Himalaya DC Charger Power Module

Power Module Assembly Document

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Document Revision Log				
REV	**DESCRIPTION**	**PREPARED BY**	**APPROVED BY**	**DATE**
Draft	INITIAL	Omprakash		
1.0	POWER MODULE FCT Rev01	Omprakash	Shiva	8/02/2025

1. INTRODUCTION

1.1 Purpose

The purpose of this document is to describe the steps for PoM assembly into single package (Box) after LV FCT test for High voltage power testing.

1.2 Scope of this document

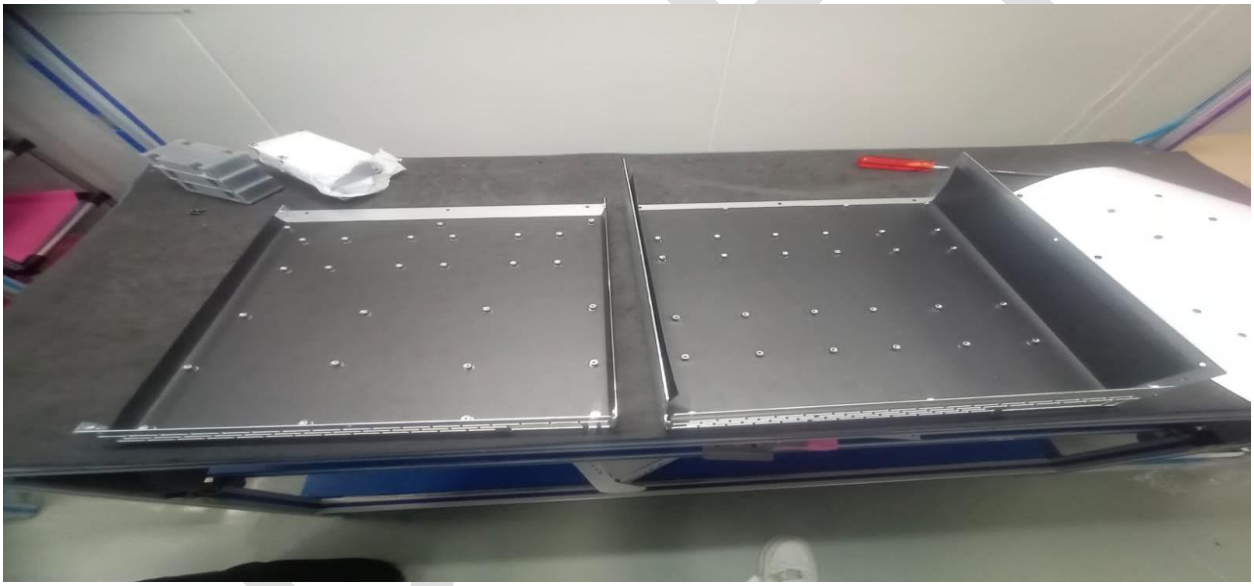
Power Module Packaging includes following items:

- Power Board 1 (PB1)
- Power Board 2 (PB2)
- Gate Driver Board Primary (GDB1)
- Gate Driver Board Secondary (GDB2)
- One Board to board connector.
- Power cable
- Heat sinks quantities (PB1- 3, PB2- 4 (Primary side -2 & secondary side-2)
- Enclosure
- Top & Bottom insulation sheet
- Heat sinks insulation Sheets!
- Thermal Pad (sheets) For PB1-3 & PB2-4 Quantities
- NTC- PB1-1 Quantity & PB2-2 Quantities with connector
- FAN assembly with Connectors.
- Short pins (black color)

2-SOP for PoM assembly follows these steps in sequence

1)- PB1 & PB2 Enclosure Should be available.

2)-Fix Black color insulation sheets in PB1 & PB2 enclosure.

