

Dual MicroDlynx™ Series Evaluation Board Documentation

The Dual MicroDlynx™ series evaluation board (DLYNX_MICRO_EVAL) Board comes with an assembled module and test components

1. Schematics

Component values are for reference only and may not be installed on shipped boards. Refer to the pictures in this document for preinstalled components and the module datasheet for other permitted ratings

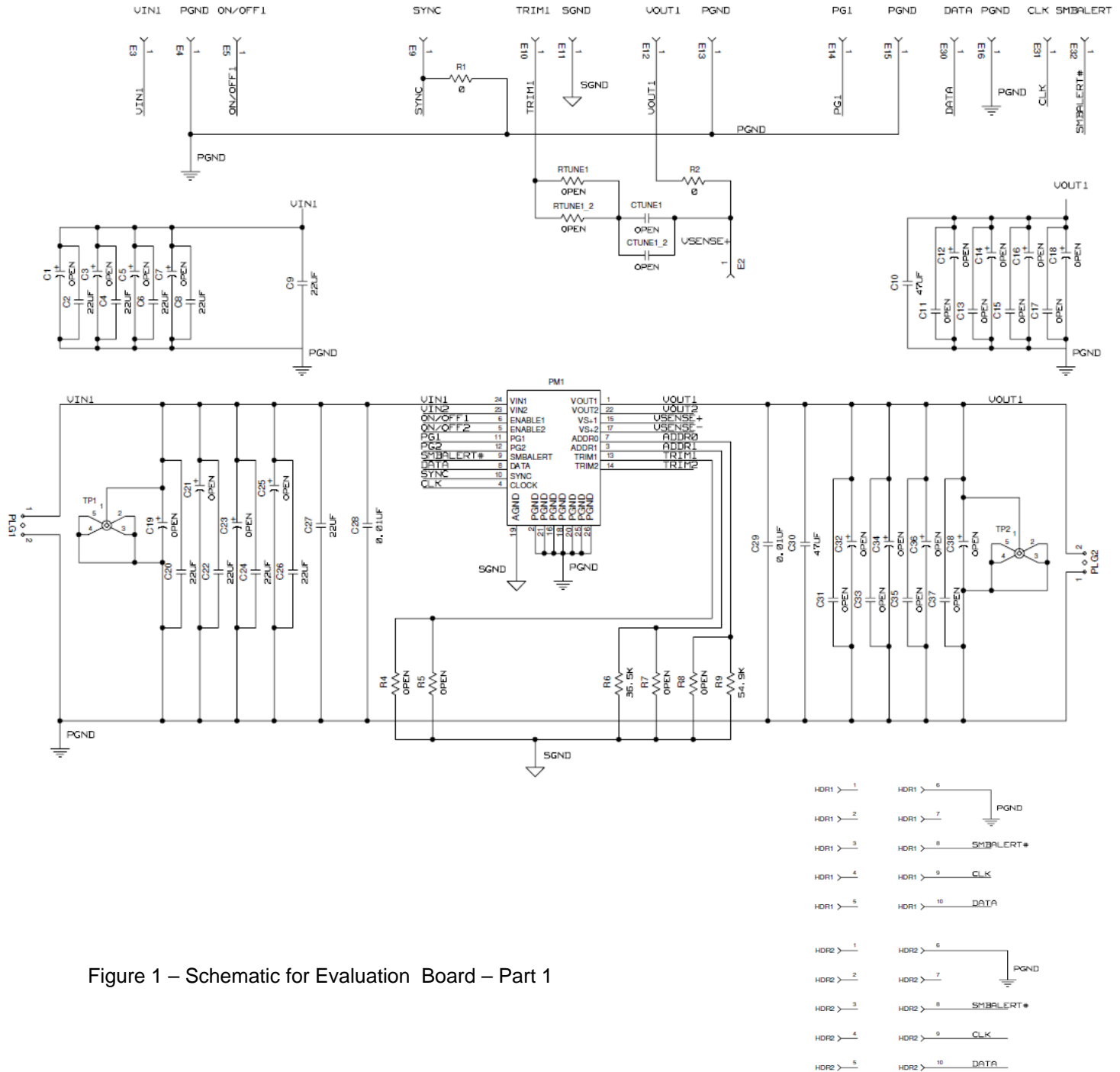


Figure 1 – Schematic for Evaluation Board – Part 1

2x12A Dual MicroDLynx™: Non-Isolated DC-DC Power Modules

4.5Vdc –14.4Vdc input; 0.51/0.6Vdc to 5.5Vdc output; 2x12A or 2x6A Output Current

