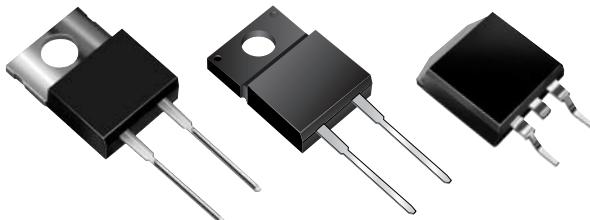
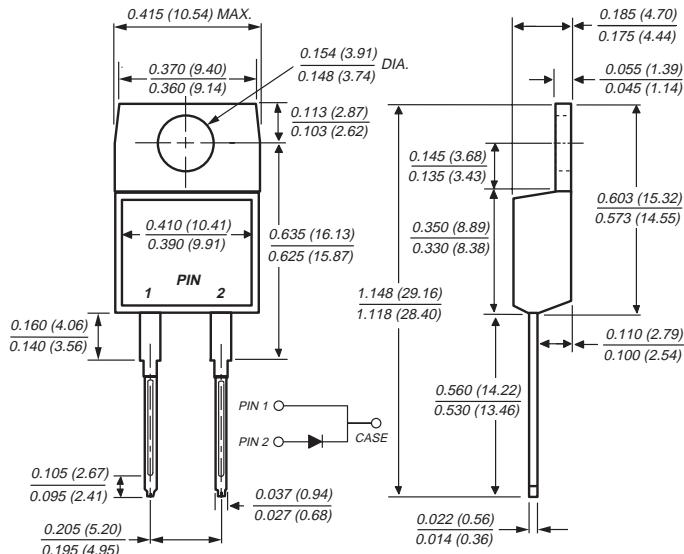
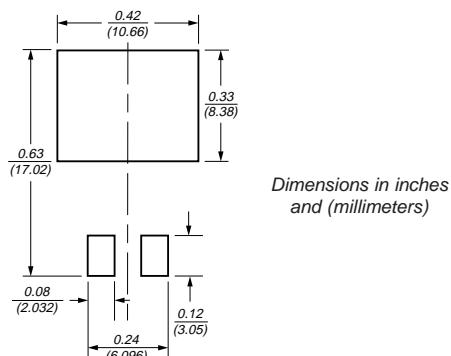
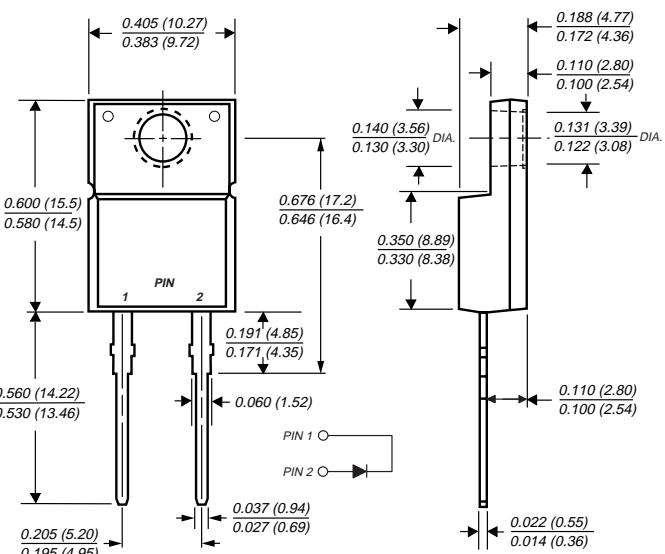
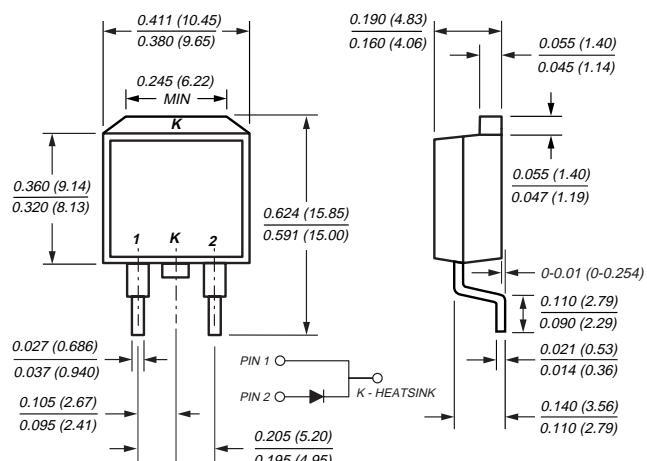


