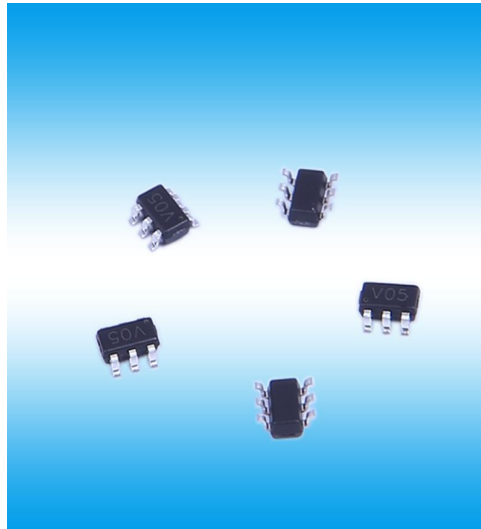


靜電保護元件ESD Protector

KSRV05-4



**Description**

➔ The KSRV05-4 has a low capacitance of 0.4pF maximum and operates with virtually no insertion loss to 1GHz. This makes the device ideal for protection of high-speed data lines such as USB 2.0, Firewire, DVI, and gigabit Ethernet interfaces. The low capacitance array configuration allows the user to protect four high-speed data or transmission lines. The low inductance construction minimizes voltage overshoot during high current surges.

KSRV05-4具有最大0.4pF的低电容，在1GHz以下几乎没有插入损耗。这使得该设备非常适合保护高速数据线，如USB 2.0、Firewire、DVI和千兆以太网接口。低电容阵列配置允许用户保护四条高速数据或传输线。在大电流冲击时，低电感结构最小化电压过冲。

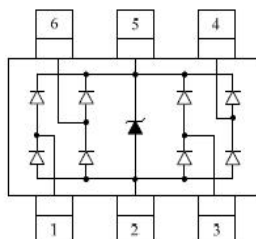
**Features 产品特征**

- |   |  |
|---|--|
| ➔ Protects four I/O lines and one Vcc line<br>保护四个I/O线和一个Vcc线 | ➔ Low capacitance<br>低电容                               |
| ➔ Working voltages : 5V<br>工作电压:5V                            | ➔ Low capacitance for high-speed interfaces<br>低电容高速接口 |
| ➔ No insertion loss to 2.0GHz<br>没有插入损耗到2.0GHz                | ➔ Terminal: Matte tin plated.<br>端子:哑光镀锡。              |
| ➔ Packaging: Tape and Reel<br>包装:胶带和卷轴                        | ➔ Reel size: 7 inch<br>卷轴尺寸:7英寸                        |

**Applications 产品应用**

- |  |  |
|--|--|
| ➔ Digital Visual Interface (DVI)<br>数字可视接口 (DVI) | ➔ USB 1.1/2.0/OTG                      |
| ➔ Notebooks & Handhelds<br>笔记本电脑和手持设备            | ➔ Projection TV & Monitors<br>投影电视及显示器 |
| ➔ Flat Panel Displays<br>平板显示器                   | ➔ Set-top box<br>机顶盒                   |

**PIN CONFIGURATION**



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ABSOLUTE MAXIMUM RATING			
Symbol	Parameter	Value	Units
$P_{PK}$	Peak Pulse Power (8/20 $\mu$ s)	150	W
$I_{PP}$	Peak Pulse Current (8/20 $\mu$ s)	5	A
$V_{ESD}$	ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	$\pm 15$ $\pm 8$	kV
$T_{OPT}$	Operating Temperature	-55/+150	$^{\circ}$ C
$T_{STG}$	Storage Temperature	-55/+150	$^{\circ}$ C

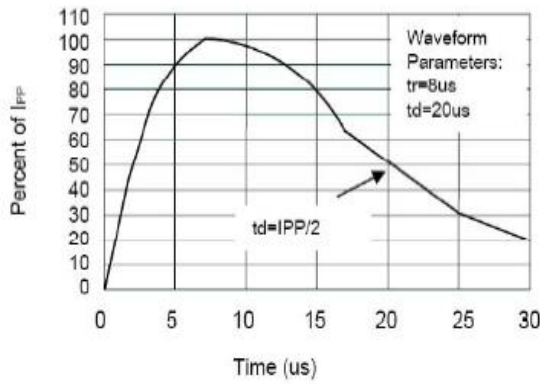
ELECTRICAL CHARACTERISTICS ( $T_{amb}=25^{\circ}$ C)						
Symbol	Parameter	Test Condition	Min	Typ	Max	Units
$V_{RWM}$	Reverse Working Voltage	Any I/O pin to GND			5.0	V
$V_{BR}$	Reverse Breakdown Voltage	$I_T = 1mA$ Any I/O pin to GND	6.0			V
$I_R$	Reverse Leakage Current	$V_{RWM} = 5V$ Any I/O pin to GND			1	$\mu$ A
$V_F$	Diode Forward Voltage	$I_F = 15mA$			1.2	V
$V_{C1}$	Clamping Voltage 1	$I_{PP} = 1A, t_p = 8/20\mu s$ Any I/O pin to GND			15	V
$V_{C2}$	Clamping Voltage 2	$I_{PP} = 5A, t_p = 8/20\mu s$ Any I/O pin to GND			28	V
$C_{J1}$	Junction Capacitance 1	$V_R = 0V, f = 1MHz$ Between I/O pins			0.4	pF
$C_{J2}$	Junction Capacitance 2	$V_R = 0V, f = 1MHz$ Any I/O pin to GND			0.8	pF

Note: I/O pins are pin 1,3,4,6.

