

**Description**

The Z-275P2J is a small, ANSI T1.421-compliant customer premise equipment (CPE) filter designed to expedite the service delivery and improve the performance of asymmetric digital subscriber line (ADSL) and home phonenumber network (HPN) services over plain old telephone service (POTS). The Z-275P2J filters all telephones, facsimile (fax) machines, answering machines, and other telephone equipment. Its filter design electronically isolates the high-speed ADSL and HPN data streams from the voice-band POTS to provide premium voice quality and optimal DSL and HPN data rates.

When the telephone set is on-hook the filter exhibits lower capacitance, which provides improved side-tone and return loss characteristics. This dynamic feature allows up to 10 filters to be used on a single phone line without a discernable loss in voice quality.

**Features**

- Isolates telephone equipment impedances from the ADSL and HPN systems
- Blocks ADSL and HPN signals from voice-band equipment up to 10 Megahertz
- Up to 10 filters can be connected to a single phone line with no performance degradation
- Provides a convenient DSL/HPN jack for easy broadband access
- ITU-T G.992.1 (Full Rate) and G.992.2 (G.Lite), V.90 and Metallic Loop Testing compatible
- Meets ANSI T1.421 for ADSL/POTS CPE microfilters
- Compliant with UL / CSA 60950, FCC CFR 47 Part 68, and IC CS-03.



*Up to 10, Z-275P2J filters can be connected to one line*

**Applications**

The DSL user installs the Z-275P2J filter into every telephone 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, and recorder connectors. The Z-275P2J may also be used to isolate a digital cable or satellite television set-top box.

The Z-275P2J Dynamic ADSL/POTS CPE filter is one of many filters and splitters manufactured by Excelsus for subscriber-installed digital services within homes, offices, and hotels. Excelsus has shipped more filters and splitters than any other manufacturer, providing models for every major industrialized country worldwide.

# Z-BLOCKER<sup>®</sup> Z-275P2J Dynamic ADSL/POTS CPE Filter

<b>Z-BLOCKER<sup>®</sup> Z-275P2J Filter Specifications per ANSI T1.421 for ADSL/POTS CPE Microfilters</b>		
Maximum number of filters per line		10
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 MHz, between 20 and 90 mA		>25 dB
From 50 k to 12 MHz, 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 1.2 MHz		<3.0 dB
With 5 filters, 25 kHz to 1.2 MHz		<4.0 dB
Connectors: One RJ11 jack each for ADSL Modem and Phone, and one RJ11 plug on a 4” cord for Line		
Dimensions: Length = 2.04in (51.9mm), Width = 1.21in (30.8mm), Height = 0.710in (18.0mm)		
US Pat. No. 6,212,259 and Taiwan Pat. No. 152847		



2875 Loker Avenue East, Carlsbad, CA 92008-6626 USA  
 Toll-free 800-457-0967 • Direct 760-476-1511 • Fax 760-476-1519  
 www.excelsus-tech.com • sales@excelsus-tech.com