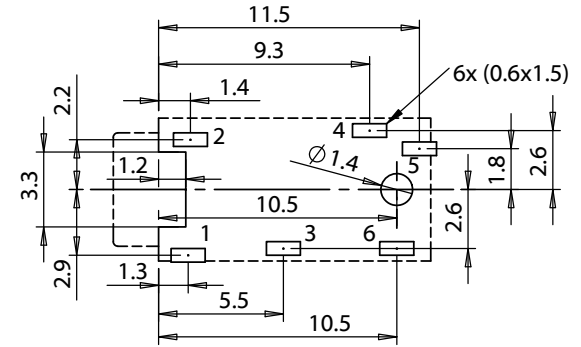
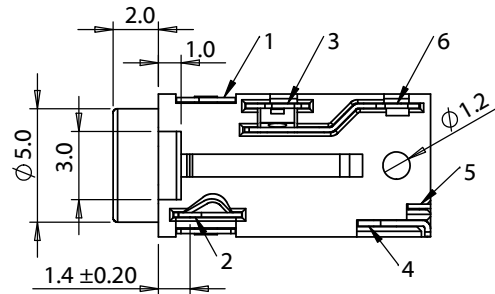
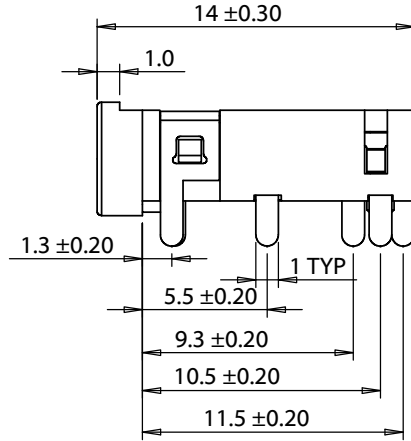
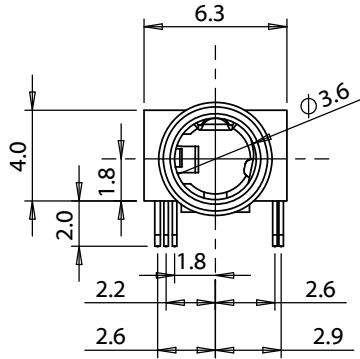
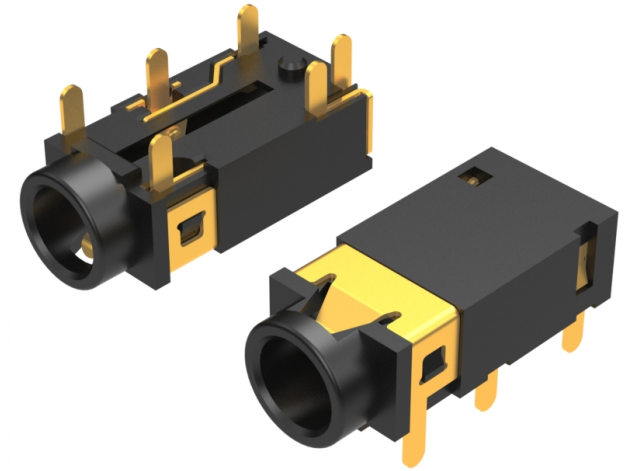


Unplugged Schematic

Plugged Schematic



P.C.B Layout

|           |            |  |   |  |   |
|-----------|------------|--|---|--|---|
| Revision: | Date:      | Description:   | Prepared:   | Notes:   | <h1>TENSILITY</h1><br>tel 1.541.323.3228 800 877.670.7118<br>fax 1.541.323.4202 web tensility.com |
| A         | 4/7/2020   | Initial release                                      | Verified:   | RoHS compliant   |   |
| A1        | 12/11/2020 | Corrected PCB dimension contact 1 from 1.1 to 1.3 mm | Dimensions are in millimeters.<br>Tolerances:<br>X: $\pm 0.5$ mm<br>X.X: $\pm 0.2$ mm<br>X.XX: $\pm 0.2$ mm | Function test: no open, no short circuit, no intermittent                    | Size: A   |
|           |            |  |   | Description:<br>Connector, 4C audio jack, 3.5xL14 mm, thru hole, gold plated | Part number:<br>54-00176  |
|           |            |  |   |  | Scale: 3:1  |

**Ratings**

Voltage: 48 V  
Current: 0.5 A

**Operating Temperature Range**

-40 ~ 105 °C, relative humidity of 85% or less

**Materials**

- ① #1 contact: phosphor bronze, gold plating
- ② #2 contact: phosphor bronze, gold plating
- ③ #3 contact: phosphor bronze, gold plating
- ④ #4 contact: phosphor bronze, gold plating
- ⑤ #5 contact: phosphor bronze, gold plating
- ⑥ #6 contact: phosphor bronze, gold plating
- ⑦ Housing: PA9T, black, UL 94 V-0

**Electrical Requirements**

Dielectric strength: 1 min @ 500 Vac  
Insulation resistance: 100 MΩ @ 250 Vdc  
Contact resistance: 30 mΩ or less at 1 KHz

