

**MODEL:** UJ31-CH-G-SMT-TR-67 | **DESCRIPTION:** USB RECEPTACLE**FEATURES**

- IP67 rated
- surface mount
- USB 3.2 Gen 2
- 10 Gbit/s data transfer speed
- reflow solder compatible

**SPECIFICATIONS**

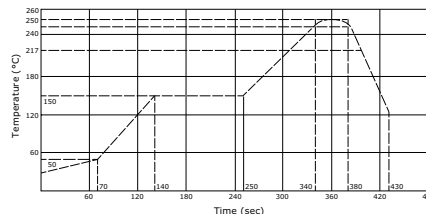
| parameter                       | conditions/description                   | min | typ    | max  | units  |
|---------------------------------|------------------------------------------|-----|--------|------|--------|
| USB standard                    | USB 3.2 Gen 2                            |     |        |      |        |
| 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] |     |        | 1.25 | 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           | between adjacent contacts                | 100 |        |      | MΩ     |
| voltage withstand               | 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 500 ± 50 cycles per hour    |     | 10,000 |      | cycles |
| operating temperature           |                                          | -25 |        | 85   | °C     |
| flammability rating             | UL94V-0                                  |     |        |      |        |
| RoHS                            | yes                                      |     |        |      |        |
| IP level                        | IP67                                     |     |        |      |        |

Note: 1. When measured at 20 mV / 100 mA.  
2. All specifications measured at 10-35°C, humidity at 45-85%, under standard atmospheric pressure, unless otherwise noted.

**SOLDERABILITY**

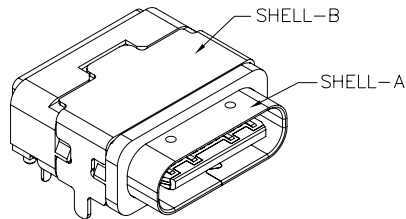
| parameter                      | conditions/description                                                                                   | min | typ | max | units |
|--------------------------------|----------------------------------------------------------------------------------------------------------|-----|-----|-----|-------|
| reel storage                   | at relative humidity <80%                                                                                |     |     | 40  | °C    |
| reflow soldering <sup>3</sup>  | see reflow profile                                                                                       | 245 | 250 | 255 | °C    |
| drying conditions <sup>4</sup> | parts in reel: bake at 40°C ±5°C for 72 hours<br>parts removed from reel: bake at 40°C ±5°C for 10 hours |     |     |     |       |

Note: 3. It is recommended to reflow solder within 72 hours from opening vacuum packaging at a temperature <30°C & relative humidity <60%.  
4. When exceeding floor life by >72 hours.

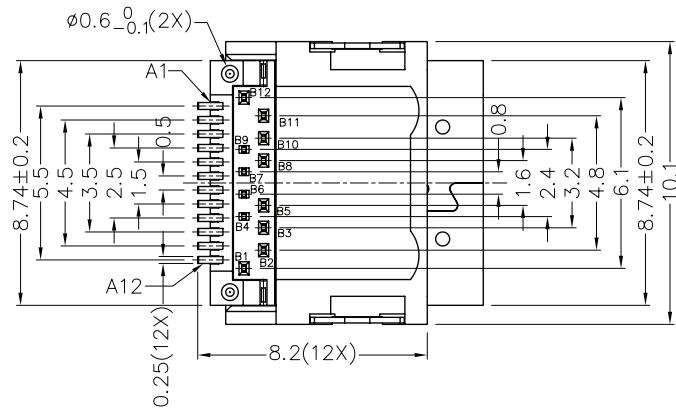
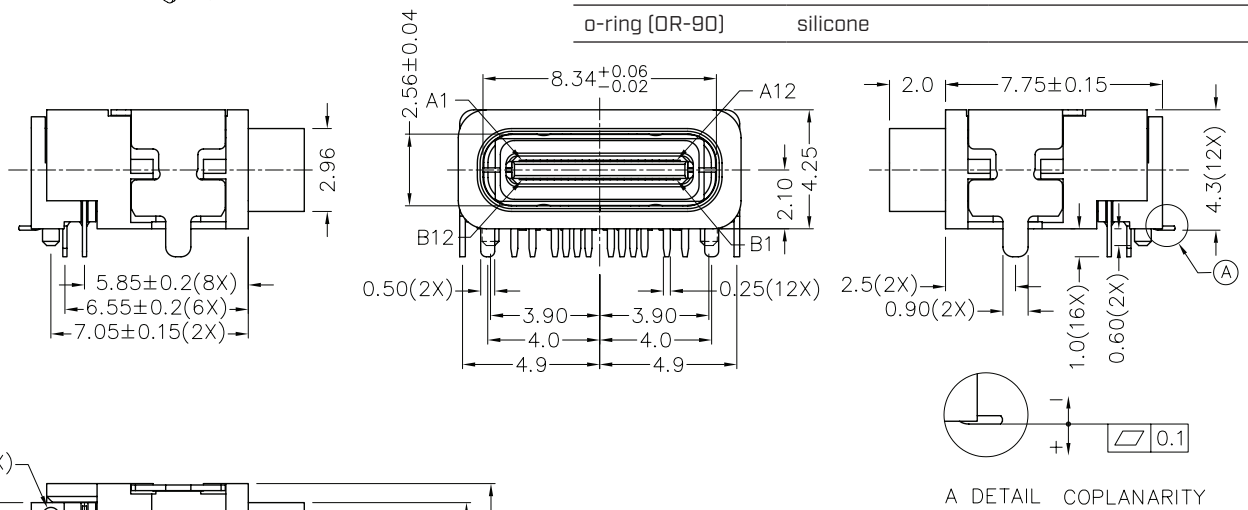


