

|           |           |                 |   |  |   |
|-----------|-----------|-----------------|---|--|---|
| 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         | 7/29/2019 | Initial release | Verified:   | RoHS compliant<br>Function test: no open, no short circuit, no intermittent                  |   |
|           |           |                 | Dimensions are in millimeters.<br>Tolerances:<br>X.X: ± 0.3 mm<br>X.XX: ± 0.2 mm<br>X.XXX: ± 0.1 mm | Description:<br>Connector, dc jack 5.5x2.5 mm, PCB mount, 90°, nickel plated, PBT, thru hole | Size: Part number:<br>A 54-00167  |
|           |           |                 |   |  | Scale: 3:1            Sheet 1 of 2  |

**Ratings**

Maximum operating voltage: 48 V  
 Maximum operating current: 8.0 A (not mated under load)

**Operating Temperature Range**

-20°C to 70°C, relative humidity of 85% or less

**Materials**

- ① Insulator: PBT, black
- ② Cover: PBT, black
- ③ Center Pin: brass, nickel plated
- ④ Terminal: brass, tin plated
- ⑤ Spring contact: phosphor bronze, tin plated

**Electrical Requirements**

Dielectric strength: 1 min @ 500 Vac  
 Insulation resistance: 100 MΩ @ 250 Vdc minimum  
 Contact resistance: 30 mΩ maximum

**Mechanical Requirements**

Insertion force: 0.3-2.0 kgf  
 Withdrawal force: 0.3-2.0 kgf  
 Life cycle: 5000 mating cycles while maintaining contact resistance: 100 mΩ maximum, withstand voltage: 500 Vac, 1 min  
 Terminal strength: 500 gf applied to the terminal for 60 seconds in any direction while maintaining electrical characteristics and without damage or excessive looseness of terminals

**Soldering**

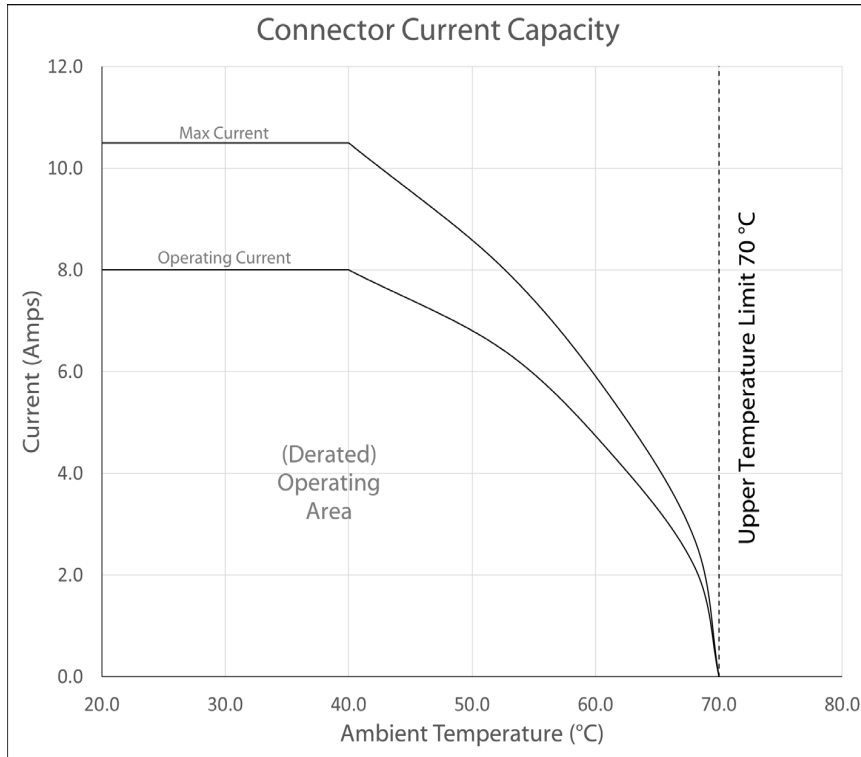
Solderability: 90% minimum coverage when terminals dipped 2mm in 260 ±5 °C solder bath for 3 ±0.5 seconds  
 Soldering heat test: no deformation when dipped 2 mm in 260 ±5 °C solder bath for 10 ±0.5 seconds  
 Solder iron durability: no deformation when exposed to 350 ±10 °C for 5 seconds or less

**Environmental Requirements**

Cold test: -40 ±2 °C for 48 hours without deformation while maintaining contact resistance: 50 mΩ maximum, insulation resistance: 100 MΩ @ 250 Vdc minimum, and no sign of damage mechanically or electrically  
 Heat test: 85 ±2 °C, relative humidity 45-85% for 48 hours while maintaining contact resistance: 50 mΩ maximum, insulation resistance: 100 MΩ @ 250 Vdc minimum, and no sign of damage mechanically or electrically  
 Humidity test: 40 ±2 °C, relative humidity 90-95% for 48 hours while maintaining contact resistance: 50 mΩ maximum, insulation resistance: 100 MΩ @ 250 Vdc minimum, and no sign of damage mechanically or electrically  
 Salt spray test: 35 ±2 °C, 5% NaCl mist for 24 hrs. Wash parts after test. No corrosion shall be present.

**Packaging Info:**

Connectors packaged bulk 500 pieces in sealed PE bag



Testing based on IEC 60512-5-2. Max current curve generated with isolated test article under controlled environmental conditions, and does not take into account external factors such as housings, mating cables, or other circuitry. Operating current curve (derated by 20% of maximum values) accounts for external factors, and manufacturing variation.

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| Size:      | Part number: |
| A          | 54-00167     |
| Scale: 3:1 | Sheet 2 of 2 |