

## Features

- ◆ Bi-directional crowbar transient voltage protection
- ◆ High surge capability
- ◆ High off-state impedance
- ◆ Low leakage current
- ◆ Low on-state voltage
- ◆ Short-circuit failure mode



DO-214AC(SMA)

## Main Application

Thyristor surge protector devices are designed to help protect sensitive telecommunication equipment from the hazards caused by lightning ,power contact,and power induction. These devices enable equipment to comply with various regulatory requirements including GR 1089,ITU K.20,K.21and K.45,IEC 60950,UL 60950,and TIA-968-A(formerly known as FCC Part 68).

## Typical application including:

- Central office switching equipment. Analog and digital linecards(xDSL,T1/E1,ISDN.....)
- Customer Premises Equipment (CPE) such as phones, fax machines, modems, POS terminals, PBX systems and caller ID adjunct boxes.
- Primary protection modules including Main Distribution Frames (MDF), building entrance equipment and station protection modules.
- Access network equipment such as remote terminals, line repeaters, multiplexers, cross-connects, WAN equipment, Network Interface Devices (NID).
- Data lines and security systems.
- CATV line amplifiers and power inserters.
- Sprinkler systems.

## Electrica Parameters (Tamb=25°C)

Part Number	VDRM	IDRM	VBO	IBO	VT	IT	CO	IH	10/700
	MIN	MAX	MAX	MAX	MAX	MAX	TYP.	MIN	MIN
	V	UA	V	MA	V	A	PF	MA	V
P0080TA-MC	6	5	25	800	4	2.2	10	10	2000
P0080TB-MC	6	5	25	800	4	2.2	15	10	4000
P0080TCL-MC	6	5	25	800	4	2.2	17	10	5000
P0080TC-MC	6	5	25	800	4	2.2	25	10	6000

## Electrical Characteristics

VDRM Stand-off voltage, is measured at IDRM

IH Holding current.

VBO Breakover voltage, is measured at 100V/μs.

IBO Breakover current.

CO Off-state capacitance is measured in V<sub>DC</sub>=2V@1MHz.

IT ON-state current

IDRM Leakage current, is measured at VDRM.

VT On-state voltage.

## Part Numbering System

P      XXXX      T      A  
 (A)                      (B)                      (C)                      (D)

(A) Semiconductor Surge Arrester

(B) Series:0080,0300...3500,3800,4200etc.

(C) Pake:SMA(DO-214AC)

(D)Rating Sure Voltage:A:2KV , B:4KV ,CL :5KV C:6KV(10/700μs)

