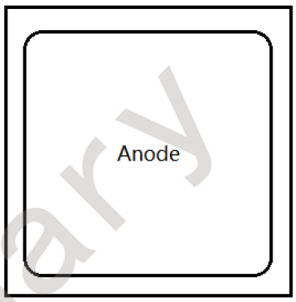
GSD40120

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	4360 × 4360 um^2	(exclude SL)
Scribe Line Size	80 um	
Die Thickness	175 um	
Anode Pad Opening Size	4033 × 4033 um^2	
Gross Die	784 ea	
Top Metallization	Al, 4um	
Back Metallization	Ti/Ni/Ag, 2.5um	
Frontside Passivation	Polyimide	
Wire Bond	Al, 15mil×2	(recommend)

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Electrical Characteristics (Wafer Type)

Maximum Ratings*2 (Tc=25℃ unless otherwise noted)

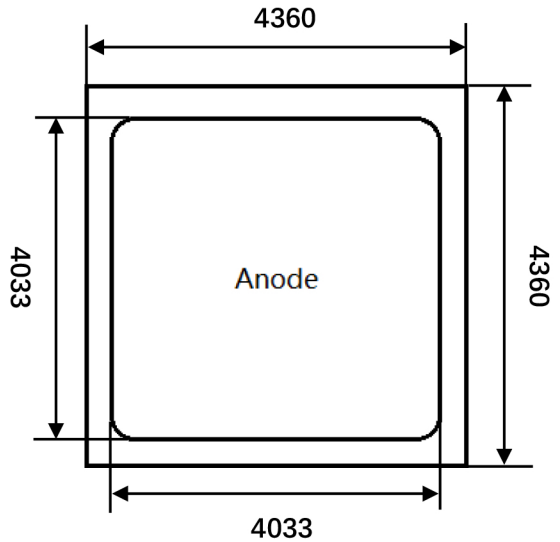
Symbol	Parameter		Value	Unit
V_{RRM}	Repetitisve peak reverse voltage		1200	V
I_F	Continuous forward current	Tc=152℃	40	A
I_{FSM}	Non-repetitive forward surge current	t_p=10ms,Half sine pulse	249	A
I_{FRM}	Repetitive Peak Forward Surge Current	t_p=10ms,Half sine pulse	208	A

*2. Based on TO-247-2 package

Static Electrical Characteristics (Tc=25℃ unless otherwise noted)

Symbol	Parameter	Test Conditions	Value			Unit
			Min.	Typ.	Max.	
V_R	Reverse blocking voltage	I_R=150uA	1200	-	-	V
I_R	Reverse current	V_R=1200V	-	9.0	150	uA
V_F	Forward voltage	I_F=20A	-	1.23	-	V
		I_F=40A	-	1.49	1.70	V

Die Layout (Unit : um)



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Announcement

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