

Silicon Standard Recovery Diode

$V_{RRM} = 100\text{ V} - 600\text{ V}$

$I_F = 12\text{ A}$

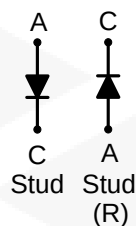
Features

- High Surge Capability
- Types from 100 V to 600 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 $T_j = 25\text{ }^{\circ}\text{C}$, unless otherwise specified ("R" devices have leads reversed)

Parameter	Symbol	Conditions	S12B (R)	S12D (R)	S12G (R)	S12J (R)	Unit
Repetitive peak reverse voltage	V_{RRM}		100	200	400	600	V
RMS reverse voltage	V_{RMS}		70	140	280	420	V
DC blocking voltage	V_{DC}		100	200	400	600	V
Continuous forward current	I_F	$T_C \leq 144\text{ }^{\circ}\text{C}$	12	12	12	12	A
Surge non-repetitive forward current, Half Sine Wave	$I_{F,SM}$	$T_C = 25\text{ }^{\circ}\text{C}$, $t_p = 8.3\text{ ms}$	280	280	280	280	A
Operating temperature	T_j		-55 to 150	-55 to 150	-55 to 150	-55 to 150	$^{\circ}\text{C}$
Storage temperature	T_{stg}		-55 to 150	-55 to 150	-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	S12B (R)	S12D (R)	S12G (R)	S12J (R)	Unit
Diode forward voltage	V_F	$I_F = 12\text{ A}$, $T_j = 25\text{ }^{\circ}\text{C}$	1.1	1.1	1.1	1.1	V
Reverse current	I_R	$V_R = 50\text{ V}$, $T_j = 25\text{ }^{\circ}\text{C}$	10	10	10	10	μA
		$V_R = 50\text{ V}$, $T_j = 175\text{ }^{\circ}\text{C}$	12	12	12	12	mA

Thermal characteristics

Thermal resistance, junction - case	R_{thJC}		2.50	2.50	2.50	2.50	$^{\circ}\text{C/W}$
-------------------------------------	------------	--	------	------	------	------	----------------------

