

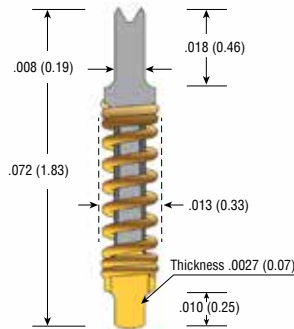
ZO

0.40 mm, 0.50 mm

Ultra HIGH Bandwidth

The ZO Ultra High Bandwidth Series takes advantage of the ZIP® scalable architecture to arrive at an ultra-compact design with 0.50 nH and 0.60 nH inductance tailor made for high frequency testing.

ZO-040



Mechanical

Pitch:	.016 (0.40)
Recommended Travel:	.018 (0.46)
Full Travel:	.020 (0.50)
Test Height:	.059 (1.51)
Mechanical Life*:	200,000 cycles
Operating Temperature:	-55°C to +155°C

Spring Force in oz. (grams)

	Order Code	Test Height
Standard		0.66 (19)
High	- 1	0.96 (27)

Electrical (Static Conditions)

Current Rating DC:	2.5 amps
Average DC Probe Resistance**:	<90 mOhms
Self Inductance (Ls):	0.50 nH
Capacitance (Cc):	0.030 pF
Bandwidth @ -1dB:	> 30.0 GHz

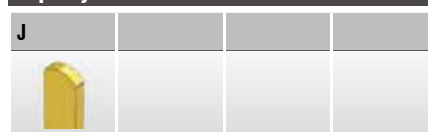
Materials and Finishes

Plunger DUT:	HyperCore™
Plunger HIB:	BeCu, Gold plated over hard Nickel
Spring:	Stainless Steel, Gold plated

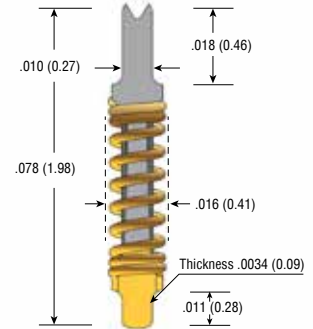
Tip Style - DUT



Tip Style - HIB



ZO-050



Mechanical

Pitch:	.020 (0.50)
Recommended Travel:	.019 (0.48)
Full Travel:	.022 (0.56)
Test Height:	.059 (1.51)
Mechanical Life*:	500,000 cycles
Operating Temperature:	-55°C to +155°C

Spring Force in oz. (grams)

	Order Code	Test Height
Standard		0.65 (18)
High	- 1	1.11 (31)

Electrical (Static Conditions)

Current Rating DC:	2.88 amps
Average DC Probe Resistance** :	<90 mOhms
Self Inductance (Ls):	0.60 nH
Capacitance (Cc):	0.03 pF
Bandwidth @ -1dB:	> 40.0 GHz

Materials and Finishes

Plunger DUT:	HyperCore™
Plunger HIB:	BeCu with proprietary plating
Spring:	Stainless Steel, Gold plated

Tip Style - DUT



Tip Style - HIB



* Life specifications are based on lab results but are dependent on cleaning frequency and the specific customer application, including DUT materials, handler kit, maintenance, etc.
 ** Contact resistance will increase over time due to solder build-up and wear



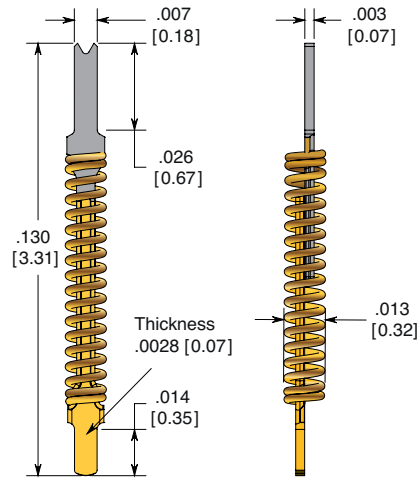
Series	Size	Tip Style	Spring Force
ZO	050	RHJ	1
ZO	040	BHJ	1



Z-040

0.40 mm

Z-040



Mechanical

Pitch:	.016 (0.40)
Recommended Travel:	.025 (0.64)
Full Travel:	.028 (0.71)
Test Height:	.105 (2.67)
Mechanical Life*:	
HyperCore DUT plunger:	500,000 cycles
BeCu DUT plunger:	50,000 cycles
Operating Temperature:	-55°C to +155°C
Spring Force in oz. (grams):	1.20 (34)

Electrical (Static Conditions)

