

Ethernet-APL Test Guide

Test Type (Data or Power): Power

Test Name: SL.2.3 Current Derivatives

Purpose/Description: To verify that a Spur Power Load port limits the load current slew rate during steady-state operation. Maximum Supply Voltage and Minimum Load Voltage.

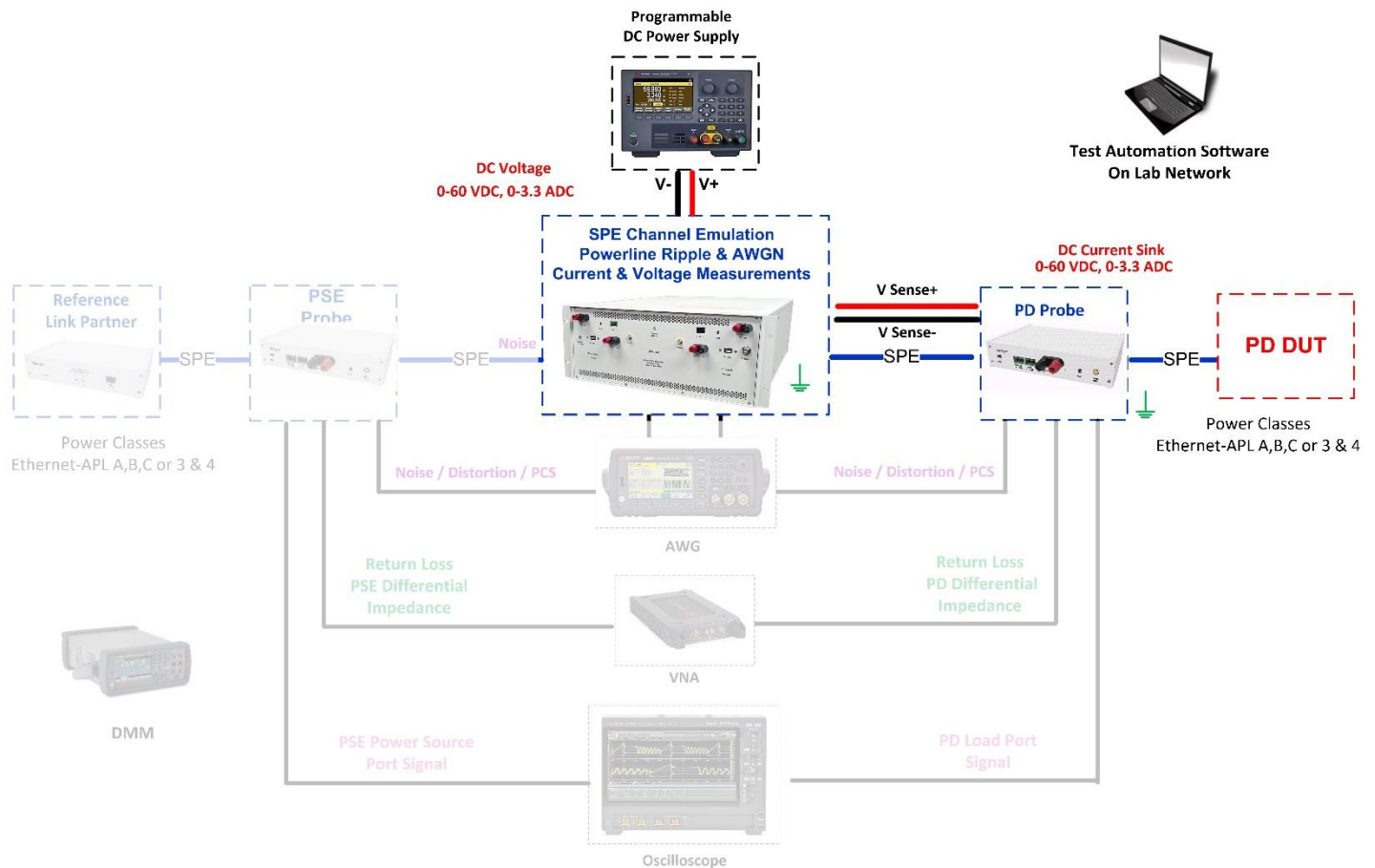
Required Test Equipment:

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 A, B or C) into the test automation software.

Expected Results (Pass/Fail Criteria):

Step	Status	Description
6	PASS	All measurements of dl_{CR}/dt less than or equal to 10 mA/ms
6	FAIL	At least one measurement of dl_{CR}/dt is greater than 10 mA/ms
8	PASS	All measurements of dl_{CR}/dt less than or equal to 10 mA/ms
8	FAIL	At least one measurement of dl_{CR}/dt is greater than 10 mA/ms

Notes:

References:

- [1] APL Port Profile 1.2 Section 5.4
- [2] Methods Annex – Sampling with Digital Multimeter
- [3] Methods Annex – Disabling PHY
- [4] Methods Annex – Power Supply Voltage Sensing