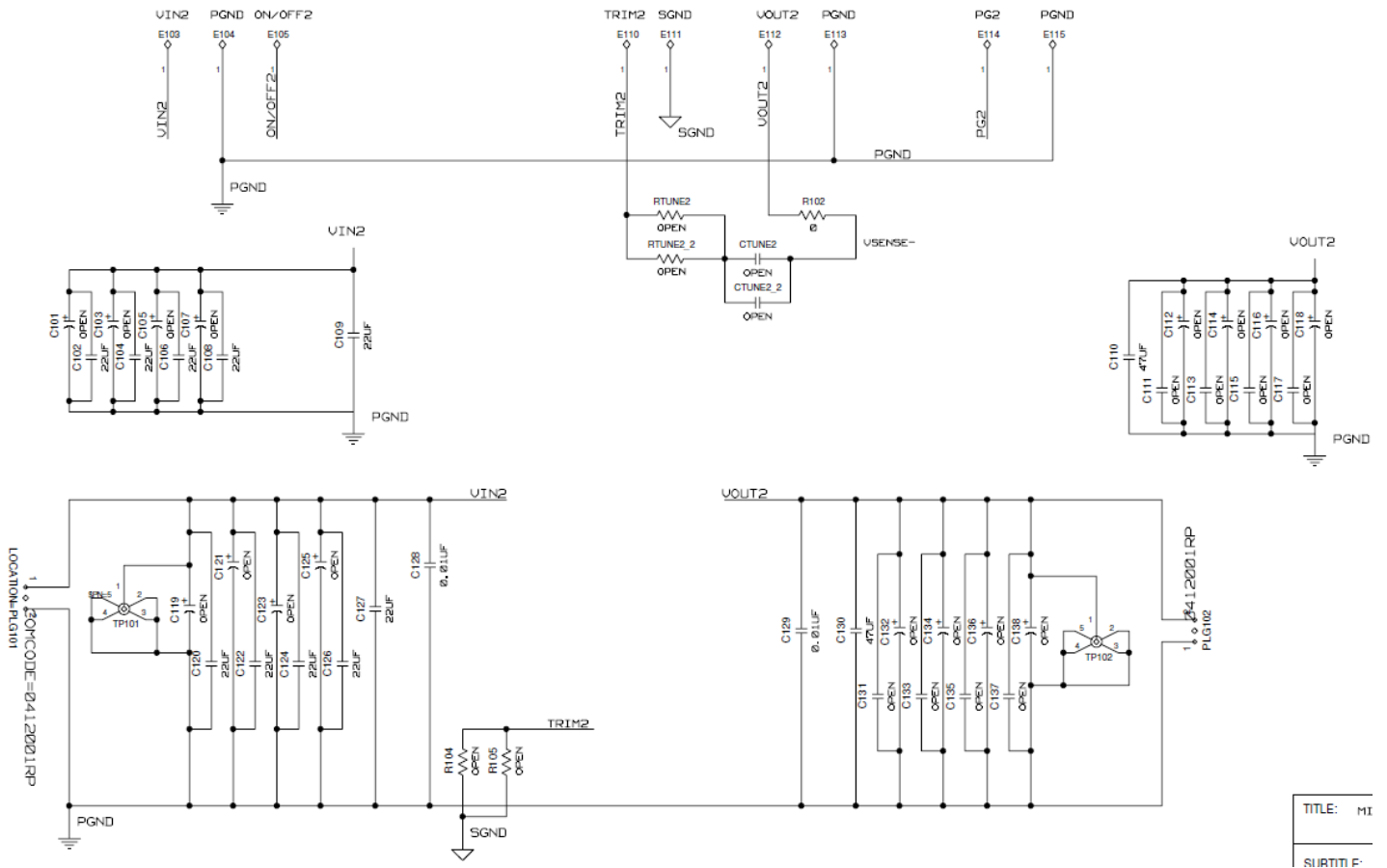


Figure 2 – Schematic for Evaluation Board – Part 2

2x12A Dual MicroDlynx™: Non-Isolated DC-DC Power Modules

4.5Vdc –14.4Vdc input; 0.51/0.6Vdc to 5.5Vdc output; 2x12A or 2x6A Output Current

