



VDSL Central Office POTS Splitter
Functional Specification

The Product Name : DT60-2020AA

REV :00

Contents:

1. Introduction	3
2. Features.....	3
3. Abbreviations.....	4
4. Block Diagram.....	5
5. Frequency Diagram.....	5
6. Electrical Characteristics.....	6
7. Test Equipment.....	7
8. Mechanical Requirements.....	8
9. External Interfaces.....	9

1. Introduction

This document contains the requirements for VDSL Splitter Recommendations. The splitter is protection from the high-frequency transients and voiceband service, the LPF provide protection from VDSL signals which may impact through non-linear or other effects, remote devices (handset, fax, voiceband, modem, etc.) and central office operation.

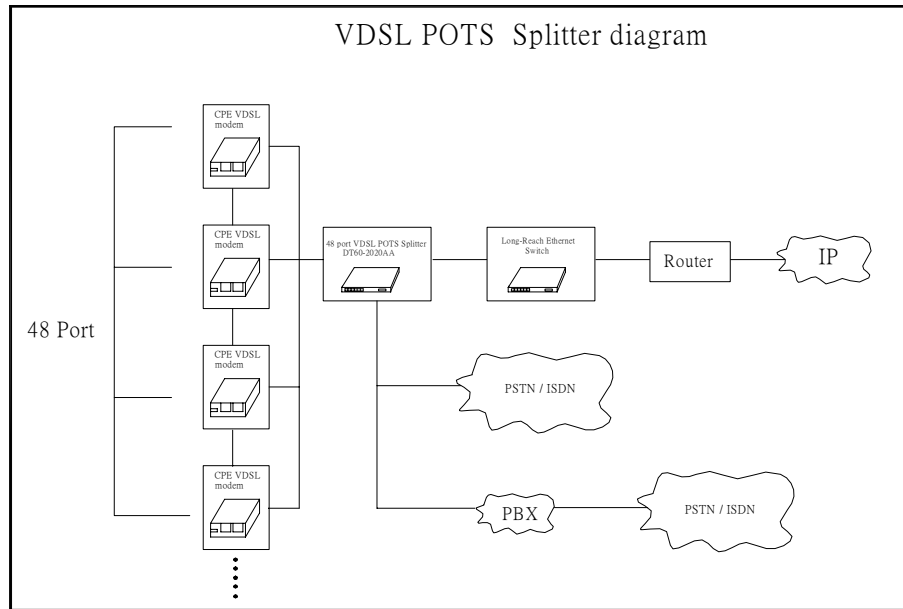
2. Features

- 1U 19” Rack
- Using CHAMP 50 pin Female connector.
- Have 48 loops on the chassis.
- Designed for implementation of VDSL Splitter application.
- -10 to 70 °C operating temperature range.
- Provides excellent isolation between VDSL and ISDN or POTS.

3. Abbreviation

VDSL	Very High bit rate Digital Subscriber Loop
Co	Central Office
CPE	Customer Premises Equipment
DSLAM	Digital Subscriber Line Access Multiplier
LPF	Low Pass Filter
HPF	High Pass Filter
POTS	Plain Old Telephone Service
ISDN	Integrated services Digital Network

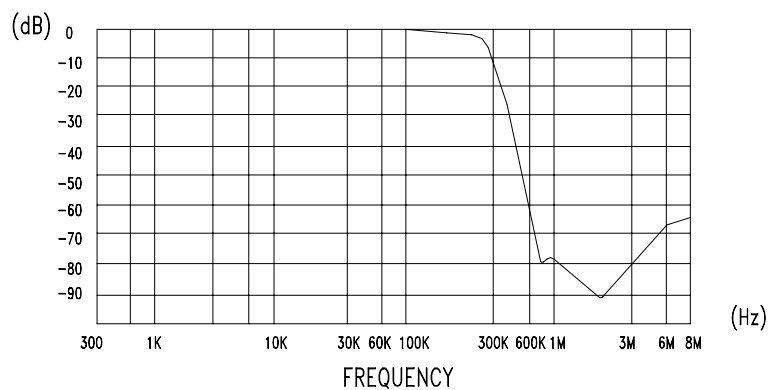
4. Block Diagram



This shows the internal diagram of the splitter. The lines connected to the DSLAM and the CPE are the VDSL signals. The DSLAM and CPE have internal high pass filters.

