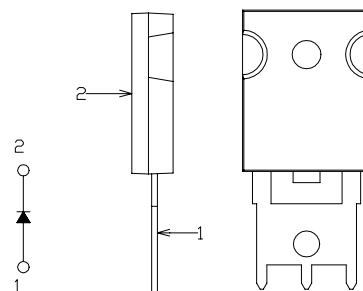


# SBD    Type : KSQ60A03LE

OUTLINE DRAWING

## FEATURES

- \* Similar to TO-247AC(TO-3P)Case
- \* Extremely Low Forward Voltage Drop
- \* Low Power Loss,High Efficiency
- \* High Surge Current Capability
- \* 30 Volts thru 60 Volts   Types Available



## Maximum Ratings

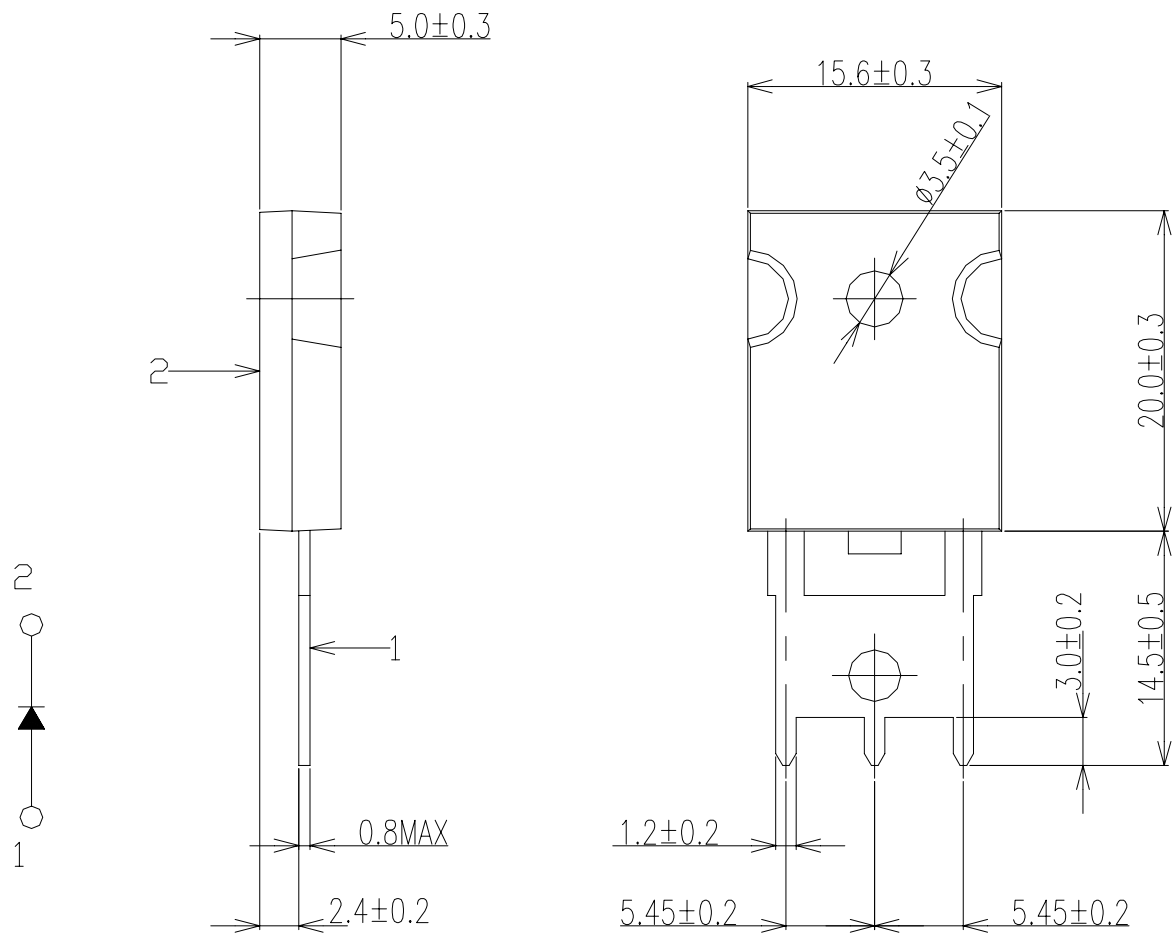
Approx Net Weight: 6.0g

| Rating                              | Symbol              | KSQ60A03LE               |                                               |                                        | Unit |
|-------------------------------------|---------------------|--------------------------|-----------------------------------------------|----------------------------------------|------|
