

100V 10A Ultra Low VF Schottky

Characteristics Summary

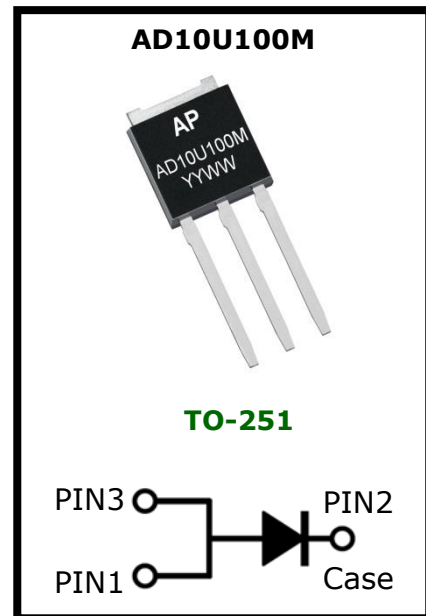
Characteristics	Values	Units
IF(AV)	10	A
VRRM	100	V
VF @ 5A, TJ = 25°C	0.47	V, typ.
TJ, Operating Junction Temperature	-40 to +150	°C

Features

- Ultra Low Forward Voltage (VF) Drop
- 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.





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}	150	A
Peak Repetitive Reverse Surge Current (2uS-1Khz)	I _{RRM}	1	A
Typical Thermal Resistance	R _{θJC}	2.5	°C / W
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*	0.42	-----	V
	IF = 5 A			0.47	0.54	
	IF = 10 A			0.57	0.62	
	IF = 3 A	TJ = 125°C		0.34	-----	
	IF = 5 A			0.39	-----	
	IF = 10 A			0.52	-----	
Instantaneous Reverse Current	VR = 100V	TJ = 25°C	IR*	-----	60	uA
		TJ = 125°C		-----	20	mA
Junction Capacitance	VR = 5V, f = 1MHz		CJ	459		pF
* Pulse width < 300 uS, Duty cycle < 2%						



