NSR10F20NXT5G

Schottky Barrier Diode

These Schottky barrier diodes are optimized for low forward voltage drop and low leakage current and are offered in a Chip Scale Package (CSP) to reduce board space. The low thermal resistance enables designers to meet the challenging task of achieving higher efficiency and meeting reduced space requirements.

Features

- Low Forward Voltage Drop 430 mV @ 1.0 A
- Low Reverse Current 20 μA @ 10 V VR
- 1.0 A of Continuous Forward Current
- ESD Rating Human Body Model: Class 3B
 - Machine Model: Class C
- High Switching Speed
- These Devices are Pb–Free, Halogen Free/BFR Free and are RoHS Compliant

Typical Applications

- LCD and Keypad Backlighting
- Camera Photo Flash
- Buck and Boost dc-dc Converters
- Reverse Voltage and Current Protection
- Clamping & Protection

Markets

- Mobile Handsets
- MP3 Players
- Digital Camera and Camcorders
- Notebook PCs & PDAs
- GPS

MAXIMUM RATINGS

	Rating	Symbol	Value	Unit
Reverse Voltage		V _R	20	V
Forward Current	(DC)	IF	1.0	Α
Forward Surge C	Forward Surge Current (60 Hz @ 1 cycle)		18	Α
Repetitive Peak (Pulse Wave = 1	Forward Current sec, Duty Cycle = 66%)	I _{FRM}	18 4.0	Α
ESD Rating:	Human Body Model Machine Model	ESD	> 8 > 400	kV V

Stresses exceeding Maximum Ratings may damage the device. Maximum Ratings are stress ratings only. Functional operation above the Recommended Operating Conditions is not implied. Extended exposure to stresses above the Recommended Operating Conditions may affect device reliability.

1



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20 V SCHOTTKY BARRIER DIODE





DSN2 (0502) CASE 152AD

MARKING DIAGRAM

PIN 1 10F20 YYY

10F20 = Specific Device Code YYY = Year Code

ORDERING INFORMATION

Device	Package	Shipping†			
NSR10F20NXT5G	DSN2 (Pb-Free)	5000 / Tape & Reel			

†For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specifications Brochure, BRD8011/D.

NSR10F20NXT5G

THERMAL CHARACTERISTICS

Characteristic	Symbol	Min	Тур	Max	Unit
Thermal Resistance Junction-to-Ambient (Note 1) Total Power Dissipation @ T _A = 25°C	R _{θJA} P _D			228 548	°C/W mW
Thermal Resistance Junction-to-Ambient (Note 2) Total Power Dissipation @ T _A = 25°C	R _{θJA} P _D			85 1.47	°C/W W
Storage Temperature Range	T _{stg}			-40 to +125	°C
Junction Temperature	TJ			+150	°C

- 1. Mounted onto a 4 in square FR-4 board 50 mm sq. 1 oz. Cu 0.06" thick single sided. Operating to steady state.
- 2. Mounted onto a 4 in square FR-4 board 1 in sq. 1 oz. Cu 0.06" thick single sided. Operating to steady state.

ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise noted)

Characteristic	Symbol	Min	Тур	Max	Unit
Reverse Leakage (V _R = 10 V) (V _R = 20 V)	I _R			20 100	μΑ
Forward Voltage (I _F = 0.5 A) (I _F = 1.0 A)	V _F		0.380 0.430	0.400 0.450	٧

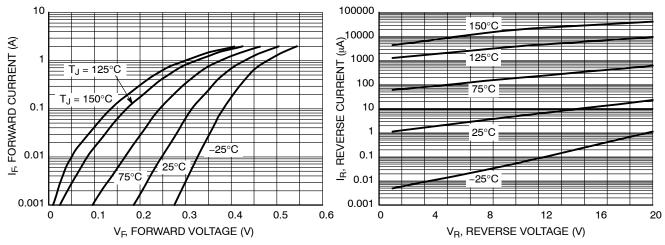


Figure 1. Forward Voltage

Figure 2. Typical Reverse Current

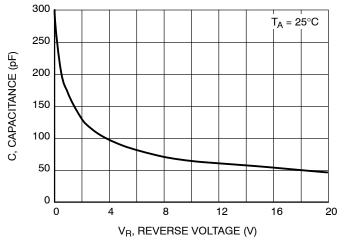
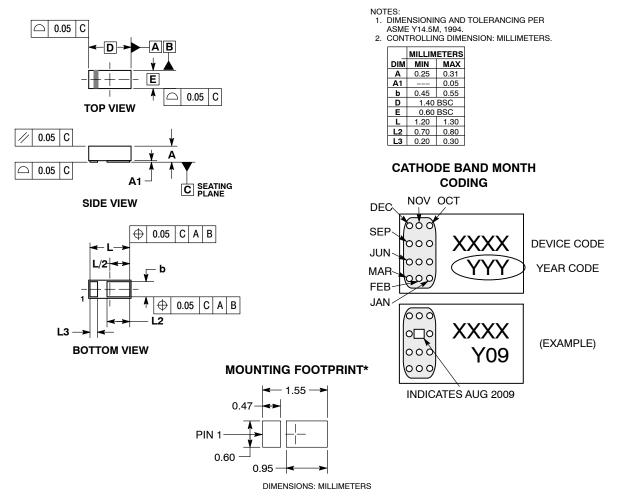


Figure 3. Typical Capacitance

NSR10F20NXT5G

PACKAGE DIMENSIONS

DSN2, **1.4x0.6**, **0.75P**CASE 152AD
ISSUE B



See Application Note AND8464/D for more mounting details

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^{*}For additional information on our Pb-Free strategy and soldering details, please download the ON Semiconductor Soldering and Mounting Techniques Reference Manual, SOLDERRM/D.