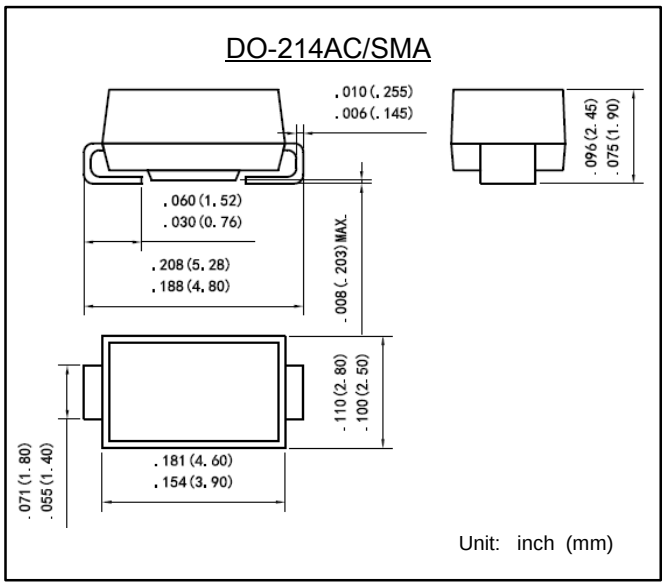
PxxxxTA Series

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-214AC 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)	$C_{O\ MAX}$ (pF)	V_{PP} 10/700us (V)	I_{PP} 10/700us (A)
P0060TA	P006A	6	25	4.0	5.0	800	2.2	50	50	3000	75
P0080TA	P008A	6	25	4.0	5.0	800	2.2	50	50	3000	75
P0300TA	P030A	25	40	4.0	5.0	800	2.2	50	70	3000	75
P0640TA	P064A	58	77	4.0	5.0	800	2.2	150	50	3000	75
P0720TA	P072A	65	88	4.0	5.0	800	2.2	150	50	3000	75
P0900TA	P090A	75	98	4.0	5.0	800	2.2	150	45	3000	75
P1100TA	P110A	90	130	4.0	5.0	800	2.2	150	45	3000	75
P1300TA	P130A	120	160	4.0	5.0	800	2.2	150	45	3000	75
P1500TA	P150A	140	180	4.0	5.0	800	2.2	150	40	3000	75
P1800TA	P180A	170	220	4.0	5.0	800	2.2	150	40	3000	75
P2300TA	P230A	190	260	4.0	5.0	800	2.2	150	35	3000	75
P2600TA	P260A	220	300	4.0	5.0	800	2.2	150	35	3000	75
P3100TA	P310A	275	350	4.0	5.0	800	2.2	150	30	3000	75
P3500TA	P350A	320	400	4.0	5.0	800	2.2	150	30	3000	75
P4200TA	P420A	390	500	4.0	5.0	800	2.2	0	30	3000	75

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-214AC SMA	T_J	Operating Junction Temperature	-40 to +150	℃
	T_S	Storage Temperature Range	-40 to +150	℃
	R_{JA}	Junction to Ambient on printed circuit	85	℃/W

Characteristics Curves

Figure 1. V-I Characteristics

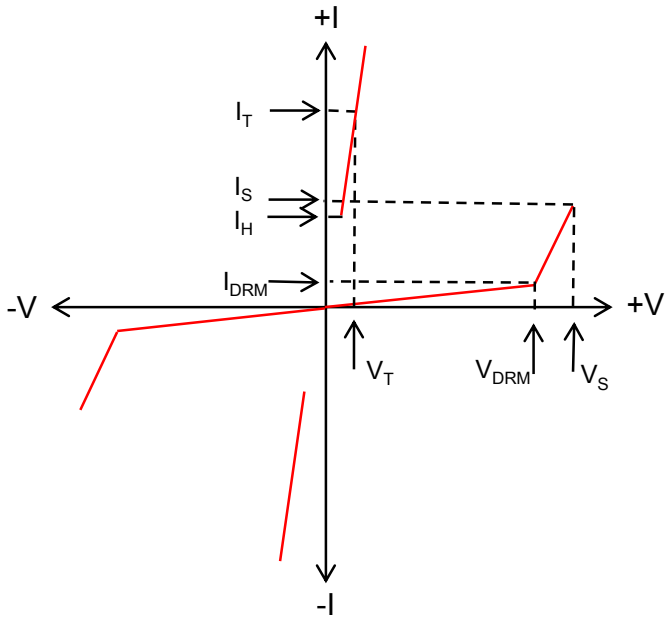


Figure 2. t_r x t_d Pulse Wave-form

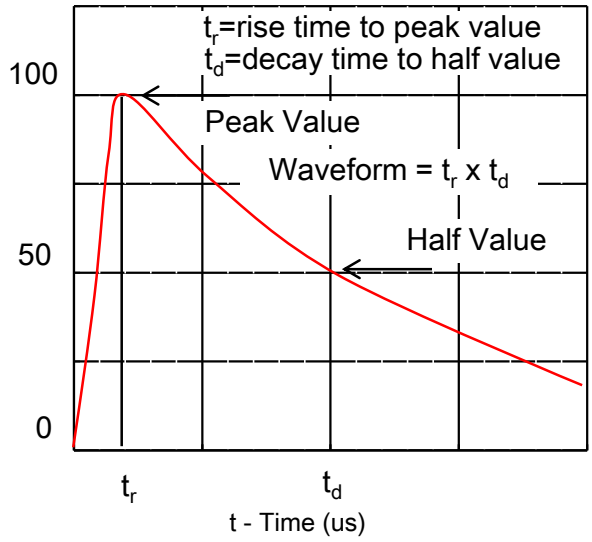


Figure 3. Normalized V_S Change versus Junction Temperature

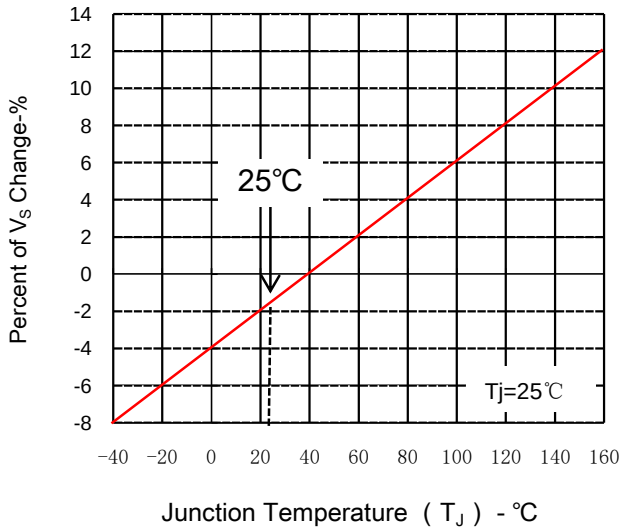


Figure 4. Normalized DC Holding Current versus Case Temperature

