

# Coplanar BTB Contact System



## Series 70-9159



Dissecting linear LED lighting from a connector standpoint looks very simple from far away, but up close there is no magical solution. Even though there have been new connectors developed in recent years specifically for this application, the specific requirements in challenging new designs continue to push for something better, different and more cost competitive. AVX has been one of the companies developing new connector systems for this specific application. The 2-Piece 9159 series offers the smallest profile while still supporting full 5 Amp capability. The 1-Piece version offers the best cost advantage for a connectorized solution, yet has limitations in LED pitch densities.

AVX's latest approach is to not even have a connector! LED's run down the center of the board looking to minimize pitch densities to maximize light output. Connectors interrupt this requirement at each Board-to-Board interface. By design and construction, providing a single contact connector is not economical. However, removing the cost of the connector without removing the functionality provides both a technical and cost effective solution. By removing the insulator and allowing contacts to be placed individually, the PCB can be designed with the LED's in the center of the PCB and the contacts on the outer edges. This optimizes the design for functionality and assembly at the best cost possible. More specifically, the contacts are packaged in T&R for automatic placement, absorb significant x and y assembly tolerances and provide a reliable gold-to-gold active contact interface. Application notes are available to outline all of the contact configurations to support both BTB and WTB applications.

### APPLICATIONS

- Linear LED strip lighting
- Commercial/Industrial co-planar or extended card applications
- Reference Product Specification 201-01-149

### FEATURES AND BENEFITS

- Gold plated horizontal contact system maximizes lateral PCB alignment and mating tolerances with a proven 2-pc connector solution
- Contact height has been minimized to 1.2mm above the PCB to prevent any shadowing effect
- Contacts can be individually spaced to support any voltage rating with a full 5 Amp current rating
- Individual contacts can support BTB and WTB applications

### ELECTRICAL

- Current Rating; 5.0 Amps
- Voltage Rating:  
Based on placement distance

### ENVIRONMENTAL

- Operating Temperature:  
-40°C to +125°C

### MECHANICAL

- Contact Material: Copper Alloy
- Plug Plating: Gold in mating area, tin on tails
- Socket Contact; Gold all over
- Durability 5 Cycles

### HOW TO ORDER

<b>70</b>	<b>9159</b>	<b>001</b>	<b>4XX</b>	<b>006</b>
Prefix	Series	Number of Ways 001 = 1	Contact Description 401 = Plug - SMT 402 = Socket - SMT	Packaging Options 006 = Gold in Contact Area

Full details in notes  
pages 66 and 67

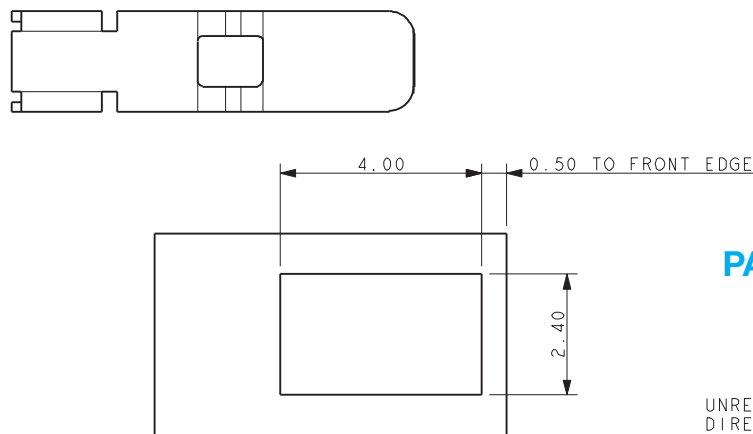
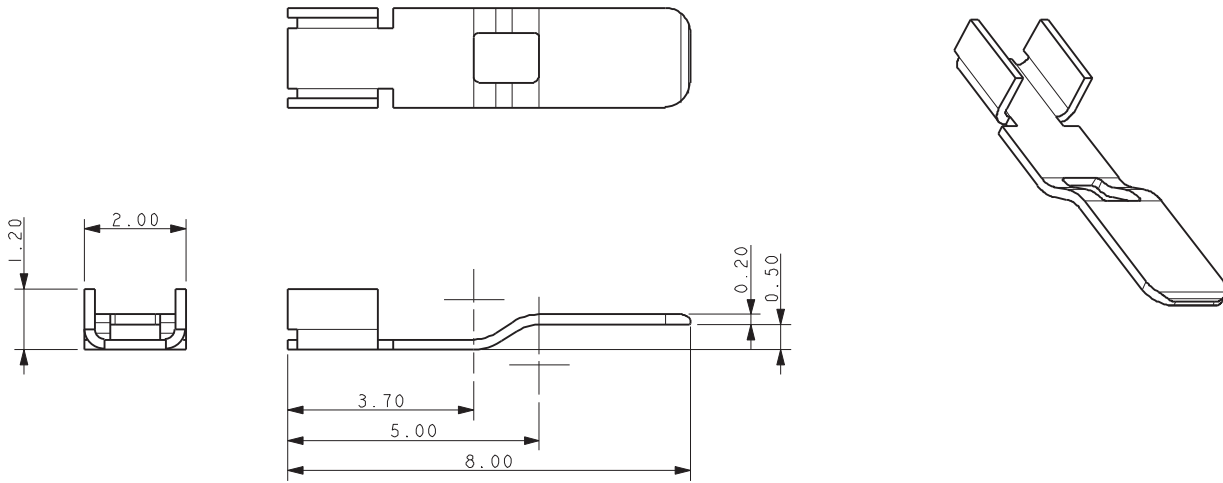


