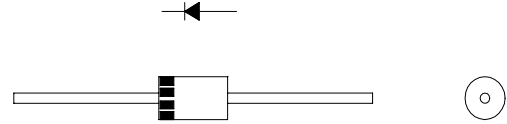


SBD Type : 31DQ03L

OUTLINE DRAWING

FEATURES

- * Extremely Low Forward Voltage Drop
- * Low Power Loss, High Efficiency
- * High Surge Capability
- * 30volts trough 100volts Types Available



Maximum Ratings

Approx Net Weight:1.18g

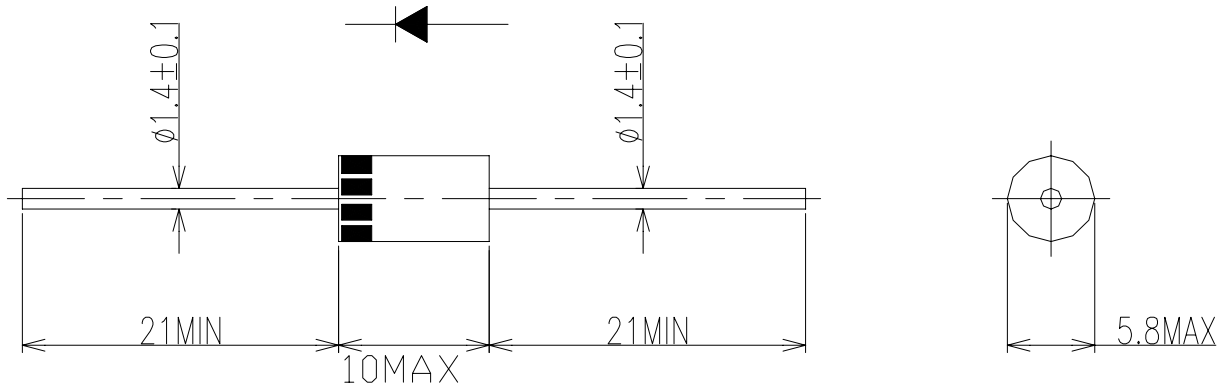
| Rating | Symbol | 31DQ03L | | | Unit |
|-------------------------------------|--------------|---------------|--------------------------------------|-------------------------------|-------------|
| Repetitive Peak Reverse Voltage | V_{RRM} | 30 | | | V |
| Average Rectified Output Current | I_O | 1.9 | $T_a=25^{\circ}C$ | Half Sine Wave Resistive Load | A |
| | | 3.0 | $T_a=53^{\circ}C$ | | |
| RMS Forward Current | $I_{F(RMS)}$ | 4.71 | | | A |
| Surge Forward Current | I_{FSM} | 120 | Half Sine Wave,1cycle,Non-repetitive | | A |
| Operating JunctionTemperature Range | T_{jw} | - 40 to + 150 | | | $^{\circ}C$ |
| Storage Temperature Range | T_{stg} | - 40 to + 150 | | | $^{\circ}C$ |

