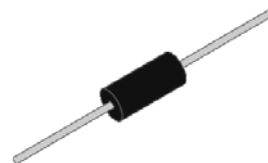


DESCRIPTION:

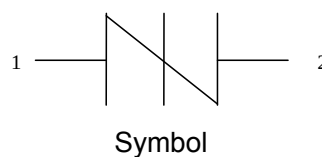
PxxxxLB series are a type of semiconductor component. They are designed to protect baseband equipment from damaging overvoltage transients.

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.
- ✧ UL 497B item recognized. (File No.: E480698).
- ✧ IEC61000-4-2 (ESD) $\pm 30\text{kV}$ (air), $\pm 30\text{kV}$ (contact).
- ✧ Non degenerative.



DO-15

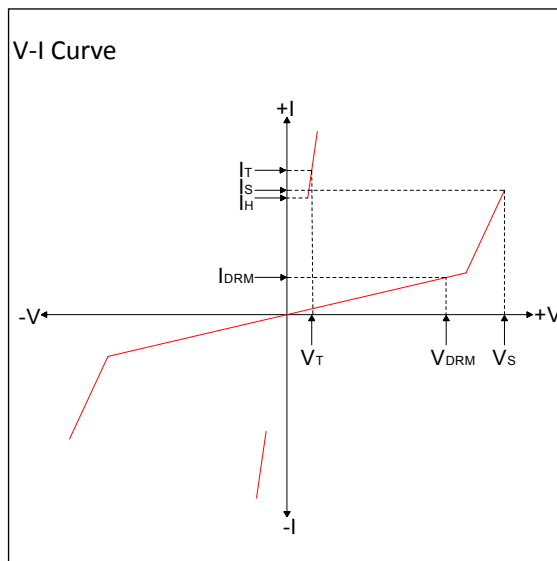


ABSOLUTE MAXIMUM RATINGS($T_A=25^\circ\text{C}$, RH=45%-75%, unless otherwise noted)

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@10/1000 μs	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/s

② Off-state capacitance is measured in $V_{\text{DC}}=2\text{V}$, $V_{\text{RMS}}=1\text{V}$, $f=1\text{MHz}$

SURGE RATINGS

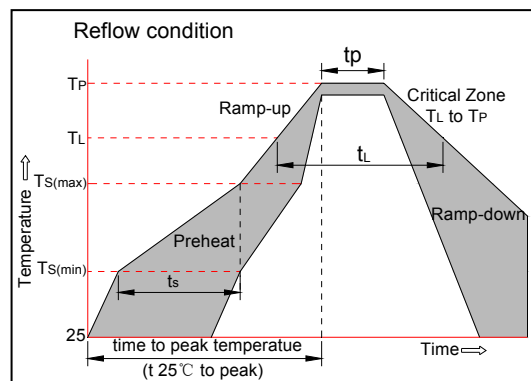
Series	$I_{\text{PP}}(\text{A})$ min			
	2/10 μs	8/20 μs	10/360 μs	10/1000 μs
B	250	250	125	80

ORDERING INFORMATION

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

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 V_s change vs. junction temperature

