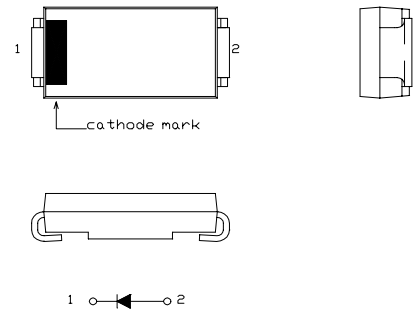


SBD Type : NSQ03A03L

FEATURES

- * **FLAT-PAK** Surface Mounting Device
- * Extremely Low Forward Voltage Drop
- * Low Power Loss, High Efficiency
- * High Surge Capability
- * 30 Volts through 60Volts Types Available
- * Packaged in 16mm Tape and Reel
- * Not Rolling During Assembly

OUTLINE DRAWING



Maximum Ratings

Approx Net Weight: 0.16g

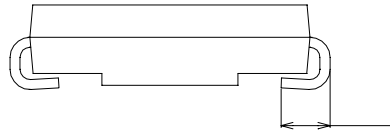
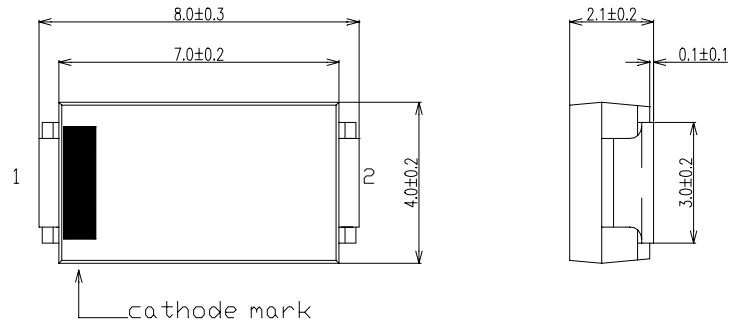
| Rating | Symbol | NSQ03A03L | | | Unit |
|--------------------------------------|--------------|-------------|---|---------------------|-------------|
| Repetitive Peak Reverse Voltage | V_{RRM} | 30 | | | V |
| Average Rectified Output Current | I_o | 1.6 | $T_a=25^{\circ}C$ *1 | 50Hz Half Sine | A |
| | | 3.0 | $T_l=103^{\circ}C$ | Wave Resistive Load | |
| RMS Forward Current | $I_{F(RMS)}$ | 4.71 | | | A |
| Surge Forward Current | I_{FSM} | 100 | 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

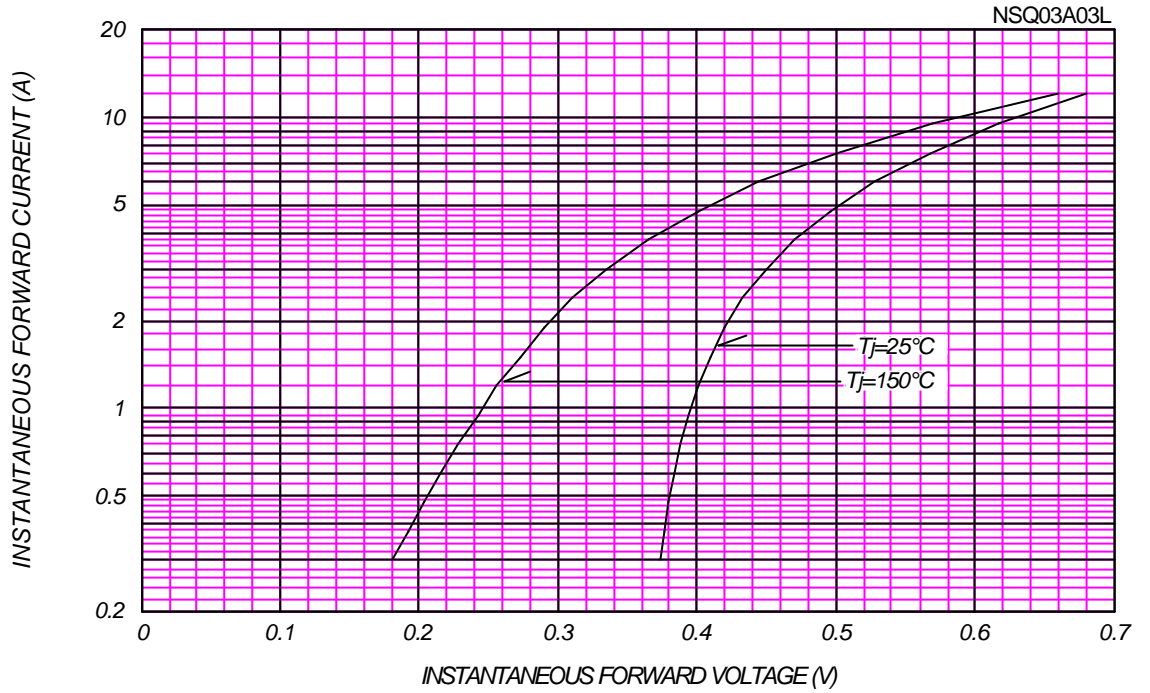
| Characteristics | | Symbol | Conditions | Min. | Typ. | Max. | Unit |
|----------------------|---------------------|---------------|-------------------------------------|------|------|------|---------------|
| Peak Reverse Current | | I_{RM} | $T_j= 25^{\circ}C, V_{RM}= V_{RRM}$ | - | - | 3 | mA |
| Peak Forward Voltage | | V_{FM} | $T_j= 25^{\circ}C, I_{FM}= 3.0A$ | - | - | 0.45 | V |
| Thermal Resistance | Junction to Ambient | $R_{th(j-a)}$ | Alumina Substrate Mounted *1 | - | - | 89 | $^{\circ}C/W$ |
| | Junction to Lead | $R_{th(j-l)}$ | - | - | - | 13 | |

