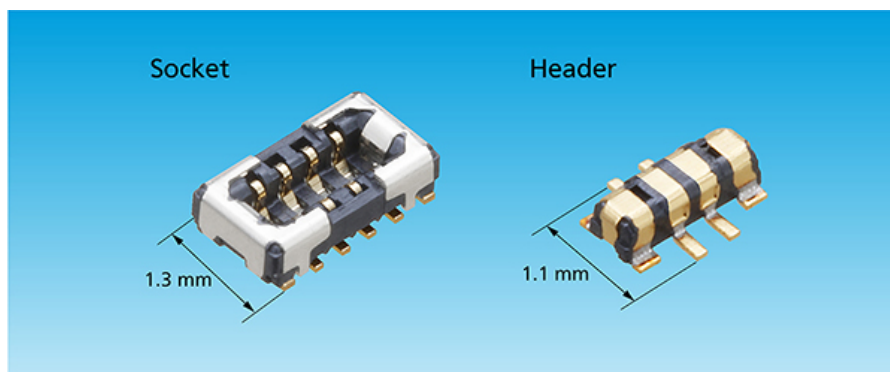


Dec 1, 2020

Panasonic Commercializes R35K Series Board to FPC Narrow Pitch Connectors for Wearable Devices

The new small connectors facilitate circuit design and contribute to device downsizing



R35K Series Board to FPC Narrow Pitch Connectors for Wearable Devices
 (December 2020, Panasonic)

Osaka, Japan – Panasonic Corporation announced today that its Industrial Solutions Company has commercialized the R35K Series of Board to FPC Narrow Pitch Connectors for use in wearable devices and will launch full-scale mass production in December 2020. The new connectors reduce the board mounting areas and are configured to be highly resistant to vibrations and impacts, contributing to reducing the size and weight and improving the reliability of such small electronics devices.

Wearable devices such as wristbands, earphones, and AR/VR glasses are widely used in various fields, including healthcare, entertainment and manufacturing, and are expected to further evolve and expand their market against the backdrop of increasing health awareness and labor shortages due to the declining birthrate and aging population. However, current mainstream connectors used in wearable devices have a problem that they require large board mounting areas due to complex wiring routes caused by their double-row terminal structure.

The newly developed connectors, with a single-row terminal structure, enable wiring from terminals of only one side, achieving an approx. 49% smaller board mounting area than Panasonic's conventional products (S35 series), which helps reduce the size and weight of wearable devices. With Panasonic's unique structure, the header and socket cannot easily be removed or break, which also improves device reliability. The connectors have also achieved large currents despite their small size, with the power terminal supporting up to 3 A and the signal terminal 0.3 A, meeting needs fast battery charging, thereby further promoting the widespread use of wearable devices.

Panasonic's new R35K Series Board to FPC Narrow Pitch Connectors have the following features:

1. The single-row terminal structure reduces mounting areas and facilitates circuit design.
2. Panasonic's unique structure, which is highly resistant to vibrations and impacts, improves device reliability.
3. Their support for large currents meets needs fast battery charging.

Suitable applications:

Wearable and hearable devices, including wristbands, earphones, and AR/VR glasses

Narrow Pitch Connectors R35K Series:

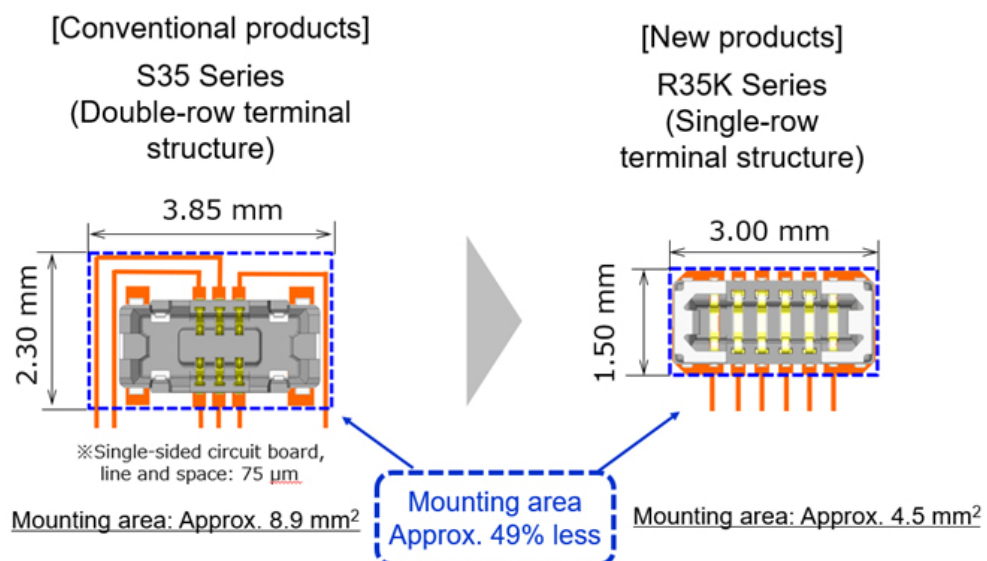
<https://www3.panasonic.biz/ac/e/control/connector/base-fpc/r35k/index.jsp?ad=press20201201>

