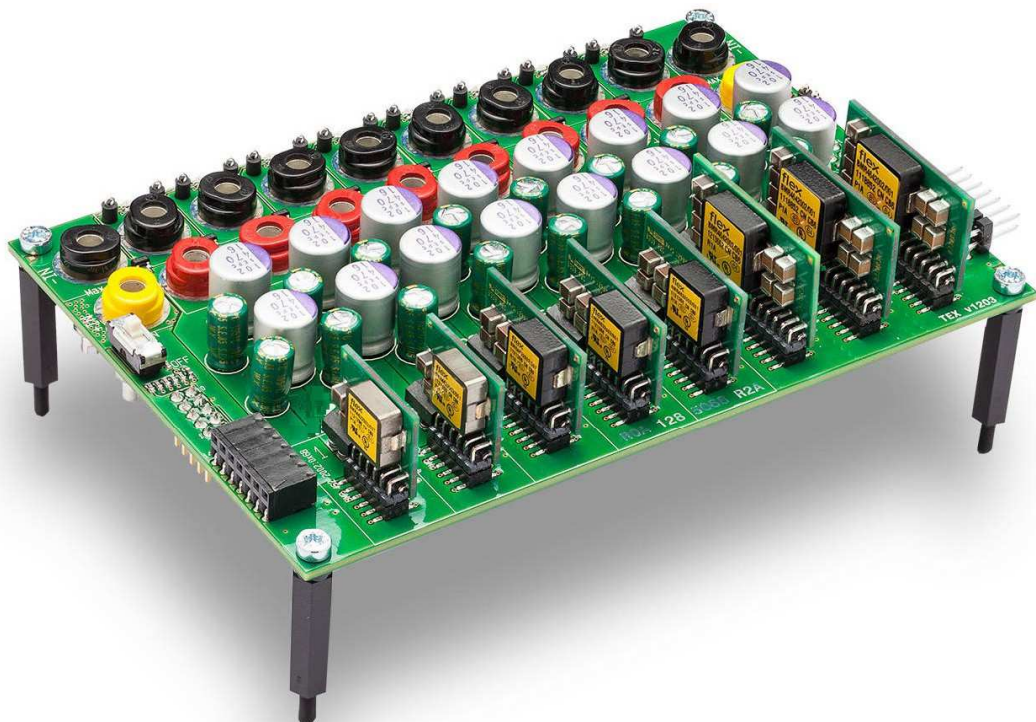


POL SIP Evaluation Board

ROA 128 5068

User Guide



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1 User Guide

1.1 Power Up/Down Instructions

This section of the document describes how to connect power supply for different cases in order to avoid mistake during measurements.

1.1.1 Power Supply Connection

Connect 5-14V DC power to the "+IN and "-IN" connectors (see Fig 1.1).

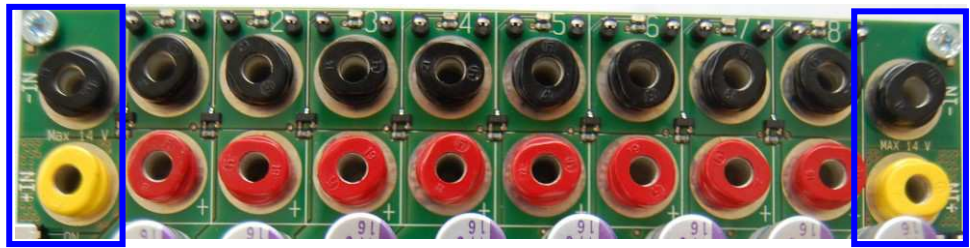


Fig 1.1 Connect 5-14V to either of the "+IN" and "-IN" DC power connectors located in both ends of the board (see blue rectangles).

Fig 1.2 shows the RC switch in "On" position.

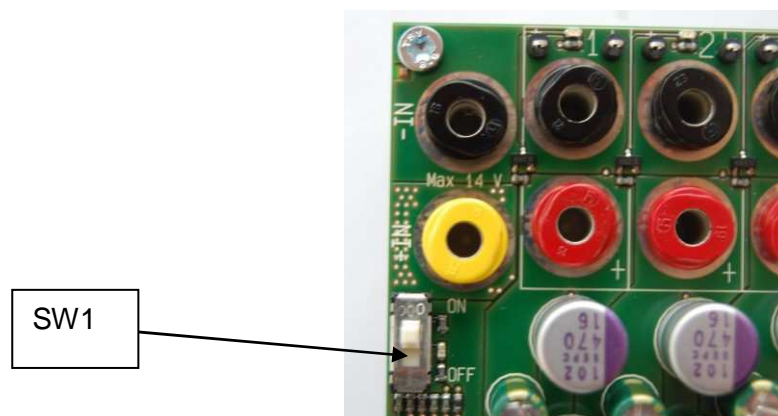


Fig 1.2 the RC switch in "On" position.

1.2 USB to PMBus connections

Fig 1.3a and Fig 1.3b shows the connection of two types of USB-to-PMBus adapters.

