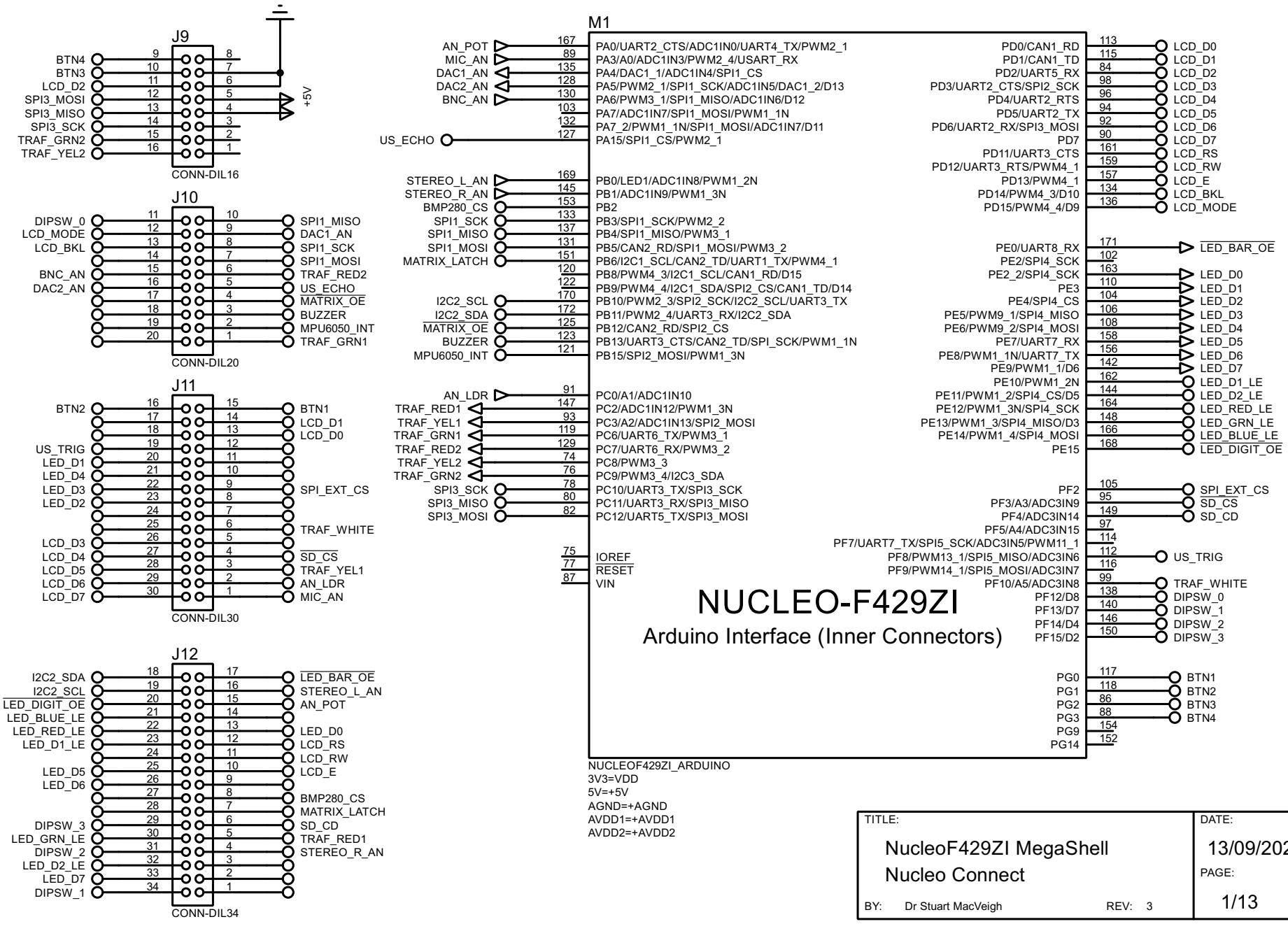
J9
BTN4
BTN3
LCD_D2
SPI3_MOSI
SPI3_MISO
SPI3_SCK
TRAF_GRN2
TRAF_YEL2
+5V
CONN-DIL16
J10
DIPSW_0
LCD_MODE
LCD_BKL
BNC_AN
DAC2_AN
SPI1_MISO
DAC1_AN
SPI1_SCK
SPI1_MOSI
TRAF_RED2
US_ECHO
MATRIX_OE
BUZZER
MPU6050_INT
TRAF_GRN1
CONN-DIL20
J11
BTN2
US_TRIG
LED_D1
LED_D4
LED_D3
LED_D2
LED_D3
LED_D4
LED_D5
LED_D6
LED_D7
BTN1
LCD_D1
LCD_D0
SPI_EXT_CS
TRAF_WHITE
SD_CS
TRAF_YEL1
AN_LDR
MIC_AN
CONN-DIL30
J12
I2C2_SDA
I2C2_SCL
LED_DIGIT_OE
LED_BLUE_LE
LED_RED_LE
LED_D1_LE
LED_D5
LED_D6
DIPSW_3
LED_GRN_LE
DIPSW_2
LED_D2_LE
LED_D7
DIPSW_1
LED_BAR_OE
STEREO_L_AN
AN_POT
LED_D0
LCD_RS
LCD_RW
LCD_E
BMP280_CS
MATRIX_LATCH
SD_CD
TRAF_RED1
STEREO_R_AN
CONN-DIL34
M1
AN_POT
MIC_AN
DAC1_AN
DAC2_AN
BNC_AN
US_ECHO
STEREO_L_AN
STEREO_R_AN
BMP280_CS
SPI1_SCK
SPI1_MISO
SPI1_MOSI
MATRIX_LATCH
I2C2_SCL
I2C2_SDA
MATRIX_OE
BUZZER
MPU6050_INT
AN_LDR
TRAF_RED1
TRAF_YEL1
TRAF_GRN1
TRAF_RED2
TRAF_YEL2
TRAF_GRN2
SPI3_SCK
SPI3_MISO
SPI3_MOSI
IOREF
RESET
VIN
PA0/UART2_CTS/ADC1IN0/UART4_TX/PWM2_1
PA3/A0/ADC1IN3/PWM2_4/USART_RX
PA4/DAC1_1/ADC1IN4/SPI1_CS
PA5/PWM2_1/SPI1_SCK/ADC1IN5/DAC1_2/D13
PA6/PWM3_1/SPI1_MISO/ADC1IN6/D12
PA7/ADC1IN7/SPI1_MOSI/PWM1_1N
PA7_2/PWM1_1N/SPI1_MOSI/ADC1IN7/D11
PA15/SPI1_CS/PWM2_1
PB0/LED1/ADC1IN8/PWM1_2N
PB1/ADC1IN9/PWM1_3N
PB2
PB3/SPI1_SCK/PWM2_2
PB4/SPI1_MISO/PWM3_1
PB5/CAN2_RD/SPI1_MOSI/PWM3_2
PB6/I2C1_SCL/CAN2_TD/UART1_TX/PWM4_1
PB8/PWM4_3/I2C1_SCL/CAN1_RD/D15
PB9/PWM4_4/I2C1_SDA/SPI2_CS/CAN1_TD/D14
PB10/PWM2_3/SPI2_SCK/I2C2_SCL/UART3_TX
PB11/PWM2_4/UART3_RX/I2C2_SDA
PB12/CAN2_RD/SPI2_CS
PB13/UART3_CTS/CAN2_TD/SPI_SCK/PWM1_1N
