



TEST SOLUTIONS

INTERFACE SOLUTIONS
CONTACTING SEMICONDUCTORS
PCB FULL CUSTOM SOLUTIONS
SPECIALITIES – CUSTOMISED DESIGNS



WATCH THE VIDEO >>



WORLDWIDE SITES

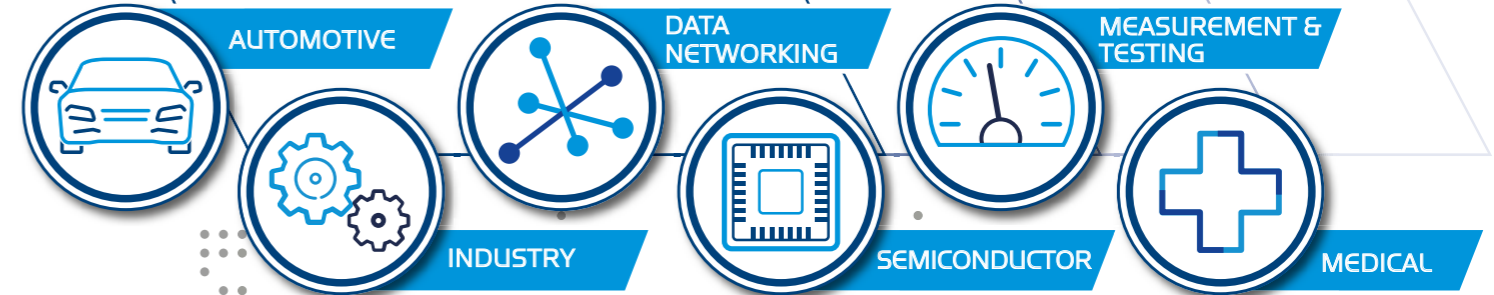


ASIA HQ Tokyo Japan, founded 1956
(Listed in the first section of the Tokyo Stock Exchange)
 Design Center: 1
 Sales Office: 11
 Manufacturing Site: 8 **20**

EMEA HQ Munich Germany, founded 1986
 Design Center: 2
 Sales Office: 5
 Manufacturing Site: 1 **8**

AMERICAS HQ San Jose CA. USA, founded 1983
 Design Center: 1
 Sales Office: 1
 Manufacturing Site: 1 **3**

MARKETS



WORLDWIDE EMPLOYEES



GROUP 2,309 in production
 325 in engineering **3,280**

EMEA 130 in production
 110 in engineering **385**

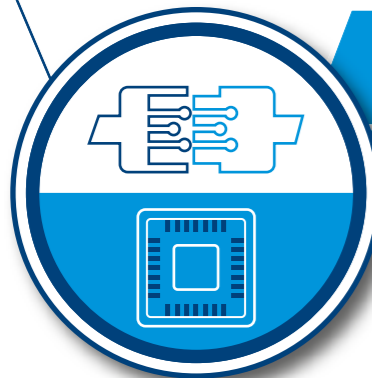
ANNUAL SALES



GROUP
333 Mio. Euro

EUROPE
104.8 Mio. Euro

DIVISIONS



CONNECTOR SOLUTIONS
 Standard & customised connectors,
 cable assemblies

TEST SOLUTIONS
 Test & burn-in sockets, test contactors,
 module test adapters, PCB design

DESIGN CENTER



- Complex 3D CAD Construction
- Design FMEA
- Analysis using FEM
 - Structural Mechanics
 - Moldflow for Plastics
 - Thermal Simulation (Flow & Static)
 - Signal Integrity
- PCB Design
- Circuit Simulation
- High Resolution 3D Prototyping
 - Plastics (Photo Polymeric)
 - Metal (LMF Laser Metal Fusion)
- In-house Sample Construction

TEST LABORATORY



- High Voltage & High Current Testing
 - High Frequency Measurements
 - Soldering
 - SEM (Scanning Electron Microscope)
 - EDX (X-Ray spectroscopy)
 - Computer Tomography / X-Ray
 - X-Ray Fluorescence Spectrometer
 - De-Rating
- ENVIRONMENT**
- Climatic & Temperature Chambers
 - Mixed Gas (4 Gases) Testing
 - Shock and Vibration Chamber
 - Corrosion Tester
 - IP Testing
 - Bending-Rotation Tester

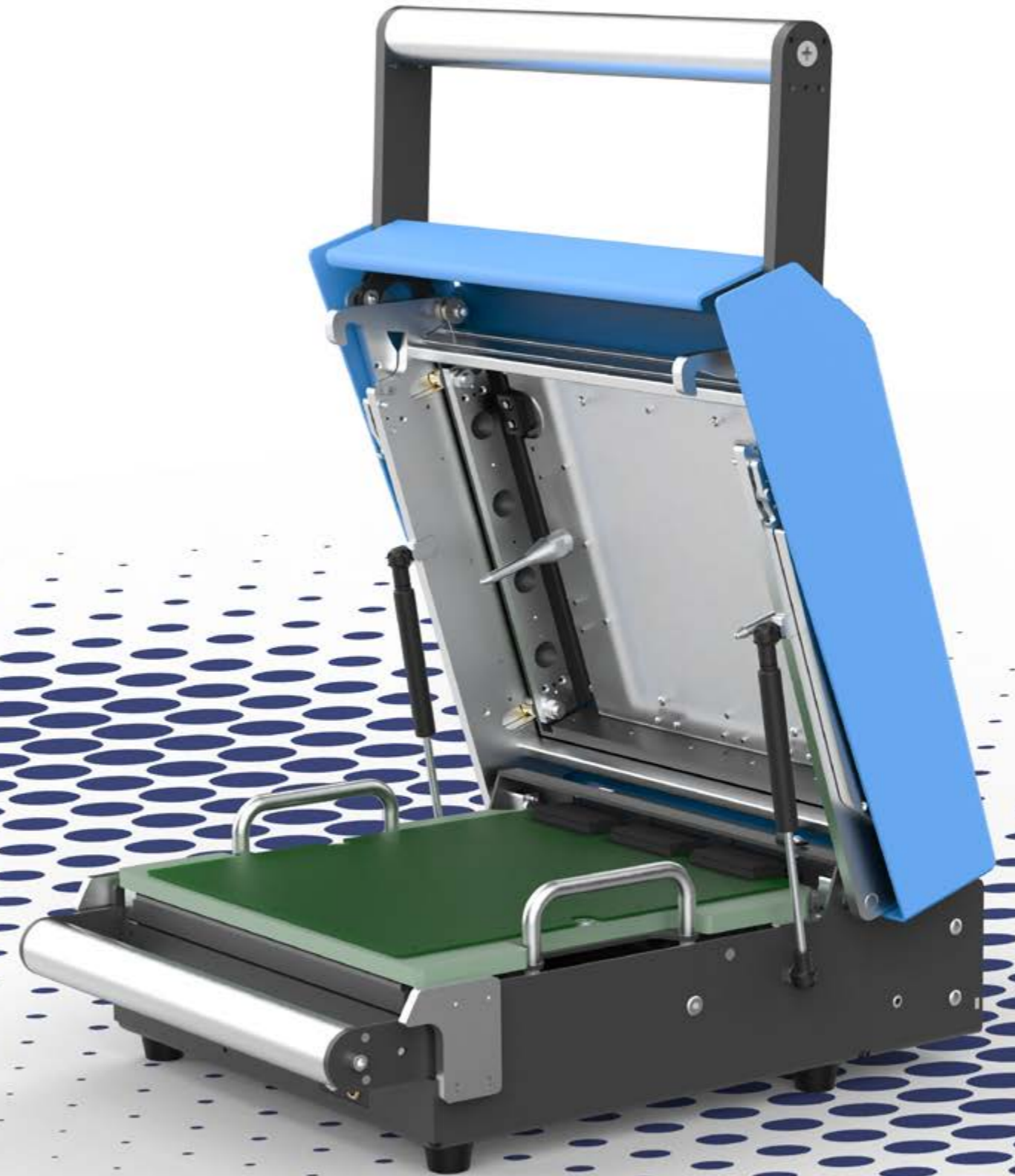
MANUFACTURING



In our production facility in Frankfurt (Oder) Germany, we manufacture connectors and cable assemblies as well as test contactors on 5,148 m².



INTERFACE SOLUTIONS





INTERFACE SOLUTIONS

Y-ETI – TEST FIXTURE

THE NEW DIMENSION OF TESTING

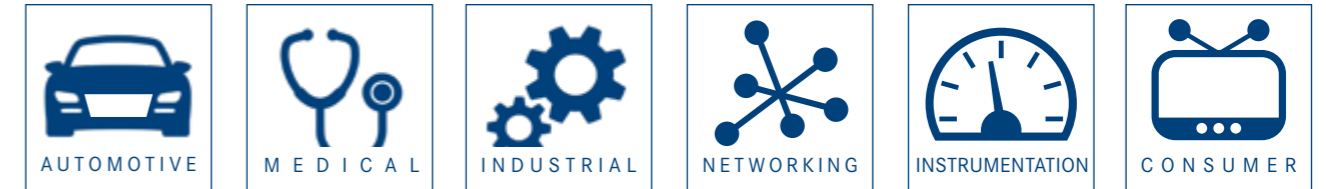
Y-ETI

S E R I E S

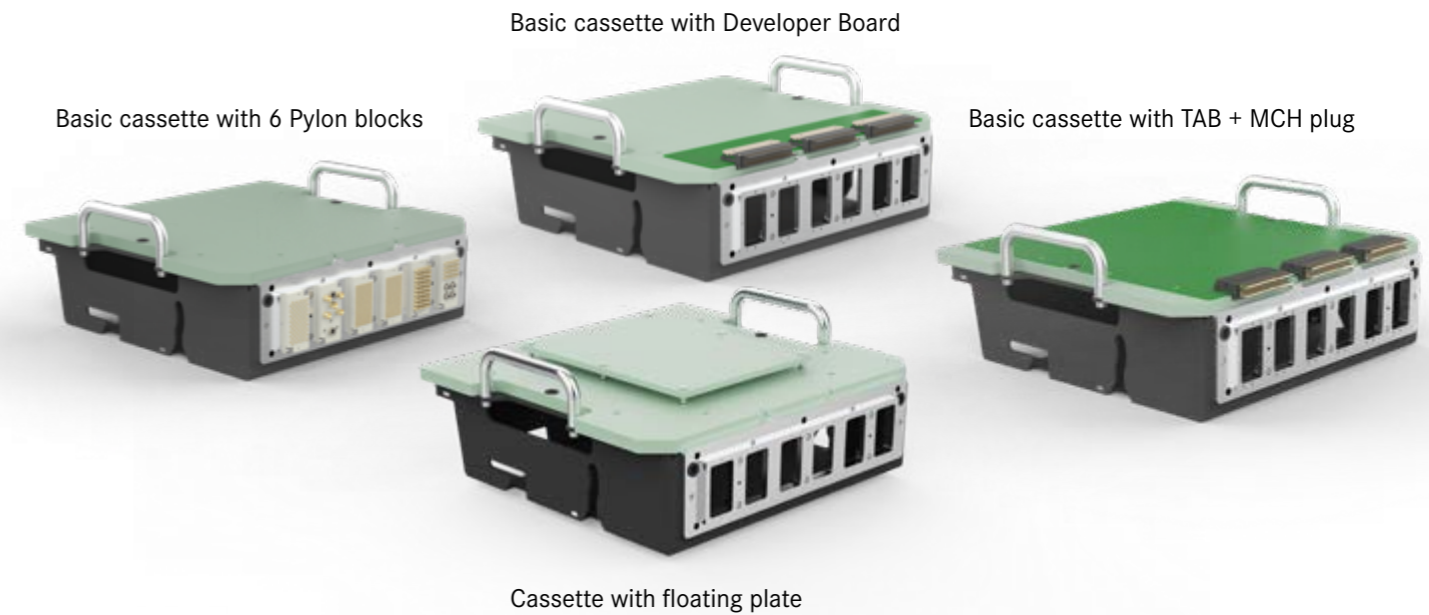
After more than 50 years of experience in the semiconductor test industry, a clear evolutionary step is entering the module testing sector. Therefore, we use our years of expertise in the test socket and connector business, resulting in excellent test contacting, to provide solutions for your testing challenges. The innovative Y-ETI test fixture from Yamaichi Electronics is a modular system which can be adjusted to customer requirements for testing electronic assemblies. With the Y-ETI, Yamaichi provides a solid test fixture, designed and manufactured in Germany. With Y-ETI's precision, reliable testing is simple for the user.



INDUSTRIES



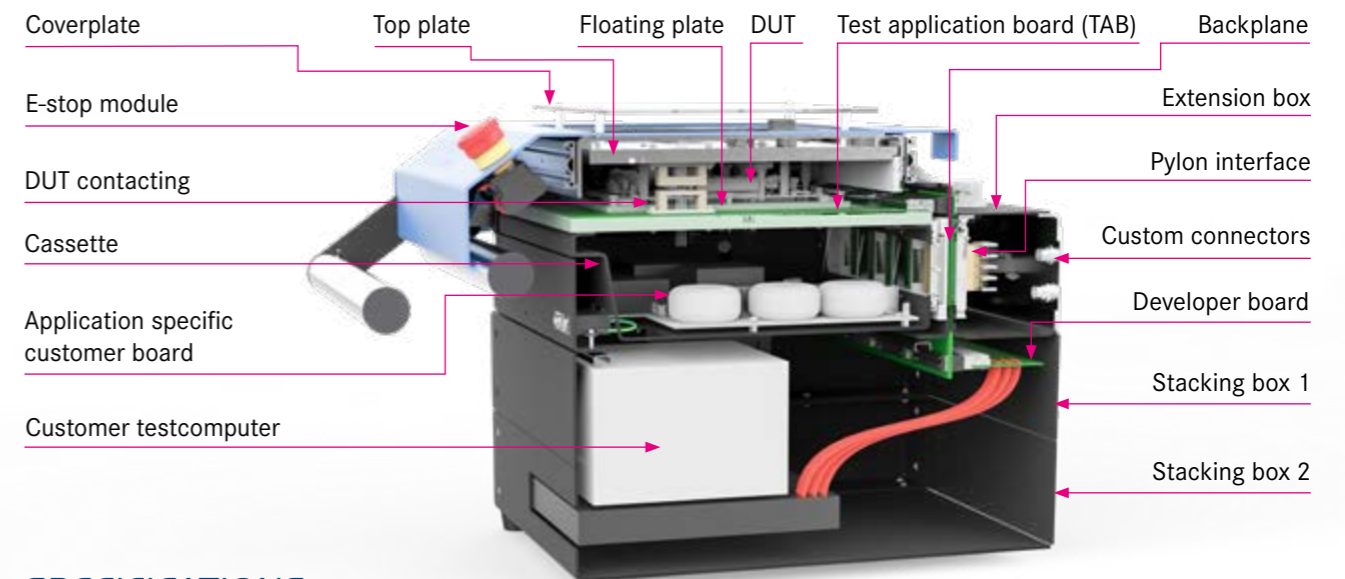
4 CONFIGURABLE CASSETTE-TYPES



FEATURES

- UNIVERSAL:**
 - Embedded solutions: integrates seamlessly with tester computers, signal processing systems
 - Versatile applications: Whether you're in the lab or engaged in volume production, the Y-ETI adapts effortlessly
 - Fine pitch to wide pitch: high & low-density requirements are handled with precision
 - Supports low & high power: suitable for a diverse range of applications without compromising performance
 - High speed analog & digital: Signal transmission with precision, low noise and low distortion
- SCALABLE:**
 - Adaptable test adapter: One test adapter for various test system applications
 - Cost-efficient design: exchangeable cassettes and standardized interfaces
 - Modular system: reusable components allow you to customize and expand as needed
 - Multi-DUT testing: Efficiently test multiple devices simultaneously
- OPTIMISED:**
 - Individual custom design: Yamaichi creates individual solutions that meet your specific requirements
 - Efficient path to testing: Our design ensures an optimal connection from the device under test (DUT) to the test system
 - Optimised work ergonomics: Comfortable and efficient testing processes
 - Ready-to-Use out of the box: Unpack and start testing immediately
 - Robust and durable: Built to withstand demanding conditions
- INDIVIDUAL:**
 - Customised contacting concept: Our system accommodates any DUT shape
 - Sensor and actuator compatibility: From speakers to microphones and light detectors, Y-ETI handles diverse stimuli
 - Complex testing scenarios: Realize challenging testing setups effortlessly
 - Test application support: Our experts provide extensive consulting services for optimised test concepts

APPLICATION EXAMPLE



SPECIFICATIONS

- MECHANICAL:**
- Max. vertical movement: 25 mm linear
 - Operating temp: 10 °C – 60 °C, other on request
 - Max. total contact pressure 2000 N
 - Typical actuation cycles: 100,000

- ELECTRICAL:**
- Max. Voltage: 25 V AC, 60 V DC, other on request
 - Max. Interface: up to 1020 contacts, more on request
 - High-speed 6.25 Gbit/s

APPLICATION (W x L x H):

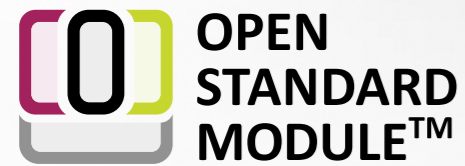
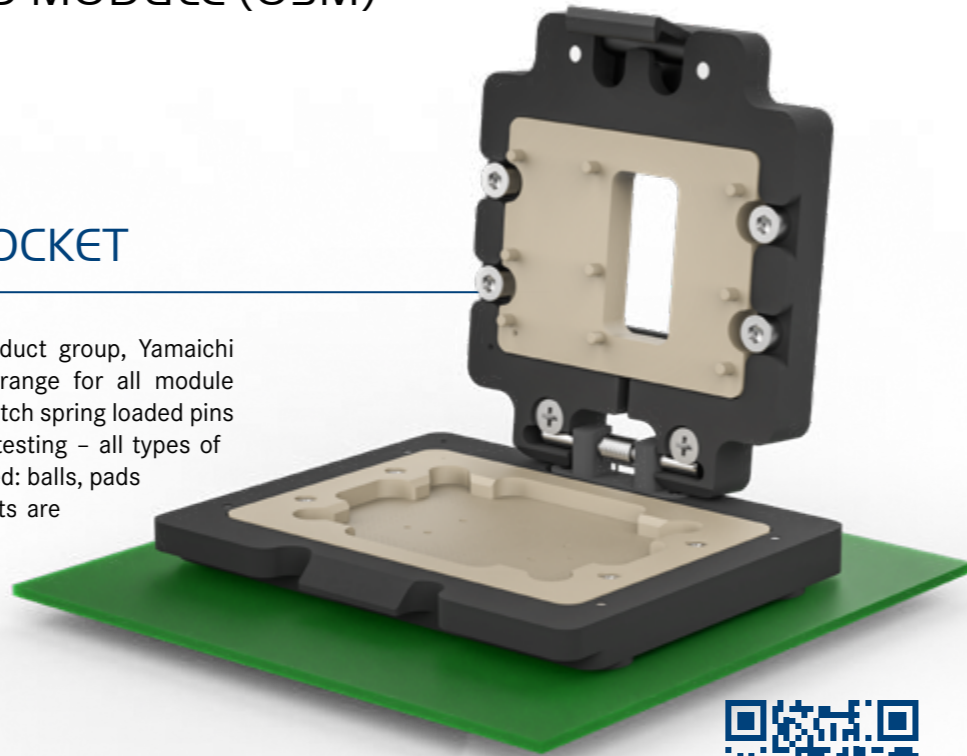
- Max. area: 270 mm x 285 mm x 44 mm



