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With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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# Silicon Fast Recovery Diode

 $V_{RRM} = 100\text{ V} - 1000\text{ V}$ 
 $I_F = 85\text{ A}$ 

## Features

- High Surge Capability
- Types up to 1000 V  $V_{RRM}$

**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)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 | $^\circ\text{C}$ |

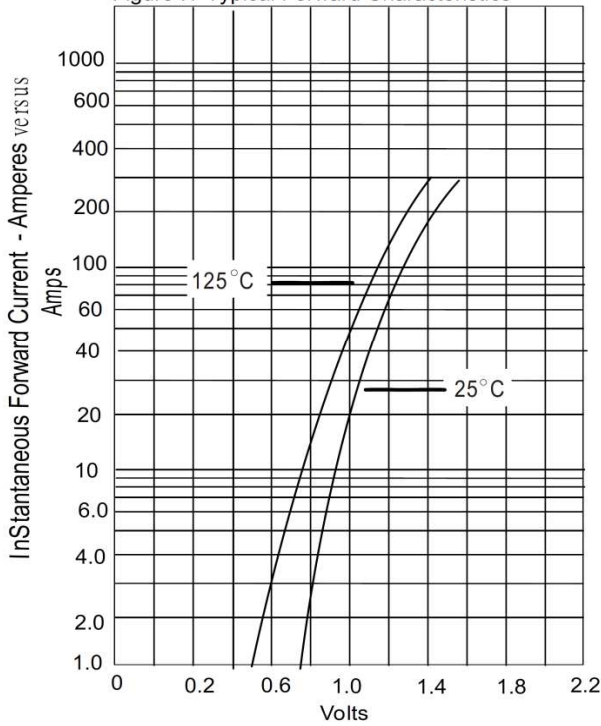
**Electrical characteristics, at  $T_j = 25\text{ }^\circ\text{C}$ , unless otherwise specified**

| 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         | mA            |

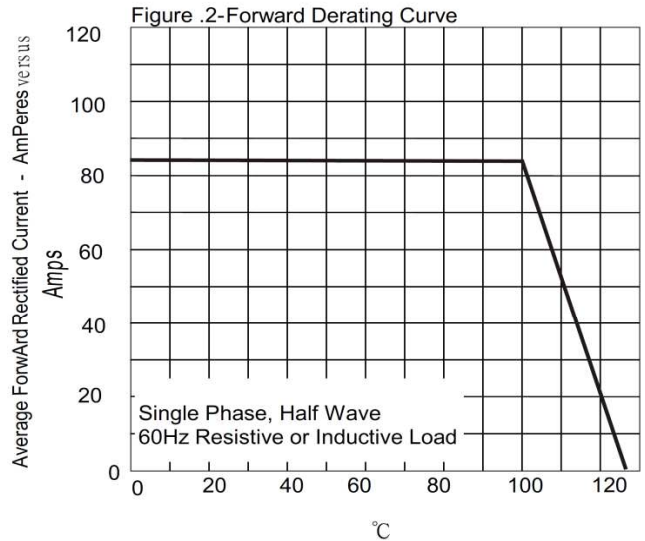
## Recovery Time

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

Figure .1-Typical Forward Characteristics

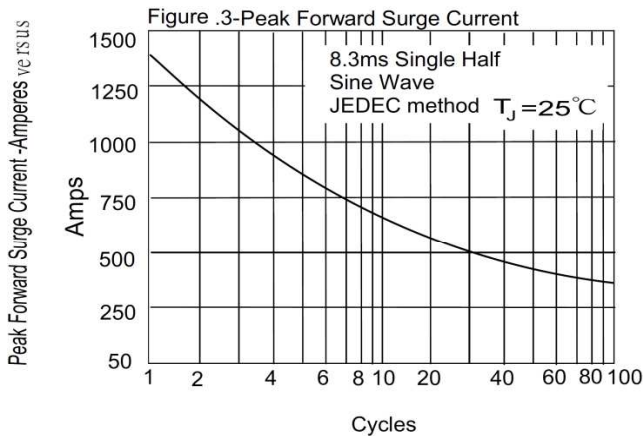


Instantaneous Forward Voltage - Volts



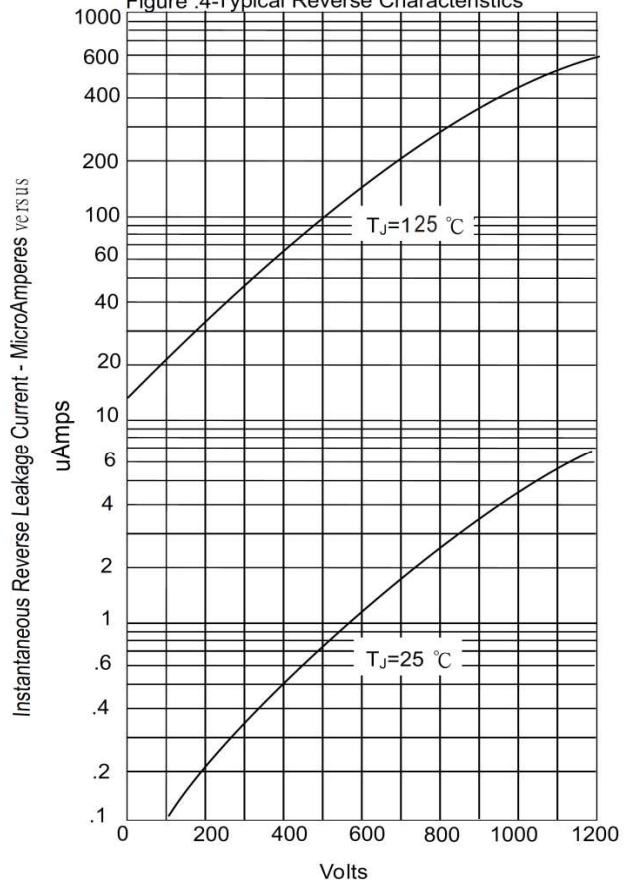
Case Temperature - °C

Figure .3-Peak Forward Surge Current



Number Of Cycles At 60Hz - Cycles

Figure .4-Typical Reverse Characteristics



Percent Of Rated Peak Reverse Voltage - Volts