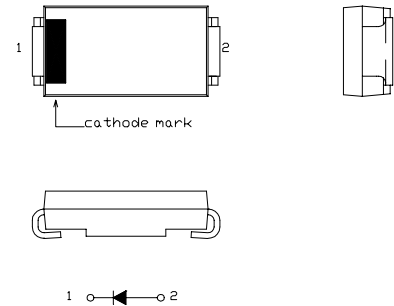


# SBD Type : NSQ03A04

## FEATURES

- \* **FLAT-PAK** Surface Mounting Device
- \* 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

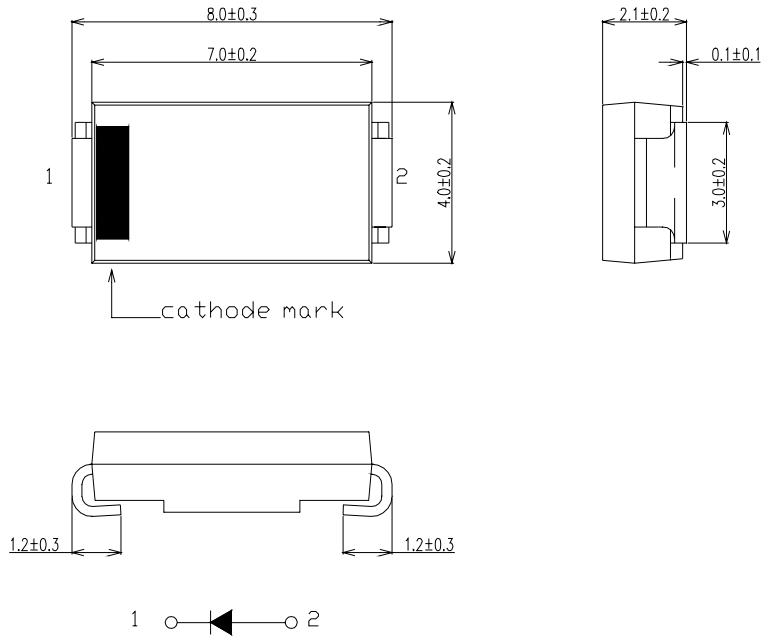
Rating	Symbol	NSQ03A04			Unit
Repetitive Peak Reverse Voltage	$V_{RRM}$	40			V
Average Rectified Output Current	$I_o$	1.62	$T_a=25^{\circ}C$ *1	50Hz Half Sine Wave Resistive Load	A
		3.0	$T_l=113^{\circ}C$		
RMS Forward Current	$I_{F(RMS)}$	4.71			A
Surge Forward Current	$I_{FSM}$	80	50Hz Half Sine Wave, 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

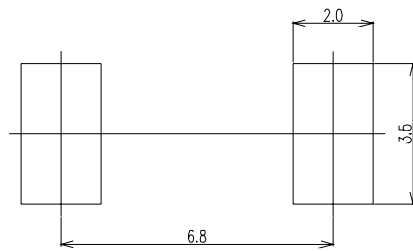
Characteristics		Symbol	Conditions	Min.	Typ.	Max.	Unit
Peak Reverse Current		$I_{RM}$	$T_j= 25^{\circ}C, V_{RM}= V_{RRM}$	-	-	3	mA
Peak Forward Voltage		$V_{FM}$	$T_j= 25^{\circ}C, I_{FM}= 3.0A$	-	-	0.55	V
Thermal Resistance	Junction to Ambient	$R_{th(j-a)}$	Alumina Substrate Mounted *1	-	-	89	$^{\circ}C/W$
	Junction to Lead	$R_{th(j-l)}$	-	-	-	13	

