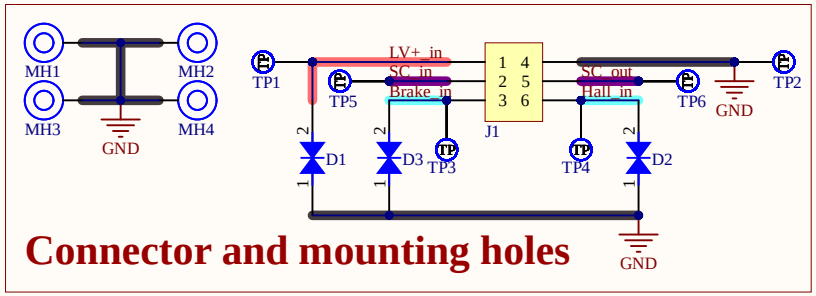
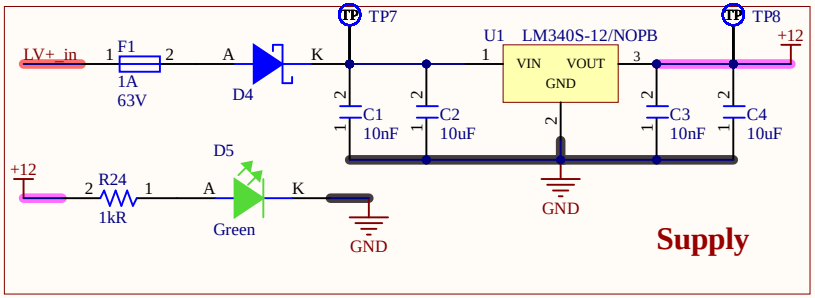
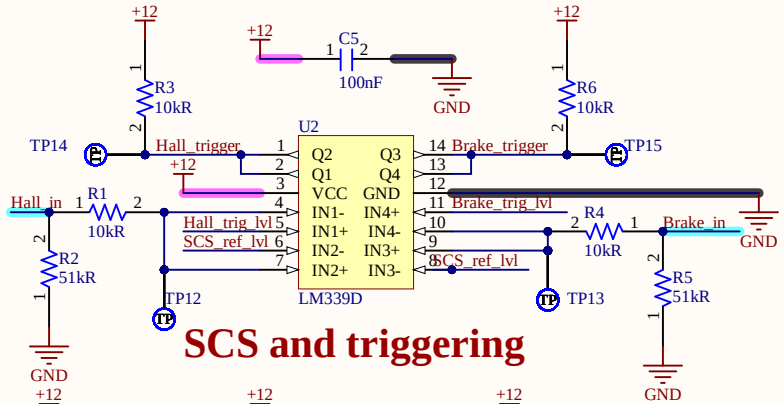


Connector and mounting holes



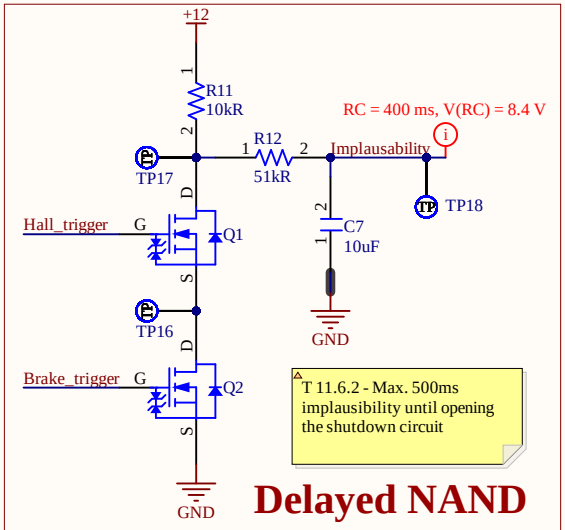
Supply

Red: Untreated supply
Cyan: External signal
Pink: Treated supply
Purple: Shutdown chain



