

NEW

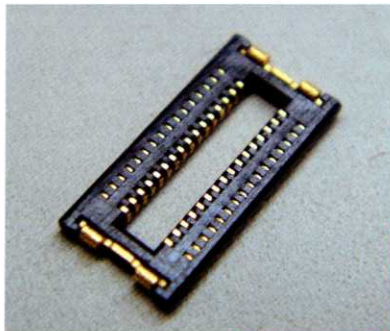
World's Smallest Stack-Height 0.7 mm Ultralow-profile, Space-Saving 0.3 mm Pitch Stacking Connectors LPZ Series

Background

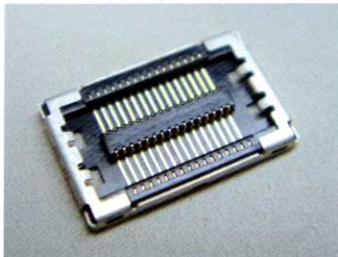
Recently, as high quality picture and large-sized liquid crystal panels (LCDs), high pixel density built-in camera modules making animated pictures, etc. increase, multiple function portable electronic devices are required. At the same time, as the number of small, thin components increases, small, thin connectors built into these electronic devices are also required. Further, as the speed of signal processing increases to allow multiple functions in devices, high frequency noise increases and becomes a major concern.

To support the needs as described above, we have developed the LPZ series of connectors, as narrow pitch connectors to connect PCB and flexible PCB, which are the world's smallest stack-height 0.7 mm ultralow-profile, space-saving 0.3 mm pitch stacking connectors with shields.

Plug connector



Receptacle connector



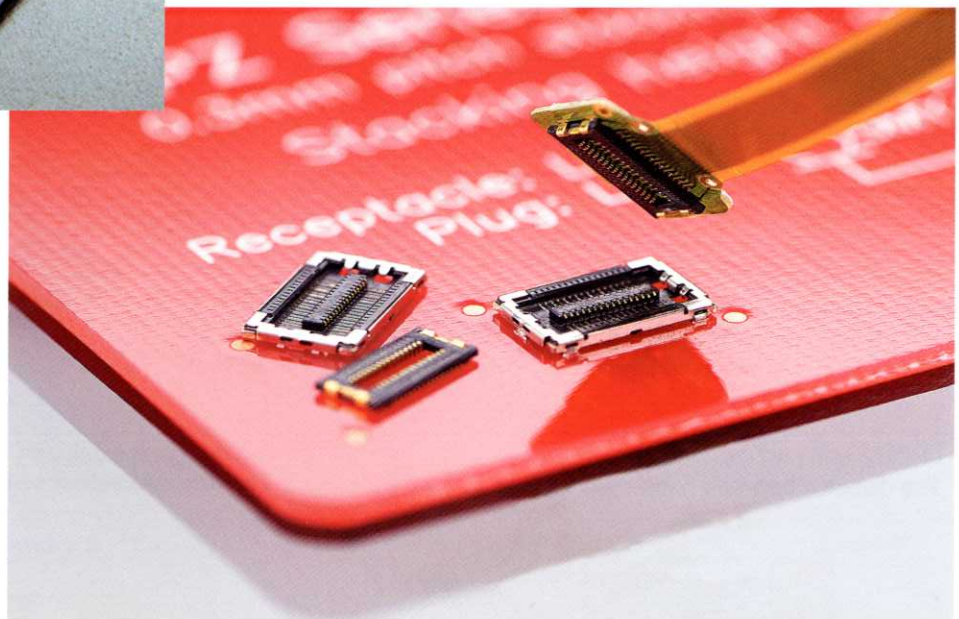
Concept

■ Minimized size

The LPZ series of connectors achieve the world's smallest stack-height 0.7 mm ultralow-profile, space-saving 0.3 mm pitch stacking connectors. Thereby, these connectors contribute to the development of significantly thin products and to the reduction of mounting surfaces on a PCB.

■ With shield

Because of high-quality picture and large-sized liquid-crystal panels (LCDs), the high pixel density of built-in camera modules making animated pictures, the signal transmission speed of the modules has increased, and therefore EMI noise from the connectors and/or flexible PCB mounted on devices has increased. Furthermore, frequency bands have also increased, which recently has required electrostatic noise preventive measures for terrestrial digital broadcasting, or "One Seg". Because all components such as contacts and soldering sections of the LPZ series of connectors at mating are enclosed by metal shields, the shell contacts of the metal shields and FG hold down if the plug connector is contacted, thus being connected to the PCB ground layer. Therefore these stacking connectors can reduce EMI noise to approximately 1/5 times that of connectors without shields.



Honda Connectors

 HONDA TSUSHIN KOGYO CO., LTD.

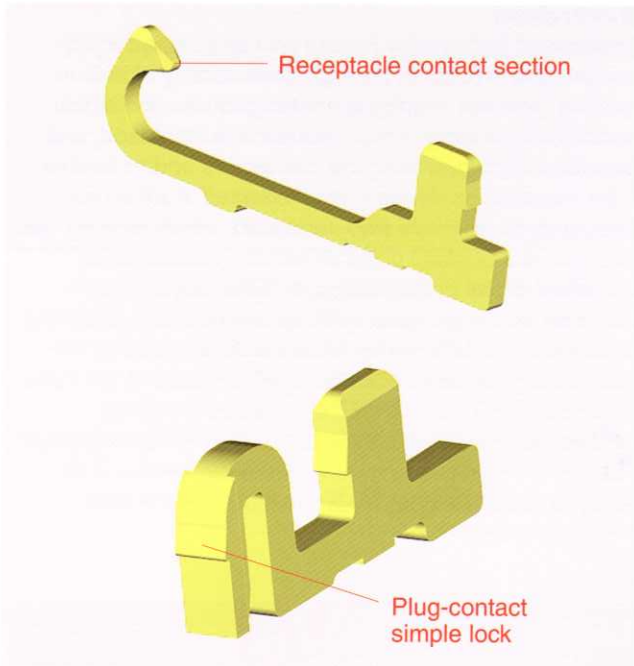
Address : 6-18-12, Megurohoncho, Meguro-Ku, Tokyo 152-8520, Japan / Telephone : +81-3-3714-1166/1161 / Fax : +81-3-5721-7090

Specifications are subject to change without notice.

