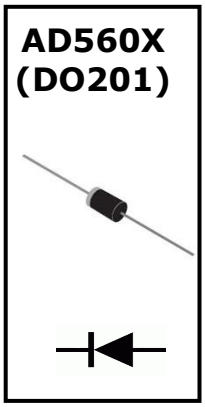
60V 5A ULTRA LOW VF TMOS Schottky

Characteristics Summary

Characteristics	Values	Units
IF(AV)	5	A
V_{RRM}	60	V
$V_{F\ TYP}$ @ 2A, T_J = 25℃	0.44	V
IR_{MAX} @ T_J = 25℃	25	uA



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

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	5	A
Non-Repetitive Peak Forward Surge Current 8.3ms	I_{FSM}	60	A
Typical Thermal Resistance Junction to Ambient (Note 1)	$R\theta_{JA}$	30	℃ / 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 = 10 A			0.68	0.73	
	IF = 5 A	TJ = 125℃		0.50	-----	
Reverse Current	VR = 60V	TJ = 25℃	IR*	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)

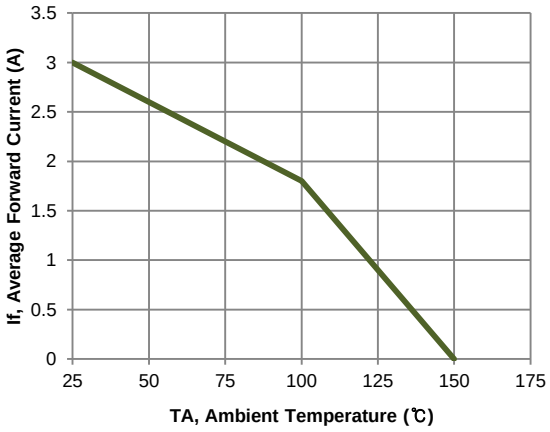


Figure 1 : DC Forward Current Derating

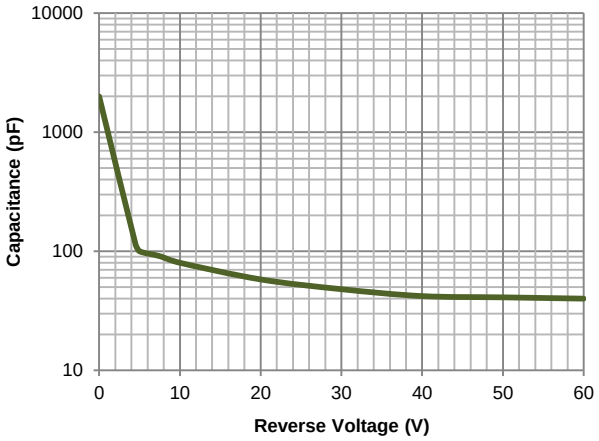


Figure 2 : Typical Junction Capacitance

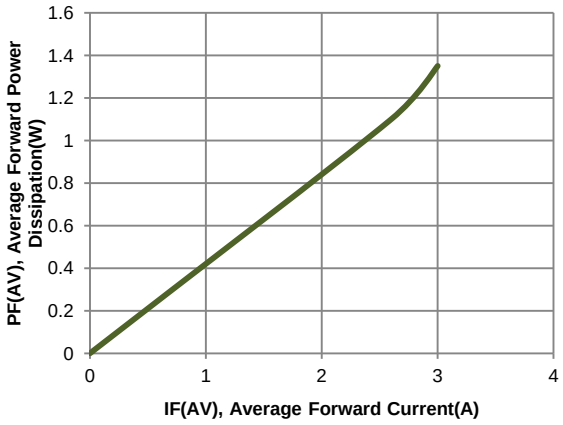


Figure 3. Forward Power Dissipation

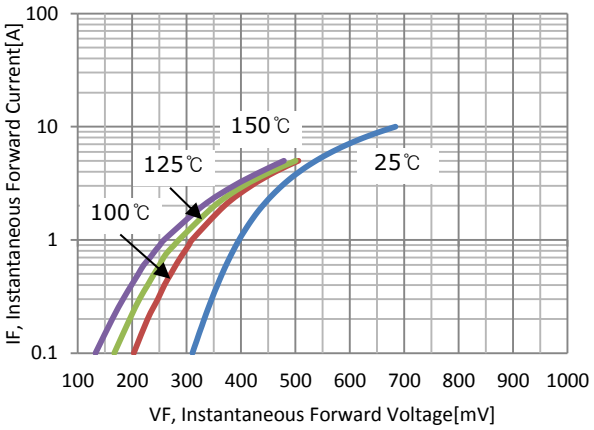


Figure 4. Typical Forward Voltage

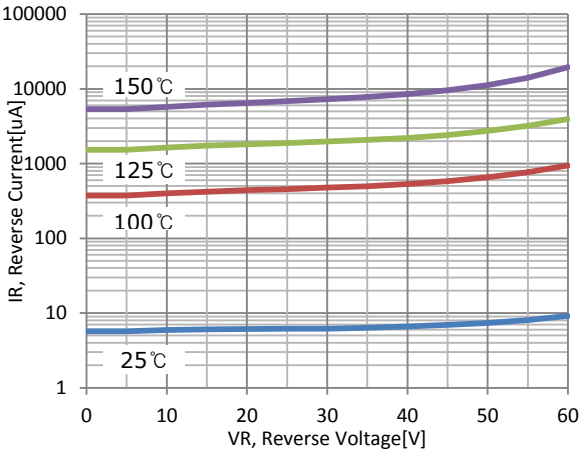
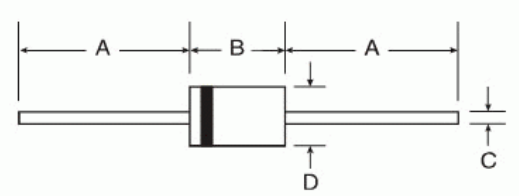


Figure 5. Typical Reverse Current

Ordering Information

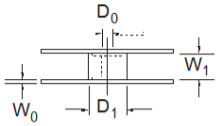
Part No	Package	Packing	Finish	Halogen	Packing Unit
AD560X	DO-201	13" Reel & Tape	Sn	Free	1,200ea

Package Dimension

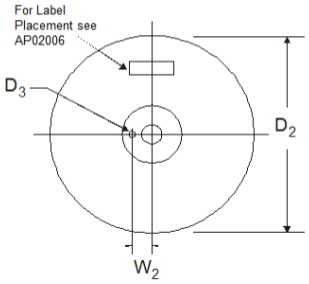


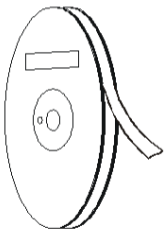
DO-201AD		
Dim	Min	Max
A	25.40	—
