

THE CLAIM

A source for one product claims *power converter* and the feature of the domain it makes; a module sold with one claims the pair as a module.

EIS draft, power converter (PWR-BUS-IN, PWR-A6-OUT)

WHAT IT PUBLISHES

FIGURE	ID
<i>Current taken at its input, per rail, at its rated output</i>	PWR-001
<i>Current delivered on each rail, at each outlet</i>	PWR-002
<i>Ripple and noise on each rail, peak-to-peak</i>	SUP-001
<i>Heat at its rated output; depth behind the product</i>	SUP-008

- ☐ Keep the claim line and these figures in one claim file, `eis-claim.yaml`; `eis claim` checks it.

READ

6.1 power, 6.2 supplies and adapters, 6.3 0 V, 6.4 the bus, 6.7 PWR-DC12, 6.8 PWR-A6, 9.5 assembly. Annex 0 (heat).

READING THIS SHEET

- shall ☐ recommended ○ may

IDs omit the EIS- prefix. Italic lines are informative notes. This reference is informative: the clauses and the register govern.

OUTLET · PWR-A6

- A6-VH3: JST VH, 3 circuits on 3.96 mm; pin 1 +6 V, 2 0 V, 3 -6 V; marked ±6 V. A6-001 A6-007
- Holds each rail at 5.75 to 6.25 V from no load to its rating. A6-002
- ☐ Clamp the outlet so a failed pass element cannot put the input on a module; a linear source, under 5 mV.
- A plug-and-socket output does not mate with reversed polarity. SUP-002
- An output on quick-connect tabs or screw terminals marks each terminal with its rail. SUP-003
- ☐ Constant-current or hiccup limiting, not foldback: a row is a large capacitive load.
- ☐ Bring the rails up in an order that avoids reverse stress on modules.
- ☐ Setpoint within ±1 %; load regulation within ±1 % from 10 % to 100 % load.

Short-circuit, reverse-swing, overshoot, and the 20 mV ripple limit are on the cards that follow.

0 V

- Every 0 V pin of its header and outlet, and the -V of a DC entry, is its 0 V. GND-001

An isolated converter from PWR-DC12 joins its output 0 V to its input -V.

INPUT FROM THE BUS · 6.4

- A 2 × 5 or 2 × 8 header on 2.54 mm, the 6.4 pinout. BUS-002 BUS-003
 - Marked conductor on -12 V; the shroud key gap on the right. BUS-004 BUS-005
 - At most 2 A per rail through one header; survives a reversed ribbon. BUS-008 BUS-009
- A linear converter takes the module's ±6 V current from ±12 V and turns 6 V × 1 per rail into heat.*
- ☐ Board at 1U module size: no taller than 21.10 mm, 1U hole span 33.65 mm, so it also mounts as a 1U module.

