



**America Semiconductor**

**Silicon Fast Recovery Diode**

**FR85B02 thru  
FR85JR02**

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

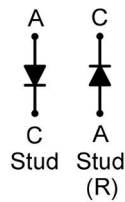
**$I_F = 85\text{ A}$**

**Features**

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

**Note:**

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



**DO-5 Package**



**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	$V_F$	$I_F = 85\text{ A}$ , $T_j = 25\text{ }^\circ\text{C}$	1.4	1.4	1.4	1.4	V
Reverse current	$I_R$	$V_R = 100\text{ V}$ , $T_j = 25\text{ }^\circ\text{C}$	25	25	25	25	$\mu\text{A}$
		$V_R = 100\text{ V}$ , $T_j = 125\text{ }^\circ\text{C}$	20	20	20	20	mA
<b>Recovery Time</b>							
Maximum reverse recovery time	$T_{RR}$	$I_F = 0.5\text{ A}$ , $I_R = 1.0\text{ A}$ , $I_{RR} = 0.25\text{ A}$	200	200	200	250	nS





Figure .1-Typical Forward Characteristics

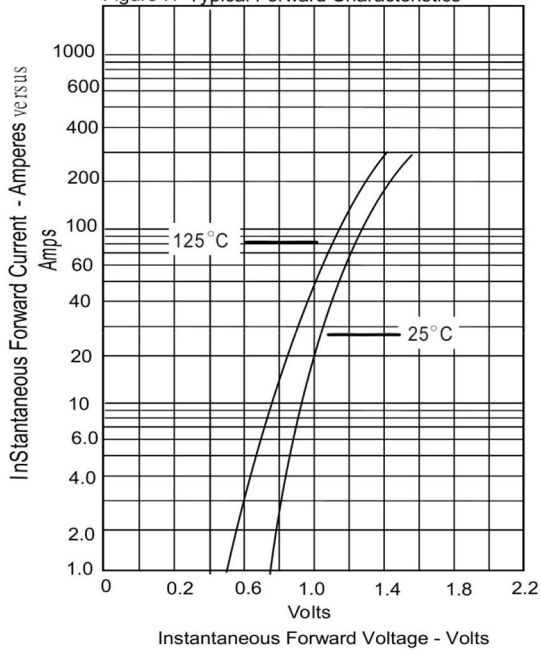


Figure .2-Forward Derating Curve

