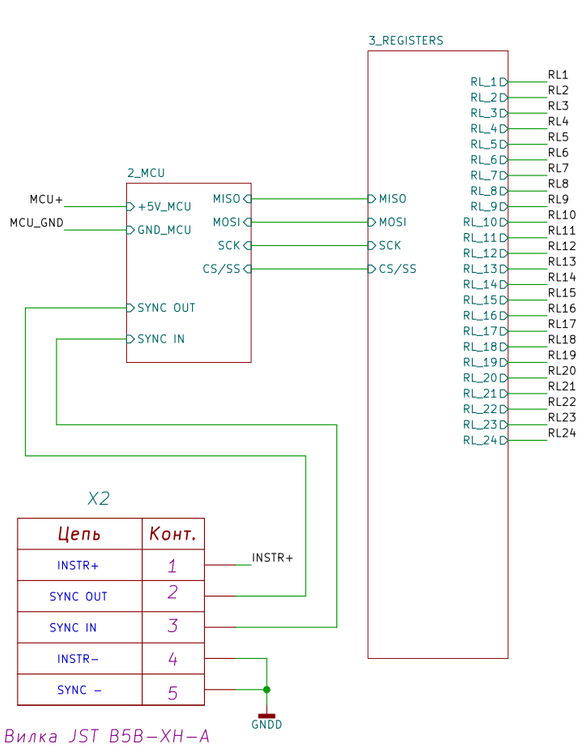
RUST.ZM-12.400.00.00

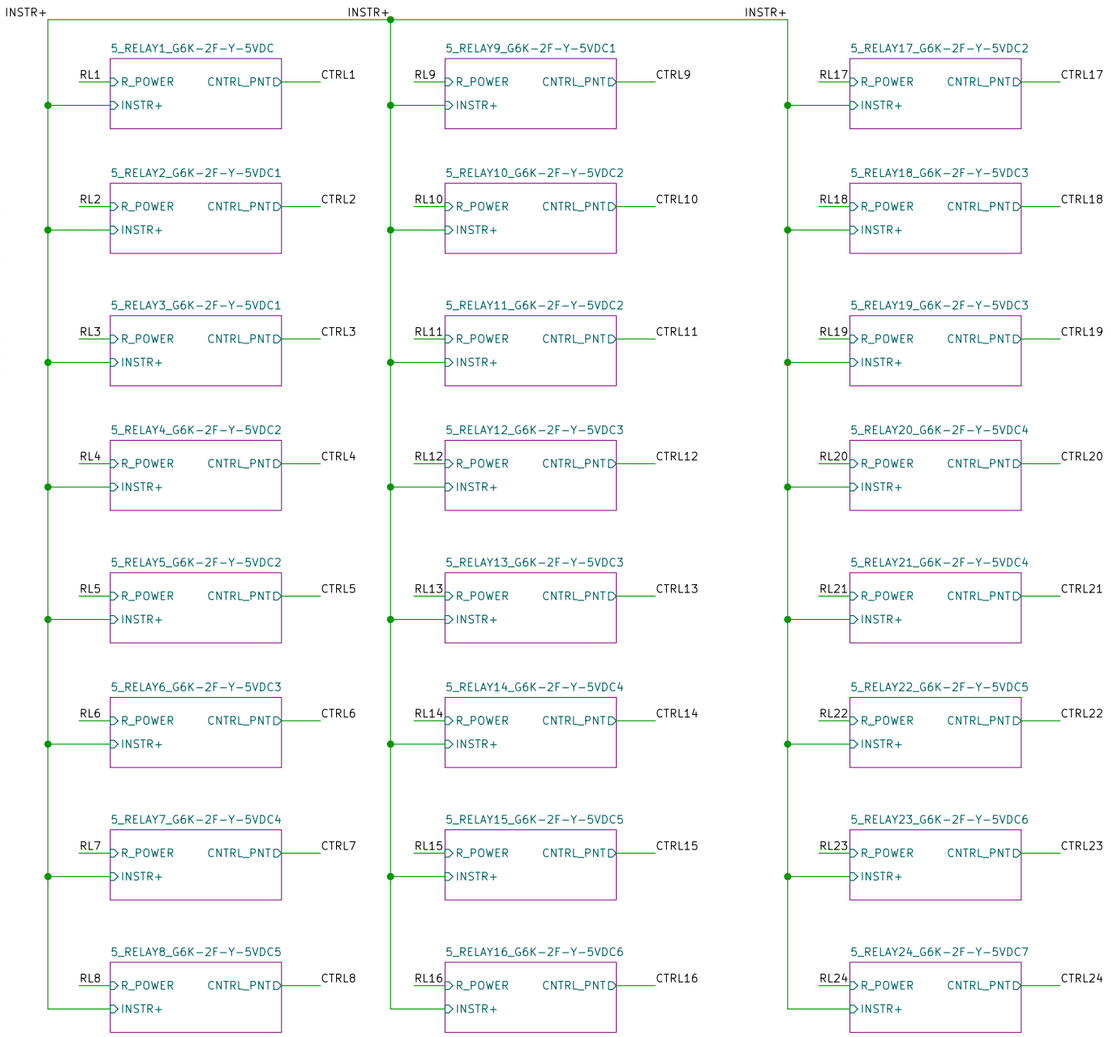


X2

Цепь	Конт.
INSTR+	1
SYNC OUT	2
SYNC IN	3
INSTR-	4
SYNC -	5

INSTR+
GNDD

Вилка JST B5B-XH-A



X4

Конт.	Цепь
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

CTRL1
CTRL2
CTRL3
CTRL4
CTRL5
CTRL6
CTRL7
CTRL8
GNDD

Вилка JST B10B-XH-A

X5

Конт.	Цепь
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

CTRL9
CTRL10
CTRL11
CTRL12
CTRL13
CTRL14
CTRL15
CTRL16
GNDD

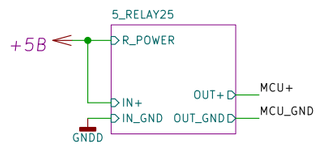
Вилка JST B10B-XH-A

X6

Конт.	Цепь
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

CTRL17
CTRL18
CTRL19
CTRL20
CTRL21
CTRL22
CTRL23
CTRL24
GNDD

Вилка JST B10B-XH-A



X3 power input

Цепь	Конт.
GND	1
+5V	2
	3
	4
	5

GNDD
+5B

Вилка JST B5B-XH-A

pins numbers 1–30 are arduino board pins

pinsA1–D12 are arDuino names of pins

PC0–PC5 PB0–PB4 PD0–PD7 are the ports numbers

DD1A

NANO_ATmega328

MCU

SCK

MISO

MOSI

CS/SS

MCU_GND

+5V_MCU

GND_MCU

MCU+

R81 51k

R82 51k

R1 12k

R84 12k

R2 12k

R3 12k

VD1 Green LED

VD56 Red LED

VD2 yellow LED

VD3 blue LED

VD57 white LED

R85 510

U2 EL814

R87 3.3k

SYNC OUT

MCU_GND

D13/PB5(SCK)	1
+3v3	2
AREF	3
A0/PC0	4
A1/PC1	5
A2/PC2	6
A3/PC3	7
A4/PC4	8
A5/PC5	9
A6/ADC[6]	10
A7/ADC[7]	11
+5V	12
RESET/PC6	13
GND	14
Vin	15
TX1/PD1	16
RX0/PD0	17
PC6/RESET	18
GND	19
D2/PD2	20
D3/PD3	21
D4/PD4	22
D5/PD5	23
D6/PD6	24
D7/PD7	25
D8/PB0	26
D9/PB1	27
D10/PB2(CS/SS)	28
D11/PB3(MOSI)	29
D12/PB4(MISO)	30

X1

Цепь	Конт
+5V_MCU	1
GND_MCU	2

S3

S4

DD2A

Oled Display

Screen 1306

SDA	1
SCL	2
VCC	3
GND	4

MCU_GND

SYNC IN

this is for future purpose for answer from instrument

to some MCU empty pin

VD55 white LED

R83 510

U1 EL814

R86 3.3k

MCU+

MCU_GND

R4 51k place 56k

S1 "Select"

MCU_GND

R5 51k place 56k

S2 "Choise"

MCU_GND

CP103

1 SYNC OUT

CP104

1 SYNC IN

QA–QH 8 output GP

9 Q7' SER DATA OUT(MISO)
10 MR(LOW–ON) (SRCLR shift register clear)
11 SH–CP (CHIP SELECT)mcu clock pin /SRCLK shift register clock
12 ST–CP(CLK) mcu latch pin /RCLC storage register clock
13 OE (LOW–ON)

14 DS(MOSI) / SER (SERIAL DATA INPUT mcu data pin)

MISO

DD6
74HC595_register

MOSI
SCK
CS/SS

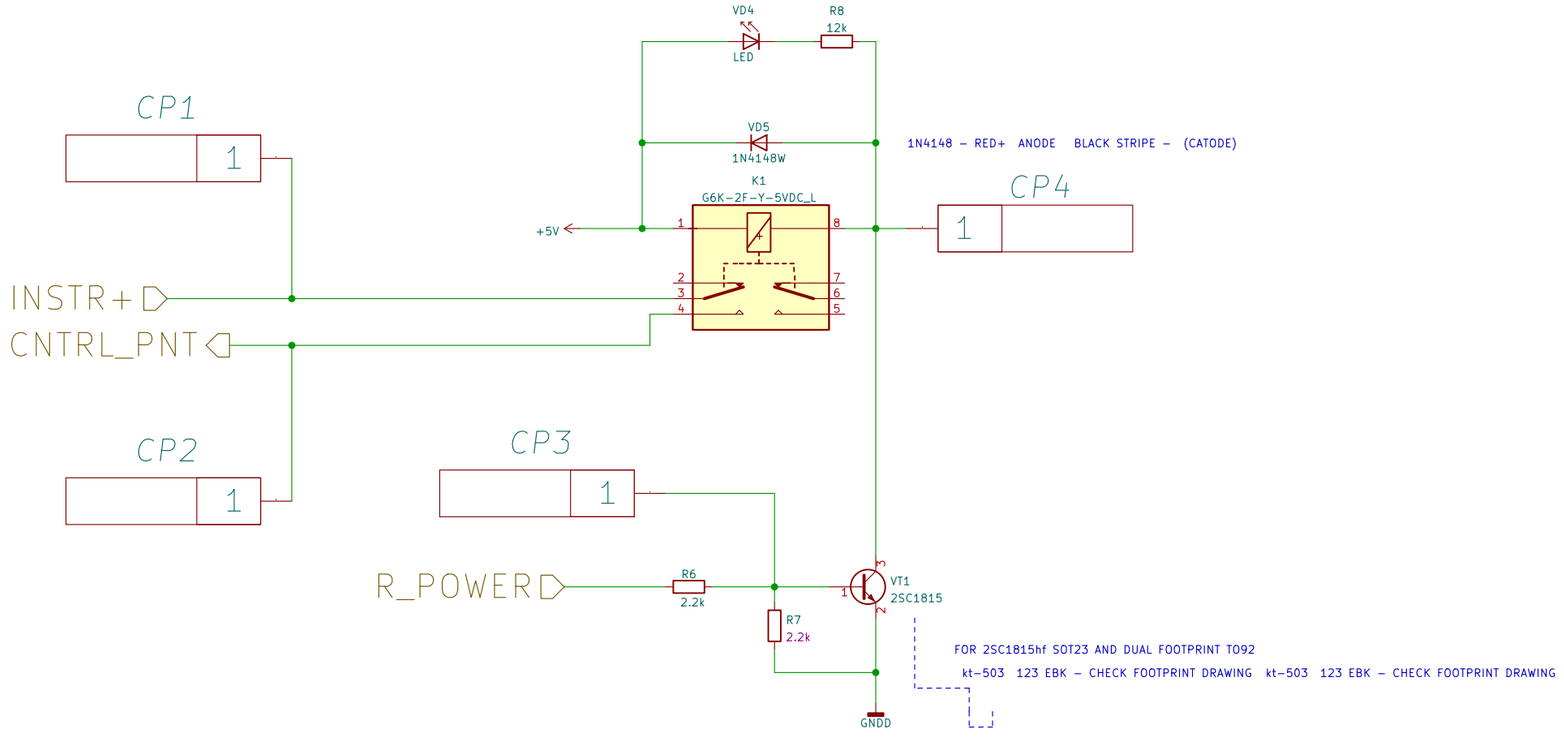
DD3
74HC595
+5V
RL_1
RL_2
RL_3
RL_4
RL_5
RL_6
RL_7
RL_8
GNDD

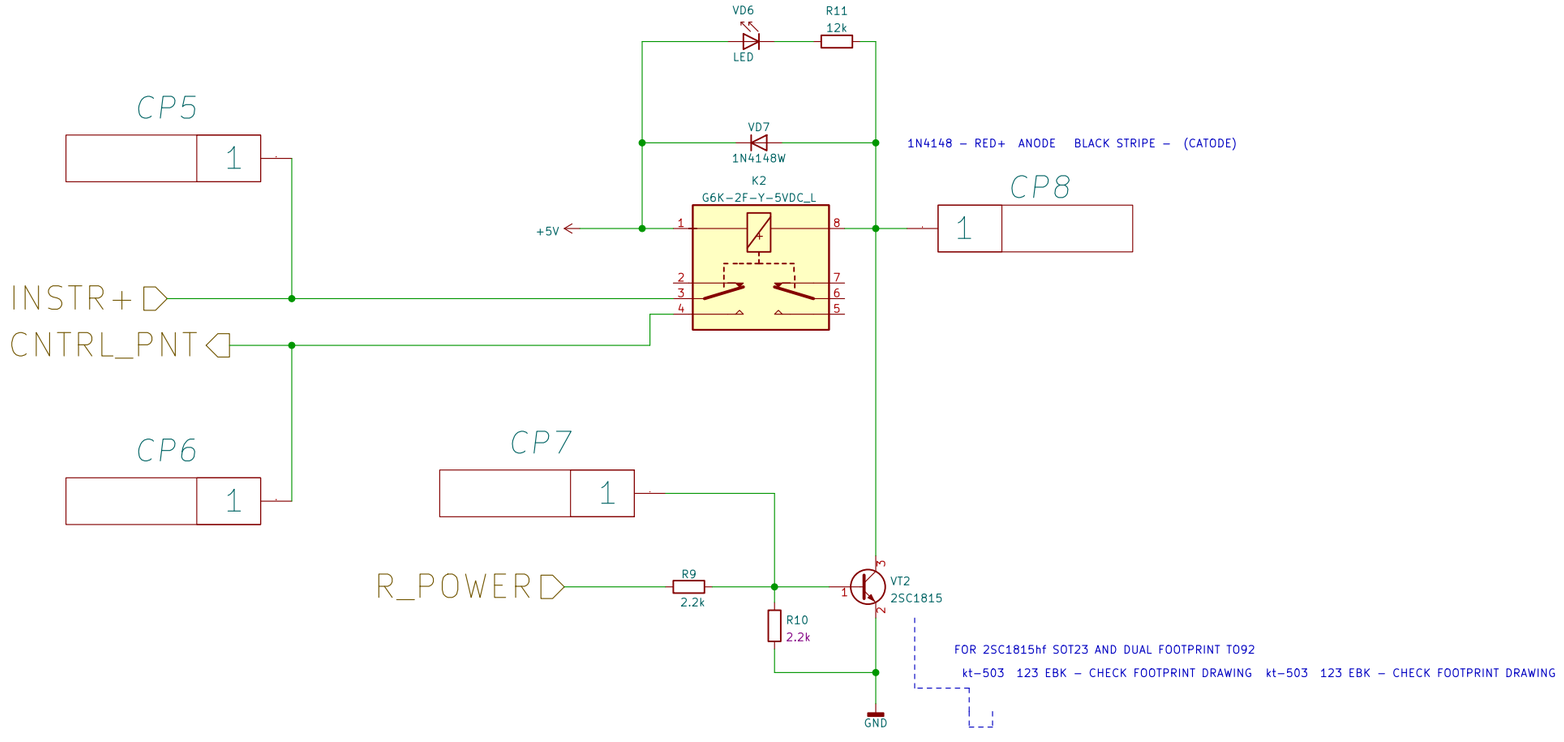
DD4
74HC595
+5V
RL_9
RL_10
RL_11
RL_12
RL_13
RL_14
RL_15
RL_16
GNDD

