



Project Sunride
The Diamond
32 Leavygreave Rd
Broomhall, Sheffield
United Kingdom
S3 7RD

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CAD: Altium Designer 25.8

Size: A3

Drawing No: **KDA Rev A1**

Changed by: Nick Angelov

Change reason: First Issue

Title: **Karman Delta V.E.C.T.O.R. Board**

Sub-Title: **Ancillaries.SchDoc**

Variant: **Standard**

Change date: 7 Nov 2025

Sheet 3 of 5

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A

B

C

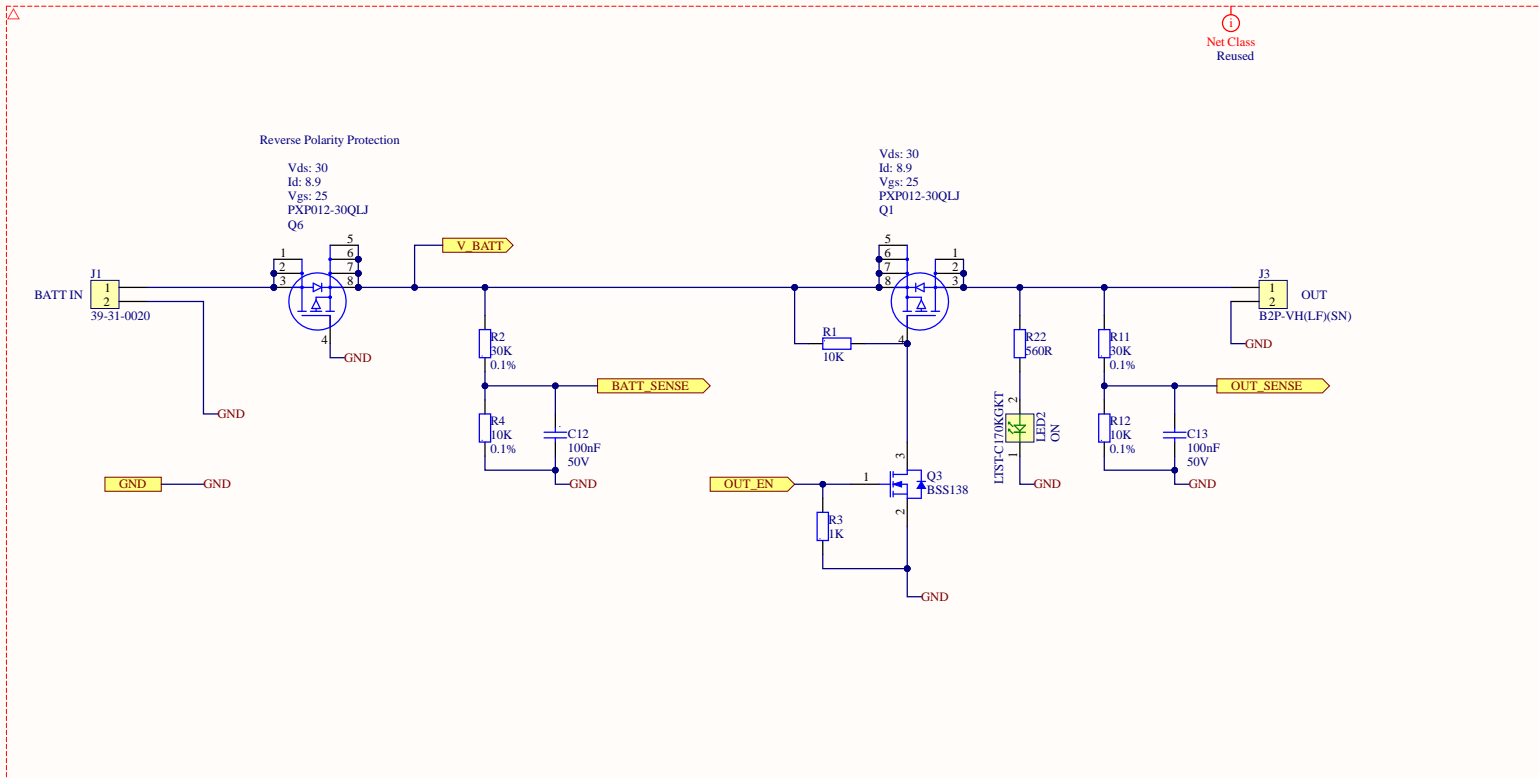
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The schematic diagram illustrates a CAN transceiver circuit with an isolation barrier. The circuit is divided into two domains by a dashed line labeled "ISOLATION BARRIER".

PC Comms Domain (Left):

- Serial Debug:** A B04B-PASK-1 (LF) (SN) connector (J9) is connected to the transceiver. It includes a 3V3 supply, a 100nF capacitor (C18), and a 10K resistor (R15).
- Transceiver (U5):** An ISO1042DWV transceiver. Its VCC1 pin is connected to 3V3, and its GND1 pin is connected to GND. The TXD pin is connected to the TX pin of the serial debug connector, and the RXD pin is connected to the RX pin.
- Line Termination:** The TX and RX lines are terminated with 120Ω resistors (R16 and R17) connected to ISO_GND.

Isolated Comms Domain (Right):

- 5V Regulator:** A MIC5239-5.0YS regulator (U4) is used to provide a 5V supply. It is connected to a 9V BATT source (TP14) and a 100nF capacitor (C15). The output (OUT) is connected to ISO_5V.
- CAN Connector (J6):** A B06B-PASK-1 (LF) (SN) connector. Its VCC2 pin is connected to ISO_5V, and its GND2 pin is connected to ISO_GND. The CANH and CANL pins are connected to the TX and RX lines of the transceiver.
- Line Termination:** The CANH and CANL lines are terminated with 120Ω resistors (R16 and R17) connected to ISO_GND.

Net Class: The schematic includes two net classes: "PC Comms Domain" and "Isolated Comms Domain".