



PAD ROL 100A PERFORMANCE+[®]

FOR QFN, DFN, AND OTHER PAD-STYLE APPLICATIONS

Engineered to a New Level of Production Performance

The **Pad ROL[®] 100A Performance+** offers 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 power amplifiers, microwave applications or 3/4/5G devices, the **Performance+** delivers. Fully conductive metal housing options provide very low ground inductance. Torlon inserts can be used for tuning impedance within contactor. Insulated coating is used for all signal and control I/O. Engineered with robust mechanical performance, the **Performance+** meets your most demanding production needs for higher First Pass Yield, longer contact life and longer MTBA. Tip design retains short wipe for small pads and misses burrs often found on sawn QFN packages. New contact designs ≥ 0.3 mm pitches for testing your QFN and DFN matte tin and NiPdAu packages.

ROL[®] 100A Performance+ Device Platings Contacts

Gold-Plated
Low-Force XL-2

Matte Tin & Tin-Based
Nickel Palladium Gold

Characterization

Pad ROL[®] 100A Performance+ Contactors are ideal for manual device evaluation, lab testing, prototyping and characterization.

- **Designed to test up 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:

- **Improved MTBA**
- **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**

PRECISION ANALOG TO mmRF[™]

AUTOMOTIVE

- Automotive Radar
- Sensors
- V2X
- Infotainment

CONSUMER

- Mobile Phones (5G)
- Memory
- Wi-Fi
- IOT

INDUSTRIAL

- 5G Infrastructure
- Machine-to-Machine
- Medical
- Remote Sensing



1 GHz

20 GHz

30 GHz

40 GHz

50 GHz

60 GHz

70 GHz

80 GHz

90 GHz

100 GHz

PAD ROL 100A PERFORMANCE+[®]

		Matte Tin	NiPdAu	Corner Pad	Short Pad
Housing	Contact	152144	161717	165546	174360
Metal	Return Loss @ -20 dB	25.3 GHz	19.9 GHz	21.3 GHz	13.0 GHz
	Insertion Loss @ 40 GHz	-0.56 dB	-0.75 dB	-0.51 dB	-0.68 dB
Gold Plated	Return Loss @ -20 dB	19.9 GHz	25.2 GHz	16 GHz	19.8 GHz
	Insertion Loss @ 40 GHz	-0.52 dB	-0.54 dB	-0.60 dB	-0.61 dB

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.

* 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):	Elastomers = 300,000 Contacts = 500,000+ Housing = 1,000,0000+	
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

