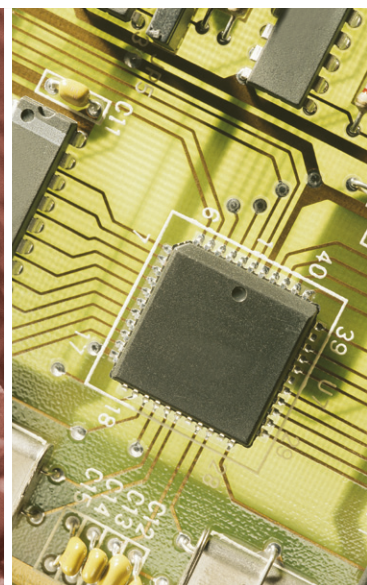


# OKins Pin and Test Sockets



# OKins Electronics

With world class manufacturing facilities in Gocheon and Hwasung, Korea, OKins Electronics Co., LTD. boasts vertically integrated, precision manufacturing in disciplines of Injection Molding, Progressive Stamping, Swiss Screw Machining, and CNC technologies.

Established in 1998, OKins Electronics is an experienced supplier of high-complexity interconnect solutions for Semiconductor Test Environments, including Wafer Sort, Package Test, High-Reliability, and Bench.

Through strong electromechanical engineering talent, OKins Electronics offers a broad range of contact technologies including Spring-Probe, MEMS Probe, Elastomeric, and Stamped Interconnect styles, addressing device pitches of less than 200 $\mu$ m, through 1.0mm and beyond.

We are connecting to the future!

► Contact: [sales@okins.co.kr](mailto:sales@okins.co.kr)

오킨스전자는 반도체 검사 부품인 소켓과 프로브 핀 등을 개발 및 생산하는 전문업체입니다. 국내 최초 번인소켓을 자체 개발한 후 다양한 제품으로 확대하여 고객만족을 실현해 오고 있습니다. 지난 시간 한국 반도체 산업의 성장과 함께 해온 저희 오킨스전자는 현재의 모습에 만족하지 않고 보다 전문화된 기술력과 경쟁력 있는 생산성으로 세계 시장을 무대로 더욱 힘찬 도약을 이루어낼 것을 저희 제품과 서비스의 멘토가 되어주시는 모든 고객과 파트너들에게 약속 드립니다.

## Business Cores

- 1 Precision Molding, Stamping and Machining
- 2 High volume manufacturing of fine pitch technologies
- 3 Multiple solutions for testing: burn-in socket, spring probes, memory module socket SSD socket, COK, etc
- 4 Effective supply chain through experience in meeting both engineering and high volume production requirements





## Reliability Capacity

- Milli-ohm meter
- Mega ohm meter
- Smart measuring scope
- Load cell meter
- Linear gauge
- Force & Resistance measurement system
- Hot temperature chamber
- Contact durability tester
- 3D level microscope (NEXIV)
- SEM (scanning electron microscope)
- X-ray inspector
- Network analyzer (Keysight)
- High/low power microscope
- Thermal shock & humidity tester
- Dielectric withstanding voltage/Insulation resistance Tester



# Spring Probes / Genaro Pin

Pin Types



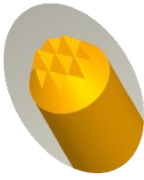
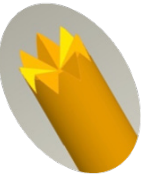
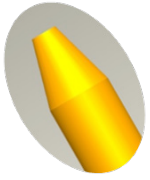


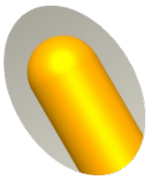

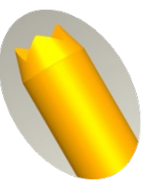

Double Pin

Single Pin

Genaro Series

Others

Top Plunger Tip Shapes



Crown

Reduced Crown

Needle

Round

Kelvin(T)

Kelvin (L)

Flat

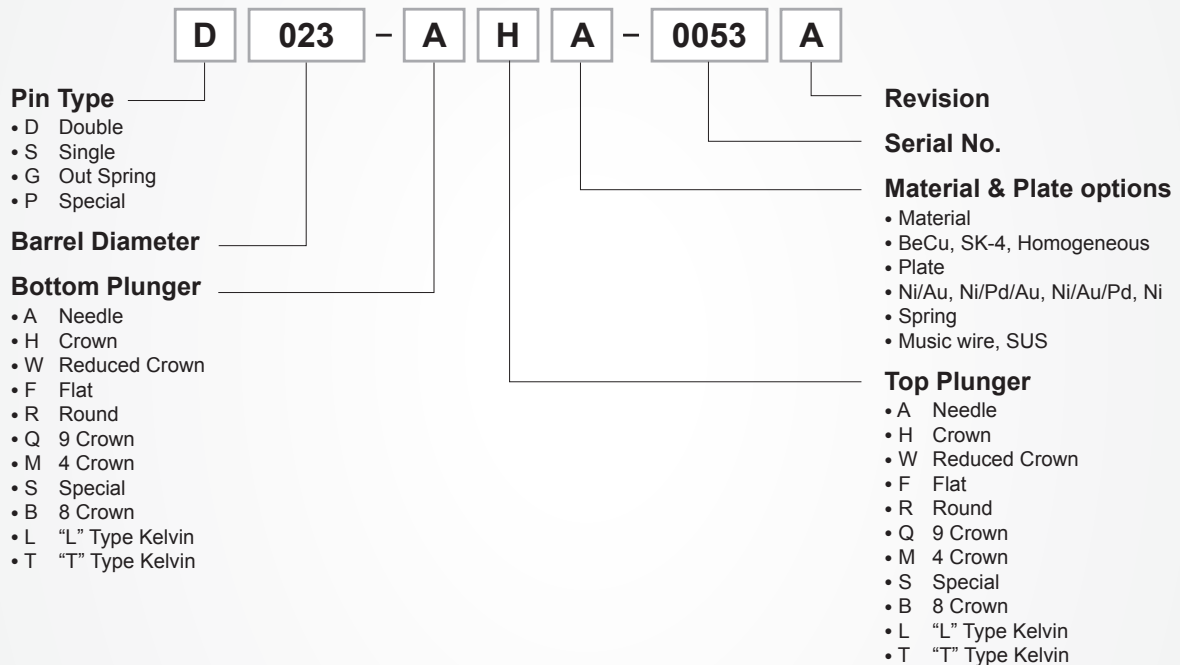
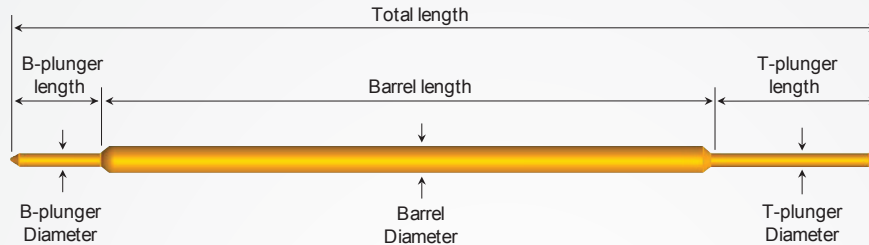
8 Crown

9 Crown



# Spring Probes

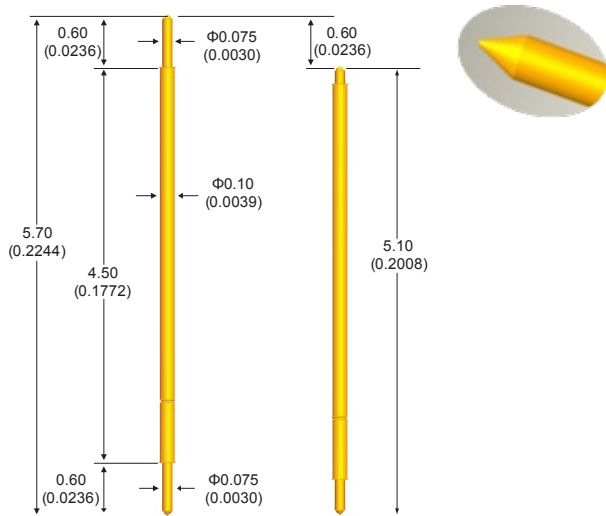
## Part Numbering System



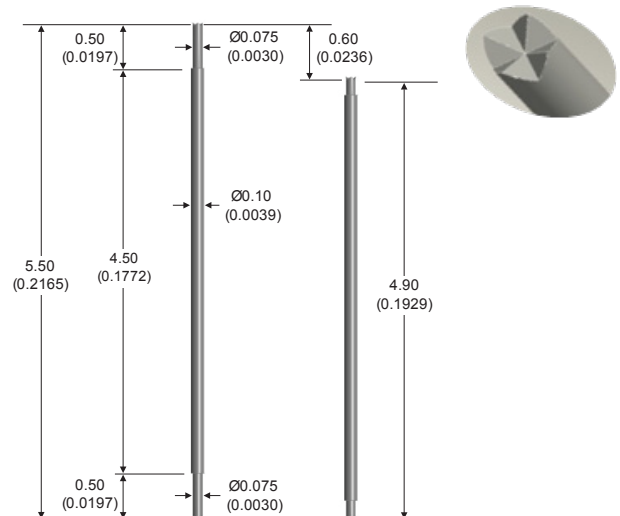
Pitch	Part No.	Page
0.15	D010-AAA-0351B, D010-HHM-0376A	06
0.20	D013-AAA-0048A, S013-AHA-0049B	07
0.25	D015-RHG-0050A, S015-RHG-0051A	08
0.30	D021-RAA-0052A, D023-AHA-0053A, S021-AHA-0054A, S023-RAA-0055A, D020-AHA-0092A	09~11
0.35	D028-RWG-0056A, D028-AAA-0057A, S026-RBJ-0058A, S028-RAA-0059A, D028-AHA-0170A, D026-AHG-0087A	12~14
0.40	D030-RAA-0060A, D030-AWA-0061A, D031-HHA-0062A, S030-AWM-0063A, OS-031-0325-RH-239A, OS-025-0330-RH-086B	15~17
0.50	D038-AHA-0064A, D041-AAH-0065A, D042-RHG-0066A, S032-RAG-0067A, OS-038-0460-WH-188B, S036-AWA-0068A	18~20
0.65	D050-AAA-0069A, D051-AQM-0070A, D057-AWM-0071A, 1823-11HX, S040-AWD-0072A, S052-WHA-0073A	21~23
0.80	S063-WHA-0027A, D065-AHA-0075A, D068-AAA-0076A, D060-RHA-0020B, S056-RWA-0077A, S058-HHB-0078A	24~26

# Spring Probes 0.15mm Pitch

## D010-AAA-0351B

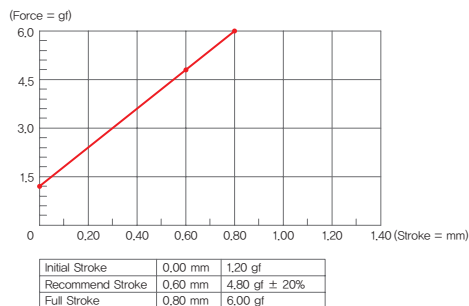


## D010-HHM-0376A



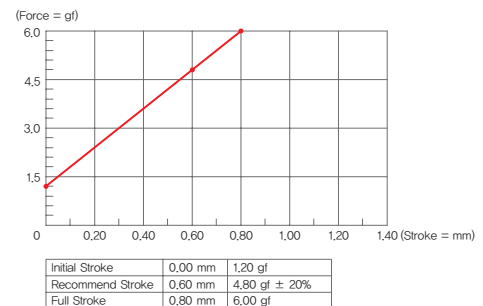
### Mechanical Specifications

Min. Device Pitch	0.15mm
Pin Height	5.7mm
Contact spring force	4.80gf@0.60mm
Recommend stroke	0.60mm
Full stroke	0.80mm
Operating temperature	-40~120℃



### Mechanical Specifications

Min. Device Pitch	0.15mm
Pin Height	5.5mm
Contact spring force	4.80gf@0.60mm
Recommend stroke	0.60mm
Full stroke	0.80mm
Operating temperature	-40~120℃



### Materials and Finishes

Top plunger	Hardened BeCu(Ni/Au)
Bottom Plunger	Hardened BeCu(Ni/Au)
Barrel	Alloy
Spring	Music Wire(Au)
Action	Double Action

### Materials and Finishes

Top plunger	Pd Alloy
Bottom Plunger	Pd Alloy
Barrel	Alloy
Spring	Music Wire(Au)
Action	Double Action

### Electrical Specifications

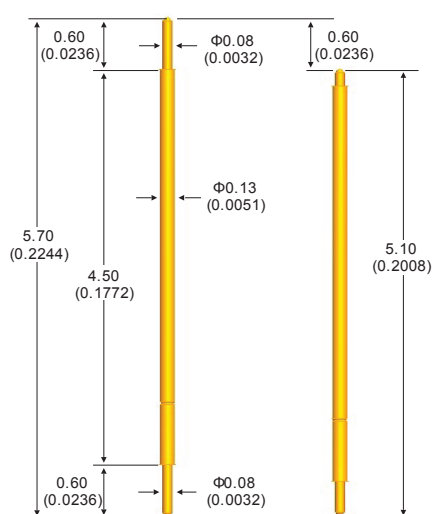
Current Rating	0.20A
Self Inductance	1.57nH
Bandwidth	32.00GHz@-0.75dB
DC Resistance	Less than 450mohm

### Electrical Specifications

Current Rating	0.20A
Self Inductance	1.57nH
Bandwidth	32.00GHz@-0.75dB
DC Resistance	Less than 450mohm

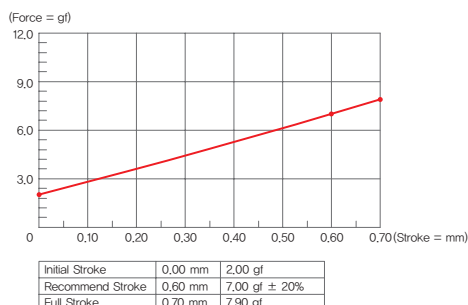
# Spring Probes 0.20mm Pitch

## D013-AAA-0048A



### Mechanical Specifications

Min. Device Pitch	0.2mm
Pin Height	5.7mm
Contact spring force	7.0gf@0.60mm
Recommend stroke	0.60mm
Full stroke	0.70mm
Operating temperature	-40~120℃



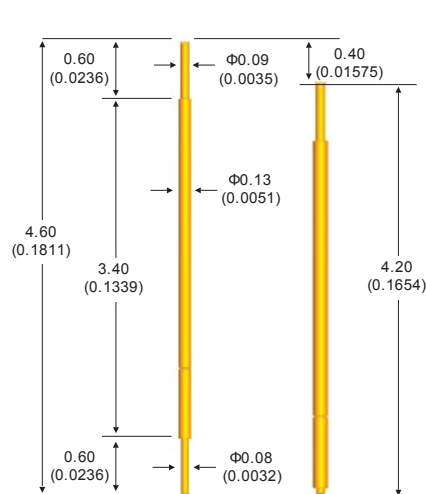
### Materials and Finishes

Top plunger	Hardened Steel(Ni/Au)
Bottom Plunger	Hardened BeCu(Ni/Au)
Barrel	Au Clad
Spring	Music Wire(Au)
Action	Double Action

### Electrical Specifications

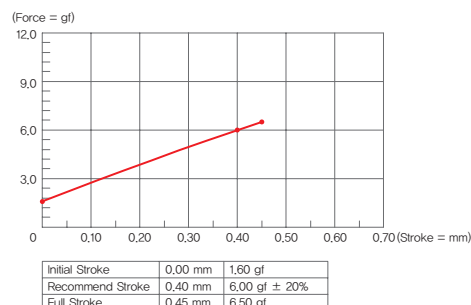
Current Rating	0.5A
Self Inductance	1.42nH
Bandwidth	3.64GHz@-1.00dB
DC Resistance	Less than 250mohm

## S013-AHA-0049B



### Mechanical Specifications

Min. Device Pitch	0.2mm
Pin Height	4.6mm
Contact spring force	6.0gf@0.40mm
Recommend stroke	0.40mm
Full stroke	0.45mm
Operating temperature	-40~120℃



### Materials and Finishes

Top plunger	BeCu
Bottom Plunger	Hardened BeCu(Ni/Au)
Barrel	Au Clad
Spring	Music Wire(Au)
Action	Single Action

### Electrical Specifications

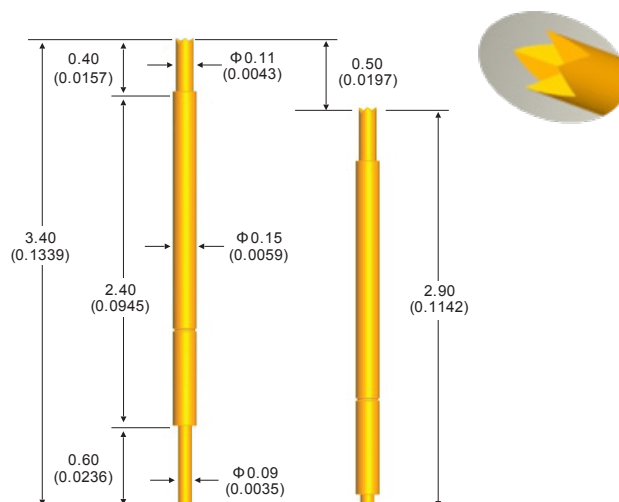
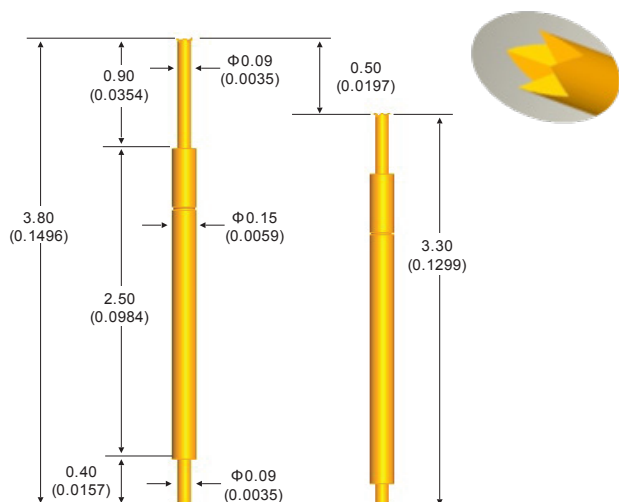
Current Rating	0.5A
Self Inductance	1.32nH
Bandwidth	3.82GHz@-1.00dB
DC Resistance	Less than 50mohm

