

230V 5A Ultra LOW VF TMOS Schottky

Characteristics Summary

Characteristics	Values	Units
IF(AV)	5	A
VRRM	230	V
V _F TYP @ 2.5A, T _J = 25°C	0.65	V
@ 5A, T _J = 25°C	0.74	V
I _R MAX @ T _J = 25°C	100	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°C Operating Junction Temperature
- Lead Free Finish, RoHS Compliant
- Excellent EMI characteristics because of low VF

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°C unless otherwise specified)

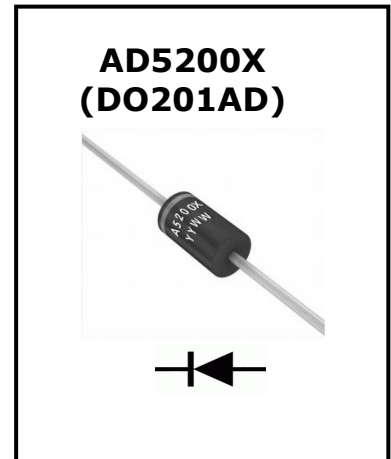
Parameter	Symbol	Values	Units
DC Blocking Voltage	V _{RM}	230	V
Working Peak Reverse Voltage	V _{RWM}	200	V
Peak Repetitive Reverse Voltage	V _{RRM}	230	V
Average Rectified Forward Current	I _D	5	A
(Rated VR-20Khz Square Wave) – 50% duty cycle			
Non-Repetitive Peak Forward Surge Current 8.3ms	I _{FSM}	150	A
Typical Thermal Resistance Junction to Ambient (Note 1)	R _{θJC}	20	°C / W
Typical Thermal Resistance Junction to Case (Note 1)	R _{θJA}	50	°C / W
Operating Junction Temperature	T _J	-55 to +175	°C
Storage Junction Temperature	T _{STG}	-55 to +175	

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

Electrical Characteristics - (TA = 25°C unless otherwise specified)

Parameter	Test Conditions		Symbol	Typ.	Max.	Units
Forward Voltage	IF = 2.5 A	TJ = 25°C	VF*	0.68	0.74	V
	IF = 5 A			0.74	0.79	
	IF = 2.5 A	TJ = 125°C		0.5	-----	
	IF = 5 A			0.54	0.58	
Reverse Current	VR = 200V	TJ = 25°C	IR*	40	100	uA
		TJ = 125°C		6	10	mA

* Short duration pulse test used to minimize self-heating effect.