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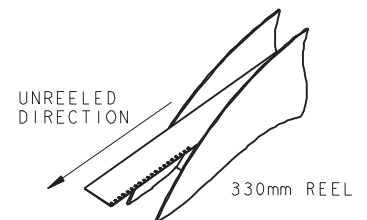
Series 70-9159

70-9159-001-401-006

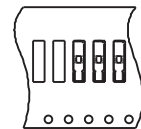


## SUGGESTED PCB LAYOUT

## PACKING DETAILS



UNREELED DIRECTION



QUANTITY PER REEL TBC

### NOTES:

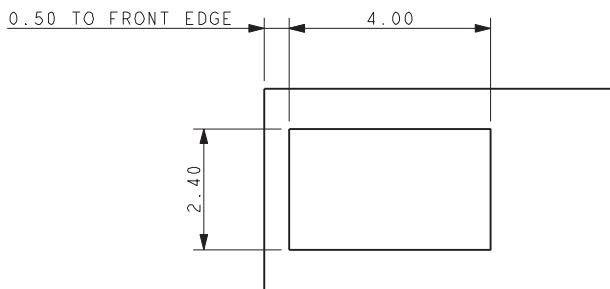
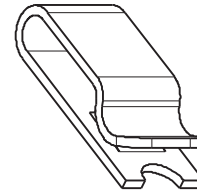
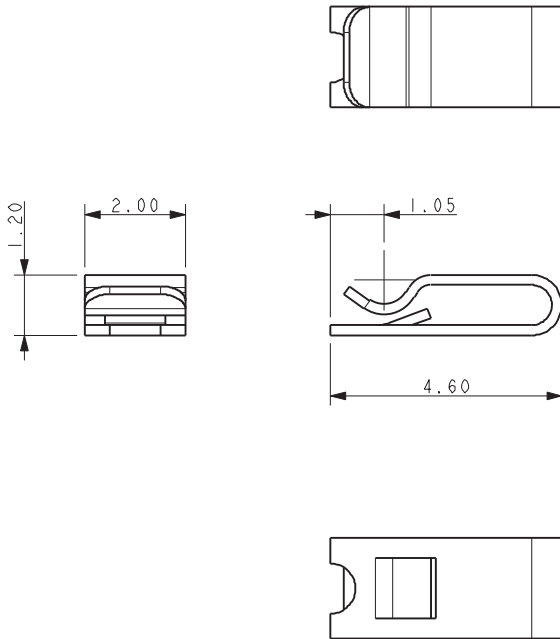
1. 9159 SINGLE CONTACT, SMT MOUNT, PLUG CONTACT.
2. TO MATE WITH 70-9159-001-402-006 SOCKET CONTACT, REFER TO PAGE 67.
3. TYPICAL APPLICATIONS SEE PAGES 68 AND 69.
4. FOR FURTHER INFORMATION REFER TO SPECIFICATION 201-01-148 AND APPLICATION NOTES 201-01-149.
5. COPPER ALLOY, NICKEL UNDERCOAT, GOLD IN CONTACT AREA. TIN ON SOLDER TAIL.
6. GENERAL TOLERANCE  $\pm 0.20$  UNLESS SPECIFIED.
7. PACKAGING IN TAPE AND REEL, QUANTITY PER REEL 4500.

