TSS Thyristor Surge Protector DO-214AC P0720TB @10/700μs 3/4KV

Our Product Introduction

Basic Information

- Place of Origin: Shenzhen, Guangdong, China
- Brand Name: SOCAY
- Certification: REACH,RoHS,ISO
- Model Number: P0720TB
- Minimum Order Quantity: 5000PCS
- Price: Negotiable
- Packaging Details: AMMO packing bulk
- Delivery Time: 5-8 work days

Product Specification

- TSS Name: Thyristor Surge Suppressors (TSS)
- TSS Package: DO-214AC/SMA
- TSS VDRM (Min.): 66V
- TSS IDRM: 5μA
- Vs @100V/μS (Max.): 87V
- TSS Is (Max.): 800mA
- Vt @It=2.2A (Max.): 4V
- TSS It (Max.): 2.2A
- TSS Ih (Min.): 120mA
- TSS C0 @1MHz,2V Bias (Typ.): 75pF
- Highlight: **TSS Thyristor Surge Protector**, **DO-214AA Thyristor Surge Protector**, **P0080SB**

Product Description

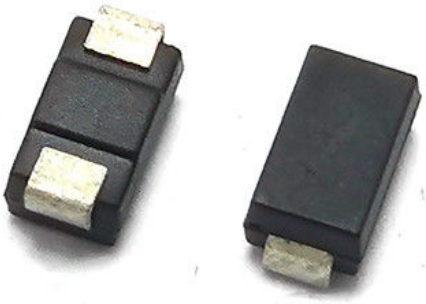
TSS Thyristor Surge Protector DO-214AA P0720TB @10/700μs 3/4KV

DATASHEET: PXXX0TB_v2101.2.pdf

Thyristor Surge Protector DO-214AA P0720TB Thyristor is a type of semiconductor component.They are designed in applications,modems, teleph-ones,line cards, answering machines, FAX machines, SLICs, T1/E1,xDSL,PBXs and more.

Part Number	Marking	V_{DRM} @I_{DRM}=5 μA	V_S @100V/μS	I_S	V_T @I_T=2.2 A	I_T	I_H	C0 @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:
V_S is measured at 100KV/s;
Off-state Capacitance is measured in V_{DC}=2V, V_{RMS}=1V, f=1MHz.



Advantages of semiconductor discharge tubes:
1. Before breakdown, it is equivalent to an open circuit, the insulation resistance is very large, and the leakage current is very small;
2. It has two-way symmetry characteristics;
3. The response speed is very ns level;
4. The breakdown voltage has good consistency.
Disadvantages of semiconductor discharge tubes:
1. Compared with ceramic discharge tubes, the flow rate is smaller, only a few hundred A;
2. The breakdown voltage has only certain specific values;
3. The capacitance is large, ranging from tens to hundreds of pF.
Selection of semiconductor discharge tubes:
When selecting TSS, the following principles should generally be followed:
1. Selection of cut-off voltage VDRM: The cut-off voltage must be greater than the maximum operating voltage of the protected circuit;
2. Selection of transition voltage VBO: The transition voltage must be less than the maximum transient peak voltage that the equipment can withstand;
3. Selection of the holding current IH: the holding current must be greater than the operating current and short-circuit current of the equipment;
4. Selection of parasitic capacitance C: The parasitic capacitance is selected according to the insertion loss allowed by the circuit or the frequency of signal transmission;
5. Selection of surge current: Different levels of surge current are selected according to the requirements of the circuit or surge test standards.
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.

Features:

- u Excellent capability of absorbing transient surge
- u Quick response to surge voltage (ns Level)
- u Eliminates overvoltage caused by fast rising transients
- u Moisture sensitivity level: Level 1
- u Weight 69 mg (approximate)
- u Non degenerative

