

5通道ESD保护二极管

UESD6V85CT36 SC70-6/SC88/SOT363

描述

UESD6V85CT36 TVS阵列设计用于保护敏感元器件免于ESD 损坏或闩锁,适用于电路板空间有限的应用。该器件是单向设备,可用于信号极性高于地面的线路,每个器件最多可保护五条线路。

TVS二极管是一种固态设备,具有大截面积结,可传导高瞬态电流,特别适用于瞬态抑制。该器件具有板级保护的电气特性,包括快速响应时间、低钳位电压和无器件劣化。

UESD6V85CT36可用于满足IEC 61000-4-2标准的第4级ESD抗扰度要求。其小型封装使其非常适合用于手机、PDA、笔记本电脑和数码相机等便携式电子产品。

应用

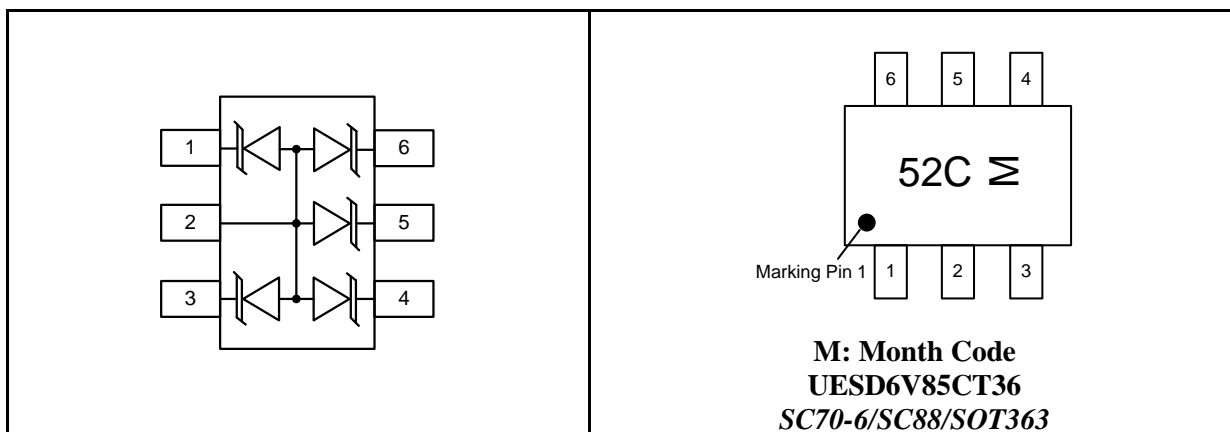
- 手机听筒和配件
- 无线电话
- PDA
- 笔记本电脑和掌上电脑
- 便携式设备
- 数码相机
- 外围设备
- MP3播放器

特性

- 数据线瞬态保护,符合IEC 61000-4-2标准:
±15kV(空气间隙放电),±8kV(接触放电)
- 可保护五条I/O线路
- 超小型SC70-6/SC88/SOT363封装
- 反向工作电压: 5V
- 低漏电流
- 低工作和钳位电压
- 固态硅雪崩技术

引脚配置

顶部视图



订购信息

芯片型号	反向工作电压	封装类型	通道数	丝印编码	发货数量
UESD6V85CT36	5.0V	SC70-6/SC88/SOT363	5	52C	3000pcs/7Inch Tape & Reel

Absolute Maximum Ratings

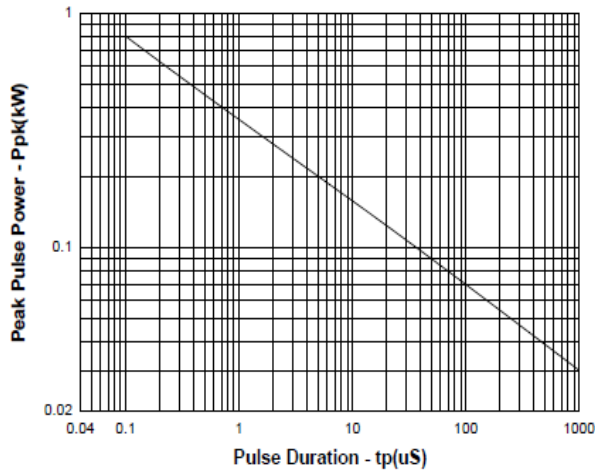
Rating	Symbol	Value	Unit
Peak Pulse Power ($t_p=8/20\mu s$) @ $T_A \leq 25^\circ C$	P_{PK}	140	Watts
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	325	$^\circ C/W$
Lead Soldering Temperature	T_L	260 (10 sec.)	$^\circ C$
Operating Temperature	T_J	-55 to +125	$^\circ C$
Storage Temperature	T_{STG}	-55 to +125	$^\circ C$
Maximum Junction Temperature	T_{JMAX}	150	$^\circ C$