## High Voltage Damper Diodes


**TO-220AC (DTV32)**

**Mounting Pad Layout TO-263AB**


### Features

- Plastic package has Underwriters Laboratories Flammability Classification 94V-0
- Ideally suited CRT horizontal deflection
- Fast reverse recovery time
- Fast forward recovery time
- Glass passivated chip junction

**ITO-220AC (DTV32F)**

**TO-263AB (DTV32B)**


### 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 guaranteed:  
250°C/10 seconds, 0.25" (6.35mm) from case for TO-220 & ITO-220; at terminals for TO-263

**Polarity:** As marked

**Mounting Position:** Any

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

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

# DTV32, DTV32F, DTV32B

Vishay Semiconductors  
formerly General Semiconductor



## Maximum Ratings (TA = 25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Maximum repetitive peak reverse voltage	VR <sub>RRM</sub>	1500	V
Maximum RMS voltage	VR <sub>RMS</sub>	1050	V
Maximum DC blocking voltage	V <sub>DC</sub>	1500	V
Maximum average forward rectified current (fig.1)	I <sub>F(AV)</sub>	10	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) at T <sub>C</sub> = 100°C	I <sub>FSM</sub>	130	A
Operating junction and storage temperature range	T <sub>J</sub> , T <sub>TSG</sub>	-55 to +150	°C
RMS Isolation voltage (DTV32F types 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>J</sub> = 25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Maximum instantaneous forward voltage <sup>(4)</sup> I <sub>F</sub> = 6A, T <sub>J</sub> = 25°C I <sub>F</sub> = 6A, T <sub>J</sub> = 125°C	V <sub>F</sub>	1.5 1.35	V
Maximum DC reverse current at V <sub>RRM</sub> T <sub>J</sub> = 25°C T <sub>J</sub> = 125°C	I <sub>R</sub>	100 1.0	μA mA
Maximum reverse recovery time at I <sub>F</sub> = 1.0A, di/dt = 50A/μs, V <sub>R</sub> = 30V, I <sub>rr</sub> = 0.1 I <sub>RM</sub>	t <sub>rr</sub>	175	ns
Typical forward recovery time I <sub>F</sub> = 6A, di/dt = 48A/μs, V <sub>FR</sub> = 3V,	t <sub>fr</sub>	280	ns
Peak forward recovery overshoot voltage I <sub>F</sub> = 6A, di/dt = 48A/μs, T <sub>J</sub> = 100°C	V <sub>FP</sub> Typical Maximum	8 12	V

## Thermal Characteristics (TA = 25°C unless otherwise noted)

Parameter	Symbol	DTV32	DTV32F	DTV32B	Unit
Typical thermal resistance from junction to case	R <sub>θJC</sub>	2.0	4.0	2.0	°C/W

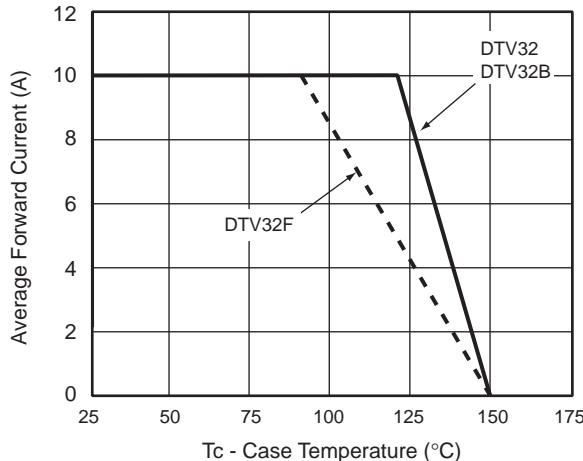
**Notes:** (1) Clip mounting (on case), where lead does not overlap heatsink with 0.110" offset  
(2) Clip mounting (on case), where leads do overlap heatsink  
(3) Screw mounting with 4-40 screw, where washer diameter is ≤ 4.9 mm (0.19")  
(4) Pulse test: 300μs pulse width, 2% duty cycle

