



### ■ Features

- Bi-directional ESD protection of two lines
- 360Watts peak pulse power ( $t_p = 8/20\mu s$ )
- Working voltage: 36V
- Low clamping voltage
- Low leakage current
- Solid-state silicon-avalanche technology
- IEC 61000-4-2  $\pm 30kV$  contact  $\pm 30kV$  air
- IEC 61000-4-4 (EFT) 40A (5/50ns)
- IEC 61000-4-5 (Lightning) 6A (8/20 $\mu s$ )

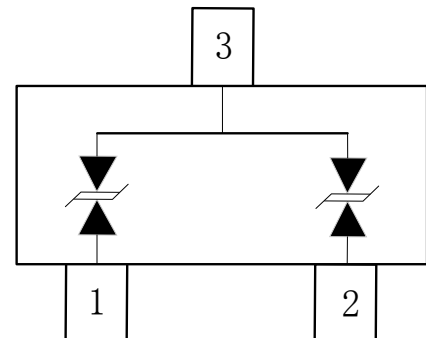
SOT-23



### ■ Applications

- Portable Electronics
- Set-Top Box
- Cellular Handsets and Accessories
- Control & Monitoring Systems
- RS-232, RS-422 & RS-485

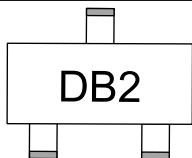
### ■ Schematic & PIN Configuration



### ■ Mechanical Data

- Package: SOT-23
- Molding compound flammability rating: UL 94V-0
- RoHS/WEEE Compliant

### ■ Ordering Information

Part Number	Package	Marking	Packing	Reel Size
NUP3105LT1G	SOT-23	 DB2	3000 Tape & Reel	7 inches

**Absolute Maximum Rating**( $T_A = 25^\circ\text{C}$  unless otherwise noted)

Parameter	Symbol	Value	Units
Reverse Voltage	PPP	360	Watts
Peak Pluse Current( $t_p=8/20\mu\text{s}$ )	I <sub>PP</sub>	6	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	V <sub>ESD</sub>	30 30	KV
Lead Soldering Temperature	T <sub>L</sub>	260(10seconds)	°C
Operating Temperature	T <sub>J</sub>	-55 to + 125	°C
Storage Temperature	T <sub>STG</sub>	-55 to + 125	°C

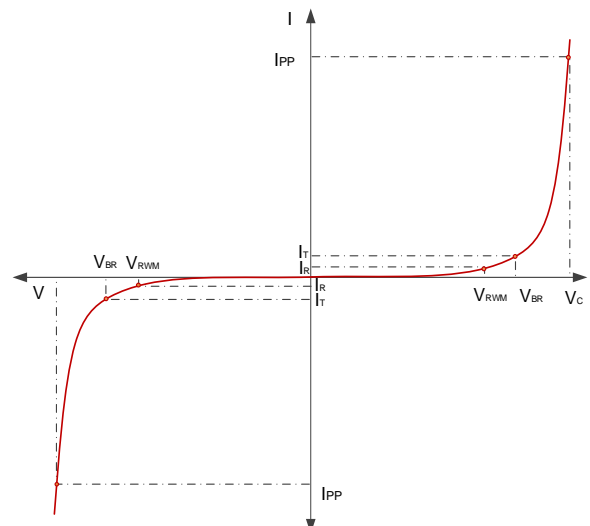
**Electrical Characteristics**( $T_A = 25^\circ\text{C}$  unless otherwise noted)

Parameter	Symbol	Conditions	Min	Typical	Max	Units
Reverse Voltage	V <sub>RWM</sub>				36	V
Reverse Breakdown Voltage	V <sub>BR</sub>	I <sub>T</sub> =1mA	40			V
Reverse Leakage Current	I <sub>R</sub>	V <sub>RWM</sub> =36V, T=25°C		0.1	0.5	μA
Clamping Voltage	V <sub>C</sub>	I <sub>PP</sub> =6A, $t_p=8/20\mu\text{s}$		54	60	V
Junction Capacitance	C <sub>j</sub>	V <sub>R</sub> =0V, f=1MHz PIN1/PIN2 to PIN3		12	16	pF

**Electrical Parameters** ( $T_A = 25^\circ\text{C}$  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>	Working Peak Reverse Voltage
I <sub>R</sub>	Maximum Reverse Leakage Current @ V <sub>RWM</sub>
V <sub>BR</sub>	Breakdown Voltage @ I <sub>T</sub>
I <sub>T</sub>	Test Current

Note:8/20μs pulse waveform.





