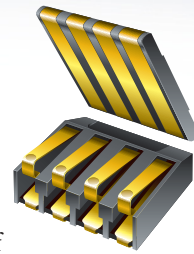


Bourns® Trimpot® 70AA Modular Contacts

Abstract

Headquartered in Riverside, California, Bourns has led the electronics industry for 60 years in the design, manufacture and sales of electronic components and subsystems. The Company's components are targeted for use in a broad range of applications in the computer, telecommunications, automotive, portable, mobile electronics and other market segments.



Bourns® Resistive Products Division offers RoHS compliant spring connectors from two to six contacts in 1-contact increments. These spring connectors are named Modular Contacts, due to their flexibility and use in various applications. Modular Contacts are available as headers and receptacles.

Model 70AA offers features, such as a 2.54 mm pitch, symmetrical pad layout, auto-centering, end-to-end stackable, pick and place compatible and high cycle life. These features give your design a durable contact with the flexibility to be used in multiple applications.

Introduction

Spring connectors are traditionally used as electrical connections between a battery pack and a PCB also known as a board-to-battery connection. Spring connectors are the preferred choice in battery pack applications due to their low profile, low cost and floating contact points. Modular Contacts can be used as board-to-battery connectors, but their design has opened the door for other applications, such as board-to-device and board-to-board connectors. Typical applications are:

Typical Applications

- Board-to-battery connection in mobile electronic devices
 - Cell phone
 - DECT phone
- Board-to-device connection in docking stations and removable electronic devices
 - Mobile EFT-POS terminal
 - Electronic waiter pad
 - Cordless bar code scanner
 - Removable front panel / display
 - Position contact
- Board-to-board connection
 - Subsystem to system

The Bourns Solution

70AA Modular Contacts allow for horizontal unidirectional and vertical engagement and are available off-the-shelf as headers and receptacles from two to six contacts. Additionally, contact pitch is maintained over multiple parts placed end-to-end on a board, as shown in Figure 1. This permits multiple part number solutions to be used for a given contact count.

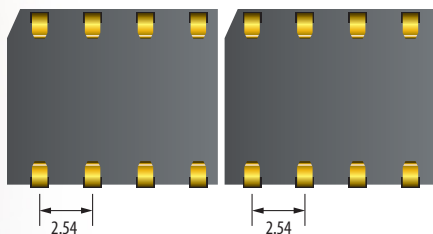


Figure 1: Stackable Pitch

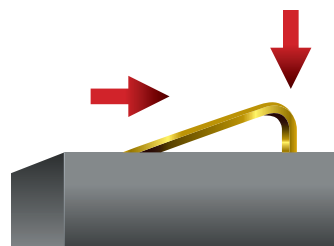


Figure 2: Horizontal and vertical contact engagement

APPLICATION NOTE

70AA Modular Contacts are gold plated, which provides low contact resistance, good current handling capability and greater durability. Parts also have captured spring ends preventing inadvertent damage. This feature is achieved by using tabs at the end of the spring, which are restrained by the inner housing wall.

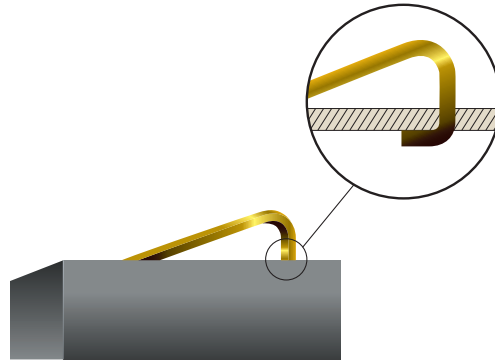


Figure 3: Captured Spring Ends

In-line terminations or “twin hot contacts” is another key feature of the 70AA. Each contact has two symmetrical terminations positioned on the connector housing. This offers design engineers the option to route PCB tracks to either one termination or both (for parallel connection, redundancy or track crossing).

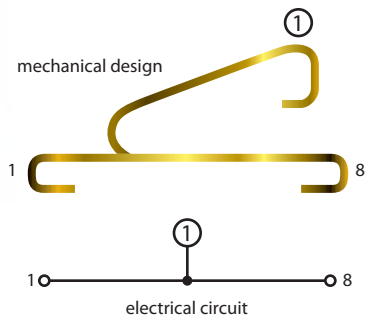


Figure 4: Twin hot contacts

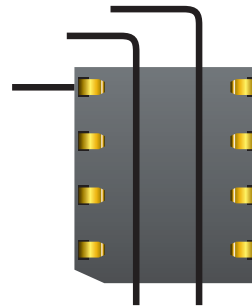


Figure 5: Possible board routing under 70AA

The 70AA's symmetrical pad layout allows the end user to place the modular contact in a 180° orientation while maintaining the original pad layout. This feature gives designers great flexibility in the design of the end product.



Figure 6: Possible 180° change while maintaining the same pad layout

APPLICATION NOTE

The 70AA easily lends itself to pick and place automated equipment. Figure 7 outlines two recommended pick-up points.

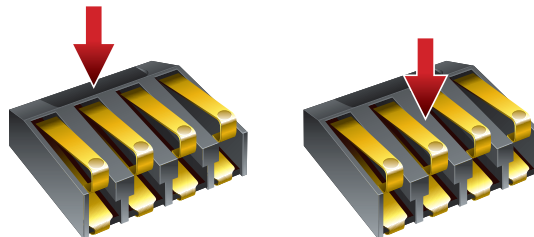


Figure 7: Recommended pick and place pick-up points

These features result in the all-important reduced time-to-market and elimination of tooling charges. In the expanding world of portable and hand-held electronics, you can place Modular Contacts just about anywhere. Bourns® Trimpot® Connectors are ready for your next design!

BOURNS®

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