

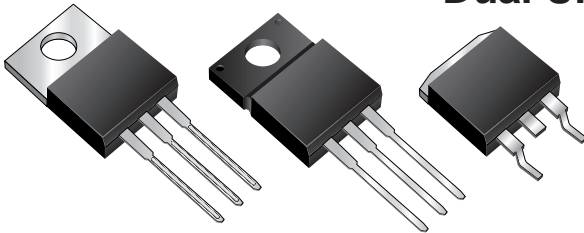


# BYV32, BYVF32 & BYVB32 Series

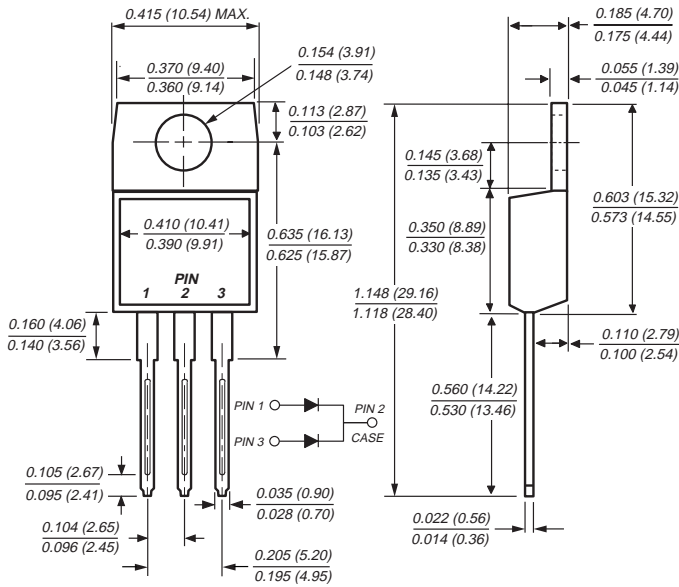
Vishay Semiconductors  
formerly General Semiconductor

## Dual Ultrafast Rectifiers

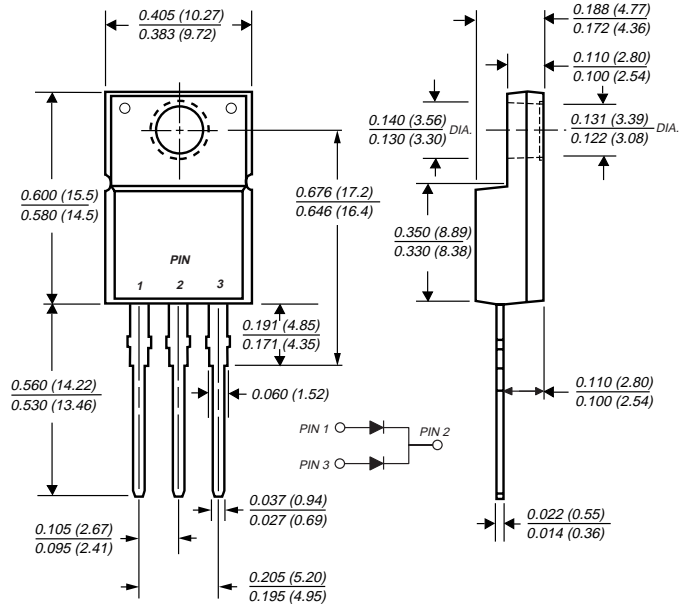
Reverse Voltage 50 to 200V  
Forward Current 18A  
Reverse Recovery Time 25ns



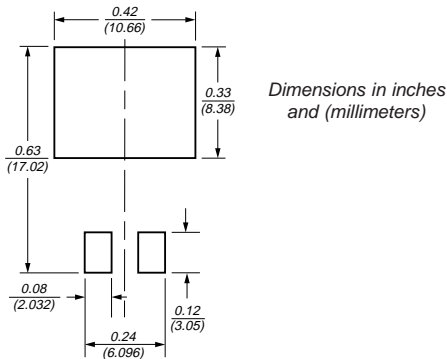
TO-220AB (BYV32 Series)



