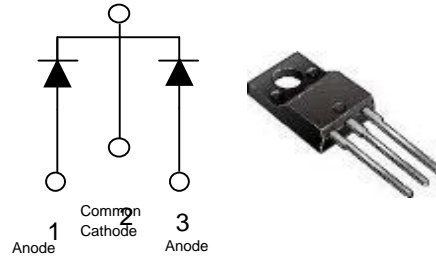


# Super Barrier Rectifier™

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	20	A
$V_{RRM}$	40	V
$V_F@10A, T_J=125^\circ C$	0.41	V, typ
$T_J(\text{operating/storage})$	-65 to 175	$^\circ C$



ELECTRICAL:

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

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

MECHANICAL:

- \* Molded Plastic ITO-220 package

Maximum Ratings and Electrical Characteristics

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

	SYMBOL			UNITS
DC Blocking Voltage	$V_{RM}$			Volts
Working Peak Reverse Voltage	$V_{RWM}$	40		
Peak Repetitive Reverse Voltage	$V_{RRM}$			
RMS Reverse Voltage	$V_{R(RMS)}$	40		Volts
Average Rectified Forward Current (Rated $V_R$ -20Khz Square Wave)-50% duty cycle	$I_O$	20		Amps
Peak Forward Surge Current - 1/2 60hz	$I_{FSM}$	180		Amps
Peak Repetitive Reverse Surge Current (2uS-2Khz)	$I_{RRM}$	3		Amps
Instantaneous Forward Voltage (per leg) $I_F = 10A; T_J = 25^\circ C$ $I_F = 20A; T_J = 25^\circ C$ $I_F = 10A; T_J = 125^\circ C$	$V_F$	Typ 0.44 0.56 0.41	Max 0.48 0.60 0.45	Volts
Maximum Reverse Current at Rated $V_{RM}$ $T_J = 25^\circ C$ $T_J = 125^\circ C$	$I_R^*$	Typ .22 20	Max 1 100	mA mA
Maximum Rate of Voltage Change (at Rated $V_R$ )	dv/dt	10,000		V/uS
Maximum Thermal Resistance JC	$R\theta_{JC}$	2		$^\circ C/W$
Operating and Storage Junction Temperature	$T_J$	-65 to +175		$^\circ C$

NOTE: Dice are available for customer applications.

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

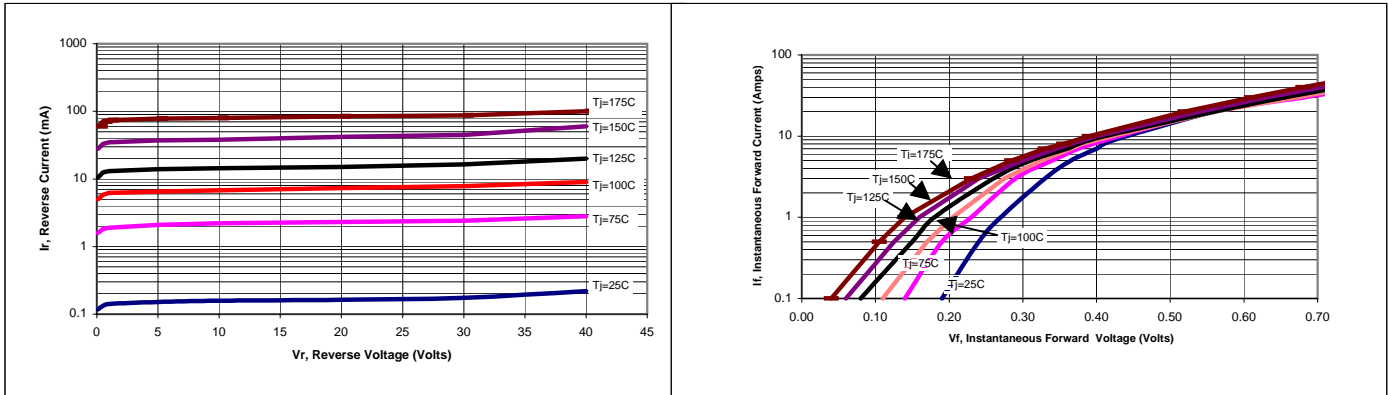


Figure 1: Typical Reverse Current

Figure 2: Typical Forward Voltage

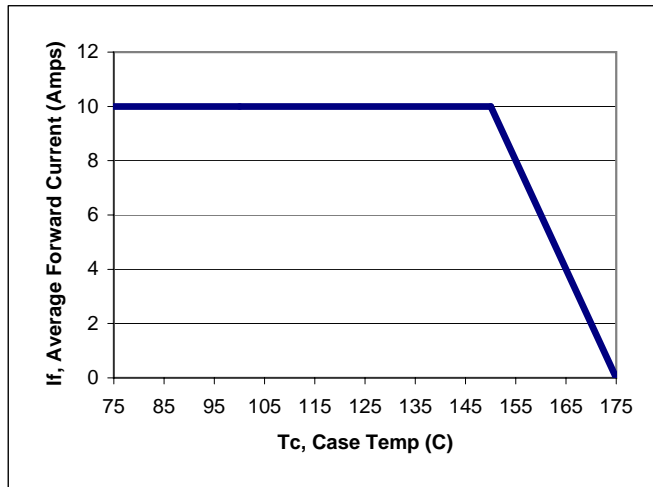



Figure 3: Current Derating, Case

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