# Spring Probes 0.25mm Pitch

## D015-RHG-0050A

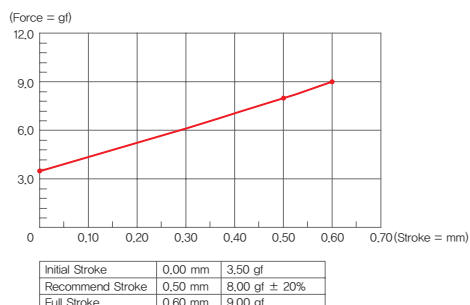
## S015-RHG-0051A

0.25 mm



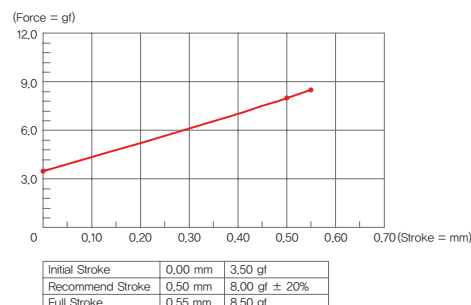
### Mechanical Specifications

Min. Device Pitch	0.25mm
Pin Height	3.8mm
Contact spring force	8.0gf@0.50mm
Recommend stroke	0.50mm
Full stroke	0.60mm
Operating temperature	-40~120℃



### Mechanical Specifications

Min. Device Pitch	0.25mm
Pin Height	3.4mm
Contact spring force	8.0gf@0.50mm
Recommend stroke	0.50mm
Full stroke	0.55mm
Operating temperature	-40~120℃



### Materials and Finishes

Top plunger	Hardened Steel(Ni/Au)
Bottom Plunger	Hardened BeCu(Ni/Au)
Barrel	Au Clad
Spring	Music Wire(Au)
Action	Double Action

### Materials and Finishes

Top plunger	Hardened Steel(Ni/Au)
Bottom Plunger	Hardened BeCu(Ni/Au)
Barrel	Au Clad
Spring	Music Wire(Au)
Action	Single Action

### Electrical Specifications

Current Rating	0.5A
Self Inductance	1.14nH
Bandwidth	5.23GHz@-1.00dB
DC Resistance	Less than 250mohm

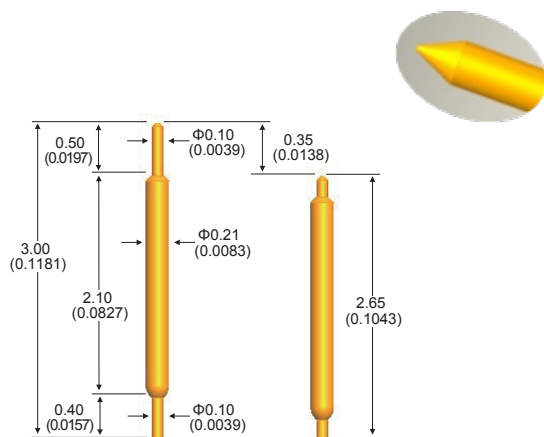
### Electrical Specifications

Current Rating	0.5A
Self Inductance	1.10nH
Bandwidth	5.42GHz@-1.00dB
DC Resistance	Less than 250mohm



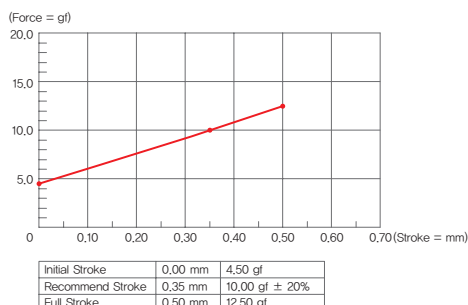
# Spring Probes 0.30mm Pitch

## D021-RAA-0052A



### Mechanical Specifications

Min. Device Pitch	0.30mm
Pin Height	3.0mm
Contact spring force	10.0gf@0.35mm
Recommend stroke	0.35mm
Full stroke	0.50mm
Operating temperature	-40~120℃



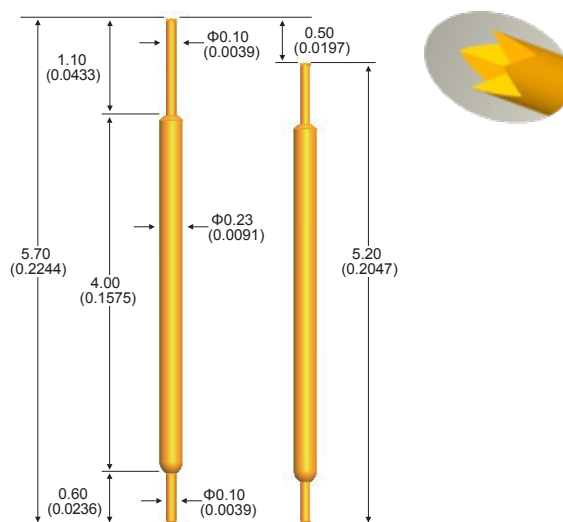
### Materials and Finishes

Top plunger	Hardened BeCu(Ni/Au)
Bottom Plunger	Hardened BeCu(Ni/Au)
Barrel	Au Clad
Spring	Music Wire(Au)
Action	Double Action

### Electrical Specifications

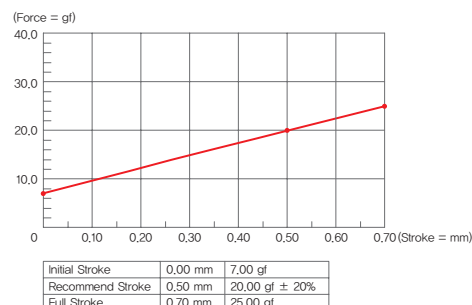
Current Rating	1.5A
Self Inductance	1.05nH
Bandwidth	7.14GHz@-1.00dB
DC Resistance	Less than 150mohm

## D023-AHA-0053A



### Mechanical Specifications

Min. Device Pitch	0.30mm
Pin Height	5.7mm
Contact spring force	20.0gf@0.50mm
Recommend stroke	0.50mm
Full stroke	0.70mm
Operating temperature	-40~120℃



### Materials and Finishes

Top plunger	Hardened BeCu(Ni/Au)
Bottom Plunger	Hardened BeCu(Ni/Au)
Barrel	Phosphorous Bronze(Ni/Au)
Spring	Music Wire(Au)
Action	Double Action

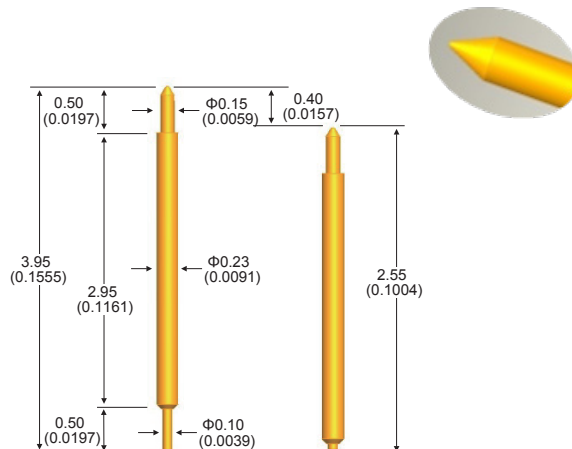
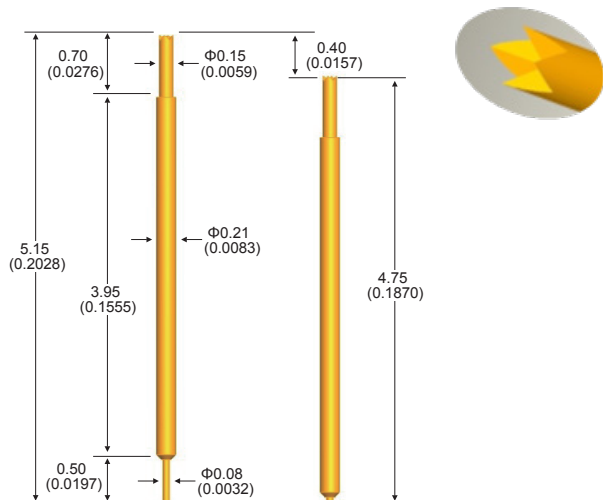
### Electrical Specifications

Current Rating	1.5A
Self Inductance	1.37nH
Bandwidth	6.87GHz@-1.00dB
DC Resistance	Less than 150mohm

# Spring Probes 0.30mm Pitch

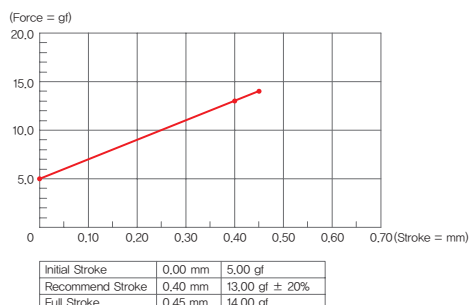
## S021-AHA-0054A

## S023-RAA-0055A



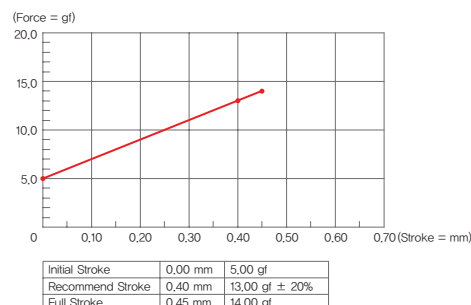
### Mechanical Specifications

Min. Device Pitch	0.30mm
Pin Height	5.15mm
Contact spring force	13.0gf@0.40mm
Recommend stroke	0.40mm
Full stroke	0.45mm
Operating temperature	-40~120℃



### Mechanical Specifications

Min. Device Pitch	0.30mm
Pin Height	3.95mm
Contact spring force	13.0gf@0.40mm
Recommend stroke	0.40mm
Full stroke	0.45mm
Operating temperature	-40~120℃



### Materials and Finishes

Top plunger	Hardened BeCu(Ni/Au)
Bottom Plunger	Hardened BeCu(Ni/Au)
Barrel	Au Clad
Spring	Music Wire(Au)
Action	Single Action

### Materials and Finishes

Top plunger	Hardened BeCu(Ni/Au)
Bottom Plunger	Hardened BeCu(Ni/Au)
Barrel	Phosphorous Bronze(Ni/Au)
Spring	Music Wire(Au)
Action	Single Action

### Electrical Specifications

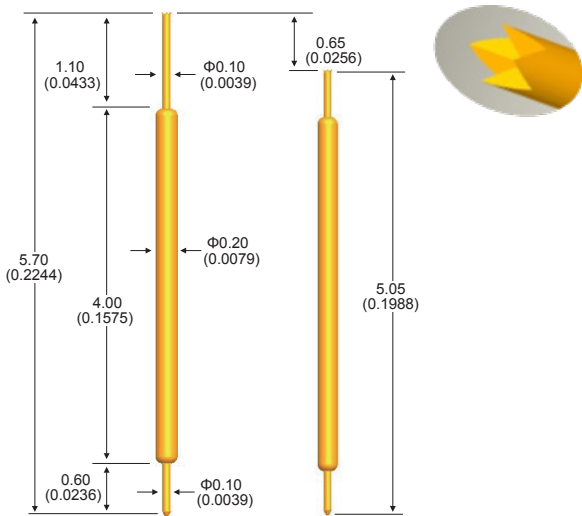
Current Rating	1.5A
Self Inductance	1.23nH
Bandwidth	6.98GHz@-1.00dB
DC Resistance	Less than 150mohm

### Electrical Specifications

Current Rating	1.5A
Self Inductance	0.90nH
Bandwidth	7.82GHz@-1.00dB
DC Resistance	Less than 150mohm

# Spring Probes 0.30mm Pitch

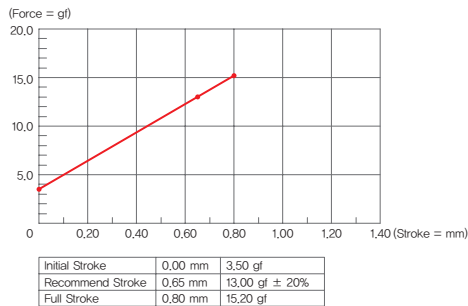
D020-AHA-0092A



0.30 mm

## Mechanical Specifications

Min. Device Pitch	0.30mm
Pin Height	5.70mm
Contact spring force	13.0gf@0.65mm
Recommend stroke	0.65mm
Full stroke	0.80mm
Operating temperature	-40~120℃



## Materials and Finishes

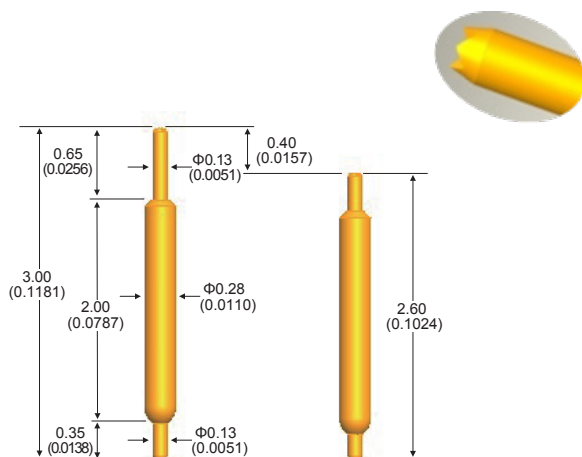
Top plunger	Hardened BeCu(Ni/Au)
Bottom Plunger	Hardened BeCu(Ni/Au)
Barrel	Au Clad
Spring	Music Wire(Au)
Action	Double Action

## Electrical Specifications

Current Rating	1.5A
Self Inductance	1.37nH
Bandwidth	6.47GHz@-1.00dB
DC Resistance	Less than 150mohm

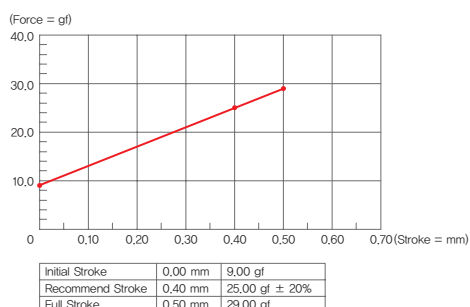
# Spring Probes 0.35mm Pitch

## D028-RWG-0056A



### Mechanical Specifications

Min. Device Pitch	0.35mm
Pin Height	3.0mm
Contact spring force	25.0gf@0.40mm
Recommend stroke	0.40mm
Full stroke	0.50mm
Operating temperature	-40~120℃



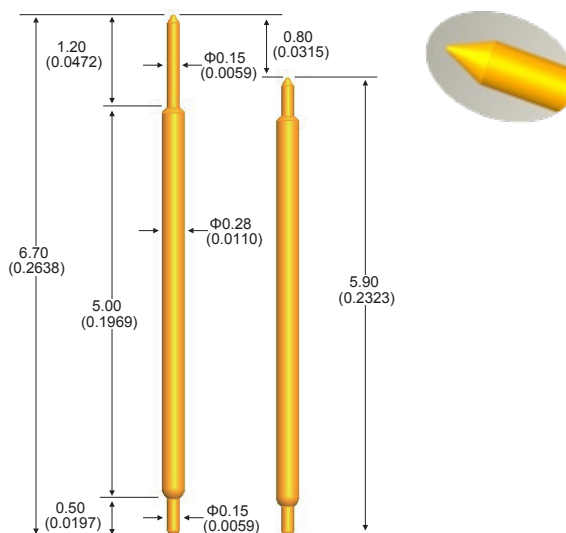
### Materials and Finishes

Top plunger	Hardened Steel(Ni/Au)
Bottom Plunger	Hardened BeCu(Ni/Au)
Barrel	Phosphorous Bronze(Ni/Au)
Spring	Music Wire(Au)
Action	Double Action

### Electrical Specifications

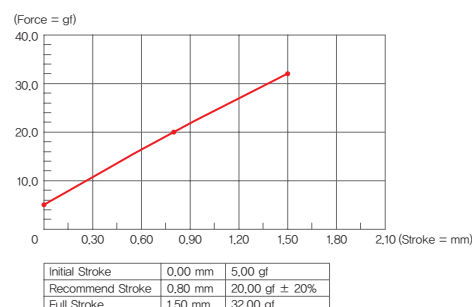
Current Rating	2.0A
Self Inductance	1.02nH
Bandwidth	8.21GHz@-1.00dB
DC Resistance	Less than 100mohm

## D028-AAA-0057A



### Mechanical Specifications

Min. Device Pitch	0.35mm
Pin Height	6.7mm
Contact spring force	20.0gf@0.80mm
Recommend stroke	0.80mm
Full stroke	1.50mm
Operating temperature	-40~120℃



