

## HIGH CURRENT PROBE

The maximum continuous current rating of a spring probe is determined by its design, size and construction. Typical probes are rated from 2 to 8 amps maximum continuously current at working travel. While this is sufficient for most board test applications, higher current applications will require a much more solid and rugged probe to withstand current capabilities of 10 to 150 amps and beyond.

### Our high current probes features

- Low resistance plungers
- PogoPlus® Bias Ball construction
- High Current optimized base material and plating
- Higher temperature spring design
- Specialized high current tip geometry

Another high current solution is our Feed-Through Plunger probe line. As the name already describes, the plunger moves right through the probe and is made from a single piece, reducing the internal resistance of the probe to a minimum.

With increasing current, any resistance within the probe will generate heat. The higher the current the more heat is generated.

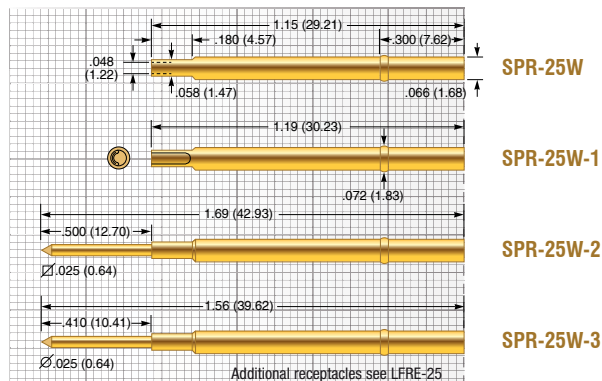
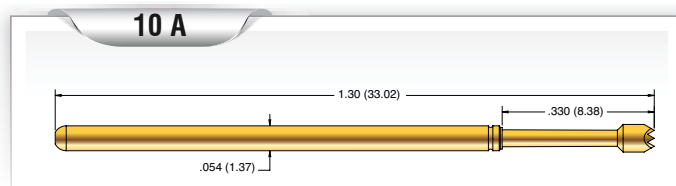
Another consideration is test cycle time. All probes are rated at continuously current carrying capability. During a test sequence the current might not be present at all time, giving the probe time to cool off and potentially being able to carry far more than the rated amps on the datasheet. Please consult our ECT contact for details on higher or pulsed current applications.



# High Current Probe

## HCP-25

100 mil (2.54 mm)



### Mechanical

Recommended Travel:	.167 (4.24)
Full Travel:	.250 (6.35)
Operating Temperature:	-55°C to +150°C

### Spring Force in oz. (grams)

	Preload	Rec. Travel
Standard	1.29 (37)	4.0 (113)
Alternate -1	2.23 (63)	8.00 (227)

### Electrical (Static Conditions)

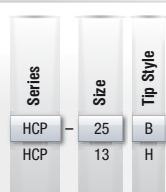
Current Rating:	10 amps
Average Probe Resistance:	<25 mOhms

### Materials and Finishes

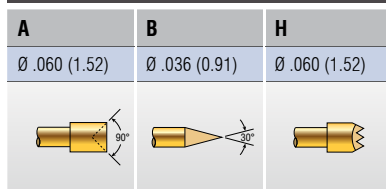
Plunger:	Heat-treated BeCu, Gold plated over hard Nickel
Barrel:	Phosphor Bronze, Gold plated over Silver
Spring:	Stainless Steel, Silver plated
Bias Ball:	Stainless Steel

### Receptacle

Hole diameter:	Ø .067 to .069 (1.70 to 1.75)
Suggested drill:	#51 or 1.70 mm
Material Housing:	Work-hardened Nickel Silver, Gold plated over hard Nickel
Material Post:	Phosphorous Bronze, Gold plated

