

3SM2 – 3SM0
Axial Leaded Hermetically Sealed
Standard Recovery Rectifier Diode

Description

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

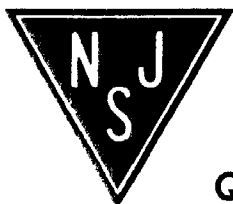
Features

- ◆ 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 & $25^\circ C$)	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 ² 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			μA
Reverse Recovery Time max. 0.5A I_F to 1.0A I_{RM} recovers to 0.25A $I_{RM(REC)}$	trr			2.0			μS
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			$^\circ\text{C/W}$