Current Rating DC:	2.0 amps
Average DC Probe Resistance** :	< 85 mOhms
Self Inductance (Ls):	1.07 nH
Capacitance (Cg):	0.21 pF
Bandwidth @ -1dB:	30.0 GHz

Materials and Finishes

Plunger DUT:	HyperCore™, BeCu Gold plated
Plunger HIB:	BeCu with proprietary plating
Spring:	Stainless Steel, Gold plated

HIGH Bandwidth

The ZIP® Z High Bandwidth Series yields the highest and most stable bandwidth for its package size. The high performance provided by these contacts makes the Z series a perfect choice for the most demanding test applications. High Bandwidth probes are available in .4mm and .5mm pitches. The Z series is offered in two DUT-side plunger material choices: HyperCore for high volume production applications and BeCu for burn-in or low volume applications.

Tip Style - DUT HyperCore



Tip Style - DUT BeCu



Tip Style - HIB



HYPERcore™
[base material]



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Z-050

0.50 mm

HIGH Bandwidth

The ZIP® Z High Bandwidth Series yields the highest and most stable bandwidth for its package size. The high performance provided by these contacts makes the Z series a perfect choice for the most demanding test applications. High Bandwidth probes are available in .4mm and .5mm pitches. The Z series is offered in two DUT-side plunger material choices: HyperCore for high volume production applications and BeCu for burn-in or low volume applications.

Tip Style - DUT HyperCore



Tip Style - DUT BeCu



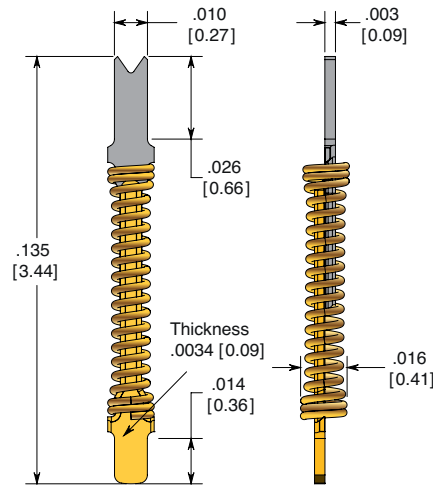
Tip Style - HIB



HYPERcore™
[base material]



Z-050



Mechanical

Pitch:	.020 (0.50)
Recommended Travel:	.025 (0.64)
Full Travel:	.030 (0.76)
Test Height:	.110 (2.79)
Mechanical Life*:	
HyperCore DUT plunger:	500,000 cycles
BeCu DUT plunger:	50,000 cycles
Operating Temperature:	-55°C to +155°C
Spring Force in oz. (grams):	1.40 (40)

Electrical (Static Conditions)

Current Rating DC:	2.8 amps
Average DC Probe Resistance** :	<65 mOhms
Self Inductance (Ls):	1.01 nH
Capacitance (Cc):	0.20 pF
Bandwidth @ -1dB:	25.0 GHz

Materials and Finishes

Plunger DUT:	HyperCore™, BeCu Gold plated
Plunger HIB:	BeCu with proprietary plating
Spring:	Stainless Steel, Gold plated

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** Contact resistance will increase over time due to solder build-up and wear

Dimensions in inches (millimeters). Specifications subject to change without notice.

Consult factory for other temperature requirements, and applications below -40°C.

Stocking Disclaimer: Stocking levels for part numbers listed in this catalog are subject to change.

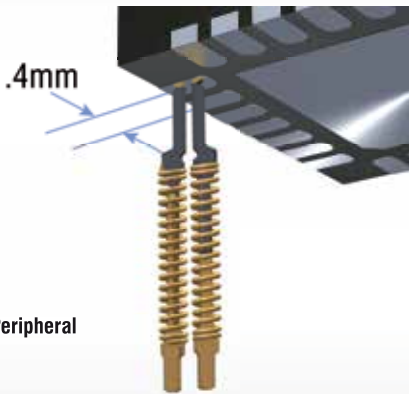
Availability is based on current levels of usage and demand.

Z - Kelvin

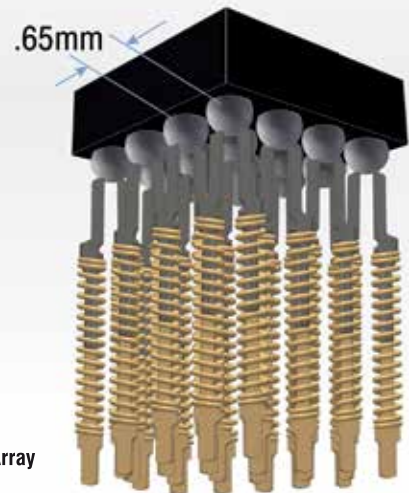
0.40 mm

Z-KELVIN

ECT's ZIP® Kelvin .4mm is ideal for voltage sensitive tests on array or peripheral devices requiring milliohm resistance measurements as well as high-power test applications.

