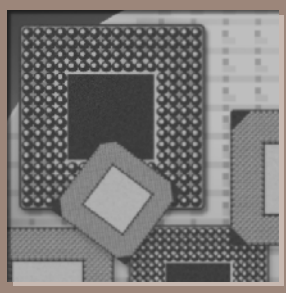
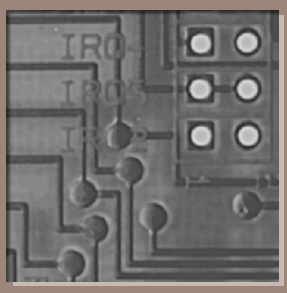
Spring Probes for ATE, Connectors, Batteries, Wire Harnesses, Semiconductor Packages and General Purpose Applications

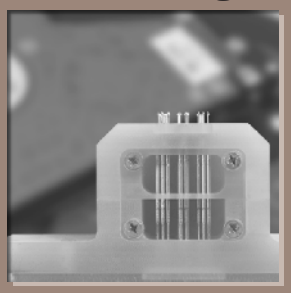
Semiconductor

Board Test

Custom Pogos®







OSTBY BARTON
POGO® PROBES

Ostby Barton's Experience… It Works for You

CONTENTS

Plating Legend

Plunger plating is color coded for easy reference.

Gold plated Gold plated steel

EVERETT CHARLES TECHNOLOGIES
Contact Products Group

487 Jefferson Boulevard
Warwick, Rhode Island 02886
Tel: (401) 739-7310
Fax: (401) 732-4937
www.ectinfo.com

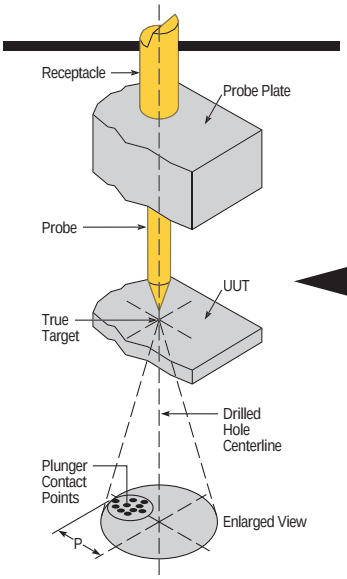
The Perfect Solution for Your Testing Problem

Test Probe Selection

Whether you are testing bare or loaded, conventional or SMT PCBs, you can maximize your testing efficiency by selecting the correct probe. Probes are manufactured in a combination of sizes (dimensional configurations), tip styles, and spring pressures to meet a variety of testing factors such as test pad geometry, component lead length, hole size, solder mask, and electrical current/resistance rating. In general, probes are divided into two groups – bare board (short stroke probes) and loaded board (long stroke probes). Short stroke probes usually have a full plunger travel of .160" (4,06 mm) or less, while the longer stroke probe is typically .250" (6,35).

Probe Selection & Mixed Test Center Applications

Test Centers	Full Plunger Travel .050 (1,27)	.100 (2,54)	.250 (6,35)
.050 (1,27)	IP271	IP261	Pogo-72
.075 (1,91)	Consult Factory	IP40	Pogo-1
.100 (2,54)	MT54	MT554	Pogo-25



MIXED TEST CENTERS

In some cases, test centers vary on a PCB and you may need to mix probe sizes within a test fixture. This can be accomplished by selecting probes with a similar plunger travel and mounting them accordingly.

SPRING PRESSURE

Most probe series have several spring pressures. Use the light spring pressure in densely populated areas of your vacuum fixture to insure proper actuation. High pressure springs penetrate contamination more effectively, and should be used in low density areas or in mechanically actuated fixtures where vacuum is not used. As a rule of thumb, use high pressure when possible. If you can't "pull" a sufficient vacuum on your board, then the spring pressure per sq. inch may exceed atmospheric pressure and a light spring pressure may be needed. Spring forces may be ± 20%.

Ostby Barton manufactures probes in a combination of sizes (dimensional configurations), tip styles and spring pressures to accommodate a variety of testing factors.

SMT Probes

A full line of 50 mil (1,27 mm) center SMT Test Probes are available. These probes are designed for use in applications where probe tip to PCB target accuracy and electrical performance is critical. Look for the "SMT" symbol in this catalog as your guide in selecting a SMT probe.

POINTING ACCURACY (P)

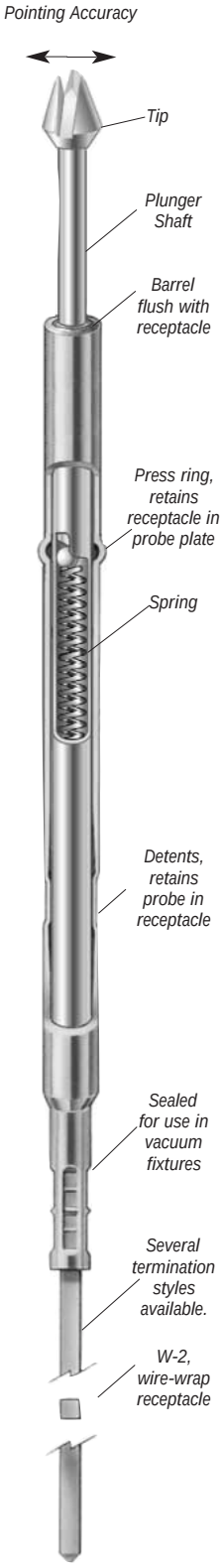
The radial movement of the plunger tip from the centerline of the mounting location is considered the pointing accuracy. The buildup of tolerances between components, as well as the probe design and assembly techniques, dictate the achievable pointing accuracy for a particular probe. While critical to the success of SMT PCB testing, it is but one consideration in maximizing tip-to-target accuracy. Other factors include fixture and PCB manufacturing tolerances. These include tooling pin alignment, drill hole perpendicularity, probe platen flatness as well as PCB artwork alignment.

PogoPlus® Series probes

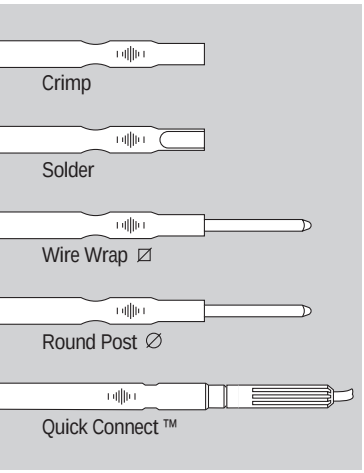
Conventional bias-type probes are susceptible to false opens – that is, transient electrical discontinuities that cause good products to "fail" during test. Revolutionary PogoPlus probes eliminate probe-induced false opens, saving you the time, money and trouble of needless product retesting.

The unrivaled electrical performance of the PogoPlus is due to the interaction between the spring, captured ball and plunger, which forces the plunger into continuous contact with the barrel wall at all times. The result is uninterrupted electrical continuity and low overall resistance that can't be equaled by any other "high performance" probe.

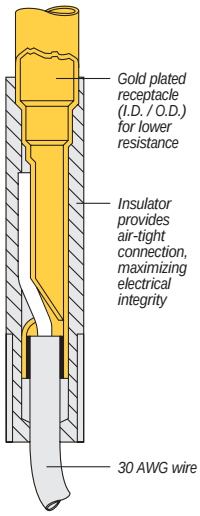
The PogoPlus is also designed to be the world's most durable probe with features like optional stainless-steel MicroSharp™ tips, tough plating, a larger spring volume and enhanced pointing precision.



Receptacles



Quick Connect™ Receptacle



High Current Probes

High current probes can carry 8-35 amps through a circuit. This is especially useful in non PCB test applications. The HC probe series provides low constant electrical resistance and excellent mechanical life on a variety of test centers. The special internal design provides higher current carrying capacity than "similar looking" probes. The stainless steel springs permit use in high temperature applications while their high pressure provides tip-to-target force minimizing constriction resistance.

Cyclo-Soldered Probes

The actuation of your vacuum fixture can pull solder fumes, fluxes, dust and smoke from the air. These elements are then deposited, together with friction-induced plating wear, on the bearing surfaces of your probe. Resistance can then skyrocket from under 50 milliohms to 2-3 ohms. In addition, high resistance readings may be intermittent, which makes it nearly impossible to find and replace the problem probes.

To address this situation, Ostby Barton originated and developed the Cyclo-Soldered test probe. This unique process provides a continuous, metallurgically bonded unit ensuring low and stable electrical constant resistance from one end of the probe to the other. When the bearing surfaces become completely insulated by contaminants, the spring (which is silver soldered to the plunger and barrel) takes over as the path of least resistance and remains constant throughout the probe's life. The maximum probe resistance is limited to that of the spring itself, which is typically under one ohm.

The Cyclo-Soldered process is available on selected probes shown in this catalog. Please consult the factory for more information.

Custom Probes

Ostby Barton has the industry's largest collection of custom probe designs. We had electrical contact design experience even before electrical contacts were adopted for ATE use.

Chances are good that you'll find the solution you need off the shelf. But if your application demands a more unique approach, our engineers will work with you to develop the probe that meets your needs.

Receptacles

Five receptacle styles are available: crimp, solder, wire wrap, round pin, and Quick Connect™. Some styles are only available in certain sizes (see specific probe series). See the TOOLS section for installation tips.

Ostby Barton creates more custom probe designs than anyone else in the industry.

CRIMP
This reliable connection is used primarily on smaller probe sizes in high density applications where wire wrap is not available or in situations where probe plate thickness inhibits the use of wire wrapping. Push-on terminals can also be used and are commercially available from most connector manufacturers.

SOLDER
This termination provides excellent electrical integrity for high reliability applications. It is used primarily in low density situations.

WIRE WRAP
These terminations are strong and provide excellent electrical integrity. It is the most common termination used in ATE fixturing. Connections can be made quickly by skilled technicians. Push-on terminals which fit the standard .025" (0,63 mm) square post can also be used.

ROUND POST
Round Post receptacles with .025" (0,63 mm) diameter posts are used with .100" (2,54 mm) center connectors and/or ribbon cable assemblies for mass termination.

QUICK CONNECT™
Quick Connect termination provides exceptional contact integrity and is available only on SMT receptacles. Connections can be made quickly and wiring mistakes can be corrected easily without damaging the receptacles.

Ordering Information

PROBES
Specify probe series, tip style, and spring force as shown below.

IP 541 A - *

Probe series
Tip style
Spring Pressure

RECEPTACLES
Specify receptacle series and termination method as shown below.

SR 541 -0

Receptacle series
Termination

Crimp:	-0
Solder cup:	-1
Wire wrap:	-2
Round post:	-3
Quick Connect ™:	-4

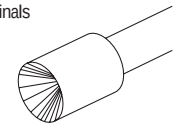
Probe Tip Selection and Applications

More selections to choose from… Ostby Barton.

Most tip styles can be used in a variety of applications. Factors to consider for loaded board tip selection are lead length (bent or straight), cleanliness and pad size. In general, tips with sharp points and internal cutting edges (to trap the lead) such as the crown or tulip, are excellent choices. To penetrate through contamination on bare boards choose a tip with sharp external cutting edges, like the chisel or star tip. These tips may mark the contact surface. As an alternative, use the convex tip on boards which are clean and free of contaminants. Experiment with several different styles until you find the one that works for your application.

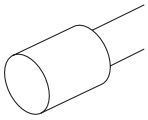
A Concave

Long leads, terminals and wire wrap posts.



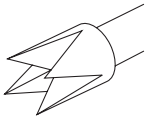
F Flat (headed)

Gold edge fingers. Provides positive contact without leaving any marks or indentations.



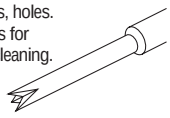
L Crown

Lands, pads, leads. Four sharp points for penetration, self cleaning.



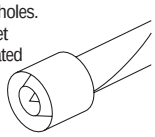
U 3 Point Crown

Lands, pads, leads, holes. Three sharp points for penetration, self-cleaning.



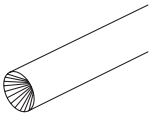
AE Target

Lands, pads, leads, holes. Self-centers on offset leads, for contaminated boards.



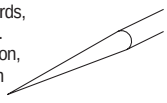
G Cup Shaft

Short leads, terminals, wire wrap posts, small-plated holes.



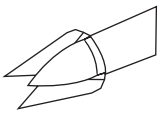
N One-piece Flexi

Contaminated boards, conformal coating. Excellent penetration, flexes for optimum point location.



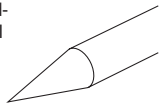
UN Trident

For pads, leads and vias



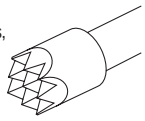
B Spear Tip

Lands, pads, plated-through holes. Tool steel holds sharp point, very durable.



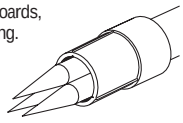
H Serrated

Lands, pads, leads, terminals. Nine points, high current, periodic tip cleaning required.



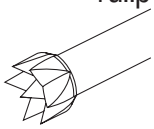
N3 Tri-Needle

Contaminated boards, conformal coating.



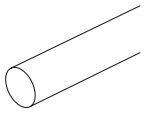
V Tulip

Plated-through holes and short or long component leads, self-cleaning.



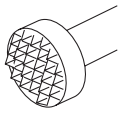
C Flat

Gold edge fingers. Provides positive contact without leaving any marks or indentations.



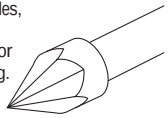
HM

HP Receiver Probe



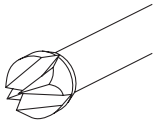
P Star

Plated-through holes, lands, pads. Best contact reliability for holes, self-cleaning.



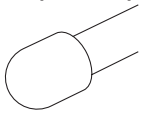
X Tapered Crown

Lands, pads, leads, holes. Four outer points tapered to lead into hole, self-cleaning.



D Spherical Radius (headed)

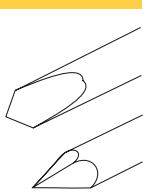
Gold edge fingers. Provides positive contact without leaving any marks or indentations.



I

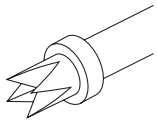
Pads, vias micro vias

I35



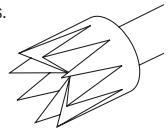
R Ringed Crown .040"

Lands, pads, leads. Four sharp points, ideal for fine line testing, self-cleaning.



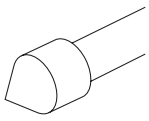
Z Eight Point

Lands, pads, leads. Eight sharp points for penetration, self-cleaning.



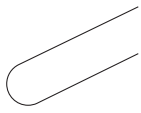
E Convex

Plated-through holes. Use on contamination-free boards, leaves no marks or indentations.



J Spherical Radius

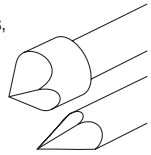
Connectors. Provides positive contact without leaving any marks or indentations.



T Chisel

Plated-through holes, test pads, vias

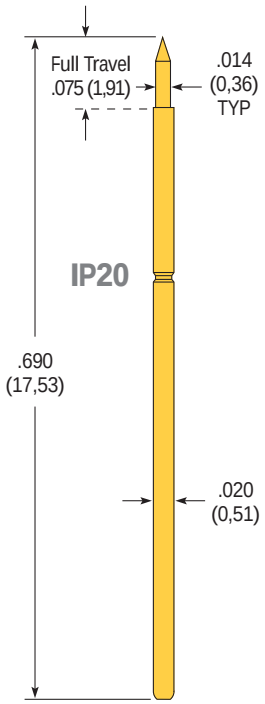
T41, T31, T1

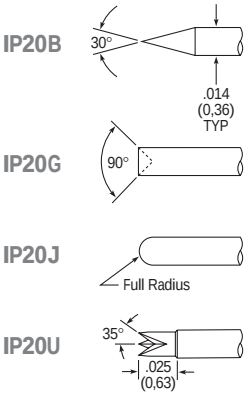


Dimensions in inches (millimeters)

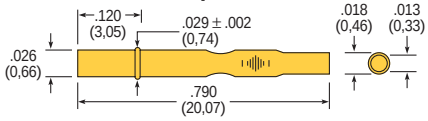
IP20
IP27

Test Probes for Bare SMT and Substrate Testing

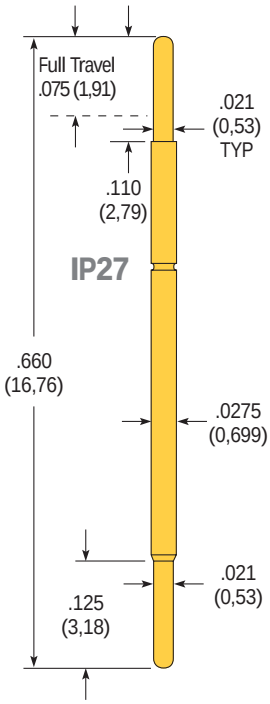


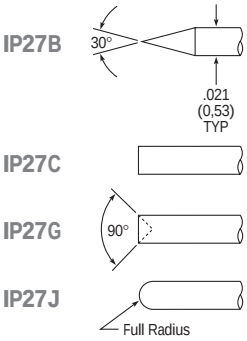


SR20-0 crimp

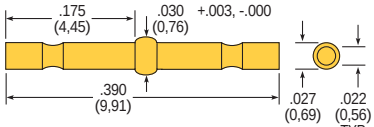


ORDERING INFORMATION:
To order, specify tip style. Example: IP20B is a "B" tip with a standard light spring pressure.

