



PCB DIRECT CONNECTORS

for Automotive Specifications

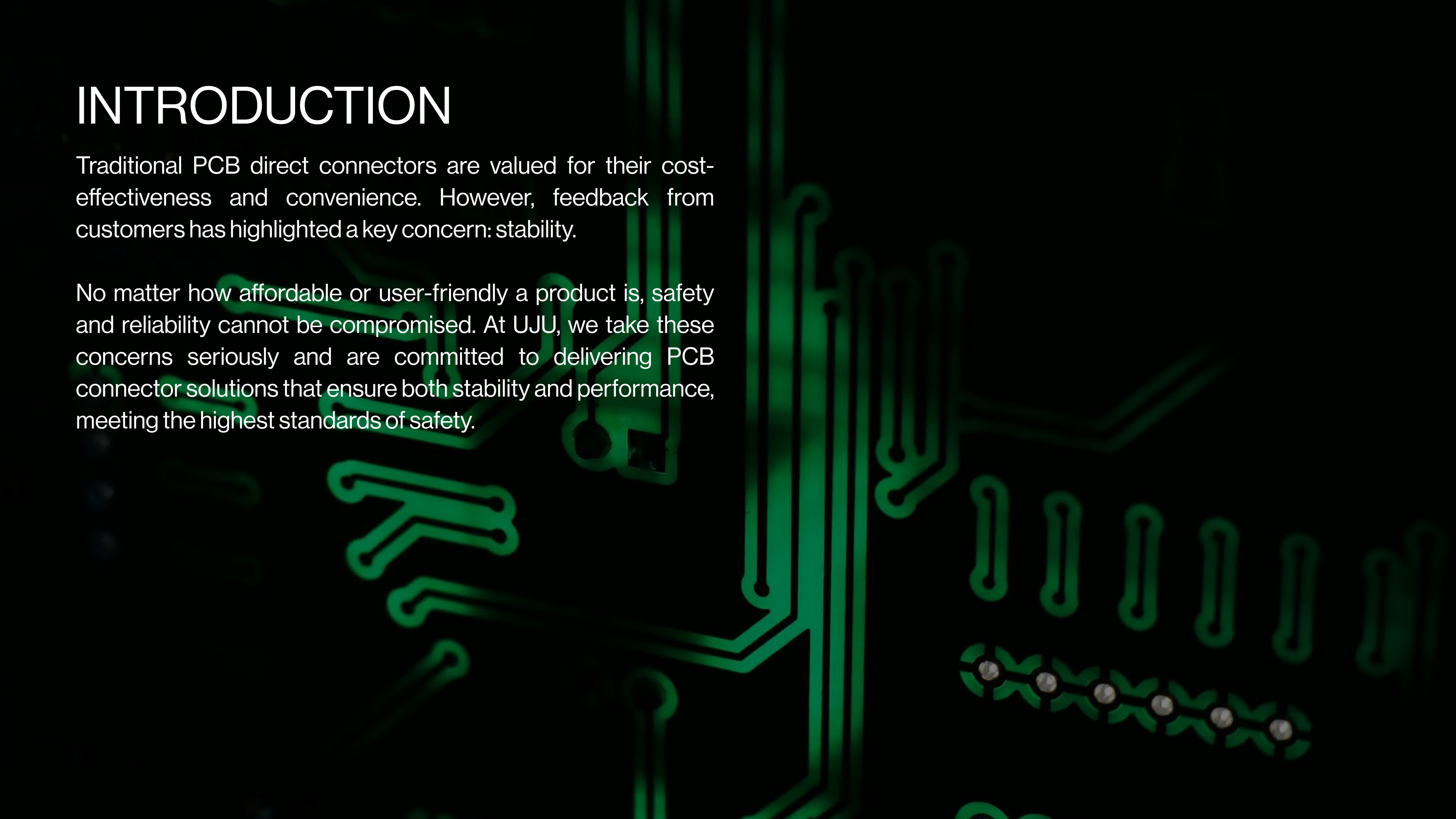
PCB SLOT

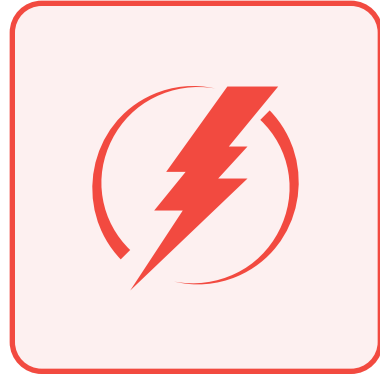


INTRODUCTION

Traditional PCB direct connectors are valued for their cost-effectiveness and convenience. However, feedback from customers has highlighted a key concern: stability.

No matter how affordable or user-friendly a product is, safety and reliability cannot be compromised. At UJU, we take these concerns seriously and are committed to delivering PCB connector solutions that ensure both stability and performance, meeting the highest standards of safety.





