Product Specification

Product Name	**CPCFA001**
Product Type	**Customer Premise Splitter**
System Application	**VDSL Over POTS/ISDN**
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The CPCFA001 is a customer premise splitter that has been specifically designed to implement the functionality of low pass filter in POTS/ISDN over VDSL application. The CPCFA001 integrate low pass filter that block the high frequency energy from reaching the POTS device and provide isolation from impedance effects of the POTS device on DSL. Because the splitter connects directly to the subscriber loop media, it must also provide some protection for externally induced line hits or faults which could damage any attached equipment or endanger humans interacting with the installed equipment.

The circuit protection will be provided mostly by standard central office line protection means and additional protection measures built into splitter to protect against line overstress which could damage the splitter itself. This splitter mainly consist of one low pass filter which provide POTS solution respectively.
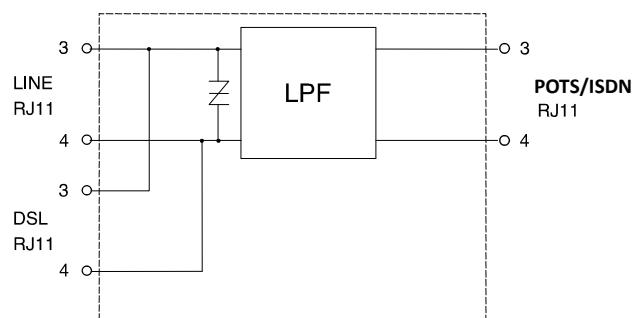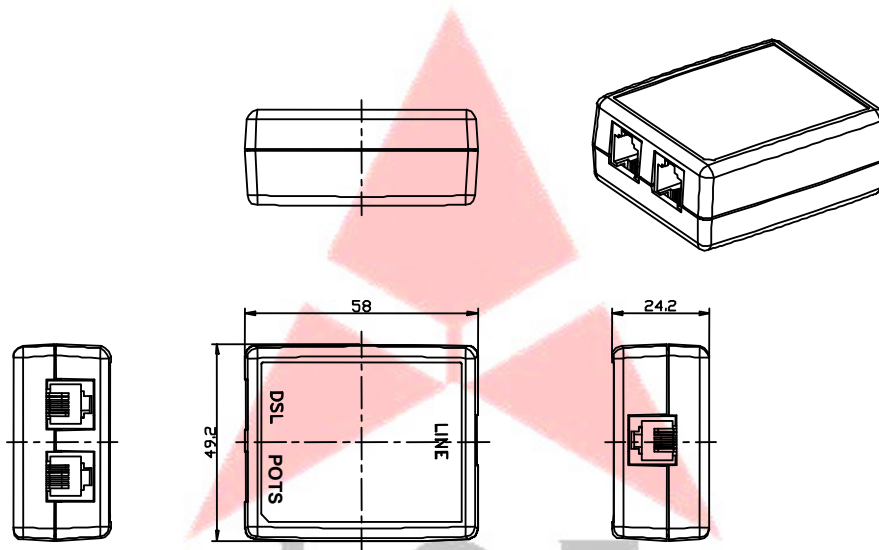
Reference :

ETSI TS 101 952-1-4 V1.1.1	Specification of ADSL over " ISDN or POTS" universal splitter
ETSI TS 101 388	Transmission and Multiplexing (TM); Asymmetric Digital Subscriber Line (ADSL) – European Specific Requirements
ITU-T K.21	Resistibility of telecommunication switching equipment to Overvoltages and overcurrents

Requirements :

Title		Conditions
DC series resistance RDC	≤12.5 Ω	Tip to Tip / Ring to Ring
DC resistance to earth	≥20 MΩ	100 vdc
DC insulation resistance between A-wire and B-wire	> 5 MΩ	Tip to Ring
POTS pass band insertion	≤ 1 dB	1000 Hz
POTS pass band insertion loss distortion	≤ |1 dB|	200 to 4 kHz (relative to 1000 Hz)
POTS pass band return loss	> 12 dB	300 Hz to 3.4 kHz
	> 8 dB	3.4 kHz to 4 kHz
ISDN band insertion loss	< 0.8 dB	10kHz to 40kHz
	< 2 dB	40kHz to 80kHz
ISDN band return loss with ZxDSL	> 16 dB	10kHz to 40kHz
	> 14 dB	40kHz to 80kHz
ISDN band return loss without ZxDSL	> 12 dB	10kHz to 40kHz
	> 10 dB	40kHz to 80kHz
Metering pulse	< 3 dB	12kHz / 16 kHz
xDSL band isolation	> 55 dB	138KHz to 150kHz
	> 65 dB	150KHz to 1104kHz
	> 55 dB	1104KHz to 30MHz
xDSL band insertion loss	< 3 dB	120 kHz to 170 kHz
	< 1 dB	170 kHz to 30MHz
POTS band Group Delay	< 250us	200 Hz to 600 Hz
	< 200us	600 Hz to 3.2 kHz
	< 250us	3.2 kHz to 4 kHz
ISDN band Group Delay	< 20us	1 kHz to 80 kHz
Unbalance about earth	> 40 dB	50 Hz to 30kHz
	> 50 dB	30 kHz to 1104 kHz
	> 40 dB	1104 kHz to 5 MHz
	> 30 dB	5 MHz to 30 MHz

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Revision History:

Rev.	Author	Approved by	Description of change	Issued date
0	Alvin	Sundi	New release	2011/08/31