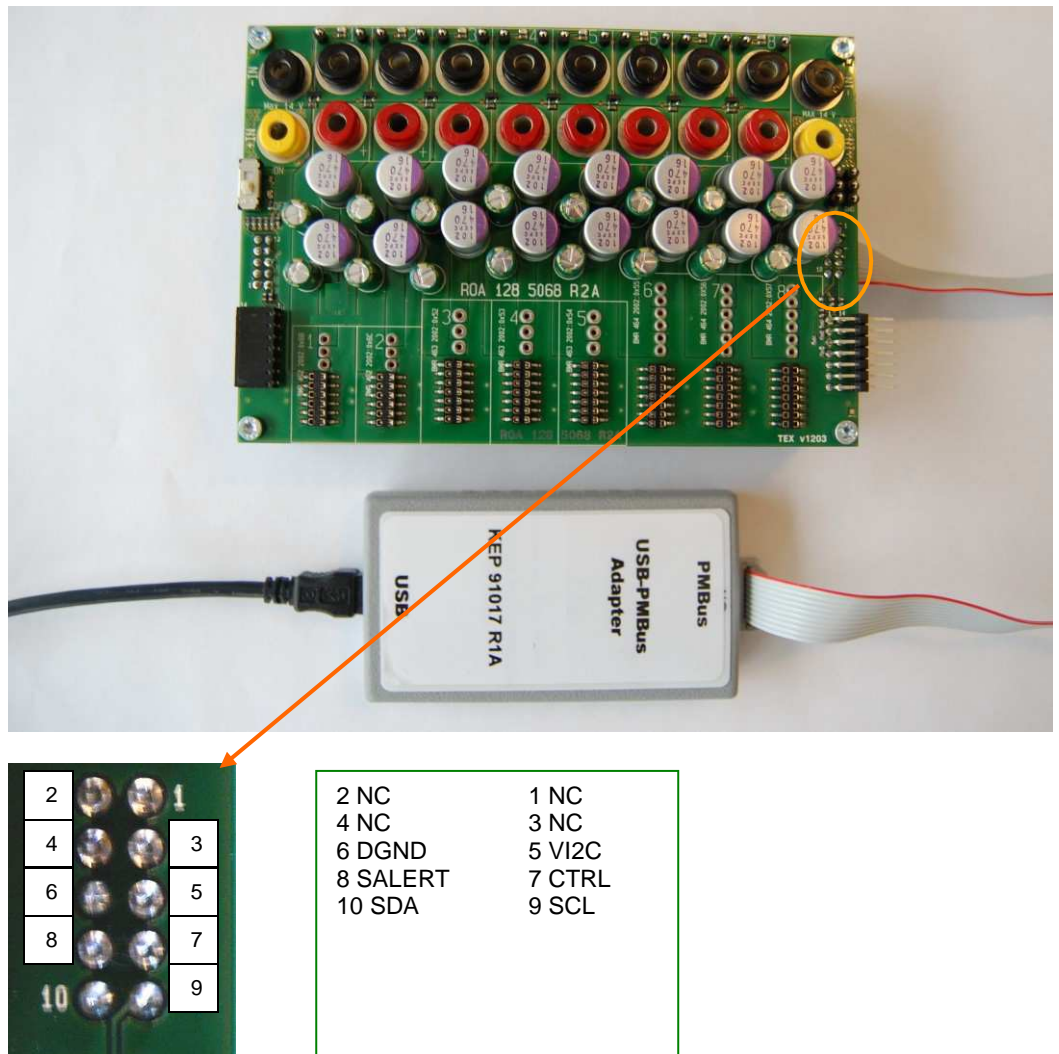


Fig 1.3a Connection of the Flex KEP 910 17 PMBus-to-USB adapter (connector is found on the back side of the ROA 128 5068 board)

