

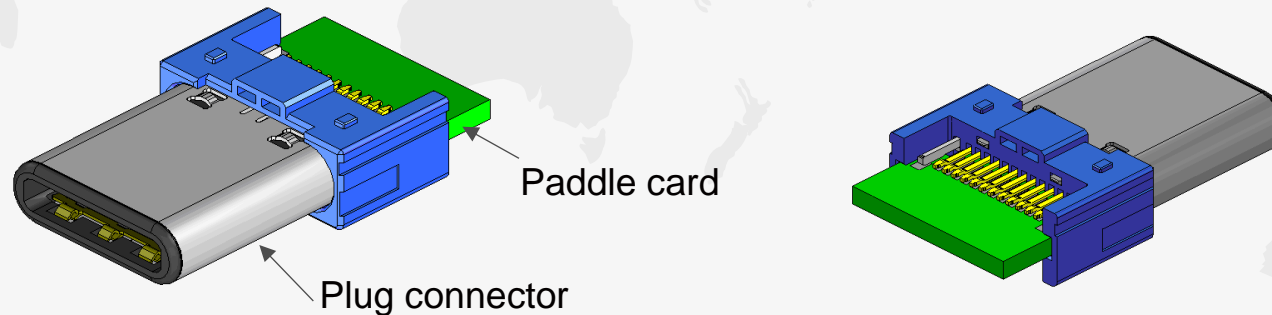


JST Proposal for USB connector “Type-C/Plug”

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◇Specification

- Current rating ; Power / 5A (apply to 1.25A/Vbus 4pins)
Signal / 0.25A
- Voltage rating ; 30V
- Temperature range ; -40°C~ +85°C (including temperature rise in applying electrical current)
- Characteristic impedance ; $85\Omega \pm 9\Omega$ / rise time : 40ps (20%-80%)
- Durability ; 10,000cyc
- Paddle card thickness ; $t0.8\text{mm}$

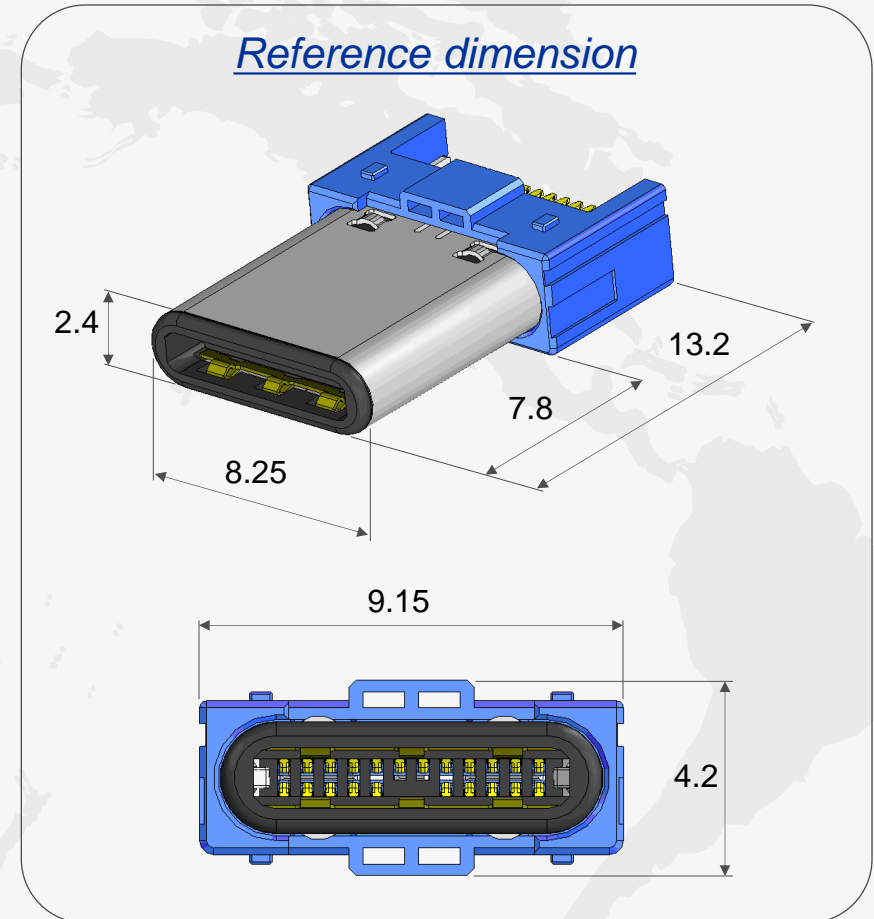


◇Construction

| Part Name | Material | Surface finish etc. |
|---------------------|----------------------|---|
| Contact | Copper alloy | Nickel under-plated selective Gold-plated |
| Housing | Heat resisting resin | UL94V-0 |
| Shell | Stainless steel | - |
| Lock | Stainless steel | Copper under-plated tin-plated |
| Ground bar | Stainless steel | - |
| Center ground plate | Copper alloy | - |
| Cover housing | Heat resisting resin | UL94V-0 |
| Polyimide tape | Polyimide | - |

