

## Silicon Standard Recovery Diode

$V_{RRM} = 200\text{ V} - 800\text{ V}$   
 $I_F = 150\text{ A}$

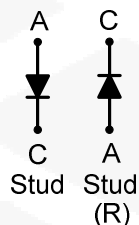
### Features

- High Surge Capability
- Types from 200 V to 800 V  $V_{RRM}$
- Not ESD Sensitive

### Note:

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

DO-8 Package



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

Parameter	Symbol	Conditions	1N4588(R)	1N4590(R)	1N4592(R)	1N4593(R)	Unit
Repetitive peak reverse voltage	$V_{RRM}$		200	400	600	800	V
DC blocking voltage	$V_{DC}$		200	400	600	800	V
Continuous forward current	$I_F$	$T_C \leq 110\text{ }^\circ\text{C}$	150	150	150	150	A
Surge non-repetitive forward current, Half Sine Wave	$I_{F,SM}$	$T_C = 25\text{ }^\circ\text{C}$ , $t_p = 8.3\text{ ms}$	3000	3000	3000	3000	A
$I_2t$ for fusing	$I_2t$	60 Hz Half wave	37200	37200	37200	37200	$\text{A}^2\text{sec}$
Operating temperature	$T_j$		-55 to 150	-55 to 150	-55 to 150	-55 to 150	$^\circ\text{C}$
Storage temperature	$T_{stg}$		-55 to 150	-55 to 150	-55 to 150	-55 to 150	$^\circ\text{C}$

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

Parameter	Symbol	Conditions	1N4588(R)	1N4590(R)	1N4592(R)	1N4593(R)	Unit
Diode forward voltage	$V_F$	$I_F = 150\text{ A}$ , $T_j = 110\text{ }^\circ\text{C}$	1.5	1.5	1.5	1.5	V
Reverse current	$I_R$	$V_R = V_{RRM}$ , $T_j = 110\text{ }^\circ\text{C}$	9.5	9	6.5	5.5	mA

### Thermal characteristics

Parameter	Symbol	Conditions	1N4588(R)	1N4590(R)	1N4592(R)	1N4593(R)	Unit
Thermal resistance, junction - case	$R_{thJC}$		0.35	0.35	0.35	0.35	$^\circ\text{C/W}$

**Electrical Characteristics**

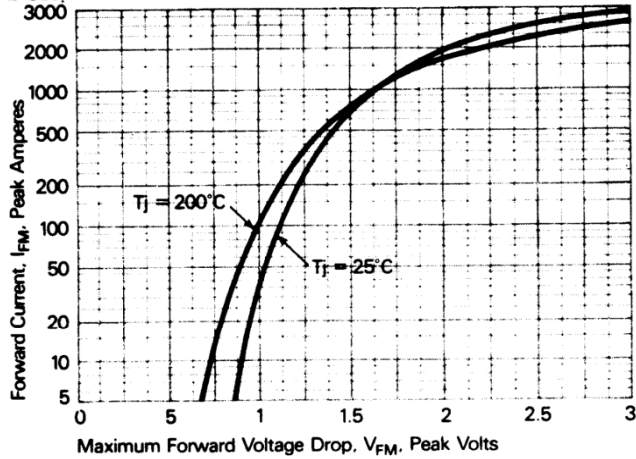


Figure 1. Forward current vs. Forward voltage.

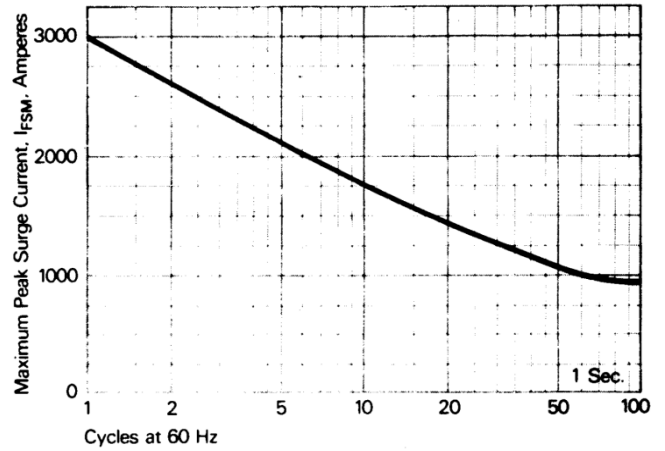


Figure 2. Maximum allowable surge current at rated load conditions.