■ Typical Characteristic( $T_A = 25^\circ\text{C}$  unless otherwise noted)

Figure 1: Peak Pulse Power vs. Pulse Time

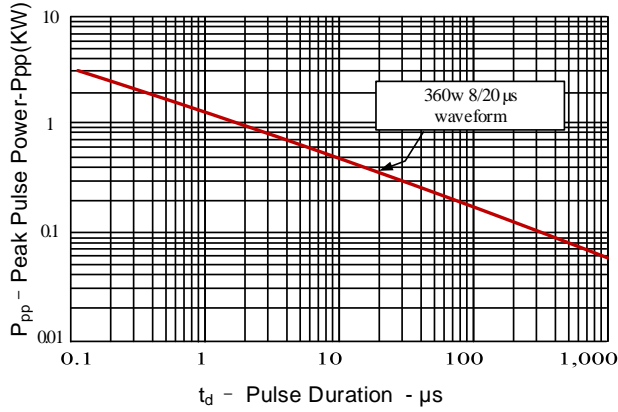


Figure 2: Power Derating Curve

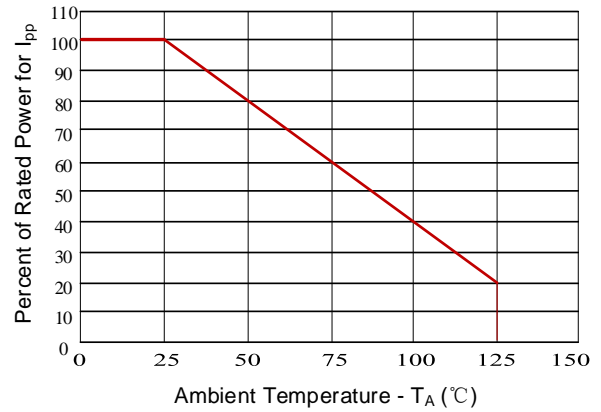


Figure3: Pulse Waveform

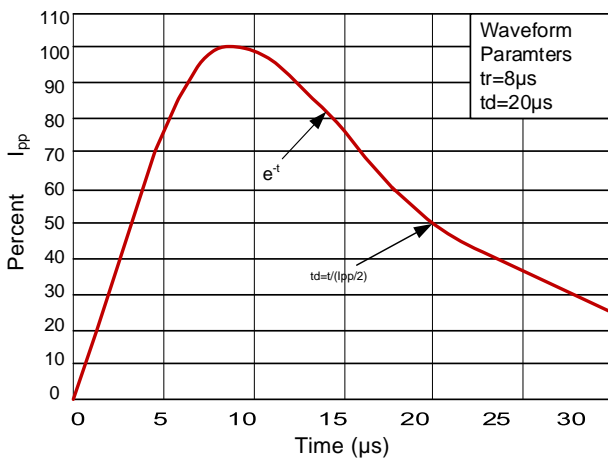
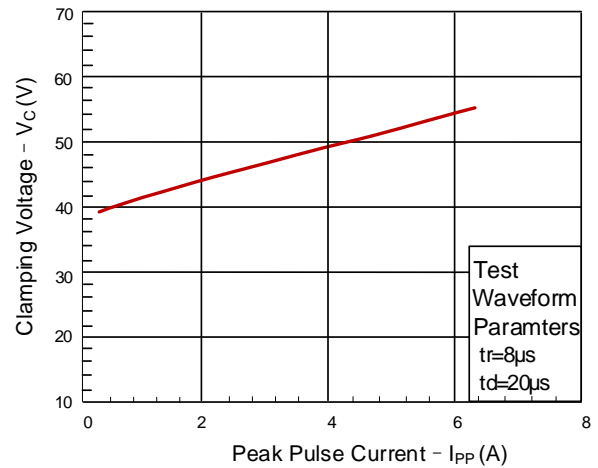
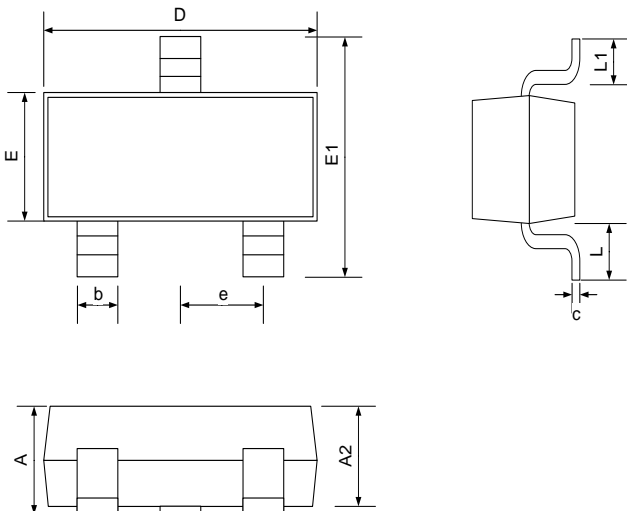


Figure 4: Clamping Voltage vs. Ipp



■ Outline Drawing – SOT-23



COMMON DIMENSION (mm)			
PKG	SOT23		
REF.	MIN.	NOM.	MAX.
A	0.900		1.150
A2	0.900		1.050
b	0.300		0.500
c	0.080		0.150
D	2.800		3.000
E	1.200		1.400
E1	2.250		2.550
e		0.950	
L		0.550	
L1	0.300		0.500