

Super Barrier Rectifier™

Using state-of-the-art SBR IC process technology,
the following features are made possible in a single device:

Major ratings and characteristics

Characteristics	Values	Units
$I_{F(AV)}$ Rectangular Waveform	40	A
V_{RRM}	100	V
$V_F @ 20A, T_J = 125^\circ C$	0.68	V, typ
T_J (operating/storage)	-65 to 175	$^\circ C$

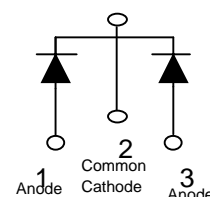
Device optimized for low forward voltage drop to maximize efficiency in Power Supply applications

MECHANICAL:

* Molded Plastic TO-247 package

ELECTRICAL:

- * Low Forward Voltage Drop
- * Reliable High Temperature Operation
- * Super Barrier Design
- * Softest, fast switching capability
- * $175^\circ C$ Operating Junction Temperature



Maximum Ratings and Electrical Characteristics

(at $25^\circ C$ unless otherwise specified)

	SYMBOL			UNITS
DC Blocking Voltage	V_{RM}			Volts
Working Peak Reverse Voltage	V_{RWM}	100		
Peak Repetitive Reverse Voltage	V_{RRM}			
Average Rectified Forward Current (Rated V_R -20Khz Square Wave) - 50% duty cycle	I_O	40		Amps
Peak Forward Surge Current - 1/2 60hz	I_{FSM}	280		Amps
Peak Repetitive Reverse Surge Current (2uS-1Khz)	I_{RRM}	2		Amps
Instantaneous Forward Voltage (per leg) $I_F = 20A; T_J = 25^\circ C$ $I_F = 20A; T_J = 125^\circ C$	V_F	Typ --- ---	Max 0.82 0.73	Volts
Maximum Instantaneous Reverse Current at Rated V_{RM} $T_J = 25^\circ C$ $T_J = 125^\circ C$	I_R^*	Typ --- ---	Max 100 10	uA mA
Maximum Rate of Voltage Change (at Rated V_R)	dv/dt	10,000		V/uS
Maximum Thermal Resistance JC (per leg) Package = TO-247	$R_{\theta_{JC}}$	2		$^\circ C/W$
Operating and Storage Junction Temperature	T_J	-65 to +175		$^\circ C$

* Pulse width < 300 uS, Duty cycle < 2%

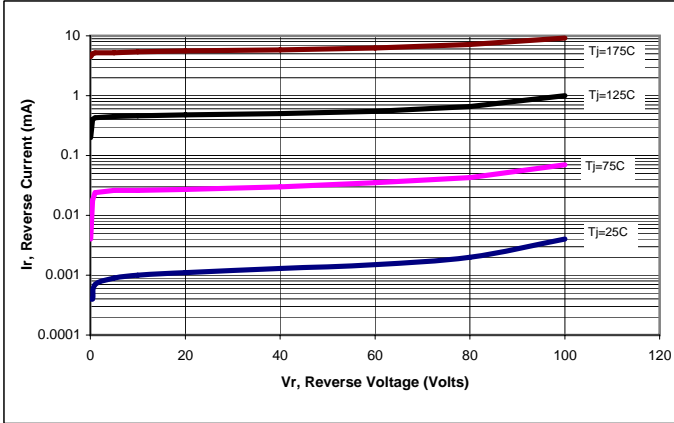


Figure 1: Typical Reverse Current

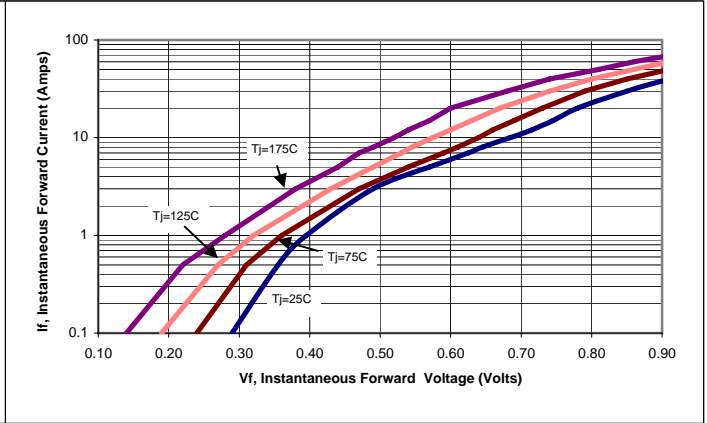


Figure 2: Typical Forward Voltage

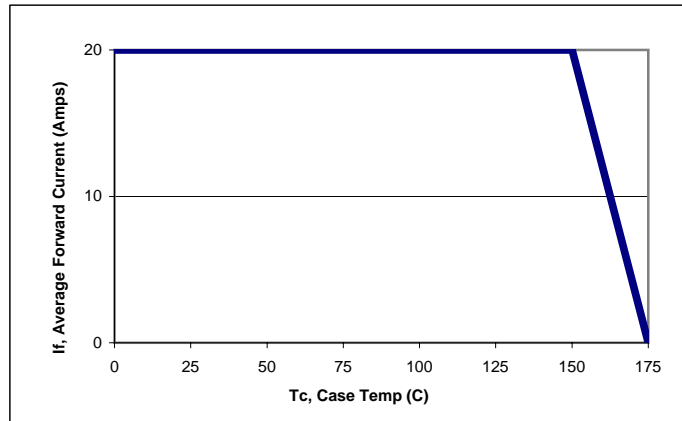


Figure 3: Current Derating, Case

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APD Semiconductor, Inc.

1 Lagoon Drive, Suite 410, Redwood City, CA 94065, USA
 Ph: 650 508 8896 FAX: 650 508 8865
 Homepage: www.apdsemi.com
 email: info@apdsemi.com