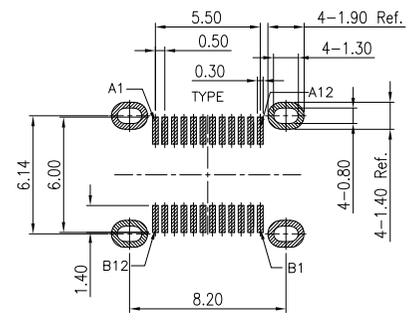
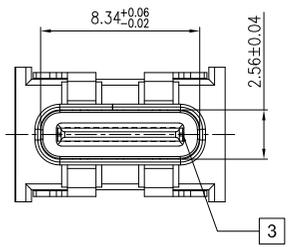
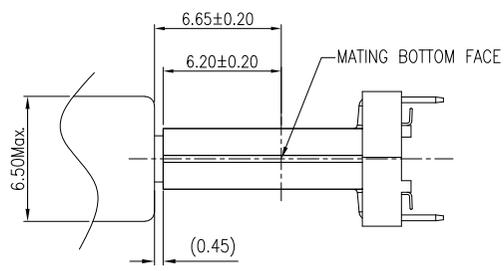


# GP Component

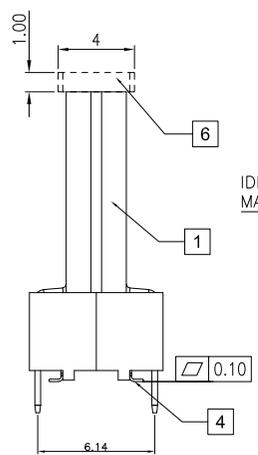
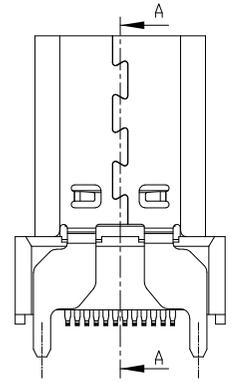
| REV. | ECN NO. | LOCATIONS | DESCRIPTION    | DATE       | DESIGN  |
|------|---------|-----------|----------------|------------|---------|
| AO   |         |           | Initial        | 2021/01/05 | Hanson  |
| A1   |         |           | Drawing Change | 2021/08/05 | Ken Lin |
| A1.1 |         |           | Change Notes.  | 2022/11/30 | Ken Lin |



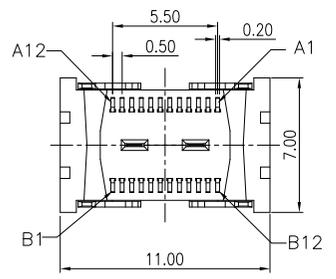
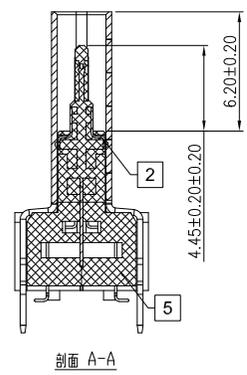
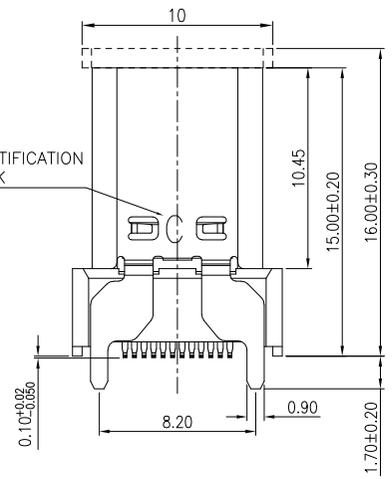
RECOMMEND P.C.B LAYOUT (COMPONENT SIDE)  
TOLERANCE FOR PCB LAYOUT IS ± 0.05  
KEEP OUT AREA



- NOTES:
- MATERIAL:
    - MOLDING: LCP UL94 V-0 ; BLACK
    - CONTACT: COPPER ALLOY.
      - AU 3U" PLATED ON CONTACT AREA
      - 50U" NICKEL PLATED OVER ALL.
    - SHELL: SUS304-H,T=0.30±0.03mm
    - 50u" NICKEL PLATING OVER ALL.
    - EMI SHILD: SUS304-H,T=0.12±0.03mm
    - LATCH: SUS301-H,T=0.15±0.03mm
  - MECHANICAL:
    - INSERTION: 5~20N.
    - EXTRACTION: 8~20N.
    - DURABILITY: 10000 CYCLES
  - ELECTRICAL:
    - CURRENT: 5A MAX FOR VBUS;
    - 1.25A MAX FOR OTHER.
    - VOLTAGE: 20VDC MAX
    - WITHSTANDING VOLTAGE: 100V AC.
    - CONTACT RESISTANCE: 40mΩ MAX.
    - INSULATION RESISTANCE: 100MΩ MIN.
  - ENVIRONMENTAL
    - TEMPERATURE RANGE: -30°C TO +80°C
  - IR REFLOW:
    - The peak temperature on the board shall be maintained for 10 seconds at 260°C



IDENTIFICATION MARK



MATRIX PART NO:  
MUSB12 - 03 - 452  
MATRIX USB - Series number  
Gold Plating  
01:G/F  
03:3u"  
15:15u"  
30:30u"

| Item | Title         | Material | Dispose  | Q'TY |
|------|---------------|----------|--|------|
| 1    | Shell         | SUS304   | Ni:30u" Min.                                   | 1PCS |
| 2    | GND Plate     | SUS301   |  | 2PCS |
| 3    | Mid Plate     | SUS301   |  | 1PCS |
| 4    | Contact       | C7025    | Mating Area: See P/N<br>Solder Tails: Matt Tin | 2PCS |
| 5    | InsertMolding | LCP      | UL 94V-0 Black                                 | 1PCS |
| 6    | COVER 01      | LCP      | UL 94V-0 Black                                 | 1PCS |

USB TYPE-C PIN ASSIGNMENTS

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

**Matrix Electronics Co.,Ltd**

TOLERANCE:  
X:X ±0.38  
X:XX ±0.25  
X:XXX ±0.15  
X:XXXX  
ANGLE: ±3°

UNIT: mm [inch]  
SCALE: 1:1 SIZE: A4

|                                |                      |  |               |
|--------------------------------|----------------------|--|---------------|
| DESIGN BY :<br>Ken Lin         | DATE :<br>2022/11/30 | PART NAME:<br>USB 3.1 TYPE C FEMALE<br>VERTICAL SMT TYPE |               |
| CHECKED BY:<br>Hanson Huang    | DATE :<br>2022/11/30 | PART NO.   | MUSB12-03-452 |
| APPROVED BY1:<br>Richard Hsieh | DATE :<br>2022/11/30 | MOLD NO.   | NA            |
| APPROVED BY2:<br>Richard Hsieh | DATE :<br>2022/11/30 | DRAW NO.   |               |
|                                |                      | SHEET NO.  | 1 OF 1        |