

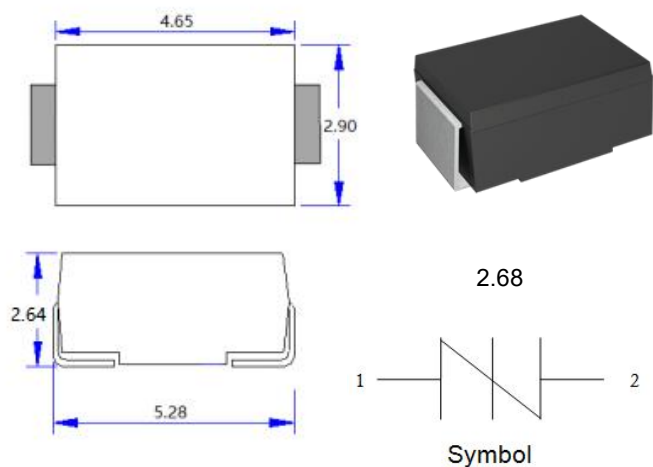
Description

PXXXXTA series thyristors are a type of semi-conduct component. They are designed in applications, modems, telephones, line cards, answering machines, FAX machines, SLICs, T1/E1, xDSL, PBXs and more. This series can be used to provide protection in accordance with industry standards such as FCC Part 68, ANSI C62.41, UL 1459, GR-1089-CORE, IEC 61000-2, IEC 61000-4 and IEC 61000-4-5 requirements

Features

- Cannot be damaged by voltage
- Eliminate hysteresis and heat dissipation typically found with clamping devices Eliminate voltage overshoot caused by fast-rising transients
- Are non-degenerative
- Will not fatigue
- Have low capacitance, making them ideal for high-speed transmission equipment
- Meets MSL level 1, per J-STD-020

Dimensions & Symbol (Unit: mm Max)



Mechanical Characteristics

Package: SMA/DO-214AA

- Case Material: "Green" Molding Compound.
- Lead Finish: Matte Tin
- UL Flammability Classification Rating 94V-0
- Standard Packaging: 12mm tape (EIA STD RS-481)
- Weight: 0.07g
- Terminal Connections: See Diagram Below
- Marking Information: See Below

Applications

- SLIC Line Card
- T1/E1 Trunk & Line Card
- DBX Branch Exchange Switches
- FCC Part 68 Customer Premise Equipment
- Line Interface Modem
- xDSL Architecture Interface

Ordering Information

Out line	Reel (pcs)	Per carton (pcs)	Reel diameters (mm)
Taping	5K	80K	330

Absolute Maximum Ratings (TA=25°C, RH=45%-75%, unless otherwise noted)

Parameter	Symbol	Value	Unit
Storage temperature range	T_{stg}	-60 to +150	°C
Operating junction temperature range	T_j	-40 to +150	°C
Repetitive peak pulse current	I_{PP}	50	A

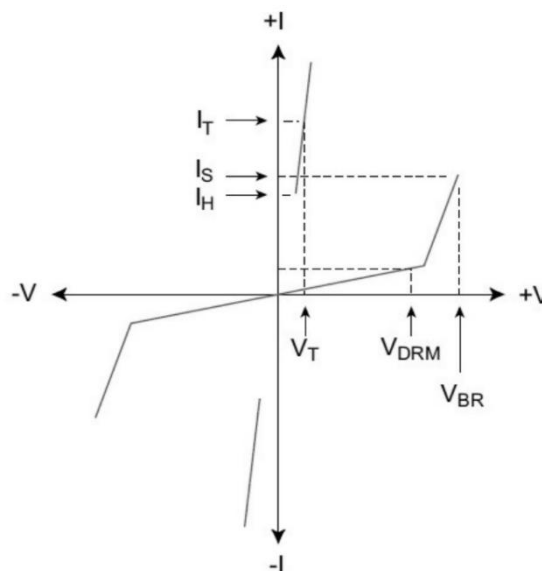
Part Number Code

Series code: P SIDACTor → **P** **XXXX** **T** **A** ← Surge: 10/700uS 2KV

$\uparrow$ $\uparrow$
 V_{DRM} SMA

Electrical Parameters & V-I Curve

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



Surge Ratings

Series	I_{PP} (A) min			
	2×10us	8×20us	5×320us	10×1000us
A	100	90	50	35

Electrical Characteristics (TA=25°C)

