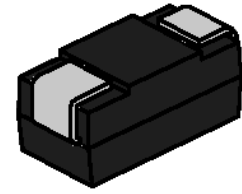




**DESCRIPTION:**

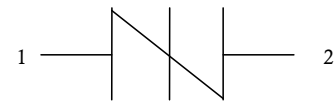
PxxxxTB series are a type of semiconductor component. They are designed to protect baseband equipment from damaging overvoltage transients.



SMA

**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.



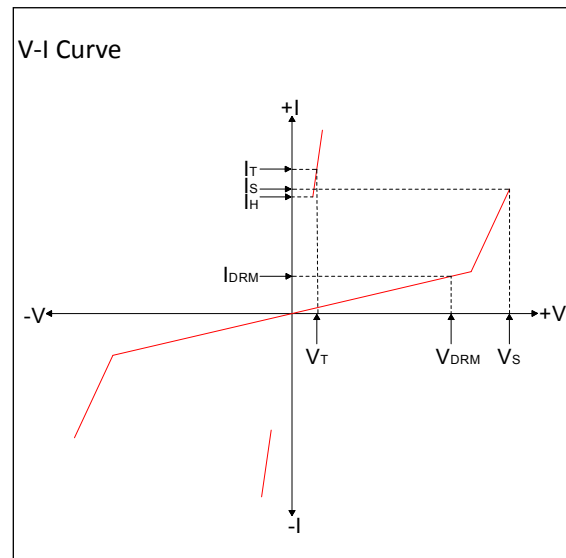
Symbol

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

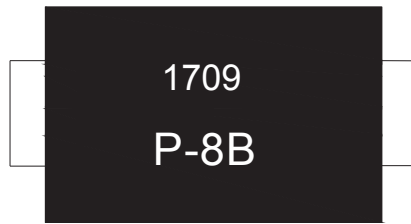
Parameter	Symbol	Value	Unit
Storage temperature range	$T_{STG}$	-60 to +150	$^{\circ}\text{C}$
Operating junction temperature range	$T_J$	-40 to +125	$^{\circ}\text{C}$
Repetitive peak pulse current	$I_{PP}$	80	A

**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



MARKING



P-8B : Device Marking Code  
1709: In ninth week, 2017

ELECTRICAL CHARACTERISTICS (T<sub>A</sub>=25°C, continued)

Part Number	I <sub>DRM</sub> @V <sub>DRM</sub>		V <sub>S</sub> <sup>①</sup> @I <sub>S</sub>		V <sub>T</sub> @I <sub>T</sub>		I <sub>H</sub>	C <sub>O</sub> <sup>②</sup>	Marking
	μA	V	V	mA	V	A	mA	pF	
	max		max	max	max	max	min	max	
P0080TB	1	6	15	800	4	2.2	50	130	P-8B
P0220TB	1	15	30	800	4	2.2	50	120	P22B
P0300TB	1	25	40	800	4	2.2	50	120	P03B
P0640TB	1	58	77	800	4	2.2	120	80	P06B
P0720TB	1	66	87	800	4	2.2	120	75	P07B
P0900TB	1	75	98	800	4	2.2	120	70	P09B
P1100TB	1	90	130	800	4	2.2	120	70	P11B
P1300TB	1	120	160	800	4	2.2	120	60	P13B
P1500TB	1	140	180	800	4	2.2	120	55	P15B
P1800TB	1	170	220	800	4	2.2	120	50	P18B
P2300TB	1	190	260	800	4	2.2	120	50	P23B
P2600TB	1	220	300	800	4	2.2	120	45	P26B
P3100TB	1	275	350	800	4	2.2	120	45	P31B
P3500TB	1	320	400	800	4	2.2	150	40	P35B

① V<sub>S</sub> is measured at 100KV/s

② Off-state capacitance is measured in V<sub>DC</sub>=2V, V<sub>RMS</sub>=1V, f=1MHz

### SURGE RATINGS

Series	I <sub>PP</sub> (A) min			
	2×10μs	8×20μs	10×360μs	10×1000μs
B	250	250	125	80

