



America Semiconductor

Silicon Fast Recovery Diode

FR85B02 thru
FR85JR02

$V_{RRM} = 100\text{ V} - 600\text{ V}$

$I_F = 85\text{ A}$

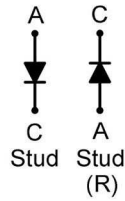
Features

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

Parameter	Symbol	Conditions	FR85B(R)02	FR85D(R)02	FR85G(R)02	FR85J(R)02	Unit
Repetitive peak reverse voltage	V_{RRM}		100	200	400	600	V
RMS reverse voltage	V_{RMS}		70	140	280	420	V
DC blocking voltage	V_{DC}		100	200	400	600	V
Continuous forward current	I_F	$T_C \leq 100\text{ }^{\circ}\text{C}$	85	85	85	85	A
Surge non-repetitive forward current, Half Sine Wave	$I_{F,SM}$	$T_C = 25\text{ }^{\circ}\text{C}$, $t_p = 8.3\text{ ms}$	1369	1369	1369	1369	A
Operating temperature	T_j		-40 to 125	-40 to 125	-40 to 125	-40 to 125	$^{\circ}\text{C}$
Storage temperature	T_{stg}		-40 to 150	-40 to 150	-40 to 150	-40 to 150	$^{\circ}\text{C}$

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

Parameter	Symbol	Conditions	FR85B(R)02	FR85D(R)02	FR85G(R)02	FR85J(R)02	Unit
Diode forward voltage	V _F	I _F = 85 A, T _j = 25 °C	1.4	1.4	1.4	1.4	V
Reverse current	I _R	V _R = 100 V, T _j = 25 °C	25	25	25	25	μA
		V _R = 100 V, T _j = 125 °C	20	20	20	20	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	250	nS





America Semiconductor

FR85B02 thru FR85JR02

Figure .1-Typical Forward Characteristics

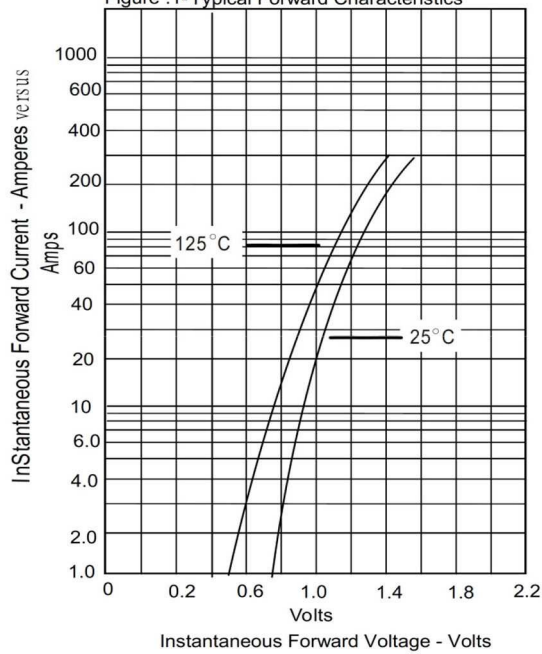


Figure .2-Forward Derating Curve