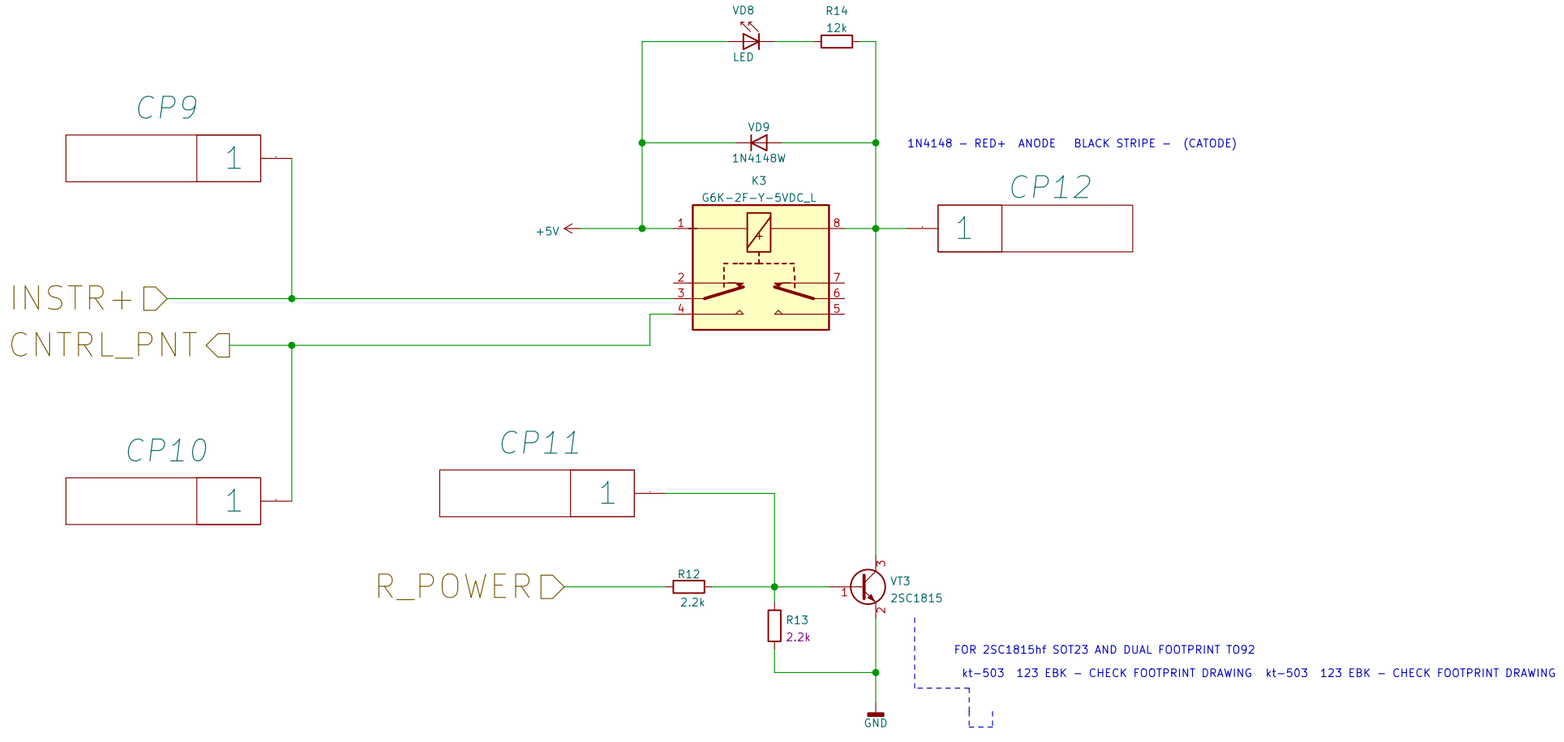
R88
51k
+5V
C1
10 мкФ
GNDD

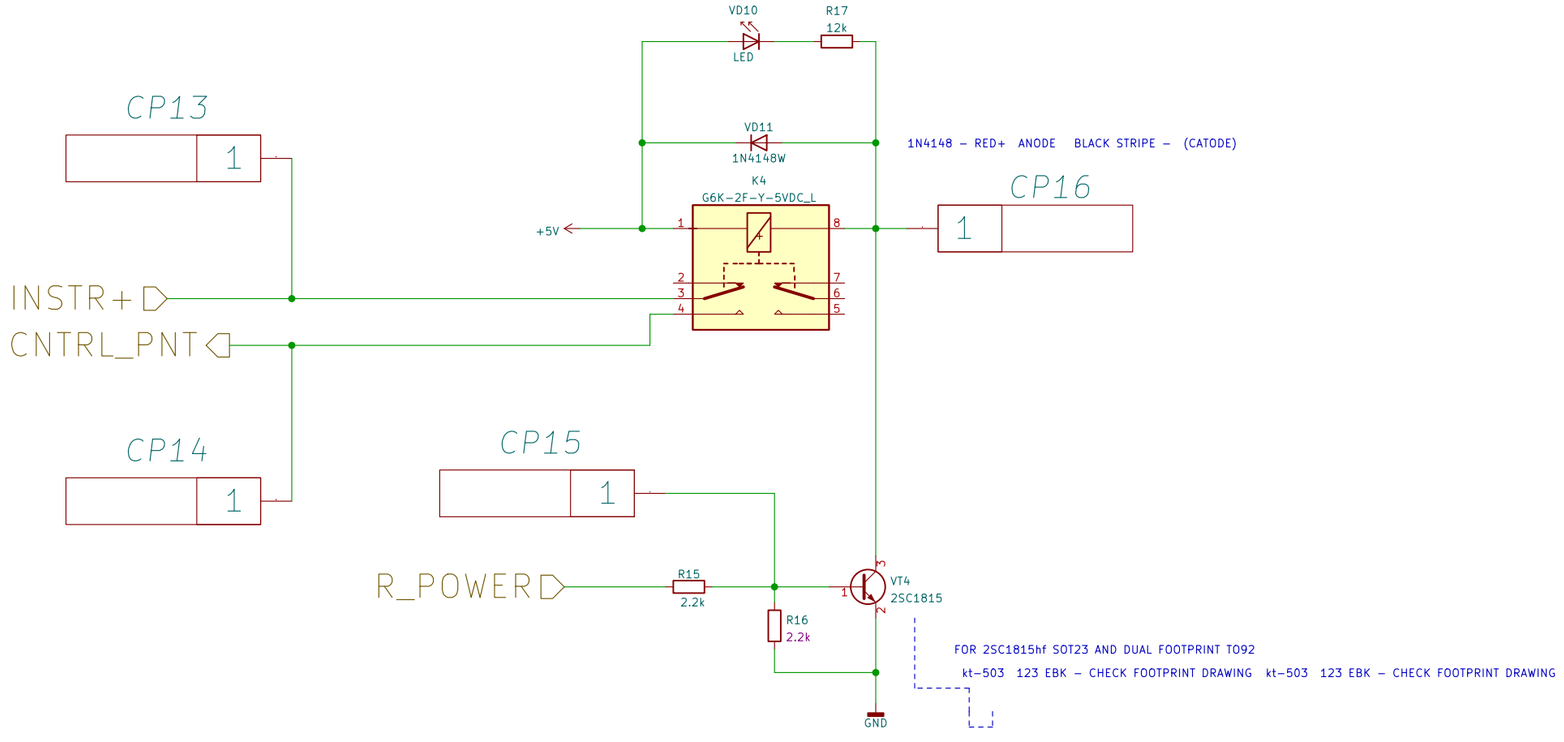
DD5
74HC595
+5V
RL_17
RL_18
RL_19
RL_20
RL_21
RL_22
RL_23
RL_24
GNDD

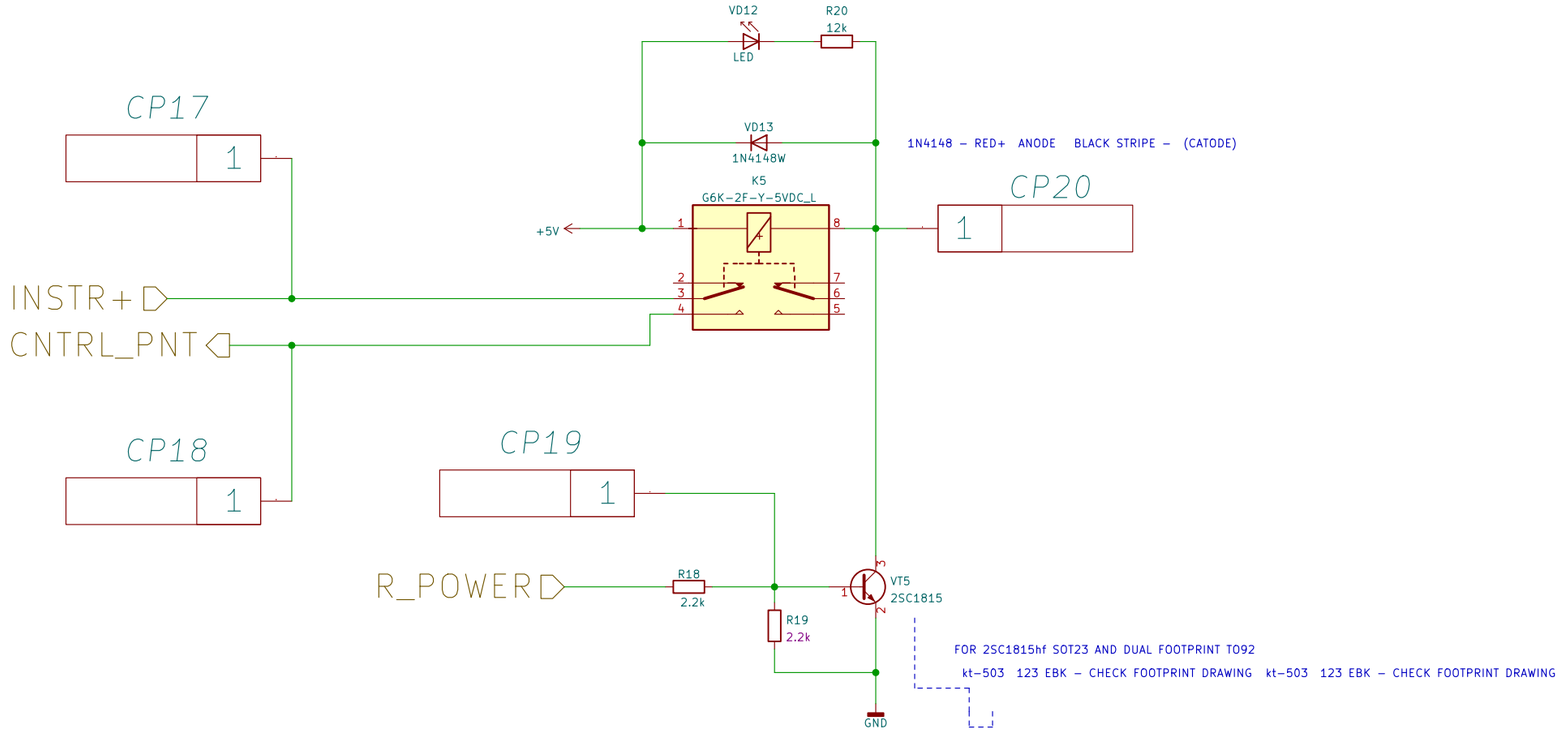
check register 10 and 13 connections on board
and make it wire if absent

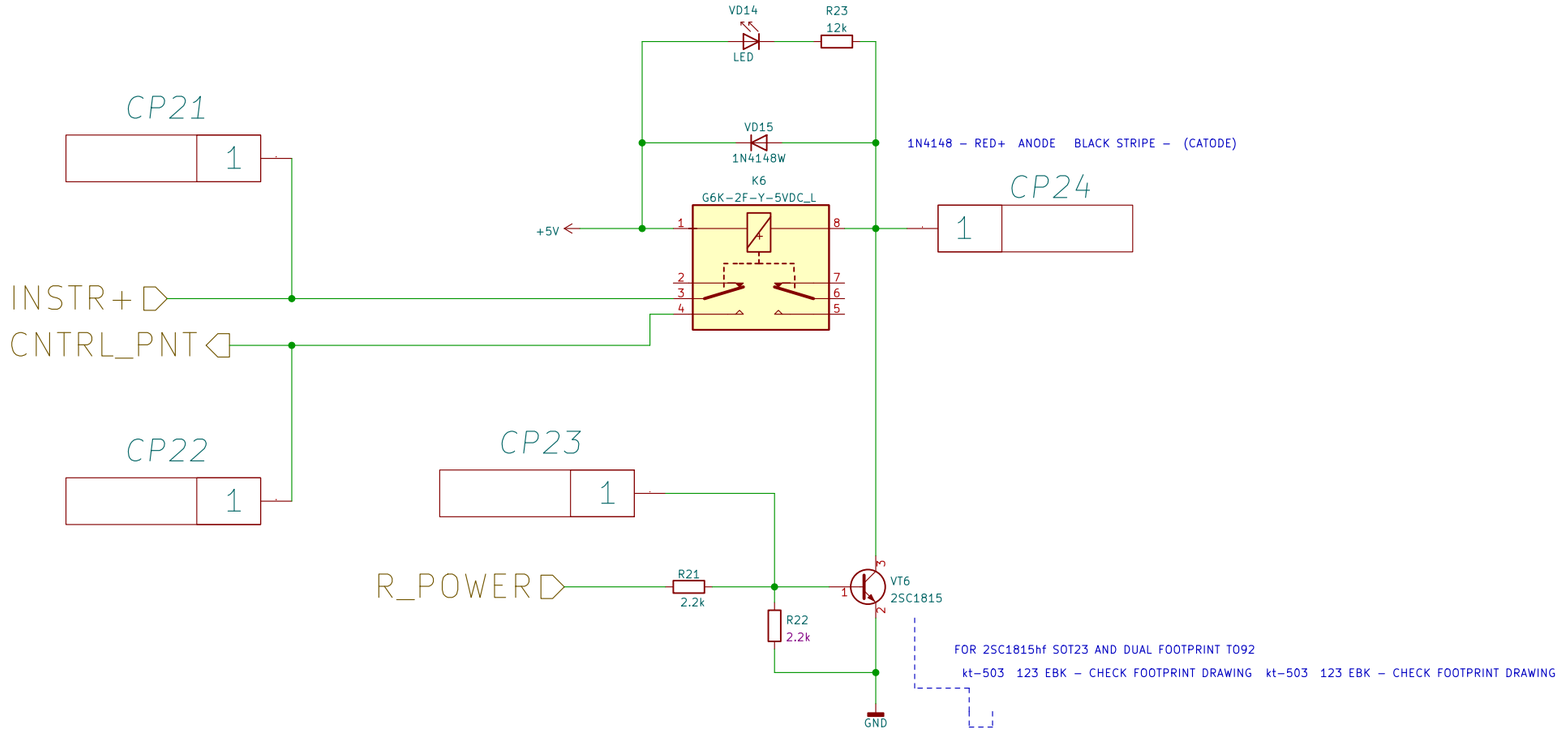

VD4
LED
R8
12k
CP1
1
VD5
1N4148W
1N4148 – RED+ ANODE BLACK STRIPE – (CATODE)
K1
G6K-2F-Y-5VDC_L
CP4
1
+5V
1
8
2
3
4
7
6
5
INSTR+
CNTRL_PNT
CP2
1
CP3
1
R_POWER
R6
2.2k
R7
2.2k
VT1
2SC1815
1
2
3
GNDD
FOR 2SC1815hf SOT23 AND DUAL FOOTPRINT TO92
kt-503 123 EBK – CHECK FOOTPRINT DRAWING kt-503 123 EBK – CHECK FOOTPRINT DRAWING

