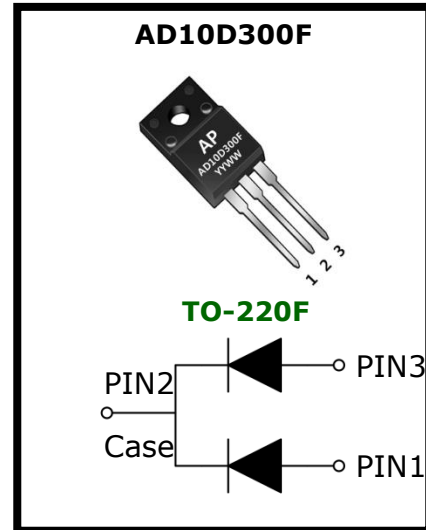


**300V 10A Ultra Low VF Schottky**

**Characteristics Summary**

Characteristics	Values	Units
IF(AV)	5 X 2	A
VRRM	300	V
VF @ 2.5A, TJ = 25°C	0.72	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 <sub>RM</sub>	300	V
Working Peak Reverse Voltage	V <sub>RWM</sub>		V
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>		V
Average Rectified Forward Current Per device (Rated VR-20Khz Square Wave) – 50% duty cycle	I <sub>D</sub>	5	A
Peak Forward Surge Current – 1/2 60hz	I <sub>FSM</sub>	170	A
Peak Repetitive Reverse Surge Current (2uS-1Khz)	I <sub>RRM</sub>	1	A
Typical Thermal Resistance (per leg) Package = TO-220F	R <sub>θJC</sub>	4	°C / W
Isolation voltage (TO-220F only)	V <sub>AC</sub>	1500	V
Maximum Rate of Voltage Change ( at Rated VR)	dv/dt	10000	V/uS
Operating Junction Temperature	T <sub>J</sub>	-40 to +150	°C
Storage Junction Temperature	T <sub>STG</sub>	-40 to +150	

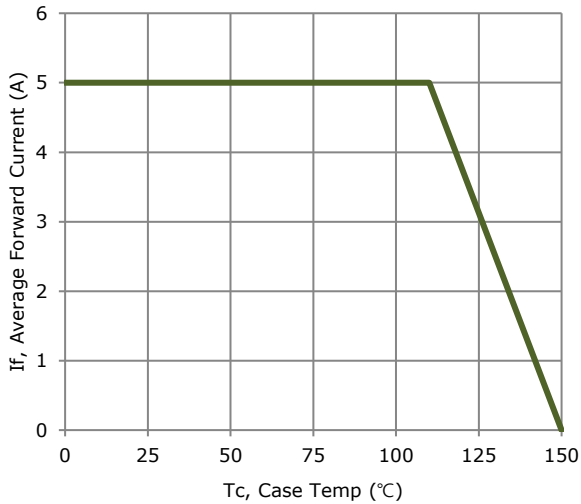
## Electrical Characteristics – (per leg)

( TA = 25°C unless otherwise specified )

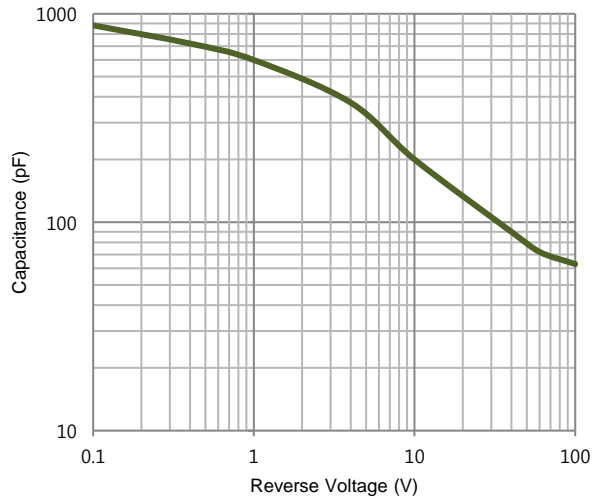
Parameter	Test Conditions		Symbol	Typ.	Max.	Units
Instantaneous Forward Voltage	IF = 2.5 A	T <sub>J</sub> = 25°C	V <sub>F</sub> *	0.72	0.74	V
	IF = 5 A			0.77	0.80	
	IF = 2.5 A	T <sub>J</sub> = 125°C		0.55		
	IF = 5 A			0.65		
Instantaneous Reverse Current	V <sub>R</sub> = 300V	T <sub>J</sub> = 25°C	I <sub>R</sub> *		50	uA
		T <sub>J</sub> = 125°C			10	mA
Junction Capacitance	V <sub>R</sub> = 5V, f = 1MHz		C <sub>J</sub>	150		pF
* Pulse width < 300 uS, Duty cycle < 2%						

