EMC3 BOARD POWER CHECK

Contents

Introduction

The following guide correctly identifies the power rails for the EMC^3. Different power configurations are required for the EMC^3 to operate as either a HOST board or PERIPHERAL board when used within the PC104 stack. When PC104 stack is not used the configuration will always be as HOST.

All Power rails must PASS before the KRIA SOM is inserted into the EMC^3 carrier.

Configuration for HOST mode

The HOST setting must be configured as indicated in the figure below, for HOST configuration set switch position 2 to OFF.

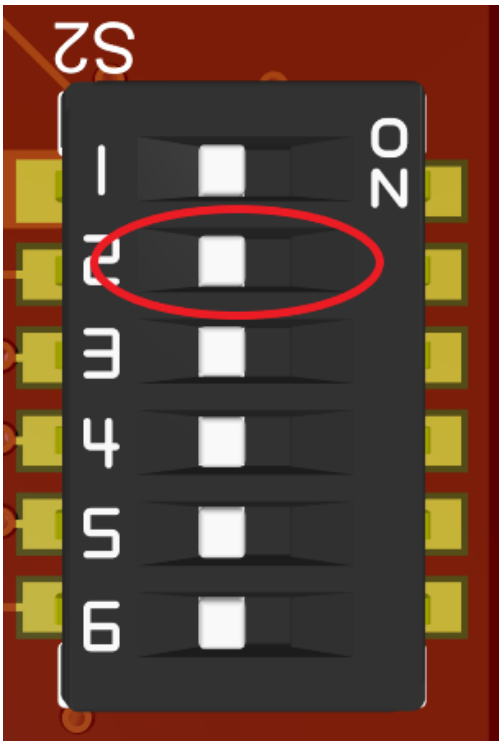


FIGURE 1: HOST SETTINGS

Power Rails

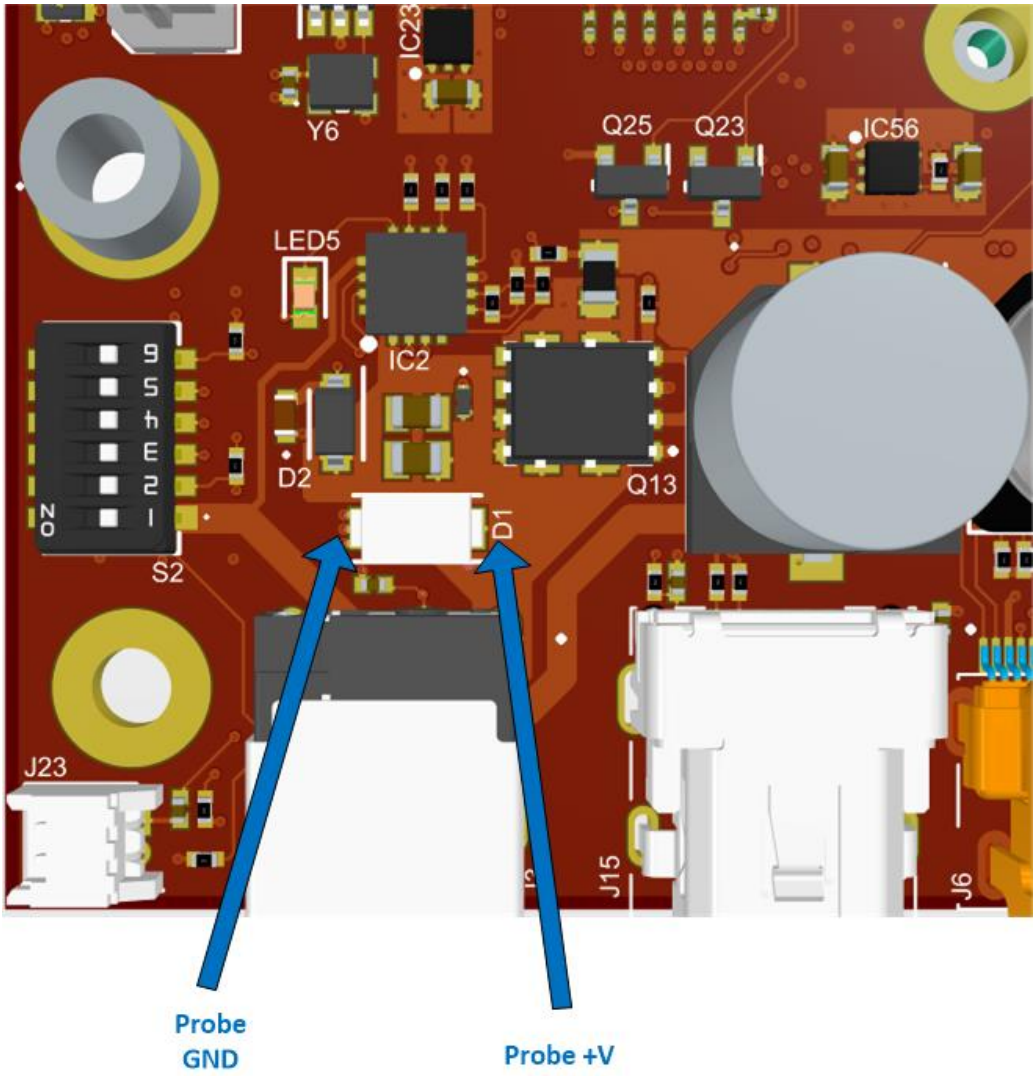
TABLE 1: POWER RAILS

Power Rail Name	Description
VIN	DC power in
8V5_36V_IN	Protected DC power in
5V0_REG_OUT	5V Regulated output
5V0_IN	5V Regulated output when HOST configuration is enabled
PS_1V2	1.2V power supply for the processor controlled peripherals
PS_1V8	1.8V power supply for the processor controlled peripherals
PS_3V3	3.3V power supply for the processor controlled peripherals
PS_ETH_1V0	1.0V power supply for the processor controlled ethernet connection
PS_ETH_2V5	2.5V power supply for the processor controlled ethernet connection
PL_1V2	1.2V power supply for the logic controlled peripherals
PL_1V8	1.8V power supply for the logic controlled peripherals
PL_3V3	3.3V power supply for the logic controlled peripherals
PL_ETH_1V0	1.0V power supply for the logic controlled ethernet connection
PL_ETH_2V5	2.5V power supply for the logic controlled ethernet connection
IAS_2V7	2.7V supply for MIPI camera
IAS_2V8_AF	2.8V supply for MIPI camera auto-focus