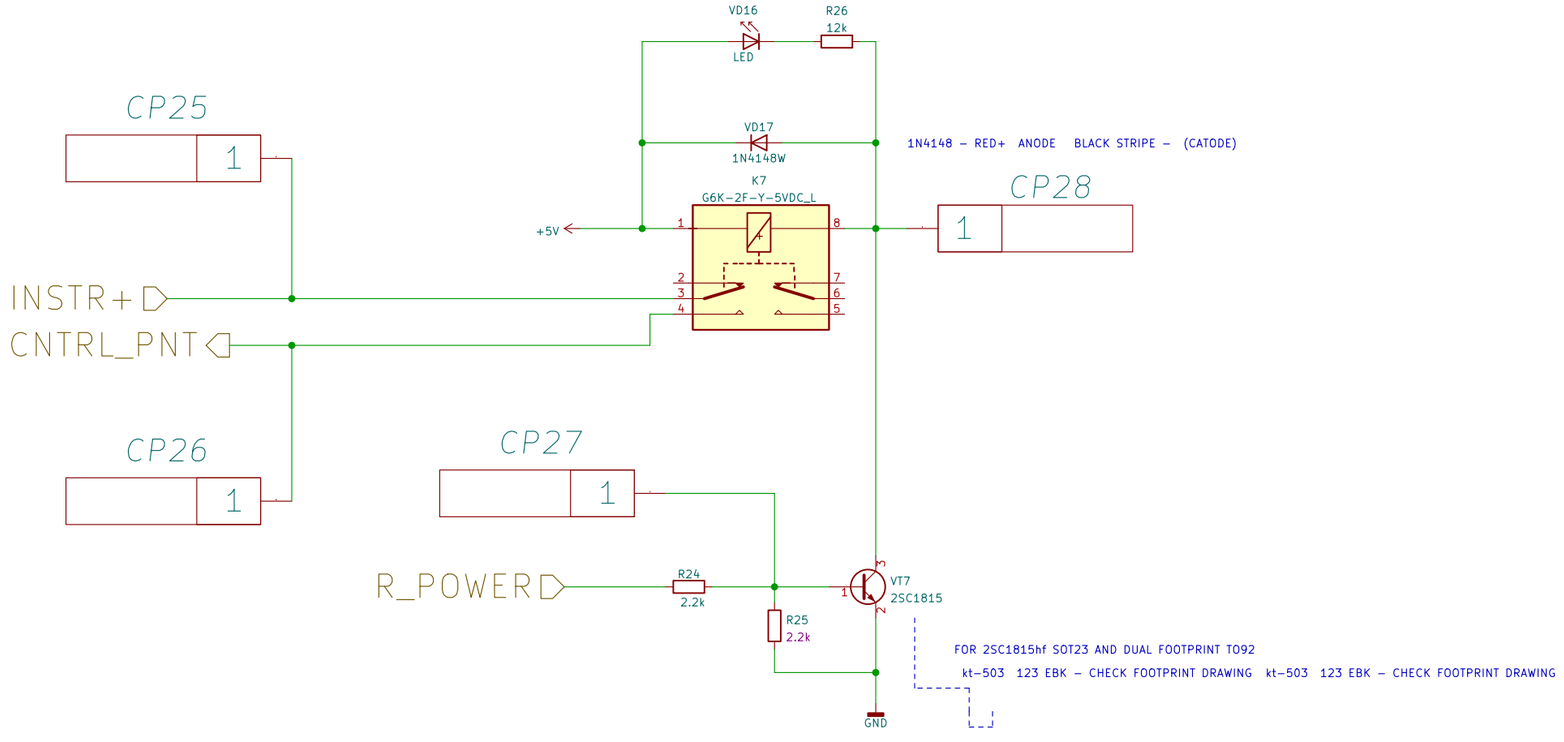

VD6
LED
R11
12k
CP5
1
VD7
1N4148W
1N4148 – RED+ ANODE BLACK STRIPE – (CATODE)
K2
G6K-2F-Y-5VDC_L
CP8
1
+5V
1
8
2
3
4
7
6
5
INSTR+
CNTRL_PNT
CP6
1
CP7
1
R_POWER
R9
2.2k
R10
2.2k
VT2
2SC1815
1
2
3
GND
FOR 2SC1815hf SOT23 AND DUAL FOOTPRINT TO92
kt-503 123 EBK – CHECK FOOTPRINT DRAWING kt-503 123 EBK – CHECK FOOTPRINT DRAWING

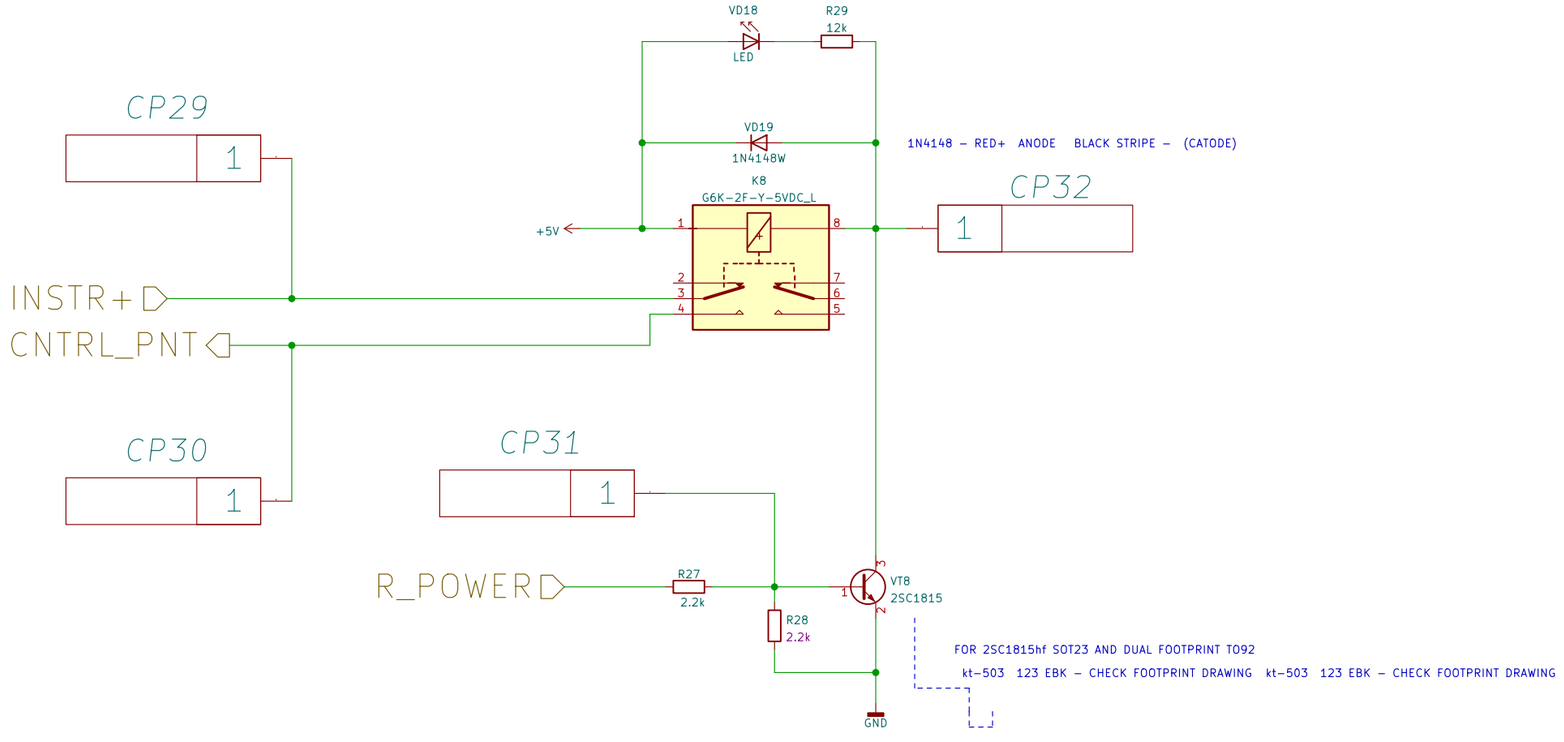

VD8
LED
R14
12k
CP9
1
VD9
1N4148W
1N4148 – RED+ ANODE BLACK STRIPE – (CATODE)
K3
G6K-2F-Y-5VDC_L
CP12
1
+5V
1
8
2
3
4
7
6
5
INSTR+
CNTRL_PNT
CP10
1
CP11
1
R_POWER
R12
2.2k
R13
2.2k
VT3
2SC1815
3
2
1
FOR 2SC1815hf SOT23 AND DUAL FOOTPRINT TO92
kt-503 123 EBK – CHECK FOOTPRINT DRAWING kt-503 123 EBK – CHECK FOOTPRINT DRAWING
GND

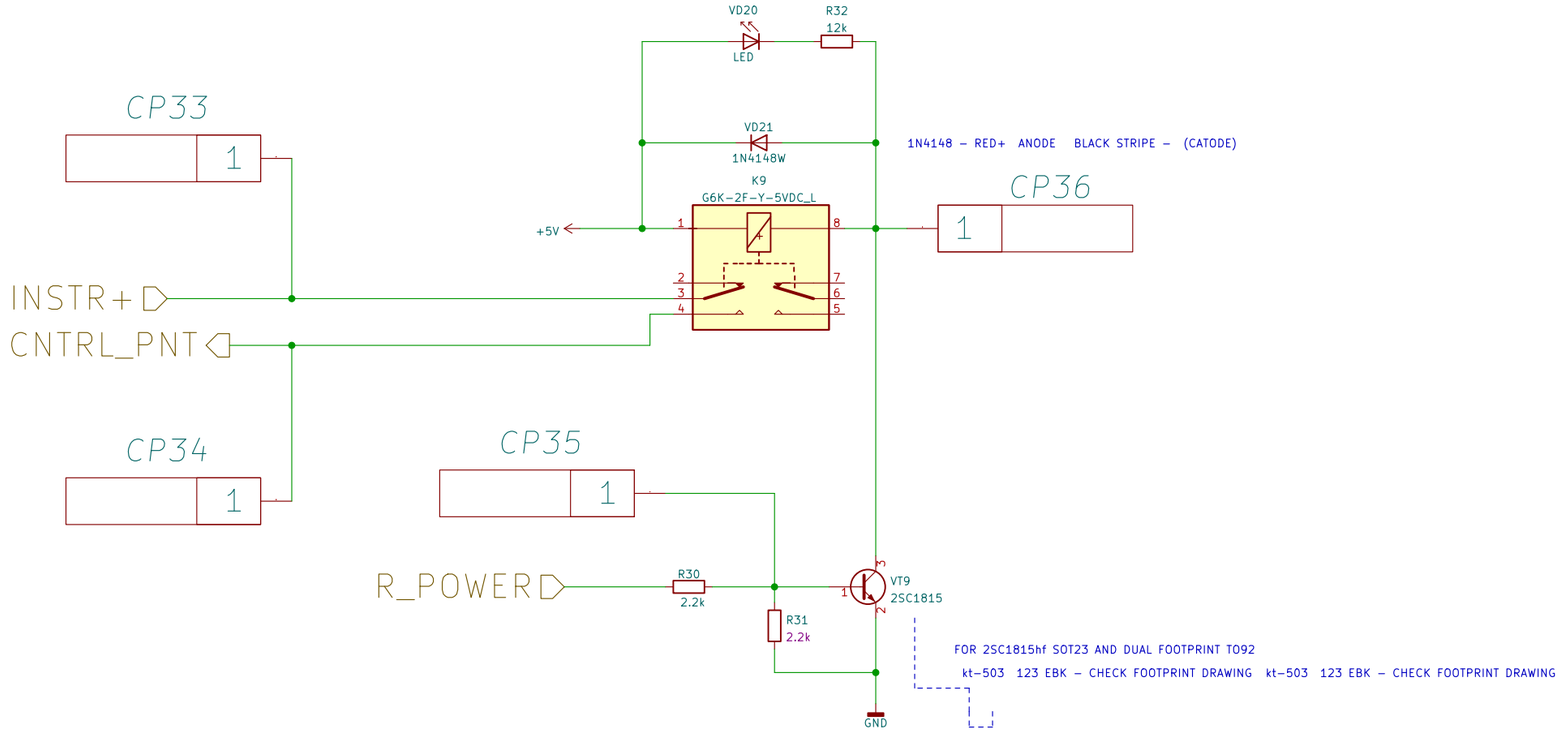

VD10
LED
R17
12k
CP13
1
VD11
1N4148W
1N4148 – RED+ ANODE BLACK STRIPE – (CATODE)
K4
G6K-2F-Y-5VDC_L
CP16
1
+5V
1
8
2
3
4
7
6
5
INSTR+
CNTRL_PNT
CP14
1
CP15
1
R_POWER
R15
2.2k
R16
2.2k
VT4
2SC1815
1
2
3
GND
FOR 2SC1815hf SOT23 AND DUAL FOOTPRINT TO92
kt-503 123 EBK – CHECK FOOTPRINT DRAWING kt-503 123 EBK – CHECK FOOTPRINT DRAWING

