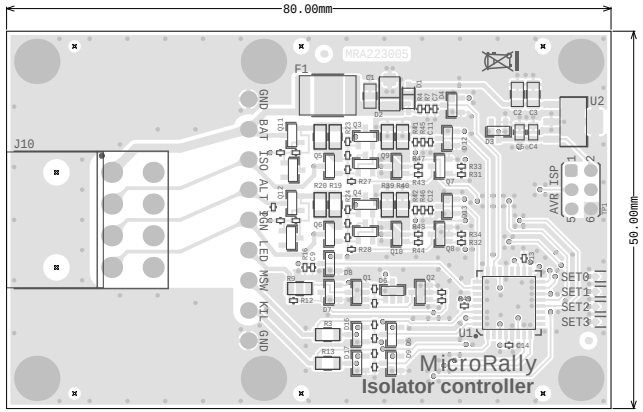
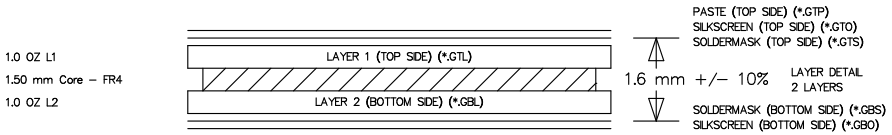
GERBER NOTES

Symbol	Count	Hole Size	Plated	Hole Type	Via/Pad
⌖	291	0.300mm	PTH	Round	Via
▽	6	1.000mm	PTH	Round	Pad
⌘	6	1.152mm	NPTH	Round	Pad
✡	9	1.300mm	PTH	Round	Pad
□	8	1.800mm	PTH	Round	Pad
⊠	2	3.000mm	NPTH	Round	Pad
○	6	3.600mm	PTH	Round	Pad
	328 Total				





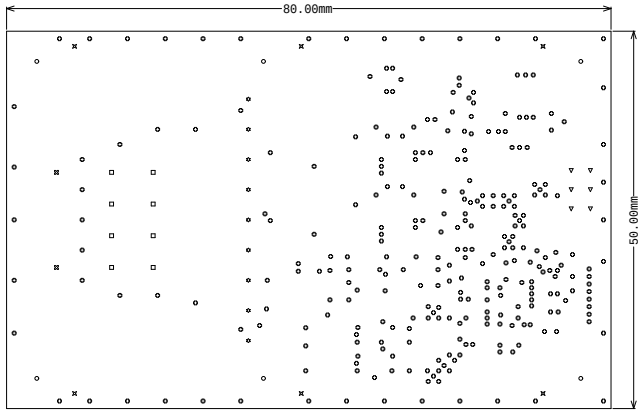
NOTES: (UNLESS OTHERWISE SPECIFIED)

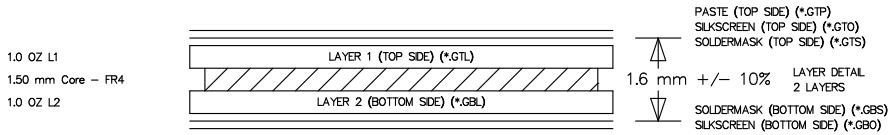
1) THIS IS 2 LAYER BOARD
2) MATERIAL: FR4, TG 150 DEGREE C MIN
3) FR4 DIELECTRIC CONSTANT NOT SPECIFIED
4) FINISHED BOARD THICKNESS TO BE 1.60MM +/- 10%
5) TRACE WIDTHS IN ARTWORK ARE FINISHED SIZES
6) SEE FILM FOR LAYER SEQUENCE AND COPPER THICKNESSES (SHOWN BEFORE PLATING)
7) MIN TRACE/SPACE 0.25/0.25MM
8) SEE DRILL CHART FOR FINISHED HOLE SIZES
9) MIN DRILL 0.30MM
10) HOLE TOLERANCE IS +/-3MIL UNLESS OTHERWISE SPECIFIED
    HOLE COPPER THICKNESS MIN 0.7MIL
    SLOT TOLERANCE +/-0.1MM
    BORDER OUTLINE TOLERANCE +/-0.15MM
11) SURFACE PLATING: HASL, Pb FREE
12) SOLDERMASK: LPI, BOTH SIDES. COLOR GREEN
13) SILKSCREEN: TOP AND BOTTOM SIDE. COLOR WHITE
14) ALL BOARDS MUST BE ELECTRICALLY TESTED FOR ISOLATION (SHORTS) AND CONTINUNITY (OPENS)

Project: Isolator Controller	
Author: Andis Jargans	Revision: 5
Date: 29.07.2022	Size: A4
File: Isolator_controller_r5.PcbDoc	MicroRally

GERBER NOTES

Symbol	Count	Hole Size	Plated	Hole Type	Via/Pad
✣	291	0.300mm	PTH	Round	Via
▽	6	1.000mm	PTH	Round	Pad
⌘	6	1.152mm	NPTH	Round	Pad
✡	9	1.300mm	PTH	Round	Pad
□	8	1.800mm	PTH	Round	Pad
⊠	2	3.000mm	NPTH	Round	Pad
○	6	3.600mm	PTH	Round	Pad
	328 Total				





