November 2014

FFPF10F150S
10 A, 1500 V, Damper Diode

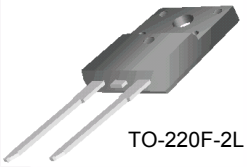
Features

- High Speed Recovery t_{rr} = 170 ns (@ I_F = 1 A)
- Max Forward Voltage, V_F = 1.6 V (@ T_C = 25°C)
- 1500 V Reverse Voltage and High Reliability
- Low Forward Voltage

Applications

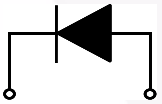
- Suitable for Damper Diode in Horizontal Deflection Circuits

Pin Assignments



TO-220F-2L

1. Cathode 2. Anode



1. Cathode 2. Anode

Absolute Maximum Ratings T_C = 25°C unless otherwise noted

Symbol	Parameter	Rating	Unit
V_{RRM}	Peak Repetitive Reverse Voltage	1500	V
V_{RWM}	Working Peak Reverse Voltage	1500	V
$I_{F(AV)}$	Average Rectified Forward Current @ T_C = 125 °C	10	A
I_{FSM}	Non-repetitive Peak Surge Current 60Hz Single Half-Sine Wave	100	A
T_J, T_{STG}	Operating Junction and Storage Temperature	- 65 to +175	°C

Thermal Characteristics T_C = 25°C unless otherwise noted

Symbol	Parameter	Max.	Unit
$R_{\theta JC}$	Maximum Thermal Resistance, Junction to Case	3.0	°C/W

Package Marking and Ordering Information

Part Number	Top Mark	Package	Packing Method	Reel Size	Tape Width	Quantity
FFPF10F150STU	FFPF10F150S	TO-220F-2L	Tube	N/A	N/A	30

Electrical Characteristics T_C = 25°C unless otherwise noted

Parameter	Conditions		Min.	Typ.	Max.	Unit
V_F[1]	Maximum Instantaneous Forward Voltage I_F = 10 A I_F = 10 A	 T_C = 25 °C T_C = 125 °C	 - -	 - -	 1.6 1.4	V
I_R[1]	Maximum Instantaneous Reverse Current @ rated V_R	 T_C = 25 °C T_C = 125 °C	 - -	 - -	 10 80	μA
t_{rr}	Maximum Reverse Recovery Time (I_F = 1 A, di_F/dt = 50 A/μs, V_R= 30 V)		-	-	170	ns
t_{fr}	Maximum Forward Recovery Time (I_F = 6.5 A, di_F/dt = 50 A/μs)		-	-	250	ns
V_{FRM}	Maximum Forward Recovery Voltage		-	-	14	V

Notes:

1. Pulse : Test Pulse Width = 300μs, Duty Cycle = 2%

Test Circuit and Waveforms

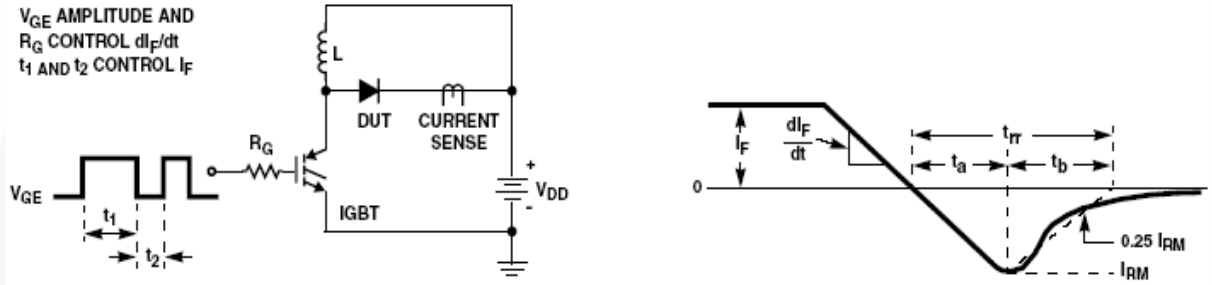


Figure 1. Diode Reverse Recovery Test Circuit & Waveform

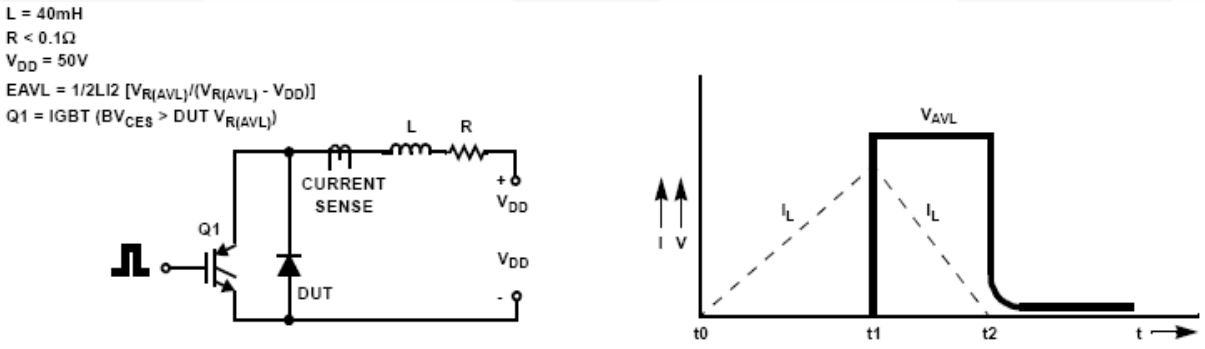


Figure 2. Unclamped Inductive Switching Test Circuit & Waveform

Typical Performance Characteristics $T_C = 25°C$ unless otherwise noted

Figure 3. Typical Forward Voltage Drop