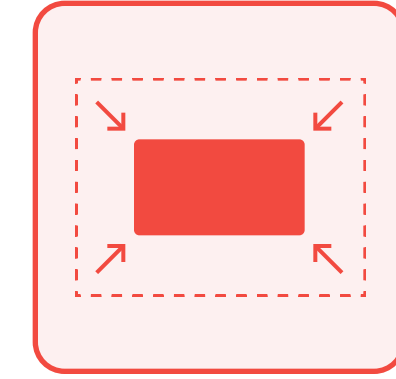
Electrical conductivity

Improved vibration-resistant conductivity



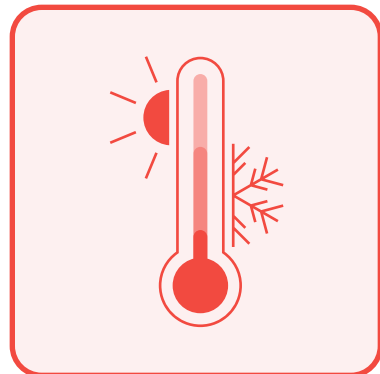
PCB Slot

Direct Mating



Creating Space

Maximized space-saving design



Temperature Resistance

Withstands extreme temperature conditions



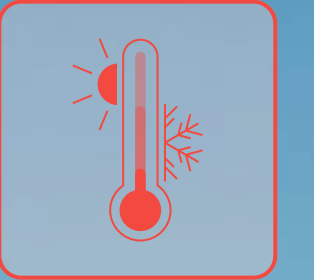
Cost Effective

Reduced costs, simplified production

Keyword 1

HIGH RELIABILITY

Driven by valuable customer feedback, UJU has taken significant steps to enhance the safety and durability of our PCB direct connectors. Our advanced PCB Slot offers a robust and reliable solution, engineered to perform in even the most extreme automotive environments.



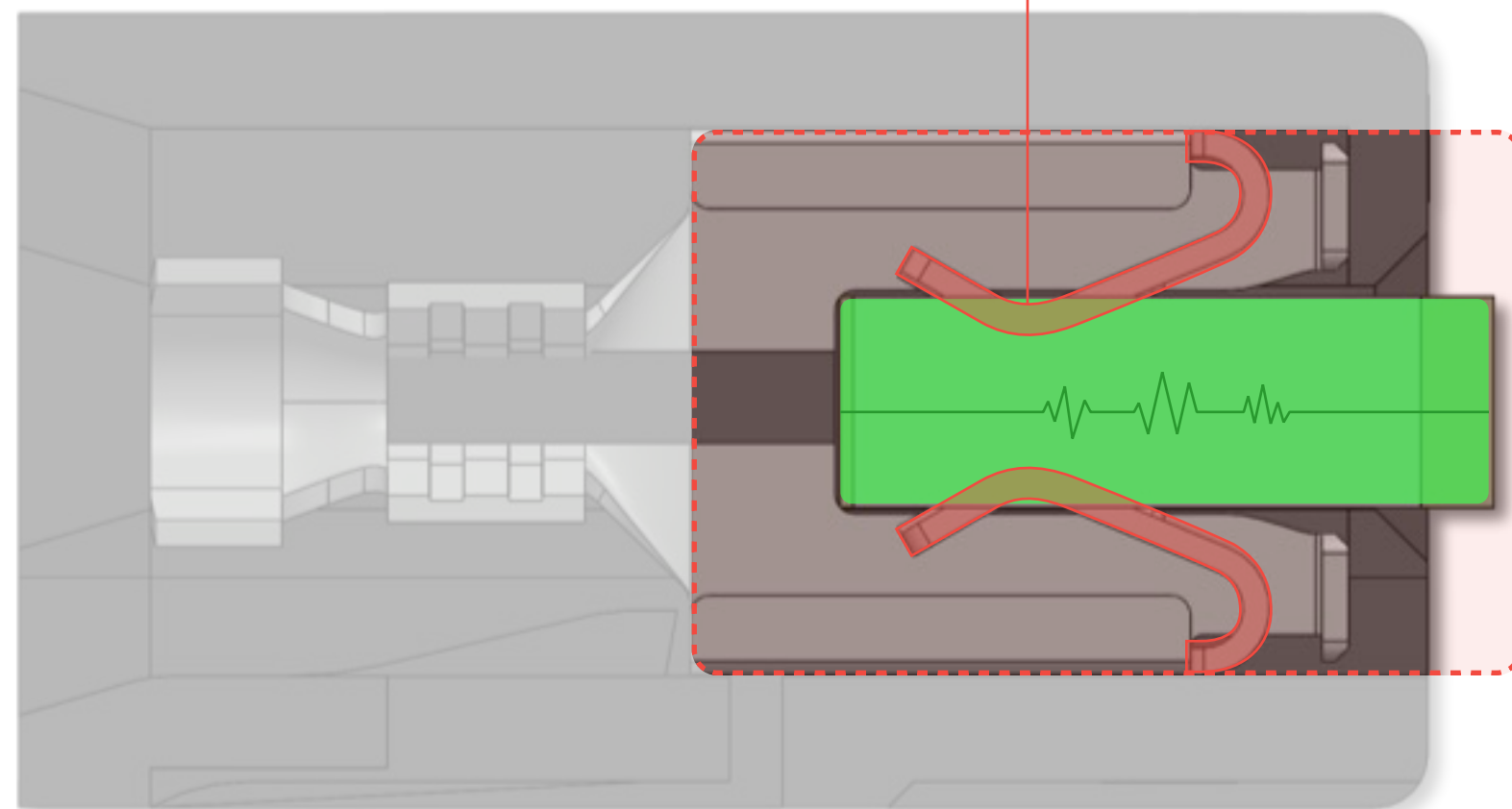
HIGH RELIABILITY

High electrical conductivity

Automobiles face constant vibrations during driving, which can disrupt the stable flow of electricity due to weakened conductivity. Recognizing this challenge, UJU has developed an advanced Fork Pin structure to prevent PCB movement.

