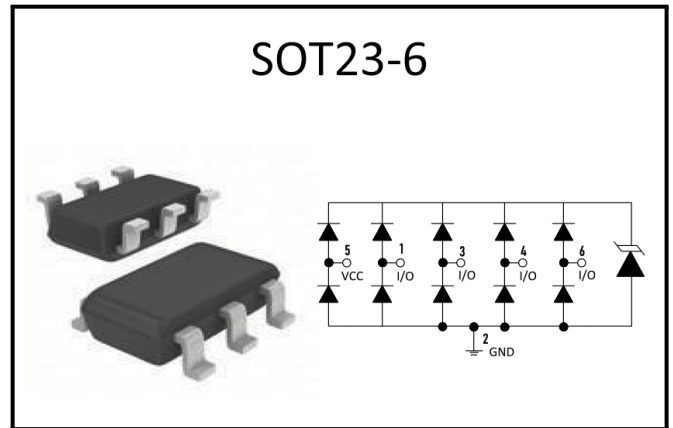


**Features**

- 70Watts peak pulse power (tp = 8/20µs)
- Solid-state silicon-avalanche technology
- Low clamping Voltage
- Low leakage current
- Low capacitance (Cj=0.25pF typ.IO/IO)
- Protection one data/power line
- IEC 61000-4-2 ±15kV contact ; ±15kV air
- IEC 61000-4-4 (EFT) 40A (5/50ns)
- IEC 61000-4-5 (Lightning) 4.0A (8/20µs)

**Package**



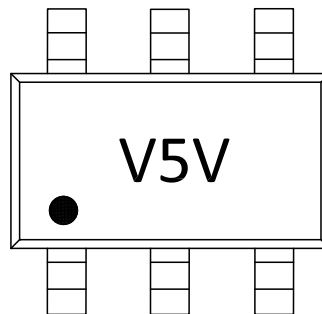
**Applications**

- Ethernet
- Digital Visual Interface (DVI)
- USB2.0
- Notebook and PC Computers

**Mechanical Characteristics**

- SOT23-6 package
- Molding compound flammability rating: UL 94V-0
- Packaging: Tape and Reel
- RoHS/WEEE Compliant

**Marking**



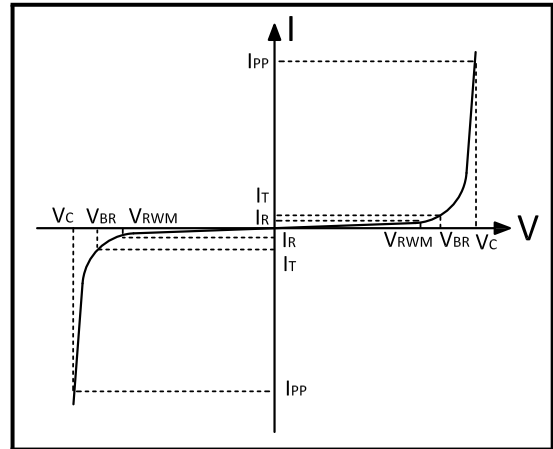
**Ordering information**

Order code	Package	Base qty	Delivery mode
BNAZ1045-04SU	SOT23-6	3k	Tape and reel



### Electrical Parameters (T<sub>A</sub> = 25°C unless otherwise noted)

Symbol	Parameter
I <sub>PP</sub>	Maximum Reverse Peak Pulse Current
V <sub>C</sub>	Clamping Voltage @ I <sub>PP</sub>
V <sub>RWM</sub>	Peak Reverse Working Voltage
I <sub>R</sub>	Reverse Leakage Current @ V <sub>RWM</sub>
V <sub>BR</sub>	Breakdown Voltage @ I <sub>T</sub>
I <sub>T</sub>	Test Current



Note: 8/20us pulse Waveform.

### Absolute Maximum Rating

Rating	Symler	Value	Units
Peak Pulse Power (tp = 8/20μs)	P <sub>PP</sub>	70	Watts
Peak Pulse Current (tp = 8/20μs)	I <sub>PP</sub>	4.0	A
ESD per IEC 61000-4-2 (Air)	V <sub>ESD</sub>	15	KV
ESD per IEC 61000-4-2 (Contact)		15	
Lead Soldering Temperature	T <sub>L</sub>	260(10seconds)	°C
Junction Temperature	T <sub>J</sub>	-55 to + 150	°C
Storage Temperature	T <sub>stg</sub>	-55 to + 150	°C

### Electrical Characteristics

Parameter	Symler	Conditions	Min	Typical	Max	Units
Reverse Stand-Off Voltage	V <sub>RWM</sub>	–	–	–	5.0	V
Reverse Breakdown Voltage	V <sub>BR</sub>	I <sub>T</sub> =1mA	6	7.8	9.5	V
Reverse Leakage Current	I <sub>R</sub>	V <sub>RWM</sub> =5V, T=25°C	–	0.05	0.2	uA
Peak Pulse Current	I <sub>PP</sub>	tp = 8/20us	–	–	4.0	A
Clamping Voltage	V <sub>C</sub>	I <sub>PP</sub> =4.0A, tp = 8/20us	–	14	17	V
Junction Capacitance	C <sub>j</sub>	V <sub>R</sub> =0V, f=1MHZ, IO to IO	–	0.25	0.35	pF
Junction Capacitance	C <sub>j</sub>	V <sub>R</sub> =0V, f=1MHZ, IO to GND	–	0.35	0.5	pF