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Project: Isolator Controller	
Author: Andis Jargans	Revision: 5
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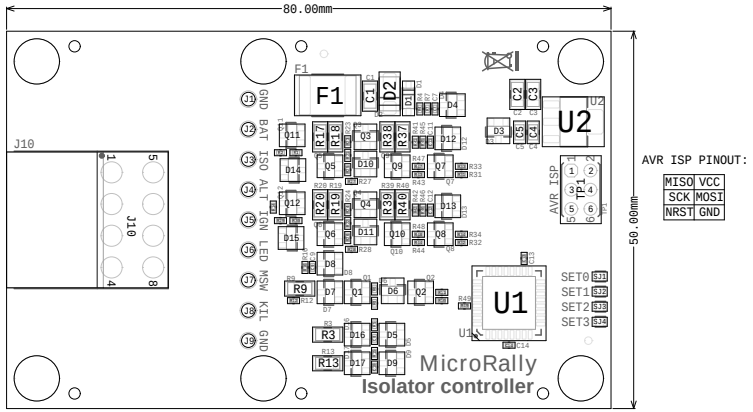
ASSEMBLY NOTES



AVR ISP PINOUT:

MISO	VCC
SCK	MOSI
NRST	GND

Bootstrap settings:

SET0 to SET4 are solder jumpers. Connect necesery jumper pads with lump of solder.
Refer to datasheet for functions.

LED brighness:

Use R37 to control LED current and thus brighness.

If LED has built-in LED, then replace R37 with 0 ohm resistor.

LED power source

To control LED directly from MCU GPIO:

Load R40, D12. Not-load R37, Q9, Q10, D11.

Use R40 to control LED current.

