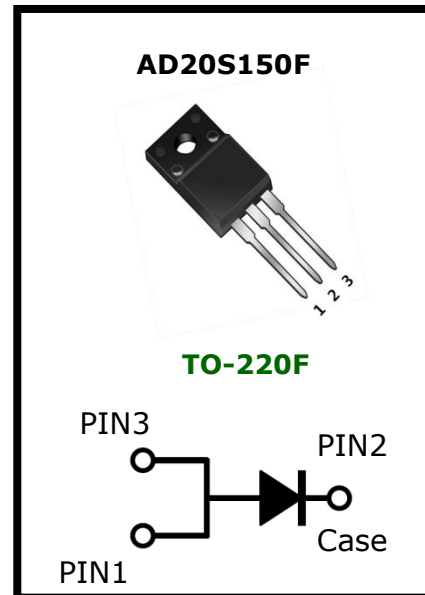


150V 20A Ultra Low VF Schottky

Characteristics Summary

Characteristics	Values	Units
$I_F(AV)$	20	A
V_{RRM}	150	V
$V_F @ 5A, T_J = 25^\circ C$ $V_F @ 10A, T_J = 25^\circ C$	0.59 0.70	V, typ.
T_J Operating Junction Temperature	-40 to +150	$^\circ C$



Features

- Ultra Low Forward Voltage (V_F) Drop Low Power Losses
- Low Leakage Current at high temperature.
- Reliable application for various circumstances.
- $150^\circ C$ Operating Junction Temperature
- Lead Free Finish, RoHS Compliant

Typical Applications

Device optimized for low forward voltage drop to maximize efficiency in Power Supply applications, high frequency converters, freewheeling diodes.

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}	200	A
Peak Repetitive Reverse Surge Current (2uS-1Khz)	I _{RRM}	1	A
Typical Thermal Resistance 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

(TA = 25°C unless otherwise specified)

Parameter	Test Conditions		Symbol	Typ.	Max.	Units
Instantaneous Forward Voltage	IF = 5 A	TJ = 25°C	VF*	0.59	0.72	V
	IF = 10 A			0.70	0.76	
	IF = 20 A			0.83	0.93	
	IF = 5 A	TJ = 125°C		0.50	----	
	IF = 10 A			0.57	----	
	IF = 20 A			0.65	----	
Instantaneous Reverse Current	VR = 100V	TJ = 25°C	IR*	-----	40	uA
		TJ = 125°C		-----	20	mA
Junction Capacitance	VR = 5V, f = 1MHz		CJ	489		pF
* Pulse width < 300 uS, Duty cycle < 2%						

