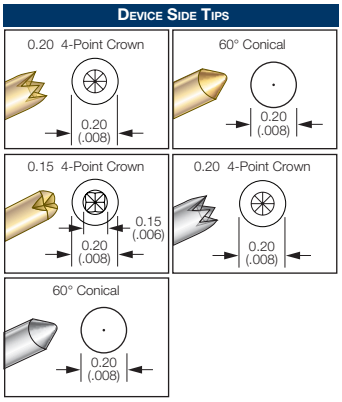
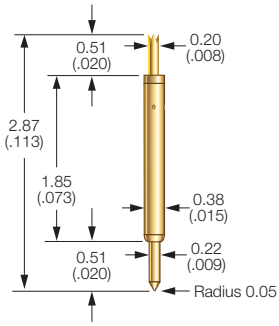
0.50mm Pitch Semiconductor Probes

623-0249 Probe





Probe Specifications

Minimum Device Pitch: 0.50mm (.020)
Signal Path Length: 2.49mm (.098)
Force per Contact: 25g (.88 oz.) @ 0.38mm (.015) travel
Device Compliance: 0.23mm (.009)
DUT Board Compliance: 0.15mm (.006)
Operating Temperature: -55°C to 120°C
Insertions: > 500,000

Materials

Barrel: Phosphorous bronze, gold plating
Spring: Music wire, gold plated
Device Side Contact:
01 & 03 Full-hard beryllium copper, gold plated
02 Carbon steel, gold plated
H1 & H2 Homogeneous alloy
Board Side Contact: Full-hard beryllium copper, gold plated

Electrical Specifications

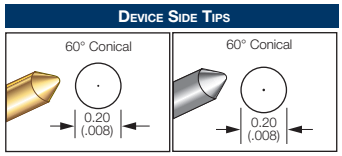
Typical Resistance: < 50 mΩ
Current Carrying Capacity: 3.5 amps continuous
(Current DC carry capability @ 80° C steady state)
Pattern 2a: R S R @ 0.5mm pitch
Characteristic Impedance: 50 Ω
Time Delay: 18 pSec
Loop Inductance: 0.89 nH
Signal Pin to Return Capacitance: 0.36 pF
-1 dB Insertion Loss Bandwidth: > 20 GHz

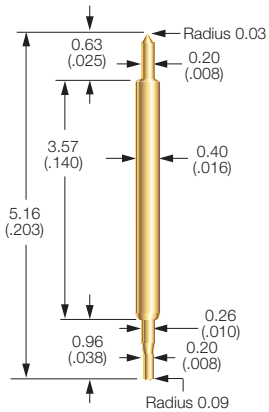
How to Order

Part No.	Device Side Tip	PCB Side Tip	Spring Force
623-0249-01	0.20 4-pt Crown	Conical	25g
623-0249-02	Conical	Conical	25g
623-0249-03	0.15 4-pt Crown	Conical	25g
623-0249-H1	0.20 4-pt Crown	Conical	25g
623-0249-H2	Conical	Conical	25g

H1 & H2 have the homogeneous alloy on the device side of the contact.

623-0290 Probe





Probe Specifications

Minimum Device Pitch: 0.50mm (.020)
Signal Path Length: 4.56mm (.180)
Force per Contact: 40g (1.4oz.) @ 0.60mm (.024) travel
Device Compliance: 0.45mm (.018)
DUT Board Compliance: 0.15mm (.006)
Operating Temperature: -55°C to 120°C
(Higher operating temperature probes available, consult factory)
Insertions: > 500,000

Materials

Barrel: Phosphorous bronze, gold plated
Spring: Music wire, gold plated
Device Side Contact: Carbon steel, gold plated or Homogeneous alloy
Board Side Contact: Full-hard beryllium copper, gold plated

Electrical Specifications

Typical Resistance: 01: < 50 mΩ & H1: < 40 mΩ
Current Carrying Capacity: 3.5 amps continuous
(Current DC carry capability @ 80° C steady state)
Pattern 2a: R S R @ 0.5mm pitch
Characteristic Impedance: 38 Ω
Time Delay: 32 pSec
Loop Inductance: 1.19 nH
Signal Pin to Return Capacitance: 0.82 pF
-1 dB Insertion Loss Bandwidth: > 9.6 GHz

How to Order

Part No.	Device Side Tip	PCB Side Tip	Spring Force
623-0290-01	Conical	Radius	40g
623-0290-H1	Conical	Radius	40g

H1 has the homogeneous alloy on the device side of the contact.
Prolonged exposure of greater than one hour reduces the maximum operating temperature of music wire springs to 85°C.

Specifications subject to change without notice. Dimensions in millimeters (inches)