Project: Isolator Controller	
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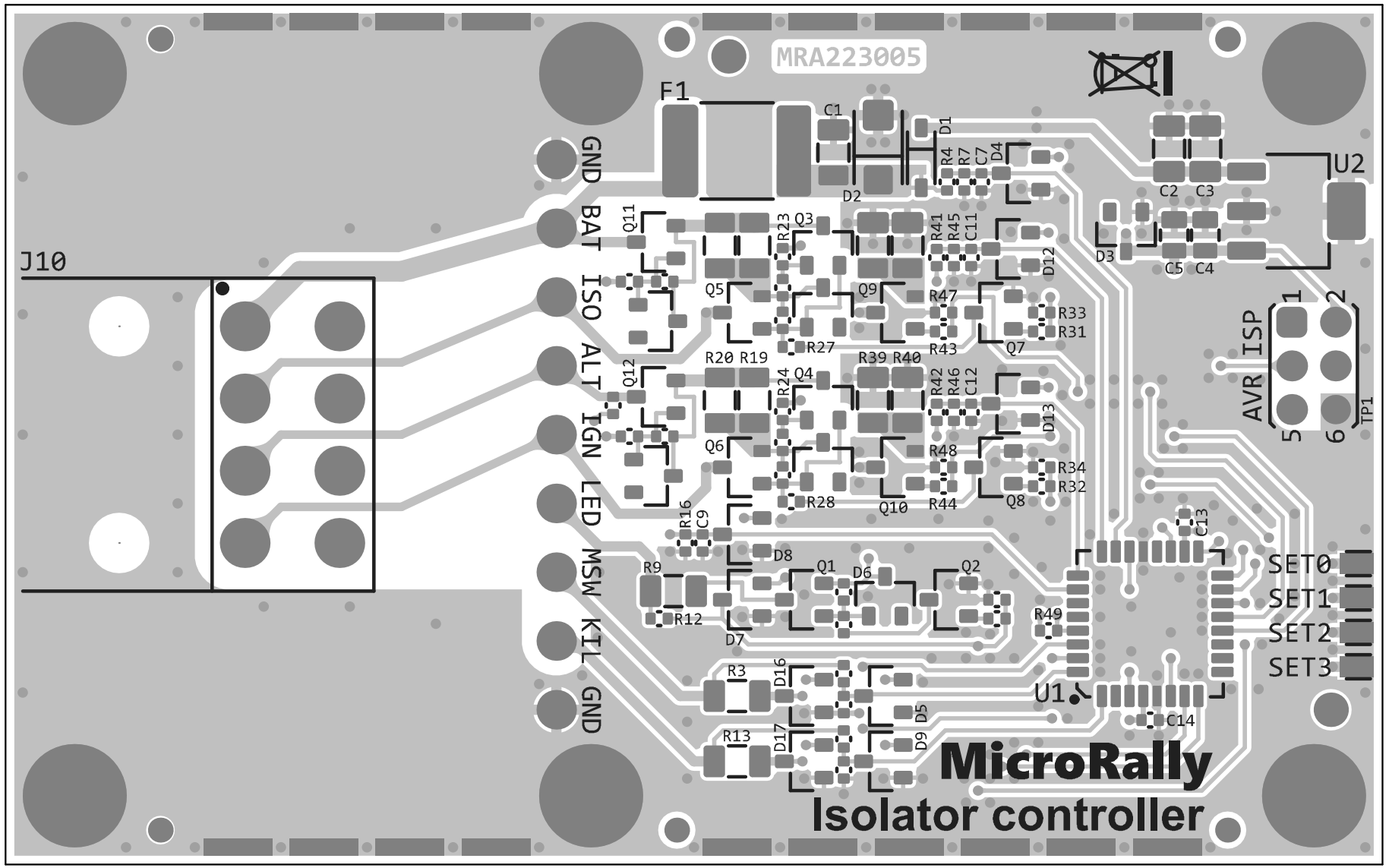
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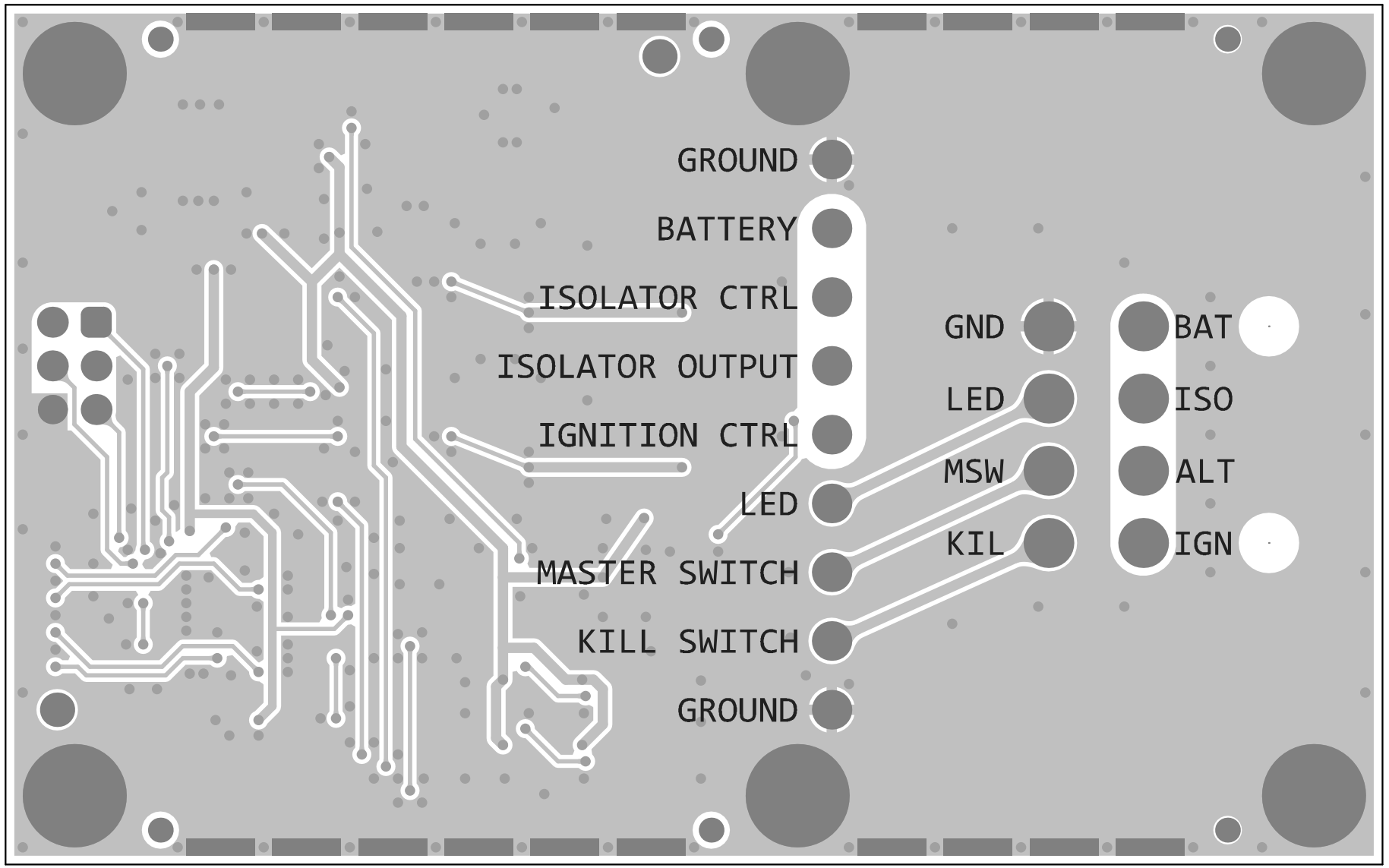
