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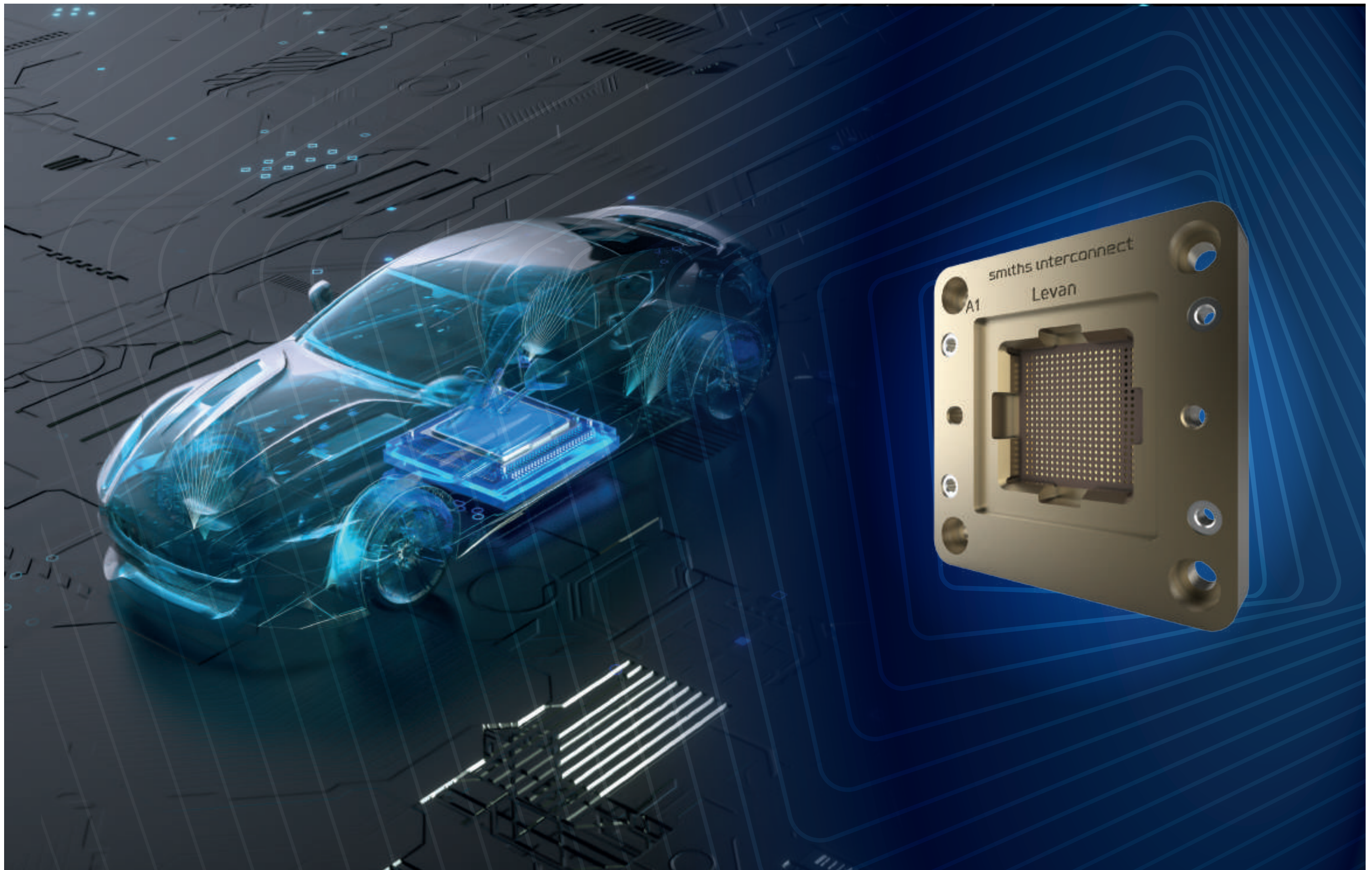
Levan Elastomeric contact Test Socket

