Silicon Standard Recovery Diode

V_{RRM} = 800 V - 1200 V
I_F = 12 A

Features

- High Surge Capability
- Types from 800 V to 1200 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



RoHS COMPLIANT

REACH COMPLIANCE

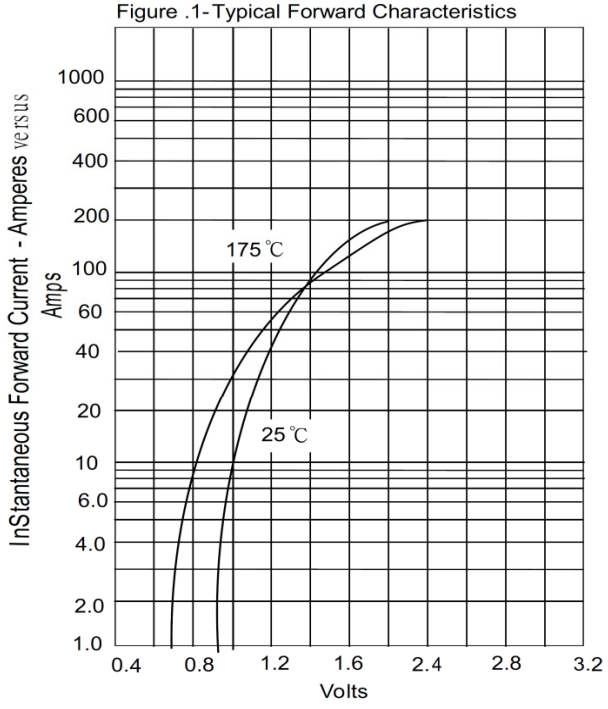
Maximum ratings, at T_j = 25 °C, unless otherwise specified ("R" devices have leads reversed)

Parameter	Symbol	Conditions	S12K (R)	S12M (R)	S12Q (R)	Unit
Repetitive peak reverse voltage	V_{RRM}		800	1000	1200	V
RMS reverse voltage	V_{RMS}		560	700	840	V
DC blocking voltage	V_{DC}		800	1000	1200	V
Continuous forward current	I_F	$T_C \leq 144$ °C	12	12	12	A
Surge non-repetitive forward current, Half Sine Wave	$I_{F,SM}$	T_C = 25 °C, t_p = 8.3 ms	280	280	280	A
Operating temperature	T_j		-55 to 150	-55 to 150	-55 to 150	°C
Storage temperature	T_{stg}		-55 to 150	-55 to 150	-55 to 150	°C

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

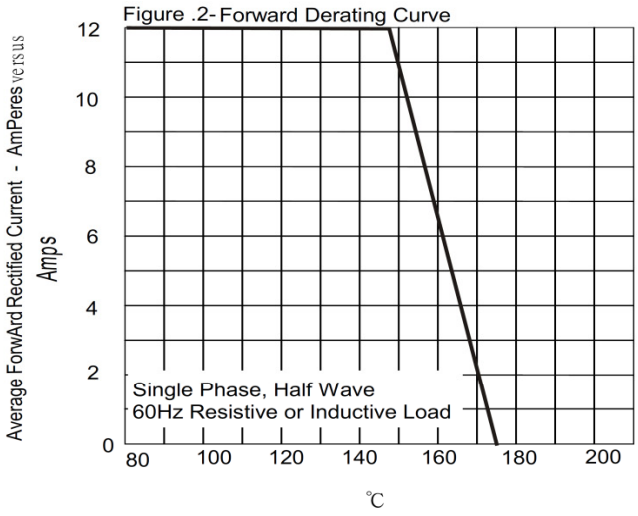
Parameter	Symbol	Conditions	S12K (R)	S12M (R)	S12Q (R)	Unit
Diode forward voltage	V_F	I_F = 12 A, T_j = 25 °C	1.1	1.1	1.1	V
Reverse current	I_R	V_R = 50 V, T_j = 25 °C	10	10	10	µA
		V_R = 50 V, T_j = 175 °C	12	12	12	mA
Thermal characteristics						
Thermal resistance, junction - case	R_{thJC}		2.50	2.50	2.50	°C/W

