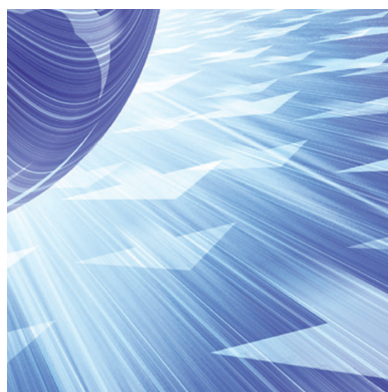


CATALOG



Problem Resolution Case Studies





Problem Resolution Case Studies

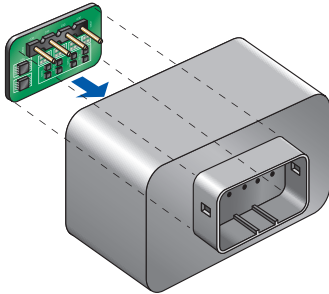
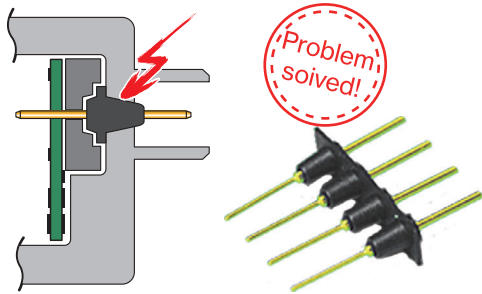
Catalog list

<div>Full custom pin headers</div> <div></div>	<div>Semi-custom pin headers</div> <div></div>	<div>Female Headers</div> <div></div>	<div>Custom SMT Parts & Components</div> <div></div>
<div>Chain Terminal Insert Systems</div> <div></div>	<div>Crimping System</div> <div></div>	<div>Pin Terminals, Lead-Pin</div> <div></div>	<div>Flexible board connectors</div> <div></div>
<div>PCB with terminals</div> <div></div>	<div>Mini Jumpers</div> <div></div>	<div>Assembly Services</div> <div></div>	<div>Tube Caps</div> <div></div>

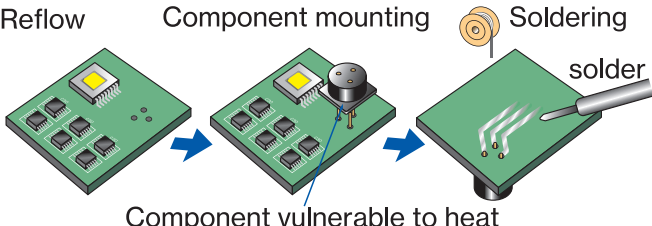
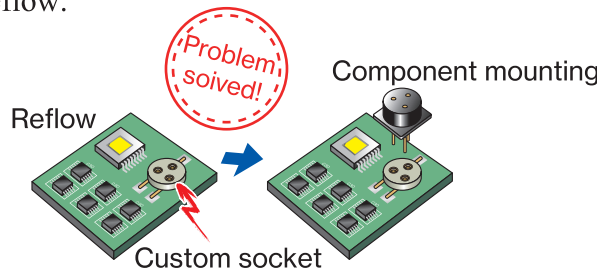
Cases that responded to problem solving

Problem Resolution Case Studies

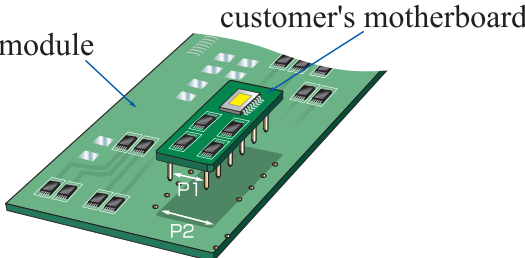
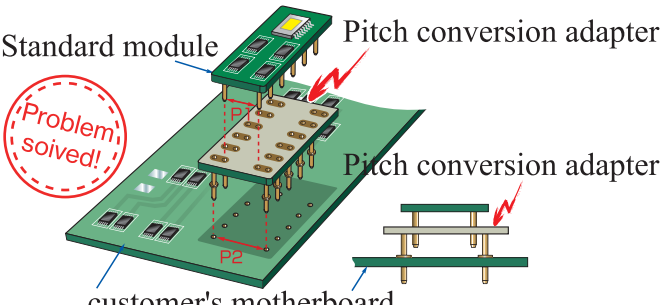
◆ Case 1 Airtight rubber header

