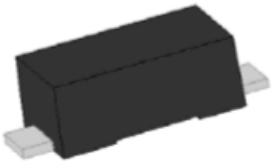
P0300DA SOD-123FL

Description

Thyristors are a type of semi—conduct component. They are designed to protect baseband equipment from damaging overvoltage transients. such as modems, telephones, line cards, answering machines, FAX machines, T1/E1, xDSL and more.



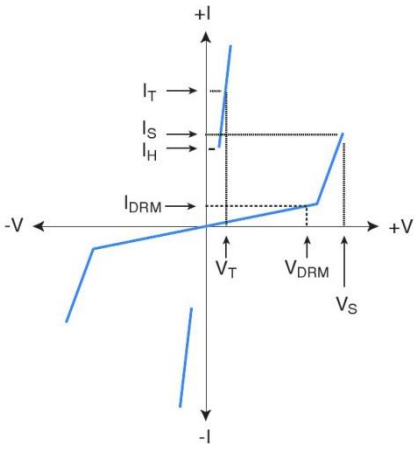
Features

- Excellent capability of absorbing transient surge
- Quick response to surge voltage (ns Level)
- Eliminates overvoltage caused by fast rising transients
- Moisture sensitivity level: Level 1
- Fails short circuit when surged in excess of ratings
- Non degenerative

Device Symbol

Typical Applications

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 VDRM
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
I_{PP}	Peak Pulse Current – maximum rated peak impulse current



Thermal Consideration

Parameter	Symbol	Value	Unit
Operating Temperature	T_J	-40 to +125	°C
Storage Temperature	T_{STG}	-40 to +125	°C
Junction to free air thermal resistance	$R_{\Theta JA}$	90	W/°C

Summary Electrical Characteristics, T a = 25 ° C (Unless Otherwise Noted)

Parameter Description		I_{DRM}@VDRM		VS ①@I_S		V_T@ I_T		I_H	C_O ②
Unit		μA	V	V	mA	V	A	mA	pF
Type	ENV	max	min	max	max	max	max	min	max
P0300DA	L	5	25	40	800	4	2.2	50	40

