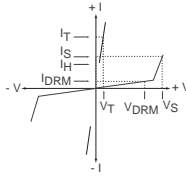


**Product Description:** SIDACtors® are solid state crowbar devices designed to protect telecom equipment during hazardous transient conditions. Capitalizing on the latest in thyristor advancements, Teccor designs their SIDACtors® with a patented ion implant technology. This technology ensures effective protection within nanoseconds, 500A surge current ratings, and simple solutions for regulatory requirements such as Bellcore 1089, TIA/EIA-15-96B, ITU-T K.20, ITU-T K.21 and UL60950.

**Operation:** In the standby mode, SIDACtors® exhibit a high off-state impedance eliminating excessive leakage currents and appearing transparent to the circuits they protect. Upon application of a voltage exceeding the switching voltage (Vs), SIDACtors® will crowbar and simulate a short circuit condition until the current flowing through the device is either interrupted or drops below the SIDACtors® holding current (IH), once this occurs, SIDACtors® will reset and return to their high off-state impedance.



Surge Ratings

Series	I <sub>pp</sub> 2 x 10µs (A)	I <sub>pp</sub> 8 x 20µs (A)	I <sub>pp</sub> 10 x 160µs (A)	I <sub>pp</sub> 10 x 560µs (A)	I <sub>pp</sub> 10 x 1000µs (A)	I <sub>TSM</sub> 60Hz (A)	di/dt (A/µs)
A	150	150	90	50	45	20	500
B	250	250	150	100	80	30	500
C	500	400	200	150	100	50	500

**B**

<p><b>Fig. A</b> TO-92 (Isolated)</p>	<p><b>Fig. B</b> TO-220 No-Ground (Isolated)</p>
<p><b>Fig. C</b> TO-220 (Isolated)</p>	<p><b>Fig. D</b> DO-214AA (Isolated)</p>
<p><b>Fig. E</b> DO-214AA (Isolated)</p>	

Fig.	Package	V <sub>DRM</sub> † (V)	V <sub>S</sub> (V)	V <sub>T</sub> (V)	I <sub>S</sub> (mA)	I <sub>H</sub> (mA)	Digi-Key Part No.	Price Each			
								1	10	500	1,000
A,1	TO-92	25	40			50	P0300EA-ND	.72	.64	.58	.48
		58	77			150	P0640EA-ND	.72	.64	.58	.48
		58	77			150	P0640EC-ND	.92	.82	.74	.62
		65	88			150	P0720EA-ND	.72	.64	.58	.48
		75	98			150	P0900EA-ND	.72	.64	.58	.48
		90	130			150	P1100EA-ND	.72	.64	.58	.48
		120	160			150	P1300EA-ND	.72	.64	.58	.48
		140	180			150	P1500EA-ND	.72	.64	.58	.48
		170	220	4	800	150	P1800EC-ND	.92	.82	.74	.62
		220	300			150	P2600EA-ND	.72	.64	.58	.48
		220	300			150	P2600EB-ND	.81	.72	.65	.54
		220	300			150	P2600EC-ND	.92	.82	.74	.62
		275	350			150	P3100EA-ND	.72	.64	.58	.48
		275	350			150	P3100EB-ND	.81	.72	.65	.54
		275	350			150	P3100EC-ND	.92	.82	.74	.62
320	400			150	P3500EB-ND	.81	.72	.65	.54		
320	400			150	P3500EC-ND	.92	.82	.74	.62		
B,1	Modified TO-220	220	260			150	P2400AA61-ND	1.60	1.42	1.28	1.07
		270	330			150	P3000AA61-ND	1.60	1.42	1.28	1.07
C,2	Modified TO-220	25	40			50	P0602AA-ND*	2.12	1.88	1.70	1.41
		65	95			150	P1602AB-ND*	2.66	2.36	2.13	1.77
		90	130	4	800	150	P2202AB-ND*	2.66	2.36	2.13	1.77
		140	180			150	P3002AB-ND*	2.66	2.36	2.13	1.77
C,3	Modified TO-220	275	350			150	P6002AB-ND*	2.66	2.36	2.13	1.77
		130	180			150	P1553AB-ND†	3.47	3.08	2.78	2.31
		170	250			150	P2103AB-ND†	3.47	3.08	2.78	2.31
		200	270			150	P2353AB-ND†	3.47	3.08	2.78	2.31
		230	300	8	800	150	P2703AB-ND†	3.47	3.08	2.78	2.31
270	350			150	P3203AB-ND†	3.47	3.08	2.78	2.31		
300	400			150	P3403AB-ND†	3.47	3.08	2.78	2.31		

\* Between pin 1-2, 2-3 † Between any 2 pins ‡ VDRM between pin 1-3 = 2 X VDRM 1-2