Type	V _{DRM}	I _{DRM}	V _S	I _S	V _T	I _T	C _O	I _H
	Min.	Max.	Max.	Max.	Max.		Typ.	Typ.
	V	μA	V	mA	V	A	pF	mA
P0080TA	6	5	25	800	4	2.2	50	50
P0300TA	25	5	40	800	4	2.2	70	50
P0640TA	58	5	77	800	4	2.2	50	150
P0720TA	65	5	88	800	4	2.2	50	150
P0900TA	75	5	98	800	4	2.2	45	150
P1100TA	90	5	130	800	4	2.2	45	150
P1300TA	120	5	160	800	4	2.2	45	150
P1500TA	140	5	180	800	4	2.2	40	150
P1800TA	170	5	220	800	4	2.2	40	150
P2000TA	180	5	220	800	4	2.2	40	150
P2300TA	190	5	260	800	4	2.2	35	150
P2600TA	220	5	300	800	4	2.2	35	150
P3100TA	275	5	350	800	4	2.2	30	150
P3500TA	320	5	400	800	4	2.2	30	150
P4000TA	360	5	460	800	4	2.2	30	150
P4500TA	400	5	540	800	4	2.2	30	150
P5000TA	500	5	600	800	4	2.2	30	150

Notes:

- All measurements are made at an ambient temperature of 25°C. I_{PP} applies to -40°C through +85°C temperature range.
- Off-state capacitance (C_O) is measured at 1 MHz with a 2 V bias and is typical value.

Ratings And V-I Characteristics Curves (TA=25°C, unless otherwise noted)