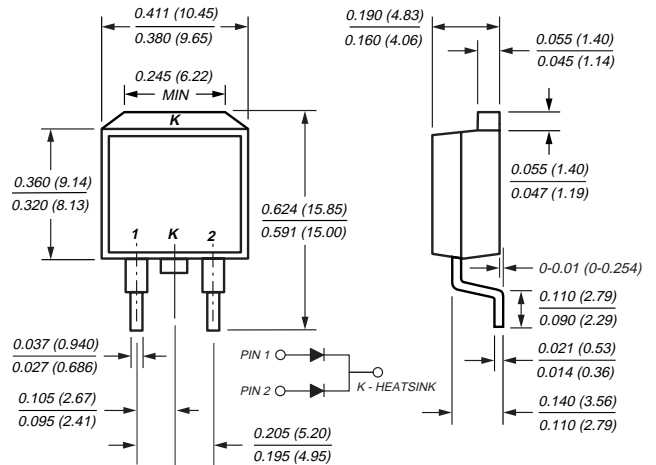
ITO-220AB (BYVF32 Series)



Mounting Pad Layout TO-263AB



TO-263AB (BYVB32 Series)



## Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Dual rectifier construction, positive centertap
- Glass passivated chip junctions
- Low power loss
- Low forward voltage, high current capability
- High surge current capability
- Superfast recovery times for high efficiency

## Mechanical Data

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

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

High temperature soldering guaranteed: 250°C, 0.16" (4.06mm) from case for 10 seconds

**Polarity:** As marked **Mounting Position:** Any

**Mounting Torque:** 10 in-lbs maximum

**Weight:** 0.08 oz., 2.24 g

# BYV32, BYVF32 & BYVB32 Series



Vishay Semiconductors  
formerly General Semiconductor

## Maximum Ratings (T<sub>C</sub> = 25°C unless otherwise noted)

Parameter	Symbol	BYV32-50	BYV32-100	BYV32-150	BYV32-200	Unit
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	50	100	150	200	V
Maximum RMS voltage	V <sub>RMS</sub>	35	70	105	140	V
Maximum DC blocking voltage	V <sub>DC</sub>	50	100	150	200	V
Maximum average forward rectified current at T <sub>C</sub> = 125°C	I <sub>F(AV)</sub>	18				A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) per leg	I <sub>FSM</sub>	150				A
Operating junction and storage temperature range	T <sub>J</sub> , T <sub>STG</sub>	-65 to +150				°C
RMS Isolation voltage (BYVF type only) from terminals to heatsink with t = 1.0 second, RH ≤ 30%	V <sub>ISOL</sub>	4500 <sup>(1)</sup> 3500 <sup>(2)</sup> 1500 <sup>(3)</sup>				V

## Electrical Characteristics (T<sub>C</sub> = 25°C unless otherwise noted)

Parameter	Symbol	BYV32-50	BYV32-100	BYV32-150	BYV32-200	Unit
Maximum instantaneous forward voltage per leg at: <sup>(4)</sup> at I <sub>F</sub> = 20A at I <sub>F</sub> = 5.0A, T <sub>J</sub> = 100°C	V <sub>F</sub>	1.15 0.85				V
Maximum DC reverse current per leg at rated DC blocking voltage T <sub>J</sub> = 25°C T <sub>J</sub> = 100°C	I <sub>R</sub>	10 600				μA
Maximum reverse recovery time per leg at I <sub>F</sub> = 1A, V <sub>R</sub> = 30V, di/dt = 100A/μs, I <sub>rr</sub> = 10% I <sub>RM</sub>	t <sub>rr</sub>	25				ns
Typical junction capacitance per leg at 4V, 1MHz	C <sub>J</sub>	45				pF

## Thermal Characteristics (T<sub>C</sub> = 25°C unless otherwise noted)

Parameter	Symbol	BYV	BYVF	BYVB	Unit
Thermal resistance from junction to case per leg	R <sub>θJC</sub>	1.6	5.0	1.6	°C/W

