



# Edge 400a

## Edge 400A SERIES CONTACTOR

For High Fidelity DIMM and other (DDR—DDR5; PCI®/PCI Express®) Applications

### Your Optimum Solution for Memory Modules

Johnstech's patented Edge technology exceeds the testing challenges of today's low-voltage (1.8 V & 1.5 V), high-speed Memory Modules. The Edge 400a Series combines a modular design for easier component configuration/replacement and improved warped-Module handling capability, with the Johnstech hallmark of excellent electrical performance and mechanical reliability. A Standard Reference Design Portfolio (to JEDEC specs) is offered in our SelecTest Program for quick delivery or customization to meet specific ATE requirements is available. For increased Test Cell efficiency and lower test costs, choose the Edge 400a Series.

#### Characterization

Edge 400a Contactors minimize parasitic-induced signal disturbances, creating an ideal environment for Module Characterization, Lab Testing and Prototype analysis

- Reduced Edge Rate Degradation
- Less Noise Incursion

- Reliable and repeatable results
- Lab results correlate 100% to Production Test
- Configurable from Manual to Automated Test

#### Production Test

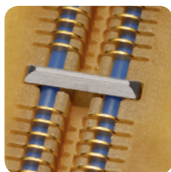
The Edge 400a Series lowers your Overall COT (Cost of Test) by providing:

- Superior Electrical Performance
- Robust Mechanical Design
- Configurable & Replaceable Components: Alignment Towers, Contacts, Elastomers, Guide Rails, Voltage Keys and (optional) Ejector Levers
- Long Contactor/Component Life
- Low, Consistent Contact Resistance
- High First-Pass Yields
- Longer MTBA (Mean Time Between Assists)
- Improved OEE (Overall Equipment Efficiency)

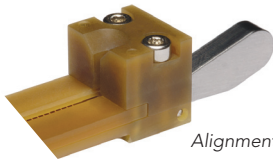
3 (Actual Size)



Edge 400a Series Contact Profile



Voltage Key



Alignment Tower



Guide Rails

Your Contact For Higher Performance

**Johnstech®**

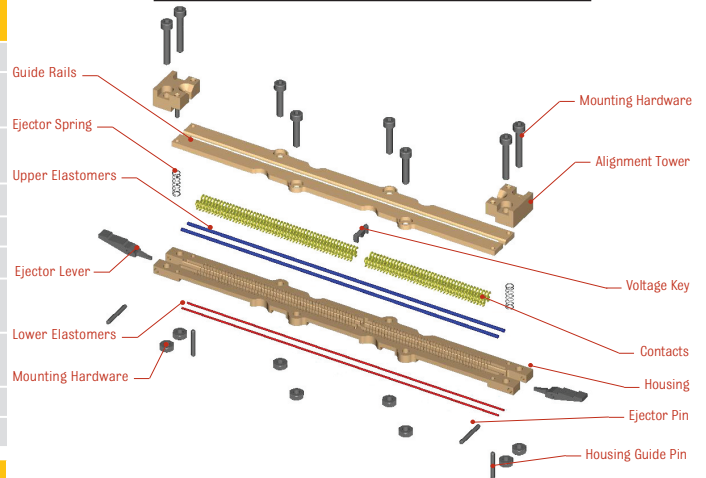
# EDGE 400A SERIES SPECIFICATIONS

Electrical Specifications	1.0 mm Pitch	0.60 mm Pitch
Electrical Length:	2.60 mm	2.60 mm
Inductance:	Self: 0.82 nH Mutual: 0.31 nH	Self: 0.51 nH Mutual: 0.23 nH
Capacitance:	Ground: 0.56 pF Mutual: 0.21 pF	Ground: 0.74 pF Mutual: 0.33 pF
$S_{21}$ Insertion Loss/Bandwidth (G-S-G):	-1 dB @ 12.2 GHz	-1 dB @ 8.2 GHz
$S_{11}$ Return Loss/Bandwidth (G-S-G):	-20 dB @ 2.8 GHz	-20 dB @ 1.8 GHz
$S_{41}$ Crosstalk/Bandwidth (G-S-S-G)	-20 dB @ 20.5 GHz	-20 dB @ 3.4 GHz
Impedance — (G-S-G): (G-S-S-G):	37.6 $\Omega$ 64.1 $\Omega$	29.1 $\Omega$ 32.8 $\Omega$
Average Contact DC Resistance (over 20K insertions):	<20 m $\Omega$	-20 m $\Omega$
Current Carrying Capability:	5 A	5 A
Current Leakage:	<10pA @ 10 V	<10pA @ 10 V

