

Silicon Fast Recovery Diode

$V_{RRM} = 800\text{ V} - 1000\text{ V}$

$I_F = 70\text{ A}$

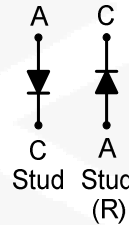
Features

- High Surge Capability
- Types from 800 V to 1000 V V_{RRM}
- Not ESD Sensitive

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	FR70K(R)05	FR70M(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	$T_C \leq 100\text{ }^{\circ}\text{C}$	70	70	A
Surge non-repetitive forward current, Half Sine Wave	$I_{F,SM}$	$T_C = 25\text{ }^{\circ}\text{C}$, $t_p = 8.3\text{ ms}$	870	870	A
Operating temperature	T_j		-55 to 150	-55 to 150	$^{\circ}\text{C}$
Storage temperature	T_{stg}		-55 to 150	-55 to 150	$^{\circ}\text{C}$

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

Parameter	Symbol	Conditions	FR70K(R)05	FR70M(R)05	Unit
Diode forward voltage	V_F	$I_F = 70\text{ A}$, $T_j = 25\text{ }^{\circ}\text{C}$	1.0	1.0	V
Reverse current	I_R	$V_R = 100\text{ V}$, $T_j = 25\text{ }^{\circ}\text{C}$	25	25	μA
		$V_R = 100\text{ V}$, $T_j = 125\text{ }^{\circ}\text{C}$	15	15	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