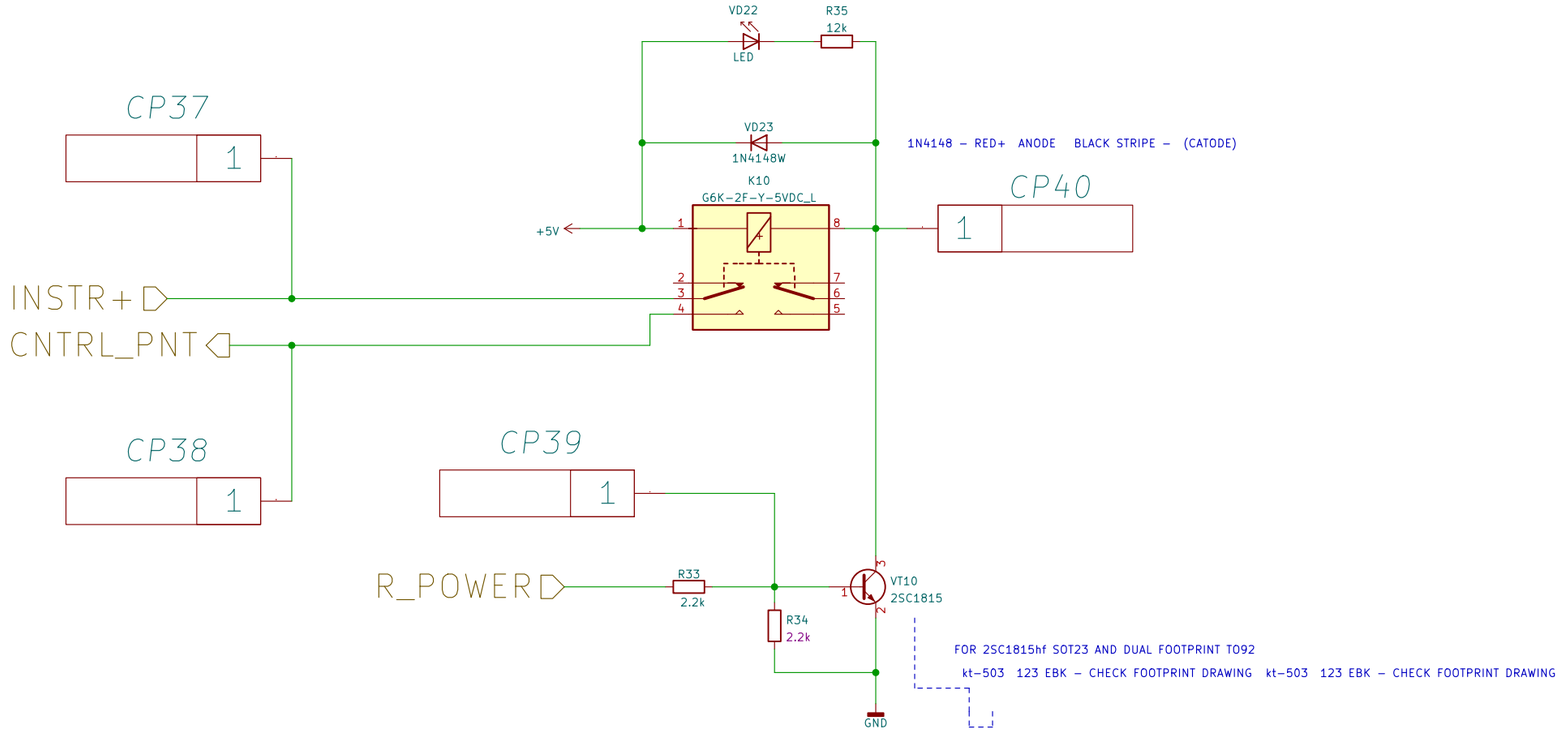

VD12
LED
R20
12k
CP17
1
VD13
1N4148W
1N4148 – RED+ ANODE BLACK STRIPE – (CATODE)
K5
G6K-2F-Y-5VDC_L
CP20
1
+5V
1
8
2
3
4
7
6
5
INSTR+
CNTRL_PNT
CP18
1
CP19
1
R_POWER
R18
2.2k
R19
2.2k
VT5
2SC1815
1
2
3
GND
FOR 2SC1815hf SOT23 AND DUAL FOOTPRINT TO92
kt-503 123 EBK – CHECK FOOTPRINT DRAWING kt-503 123 EBK – CHECK FOOTPRINT DRAWING

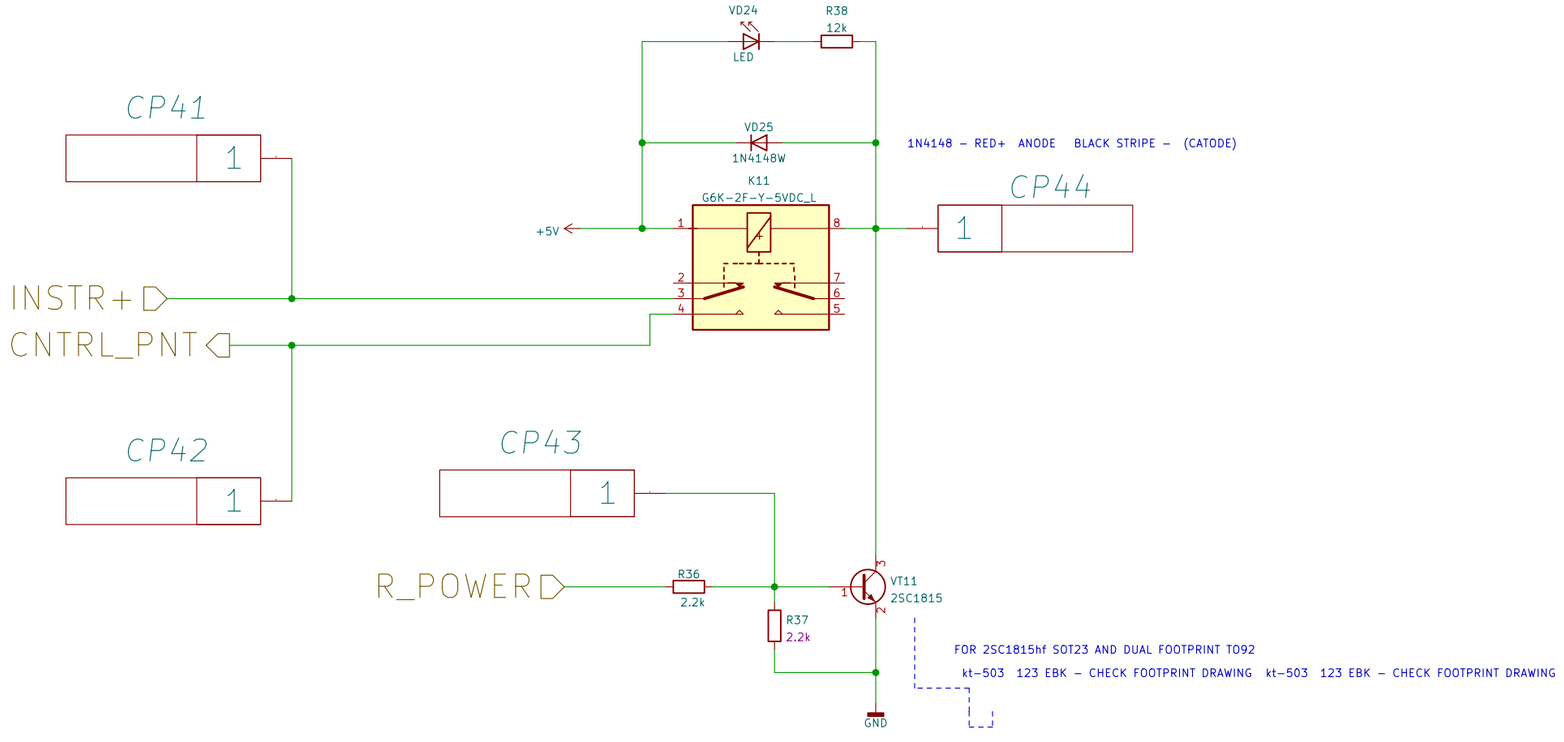

VD14
LED
R23
12k
CP21
1
VD15
1N4148W
1N4148 – RED+ ANODE BLACK STRIPE – (CATODE)
K6
G6K-2F-Y-5VDC_L
CP24
1
+5V
1
8
2
3
4
7
6
5
INSTR+
CNTRL_PNT
CP22
1
CP23
1
R_POWER
R21
2.2k
R22
2.2k
VT6
2SC1815
1
2
3
GND
FOR 2SC1815hf SOT23 AND DUAL FOOTPRINT TO92
kt-503 123 EBK – CHECK FOOTPRINT DRAWING kt-503 123 EBK – CHECK FOOTPRINT DRAWING

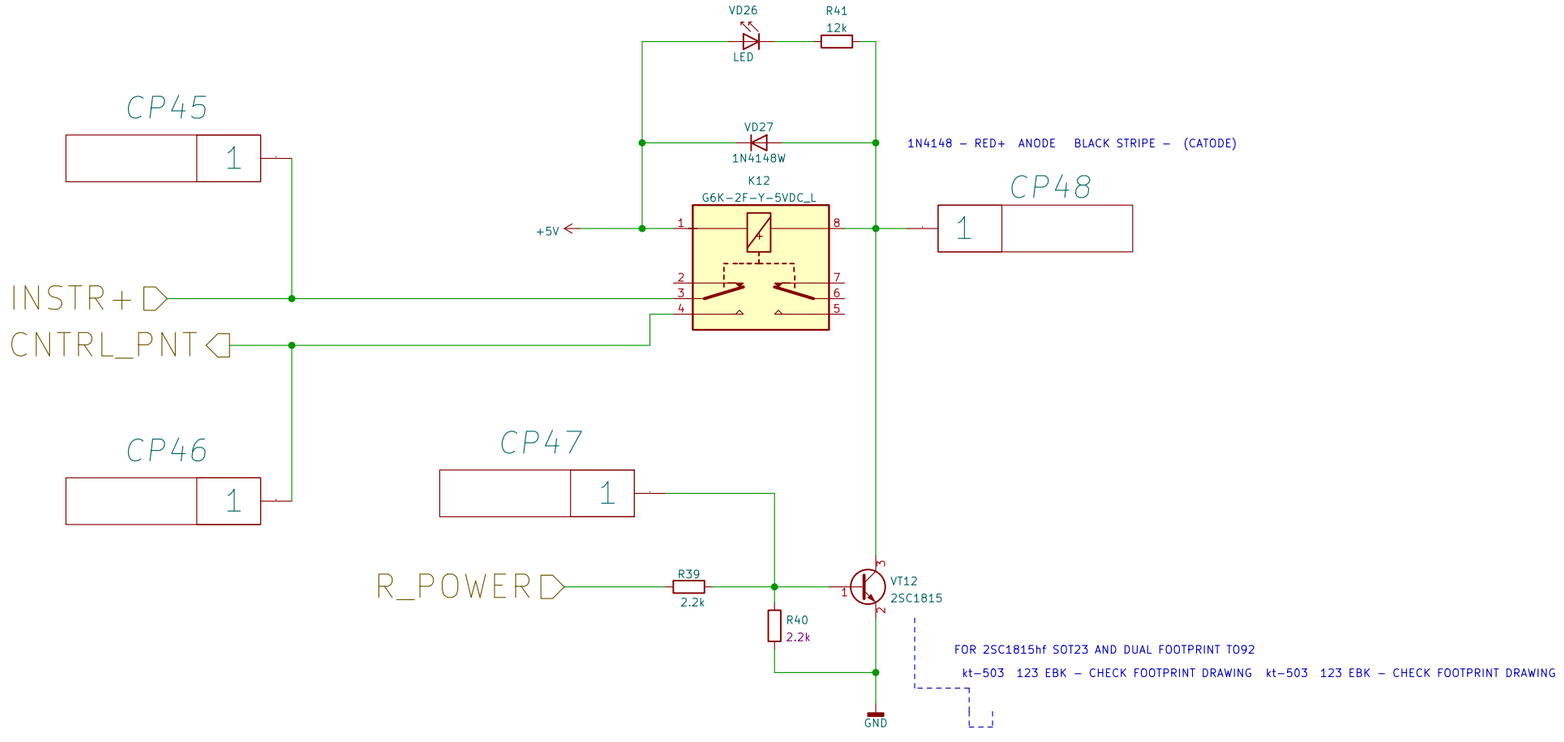

VD16
LED
R26
12k
CP25
1
VD17
1N4148W
1N4148 – RED+ ANODE BLACK STRIPE – (CATODE)
K7
G6K-2F-Y-5VDC_L
CP28
1
+5V
1
8
2
3
4
7
6
5
INSTR+
CNTRL_PNT
CP26
1
CP27
1
R_POWER
R24
2.2k
R25
2.2k
VT7
2SC1815
1
2
3
FOR 2SC1815hf SOT23 AND DUAL FOOTPRINT TO92
kt-503 123 EBK – CHECK FOOTPRINT DRAWING kt-503 123 EBK – CHECK FOOTPRINT DRAWING
GND

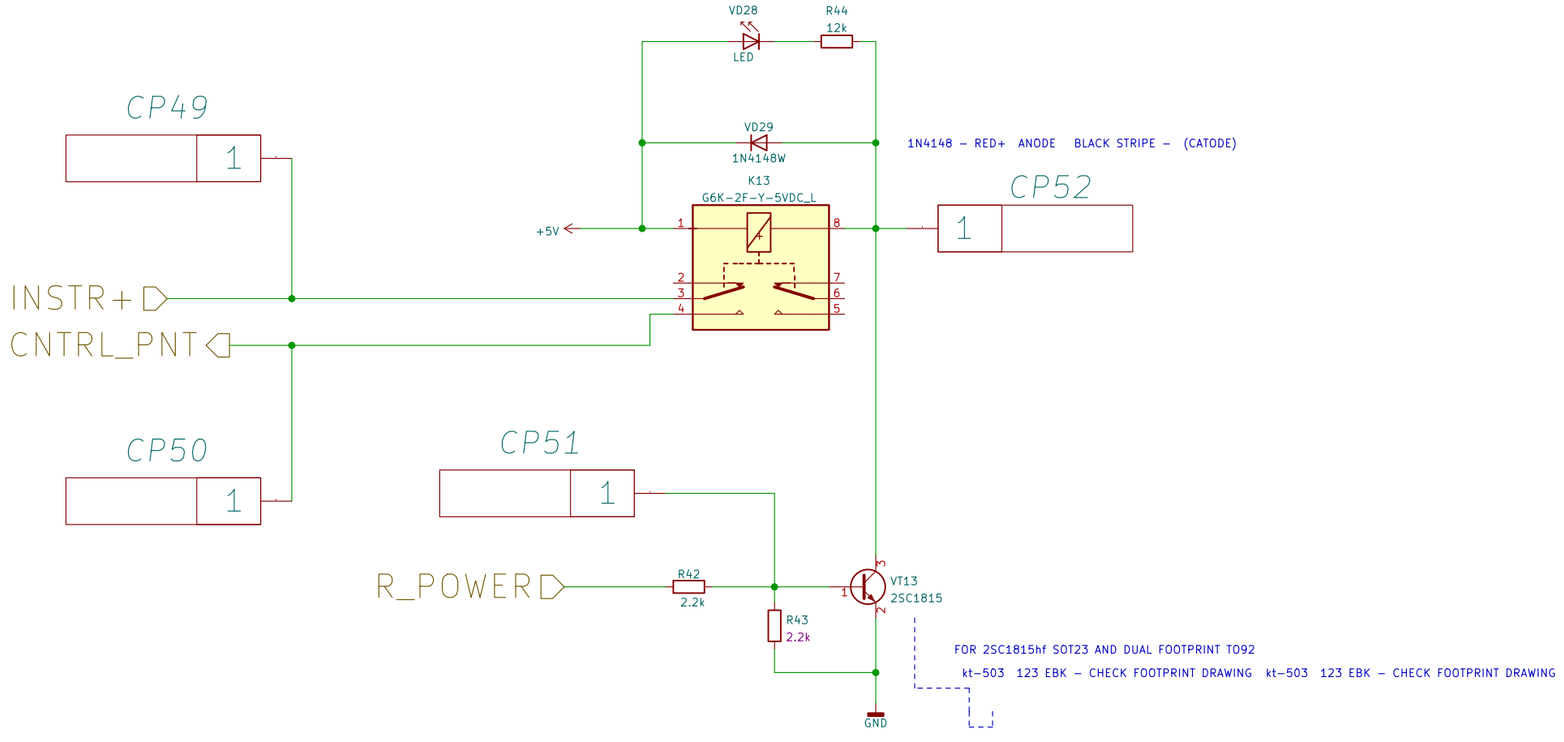

VD18
LED
R29
12k
CP29
1
VD19
1N4148W
1N4148 – RED+ ANODE BLACK STRIPE – (CATODE)
K8
G6K-2F-Y-5VDC_L
CP32
1
+5V
1
8
2
3
4
7
6
5
INSTR+
CNTRL_PNT
CP30
1
CP31
1
R_POWER
R27
2.2k
R28
2.2k
VT8
2SC1815
1
2
3
GND
FOR 2SC1815hf SOT23 AND DUAL FOOTPRINT TO92
kt-503 123 EBK – CHECK FOOTPRINT DRAWING kt-503 123 EBK – CHECK FOOTPRINT DRAWING