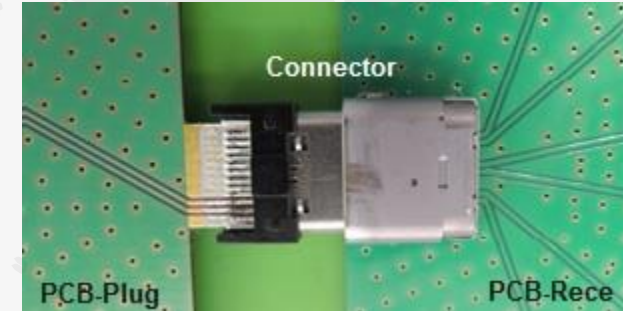
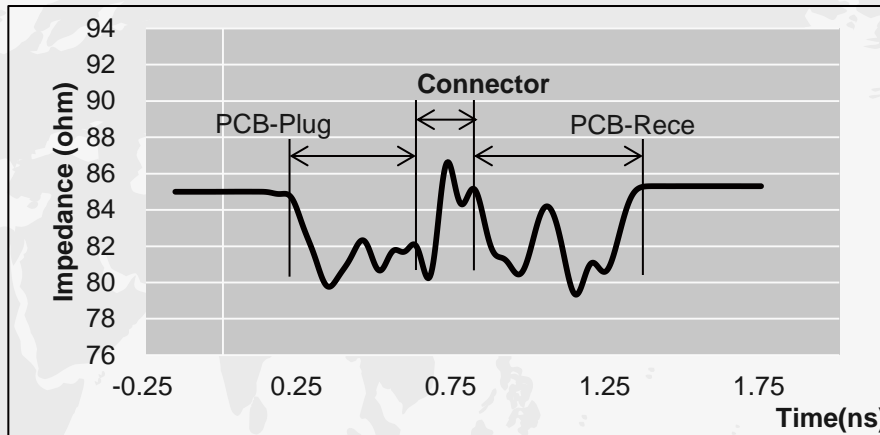
◆Features

- **Transmission performance**
:Meeting USB Type-C requirement
- **Adoption of Cover housing**
:Preventing over-mold resin flowing into connector
- **Mounting work performance**
:Structure of enabling to mount paddle card easily
- **Connector strength against bending**
:Preventing plug connector coming off from over-mold resin



Performance :Meeting USB Type-C requirement

◆Transmission performance



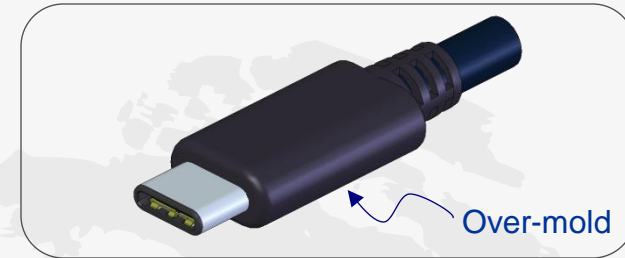
| | Type-C Specifications | Results | Judgment |
|---|-----------------------|------------------|----------|
| Characteristic impedance(Differential) Rise time : 40ps (20-80%) | $85 \pm 9\Omega$ | 80 to 87Ω | OK |

◆Temperature Rise

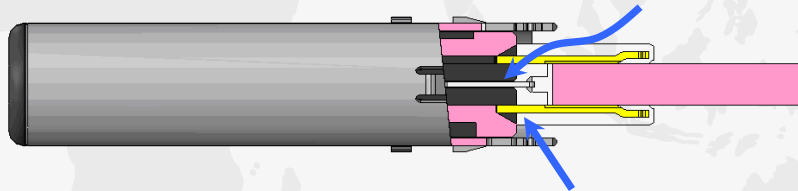
| | Type-C Specifications | Results | Judgment |
|------------------|--|-------------|----------|
| Temperature Rise | Not exceed 30°C above the ambient temperature | 19 °C (MAX) | OK |

○Adoption of Cover housing

:Preventing over-mold resin flowing into connector



Without Cover housing

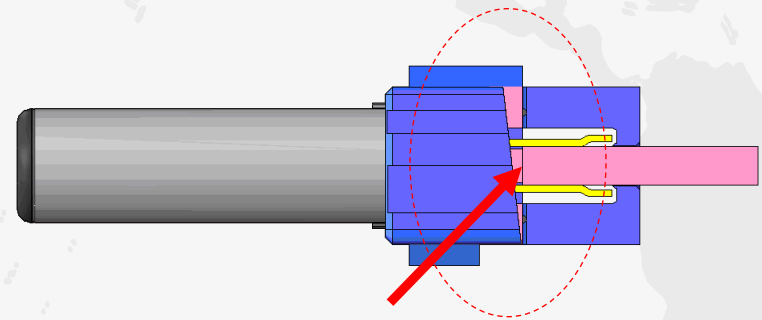


Over-mold resin flow into till tip of contact

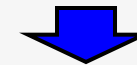


Need an additional process to prevent over-mold resin flowing into inside of connector during assembly process