Electrical Characteristics

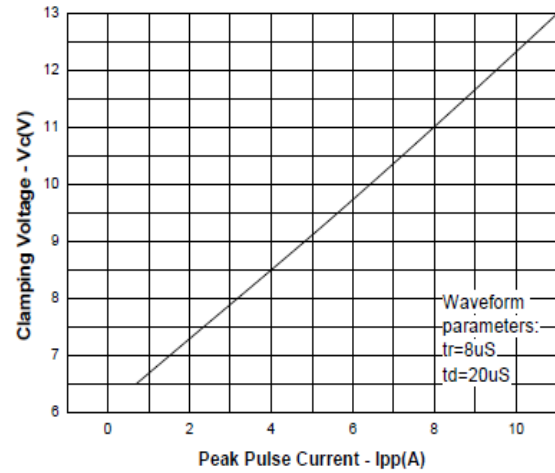
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Reverse Stand-Off Voltage	V_{RWM}				5	V
Reverse Breakdown Voltage	V_{BR}	$I_T=1mA$	6	6.8	7.2	V
Reverse Leakage Current	I_R	$V_{RWM}=5V$, $T=25^\circ C$			0.1	μA
Clamping Voltage	V_C	$I_{PP}=5A$, $t_p=8/20\mu s$			9.1	V
		$I_{PP}=11A$, $t_p=8/20\mu s$			13	
Junction Capacitance	C_J	Pin 1, 3, 4, 5, 6 to 2 $V_R=0V$, $f=1MHz$		40	50	pF
		Pin 1, 3, 4, 5, 6 to 2 $V_R=2.5V$, $f=1MHz$		30	40	

Typical Operating Characteristics

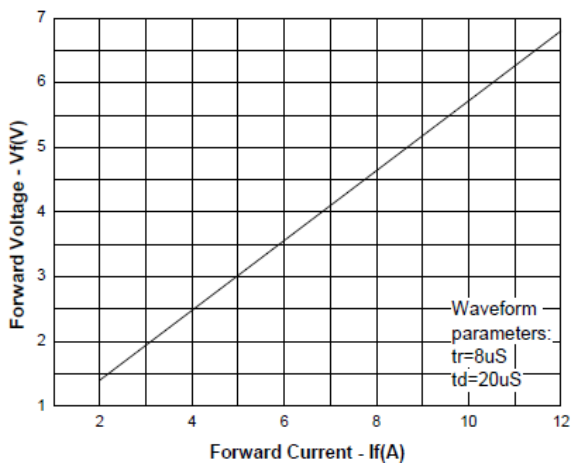
Non-Repetitive Peak Pulse Power vs. Pulse Time



