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THE ONLINE DISTRIBUTOR OF ELECTRONIC COMPONENTS

GeneSiC™ SEMICONDUCTOR

S320J thru S320QR

Silicon Standard Recovery Diode

V_{RRM} = 600 V - 1200 V
I_F =320 A

Features

- High Surge Capability
- Types up to 1200 V V_{RRM}

DO-9 Package

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

Parameter	Symbol	Conditions	S320J (R)	S320K (R)	S320M (R)	S320Q (R)	Unit
Repetitive peak reverse voltage	V_{RRM}		600	800	1000	1200	V
RMS reverse voltage	V_{RMS}		420	566	707	848	V
DC blocking voltage	V_{DC}		600	800	1000	1200	V
Continuous forward current	I_F	$T_C \leq 100$ °C	320	320	320	320	A
Surge non-repetitive forward current, Half Sine Wave	$I_{F,SM}$	T_C = 25 °C, t_p = 8.3 ms	4700	4700	4700	4700	A
Operating temperature	T_j		-60 to 180	-60 to 180	-60 to 180	-60 to 180	°C
Storage temperature	T_{stg}		-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	S320J (R)	S320K (R)	S320M (R)	S320Q (R)	Unit
Diode forward voltage	V_F	I_F = 300 A, T_j = 25 °C	1.2	1.2	1.2	1.2	V
Reverse current	I_R	V_R = 600 V, T_j = 25 °C	10	10	10	10	µA
		V_R = 600 V, T_j = 175 °C	12	12	12	12	mA
Thermal characteristics							
Thermal resistance, junction - case	R_{thJC}		0.16	0.16	0.16	0.16	°C/W

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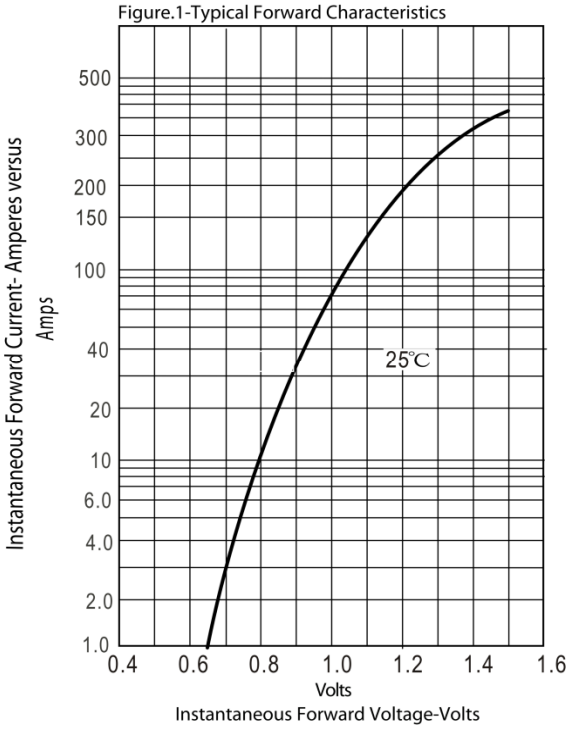
Figure.1-Typical Forward Characteristics



Figur.2-Forward Derating Curve

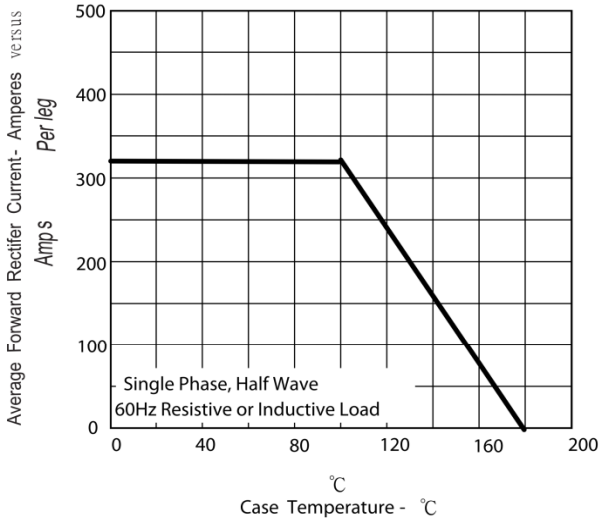
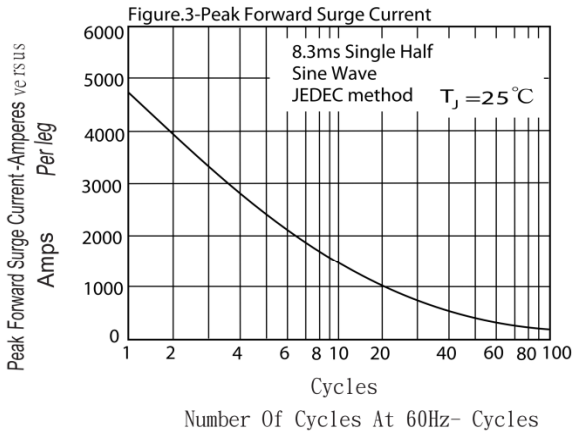
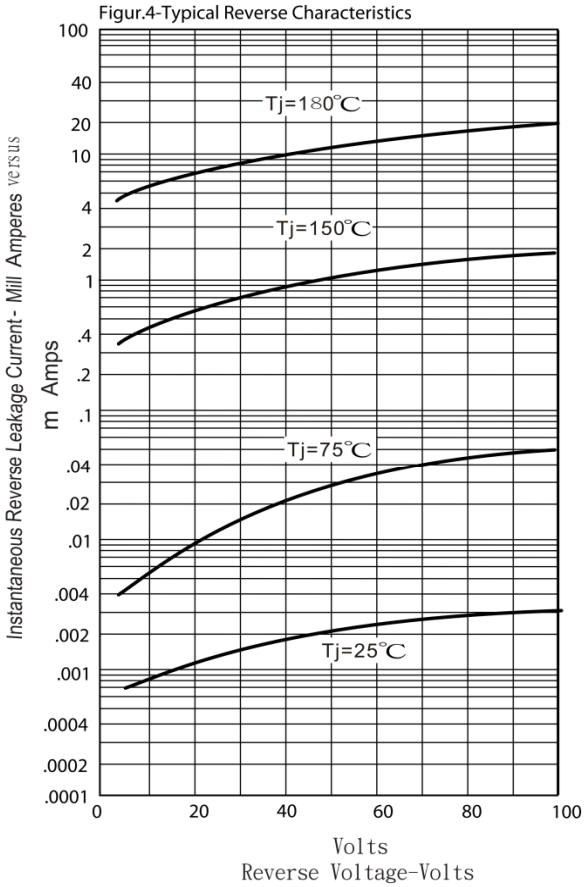


Figure.3-Peak Forward Surge Current



Figur.4-Typical Reverse Characteristics