Customer's request	ICREX proposal
<p>I want to make a connector connection to get signals from a board that is inside a unit that needs to be airtight.</p> 	<p>We suggest a method of using rubber as the base of the header to make a connector connection while keeping the unit airtight.</p> 

◆ Case 2 Reflow heat countermeasure

Customer's request	ICREX proposal
<p>For components that cannot withstand reflow heat, we have to mount them on the board after reflow. We want to reduce the number of man-hours for this process.</p> <p>Reflow Component mounting Soldering</p>  <p>Component vulnerable to heat</p>	<p>Mount a socket that matches the components' lead pitch and pattern onto the board, then mount the components onto the socket after reflow.</p>  <p>Custom socket</p>

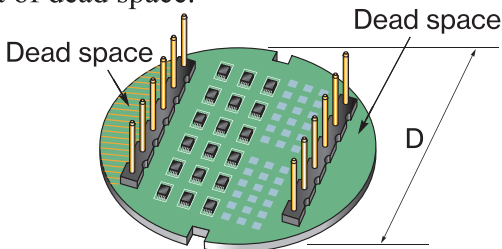
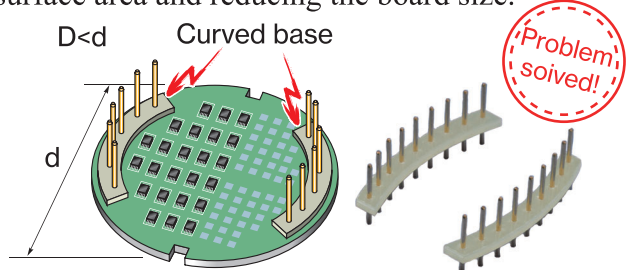
◆ Case 3 Pitch conversion adapter

Customer's request	ICREX proposal
<p>Our standard module lead pitch doesn't match our customer's motherboard pitch.</p> <p>Standard module customer's motherboard</p> 	<p>Connect to different pitch modules via a pitch conversion adapter connected to a pattern.</p> <p>Standard module Pitch conversion adapter Pitch conversion adapter customer's motherboard</p> 

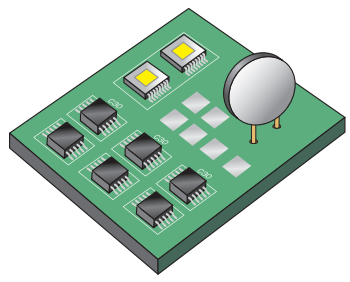
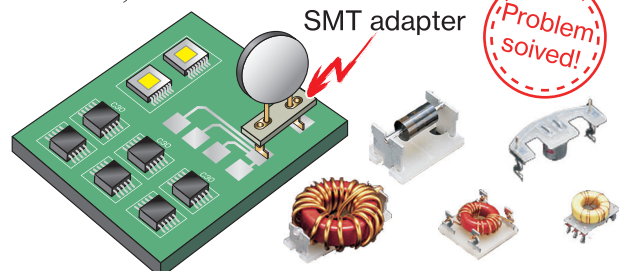
Problem Resolution Case Studies

Cases that responded to problem solving

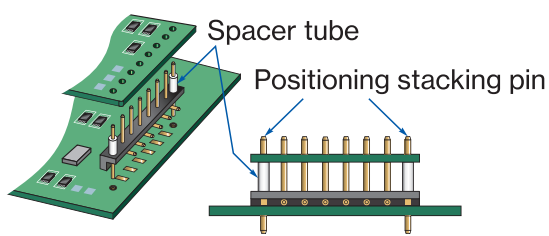
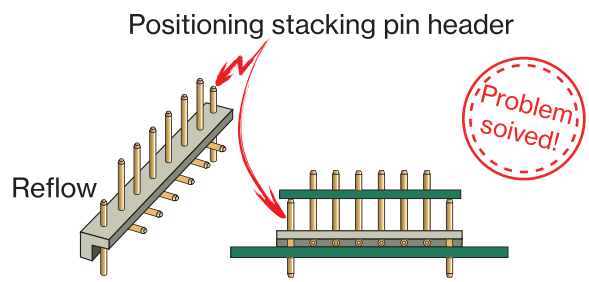
◆ Case 4 Pin header different shape from base

Customer's request	ICREX proposal
<p>When a header is attached to a circular board, the board needs to be made smaller, so there is a lot of dead space.</p> 	<p>Make the base curved, maintaining the effective surface area and reducing the board size.</p> <p>$D < d$ Curved base</p>  <p>Because the header base uses substrate material CEM-3, it is freely customizable without any initial mold costs.</p>

