BORN SEMICONDUCTOR

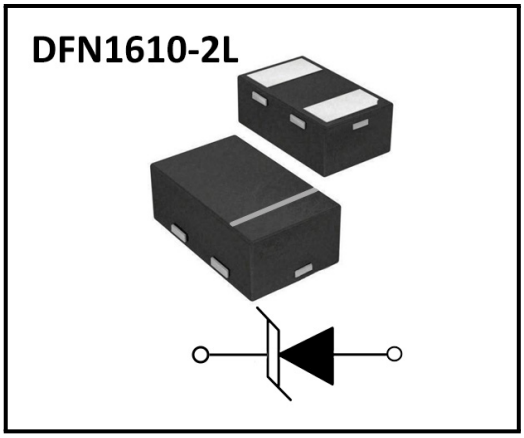
BN5A2V30

Schottky Barrier Diode

Features

- The plastic package carries UL Flammability Classification 94V-0
- For surface mounted applications
- Low power loss, high efficiency
- Built-in strain relief, ideal for automated placement
- High forward surge current capability
- High temperature soldering guaranteed:260°C/10 seconds at terminals
- ESD Rating:
  - Human Body Model: Class 3B
  - Machine Model: Class C

Package



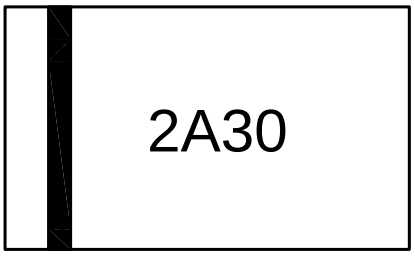
Applications

- Low voltage, high frequency inverters
- Freewheeling
- DC/DC converters
- Polarity protectionapplication

Mechanical Data

- Package: DFN1610-2L
- UL Flammability Classification Rating 94V-0
- Packaging: Tape and Reel
- RoHS/WEEE Compliant

Marking



Ordering information

Order code	Package	Marking	Base qty	Delivery mode
BN5A2V30	DFN1610-2L	2A30	3K	Tape and reel

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Specifications are subject to change without notice.
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Revision: 2022-Jan-1-A

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Maximum Ratings @T_A=25°C unless otherwise noted

Symbol	Parameter	Value	Unit
V_{RRM}	Maximum repetitive peak reverse voltage	30	V
V_{RMS}	Maximum RMS voltage	21	V
I_{AV}	Maximum average forward rectified current	2	A
I_{FSM}	Peak Forward Surge Current (8.3ms single half sine wave or eq. square wave)	30	A
I^2T	I^2t Rating for Fusing (t < 8.3ms)	3.735	A2s
$R_{\theta JA}$	Typical Thermal Resistance Junction to Ambient	500	°C/W
T_J	Operating Temperature Range	-55 to +125	°C
T_{STG}	Storage Temperature	-55 to +150	°C

Electrical Characteristics @T_A=25°C unless otherwise noted

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_{BR}	Breakdown Voltage	I_{BR}=1mA	45	–	–	V
V_F	Forward Voltage	I_F=1A	–	–	0.5	V
		I_F=2A	–	–	0.55	
I_R	Maximum DC reverse current	V_R=30V, T_A=25°C	–	–	50	uA
		V_R=30V, T_A=100°C	–	–	1000	
T_{rr}	Maximum reverse recovery time	I_F = 10mA,I_R=10mA,R=100Ω	–	5	–	nS

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Typical Performance Characteristics(T_J = 25 °C, unless otherwise noted)

