

Coaxial Probes with Cable

Specialty Test Products



Board Test Spring Probes

Smiths Interconnect offers a wide range of spring contact probes to meet your testing requirements and has long been recognized as the world's largest probe manufacturer. With over 60 different probe series that includes our standard Board Test Fixture Probes as well as our Specialty Test Probes, we provide a full portfolio designed for general purpose test on bare boards, loaded printed circuit boards, surface mount assemblies and other forms of test.



MICRO SERIES PROBES

The Micro probe series range in pitch from 0.20" (0.51 mm) to 0.030" (0.76 mm) pitch and are typically between half an inch to an inch in length.

ROTATOR PROBES

Ideal for non-clean and lead-free applications, this aggressive probe rotates 90° at the rated travel, virtually drilling through contaminants with a low spring force.

STANDARD PROBES

Our standard probes range in pitch from 0.039" (1.00 mm) to 0.187" (4.75 mm). Within most series, there are multiple length and travel options, including more aggressive probes dimensionally equivalent to the standard probes.

HIGH CURRENT PROBES

We offer two different high current probe designs in four different pitches. The SH series features a bias ball, which is the most aggressive biasing technique to aid in assuring a low and consistent resistance, cycle after cycle. The SHE Series features a bias spring, an effective biasing technique for many applications.

DOUBLE-ENDED PROBES & RECEPTACLES

Double-ended probes feature both a top-side and bottom-side compliant plunger. Double-ended receptacles are available with a permanent bottom-side plunger and a replaceable probe on the top side. They are also available with both a top and bottom-side replaceable probe.

SWITCH PROBES

A Switch Probe is a spring contact probe and receptacle that has two individual current paths. One current path is closed, the other is open and after a designated travel the second current path closes.

LEAD FREE PROBES

The Lead Free probe series is based on our ICT Probe Series. The plunger material, plating and tip geometry have been optimized to provide less wear and contamination build-up while using a moderate spring force of 7 to 8 ounces.

THERMOCOUPLE PROBES

The Thermocouple Probe is an ungrounded, thermally conductive probe used for the measurement of variations in temperature. We offer two Thermocouple Probes: Type T for up to 220°F, and Type K for up to 350°F.

ICT PROBES

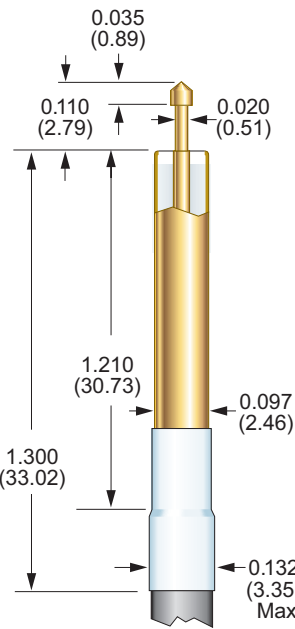
The ICT probe design features a bifurcated barrel with four separate fingers. The barrel is compliant and formed against the plunger, thus eliminating any gap between the plunger and barrel. ICT probes are more accurate and stable in resistance than standard designs.



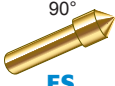







COAXIAL PROBES

Our Coax Probes provide a low noise, controlled impedance signal path with reliable, easy connect/disconnect options. Our designs include a spring-loaded signal probe and a spring-loaded shielding plunger for the ground.

100526 Coax Series

0.150 (3.18) Centers



Signal BeCu Tips	Diameter
 B	0.020 (0.51) 
 ES	0.046 (1.17) 
 H	0.035 (0.89) 
 J	0.020 (0.51) 
 U	0.020 (0.51) 

Probe Specifications

Minimum Centers	0.150 (3.18)
Current Rating	3 A continuous
Spring Force	Signal Conductor: 1.60 oz (45 g) @ 0.070 (1.78) travel (tips B, J, U) 2.00 oz (57 g) @ 0.070 (1.78) travel (tips ES, H)
Nominal Impedance	50 Ω
Maximum Travel	0.090 (2.29) (tips B, J, U) 0.075 (1.91) (tips ES, H)
Working Travel	0.070 (1.78)

Materials

Spring	Beryllium copper, gold plated
Dielectric Insulator	Teflon
Shielding Tube	Brass, gold plated
Signal Conductor	Series S, Size 00 probe
Coaxial Cable	RG 316

How to Order

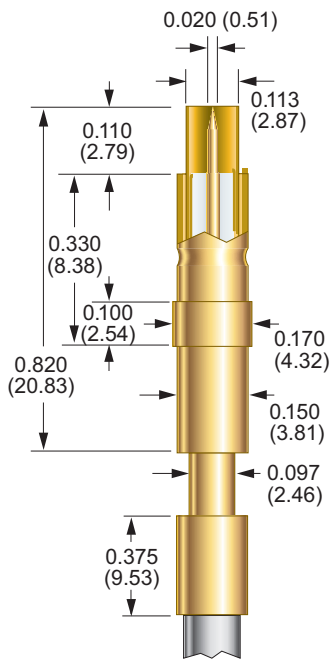
1 0 0 5 2 6 - ES - 1 2 - AM
1 2 3 4

1 Base Part Number	1 0 0 5 2 6
2 Signal Tip Style	B, ES, H, J, U
5 Cable Length	1 2 in. 3 6 in.
6 Termination ⁽¹⁾	AM SMA Male AF SMA Female
	NC No Connector

