

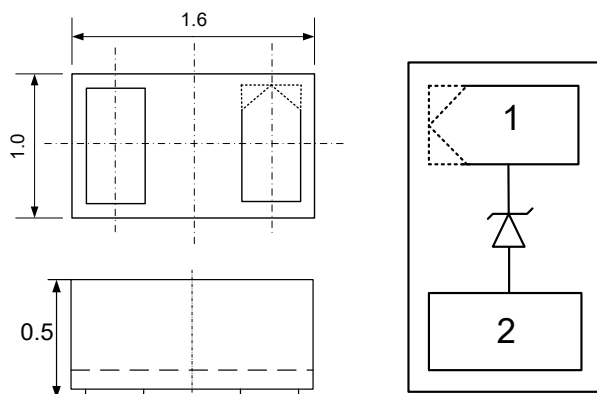
## Description

The DC3671P6 is an Uni-directional TVS diode, utilizing leading monolithic silicon technology to provide fast re-sponse time and low ESD clamping voltage, making this device an ideal solution for protecting voltage sensitive data and power line. The DC3671P6 complies with the IEC 61000-4-2 (ESD) with  $\pm 30\text{kV}$  air and  $\pm 30\text{kV}$  contact discharge. It is assembled into an ultra-small 1.6x1.0x0.5mm lead-free DFN package. The small size and high ESD surge protection make DC3671P6 an ideal choice to protect cell phone, digital cameras, audio players and many other portable applications.

## Mechanical Characteristics

- ◆ Package: DFN1610-2
- ◆ Case Material: "Green" Molding Compound.
- ◆ Moisture Sensitivity: Level 3 per J-STD-020
- ◆ Terminal Connections: See Diagram Below
- ◆ Marking Information: See Below

## Dimensions and Pin Configuration



Package Dimensions (mm)    Circuit and Pin Schematic

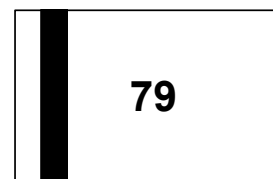
## Features

- ◆ Small package: 1.6 x1.0 x0.5mm
- ◆ Protects one data or power line
- ◆ Operating voltage: 36V
- ◆ High peak pulse current capability
- ◆ Ultra low clamping voltage
- ◆ 2-pin leadless package
- ◆ Complies with following standards:
  - IEC 61000-4-2 (ESD) immunity test
  - Air discharge:  $\pm 30\text{kV}$
  - Contact discharge:  $\pm 30\text{kV}$
- ◆ RoHS Compliant

## Applications

- ◆ Mobile Phones and Accessories
- ◆ Battery Protection
- ◆ USB VBus
- ◆ Power Line Protection
- ◆ Hand Held Portable Applications

## Marking Information



79= Device Marking Code  
Bar denotes Cathode

## Ordering Information

Part Number	Marking	Packaging	Reel Size
DC3671P6	79	3000/Tape & Reel	7 inch

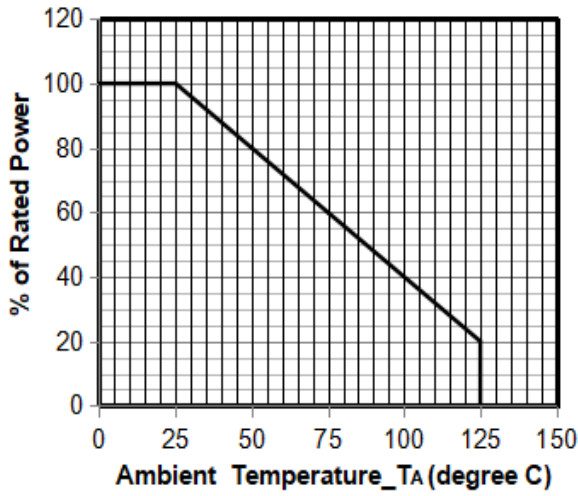
### **Absolute Maximum Ratings ( $T_A=25^{\circ}\text{C}$ unless otherwise specified)**

