NOTE
All numerical values are in metric units. Dimensions are in millimeters. Unless otherwise specified, dimensions have a tolerance of ±0.13 and angles have a tolerance of ±2°. Figures are not drawn to scale.

1. INTRODUCTION

This specification covers the requirements for application of the AdrenaLINE Slingshot 92-Ohm 224G cable system. The cable system interfaces with the 92-ohm AdrenaLINE Slingshot connector system. Differential pairs are arranged in a hermaphroditic mating interface.

When mating, connector alignment features help to align the contacts prior to engagement of the connectors. The receptacle alignment bosses fit into the cabled connector (header) alignment slots, which have a guide feature. Basic terms and features of this product are provided in Figure 1.

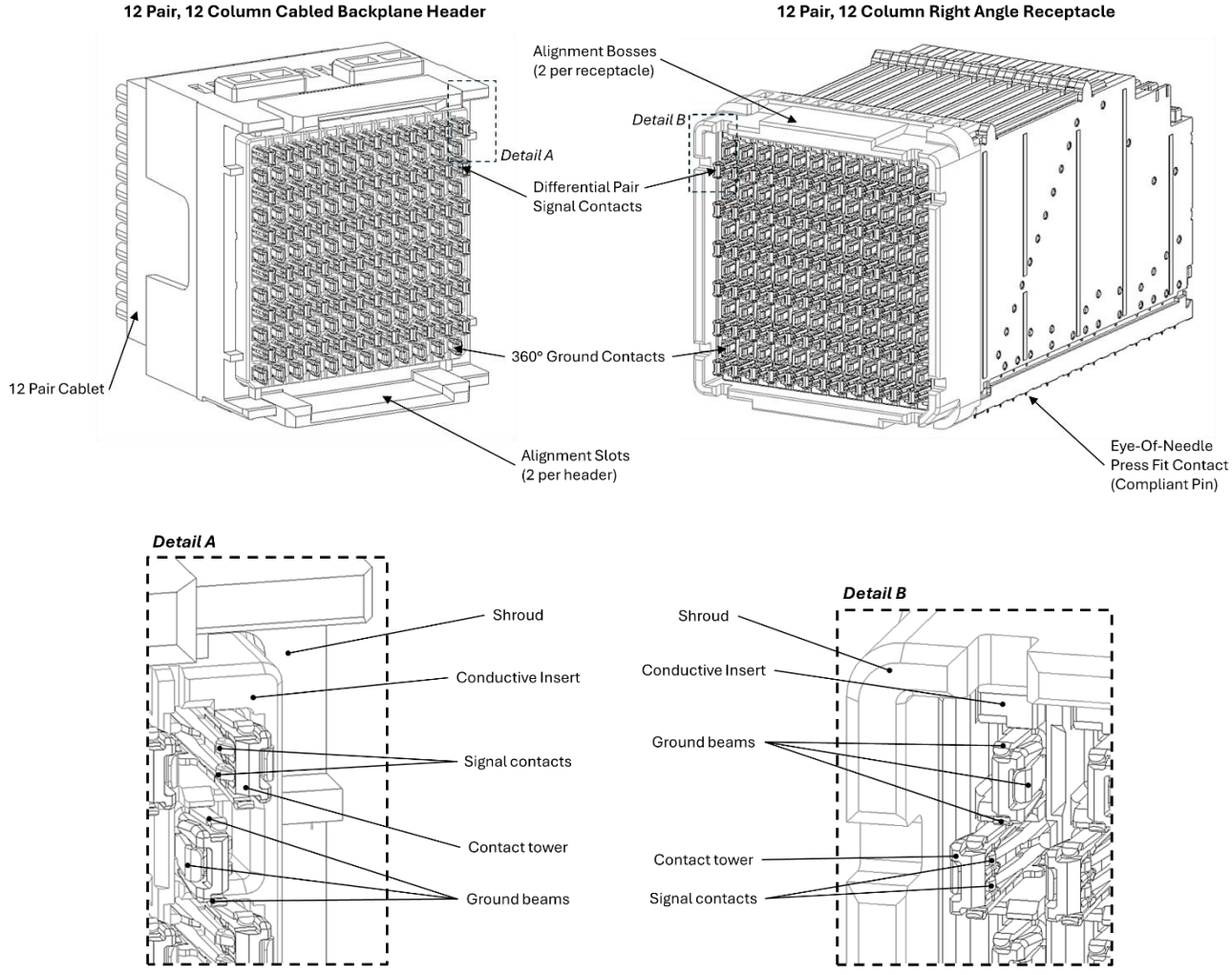


Figure 1

2. REFERENCE MATERIAL

2.1. Revision Summary

Revision Title	Date	Summary
REV 1	23OCTOBER2025	Initial Draft

2.2. Customer Assistance

Visit www.te.com or call the number at the bottom of page 1 if customer assistance is required.

