

TECHNICAL DATA
DATA SHEET 1197, REV. -

PLASTIC POWER SCHOTTKY RECTIFIER (60 V, 80 A)

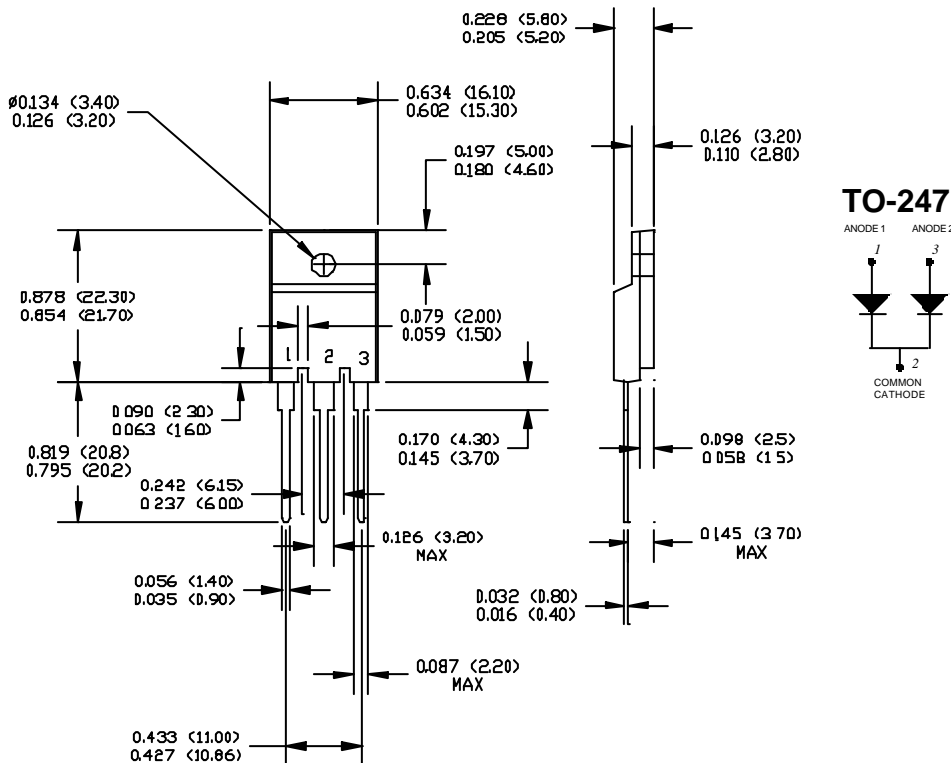
Applications:

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

Features:

- 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

Mechanical Dimensions: In Inches / mm



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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 @ $T_C=120^{\circ}C$, 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, $T_J = 25^{\circ}C$	0.60	V
	V_{F2}	@ 40 A, Pulse, $T_J = 125^{\circ}C$ @ 80 A, Pulse, $T_J = 125^{\circ}C$	0.55 0.78	V
Max. Reverse Current (per leg)	I_{R1}	@ $V_R =$ Rated V_R , Pulse, $T_J = 25^{\circ}C$	5	mA
	I_{R2}	@ $V_R =$ Rated V_R , Pulse, $T_J = 100^{\circ}C$	200	mA
Max. Junction Capacitance (per leg)	C_T	@ $V_R = 5V$, $T_C = 25^{\circ}C$ $f_{SIG} = 1MHz$, $V_{SIG} = 50mV$ (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	$^{\circ}C$
Max. Storage Temperature	T_{stg}	-	-65 to +150	$^{\circ}C$
Maximum Thermal Resistance Junction to Case (per leg)	$R_{\theta JC}$	DC operation	1.0	$^{\circ}C/W$
Maximum Thermal Resistance Junction to Case (per package)	$R_{\theta JC}$	DC operation	0.5	$^{\circ}C/W$
Typical Thermal Resistance, Case to Heat Sink	$R_{\theta CS}$	Mounting surface, smooth and greased	0.24	$^{\circ}C/W$
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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