

150V 40A Ultra Low VF Schottky

Characteristics Summary

Characteristics	Values	Units
IF(AV)	20 X 2	A
VRRM	150	V
VFBC @ 10A, TJ = 25°C	0.70	V, typ.
IR @ TJ = 25°C	13	uA, typ.

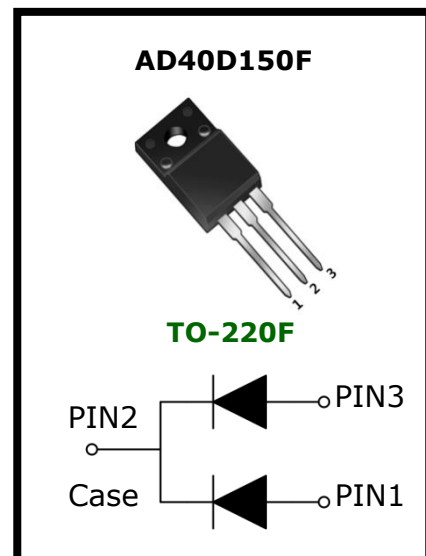
Features

- Ultra Low Forward Voltage (VF) Drop
- Very Low Reverse Leakage in high temperature.
- Softest, fast switching capability
- 150°C Operating Junction Temperature
- Lead Free Finish, RoHS Compliant

Typical Applications

Device optimized for low forward voltage drop to maximize efficiency in Power Supply applications.

- DC/DC Converters
- AC/DC Converters





Maximum Ratings Characteristics

(TA = 25°C unless otherwise specified)

Parameter	Symbol	Values	Units
DC Blocking Voltage	V _{RM}	150	V
Working Peak Reverse Voltage	V _{RWM}		V
Peak Repetitive Reverse Voltage	V _{RRM}		V
Average Rectified Forward Current Per device (Rated VR-20Khz Square Wave) – 50% duty cycle	I _D	20	A
Peak Forward Surge Current – 1/2 60hz	I _{FSM}	250	A
Peak Repetitive Reverse Surge Current (2uS-1Khz)	I _{RRM}	2	A
Typical Thermal Resistance (per leg) Package = TO-220F	R _{θJC}	4	°C / W
Isolation voltage (TO-220F only)	V _{AC}	1500	V
Maximum Rate of Voltage Change (at Rated VR)	dv/dt	10000	V/uS
Operating Junction Temperature	T _J	-40 to +150	°C
Storage Junction Temperature	T _{STG}	-40 to +150	

Electrical Characteristics – (per leg)

(TA = 25°C unless otherwise specified)

Parameter	Test Conditions		Symbol	Typ.	Max.	Units	
Instantaneous Forward Voltage	IF = 5 A	TJ = 25°C	VF*	----	-----	V	
	IF = 10 A			0.70	0.80		
	IF = 20 A			0.86	0.94		
	IF = 5 A	TJ = 125°C		-----	-----		
	IF = 10 A			0.58	-----		
	IF = 20 A			0.68	-----		
Instantaneous Reverse Current	VR = 150V	TJ = 25°C	IR*	12	40	uA	
		TJ = 125°C		9	20	mA	
* Pulse width < 300 uS, Duty cycle < 2%							

* Pulse width < 300 uS, Duty cycle < 2%

Characteristics Curves

($T_A = 25^{\circ}\text{C}$ unless otherwise specified)