PB15/SPI2_MOSI/PWM1_3N
PC0/A1/ADC1IN10
PC2/ADC1IN12/PWM1_3N
PC3/A2/ADC1IN13/SPI2_MOSI
PC6/UART6_TX/PWM3_1
PC7/UART6_RX/PWM3_2
PC8/PWM3_3
PC9/PWM3_4/I2C3_SDA
PC10/UART3_TX/SPI3_SCK
PC11/UART3_RX/SPI3_MISO
PC12/UART5_TX/SPI3_MOSI
PD0/CAN1_RD
PD1/CAN1_TD
PD2/UART5_RX
PD3/UART2_CTS/SPI2_SCK
PD4/UART2_RTS
PD5/UART2_TX
PD6/UART2_RX/SPI3_MOSI
PD7
PD11/UART3_CTS
PD12/UART3_RTS/PWM4_1
PD13/PWM4_1
PD14/PWM4_3/D10
PD15/PWM4_4/D9
PE0/UART8_RX
PE2/SPI4_SCK
PE2_2/SPI4_SCK
PE3
PE4/SPI4_CS
PE5/PWM9_1/SPI4_MISO
PE6/PWM9_2/SPI4_MOSI
PE7/UART7_RX
PE8/PWM1_1N/UART7_TX
PE9/PWM1_1/D6
PE10/PWM1_2N
PE11/PWM1_2/SPI4_CS/D5
PE12/PWM1_3N/SPI4_SCK
PE13/PWM1_3/SPI4_MISO/D3
PE14/PWM1_4/SPI4_MOSI
PE15
PF2
PF3/A3/ADC3IN9
PF4/ADC3IN14
PF5/A4/ADC3IN15
PF7/UART7_TX/SPI5_SCK/ADC3IN5/PWM11_1
PF8/PWM13_1/SPI5_MISO/ADC3IN6
PF9/PWM14_1/SPI5_MOSI/ADC3IN7
PF10/A5/ADC3IN8
PF12/D8
PF13/D7
PF14/D4
PF15/D2
PG0
PG1
PG2
PG3
PG9
PG14
LCD_D0
LCD_D1
LCD_D2
LCD_D3
LCD_D4
LCD_D5
LCD_D6
LCD_D7
LCD_RS
LCD_RW
LCD_E
LCD_BKL
LCD_MODE
LED_BAR_OE
LED_D0
LED_D1
LED_D2
LED_D3
LED_D4
LED_D5
LED_D6
LED_D7
LED_D1_LE
LED_D2_LE
LED_RED_LE
LED_GRN_LE
LED_BLUE_LE
LED_DIGIT_OE
SPI_EXT_CS
SD_CS
SD_CD
US_TRIG
TRAF_WHITE
DIPSW_0
DIPSW_1
DIPSW_2
DIPSW_3
BTN1
BTN2
BTN3
BTN4
NUCLEO-F429ZI
Arduino Interface (Inner Connectors)
NUCLEOF429ZI_ARDUINO
3V3=VDD
5V=+5V
AGND=+AGND
AVDD1=+AVDD1
AVDD2=+AVDD2
TITLE:
NucleoF429ZI MegaShell
Nucleo Connect
BY: Dr Stuart MacVeigh
REV: 3
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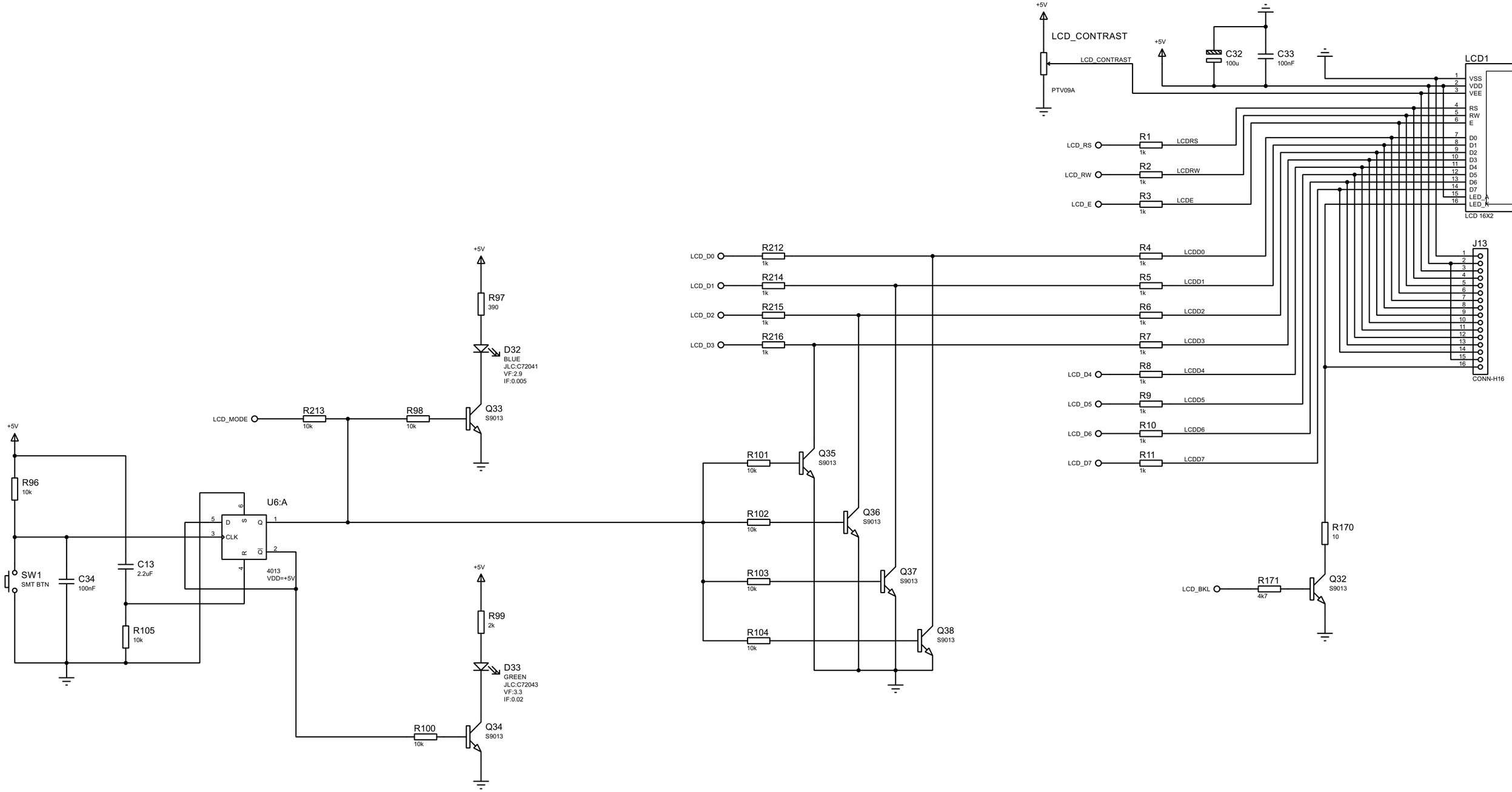
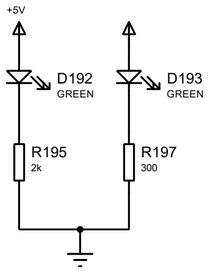
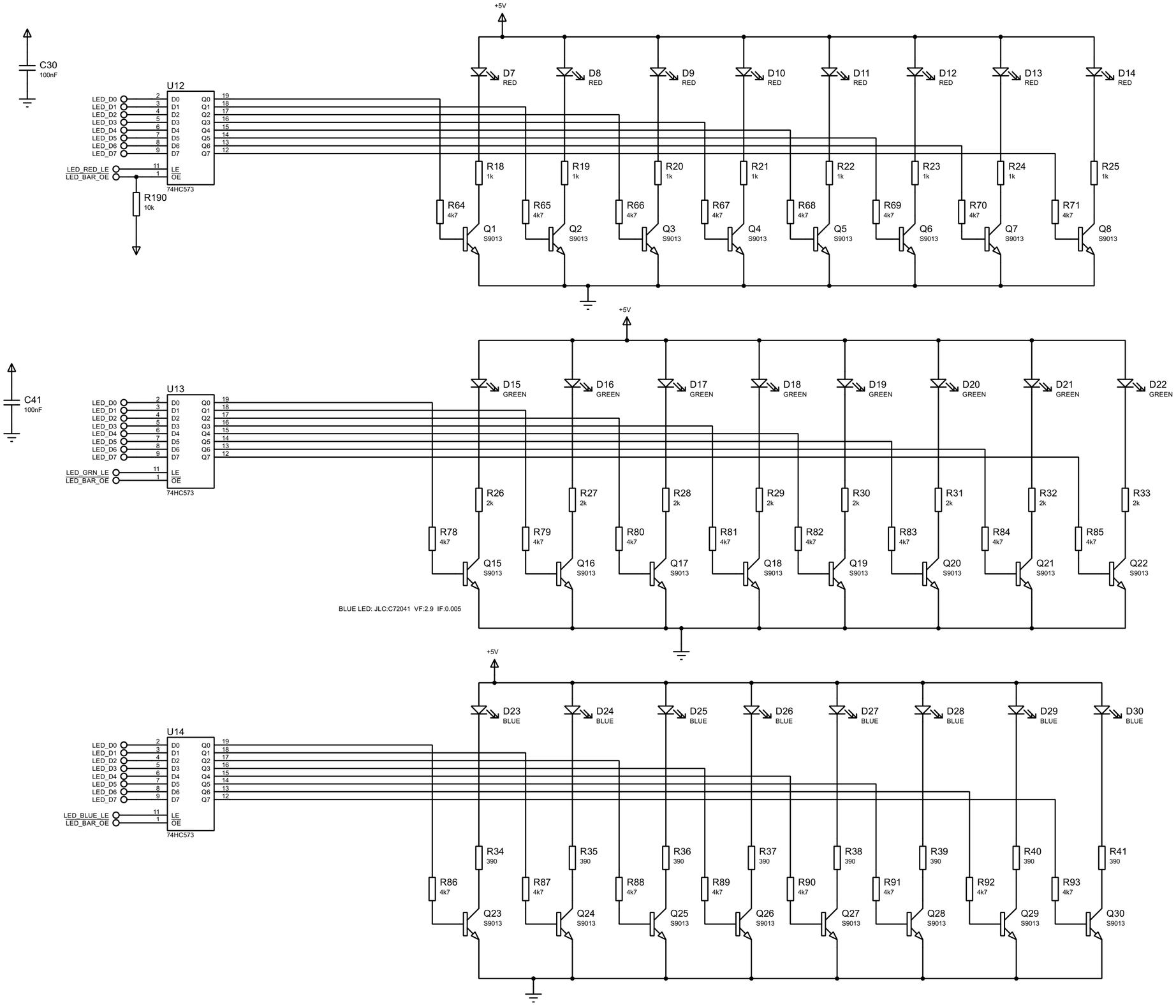
1/13

