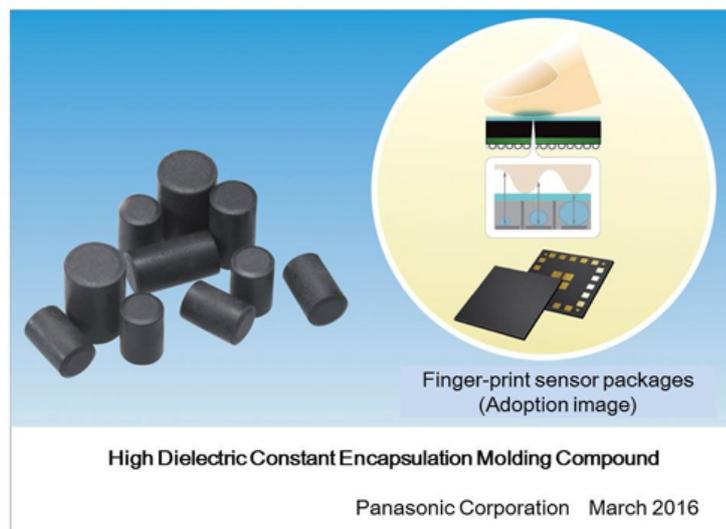


Mar 18, 2016

Panasonic Commercializes a High Dielectric Constant Encapsulation Molding Compound Suitable for Finger-Print Sensor Packages



Developed an encapsulation molding compound having a relative permittivity twice as large as that of sapphire glass, and will start full-scale mass production in April 2016.

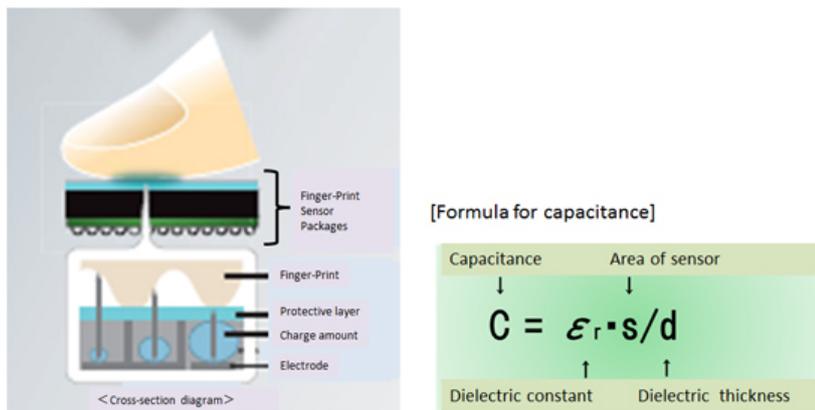
Osaka, Japan - Panasonic Corporation today announced that it has commercialized an encapsulation molding compound having a high dielectric constant (Dk) that is suitable for finger-print sensor packages to be incorporated in mobile devices, and will start full-scale mass production of the product in April 2016. This material helps improve the performance as well as reduce the size and thickness of packages for finger-print sensors.

Finger-print recognition features are expected to be embedded in an increasing number of mobile devices including smartphones. Sapphire glass has been used in the finger-print contact part of packages for existing capacitive finger-print sensors due to its high dielectric constant, but has drawbacks such as the difficulty of making the sensor packages smaller and thinner and the complexity of the manufacturing processes. Panasonic has commercialized an encapsulation molding compound having a high dielectric constant that can be used instead of sapphire glass. This material will help improve the performance as well as reduce the size and thickness of sensor packages.

This encapsulation material has the following advantages.

1. High relative permittivity: Meeting the demand for higher sensitivity of sensors and smaller, thinner packages
 - Relative permittivity (Dk, at 1 MHz): 7-20 (approximately 10 with sapphire glass)
 - Twice the sensitivity of sapphire glass
2. Narrow-gap filling and low warpage during molding: greater flexibility in the design of packaging structures
 - Narrow-gap filling: supporting 50 μm encapsulation thickness on the chip (in case of compression molding)
 - Low warpage: available in a wide lineup in accordance with packaging structures
3. Ready for packaging thinner structures with simplified manufacturing processes

<Cross-section diagram of finger-print sensor packages>



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, enterprise solutions and device industries. Since its founding in 1918, the company has expanded globally and now operates 468 subsidiaries and 94 associated companies worldwide, recording consolidated net sales of 7.715 trillion yen for the year ended March 31, 2015. 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>

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