

| Reference          | Value                         | Footprint   | part                                | datasheet   | Valid | Current (A) | Max Current (A) | Current_valid | Voltage (V) | Max Voltage (V) | Voltage_Valid | Power (W)   | Max Power (W) | Power_valid | Temperature | Max temperature | Temp_valid |
|--------------------|-------------------------------|---|-------------------------------------|---|-------|-------------|-----------------|---------------|-------------|-----------------|---------------|-------------|---------------|-------------|-------------|-----------------|------------|
| C1                 | 100nF                         | Capacitor_SMD:C_0805_2012Metric_Pad1.18x1.45mm_HandSolder                 | C0805C104K5RACTU                    | KEM_C1002_X7R_SMD.pdf   | OK    |             |                 |               | 3,365       | 50              | OK            |             |               |             | 50          | 125             | OK         |
| C2                 | 100nF                         | Capacitor_SMD:C_0805_2012Metric_Pad1.18x1.45mm_HandSolder                 | C0805C104K5RACTU                    | KEM_C1002_X7R_SMD.pdf   | OK    |             |                 |               | 3,365       | 50              | OK            |             |               |             | 50          | 125             | OK         |
| C3                 | 100nF                         | Capacitor_SMD:C_0805_2012Metric_Pad1.18x1.45mm_HandSolder                 | C0805C104K5RACTU                    | KEM_C1002_X7R_SMD.pdf   | OK    |             |                 |               | 3,365       | 50              | OK            |             |               |             | 50          | 125             | OK         |
| C4                 | 4.7uF                         | Capacitor_SMD:C_0805_2012Metric_Pad1.18x1.45mm_HandSolder                 | C0805C475K3RACTU                    | KEM_C1002_X7R_SMD.pdf   | OK    |             |                 |               | 3,365       | 25              | OK            |             |               |             | 50          | 125             | OK         |
| C5                 | 10uF                          | Capacitor_SMD:C_0805_2012Metric_Pad1.18x1.45mm_HandSolder                 | C0805C106K3PACTU                    | KEM_C1006_X5R_SMD.pdf   | OK    |             |                 |               | 5,25        | 25              | OK            |             |               |             | 50          | 85              | OK         |
| C6                 | 10uF                          | Capacitor_SMD:C_0805_2012Metric_Pad1.18x1.45mm_HandSolder                 | C0805C106K3PACTU                    | KEM_C1006_X5R_SMD.pdf   | OK    |             |                 |               | 3,365       | 25              | OK            |             |               |             | 50          | 85              | OK         |
| C7                 | 100nF                         | Capacitor_SMD:C_0805_2012Metric_Pad1.18x1.45mm_HandSolder                 | C0805C104K5RACTU                    | KEM_C1002_X7R_SMD.pdf   | OK    |             |                 |               | 3,365       | 50              | OK            |             |               |             | 50          | 125             | OK         |
| D1                 | RED_LED                       | LED_THT:LED_D5.0mm  |                                     |   | OK    |             |                 |               |             |                 |               |             |               |             |             |                 |            |
| D2                 | GREEN_LED                     | LED_THT:LED_D5.0mm  |                                     |   | OK    |             |                 |               |             |                 |               |             |               |             |             |                 |            |
| D3                 | POWER_LED                     | LED_SMD:LED_1206_3216Metric_Pad1.42x1.75mm_HandSolder                     | QTLP650C4TR/FC15-21SYGC/S530-E2/TR8 | DSE-0031723-QTLP650C4TR-FC15-21SYGC-S530-E2-TR8-V1.pdf                      | OK    | 0,011212121 | 0,015           | OK            | 3,365       | 5               | OK            | 0,037728788 | 0,06          | OK          | 50          | 85              | OK         |
| HS1                | HEAT_SINK                     | 530002B02500G   | 530002B02500G                       | Boyd-Board-Level-Heatsinks-Catalog.pdf                                      | OK    |             |                 |               |             |                 |               |             |               |             | 100         | 150             | OK         |
| HP                 | HEAT_PASTE                    | -   | TC3-1G                              | TC3-1G.pdf  | OK    |             |                 |               |             |                 |               |             |               |             | 100         | 150             | OK         |
| J1                 | Conn_01x04_Pin                | Connector_PinHeader_2.54mm:PinHeader_1x04_P2.54mm_Vertical                |                                     |   | OK    |             |                 |               |             |                 |               |             |               |             |             |                 |            |