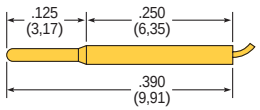




SR27-0 crimp



ST27 terminal



ORDERING INFORMATION:
To order, specify tip style. Example: IP27C is a "C" tip with a standard light spring pressure.

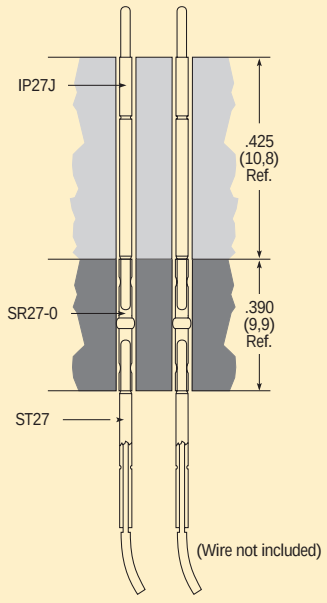
Specifications subject to change without notice.
Drawings not to scale.
Optional tip styles, spring pressures, and materials available, contact factory for more information.

SPECIFICATIONS

PROBE SERIES	IP20	IP27
Test Centers	.030 (0,762)	.039 (1,00)
Mechanical		
Max. Plunger Travel	.075 (1,91)	.075 (1,91)
Recom. Working Travel	.050 (1,27)	.050 (1,27)
Mechanical Life (cycles)	>250,000	>1,000,000
Spring Pressure		
Light: initial	.4 oz. (11g)	.8 oz. (23g)
@ working travel	1.4 oz. (40g)	1.8 oz. (51g)
Materials & Finishes		
Plunger	Hardened Beryllium Copper, Gold plated over Nickel plate	Hardened Beryllium Copper, Gold plated over Nickel plate
Barrel	Hardened Beryllium Copper, Gold plated (I.D. & O.D.) over Nickel plate	Work hardened Nickel Silver, Gold plated (I.D. & O.D.) over Nickel plate
Spring	Music Wire, Silver plated	Stainless Steel, Silver plated
Operating Range (typical)	-55°C to + 105°C	-55°C to + 150°C
Electrical		
Current Rating (static conditions)	2 amps	2 amps
Avg. Resistance (mOHMS)	50	35

RECEPTACLE SERIES	SR20 Uses Insertion Tool #T20-0	SR27 Uses Insertion Tool #T27-0
Mounting Hole Size	.0265/.0276 (0,67/0,70)	.0285/.0295 (0,72/0,75)
Suggested Drill Size	0,70 mm	#69 or 0,75 mm
Suggested Wire Gauge	30 AWG	28-30 AWG
Materials & Finishes	Hardened Beryllium Copper, Gold plated (I.D. & O.D.)over Nickel plate	Work hardened Nickel Silver, Gold plated (I.D. & O.D.)over Nickel plate
Terminations	Crimp	Crimp, terminal

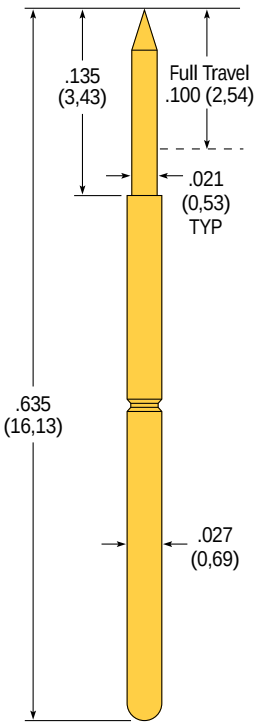
Pre-terminated receptacles available, contact factory for information.

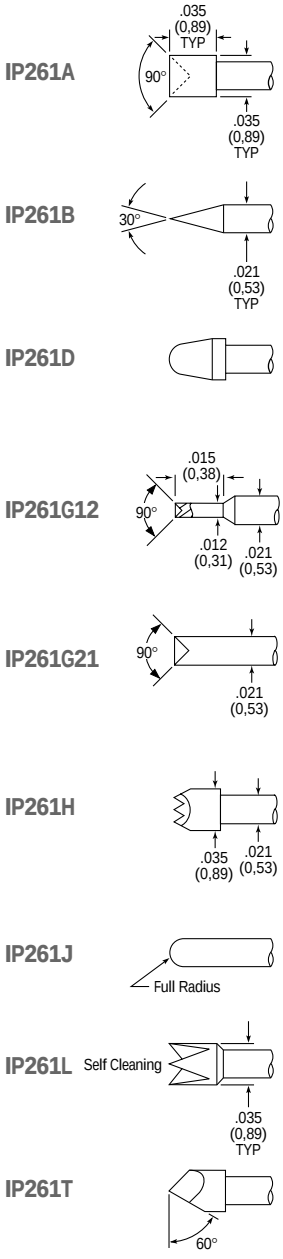


Dimensions in inches (millimeters)

IP261

Test Probes for Bare and Loaded SMT PCB Testing





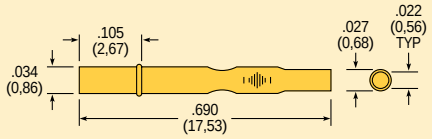
SPECIFICATIONS

PROBE SERIES	IP261
Test Centers	.050 (1,27)
Mechanical	
Max. Plunger Travel	.100 (2,54)
Recom. Working Travel	.067 (1,70)
Mechanical Life (cycles)	>1,000,000
Spring Pressure	
Light: initial	.6 oz. (17g)
@ working travel	2.8 oz. (79g)
Heavy: initial	.8 oz. (23g)
-1 @ working travel	3.7 oz. (105g)
Materials & Finishes	
Plunger	Hardened Beryllium Copper, Gold plated over Nickel plate
Barrel	Work hardened Phosphor Bronze, Gold plated (I.D. & O.D.) over Nickel plate
Spring — light:	Stainless Steel, Silver plated
— heavy:	Music Wire, Silver plated
Operating Range (typical)	Light -55°C to + 150°C Heavy –55°C to +105°C
Electrical	
Current Rating (static conditions)	3 amps
Avg. Resistance (mOHMS)	35

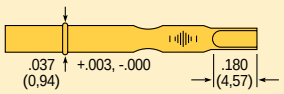
RECEPTACLE SERIES	SR261 (Uses Insertion Tool #T261-0)
Mounting Hole Size	.035/.0365 (0,89/0,93)
Suggested Drill Size	#64 or 0,92 mm
Suggested Wire Gauge	28-30 AWG
Materials & Finishes	Work hardened Nickel Silver, Gold plated over Nickel plate
Terminations	Crimp, solder, Quick-Connect™

One RS-1 insulator sleeve is provided with each Quick Connect™ receptacle.
Contact factory for price and delivery on additional quantities.

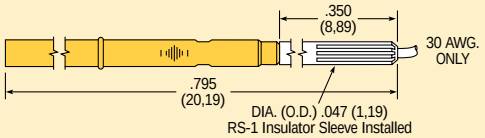
SR261-0 crimp



SR261-1 solder



SR261-4 Quick Connect™

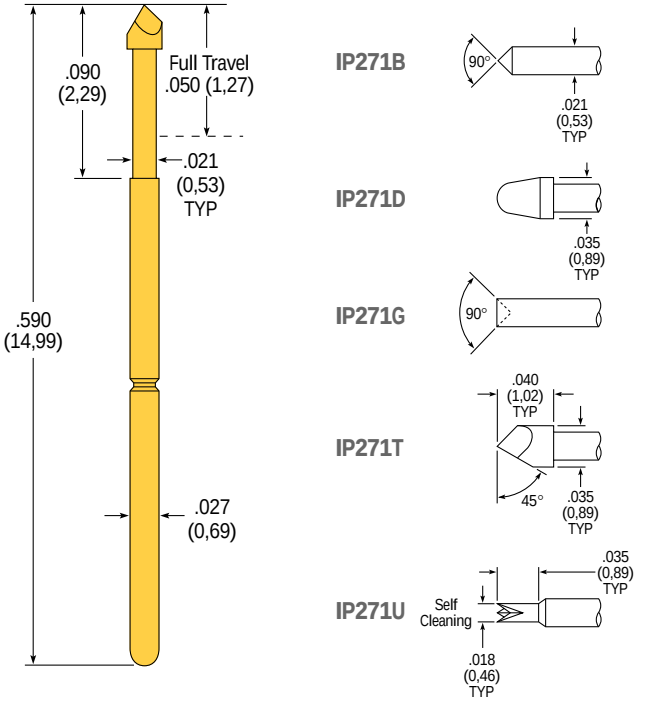


ORDERING INFORMATION: To order, specify tip style and spring pressure. Example: IP261A is an "A" tip with a light spring. For a heavy spring pressure, add -1 to the model number, i.e., IP261A-1.

Specifications subject to change without notice.
Drawings not to scale.
Optional tip styles, spring pressures, and materials available, contact factory for more information.

IP271

Test Probes for Bare and Loaded SMT PCB Testing



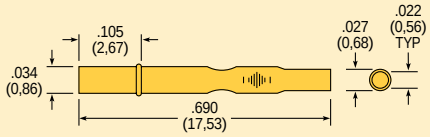
SPECIFICATIONS

PROBE SERIES	IP271
Test Centers	.050 (1,27)
Mechanical	
Max. Plunger Travel	.050 (1,27)
Recom. Working Travel	.050 (1,27)
Mechanical Life (cycles)	>1,000,000
Spring Pressure	
initial	1.6 oz. (45g)
@ working travel	3.2 oz. (91g)
Materials & Finishes	
Plunger	Hardened Beryllium Copper, Gold plated over Nickel plate
Barrel	Work hardened Phosphor Bronze, Gold plated (I.D. & O.D.) over Nickel plate
Spring — light:	Music Wire, Silver plated
Operating Range (typical)	-55°C to + 105°C
Electrical	
Current Rating (static conditions)	3 amps
Avg. Resistance (mOHMS)	35

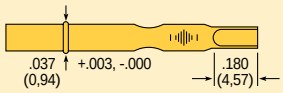
RECEPTACLE SERIES	SR261 (Uses Insertion Tool #T261-0)
Mounting Hole Size	.035/.0365 (0,89/0,93)
Suggested Drill Size	#64 or 0,92 mm
Suggested Wire Gauge	28-30 AWG
Materials & Finishes	Work hardened Nickel Silver, Gold plated over Nickel plate
Terminations	Crimp, solder, Quick Connect™

One RS-1 insulator sleeve is provided with each Quick Connect™ receptacle.
Contact factory for price and delivery on additional quantities.

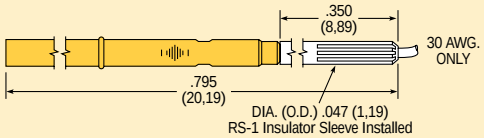
SR261-0 crimp



SR261-1 solder



SR261-4 Quick Connect™

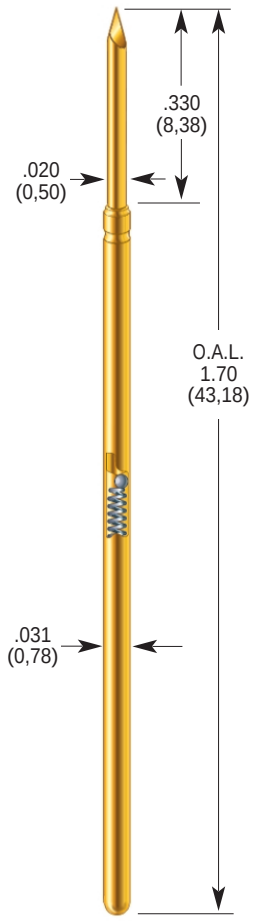


ORDERING INFORMATION: To order, specify tip style and spring pressure. Example: IP271B is a "B" tip with a standard spring.

Specifications subject to change without notice.
Drawings not to scale.
Optional tip styles, spring pressures, and materials available, contact factory for more information.

POGO-72

High-Performance Bias Ball Probe For Loaded PCB Testing

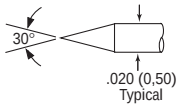


Patented

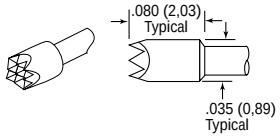
NOTE: To order in steel, include a -S after model #, i.e. POGO-72H-4-S

Pogo series not available with cyclo-soldered option

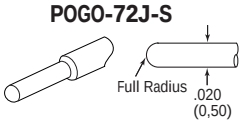
POGO-72B



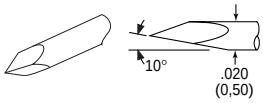
POGO-72H
POGO-72H-S



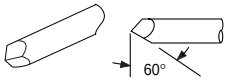
POGO-72J
POGO-72J-S



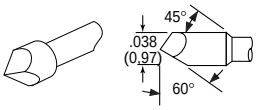
POGO-72T1
POGO-72T1-S



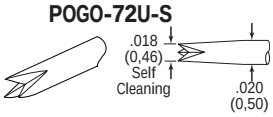
POGO-72T20
POGO-72T20-S



POGO-72T38
POGO-72T38-S



POGO-72U
POGO-72U-S



SPECIFICATIONS

PROBE SERIES	POGO-72	POGO-72 STEEL
Mechanical		
Full Travel:	.250 (6,35)	.250 (6,35)
Recommended Working Travel:	.167 (4,24)	.167 (4,24)
Mechanical Life Exceeds:	1 x 10^6 cycles	1 x 10^5 cycles
Operating Temperature	-55°C to +105°C	-55°C to +105°C
Consult factory for other temperature requirements, and applications below -40°C		
Electrical (Static Conditions)		
Current Rating:	3 amps	3 amps
maximum continuous current, non-inductive at working travel		
Probe Resistance	15 m Ω	15 m Ω
With a standard deviation of <2 mV @ 25 mA test current		
Materials and Finishes		
Plunger:	Heat-treated beryllium copper, gold-plated over hard nickel	Heat-treated tool steel, gold-plated over hard nickel
Barrel:	Work hardened beryllium copper, HPA-GOLD™ plated (I.D. and O.D.) over hard nickel	Work hardened beryllium copper, HPA-GOLD™ plated (I.D. and O.D.) over hard nickel
Spring:	Music wire	Music wire
Ball:	Stainless steel	Stainless steel

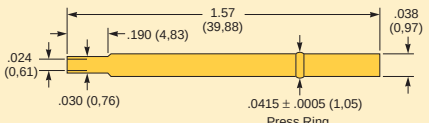
RECEPTACLE SPECIFICATIONS (Uses Insertion Tool #AT31)

Mounting Hole Size: A #61 drill is most commonly used.	.039 (0,99)	.039 (0,99)
Recommended Wire Gauge:	28-30 AWG	28-30 AWG
Connections:	**HPR-72W** Crimp (To order with 30 inches of 28 or 30 AWG wire attached, add -28 or -30 to model number.) **HPR-72W-1** Solder cup **HPR-72W-4 FASTITE**® wire termination (30 AWG only), max. insulation diameter = .019 (0,48), wire strip length = .125 (3,2) **DS-62-1** Insulation sleeve for HPR-72-W-4. One sleeve is provided with each **FASTITE**® receptacle at no charge. Consult factory for price/delivery on additional quantities. **FWA-1-30** 30 AWG wire with DS-62-1 insulation sleeve attached.	**HPR-72W** Crimp (To order with 30 inches of 28 or 30 AWG wire attached, add -28 or -30 to model number.) **HPR-72W-1** Solder cup **HPR-72W-4 FASTITE**® wire termination (30 AWG only), max. insulation diameter = .019 (0,48), wire strip length = .125 (3,2) **DS-62-1** Insulation sleeve for HPR-72-W-4. One sleeve is provided with each **FASTITE**® receptacle at no charge. Consult factory for price/delivery on additional quantities. **FWA-1-30** 30 AWG wire with DS-62-1 insulation sleeve attached.
Materials and Finishes	Work-hardened beryllium copper, HPA-Gold™ plated (I.D. and O.D.) over hard nickel.	Work-hardened beryllium copper, HPA-Gold™ plated (I.D. and O.D.) over hard nickel.

