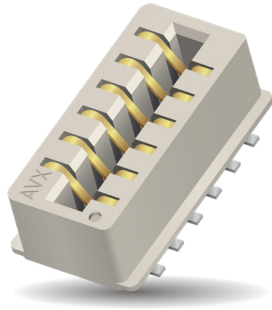


# Vertical Dual Row Top Entry Card Edge

9159-650



## GENERAL DESCRIPTION

KYOCERA AVX Interconnect continues to develop unique connectors to fill the gap in the market. The newest addition to KYOCERA AVX's broadening line of one piece card edge connectors is the 4p-12p dual row top entry version 9159-650, which is extension of popular single row version 9159-550. This new configuration with staggered dual row contacts will allow doubled number of positions in similar size of the connector. Available in both without and with polarization where the mating PCB layout is modified to form a key, to avoid wrong insertion to the connector.

This small connector is packed with several key features that provide significant functionality in a broad range of applications. The proven contact system is gold plated for enhanced reliability, signal integrity and full 2.5A/contact current rating. The connector is designed for mating PCB board with 1.6mm thickness and gold plated pads.

## APPLICATIONS

Provides a one piece connector solution for perpendicular PCB mating in applications:

- Automotive
- Industrial
- Lighting

## FEATURES AND BENEFITS

- 2.5 Amps per contact current rating meets robust application requirements
- Doubled number of positions with dual row solution
- Optional kapton tape version supports pick and place robotic placement and SMT termination
- Available version with polarization where the mating PCB layout is modified to form a key, to avoid error during insertion
- Gold plated BeCu contact system for high reliability in harsh environments

## ELECTRICAL

|                       |                    |
|-----------------------|--------------------|
| <b>Current Rating</b> | 2.5 Amps / Contact |
| <b>Voltage Rating</b> | 300 VAC            |

## ENVIRONMENTAL

|                              |                 |
|------------------------------|-----------------|
| <b>Operating Temperature</b> | -40°C to +125°C |
|------------------------------|-----------------|

## MECHANICAL

|                           |                                      |
|---------------------------|--------------------------------------|
| <b>Insulator Material</b> | High temperature Nylon UL94V-0 rated |
| <b>Contact Material</b>   | Beryllium Copper                     |
| <b>Durability</b>         | 10 Cycles                            |
| <b>Plating</b>            | Gold / Tin over Nickel               |

## HOW TO ORDER

**Prefix** — 00  
**Series** — 9159  
**No. of Ways** — 0XX

**65X** — Double Sided Thru Board Card Edge  
**9** — with Kapton Tape  
**0** — without Kapton Tape  
**6** — Plating Options  
 6 = Gold plating on nose with Tin on Tails  
**Keying**  
 0 = without keying  
 1 = with keying  
**Insulator Color**

| Code | Color | Application          |
|------|-------|----------------------|
| 9    | White | UL Approved Standard |

| Code | Size | Contacts |
|------|------|----------|
| 004  | 2x2  | 4        |
| 006  | 2x3  | 6        |
| 008  | 2x4  | 8        |
| 010  | 2x5  | 10       |
| 012  | 2x6  | 12       |