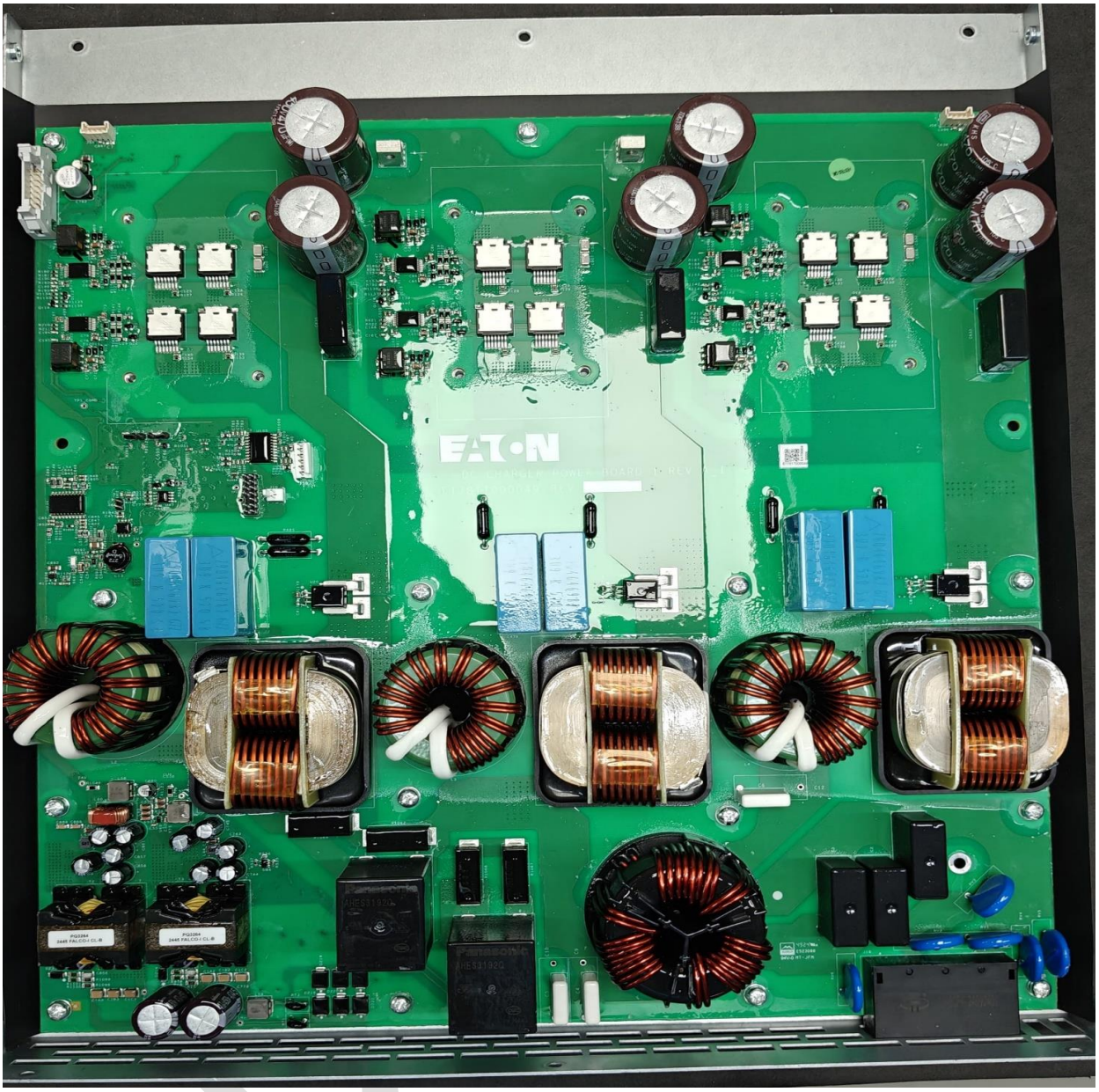


3)-Put PB1 & PB2 In enclosure including insulation sheets and fix it with screws

(SCREW Spring and flat Washer M4*8 ZN K-PZ) 