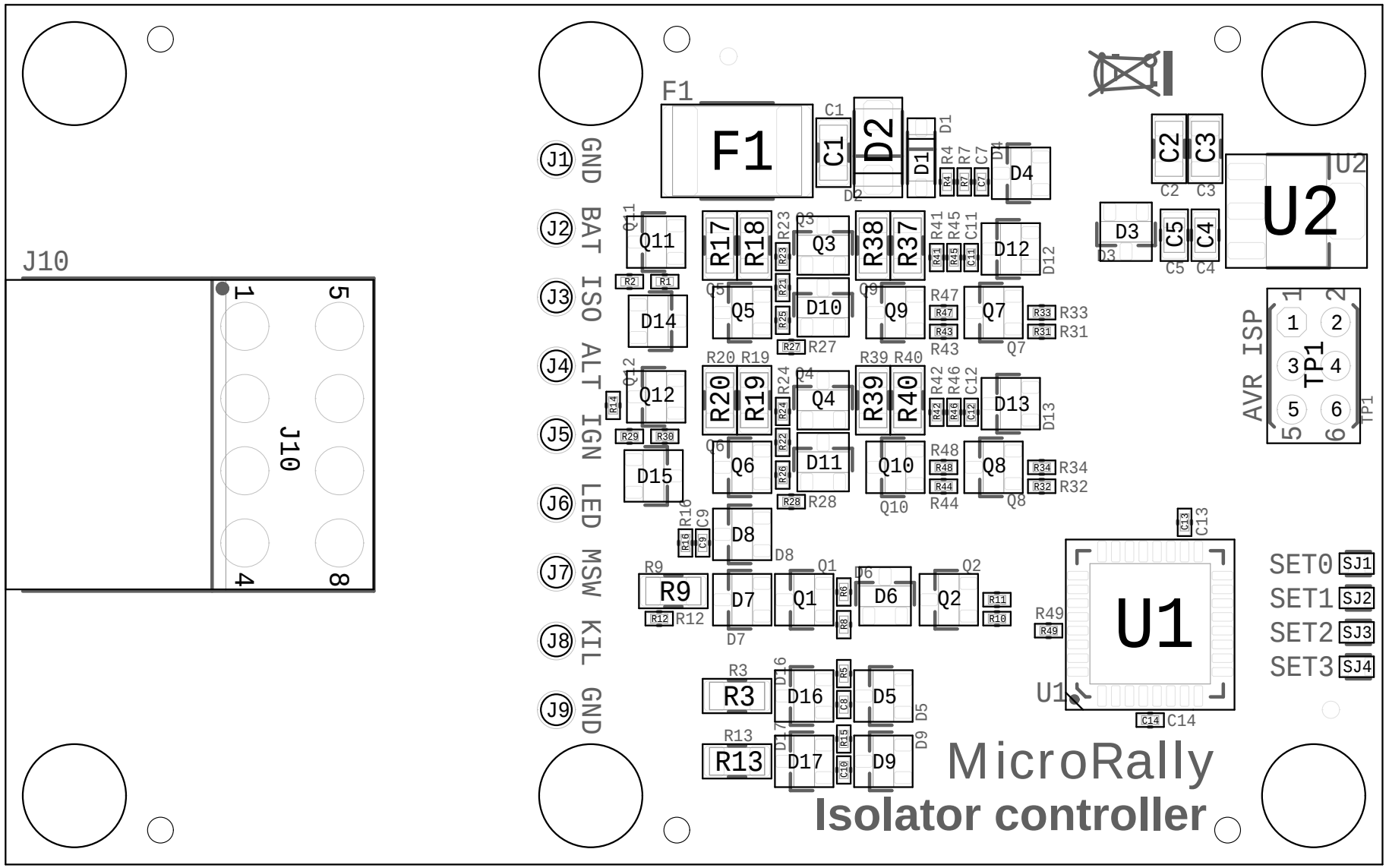
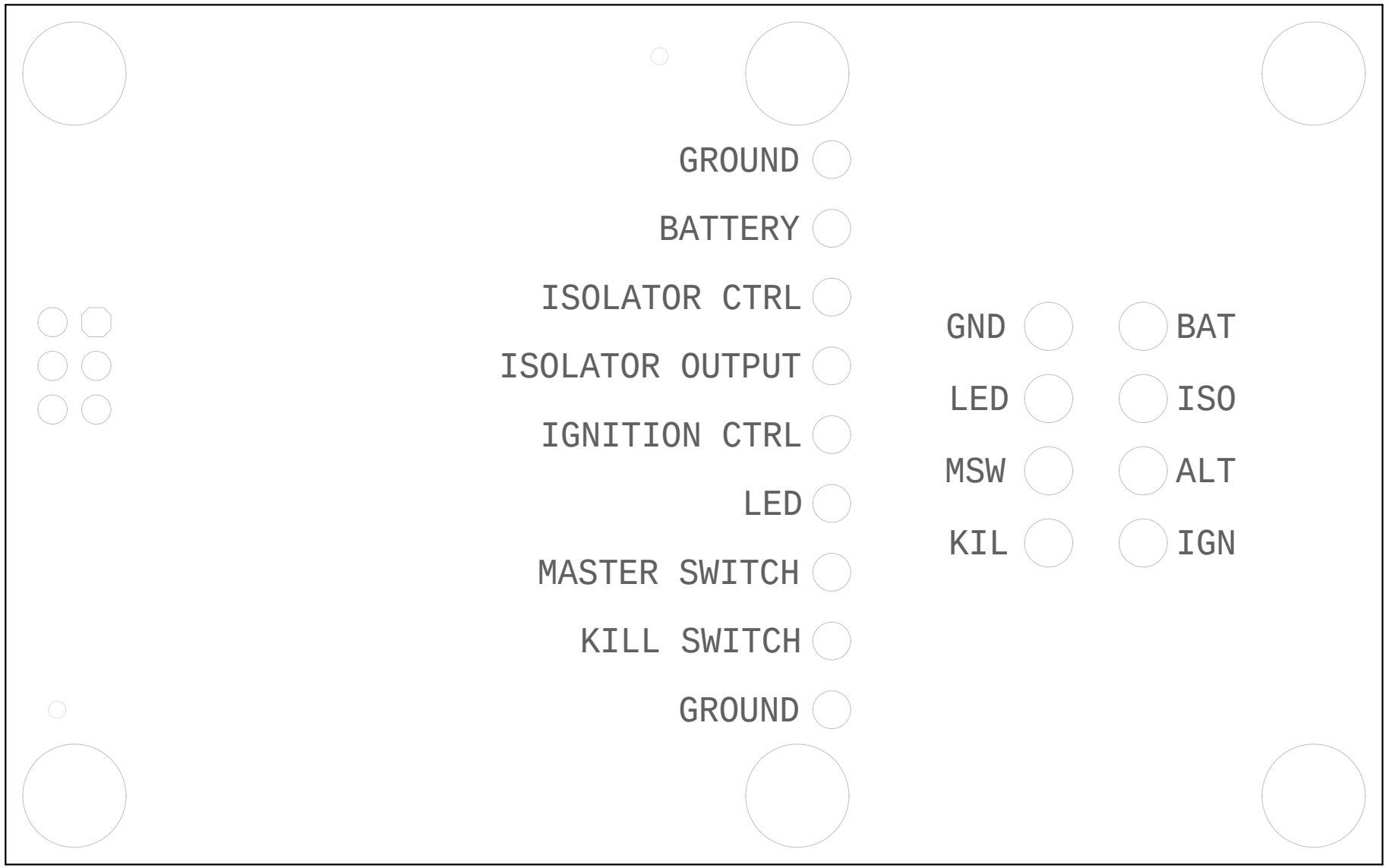
F1
J10
GND
BAT
ISO
ALT
IGN
LED
MSW
KTL
GND
C1
D1
D2
R4
R7
C7
D4
U2
C2
C3
C5
C4
D3
Q11
Q3
R23
Q5
Q9
R41
R45
C11
D12
R47
R33
R31
R27
R43
Q7
R20
R19
Q12
Q4
R24
R39
R40
R42
R46
C12
D13
Q6
R48
R34
R32
R28
Q10
R44
Q8
R16
C9
C13
R9
D8
Q1
D6
Q2
R12
R49
D7
R3
D16
U1
C14
R13
D17
D5
D9
AVR ISP
1
2
5
6
TP1
SET0
SET1
SET2
SET3
MicroRally
Isolator controller


