

BCO120S040D1

Silicon Carbide Schottky Diode

1200V, 40A



bestirpower

Description

BCO120S040D1 utilizes bestirpower's advanced silicon carbide diode technology. This technology combines the benefits of excellent low forward voltage and robustness. Consequently, the family is suitable for application requiring high power efficiency

Applications

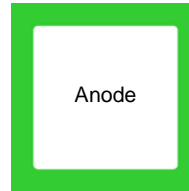
- Solar inverter, UPS
- EV charging station
- Power Factor Correction

Features

V_{RRM}	I_F	$T_{J,max}$	Q_C
1200 V	40 A	175 °C	241 nC

- No reverse recovery current
- Low forward voltage
- 175°C Max junction temperature
- High surge current capability
- Switching behavior independent of temperature

Die Configuration



*Cathode : Bottom



Die Mechanical Parameters

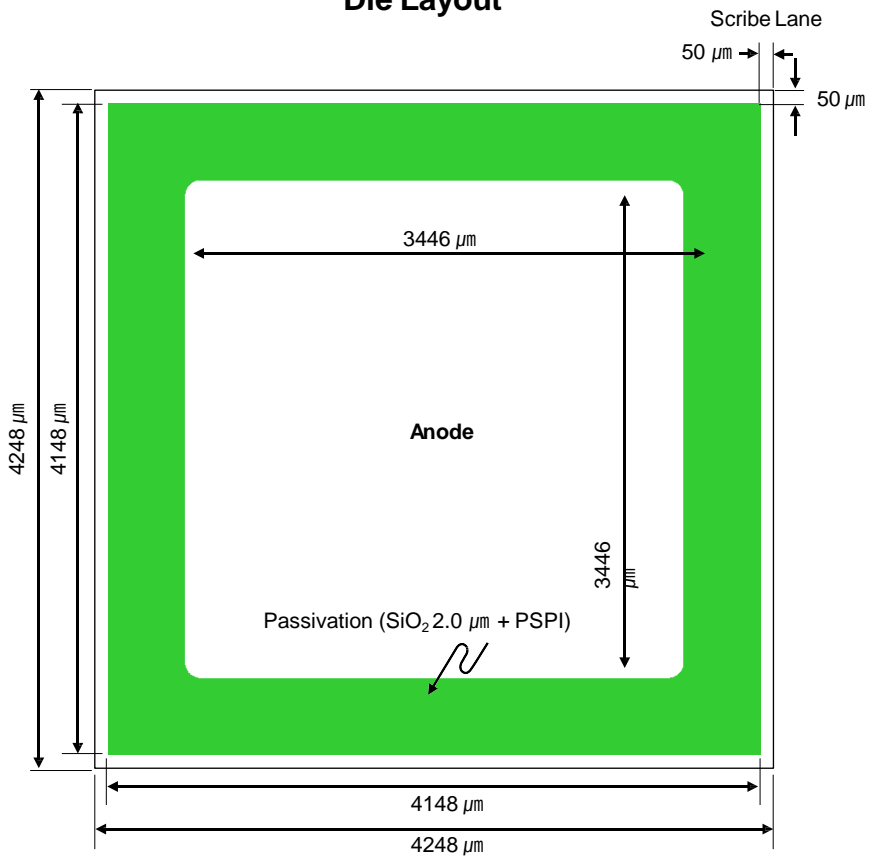
Parameter	Typical Value	Unit
Wafer Diameter	6	inch
Die Dimensions (W x L x T)	4148 x 4148 x 200	μm
Anode Metallization (AlCu)	4	μm
Bottom Cathode Metallization (Ti/Ni/Ag)	0.5	μm
Recommended Source Bond Wire	Al 20mils x 3	ea
Gross Die (Single chip of wafer)	800	ea

Electrical Characteristics ($T_J = 25^\circ\text{C}$) (Note1)

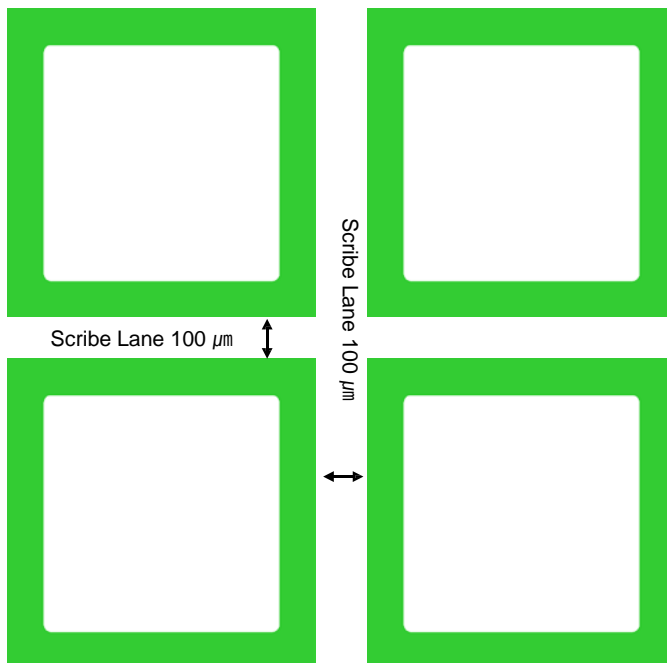
Symbol	Parameter	Test Conditions	Min	Typ	Max	Unit
V_F	Forward Voltage	$I_F = 40\text{ A}, T_C = 25^\circ\text{C}$		1.39	1.70	V
I_R	Reverse Current	$V_R = 1200\text{ V}, T_C = 25^\circ\text{C}$		-	100	μA

1. Base on TO247 package.

Die Layout



Wafer Sawing Information



Disclaimer

Bestirpower reserve the right to make changes, corrections, enhancements, modifications, and improvements to Bestirpower products and/or to this document at any time without notice.

The information given in this document shall in no event be regarded as a guarantee of conditions or characteristics. Bestirpower does not assume any liability for infringement of patents, copyrights, or other intellectual property rights of third parties by or arising from the use of Products or technical information described in this document.

This document is the property of Bestirpower Co., LTD., and not allowed to copy or transformed to other format if not under the authority approval.

© 2023 Bestirpower – All rights reserved