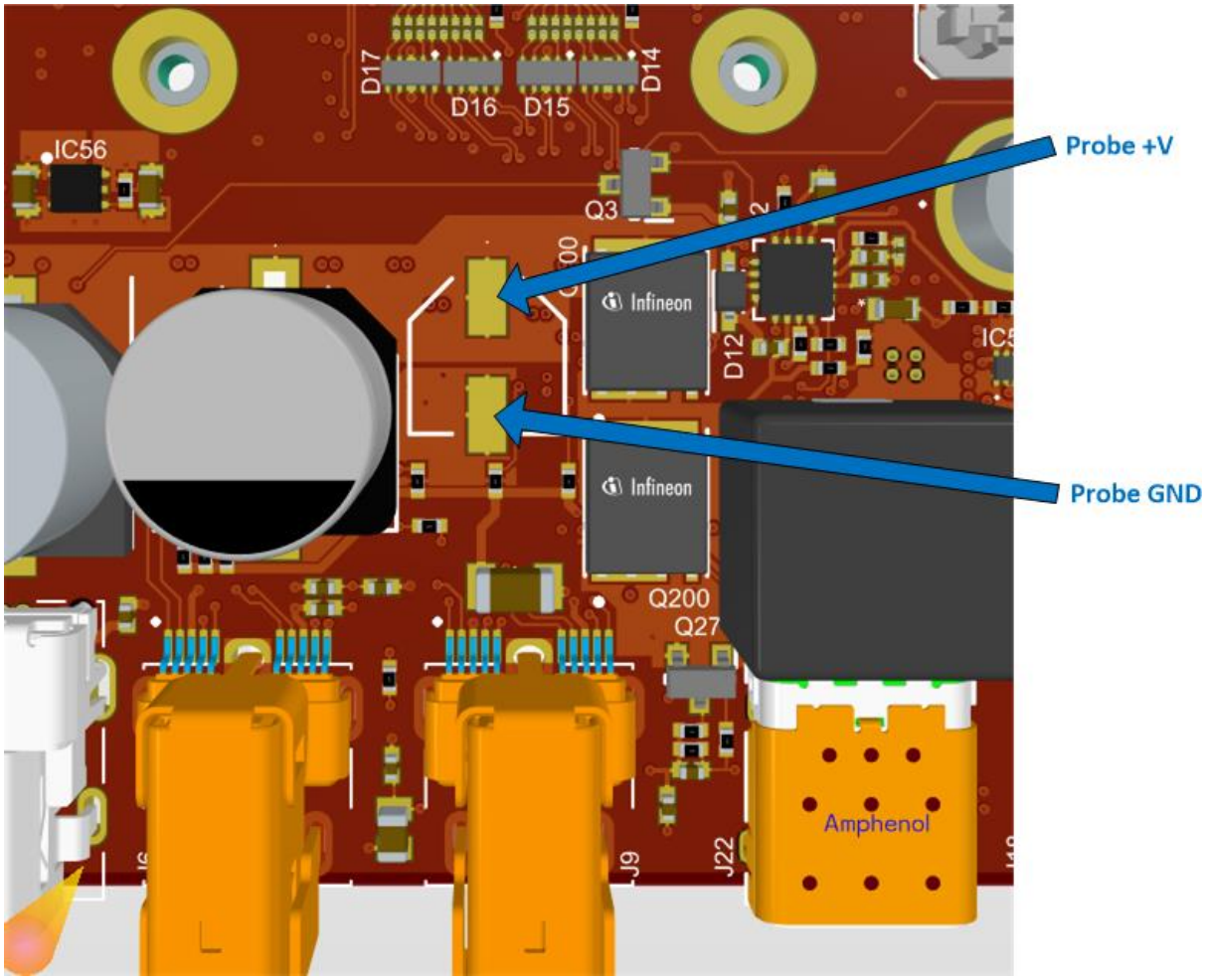
Procedure

Testing the VIN power rail

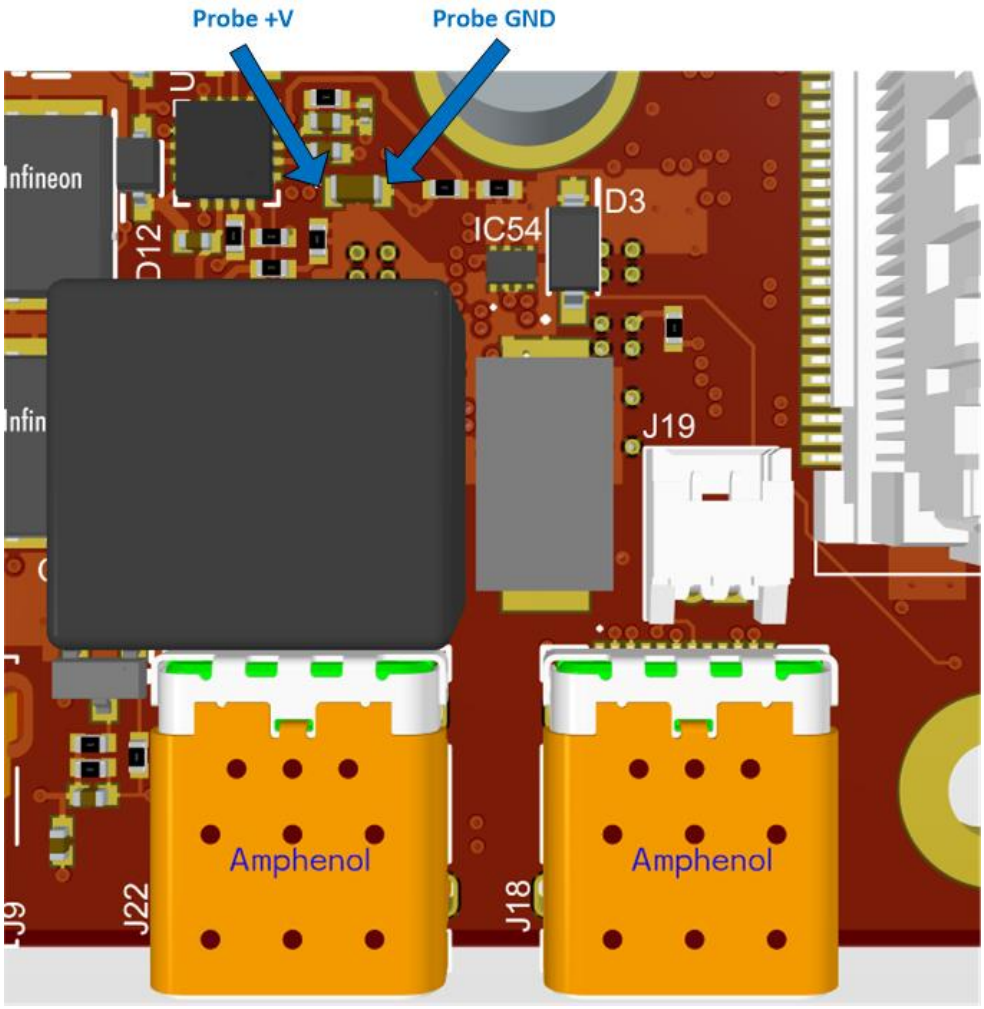
The voltage across diode D1 should measure the same at the DC input voltage, points to probe are indicated on the figure below.



