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3SM2 – 3SM0

Axial Leaded Hermetically Sealed
Standard Recovery Rectifier Diode

Description

V_R = 200 - 1000V
I_F = 5.0A
t_{rr} = 2μS
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°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 (tp = 8.3mS @ V_R & T_{JMAX}) (tp = 8.3mS, @ V_R & 25°C)	I_{FSM}	100 150					A
Storage Temperature Range	T_{STG}	-65 to +175					°C

Electrical Specifications

	Symbol	3SM2	3SM4	3SM6	3SM8	3SM0	Units
Average Forward Current (sine wave) - max. T_A = 55°C - max. L = 3/8"; T_L = 55°C	 $I_{F(AV)}$ $I_{F(AV)}$			 3.0 5.0			A
I^2t for fusing (t = 8.3mS) max	I^2t			42			A^2S
Forward Voltage Drop max. @ I_F = 3.0A, T_j = 25°C	V_F			1.0			V
Reverse Current max. @ V_{RWM}, Tj = 25°C @ V_{RWM}, Tj = 125°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 = 5V, 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			°C/W
Thermal Resistance-Junction to Ambient on 0.06" thick pcb. 1 oz. copper	$R_{\theta JA}$			47			°C/W