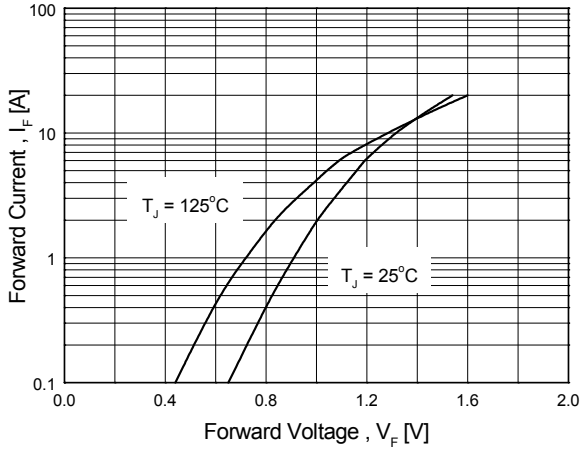


Figure 4. Typical Reverse Current

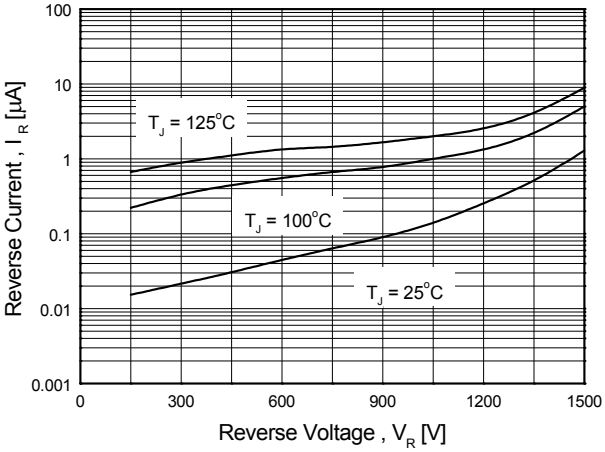


Figure 5. Typical Junction Capacitance

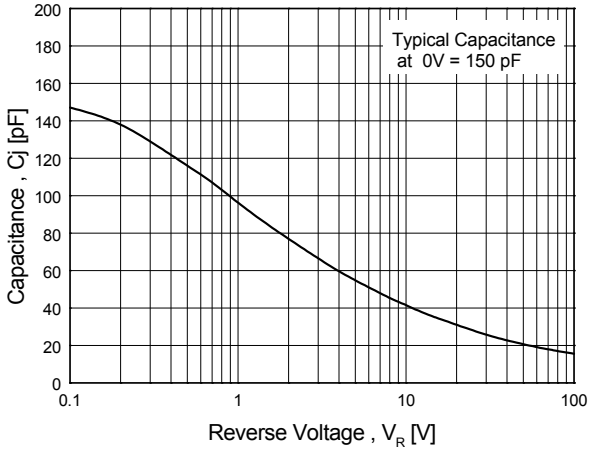


Figure 6. Typical Reverse Recovery Time

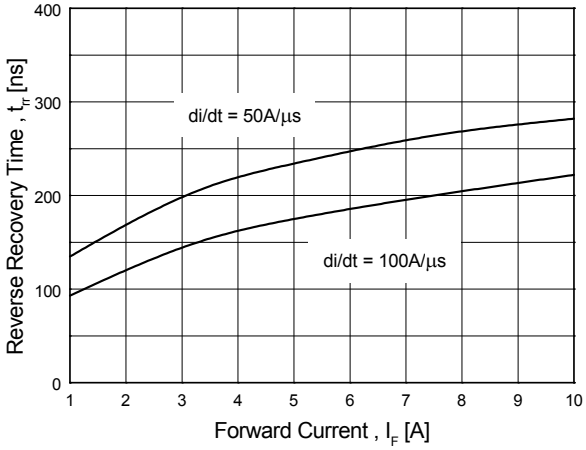


Figure 7. Typical Stored Charge

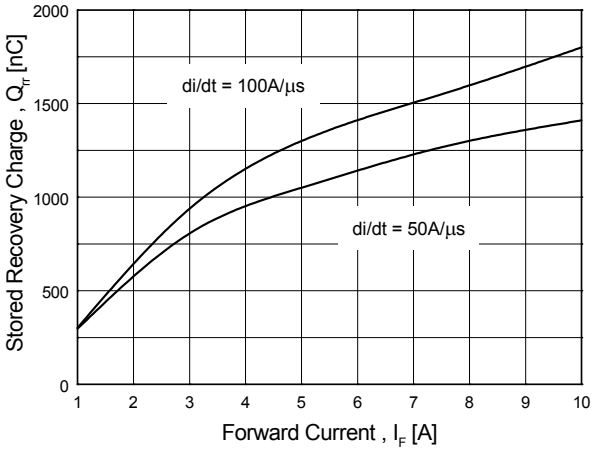
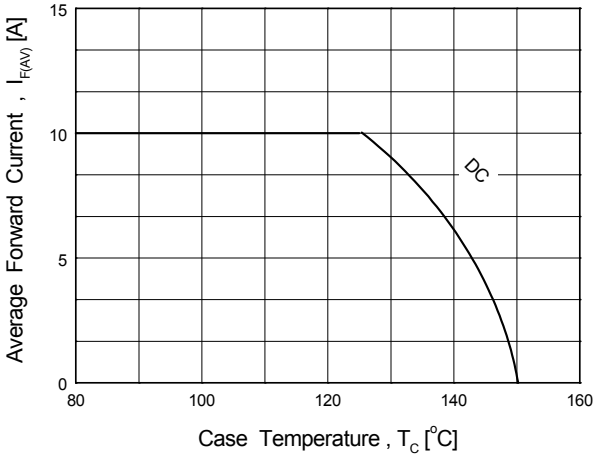


