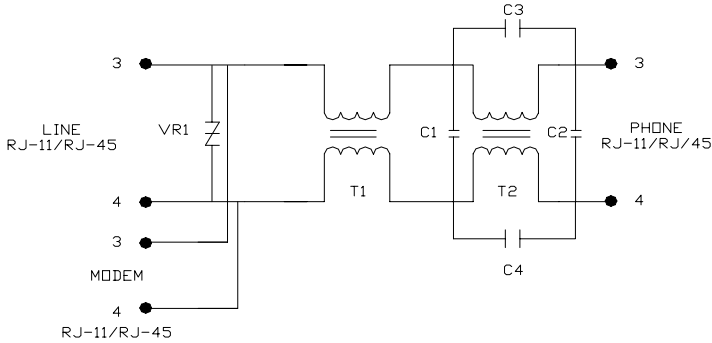


ADSL POTS SPLITTER

- Designs exceed standard for ITU-T G.992,1
- POTS loop DC currents from 0mA to 100mA
- Excellent longitudinal balance
- Operation temperature -10 to 75°C
- Low Cost



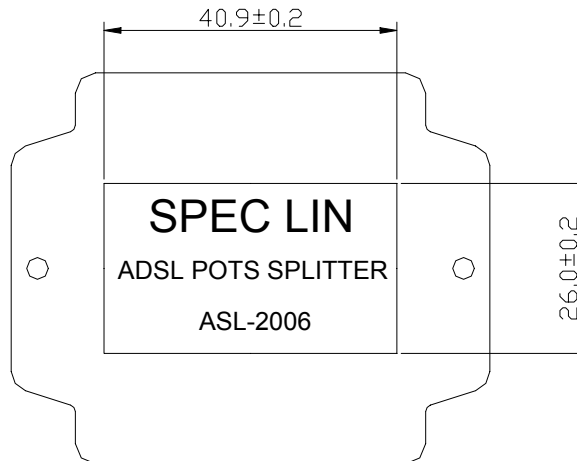
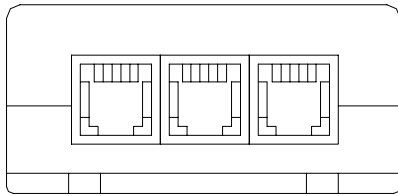
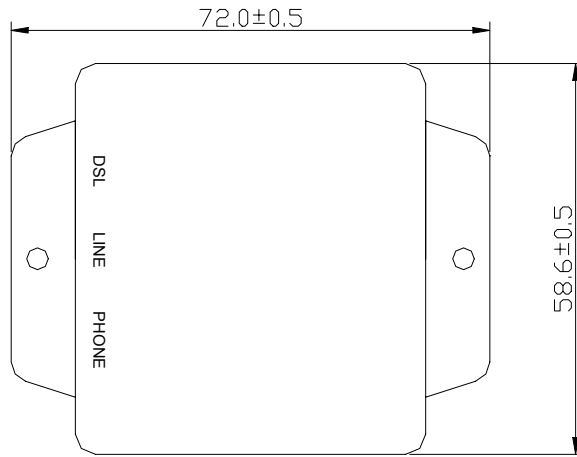
Specifications

		MIN.	TYP.	MAX.	Unit
Insertion loss	1004Hz short loop			1.0	dB
	1004Hz long loop			0.75	dB
Attenuation distortion	200Hz to 3.4KHz short loop	-1.5		1.5	dB
	3.4KHz to 4KHz short loop	-2.0		2.0	dB
	200Hz to 3.4kHz long loop	-1.5		0.5	dB
	3.4KHz to 4KHz long loop	-1.5		1.0	dB
Attenuation in ADSL band	30KHz to 300KHz	65			dB
	300KHz to 1104KHz	55			dB
Delay distortion	600Hz to 3.2KHz short loop			200	usec
	200Hz to 4KHz short loop			250	usec
	600Hz to 3.2KHz long loop			200	usec
	200Hz to 4KHz long loop			250	usec
Return loss @Short Loop & Long Loop	ERL	6			dB
	SRL – LO	5			dB
	SRL – HI	3			dB
Longitudinal balance	200Hz to 3200Hz 25mA	52			dB
Tip to ring Capacitor	@30Hz	20		115	nF
DC resistance	Tip to ring			25	ohms
	Tip or ring to ground	5			Mohms
DC current			100		mA

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UNITS: mm
 SHEET: 1 OF

DRAWING NO.
ASL-2006



SPEC LIN ENTERPRISE CO. LTD.