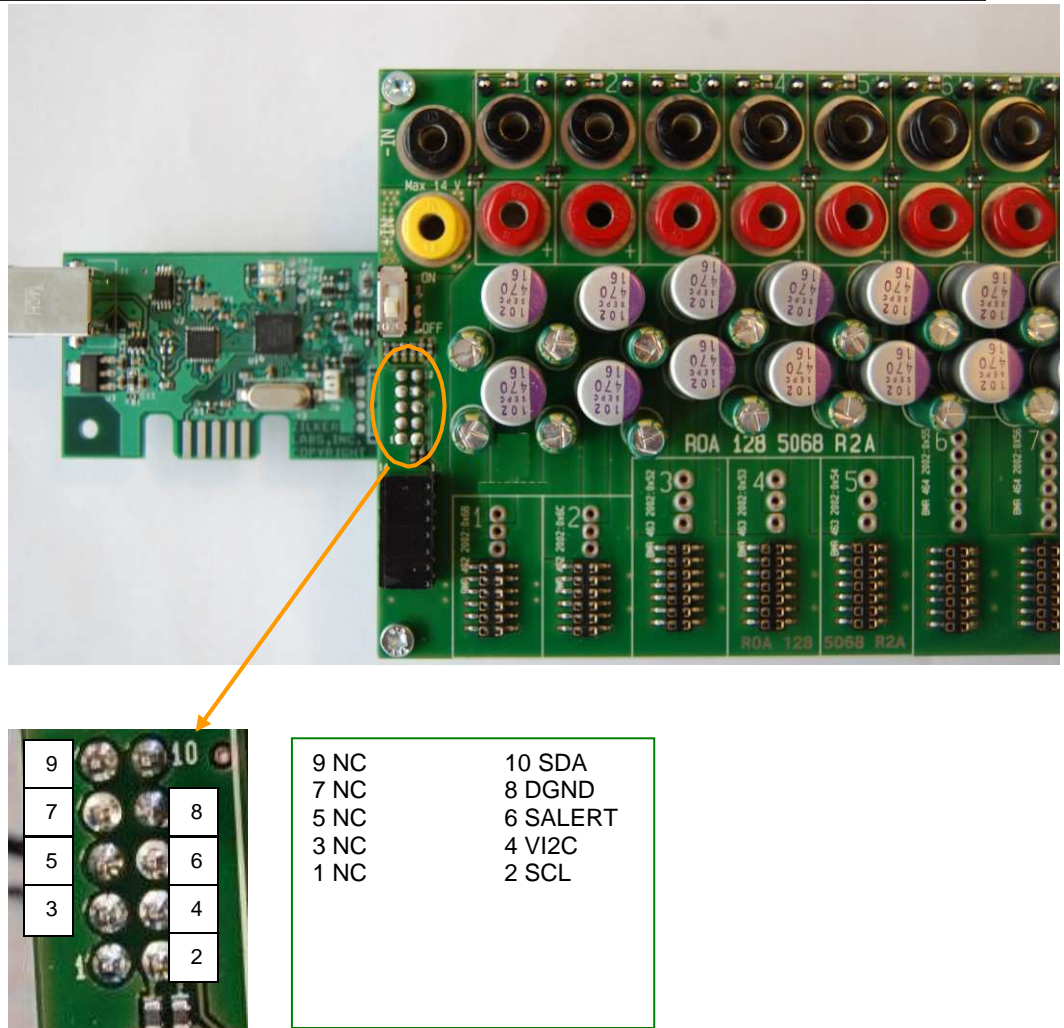


Fig 1.3b Connection of the Intersil ZLUSBREF02 PMBus-to-USB adapter (connector is found on the back side of the ROA 128 5068 board)

1.2.1 Power-up instruction:

- **Mount** the **BMR:s** in the desired positions
- Connect and turn **On** the **5-14 V** supply
- Turn **RC switch** in **On** position
 - The LEDs should now give green light, (unless the outputs of the BMRs are not configured to be disabled).
- Connect the PMBus Adapter/Cable to the board.
- Start the software program.

1.2.2 Power-down instruction:

- Turn **RC switch** in **Off** position **or** turn **Off** the **5-14V** Supply
- Now, the **BMR** modules can be removed/replaced.

1.3 Board to board connectors

Fig 1.4 shows the board to board connectors

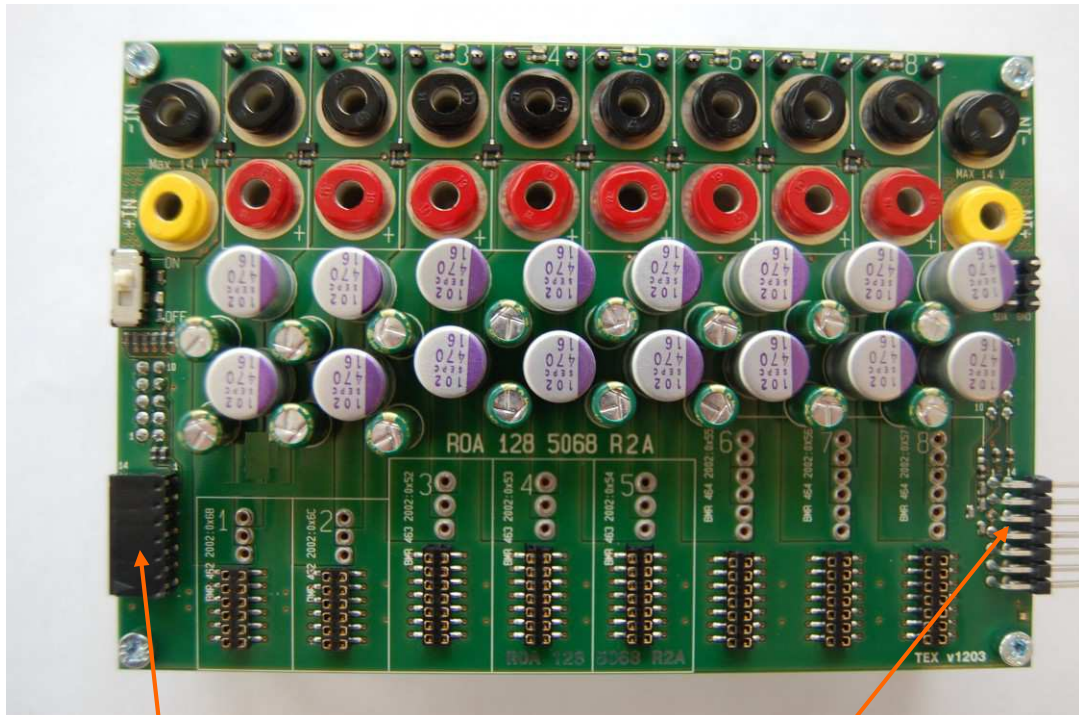


Fig 1.4 Board to board connectors

Board I/O
connector

PMBus I/O
connector

The following signals are connected to the board to board connectors:

