Silicon Fast Recovery Diode

V_{RRM} = 800 V - 1000 V
I_F = 40 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

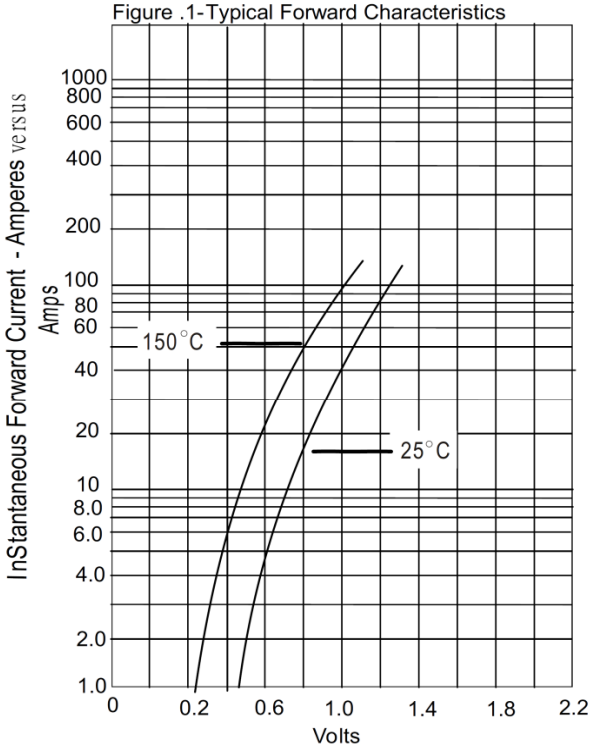
Maximum ratings, at T_j = 25 °C, unless otherwise specified ("R" devices have leads reversed)

Parameter	Symbol	Conditions	FR40K(R)05	FR40M(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	$T_C \leq 100$ °C	40	40	A
Surge non-repetitive forward current, Half Sine Wave	$I_{F,SM}$	T_C = 25 °C, t_p = 8.3 ms	500	500	A
Operating temperature	T_j		-55 to 150	-55 to 150	°C
Storage temperature	T_{stg}		-55 to 150	-55 to 150	°C

Electrical characteristics, at Tj = 25 °C, unless otherwise specified

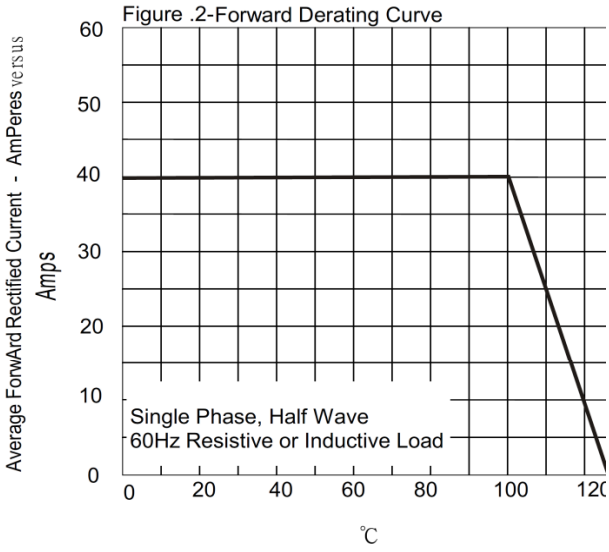
Parameter	Symbol	Conditions	FR40K(R)05	FR40M(R)05	Unit
Diode forward voltage	V_F	I_F = 40 A, T_j = 25 °C	1.0	1.0	V
Reverse current	I_R	V_R = 100 V, T_j = 25 °C	25	25	µA
		V_R = 100 V, T_j = 125 °C	10	10	mA
Recovery Time					
Maximum reverse recovery time	T_{RR}	I_F=0.5 A, I_R=1.0 A, I_{RR}= 0.25 A	500	500	nS
Thermal characteristics					
Thermal resistance, junction - case	R_{thJC}		0.8	0.8	°C/W

