Burn in Test

The Burn-In test will expose the DUT (divice 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 by insert molding and holds the machining part, that 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 shoes and exceptional hardness and is able to deal with the demanding conditions posed by the Burn-In test.

Design Concept

Pogo Type Burn-in Socket

Burn in Socket	Specification
IC Size	<15x15 mm²
Min. Pitch	0.3
Body Material	PES (Black)
Housing Material	Ultem2300
Operating Temperature	-55°C~180°C

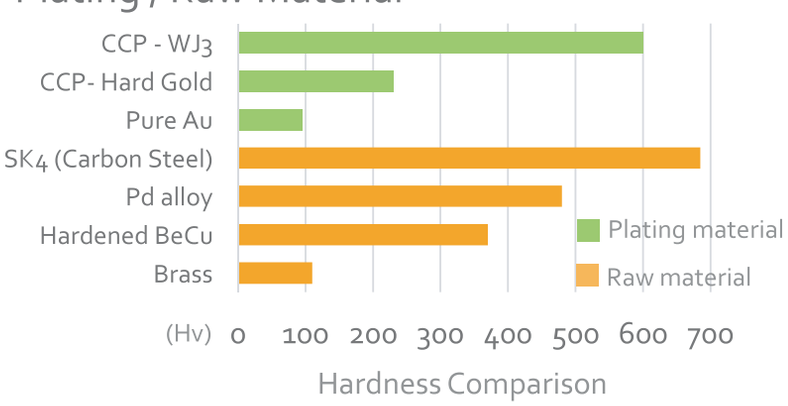
C.C.P. splits the socket into standard part and machining part. Standard part is processed by insert molding while the machining part is manufactured by CNC according to IC size, therefore to shorten the develop time and to down mold tooling cost. C.C.P. is flexible to all the customer demands.

Standard Part

Customized part

Manufactured according to IC size

Plating / Raw Material



Hardness Comparison

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

*All specifications are subject to changes without prior notification

Probe Specification

Unit:mm; [ ]:in

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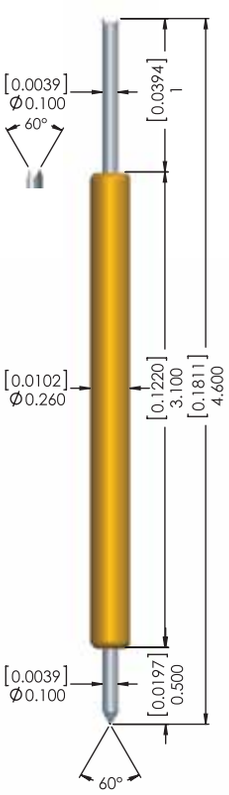

Material

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

Electrical Spec.

Pitch: 0.4mm Socket Material: Peek 1000 G S G

Current rating 1A continuous
Contact Resistance <175mΩ(AVG)
Characteristic impedance 57Ω
Insertion loss -1dB>20GHz
Return loss -20dB@8.38GHz
Time delay 23.4psec
Loop inductance 1.34nH
Capacitance 0.41pF

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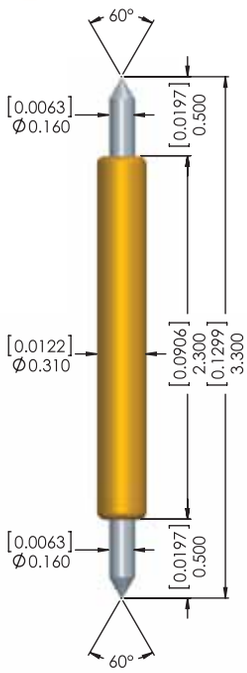


Material

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

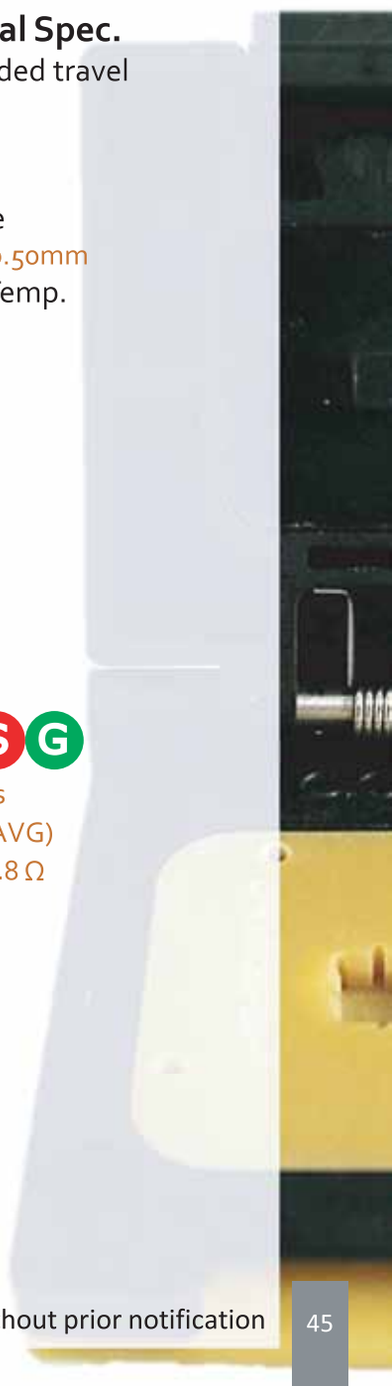
Mechanical Spec.

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 G S G

Current rating 1.5A continuous
Contact Resistance <175mΩ(AVG)
Characteristic impedance 40.8Ω
Insertion loss -1dB>20GHz
Return loss -20dB@5.3GHz
Time delay 15.9psec
Loop inductance 0.65nH
Capacitance 0.39pF



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Probe Specification

Unit:mm; [ ]:in

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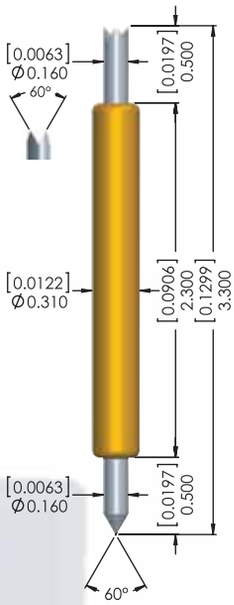

Material

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

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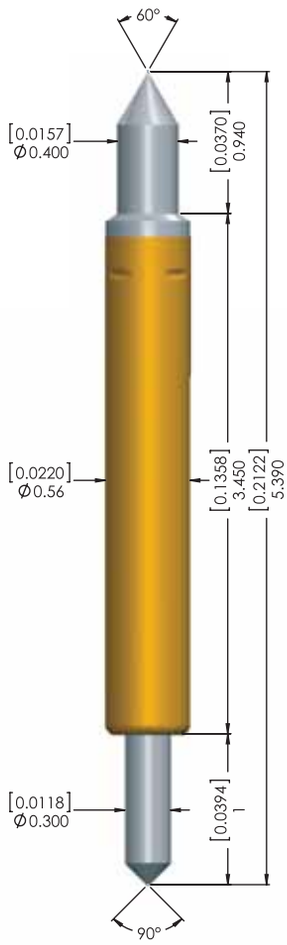

Material

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.

Pitch: 0.4mm Socket Material: Peek 1000

GSG

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.

Pitch: 0.8mm Socket Material: Peek 1000

GSG

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

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