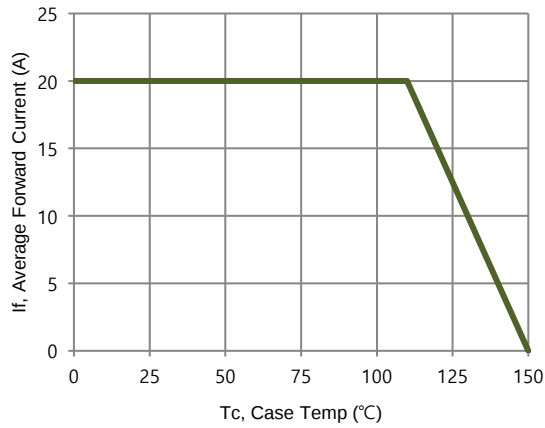


Figure 1 : Current Derating, Case

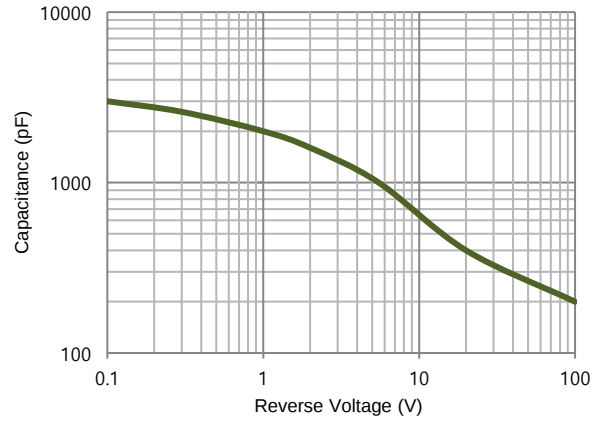


Figure 2 : Typical Junction Capacitance

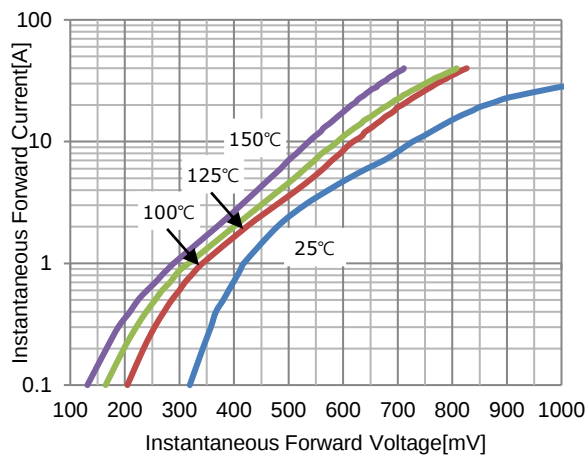


Figure 3 : Typical Forward Voltage

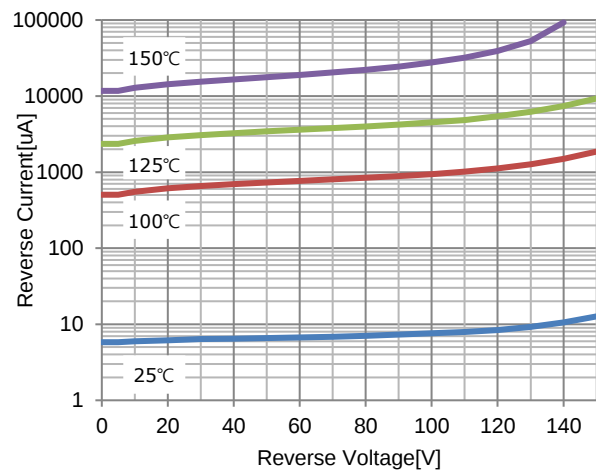
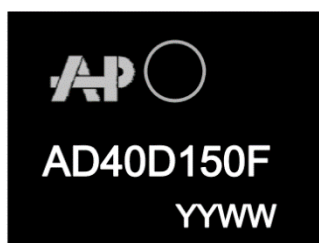


Figure 4 : Typical Reverse Current

Ordering Information

Part No	Package	Packing	Finish	Halogen	Packing Unit
AD40D150F	TO-220F	Tube	Sn	Free	5,000ea

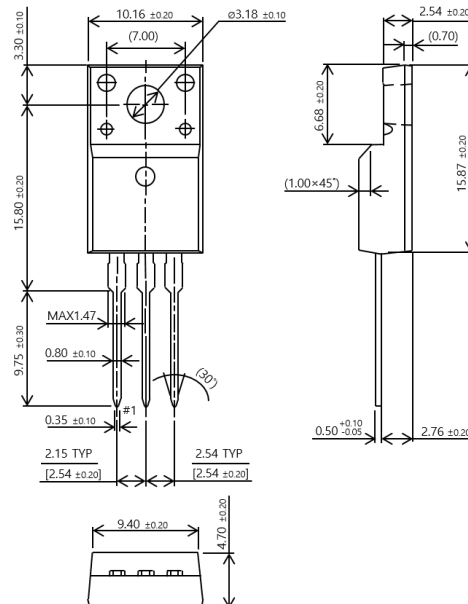
Marking Layout



AP : APsemi LOGO
YY : 2-digit Year code
WW : 2-digit Week Code

Package Dimensions

TO-220F



Revision History

No	Date	Contents
0	2016-03-18	Initial Brief Datasheet Release

<http://www.apsemi.com>

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