

Burn In Test

The Burn-In test will expose the DUT (device under test) to harsh conditions: 150°C; relative humidity (RH): 85 rh; current rating: 1A continuous for 1000 hrs. In order to withstand conditions like that, C.C.P. modifies the plating material and core material. C.C.P. splits the socket into two parts: The standard part and the machining part. The standard part is manufactured by insert molding and holds the machining part which is customized according to the customers' IC design and made by CNC. The pins for the burn-in solution use a special material (WJ3) that shows an exceptional hardness and is able to withstand the demanding conditions posed by the Burn-In test.

Design Concept



Pogo Type Burn-in Socket

Burn in Socket	Specification
IC Size	<15x15 mm ²
Min. Pitch	0.3
Body Material	PES (Black)
Housing Material	Ultem2300
Operating Temperature	-55°C~180°C

C.C.P. splits the socket into a standard part and a machining part. The standard part is processed by insert molding while the machining part is manufactured by CNC according to IC's size. This shortens the development time and reduces the mold tooling cost. C.C.P. can customize the sockets according to your needs.



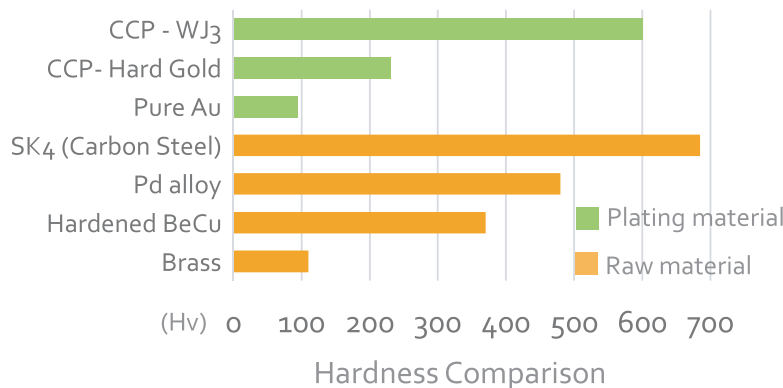
Standard Part



Customized part

Manufactured according to IC size

Plating / Raw Material

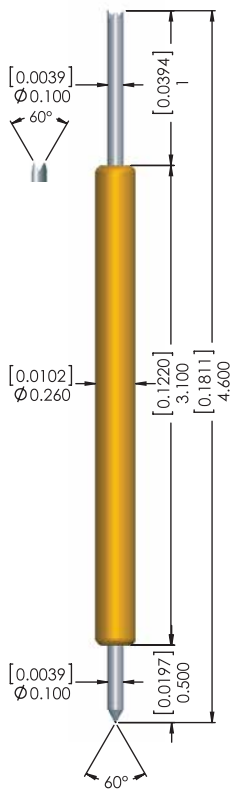


Commonly used in burn in test solution, WJ3 is a special plating material developed by C.C.P. and usually plated on the DUT side plunger. Besides high hardness, WJ3 is able to perform steadily in severe testing environments that reach 150°C for 1000 hours possibly even for 3000 hours.

Probe Specifications

Unit:mm; []:in

WE1-026EF31-01A0



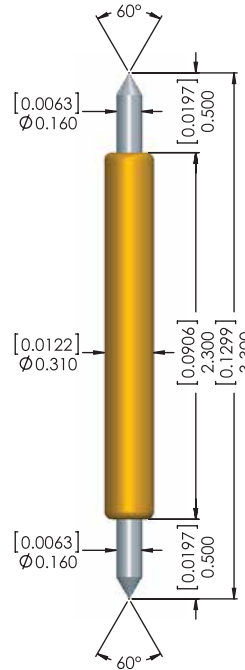
Material

- Top Plunger: BeCu, WJ₃ plated
- Barrel: PhBz, Au plated
- Spring: SUS, Au plated
- Bottom Plunger: BeCu, WJ₃ plated

Mechanical Spec.

- Recommended Travel: 0.50mm
- Full Travel: 0.80mm
- Spring Force: 20g±20% @ 0.50mm
- Operating Temp.: -55°C~175°C

WE1-031BB23-01A0



Material

- Top Plunger: BeCu, WJ₃ plated
- Barrel: PhBz, Au plated
- Spring: SUS, Au plated
- Bottom Plunger: BeCu, WJ₃ plated

Mechanical Spec.