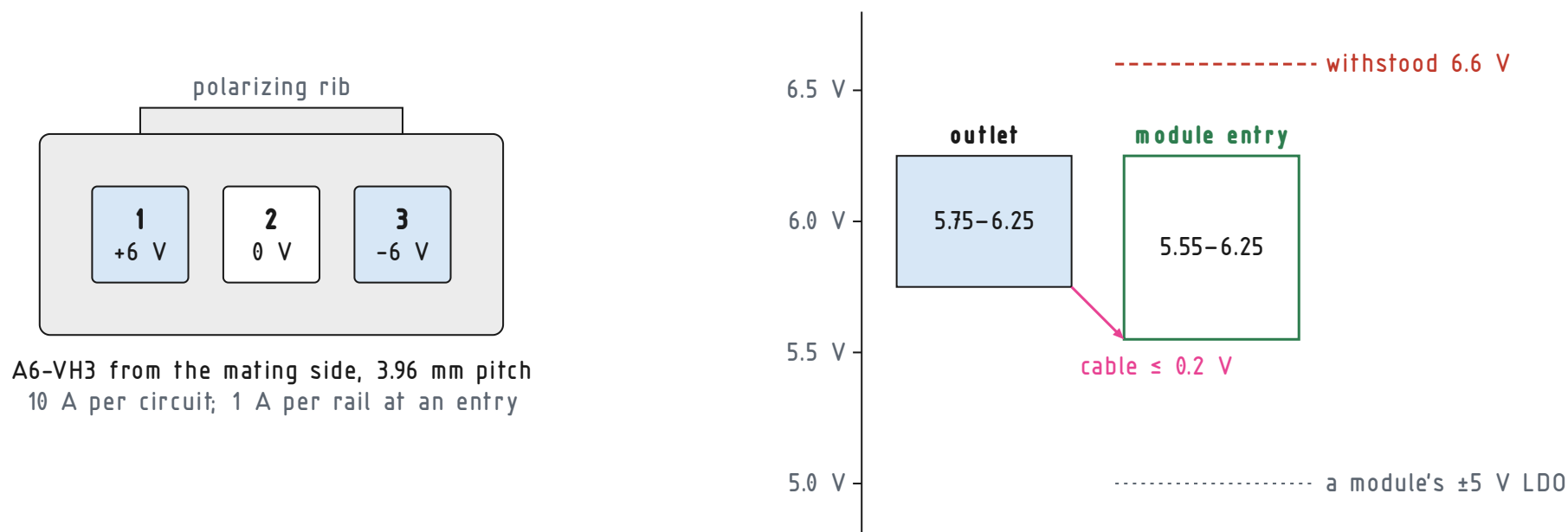
INPUT FROM PWR-DC12 · 6.7

- Publish the DC entry variant, the max continuous current at 12 V (taken at the entry or delivered at each output), and the min and max input voltage. DC-001 PWR-001 DC-002
- Marked beside it: polarity symbol, nominal voltage, max current. DC-011
- A DC entry never uses the pinout of a 10-pin or 16-pin power header. DC-003
- A barrel DC entry, DC-BAR21 or DC-BAR25, is center positive. DC-004
- A multi-pin DC entry implements the tabled pin functions. DC-005
- ☐ Above 5 A, a multi-pin entry rather than a barrel.

INSTALLER · 9.1, 9.5

- One source on each PWR-A6 entry at a time. ASM-008
- Budget the converter's input on the bus with the row's modules. ASM-001

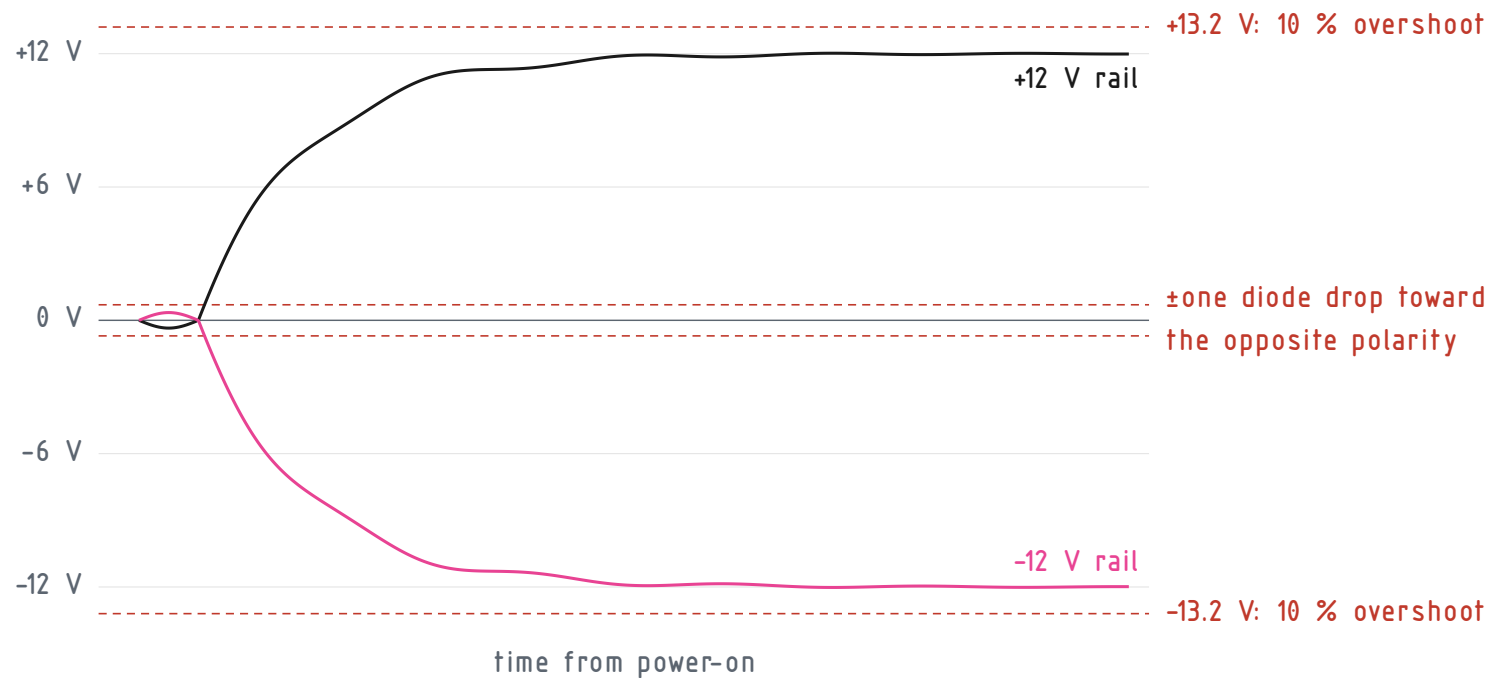
EIS · PWR-A6: the A6-VH3 entry and the voltage window



One connector for PWR-A6 only (A6-001). An outlet holds its window to its rating (A6-002); a module works across the entry window (A6-003), survives 6.6 V (A6-004), and draws at most 1 A per rail (A6-005).