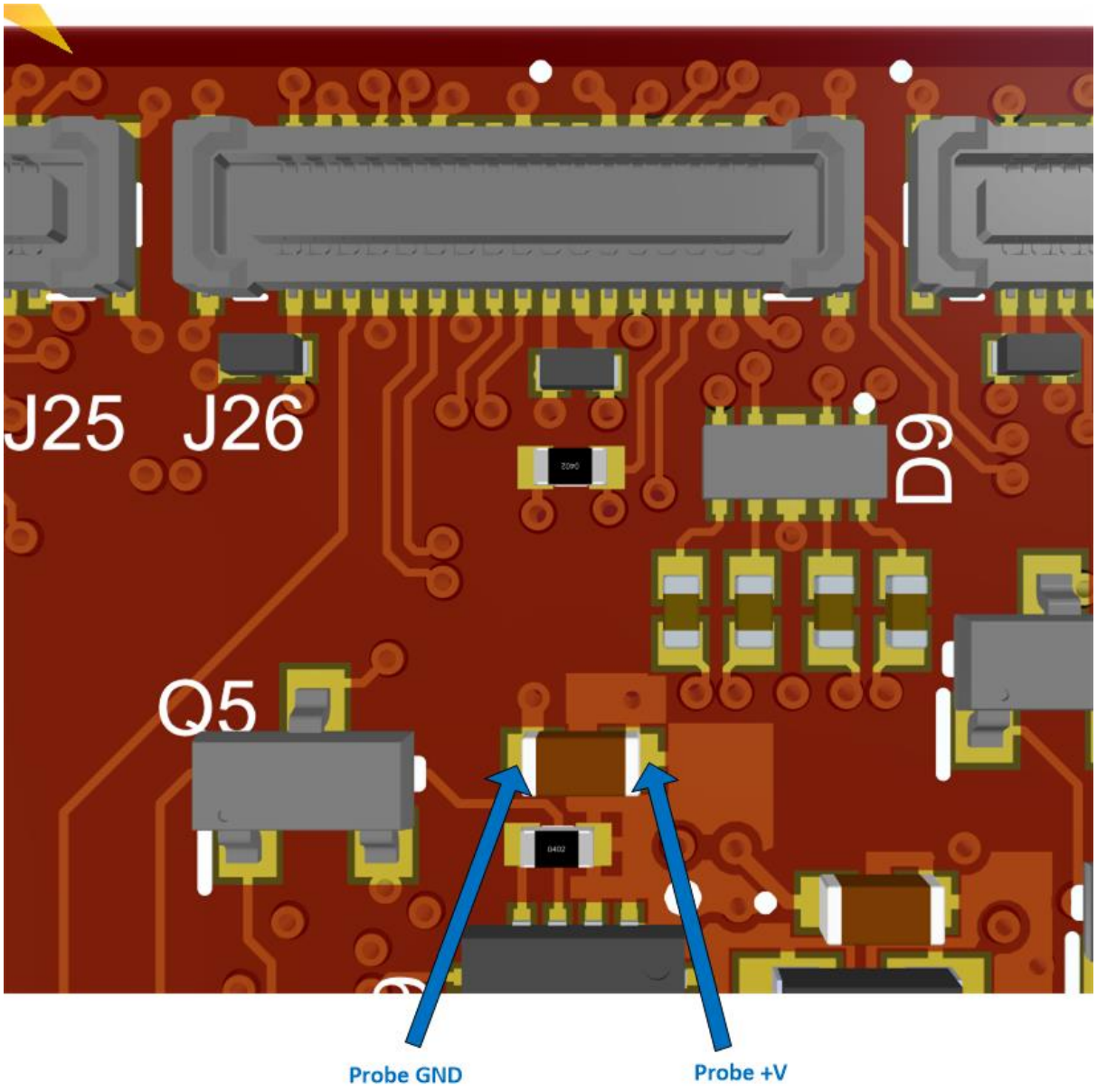
Testing the 8V5_36V_IN power rail



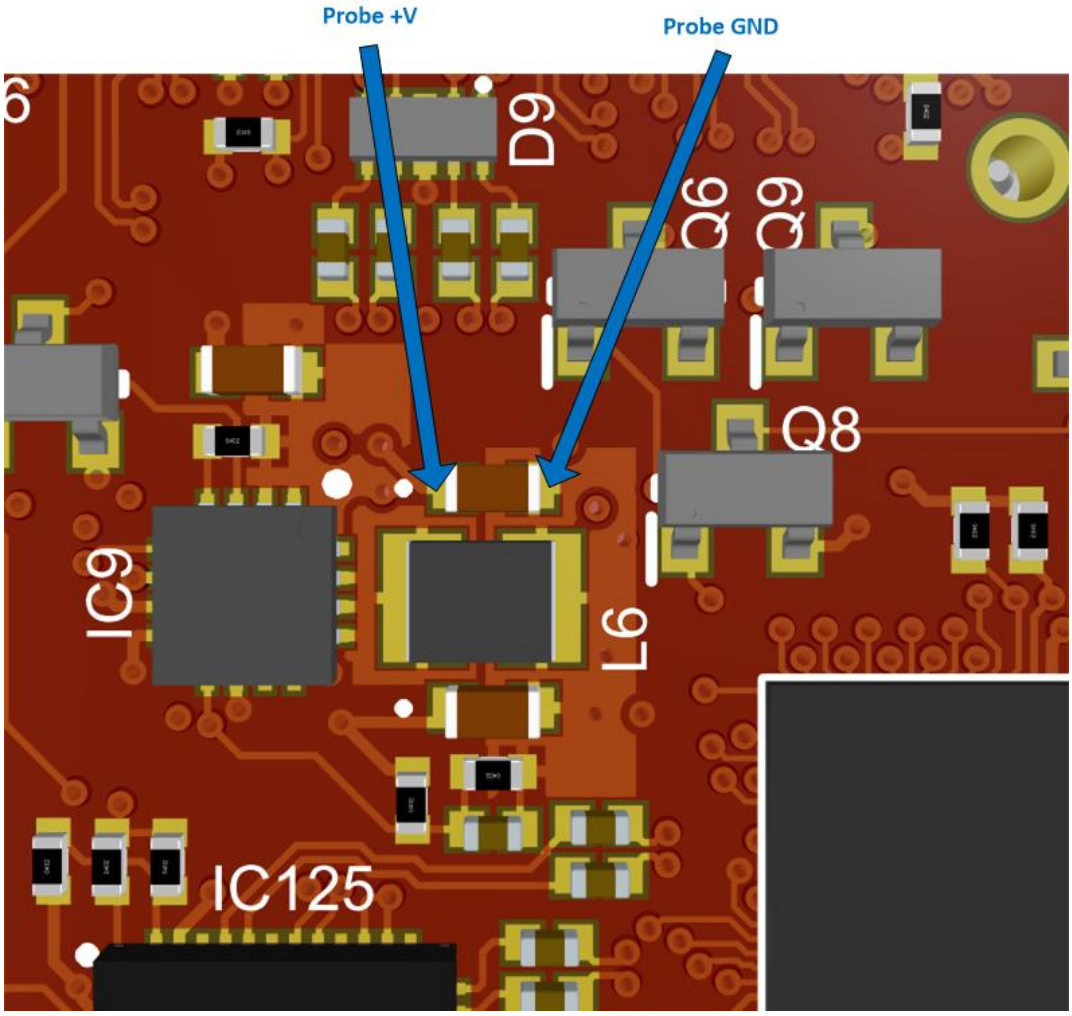
Testing the 5V0_REG_OUT power rail



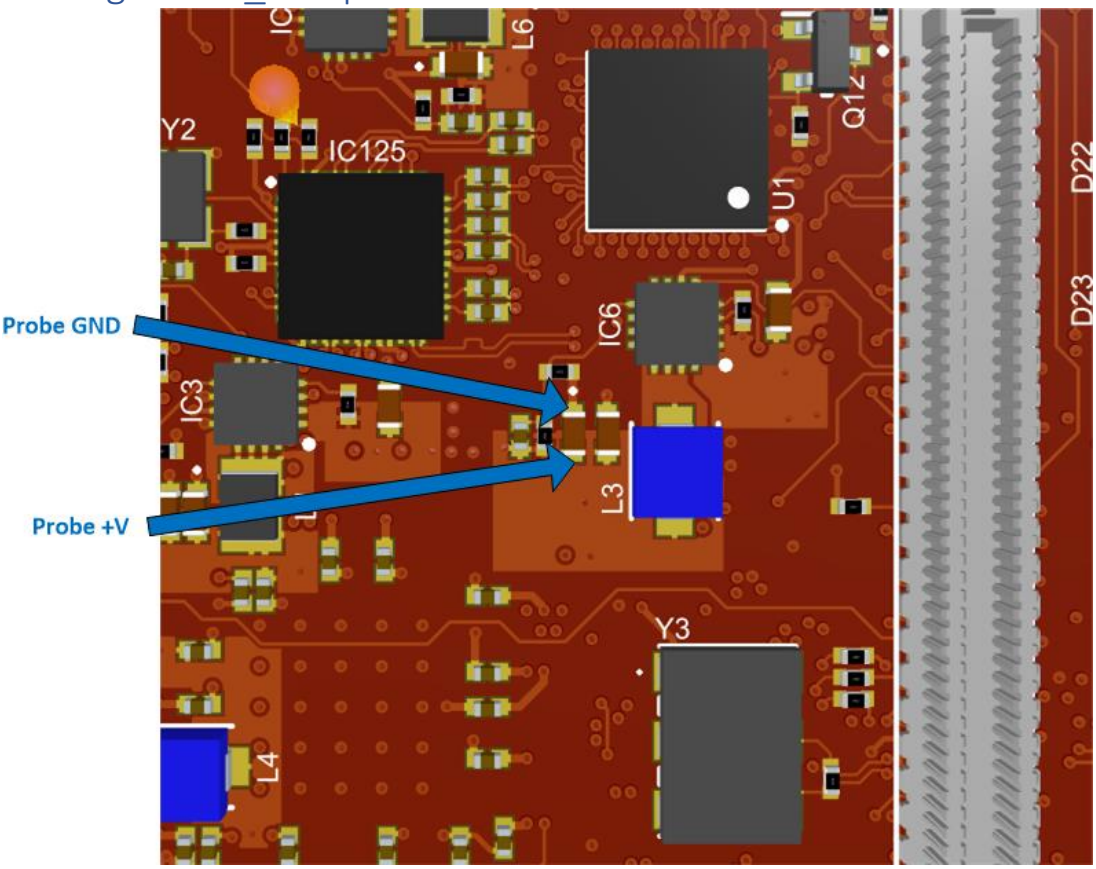
