

PAD ROL[®] 100A XT

FOR QFN, DFN, AND OTHER PAD-STYLE APPLICATIONS

The Automotive Test Solution That Drives Toward Higher Test Yields

As a designer of high performance devices for the automotive industry, you know that your applications are growing in both numbers and complexity. Since this trend is expected to continue for the next several years, it is more important than ever to require extreme versatility and superior reliability from your test solutions. Whether you are testing Audio & Infotainment, Vehicle Networking, Powertrain, or other automotive device applications, look for the solution that drives your results toward higher test yields and delivers superior production throughput.

Johnstech's The *Pad ROL[®] 100A XT[™]* Automotive Contactor is just the product you're looking for! This Xtreme Temperature (*XT[™]*) capable product is designed to maximize your test results, regardless of your tri-temp testing objectives! Even if you are not testing outside the temperature limits of standard Contactors and sockets, the robust design of the *XT[™]* Contactor provides additional design margin and certainly satisfies even your roadmap requirements.

The *Pad ROL[®] 100A XT[™]* Automotive Contactor improves test yields and increases test reliability through several features, including:

FEATURES & BENEFITS (0.5 Pitch)	
FREQUENCY	40GHz Matte Tin; 40GHz NiPdAu
PITCH	≥ 0.3mm
TEMPERATURE	-65°C to 175°C
CURRENT CARRY CAPABILITY @ 100%	3.1A Matte Tin; 2.6A NiPdAu
HIGH VOLTAGE CAPABLE	16.5kV @ 0.5mm 1.65 pA Leakage Current

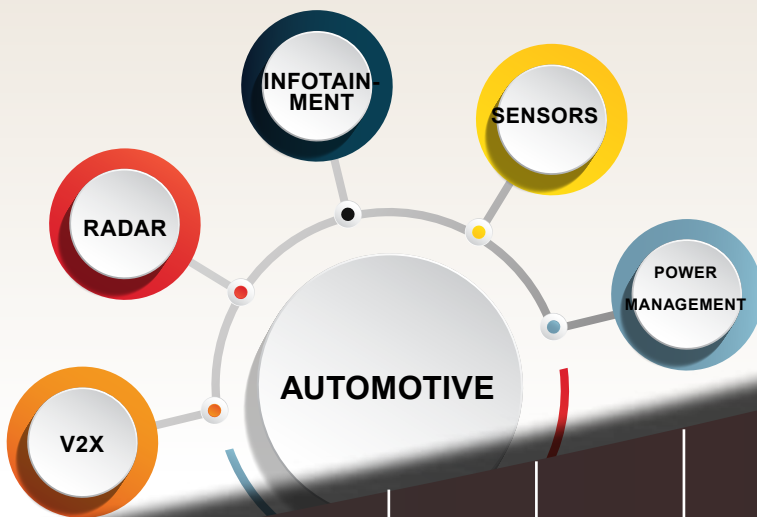
Electrical Reliability Improves Yields

- Patented, One-Piece ROL[®] Contacts
- Delivers Lowest Contact Resistance (CRES)
- High Current Carrying Capability
- Low Inductance
- Extremely Stable Contact Resistance (CRES)
- High Frequency Capability
- Wiping Contact Clears Debris

Mechanically Robust

- Long Life ROL[®] Contacts
- Temperature Test Stability
- Patented Wiping Lengthens MTBA

PRECISION ANALOG TO mmRF



1 GHz

20 GHz

30 GHz

40 GHz

50 GHz

60 GHz

70 GHz

80 GHz

90 GHz

100 GHz

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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: 0.08 pF Mutual: 0.03 pF	Ground: 0.08 pF Mutual: 0.03 pF
S ₂₁ Insertion Loss (GSG):	-1dB @ 40+ GHz	-1dB @ 40+ GHz
S ₁₁ Return Loss (GSG):	-20dB @ 9.9 GHz	-20dB @ 18 GHz
S ₄₁ Crosstalk (GSSG):	-20dB @ 24.2 GHz	-20dB @ 33.5 GHz
Average CRES:	50 mOhms	<20 mOhms
Current Carrying Capacity* (Duty cycle 100%, 50%, 1%)	3.1A, 5.0A, 6.1A	2.6A, 4.2A, 5.2A
RMS Current Carrying Capacity** (Duty Cycle 100%, 50%, 1%)	3.1A, 4.4A, 31.0A	2.6A, 3.7A, 26.0A
Current Leakage:	<1pA @ 10V	

NOTE: Specifications for 0.5mm pitch configurations shown here. These specifications are based on a combination of internal and third-party measured testing.