### ORDERING INFORMATION

<b>P</b>	<b>008</b>	<b>0</b>	<b>T</b>	<b>B</b>
Series code P: SIDACTor	Median voltage	0: Bi-direction 1: Uni-direction	Package type:SMA	Surge ratings:4KV(10/700μs)

### SOLDERING PARAMETERS

Reflow Condition		Pb-Free assembly (see FIG.2)
Pre Heat	-Temperature Min (T <sub>s(min)</sub> )	+150°C
	-Temperature Max(T <sub>s(max)</sub> )	+200°C
	-Time (Min to Max) (ts)	60-180 secs.
Average ramp up rate (Liquidus Temp (T <sub>L</sub> )to peak)		3°C/sec. Max
T <sub>s(max)</sub> to T <sub>L</sub> - Ramp-up Rate		3°C/sec. Max
Reflow	-Temperature(T <sub>L</sub> ) (Liquidus)	+217°C
	-Temperature(t <sub>L</sub> )	60-150 secs.
Peak Temp (T <sub>p</sub> )		+260(+0/-5)°C
Time within 5°C of actual Peak Temp (t <sub>p</sub> )		30secs.Max
Ramp-down Rate		6°C/sec. Max
Time 25°C to Peak Temp (T <sub>P</sub> )		8 min. Max
Do not exceed		+260°C