◆ Case 5 SMT conversion adapter

Customer's request	ICREX proposal
<p>The discrete components we use are not SMT. We want to stop doing post-soldering and cut costs.</p> 	<p>Convert to SMT with an adapter composed of a base made of substrate material (CEM-3), which is highly resistant to high temperature reflow, and a lead terminal.</p> 

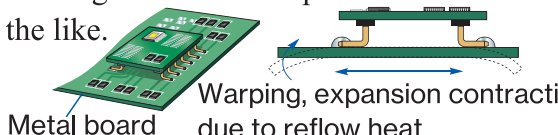
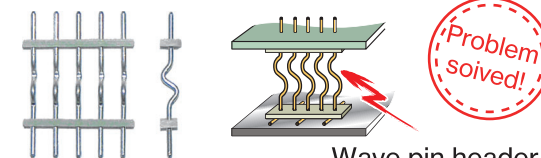
◆ Case 6 Stacking pin headers

Customer's request	ICREX proposal
<p>For board to board connection, we are using spacer tubes to maintain the distances between boards, but it is a time consuming operation.</p> 	<p>Use a pin header for the whole length of the SMT connection pin and positioning and stacking pin, and reduce the number of spacer tubes.</p> 

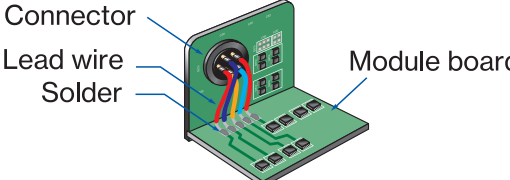
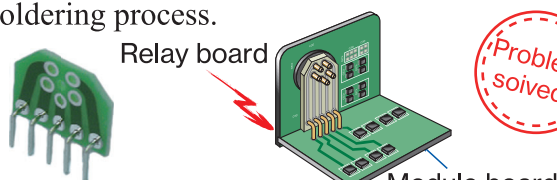
Problem Resolution Case Studies

Cases that responded to problem solving

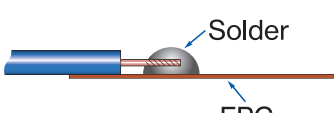
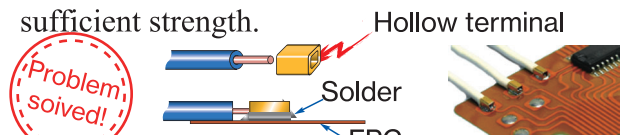
◆ Case 7 Metal board interface

Customer's request	ICREX proposal
<p>When we connect a daughter board to a metal motherboard, the reflow heat causes the metal to warp and shrink, which places stress on the solder and gives us a lot of problems with cracks and the like.</p>  <p>Metal board</p> <p>Warping, expansion contraction due to reflow heat</p>	<p>Change header terminal shape to a wave shape, reducing stress on the solder parts.</p>  <p>Wave pin header</p> <p>Problem solved!</p>

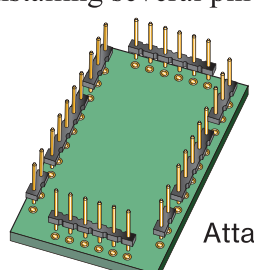
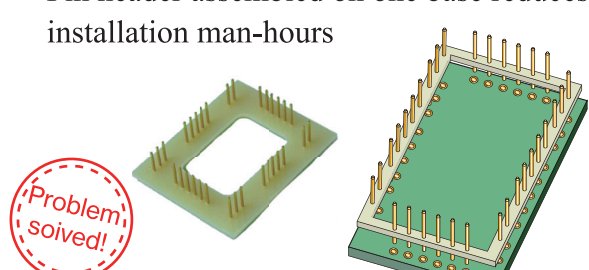
◆ Case 8 Board to board connection

Customer's request	ICREX proposal
<p>We are using lead soldering to make the board and connector connection, but it is very time consuming. Do you have any good ideas?</p>  <p>Connector</p> <p>Lead wire</p> <p>Solder</p> <p>Module board</p>	<p>Use a relay board with terminals to connect the terminals and module board, then the relay board and connectors, and do away with the lead wire soldering process.</p>  <p>Relay board</p> <p>Module board</p> <p>Problem solved!</p>