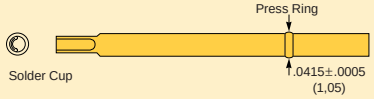
SPRING FORCE +/- 20% IN OZ. (GRAMS) Spring Type			Preload	2/3 Travel
To order, add dash number to Model Number.				
Light		-2	.73 (21)	2.0 (57)
Standard	as shown	-4	.99 (28)	4.0 (114)
Alternate		-6	.64 (18)	6.0 (170)
High		-8	2.33 (66)	8.0 (227)

Optional spring forces and materials are available.

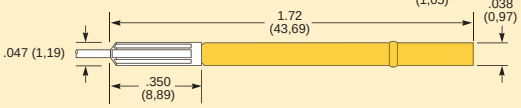
HPR-72W



HPR-72W-1



HPR-72W-4
(Shown with DS-62-1 installed)

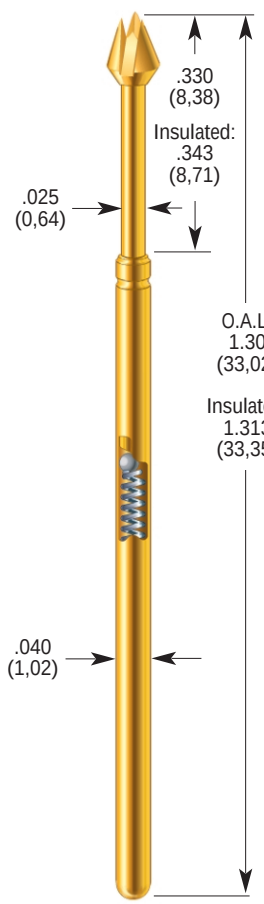


Pogo® Plus

Dimensions in inches (millimeters)

POGO-1

High-Performance Bias Ball Probe For Loaded PCB Testing

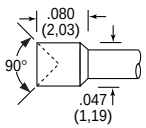


Patented

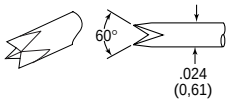
NOTE: To order in steel, include a -S after model #, i.e. POGO-1H-4-S

Pogo series not available with cyclo-soldered option

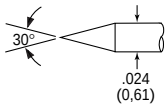
POGO-1A



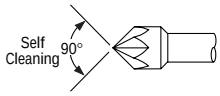
POGO-1L24
POGO-1L24-S



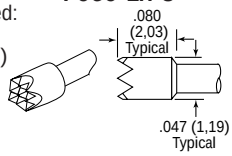
POGO-1B
POGO-1B-S



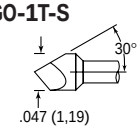
POGO-1P
POGO-1P-S



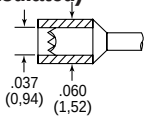
POGO-1H
POGO-1H-S



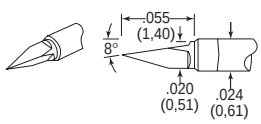
POGO-1T
POGO-1T-S



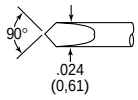
POGO-1H-INS-8
(Insulated)



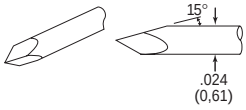
POGO-1T1
POGO-1T1-S



POGO-1I
POGO-1I-S

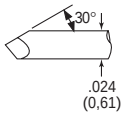


POGO-1T24
POGO-1T24-S

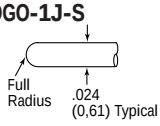


POGO-1I35-S

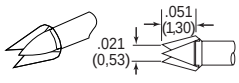
POGO-1T30
POGO-1T30-S



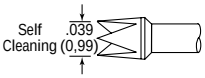
POGO-1J
POGO-1J-S



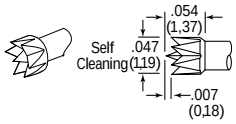
POGO-1UN
POGO-1UN-S



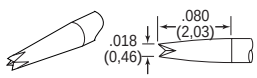
POGO-1L
POGO-1L-S



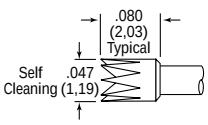
POGO-1V
POGO-1V-S



POGO-1L18
POGO-1L18-S



POGO-1Z



SPECIFICATIONS

PROBE SERIES	POGO-1	POGO-1 STEEL
Mechanical		
Full Travel:	.250 (6,35)	.250 (6,35)
Recommended Working Travel:	.167 (4,24)	.167 (4,24)
Mechanical Life Exceeds:	1 x 10^6 cycles	1 x 10^6 cycles
Operating Temperature	-55°C to +105°C	-55°C to +105°C
Consult factory for other temperature requirements, and applications below -40°C		
Electrical (Static Conditions)		
Current Rating:	6 amps	6 amps
Maximum continuous current, non-inductive at working travel		
Probe Resistance	20 m Ω	15 m Ω
With a standard deviation of <3 mV @ 25 mA test current		
Materials and Finishes		
Plunger:	Heat-treated beryllium copper, gold-plated over hard nickel	Heat-treated tool steel, gold-plated over hard nickel
Barrel:	Work hardened phosphor bronze, HPA-GOLD™ plated (I.D. and O.D.) over hard nickel	Work hardened phosphor bronze, HPA-GOLD™ plated (I.D. and O.D.) over hard nickel
Spring:	Music wire	Music wire
Ball:	Stainless steel	Stainless steel

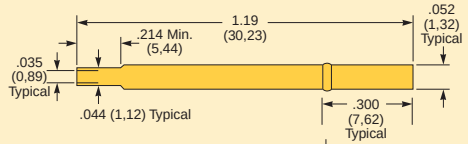
RECEPTACLE SPECIFICATIONS (Uses Insertion Tool #ARIT40)

Mounting Hole Size: **Suggested Drill Size:**	.053/.055 (1,35/1,40) #54 or 1,4 mm	.053/.055 (1,35/1,40)
Recommended Wire Gauge:	24-28 AWG	24-28 AWG
Connections:	**LTR-1W** Crimp **LTR-1W-1** Solder cup **LTR-1W-2** Wire wrap/square post. Vacuum leak rate not to exceed 1 x 10^{-4} CFM @ 15 psi **SR40-2L** Wire wrap, square post **SR40-2LL** Wire wrap, square post	**LTR-1W** Crimp **LTR-1W-1** Solder cup **LTR-1W-2** Wire wrap/square post. Vacuum leak rate not to exceed 1 x 10^{-4} CFM @ 15 psi **SR40-2L** Wire wrap, square post **SR40-2LL** Wire wrap, square post
Materials and Finishes		
Housing:	Work-hardened nickel silver, gold plated over hard nickel	Work-hardened nickel silver, gold plated over hard nickel
Square Post:	Phosphor bronze, gold plated	Phosphor bronze, gold plated

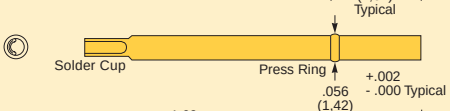
SPRING FORCE +/- 20% IN OZ. (GRAMS) Spring Type		Preload	2/3 Travel
To order, add dash number to Model Number.			
Light	-2	0.72 (20)	2.0 (57)
Standard	as shown -4	1.47 (42)	4.0 (114)
Alternate	-6	1.73 (49)	6.0 (170)
High	-8	1.20 (34)	8.0 (227)
Ultra High	-10	3.50 (99)	10.0 (283)

Optional spring forces and materials are available.

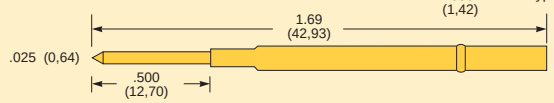
LTR-1W



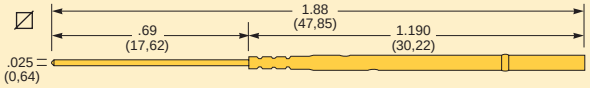
LTR-1W-1



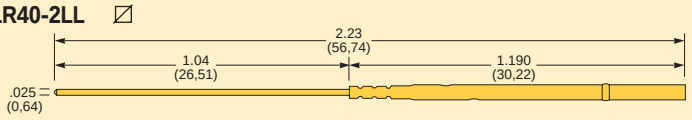
LTR-1W-2



LR40-2L

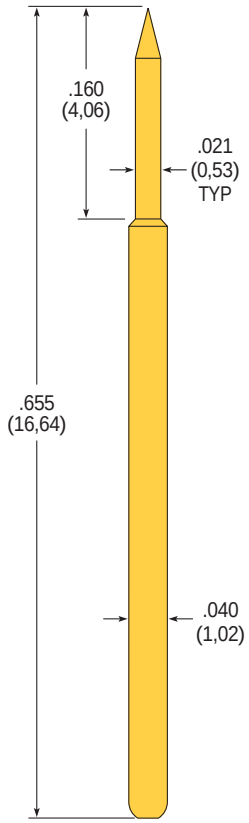


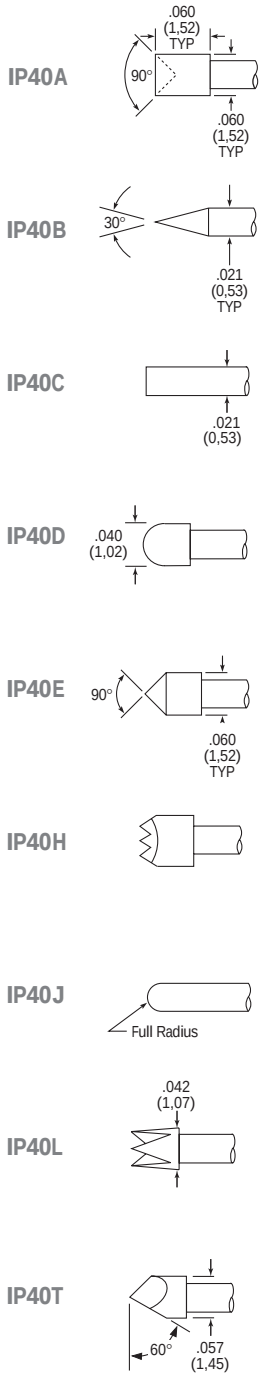
LR40-2LL



IP40

Test Probes for Bare and Loaded PCB Testing





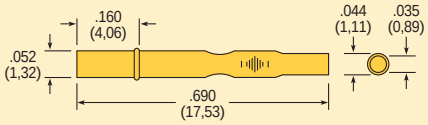
Specifications subject to change without notice.
Drawings not to scale.
Optional tip styles, spring pressures, and materials available, contact factory for more information.

SPECIFICATIONS

PROBE SERIES	IP40
Test Centers	.075 (1,91)
Mechanical	
Max. Plunger Travel	.100 (2,54)
Recom. Working Travel	.067 (1,70)
Mechanical Life (cycles)	>1,000,000
Spring Pressure	
Light: initial	1.1 oz. (31g)
@ working travel	2.5 oz. (71g)
Heavy: initial	1.3 oz. (37g)
-1 @ working travel	4.5 oz. (128g)
Materials & Finishes	
Plunger	Hardened Beryllium Copper, Gold plated over Nickel plate
Barrel	Work hardened Phosphor Bronze, Gold plated (I.D. & O.D.) over Nickel plate
Spring	Stainless Steel, Silver plated
Operating Range (typical)	-55°C to + 150°C
Electrical	
Current Rating (static conditions)	3 amps
Avg. Resistance (mOHMS)	35

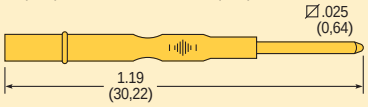
RECEPTACLE SERIES	SR40 (Uses Insertion Tool #ARIT40)
Mounting Hole Size	.053/.055 (1,35/1,40)
Suggested Drill Size	#54 or 1,4 mm
Suggested Wire Gauge	24-28 AWG
Materials & Finishes	Work hardened Nickel Silver, Gold plated over Nickel plate
Terminations	Crimp, solder, wire wrap

SR40-0 crimp



SR40-1 solder

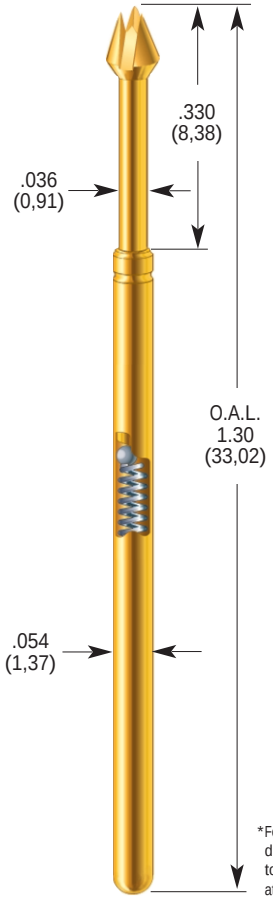
SR40-2 wire wrap



ORDERING INFORMATION: To order, specify tip style and spring pressure. Example: IP40A is an "A" tip with a light spring. For a heavy spring pressure, add -1 to the model number, i.e., IP40A-1.

POGO-25

High-Performance Bias Ball Probe For Loaded PCB Testing



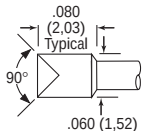
*For insulated tip dimensions, refer to diagrams at right.

Patented

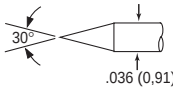
NOTE: To order in steel, include a -S after model #, i.e. POGO-25H-4-S

Pogo series not available with cyclo-soldered option

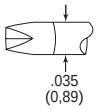
POGO-25A
POGO-25A-S



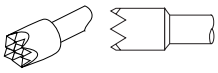
POGO-25B
POGO-25B-S



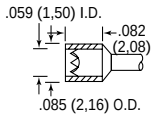
POGO-25FL-S



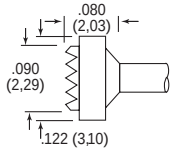
POGO-25H
POGO-25H-S



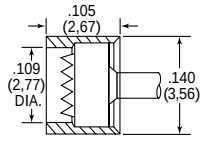
POGO-25H-INS
(Insulated)



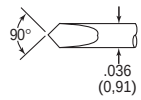
POGO-25HM



POGO-25HM-INS
(Insulated)



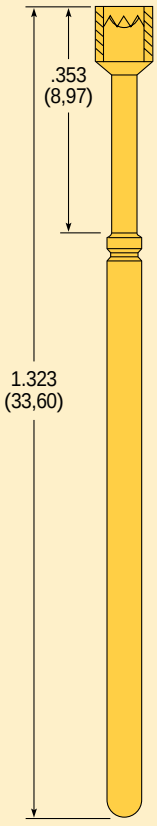
POGO-25I
POGO-25I-S



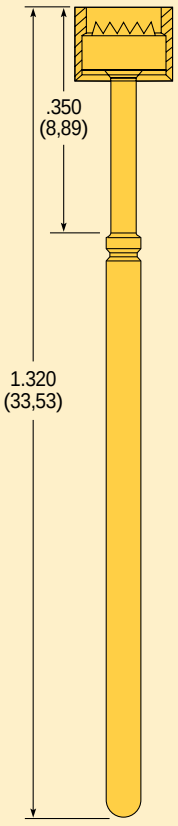
SPECIFICATIONS

PROBE SERIES	POGO-25	POGO-25 STEEL
Mechanical		
Full Travel:	.250 (6,35)	.250 (6,35)
Recommended Working Travel:	.167 (4,24)	.167 (4,24)
Mechanical Life Exceeds:	1 x 10^6 cycles	1 x 10^6 cycles
Operating Temperature	-55°C to +105°C	-55°C to +105°C
Consult factory for other temperature requirements, and applications below -40°C		
Electrical (Static Conditions)		
Current Rating:	10 amps	10 amps
Maximum continuous current, non-inductive at working travel		
Probe Resistance	8 m Ω	8 m Ω
With a standard deviation of <1 mV @ 25 mA test current		
Materials and Finishes		
Plunger:	Heat-treated beryllium copper, gold-plated over hard nickel	Plunger steel, heat-treated tool steel, gold-plated over hard nickel
Barrel:	Work hardened phosphor bronze, HPA-GOLD™ plated (I.D. and O.D.) over hard nickel	Work hardened phosphor bronze, HPA-GOLD™ plated (I.D. and O.D.) over hard nickel
Spring:	Music wire	Music wire
Ball:	Stainless steel	Stainless steel