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

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

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

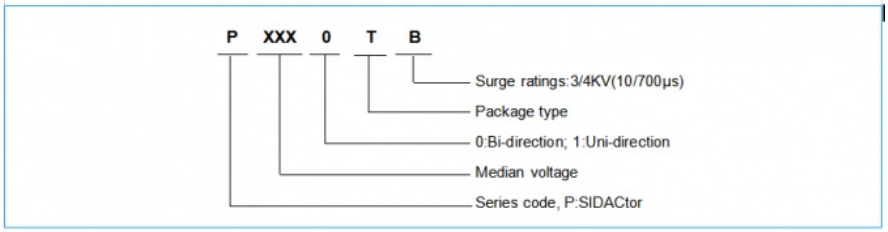


Fig.1: tr × td pulse waveform

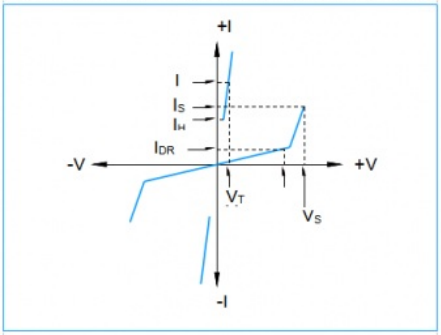


Fig.2: Reflow condition

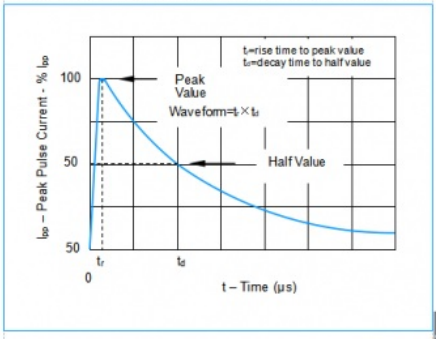


Fig.3: Normalized Vs change vs. junction temperature

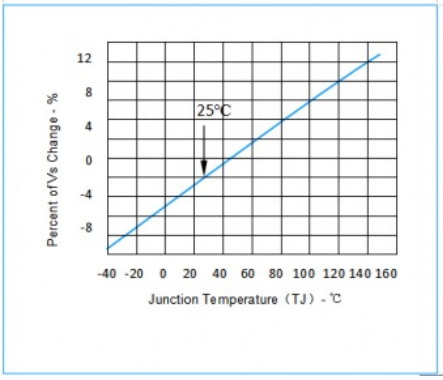
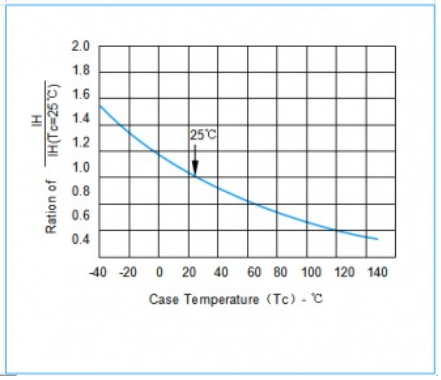
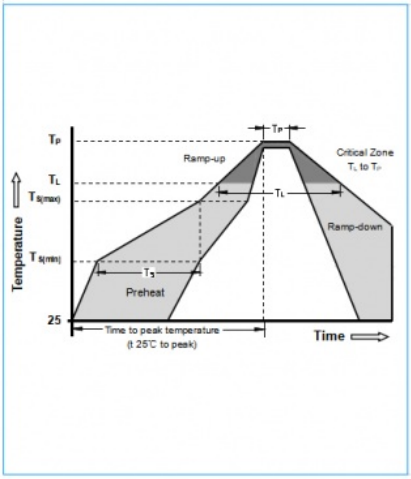


Fig.4: Normalized DC holding current vs. case temperature



Soldering Parameters

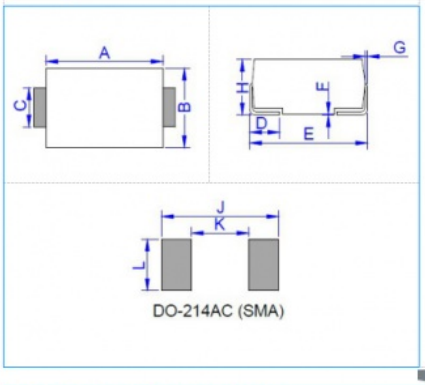


Reflow Condition		Pb-Free assembly
Pre Heat	-Temperature Min ($T_{s(min)}$)	+150℃
	-Temperature Max($T_{s(max)}$)	+200℃
	-Time (Min to Max) (ts)	60-180 secs.
Average ramp up rate (Liquid us Temp (T_L) to peak)		3℃/sec. Max
$T_{s(max)}$ to T_L - Ramp-up Rate		3℃/sec. Max
Reflow	-Temperature(T_L) (Liquid 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

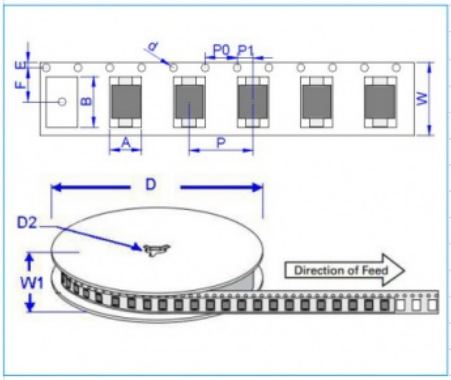
Package Mechanical Data



DO-214AC (SMA)

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

FAQ

Q1. Can I have a sample order ?

A: Yes, we welcome sample order to test and check quality. Mixed samples are acceptable.

Q2. What about the lead time?

A:Sample needs 1 days, mass production time needs 1-2 weeks for order quantity more than

Q3. Do you have any MOQ ?

A: MOQ depend on the type of product, 1pc for sample checking is availabl

Q4. How to proceed an order ?

A: Firstly let us know your requirements or application.

Secondly We quote according to your requirements or our suggestions.
Thirdly customer confirms the samples and places deposit for formal order.
Fourthly We arrange the production.

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