

# HCO120S40D1

## SiC Silicon Carbide Schottky Diode

1200V, 40A

### Description

The 1200V SiC is an advanced Power Master Semiconductor's silicon carbide diode family. This technology combines the benefits of excellent low forward voltage and robustness. Consequently, the SiC 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

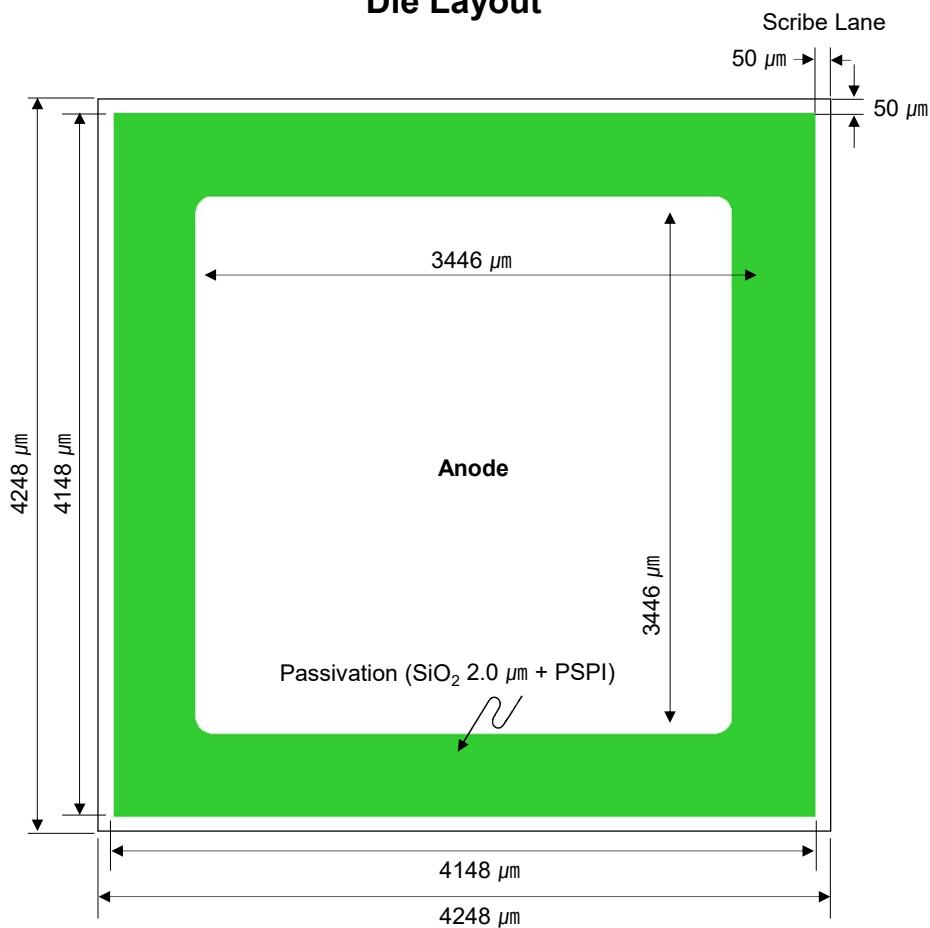
Parameter	Typical Value	Unit
Wafer Diameter	6	inch
Die Dimensions (W x L x T)	4248 x 4248 x 200	µm
Anode Metallization (AlCu)	4	µm
Bottom Cathode Metallization (Ti/Ni/Ag)	0.5	µm
Recommended Source Bond Wire	Al 20mils x 3	ea
Gross Die (Single chip of wafer)	840	ea

### 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

