

コンタクトプローブ製品案内

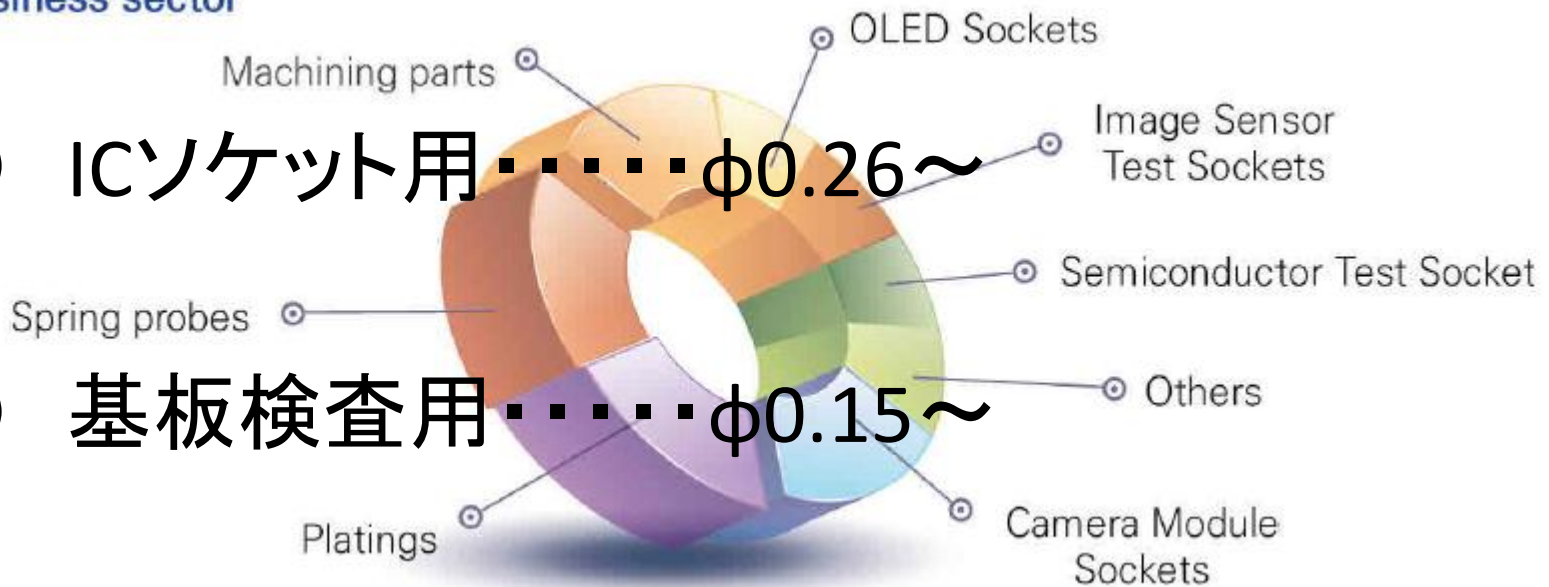
- ウェハ検査用.....φ0.1～φ0.3

Business sector

- ICソケット用.....φ0.26～

- 基板検査用.....φ0.15～

- その他電子デバイス検査用



Product Name Description

型番詳細

EP - 03



エルマープローブ 外径

57



長さ

S -



摺動タイプ

S=Single

D=Double

C



BOTTOM形状

N



TOP形状

末尾-F はフランジ付

Tips types of plungers

プランジャー先端形状



Cone



Concave



Conical



Conical



8Crown



S Crown



Flat



Full Round



Reduce Crown



Roll Crown



Stair Type



Three Conical

プローブ長さに対応ピッチ ①



- Pitches 0.25
- Length 2.5mm~5.5mm



- Pitches 0.35~0.4
- Length 2.5mm~20mm



- Pitches 0.5
- Length 2.2mm~30mm

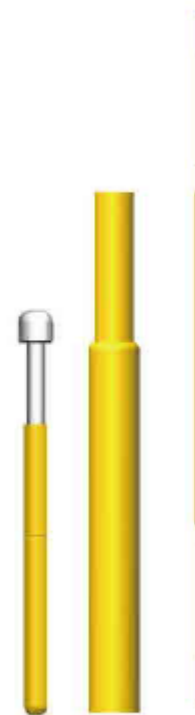
プローブ長さに対応ピッチ ②



- Pitches 0.8
- Length 2.5mm~40mm



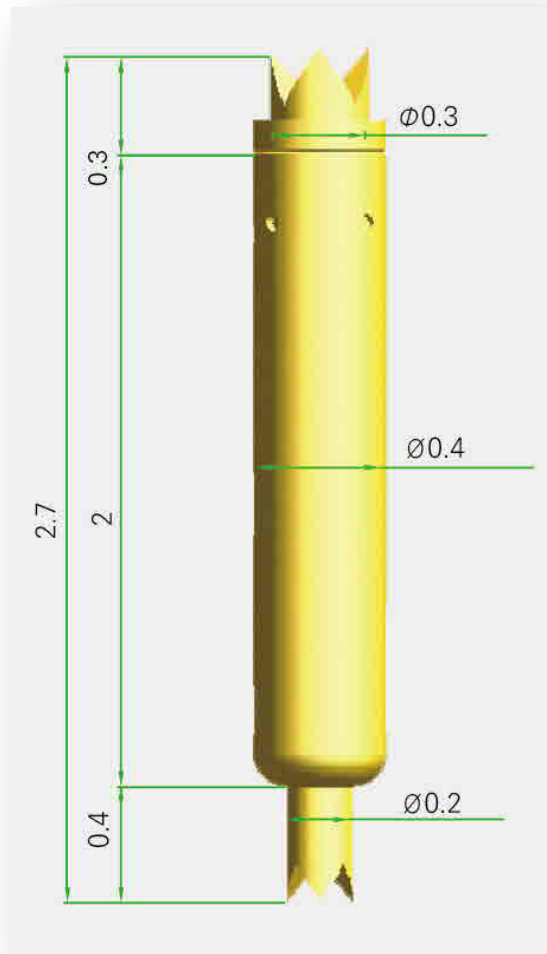
- Pitches 1.0
- Length 2.5mm~50mm



- Pitches 01.27
- Length 4.0mm~65mm

0.6mm Pitch

Type: EP-0427S-CC



Mechanical Specifications

Pitch : 0.5mm

Total Length : 2.7mm

Pointing Accuracy : ± 0.05

Spring Force : 13.0g at 0.3mm Recommended stroke

Full-Stroke : 0.4 mm

Electrical Specifications