This innovative design incorporates a Cantilever structure that maintains consistent tension at the contact points, ensuring minimal contact resistance and optimal electrical flow. UJU's solution delivers unparalleled reliability, even in the most demanding automotive environments

Fork Pin + Cantilever

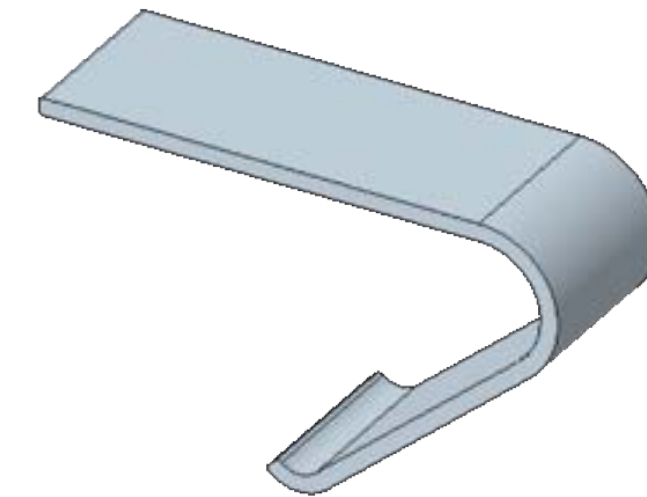


Electrical conductivity

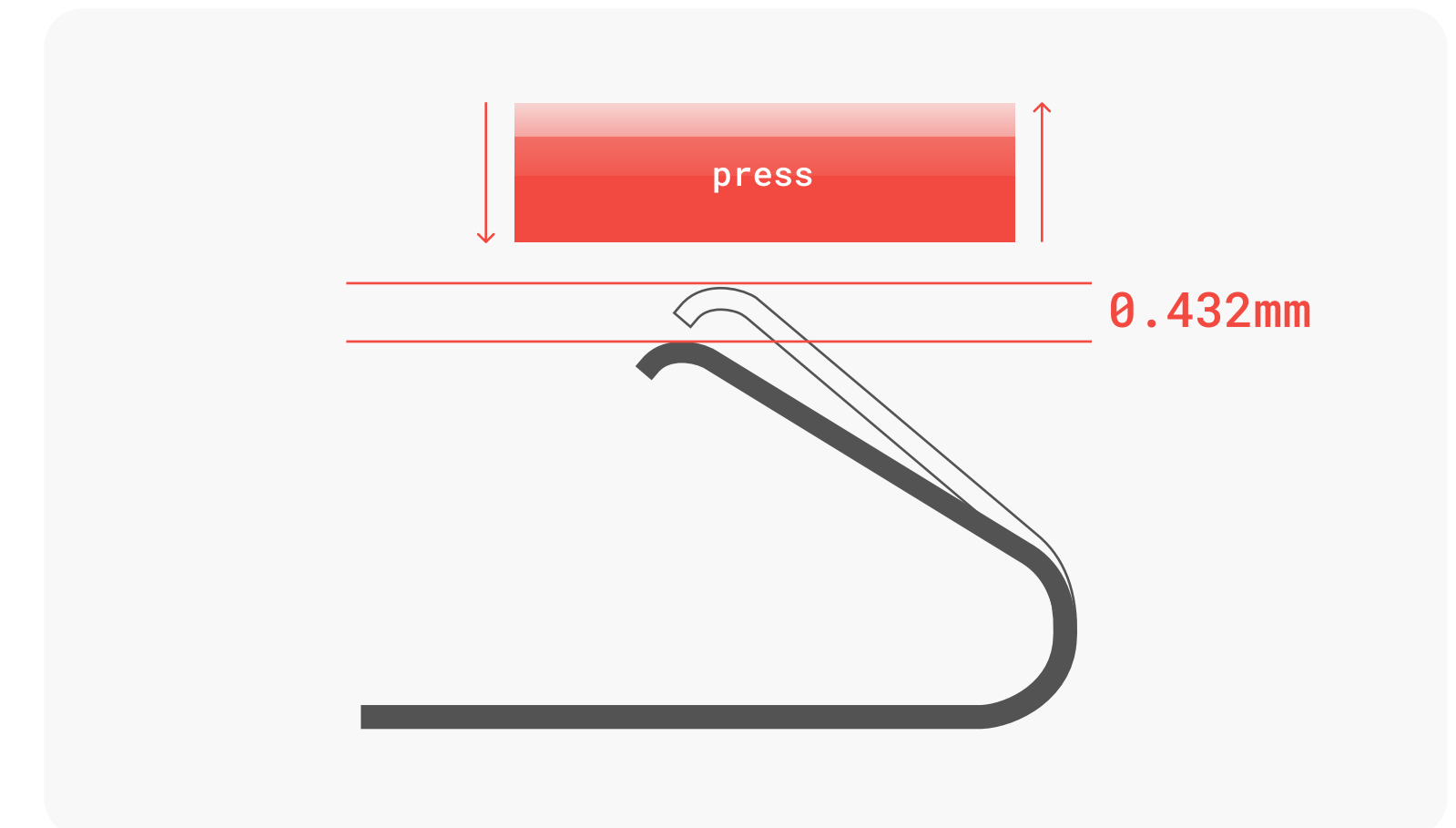
Improved vibration-resistant conductivity

Stress-strain test

Round Material



Permanent Deformation



HIGH RELIABILITY

High Temperature Resistance

Vehicles not only endure constant vibrations but are also regularly exposed to extreme temperatures, ranging from -40°C to 125°C. To address these challenges, UJU has rigorously tested and developed PCB connectors capable of withstanding such harsh conditions.

