

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	1.0 *	A
V_{RRM}	30	V
$V_F@1A, T_J=75^\circ C$	0.38	V, typ
T_J (operating/storage)	-65 to 125	$^\circ C$

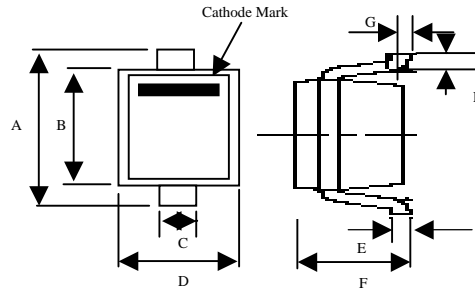
*Note: Device mounted on a glass epoxy board,
Board size: 50mm x 50mm,
Land size: 6mm x 6mm

ELECTRICAL:

- * Low Forward Voltage Drop
- * Low Reverse Leakage
- * Reliable High Temperature Operation
- * Super Barrier Design
- * Softest, fast switching capability
- * 125 $^\circ C$ Operating Junction Temperature

MECHANICAL:

* Molded Plastic SOD-323 package



SOD-323		
Di	Min	Max
A	2.30	2.70
B	1.60	1.80
C	0.25	0.40
D	1.15	1.45
E	0.10	0.18
F	0.85	1.05
G	-	0.10
H	0.20	0.40
All Dimensions in mm		

Maximum Ratings and Electrical Characteristics

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

	SYMBOL			UNITS
DC Blocking Voltage	V_{RM}	30		Volts
Working Peak Reverse Voltage	V_{RWM}			
Peak Repetitive Reverse Voltage	V_{RRM}			
Average Rectified Forward Current (Rated V_R -20Khz Square Wave) - 50% duty cycle	$I_O^{(1)}$	1		Amps
Peak Forward Surge Current - 1/2 60hz	I_{FSM}	18		Amps
Instantaneous Forward Voltage $I_F = 0.7A; T_J = 25^\circ C$ $I_F = 1A; T_J = 25^\circ C$ $I_F = 0.7A; T_J = 75^\circ C$	V_F	Typ --- 0.41 ---	Max 0.41 --- 0.36	Volts
Maximum Reverse Current at Rated V_{RM} $T_J = 25^\circ C$ $T_J = 75^\circ C$	$I_R^{(2)}$	Typ --- ---	Max 0.1 2	mA mA
Operating and Storage Junction Temperature	T_J	-65 to +125		$^\circ C$

(1) We recommend that the worst case current be no greater than 80% of the maximum rating of I_O

(2) Pulse width < 300 uS, Duty cycle < 2%

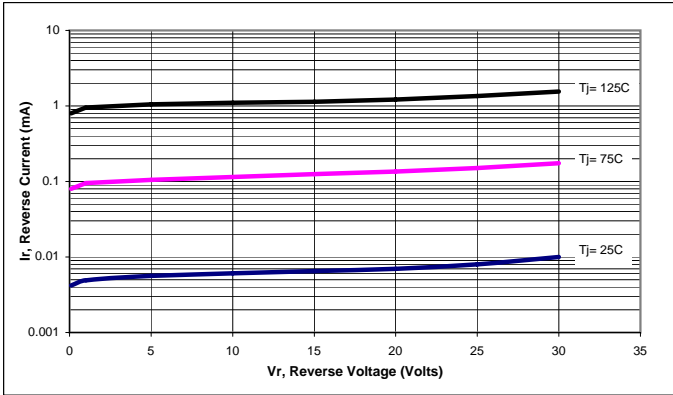


Figure 1: Typical Reverse Current

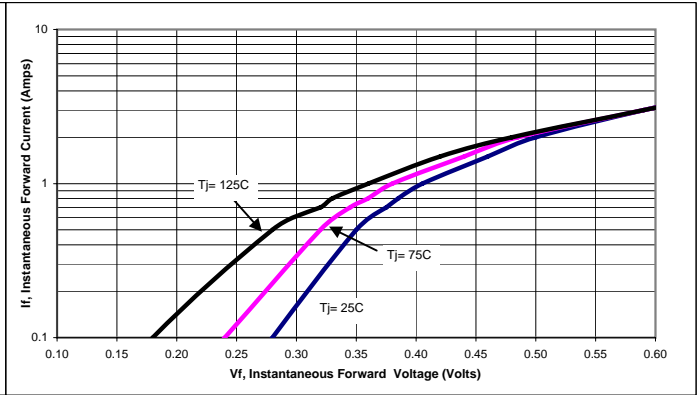


Figure 2: Typical Forward Voltage

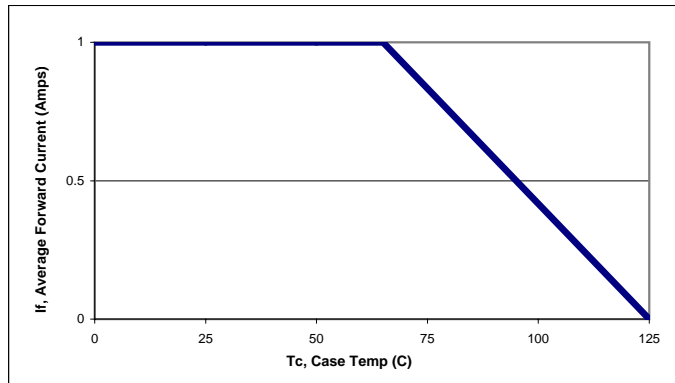
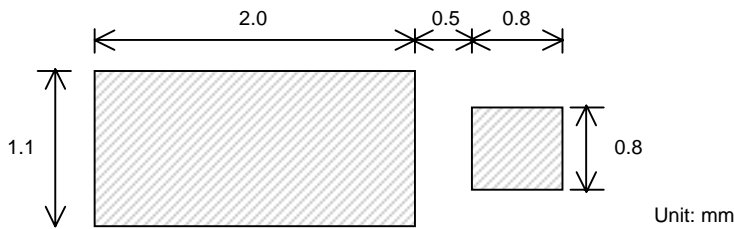


Figure 3: Current Derating, Case*

*Device mounted on a 50mm x 50mm glass epoxy board, 50% duty cycle

STANDARD SOLDERING PAD:



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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