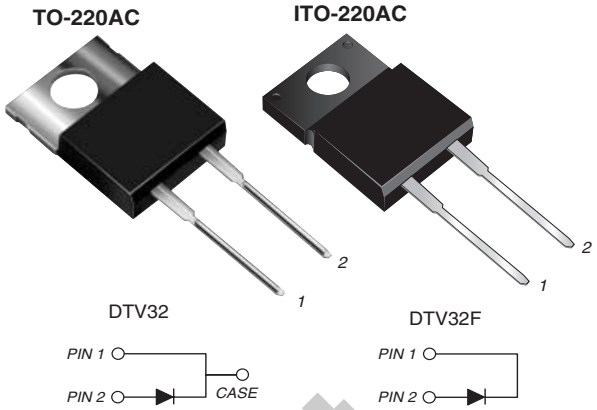
High Voltage Damper Diodes

Major Ratings and Characteristics

$I_{F(AV)}$	10 A
V_{RRM}	1500 V
t_{rr}	175 ns
t_{fr}	280 ns
V_F	1.35 V



Features

- Glass passivated chip junction
- High breakdown voltage capability
- Very fast reverse recovery time
- Fast forward recovery time
- High efficiency, low switching losses
- Meets MSL level 1, per J-STD-020C

Typical Applications

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

Mechanical Data

Case: JEDEC TO-220AC, ITO-220AC

Terminals: Matte tin plated (E3 Suffix) leads, solderable per J-STD-002B and MIL-STD-750, Method 2026

Mounting Torque: 10 in-lbs Maximum

Epoxy meets UL-94V-0 Flammability rating

New Product

Maximum Ratings

(T_C = 25 °C unless otherwise noted)

Parameter	Test condition	Symbol	Value	Unit
Maximum repetitive peak reverse voltage		V_{RRM}	1500	V
Maximum RMS voltage		V_{RMS}	1050	V
Maximum DC blocking voltage		V_{DC}	1500	V
Maximum average forward rectified current (fig. 1)		$I_{F(AV)}$	10	A
Peak forward surge current	8.3 ms single half sine-wave superimposed on rated load (JEDEC Method) at T_C = 100 °C	I_{FSM}	130	A
Operating junction and storage temperature range		T_J, T_{STG}	-55 to +150	°C
RMS Isolation voltage (DTV32F types 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	Test condition	Symbol	Value	Unit
Maximum instantaneous forward voltage(4)	I_F = 6 A, T_J = 25 °C I_F = 6 A, T_J = 125 °C	V_F	1.5 1.35	V
Maximum DC reverse current at V_{RRM}	T_J = 25 °C T_J = 125 °C	I_R	100 1.0	µA mA
Maximum reverse recovery time	at I_F = 1.0 A, di/dt = 50 A/µs, V_R = 30 V, I_{rr} = 0.1 I_{RM}	t_{rr}	175	ns
Typical forward recovery time	I_F = 6 A, di/dt = 48 A/µs, V_{FR} = 3 V	t_{fr}	280	ns
Peak forward recovery overshoot voltage	at I_F = 6 A, di/dt = 48 A/µs, T_J = 100 °C Typical Maximum	V_{FP}	8 12	V

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: 300 µs pulse width, 2 % duty cycle

Thermal Characteristics

(T_C = 25 °C unless otherwise noted)

Parameter	Test condition	Symbol	DTV32	DTV32F	Unit
Typical thermal resistance from junction to case		$R_{\theta JC}$	2.0	4.0	°C/W

Ratings and Characteristics Curves

(T_A = 25 °C unless otherwise noted)

