

## »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



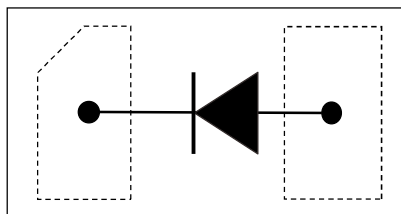
## »Applications

- ◆ Low voltage, high frequency inverters
- ◆ Freewheeling
- ◆ DC/DC converters
- ◆ Polarity protection application

## »Mechanical Data

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

## »Schematic & PIN Configuration



»Absolute Maximum Ratings

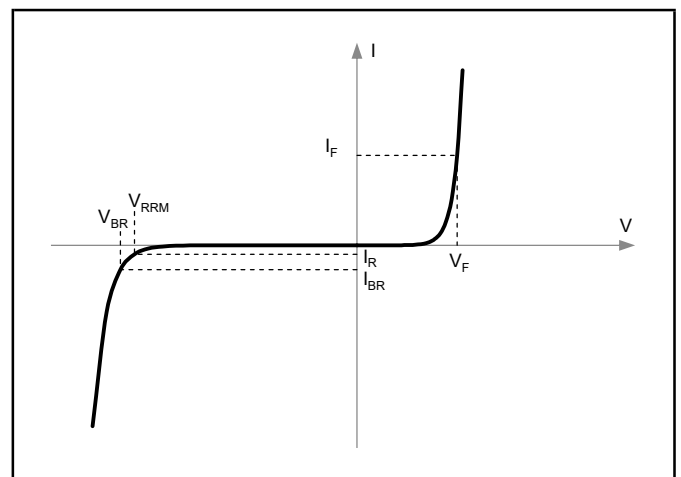
Parameter	Symbol	Value	Units
Maximum repetitive peak reverse voltage	$V_{RRM}$	30	V
Maximum RMS voltage	$V_{RMS}$	21	V
Maximum average forward rectified current	$I_{AV}$	2	A
Peak Forward Surge Current (8.3ms single half sine wave or eq. square wave)	$I_{FSM}$	30	A
I <sup>2</sup> t Rating for Fusing (t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

»Electrical Characteristics

Parameter	Symbol	Conditions	Min	Typ	Max	Units
Breakdown Voltage	$V_{BR}$	$I_{BR} = 1mA$	45			V
Maximum DC reverse current	$I_R$	$V_R = 30V, T_a=25^\circ C$			50	uA
		$V_{RT} = 30V, T_a=100^\circ C$			1000	uA
Forward Voltage	$V_F$	$I_F = 1A$			0.5	V
		$I_F = 2A$			0.55	V
Maximum reverse recovery time	$t_{RR}$	$I_F=10mA, I_R=10/1mA, R=100\Omega$		5		ns

»Electrical Parameters

Symbol	Definition
$V_F$	Forward Voltage
$I_F$	Forward Current
$V_{RRM}$	Maximum repetitive peak reverse voltage
$I_R$	Maximum DC reverse current
$V_{BR}$	Breakdown Voltage
$I_{BR}$	Breakdown Current



