

100V 50A Ultra Low VF Schottky

Characteristics Summary

Characteristics	Values	Units
IF(AV)	50	A
VRRM	100	V
V _F @ 5A, T _J = 25°C	0.44	V, typ.
V _F @ 5A, T _J = 125°C	0.35	
V _F @ 50A, T _J = 125°C	0.80	
T _J Operating Junction Temperature	-40 to +150	°C

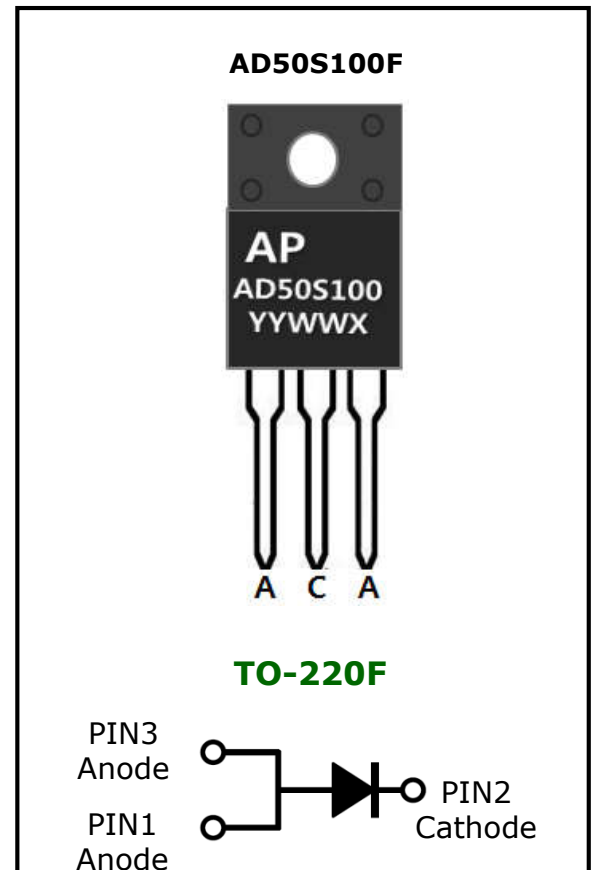
Features

- Ultra Low Forward Voltage (V_F) Drop
- Very Low Reverse Leakage in high temperature.
- Softest, fast switching capability
- 150°C Operating Junction Temperature
- Low power losses and Low EMC
- 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}	100	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	50	A
Peak Forward Surge Current – 1/2 60hz	I _{FSM}	260	A
Peak Repetitive Reverse Surge Current (2uS-1Khz)	I _{RRM}	1	A
Power Dissipation (T _J = 25 °C)	P _D	60	W
Typical Thermal Resistance (Package = TO-220F)	R _{θJC}	2.35	°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 +175	

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*	0.44	-	V
	IF = 10 A			0.51	-	
	IF = 20 A			0.62	0.65	
	IF = 30 A			0.70	0.75	
	IF = 5 A	TJ = 125°C		0.35	-	
	IF = 10A			0.46	-	
	IF = 20 A			0.59	-	
	IF = 50 A			0.80	-	
Instantaneous Reverse Current	VR = 100V	TJ = 25°C	IR*	15	50	uA
		TJ = 125°C		15	20	mA
* Pulse width < 300 uS, Duty cycle < 2%						