2.3. Drawings

Customer drawings for product part numbers are available from www.te.com. Information contained in the customer drawing takes priority.

2.4. Specifications

Application Specification 114-78104 provides application details for the AdrenaLINE Slingshot 224G connector system.

Product Specification 108-161114 provides expected product performance and test results.

3. REQUIREMENTS

3.1. Storage

A. Environment

The product should be stored in a cool area with a low relative humidity. The storage temperature for the product should be between -5°C and 70°C.

B. Shelf Life

The product should remain in the shipping containers until ready for use to prevent deformation to components. The product should be used on a first in, first out basis to avoid storage contamination that could adversely affect performance.

Connectors that are removed from the shipping container, but not used, must be carefully placed back into the original container as soon as possible.

C. Chemical Exposure

Do not store product near any chemical listed below as they may cause stress corrosion cracking in the material.

Alkalies	Ammonia	Citrates	Phosphates Citrates	Sulfur Compounds
Amines	Carbonates	Nitrites	Sulfur Nitrites	Tartrates

3.2. Material

The housings are molded of high-temperature, UL94V-0 rated thermoplastic. The contacts are made of copper alloy and plated with a nickel alloy underplate. The contact interface area is also plated with precious metal. Refer to the specific customer drawing for details.

3.3. Mating

A. Alignment

Proper alignment is essential to ensure full engagement of mating connectors and to ensure that contacts are not bent or otherwise damaged during mating and unmating. Utilize the connector alignment features on the header housing and receptacle housing to properly locate the connector. For tolerance limitations, See Figure 2. Tolerances apply when connectors are free-floating and allowed to gather. Do not hold or use the cable while mating or unmating the connector.

