



Silicon Fast Recovery Diode

FR85B05 thru FR85JR05

$V_{RRM} = 100\text{ V} - 1000\text{ V}$

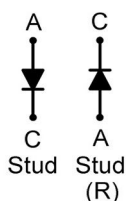
$I_F = 85\text{ A}$

Features

- High Surge Capability
- Types up to 1000 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 $T_j = 25\text{ °C}$, 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	$T_C \leq 100\text{ °C}$	85	85	85	85	A
Surge non-repetitive forward current, Half Sine Wave	$I_{F,SM}$	$T_C = 25\text{ °C}$, $t_p = 8.3\text{ ms}$	1369	1369	1369	1369	A
Operating temperature	T_j		-40 to 125	-40 to 125	-40 to 125	-40 to 125	°C
Storage temperature	T_{stg}		-40 to 150	-40 to 150	-40 to 150	-40 to 150	°C

Electrical characteristics, at $T_j = 25\text{ °C}$, 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 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	500	500	500	500	nS





Figure .1-Typical Forward Characteristics

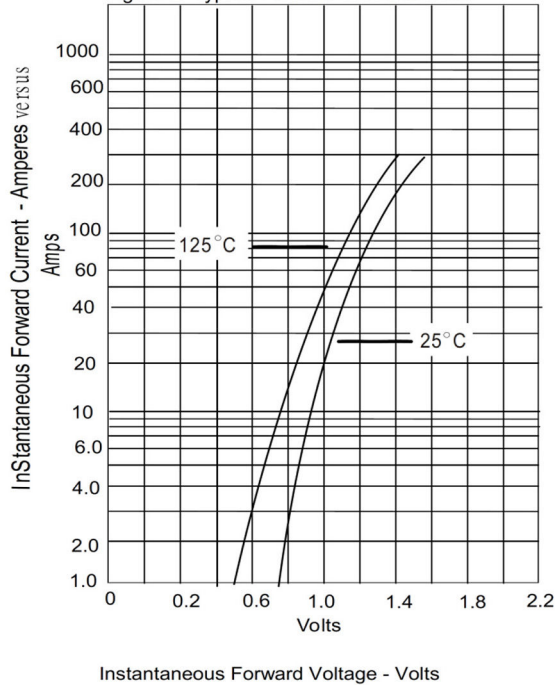


Figure .2-Forward Derating Curve

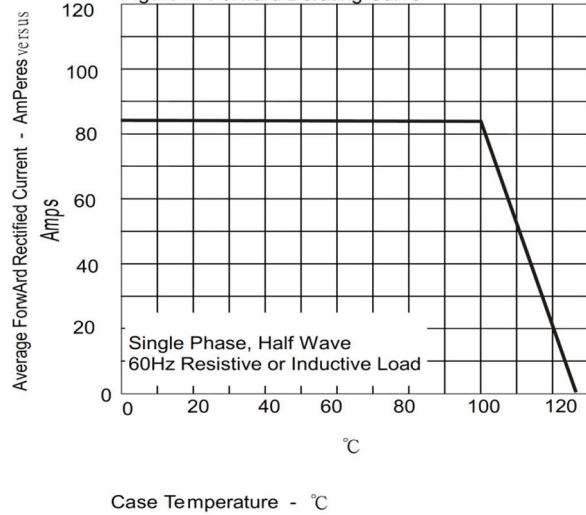


Figure .3-Peak Forward Surge Current

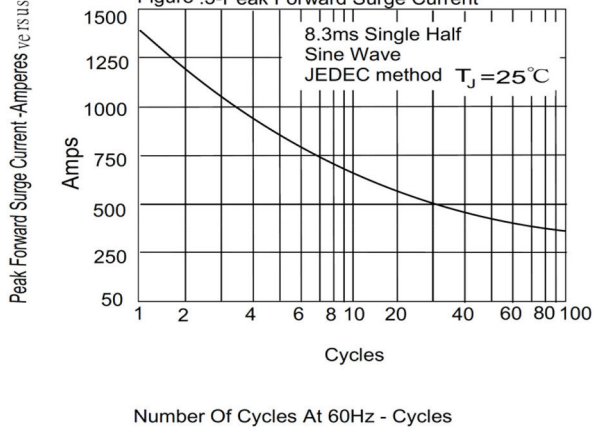


Figure .4-Typical Reverse Characteristics