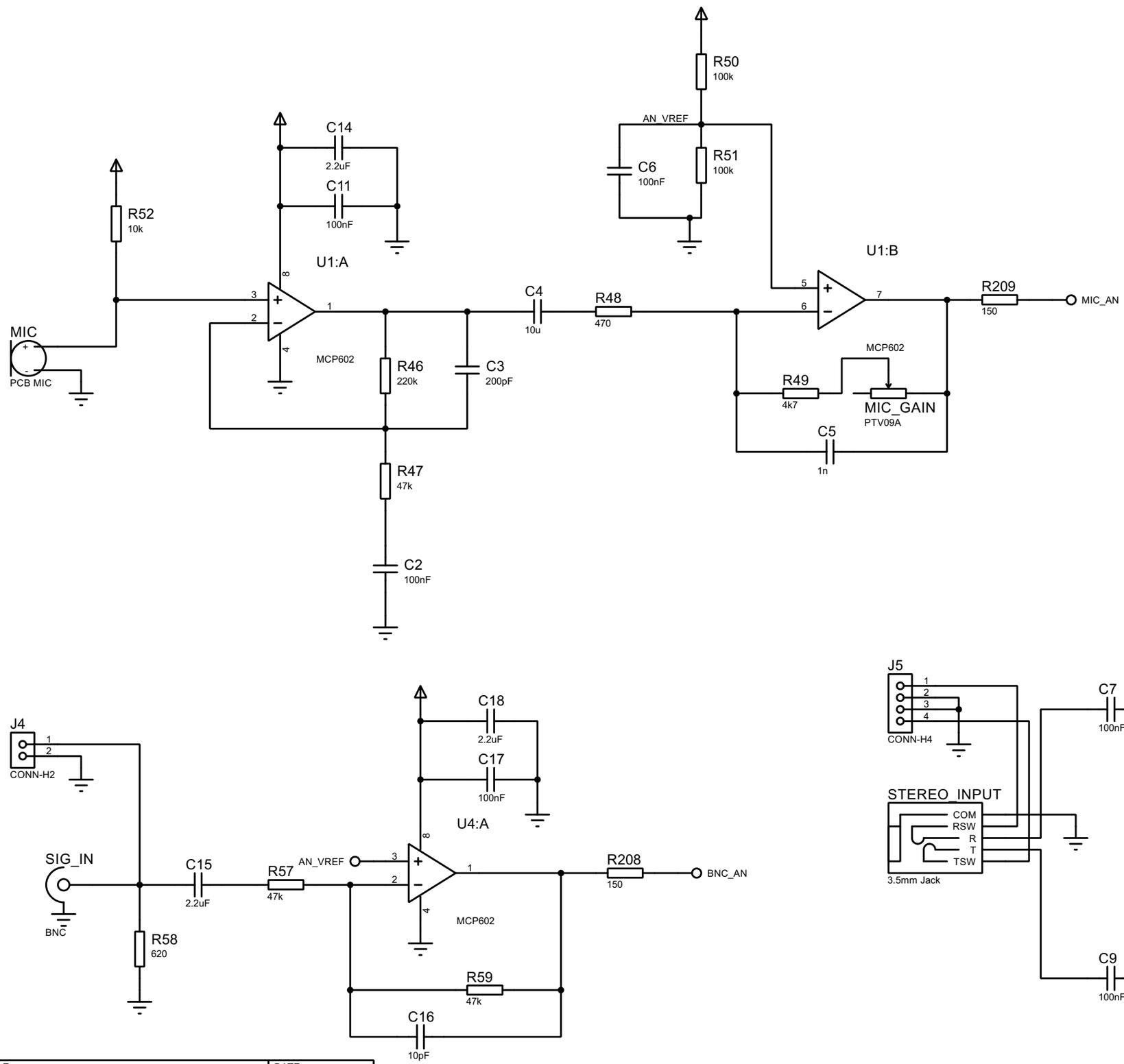


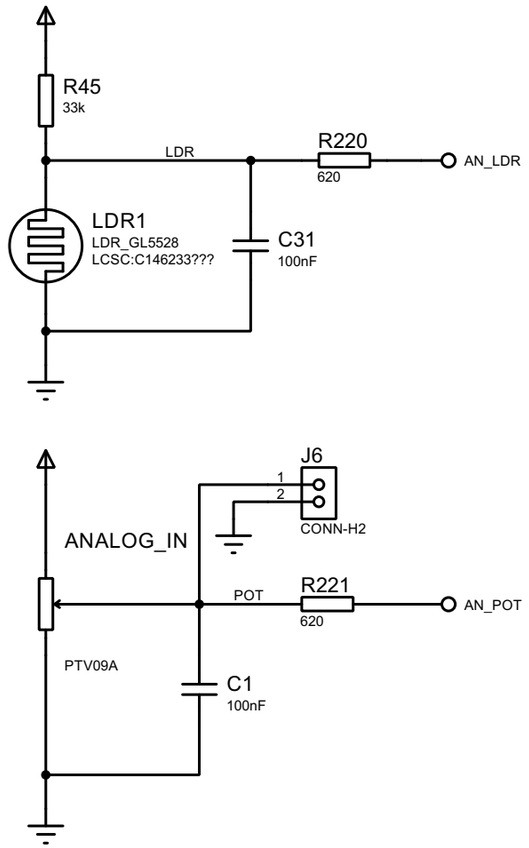
TITLE: NucleoF429ZI MegaShell LCD Display	DATE: 13/09/2021
BY: Dr Stuart MacVeigh REV: 3	PAGE: 2/13

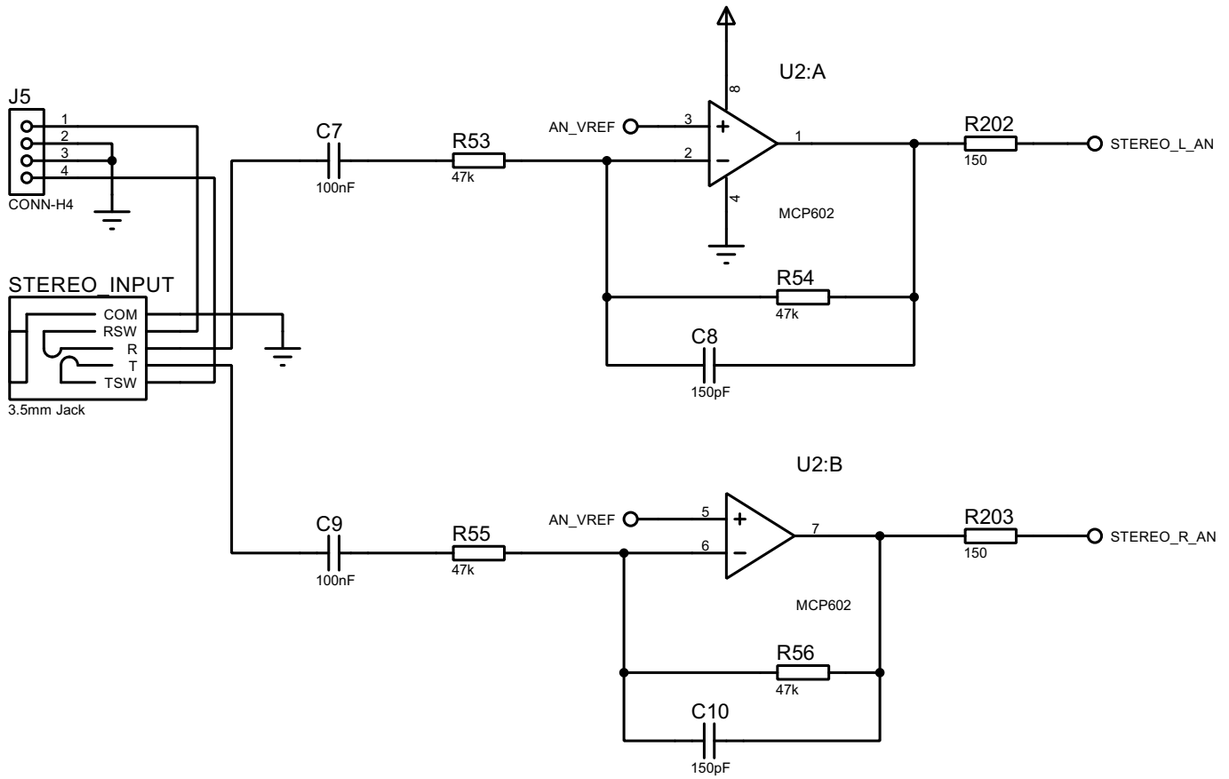




TITLE: NucleoF429ZI MegaShell LED Bar Display	DATE: 13/09/2021