*1 Alumina Substrate Mounted (Soldering Lands=2x3.5mm, Both Sides)
(T_l : Lead Temperature)

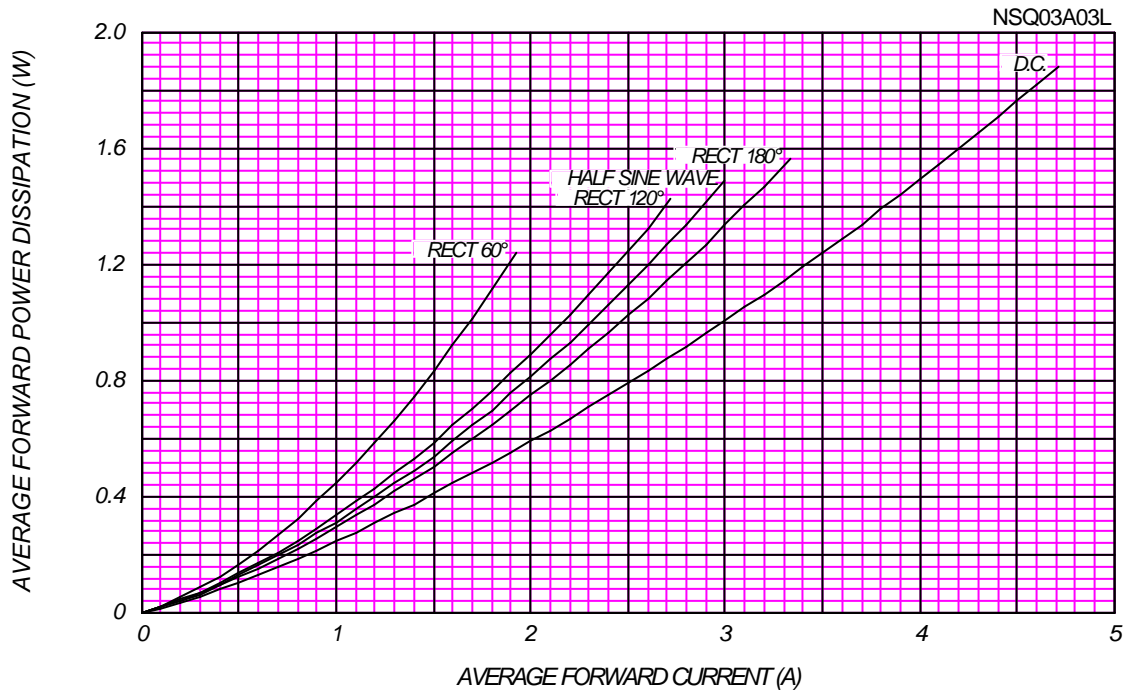
NSQ03A03L OUTLINE DRAWING (Dimensions in mm)