L : Lead-free

①Vs is measured at 100KV/s

②Off-state capacitance is measured in VDC=2V, VRMS=1V, f=1MHz

Surge Ratings

Type	Wave Sharp		VPP
IEC6100-4-5	Voltage	10/700μs	2000V

Rating & Characteristic Curves

Figure 1- Reflow Soldering

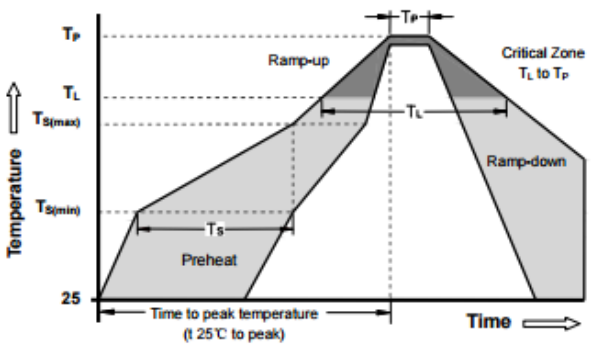


Figure 2- PEAK PULSE CURVE

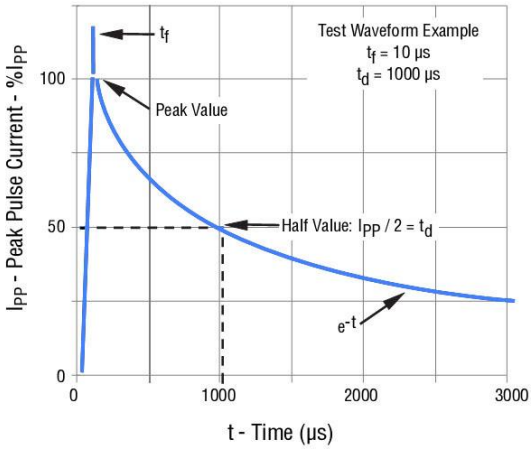


Figure 3-Normalized DC Holding Current versus Case Temperature

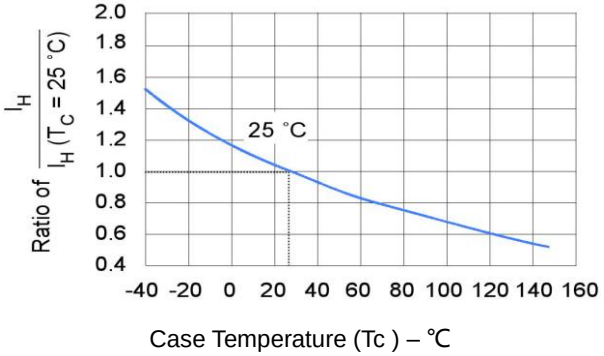
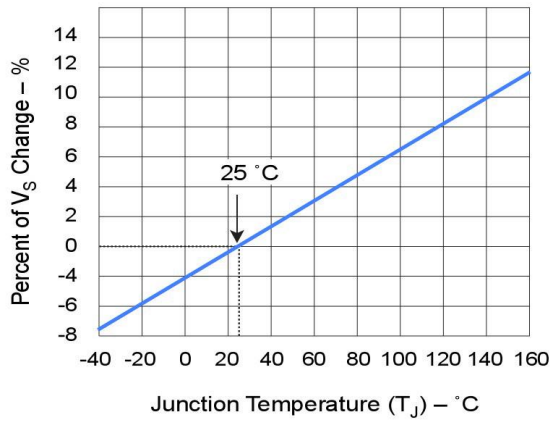
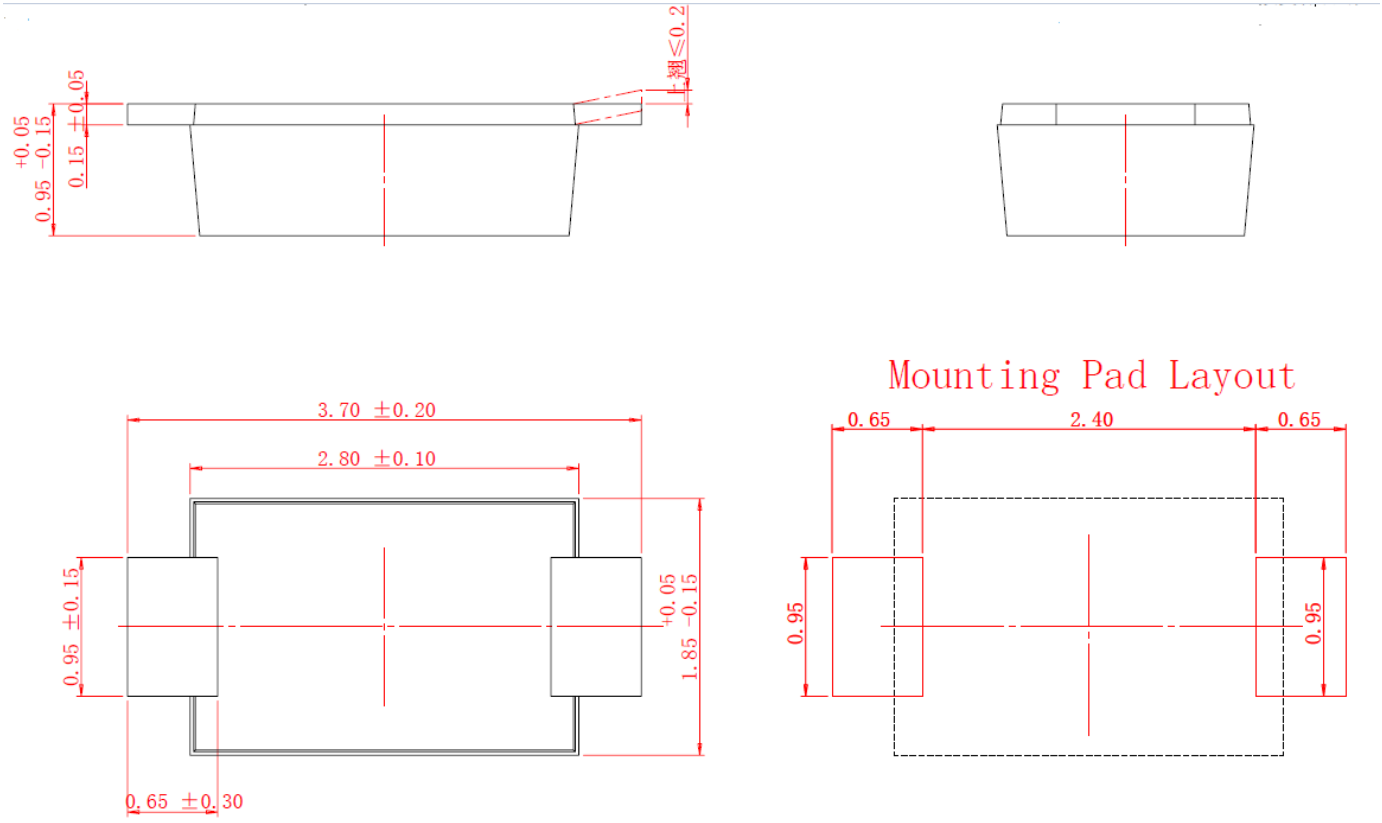


Figure 4-Normalized vs chang versus Junction Temp





Disclaimer

Specifications are subject to change without notice.

The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time.

Users should verify actual device performance in their specific applications.