Our PCB Slot is engineered to perform reliably in the toughest automotive environments, meeting the stringent specifications and standards demanded by global automotive companies. With UJU, you get connectors designed for excellence and endurance in every condition.



ES91500-03

UJU ELECTRONICS

Product Validation Test

GMW3191

UJU ELECTRONICS

Product Validation Test

USCAR2

UJU ELECTRONICS

Product Validation Test

TEST NAME :

A - Term. - Term. Engage/Disengage Force

B - Terminal Bend Resistance

C - Current Cycling

D - Term.-Conn. Insertion/Retention

E - Misc. Component Engage /Disengage

F - Audible Click

G - Conn. Conn Mating/Un-mating

H - Polarization Effectiveness

I - Drop

J - Cavity Damage

K - Header Pin Retention

L - Mounting Feature Strength

M - Vibration/ Mechanical Shock

N - Thermal Shock

O - Temp./Humidity

P - High Temp Exposure

Q - Fluid Resistance

R - Temp/Humidity-Submersion

S - Temp/Humidity-PV Leak

RSAA - Temp./Humidity - PV Leak, Submersion, High Pressure Spray

T - High Temp. Exposure - Submersion

U - High Temp. Exposure - P/V Leak

TUAB - High Temp. Exposure - PV Leak, Submersion, High Pressure Spray

V - Temp/Humidity

W - Pressure/Vacuum (Stand Alone)

X - Mechanical Assist Integrity

ility Engagement Force

sistance

and Resistance

t Rating

ycling

nals Only)

actor Engagement Force

nnector Extraction Force

polarization

nnector Engagement Force

ing Force (Open Position)

(Robustness (Prior to Mate)

ing Feature Mechanical Strength

le Feedback

Mechanical Overstress (Wire Snagging)

etention:Mated Connector

etention:Unmated Connector

for Disengagement Force

ation(Coding)) and Mis-mating Feature Effectiveness

armal Cycling

al-ability

al-ability

y

Seal-ability

ad Metallic Components Only

olation Resistance

olation Resistance

c Isolation Resistance

ad Metallic Components Only

ectrical

c Electrical

(If Required)

and disengage force

between housings

between terminal to housings

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Force

ce

d Voltage

ibility

erature shock test

midity Constant

midity Cycle

it

ent endurance test

f reflow soldering

PASSED

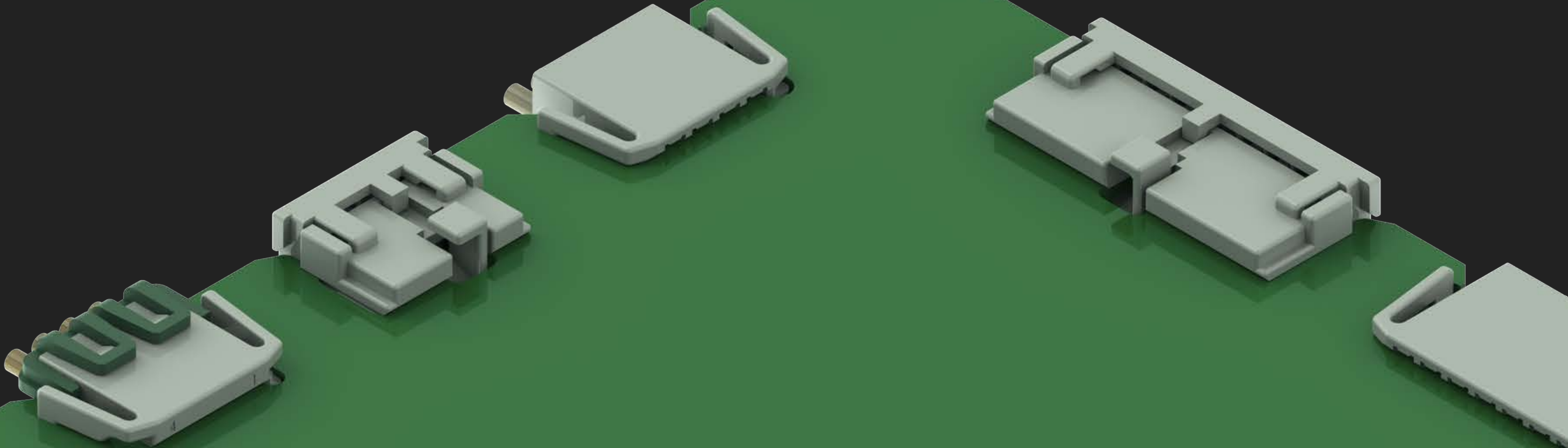
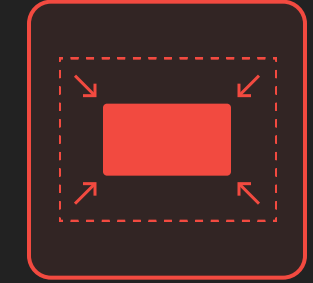
PASSED

*USCAR2 / GMW3191 / ES91500-03

Keyword 2

DIRECT MATING

At UJU, we've significantly enhanced the stability of our PCB Slots while preserving their key advantages. By maintaining the ability to directly attach to the PCB, our connectors offer improved space efficiency and help reduce costs—delivering a reliable and economical solution without compromise.