Bandwidth : 13.7Ghz @ -1dB

Self inductance : 0.52 nH

Current rating : 1.0 amps

Resistance : Less than 80 m Ω

Capacitance : 0.44 pF

Propagation delay : 11.8 ps

Operating Temperature : -40°C - 120°C

Materials & Platings

Barrel : Phosphor bronze / Ni + Au plated

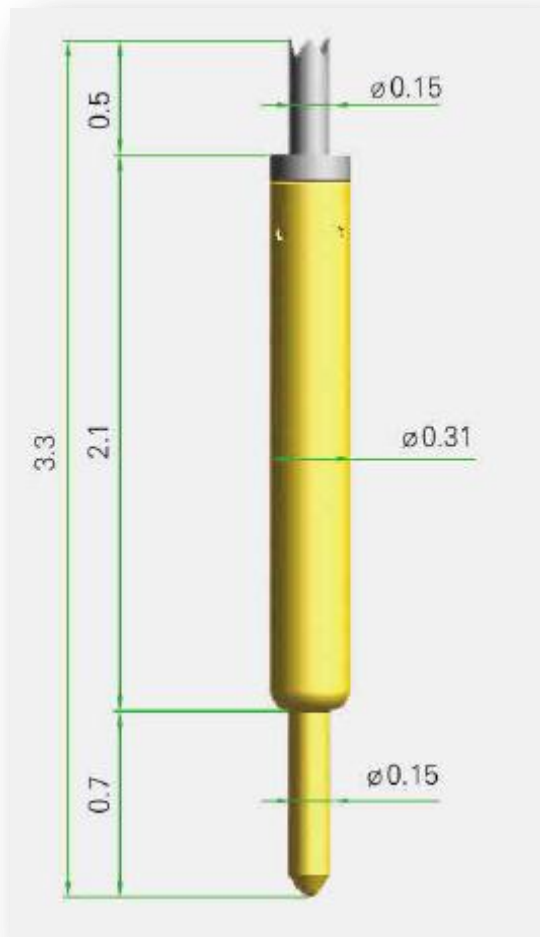
Top Plunger : Hardened beryllium cooper / Ni + Au platedon plated

Bottom Plunger : Hardened beryllium copper / Ni + Au plated

Spring : Music - Wire / Ni + Au plated

0.4mm Pitch

Type: EP-03133S-CN



Mechanical Specifications

Pitch : 0.4mm

Total Length : 3.3mm

Pointing Accuracy : ± 0.05

Spring Force : 25.0g at 0.5mm Recommended stroke

Full-Stroke : 0.7 mm

Electrical Specifications

Bandwidth : 8.3Ghz @ -1dB

Self inductance : 0.48 nH

Current rating : 1.0 amps

Resistance : Less than 80 m Ω

Capacitance : 0.37 pF

Propagation delay : 18.1 ps

Operating Temperature : -40°C - 120°C

Materials & Platings

Barrel : Phosphor bronze / Ni + Au plated

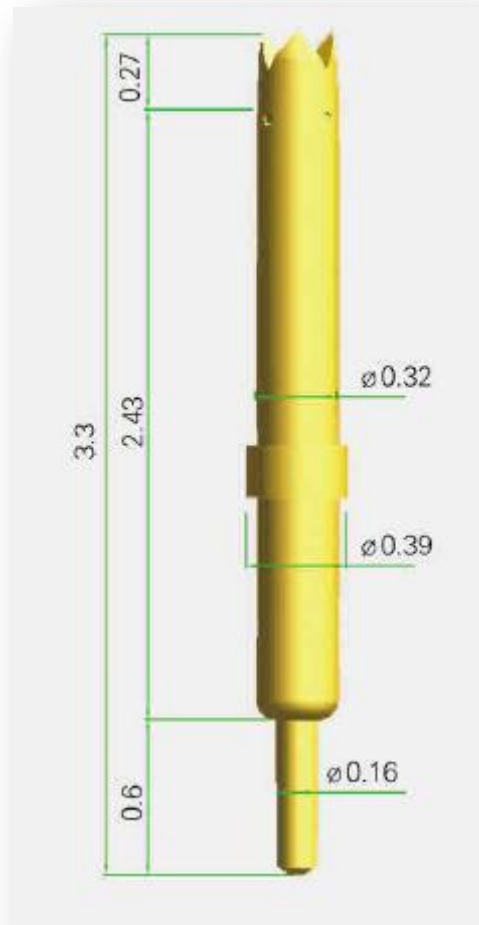
Top Plunger : Hardened Pd Alloy / Non plated

