

COAXIAL PROTECTOR

APPLICATIONS

- ✓ High Speed Video Camera
- ✓ Coaxial Ethernet
- ✓ High Speed Data Lines

IEC COMPATIBILITY (EN61000-4)

- ✓ 61000-4-5 (Surge): 24A, 8/20 μ s - Level 2(Line-Gnd) & Level 3(Line-Line)

FEATURES

- ✓ Meets IEC 1000-4-5 Industry Requirements
- ✓ BNC Connection
- ✓ Low Capacitance
- ✓ Completely Enclosed Aluminum Housing
- ✓ Low Clamping Voltage
- ✓ Nanosecond Response Time
- ✓ Long Life and Maintenance Free
- ✓ Finger Safe Connectors

MECHANICAL CHARACTERISTICS

- ✓ Metal Package
- ✓ Weight 161 Grams (Approximate)
- ✓ Device Marking: Part Number, Logo

DESCRIPTION

The CX12 series is a two stage, hybrid surge protector designed to protect interfacing equipment from induced lightning or switching transients. The multistage technique has proven to be the most cost effective and reliable method for protecting sensitive electronic equipment. Employing state-of-the-art avalanche junction diode technology, these devices provide superior performance for video, Ethernet, Token Ring or other LAN interface systems. They are in-line modules with easy interconnecting terminals. A completely enclosed aluminum housing provides EMC shielding to meet industry standard requirements. The enclosure has two female BNC type connections for easy installation. The case is ground for those installations that require external ground connections.

FIGURE 3
LINEAR VS NON-LINEAR CAPACITANCE

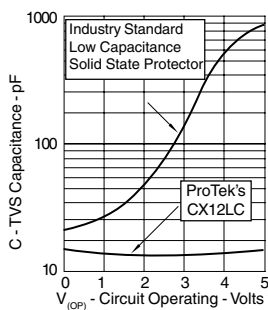


Figure 3 shows a comparison of capacitance between a industrial standard device (Top Line) and the ProTek Device CX12LC (Bottom Line). Due to the drastic change in the capacitance of the product (Top Line), signal distortion, loss of data or even access into the computer may be a problem.