BY: Dr Stuart MacVeigh REV: 3	PAGE: 3/13







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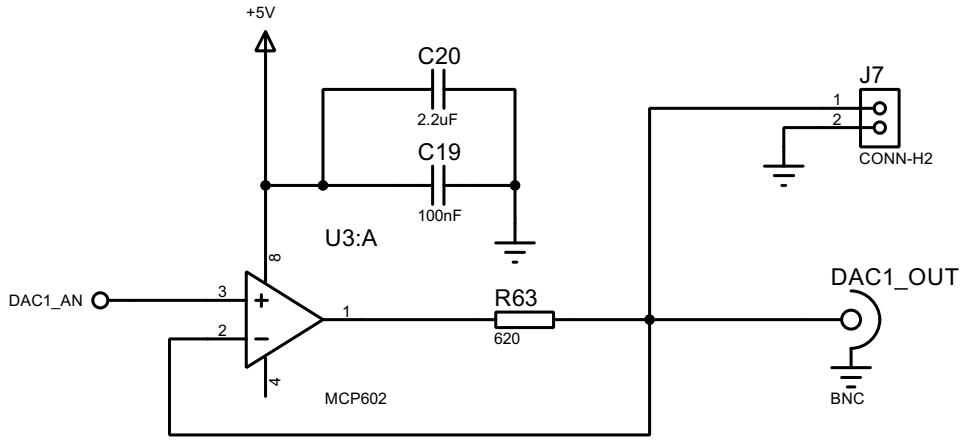
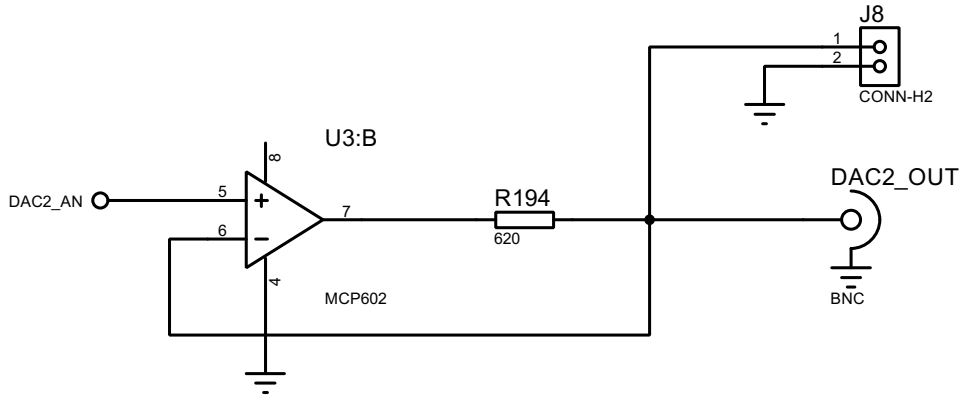
NucleoF429ZI MegaShell Analogue Inputs	13/09/2021
BY: Dr Stuart MacVeigh REV: 3	PAGE: 4/13