SYNC
SALERT
SCL
SDA
CTRL
GND

This board can be connected to other 3E evaluation boards through the board to board connectors. All interconnected boards are sharing the same PMBus and SYNC signals and only one PMBus to USB adapter is needed.

Note: When the switch SW1 (see fig 1.2) is in On position the CTRL_ALL pin on each module is connected to CTRL which is connected to the board to board connectors.

2 Address and vout range resistors

This section describes the locations of the Address and Vout-range pinstrap resistors, see table 1 for the resistors for each POL position. To know what resistor value to mount, please look in the actual technical specification of the BMR product.

Fig 2.1 shows the positions of the address and vout range resistors.

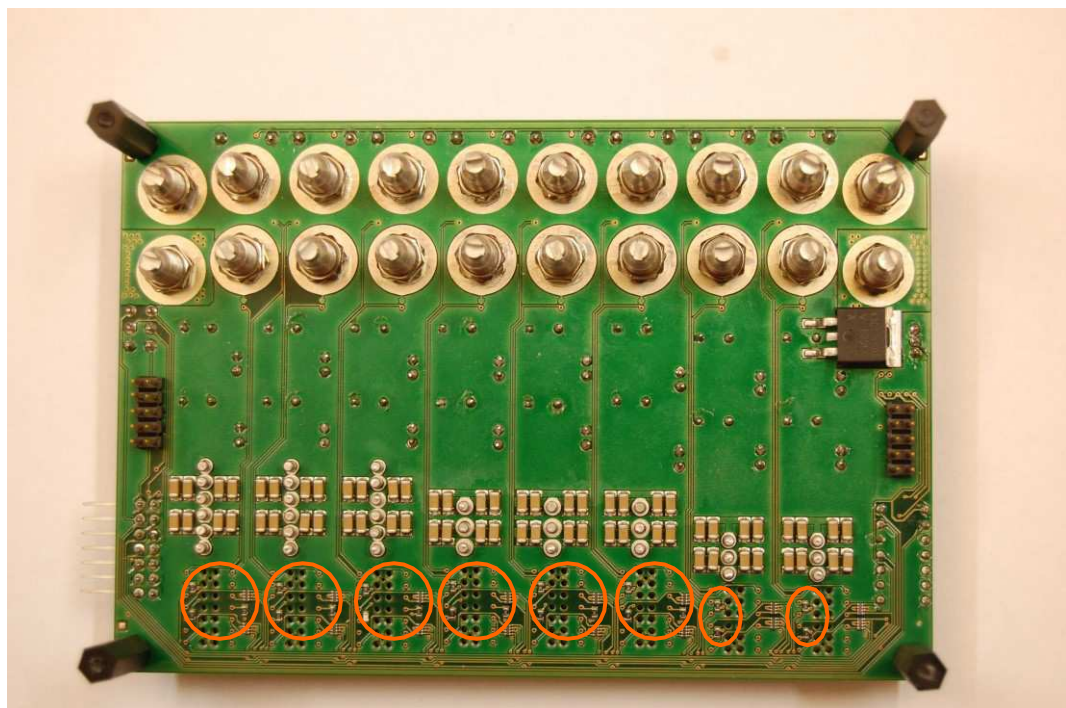


Fig 2.1 Positions of the address and vout range resistors.

2.1 Change of address resistors

2.1.1 BMR 462 adjustment of address resistors

To change the address in a position, change the resistors values as shown in fig. 2.2.

