

Features

- ❑ IEC61000-4-2 (ESD) +/-30kV (air),
+/-30KV(contact)
- IEC61000-4-4 (EFT) 40A (5/50ns)
- IEC61000-4-5 (EOS) (1.2/50uS, 8/20uS)
- ❑ Protects one I/O line (bidirectional)
- ❑ Working voltages : 3.3V,8V,12V,15V,18V,
24V,36V
- ❑ Low leakage current
- ❑ ROHS compliant

Description

The TSxx01TE Series are ultra low capacitance transient voltage suppressor arrays, designed to protect applications such as portable electronics and SMART phones.

The TSxx01TE and Series meets IEC 61000-4-2 (ESD) and IEC 61000-4-4 (EFT) requirements. At higher operating frequencies or faster edge rates, insertion loss and signal integrity are a major concern. This series offers a ultra low capacitance and low leakage current in a miniature SOD323 package.

Applications

- ☐ Cell Phone Handsets and Accessories
- ☐ Microprocessor based equipment
- ☐ Personal Digital Assistants (PDA's)
- ☐ Notebooks, Desktops, and Servers
- ☐ Portable Instrumentation
- ☐ Peripherals
- ☐ USB Interface

Mechanical Characteristics

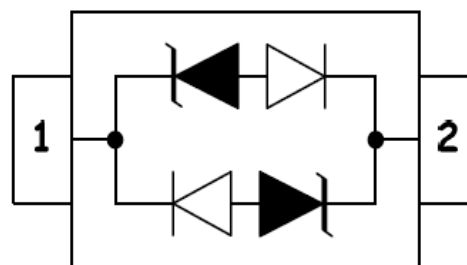
- ☐ SOD323 package
- ☐ Flammability Rating: UL 94V-0
- ☐ Packaging:Tape and Reel
- ☐ High temperature soldering guaranteed:260°C/10s
- ☐ Reel size: 7 inch

Ordering Information

Device: TSxx01TE

- ☐ Package: SOD323
- ☐ Material: Halogen free
- ☐ Packing: Tape & Reel
- ☐ Quantity per reel: 3,000pcs

Pin Configuration



(Top View)

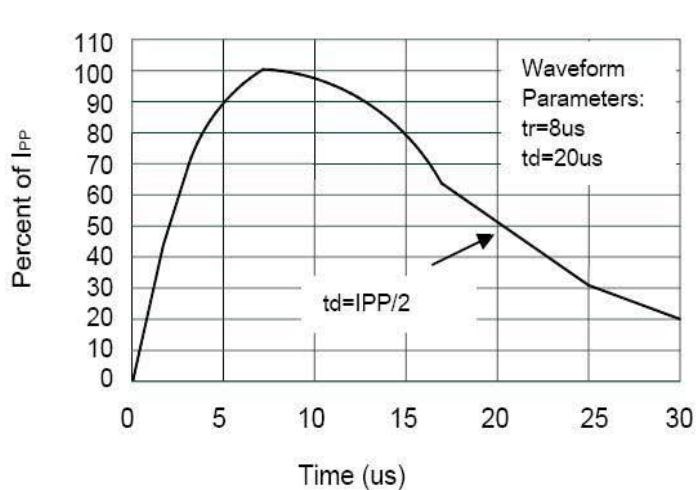
Absolute Maximum Rating

Symbol	Parameter	Value	Units
V_{ESD}	ESD per IEC 61000-4-2 (Air)	± 30	kV
	ESD per IEC 61000-4-2 (Contact)	± 30	
T_{OPT}	Operating Temperature	-55 to +150	°C
T_{STG}	Storage Temperature	-55 to +150	°C
T_{LST}	Lead Soldering Temperature	260	°C

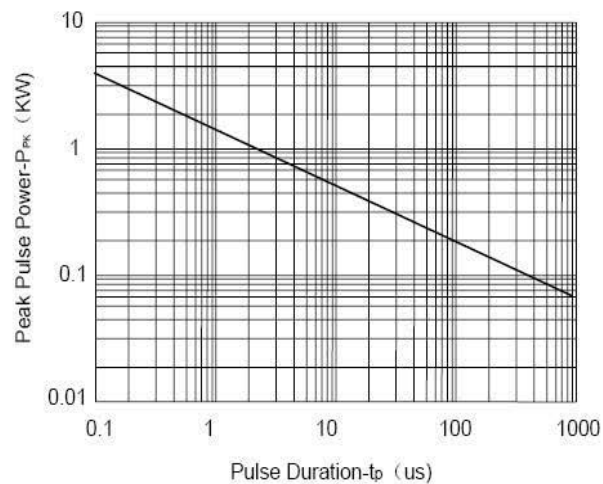
Electrical Characteristics (T = 25°C)