**Mechanical Requirements**

Insertion force: 0.3-2 kgf  
Withdrawal force: 0.3-2 kgf  
Life cycle: 5000 mating cycles while maintaining 0.3 kgf min. insertion force, 0.2 kgf min. withdrawal force and less than 100 mΩ contact resistance  
Terminal strength: 500 gf applied in one direction to the tip of the terminal for 1 second without mechanical or electrical damage

**Soldering**

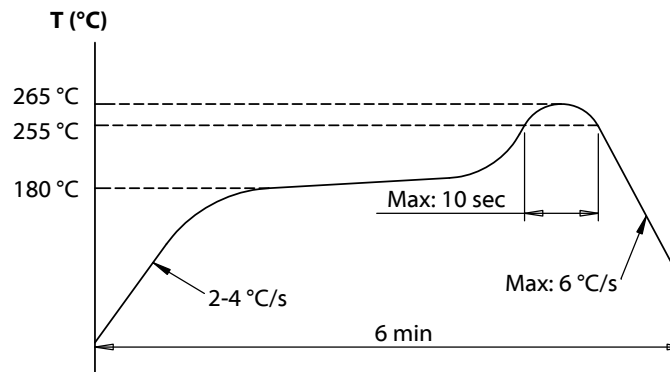
Solderability: 90% minimum coverage when terminals dipped 2mm in 260 ±5 °C solder bath for 3 ±0.5 seconds  
Solder bath durability: no deformation when immersed in 255 ±5 °C up to surface of the board 1.6 mm for 5 seconds or less  
Solder iron durability: no deformation when exposed to 350 ±10 °C for 5 seconds or less

**Environmental Requirements**

Cold test: -40 ±2 °C for 48 hours without deformation  
Heat test: 70 °C, relative humidity 70-85% for 96 hours without deformation  
Humidity test: 40 ±2 °C, relative humidity 90-100% for 96 hours without deformation  
Salt spray test: 35 ±2 °C, 5% NaCl mist for 24 hrs. Wash parts after test. No remarkable corrosion shall be present

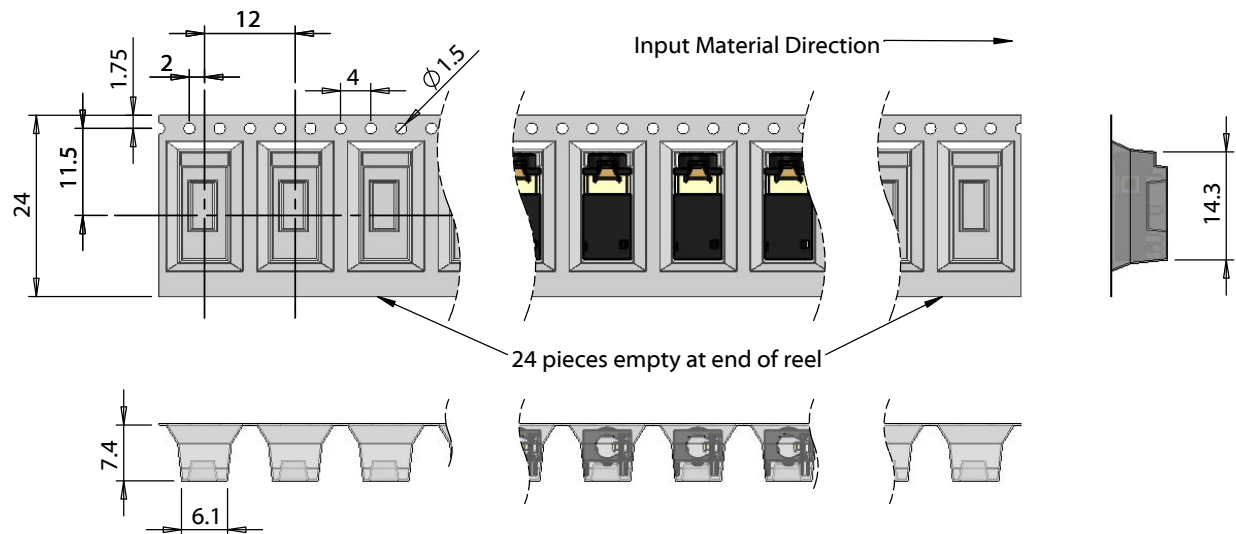
**Packaging**

1000 pieces/ reel  
12 reels/ box



Reflow soldering temperature profile

## Packaging Detail



|           |            |  |   |  |   |
|-----------|------------|--|---|--|---|
| Revision: | Date:      | Description:   | Prepared:   | Notes:   | <b>TENSILITY</b><br>tel 1.541.323.3228 800 877.670.7118<br>fax 1.541.323.4202 web tensility.com |
| A         | 4/7/2020   | Initial release                                      | Verified:   | RoHS compliant<br>Function test: no open, no short circuit, no intermittent  |   |
| A1        | 12/11/2020 | Corrected PCB dimension contact 1 from 1.1 to 1.3 mm | Dimensions are in millimeters.<br>Tolerances:<br>X: ± 0.5 mm<br>X.X: ± 0.3 mm<br>X.XX: ± 0.2 mm | Description:<br>Connector, 4C audio jack, 3.5xL14 mm, thru hole, gold plated | Size: A<br>Part number: 54-00176  |
|           |            |  |   |  | Scale: 1:1  Sheet 2 of 2  |