Surface Mount Thyristor Surge Suppressors TSS P0080SA 2KV Low Voltage Overshoot

Our Product Introduction

Basic Information

- Place of Origin: Shenzhen, Guangdong, China
- Brand Name: SOCAY
- Certification: REACH,RoHS,ISO
- Model Number: P0080SA
- Minimum Order Quantity: 2500PCS
- Price: Negotiable
- Packaging Details: AMMO packing bulk
- Delivery Time: 5-8 work days

Product Specification

- Item: Thyristor Surge Suppressors (TSS)
- Package Type: DO-214AA/SMB
- VDRM (Min.): 6V
- IDRM: 5μA
- Vs @100V/μS (Max.): 25V
- Is (Max.): 800mA
- Vt @It=2.2A (Max.): 4V
- It (Max.): 2.2A
- Ih (Min.): 50mA
- C0 @1MHz,2V Bias (Typ.): 50pF
- Highlight: **Surface Mount Thyristor Surge Suppressors**, **Thyristor Surge Suppressors 2KV**, **P0080SA**

Product Description

P0080SA @10/700μS,2KV Surface Mount Thyristor Surge Suppressors (TSS) Low Voltage Overshoot

DATASHEET: PXXX0SA_v2103.1.pdf

Part Number	Marking	V_{DRM} @I_{DRM}= 5μA	VS @100V/μS	V_T @I_T=2.2A	I_S	I_T	I_H	C0 @1MHz, 2V bias
		V min	V max	V max	mA max	A max	mA min	pF typ
P0080SA	P008A	6	25	4	800	2.2	50	50
P0300SA	P03A	25	40	4	800	2.2	50	70
P0640SA	P06A	58	77	4	800	2.2	150	50
P0720SA	P07A	65	88	4	800	2.2	150	50
P0900SA	P09A	75	98	4	800	2.2	150	45
P1100SA	P11A	90	130	4	800	2.2	150	45
P1300SA	P13A	120	160	4	800	2.2	150	45
P1500SA	P15A	140	180	4	800	2.2	150	40
P1800SA	P18A	170	220	4	800	2.2	150	40
P2300SA	P23A	190	260	4	800	2.2	150	35
P2600SA	P26A	220	300	4	800	2.2	150	35
P3100SA	P31A	275	350	4	800	2.2	150	30
P3500SA	P35A	320	400	4	800	2.2	150	30

Notes:
Vs is measured at 100KV/s.
Off-state capacitance is measured in V_{DC}=2V, V_{RMS}=1V, f=1MHz.

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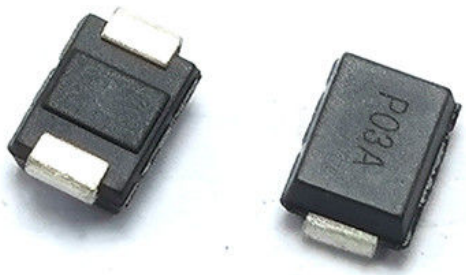


Description:
PXXX0SA Series are designed to protect broadband equipment such as modems, line card, CPE and DSL from damaging over-voltage transients.
The series provides a surface mount solution that enables equipment to comply with global regulatory standards.

Features:

- u Low voltage overshoot
- u Low on-state voltage
- u Does not degrade surge capability after multiple surge events within limit
- u Fails short circuit when surged in excess of ratings
- u Low Capacitance

Applicable Global Standards:

- u TIA-968-A
- u ITU K.20/21 Enhanced level
- u ITU K.20/21 Basic Level
- u GR 1089 Inter building
- u GR 1089 Inter building
- u IEC 6100-4-5
- u YD/T 1082
- u YD/T 993
- u YD/T 950

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

Series	**2/10µS[1]**	**8/20µS[1]**	**10/160µS[1]**	**10/560µS[1]**	**10/1000µS[1]**	**5/310µS[1]**	**I_{TSM} 50/60 Hz**	**di/dt**
	2/10µS[2]	**1.2/50µS[2]**	**10/160µS[2]**	**10/560µS[2]**	**10/1000µS[2]**	**10/700µS[2]**		
	A min	**A min**	**A min**	**A min**	**A min**	**A min**	**A min**	**Amps/µs max**
A	150	150	90	50	45	50	20	500

Notes: Current waveform in µs Voltage waveform in µs	- Peak pulse current rating (I_{PP}) is repetitive and guaranteed for the life of the product. - I_{PP} ratings applicable over temperature range of -40ºC to +85ºC - The device must initially be in thermal equilibrium with -40°C < T_J < +150°C

Lead Material	Copper Alloy	
Terminal Finish	100% Matte-Tin Plated	
Body Material	UL recognized epoxy meeting flammability classification 94V-0	

Part Number	**Component Package**	**Quantity**	**Packaging Option**	**Packaging Specification**
Pxxx0SA	DO-214AA	2500	Tape & Reel - 12mm/13″tape	EIA -481 - D