Characteristics Curves

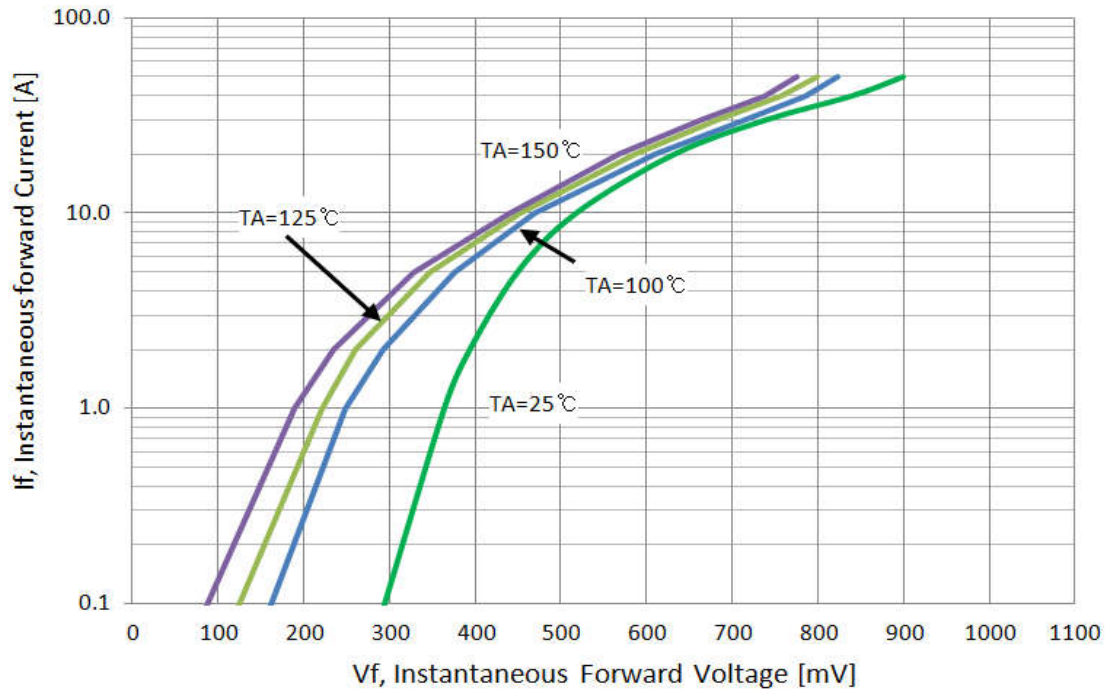


Figure : Typical Forward Voltage

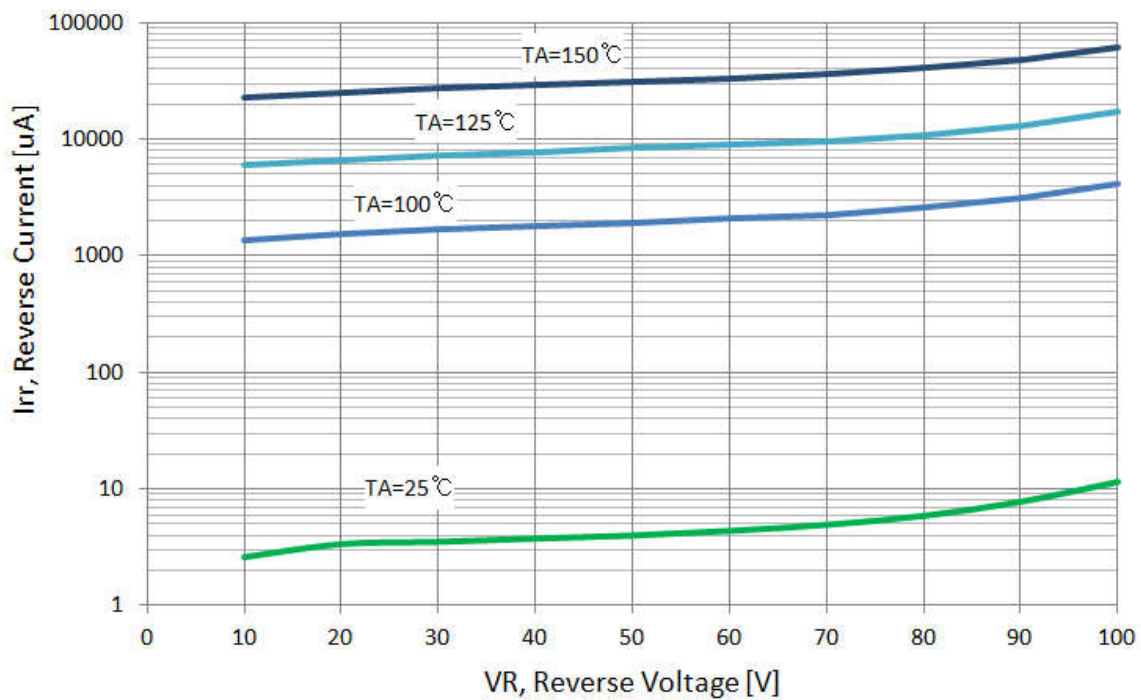


Figure : Typical Reverse Current

Ordering Information

Part No	Package	Packing	Finish	Small Box	Packing Unit
AD50S100F	TO-220F	Tube	Sn	1,000ea	5,000ea