# Vertical Dual Row Top Entry Card Edge

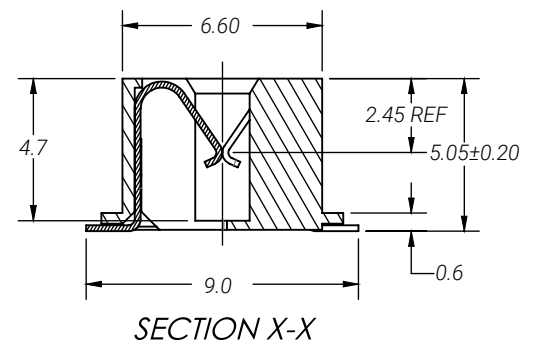
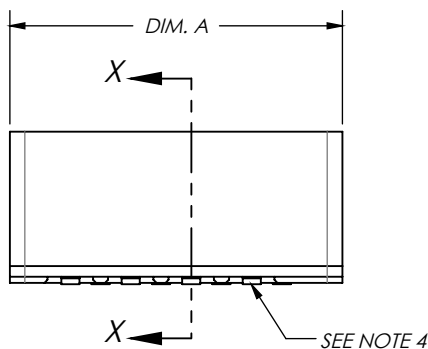
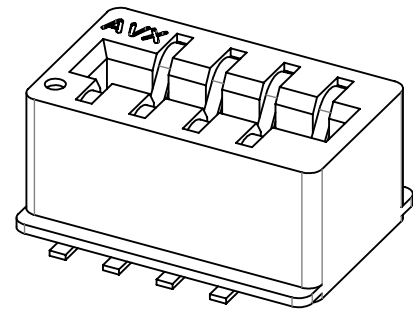
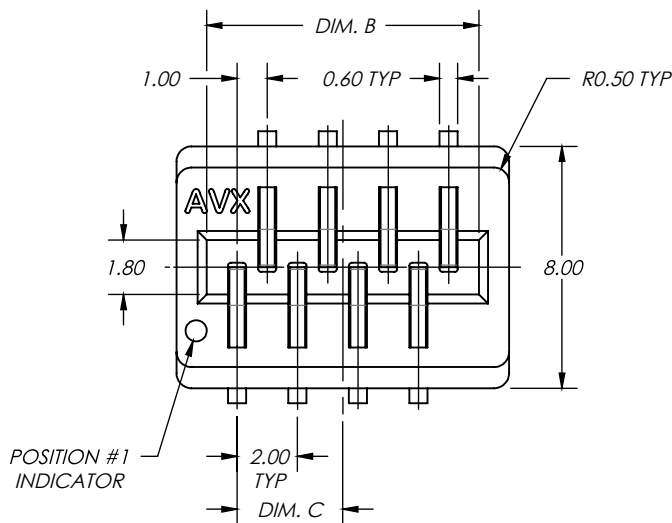
9159-650



00 9159 0XX 65X 906

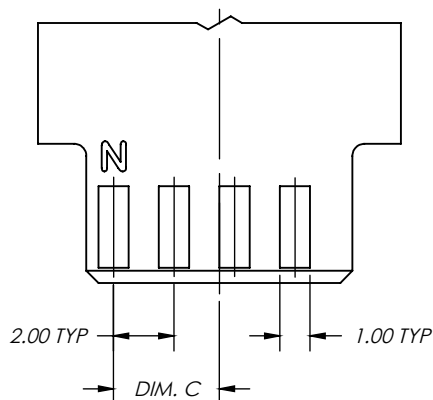
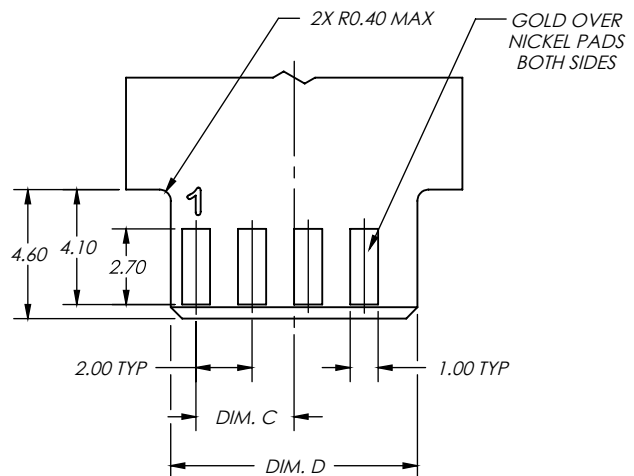
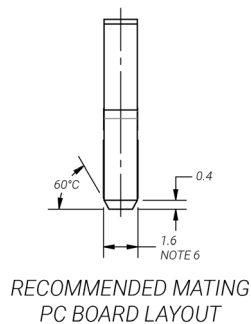
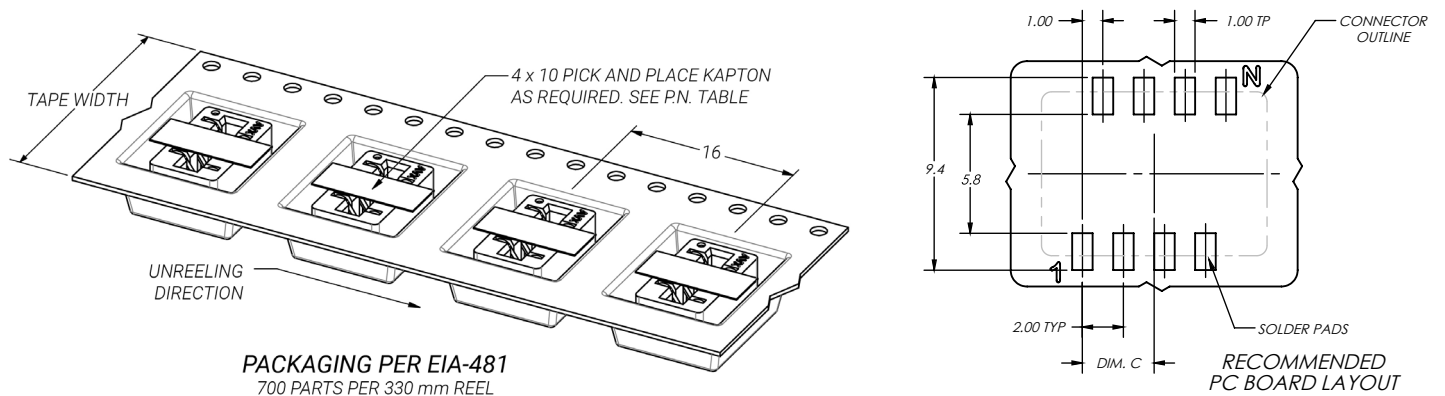
## DIMENSIONS