With Cover housing



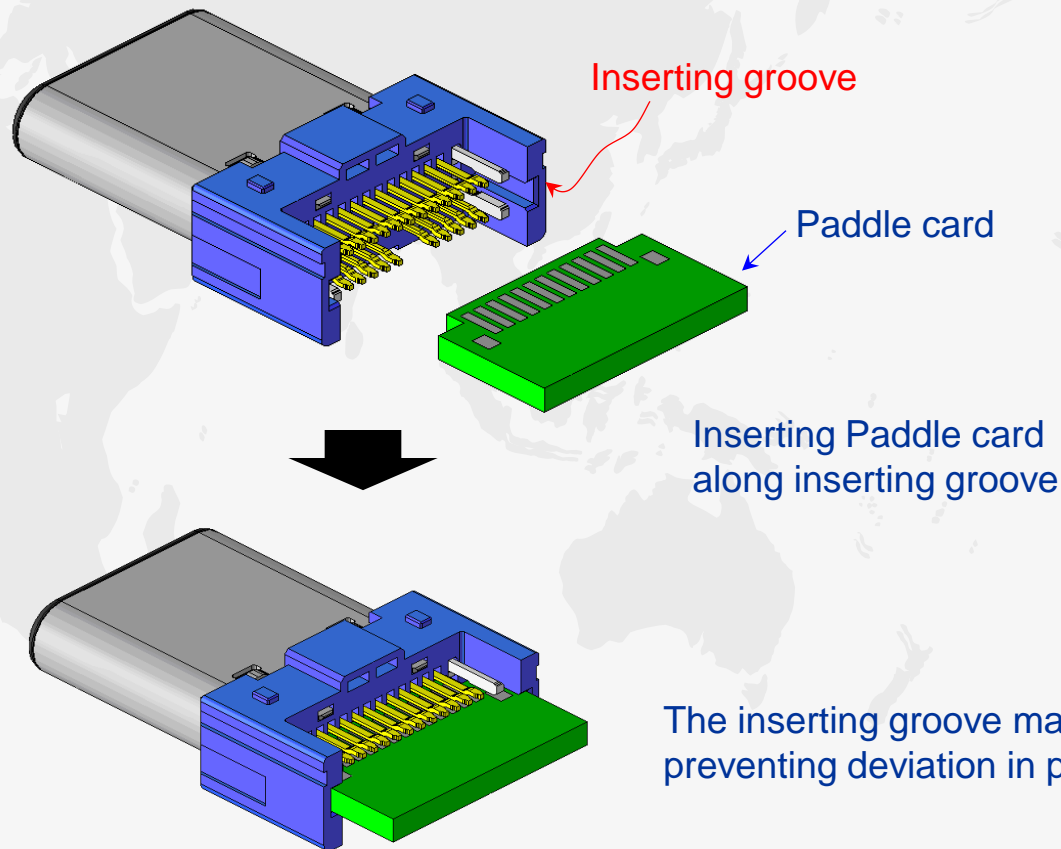
Cover housing blocks to flow over-mold resin into connector



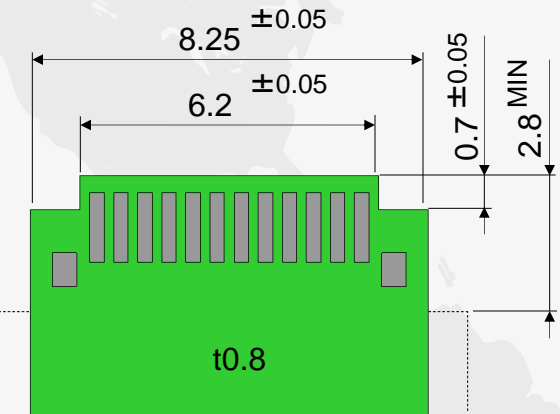
No need an additional process

Mounting work performance

:Structure of enabling to mount paddle card easily



Paddle card dimension



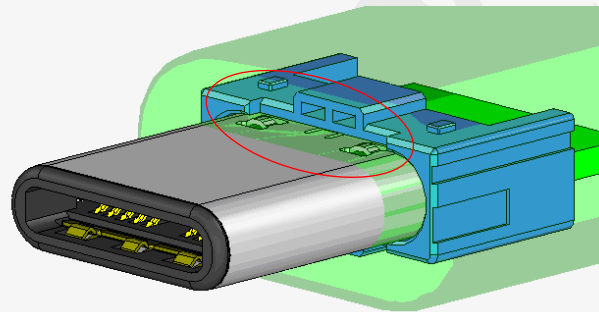
The inserting groove makes mounting lead easily and preventing deviation in pitch, bending lead also

Connector strength against bending

: Preventing plug connector coming off from over-mold resin



When connector prying, danger of bending the part of shell



Entering over-mold resin into hole of shell/
cover housing makes strength up between
over-mold resin and shell