Marking Layout



1st LINE : LOGO

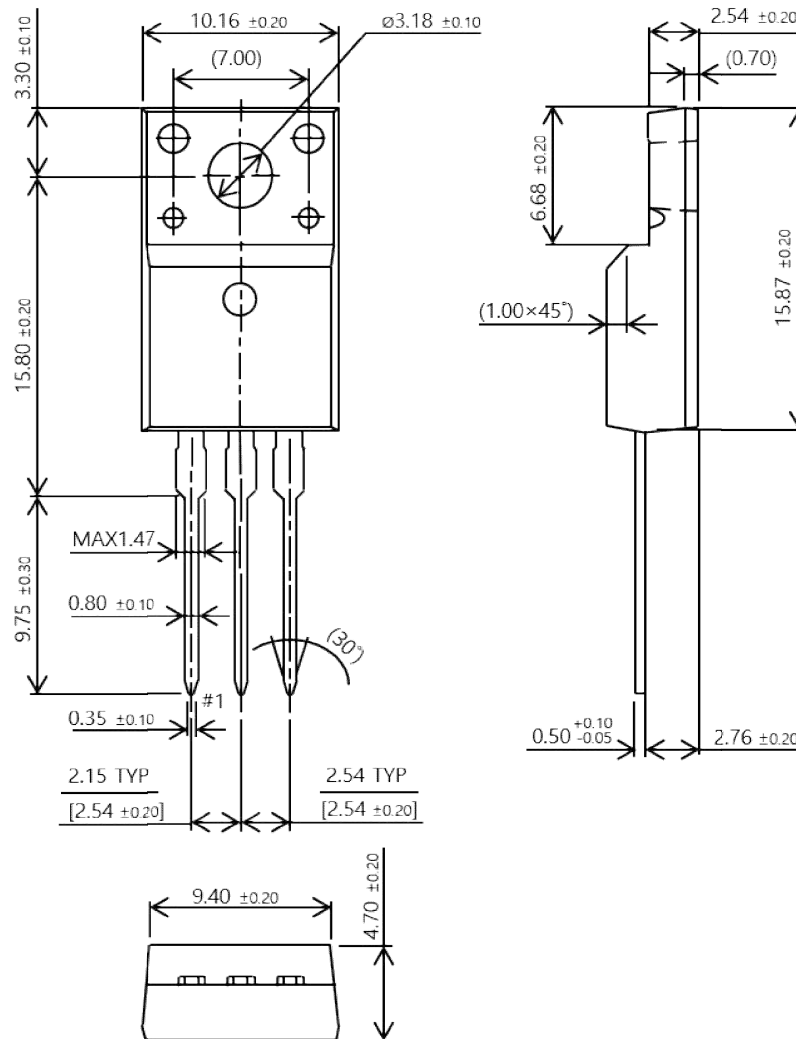
2nd LINE : DEVICE NAME

3rd LINE : YEAR & WORK WEEK



Package Dimensions

TO-220F



Revision History

No	Date	Contents
0	2019-10-03	Initial Brief Datasheet Release

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