

## Silicon Standard Recovery Diode

$V_{RRM} = 1000\text{ V} - 1400\text{ V}$

$I_F = 150\text{ A}$

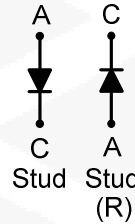
### Features

- High Surge Capability
- Types from 1000 V to 1400 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	1N4594(R)	1N4595(R)	1N4596(R)	Unit
Repetitive peak reverse voltage	$V_{RRM}$		1000	1200	1400	V
DC blocking voltage	$V_{DC}$		1000	1200	1400	V
Continuous forward current	$I_F$	$T_C \leq 110\text{ }^\circ\text{C}$	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	A
$I_2t$ for fusing	$I_2t$	60 Hz Half wave	37200	37200	37200	$\text{A}^2\text{sec}$
Operating temperature	$T_j$		-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	$^\circ\text{C}$

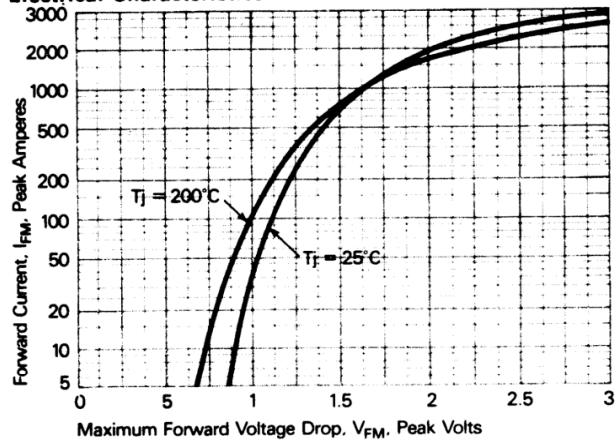
### Electrical characteristics, at $T_j = 25\text{ }^\circ\text{C}$ , unless otherwise specified

Parameter	Symbol	Conditions	1N4594(R)	1N4595(R)	1N4596(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	V
Reverse current	$I_R$	$V_R = V_{RRM}$ , $T_j = 110\text{ }^\circ\text{C}$	4.5	4	3.5	mA

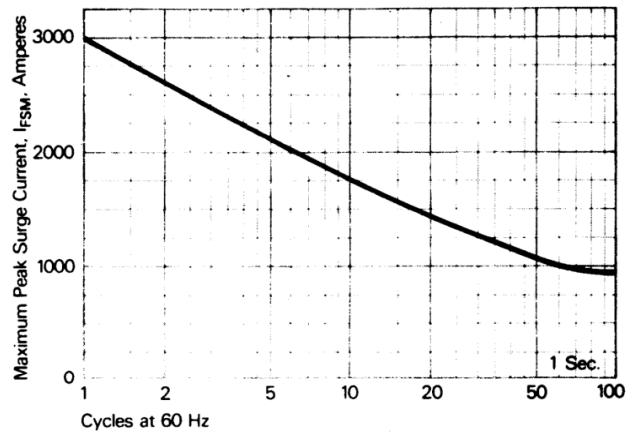
### Thermal characteristics

Parameter	Symbol	Conditions	1N4594(R)	1N4595(R)	1N4596(R)	Unit
Thermal resistance, junction - case	$R_{thJC}$		0.35	0.35	0.35	$^\circ\text{C/W}$

