

Revision:	Date:	Description:	Prepared:	Notes:	TENSILITY
A	5/19/2022	Initial release	PB		
			Verified:	Function test: no open, no short circuit, no intermittent	tel 1.541.323.3228 800 877.670.7118 fax 1.541.323.4202 web tensility.com
			JD	Description:	Size: Part number:
			Dimensions are in millimeters. Tolerances: X: ± 0.5 mm X.X: ± 0.3 mm X.XX: ± 0.1 mm	Connector, dc jack 5.5x2.5 mm, PCB mount, 180°, silver plated, thru hole	A 54-00287
					Scale: 3:1
					Sheet 1 of 2

5

4

3

2

1

To see a custom version of this cable assembly, call Tensility at 541-323-3228 or email engineering@tensility.com

Ratings

Voltage: 48 V
Current: 7.5 A

Operating Temperature Range

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

Materials

- ① Insulator: PA9T, UL 94 V-0, black
- ② Cover: PA9T, UL 94 V-0, black
- ③ Pin: brass, nickel plated
- ④ Pin contact: brass, silver plated
- ⑤ Spring: phosphor bronze, silver plated
- ⑥ Switch: brass, silver plated

Electrical Requirements

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

Mechanical Requirements

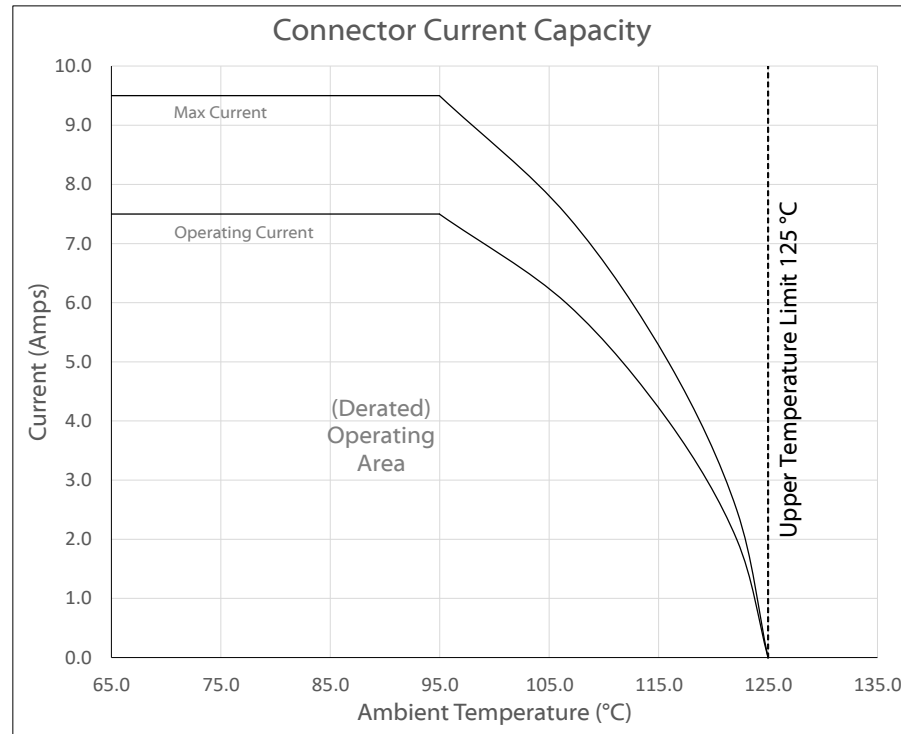
Insertion force: 0.3-2 kgf
Withdrawal force: 0.3-2 kgf
Life cycle: 5000 mating cycles while maintaining 0.3 kgf min. insertion force, 0.2 kgf min. withdrawal force and less than 100 mΩ contact resistance.

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 260 ±5 °C up to surface of the board 2 mm for 10 ±0.5 seconds
Solder iron durability: no deformation when exposed to 350 ±10 °C for 1 to 5 seconds

Environmental Requirements

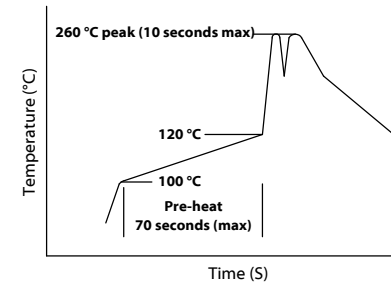
Humidity test: 40 °C, relative humidity 90-95% for 48 hours without deformation
Salt spray test: 35 °C, relative humidity 90-95%, 5% NaCl mist for 24 hrs. Wash parts after test. Maintain mechanical requirements and a contact resistance of less than 80 mΩ.



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.

Wave Soldering Temperature Profile

Pb - Free Flow Profile
Solder temperature: 260 °C
Time: 5 seconds maximum
Pre-heat: 100 ~120°C
Time: 70 seconds maximum
Measure point: surface of the solder leads



Revision:	Date:	Description:
A	5/19/2022	Initial release

Prepared: **PB**
Digitally signed by PB
Date: 2022.06.06
09:52:24 -07'00'

Verified: **JD**
Digitally signed by JD
Date: 2022.06.06
09:53:57 -07'00'

Dimensions are in millimeters.
Tolerances:
X: ± 0.5 mm
X.X: ± 0.3 mm
X.XX: ± 0.1 mm

Notes:

RoHS compliant

Function test: no open, no short circuit, no intermittent

Description:
Connector, dc jack 5.5x2.5 mm, PCB mount, 180°, silver plated, thru hole

TENSILITY

tel 1.541.323.3228 800 877.670.7118
fax 1.541.323.4202 web tensility.com

Size: A	Part number: 54-00287
Scale: 3:1	

Sheet 2 of 2