



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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NGTD9R120F2

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

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	2900 x 2900	μm^2
Die Thickness	10	mils
Wafer Size	150	mm
Top Pad Size (Anode)	2263 x 2263	μm^2
Top Metal (Anode)	4 μm AlSi	
Back Metal (Cathode)	2 μm TiNiAg	
Max possible chips per wafer	1535	
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
NGTD9R120F2WP	Yes	Bare Wafer in Jar
NGTD9R120F2SWK	Yes	Sawn Wafer on Tape

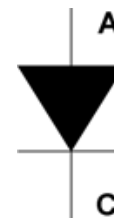


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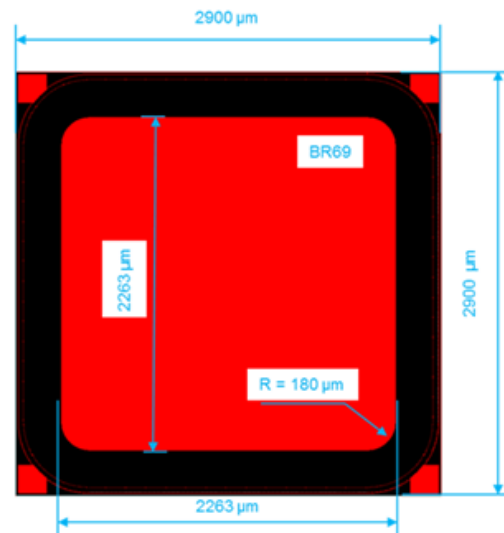
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$V_{RRM} = 1200 \text{ V}$
 $I_F = \text{Limited by } T_{J(\text{max})}$

DIODE DIE



DIE OUTLINE



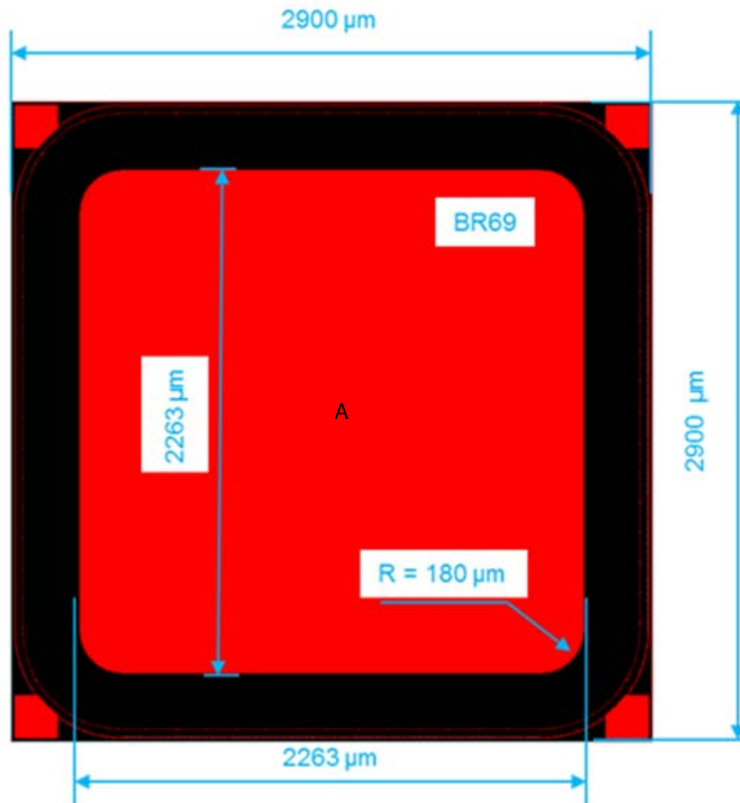
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ELECTRICAL CHARACTERISTICS ($T_J = 25^\circ\text{C}$, unless otherwise specified)

Parameter	Test Conditions	Symbol	Min	Typ	Max	Units
STATIC CHARACTERISTICS						
Forward Voltage	$I_F = 15\text{ A}$, $T_J = 25^\circ\text{C}$	V_F		2.0	2.6	V
Reverse Voltage	$I_R = 250\ \mu\text{A}$, $T_J = 25^\circ\text{C}$	V_R	1200			V
Reverse Current	$V_R = 1200\text{ V}$, $T_J = 25^\circ\text{C}$	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

NGTD9R120F2

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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