OPEN STANDARD MODULE (OSM)

Y-IS OSM TEST SOCKET

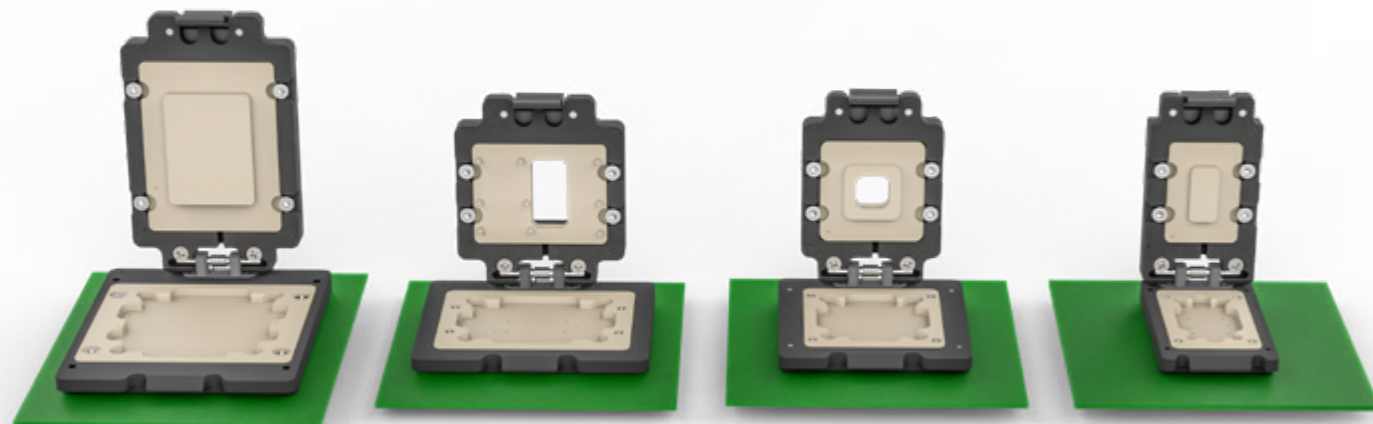
With the OSM™ Test Socket product group, Yamaichi Electronics offers the complete range for all module sizes 0, S, M and L. By using fine-pitch spring loaded pins – as known from semiconductor testing – all types of module interfaces can be contacted: balls, pads or bumps. The OSM™ Test Sockets are designed to decrease test costs by combining reliable testing and modular design.



WATCH THE VIDEO >>



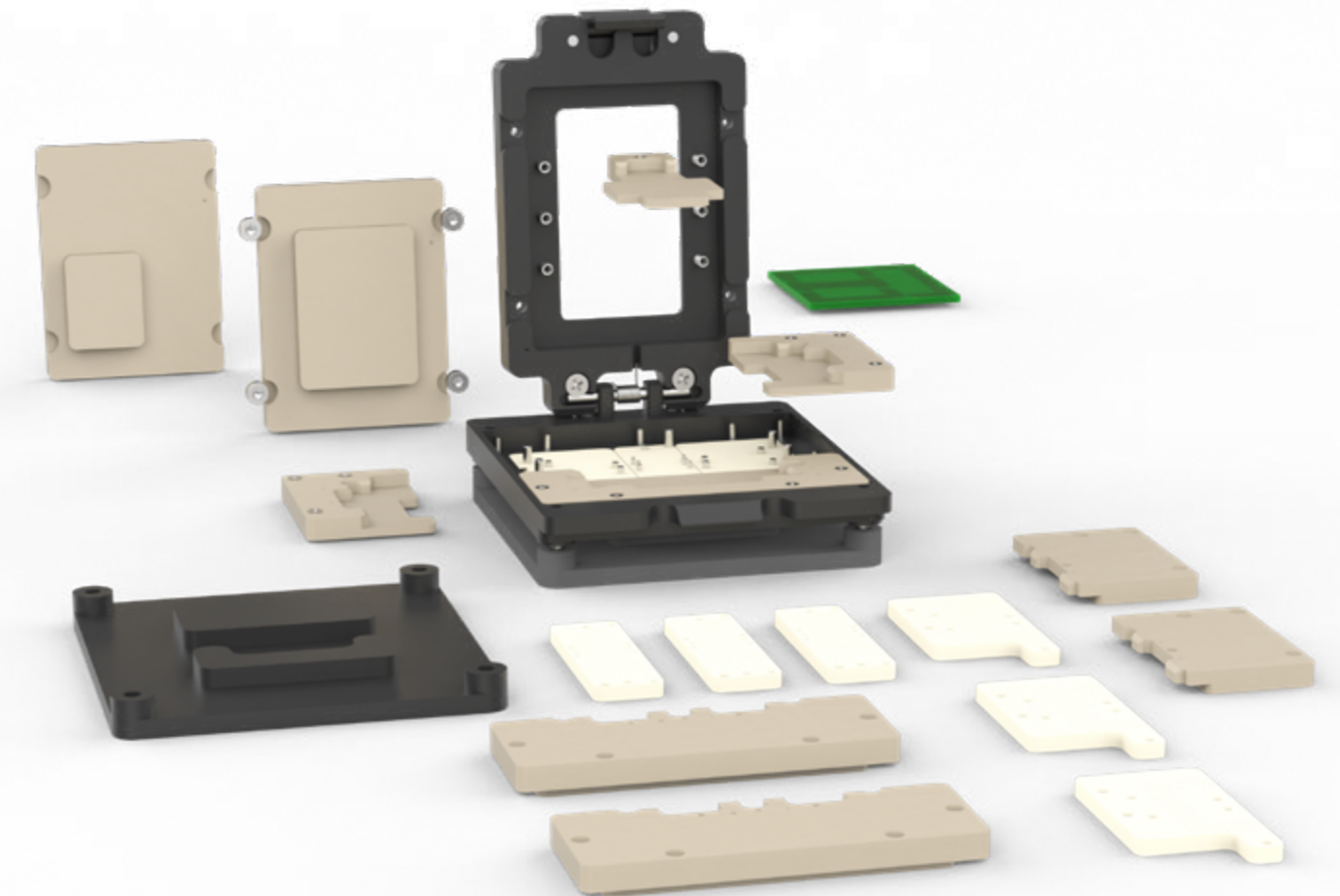
Size 0	188 Pins	Compression mount socket requires gold pad on test PCB	Individual spring loaded pushers
Size S	332 Pins	Standard contact pin is usable for LGA, BGA and bumps on module	Optimised socket sizes
Size M	476 Pins	Other pin types for high-volume testing are available	Ease of servicing
Size L	662 Pins		



OPEN STANDARD MODULE (OSM)

Y-IS OSM TEST SOCKET - MODULAR INSERTS

- Single socket size with optional inserts for module size 0, S, M, L
- Flexible engineering/lab socket
- Low volume test socket

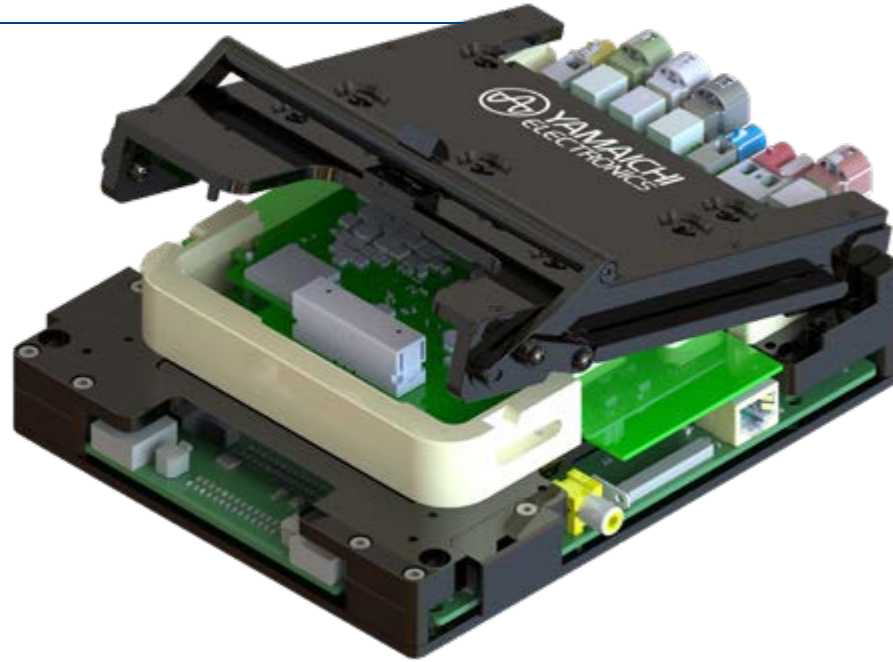


Member of





BOARD LEVEL TESTING (BLT)



WATCH THE VIDEO >>

FEATURES

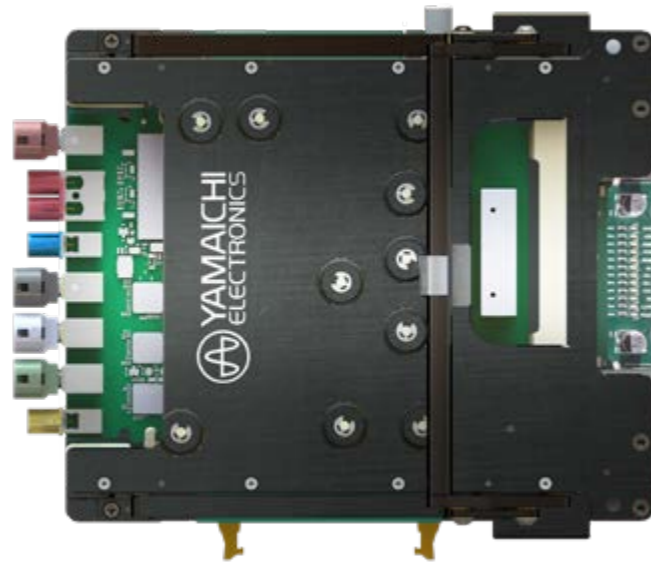
- Fully customised for high-volume-testing
- Stand-alone and integrable
- Fine-pitch contacting of test points

ADVANTAGES

- Compact test fixture and fully customised
- Developed for high-volume automotive testing of highly integrated modules
- Short signal paths from DUT to test board

SPECIFICATIONS

- Mating cycles: typ. 50,000
- Operating temperature range: 25 °C - +85 °C



FLASHING SYSTEM

FEATURES

- In-line programming / flashing
- Stand-alone or integrable
- High-volume flashing

ADVANTAGES

- Compact design
- Easy maintenance
- High-speed for faster throughput

SPECIFICATIONS

- Mating cycles: typ. 50,000
- Operating temperature range: 25 °C - +85 °C



SYSTEM LEVEL TEST (SLT)

FEATURES

- Scalable test system
- Reliable module testing
- In-line or stand-alone test system

ADVANTAGES

- Compact test fixture and fully customised
- Developed for high-volume automotive testing of high-integrated modules
- Short signal paths from DUT to test board

SPECIFICATIONS

- Mating cycles: typ. 50,000
- Operating temperature range: 25 °C - +85 °C





INTERFACE SOLUTIONS

COM TEST ADAPTER

QSEVEN / SMARC



WATCH THE VIDEO >>

FEATURES

- Ready for high-volume test
- Reduced costs per tested module
- Manual or automated module insertion
- Impedance-controlled test adapter design
- Reliable contacting technology

ADVANTAGES

- According SGET Qseven standard
- Customisation possible

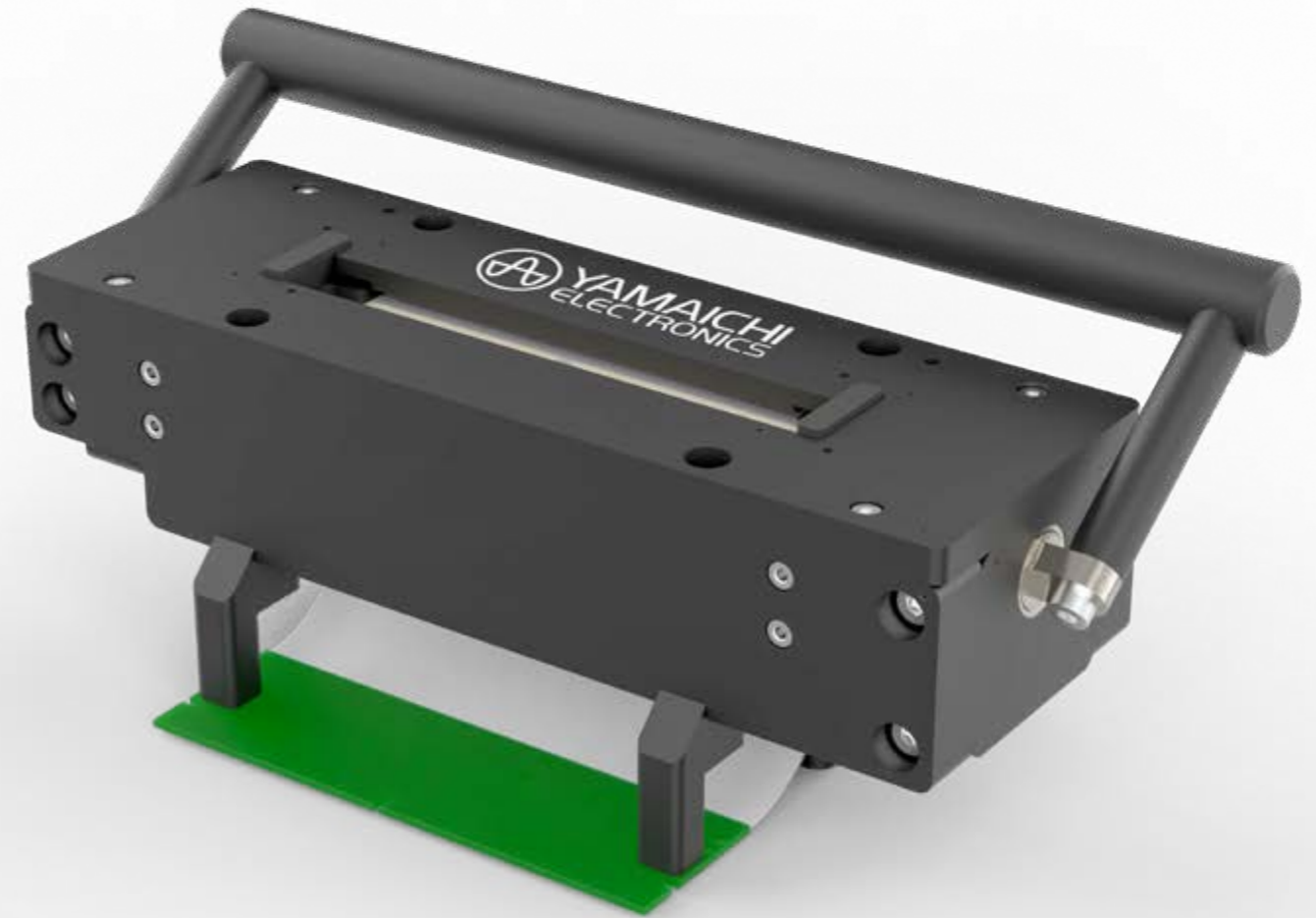
SPECIFICATIONS

- Mating cycles: typ. 50,000
- Operating temperature range: 25 °C – +85 °C



INTERFACE SOLUTIONS

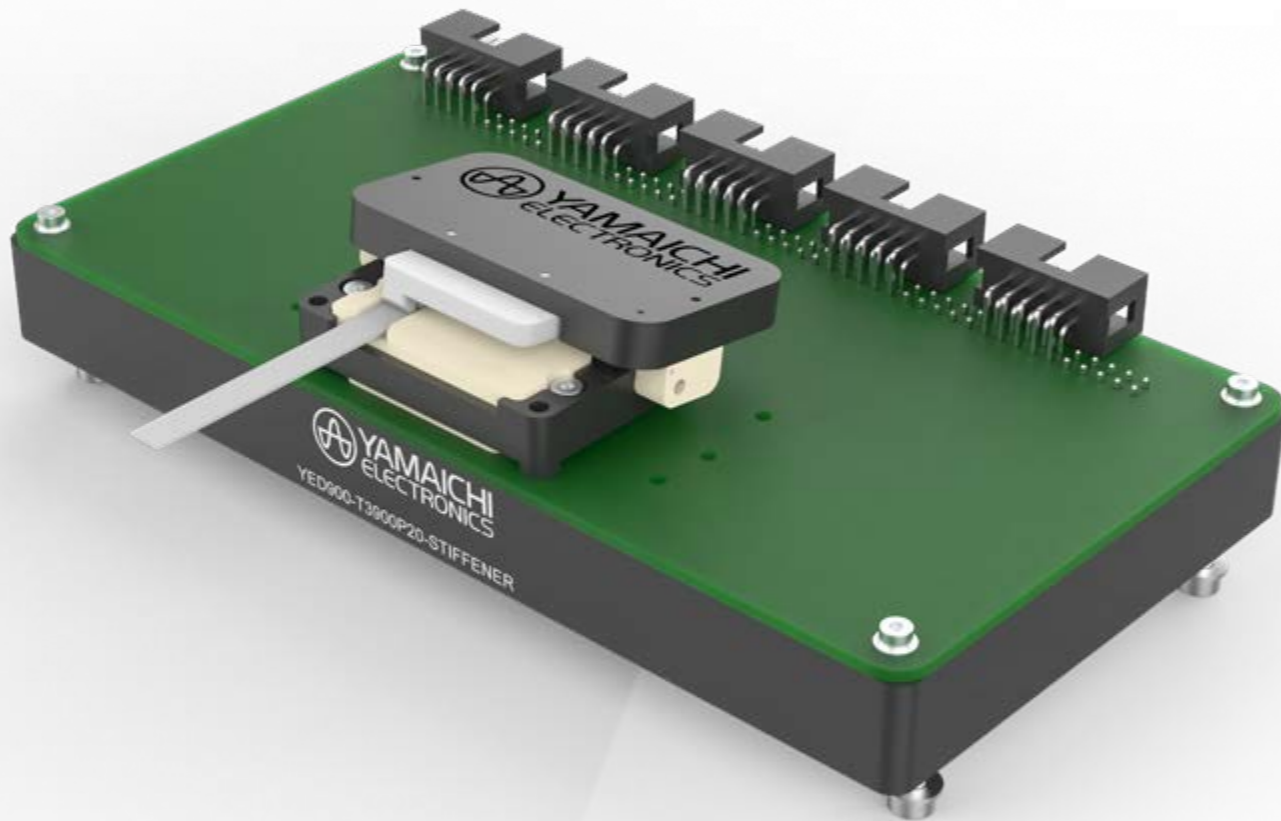
COM TEST ADAPTER





Y-IS FPC / FFC TEST FIXTURE

BOTTOM CONTACTING



FEATURES

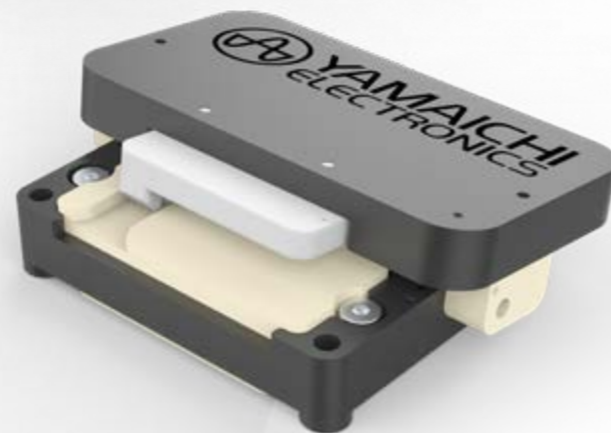
- Integrated pin protection
- Flex foil guiding during insertion
- Semi-custom design for top and bottom contacting