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

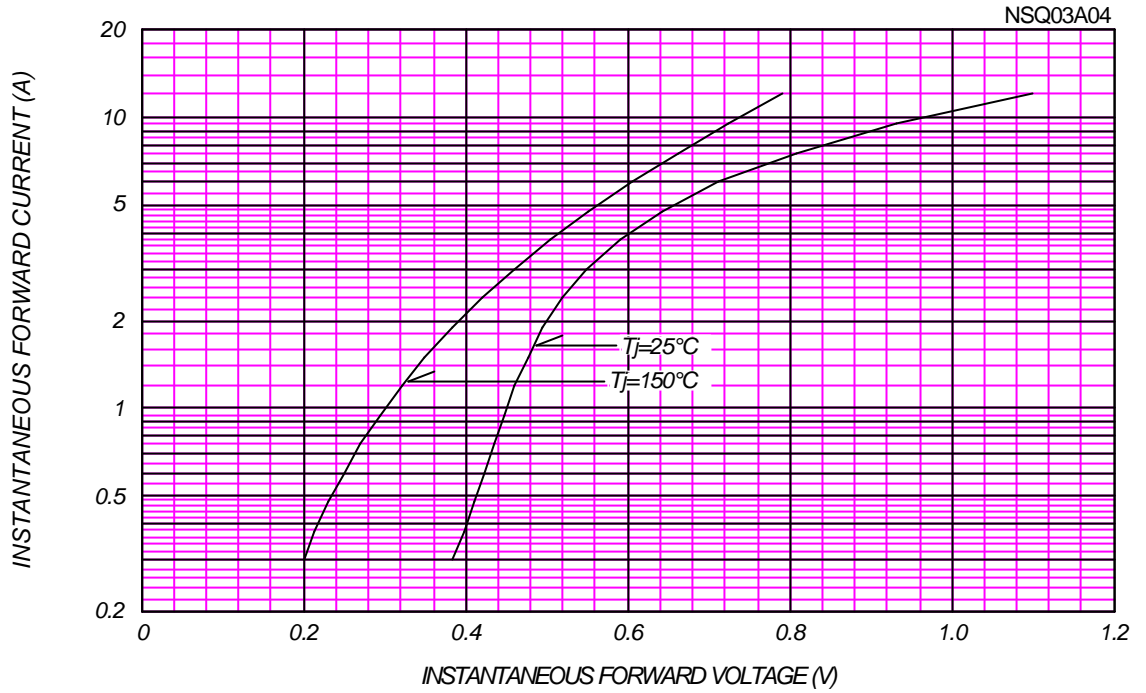
NSQ03A04 OUTLINE DRAWING (Dimensions in mm)



