

New!

Verticon™ 100 BGA Contactor

Transparent Performance

for BGA and FBGA Devices

Your High Precision, Low Maintenance Solution.

Ideal for High Speed Digital, RF, and Precision Analog Device Testing

Exceptional Electrical Performance.

The very short electrical contact length of the Verticon™ 100 BGA contactor, makes it well suited for high frequency wireless and microwave applications as well as high-speed digital interfaces. The combined contact profile design and proprietary plating enable low and stable contact resistance measurements. This makes the Verticon™ 100 BGA well-suited for precision low noise DC measurements.

The Verticon™100 BGA offers an electrical advantage:

- High bandwidth: 33.7 GHz
- Low inductance: 0.32nH
Low capacitance: 0.059pF
- High current carrying capacity:
3A
- Low, stable contact resistance:
<50 ± 10 mOhms

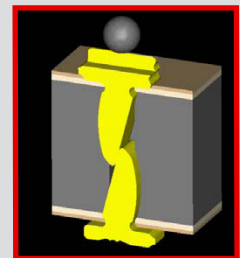
Robust Mechanical Design.

The Verticon™ 100 BGA contactor's simple but robust mechanical design ensures reliable performance with minimal maintenance and fast cleaning. The patented contact self-cleaning micro wipe action removes contamination from the device balls, delivering high first pass yield and extended MTBA cycles. The low force contacting and engineered materials of construction result in long contact life. And the motionless contact foot maximizes load board life. Replacement contacts are preassembled in a cartridge, providing quick mean-time-to-repair (MTTR).

The Verticon™100 BGA delivers mechanical excellence:

- High first-pass yield: 99+%*
- Extended MTBA: 50,000-100,000 insertions for precision applications (<150 mOhms)*
- Quick MTTR: <5 minutes
- Increased load board life

Delivering the test performance you need and the outcomes your customers demand.



Contact Profile

Superior Electrical Performance
+
Superior Mechanical Performance
= Lowest Overall Cost of Test

*Specifications provided here are based on internal testing at Johnstech, customer production sites, and third party electrical testing. Actual individual results may vary based on a wide range of variables including: handler/contactor/load board interface, handler plunge depth and velocity, device presentation, alignment plate condition, package plating characteristics, test floor conditions, maintenance activities, mounting/fastening techniques, non-coplanarity from site to site, non-coplanar docking, and temperature extremes.

Your Contact For Higher Performance

Johnstech®

20
YEARS

Verticon™ 100 BGA SPECIFICATIONS

Electrical Specifications	
Electrical Length (compressed height):	0.95 mm
Inductance:	Self: 0.32 nH Mutual: 0.068 nH
Capacitance:	Self: 0.059 pF Mutual: 0.012 pF
S_{21} Insertion Loss/Bandwidth (Ground-Signal-Ground):	-1dB @ 33.7 GHz
S_{11} Return Loss/Bandwidth (Ground-Signal-Ground):	-20dB @ 25.1 GHz
S_{41} Crosstalk/Bandwidth (Ground-Signal-Signal-Ground):	-20dB @ 33.5 GHz
Average Contact DC Resistance:	<50 mOhms
Current Carrying Capacity:	3 A
Current Leakage:	<1pA @ 10 V
Contact Decoupling Area:	3.5mm offset Device Width + 7mm

Mechanical Specifications	
Physical Contact Length:	1.32 mm
Compressed Height:	0.95 mm
Contact Life (# of insertions):	Cartridge = >500,000 Housing = >2,000,000
Mechanical Compliance:	0.37 mm
Electrical Compliance (operating range):	0.29 mm
Contact Force (fully compressed):	35 grams
Contact Tip Coplanarity:	<0.05 mm max
Environmental:	-40°C to 155°C
Housing Material:	Torlon*

Manual Actuator

Manual Actuator	Description	Operation	Material	Ball Count
DL-VCMA	Double Latch, Clip-On	Push to Force*	Ultem®/Torlon®	0-100
ZMA	Single Latch, Bolt Down	Push to Force*	Aluminum/ Ultem®/Torlon®	81-2704



Double-Latch VCMA



Single-Latch ZMA

* Note: Manual actuators can be set for "Push to Distance" by request.

Housing Options

Housings are offered in standard handler-specific sizes with custom sizes also available. Contact Johnstech for assistance.

Pitches

0.5mm - 1.27mm

Contact Options

There is one standard contact set for all configurations.

Johnstech Services/Resource Options

Test Floor Technical Support - Worldwide

Additional Services Include: First-Pass Yield Enhancement; Performance Audits; Customized Training; Applications Engineering. Online Tech Support at: www.johnstech.com/support

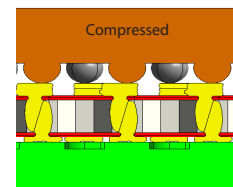
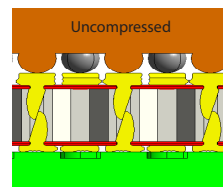
Engineering Services

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

Website (www.johnstech.com)

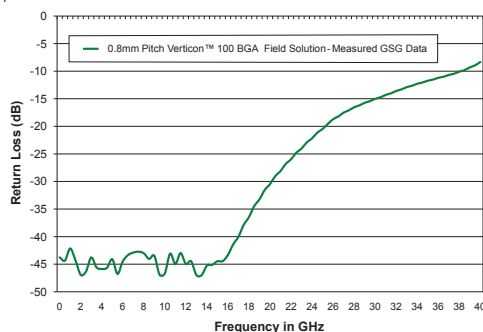
Product, Test, Industry Support Information; Downloadable, Product Spec Sheets; Maintenance and Inspection Guides; Tech Papers; Application Notes.

METHODOLOGY

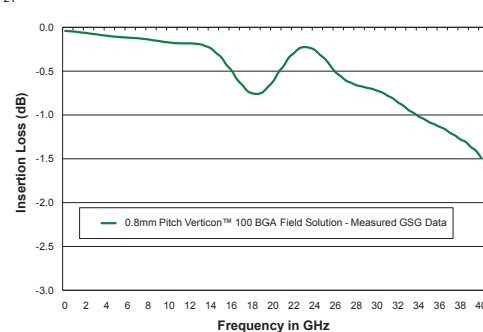


Verticon™ 100 BGA Performance

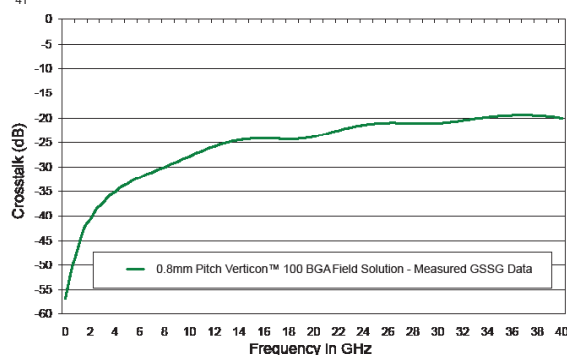
S_{11} Return Loss



S_{21} Insertion Loss



S_{41} Crosstalk



Eye Diagram

