



# America Semiconductor

## Silicon Power Schottky Diode

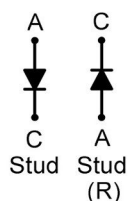
**1N5829 thru  
1N5831R**  
 $V_{RRM} = 20\text{ V} - 40\text{ V}$   
 $I_F = 25\text{ A}$

### Features

- High Surge Capability
- Types up to 40V  $V_{RRM}$

### Note:

1. Standard polarity: Stud is cathode.
2. Reverse polarity (R): Stud is anode.
3. Stud is base.



DO-4 Package



### Maximum ratings, at $T_j = 25\text{ }^\circ\text{C}$ , unless otherwise specified ("R" devices have leads reversed)

Parameter	Symbol	Conditions	1N5829 (R)	1N5830 (R)	1N5831 (R)	Unit
Repetitive peak reverse voltage	$V_{RRM}$		20	25	35	V
RMS reverse voltage	$V_{RMS}$		14	17	25	V
DC blocking voltage	$V_{DC}$		20	25	35	V
Continuous forward current	$I_F$	$T_C \leq 100\text{ }^\circ\text{C}$	25	25	25	A
Surge non-repetitive forward current, Half Sine Wave	$I_{F,SM}$	$T_C = 25\text{ }^\circ\text{C}$ , $t_p = 8.3\text{ ms}$	800	800	800	A
Operating temperature	$T_j$		-55 to 150	-55 to 150	-55 to 150	$^\circ\text{C}$
Storage temperature	$T_{stg}$		-55 to 175	-55 to 175	-55 to 175	$^\circ\text{C}$

### Electrical characteristics, at $T_j = 25\text{ }^\circ\text{C}$ , unless otherwise specified

Parameter	Symbol	Conditions	1N5829 (R)	1N5830 (R)	1N5831 (R)	Unit
Diode forward voltage	$V_F$	$I_F = 25\text{ A}$ , $T_j = 25\text{ }^\circ\text{C}$	0.58	0.58	0.58	V
Reverse current	$I_R$	$V_R = 20\text{ V}$ , $T_j = 25\text{ }^\circ\text{C}$ $V_R = 20\text{ V}$ , $T_j = 125\text{ }^\circ\text{C}$	2 250	2 250	2 250	mA

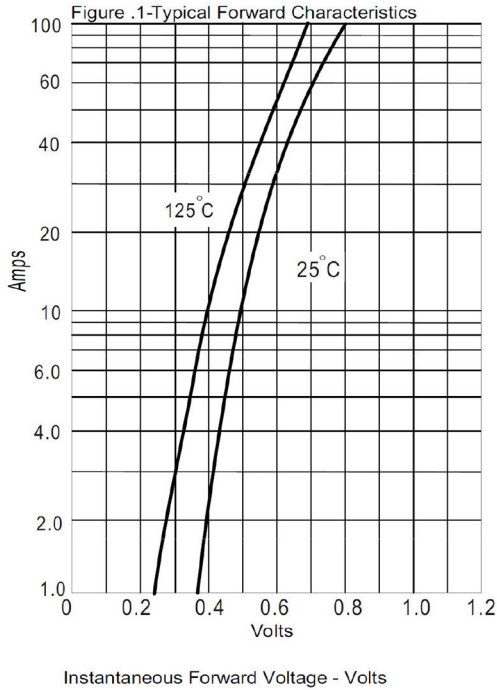
### Thermal characteristics

Thermal resistance, junction - case	$R_{thJC}$		1.8	1.8	1.8	$^\circ\text{C/W}$
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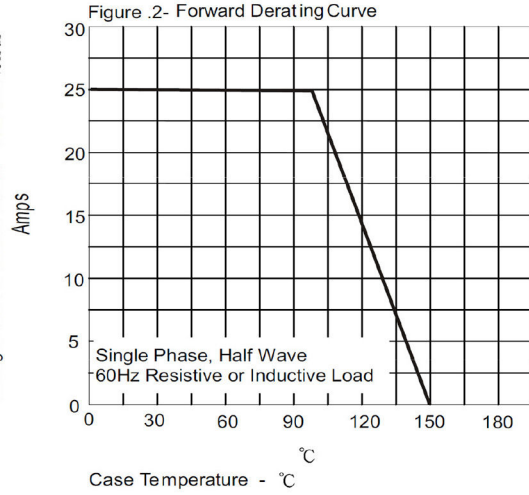




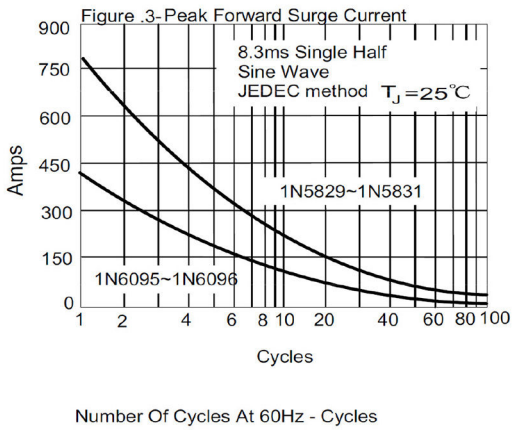
Instantaneous Forward Current - Amperes versus



Average Forward Rectified Current - Amperes versus



Peak Forward Surge Current - Amperes versus



Instantaneous Reverse Leakage Current - MilliAmperes versus