| Part Number         | Size  | Dim. A | Dim. B | Dim. C | Dim. D | Tape Width | Kapton Tape |
|---------------------|-------|--------|--------|--------|--------|------------|-------------|
| 00-9159-004-651-906 | 2 x 2 | 7.0    | 5.0    | 1.5    | 4.8    | 24         | YES         |
| 00-9159-004-653-906 |       |        |        |        |        |            | NO          |
| 00-9159-006-651-906 | 2 x 3 | 9.0    | 7.0    | 2.5    | 6.8    | 24         | YES         |
| 00-9159-006-653-906 |       |        |        |        |        |            | NO          |
| 00-9159-008-651-906 | 2 x 4 | 11.0   | 9.0    | 3.5    | 8.8    | 24         | YES         |
| 00-9159-008-653-906 |       |        |        |        |        |            | NO          |
| 00-9159-010-651-906 | 2 x 5 | 13.0   | 11.0   | 4.5    | 10.8   | 32         | YES         |
| 00-9159-010-653-906 |       |        |        |        |        |            | NO          |
| 00-9159-012-651-906 | 2 x 6 | 15.0   | 13.0   | 5.5    | 12.8   | 32         | YES         |
| 00-9159-012-653-906 |       |        |        |        |        |            | NO          |



# Vertical Dual Row Top Entry Card Edge

9159-650



## NOTES:

- FOR FURTHER DETAILS, REFER TO KYOCERA AVX SPECIFICATION 20-01-226 AND APPLICATION NOTES 201-01-227.
- HOUSING MATERIAL: GLASS-FILLED, HIGH TEMPERATURE NYLON; FLAME RETARDANT PER UL94V-0; COLOR: NATURAL.
- CONTACT MATERIAL: HIGH STRENGTH COPPER ALLOY.
- CONTACT PLATING: NICKEL UNDERPLATE ALL OVER; GOLD FLASH IN CONTACT AREA; LEAD-FREE MATTE TIN ON TAILS.
- CONTACT TAIL CO-PLANARITY TO BE WITHIN 0.10 mm.
- MATING PCB THICKNESS TO INCLUDE COPPER AND PLATING.
- UL APPROVED (US AND CANADA) UL REFERENCE E90723.