Electrical • Thermal Characteristics

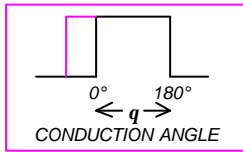
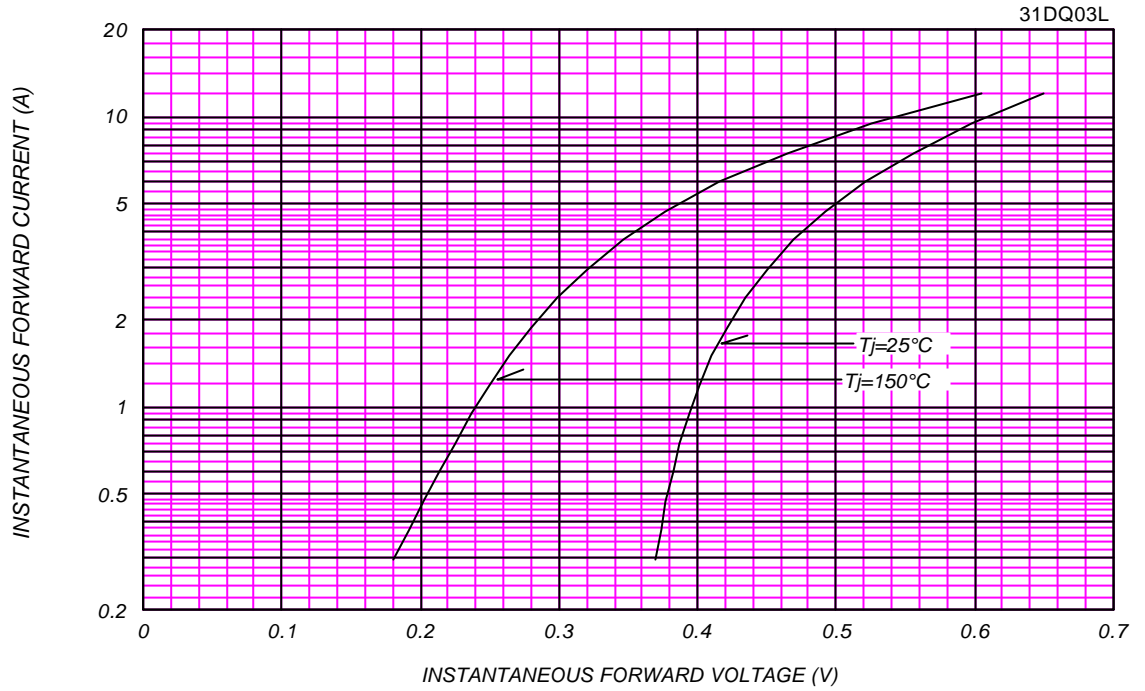
| Characteristics | Symbol | Conditions | Min | Typ | Max | Unit |
|---|---------------|-------------------------------------|-----|-----|------|---------------|
| Peak Reverse Current | I_{RM} | $T_j= 25^{\circ}C, V_{RM}= V_{RRM}$ | - | - | 3 | mA |
| Peak Forward Voltage | V_{FM} | $T_j= 25^{\circ}C, I_{FM}= 3 A$ | - | - | 0.45 | V |
| Thermal Resistance(Junction to Ambient) | $R_{th(j-a)}$ | Without Fin or P.C.Board | - | - | 80 | $^{\circ}C/W$ |
| | | With Fin *1 | | | 34 | |