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NucleoF429ZI MegaShell Analogue Outputs	13/09/2021
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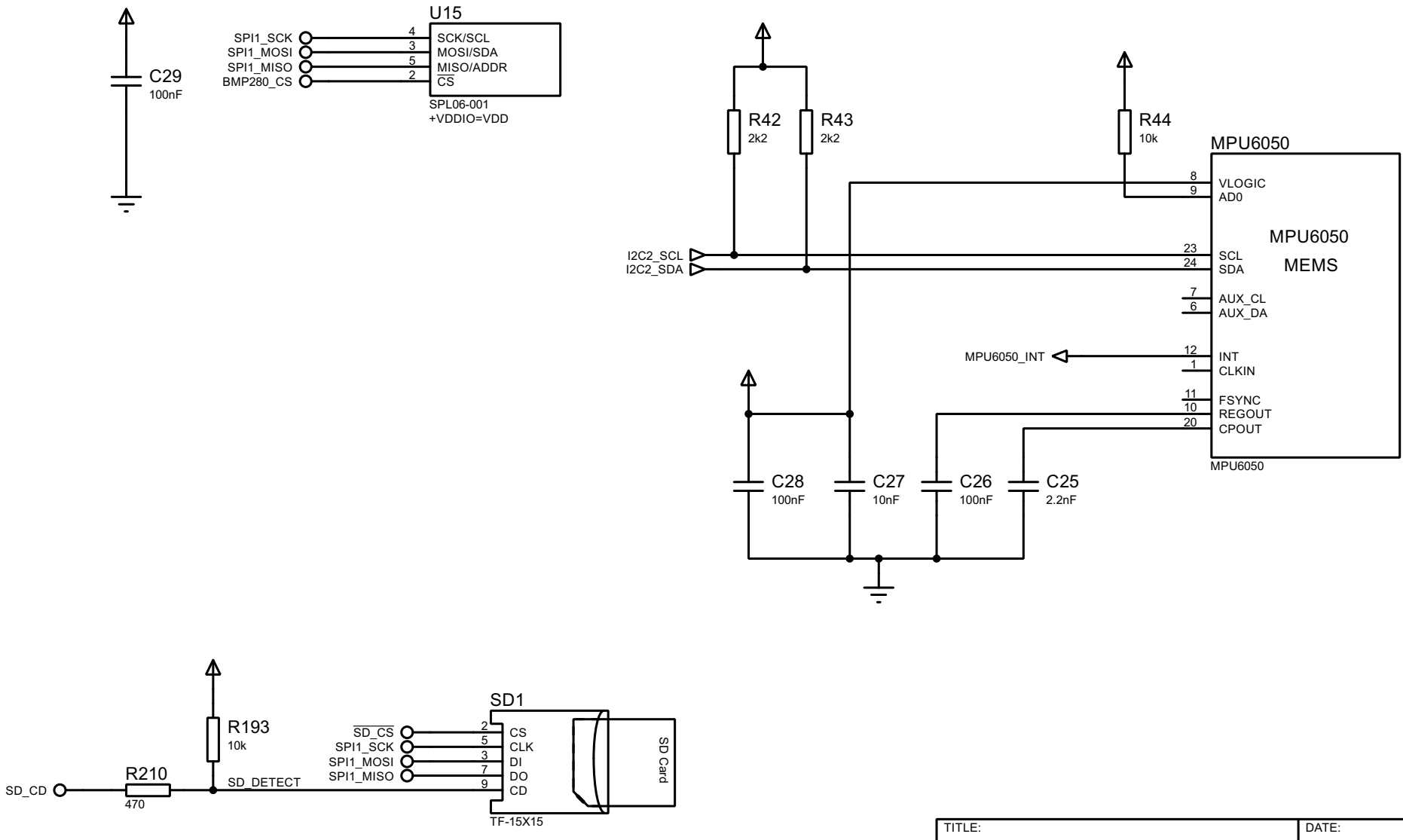
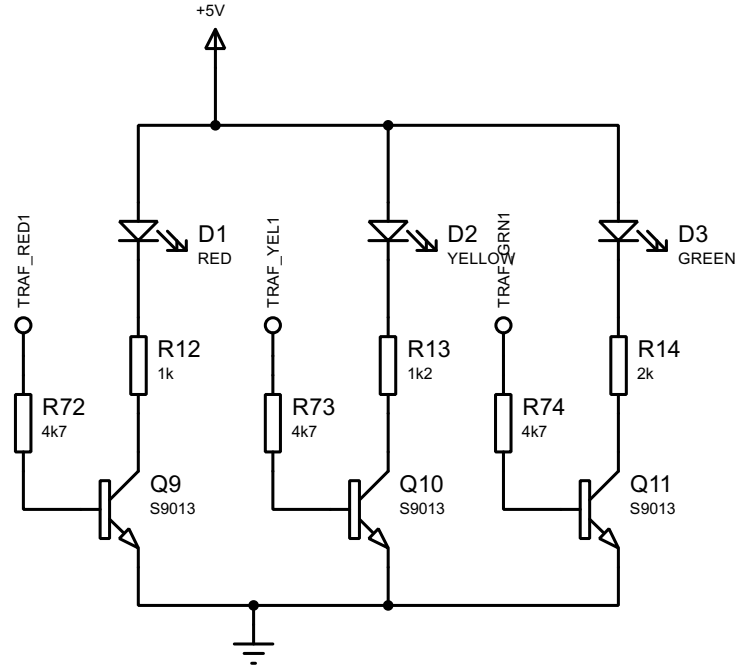
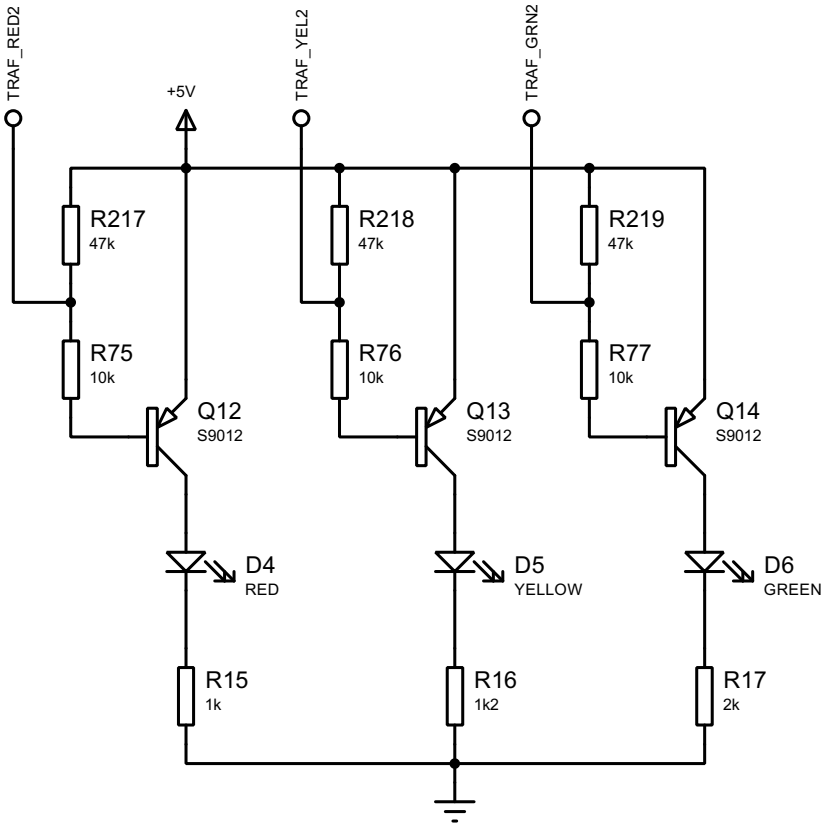
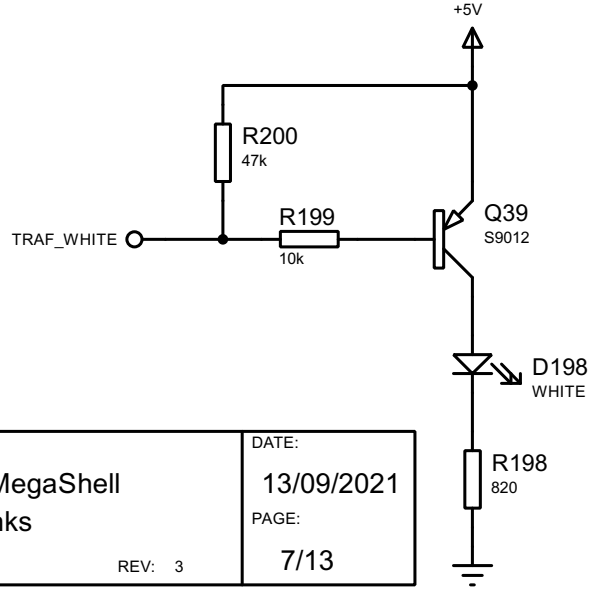
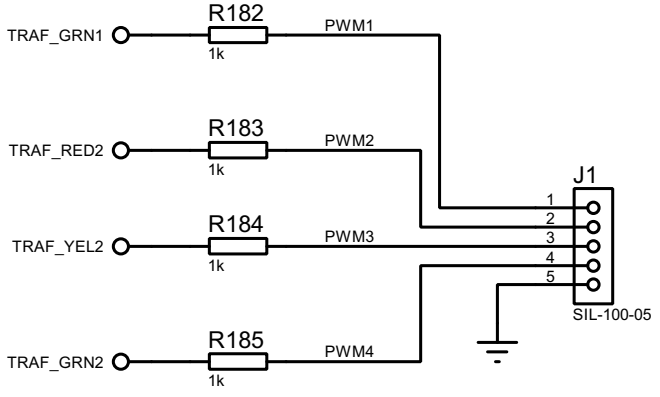


