Description

The Z-420UK-A is a customer premise equipment (CPE) filter designed to expedite the service delivery and improve the performance of asymmetric digital subscriber line (ADSL) services over plain old telephone service (POTS) in the United Kingdom (UK). The Z-420UK-A filters all telephones, facsimile (fax) machines, answering machines, and other telephone equipment. Its filter design electronically isolates the high-speed ADSL data stream from the voice-band POTS to provide premium voice quality and optimal DSL data rates.

When the telephone set is on-hook the filter adds little capacitance to the line, which provides improved side-tone and return loss characteristics. The filter becomes "active" only when the telephone is being used. This "dynamic" feature allows several filters to be used on a single phone line without a discernable loss in voice quality or malfunction of Caller ID / Caller Line Identification (CLI).

Features

- Isolates telephone equipment impedances from ADSL
- Blocks ADSL signals from voice-band equipment
- Provides a DSL convenience jack for connecting a DSL modem or HPN device
- Meets BT requirements per SIN 346 Issue 2.4 (November 2003)
- ITU-T G.992.1 (Full Rate) and G.992.2 (G.Lite), V.90 and Metallic Loop Testing compatible
- Supports Caller ID / Caller Line Identification (CLI) with up to 4 filters on the line
- CE Mark certified

The Z-420UK-A dynamic CPE filter for UK supports Caller ID / Caller Line Identification with up to 4 filters

Applications

The DSL user installs the Z-420UK-A 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-420UK-A may also be used to isolate a digital cable or satellite television set-top box.

The Z-420UK-A ADSL/POTS CPE filter for UK 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-420UK-A ADSL/POTS Dynamic CPE Filter for UK

Z-BLOCKER® Z-420UK-A Filter Specifications	
Matching impedance $Z_{complex(2)}$ of ITU-T G.992.1 E.1	230nF // 1050Ω + 320Ω
POTS Pass Band Return Loss terminated in ZHP	
0.3 – 0.5kHz	≥14dB increasing linearly to ≥18dB
0.5 – 2.0kHz	≥18dB
2.0 – 3.4kHz	≥18dB decreasing linearly to ≥14dB
Insertion Loss @ 1 kHz, 1 filter	< 1.0 dB
Insertion Loss Distortion; delta between 1 kHz and 200 Hz ≤ f ≤ 4 kHz levels	< +/-1 dB
Isolation Resistance, branch-earth	>10 MΩ
Isolation Resistance, branch-branch	>1 MΩ
DC Resistance	< 50 Ω
Maximum peak signal power in 200-4000Hz	< 3 dBm
DC Feeding Current (Loop Current)	< 100 mA
AC ringing voltage (25-50Hz)	< 100 V_{rms}
Unbalance About Earth (terminated with 600Ω)	
15 Hz to 50 Hz	> 40 dB
50 Hz to 600 Hz	> 46 dB
600 Hz to 3400 Hz	> 52 dB
Metering Insertion Loss (12/16 kHz, < 5V_{rms} in 200Ω)	< 3 dB
Longitudinal Balance (25 kHz to 1.1 MHz)	
At Line/Phone Port with Phone/Line Port terminated in 100Ω	> 40 dB
ADSL Stop Band Return Loss (200 kHz to 1 MHz) with Line and ADSL ports terminated in 100Ω	> 16 dB
Off-Hook ADSL Stop Band Isolation (Insertion Loss) w/ 100Ω at Line/Phone	
32 kHz to 200 KHz	> 29 dB
200 kHz to 1.1 MHz	> 55 dB
On-Hook ADSL Stop Band Isolation (Insertion Loss) w/ 100Ω at Line/Phone	
32 kHz to 350 KHz	> 29 dB
350 kHz to 1.1 MHz	> 55 dB
On-Hook ADSL Stop Band Isolation (Insertion Loss) w/ 100Ω at Line and 4kΩ // 1nF at Phone	
32 kHz to 350 KHz	> 16 dB
350 kHz to 1.1 MHz	> 55 dB
Common-Mode Insertion Loss (26 kHz to 1.1 MHz)	> 30 dB
Voice Band Noise at Phone Port	< -70 dBmp
Dimensions (Length x Width x Height)	
Housing: 55mm x 43mm x 23mm	
Short Cord (length): approximately 100mm	
Connectors	
RJ11 jack (DSL/HPN); UK jack (Phone); Detachable short cord with RJ11 jack (to filter) and UK plug (to Line)	
Meets BT requirements per SIN 346 Issue 2.4 (November 2003)	
Supports Caller ID / Caller Line Identification (CLI) with up to 4 filters connected to the line	
CE Mark certified.	
US Pat. No. 6,212,259, Taiwan Pat. No. 152847, Other Patents Pending	