

Bidirectional Ultra Low Capacitance TVS Array

## DESCRIPTION

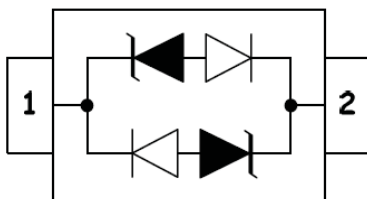
The TABXXLC Series are ultra low capacitance transient voltage suppressor arrays, designed to protect applications such as portable electronics and SMART phones. This series is available in both unidirectional and bidirectional configurations and is rated at 350 Watts for an 8/20 $\mu$ s waveshape.

The TABXXLC 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 SOD-323 package.

## ORDERING INFORMATION

- ✧ Device: TABXXLC
- ✧ Package: SOD-323
- ✧ Material: Halogen free
- ✧ Packing: Tape & Reel
- ✧ Quantity per reel: 3,000pcs

## PIN CONFIGURATION



## FEATURES

- ✧ IEC61000-4-2 (ESD)  $\pm$ 15kV (air),  $\pm$ 8kV (contact)
- ✧ IEC61000-4-4 (EFT) 40A (5/50 $\eta$ s)
- ✧ IEC61000-4-5 (Lightning) 12A (8/20 $\mu$ s)
- ✧ Protects one I/O line (bidirectional)
- ✧ Low clamping voltage
- ✧ Working voltages : 3V, 5V, 8V, 12V, 15V, 18V, 20V, 24V
- ✧ Low leakage current
- ✧ Response Time is < 1 ns
- ✧ P/N suffix V means AEC-Q101 qualified, e.g:TAB03LCV
- ✧ P/N suffix V means Halogen-free

## MACHANICAL DATA

- ✧ SOD-323 package
- ✧ Flammability Rating: UL 94V-0
- ✧ Packaging: Tape and Reel
- ✧ High temperature soldering guaranteed:260 $^{\circ}$ C/10s
- ✧ Reel size: 7 inch

## APPLICATIONS

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

## PACKAGE OUTLINE



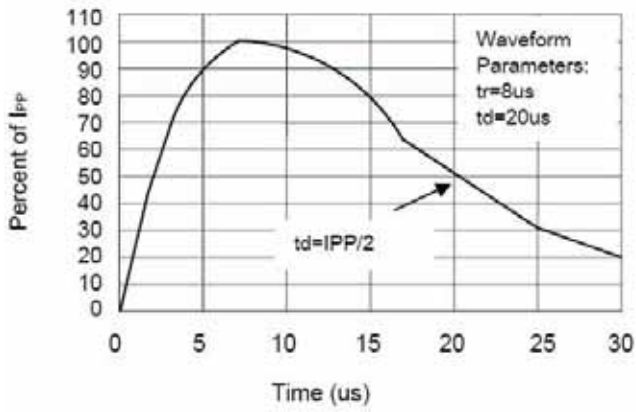
## ABSOLUTE MAXIMUM RATING

Symbol	Parameter	Value	Units
$V_{ESD}$	ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	$\pm 15$ $\pm 8$	kV
$P_{PP}$	Peak Pulse Power (8/20 $\mu$ s)	350	W
$T_{OPT}$	Operating Temperature	-55/+150	$^{\circ}$ C
$T_{STG}$	Storage Temperature	-55/+150	$^{\circ}$ C
$T_L$	Lead Soldering Temperature	260	$^{\circ}$ C

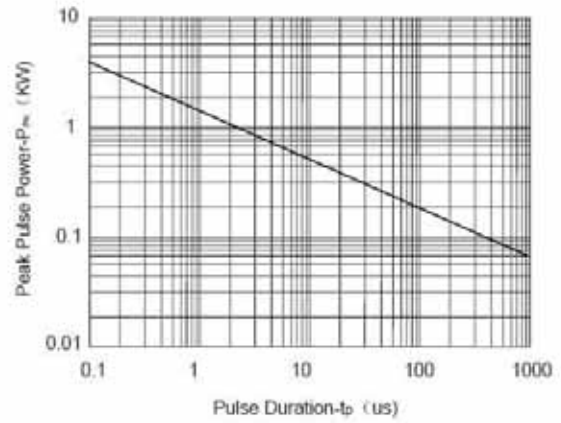
## ELECTRICAL CHARACTERISTICS ( $T_{amb}=25^{\circ}$ C)