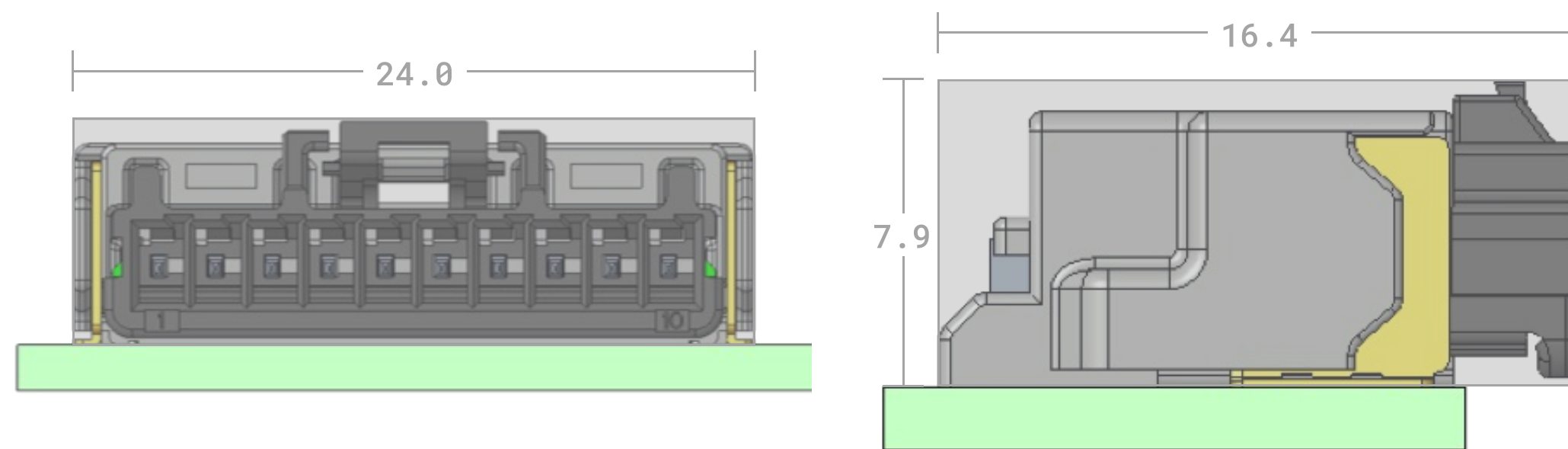


DIRECT MAITING

Creating Space

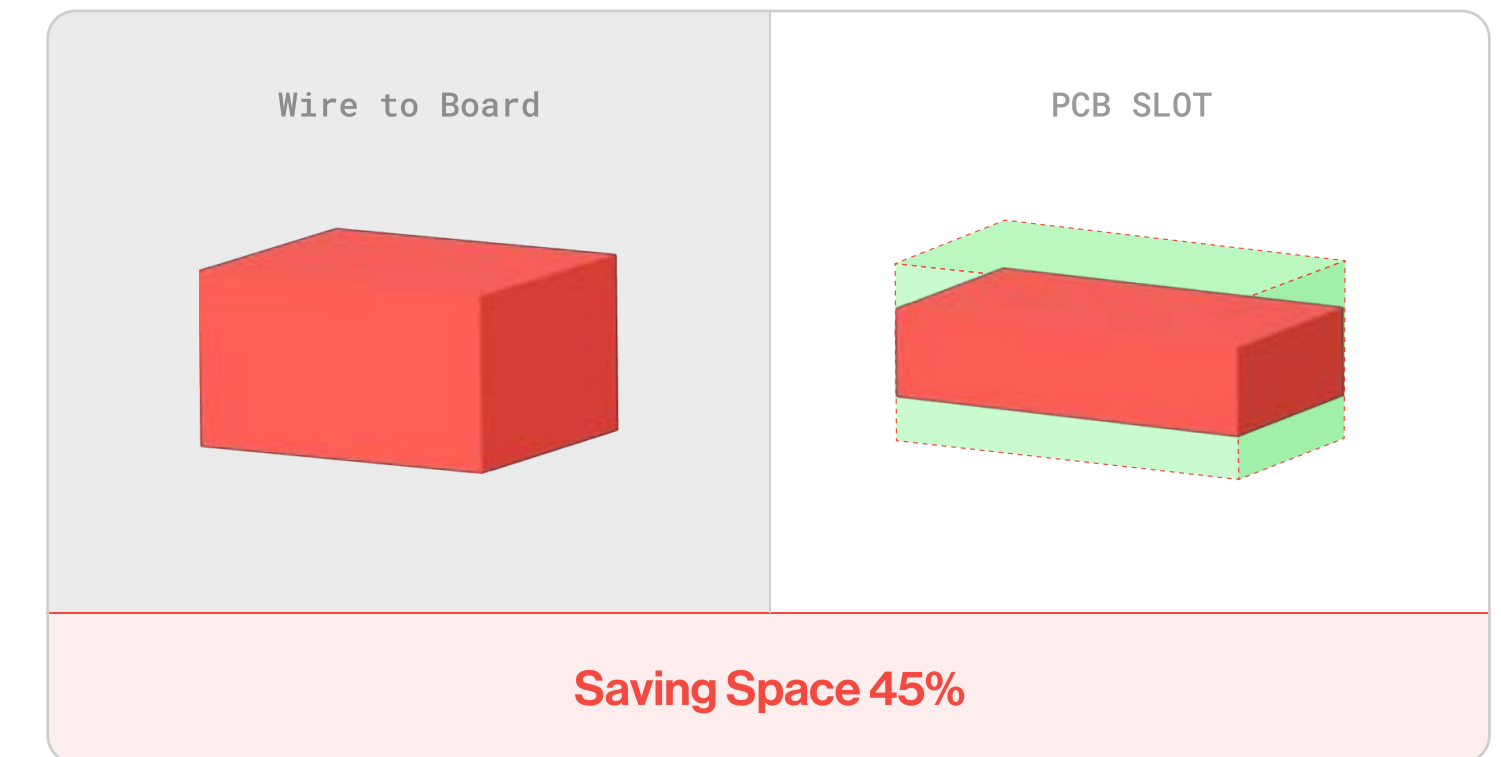
Designing for small-scale applications often involves integrating multiple functions into limited spaces, posing a significant challenge for engineers. Efficient space utilization is key in these scenarios. Unlike SMT connectors, which demand extra room for counterpart components, UJU PCB Slots connect directly to the PCB. This direct connection streamlines the design process and offers substantial space-saving advantages, making them an ideal choice for compact applications.