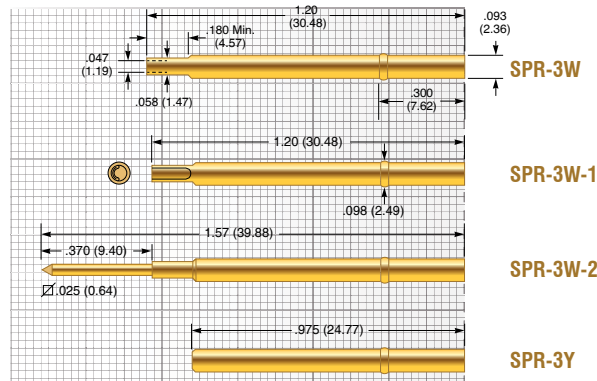
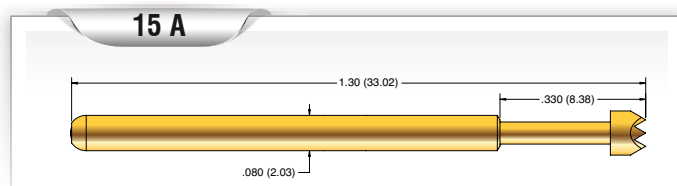


### Tip Style



## HCP-13

125 mil (3.18 mm)



### Mechanical

Recommended Travel:	.167 (4.24)
Full Travel:	.250 (6.35)
Operating Temperature:	-55°C to +150°C

### Spring Force in oz. (grams)

	Preload	Rec. Travel
Standard	1.44 (41)	4.5 (128)
Alternate -1	2.43 (69)	8.00 (227)

### Electrical (Static Conditions)

Current Rating:	15 amps
Average Probe Resistance:	<25 mOhms

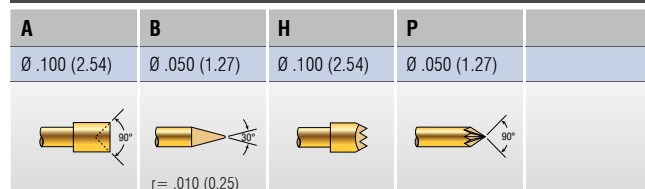
### Materials and Finishes

Plunger:	Heat-treated BeCu, Gold plated over hard Nickel
Barrel:	Phosphor Bronze, Gold plated over Silver
Spring:	Stainless Steel, Silver plated
Bias Ball:	Stainless Steel
Terminal Ball:	Stainless Steel

### Receptacle

Hole diameter:	Ø .094 to .096 (2.39 to 2.44)
Suggested drill:	#41 or 2.40 mm
Material Housing:	Nickel Silver, Gold plated over hard Nickel
Material Post:	Phosphorous Bronze, Gold plated

### Tip Style



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

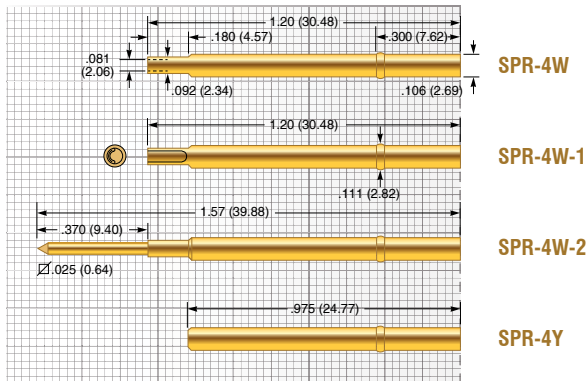
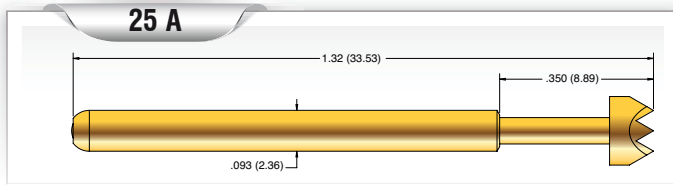
Consult factory for other temperature requirements, and applications below -40°C.

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.

