SIDACtor Protection Thyristor

Package DO-214AA

SGS RoHS

Description

Pxxx0SALRP,PXXX0SBLRP,PXXX0SCLRP 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.
Pxxx0SALRP,PXXX0SBLRP,PXXX0SCLRP 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, Pxxx0SALRP,PXXX0SBLRP,PXXX0SCLRP Series devices offer absolute surge protection regardless of the surge current available and the rate of applied voltage (dv/dt).
Pxxx0SALRP,PXXX0SBLRP,PXXX0SCLRP 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

Part Number	Marking	V_{DRM} @I_{DRM}=5 μ A	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
P0080SALRP	P008A	6	25	50	800	2.2	4	45
P0300SALRP	P03A	25	40	50	800	2.2	4	45
P0640SALRP	P06A	58	77	150	800	2.2	4	35
P0720SALRP	P07A	65	88	150	800	2.2	4	50
P0900SALRP	P09A	75	98	150	800	2.2	4	40
P1100SALRP	P11A	90	130	150	800	2.2	4	35
P1300SALRP	P13A	120	160	150	800	2.2	4	35
P1500SALRP	P15A	140	180	150	800	2.2	4	40
P1800SALRP	P18A	170	220	150	800	2.2	4	40
P2100SALRP	P21A	180	240	150	800	2.2	4	40
P2300SALRP	P23A	190	260	150	800	2.2	4	45
P2600SALRP	P26A	220	300	150	800	2.2	4	35
P3100SALRP	P31A	275	350	150	800	2.2	4	35
P3500SALRP	P35A	320	400	150	800	2.2	4	30
P0080SBLRP	P008B	6	25	50	800	2.2	4	60
P0300SBLRP	P03B	25	40	50	800	2.2	4	65
P0640SBLRP	P06B	58	77	150	800	2.2	4	45
P0720SBLRP	P07B	65	88	150	800	2.2	4	45
P0900SBLRP	P09B	75	98	150	800	2.2	4	40
P1100SBLRP	P11B	90	130	150	800	2.2	4	40
P1300SBLRP	P13B	120	160	150	800	2.2	4	40
P1500SBLRP	P15B	140	180	150	800	2.2	4	35
P1800SBLRP	P18B	170	220	150	800	2.2	4	65
P2100SBLRP	P21B	180	240	150	800	2.2	4	60

Table continues on next page

Electrical Characteristics continued

Part Number	Marking	V_{DRM} @I_{DRM}=5 μ A	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
P2300SBLRP	P23B	190	260	150	800	2.2	4	50
P2600SBLRP	P26B	220	300	150	800	2.2	4	45
P3100SBLRP	P31B	275	350	150	800	2.2	4	45
P3500SBLRP	P35B	320	400	150	800	2.2	4	40
P0080SCLRP	P008C	6	25	50	800	2.2	4	75
P0300SCLRP	P03C	25	40	50	800	2.2	4	75
P0640SCLRP	P06C	58	77	150	800	2.2	4	55
P0720SCLRP	P07C	65	88	150	800	2.2	4	60
P0900SCLRP	P09C	75	98	150	800	2.2	4	65
P1100SCLRP	P11C	90	130	150	800	2.2	4	55
P1300SCLRP	P13C	120	160	150	800	2.2	4	60
P1500SCLRP	P15C	140	180	150	800	2.2	4	50
P1800SCLRP	P18C	170	220	150	800	2.2	4	55
P2100SCLRP	P21C	180	240	150	800	2.2	4	85
P2300SCLRP	P23C	190	260	150	800	2.2	4	65
P2600SCLRP	P26C	220	300	150	800	2.2	4	65
P3100SCLRP	P31C	275	350	150	800	2.2	4	55
P3500SCLRP	P35C	320	400	150	800	2.2	4	50
P4500SCLRP	P45C	400	540	150	800	2.2	4	45

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.

