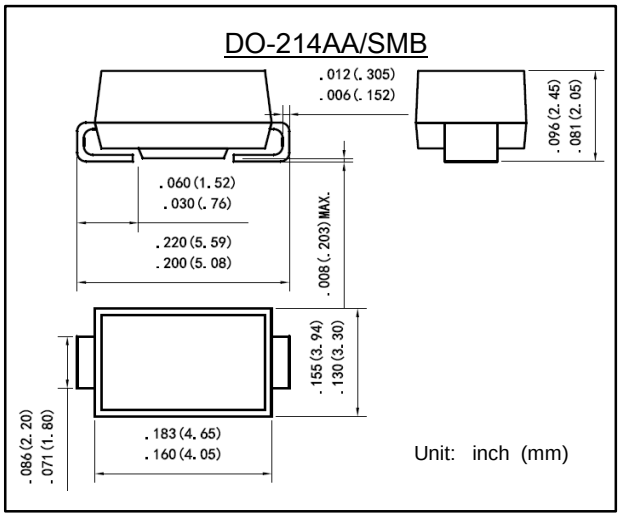
PxxxxSB Series

Surface Mounted Over-voltage Protection Thyristor

VOLTAGE : 6.0 - 390V

Features

- Low reverse leakage
- High reliability
- High temperature soldering guaranteed: 260℃/10seconds
- Lead and body according with RoHS standard
- Have low capacitance, making them ideal for high-speed transmission equipment
- Will not fatigue
- Are non-degenerative
- Eliminate voltage overshoot caused by fast-rising transients
- Cannot be damaged by voltage



Mechanical Data

- Case:DO-214AA Molded plastic
- Epoxy: UL 94V-0 rate flame retardant
- Lead: Pure tin plated, lead free
- Green compound

RoHS COMPLIANT

Electrical Parameters

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

Electrical Characteristics

Part Number	Marking	V_{DRM} (V)	V_S (V)	V_T (V)	I_{DRM} (uA)	I_S (mA)	I_T (A)	I_H (mA)	C_O (pF)	V_{PP} 10/700us (V)	I_{PP} 10/1000us (A)
P0060SB	P006B	6	25	4.0	5.0	800	2.2	50	80	4000	100
P0080SB	P008B	6	25	4.0	5.0	800	2.2	50	80	4000	100
P0300SB	P030B	25	40	4.0	5.0	800	2.2	50	80	4000	100
P0640SB	P064B	58	77	4.0	5.0	800	2.2	150	60	4000	100
P0720SB	P072B	65	88	4.0	5.0	800	2.2	150	60	4000	100
P0900SB	P090B	75	98	4.0	5.0	800	2.2	150	55	4000	100
P1100SB	P110B	90	130	4.0	5.0	800	2.2	150	55	4000	100
P1300SB	P130B	120	160	4.0	5.0	800	2.2	150	55	4000	100
P1500SB	P150B	140	180	4.0	5.0	800	2.2	150	60	4000	100
P1800SB	P180B	170	220	4.0	5.0	800	2.2	150	60	4000	100
P2300SB	P230B	190	260	4.0	5.0	800	2.2	150	55	4000	100
P2600SB	P260B	220	300	4.0	5.0	800	2.2	150	50	4000	100
P3100SB	P310B	275	350	4.0	5.0	800	2.2	150	45	4000	100
P3500SB	P350B	320	400	4.0	5.0	800	2.2	150	40	4000	100
P4200SB	P420B	390	500	4.0	5.0	800	2.2	0	40	4000	100

Note:

1) All measurements are made at an ambient temperature of 25℃. I_{PP} applies to -40℃ through +85℃ temperature range.

2) Off-state capacitance (C_O) is measured at 1 MHz with a 2 V bias and is typical value.

