

Features

- ❑ IEC61000-4-2 (ESD) ±30KV (air),
± 30KV(contact)
- IEC61000-4-4 (EFT) 40A (5/50ns)
- ❑ 350 Watts Peak Pulse Power per (tp=8/20us)
- ❑ Protects one I/O line (Unidirectional)
- ❑ Working voltages : 5V,8V,12V,15V,18V,24V
- ❑ Low leakage current

Description

The TSxx11LDX Series 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).

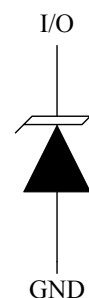
Applications

- ❑ 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

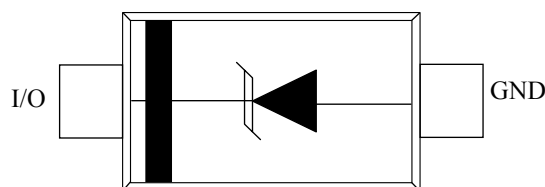
Mechanical Characteristics

- ❑ SOD-523 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



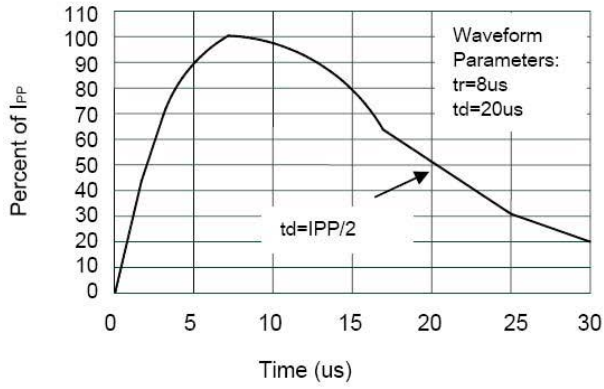
SOD-523
(Top View)

Absolute Maximum Rating

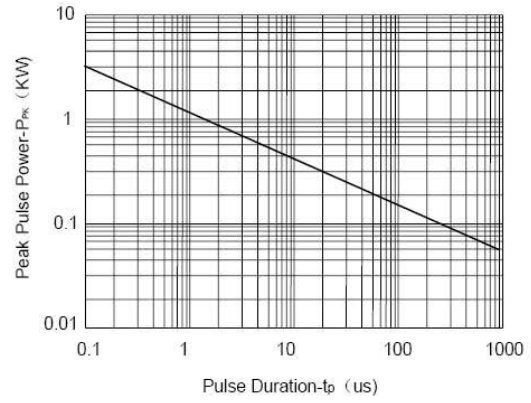
Symbol	Parameter	Value	Units
V _{ESD}	ESD per IEC 61000-4-2 (Air)	±30	kV
	ESD per IEC 61000-4-2 (Contact)	±30	
P _{PP}	Peak Pulse Power (8/20μs)	350	W
T _{OPT}	Operating Temperature	-55/+150	°C
T _{STG}	Storage Temperature	-55/+150	°C
T _L	Lead Soldering Temperature	260 (10 sec.)	°C

Electrical Characteristics (T = 25°C)

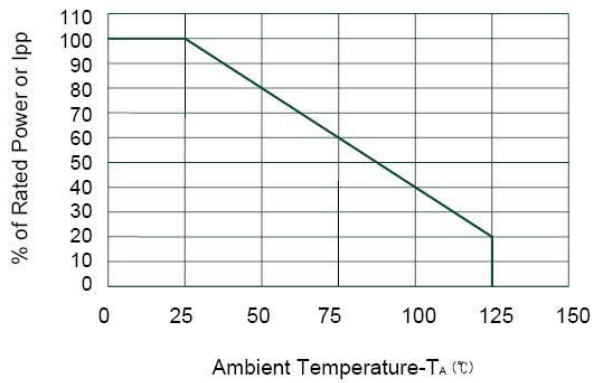
PART NUMBER	V _{RWM}	V _B	I _T	V _{C@1A}	V _C		I _R	C _T	DEVICE MARKING
	(V) (max.)	(V) (min.)	(mA)	(V) (max.)	(V) (max.) (@A)		(μA) (max.)	(pF) (max.)	
TS0511LDX	5	6	1	10	16	24	0.1	150	5D
TS0811LDX	8	9.2	1	13	20	15	0.1	100	AD
TS1211LDX	12	13.3	1	18	25	10	0.1	90	BD
TS1511LDX	15	16.7	1	24	30	7	0.1	50	CD
TS1811LDX	18	20.4	1	29	35	6	0.1	30	DD
TS2411LDX	24	26.7	1	35	48	5	0.1	30	ED



Pulse Waveform



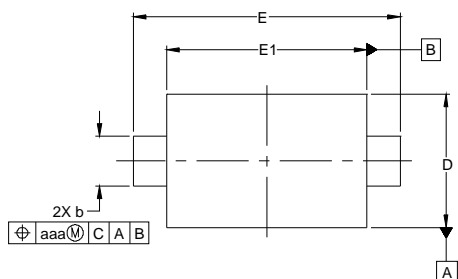
Non-Repetitive Peak Pulse Power vs. Pulse Time



