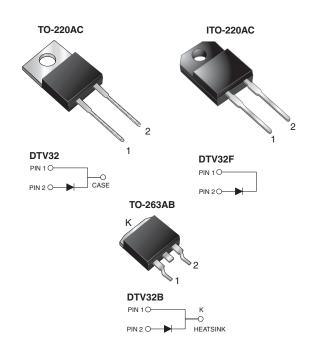
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## DTV32, DTV32F, DTV32B

Vishay General Semiconductor

## **High Voltage Damper Diodes**



PRIMARY CHARACTERISTICS					
I <sub>F(AV)</sub>	10 A				
V <sub>RRM</sub>	1500 V				
t <sub>rr</sub>	175 ns				
t <sub>fr</sub>	280 ns				
V <sub>F</sub>	1.35 V				

## FEATURES

- Glass passivated chip junction
- High breakdown voltage capability
- · Very fast reverse recovery time
  - Fast forward recovery time



- ROHS COMPLIANT
- High efficiency, low switching losses
- Meets MSL level 1, per J-STD-020, LF maximum peak of 245 °C (for TO-263AB package)
- Solder dip 260 °C, 40 s (for TO-220AC and ITO-220AC package)
- Compliant to RoHS Directive 2002/95/EC and in accordance to WEEE 2002/96/EC

### **TYPICAL APPLICATIONS**

For use in high resolution display TV and monitor horizontal deflection application.

### **MECHANICAL DATA**

**Case:** TO-220AC, ITO-220AC, TO263AB Epoxy meets UL 94 V-0 flammability rating **Terminals:** Matte tin plated leads, solderable per J-STD-002 and JESD 22-B102

E3 suffix for consumer grade, meets JESD 201 class 1A whisker test

#### Polarity: As marked

Mounting Torque: 10 in-lbs maximum

<b>MAXIMUM RATINGS</b> (T <sub>C</sub> = 25 °C unless otherwise noted)						
PARAMETER	SYMBOL	VALUE	UNIT			
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	1500	V			
Maximum RMS voltage	V <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	А			
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	I <sub>FSM</sub>	130	А			
Operating junction and storage temperature range	T <sub>J</sub> , T <sub>STG</sub>	- 55 to + 150	°C			
Isolation voltage (ITO-220AC only) from terminal to heatsink t = 1 min	V <sub>AC</sub>	1500	v			

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<b>ELECTRICAL CHARACTERISTICS</b> ( $T_C = 25$ °C unless otherwise noted)						
PARAMETER	TEST CONDITI	SYMBOL	VALUE	UNIT		
Maximum instantaneous forward voltage <sup>(1)</sup>	I <sub>F</sub> = 6 A I <sub>F</sub> = 6 A	T <sub>J</sub> = 25 °C 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	$I_F = 1.0$ A, dI/dt = 50 A/µs, $V_R = 30$ V, $I_{rr} = 0.1$ $I_{RM}$		t <sub>rr</sub>	175	ns	
Typical forward recovery time	$I_F = 6 \text{ A}, \text{ dI/dt} = 48 \text{ A/}\mu\text{s}, \text{ V}_{FR} = 3 \text{ V}$		t <sub>fr</sub>	280	ns	
Peak forward recovery overshoot voltage	I <sub>F</sub> = 6 A, dl/dt = 48 A/μs, T <sub>J</sub> = 100 °C	typical maximum	V <sub>FP</sub>	8 12	V	

Note:

(1) Pulse test: 300  $\mu s$  pulse width, 2 % duty cycle

<b>THERMAL CHARACTERISTICS</b> ( $T_C = 25$ °C unless otherwise noted)					
PARAMETER	SYMBOL	DTV32	DTV32B	DTV32F	UNIT
Typical thermal resistance from junction to case	$R_{ ext{ heta}JC}$	2.0		4.0	°C/W

ORDERING INFORMATION (Example)							
PACKAGE	PREFERRED P/N	UNIT WEIGHT (g)	PACKAGE CODE	BASE QUANTITY	DELIVERY MODE		
TO-220AC	DTV32-E3/45	1.80	45	50/tube	Tube		
ITO-220AC	DTV32F-E3/45	1.95	45	50/tube	Tube		
TO-263AB	DTV32B-E3/45	1.77	45	50/tube	Tube		
TO-263AB	DTV32B-E3/81	1.77	81	800/reel	Tape and reel		

### **RATINGS AND CHARACTERISTICS CURVES**

(T<sub>A</sub> = 25 °C unless otherwise noted)

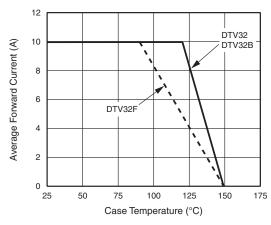


Figure 1. Forward Current Derating Curve

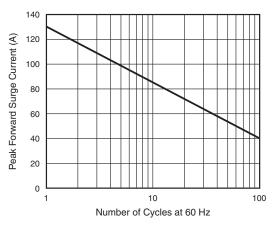


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

For technical questions within your region, please contact one of the following: DiodesAmericas@vishay.com, DiodesAsia@vishay.com, DiodesEurope@vishay.com

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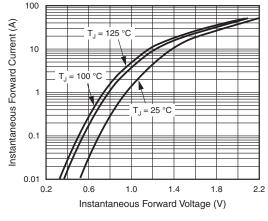


Figure 3. Typical Forward Voltage

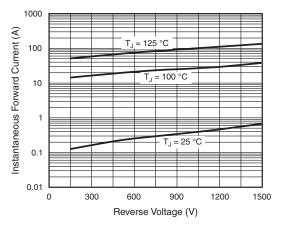


Figure 4. Typical Reverse Current

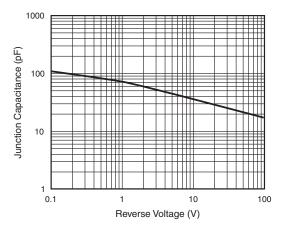


Figure 5. Typical Capacitance

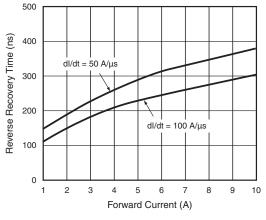
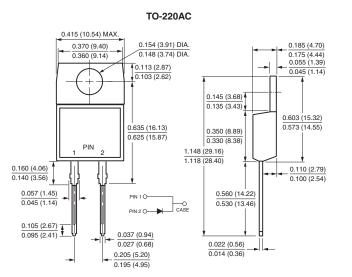


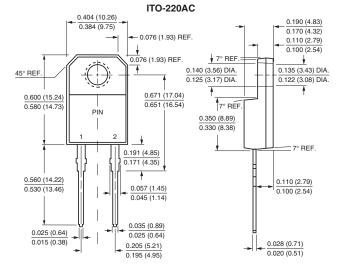
Figure 6. Typical Reverse Recovery Time

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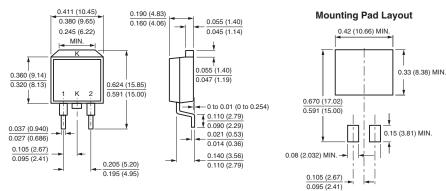
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TO-263AB







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