



**MODEL:** UP31-CV-G-CM | **DESCRIPTION:** USB PLUG

**FEATURES**

- USB Type C plug
- USB 3.2 Gen 2
- 10 Gbit/s data transfer speed
- reflow solder compatible



**SPECIFICATIONS**

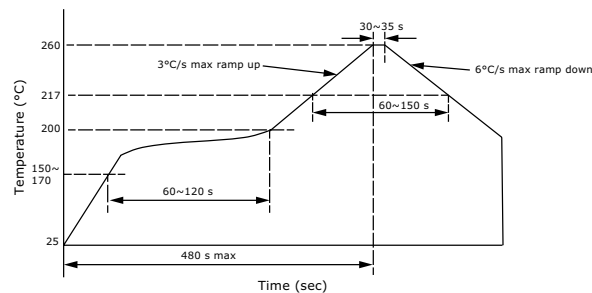
| parameter                       | conditions/description                            | min | typ    | max  | units  |
|---------------------------------|---------------------------------------------------|-----|--------|------|--------|
| USB standard                    | USB 3.2 Gen 2                                     |     |        |      |        |
| rated input voltage             |                                                   |     |        | 20   | Vdc    |
| rated input current             | as per EIA-364-70, Method B                       |     |        |      |        |
|                                 | power pins collectively [A4, A9, B4, B9]          |     |        | 5.0  | A      |
|                                 | GND pins collectively [A1, A12, B1, B12]          |     |        | 6.25 | A      |
|                                 | VCONN pins individually [A5, B5]                  |     |        | 1.25 | A      |
|                                 | all other signal pins individually                |     |        | 0.25 | A      |
| contact resistance <sup>1</sup> | between terminals and mating plug                 |     |        | 40   | mΩ     |
| insulation resistance           | at 100 Vdc for 1 minute between adjacent contacts | 100 |        |      | MΩ     |
| voltage withstand               | at 60 Hz for 1 minute between adjacent contacts   |     |        | 100  | Vac    |
| insertion force                 | at a rate of 12.5 mm/min                          | 5   |        | 20   | N      |
| withdrawal force                | at a rate of 12.5 mm/min                          | 8   |        | 20   | N      |
| life                            | at a rate of 200 max cycles per hour              |     | 10,000 |      | cycles |
| operating temperature           |                                                   | -30 |        | 85   | °C     |
| storage temperature             |                                                   | -40 |        | 85   | °C     |
| flammability rating             | UL94V-0                                           |     |        |      |        |
| RoHS                            | yes                                               |     |        |      |        |

Note: 1. When measured at 20 mV max / 100 mA.

**SOLDERABILITY**

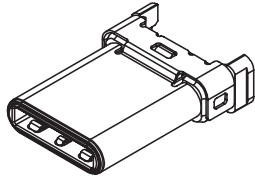
| parameter                     | conditions/description    | min | typ | max | units |
|-------------------------------|---------------------------|-----|-----|-----|-------|
| reel storage                  | at relative humidity <60% |     |     | 30  | °C    |
| reflow soldering <sup>2</sup> | see reflow profile        | 255 | 260 | 265 | °C    |

Note: 2. It is recommended to reflow solder within 168 hours from opening vacuum packaging at a temperature <30°C & relative humidity <60%.