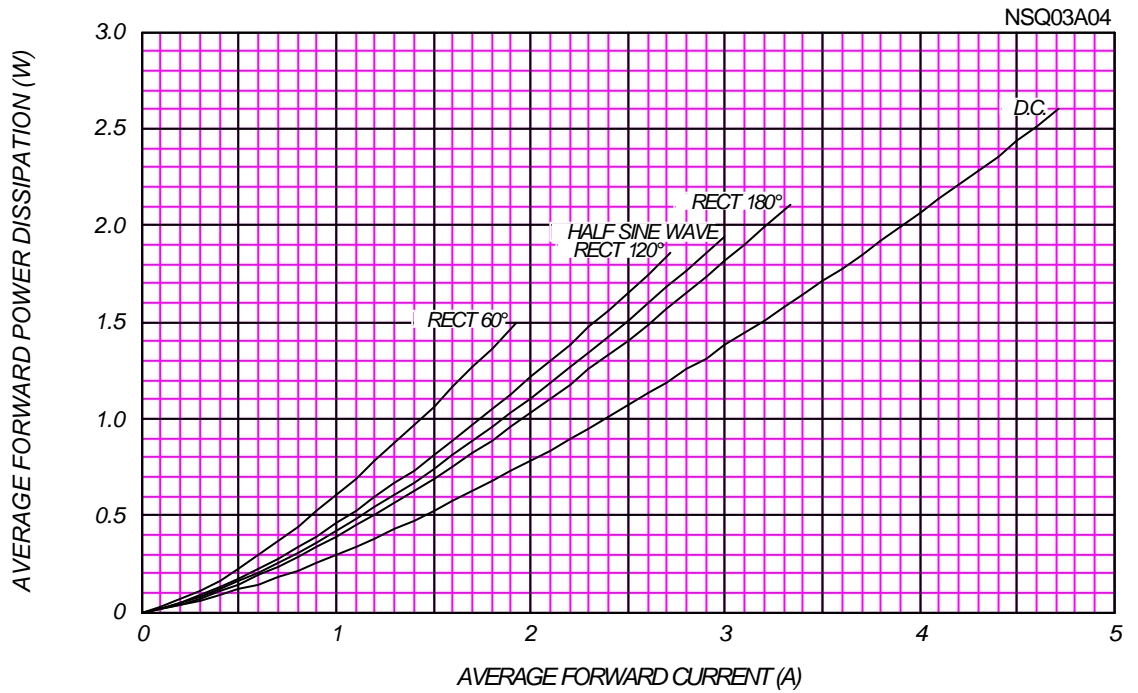
SOLDERING PAD



FORWARD CURRENT VS. VOLTAGE



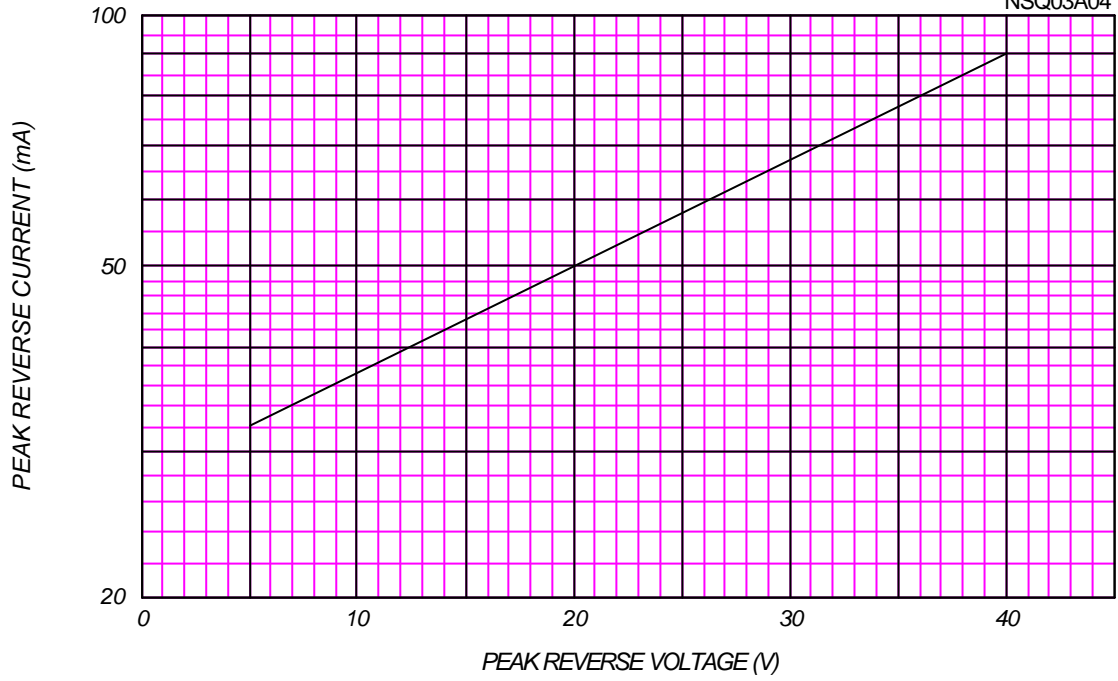
AVERAGE FORWARD POWER DISSIPATION



PEAK REVERSE CURRENT VS. PEAK REVERSE VOLTAGE

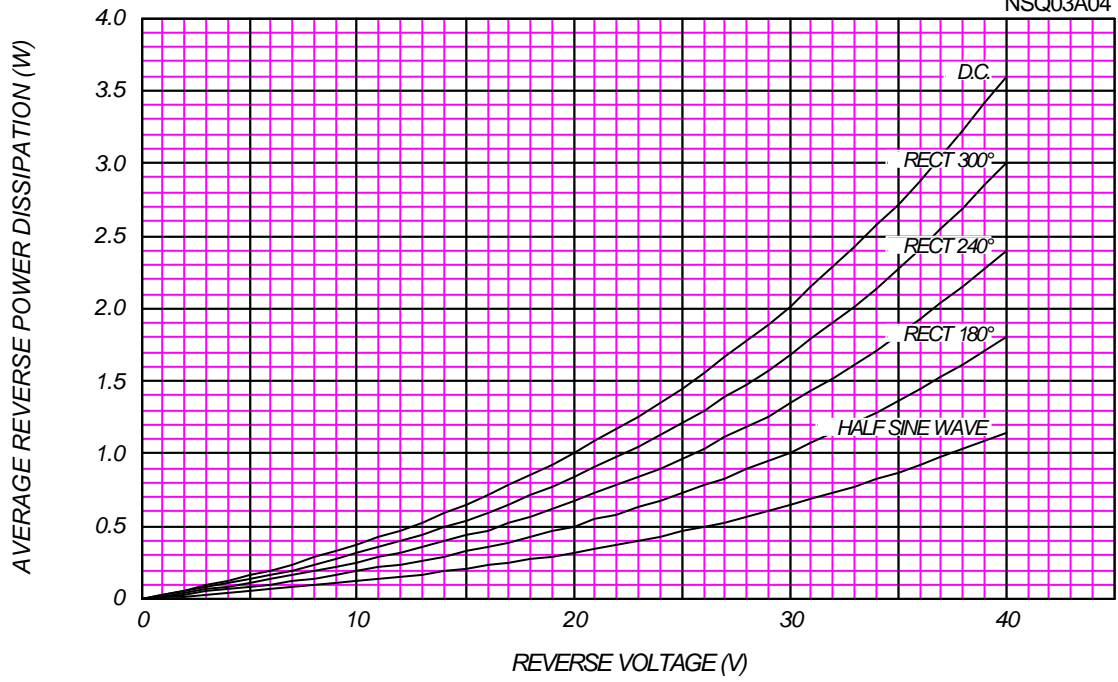
T<sub>j</sub> = 150 °C