### Materials and Finishes

Top plunger	Hardened BeCu(Ni/Au)
Bottom Plunger	Hardened BeCu(Ni/Au)
Barrel	Phosphorous Bronze(Ni/Au)
Spring	Music Wire(Au)
Action	Double Action

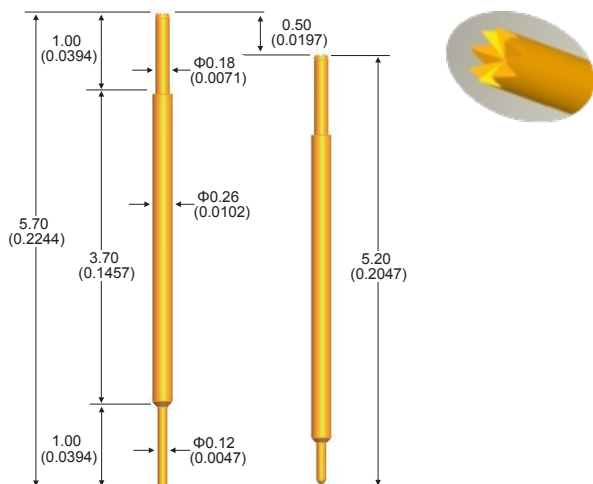
### Electrical Specifications

Current Rating	2.0A
Self Inductance	1.42nH
Bandwidth	7.62GHz@-1.00dB
DC Resistance	Less than 100mohm



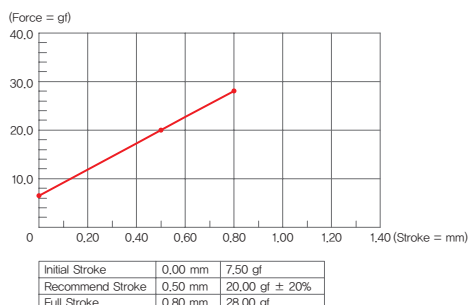
# Spring Probes 0.35mm Pitch

## S026-RBJ-0058A



### Mechanical Specifications

Min. Device Pitch	0.35mm
Pin Height	5.7mm
Contact spring force	20.0gf@0.50mm
Recommend stroke	0.50mm
Full stroke	0.80mm
Operating temperature	-40~120℃



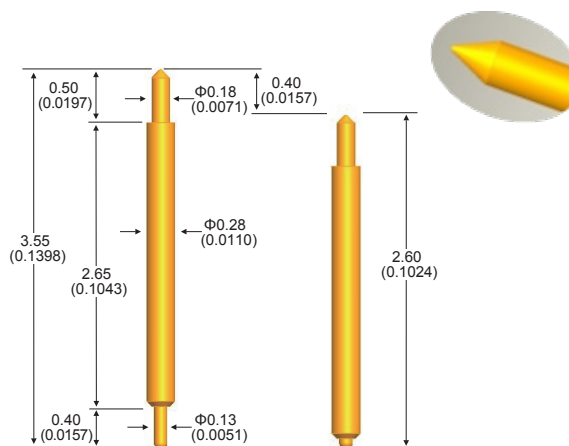
### Materials and Finishes

Top plunger	Hardened Steel(Ni/Au)
Bottom Plunger	Hardened BeCu(Ni/Au)
Barrel	Phosphorous Bronze(Ni/Au)
Spring	Music Wire(Au)
Action	Single Action

### Electrical Specifications

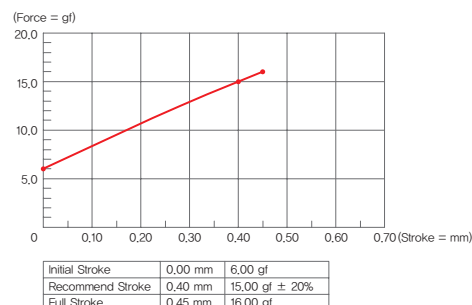
Current Rating	2.0A
Self Inductance	1.30nH
Bandwidth	7.56GHz@-1.00dB
DC Resistance	Less than 80mohm

## S028-RAA-0059A



### Mechanical Specifications

Min. Device Pitch	0.35mm
Pin Height	3.55mm
Contact spring force	15.0gf@0.40mm
Recommend stroke	0.40mm
Full stroke	0.45mm
Operating temperature	-40~120℃



### Materials and Finishes

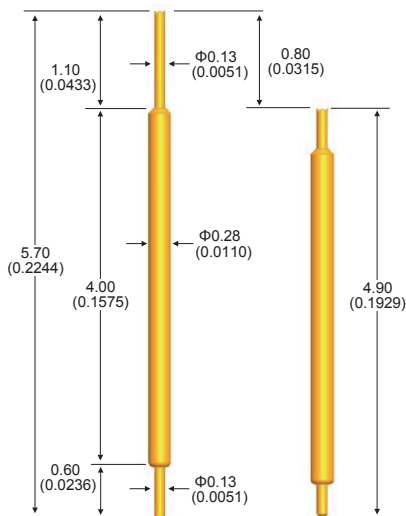
Top plunger	Hardened BeCu(Ni/Au)
Bottom Plunger	Hardened BeCu(Ni/Au)
Barrel	Phosphorous Bronze(Ni/Au)
Spring	Music Wire(Au)
Action	Single Action

### Electrical Specifications

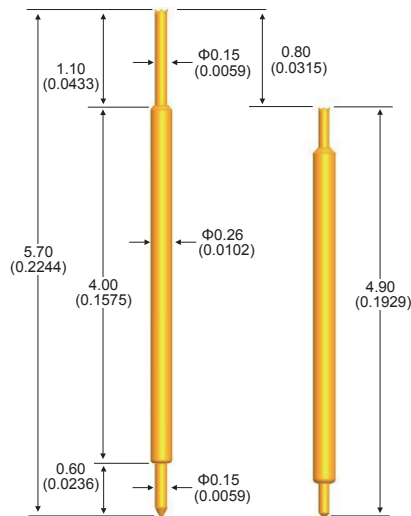
Current Rating	2.0A
Self Inductance	0.95nH
Bandwidth	8.21GHz@-1.00dB
DC Resistance	Less than 80mohm

# Spring Probes 0.35mm Pitch

## D028-AHA-0170A

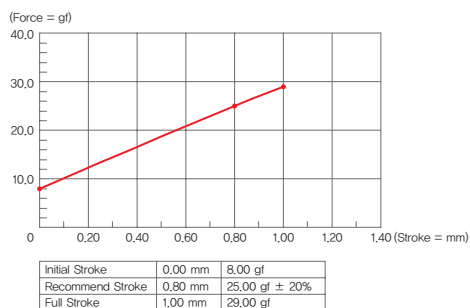


## D026-AHG-0087A



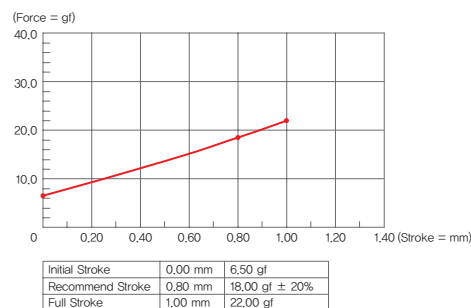
### Mechanical Specifications

Min. Device Pitch	0.35mm
Pin Height	5.7mm
Contact spring force	25.0gf@0.80mm
Recommend stroke	0.80mm
Full stroke	1.00mm
Operating temperature	-40~120℃



### Mechanical Specifications

Min. Device Pitch	0.35mm
Pin Height	5.70mm
Contact spring force	18.0gf@0.80mm
Recommend stroke	0.80mm
Full stroke	1.00mm
Operating temperature	-40~120℃



### Materials and Finishes

Top plunger	Hardened BeCu(Ni/Au)
Bottom Plunger	Hardened BeCu(Ni/Au)
Barrel	Phosphorous Bronze(Ni/Au)
Spring	Music Wire(Au)
Action	Double Action

### Materials and Finishes

Top plunger	Hardened BeCu(Ni/Au)
Bottom Plunger	Hardened BeCu(Ni/Au)
Barrel	Phosphorous Bronze(Ni/Au)
Spring	Music Wire(Au)
Action	Double Action

### Electrical Specifications

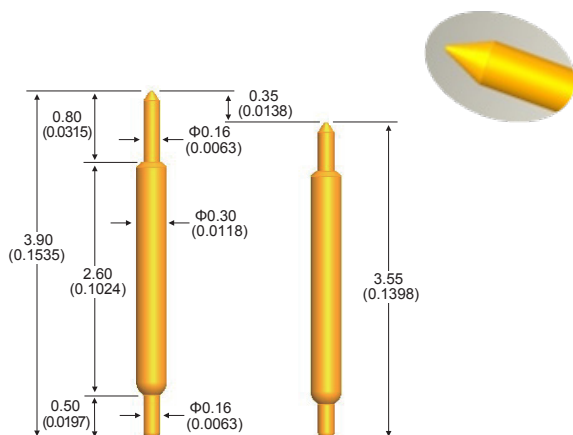
Current Rating	2.0A
Self Inductance	1.37nH
Bandwidth	7.89GHz@-1.00dB
DC Resistance	Less than 80mohm

### Electrical Specifications

Current Rating	2.0A
Self Inductance	1.37nH
Bandwidth	7.54GHz@-1.00dB
DC Resistance	Less than 80mohm

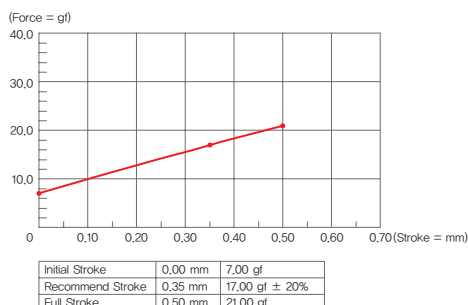
# Spring Probes 0.40mm Pitch

## D030-RAA-0060A



### Mechanical Specifications

Min. Device Pitch	0.40mm
Pin Height	3.9mm
Contact spring force	17.0gf@0.35mm
Recommend stroke	0.35mm
Full stroke	0.50mm
Operating temperature	-40~120℃



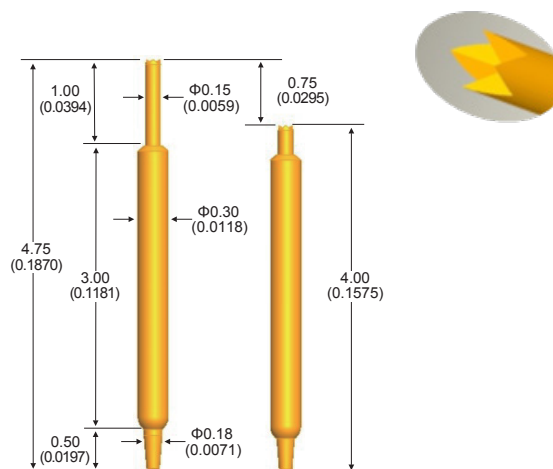
### Materials and Finishes

Top plunger	Hardened BeCu(Ni/Au)
Bottom Plunger	Hardened BeCu(Ni/Au)
Barrel	Phosphorous Bronze(Ni/Au)
Spring	Music Wire(Au)
Action	Double Action

### Electrical Specifications

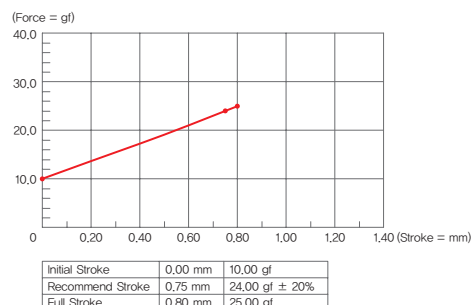
Current Rating	2.0A
Self Inductance	0.98nH
Bandwidth	20.8GHz@-1.00dB
DC Resistance	Less than 80mohm

## D030-AWA-0061A



### Mechanical Specifications

Min. Device Pitch	0.40mm
Pin Height	4.75mm
Contact spring force	24.0gf@0.75mm
Recommend stroke	0.75mm
Full stroke	0.80mm
Operating temperature	-40~120℃



### Materials and Finishes

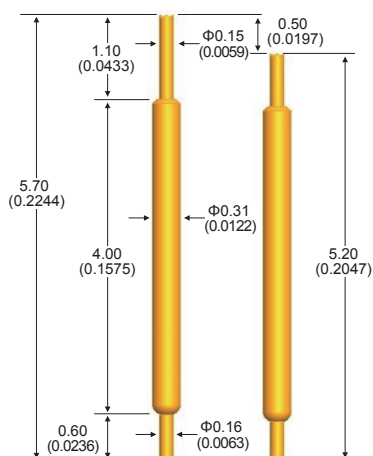
Top plunger	Hardened BeCu(Ni/Au)
Bottom Plunger	Hardened BeCu(Ni/Au)
Barrel	Phosphorous Bronze(Ni/Au)
Spring	Music Wire(Au)
Action	Double Action

### Electrical Specifications

Current Rating	2.0A
Self Inductance	1.03nH
Bandwidth	19.3GHz@-1.00dB
DC Resistance	Less than 80mohm

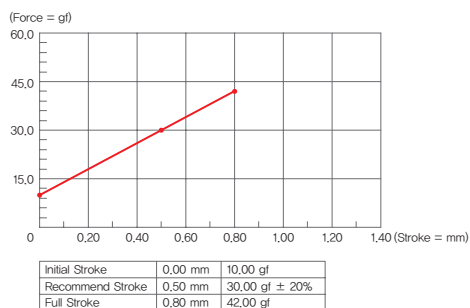
# Spring Probes 0.40mm Pitch

## D031-HHA-0062A



### Mechanical Specifications

Min. Device Pitch	0.40mm
Pin Height	5.7mm
Contact spring force	30.0gf@0.50mm
Recommend stroke	0.50mm
Full stroke	0.80mm
Operating temperature	-40~120℃



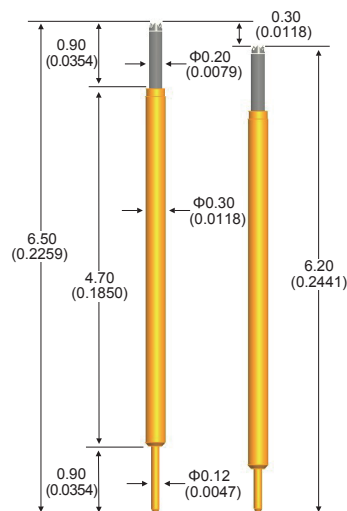
### Materials and Finishes

Top plunger	Hardened BeCu(Ni/Au)
Bottom Plunger	Hardened BeCu(Ni/Au)
Barrel	Phosphorous Bronze(Ni/Au)
Spring	Music Wire(Au)
Action	Double Action

### Electrical Specifications

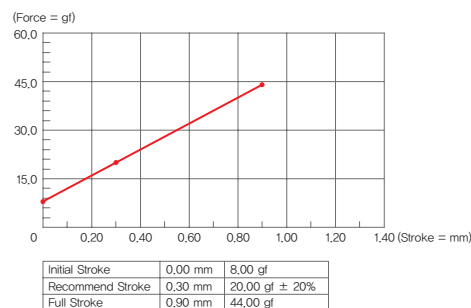
Current Rating	2.0A
Self Inductance	1.41nH
Bandwidth	15.0GHz@-1.00dB
DC Resistance	Less than 80mohm

## S030-AWM-0063A



### Mechanical Specifications

Min. Device Pitch	0.40mm
Pin Height	6.5mm
Contact spring force	20.0gf@0.30mm
Recommend stroke	0.30mm
Full stroke	0.90mm
Operating temperature	-40~120℃



### Materials and Finishes

Top plunger	Pd-Alloy
Bottom Plunger	Hardened BeCu(Ni/Au)
Barrel	Phosphorous Bronze(Ni/Au)
Spring	Music Wire(Au)
Action	Single Action

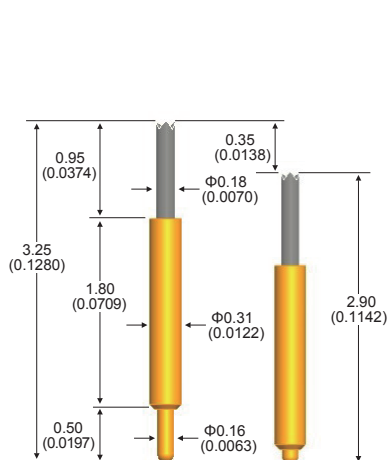
### Electrical Specifications

Current Rating	2.0A
Self Inductance	1.39nH
Bandwidth	13.2GHz@-1.00dB
DC Resistance	Less than 80mohm



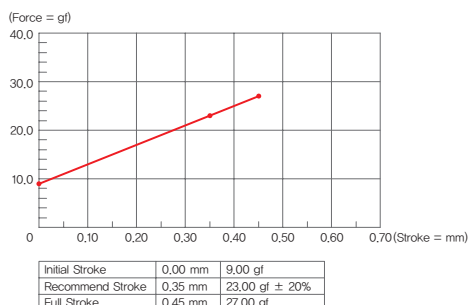
# Spring Probes 0.40mm Pitch

## OS-031-0325-RH-239A



### Mechanical Specifications

Min. Device Pitch	0.40mm
Pin Height	3.25mm
Contact spring force	23.0gf@0.35mm
Recommend stroke	0.35mm
Full stroke	0.45mm
Operating temperature	-40~120℃