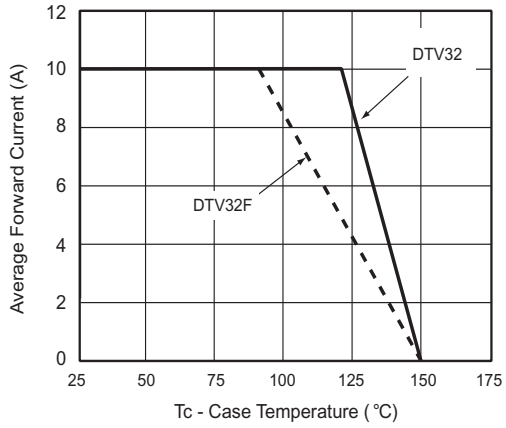


Figure 1. Forward Current Derating Curve

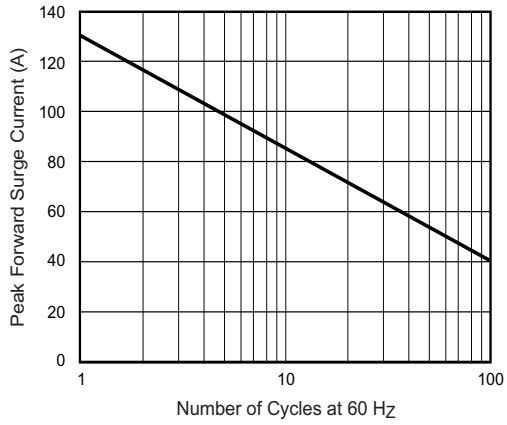


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

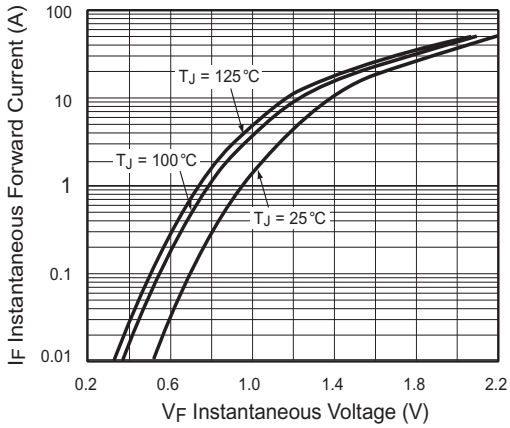


Figure 3. Typical Forward Voltage

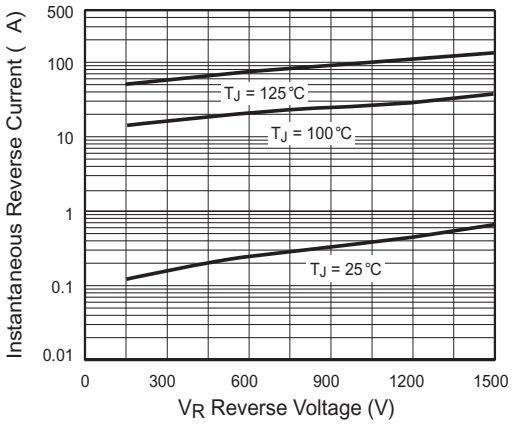


Figure 4. Typical Reverse Current

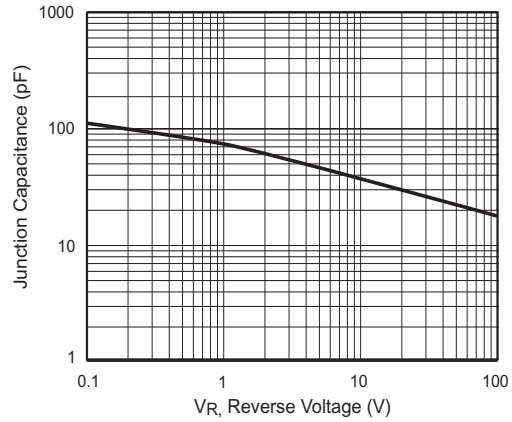


Figure 5. Typical Capacitance

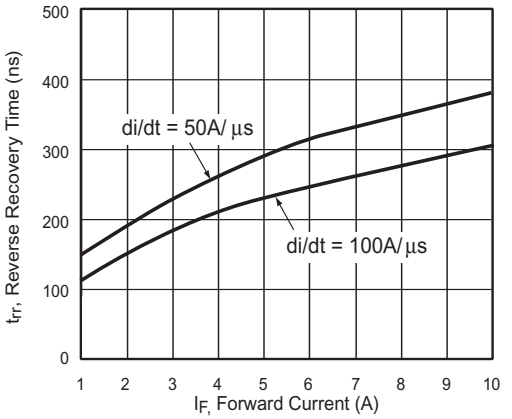
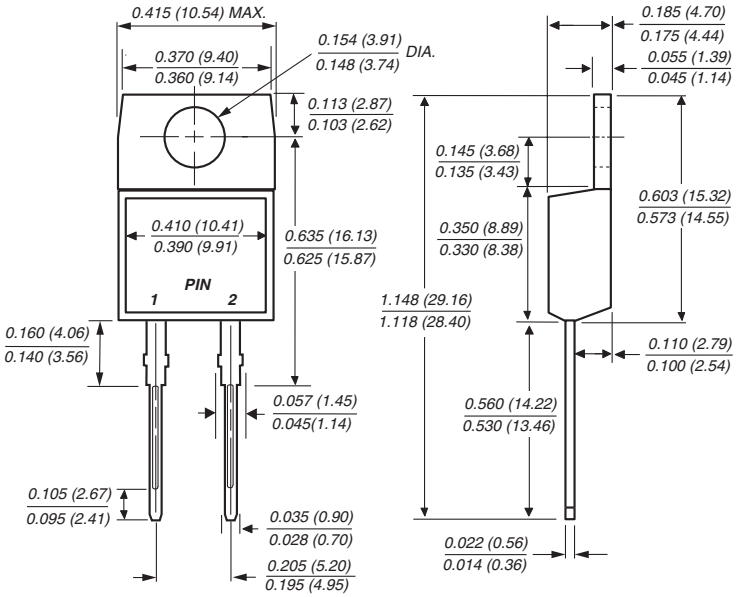


Figure 6. Typical Reverse Recovery Time

Dimensions in Inches and (millimeters)

TO-220AC



ITO-220AC