| J2                 | OLED_Display                  | Connector_PinHeader_2.54mm:PinHeader_1x04_P2.54mm_Vertical                | oled display ruizhi 0.96            | OLED_096.pdf  | OK    |             |                 |               | 3,365       | 5,2             | OK            |             |               |             | 50          | 80              | OK         |
| J3                 | USB_C_Receptacle_PowerOnly_6P | Connector_USB:USB_C_Receptacle_GCT_USB4125-xx-x-0190_6P_TopMnt_Horizontal | USB4125-GF-A                        | usb4125-spec.pdf  | OK    | 0,80207962  | 3               | OK            | 5,25        | 48              | OK            |             |               |             | 50          | 85              | OK         |
| Q1                 | BT416-600CW                   | Package_TO_SOT_THT:TO-220-3_Vertical                                      | BT416-600CWRG                       | bta16.pdf   | OK    | 12          | 16              | OK            | 325,2691193 | 600             | OK            | 13          | 14,42307692   | OK          | 117,6       | 125             | OK         |
| R1                 | 1100ohm                       | Resistor_THT:R_Axial_DIN0309_L9.0mm_D3.2mm_P12.70mm_Horizontal            | CFR-50JB-52-1K1                     | YAGEO-CFR_DATASHEET.pdf   | OK    |             |                 |               | 230         | 300             | OK            | 0,308611111 | 0,5           | OK          | 50          | 70              | OK         |
| R2                 | 1100ohm                       | Resistor_THT:R_Axial_DIN0309_L9.0mm_D3.2mm_P12.70mm_Horizontal            | CFR-50JB-52-1K1                     | YAGEO-CFR_DATASHEET.pdf   | OK    |             |                 |               | 230         | 300             | OK            | 0,308611111 | 0,5           | OK          | 50          | 70              | OK         |
| R3                 | 1100ohm                       | Resistor_THT:R_Axial_DIN0309_L9.0mm_D3.2mm_P12.70mm_Horizontal            | CFR-50JB-52-1K1                     | YAGEO-CFR_DATASHEET.pdf   | OK    |             |                 |               | 230         | 300             | OK            | 0,308611111 | 0,5           | OK          | 50          | 70              | OK         |
| R4                 | 1800ohm                       | Resistor_SMD:R_0805_2012Metric_Pad1.20x1.40mm_HandSolder                  | ERA-6AEB182V                        | R1800_panasonic.pdf   | OK    |             |                 |               | 3,365       | 100             | OK            | 0,006296978 | 0,125         | OK          | 50          | 85              | OK         |
| R5                 | 150ohm                        | Resistor_SMD:R_0805_2012Metric_Pad1.20x1.40mm_HandSolder                  | CRCW0805150RFKEA                    | resistor_vishay.pdf   | OK    |             |                 |               | 3,365       | 150             | OK            | 0,076250673 | 0,25          | OK          | 50          | 70              | OK         |
| R6                 | 150ohm                        | Resistor_SMD:R_0805_2012Metric_Pad1.20x1.40mm_HandSolder                  | CRCW0805150RFKEA                    | resistor_vishay.pdf   | OK    |             |                 |               | 3,365       | 150             | OK            | 0,076250673 | 0,25          | OK          | 50          | 70              | OK         |
| R7                 | 150ohm                        | Resistor_SMD:R_0805_2012Metric_Pad1.20x1.40mm_HandSolder                  | CRCW0805150RFKEA                    | resistor_vishay.pdf   | OK    |             |                 |               | 3,365       | 150             | OK            | 0,076250673 | 0,25          | OK          | 50          | 70              | OK         |
| R12                | 150ohm                        | Resistor_SMD:R_0805_2012Metric_Pad1.20x1.40mm_HandSolder                  | CRCW0805150RFKEA                    | resistor_vishay.pdf   | OK    |             |                 |               | 3,365       | 150             | OK            | 0,076250673 | 0,25          | OK          | 50          | 70              | OK         |
| R8                 | 10kohm                        | Resistor_SMD:R_0805_2012Metric_Pad1.20x1.40mm_HandSolder                  | CRCW080510K0FKEA                    | resistor_vishay.pdf   | OK    |             |                 |               | 3,365       | 150             | OK            | 0,00114376  | 0,25          | OK          | 50          | 70              | OK         |
| R9                 | 10kohm                        | Resistor_SMD:R_0805_2012Metric_Pad1.20x1.40mm_HandSolder                  | CRCW080510K0FKEA                    | resistor_vishay.pdf   | OK    |             |                 |               | 3,365       | 150             | OK            | 0,00114376  | 0,25          | OK          | 50          | 70              | OK         |
| R10                | 5.1kohm                       | Resistor_SMD:R_0805_2012Metric_Pad1.20x1.40mm_HandSolder                  | CRCW08055K10FKEA                    | resistor_vishay.pdf   | OK    |             |                 |               | 5,25        | 150             | OK            | 0,005459002 | 0,25          | OK          | 50          | 70              | OK         |
