Thyristor Surge Suppressors

Description

Package: DO-214AC / SMA

Pxxx0TA Series are micro capacitance Thyristor Surge Suppressor designed to protect telecommunications equipment such as ADSL Modems,Router, , Telephone, CCTV Camera,Digital Video Record,Video Capture Card,Twisted-pair video transmitter,CATV Splitter.....Etc.

Pxxx0TA Series Thyristor Surge Suppressor are used to enable equipment to meet various regulatory requirements including GR 1089, ITU K.20/21,IEC 61000-4-5, YD/T 1082,YD/T 993,YD/T 950,TIA-968-A ,TIA-968-B

Features

Compared to surge suppression using other technologies, Pxxx0TA Series devices offer absolute surge protection regardless of the surge current available and the rate of applied voltage (dv/dt). Pxxx0TA Series devices:

- **100% Lead-Free(RoHs Compliant)**
- **Can not be damaged by voltage**
- **Eliminate hysteresis and heat dissipation typically found with clamping devices**
- **Eliminate voltage overshoot caused by fast-rising transients**
- **Are non-degenerative**
- **Have low capacitance, making them ideal for high-speed transmission equipment**

Electrical Characteristics

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
I_H	**Holding Current** — minimum current required to maintain on state
I_S	**Switching Current** — maximum current required to switch to on state
I_T	**On-state Current** — maximum rated continuous on-state current
V_T	**On-state Voltage** — maximum voltage measured at rated on-state current
Capacitance	**Off-state Capacitance** — typical capacitance measured in off state
I_{DRM}	**Leakage Current** — maximum peak off-state current measured at V_{DRM}
I_{PP}	**Peak Pulse Current** — maximum rated peak impulse current
I_{TSM}	**Peak One-cycle Surge Current** — maximum rated one-cycle AC current
di/dt	**Rate of Rise of Current** — maximum rated value of the acceptable rate of rise in current over time

Electrical Characteristics

Part Number	Marking	V_{DRM} @I_{DRM}=5 μ A	V_S @100V/μs	I_H Min	I_S Max	I_T Max	V_T@I_T= 2.2Amps	Capacitance @1MHz,2V bias	Delivery Time	
		V min	V max	mA	mA	A	Vmax	pF	in stock	Produce
P0080TA	P008A	6	25	50	800	2.2	4	35pF	4 days	4days
P0080TAMC	P008A	6	25	50	800	2.2	4	12pF	4 days	7days
P0300TA	P03A	25	40	50	800	2.2	4	40pF	4 days	12days
P0640TA	P06A	58	77	150	800	2.2	4	35pF	4 days	12days
P2300TA	P23A	190	260	150	800	2.2	4	40pF	4 days	7days
P2600TA	P26A	220	300	150	800	2.2	4	35pF	4 days	12days
P3100TA	P31A	275	350	150	800	2.2	4	35pF	4 days	7days
P3500TA	P35A	320	400	150	800	2.2	4	30pF	4 days	12days

Notes:

-All measurements are made at an ambient temperature of 25°C .Ipp applies to -40°C through +85°C temperature range .

-Off-state capacitance(Co) is typical value.

*For surge ratings,see next page.

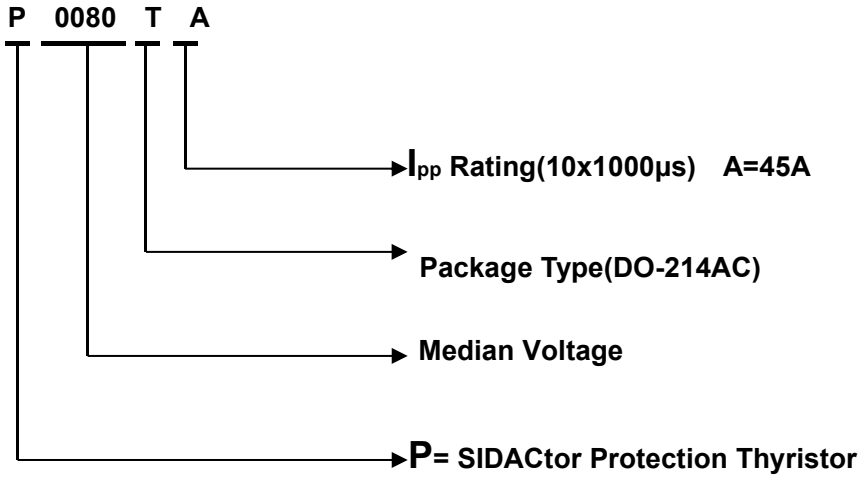
Surge Ratings

Series	Ipp 2x10μs Amps	Ipp 8x20μs Amps	Ipp 10x160μs Amps	Ipp 10x560μs Amps	Ipp 10x1000μs Amps	Ipp 5x320μs Amps	Ipp 5x310μs Amps	Ipp 10x360μs Amps	ITSM 50/60Hz Amps		
A	150	150	90	50	45	75	75	75	20		