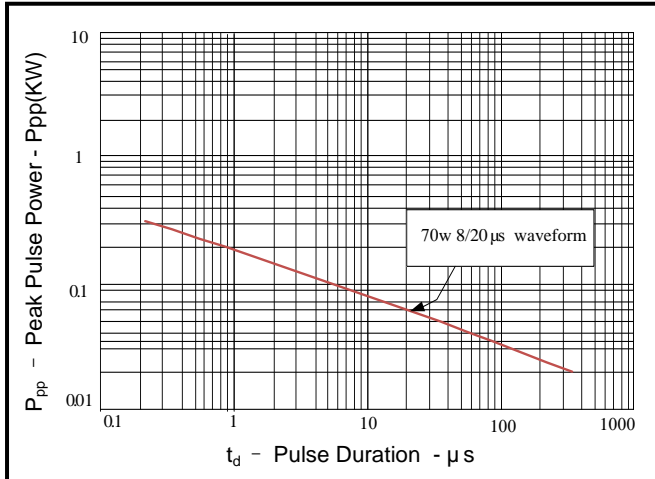


# BNAZ1045-04SU

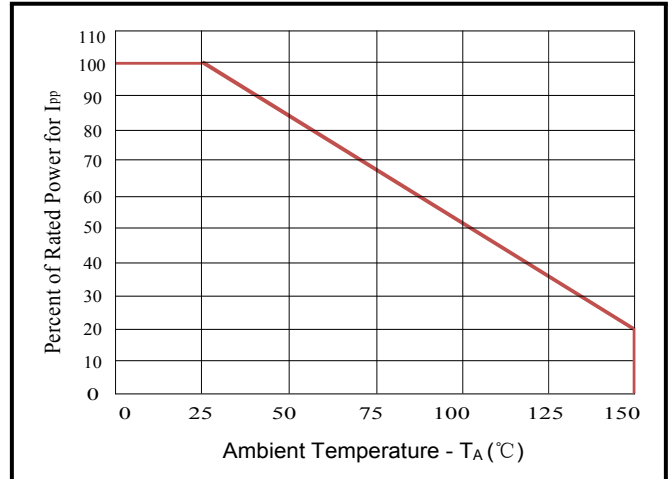
ESD Protection Diode

## Typical Characteristics

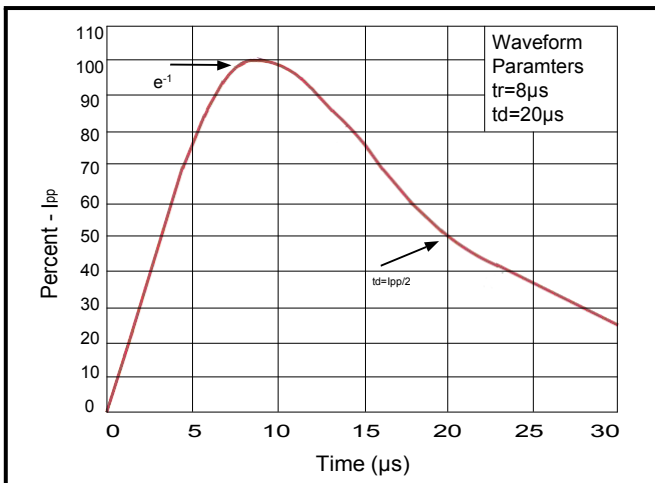
**Figure 1: Peak Pulse Power vs. Pulse Time**