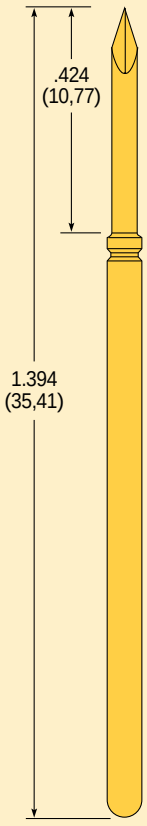
Insulated and Special Tip Probe Dimensions



POGO-25H-INS-8



POGO-25HM-INS-4

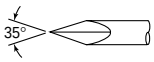


POGO-25I35-6SL
POGO-25I35-10SL

Pogo® Plus

 Dimensions in inches (millimeters)

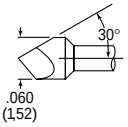
POGO-25I35-S



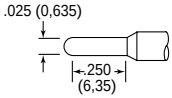
POGO-25L36
POGO-25L36-S

POGO-25I35-6SL*
POGO-25I35-10SL*

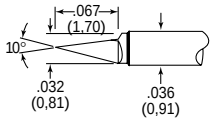
POGO-25T
POGO-25T-S



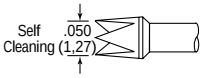
POGO-25J
POGO-25J-S



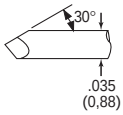
POGO-25T1-S



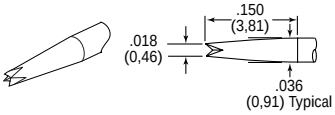
POGO-25L
POGO-25L-S



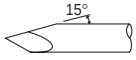
POGO-25T30
POGO-25T30-S



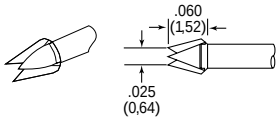
POGO-25L18
POGO-25L18-S



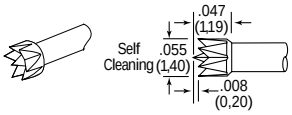
POGO-25T36
POGO-25T36-S



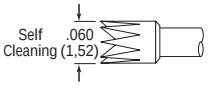
POGO-25UN
POGO-25UN-S



POGO-25V
POGO-25V-S



POGO-25Z
POGO-25Z-S



* See diagrams at left for dimensions

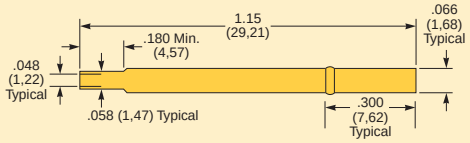
RECEPTACLE SPECIFICATIONS (Uses Insertion Tool #ARIT54)

Mounting Hole Size:	.067/.069 (1,7/1,75)	.067/.069 (1,7/1,75)
Recommended Wire Gauge:	22-26 AWG	22-26 AWG
Connections:	**SPR-25W** Crimp or push-on termination (AMP terminal 60983-1 or equivalent **SPR-25W-1** Solder cup **SPR-25W-2** Wire wrap/square post. Vacuum leak rate not to exceed 1 x 10^{-4} CFM @ 15 psi **SPR-25W-3** Connector pin/round post **SR54-2L** Wire wrap, square post **SR54-2LL** Wire wrap, square post	**SPR-25W** Crimp or push-on termination (AMP terminal 60983-1 or equivalent **SPR-25W-1** Solder cup **SPR-25W-2** Wire wrap/square post. Vacuum leak rate not to exceed 1 x 10^{-4} CFM @ 15 psi **SPR-25W-3** Connector pin/round post **SR54-2L** Wire wrap, square post **SR54-2LL** Wire wrap, square post
Materials and Finishes		
Housing:	Work-hardened nickel silver, gold plated over hard nickel	Work-hardened nickel silver, gold plated over hard nickel
Round Post:	Phosphor bronze, gold plated	Phosphor bronze, gold plated
Square Post:	Phosphor bronze, gold plated	Phosphor bronze, gold plated

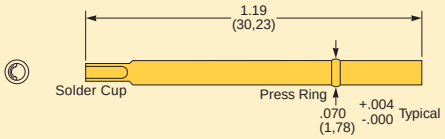
SPRING FORCE +/- 20% IN OZ. (GRAMS) Spring Type		Preload	2/3 Travel
To order, add dash number to Model Number.			
Light	-2	0.70 (20)	2.0 (57)
Standard as shown	-4	1.24 (35)	4.0 (114)
Alternate	-6	1.73 (49)	6.0 (170)
High	-8	2.15 (61)	8.0 (227)
Ultra High	-10	1.87 (53)	10.0 (283)
Super (Available)	-16	3.90 (111)	16.0 (455)

Optional spring forces and materials are available.

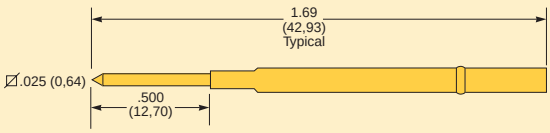
SPR-25W



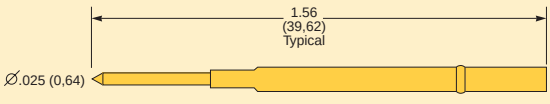
SPR-25W-1



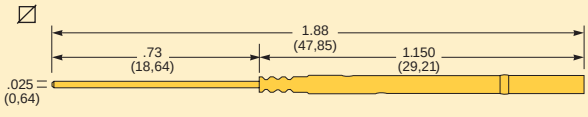
SPR-25W-2 ⊠



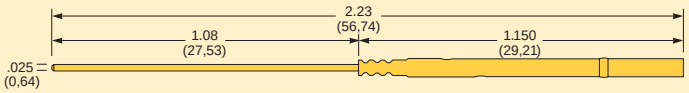
SPR-25W-3 ∅



SR54-2L ⊠

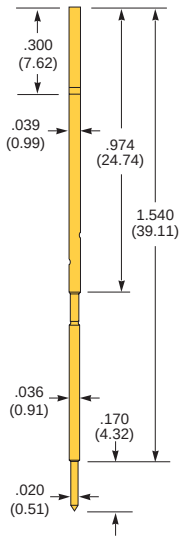


SR54-2LL ⊠

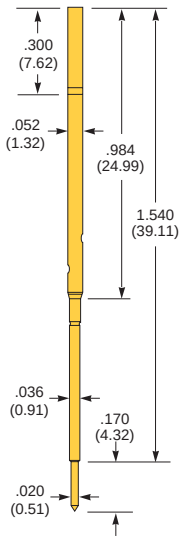


DER-50
DER-75
DER-100

Double-Ended Receptacles

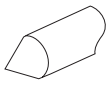


DER-50

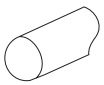


DER-75

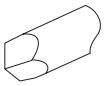
B TIP STYLE
Order DER-xxxB-3.5

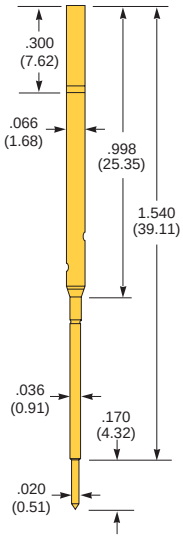


J TIP STYLE
Order DER-xxxJ-3.5



T TIP STYLE
Order DER-xxxT-3.5





DER-100

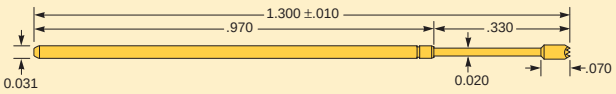
RECEPTACLE SPECIFICATIONS

	DER-050	DER-075	DER-100
Mechanical			
Recommended Mounting Centers:	.050 (1.27)	.075 (1.91)	.100 (2.54)
Full Travel:	.160 (4.06)	.160 (4.06)	.160 (4.06)
Recommended Travel:	.130 (3.30)	.130 (3.30)	.130 (3.30)
Test Height:	1.586 (40.28)	1.586 (40.28)	1.586 (40.28)
Spring Force in oz. (grams):	3.5 (99)	3.5 (99)	3.5 (99)
Overall Length:	1.710 (43.43)	1.710 (43.43)	1.710 (43.43)
Recommended Mounting Hole Size:	.037/.038 (.94/.97)	.053/.055 (1.35/1.40)	.067/.069 (1.70/1.75)
Materials and Finishes			
Plunger:	Beryllium copper alloy, hard gold over nickel	Beryllium copper alloy, hard gold over nickel	Beryllium copper alloy, hard gold over nickel
Barrel:	Beryllium copper alloy, hard gold over nickel	Beryllium copper alloy, hard gold over nickel	Beryllium copper alloy, hard gold over nickel
Spring:	Steel alloy, hard gold over nickel	Steel alloy, hard gold over nickel	Steel alloy, hard gold over nickel
Receptacle:	Beryllium copper alloy, hard gold over nickel	Nickel silver alloy, hard gold over nickel	Nickel silver alloy, hard gold over nickel
Fixture Probes (Ordered Seperately)	Pogo-62 (see below)	Pogo-1 (see page 8)	Pogo-25/LT54 (see 10, 11 & 13)

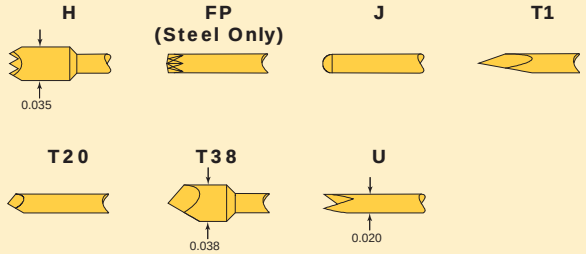
PROBE SPECIFICATIONS	POGO-62	POGO-62 STEEL
Mechanical		
Full Travel:	.250 (6.35)	.250 (6.35)
Recommended Working Travel:	.167 (4.24)	.167 (4.24)
Mechanical Life:	500,000 cycles	500,000 cycles
Operating Temperature	-55°C to +105°C	-55°C to +105°C
Consult factory for other temperature requirements, and applications below -40° C.		
Electrical (Static Conditions)		
Current Rating:	3 amps	3 amps
Maximum continuous current, non-inductive at working travel		
Probe Resistance	15 mΩ	15 mΩ
With a standard deviation of <1 mΩ @ 25 mA test current		
Materials and Finishes		
Plunger:	Heat-treated beryllium copper, hard gold over nickel	Heat-treated beryllium copper, hard gold over nickel
Barrel:	Work-hardened beryllium copper, hard gold over nickel	Work-hardened beryllium copper, hard gold over nickel
Spring:	Music wire	Music wire
Ball:	Stainless steel	Stainless steel

SPRING FORCE IN OZ. (GRAMS) Spring Type		Preload	2/3 Travel
Light	-2	.48 (14)	2.0 (57)
Standard	-4	1.02 (29)	4.0 (114)
Alternate	-6	.66 (19)	6.0 (170)

POGO-62

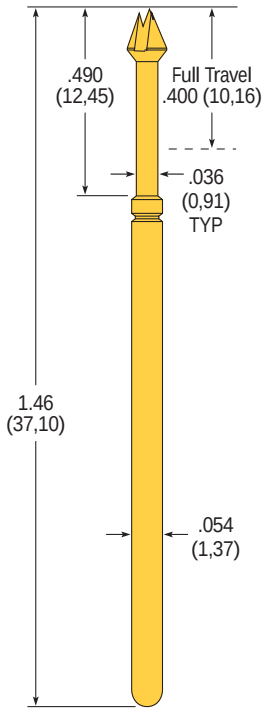


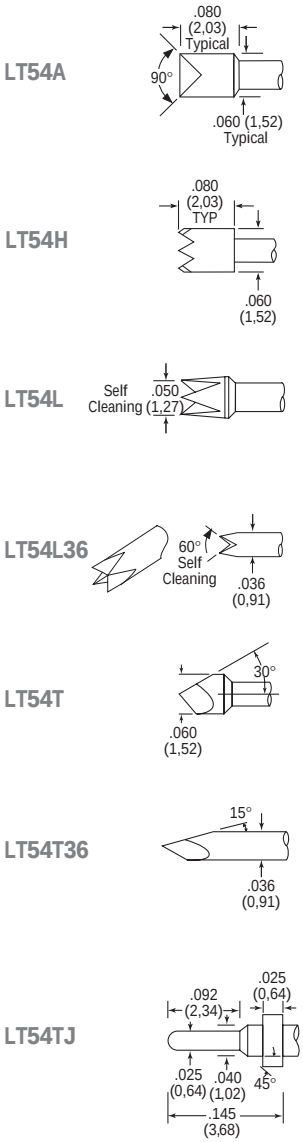
Tip Styles



LT54

Long Travel Test Probes for Bare, Loaded and Dual Level PCB Testing



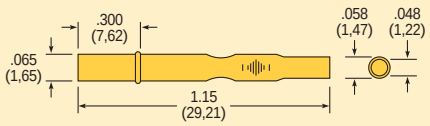


SPECIFICATIONS

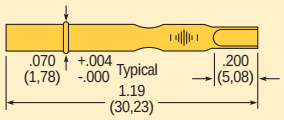
PROBE SERIES		LT54	LT54TJ
Test Centers		.100 (2,54)	.100 (2,54)
Mechanical			
Max. Plunger Travel		.400 (10,16)	.345 (8.76)
Recom. Working Travel		.315 (8,0)	.315 (8.00)
Mechanical Life (cycles)		>100,000	>100,000
SPRING FORCE IN OZ. (GRAMS)			
Spring Type		**Preload**	**.315 Travel**
Standard	-4	1.24 (35)	4.0 (114)
Alternate	-6	1.73 (49)	6.0 (170)
High	-8	2.15 (61)	8.0 (227)
Materials & Finishes			
Plunger		Hardened Beryllium Copper, Gold plated over Nickel plate	Hardened Beryllium Copper, Gold plated over Nickel plate
Barrel		Work hardened Phosphor Bronze, Gold plated (I.D. & O.D.) over Nickel plate	Work hardened Phosphor Bronze, Gold plated (I.D. & O.D.) over Nickel plate
Spring		Music Wire, Silver plated	Music Wire, Stainless steel
Operating Range (typical)		-55°C to + 105°C	-55°C to + 105°C
Electrical			
Current Rating (static conditions)		10 amps	10 amps
Avg. Resistance (mOHMS)		8	8

RECEPTACLE SERIES	SR54 (Uses Insertion Tool #ARIT54)	SR54 (Uses Insertion Tool #ARIT54)
Mounting Hole Size	.067/.069 (1,70/1,75)	.067/.069 (1,70/1,75)
Suggested Drill Size	1,75 mm	1,75 mm
Suggested Wire Gauge	22-26 AWG	22-26 AWG
Materials & Finishes	Work hardened Nickel Silver, Gold plated over Nickel plate	Work hardened Nickel Silver, Gold plated over Nickel plate
Terminations	Crimp, solder, wire wrap, round post	Crimp, solder, wire wrap, round post

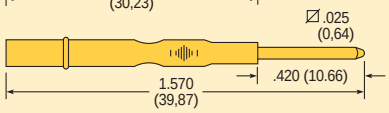
SR54-0 crimp



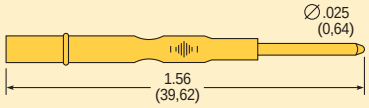
SR54-1 solder



SR54-2 wire wrap



SR54-3 round post



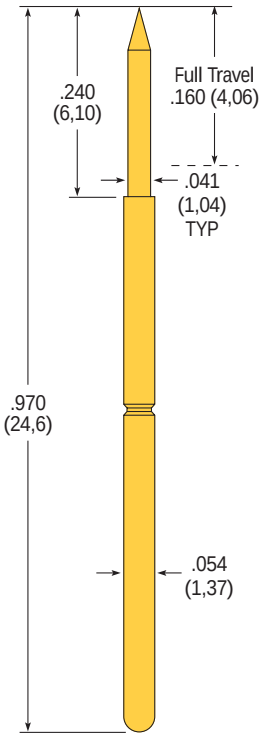
ORDERING INFORMATION: To order, specify tip style and spring pressure. Example: LT54H is an "H" tip with a standard spring.

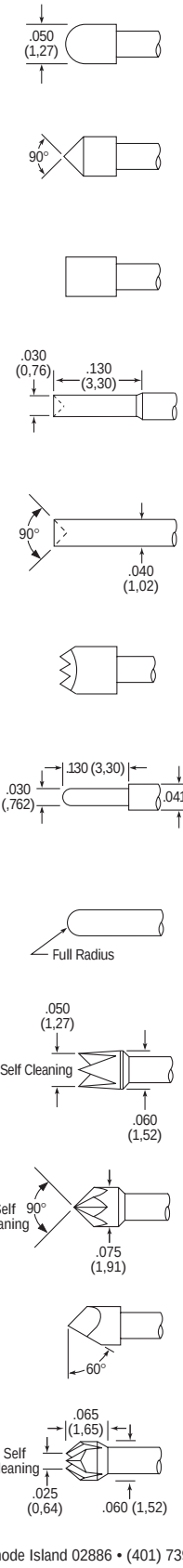
Specifications subject to change without notice.
Drawings not to scale.
Optional tip styles, spring pressures, and materials available, contact factory for more information.

