

# LEADED ROL<sup>®</sup> 200 XT<sup>™</sup>

FOR QFP, SO, SOT AND OTHER LEADED-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 *Leaded ROL<sup>®</sup> 200 XT<sup>™</sup>* Automotive Contactor is just the product you're looking for! This Xtreme Temperature (*XT<sup>™</sup>*) 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<sup>™</sup>* Contactor provides additional design margin and certainly satisfies even your roadmap requirements.

The Leaded ROL 200 XT Automotive Contactor improves test yields and increases test reliability through several features, including:

### FEATURES & BENEFITS

<b>FREQUENCY</b>	20.7GHz Matte Tin; 21.3GHz NiPdAu
<b>PITCH</b>	≥ .4mm
<b>TEMPERATURE</b>	-65°C to 175°C
<b>CURRENT CARRY CAPABILITY @ 100%</b>	4.3A Matte Tin; 4.4A NiPdAu
<b>HIGH VOLTAGE CAPABLE</b>	16.5kV @ 0.5mm 1.65pA Leakage Current

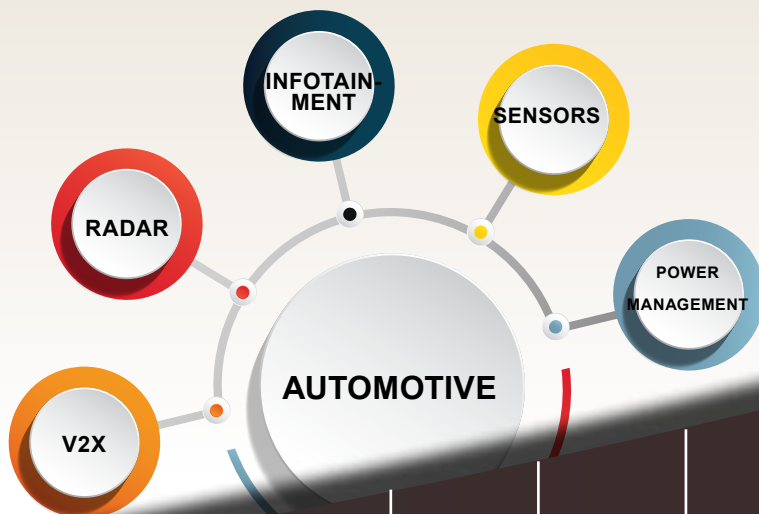
#### Electrical Reliability Improves Yields

- Patented, One-Piece ROL<sup>®</sup> 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<sup>®</sup> 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

**LEADED ROL<sup>®</sup> 200 XT<sup>™</sup>**

# LEADED ROL<sup>®</sup> 200 XT<sup>™</sup>

Electrical Specifications	Matte Tin Configuration	NiPdAu Configuration
Electrical Length (compressed height):	1.98 mm	2.00 mm
Inductance:	Self: 0.42 nH Mutual: 0.16 nH	Self: 0.45 nH Mutual: 0.16 nH
Capacitance:	Ground: 0.23 pF Mutual: 0.14 pF	Ground: 0.20 pF Mutual: 0.08 pF
S <sub>21</sub> Insertion Loss (GSG):	-1dB @ 20.7 GHz	-1dB @ 21.3 GHz
S <sub>11</sub> Return Loss (GSG):	-20dB @ 4.4 GHz	-20dB @ 3.2 GHz
S <sub>41</sub> Crosstalk (GSSG):	-20dB @ 16.7 GHz	-20dB @ 14.5 GHz
Average CRES:	<60 mOhms	<20 mOhms
Current Carrying Capability*: (Duty cycle 100%, 50%, 1%)	4.3A, 7.3A, 10.1A	4.4A, 5.9A, 9.1A
RMS Current Carrying Capability**: (Duty cycle 100%, 50%, 1%)	4.3A, 6.0A, 42.7A	4.4A, 6.3A, 44.4A
Current Leakage:	<1pA @ 10V	
Nearest Decoupling Area:	1.80 mm	