- Recommended Travel: 0.50mm
- Full Travel: 0.70mm
- Spring Force: 30g±20% @ 0.50mm
- Operating Temp.: -55°C~175°C

Electrical Spec.



Pitch: 0.4mm Socket Material: Peek 1000

- Current Rating: 1A continuous
- Contact Resistance: <175mΩ(AVG)
- Characteristic Impedance: 57Ω
- Insertion Loss: -1dB>20GHz
- Return Loss: -20dB@8.38GHz
- Time Delay: 23.4 psec
- Loop Inductance: 1.34 nH
- Capacitance: 0.41 pF

Electrical Spec.



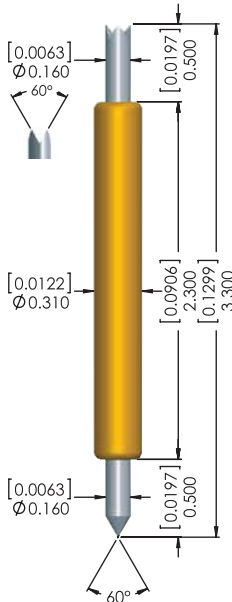
Pitch: 0.4mm Socket Material: Peek 1000

- Current Rating: 1.5A continuous
- Contact Resistance: <175mΩ(AVG)
- Characteristic Impedance: 40.8Ω
- Insertion Loss: -1dB>20GHz
- Return Loss: -20dB@5.3GHz
- Time Delay: 15.9 psec
- Loop Inductance: 0.65 nH
- Capacitance: 0.39 pF

Probe Specifications

Unit:mm; []:in

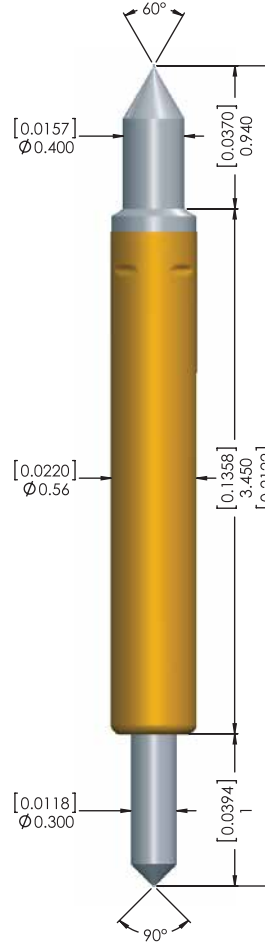
WE1-031BF23-01A0



Material
 Top Plunger: BeCu , WJ₃ plated
 Barrel: PhBz , Au plated
 Spring: SUS , Au plated
 Bottom Plunger: BeCu , WJ₃ plated

Mechanical Spec.
 Recommended Travel: 0.50mm
 Full Travel: 0.70mm
 Spring Force: 30g±20%@0.50mm
 Operating Temp.: -55°C~175°C

WE3-056BE34-02A0



Material
 Top Plunger: BeCu , WJ₃ plated
 Barrel: Brass , Au plated
 Spring: SUS , Au plated
 Bottom Plunger: BeCu , WJ₃ plated

Mechanical Spec.
 Recommended Travel: 0.67mm
 Full Travel: 0.90mm
 Spring Force: 35g±20%@0.67mm
 Operating Temp.: -55°C~175°C

Electrical Spec. **G S G**

Pitch: 0.4mm Socket Material: Peek 1000

- Current Rating 1.5A continuous
- Contact Resistance <175mΩ(AVG)
- Characteristic Impedance 33.72Ω
- Insertion Loss -1dB@12.51GHz
- Return Loss -20dB@2.49GHz
- Time Delay 17.2 psec
- Loop Inductance 0.58 nH
- Capacitance 0.51 pF

Electrical Spec. **G S G**

Pitch: 0.8mm Socket Material: Peek 1000

- Current Rating 5A continuous
- Contact Resistance <75mΩ(AVG)
- Characteristic Impedance 32.1Ω
- Insertion Loss -1dB@7 GHz
- Return Loss -20dB@1.19 GHz
- Time Delay 29.5 psec
- Loop Inductance 0.95nH
- Capacitance 0.92 pF