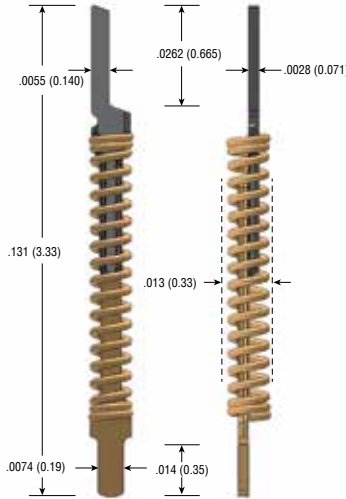


Peripheral



Array

Z-040KHJ



Mechanical

Pitch:	.016 (0.40)
Recommended Travel:	.025 (0.64)
Full Travel:	.028 (0.71)
Test Height:	.105 (2.67)
Mechanical Life*:	500,000 cycles
Operating Temperature:	-55°C to +155°C
Spring Force in oz. (grams):	1.20 (34)

Electrical (Static Conditions)

Current Rating DC:	1.2 amps
Average DC Probe Resistance** :	< 70 mOhms
Self Inductance (Ls):	1.0 nH
Capacitance (Cc):	0.40 pF
Bandwidth @ -1dB:	7.0 GHz


Materials and Finishes

Plunger DUT:	HyperCore™
Plunger HIB:	BeCu with proprietary plating
Spring:	Stainless Steel, Gold plated

Tip Style - DUT

K			
			

Tip Style - HIB

J			
			

HYPERcore™
[base material]

Dimensions in inches (millimeters). Specifications subject to change without notice. Consult factory for other temperature requirements, and applications below -40°C. Stocking Disclaimer: Stocking levels for part numbers listed in this catalog are subject to change. Availability is based on current levels of usage and demand.



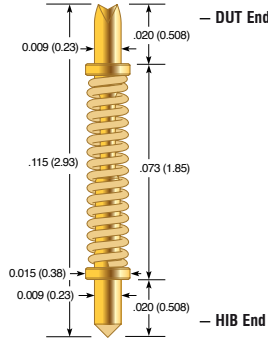
ECT CONTACT PRODUCTS
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ECT-CPG.com
shop.ECT-CPG.com

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BTM

0.50 mm, 0.75 mm, 1.00 mm

BTM-050



Mechanical

Pitch:	.019 (0.50)
Recommended Travel:	.015 (0.38)
Full Travel:	.020 (0.51)
Test Height:	.098 (2.49)
Mechanical Life*:	500,000 cycles
Operating Temperature:	-55°C to +155°C
Spring Force in oz. (grams):	1.10 (31)

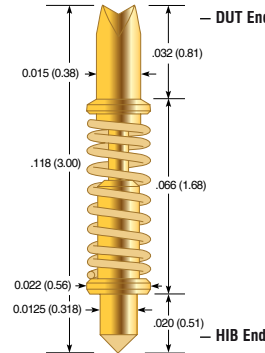
Electrical (Static Conditions)

Current Rating:	2.5 amps
Average DC Probe Resistance**:	<50 mOhms
Self Inductance (Ls):	0.95 nH
Capacitance (Cc):	0.28 pF
Bandwidth @ -1dB:	23.00 GHz

Materials and Finishes

Plunger:	Heat-treated BeCu, Gold plated over hard Nickel or Primeguard 1 for NiPd solder or Primeguard 2 for Lead free solder
Barrel:	Work-hardened BeCu, Gold plated over hard Nickel
Spring:	Steel alloy, Gold plated over hard Nickel

BTM-075



Mechanical

Pitch:	.030 (0.75)
Recommended Travel:	.015 (0.38)
Full Travel:	.020 (0.51)
Test Height:	.103 (2.62)
Mechanical Life*:	500,000 cycles
Operating Temperature:	-55°C to +155°C
Spring Force in oz. (grams):	1.00 (28)

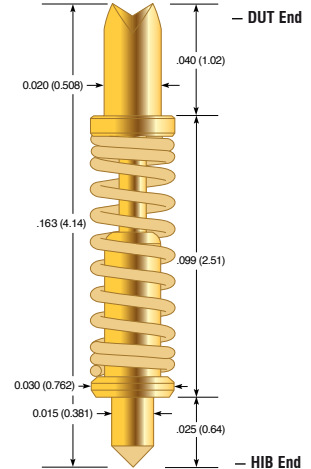
Electrical (Static Conditions)

