SOCAY

RoHS

Thyristor Surge Suppressors (TSS)

PXXX0TB Series DO-214AC(SMA) @10/700μs，3/4KV

Description

PXXX0TB Series Thyristors are a type of semiconductor component.They are designed in applications,modems, telephones,line cards, answering machines, FAX machines, SLICs, T1/E1,xDSL,PBXs and more.

SMA

Features

- 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
- Weight 69 mg (approximate)
- Non degenerative

Schematic Symbol

Symbol

Absolute Maximum Ratings (T_A=25℃, RH=45%-75%, unless otherwise noted)

Parameter	Symbol	Value	Unit
Storage Temperature Range	T_{stg}	-60 to +150	℃
Operating Junction Temperature Range	T_j	-40 to +150	℃
Repetitive Peak Pulse Current	I_{PP}	80	A

Electrical Parameters (T_A=25℃)

Parameter	Definition
I_S	**Switching Current** - maximum current required to switch to on state
I_{DRM}	**Leakage Current** - maximum peak off-state current measured at V_{DRM}
I_H	**Holding Current** - minimum current required to maintain on state
I_T	**On-state Current** - maximum rated continuous on-state current
V_S	**Switching Voltage** - maximum voltage prior to switching to on stat
V_{DRM}	**Peak Off-state Voltage** - maximum voltage that can be applied while maintaining off state
V_T	**On-state Voltage** - maximum voltage measured at rated on-state current
C_0	**Off-state Capacitance** - typical capacitance measured in off state

Thyristor Surge Suppressors (TSS)

PXXX0TB Series DO-214AC(SMA) @10/700μs，3/4KV

Electrical Characteristics (T_A=25℃)

Part Number	Marking	V_{DRM} @I_{DRM}=5μA	V_S ① @100V/μS	I_S	V_T @I_T=2.2A	I_T	I_H	C0 ② @1MHz, 2Vbias
		V Min.	V Max.	mA Max.	V max.	A max.	mA min.	pF typ.
P0080TB	P008B	6	25	800	4	2.2	50	130
P0220TB	P22B	15	30	800	4	2.2	50	120
P0300TB	P03B	25	40	800	4	2.2	50	120
P0640TB	P06B	58	77	800	4	2.2	120	80
P0720TB	P07B	66	87	800	4	2.2	120	75
P0900TB	P09B	75	98	800	4	2.2	120	70
P1100TB	P11B	90	130	800	4	2.2	120	70
P1300TB	P13B	120	160	800	4	2.2	120	60
P1500TB	P15B	140	180	800	4	2.2	120	55
P1800TB	P18B	170	220	800	4	2.2	120	50
P2300TB	P23B	190	260	800	4	2.2	120	50
P2600TB	P26B	220	300	800	4	2.2	120	45
P3100TB	P31B	275	350	800	4	2.2	120	45
P3500TB	P35B	320	400	800	4	2.2	150	40

Notes:

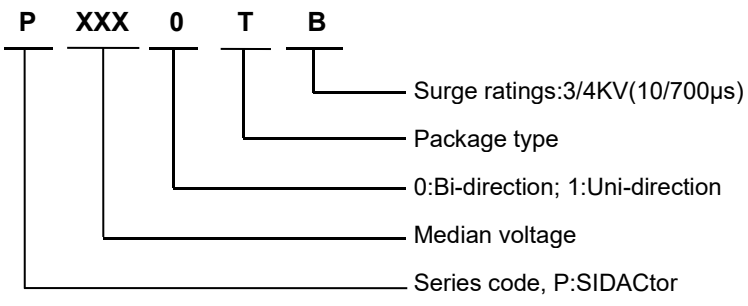
① V_S is measured at 100KV/s;

② Off-state Capacitance is measured in V_{DC}=2V, V_{RMS}=1V, f=1MHz.

Surge Ratings

Series	I_{PP} (A) min				
	2×10μs	8×20μs	10×360μs	10×700μs	10×1000μs
0080-0300	150	150	70	75	50
0640-3500	250	250	125	100	80

Ordering Information



Thyristor Surge Suppressors (TSS)