Wire to board connector (10P)

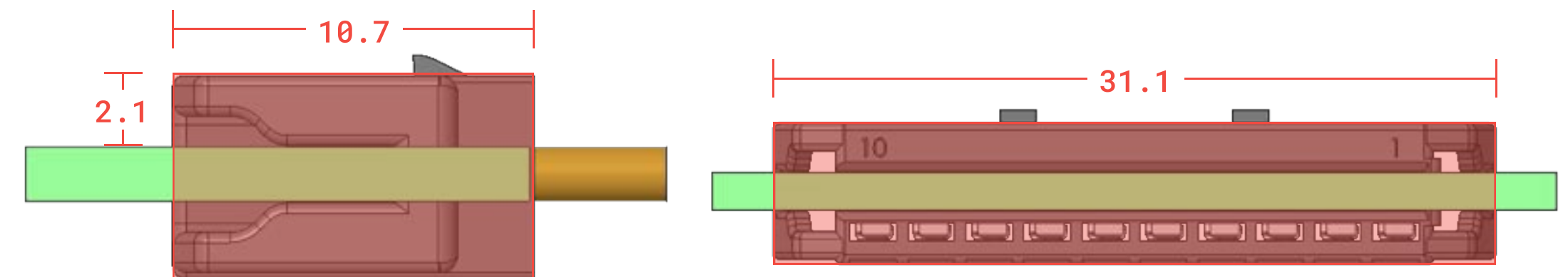


$$16.4 \times 7.9 \times 24.0 =$$

$$3,110 \text{ mm}^3$$



PCB Slot (10P)



$$10.7 \times 2.1 \times 31.1 \times 2 =$$

$$1,400 \text{ mm}^3$$

DIRECT MAITING

Cost Effective

By eliminating the need for additional counterpart components, UJU PCB Slots provide a dual benefit: reduced connector costs and a simplified design process. The ability to connect directly to the PCB streamlines assembly, resulting in a significant boost in productivity. With UJU, you achieve a cost-efficient, high-performing solution tailored for modern design needs.

Wire to board connector



- Requires an SMT process.
- Involves the assembly of Product 1 and Product 2.
- A total of two products is necessary.

PCB Slot



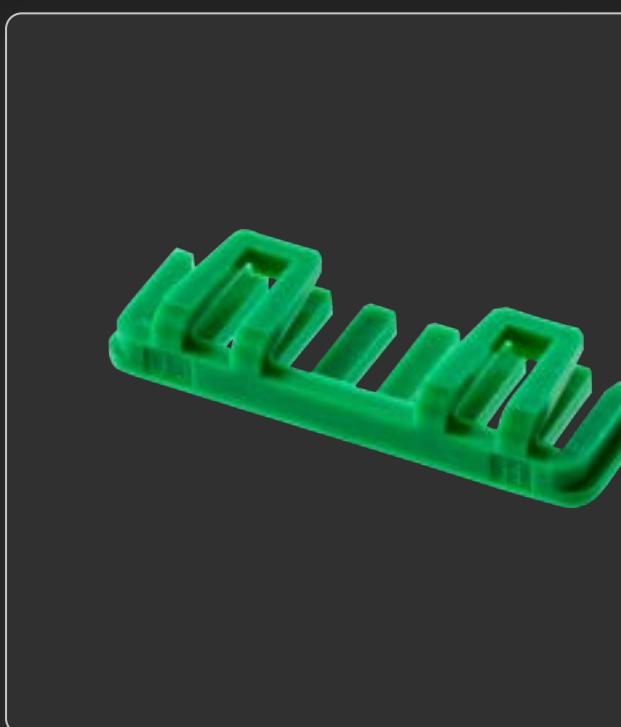
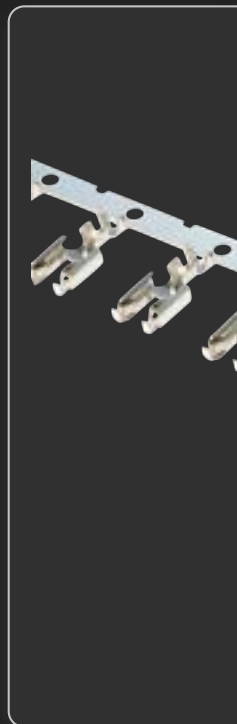
- **Does not require an SMT process.**
- **No assembly process is needed.**
- **Can function with just one product.**

