

## Description

The Z-330P2J2 is a small, in-line, ANSI T1.421-compliant customer premises equipment (CPE) filter designed to expedite the service delivery and improve the performance of digital subscriber line (DSL) and home phonenumber network (HPN) services over plain old telephone service (POTS). The Z-330P2J2 filters all telephones, facsimile (fax) machines, answering machines, and other telephone equipment. Its third-order filter design electronically isolates the high-speed DSL and HPN data streams from the voice-band POTS to provide premium voice quality and optimal DSL and HPN data rates.



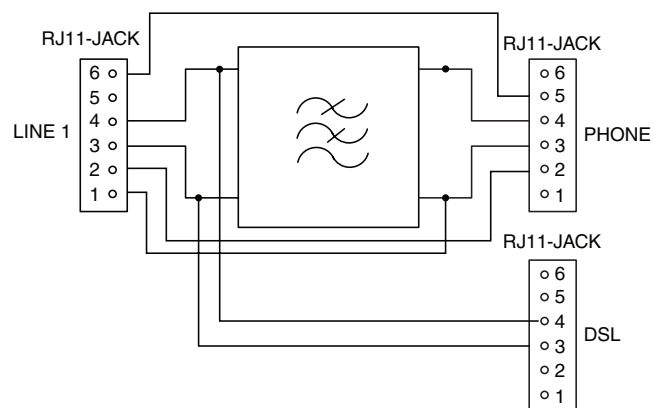
*Z-330P2J2 xDSL over POTS CPE In-Line Filter*

## Features

- Isolates telephone equipment impedances from the xDSL and HPN systems
- Blocks xDSL and HPN signals from voice-band equipment up to 10 Megahertz
- Provides a DSL convenience jack for connecting a DSL modem or HPN device
- Meets ANSI T1.421 (2001) North American DSL filter standard
- Compatible with all major xDSL standards including ADSL Full Rate (ITU-T G.992.1), ADSL G.Lite (ITU-T G.992.2), ADSL2 (ITU-T G.992.3 and .4), ADSL2+ (ITU-T G.992.5 in analog mode), ADSL2++, VDSL (ITU-T G.993.1), VDSL2; also V.90 and Metallic Loop Testing compatible
- Compliant with UL / CSA 60950, FCC CFR 47 Part 68

## Applications

The DSL user installs the Z-330P2J2 in-line filter into each telephone line jack in the subscribers' premises that contains voice-band equipment devices, including corded/cordless telephones, answering machines, fax machines, 56Kb/s and lower rate modems, automatic dialers, recorder connectors and satellite television set-top boxes. The Z-330P2J2 in-line filter is one of many filters and splitters manufactured by Excelsus for subscriber-installed digital services within homes, offices, and hotels. Excelsus is the number one selling brand of DSL filters worldwide.



*Z-330P2J2 block schematic*

## Z-BLOCKER Z-330P2J2 Filter Specifications

DC Resistance		
Network port at 20mA		<25 Ω
Tip and Ring to Ground at ≤ 100 Vdc		>10 MΩ
Tip and Ring to Ground at ≥ 100 Vdc and ≤ 200 Vdc		>30 kΩ
Operating Current		5 to 90 mA
Operating Voltages		
Network tip to ring		0 to -80 Vdc
Network tip to ring level with ringing signal of 17 to 23Hz and 40 to 106 Vrms		-20 to -80 Vdc
On-hook Voice Band Insertion Loss		
Single filter		-0.5dB to 1.5dB
With 5 filters		-1.0dB to 6.5dB
On-hook Voice Band Insertion Loss Distortion		
Single filter, 200 to 1000 Hz		-1.5dB to 1.5dB
With 5 filters, 200 to 1000 Hz		-5.5dB to 2.0dB
Single filter, 1 to 2.8 kHz		-1.5dB to 1.5dB
With 5 filters, 1 to 2.8 kHz		-2.0dB to 2.0dB
On- or Off-hook Envelope Delay 300 Hz - 2800 Hz		<250μs
Off-hook Voice Band Insertion Loss		
Single filter		-0.5dB to 0.5dB
With 5 filters		-1.0dB to 1.0dB
Off-hook Voice Band Insertion Loss Distortion		
Single filter, 200 to 3400 Hz		-1.0dB to 0.5dB
With 5 filters, 200 to 3400 Hz		-1.5dB to 2.5dB
Single filter, 3.4 to 4 kHz		-1.5dB to 1.0dB
With 5 filters, 3.4 to 4 kHz		-2.0dB to 3.25dB
Off-hook impedance distortion		
Phone Port	SRL Low	>13 dB
“	ERL	>9 dB
“	SRL High	>3 dB
Network Port	SRL Low	>12 dB
“	ERL	>10 dB
“	SRL High	>5 dB
Inter-Modulation Distortion Second and Third order products		>60 dB
On-hook High Band Stopband Attenuation		
From 25 kHz to 12 MHz, between 20 and 90 mA		>12 dB
Off-hook High Band Stopband Attenuation		
From 25 to 50 kHz, between 20 and 90 mA		>21 dB
From 25 to 50 kHz, between 7 and 20 mA		>13 dB
From 50 k to 12 M Hz, between 20 and 90 mA		>25 dB
From 50 k to 12 M Hz, between 7 and 20 mA		>22 dB
Bridging Loss		
Single filter, 25 kHz to 1.2 MHz		<0.5 dB
With 5 filters, 25 kHz to 1.2 MHz		<1.25 dB
Single filter, 25 kHz to 12 MHz		<3.0 dB
With 5 filters, 25 kHz to 12 MHz		<4.0 dB

Connectors: One RJ11 jack each for ADSL Modem and Phone connection with a line 2 pass through, and one RJ11 plug on a 4' cord for Line connection.

Dimensions: Length = 2.04in (51.9mm), Width = 1.21in (30.8mm), Height = 0.710in (18.0mm)

Compliant and listed with UL / CSA 60950, FCC CFR 47 Part 68