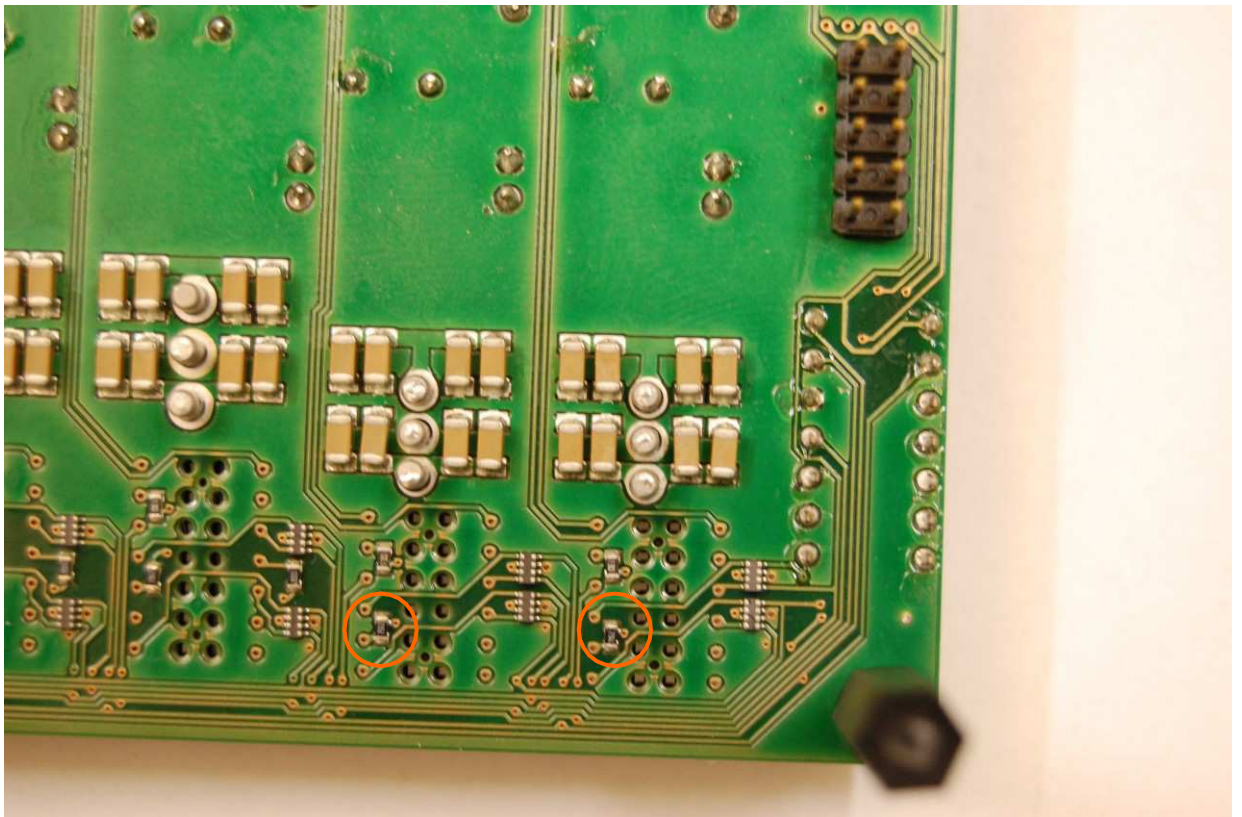


Fig 2.2 Address resistors in positions for BMR 462.

2.1.2 BMR 463/464 adjustment of address resistors

To change the address in a position, change the resistors values as shown in fig. 2.3.

