

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


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

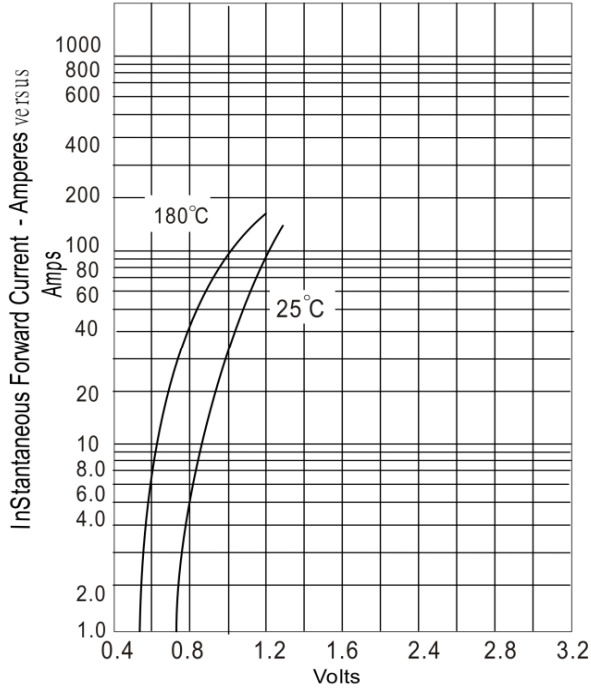
Electrical characteristics, at $T_j = 25\text{ °C}$, unless otherwise specified

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	μA
		$V_R = 100\text{ V}$, $T_j = 160\text{ °C}$	4.5	4.5	mA

Thermal characteristics

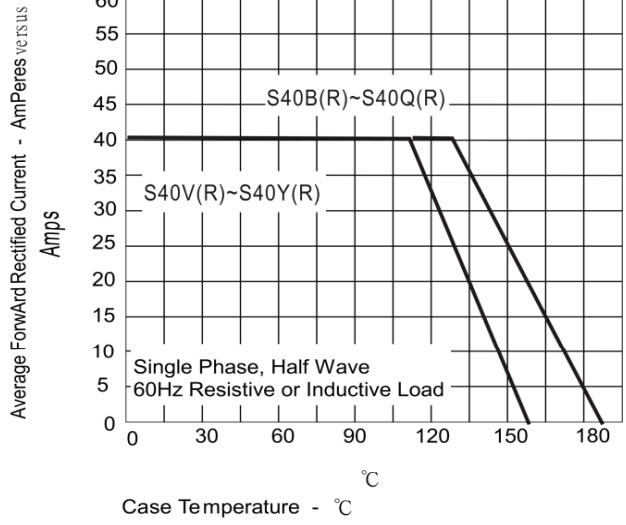
Thermal resistance, junction - case	R_{thJC}		1.25	1.25	°C/W
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Figure .1-Typical Forward Characteristics



Instantaneous Forward Voltage - Volts

Figure .2- Forward Derating Curve



Case Temperature - °C

Figure .4-Typical Reverse Characteristics

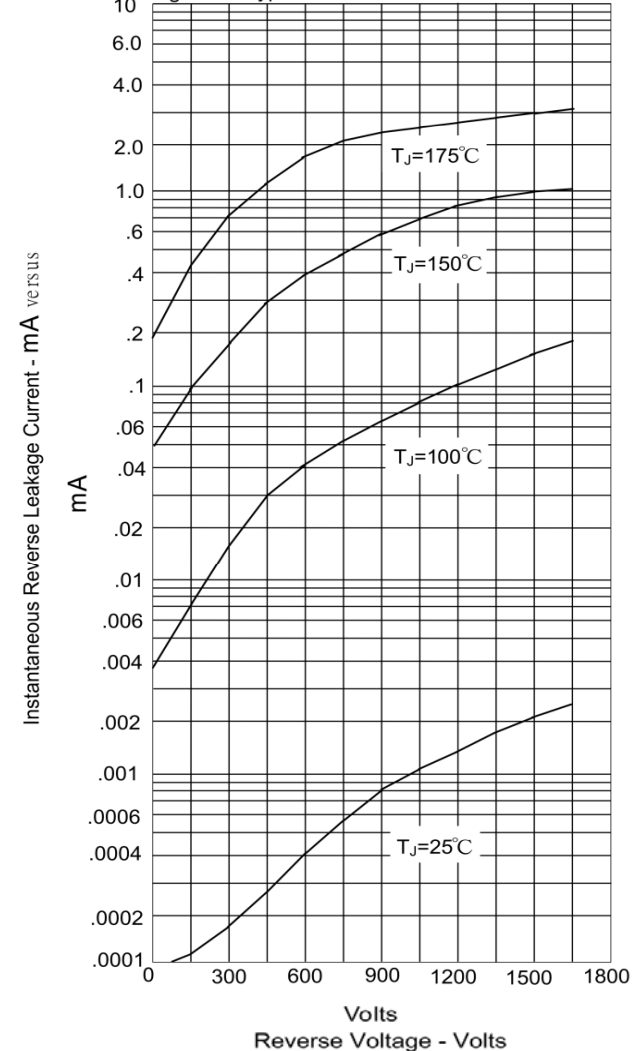
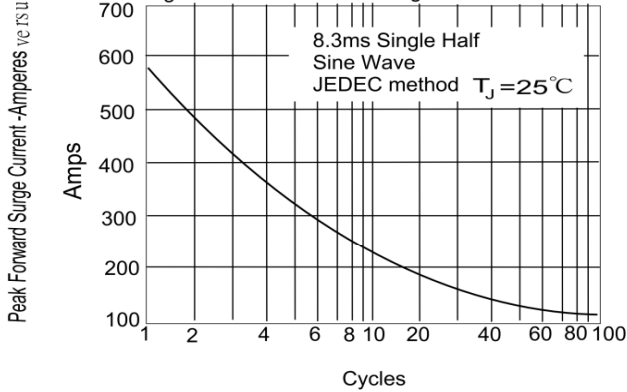


Figure .3-Peak Forward Surge Current



Number Of Cycles At 60Hz - Cycles