

High Current Solutions

C.C.P. offers a patented solution for high current pogo pin testers that can be used in a variety of applications such as EV Battery testing or other industrial applications. The design is customizable and can be fitted to your specific requirements. The design offers a much more reliable current flow and reduces the wear on the tester significantly.

Design Concept

Double-Ended High Current Probe for IC Testing



Current Path of...

Normal pin: Blue line

High current pin: Red line

Taiwan Patent No. M453149

Generally, the current runs from the bottom plunger through the barrel wall to the top plunger. Due to that, the contact resistance between the wall and plunger will increase gradually. This can cause the spring to burn and lead to a failure at higher currents. The straight plunger in the center of the high current pin allows the current to take a direct route, to the top plunger and in consequences avoids flowing through the spring during testing.

Single High Current Pin for Lithium Battery Testing



CCP developed a special design which is different from standard testing pins to improve the current carrying capabilities of our high current pin.

Coaxial High Current Pin for Lithium Battery Testing

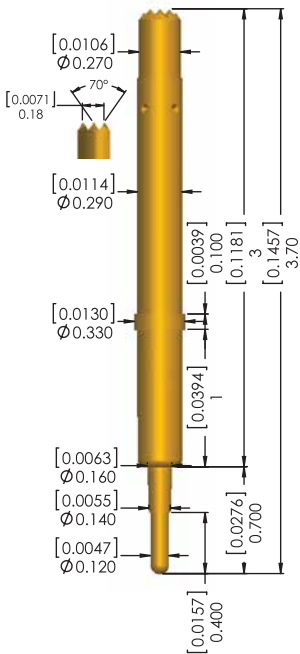


This coaxial high current pin combines a sensor pin with a current test pin in one probe design. The one-piece design of the current test pin improves the electrical resistance significantly.

Probe Specifications (IC Testing Probe)

Unit:mm; []:in

DE4-029DW25-01A0



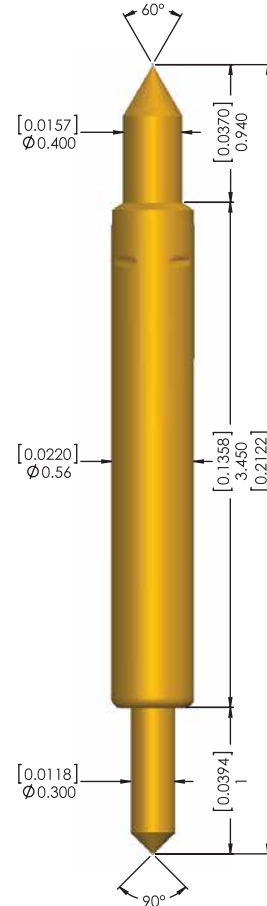
Material

Top Plunger
BeCu , Au plated
Barrel
PhBz , Au plated
Spring
SUS , Au plated
Bottom Plunger
BeCu , Au plated

Mechanical Spec.

Recommended Travel
0.40mm
Full Travel
0.70mm
Spring Force
25g±20%@0.40mm
Operating Temp.
-55°C~150°C

DE3-056BE34-01A0



Material

Top Plunger
BeCu , Au plated
Barrel
Brass , Au plated
Spring
SUS , Au plated
Bottom Plunger
BeCu , Au plated

Mechanical Spec.

Recommended Travel
0.67mm
Full Travel
0.95mm
Spring Force
35g±20%@0.67mm
Operating Temp.
-55°C~150°C

Electrical Spec.

Pitch: 0.5mm Socket Material: Peek 1000



Current Rating 3A continuous
Contact Resistance <75mΩ(AVG)
Characteristic Impedance 52.7 Ω
Insertion Loss -1dB>20GHz
Return Loss -20dB@10GHz
Time Delay 18.97 psec
Loop Inductance 1.00 nH
Capacitance 0.36 pF

Electrical Spec.

Pitch: 0.8mm Socket Material: Peek 1000

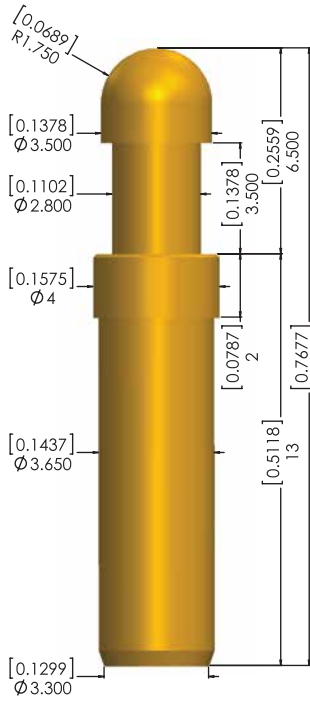


Current Rating 5A continuous
Contact Resistance <75mΩ(AVG)
Characteristic Impedance 32.1Ω
Insertion Loss -1dB@6.27GHz
Return Loss -20dB@1.2GHz
Time Delay 29.5 psec
Loop Inductance 0.95 nH
Capacitance 0.92 pF

Probe Specifications (Battery Testing Probe)

