

# Edge 400a

## EDGE 400a SERIES CONTACTOR

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

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 SelectTest 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.

## 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
- Increased MTBA (Mean Time Between Assists)
- Improved OEE (Overall Equipment Efficiency)

## 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.



Your Optimum Solution for Memory Module Testing.

3 (Actual Size)



Edge 400a Series Contact Profile



Guide Rails



Voltage Key



Alignment Tower

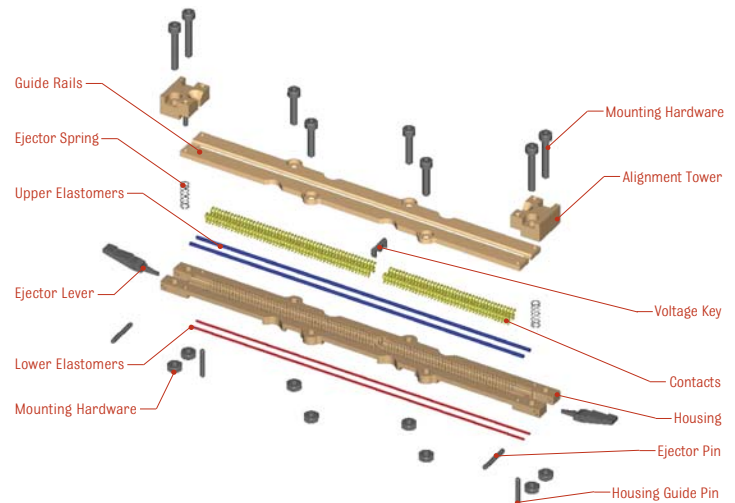
## EDGE 400a SERIES SPECIFICATIONS

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

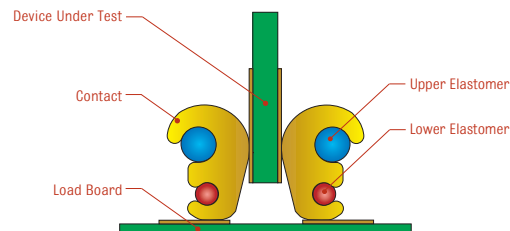
| Mechanical Specifications         | (for both 1.0 mm & 0.60 mm Pitches)   |
|-----------------------------------|---|
| Physical Contact Length:          | 4.02 mm   |
| Contactor Life (# of insertions): | Elastomers = 300,000<br>Contacts = 500,000<br>Housing = 2,000,000<br>Alignment Towers = 750,000<br>Guide Rails = 750,000<br>Voltage Key = 750,000 |
| Contact Compliance:               | 0.20 mm   |
| Contact Wipe on Pad:              | 0.13 mm   |
| Contact Force:                    | 28 grams  |
| Contact Tip Coplanarity:          | 0.05 mm   |
| Environment:                      | -40°C to 155°C  |
| Housing Material:                 | Ultem® 2300   |
| Contact Material:                 | Beryllium Copper plated with<br>Nickel and Gold (BeCuNiAu)  |

Depending on overall interface, numbers may vary. All above information is based on measured data.

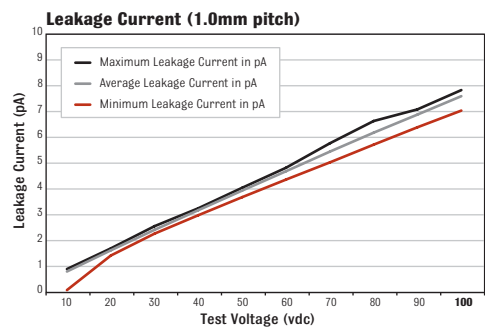
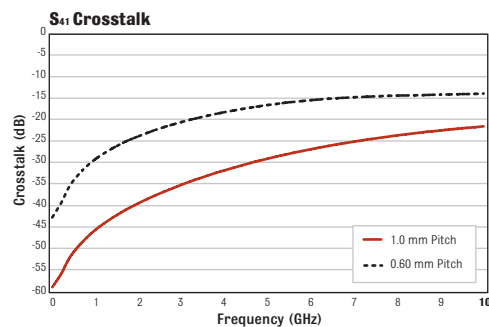
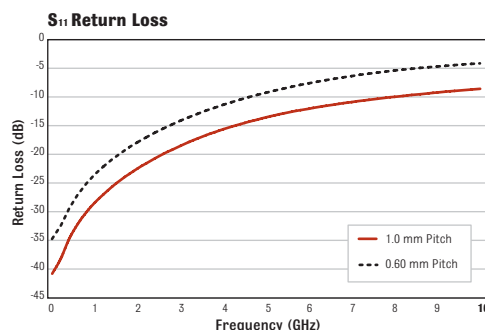
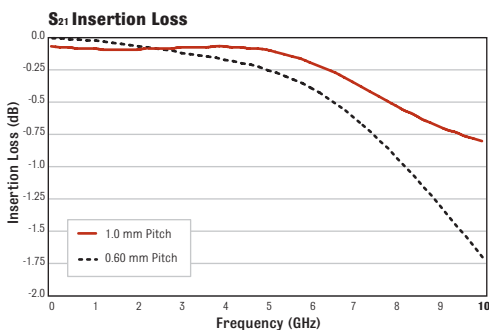
## Edge 400a Contactor Components



## Edge 400a Contact Methodology



## EDGE 400a SERIES PERFORMANCE



## ADDITIONAL INFORMATION

### 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.

**Comprehensive 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. Online Info Request Forms at: [www.therightcontacts.com](http://www.therightcontacts.com)

### Ejector Lever Options



## JOHNSTECH INTERNATIONAL CORPORATION

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