Characteristics Curves

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

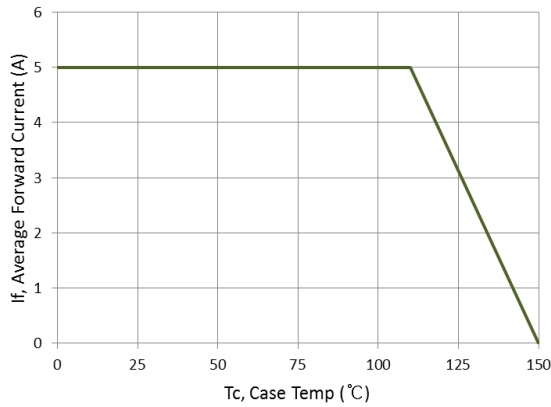


Figure 1 : Current Derating, Case

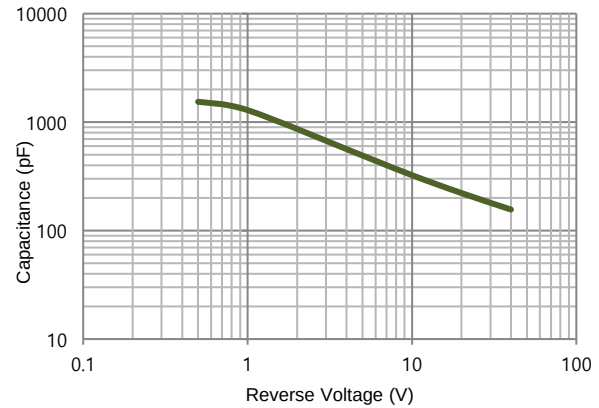


Figure 2 : Typical Junction Capacitance

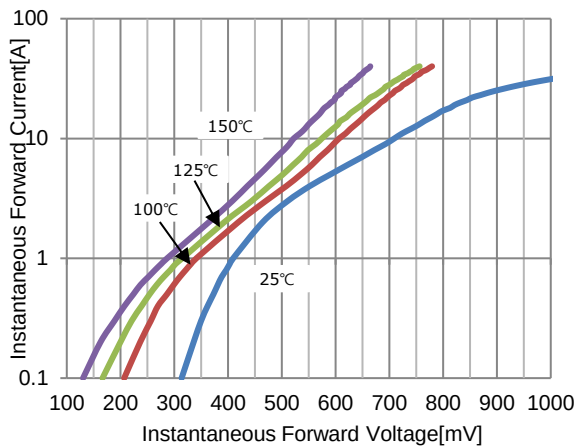


Figure 3 : Typical Forward Voltage

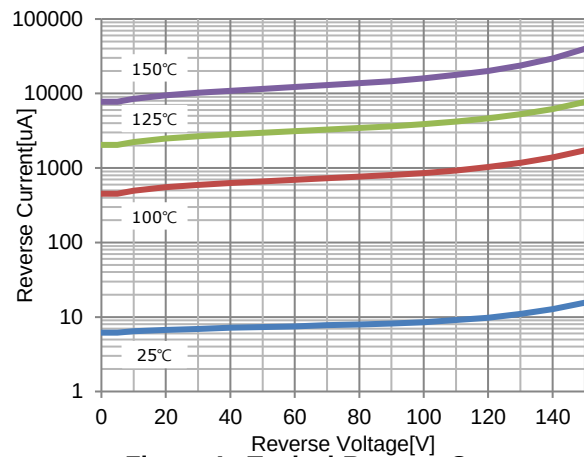
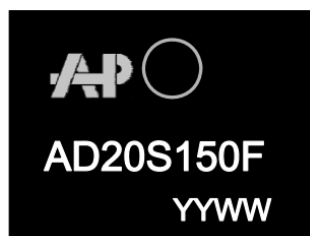


Figure 4 : Typical Reverse Current

Ordering Information

Part No	Package	Packing	Finish	Halogen	Packing Unit
AD20S150F	TO-220F	Tube	Sn	Free	5,000ea

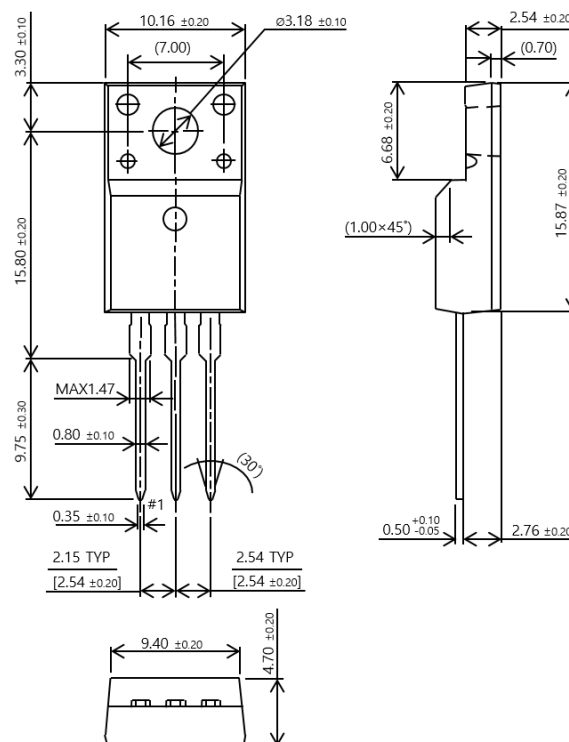
Marking Layout



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

Package Dimensions

TO-220F



Revision History

No	Date	Contents
0	2017-01-03	Initial Brief Datasheet Release
1	2019-01-11	Junction Capacitance Updated

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