PART NUMBER	DEVICE MARKING	$V_{RWM}$ (V)	$V_B@1mA$ (V)	$V_C@1A$ (V)	$V_C@I_{pp}$ (V)		$V_C@I_{pp}$ (V)		$I_R$ ( $\mu$ A)	$C_T$ (pF)
		Max	Min	Max	Max	$I_{pp}$ (A)	Max	$I_{pp}$ (A)	Max	Typ.
TAB03LC	CC	3.0	4.0	7.0	13.9	8	20.0	20	5	0.8
TAB05LC	AC	5.0	6.0	9.8	18.3	8	20.0	18	1	0.8
TAB08LC	BC	8.0	8.5	13.4	18.5	8	24.0	18	1	0.8
TAB12LC	DC	12.0	13.3	19.0	24.0	6	28.6	12	1	0.8
TAB15LC	EC	15.0	16.7	24.0	29.0	5	31.8	10	1	0.8
TAB18LC	FC	18.0	20.0	35.0	45.0	5	53.0	7	1	0.8
TAB20LC	GC	20.0	22.0	38.0	45.0	4	55.0	7	1	0.8
TAB24LC	HC	24.0	26.7	43.0	45.0	3	56.0	6	1	0.8

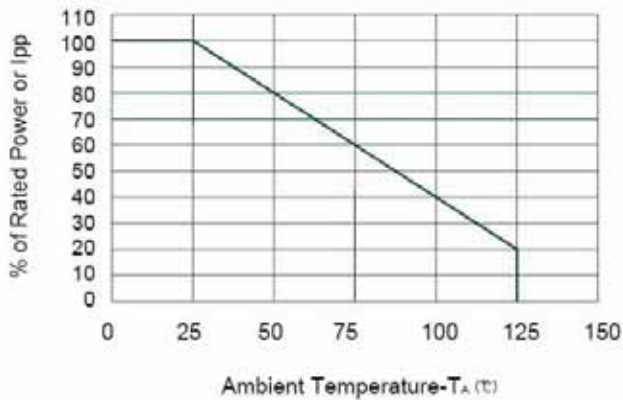
## RATING AND CHARACTERISTICS CURVES ( TAB03LC THRU TAB24LC )



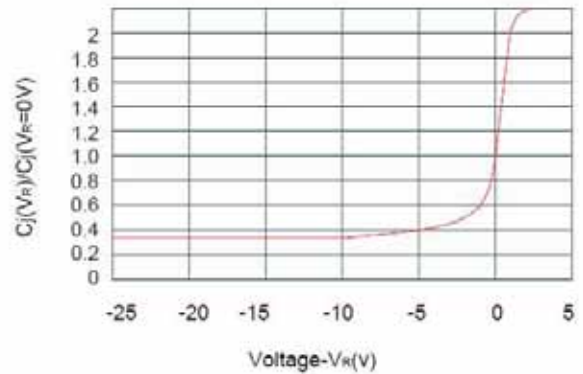
**Pulse Waveform**



**Non-Repetitive Peak Pulse Power vs. Pulse Time**



**Power Derating Curve**



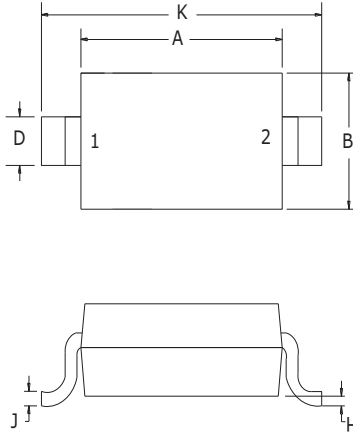
**Junction Capacitance vs. Reverse Voltage**

