

## **Product Specification File**

**PN: AFN802**

**Product Type : ADSL Micro Filter**

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Head Office 區新生路 248-32 號 5F  
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<b>Revision</b>	<b>Realized By</b>	<b>Modification Description</b>	<b>Date</b>	<b>Last Pages</b>
<b>A01</b>	<b>Kelvin Huang</b>	<b>New Release</b>	<b>Mar-26-2007</b>	<b>8</b>

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2

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## Table of contents

<b>1</b>	<b>Preliminary</b> .....	<b>4</b>
<b>2</b>	<b>Customer reference documents</b> .....	<b>4</b>
<b>3</b>	<b>Standard reference documents</b> .....	<b>4</b>
<b>4</b>	<b>Features</b> .....	<b>4</b>
<b>5</b>	<b>Design requirements</b> .....	<b>5</b>
	5.1 Schematic.....	5
	5.2 Electrical Performance.....	5~6
	5.3 Mechanical.....	7
	5.4 Pin Assignments.....	7
<b>6</b>	<b>Environmental conditions</b> .....	<b>8</b>
	6.1 Resistibility to over voltages and over currents.....	8
	6.2 Climatic conditions.....	8
<b>7</b>	<b>Reliability conditions</b> .....	<b>8</b>
	7.1 Thermal shock.....	8
	7.2. Temperature humidity exposure.....	8
	7.3. Vibration test.....	8
<b>8</b>	<b>Note</b> .....	<b>8</b>

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**1 Preliminary:**

**This is a POTS splitter that has been specifically designed to implement the functionality of low pass filter in ADSL over POTS application.**

**2 Customer reference documents:**

**None**

**3 Standard reference documents:**

- ETS 300 001
- ANSI T1E1.4 G.992.2
- ITU-T G.992.5 Annex E

**4 Features**

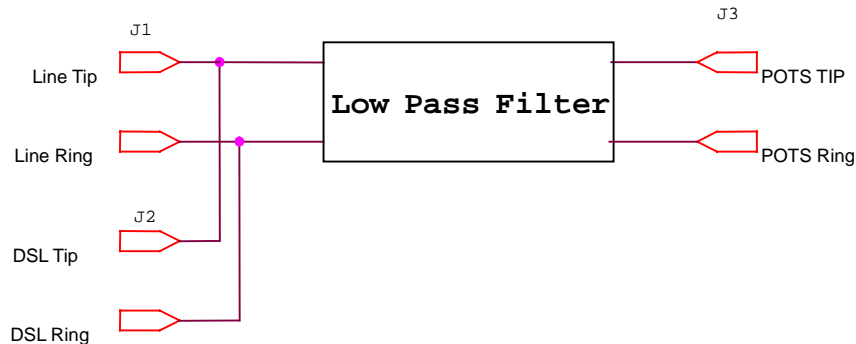
- Compact package, includes connectors for ease of installation
- Design for ADSL over POTS Application
- 100 mA DC Loop Current Capacity

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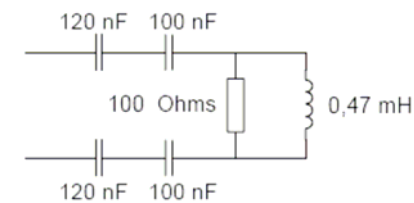
## 5 Design Requirement

### 5.1 Schematic



## 5.2 Electrical Performance

### 5.2.1 General conditions

General conditions		
	Conditions	Values
Splitter bandwidth		DC-4.0KHz
Voice band		0.3-3.4KHz
Ringing frequency		15.3 Hz to 68 Hz
ADSL band		30KHz ~ 1104KHz
Line Impedance ZL	300 Hz to 3.4 kHz	600 ohms
Modem impedance	30 kHz to 1104KHz	100 ohms
ZADSL	0Hz ~ 4KHz	
Max. operating voltage to ground		250VDC
DC Loop current		<100mA

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5

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### 5.2.2 Electrical Requirement