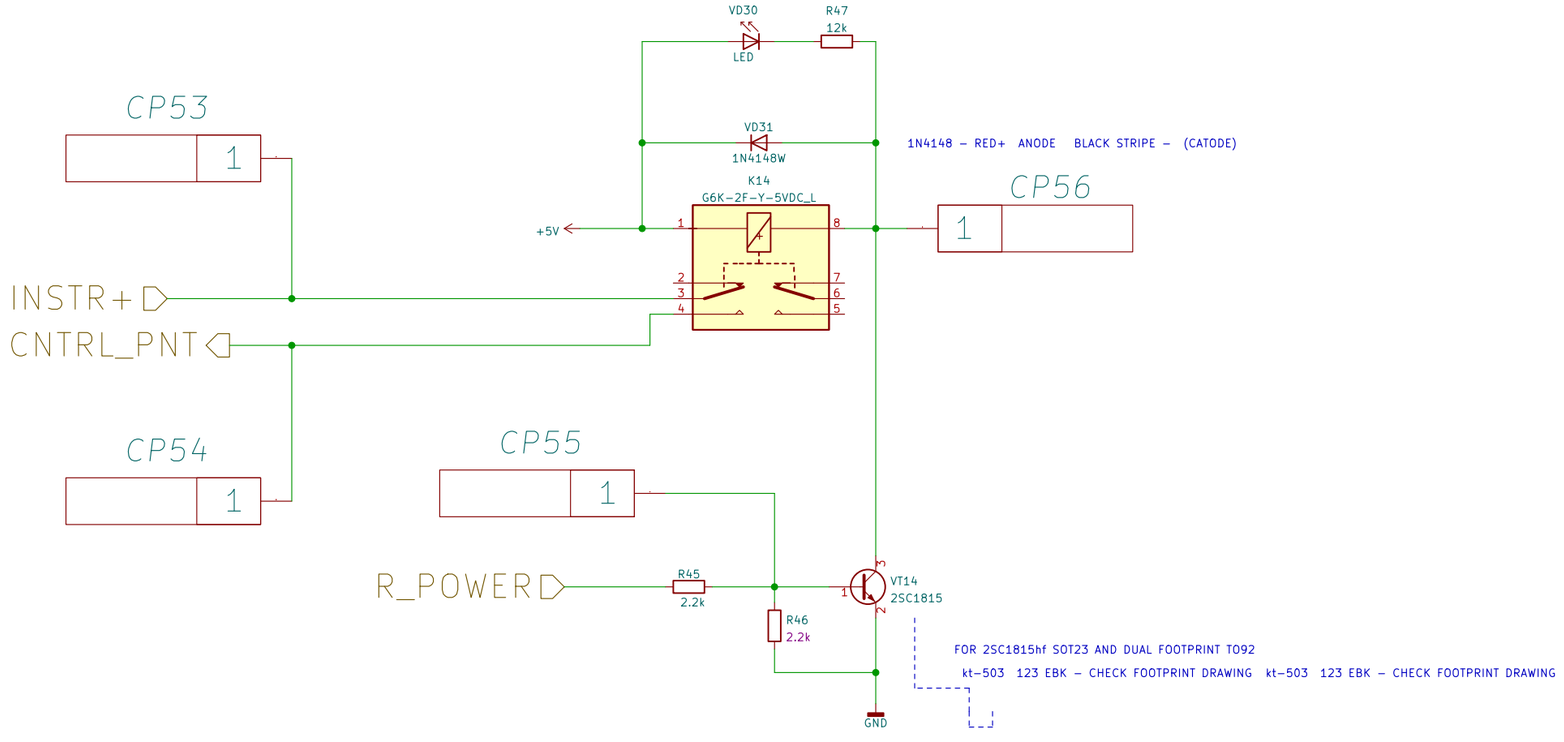

VD20
LED
R32
12k
CP33
1
VD21
1N4148W
1N4148 – RED+ ANODE BLACK STRIPE – (CATODE)
K9
G6K-2F-Y-5VDC_L
CP36
1
+5V
1
8
INSTR+
CNTRL_PNT
2
3
4
7
6
5
CP34
1
CP35
1
R_POWER
R30
2.2k
R31
2.2k
VT9
2SC1815
1
2
3
GND
FOR 2SC1815hf SOT23 AND DUAL FOOTPRINT TO92
kt-503 123 EBK – CHECK FOOTPRINT DRAWING kt-503 123 EBK – CHECK FOOTPRINT DRAWING

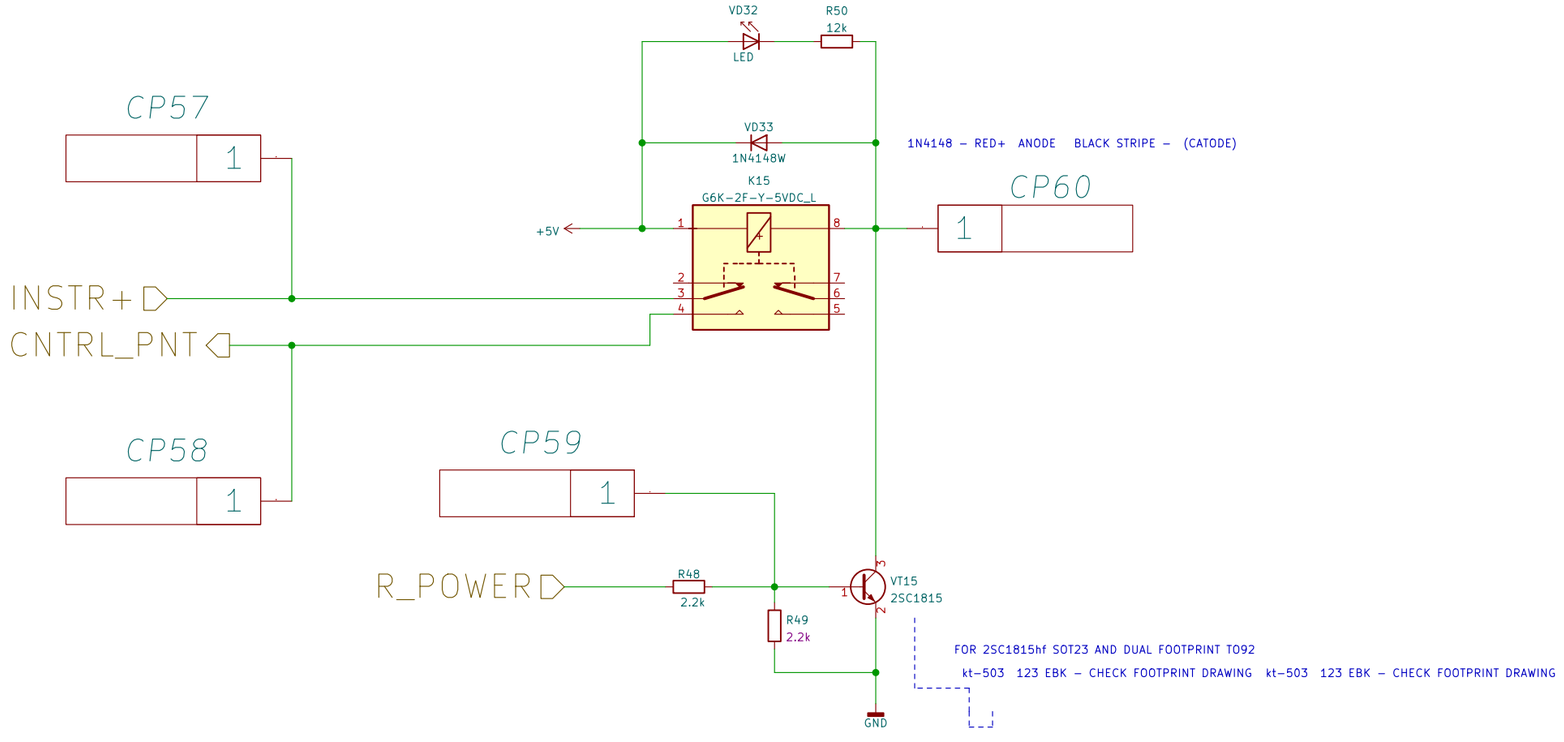

VD22
LED
R35
12k
CP37
1
VD23
1N4148W
1N4148 – RED+ ANODE BLACK STRIPE – (CATODE)
K10
G6K-2F-Y-5VDC_L
CP40
1
+5V
1
8
2
3
4
7
6
5
INSTR+
CNTRL_PNT
CP38
1
CP39
1
R_POWER
R33
2.2k
R34
2.2k
VT10
2SC1815
1
2
3
GND
FOR 2SC1815hf SOT23 AND DUAL FOOTPRINT TO92
kt-503 123 EBK – CHECK FOOTPRINT DRAWING kt-503 123 EBK – CHECK FOOTPRINT DRAWING

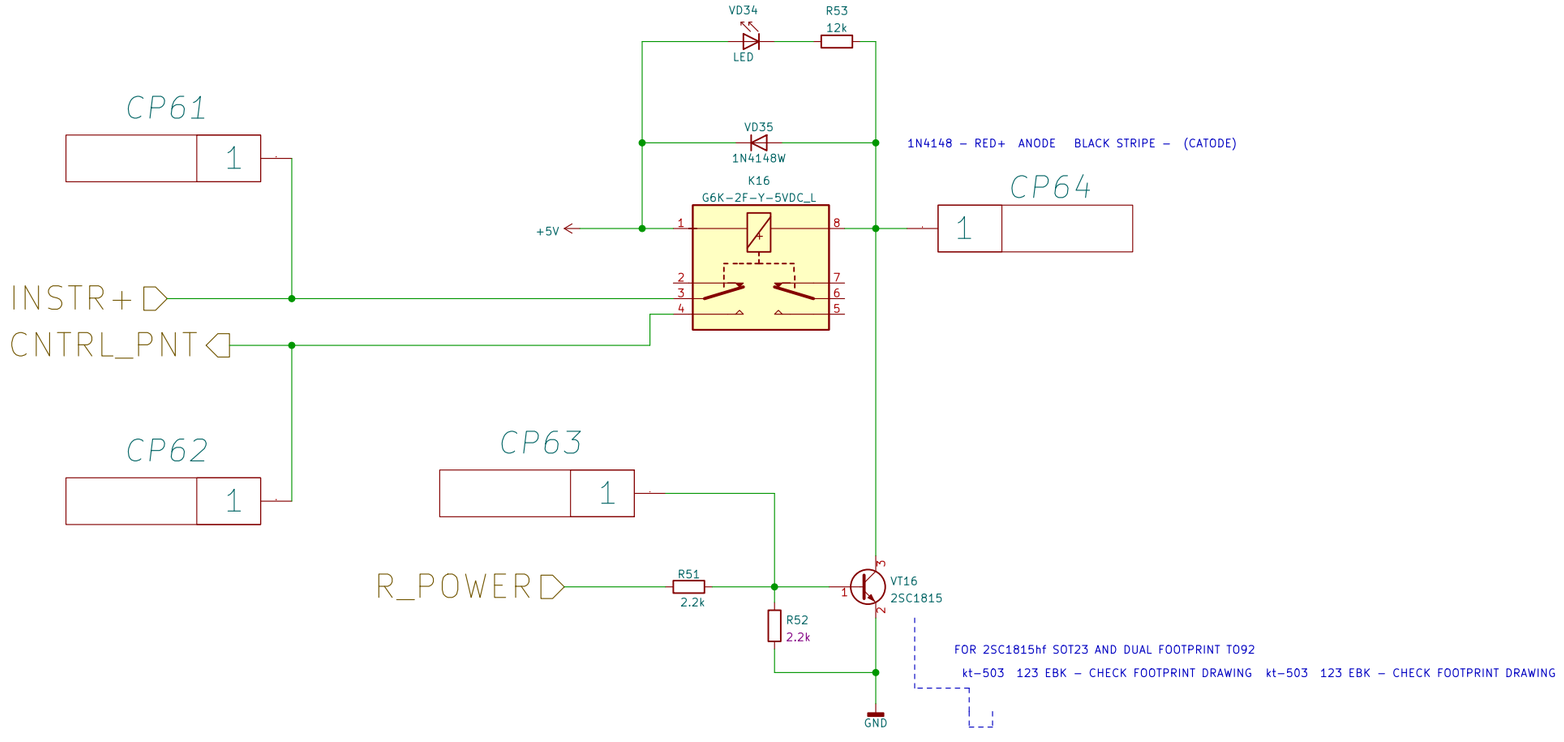

VD24
LED
R38
12k
CP41
1
VD25
1N4148W
1N4148 – RED+ ANODE BLACK STRIPE – (CATODE)
K11
G6K-2F-Y-5VDC_L
CP44
1
+5V
1
8
2
3
4
7
6
5
INSTR+
CNTRL_PNT
CP42
1
CP43
1
R_POWER
R36
2.2k
R37
2.2k
VT11
2SC1815
1
2
3
GND
FOR 2SC1815hf SOT23 AND DUAL FOOTPRINT TO92
kt-503 123 EBK – CHECK FOOTPRINT DRAWING kt-503 123 EBK – CHECK FOOTPRINT DRAWING

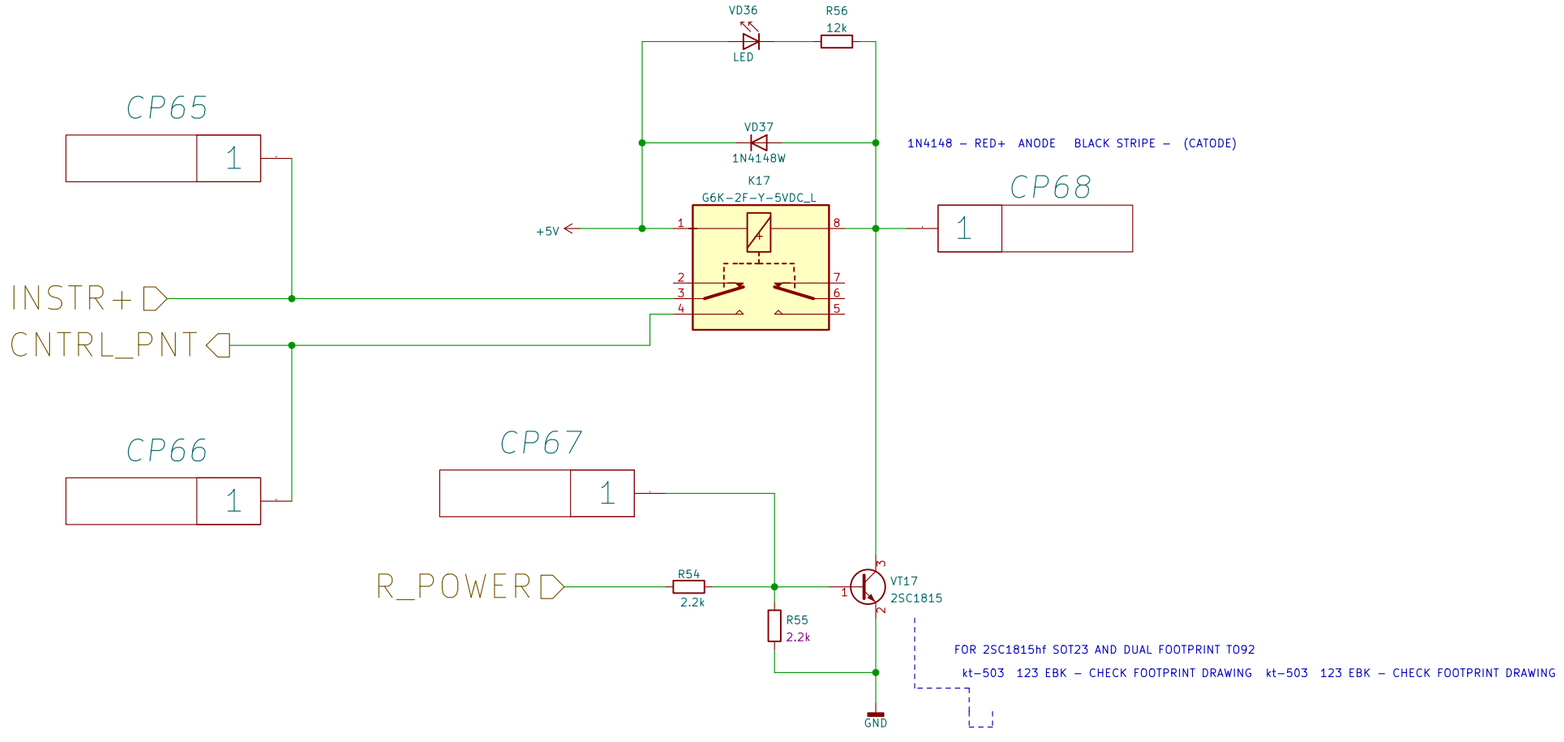

VD26
LED
R41
12k
CP45
1
VD27
1N4148W
1N4148 – RED+ ANODE BLACK STRIPE – (CATODE)
K12
G6K-2F-Y-5VDC_L
CP48
1
+5V
1
8
INSTR+
CNTRL_PNT
2
3
4
7
6
5
CP46
1
CP47
1
R_POWER
R39
2.2k
R40
2.2k
VT12
2SC1815
1
2
3
GND
FOR 2SC1815hf SOT23 AND DUAL FOOTPRINT TO92
kt-503 123 EBK – CHECK FOOTPRINT DRAWING kt-503 123 EBK – CHECK FOOTPRINT DRAWING