◆ Case 9 FPC and lead wire connection

Customer's request	ICREX proposal
<p>We solder lead wires onto FPC, but we cannot get sufficient strength.</p>  <p>Solder</p> <p>FPC</p>	<p>Mount a square, hollow terminal onto the FPC and then solder the lead wire to the terminal. The larger solder connection area will ensure sufficient strength.</p>  <p>Hollow terminal</p> <p>Solder</p> <p>FPC</p> <p>Problem solved!</p>

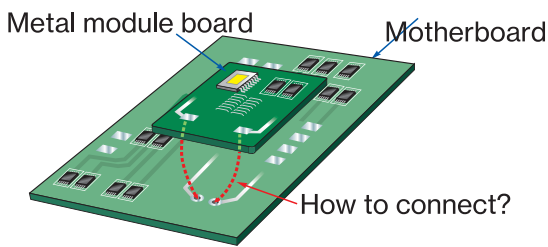
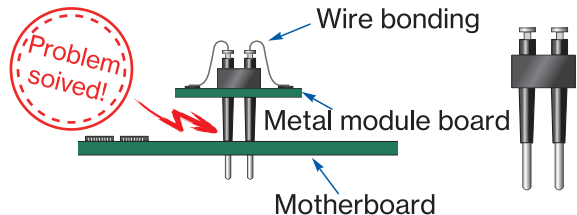
◆ Case 10 Reduced man-hours to install pin headers

Customer's request	ICREX proposal
<p>Installing several pin headers is troublesome...</p>  <p>Attach 8 pin headers of 4 types</p>	<p>Pin header assembled on one base reduces installation man-hours</p>  <p>Problem solved!</p>

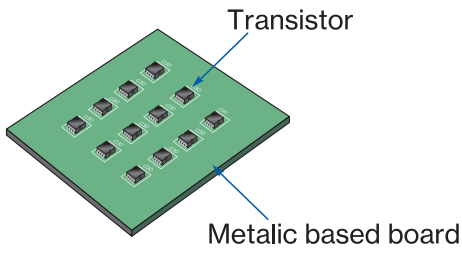
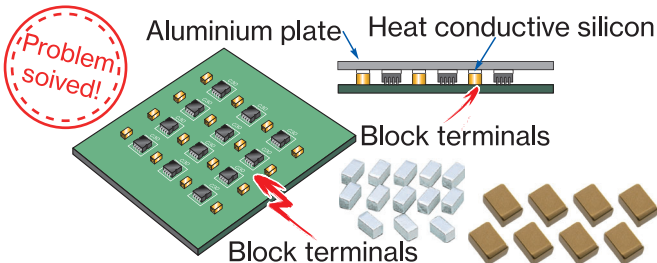
Problem Resolution Case Studies

Cases that responded to problem solving

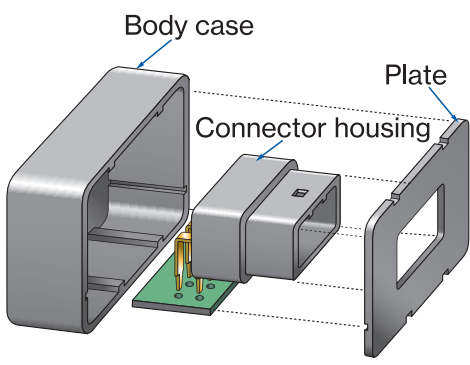
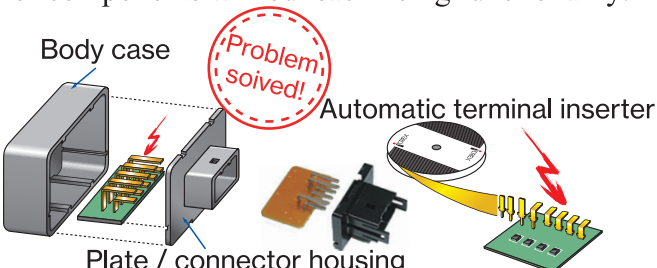
◆ Case 11 Wire bonding terminal

Customer's request	ICREX proposal
<p>We want to stack a metal module board onto a motherboard and connect the two with wire bonding. Any ideas?</p> 	<p>Use a special pin header with a flat section and connect the metal board and flat section of the pin with wire bonding, and then solder the metal module board to the motherboard after mounting.</p> 

◆ Case 12 Metal board heat dissipation

Customer's request	ICREX proposal
<p>I want to be able to efficiently dissipate the heat from a metallic based board within a limited module height.</p> 	<p>Arrange copper block terminals around the heat source and then dissipate the heat into an aluminium plate via heat conductive silicon!</p> 