ADVANTAGES

- Space-saving design
- High reliable contact pin with fewer contact marks
- Any shape of FPC or FFC

SPECIFICATIONS

- Mating cycles: typ. 50,000
- Operating temperature range: 20 °C – +85 °C



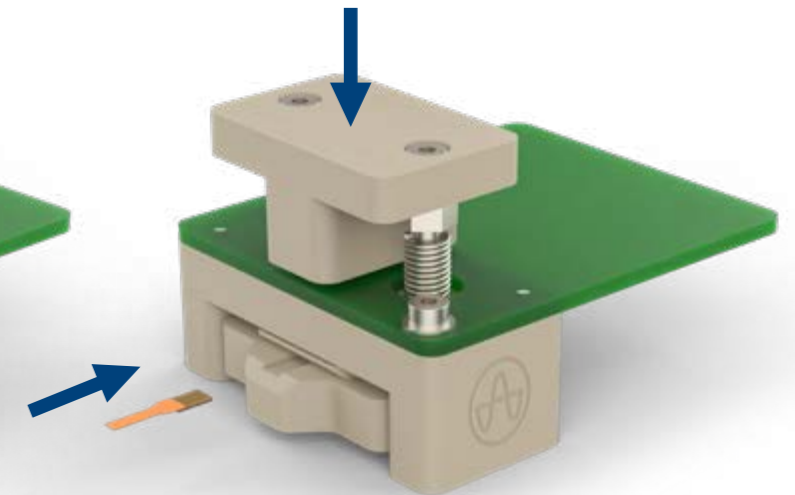
Y-IS FPC / FFC TEST FIXTURE

TOP CONTACTING

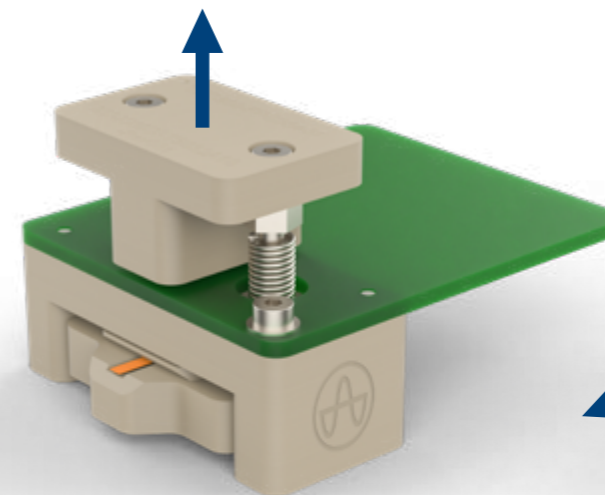
1. Relaxed closed position



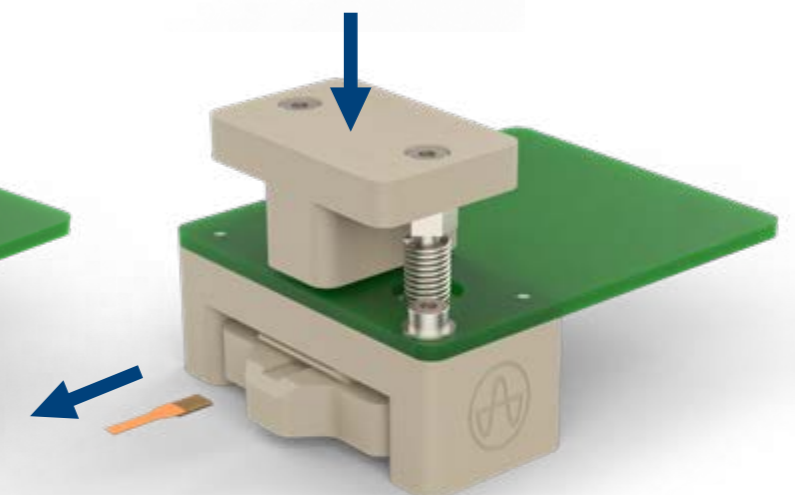
2. Push and hold down the pusher, then insert the FPC inside the channel



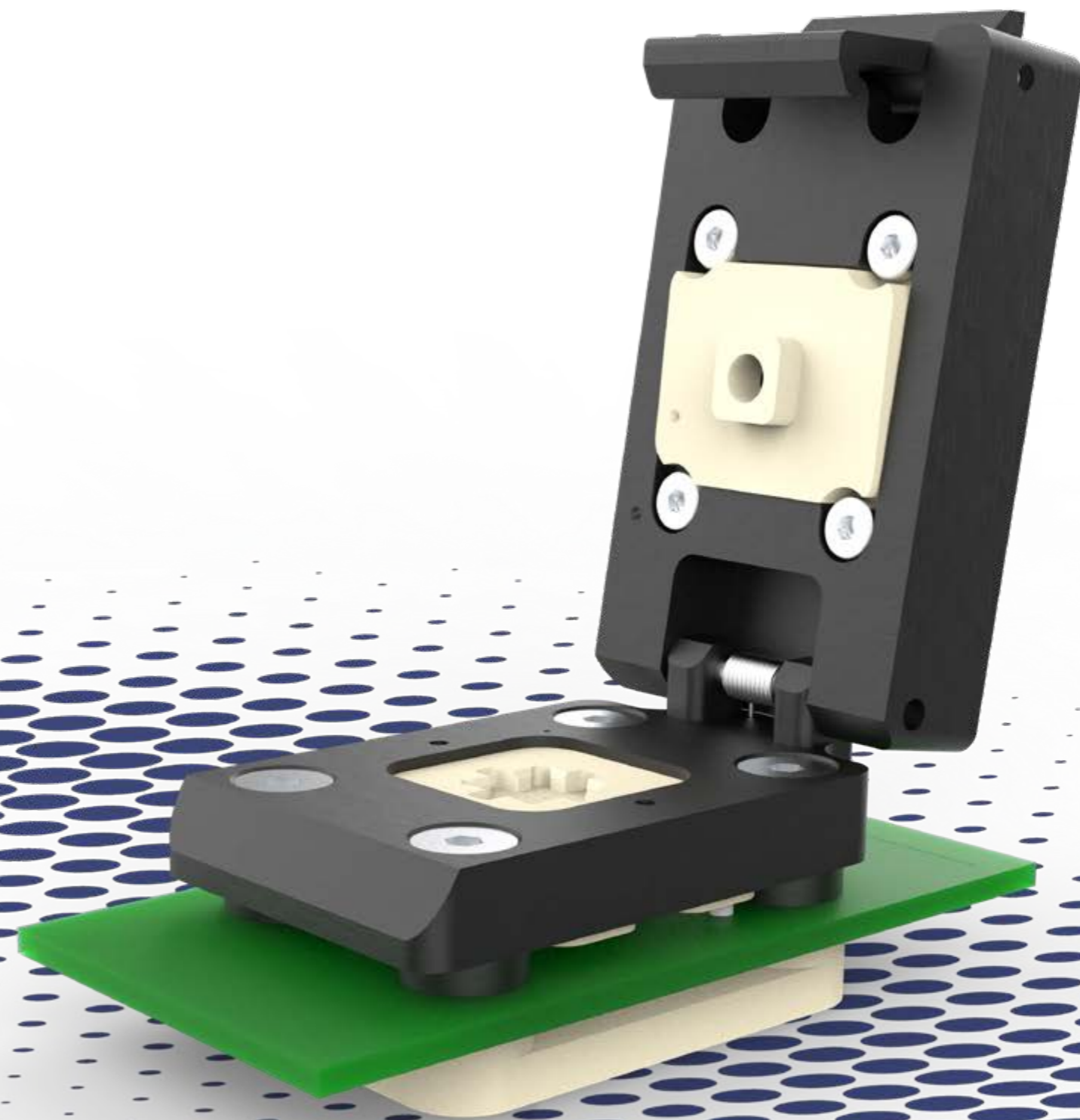
3. Release the pusher (ready for FPC testing)

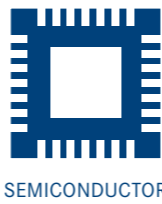


4. Once testing is finished, push and hold down the pusher, then take out the FPC.
NB: Do not take out the FPC unless the pusher is held down, otherwise, the contact pins or the FPC will be damaged



CONTACTING SEMICONDUCTOR





IC561 | IC603 | IC604

FEATURES

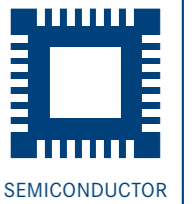
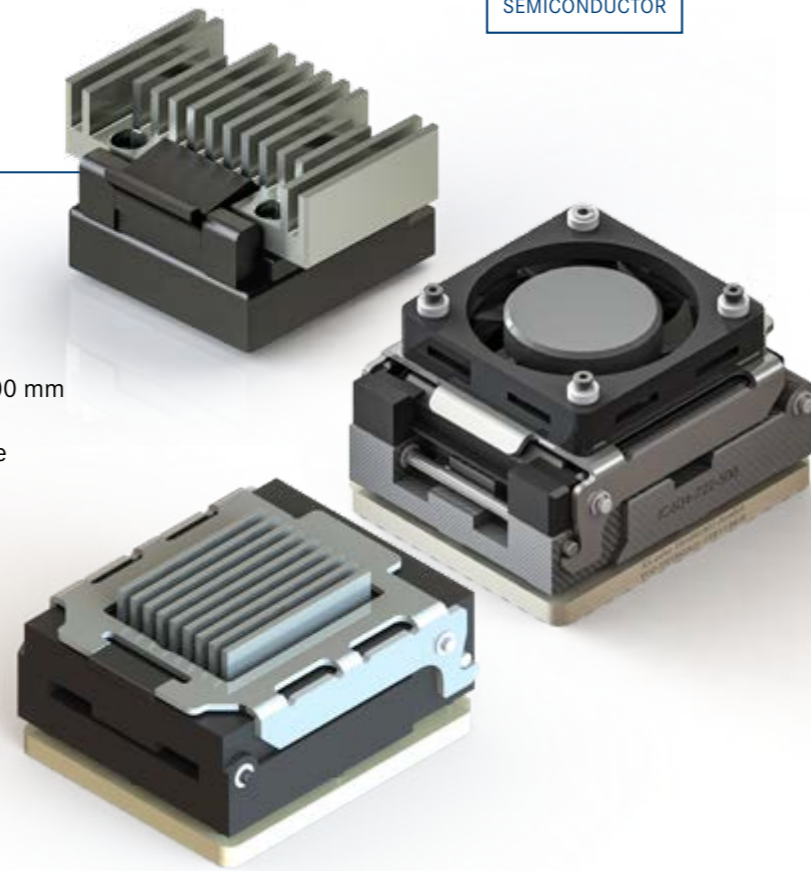
- Semi-custom clamshell CMT socket solution suitable for BGA, CSP, QFN, SON, LGA packages
- Pitch from 0.30 mm standard, staggered or irregular
- For the IC603 / IC604 fixed standard pitch 0.80 / 1.00 mm
- Full flexibility through drilled insulator and milled pusher
- IC603 / IC604 use buckling beam technology (applicable for high-power applications)

ADVANTAGES

- Ability to support both burn-in & validation test
- Compression Mount Technology (CMT) for quick installation and maintenance
- Modular design allows easy replacement of socket components in the field

SPECIFICATIONS

- Mating cycles: 10,000
- Operating temperature range: -40 °C - +150 °C



IC630

FEATURES

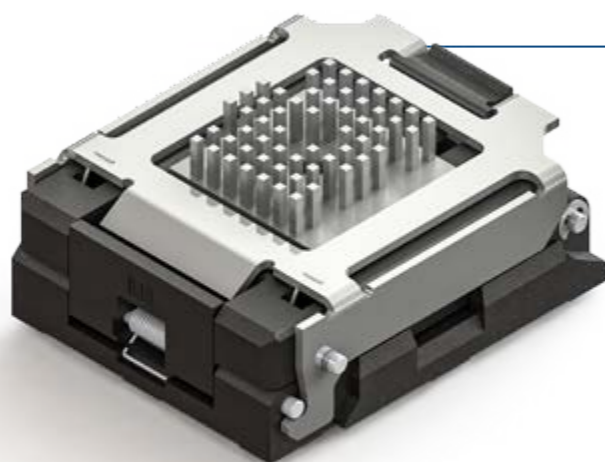
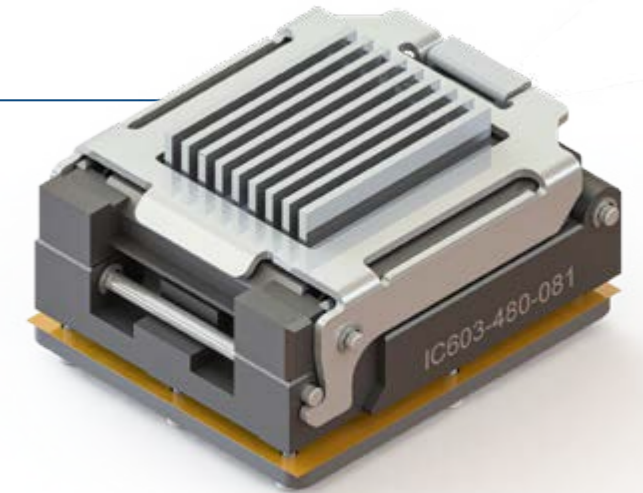
- Semi-custom socket suitable for large BGA and LGA packages
- Pitch from 0.30 mm standard, staggered or irregular
- Compression mount for quick installation and maintenance
- Heat sink / Cartridge heater / RTD / 30K temp. sensor / Fan (option)
- Customised stiffener shape

ADVANTAGES

- Modular design allows easy replacement of socket components in the field
- Unique activated lid mechanism
- Dual lid design / Low actuation force / 2-Step vertical actuation motion, for bare die and lidded DUT

SPECIFICATIONS

- Mating cycles: 10,000
- Operating temperature range: -40 °C - +150 °C



IC567

FEATURES

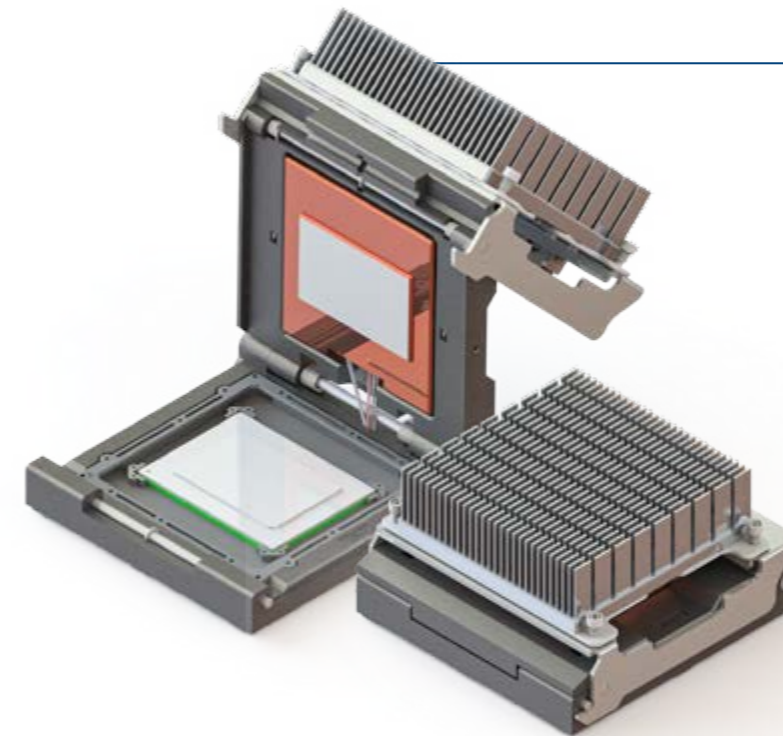
- Semi-custom socket suitable for large BGA and LGA packages
- Standard pitch 0.65 mm
- Two spring probe pin types: SWP for standard and SUS for high temp.
- Individual contact pins / Contact pin module / Heat sink / Heater / Temp. sensor

