

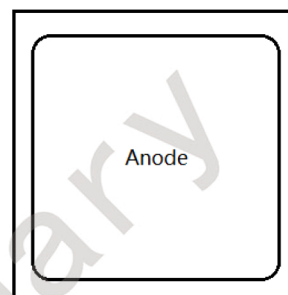
# GSD20120

## 1200V Silicon Carbide Schottky Diode



### Features

- Negligible reverse recovery
- High surge current
- Positive temperature coefficient
- Higher frequency
- Halogen-free / RoHS compliant



### Applications

- SMPS
- Solar inverter
- Data Center
- UPS

### Benefits

- ◆ High-speed switching
- ◆ Low heat dissipation requirements
- ◆ Reduce size and cost of the system
- ◆ High-reliability

### Die Information

Wafer Size	150 mm
Die Size	3200 × 3200 $\mu\text{m}^2$ (exclude SL)
Scribe Line Size	80 $\mu\text{m}$
Die Thickness	175 $\mu\text{m}$
Anode Pad Opening Size	2870 × 2870 $\mu\text{m}^2$
Gross Die	1452 ea
Top Metallization	Al, 4 $\mu\text{m}$
Back Metallization	Ti/Ni/Ag, 2.5 $\mu\text{m}$
Frontside Passivation	Polyimide
Wire Bond	Al, 15mil×2 (recommend)

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### Electrical Characteristics (Wafer Type)

#### Maximum Ratings<sup>\*2</sup> (Tc=25°C unless otherwise noted)

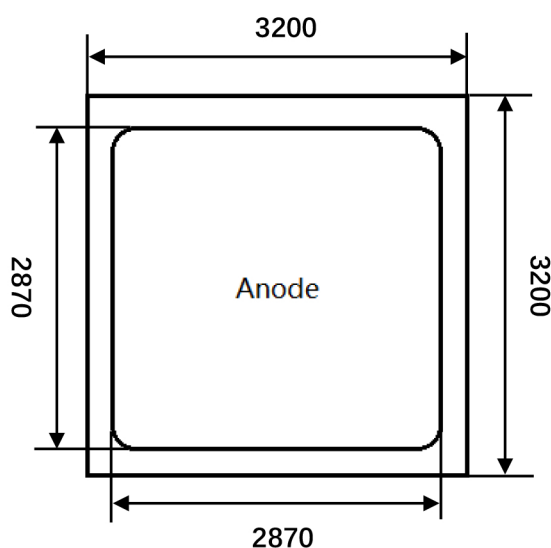
Symbol	Parameter		Value	Unit
$V_{RRM}$	Repetitive peak reverse voltage		1200	V
$I_F$	Continuous forward current	Tc=159°C	20	A
$I_{FSM}$	Non-repetitive forward surge current	t <sub>p</sub> =10ms, Half sine pulse	120	A
$I_{FRM}$	Repetitive Peak Forward Surge Current	t <sub>p</sub> =10ms, Half sine pulse	105	A

\*2. Based on TO-220-2 package

### Static Electrical Characteristics (Tc=25°C unless otherwise noted)

Symbol	Parameter	Test Conditions	Value			Unit
			Min.	Typ.	Max.	
$V_R$	Reverse blocking voltage	$I_R=250\mu A$ , Tc=25°C	1200	-	-	V
$I_R$	Reverse current	$V_R=1200V$ , Tc=25°C	-	2.0	150	μA
$V_F$	Forward voltage	$I_F=10A$ , Tc=25°C	-	1.25	-	V
		$I_F=20A$ , Tc=25°C	-	1.44	1.70	V

### Die Layout (Unit : μm)



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### Announcement

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