Mechanical Specifications	For 1.0 mm & 6.0 mm Pitches
Physical Contact Length:	4.02 mm
Contactor Life (# of insertions):	Elastomers = 300,000 Contacts = 500,000 Housing = 2,000,000 Alignment Towers = 750,000 Guide Rails = 750,000 Voltage Keys = 750,000
Contact Compliance:	0.20 mm
Contact Wipe on Pad:	0.13 mm
Contact Force:	28 grams
Contact Tip Coplanarity:	0.05 mm
Environmental:	-40°C to 155°C
Housing Material:	Ultem® 2300
Contact Material:	Beryllium Copper plated with Nickel and Gold (BeCuNiAu)

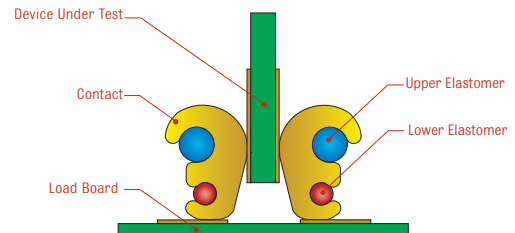
Specifications provided here are based on Johnstech's Testing. Actual individual results may vary based on a wide range of variables including: the Handler/Contactor/Load Board Interface, the Plunge Depth and Speed, the Device Presentation, the package and Device Plating Characteristics; and the general Test Floor conditions, policies and maintenance activities.

## Edge 400a Contactor Components



## METHODOLOGY

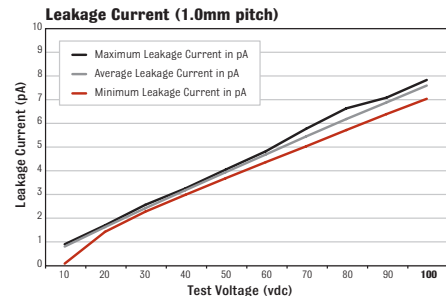
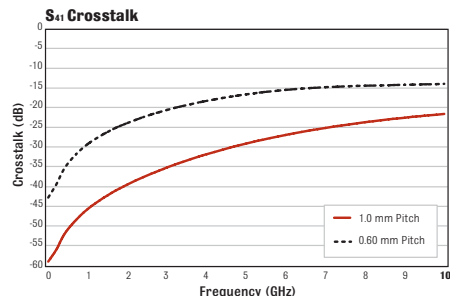
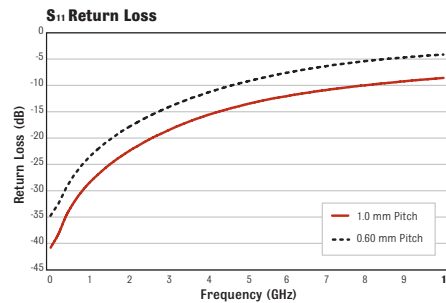
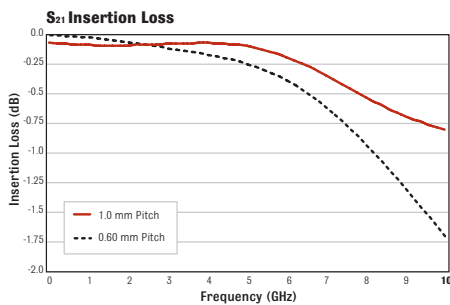
### Edge 400a Contact Methodology



### Ejector Lever Options



## EDGE 400A SERIES PERFORMANCE



### Edge 400a Series Standard Reference Designs

Johnstech offers a catalog of standard reference designs developed to JEDEC and Handler-interface specifications. Custom designs to meet other application requirements are also available. Contact Johnstech for assistance.

### Johnstech Services/Resources

Test Floor Technical Support – Worldwide Field Service Offices; First-Pass Yield Enhancement; Performance Audits; Customized Training and Applications Engineering. Online Tech Support Form at: [www.johnstechhelp.com](http://www.johnstechhelp.com)

### Engineering Services

Load Board Evaluation & Testing; HFSS 3D Modeling; Electrical Performance Analysis; PCB/Contactor/Device Optimization; Contactor S Parameter & Characterization Data; Thermal Conductivity Analysis and Advanced Design System (ADS) Simulation, Analysis & Optimization.

### Website ([www.johnstech.com](http://www.johnstech.com))

Product, Test, Industry and Support Information; Downloadable, Product Spec Sheets; Maintenance & Inspection Guides, Tech Papers and Application Notes.