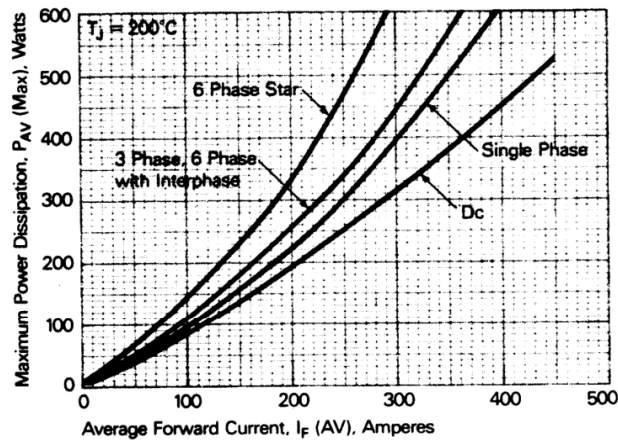
**Electrical Characteristics**



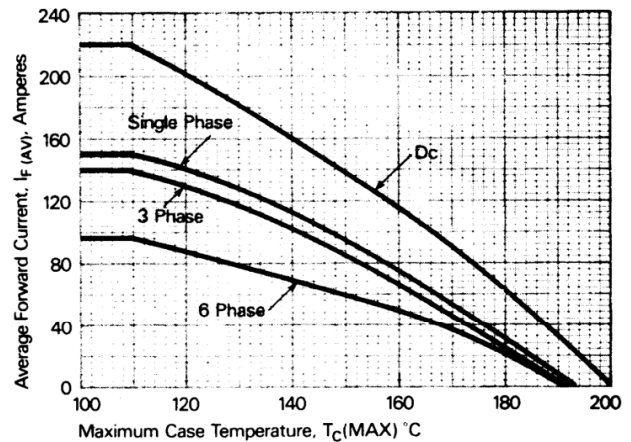
**Figure 1. Forward current vs. Forward voltage.**



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



**Figure 3. Power dissipation vs. Average forward current.**

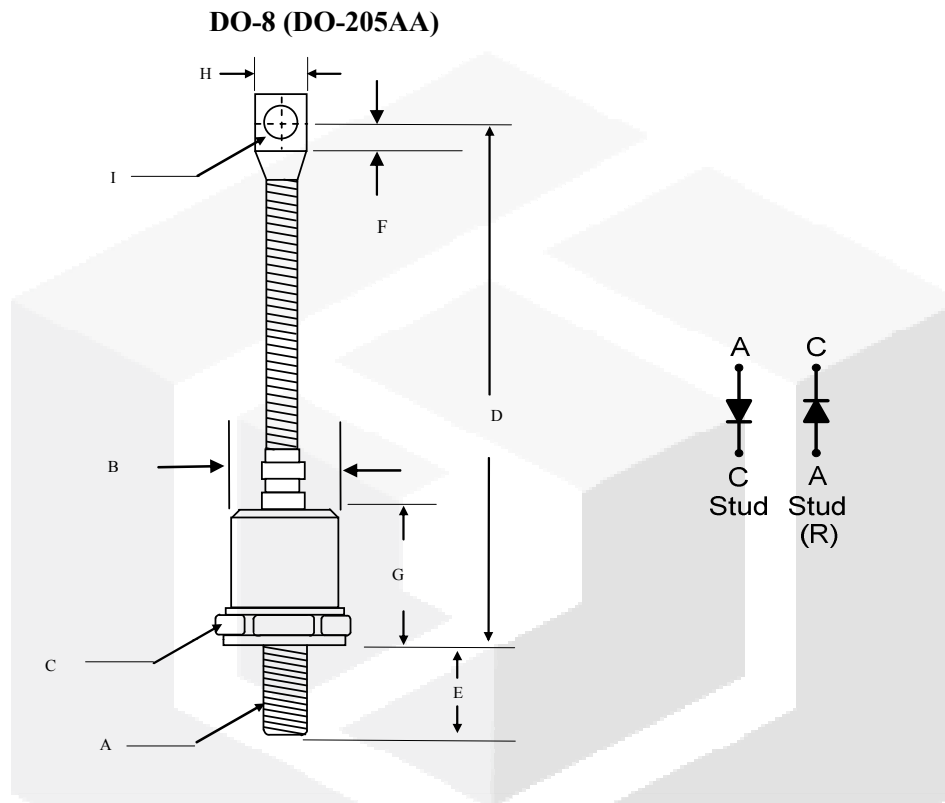


**Figure 4. Forward current vs. Case temperature.**



## 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