

## 3SM2 – 3SM0

### Axial Leaded Hermetically Sealed Standard Recovery Rectifier Diode

#### Description

$V_R = 200 - 1000V$   
 $I_F = 5.0A$   
 $t_{rr} = 2\mu S$   
 $V_F = 1.0V$

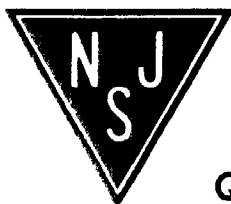
#### Features

- ◆ Low reverse leakage current
- ◆ Hermetically sealed in fused metal oxide
- ◆ Good thermal shock resistance
- ◆ Low forward voltage drop
- ◆ Avalanche capability

#### Absolute Maximum Ratings

Electrical specifications @  $T_A = 25^\circ C$  unless otherwise specified.

	Symbol	3SM2	3SM4	3SM6	3SM8	3SM0	Units
Working Reverse Voltage	$V_{RWM}$	200	400	600	800	1000	V
Average Forward Current @ 55°C in free air, lead length 0.375"	$I_{F(AV)}$	5.0					A
Repetitive Surge Current @ 55°C in free air, lead length 0.375"	$I_{FRM}$	25					A
Non-Repetitive Surge Current ( $t_p = 8.3mS$ @ $V_R$ & $T_{JMAX}$ ) ( $t_p = 8.3mS$ , @ $V_R$ & 25°C)	$I_{FSM}$	100 150					A
Storage Temperature Range	$T_{STG}$	-65 to +175					°C



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## Electrical Specifications

	Symbol	3SM2	3SM4	3SM6	3SM8	3SM0	Units
Average Forward Current (sine wave) - max. $T_A = 55^\circ\text{C}$ - max. $L = 3/8"$ ; $T_L = 55^\circ\text{C}$	$I_{F(AV)}$ $I_{F(AV)}$			3.0 5.0			A
Pt for fusing (t = 8.3mS) max	Pt			42			A <sup>2</sup> S
Forward Voltage Drop max. @ $I_F = 3.0\text{A}$ , $T_J = 25^\circ\text{C}$	$V_F$			1.0			V
Reverse Current max. @ $V_{RWM}$ , $T_J = 25^\circ\text{C}$ @ $V_{RWM}$ , $T_J = 125^\circ\text{C}$	$I_R$ $I_R$			1.0 60			$\mu\text{A}$
Reverse Recovery Time max. 0.5A $I_F$ to 1.0A $I_{RM}$ recovers to 0.25A $I_{RM(REC)}$	trr			2.0			$\mu\text{S}$
Junction Capacitance typ. @ $V_R = 5\text{V}$ , f = 1MHz	Cj			92			pF

## Thermal Characteristics

	Symbol	3SM2	3SM4	3SM6	3SM8	3SM0	Units
Thermal Resistance-Junction to Lead Lead length = 0.375" Lead length = 0.0"	$R_{\theta JL}$ $R_{\theta JL}$			22 4			$^\circ\text{C/W}$
Thermal Resistance-Junction to Ambient on 0.06" thick pcb. 1 oz. copper	$R_{\theta JA}$			47			$^\circ\text{C/W}$