Testing the 5V0_IN power rail



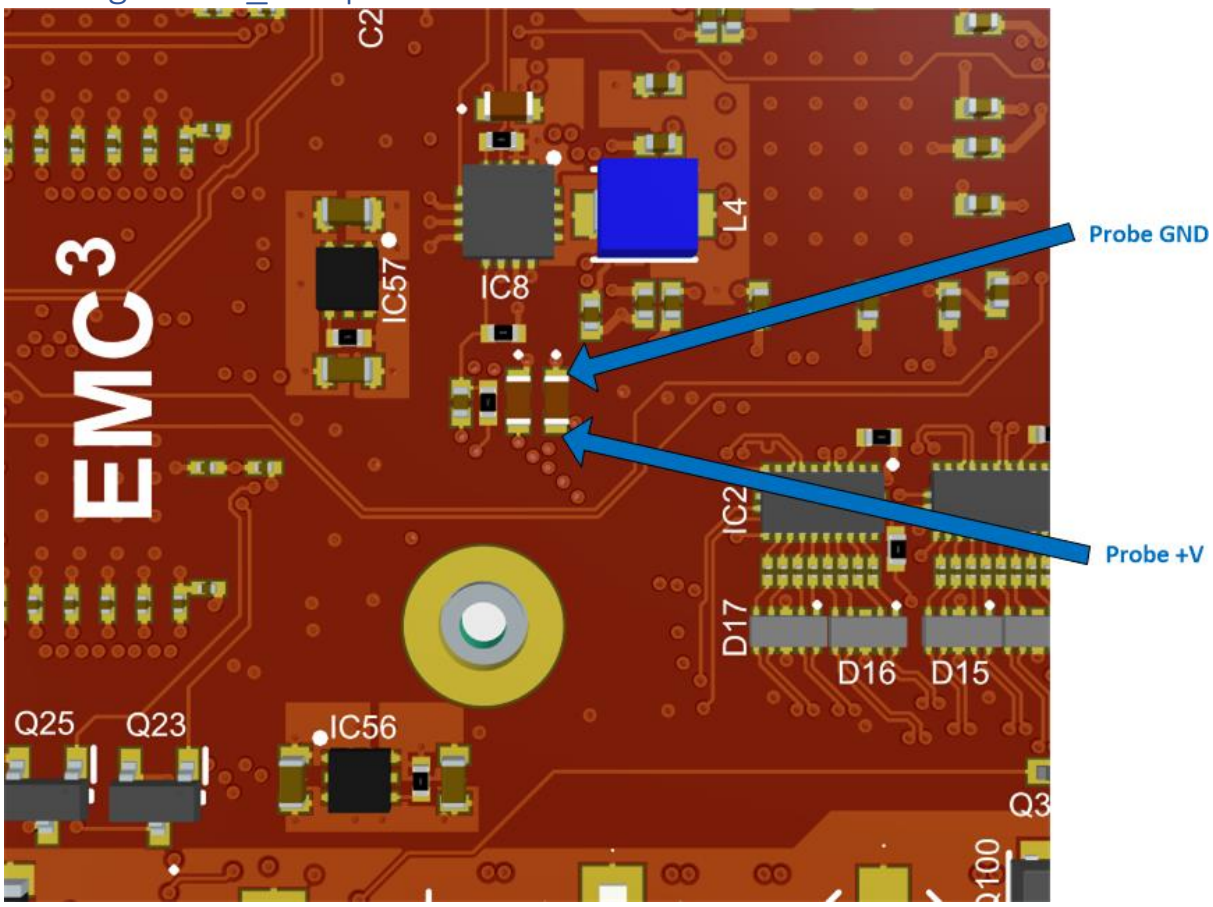
Testing the PS_1V2 power rail


Probe +V
Probe GND
D9
Q6
Q9
Q8
IC9
L6
IC125

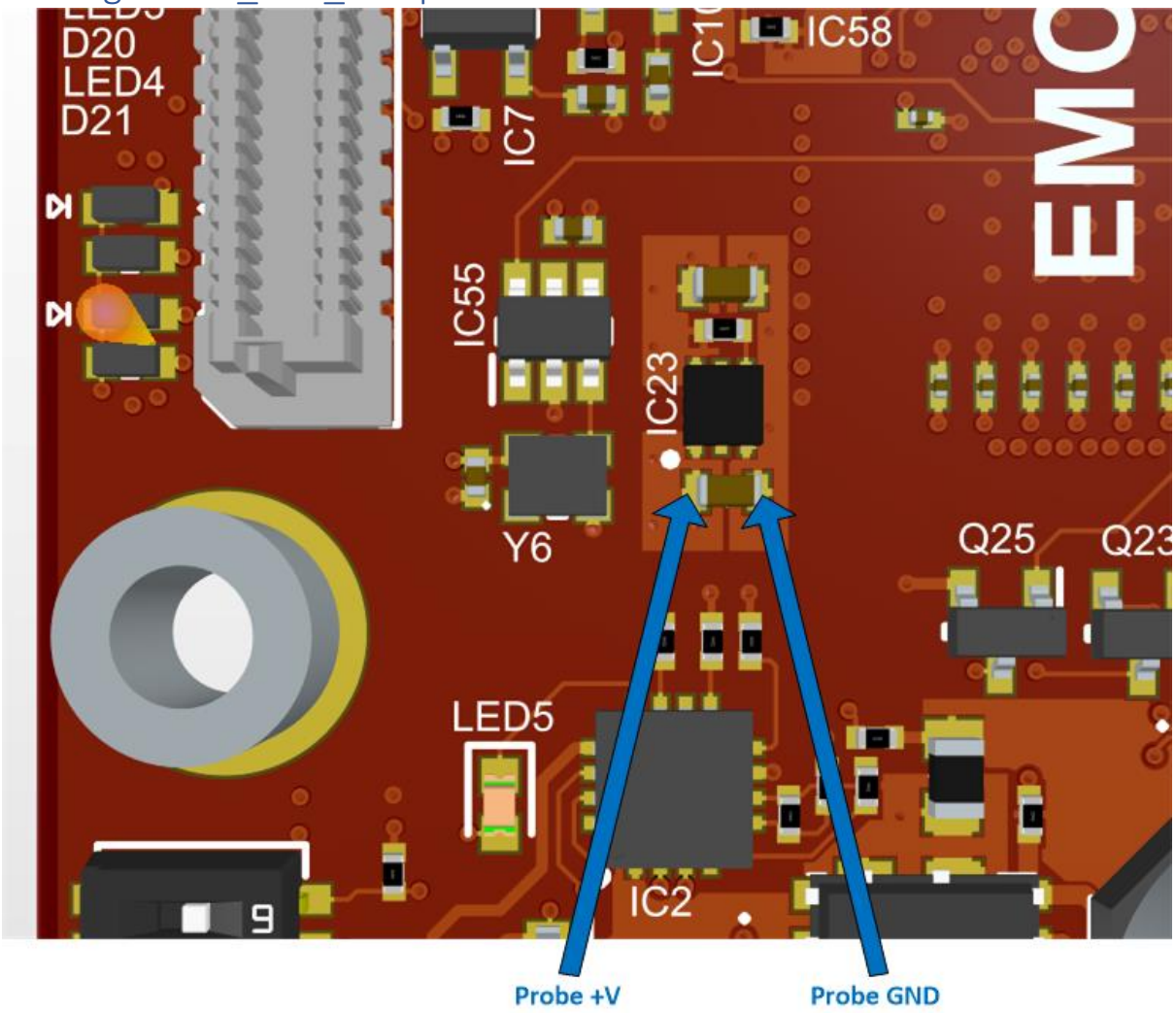
