

Ethernet-APL Test Guide

Test Type (Data or Power): Power

Test Name: TL.2.3 Current Derivatives

Purpose/Description: To verify that a Trunk Power Load limits the load current slew rate after inrush has occurred.

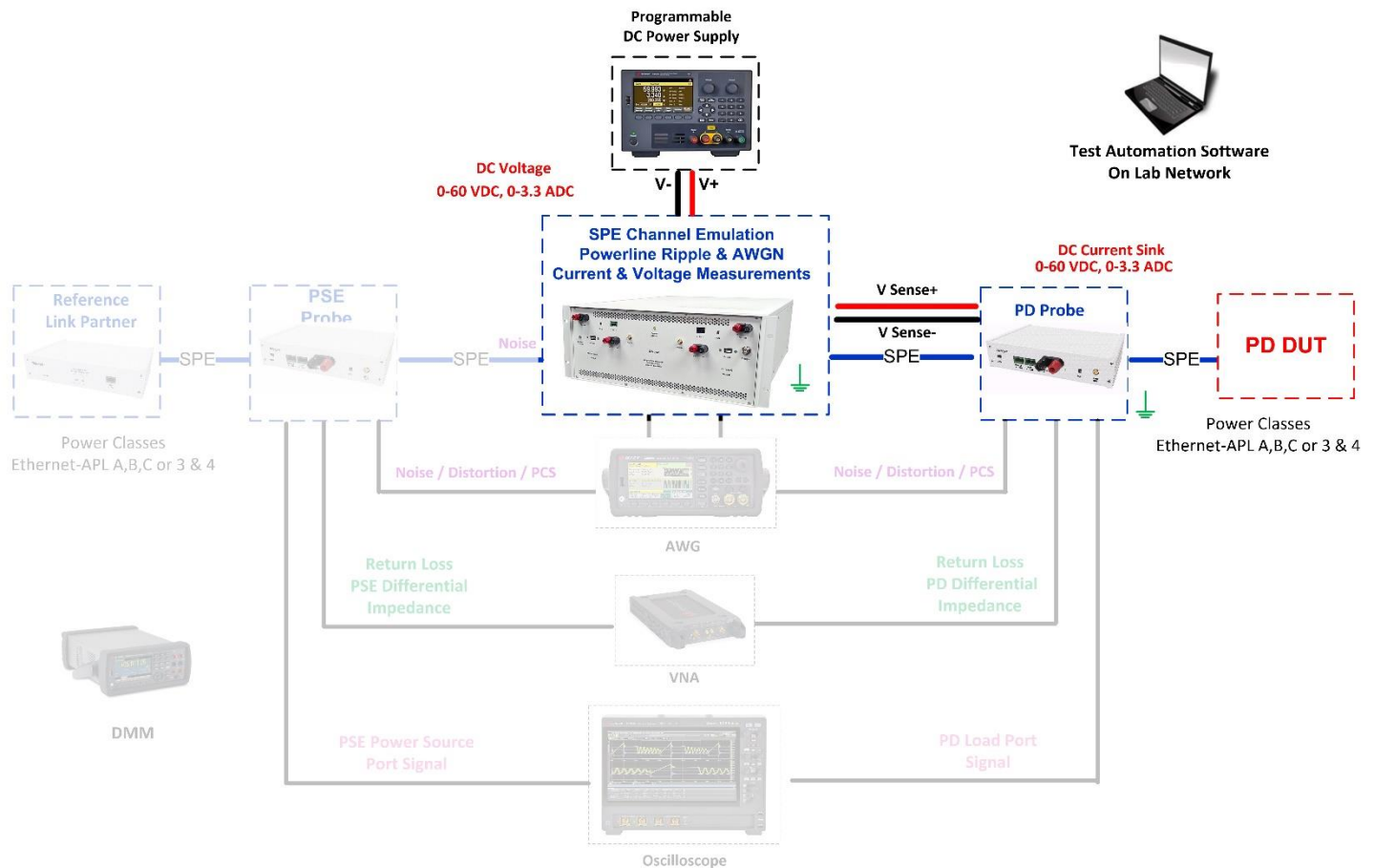
Required Test Equipment:

1. PD Probe
2. 4950 Channel Emulator (for current and voltage measurements)
3. Programmable DC Power Supply (to power the PD Load DUT)
4. Test Automation Software

Test Setup / Connection Diagram:



Universal Test Setup for Combined PSE and PD Data & Power Conformance Testing Port Under Test PD



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Device Under Test Setup:

- It is expected that all tests are performed with PHY communication abilities disabled. This is achieved by disabling Auto-Negotiation and setting the PHY to SLAVE mode. Regardless of the PHY state, each data line of the port under test shall be terminated with a 50 Ohm resistance behind a 1 μ F series capacitor in the Telebyte Probe.
- Enter the Power Class for the Device Under Test (Class 3) into the test automation software.

Expected Results (Pass/Fail Criteria):

Step	Status	Description
5	PASS	All measurements of dl_{CR}/dt less than or equal to 100 mA/ms
5	FAIL	At least one measurement of dl_{CR}/dt is greater than 100 mA/ms
7	PASS	All measurements of dl_{CR}/dt less than or equal to 100 mA/ms
7	FAIL	At least one measurement of dl_{CR}/dt is greater than 100 mA/ms

Notes:

References:

[1] APL Port Profile Draft 1.2 Section 5.4