PXXX0TB Series **DO-214AC(SMA)** **@10/700μs，3/4KV**

Characteristic Curves

Fig.1: tr × td pulse waveform

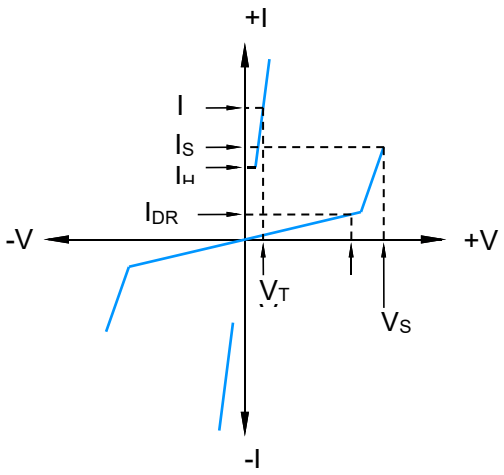


Fig.2: Reflow condition

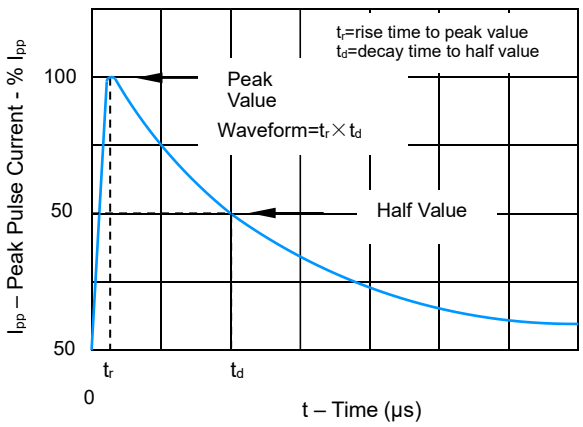


Fig.3: Normalized Vs change vs. junction temperature

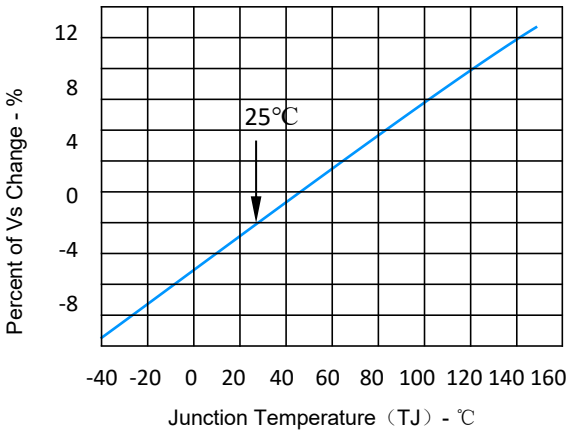
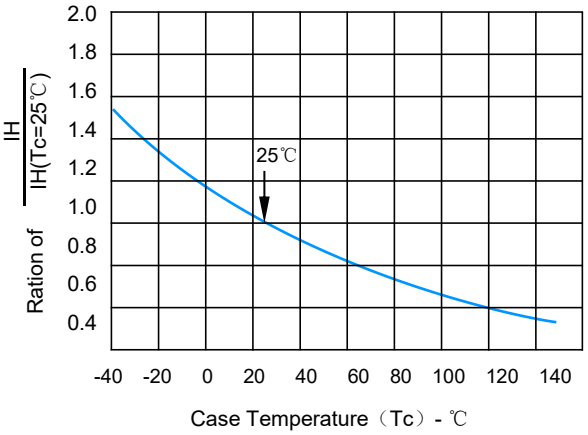


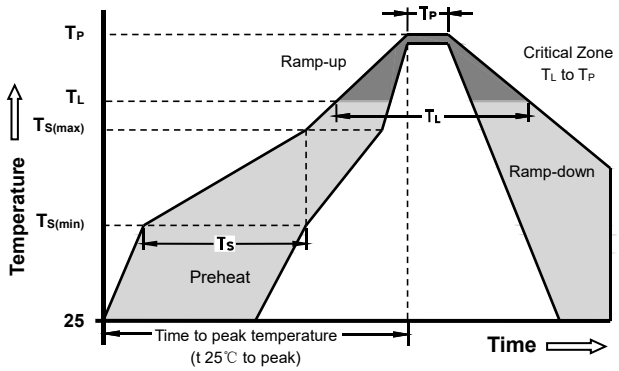
Fig.4: Normalized DC holding current vs. case temperature



Thyristor Surge Suppressors (TSS)

PXXX0TB Series DO-214AC(SMA) @10/700μs，3/4KV

Soldering Parameters



Reflow Condition		Pb-Free assembly
Pre Heat	**-Temperature Min ($T_{s(min)}$)**	+150℃
	-Temperature Max($T_{s(max)}$)	+200℃
	-Time (Min to Max) (ts)	60-180 secs.
Average ramp up rate (Liquid us Temp (T_L) to peak)		3℃/sec. Max
$T_{s(max)}$ to T_L - Ramp-up Rate		3℃/sec. Max
Reflow	**-Temperature(T_L) (Liquid μs)**	+217℃
	-Temperature(t_L)	60-150 secs.
Peak Temp (T_p)		+260(+0/-5)℃
Time within 5℃ of actual Peak Temp (t_p)		8-15 secs.
Ramp-down Rate		6℃/sec. Max
Time 25℃ to Peak Temp (T_P)		8 min. Max
Do not exceed		+260℃