## MECHANICAL DRAWING

units: mm  
tolerance:  
X.X  $\pm 0.20$  mm  
X.XX  $\pm 0.10$  mm  
X.XXX  $\pm 0.05$  mm

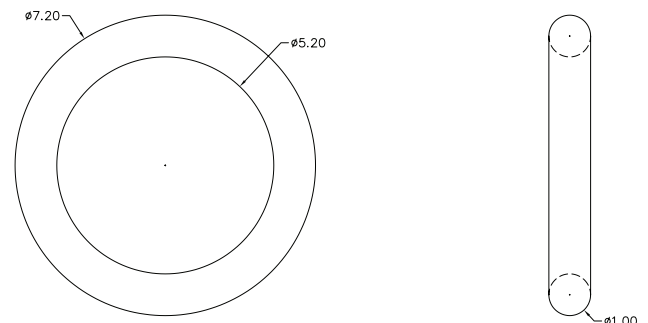


|                             | MATERIAL        | PLATING                                                      |
|-----------------------------|-----------------|--------------------------------------------------------------|
| contact terminals           | copper alloy    | nickel over all,<br>gold flash on contact and<br>solder area |
| shell-A                     | stainless steel | nickel                                                       |
| shell-B                     | brass           | nickel                                                       |
| inner ground cover<br>shell | stainless steel |                                                              |
| mid plate                   | stainless steel | nickel                                                       |
| insulator                   | PA10T           | black                                                        |
| housing                     | PA10T           | black                                                        |
| o-ring (OR-90)              | silicone        |                                                              |



|         |     |      |      |      |      |    |    |      |      |      |      |     |
|---------|-----|------|------|------|------|----|----|------|------|------|------|-----|
| PIN NO. | A1  | A2   | A3   | A4   | A5   | A6 | A7 | A8   | A9   | A10  | A11  | A12 |
|         | GND | TX1+ | TX1- | Vbus | CC1  | D+ | D- | SBU1 | Vbus | RX2- | RX2+ | GND |
| PIN NO. | B12 | B11  | B10  | B9   | B8   | B7 | B6 | B5   | B4   | B3   | B2   | B1  |
|         | GND | RX1+ | RX1- | Vbus | SBU2 | D- | D+ | CC2  | Vbus | TX2- | TX2+ | GND |