PB2

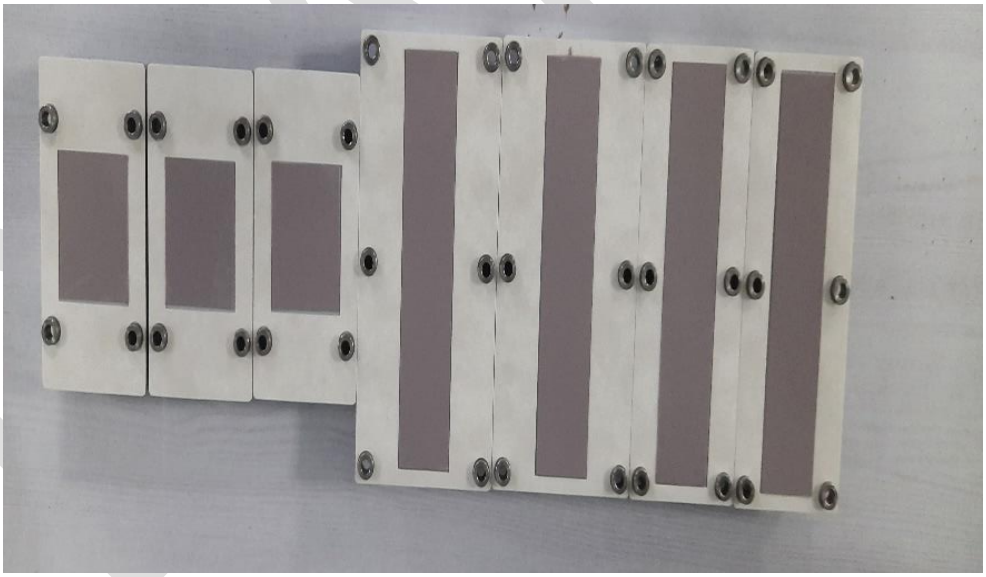
PB1



4)-Prepare Heat Sinks for PB1 & PB2 Mosfets in following manner:

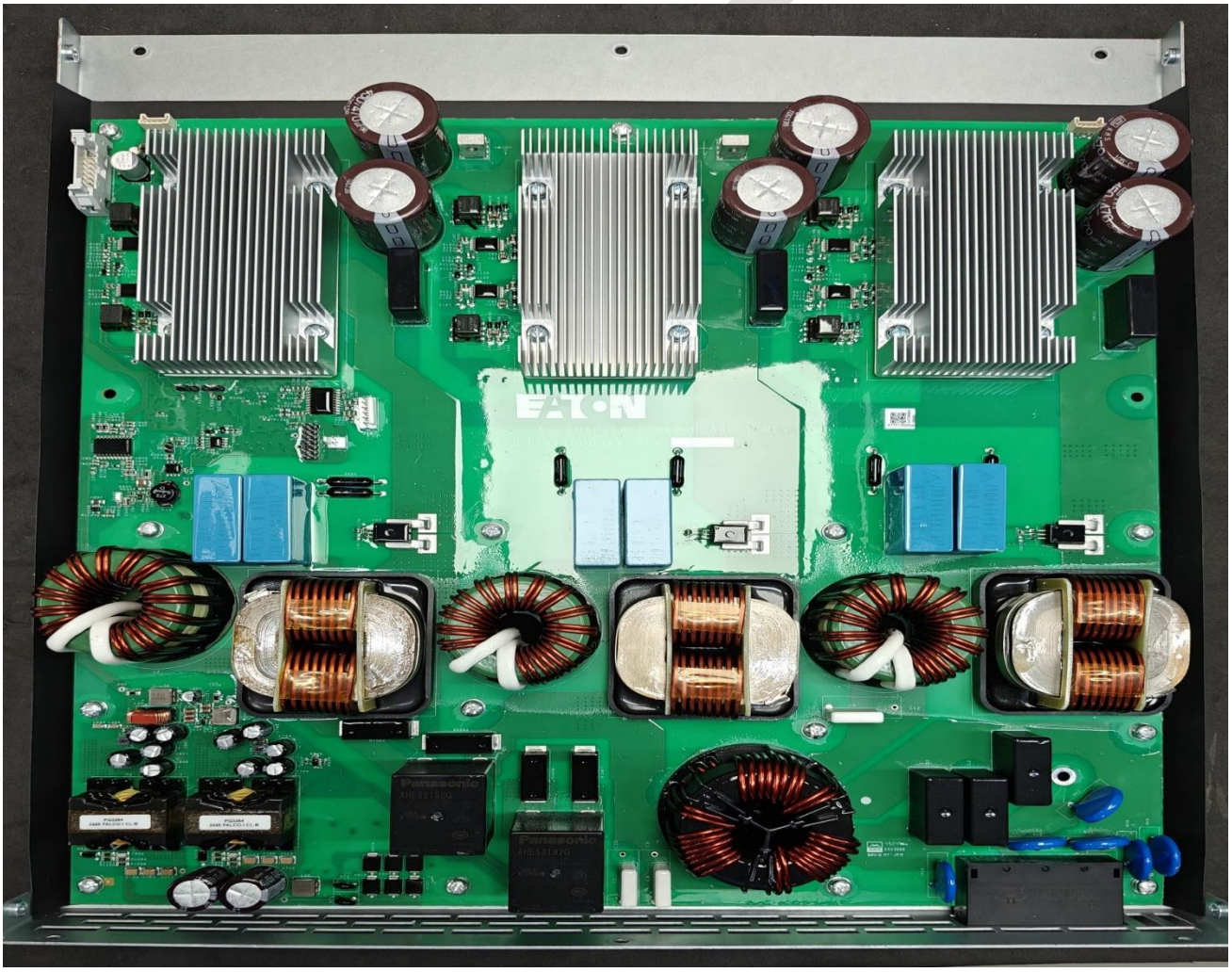
4.1-Paste White color insulation sheets on heat sink.