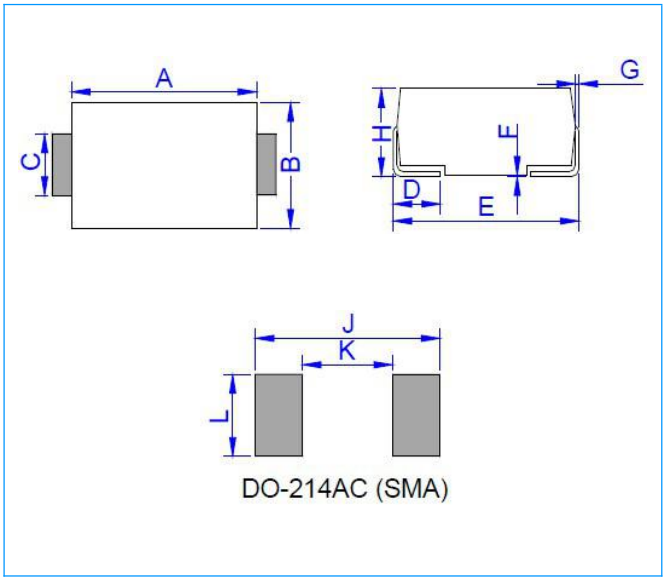
Marking

P-8B :Device Marking Code

Thyristor Surge Suppressors (TSS)

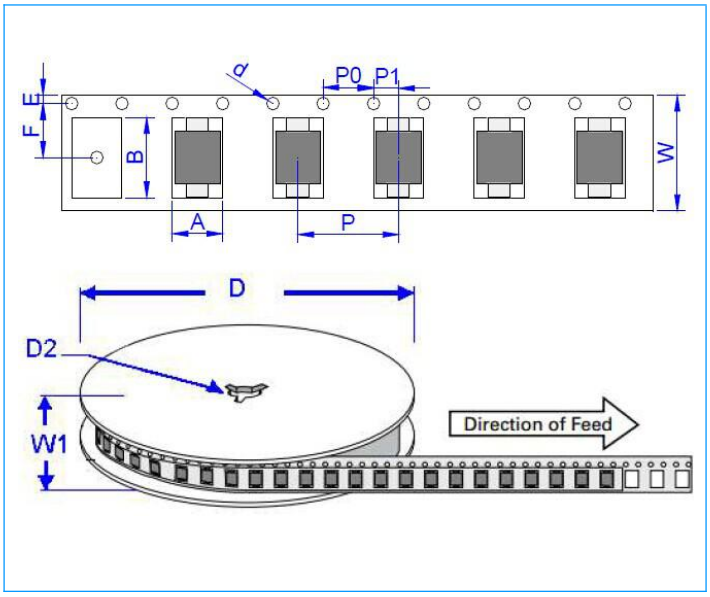
PXXX0TB Series DO-214AC(SMA) @10/700μs，3/4KV

Package Mechanical Data



Ref.	Dimensions			
	Millimeters		Inches	
	Min	Max	Min	Max
A	4.25	4.65	0.167	0.183
B	2.50	2.90	0.098	0.114
C	1.35	1.65	0.053	0.065
D	0.76	1.52	0.030	0.060
E	4.93	5.28	0.194	0.208
F	0.051	0.203	0.002	0.008
G	0.15	0.31	0.006	0.012
H	1.98	2.41	0.078	0.095
J	6.80	—	0.268	—
K	—	2.60	—	0.102
L	2.40	—	0.094	—

Tape and Reel Specification-SMA



Ref.	Dimensions	
	Millimeters	Inches
A	2.79 ± 0.3	0.110 ± 0.012
B	5.33 ± 0.3	0.210 ± 0.012
d	1.5 ± 0.1	0.059 ± 0.004
D	330.0	13.0
D2	13 ± 1	0.512 ± 0.039
E	1.5 ± 0.2	0.059 ± 0.008
F	5.65 ± 0.2	0.222 ± 0.008
P	4.0 ± 0.2	0.157 ± 0.008
P0	4.0 ± 0.2	0.157 ± 0.008
P1	2.0 ± 0.2	0.079 ± 0.008
W	12.0 ± 0.2	0.472 ± 0.008
W1	16.8 ± 2.0	0.661 ± 0.079

Outline	Reel (pcs)	Per Carton (pcs)	Reel Diameters (mm)
Taping	5,000	80,000	330