Figure 8. Forward Current Deration Curve



Mechanical Dimensions

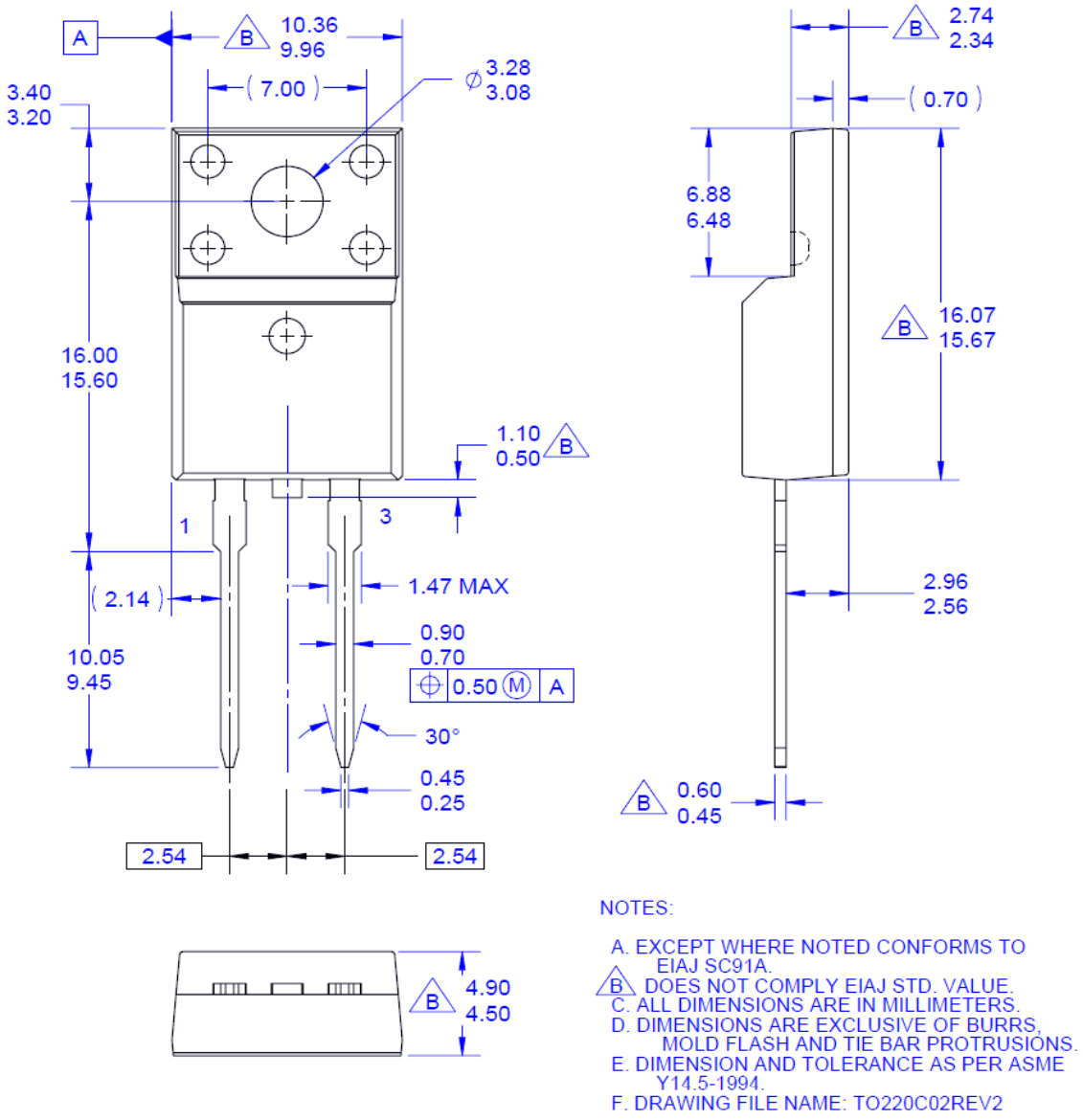


Figure 9. TO-220F 2L - 2LD; TO220; MOLDED; FULL PACK

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