FORWARD CURRENT VS. VOLTAGE



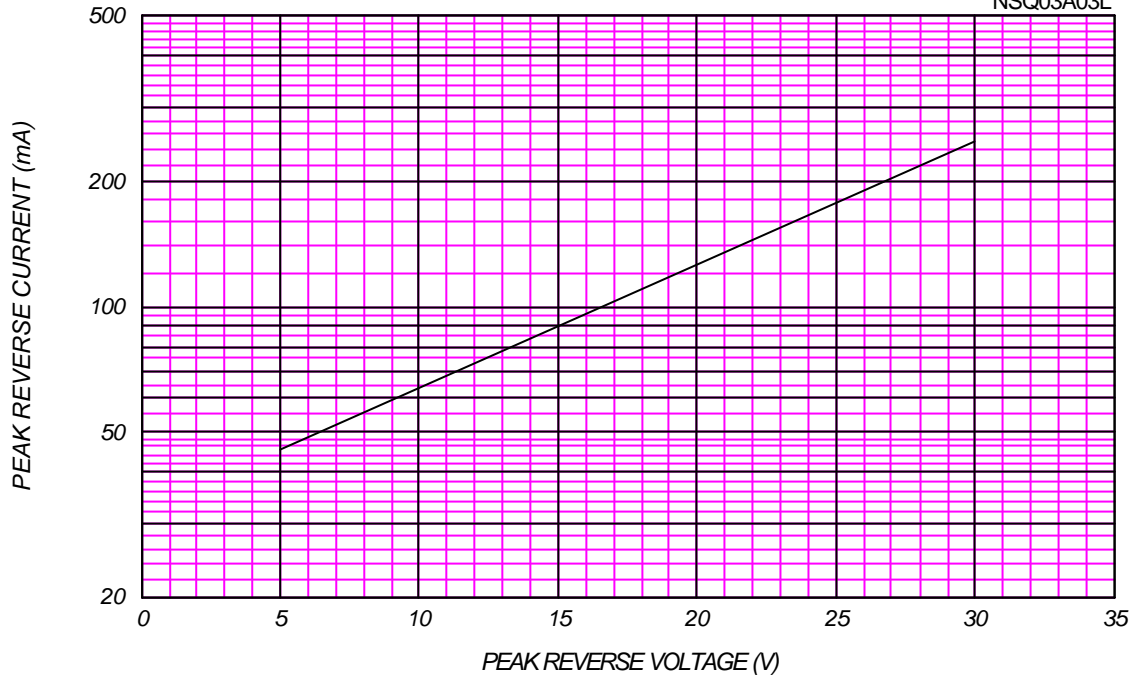
AVERAGE FORWARD POWER DISSIPATION



PEAK REVERSE CURRENT VS. PEAK REVERSE VOLTAGE

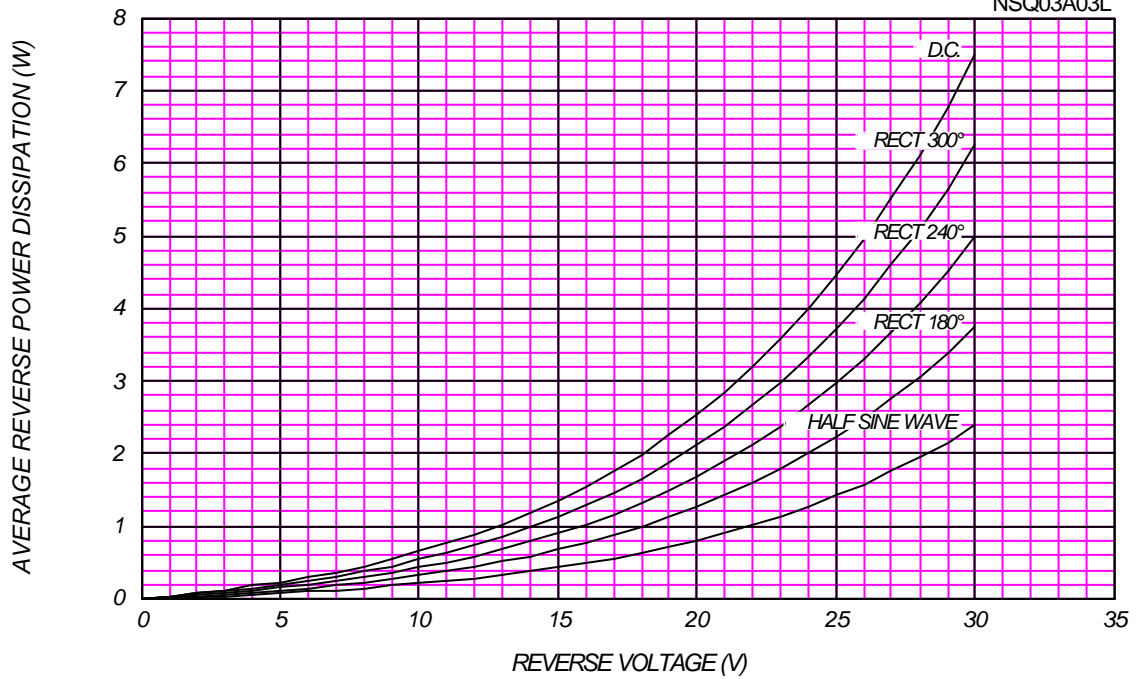