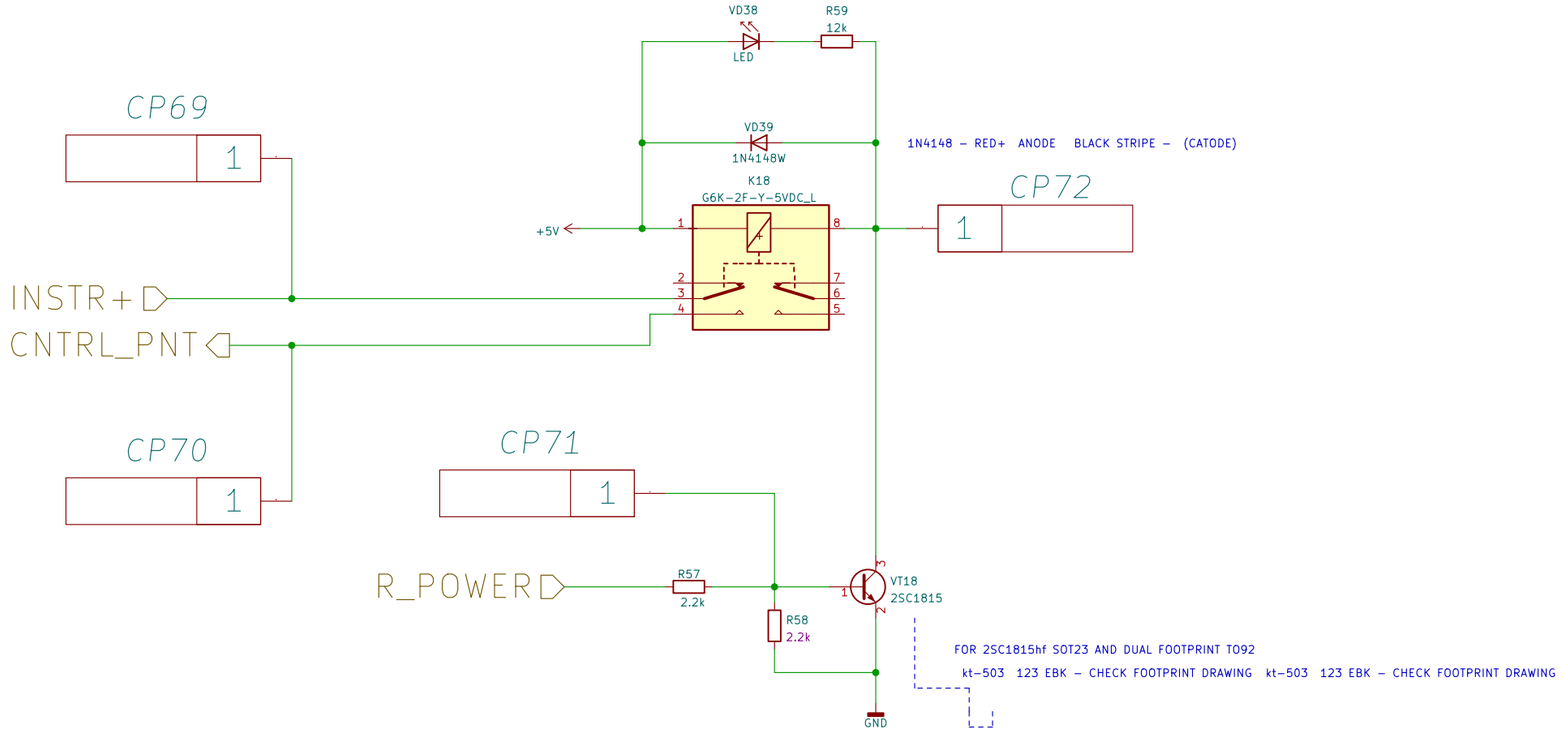

VD28
LED
R44
12k
CP49
1
VD29
1N4148W
1N4148 – RED+ ANODE BLACK STRIPE – (CATODE)
K13
G6K-2F-Y-5VDC_L
CP52
1
+5V
1
8
2
3
4
7
6
5
INSTR+
CNTRL_PNT
CP50
1
CP51
1
R_POWER
R42
2.2k
R43
2.2k
VT13
2SC1815
1
2
3
GND
FOR 2SC1815hf SOT23 AND DUAL FOOTPRINT TO92
kt-503 123 EBK – CHECK FOOTPRINT DRAWING kt-503 123 EBK – CHECK FOOTPRINT DRAWING

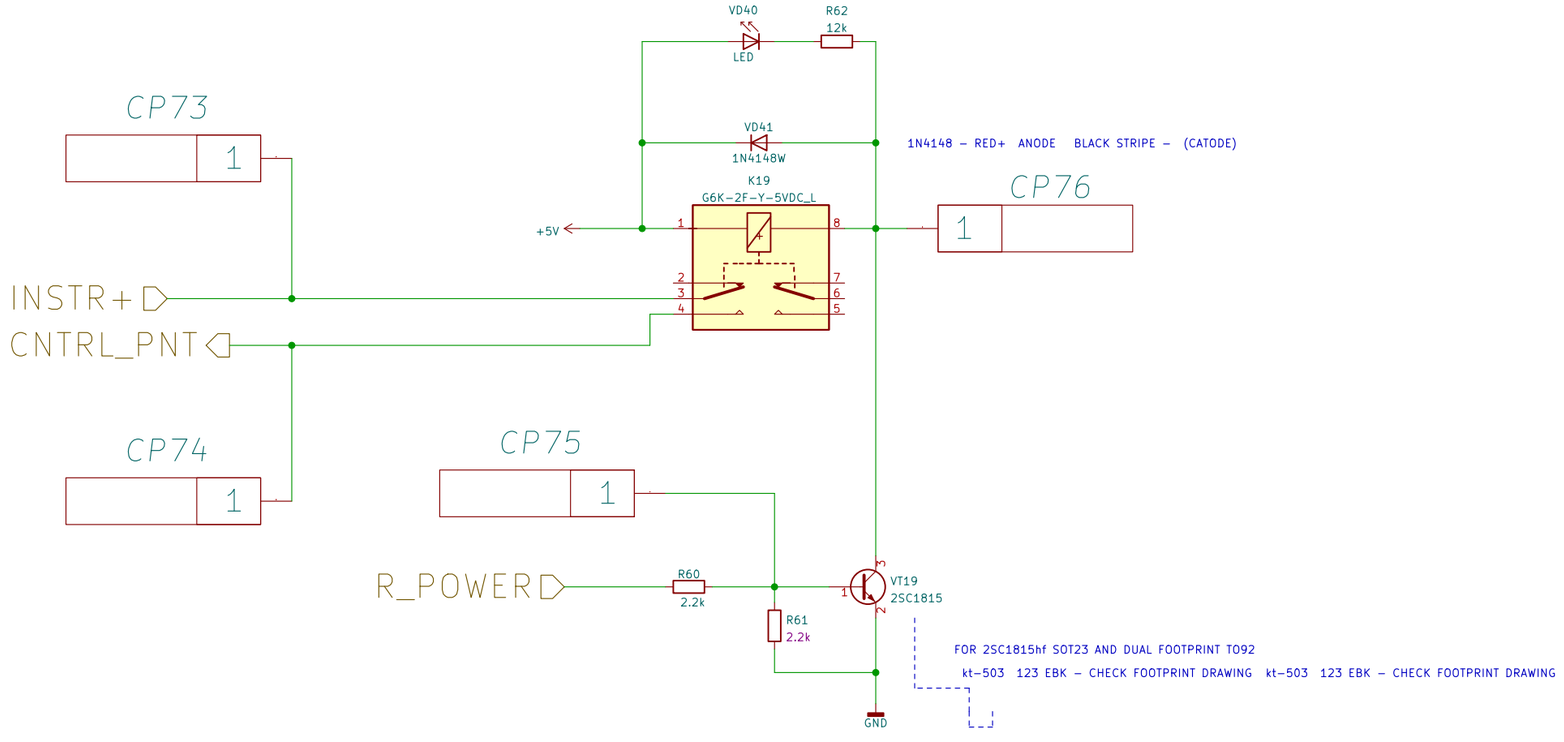

VD30
LED
R47
12k
CP53
1
VD31
1N4148W
1N4148 – RED+ ANODE BLACK STRIPE – (CATODE)
K14
G6K-2F-Y-5VDC_L
CP56
1
+5V
1
8
2
3
4
7
6
5
INSTR+
CNTRL_PNT
CP54
1
CP55
1
R_POWER
R45
2.2k
R46
2.2k
VT14
2SC1815
1
2
3
GND
FOR 2SC1815hf SOT23 AND DUAL FOOTPRINT TO92
kt-503 123 EBK – CHECK FOOTPRINT DRAWING kt-503 123 EBK – CHECK FOOTPRINT DRAWING

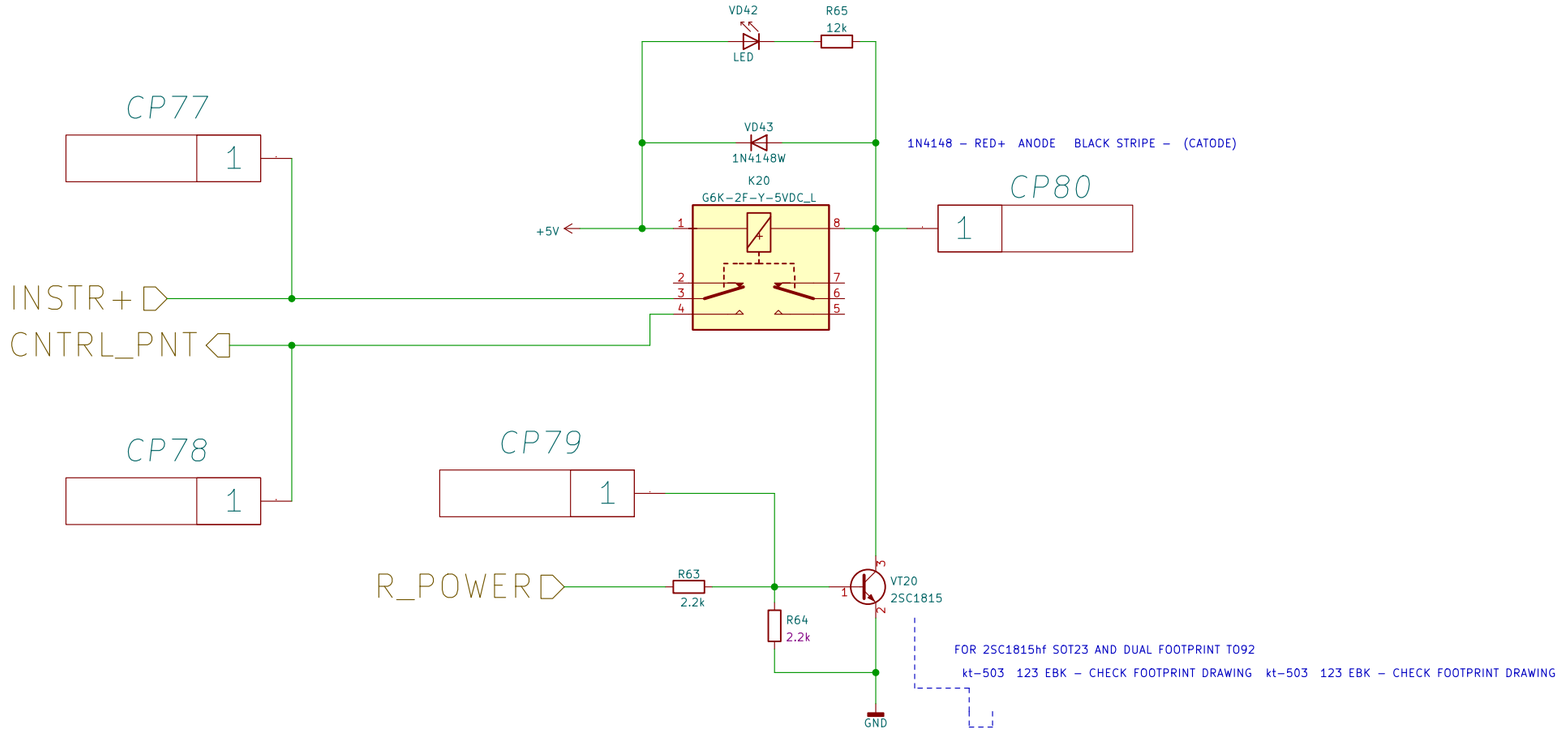

VD32
LED
R50
12k
CP57
1
VD33
1N4148W
1N4148 – RED+ ANODE BLACK STRIPE – (CATODE)
K15
G6K-2F-Y-5VDC_L
CP60
1
+5V
1
8
2
3
4
7
6
5
INSTR+
CNTRL_PNT
CP58
1
CP59
1
R_POWER
R48
2.2k
R49
2.2k
VT15
2SC1815
1
2
3
GND
FOR 2SC1815hf SOT23 AND DUAL FOOTPRINT TO92
kt-503 123 EBK – CHECK FOOTPRINT DRAWING kt-503 123 EBK – CHECK FOOTPRINT DRAWING