Pre-Installed components for the Dual MicroDlynx™ include input filtering [C28 & 128 (0.047uF,16V), C27 & 127(22uF,16V), C22 & 122(470uF,16V)], output filtering [C29 & 129(0.047uF,16V), C30 & 130, C31 & 131 (47µF,6.3V)], RSENSE resistors, R2 & R102 = 0 Ohms, Trim R5 & 105 =20K, Address R15=54.9K, R14=36.5K, RSYNCH resistor, R1 = 0 Ohms and some test points.

10-Pin Ribbon Cable to USB Interface Adaptor or Second Eval Board

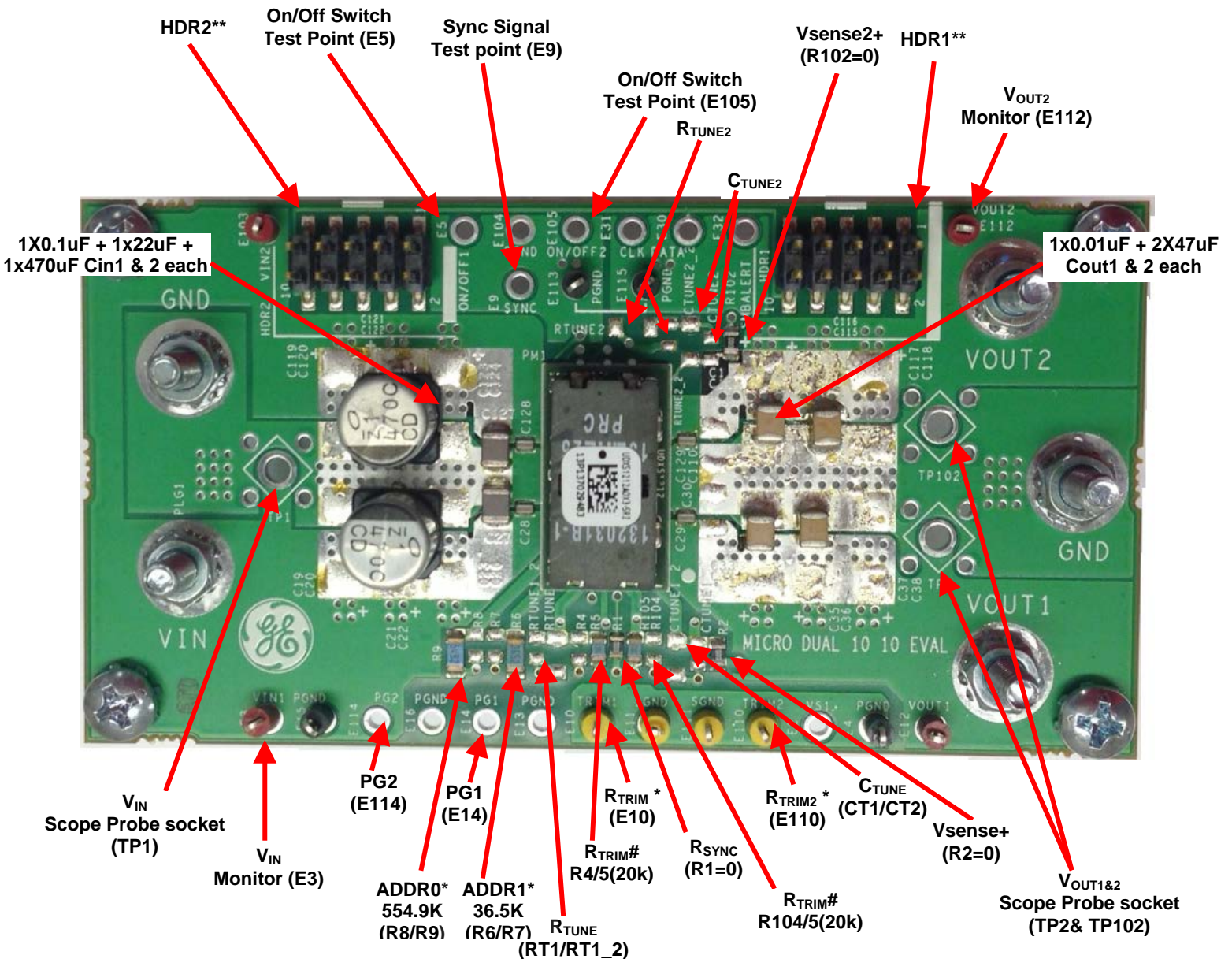


Figure 6. Power and Analog Signal Interface for the UDXS1212/UDXS0606 Eval Board

Caution! Before applying power, make sure that the externally installed capacitors (input & output) have appropriate voltage and polarity ratings based on the application.

2x12A Dual MicroDLynx™: Non-Isolated DC-DC Power Modules

4.5Vdc –14.4Vdc input; 0.51/0.6Vdc to 5.5Vdc output; 2x12A or 2x6A Output Current

Notes:

Module can be trimmed either by soldering a different fixed resistor(s) @ R5 or by attaching a potentiometer/resistor between test points E10 and E11 . IF using E10 and E11, remember to remove installed resistor-R5/R104

* The Dual MicroDLynx module can be assigned a specific address by connecting resistors (R₈/R₉) from the ADDR0 pin to SIG_GND and resistors (R₆/R₇) from the ADDR1 pin to SIG_GND. The evaluation board comes with preinstalled ADDR1 resistor R14=36.5K and ADDR0 resistor, R15=54.9K as an example. These values correspond to Octal digits "3 4" equivalent to HEX number "1C" (equivalent to 28 decimal). Please refer to the data sheet for additional details.