IP541

Test Probes for Bare and Loaded PCB Testing

The IP541 is an interchangeable probe designed for use in testing conventional PCBs.



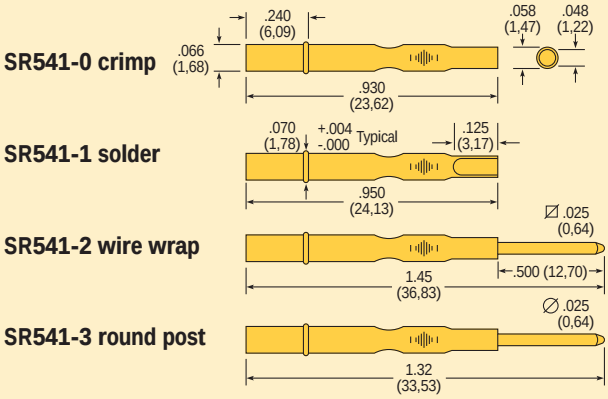


Specifications subject to change without notice.
Drawings not to scale.
Optional tip styles, spring pressures, and materials available, contact factory for more information.

SPECIFICATIONS

PROBE SERIES		IP541
Test Centers		.100 (2,54)
Mechanical		
Max. Plunger Travel		.160 (4,06)
Recom. Working Travel		.106 (2,69)
Mechanical Life (cycles)		>1,000,000
Spring Pressure		
Light:	initial	1.08 oz. (31g)
	@ working travel	3.5 oz. (99g)
Heavy:	initial	2.64 oz. (75g)
-1	@ working travel	6.5 oz. (184g)
Extra Heavy:	initial	4.09 oz. (116g)
-2	@ working travel	10.0 oz. (283g)
Materials & Finishes		
Plunger		Hardened Beryllium Copper, Gold plated over Nickel, except the K tip which is Tool Steel
Barrel		Work hardened Nickel Silver, Gold plated (I.D. & O.D.) over Nickel plate
Spring		Music Wire, Silver plated
Operating Range (typical)		-55°C to + 105°C
Electrical		
Current Rating (static conditions)		3 amps
Avg. Resistance (mOHMS)		50

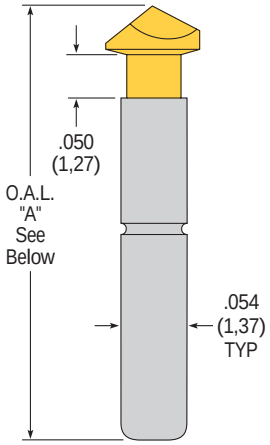
RECEPTACLE SERIES	SR541 (Uses Insertion Tool #ARIT54)
Mounting Hole Size	.069 (1,75)
Suggested Drill Size	1,75 mm
Suggested Wire Gauge	22-30 AWG
Materials & Finishes	Work hardened Nickel Silver, Gold plated over Nickel plate
Terminations	Crimp, solder, wire wrap, round post

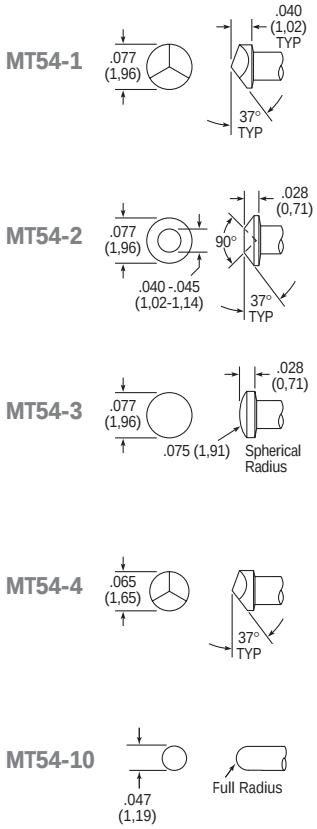


ORDERING INFORMATION: To order, specify tip style and spring pressure. Example: IP541A is an "A" tip with a light spring. For a heavy spring pressure, add -1 to the model number, i.e., IP541A-1.

MT54

Test Probes for use in Everett Charles Test Equipment Bare PCB Testers





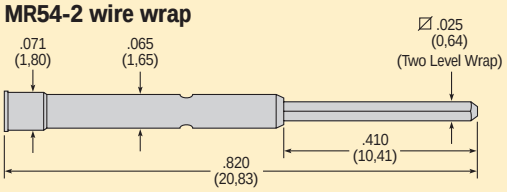
Model No.	*Dimension A*
MT54-1, -4	.375 (9,53)
MT54-2, -3	.365 (9,27)
MT54-10	.363 (9,22)

SPECIFICATIONS

PROBE SERIES	MT54
Test Centers	.100 (2,54)
Mechanical	
Max. Plunger Travel	.050 (1,27)
Recom. Working Travel	.050 (1,27)
Mechanical Life (cycles)	>1,000,000
Spring Pressure	
initial	1.1 oz. (31.2g)
@ working travel	3.8 oz. (108g)
Materials & Finishes	
Plunger	Hardened Beryllium Copper, Gold plated over Nickel plate
Barrel	Work hardened Nickel Silver, unplated
Spring	Stainless Steel, Silver plated
Operating Range (typical)	-55°C to + 150°C
Electrical	
Current Rating (static conditions)	3 amps
Avg. Resistance (mOHMS)	50

RECEPTACLE SERIES	MR54 (Uses Insertion Tool #MRT54-005)
Mounting Hole Size	.067/.069 (1,70/1,75)
Suggested Drill Size	1,75 mm
Suggested Wire Gauge	26-30 AWG
Materials & Finishes	Nickel Silver, unplated
Terminations	Wire wrap

MR54-2 wire wrap



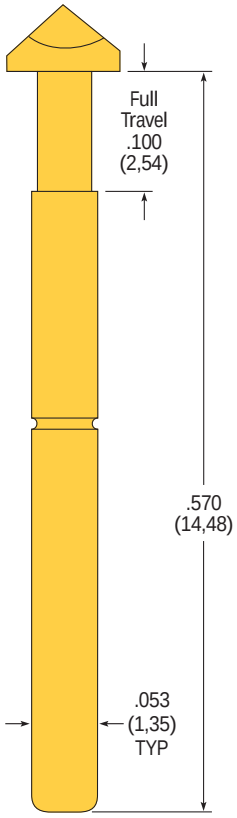
Hole Diameters to be Contacted:		*Recommended Test Centers*	
MT54-1	up to .073 (1,85)	MT54-1, -2, -3, -4, -10	.100 (2,54)
MT54-2	lands and pads		
MT54-3	lands and pads		
MT54-4	up to .058 (1,47)		
MT54-10	lands and pads		

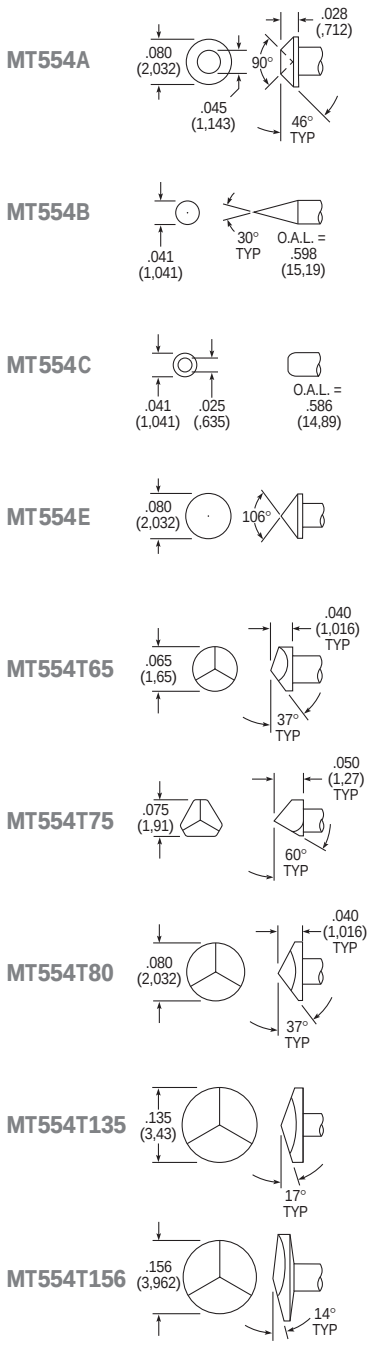
ORDERING INFORMATION: To order, specify model number, i.e., MT54-1.

Specifications subject to change without notice.
Drawings not to scale.
Optional tip styles, spring pressures, and materials available, contact factory for more information.

MT554

Test Probes for use in Everett Charles Technologies Bare PCB Test Fixtures



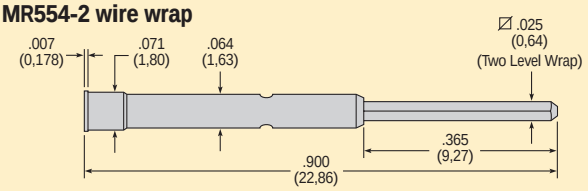


SPECIFICATIONS

PROBE SERIES	MT554
Test Centers	.100 (2,54), .156 (3,96), .187 (4,75)
Mechanical	
Max. Plunger Travel	.100 (2,54)
Recom. Working Travel	.075 (1,91)
Mechanical Life (cycles)	>2,000,000
Spring Pressure	
Light: initial	1.71 oz. (48g)
@ working travel	3.0 oz. (85g)
Heavy: initial	2.82 oz. (79,95g)
-1 @ working travel	5.0 (141g)
Materials & Finishes	
Plunger	Hardened Beryllium Copper, Gold plated over Nickel plate
Barrel	Work hardened Phosphor Bronze, Gold plated (I.D. & O.D.) over Nickel plate
Spring	Stainless Steel, Silver plated
Operating Range (typical)	-55°C to + 150°C
Electrical	
Current Rating (static conditions)	3 amps
Avg. Resistance (mOHMS)	35

RECEPTACLE SERIES	MR554 (Uses Insertion Tool #MRT554-005)
Mounting Hole Size	.067/.069 (1,70/1,75)
Suggested Drill Size	#51 or 1,75 mm
Suggested Wire Gauge	26-30 AWG
Materials & Finishes	Nickel Silver, unplated
Termination	Wire wrap

MR554-2 wire wrap



ORDERING INFORMATION: To order, specify tip style and spring pressure. Example: MT554C is a "C" tip with a light spring. For a heavy spring pressure, add -1 to the model number, i.e., MT554C-1.

Hole Diameters to be Contacted:	
MT554A	lands and pads
MT554B	lands and pads
MT554C	lands and pads
MT554E	up to .073 (1,85)
MT554T65	up to .058 (1,47)
MT554T75	up to .070 (1,78)
MT554T80	up to .073 (1.85)
MT554T135	up to .125 (3,18)
MT554T156	up to .150 (3,81)

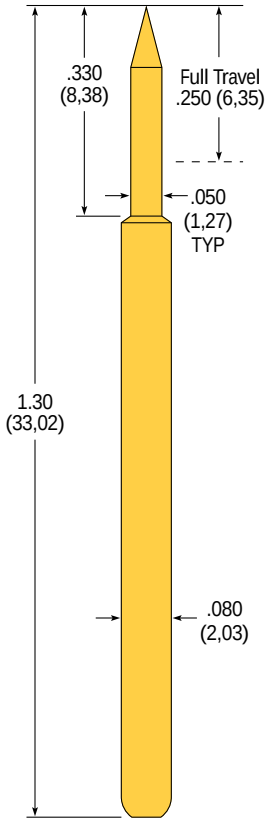
Recommended Test Centers	
MT554 A, B, C, E, T65, T75, T80	.100 (2,54)
MT554 T135	.156 (3,96)
MT554 T156	.187 (4,75)

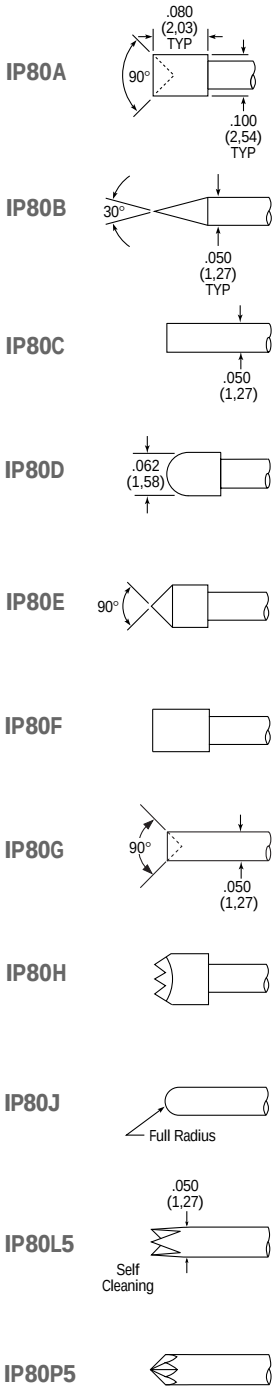
Specifications subject to change without notice.
Drawings not to scale.
Optional tip styles, spring pressures, and materials available, contact factory for more information.

Dimensions in inches (millimeters)

IP80

Test Probes for General Purpose, Cable and Harness, Burn-in, Power Supply, and Connector Testing



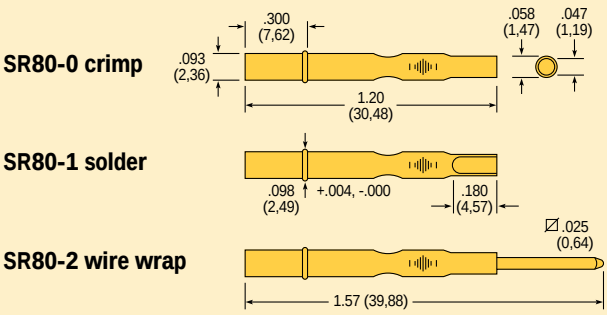


SPECIFICATIONS

PROBE SERIES	IP80
Test Centers	.125 (3,18)
Mechanical	
Max. Plunger Travel	.250 (6,35)
Recom. Working Travel	.166 (4,22)
Mechanical Life (cycles)	>1,000,000
Spring Pressure	
Light: initial	1.6 oz. (51g)
@ working travel	4.5 oz. (128g)
Heavy: initial	2.5 oz. (71g)
-1 @ working travel	6.5 oz. (184g)
Materials & Finishes	
Plunger	Hardened Beryllium Copper, Gold plated over Nickel plate
Barrel	Work hardened Nickel Silver, Gold plated over Nickel plate
Spring — light:	Beryllium Copper, Silver plated
— heavy:	Stainless Steel, Silver plated
Operating Range (typical)	Light -55°C to + 105°C or Heavy -55° C to +150°C
Electrical	
Current Rating (static conditions)	6 amps
Avg. Resistance (mOHMS)	50

RECEPTACLE SERIES	SR80 (Uses Insertion Tool #T80-0)
Mounting Hole Size	.094/.096 (2,39/2,44)
Suggested Drill Size	#41 or 2,4 mm
Suggested Wire Gauge	22-26 AWG*
Materials & Finishes	Work hardened Nickel Silver, Gold plated over Nickel plate
Terminations	Crimp, solder, wire wrap

*22-26 AWG wire is recommended only for typical ATE applications.
Other applications may require a larger wire size. Contact factory for more information.