Testing the PS_1V8 power rail



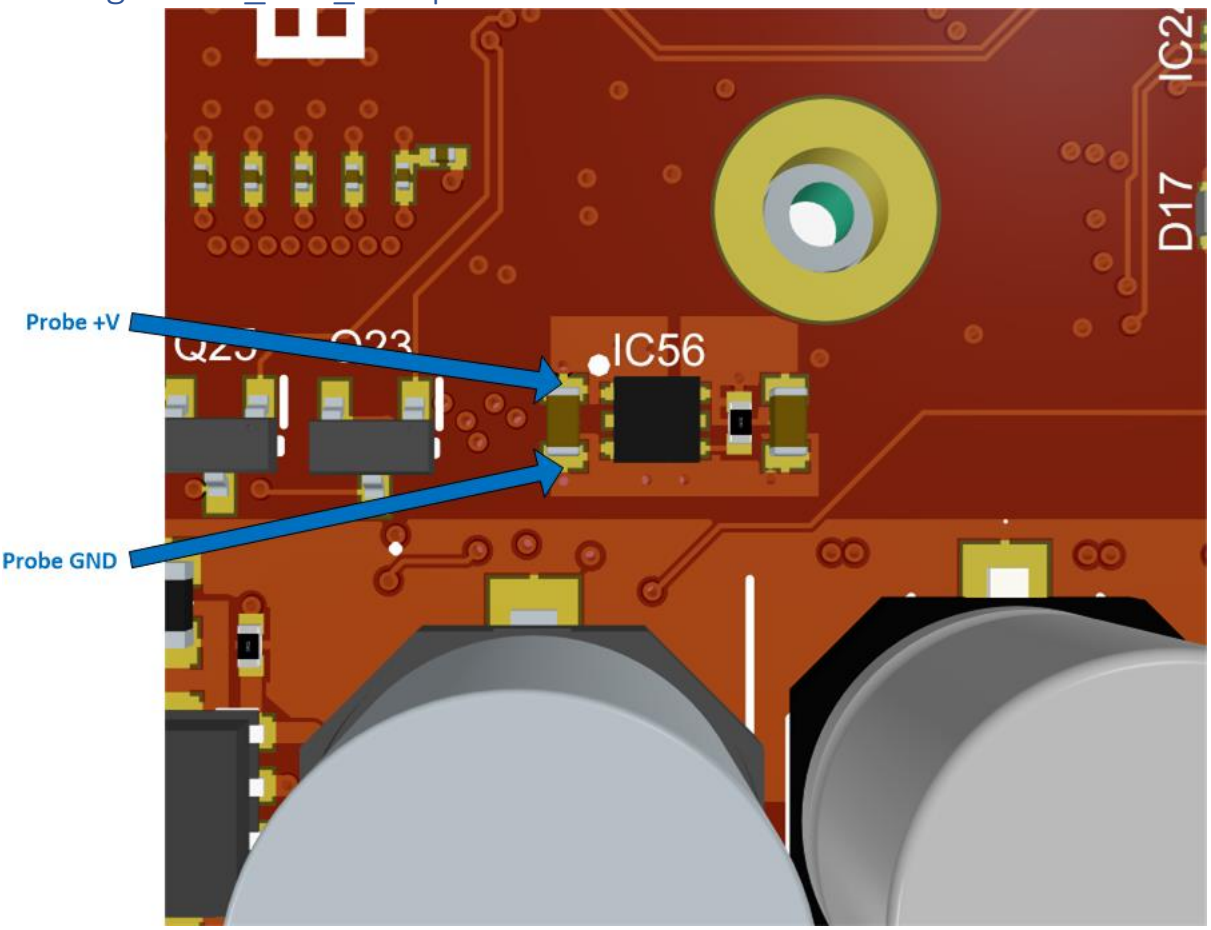
Testing the PS_3V3 power rail



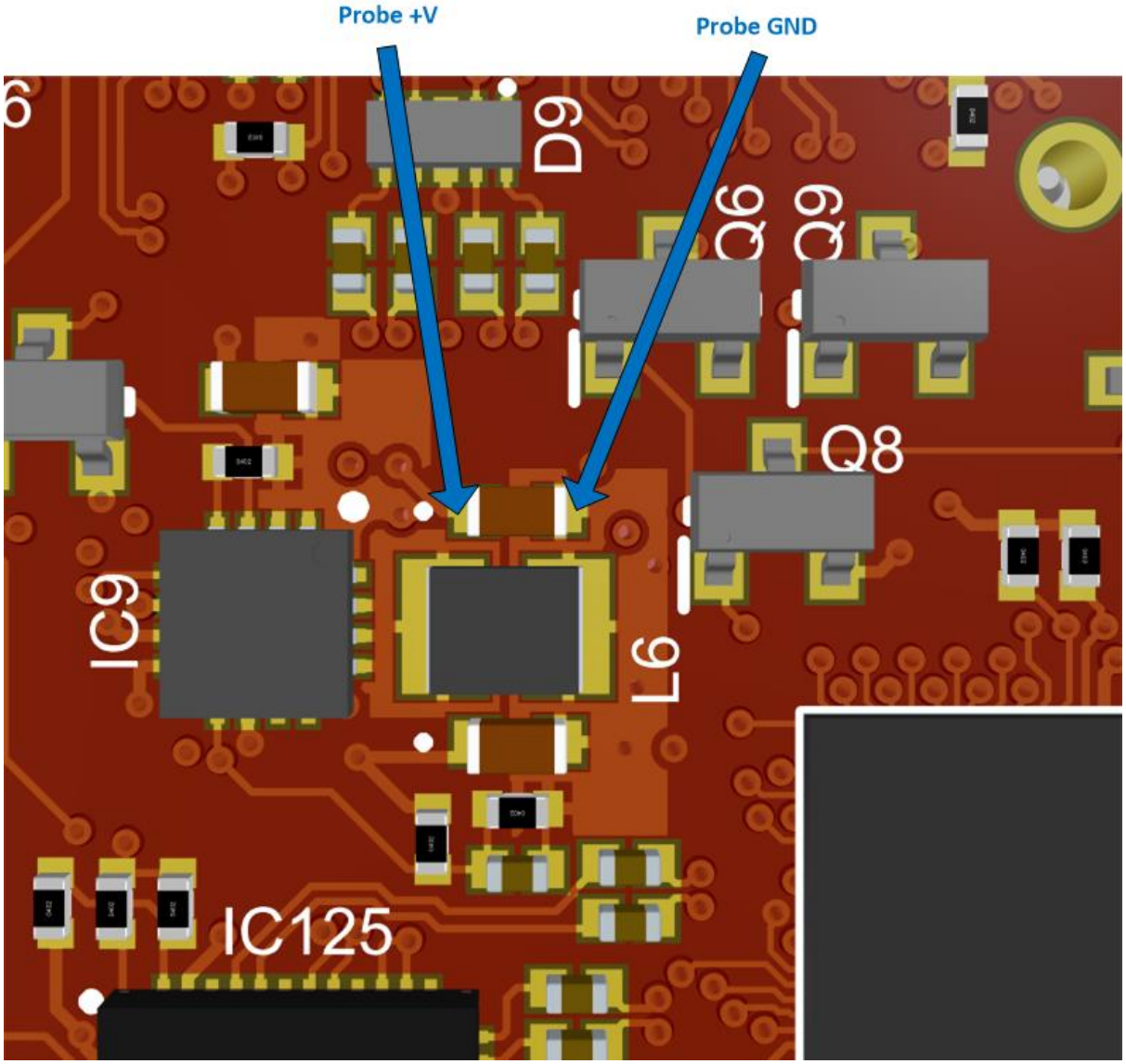
Testing the PS_ETH_1V0 power rail



