NGTD17R120F2

Fast Switching Rectifier Die

Fast switching low Vf rectifier die for free−wheeling applications.

Features

- Fast Switching
- Low Vf

Typical Applications

- Industrial Motor Control
- Solar PV Inverters

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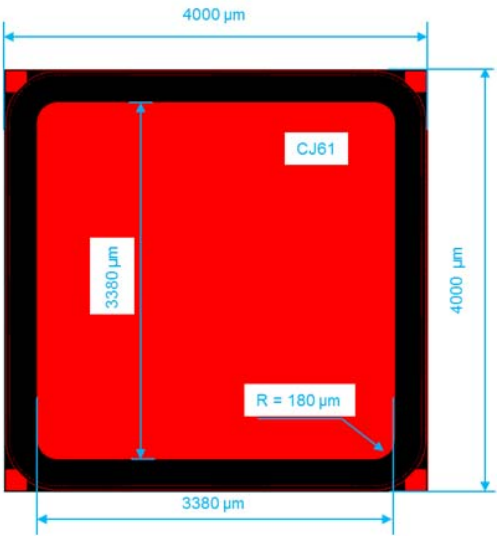
V_{RRM} = 1200 V
I_F = Limited by $T_{J(max)}$

DIODE DIE

DIE OUTLINE



MAXIMUM RATINGS

Parameter	Symbol	Value	Unit
Peak Reverse Voltage	V_{RRM}	1200	V
Max Forward Conduction Current	I_F	(Note 1)	A
Maximum Junction Temperature	T_J	175	°C

Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.

1. Depending on thermal properties of assembly.

MECHANICAL DATA

Parameter	Value	Unit
Die Size	4000 x 4000	µm²
Die Thickness	5.5	mils
Wafer Size	150	mm
Top Pad Size (Anode)	3380 x 3380	µm²
Top Metal (Anode)	4 µm AlSi	
Back Metal (Cathode)	2 µm TiNiAg	
Max possible chips per wafer	769	
Passivation frontside	Oxide−Nitride	
Reject ink dot size	25 mils	
Recommended storage environment: In original container, in dry nitrogen, or temperature of 18−28°C, 30−65%RH	Type: Bare Wafer in Jar Storage time: < 36 months	Type: Die on tape in ring−pack Storage time: < 3 months

ORDERING INFORMATION

Device	Inking?	Shipping
NGTD17R120F2WP	Yes	Bare Wafer in Jar
NGTD17R120F2SWK	Yes	Sawn Wafer on Tape

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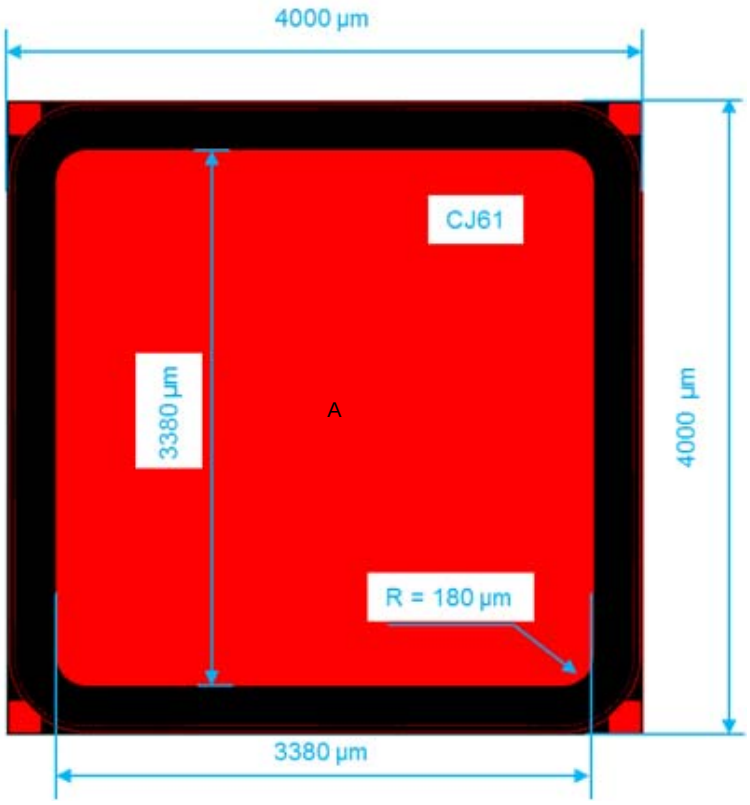
ELECTRICAL CHARACTERISTICS (T_J = 25°C, unless otherwise specified)

Parameter	Test Conditions	Symbol	Min	Typ	Max	Units
STATIC CHARACTERISTICS						
Forward Voltage	I_F = 35 A, T_J = 25°C	V_F		1.8		V
Reverse Voltage	I_R = 400 μA, T_J = 25°C	V_R	1200			V
Reverse Current	V_R = 1200 V, T_J = 25°C	I_R	−1.0		1.0	μA

Product parametric performance is indicated in the Electrical Characteristics for the listed test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.

DIE LAYOUT



A = Anode pad
All dimensions in μm

Further Electrical Characteristic

Switching characteristics and thermal properties are depending strongly on module design and mounting technology and can therefore not be specified for a bare die.

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