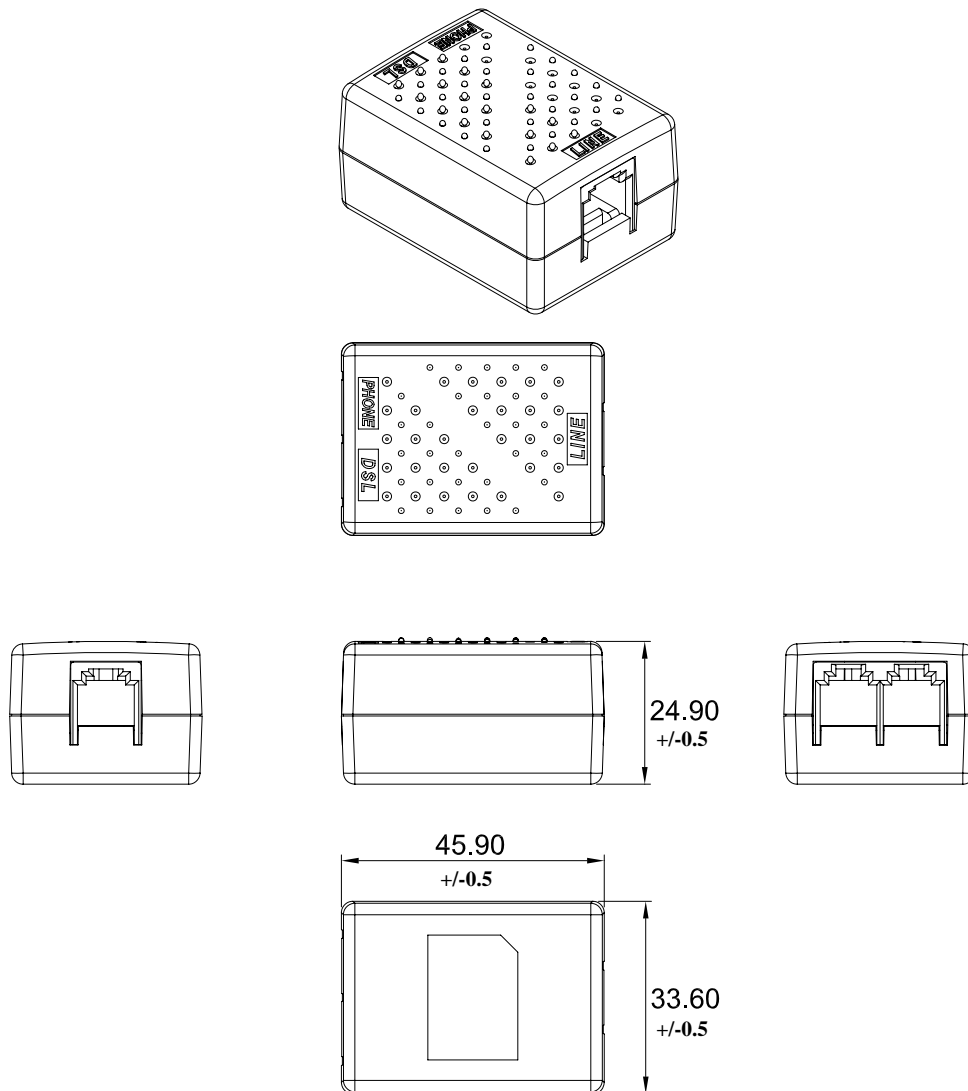
Electrical Requirement		
DC requirements		
	Conditions	Values
TIP to RING	100VDC	> 5 MΩ
TIP to RING	POTS port shorted	<25Ω
Pass band loss requirements		
Insertion loss @ 600 ohms	1004Hz	<0.5 dB
Attenuation distortion@600ohms (relative to 1004Hz)	200 Hz<f<4 kHz	<±1.0 dB
Return loss (600 ohms)	300 Hz to 500Hz	>14 dB
	500Hz to 2.0 kHz	>18 dB
	2kHz to 3.4 kHz	>14 dB
Longitudinal conversion loss ( LCL )	200 Hz to 1 kHz	> 58 dB
	1 kHz to 3 kHz	> 53 dB
Delay distortion	200Hz to 4 kHz	< 100us
ADSL band characteristics		
ADSL band attenuation	30KHz~80KHz	>30dB
	80KHz~1104KHz	> 50 dB

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6

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### 5.3 Mechanical



### 5.4 Pin Assignments

Connector	Function	Style	Tip	Ring
J1	DSL	RJ11 Jack	Pin3	Pin4
J2	Line	RJ11 Jack	Pin3	Pin4
J3	Phone	RJ11 Jack	Pin3	Pin4

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**6 Environmental conditions:**

## 6.1 Resistibility to over voltages and over currents:

Comply with the resistibility requirements per ITU-T Recommendation K.21 electrical safety requirements

## 6.2 Climatic conditions:

## 6.2a. Operating temperature:

-20 °C to +60 °C

## 6.2b. Storage and transportation:

Low ambient temperature - 40 °C

High ambient temperature +80 °C

## 6.2c. Operation humidity:

0 to 95% (non-condensing)

**7 Reliability conditions:**

## 7.1 Thermal shock:

Temperature from -20 °C to +85 °C for 5 cycles

## 7.2. Temperature humidity exposure:

+50 °C / 95 RH, 96hrs

## 7.3. Vibration test:

Random vibration / Overall: 1.15 g rms

Freq. (Hz): 1 → 4 → 100 → 200

PSD (g<sub>2</sub>/ Hz): 0.0001 → 0.01 → 0.01 → 0.001

Test Axis / Time: Top / 30 mins Bottom / 10 mins

X axis / 10 mins Y axis / 10 mins

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