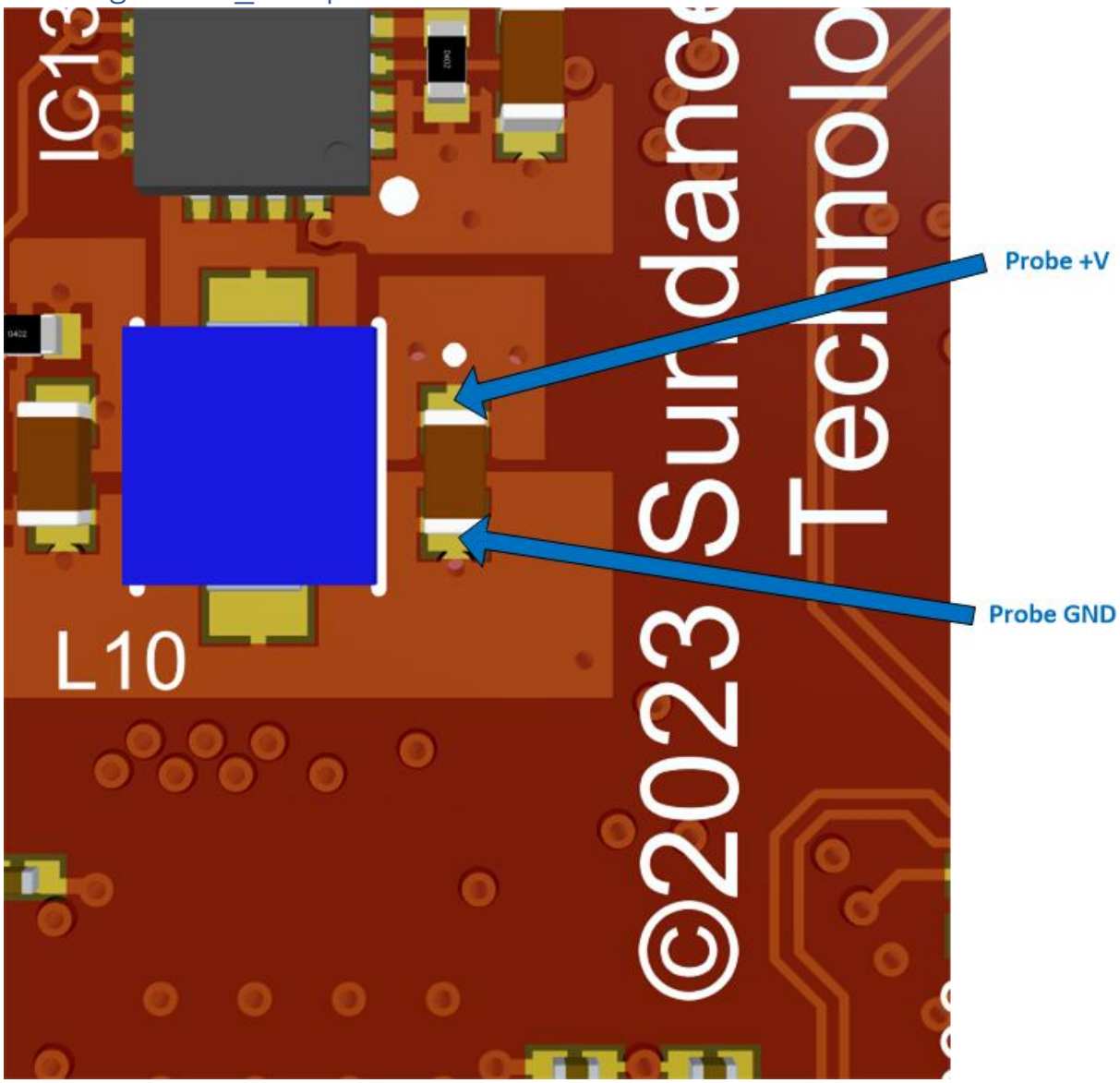
Testing the PS_ETH_2V5 power rail



Testing the PL_1V2 power rail

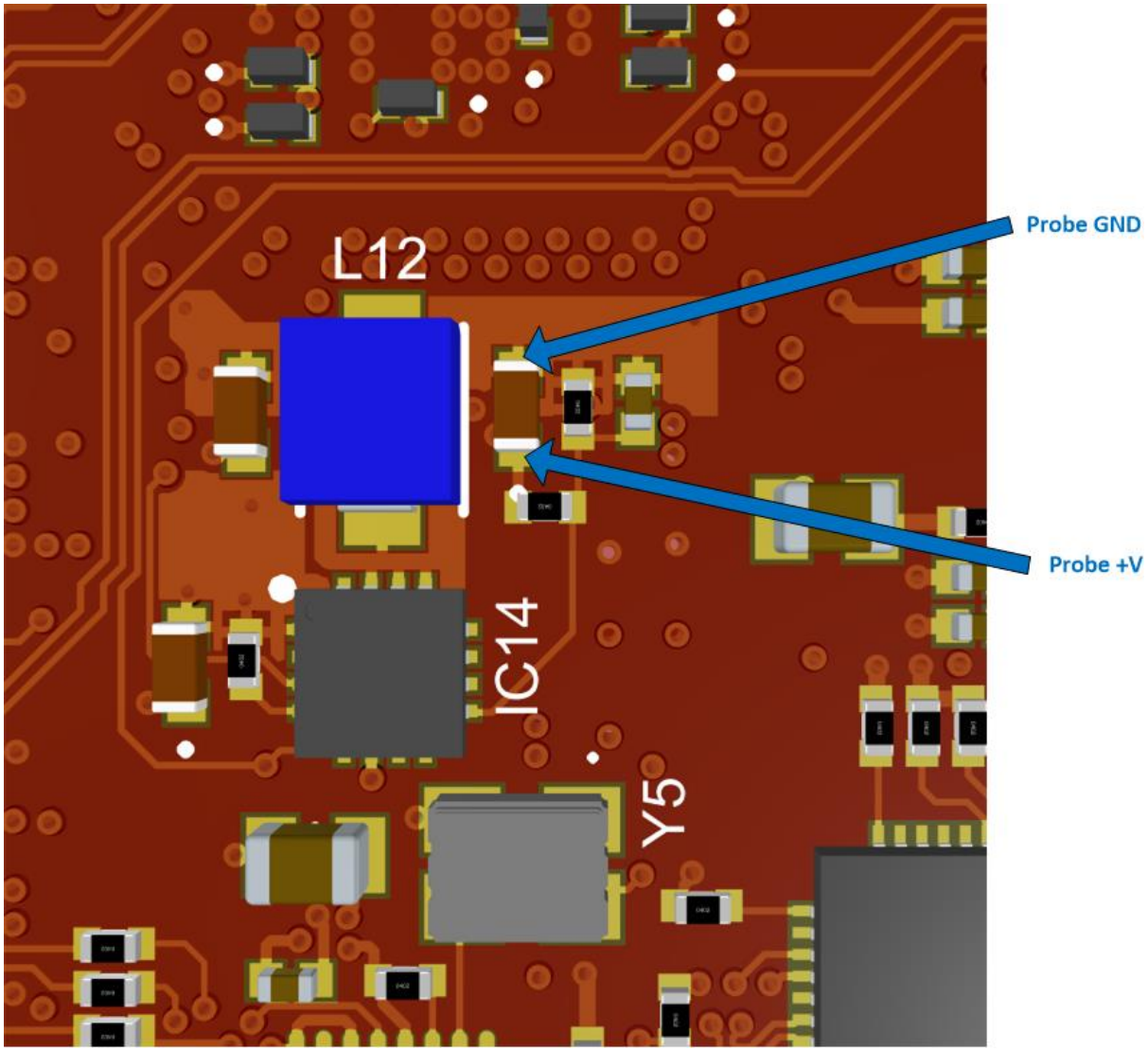


Testing the PL_1V8 power rail