5. Frequency Diagrammatic

The splitter is supposed to filter all the frequency above 900 KHz



6. Electrical Characteristics

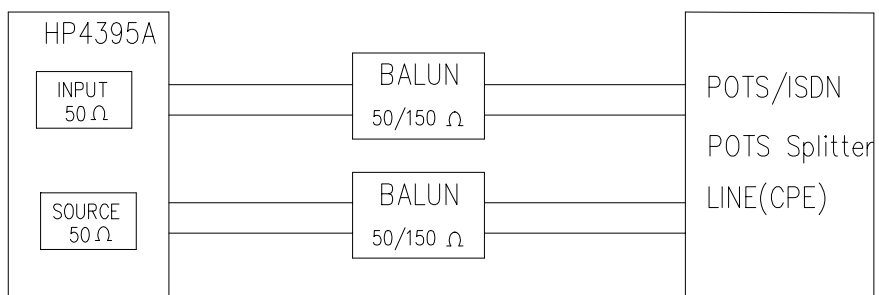
The table shows the entire electrical requirement for the POTS splitter

ELECTRICAL CHARACTERISTICS	
ATTENUATION	60dB Min. @800KHz ~ 7.9MHz
PASSBAND FREQUENCY	20KHz ~ 120KHz @100mAdc
O/P IMPEDANCE	150 Ω
I/P IMPEDANCE	150 Ω
INSERTION LOSS	0.8dB Max. @20KHz ~ 100KHz 1.0dB Max. @100KHz ~ 120KHz
RETURN LOSS	20dB Min.

7. Test Equipment

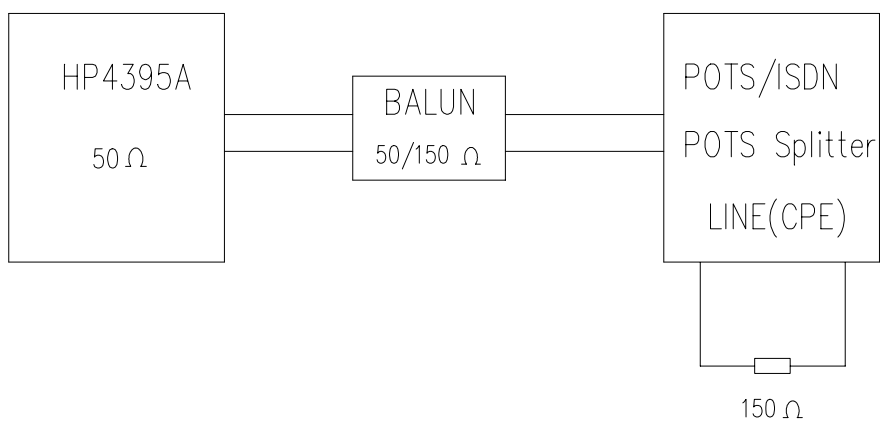
a. Insertion Loss, Attenuation Distortion, Delay Distortion Test Equipment

