



### DESCRIPTION

- ◆ The ESDE5V0U are designed by TVS device that is to protect sensitive electronics from damage or latch-up due to ESD.
- ◆ They are designed for use in applications where board space is at a premium.
- ◆ ESDE5V0U will protect single line, and may be used on line where the signal polarities swing above and below ground.
- ◆ ESDE5V0U offer desirable characteristics for board level protection including fast response time, low operating and clamping voltage, and no device degradation.
- ◆ ESDE5V0U may be used to meet the immunity requirements of IEC 61000-4-2, level 4.
- ◆ The small SOD-723 package makes them ideal for use in portable electronics such as cell phones, PDA's, notebook computers, and digital cameras.

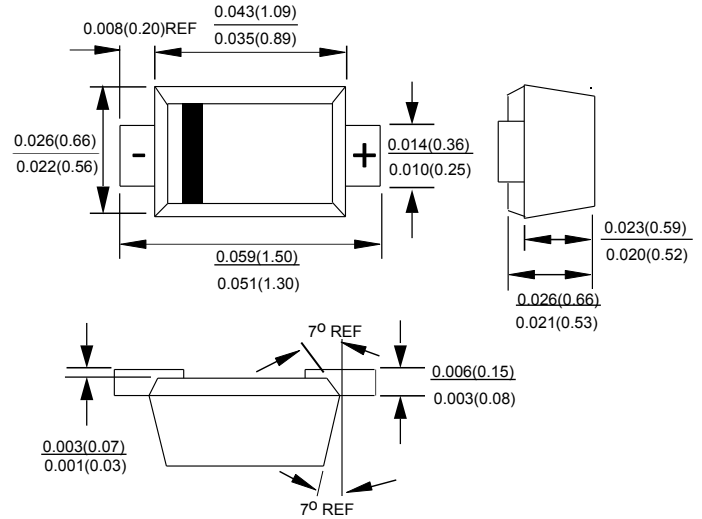
### FEATURES

- ◆ Transient protection for data lines to IEC 61000-4-2 (ESD) ±15kV (air), ±8kV (contact) IEC 61000-4-4 (EFT) 40A (5/50ns)
- ◆ Protects single I/O lines
- ◆ Working voltage: 5V
- ◆ Low leakage current
- ◆ Low operating and clamping voltages

### APPLICATIONS

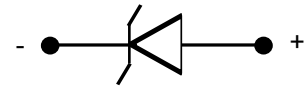
- ◆ Cellular Handsets and Accessories
- ◆ Cordless Phone
- ◆ PDA
- ◆ Notebooks and Handhelds
- ◆ Portable Instrumentation
- ◆ Digital Cameras
- ◆ MP3 Player

### PACKAGE OUTLINE SOD-723

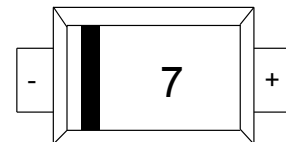


Unit : Inch (mm)

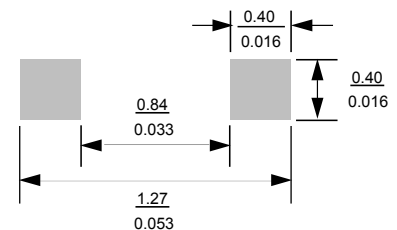
### PINCONFIGURATION



### Part Marking



### Suggested Pad Layout



Unit : mm / Inch

**ABSOLUTE MAXIMUM RATINGS**

(TA=25°C Unless otherwise noted)

Parameter	Symbol	Typical	Unit
Peak Pulse Power ( tp = 8/20 μs )	Ppk	135	W
Maximum Peak Pulse Current ( tp = 8/20 μs )	Ipp	10	A
ESD per IEC 61000 – 4 – 2 (Air )	Vpp	±15	KV
ESD per IEC 61000 – 4 – 2 (Contact )	Vpp	±8	KV
Operating Junction Temperature	Tj	-55 ~ 125	°C
Storage Temperature Range	TSTG	-55 ~ 150	°C
Lead Soldering Temperature	TL	260 ( 10sec )	°C

