

## Silicon Standard Recovery Diode

$V_{RRM} = 100\text{ V} - 1600\text{ V}$

$I_F = 40\text{ A}$

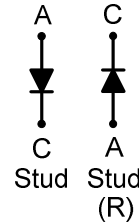
### Features

- High Surge Capability
- Types up to 1600 V  $V_{RRM}$

DO-5 Package

### Note:

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



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

Parameter	Symbol	Conditions	S40V (R)	S40Y (R)	Unit
Repetitive peak reverse voltage	$V_{RRM}$		1400	1600	V
RMS reverse voltage	$V_{RMS}$		990	1130	V
DC blocking voltage	$V_{DC}$		1400	1600	V
Continuous forward current	$I_F$	$T_C \leq 110\text{ °C}$	40	40	A
Surge non-repetitive forward current, Half Sine Wave	$I_{F,SM}$	$T_C = 25\text{ °C}$ , $t_p = 8.3\text{ ms}$	595	595	A
Operating temperature	$T_j$		-65 to 160	-65 to 160	°C
Storage temperature	$T_{stg}$		-65 to 160	-65 to 160	°C

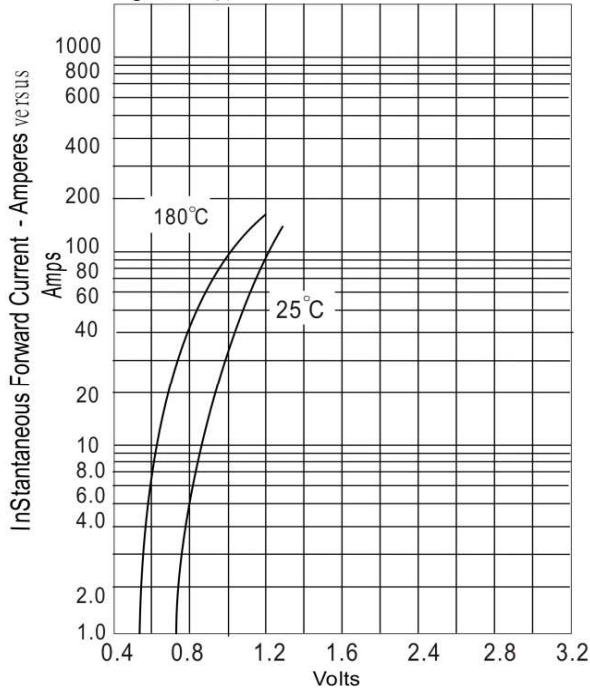
### Electrical characteristics, at $T_j = 25\text{ °C}$ , unless otherwise specified

Parameter	Symbol	Conditions	S40V (R)	S40Y (R)	Unit
Diode forward voltage	$V_F$	$I_F = 40\text{ A}$ , $T_j = 25\text{ °C}$	1.1	1.1	V
Reverse current	$I_R$	$V_R = 100\text{ V}$ , $T_j = 25\text{ °C}$	10	10	$\mu\text{A}$
		$V_R = 100\text{ V}$ , $T_j = 160\text{ °C}$	4.5	4.5	mA

### Thermal characteristics

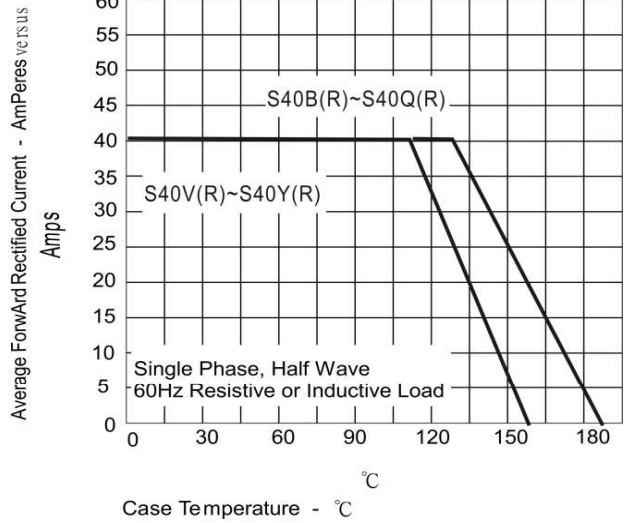
Thermal resistance, junction - case	$R_{thJC}$		1.25	1.25	°C/W
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Figure .1-Typical Forward Characteristics



Instantaneous Forward Voltage - Volts

Figure .2- Forward Derating Curve



Case Temperature - °C

Figure .4-Typical Reverse Characteristics

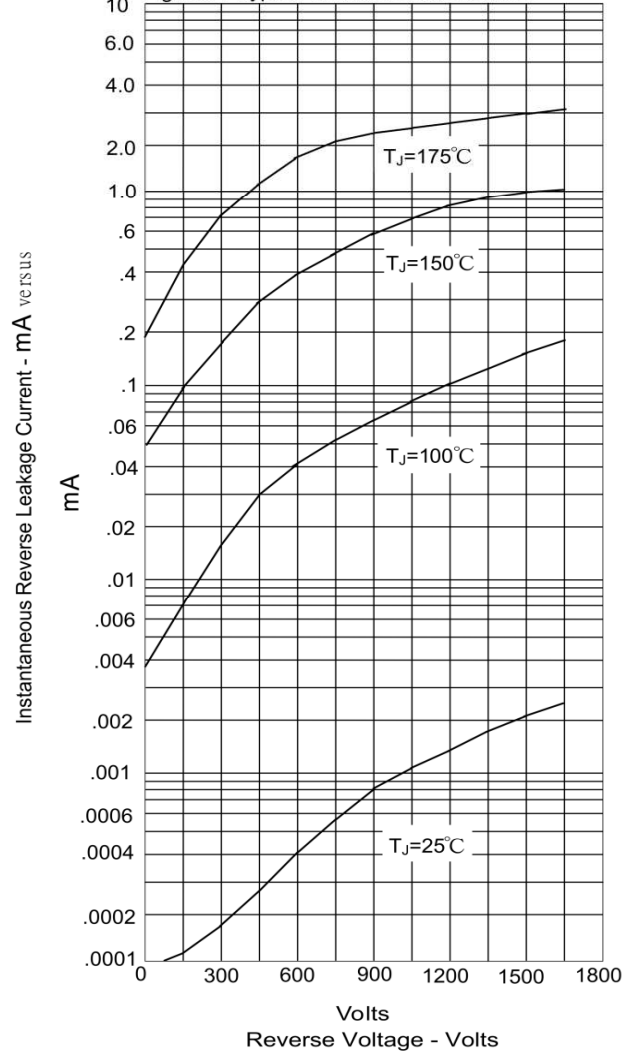
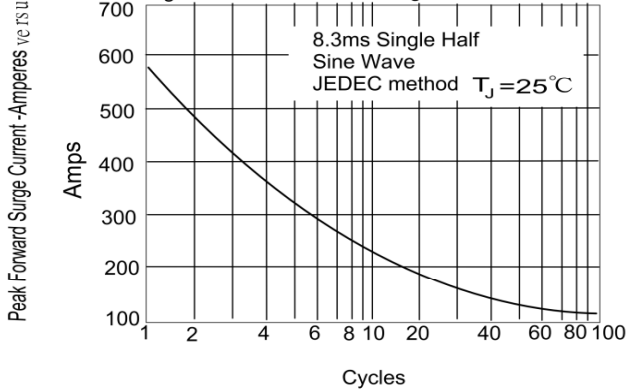


Figure .3-Peak Forward Surge Current



Number Of Cycles At 60Hz - Cycles