

# Mill-Max Mfg. Corp

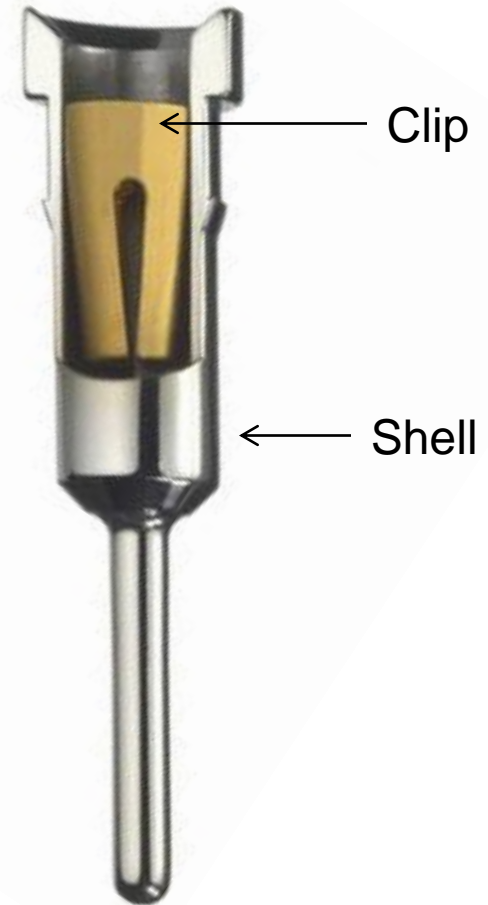
## PIN RECEPTACLES

### Training Module



# What is a Receptacle?

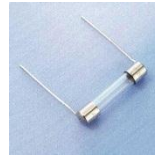
- High-reliability – 2 piece construction
- Gas tight seal – Environmental conditions will not affect the integrity of the contact.
- Multiple contact options – Contacts can be interchanged to provide for higher or lower insertion force.
- BeNi contact options for hi-temp applications
- Multiple shell options
- Multiple plating options
- Encapsulated contact area – solder can't wick up into contact area
- High number of insertion cycles
- Acceptance range between .008" to .102"



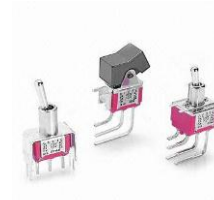
# Where are Receptacles used?

Mill-Max receptacles can be advantageous in any printed circuit, front panel, board edge or elevated height applications, offering both reliable electrical interconnections and provisions for future field device upgradeability.

Shown here are just a few of the many different components that can be plugged into a Mill-Max Receptacle.



Fuses



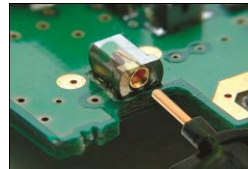
Miniature Switches



DC/DC Converters



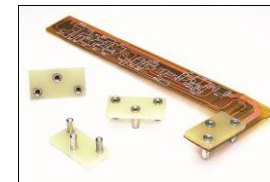
Miniature Relays



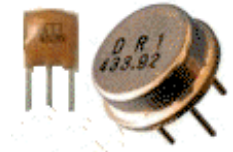
Horizontal SMT Applications



LCD Backlight Displays



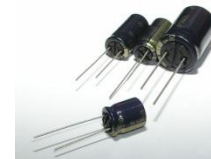
Flex Circuits



Filters



LEDs



Capacitors



Lamps



7-Segment Displays



Connectors



Sensors



Amplifier Modules



Magnetic Transducers

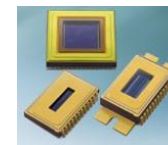
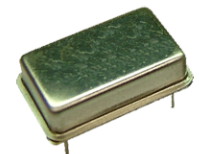


Image Sensors

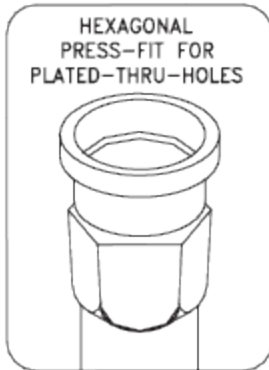
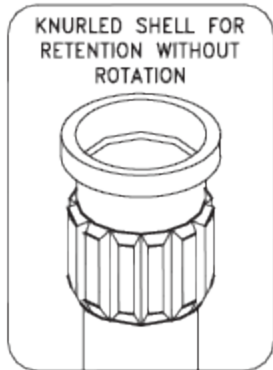
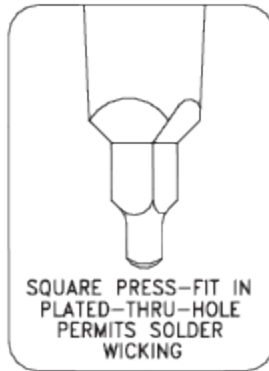
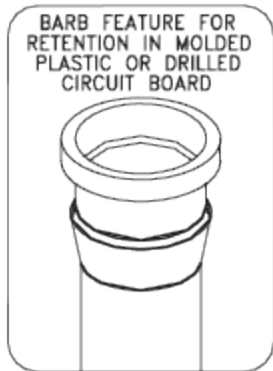
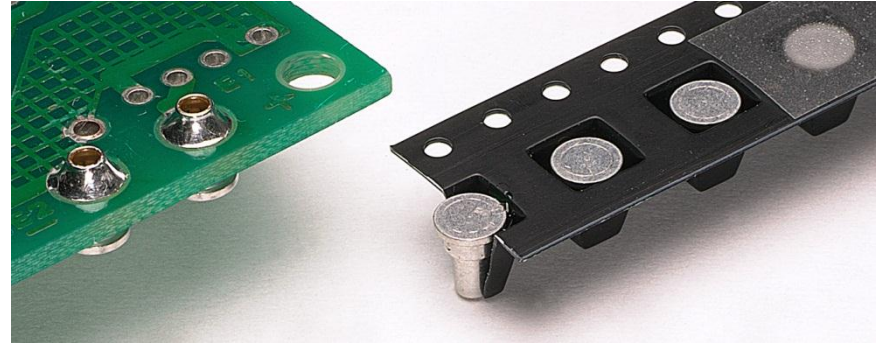


Crystal Oscillators



# PC Board Applications

Receptacles can be used as in solder mount or a variety of Press-Fit Options shown below.

