

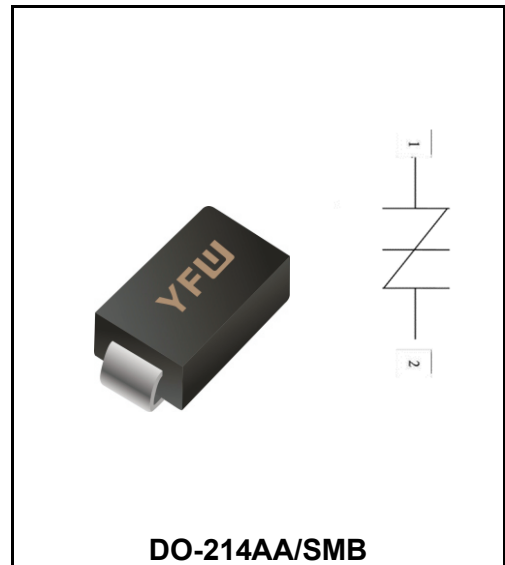
Surface Mounted Over-voltage Protection Thyristor

FEATURES

- ◆ Low reverse leakage
- ◆ High reliability
- ◆ High temperature soldering guaranteed:
260°C/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 /SMB
- ◆ Epoxy: UL 94V-0 rate flame retardant
- ◆ Lead: Pure tin plated, lead free
- ◆ Green compound



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 _r (A)	I _H (mA)	C _O (pF)	V _{PP} 10/700us (V)	I _{PP} 10/1000us (A)
P0060SC	P006C	6	15	4.0	5.0	800	2.2	50	105	6000	150
P0080SC	P008C	6	25	4.0	5.0	800	2.2	50	105	6000	150
P0300SC	P030C	25	40	4.0	5.0	800	2.2	50	105	6000	150
P0640SC	P064C	58	77	4.0	5.0	800	2.2	150	95	6000	150
P0720SC	P072C	65	88	4.0	5.0	800	2.2	150	95	6000	150
P0900SC	P090C	75	98	4.0	5.0	800	2.2	150	85	6000	150
P1100SC	P110C	90	130	4.0	5.0	800	2.2	150	85	6000	150
P1300SC	P130C	120	160	4.0	5.0	800	2.2	150	85	6000	150
P1500SC	P150C	140	180	4.0	5.0	800	2.2	150	80	6000	150
P1800SC	P180C	170	220	4.0	5.0	800	2.2	150	80	6000	150
P2300SC	P230C	190	260	4.0	5.0	800	2.2	150	75	6000	150
P2600SC	P260C	220	300	4.0	5.0	800	2.2	150	75	6000	150
P3100SC	P310C	275	350	4.0	5.0	800	2.2	150	65	6000	150
P3500SC	P350C	320	400	4.0	5.0	800	2.2	150	65	6000	150
P4200SC	P420C	390	500	4.0	5.0	800	2.2	0	65	6000	150
P8800SC	P880C	750	1000	4.0	5.0	800	2.2	5	50	6000	100

Note:

- 1) All measurements are made at an ambient temperature of 25°C. I_{PP} applies to -40°C through +85°C 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	°C
	T _S	Storage Temperature Range	-40 to +150	°C
	R _{JA}	Junction to Ambient on printed circuit	53	°C/W