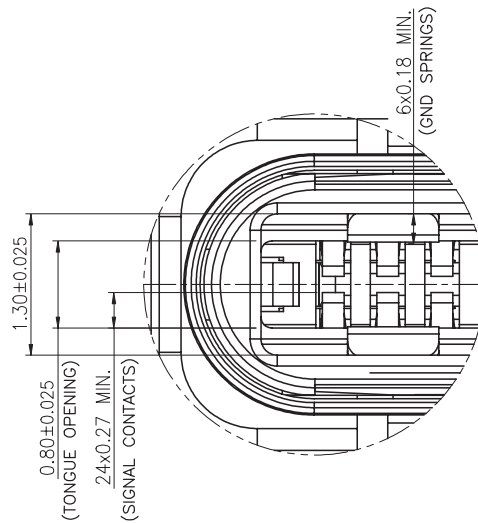
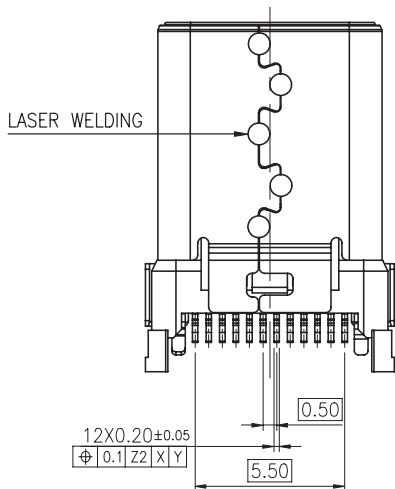
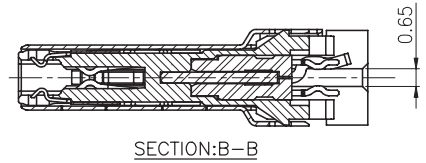
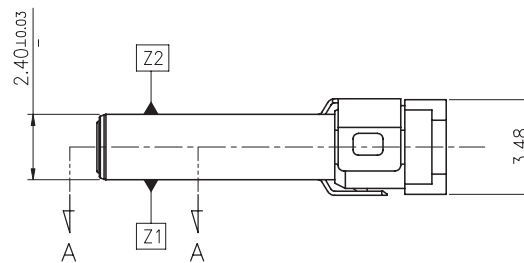
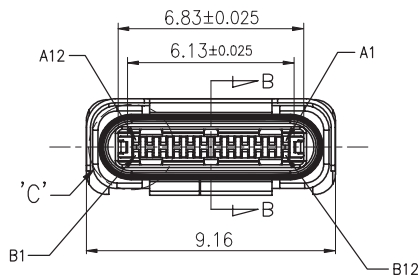
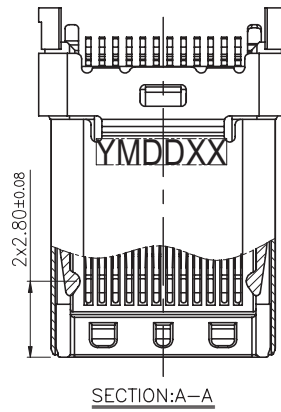
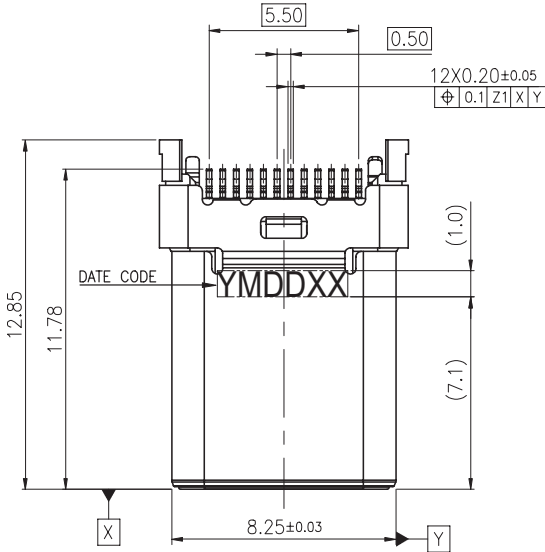


