

## Features

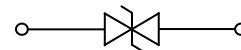
- 35 Watts peak pulse power ( $t_p = 8/20\mu s$ )
- 0201 chip scale package
- Bidirectional configurations
- Solid-state silicon-avalanche technology
- Low clamping voltage
- Low leakage current
- Low capacitance ( $C_j = 5pF$  typ.)
- Protection one data/power line to:
  - IEC 61000-4-2  $\pm 8kV$  contact  $\pm 15kV$  air
  - IEC 61000-4-4 (EFT) 40A (5/50ns)
  - IEC 61000-4-5 (Lightning) 2.6A (8/20 $\mu s$ )
- RoHS compliant



**CSP0201**

## Applications

- Audio Line, Speaker, Headset, Microphone Protection
- Human Interface Devices (Keyboard, Touchpad, Buttons)
- USB2.0 Protection



**Schematic Diagram**

## Absolute Maximum Ratings ( $T_A = 25^\circ C$ unless otherwise noted)

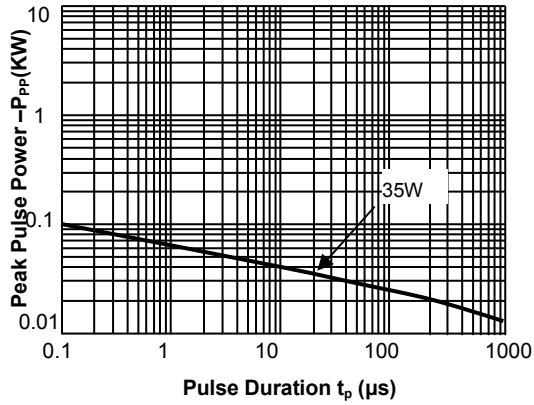
Parameter	Symbol	Value	Unit
Peak Pulse Power ( $T_P = 8/20\mu S$ )	$P_{PP}$	35	W
Peak Pulse Current ( $t_P = 8/20\mu S$ )	$I_{PP}$	2.6	A
ESD contact discharge (IEC-61000-4-2)	$V_{ESD}$	8	kV
ESD air discharge (IEC-61000-4-2)	$V_{ESD}$	15	kV
Junction Temperature	$T_J$	-55 to +125	$^\circ C$
Storage temperature	$T_{STG}$	-55 to +150	$^\circ C$

## Electrical Characteristics ( $T_A = 25^\circ C$ unless otherwise noted)

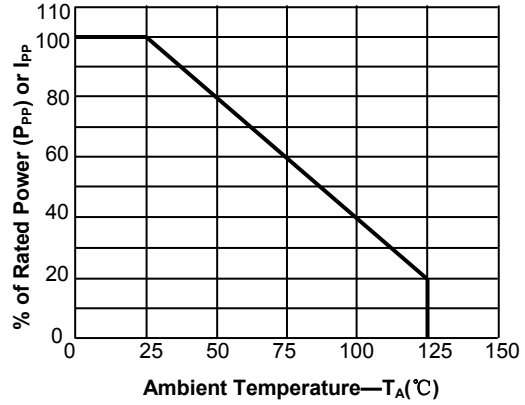
Parameter	Symbol	Condition	Min	Typ	Max	Unit
Reverse stand-off Voltage	$V_{RWM}$	-	-	-	5.0	V
Reverse Breakdown Voltage	$V_{BR}$	$I_T = 1mA$	6.0	8.0	9.5	V
Reverse Leakage Current	$I_R$	$V_R = 5V$	-	0.01	0.5	$\mu A$
Clamping Voltage (IEC 61000-4-5)	$V_C$	$I_{PP} = 1A$	-	11.6	-	V
	$V_C$	$I_{PP} = 2.6A$	-	13.5	-	V
Trigger Voltage (IEC 61000-4-2)	$V_T$	$V_{ESD} = 8kV$	-	105	-	V
Clamping Voltage (IEC 61000-4-2)	$V_C$	$V_{ESD} = 8kV$	-	20	-	V
Junction Capacitance	$C_J$	$V_R = 0V, f = 1MHz$	-	5	-	pF

## Typical Characteristic Curves

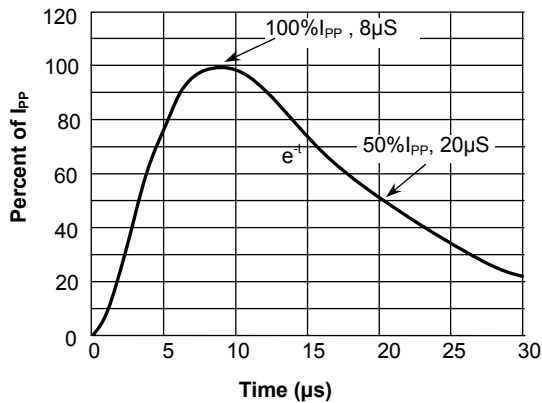
**Fig.1 Peak Pulse Power Rating Curve**



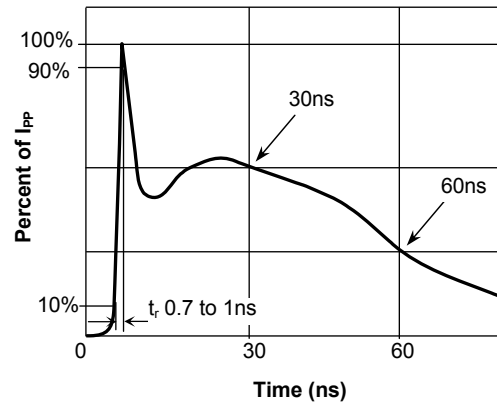
**Fig.2 Pulse Derating Curve**



**Fig.3 Pulse Waveform-8/20μs**

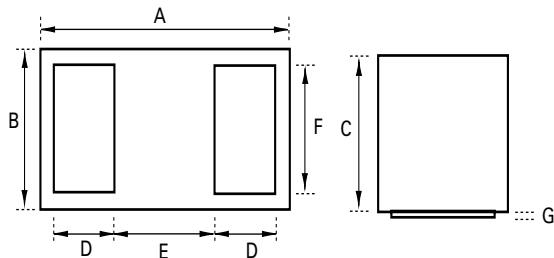


**Fig.4 Pulse Waveform-ESD(IEC61000-4-2)**



## Product Dimensions

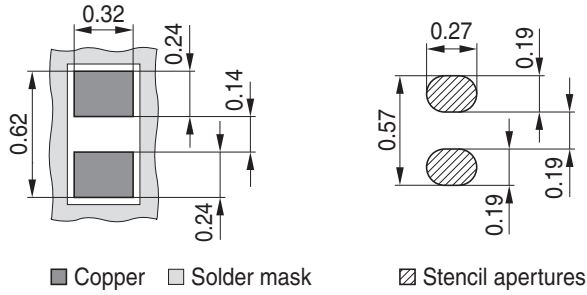
CSP0201



Symbol	Dimensions in millimeters		
	Min	Nom	Max
A	0.570	0.600	0.630
B	0.270	0.300	0.330
C	0.230	0.260	0.290
D	0.125	0.130	0.135
E	0.265	0.270	0.275
F	0.225	0.230	0.235
G	0.005	0.010	0.015

### Footprint

Dimension in mm



### Marking



### Order Information

Device	Package	Carrier	Quantity	HSF Status
SPES5VC0201-2B	0201	Tape & Reel	10000pcs / Reel	RoHS compliant