TS1811LD-C

1-Line, Uni-directional, TVS Protection

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

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 guaranted:260℃/10s
- Reel size: 7 inch

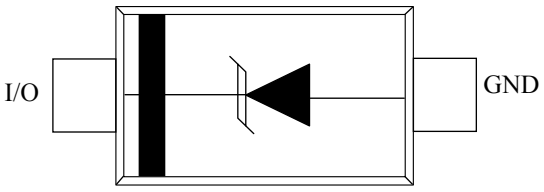
Description

The TS1811LD-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).

Circuit Diagram

Pin Configuration



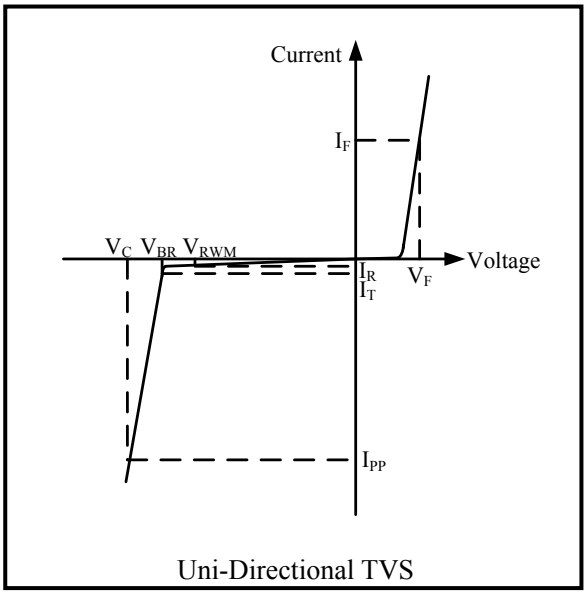
SOD523
(Top View)

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

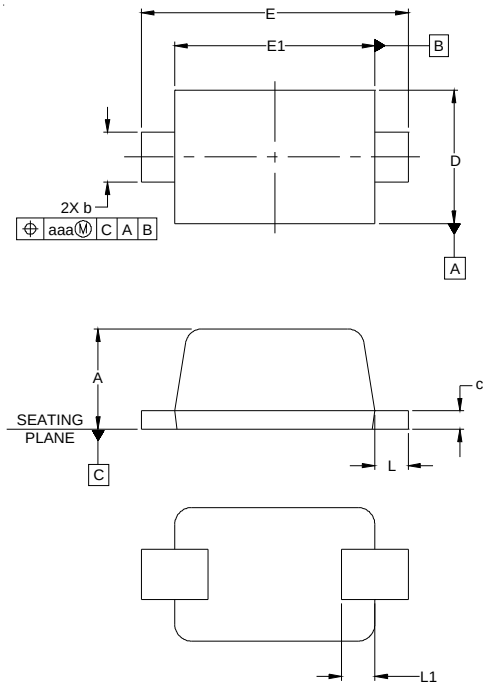


Uni-Directional TVS

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

Package Outline

Outline Drawing (SOD523)

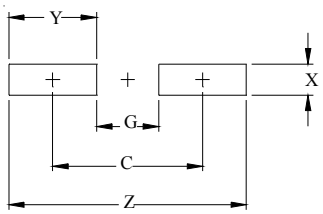


DI	INCHES			MILLIMETERS		
	MIN	NO	MA	MIN	NO	MA
A	.019	.023	.027	0.50	0.60	0.70
b	.009	-	.013	0.25	-	0.35
c	.003	-	.008	0.10	-	0.20
D	.027	.031	.035	0.70	0.80	0.90
E	.059	.063	.067	1.50	1.60	1.70
E1	.043	.047	.051	1.10	1.20	1.30
L	.003	.008	.011	0.10	0.20	0.30
L1	.003	.005	.008	0.10	0.15	0.20
aaa		.008			0.20	

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

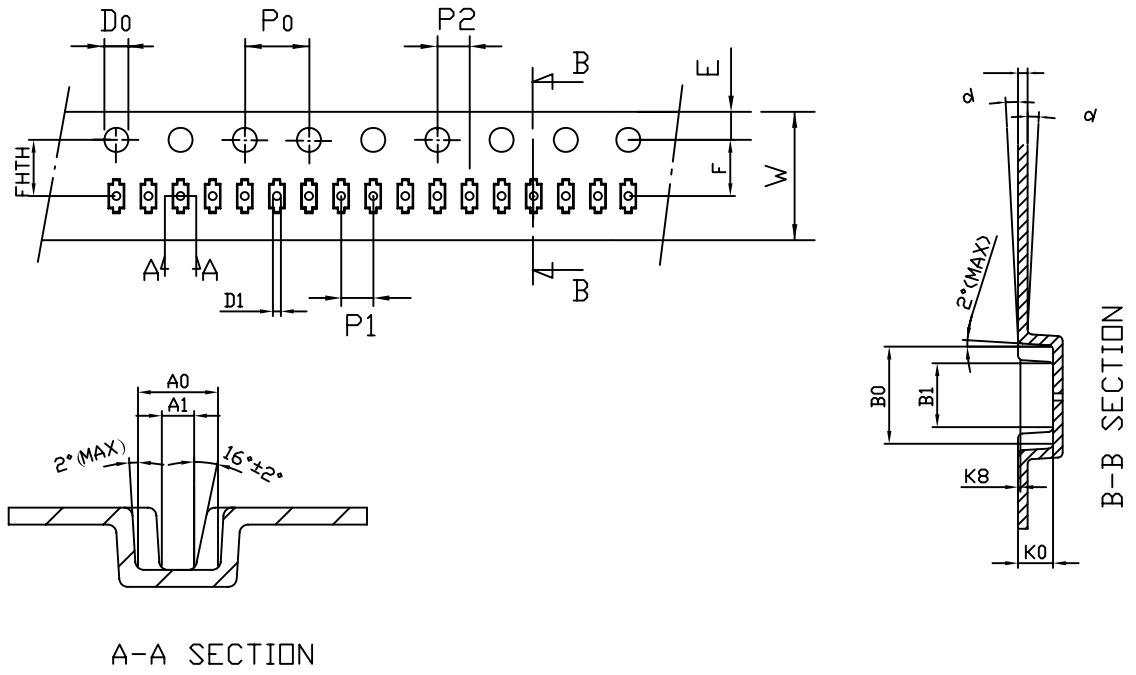


DIMENSIONS		
DIM	INCHES	MILLIMETERS
C	(.057)	(1.45)
G	.024	0.60
X	.018	0.45
Y	.033	0.85
Z	.090	2.30

NOTES:

1. THIS LAND PATTERN IS FOR REFERENCE PURPOSES ONLY

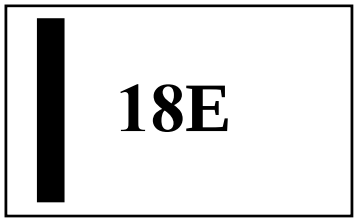
Tape and Reel Specification



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



Ordering Information

Part Number	Working Voltage	Quantity Per Reel	Reel Size
TS1811LD-C	18V	3,000	7 Inch

Note:

(1) "E" is part number,fi

(2) "XX" is the internal c