

## Silicon Standard Recovery Diode

$V_{RRM} = 800\text{ V} - 1600\text{ V}$

$I_F = 400\text{ A}$

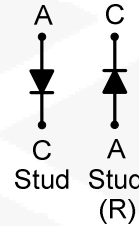
### Features

- High Surge Capability
- Types from 800 V to 1600 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-9 Package



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

Parameter	Symbol	Conditions	S400K (R)	S400Q (R)	S400Y (R)	Unit
Repetitive peak reverse voltage	$V_{RRM}$		800	1200	1600	V
RMS reverse voltage	$V_{RMS}$		566	848	1131	V
DC blocking voltage	$V_{DC}$		800	1200	1600	V
Continuous forward current	$I_F$	$T_C \leq 120\text{ }^\circ\text{C}$	400	400	400	A
Surge non-repetitive forward current, Half Sine Wave	$I_{F,SM}$	$T_C = 25\text{ }^\circ\text{C}$ , $t_p = 8.3\text{ ms}$	8640	8640	8640	A
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	$^\circ\text{C}$

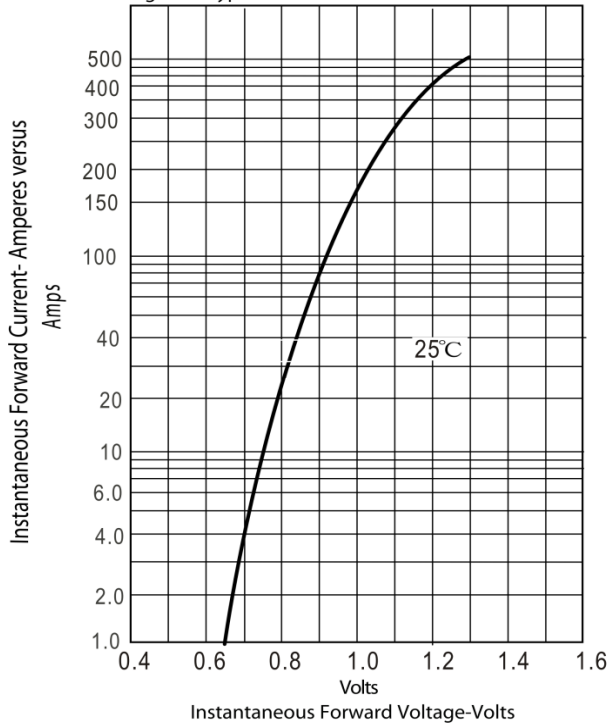
### Electrical characteristics, at $T_j = 25\text{ }^\circ\text{C}$ , unless otherwise specified

Parameter	Symbol	Conditions	S400K (R)	S400Q (R)	S400Y (R)	Unit
Diode forward voltage	$V_F$	$I_F = 400\text{ A}$ , $T_j = 25\text{ }^\circ\text{C}$	1.2	1.2	1.2	V
Reverse current	$I_R$	$V_R = 50\text{ V}$ , $T_j = 25\text{ }^\circ\text{C}$	10	10	10	$\mu\text{A}$
		$V_R = 50\text{ V}$ , $T_j = 175\text{ }^\circ\text{C}$	12	12	12	mA

### Thermal characteristics

Parameter	Symbol	Conditions	S400K (R)	S400Q (R)	S400Y (R)	Unit
Thermal resistance, junction - case	$R_{thJC}$		0.14	0.14	0.14	$^\circ\text{C/W}$

