



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: 5 μ A
- Vs @100V/ μ S (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**

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Product Description

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

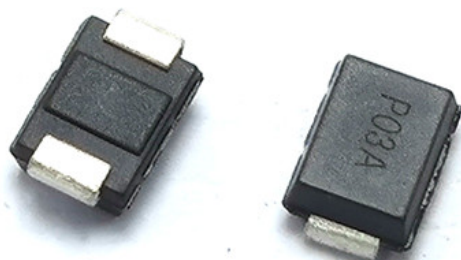
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Part Number	Marking	V_{DRM} @ $I_{DRM}=5\mu A$	V_S @100V/ μS	V_T @ $I_T=2.2A$	I_S	I_T	I_H	C_0 @1MHz, 2V bias
		V min	V max	V max	mA max	A max	mA min	pF typ
P0080SA	P008A	6	25	4	800	2.2	50	50
P0300SA	P03A	25	40	4	800	2.2	50	70
P0640SA	P06A	58	77	4	800	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:

V_S is measured at 100KV/s.

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



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

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
	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

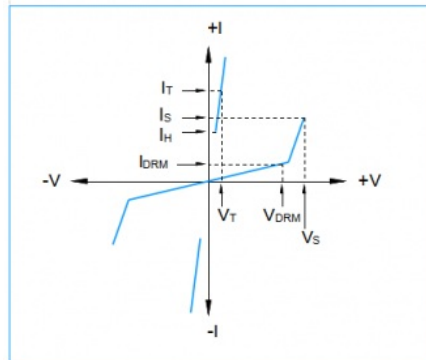


Figure 3 - Normalized V_S Change Versus Junction Temperature

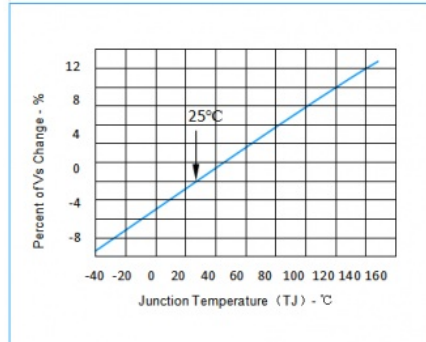


Figure 2 - $t_r \times t_d$ Pulse Waveform

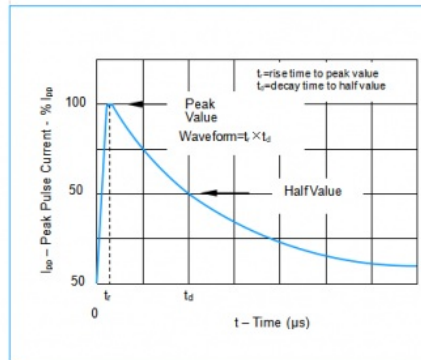
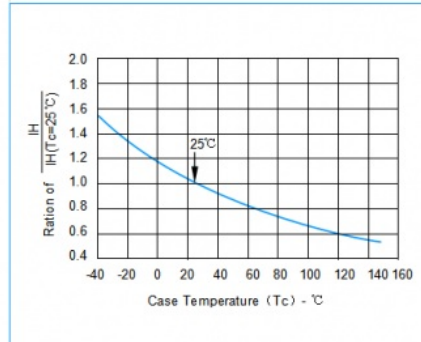
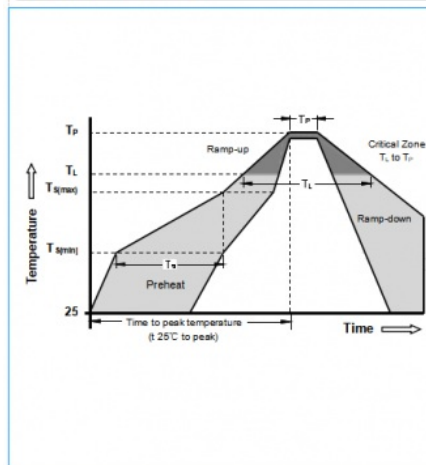


Figure 4 - Normalized DC Holding Current Versus Case Temperature



Soldering Parameters



Reflow Condition		Lead-free assembly
Pre Heat	-Temperature Min (T_{qmin})	+150°C
	-Temperature Max (T_{qmax})	+200°C
	-Time (min to max) (T_q)	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
PXXX 0 S A Type _____ Median Voltage _____ Construction Variable, 0: One chip 2: Two chip E: ESD Protection Ipp Rating: A: @10/700 μs 2KV (50A) B: @10/700 μs 4KV (100A) C: @10/700 μs 6KV (150A) D: @10/700 μs 8KV (200A) Package Type S: DO-214AA(SMB) T: DO-214AC(SMA) E: TO-92 L: DO-15, DO-27, DO-41 Y: SMB-H	PXXA _____ Part Marking Code (Refer to Electrical Characteristics Table)

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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