| Repetitive Peak Reverse Voltage     | V <sub>RRM</sub>    | 30                       |                                               |                                        | V    |
| Average Rectified Output Current    | I <sub>O</sub>      | 60                       | Tc=106℃                                       | 50 Hz half Sine Wave<br>Resistive Load | A    |
| RMS Forward Current                 | I <sub>F(RMS)</sub> | 94.2                     |                                               |                                        | A    |
| Surge Forward Current               | I <sub>FSM</sub>    | 700                      | 50Hz Half 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  |

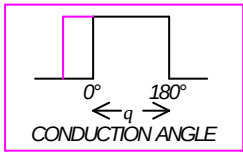
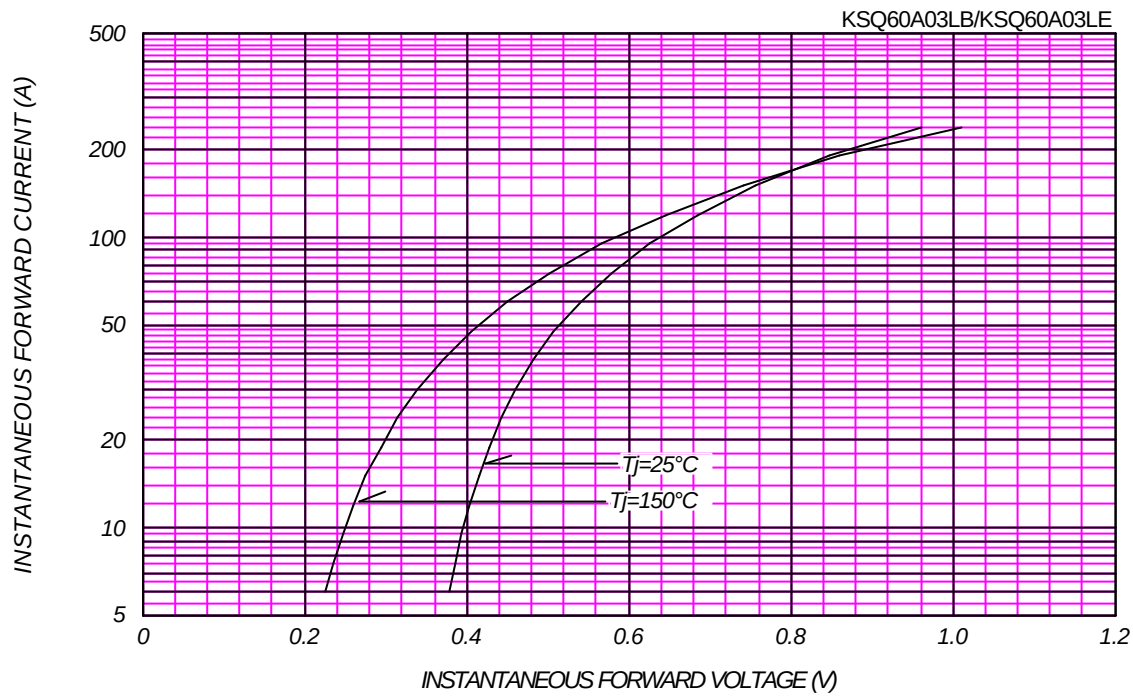
## Electrical • Thermal Characteristics