BLOCK2,LIU WU FIRST INDUSTRIAL AREA,ERHEN RO. WE.,
SHIH-JE TOWN,DONG GUAN CITY,KUAN DONG PROVINCE,CHINA
TEL: 86-769-632-1088 FAX: 86-769-632-1061

AGENCY NO.

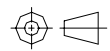
ISO 9002: 036809750

DRAWING NO.

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SHEET
2 OF 5



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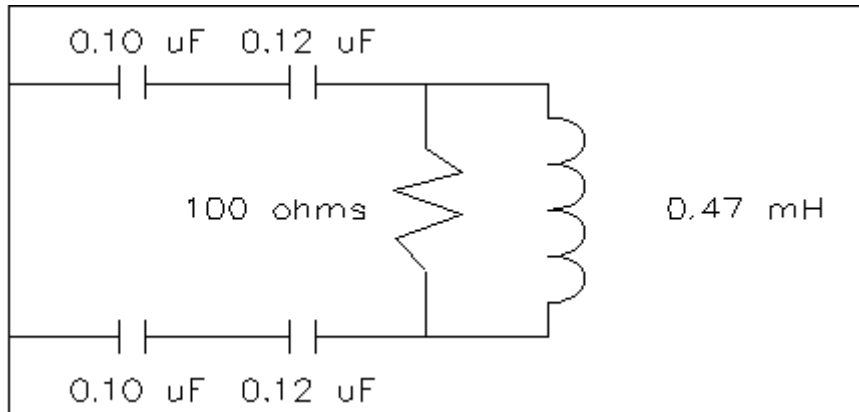
ELECTRICAL CHARACTERISTICS

1. Technical Requirement:

1.1 ZHP-r Defined

To facilitate testing of the POTS splitter independently of the actual modem or specific vendor. ZHP-r is defined in Figure E-1 to allow proper termination of xDSL port during. The ZHP is valid only for voice band frequencies. The combination of capacitors in the voice band testing ZHP-r is only representative.