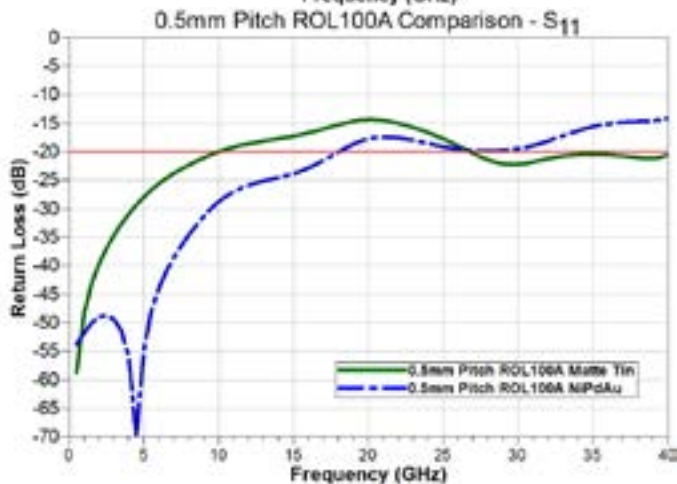
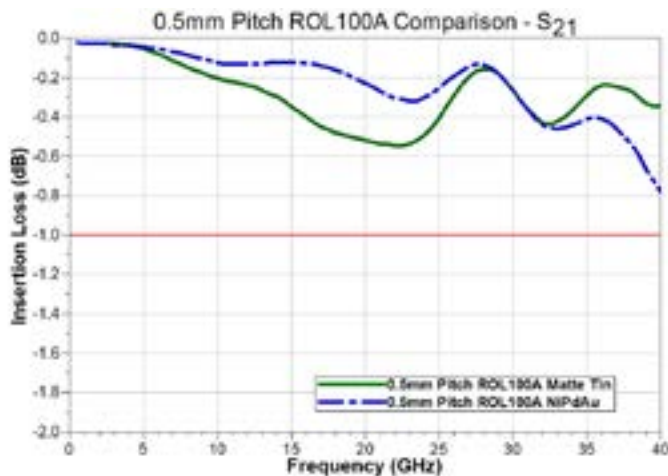
* Test conditions: 300 msec pulse, 20°C temperature rise. Higher currents allowed for higher temperature rises.

** RMS current carrying capacity for pulsed applications. Values based on measured steady state current capacity, standardized to 1 Hz test cycle, 20°C temperature rise. Higher currents allowed for higher temperature rises.

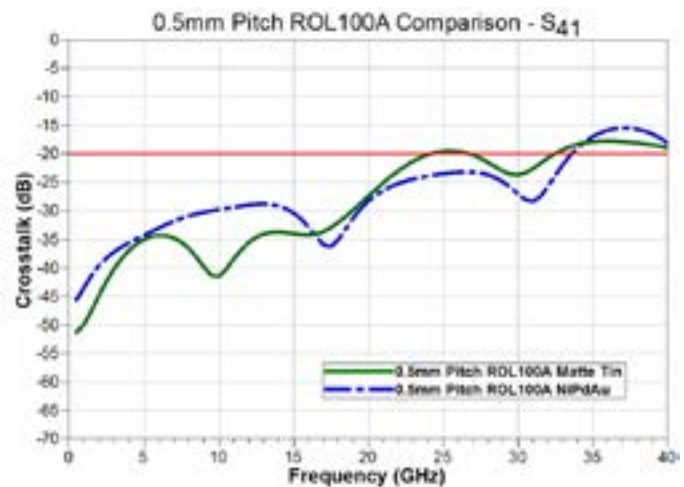
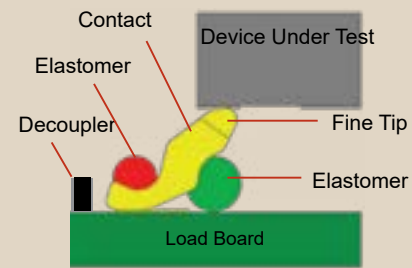
Mechanical Performance	Matte Tin	NiPdAu Configuration
Physical Compressed Height	0.75 mm	
Contact Life***: (# of insertions, Typical Performance)	Elastomers = 300,000 Contacts = 500,000+ Housing = 1,000,000+	
Contact Compliance:	0.175 - 0.200 mm	
Contact Force (per contact):	50 grams	
Temperature:	-65°C to +175°C	
Housing Material:	Torlon 5030	
Contacts:	Gold-plated	Low-Force XL-2
Contact Material:	BeCuNiAu	Gold-plated Alloy

*** 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, and 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 coplanarity; docking coplanarity; and temperature extremes.

**** Contact force is dependent on many variables. The contact force listed is typical and may not represent your test solution.



Methodology



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