## Ordering Information

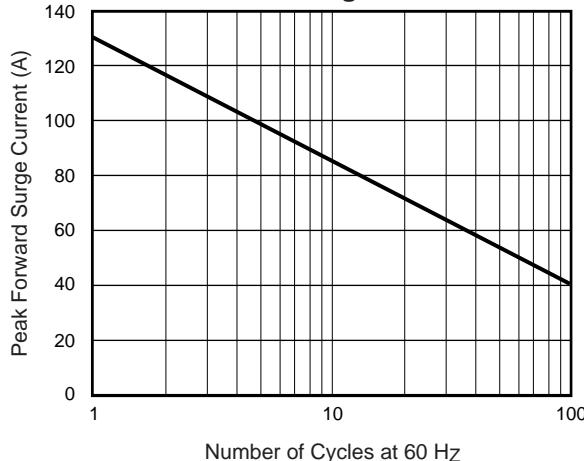
Product	Case	Package Code	Package Option
DTV32	TO-220AC	45	Anti-Static tube, 50/tube, 2K/carton
DTV32F	ITO-220AC	45	Anti-Static tube, 50/tube, 2K/carton
DTV32B	TO-263AB	31 45 81	13" reel, 800/reel, 4.8K/carton Anti-Static tube, 50/tube, 2K/carton Anti-Static 13" reel, 800/reel, 4.8K/carton

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

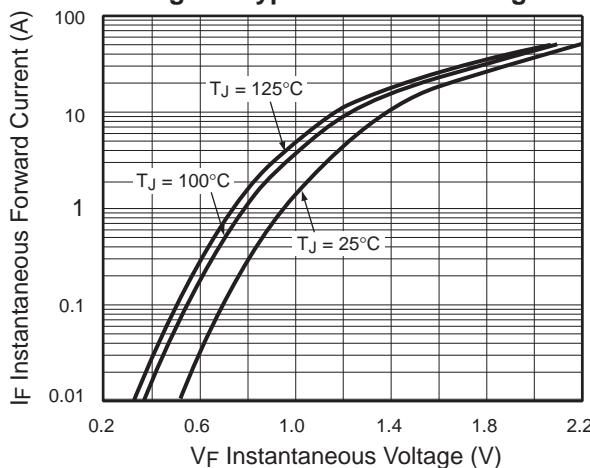
**Fig. 1 – Forward Current Derating Curve**



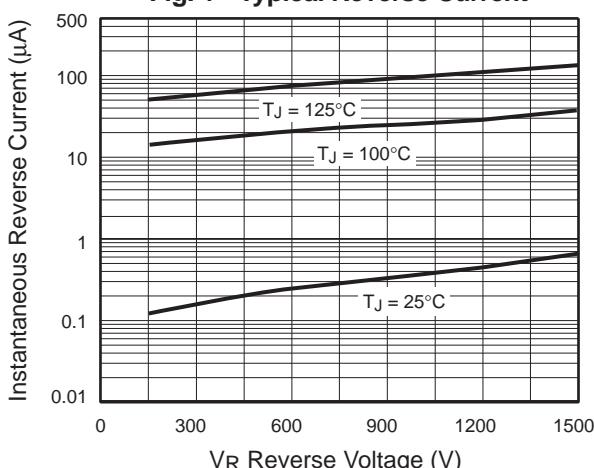
**Fig. 2 – Maximum Non-Repetitive Peak Forward Surge Current**



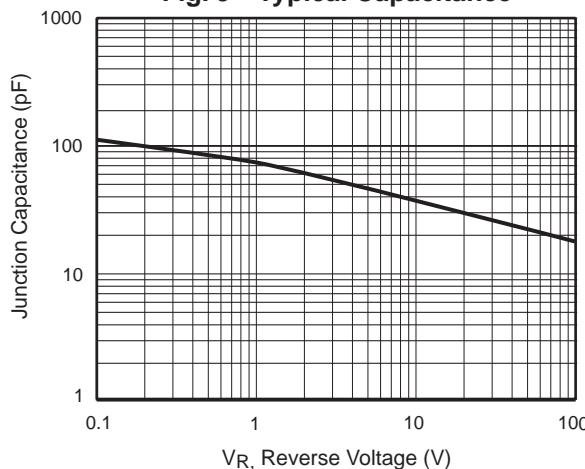
**Fig. 3 – Typical Forward Voltage**



**Fig. 4 – Typical Reverse Current**



**Fig. 5 – Typical Capacitance**



**Fig. 6 – Typical Reverse Recovery Time**

