

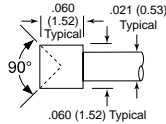
# High & Standard Performance Probes

# HPA-1 SPA-1

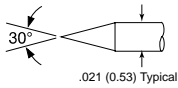
Test Center  
**.075 (1.91)**

TO ORDER, CALL 909-625-9390

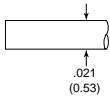
### HPA-1A SPA-1A



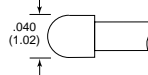
### HPA-1B SPA-1B



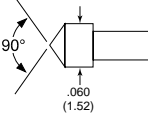
### HPA-1C SPA-1C



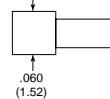
### HPA-1D SPA-1D



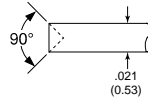
### HPA-1E SPA-1E



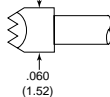
### HPA-1F SPA-1F



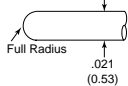
### HPA-1G SPA-1G



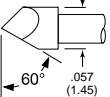
### HPA-1H SPA-1H



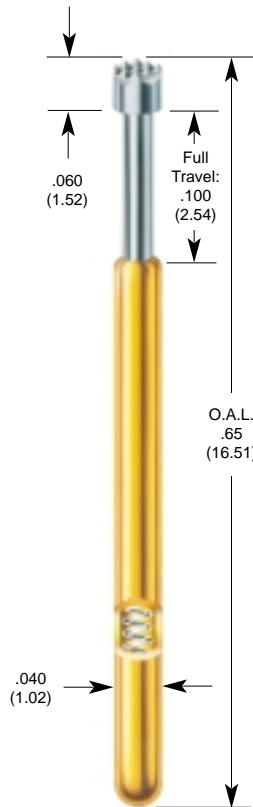
### HPA-1J SPA-1J



### HPA-1T SPA-1T



HPA-1



SPA-1

Dimensions in inches (millimeters)

## Probe Specifications

	HPA-1	SPA-1
<b>Mechanical</b>		
Full Travel:	.100 (2.54)	.100 (2.54)
Recommended Working Travel:	.067 (1.70)	.067 (1.70)
Mechanical Life Exceeds:	1 x 10 <sup>6</sup> cycles	1 x 10 <sup>6</sup> cycles
<b>Operating Temperature</b>	-55°C to +150°C	-55°C to +150°C
Consult factory for other temperature requirements, and applications below -40° C.		
<b>Electrical (Static Conditions)</b>		
Current Rating:	3 amps	3 amps
Maximum continuous current, non-inductive at working travel		
<b>Probe Resistance</b>	35 mΩ	50 mΩ
With a standard deviation of <7 mΩ @ 25 mA test current		
<b>Materials and Finishes</b>		
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

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

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

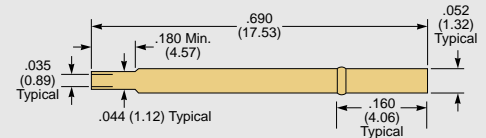
The HPA-1 and SPA-1 may be used to test bare PCBs on mixed test centers with the HPA-0 and HPA-74 probes, see pages 22 and 27.

## Spring Force in oz. (grams)

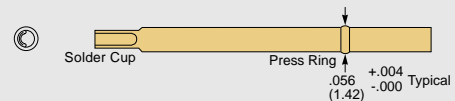
Spring Type	Preload	2/3 Travel
To order, add dash number to Model Number.		
<b>Standard</b> as shown	1.1 (31)	2.5 (71)
<b>Alternate</b> -1	1.3 (37)	4.5 (128)

Optional spring forces and materials are available.

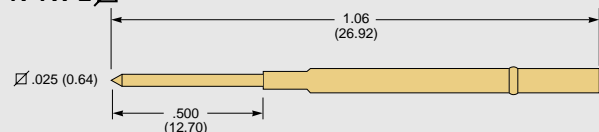
### SPR-1W



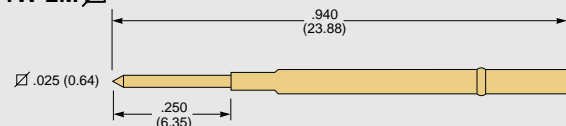
### SPR-1W-1



### SPR-1W-2



### SPR-1W-2M



Bare PCB Test Probes



Actual Sizes