Silicon Standard Recovery Diode

V_{RRM} = 100 V - 600 V
I_F = 300 A

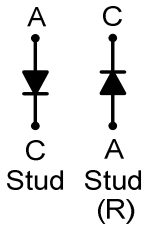
Features

- High Surge Capability
- Types up to 600 V V_{RRM}

DO-9 Package

Note:

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



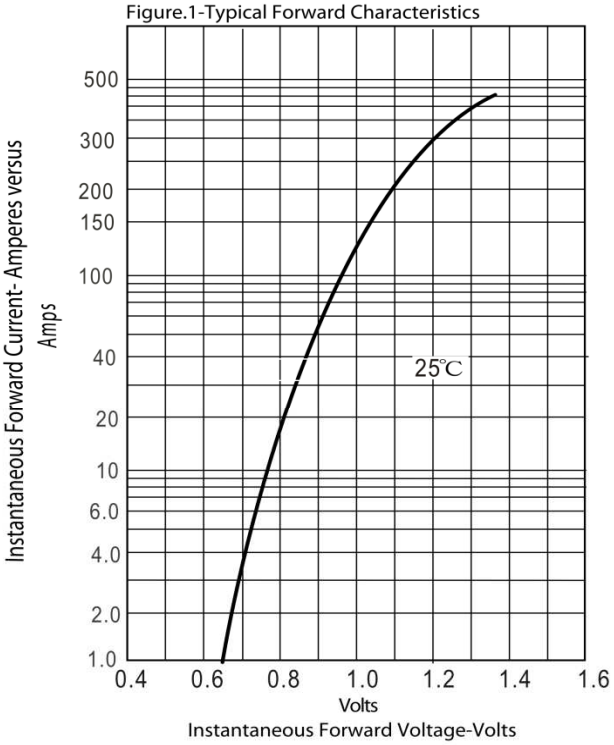
Maximum ratings, at T_j = 25 °C, unless otherwise specified ("R" devices have leads reversed)

Parameter	Symbol	Conditions	S300B (R)	S300D (R)	S300E (R)	S300G (R)	S300J (R)	Unit
Repetitive peak reverse voltage	V_{RRM}		100	200	300	400	600	V
RMS reverse voltage	V_{RMS}		70	140	212	280	420	V
DC blocking voltage	V_{DC}		100	200	300	400	600	V
Continuous forward	I_F	$T_C \leq 130$ °C	300	300	300	300	300	A
Surge non-repetitive forward current, Half Sine Wave	$I_{F,SM}$	T_C = 25 °C, t_p = 8.3 ms	6850	6850	6850	6850	6850	A
Operating temperature	T_j		-60 to 200	-60 to 200	-60 to 200	-60 to 200	-60 to 200	°C
Storage temperature	T_{stg}		-60 to 200	-60 to 200	-60 to 200	-60 to 200	-60 to 200	°C

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

Parameter	Symbol	Conditions	S300B (R)	S300D (R)	S300E (R)	S300G (R)	S300J (R)	Unit
Diode forward voltage	V_F	I_F = 300 A, T_j = 25 °C	1.2	1.2	1.2	1.2	1.2	V
Reverse current	I_R	V_R = 100 V, T_j = 25 °C	10	10	10	10	10	µA
		V_R = 100 V, T_j = 175 °C	12	12	12	12	12	mA
Thermal characteristics								
Thermal resistance, junction - case	R_{thJC}		0.16	0.16	0.16	0.16	0.16	°C/W

Figure.1-Typical Forward Characteristics



Figur.2-Forward Derating Curve

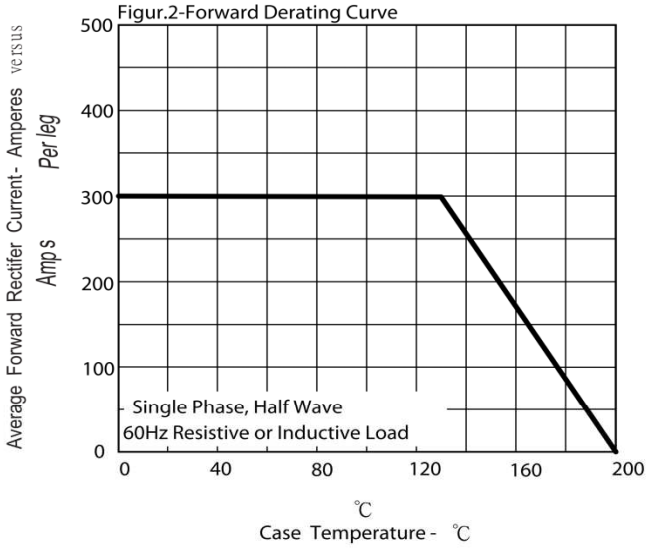
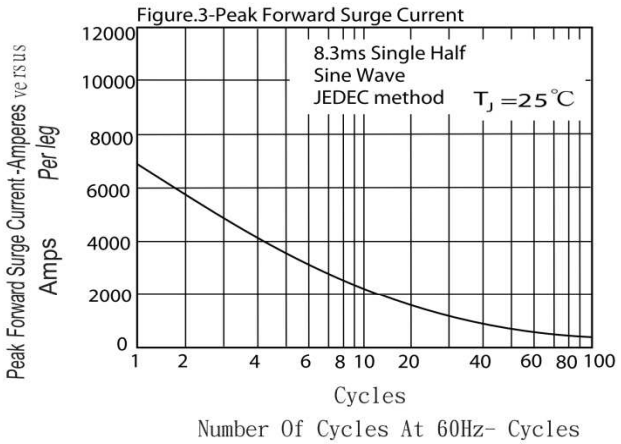


Figure.3-Peak Forward Surge Current



Figur.4-Typical Reverse Characteristics