

Pb Free Plating Product

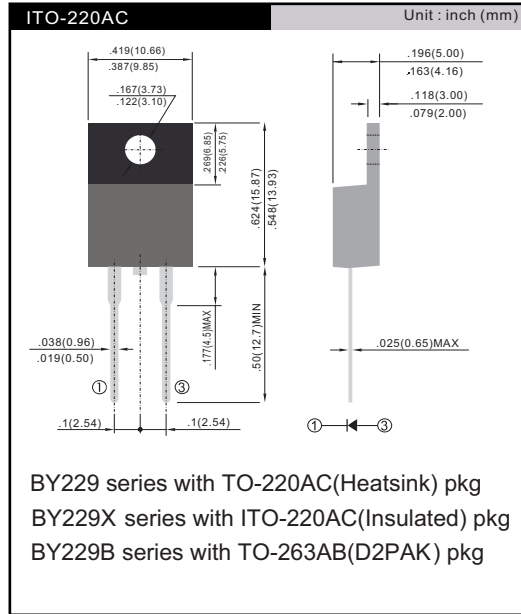
BY229X200 thru BY229X800



8.0 Ampere Insulated Glass Passivated Ultra Fast Recovery Rectifiers

- Features**
- * Fast switching for high efficiency
 - * Low forward voltage drop
 - * High current capability
 - * Low reverse leakage current
 - * High surge current capability
- Application**
- * Switching mode power supply
 - * Inverter/converter
 - * TV receiver, monitor/set top box

- Mechanical Data**
- * Case: Molded plastic Isolated/Insulated ITO-220AC
 - * Epoxy: UL 94V-0 rate flame retardant
 - * Terminals: Solderable per MIL-STD-202 method 208
 - * Polarity: As marked on diodes body
 - * Mounting position: Any
 - * Weight: 2.03 grams approximately



| MAXIMUM RATINGS (T _C = 25 °C unless otherwise noted) | | | | | | |
|---|-----------------------------------|-------------------------|-------------------------|-------------------------|-------------------------|------|
| PARAMETER | SYMBOL | BY229X200 BY229X-200 | BY229X400 BY229X-400 | BY229X600 BY229X-600 | BY229X800 BY229X-800 | UNIT |
| Maximum recurrent peak reverse voltage | V _{RRM} | 200 | 400 | 600 | 800 | V |
| Maximum RMS voltage | V _{RMS} | 140 | 280 | 420 | 560 | V |
| Maximum DC blocking voltage | V _{DC} | 200 | 400 | 600 | 800 | V |
| Maximum average forward rectified current at T _C = 100 °C | I _{F(AV)} | 8.0 | | | | A |
| Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load | I _{FSM} | 100 | | | | A |
| Maximum slope of reverse recovery current I _F = 2.0 A, V _R = 30 V, di/dt = 20 μs | di/dt | 60 | | | | A/μs |
| Operating junction and storage temperature range | T _J , T _{STG} | - 40 to + 150 | | | | °C |
| Isolation voltage (ITO-220AC only) from terminal to heatsink t = 1 min | V _{AC} | 1500 | | | | V |

| ELECTRICAL CHARACTERISTICS (T _C = 25 °C unless otherwise noted) | | | | | | | | |
|--|---|---|-----------------|-------------------------|-------------------------|-------------------------|-------------------------|------|
| PARAMETER | TEST CONDITIONS | | SYMBOL | BY229X200 BY229X-200 | BY229X400 BY229X-400 | BY229X600 BY229X-600 | BY229X800 BY229X-800 | UNIT |
| Maximum instantaneous forward voltage ⁽¹⁾ | 8.0 A | | V _F | 0.98 | 1.3 | 1.7 | 1.8 | V |
| Maximum DC reverse current at rated DC blocking voltage | | T _J = 25 °C T _J = 125 °C | I _R | 10 250 | | | | μA |
| Maximum reverse recovery time | I _F = 1.0 A, V _R = 30 V, di/dt = 50 A/μs, I _{rr} = 10 % I _{RM} | | t _{rr} | 35 | | | 50 | ns |
| Maximum recovered stored charge | I _F = 2.0 A, V _R = 30 V, di/dt = 20 A/μs | | Q _{rr} | 700 | | | | nC |

