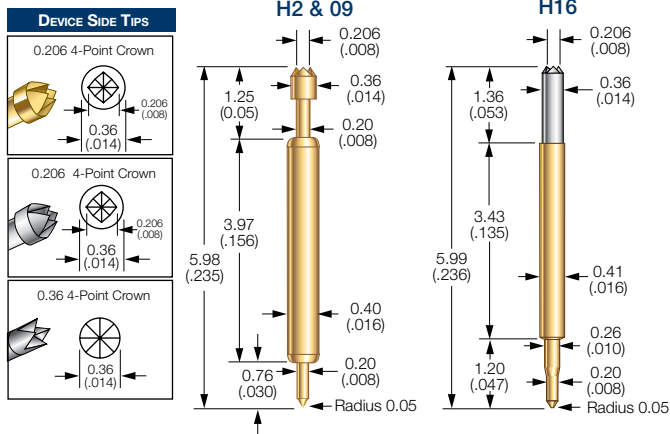


# 0.50MM & 0.65MM PITCH Semiconductor Probes

## 623-0047 PROBE



### PROBE SPECIFICATIONS

**Minimum Device Pitch:** 0.50mm (.020)

**Signal Path Length:** 5.28mm (.208)

**Force per Contact:**

- 09 - 32g (1.1 oz.) @ 0.70mm (.028) travel
- H2 - 22g (0.78 oz.) @ 0.70mm (.028) travel
- H16 - 35g (1.24 oz.) @ 0.70mm (.028) travel

**Device Compliance:** 0.40mm (.016)

**DUT Board Compliance:** 0.30mm (.012)

**Operating Temperature:**

- 55°C to 150°C for stainless steel spring
- 55°C to 120°C for music wire spring

(Higher operating temperature probes available, consult factory)

**Insertions:** > 500,000

### MATERIALS

**Barrel:** Phosphorous bronze, gold plating

**Spring:**

- 09 & H2 - Stainless steel, gold plated
- H16 - Music wire, gold plated

**Device Side Contact:** Full-hard beryllium copper, gold plated or Homogeneous alloy

**Board Side Contact:** Full-hard beryllium copper, gold plated

### ELECTRICAL SPECIFICATIONS

**Typical Resistance:** H2 & H9 < 45 mΩ; H16 < 50 mΩ

**Current Carrying Capacity:** 2.2 amps continuous  
(Current DC carry capability @ 80° C steady state)

**Pattern 2a:** R S R @ 0.65mm pitch

**Characteristic Impedance:** 50 Ω

**Time Delay:** 31 pSec

**Loop Inductance:** 1.56 nH

**Signal Pin to Return Capacitance:** 0.62 pF

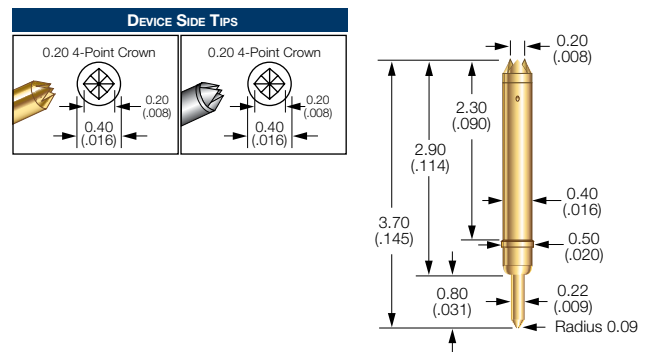
**-1 dB Insertion Loss Bandwidth:** > 20 GHz

### HOW TO ORDER

Part No.	Device Side Tip	PCB Side Tip
623-0047-09	0.206 4-pt Crown	Conical
623-0047-H2	0.36 4-pt Crown	Conical
623-0047-H16	0.206 4-pt Crown	Conical

H2 & H16 has the homogeneous alloy on the device side of the contact.

## 623-0303 PROBE



### PROBE SPECIFICATIONS

**Minimum Device Pitch:** 0.65mm (.026)

**Signal Path Length:** 3.10mm (.122)

**Force per Contact:** 30g (1.06 oz.) @ 0.60mm (.024) travel

**Device Compliance:** 0.40mm (.016)

**DUT Board Compliance:** 0.20mm (.008)

**Operating Temperature:** -55°C to 120°C  
(Higher operating temperature probes available, consult factory)

**Insertions:** > 500,000

### MATERIALS

**Barrel:** Phosphorous bronze, gold plating

**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:** < 40 mΩ

**Current Carrying Capacity:** 3 amps continuous  
(Current DC carry capability @ 80° C steady state)

**Pattern 2a:** R S R @ 0.65mm pitch

**Characteristic Impedance:** 49 Ω

**Time Delay:** 17 pSec

**Loop Inductance:** 0.85 nH

**Signal Pin to Return Capacitance:** 0.35 pF

**-1 dB Insertion Loss Bandwidth:** > 20 GHz

### HOW TO ORDER

Part No.	Device Side Tip	PCB Side Tip
623-0303-01	0.20 4-pt. Crown	Conical
623-0303-H1	0.20 4-pt. Crown	Conical

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)