

Ultra fast Rectifier

BYR29X-800

FEATURES

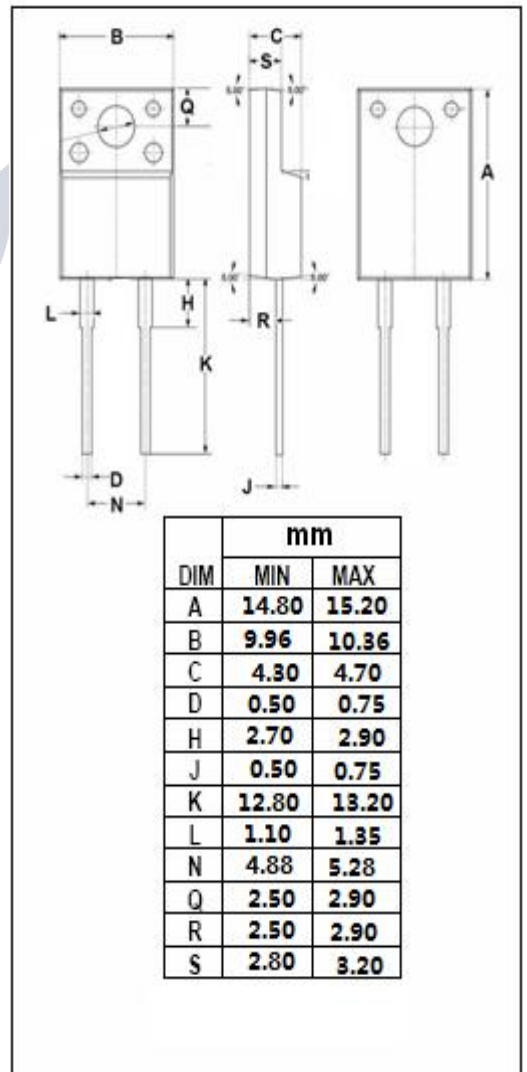
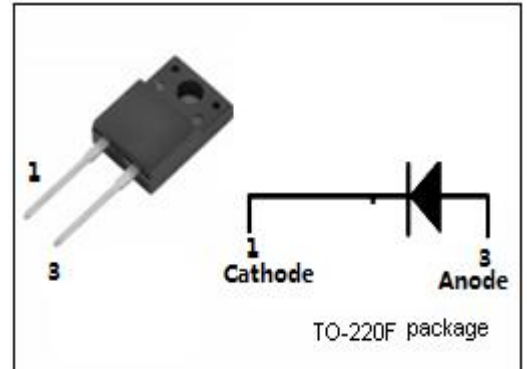
- With TO-220F packaging
- Low switching loss
- High surge current capability
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Switching power supply
- Power switching circuits
- General rectification

ABSOLUTE MAXIMUM RATINGS (T_a=25°C)

| SYMBOL | PARAMETER | | VALUE | UNIT | |
|--------|--|--|---------|------|---|
| VRRM | Peak Repetitive Reverse Voltage | | 800 | V | |
| VRWM | Working Peak Reverse Voltage | | | | |
| VR | DC Blocking Voltage tw=500ns;duty=1/40 | | | | |
| IF(AV) | Average Rectified Forward Current | | 8 | A | |
| IFRM | Repetitive Peak Forward Current | | 16 | A | |
| IFSM | Nonrepetitive Peak Surge Current | | 50Hz | 60 | A |
| | | | 60Hz | 66 | |
| TJ | Junction Temperature | | -40~150 | °C | |
| Tstg | Storage Temperature Range | | -40~150 | °C | |



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THERMAL CHARACTERISTICS

| SYMBOL | PARAMETER | MAX | UNIT |
|-------------|--------------------------------------|-----|---------------|
| R_{thj-c} | Thermal Resistance, Junction to Case | 5.5 | $^{\circ}C/W$ |

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

| SYMBOL | PARAMETER | CONDITIONS | MAX | UNIT |
|----------|---------------------------------------|---|--------------------|---------|
| V_F | Maximum Instantaneous Forward Voltage | $I_F=8A, T_j=25^{\circ}C$ $I_F=8A, T_j=150^{\circ}C$ $I_F=20A, T_j=25^{\circ}C$ | 1.7 1.5 1.95 | V |
| I_R | Maximum Instantaneous Reverse Current | $V_R=V_{RWM}, T_j=25^{\circ}C$ $V_R=V_{RWM}, T_j=100^{\circ}C$ | 10 200 | μA |
| t_{rr} | Maximum Reverse Recovery Time | $I_F=1A; di_F/dt=100A/\mu s; V_R=30V$ | 75 | ns |

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