High Bandwidth Test Socket for IC Testing



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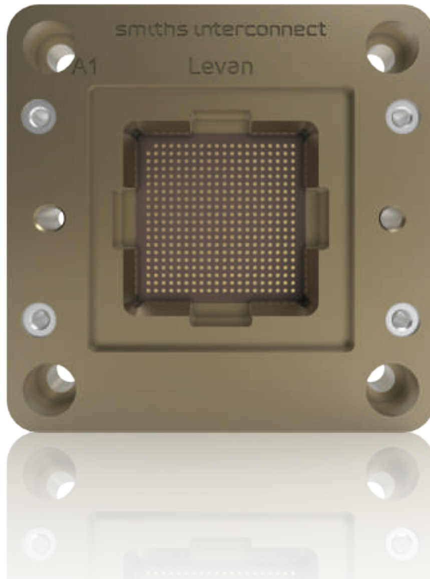


We introduce the Levan elastomeric socket family, engineered specifically with precision. The elastomeric grid of Levan features conductive columns that guarantee accurate and consistent test results across a spectrum of devices. It's a great test solution for BGA, LGA, QFN and other variants.

Its high bandwidth and low inductance capabilities render it electrically invisible to the test system, safeguarding against ball damage to Devices Under Test (DUT) and providing unmatched electrical and mechanical advantages. Levan elevates testing standards from engineering requirements to high-volume production, ensuring versatility and cost-effectiveness.

Product Features

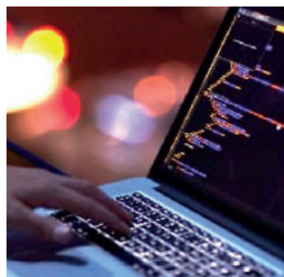
- Solution for BGA, LGA, QFN and other variants
- RF Bandwidth > 40 GHz @ -1dB IL
- Short signal path ≤ 0.9 mm
- Ability to do Impedance match signals
- Consistent stable contact resistance 100 mΩ (Avg.)
- Low Inductance
- Optimized design based on test application
- Tri-Temp socket design to support -55 °C to +160 °C
- Designed for manual test, bench test, and HVM production test using the same socket

Benefits

- Design adaptation to meet requirement
- Electrically transparent signal
- Matched Impedance
- Excellent DC performance
- Application matching allows for increased yield and product life
- Precision-machined socket housing ensures robust mechanical performance
- Field repairable, easy replacement of Levan elastomer
- Cleaning is user-friendly and simple
- Match existing PCB socket footprint and test hardware lead to cost saving for customers
- Reduced delivery times over probe sockets

