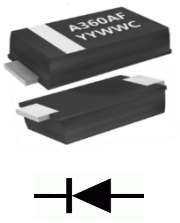
60V 3A ULTRA LOW VF TMOS Schottky

Characteristics Summary

Characteristics	Values	Units
IF(AV)	3	A
V_{RRM}	60	V
$V_{F\ TYP}$ @ 1A, T_J = 25℃	0.40	V
IR_{MAX} @ T_J = 25℃	25	uA

AD360AF (SMAF)



Features

- Reduced low forward voltage drop (VF) ; better efficiency and cooler operation.
- Reduced high temperature reverse leakage; Increased reliability against thermal runaway failure in high temperature operation.
- Softest, fast switching capability
- 150℃ Operating Junction Temperature
- Lead Free Finish, RoHS Compliant
- Very small package size as 2.6 X 3.95 X 1.0 (mm)

Typical Applications

Device optimized for low forward voltage drop to suitable efficiency in general rectification applications.

· Boost Diode, Blocking Diode, Rectifier, Recirculating Diode

Maximum Ratings Characteristics - (TA = 25℃ unless otherwise specified)

Parameter	Symbol	Values	Units
DC Blocking Voltage	V_{RM}	60	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	3	A
Non-Repetitive Peak Forward Surge Current 8.3ms	I_{FSM}	60	A
Typical Thermal Resistance Junction to Ambient (Note 1)	$R\theta_{JC}$	32	℃ / W
Typical Thermal Resistance Junction to Case (Note 1)	$R\theta_{JA}$	93	℃ / W
Operating Junction Temperature	T_J	-55 to +150	℃
Storage Junction Temperature	T_{STG}	-55 to +150	

Note 1 : FR-4 PCB, 2 oz Copper. Minimum recommended pad layout

Electrical Characteristics - (TA = 25℃ unless otherwise specified)

Parameter	Test Conditions		Symbol	Typ.	Max.	Units
Forward Voltage	IF = 2 A	TJ = 25℃	V_F*	0.44	0.48	V
	IF = 3 A			0.47	0.51	
	IF = 5 A			0.54	0.59	
	IF = 5 A	TJ = 125℃		0.50	-----	
Reverse Current	VR = 60V	TJ = 25℃	I_R*	9	25	uA
		TJ = 125℃		4	10	mA
* Short duration pulse test used to minimize self-heating effect.						

Characteristics Curves

(TA = 25℃ unless otherwise specified)