ADVANTAGES

- Modular design allows easy replacement of socket components in the field
- Field replaceable socket cartridge
- Socket lid and heat sink mechanism allow parallel touch down on the PKG
- Detachable heat sink
- Low stable contact resistance

SPECIFICATIONS

- Mating cycles: 10,000
- Operating temperature range: -40 °C - +150 °C



IC542

FEATURES

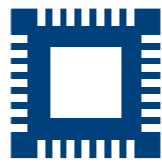
- Semi-custom socket suitable for large and very large BGA and LGA packages
- 4 form factors (L, XL, XXL, TXL) for packages up to 110 x 110 mm with 15,000 contacts
- Robust socket structure, reduced number of piece parts
- New component of the second latch to moderate contact reaction force via the lid
- Pitch 0.80/1.00 mm standard
- Two spring probe pin types: SWP for standard and SUS for high temp.
- Individual contact pins / Contact pin module / Heat sink / Heater / Temp. sensor

ADVANTAGES

- Replaceable contact module
- Modular design allows easy replacement of socket components in the field
- Unique activated lid mechanism
- Dual lid design / Low actuation force / 2-Step vertical actuation motion, for bare die and lidded DUT
- Low stable contact resistance

SPECIFICATIONS

- Mating cycles: 10,000
- Operating temperature range: -40 °C - +150 °C



EVALUATION & VALIDATION SOCKET

FEATURES

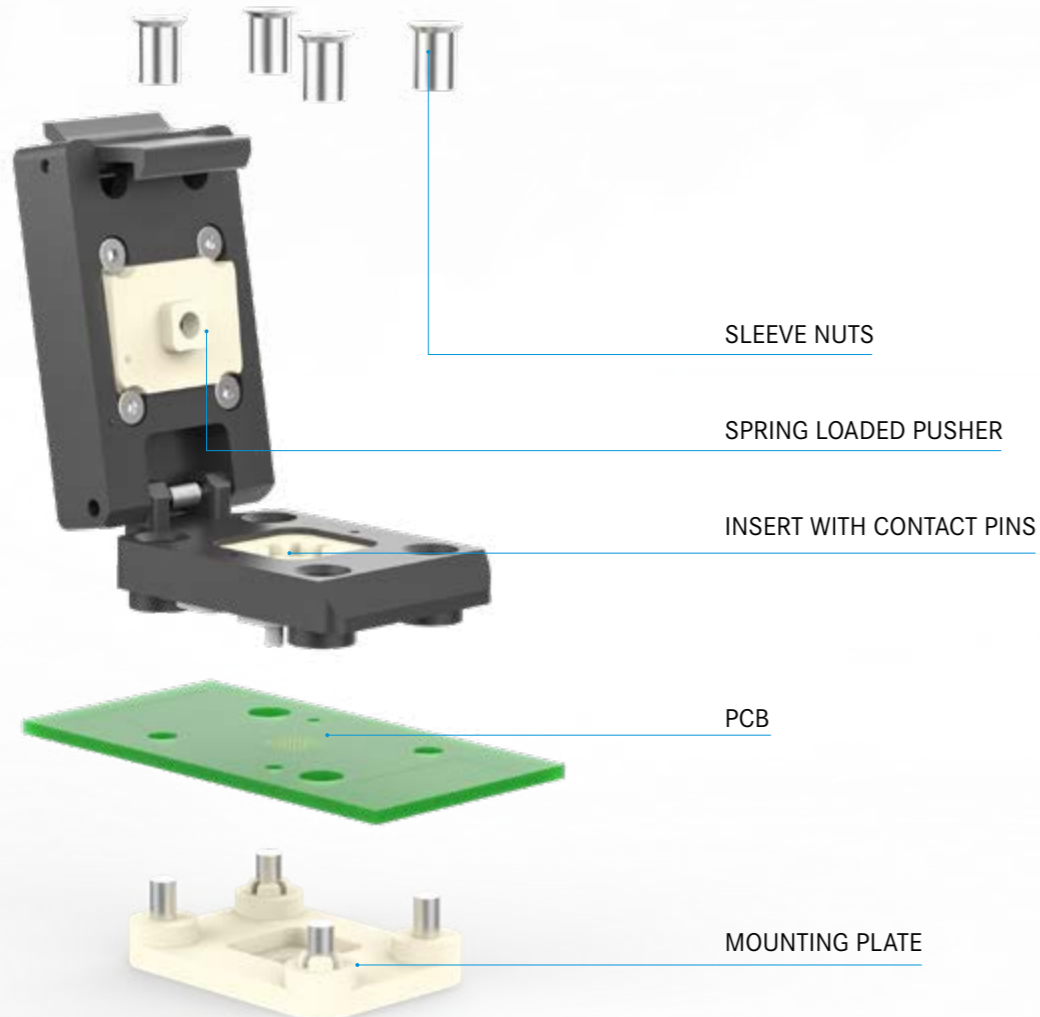
- Supporting package sizes from 1.5 x 1.5 to 12.0 x 12.0 mm
- Spring loaded pusher
- Improved device loading

ADVANTAGES

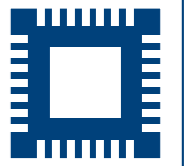
- Standard pins for robust testing
- Low inductance pins for high-performance testing
- Easy socket to PCB assembly with pre-assembled mounting plate
- Optional stiffener

SPECIFICATIONS

- Mating cycles: typ. 50,000
- Operating temperature range: -40 °C - +150 °C



WATCH THE VIDEO >>



FAILURE ANALYSIS SOCKET

FEATURES

- Footprint compatible with evaluation socket
- Low profile socket
- Using Gorilla Glass™ plate

ADVANTAGES

- Low inductance pins for reliable failure analysis
- Easy socket to PCB assembly with pre-assembled mounting plate
- Optional stiffener

SPECIFICATIONS

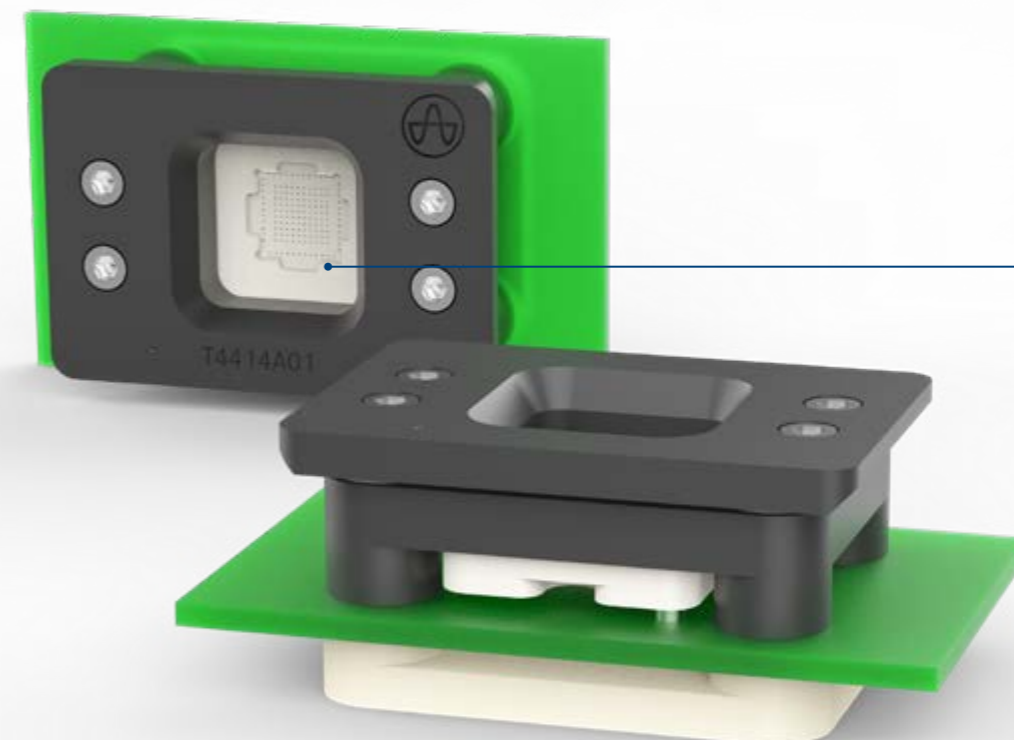
- Mating cycles: typ. 50,000
- Operating temperature range: -40 °C - +150 °C



MOUNTING PLATE



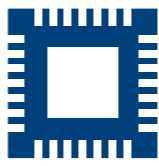
WATCH THE VIDEO >>



GORILLA GLASS™

Y-RED

TEST CONTACTOR



IC561 | IC564

FEATURES

- Semi-custom clamshell CMT socket solution suitable for BGA, CSP, QFN, SON, LGA packages
- Pitch from 0.30 mm standard, staggered or irregular
- Full flexibility through drilled insulator and milled pusher

ADVANTAGES

- Spring loader pusher
- Airflow through the top duct channel
- Compact design

SPECIFICATIONS

- Mating cycles: 10,000
- Operating temperature range: -40 °C - +150 °C



WATCH THE VIDEO >>

IC603 | IC604

FEATURES

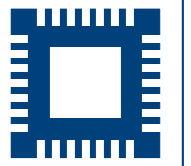
- Semi-custom socket suitable for large BGA and LGA packages
- Pitch 0.80 mm (IC603) and 1.00 mm (IC604) standard
- Bow-type stamped pins
- Modular design allows easy replacement of socket components in the field
- Heat sink / Cartridge heater / RTD / 30K temp. sensor / Fan (option)

ADVANTAGES

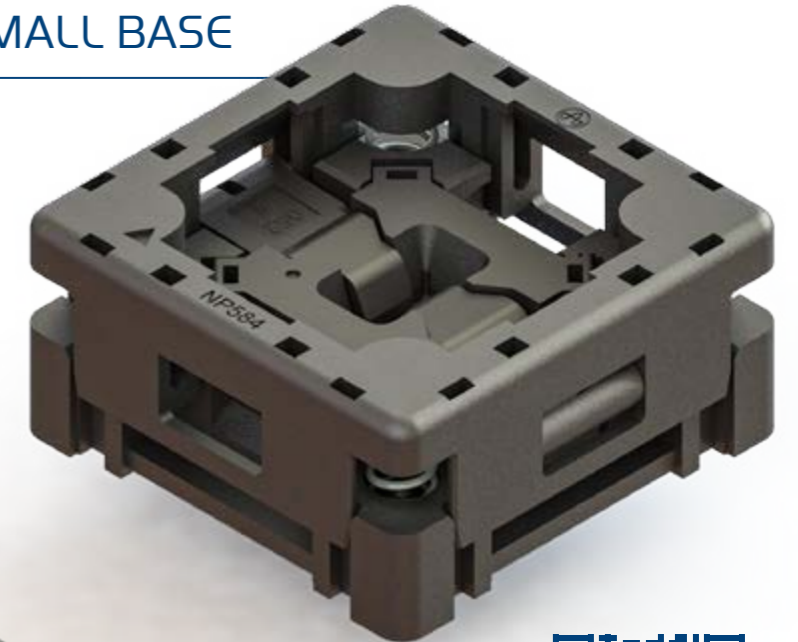
- Unique activated lid mechanism
- Dual lid design / Low actuation force / 2-Step vertical actuation motion, for bare die and lidded DUT
- Compression mount for quick installation and maintenance
- Customised stiffener shape

SPECIFICATIONS

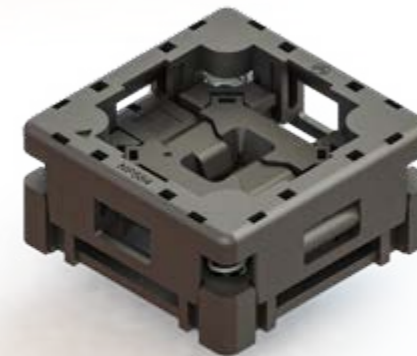
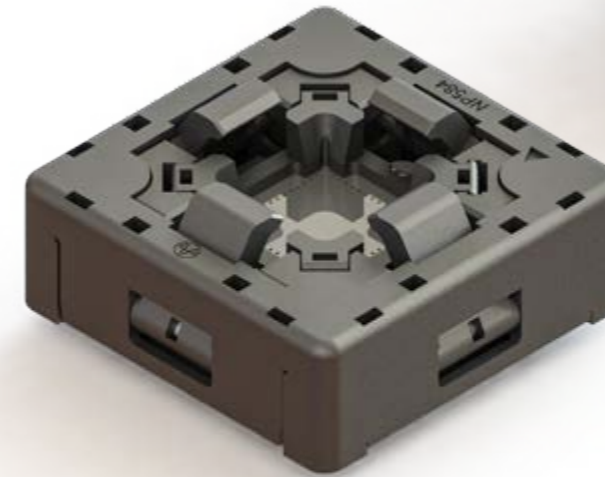
- Mating cycles: 10,000
- Operating temperature range: -40 °C - +150 °C



NP584 LARGE | MID | SMALL BASE



WATCH THE VIDEO >>



ADVANTAGES

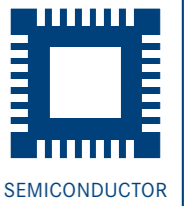
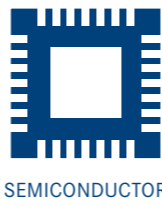
- Ability to support both burn-in & validation test
- Compression Mount Technology (CMT) for quick installation and maintenance
- Compact design / 3 form factors

SPECIFICATIONS

- Mating cycles: 10,000
- Operating temperature range: -40 °C - +150 °C

FEATURES

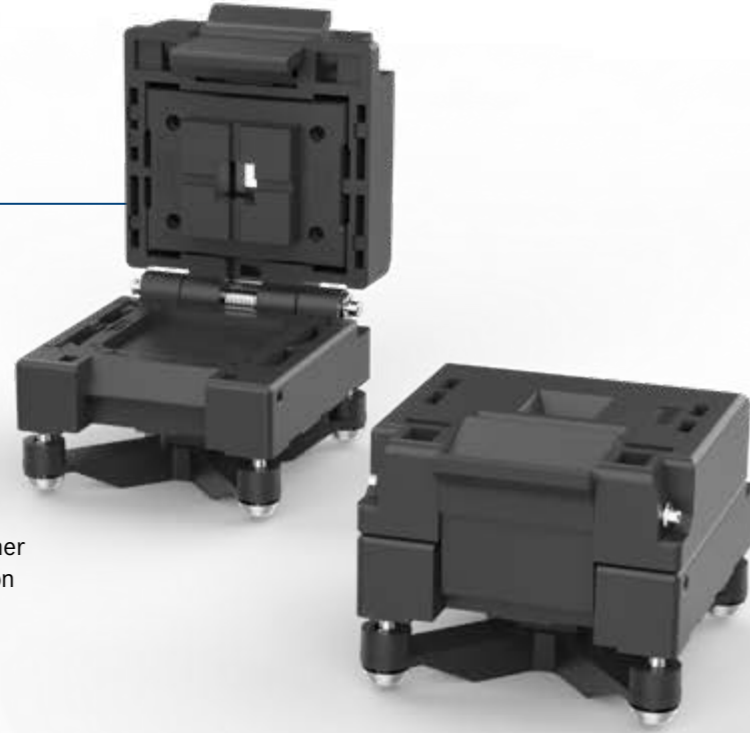
- Semi-custom open-top CMT socket solution suitable for BGA, CSP, QFN, SON, LGA packages
- Pitch from 0.30 mm standard, staggered or irregular
- Full flexibility through drilled insulator and milled pusher



IC642

FEATURES

- Semi-custom clamshell CMT socket solution suitable for BGA, CSP, QFN, SON, LGA packages for low inductance applications
- Outline dimensions 35.5 x 39.0 sqmm
- Suitable for packages up to 18.00 x 18.00 sqmm
- Pitch from 0.40 mm standard, staggered or irregular
- Up to 600 pin count capability
- Full flexibility through drilled insulator and milled pusher
- Integrated lid local thermal control as an additional option



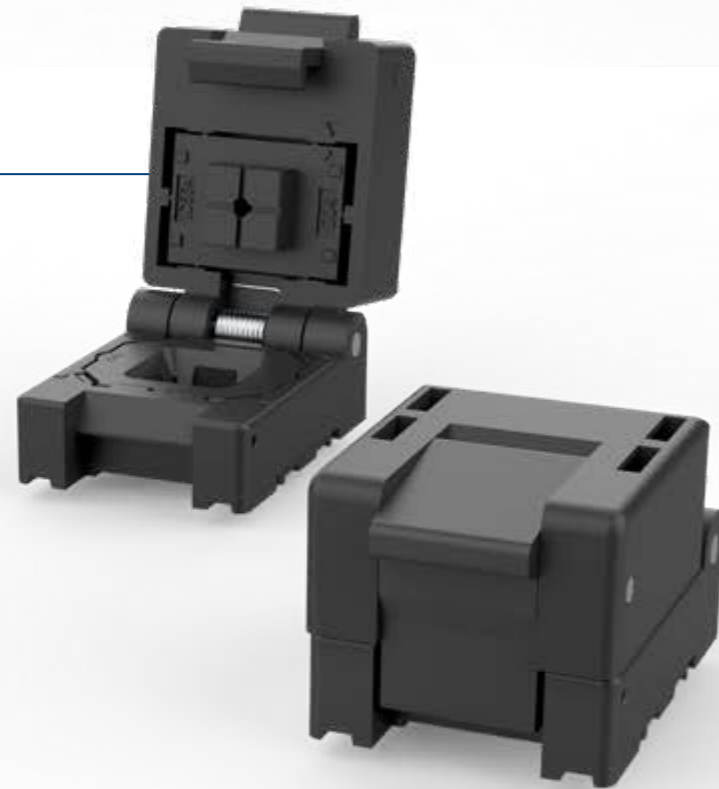
SPECIFICATIONS

- Mating cycles: 10,000
- Operating temperature range: -40 °C - +150 °C

IC655

FEATURES

- Semi-custom clamshell CMT socket solution suitable for BGA, CSP, QFN, SON, LGA packages for low inductance applications
- Outline dimensions 27.0 x 20.0 sqmm
- Suitable for packages up to 10.00 x 10.00 sqmm
- Pitch from 0.40 mm standard, staggered or irregular
- Up to 240 pin count capability
- Full flexibility through drilled insulator and milled pusher



