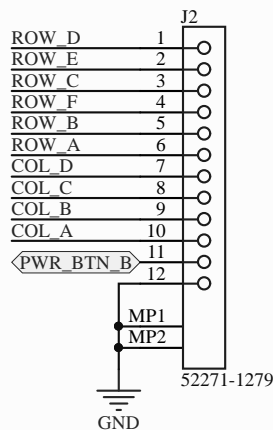


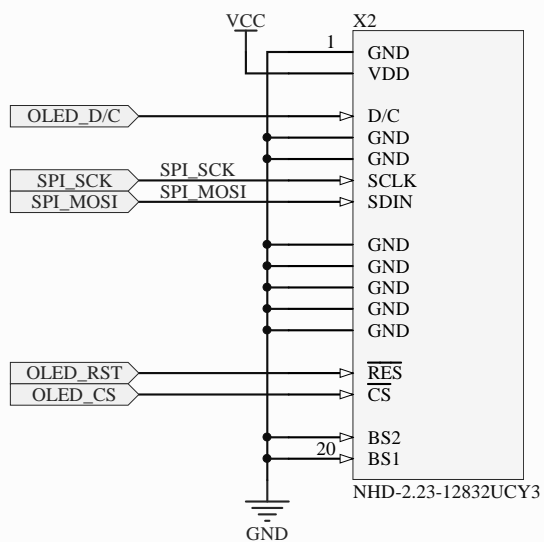
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Membrane Keypad FFC Connector

