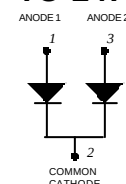


· **Switching Power Supply** · **Converters** · **Free-Wheeling Diodes** · **Polarity Protection Diode**

- **Soft Reverse Recovery at Low and High Temperature**
- **Low Forward Voltage Drop and 150 °C Operation**
- **Low Power Loss, High Efficiency**
- **High Surge Capacity**
- **Guard Ring for Enhanced Durability and Long Term Reliability**
- **Guaranteed Reverse Avalanche Characteristics**

[illegible]

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Maximum Ratings:

Characteristics	Symbol	Condition	Max.	Units
Peak Inverse Voltage	V_{RWM}	-	60	V
Max. Average Forward Current	$I_{F(AV)}$	50% duty cycle @ $T_C = 120^\circ\text{C}$, rectangular wave form	80	A
Max. Peak One Cycle Non-Repetitive Surge Current (per leg)	I_{FSM}	8.3 ms, half Sine pulse	980	A

Electrical Characteristics:

Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop (per leg)	V_{F1}	@ 40 A, Pulse, $T_J = 25^\circ\text{C}$	0.60	V
	V_{F2}	@ 40 A, Pulse, $T_J = 125^\circ\text{C}$ @ 80 A, Pulse, $T_J = 125^\circ\text{C}$	0.55 0.78	V
Max. Reverse Current (per leg)	I_{R1}	@ $V_R = \text{Rated } V_R$, Pulse, $T_J = 25^\circ\text{C}$	5	mA
	I_{R2}	@ $V_R = \text{Rated } V_R$, Pulse, $T_J = 100^\circ\text{C}$	200	mA
Max. Junction Capacitance (per leg)	C_T	@ $V_R = 5\text{V}$, $T_C = 25^\circ\text{C}$ $f_{SIG} = 1\text{MHz}$, $V_{SIG} = 50\text{mV (p-p)}$	2600	pF
Typical Series Inductance (per leg)	L_S	Measured lead to lead 5 mm from package body	7.5	nH
Max. Voltage Rate of Change	dv/dt	-	10,000	V/ μs

Thermal-Mechanical Specifications:

Characteristics	Symbol	Condition	Specification	Units
Max. Junction Temperature	T_J	-	-65 to +150	$^\circ\text{C}$
Max. Storage Temperature	T_{stg}	-	-65 to +150	$^\circ\text{C}$
Maximum Thermal Resistance Junction to Case (per leg)	$R_{\theta JC}$	DC operation	1.0	$^\circ\text{C/W}$
Maximum Thermal Resistance Junction to Case (per package)	$R_{\theta JC}$	DC operation	0.5	$^\circ\text{C/W}$
Typical Thermal Resistance, Case to Heat Sink	$R_{\theta CS}$	Mounting surface, smooth and greased	0.24	$^\circ\text{C/W}$
Approximate Weight	wt	-	6	g
Mounting Torque	T_M	-	6 (min) 12 (max)	kg-cm
Case Style	TO-247AC (TO-3P) JEDEC			

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