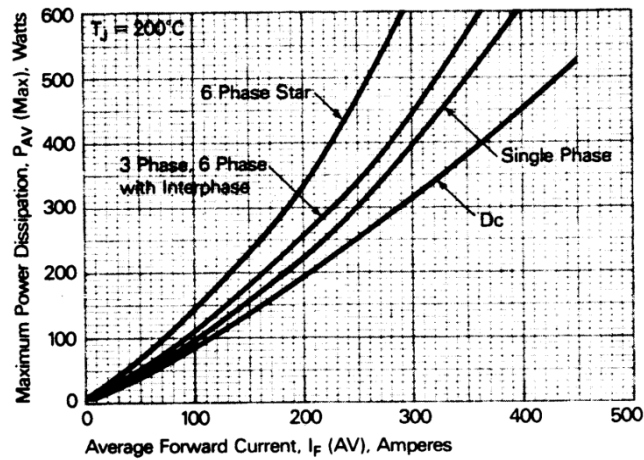


Figure 3. Power dissipation vs. Average forward current.

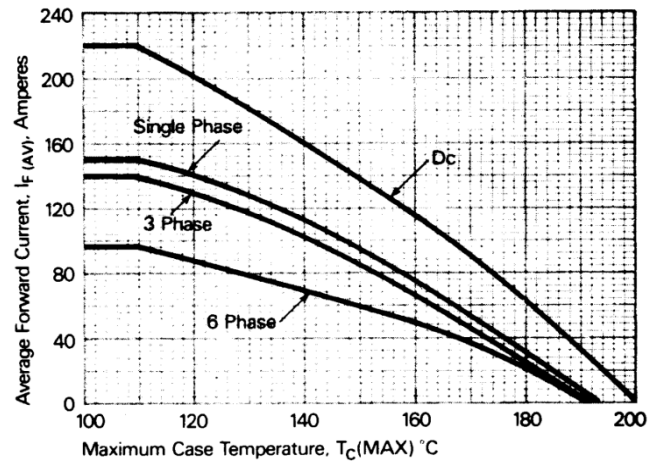
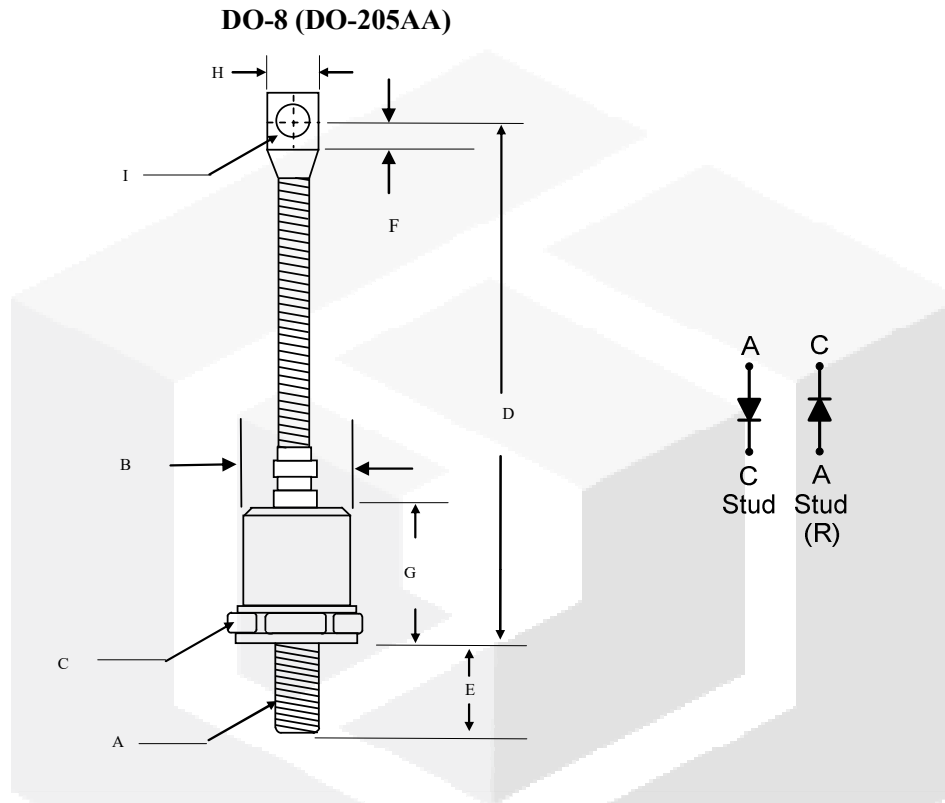


Figure 4. Forward current vs. Case temperature.

**Package dimensions and terminal configuration**

Product is marked with part number and terminal configuration.



	Inches		Millimeters	
	Min	Max	Min	Max
A	3/8-24 UNF			
B	----	φ0.930	----	φ23.5
C	1.050	1.060	26.67	26.92
D	4.300	4.700	109.22	119.38
E	----	0.690	----	17.00
F	0.260	----	6.50	----
G	----	0.940	----	24.00
H	----	0.600	----	15.23
I	0.276	0.286	7.010	7.260

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