** HDR1/HDR2 allow the unit on the Eval board to interface (via 10 pin Ribbon Cable) with another unit on a different Eval Board and/or to GE "USB Interface Adapter" module in order for multiple modules to be controlled by the GUI. For further details, please refer to the GE document, "Digital Power Insight™ User Manual".

Note1: The red wire on the ribbon cable should be aligned to Pin 1 (left side) of the HDR1 or HDR2 connectors.

Note2: Headers and Ribbon Cable Assembly details:

Part Description (HDR1 & HDR2): 10-Pin Dual Row Male Pin Header, SMT

e.g. FCI P/N: 95157-210 (Digi-Key P/N: 95157-210-ND) or Molex P/N: 0015910100

Part Description: IDC Ribbon Cable Assembly

e.g.: 3M P/N: M3DDA-1018J (Digi-Key P/N: M3DDA-1018J-ND) or Molex P/N: 111062-022

2x12A Dual MicroDlynx™: Non-Isolated DC-DC Power Modules

4.5Vdc –14.4Vdc input; 0.51/0.6Vdc to 5.5Vdc output; 2x12A or 2x6A Output Current

Pre-Installed components for the 6A/12A Analog Dual MicroDlynx™ include input filtering [C₂₈ & 128 (0.047uF,16V), C₂₇ & 127(22uF,16V), C₂₂ & 122(470uF,16V)], output filtering [C₂₉ & 129(0.047uF,16V), C₃₀ & 130, C₃₁ & 131 (47uF,6.3V)], R_{SENSE} resistors, R₂ & R₁₀₂ = 0 Ohms, Trim R₅ & 105 =20k, R_{SYNCH} resistor, R₁ = 0 Ohms and some test points.

