

Revision:	Date:	Description:	Prepared:	Notes:	<h1>TENSILITY</h1> tel 1.541.323.3228 800 877.670.7118 fax 1.541.323.4202 web tensility.com
A	5/13/2021	Initial release	Verified:	RoHS compliant Function test: no open, no short circuit, no intermittent	
			Dimensions are in millimeters. Tolerances: X: ± 0.5 mm X.X: ± 0.3 mm X.XX: ± 0.1 mm	Description: Connector, dc jack 5.5x2.1 mm, PCB mount, 180°, silver plated, thru hole	Size: A Part number: 54-00286
					Scale: 3:1 Sheet 1 of 2

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Ratings

Voltage: 48 Vdc
Current: 7 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

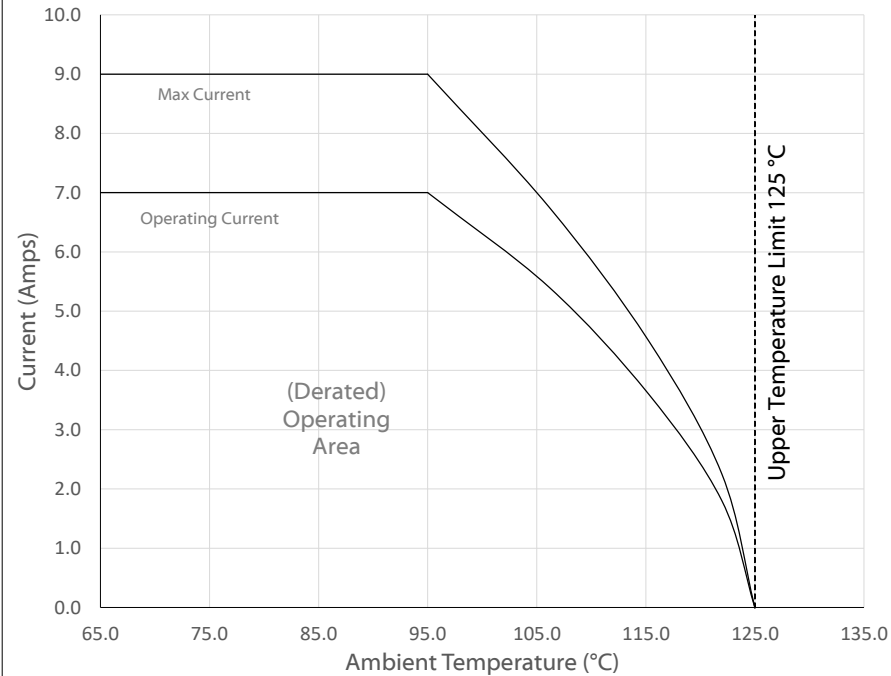
Insertion force: 0.3-2 kgf
Withdrawal force: 0.3-2 kgf
Life cycle: 5000 mating cycles while maintaining 0.3 kgf min. insertion force, 0.2 kgf min. withdrawal force and less than 100 mΩ contact resistance.

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

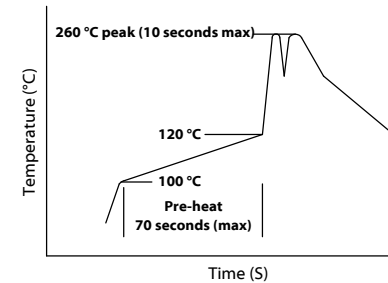
Humidity test: 40 °C, relative humidity 90-95% for 48 hours without deformation
Salt spray test: 35 °C, relative humidity 90-95%, 5% NaCl mist for 24 hrs. Wash parts after test. Maintain mechanical requirements and a contact resistance of less than 80 mΩ.

Connector Current Capacity

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



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