FIGURE 4
PULSE WAVE FORM

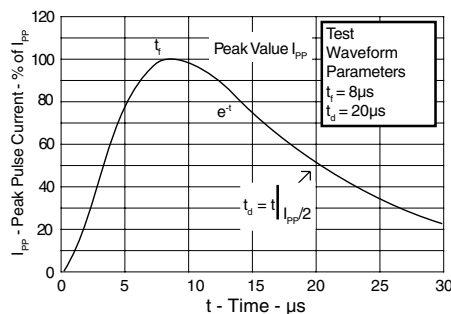


FIGURE 1
TRANSIENT VOLTAGE THREAT
CONDITION

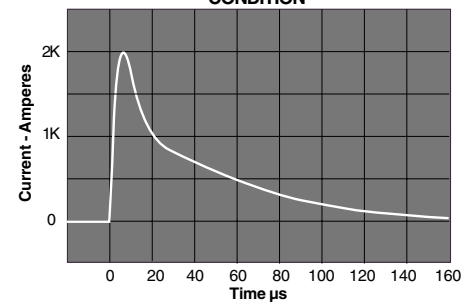


FIGURE 2
CX 12LC CLAMPING VOLTAGE

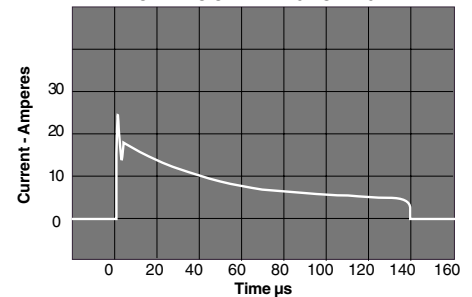


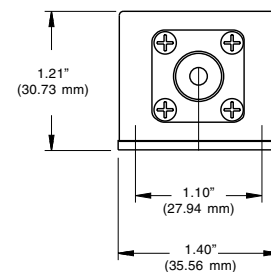
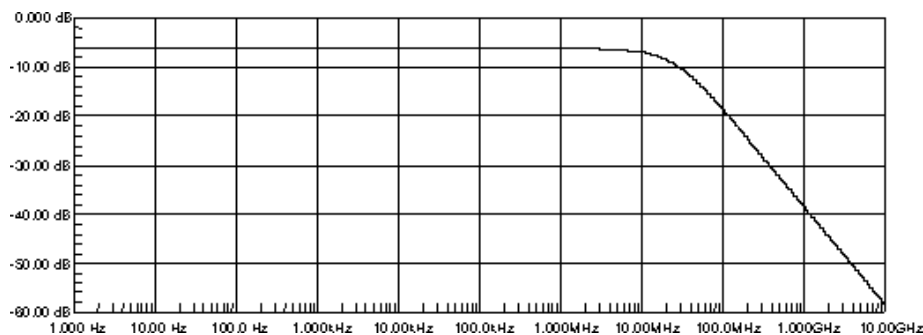
Figure 1 and 2 are photographs of digitized waveforms showing a typical transient voltage and the clamping action of the CX12LC module. The device was subjected to a 2000A, 8/20 μ s impulse waveform in accordance with ANSI C62.36. The CX12 has an operating frequency range up to 10MHz and the CX12LC up to 100MHz.

DEVICE CHARACTERISTICS

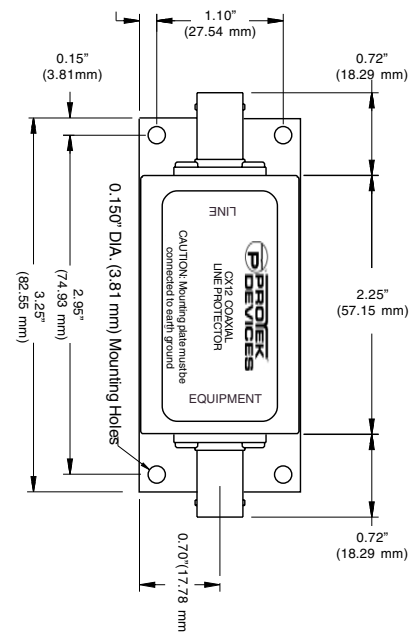
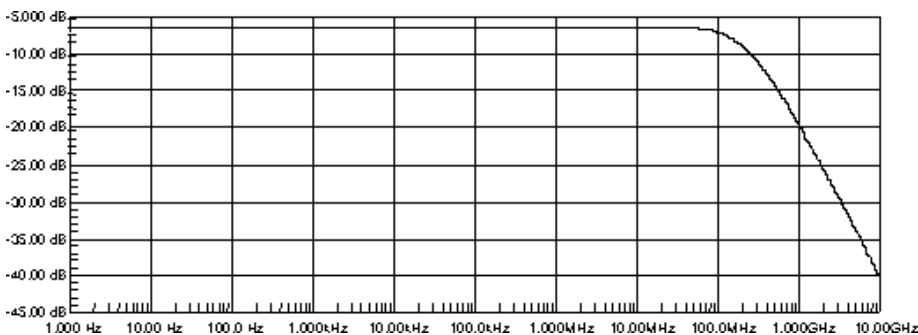
MAXIMUM RATINGS @ 25°C		ELECTRICAL CHARACTERISTICS @ 25°C			
Peak Operating Line Voltage (V _{OP})	±12 V	PROTEK PART NUMBER	MAXIMUM CLAMPING VOLTAGE * Line-Ground 500A @ 8/20 ms V _C VOLTS	MAXIMUM LINE THRUPUT RESISTANCE R OHMS	TYPICAL CAPACITANCE @ 0 V, 1 MHz C pF
Operating Line Current (I _O)	200mA				
Maximum Transient Voltage	20kV				
Maximum Transient Current	3000A (8/20µs)				
Maximum Leakage Current	5µA				
CX12 Frequency Response -3 dB	@ 30MHz				
CX12LC Frequency Response -3 dB	@ 200MHz				
Operating & Storage Temperature	-40° to +85°C				
Response Time	< 10 ns				
		CX12	24	3	200
		CX12LC	28	10	25

* Other Voltages Available Consult Factory

Frequency Response CX12



Frequency Response CX12LC



INSTALLATION

The CX12 series is designed with a female BNC type connector on both ends for easy installation. Disconnect the video or data line from the sensitive equipment. Insert the CX12 in the line near the AC power outlet of the equipment to be protected. Install a cable in between the CX12 and the equipment to be protected. Attach a ground wire between the case of the CX12 and the equipment AC power ground, or to the coax shield as required.