

## Description

Fast Delivery Time

PXXX0ECMC Series SIDACtor Protection Thyristor protect telecommunications equipment such as ADSL Modems,Router, , Telephone, CCTV Camera,Digital Video Record,Video Capture Card,Twisted-pair video transmitter,CATV Splitter.....Etc.

PXXX0ECMC Series SIDACtor Protection Thyristor 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, PXXX0ECMC Series devices offer absolute surge protection regardless of the surge current available and the rate of applied voltage (dv/dt).PXXX0ECMC Series devices:

- 100% Lead-Free(RoHs Compliant )
- Cannot 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
$V_{DRM}$	<b>Peak Off-state Voltage</b> — maximum voltage that can be applied while maintaining off state
$V_S$	<b>Switching Voltage</b> — maximum voltage prior to switching to on state
$I_H$	<b>Holding Current</b> — minimum current required to maintain on state
$I_S$	<b>Switching Current</b> — maximum current required to switch to on state
$I_T$	<b>On-state Current</b> — maximum rated continuous on-state current
$V_T$	<b>On-state Voltage</b> — maximum voltage measured at rated on-state current
Capacitance	<b>Off-state Capacitance</b> — typical capacitance measured in off state
$I_{DRM}$	<b>Leakage Current</b> — maximum peak off-state current measured at $V_{DRM}$
$I_{PP}$	<b>Peak Pulse Current</b> — maximum rated peak impulse current
$I_{TSM}$	<b>Peak One-cycle Surge Current</b> — maximum rated one-cycle AC current
di/dt	<b>Rate of Rise of Current</b> — maximum rated value of the acceptable rate of rise in current over time

Part Number	V <sub>DRM</sub> @I <sub>DRM</sub> =5 μ A	V <sub>S</sub> @100V/μs	I <sub>H</sub>	I <sub>S</sub>	I <sub>T</sub>	V <sub>T</sub> @I <sub>T</sub> =2.2Amps	Capacitance @1MHz,2V bias
	V <sub>min</sub>	V <sub>max</sub>	mA <sub>min</sub>	mA <sub>max</sub>	A <sub>max</sub>	V <sub>max</sub>	pF
P0080ECMC	6	25	50	800	2.2	4	50
P0300ECMC	25	40	50	800	2.2	4	50
P0640ECMC	58	77	150	800	2.2	4	50
P0720ECMC	65	88	150	800	2.2	4	50
P0900ECMC	75	98	150	800	2.2	4	50
P1100ECMC	90	130	150	800	2.2	4	50
P1300ECMC	120	160	150	800	2.2	4	50
P1500ECMC	140	180	150	800	2.2	4	50
P1800ECMC	170	220	150	800	2.2	4	50
P2300ECMC	190	260	150	800	2.2	4	50
P2600ECMC	220	300	150	800	2.2	4	40
P3100ECMC	275	350	150	800	2.2	4	40
P3500ECMC	320	400	150	800	2.2	4	40

## Notes:

-All measurements are made at an ambient temperature of 25°C .I<sub>pp</sub> applies to -40°C through +85°C temperature range .

-Off-state capacitance(C<sub>o</sub>) is typical value.


\*For surge ratings,see next page.

