

Revision:	Date:	Description:	Prepared:	Notes:		
Α	7/8/2021	Initial release	AW Digitally signed by AW Date: 2021.07.09 11:31:20 -07'00'	RoHS compliant		FNSII ITY
			Verified: AG  Digitally signed by AG Date: 2021.07.09 11.32:29-0700	Function test: no open, no short circuit, no intermittent		1.541.323.3228 800 877.670.7118 1x 1.541.323.4202 web tensility.com
			Dimensions are in millimeters. Tolerances: X: ± 0.2 mm X.X: ± 0.2 mm X.XX: ± 0.2 mm	Description: Connector, dc jack 4.0x1.7 mm, PCB mount, 90°, silver plated, PA9T, thru hole	Size:	Part number: 54-00288
					Scale:	3:1 Sheet 1 of 2

5 4 3 2

## Ratings

Voltage: 48 V

Current: 6.5 A (not mated under load)

#### **Operating Temperature Range**

-40~105 °C, relative humidity of 85% or less

#### Materials

- (1) Insulator: PA9T, black
- (2) Pin: C3604 brass, nickel plated (3) Shell contact: C3604 brass, silver plated
- (4) Switch contact: C5191 phosphor bronze, silver plated

### **Electrical Requirements**

Dielectric strength: 1 min @ 500 Vac Insulation resistance: 100 MΩ @ 500 Vdc Contact resistance: 30 m $\Omega$  or less

#### **Mechanical Requirements**

Insertion force: 0.3-3 kgf Withdrawal force: 0.3-3 kgf

Life cycle: 5000 mating cycles while maintaining 0.3 kgf min. insertion force, 0.2 kgf min, withdrawal force and less than  $100 \text{ m}\Omega$  contact resistance.

# Soldering

Solderability: 90% minimum coverage when terminals dipped 2mm in 260  $\pm$ 5 °C solder bath for 3  $\pm$ 0.5 seconds

Solder bath durability: no deformation when immersed in 260  $\pm 5$  °C up to surface of the board 2.0 mm for 5 seconds or less Solder iron durability: no deformation when exposed to 350  $\pm$ 10  $^{\circ}$ C

for 3 ±0.5 seconds

#### **Environmental Requirements**

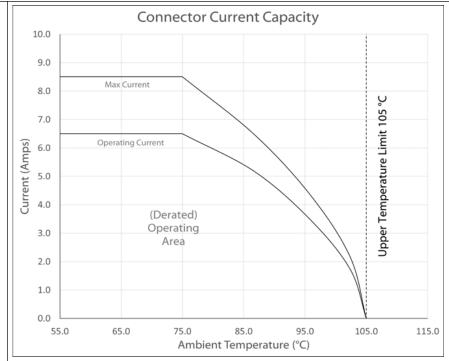
Cold test: -25 ±3 °C for 48 hours without deformation Heat test: 85 °C, relative humidity 70-85% for 96 hours without deformation

Humidity test: 40 °C, relative humidity 90-100% for 96 hours without deformation

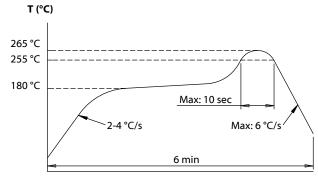
Salt spray test: 35 °C, relative humidity 90-95%, 5% NaCl mist for 24 hrs. Wash parts after test. Maintain mechanical requirements and a contact resistance of less than 80 m $\Omega$ .

### 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.



Reflow soldering temperature profile

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			Verified: AG  Digitally signed b Date: 2021.07.09 11:32:43-0700	Function test: no open, no short of intermittent	circuit, no	tel	1.541.	323.3228 800 83	8 800 877.670.7118 2 web tensility.com		
			-	Description:	Description:		Size: Part number:				
				Connector, dc jack 4.0x1.7 mm, PCB mount, 90°,		А 54-00288					
				silver plated, PA9T, thru hole		Scale:	3:1		Sheet 2 of 2		

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