Parameter	Symbol	Value	Unit
Peak Pulse Power(8/20 $\mu\text{s}$ )	Ppk	1800	W
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	VESD	$\pm 30$ $\pm 30$	kV
Operating Temperature Range	TJ	-55 to +125	$^{\circ}\text{C}$
Storage Temperature Range	Tstg	-55 to +150	$^{\circ}\text{C}$

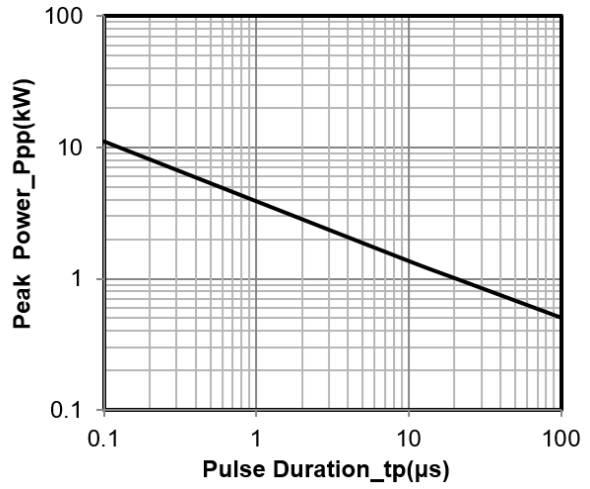
### **Electrical Characteristics ( $T_A=25^{\circ}\text{C}$ unless otherwise specified)**

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Working Voltage	VRWM			36	V	
Breakdown Voltage	VBR	37			V	IT = 1mA
Reverse Leakage Current	IR			0.5	$\mu\text{A}$	VRWM = 36V
Forward Voltage	VF			1.2	V	IF = 10mA
Peak Pulse Current	IPP			25	A	tp = 8/20 $\mu\text{s}$
Clamping Voltage	VC			60	V	IPP = 10A (8 x 20 $\mu\text{s}$ pulse)
Clamping Voltage	VC			75	V	IPP = 25A (8 x 20 $\mu\text{s}$ pulse)
Junction Capacitance	CJ			150	pF	VR = 0V, f = 1MHz

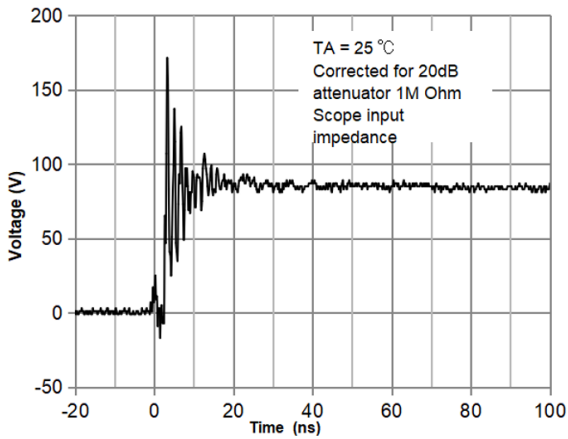
**Typical Performance Characteristics (TA=25°C unless otherwise Specified)**



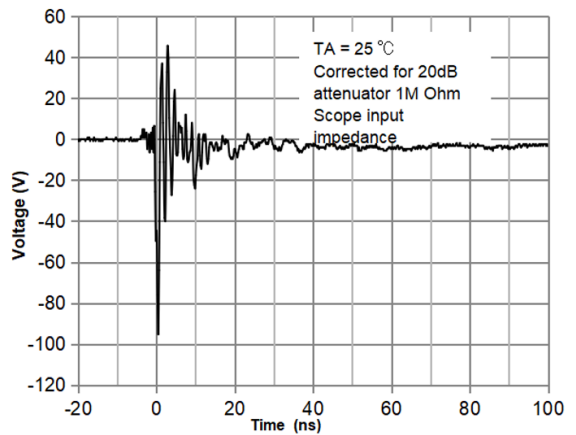
**Power Derating Curve**



**Peak Pulse Power vs. Pulse Time**



**ESD Clamping Voltage 8 kV  
Contact per IEC61000-4-2**



**ESD Clamping Voltage  
-8 kV Contact per IEC61000-4-2**

