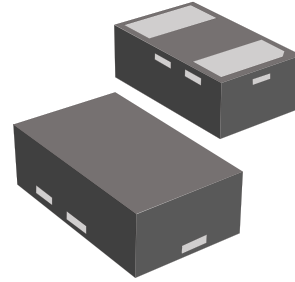


## » Features

- 1620Watts peak pulse power ( $t_p = 8/20\mu s$ )
- Uni-directional configurations
- Solid-state silicon-avalanche technology
- Low clamping voltage
- Low leakage current
- Complies with following standards:
  - IEC 61000-4-2 (ESD) immunity test
    - Air discharge:  $\pm 30KV$
    - Contact discharge:  $\pm 30KV$
  - IEC61000-4-4 (EFT) 40A (5/50ns)
  - IEC61000-4-5 (Lightning) 45A (8/20us)



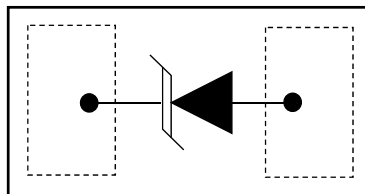
## » Applications

- Computer
- Mobile Phones and Accessories
- Digital Cameras
- Personal Digital Assistants

## » Mechanical Data

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

## » Schematic & PIN Configuration



DFN1610

» **Absolute Maximum Ratings**

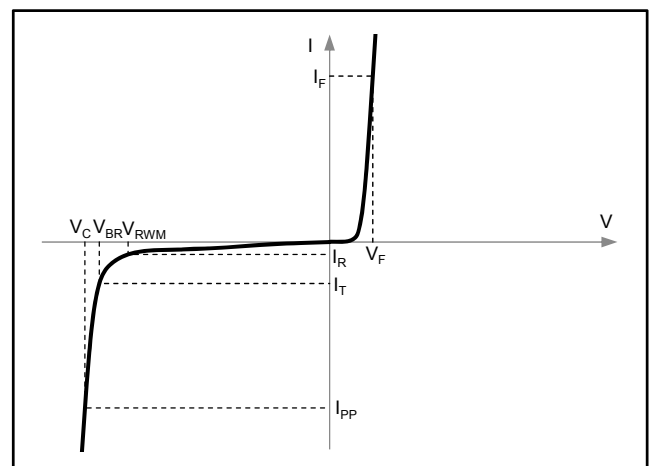
Parameter	Symbol	Value	Units
Reverse Working Voltage	$V_{RWM}$	18	V
Peak Pulse Power (8/20 $\mu$ s)	$P_{PP}$	1620	W
Peak Pulse Current (8/20 $\mu$ s)	$I_{PP}$	45	A
ESD per IEC 61000-4-2 (Air)	$V_{ESD-Air}$	30	KV
ESD per IEC 61000-4-2 (Contact)	$V_{ESD-Contact}$	30	KV
Lead Soldering Temperature	$T_L$	260(10s)	$^{\circ}C$
Operating Temperature Range	$T_J$	-55 to 125	$^{\circ}C$
Storage Temperature Range	$T_{STG}$	-55 to 150	$^{\circ}C$

» **Electrical Characteristics**

Parameter	Symbol	Conditions	Min	Typ	Max	Units
Breakdown Voltage	$V_{BR}$	$I_T = 1mA$	20			V
Reverse Leakage Current	$I_R$	$V_{RWM} = 18V$			0.5	$\mu A$
Clamping Voltage	$V_C$	$I_{PP} = 45A, 8/20\mu s$		33	36	V
Junction Capacitance	$C_J$	$V_{DC} = 0V, f = 1MHz$		250	350	pF

» **Electrical Parameters**

Symbol	Definition
$I_{PP}$	Maximum Reverse Peak Pulse Current
$V_C$	Clamping Voltage @ $I_{PP}$
$V_{RWM}$	Working Peak Reverse Voltage
$I_R$	Maximum Reverse Leakage Current @ $V_{RWM}$
$V_{BR}$	Breakdown Voltage @ $I_T$
$I_T$	Test Current