# Vertical Dual Row Top Entry Card Edge

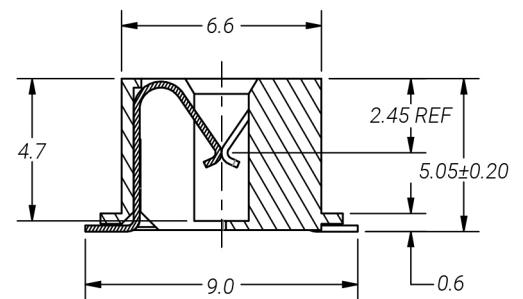
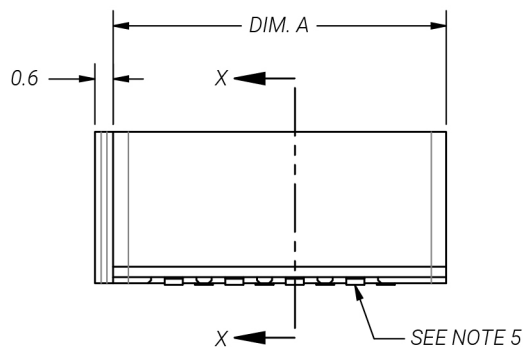
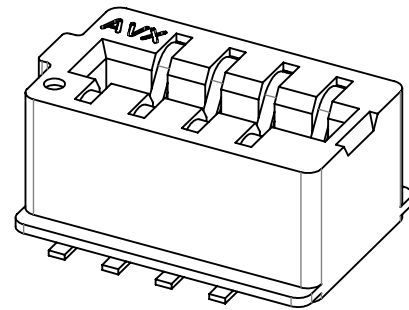
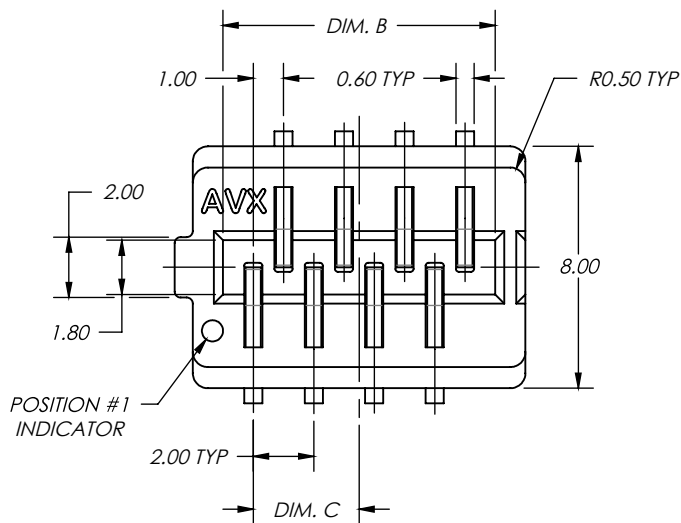
9159-650



00 9159 0XX 65X 916

## DIMENSIONS

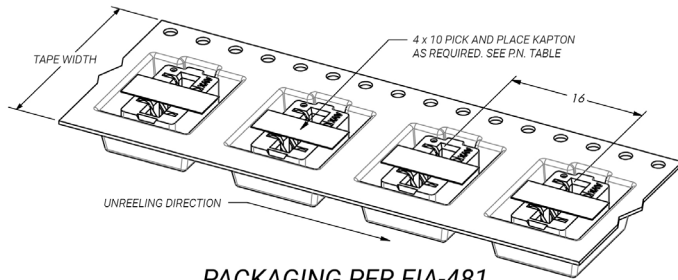
| Part Number         | Size  | Dim. A | Dim. B | Dim. C | Dim. D | Tape Width | Kapton Tape |
|---------------------|-------|--------|--------|--------|--------|------------|-------------|
| 00-9159-004-651-916 | 2 x 2 | 7.0    | 5.0    | 1.5    | 4.8    | 24         | YES         |
| 00-9159-004-653-916 |       |        |        |        |        |            | NO          |
| 00-9159-006-651-916 | 2 x 3 | 9.0    | 7.0    | 2.5    | 6.8    | 24         | YES         |
| 00-9159-006-653-916 |       |        |        |        |        |            | NO          |
| 00-9159-008-651-916 | 2 x 4 | 11.0   | 9.0    | 3.5    | 8.8    | 24         | YES         |
| 00-9159-008-653-916 |       |        |        |        |        |            | NO          |
| 00-9159-010-651-916 | 2 x 5 | 13.0   | 11.0   | 4.5    | 10.8   | 32         | YES         |
| 00-9159-010-653-916 |       |        |        |        |        |            | NO          |
| 00-9159-012-651-916 | 2 x 6 | 15.0   | 13.0   | 5.5    | 12.8   | 32         | YES         |
| 00-9159-012-653-916 |       |        |        |        |        |            | NO          |