ZHP Remote end



NOTE Component Tolerances: Capacitors:2.5%, Resistors: 1%, Coils: 5%

Figure E-1 ZHP-r definitions

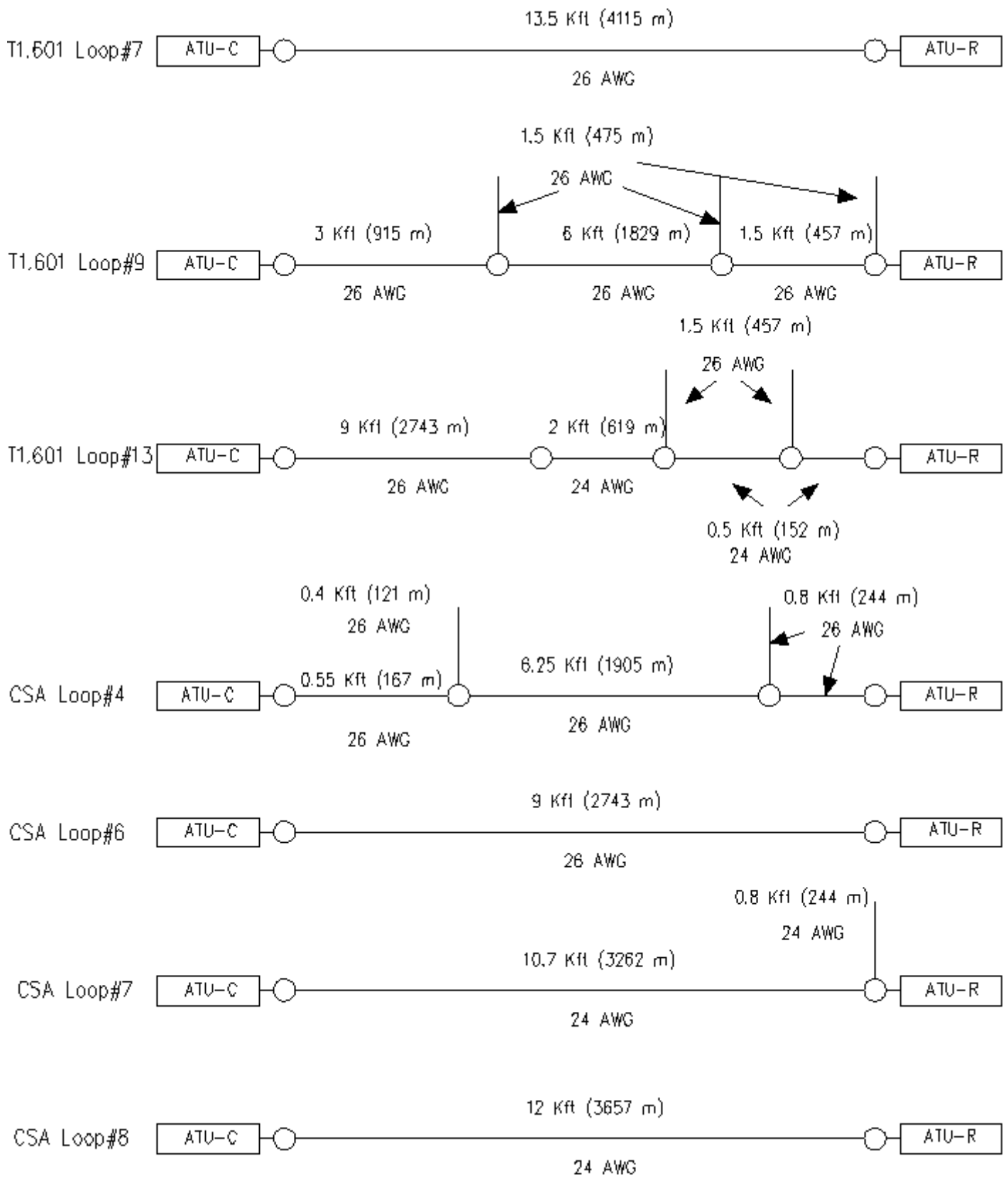
1.2 Tset Loops

Loops to be used for testing are divided into two groups. This is done to obtain more specific requirements under the widely varying conditions of short and long loops and to account for the effect of the opposite splitter impedances being "seen" through the loop and affecting performance.

▶ Short Loops: 0, 0.5 Kft, 2.0 Kft 5 Kft pairs of 26 AWG cables

▶ Long Loops: ANSI T1.601 resistance desing loops 7 , 9 , and 13 and T1

TR28 CSA loops 4, 6 , 7 and 8



1.3 Test method

1.3.1 Insertion Loss at 1004 Hz

For each of the test loops specified in 1.2 and using the test set-up shown in Figure E-3 the insertion loss from the source to the termination shall be measured with and without the Splitter/ZHP combination inserted.

The increase in insertion loss at 1004 Hz on any of the test loops, due to addition of the Splitter/ZHP, shall as follows specifications.

1.3.2 Attenuation Distortion in the Voice Band

The variation of insertion loss with frequency shall be measured using the test set up Figure E-3. The defined ZHP-r will be attached to the xDSL port of the splitter. If the splitter is an internal part of the ATU, then the modem remains attached as the xDSL load. The increase in attenuation distortion, relative to the 1004 KHz insertion loss, caused by the POTS splitter with the ZHP-r (or modem) load attached using each of the test loops identified above, shall be as follows specifications.

Figure E-3 defines the test configuration and the value of the test components that shall be used for transmission measurements in the voice band Remote POTS splitter.

