## SERIES: UJ31-CH-SMT \| DESCRIPTION: USB RECEPTACLE

## FEATURES

- USB Type C receptacle
- USB 3.1
- $10 \mathrm{Gbit} / \mathrm{s}$ data transfer speed
- reflow solder compatible
- tape \& reel packaging


PART NUMBER KEY


## SPECIFICATIONS

| parameter | conditions/description | min | typ | max | units |
| :---: | :---: | :---: | :---: | :---: | :---: |
| rated input voltage |  |  |  | 20 | Vdc |
| rated input current | as per EIA-364-70, Method B power pins collectively (A4, A9, B4, B9) GND pins collectively (A1, A12, B1, B12) VCONN pins individually (A5, B5) all other signal pins individually |  |  | $\begin{gathered} 5.0 \\ 6.25 \\ 1.25 \\ 0.25 \end{gathered}$ | $\begin{aligned} & \text { A } \\ & \text { A } \\ & \text { A } \\ & \text { A } \end{aligned}$ |
| contact resistance ${ }^{1}$ | between terminals and mating plug |  |  | 40 | $\mathrm{m} \Omega$ |
| insulation resistance | at 100 Vdc for 1 minute between adjacent contacts | 100 |  |  | $\mathrm{M} \Omega$ |
| voltage withstand | at 60 Hz for 1 minute between adjacent contacts |  |  | 100 | Vac |
| insertion force | at a rate of $12.5 \mathrm{~mm} / \mathrm{min}$ | 5 |  | 20 | N |
| withdrawal force | at a rate of $12.5 \mathrm{~mm} / \mathrm{min}$ | 8 |  | 20 | N |
| life | at a rate of 200 max cycles per hour |  | 10,000 |  | cycles |
| operating temperature |  | -30 |  | 85 | ${ }^{\circ} \mathrm{C}$ |
| storage temperature |  | -40 |  | 85 | ${ }^{\circ} \mathrm{C}$ |
| flammability rating | UL94V-0 |  |  |  |  |
| RoHS | yes |  |  |  |  |
| Note: 1. When measured | $\text { ax / } 100 \mathrm{~mA} \text {. }$ |  |  |  |  |

## MECHANICAL DRAWING

units: mm tolerance: $X . X \pm 0.20 \mathrm{~mm}$ $X . X X \pm 0.15 \mathrm{~mm}$



|  | MATERIAL | PLATING |
| :--- | :--- | :--- |
| contact terminals | copper alloy | contact: $2 \mu^{\prime \prime}$ gold <br> solder: tin |
| shell | stainless steel | nickel |
| EMI shell | stainless steel |  |
| mid plate | stainless steel | tin |
| insulator | PA9T |  |



## MECHANICAL DRAWING [CONTINUED]

units: mm
PCB tolerance: $\pm 0.05 \mathrm{~mm}$

| PIN CONNECTIONS |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| PIN | SIGNAL <br> NAME | MATING <br> SEQUENCE | PIN | SIGNAL <br> NAME | MATING <br> SEQUENCE |  |  |  |  |  |
| A1 | GND | FIRST | B12 | GND | FIRST |  |  |  |  |  |
| A2 | SSTXp1 | SECOND | B11 | SSRXp1 | SECOND |  |  |  |  |  |
| A3 | SSTXn1 | SECOND | B10 | SSRXn1 | SECOND |  |  |  |  |  |
| A4 | V $_{\text {Bus }}$ | FIRST | B9 | $V_{\text {BUs }}$ | FIRST |  |  |  |  |  |
| A5 | CC1 | SECOND | B8 | SBU2 | SECOND |  |  |  |  |  |
| A6 | Dp1 | SECOND | B7 | Dn2 | SECOND |  |  |  |  |  |
| A7 | Dn1 | SECOND | B6 | Dp2 | SECOND |  |  |  |  |  |
| A8 | SBU1 | SECOND | B5 | CC2 | SECOND |  |  |  |  |  |
| A9 | $V_{\text {BUs }}$ | FIRST | B4 | $V_{\text {BUs }}$ | FIRST |  |  |  |  |  |
| A10 | SSRXn2 | SECOND | B3 | SSTXn2 | SECOND |  |  |  |  |  |
| A11 | SSRXp2 | SECOND | B2 | SSTXp2 | SECOND |  |  |  |  |  |
| A12 | GND | FIRST | B1 | GND | FIRST |  |  |  |  |  |
| SHELL |  |  |  |  |  |  | GND |  | SHELL | GND |



Recommended PCB Layout
Top View

## SOLDERABILITY

| parameter | conditions/description | $\boldsymbol{m i n}$ | typ | $\boldsymbol{m a x}$ | units |
| :--- | :--- | :---: | :---: | :---: | :---: |
| reel storage | at relative humidity $<60 \%$ |  | 30 | ${ }^{\circ} \mathrm{C}$ |  |
| reflow soldering ${ }^{1}$ | see reflow profile | 255 | 260 | 265 | ${ }^{\circ} \mathrm{C}$ |

Note: 1. It is recommended to reflow solder within 168 hours from opening vacuum packaging at a temperature $<30^{\circ} \mathrm{C} \&$ relative humidity $<60 \%$.


## PACKAGING

units: mm
Reel Size: Ø380 mm
Reel QTY: 1,200 pcs per reel


## REVISION HISTORY

| rev. | description | date |
| :---: | :---: | :---: |
| 1.0 | initial release | $12 / 19 / 2017$ |
| 1.01 | updated reel details | $01 / 19 / 2018$ |
| 1.02 | updated datasheet | $01 / 30 / 2018$ |
| 1.03 | brand update | $01 / 28 / 2020$ |

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

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 effectiveness.

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