## O-ring (P/N: OR-90)



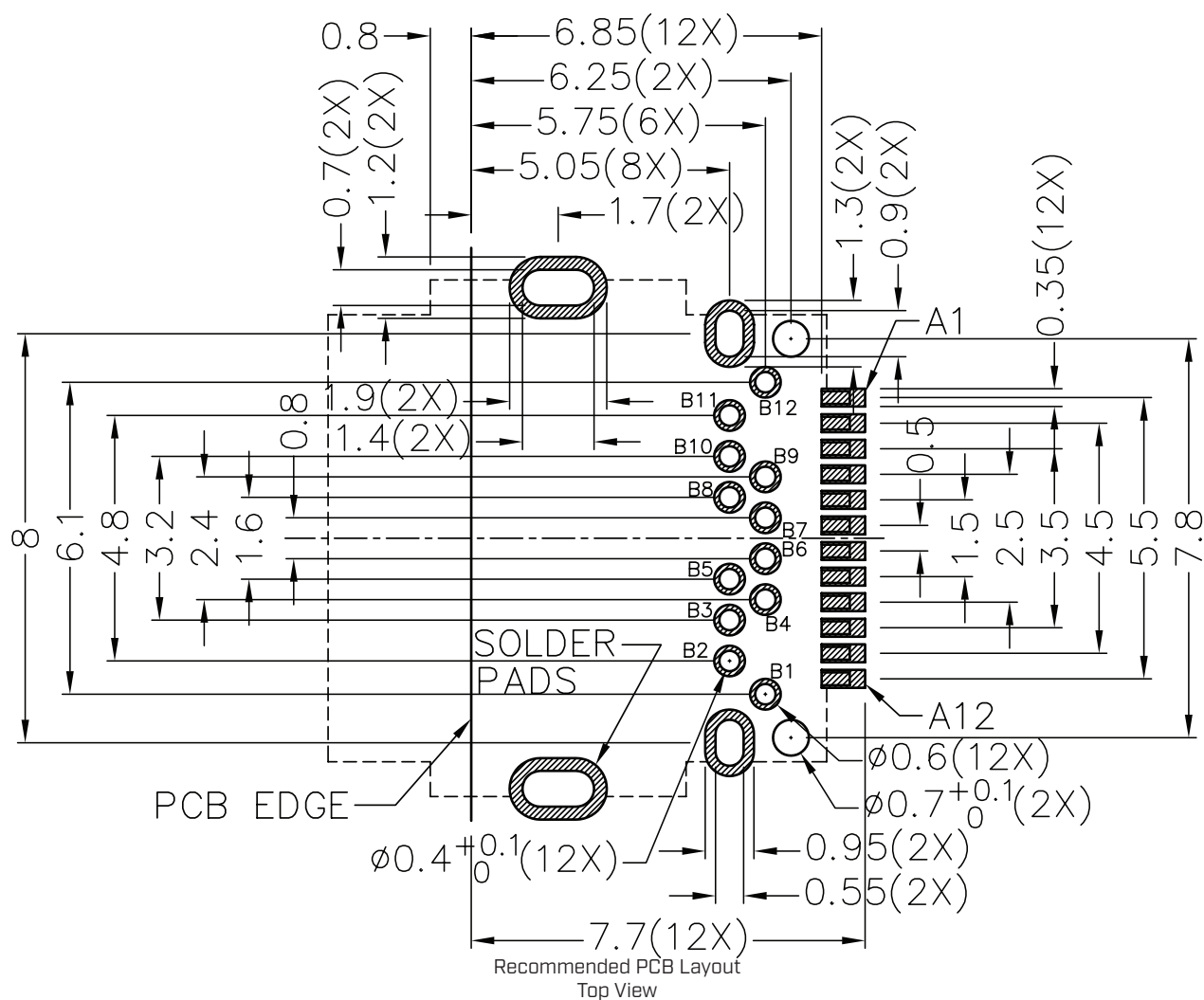
## MECHANICAL DRAWING (CONTINUED)