PART NUMBER	DEVICE MARKING	V_{RWM} (V) (max.)	V_B (V) (min.)	I_{pp} (A) (max.)	$V_{C@1A}$ (V) (max.)	V_C (V) (max.) (@A)		I_R (nA) (max.)	C_T (pF) (typ.)
TS0301TE	AC/CC	3.3	4.0	20	8.0	16	20	50	0.9
TS0801TE	BC	8.0	9.2	15	15.0	28	15	50	0.9
TS1201TE	DC	12.0	13.3	13	19.0	32	13	50	0.9
TS1501TE	EC	15.0	16.7	10	24.0	36	10	50	0.9
TS1801TE	GC	18.0	20.0	8	28.0	45	8	50	0.9
TS2401TE	HC	24.0	26.7	7	36.0	50	7	50	0.9
TS3601TE	KC	36.0	40.0	6	50.0	60	6	50	0.9

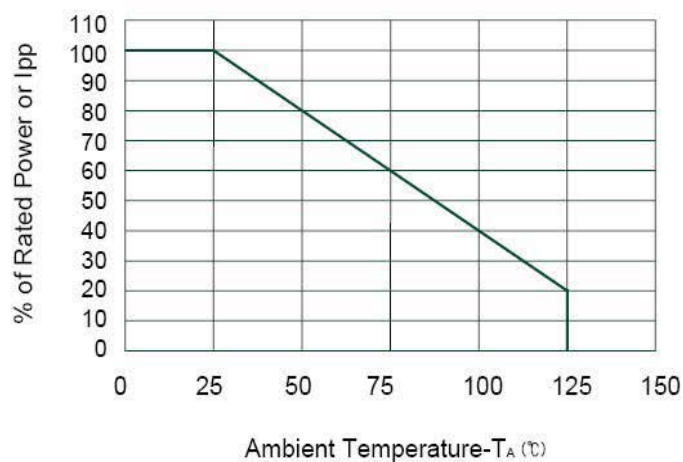
Electrical Characteristics Curve



Pulse Waveform



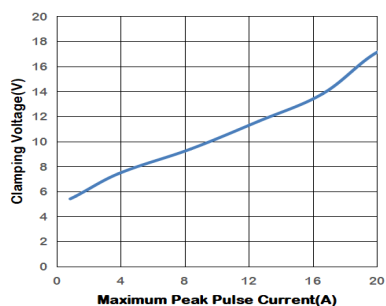
Non-Repetitive Peak Pulse Power vs. Pulse Time



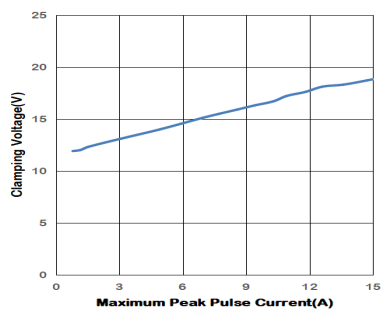
Power Derating Curve

IEC61000-4-5 EOS Test (1.2/50uS, 8/20uS)