TITLE: NucleoF429ZI MegaShell Serial Interface Modules	DATE: 13/09/2021
BY: Dr Stuart MacVeigh REV: 3	PAGE: 6/13





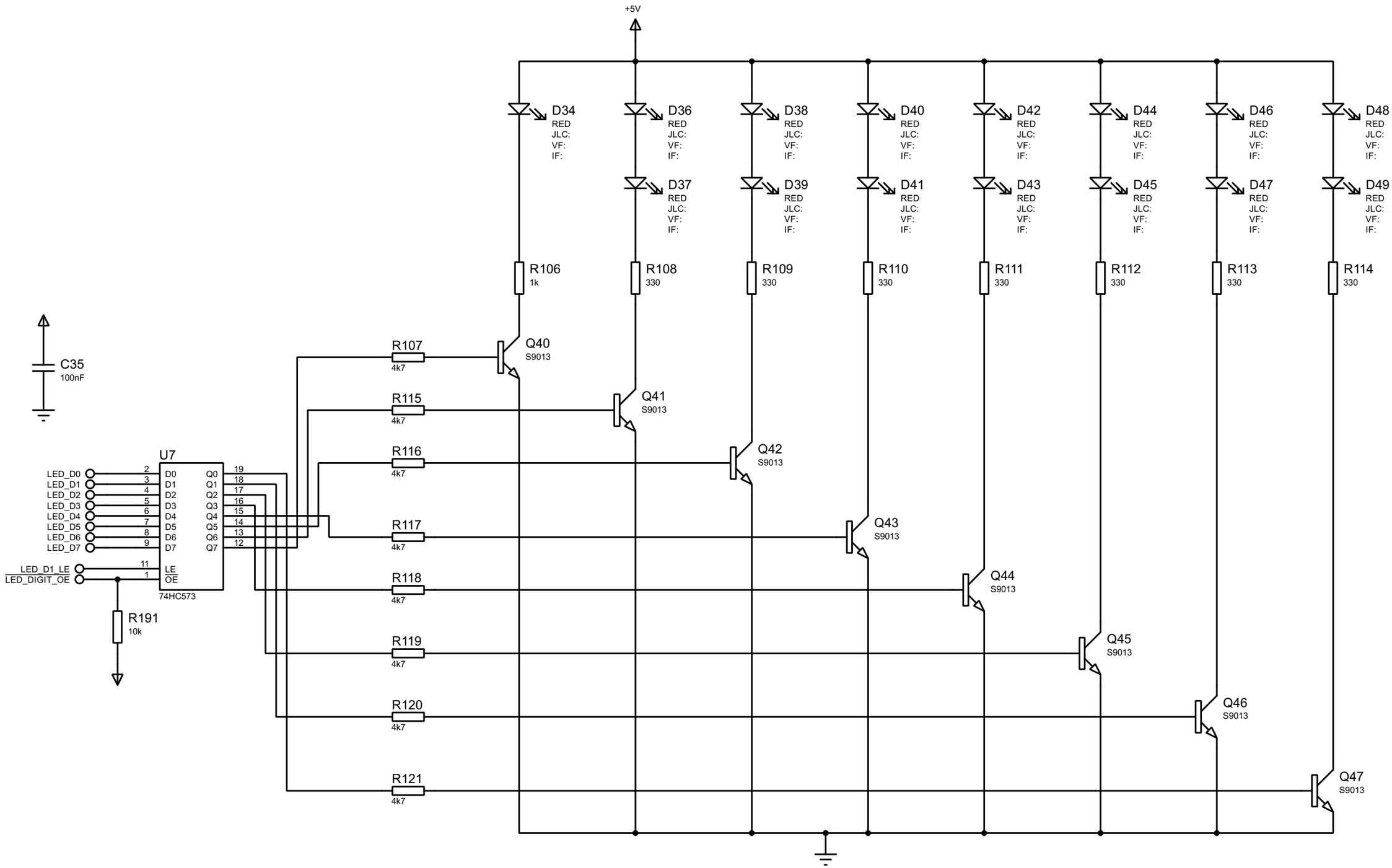




TITLE: NucleoF429ZI MegaShell Traffic Light Banks	DATE: 13/09/2021
BY: Dr Stuart MacVeigh REV: 3	PAGE: 7/13

TITLE:	DATE:
NucleoF429ZI MegaShell LED Digit 1	13/09/2021 PAGE: 8/13
BY: Dr Stuart MacVeigh REV: 3	