1. When ordering with a preattached connector, please note that the connector will not fit through the probe mounting hole. The probe must be inserted from the bottom side of the mounting plate.
Dimensions are in inches (mm) | All specifications are subject to change

100445 & 100746 Coax Series

0.200 (5.08) Centers



Signal BeCu Tips	Diameter
 A	0.035 (0.89)
 B	0.020 (0.51)
 ES	0.046 (1.17)
 H	0.035 (0.89)

Shielding BeCu Tips	Diameter
 N	0.113 (2.87)
 S	0.113 (2.87)

Probe Specifications

Minimum Centers	0.200 (5.08)
Current Rating	3 A continuous
Spring Force	Signal Conductor: 1.60 oz (45 g) @ 0.070 (1.78) travel (tip B) 2.00 oz (57 g) @ 0.070 (1.78) travel (tips A, ES, H) Shielding Plunger: 4.30 oz (122 g) @ 0.070 (1.78) travel
Nominal Impedance	50 Ω
Maximum Travel	0.090 (2.29) (tip B) 0.075 (1.91) (tips A, ES, H)
Working Travel	0.070 (1.78)

Materials

Barrel	Brass, gold plated
Spring	Signal Conductor: Beryllium copper, gold plated Shielding Plunger: Stainless steel, gold plated
Shielding Plunger	Beryllium copper, gold plated
Dielectric Insulator	Teflon
Shielding Tube	Stainless steel, gold plated
Signal Conductor	Series S, Size 00 probe
Crimp Ferrule	Brass, gold plated
Coaxial Cable	100445: RG 174U 100746: RG 316

How to Order

1 0 0 4 4 5 - B - N - F - 1 2 - A M
1 2 3 4 5 6

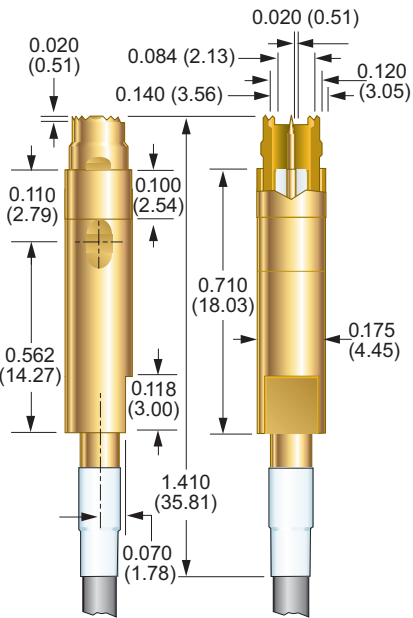
1 Base Part Number	1 0 0 4 4 5	1 0 0 7 4 6
2 Signal Tip Style	A, B, ES, H	
3 Mounting Flange	N Without Flange	F With Flange
4 Shielding Plunger	S Serrated	N Flat
5 Cable Length	1 2 in.	3 6 in.
6 Termination ⁽¹⁾	A M SMA Male	A F SMA Female
	N C No Connector	

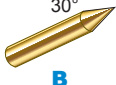

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100999 Coax Series

0.200 (5.08) Centers



Becu Tips	Diameter
 30° B	0.020 (0.51)
 60° U	0.020 (0.51)

Probe Specifications

Minimum Centers	0.200 (5.08)
Current Rating	3 A continuous
Spring Force	Signal Conductor: 1.60 oz (45 g) @ 0.070 (1.78) travel (tip B) 3.30 oz (93 g) @ 0.070 (1.78) travel (tip U) Shielded Plunger: 4.50 oz (127 g) @ 0.070 (1.78) travel
Nominal Impedance	50 Ω
Maximum Travel	0.090 (2.29)
Working Travel	0.070 (1.78)

Materials

Barrel	Brass, gold plated
Spring	Signal Conductor: Beryllium copper, gold plated Shielding Plunger: Stainless steel, gold plated
Shielding Plunger	Beryllium copper, gold plated
Dielectric Insulator	Teflon
Shielding Tube	Brass, gold plated
Signal Conductor	Series S, Size 00 probe
Coaxial Cable	Semi-flex or flex cable

How to Order

	1	0	0	9	9	9	-	E	S	-	1	2	-	A	M	-	F
	1							2			3			4			5
1 Base Part Number	1 0 0 9 9 9																
2 Signal Tip Style	B, U																
3 Cable Length	1 2 in. 3 6 in.																
4 Termination ⁽¹⁾	A M SMA Male A F SMA Female																
	N C No Connector																
5 Cable Type	F Flex S Semi-Flex																

1. When ordering with a preattached connector, please note that the connector will not fit through the probe mounting hole. The probe must be inserted from the bottom side of the mounting plate.
Dimensions are in inches (mm) | All specifications are subject to change

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