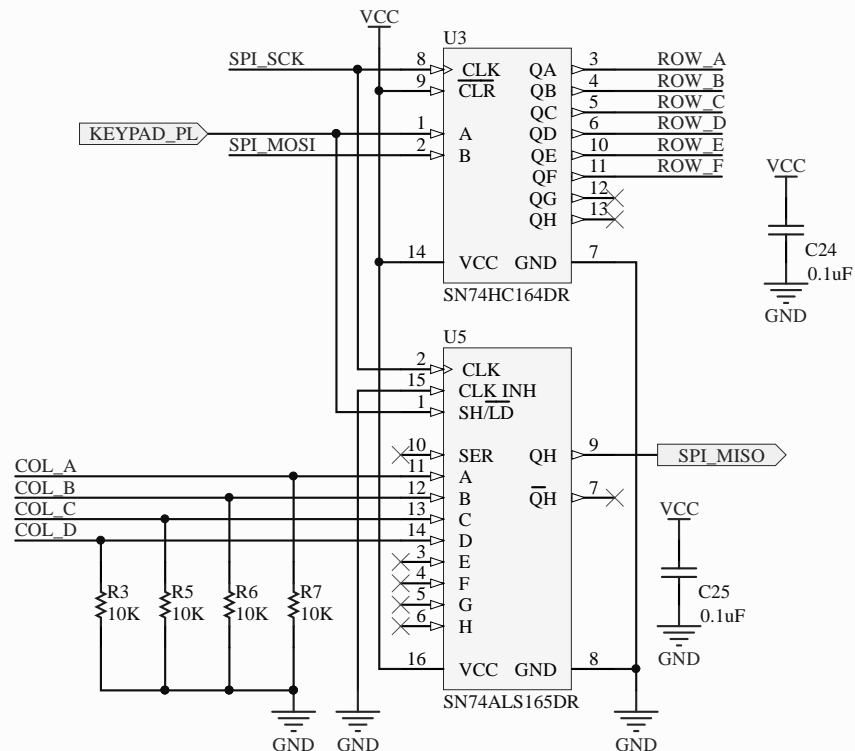


PWR_BTN_B goes to On/Off Circuit on Power Sheet

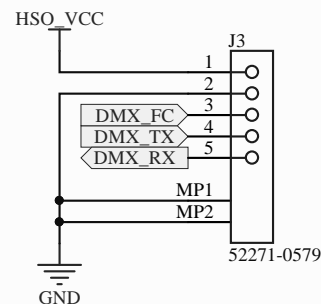
OLED Display