Current Rating:	2.9 amps
Average DC Probe Resistance**:	<50 mOhms
Self Inductance (Ls):	0.77 nH
Capacitance (Cc):	0.25 pF
Bandwidth @ -1dB:	15.84 GHz

Materials and Finishes

Plunger:	Heat-treated BeCu, Gold plated over hard Nickel or Primeguard 1 for NiPd solder or Primeguard 2 for Lead free solder
Barrel:	Work-hardened Brass, Gold plated over hard Nickel
Spring:	Steel alloy, Gold plated over hard Nickel

BTM-100



Mechanical

Pitch:	.040 (1.00)
Recommended Travel:	.028 (0.71)
Full Travel:	.030 (0.76)
Test Height:	.136 (3.45)
Mechanical Life*:	500,000 cycles
Operating Temperature:	-55°C to +155°C
Spring Force in oz. (grams):	1.40 (39)

Electrical (Static Conditions)

Current Rating:	3.5 amps
Average DC Probe Resistance**:	<50 mOhms
Self Inductance (Ls):	1.30 nH
Capacitance (Cc):	0.34 pF
Bandwidth @ -1dB:	10.00 GHz

Materials and Finishes

Plunger:	Heat-treated BeCu, Gold plated over hard Nickel or Primeguard 1 for NiPd solder or Primeguard 2 for Lead free solder
Barrel:	Work-hardened Brass, Gold plated over hard Nickel
Spring:	Steel alloy, Gold plated over hard Nickel

Tip Style - DUT



Tip Style - HIB



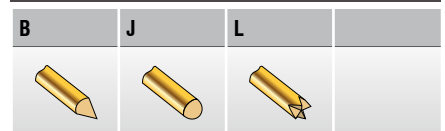
Tip Style - DUT



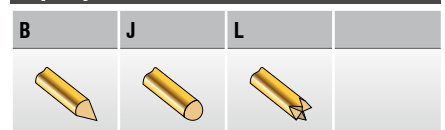
Tip Style - HIB



Tip Style - DUT



Tip Style - HIB

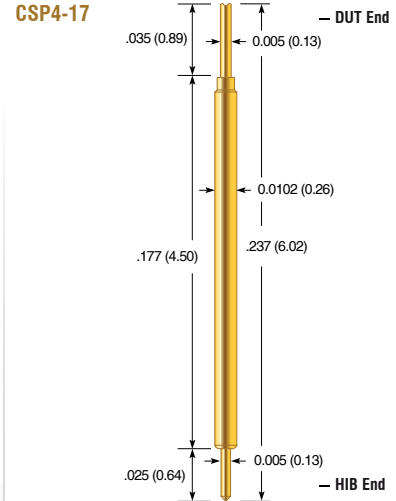
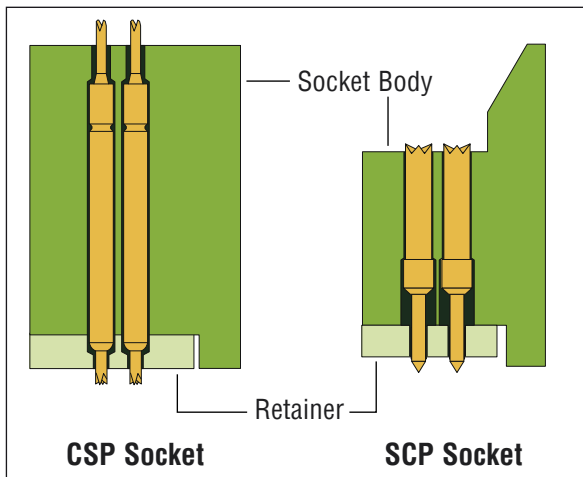


CSP4

0.40 mm

Socket Design Considerations

- CSP series is captured between the socket body and retainer plate, with the barrel fixed in place.
- SCP Socket series is captured between the socket body and retainer plate, with the barrel sliding freely counter bore.
- Counter bore should not be too deep, and enable a minimum amount of preload against interface board.
- Body height and device cavity should be designed to prevent probe from being compressed shorter than test height.



