



PxxxxLB Series TSS

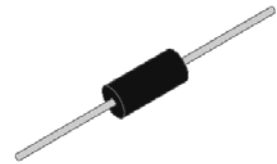
Rev.1

DESCRIPTION:

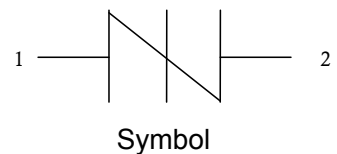
PxxxxLB series are a type of semiconduct component. They are designed to protect baseband equipment from damaging overvoltage transients.

FEATURES:

- ✧ Low profile package.
- ✧ Low on-state voltage.
- ✧ Excellent capability of absorbing transient surge.
- ✧ Quick response to surge voltage (ns Level).
- ✧ Eliminates overvoltage caused by fast rising transients.
- ✧ Moisture sensitivity level: Level 1.
- ✧ Non degenerative.



DO-15

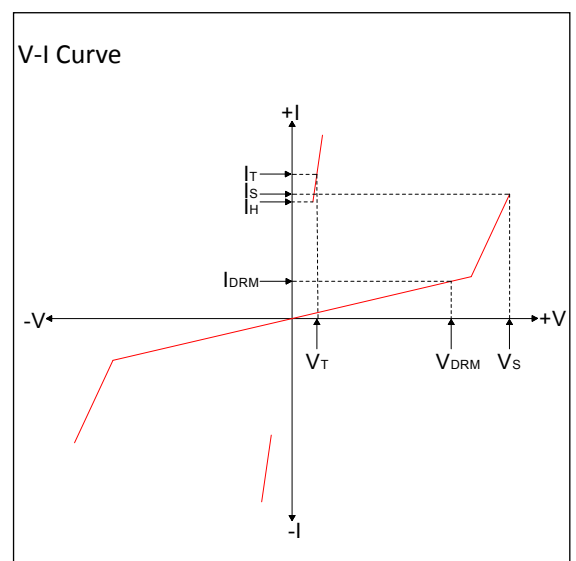


ABSOLUTE MAXIMUM RATINGS($T_A=25^{\circ}\text{C}$, RH=45%-75%, unless otherwise noted)

Parameter	Symbol	Value	Unit
Storage temperature range	T_{STG}	-60 to +150	$^{\circ}\text{C}$
Operating junction temperature range	T_J	-40 to +125	$^{\circ}\text{C}$
Repetitive peak pulse current	I_{PP}	80	A

ELECTRICAL CHARACTERISTICS($T_A=25^{\circ}\text{C}$)

Symbol	Parameter
V_{DRM}	Peak off-state voltage
I_{DRM}	Off-state current
V_S	Switching voltage
I_S	Switching current
V_T	On-state voltage
I_T	On-state current
I_H	Holding current
C_O	Off-state capacitance



ELECTRICAL CHARACTERISTICS($T_A=25^{\circ}\text{C}$, continued)

Part Number	$I_{\text{DRM}}@V_{\text{DRM}}$		$V_S^{①}@I_S$		$V_T@I_T$		I_H	$C_O^{②}$
	μA	V	V	mA	V	A	mA	pF
	max		max	max	max	max	min	max
P0080LB	1	6	15	800	4	2.2	50	130
P0220LB	1	15	30	800	4	2.2	50	120
P0300LB	1	25	40	800	4	2.2	50	120
P0640LB	1	58	77	800	4	2.2	120	80
P0720LB	1	66	87	800	4	2.2	120	75
P0900LB	1	75	98	800	4	2.2	120	70
P1100LB	1	90	130	800	4	2.2	120	70
P1300LB	1	120	160	800	4	2.2	120	60
P1500LB	1	140	180	800	4	2.2	120	55
P1800LB	1	170	220	800	4	2.2	120	50
P2300LB	1	190	260	800	4	2.2	120	50
P2600LB	1	220	300	800	4	2.2	120	45
P3100LB	1	275	350	800	4	2.2	120	45
P3500LB	1	320	400	800	4	2.2	150	40

① V_S is measured at 100KV/s② Off-state capacitance is measured in $V_{\text{DC}}=2\text{V}$, $V_{\text{RMS}}=1\text{V}$, $f=1\text{MHz}$ **SURGE RATINGS**

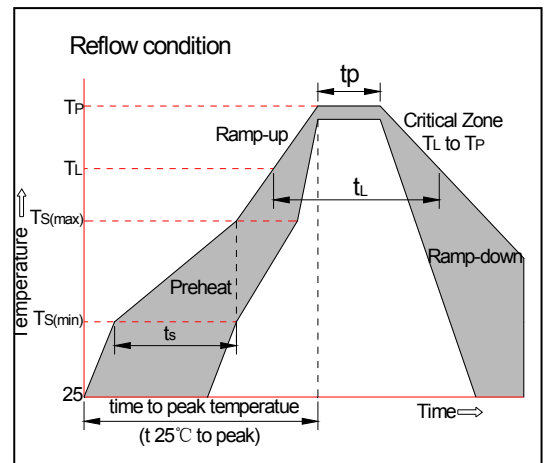
Series	$I_{\text{PP}}(\text{A})$ min			
	$2\times 10\mu\text{s}$	$8\times 20\mu\text{s}$	$10\times 360\mu\text{s}$	$10\times 1000\mu\text{s}$
B	250	250	125	80