Bottom Plunger : Hardened beryllium copper / Ni + Au plated

Spring : Music - Wire / Ni + Au plated

0.6mm Pitch

Type: EP-03233S-CR-F



Mechanical Specifications

Pitch : 0.5mm

Total Length : 3.3mm

Pointing Accuracy : ± 0.05

Spring Force : 31.0g at 0.38mm Recommended stroke

Full-Stroke : 0.51 mm

Electrical Specifications

Bandwidth : 8.71 Ghz @ -1dB

Self inductance : 0.52 nH

Current rating : 1.5 amps

Resistance : Less than 80 m Ω

Capacitance : 0.41 pF

Propagation delay : 17.1 ps

Operating Temperature : -40°C - 120°C

Materials & Platings

Barrel : Phosphor bronze / Ni + Au plated

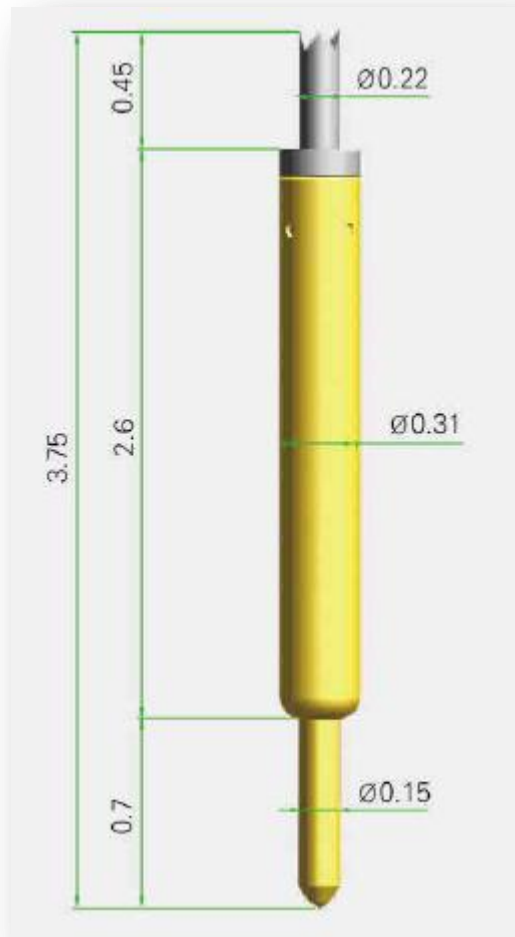
Top Plunger : Hardened beryllium copper / Ni + Au plated

Bottom Plunger : Hardened beryllium copper / Ni + Au plated

Spring : Music - Wire / Ni + Au plated

0.4mm Pitch

Type: EP-03375S-CR



Mechanical Specifications

Pitch : 0.4mm

Total Length : 3.75mm

Pointing Accuracy : ± 0.05

Spring Force : 20.0g at 0.45mm Recommended stroke

Full-Stroke : 0.65 mm

Electrical Specifications

Bandwidth : 7.36Ghz @ -1dB

Self inductance : 0.65 nH

Current rating : 1.0 amps

Resistance : Less than 80 m Ω

Capacitance : 0.42 pF

Propagation delay : 17.64 ps

Operating Temperature : -40°C - 120°C

Materials & Platings

Barrel : Phosphor bronze / Ni + Au plated

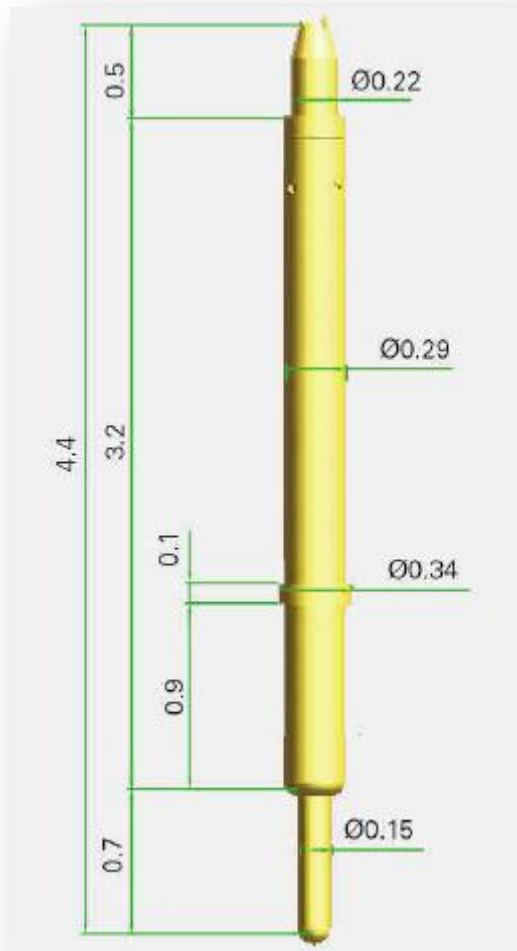
Top Plunger : Hardened beryllium copper / Ni + Au + PdCo plated

