ShenZhen HuaXinAn Electronics Co.,Ltd

PXXX0ECMCL

SIDACtor Protection Thyristors

Package TO-92

Description

Fast Delivery Time

PXXX0ECMCL 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.

PXXX0ECMCL 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, PXXX0ECMCL Series devices offer absolute surge protection regardless of the surge current available and the rate of applied voltage (dv/dt).PXXX0ECMCL 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}	**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 continued

Part Number	V_{DRM} @I_{DRM}=5 μA	V_S @100V/μs	I_H	I_S	I_T	V_T @I_T=2.2Amps	Capacitance @1MHz,2V bias
	V min	V max	mA min	mA max	A max	Vmax	pF
P0080ECMCL	6	25	50	800	2.2	4	50
P0300ECMCL	25	40	50	800	2.2	4	50
P0640ECMCL	58	77	150	800	2.2	4	50
P0720ECMCL	65	88	150	800	2.2	4	50
P0900ECMCL	75	98	150	800	2.2	4	50
P1100ECMCL	90	130	150	800	2.2	4	50
P1300ECMCL	120	160	150	800	2.2	4	50
P1500ECMCL	140	180	150	800	2.2	4	50
P1800ECMCL	170	220	150	800	2.2	4	50
P2300ECMCL	190	260	150	800	2.2	4	50
P2600ECMCL	220	300	150	800	2.2	4	40
P3100ECMCL	275	350	150	800	2.2	4	40
P3500ECMCL	320	400	150	800	2.2	4	40

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.

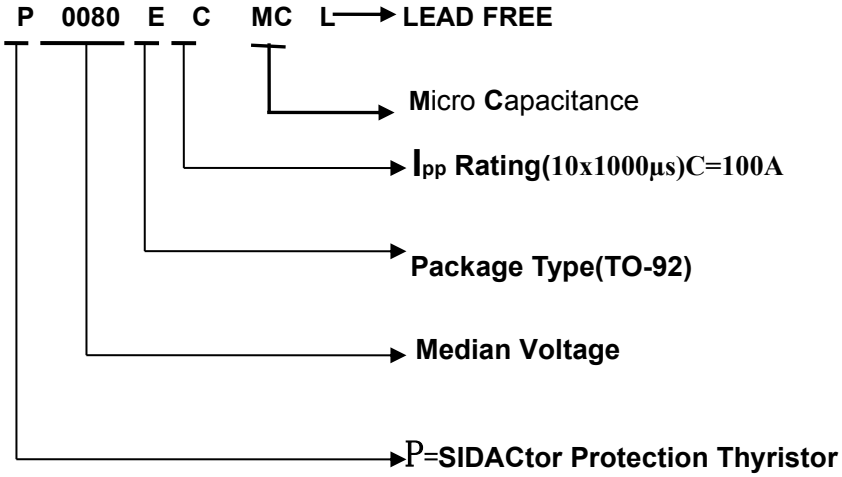
Surge Ratings

Series	Ipp 2x10μs	Ipp 8x20μs	Ipp 10x160μs	Ipp 10x560μs	Ipp 10x1000μs	Ipp 5x320μs	Ipp 5x310μs	Ipp 10x360μs	ITSM 50/60Hz	di/dt
	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps/μs
C	500	400	200	150	100	200	200	175	30	500

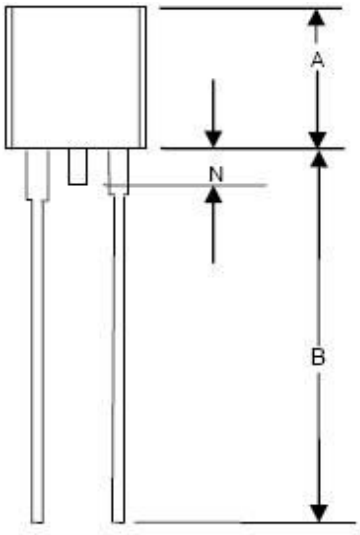
Thermal Considerations

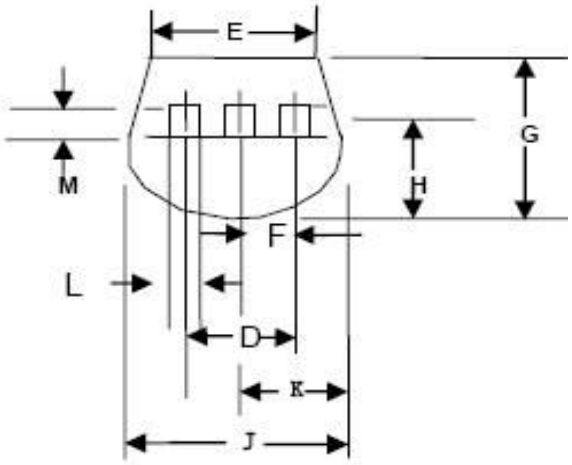
Package TO-92	Symbol	Parameter	Value	Unit
	T_J	Operating Junction Temperature Range	-40 to +150	°C
	T_S	Storage Temperature Range	-65 to +150	°C
	$R_{\theta JA}$	Junction to Ambient on prited circuit	90	°C /W