» Typical Characteristics

Fig.1 - Peak Pulse Power Rating

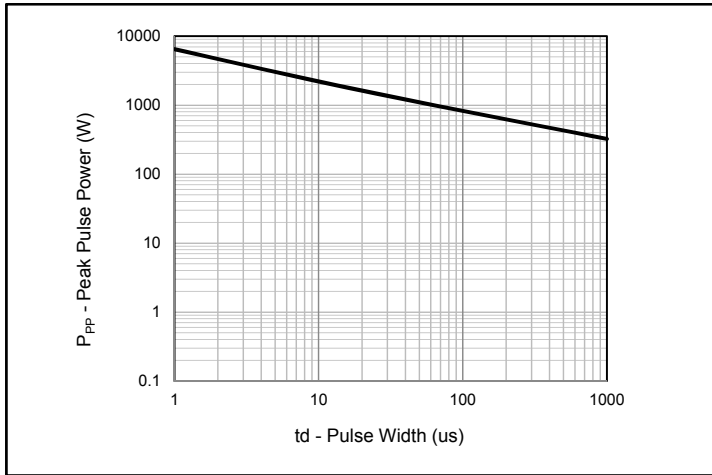


Fig.2 - Pulse Derating Curve

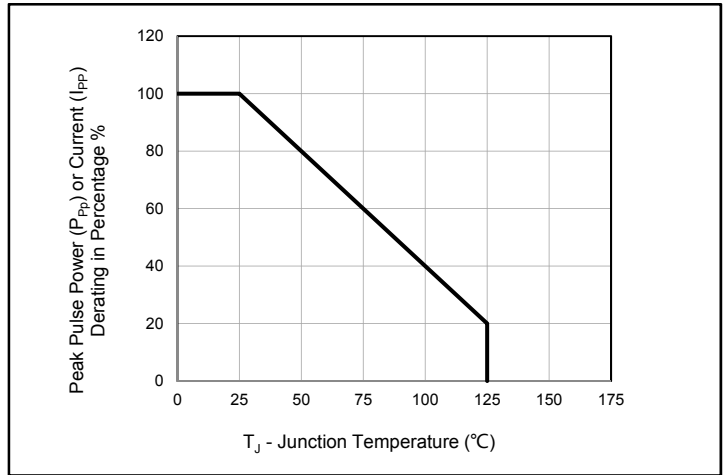


Fig.3 - 8/20us Pulse Waveform

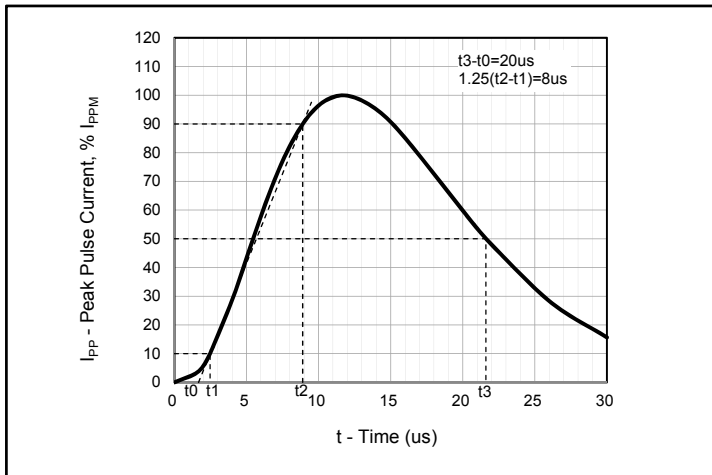
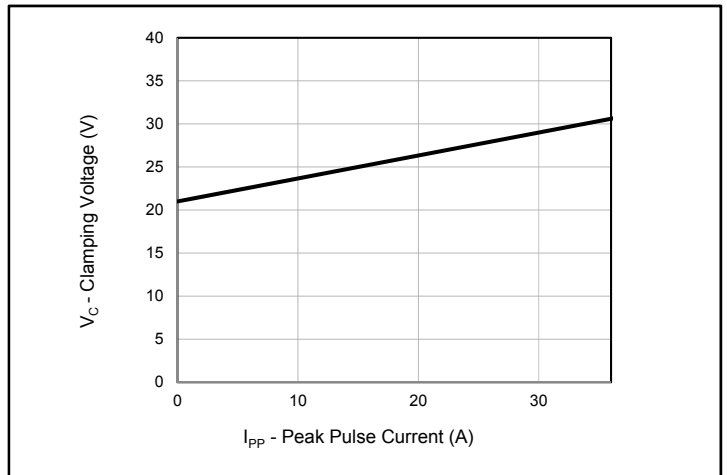
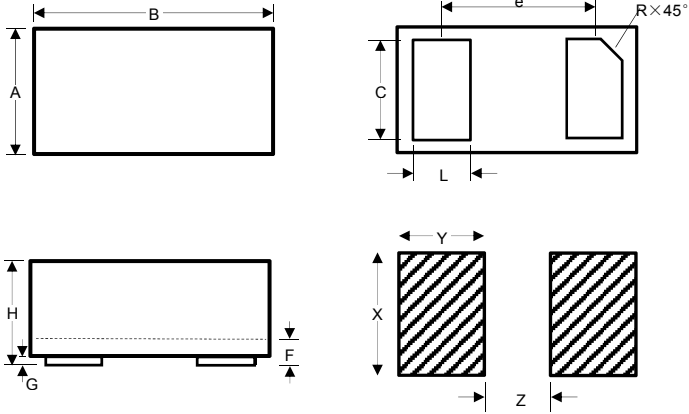


Fig.4 - Clamping Voltage

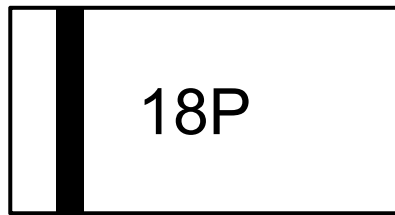


» Outline Drawing



DFN1610						
SYMBOL	Millimeters			Inches		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.95	1	1.05	0.037	0.039	0.041
B	1.55	1.6	1.65	0.061	0.063	0.065
C	0.75	0.8	0.85	0.03	0.031	0.033
L	0.35	0.4	0.45	0.014	0.016	0.018
e1		1.1			0.043	
H	0.45	0.5	0.55	0.018	0.02	0.022
R	0.15	0.2	0.25	0.006	0.008	0.01
X		1			0.039	
Y		0.625			0.025	
Z		0.6			0.024	

» Marking



Marking Code: 18P

» Ordering Information

Order Code	Package	Base Quantity	Delivery Mode
BN5A181V45	DFN1610	3000	Tape and Reel

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