Printed in Japan

Simple Lock Contact

By providing a boss on the contact of the plug connector, you “feel a click” at the time of insertion, and by utilizing our own unique contact action, high mating retention can be maintained. Because the contacts are manufactured by press punching, the form can be controlled with accuracy, which was not possible in the bellows contact structure. Therefore, this simple lock contact structure prevents partial mating caused by assembling work, which becomes a major concern, un-mating caused by impact from dropping the device, and improves the breaking strength of the flexible printed circuits (FPC). Thus, the new 0.7 mm stack-height stacking connectors achieve a high mating retention equivalent to or greater than conventional 1.5 mm stack-height stacking connectors.

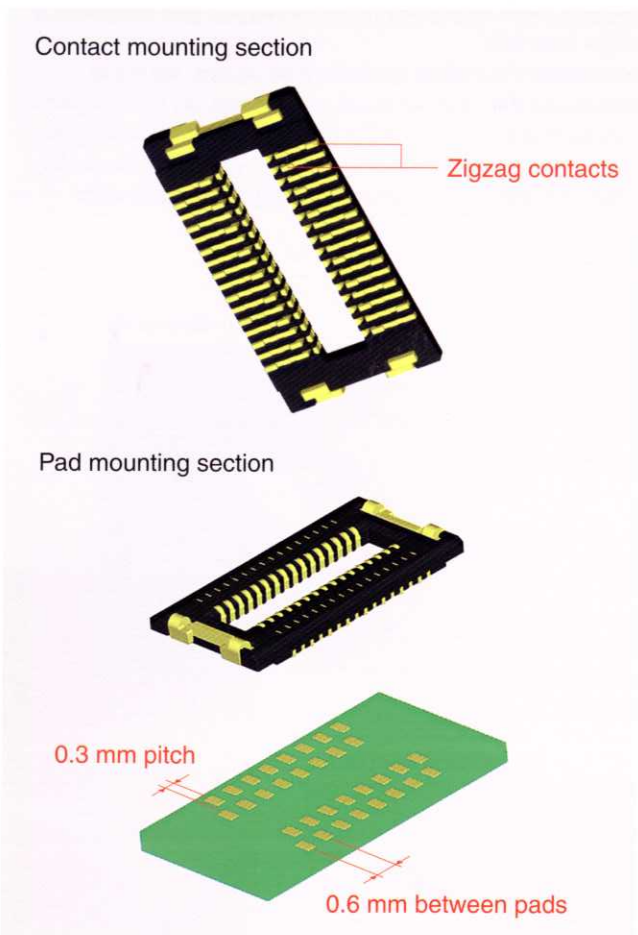


Specifications

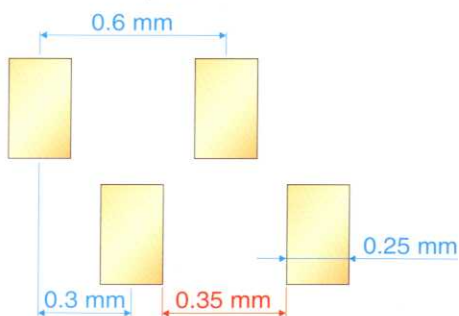
- Stack height: 0.7 mm
- Contact pitch: 0.3 mm
- No. of contacts: 32, 40 (24, 60)
- Rated current: 0.25A
- Rated voltage: 50V AC (r.m.s.)
- Temperature range: -55 to +85°C
- Delivery form: Embossed tape

Mounting

The LPZ series connector contacts are 0.3 mm pitch, but the contact soldering sections are 0.6 mm pitch and drawn up in two lines with a zigzag contact arrangement, so that the distance between pads becomes approximately doubled (refer to Fig. 1). Therefore, short circuits can be prevented, which occupy the majority of mounting defects in the market, and pads of soldering areas can be made larger, so that sufficient solder can be applied. By manufacturing the contacts by press punching and by using high-accuracy assembling equipment, a flatness of up to 0.08 mm can be achieved and defective soldering can be prevented. Further, the rising of molten solder, which becomes major concern for low profile connectors, can be restrained by plating Nickel plate on pads where solder is hard to apply.



LPZ 0.3 mm pitch connector
The distance between pads



0.4 mm pitch contacts
The distance between pads

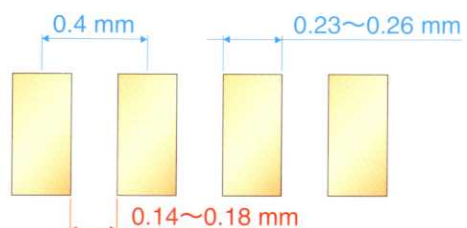


Fig. 1 Distance comparison between pads of LPZ 0.3 mm pitch connectors and between pads of 0.4 mm pitch connectors.