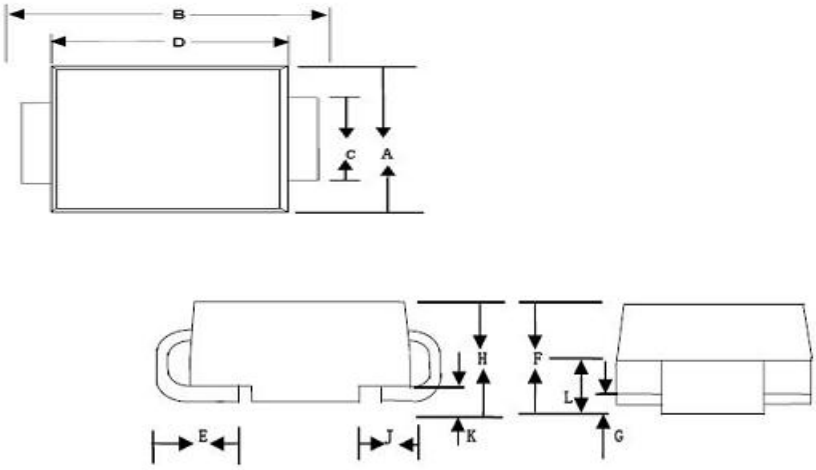
Thermal Considerations

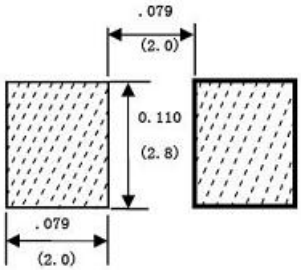
Package: DO-214AC/SMA	Symbol	Parameter	Value	Unit
	T_J	Operating Junction Temperature Range	-40 to +150	°C
	T_S	Storage Temperature Range	-65 to +150	°C
	$R_{\theta JA}$	Junction to Ambient on prited circuit	90	°C /W

Description of Part Number



Dimensions - DO-214AC





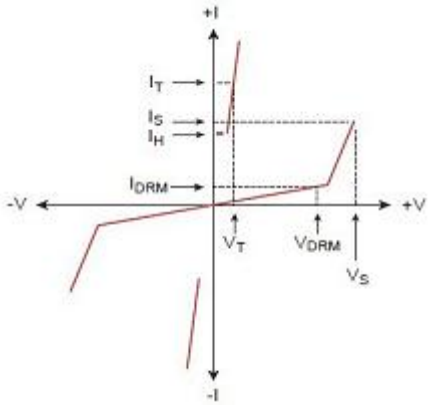
Dimension	Inches		Millimeters	
	Min	Max	Min	Max
A	0.098	0.114	2.50	2.90
B	0.188	0.208	4.80	5.28
C	0.055	0.062	1.40	1.60
D	0.157	0.181	4.00	4.60
E	0.030	0.060	0.76	1.52
F	0.078	0.096	2.00	2.44
H	0.080	0.104	2.05	2.64

Packing Options

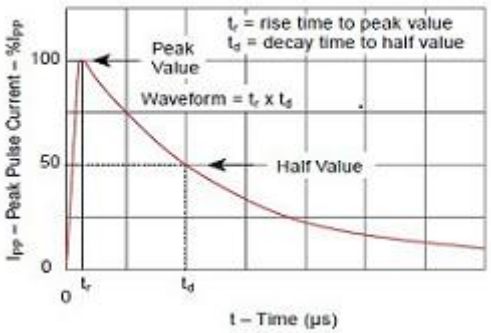
Package Type	Description	Packing Quantity	Industry Standard
A	DO-214AC Reel Pack	5000 PCS	EIA-481-D

Characteristics Curve

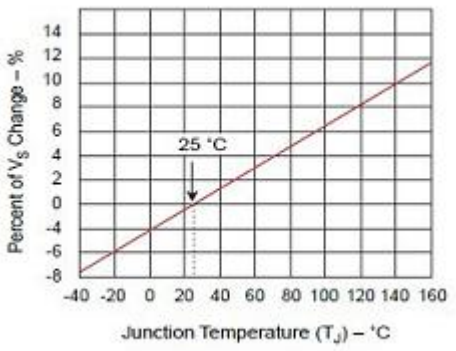
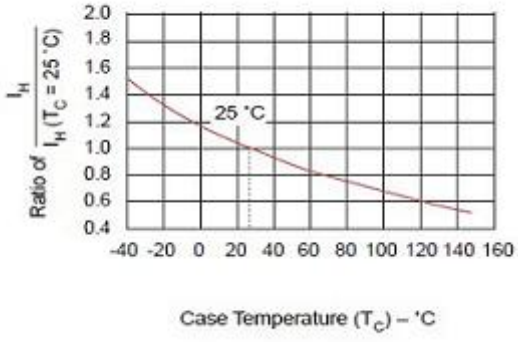
V-I Characteristics



Tr x Td Pulse Waveform



Normalized Vs Change Versus Junction Temperature



Normalized DC Holding Current Versus Case Temperature