

Product Specification File

PN: AMF600U06

Product Type : POTS Filter

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Head Office
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Revision	Realized By	Modification Description	Date	Last Pages
A01	Kelvin Huang	New Release	Jul-17-2006	8

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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
- ITU-T K21
- ANSI T1E1.4 G.992.2

4 Features

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

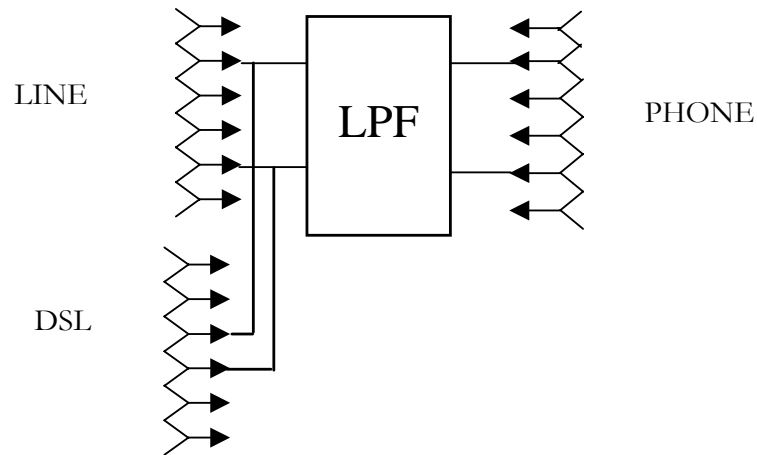
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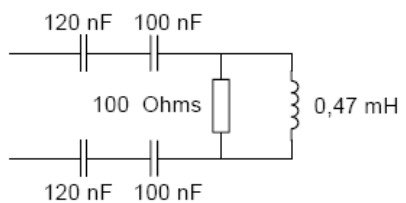
5 Design Requirement

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 1104 kHz	100 ohms
ZADSL	0Hz ~ 4KHz	
Max. operating voltage to ground		250VDC
DC Loop current		<100mA

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5.2.2 Electrical Requirement

Electrical Requirement		
DC requirements		
	Conditions	Values
TIP to RING	100VDC	> 10 MΩ
TIP to RING	POTS port shorted	<50Ω
Pass band loss requirements		
Insertion loss @ 600 ohms	1004Hz	<1.0 dB
Attenuation distortion@600ohms (relative to 1004Hz)	200 Hz<f<4 kHz	±1.0 dB
Return loss	200Hz~500Hz	>14dB
	500Hz~2000Hz	>18dB
	2000Hz~3400Hz	>14dB
Longitudinal conversion loss (LCL)	200 Hz to 1 kHz	> 58 dB
	1 kHz to 3 kHz	> 53 dB
Delay distortion	200Hz to 4 kHz	< 100 s
ADSL band characteristics		
ADSL band attenuation	30KHz	>25dB
	1.1MHz	>65dB

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5.3 Mechanical

Length=174.5mm

Width=42mm

High=24mm

**5.4 Pin Assignments**

Connector	Function	Style	Tip	Ring
J1	Line	UK-PLUG	Pin2	Pin5
J2	Phone	UK-JACK	Pin2	Pin5
J3	DSL	RJ11	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.20 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 (g₂/ 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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