Dyno™ Test Sockets for QFN Devices
The Dyno Difference

Only IDI has the Dyno contact – a revolutionary breakthrough in high-performance QFN testing.

- Patent-pending design
- Resistance < 20 mΩ against a matte-tin device
- Bandwidths > 10GHz @ -1dB on 0.40mm pitch and 0.50mm pitch
- Mechanical life > 500,000 cycles
- Endura plating resists solder build-up
- Wiping action ensures good device contact with minimal board side wipe
- Requires minimal cleaning

Advantages of Dyno QFN Test Sockets

With IDI’s Dyno Test Sockets for QFN testing, you get significant advantages over any competitive technology.

- Self-cleaning contact design
- Compatible with existing offset load boards
- Unmatched reliability
- Fast delivery time

A Long-Lasting Test Socket

The Dyno Test Socket requires minimal cleaning and has a mechanical life of over 500,000 cycles. Its unique design provides a slight wiping action on the device to penetrate contaminants and oxides on the hard, lead-free surfaces. Because compliance to the load board is derived from the elastomer and isolated from the movement of the contact tip, board scrub is minimized and board pad life should be relatively infinite.

Easy Contact Replacement

With a cycle life well in excess of 500,000 insertions, the Dyno contact and silicone elastomer do not require frequent refurbishment. However, should the need arise both items are field replaceable with relative ease. The Dyno contacts can be individually replaced.

Dyno Contacts and Probes in a Single Socket

The Dyno contact is designed to be compatible with the Synergetix flagship, the 3-piece probe. The peripheral leads on the QFN can be tested with the Dyno contact and the ground pad in the center of the device can utilize our 101267 probe.

Fast Delivery Time

IDI designs its Synergetix® test sockets in one week and generally ships within three weeks after the design is approved.

Higher First Pass Yields Lower Cost of Test

Discover how you can get an innovative solution to testing lead free devices with Dyno Test Sockets. Call us today at 913-342-5544.
**MECHANICAL SPECIFICATIONS**

**0.4mm Dyno**
- Minimum Device Pitch: 0.40 (0.016)
- Signal Path Length: 2.92 (0.115)
- Force per Contact: 40g (1.5 oz.) @ 0.38 (0.015) travel
- Device Compliance: 0.23 (0.009)
- DUT Board Compliance: 0.15 (0.006)
- Operating Temperature: -55°C to 150°C
- Insertions: >500,000

**0.4mm RP Dyno**
- Minimum Device Pitch: 0.40 (0.016)
- Signal Path Length: 2.92 (0.115)
- Force per Contact: 85g (3.0 oz.) @ 0.38 (0.015) travel
- Device Compliance: 0.23 (0.009)
- DUT Board Compliance: 0.15 (0.006)
- Operating Temperature: -55°C to 150°C
- Insertions: >500,000

**0.5mm Dyno**
- Minimum Device Pitch: 0.50 (0.020)
- Signal Path Length: 2.92 (0.115)
- Force per Contact: 85g (3.0 oz.) @ 0.38 (0.015) travel
- Device Compliance: 0.23 (0.009)
- DUT Board Compliance: 0.15 (0.006)
- Operating Temperature: -55°C to 150°C
- Insertions: >500,000

**0.5mm RP Dyno**
- Minimum Device Pitch: 0.50 (0.020)
- Signal Path Length: 2.92 (0.115)
- Force per Contact: 85g (3.0 oz.) @ 0.38 (0.015) travel
- Device Compliance: 0.23 (0.009)
- DUT Board Compliance: 0.15 (0.006)
- Operating Temperature: -55°C to 150°C
- Insertions: >500,000

**MATERIALS**
- Contact: Beryllium copper, Endura plated
- Insulator: Silicone

**ELECTRICAL SPECIFICATIONS**

**0.4mm Dyno**
- Typical Resistance: < 20 mΩ
- Current Carrying Capacity: 5 amps continuous
  (Current DC carry capability @ 80°C steady state)
- Pattern 2a: A B C (at 0.4mm pitch)
- Characteristic Impedance: 34Ω
- Time Delay: 37 pSec
- Loop Inductance: 1.51 nH
- Signal Pin to Return Capacitance: 0.90 pF
- 1dB Insertion Loss Bandwidth: >10 GHz

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- Time Delay: 37 pSec
- Loop Inductance: 1.51 nH
- Signal Pin to Return Capacitance: 0.90 pF
- 1dB Insertion Loss Bandwidth: >10 GHz

**0.5mm Dyno**
- Typical Resistance: < 20 mΩ
- Current Carrying Capacity: 5 amps continuous
  (Current DC carry capability @ 80°C steady state)
- Pattern 2a: A B C (at 0.5mm pitch)
- Characteristic Impedance: 34Ω
- Time Delay: 48 pSec
- Loop Inductance: 1.74 nH
- Signal Pin to Return Capacitance: 1.34 pF
- 1dB Insertion Loss Bandwidth: >10 GHz

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- Signal Pin to Return Capacitance: 1.34 pF
- 1dB Insertion Loss Bandwidth: >10 GHz

**TEST BOARD LAYOUTS**

**Dyno**

**RP Dyno**
**PROBE SPECIFICATIONS**

Minimum Device Pitch: 0.50 (.020)
Signal Path Length: 2.92 (.115)
Force per Contact: 24g (0.86 oz.),
27g (0.94 oz), 32g (1.10 oz.), or
37g (1.30 oz.) @ 0.38 (.015) travel
Device Compliance: 0.23 (.009)
DUT Board Compliance: 0.15 (.006)
Operating Temperature:
- -55˚C to 150˚C for stainless steel
- -55˚C to 85˚C for music wire
Insertions: >500,000

**MATERIALS**

Barrel: Full-hard beryllium copper, Endura plating
Spring:
- Stainless steel, gold plated – 24g & 27g spring
- Music wire, gold plated – 32g & 37g spring
Plunger: Full-hard beryllium copper, gold plated

**ELECTRICAL SPECIFICATIONS**

Typical Resistance: <40 mΩ
Current Carrying Capacity: 5 amps continuous
(Individual probe in free air @ ambient temperature)

**HOW TO ORDER**

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<thead>
<tr>
<th>Part No.</th>
<th>Device Side Tips</th>
<th>Spring Force</th>
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<td></td>
<td>120˚ Spear Point</td>
<td>24 gram</td>
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<td></td>
<td>Concave</td>
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<td></td>
<td>4-Point Crown</td>
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<td></td>
<td>Reduced 4-Point Crown</td>
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