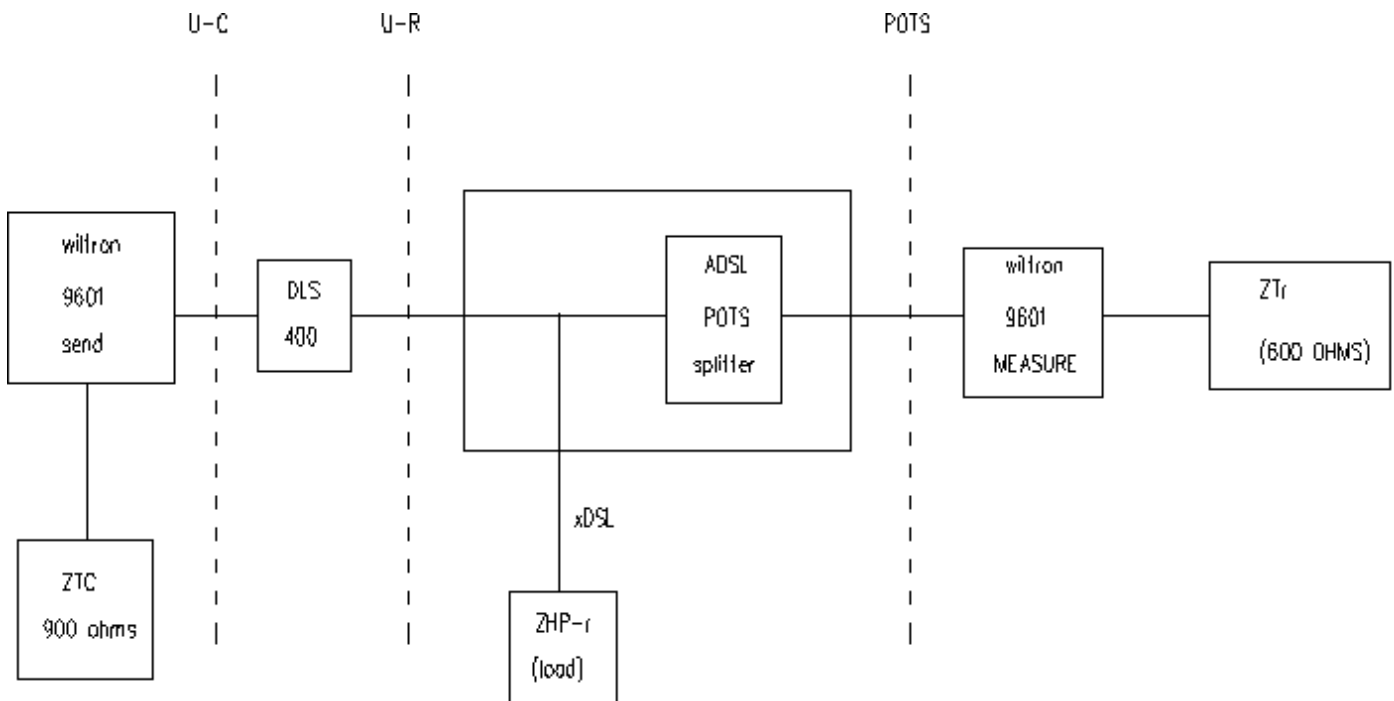


Figure E-3 Transmission measurements in voice band for the Remote POTS Splitter

1.3.3 Return Loss

Figure E-4 defines the test configuration and the components that shall be used for transmission measurements in the voice band for the Remote POTS splitter.

Where:

ZNL-r = 1330 ohms in parallel with the series connection of a 348 ohms resistor and a 100 nF capacitor (long loop model seen from RT)