GROUND
BATTERY
ISOLATOR CTRL
ISOLATOR OUTPUT
IGNITION CTRL
LED
MASTER SWITCH
KILL SWITCH
GROUND
GND
LED
MSW
KIL
BAT
ISO
ALT
IGN


J10
1
5
4
8
J10
F1
J1 GND
J2 BAT
J3 ISO
J4 ALT
J5 IGN
J6 LED
J7 MSW
J8 KIL
J9 GND
U2
AVR ISP
TP1
SET0 SJ1
SET1 SJ2
SET2 SJ3
SET3 SJ4
U1
MicroRally
Isolator controller


GROUND
BATTERY
ISOLATOR CTRL
ISOLATOR OUTPUT
IGNITION CTRL
LED
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KILL SWITCH
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LED
ISO
MSW
ALT
KIL
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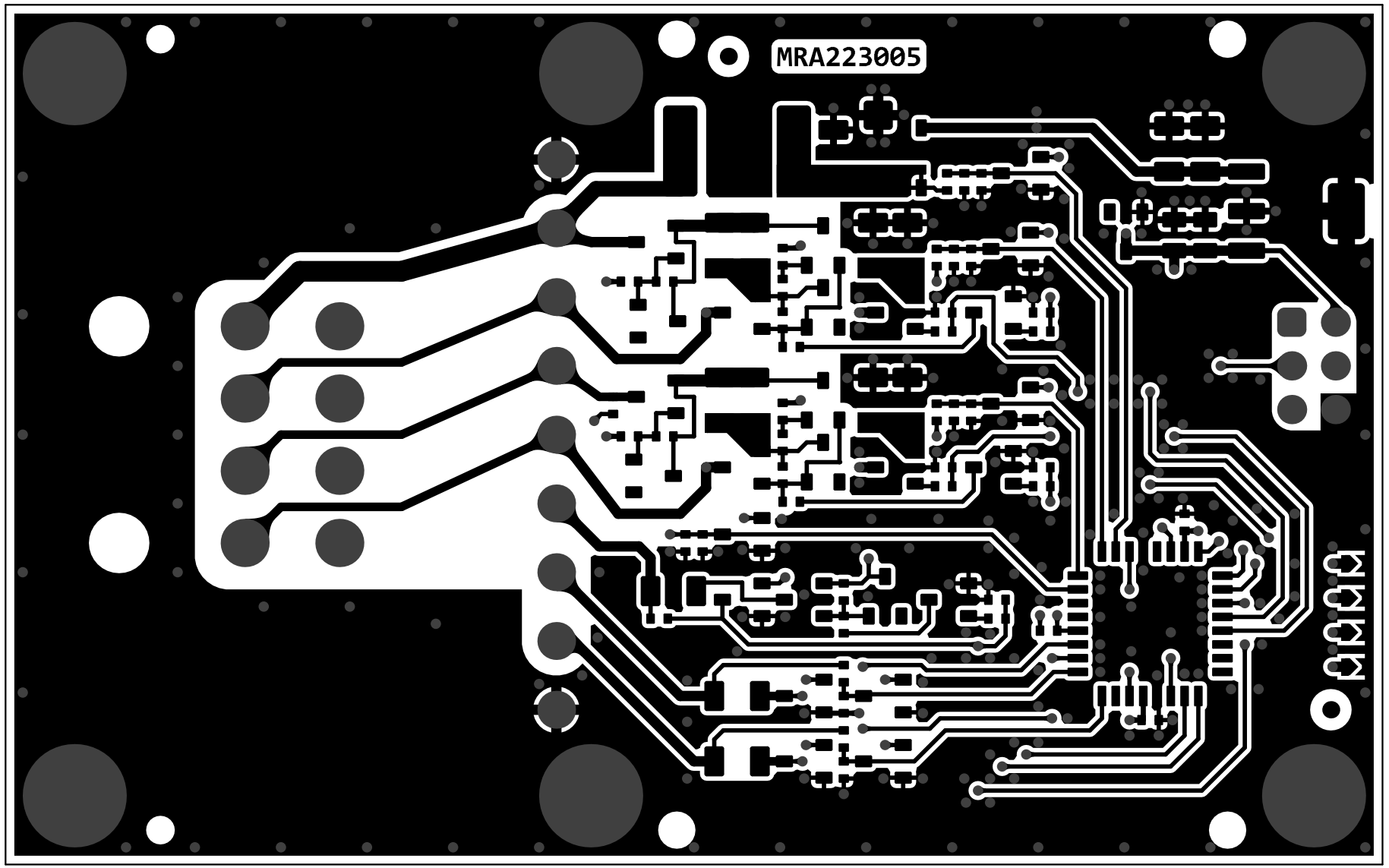
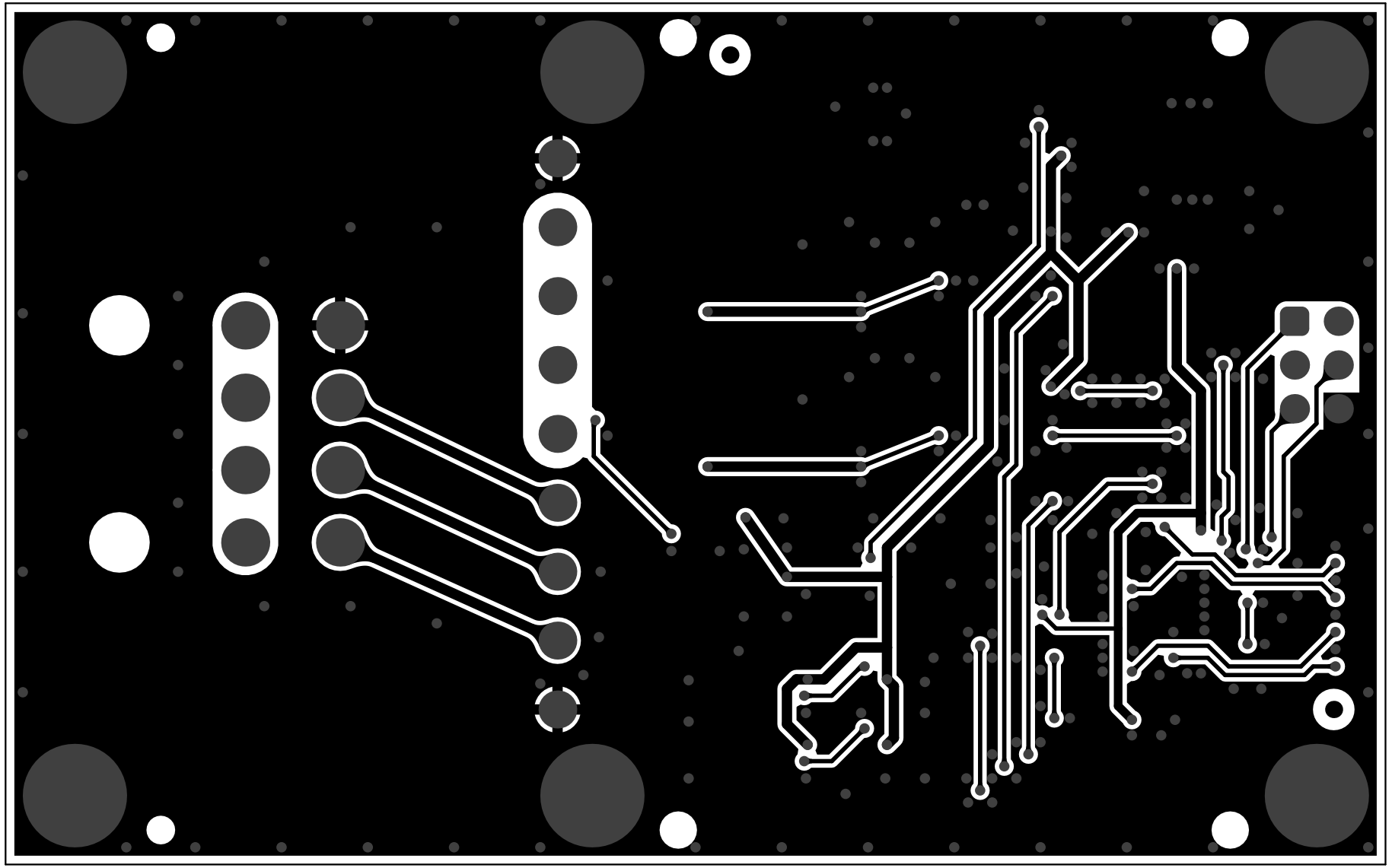
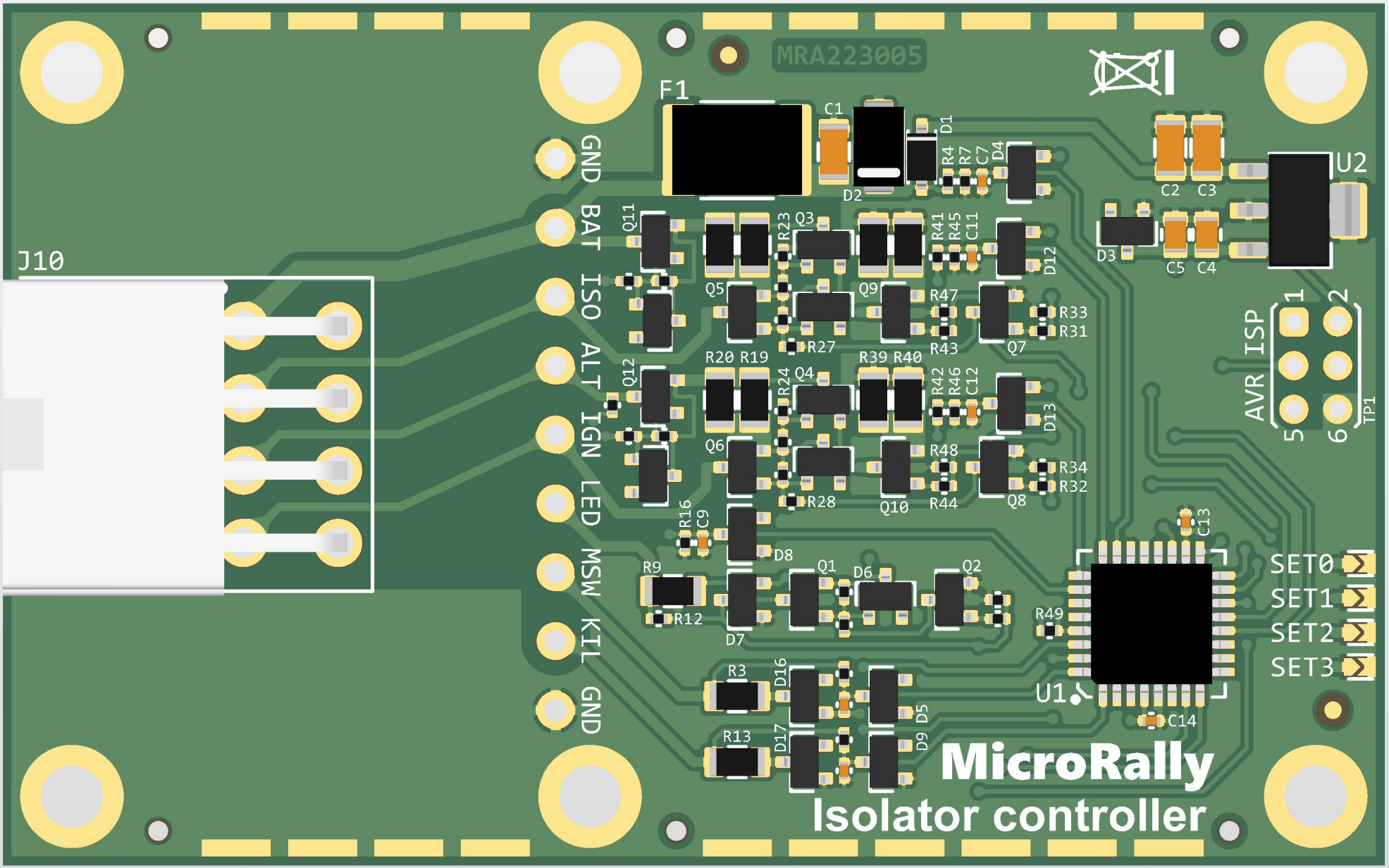