units: mm

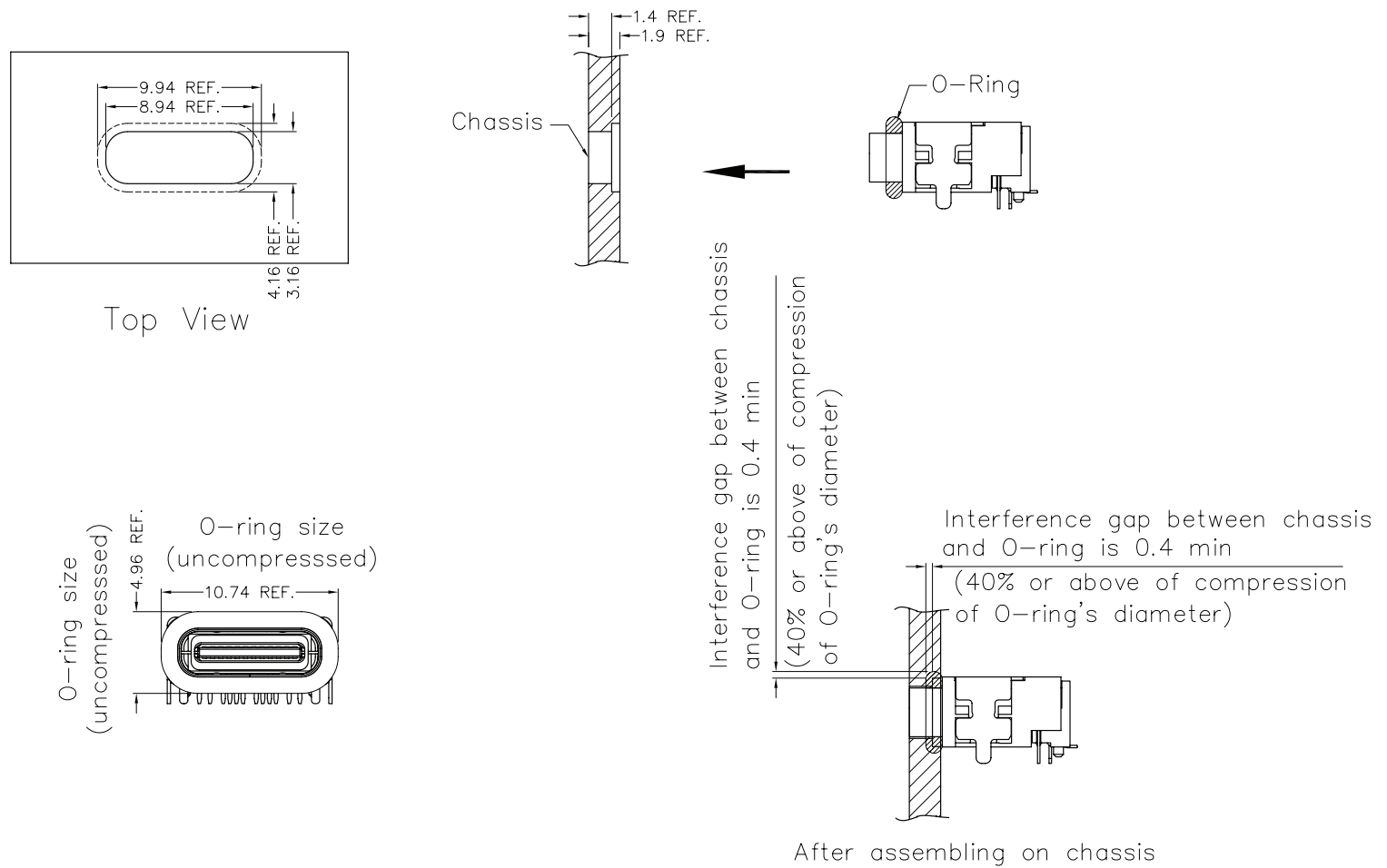
PCB tolerance:  $\pm 0.05$  mm

PCB thickness: 0.6~1.2 mm

| PIN CONNECTIONS |             |     |             |
|-----------------|-------------|-----|-------------|
| PIN             | SIGNAL NAME | PIN | SIGNAL NAME |
| A1              | GND         | B12 | GND         |
| A2              | TX1+        | B11 | RX1+        |
| A3              | TX1-        | B10 | RX1-        |
| A4              | $V_{BUS}$   | B9  | $V_{BUS}$   |
| A5              | CC1         | B8  | SBU2        |
| A6              | D+          | B7  | D-          |
| A7              | D-          | B6  | D+          |
| A8              | SBU1        | B5  | CC2         |
| A9              | $V_{BUS}$   | B4  | $V_{BUS}$   |
| A10             | RX2-        | B3  | TX2-        |
| A11             | RX2+        | B2  | TX2+        |
| A12             | GND         | B1  | GND         |