# Coplanar BTB Contact System



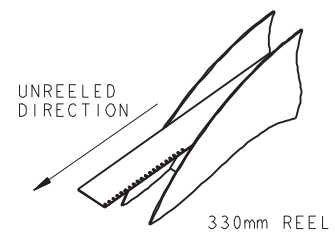
Series 70-9159

70-9159-001-402-006

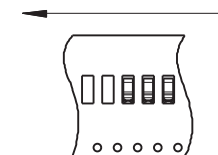


**SUGGESTED PCB LAYOUT**

## PACKING DETAILS



UNREELED DIRECTION



### NOTES:

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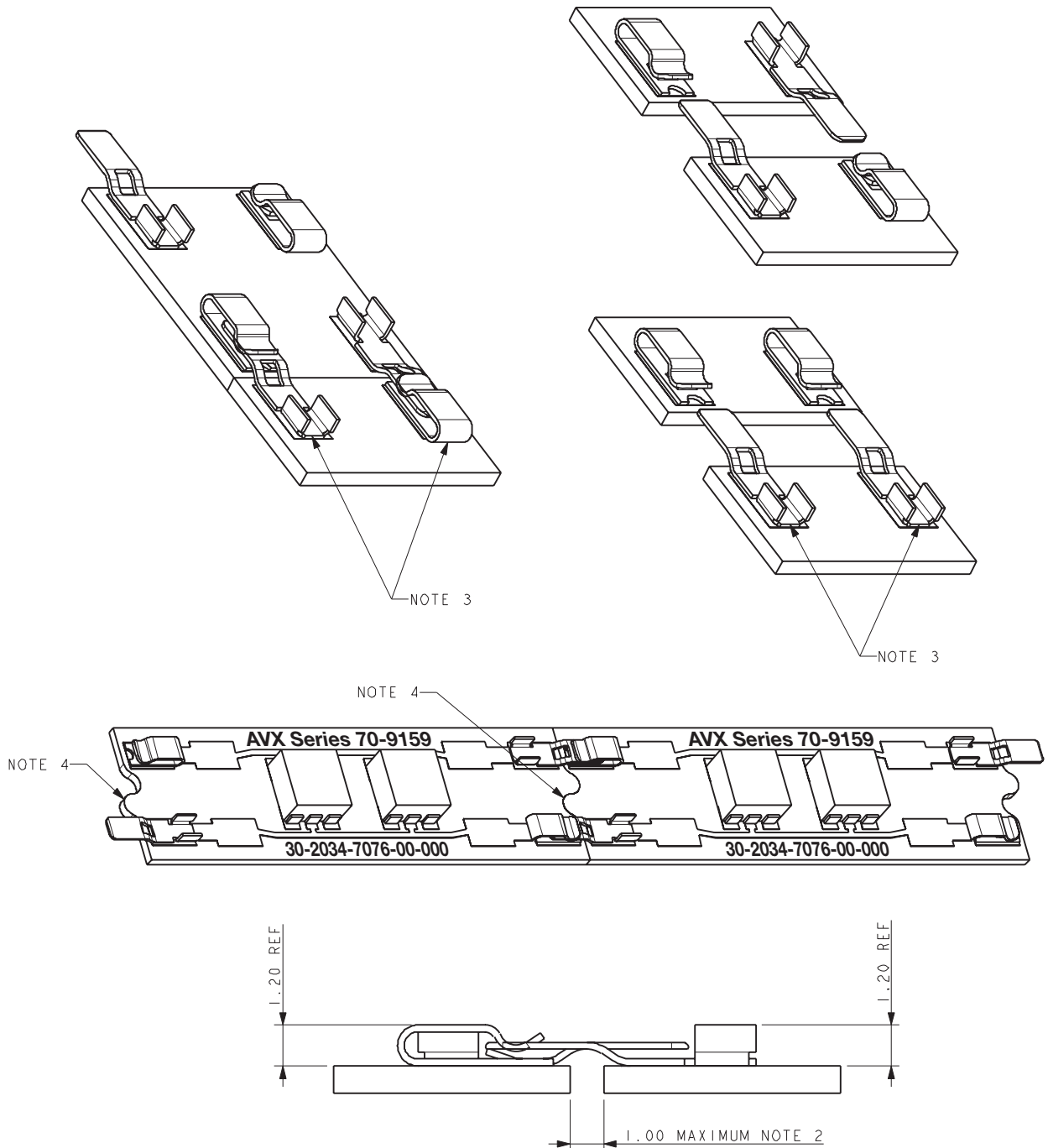


# Coplanar BTB Contact System



Series 70-9159

70-9159-001-40X-006  
BOARD TO BOARD ASSEMBLY



NOTES:

1. SIMPLE BOARD TO BOARD ASSEMBLY
2. CONTACTS WILL COPE WITH A GAP BETWEEN BOARDS UP TO 1.00MM.
3. ALL MATING COMBINATIONS PERMISSIBLE, FOR EXAMPLE BY USING 1 PLUG AND 1 SOCKET ON BOARD E3ND THE BOARDS ARE REVERSABLE.
4. TO AID ALIGNMENT BOARDS MAY BE KEYED TOGETHER.