Bottom Plunger : Hardened beryllium copper / Ni + Au plated

Spring : Music - Wire / Ni + Au plated

0.4mm Pitch

Type: EP-03444S-AD-F



Mechanical Specifications

Pitch : 0.4mm

Total Length : 4.4mm

Pointing Accuracy : ± 0.05

Spring Force : 27.0g at 0.5mm Recommended stroke

Full-Stroke : 0.7 mm

Electrical Specifications

Bandwidth : 7.46Ghz @ -1dB B

Self inductance : 0.74 nH

Current rating : 1.0 amps

Resistance : Less than 80 m Ω

Capacitance : 0.49 pF

Propagation delay : 22.3 ps

Operating Temperature : -40°C - 120°C

Materials & Platings

Barrel : Phosphor bronze / Ni + Au plated

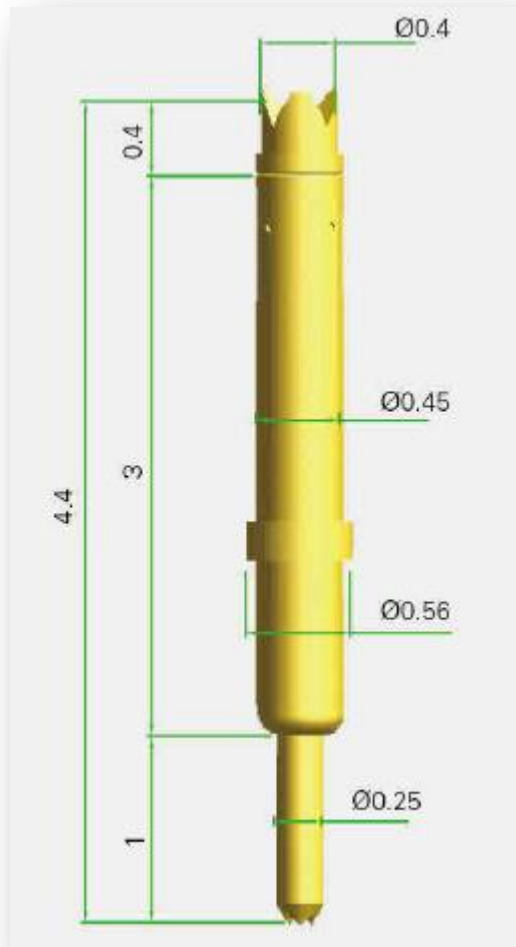
Top Plunger : Hardened Steel / Ni + Au plated

Bottom Plunger : Hardened beryllium copper / Ni + Au plated

Spring : Music - Wire / Ni + Au plated

0.8mm Pitch

Type: EP-04544S-MA-F



Mechanical Specifications

Pitch : 0.75mm

Total Length : 4.4mm

Pointing Accuracy : ± 0.05

Spring Force : 34.0g at 0.5mm Recommended stroke

Full-Stroke : 0.7 mm

Electrical Specifications

Bandwidth : 9.31Ghz @ -1dB B

Self inductance : 1.21 nH

Current rating : 2.5 amps

Resistance : Less than 80 m Ω

Capacitance : 1.34 pF

Propagation delay : 20.6 ps

Operating Temperature : -40°C - 120°C

Materials & Platings

Barrel : Phosphor bronze / Ni + Au plated

Top Plunger : Hardened beryllium cooper / Ni + Au plated

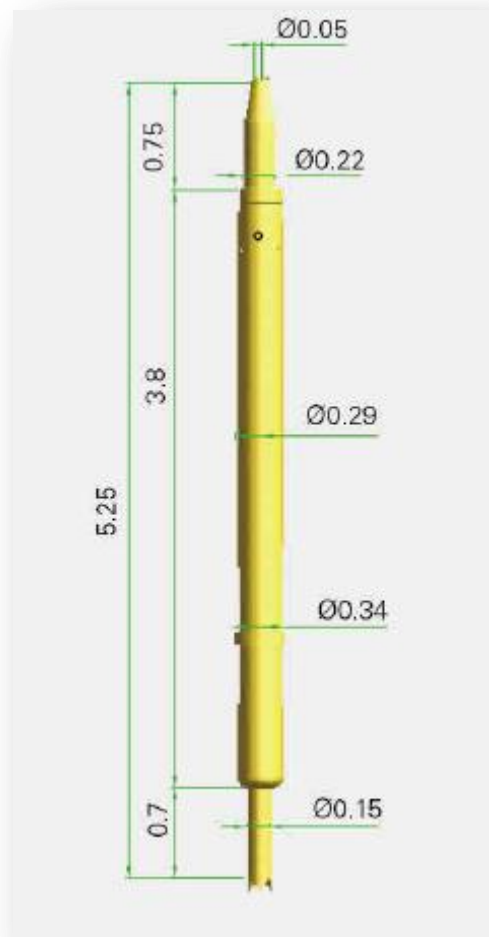
Bottom Plunger : Hardened beryllium cooper /

Ni + Au plated

Spring : Music - Wire / Ni + Au plated

0.4mm Pitch

Type: EP-034525S-AC-F



Mechanical Specifications

Pitch : 0.4mm

Total Length : 5.25mm

Pointing Accuracy : ± 0.05

Spring Force : 27.0g at 0.6mm Recommended stroke

Full-Stroke : 0.7 mm

Electrical Specifications

Bandwidth : 7.21Ghz @ -1dB B

Self inductance : 0.75 nH

Current rating : 1.0 amps

Resistance : Less than 80 m Ω

Capacitance : 0.45 pF

Propagation delay : 23.1 ps

Operating Temperature : -40°C - 120°C

Materials & Platings

Barrel : Phosphor bronze / Ni + Au plated

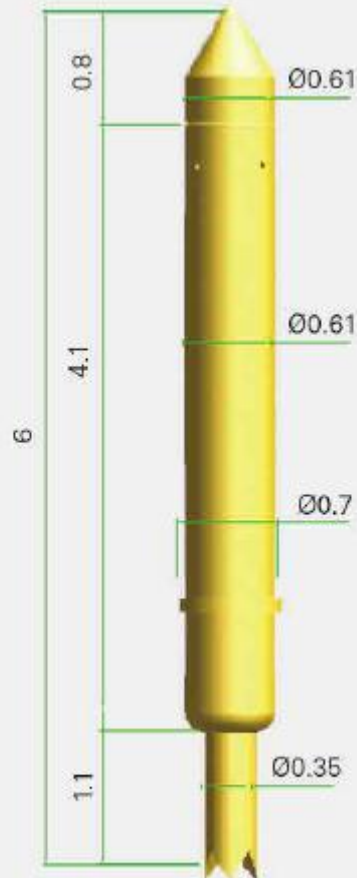
Top Plunger : Hardened beryllium copper / Ni + Au plated

