smiths interconnect

H-Pin
Stamped contact

Robust contact solution for burn-in, programming, and system-level applications.

The H-Pin is a stamped spring probe with the mechanical, electrical, and thermal performance of a spring probe, and the ease of use and high volume manufacturability of a stamped contact. The H-Pin serves applications without the typical compromises that are generally required when considering cost versus performance.

Excellent mechanical and electrical performance.

Utilizing high volume BeCu stamping technology, combined with a stainless steel spring for mechanical travel, the H-Pin has a working range up to 0.70 mm with a flat spring rate and can be utilized up to 15 GHz with −1.0 dB loss, carry up to 4 A of current and withstand temperatures up to 200 °C.

High volume stamping and quality control.

From pin one to one million, you'll get the same pin every time. Because of our automated H-Pin manufacturing process, you'll be the first person to make contact with your pins.
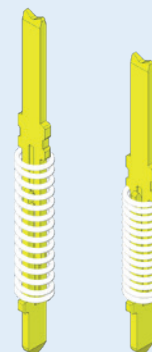
Benefits

- Compliancy for large package warpage
- Stable contact resistance and force
- Solid beam electrical performance
- Compliancy at high temperatures (180 °C)
- Correlated bi, system evaluation and test
- Reliable power and ground contact
- Stocked inventory and better lead time
- High volume capacity, quality control, and ease of use

Feature Options

- 0.40 mm to 0.70 mm travel
- Flat-spring rate
- BeCu H-Pin
- Stainless steel core spring
- Bandwidth −1dB @ 15 GHz
- Current carrying capacity
- High-volume stamping
- Reel-to-reel pin insertion

H-Pin detail, showing full deflection (right).

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Standard off-the-shelf H-Pins

Version

	H027	T033	H033
LGA	 DUT side · PCB side Lenght: 2.89 · Travel: 0.40 **H027LL1A**	 DUT side · PCB side Lenght: 1.26 · Travel: 0.25 **T033LT1A**	 DUT side · PCB side Lenght: 2.89 · Travel: 0.40 **H033LL2A**
BGA	 DUT side · PCB side Lenght: 3.43 · Travel: 0.40 **H027WL1A**		 DUT side · PCB side Lenght: 3.81 · Travel: 0.40 **H033DL2A**

	H038	H057	H077
LGA	 DUT side · PCB side Lenght: 2.95 · Travel: 0.43 **H038LL1A**	 DUT side · PCB side Lenght: 3.0 · Travel: 0.50 **H057LL1A**	 DUT side · PCB side Lenght: 4.45 · Travel: 0.70 **H077LL1A**
BGA	 DUT side · PCB side Lenght: 3.86 · Travel: 0.43 **H038DL1A**	 DUT side · PCB side Lenght: 3.80 · Travel: 0.50 **H057DL1A**	 DUT side · PCB side Lenght: 5.69 · Travel: 0.70 **H077DL1A**

Dimensions are in mm.

Technical specifications

	H027	T033	H033	H038	H057	H077
Min Pitch (mm)	0.35	0.40	0.40	0.50	0.70	1.00
Pin Diameter (mm)	0.27	0.33	0.33	0.38	0.57	0.77
Force Options (gF)	8.2	8.6	14.5	30.9	30	34.9
Contact Resistance (mΩ)	<65	<35	<50	<35	<30	<16
Current Rating (A, free air)	0.5	1.8	1.8	2.9	3.0	4.0
Bandwidth at -1dB (GHz)	24.7	50.0	31.7	15.7	18.1	21.9
Self-Inductance (nH)	0.92	0.28	0.75	0.88	0.95	1.04

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