Thermal Considerations

Package	Symbol	Parameter	Value	Unit
DO-214AA SMB	T_J	Operating Junction Temperature	-40 to +150	℃
	T_S	Storage Temperature Range	-40 to +150	℃
	R_{JA}	Junction to Ambient on printed circuit	53	℃/W

Characteristics Curves

Figure 1. V-I Characteristics

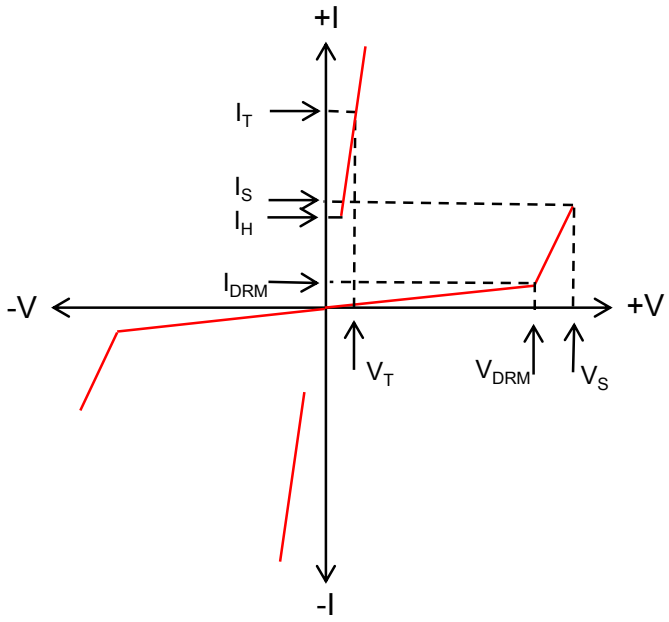


Figure 2. t_r x t_d Pulse Wave-form

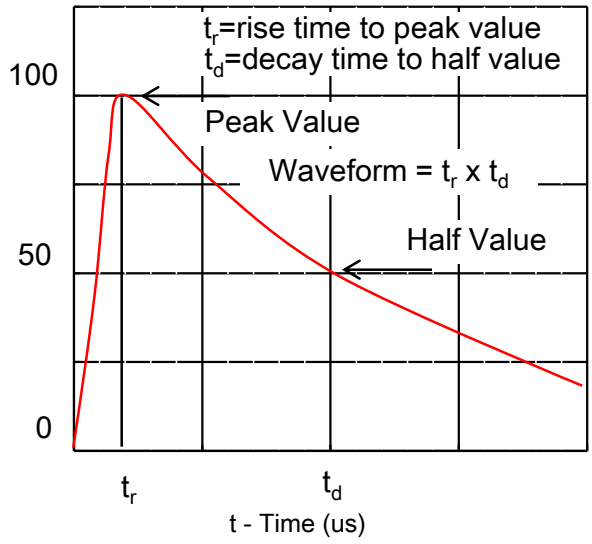


Figure 3. Normalized V_S Change versus Junction Temperature

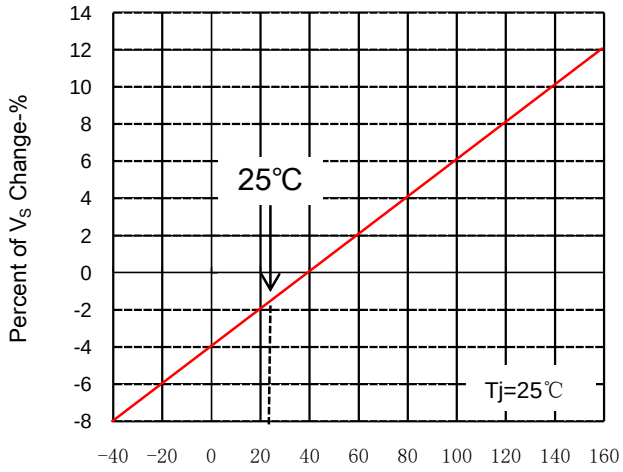


Figure 4. Normalized DC Holding Current versus Case Temperature

