Silicon Standard Recovery Diode

V_{RRM} = 100 V - 1600 V
I_F = 85 A

Features

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

DO-5 Package

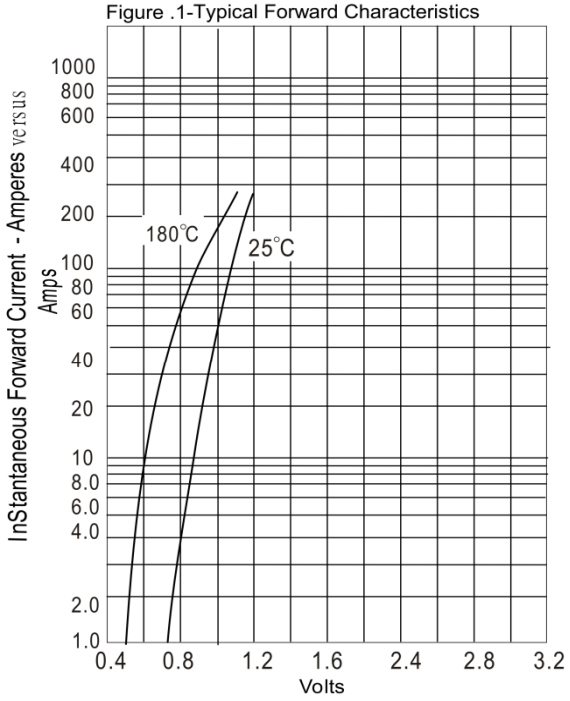
Maximum ratings, at T_j = 25 °C, unless otherwise specified ("R" devices have leads reversed)

Parameter	Symbol	Conditions	S85V (R)	S85Y (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	$T_C \leq 110$ °C	85	85	A
Surge non-repetitive forward current, Half Sine Wave	$I_{F,SM}$	T_C = 25 °C, t_p = 8.3 ms	1800	1800	A
Operating temperature	T_j		-65 to 150	-65 to 150	°C
Storage temperature	T_{stg}		-65 to 150	-65 to 150	°C

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

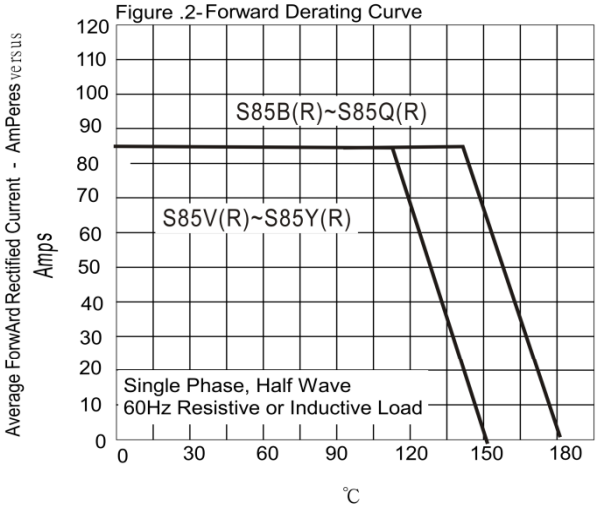
Parameter	Symbol	Conditions	S85V (R)	S85Y (R)	Unit
Diode forward voltage	V_F	I_F = 85 A, T_j = 25 °C	1.1	1.1	V
Reverse current	I_R	V_R = 100 V, T_j = 25 °C	10	10	µA
		V_R = 100 V, T_j = 150 °C	4.5	4.5	mA
Thermal characteristics					
Thermal resistance, junction - case	R_{thJC}		0.65	0.65	°C/W

Figure .1-Typical Forward Characteristics



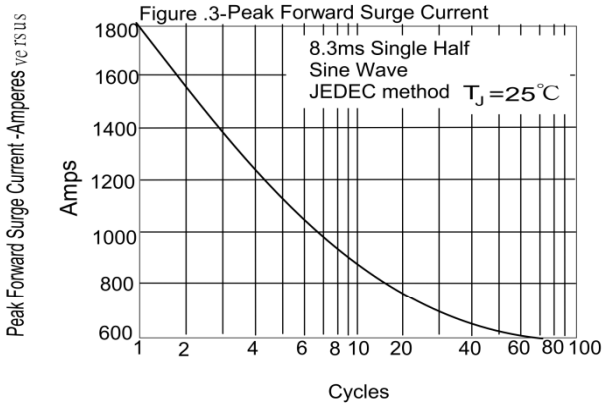
Instantaneous Forward Voltage - Volts

Figure .2-Forward Derating Curve



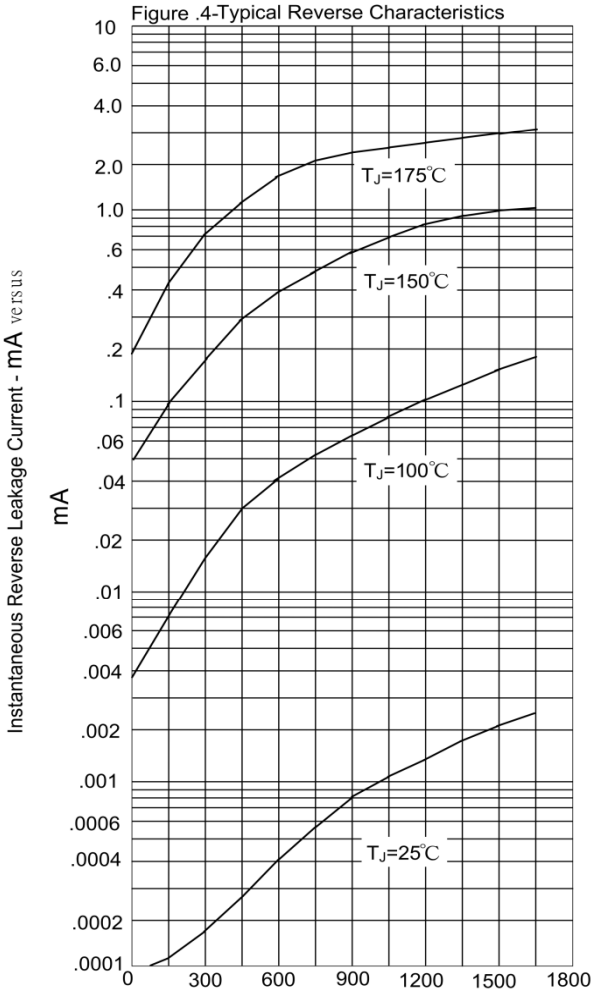
Case Temperature - °C

Figure .3-Peak Forward Surge Current



Number Of Cycles At 60Hz - Cycles

Figure .4-Typical Reverse Characteristics



Reverse Voltage - Volts