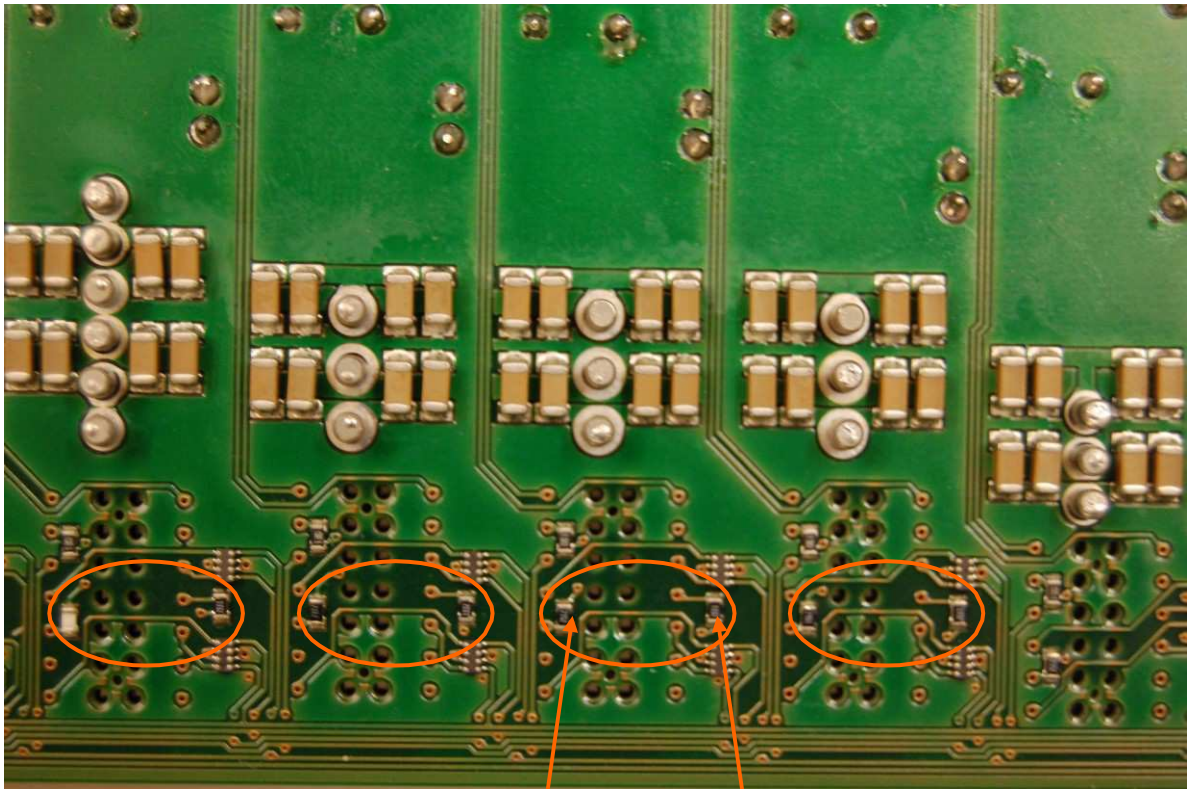


Fig 2.3 Address resistors in positions for BMR 463/464.

RSA0

RSA1

2.2 Change of Vout range resistors

2.2.1 BMR 462 adjustment of vout range resistors

To change the vout range in a position, change the resistors values as shown in fig. 2.4.

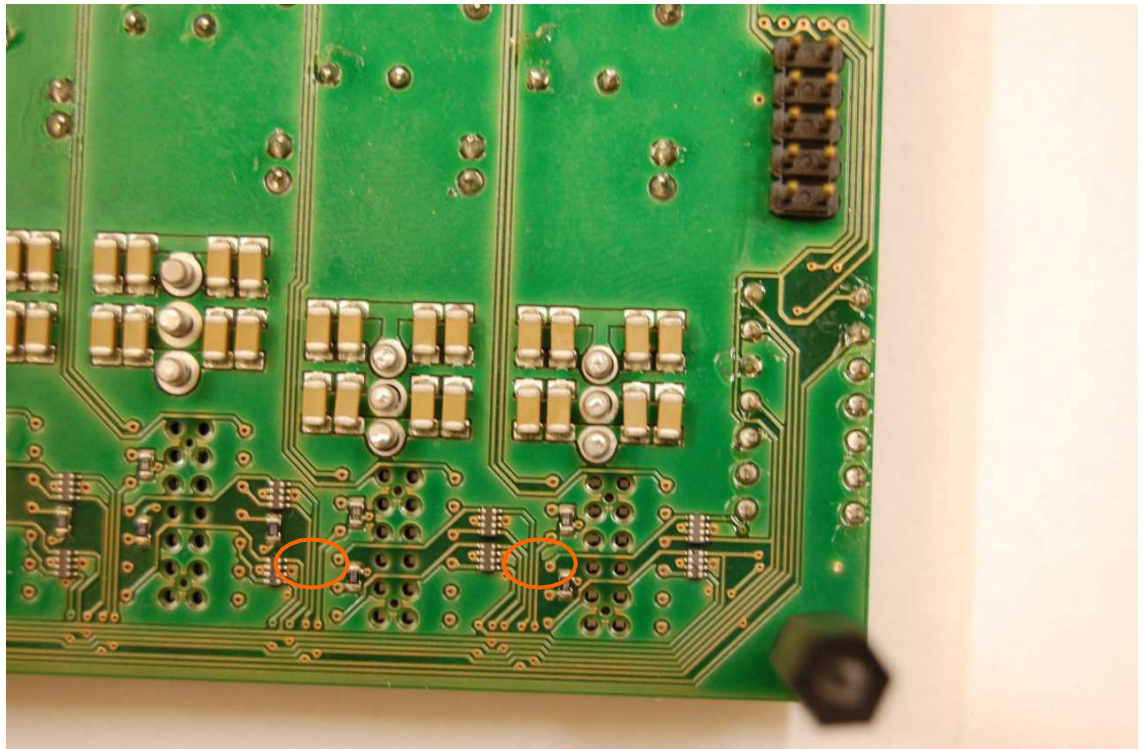


Fig 2.4 Vout range resistors in positions for BMR 462.

2.2.2 BMR 463/464 adjustment of vout range resistors

To change the vout range in a position, change the resistors values as shown in fig. 2.5.

