

ICCU : Hyundai Mobis (Hyundai IONIQ5) Teardown Report

ICCU: Integrated Charging Control Unit



Hyundai Mobility IONIQ5

Cited from : <https://www.hyundai.com/jp/ioniq5l>



IONIQ5 ICCU

Overview

Hyundai IONIQ5 is a cross-over SUV type BEV. It has two types of driving system (2WD and AWD) and two types Lithium battery capacity (58 kWh and 72.6 kWh).

The Hyundai IONIQ5 is equipped with an integrated power management system called ICCU (Integrated Charging Control Unit).

ICCU has functions such as OBC, V2L, DCDC etc.

This report is Teardown report for ICCU of IONIQ5.

Product features

- 3-phase AC input for the EU market (Battery voltage: 697 V, OBC maximum output: 11 kW)
- Input voltage: 3-phase 230 VAC (for EU) and single-phase 200 VAC (for US, JP)
- V2L Maximum output: 3.6kW (110VAC/220VAC)
- SiC MOSFET(Discrete 1200V) manufactured by ST Microelectronics is adopted.
- Insulated gate driver manufactured by Rohm is adopted.

Report Contents (68 pages)

- Product teardown, parts measurement (size & weight)
- Information of main SMD on the PCB
- PCB and parts connection

Report price

Delivered one week after order placement

Please contact us for report pricing.

**If you are interested in circuit analysis or detail structural analysis of this product,
please feel free to contact us.**

TABLE OF CONTENTS

		Page
<u>Summary</u>		
Table 1	Product information	... 3
<u>Product Teardown</u>		
	Product Overview	... 4
	Installation Status [Resin cover]	... 5
	Installation Status [Vent filter]	... 7
	Installation Status [Back cover]	... 9
	Installation Status [plate spring]	... 47
	Installation Status [Transformer]	... 48
	Installation Status [Thermal pad 4-6]	... 49
	Installation Status [Chassis]	... 50
<u>Overview</u>		
Fig. 1-1	Filter PCB Overview	... 51
Fig. 1-2	Control PCB Overview	... 52
Fig. 1-3	Switching Power Supply PCB Overview	... 53
Fig. 1-4	Power PCB Overview	... 54
Fig. 2-1	Main SMD Location of Filter PCB (Top View)	... 55
Fig. 2-2-1	Main SMD Location of Control PCB (Top View)	... 56
Fig. 2-2-2	Main SMD Location of Control PCB (Bottom View)	... 57
Fig. 2-3-1	Main SMD Location of Switching Power Supply PCB (Top View)	... 58
Fig. 2-3-2	Main SMD Location of Switching Power Supply PCB (Bottom View)	... 59
Fig. 2-4-1	Main SMD Location of Power PCB (Top View)	... 60
Fig. 2-4-2	Main SMD Location of Power PCB (Bottom View)	... 61
Fig. 3-1	Moisture-proof Coating Area of Filter PCB	... 62
Fig. 3-2	Moisture-proof Coating Area of Control PCB	... 63
Fig. 3-3	Moisture-proof Coating Area of Switching Power Supply PCB	... 64
Fig. 3-4	Moisture-proof Coating Area of Power PCB	... 65
<u>Parts Connection</u>		
Fig. 4-1	Main Path Connection Diagram 1	... 66
Fig. 4-2	Main Path Connection Diagram 2	... 67
Fig. 4-3	Signal Connection Diagram	... 68

