

HCO120S30D1

eSiC Silicon Carbide Schottky Diode

1200V, 30A

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

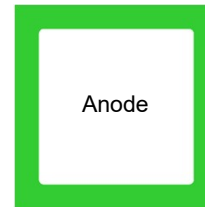
- Solar inverter, UPS
- EV charging station
- Power Factor Correction

Features

| V_{RRM} | I_F | $T_{J,max}$ | Q_C |
|-----------|-------|-------------|--------|
| 1200 V | 30 A | 175 °C | 180 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

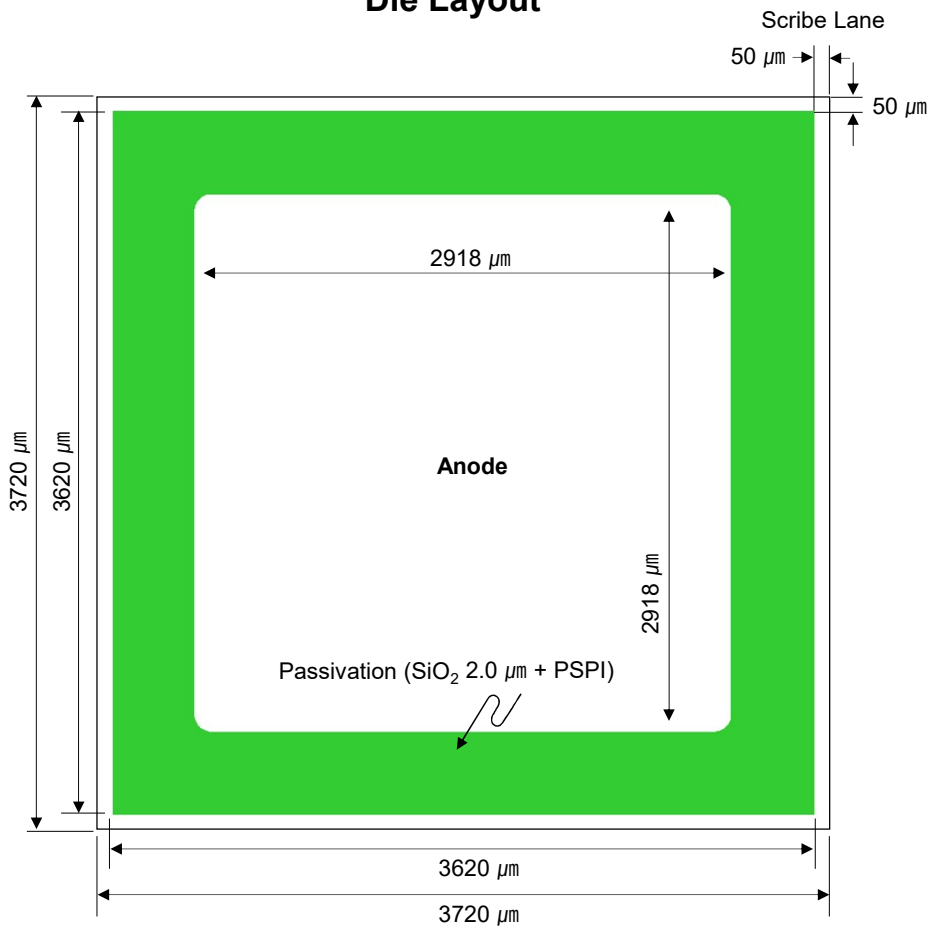
| Parameter | Typical Value | Unit |
|---|-------------------|------|
| Wafer Diameter | 6 | inch |
| Die Dimensions (W x L x T) | 3720 x 3720 x 200 | μm |
| Anode Metallization (AlCu) | 4 | μm |
| Bottom Cathode Metallization (Ti/Ni/Ag) | 0.5 | μm |
| Recommended Source Bond Wire | Al 20mils x 2 | ea |
| Gross Die (Single chip of wafer) | 1,114 | ea |

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

| Symbol | Parameter | Test Conditions | Min | Typ | Max | Unit |
|--------|-----------------|--|-----|------|------|------|
| V_F | Forward Voltage | $I_F = 30 \text{ A}, T_C = 25^\circ\text{C}$ | | 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

