

Pb Free Plating Product

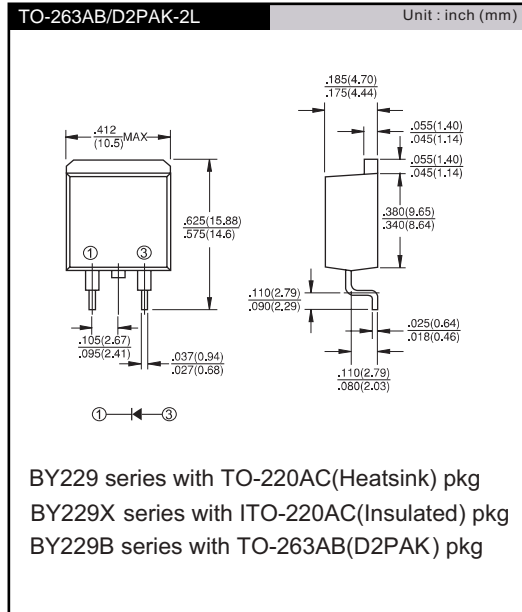
BY229B200 thru BY229B800



8.0 Ampere Surface Mount D2PAK Pkg 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: (Surface Mount TO-220)TO-263AB Package
 - * 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	BY229B200 BY229B-200	BY229B400 BY229B-400	BY229B600 BY229B-600	BY229B800 BY229B-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	BY229B200 BY229B-200	BY229B400 BY229B-400	BY229B600 BY229B-600	BY229B800 BY229B-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)

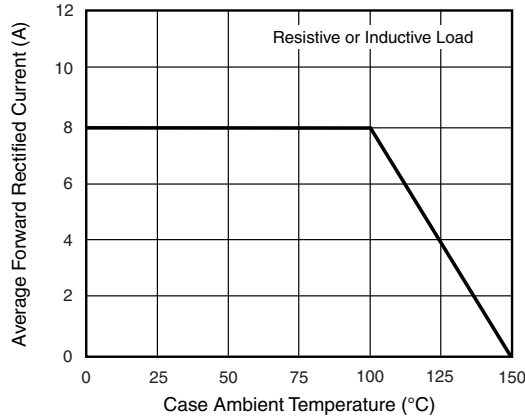


Figure 1. Forward Current Derating Curve

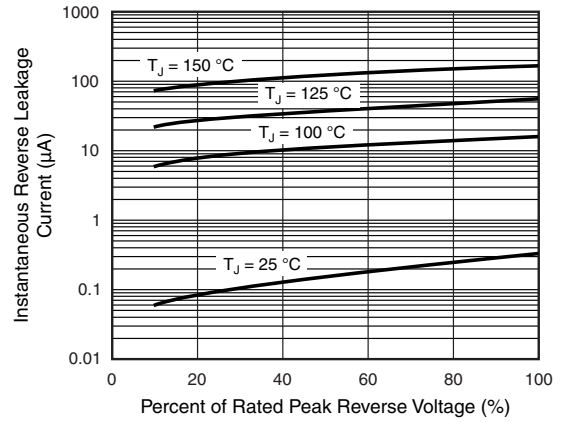


Figure 4. Typical Reverse Leakage Characteristics

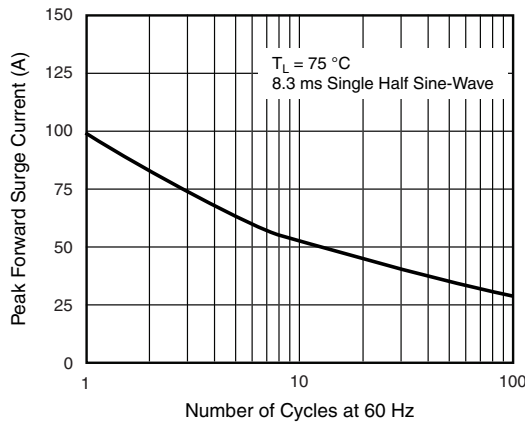


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

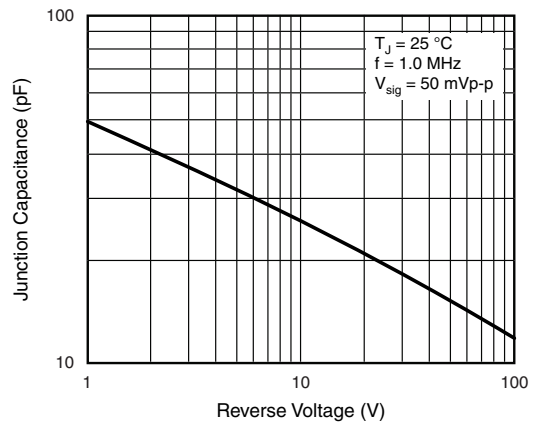


Figure 5. Typical Junction Capacitance

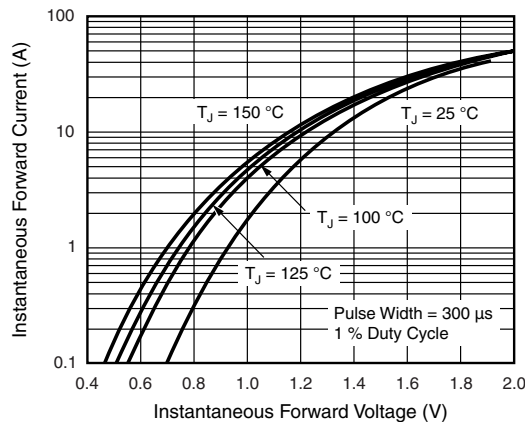


Figure 3. Typical Instantaneous Forward Characteristics