

PAD ROL® 100A

FOR QFN, DFN, AND OTHER PAD-STYLE APPLICATIONS

Your Solution for Best-in-Class RF / Microwave Testing

The *Pad ROL*® 100A offers the best-in-class electrical performance for testing your most demanding RF and microwave communications devices to 40 GHz. Whether you're performing engineering tests on high gain RF amplifiers, RF transceivers, or other 3G/4G devices, the *Pad ROL*® 100A delivers. Engineered with robust mechanical performance, the *Pad ROL*® 100A meets your most demanding production needs for higher First Pass Yield, longer MTBA, resulting in lower cost of test. New contact designs for 0.4mm and ≥ 0.5mm pitches provide longer contact life and longer MTBA for testing your QFN and DFN matte tin and NiPdAu packages.

ROL® 100A Contacts

Gold-Plated
Low-Force XL-2

Device Platings

Matte Tin & Tin-Based
Nickel Palladium Gold

Characterization

Pad ROL® 100A Contactors are ideal for Manual Device Evaluation, Lab Testing, Prototyping and Characterization

- **Designed to test to 40 GHz**
- **Reliable and repeatable results.**
- **Lab Performance correlates to Production Test Floor**
- **Robust Manual Actuator life of 10k+ insertions**

Production Test

The self-cleaning wipe action of the "rolling contact" design provides many benefits for Production Test:

- **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**



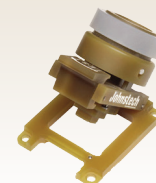
Gold-Plated Contact Profile
Matte Tin Configuration



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[®] 100A

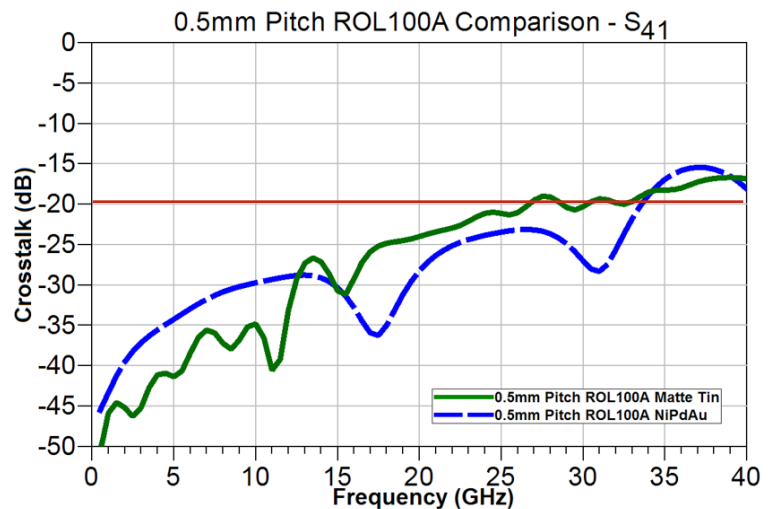
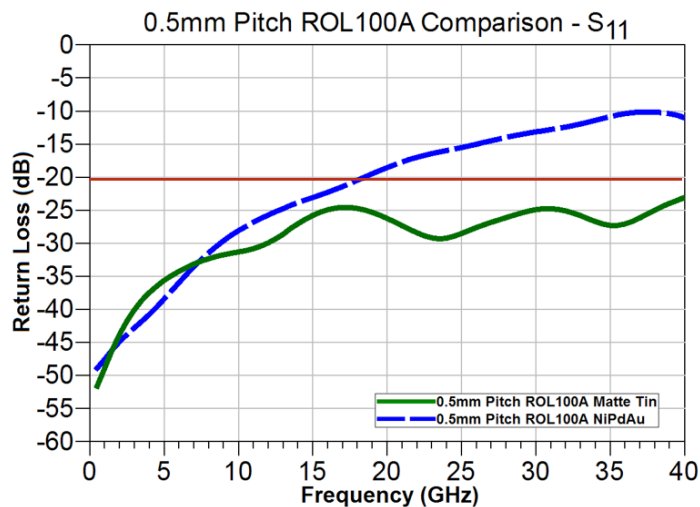
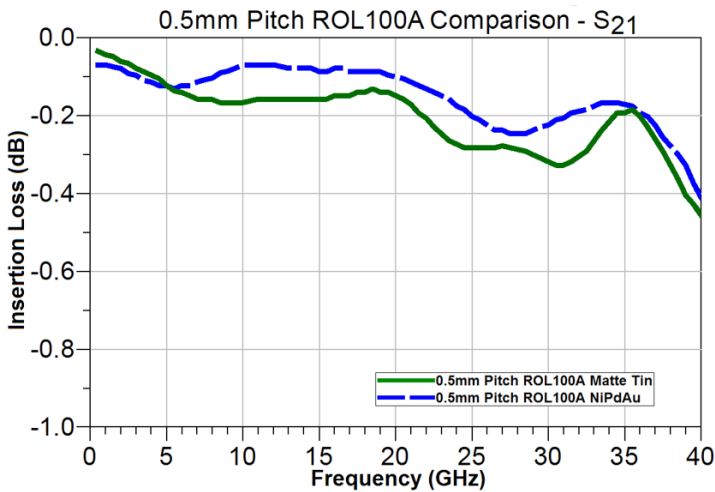
Electrical Specifications	Matte Tin Configuration	NiPdAu Configuration
Electrical Length (compressed height):	1.10 mm	1.14 mm
Inductance:	Self: 0.23 nH Mutual: 0.14 nH	Self: 0.37 nH Mutual: 0.15 nH
Capacitance:	Ground: 0.16 pF Mutual: 0.05 pF	Ground: 0.17 pF Mutual: 0.03 pF
S ₂₁ Insertion Loss (GSG):	-1dB @ 40+ GHz	-1dB @ 40+ GHz
S ₁₁ Return Loss (GSG):	-20dB @ 40+ GHz	-20dB @ 18.5 GHz
S ₄₁ Crosstalk (GSSG):	-20dB @ 26.7 GHz	-20dB @ 33.5 GHz
Average CRES:	50 mOhms	<20 mOhms
Current Carrying Capability**: (Duty cycle 100%, 50%, 1%)	3.1A, 5.0A, 6.1A	2.61A, 4.19A, 5.16A
Current Leakage:	<1pA @ 10V	
Nearest Decoupling Area:	1.25 mm	

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

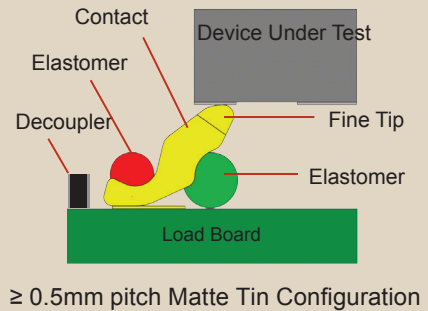
* Contact, elastomer, and housing life values are TYPICAL based on Johnstech internal testing. Actual production life will vary based on a wide range of variables including: handler, Contactor, load board interface; handler plunge depth and velocity; device presentation; alignment plate condition; package 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:	0.75 mm	
Contact Life (# of insertions, Typical Performance*):	Elastomers = 300,000 Contacts = 500,000+ Housing = 1,000,000+	
Contact Compliance:	0.175 - 0.200 mm	
Contact Force (per contact):	60 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



Methodology



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