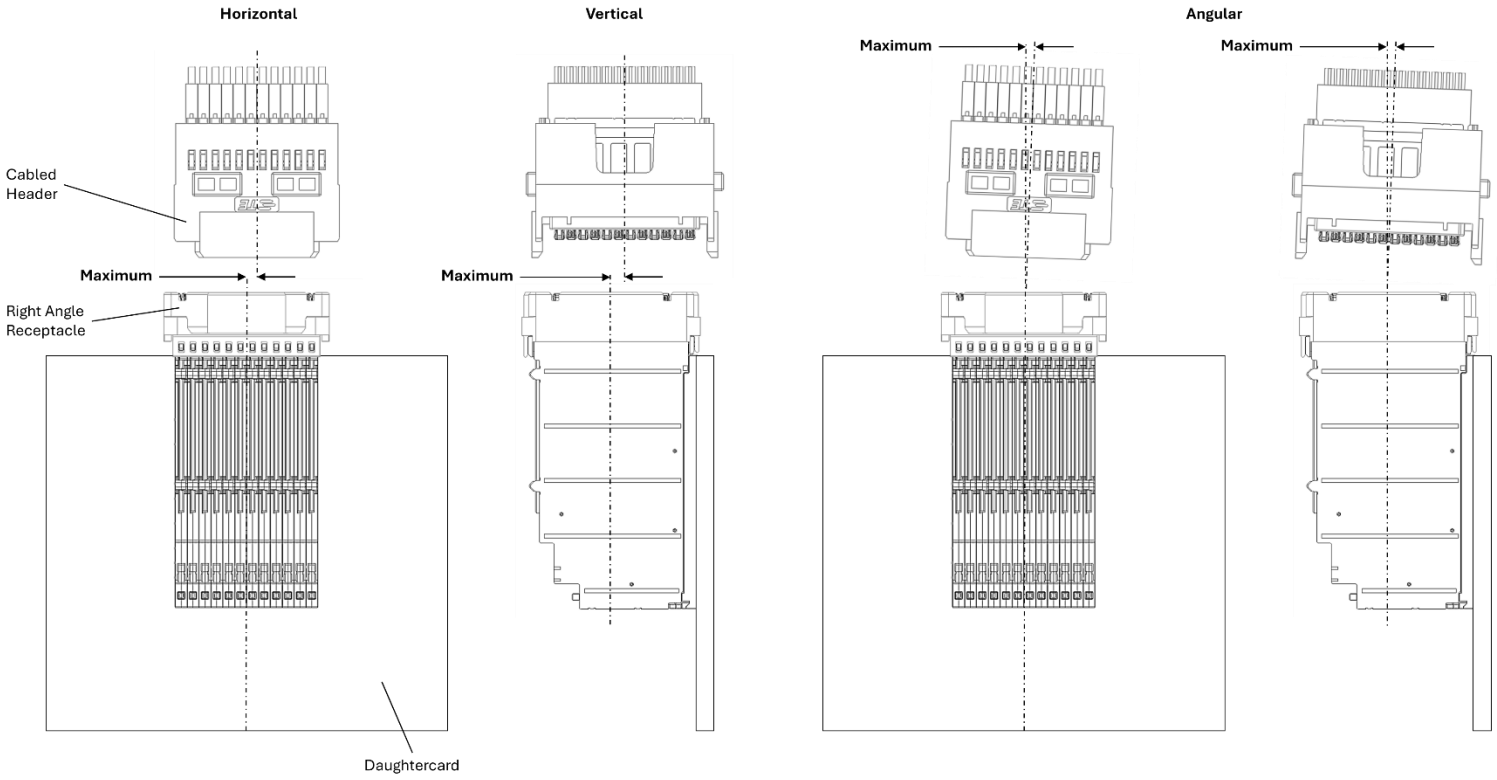


Figure 2

B. Guide Hardware

Guide hardware is recommended whenever possible to eliminate the risk of connector damage. UPM guide hardware is recommended and has been proven to work well with the AdrenaLINE Slingshot platform. In special applications, custom guide hardware is also available. Please contact TE Engineering for part number recommendations or help with specifying guide hardware for your specific application.

C. Mating Sequences

This connector system has two basic levels of sequencing during mating. The order of mating is: ground beams and signal contacts. A detailed mating sequence within the connector is described in Table 1 and Figure 3, where Dim “A” represents the relative distance between the mating faces of the conductive inserts within each connector.

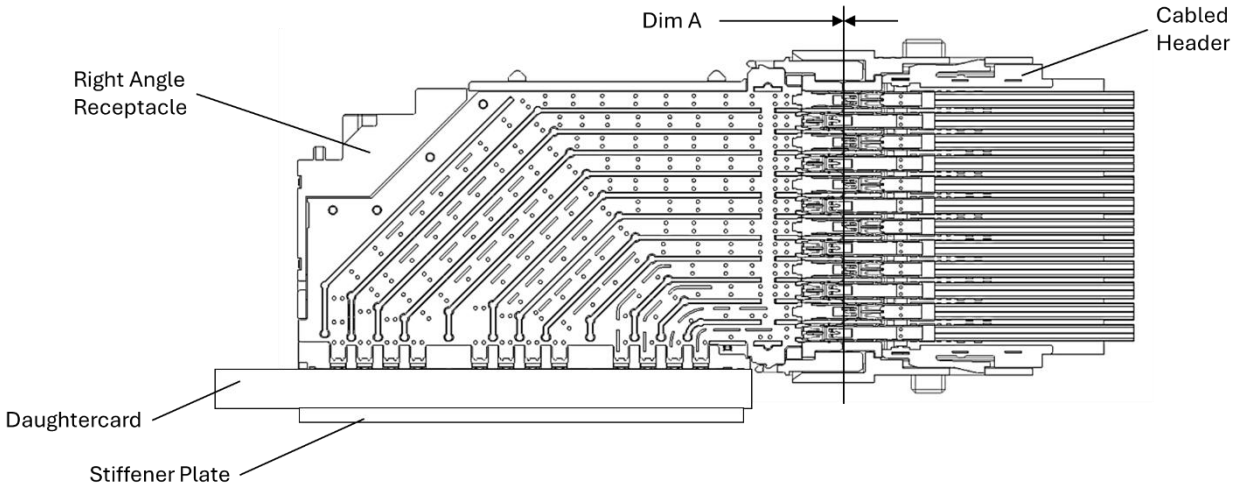
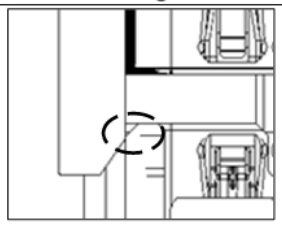
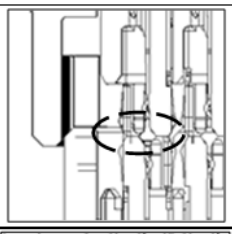
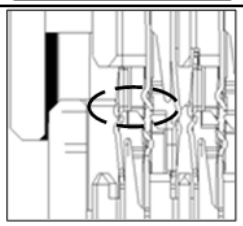
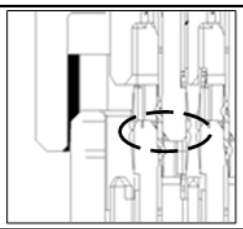
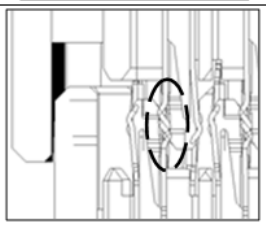
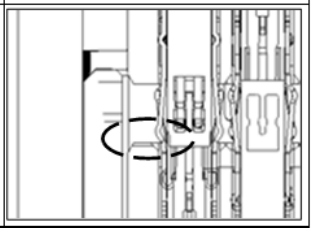
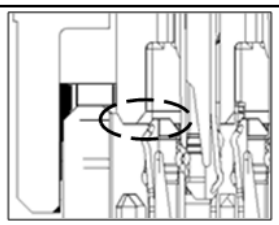


