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Success in co-developing Millimeter Wave Absorber for Millimeter wave near field radar of ADAS(advanced driver assistance system), which satisfies thinness, broad band absorption and , lightness by using Soybean hull.

Microwave Absorbers Inc.
Tekechi Co.,Ltd.

Microwave Absorbers Inc. (Tokyo JAPAN founded in 2006), which develops, manufactures and sells Microwave Absorbers, and Takechi Co.,Ltd. (Ehime JAPAN founded in 1957), which manufactures Rubber and Resin products for Vehicle and Industry have co-developed Millimeter Wave Absorber by use of Soybean hull in order that it may have millimeter wave near field radar operated correctly. This newly developed absorber has three features such as thin (2mm), broad band absorption(76-110GHz), and light-weighted.

Recently in Japan toward 2020 Olympic year, Millimeter wave Vehicle – vehicle distance radar (76GHz) and millimeter wave near field radar (77GHz) has been being developed as key sensor technologies for ADAS and AEB (Autonomous Emergency Braking) . Millimeter wave absorber has been installed to absorb unnecessary RF leakage in order that it may have millimeter wave near field radar operated correctly. However existing RF millimeter wave absorber absorbs only narrow band (76GHz). In addition, that costs much because yield loss rate becomes higher. For it is necessary and very difficult to fulfil both finest mixing and minimizing thickness tolerance.

To solve these problems, both firms adopted air carbon from Soybean hull baked at high temperature, which Professor IIZUKA (Yamagata university, chairperson of Engineering Faculty) has researched. Besides Dr. KAMEI (Associate Professor of National Defense Academy) helped them to evaluate their absorber with NDA's millimeter wave absorber evaluation equipment, few of which exist in Japan.

This newly developed absorber has such features as both broad band and high performance. Thus it decrease yield loss in manufacturing. And air carbon of soybean hull is so light weighted as to contribute to vehicle weight saving. It means that they can come to manufacture broad band absorption, thin, and light-weight absorber.

Japan Cabinet Office released the marketing survey about ADAS propagation in 2025. In accordance with this project, we expect that Millimeter wave radar with Millimeter wave absorber should be prevailed.

Contact about this news release

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