

Features

- ❑ IEC61000-4-2 (ESD) $\pm 30\text{kV}$ (air),
 $\pm 30\text{KV}$ (contact)
- IEC61000-4-4 (EFT) 40A (5/50ns)
- ❑ 350 Watts Peak Pulse Power per (tp=8/20us)
- ❑ Protects one I/O line (bidirectional)
- ❑ Working voltages : 3.3V, 5V, 8V, 12V, 15V, 18V,
24V, 36V, 48V
- ❑ Low leakage current
- ❑ ROHS compliant

Description

The TSxx11LEX 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).

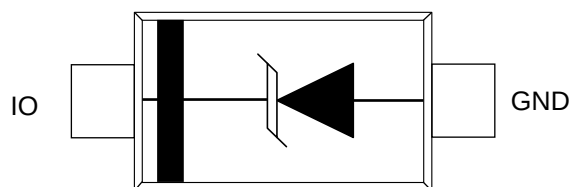
Applications

- ❑ 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

- ❑ SOD323 Package
- ❑ Flammability Rating: UL 94V-0
- ❑ Packaging: Tape and Reel
- ❑ High temperature soldering guaranteed: $260^{\circ}\text{C}/10\text{s}$
- ❑ Reel size: 7 inch

Pin Configuration



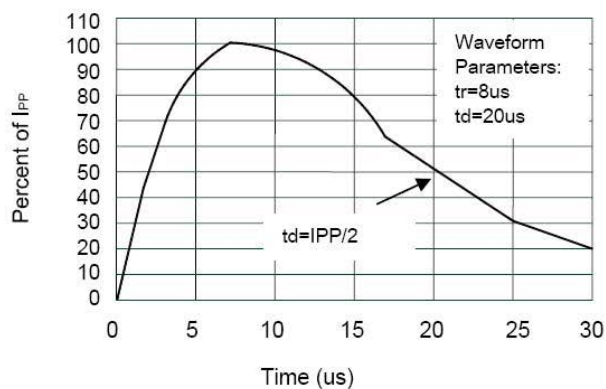
SOD323 (Top View)

Absolute Maximum Rating

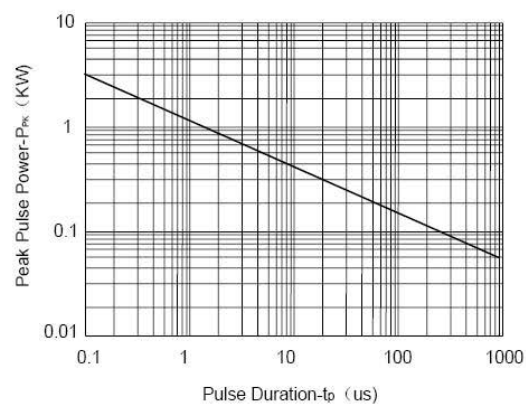
Symbol	Parameter	Value	Units
V _{ESD}	ESD per IEC 61000-4-2 (Air)	±30	kV
	ESD per IEC 61000-4-2 (Contact)	±30	
P _{PP}	Peak Pulse Power (8/20μs)	350	W
T _{OPT}	Operating Temperature	-55/+150	°C
T _{STG}	Storage Temperature	-55/+150	°C
T _L	Lead Soldering Temperature	260 (10 sec.)	°C

Electrical Characteristics (T = 25°C)

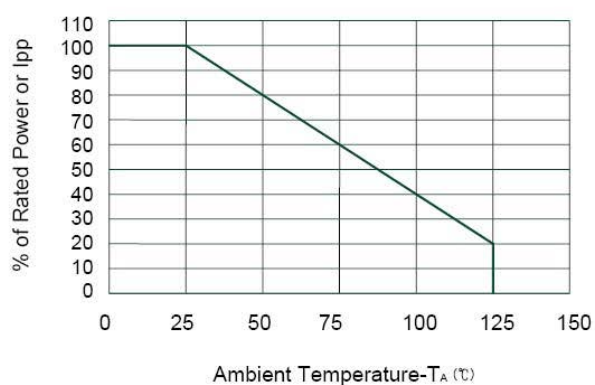
PART NUMBER	V _{RWM} (V) (max.)	V _B (V) (min.)	I _T (mA)	V _{C@1A} (V) (max.)	V _C (V) (max.) (@A)		I _R (μA) (max.)	C _T (pF) (max.)	DEVICE MARKING
TS0311LEX	3.3	4.5	1	6	13	15	0.1	500	03W
TS0511LEX	5	6.0	1	10	24	19	0.1	160	05W
TS0811LEX	8	9.2	1	15	28	15	0.1	140	08W
TS1211LEX	12	13.3	1	19	32	13	0.1	120	12W
TS1511LEX	15	16.7	1	24	36	10	0.1	100	15W
TS1811LEX	18	20.4	1	28	45	8	0.1	80	18W
TS2411LEX	24	26.7	1	36	50	7	0.1	60	24W
TS3611LEX	36	40.0	1	50	60	6	0.1	40	36W
TS4811LEX	48	52.0	1	65	70	5	0.1	40	48W



Pulse Waveform



Non-Repetitive Peak Pulse Power vs. Pulse Time



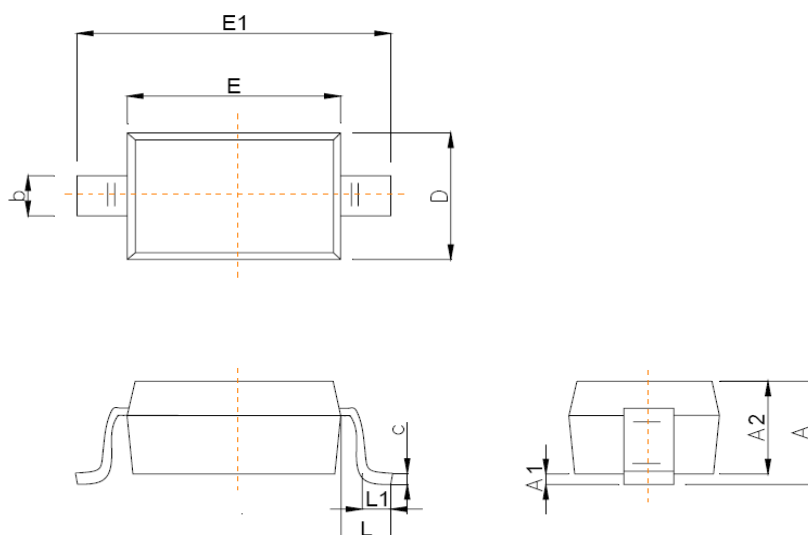
Power Derating Curve

Package Outline

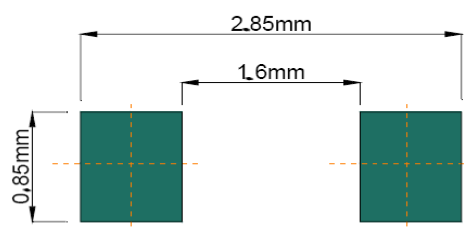
□ SOD323 package



Package Outline Dimensions



Symbol	Dimensions In Millimeters	
	Min	Max
A		1.00
A1	0.000	0.100
A2	0.800	0.900
b	0.250	0.350
c	0.080	0.150
D	1.200	1.400
E	1.600	1.800
E1	2.500	2.700
e	1.800	2.040
L	0.475 REF	
L1	0.250	0.400
θ	0°	8°



Recommended Pad outline