Figure 3

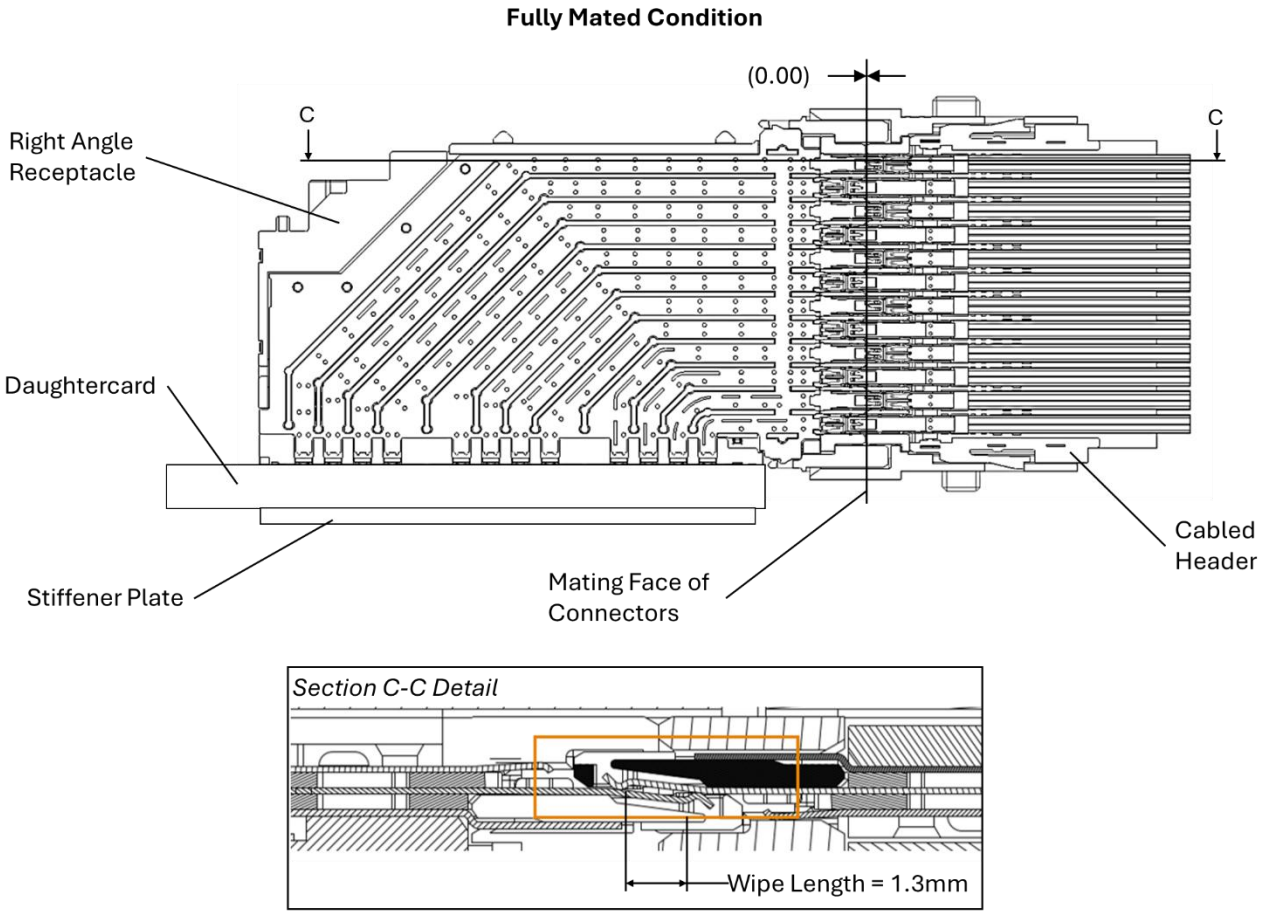
Table 1.