NSQ03A04



AVERAGE REVERSE POWER DISSIPATION

NSQ03A04

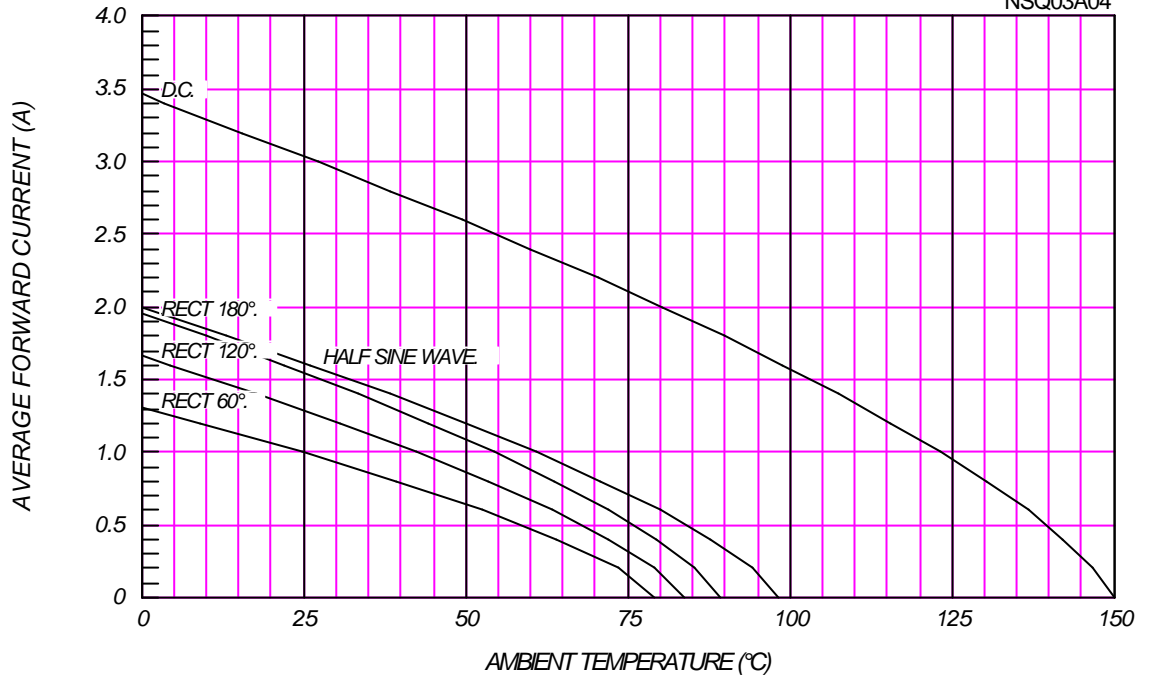




### AVERAGE FORWARD CURRENT VS. AMBIENT TEMPERATURE

Alumina Substrate Mounted,  $V_{RM}=40V$

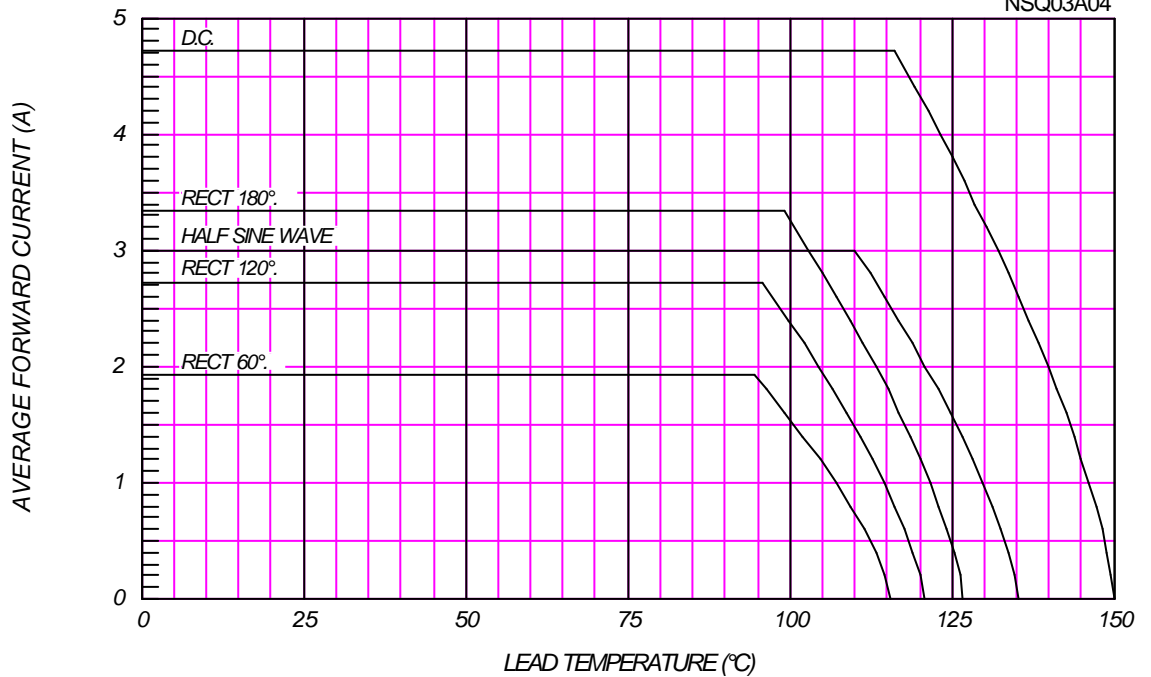
NSQ03A04



### AVERAGE FORWARD CURRENT VS. LEAD TEMPERATURE

$V_{RM}=40V$