## HCP-14

187 mil (4.75 mm)



### Mechanical

Recommended Travel:	.167 (4.24)
Full Travel:	.250 (6.35)
Operating Temperature:	-55°C to +150°C

### Spring Force in oz. (grams)

	Preload	Rec. Travel
Standard	0.86 (24)	4.8 (136)
Alternate -1	4.32 (122)	12.0 (340)

### Electrical (Static Conditions)

Current Rating:	25 amps
Average Probe Resistance:	<25 mOhms

### Materials and Finishes

Plunger:	Heat-treated BeCu, Gold plated over hard Nickel
Barrel:	Phosphor Bronze, Gold plated over Silver
Spring:	Stainless Steel, Silver plated
Bias Ball:	Stainless Steel
Terminal Ball:	Stainless Steel

### Receptacle

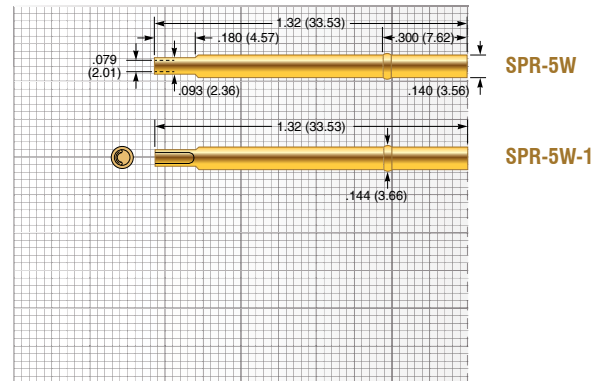
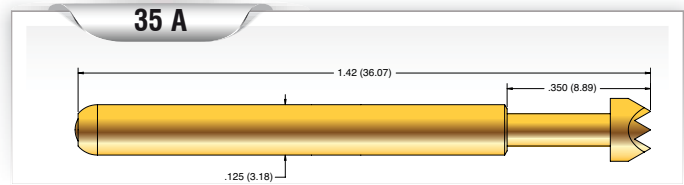
Hole diameter:	Ø .107 to .109 (2.72 to 2.77)
Suggested drill:	2.75 mm
Material Housing:	Nickel Silver, Gold plated over hard Nickel
Material Post:	Phosphorous Bronze, Gold plated

### Tip Style

A	B	H		
Ø .156 (3.96)	Ø .060 (1.52)	Ø .156 (3.96)		

## HCP-15

187 mil (4.75 mm)



### Mechanical

Recommended Travel:	.167 (4.24)
Full Travel:	.250 (6.35)
Operating Temperature:	-55°C to +150°C

### Spring Force in oz. (grams)

	Preload	Rec. Travel
Standard	3.76 (107)	16.0 (456)
Alternate -1	6.05 (172)	24.0 (680)

### Electrical (Static Conditions)

Current Rating:	35 amps
Average Probe Resistance:	<25 mOhms

### Materials and Finishes

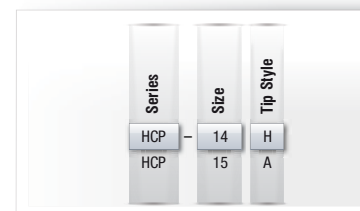
Plunger:	Heat-treated BeCu, Gold plated over hard Nickel
Barrel:	Phosphor Bronze, Gold plated over Silver
Spring:	Stainless Steel, Silver plated
Bias Ball:	Stainless Steel
Terminal Ball:	Stainless Steel

### Receptacle

Hole diameter:	Ø .141 to .143 (3.58 to 3.63)
Suggested drill:	3.60 mm
Material Housing:	Nickel Silver, Gold plated over hard Nickel

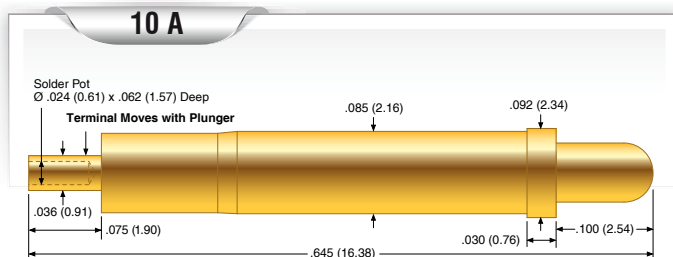
### Tip Style

A	B	H
Ø .156 (3.96)	Ø .080 (2.03)	Ø .156 (3.96)



## P3325

125 mil (3.18 mm)



### Mechanical

Recommended Travel:	.066 (1.68)
Full Travel:	.100 (2.54)
Operating Temperature:	-55°C to +105°C

### Spring Force in oz. (grams)

	Preload	Rec. Travel
Standard	5.0 (142)	8.3 (235)