Figure 1: Forward Characteristics

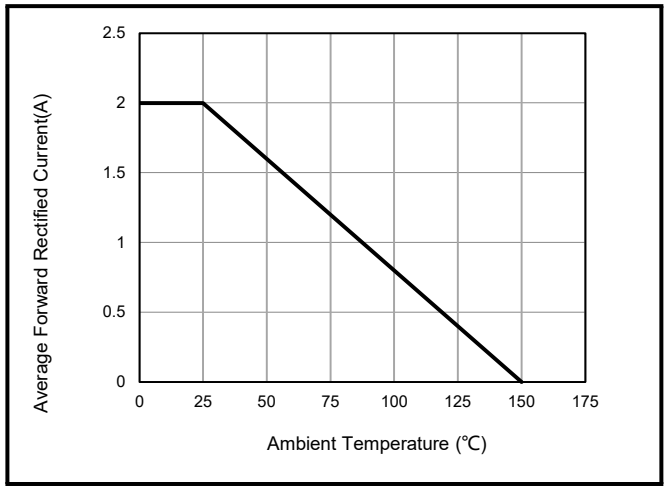


Figure 2: Typical Reverse Characteristics

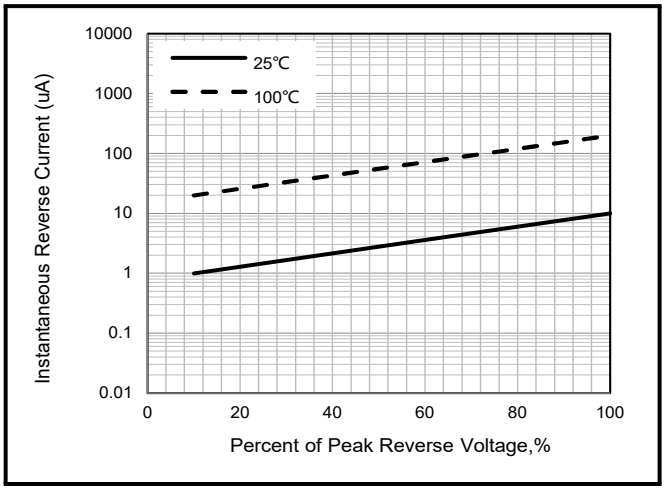


Figure 3: Typical Instantaneous Forward Characteristics

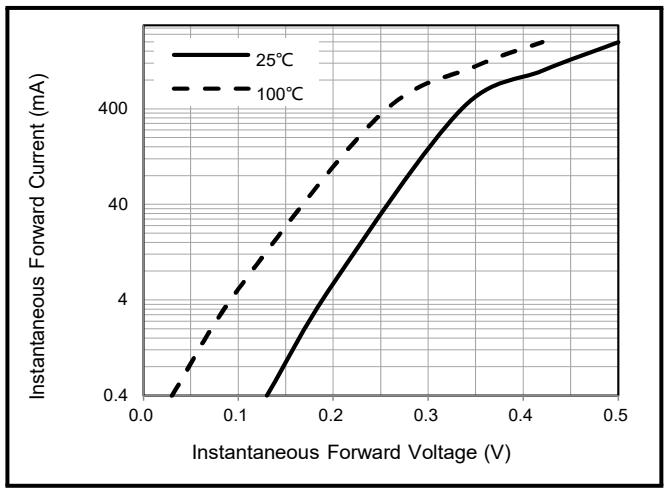
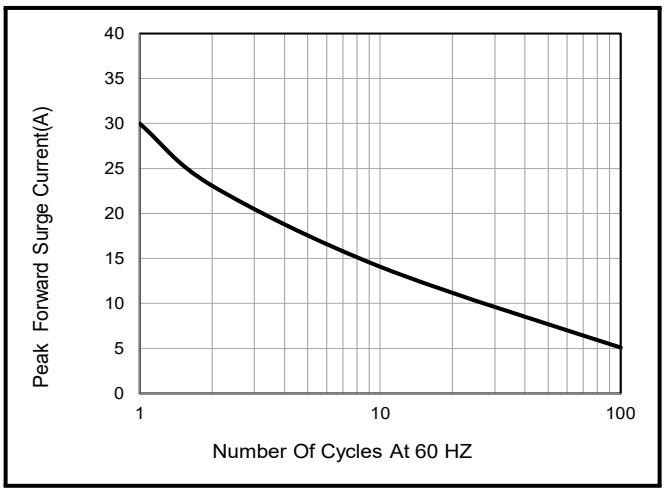


Figure 4:Maximum Non-Repetitive Peak Forward Surge Current



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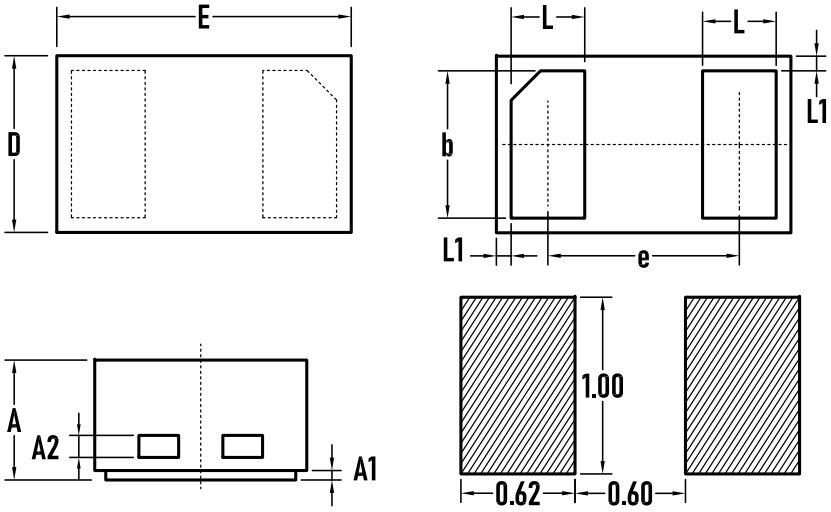
Outline Drawing - DFN1610-2L



SYMBOL	MILLIMETER		
	MIN.	Typ.	MAX.
A	0.45	0.50	0.55
A1	–	0.02	0.05
A2	0.119	0.127	0.135
E	1.55	1.60	1.65
D	0.95	1.00	1.05
b	–	0.80	–
e	1.1039BSC		
L	0.35	0.40	0.45
L1	0.05REF		

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