»Typical Characteristics

Fig. 1 - Forward Current Derating Curve

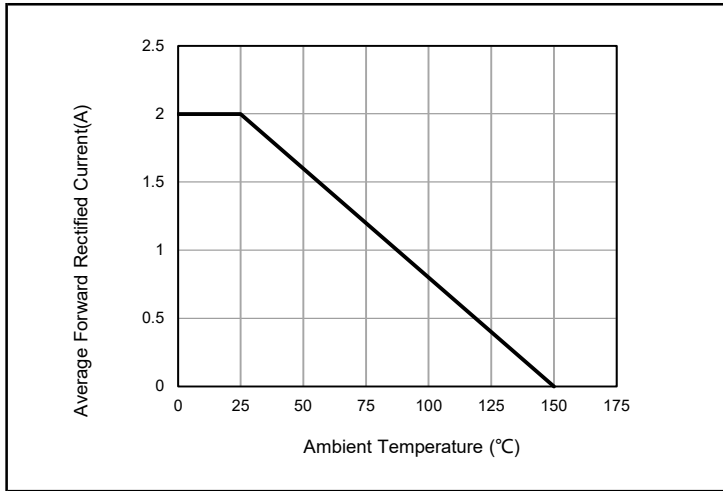


Fig. 2 - Typical Reverse Characteristics

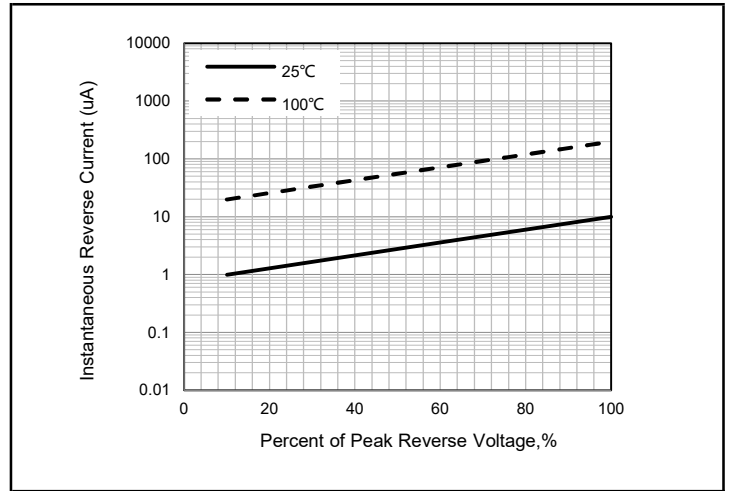


Fig. 3 - Typical Instantaneous Forward Characteristics

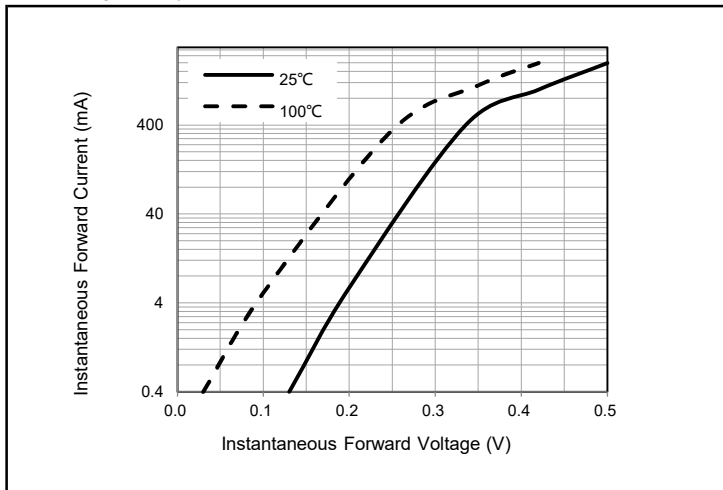
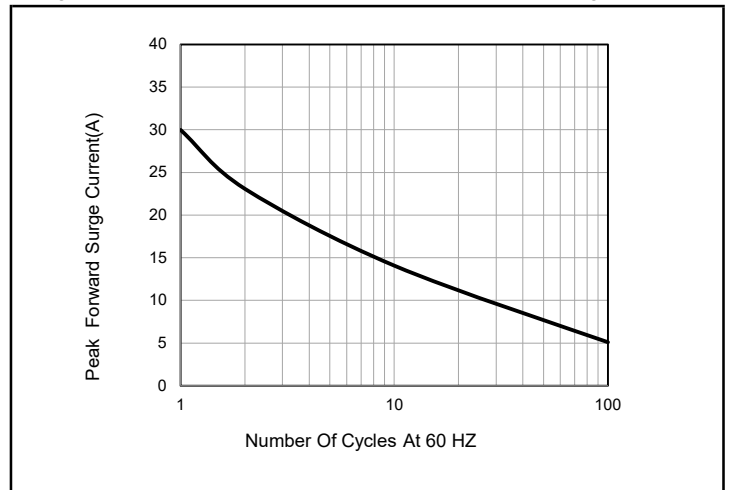
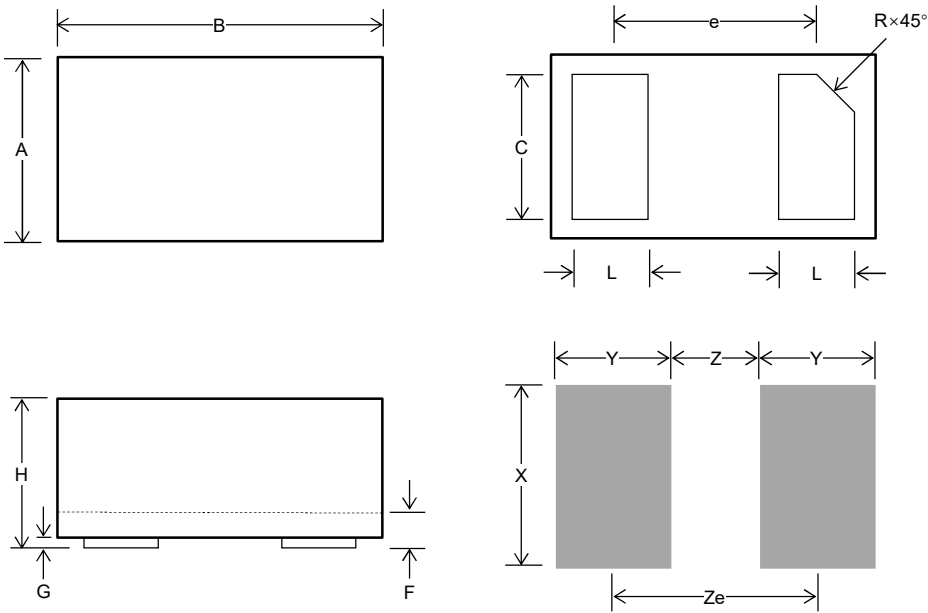


Fig. 4 - Maximum Non-Repetitive Peak Forward Surge Current

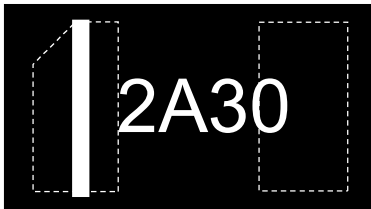


»Outline Drawing



DFN1610			
SYMBOL	Millimeters		
	MIN	NOM	MAX
A	0.95	1	1.05
B	1.55	1.6	1.65
C		0.8	
F		0.15	
G	-	0.02	0.05
H	0.45	0.5	0.55
L	0.35	0.4	0.45
e		1.1	
X		1	
Y		0.625	
Z		0.6	
Ze		1.225	

»Marking



»Ordering Information

Order Code	Package	Base Quantity	Delivery Mode
BN5A2V30	DFN1610	3000 PCS/Reel	Tape and 7"Reel

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