

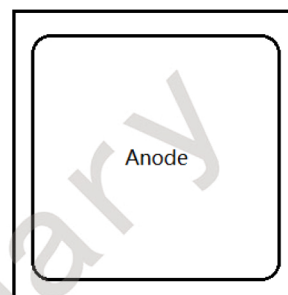
GSD40060

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	3300 × 3300 μm^2 (exclude SL)
Scribe Line Size	80 μm
Die Thickness	175 μm
Anode Pad Opening Size;	3050 × 3050 μm^2
Gross Die	1385 ea
Top Metallization	Al, 4 μm
Back Metallization	Ti/Ni/Ag, 2.5 μm
Frontside Passivation	Polyimide
Wire Bond	Al, 20mil×2 (recommend)

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Electrical Characteristics (Wafer Type)

Maximum Ratings^{*2} (Tc=25°C unless otherwise noted)

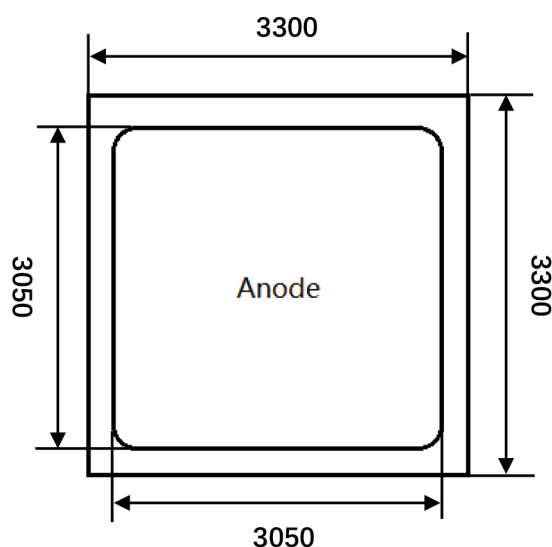
Symbol	Parameter		Value	Unit
V_{RRM}	Repetitive peak reverse voltage		650	V
I_F	Continuous forward current	Tc=146°C	40	A
I_{FSM}	Non-repetitive forward surge current	$t_p=10ms$, Half sine pulse	262	A
I_{FRM}	Repetitive Peak Forward Surge Current	$t_p=10ms$, Half sine pulse	218	A

*2. Based on TO-247-2 package

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

Symbol	Parameter	Test Conditions	Value			Unit
			Min.	Typ.	Max.	
V_R	Reverse blocking voltage	$I_R=200\mu A$	650	-	-	V
I_R	Reverse current	$V_R=650V$	-	8	100	μA
V_F	Forward voltage	$I_F=20A$	-	1.21	-	V
		$I_F=40A$	-	1.42	1.6	V

Die Layout (Unit : μm)



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Announcement

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