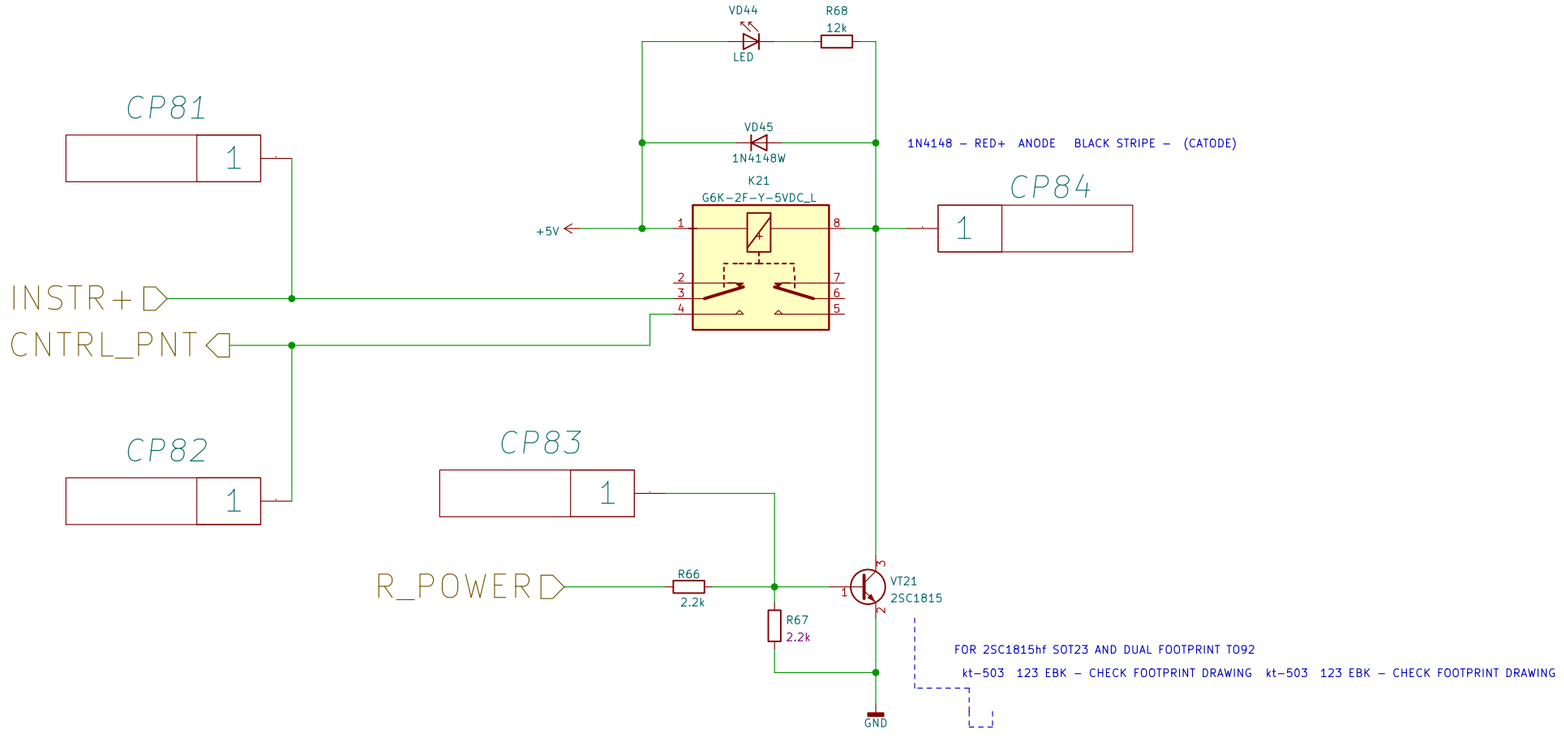

VD34
LED
R53
12k
CP61
1
VD35
1N4148W
1N4148 – RED+ ANODE BLACK STRIPE – (CATODE)
K16
G6K-2F-Y-5VDC_L
CP64
1
+5V
1
8
2
3
4
7
6
5
INSTR+
CNTRL_PNT
CP62
1
CP63
1
R_POWER
R51
2.2k
R52
2.2k
VT16
2SC1815
1
2
3
GND
FOR 2SC1815hf SOT23 AND DUAL FOOTPRINT TO92
kt-503 123 EBK – CHECK FOOTPRINT DRAWING kt-503 123 EBK – CHECK FOOTPRINT DRAWING

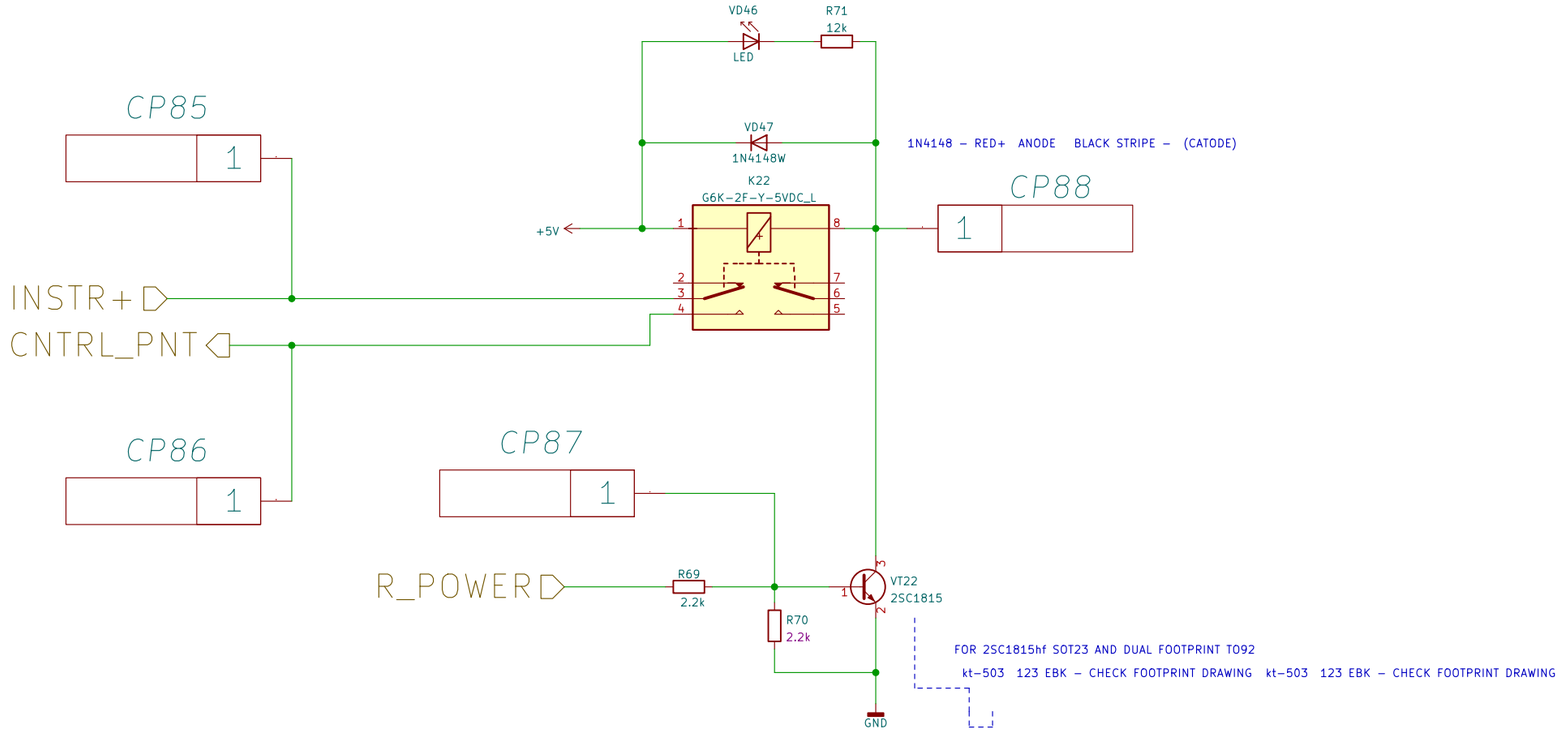

VD36
LED
R56
12k
CP65
1
VD37
1N4148W
1N4148 – RED+ ANODE BLACK STRIPE – (CATODE)
K17
G6K-2F-Y-5VDC_L
CP68
1
+5V
1
8
2
3
4
7
6
5
INSTR+
CNTRL_PNT
CP66
1
CP67
1
R_POWER
R54
2.2k
R55
2.2k
VT17
2SC1815
1
2
3
GND
FOR 2SC1815hf SOT23 AND DUAL FOOTPRINT TO92
kt-503 123 EBK – CHECK FOOTPRINT DRAWING kt-503 123 EBK – CHECK FOOTPRINT DRAWING

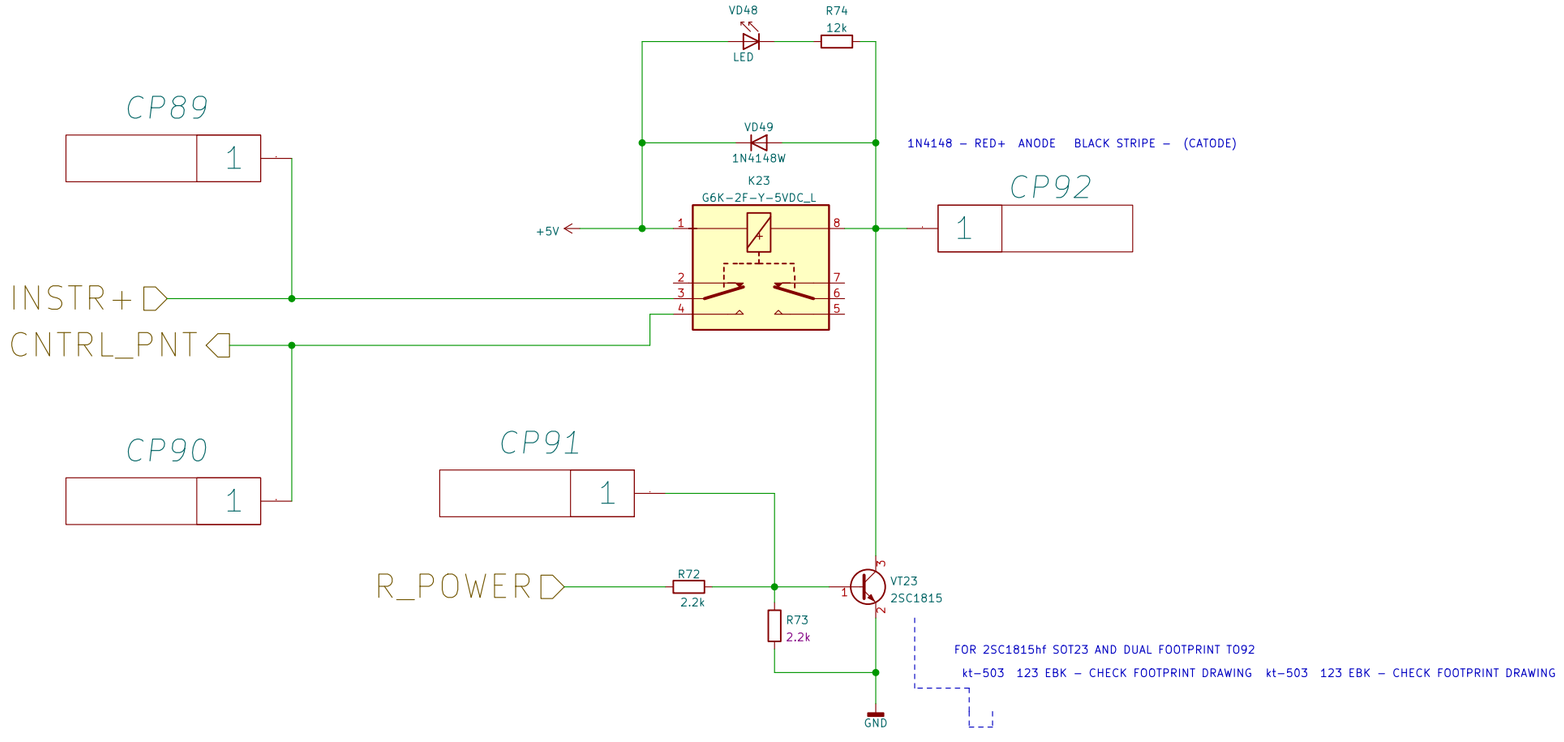

VD38
LED
R59
12k
CP69
1
VD39
1N4148W
1N4148 – RED+ ANODE BLACK STRIPE – (CATODE)
K18
G6K-2F-Y-5VDC_L
CP72
1
+5V
1
8
2
3
4
7
6
5
INSTR+
CNTRL_PNT
CP70
1
CP71
1
R_POWER
R57
2.2k
R58
2.2k
VT18
2SC1815
1
2
3
GND
FOR 2SC1815hf SOT23 AND DUAL FOOTPRINT TO92
kt-503 123 EBK – CHECK FOOTPRINT DRAWING kt-503 123 EBK – CHECK FOOTPRINT DRAWING

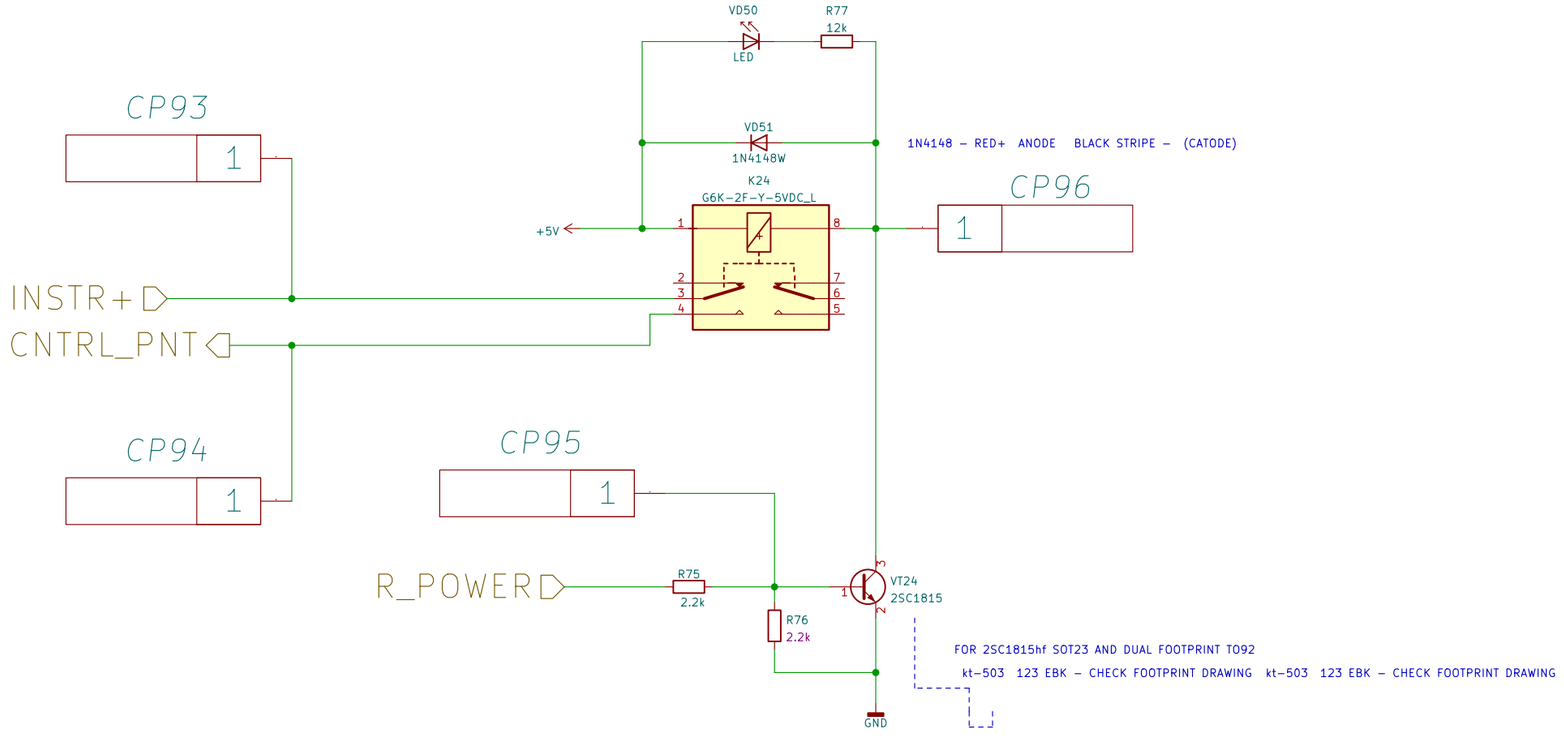

VD40
LED
R62
12k
CP73
1
VD41
1N4148W
1N4148 – RED+ ANODE BLACK STRIPE – (CATODE)
K19
G6K-2F-Y-5VDC_L
CP76
1
+5V
1
8
2
3
4
7
6
5
INSTR+
CNTRL_PNT
CP74
1
CP75
1
R_POWER
R60
2.2k
R61
2.2k
VT19
2SC1815
3
2
1
FOR 2SC1815hf SOT23 AND DUAL FOOTPRINT TO92
kt-503 123 EBK – CHECK FOOTPRINT DRAWING kt-503 123 EBK – CHECK FOOTPRINT DRAWING
GND