MRA223005

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D2
R4
R7
C7
D4
C2
C3
U2
D3
C5
C4
Q11
Q3
R23
R41
R45
C11
D12
Q5
Q9
R47
R33
R31
R27
R43
Q7
R20
R19
R39
R40
Q12
Q4
R24
R42
R46
C12
D13
Q6
R48
R34
R32
R28
Q10
R44
Q8
R16
C9
D8
R9
Q1
D6
Q2
R12
D7
R49
C13
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D5
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AVR ISP
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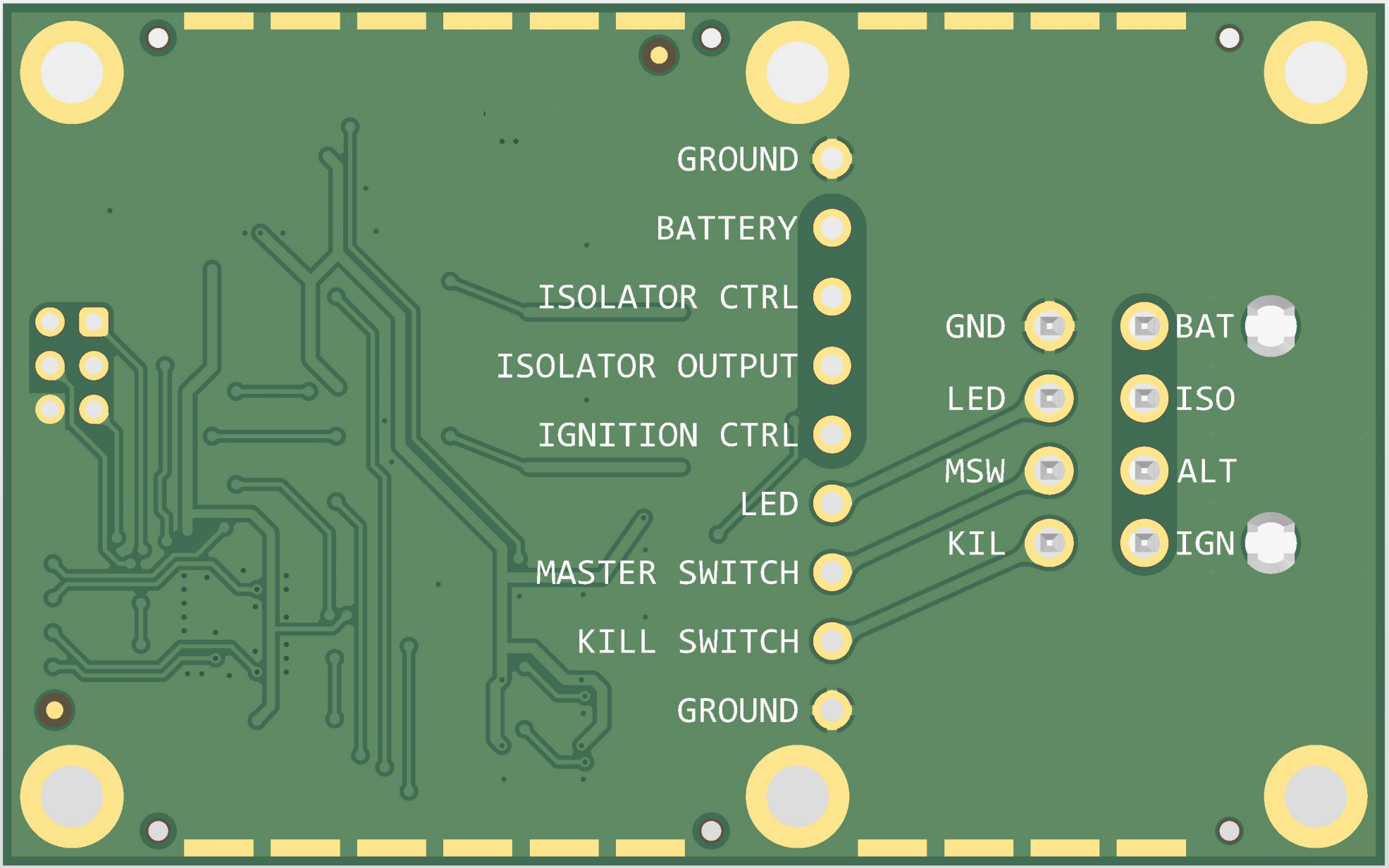
MicroRally
Isolator controller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ISOLATOR CTRL
ISOLATOR OUTPUT
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MASTER SWITCH
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ALT
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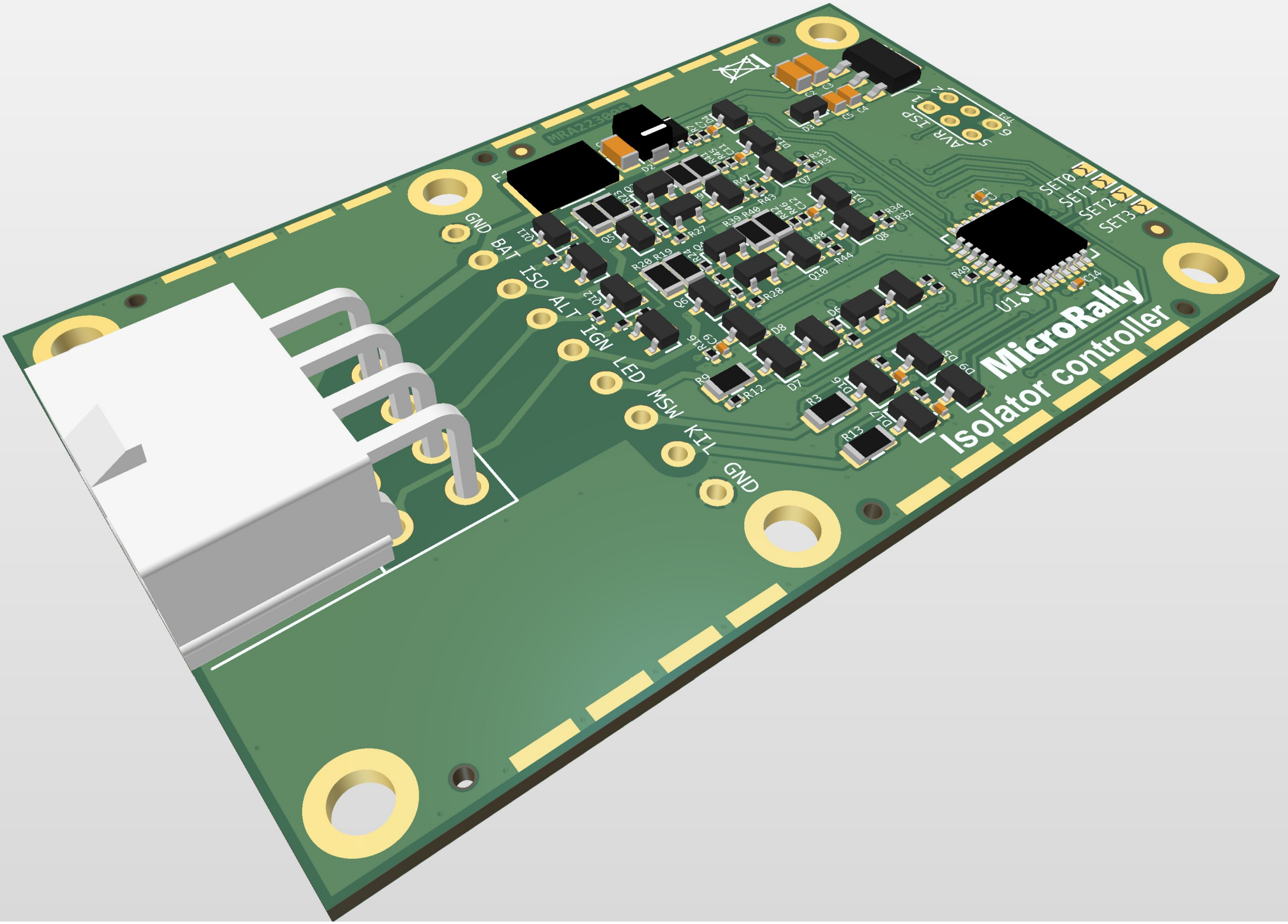
GND
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Isolator controller