Keypad Shift Registers

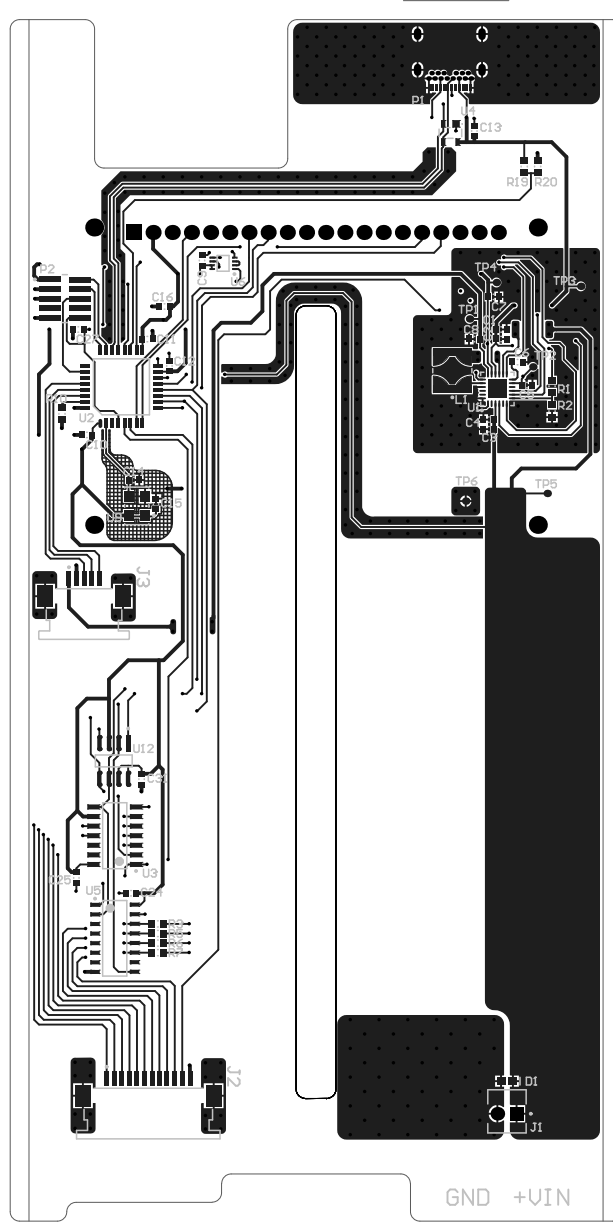


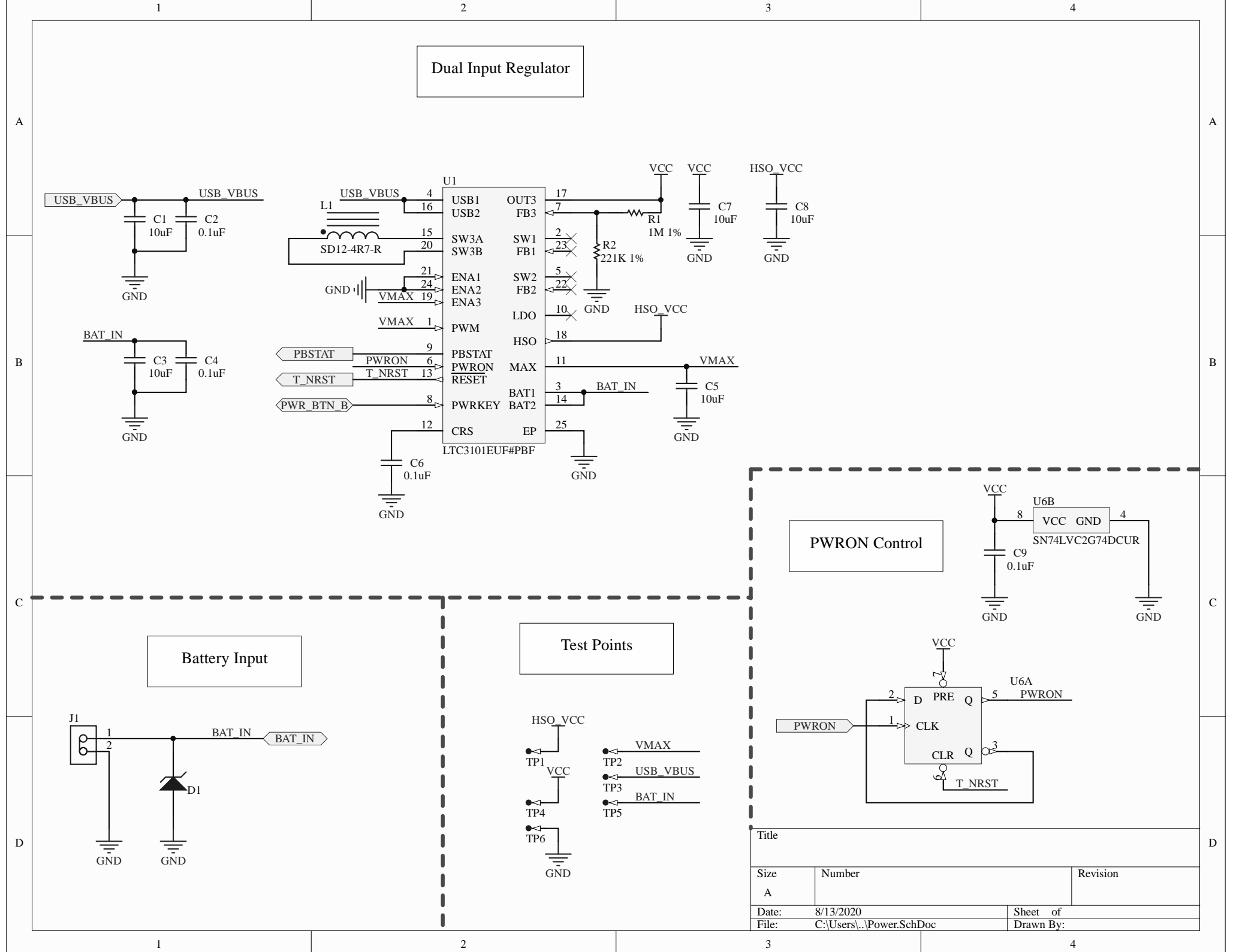
DMX Board Connector

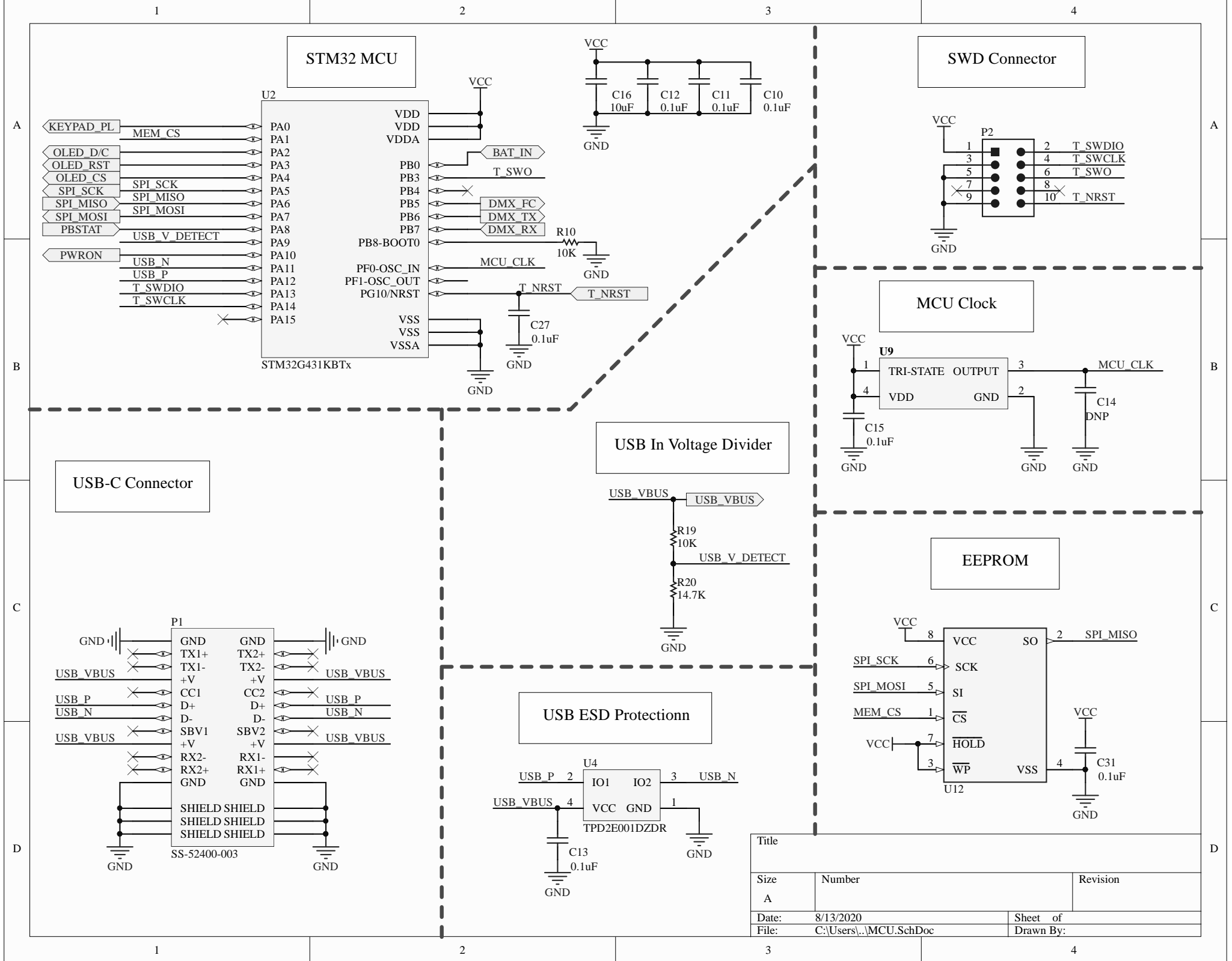


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| Date: | 8/13/2020 | Sheet of |
| File: | C:\Users\...\User Interface.SchDoc | Drawn By: |

