

P.C.B. Layout

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	9/26/2018	Initial release	JP <small>Digitally signed by JP Date: 2018.09.27 15:59:33 -07'00'</small>			Function test: no open, no short circuit, no intermittent
			Verified:	Description: Connector, dc jack 2.35x0.7 mm, PCB mount, 90°, silver plated, board lock	Size:	
			AW <small>Digitally signed by AW Date: 2018.09.27 16:04:04 -07'00'</small>		Part number:	A 54-00139
			Dimensions are in millimeters. Tolerances: < 1.0: $\pm 0.1$ mm 1.0 to 10.0: $\pm 0.2$ mm > 10.0: $\pm 0.3$ mm		Scale:	4:1

**Ratings**

Maximum operating voltage: 48 V  
 Maximum operating current: 5.0 A (not mated under load)

**Operating Temperature Range**

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

**Materials**

- ① Insulator: PBT, black
- ② Cover: brass, nickel plated
- ③ Terminal: brass, tin plated
- ④ Terminal: brass, silver plated
- ⑤ Terminal: beryllium copper, silver plated
- ⑥ Center Pin: brass, silver plated

**Electrical Requirements**

Dielectric strength: 1 min @ 500 Vac  
 Insulation resistance: 100 MΩ @ 500 Vdc minimum  
 Contact resistance: 50 mΩ maximum

**Mechanical Requirements**

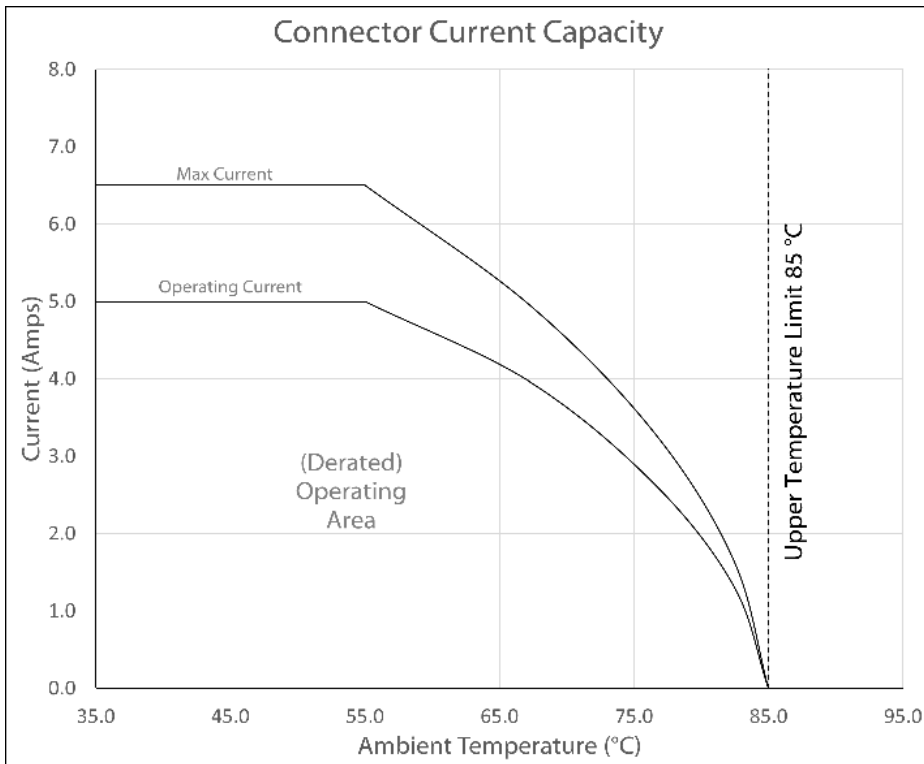
Insertion force: 0.4-0.9 kgf  
 Withdrawal force: 0.3-0.7 kgf  
 Life cycle: 5000 mating cycles while maintaining contact resistance: 100 mΩ maximum, withstand voltage: 250 Vac, 1 min  
 Terminal strength: 300 gf applied to the terminal for 15 seconds in any direction while maintaining electrical characteristics and without damage or excessive looseness of terminals

**Soldering**

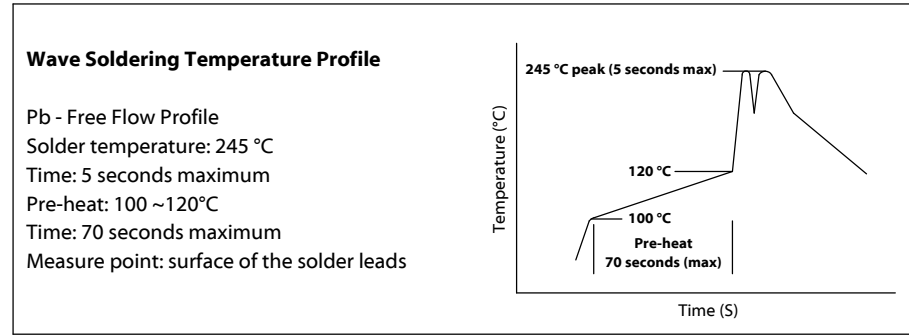
Solderability: 75% minimum coverage when terminals dipped 2mm in 245 ±5 °C solder bath for 3 ±0.5 seconds  
 Solder bath durability: no deformation when immersed in 255 ±5 °C up to surface of the board 1.6 mm for 5 seconds or less  
 Solder iron durability: no deformation when exposed to 350 ±10 °C for 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.



Revision:	Date:	Description:
A	9/26/2018	Initial release

Prepared: JP  
Digitally signed by JP Date: 2018.09.27 15:59:52 -07'00'

Verified: AW  
Digitally signed by AW Date: 2018.09.27 16:04:17 -07'00'

Dimensions are in millimeters.  
 Tolerances:  
 < 1.0: ± 0.1 mm  
 1.0 to 10.0: ± 0.2 mm  
 > 10.0: ± 0.3 mm

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

Description:  
 Connector, dc jack 2.35x0.7 mm, PCB mount, 90°, silver plated, board lock

**TENSILITY**

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Size: A Part number: 54-00139

Scale: 5:1 Sheet 2 of 2