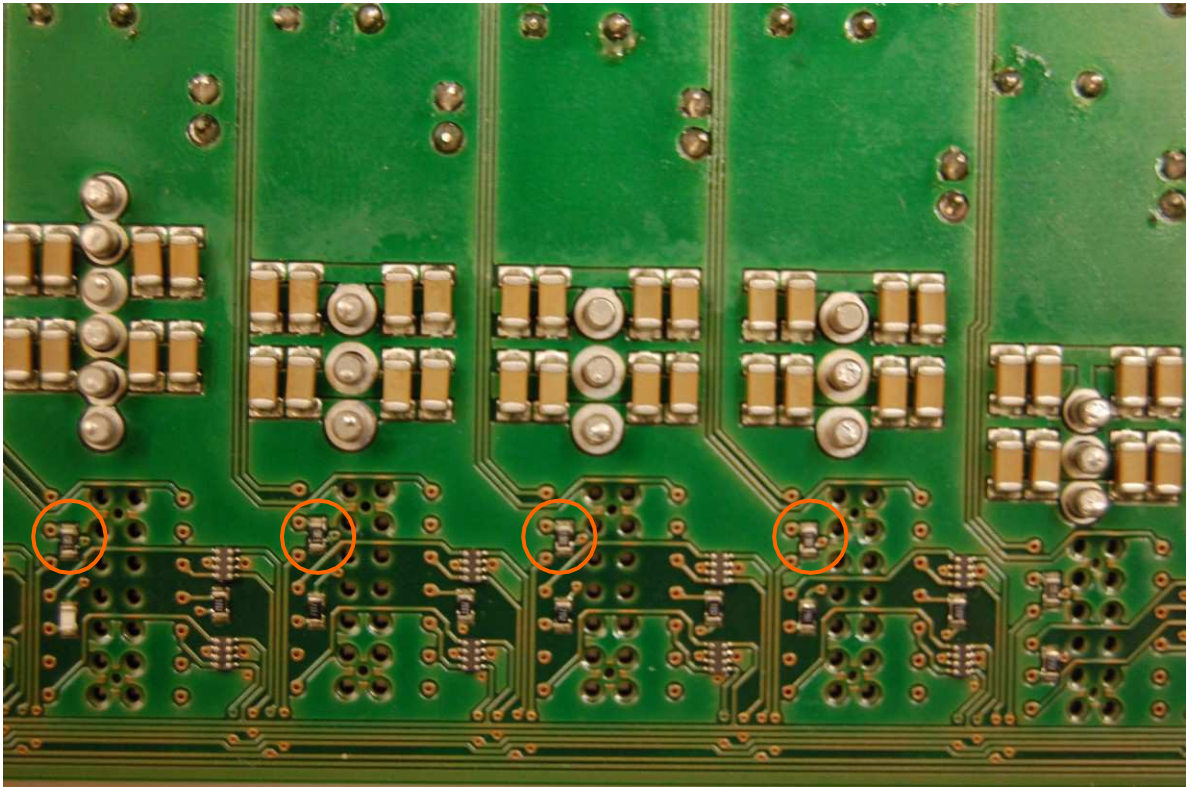


Fig 2.5 Vout range resistors in positions for BMR 463/464.

POL position / Address	Address resistors RSA0 / RSA1	Vout range resistor
1 / 0x6B	R103	R104
2 / 0x6C	R203	R204
3 / 0x52	R303 / R304	R305
4 / 0x53	R403 / R404	R405
5 / 0x54	R503 / R504	R505
6 / 0x55	R603 / R604	R605
7 / 0x56	R703 / R704	R705
8 / 0x57	R803 / R804	R805

Table 1 Address resistors and Vout resistors for different POL positions.

3 Modification for Parallel Operation

It is possible to operate two or three BMR 463 2002 or two or three BMR 464 2002 in parallel by connecting the output voltage connectors together.

For proper performance the connection shall be of low impedance and the point of connection shall be at the PCB as indicated in Figure 3.1.

As connection power jumpers can be used as shown in Figure 3.2. Note that the power jumpers shall be attached below the ring nuts of the output voltage connectors. Alternatively the connection can be made of a piece of thick copper wire that is soldered directly to the PCB.

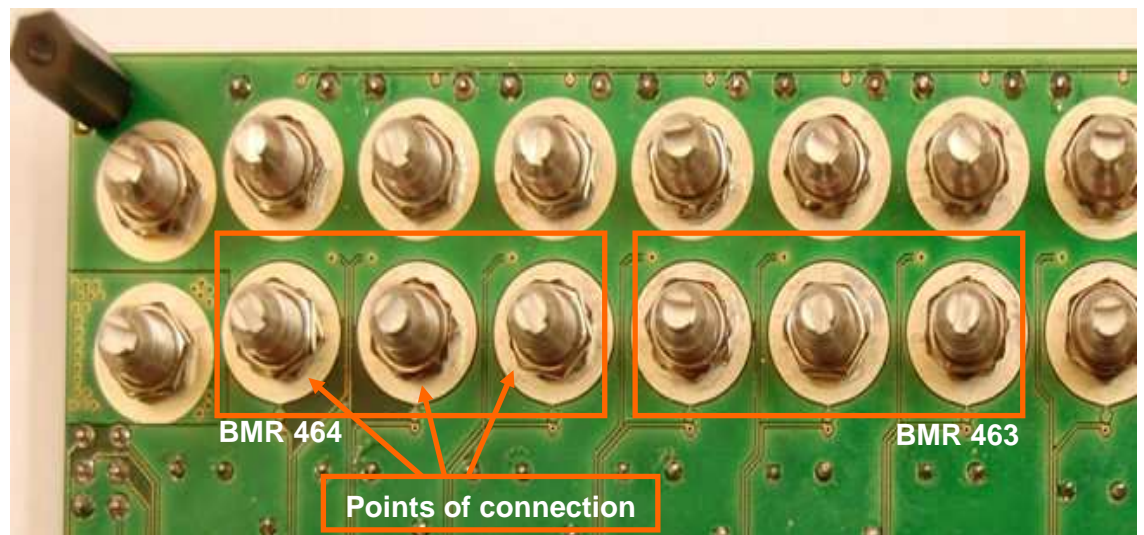


Fig 3.1. Connection of output voltage for parallel operation.