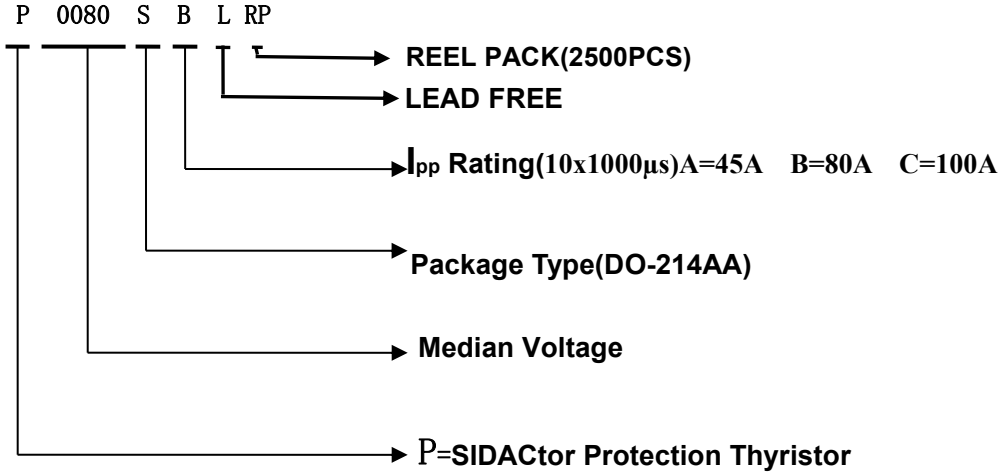
Surge Ratings

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
A	150	150	90	50	45	75	75	75	20	500
B	250	250	150	100	80	100	100	125	25	500
C	500	400	200	150	100	200	200	175	30	500