ORDERING INFORMATION

Series code P: SIDACtor	P	008	0	L	B	Surge ratings: 4KV(10/700 μs) Package type: DO-15
	Median voltage		0: Bi-direction 1: Uni-direction			

SOLDERING PARAMETERS

Reflow Condition		Pb-Free assembly (see figure at right)
Pre Heat	-Temperature Min ($T_{s(min)}$)	+150°C
	-Temperature Max($T_{s(max)}$)	+200°C
	-Time (Min to Max) (t_s)	60-180 secs.
Average ramp up rate (Liquidus Temp (T_L) to peak)		3°C/sec. Max
$T_{s(max)}$ to T_L - Ramp-up Rate		3°C/sec. Max
Reflow	-Temperature(T_L)(Liquidus)	+217°C
	-Temperature(t_L)	60-150 secs.
Peak Temp (T_p)		+260(+0/-5)°C
Time within 5°C of actual Peak Temp (t_p)		30secs.Max
Ramp-down Rate		6°C/sec. Max
Time 25°C to Peak Temp (T_p)		8 min. Max
Do not exceed		+260°C



Flow/Wave Soldering(Solder Dipping)	
Peak Temperature	260°C
Dipping Time	5 seconds
Soldering	1 time

FIG.1: Normalized Vs change vs. junction temperature

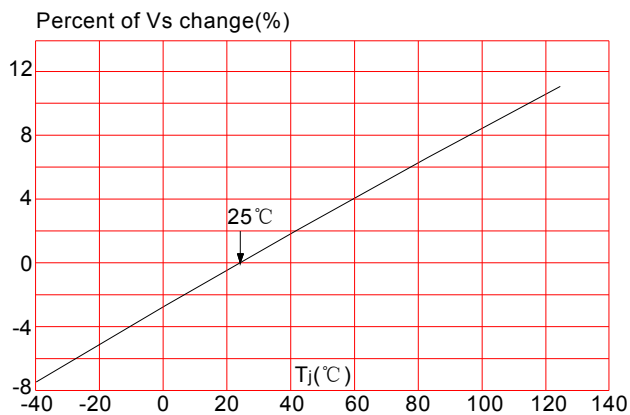


FIG.2: Normalized DC holding current vs. case temperature

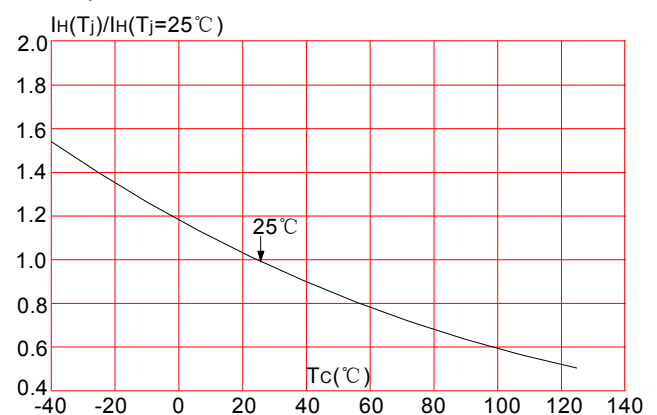
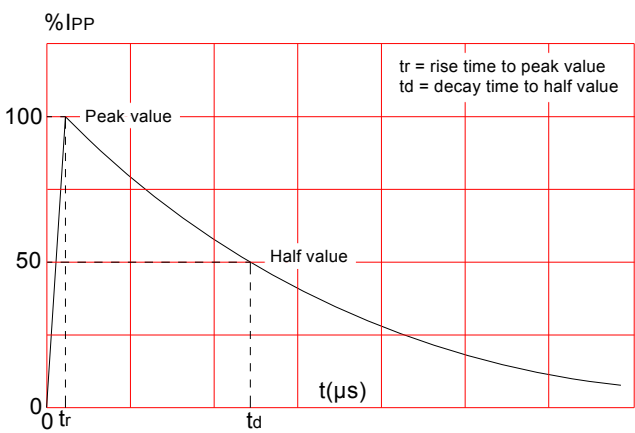


FIG.3: tr × td pulse waveform



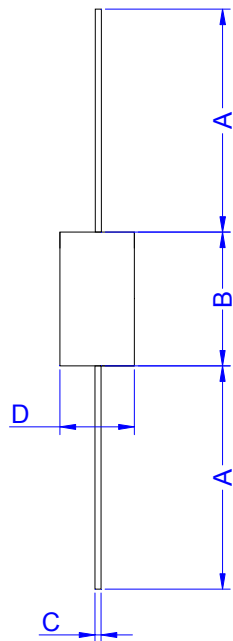
MARKING & ORDERING INFORMATION



Product Type

- | | | | | |
|-----|-----|-----|-----|-----|
| P | xxx | x | L | B |
| (1) | (2) | (3) | (4) | (5) |
- (1)Thyristor surge suppressors
(2) V_s voltage code
(3)Bi-directional
(4)Package:DO-15
(5)Surge ratings:4KV(10/700 μ s)

PACKAGE MECHANICAL DATA



DO-15

Ref.	Dimensions			
	Inches		Millimeters	
	Min.	Max.	Min.	Max.
A	1.000	-	25.40	-
B	0.228	0.300	5.80	7.62
C	0.022	0.035	0.56	0.89
D	0.102	0.142	2.60	3.60

Part Number	UNIT WEIGHT (g/PCS) typ.	Case Type	Quantity	Packing Option
PxxxxLB	0.42	DO-15/DO-204AC	2000	Box

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