

Features

- ❑ IEC61000-4-2 (ESD) +/-30kV (air),
+/-30KV(contact)
IEC61000-4-4 (EFT) 40A (5/50ns)
- ❑ Peak Pulse Current(tp=8/20us) 12 A
- ❑ Protects one I/O line
- ❑ Working voltages : 18V
- ❑ Low leakage current
- ❑ ROHS compliant

Description

The TS1811LDX-C is designed for applications requiring transient overvoltage protection capability. They are intended for use in voltage and ESD sensitive equipment such as computers, printers, business machines, communication systems, medical equipment and other applications. These devices are ideal for situations where board space is at a premium.

This series has been specifically designed to protect sensitive components which are connected to power data and transmission lines from overvoltage caused by ESD(electrostatic discharge), CDE (Cable Discharge Events), and EFT (electrical fast transients).

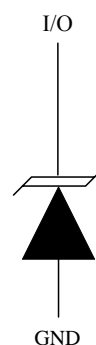
Applications

- ❑ Cell Phone Handsets and Accessories
- ❑ Microprocessor based equipment
- ❑ Personal Digital Assistants (PDA's)
- ❑ Notebooks, Desktops, and Servers
- ❑ Portable Instrumentation
- ❑ Networking and Telecom
- ❑ Serial and Parallel Ports.
- ❑ Peripherals

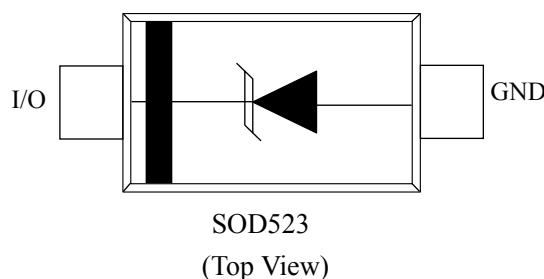
Mechanical Characteristics

- ❑ SOD523 package
- ❑ Flammability Rating: UL 94V-0
- ❑ Packaging: Tape and Reel
- ❑ High temperature soldering guaranteed:260°C/10s
- ❑ Reel size: 7 inch

Circuit Diagram



Pin Configuration

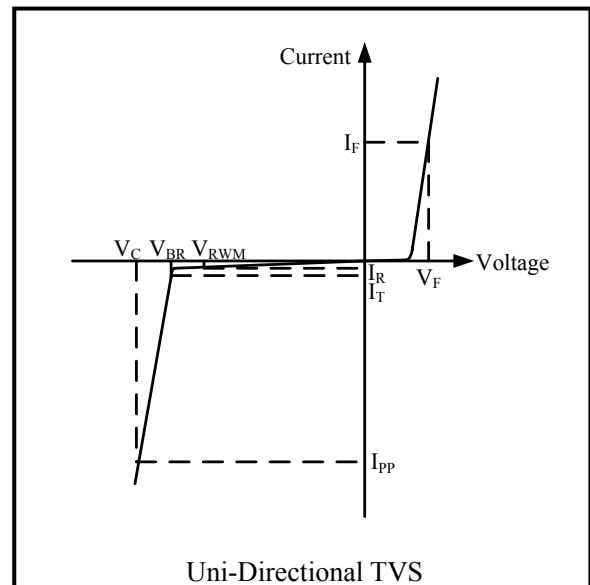


Absolute Maximum Rating

Symbol	Parameter	Value	Units
V_{ESD}	ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	± 30 ± 30	kV
I_{PP}	Peak Pulse Current(8/20us)	12	A
P_{PK}	Peak Pulse Power (8/20μs)	400	W
T_{STG} / T_{OPT}	Storage Temperature / Operating Temperature	-55/+150	°C
T_L	Lead Soldering Temperature	260 (10 sec.)	°C

Electrical Characteristics (T = 25°C)

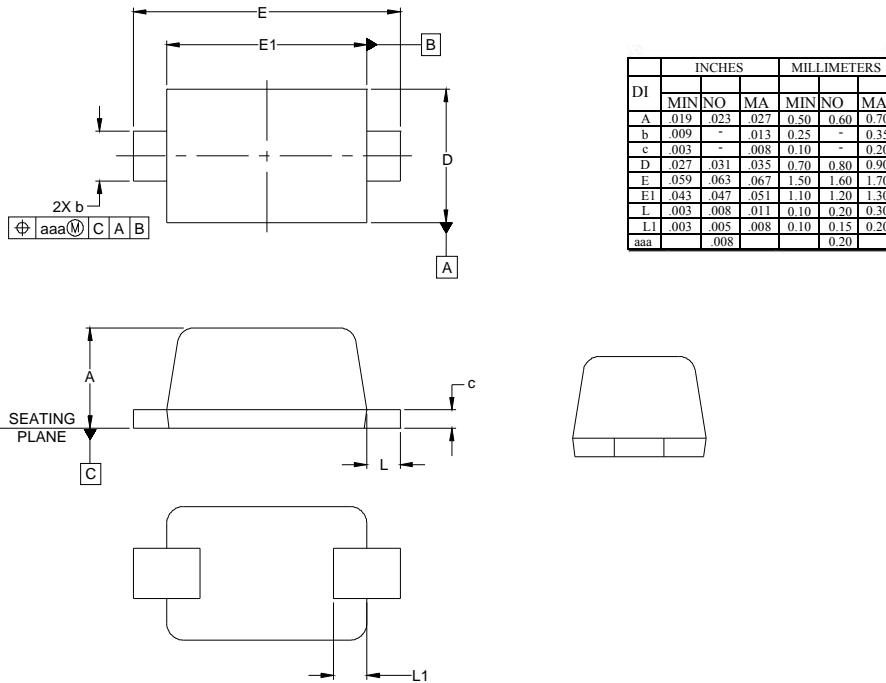
Symbol	Parameter
V_{RWM}	Nominal Reverse Working Voltage
I_R	Reverse Leakage Current @ V_{RWM}
V_{t1}	Trigger Voltage
I_{t1}	Trigger Current @ V_{t1}
V_h	Holding Voltage
I_h	Holding Current @ V_h
V_C	Clamping Voltage @ I_{PP}
V_{CR}	Reverse Clamping Voltage @ I_{PP}
I_{PP}	Maximum Peak Pulse Current
C_{ESD}	Parasitic Capacitance