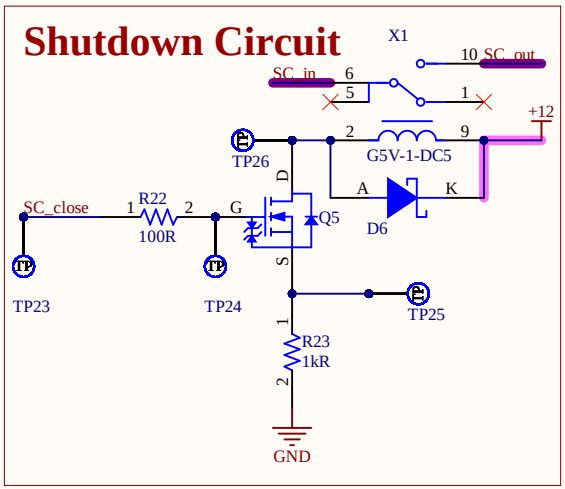
SCS and triggering

The BSPD can handle 0-5V inputs. If one of the sensors' signals is 0V, it will cause the Shutdown Circuit to be open because they both are SCS. the trigger level for each signal is configured with R9 and R10 .

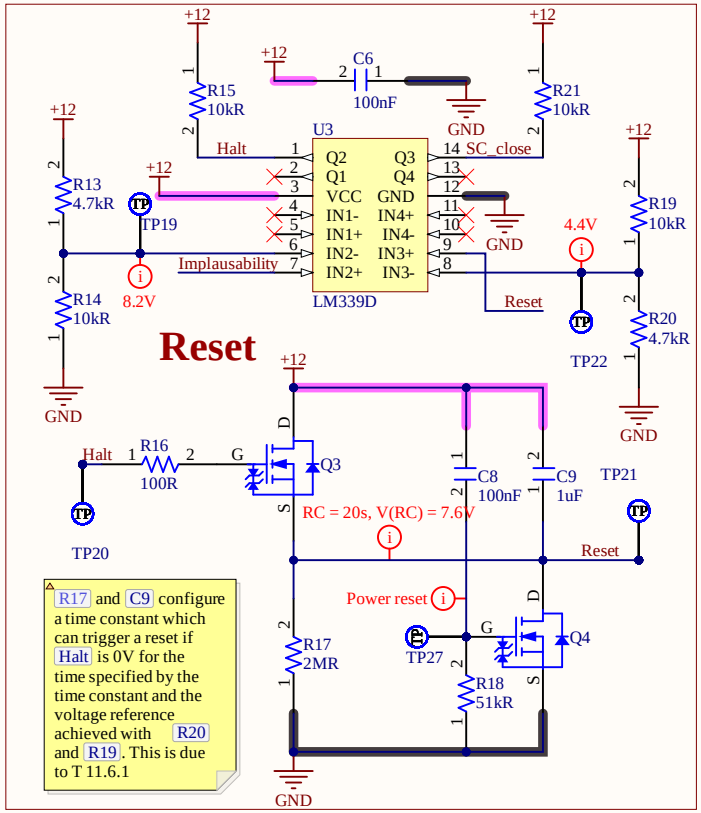


Delayed NAND

T 11.6.2 - Max. 500ms implausibility until opening the shutdown circuit



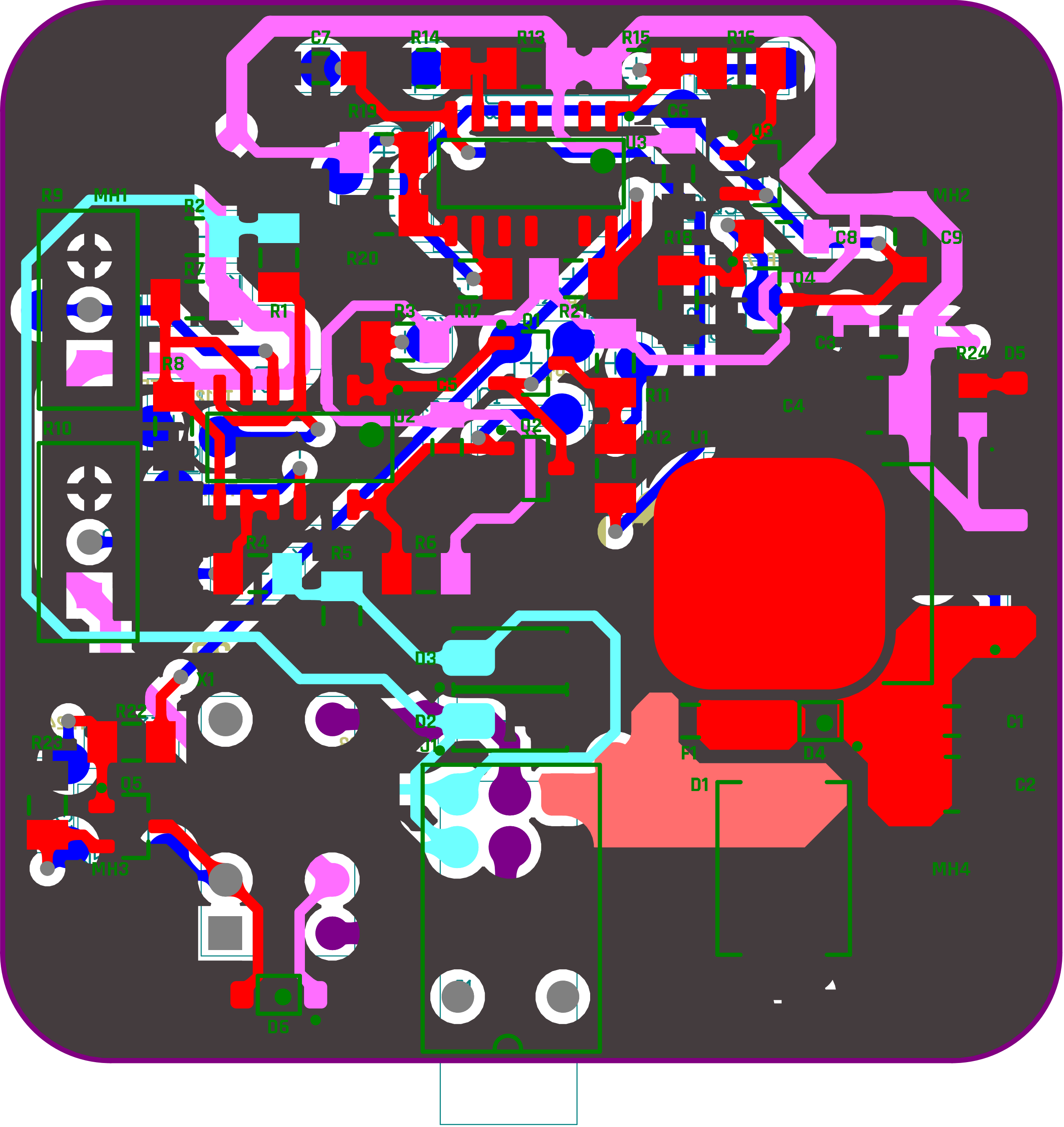
Shutdown Circuit

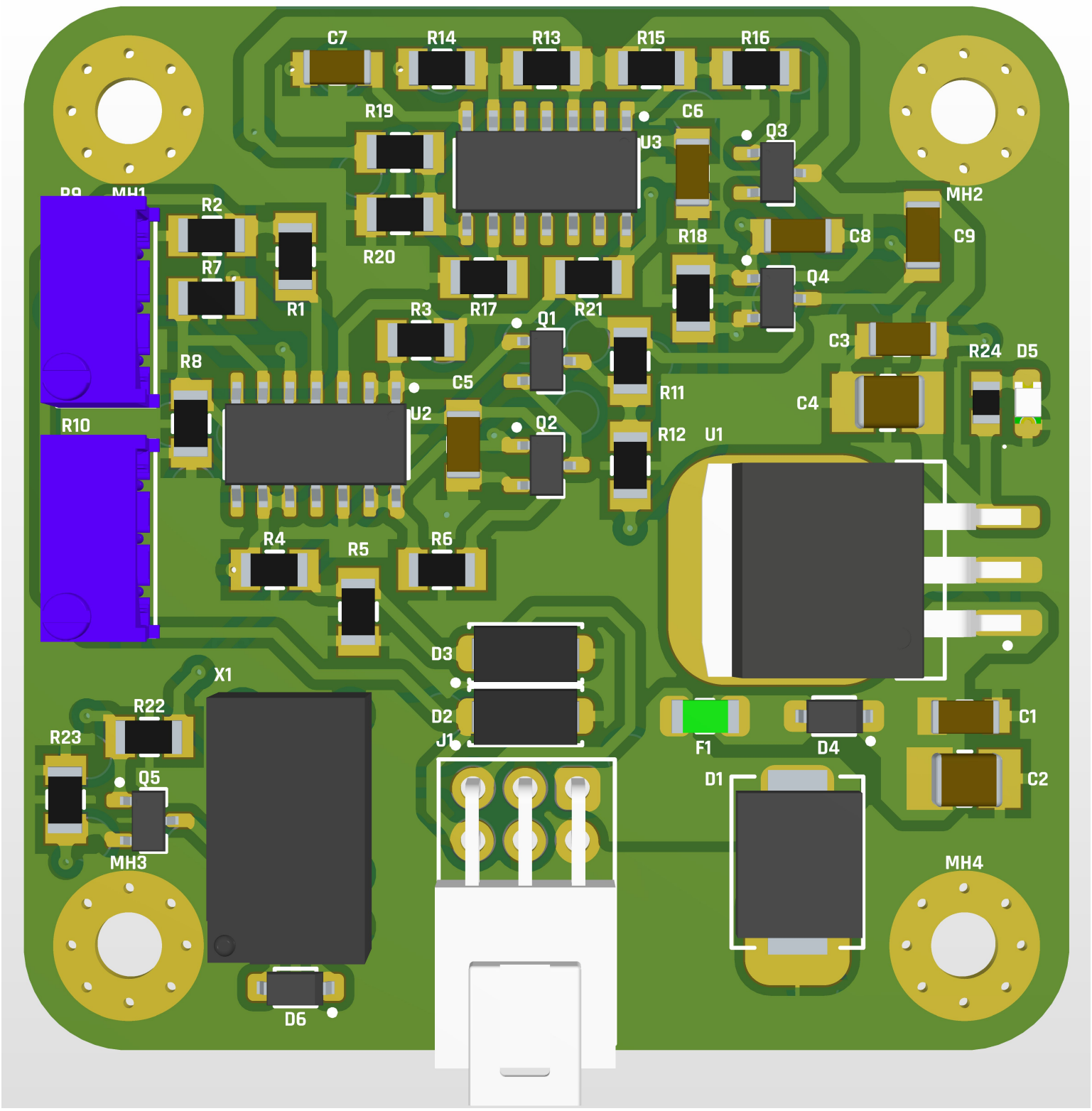


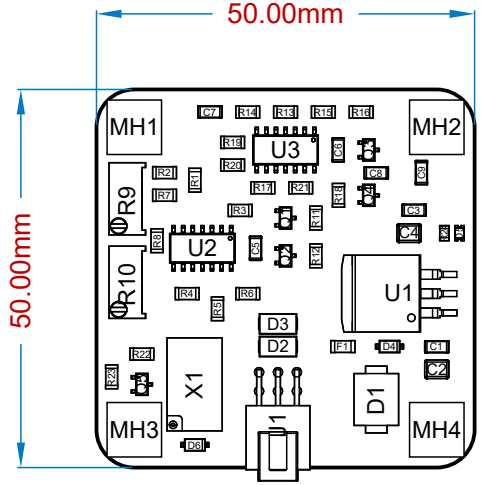
Reset

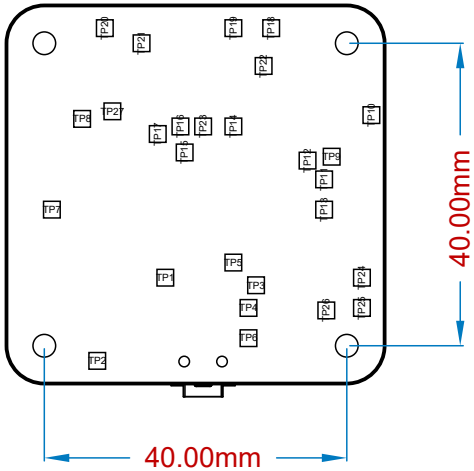
