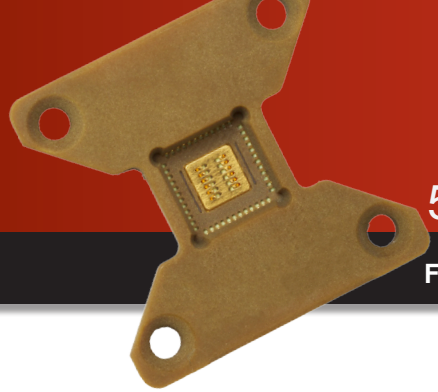


Pad ROL® 100A-Z50™

50 Ohm **Controlled Impedance** Contacts

FOR QFN, DFN, AND OTHER PAD-STYLE APPLICATIONS

mmRF™

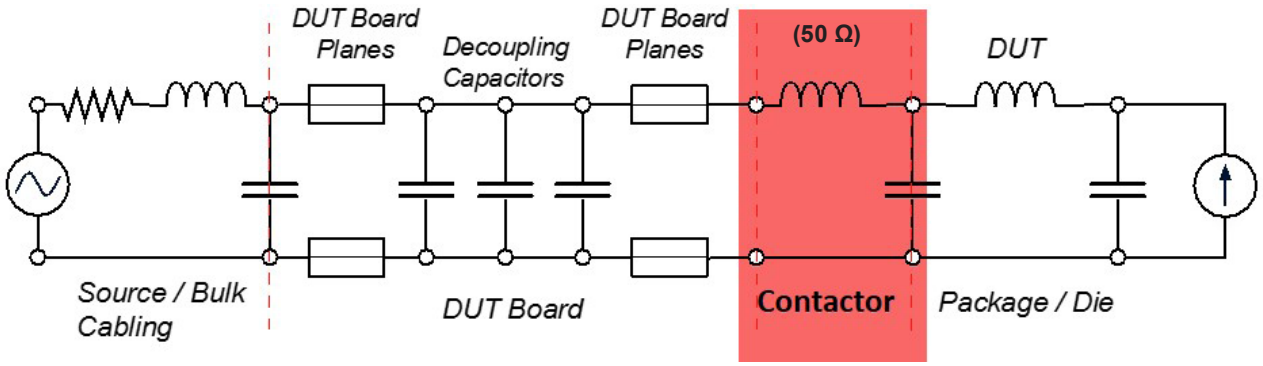
Based on Johnstech's proven Pad ROL® 100A Contactor for RF, microwave, and millimeter wave performance, the Z50™ test solution provides 50 ohm controlled impedance self-cleaning wipe contacts that deliver more consistent test results with higher Cpk and tighter guard bands. This lowers the risk for your most challenging RF and high-speed digital device testing.

50 Ohms Controlled Impedance +/-1 Ohm

The ROL® 100A–Z50™ provides controlled 50 ohms impedance to within +/-1 ohm to ≥ 6 GHz. As the graphs on the following page indicate, the excellent low Return Loss of the Z50™ provides controlled impedance over an extended frequency range.

Key Features and Applications

- **Frequency coverage beyond 40 GHz**
- **Controlled impedance of 50 ohms +/- 1 ohm to ≥ 6 GHz**
- **Return loss better than -40 dB to ≥ 6 GHz.**
- **Applications: RF and High-Speed Digital Devices requiring 50 ohm controlled impedance.**
- **Examples include duplexers, transceivers, amplifiers, VCOs, and RF front-end modules**
- **Specially-designed ROL®100A-Z50 contacts and housing slots are optimized for 50 ohms.**
- **Johnstech RF modeling services are available to help optimize your overall test solution, including the PCB layout.**



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

Impedance changes as the pitch changes (i.e., spacing of the contacts). Therefore, different profiles and thicknesses of contacts are required to maintain 50 ohms impedance. Only the 0.5mm pitch contacts are shown here. Consult your Johnstech sales representative for more information.

Johnstech®

SMART. CONNECTED. GLOBAL.