**ELECTRICAL CHARACTERISTICS**

(TA=25°C Unless otherwise noted)

Parameter	Symbol	Conditions	Min.	Typ	Max.	Unit
Reverse Stand – Off Voltage	VRWM				5	V
Reverse Breakdown Voltage	VBR	It = 1mA	6		7.6	V
Reverse Leakage Current	IR	VRWM = 5V , T=25°C			1	μA
Clamping Voltage	VC	Ipp =12A , tp = 8/20 μs			13.5	V
Junction Capacitance	Cj	Between I/O Pin and GND VR = 0V , f = 1MHz			80	pF

**ORDERING INFORMATION**

Part Number	Package	Part Marking	7" Reel Packing
ESDE5V0U	SOD-723	7	8000 pcs



# Single-Line ESD Protection Array

## TYPICAL CHARACTERISTICS

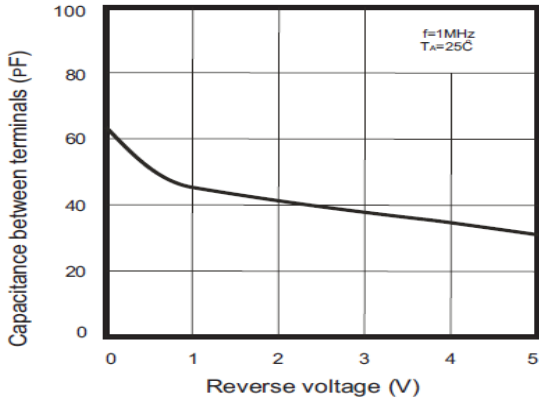


Fig 1 : Junction Capacitance V.S Reverse Voltage Applied

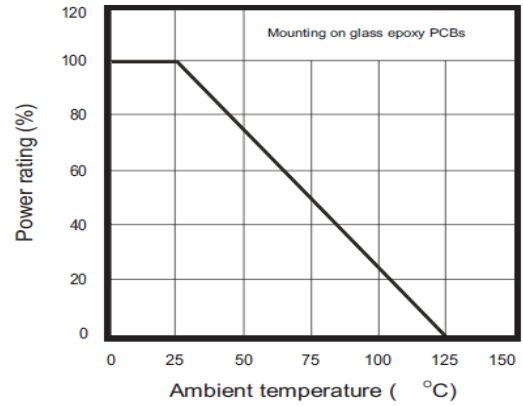


Fig 2 : Peak Plus Power V.S Exponential Plus Duration

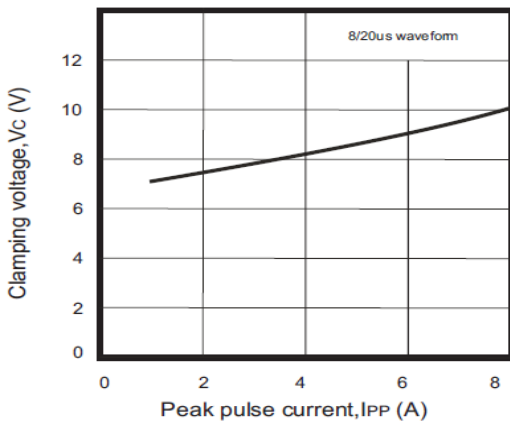


Fig 3 : Clamping Voltage VS Peak Pulse Current

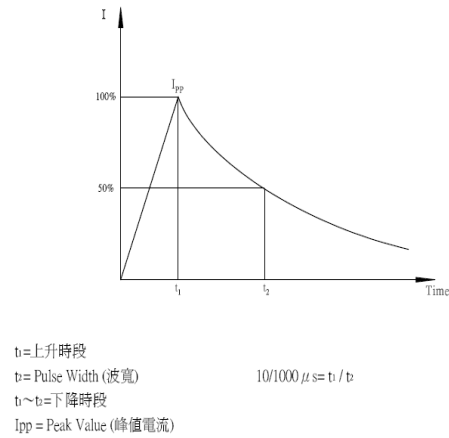


Fig 4 : Forward Voltage Drop V.S Peak Forward Current