Bottom Plunger : Hardened beryllium copper / Ni + Au plated

Spring : Music -Wire / Ni + Au plated

1.0mm Pitch

Type: EP-0760S-AC-F



Mechanical Specifications

Pitch : 1.0mm

Total Length : 6.0mm

Pointing Accuracy : ± 0.05

Spring Force : 38.0g at 0.8mm Recommended stroke

Full-Stroke : 1.1 mm

Electrical Specifications

Bandwidth : 10.48Ghz @ -1dB B

Self inductance : 1.09 nH

Current rating : 3.0 amps

Resistance : Less than 80 m Ω

Capacitance : 0.96 pF

Propagation delay : 26.84 ps

Operating Temperature : -40°C - 120°C

Materials & Platings

Barrel : Phosphor bronze / Ni + Au plated

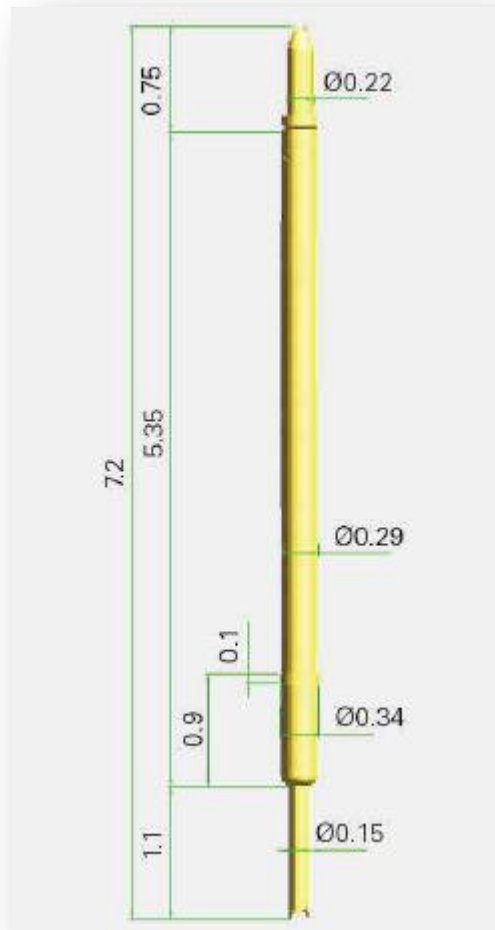
Top Plunger : Hardened beryllium copper / Ni + Au plated

Bottom Plunger : Hardened beryllium copper / Ni + Au plated

Spring : Music - Wire / Ni + Au plated

0.4mm Pitch

Type: EP-03472S-AC-F



Mechanical Specifications

Pitch : 0.4mm

Total Length : 7.2mm

Pointing Accuracy : ± 0.05

Spring Force : 32.0g at 0.7mm Recommended stroke

Full-Stroke : 0.9 mm

Electrical Specifications

Bandwidth : 7.15Ghz @ -1dB

Self inductance : 0.89 nH

Current rating : 1.0 amps

Resistance : Less than 80 m Ω

Capacitance : 0.79 pF

Propagation delay : 30.2 ps

Operating Temperature : -40°C - 120°C

Materials & Platings

Barrel : Phosphor bronze / Ni + Au plated

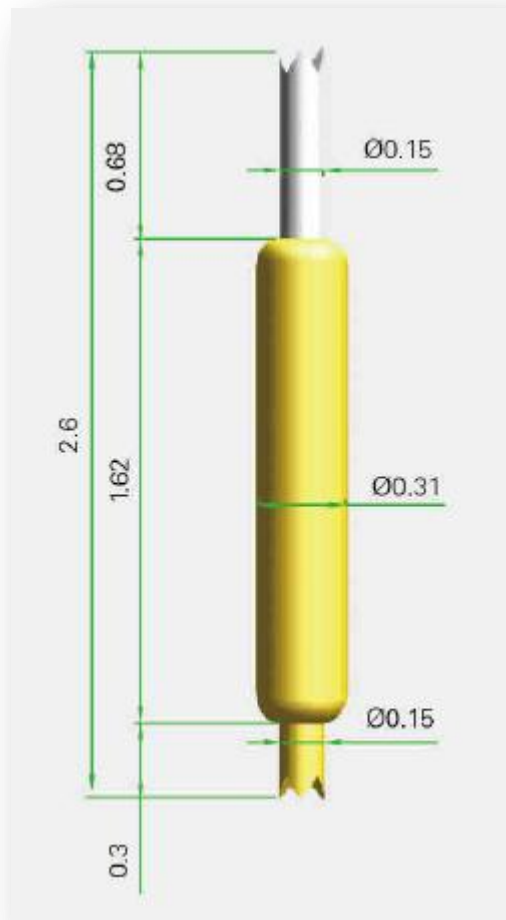
Top Plunger : Hardened Steel / Ni + Au plated