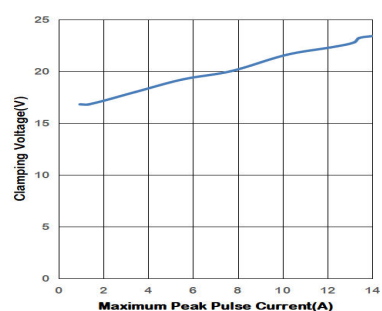
TS0301TE



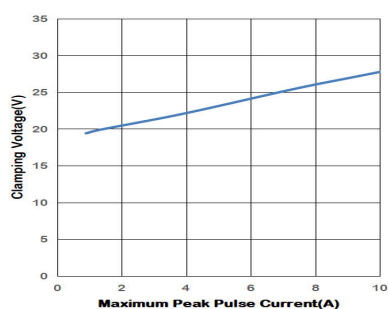
TS0801TE



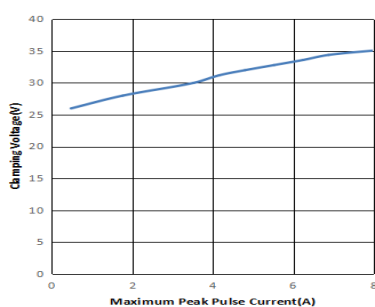
TS1201TE



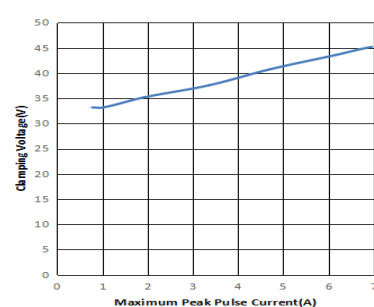
TS1501TE



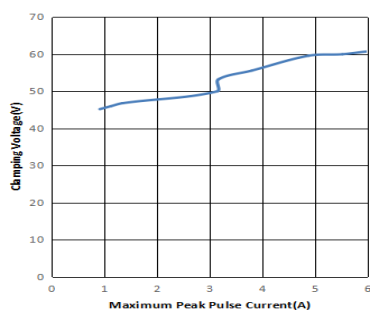
TS1801TE



TS2401TE



TS3601TE

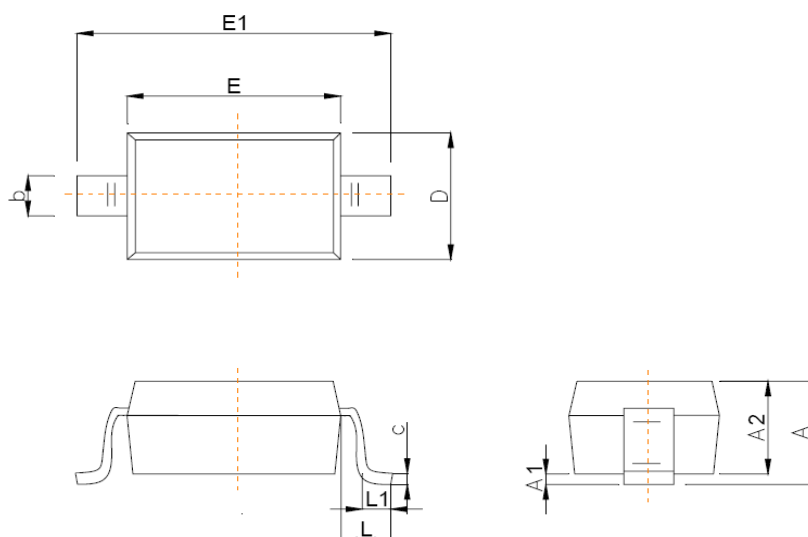


Package Outline

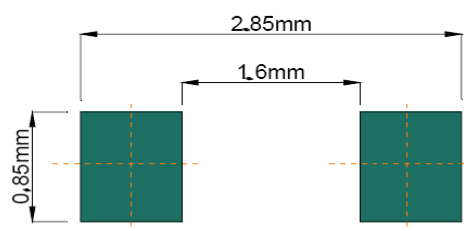
□ SOD323 package



Package Outline Dimensions



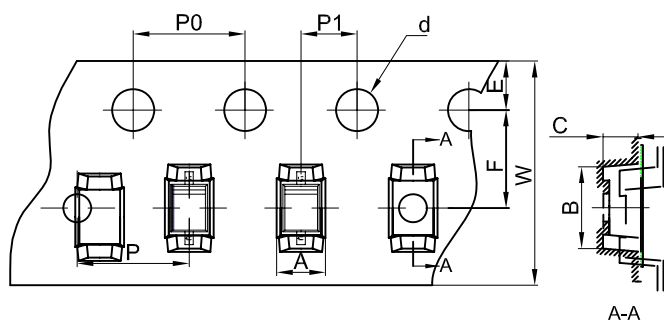
Symbol	Dimensions In Millimeters	
	Min	Max
A		1.00
A1	0.000	0.100
A2	0.800	0.900
b	0.250	0.350
c	0.080	0.150
D	1.200	1.400
E	1.600	1.800
E1	2.500	2.700
e	1.800	2.040
L	0.475 REF	
L1	0.250	0.400
θ	0°	8°