SECTION X-X

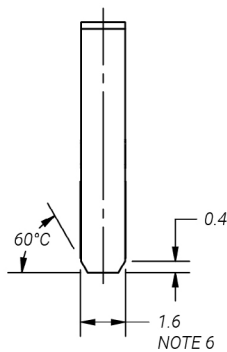
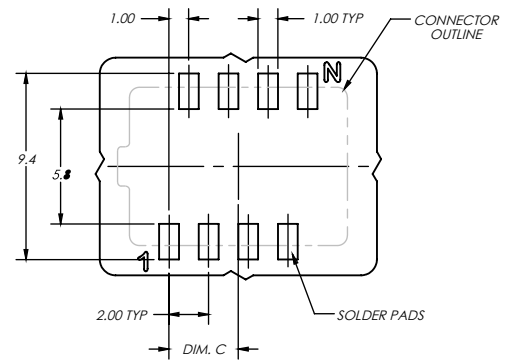
# Vertical Dual Row Top Entry Card Edge

9159-650

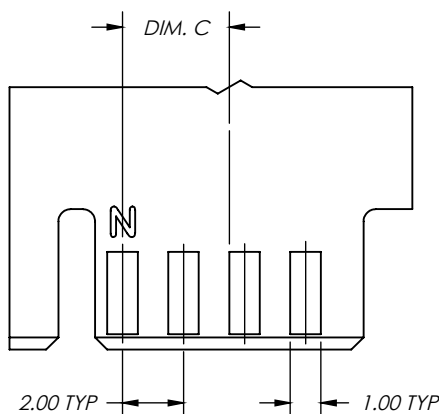
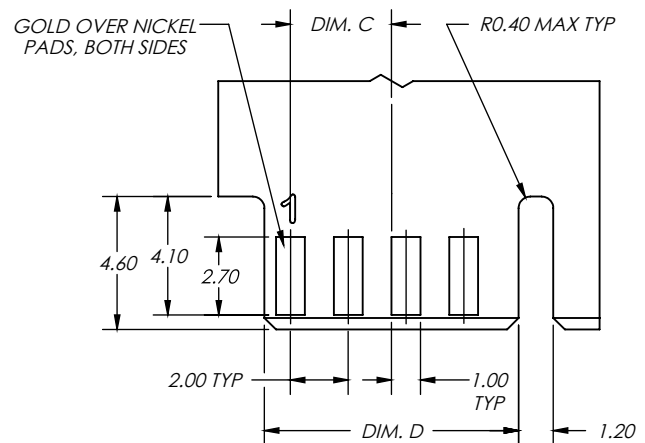


**PACKAGING PER EIA-481**  
700 PARTS PER 330 mm REEL

RECOMMENDED PC BOARD LAYOUT



RECOMMENDED MATING  
PC BOARD LAYOUT

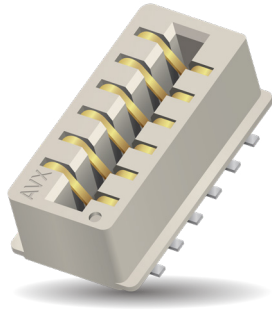


**NOTES:**

1. FOR FURTHER DETAILS, REFER TO KYOCERA AVX SPECIFICATION 201-01-226 AND APPLICATION NOTES 201-01-227.
2. HOUSING MATERIAL: GLASS-FILLED, HIGH TEMPERATURE NYLON; FLAME RETARDANT PER UL94V-0; COLOR: NATURAL.
3. CONTACT MATERIAL: HIGH STRENGTH COPPER ALLOY.
4. CONTACT PLATING: NICKEL UNDERPLATE ALL OVER; GOLD FLASH IN CONTACT AREA; LEAD-FREE MATTE TIN ON TAILS.
5. CONTACT TAIL CO-PLANARITY TO BE WITHIN 0.10 mm.
6. MATING PCB THICKNESS TO INCLUDE COPPER AND PLATING.
7. UL APPROVED (US AND CANADA); UL REFERENCE E90723.

# Dual Row Inverted Thru Board Card Edge

9159-600



## GENERAL DESCRIPTION

KYOCERA AVX Interconnect continues to develop unique connectors to fill the gap in the market. The newest addition to KYOCERA AVX's broadening line of one piece card edge connectors is the 4p-12p Dual Row Inverted version 9159-650, which is extension of popular single row version 9159-500. This new configuration with staggered dual row contacts will allow doubled number of positions in similar size of the connector.