SPECIFICATIONS

- Mating cycles: 10,000
- Operating temperature range: -40 °C - +150 °C

NP656

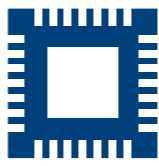
FEATURES

- Semi-custom open top CMT socket solution suitable for BGA, CSP, QFN, SON, LGA packages for low inductance applications
- Outline dimensions 28.0 x 28.0 sqmm
- Suitable for packages up to 10.00 x 10.00 sqmm
- Pitch from 0.40 mm standard, staggered or irregular
- Up to 240 pin count capability
- Full flexibility through drilled insulator and milled pusher



SPECIFICATIONS

- Mating cycles: 10,000
- Operating temperature range: -40 °C - +150 °C



YED274 TEST CONTACTOR

FEATURES

- Pitch starting at 0.30 mm
- For all typical semiconductor packages
- Large variety of contact tips
- Standard and low inductance possible

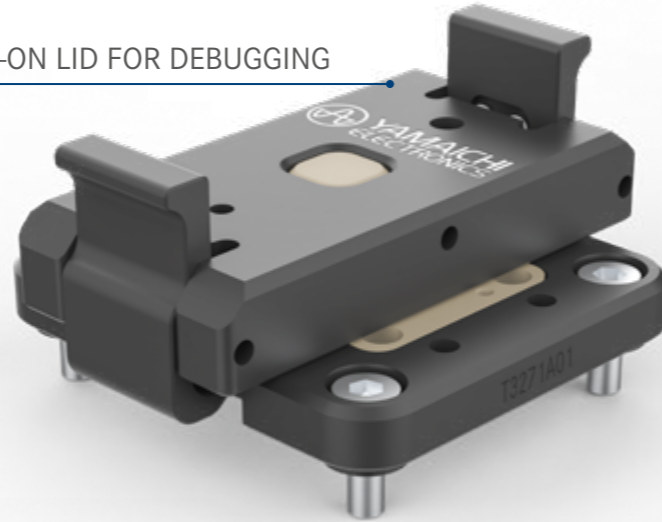
ADVANTAGES

- High insertion count to reduce cost of test
- Easy maintenance
- Optimal device alignment
- Pin protection due to floating base design

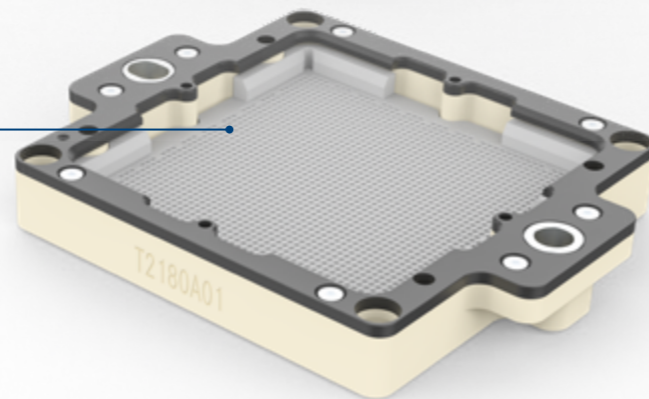
SPECIFICATIONS

- Mating cycles: typ. 500,000
- Operating temperature range: -40 °C - +150 °C

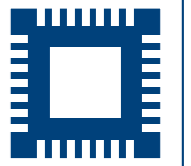
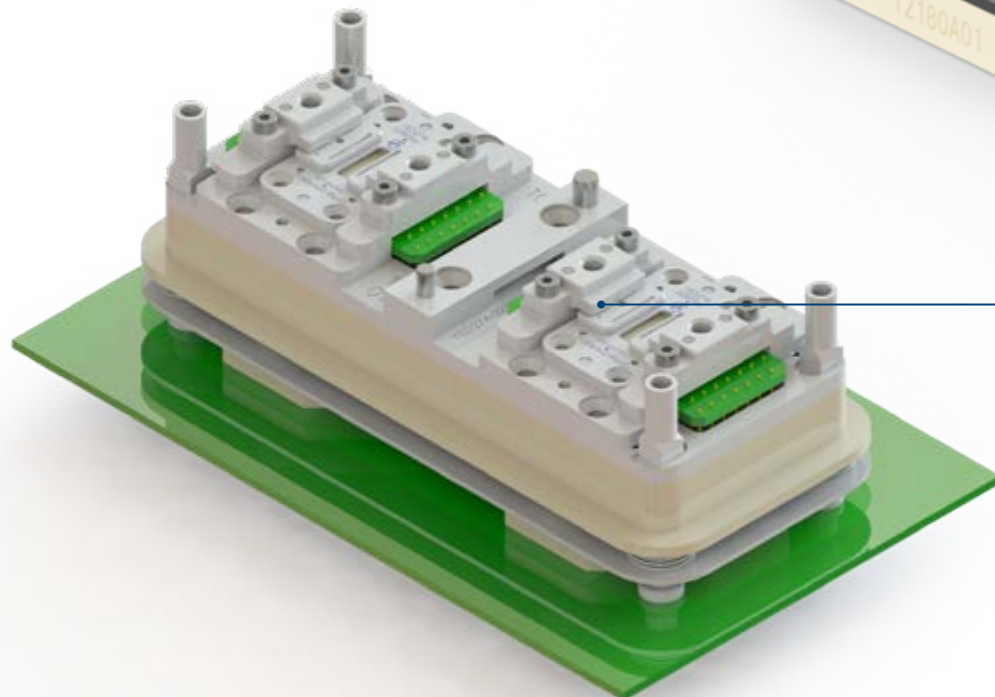
CLIP-ON LID FOR DEBUGGING



FLOATING BASE FOR DEVICE GUIDING AND PIN PROTECTION



DUAL SITE SOCKET WITH INTEGRATED FAN-OUT



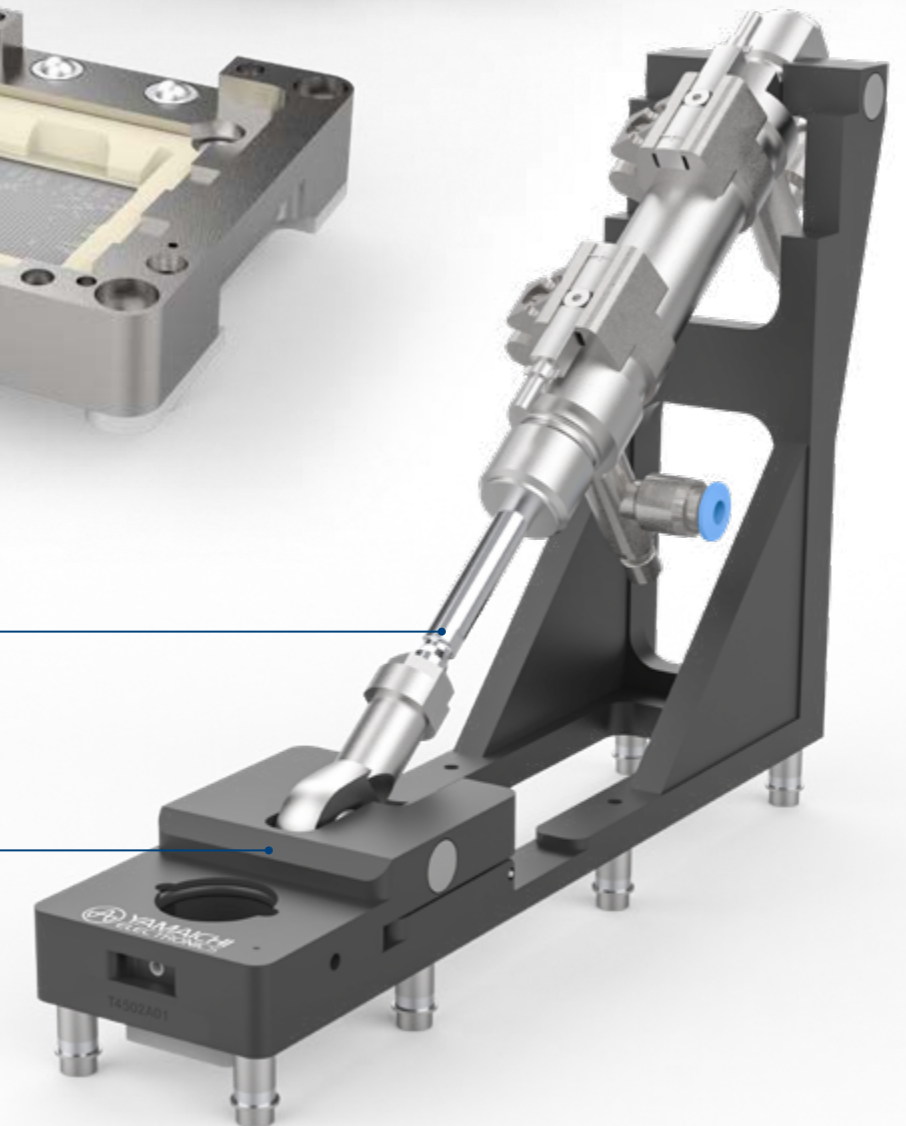
YED274 TEST CONTACTOR

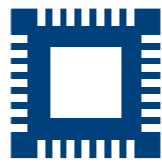
OPTIMISED DEVICE ACTUATOR



PNEUMATIC LID ACTUATOR

DURABLE BEARING FOR HIGH-VOLUME TESTING





YED900 TEST CONTACTOR

FEATURES

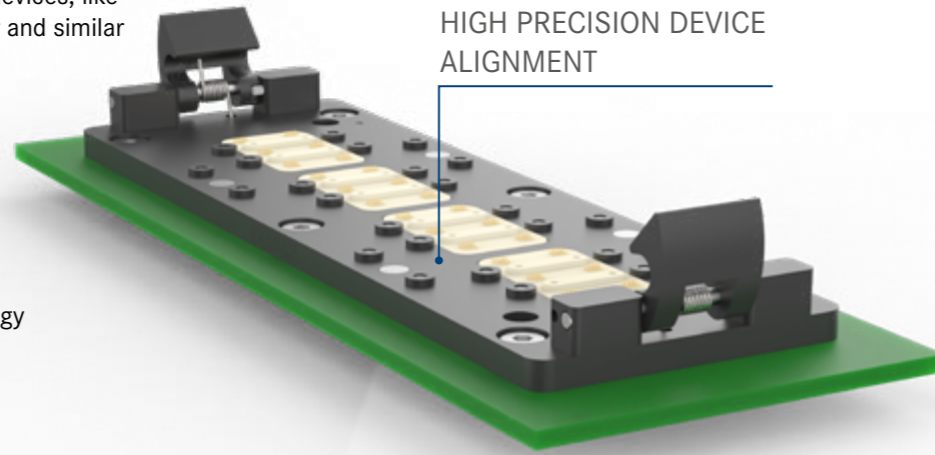
- Parallel device contacting
- For any type of semiconductor MEMS devices, like microphones, speaker, pressure sensor and similar
- Fine-pitch starting from 0.25 mm
- Optional sealing: for pressure, speaker and microphone devices

ADVANTAGES

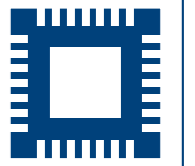
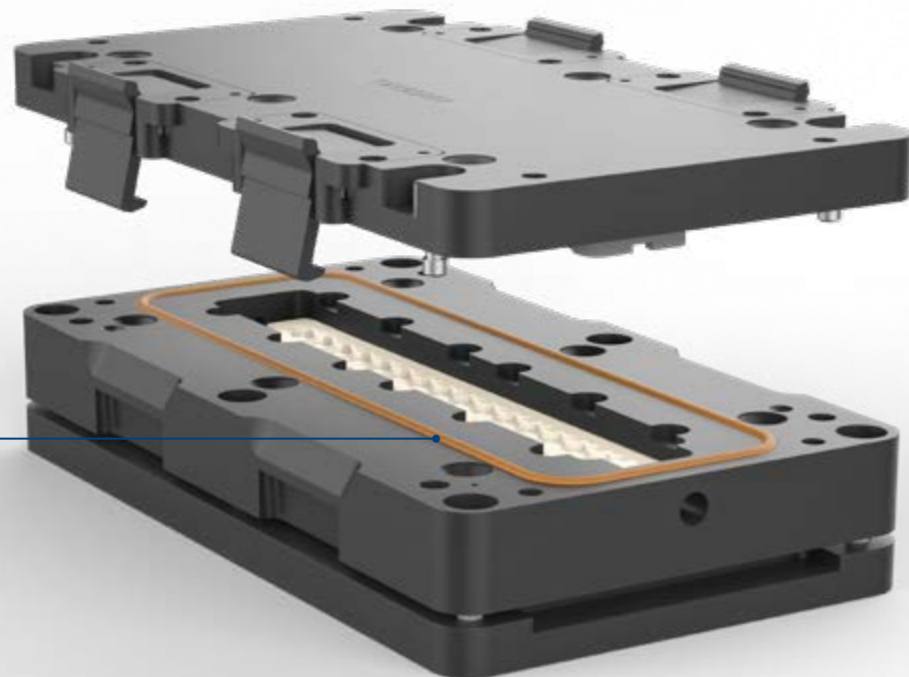
- Cost efficient multi-site testing
- Reliable and excellent contact technology

SPECIFICATIONS

- Mating cycles: typ. 50,000
- Operating temperature range: -40 °C - +150 °C

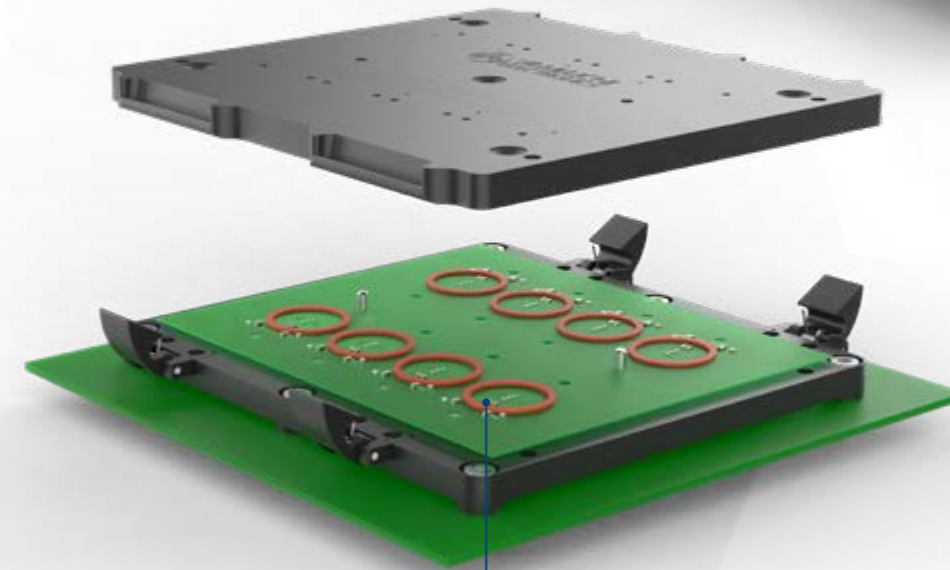
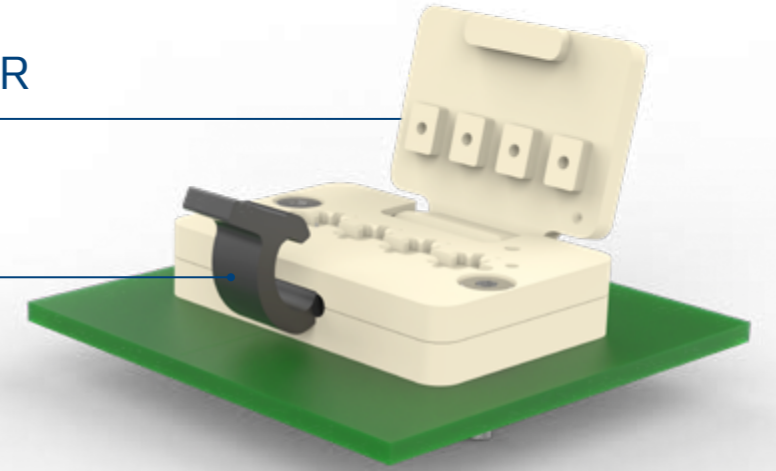


