LEADED ROL® 400XT

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® 400 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 Leaded ROL 400 XT Automotive Contactor improves test yields and increases test reliability through several features, including:

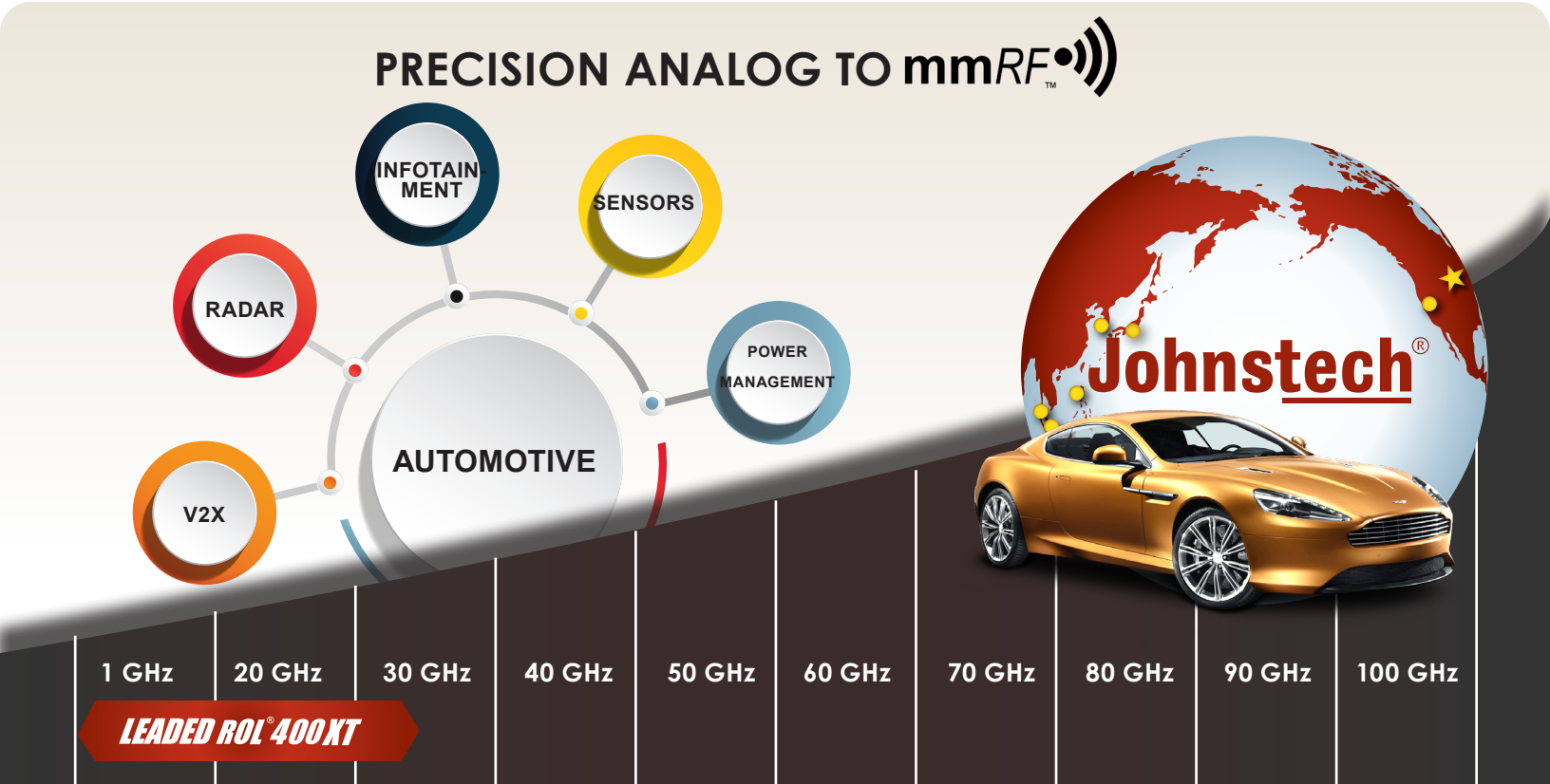
FEATURES & BENEFITS (0.5 Pitch)	
FREQUENCY	5.4GHz Matte Tin; 5.8GHz NIPDAu
PITCH	≥ .4mm
TEMPERATURE	-65°C to 175°C
CURRENT CARRY CAPABILITY @ 100%	4.9A Matte Tin; 3.4A NIPDAu
HIGH VOLTAGE CAPABLE	16.5kV @ 0.5mm 1.65pA Leakage Current

Electrical Reliability Improves Yields

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

Mechanically Robust

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



LEADED ROL®400XT

Electrical Specifications	Matte Tin Configuration	NiPdAu Configuration
Electrical Length (compressed height):	3.60 mm	3.54 mm
Inductance:	Self: 0.47 nH Mutual: 0.21 nH	Self: 0.69 nH Mutual: 0.26 nH
Capacitance:	Ground: 0.42 pF Mutual: 0.34 pF	Ground: 0.45 pF Mutual: 0.28 pF
S_{21} Insertion Loss (GSG):	-1dB @ 5.4 GHz	-1dB @ 5.8 GHz
S_{11} Return Loss (GSG):	-20dB @ 1.2 GHz	-20dB @ 1.2 GHz
S_{41} Crosstalk (GSSG):	-20dB @ 3.8 GHz	-20dB @ 6.4 GHz
Average CRES:	<30 mOhms	<20 mOhms
Current Carrying Capability*: (Duty cycle 100%, 50%, 1%)	4.9A, 9.0A, 14.3A	3.4A, 6.4A, 15.8A
RMS Current Carrying Capability**: (Duty cycle 100%, 50%, 1%)	4.9A, 6.9A, 49.0A	3.4A, 4.8A, 33.7A
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
Physical Compressed Height:	2.79 mm	
Contactor Life *** (# of insertions):	Elastomers = 300,000 Contacts = 500,000+ Housing = 2,000,000+	
Contact Compliance:	0.23 mm	
Contact Force (per contact):	60 grams	40 grams
Contact Tip Coplanarity:	0.05 mm	
Temperature:	-65°C to 175°C	
Housing Material:	Torlon® 5030	
Contacts Material:	BeCuNiAu	XL-2

*** 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.*

Manual Actuator

VMA (Vertical Manual Actuator)
ZMA (Z-Axis Manual Actuator)

Housing Options

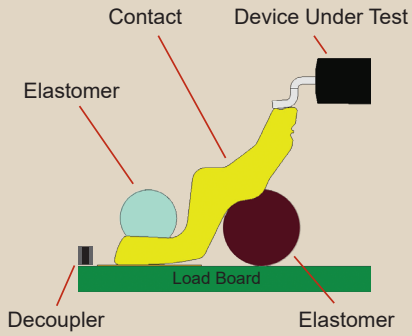
Housings are offered in standard handler specific sizes with custom sizes also available

Contact Options

Gold-Plated or Low Force XL-2
Pitches from 0.50mm – 1.27mm

Methodology

Matte Tin configuration shown.



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