Figure.1-Typical Forward Characteristics



Figur.2-Forward Derating Curve

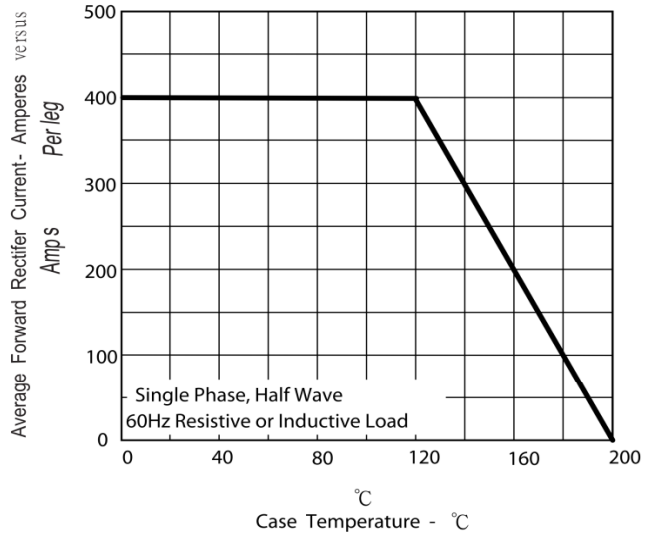
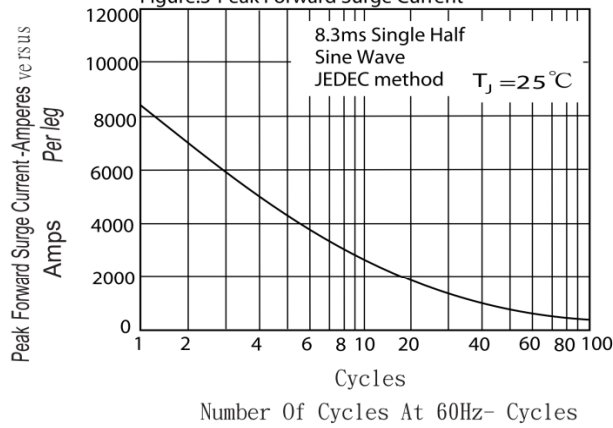
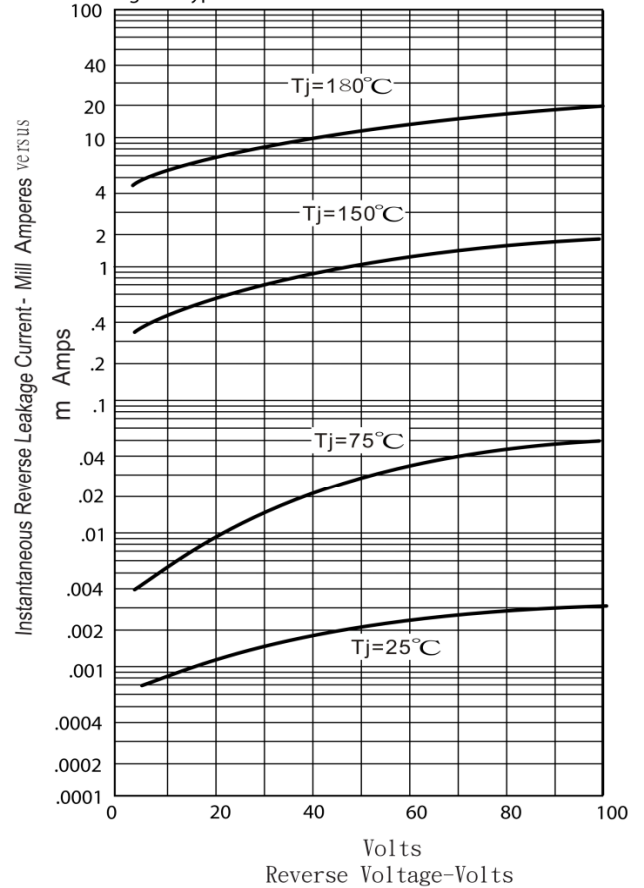


Figure.3-Peak Forward Surge Current

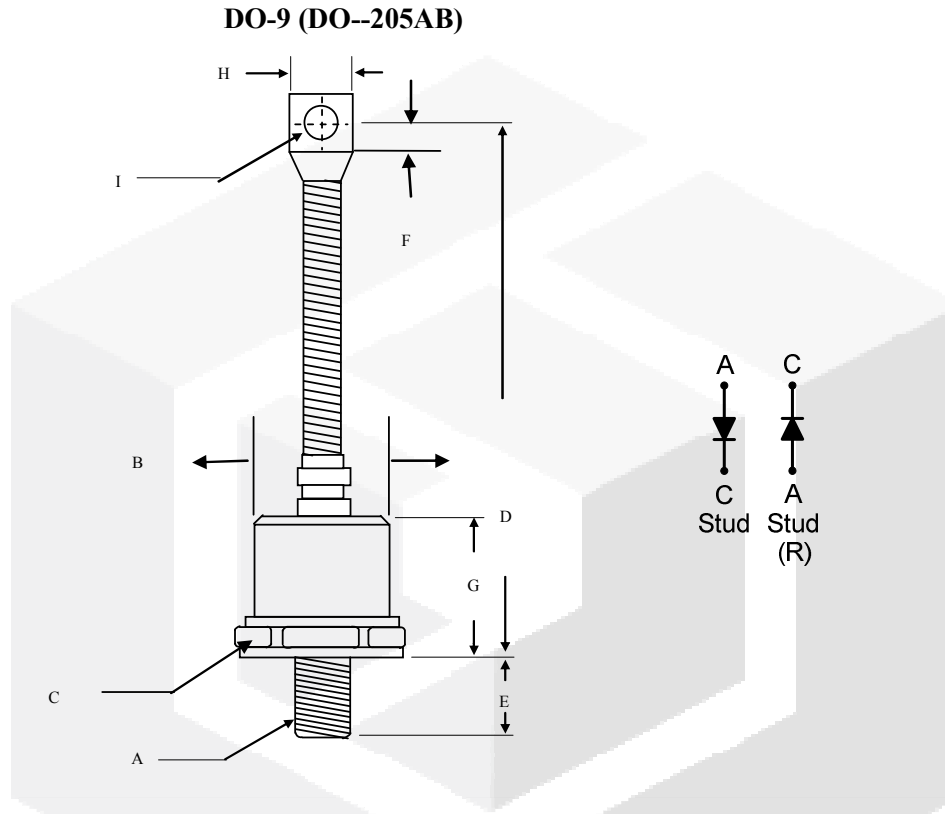


Figur.4-Typical Reverse Characteristics



**Package dimensions and terminal configuration**

Product is marked with part number and terminal configuration.



	Inches		Millimeters	
	Min	Max	Min	Max
A	M 20 * P 1.5			
B	----	1.10	----	27.94
C	1.24	1.25	31.5	31.90
D	5.31	5.98	135	152
E	0.78	0.828	19.60	21.03
F	0.470	0.530	11.94	13.46
G	----	1.122	----	28.5
H	----	0.787	----	20.0
I	0.330	0.350	8.38	8.89