

Revision:	Date:	Description:	Prepared:	Notes: Function test: no open, no short circuit, no intermittent	<h1>TENSILITY</h1> tel 1.541.323.3228 800 877.670.7118 fax 1.541.323.4202 web tensility.com
A	9/26/2018	Initial release	Verified:		
			Dimensions are in millimeters. Tolerances: < 1.0: ± 0.1 mm 1.0 to 10.0: ± 0.2 mm > 10.0: ± 0.3 mm		
			Description:	Connector, dc jack 5.5x2.5 mm, PCB mount, vertical, silver plated, board lock	Size: A
					Part number: 54-00147
					Scale: 3:1
					Sheet 1 of 2

Ratings

Maximum operating voltage: 48 V
 Maximum operating current: 4.5 A (not mated under load)

Operating Temperature Range

-25 to 85 °C, relative humidity of 85% or less

Materials

- ① Insulator: PBT, black
- ② Back Plate: PBT, black
- ③ Center Pin: copper alloy, 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 @ 500 Vdc minimum
 Contact resistance: 50 mΩ maximum

Mechanical Requirements

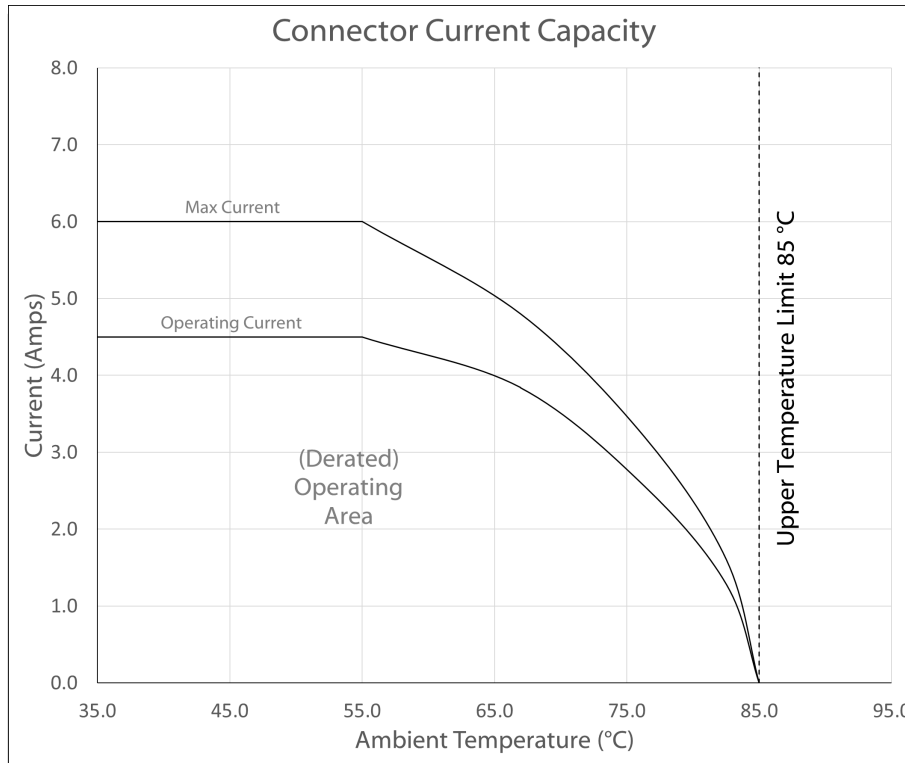
Insertion force: 0.7-1.5 kgf
 Withdrawal force: 0.5-1.5 kgf
 Life cycle: 5000 mating cycles while maintaining contact resistance: 100 mΩ maximum, withstand voltage: 500 Vac, 1 min
 Terminal strength: 150 gf applied to the terminal for 15 seconds in any direction while maintaining electrical characteristics and without damage or excessive looseness of terminals

Soldering

Solderability: 75% minimum coverage when terminals dipped 2mm in 245 ±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 3 ±0.5 seconds

Environmental Requirements

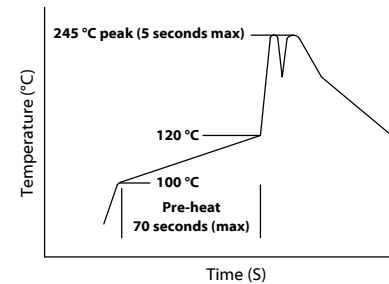
Cold test: -25 ±3 °C for 48 hours without deformation
 Heat test: 85 ±2 °C, relative humidity 45-85% for 48 hours without deformation
 Humidity test: 40 ±2 °C, relative humidity 90-95% for 48 hours without deformation



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: 245 °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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Size: A	Part number: 54-00147
Scale: 5:1	Sheet 2 of 2