Silicon Fast Recovery Diode

V_{RRM} = 50 V - 400 V

I_F = 6 A

Features

- High Surge Capability
- Types from 50 V to 400 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-4 Package



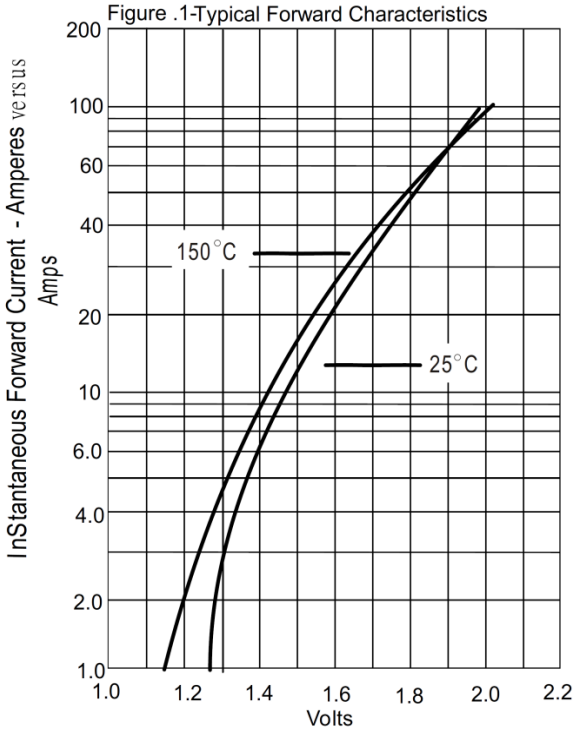
Maximum ratings, at T_j = 25 °C, unless otherwise specified ("R" devices have leads reversed)

Parameter	Symbol	Conditions	FR6A(R)05	FR6B(R)05	FR6D(R)05	FR6G(R)05	Unit
Repetitive peak reverse voltage	V_{RRM}		50	100	200	400	V
RMS reverse voltage	V_{RMS}		35	70	140	280	V
DC blocking voltage	V_{DC}		50	100	200	400	V
Continuous forward current	I_F	$T_C \leq 100$ °C	16	16	16	16	A
Surge non-repetitive forward current, Half Sine Wave	$I_{F,SM}$	T_C = 25 °C, t_p = 8.3 ms	135	135	135	135	A
Operating temperature	T_j		-55 to 150	-55 to 150	-55 to 150	-55 to 150	°C
Storage temperature	T_{stg}		-55 to 150	-55 to 150	-55 to 150	-55 to 150	°C

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

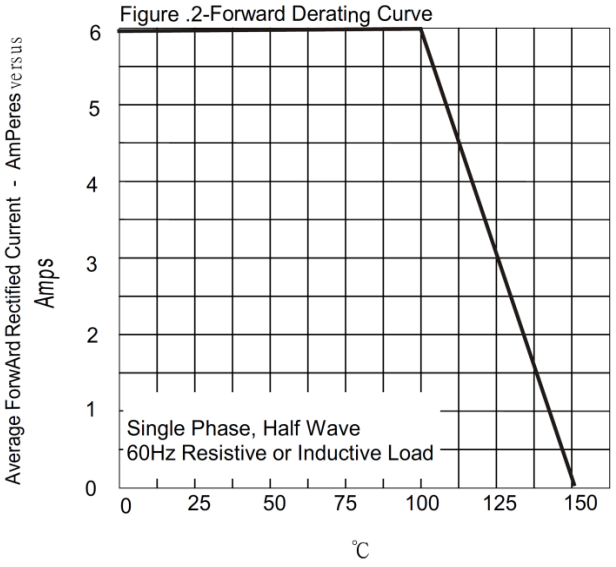
Parameter	Symbol	Conditions	FR6A(R)05	FR6B(R)05	FR6D(R)05	FR6G(R)05	Unit
Diode forward voltage	V_F	I_F = 6 A, T_j = 25 °C	1.4	1.4	1.4	1.4	V
Reverse current	I_R	V_R = 50 V, T_j = 25 °C	25	25	25	25	µA
		V_R = 50 V, T_j = 150 °C	6	6	6	6	mA
Recovery Time							
Maximum reverse recovery time	T_{RR}	I_F=0.5 A, I_R=1.0 A, I_{RR}= 0.25 A	500	500	500	500	nS
Thermal characteristics							
Thermal resistance, junction - case	R_{thJC}		2.5	2.5	2.5	2.5	°C/W

