



# PAD ROL® 200

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 ROL® 200 Series provides Contact/Elastomer configurations for the unique challenges of matte tin and NiPdAu packages.

### ROL® 200 Contacts

Gold-Plated  
Low-Force XL-2

### Device Platings

Matte Tin & Tin-Based  
Nickel Palladium Gold

## Characterization

ROL® 200 Contactors are ideal for Manual Device Evaluation, Lab Testing, Prototyping and Characterization

- **Designed to test to 20 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**



Gold-Plated  
Contact Profile  
Matte Tin  
Configuration



Low-Force XL-2  
Contact Profile  
NiPdAu  
Configuration



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



SL-VCMA  
Single-Latch Vertically  
Compliant Manual  
Actuator



# Pad ROL<sup>®</sup> 200

Electrical Specifications	Matte Tin Configuration	NiPdAu Configuration
Electrical Length (compressed height):	2.00 mm	2.07 mm
Inductance:	Self: 0.42 nH Mutual: 0.24 nH	Self: 0.55 nH Mutual: 0.24 nH
Capacitance:	Ground: 0.35 pF Mutual: 0.13 pF	Ground: 0.35 pF Mutual: 0.12 pF
S <sub>21</sub> Insertion Loss (GSG):	-1dB @ 24.6 GHz	-1dB @ 18.5 GHz
S <sub>11</sub> Return Loss (GSG):	-20dB @ 5.2 GHz	-20dB @ 5.8 GHz
S <sub>41</sub> Crosstalk (GSSG):	-20dB @ 18.2 GHz	-20dB @ 29.5 GHz
Average CRES:	30 mOhms	<20 mOhms
Current Carrying Capability**:	3.8A, 6.0A, 9.8A	3A, 5.1A, 9.3A
Current Leakage:	<1pA @ 10V	
Nearest Decoupling Area:	1.58 mm	

Results for 0.5mm pitch configurations shown here. Electrical specifications based on third party measured testing.

\* Contact, elastomer, and housing life values are TYPICAL based on Johnstech internal testing. Actual production life will 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 material and characteristics; test floor conditions; maintenance activities; mounting/fastening techniques; site-to-site co-planarity; docking co-planarity; and temperature extremes.

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

Mechanical Specifications	Matte Tin Configuration	NiPdAu Configuration
Physical Compressed Height:	1.40 mm	
Contact Life (# of insertions, Typical Performance*):	Elastomers = 300,000 Contacts = 500,000+ Housing = 2,000,000+	
Contact Compliance:	0.20 mm	
Contact Force (per contact):	70 grams	30 grams
Contact Tip Coplanarity:	0.05 mm	
Temperature:	- 40°C to 155°C	
Housing Material:	Torlon <sup>®</sup> 5030	
Contacts:	Gold-Plated	Low-Force XL-2
Contact Material:	BeCuNiAu	Gold-plated Alloy

