



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

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	FR85K(R)05	FR85M(R)05	Unit
Repetitive peak reverse voltage	$V_{RRM}$		800	1000	V
RMS reverse voltage	$V_{RMS}$		560	700	V
DC blocking voltage	$V_{DC}$		800	1000	V
Continuous forward current	$I_F$	$T_C \leq 100\text{ }^{\circ}\text{C}$	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	A
Operating temperature	$T_j$		-40 to 125	-40 to 125	$^{\circ}\text{C}$
Storage temperature	$T_{stg}$		-40 to 150	-40 to 150	$^{\circ}\text{C}$

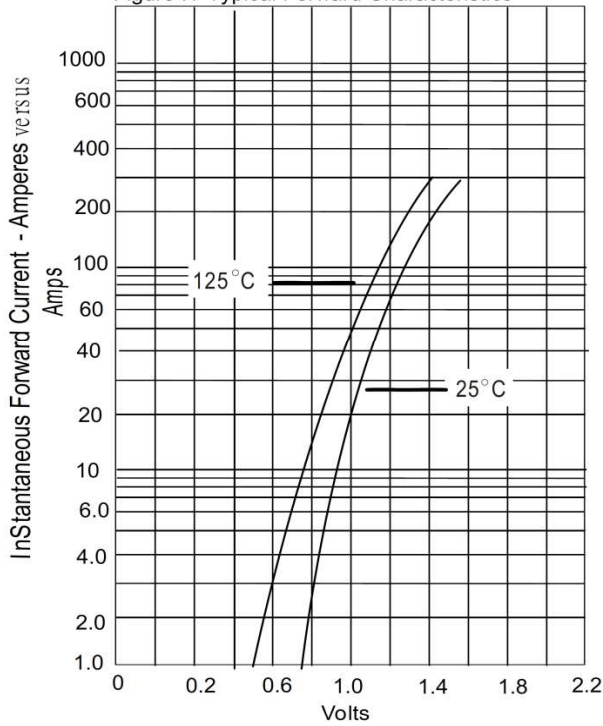
**Electrical characteristics, at  $T_j = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified**

Parameter	Symbol	Conditions	FR85K(R)05	FR85M(R)05	Unit
Diode forward voltage	$V_F$	$I_F = 85\text{ A}$ , $T_j = 25\text{ }^{\circ}\text{C}$	1.4	1.4	V
Reverse current	$I_R$	$V_R = 100\text{ V}$ , $T_j = 25\text{ }^{\circ}\text{C}$	25	25	$\mu\text{A}$
		$V_R = 100\text{ V}$ , $T_j = 125\text{ }^{\circ}\text{C}$	20	20	mA

## Recovery Time

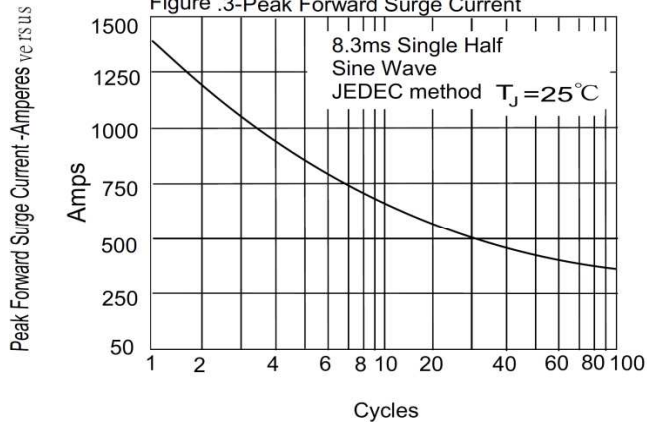
Maximum reverse recovery time	$T_{RR}$	$I_F = 0.5\text{ A}$ , $I_R = 1.0\text{ A}$ , $I_{RR} = 0.25\text{ A}$	500	500	nS
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Figure .1-Typical Forward Characteristics



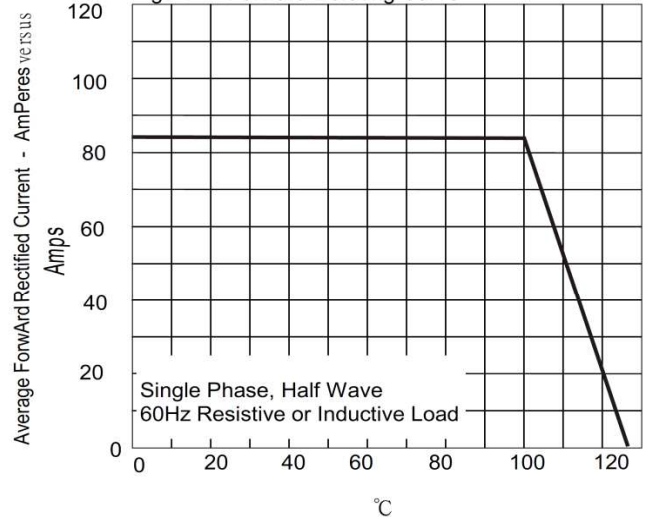
Instantaneous Forward Voltage - Volts

Figure .3-Peak Forward Surge Current



Number Of Cycles At 60Hz - Cycles

Figure .2-Forward Derating Curve



Case Temperature - °C

Figure .4-Typical Reverse Characteristics