### Electrical (Static Conditions)

Current Rating:	10 amps
Average Probe Resistance:	<10 mOhms

### Materials and Finishes

Plunger:	Hardened BeCu, Gold plated
Barrel:	Brass
Spring:	Music Wire

### Mounting Options

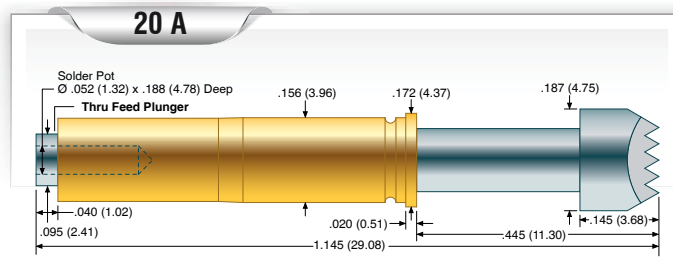
Hole diameter:	Ø .086 (2.18)
Suggested drill:	#44 or 2.18 mm

### Tip Style

0	1		
Ø .061 (1.55)	Ø .090 (2.29)		

## P2447-1W

225 mil (5.72 mm)



### Mechanical

Recommended Travel:	.200 (5.08)
Full Travel:	.300 (7.62)
Operating Temperature:	-55°C to +150°C

### Spring Force in oz. (grams)

	Preload	Rec. Travel
Standard	6.0 (170)	14.0 (397)

### Electrical (Static Conditions)

Current Rating:	20 amps
Average Probe Resistance:	<10 mOhms

### Materials and Finishes

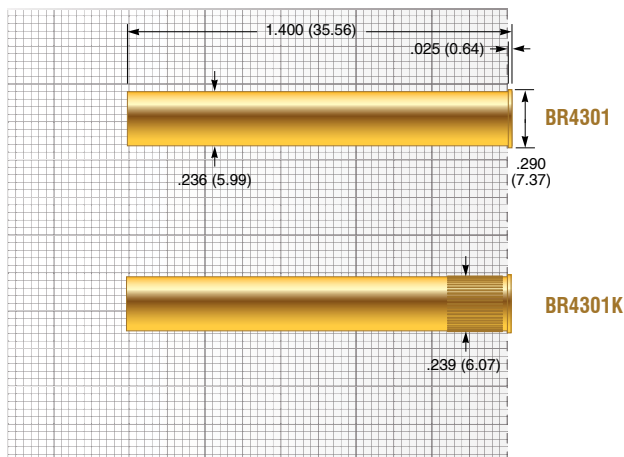
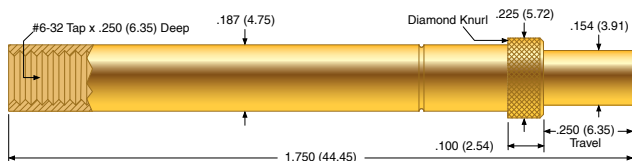
Plunger:	Hardened BeCu, Nickel plated
Barrel:	Brass
Spring:	Stainless Steel

### Mounting Options

Hole diameter:	Ø .157 (3.99)
Suggested drill:	#22 or 3.99 mm



P4301



## Tip Style

1F	1R	1W	1Z	2F	2R
Ø .154 (3.91)	Ø .154 (3.91)	Ø .154 (3.91)	Ø .200 (5.08)	Ø .154 (3.91)	Ø .154 (3.91)

up to 50 A

## Mechanical

Recommended Travel:	.167 (4.24)
Full Travel:	.250 (6.35)
Operating Temperature:	-55°C to +150°C

## Spring Force in oz. (grams)

	Preload	Rec. Travel
Standard	16 (454)	25.7 (729)

## Electrical (Static Conditions)

Current Rating BeCu:	40 amps
Current Rating Tellurium Copper:	50 amps
Average Probe Resistance:	<5 mOhms