### Electrical Characteristics Curves

Figure1 V-I Characteristics

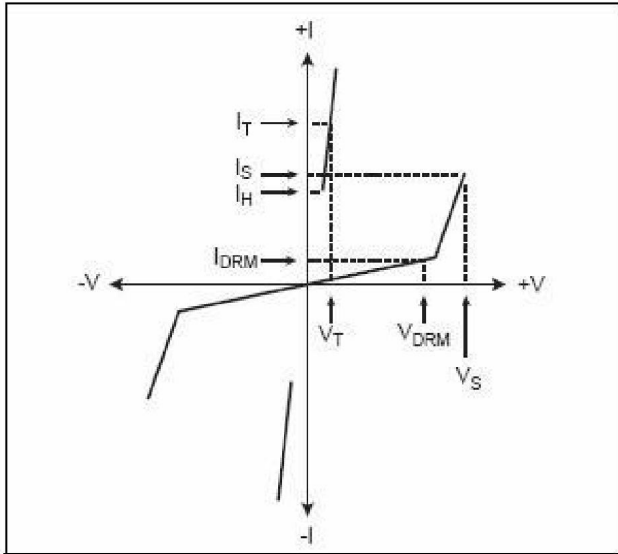


Figure2 t x td Pulse Wave-form

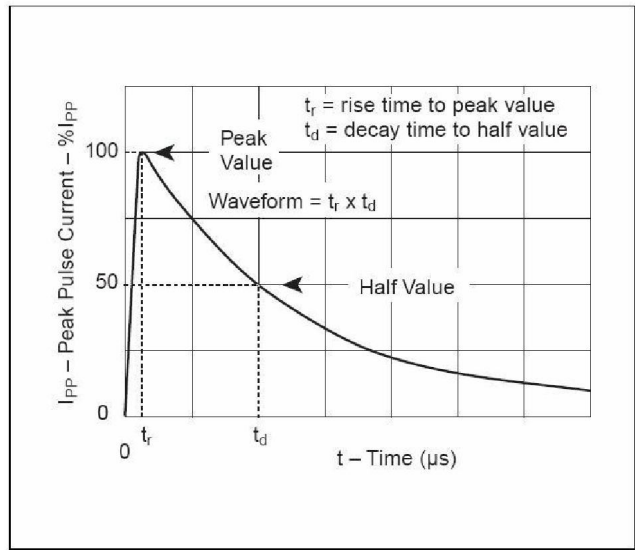
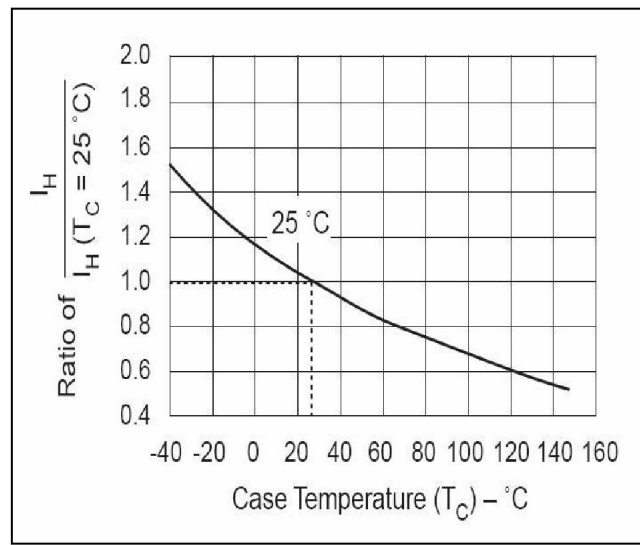
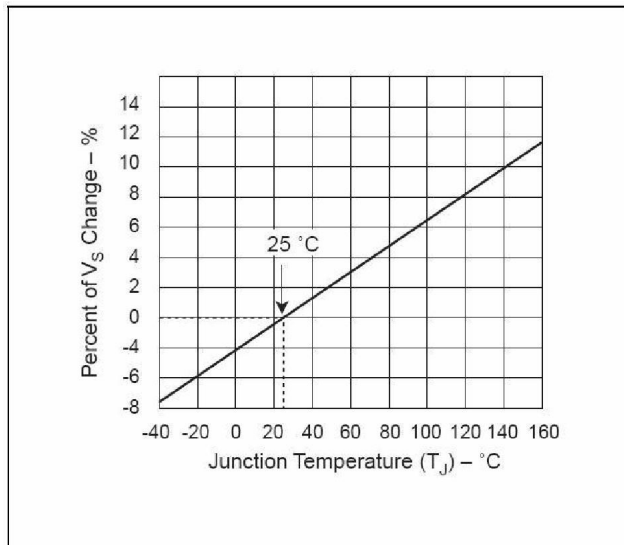



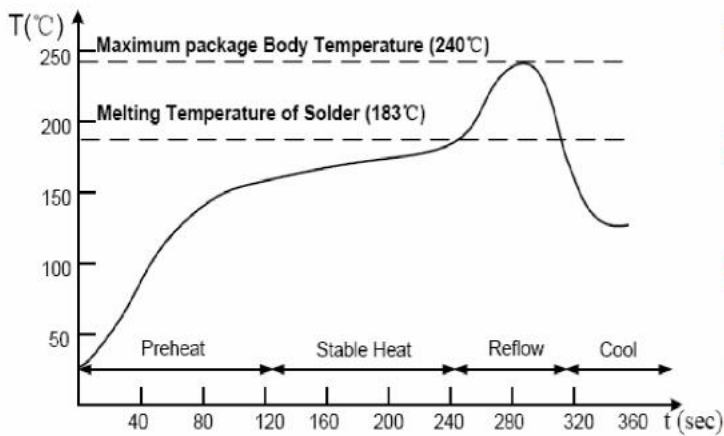
Figure 3 Normalized  $V_S$  Change versus Junction Temperature      Figure 4 Normalized DC Holding Current



### Thermal Considerations

Package DO-214AA/SMA	Symbol	Parameter	Value	Unit
	T <sub>J</sub>	Operating Junction Temperature	-40 to +150	°C
	T <sub>S</sub>	Storage Temperature Range	-40 to +150	°C
	R <sub>θJA</sub>	Junction to Ambient on printed circuit	90	°C/W

## Solder Reflow Recommendations

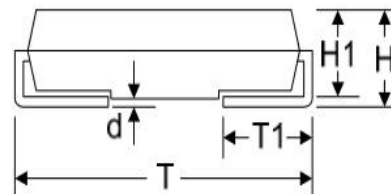
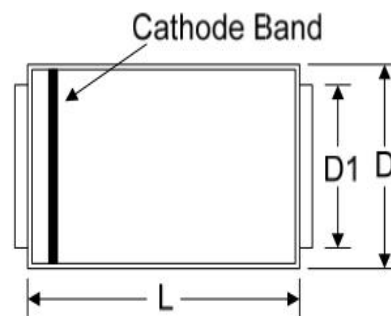


- Recommended reflow methods: IR, vapor phase oven, hot air oven, wave solder.
- The device can be exposed to a maximum temperature of 265°C for 10 seconds.
- Devices can be cleaned using standard industry methods and solvents.


Notes: If reflow temperatures exceed the recommended profile, devices may not meet the performance requirements.

## Package Dimensions

Ref.(mm)	Millimeters	
	Min.	Max.
D	2.50	2.90
D1	1.20	1.70
L	3.99	4.50
T	4.93	5.28
T1	0.76	1.52
d	0	2.44
H	2.051	2.643
H1	2.0	2.44



## Summary of Packing Options

Package Type	Description	Packing Quantity	Industry Standard
DO-214AC(SMA) 	Embossed Carrier Reel Pack	3000PCS	EIA-481-D