

Fast Switching Rectifier Die NGTD9R120F2

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)	Α	
Maximum Junction Temperature	TJ	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	μm²	
Die Thickness	10	mils	
Wafer Size	150	mm	
Top Pad Size (Anode)	2263 x 2263	μm²	
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		

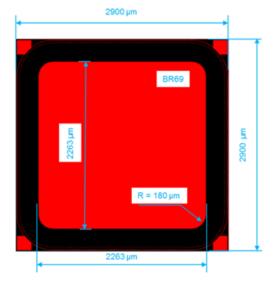
1

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

DIODE DIE



DIE OUTLINE



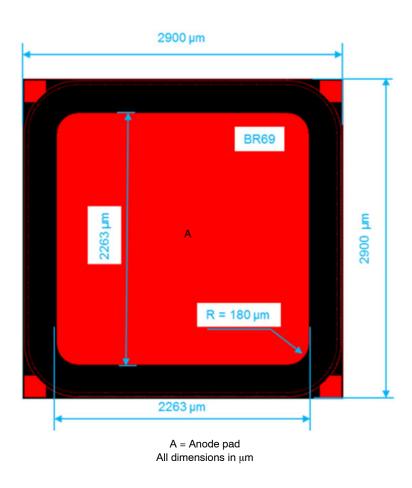
NGTD9R120F2

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

Parameter	Test Conditions	Symbol	Min	Тур	Max	Units		
STATIC CHARACTERISTICS								
Forward Voltage	I _F = 15 A, T _J = 25°C	V_{F}		2.0	2.6	٧		
Reverse Voltage	I _R = 250 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	μΑ		

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



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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