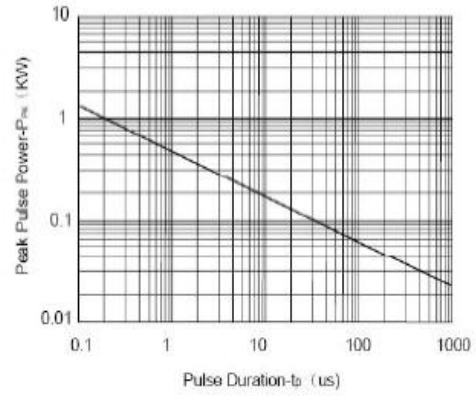
靜電保護元件ESD Protector

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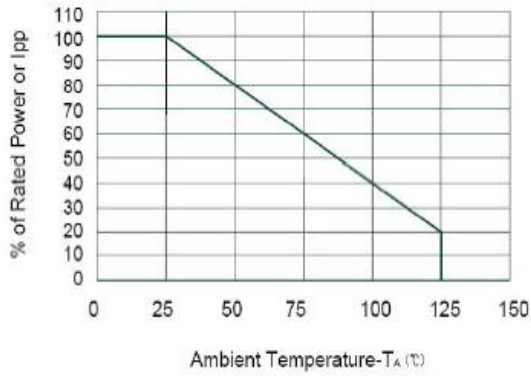
ELECTRICAL CHARACTERISTICS CURVE



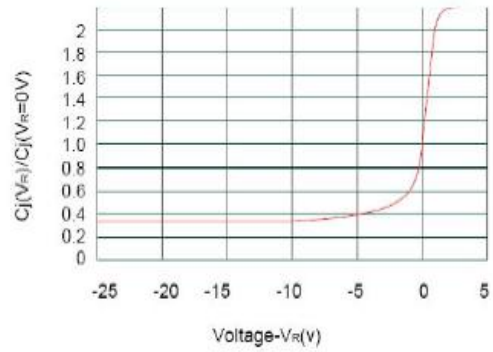
Pulse Waveform



Non-Repetitive Peak Pulse Power vs. Pulse Time



Power Derating Curve

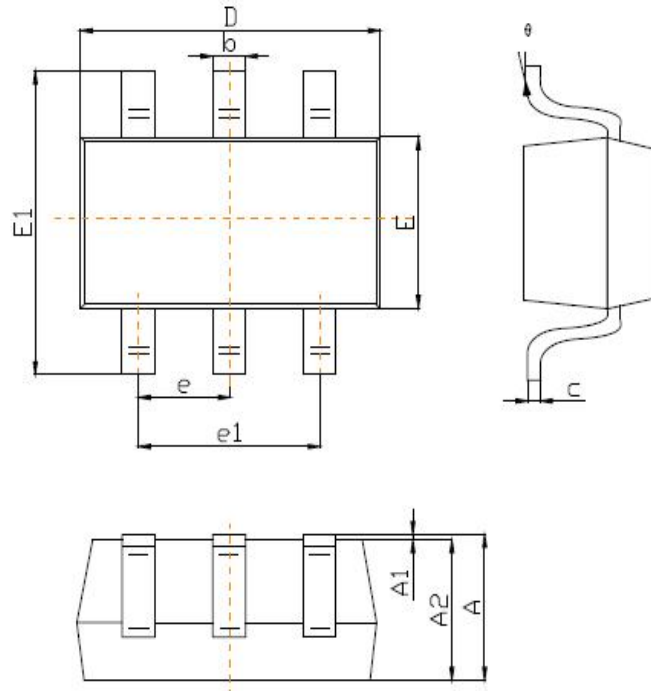


Junction Capacitance vs. Reverse Voltage

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PACKAGE OUTLINE DIMENSIONS



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.050	1.250	0.041	0.049
A1	0.000	0.100		0.004
A2	1.050	1.150	0.041	0.045
b	0.300	0.500	0.012	0.020
c	0.100	0.200	0.004	0.008
D	2.820	3.020	0.111	0.119
E	1.500	1.700	0.059	0.067
E1	2.650	2.950	0.104	0.116
e	0,950(BSC)		0.037(BSC)	
e1	1.800	2.000	0.071	0.079
L	0.300	0.600	0.012	0.024
	0°	8°	0°	8°