

## Ultra fast Rectifier

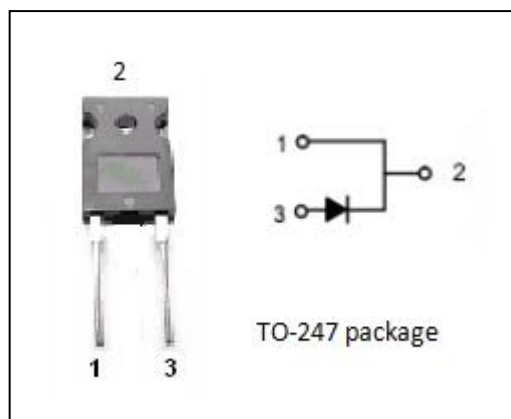
RHRG30120

## FEATURES

- High junction temperature capability
- Low forward voltage
- High current capability
- Low power loss, high efficiency
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

## APPLICATIONS

- Switching power supply
- Free-Wheeling diodes
- Reverse battery protection
- Center tap configuration

ABSOLUTE MAXIMUM RATINGS( $T_a=25^\circ\text{C}$ )

SYMBOL	PARAMETER	VALUE	UNIT
$V_{RRM}$ $V_{RMS}$ $V_R$	Peak Repetitive Reverse Voltage RMS Voltage DC Blocking Voltage	1200	V
$I_{F(AV)}$	Average Rectified Forward Current @ $T_c=110^\circ\text{C}$	30	A
$I_{F(RMS)}$	RMS Forward Current	60	A
$I_{FSM}$	Nonrepetitive Peak Surge Current (60Hz single half sine-wave superimposed on rated load conditions)	300	A
$T_J$	Junction Temperature	-65~175	$^\circ\text{C}$
$T_{stg}$	Storage Temperature Range	-65~175	$^\circ\text{C}$

## THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	1.2	$^\circ\text{C/W}$

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**ELECTRICAL CHARACTERISTICS** (Pulse Test: Pulse Width=300  $\mu$  s, Duty Cycle $\leq$ 1%)

SYMBOL	PARAMETER			CONDITIONS	MAX	UNIT
$V_F$	Maximum Voltage	Instantaneous	Forward	$I_F = 30A; T_c = 25^\circ C$ $I_F = 30A; T_c = 150^\circ C$	3.2 2.6	V
$I_R$	Maximum Current	Instantaneous	Reverse	$V_R = \text{rated } V_{RRM}; T_c = 25^\circ C$ $V_R = \text{rated } V_{RRM}; T_c = 150^\circ C$	250 1000	$\mu A$
$t_{rr}$	Maximum Reverse Recovery Time			$I_F = 1A; diF/dt = 100A/\mu s$	65	ns

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