Thermal Considerations

Package	Symbol	Parameter	Value	Unit
DO-214AA 	T_J	Operating Junction Temperature Range	- 40 to + 150	°C
	T_S	Storage Temperature Range	- 40 to +150	°C
	$R_{\theta JA}$	Thermal Resistance: Junction to Ambient	90	°C/W

Figure 1 - V-I Characteristics

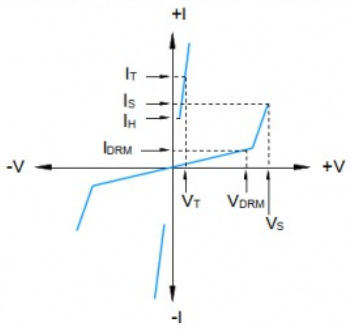


Figure 2 - $t_r \times t_d$ Pulse Waveform

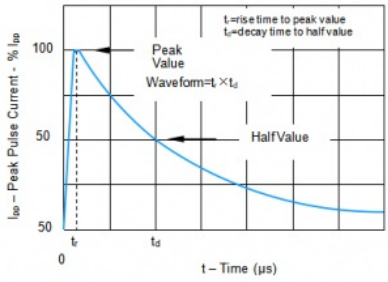


Figure 3 - Normalized V_S Change Versus Junction Temperature

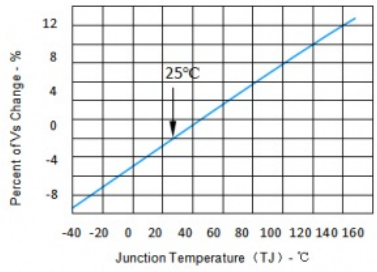
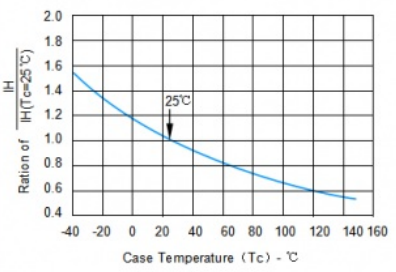
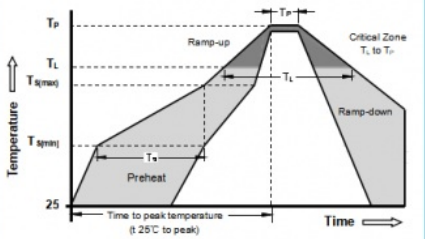


Figure 4 - Normalized DC Holding Current Versus Case Temperature

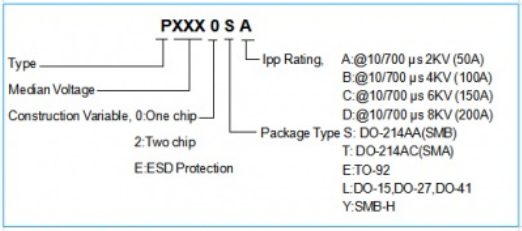


Soldering Parameters



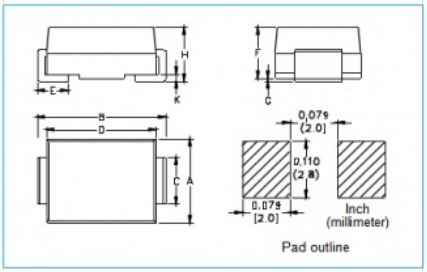
Reflow Condition		Lead–free assembly
Pre Heat	-Temperature Min ($T_{s(min)}$)	+150°C
	-Temperature Max ($T_{s(max)}$)	+200°C
	-Time (min to max) (T_s)	60 -180 Seconds
Average ramp up rate (Liquidus Temp T_L) to peak		3°C/Second Max
$T_{s(max)}$ to T_L - Ramp-up Rate		3°C/Second Max
Reflow	- Temperature (T_L) (Liquidus)	+217°C
	- Time (min to max) (T_L)	60 -150 Seconds
Peak Temperature (T_P)		260 +0/-5°C
Time within 5°C of actual peak Temperature (t_P)		30 Seconds Max
Ramp-down Rate		6°C/Second Max
Time 25°C to peak Temperature (T_P)		8 minutes Max
Do not exceed		+260°C

Part Numbering



Part Marking

Dimensions DO-214AA



Dimensions	Inches		Millimeters	
	Min	Max	Min	Max
A	0.130	0.156	3.30	3.95
B	0.201	0.220	5.10	5.60
C	0.077	0.087	1.95	2.20
D	0.159	0.181	4.05	4.60
E	0.030	0.063	0.76	1.60
F	0.076	0.096	1.90	2.45
G	0.002	0.008	0.05	0.20
H	0.077	0.104	1.95	2.65
K	0.006	0.016	0.15	0.41

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