Dim A (mm)	Sequence Description	Image
6.39	Connector shroud fully engaged	
4.06	Contact towers begin to bypass	
3.48	Signal contacts begin to bypass tower insert	
3.32	Contact towers fully bypassed	
2.60	Signal contact touches mating signal contact	
1.91	Side ground beams start to bypass conductive insert lead in	
1.89	Main ground beams start to bypass conductive insert lead-in	

D. Wipe Length and Full Mate

Full mating of connectors is necessary to ensure a good connection and to obtain the maximum signal transmission performance. The dimensions shown below for the fully mated condition are recommended.

Connector wipe length is calculated by subtracting the fully mated condition from the reliable mating point data. Wipe lengths are given in Figure 4.



Note 1: Dimensions are calculated using nominal connector conditions. Right angle receptacle is assumed to be seated flush with the daughtercard board.

Note 2: The first mate, last break sequencing pointa is the first and last instance in a mating cycle where the signal contact of the cabled header comes in contact with the mating signal contact of the right angle receptacle. The reliable mating point is the first and last instance in a mating cycle where the signal contact of the cabled header fully deflect the mating signal contact of the right angle receptacle and the beams are supplying full normal force

Figure 4.

E.Maximum Demate

The dimensions shown for the fully mated condition are recommended; however, the maximum demate dimension given in Figure 5 is acceptable for delivering signal transmission performance that exceeds minimum limits.