*1 :20x20x1t(mm) Copper plates, L=5mm, Both Sides

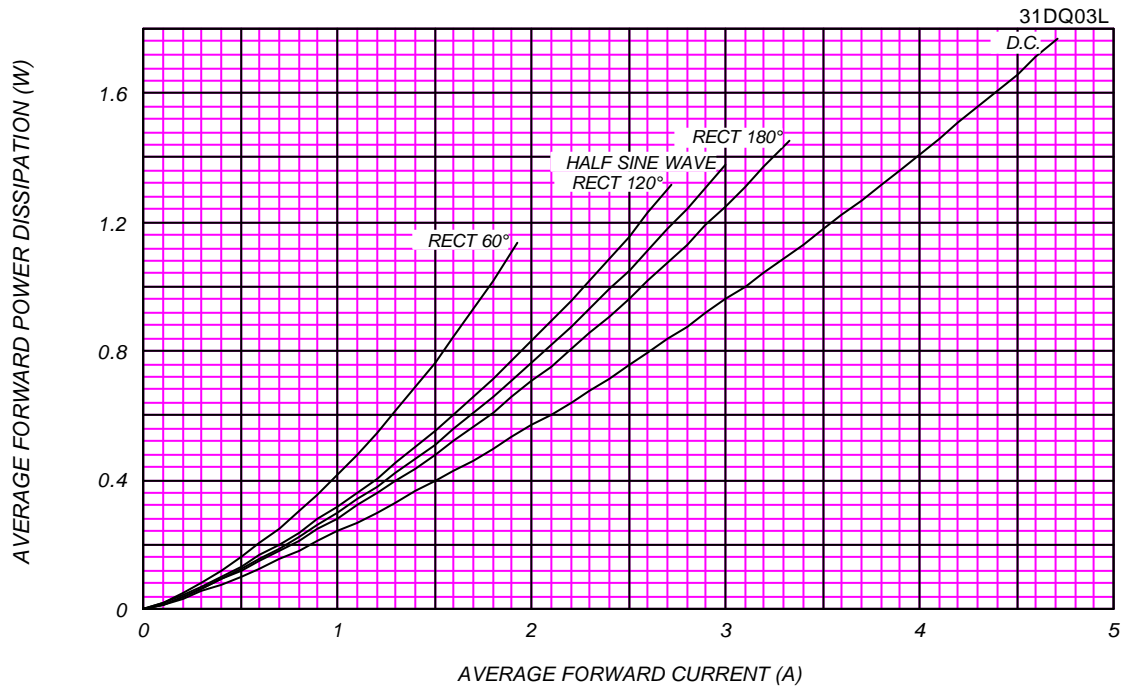
31DQ_ OUTLINE DRAWING (Dimensions in mm)



