

Features

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

Description

The TS0511LBX 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.

The TS0511LBX 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).

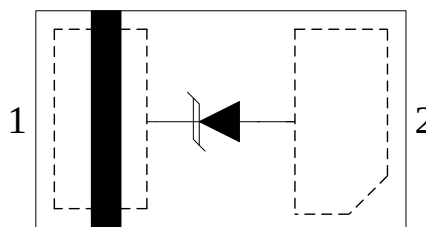
Applications

- ☐ 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

- ☐ uDFN-2L package
- ☐ Flammability Rating: UL 94V-0
- ☐ Packaging: Tape and Reel
- ☐ High temperature soldering guaranteed: 260 °C/10s
- ☐ Reel size: 7 inch

Pin Configuration



uDFN-2L
(Top View)

Absolute Maximum Rating

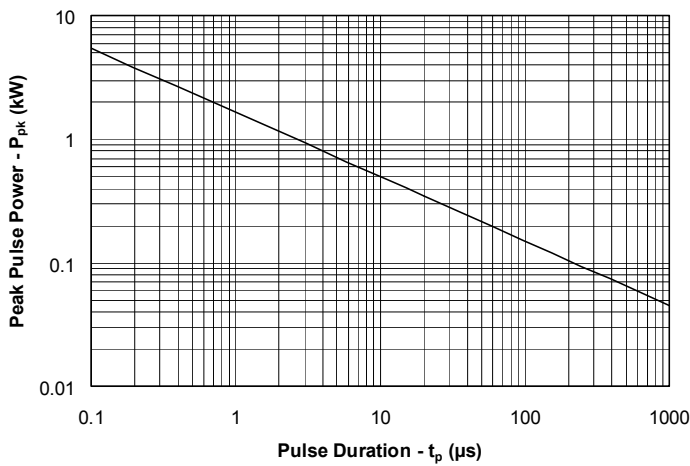
Symbol	Parameter	Value	Units
V_{ESD}	ESD per IEC 61000-4-2 (Air)	± 30	kV
	ESD per IEC 61000-4-2 (Contact)	± 30	
P_{PP}	Peak Pulse Power (8/20 μ s)	350	W
T_{OPT}	Operating Temperature	-55/+150	°C
T_{STG}	Storage Temperature	-55/+150	°C
T_L	Lead Soldering Temperature	260 (10 sec.)	°C

Electrical Characteristics (T = 25°C)

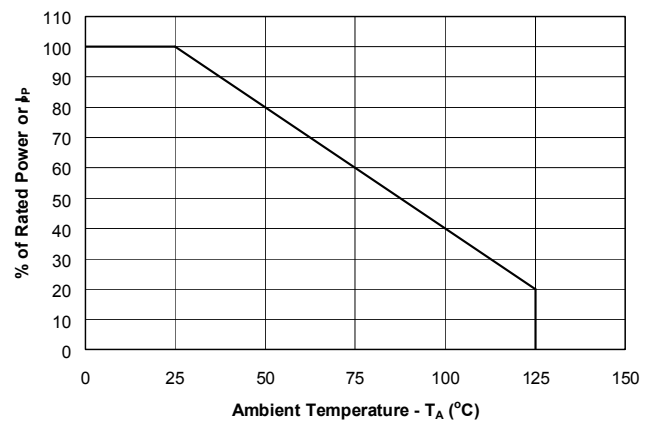
Symbol	Test Condition	Minimum	Typical	Maximum	Units
V_{RWM}				5.0	V
I_R	$V_{RWM} = 5V, T = 25^\circ C$			50	μA
V_{BR}	$I_T = 1mA$	6.0			V
V_C	$I_{PP} = 5A, t_p = 8/20\mu s$			9.8	V
V_C	$I_{PP} = 24A, t_p = 8/20\mu s$			14.5	V
I_{PP}	$t_p = 8/20\mu s$			24	A
C_{ESD}	$V_R = 0V, f = 1MHz$			350	pF



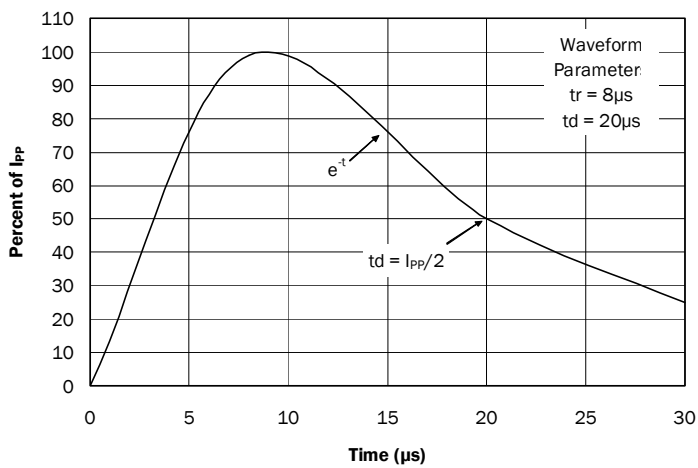
Non-Repetitive Peak Pulse Power vs. Pulse Time



