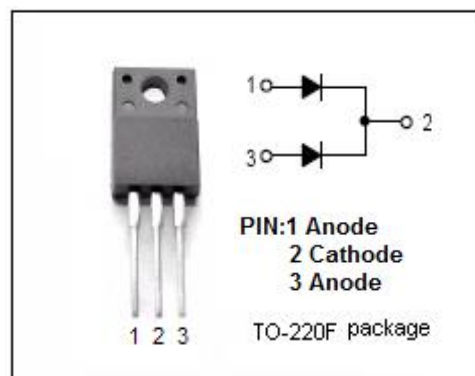


Ultra fast Rectifier
UGF2008
FEATURES

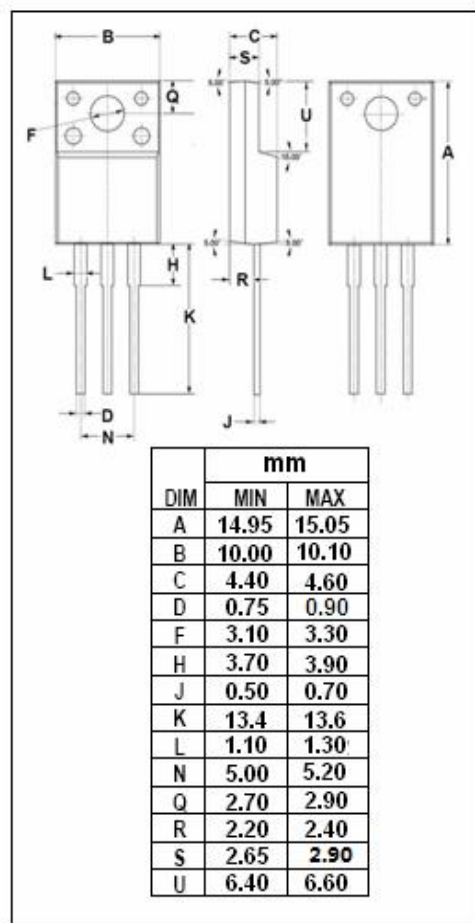
- High junction temperature capability
- Low forward voltage
- High current capability
- Low power loss, high efficiency
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

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


ABSOLUTE MAXIMUM RATINGS(T_a=25°C)

| SYMBOL | PARAMETER | VALUE | UNIT |
|--------------------------------------------------------|------------------------------------------------------------------------------------------------------------|---------|------|
| V _{RRM} V _{RMS} V _R | Peak Repetitive Reverse Voltage RMS Voltage DC Blocking Voltage | 600 | V |
| I _{F(AV)} | Average Rectified Forward Current @T _c =110°C | 20 | A |
| I _{FSM} | Nonrepetitive Peak Surge Current (8.3ms single half sine-wave superimposed on rated load conditions) | 150 | A |
| T _J | Junction Temperature | -40~150 | °C |
| T _{stg} | Storage Temperature Range | -40~150 | °C |


THERMAL CHARACTERISTICS

| SYMBOL | PARAMETER | MAX | UNIT |
|---------------------|--------------------------------------|-----|------|
| R _{th j-c} | Thermal Resistance, Junction to Case | 2.0 | °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 Instantaneous Forward Voltage | $I_F=10A; T_c=25^\circ C$ $I_F=10A; T_c=125^\circ C$ | 1.65 1.55 | V |
| I_R | Maximum Instantaneous Reverse Current | $V_R= \text{rated } V_{RRM}; T_c=25^\circ C$ $V_R= \text{rated } V_{RRM}; T_c=100^\circ C$ | 50 500 | μ A |
| t_{rr} | Maximum Reverse Recovery Time | $I_F=1A; I_{RR}=1A; I_{rec}=0.25A$ | 35 | ns |

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