| Characteristics      | Symbol           | Conditions                                      | Min.             | Typ. | Max. | Unit                             |
|----------------------|------------------|-------------------------------------------------|------------------|------|------|----------------------------------|
| Peak Reverse Current | $I_{RM}$         | $T_j= 25^{\circ}\text{C}, V_{RM}= V_{RRM}$      | -                | -    | 40   | mA                               |
| Peak Forward Voltage | $V_{FM}$         | $T_j= 25^{\circ}\text{C}, I_{FM}= 60 \text{ A}$ | -                | -    | 0.54 | V                                |
| Thermal Resistance   | Junction to Case | $R_{th(j-c)}$                                   | Junction to Case | -    | -    | 0.75 $^{\circ}\text{C}/\text{W}$ |

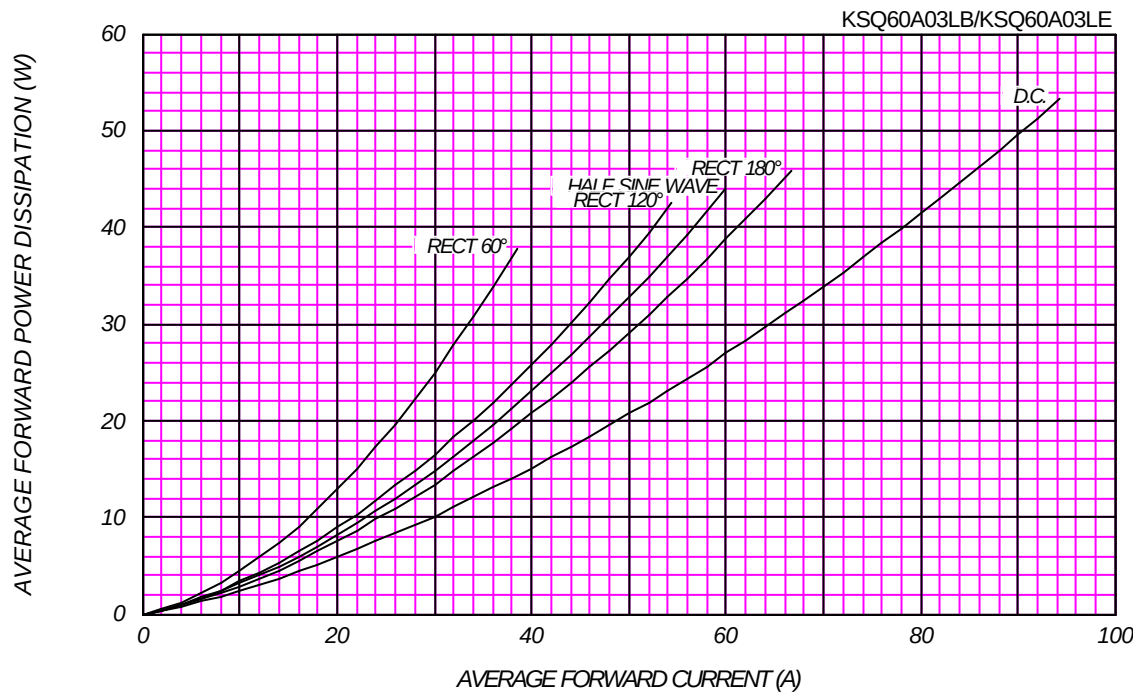
KSQ\_E OUTLINE DRAWING (Dimensions in mm)



