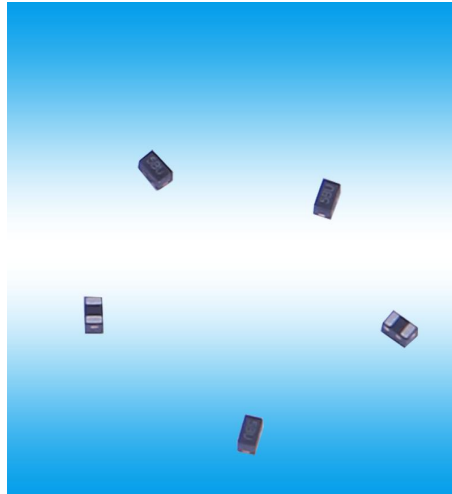


靜電保護元件ESD Protector

KESD0501BU



**Description**

KESD0501BU uses ultra-small DFN1006 package. Each KESD0501BU device can protect one high-speed data line. It offers system designers flexibility to protect single data line where space is a premium concern. The combined features of low capacitance, ultra-small size and high ESD robustness make KESD0501BU ideal for high-speed data port and high-frequency line applications, such as cellular phones and HD visual devices.

KESD0501BU使用超小的DFN1006包装。每个KESD0501BU设备可保护一条高速数据线。它为系统设计者提供了灵活性，以保护单个数据线的空间是一个重要的关注。KESD0501BU具有低电容、超小体积和高ESD鲁棒性的特点，是手机、高清视觉设备等高速数据端口和高频线路应用的理想选择。

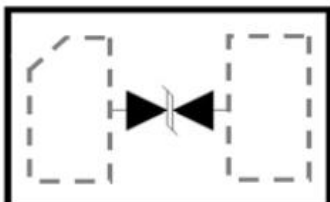
**Features 产品特点**

- Transient protection for high-speed data lines IEC 61000-4-2 (ESD)  $\pm 15\text{kV}$  (Air);  $\pm 8\text{kV}$  (Contact); IEC 61000-4-4 (EFT) 40A (5/50 ns); Cable Discharge Event (CDE)
- 高速数据线暂态保护 IEC 61000-4-2 (ESD)  $\pm 15\text{kV}$  (Air)/ $\pm 8\text{kV}$ (接触); IEC61000 -4-4 (EFT) 40A(5/50ns); 电缆放电事件 (CDE)
- Package optimized for high-speed lines  
适合高速线路的包装优化
- Low capacitance: 0.25pF (Typical)  
低电容:0.25pF(典型)
- Protects one data, control line  
保护一个数据, 控制线
- Low clamping voltage  
低电压钳位
- Ultra-small package (1.0mmX0.6mmX0.5mm)  
超薄包装(1.0毫米0.6毫米0.5毫米)
- Low leakage current  
低泄漏电流

**Applications 产品应用**

- Serial ATA  
ATA接口
- Desktops, Servers and Notebooks  
台式机、服务器和笔记本
- Cellular Phones  
移动电话
- MDDI Ports, Display Ports  
MDDI端口, 显示端口
- Digital Visual Interfaces (DVI)  
数字视觉接口 (DVI)
- USB Data Line Protection  
USB数据线保护

**PIN CONFIGURATION**



**CIRCUIT DIAGRAM**



靜電保護元件ESD Protector

KESD0501BU

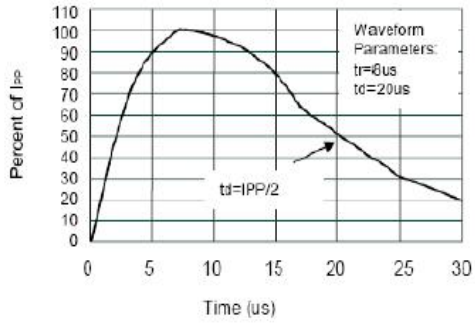
ABSOLUTE MAXIMUM RATING			
Symbol	Parameter	Value	Units
V <sub>ESD</sub>	ESD per IEC 61000-4-2 (Air)	±20	kV
	ESD per IEC 61000-4-2 (Contact)	±20	
P <sub>PP</sub>	Peak Pulse Power (8/20μs)	88	W
T <sub>OPT</sub>	Operating Temperature	-55~125	°C
T <sub>STG</sub>	Storage Temperature	-55~150	°C

ELECTRICAL CHARACTERISTICS (Tamb=25°C)						
Symbol	Parameter	Test Condition	Min	Typ	Max	Units
V <sub>RWM</sub>	Reverse Working Voltage				5.0	V
V <sub>BR</sub>	Reverse Breakdown Voltage	I <sub>T</sub> = 1mA	6.0			V
I <sub>R</sub>	Reverse Leakage Current	V <sub>RWM</sub> = 5V			100	nA
V <sub>C</sub>	Clamping Voltage	I <sub>PP</sub> = 1A, t <sub>p</sub> = 8/20μs			13	V
		I <sub>PP</sub> = 4A, t <sub>p</sub> = 8/20μs			22	V
C <sub>J</sub>	Junction Capacitance	V <sub>R</sub> = 0V, f = 1MHz		0.25	0.40	pF

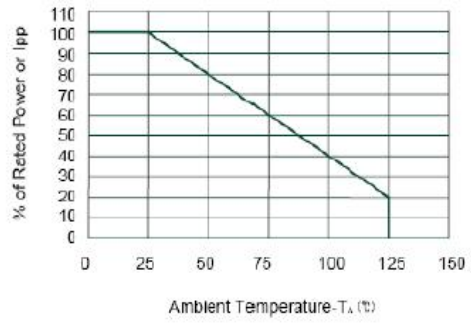
靜電保護元件ESD Protector

KESD0501BU

ELECTRICAL CHARACTERISTICS CURVE

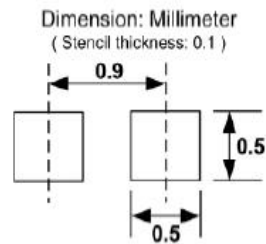
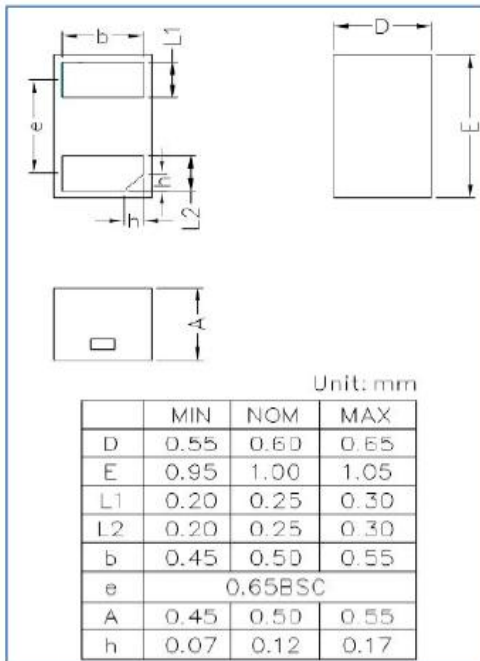


Pulse Waveform



Power Derating Curve

DFN1006 PACKAGE OUTLINE DIMENSIONS



Soldering Footprint