Bottom Plunger : Hardened beryllium copper / Ni + Au plated

Spring : Music - Wire / Ni + Au plated

0.4mm Pitch

Type: EP-03126D-CC



Mechanical Specifications

Pitch : 0.4mm

Total Length : 2.6mm

Pointing Accuracy : ± 0.05

Spring Force : 30.0g at 0.38mm Recommended stroke

Full-Stroke : 0.45 mm

Electrical Specifications

Bandwidth : 9.8Ghz @ -1dB

Self inductance : 0.47 nH

Current rating : 1.0 amps

Resistance : Less than 80 m Ω

Capacitance : 0.48 pF

Propagation delay : 11.58 ps

Operating Temperature : -40°C - 120°C

Materials & Platings

Barrel : Phosphor bronze / Ni + Au plated

Top Plunger : Hardened Pd Alloy / Non plated

Bottom Plunger : Hardened beryllium copper / Ni + Au plated

Spring : Music -Wire / Ni + Au plated

0.4mm Pitch

Type: EP-02543D-AA



Mechanical Specifications

Pitch : 0.35mm

Total Length : 4.3mm

Pointing Accuracy : ± 0.05

Spring Force : 22.0g at 0.5mm Recommended stroke

Full-Stroke : 0.7 mm

Electrical Specifications

Bandwidth : 12.3Ghz @ -1dB

Self inductance : 5.3 nH

Current rating : 1.0 amps

Resistance : Less than 80 m Ω

Capacitance : 0.52 pF

Propagation delay : 10.4 ps

Operating Temperature : -40°C - 120°C

Materials & Platings

Barrel : Phosphor bronze / Ni + Au plated

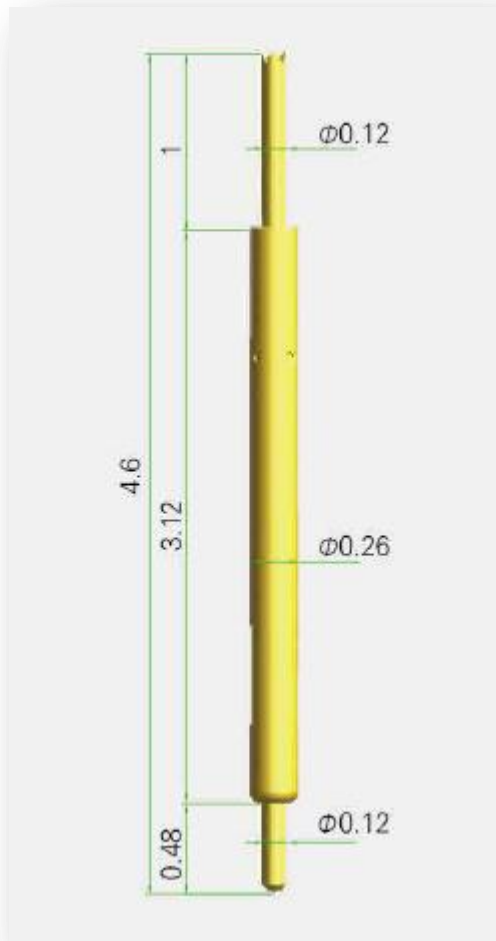
Top Plunger : Hardened beryllium copper / Ni + Au plated

Bottom Plunger : Hardened beryllium copper / Ni + Au plated

Spring : Music - Wire / Ni + Au plated

0.4mm Pitch

Type: EP-02646D-CR



Mechanical Specifications

Pitch : 0.35mm

Total Length : 4.6mm

Pointing Accuracy : ± 0.05

Spring Force : 21.0g at 0.5mm Recommended stroke

Full-Stroke : 0.6 mm

Electrical Specifications

Bandwidth : 11.6Ghz @ -1dB

Self inductance : 5.1 nH

Current rating : 1.0 amps

Resistance : Less than 80 m Ω

Capacitance : 0.5 pF

Propagation delay : 10.6 ps

Operating Temperature : -40°C - 120°C

Materials & Platings

Barrel : Phosphor bronze / Ni + Au plated

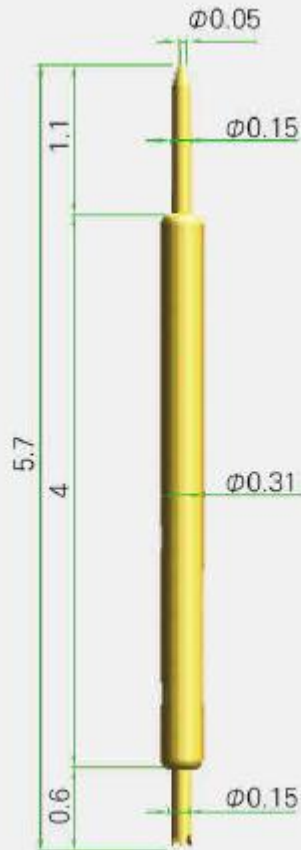
Top Plunger : Hardened beryllium copper / Ni + Au plated