FORWARD CURRENT VS. VOLTAGE



AVERAGE FORWARD POWER DISSIPATION

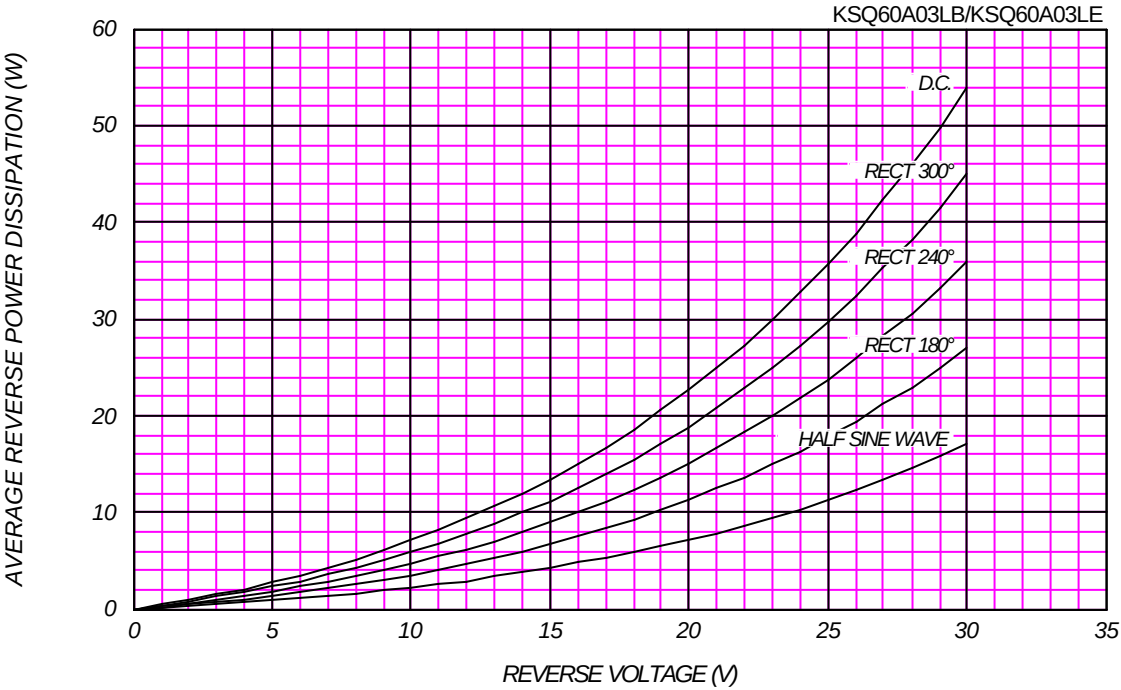


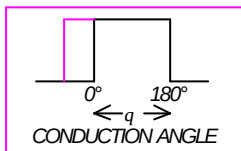
PEAK REVERSE CURRENT VS. PEAK REVERSE VOLTAGE

T<sub>j</sub> = 150 °C



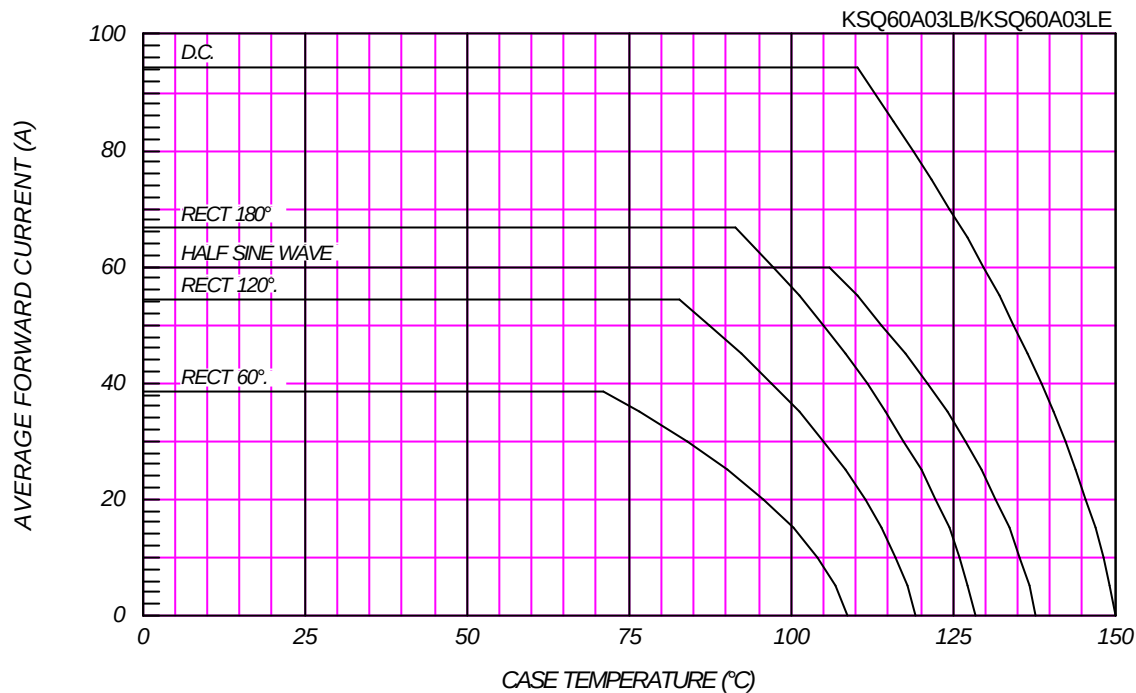