Unit:mm; []:in

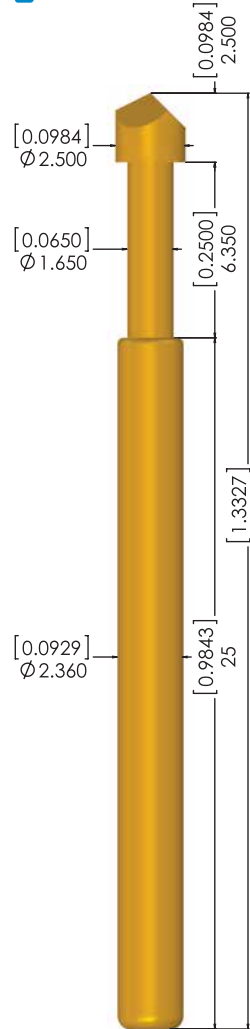
H101001M1



Material
Plunger
 BeCu , Au plated
Barrel
 Brass , Au plated
Spring
 SUS , Au plated

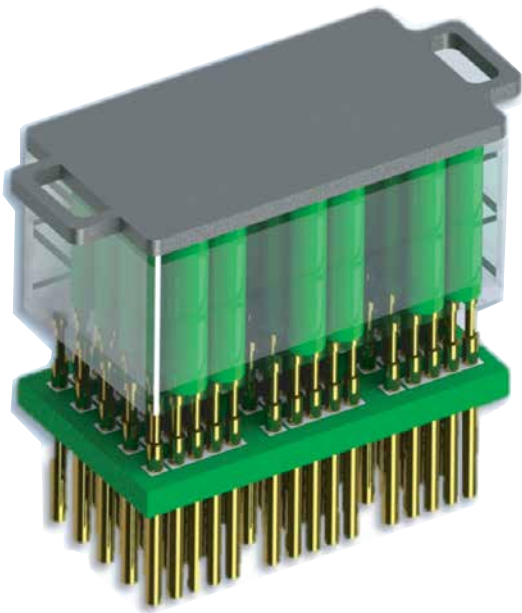
Mechanical Spec.
 Recommended Travel
 2.30mm
 Full Travel
 3.5mm
 Spring Force
 250g±20%@2.3mm
 Operating Temp.
 -55°C~150°C
Current Rating
 10 A

S-11T1-2545G



Material
Plunger
 BeCu , Au plated
Barrel
 Brass , Au plated
Spring
 SUS , Au plated

Mechanical Spec.
 Recommended Travel
 4.20mm
 Full Travel
 6.35mm
 Spring Force
 450g±20%@4.20mm
 Operating Temp.
 -55°C~150°C
Current Rating
 6 A

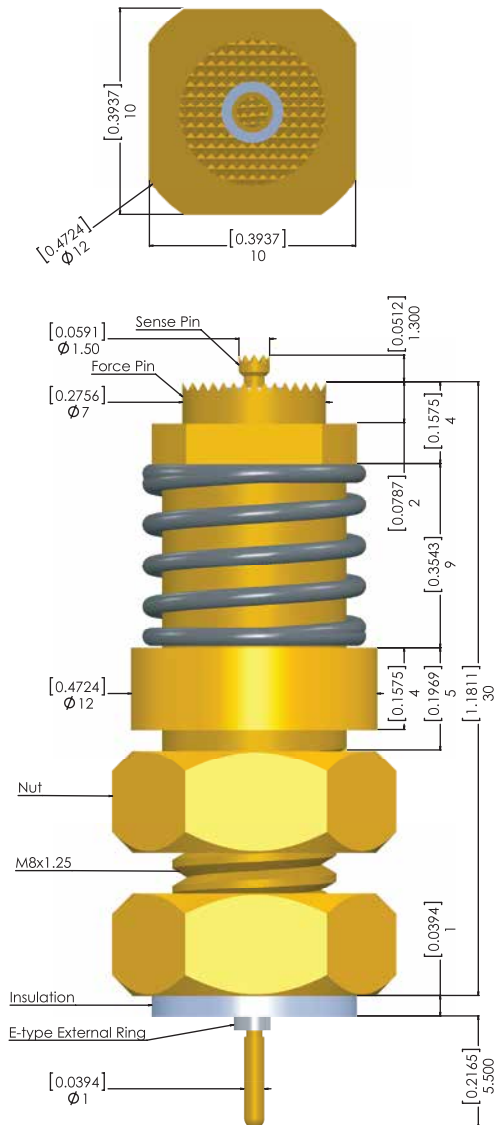


Application Demonstration

Probes touch the PCB to close the circuits and activate the lithium battery.

Probe Specifications (Battery Testing Probe)

Unit:mm; []:in



H050002M0

Material

- Sense Pin
- Plunger
BeCu , Au plated
- Barrel
PhBz , Au plated
- Spring
SUS , Au plated
- Force Pin
- Plunger
BeCu , Au plated
- Barrel
Brass , Au plated
- Spring
SUS , Au plated

Mechanical Spec.

- Sense Pin
- Recommended Travel
1.00mm
- Full Travel
1.50mm
- Spring Force
90g±20%@1.00mm
- Force Pin
- Recommended Travel
4.00mm
- Full Travel
6.00mm
- Spring Force
700g±20%@4.00mm

- Nut
BeCu , Au plated
- Insulation
Teflon

Current Rating
50 A



Application Demonstration

We are able to customize our probes to meet your current carrying requirements. Several patented designs and proprietary, industry leading plating technologies will offer you the right solution for your application.