Product Features:

1. The single-row terminal structure reduces mounting areas and facilitates circuit design.

With further downsizing and higher performance, electronic devices such as wearables and hearables require connectors that are smaller and facilitate circuit design. The issue with current mainstream connectors with a double-row terminal structure is their large board mounting areas due to complex wiring routes. By adopting Panasonic's unique molding and process technologies, the newly developed connectors have achieved a single-row terminal structure, configured to have internal terminals aligned horizontally, enabling wiring from one side. Connector downsizing and simplified wiring routes have reduced mounting areas by approx. 49% compared to Panasonic's conventional products (S35 series) and also facilitated circuit design.

[Feature 1: Terminal Structure Comparison (6 pins)]



2. Panasonic's unique structure, which is highly resistant to vibrations and impacts, improves device reliability.

Devices worn on the body require high resistance to vibrations and impacts of a fall, etc. The connectors continue to adopt Panasonic's unique Tough Contact structure, which enables the contact part to have adequate spring characteristics through high-precision bending using precision metal processing. The header and socket, which feature a high removal force and high robustness, will not easily be removed or break, improving device reliability.

3. Their support for large currents meets needs fast battery charging.

With a growing number of devices expected to be used for IoT, needs related to the reduction in charging time on the device side are expected to increase in the future. By adopting Panasonic's unique material processing technology, the connectors have achieved large currents despite their small size, with the power terminal supporting up to 3 A and signal terminal 0.3 A, enabling fast battery charging, etc.

Product Specifications:

[Product Specifications]

Board to FPC Narrow Pitch Connectors R35K Series		
Part No.		4 pins: Socket: AXF5K0412, Header: AXF6K0412 6 pins: Socket: AXF5K0612, Header: AXF6K0612
Dimensions		4 pins: Width 1.3 mm, Length: 2.24 mm 6 pins: Width 1.3 mm, Length: 2.94 mm
Mated height		0.6 mm
No. of pins		4, 6
Electrical characteristics	Rated current	Power terminal: Max. 3.0 A/pin contact Signal terminal: Max. 0.3 A/pin contact
	Rated voltage	30 V AC/DC
	Insulation resistance	Min. 1,000 MΩ (Initial)
	Dielectric strength	150 V AC for 1 min.
	Contact resistance	Power terminal part: Max. 30 mΩ Signal terminal part: Max. 90 mΩ
Mechanical characteristics	Composite insertion force	Max. 25 N (Initial)
	Composite removal force	Min. 3.0 N (Initial)

Detail Information:

- Narrow Pitch Connectors R35K Series

<https://www3.panasonic.biz/ac/e/control/connector/base-fpc/r35k/index.jsp?ad=press20201201>

Media Contact:

Panasonic Corporation Brand Strategy Division Global Communications Office

<https://news.panasonic.com/global/contacts/>

Inquiries:

https://www3.panasonic.biz/ac/e/user/new_question/?ad=press20201201

About Panasonic

Panasonic Corporation is a worldwide leader in the development of diverse electronics technologies and solutions for customers in the consumer electronics, housing, automotive, and B2B businesses. The company, which celebrated its 100th anniversary in 2018, has expanded globally and now operates 528 subsidiaries and 72 associated companies worldwide, recording consolidated net sales of 7.49 trillion yen for the year ended March 31, 2020. Committed to pursuing new value through innovation across divisional lines, the company uses its technologies to create a better life and a better world for its customers. To learn more about Panasonic: <https://www.panasonic.com/global>.

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