7-Seg Display1



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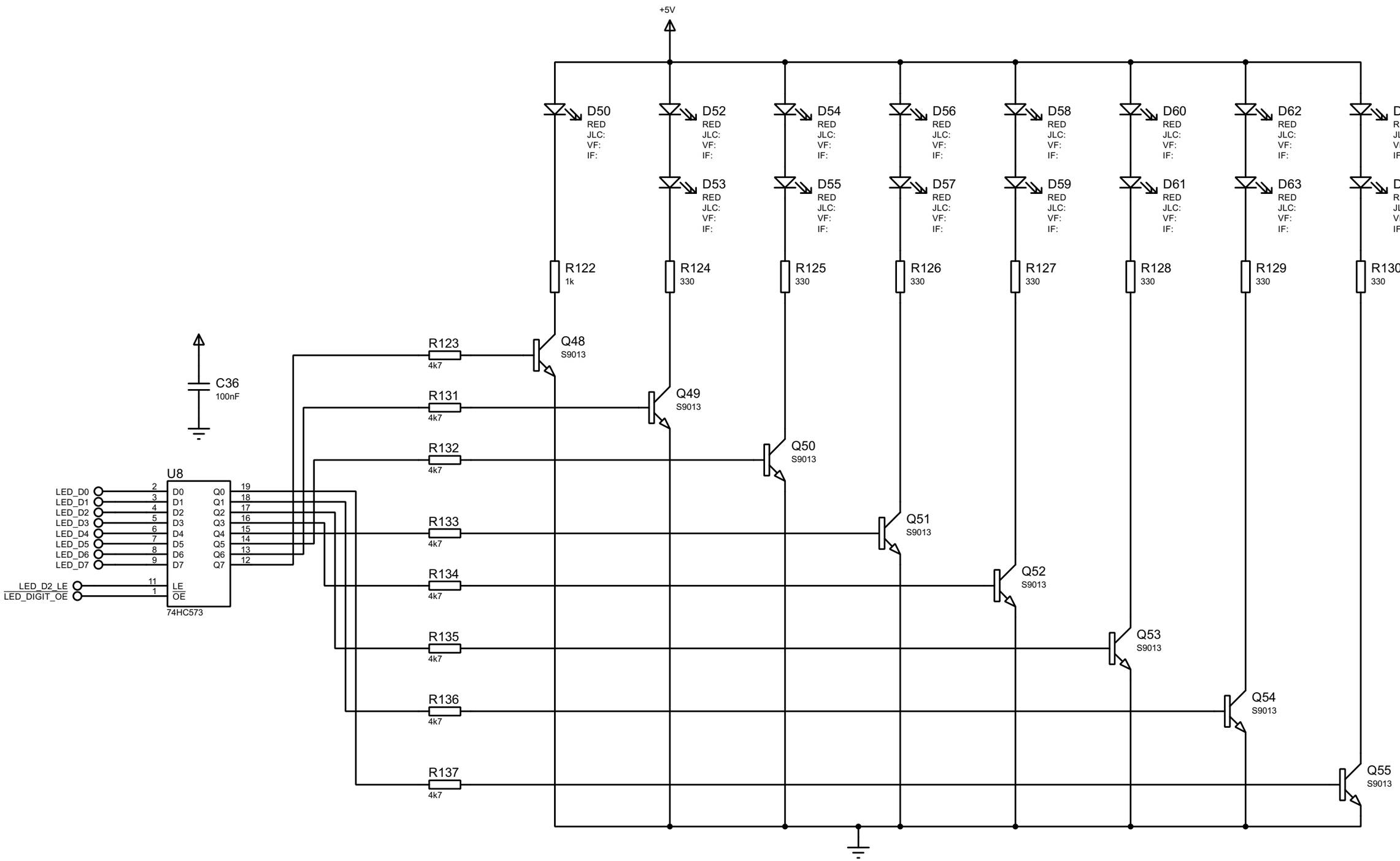
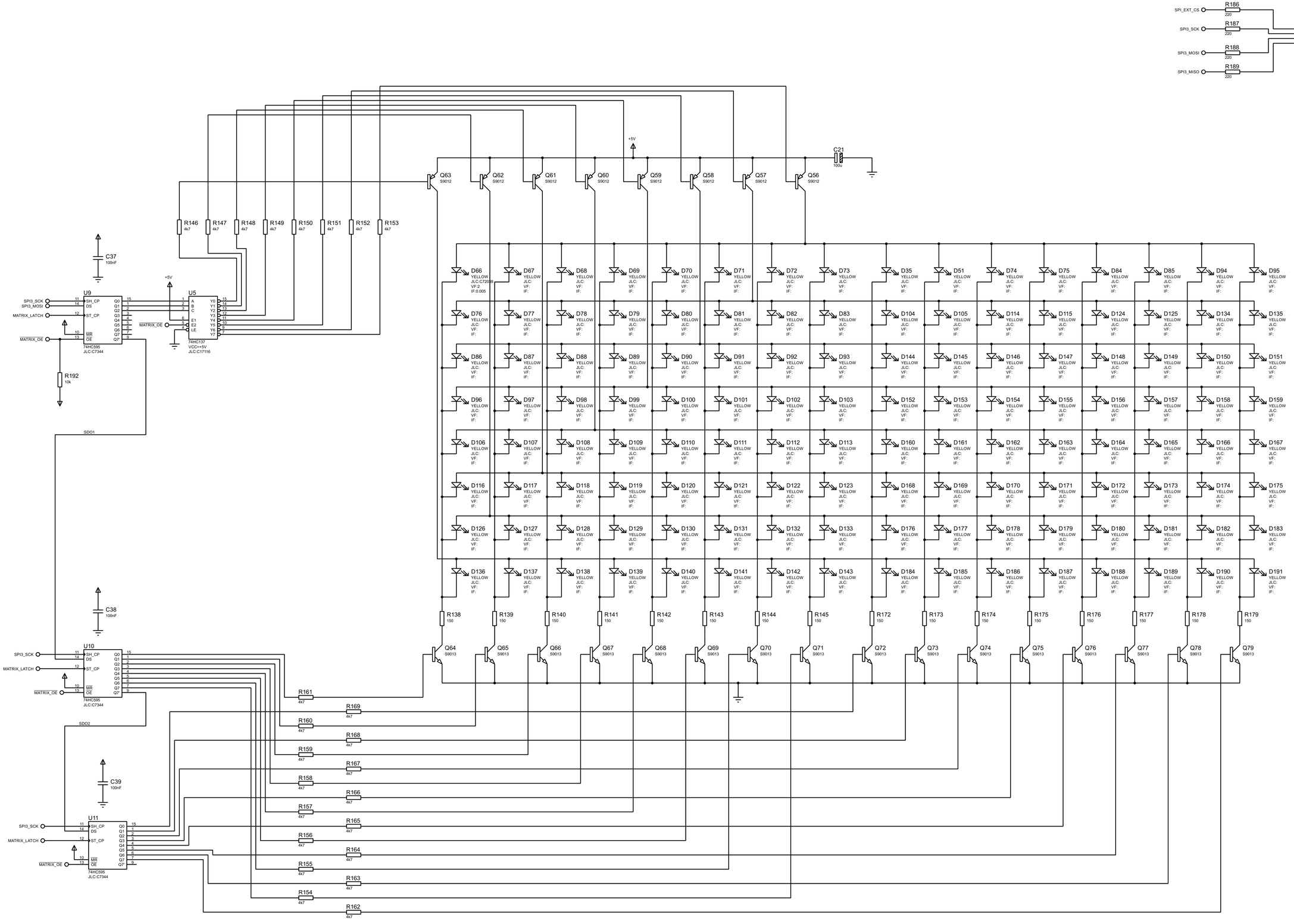
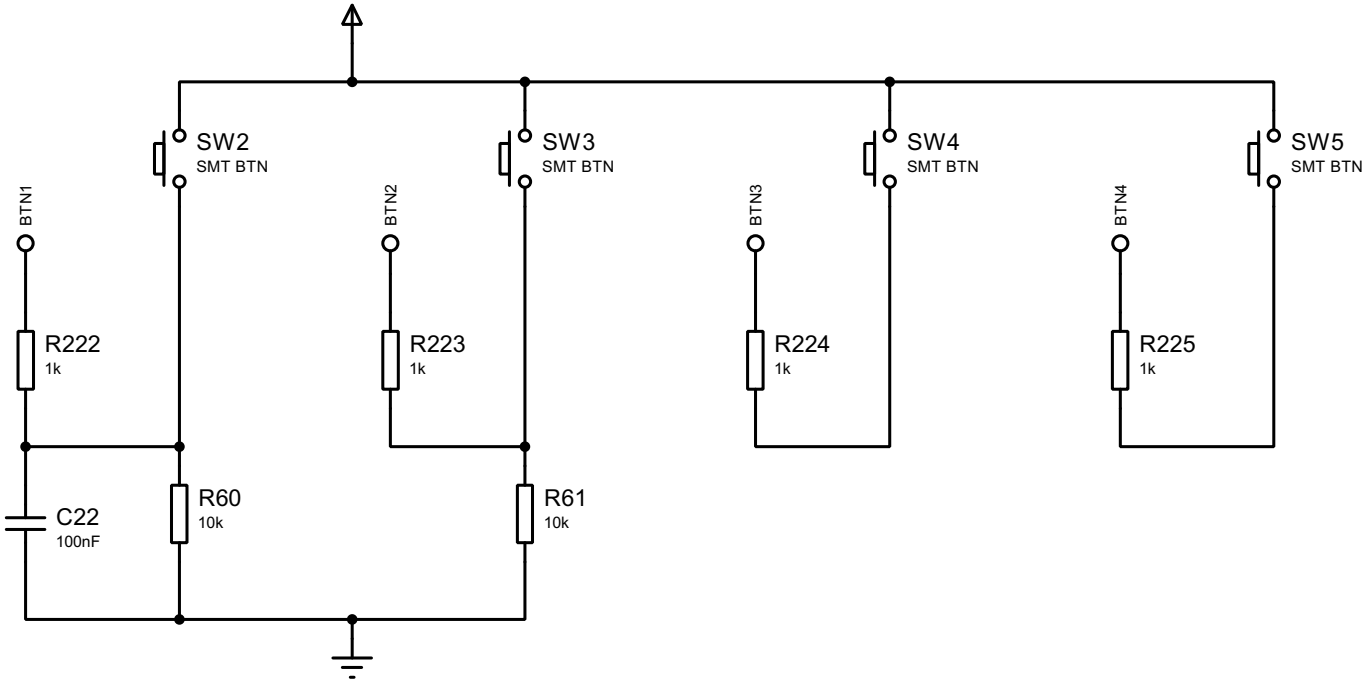
NucleoF429ZI MegaShell LED Digit 2	13/09/2021 PAGE:
BY: Dr Stuart MacVeigh REV: 3	9/13

