

ELECTRO POWER ENTERPRISE

Fast Recovery Diode Stud

M0139S(R)M180

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Forward Conduction

Parameter	Symbol	Min.	Max.	Typ.	Units	Conditions
Repetitive peak reverse voltage	V_{RRM}			1800	V	
Non repetitive peak reverse voltage	V_{RSM}			1900	V	
Max. average forward current	$I_{F(AV)}$			58	A	Sinewave, 180° conduction, $T_c=100^\circ\text{C}$
Max. RMS forward current	$I_{F(RMS)}$			175	A	Nominal value; $T_c=100^\circ\text{C}$
Max. peak, one-cycle forward, non-repetitive surge current	I_{FSM}			2.4	kA	10.0 msec (50Hz), half sinewave, $T_j = 25^\circ\text{C}$, $V_{RM} = 0.6V_{RRM}$
Maximum I^2t for fusing	I^2t			30	kA^2s	
Max. forward voltage drop	V_F			1.6	V	$I_F = 280\text{A}$; $T_c=25^\circ\text{C}$
Threshold voltage	V_{F0}			1.24	V	$I_F < 500\text{A}$
Slope resistance	r_s			1.28	$\text{m}\Omega$	

Thermal and Mechanical Specifications

Parameter	Symbol	Min.	Max.	Typ.	Units	Conditions
Operating temperature	T_j	-40	+125		$^\circ\text{C}$	
Storage temperature	T_{stg}	-40	+150		$^\circ\text{C}$	
Reverse recovery charge	Q_{rr}			90	μC	
Thermal resistance - junction to case	$R_{\theta(j-c)}$		-	0.3	K/W	
Thermal resistance - case to heatsink	$R_{\theta(c-s)}$		-	0.08	K/W	
Mounting force	P			11	Nm	$\pm 20\%$
Weight	W	-	-	-	g	
Case style				DO-8		See Outline Table

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CASE OUTLINE AND DIMENSIONS.