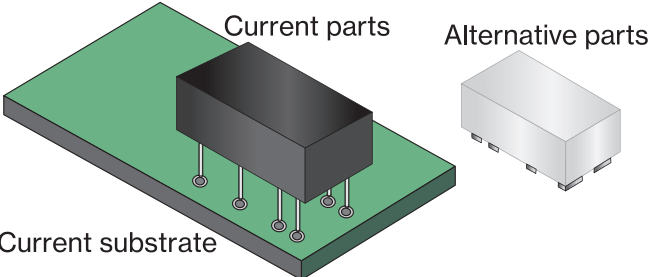
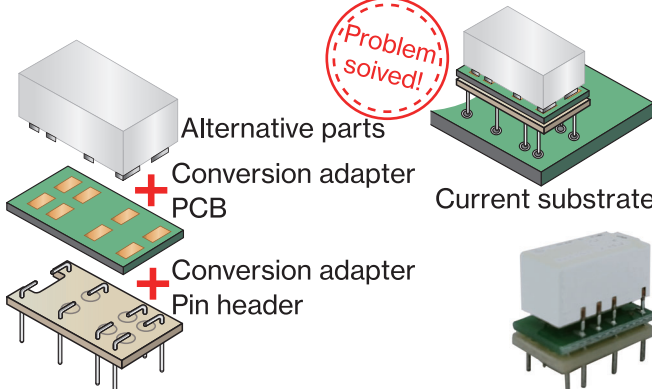
◆ Case 13 Connector housing components reduction

Customer's request	ICREX proposal
<p>We are manually mounting connectors onto the boards, but the cost is prohibitive. We want to reduce the work time and parts costs together to reduce total costs.</p> 	<p>Without using connector housings, the ICREX standard inserter will insert single terminals directly on to the board, vastly reducing the purchase price and reducing man-hours. Also, by combining the connector housings into one with the front case, you will be able to cut the number of components without sacrificing functionality.</p> 

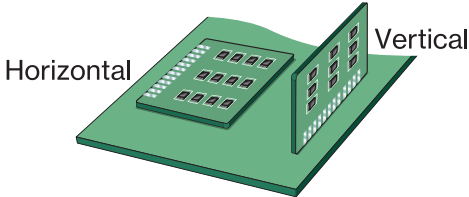
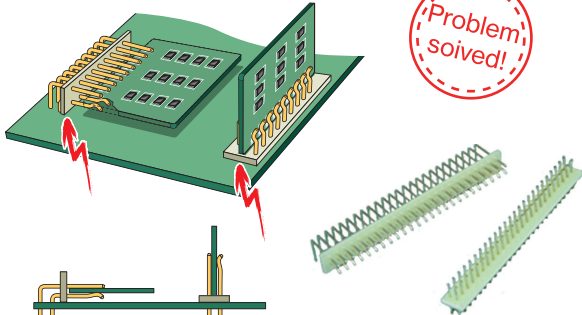
Problem Resolution Case Studies

Cases that responded to problem solving

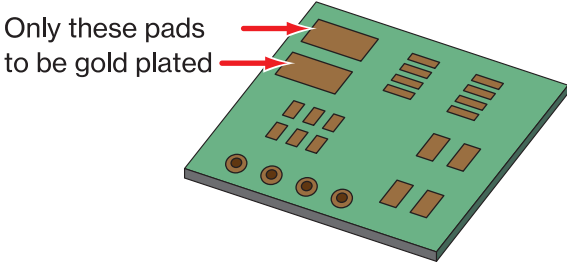
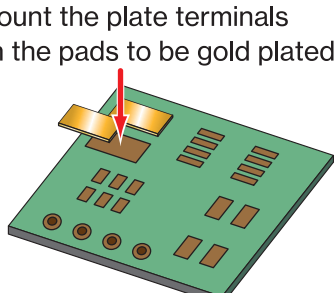
◆ Case 14 Conversion adapter

お客さまのお困りの声	解決
<p>The parts being used are discontinued from production, and the alternative parts are different in mounting system, pitch, and wiring. However, we can't change the current substrate..</p>  <p>Current parts Alternative parts</p> <p>Current substrate</p>	<p>Solved by conversion adapter</p>  <p>Alternative parts + Conversion adapter PCB + Conversion adapter Pin header</p> <p>Current substrate</p> <p>Problem solved!</p>

