

Ultra fast Rectifier

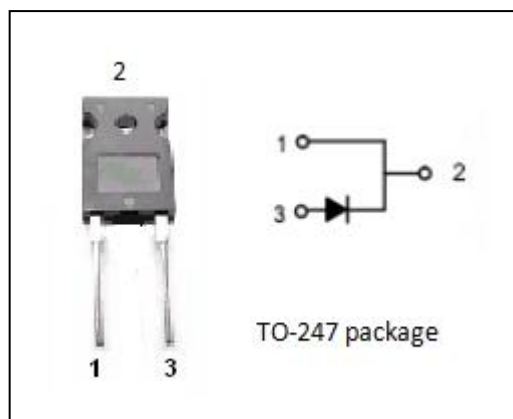
RHRG30120

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 μ 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	μA
t_{rr}	Maximum Reverse Recovery Time			$I_F = 1A$; $diF/dt = 100A/\mu s$	65	ns

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