| Quantity | Comment | Description | Designator | Footprint |
|----------|--------------------|---|---|---------------------------|
| 1 | 52271-0579 | 1.0 mm Pitch Easy-On(TM) Type FPC Connector, 3.0 mm Mated Height, Right Angle, ZIF, SMT, Bottom Contact, 5 Circuits, -40 to 85 degC, ELV and RoHS Compliant, Tape and Reel | J3 | MOLX-52271-0579 |
| 1 | 52271-1279 | 1.0 mm Pitch Easy-On(TM) Type FPC Connector, 3.0 mm Mated Height, Right Angle, ZIF, SMT, Bottom Contact, 12 Circuits, -40 to 85 degC, ELV and RoHS Compliant, Tape and Reel | J2 | MOLX-52271-1279 |
| 1 | LTC3101EUF#PBF | Wide Vin, Multi-Output DC/DC Converter and PowerPath Controller, 1.8 to 5.5 V Vin, 24-pin QFN (UF-24), -40 to 85 degC, Pb-Free | U1 | LT-UF-24_N |
| 1 | SN74HC164DR | 8-Bit Parallel-Out Serial Shift Registers, D0014A, LARGE T&R | U3 | D0014A_M |
| 1 | SN74ALS165DR | Parallel-Load 8-Bit Serial Shift Registers, D0016A, LARGE T&R | U5 | D0016A_L |
| 1 | SN74LVC2G74DCUR | Single Positive-Edge-Triggered D-Type Flip-Flop with Clear and Preset, DCU0008A, LARGE T&R | U6 | DCU0008A_N |
| 1 | 14.7K | Jumper 0603 (1608 Metric) | R20 | RESC0603(1608)_N |
| 1 | 1M 1% | Jumper 0603 (1608 Metric) | R1 | RESC0603(1608)_N |
| 1 | 221K 1% | Jumper 0603 (1608 Metric) | R2 | RESC0603(1608)_N |
| 6 | 10K | Jumper 0603 (1608 Metric) | R3, R5, R6, R7, R10, R19 | RESC0603(1608)_N |
| 1 | DNP | CAP 27pF 16V ±0.5pF 0603 (1608 Metric) Thickness 1mm SMD | C14 | CAPC0603(1608)10 0_L |
| 13 | 0.1uF | CAP 27pF 16V ±0.5pF 0603 (1608 Metric) Thickness 1mm SMD | C2, C4, C6, C9, C10, C11, C12, C13, C15, C24, C25, C27, C31 | CAPC0603(1608)10 0_L |
| 6 | 10uF | CAP 27pF 16V ±0.5pF 0603 (1608 Metric) Thickness 1mm SMD | C1, C3, C5, C7, C8, C16 | CAPC0603(1608)10 0_L |
| 1 | TPD2E001DZDR | Low-Capacitance 2 Channel ESD-Protection Array for High-Speed Data Interface, 0.9 to 5.5 V, -40 to 85 degC, 4-Pin SOP (DZD), Green (RoHS & no Sb/Bi), Tape and Reel | U4 | DZD0004A_N |
| 1 | FTSH-105-01-F-DV-K | Male Header, Pitch 1.27 mm, 2 x 5 Position, Height 6.12 mm, RoHS, Tube | P2 | SMTC-FTSH-105-01-L-DV-K_V |
| 1 | 640456-2 | Male Header, Pitch 2.54 mm, 1 x 2 Position, Height 10.49 mm, Tail Length 3.556 mm, -55 to 105 degC, RoHS, Bulk | J1 | TECO-640456-2_V |
| 1 | XLH536024.000000 | Clock Oscillator, 3.3 V, 25 MHz, -55 to 125 degC, 4-Pin SMD, RoHS, Tape and Reel | U9 | ECS-396X_V |
| 1 | XGD10603MR | ESD Protector Overvoltage Protection Device, 0.25 pF, 24 V, -55 to 125 degC, 2-Pin SMD (0603), RoHS, Tape and Reel | D1 | TECO-0603_V |
| 1 | SD12-4R7-R | SD Series High Power Density, Low Profile, Shielded Inductor, 4.7 uH, -40 to 85 degC, 2-Pin SMD, RoHS, Tape and Reel | L1 | EATN-SD12_V |
| 1 | CAT25640VI-GT3 | IC EEPROM 256K SPI 20MHZ 8SOIC | U12 | FP-CAT25640VI-GT3-IPC_B |
| 1 | NHD-2.23-12832UCY3 | | X2 | NHD-2.23-12832UCY3 |
| 1 | SS-52400-003 | | P1 | SS-52400-00X |
| 1 | STM32G431KBTx | | U2 | LOFP32 |
| | | | | |







STM32 MCU

U2

STM32G431KBTx

SWD Connector

MCU Clock

EEPROM

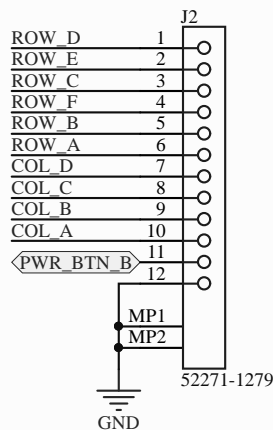
USB-C Connector

USB In Voltage Divider

USB ESD Protectionnn

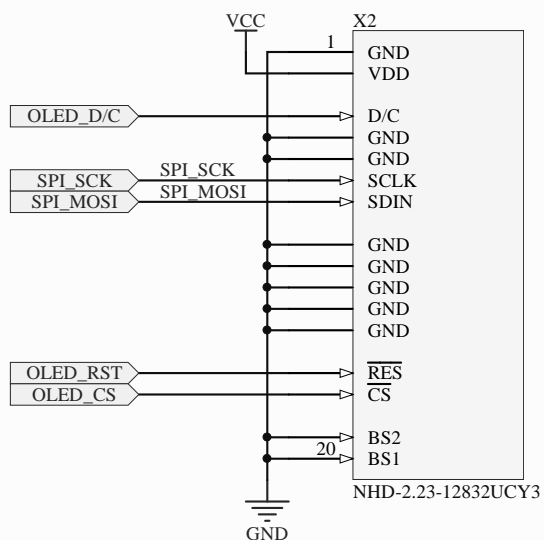
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Membrane Keypad FFC Connector