4.2-Place Thermal pad on heat sinks

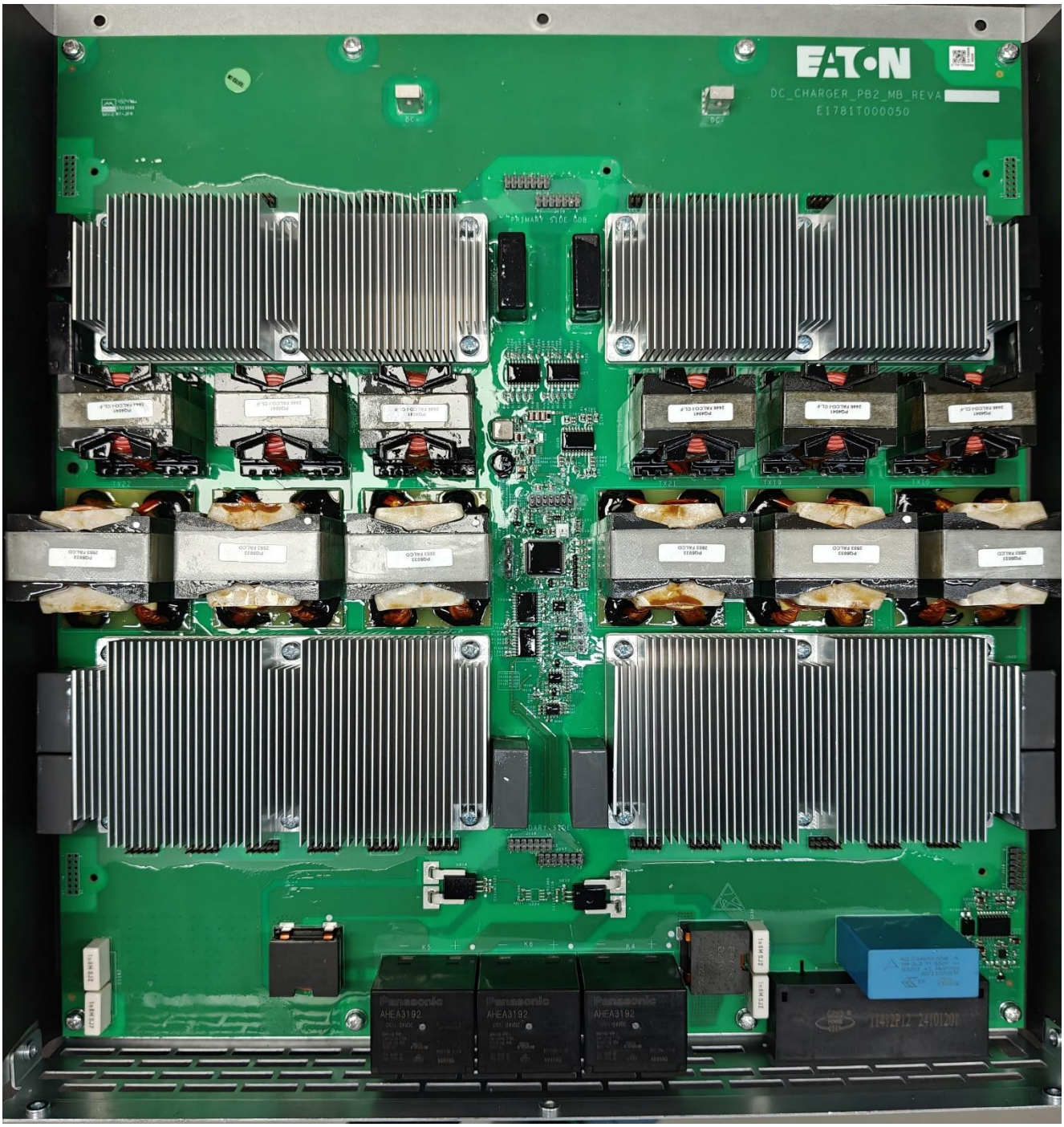


5)-Place Heat Sinks on PB1 & PB2 and tight it with screws and ensure that screws should not be loosed. (SCREW, Spring and Flat WASHER M4*15 TRUSS CROSS ZN)

