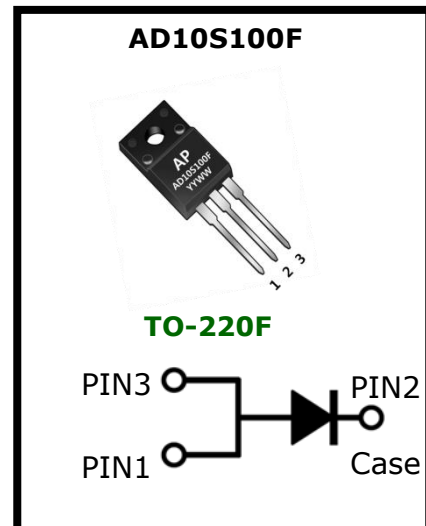


100V 10A Ultra Low VF Single Schottky

Characteristics Summary

Characteristics	Values	Units
IF(AV)	10	A
VRRM	100	V
VF @ 5A, TJ = 25°C	0.47	V, typ.
TJ, Operating Junction Temperature	-40 to +150	°C



Features

- Ultra Low Forward Voltage (VF) Drop Low Power Losses
- Low Leakage Current at high temperature.
- Reliable application for various circumstances.
- 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, high frequency converters, freewheeling diodes.

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 (Rated VR-20Khz Square Wave) – 50% duty cycle	I _D	10	A
Peak Forward Surge Current – 1/2 60hz	I _{FSM}	225	A
Peak Repetitive Reverse Surge Current (2uS-1Khz)	I _{RRM}	1	A
Typical Thermal Resistance	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 = 3 A	TJ = 25°C	VF*	0.47	0.50	V
	IF = 5 A			0.51	0.58	
	IF = 10 A			0.62	0.66	
	IF = 3 A	TJ = 125°C		0.39	-----	
	IF = 5 A			0.43	-----	
	IF = 10 A			0.57	-----	
Instantaneous Reverse Current	VR = 100V	TJ = 25°C	IR*	-----	50	uA
		TJ = 125°C		-----	20	mA
Junction Capacitance	VR = 5V, f = 1MHz		CJ	508		pF
* 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)