This small connector is packed with several key features that provide significant functionality in a broad range of applications. The proven contact system is gold plated for enhanced reliability, signal integrity and full 2.5A/contact current rating. The connector is designed for mating PCB board with 1.6mm thickness and

gold plated pads.

## APPLICATIONS

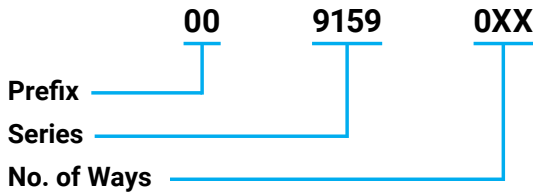
Provides a one piece connector solution for perpendicular PCB mating in applications:

- Automotive
- Industrial
- Lighting

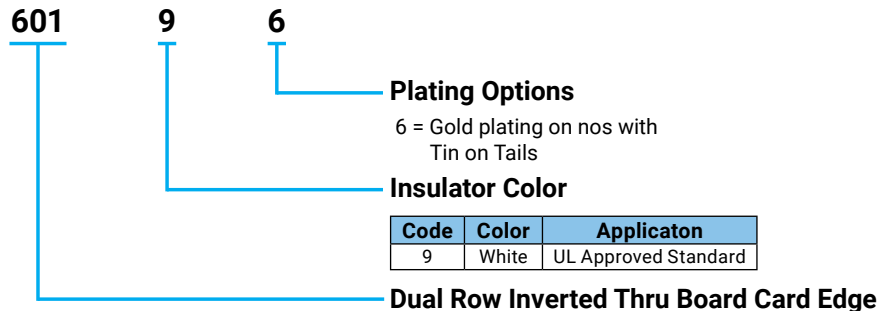
## FEATURES AND BENEFITS

- 2.5 Amps per contact current rating meets robust application requirements
- Doubled number of positions with dual row solution
- Gold plated BeCu contact system for high reliability in harsh environments
- Low profile thru board design does not interfere with Led's etc.

## HOW TO ORDER



| Code | Size | Contact |
|------|------|---------|
| 004  | 2x2  | 4       |
| 006  | 2x3  | 6       |
| 008  | 2x4  | 8       |
| 010  | 2x5  | 10      |
| 012  | 2x6  | 12      |



| Code | Color | Applicaton           |
|------|-------|----------------------|
| 9    | White | UL Approved Standard |

## ELECTRICAL

|                       |                    |
|-----------------------|--------------------|
| <b>Current Rating</b> | 2.5 Amps / Contact |
| <b>Voltage Rating</b> | 300 VAC            |

## ENVIRONMENTAL

|                              |                 |
|------------------------------|-----------------|
| <b>Operating Temperature</b> | -40°C to +125°C |
|------------------------------|-----------------|

## MECHANICAL

|                           |                                      |
|---------------------------|--------------------------------------|
| <b>Insulator Material</b> | High temperature Nylon UL94V-0 rated |
| <b>Contact Material</b>   | Beryllium Copper                     |
| <b>Durability</b>         | 10 Cycles                            |
| <b>Plating</b>            | Gold / Tin over Nickel               |