Maximum Demate Condition

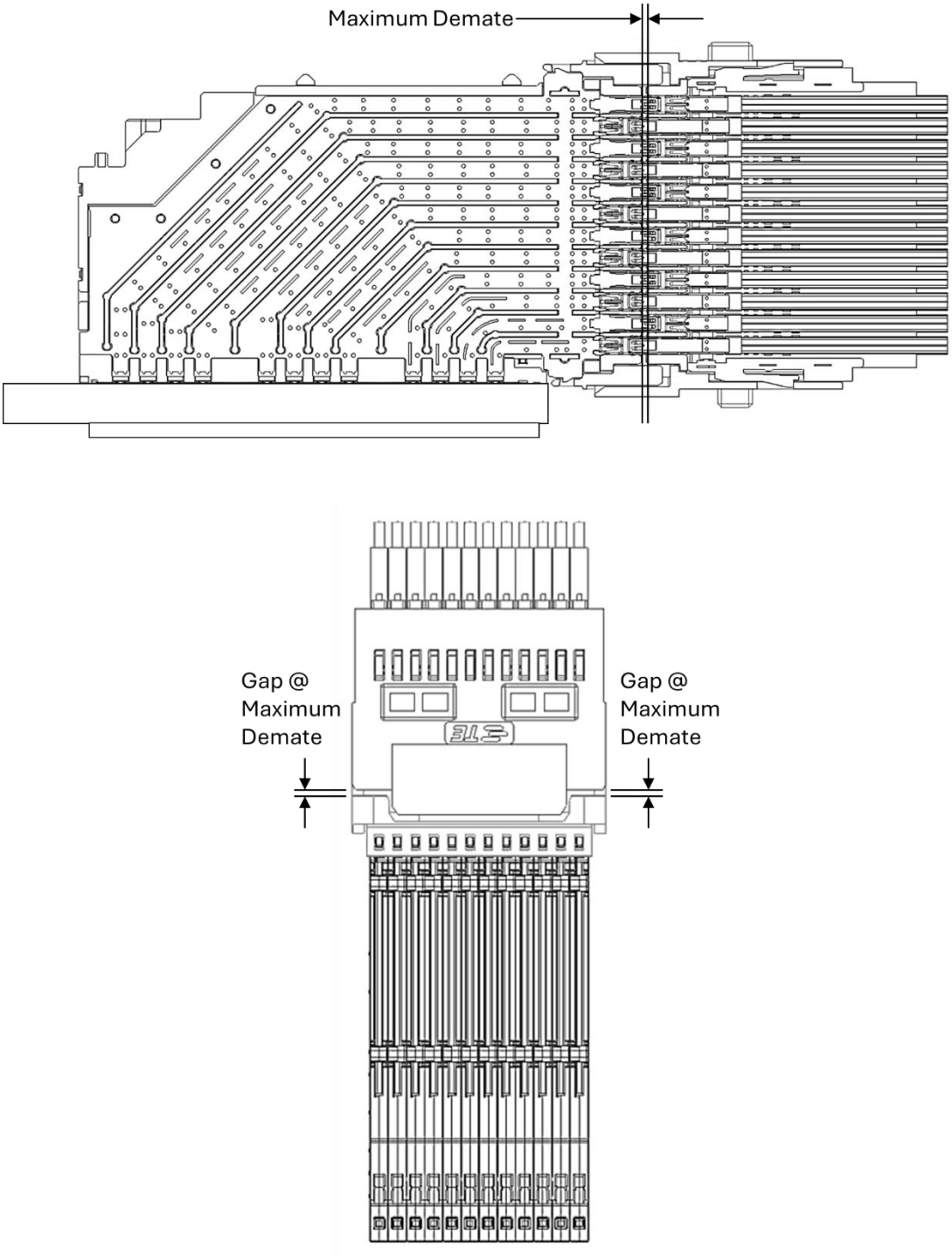


Figure 5

NOTE
For circuit routing concerns or applications with sense pins, call the number at the bottom of page 1.

3.4. Unmating

A. Connector

All mating conditions apply to unmating. While unmating hold the connector by the header housing. Do not utilize the cables to remove the connector.

3.5. Repair and Rework

Damaged or defective connectors must not be used. AdrenaLINE Slingshot cable assemblies are not field repairable and must be returned to TE for repair or replacement.

3.6. Cable Bend Radius

Cable assemblies should follow the bend radius of the cable. Testing can be performed to find the optimum minimum bend radius for the final application.

4. VISUAL AID

The illustration shown in Fig. 6 is a typical application of the AdrenaLINE Slingshot cable system. This illustration should be used by production personnel to ensure a correctly applied product. Applications which do not appear correct should be inspected using the information in the preceding pages of this specification and in the instructional material shipped with the product or tooling.

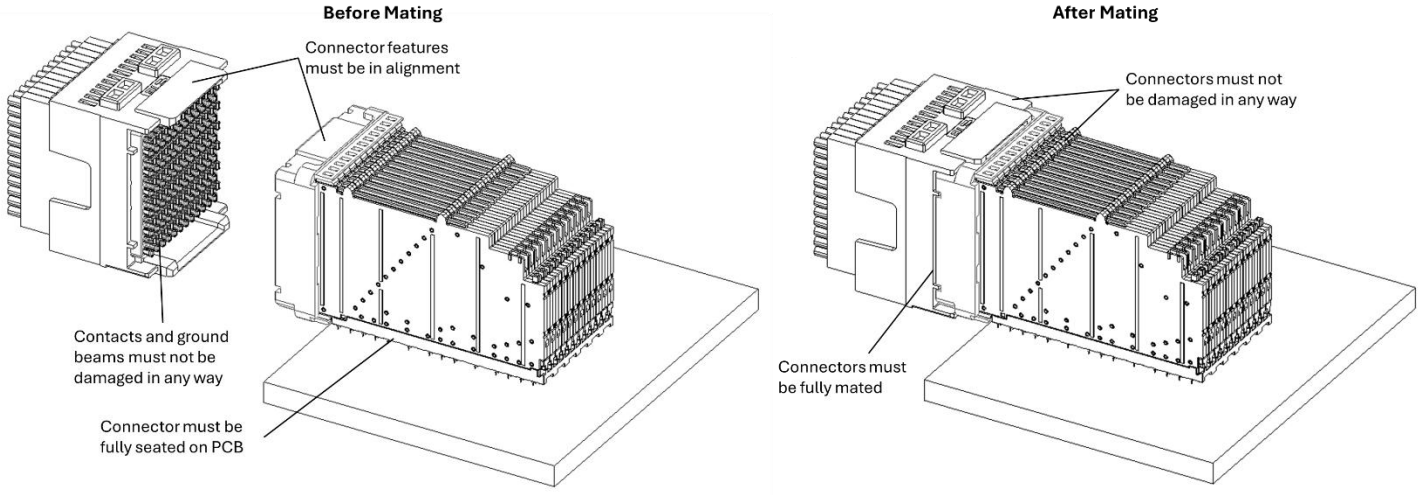


Figure 6