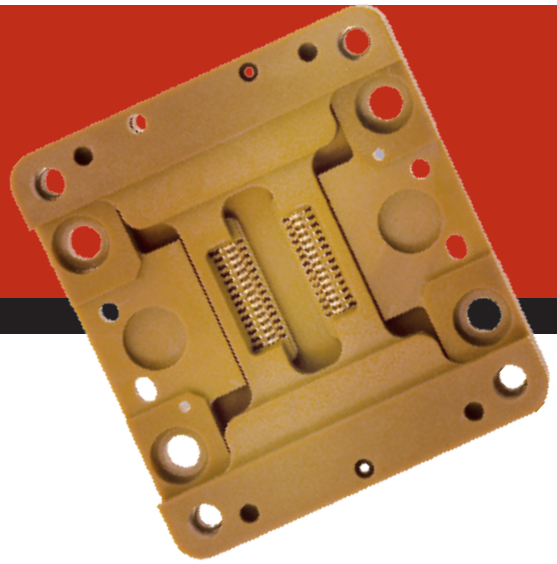


Leaded 4mm

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

Mechanical Reliability with Electrical Performance

The Leaded 4mm Contactor was Johnstech's first product and after more than 15 years, it is still meeting — and exceeding — the vigorous High Performance Test requirements of the mid-range Analog & Mixed Signal market. Its patented "S" Contact Technology utilizes a unique wipe motion that provides precise mechanical lead contact and excellent electrical signal fidelity. Test results from the lab will correlate directly to your production test floor.

Characterization

Leaded 4mm Contactors are unsurpassed for Manual Device Evaluation, Lab Testing, Prototyping and Characterization

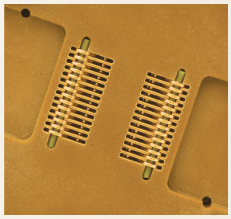
- Designed to test up to 5 GHz.
- Reliable and repeatable results
- Lab Performance correlates 100% to Production Test Floor
- VMA and ZMA Manual Actuators have a lifespan of 10K+ insertions

Production Test

Many Leaded 4mm attributes are important to Production Test:

- Long, Proven & Exceptional Product History
- Excellent Electrical Performance
- Consistently Low Contact Resistance
- Universal Footprint Compatible

(Actual Size)



View of Contactor on Load Board Side

ZMA
Z-Axis
Manual Actuator

VMA
Vertical
Manual Actuator

Your Contact for Higher Performance

Johnstech®

Electrical Specifications	Gold-Plated Contact*
Electrical Length (compressed height):	3.55
Inductance:	Self: 0.61 nH Mutual: 0.27 nH
Capacitance:	Ground: 0.92 pF Mutual: 0.36 pF
S_{21} Insertion Loss/Bandwidth (Ground-Signal-Ground):	-1dB @ 4.6 GHz
S_{11} Return Loss/Bandwidth (Ground-Signal-Ground):	-20dB @ 1.1 GHz
S_{41} Crosstalk/Bandwidth (Ground-Signal-Signal-Ground):	-20dB @ 3.0 GHz
Average Contact DC Resistance:	<20 mOhms
Current Carrying Capability:	5.70 A
Current Leakage:	<1pA @ 10V
Contact to Decoupling Area:	2.30 mm

Mechanical Specifications	Gold-Plated Contact*
Physical Contact Length:	9.95 mm
Physical Compressed Height:	2.79 mm
Contactor Life (# of insertions):	Elastomers = up to 500,000 Contacts = up to 500,000 Housing = >1,000,000
Contact Compliance:	0.23 mm
Contact Wipe on Lead:	0.10-0.20 mm
Contact Force (per contact):	90-120 grams
Contact Tip Coplanarity:	0.05 mm
Environmental:	-40°C to 155°C
Housing Material:	Torlon® 5030
Contact Material:	Beryllium Copper 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.

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
Pitches from 0.50 mm - 1.27 mm

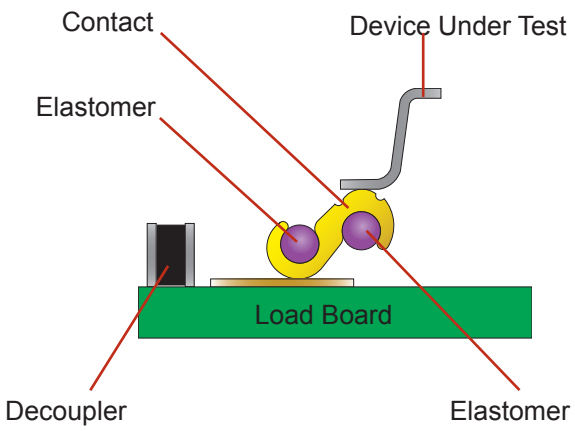
Johnstech Services/Resource Options
Test Floor Technical Support - Worldwide Field Service Offices; First-Pass Yield Enhancement; Performance Audits; Customized Training and Applications Engineering. Online Tech Support at:

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



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