R17 and C9 configure a time constant which can trigger a reset if Halt is 0V for the time specified by the time constant and the voltage reference achieved with R20 and R19 . This is due to T 11.6.1

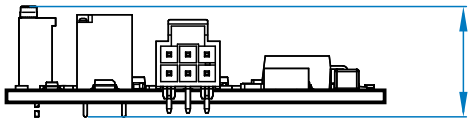
Company: e-Tech Racing	e-techracing.es		
Project: BSPD	Variant: [No Variations]		
Size: -	Page Contents: BSPD.SchDoc	Version: 2.0	
		Department: PCBs	
Author: David Redondo	dredondovinolo@gmail.com	Sheet 1 of 1	
Checked by: David Redondo		Date: 02/04/2023	


C7
R14
R13
R15
R16
R19
C6
U3
Q3
R9
MH1
R2
MH2
R20
R18
C8
C9
R7
Q4
R1
R3
R17
R21
Q1
C3
R24
D5
R8
C5
R11
C4
U2
R10
Q2
R12
U1
R4
R5
R6
D3
X1
R22
D2
J1
F1
D4
C1
R23
D1
C2
Q5
MH3
MH4
D6

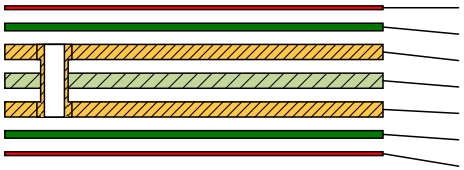

C7
R14
R13
R15
R16
R19
C6
U3
Q3
MH1
R2
R7
R1
R20
R18
C8
MH2
C9
Q4
R3
R17
Q1
R21
C3
R24
D5
R8
C5
U2
R11
C4
R10
Q2
R12
U1
R4
R5
R6
D3
X1
R22
D2
J1
F1
D4
C1
R23
Q5
D1
C2
MH3
MH4
D6







Designator	Name	Quantity
C1, C3	885012008055	2
C2, C4	GRJ32ER71H106KE11L	2
C5, C6, C8	885012208058	3
C7	885012208018	1
C9	885012208036	1
D1	824551301	1
D2, D3	824501600	2
D4, D6	MBR0530	2
D5	150080VS75000	1
F1	0437001.WRA	1
J1	J_NanoFit_2x3	1
MH1, MH2, MH3, MH4	Mounting_Hole_M3	4
Q1, Q2, Q3, Q4, Q5	CPH3455-TL-H	5
R1, R3, R4, R6, R11, R14, R15, R19, R21	CRCW120610K0FKEA	9
R2, R5, R7, R12, R18	CRCW120610K0FKEA	5
R8	CR1206-FX-2201ELF	1
R9, R10	3296W-1-103LF	2
R13, R20	CRS1206-FX-4701ELF	2
R16, R22	CRG1206F100R	2
R17	HVC1206-2M0FT3	1
R23	ERJT08J102V	1
R24	CR0805-JW-102ELF	1
U1	LM340S-12/NOPB	1
U2, U3	LM339D	2
X1	G5V-1-DC5	1



Material	Layer	Thickness
	Top Overlay	
Surface Material	Top Solder	0.010mm
Copper	**Top Layer**	**0.035mm**
		1.500mm
Copper	**Bottom Layer**	**0.035mm**
Surface Material	Bottom Solder	0.010mm
	Bottom Overlay	

Total thickness: 1.590mm

BSPD