DTP & TTP Series

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Thyristor Transient Voltage Suppressor

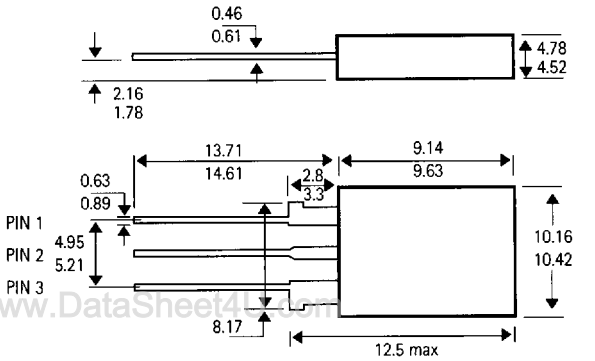
TO220 (modified) Thyristor Transient Voltage Suppressor.

HTA Industries Limited DTP & TTP Series is a bidirectional modified TO220 package transient votage protector. These bidirectional thyristor/sidac devices are designed to protect telecommunications and data transmission applications. These devices are available in a range of operating voltages. Upon a voltage exceeding the breakover voltage point, the sidac switches on (with either a negative or positive zener region) and crowbars to a low on-state voltage, the device will continue in this state until the current drops below the minimum holding current of the device.

The range of suppressors offer effectively instantaneous clamping efficiency, high current diverting capability combined with low capacitance.

Outline Dimensions

TO-220 (modified)
All leads insulated from case.
Case is electrically non-conductive.



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Configuration

Device	Breakover Voltage (Instantaneous Clamping Voltage) Vbo				Breakover Current Ibo	Blocking Voltage Vdrm	Peak Off-state Current at Vdrm (2)	Peak Pulse Current Tj <=150°C (7)(12)			Peak One Cycle (sinusoidal) surge current (17) Itsm	
	Pins 1-3 (VOLTS)		Pins 3-2 1-2(VOLTS)		µA	Pins 1-3 (VOLTS)	µAmps	10x 160µs	Amps 10x 560µs	10x 1000µs	Amps	
	min	max	min	max	max	min	max	max	max	max	60Hz	50Hz
DTP120 *	120	190	60	95	10	50	5	150	100	100	60	50
DTP190 *	190	250	95	125	10	75	5	150	100	100	60	50
DTP240 •	240	300	120	150	10	95	5	150	100	100	60	50
DTP280 •	280	320	140	160	10	110	5	150	100	100	60	50
DTP440 •	440	580	220	290	10	175	5	150	100	100	60	50
DTP540 •	540	720	270	360	10	215	5	150	100	100	60	50
TTP140 *	140	170	140	170	10	110	5	150	100	100	60	50
TTP180 *	180	240	180	240	10	145	5	150	100	100	60	50
TTP210 •	210	265	210	265	10	170	5	150	100	100	60	50
TTP240 •	240	300	240	300	10	190	5	150	100	100	60	50
TTP280 •	280	350	280	350	10	225	5	150	100	100	60	50
TTP300 •	300	380	300	380	10	240	5	150	100	100	60	50

Notes:
* have a negative slope resistance prior to switching as shown in Fig. 1. IPP = 10/1000µs waveform
• have a positive slope resistance prior to switching as shown on Fig. 2 Co = 1MHz, 15mVAC with 50VDC Bias < 100pF

Fig 1
V-I Characteristics of Devices with Negative Resistance

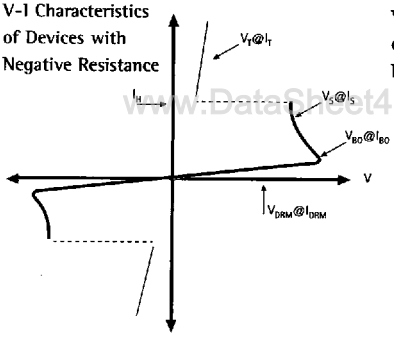

Fig 2
V-I Characteristics of Devices with Positive Resistance