Module can be trimmed either by soldering a different fixed resistor(s) @ R₅ or by attaching a potentiometer/resistor between test points E10 and E11. IF using E10 and E11, remember to remove installed resistor – R₅/R₁₀₄

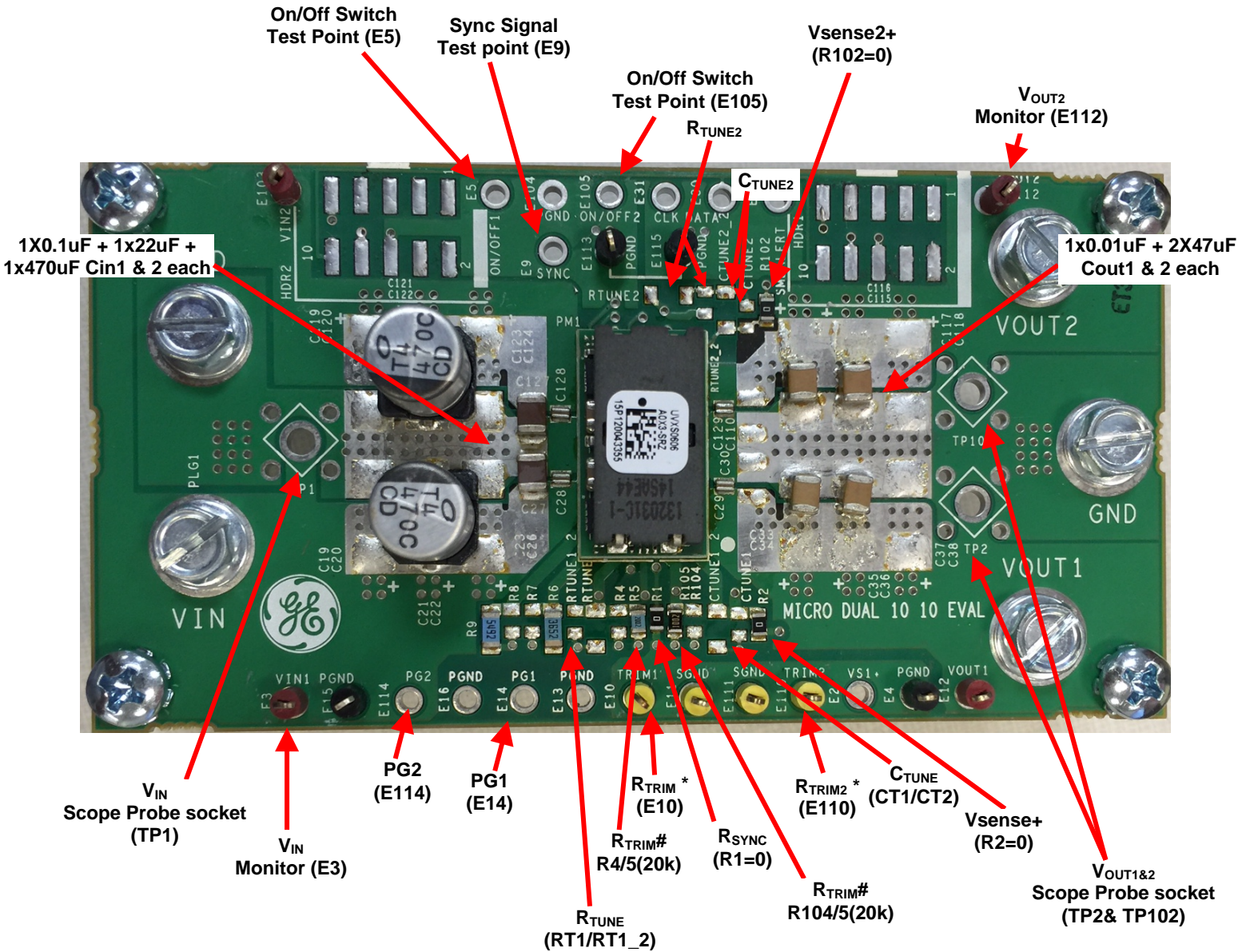


Figure 7. Power and Analog Signal Interface for the UVXS1212/UVXS0606 Eval Board

Caution! Before applying power, make sure that any additionally installed capacitors (input & output) have appropriate voltage and polarity ratings based on the application