

Ultrafast Rectifier

MUR3040CT

FEATURES

- Ultra-Fast Switching
- High current capability
- Low forward voltage drop
- Low power loss, high efficiency
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

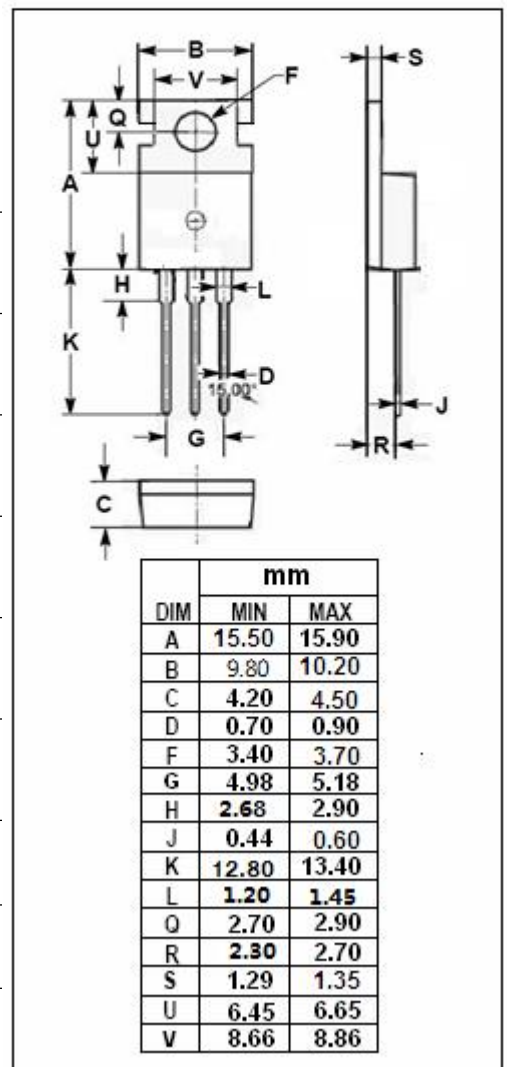
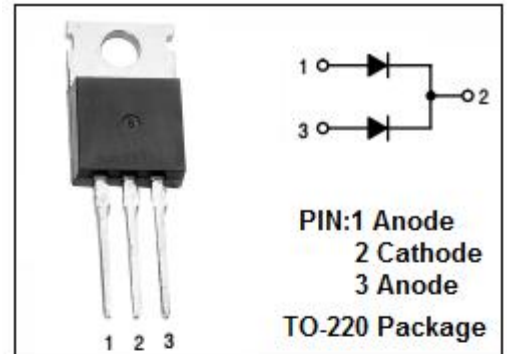
- Switching power supply
- Power switching circuits

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	30	A
I_{FSM}	Nonrepetitive Peak Surge Current (Surge applied at rated load conditions half-wave, single phase, 60Hz)	300	A
T_J	Junction Temperature	-55~150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-55~150	$^\circ\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R_{thj-c}	Thermal Resistance, Junction to Case	0.9	$^\circ\text{C/W}$



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

SYMBOL	PARAMETER	CONDITIONS	MAX	UNIT
V_F	Maximum Instantaneous Forward Voltage	$I_F = 15\text{A}; T_j = 25^{\circ}\text{C}$	1.3	V
I_R	Maximum Instantaneous Reverse Current	$V_R = V_{RWM}; T_j = 25^{\circ}\text{C}$ $V_R = V_{RWM}; T_j = 125^{\circ}\text{C}$	5 100	μA
t_{rr}	Maximum Reverse Recovery Time	$I_F = 0.5\text{A}; I_R = 1.0\text{A}; I_{rr} = 0.25\text{A}$	35	ns

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