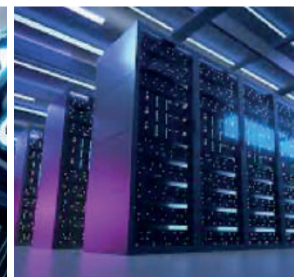
End Product Markets

Communication

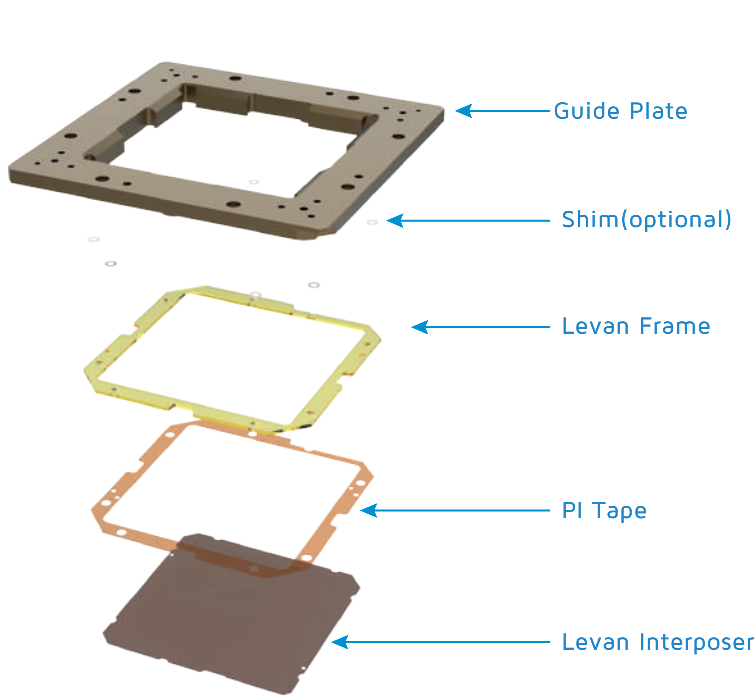

Computing

Consumer

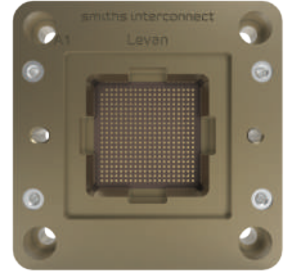
Automobile


Data Centres

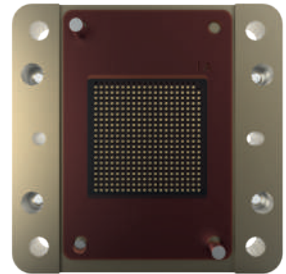
Product Structure



Front View



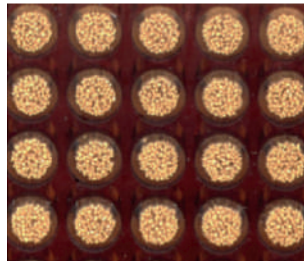
Back View



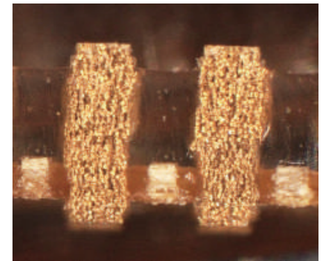
Product Specifications

Material	
Conductive Particle	Au Plated Ni
Holding Frame	Plastic or Stainless Steel
Body	Silicon
Electrical	
Contact Resistance (mΩ)	30~50
Bandwidth (@-1dB, GHz)	23~108
Return Loss (@-10dB, GHz)	10~110
Self Inductance (nH)	0.08~0.29
Mechanical	
Package Types	BGA/LGA/QFN/QFP
Operation Temperature (°C)	Normal : -40°C~ 125°C Special : -55°C ~ 160°C
Testing Travel (mm)	0.15 (Max=0.25)
Contact Force (gf per pin)	8 ~ 55
Mechanical Lifetime (T/D)	ATE : < 50K
Application specification	
Pitch (mm)	0.3 ~ 1.27
Max Pin Count	< 8,000

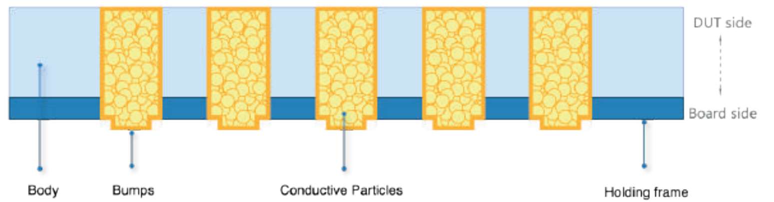
Array of Columns

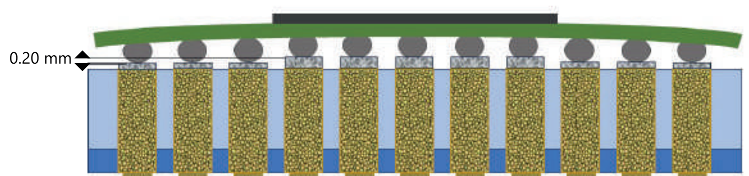


Cross Section



Structure





Column height increased in center array to accomodate package cp-planarity tolerances
(columns can be arranged in any location thoughout the IC array)

Levan Elastomer Product Options

Product Applications

- CN – Suitable for most applications.
- CM – Developed for memory applications running in production test environment.
- CW – Includes Kapton ball guide to align BGA for larger size BGA devices. Or production fine pitch BGA applications.
- PiS – Intended for production applications like SLT without ball damage and increased life.
- mPiS – Designed for ultra-fine pitch memory and SoC applications.

TYPE	PITCH	CONTACT FORCE	INSERTION LOSS (@-1dB)	MAIN APPLICATION
CN	**0.3 ~1.27mm**	**8~55gf/pin**	**23.4~108GHz**	**Logic / Development of evaluation uses and for handler test**
CM	**0.8mm**	**45gf/pin**	**66.9 GHz**	**Memory-IC DRAM DDR2&3, GDDR3&5**
CW	**0.4~1.27mm**	**10~35gf/pin**	**51~102 GHz**	**Fine pitch & High pin count Memory- DDR4&5, LP-DDR Logic-IC , SOC-IC, RF-IC**
PiS	**0.35~1.27mm**	**10~30gf/pin**	**51~102 GHz**	**Fine pitch & Automotive Memory-IC DDR4&5, LP-DDR**
mPiS	**0.3~0.35mm**	**8~16gf/pin**	**91~104 GHz**	**Fine pitch Memory-IC LP-DDR**

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