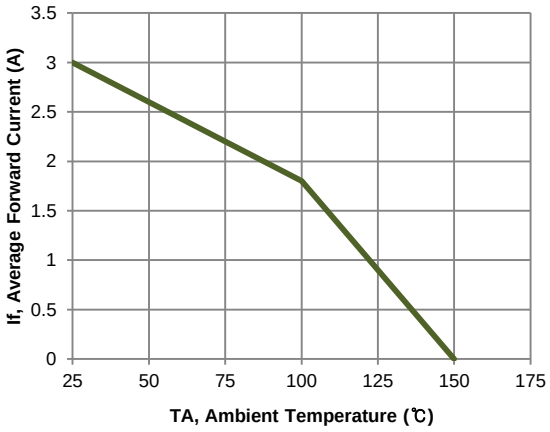


Figure 1 : DC Forward Current Derating

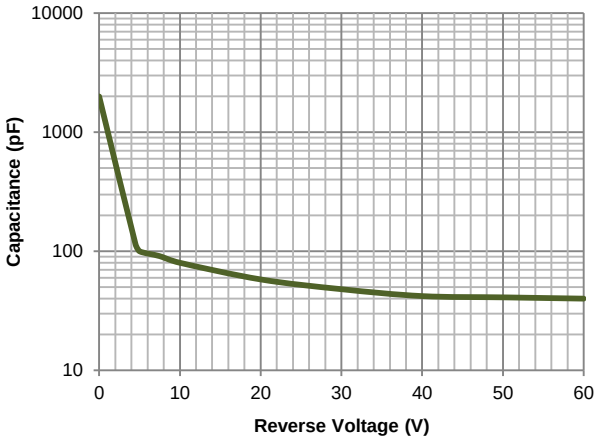


Figure 2 : Typical Junction Capacitance

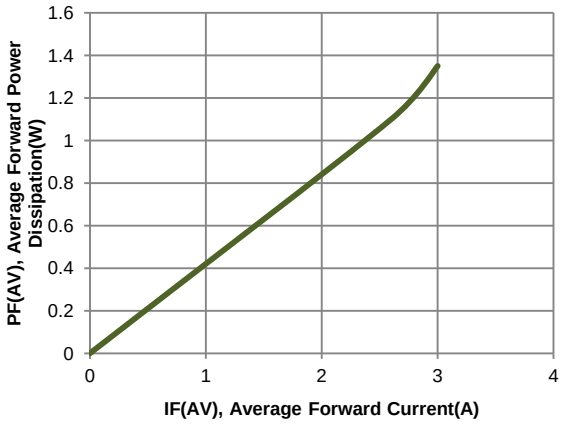


Figure 3. Forward Power Dissipation

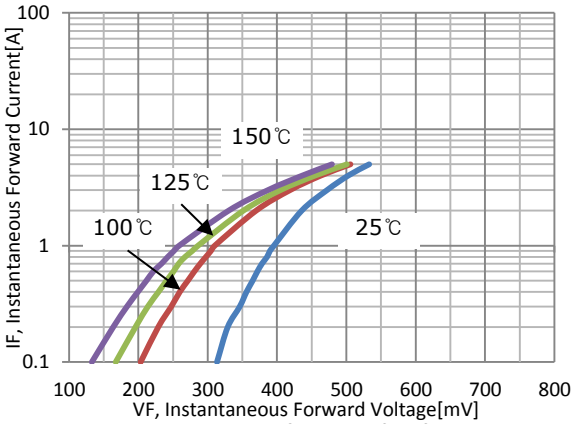


Figure 4. Typical Forward Voltage

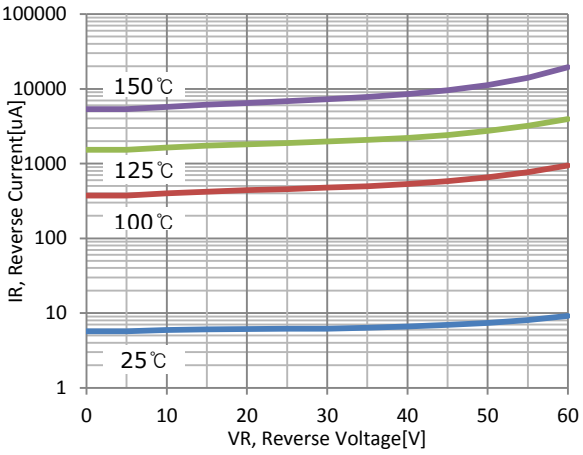


Figure 5. Typical Reverse Current

Ordering Information

Part No	Package	Packing	Finish	Halogen	Packing Unit
AD360AF	SMAF	7" Reel & Tape	Sn	Free	3,000ea