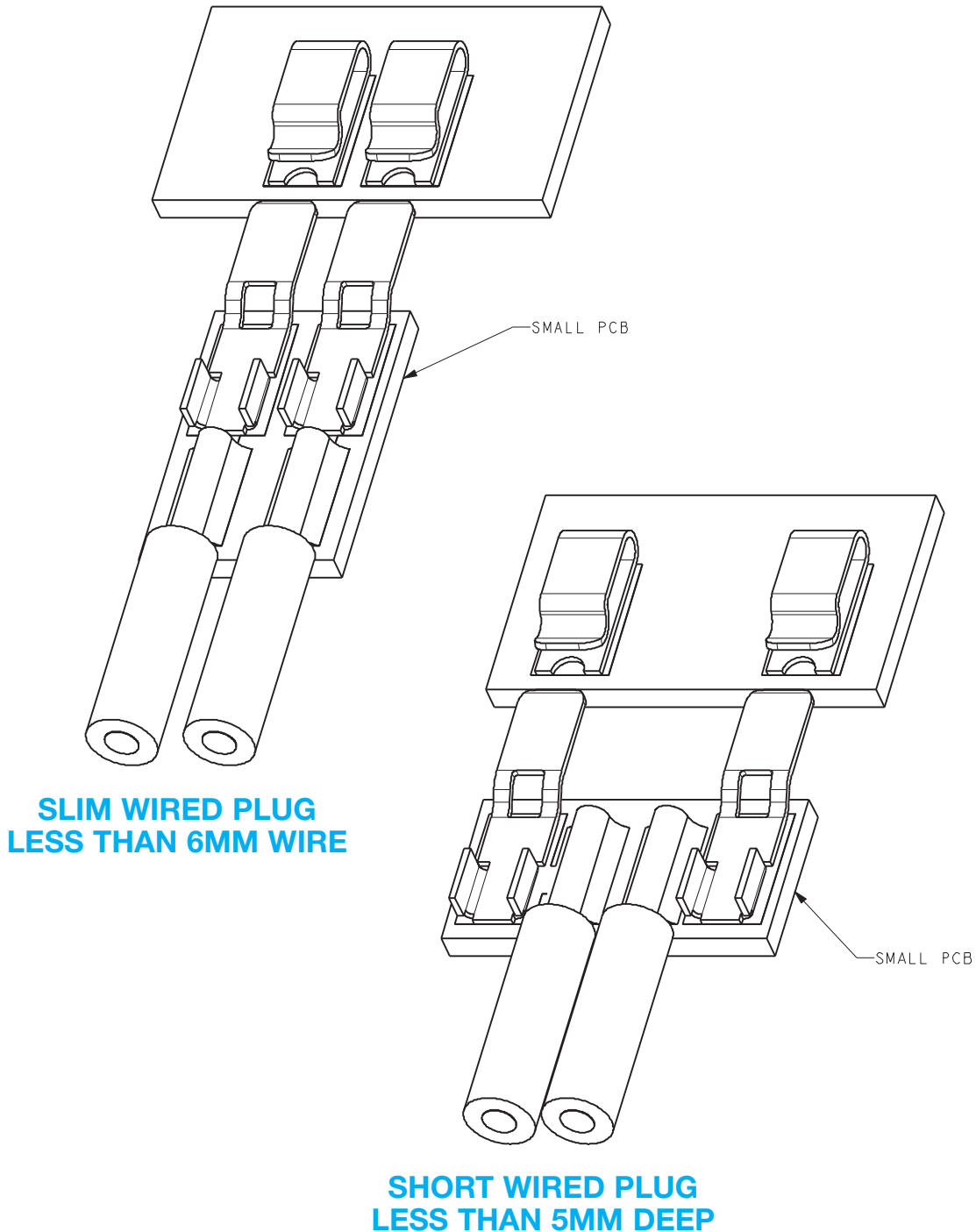


# Coplanar BTB Contact System



Series 70-9159

## 70-9159-001-40X-006 SIMPLE COMPACT WIRED PLUG ASSEMBLIES



### NOTES:

1. SIMPLE BUILT UP ASSEMBLY
2. CONTACTS CAN BE USED WITH A SUITABLE PCB DESIGN FOR CUSTOMER BUILT SMALL CABLE ASSEMBLIES.
3. TWO WAY PLUG CONNECTIONS SHOWN BUT ANY COMBINATION POSSIBLE.