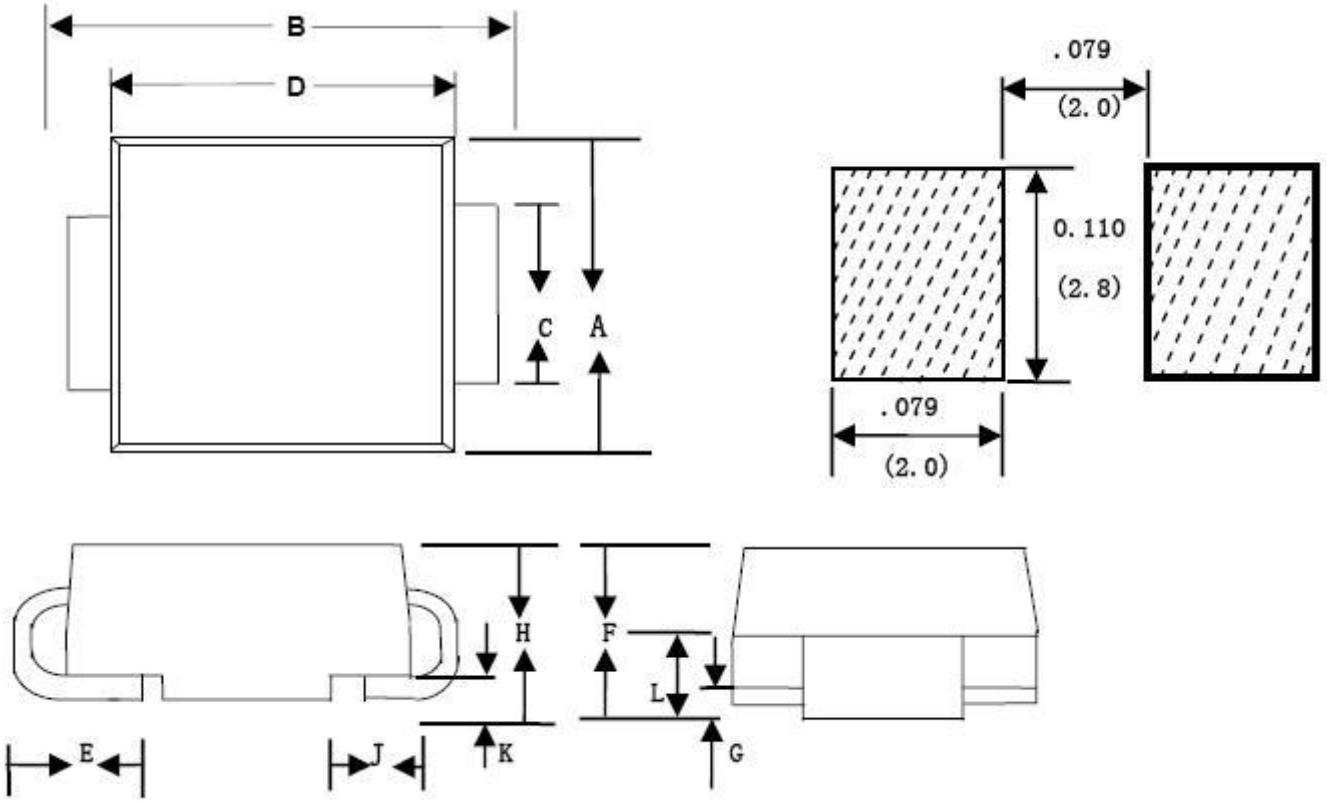
Thermal Considerations

Package DO-214AA/SMB	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-214AA



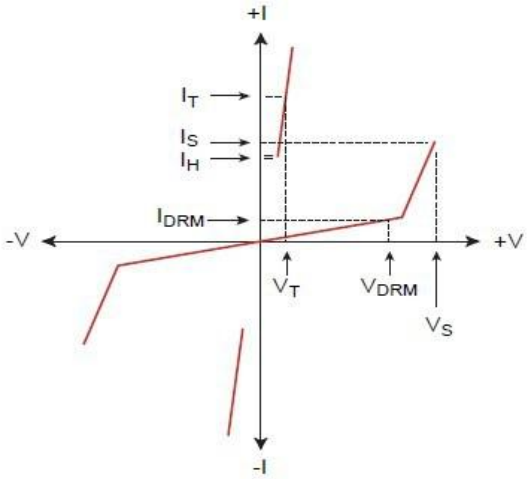
Dimension	Inches		Millimeters	
	Min	Max	Min	Max
A	0.134	0.155	3.40	3.94
B	0.205	0.22	5.21	5.59
C	0.075	0.083	1.90	2.11
D	0.166	0.185	4.22	4.70
E	0.036	0.056	0.91	1.42
F	0.073	0.087	1.85	2.2
G	0.002	0.008	0.05	0.20
H	0.077	0.094	1.95	2.40
J	0.043	0.053	1.09	1.35
K	0.008	0.014	0.20	0.35
L	0.039	0.049	0.99	1.24

Packing Options

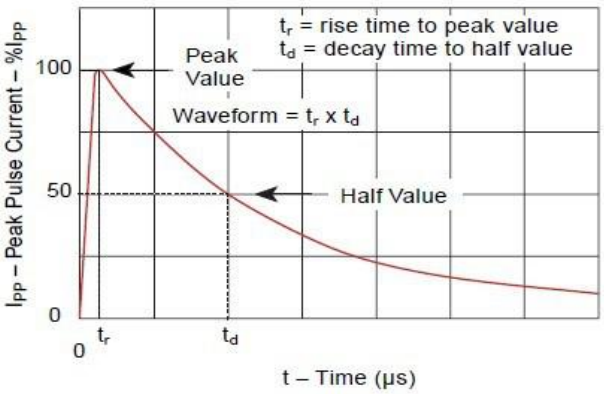
Package Type	Description	Packing Quantity	Industry Standard
S	DO-214AA Reel Pack	2500 PCS	EIA-481-D