AVERAGE REVERSE POWER DISSIPATION





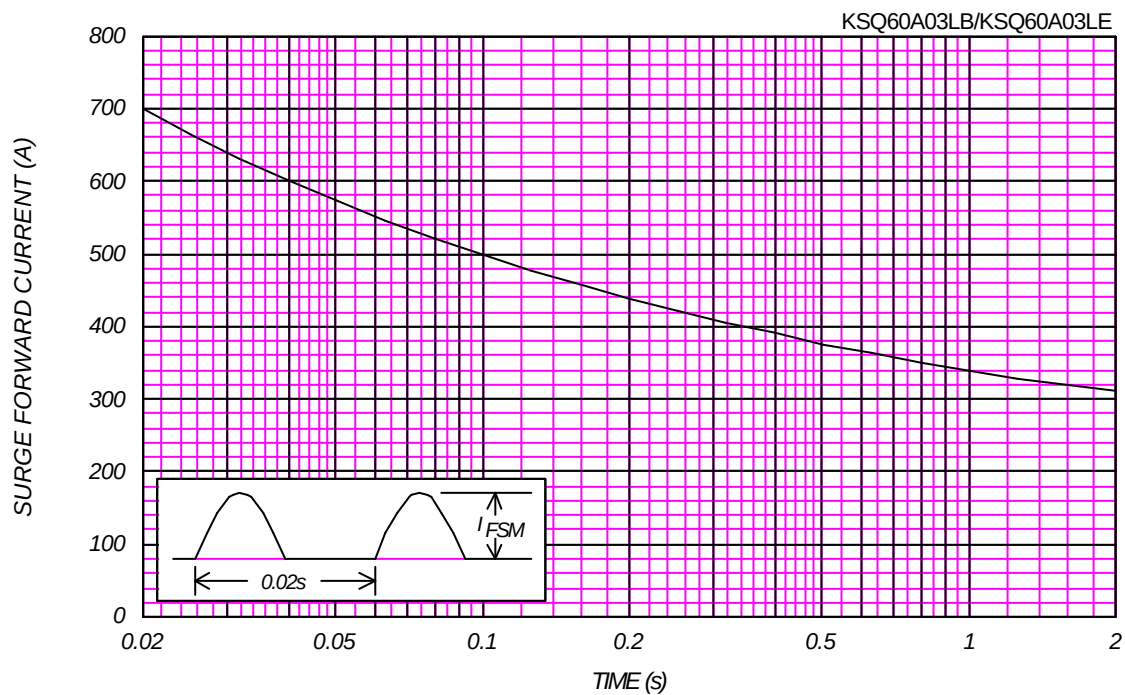
### AVERAGE FORWARD CURRENT VS. CASE TEMPERATURE

$V_{RM}=30V$



### SURGE CURRENT RATINGS

$f=50Hz$ , Half 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

KSQ60A03LB/KSQ60A03LE

