

TBU® High-Speed Protectors



Product Features	Applications
<ul style="list-style-type: none"> • Series protection device • Does not add capacitance to the signal line • Triggers at a specified current • Can be connected in parallel to increase trigger current • Blocks voltages and currents • Low let-through current • Low series resistance: 2.6 - 21.4 ohms • Self-resetting • Bourns® Model TBU-PL Series offers voltage triggering 	<ul style="list-style-type: none"> • xDSL • Ethernet / T1/E1 • RS232 / RS485 / RS422 • CANbus • Video surveillance • Intelligent transport systems • Microwave links

CAPABILITIES

Maximum impulse voltage: 40 V to 850 V

Minimum current trigger levels: 50 mA to 500 mA

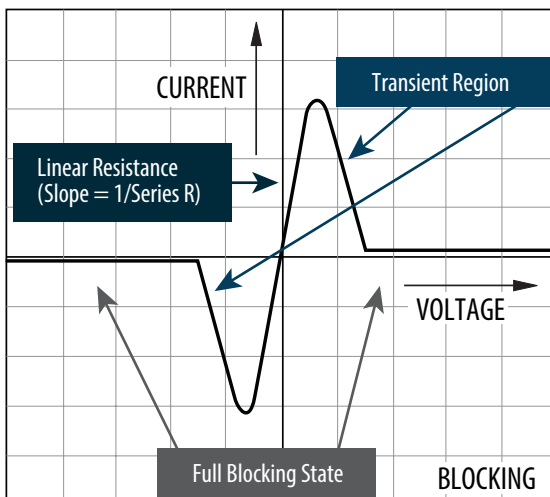
Maximum current through the triggered TBU® HSP device: 1 mA

Overcurrent protection response time: < 1 μs

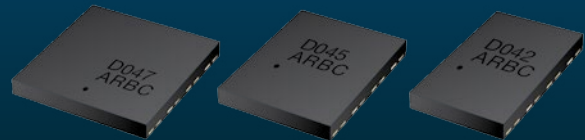
Low insertion loss up to 5 GHz

Operating temperature: -55 °C to +125 °C

I-V Curve



TCS™ High-Speed Protectors



Product Features	Applications
<ul style="list-style-type: none"> • Series protection device • Does not add capacitance to the signal line • Fast response time: < 1 μs • Low series resistance: 1.3 - 2.6 ohms • Well-matched channel resistance: ± 2 % • Can be connected in series to increase voltage capability 	<ul style="list-style-type: none"> • xDSL • Ethernet • HART FSK modems • High-speed signal lines

CAPABILITIES

Maximum impulse voltage: 40 V

Minimum current trigger levels: 250 mA, 500 mA or 750 mA

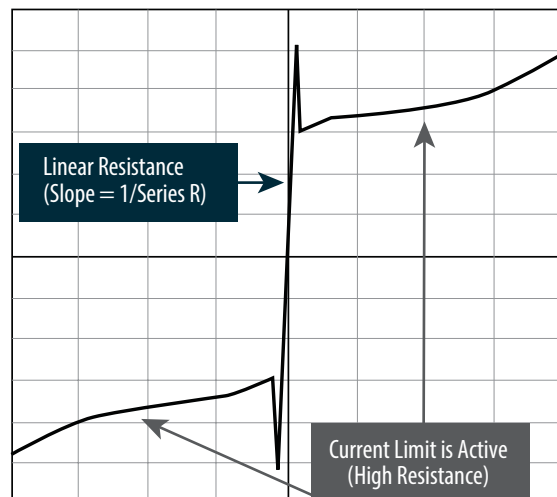
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Overcurrent protection response time: < 1 μs

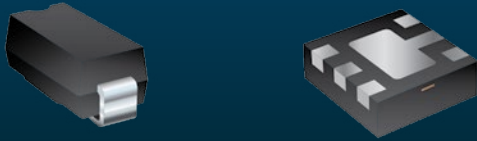
Low insertion loss up to 6 GHz

Operating temperature: -55 °C to +125 °C

I-V Curve



TVS Diodes/TVS Diode Arrays



Product Features	Applications
<ul style="list-style-type: none"> • Fast ESD and surge overvoltage protection • Wide range of operating voltage • Fast response time and rigid clamp voltage • Low and ultra-low capacitance devices 	<ul style="list-style-type: none"> • xDSL • Ethernet / T1/E1 • RS232 / RS485 / RS422 • USB 2.0 / USB 3.0 / EEE1394 • Antenna protection • HDMI 2.0 • Power over Ethernet (PoE)

Power TVS Products



Product Features	Applications
<ul style="list-style-type: none"> • High power overvoltage protection • High surge current capability: 3 - 15 kA • Fast response time and rigid clamp voltage • Excellent performance over temperature 	<ul style="list-style-type: none"> • AC line protection • High-power DC bus protection

CAPABILITIES

Working peak reverse voltage: 2.8 V to 495 V
IEC 61000-4-5 8/20 μ s: 500 mA to 326 A
IEC 61000-4-2 contact: 8 kV to 30 kV
IEC 61000-4-2 air-gap: 15 kV to 30 kV
Operating temperature: -55 °C to +150 °C

CAPABILITIES

Repetitive peak off-state voltage: 58 V to 470 V
Peak current per IEC 61000-4-5 (8/20 μ s): 3 kA to 15 kA
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Operating temperature: -55 °C to +125 °C

I-V Curve