PB1



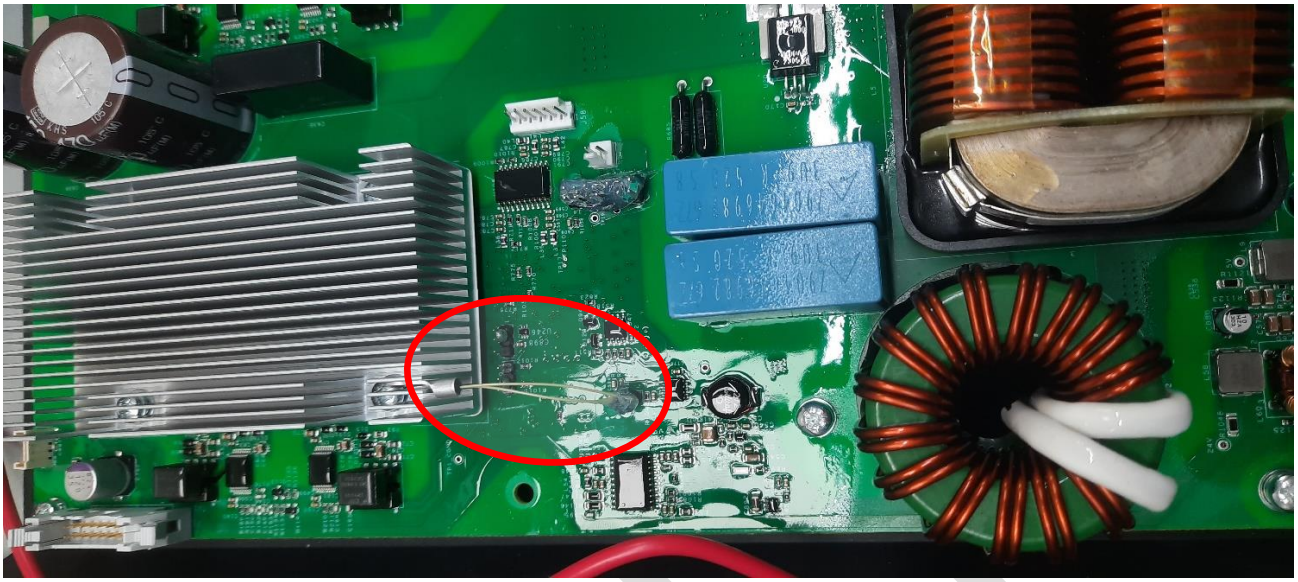
PB2



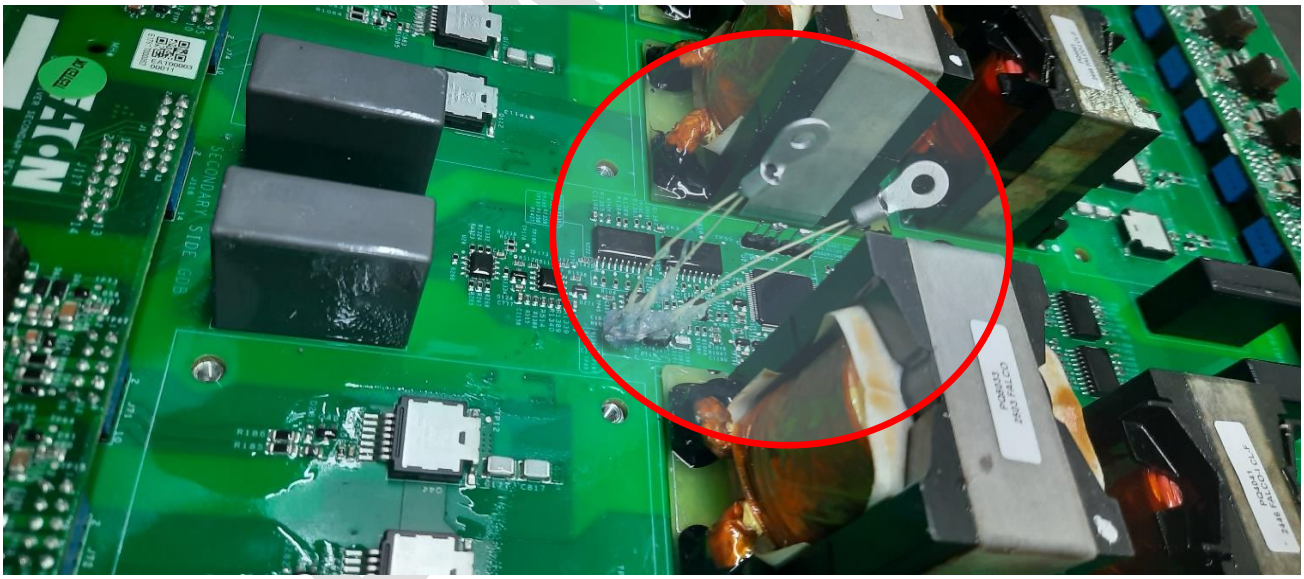
PB1 & PB2 after placing all screws.

6)-Place NTCs on PB1 (One quantity) & PB2 (2 quantities) Heat Sinks. After placing put the glue

PB1-J41 Connector



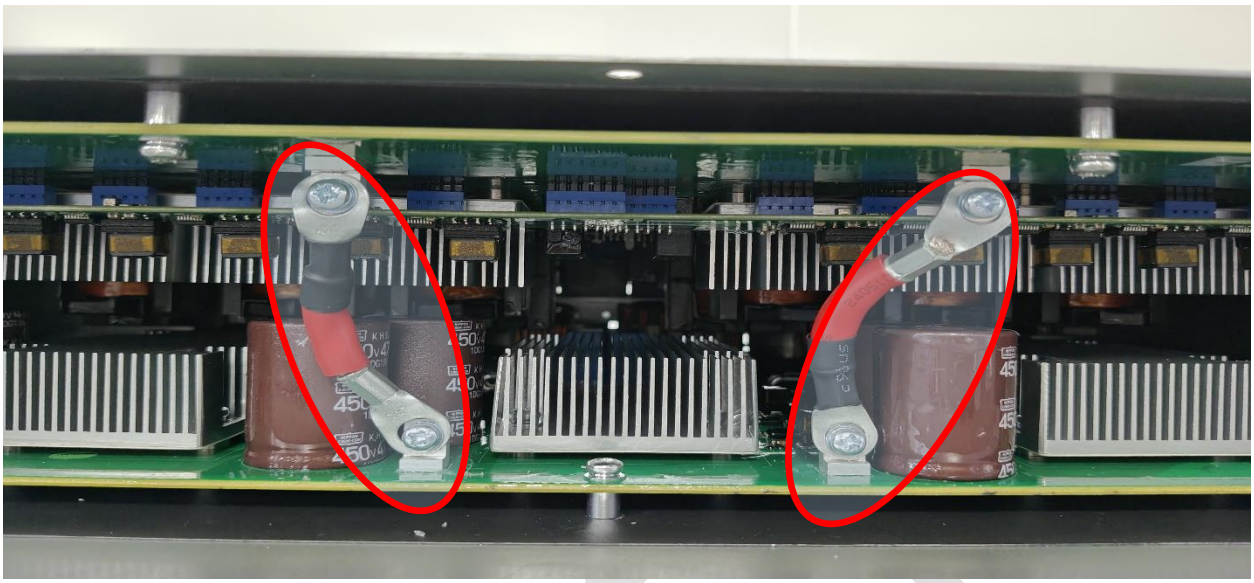
PB2- J41 & J62 Connector



7)-Start packing PB1 & PB2 by overlapping on each other and placing screws (M4*8 Flat Zn Blue Pre-Glue D7)

8)-Place board to board connector mentioned in red portion.

9)-Place power cable (10 sq mm with lugs) mentioned in below image.



10)- Place FAN Assembly by connecting connectors (RED wire -4 pin, black wire-3 pin & brown wire-2 pin of connector) & ensure connectors intact should not be loosed (Put Glue at connectors)