OPTIONAL SEALING



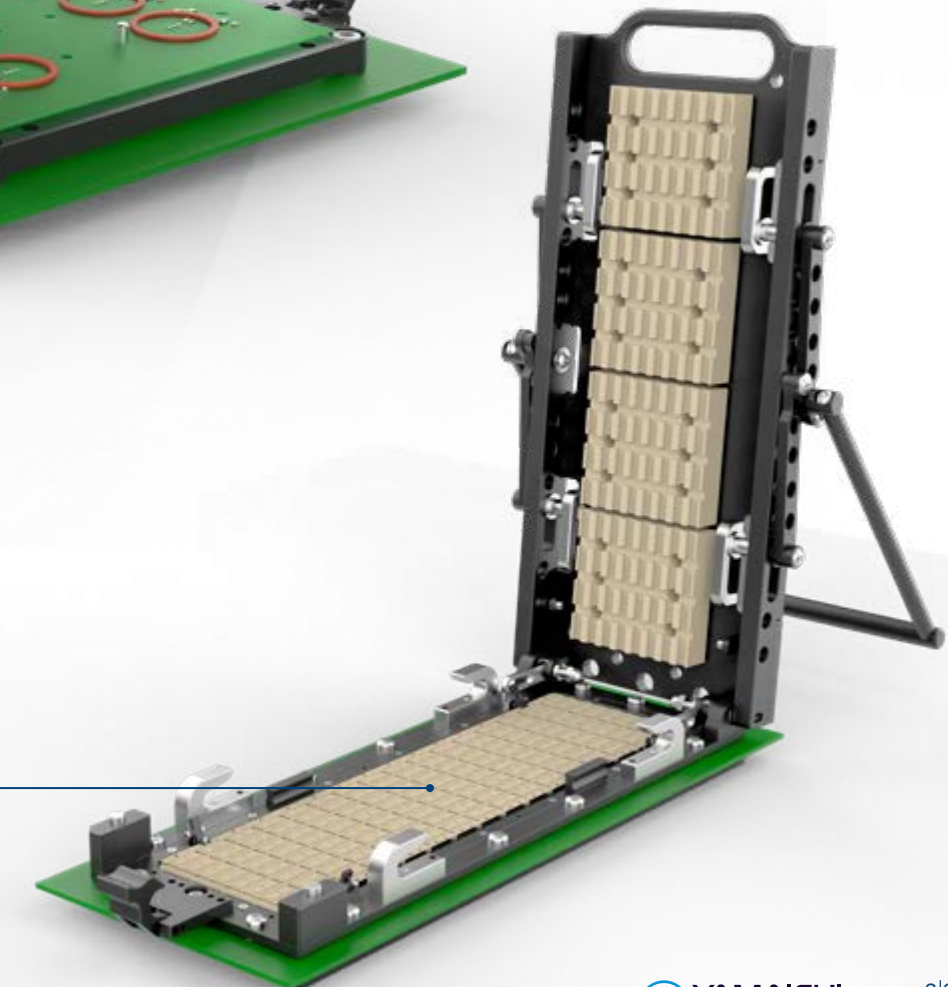
YED900 TEST CONTACTOR

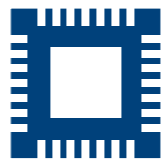
OPTIMISED CAVITY DESIGN FOR BETTER DEVICE INSERTION / EXTRACTION



CONTACTING PCB PANEL

LEAD-FRAME / STRIP BURN-IN SOCKET





YED254 | 274 TEST CONTACTOR

FEATURES

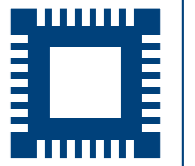
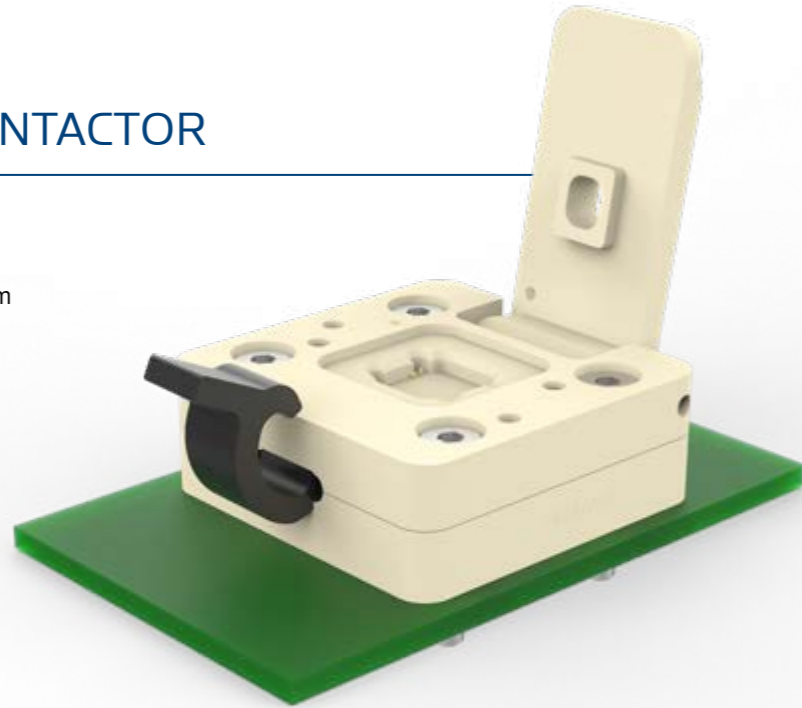
- Customised test contactor for pitch ≥ 0.16 mm
- Easy to close cover
- Higher temperature range available
- Contact force (typ): 9 gf to 40 gf

ADVANTAGES

- Outstanding performance
- Lab applications
- Suitable for HAST, HTOL, Burn-In or any other reliability test
- Optional: serial number and data matrix code

SPECIFICATIONS

- Mating cycles: up to 500,000
- Operating temperature range: $-55\text{ }^{\circ}\text{C} - +150\text{ }^{\circ}\text{C}$



YED-PIN

FEATURES

- Semiconductor testing
- High actuation cycles
- Applications: ATE, Burn-In, HAST

ADVANTAGES

- Excellent reliability
- Low contact resistance
- Ultra fine pitch contacting
- Large variety of dimensions and plunger tips

SPECIFICATIONS

- Mating cycles: $>500,000$
- Contact resistance: $<50\text{ m}\Omega$
- Contact force (typ.): 5 gf - 31 gf
- Pitch: $>0.15\text{ mm}$
- Operating temperature (typ.): $-55\text{ }^{\circ}\text{C} - 150\text{ }^{\circ}\text{C}$





BALL GRID ARRAY (BGA) | CHIP SCALE PACKAGE (CSP) LAND GRID ARRAY (LGA)

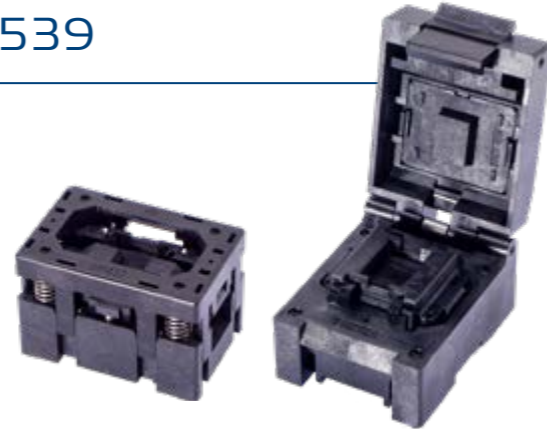
BGA / CSP / LGA - NP437 / IC511 / IC539

FEATURES

- 0.40 mm pitch open top and clamshell socket
- Compression Mount Technology (CMT), 0.40 to 0.60 mm fan-out type
- Depopulation versions available

SPECIFICATIONS

- Mating cycles: 10,000
- Operating temperature range: -40 °C - +150 °C



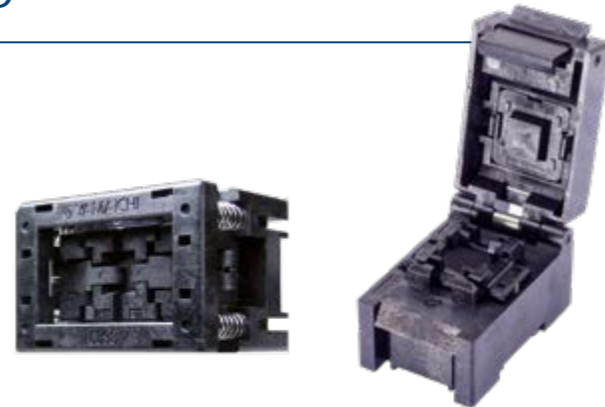
BGA / CSP / LGA - IC398 / IC409

FEATURES

- 0.50 mm pitch open top socket
- Compression Mount Technology (CMT)
- Depopulation versions available

SPECIFICATIONS

- Mating cycles: 10,000
- Operating temperature range: -40 °C - +150 °C



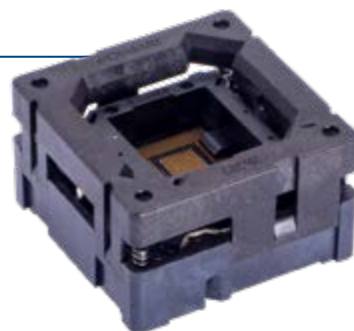
BGA / CSP - NP383

FEATURES

- 0.50 mm pitch open top socket
- 2-point tweezer-style contact system

SPECIFICATIONS

- Mating cycles: 10,000
- Operating temperature range: -40 °C - +150 °C



BALL GRID ARRAY (BGA) | CHIP SCALE PACKAGE (CSP) LAND GRID ARRAY (LGA)

BGA / CSP / LGA - IC280

FEATURES

- 0.65 mm to 1.00 mm pitch clamshell socket
- Buckling beam contact system

SPECIFICATIONS

- Mating cycles: 10,000
- Operating temperature range: -40 °C - +150 °C



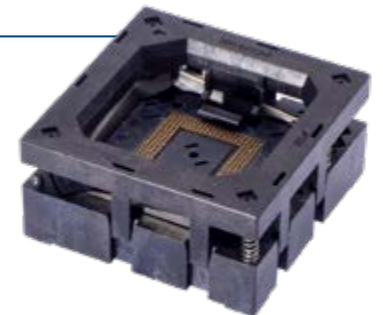
BGA / CSP - NP291

FEATURES

- 0.65 mm to 0.75 mm pitch open top socket
- Contacting structure to nip the sides of solder balls to lower damages of coplanarity of solder balls

SPECIFICATIONS

- Mating cycles: 10,000
- Operating temperature range: -55 °C - +170 °C



BGA / CSP - NP556

FEATURES

- 0.80 mm pitch open top socket
- Compression Mount Technology (CMT)

SPECIFICATIONS

- Mating cycles: 10,000
- Operating temperature range: -40 °C - +150 °C





BALL GRID ARRAY (BGA) | CHIP SCALE PACKAGE (CSP) LAND GRID ARRAY (LGA)

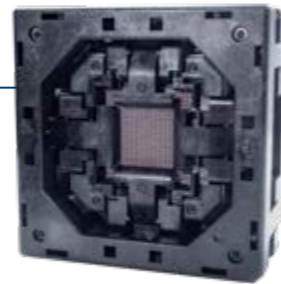
BGA / CSP - NP566

FEATURES

- 0.80 mm pitch open top socket
- 2-point tweezer style contact system

SPECIFICATIONS

- Mating cycles: 10,000
- Operating temperature range: -40 °C - +150 °C



BGA / CSP / LGA - NP351

FEATURES

- 0.80 mm pitch open top socket
- 2-point tweezer style contact system

SPECIFICATIONS

- Mating cycles: 10,000
- Operating temperature range: -55 °C - +150 °C



BGA / CSP - NP352 / NP483 / NP486

FEATURES

- 1.00 mm pitch open top socket
- 2-point tweezer style contact system

SPECIFICATIONS

- Mating cycles: 10,000
- Operating temperature range: -40 °C - +150 °C



BGA / CSP - NP276

FEATURES

- 1.27 mm pitch open top socket
- 2-point tweezer style contact system

SPECIFICATIONS

- Mating cycles: 10,000
- Operating temperature range: -55 °C - +150 °C



SMALL OUTLINE PACKAGES GULL-WING LEADS (SOP)

SOP - IC51

FEATURES

- 0.40 mm to 1.27 mm pitch clamshell socket
- Support SOP, TSOP TYPE I & II packages
- Dual wipe contacts ensure high reliability

SPECIFICATIONS

- Mating cycles: 10,000
- Operating temperature range: -55 °C - +170 °C



SOP - IC189

FEATURES

- 0.40 mm to 1.27 mm pitch open top socket
- Support SOP, TSOP TYPE I & II packages

SPECIFICATIONS

- Mating cycles: 10,000
- Operating temperature range: -40 °C - +150 °C



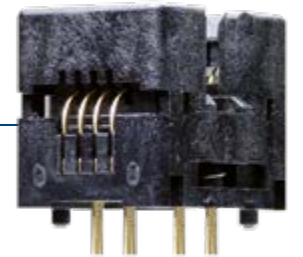
SOP - IC235

FEATURES

- 1.27 mm pitch open top socket
- Support SOP, TSOP TYPE II packages

SPECIFICATIONS

- Mating cycles: 10,000
- Operating temperature range: -40 °C - +150 °C



SOP - IC191

FEATURES

- 0.50 mm pitch open top socket
- Support TSOP TYPE I packages

SPECIFICATIONS

- Mating cycles: 10,000
- Operating temperature range: -55 °C - +170 °C



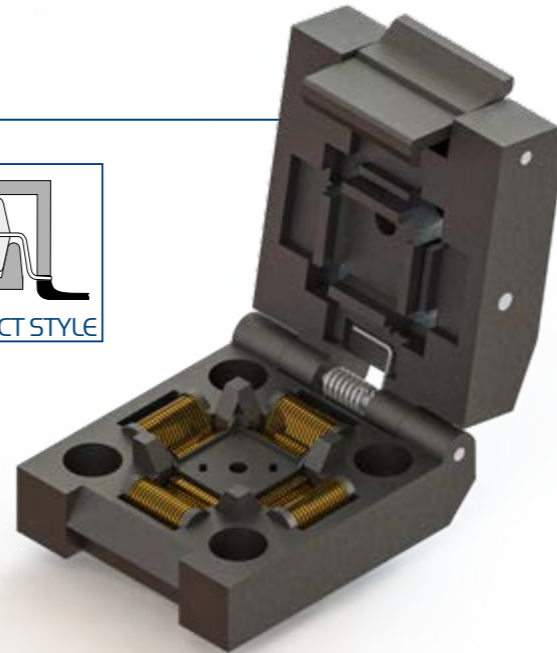
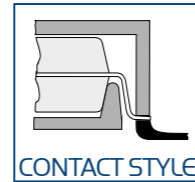


QUAD FLAT PACKAGES GULL-WING LEADS (QFP)

QFP - IC51

FEATURES

- 0.40 mm to 1.27 mm pitch clamshell socket
- Support QFP, PQFP, TQFP and MQUAD® packages



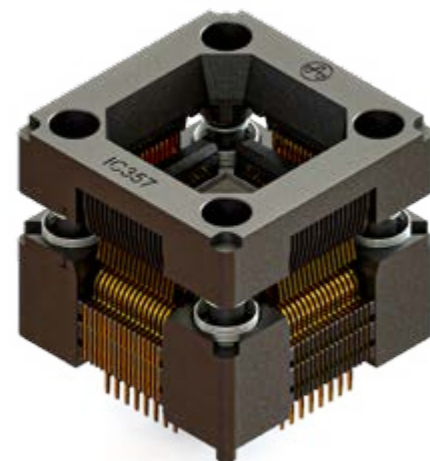
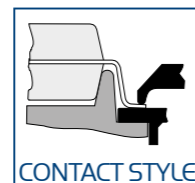
SPECIFICATIONS

- Mating cycles: 10,000
- Operating temperature range: -55 °C - +170 °C

QFP - IC357 / IC402

FEATURES

- 0.40 mm to 0.65 mm pitch open top socket
- Center GND and signal GND versions available (exposed pad contact)
- 2-point contact type



SPECIFICATIONS

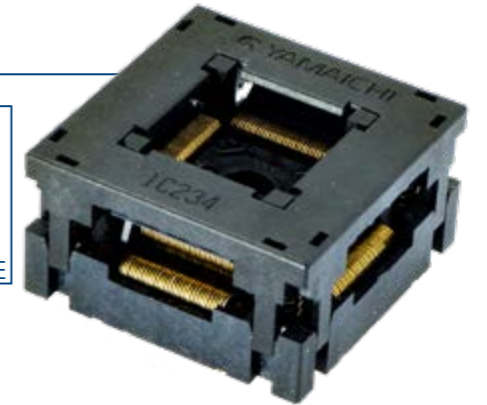
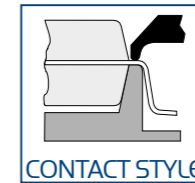
- Mating cycles: 10,000
- Operating temperature range: -40 °C - +150 °C (up to 180 °C)



QFP - IC234

FEATURES

- 0.40 mm to 0.80 mm pitch open top socket
- Single shoulder contact type



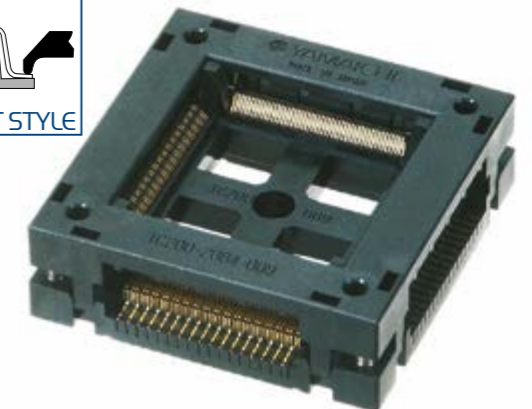
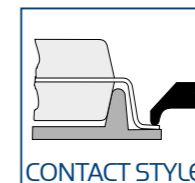
SPECIFICATIONS

- Mating cycles: 10,000
- Operating temperature range: -40 °C - +150 °C

QFP - IC200 / IC201 / IC217 / IC218 / IC248

FEATURES

- 0.40 mm to 0.80 mm pitch open top socket
- Single foot contact type



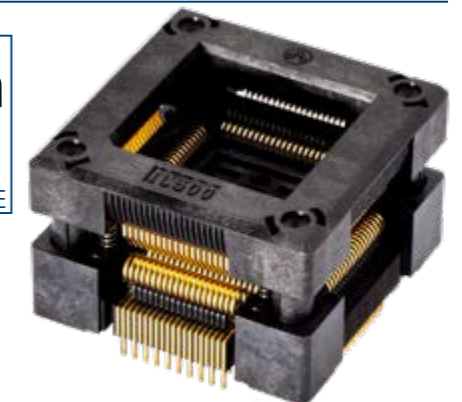
SPECIFICATIONS

- Mating cycles: 10,000
- Operating temperature range: -40 °C - +150 °C

QFP - IC500

FEATURES

- 0.50 to 0.65 mm pitch open top socket
- Center GND version available (exposed pad contact)
- Dual shoulder contact type



SPECIFICATIONS

- Mating cycles: 10,000
- Operating temperature range: -40 °C - +150 °C



QUAD FLAT NO-LEAD (QFN)

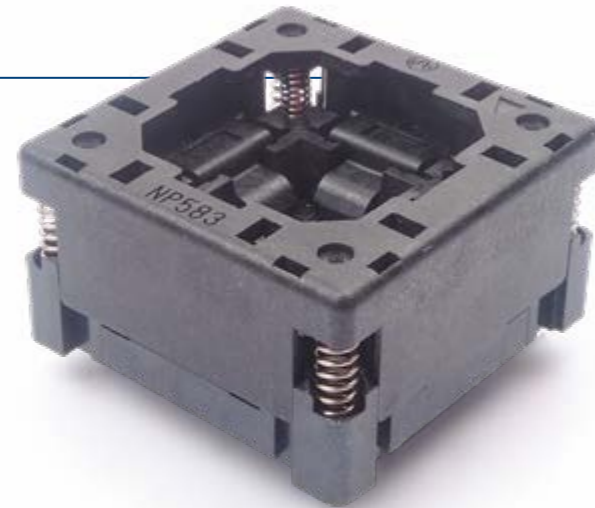
QFN - NP506 / NP583

FEATURES

- 0.40 mm to 0.80 mm (NP506) / 0.40 to 2.00 mm (NP583) pitch open-top socket
- Center GND version available (exposed pad contact)
- Support packages with and without „dimples“