FORWARD CURRENT VS. VOLTAGE



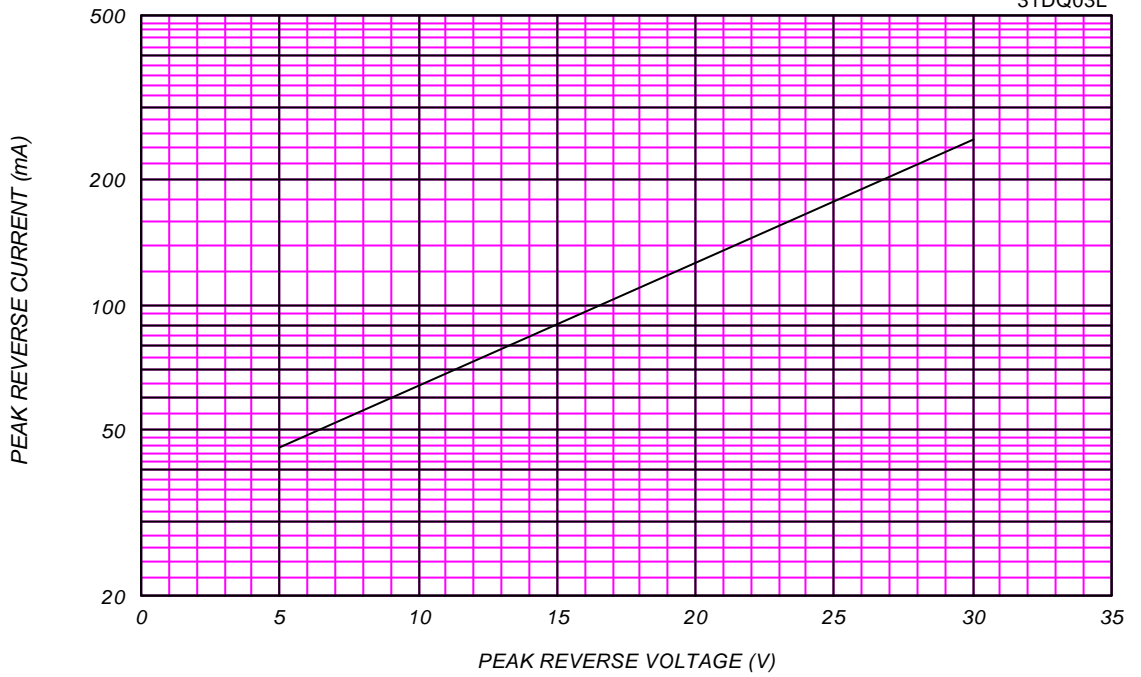
AVERAGE FORWARD POWER DISSIPATION



PEAK REVERSE CURRENT VS. PEAK REVERSE VOLTAGE

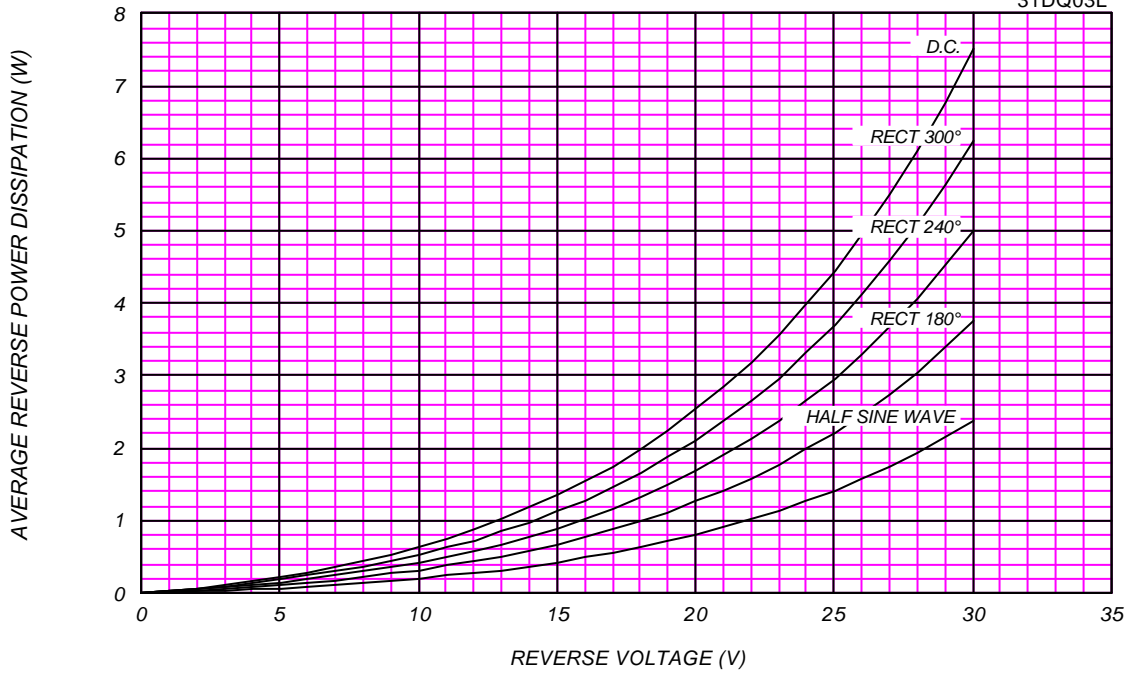