Bottom Plunger : Hardened beryllium copper / Ni + Au plated

Spring : Music -Wire / Ni + Au plated

0.4mm Pitch

Type: EP-03157D-AC



Mechanical Specifications

Pitch : 0.4mm

Total Length : 5.7mm

Pointing Accuracy : ± 0.05

Spring Force : 20.0g at 0.5mm Recommended stroke

Full-Stroke : 0.7 mm

Electrical Specifications

Bandwidth : 7.83Ghz @ -1dB

Self inductance : 1.26 nH

Current rating : 1.0 amps

Resistance : Less than 80 m Ω

Capacitance : 1.43 pF

Propagation delay : 26.67 ps

Operating Temperature : -40°C - 120°C

Materials & Platings

Barrel : Phosphor bronze / Ni + Au plated

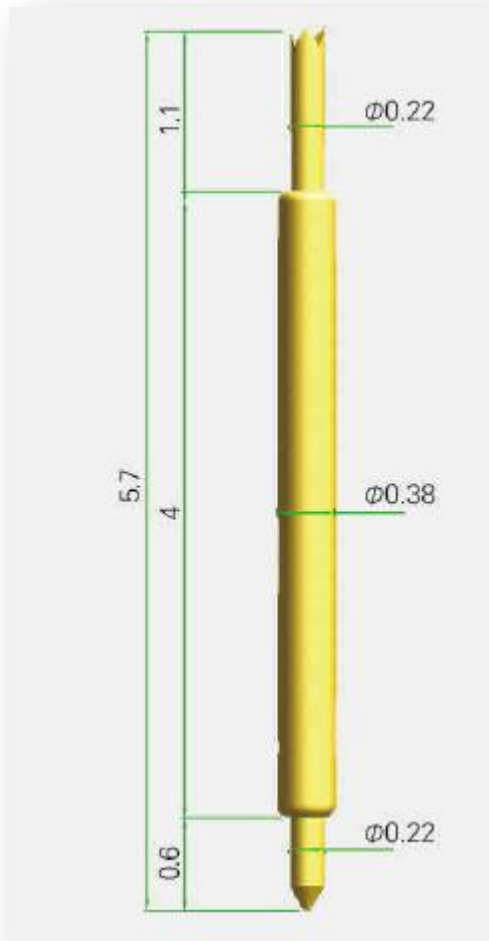
Top Plunger : Hardened beryllium copper / Ni + Au plated

Bottom Plunger : Hardened beryllium copper / Ni + Au plated

Spring : Music -Wire / Ni + Au plated

0.6mm Pitch

Type: EP-03857D-CA



Mechanical Specifications

Pitch : 0.5mm

Total Length : 5.7mm

Pointing Accuracy : ± 0.05

Spring Force : 30.0g at 0.65mm Recommended stroke

Full-Stroke : 0.8 mm

Electrical Specifications

Bandwidth : 9.68Ghz @ -1dB

Self inductance : 1.01 nH

Current rating : 2.0 amps

Resistance : Less than 80 m Ω

Capacitance : 0.99 pF

Propagation delay : 26.71 ps

Operating Temperature : -40°C - 120°C

Materials & Platings

Barrel : Phosphor bronze / Ni + Au plated

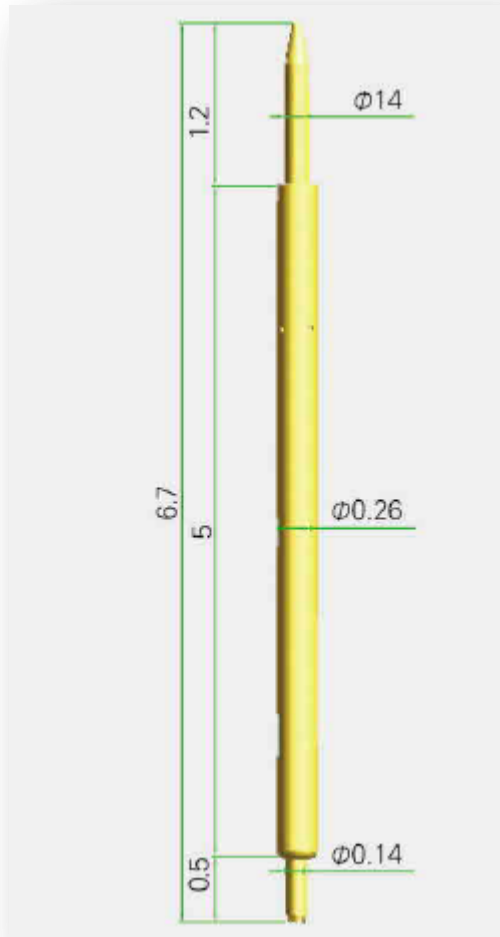
Top Plunger : Hardened beryllium copper / Ni + Au plated