## ASSEMBLY REFERENCE

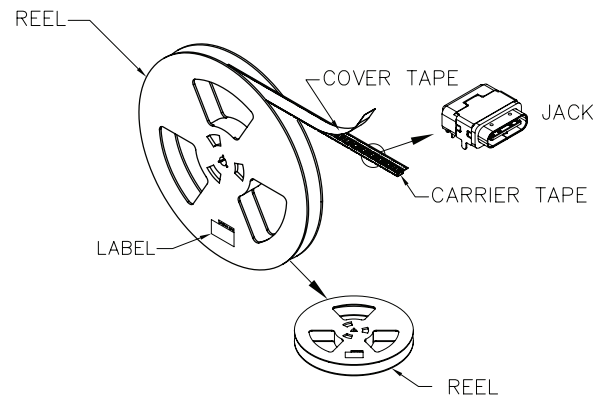
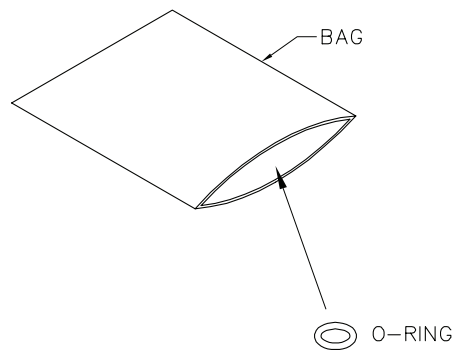
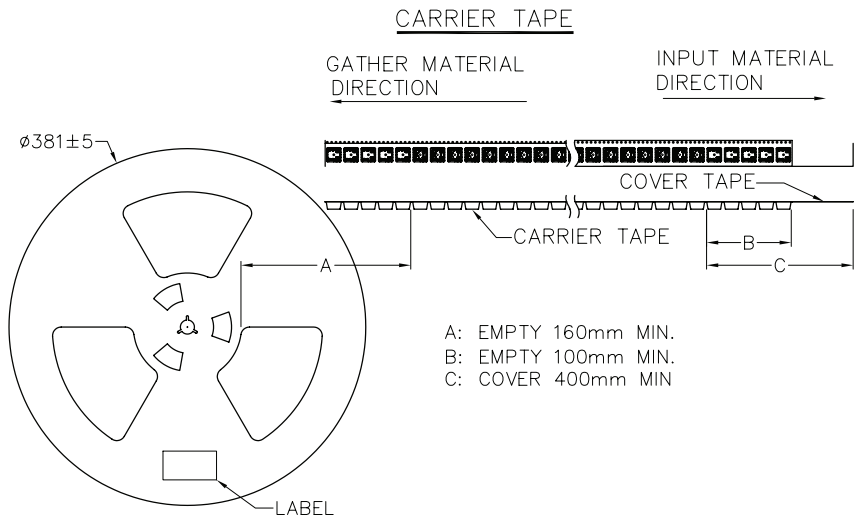
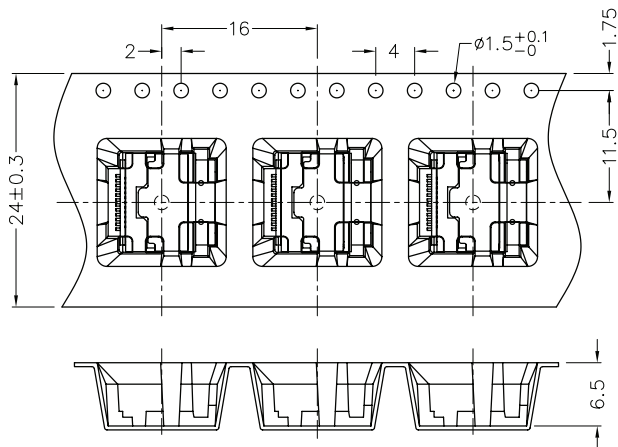


## PACKAGING

units: mm

Reel Size:  $\varnothing 381$  mm

Reel QTY: 900 pcs per reel



REVISION HISTORY

| rev. | description                            | date       |
|------|----------------------------------------|------------|
| 1.0  | initial release                        | 06/24/2020 |
| 1.01 | updated USB standard, added o-ring p/n | 04/21/2022 |
| 1.02 | logo, datasheet style update           | 08/05/2022 |
| 1.03 | CUI Devices rebranded to Same Sky      | 09/12/2024 |

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



Same Sky offers a one (1) year limited warranty. Complete warranty information is listed on our website.

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