◆ Case 15 Daughter board connection

お客さまのお困りの声	解決
<p>We want to connect a daughter board and motherboard either horizontally or vertically, without making holes in the daughter board.</p>  <p>Horizontal Vertical</p>	<p>Put a spring action pin header on one side to hold the daughter board!</p>  <p>Problem solved!</p>

◆ Case 16 We want gold plating only where necessary

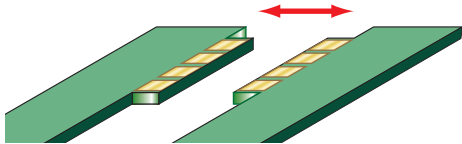
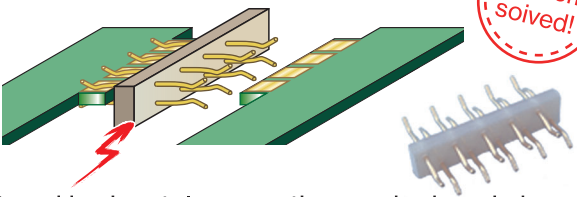
お客さまのお困りの声	解決
<p>Only some pads on the board need gold plating. Gold plating all of them or partially gold plating all of them would cost too much...</p>  <p>Only these pads to be gold plated</p>	<p>Solve this problem by mounting a plate terminal on the pad that needs gold plating. This will reduce costs when manufacturing boards.</p> <p>Mount the plate terminals on the pads to be gold plated</p>  <p>Problem solved!</p> <p>No burrs on front face (whole circumference curved)</p> <p>Side view</p>

● All of our products are RoHS compliant.

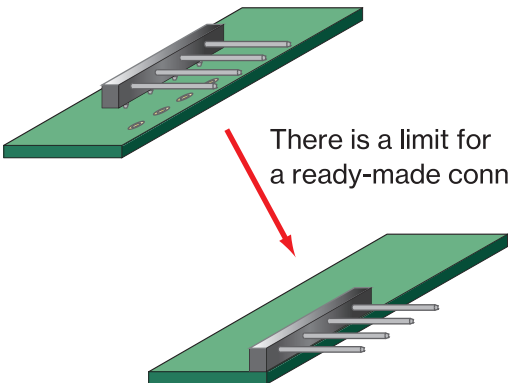
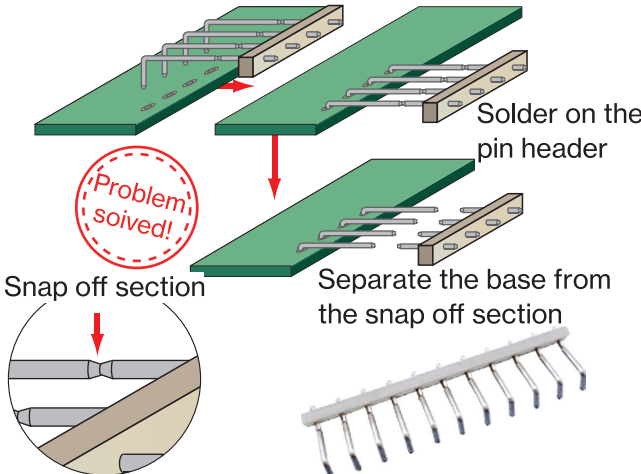
Problem Resolution Case Studies

Cases that responded to problem solving

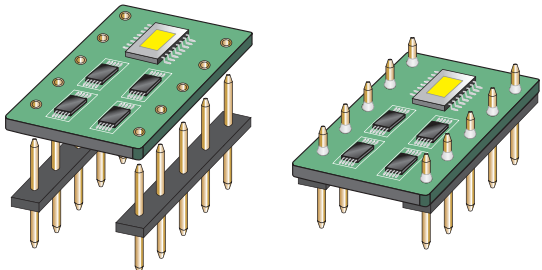
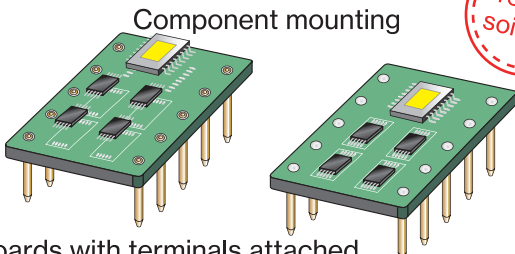
◆ Case 17 Board horizontal connecting pin header