Fig.	Package	V <sub>DRM</sub> (V)	V <sub>S</sub> (V)	V <sub>T</sub> (V)	I <sub>S</sub> (mA)	I <sub>H</sub> (mA)	Digi-Key Part No.	Cut Tape Price Each			Digi-Key Part No.	T & R Pricing
								1	10	100		2,500
D,1	DO-214	25	40				P0300SARPCT-ND	1.90	1.52	1.14	P0300SARPTR-ND	494.00/M
		58	77				P0640SARPCT-ND	1.90	1.52	1.14	P0640SARPTR-ND	494.00/M
		58	77				P0640SCRPT-ND	2.25	1.80	1.35	P0640SCRPTR-ND	585.00/M
		65	88				P0720SARPCT-ND	1.90	1.52	1.14	P0720SARPTR-ND	494.00/M
		140	180				P1500SARPCT-ND	1.90	1.52	1.14	P1500SARPTR-ND	494.00/M
		170	220				P1800SCRPT-ND	2.25	1.80	1.35	P1800SCRPTR-ND	585.00/M
		220	300	5	800	150	P2600SARPCT-ND	1.90	1.52	1.14	P2600SARPTR-ND	494.00/M
		220	300				P2600SBRPCT-ND	2.05	1.64	1.23	P2600SBRPTR-ND	533.00/M
		220	300				P2600SCRPT-ND	2.25	1.80	1.35	P2600SCRPTR-ND	585.00/M
		275	350				P3100SARPCT-ND	1.90	1.52	1.14	P3100SARPTR-ND	494.00/M
		275	350				P3100SBRPCT-ND	2.05	1.64	1.23	P3100SBRPTR-ND	533.00/M
		275	350				P3100SCRPT-ND	2.25	1.80	1.35	P3100SCRPTR-ND	585.00/M
		320	400				P3500SBRPCT-ND	2.75	2.20	1.65	P3500SBRPTR-ND	715.00/M
		320	400				P3500SCRPT-ND	2.25	1.80	1.35	P3500SCRPTR-ND	585.00/M

**Subscriber Line Interface Circuit Protection (SLIC)**

The Batrax® device is a solid state protection device that can be referenced to either a positive or negative voltage source. The B1100C\_ is for a -VREF. Designed using an SCR and an integrated diode, the B1100C\_ Batrax® device begins to conduct at |-VREF|+1.2V|.

The P0641S\_ is a unidirectional solid state protection devices constructed with a SIDACtor® device and an integrated diode. Used to protect SLIC IC's from being damaged during transient voltage activity. They help line cards meet various regulatory requirements including: GR1089, ITU K.20, K.21 and K.45, IEC 60950 and TIA/EIA-15-96B.

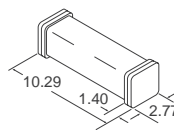
Surge Ratings

Digi-Key Part No.	Series	I <sub>pp</sub> 2 x 10µs (A)	I <sub>pp</sub> 8 x 20µs (A)	I <sub>pp</sub> 10 x 160µs (A)	I <sub>pp</sub> 10 x 560µs (A)	I <sub>pp</sub> 10 x 1000µs (A)	I <sub>TSM</sub> 60Hz (A)	di/dt (A/µs)
B1100C_	A	150	150	90	50	45	40	500
	C	500	400	200	150	100	50	500
	P0641S_	A	200	150	100	60	50	20
	C	500	400	200	120	100	50	500

Fig.	Package	V <sub>DRM</sub> (V)	V <sub>S</sub> (V)	V <sub>T</sub> (V)	V <sub>F</sub> (V)	IDRM (mA)	IGT (mA)	IS (mA)	IT (mA)	I <sub>H</sub> (mA)	CO (pF)	Digi-Key Part No.	Cut Tape Price Each			Digi-Key Part No.	T&R Pricing	
													1	10	100	500		2,500
<i>SLIC Batrax Protection</i>																		
E,5	Modified DO-214	-VREF +1.2V	-VREF +10V	4	5	5	100	—	1	100	50	B1100CARPCT-ND	2.45	1.96	1.47	.98	B1100CARPTR-ND	637.00/M
												B1100CCRPT-ND	4.20	3.36	2.52	1.68	B1100CCRPTR-ND	1092.00/M
<i>SLIC Protection</i>																		
D,4	DO-214	58	77	4	5	5	—	800	1	120	70	P0641SARPCT-ND	1.95	1.56	1.17	.78	P0641SARPTR-ND	507.00/M
												P0641SCRPT-ND	2.45	1.96	1.47	.98	P0641SCRPTR-ND	637.00/M

