

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	7/29/2019	Initial release	Verified:	RoHS compliant Function test: no open, no short circuit, no intermittent	
			Dimensions are in millimeters. Tolerances: X.X: ± 0.3 mm X.XX: ± 0.2 mm X.XXX: ± 0.1 mm	Description: Connector, dc jack 3.5x1.35 mm, PCB mount, 90°, silver plated, PBT, thru hole	Size: Part number: A 54-00168
					Scale: 3:1 Sheet 1 of 2

Ratings

Maximum operating voltage: 48 V
Maximum operating current: 5.5 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, silver plated
- ⑤ Spring contact: stainless steel, silver 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

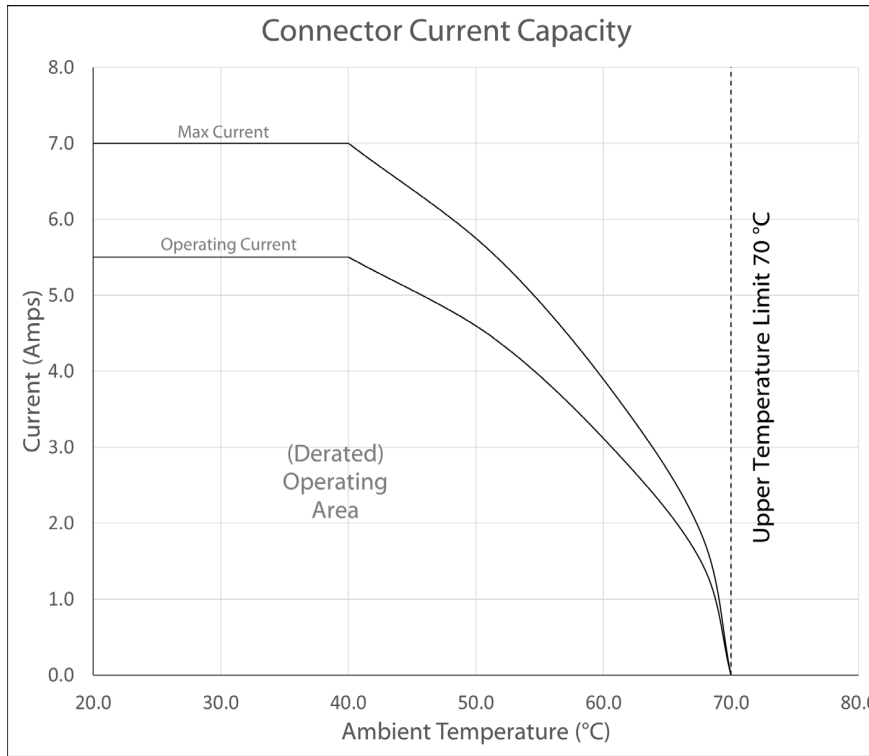
Solderability: 90% minimum coverage when terminals dipped 2mm in 260 ±5 °C solder bath for 3 ±0.5 seconds
Soldering heat test: no deformation when dipped 2 mm in 260 ±5 °C solder bath for 10 ±0.5 seconds
Solder iron durability: no deformation when exposed to 350 ±10 °C for 5 seconds or less

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 1000 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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						Sheet 2 of 2