SPECIFICATIONS

- Mating cycles: 10,000
- Operating temperature range: -40 °C - +150 °C



QFN - IC609 / IC610

FEATURES

- 0.40 mm (IC609) and 0.50 mm (IC610) pitch clamshell socket
- Center GND version available (exposed pad contact)

SPECIFICATIONS

- Mating cycles: 10,000
- Operating temperature range: -40 °C - +150 °C



QUAD FLAT NO-LEAD (QFN)

QFN - NP404

FEATURES

- 0.50 mm pitch open top socket
- Buckling beam contacts

SPECIFICATIONS

- Mating cycles: 10,000
- Operating temperature range: -40 °C - +150 °C



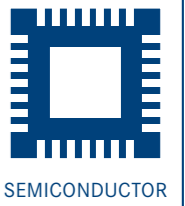
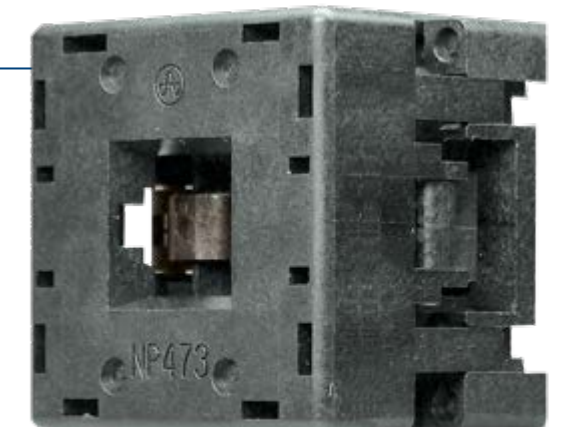
QFN - NP473 / NP363

FEATURES

- 0.50 mm and 1.00 mm pitch open top socket
- Package outline size in the range of 4~8 sqmm

SPECIFICATIONS

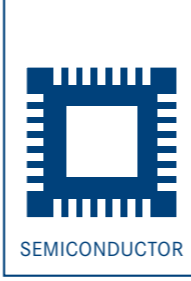
- Mating cycles: 10,000
- Operating temperature range: -40 °C - +150 °C (up to 180°C)





CONTACTING SEMICONDUCTOR

QUAD FLAT NO-LEAD (QFN) LEADLESS CHIP CARRIER (LCC)



QFN - NP445

FEATURES

- 0.50 mm pitch open top socket
- Center GND version available (exposed pad contact)

SPECIFICATIONS

- Mating cycles: 10,000
- Operating temperature range: -40 °C - +150 °C (up to 180°C)



QFN - QFN11T

FEATURES

- 0.40 mm to 0.80 mm pitch clamshell socket
- Center GND version available (exposed pad contact)

SPECIFICATIONS

- Mating cycles: 10,000
- Operating temperature range: -40 °C - +170 °C



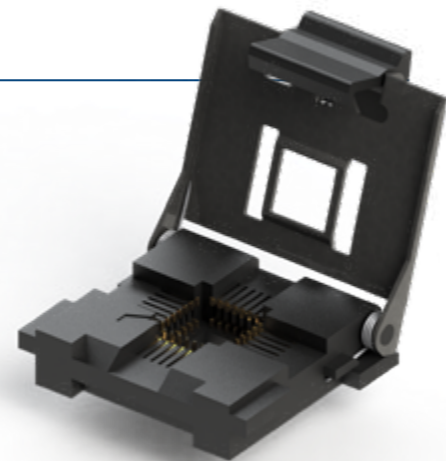
LCC - IC51 / IC53

FEATURES

- 1.016 and 1.27 mm pitch
- 44, 48 and 68 contact pins

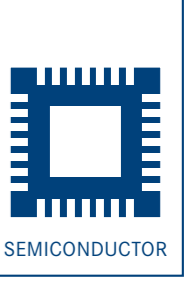
SPECIFICATIONS

- Mating cycles: 10,000
- Operating temperature range: -40 °C - +170 °C



CONTACTING SEMICONDUCTOR

THROUGH-HOLE PACKAGES (SIP / ZIP / DIP)



SINGLE INLINE PACKAGE - SIP – IC70

FEATURES

- 1.27 to 2.00 mm pitch
- Dual wipe contacts ensure high reliability

SPECIFICATIONS

- Mating cycles: 10,000
- Operating temperature range: -55 °C - +170 °C



ZIG-ZAG INLINE PACKAGE - ZIP – IC39

FEATURES

- 1.27 to 1.778 mm pitch
- Dual wipe contacts ensure high reliability

SPECIFICATIONS

- Mating cycles: 10,000
- Operating temperature range: -40 °C - +170 °C



DUAL INLINE PACKAGE - DIP – IC37

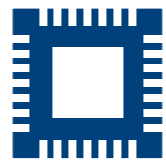
FEATURES

- 2.54 mm pitch
- Dual wipe contacts ensure high reliability

SPECIFICATIONS

- Mating cycles: 25,000
- Operating temperature range: -40 °C - +170 °C

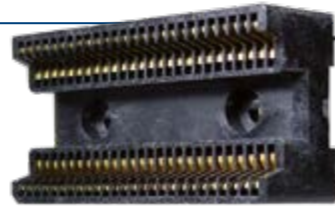




SHRINK DUAL INLINE PACKAGE - SDIP – IC76

FEATURES

- Shrink pitch (1.778 mm) sockets for high-density mounting
- Dual wipe contacts ensure high reliability



SPECIFICATIONS

- Mating cycles: 25,000
- Operating temperature range: -40 °C – +170 °C

SHRINK DUAL INLINE PACKAGE - SDIP – IC121

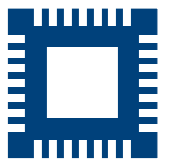
FEATURES

- Shrink pitch (1.778 mm) sockets for high-density mounting
- Dual wipe contacts ensure high reliability



SPECIFICATIONS

- Mating cycles: 10,000
- Operating temperature range: -40 °C – +150 °C



SOJ – IC100 / IC107

FEATURES

- 1.27mm pitch
- IC100 Series – IC-orientation – dead bug insertion
- IC107 Series – IC-orientation – live bug insertion



SPECIFICATIONS

- Mating cycles: 10,000
- Operating temperature range: -55 °C – +170 °C

PLCC – IC51

FEATURES

- 1.27mm pitch clamshell socket for PLCC packages
- IC-orientation - live bug insertion



SPECIFICATIONS

- Mating cycles: 10,000
- Operating temperature range: -40 °C – +170 °C

PLCC – IC120

FEATURES

- 1.27mm pitch open top socket for PLCC packages
- IC-orientation - live or dead bug insertion available
- Auto load capable
- IC auto-ejection type



SPECIFICATIONS

- Mating cycles: 10,000
- Operating temperature range: -40 °C – +170 °C



BURN-IN BACKPLANE & CARD EDGE CONNECTOR

BURN-IN BACKPLANE - CN136

FEATURES

- 432 contact pins (200 signal pins, 200 GND pins, 32 power supply pins)
- 90° orientation
- THT mounting

ADVANTAGES

- Low insertion force
- Robust design
- Support high channel parallelism requirement

SPECIFICATIONS

- Mating cycles: 10,000
- Current rating: 1 A / power pin
- Operating temperature range: -40 °C - +180 °C



CARD EDGE - PS 42



CARD EDGE - PS 44



CARD EDGE - PS 61



FEATURES (FOR PS 42/44/61)

- 2.54mm pitch - fit card thickness 1.60mm
- 180° orientation
- 2 terminal types available

SPECIFICATIONS (FOR PS 42/44/61)

- Mating cycles: 500
- Current rating: 3 A / pin
- Operating temperature range: -40 °C - +170 °C



DUAL INLINE MEMORY MODULE (DIMM) SINGLE INLINE MEMORY MODULE (SIMM)



DIMM - IC-554

FEATURES

- 1.27 to 2.00 mm pitch
- Dual wipe contacts ensure high reliability



DIMM - IC-497

FEATURES

- 0.80 mm pitch - fit card thickness 1.00 mm - 4 different positioning indicators
- 144 contact pins



DIMM - IC-438

FEATURES

- 1.27 mm pitch - fit card thickness 1.27 mm - 7 different positioning indicators
- 168 contact pins



DIMM - IC-595

FEATURES

- 1.00 mm pitch - fit card thickness 1.27 mm
- 184 and 240 contact pins



SPECIFICATIONS*

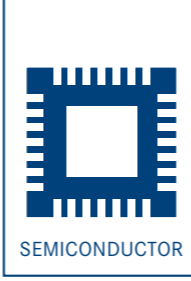
- Mating cycles: 10,000
- Operating temperature range: -55 °C - +170 °C (all DIMM) | -55 °C - +150 °C (SIMM)

*for all products on this page



CONTACTING SEMICONDUCTOR

DUAL INLINE MEMORY MODULE (DIMM) SINGLE INLINE MEMORY MODULE (SIMM)



DIMM - IC-589

FEATURES

- 1.27 mm pitch - fit card thickness 1.27 mm
- 184 contact pins



DIMM - IC-657

FEATURES

- 0.50 mm pitch - 144 and 172 contact pins - fit card thickness 0.80 mm
- 0.60 mm pitch - 200 contact pins - fit card thickness 1.00 mm



SIMM - IC-176

FEATURES

- 1.27 mm pitch - 64, 72 and 100 contact pins - fit card thickness 1.27 mm
- 2.54 mm pitch - 30 and 35 contact pins - fit card thickness 1.27 mm



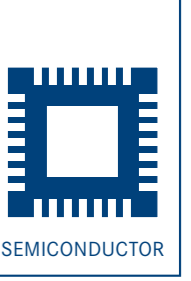
SPECIFICATIONS*

- Mating cycles: 10,000
- Operating temperature range: -55 °C - +170 °C (all DIMM) | -55 °C - +150 °C (SIMM)



CONTACTING SEMICONDUCTOR

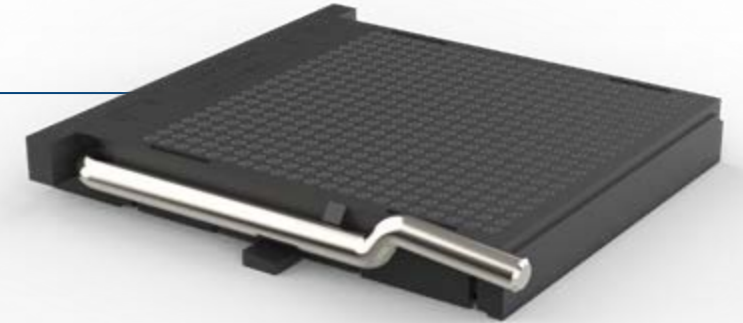
PIN GRID ARRAY (PGA)



PGA - NP89

FEATURES

- 2.54 mm pitch - 3-point contact system
- Grid 11x11 / 17x17 / 21x21 / 25x25
- Depopulation / protection key on demand
- Zero insertion force - left side handle



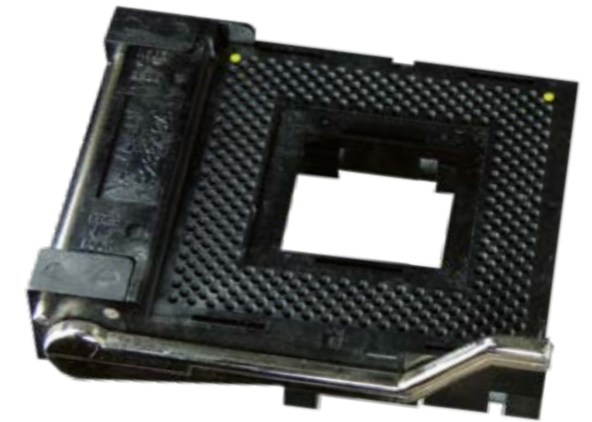
SPECIFICATIONS

- Operating temperature range: -40 °C - +170 °C

PGA - NP236

FEATURES

- 1.27 mm interstitial pitch
- 1,020 contacts - grid 47x47 depopulated
- Zero insertion force - left side handle



SPECIFICATIONS

- Operating temperature range: -55 °C - +170 °C

PCB FULL CUSTOM SOLUTIONS

Our European Design Centre (EDC) for the electrical engineering of interconnectivity products and systems such as test applications, failure analysis & reliability uses the Altium Designer software for PCB design. Our engineers are experts in all PCB-related design challenges and carry out superior PCB design work.

Our range of products and services includes PCB design for all types of test setups and test applications. Yamaichi Electronics is a system supplier supporting customers with decades of know-how in test philosophy, contacting, placement and routing of integrated semiconductor components in test environments, for example in DUT / Load Board development.

Numerous globally renowned semiconductor manufacturers and design companies in a variety of business sectors and with a wide range of products can be cited as reference customers for the development of custom test applications. All of these customers have already implemented successful projects with Yamaichi Electronics.

We are certified by the IPC Designer Council as a C.I.D. (Certified Interconnect Designer), the only certification for PCB designers recognised worldwide. Yamaichi Electronics is also a member of FED, the trade association for electronics design.

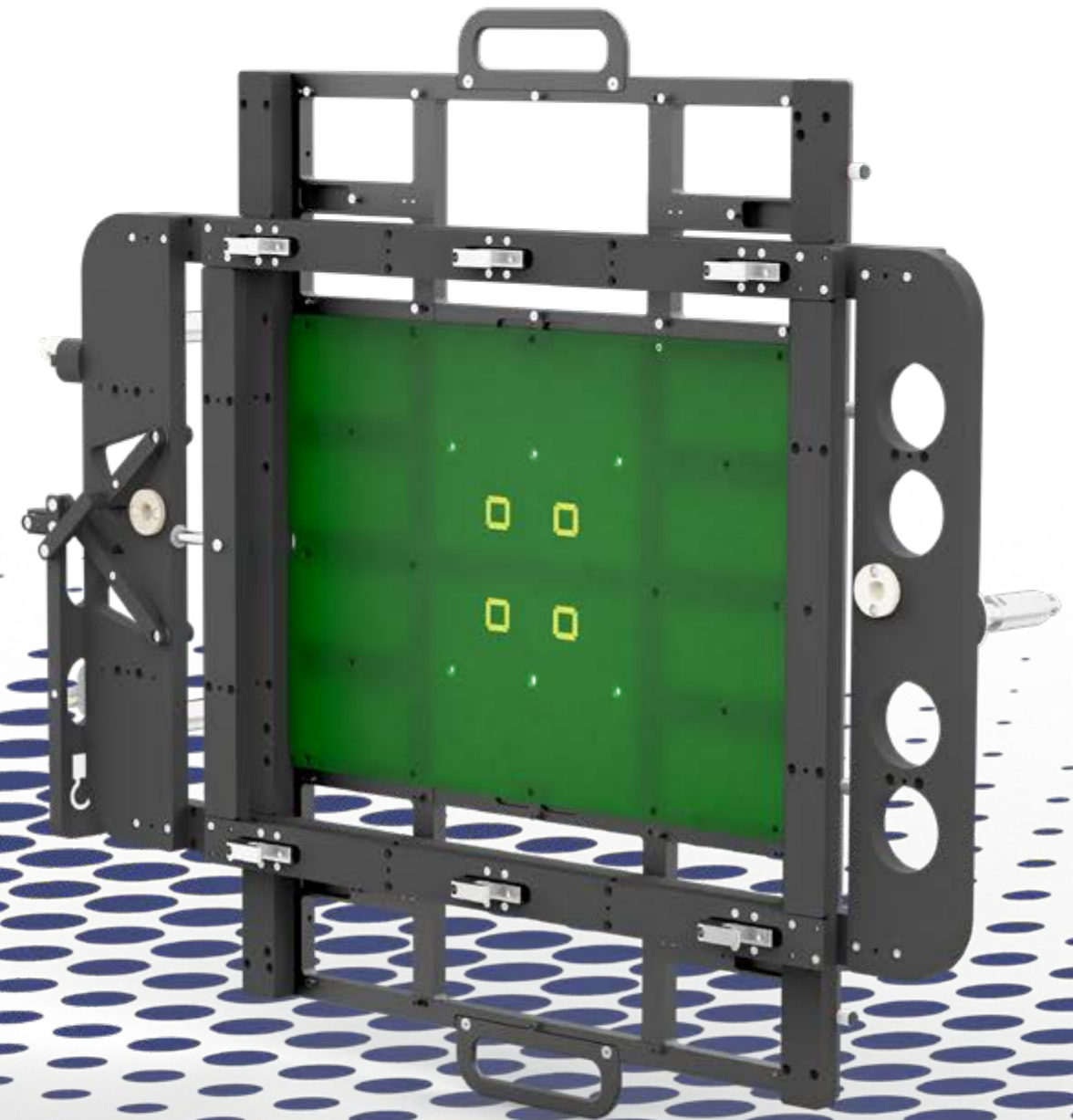
Our European Design Centre is located in Munich, Germany and Sousse, Tunisia. Since we are close to our customers, our staff can react quickly to all requirements and carry out analysis for electrical, mechanical and temperature-driven parameters, including change requests and their consolidation into an optimised design. We are certified according to ISO 9001 : 2015.



