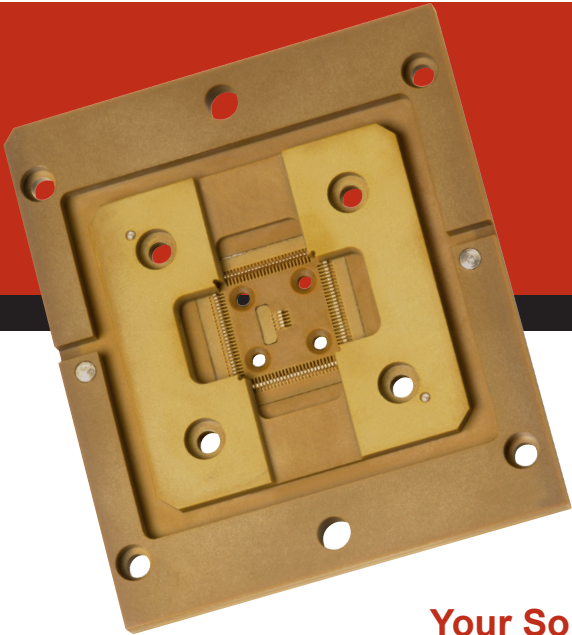


Leaded ROL™ 400

For QFP, SO, SOIC, SOJ, SOP, PLCC, TSOP, and SOT Applications



Your Solution for Testing Lead-Free

The Leaded ROL™400 utilizes Johnstech's patented ROL™ technology, widely-known for its excellent electrical performance and proven mechanical reliability. The Leaded ROL™400 Contactor is ideally suited for high-volume testing of Precision Analog devices and is offered in two Contact configurations developed specifically for the unique challenges and different device platings used in Lead-Free Testing.:

Contacts

Gold-Plated
XL-2

Device Platings

Matte Tin (Sn) & Tin-Based
Nickel Palladium Gold (NiPdAu)

Characterization

Johnstech Contactors are unsurpassed for Manual Device Evaluation, Lab Testing, Prototyping and Characterization

- Designed to test to 5+ 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 Leaded ROL™400 Contactor is especially well-suited to Production Test providing:

- Consistent Contact Resistance
- Optimized Electrical Performance
- Higher First Pass Yields
- Less Frequent Cleaning
- Longer MTBA (Mean Time Between Assists)
- Prolonged Load Board Life
- Footprint Compatible with Leaded Series 4mm
- Simplified Maintenance & Rebuilding
- Improved OEE (Overall Equipment Efficiency)
- Lower Overall COT (Cost of Test)



(Actual Size)



Gold-Plated
Contact Profile



(Actual Size)



Low-Force XL-2
Contact Profile



ZMA
Z-Axis
Manual Actuator



VMA
Vertical
Manual Actuator

Your Contact for Higher Performance

Johnstech®

Johnstech Leded ROL™ 400 Contactor Specifications

Electrical Specifications	Matte Tin Configuration*	NiPdAu Configuration
Electrical Length (compressed height):	3.60 mm	3.54 mm
Inductance:	Self: 0.66 nH Mutual: 0.25 nH	Self: 0.61 nH Mutual: 0.31 nH
Capacitance:	Ground: 0.38 pF Mutual: 0.32 pF	Ground: 0.38 pF Mutual: 0.30 pF
S ₂₁ Insertion Loss/Bandwidth (Ground-Signal-Ground):	-1dB @ 5.4 GHz	-1dB @ 5.0 GHz
S ₁₁ Return Loss/Bandwidth (Ground-Signal-Ground):	-20dB @ 1.2 GHz	-20dB @ 1.2 GHz
S ₄₁ Crosstalk/Bandwidth (Ground-Signal-Signal-Ground):	-20dB @ 3.8 GHz	-20dB @ 5.8 GHz
Average Contact DC Resistance:	<30 mOhms	<20 mOhms
Current Carrying Capability:	4.90 A	3.90 A
Current Leakage:	<1pA @ 10V	<1pA @ 10V
Contact to Decoupling Area:	1.80 mm	1.80 mm

Mechanical Specifications	Matte Tin Configuration*	NiPdAu Configuration
Physical Contact Length:	4.56 mm	4.55 mm
Physical Compressed Height:	2.79 mm	2.79 mm
Contact Life (# of insertions):	Elastomers = 300,000 Contacts = 500,000+ Housing = 2,000,000	Elastomers = 300,000 Contacts = 500,000+ Housing = 2,000,000
Contact Compliance:	0.23 mm	0.23 mm
Contact Wipe on Lead:	0.22 mm	0.25 mm
Contact Force (per contact):	60 grams	30 grams
Contact Tip Coplanarity:	0.05 mm	0.05 mm
Environmental:	-40°C to 155°C	-40°C to 155°C
Housing Material:	Torlon® 5030	Torlon® 5030
Contacts Material:	BeCuNiAu	XL-2

* Results from Matte Tin Device Test, 0.50 mm pitch * Results from NiPdAu Device Test, 0.50 mm pitch

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/contacter/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.

Manual Actuator

VMA (Vertical Manual Actuator)
ZMA (Z-Axis Manual Actuator)

Housing Options

Housings are offered in standard handler specific sizes with custom sizes also available

Contact Options

Gold-Plated or Low Force XL-2
Pitches from 0.40mm - 1.27mm

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

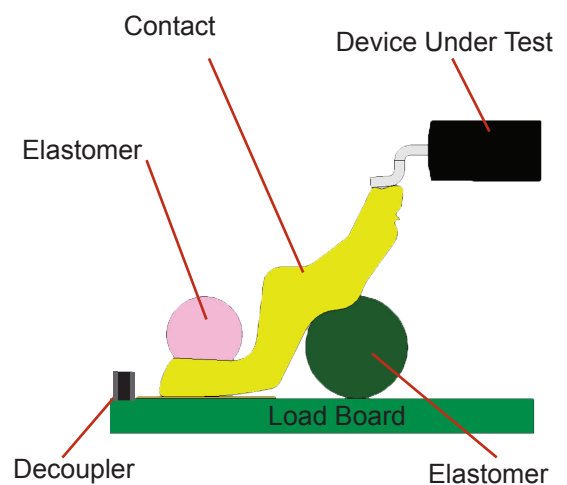
Engineering Services

Load Board Evaluation & Testing; HFSS 3D Modeling; Electrical Performance Analysis; PCB/Contactor/Device Optimization; Contactor S Parameter Data; Thermal Conductivity Analysis and Advanced Design System (ADS) Simulation, Analysis & Optimization.

Website (www.johnstech.com)

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

Methodology



Johnstech International Corporation • 1210 New Brighton Boulevard • Minneapolis, MN 55413-1641 USA
Tel 612.378.2020 • Fax 612.378.2030 • www.johnstech.com • E-mail info@johnstech.com