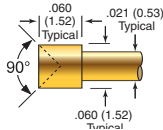
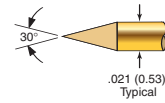


TO ORDER, CALL 909-625-9390

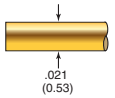
**HPA-1A
SPA-1A**



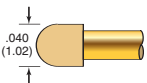
**HPA-1B
SPA-1B**



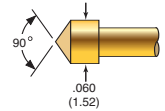
**HPA-1C
SPA-1C**



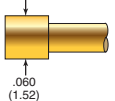
**HPA-1D
SPA-1D**



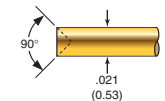
**HPA-1E
SPA-1E**



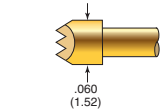
**HPA-1F
SPA-1F**



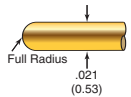
**HPA-1G
SPA-1G**



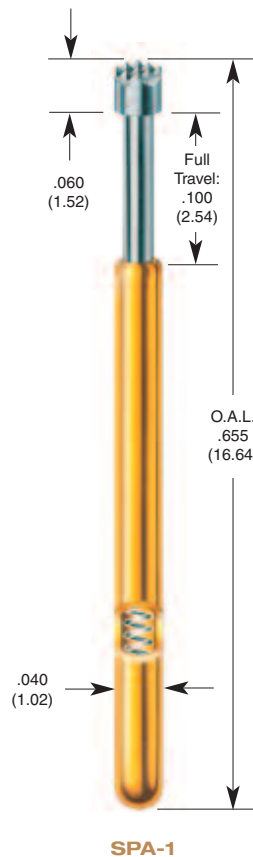
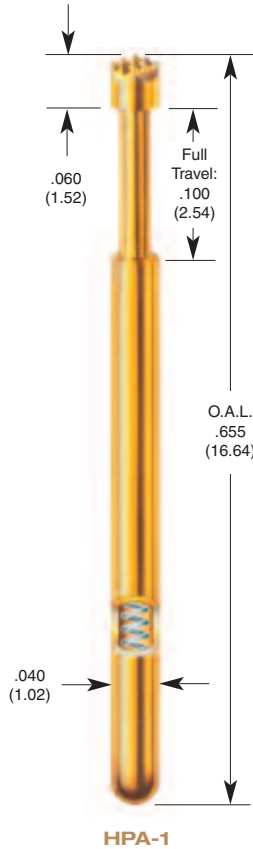
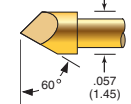
**HPA-1H
SPA-1H**



**HPA-1J
SPA-1J**



**HPA-1T
SPA-1T**



Probe Specifications HPA-1 SPA-1

| | | |
|--|--|--|
| Mechanical | | |
| Full Travel: | .100 (2.54) | .100 (2.54) |
| Recommended Working Travel: | .067 (1.70) | .067 (1.70) |
| Mechanical Life Exceeds: | 1 x 10 ⁶ cycles | 1 x 10 ⁶ cycles |
| Operating Temperature | -55°C to +150°C | -55°C to +150°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 | | |
| Average Probe Resistance | 35 mΩ | 50 mΩ |
| Materials and Finishes | | |
| Plunger: | Heat-treated beryllium copper, gold plated over hard nickel | Heat-treated beryllium copper, rhodium 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: | Stainless steel, silver plated | Stainless steel, silver plated |

Receptacle Specifications

| | | |
|--|--|--|
| Mounting Hole Size: | .053/.055 (1.35/1.40) | .053/.055 (1.35/1.40) |
| A #54 or 1.4 mm drill is most commonly used. | | |
| Recommended Wire Gauge: | 24-28 AWG | 24-28 AWG |
| Connections: | SPR-1W Crimp SPR-1W-1 Solder cup SPR-1W-2/SPR-1W-2M Wire wrap/square post. Vacuum leak rate not to exceed 1 x 10 ⁻⁴ CFM @ 15 psi | SPR-1W Crimp SPR-1W-1 Solder cup SPR-1W-2/SPR-1W-2M Wire wrap/square post. Vacuum leak rate not to exceed 1 x 10 ⁻⁴ CFM @ 15 psi |

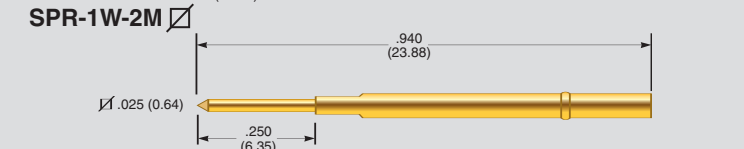
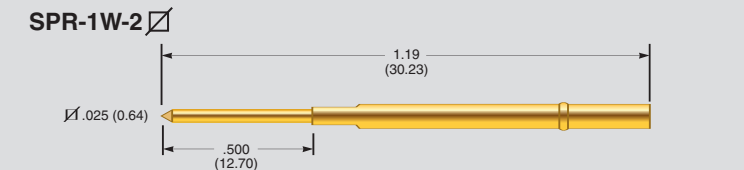
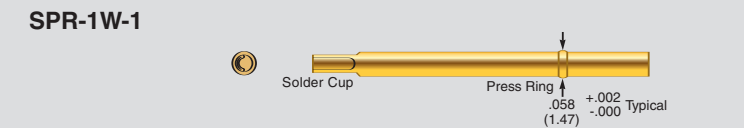
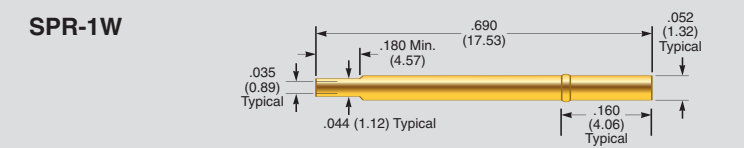
| | | |
|-------------------------------|---|---|
| Materials and Finishes | | |
| Housing: | Work-hardened nickel silver, gold plated over hard nickel | Work-hardened nickel silver, gold plated over hard nickel |
| Square Post: | Phosphorous bronze, gold plated | Phosphorous bronze, gold plated |

The HPA-1 and SPA-1 may be used to test bare PCBs on mixed test centers with the HPA-0 and HPA-74 probes, see pages 28 and 33.

Spring Force in oz. (grams)

| Spring Type | Preload | 2/3 Travel |
|--|----------|------------|
| To order, add dash number to Model Number. | | |
| Standard as shown | 1.1 (31) | 2.5 (71) |
| Alternate -1 | 1.3 (37) | 4.5 (128) |

Optional spring forces and materials are available.



Bare PCB Test Probes



Actual Size