NOTE: SRL-LO = 260 ~ 500 Hz

ERL = 560 ~ 1965 Hz

SRL-HI = 2200 ~ 3400 Hz

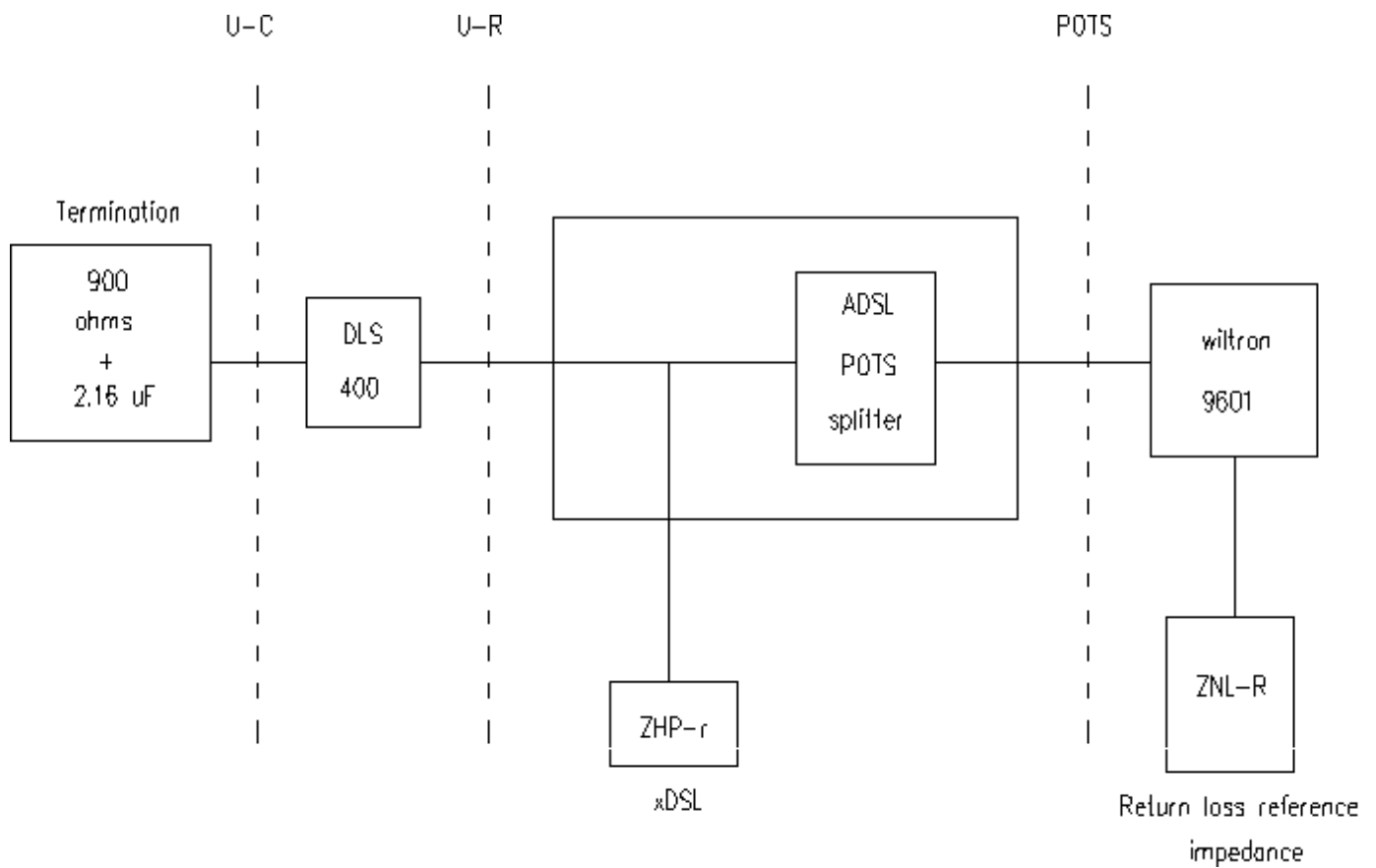


Figure E-4-Remote POTS splitter Return Loss Set Up

1.3.4 Longitudinal Balance test

The longitudinal balance of the POTS splitter (without loops), measured in either direction between the POTS/PSTN and line pots, as a two port device, shall be measured in accordance with IEEE 455 the applied longitudinal voltage shall be maximum 3.0 V p-p. The balance shall be greater than 58 dB for frequencies between 200 Hz - 1KHz with a straight line level decreasing to 53 dB at 3 KHz. A dc bias current of 25 mA will be applied.

Figure E-5 shows the test setup for the external Remote POTS splitter.