Mechanical

Pitch:	.016 (0.40)
Recommended Travel:	.020 (0.51)
Full Travel:	.025 (0.64)
Test Height:	.217 (5.51)
Mechanical Life*:	250,000 cycles
Operating Temperature:	-55°C to +105°C
Spring Force in oz. (grams):	0.85 (24)

Electrical (Static Conditions)

Current Rating:	2.0 amps
Average DC Probe Resistance**:	< 100 mOhms
Self Inductance (Ls):	1.71 nH
Capacitance (Cc):	0.58 pF
Bandwidth @ -1dB:	6.8 GHz

Materials and Finishes

Plunger DUT:	Heat-treated Steel or BeCu, Gold plated over hard Nickel
Plunger HIB:	Heat-treated Steel or BeCu, Gold plated over hard Nickel
Barrel:	Work-hardened Phosphorous Bronze, Gold plated over hard Nickel
Spring:	Music Wire, Gold plated

Tip Style - DUT / HIB

B	L		

Dimensions in inches (millimeters). Specifications subject to change without notice. Consult factory for other temperature requirements, and applications below -40°C. Stocking Disclaimer: Stocking levels for part numbers listed in this catalog are subject to change. Availability is based on current levels of usage and demand.

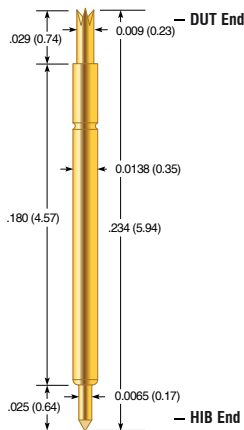


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** Contact resistance will increase over time due to solder build-up and wear

CSP5

0.50 mm

CSP5-18



Mechanical

Pitch:	.019 (0.50)
Recommended Travel:	.020 (0.51)
Full Travel:	.025 (0.64)
Test Height:	.214 (5.44)
Mechanical Life*:	500,000 cycles
Operating Temperature:	-55°C to +155°C
Spring Force in oz. (grams):	0.7 (19.8)

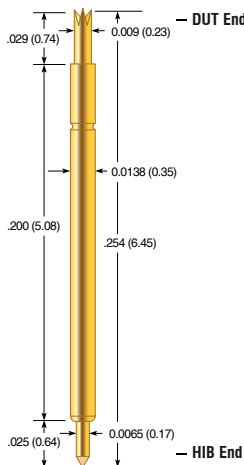
Electrical (Static Conditions)

Current Rating:	2 amps
Average DC Probe Resistance**:	<150 mOhms
Self Inductance (Ls):	1.5 nH
Capacitance (Cc):	0.63 pF
Bandwidth @ -1dB:	8.13 GHz

Materials and Finishes

Plunger DUT:	Heat-treated BeCu or Steel, Gold plated over hard Nickel or Primeguard 1 for NiPd solder or Primeguard 2 for Lead free solder
Plunger HIB:	Heat-treated BeCu or Steel, Hard Gold over Nickel
Barrel:	Work-hardened Phosphor Bronze, Gold plated over hard Nickel
Spring:	Steel alloy, Gold plated

CSP5-20



Mechanical

Pitch:	.019 (0.50)
Recommended Travel:	.020 (0.51)
Full Travel:	.025 (0.64)
Test Height:	.234 (5.94)
Mechanical Life*:	500,000 cycles
Operating Temperature:	-55°C to +155°C
Spring Force in oz. (grams):	0.7 (19.8)

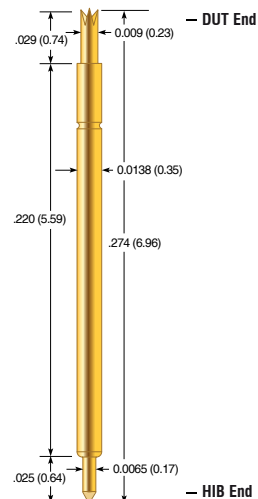
Electrical (Static Conditions)

Current Rating:	2 amps
Average DC Probe Resistance**:	<150 mOhms
Self Inductance (Ls):	1.65 nH
Capacitance (Cc):	0.69 pF
Bandwidth @ -1dB:	7.4 GHz

Materials and Finishes

Plunger DUT:	Heat-treated BeCu or Steel, Gold plated over hard Nickel or Primeguard 1 for NiPd solder or Primeguard 2 for Lead free solder
Plunger HIB:	Heat-treated BeCu or Steel, Hard Gold over Nickel
Barrel:	Work-hardened Phosphor Bronze, Gold plated over hard Nickel
Spring:	Steel alloy, Gold plated

CSP5-22



Mechanical

Pitch:	.019 (0.50)
Recommended Travel:	.020 (0.51)
Full Travel:	.030 (0.76)
Test Height:	.254 (6.45)
Mechanical Life*:	500,000 cycles
Operating Temperature:	-55°C to +155°C
Spring Force in oz. (grams):	1.2 (34.9)

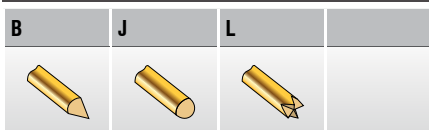
Electrical (Static Conditions)