Description of Part Number



Dimensions - TO-92





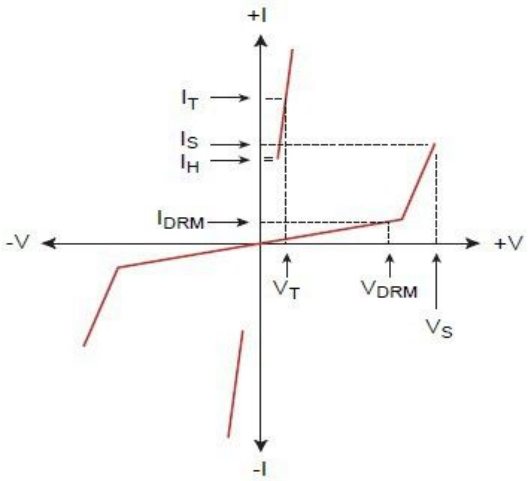
Dimension	Inches		Millimeters	
	Min	Max	Min	Max
A	0.176	0.196	4.40	4.98
B	0.500		12.1	
D	0.095	0.105	2.14	2.67
E	0.150		3.81	
F	0.046	0.054	1.16	1.37
G	0.135	0.145	3.43	3.68
H	0.088	0.096	2.23	2.44
J	0.176	0.186	4.47	4.70
K	0.088	0.096	2.23	2.44
L	0.013	0.019	0.33	0.48
M	0.013	0.017	0.33	0.43
N		0.060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

Packing Options

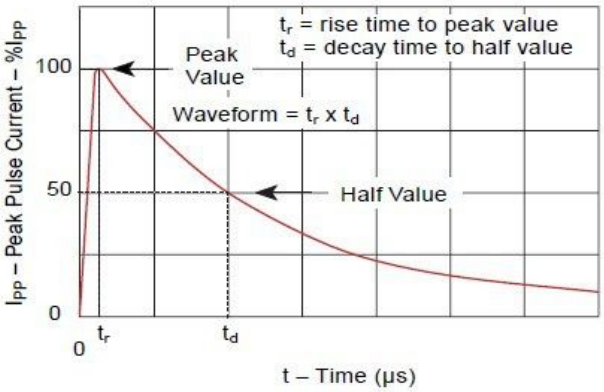
Package Type	Description	Packing Quantity	Industry Standard
E	TO-92 Bulk Pack	1000 PCS	N/A

Characteristics Curve

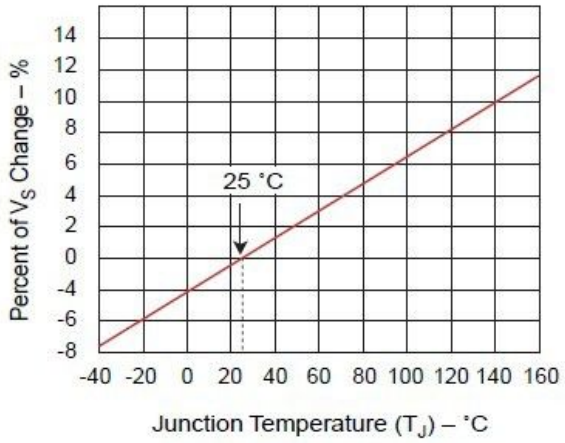
V-I Characteristics



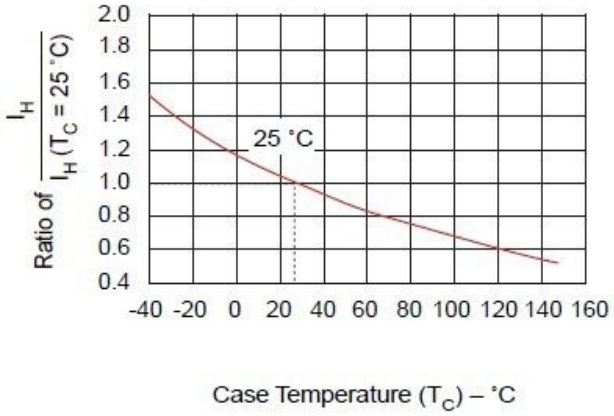
Tr x Td Pulse Waveform



Normalized Vs Change Versus Junction Temperature



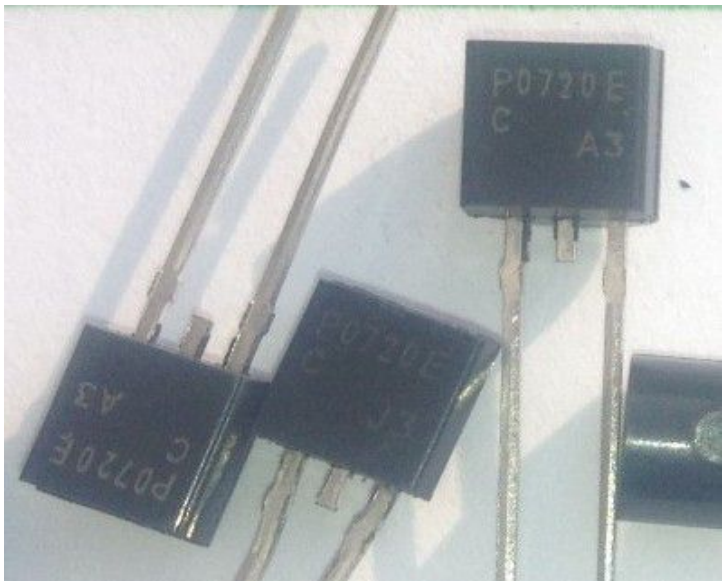
Normalized DC Holding Current Versus Case Temperature



Sample pictures

P0720ECMCL（Marking P0720EC)

Fast Delivery Time



P3100ECMCL（Marking P3100EC)

Fast Delivery Time