

Revision:	Date:	Description:	Prepared:	Notes:	<h1>TENSILITY</h1> <p>tel 1.541.323.3228 800 877.670.7118</p> <p>fax 1.541.323.4202 web tensility.com</p>	
A	7/22/2025	Initial release	Verified:	RoHS compliant		
			Dimensions are in millimeters.	Function test: no open, no short circuit, no intermittent	Size:	Part number:
			Tolerances:	Description:	A	54-00253
			X: ± 0.5 mm	Connector, dc jack, 5.5x2.1xL14.1 mm, thru hole, silver plated	Scale: 3:1	Sheet 1 of 2
			X.X: ± 0.3 mm			
			X.XX: ± 0.2 mm			

Ratings

Maximum operating voltage: 48 V
Maximum operating current: 8 A (not mated under load)

Operating Temperature Range

-40 ~ 130 °C, relative humidity of 85% or less

Materials

- ① Insulator: LCP, black UL 94 V-0
- ② Spring contact: C5191 phosphor bronze, silver plated
- ③ Switch contact: C3604 brass, silver plated
- ④ Pin: zinc alloy, nickel plated
- ⑤ Shell: SPCC, nickel plated
- ⑥ Front plate: SUS301

Electrical Requirements

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

Mechanical Requirements

Insertion force: 0.5-3 kgf
Withdrawal force: 0.5-3 kgf
Life cycle: 5000 mating cycles while maintaining 30% initial values.
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 265 ±5 °C up to surface of the board 1.6 mm for 10 seconds or less
Solder iron durability: no deformation when exposed to 350 ±10 °C for 5 ±0.5 seconds

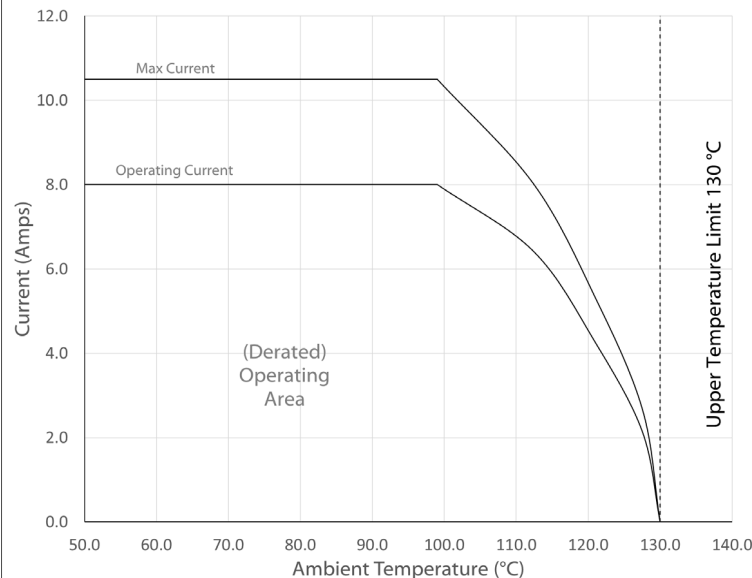
Environmental Requirements

Cold test: -40 ±2 °C for 48 hours without deformation
Heat test: 85 °C for 48 hours without deformation
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.

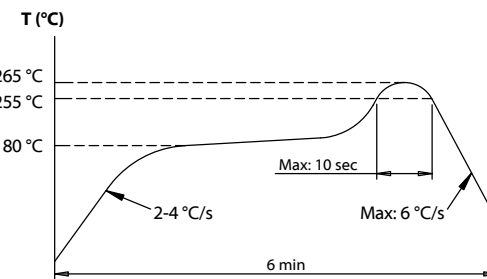
Packaging

300 pieces/ reel
12 reels/ box

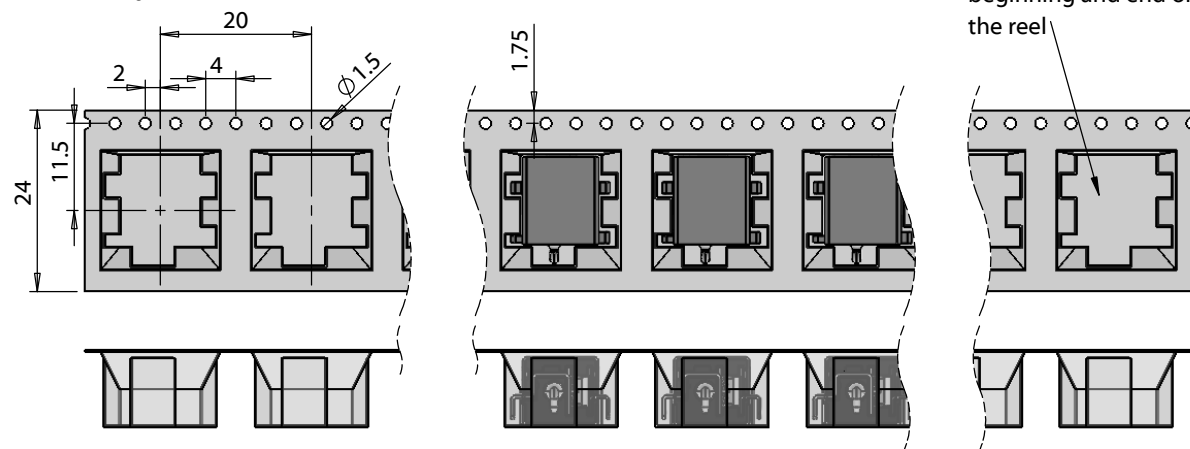
Connector Current Capacity



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.



Reflow soldering temperature profile



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				Function test: no open, no short circuit, no intermittent	
				Description: Connector, dc jack, 5.5x2.1xL14.1 mm, thru hole, silver plated	
					Sheet 2 of 2