

# PAD ROL™ 150

FOR QFN, DFN, AND OTHER PAD-STYLE APPLICATIONS

## Your Solution for Analog / Mixed Signal / RF Testing

Johnstech's patented ROL™ technology provides excellent electrical performance and proven mechanical reliability for Precision Analog, Mixed Signal and RF applications. The Pad ROL™ 150 Series provides the next level of higher frequency performance beyond the Pad ROL™ 200 for testing NiPdAu packages.

## Load Board Compatibility

The Pad ROL™ 150 Contactor is load-board compatible with the Pad ROL™ 200, so attaining higher frequency performance is an easy upgrade.

### ROL™ 150 Contacts

Low-Force XL-2

### Device Platings

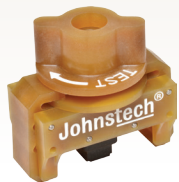
Nickel Palladium Gold



Low-Force XL-2 Contact Profile NiPdAu Configuration (Fine Tip)



Low-Force XL-2 Contact Profile NiPdAu Configuration (Full Tip)



DL-VCMA Plus™ Double-Latch Vertically Compliant Manual Actuator



SL-VCMA Single-Latch Vertically Compliant Manual Actuator

## Characterization

Pad ROL™ 150 Contactors are ideal for Manual Device Evaluation, Lab Testing, Prototyping and Characterization

- **Designed to test > 30 GHz**
- **Reliable and repeatable results**
- **Lab Performance correlates to Production Test Floor**
- **Robust Manual Actuator life of 10k+ insertions**

## Production Test

The “rolling contact” design of the ROL™ Contactor, which creates a self-cleaning wipe action, provides extensive Production Test benefits:

- **Consistent Contact Resistance**
- **Optimized Electrical Performance**
- **Higher First Pass Yield**
- **Repeatable Site-to-Site Performance**
- **Longer MTBA (Mean Time Between Assists)**
- **Prolonged Load Board Life**
- **Simple Maintenance & Rebuilding**
- **Improved OEE (Overall Equipment Efficiency)**
- **Lower Overall Cost of Test**



Johnstech technologies and products are protected by United States and International patents, both granted and pending. For Johnstech patent information, call 612-378-2020.

# Pad ROL™ 150

Electrical Specifications	NiPdAu Configuration
Electrical Length (compressed height):	2.05 mm
Inductance:	Self: 0.36 nH Mutual: 0.23 nH
Capacitance:	Ground: 0.21 pF Mutual: 0.07 pF
S <sub>21</sub> Insertion Loss (GSG):	40 GHz
S <sub>11</sub> Return Loss (GSG):	7.6 GHz
S <sub>41</sub> Crosstalk (GSSG):	40 GHz
Average CRES:	50 mΩ
Current Carrying Capability*: (Duty cycle 100%, 50%, 1%)	2.02A, 3.34A, 4.76A
Current Leakage:	<1pA @ 10V
Nearest Decoupling Area:	1.58 mm

Mechanical Specifications	NiPdAu Configuration
Physical Compressed Height:	1.0 mm
Contact Life (# of insertions):	Elastomers = 300,000 Contacts = 500,000 Housing = 2,000,000+
Contact Compliance:	0.3 mm
Contact Force (per contact):	25g (NiPdAu)
Contact Tip Coplanarity:	0.05 mm
Temperature:	- 40°C to +155°C
Housing Material:	Torlon® 5030
Contacts:	Low-force XL-2
Contact Material:	Gold-plated Alloy

Results for 0.5mm pitch configurations. Specifications provided here are based on internal testing at Johnstech, customer production sites, and third party electrical testing. Actual individual results may vary based on a wide range of variables including: handler/contactor/load board interface, handler plunge depth and velocity, device presentation, alignment plate condition, package plating characteristics, test floor conditions, maintenance activities, mounting/fastening techniques, non-coplanarity from site to site, non-coplanar docking, and temperature extremes.

\* Test conditions: 300 msec pulse, 20°C temperature rise.

## Manual Actuator

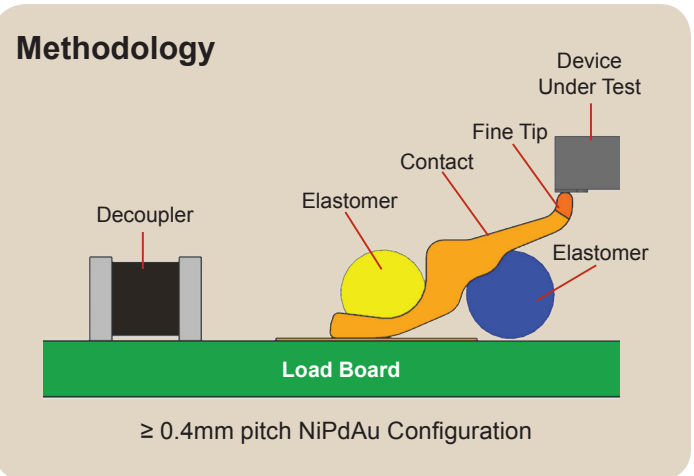
Double-Latch (DL-VCMA Plus™) and Single-Latch (SL-VCMA) Vertically Compliant Manual Actuators are available. Manual Actuator Material is Ultem® 2300.

## Housing Options

Housings are offered in standard handler specific sizes with custom sizes also available. Contact Johnstech for assistance.

## Contact Options

Low-Force XL-2 Fine Tip, ≥ 0.4mm pitch, NiPdAu packages  
Low-Force XL-2 Full Tip, ≥ 0.4mm pitch, NiPdAu packages



## Johnstech Services and Contact Information

### Johnstech Services/Resource Options

Test Floor Technical Support - Worldwide Field Service Offices; First-Pass Yield Enhancement; Performance Audits; Customized Training and Applications Engineering. Online Tech Support at [www.johnstech.com/support](http://www.johnstech.com/support)

### Engineering Services

Mobile RF Modeling, Wafer Level Thermal Analysis, Die Shrink Test Planning, Test Signal Integrity Optimization, Test Cell Integration, and Probe Card PCB Evaluation.

### Website ([www.johnstech.com](http://www.johnstech.com))

Product, Test, Industry Support Information; Downloadable, Product Spec Sheets; Maintenance and Inspection Guides; Tech Papers and Application Notes.

All products and technology herein covered by U.S. and/or International patents.



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