Current Rating:	2 amps
Average DC Probe Resistance**:	<150 mOhms
Self Inductance (Ls):	1.79 nH
Capacitance (Cc):	0.75 pF
Bandwidth @ -1dB:	6.8 GHz

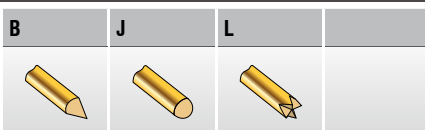
Materials and Finishes

Plunger DUT:	Heat-treated BeCu or Steel, Gold plated over hard Nickel or Primeguard 1 for NiPd solder or Primeguard 2 for Lead free solder
Plunger HIB:	Heat-treated BeCu or Steel, Hard Gold over Nickel
Barrel:	Work-hardened Phosphor Bronze, Gold plated over hard Nickel
Spring:	Steel alloy, Gold plated

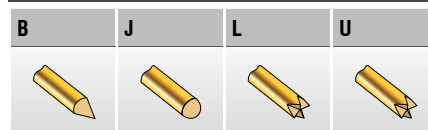
Tip Style - DUT / HIB



Tip Style - DUT / HIB

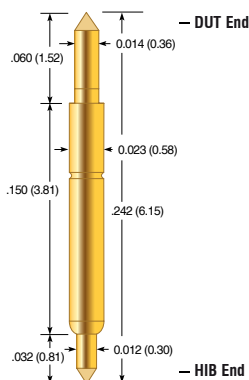


Tip Style - DUT / HIB



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** Contact resistance will increase over time due to solder build-up and wear

CSP8-15



Mechanical

Pitch:	.032 (0.80)
Recommended Travel:	.030 (0.76)
Full Travel:	.034 (0.86)
Test Height:	.212 (5.38)
Mechanical Life*:	500,000 cycles
Operating Temperature:	-55°C to +155°C
Spring Force in oz. (grams):	1.0 (28.3)

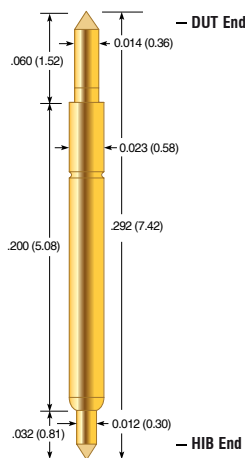
Electrical (Static Conditions)

Current Rating:	3 amps
Average DC Probe Resistance**:	<150 mOhms
Self Inductance (Ls):	1.23 nH
Capacitance (Cc):	0.65 pF
Bandwidth @ -1dB:	9.23 GHz

Materials and Finishes

Plunger DUT:	Heat-treated BeCu or Steel, Gold plated over hard Nickel or Primeguard 1 for NiPd solder or Primeguard 2 for Lead free solder
Plunger HIB:	Heat-treated BeCu or Steel, Hard Gold over Nickel
Barrel:	Work-hardened Phosphor Bronze, Gold plated over hard Nickel
Spring:	Steel alloy, Gold plated

CSP8-20



Mechanical

Pitch:	.032 (0.80)
Recommended Travel:	.030 (0.76)
Full Travel:	.035 (0.89)
Test Height:	.262 (6.65)
Mechanical Life*:	500,000 cycles
Operating Temperature:	-55°C to +155°C
Spring Force in oz. (grams):	1.0 (28.3)

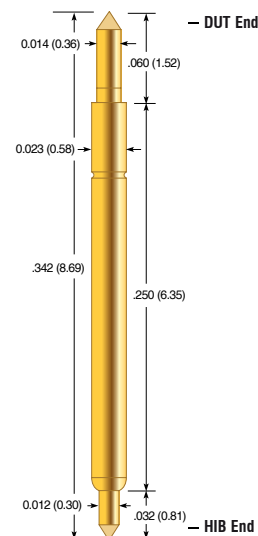
Electrical (Static Conditions)

Current Rating:	3 amps
Average DC Probe Resistance**:	<150 mOhms
Self Inductance (Ls):	1.52 nH
Capacitance (Cc):	0.81 pF
Bandwidth @ -1dB:	7.45 GHz

Materials and Finishes

Plunger DUT:	Heat-treated BeCu or Steel, Gold plated over hard Nickel or Primeguard 1 for NiPd solder or Primeguard 2 for Lead free solder
Plunger HIB:	Heat-treated BeCu or Steel, Hard Gold over Nickel
Barrel:	Work-hardened Phosphor Bronze, Gold plated over hard Nickel
Spring:	Steel alloy, Gold plated