Figure .1- Typical Forward Characteristics



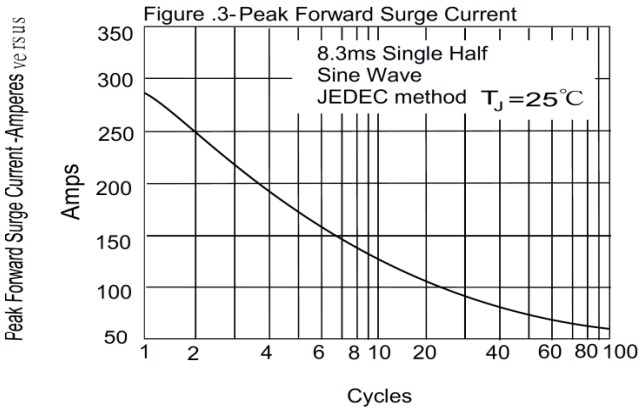
Instantaneous Forward Voltage - Volts

Figure .2- Forward Derating Curve



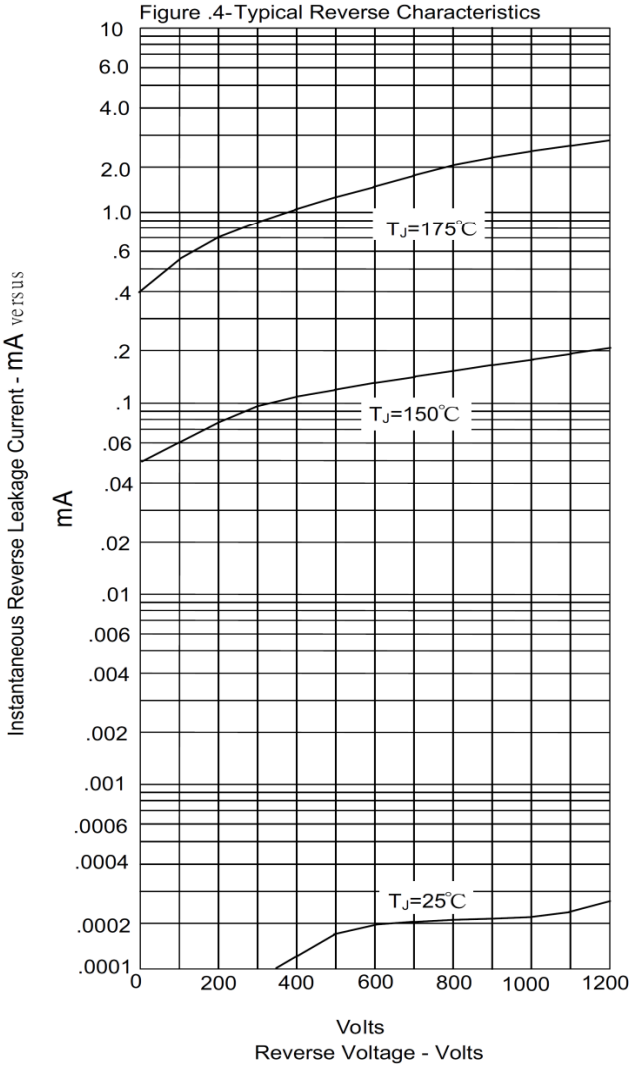
Case Temperature - ℃

Figure .3- Peak Forward Surge Current



Number Of Cycles At 60Hz - Cycles

Figure .4- Typical Reverse Characteristics

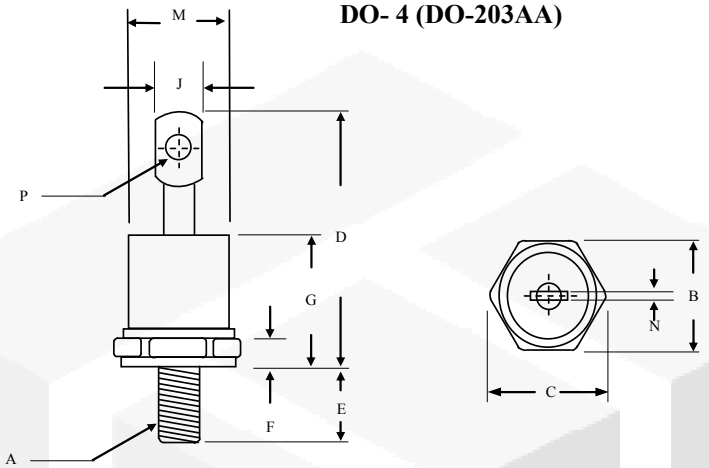


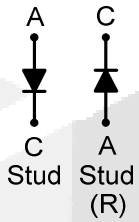
Reverse Voltage - Volts

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