T_j = 150 °C

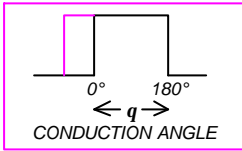
31DQ03L



AVERAGE REVERSE POWER DISSIPATION

31DQ03L

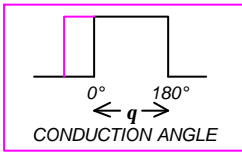
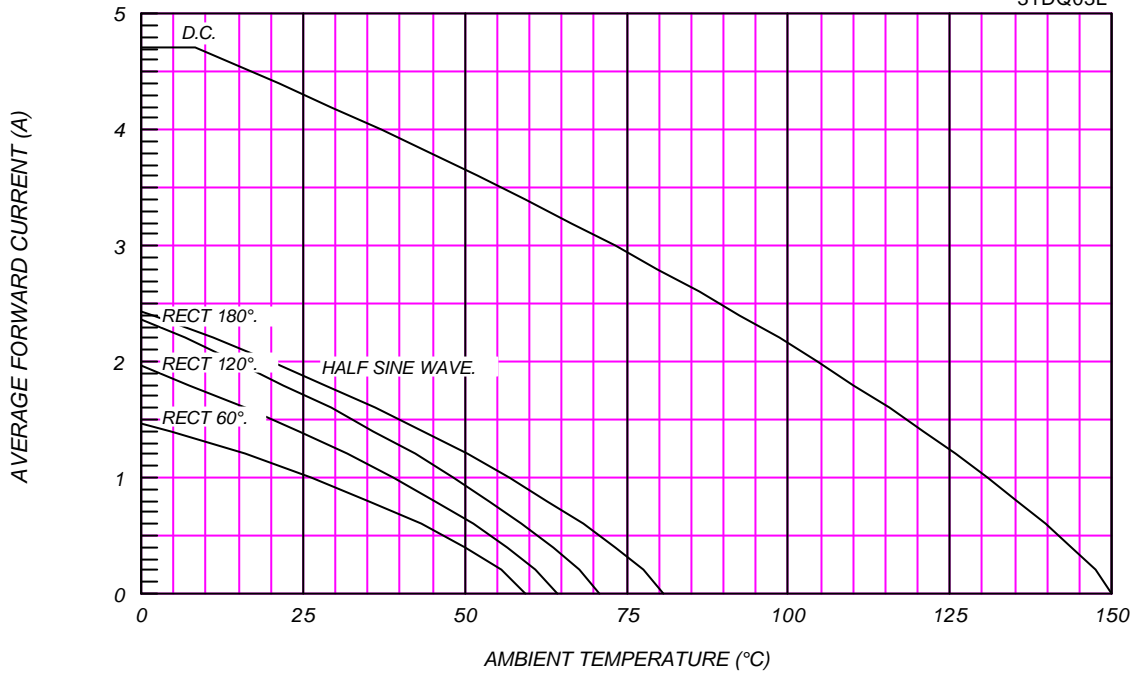