Figure .1-Typical Forward Characteristics



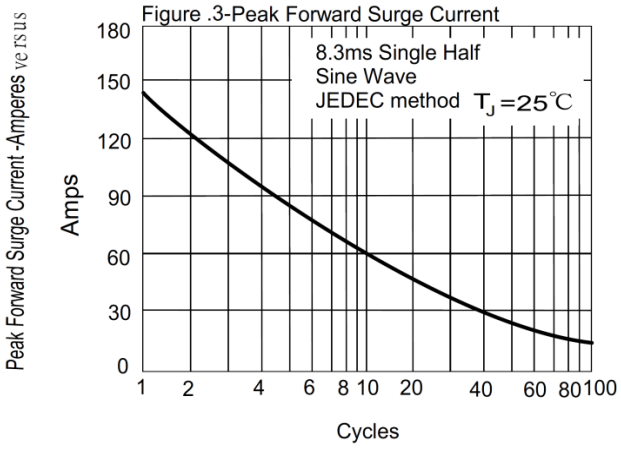
Instantaneous Forward Voltage - Volts

Figure .2-Forward Derating Curve



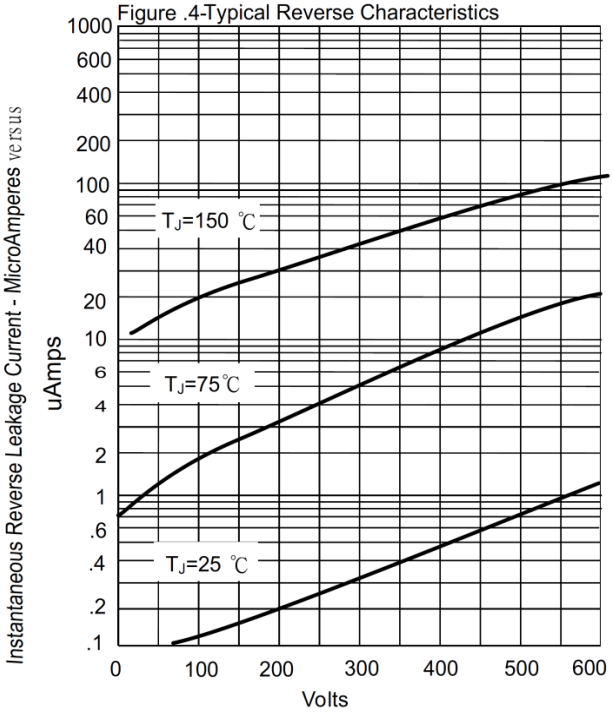
Case Temperature - ℃

Figure .3-Peak Forward Surge Current



Number Of Cycles At 60Hz - Cycles

Figure .4-Typical Reverse Characteristics

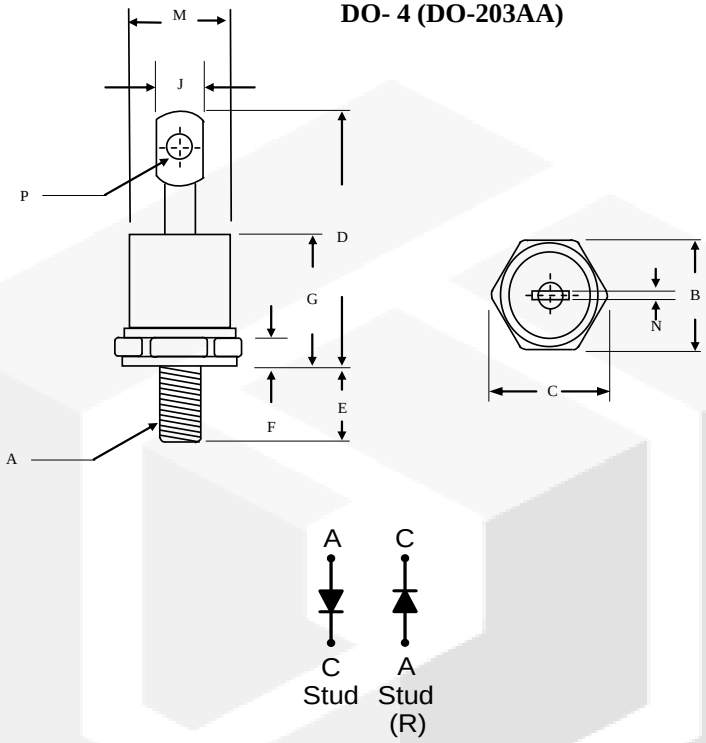


Reverse Voltage - Volts

Package dimensions and terminal configuration

Product is marked with part number and terminal configuration.

DO- 4 (DO-203AA)



	Inches		Millimeters	
	Min	Max	Min	Max
A	10-32 UNF			
B	0.424	0.437	10.77	11.10
C	-----	0.505	-----	12.82
D	------	0.800	-----	20.30
E	0.453	0.492	11.50	12.50
F	0.114	0.140	2.90	3.50
G	-----	0.405	-----	10.29
J	-----	0.216	-----	5.50
M	-----	φ0.302	-----	φ7.68
N	0.031	0.045	0.80	1.15
P	0.070	0.79	1.80	2.00