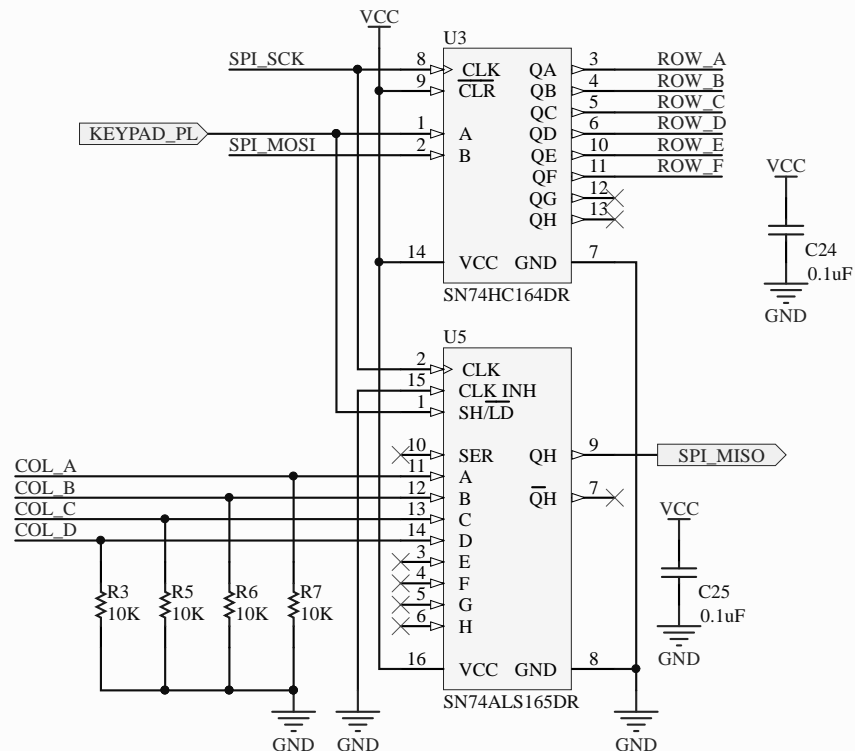


PWR_BTN_B goes to On/Off Circuit on Power Sheet

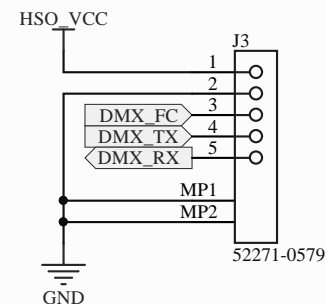
OLED Display



Keypad Shift Registers



DMX Board Connector



| Title | | |
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| Size | Number | Revision |
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| Date: | 8/13/2020 | Sheet of |
| File: | C:\Users\...\User Interface.SchDoc | Drawn By: |