Symbol	Test Condition	Minimum	Typical	Maximum	Units
V_{RWM}				18.0	V
I_R	$V_{RWM} = 18V, T = 25^{\circ}C$		0.01	0.1	μA
V_{BR}	$I_T = 1mA$	18	19		V
V_C	$I_{PP} = 12A, t_p = 8/20\mu s$			35	V
C_{ESD}	$V_R = 0V, f = 1MHz$		80		pF

Package Outline

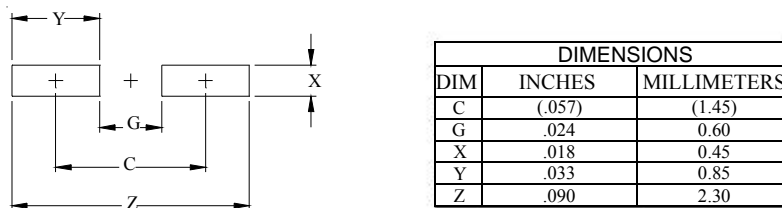
Outline Drawing (SOD523)



NOTES:

1. CONTROLLING DIMENSIONS ARE IN MILLIMETERS (ANGLES IN DEGREES).
2. DIMENSIONS "E1" AND "D" DO NOT INCLUDE MOLD FLASH, PROTRUSIONS OR GATE BURRS.

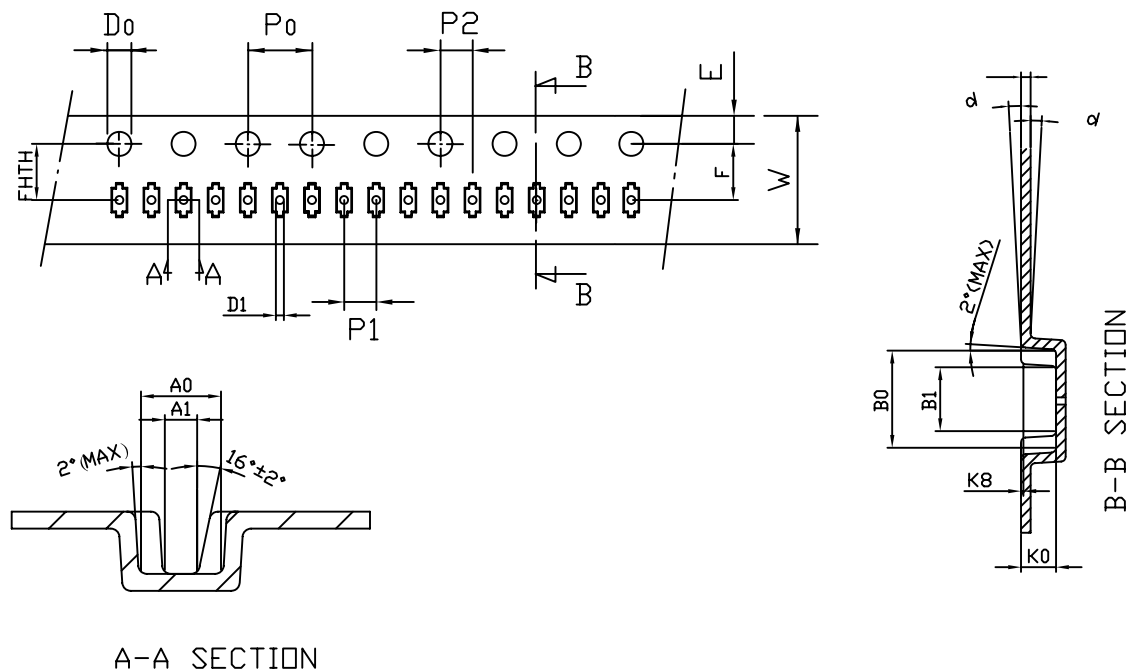
Land Pattern



NOTES:

1. THIS LAND PATTERN IS FOR REFERENCE PURPOSES ONLY

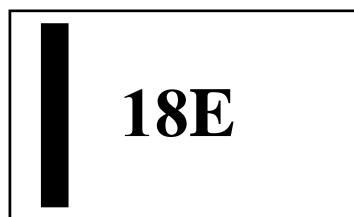
Tape and Reel Specification



unit:mm

symbol	A0	B0	K0	P0	P1	P2	A1	T
Spec	0.90±0.05	1.95±0.05	0.73±0.05	4.0±0.10	2.0±0.05	2.0±0.05	0.39±0.05	0.20±0.02
symbol	E	F	D0	D1	B2	W	10P0	K8
Spec	1.75±0.10	3.50±0.05	1.50 ^{+0.10} ₋₀	0.50±0.05	1.40±0.05	8.0 ^{+0.3} _{-0.1}	40.0±0.10	0.15MAX
symbol	FHTH							
Spec	3.50±0.05							

Marking Codes



Note:

- (1) "E" is part number, fi
- (2) "XX" is the internal c

Ordering Information

Part Number	Working Voltage	Quantity Per Reel	Reel Size
TS1811LDX-C	18V	3,000	7 Inch