

HCO120S40D1

eSiC Silicon Carbide Schottky Diode

1200V, 40A

Description

The 1200V eSiC 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 eSiC family is suitable for application requiring high power efficiency.

Applications

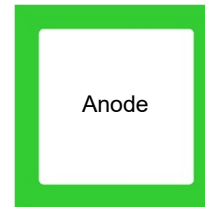
- Solar inverter, UPS
- EV charging station
- Power Factor Correction

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

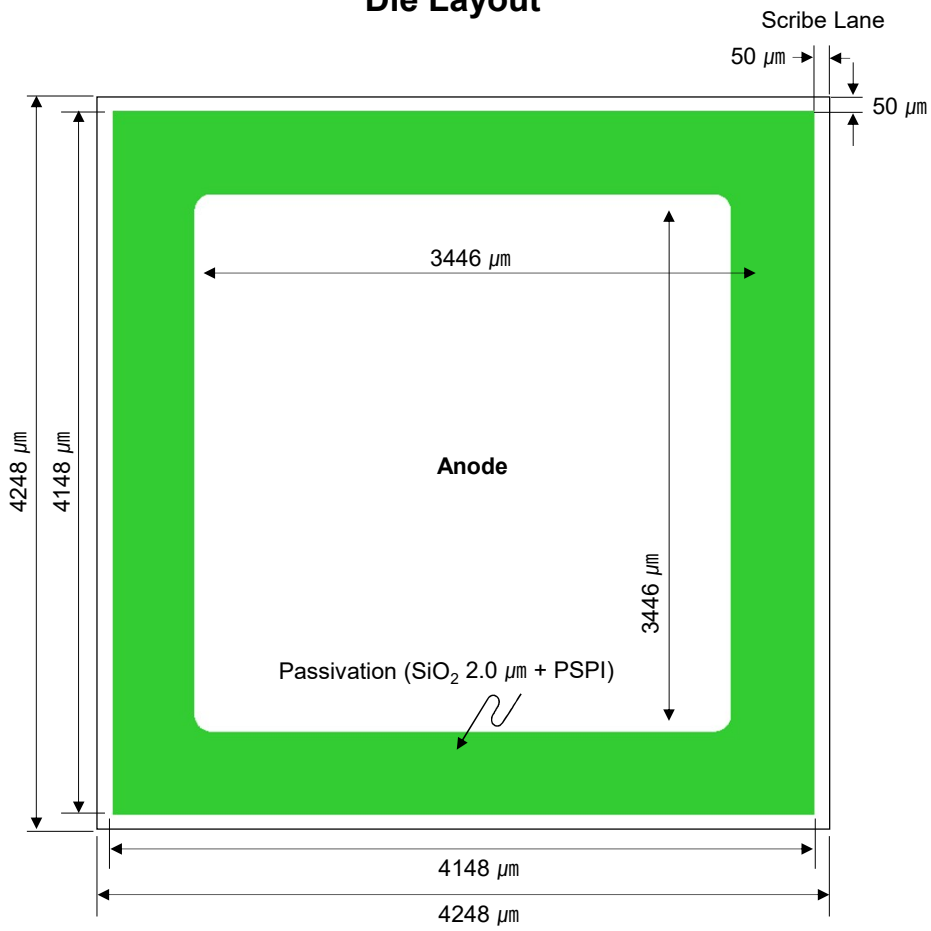
Parameter	Typical Value	Unit
Wafer Diameter	6	inch
Die Dimensions (W x L x T)	4248 x 4248 x 200	μm
Anode Metallization (AlCu)	4	μm
Bottom Cathode Metallization (Ti/Ni/Ag)	0.5	μm
Recommended Source Bond Wire	Al 20mils x 3	ea
Gross Die (Single chip of wafer)	840	ea

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