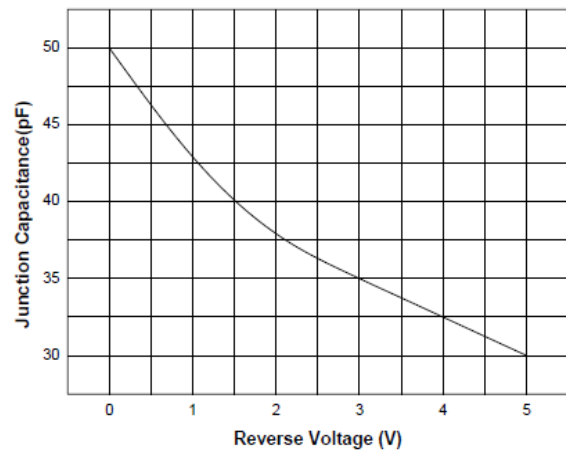
Clamping Voltage vs. Peak Pulse Current



Forward Voltage vs. Forward Current



Junction Capacitance vs. Reverse Voltage



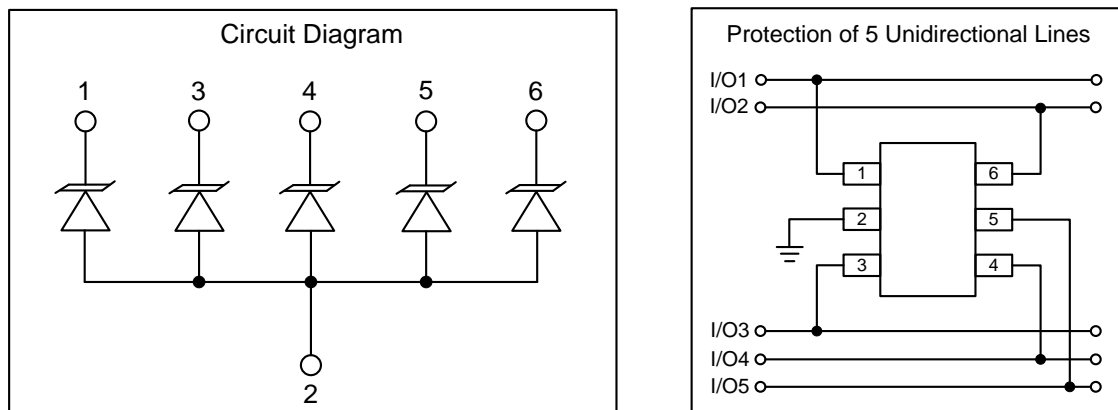
Application Information

UESD6V85CT36 ESD protection diode is designed to protect 5 data, I/O, or power supply lines. The device is unidirectional and may be used on lines where the signal polarity is above ground. The cathode should be placed towards the line that is to be protected.

Device Connection for Protection of Quad Data Lines

The UESD6V85CT36 TVS diode array is designed to protect up to five unidirectional data lines. The device as follows:

Unidirectional protection of five I/O lines is achieved by connecting pins 1, 3, 4, 5, and 6 to the data lines. Pin 2 is connected to ground. The ground connection should be made directly to the ground plane for best results. The path length is kept as short as possible to reduce the effects of parasitic inductance in the board traces.



Circuit Board Layout Recommendations for Suppression of ESD

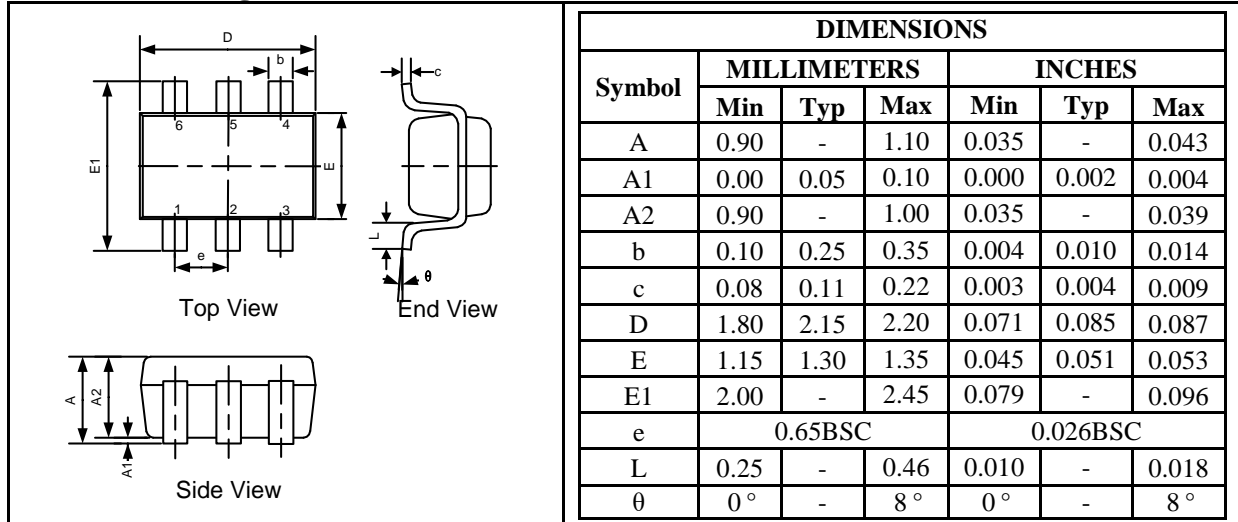
Good circuit board layout is critical for the suppression of ESD induced transients. The following guidelines are recommended:

- Place the TVS near the input terminals or connectors to restrict transient coupling.
- Minimize the path length between the TVS and the protected line.
- Minimize all conductive loops including power and ground loops.
- The ESD transient return path to ground should be kept as short as possible.
- Never run critical signals near board edges.
- Use ground planes whenever possible. For multilayer printed-circuit boards, use ground vias.
- Keep parallel signal paths to a minimum.
- Avoid running protection conductors in parallel with unprotected conductor.
- Minimize all printed-circuit board conductive loops including power and ground loops.
- Avoid using shared transient return paths to a common ground point.

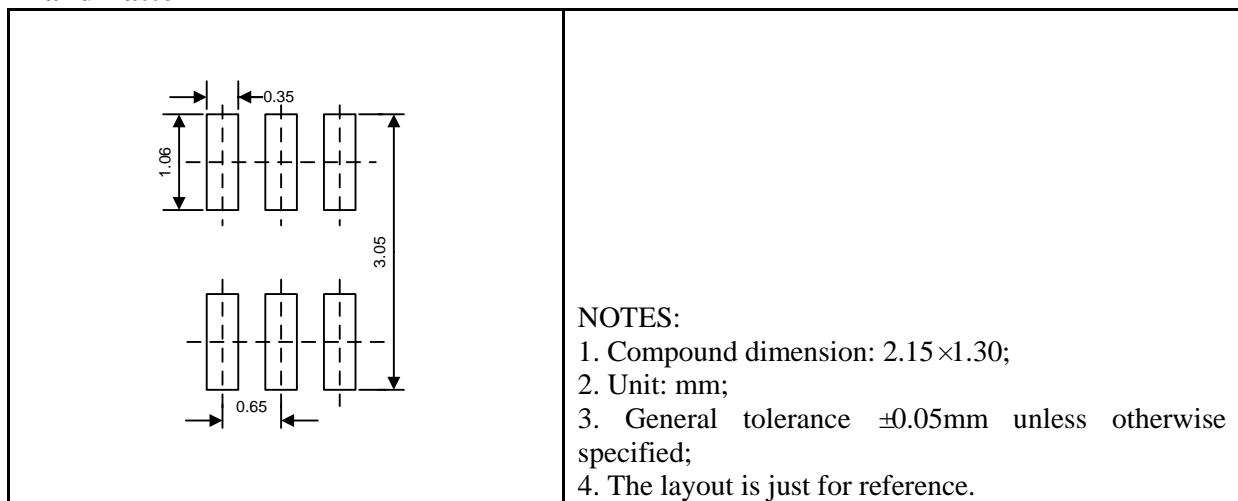
Package Information

UESD6V85CT36 SC70-6/SC88/SOT363

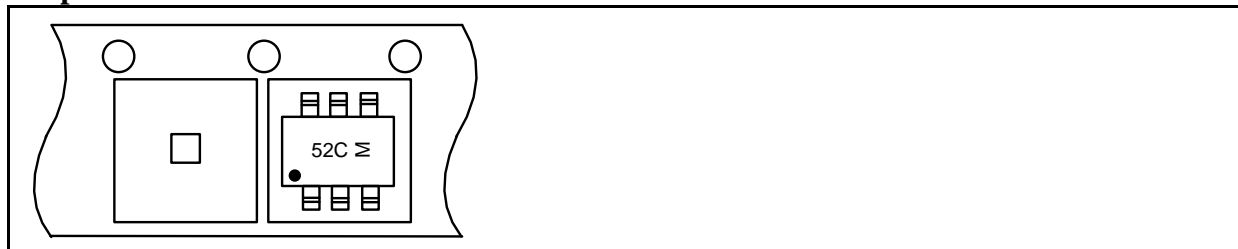
Outline Drawing



Land Pattern



Tape and Reel Orientation



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