CSP8-25



Mechanical

Pitch:	.032 (0.80)
Recommended Travel:	.030 (0.76)
Full Travel:	.040 (1.02)
Test Height:	.312 (7.92)
Mechanical Life*:	500,000 cycles
Operating Temperature:	-55°C to +155°C
Spring Force in oz. (grams):	1.1 (31.2)

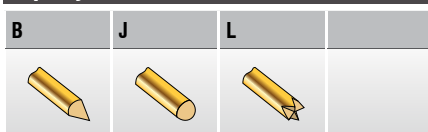
Electrical (Static Conditions)

Current Rating:	3 amps
Average DC Probe Resistance**:	<150 mOhms
Self Inductance (Ls):	1.81 nH
Capacitance (Cc):	0.96 pF
Bandwidth @ -1dB:	5.25 GHz

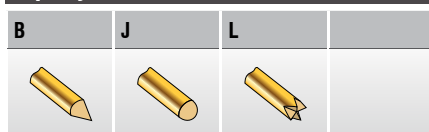
Materials and Finishes

Plunger DUT:	Heat-treated BeCu or Steel, Gold plated over hard Nickel or Primeguard 1 for NiPd solder or Primeguard 2 for Lead free solder
Plunger HIB:	Heat-treated BeCu or Steel, Hard Gold over Nickel
Barrel:	Work-hardened Phosphor Bronze, Gold plated over hard Nickel
Spring:	Steel alloy, Gold plated

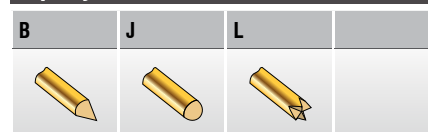
Tip Style - DUT / HIB



Tip Style - DUT / HIB



Tip Style - DUT / HIB



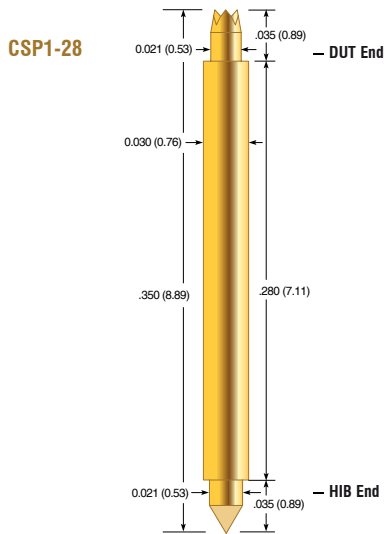
Dimensions in inches (millimeters). Specifications subject to change without notice. Consult factory for other temperature requirements, and applications below -40°C. Stocking Disclaimer: Stocking levels for part numbers listed in this catalog are subject to change. Availability is based on current levels of usage and demand.



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CSP1

1.0 mm



Mechanical

Pitch:	.039 (1.0)
Recommended Travel:	.030 (0.76)
Full Travel:	.040 (1.02)
Test Height:	.315 (8.00)
Mechanical Life*:	500,000 cycles
Operating Temperature:	-55°C to +155°C
Spring Force in oz. (grams):	2.0 (57)

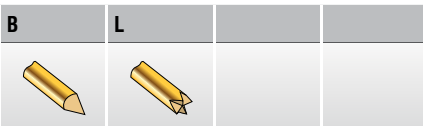
Electrical (Static Conditions)

Current Rating:	3 amps
Average DC Probe Resistance**:	< 100 mOhms
Self Inductance (Ls):	3.10 nH
Capacitance (Cc):	0.95 pF
Bandwidth @ -1dB:	3.80 GHz

Materials and Finishes

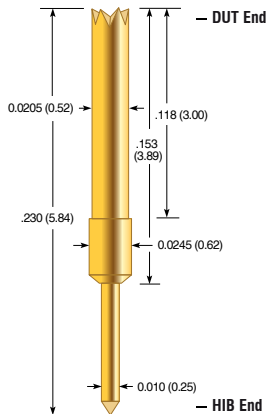
Plunger DUT:	Heat-treated BeCu, Gold plated over hard Nickel
Plunger HIB:	Heat-treated BeCu, Gold plated over hard Nickel
Barrel:	Work-hardened Phosphor Bronze, Gold plated over hard Nickel
Spring:	Steel alloy, Gold plated

Tip Style - DUT / HIB



* Life specifications are based on lab results but are dependent on cleaning frequency and the specific customer application, including DUT materials, handler kit, maintenance, etc.
** Contact resistance will increase over time due to solder build-up and wear

SCP-080



Mechanical

Pitch:	.032 (0.80)
Recommended Travel:	.030 (0.76)
Full Travel:	.035 (0.89)
Test Height:	.200 (5.08)
Mechanical Life*:	1,000,000 cycles
Operating Temperature:	-55°C to +155°C
Spring Force in oz. (grams):	1.50 (42.5)