FIG.1: tr × td pulse waveform

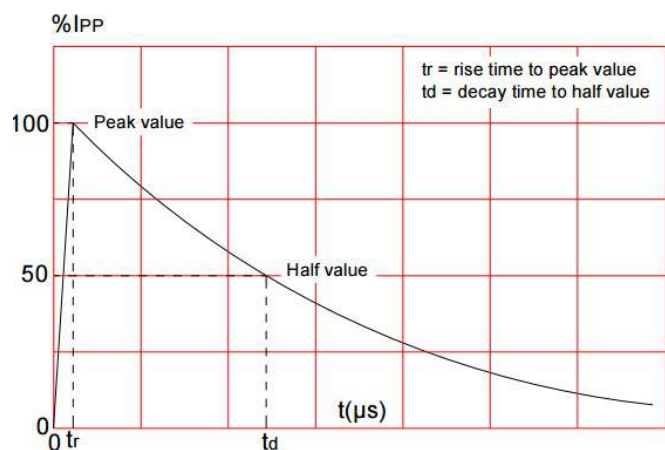


FIG.2: Reflow condition

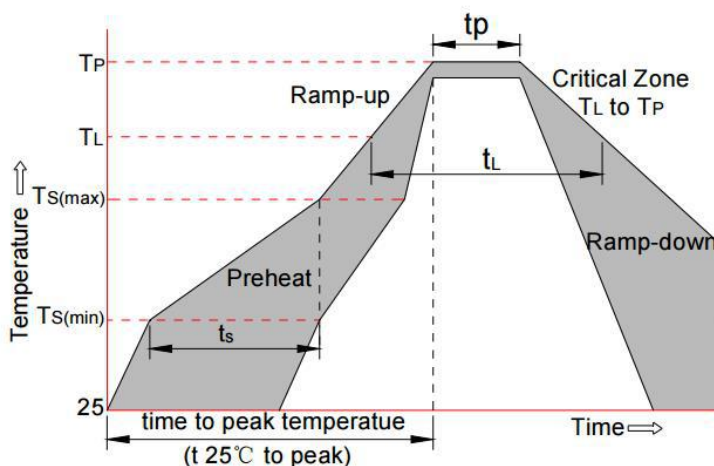


FIG.3: Normalized V_s change vs. junction temperature

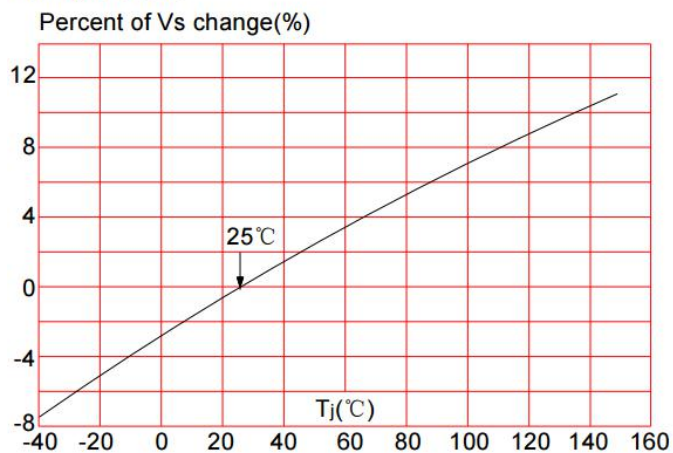
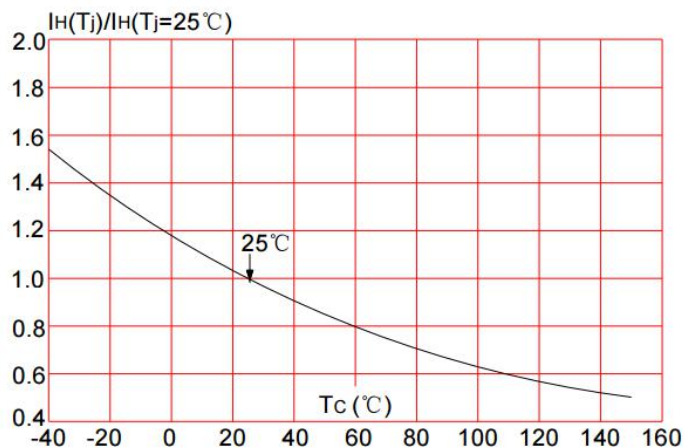
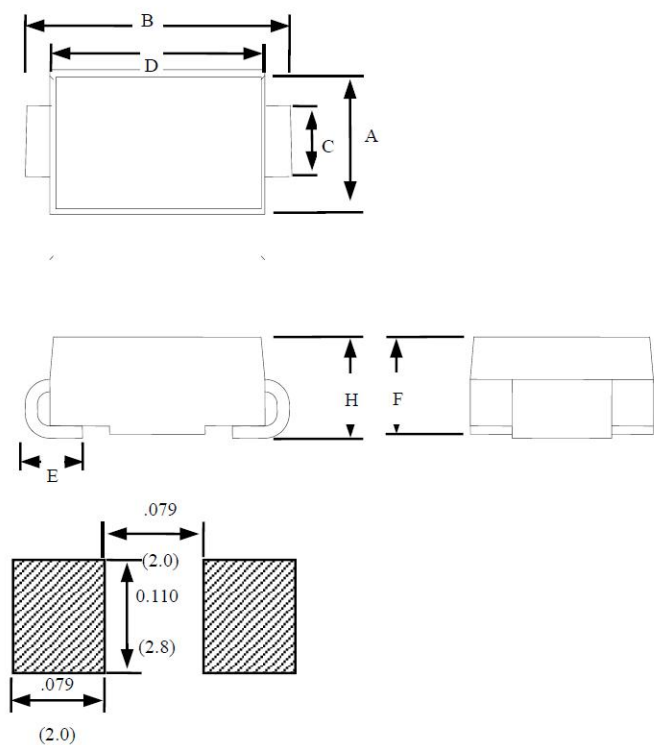


FIG.4: Normalized DC holding current vs. case temperature



Package Mechanical Data



Dimension	Inches		Millimeters	
	MIN	MAX	MIN	MAX
A	0.098	0.114	2.50	2.90
B	0.188	0.208	4.80	5.28
C	0.055	0.062	1.40	1.60
D	0.157	0.181	4.00	4.60
E	0.030	0.060	0.76	1.52
F	0.078	0.096	2.00	2.44
H	0.080	0.104	2.051	2.643