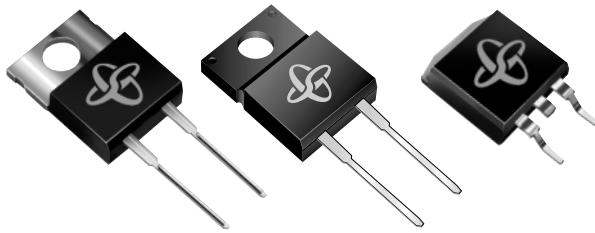


Ultrafast Rectifiers

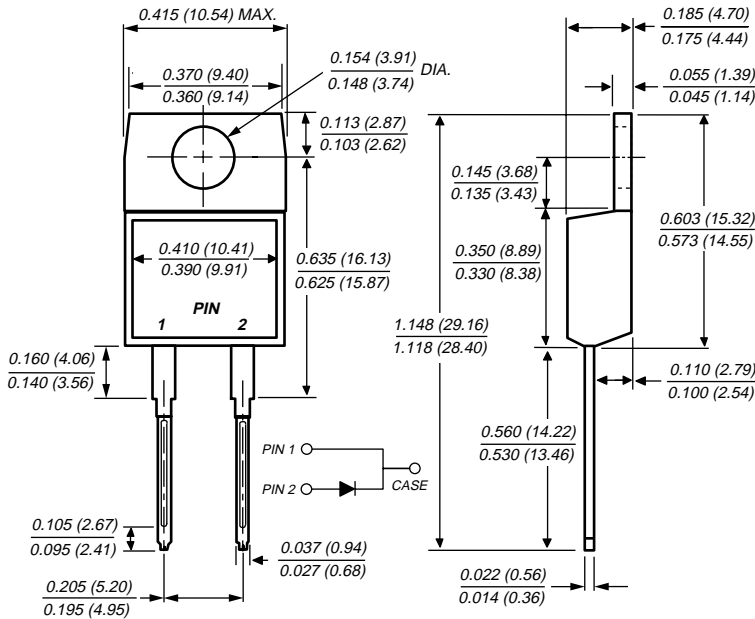
Reverse Voltage 50 to 200V

Forward Current 8.0A

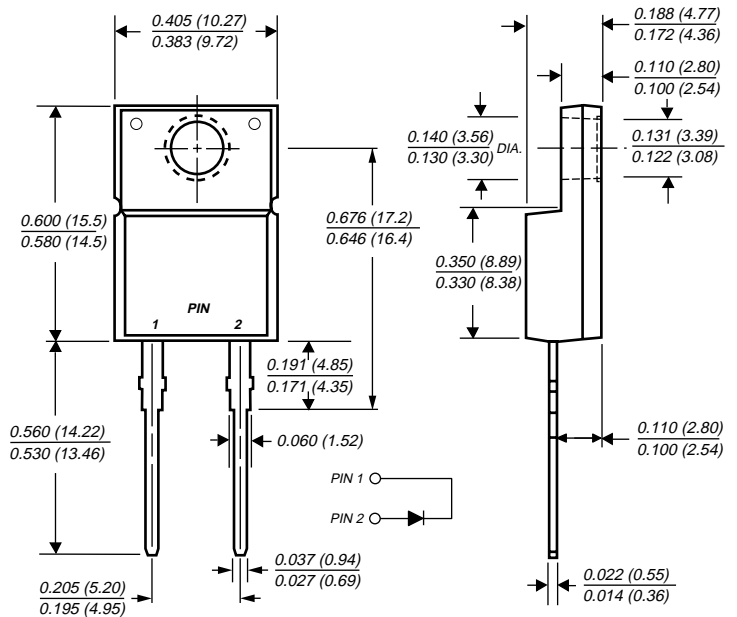
Reverse Recovery Time 25ns



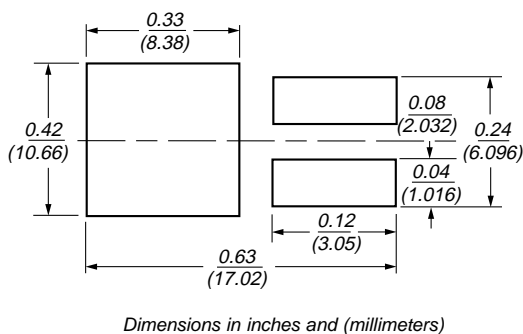
TO-220AC (BYW29 Series)