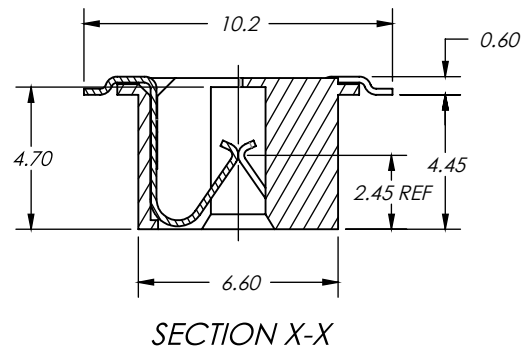
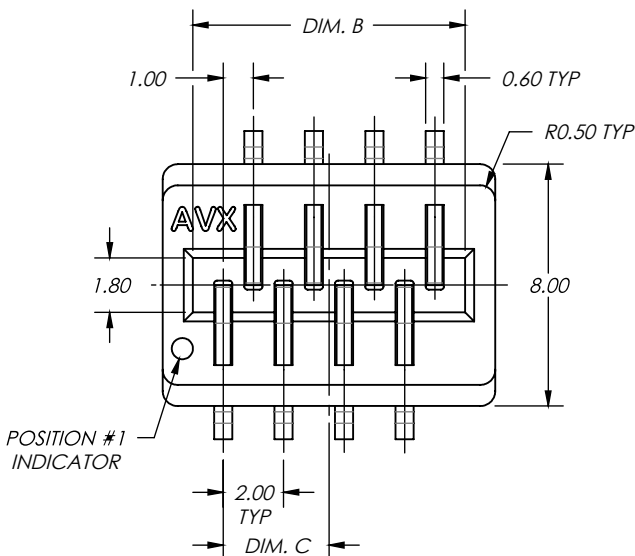
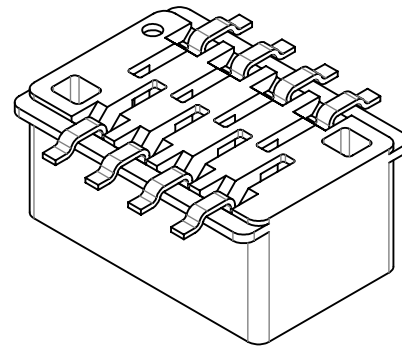
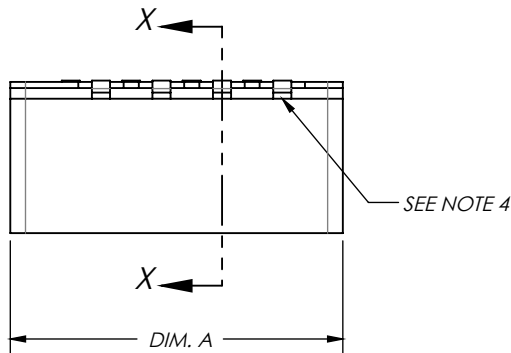
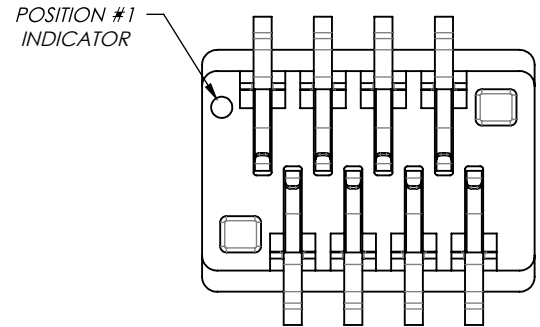
# Dual Row Inverted Thru Board Card Edge

9159-600

00 9159 0XX 601 906

## DIMENSIONS

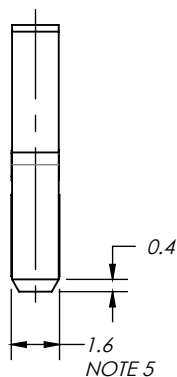
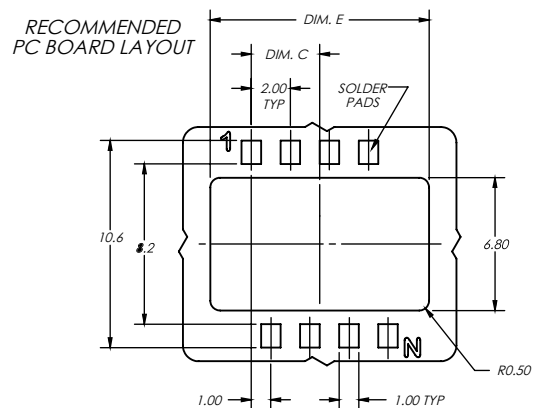
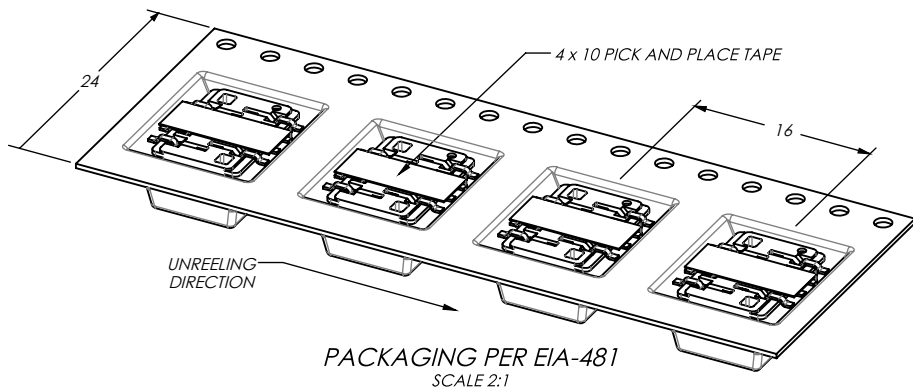
| Part Number         | Size  | Dim. A | Dim. B | Dim. C | Dim. D | Dim. E |
|---------------------|-------|--------|--------|--------|--------|--------|
| 00-9159-004-601-906 | 2 x 2 | 7.00   | 5.00   | 1.50   | 4.80   | 7.20   |
| 00-9159-006-601-906 | 2 x 3 | 9.00   | 7.00   | 2.50   | 6.80   | 9.20   |
| 00-9159-008-601-906 | 2 x 4 | 11.00  | 9.00   | 3.50   | 8.80   | 11.20  |
| 00-9159-010-601-906 | 2 x 5 | 13.00  | 11.00  | 4.50   | 10.80  | 13.20  |
| 00-9159-012-601-906 | 2 x 6 | 15.00  | 13.00  | 5.50   | 12.80  | 15.20  |