FIG.1:  $t_r \times t_d$  pulse waveform

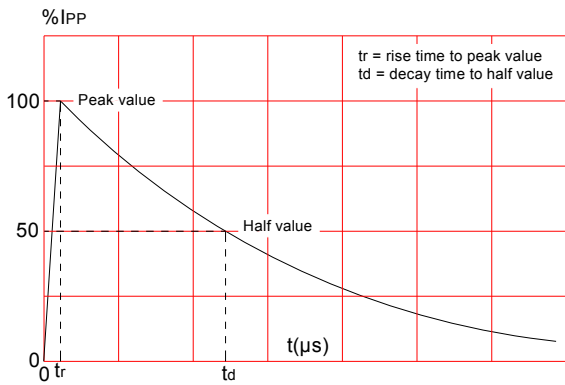


FIG.2: Reflow condition

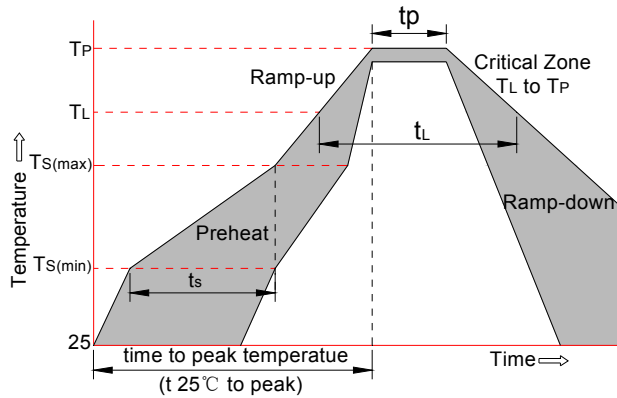


FIG.3: Normalized  $V_s$  change vs. junction temperature

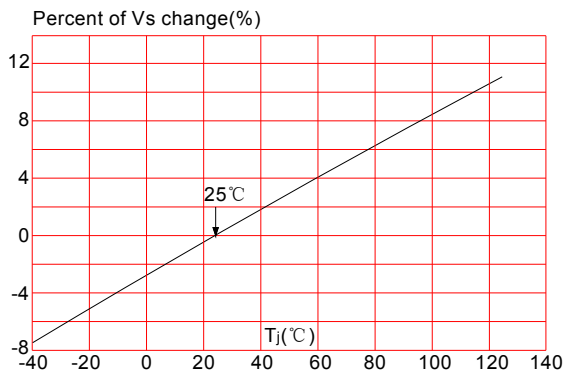
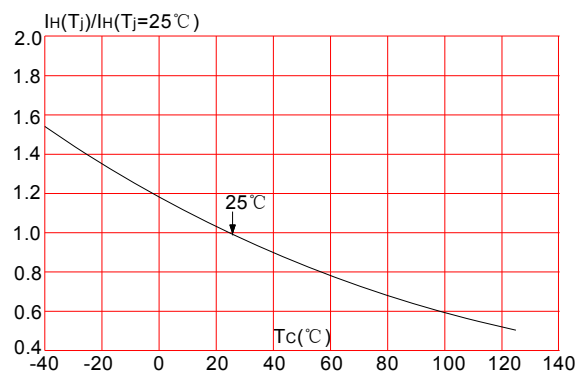
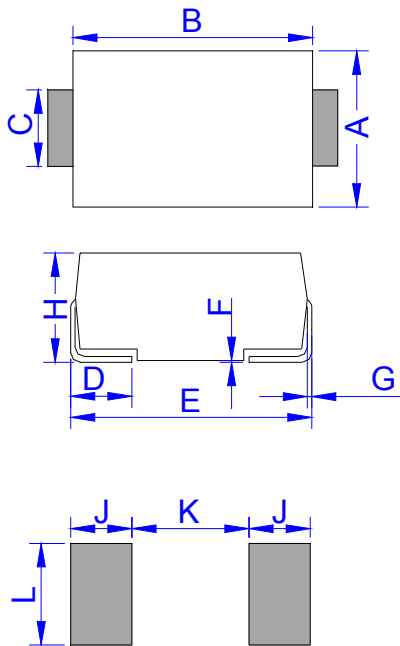


FIG.4: Normalized DC holding current vs. case temperature



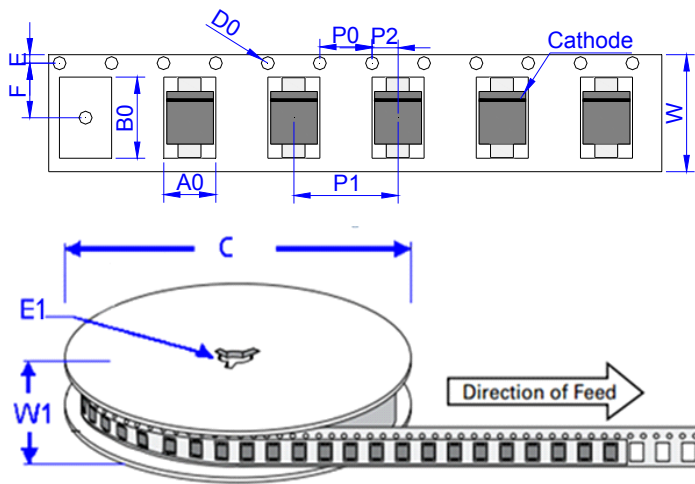
PACKAGE MECHANICAL DATA



DO-214AC (SMA)

Ref.	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	2.60	3.00	0.102	0.118
B	4.15	4.65	0.163	0.183
C	1.25	1.65	0.049	0.065
D	0.95	1.52	0.037	0.060
E	4.90	5.30	0.193	0.209
F	0.051	0.203	0.002	0.008
G	0.15	0.31	0.006	0.012
H	2.00	2.44	0.079	0.096
J	2.00		0.079	
K		2.30		0.091
L	1.80		0.071	

TAPE AND REEL SPECIFICATION-SMA



Ref.	Dimensions	
	Millimeters	Inches
A0	2.79 ± 0.3	0.110 ± 0.012
B0	5.33 ± 0.3	0.210 ± 0.012
C	330.0	13.0
D0	1.55 ± 0.1	0.061 ± 0.004
E	1.75 ± 0.2	0.069 ± 0.008
E1	13.3 ± 0.3	0.524 ± 0.012
F	5.5 ± 0.2	0.217 ± 0.008
P0	4.00 ± 0.2	0.157 ± 0.008
P1	4.00 ± 0.2	0.157 ± 0.008
P2	2.00 ± 0.2	0.079 ± 0.008
W	12.0 ± 0.2	0.472 ± 0.008
W1	15.7 ± 2.0	0.618 ± 0.079

OUTLINE	UNIT WEIGHT (g/PCS) typ.	REEL (PCS)	PER CARTON (PCS)	REEL DIAMETERS (mm)
TAPING	0.069	5,000	80,000	330