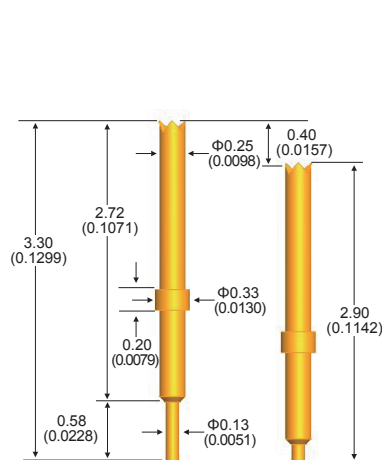
### Materials and Finishes

Top plunger	Pd-Alloy
Bottom Plunger	Hardened BeCu(Ni/Au)
Barrel	Phosphorous Bronze(Ni/Au)
Spring	Music Wire(Au)
Action	Single Action

### Electrical Specifications

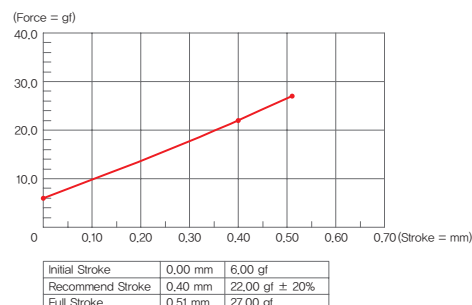
Current Rating	3.0A
Self Inductance	1.09nH
Bandwidth	21.0GHz@-1.00dB
DC Resistance	Less than 80mohm

## OS-025-0330-RH-086B



### Mechanical Specifications

Min. Device Pitch	0.40mm
Pin Height	3.3mm
Contact spring force	22.0gf@0.40mm
Recommend stroke	0.40mm
Full stroke	0.51mm
Operating temperature	-40~120℃



### Materials and Finishes

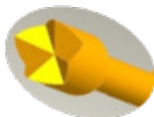
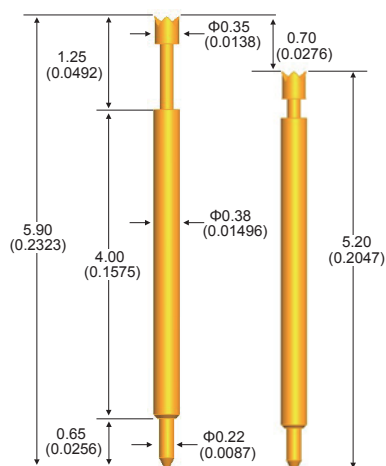
Top plunger	Hardened BeCu(Ni/Au)
Bottom Plunger	Hardened BeCu(Ni/Au)
Barrel	Phosphorous Bronze(Ni/Au)
Spring	Music Wire(Au)
Action	Single Action

### Electrical Specifications

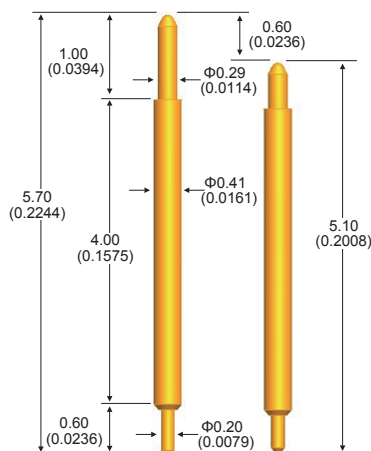
Current Rating	3.0A
Self Inductance	1.09nH
Bandwidth	21.0GHz@-1.00dB
DC Resistance	Less than 60mohm

# Spring Probes 0.50mm Pitch

## D038-AHA-0064A

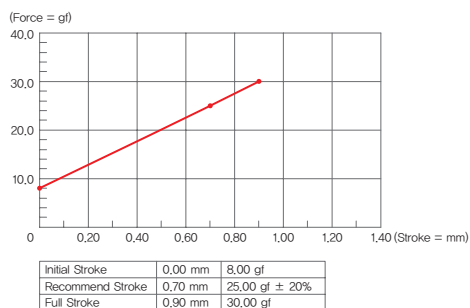


## D041-AAH-0065A



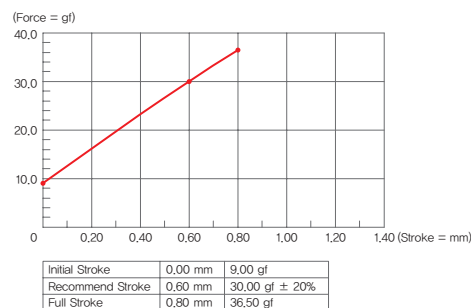
### Mechanical Specifications

Min. Device Pitch	0.50mm
Pin Height	5.9mm
Contact spring force	25.0gf@0.70mm
Recommend stroke	0.70mm
Full stroke	0.90mm
Operating temperature	-40~120℃



### Mechanical Specifications

Min. Device Pitch	0.50mm
Pin Height	5.7mm
Contact spring force	30.0gf@0.60mm
Recommend stroke	0.60mm
Full stroke	0.80mm
Operating temperature	-40~120℃



### Materials and Finishes

Top plunger	Hardened BeCu(Ni/Au)
Bottom Plunger	Hardened BeCu(Ni/Au)
Barrel	Phosphorous Bronze(Ni/Au)
Spring	Music Wire(Au)
Action	Double Action

### Materials and Finishes

Top plunger	Hardened Steel(Ni/Au)
Bottom Plunger	Hardened BeCu(Ni/Au)
Barrel	Phosphorous Bronze(Ni/Au)
Spring	Music Wire(Au)
Action	Double Action

### Electrical Specifications

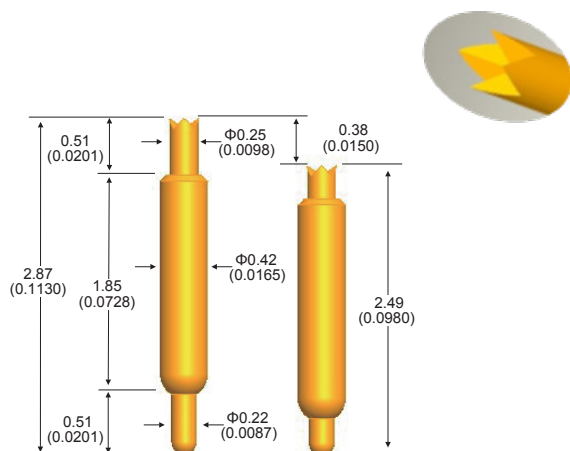
Current Rating	2.0A
Self Inductance	1.60nH
Bandwidth	16.9GHz@-1.00dB
DC Resistance	Less than 50mohm

### Electrical Specifications

Current Rating	2.0A
Self Inductance	1.28nH
Bandwidth	17.5GHz@-1.00dB
DC Resistance	Less than 50mohm

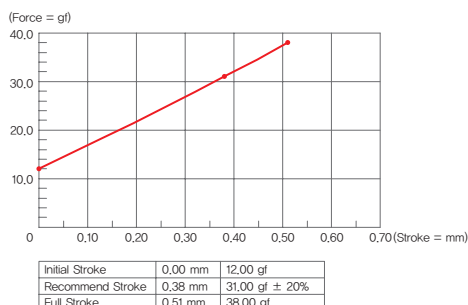
# Spring Probes 0.50mm Pitch

## D042-RHG-0066A



### Mechanical Specifications

Min. Device Pitch	0.40mm
Pin Height	3.25mm
Contact spring force	31.0gf@0.38mm
Recommend stroke	0.38mm
Full stroke	0.51mm
Operating temperature	-40~120°C



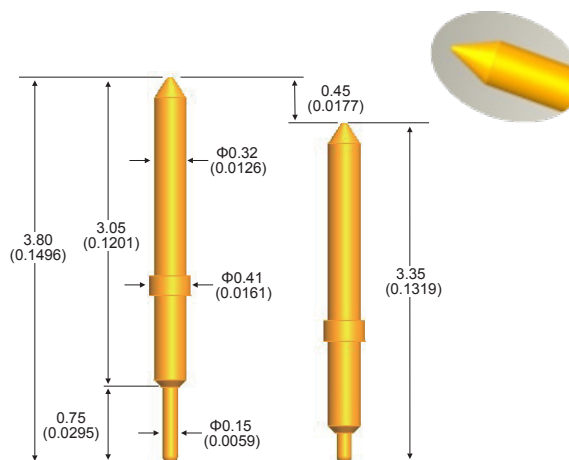
### Materials and Finishes

Top plunger	Hardened Steel(Ni/Au)
Bottom Plunger	Hardened BeCu(Ni/Au)
Barrel	Phosphorous Bronze(Ni/Au)
Spring	Music Wire(Au)
Action	Double Action

### Electrical Specifications

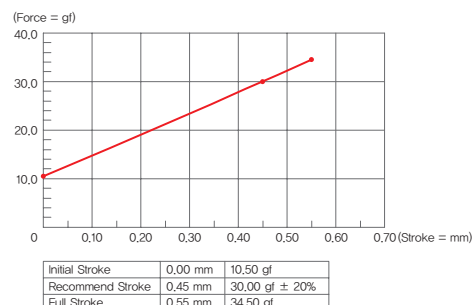
Current Rating	3.0A
Self Inductance	1.09nH
Bandwidth	21.0GHz@-1.00dB
DC Resistance	Less than 50mohm

## S032-RAG-0067A



### Mechanical Specifications

Min. Device Pitch	0.40mm
Pin Height	3.3mm
Contact spring force	30.0gf@0.45mm
Recommend stroke	0.45mm
Full stroke	0.55mm
Operating temperature	-40~120°C



### Materials and Finishes

Top plunger	Hardened BeCu(Ni/Au)
Bottom Plunger	Hardened BeCu(Ni/Au)
Barrel	Phosphorous Bronze(Ni/Au)
Spring	Music Wire(Au)
Action	Single Action

### Electrical Specifications

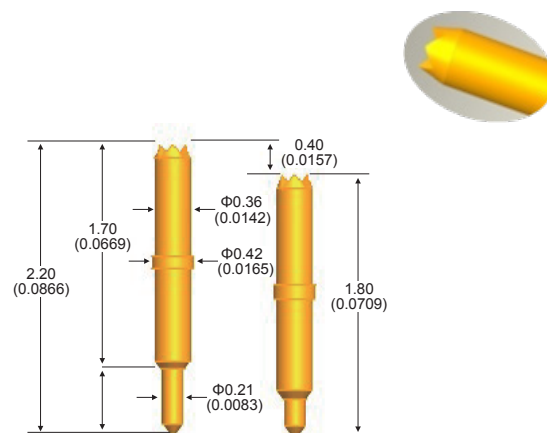
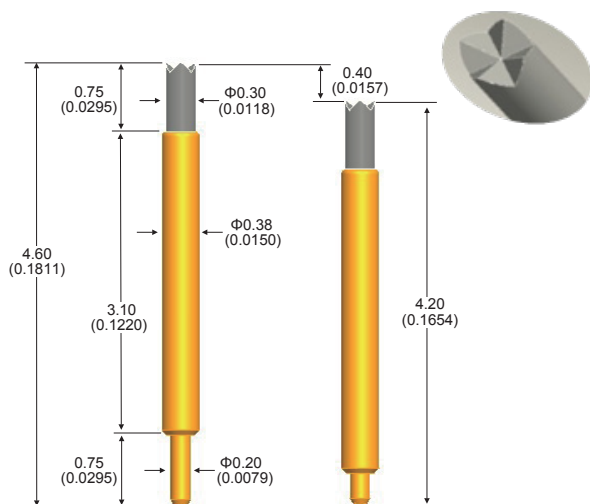
Current Rating	3.0A
Self Inductance	1.09nH
Bandwidth	21.0GHz@-1.00dB
DC Resistance	Less than 50mohm

# Spring Probes 0.50mm Pitch

## OS-038-0460-WH-188B

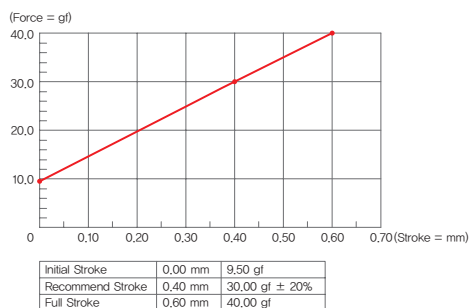
## S036-AWA-0068A

0.50 mm



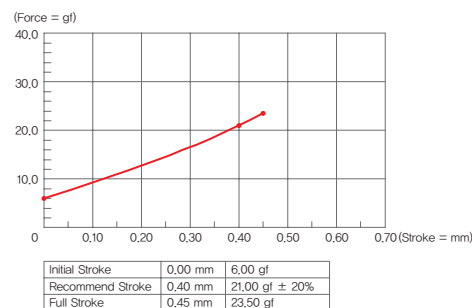
### Mechanical Specifications

Min. Device Pitch	0.50mm
Pin Height	4.6mm
Contact spring force	30.0gf@0.40mm
Recommend stroke	0.40mm
Full stroke	0.60mm
Operating temperature	-40~140℃



### Mechanical Specifications

Min. Device Pitch	0.50mm
Pin Height	2.2mm
Contact spring force	21.0gf@0.40mm
Recommend stroke	0.40mm
Full stroke	0.45mm
Operating temperature	-40~120℃



### Materials and Finishes

Top plunger	Pd-Alloy
Bottom Plunger	Hardened BeCu(Ni/Au)
Barrel	Phosphorous Bronze(Ni/Au)
Spring	Stainless Steel(Au)
Action	Single Action

### Materials and Finishes

Top plunger	Hardened BeCu(Ni/Au)
Bottom Plunger	Hardened BeCu(Ni/Au)
Barrel	Phosphorous Bronze(Ni/Au)
Spring	Music Wire(Au)
Action	Single Action

### Electrical Specifications

Current Rating	3.0A
Self Inductance	1.26nH
Bandwidth	18.9GHz@-1.00dB
DC Resistance	Less than 50mohm

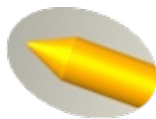
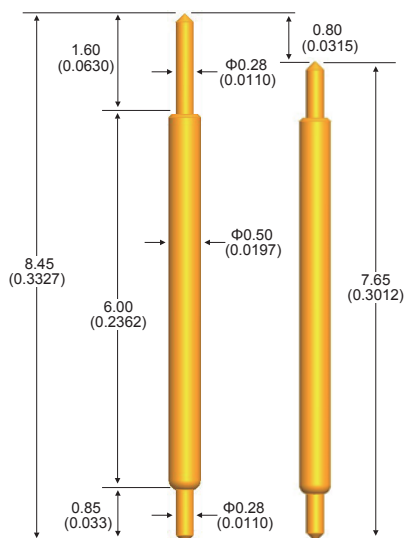
### Electrical Specifications

Current Rating	3.0A
Self Inductance	0.90nH
Bandwidth	24.5GHz@-1.00dB
DC Resistance	Less than 50mohm



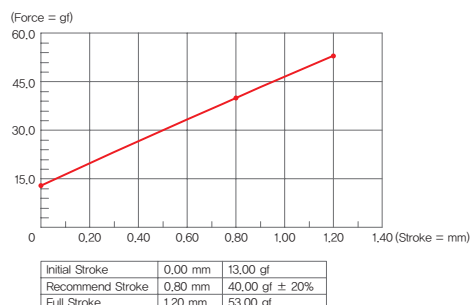
# Spring Probes 0.65mm Pitch

## D050-AAA-0069A



### Mechanical Specifications

Min. Device Pitch	0.65mm
Pin Height	8.45mm
Contact spring force	40.0gf@0.80mm
Recommend stroke	0.80mm
Full stroke	1.20mm
Operating temperature	-40~120℃



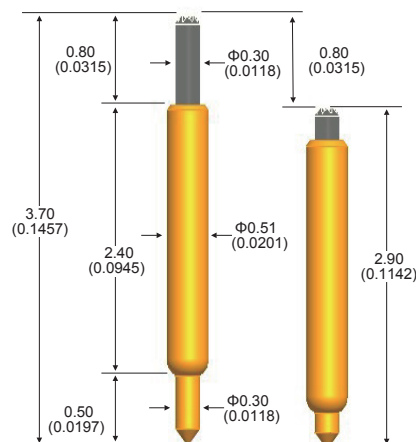
### Materials and Finishes

Top plunger	Hardened BeCu(Ni/Au)
Bottom Plunger	Hardened BeCu(Ni/Au)
Barrel	Phosphorous Bronze(Ni/Au)
Spring	Music Wire(Au)
Action	Double Action

### Electrical Specifications

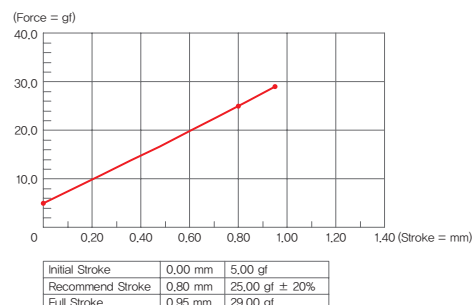
Current Rating	2.0A
Self Inductance	1.51nH
Bandwidth	13.4GHz@-1.00dB
DC Resistance	Less than 50mohm

## D051-AQM-0070A



### Mechanical Specifications

Min. Device Pitch	0.65mm
Pin Height	3.7mm
Contact spring force	25.0gf@0.80mm
Recommend stroke	0.80mm
Full stroke	0.95mm
Operating temperature	-40~120℃



### Materials and Finishes

Top plunger	Pd-Alloy
Bottom Plunger	Hardened BeCu(Ni/Au)
Barrel	Phosphorous Bronze(Ni/Au)
Spring	Music Wire(Au)
Action	Double Action