$T_j = 150\text{ }^\circ\text{C}$

NSQ03A03L



AVERAGE REVERSE POWER DISSIPATION

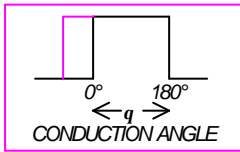
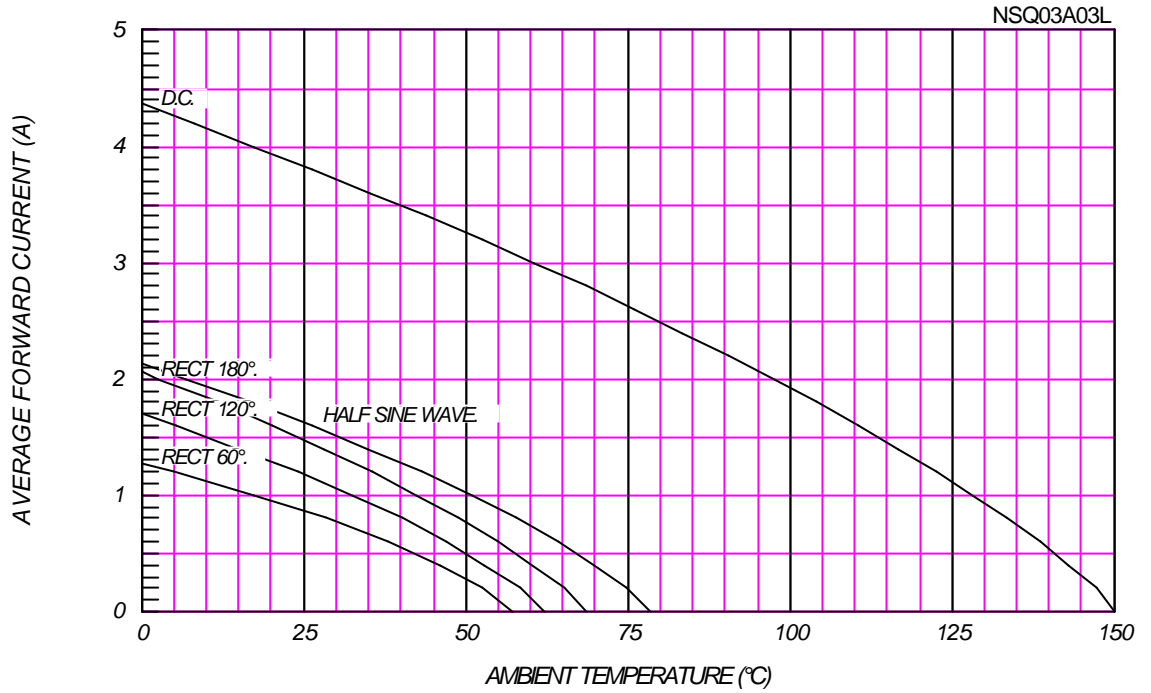
NSQ03A03L