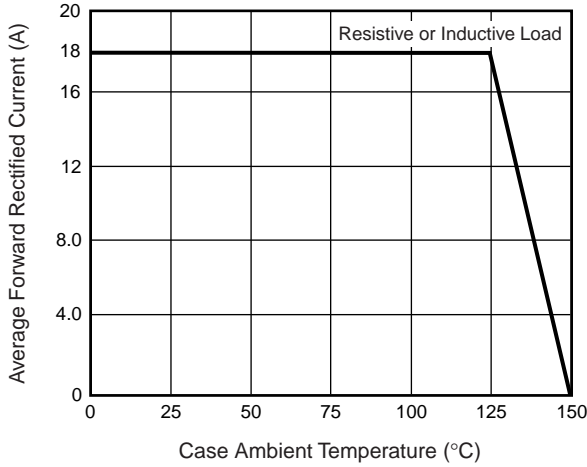
### Notes:

- (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

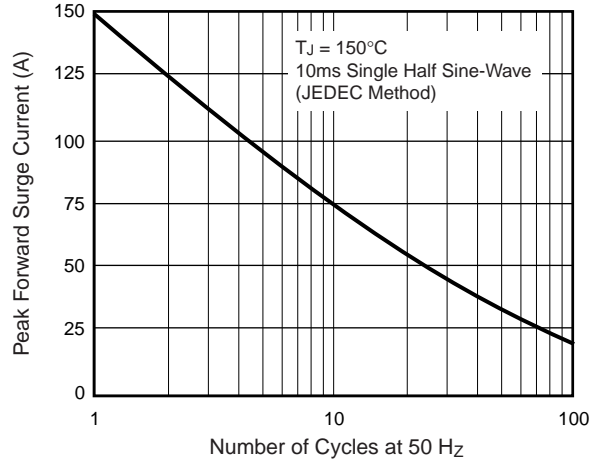


## Ratings and Characteristic Curves ( $T_A = 25^\circ\text{C}$ unless otherwise noted)

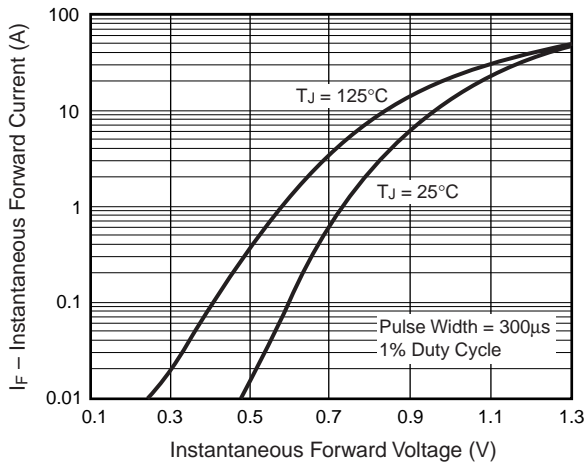
### Forward Current Derating Curve



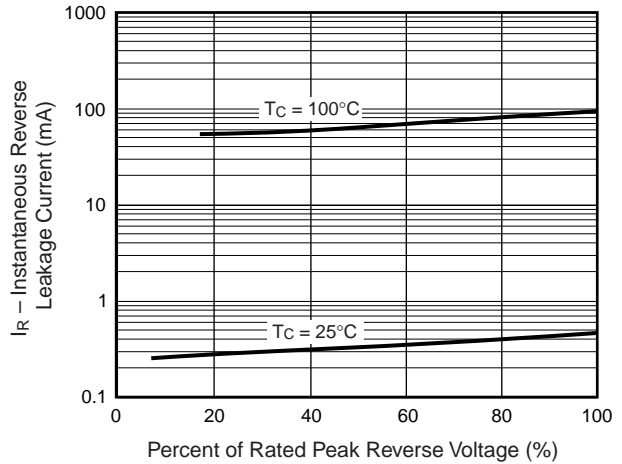
### Maximum Non-Repetitive Peak Forward Surge Current Per Leg



### Typical Instantaneous Forward Characteristics Per Leg



### Typical Reverse Leakage Characteristics Per Leg



### Typical Junction Capacitance Per Leg

