

Ultrafast Rectifier

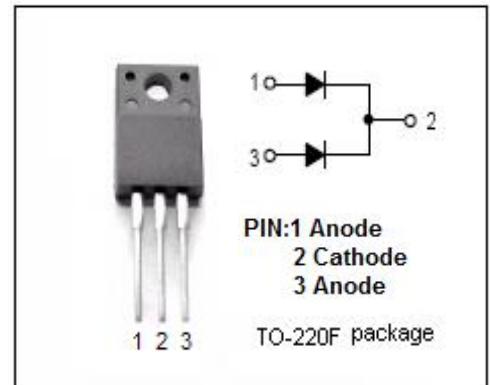
MURF2040CT

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

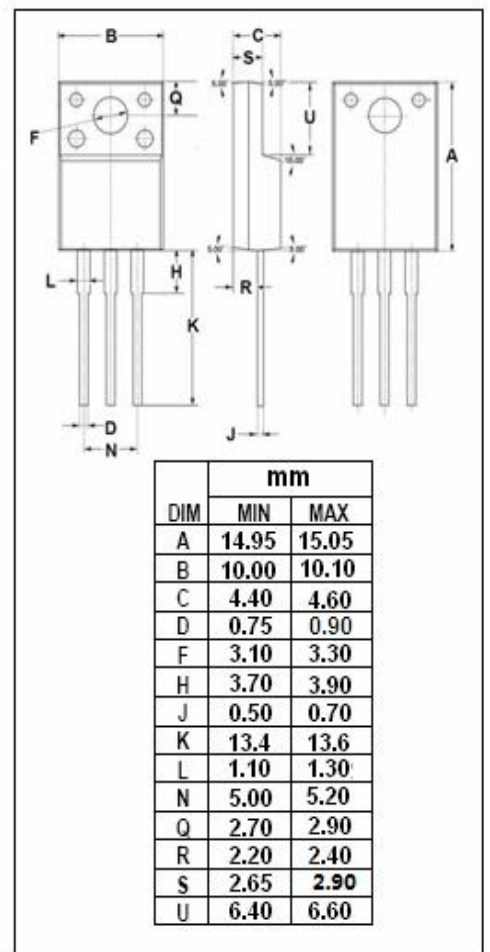
APPLICATIONS

- Switching power supply
- Power switching circuits



ABSOLUTE MAXIMUM RATINGS(T_a=25°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 | 10 20 | A |
| I _{FSM} | Nonrepetitive Peak Surge Current (Surge applied at rated load conditions half-wave, single phase, 60Hz) | 120 | A |
| T _J | Junction Temperature | -55~150 | °C |
| T _{stg} | Storage Temperature Range | -55~150 | °C |



THERMAL CHARACTERISTICS

| SYMBOL | PARAMETER | MAX | UNIT |
|---------------------|--------------------------------------|-----|------|
| R _{th j-c} | Thermal Resistance, Junction to Case | 5.0 | °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 | $I_F = 10\text{A}; T_j = 25^{\circ}\text{C}$ | 1.26 | V |
| I_R | Maximum Instantaneous Reverse Current | $V_R = V_{RWM}; T_j = 25^{\circ}\text{C}$ $V_R = V_{RWM}; T_j = 125^{\circ}\text{C}$ | 10 100 | μA |
| t_{rr} | Maximum Reverse Recovery Time | $I_F = 0.5\text{A};$ | 35 | ns |