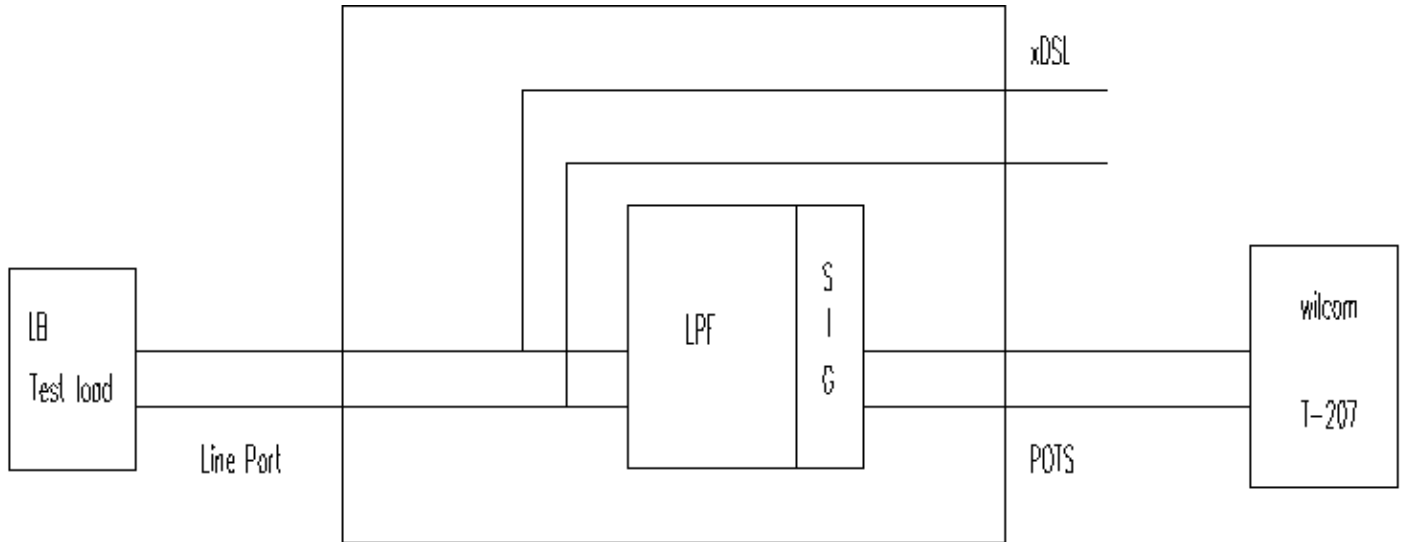


Figure E-5-Longitudinal Balance Remote Setup per IEEE 455

1.3.5 ADSL band Attenuation

The insertion loss of the and ZHP-r measured as shown in Figure E-6 shall be as follows specification .

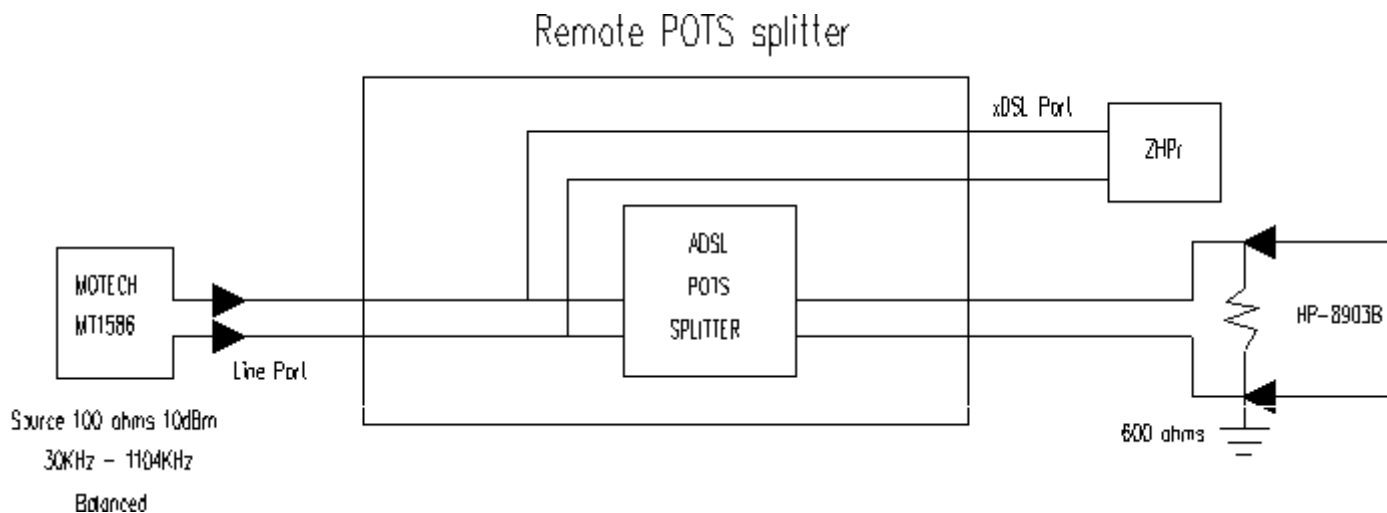


Figure E-6-Measurement of the Remote splitter attenuaton in the ADSL Band

1.4 Test Apparafus:

- A. WILTRON MIDEL 9601 TRANSMISSION MEASUREMENT SET
- B. WILCOM MIDEL T-207 LONGITUDINAL BALANCE TEST SET
- C. SPIRENT DLS-400 xDSL WIRELINE SIMULATOR
- D. MOTECH MT 1586 WIDE BAND TRANSMISSION LINE TESTER
- E. HP-8903B AUDIO ANALYZER