**TECCOR TeleLink® SMD Fuse**

The TeleLink® Surface Mount surge resistant time lag fuse has been designed to offer the ultimate in circuit protection while meeting the necessary surge requirements of the telecommunications industry. When used in conjunction with the SIDACtor® they provide a complete regulatory compliant solution for standards such as GR 1089, TIA/EIA-15-96B, UL60950, and ITU K.20 & K.21. **Specifications:** Interrupting Values • Voltage Rating: 250V • Current Rating: 1.25A **Surge Ratings:** • 100A, 10 x 1000µs and 500A, 2 x 10µs • Designed specifically for telecommunications equipment



Digi-Key Part No.	Cut Tape Price Each			Digi-Key Part No.	T&R Pricing
	1	10	100		2,500
F1250TRPCT-ND	2.30	1.84	1.38	F1250TRPTR-ND	598.00/M

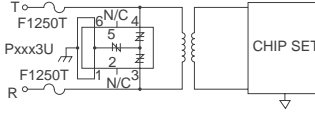
More Product Available Online: [www.digikey.com](http://www.digikey.com)



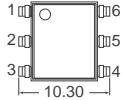
## Preliminary Balanced Line Protector

### General Description:

Teccor's new Balanced Protector is designed to offer Teccor customers a surface mount alternative to our traditional modified TO-220 package. Based on a 6-pin SOIC package, Teccor's Balanced Protector is built using Teccor's patented "Y" (US Patent 4,905,119) configuration and is available in surge current ratings of up to 500A.



Series	I <sub>pp</sub> 2 x 10µs (A)	I <sub>pp</sub> 8 x 20µs (A)	I <sub>pp</sub> 10 x 160µs (A)	I <sub>pp</sub> 10 x 560µs (A)	I <sub>pp</sub> 10 x 1000µs (A)	f <sub>TSM</sub> 60Hz (A)	di/dt (A/µs)
C	500	400	200	150	100	50	500



V <sub>DRM</sub> (V)	V <sub>S</sub> (V)	V <sub>T</sub> (V)	I <sub>S</sub> (mA)	I <sub>H</sub> (mA)	Digi-Key Part No.	Cut Tape Price Each			Digi-Key Part No.	T & R Pricing 1,500
						1	10	100		
130	180	10	800	120	P1553UCRPCT-ND	4.92	4.48	4.03	P1553UCRPTR-ND	2327.00/M
150	210	10	800	120	P1803UCRPCT-ND	4.92	4.48	4.03	P1803UCRPTR-ND	2327.00/M
170	250	10	800	120	P2103UCRPCT-ND	4.92	4.48	4.03	P2103UCRPTR-ND	2327.00/M
200	270	10	800	120	P2353UCRPCT-ND	4.92	4.48	4.03	P2353UCRPTR-ND	2327.00/M
230	300	10	800	120	P2703UCRPCT-ND	4.92	4.48	4.03	P2703UCRPTR-ND	2327.00/M
270	350	10	800	120	P3203UCRPCT-ND	4.92	4.48	4.03	P3203UCRPTR-ND	2327.00/M
300	400	10	800	120	P3403UCRPCT-ND	4.92	4.48	4.03	P3403UCRPTR-ND	2327.00/M
420	600	10	800	120	P5103UCRPCT-ND	4.92	4.48	4.03	P5103UCRPTR-ND	2327.00/M

## Sidac

### General Description:

The Sidac is a silicon bilateral voltage triggered switch with greater power-handling capabilities than standard diacs. Upon application of a voltage exceeding the Sidac breakover voltage point, the Sidac switches on through a negative resistance region to a low on-state voltage. Conduction will continue until the current is interrupted or drops below the minimum holding current of the device.

### Applications:

- High voltage lamp igniters • Natural gas igniters • Gas oil igniters • High voltage power supplies • Xenon igniters • Over voltage protector • Pulse generators • Fluorescent lighting igniters • HID lighting igniters

### Features:

- AC circuit oriented • Glass passivated junctions • High surge current capability

### General Notes:

- All measurements are made at 60Hz with a resistive load at an ambient temperature of +25°C unless otherwise specified • Storage temperature range (TS) is -65°C to +150°C • Junction temperature range (TJ) is -40°C to +110°C • Lead solder temperature is a maximum of +230°C for 10 seconds maximum; ≥ 1/16" (1.59mm) from case.