Test Equipment



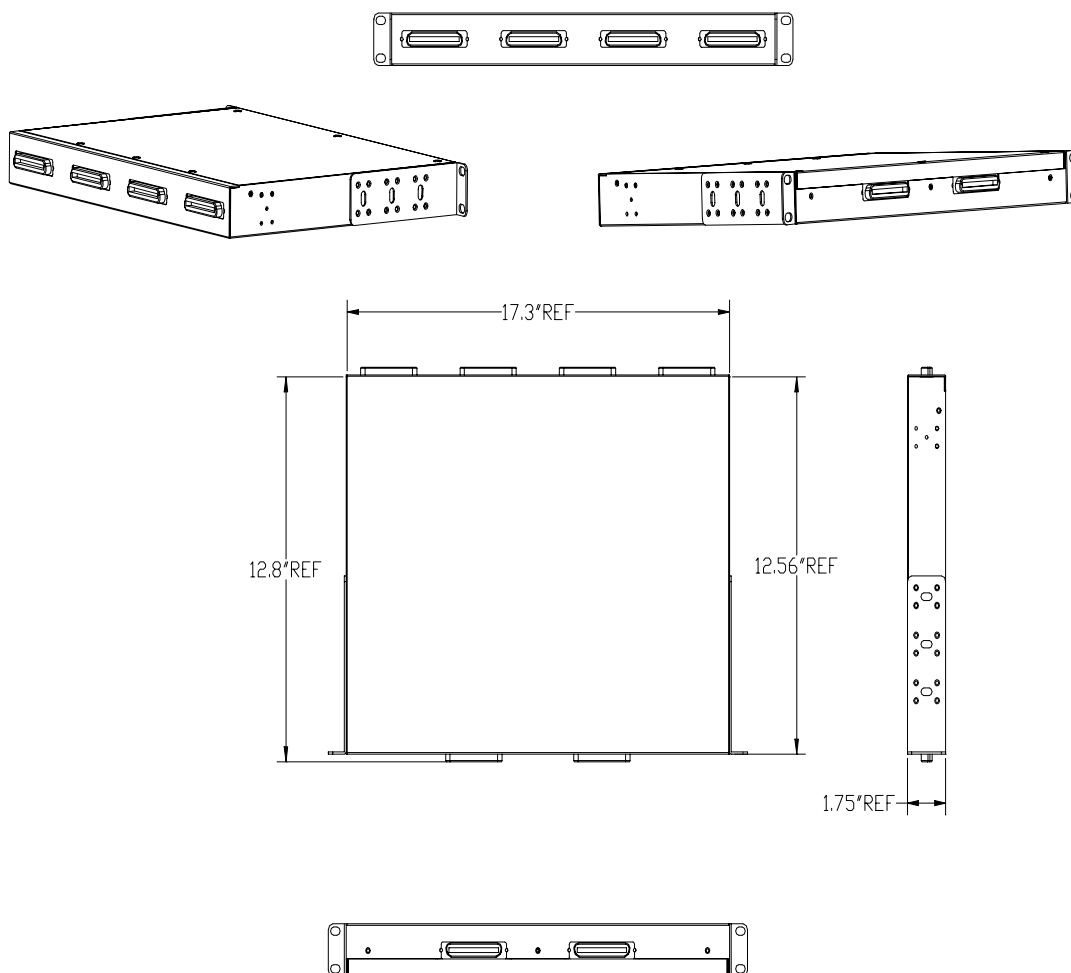
b. Return Loss Test Equipment

Test Equipment



8. External Interfaces

The POTS splitter will be designed for a 19" rack, the height is 1U and depth is 12.56". Show the mechanical shape on the under.



9.External Interfaces

The splitter has six CHAMP 50 pin Female connectors, each having the same pin out, which is described in table.

Function	Pin	Pin	Function
Port 1 TIP	1	26	Port 1 Ring
Port 2 TIP	2	27	Port 2 Ring
Port 3 TIP	3	28	Port 3 Ring
Port 4 TIP	4	29	Port 4 Ring
Port 5 TIP	5	30	Port 5 Ring
Port 6 TIP	6	31	Port 6 Ring
Port 7 TIP	7	32	Port 7 Ring
Port 8 TIP	8	33	Port 8 Ring
Port 9 TIP	9	34	Port 9 Ring
Port 10 TIP	10	35	Port 10 Ring
Port 11 TIP	11	36	Port 11 Ring
Port 12 TIP	12	37	Port 12 Ring
Port 13 TIP	13	38	Port 13 Ring
Port 14 TIP	14	39	Port 14 Ring
Port 15 TIP	15	40	Port 15 Ring
Port 16 TIP	16	41	Port 16 Ring
Port 17 TIP	17	42	Port 17 Ring
Port 18 TIP	18	43	Port 18 Ring
Port 19 TIP	19	44	Port 19 Ring
Port 20 TIP	20	45	Port 20 Ring
Port 21 TIP	21	46	Port 21 Ring
Port 22 TIP	22	47	Port 22 Ring
Port 23 TIP	23	48	Port 23 Ring
Port 24 TIP	24	49	Port 24 Ring
No Connect	25	50	No Connect