## Surge Ratings

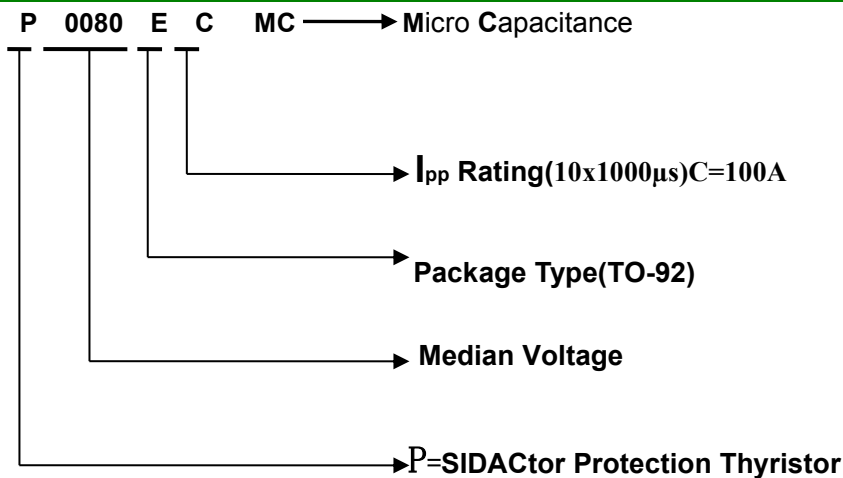


Series	$I_{pp}$ 2x10 $\mu$ s	$I_{pp}$ 8x20 $\mu$ s	$I_{pp}$ 10x160 $\mu$ s	$I_{pp}$ 10x560 $\mu$ s	$I_{pp}$ 10x1000 $\mu$ s	$I_{pp}$ 5x320 $\mu$ s	$I_{pp}$ 5x310 $\mu$ s	$I_{pp}$ 10x360 $\mu$ s	$I_{TSM}$ 50/60Hz	di/dt
	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps/ $\mu$ s
C	500	400	200	150	100	200	200	175	30	500

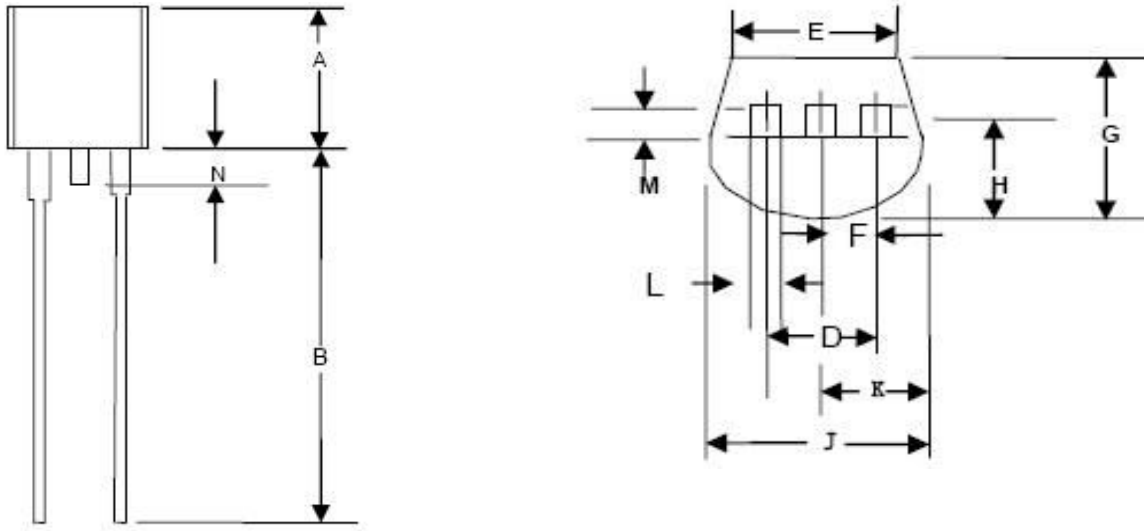
## Thermal Considerations

Package	TO-92	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 prited circuit	90	$^{\circ}$ C /W

## Description of Part Number



## Dimensions - TO-92



Dimension	Inches		Millimeters	
	Min	Max	Min	Max
A	0.176	0.196	4.40	4.98
B	0.500		12.1	
D	0.095	0.105	2.14	2.67
E	0.150		3.81	
F	0.046	0.054	1.16	1.37
G	0.135	0.145	3.43	3.68
H	0.088	0.096	2.23	2.44
J	0.176	0.186	4.47	4.70
K	0.088	0.096	2.23	2.44
L	0.013	0.019	0.33	0.48
M	0.013	0.017	0.33	0.43
N		0.060		1.52

