

February 20, 2024
Maxell, Ltd.

**Exhibiting high-frequency functional sheets developed in the
“Development of Terahertz band coherent transceivers using micro-actuators”
project adopted by NICT towards “Beyond 5G/6G”**

Exhibiting in MWC Barcelona 2024 -the world’s largest and most influential connectivity event-

Maxell, Ltd. (President and Representative Director: Keiji Nakamura / hereinafter “Maxell”) announced today that it will exhibit the development results of its “high-frequency functional sheets” in MWC Barcelona 2024, Spain (2/26~29) in the Japan Pavilion (Hall6, 6E54). This research is a part of the National Institute of Information and Communications Technology (NICT)'s Beyond 5G R&D promotion project “Development of terahertz coherent transceivers utilizing micro-actuators” (hereinafter “this project”). Maxell will exhibit in collaboration with the Tokyo Institute of Technology.

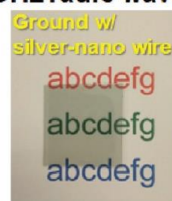
In this collaborative research project with Tokyo Institute of Technology, Maxell developed a frequency filter radome (antenna cover), transparency radio wave absorbers/radio wave reflectors targeting the high-frequency range of several GHz~300GHz. These prototypes will be exhibited at the MWC Barcelona 2024. Maxell will develop various advanced functional sheets for radio waves that can respond to submillimeter waves and terahertz waves by developing its millimeter-wave radio wave absorber technology to contribute to the Beyond 5G/6G society.

Exhibits: Transparent radio wave functional sheets

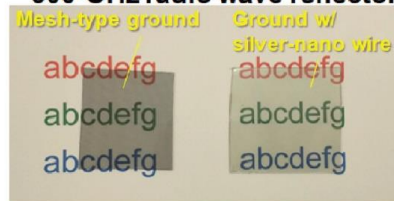
Maxell will exhibit radio wave absorbers, reflectors, and frequency-selective radomes, leveraging it’s transparent high-frequency radio wave absorber technology developed so far.

Toward “Beyond 5G/6G” system!

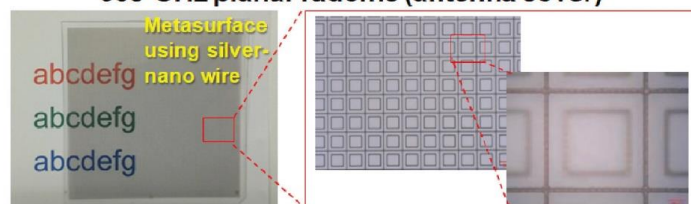
300-GHz radio wave absorber



300-GHz radio wave reflector



300-GHz planar radome (antenna cover)



Transparent & flexible, thinner than 1mm!

Transparency radio wave absorber, reflector, and radome to be exhibited

These transparent functional sheets have achieved an expansion of the frequency band of the corresponding radio waves compared to Maxell's conventional product*. This achievement was realized by using a frequency-selective surface on the stacking structure of the transparent material. In addition to these absorbers, Maxell has developed reflectors for radio waves in specific frequency bands and frequency filters that transmit radio waves in specific frequency bands. These products are expected to be applied to a wider range of compatible products. Through the development of this project, Maxell will further contribute to the future Beyond 5G/6G society and a sustainable society.

* The 300 GHz transparent absorber sheet that Maxell has developed

MWC Barcelona 2024 official site

<https://www.mwcbarcelona.com/>

MWC Barcelona 2024 Japan Pavilion official site

<https://mandmcolor.com/mwc2024japanpavilion/>

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Inquiries about products and exhibits

New Business Producing Div., Maxell, Ltd.

https://biz.maxell.com/en/functional_materials/inquiry_form_input1.html