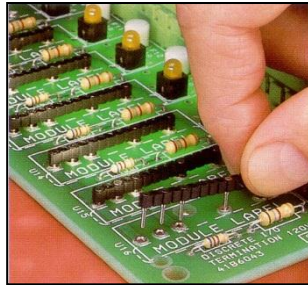
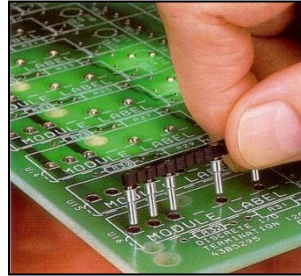


In addition, Mill-Max offers compliant body receptacles designed for solder-less press-fit assembly into plated through and non-plated through-holes ( drilled to starting hole sizes between .040 to .0433" [1,02-1,1mm] in diameter.

# Packaging

## Carrier Sockets

- Receptacles come pre-loaded on carriers. They are placed on the pc board into appropriately sized holes and run through solder process.
- After soldering, the “carrier” is removed leaving very low-profile receptacles. Multiple receptacles have been installed in a fraction of the time it takes to install individual receptacles.



## Tape and Reel



Mill-Max through-hole receptacles are available on tape & reel for automated assembly.

## Bulk

Mill-Max has partnered with companies offering automated assembly equipment for parts bought in bulk. Contact Technical Services for more information.



# For More Information

Follow the links below or visit [www.mill-max.com](http://www.mill-max.com) for more detailed information on all of our products.

- [Step by Step Receptacle Search](#)
- [Using Screw Machined Technology in your Application](#) (Login Required)
- [Selecting the right Contact Clip for your Application](#) (Login Required)
- [Application of Discrete Receptacles with Organic Fibre Plug Solder Barrier](#) (PDF)
- [Application of Receptacles using Carriers](#) (Login Required)
- [Applications and Specifications for Press Fit Connectors](#) (Login Required)

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MILL-MAX<sup>®</sup> MAXIMUM CONNECTIONS

Search by Part Number

Home > **Technical Assistance**

### TECHNICAL ASSISTANCE

When customers need a high-performance connector for their critical interconnect applications, Mill-Max [precision-machined](#) pin technology is the answer. Mill-Max Interconnects offer multiple advantages over their stamped-and-formed counterparts:

- Receptacle shells have seamless construction, preventing solder contamination from entering the electrical contact area during wave or reflow soldering operations.
- Countersinking at the top of machined pins promotes alignment, making assembly more productive.
- Machined sockets are made with brass alloy 360 ½ hard, an alloy known for its strength, conductive, and thermal properties.
- Press-fit assembled inside each receptacle shell is a highly reliable, four-finger [beryllium copper contact clip](#), which scores the mating device lead, forming a gas-tight electrical and mechanical connection. For high-temperature applications of more than 150°C, an alternative [beryllium nickel alloy](#) is available.
- Multi-finger [contact clips](#) are superior to wiping connector blades because they provide multiple points of contact to the mating pin, providing better power and force distribution.
- Two-piece receptacle construction (shell and contact clip) allows for cost-efficient plating combinations. Receptacle shells can be plated with tin for solderability. Contact clips can be gold-plated for optimum conductivity.
- Socket insulators are made from high-temperature thermoplastics suitable for reflow soldering temperatures.
- Non-standard footprint pattern insulators can be easily created and configured using in-house PCB routers to machine FR-4 epoxy or G-30 polyimide for applications greater than 150°C.

Mill-Max is North America's largest supplier of screw machined pins, receptacles, terminals and sockets. Our 140,000 square foot plant houses all facilities including: engineering, tooling, primary and secondary machining, inner contact stamping, gold and tin plating, injection molding, automatic assembly operations and strict process control, monitored by our experienced Quality Control inspectors.

Are you looking for ways of connecting two parallel conductive surfaces inside an electronic device or instrument? [See how Mill-Max Spring Contacts](#) can be used to accommodate uneven, non-parallel or blind mate connections.

Are you considering mechanically fastening pin terminals to a circuit board? [Swaage assembly](#) is commonly used with solder terminals and printed circuit pins where one end of the terminal is flared out (riveted) securing it to the PCB.

### TECHNICAL ASSISTANCE

- ORDER A DESIGN GUIDE
- ORDER A SAMPLE
- FAQs
- EMAIL TECHNICAL SUPPORT
- DOWNLOAD WORKSHEET
- MATERIAL PROPERTIES
- DOCUMENT LIBRARY
- ENGINEERING NOTEBOOK
- NEWSLETTER SIGN-UP
- GLOSSARY

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Online Resource: [#Engineering Notebook](#) - Learn best practices for designing & incorporating Mill-Max products: <http://ht.ly/5m3Gy>  
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Boeing Forecasts \$4-Trillion Global Jet Market: <http://bit.ly/IDo6eO>  
[#manufacturing](#) [#aerospace](#) via [@mfgsourcing](#)  
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Engineering Word of the Week: COMPLIANT PRESS FIT - Method of mounting an interconnect component to a PC board (cont) <http://tl.gd/b85dph>  
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