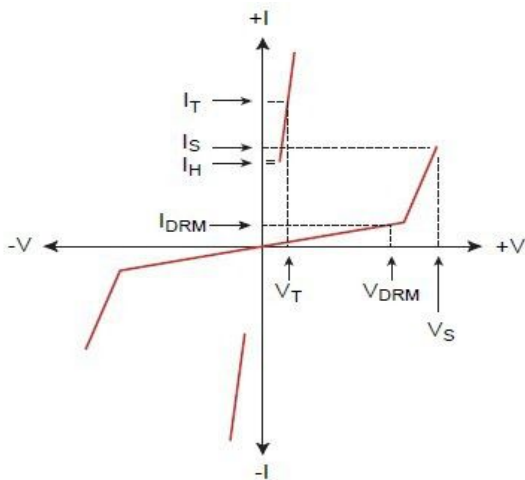
## Packing Options



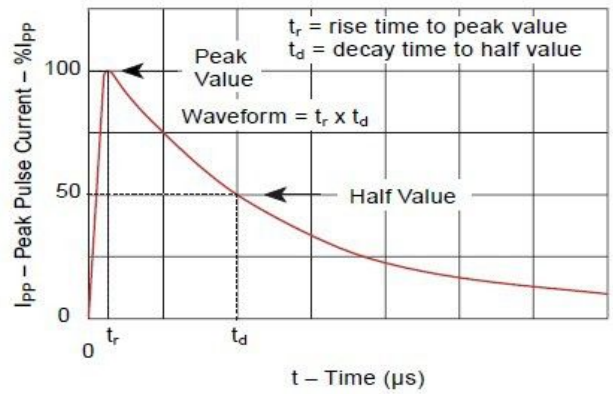
Package Type	Description	Packing Quantity	Industry Standard
E	TO-92 Bulk Pack	1000 PCS	N/A

## Characteristics Curve

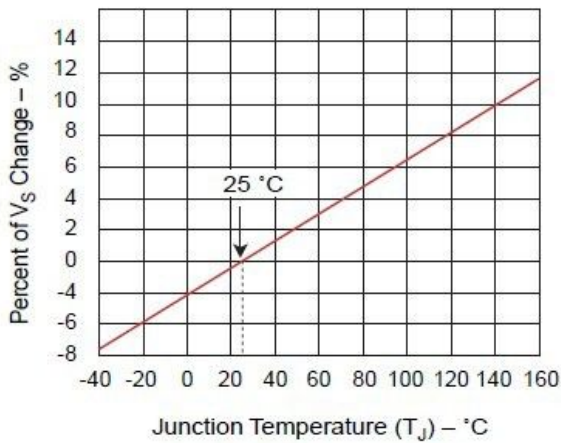
### V-I Characteristics



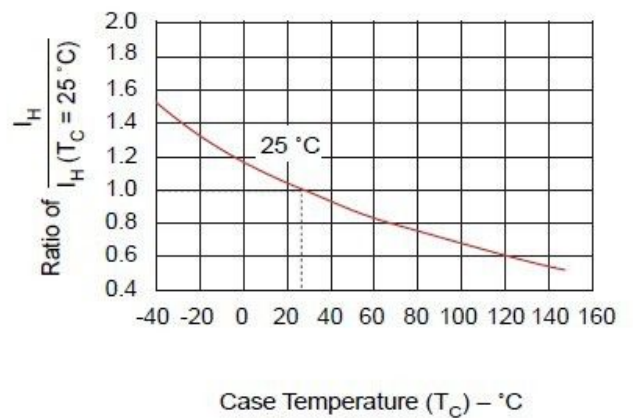
### Tr x Td Pulse Waveform



### Normalized Vs Change Versus Junction Temperature



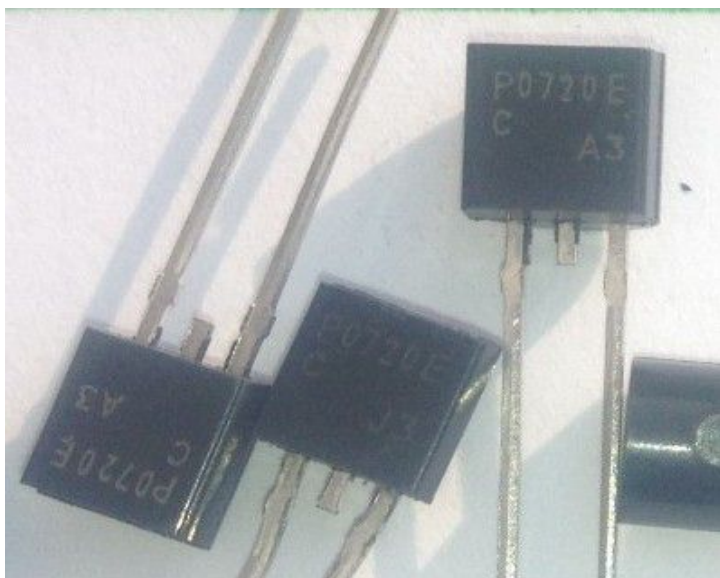
### Normalized DC Holding Current Versus Case Temperature



## Sample pictures

P0720ECMC (Marking P0720EC)

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P3100ECMC (Marking P3100EC)

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