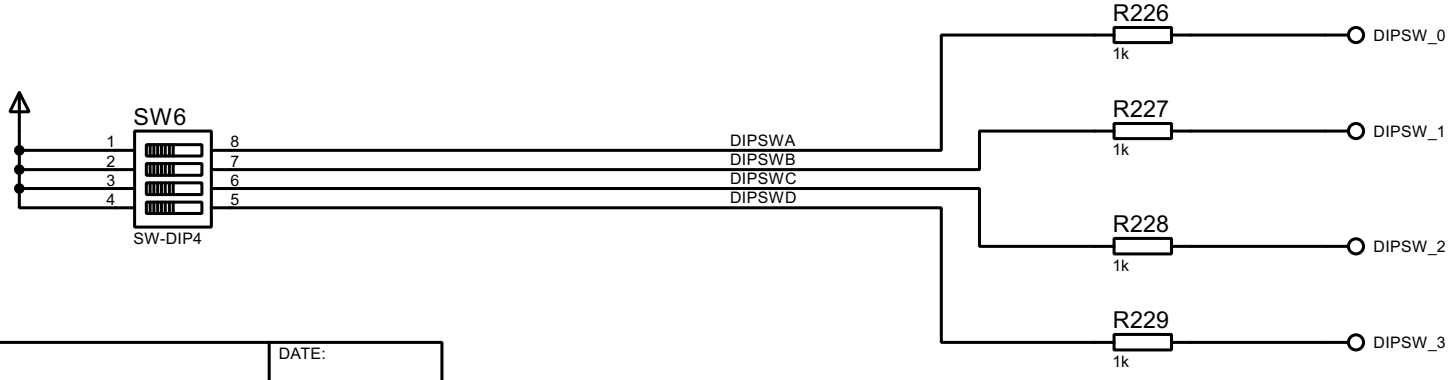
7-Seg Display2



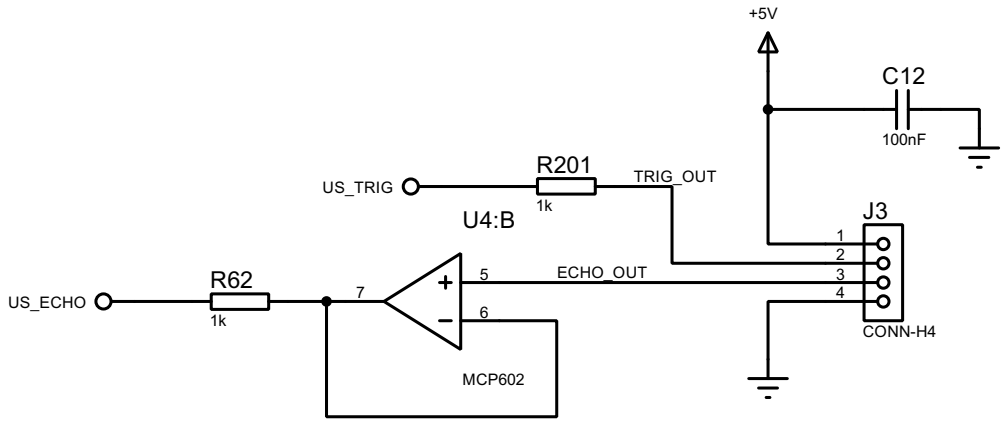


TITLE: NucleoF429ZI MegaShell LED Matrix Display	DATE: 13/09/2021
BY: Dr Stuart MacVeigh REV: 3	PAGE: 10/13





TITLE: NucleoF429ZI MegaShell Buttons	DATE: 13/09/2021
BY: Dr Stuart MacVeigh REV: 3	PAGE: 11/13



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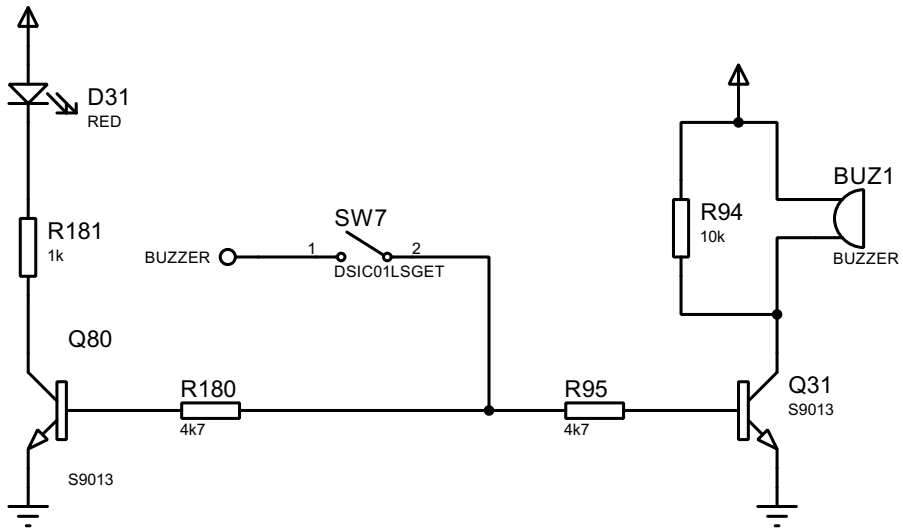
NucleoF429ZI MegaShell UltraSonic Module	13/09/2021
BY: Dr Stuart MacVeigh REV: 3	PAGE: 12/13



TITLE:	DATE:
NucleoF429ZI MegaShell Buzzer	13/09/2021
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