Telstra Operations, Network Engineering,
Access Infrastructure

Technical Reference
Document No: RCIT.0004

Splitter Specification for ADSL/POTS

Spectrum Sharing Service, Retail ADSL & Wholesale ADSL

Issue 3.0

Implementation:

1. PURPOSE

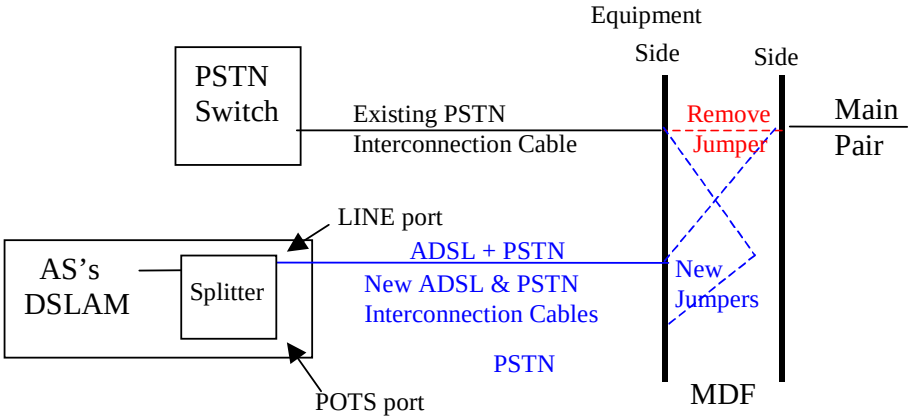
The purpose of this Technical Reference is to provide the technical requirements for Splitters located at both exchange and customer premises ends of a loop for all splitter applications on Telstra lines which also carry Telstra POTS and ADSL, ADSL2, or ADSL2+. This includes Shared Spectrum services, Telstra Retail ADSL and Telstra Wholesale ADSL.

2. SCOPE

Splitters for both exchange and customer premises ends of a loop between ADSL and

4.2. Exchange Splitter

The exchange end splitter is cabled from the telephony port back to the MDF to enable further jumpering to the telephone switch.



test with TN12 (and vice versa). If a result fails marginally with Z_R then TN12 can be used as it may pass with this slightly different impedance TN12 (and vice versa).

4.2.1.2. Splitter Requirements (Section 6 of ETSI TS 101.952-1-1 V1.2.1)

4.2.1.2.1 Option A Splitters

Option A splitters are required.

High voltage swings are created under a number of circumstances. The obvious condition is when a telephone goes off-hook or goes back on-hook. Loop disconnect dialling also causes high voltage swings. Indeed older telephones literally short out the line. High voltage swings also occur at the line-card of the local exchange when line reversal is used. Thus measurement of the large signal performa

The ADSL service provider may apply test signals within the ADSL bands at any time provided those test signals are compliant with the ACIF Network Deployment Rules Code C559, either belonging to an existing Deployment Class or demonstrated to be compliant under the provisions for Non-deployment Class systems.

Testing of the line at DC or voice frequency may only be performed when the telephone service is inactive; in this case the method of determination of inactivity and the duration of the test is to be determined in consultation with Telstra.

Additionally, the splitter may optionally incorporate relay bypass to enable testing from the telephony port without the splitter or DSLAM connected.

The following paragraph is for information only, i.e. not tested for this specification.

DSLAM ADSL equipment must comply with the relevant ADSL transmit PSD masks and deployment rules of ITU-T G.992.1, ITU-T G.992.5 and ACIF C559-3.

4.3. Customer End Splitter

The customer end splitter may be implemented as a centralized or an in-line (distributed) splitter. New customer premises' cabling is to be provided from the centralized splitter to the ADSL CPE; it is unacceptable practice to use the alternate (red and black) pair in the customer premises wiring to connect the modem to the central splitter. The splitter provides a low pass filtering functionality in the telephony path. The high pass component of the splitter is assumed to be in the ADSL CPE.

The low pass filtering at the customer end centralised splitter shall comply with the requirements of Australian Standard AS/ACIF S041.1:2009 and S041.3:2009. The combined effect of up to 3 in-line filters shall also comply with the requirements of

Figure 4 – Test layout for POTS compatibility testing (note: for central filter use one filter and 3 telephones)

Alternatively, a live ADSL2+ service may be used for this test, if the required line attenuations can be made from a short access line plus an artificial cable.

4.3.2. Other Requirements Applicable to Customer End Splitters (EXPLANATORY – not for compliance)

In order to avoid unacceptable attenuation of Telstra's PSTS, the total length of the tie cable from the Network Boundary Point (NBP) to the splitter shall be as specified in "Telstra Network Termination Device, Information for Cabling Providers" Guideline 012688.

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Testing of the line at DC or voice frequency may only be performed when the telephone service is inactive; in this case the method of determination of inactivity and the duration of the test is to be determined in consultation with Telstra.

ADSL equipment must comply with the relevant ADSL transmit PSD masks and deployment rules of ITU-T G.992.1, ITU-T G.992.5, ACIF S043-2 and ACIF C559.

5. DEFINITIONS

The following words, acronyms and abbreviations are referred to in this document.

Term	Definition
ACMA	