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**Development of
“300mm thick rewiring LTCC Interposer substrate”
for semi-conductor wafer testing probe cards**

- Yokowo, which developed Interposer substrate for semi-conductor testing in 2007, has this time developed the “300mm thick rewiring LTCC Interposer substrate” that has multi rewiring layers on LTCC surface.
- Semiconductor testing probe card has equipped 300mm ceramic interposer substrate for years. The ceramic substrate has usually core substrates with many via and wiring layers (6-8layers), there has been, however, high resistance and cost caused by multi layers and the low productivity caused by wire breakdown.
- Yokowo successfully overcomes the problem with its own LTCC technology based on 150mm square Interposer substrate for logic use, and developed “300mm thick rewiring LTCC Interposer substrate”.
- General info of “300mm thick rewiring LTCC Interposer substrate”

The developed “300mm thick rewiring LTCC Interposer substrate” has multi layers structure. The base layer is internally wired 300mm LTCC core substrate, second one is conductive wiring layer and third one is glass layer for insulators and above that second conductive rewiring layers is installed. Rewiring layers can be piled up to three layers.

Recently 300mm ceramic multi layers ceramics interposer substrate has been suffered from the problem caused by wire breakdown due to the difference of Coefficient of Thermal Expansion rate between Ceramics and wiring conductors. Yokowo solved this problem by using internal wired LTCC substrate and wiring thick rewiring conductor instead of thin rewiring, and achieved high reliability. And by using Ag thick conductor, low resistance and low cost (30% less than thin wiring) have been achieved against the PVD thin conductive wiring method.

- The general specifications of “300mm thick rewiring LTCC Interposer substrates” are below.

■ Size	: ϕ 330 mm
■ Thickness	: 6.0 mm
■ Core Materials	: LTCC
■ Core Electrode	: Silver
■ Thin Rewiring Materials	: Original Glass
■ Thin Rewiring Electrode	: Silver
■ Internal Wired, Thick Rewired L/S	: 150/150 μ m
■ Thick Rewired Pad Pitch	: 800 μ m
■ Pad Diameter	: 700 μ m
■ Surface Finishing	: Thin Au Plating

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