お客さまのお困りの声	解決
<p>I want to connect the boards horizontally, but there is a height limit, and it is not possible to use a ready-made connector.</p>  <p>With a ready-made connector, the height is limited...</p>	<p>Connect board to board with a spring pin terminal card edge pin header.</p>  <p>Board horizontal connecting card edge pin header</p>

◆ Case 18 Snap-off solder type pin header

お客さまのお困りの声	解決
<p>We want to attach terminals as mechanical parts of a module board, but we are restricted by height, so we can't use pin headers...</p>  <p>There is a limit for a ready-made connectors...</p>	<p>The pin headers have the terminals lined up for easy soldering. After soldering to a module board, just snap off the unwanted base sections.</p>  <p>Solder on the pin header</p> <p>Snap off section</p> <p>Separate the base from the snap off section</p>

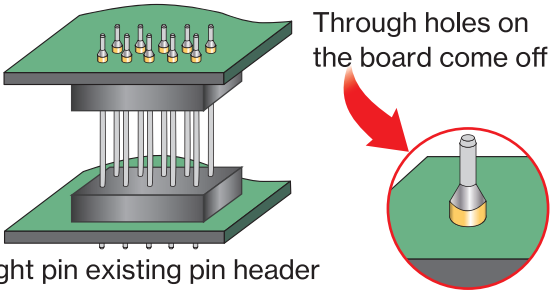
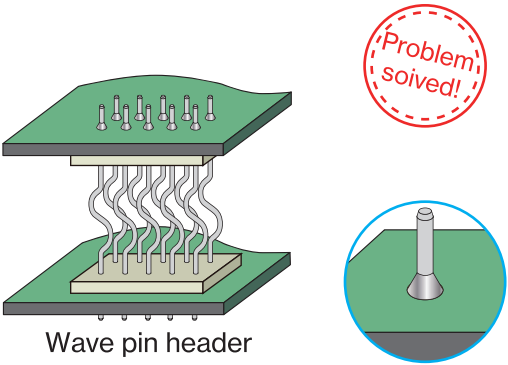
◆ Case 19 PCB with terminals inserted

お客さまのお困りの声	解決
<p>It is troublesome to attach the pin header in a separate process after component mounting ...</p>  <p>Attach pin header in later process</p>	<p>With this product, reflow soldering of mounting parts and terminals simultaneously.</p>  <p>Component mounting</p> <p>Boards with terminals attached</p>

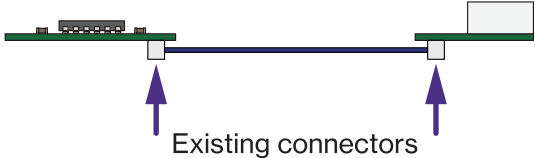
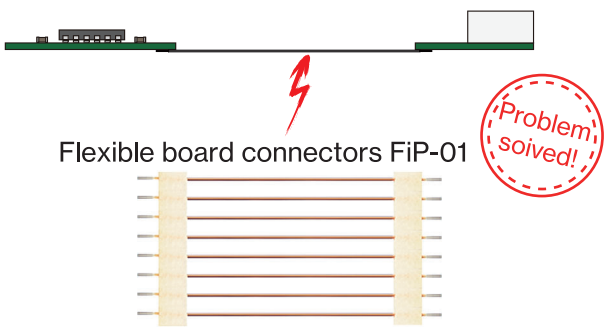
Problem Resolution Case Studies

Cases that responded to problem solving

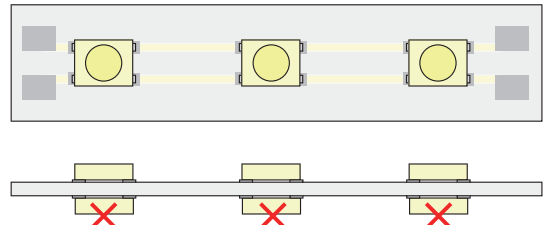
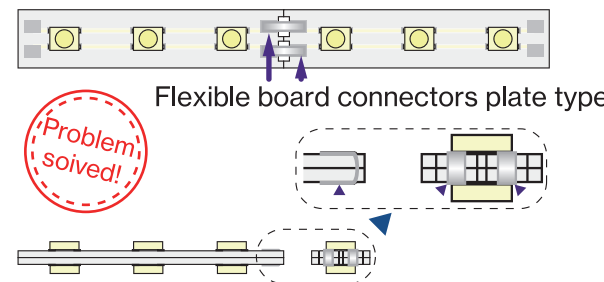
◆ Case 20 Stress relief on solder parts