## Characteristics Curves

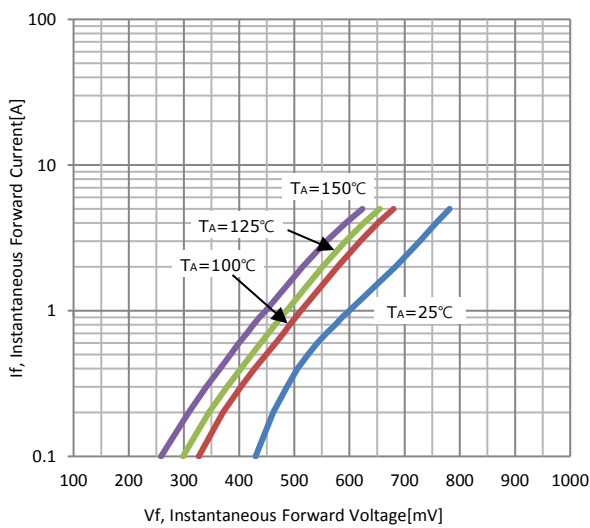
( TA = 25°C unless otherwise specified )



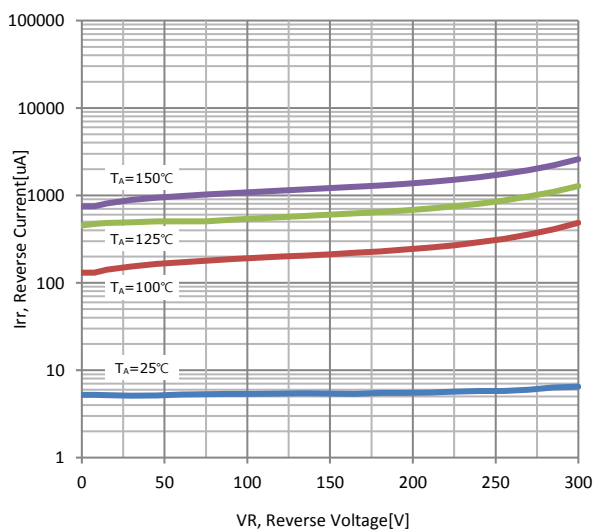
**Figure 1 : Current Derating, Case**



**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
AD10D300F	TO-220F	Tube	Sn	Free	5,000ea

## Marking Layout



**1<sup>ST</sup> Line : Company logo**

**2<sup>nd</sup> Line : Date code**

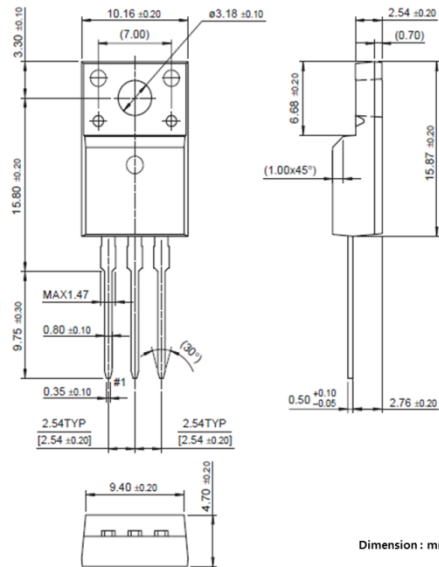
- **YY : Last two digit of calendar year**
- **WW : Work week calendar**

**3<sup>rd</sup> Line : Device name + PKG CODE**

- **F : TO-220F PKG code**

## Package Dimensions

### TO-220F



## Revision History

No	Date	Contents
0	2017-04-11	Initial Brief Datasheet Release
1	2019-01-04	Junction Capacitance Updated

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## IMPORTANT NOTICE

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