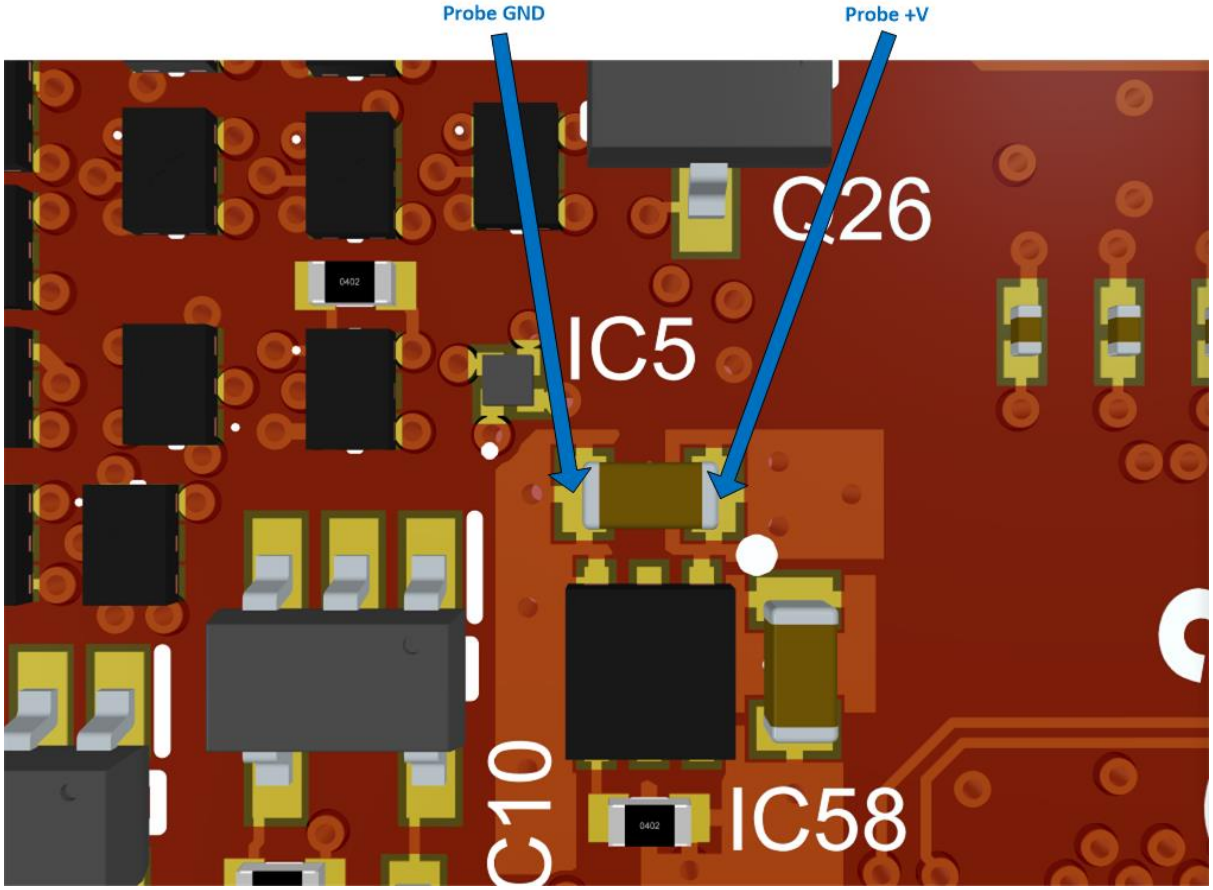


Testing the PL_3V3 power rail

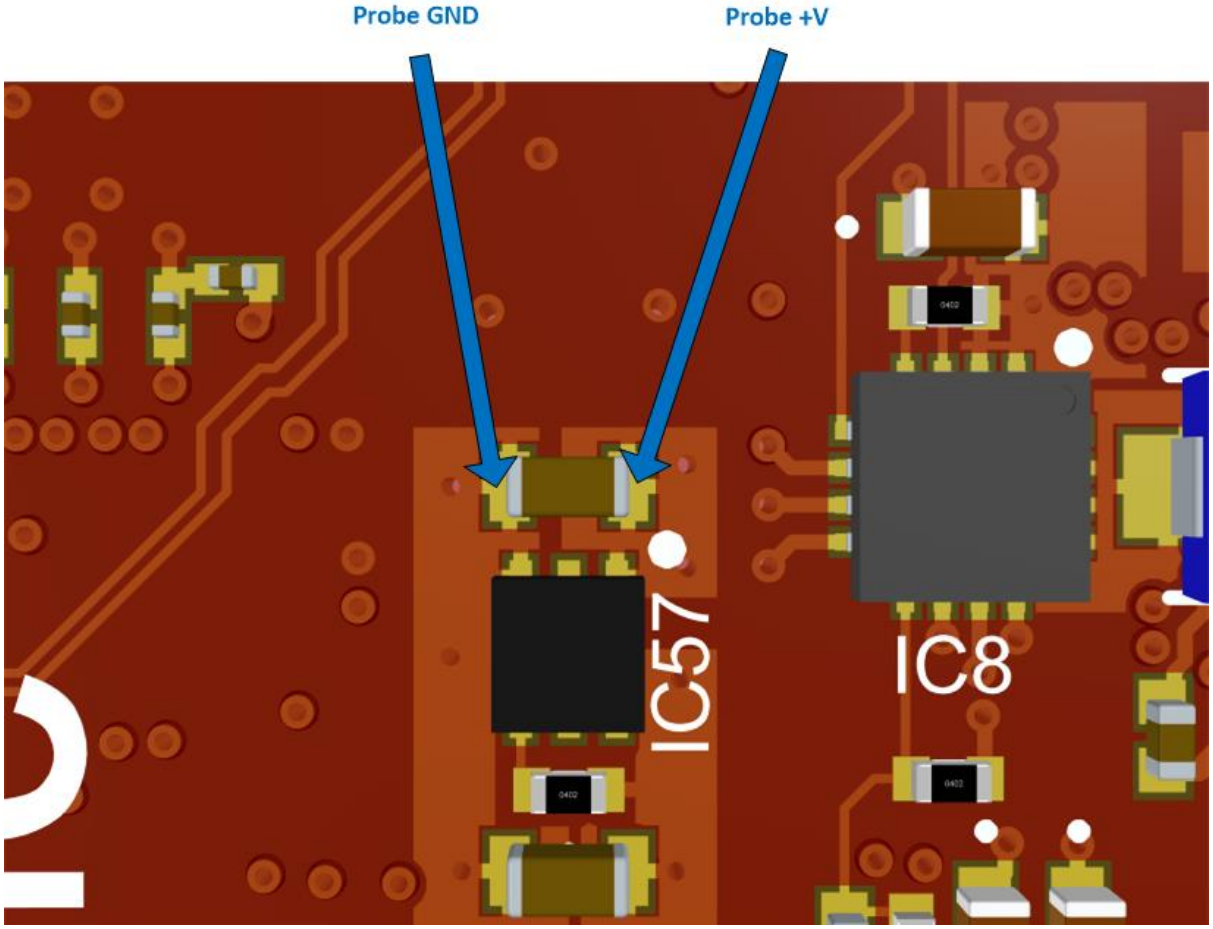
Component on Rear


L12
IC14
Y5
Probe GND
Probe +V

Testing the PL_ETH_1V0 power rail