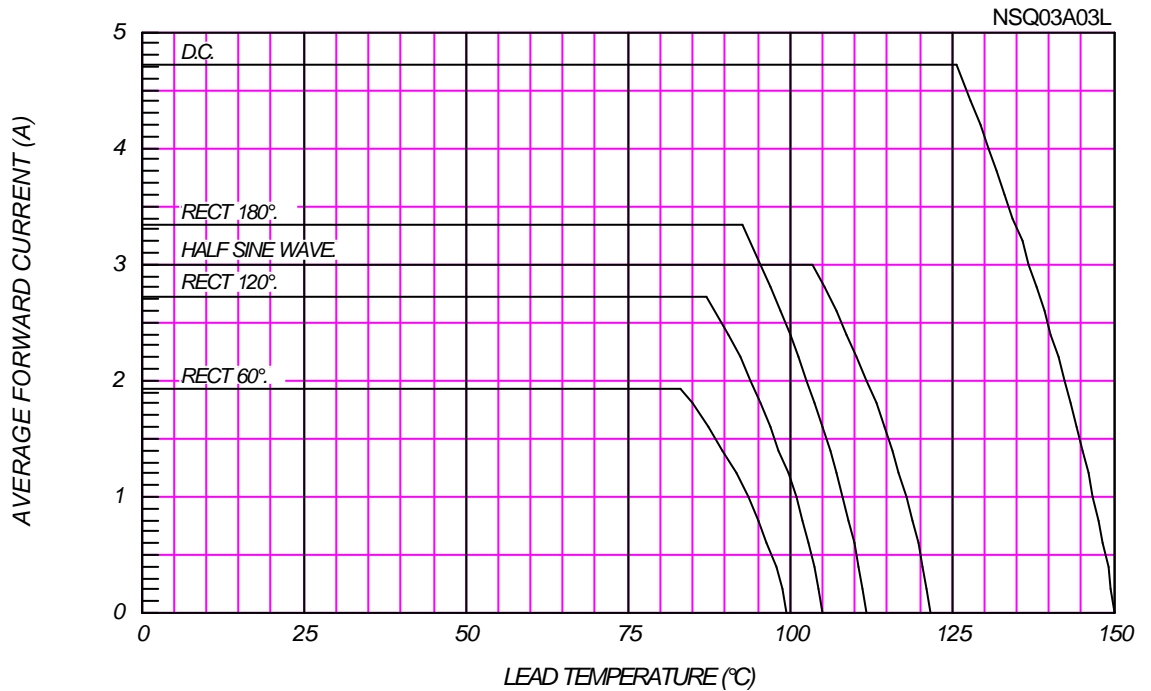
AVERAGE FORWARD CURRENT VS. AMBIENT TEMPERATURE

Alumina Substrate Mounted (Soldering Land=2x3.5mm), $V_{RM}=30V$



AVERAGE FORWARD CURRENT VS. LEAD TEMPERATURE

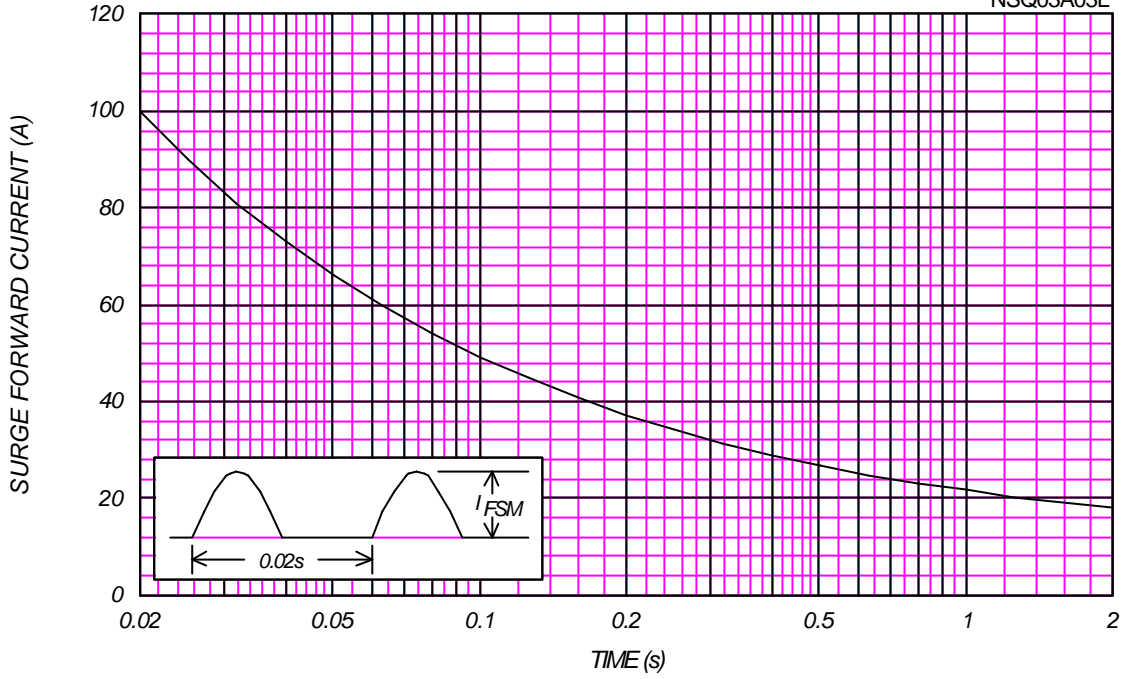
$V_{RM}=30V$



SURGE CURRENT RATINGS

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

NSQ03A03L



JUNCTION CAPACITANCE VS. REVERSE VOLTAGE

T_j=25° C, V_m=20mV_{RMS}, f=100kHz, Typical Value

NSQ03A03L