Pad ROL® 100A-Z50™ 50 Ohm Controlled Impedance

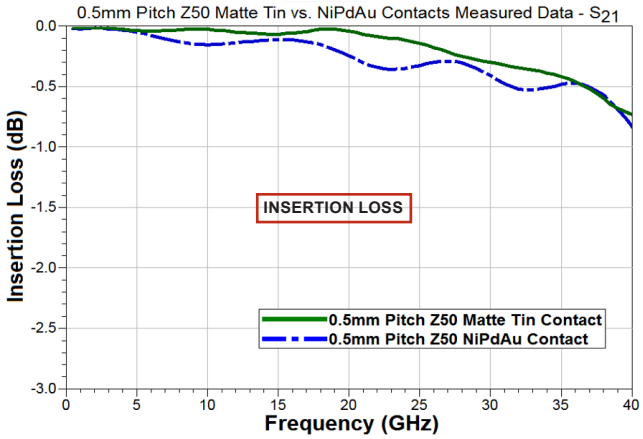
Electrical Performance	Matte Tin Configuration	NiPdAu Configuration
Controlled Impedance	50 Ohms +/- 1 Ohm to ≥ 6 GHz (pitches 0.5, 0.65,0.8, 1.0mm)	
Electrical Length (at compressed height):	1.10 mm	1.14 mm
Inductance:	Self: 0.396 nH Mutual: 0.151 nH	Self: 0.418 nH Mutual: 0.153 nH
Capacitance:	Ground: 0.141 pF Mutual: 0.027 pF	Ground: 0.145 pF Mutual: 0.029 pF
S_{21} Insertion Loss (GSG):	-1 dB@ 40+ GHz	-1 dB @ 40+ GHz
S_{11} Return Loss (GSG):	-20 dB @ 24.3 GHz	-20 dB @ 19.1 GHz
S_{41} Crosstalk (GSSG):	-20 dB @18.9 GHz	-20 dB @ 17.1 GHz
Average CRES:	< 100 mΩ	<30 mΩ
Current Carrying Capacity**: (Duty cycle 100%, 50%, 1%)	1.6 A, 2.7 A, 3.3 A	1.4 A, 2.4 A, 3.3 A
Current Leakage:	<1 pA @ 10V	<1 pA @ 10V
Nearest Decoupling Area:	1.25 mm	

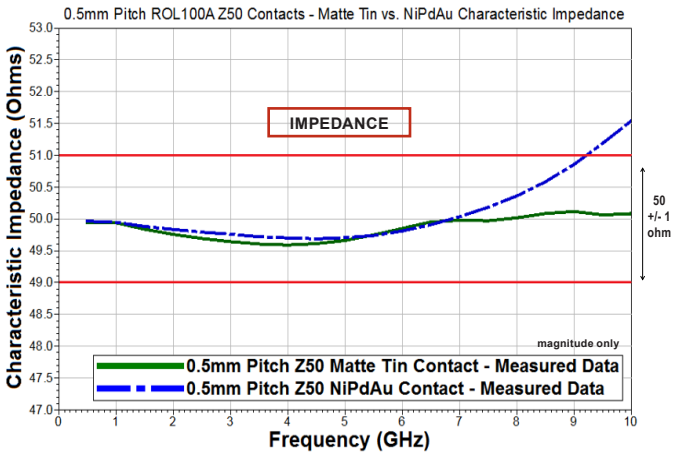
Mechanical Performance	Matte Tin Configuration	NiPdAu Configuration
Physical Compressed Height	0.75 mm	
Contactor Life* (# of insertions, Typical Performance):	Elastomers = 300,000 Contacts = 500,000+ Housing = 2,000,000+	
Contact Compliance:	0.175 mm	
Contact Force (per contact)	25 grams	20 grams
Contact Tip Coplanarity	0.05 mm	
Temperature:	-40°C to 155°C	
Housing Material:	Torlon 5030	
Contacts:	Gold-plated	Low-Force XL-2
Contact Material:	BeCuNiAu	Gold-plated Alloy

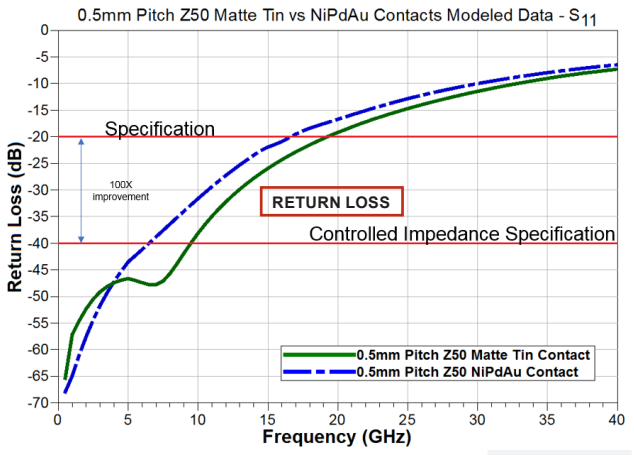
Results for 0.5mm pitch configurations shown here. Consult Johnstech for other pitches. Electrical specifications based on third party measured testing.

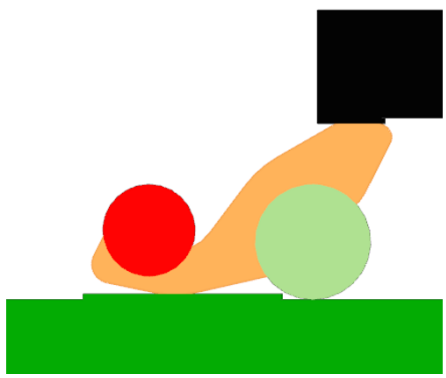
** Contact, elastomer, and housing life values are TYPICAL based on Johnstech internal testing. Actual production life will vary based on a wide range of variables including: handler, contactor, load board interface; handler plunge depth and velocity; device presentation; alignment plate condition; package 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.*









Pad ROL®100A–Z50™ 0.5 pitch configuration.

Johnstech®

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