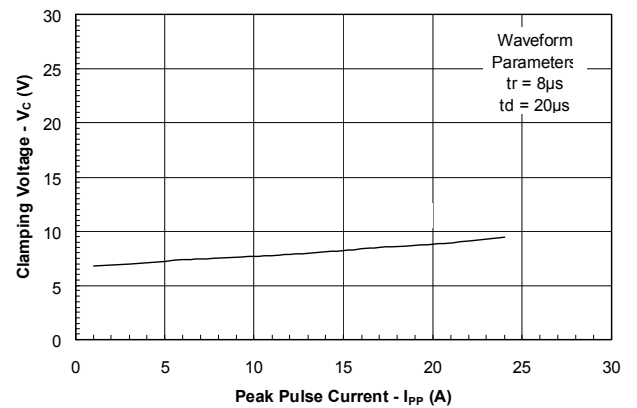
Power Derating Curve



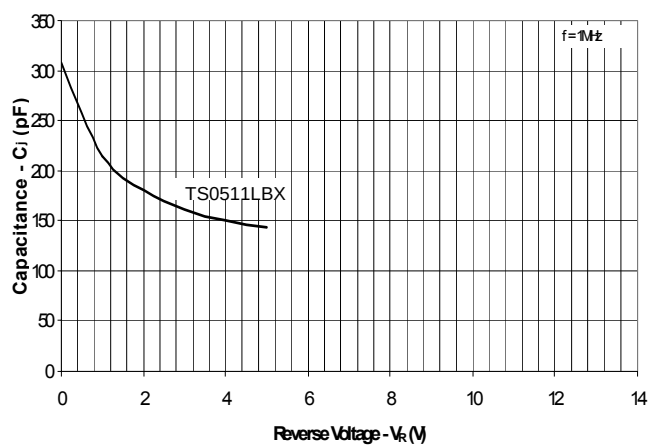
Pulse Waveform



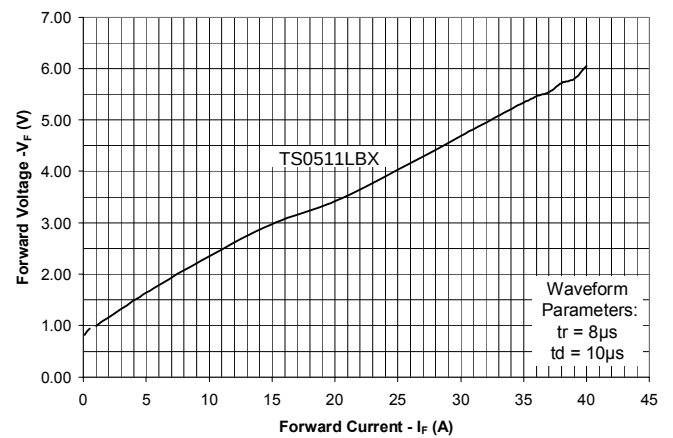
Clamping Voltage vs. Peak Pulse Current



Capacitance vs. Reverse Voltage

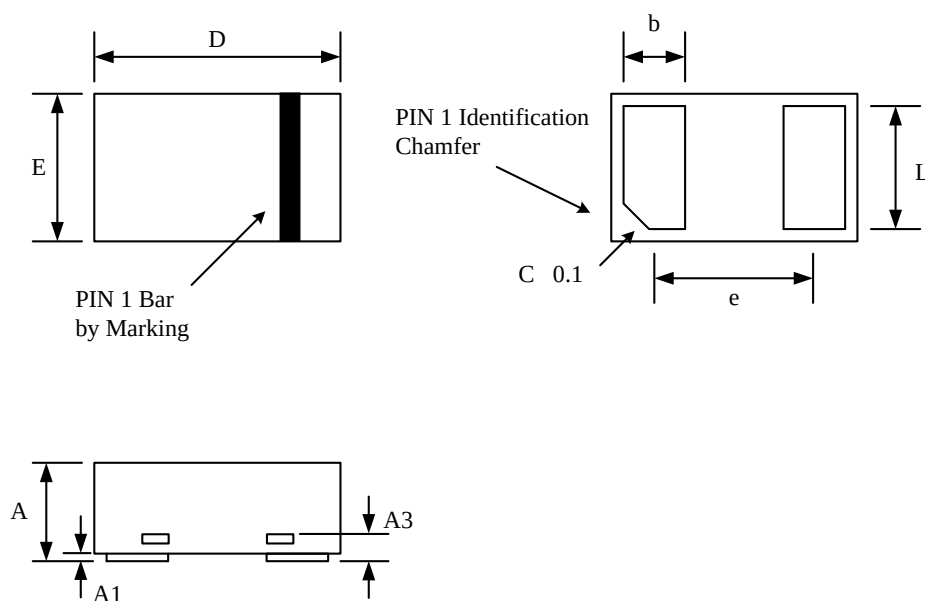


Forward Voltage vs. Forward Current



Package Outline Demensions

- ☐ uDFN-2L package
- ☐ 2 leads, very small package
- ☐ MSL-1



Package Dimensions (Controlling dimensions are in millimeters)

Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Minimum	Maximum	Minimum	Maximum
A	0.400	0.550	0.016	0.022
A1	0.000	0.050	0.000	0.002
A3	0.125 REF		0.005 REF	
D	0.950	1.050	0.037	0.041
E	0.550	0.650	0.022	0.026
b	0.200	0.300	0.008	0.012
e	0.650 BSC		0.026 BSC	
L	0.450	0.550	0.018	0.022