

Monday 3/10/14 2:30pm

If one was good, two must be better! Poster Sessions that is! We had so many qualified submissions this year, we divided them in to two Poster sessions offering a variety of relevant topics to augment what you'll learn sitting in the Podium sessions.

Poster Sessions are a great way to network through interaction with the poster presenters and other curious bystanders, multitask during a break and stretch your legs after a long session.



This Poster

One Piece Stamped and Formed Probe Pin

Ichiro Fujishiro—Yamaichi Electronics

Correlation and Measuring Techniques for +/-5% Impedance

Tom Bresnan—R&D Altanova

Compliance Grounding -The Mechanical Importance of Grounding

Shamal Mundiyyath—JF Microtechnology Sdn Bhd

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BiTS 2014



One-Piece Stamped and Formed Probe Pin

Ichiro Fujishiro **Patent Pending**
Yamaichi Electronics

Key Industry Challenges:

- Pitches continue to shrink
- Test temperature and device current is increasing
- Cost continues to be a focus, even in demanding applications

Solution: One-Piece Stamped and Formed Probe Pin

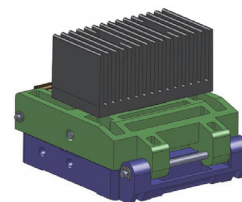
- One-piece stamped and formed pin provides high current carrying capacity
- High volume stamping delivers high quality and low cost

Key Features

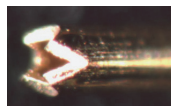
- 0.4mm minimum pitch
- Excellent electrical conductivity due to beryllium copper base material
- Stable contact force and resistance throughout pin life
- Excellent SI performance
- Excellent travel for 0.4mm pitch solution
- Compatible with current Burn In Socket Solutions

Additional Features:

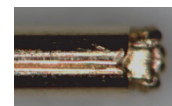
- Supports non-magnetic probe applications
- Outstanding SI performance enables support for SLT, Test and Validation Applications



【Photo】



Device Side



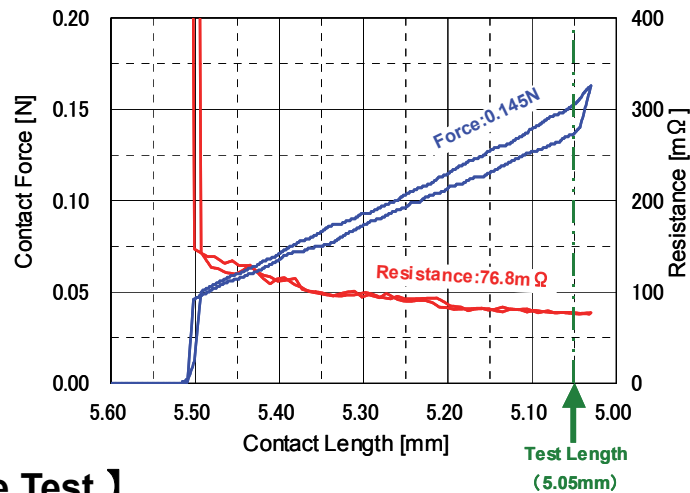
PCB Side

Specification

- Contact Pitch: 0.4mm minimum
- Test Height: 5.05mm
- Operation Stroke: 0.65mm
- Contact Force: 14gf \pm 5gf (0.137N \pm 0.0049N)
- Spring Life: 80,000 times
- Operation Temperature: \sim -40 to 150°C

Basic Performance

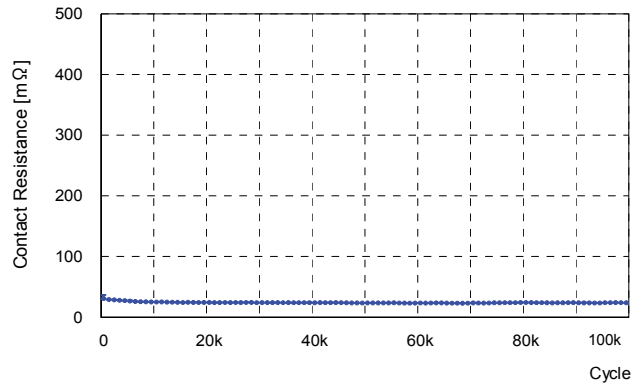
【Contact Force – Displacement – Resistance】



【Cycle Test】

Testing Condition

- Temperature: Ambient
- Contact Object: Plate with Au plating



Current Carrying Capacity Comparison

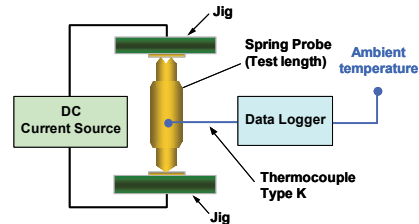
[Measuring Method]

- Measure the temperature at the Barrel.
- Use higher temperature readings as data.

[Current condition]

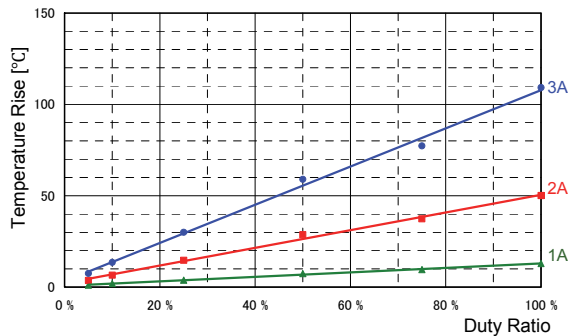
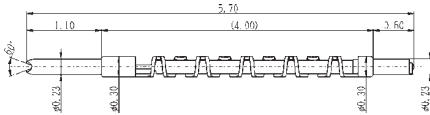
- Current value : 1A, 2A, 3A
- Duty ratio : 5%, 10%, 25%, 50%, 75%, 100% (1Hz)

[Test Result]

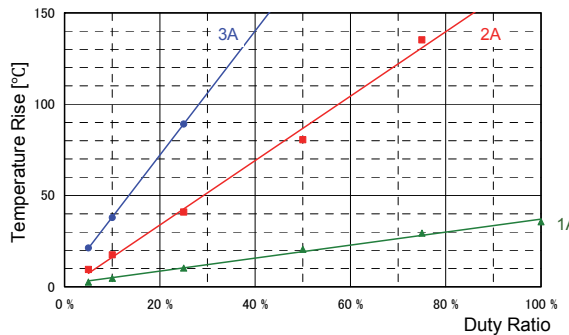


Measurement State Figure

One Piece Pressed Probe Pin



Standard Four Piece Probe Pin



[Table]

<2A >

Temperature Rise : [°C]

Product name	Duty Ratio					
	5 %	10 %	25 %	50 %	75 %	100 %
One Piece Pressed Probe	3.7	6.6	14.7	28.7	37.4	50.1
Standard Four Piece Probe Pin	9.5	17.5	41.0	80.5	135.2	-

<3A >

Temperature Rise : [°C]

Product name	Duty Ratio					
	5 %	10 %	25 %	50 %	75 %	100 %
One Piece Pressed Probe	7.5	13.5	30.0	59.0	77.3	109.2
Standard Four Piece Probe Pin	21.3	37.9	89.2	-	-	-

Temperature Rise : < 30 °C 30-80 deg.C ≥ 80 deg.C