## MECHANICAL DRAWING

units: mm  
 tolerance:  
 X.X ±0.2 mm  
 X.XX ±0.15 mm



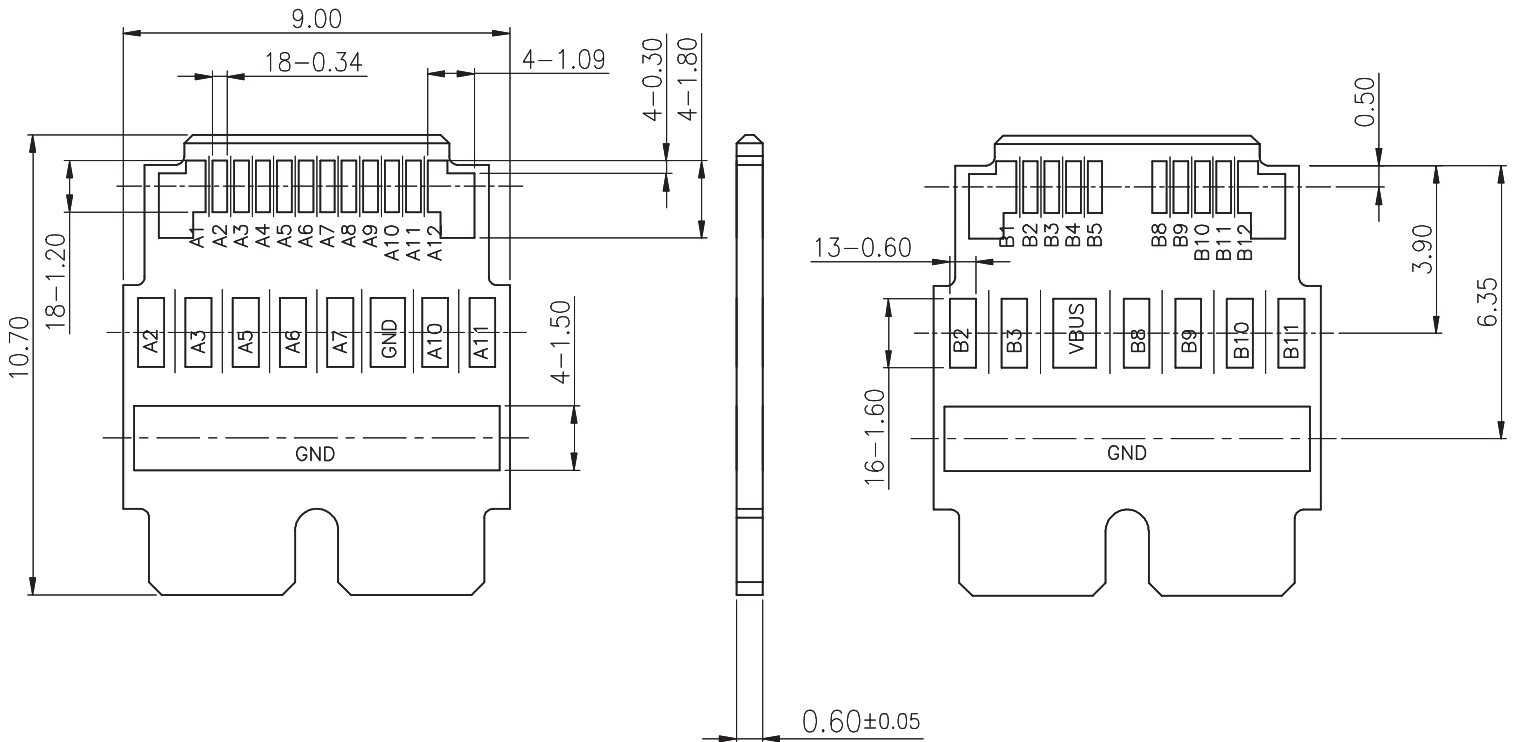
|                   | MATERIAL          | PLATING            |
|-------------------|-------------------|--------------------|
| contact terminals | copper alloy      | contact: 2 μm gold |
| ground spring     | stainless steel   |                    |
| shell             | stainless steel   | nickel             |
| latch             | stainless steel   | nickel             |
| insulator         | silicone adhesive |                    |
| internal body     | LCP               |                    |
| housing           | PA9T              |                    |



## MECHANICAL DRAWING (CONTINUED)

units: mm  
PCB tolerance:  $\pm 0.05$  mm

| PIN CONNECTIONS |                  |       |                  |
|-----------------|------------------|-------|------------------|
| PIN             | SIGNAL NAME      | PIN   | SIGNAL NAME      |
| A1              | GND              | B12   | GND              |
| A2              | SSTXp1           | B11   | SSRXp1           |
| A3              | SSTXn1           | B10   | SSRXn1           |
| A4              | V <sub>BUS</sub> | B9    | V <sub>BUS</sub> |
| A5              | CC1              | B8    | SBU2             |
| A6              | Dp1              | B7    | Dn2              |
| A7              | Dn1              | B6    | Dp2              |
| A8              | SBU1             | B5    | CC2              |
| A9              | V <sub>BUS</sub> | B4    | V <sub>BUS</sub> |
| A10             | SSRXn2           | B3    | SSTXn2           |
| A11             | SSRXp2           | B2    | SSTXp2           |
| A12             | GND              | B1    | GND              |
| SHELL           |                  | SHELL |                  |



Recommended PCB Layout  
Top View

## REVISION HISTORY

| rev. | description                       | date       |
|------|-----------------------------------|------------|
| 1.0  | initial release                   | 12/19/2017 |
| 1.01 | updated datasheet                 | 01/30/2018 |
| 1.02 | brand update                      | 01/28/2020 |
| 1.03 | updated USB standard              | 04/19/2022 |
| 1.04 | logo, datasheet style update      | 08/05/2022 |
| 1.05 | CUI Devices rebranded to Same Sky | 09/12/2024 |

The revision history provided is for informational purposes only and is believed to be accurate.



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