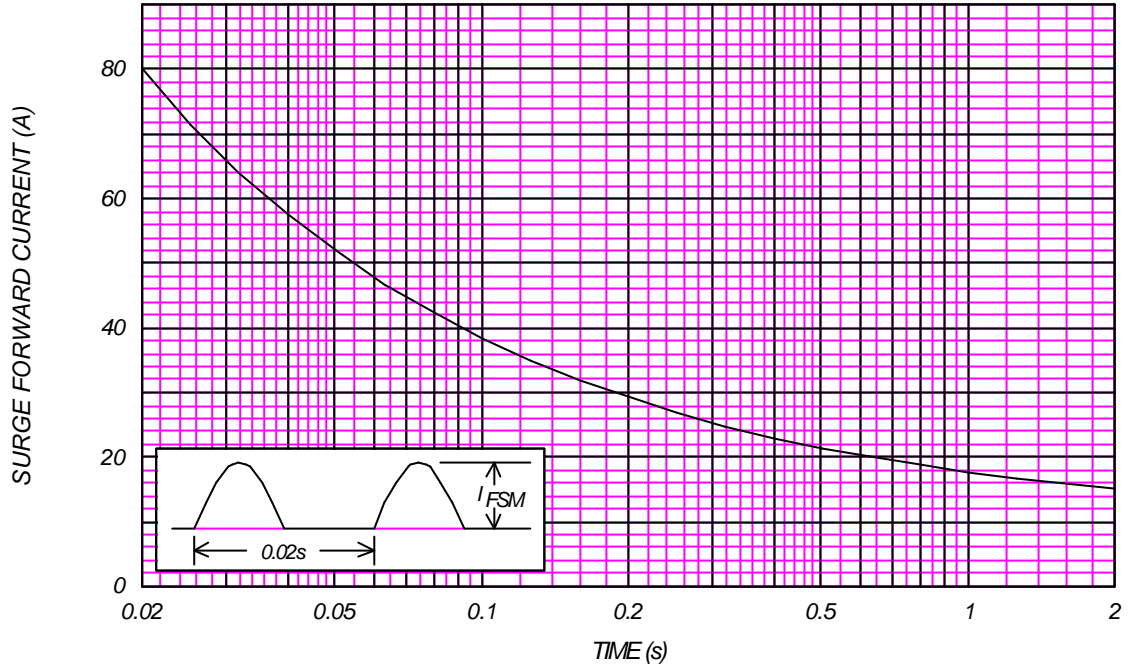
NSQ03A04



### SURGE CURRENT RATINGS

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

NSQ03A04



### JUNCTION CAPACITANCE VS. REVERSE VOLTAGE

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

NSQ03A04