Figure .1-Typical Forward Characteristics



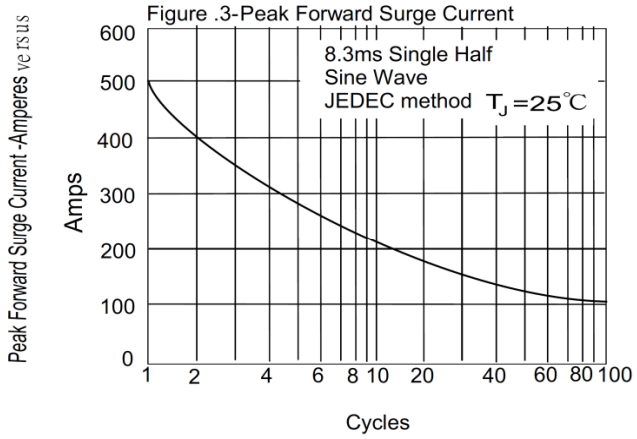
Instantaneous Forward Voltage - Volts

Figure .2-Forward Derating Curve



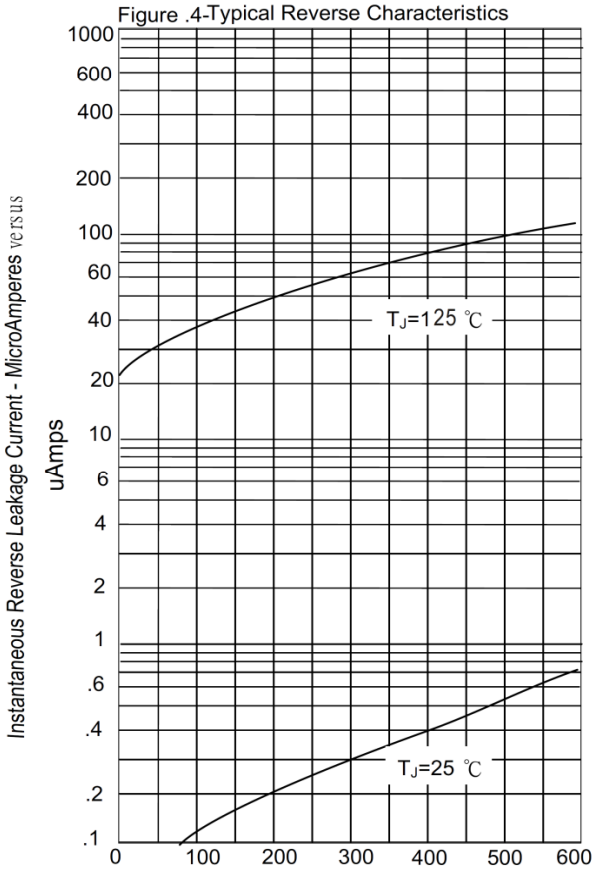
Case Temperature - ℃

Figure .3-Peak Forward Surge Current



Number Of Cycles At 60Hz - Cycles

Figure .4-Typical Reverse Characteristics

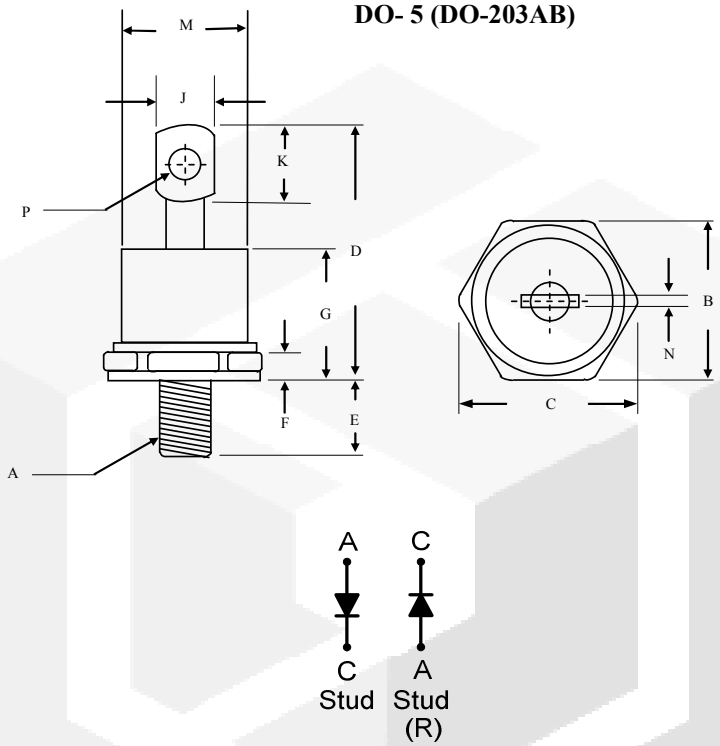


Percent Of Rated Peak Reverse Voltage - Volts

Package dimensions and terminal configuration

Product is marked with part number and terminal configuration.

DO- 5 (DO-203AB)



	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