### Electrical Specifications

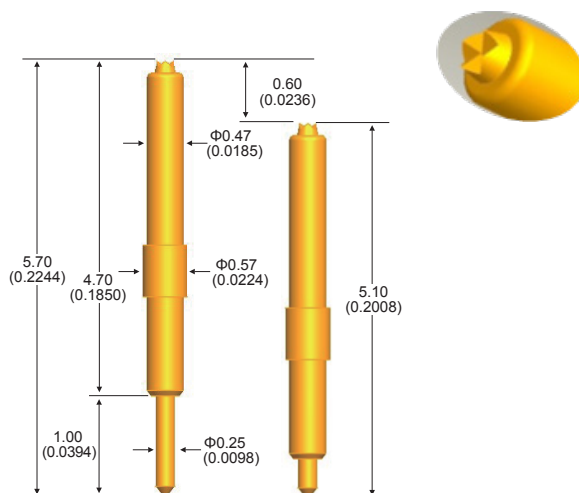
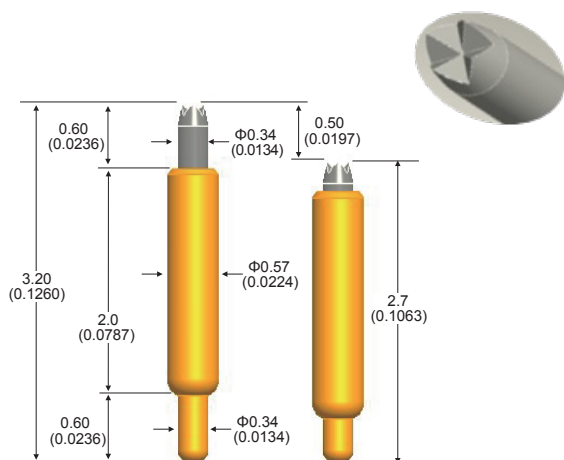
Current Rating	2.5A
Self Inductance	0.98nH
Bandwidth	12.3GHz@-1.00dB
DC Resistance	Less than 50mohm

# Spring Probes 0.65mm Pitch

## D057-AWM-0071A

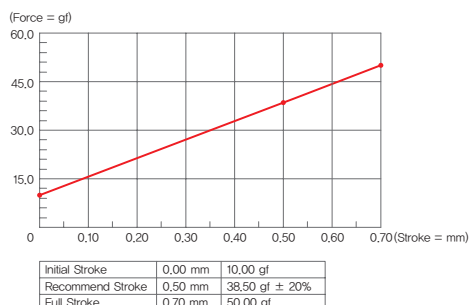
## 1823-11HX

0.65 mm



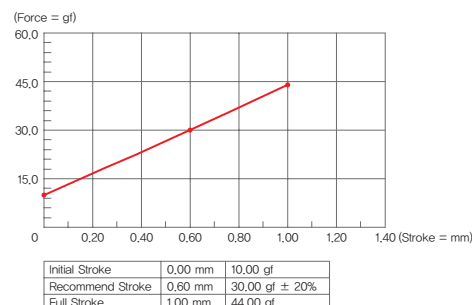
### Mechanical Specifications

Min. Device Pitch	0.65mm
Pin Height	3.2mm
Contact spring force	38.5gf@0.50mm
Recommend stroke	0.50mm
Full stroke	0.70mm
Operating temperature	-40~120℃



### Mechanical Specifications

Min. Device Pitch	0.65mm
Pin Height	5.7mm
Contact spring force	30.0gf@0.60mm
Recommend stroke	0.60mm
Full stroke	1.00mm
Operating temperature	-40~120℃



### Materials and Finishes

Top plunger	Pd-Alloy
Bottom Plunger	Hardened BeCu(Ni/Au)
Barrel	Phosphorous Bronze(Ni/Au)
Spring	Music Wire(Au)
Action	Double Action

### Materials and Finishes

Top plunger	Hardened BeCu(Ni/Au)
Bottom Plunger	Hardened BeCu(Ni/Au)
Barrel	Phosphorous Bronze(Ni/Au)
Spring	Music Wire(Au)
Action	Single Action

### Electrical Specifications

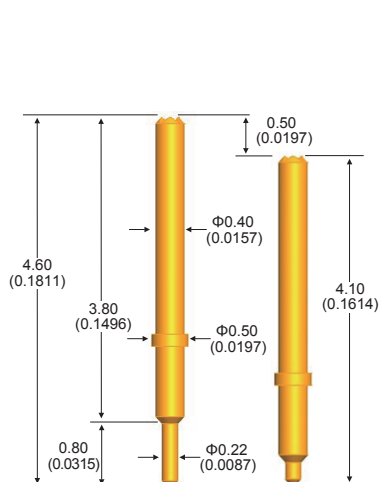
Current Rating	2.5A
Self Inductance	0.91nH
Bandwidth	12.6GHz@-1.00dB
DC Resistance	Less than 50mohm

### Electrical Specifications

Current Rating	2.5A
Self Inductance	1.10nH
Bandwidth	15.2GHz@-1.00dB
DC Resistance	Less than 50mohm

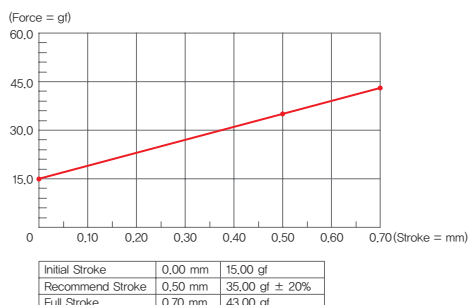
# Spring Probes 0.65mm Pitch

## S040-AWD-0072A



### Mechanical Specifications

Min. Device Pitch	0.65mm
Pin Height	4.6mm
Contact spring force	35.0gf@0.50mm
Recommend stroke	0.50mm
Full stroke	0.70mm
Operating temperature	-40~140℃



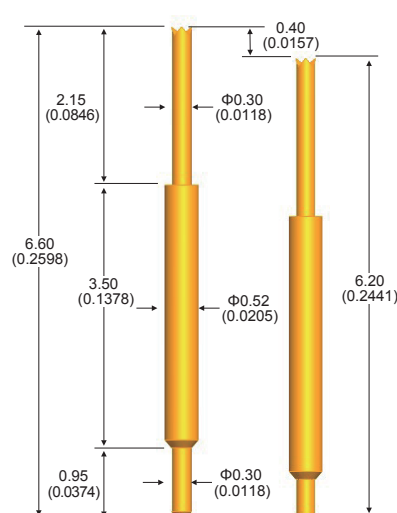
### Materials and Finishes

Top plunger	Hardened BeCu(Ni/Au)
Bottom Plunger	Hardened BeCu(Ni/Au)
Barrel	Phosphorous Bronze(Ni/Au)
Spring	Stainless Steel(Au)
Action	Single Action

### Electrical Specifications

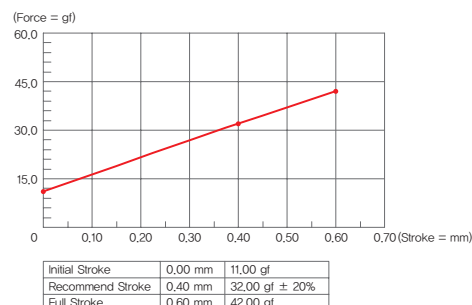
Current Rating	2.5A
Self Inductance	1.08nH
Bandwidth	16.0GHz@-1.00dB
DC Resistance	Less than 50mohm

## S052-WHA-0073A



### Mechanical Specifications

Min. Device Pitch	0.65mm
Pin Height	6.6mm
Contact spring force	32.0gf@0.40mm
Recommend stroke	0.40mm
Full stroke	0.60mm
Operating temperature	-40~120℃



### Materials and Finishes

Top plunger	Hardened BeCu(Ni/Au)
Bottom Plunger	Hardened BeCu(Ni/Au)
Barrel	Phosphorous Bronze(Ni/Au)
Spring	Music Wire(Au)
Action	Single Action

### Electrical Specifications

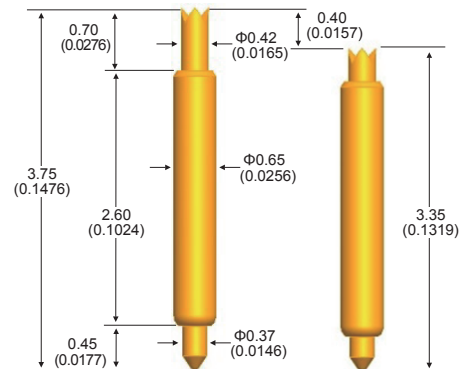
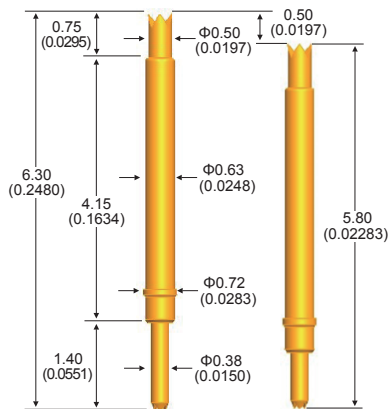
Current Rating	2.5A
Self Inductance	1.21nH
Bandwidth	12.8GHz@-1.00dB
DC Resistance	Less than 50mohm

# Spring Probes 0.80mm Pitch

## S063-WHA-0027A

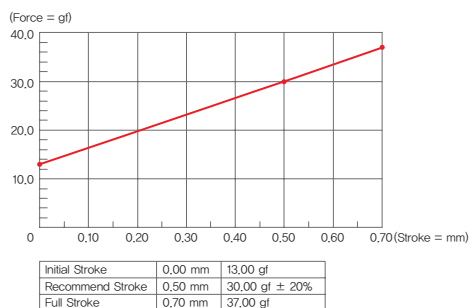
## D065-AHA-0075A

0.80 mm



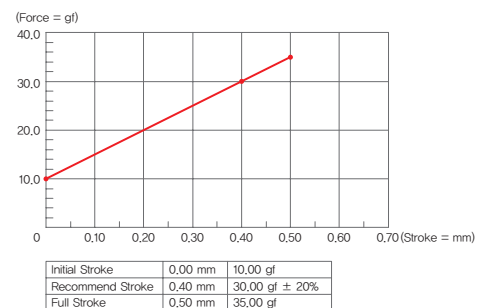
### Mechanical Specifications

Min. Device Pitch	0.80mm
Pin Height	6.3mm
Contact spring force	30.0gf@0.50mm
Recommend stroke	0.50mm
Full stroke	0.70mm
Operating temperature	-40~120℃



### Mechanical Specifications

Min. Device Pitch	0.80mm
Pin Height	3.75mm
Contact spring force	30.0gf@0.40mm
Recommend stroke	0.40mm
Full stroke	0.50mm
Operating temperature	-40~120℃



### Materials and Finishes

Top plunger	Hardened BeCu(Ni/Au)
Bottom Plunger	Hardened BeCu(Ni/Au)
Barrel	Brass(Ni/Au)
Spring	Music Wire(Au)
Action	Single Action

### Materials and Finishes

Top plunger	Hardened BeCu(Ni/Au)
Bottom Plunger	Hardened BeCu(Ni/Au)
Barrel	Phosphorous Bronze(Ni/Au)
Spring	Music Wire(Au)
Action	Double Action

### Electrical Specifications

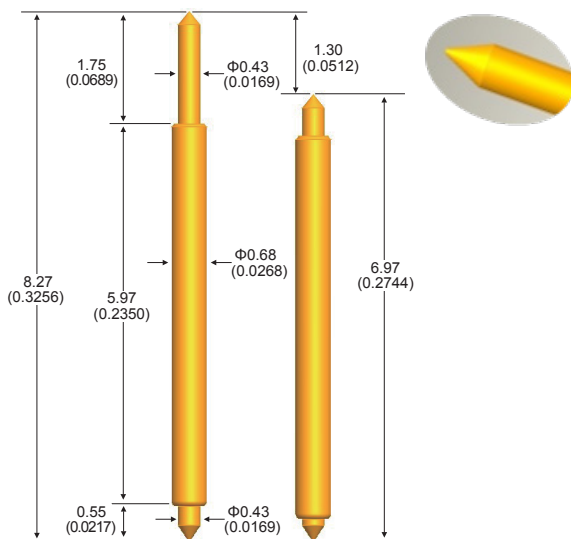
Current Rating	2.5A
Self Inductance	0.98nH
Bandwidth	16.9GHz@-1.00dB
DC Resistance	Less than 50mohm

### Electrical Specifications

Current Rating	2.5A
Self Inductance	0.89nH
Bandwidth	21.9GHz@-1.00dB
DC Resistance	Less than 50mohm

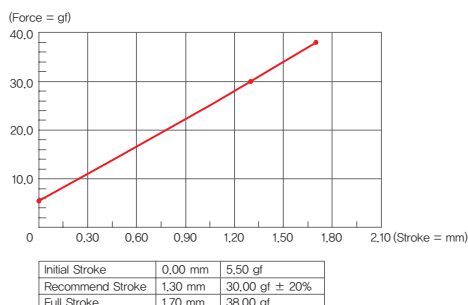
# Spring Probes 0.80mm Pitch

## D068-AAA-0076A



### Mechanical Specifications

Min. Device Pitch	0.80mm
Pin Height	8.27mm
Contact spring force	30.0gf@1.30mm
Recommend stroke	1.30mm
Full stroke	1.70mm
Operating temperature	-40~120°C



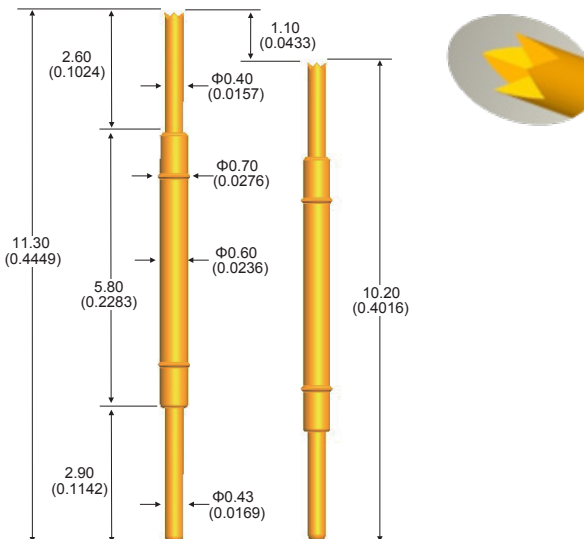
### Materials and Finishes

Top plunger	Hardened BeCu(Ni/Au)
Bottom Plunger	Hardened BeCu(Ni/Au)
Barrel	Phosphorous Bronze(Ni/Au)
Spring	Music Wire(Au)
Action	Double Action

### Electrical Specifications

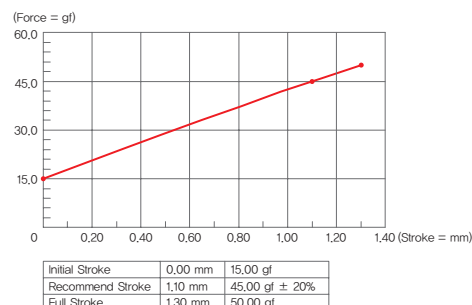
Current Rating	2.5A
Self Inductance	1.13nH
Bandwidth	14.0GHz@-1.00dB
DC Resistance	Less than 50mohm

## D060-RHA-0020B



### Mechanical Specifications

Min. Device Pitch	0.80mm
Pin Height	11.3mm
Contact spring force	45.0gf@1.10mm
Recommend stroke	1.10mm
Full stroke	1.30mm
Operating temperature	-40~120°C



### Materials and Finishes

Top plunger	Hardened BeCu(Ni/Au)
Bottom Plunger	Hardened BeCu(Ni/Au)
Barrel	Phosphorous Bronze(Ni/Au)
Spring	Music Wire(Au)
Action	Double Action

### Electrical Specifications

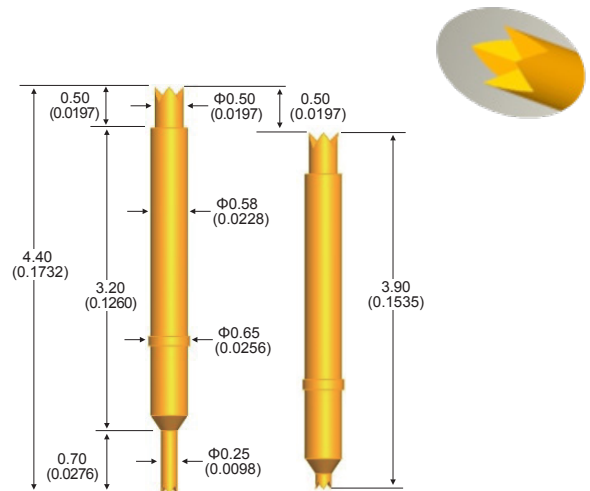
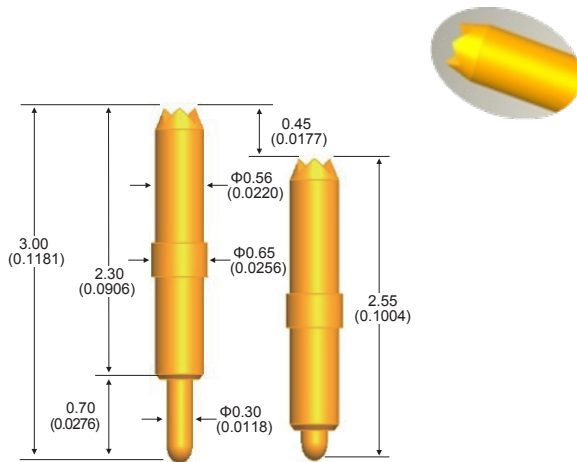
Current Rating	2.5A
Self Inductance	1.47nH
Bandwidth	11.8GHz@-1.00dB
DC Resistance	Less than 50mohm