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

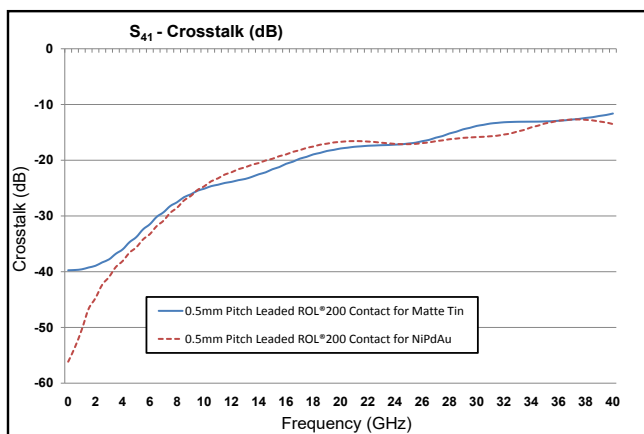
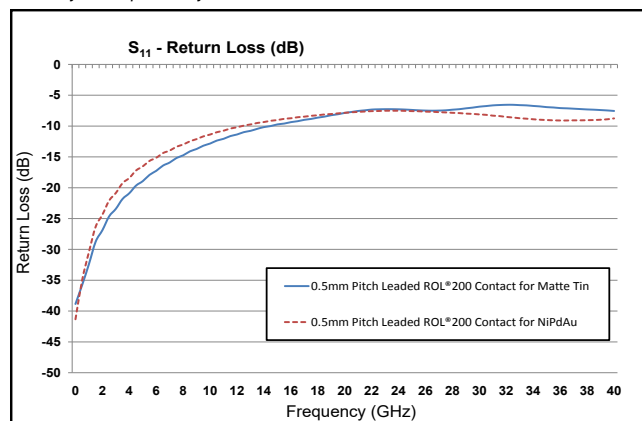
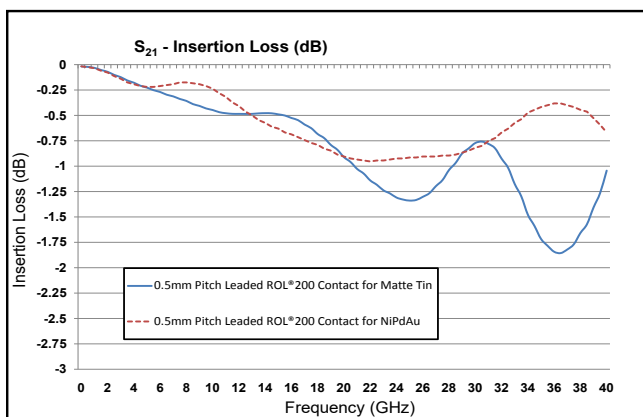
\* Test conditions: 300 msec pulse, 20°C temperature rise. Higher currents allowed for higher temperature rises.

Mechanical Specifications	Matte Tin Configuration	NiPdAu Configuration
Compressed Height:	1.34 mm	1.34 mm
Electrical Length:	1.98 mm	2.00 mm
Contactor Life*** (# of insertions):	Elastomers = 330,000 Contacts = 500,000+ Housing = 2,200,000+	
Contact Compliance:	0.20 mm	
Contact Wipe on Pad:	0.22 mm	0.13 mm
Contact Force (per contact):	50 grams	
Contact Tip Coplanarity:	0.05 mm	
Temperature:	-65°C to +175°C	
Housing Material:	High Performance Torlon <sup>®</sup>	
Contacts:	Gold-Plated	Low-Force XL-2
Contact Material:	Beryllium Copper Alloy	

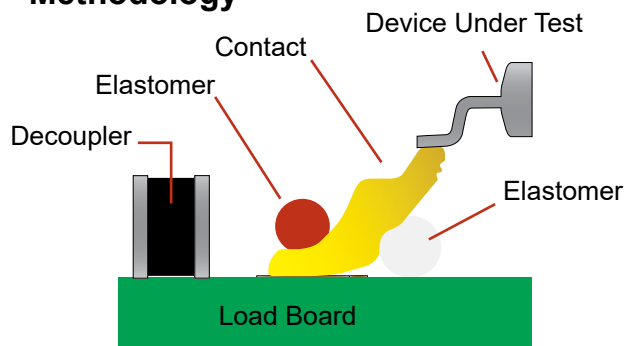
\*\* RMS current carrying capacity for pulsed applications. Values based on measured steady state current capacity, standardized to 1 Hz test cycle, 20°C temperature rise. Higher currents allowed for higher temperature rises.

\*\*\* 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



**Johnstech<sup>®</sup>**

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