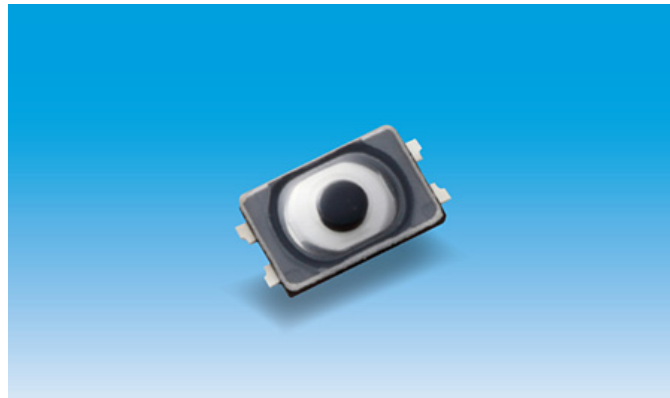


Aug 2, 2017

Panasonic Commercializes the Industry's Thinnest*1 Push-button Type "Light Touch Switch"

Panasonic's new push-button switch, named the 2.6 × 1.6 mm Top Push Surface Mount Device (SMD) Light Touch Switch, has a thickness of 0.5 mm, the industry's slimmest*1, which contributes to improving the design flexibility of wearable and hearable devices.



2.6×1.6mm Top Push SMD Light Touch Switch
(August 2017, Panasonic)

Osaka, Japan - Panasonic Corporation announced today that it will commercialize an SMD push-button switch named "Light Touch Switch", that achieves the industry's thinnest, 0.50 mm thickness. The external dimension is 2.6x1.6mm and it is applicable to wearable and [hearable \[1\]](#) devices. Mass production will start in August 2017.

The use of hearable devices such as hearing aids is expected to increase, driven by aging societies as well as increased numbers of wearable devices due to growing numbers of IoT-enabled products. Push-button switches are installed in devices for turning their power on and off, switching functions, and controlling volume. There is a need not only for smaller sizes and profiles, but also easy operability, [tactile feedback \[2\]](#), and waterproof and dust-proof capabilities. Using its unique precision processing technology, Panasonic has commercialized a push-button switch that works under the light operation force but gives clear tactile feedback, while successfully reducing the product thickness to the industry's thinnest*1 of 0.50 mm.

Product information:

http://www3.panasonic.biz/ac/e/control/switch/light-touch/2616m_smd/index.jsp?ad=press20170802E

Panasonic's new push-button switch has the following features:

1. The industry's thinnest*1 0.50 mm thickness contributes to the reduction of devices in size and improves design in flexibility
 - Dimension: Length 2.6 × width 1.6 × thickness 0.50 mm
 - Panasonic's conventional product*2: Length 2.6 × width 1.6 × thickness 0.53 mm/0.55 mm
2. The product achieves light operation force and a clear click feeling (tactile feedback), contributing to noise reduction during operation
 - Operation force: 1.0 N Panasonic's conventional product*2: 1.6 N and 2.4 N
3. Water-resistant and dust-proof design is ideal for wearable and hearable devices and allows it to be used both indoors and outdoors
 - Compliant with IP67 level in International Protection Marking.

*1: As a push-button switch as of August 2, 2017 (Panasonic data)

*2: Panasonic's conventional product: Length 2.6 × width 1.6 × thicknesses 0.53 mm/0.55 mm, Operation force 1.6 N and 2.4 N

Suitable applications:

Wearable devices (smart watches, wristbands, etc.), hearable devices (headphones, hearing aids, etc.), healthcare devices (portable medical devices, etc.), and other devices

Product features:

1. The industry's slimmest 0.5 mm thickness contributes to the reduction of devices in size and improves design in flexibility

With wearable and hearable devices becoming smaller, thinner, and wireless-enabled, operation switches need to be smaller and thinner to assist the space-saving design of such devices. The operability of switches normally declines as they are made thinner due to restrictions associated with their contact structure design. Panasonic has commercialized a switch that features the industry's slimmest 0.5 mm thickness, and yet achieves excellent operability by utilizing its unique movable contact design technology, precision processing technology, and press working technology. This allows the switch to meet the need for space-saving design, contributing to making various devices smaller and thinner and improving the design flexibility of such devices.

2. The product achieves light operation force and a clear click feeling (tactile feedback), contributing to noise reduction during operation

There is an increasing need for more ergonomic and more comfortably-operated wearable and hearable devices. It is also important to minimize noise when devices such as hearing aids and headphones are operated. In the past, the operability and tactile feedback of switches deteriorated as they were made thinner, due to restrictions associated with their contact structure design. The product is the industry's slimmest, at 0.5 mm, yet provides excellent operability and tactile feedback, and at the same time achieves noise reduction during operation through the use of our unique movable contact design technology and precision processing technology.

3. Its water-resistant and dust-proof design is ideal for wearable and hearable devices and allows it to be used both indoors and outdoors

Wearable and hearable devices that can be used both indoors and outdoors require a waterproof and dust-proof design. Panasonic's conventional switches had a metal cover bonded to a base, which made it difficult to ensure a fully water-resistant and dust-proof seal. The new product achieves a watertight and dust-proof design compliant with IP67 standards as well as the industry's slimmest through the adoption of our new sealing method, in which its cover and base undergo laser welding. This makes the switch ideal for use in a wide range of environments indoors or outdoors.

Basic specifications:

Item		Performance
Type		Snap action/push-on, 1-pole, single throw type
Electrical characteristics	Rating	10 μ A 2 V DC - 20 mA 15 V DC (resistive load)
	Contact resistance	500 m Ω or lower
	Insulation resistance	50 M Ω or higher (at 100 V DC)
	Withstand voltage	250 V AC for 1 minute
	Bouncing	10 ms or lower (ON, OFF)
Mechanical characteristics	Operation force	1.0 N
	Stroke	0.08 mm
Durability	Operating life	500,000 operations or higher
IP67	IP6x (dustproof)	4 types of talc for 8 hours
	IPx7 (watertight)	Immersed for 30 minutes at 1 m depth
Usable temperature range		-40 $^{\circ}$ C to +85 $^{\circ}$ C
Storage temperature range		-40 $^{\circ}$ C to +85 $^{\circ}$ C (single unit)
		-20 $^{\circ}$ C to +60 $^{\circ}$ C (after taping)
Minimum packing quantity		10,000-piece emboss taping (packed in a reel)
Number of switches per shipping box		50,000

[Term Descriptions]

[1] Hearable

A hearable device refers to a wearable device fitted to the ear, such as a high-functionality earphone or headset.

[2] Tactile feedback

This is a perceptible physical response when an operation switch is pushed. The 'click' feeling that results tells the users that the switch has operated as intended.

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. Celebrating its 100th anniversary in 2018, the company has expanded globally and now operates 495 subsidiaries and 91 associated companies worldwide, recording consolidated net sales of 7.343 trillion yen for the year ended March 31, 2017. 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:

<http://www.panasonic.com/global>.

Media Contact:

Global Communications Department

Panasonic Corporation

Tel: +81-(0)3-3574-5664

**The content in the following news releases is accurate at the time of publication but may be subject to change without notice. Please note therefore that these documents may not always contain the most up-to-date information.*