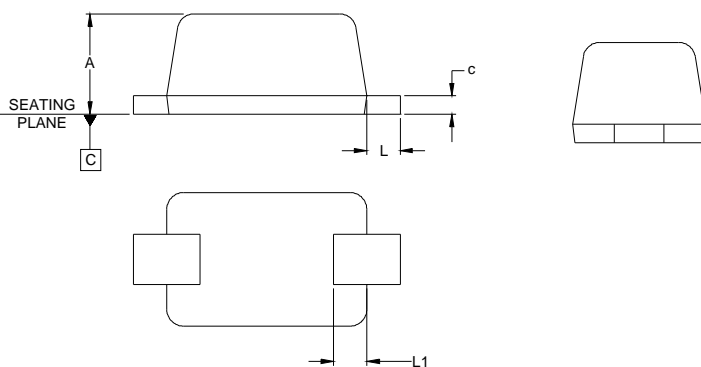
Power Derating Curve

Package Outline Dimensions

Outline Drawing (SOD-523)



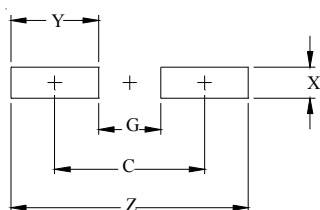
DI	INCHES			MILLIMETERS		
	MIN	NO	MA	MIN	NO	MA
A	.019	.023	.027	0.50	0.60	0.70
b	.009	-	.013	0.25	-	0.35
c	.003	-	.008	0.10	-	0.20
D	.027	.031	.035	0.70	0.80	0.90
E	.059	.063	.067	1.50	1.60	1.70
E1	.043	.047	.051	1.10	1.20	1.30
L	.003	.008	.011	0.10	0.20	0.30
L1	.003	.005	.008	0.10	0.15	0.20
aaa	.008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

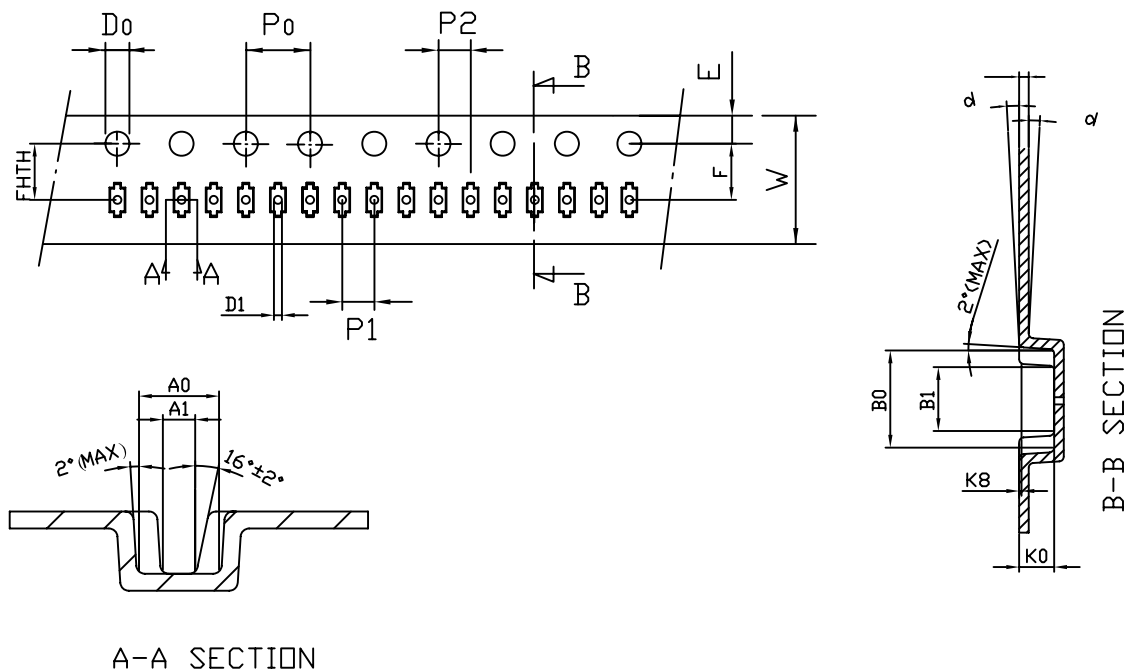


DIMENSIONS		
DIM	INCHES	MILLIMETERS
C	(.057)	(1.45)
G	.024	0.60
X	.018	0.45
Y	.033	0.85
Z	.090	2.30

NOTES:

1. THIS LAND PATTERN IS FOR REFERENCE PURPOSES ONLY
CONSULT YOUR MANUFACTURING GROUP TO ENSURE YOUR
COMPANY'S MANUFACTURING GUIDELINES ARE MET

Tape and Reel Specification



A-A SECTION

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							

Ordering Information

Part Number	Working Voltage	Quantity Per Reel	Reel Size
TSxx11LDX	xxV	3,000	7 Inch