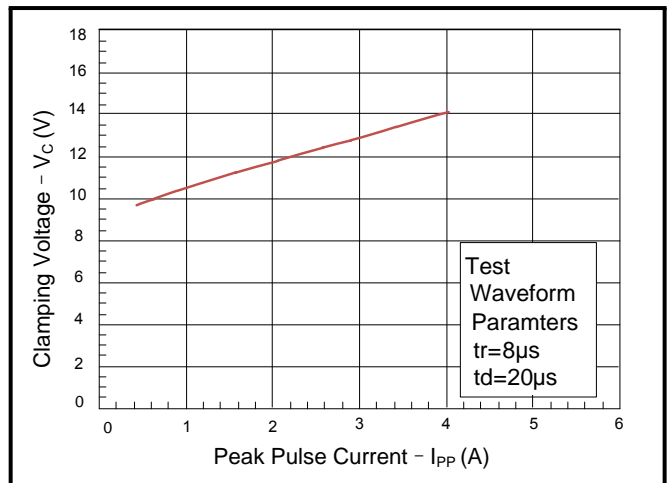
**Figure 2: Power Derating Curve**



**Figure 3: Pulse Waveform**



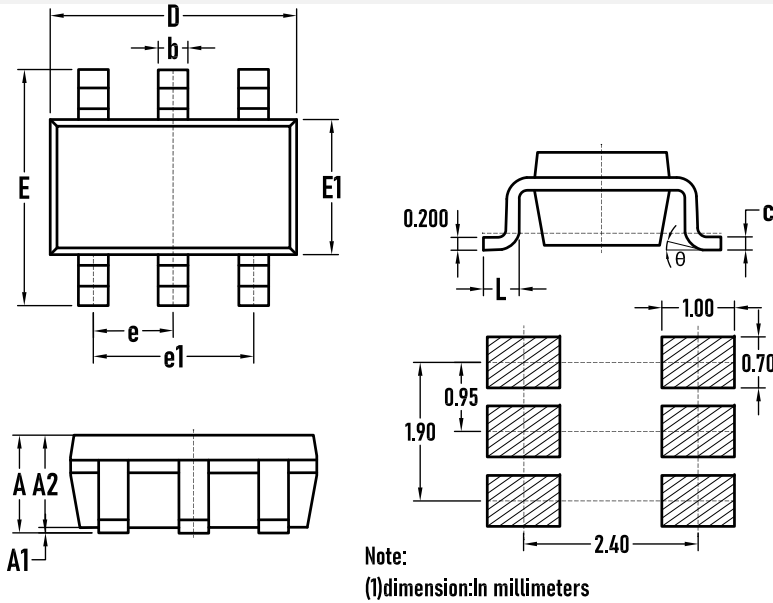
**Figure 4: Clamping Voltage vs. Ipp**



**BNAZ1045-04SU**

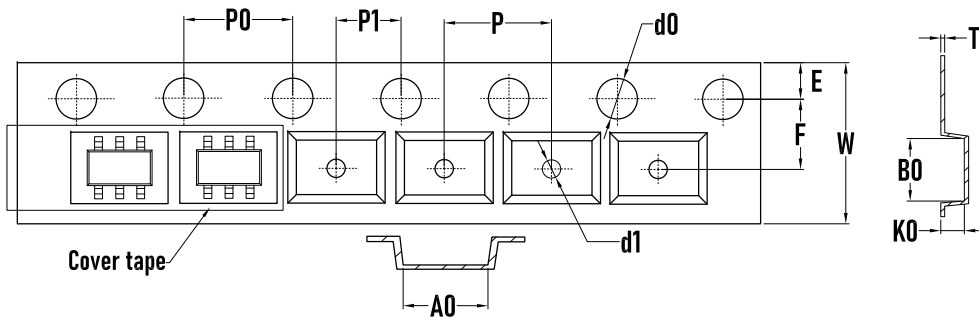
ESD Protection Diode

Outline Drawing – SOT23-6L



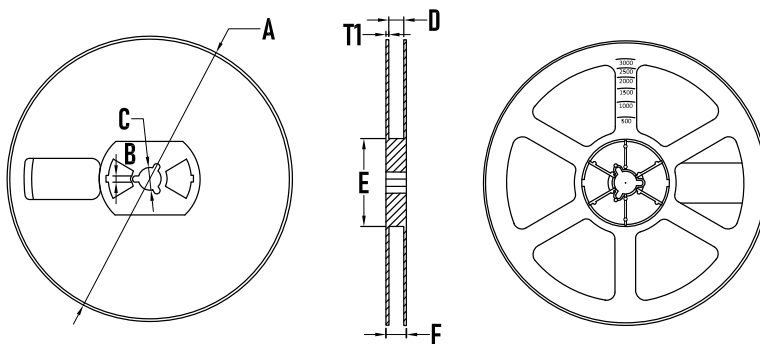
SYMBOL	MILLIMETER		Inches	
	MIN	MAX	MIN	MAX
A	1.050	1.250	0.041	0.049
A1	0.000	0.100	0.000	0.004
A2	1.050	1.150	0.041	0.045
b	0.300	0.500	0.012	0.020
C	0.100	0.200	0.004	0.008
D	2.820	3.020	0.111	0.119
E1	1.500	1.700	0.059	0.067
E	2.650	2.950	0.104	0.116
e	0.950(BSC)		0.037(BSC)	
e1	1.800	2.000	0.071	0.079
L	0.300	0.600	0.012	0.024
θ	0°	8°	0°	8°

Packaging Tape - SOT23-6L



SYMBOL	MILLIMETER
A0	3.25±0.1
B0	3.3±0.1
d0	1.55±0.1
d1	1.0±0.1
E	1.75±0.1
F	3.50±0.1
K0	1.38±0.1
P	4.00±0.1
P0	4.00±0.1
P1	2.00±0.1
W	8.00±0.2
T	0.2±0.02

Packaging Reel



SYMBOL	MILLIMETER
A	177.8±0.2
B	2.7±0.2
C	13.5±0.2
D	9.6±0.3
E	54.5±0.2
F	12.3±0.3
T1	1.0±0.2
Quantity	3000PCS

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