B	7.20	9.50
C	1.20	1.30
D	4.80	5.30
All Dimensions in mm		

Reel Packing Method



Direction of Unreeling

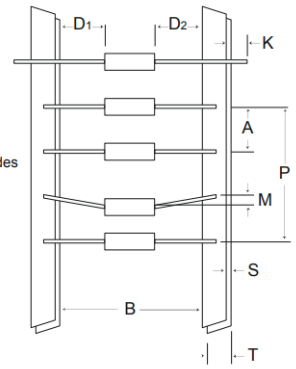




PRODUCT REEL			
Description	Symbol	Specification(mm)	Alternate(mm)
Arbor Hole Diameter	D_0	16.6 ± 0.50	30.0 ± 0.50
Core Diameter (O.D)	D_1	81.0 Typical	81.0 Typical
Reel Diameter	D_2	345.0 ± 15.0	260.0 ± 15.0
Drive Hole Diameter	D_3	9.5 ± 0.5	9.5 ± 0.5
Material Thickness	W_0	2.0 – 4.0	2.0 – 4.0
Reel Width	W_1	80.0 ± 5.0	65.0 ± 5.0
Drive/ Arbor Hole Spacing	W_2	27.5 ± 0.5	27.5 ± 0.5

Core material: plastic (blue/black) or metal (neutral)
Reel material: corrugated board or plastic (blue or black)

Dimensions A, M, K, P, S, & T apply to both sides



REEL AND AMMO PACK TAPING SPECIFICATIONS		
Description	Symbol	Specification (mm)
Component Pitch	A	10.0 ± 0.5
Inside Tape Spacing	B	52.4 ± 1.5
Lead to Lead Eccentricity	$\lvert D_1 - D_2 \rvert$	1.4 max
Lead Extension	K	0.8 max
Lead Bending	M	1.2 max
Cumulative Pitch	P	±1.5 per 6 pitch
Exposed Adhesive	S	0.8 max
Tape Width	T	6.0 ± 0.4
Empty Spaces		< 0.1%
Polarity Marking	All polarized components shall be oriented in the same direction. The cathode tape shall be colored, and the anode tape shall be white or light beige. Anode end must face label-side of reel. See AP02006 for label placement.	

Revision History

No	Date	Contents
0	2016-10-25	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