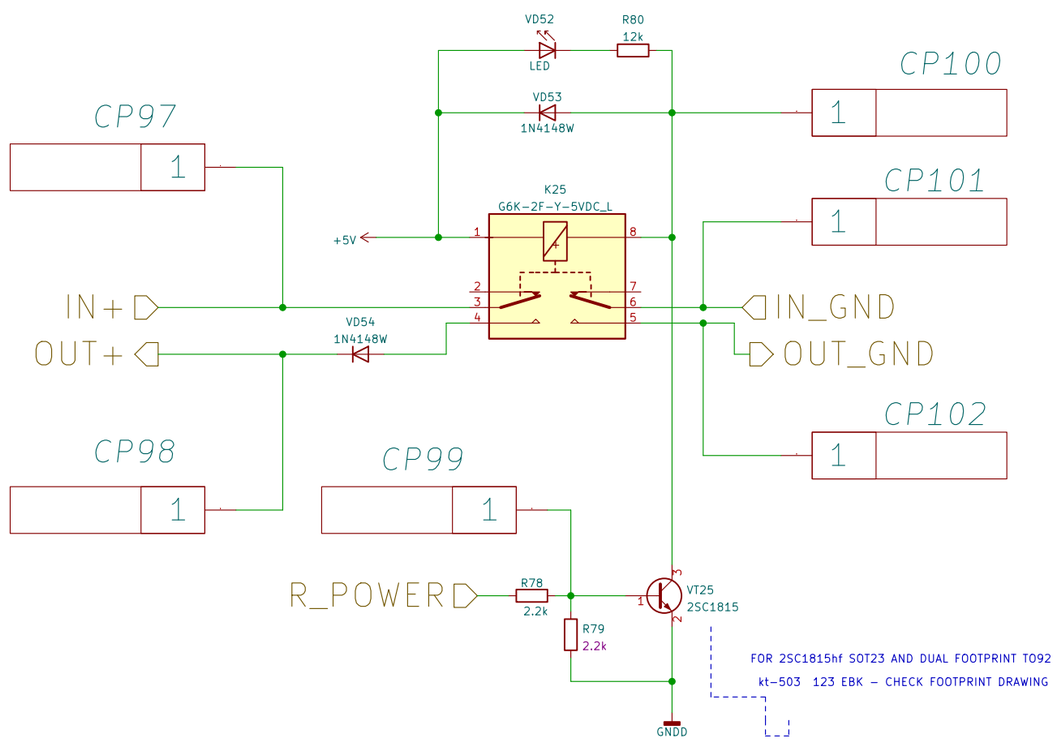

VD42
LED
R65
12k
CP77
1
VD43
1N4148W
1N4148 – RED+ ANODE BLACK STRIPE – (CATODE)
K20
G6K-2F-Y-5VDC_L
CP80
1
+5V
1
8
2
3
4
7
6
5
INSTR+
CNTRL_PNT
CP78
1
CP79
1
R_POWER
R63
2.2k
R64
2.2k
VT20
2SC1815
1
2
3
GND
FOR 2SC1815hf SOT23 AND DUAL FOOTPRINT TO92
kt-503 123 EBK – CHECK FOOTPRINT DRAWING kt-503 123 EBK – CHECK FOOTPRINT DRAWING


VD44
LED
R68
12k
CP81
1
VD45
1N4148W
1N4148 – RED+ ANODE BLACK STRIPE – (CATODE)
K21
G6K-2F-Y-5VDC_L
CP84
1
+5V
1
8
2
3
4
7
6
5
INSTR+
CNTRL_PNT
CP82
1
CP83
1
R_POWER
R66
2.2k
R67
2.2k
VT21
2SC1815
1
2
3
GND
FOR 2SC1815hf SOT23 AND DUAL FOOTPRINT TO92
kt-503 123 EBK – CHECK FOOTPRINT DRAWING kt-503 123 EBK – CHECK FOOTPRINT DRAWING

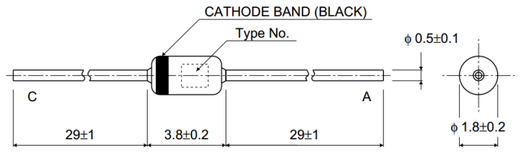

VD46
LED
R71
12k
CP85
1
VD47
1N4148W
1N4148 – RED+ ANODE BLACK STRIPE – (CATODE)
K22
G6K-2F-Y-5VDC_L
CP88
1
+5V
1
8
2
3
4
7
6
5
INSTR+
CNTRL_PNT
CP86
1
CP87
1
R_POWER
R69
2.2k
R70
2.2k
VT22
2SC1815
1
2
3
GND
FOR 2SC1815hf SOT23 AND DUAL FOOTPRINT TO92
kt-503 123 EBK – CHECK FOOTPRINT DRAWING kt-503 123 EBK – CHECK FOOTPRINT DRAWING


VD48
LED
R74
12k
CP89
1
VD49
1N4148W
1N4148 – RED+ ANODE BLACK STRIPE – (CATODE)
K23
G6K-2F-Y-5VDC_L
CP92
1
+5V
1
8
2
3
4
7
6
5
INSTR+
CNTRL_PNT
CP90
1
CP91
1
R_POWER
R72
2.2k
R73
2.2k
VT23
2SC1815
1
2
3
GND
FOR 2SC1815hf SOT23 AND DUAL FOOTPRINT TO92
kt-503 123 EBK – CHECK FOOTPRINT DRAWING kt-503 123 EBK – CHECK FOOTPRINT DRAWING

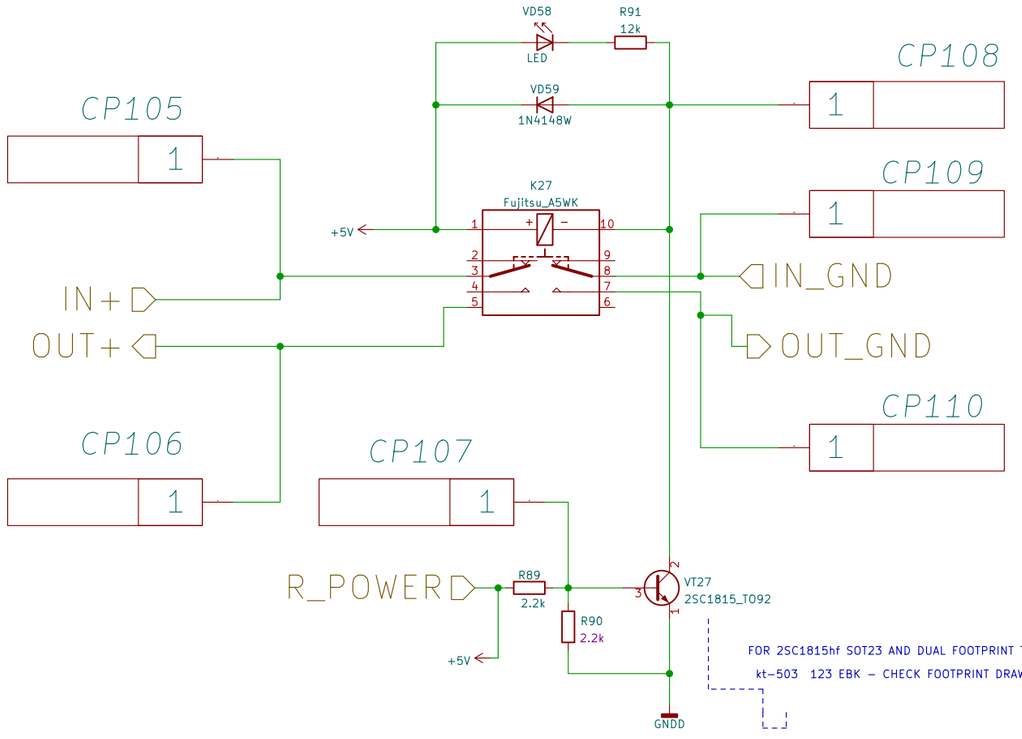

VD50
LED
R77
12k
CP93
1
VD51
1N4148W
1N4148 – RED+ ANODE BLACK STRIPE – (CATODE)
K24
G6K-2F-Y-5VDC_L
CP96
1
+5V
1
8
2
3
4
7
6
5
INSTR+
CNTRL_PNT
CP94
1
CP95
1
R_POWER
R75
2.2k
R76
2.2k
VT24
2SC1815
1
2
3
GND
FOR 2SC1815hf SOT23 AND DUAL FOOTPRINT TO92
kt-503 123 EBK – CHECK FOOTPRINT DRAWING kt-503 123 EBK – CHECK FOOTPRINT DRAWING

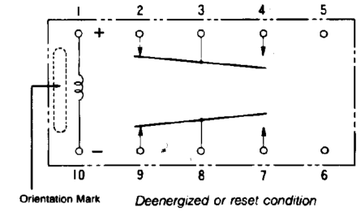

VD52
LED
R80
12k
VD53
1N4148W
CP100
1
CP97
1
K25
G6K-2F-Y-5VDC_L
CP101
1
+5V
1
8
2
3
4
7
6
5
IN+
OUT+
VD54
1N4148W
IN_GND
OUT_GND
CP102
1
CP98
1
CP99
1
R_POWER
R78
2.2k
R79
2.2k
VT25
2SC1815
FOR 2SC1815hf SOT23 AND DUAL FOOTPRINT TO92
kt-503 123 EBK - CHECK FOOTPRINT DRAWING
GNDD

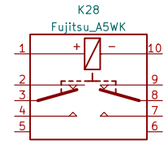
1N4148 / 1N4150 / 1N4448

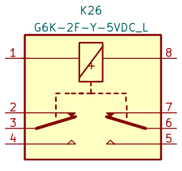


ROHM : GSD
EIAJ : –
JEDEC : DO-35

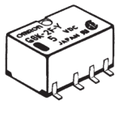


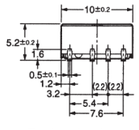


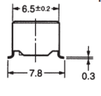




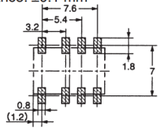
G6K-2F-Y



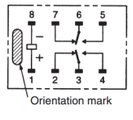




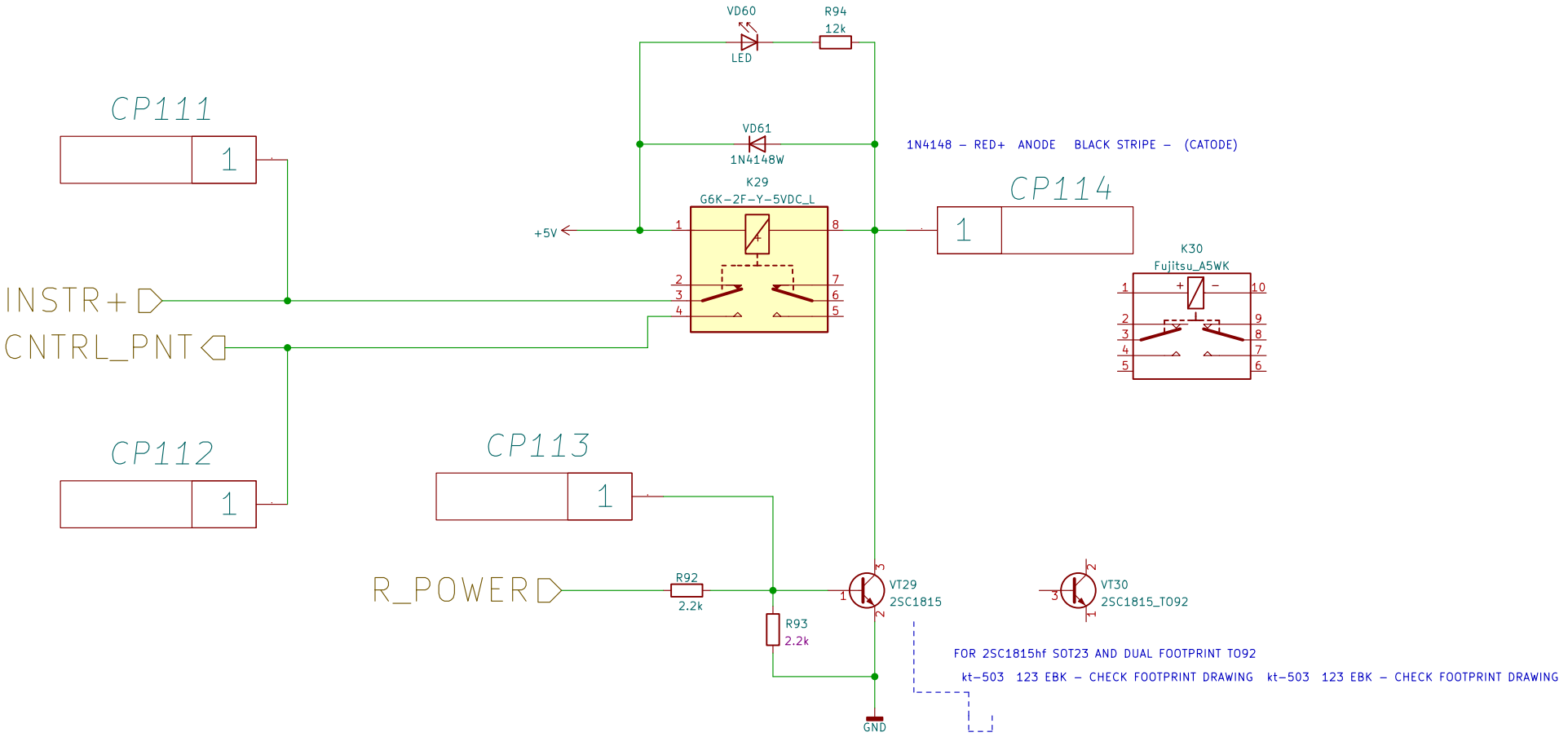
Mounting Dimensions (Top View)
Tolerance: ±0.1 mm



Terminal Arrangement/ Internal Connections (Top View)



Note 1: Each value has a tolerance of ±0.3 mm.
Note 2: The coplanarity of the terminals is 0.1 mm max.


VD60
LED
R94
12k
VD61
1N4148W
1N4148 – RED+ ANODE BLACK STRIPE – (CATODE)
K29
G6K-2F-Y-5VDC_L
+5V
CP111
1
CP114
1
K30
Fujitsu_A5WK
INSTR+
CNTRL_PNT
CP112
1
CP113
1
R_POWER
R92
2.2k
R93
2.2k
VT29
2SC1815
VT30
2SC1815_TO92
GND
FOR 2SC1815hf SOT23 AND DUAL FOOTPRINT TO92
kt-503 123 EBK – CHECK FOOTPRINT DRAWING kt-503 123 EBK – CHECK FOOTPRINT DRAWING