## SOD-323

### Mechanical Data

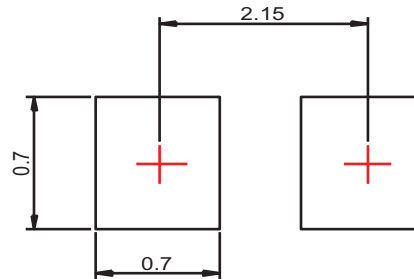
Case: SOD-323

Case Material: Molded Plastic. UL Flammability

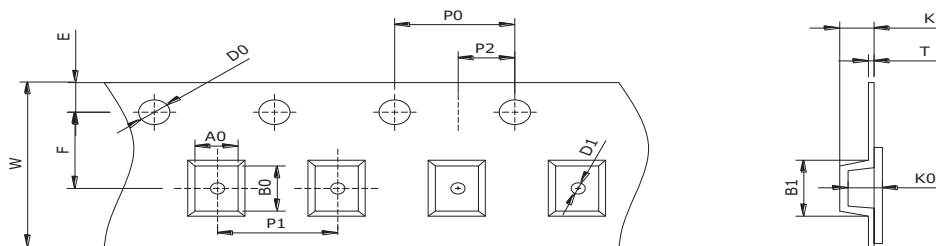


Dim	Millimeters		Inches	
	Min	Max	Min	Max
A	1.60	1.80	0.063	0.071
B	1.2	1.40	0.047	0.055
C	0.80	0.90	0.031	0.035
D	0.25	0.35	0.010	0.014
E	0.15REF		0.006REF	
H	0	0.10	0	0.004
J	0.08	0.15	0.003	0.006
K	2.50	2.70	0.098	0.106

### Recommended Pad outline



### SOD-323 Reel Dim

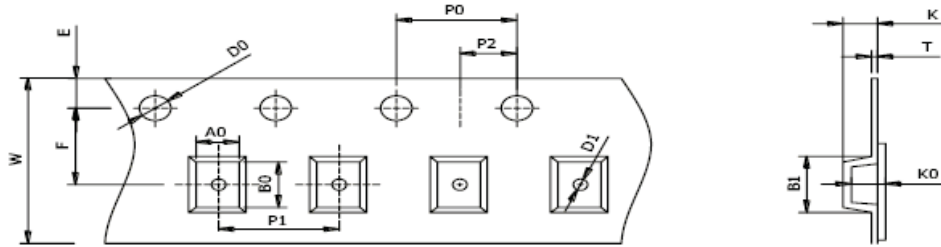


Package	Diode Size	Pocket Size B0×A0×K0(mm)	Tape Width	Reel Diameter	Quantity Per Reel	P0	P1
SOD-323	2.60×1.40×1.05	30×1.50×1.25	8mm	178mm(7")	3000	4mm	4mm
D0	D1	E	F	K	T	W	
1.5mm	1.05mm	1.75mm	3.5mm	0.95mm	0.2mm	8mm	

### Packing

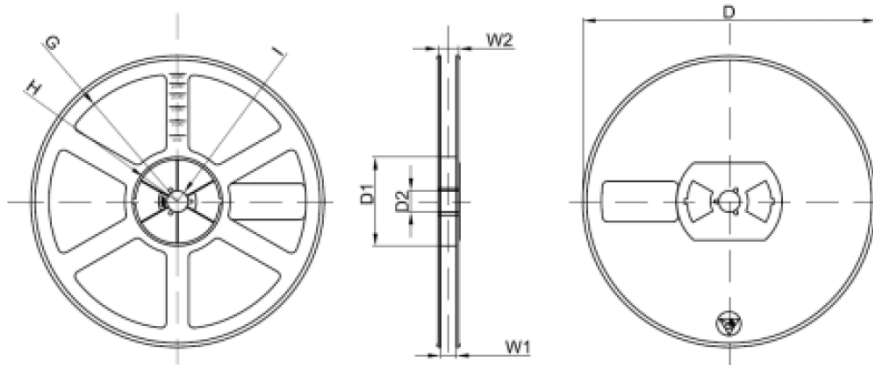
Reel	Reel Size	Box (Box Size)	Carton(Carton Size)
3000pcs	7inch	45,000pcs(203*203*195)	180,000pcs(438*438*220)

## Carrier Tape



Package	Diode Size	Pocket Size B0×A0×K0(mm)	Tape Width	Reel Diameter	Quantity Per Reel	P0	P1
SOD-323	2.60×1.40×1.05	3.30×1.50×1.25	8mm	178mm(7")	3000	4mm	4mm
D0	D1	E	F	K	T	W	
1.5mm	1.05mm	1.75mm	3.5mm	0.95mm	0.2mm	8mm	

## Reel



Unit: mm

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

## Packing Quantity

Reel		Inner Box		Carton	
Size	Quantity Per Reel	Size	Quantity Per Reel	Size	Quantity Per Reel
7 (inch)	3,000pcs	210*208*203 (mm)	45,000pcs	440*440*230 (mm)	180,000pcs



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