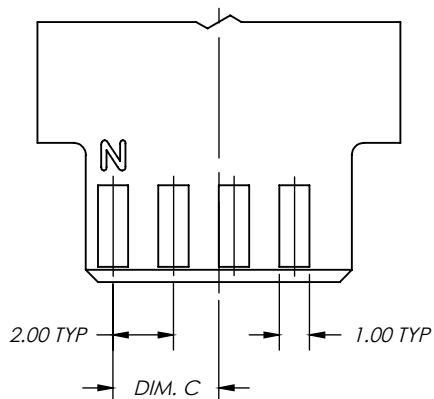
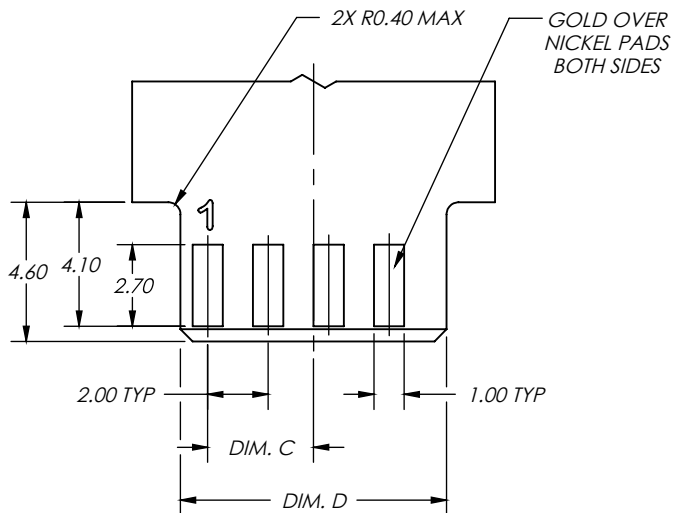
# Dual Row Inverted Thru Board Card Edge

9159-600

00 9159 0XX 601 906



RECOMMENDED MATING  
PC BOARD LAYOUT



NOTES:

1. HOUSING MATERIAL: GLASS-FILLED, HIGH TEMPERATURE NYLON; FLAME RETARDANT PER UL94V-0; COLOR: NATURAL.
2. CONTACT MATERIAL: HIGH STRENGTH COPPER ALLOY.
3. CONTACT PLATING: NICKEL UNDERPLATE ALL OVER; GOLD FLASH IN CONTACT AREA; LEAD-FREE MATTE TIN ON TAILS.
4. CONTACT TAIL CO-PLANARITY TO BE WITHIN 0.10 mm.
5. MATING PCB THICKNESS TO INCLUDED COPPER AND PLATING.
6. PACKAGING TO BE IN POCKET TAPE ON REELS PER EIA-481 WITH 700 PARTS PER REEL.