| R11                | 5.1kohm                       | Resistor_SMD:R_0805_2012Metric_Pad1.20x1.40mm_HandSolder                  | CRCW08055K10FKEA                    | resistor_vishay.pdf   | OK    |             |                 |               | 5,25        | 150             | OK            | 0,005459002 | 0,25          | OK          | 50          | 70              | OK         |
| SW1                | Valid                         | Button_Switch_THT:SW_PUSH_6mm_H5mm  |                                     |   | OK    |             |                 |               |             |                 |               |             |               |             |             |                 |            |
| SW2                | Up                            | Button_Switch_THT:SW_PUSH_6mm_H5mm  |                                     |   | OK    |             |                 |               |             |                 |               |             |               |             |             |                 |            |
| SW3                | Down                          | Button_Switch_THT:SW_PUSH_6mm_H5mm  |                                     |   | OK    |             |                 |               |             |                 |               |             |               |             |             |                 |            |
| SW4                | Left                          | Button_Switch_THT:SW_PUSH_6mm_H5mm  |                                     |   | OK    |             |                 |               |             |                 |               |             |               |             |             |                 |            |
| SW5                | Right                         | Button_Switch_THT:SW_PUSH_6mm_H5mm  |                                     |   | OK    |             |                 |               |             |                 |               |             |               |             |             |                 |            |
| SW6                | return                        | Button_Switch_THT:SW_PUSH_6mm_H5mm  |                                     |   | OK    |             |                 |               |             |                 |               |             |               |             |             |                 |            |
| SW7                | NRST                          | Button_Switch_THT:SW_PUSH_6mm_H5mm  |                                     |   | OK    |             |                 |               |             |                 |               |             |               |             |             |                 |            |
| SW8                | BOOT0                         | Button_Switch_THT:SW_PUSH_6mm_H5mm  |                                     |   | OK    |             |                 |               |             |                 |               |             |               |             |             |                 |            |
| TH1                | Thermistor_NTC                | Resistor_THT:R_Axial_DIN0204_L3.6mm_D1.6mm_P2.54mm_Vertical               | NRBG105F3950B1F                     | eaton-nrbg-glass-sealed-radial-lead-ntc-thermistor-datasheet-elx1105-en.pdf | OK    |             |                 |               | 3,365       | 50              | OK            | 0,000233092 | 0,032         | OK          | 260         | 300             | OK         |
| U1_emitter         | MOC3063M                      | Package_DIP:DIP-6_W7.62mm_LongPads  | MOC3063M                            | MOC3163M-D.pdf  | OK    | 0,017946128 | 0,06            | OK            | 3,365       | 6               | OK            | 0,017946128 | 0,04935       | OK          | 62,72775032 | 100             | OK         |
| U1_detector        | MOC3063M                      | Package_DIP:DIP-6_W7.62mm_LongPads  | MOC3063M                            | MOC3163M-D.pdf  | OK    | 0,89605818  | 1               | OK            | 325,2691193 | 600             | OK            | 0,045       | 0,0616        | OK          | 75,56818182 | 100             | OK         |
| U2                 | STM32C011F6Px                 | Package_SO:TSSOP-20_4.4x6.5mm_P0.65mm                                     | STM32C011F6P6                       | stm32c011f6.pdf   | OK    | 0,067979798 | 0,1             | OK            | 3,365       | 4               | OK            |             |               |             | 50          | 85              | OK         |
| U4                 | STM32C031F6Px                 | Package_SO:TSSOP-20_4.4x6.5mm_P0.65mm                                     | STM32C031F6P6                       | stm32c031f6.pdf   | OK    | 0,067979798 | 0,1             | OK            | 3,365       | 4               | OK            |             |               |             | 50          | 85              | OK         |
| LD1117S33TR_SOT223 |                               | Package_TO_SOT_SMD:SOT-223-3_TabPin2                                      | LD1117S33TR                         | LD1117.pdf  | OK    | 0,155139073 | 0,8             | OK            | 5,25        | 15              | OK            | 0,312605232 | 12            | OK          | 84,38657547 | 125             | OK         |
| Vdr1               | S14K230                       | Varistor_RV_Disc_D15.5mm_W7.5mm_P7.5mm                                    | B72214S0231K101                     | S10V_Leaded_StandarD.pdf  | OK    | 12          | 3000            | OK            |             |                 |               |             |               |             | 50          | 105             | OK         |