PWR-A6: the A6-VH3 entry, its pins, and the voltage window from the outlet to the module (6.8).

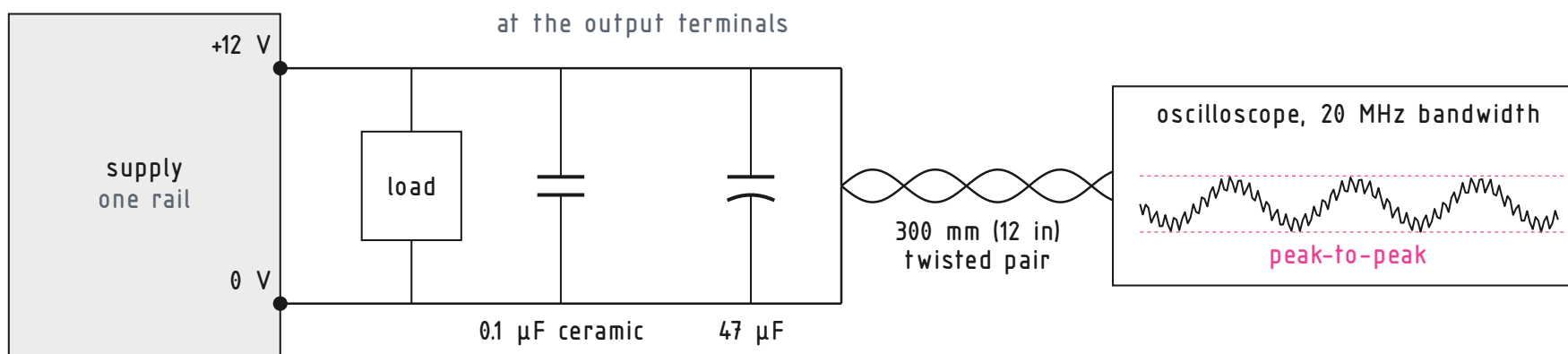
EIS · A supply's rails at power-up



At start-up no rail overshoots its nominal voltage by more than 10 % (SUP-006). During power-up, power-down, or a fault, no rail swings more than one diode drop toward the opposite polarity (SUP-005). Each rail survives an indefinite short to 0 V (SUP-004). The traces are illustrative.

The limits a supply's rails keep at power-up (6.2).

