

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}	V _S	I _H	I _S	I _T	V _{T@I_T=}	Capacitance	Delivery Time	
		@I _{DRM} =5 μ A	@100V/μs	Min	Max	Max	2.2Amps	@1MHz,2V bias	in stock	Produce
		V _{min}	V _{max}	mA	mA	A	V _{max}	pF		
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 .I_{pp} applies to -40°C through +85°C temperature range .


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

*For surge ratings,see next page.

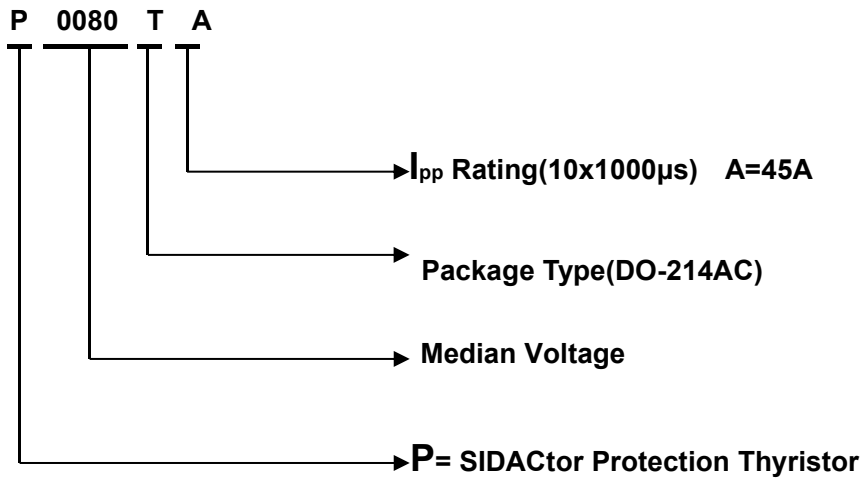
Surge Ratings

Series	I_{pp} 2x10 μ s	I_{pp} 8x20 μ s	I_{pp} 10x160 μ s	I_{pp} 10x560 μ s	I_{pp} 10x1000 μ s	I_{pp} 5x320 μ s	I_{pp} 5x310 μ s	I_{pp} 10x360 μ s	I_{TSM} 50/60Hz	
	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps	
A	150	150	90	50	45	75	75	75	20	

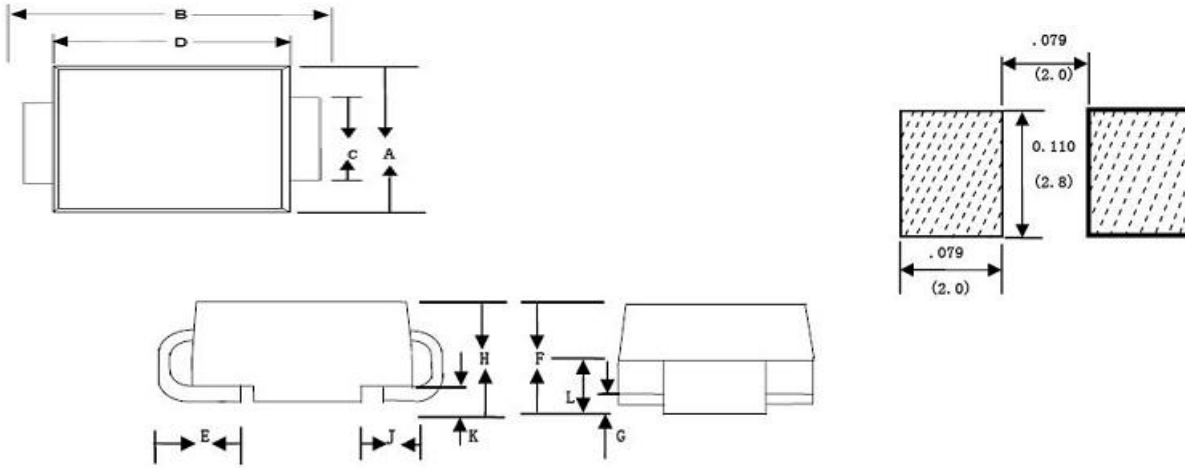
Thermal Considerations

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

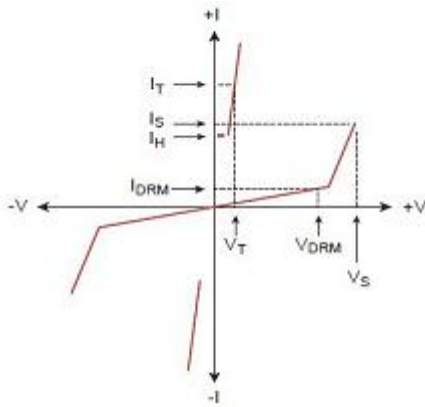
Packing Options



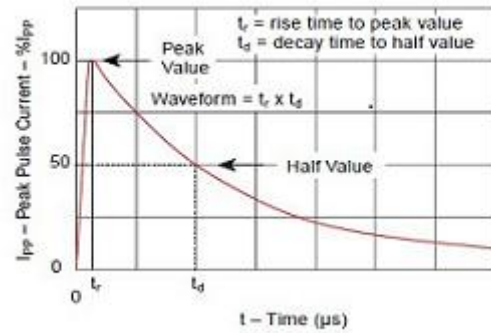
Package Type	Description	Packing Quantity	Industry Standard
A	DO-214AC Reel Pack	5000 PCS	EIA-481-D

Characteristics Curve

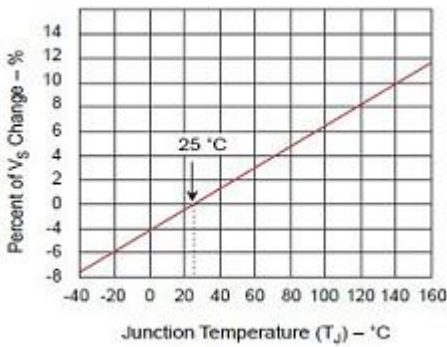
V-I Characteristics



Tr x Td Pulse Waveform



Normalized Vs Change Versus Junction Temperature



Normalized DC Holding Current Versus Case Temperature