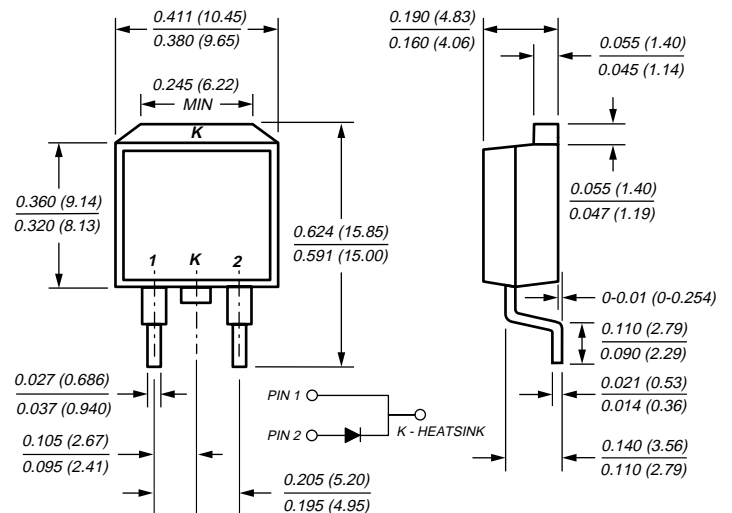
ITO-220AC (BYWF29 Series)



Mounting Pad Layout TO-263AB



TO-263AB (BYWB29 Series)



Mechanical Data

Case: JEDEC TO-220AC, ITO-220AC & TO-263AB molded plastic body

Terminals: Plated leads, solderable per MIL-STD-750, Method 2026

High temperature soldering in accordance with CECC 802 / Reflow guaranteed

Polarity: As marked

Mounting Position: Any

Mounting Torque: 10 in-lbs maximum

Weight: approx. 0.05 ounce, 1.35 grams

Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Glass passivated chip junction
- Low power loss
- Low leakage current
- High surge current capability
- Superfast recovery time for high efficiency

Maximum Ratings (T_C = 25°C unless otherwise noted)

Parameter	Symbol	BYW29-50	BYW29-100	BYW29-150	BYW29-200	Unit
Maximum repetitive peak reverse voltage	V _{RRM}	50	100	150	200	V
Maximum RMS voltage	V _{RMS}	35	70	105	140	V
Maximum DC blocking voltage	V _{DC}	50	100	150	200	V
Maximum average forward rectified current at T _C = 105°C	I _{F(AV)}	8.0				A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) per leg	I _{FSM}	100				A
Operating and storage temperature range	T _J , T _{STG}	-65 to +150				°C
RMS Isolation voltage (BYWF type only) from terminals to heatsink with t = 1.0 second, RH ≤ 30%	V _{ISOL}	4500 ⁽¹⁾ 3500 ⁽²⁾ 1500 ⁽³⁾				V

Electrical Characteristics (T_C = 25°C unless otherwise noted)

Parameter	Symbol	BYW29-50	BYW29-100	BYW29-150	BYW29-200	Unit
Maximum instantaneous forward voltage at: ⁽⁴⁾ I _F = 20A, T _J = 25°C I _F = 8.0A, T _J = 150°C	V _F	1.3 0.8				V
Maximum DC reverse current at rated DC blocking voltage T _C = 25°C T _C = 100°C	I _R	10 500				μA
Maximum reverse recovery time at I _F = 1A, V _R = 30V, di/dt = 100A/μs, I _{rr} = 10% I _{RM}	t _{rr}	25				ns
Typical junction capacitance at 4V, 1MHz	C _J	45				pF

Thermal Characteristics (T_C = 25°C unless otherwise noted)

Parameter	Symbol	BYW	BYWF	BYWB	Unit
Typical thermal resistance from junction to case per leg	R _{θJC}	TBD	TBD	TBD	°C/W

Notes:

