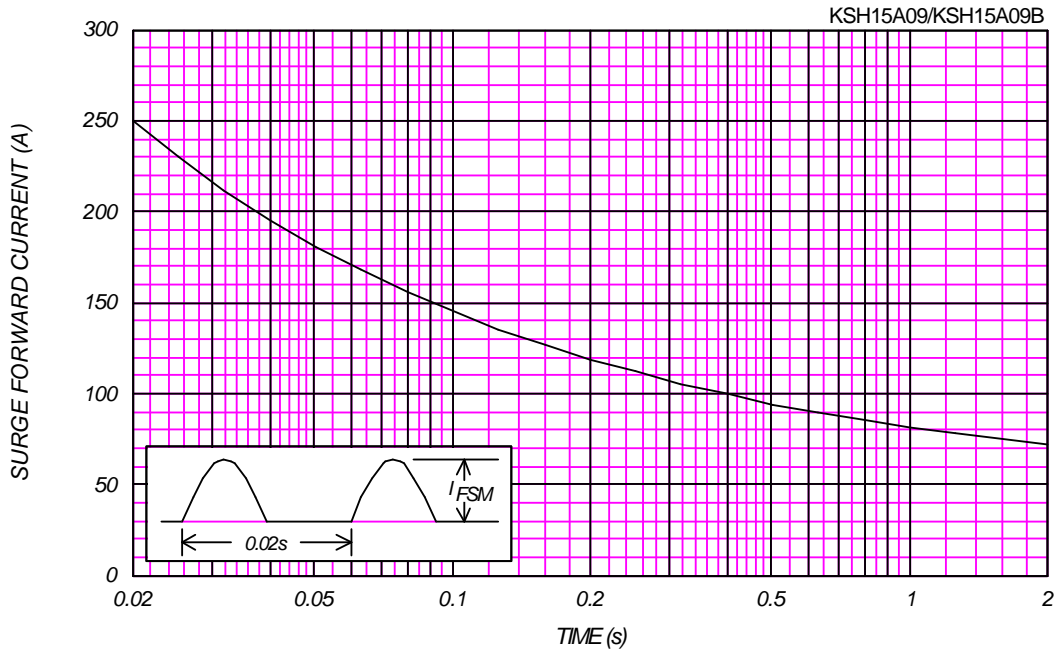
### AVERAGE FORWARD CURRENT VS. CASE TEMPERATURE

$V_{RM}=90\text{ V}$



### SURGE CURRENT RATINGS

$f=50\text{ Hz}$ , Sine Wave, Non-Repetitive, No Load



### JUNCTION CAPACITANCE VS. REVERSE VOLTAGE

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

KSH15A09/KSH15A09B