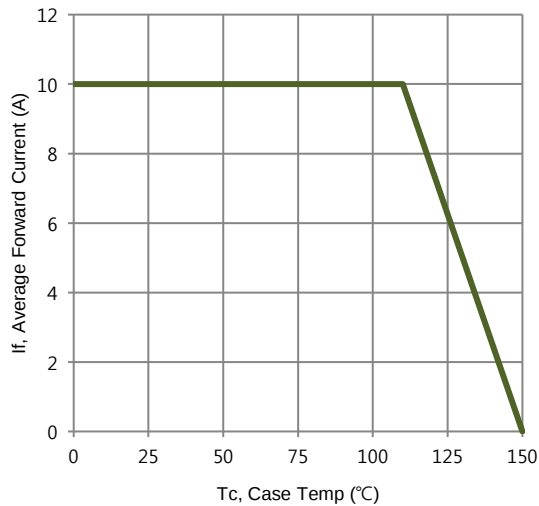


Figure 1 : Current Derating, Case

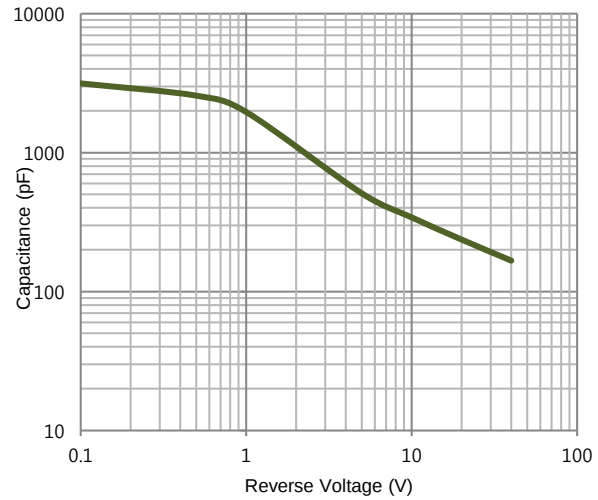


Figure 2 : Typical Junction Capacitance

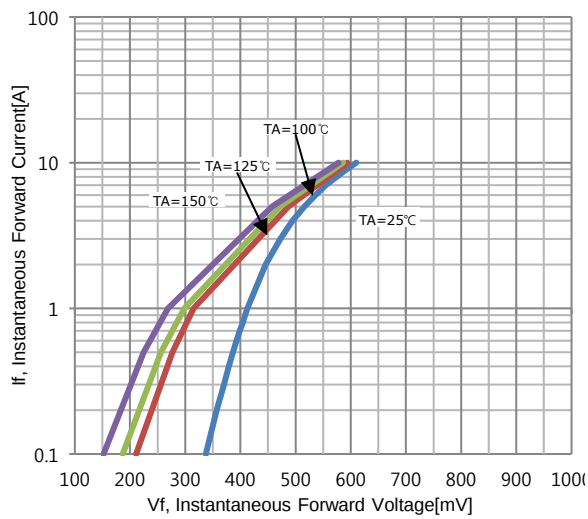


Figure 3 : Typical Forward Voltage

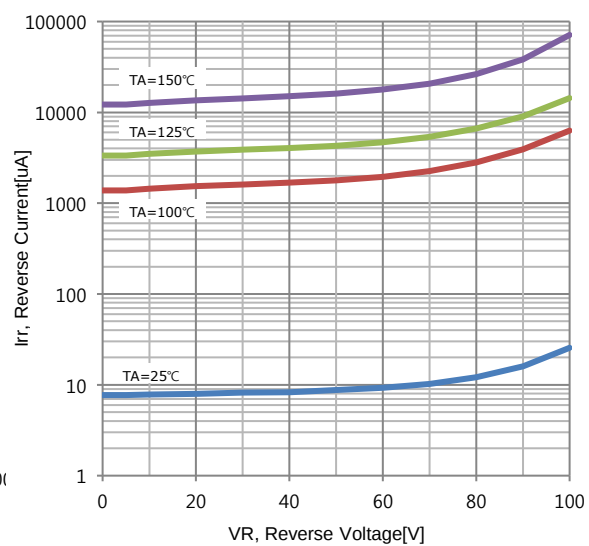


Figure 4 : Typical Reverse Current

Ordering Information

Part No	Package	Packing	Finish	Halogen	Packing Unit
AD10S100F	TO-220F	Tube	Sn	Free	5,000ea

Marking Layout



1ST Line : Company logo

2nd Line : Date code

- **YY : Last two digit of calendar year**
- **WW : Work week calendar**

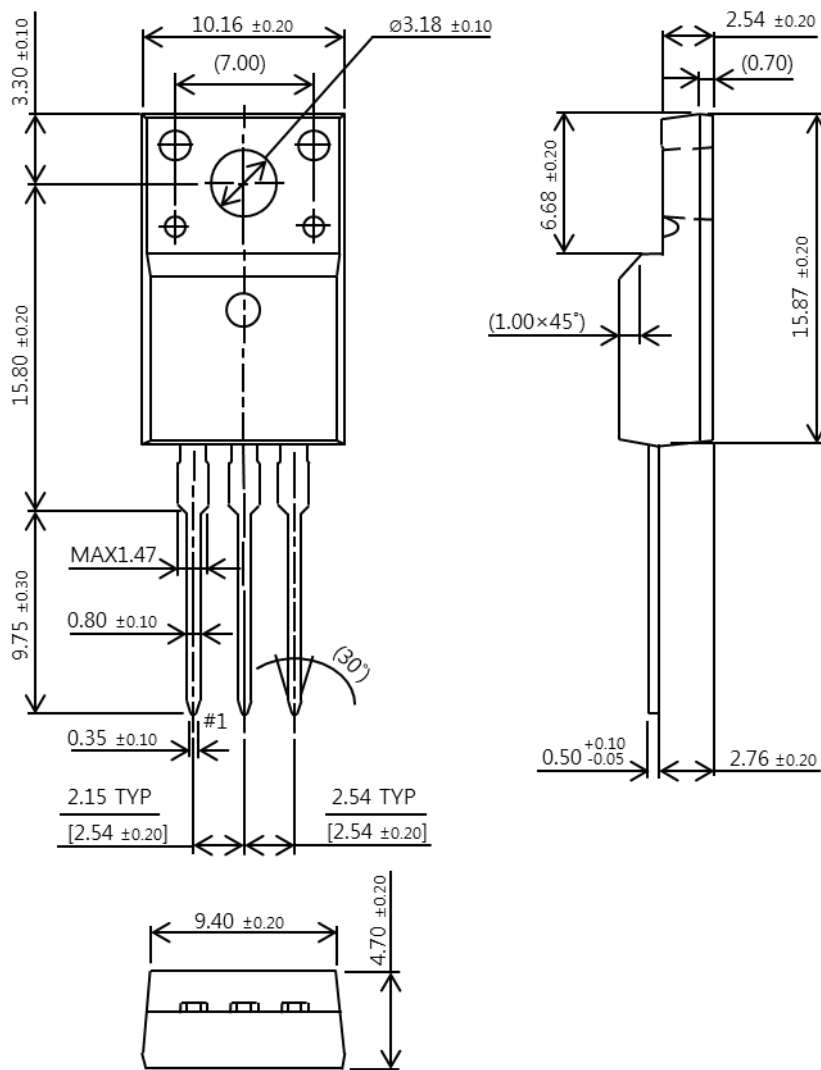
3rd Line : Device name + PKG CODE

-F: TO-220F PKG code



Package Dimensions

TO-220F



Revision History

No	Date	Contents
0	2016-12-27	Initial Brief Datasheet Release
1	2019-01-07	Junction Capacitance Updated

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