AVERAGE FORWARD CURRENT VS. AMBIENT TEMPERATURE

Without Fin or P.C. Board, $V_{RM}=30V$

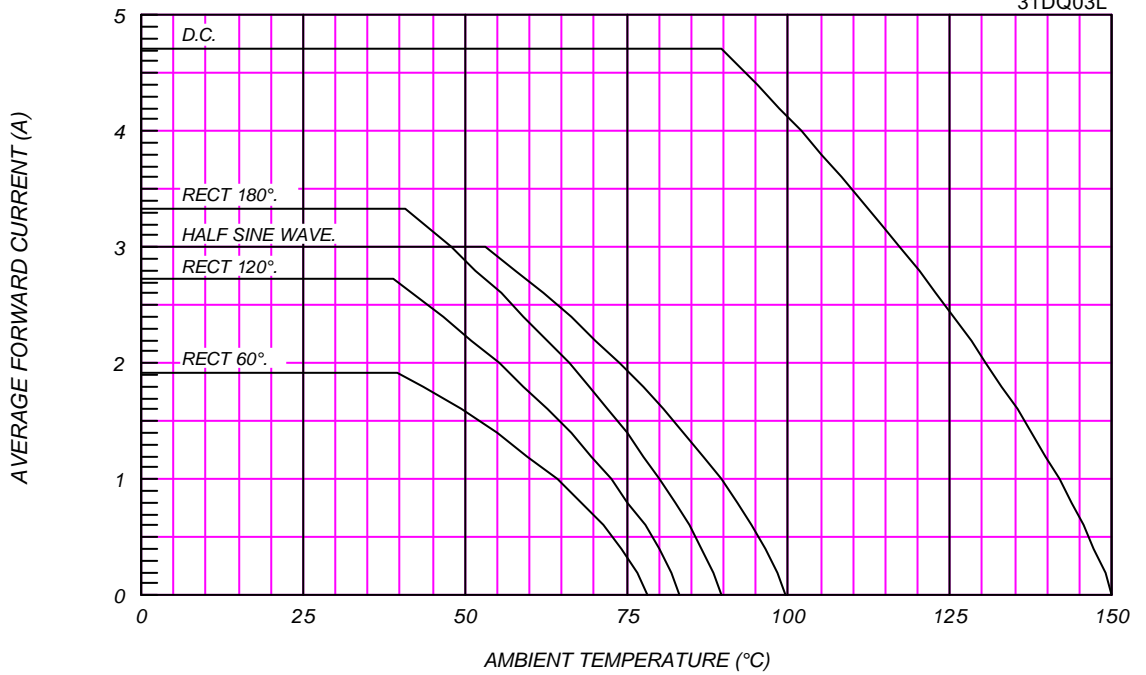
31DQ03L



AVERAGE FORWARD CURRENT VS. AMBIENT TEMPERATURE

With Cu Fin x2 (20x20x1t, L=5mm, Both Sides), $V_{RM}=30V$

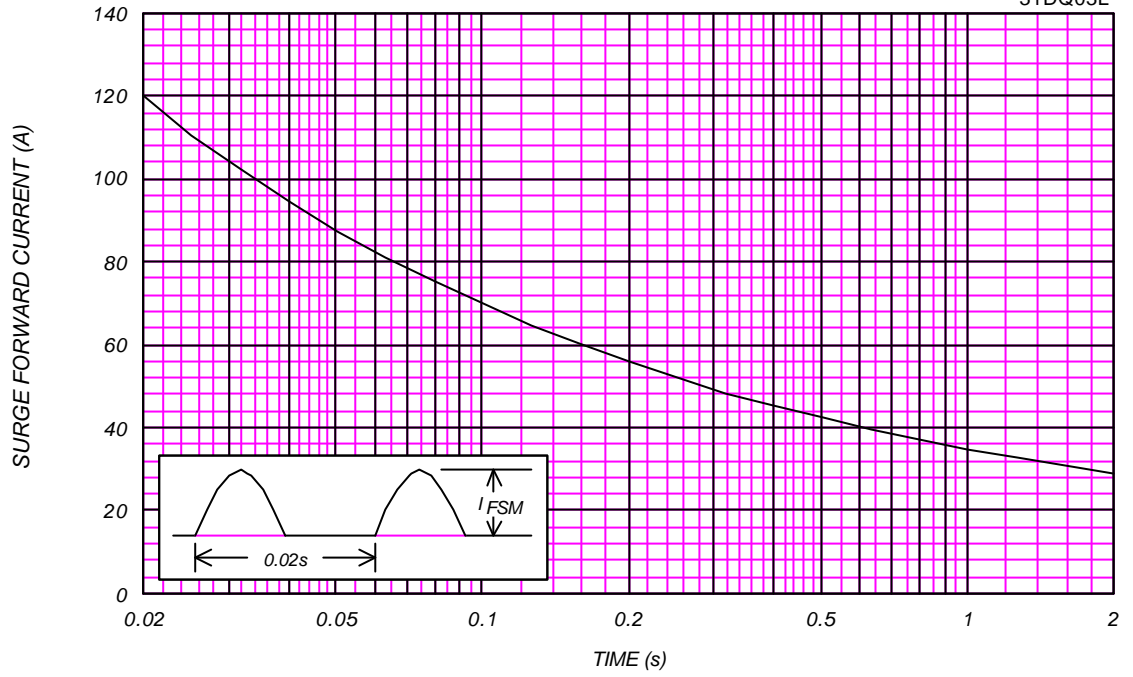
31DQ03L



SURGE CURRENT RATINGS

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

31DQ03L



JUNCTION CAPACITANCE VS. REVERSE VOLTAGE

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

31DQ03L