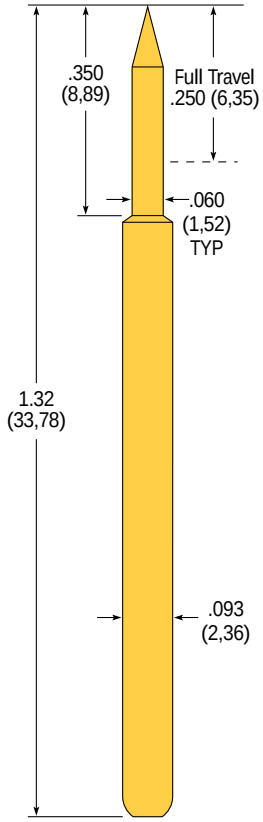


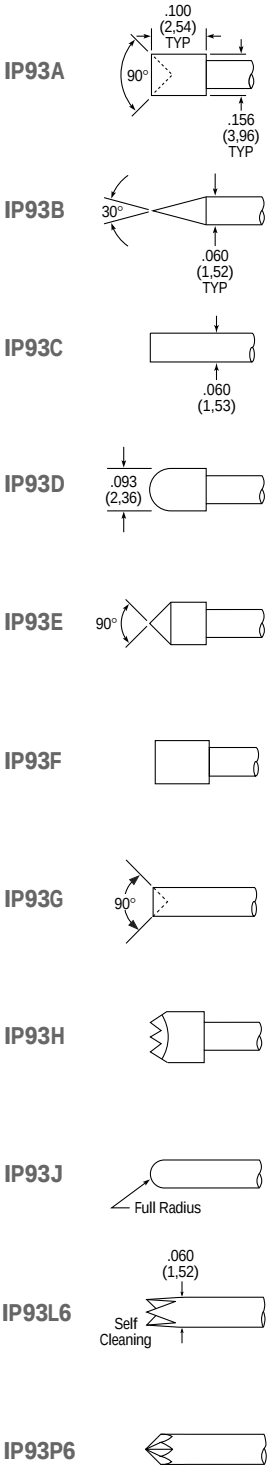
ORDERING INFORMATION: To order, specify tip style and spring pressure. Example: IP80A is an "A" tip with a light spring. For a heavy spring pressure, add -1 to the model number, i.e., IP80A-1.

Specifications subject to change without notice.
Drawings not to scale.
Optional tip styles, spring pressures, and materials available, contact factory for more information.

IP93

Test Probes for General Purpose, Cable and Harness, Burn-in, Power Supply, and Connector Testing





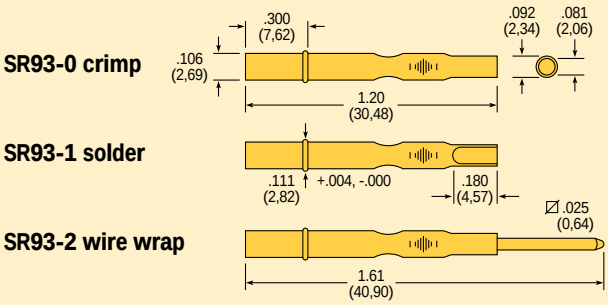
Specifications subject to change without notice.
Drawings not to scale.
Optional tip styles, spring pressures, and materials available, contact factory for more information.

SPECIFICATIONS

PROBE SERIES	IP93
Test Centers	.187 (4,75)
Mechanical	
Max. Plunger Travel	.250 (6,35)
Recom. Working Travel	.166 (4,22)
Mechanical Life (cycles)	>1,000,000
Spring Pressure	
Light: initial	2.2 oz. (62g)
@ working travel	4.8 oz. (136g)
Heavy: initial	3.2 oz. (91g)
-1 @ working travel	6.9 oz. (196g)
Materials & Finishes	
Plunger	Hardened Beryllium Copper, Gold plated over Nickel
Barrel	Work hardened Nickel Silver, Gold plated over Nickel plate
Spring — light:	Beryllium Copper, Silver plated
— heavy:	Stainless Steel, Silver plated
Operating Range (typical)	Light -55°C to + 105°C or Heavy -55°C to +150°C
Electrical	
Current Rating (static conditions)	7 amps
Avg. Resistance (mOHMS)	50

RECEPTACLE SERIES	SR93 (Uses Insertion Tool #T93-0)
Mounting Hole Size	.107/.109 (2,72/2,77)
Suggested Drill Size	2,75 mm
Suggested Wire Gauge	22-26 AWG*
Materials & Finishes	Work hardened Nickel Silver, Gold plated over Nickel plate
Terminations	Crimp, solder, wire wrap

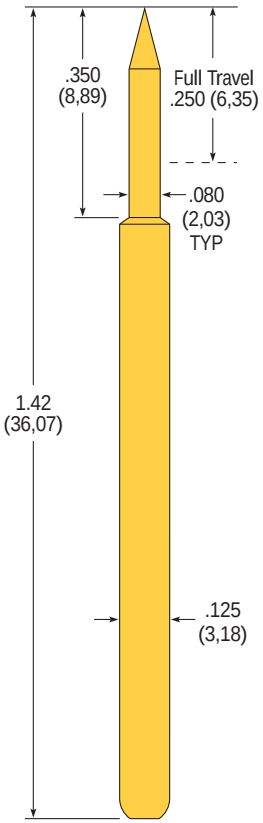
* 22-26 AWG wire is recommended only for typical ATE applications.
Other applications may require a larger wire size. Contact factory for more information.

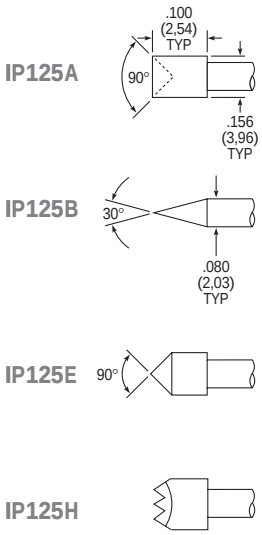


ORDERING INFORMATION: To order, specify tip style and spring pressure. Example: IP93A is an "A" tip with a light spring. For a heavy spring pressure, add -1 to the model number, i.e., IP93A-1.

IP125

Test Probes for General Purpose, Cable and Harness, Burn-in, Power Supply, and Connector Testing



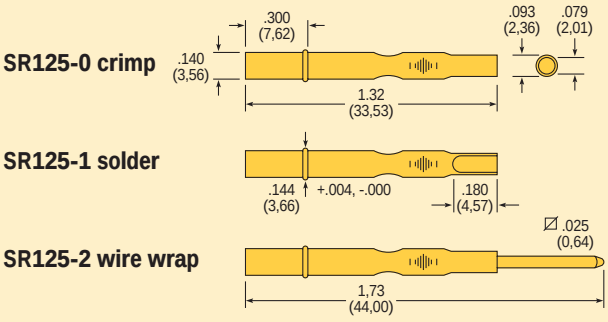


SPECIFICATIONS

PROBE SERIES	IP125
Test Centers	.187 (4,75)
Mechanical	
Max. Plunger Travel	.250 (6,35)
Recom. Working Travel	.166 (4,22)
Mechanical Life (cycles)	>1,000,000
Spring Pressure	
initial	6.1 oz. (173g)
@ working travel	16.0 oz. (454g)
Materials & Finishes	
Plunger	Hardened Beryllium Copper, Gold plated over Nickel plate
Barrel	Work hardened Nickel Silver, Gold plated over Nickel plate
Spring	Stainless Steel
Operating Range (typical)	-55°C to + 150°C
Electrical	
Current Rating (static conditions)	8 amps
Avg. Resistance (mOHMS)	50

RECEPTACLE SERIES	SR125 (Uses Insertion Tool #T125-0)
Mounting Hole Size	.141/.143 (3,58/3,63)
Suggested Drill Size	3,6 mm
Suggested Wire Gauge	22-26 AWG*
Materials & Finishes	Work hardened Nickel Silver, Gold plated over Nickel plate
Terminations	Crimp, solder, wire wrap

*22-26 AWG wire is recommended only for typical ATE applications.
Other applications may require a larger wire size. Contact factory for more information.

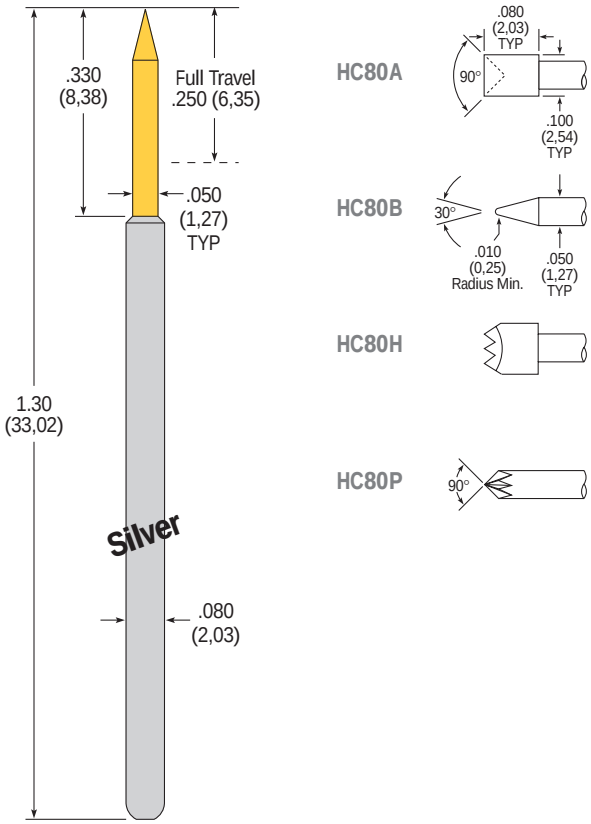


ORDERING INFORMATION: To order, specify tip style. Example: IP125A is an "A" tip with a standard spring.

Specifications subject to change without notice.
Drawings not to scale.
Optional tip styles, spring pressures, and materials available, contact factory for more information.

HC80

Test Probes for *HIGH CURRENT* and *HIGH TEMPERATURE* Applications



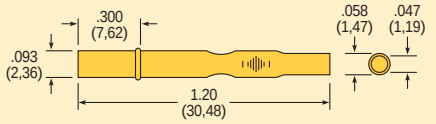
SPECIFICATIONS

PROBE SERIES	HC80
Test Centers	.125 (3,18)
Mechanical	
Max. Plunger Travel	.250 (6,35)
Recom. Working Travel	.166 (4,22)
Mechanical Life (cycles)	>250,000
Spring Pressure	
initial	1.54 oz. (44g)
@ working travel	4.5 oz. (128g)
Materials & Finishes	
Plunger	Hardened Beryllium Copper, Gold plated over Nickel plate
Barrel	Work hardened Nickel Silver, Silver plated (I.D. & O.D.) over Nickel Silver
Spring	Stainless Steel, Silver plated
Operating Range (typical)	-55°C to + 150°C
Electrical	
Current Rating (static conditions)	15 amps (continuous current ambient temp.)
Avg. Resistance (mOHMS)	25

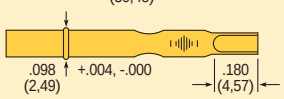
RECEPTACLE SERIES	SR80 (Uses Insertion Tool #T80-0)
Mounting Hole Size	.094/.096 (2,39/2,44)
Suggested Drill Size	#41 or 2,4 mm
Suggested Wire Gauge	22-26 AWG*
Materials & Finishes	Work hardened Nickel Silver, Gold plated over Nickel plate
Terminations	Crimp, solder, wire wrap

*22-26 AWG wire is recommended only for typical ATE applications.
Other applications may require a larger wire size. Contact factory for more information.

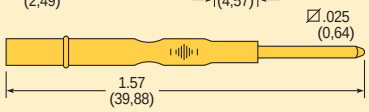
SR80-0 crimp



SR80-1 solder



SR80 -2 wire wrap

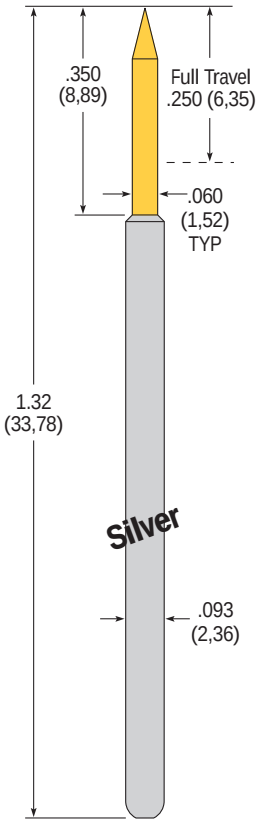


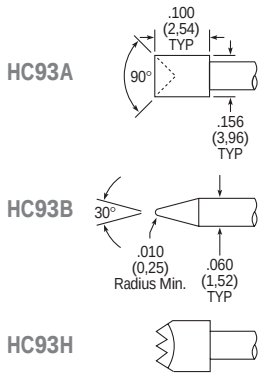
ORDERING INFORMATION: To order, specify tip style. Example: HC80A is an "A" tip with a standard spring pressure.

Specifications subject to change without notice.
Drawings not to scale.
Optional tip styles, spring pressures, and materials available, contact factory for more information.

HC93

Test Probes for *HIGH CURRENT* and *HIGH TEMPERATURE* Applications



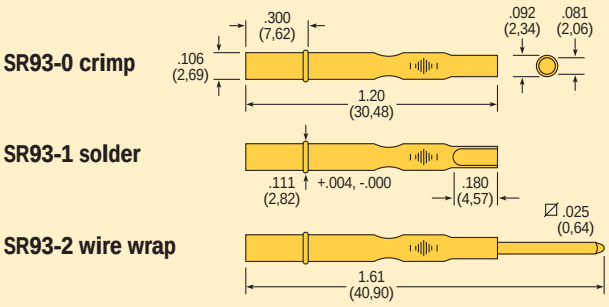


SPECIFICATIONS

PROBE SERIES	HC93
Test Centers	.187 (4,75)
Mechanical	
Max. Plunger Travel	.250 (6,35)
Recom. Working Travel	.166 (4,22)
Mechanical Life (cycles)	>250,000
Spring Pressure	
initial	0.86 oz. (24g)
@ working travel	4.8 oz. (136g)
Materials & Finishes	
Plunger	Hardened Beryllium Copper, Gold plated over Nickel plate
Barrel	Work hardened Nickel Silver, Silver plated (I.D. & O.D.) over Nickel Silver
Spring	Stainless Steel, Silver plated
Operating Range (typical)	-55°C to + 150°C
Electrical	
Current Rating (static conditions)	25 amps (continuous current ambient temp.)
Avg. Resistance (mOHMS)	25

RECEPTACLE SERIES	SR93 (Uses Insertion Tool #T93-0)
Mounting Hole Size	.107/.109 (2,72/2,77)
Suggested Drill Size	2,75 mm
Suggested Wire Gauge	22-26 AWG*
Materials & Finishes	Work hardened Nickel Silver, Gold plated over Nickel plate
Terminations	Crimp, solder, wire wrap

*22-26 AWG wire is recommended only for typical ATE applications.
Other applications may require a larger wire size. Contact factory for more information.

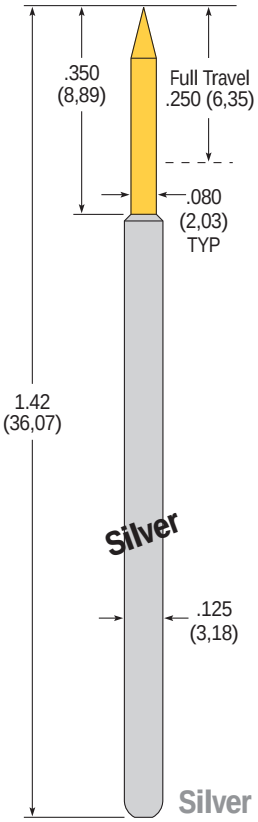


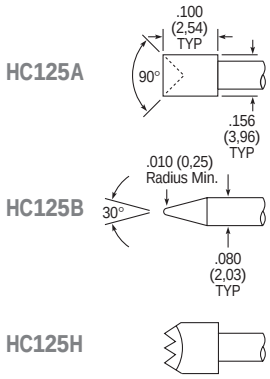
ORDERING INFORMATION: To order, specify tip style. Example: HC93A is an "A" tip with a standard spring.

Specifications subject to change without notice.
Drawings not to scale.
Optional tip styles, spring pressures, and materials available, contact factory for more information.

HC125

Test Probes for *HIGH CURRENT* and *HIGH TEMPERATURE* Applications



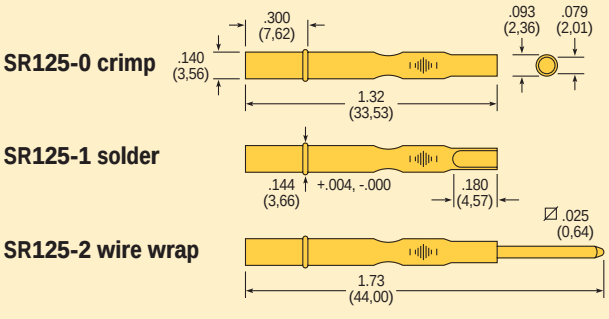


SPECIFICATIONS

PROBE SERIES	HC125
Test Centers	.187 (4,75)
Mechanical	
Max. Plunger Travel	.250 (6,35)
Recom. Working Travel	.166 (4,22)
Mechanical Life (cycles)	>250,000
Spring Pressure	
initial	3.76 oz. (107g)
@ working travel	16.0 oz. (456g)
Materials & Finishes	
Plunger	Hardened Beryllium Copper, Gold plated over Nickel plate
Barrel	Work hardened Nickel Silver, Silver plated (I.D. & O.D.) over Nickel Silver
Spring	Stainless Steel, Silver plated
Operating Range (typical)	-55°C to + 150°C
Electrical	
Current Rating (static conditions)	35 amps (continuous current ambient temp.)
Avg. Resistance (mOHMS)	25

RECEPTACLE SERIES	SR125 (Uses Insertion Tool #T125-0)
Mounting Hole Size	.141/.143 (3,58/3,63)
Suggested Drill Size	3,6 mm
Suggested Wire Gauge	22-26 AWG*
Materials & Finishes	Work hardened Nickel Silver, Gold plated over Nickel plate
Terminations	Crimp, solder, wire wrap

*22-26 AWG wire is recommended only for typical ATE applications.
Other applications may require a larger wire size. Contact factory for more information.

