

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

Parameter	Symbol	Conditions	FR85B(R)05	FR85D(R)05	FR85G(R)05	FR85J(R)05	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)05	FR85D(R)05	FR85G(R)05	FR85J(R)05	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	$\text{mA}$

**Recovery Time**

Maximum reverse recovery time	$T_{RR}$	$I_F = 0.5\text{ A}$ , $I_R = 1.0\text{ A}$ , $I_{RR} = 0.25\text{ A}$	500	500	500	500	nS
-------------------------------	----------	---	-----	-----	-----	-----	----



Figure 1-Typical Forward Characteristics

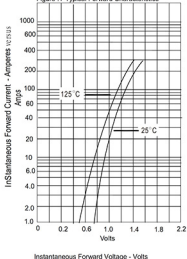


Figure 2-Forward Derating Curve

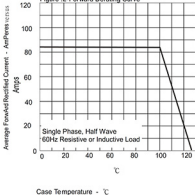


Figure 3-Peak Forward Surge Current

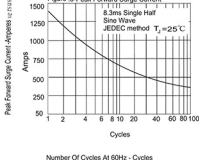


Figure 4-Typical Reverse Characteristics