Figure .1-Typical Forward Characteristics

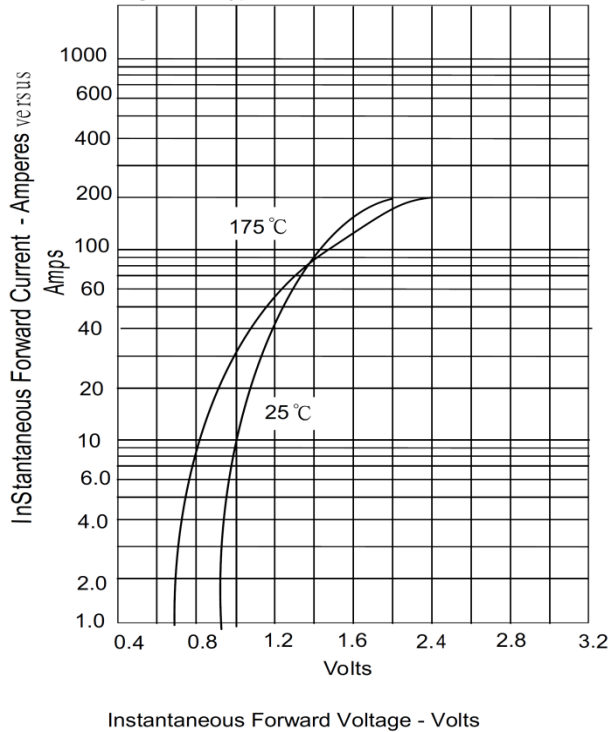


Figure .2-Forward Derating Curve

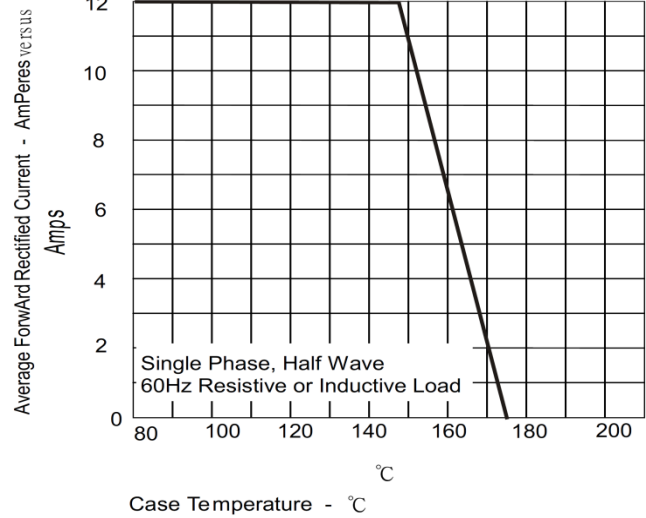


Figure .3-Peak Forward Surge Current

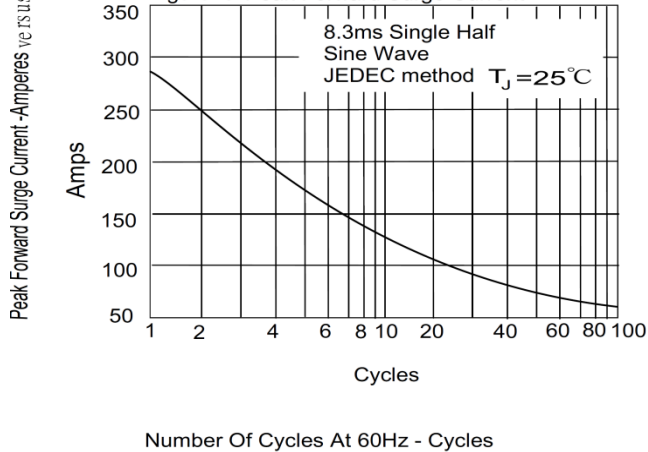
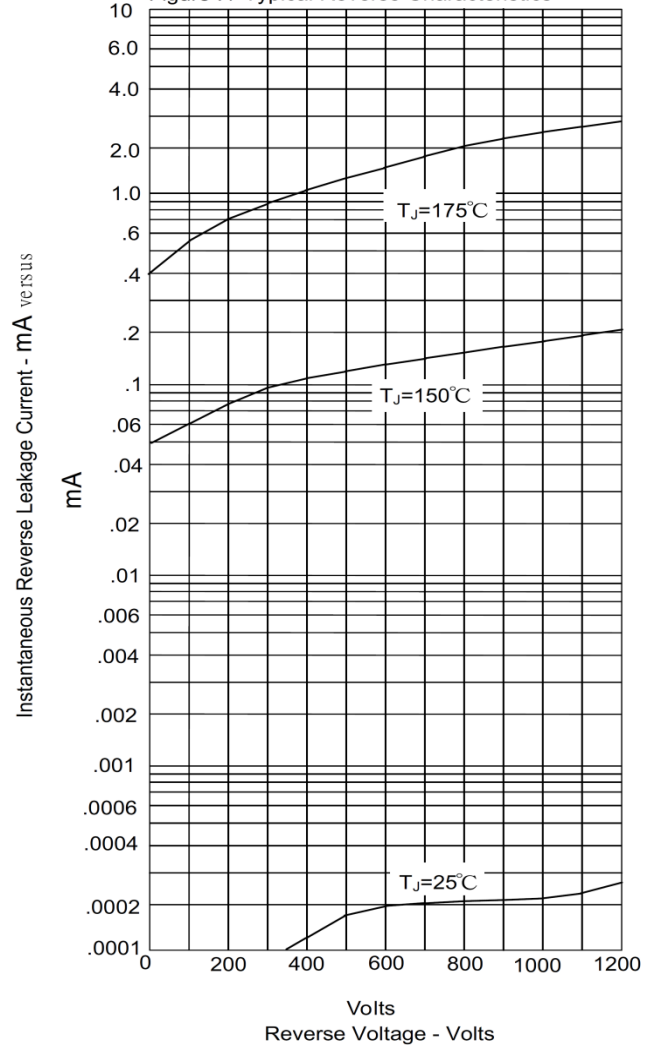