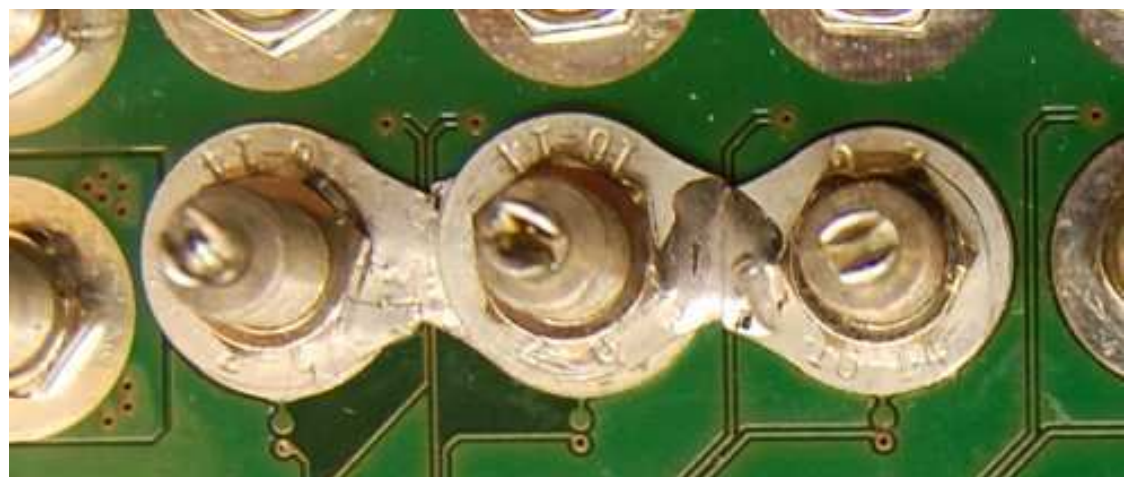


Fig 3.2. Connection with power jumpers.

4 Dimensions

The outer dimensions (in mm) of the test board are shown in Fig 4.1.

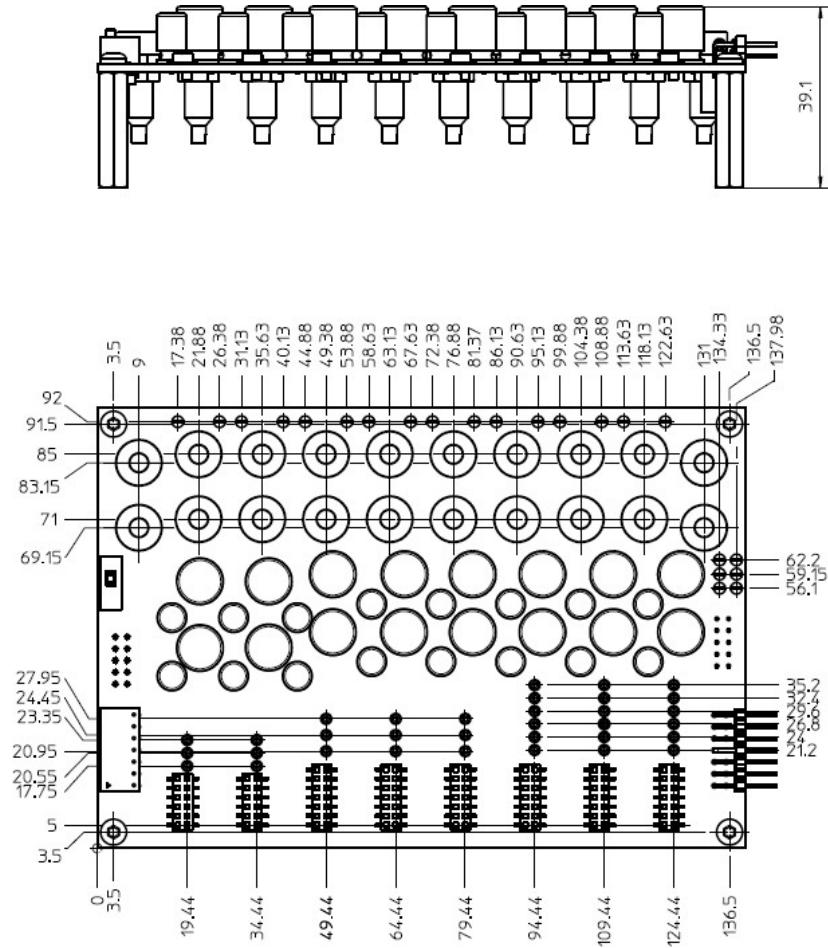


Fig 4.1 The outer dimensions (in mm).

The whole test board has the outer dimensions 140 x 95 x 39.1 mm (L x W x H). Weight of the complete test board is ~220 g.