Characteristics Curves

Figure 1. V-I Characteristics

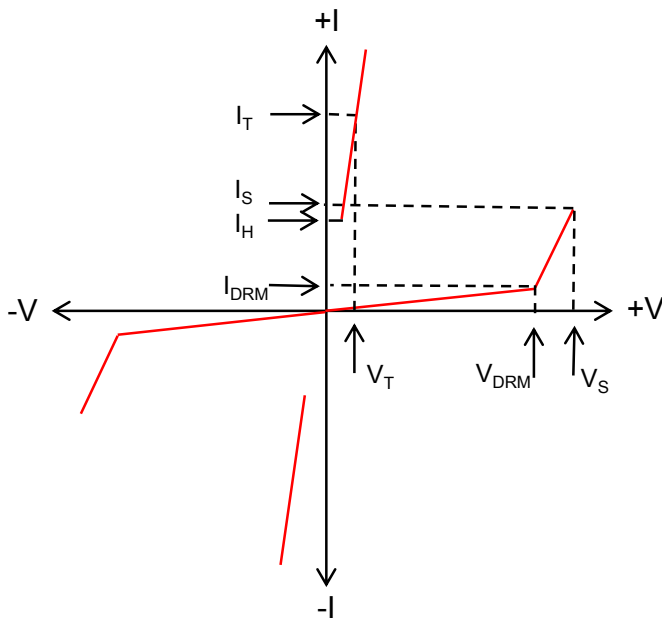


Figure 2. $t_r \times t_d$ Pulse Wave-form

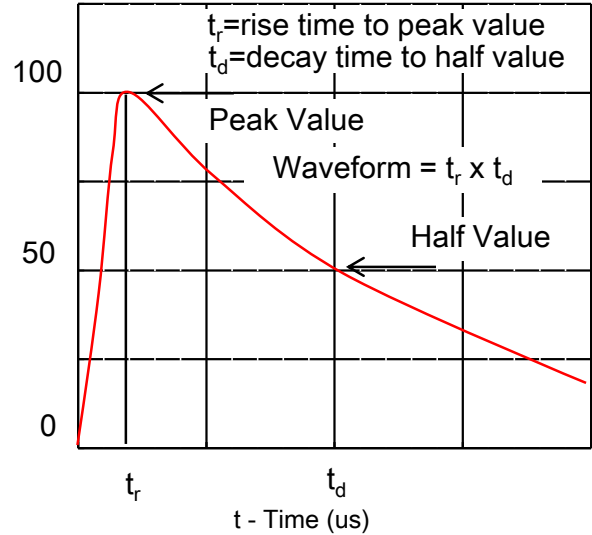


Figure 3. Normalized V_S Change versus Junction Temperature

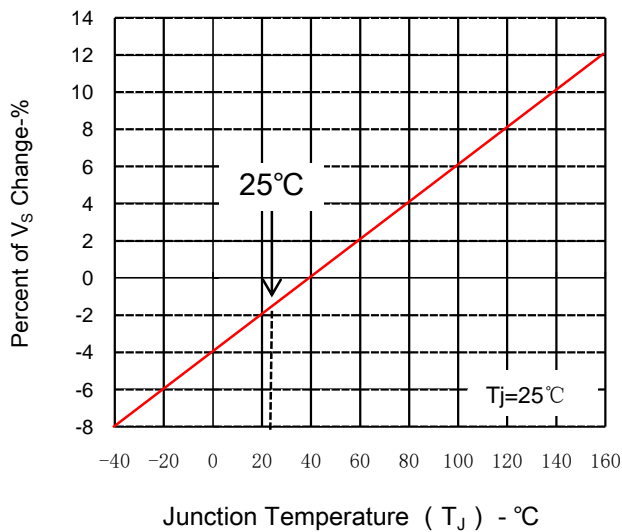
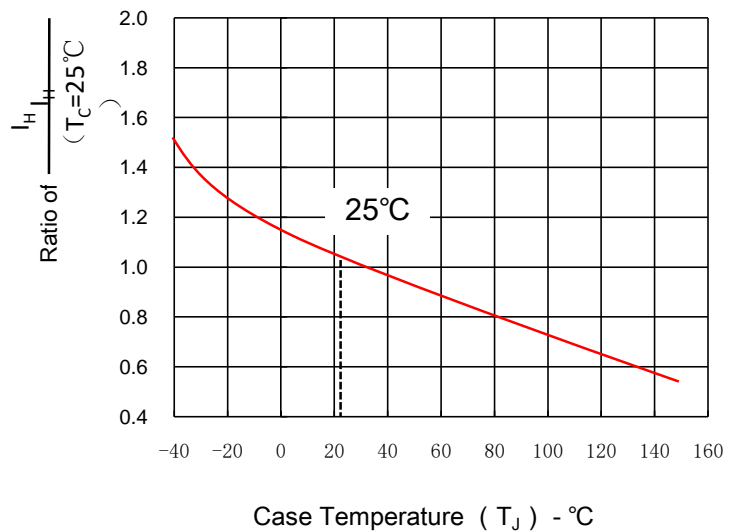
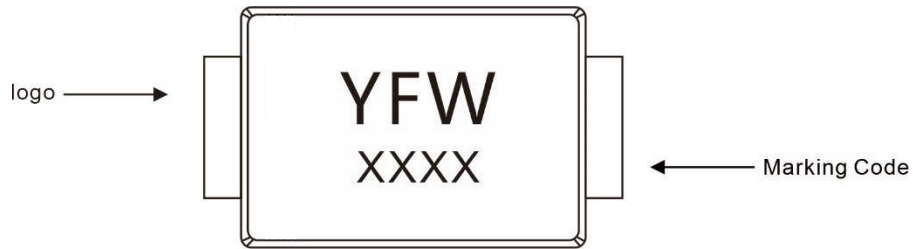


Figure 4. Normalized DC Holding Current versus Case Temperature



Marking Diagram



Ordering information

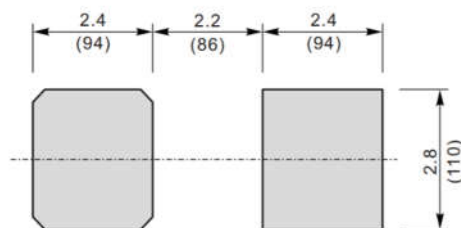
Package	Packing Description	Packing Quantity
DO-214AA SMB	Tape/Reel, 13" reel	3000PCS/Reel 30000PCS/Carton

Package Dimensions

DO-214AA SMB

Dim.	Millimeter(mm)		mil	
	Min.	Max.	Min.	Max.
A	2.13	2.44	84	96
E	4.06	4.70	160	185
D	3.3	3.94	130	155
E ₁	5.08	5.59	200	220
A ₁	0.05	0.20	2.0	7.9
L	0.8	1.5	32	59
C	0.152	0.305	6	12
b	1.9	2.2	75	87

The recommended mounting pad size



Unit : $\frac{\text{mm}}{\text{(mil)}}$

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