Characteristics Curve

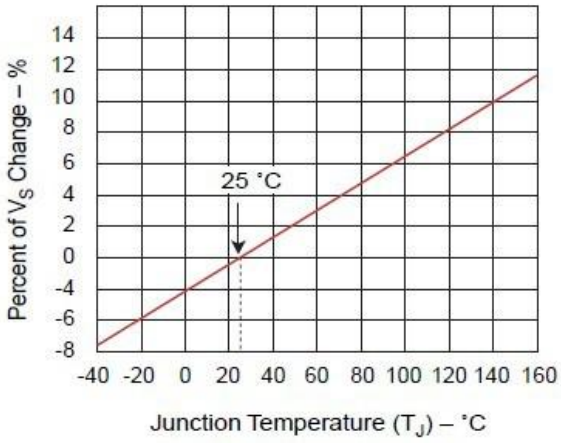
V-I Characteristics



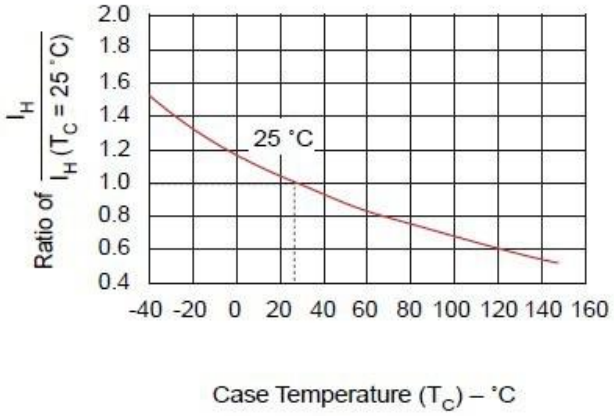
Tr x Td Pulse Waveform



Normalized Vs Change Versus Junction Temperature



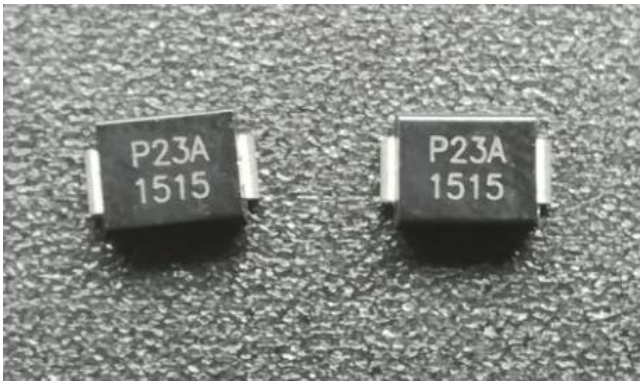
Normalized DC Holding Current Versus Case Temperature



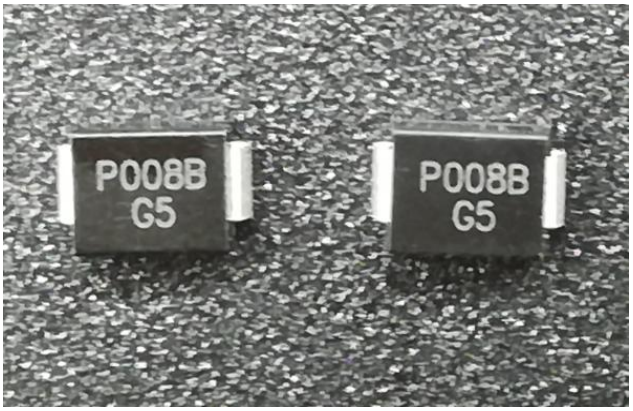
Sample pictures

P1300SALRP (Marking: P13A)

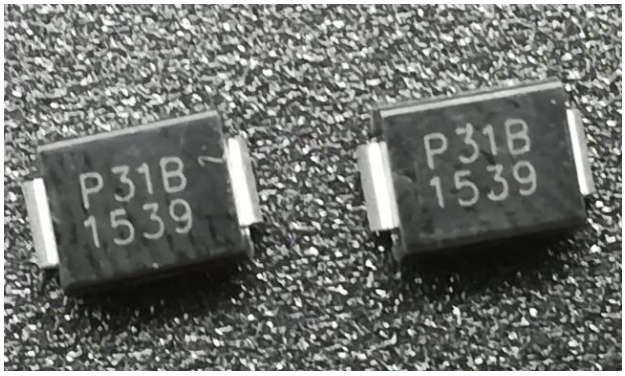
P2300SALRP (Marking: P23A)