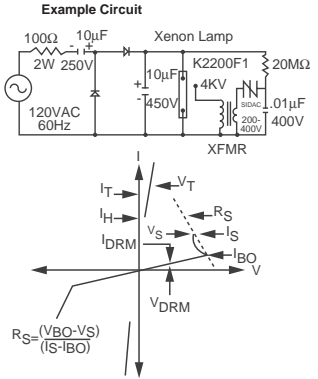
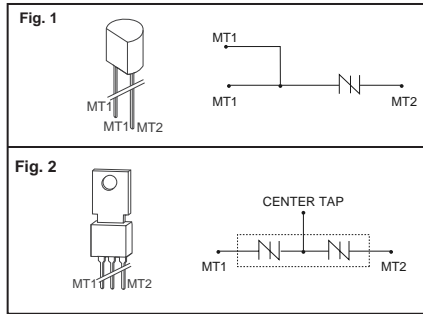
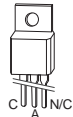


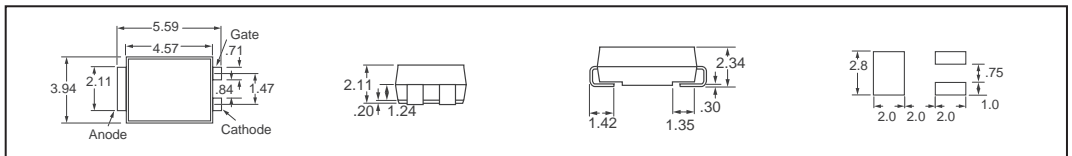
Fig.	Package	I <sub>T(RMS)</sub> (A)	V <sub>DRM</sub> (V)	V <sub>BO</sub>		I <sub>DRM</sub> (µA)	I <sub>BO</sub> (µA)	Digi-Key Part No.	Price Each					
									1	10	100	250	500	1,000
1	TO-92	1.0	±90	95	113	5	10	K1050E70-ND	.54	.48	.44	.36	.32	.30
			±90	104	118	5	10	K1100E70-ND	.54	.48	.44	.36	.32	.30
			±90	110	125	5	10	K1200E70-ND	.54	.48	.44	.36	.32	.30
			±90	120	138	5	10	K1300E70-ND	.54	.48	.44	.36	.32	.30
			±90	130	146	5	10	K1400E70-ND	.59	.52	.47	.39	.34	.33
			±90	140	170	5	10	K1500E70-ND	.59	.52	.47	.39	.34	.33
			±180	190	215	5	10	K2000E70-ND	.68	.60	.54	.45	.39	.38
			±180	205	230	5	10	K2200E70-ND	.68	.60	.54	.45	.39	.38
			±190	220	250	5	10	K2400E70-ND	.72	.64	.58	.48	.42	.40
			±190	240	280	5	10	K2500E70-ND	.72	.64	.58	.48	.42	.40
2	TO-202AB (Non-Isolated)	1.0	±180	190	215	5	10	K2000F1-ND	.95	.84	.76	.63	.55	.53
			±180	205	230	5	10	K2200F1-ND	.95	.84	.76	.63	.55	.53
			±190	220	250	5	10	K2400F1-ND	.99	.88	.80	.66	.58	.55
			±190	240	280	5	10	K2500F1-ND	.99	.88	.80	.66	.58	.55
			±190	270	330	5	10	K3000F1-ND	1.10	.98	.89	.74	.64	.62

## Silicon Rectifiers with Glass Passivated



Package	I <sub>T RMS</sub> (A)	V <sub>RRM</sub> (V)	I <sub>FSM</sub> (A)	V <sub>FM</sub> (V)	Digi-Key Part No.	Price Each					
						1	10	100	250	500	1,000
TO-220AB (Isolated)	20	400	300	1.6	D4020L-ND	1.51	1.34	1.21	1.01	.88	.84
	20	600	300	1.6	D6020L-ND	1.58	1.40	1.26	1.05	.91	.88
	25	400	350	1.6	D4025L-ND	1.80	1.60	1.44	1.20	1.04	1.00
	25	600	350	1.6	D6025L-ND	1.89	1.68	1.52	1.26	1.10	1.05

## Sensitive Gate Surface Mount SCRs



I <sub>T RMS</sub> (A)	V <sub>DRM VRRM</sub> (V)	Package	I <sub>GT</sub> (µA)	I <sub>DRM VRRM</sub> @ 25°C (µA)	V <sub>TM</sub> @ 25°C (V)	V <sub>GT</sub> @ 25°C (V)	I <sub>H</sub> (mA)	Digi-Key Part No.	Cut Tape Price Each				Digi-Key Part No.	Tape & Reel Pricing 2,500
									1	10	100	250		
0.8	200 400 600	COMPAK	200	2.0	1.7	0.8	5.0	S2SCT-ND	.90	.74	.63	.53	S2STR-ND	391.00/M
								S4SCT-ND	.98	.80	.68	.58	S4STR-ND	425.00/M
								S6SCT-ND	1.21	1.00	.84	.72	S6STR-ND	527.00/M
	200 400 600	COMPAK	50	2.0	1.7	0.8	5.0	S2S2CT-ND	1.01	.84	.71	.60	S2S2TR-ND	442.00/M
								S4S2CT-ND	1.09	.90	.76	.65	S4S2TR-ND	476.00/M
								S6S2CT-ND	1.37	1.12	.95	.81	S6S2TR-ND	595.00/M

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