Keyword 3

SCALABILITY

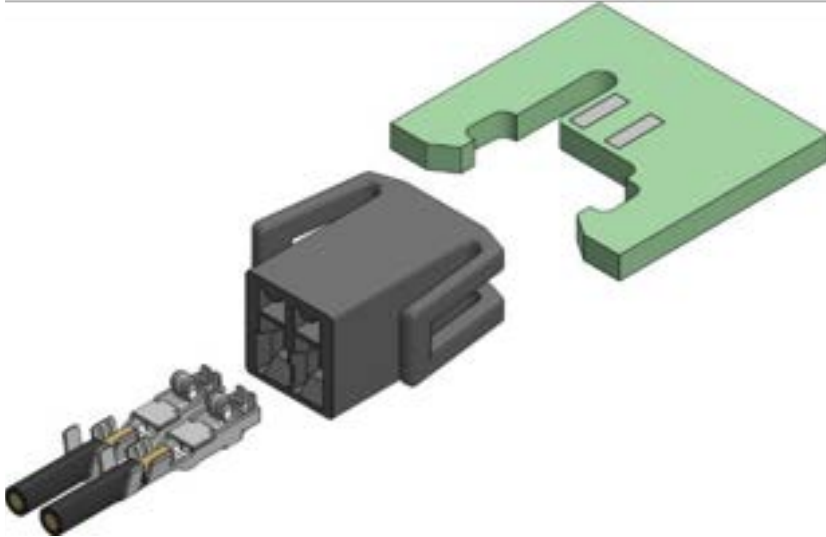
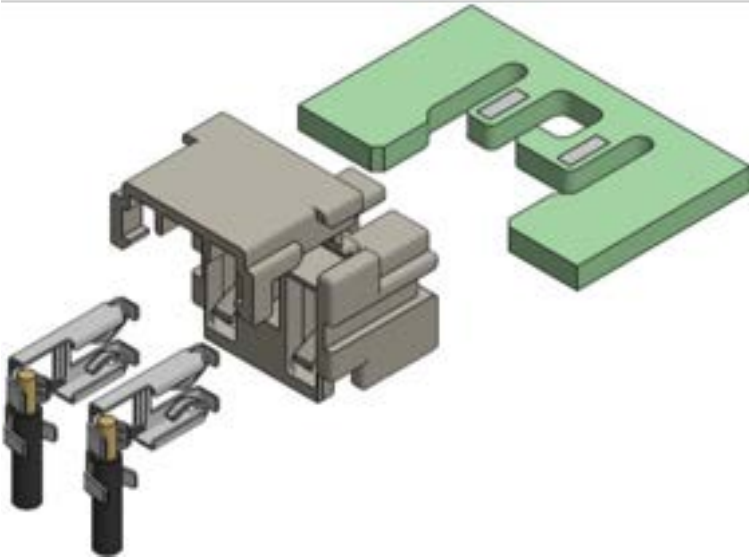


PCB Slots deliver unmatched flexibility in design, offering a variety of pin configuration options and vertical or horizontal types. This adaptability enhances scalability and provides engineers with greater freedom to implement solutions tailored to diverse environments.

With UJU PCB Slots, you can create designs that are both versatile and optimized for a wide range of applications.