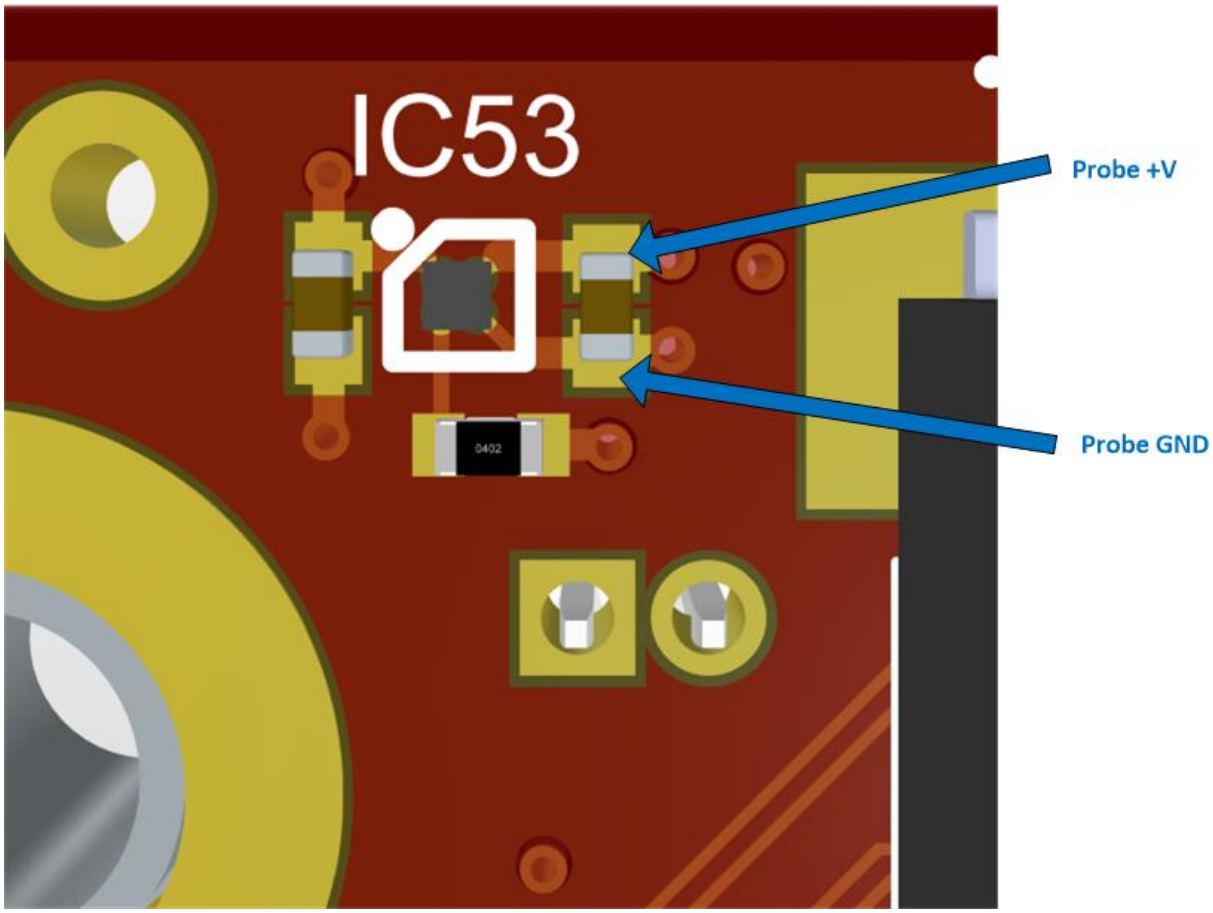


Testing the PL_ETH_2V5 power rail



Testing the IAS_2V7 power rail

Component on Rear


IC53
Probe +V
Probe GND
0402

Testing the IAS_2V8_AF power rail