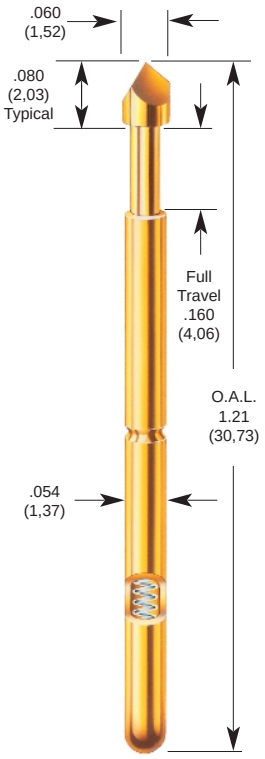


ORDERING INFORMATION: To order, specify tip style. Example: HC125A is an "A" tip with a standard spring pressure.

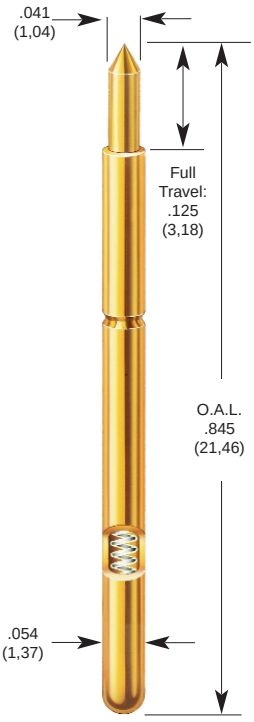
Specifications subject to change without notice.
Drawings not to scale.
Optional tip styles, spring pressures, and materials available, contact factory for more information.

FRP-25T
GSP-2B

ATE Receiver Probes



For Factron Series 300/700
FRP-25T



For GenRad 227/82/73
GSP-2B

Note: The GSP-2BP is designed for use in receptacles without detents.

SPECIFICATIONS

PROBE SERIES	FRP-25T	GSP-2B
Application:	The FRP-25T is designed for use in Schlumberger (Factron) tester interfaces	The GSP-2B is designed for use in GenRad tester interfaces
Mechanical Full Travel:	.160 (4,06)	.125 (3,18)
Operating Temperature: Consult factory for other temperature requirements, and applications below -40°C	-55˚C to +105˚C	-55˚C to + 130˚C
Electrical (Static Conditions) Current Rating: Maximum continuous current, non-inductive at working travel	5 amps	5 amps
Probe Resistance: With a standard deviation of <5 mΩ @ 25 mA test current	35 mΩ	35 mΩ
Materials and Finishes		
Plunger:	Heat-treated beryllium copper, gold plated over hard nickel	Heat-treated beryllium copper, gold plated over hard nickel
Barrel:	Work-hardened phosphor bronze, gold plated over hard nickel	Work-hardened nickel silver, gold plated (I.D. and O.D.) over hard nickel
Spring:	Music wire, gold plated	Beryllium copper, silver plated

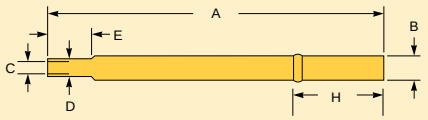
RECEPTACLE SPECIFICATIONS (Uses Insertion Tool #ARIT54)

Materials and Finishes		
Housing:	Work-hardened nickel silver, gold plated over hard nickel	Work-hardened nickel silver, gold plated over hard nickel
Round Post:	Phosphor bronze, gold plated	Phosphor bronze, gold plated
Square Post:	Phosphor bronze, gold plated	Phosphor bronze, gold plated

SPRING FORCE +/- 20% IN OZ. (GRAMS) Spring Type		Preload	3/4 Travel
To order, add dash number to Model Number.			
FRP-25T	as shown	.92 (26)	4.0 (113)
GSP-2B	as shown	2.0 (57)	4.5 (128)

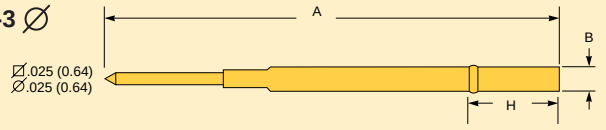
Optional spring forces and materials are available.

W

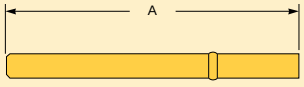


W-1

W-2 ☐ **W-3** ∅



Y



Receptacle Dimensions

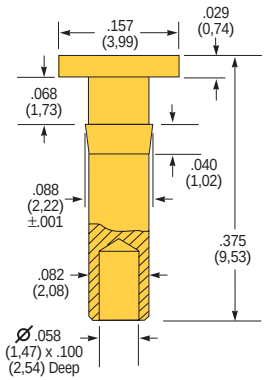
	A	B	C	D	E
SPR-25W	1.15(29,21)	.066(1,68)	.048(1,22)	.058(1,47)	.180(4,57)
SPR-25W-1	1.19(30,23)	.066(1,68)	.048(1,22)	.058(1,47)	.180(4,57)
SPR-25W-2	1.69(42,93)	.066(1,68)	Square Post = .025(0,064)		
SPR-25W-3	1.56(39,62)	.066(1,68)	Round Post = .025(0,064) DIA.		
SPR-2W	.930(23,62)	.066(1,68)	.048(1,22)	.058(1,47)	.20(5,08)
SPR-2W-1	.950(24,13)	.066(1,68)	.048(1,22)	.058(1,47)	.20(5,08)
SPR-2W-2	1.45(36,83)	.066(1,68)	Square Post = .025(0,064)		
SPR-2W-3	1.32(33,53)	.066(1,68)	Round Post = .025(0,064) DIA.		
SPR-2Y	.735(18,67)	.066(1,68)			

SPR-25 and SPR-2 Series press ring diameter is typically .070 (1,78)
H dimension SPR-25 Series = .300 (7,62) and SPR-2 Series = .240 (6,09)

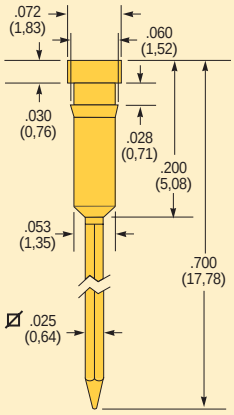
SIP-90
GPP-95-2

ATE Interface Pins

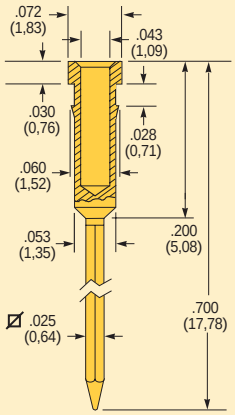
GPP-95-2
Materials: Brass, gold plated
Mounting Hole Size: .085 (2,15)
Applications: Designed for use in original GenRad interface boards.



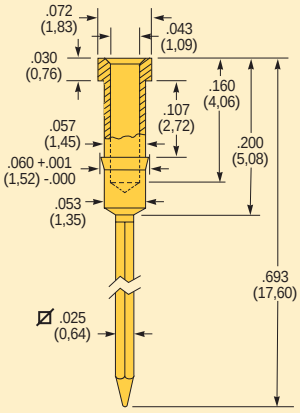
SIP-90-2
Materials: Brass, gold plated
Mounting Hole Size: .055 (1,40)
Applications: Designed for use in original GenRad interface blocks.



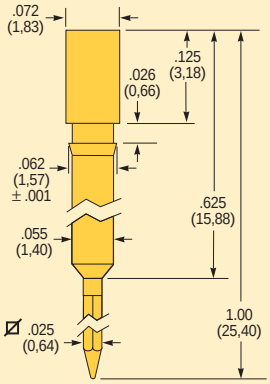
SIP-90-3
Materials: Brass, gold plated
Mounting Hole Size: .055 (1,40)
Applications: Designed for use in original Zehntel interface panels.



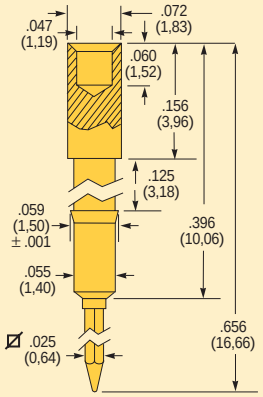
SIP-90-4
Materials: Brass, gold plated
Mounting Hole Size: .055 (1,40)
Applications: Designed for use in original Factron interface panels. SIP-90-4 replaces SIP-90-1.



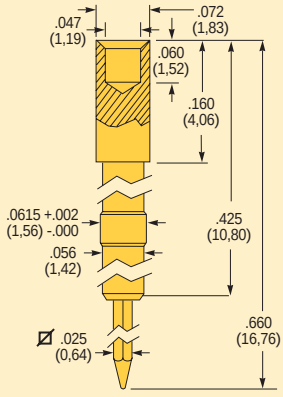
SIP-90-5
Materials: Brass, gold plated
Mounting Hole Size: .057 (1,45)
Applications: General interconnect.



SIP-90-6
Materials: Brass, gold plated
Mounting Hole Size: .057 (1,45)
Applications: General interconnect.



SIP-90-7
Materials: Brass, gold plated
Mounting Hole Size: .0595 (1,51)
Applications: General interconnect.

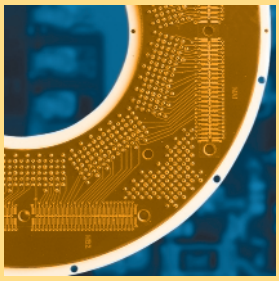


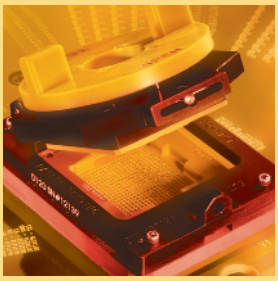
Dimensions in inches (millimeters)

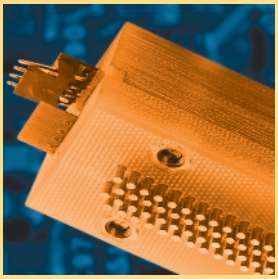
High Performance Contact Solutions for Semiconductor Test Packages

High density packages (BGA, CSPs, µBGAs) continue their expanding popularity in today's modern PCBs. Increasing rise times and increasing signal density affect all areas of interconnection technology.

Test probes and Pogo® contacts continue to demonstrate their flexibility in newer demanding test/contact areas. Ostby Barton has years of experience in designing and producing high performance contacts needed in applications for: higher frequency test, low resistance measurements, high cycle life requirements, new solder technology processes, and other test connections (memory test, burn-in, handler apps, etc.)



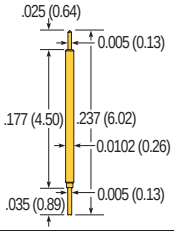


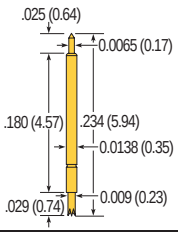


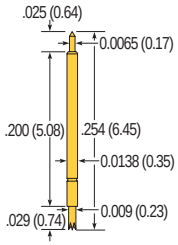
CSP4 CSP8 CSP5 CSP1-1.27

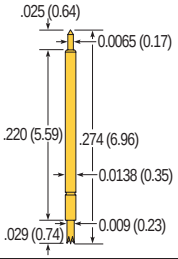
Double Ended Performance Pogo® Contacts for BGA, CSP, LGA and PGA Test Applications

ECT offers a wide variety of Double-Ended Pogos® on pitches ranging from .4 mm to 1.27 mm. Various length options also provides drop-in replacement capability for most competitor probes.

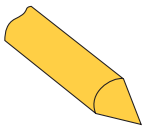




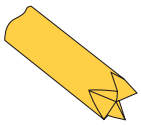




B-TIP PLUNGER-DUT (ALL CSP PROBES)



L-TIP PLUNGER-DUT (ALL CSP PROBES)



Specifications	CSP4	CSP5-18	CSP5-20	CSP5-22
Mechanical				
Pitch:	.4mm	.5mm	.5mm	.5mm
Recommended Mounting Centers:	.016 (0,40)	.020 (0,50)	.020 (0,50)	.020 (0,50)
Full Travel:	.025 (0,64)	.025 (0,64)	.025 (0,64)	.025 (0,64)
Recommended Travel:	.020 (0,51)	.020 (0,51)	.020 (0,51)	.020 (0,51)
Test Height:	.217 (5,51)	.214 (5,44)	.234 (5,94)	.254 (6,45)
Spring Force:	.85 (24,1g)	.7oz (19,8g)	.7oz (19,8g)	1.0oz (28,4g)
Overall Length:	.237 (6,02)	.234 (5,94)	.254 (6,45)	.274 (6,96)
Mechanical Life:	250,000 cycles	500,000 cycles	500,000 cycles	500,000 cycles
Materials and Finishes				
Plunger End (long extension)	BeCu or Steel	BeCu or Steel	BeCu or Steel	BeCu or Steel
Terminal End (short Extension)	BeCu or Steel Hard Gold over Nickel	BeCu or Steel Hard Gold over Nickel	BeCu or Steel Hard Gold over Nickel	BeCu or Steel Hard Gold over Nickel
Barrel:	Phosphor Bronze Hard Gold over Nickel	Phosphor Bronze Hard Gold over Nickel	Phosphor Bronze Hard Gold over Nickel	Phosphor Bronze Hard Gold over Nickel
Spring:	Music Wire/Gold Plate	Steel Alloy/Gold Plate	Steel Alloy/Gold Plate	Music Wire/Gold Plate
Environmental				
Maximum Operating Temperature:	105°C	155°C	155°C	105°C
Electrical				
Average DC Resistance:**	<100mΩ	<100mΩ	<100mΩ	<100mΩ
Current Capacity:	2A	2A	2A	2A
Self Inductance (Ls):	1.71nH	1.5nH*	1.65nH*	1.79nH
Capacitance (Cc):	.58pF	.63pF*	.69pF*	.75pF
Bandwidth @ -1dB:	6.8GHz	8.13GHz*	7.4GHz*	6.8GHz

ORDERING INFORMATION

CSP5

Example: CSP5-20LCBC

Model Number: CSP5- [20] [L] [C] [B] [C]

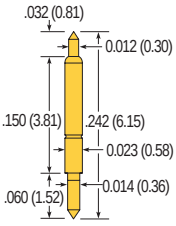
- Barrel Length:
  - 18 = .180
  - 20 = .200
  - 22 = .220
- Plunger Tip Style:
  - B, L
- Plunger Material:
  - C = BeCu
  - S = Steel
- Terminal Tip Style:
  - B, L
- Terminal Material:
  - C = BeCu
  - S = Steel

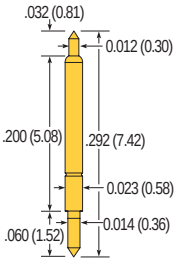
CSP8

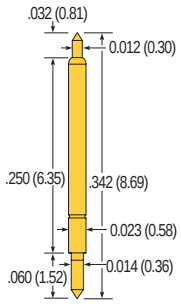
Example: CSP8-25BSBS

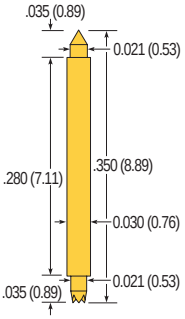
Model Number: CSP8- [25] [B] [S] [B] [S]

- Barrel Length:
  - 15 = .150
  - 20 = .200
  - 25 = .250
- Plunger Tip Style:
  - B, L
- Plunger Material:
  - C = BeCu
  - S = Steel
- Terminal Tip Style:
  - B, L
- Terminal Material:
  - C = BeCu
  - S = Steel