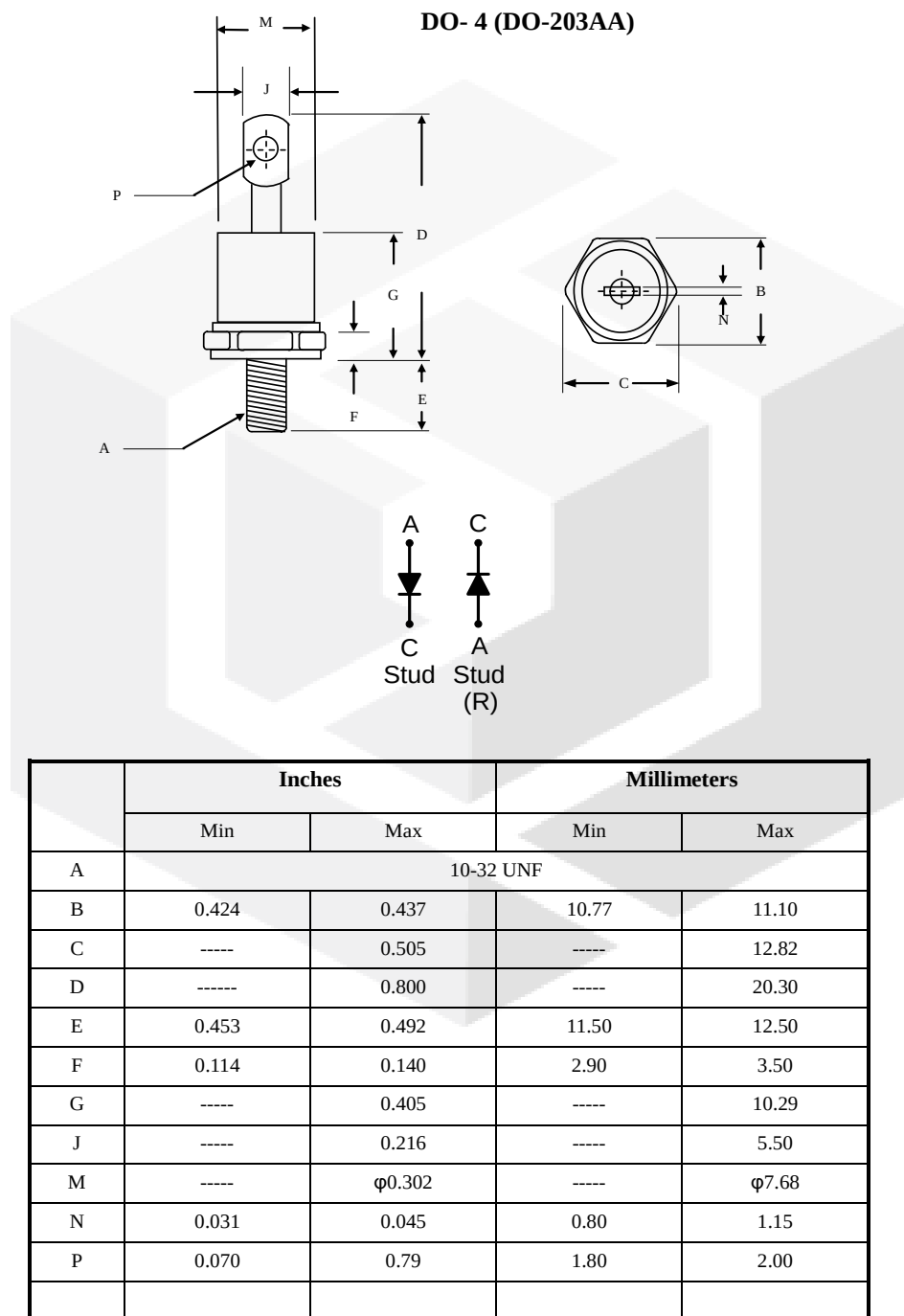


Figure .4-Typical Reverse Characteristics



Package dimensions and terminal configuration

Product is marked with part number and terminal configuration.



Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[GeneSiC Semiconductor:](#)

[S12B](#)