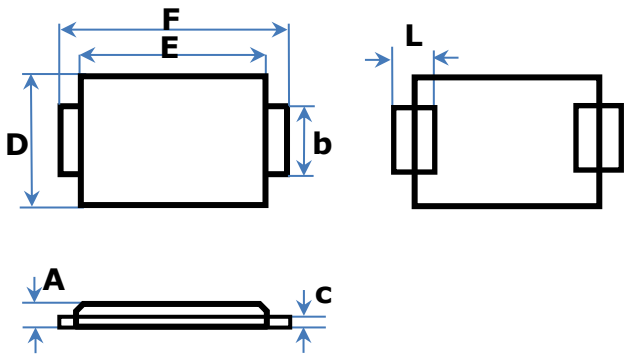
Marking Layout

1ST Line : Device Name

2nd Line : Date Code

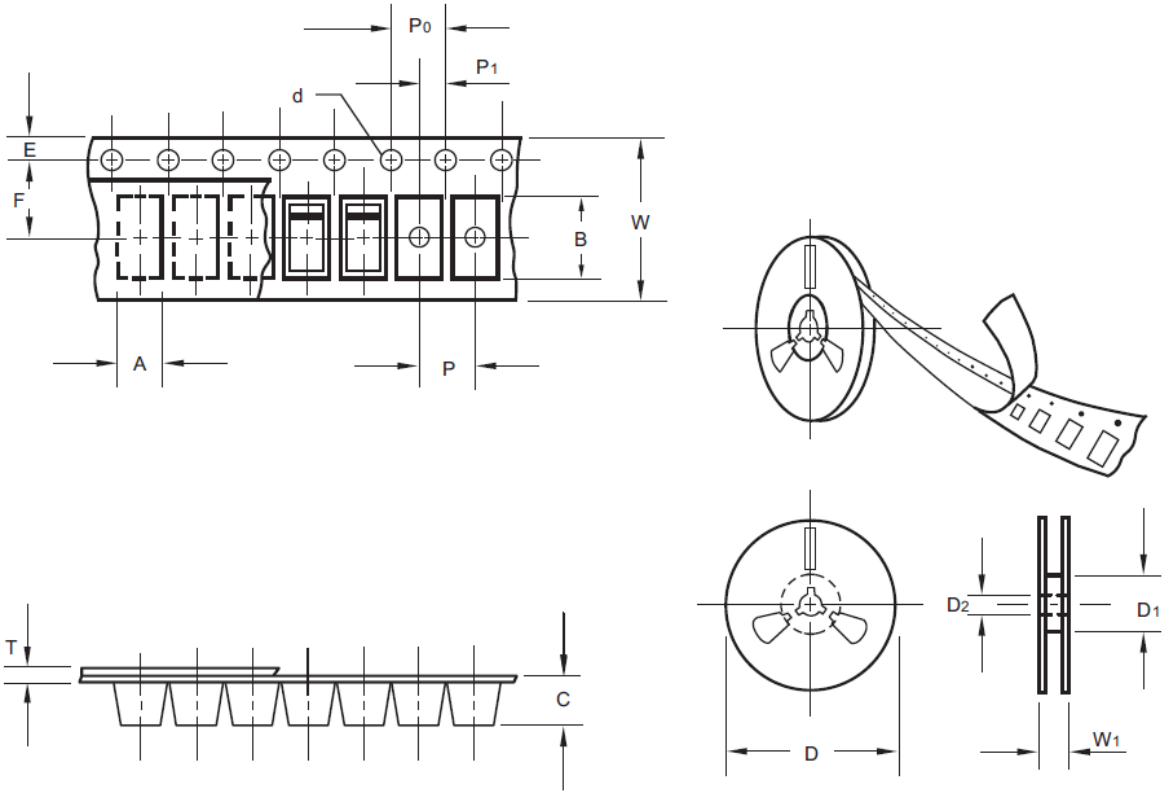
- YY : Last two digit of calendar year
- WW : Work week code
- C : Assembly site

Package Dimensions



SMAF			unit : mm
DIM	MIN	MAX	TYP
A	0.90	1.10	1.00
b	1.30	1.70	1.50
c	0.10	0.30	0.20
D	2.30	2.90	2.60
E	3.60	4.30	3.95
F	4.80	5.30	5.05
L	0.80	1.30	1.05

Reel Packing Method



unit:mm

Item	Symbol	Tolerance	SMAF
Carrier width	A	0.1	3.00
Carrier length	B	0.1	5.50
Carrier depth	C	0.1	1.20
Sprocket hole	d	0.1	1.50
13" Reel outside diameter	D	2.0	330.00
13" Reel inner diameter	D_1	min	50.00
7" Reel outside diameter	D	2.0	178.00
7" Reel inner diameter	D_1	min	62.00
Feed hole diameter	D_2	0.5	13.00
Sprocket hole position	E	0.1	1.75
Punch hole position	F	0.1	5.50
Punch hole pitch	P	0.1	4.00
Sprocket hole pitch	P_0	0.1	4.00
Embossment center	P_1	0.1	2.00
Overall tape thickness	T	0.1	0.25
Tape width	W	0.3	12.00
Reel width	W_1	1.0	11.40

Note:Devices are packed in accor dance with EIA standar RS-481-A and specifications listed above.

Revision History

No	Date	Contents
0	2016-09-09	Initial Brief Datasheet Release

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AP Semiconductor Co., Ltd

Contact. Tel 82.70.4693.2299 FAX 82.70.4000.4009

E-mail: sales@apsemi.com