Electrical (Static Conditions)

Current Rating:	5 amps
Average DC Probe Resistance**:	<50 mOhms
Self Inductance (Ls):	1.27 nH
Capacitance (Cc):	0.12 pF
Bandwidth @ -1dB:	6.0 GHz

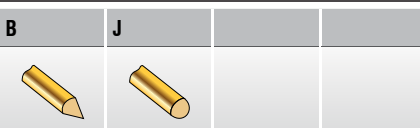
Materials and Finishes

Plunger:	Heat-treated BeCu, Gold plated over hard Nickel
Barrel:	Work-hardened BeCu, Gold plated over hard Nickel
Spring:	Steel alloy, Gold plated

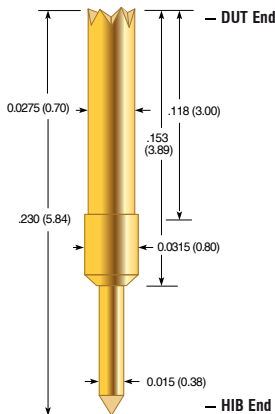
Tip Style - DUT



Tip Style - HIB



SCP-100



Mechanical

Pitch:	.039 (1.00)
Recommended Travel:	.030 (0.76)
Full Travel:	.035 (0.89)
Test Height:	.200 (5.08)
Mechanical Life*:	1,000,000 cycles
Operating Temperature:	-55°C to +155°C
Spring Force in oz. (grams):	1.50 (42.5)

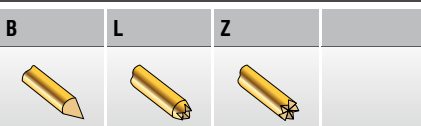
Electrical (Static Conditions)

Current Rating:	7 amps
Average DC Probe Resistance**:	<50 mOhms
Self Inductance (Ls):	1.40 nH
Capacitance (Cc):	0.66 pF
Bandwidth @ -1dB:	6.70 GHz

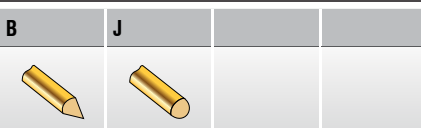
Materials and Finishes

Plunger:	Heat-treated BeCu, Gold plated over hard Nickel
Barrel:	Work-hardened BeCu, Gold plated over hard Nickel
Spring:	Steel alloy, Gold plated

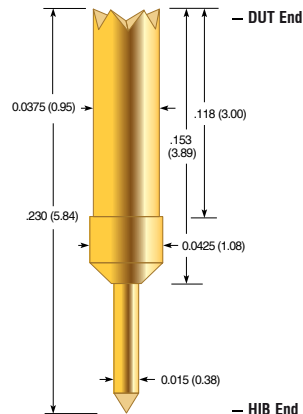
Tip Style - DUT



Tip Style - HIB



SCP-127



Mechanical

Pitch:	.050 (1.27)
Recommended Travel:	.030 (0.76)
Full Travel:	.035 (0.89)
Test Height:	.200 (5.08)
Mechanical Life*:	1,000,000 cycles
Operating Temperature:	-55°C to +155°C
Spring Force in oz. (grams):	1.50 (42.5)

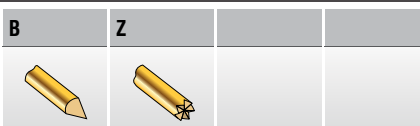
Electrical (Static Conditions)

Current Rating:	9 amps
Average DC Probe Resistance**:	<50 mOhms
Self Inductance (Ls):	1.40 nH
Capacitance (Cc):	0.79 pF
Bandwidth @ -1dB:	7.6 GHz

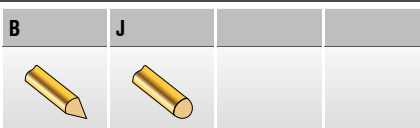
Materials and Finishes

Plunger:	Heat-treated BeCu, Gold plated over hard Nickel
Barrel:	Work-hardened BeCu, Gold plated over hard Nickel
Spring:	Steel alloy, Gold plated

Tip Style - DUT



Tip Style - HIB



Dimensions in inches (millimeters). Specifications subject to change without notice. Consult factory for other temperature requirements, and applications below -40°C. Stocking Disclaimer: Stocking levels for part numbers listed in this catalog are subject to change. Availability is based on current levels of usage and demand.



* Life specifications are based on lab results but are dependent on cleaning frequency and the specific customer application, including DUT materials, handler kit, maintenance, etc.
** Contact resistance will increase over time due to solder build-up and wear