Recommended Pad outline

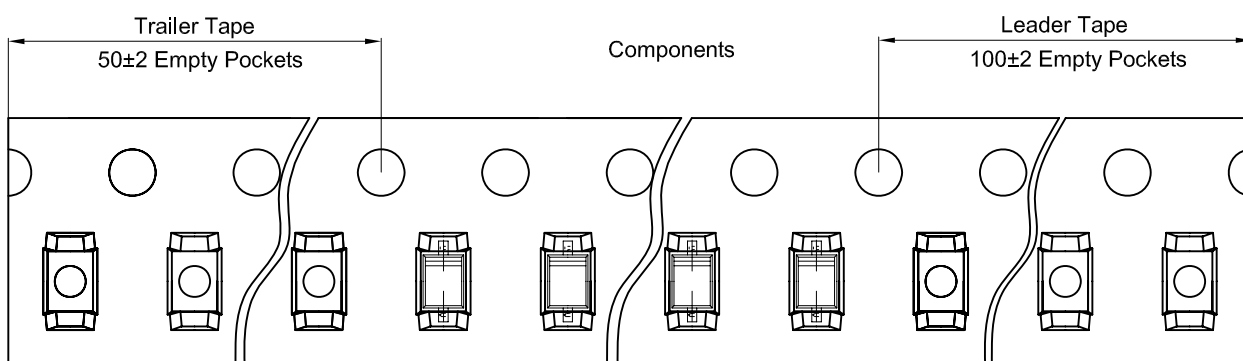
P.S. TSxx01TE series are the bidirectional TVS. The device marking is directionless. Then the device orientation in tape is not requested.

Tape and Reel Specification

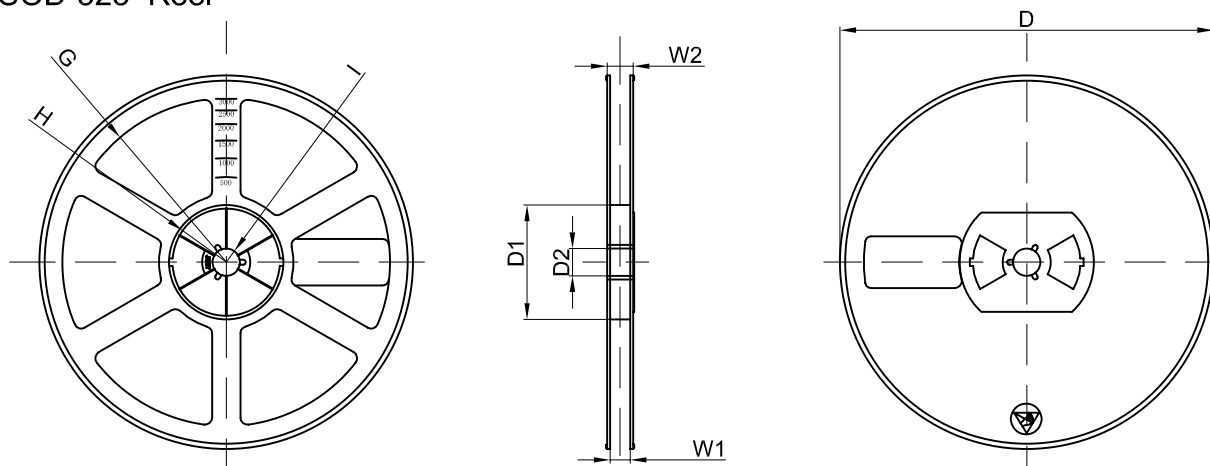


Dimensions are in millimeter										
Pkg type	A	B	C	d	E	F	P0	P	P1	W
SOD-323	1.46	2.90	1.25	Ø1.50	1.75	3.50	4.00	4.00	2.00	8.00
(Tolerance)	+/-0.05	+/-0.05	+/-0.05	+/-0.1	+/-0.1	+/-0.1	+/-0.1	+/-0.1	+/-0.1	+0.3/-0.1

SOD-323 Tape Leader and Trailer



SOD-323 Reel



Dimensions are in millimeter								
Reel Option	D	D1	D2	G	H	I	W1	W2
7" Dia	Ø178.00	54.40	13.00	R78.00	R25.60	R6.50	9.50	12.30
Tolerance	+/-2	+/-1	+/-1	+/-1	+/-1	+/-1	+/-1	+/-1

REEL	Reel Size	Box	Box Size(mm)	Carton	Carton Size(mm)	G.W.(kg)
3000 pcs	7 inch	45,000 pcs	203×203×195	180,000 pcs	438×438×220	