

P.C.B. Layout
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Revision:	Date:	Description:	Prepared:	Notes:						
Α	8/5/2019	Initial release	AW Date: 2019.08.05 11:00:29 -07'00'	RoHS compliant			TENSILITY			
			Verified: AG Digitally signed by AG Date: 2019.08.05 Dimensions are in	Function test: no open, no short circuit, no intermittent			tel 1.541.323.3228 800 877.670.7118 fax 1.541.323.4202 web tensility.com			
			millimeters. Tolerances: X.X: ± 0.3 mm	illimeters. Description:		Size:	Part nu 54-00			
			X.XX: ± 0.2 mm X.XXX: ± 0.1 mm			Scale	: 3:1		Sheet 1 of 2	
		5	4	3	2				1	

# Ratings

Maximum operating voltage: 48 V

Maximum operating current: 3.0 A (not mated under load)

## **Operating Temperature Range**

-20°C to 70°C, relative humidity of 85% or less

#### Materials

- 1) Insulator: PBT, black black
- (2) Center Pin: brass, nickel plated
- (3) Terminal: brass, silver plated
- (4) Spring contact: stainless steel, silver plated

## **Electrical Requirements**

Dielectric strength: 1 min @ 500 Vac

Insulation resistance: 100 M $\Omega$  @ 250 Vdc minimum

Contact resistance:  $30 \text{ m}\Omega$  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 mg 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  $260 \pm 5$  °C solder bath for  $10 \pm 0.5$  seconds

Solder iron durability: no deformation when exposed to 350  $\pm$ 10  $^{\circ}$ C for 5 seconds or less

## **Environmental Requirements**

Cold test:  $-40 \pm 2$  °C for 48 hours without deformation while maintaining contact resistance:  $50 \, \text{m}\Omega$  maximum, insulation resistance:  $100 \, \text{M}\Omega$  @  $250 \, \text{Vdc}$  minimum, and no sign of damage mechanically or electrically

Heat test:  $85\pm2$  °C, relative humidity 45-85% for 48 hours while maintaining contact resistance:  $50\,\mathrm{m}\Omega$  maximum, insulation resistance:  $100\,\mathrm{m}\Omega$  @ 250 Vdc minimum, and no sign of damage mechanically or electrically

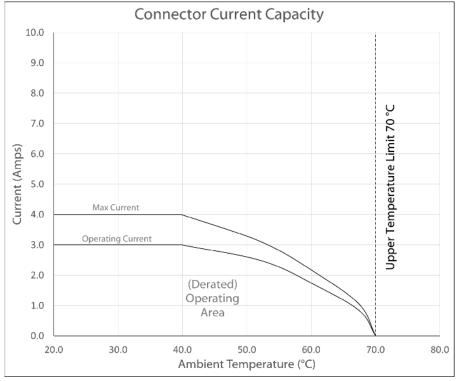
Humidity test:  $40 \pm 2$  °C, relative humidity 90-95% for 48 hours while maintaining contact resistance: 50 mΩ maximum, insulation resistance: 100 MΩ @ 250 Vdc minimum, and no sign of damage mechanically or electrically

Salt spray test:  $35 \pm 2$  °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

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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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Α	8/5/2019	Initial release	AW Digitally signed by AW Date: 2019.8805 11:00-47-0700' RoHS compliant		ENSILITY		
			Verified: AG  Digitally signed by AG Date: 2019.08.05 11:01:54  Option	Function test: no open, no short circuit, no intermittent	tel 1.541.323.3228 800 877.670.7118 fax 1.541.323.4202 web tensility.com		
			millimeters. Tolerances: < 1.0: ± 0.1 mm	Connector, dc jack 2.35x0.7 mm, PCB mount, 90°,		Part number: 54-00170	
			1.0 to 10.0: ± 0.2 mm silve > 10.0: ± 0.3 mm	silver plated, thru hole, PBT	Scale:	3:1 Sheet 2 of 2	

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