

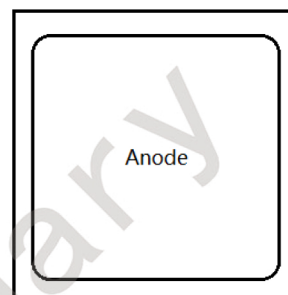
# GSD20060

## 650V Silicon Carbide Schottky Diode



### Features

- High surge current capability
- No reverse recovery
- Positive Temperature Coefficient
- Easy to paralleling
- Halogen-free / RoHS compliant



### Applications

- Solar inverter
- Power factor correction
- Data Center
- Switch mode power supply

### Benefits

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

### Die Information

Wafer Size	150 mm
Die Size	2580 × 2580 $\mu\text{m}^2$ (exclude SL)
Scribe Line Size	80 $\mu\text{m}$
Die Thickness	175 $\mu\text{m}$
Anode Pad Opening Size;	2330 × 2330 $\mu\text{m}^2$
Gross Die	2244 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)

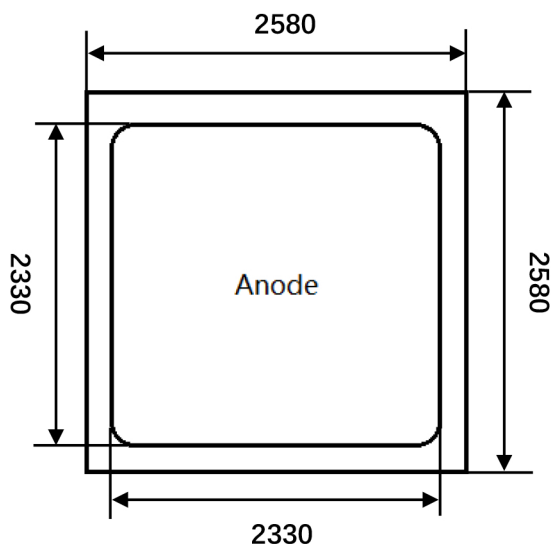
Symbol	Parameter		Value	Unit
$V_{RRM}$	Repetitive peak reverse voltage		650	V
$I_F$	Continuous forward current	Tc=154°C	20	A
$I_{FSM}$	Non-repetitive forward surge current	$t_p=10ms$ , Half sine pulse	172	A
$I_{FRM}$	Repetitive Peak Forward Surge Current	$t_p=10ms$ , Half sine pulse	164	A

\*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	$I_R=100\mu A$	650	-	-	V
$I_R$	Reverse current	$V_R=650V$	-	6	100	$\mu A$
$V_F$	Forward voltage	$I_F=10A$	-	1.15	-	V
		$I_F=20A$	-	1.34	1.6	V

#### Die Layout (Unit : $\mu m$ )



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### Announcement

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