Characteristics Curves

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

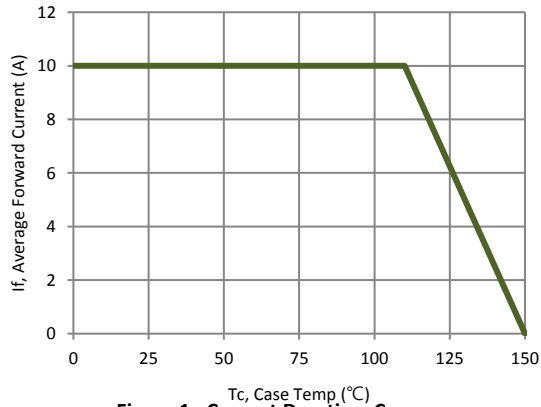


Figure 1 : Current Derating, Case

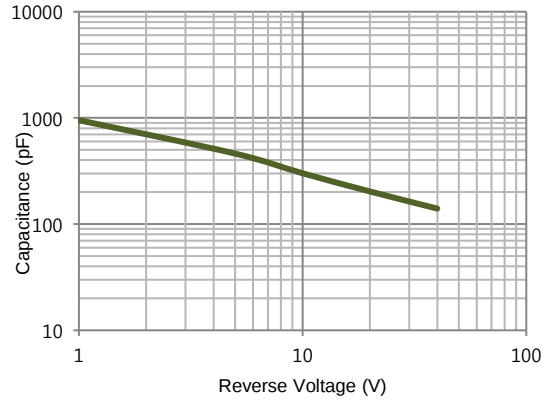


Figure 2 : Typical Junction Capacitance

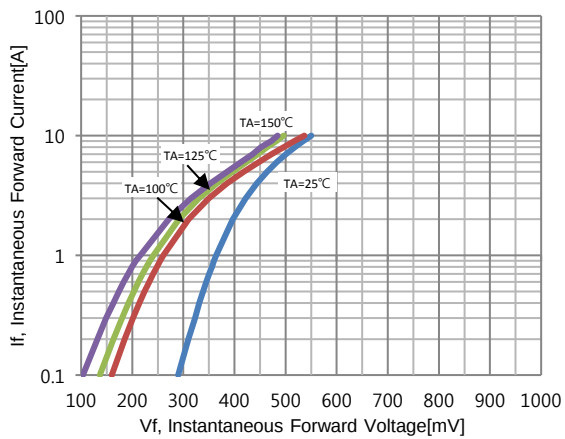


Figure 3 : Typical Forward Voltage

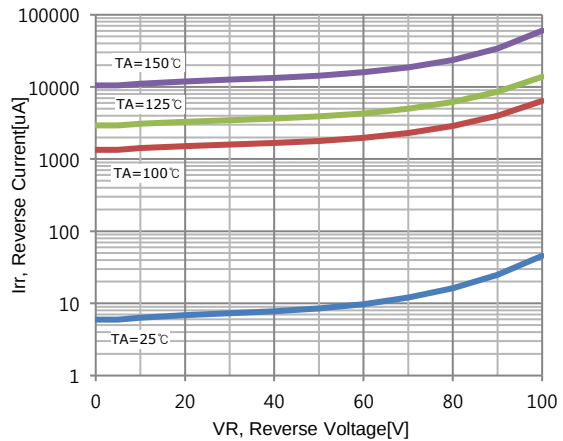


Figure 4 : Typical Reverse Current

Ordering Information

Part No	Package	Packing	Finish	Halogen	Packing Unit
AD10U100M	TO-251	Tape & Reel	Sn	Free	3,600ea

Marking Layout



1ST Line : Company logo

2nd Line : Device name + PKG CODE

- **R** : TO-251 PKG code

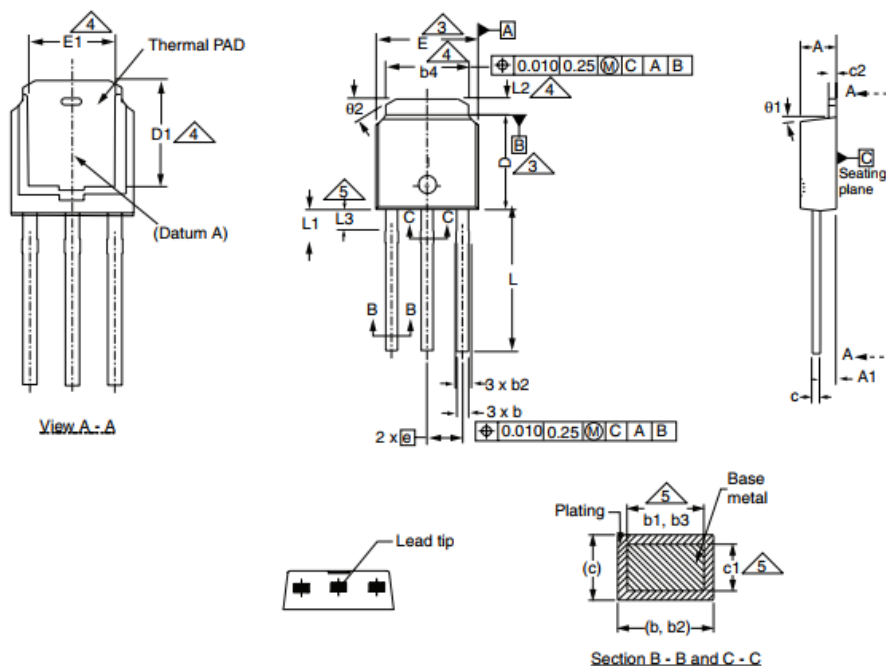
3rd Line : Date code

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



Package Dimensions

TO-251



DIM.	MILLIMETERS		INCHES	
	MIN.	MAX.	MIN.	MAX.
A	2.18	2.39	0.086	0.094
A1	0.89	1.14	0.035	0.045
b	0.64	0.89	0.025	0.035
b1	0.65	0.79	0.026	0.031
b2	0.76	1.14	0.030	0.045
b3	0.76	1.04	0.030	0.041
b4	4.95	5.46	0.195	0.215
c	0.46	0.61	0.018	0.024
c1	0.41	0.56	0.016	0.022
c2	0.46	0.86	0.018	0.034
D	5.97	6.22	0.235	0.245

DIM.	MILLIMETERS		INCHES	
	MIN.	MAX.	MIN.	MAX.
D1	5.21	-	0.205	-
E	6.35	6.73	0.250	0.265
E1	4.32	-	0.170	-
e	2.29 BSC		2.29 BSC	
L	8.89	9.65	0.350	0.380
L1	1.91	2.29	0.075	0.090
L2	0.89	1.27	0.035	0.050
L3	1.14	1.52	0.045	0.060
θ1	0°	15°	0°	15°
θ2	25°	35°	25°	35°

ECN: S-82111-Rev. A, 15-Sep-08
DWG: 5968



Revision History

No	Date	Contents
0	2017-02-02	Initial Brief Datasheet Release
1	2019-01-09	Junction Capacitance Updated

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