# Spring Probes 0.80mm Pitch

## S056-RWA-0077A

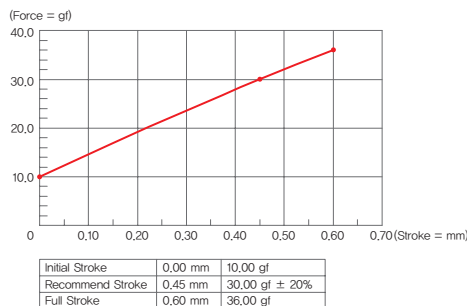
## S058-HHB-0078A

0.80 mm



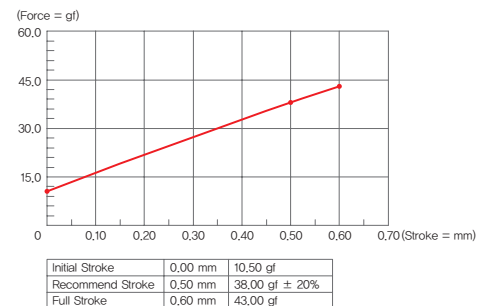
### Mechanical Specifications

Min. Device Pitch	0.80mm
Pin Height	3.0mm
Contact spring force	30.0gf@0.45mm
Recommend stroke	0.45mm
Full stroke	0.60mm
Operating temperature	-40~120°C



### Mechanical Specifications

Min. Device Pitch	0.80mm
Pin Height	4.4mm
Contact spring force	38.0gf@0.50mm
Recommend stroke	0.50mm
Full stroke	0.60mm
Operating temperature	-40~120°C



### Materials and Finishes

Top plunger	Hardened BeCu(Ni/Au)
Bottom Plunger	Hardened BeCu(Ni/Au)
Barrel	Brass(Ni/Au)
Spring	Music Wire(Au)
Action	Single Action

### Materials and Finishes

Top plunger	Hardened BeCu(Ni/Au)
Bottom Plunger	Hardened BeCu(Ni/Au)
Barrel	Phosphorous Bronze(Ni/Au)
Spring	Music Wire(Au)
Action	Single Action

### Electrical Specifications

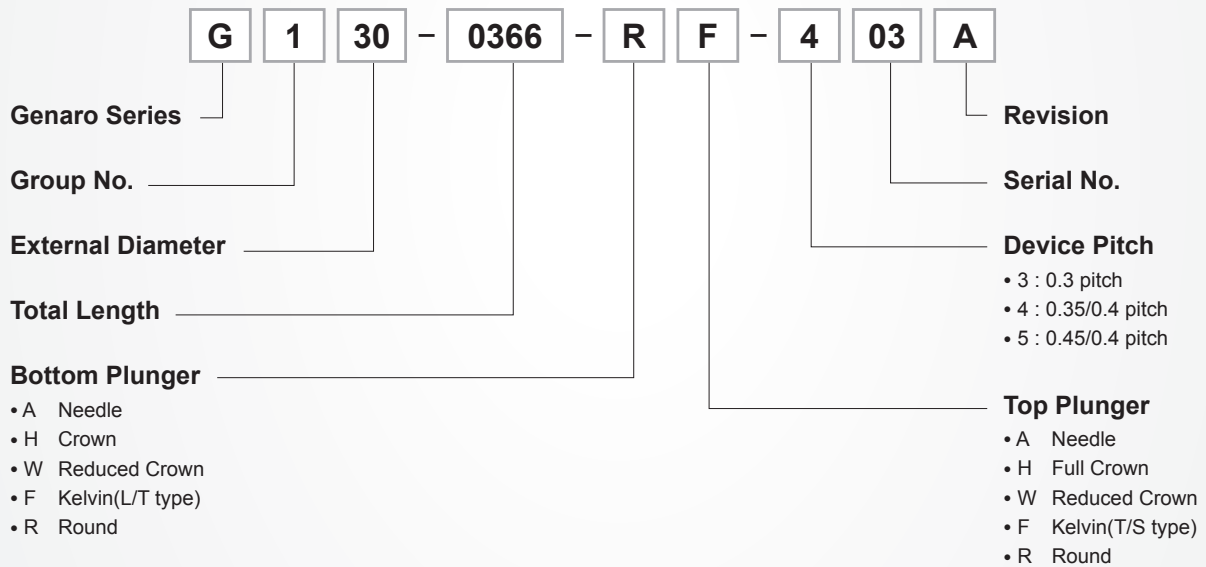
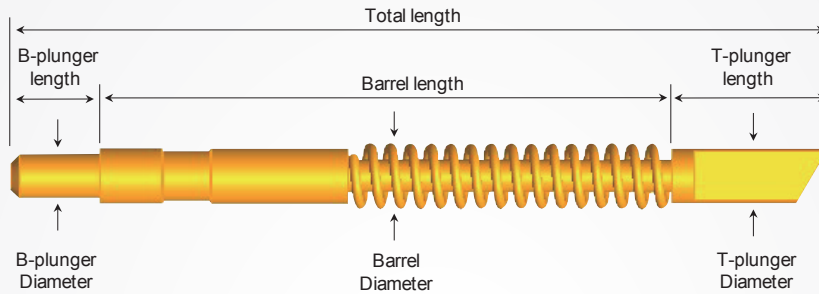
Current Rating	2.5A
Self Inductance	0.69nH
Bandwidth	23.1GHz@-1.00dB
DC Resistance	Less than 50mohm

### Electrical Specifications

Current Rating	2.5A
Self Inductance	0.86nH
Bandwidth	19.8GHz@-1.00dB
DC Resistance	Less than 50mohm

# Genaro Pin

## Part Numbering System

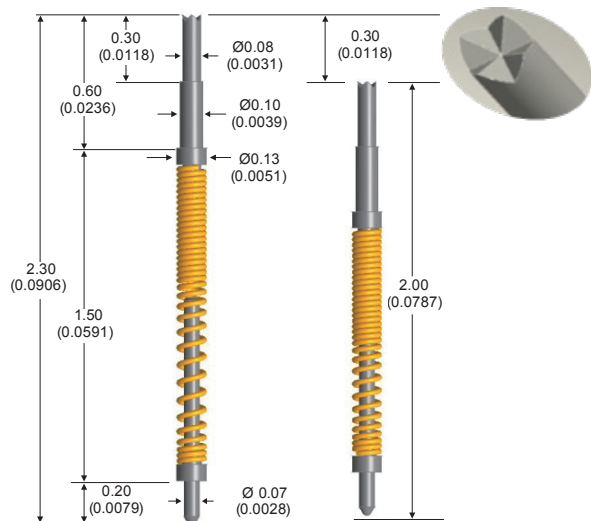


Pitch	Part No.	Page
<b>0.20</b>	G013-AHM-0349A, G013-AAM-0377A	28
<b>0.35</b>	G125-0366-RF-404S, G125-0366-RW-404T	29
<b>0.40</b>	G129-0540-RH-405A, G130-0366-RF-403B, G130-0366-RF-403S, G130-0366-RF-403T	30~31
<b>0.50</b>	G138-0230-RF-505A, G138-0250-RH-508A	32
<b>0.65</b>	G145-0200-RH-806A, G158-0440-RH-804A	33



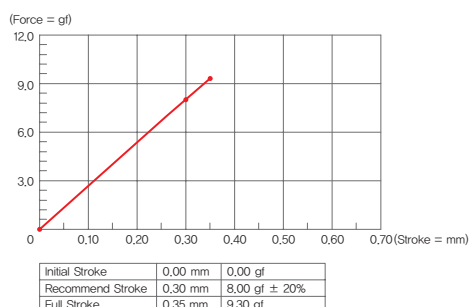
# Genaro Pin 0.20mm Pitch

## G013-AHM-0349A



### Mechanical Specifications

Min. Device Pitch	0.20mm
Pin Height	2.30mm
Contact spring force	8.0gf@0.30mm
Recommend stroke	0.30mm
Full stroke	0.35mm
Operating temperature	-40~120℃



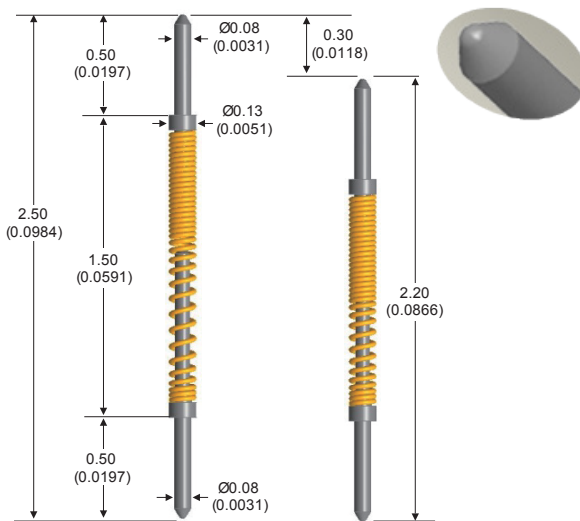
### Materials and Finishes

Top plunger	Pd-Alloy
Bottom Plunger	Pd-Alloy
Spring	Music Wire(Au)

### Electrical Specifications

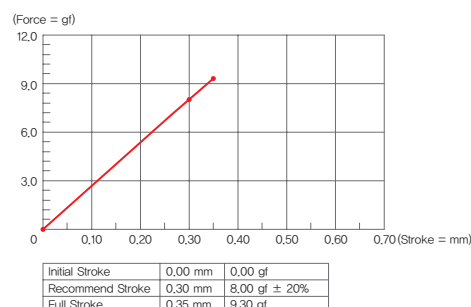
Current Rating	0.25A
Self Inductance	1.49nH
Bandwidth	1.20GHz@-1.00dB
DC Resistance	Less than 300mohm

## G013-AAM-0377A



### Mechanical Specifications

Min. Device Pitch	0.20mm
Pin Height	2.50mm
Contact spring force	8.0gf@0.30mm
Recommend stroke	0.30mm
Full stroke	0.35mm
Operating temperature	-40~120℃



### Materials and Finishes

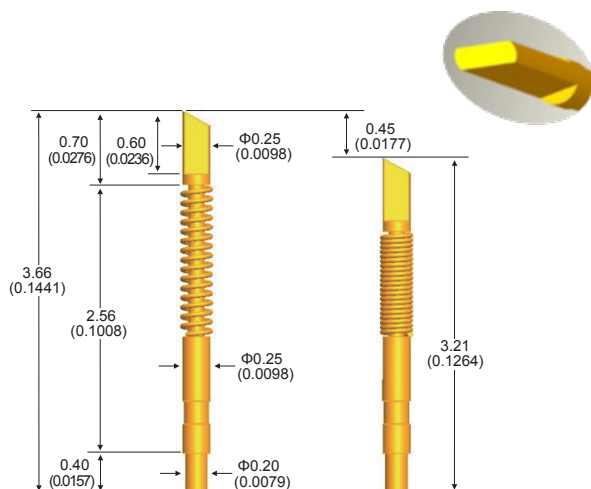
Top plunger	Pd-Alloy
Bottom Plunger	Pd-Alloy
Spring	Music Wire(Au)

### Electrical Specifications

Current Rating	0.25A
Self Inductance	1.49nH
Bandwidth	1.20GHz@-1.00dB
DC Resistance	Less than 300mohm

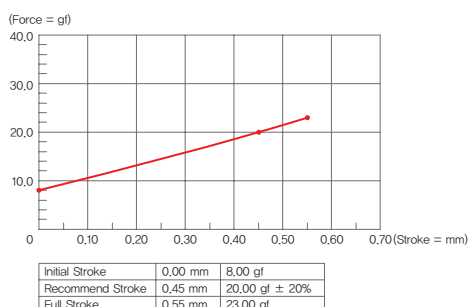
# Genaro Pin 0.35mm Pitch

## G125-0366-RF-404S



### Mechanical Specifications

Min. Device Pitch	0.35mm
Pin Height	3.66mm
Contact spring force	20.0gf@0.45mm
Recommend stroke	0.45mm
Full stroke	0.55mm
Operating temperature	-40~140℃



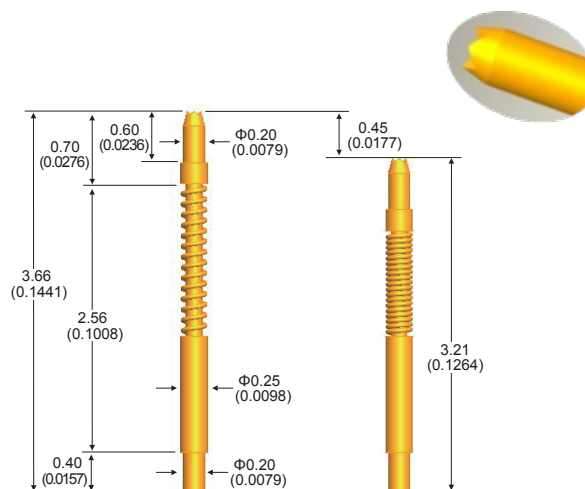
### Materials and Finishes

Top plunger	Hardened Steel(Ni/PdCo/Au)
Bottom Plunger	Phosphorous Bronze(Ni/Au)
Spring	Stainless Steel (Au)

### Electrical Specifications

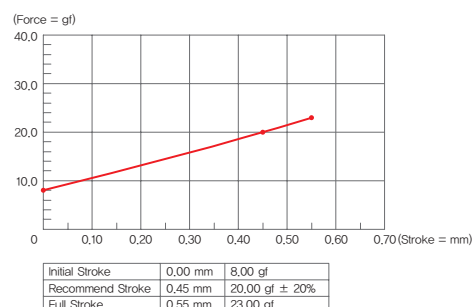
Current Rating	2.0A
Self Inductance	0.91nH
Bandwidth	21.0GHz@-1.00dB
DC Resistance	Less than 80mohm

## G125-0366-RW-404T



### Mechanical Specifications

Min. Device Pitch	0.35mm
Pin Height	3.66mm
Contact spring force	20.0gf@0.45mm
Recommend stroke	0.45mm
Full stroke	0.55mm
Operating temperature	-40~140℃



### Materials and Finishes

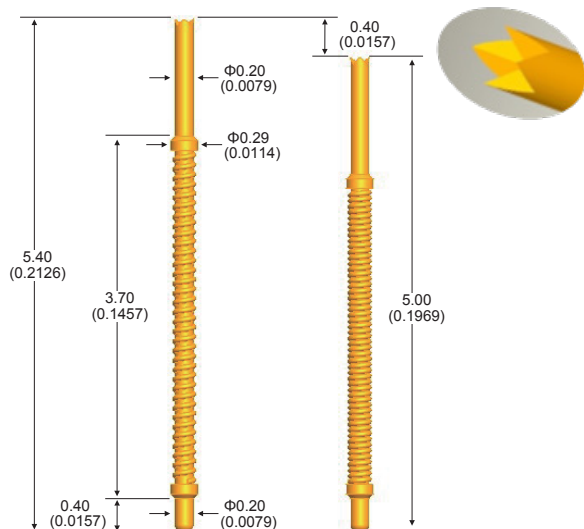
Top plunger	Hardened Steel(Ni/PdCo/Au)
Bottom Plunger	Phosphorous Bronze(Ni/Au)
Spring	Stainless Steel (Au)

### Electrical Specifications

Current Rating	2.0A
Self Inductance	0.91nH
Bandwidth	21.0GHz@-1.00dB
DC Resistance	Less than 80mohm

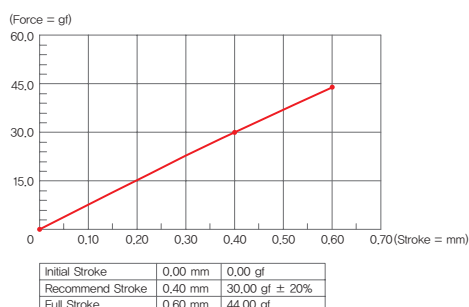
# Genaro Pin 0.40mm Pitch

## G129-0540-RH-405A



### Mechanical Specifications

Min. Device Pitch	0.40mm
Pin Height	5.4mm
Contact spring force	30.0gf@0.40mm
Recommend stroke	0.40mm
Full stroke	0.60mm
Operating temperature	-40~120℃



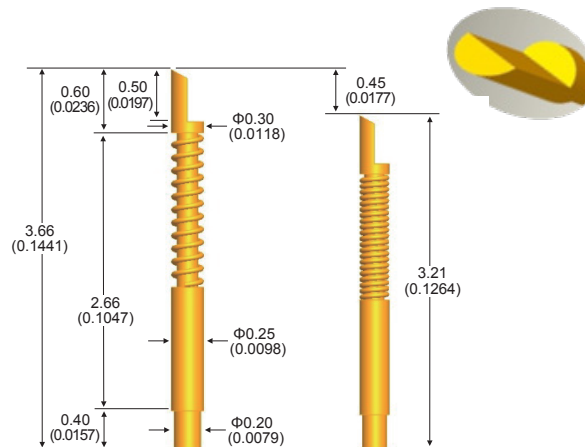
### Materials and Finishes

Top plunger	Hardened Steel(Ni/PdCo/Au)
Bottom Plunger	Phosphorous Bronze(Ni/Au)
Spring	Music Wire(Au)

### Electrical Specifications

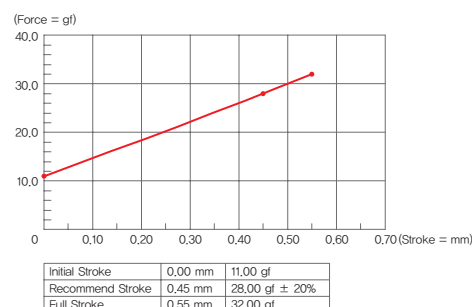
Current Rating	2.5A
Self Inductance	1.24nH
Bandwidth	17.8GHz@-1.00dB
DC Resistance	Less than 50mohm

