

Silicon Standard Recovery Diode

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

$I_F = 85\text{ A}$

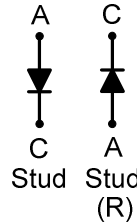
Features

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

Parameter	Symbol	Conditions	S85K (R)	S85M (R)	S85Q (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	$T_C \leq 140\text{ }^\circ\text{C}$	85	85	85	A
Surge non-repetitive forward current, Half Sine Wave	$I_{F,SM}$	$T_C = 25\text{ }^\circ\text{C}$, $t_p = 8.3\text{ ms}$	1800	1800	1800	A
Operating temperature	T_j		-65 to 180	-65 to 180	-65 to 180	$^\circ\text{C}$
Storage temperature	T_{stg}		-65 to 180	-65 to 180	-65 to 180	$^\circ\text{C}$

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

Parameter	Symbol	Conditions	S85K (R)	S85M (R)	S85Q (R)	Unit
Diode forward voltage	V_F	$I_F = 85\text{ A}$, $T_j = 25\text{ }^\circ\text{C}$	1.1	1.1	1.1	V
Reverse current	I_R	$V_R = 100\text{ V}$, $T_j = 25\text{ }^\circ\text{C}$	10	10	10	μA
		$V_R = 100\text{ V}$, $T_j = 180\text{ }^\circ\text{C}$	9	9	9	mA

Thermal characteristics

Parameter	Symbol	Conditions	S85K (R)	S85M (R)	S85Q (R)	Unit
Thermal resistance, junction - case	R_{thJC}		0.65	0.65	0.65	$^\circ\text{C/W}$

Figure .1-Typical Forward Characteristics

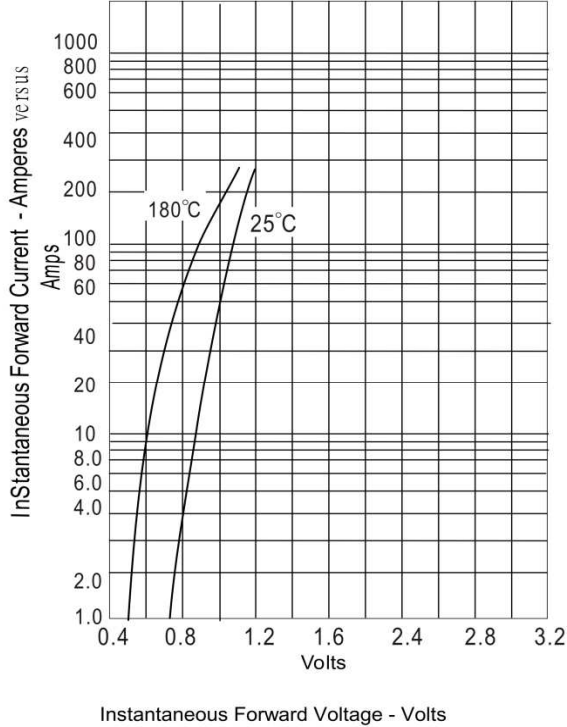


Figure .2-Forward Derating Curve

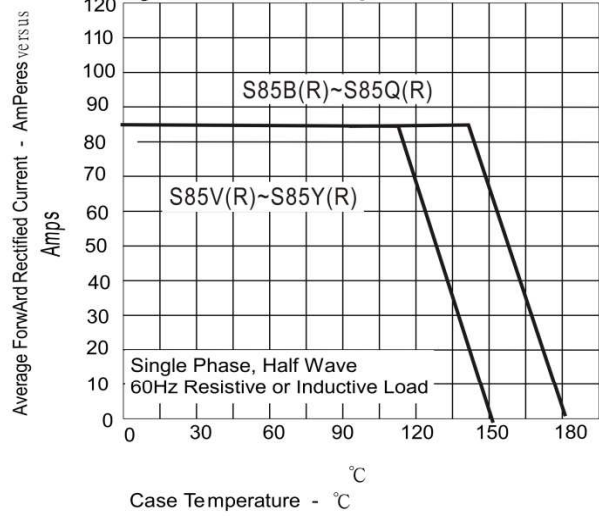


Figure .3-Peak Forward Surge Current

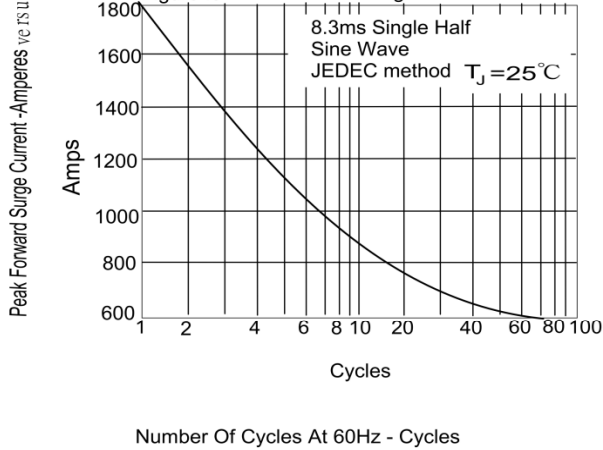


Figure .4-Typical Reverse Characteristics