EIS · Measuring ripple and noise

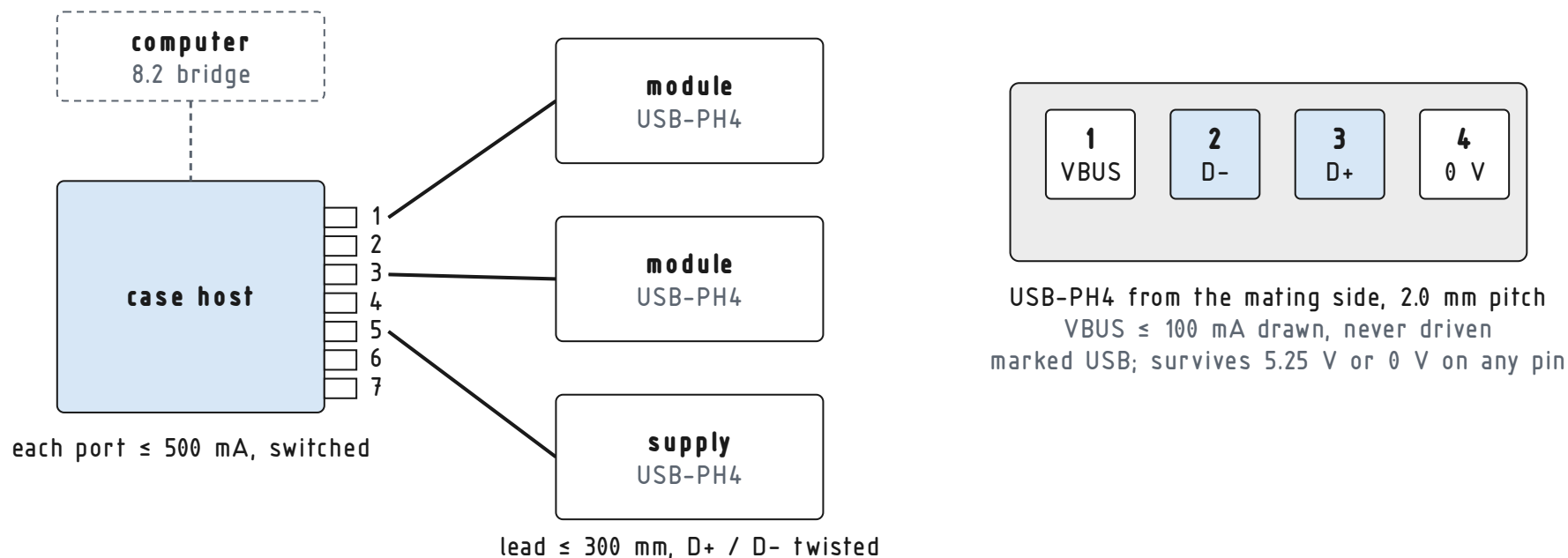


Each rail is loaded at the maker's stated test current and measured at the supply's output terminals, or at test points the product publishes, with 0.1 μF in parallel with 47 μF across the measurement point and a 300 mm (12 in) twisted pair to a 20 MHz oscilloscope.

The supply publishes the peak-to-peak figure for each rail (SUP-001); every rail stays below 150 mV (SUP-007). A linear or post-regulated supply, typically under 10 mV, suits a row of MOD-VIDEO modules.

How ripple and noise are measured (6.2).

EIS · CTRL-USB: a case host, its ports, and the USB-PH4 port behind each product

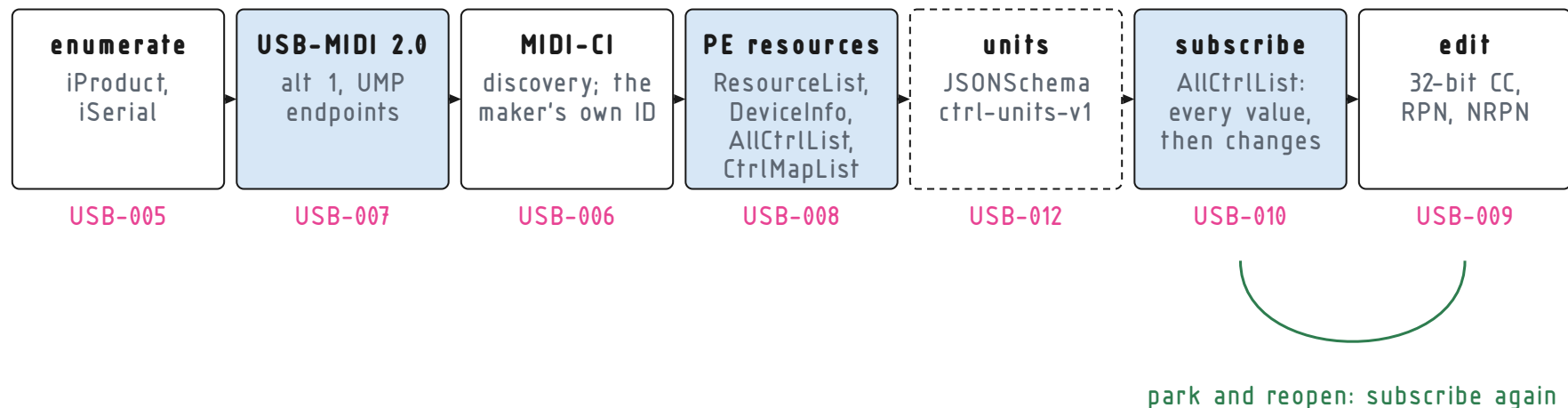


A USB 2.0 full-speed device on USB-PH4 (USB-001), marked and robust (USB-002), drawing ≤ 100 mA from VBUS (USB-003); a straight lead (USB-004).

The host limits and switches each port (USB-013) and numbers it (USB-014).

A case host, its ports, and the CTRL-USB ports of the modules behind the panels (8.1).

EIS · CTRL-USB: what a case host asks a device, from enumeration to edited values



The host knows no product: it lists and sets controls with these standard steps alone (USB-015). Units are optional; without them it shows a percentage, the step, or the map's titles. A device keeps working when parked (USB-011) and the host subscribes again when it reopens it (USB-016).

From enumeration to edited values: the discovery a host makes on a CTRL-USB device (8.1).