

PAD ROL® 200KR 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 *Pad ROL® 200KR 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® 200KR XT™* Automotive Contactor improves test yields and increases test reliability through several features, including:

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

Mechanically Robust

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

Kelvin-Ready™ Versatility

- Configurable Application Flexibility
- Two Contact Profiles Optimize Performance
- Kelvin Only When And Where Needed
- Superior Load Board Design (see back)
- Determine When To Clean
- Eliminate / Minimize Retests
- Redundant Sense Contact Reliability
- Self Cleaning Contacts Clear Debris

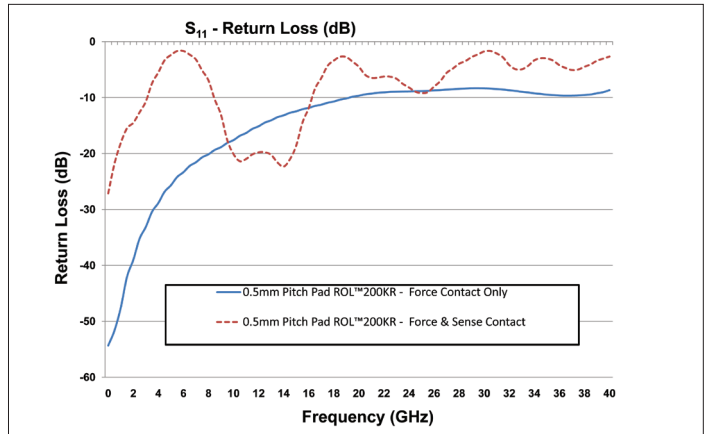
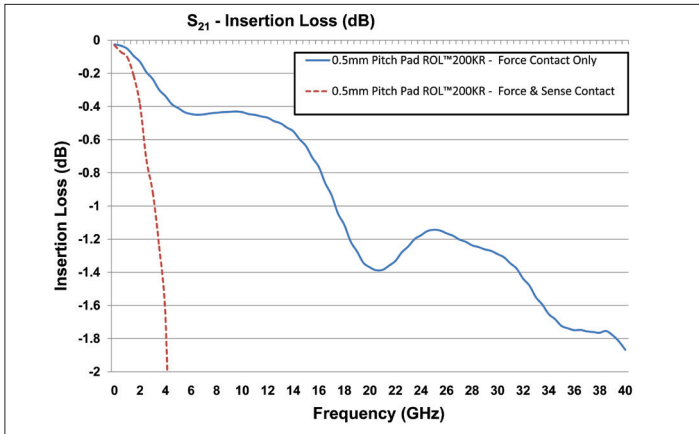


Pad ROL® 200KR XT™

Electrical Specifications	For Contact Only (Non-Kelvin I/O's)	Force + Sense (Kelvin I/O's)
Inductance:	Self: 0.47 nH Mutual: 0.10 nH	Self: 3.5 nH Mutual: 0.72 nH
Capacitance:	Ground: 0.16 pF Mutual: 0.06 pF	Ground: 0.78 pF Mutual: 0.25 pF
S ₂₁ Insertion Loss (GSG):	-1 dB @ 17.1 GHz	-1dB @ 3.0 GHz
S ₁₁ Return Loss (GSG):	-20 dB @ 8.0 GHz	-20dB @ 0.8 GHz
S ₄₁ Crosstalk (GSSG):	-20 dB @ 33.5 GHz	-20dB @ 17.3 GHz
Average CRES:	40 mΩ Force Contact 330 mΩ Sense Contact	<1 mΩ System
Current Carrying Capacity (Duty Cycle 100%, 50%, 1%):	2.8 A, 4.0A, 5.8A Force Contact 0.8A, 1.3A, 1.7A Sense Contact	
Current Leakage:	<1pA @ 10V	
Nearest Decoupling Area:	1.58 mm	

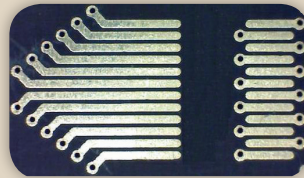
Mechanical Specifications	Force Contact (non-Kelvin)	Force + Sense (Kelvin)
Compressed Height:	1.40 mm	
Electrical Length:	2.00 mm	
Contact Force:		
Force Contact Only (Force + Sense Contact)	@ -65°C @ 25°C @ +175°C	30 grams (60 grams) 30 grams (60 grams) 40 grams (70 grams)
Component Life (# of insertions):		Elastomers = 300,000 Force Contacts = 500,000+ Sense Contacts = 300,000+ Housing = 2,000,000+
Contact Compliance:	0.20 mm	
Contact Wipe on Pad:	0.17 mm	
Contact Tip Coplanarity:	0.05 mm	
Temperature:		-65°C to +175°C
Housing Material:		High Performance Torlon®
Force Contacts:		Low-Force XL-2K Fine Tip

*Force contacts with 1000Ω resistor in parallel with self inductance and 30mΩ of contact resistance model accurate to 10 GHz.

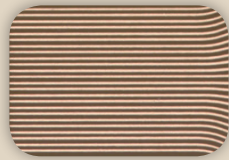


Kelvin-Ready™ Load Boards More Reliable, Less Expensive

The Pad ROL® 200KR Kelvin-Ready™ load board solution separates the Force and Sense load board traces in a front and back format, allowing standard size load board traces to route test signals. The relatively larger traces maintain testing reliability and simplify load board design, reducing load board manufacturing expenses relative to other socket designs. For I/Os where Kelvin is not needed, removing the Sense line creates additional load board real estate and can also provide a straight line path to high speed connectors when testing RF and other high speed signals.

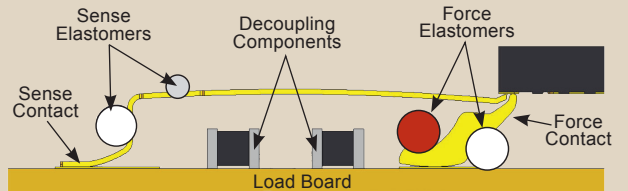


Kelvin-Ready™ Front/Back Design



Spring Pin Side-by-Side Design

Methodology



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