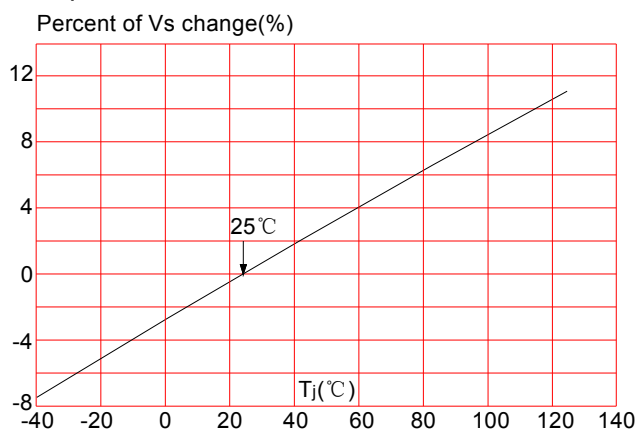


FIG.2: Normalized DC holding current vs. case temperature

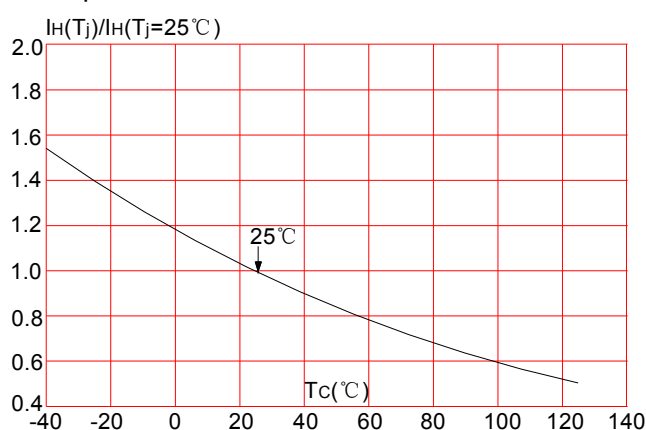
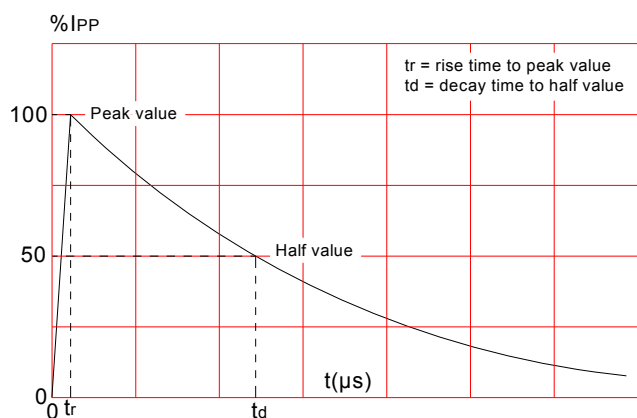


FIG.3: tr × td pulse waveform



MARKING & ORDERING INFORMATION



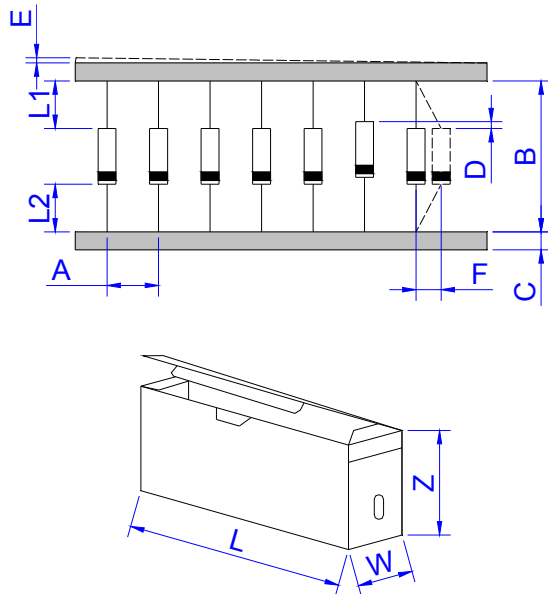
Product Type

- | 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(10/700μs) |

PACKAGE MECHANICAL DATA

Ref.	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	25.40	-	1.000	-
B	5.80	7.62	0.228	0.300
C	0.71	0.86	0.028	0.034
D	2.60	3.60	0.102	0.142

TAPE AND BOX SPECIFICATION-DO-15



Ref.	Dimensions	
	Millimeters	Inches
A	5.0±0.5	0.197±0.020
B	53.0±1.5	2.087±0.059
C	6.0±0.5	0.236±0.020
D	1.2(MAX)	0.047(MAX)
E	0.8(MAX)	0.031(MAX)
F	1.5(MAX)	0.059(MAX)
L1-L2	1.0(MAX)	0.039(MAX)
W	80±5.0	3.150±0.197
L	250±5.0	9.843±0.197
Z	115±5.0	4.528±0.197

PART No.	UNIT WEIGHT (g/PCS) typ.	PER BOX (PCS)	PER CARTON (PCS)	DESCRIPTION
PxxxxLB	0.42	2,000	20,000	Box