お客さまのお困りの声	解決
<p>The stress such as temperature change causes the soldered part of the pin header to come off together with the board through hole</p>  <p>Through holes on the board come off</p> <p>Straight pin existing pin header</p>	<p>Stress relief with Wave pin header</p>  <p>Problem solved!</p> <p>Wave pin header</p>

◆ Case 21 Flexible board connectors

お客さまのお困りの声	解決
<p>Existing connectors are too big</p>  <p>Existing connectors</p>	<p>Even in a narrow place with Flexible board connectors</p>  <p>Problem solved!</p> <p>Flexible board connectors FiP-01</p>

◆ Case 22 Flexible board connectors Plate type


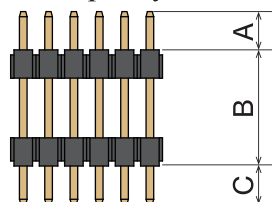
お客さまのお困りの声	解決
<p>I want to mount components on both sides, but there is a limit to the number of reflow times..</p>  <p>Reflow limit One part allows only one side to be reflowed.</p>	<p>A flexible plate-type terminal that connects single-sided boards and solves by aligning them back to back</p>  <p>Problem solved!</p> <p>Flexible board connectors plate type</p>

● All of our products are RoHS compliant.

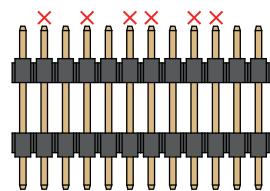
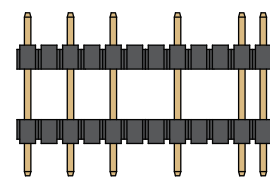
Problem Resolution Case Studies

Cases that responded to problem solving

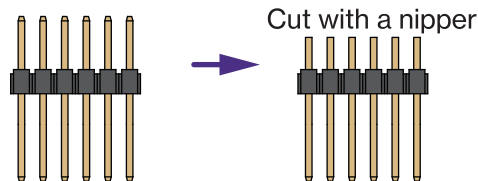
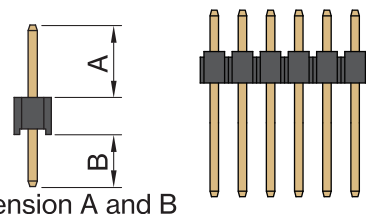
◆ Case 23 Countermeasures against semi-custom pin header discontinuity

Customer's request	ICREX proposal
<p>The off-the-shelf pin header is discontinuous and there is no substitute.</p> 	<p>Resolved with semi-custom pin headers that can specify dimensions.</p>  <p>Designate A, B and C dimensions to make them equivalent to ready-made products</p> <p>Problem solved!</p>

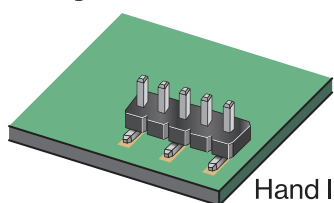
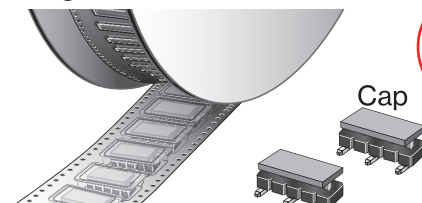
◆ Case 24 Semi-custom Pin Header Remove Pin Specifications

Customer's request	ICREX proposal
<p>A pin header with unwanted pin terminals removed is required.</p> <p>✗ Unnecessary</p> 	<p>Resolved with semi-custom pin header capable of pin removal specifications.</p>  <p>Problem solved!</p>

◆ Case 25 Semi-custom pin header dimension designation

Customer's request	ICREX proposal
<p>If the pin header is ready for use, the pin terminals are long and cut.</p> <p>It takes a lot of man-hours to complete..</p>  <p>Cut with a nipper</p>	<p>Designate dimensions with semi-custom pin headers to reduce pin terminal cut man-hours.</p>  <p>Dimension A and B</p> <p>Problem solved!</p>

◆ Case 26 Semi-custom pin header reel packaging

Customer's request	ICREX proposal
<p>The ready-made pin header cannot be mounted on the mounting machine, and it is soldered in a separate process, and it takes a lot of man-hours.</p>  <p>Hand loading, hand solder</p>	<p>Semi-custom pin headers that can be taped are used for reel packaging and are available on mounting machines.</p>  <p>Cap</p> <p>Problem solved!</p>

● All of our products are RoHS compliant.