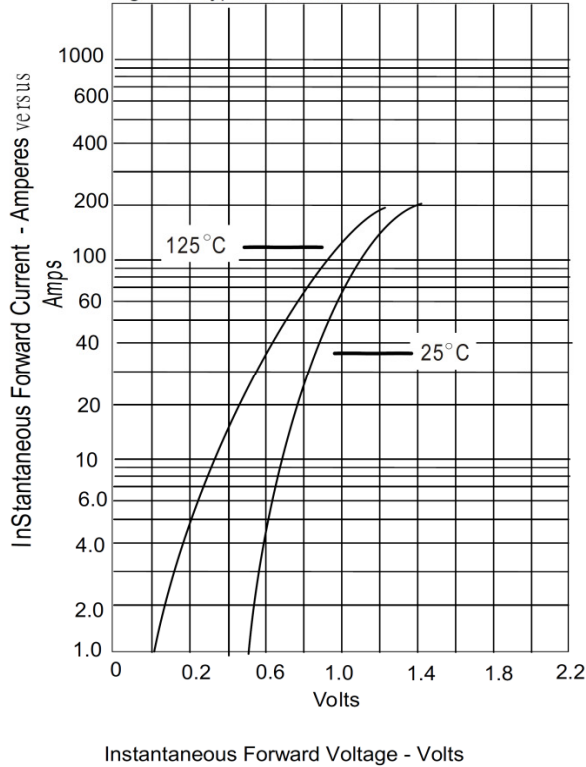


Figure .2 Forward Derating Curve

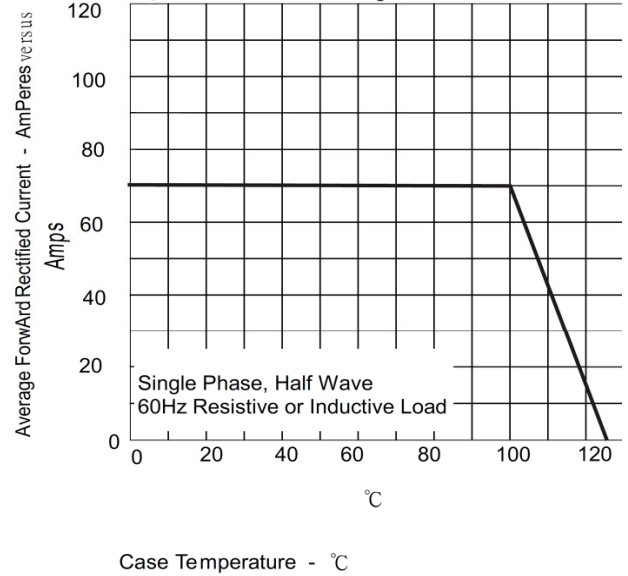


Figure .3 Peak Forward Surge Current

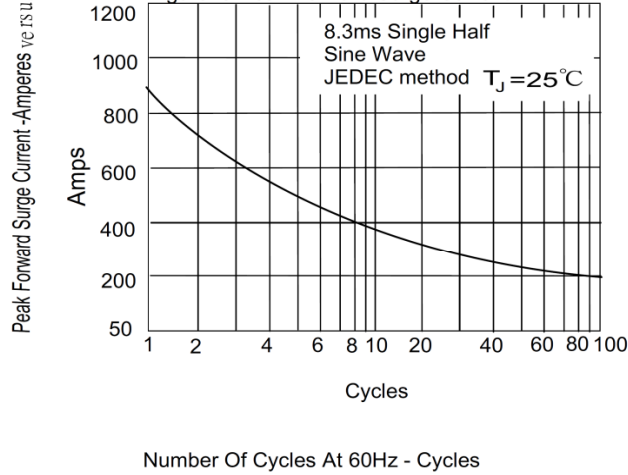
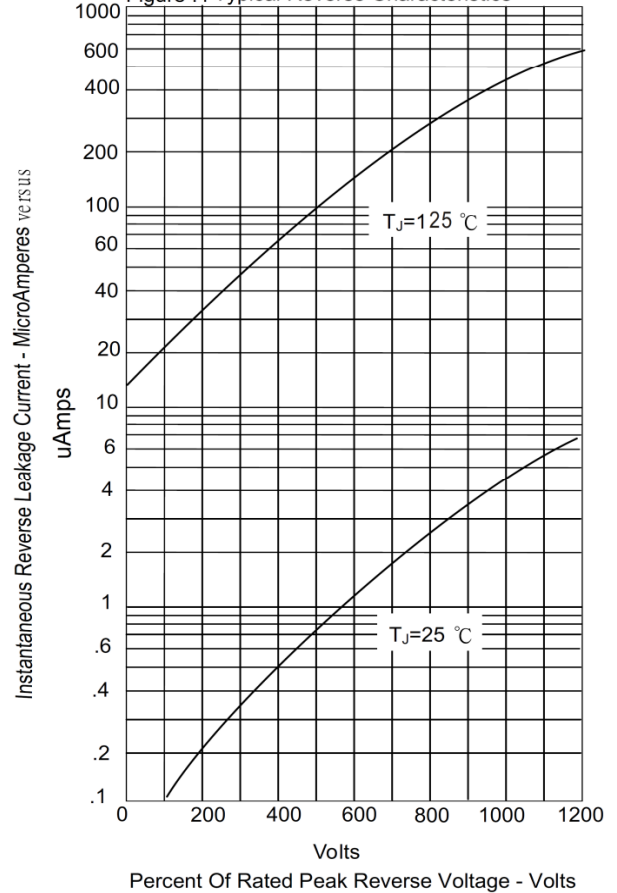
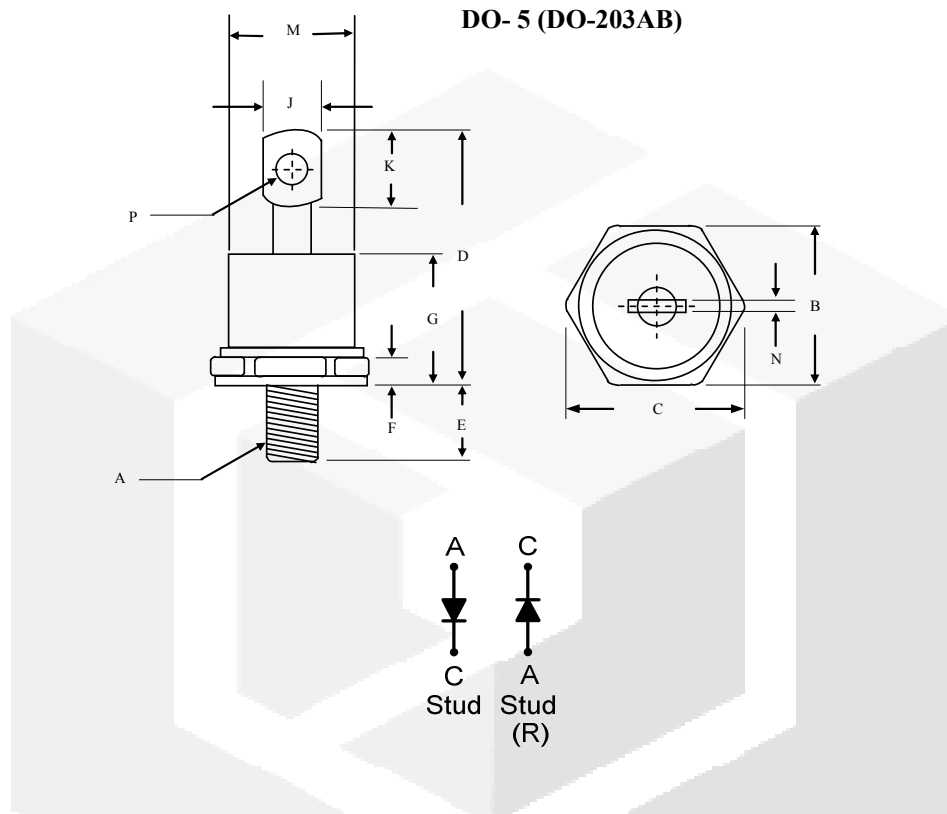


Figure .4 Typical Reverse Characteristics



Package dimensions and terminal configuration

Product is marked with part number and terminal configuration.



	Inches		Millimeters	
	Min	Max	Min	Max
A	1/4 -28 UNF			
B	0.669	0.687	17.19	17.44
C	-----	0.794	-----	20.16
D	-----	1.020	-----	25.91
E	0.422	0.453	10.72	11.50
F	0.115	0.200	2.93	5.08
G	-----	0.460	-----	11.68
J	-----	0.280	-----	7.00
K	0.236	-----	6.00	-----
M	-----	0.589	-----	14.96
N	-----	0.063	-----	1.60
P	0.140	0.175	3.56	4.45