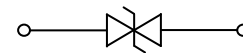


## Features

- 150 Watts peak pulse power ( $t_p = 8/20\mu s$ )
- DFN1006 package
- Bidirectional configurations
- Protects one I/O port
- Low clamping voltage
- Low Leakage current
- ESD-immunity acc. IEC 61000-4-2  $\pm 8kV$  contact  
 $\pm 15kV$  air
- IEC 61000-4-4 (EFT) 40A (5/50ns)



DFN1006 (0402)



Schematic Diagram

## Applications

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

## Absolute Maximum Ratings

( $T_A = 25^\circ C$  unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power ( $t_p = 8/20\mu s$ )	$P_{PP}$	150	W
Peak Pulse Current ( $t_p = 8/20\mu s$ )	$I_{PP}$	9.4	A
Junction Temperature	$T_J$	-55 to +125	$^\circ C$
Storage temperature	$T_{STG}$	-55 to +150	$^\circ C$
ESD per IEC 61000-4-2 (Air)	$V_{ESD}$	$\pm 15$	kV
ESD per IEC 61000-4-2 (Contact)		$\pm 8$	kV

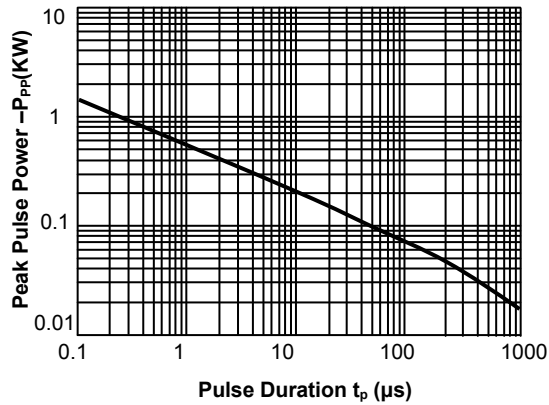
## Electrical Characteristics

( $T_A = 25^\circ C$  unless otherwise specified)

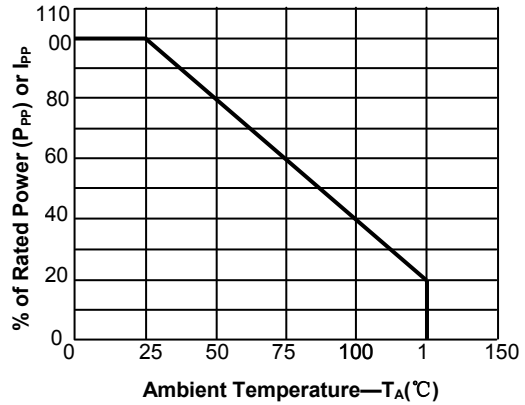
Parameter	Symbol	Condition	Min	Typ	Max	Unit
Reverse stand-off Voltage	$V_{RWM}$				5	V
Reverse Breakdown Voltage	$V_{BR}$	$I_T = 1mA$	5.0	6.8		V
Reverse Leakage Current	$I_R$	$V_R = 5V$			1	$\mu A$
Clamping Voltage	$V_C$	$I_{PP} = 5A, T_p = 8/20\mu s$			11.6	V
	$V_C$	$I_{PP} = 9.4A, T_p = 8/20\mu s$			18.6	V
Junction Capacitance	$C_J$	$V_R = 0V, f = 1MHz$		15		pF

## Typical Characteristic Curves

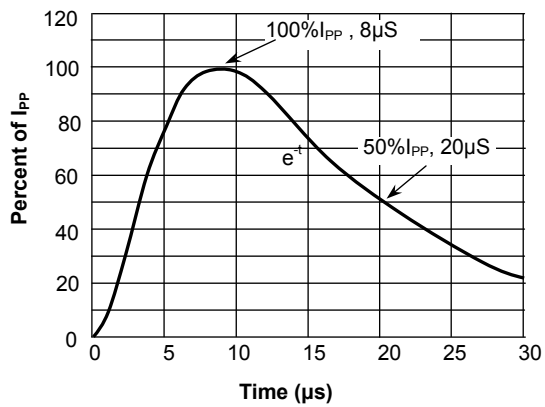
**Fig.1 Peak Pulse Power Rating Curve**



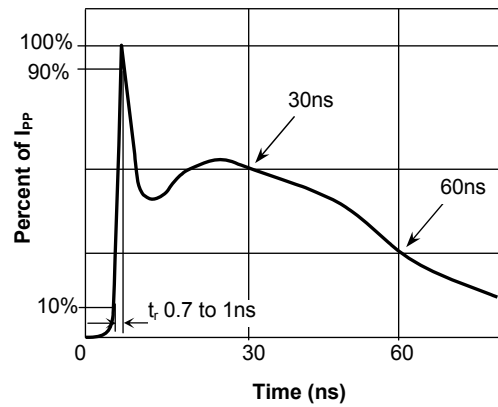
**Fig.2 Pulse Derating Curve**



**Fig.3 Pulse Waveform-8/20μs**

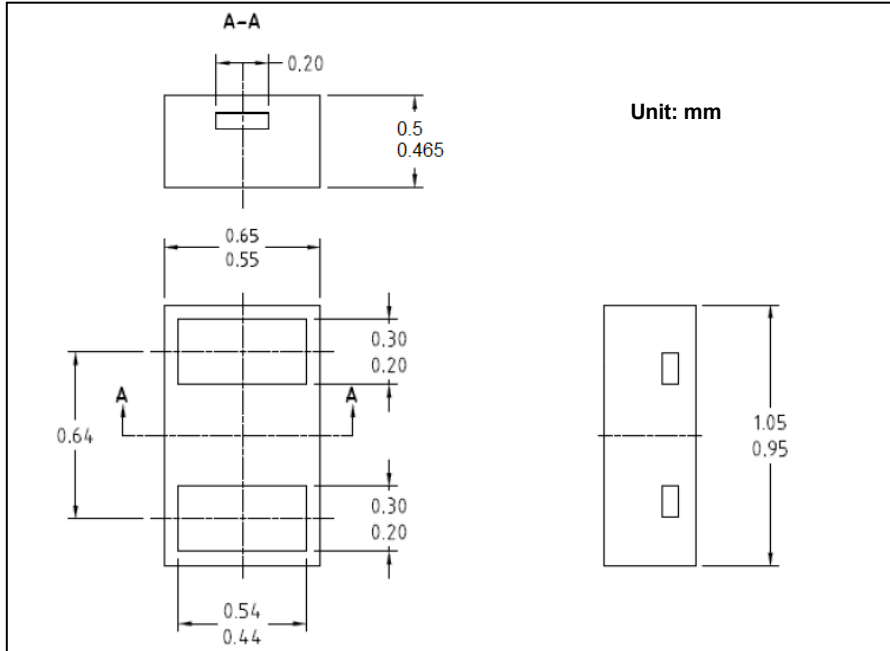


**Fig.4 Pulse Waveform-ESD(IEC61000-4-2)**





### Product Dimensions



### Order Information

Device	Package	Marking	Carrier	Quantity	HSF Status
SPES5VD1006-2B	DFN1006	C	Tape & Reel	10000pcs / Reel	RoHS compliant