| Comment | Description | Designator | Footprint | LibRef | Quantity |
|--------------------|---|---|-------------------------------|--------------------|----------|
| 10uF | CAP 27pF 16V ±0.5pF 0603 (1608 Metric) Thickness 1mm SMD | C1, C3, C5, C7, C8, C16 | CAPC0603(1608)100_L | CMP-1035-00873-1 | 6 |
| 0.1uF | CAP 27pF 16V ±0.5pF 0603 (1608 Metric) Thickness 1mm SMD | C2, C4, C6, C9, C10, C11, C12, C13, C15, C24, C25, C27, C31 | CAPC0603(1608)100_L | CMP-1035-00873-1 | 13 |
| DNP | CAP 27pF 16V ±0.5pF 0603 (1608 Metric) Thickness 1mm SMD | C14 | CAPC0603(1608)100_L | CMP-1035-00873-1 | 1 |
| XGD10603MR | ESD Protector Overvoltage Protection Device, 0.25 pF, 24 V, - 55 to 125 degC, 2-Pin SMD (0603), RoHS, Tape and Reel | D1 | TECO-0603_V | CMP-2000-06889-1 | 1 |
| 640456-2 | Male Header, Pitch 2.54 mm, 1 x 2 Position, Height 10.49 mm, Tail Length 3.556 mm, -55 to 105 degC, RoHS, Bulk | J1 | TECO-640456-2_V | CMP-2000-05417-1 | 1 |
| 52271-1279 | 1.0 mm Pitch Easy- On(TM) Type FPC Connector, 3.0 mm Mated Height, Right Angle, ZIF, SMT, Bottom Contact, 12 Circuits, -40 to 85 degC, ELV and RoHS Compliant, Tape and Reel | J2 | MOLX-52271-1279 | 52271-1279 | 1 |
| 52271-0579 | 1.0 mm Pitch Easy- On(TM) Type FPC Connector, 3.0 mm Mated Height, Right Angle, ZIF, SMT, Bottom Contact, 5 Circuits, -40 to 85 degC, ELV and RoHS Compliant, Tape and Reel | J3 | MOLX-52271-0579 | 52271-0579 | 1 |
| SD12-4R7-R | SD Series High Power Density, Low Profile, Shielded Inductor, 4.7 uH, -40 to 85 degC, 2- Pin SMD, RoHS, Tape and Reel | L1 | EATN-SD12_V | CMP-2000-07038-1 | 1 |
| SS-52400-003 | | P1 | SS-52400-00X | SS-52400-003 | 1 |
| FTSH-105-01-F-DV-K | Male Header, Pitch 1.27 mm, 2 x 5 Position, Height 6.12 mm, RoHS, Tube | P2 | SMTc-FTSH-105-01-L- DV-K_V | CMP-2000-05352-1 | 1 |
| 1M 1% | Jumper 0603 (1608 Metric) | R1 | RESC0603(1608)_N | CMP-1012-00001-1 | 1 |
| 221K 1% | Jumper 0603 (1608 Metric) | R2 | RESC0603(1608)_N | CMP-1012-00001-1 | 1 |
| 10K | Jumper 0603 (1608 Metric) | R3, R5, R6, R7, R10, R19 | RESC0603(1608)_N | CMP-1012-00001-1 | 6 |
| 14.7K | Jumper 0603 (1608 Metric) | R20 | RESC0603(1608)_N | CMP-1012-00001-1 | 1 |
| LTC3101EUF#PBF | Wide Vin, Multi- Output DC/DC Converter and PowerPath Controller, 1.8 to 5.5 V Vin, 24-pin QFN (UF-24), -40 to 85 degC, Pb-Free | U1 | LT-UF-24_N | CMP-0478-00246-1 | 1 |
| STM32G431KBTx | | U2 | LOFP32 | STM32G431KBTx | 1 |
| SN74HC164DR | 8-Bit Parallel-Out Serial Shift Registers, D0014A, LARGE T&R | U3 | D0014A_M | CMP-0780-00006-3 | 1 |
| TPD2E001DZDR | Low-Capacitance 2- Channel ESD- Protection Array for High-Speed Data Interface, 0.9 to 5.5 V, - 40 to 85 degC, 4-Pin SOP (DZD), Green (RoHS & no Sb/Br), Tape and Reel | U4 | DZD0004A_N | CMP-2000-04961-1 | 1 |
| SN74ALS165DR | Parallel-Load 8-Bit Serial Shift Registers, D0016A, LARGE T&R | U5 | D0016A_L | CMP-0780-00014-3 | 1 |
| SN74LVC2G74DCUR | Single Positive-Edge- Triggered D-Type Flip- Flop with Clear and Preset, DCU0008A, LARGE T&R | U6 | DCU0008A_N | CMP-0859-00648-3 | 1 |
| XLH536024.000000I | Clock Oscillator, 3.3 V, 25 MHz, -55 to 125 degC, 4-Pin SMD, RoHS, Tape and Reel | U9 | ECS-396X_V | CMP-2000-06192-1 | 1 |
| CAT25640VI-GT3 | IC EEPROM 256K SPI 20MHZ 8SOIC | U12 | FP-CAT25256VI-GT3- IPC_B | CMP-07117-000003-1 | 1 |
| NHD-2.23-12832UCY3 | | X2 | NHD-2.23-12832UCY3 | NHD-2.23-12832UCY3 | 1 |