## G130-0366-RF-403B



### Mechanical Specifications

Min. Device Pitch	0.40mm
Pin Height	3.66mm
Contact spring force	28.0gf@0.45mm
Recommend stroke	0.45mm
Full stroke	0.55mm
Operating temperature	-40~120℃



### Materials and Finishes

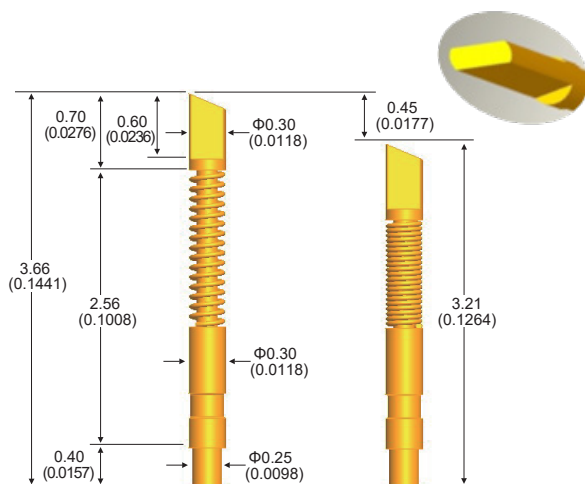
Top plunger	Hardened Steel(Ni/PdCo/Au)
Bottom Plunger	Phosphorous Bronze(Ni/Au)
Spring	Music Wire(Au)

### Electrical Specifications

Current Rating	2.0A
Self Inductance	0.91nH
Bandwidth	21.0GHz@-1.00dB
DC Resistance	Less than 50mohm

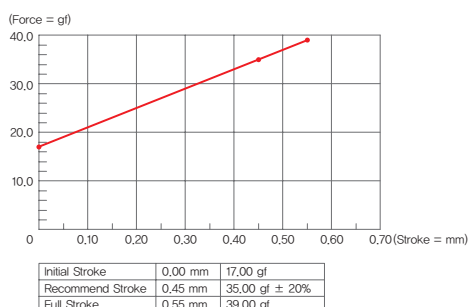
# Genaro Pin 0.40mm Pitch

## G130-0366-RF-403S



### Mechanical Specifications

Min. Device Pitch	0.40mm
Pin Height	3.66mm
Contact spring force	35.0gf@0.45mm
Recommend stroke	0.45mm
Full stroke	0.55mm
Operating temperature	-40~140℃



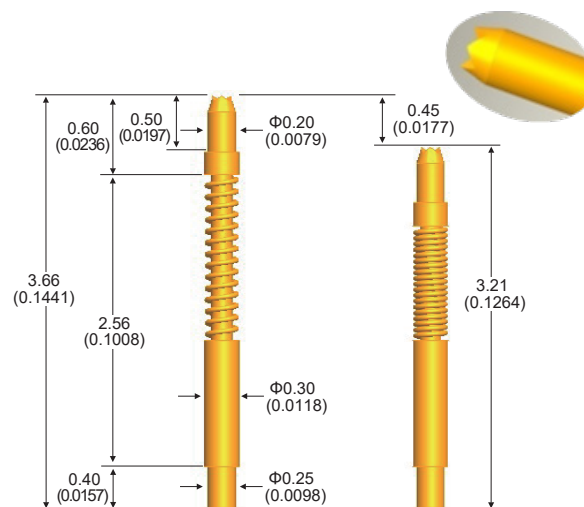
### Materials and Finishes

Top plunger	Hardened Steel(Ni/PdCo/Au)
Bottom Plunger	Phosphorous Bronze(Ni/Au)
Spring	Stainless Steel (Au)

### Electrical Specifications

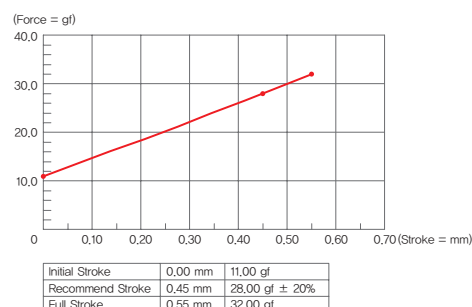
Current Rating	2.5A
Self Inductance	0.91nH
Bandwidth	21.0GHz@-1.00dB
DC Resistance	Less than 50mohm

## G130-0366-RF-403T



### Mechanical Specifications

Min. Device Pitch	0.40mm
Pin Height	3.66mm
Contact spring force	28.0gf@0.45mm
Recommend stroke	0.45mm
Full stroke	0.55mm
Operating temperature	-40~120℃



### Materials and Finishes

Top plunger	Hardened Steel(Ni/PdCo/Au)
Bottom Plunger	Phosphorous Bronze(Ni/Au)
Spring	Music Wire(Au)

### Electrical Specifications

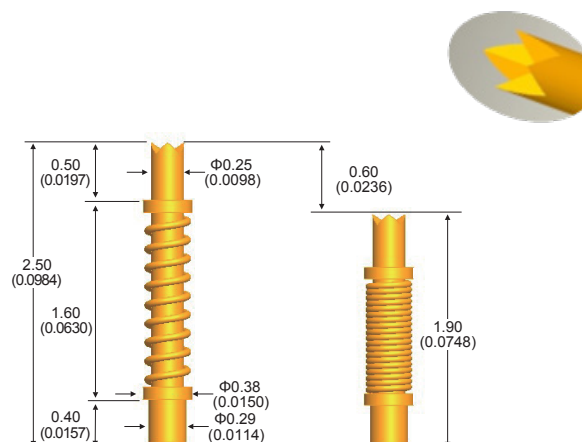
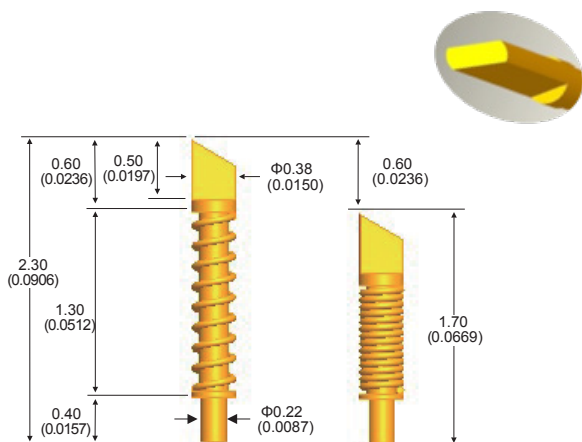
Current Rating	2.0A
Self Inductance	0.91nH
Bandwidth	21.0GHz@-1.00dB
DC Resistance	Less than 50mohm

# Genaro Pin 0.50mm Pitch

## G138-0230-RF-505A

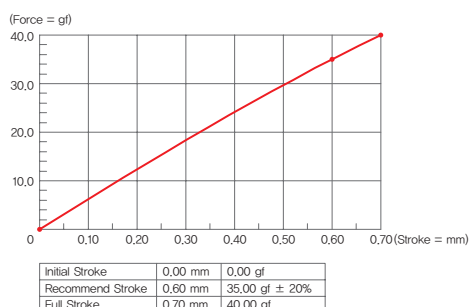
## G138-0250-RH-508A

0.50 mm



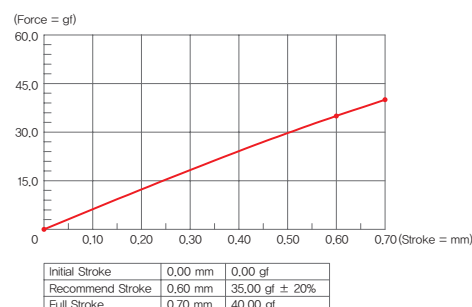
### Mechanical Specifications

Min. Device Pitch	0.45mm
Pin Height	2.3mm
Contact spring force	35.0gf@0.60mm
Recommend stroke	0.60mm
Full stroke	0.70mm
Operating temperature	-40~120°C



### Mechanical Specifications

Min. Device Pitch	0.45mm
Pin Height	2.5mm
Contact spring force	35.0gf@0.60mm
Recommend stroke	0.60mm
Full stroke	0.70mm
Operating temperature	-40~120°C



### Materials and Finishes

Top plunger	Hardened Steel(Ni/PdCo/Au)
Bottom Plunger	Phosphorous Bronze(Ni/Au)
Spring	Music Wire(Au)

### Materials and Finishes

Top plunger	Hardened Steel(Ni/PdCo/Au)
Bottom Plunger	Phosphorous Bronze(Ni/Au)
Spring	Music Wire(Au)

### Electrical Specifications

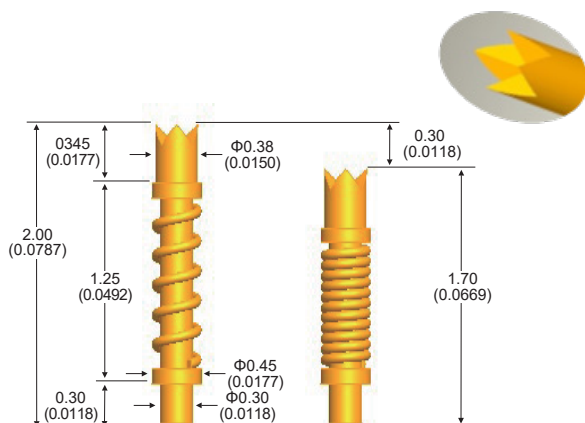
Current Rating	3.0A
Self Inductance	0.76nH
Bandwidth	22.6GHz@-1.00dB
DC Resistance	Less than 40mohm

### Electrical Specifications

Current Rating	3.0A
Self Inductance	0.76nH
Bandwidth	22.6GHz@-1.00dB
DC Resistance	Less than 40mohm

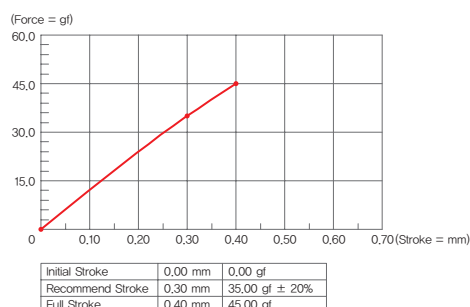
# Genaro Pin 0.65mm Pitch

## G145-0200-RH-806A



### Mechanical Specifications

Min. Device Pitch	0.65mm
Pin Height	2.0mm
Contact spring force	35.0gf@0.30mm
Recommend stroke	0.30mm
Full stroke	0.40mm
Operating temperature	-40~120℃



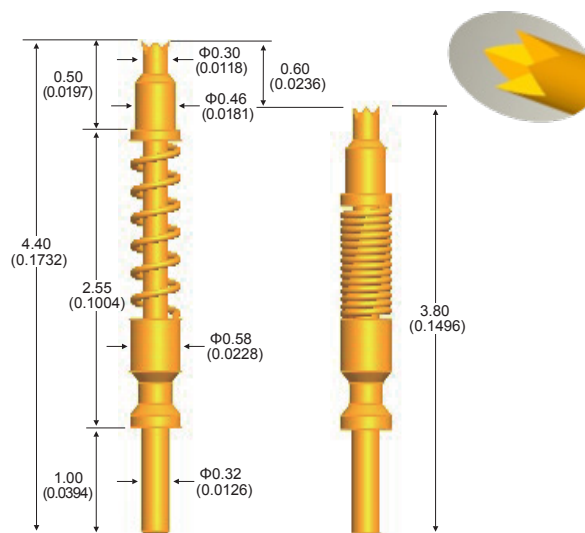
### Materials and Finishes

Top plunger	Hardened Steel(Ni/PdCo/Au)
Bottom Plunger	Phosphorous Bronze(Ni/Au)
Spring	Music Wire(Au)

### Electrical Specifications

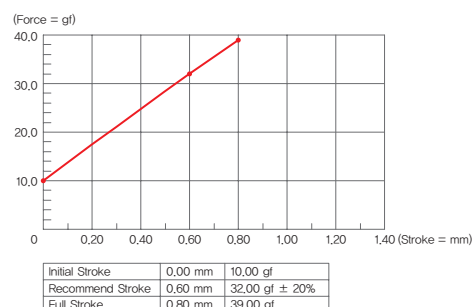
Current Rating	3.5A
Self Inductance	0.62nH
Bandwidth	24.8GHz@-1.00dB
DC Resistance	Less than 40mohm

## G158-0440-RH-804A



### Mechanical Specifications

Min. Device Pitch	0.65mm
Pin Height	4.4mm
Contact spring force	32.0gf@0.60mm
Recommend stroke	0.60mm
Full stroke	0.80mm
Operating temperature	-40~120℃



### Materials and Finishes

Top plunger	Hardened Steel(Ni/PdCo/Au)
Bottom Plunger	Phosphorous Bronze(Ni/Au)
Spring	Music Wire(Au)

### Electrical Specifications

Current Rating	3.0A
Self Inductance	0.98nH
Bandwidth	16.5GHz@-1.00dB
DC Resistance	Less than 40mohm

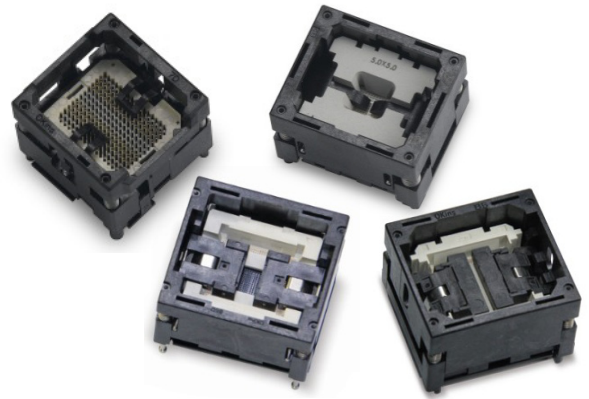
# Burn-in Socket Line-up

OKins offers wide selection of Burn-in Sockets for various device packages, from Lead packages to Ball packages, including TSOP, QFP, BGA, CSP, LGA, QFN, and CLCC. These Burn-in Sockets support thermal and electrical stress testing of IC packages.

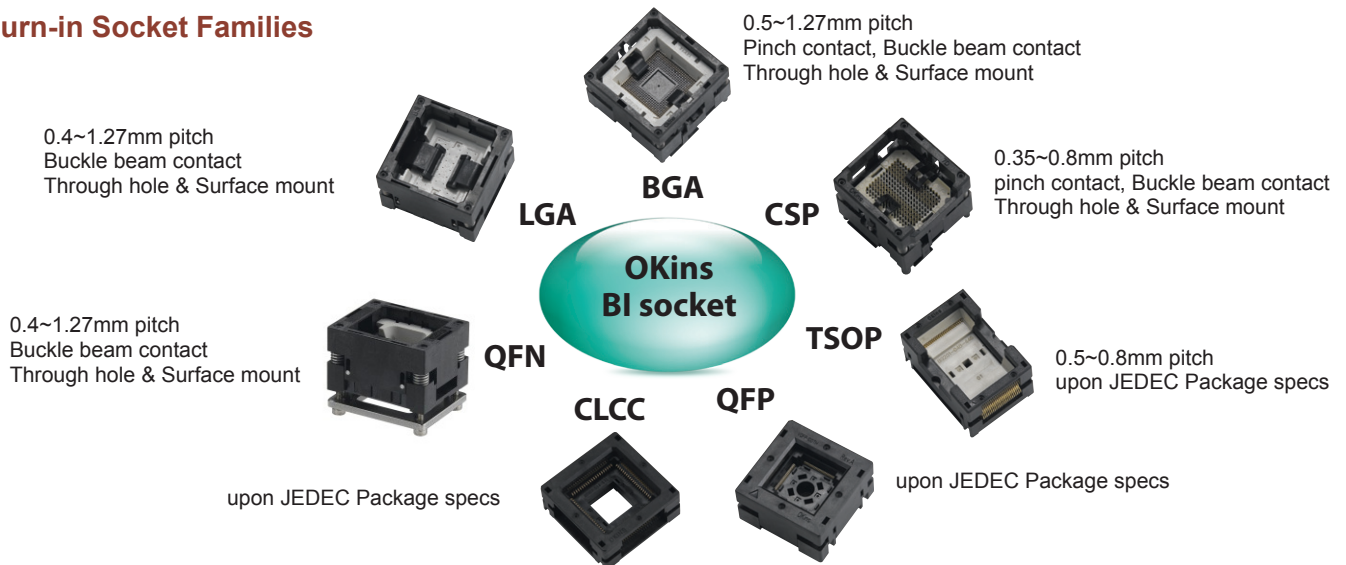
OKins can help customer choose the most cost effective socket option based on multiple requirements.

## General Design Features

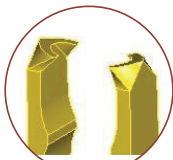
- Wide selection of package types
- Full line-up of BGA & CSP package burn-in sockets
- High performance memory burn-in sockets
- Diversified QFN package sockets
- Quick time delivery for development and high volume
- Cost effective



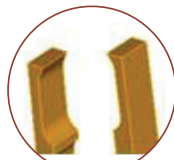
## Burn-in Socket Families



## Burn-in Socket Contacts



4-point pinch



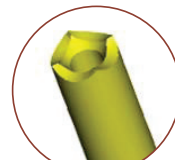
Off-set pinch



Buckle beam  
(ball package)



Buckle beam  
(flat pad)



4-point  
buckle beam



# Test Socket

OKins has diverse high performance test sockets to meet customer requirements. The sockets can be used for manual test or with ATE handler. Sockets are custom designed for use in engineering, R&D and high volume production.