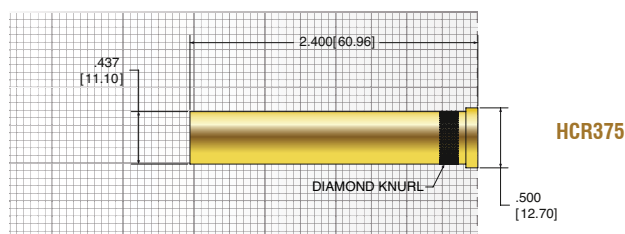
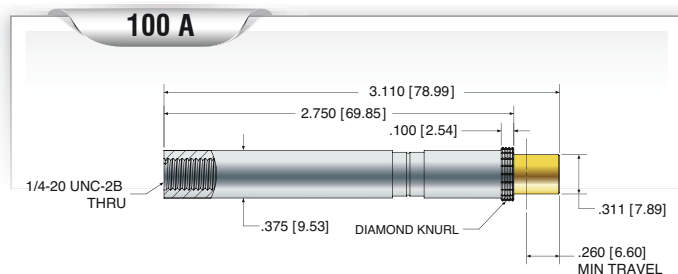
## Materials and Finishes

Plunger (1F, 2F)	Tellurium Copper, Gold plated
Plunger:	BeCu, Gold plated
Barrel:	Tellurium Copper, Gold plated
Spring:	Stainless Steel
Ball:	Stainless Steel

## Receptacle

Hole diameter:	Ø .238 (6.05)
Suggested drill:	#B or 6.05 mm
Material Housing:	Nickel Silver, Gold plated

## HC375



### Mechanical

Recommended Travel:	.250 (6.35)
Full Travel:	.360 (9.14)
Operating Temperature:	-55°C to +155°C

### Spring Force in oz. (grams)

	Order Code	Preload	Rec. Travel
Standard	-4	27.2 (771)	64 (1814)
Alternate	-6	24.0 (680)	96 (2722)

### Electrical (Static Conditions)

Current Rating:	100 amps
Average Probe Resistance:	<25 mOhms

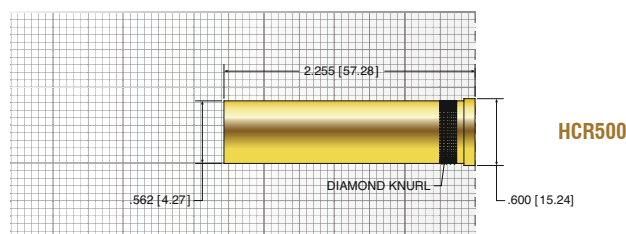
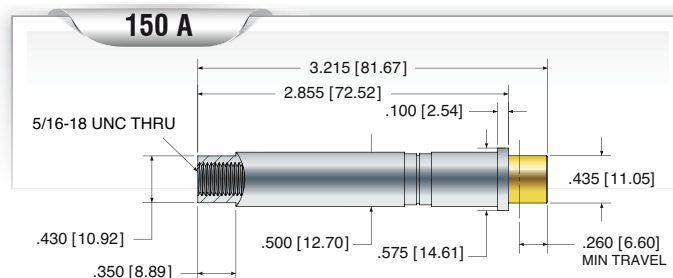
### Materials and Finishes

Plunger:	BeCu Gold plated
Barrel:	Brass Silver plated
Spring:	Stainless Steel

### Receptacle

Hole Diameter:	Ø .439 (11.15)
Suggested drill:	7/16 or 11.15 mm
Material Housing:	Brass Gold plated

## HC500



### Mechanical

Recommended Travel:	.250 (6.35)
Full Travel:	.260 (6.60)
Operating Temperature:	-55°C to +155°C

### Spring Force in oz. (grams)

	Preload	Rec. Travel
Standard	22.08 (626)	220.8 (6260)

### Electrical (Static Conditions)

Current Rating:	150 amps
Average Probe Resistance:	<25 mOhms

### Materials and Finishes

Plunger:	BeCu Gold plated
Barrel:	Brass Silver plated
Spring:	Stainless Steel Silver plated

### Receptacle

Hole Diameter:	Ø .571 - Ø .5679 (14.50 mm)
Suggested drill:	14.50 mm
Material Housing:	Brass Gold plated

### Tip Style (additional styles on request)

1F			
Ø .311 (7.89)			

### Tip Style (additional styles on request)

1F			
Ø .435 (11.05)			

