P:908-810-SEMI(7364)
info@AmericaSemi.com

America Semiconductor

"In America Semi We Trust"

MANUFACTURER OF WORLD CLASS HIGH POWER SEMICONDUCTORS

America Semiconductor

FR20K05 thru FR20MR05

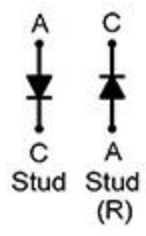
Silicon Fast Recovery Diode

V_{RRM} = 800 V - 1000 V
I_F = 20 A

Features
- High Surge Capability
- Types up to 1000 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 °C, unless otherwise specified ("R" devices have leads reversed)

Parameter	Symbol	Conditions	FR20K(R)05	FR20M(R)05	Unit
Repetitive peak reverse voltage	V_{RRM}		800	1000	V
RMS reverse voltage	V_{RMS}		560	700	V
DC blocking voltage	V_{DC}		800	1000	V
Continuous forward current	I_F	$T_C \leq 100$ °C	20	20	A
Surge non-repetitive forward current, Half Sine Wave	$I_{F,SM}$	T_C = 25 °C, t_p = 8.3 ms	250	250	A
Operating temperature	T_j		-40 to 125	-40 to 125	°C
Storage temperature	T_{stg}		-40 to 150	-40 to 150	°C

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

Parameter	Symbol	Conditions	FR20K(R)05	FR20M(R)05	Unit
Diode forward voltage	V_F	I_F = 20 A, T_j = 25 °C	1.4	1.4	V
Reverse current	I_R	V_R = 800 V, T_j = 25 °C V_R = 800 V, T_j = 125 °C	25 10	25 10	µA mA
Recovery Time					
Maximum reverse recovery time	T_{RR}	I_F=0.5 A, I_R=1.0 A, I_{RR}= 0.25 A	500	500	nS
Thermal characteristics					
Thermal resistance, junction - case	R_{thJC}		0.6	0.6	°C/W

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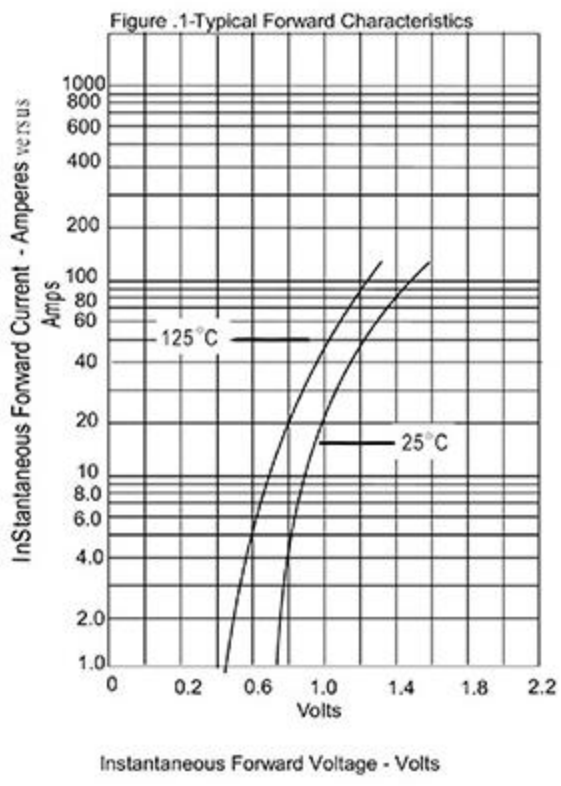

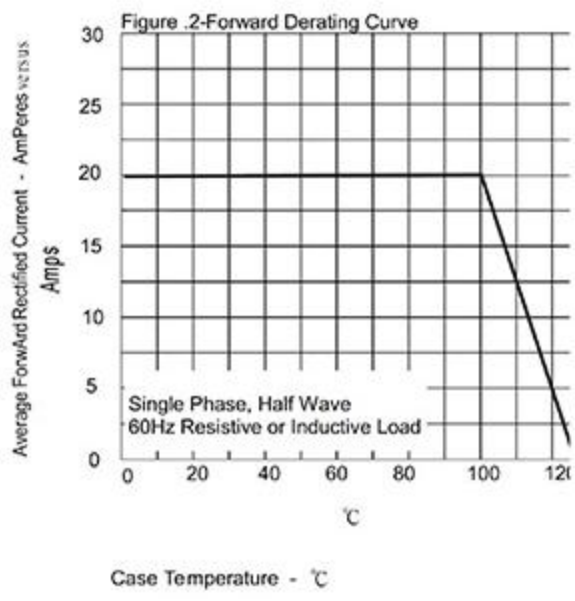

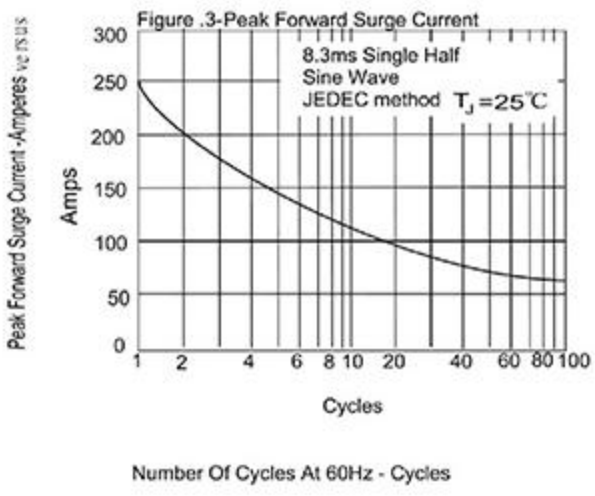

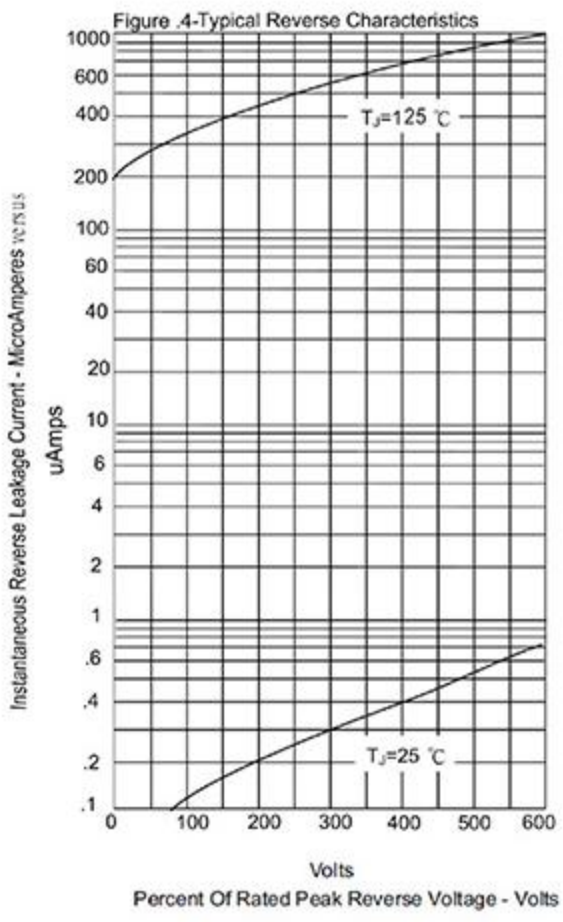

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Tel:(908)810-SEMI(7364) Fax:(908)810-5334
Email:info@AmericaSemi.com
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