Silicon Standard Recovery Diode

V_{RRM} = 100 V - 1600 V

I_F = 40 A

Features

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

DO-5 Package

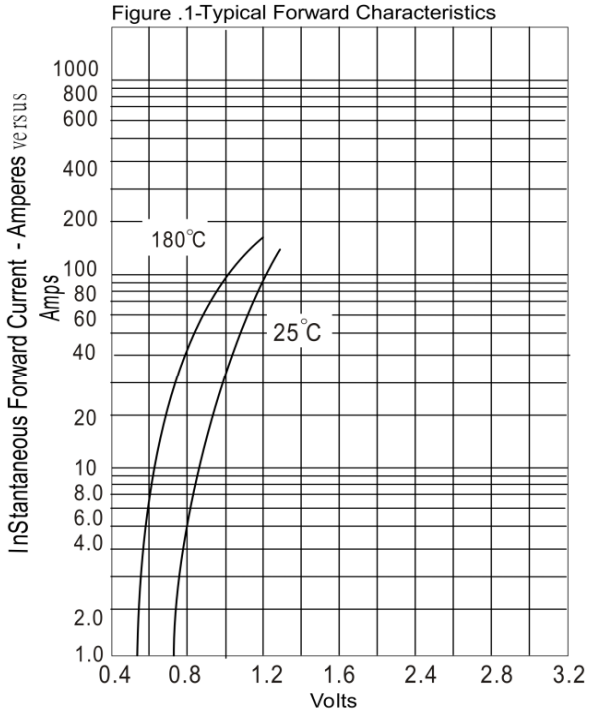
Maximum ratings, at T_j = 25 °C, unless otherwise specified ("R" devices have leads reversed)

Parameter	Symbol	Conditions	S40K (R)	S40M (R)	S40Q (R)	Unit
Repetitive peak reverse voltage	V_{RRM}		800	1000	1200	V
RMS reverse voltage	V_{RMS}		560	700	840	V
DC blocking voltage	V_{DC}		800	1000	1200	V
Continuous forward current	I_F	$T_C \leq 140$ °C	40	40	40	A
Surge non-repetitive forward current, Half Sine Wave	$I_{F,SM}$	T_C = 25 °C, t_p = 8.3 ms	595	595	595	A
Operating temperature	T_j		-65 to 190	-65 to 190	-65 to 190	°C
Storage temperature	T_{stg}		-65 to 190	-65 to 190	-65 to 190	°C

Electrical characteristics, at Tj = 25 °C, unless otherwise specified

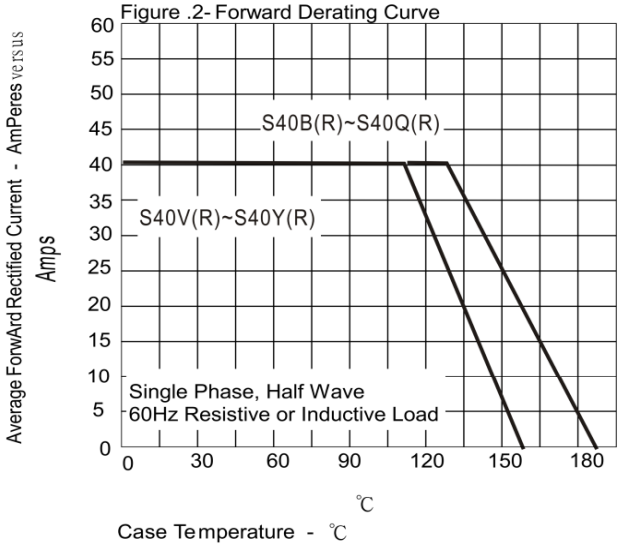
Parameter	Symbol	Conditions	S40K (R)	S40M (R)	S40Q (R)	Unit
Diode forward voltage	V_F	I_F = 40 A, T_j = 25 °C	1.1	1.1	1.1	V
Reverse current	I_R	V_R = 100 V, T_j = 25 °C	10	10	10	µA
		V_R = 100 V, T_j = 190 °C	9	9	9	mA
Thermal characteristics						
Thermal resistance, junction - case	R_{thJC}		1.25	1.25	1.25	°C/W

Figure .1-Typical Forward Characteristics



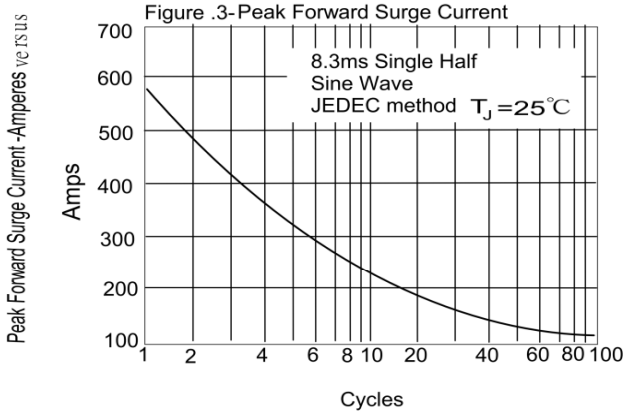
Instantaneous Forward Voltage - Volts

Figure .2- Forward Derating Curve



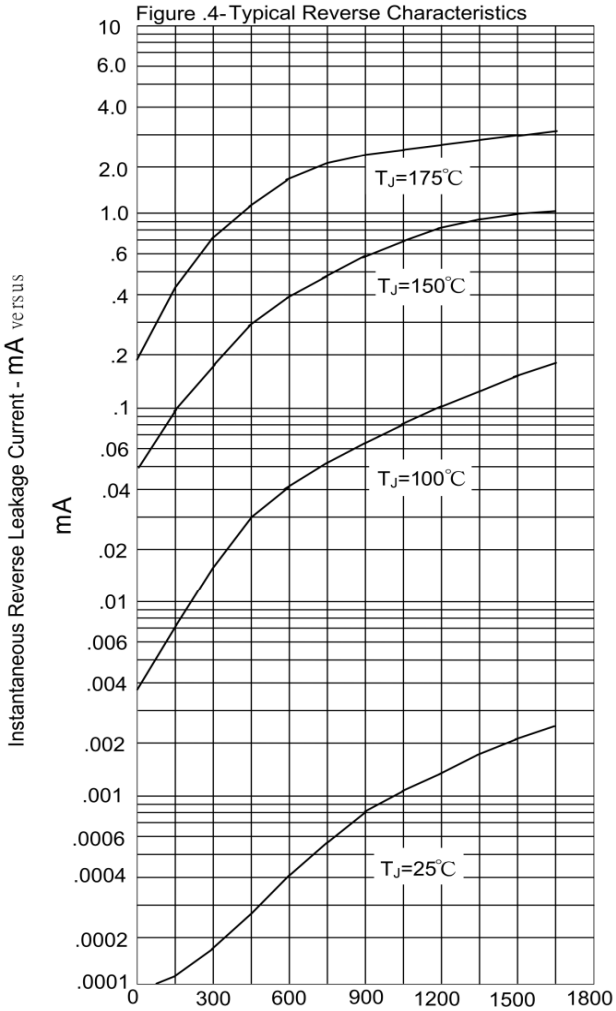
Case Temperature - ℃

Figure .3-Peak Forward Surge Current



Number Of Cycles At 60Hz - Cycles

Figure .4-Typical Reverse Characteristics



Reverse Voltage - Volts