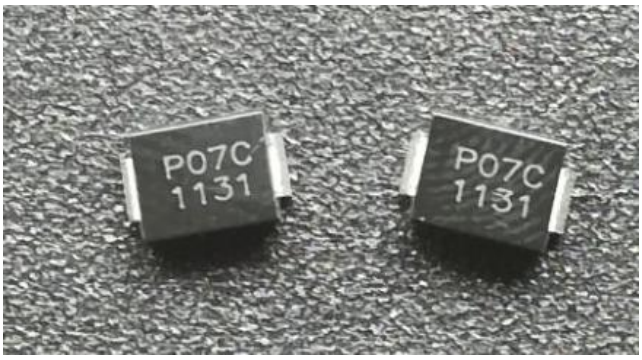
P0080SBLRP (Marking: P008B)



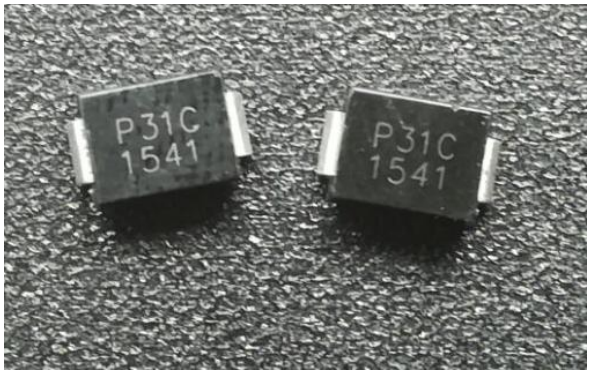
P3100SBLRP (Marking: P31B)



P0720SCLRP (Marking: P07C)



P3100SCLRP (Marking: P31C)



Cross Reference List

Cross Reference			
HUAAN / SIDACtor Protection Thyristor Part Number	Littelfuse / SIDACtor Protection Thyristor Part Number	HUAAN / SIDACtor Protection Thyristor Part Number	Littelfuse / SIDACtor Protection Thyristor Part Number
P0080SALRP	P0080SALRP	P0080SCLRP	P0080SCLRP
P0300SALRP	P0300SALRP	P0300SCLRP	P0300SCLRP
P0640SALRP	P0640SALRP	P0640SCLRP	P0640SCLRP
P0720SALRP	P0720SALRP	P0720SCLRP	P0720SCLRP
P0900SALRP	P0900SALRP	P0900SCLRP	P0900SCLRP
P1100SALRP	P1100SALRP	P1100SCLRP	P1100SCLRP
P1300SALRP	P1300SALRP	P1300SCLRP	P1300SCLRP
P1500SALRP	P1500SALRP	P1500SCLRP	P1500SCLRP
P1800SALRP	P1800SALRP	P1800SCLRP	P1800SCLRP
P2100SALRP	P2100SALRP	P2100SCLRP	P2100SCLRP
P2300SALRP	P2300SALRP	P2300SCLRP	P2300SCLRP
P2600SALRP	P2600SALRP	P2600SCLRP	P2600SCLRP
P3100SALRP	P3100SALRP	P3100SCLRP	P3100SCLRP
P3500SALRP	P3500SALRP	P3500SCLRP	P3500SCLRP
P0080SBLRP	P0080SBLRP	P4500SCLRP	P4500SCLRP
P0300SBLRP	P0300SBLRP		
P0640SBLRP	P0640SBLRP		
P0720SBLRP	P0720SBLRP		
P0900SBLRP	P0900SBLRP		
P1100SBLRP	P1100SBLRP		
P1300SBLRP	P1300SBLRP		
P1500SBLRP	P1500SBLRP		
P1800SBLRP	P1800SBLRP		
P2100SBLRP	P2100SBLRP		
P2300SBLRP	P2300SBLRP		
P2600SBLRP	P2600SBLRP		
P3100SBLRP	P3100SBLRP		
P3500SBLRP	P3500SBLRP		