



America Semiconductor

Silicon Fast Recovery Diode

**FR20A02 thru
FR20JR02**

V_{RRM} = 50 V - 600 V

I_F = 20 A

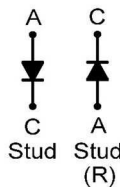
Features

- High Surge Capability
- Types up to 600 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	FR20A(R)02	FR20B(R)02	FR20D(R)02	FR20G(R)02	FR20J(R)02	Unit
Repetitive peak reverse voltage	V _{RRM}		50	100	200	400	600	V
RMS reverse voltage	V _{RMS}		35	70	140	280	420	V
DC blocking voltage	V _{DC}		50	100	200	400	600	V
Continuous forward current	I _F	T _C ≤ 100 °C	20	20	20	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	250	250	250	A
Operating temperature	T _j		-40 to 125	-40 to 125	-40 to 125	-40 to 125	-40 to 125	°C
Storage temperature	T _{stg}		-40 to 150	-40 to 150	-40 to 150	-40 to 150	-40 to 150	°C

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

Parameter	Symbol	Conditions	FR20A(R)02	FR20B(R)02	FR20D(R)02	FR20G(R)02	FR20J(R)02	Unit
Diode forward voltage	V _F	I _F = 20 A, T _j = 25 °C	1.4	1.4	1.4	1.4	1.4	V
Reverse current	I _R	V _R = 50 V, T _j = 25 °C	25	25	25	25	25	µA
		V _R = 50 V, T _j = 150 °C	10	10	10	10	10	mA
Recovery Time								
Maximum reverse recovery time	T _{RR}	I _F = 0.5 A, I _R = 1.0 A, I _{RR} = 0.25 A	200	200	200	200	250	nS
Thermal characteristics								
Thermal resistance, junction - case	R _{thJC}		0.6	0.6	0.6	0.6	0.6	°C/W





Figure .1-Typical Forward Characteristics

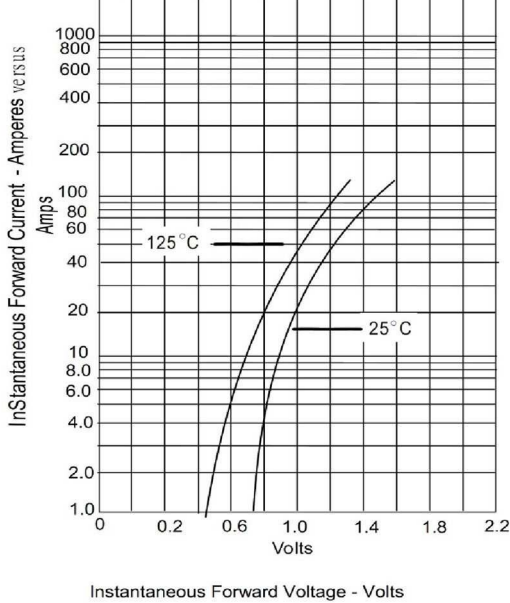
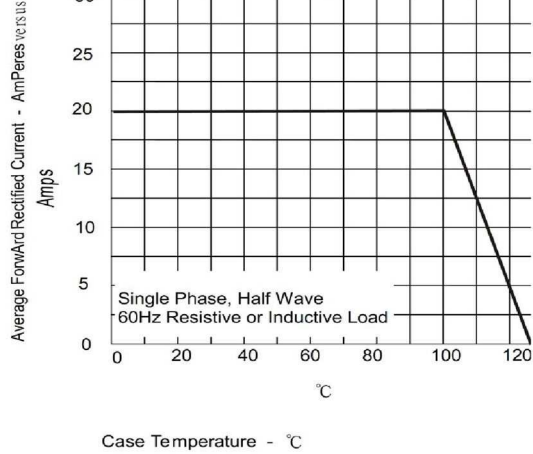


Figure .2- Forward Derating Curve



Case Temperature - °C

Instantaneous Forward Voltage - Volts

Figure .4 Typical Reverse Characteristics

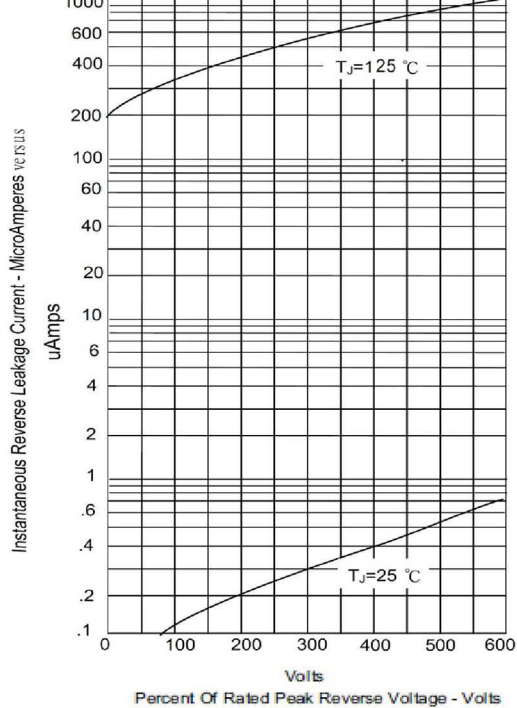
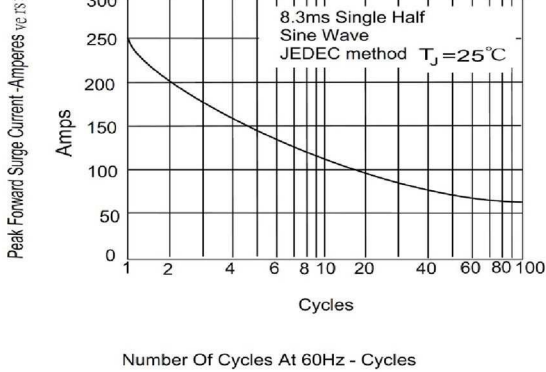


Figure .3-Peak Forward Surge Current



Number Of Cycles At 60Hz - Cycles