Characteristics Curves

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

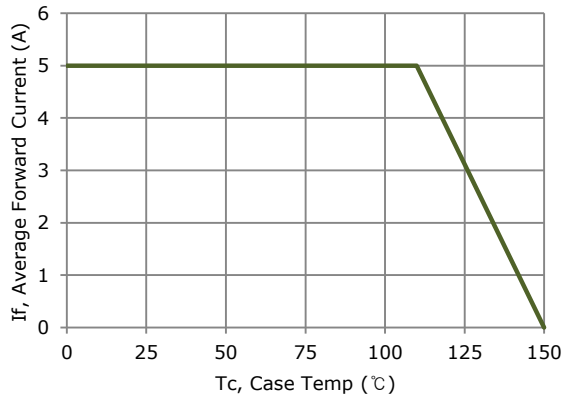


Figure 1 : Current Derating, Case

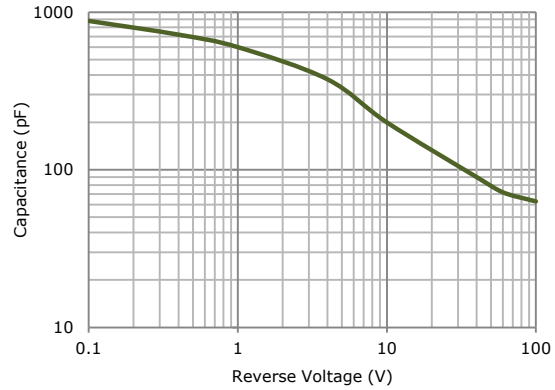


Figure 2 : Typical Junction Capacitance

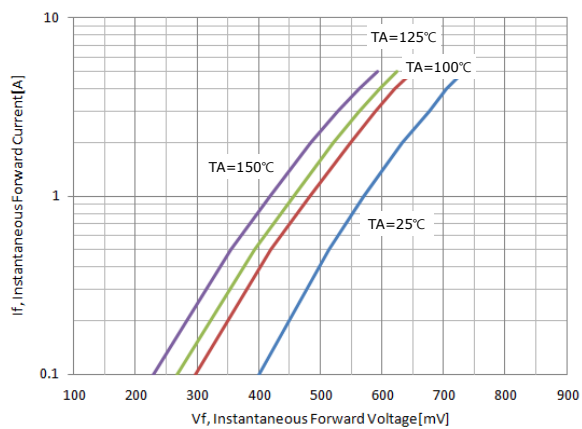


Figure 3 : Typical Forward Voltage

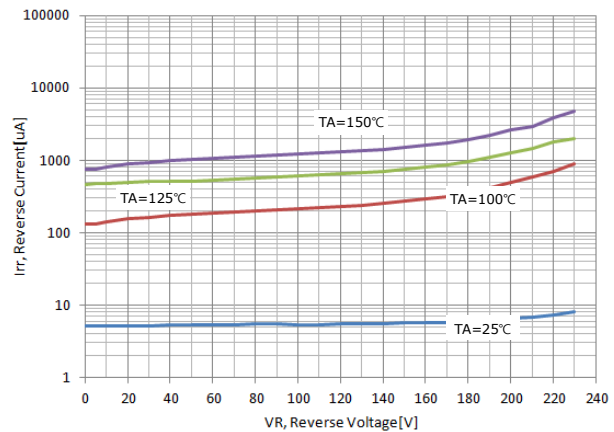


Figure 4 : Typical Reverse Current

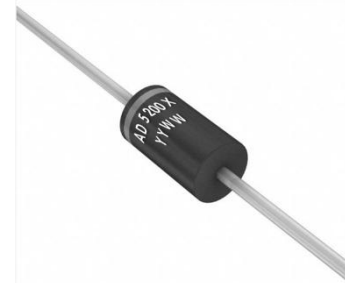
Marking Layout

1ST Line : Device Name

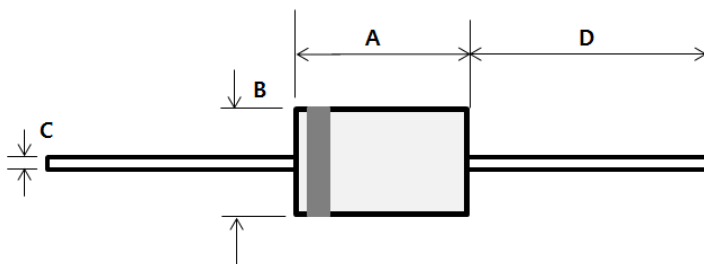
2nd Line : Date Code

- YY : Last two digits of calendar year

- WW : Work week code



Package Dimensions

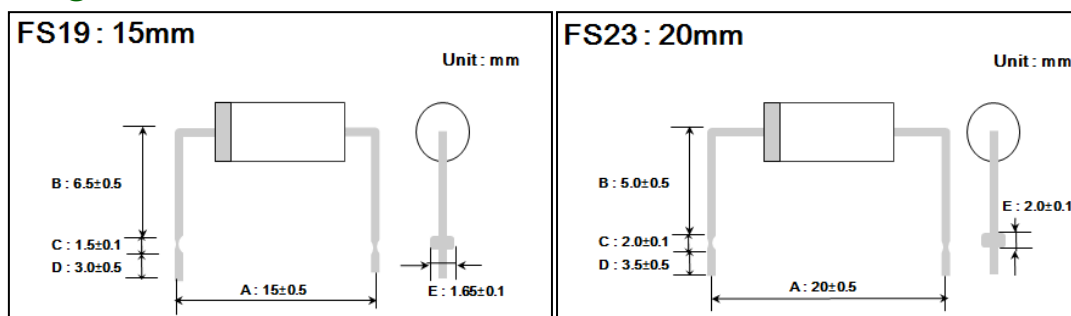


DO201AD unit : mm			
DIM	MIN	MAX	TYP
A	8.9	9.5	9.0
B(ø)	4.9	5.5	5.2
C(ø)	1.15	1.45	1.3
D	24.5	25.9	25.2

Ordering Information

Part No	Package	Forming	Finish	Packing Unit
AD5200X-FS19	DO-201AD	15mm	Sn	200ea/box x 50boxes = 10,000ea
AD5200X-FS23	DO-201AD	20mm	Sn	200ea/box x 50boxes = 10,000ea

Forming Dimensions



Revision History

No	Date	Contents
00	2020-03-02	Initial Brief Datasheet Release
01	2020-03-20	Update the value of VRRM to actual level
02	2020-08-06	Update the Forming Dimensions

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