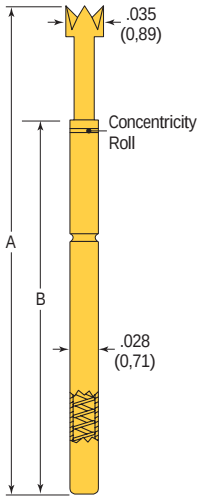




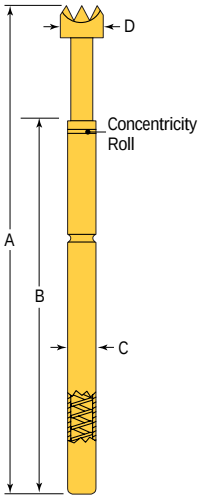
Specifications	CSP8-15	CSP8-20	CSP8-25	CSP1-1.27
Mechanical				
Pitch:	.8mm	.8mm	.8mm	1.0 - 1.27mm
Recommended Mounting Centers:	.0315 (0,80)	.0315 (0,80)	.0315 (0,80)	.039 (1,0) / .050 (1,27)
Full Travel:	.040 (1,02)	.040 (1,02)	.040 (1,02)	.040 (1,02)
Recommended Travel:	.030 (0,76)	.030 (0,76)	.030 (0,76)	.035 (0,89)
Test Height:	.212 (5,38)	.262 (6,65)	.312 (7,92)	.315 (8,0)
Spring Force:	1.1oz (31,2g)	1.1oz (31,2g)	1.1oz (31,2g)	2.0oz (56,7g)
Overall Length:	.242 (6,15)	.292 (7,42)	.342 (8,69)	.350 (8,89)
Mechanical Life:	500,000 cycles	500,000 cycles	500,000 cycles	500,000 cycles
Materials and Finishes				
Plunger End (long extension)	BeCu or Steel	BeCu or Steel	BeCu or Steel	BeCu
Terminal End (short Extension)	BeCu or Steel Hard Gold over Nickel	BeCu or Steel Hard Gold over Nickel	BeCu or Steel Hard Gold over Nickel	BeCu Hard Gold over Nickel
Barrel:	Phosphor Bronze Hard Gold over Nickel	Phosphor Bronze Hard Gold over Nickel	Phosphor Bronze Hard Gold over Nickel	Phosphor Bronze Hard Gold over Nickel
Spring:	Steel Alloy/Gold Plate	Steel Alloy/Gold Plate	Steel Alloy/Gold Plate	Steel Alloy/Gold Plate
Environmental				
Maximum Operating Temperature:	155°C	155°C	155°C	155°C
Electrical				
Average DC Resistance:**	<100mΩ	<100mΩ	<100mΩ	<50mΩ
Current Capacity:	3A	3A	3A	5A
Self Inductance (Ls):	1.23nH*	1.52nH*	1.81nH	3.1nH
Capacitance (Cc):	.65pF*	.81pF*	.96pF	.95pF
Bandwidth @ -1dB:	9.23GHz*	7.45GHz*	5.25GHz	3.8GHz

Consult factory for availability. **Estimated* ***DC Resistance measured contacting a clean gold plated surface on both probe tips.*

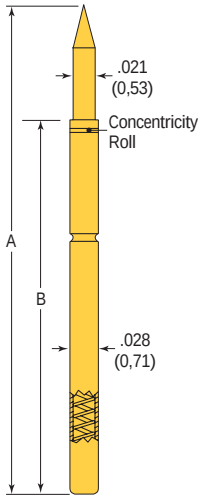
BGA/PGA, LGA Applications



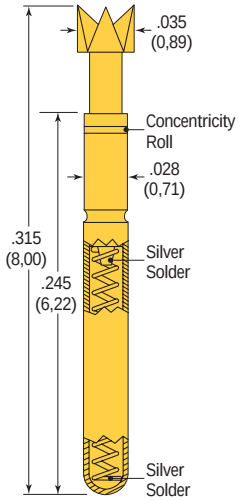
BGA & PGA
Crown Head



BGA & PGA
Serrated Head



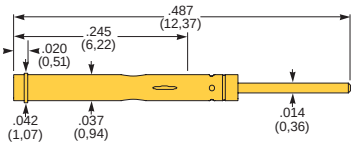
LGA
Spear Point



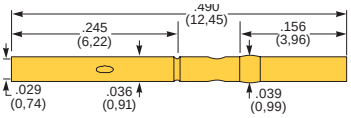
BGA

RECEPTACLES

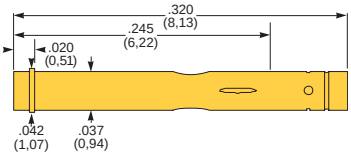
BGR28-3



BGR28-DE



BGR28-S



Consult factory for availability.

SOIC Package Test Contacts

The following assortment of Pogo contacts has been carefully selected from numerous successful solutions for high performance testing. Many have been used in test sockets for high speed CPU and memory BGA assemblies.

SPECIFICATIONS

BGA & PGA Crown Heads

Model Number	BGP28BL35ST	BGP28SL35ST	BGP28BL35LT	BGP28SL35LT
A: Overall Length	.315 (8,00)	.315 (8,00)	.470 (11,94)	.470 (11,94)
B: Barrel Length	.245 (6,22)	.245 (6,22)	.360 (9,14)	.360 (9,14)
Recommended Working Travel	.040 (1,02)	.040 (1,02)	.053 (1,35)	.053 (1,35)
Full Travel	.040 (1,02)	.040 (1,02)	.080 (2,03)	.080 (2,03)
Spring Pressure at Working Travel	2.0 OZ (57g)	2.0 OZ (57g)	2.0 OZ (57g)	1.6 OZ (45g)
Spring Material	BECU	302 S.S.	BECU	302 S.S.

Test Centers 050 (1,27)
Mechanical Life (Cycles) . . . . . > 25,000
Electrical Current Rating (Static Conditions) . . . . . 2-3 AMPS
Electrical Average Resistance (mOHMS) . . . . . <50

BGA & PGA Serrated Heads

Model Number	BGP28BHST	BGP28SHST	BGP28MHLT	BGP28BHLT
A: Overall Length	.295 (7,49)	.315 (8,00)	.470 (11,94)	.580 (14,73)
B: Barrel Length	.225 (5,72)	.245 (6,22)	.360 (9,14)	.470 (11,94)
C: Body Diameter	.028 (0,71)	.028 (0,71)	.028 (0,71)	.027 (0,69)
D: Head Diameter	.040 (1,02)	.040 (1,02)	.040 (1,02)	.035 (0,89)
Recommended Working Travel	.040 (1,02)	.040 (1,02)	.053 (1,35)	.075 (1,90)
Full Travel	.040 (1,02)	.040 (1,02)	.080 (2,03)	.075 (1,90)
Spring Pressure at Working Travel	2.0 OZ (57g)	2.0 OZ (57g)	2.1 OZ (60g)	2.5 OZ (71g)
Spring Material	BECU	302 S.S.	Music Wire	BECU

Test Centers 050 (1,27)
Mechanical Life (Cycles) . . . . . > 25,000
Electrical Current Rating (Static Conditions) . . . . . 2-3 AMPS
Electrical Average Resistance (mOHMS) . . . . . <50

LGA Spear Points

Model Number	LGP28BBST	LGP28SBST	LGP28BBLT	LGP28SBLT
A: Overall Length	.315 (8,00)	.315 (8,00)	.470 (11,94)	.470 (11,94)
B: Barrel Length	.245 (6,22)	.245 (6,22)	.360 (9,14)	.360 (9,14)
Recommended Working Travel	.040 (1,02)	.040 (1,02)	.053 (1,35)	.053 (1,35)
Full Travel	.040 (1,02)	.040 (1,02)	.080 (2,03)	.080 (2,03)
Spring Pressure at Working Travel	2.0 OZ (57g)	2.0 OZ (57g)	2.0 OZ (57g)	2.0 OZ (57g)
Spring Material	BECU	302 S.S.	BECU	302 S.S.

Test Centers 050 (1,27)
Mechanical Life (Cycles) . . . . . > 25,000
Electrical Current Rating (Static Conditions) . . . . . 2-3 AMPS
Electrical Average Resistance (mOHMS) . . . . . <50
This series can also be used as a “Ground Probe”

BGA

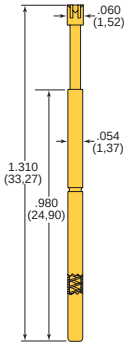
Model Number	BGP28BL35ST-S
Test Centers	.050 (1,27)
Recommended Working Travel	.040 (1,02)
Full Travel	.040 (1,02)
Spring Pressure at Working Travel	2.0 OZ (57g)
Mechanical Life (Cycles)	> 25,000
Electrical Current Rating (Static Conditions)	2-3 Amps
Electrical Average Resistance (mOHMS)	< 50

Cyclo Soldered Construction

BGA/PGA Various

Special Contacts, Handler Interface Contacts, Double-Ended Fine Pitch Contacts

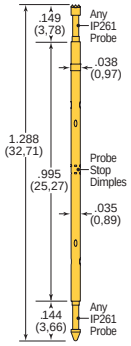
For Discrete IC testing, BGA and PGA Contacts, and DUT Ring, for applications that require high performance interconnections.



PGA OR OTHER PIN APPLICATIONS

Model Number	PIN54SG-1
Test Centers	.100 (2,54)
Recommended Working Travel	.166 (4,22)
Full Travel	.250 (6,35)
Spring Pressure At Working Travel	6.3 OZ (179g)
Mechanical Life (Cycles)	> 25,000
Electrical Current Rating (Static Conditions)	2-3 Amps
Electrical Average Resistance (mOHMS)	< 50

Uses Standard SR54 Receptacles

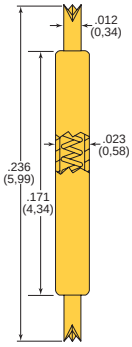


HANDLER INTERFACE PROBE / DOUBLE ENDER*

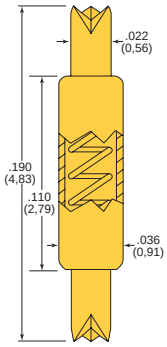
Model Number	DER28-IP261
Test Centers	.050 (1,27)
Recommended Working Travel (Each End)	.067 (1,70)
Full Travel (Each End)	.100 (2,54)
Spring Pressure At Working Travel	2.8 OZ (79g)
Mechanical Life (Cycles)	> 1,000,000
Electrical Current Rating (Static Conditions)	3 Amps
Electrical Average Resistance (mOHMS)	< 35
Recommended Hole Size	.036 Dia (#64 Drill)

*Probe not included, unless specified.

DOUBLE ENDED FINE PITCH CONTACTS

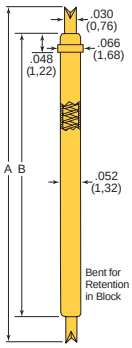


Model Number	BGP23U12-DE
Test Centers	.030 (0,762)
Recommended Working Travel	.030 (0,76)
Full Travel	.040 (1,02)
Spring Pressure At Working Travel	1.5 OZ (43g)
Mechanical Life (Cycles)	> 25,000
Electrical Current Rating (Static Conditions)	2-3 Amps
Electrical Average Resistance (mOHMS)	< 50



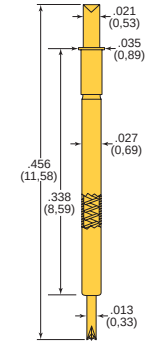
Model Number	BGP36U22-DE
Test Centers	.050 (1,27)
Recommended Working Travel	.030 (0,76)
Full Travel	.040 (1,02)
Spring Pressure At Working Travel	1.5 OZ (43g)
Mechanical Life (Cycles)	> 25,000
Electrical Current Rating (Static Conditions)	2-3 Amps
Electrical Average Resistance (mOHMS)	< 50

Large Plunger Dia Enables Contact To Offset Ball Locations

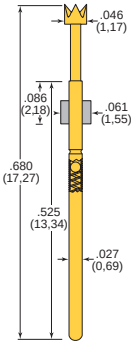


Model Number	BGP52L30-DE-SV	BGP52L30-DE-LV
A: Overall Length	.576 (14,63)	.876 (22,25)
B: Barrel Length	.436 (11,07)	.736 (18,69)
Recommended Working Travel	.093 (2,36)	.093 (2,36)
Full Travel	.140 (3,56)	.140 (3,56)
Spring Pressure at Working Travel	1.9 OZ (54g)	2.0 OZ (57g)

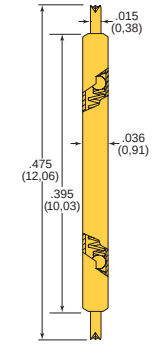
Test Centers	.100 (2,54)
Mechanical Life (Cycles)	> 25,000
Electrical Current Rating (Static Conditions)	2-3 Amps
Electrical Average Resistance (mOHMS)	< 50



Model Number	BGP27G21-DE
Test Centers	.050 (1,27)
Recommended Working Travel	.040 (1,02)
Full Travel	.080 (2,03)
Spring Pressure At Working Travel	1.4 OZ (40g)
Mechanical Life (Cycles)	> 25,000
Electrical Current Rating (Static Conditions)	2-3 Amps
Electrical Average Resistance (mOHMS)	< 50



Model Number	BGP27L46-INS
Test Centers	.050 (1,27)
Recommended Working Travel	.100 (2,54)
Full Travel	.115 (2,92)
Spring Pressure At Working Travel	2.9 OZ (82g)
Mechanical Life (Cycles)	> 25,000
Electrical Current Rating (Static Conditions)	2-3 Amps
Electrical Average Resistance (mOHMS)	< 50
Insulated Ring:	Ultem



Model Number	BGP36U15-DE
Test Centers	.050 (1,27)
Recommended Working Travel	.060 (15,24)
Full Travel	.080 (2,03)
Spring Pressure At Working Travel	2.5 OZ (71g)
Mechanical Life (Cycles)	> 25,000
Electrical Current Rating (Static Conditions)	2-3 Amps
Electrical Average Resistance (mOHMS)	< 50

Double Bias Ball

Consult factory for availability.

Tools

Crimp Pliers

Model #900*

Interchangeable Crimp Plier Locators

Model #	Receptacle Series
CL20	SR20
CL261	SR261
CL27	SR27
CL31	HPR72
CL40	SR40
CL54	SR54
CL541	SR541
CL80	SR80

* Operating instructions are included with each plier ordered.

Specifications subject to change without notice.
Drawings not to scale.
Optional tip styles, spring pressures, and materials available, contact factory for more information.

ARIT

T style tools

Receptacle Insertion Tools

Model #	Mounting Height	Receptacle Series
T20-0	Flush	SR20
T261-0	Flush	SR261
T27-0	Flush	SR27
AT31	Flush–.285	HPR72
		HPR72W
ARIT40	Flush–.125	SR40
ARIT40	.160–.220	LR40
		LTR-1W
ARIT54	Flush–.125"	SR541
ARIT54	Flush–.220"	SR54
		SPR25W
T80-0	Flush	SR80
T93-0	Flush	SR93
T125-0	Flush	SR125
MRT54-005	.005 (0,13)	MR54
MRT554-005	.005 (0,13)	MR554

Adjustable Tool (ARIT) Instructions

1. Loosen set screws.
2. Rotate thimble to desired receptacle mounting height.
3. Lock both set screws.

Miscellaneous Insertion Tools

Model #	Description
FIT-1	Quick Connect™ insertion tool for SR28-4, SR31-4
PIT-261	Probe insertion tool for IP261 Series
PIE-54	Probe insertion and extraction tool for 100 mil center headed test probes

MB-2

MB-1

MB-3

Maintenance Brushes

Model #	Description
MB-1	Brass bristle brush (4-1/4" x 2-1/2")
MB-2	4 row brass brush (3-1/4" x 1-1/8")
MB-3	Nylon brush (6-1/4")

FIT-1

PIE-54

Receptacle Installation

The receptacle is inserted into the drilled hole and tapped into place using a plastic mallet and a receptacle insertion tool. Several “taps” (3-5) with the mallet is recommended to provide maximum receptacle retention. Epoxy is not required. The receptacle is held in place by the press ring, which collapses into the hole during insertion, forming a tight fit.

While some insertion tools are designed to mount the receptacles flush with the probe plate, the ARIT series (Adjustable Tool) allows various mounting heights as required by the test fixture manufacturer. For instance, many users of the Pogo-25 long stroke series typically mount them .220" (5,59 mm) above the surface. The press ring is positioned for maximum retention in probe plates that are 3/8 inch thick or more. If the probe plate is too thin, the receptacle may fall through during insertion. In this case you can drill a smaller hole and use the press ring as a stop. However, you will need to secure receptacle with epoxy.

Once the receptacle is installed, insert the probe until the top of the probe barrel is flush with the top of the receptacle. The probe is held in place with 4 retention detents.

Ostby Barton
A Division of Everett Charles Technologies
487 Jefferson Boulevard
Warwick, RI 02886
Tel: (401) 739-7310
Fax: (401) 732-4937
Internet: ectinfo.com

DOVER A Dover Company
8018-8-03-156