

## Ultrafast Rectifier

## RURG3040,ISMUR3040

### FEATURES

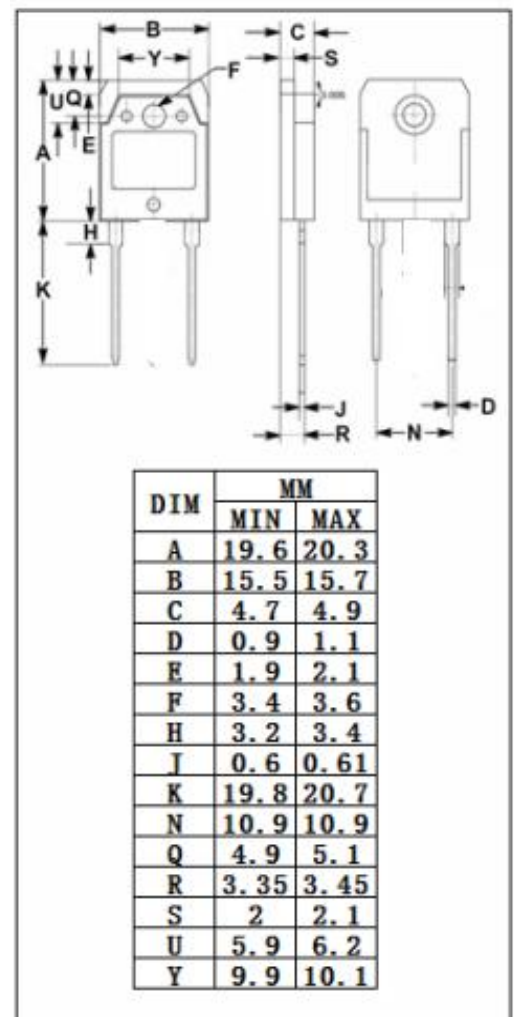
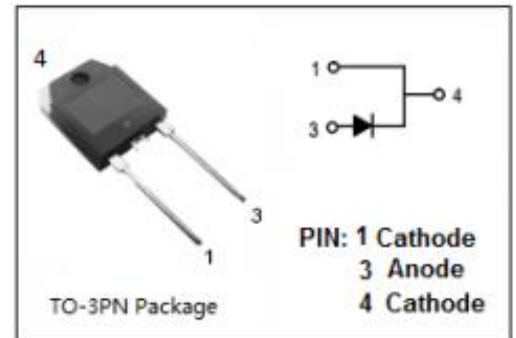
- Guarding for over voltage protection
- Dual rectifier construction,positive center tap
- Metal of silicon rectifier,majority carrier conduction
- Low forward voltage,high efficiency
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

### APPLICATIONS

- Switching power supply
- Rectifier in switch mode supplies

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{RRM}$ $V_{RWM}$ $V_R$	Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	400	V
$I_{F(AV)}$	Average Rectified Forward Current Per Leg Total device	15 30	A
$I_{FSM}$	Nonrepetitive Peak Surge Current (Surge applied at rated load conditions half-wave, single phase, 60Hz)	150	A
$P_D$	Maximum power dissipation	100	W
$T_J$	Junction Temperature	-40~175	$^{\circ}\text{C}$
$T_{stg}$	Storage Temperature Range	-40~175	$^{\circ}\text{C}$



**Fast Recovery Rectifier****RURG3040,ISMUR3040****THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
$R_{thj-c}$	Thermal Resistance, Junction to Case	1.5	$^{\circ}\text{C}/\text{W}$

**ELECTRICAL CHARACTERISTICS ( $T_a=25^{\circ}\text{C}$ )** (Pulse Test: Pulse Width=300  $\mu\text{s}$ , Duty Cycle $\leq 2\%$ )

SYMBOL	PARAMETER	CONDITIONS	MAX	UNIT
$V_F$	Maximum Instantaneous Forward Voltage	$I_F=15\text{A}; T_j=25^{\circ}\text{C}$ $I_F=15\text{A}; T_j=150^{\circ}\text{C}$	1.25 1.12	V
$I_R$	Maximum Instantaneous Reverse Current	$V_R=V_{RWM}; T_j=25^{\circ}\text{C}$ $V_R=V_{RWM}; T_j=150^{\circ}\text{C}$	10 500	$\mu\text{A}$
$t_{rr}$	Maximum Reverse Recovery Time	$I_F=1\text{A};$	60	ns

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