Bottom Plunger : Hardened beryllium copper / Ni + Au plated

Spring : Music - Wire / Ni + Au plated

0.4mm Pitch

Type: EP-02667D-AA



Mechanical Specifications

Pitch : 0.35mm

Total Length : 6.7mm

Pointing Accuracy : ± 0.05

Spring Force : 22g at 0.7mm Recommended stroke

Full-Stroke : 1.0 mm

Electrical Specifications

Bandwidth : 13.7Ghz @ -1dB

Self inductance : 5.8 nH

Current rating : 1.0 amps

Resistance : Less than 80 m Ω

Capacitance : 0.59 pF

Propagation delay : 11.2 ps

Operating Temperature : -40°C - 120°C

Materials & Platings

Barrel : Phosphor bronze / Ni + Au plated

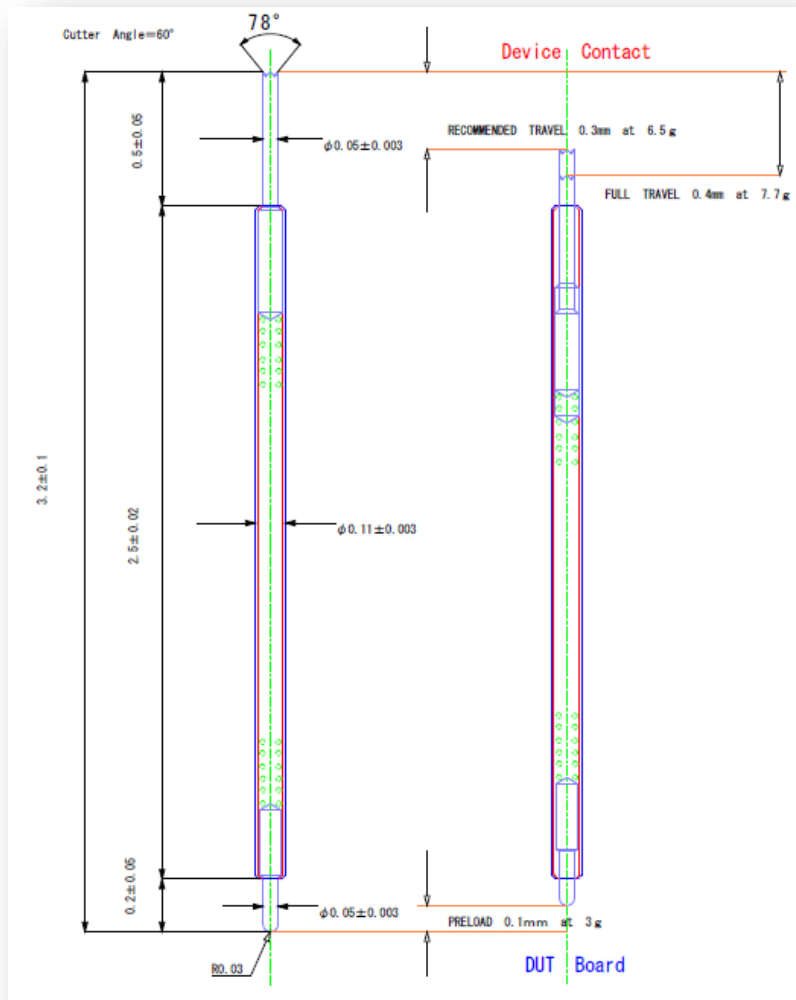
Top Plunger : Hardened beryllium copper / Ni + Au plated

Bottom Plunger : Hardened beryllium copper / Ni + Au plated

Spring : Music - Wire / Ni + Au plated

0.15mm Pitch

Type: EP-01132D-CR



Mechanical Spec

Recommend Stroke : 0.4mm

Full Stroke : 0.4mm

Spring Force : 6.5 g ± 20%

Spring Life : 200K over

Operating Temperature : -40°C ~ 150°C

Electrical Characteristic

Resistance : < 350mΩ

Current Ratio : 0.7A

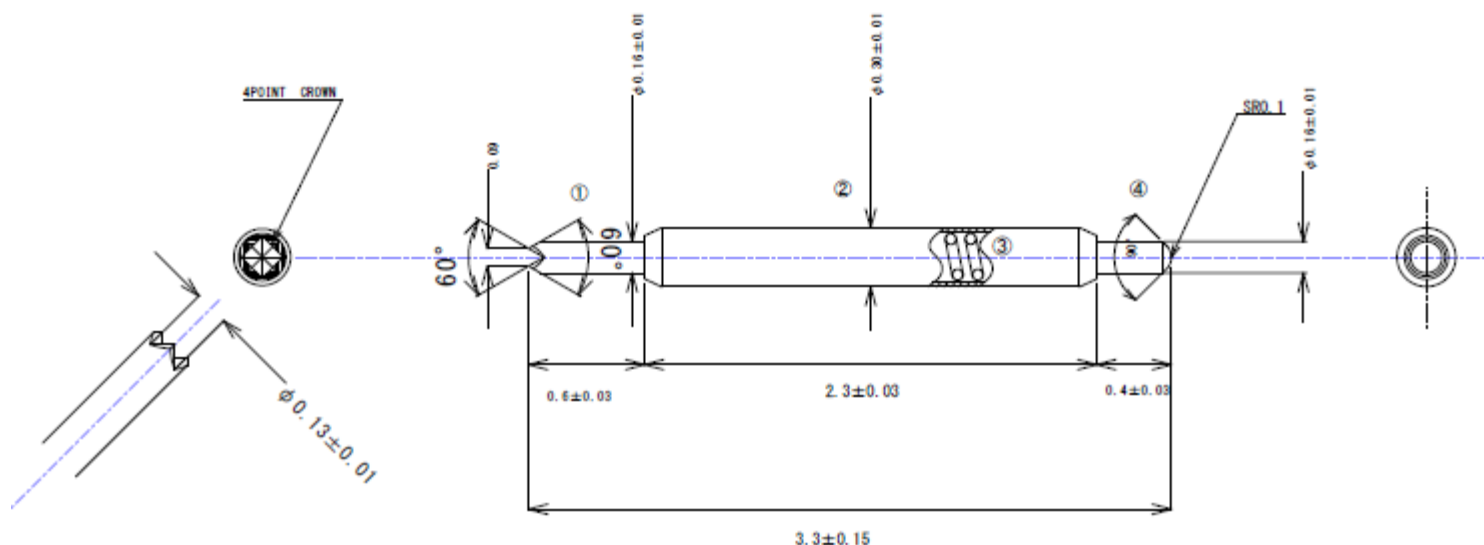
MATERIAL & FINISHS

P. No	COMPONENTS	MATERIALS	PLATING
1	BOTTOM PLUNGER	Ag30-P440-Cu30	
2	BARREL	Ni/Au Clad	
3	SPRING	SMP-U	Ni1.0μ + AuCo0.3μ
4	TOP PLUNGER	C1730	Ni2μ + AuCo2μ

Type: DP-01132D-C/R

0.4mm Pitch

Type: EP-0333D-CR



Spring Force : Working Travel 0.5mm ⇒ 0.323N ± 0.049N
 Max Travel 0.7mm

ITEM	DESCRIPTION	MATERIAL	PLATING
①	Plunger	C1730	Ni 2 μm ~ 3.5 / AuCo 2 μm ~ 3.5
②	Barrel	Ni / Au 1.0 μ	AuCo 0.2 μm
③	Spring	SWP-U	Ni 1 μm / AuCo 0.2 μm
④	Plunger	C1730	Ni 2 μm ~ 3.5 / AuCo 2 μm ~ 3.5