ADVANTAGES

- Customised designs for PCB & hardware
- Inhouse electrical and thermal simulations
- Manufacturing & assembly at selected partners
- Consulting service

SPECIALITIES – CUSTOMISED DESIGNS





DOCKINGS

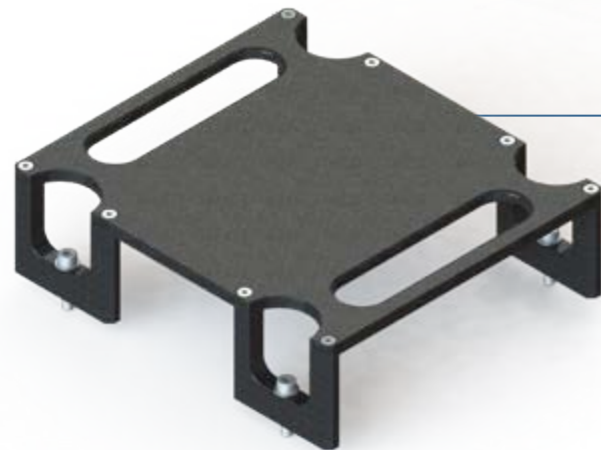
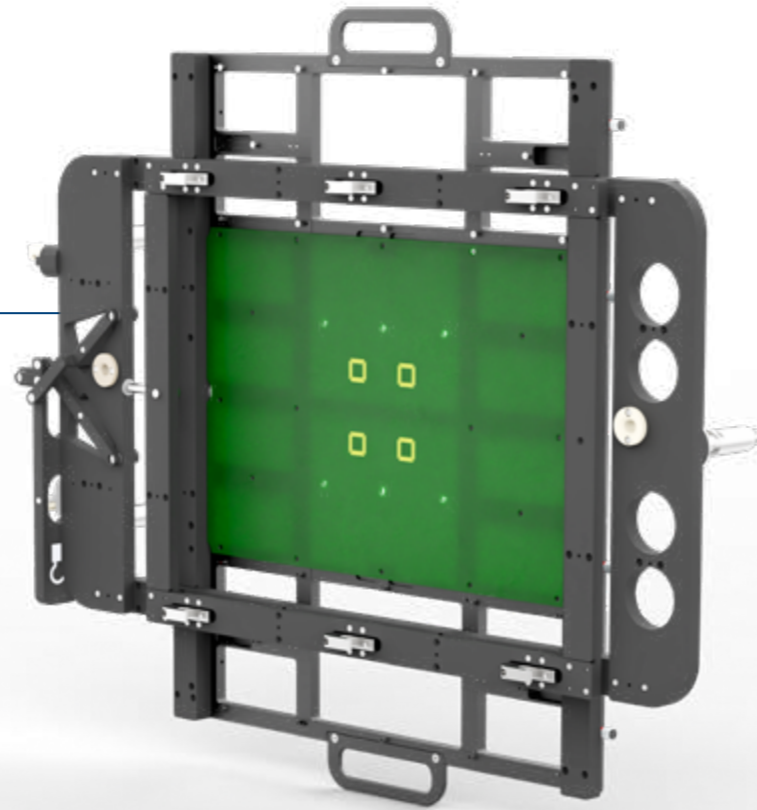
YED900 DOCKING

FEATURES

- Docking for tester and handler frame with side lever
- Fast and easy docking
- Side lever with indicator OPEN / CLOSE

ADVANTAGES

- Stable, robust and buckling-resistant frames
- Easy adopting on existing systems
- Fewer contact points between the contact unit and the load board
- Short signal paths for precise measurement result
- Maintenance free



YED900 PROTECTION COVER

FEATURES

- Optional accessory for dockings
- Protect your docking application during storage
- Individual designs

ADVANTAGES

- Provides a safe handling of your docking application
- Easy adaption

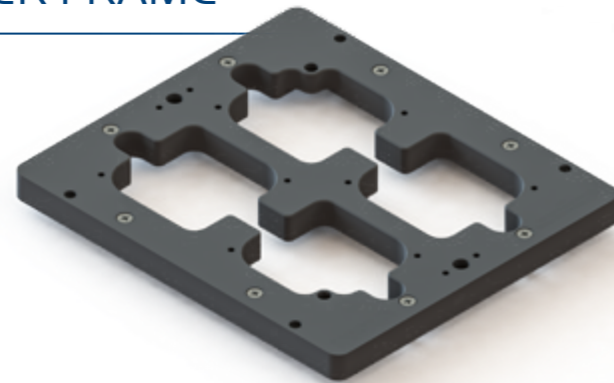
YED900 CONTACT UNIT HOLDER FRAME

FEATURES

- Adaption to existing contact unit holder for DUT-boards
- Precise guiding between all sub-assemblies
- Individual frame size

ADVANTAGES

- Smart design and high-quality production
- Adaption to any contact unit holders possible
- Maintenance free



ACCESSORIES

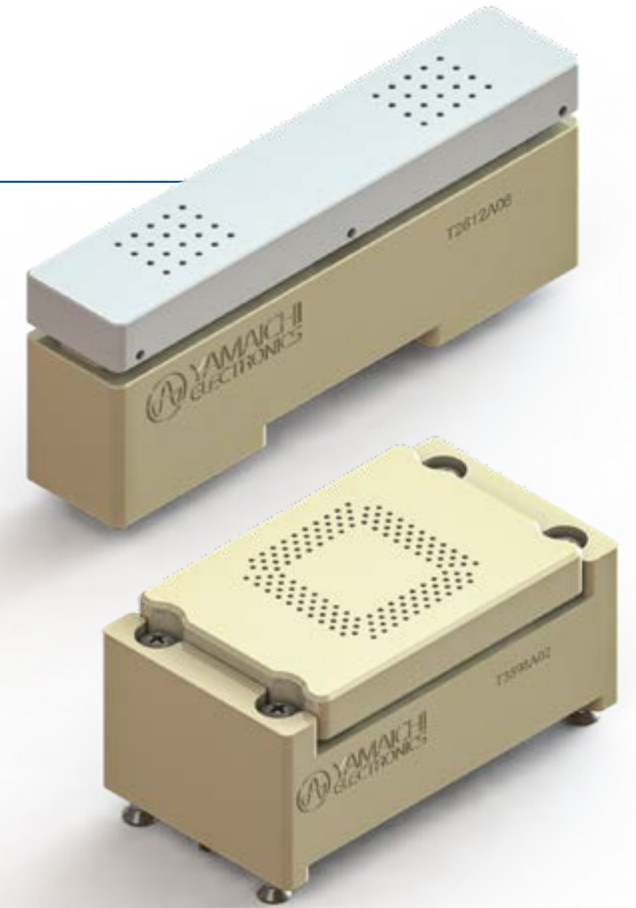
YED900 PIN BLOCKS

FEATURES

- Solderless pin block with pin protection
- Spring probe design
- Compression mount pin block for better maintenance

ADVANTAGES

- Individual size depending on pin count and available space
- Large variety of pins available
- Contact height can be customised



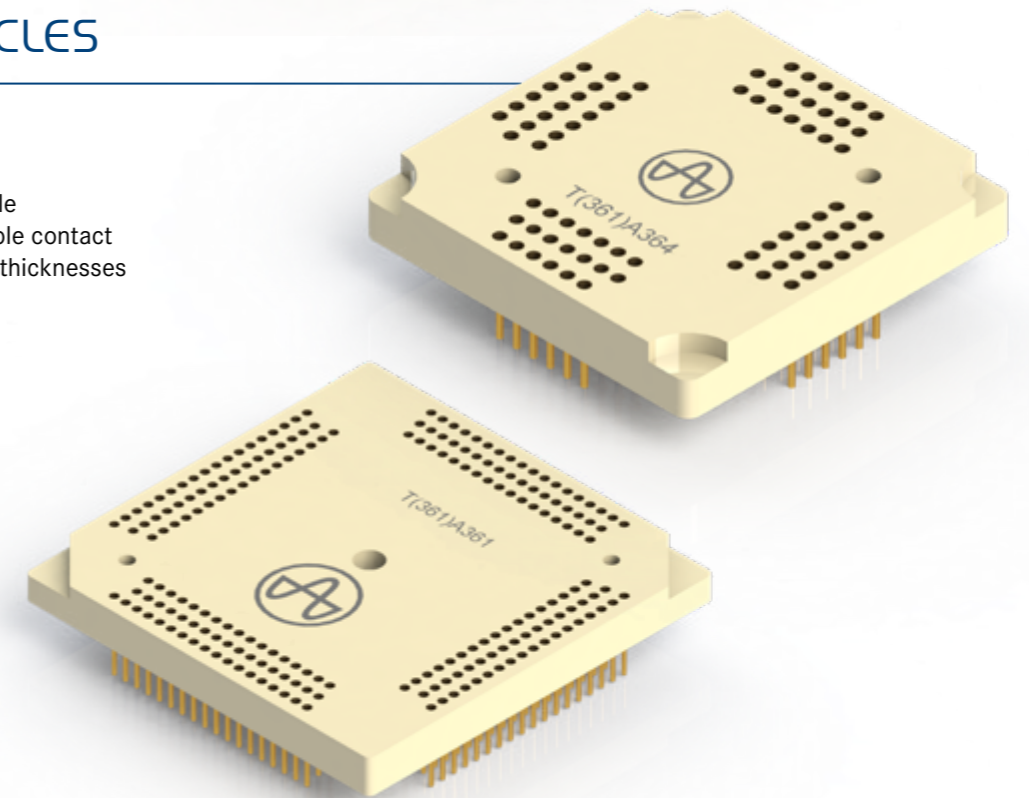
YED RECEPTACLES

FEATURES

- Various tail lengths available
- Spring clip design for reliable contact
- Individual receptacle body thicknesses

ADVANTAGES

- Robust design
- Usable in ATE applications
- Reliable contacts
- Customised design





HIGH-RELIABILITY

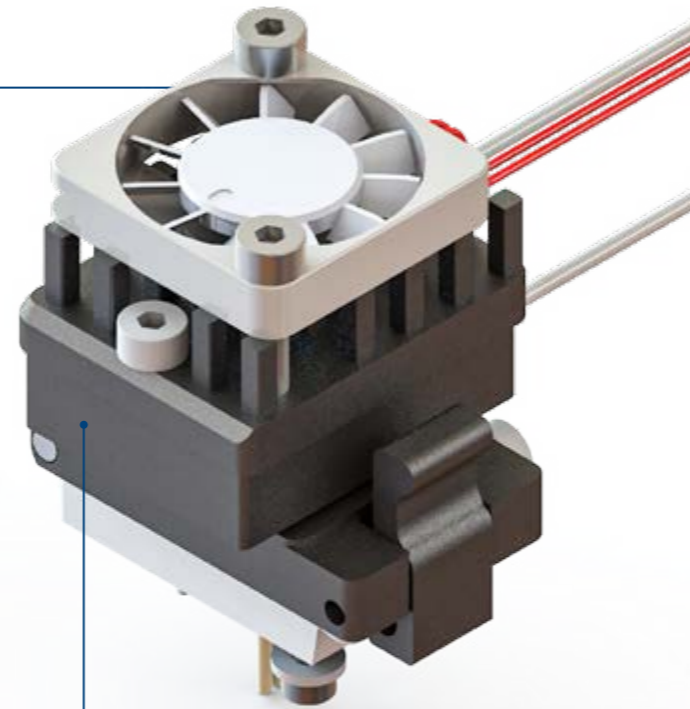
YED900 HIGH-REL

FEATURES

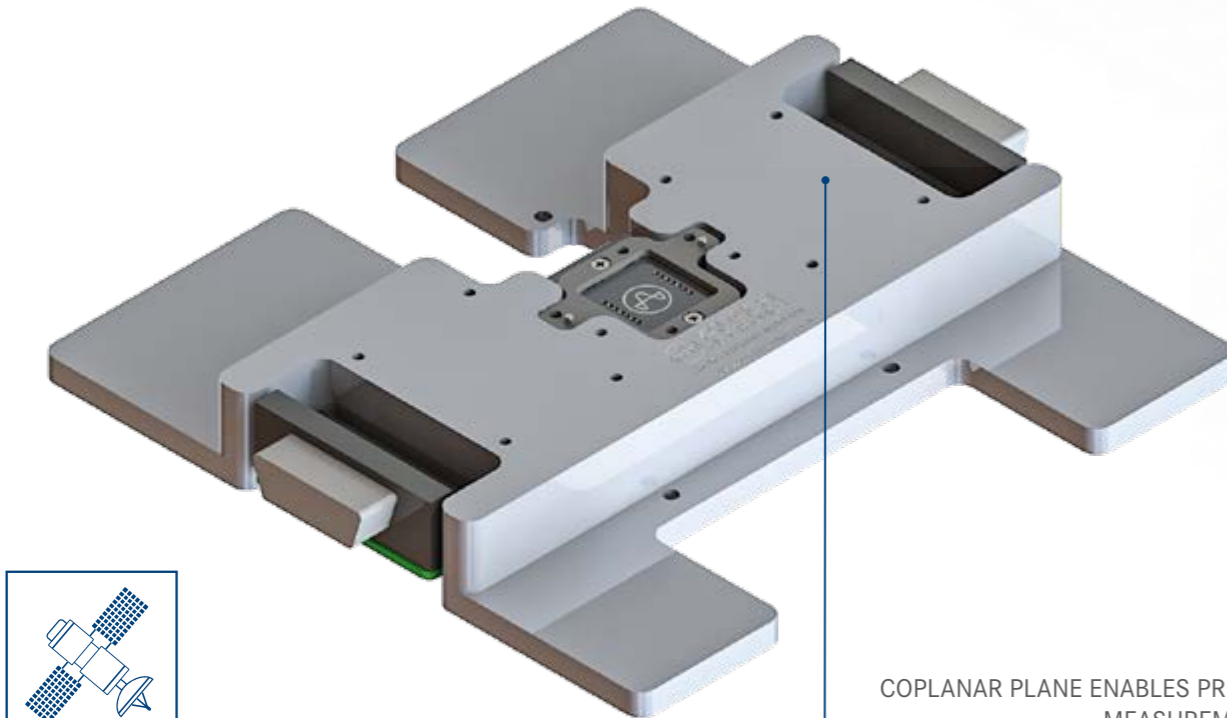
- Reliable contact technology with optional redundancy
- Outstanding performance
- HF capable

ADVANTAGES

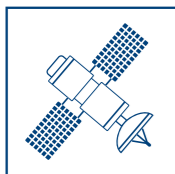
- Fully customised to meet customers' requirements
- Selected materials and proven contact technology
- Reliable and robust design
- Precise manufacturing and high-quality standard



SENSING FLUIDS OF BIOSENSORS



COPLANAR PLANE ENABLES PRECISE MEASUREMENTS



IMAGING SOCKETS

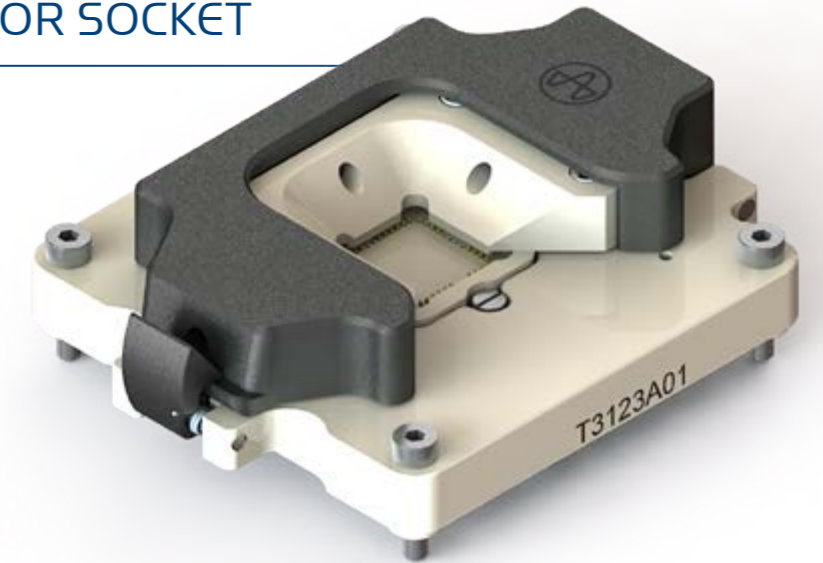
YED900 IMAGING SENSOR SOCKET

FEATURES

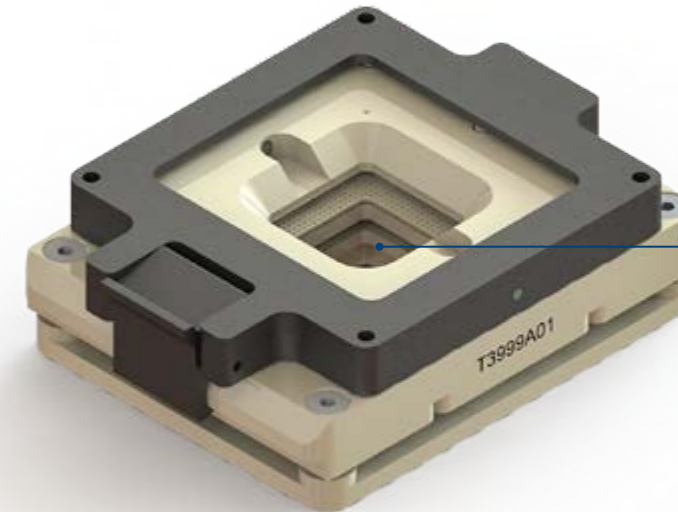
- Fully customised socket
- Optimised to reduce reflections
- Selected reliable materials
- HF capable

ADVANTAGES

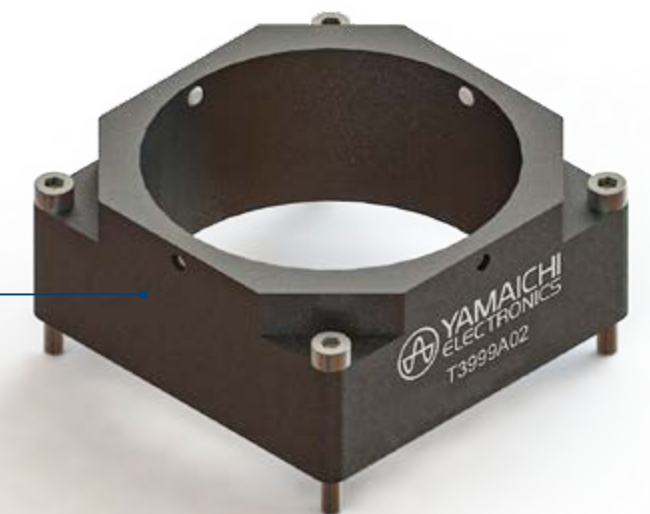
- Pitch starting from 0.25 mm
- Any size of socket possible
- Integration of socket into test setup
- Reliable contact technology



LARGE AND FLAT OPENING



OPTIONAL ADAPTER FOR LIGHT ABSORPTION





TEST SOLUTIONS

INTERFACE SOLUTIONS

CONTACTING SEMICONDUCTORS

PCB FULL CUSTOM SOLUTIONS

SPECIALITIES – CUSTOMISED DESIGNS

YED-V1-2|4

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