Note: (1) Pulse test: 300 μs pulse width, 1 % duty cycle

| THERMAL CHARACTERISTICS (T _C = 25 °C unless otherwise noted) | | | | | |
|---|------------------|--------------|---------------|---------------|------|
| PARAMETER | SYMBOL | BY229 series | BY229X series | BY229B series | UNIT |
| Typical thermal resistance from junction to case | R _{θJC} | 2.0 | 4.8 | 2.0 | °C/W |
| Typical thermal resistance from junction to air | R _{θJA} | 20 | - | 20 | °C/W |

RATINGS AND CHARACTERISTICS CURVES

($T_A = 25\text{ }^\circ\text{C}$ unless otherwise noted)

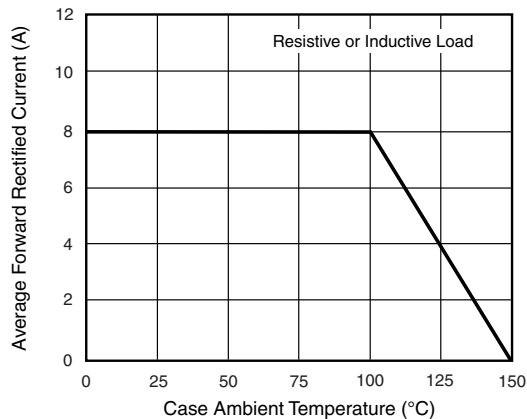


Figure 1. Forward Current Derating Curve

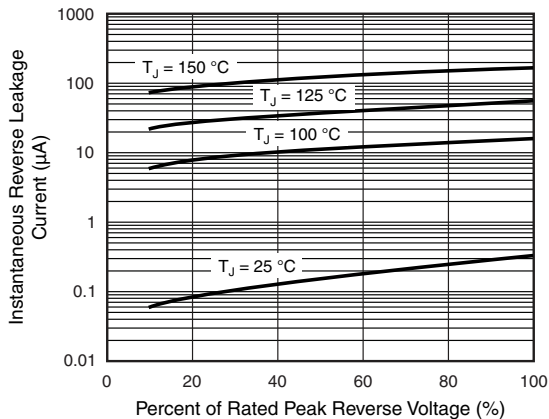


Figure 4. Typical Reverse Leakage Characteristics

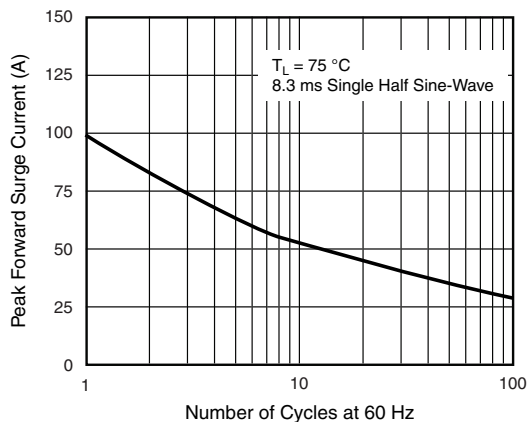


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

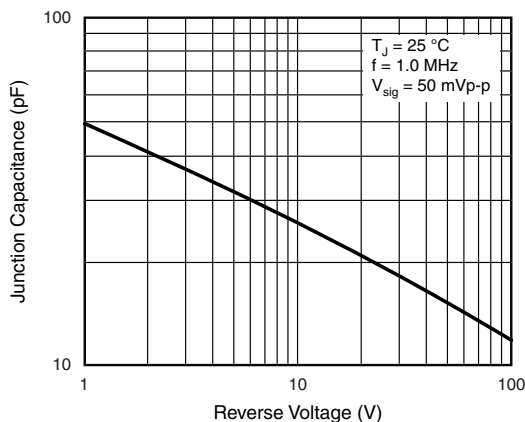


Figure 5. Typical Junction Capacitance

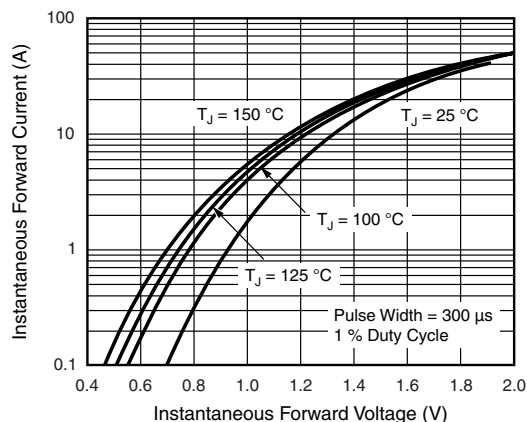


Figure 3. Typical Instantaneous Forward Characteristics