- (1) Clip mounting (on case), where lead does not overlap heatsink with 0.110" offset
- (2) Clip mounting (on case), where leads do overlap heatsink
- (3) Screw mounting with 4-40 screw, where washer diameter is ≤ 4.9mm (0.19")
- (4) Pulse test: 300μs pulse width, 1% duty cycle



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

Fig. 1 – Maximum Forward Current Derating Curve

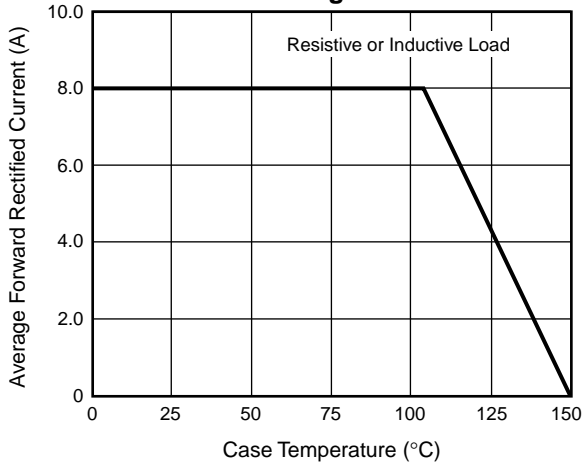


Fig. 2 – Maximum Non-Repetitive Peak Forward Surge Current

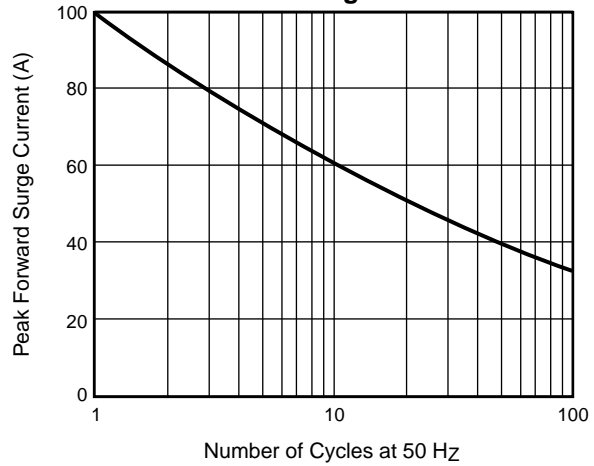


Fig. 3 – Typical Instantaneous Forward Characteristics

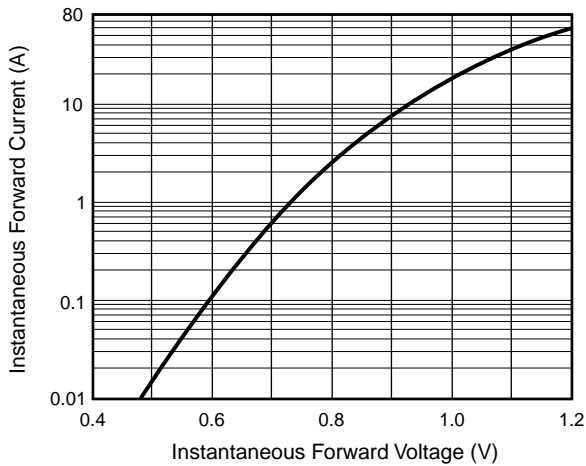


Fig. 4 – Typical Reverse Leakage Characteristics

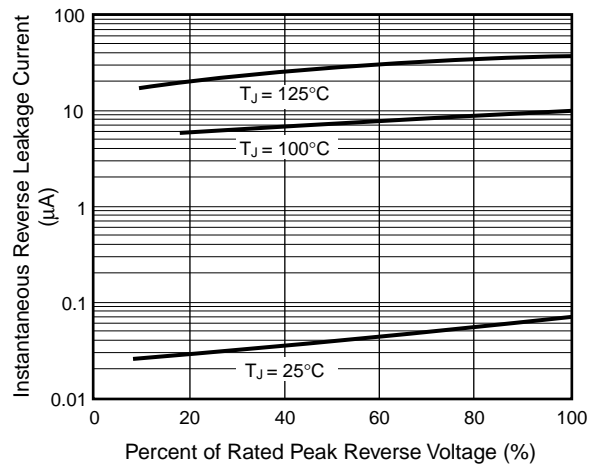


Fig. 5 – Typical Junction Capacitance