## Design Features

- Standard/custom design for ATE handler
- Manual test application with manual lid
- Standard/custom footprint
- Dual operation on both ATE and manual
- User friendly designs

## Test Solutions

- Design solution for any type of package types
- Various applications - Production, Development, Engineering, Characterization
- Adaptable to most of existing load boards
- Long operation cycles under ATE handler operation
- Cost effective

## Product Category








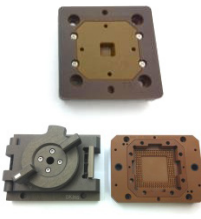


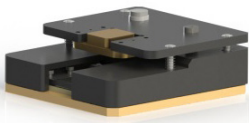
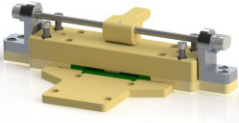


### • Devices

Digital, Analog, Imaging, Microcontroller, ASIC, EEPROM, Flash, Mixed Signal, Wireless, RF, CMOS image sensor, LED

### • Packages

- Lead package: M/TQFP, T/SOP, D/QFN, CLCC, etc
- Ball package: BGA, CSP, WLP, etc

## Product Line-up

		BGA/CSP	QFN/MLF	TQFP	TSOP	WLCSP
Pitch (MIN)		0.3mm	0.2mm	0.4mm	0.4mm	0.25mm
Contact		Spring probes, Genaro pin	Spring probes, Genaro pin	Spring probes, Genaro pin	Spring probes, Stamped pin	Spring probes, Genaro pin
Design	Clamshell					
	Bottle cap, Open top					
	Other Designs					

# Kelvin Socket

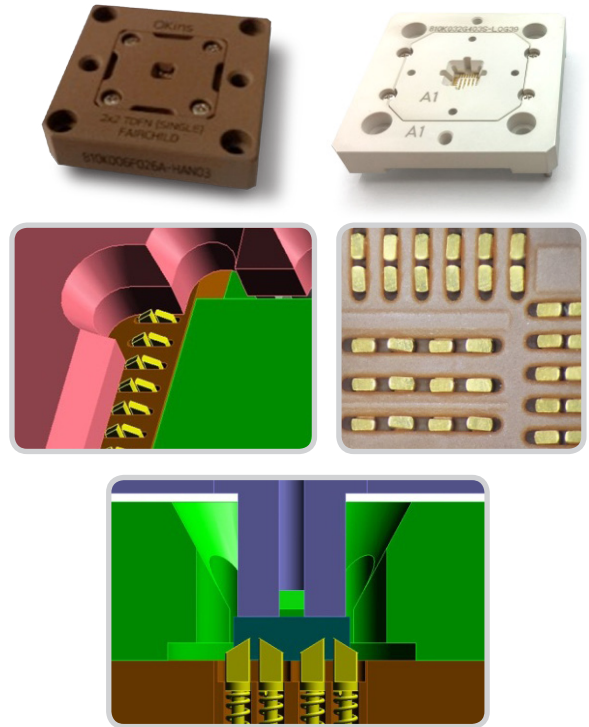
- Spring probes technology based Kelvin contact solutions
- Off-set pointed pin with spring outside loaded design
- Complete socket solution with Genaro-I contact

## Design Features

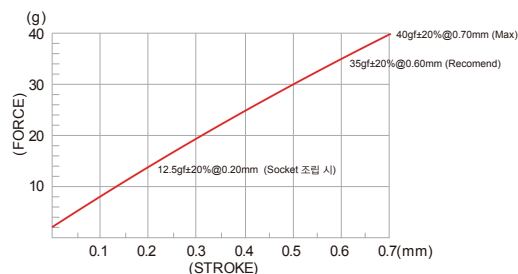
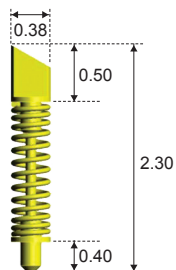
- Standard & custom design
- Independent pin action for the 2 contacts on the Kelvin pad
- Stable contacts throughout high number of insertion
- Supported packages: QFN, DFN, SOP, SOT
- Available for up to 0.4mm pitch pad
- Optimized pin technology for best performance

## Material & Specifications

- Socket body: Vespel, Torlon 5530 or equivalent
- Material & plating selected for longer life insertion and test yield
- Insertion life: 500K for Sn; 200K for NiPd plate package



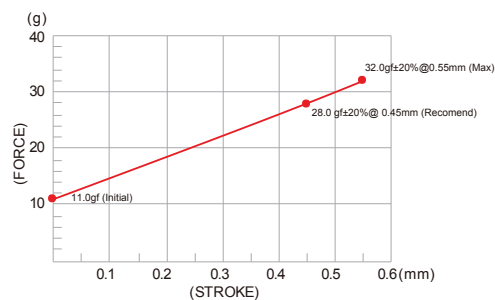
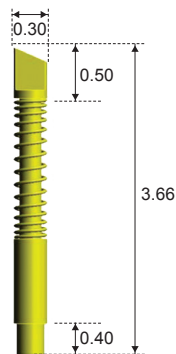
### Pin Part No : G138-0230-RF-505A



### Pin Specifications

- Pitch: 0.5mm and higher
- Contact spring force: 35.0gf/0.60mm
- Full stroke: 0.70mm
- Recommend stroke: 0.60mm
- Operating temperature: -40~120°C
- Bandwidth: 22.6GHz @ -1.0dB
- Self inductance: 0.76nH
- Contact resistance: Less than 40mohm
- Current rating: 1.0A continuous

### Pin Part No : G130-0366-RF-403B



### Pin Specifications

- Pitch: 0.4mm and higher
- Contact spring force: 28gf/0.45mm
- Full stroke: 0.55mm
- Recommend stroke: 0.45mm
- Operating temperature: -40~120°C
- Bandwidth: 21.0GHz @ -1.0dB
- Contact resistance: 50mohm
- Self inductance: 0.91nH
- Current rating: 1.0A continuous

# PION Contact(Fine pitch solution)

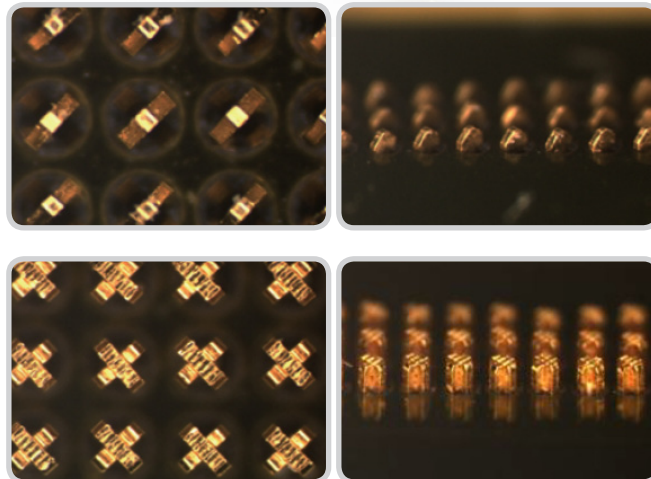
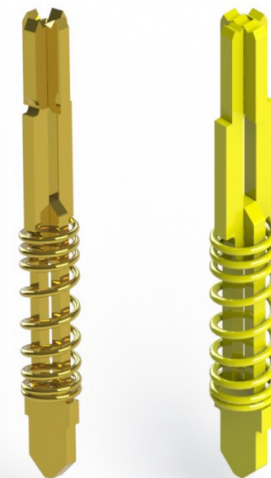
- Extremely fine pitch contact solution
- Lowest cost in the market for device testing industry
- Quick turn design support for custom requirements
- Fast support for high volume production

## Product Descriptions

- Applications package test socket  
wafer level test socket  
burn-in test socket  
interposer (PCB, socket etc.)
- Device pitch 0.2 / 0.3 / 0.4 / 0.5 / 0.8mm
- Stable contacts throughout high number of insertion
- Packages BGA, CSP, WLCSP, QFN etc.)

## Advantages

- Ultra fine pitch support thru MEMS manufacturing
- Lowest cost ever any pitch type of device testing
- Quick turn design support for custom requirements
- Long insertion with good electrical properties
- Short Length achievable

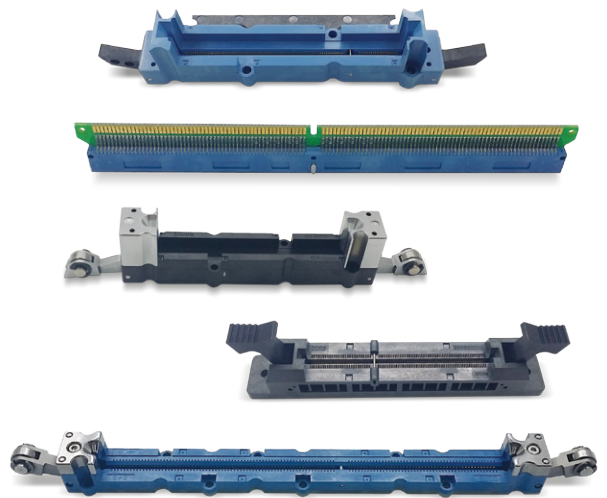


## Specifications of PION contact

Item	Pitch	0.8mm	0.5mm	0.3mm	0.2mm	
General Information	Length	5.80mm	8.35mm	2.0mm	2.0mm	
	Diameter	0.50mm	0.35mm	0.25mm	0.15mm	
	Compliance	1.0mm MAX	1.0mm MAX	0.4mm MAX	0.4mm MAX	
Mechanical Characteristics	Temperature Range	-40°C ~ 125°C	-40°C ~ 125°C	-40°C ~ 125°C	-40°C ~ 125°C	
	Contact Force	36~40gf@0.6mm	20~24gf@0.5mm	3.5~5.0gf@0.32mm	2.8~3.2gf@0.32mm	
	Recommended Stroke	0.6mm (Test)	0.5mm (Burn-in)	0.32mm	0.32mm	
	Life cycle (Mechanical)	>500K	>500K	>300K	>300K	
	Contact Resistance	<100mΩ	<100mΩ	<150mΩ	<150mΩ	
Electrical Characteristics	Self Inductance	2.40nH	2.85nH	0.66nH	0.58nH	
	Capacitance	0.48pF	0.39pF	0.12pF	0.10pF	
	Bandwidth	S21(Insertion)	9.61GHz@-1dB	5.36GHz@-1dB	14.27GHz@-1dB	14.84GHz@-1dB
		S11(Return)	1.81GHz@-20dB	0.90GHz@-20dB	6.03GHz@-20dB	7.11GHz@-20dB
	Current rate (continuous)	1.0 A	1.0 A	0.8 A	0.5 A	
	Material	Contact pad	Top	Au plated BeCu	Au plated BeCu	Au Plated NiCo
Bottom			Au Plated BeCu	Au Plated BeCu	Au Plated NiCo	Au Plated NiCo

# Memory Module Test Socket

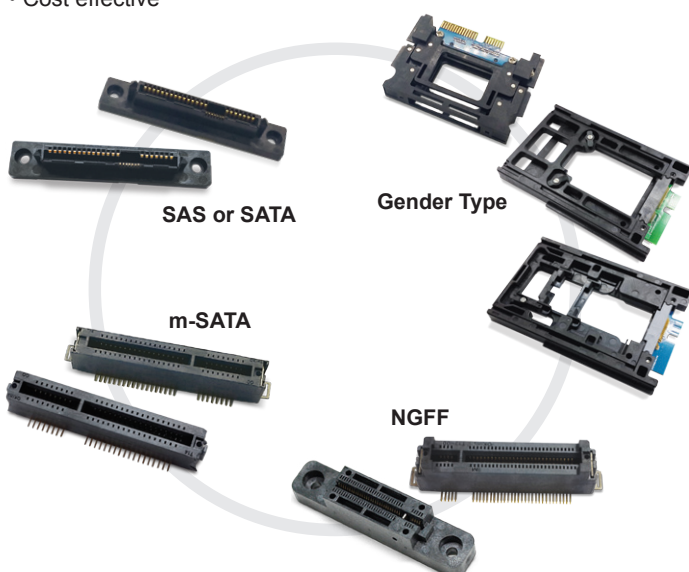
ITEM	Specification	
	260 SD E/T	288 RD E/T
Operating Temperature	40°C~ 120°C	40°C~ 120°C
Contact Material	BeCu	BeCu
Body Material	PEI-BLUE	PEI-BLUE
Contact Resistance	Max. 30mΩ	Max. 30mΩ
Current	Max. 7A	Max. 7A
Contact force (gf)	30g+/-5g/Pin	35g+/-5g/Pin
Contact plating	Ni:3μm~5μm, Au: 1μm~2μm	Ni:3μm~5μm Au: 1μm~2μm
Mold tolerance	Below 5/100	Below 5/100
Signal Path	6.80mm	6.50mm
S-Parameter	S21:3.4Ghz@-1dB	S21:3.4Ghz@-1dB
	S11:3.3Ghz@-10dB	S11:3.3Ghz@-10dB



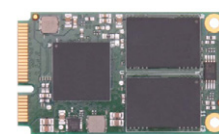
# SSD(Solid State Drive) Test Socket

## General Design Feature

- Wide selection of package types
- Full line-up of BGA & CSP package burn-in sockets
- High performance memory burn-in sockets
- Diversified QFN package sockets
- Quick time delivery for development and high volume
- Cost effective



Mini card PCIe SSD



Full mini Card SSD(mSATA)



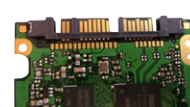
Half mini SSD



NGFF SSD



2.5" SSD (Standard)



uSATA SSD



PCIe SSD X8

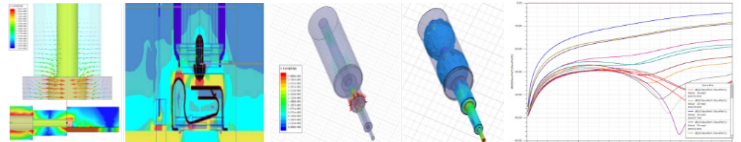


# Microwave products

- Offering wide selection for RF testing products
- Offering RF measurement and analysis service with in-house RF experts
- Stabilized products development capability through accurate and prompt RF analysis by HFSS

## Design Features

- Optimized design based on Impedance Matching
- Wide frequency capacity up to 40GHz
- Customized design availability ad customer's needs
- Highly-specialized products design by 2D/3D modeling
- Advance verification by FMEA > performance optimization

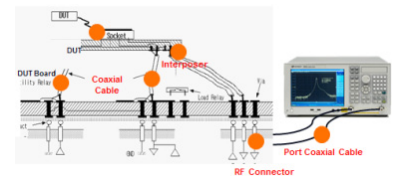


## OKins RF Products



RF Cable Assembly

- Frequency: DC to 18GHz, DC to 40GHz
- Low loss cable assembly suitable for RF test & measurement
- Excellent phase stability against temperature change and bending.
- Connector type : 2.92 mm, SMA, N,



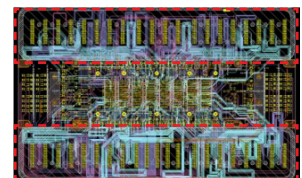
RF Probe

- Frequency: DC to 3GHz, DC to 6GHz
- RF Switch & Receptacle Measurement Probe
- Connector type : SMPM

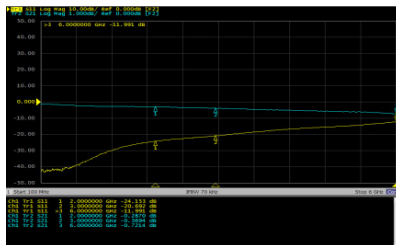


Pogo Tower

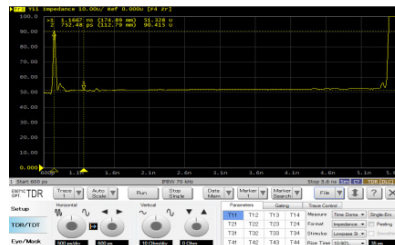
- Data Rate : 6Gbps, 12Gbps
- DIB(DUT Interface Board) Connector & Cable Assembly



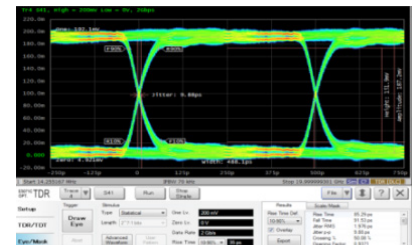
## RF Measurement Service



- **S-parameter**
  - Return Loss
  - Insertion Loss
  - Time Delay
  - Smith Chart



- **Time Domain Reflectometer**
  - Characteristic Impedance
  - Skew, Time Delay



- **Eye Diagram**
  - Signal Speed
  - Jitter, Noise

# OKins Electronics Business Network



## USA

### OKins USA INC.

- 3003 North 1st Street STE333,  
San Jose, CA 95134
- Contact : Matte Hansen (CEO)
- TEL : 1-408-232-5480
- Mobile : 1-408-202-7153
- matt@okinsusa.com

## JAPAN

### Neverg Co., Ltd.

- 2-9-6 Casa Asakawa 301,  
Minamiyukigaya, Ohta-ku, Tokyo  
Japan 145-0066
- Contact : 大熊真史
- TEL : 81-90-3008-5027
- okuma1126@gmail.com

## CHINA

### 奥金斯电子有限公司

- 1101# 3Block Aoyun-Garden QiongJi Road  
SIP SuZhou, CHINA 215000
- Contact : 朴文杰
- Mobile: 139.1544.4730
- Wechat: jie589512
- E-mail(1): piaowenjie\_88888@163.com
- E-mail(2): okinschina@163.com

[www.okins.co.kr](http://www.okins.co.kr)



3F, Malgeunnae 1-gil 37, Uiwang-si, Gyeonggi-do Korea, 16073  
Contact : sales@okins.co.kr  
TEL : 82-31-467-5581 FAX : 82-31-467-5566