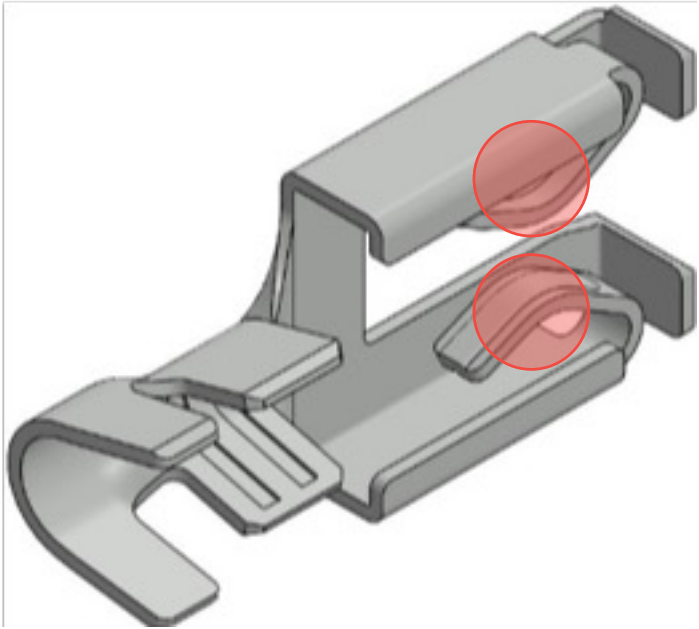
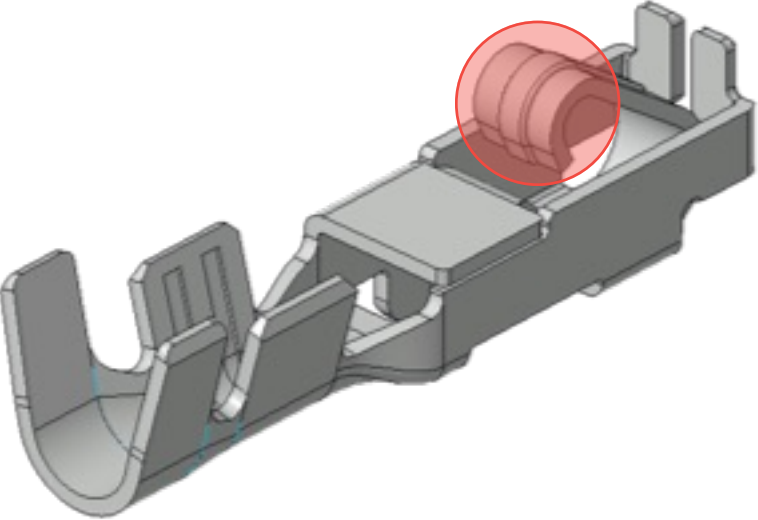
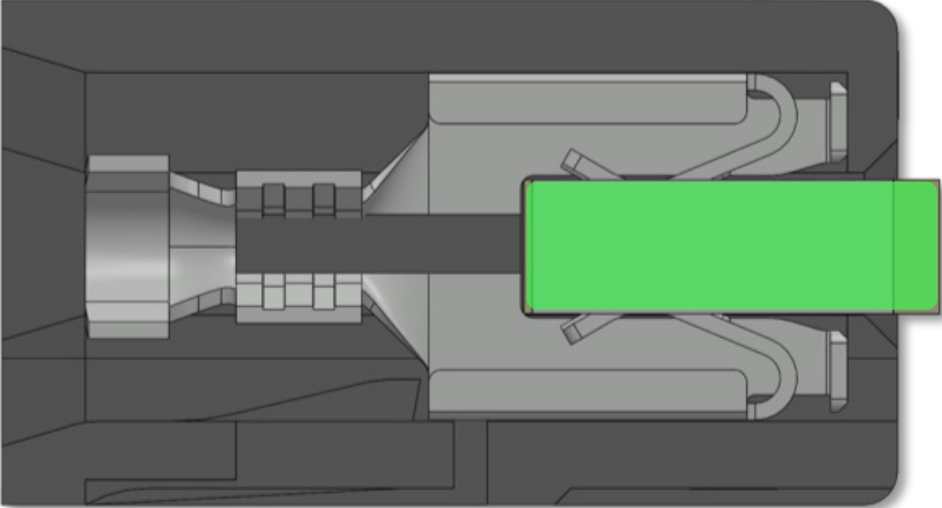
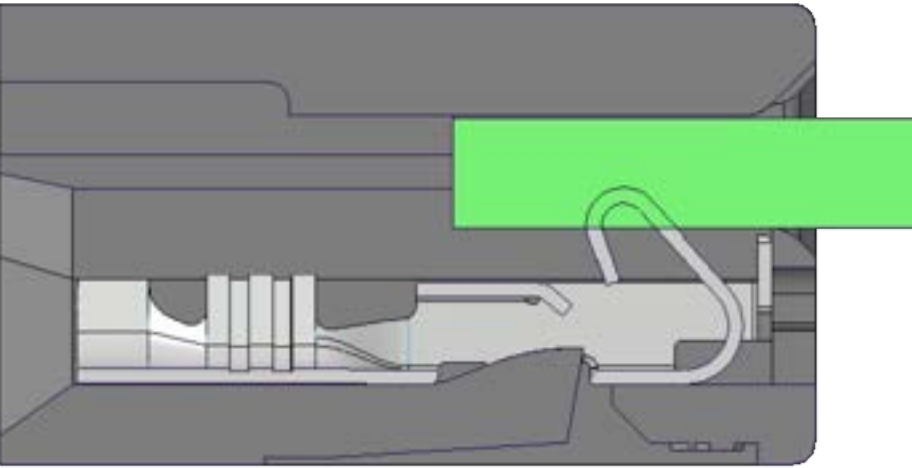
SCALABILITY

PCB Slot HZT & VTC

PCB Slot Horizontal	PCB Slot Vertical
	
	

SCALABILITY

PCB Slot One & Two contact

PCB Slot Two-sided contact	PCB Slot One-sided contact
	
	

MORE DETAILS

At UJU, we specialize in providing customized PCB connector solutions designed to meet your specific requirements. Whether you're tackling complex design challenges or looking for enhanced reliability, our experts are here to help. Contact us today and let us craft the perfect solution for your needs!

PCB Slot Contact Page	↓
PCB Slot Vertical Page	↓
PCB Slot Horizontal Page	↓

