

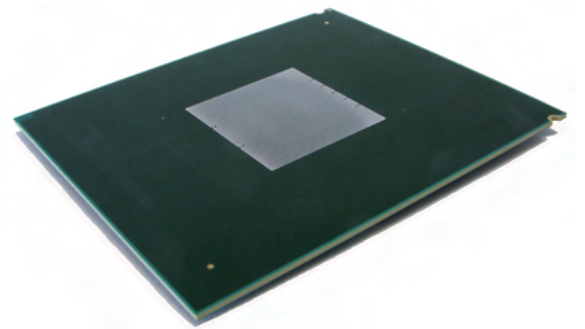
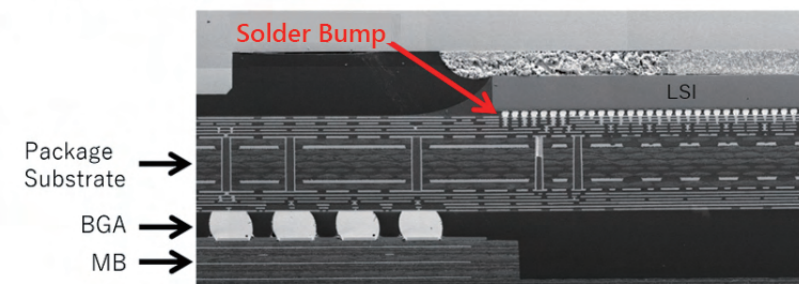
# GigaModule Series Packaging Substrate

“GigaModule Family” for next generation high-performance and ultra thin substrate

## A state-of-the-art FC-BGA substrate for large Die

- >100mm $\square$  size of 16-n-16 buildup substrate is available. ( n: Core layer)
- Large size FC-BGA substrate for high-power application with thick copper layer
- Our total solution from design enables small quantity and short-term manufacturing

Example of multi-pin LSI mounting



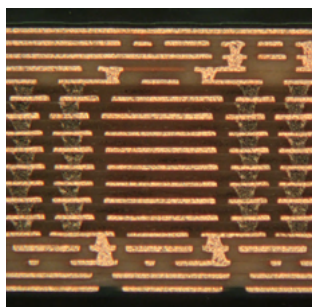
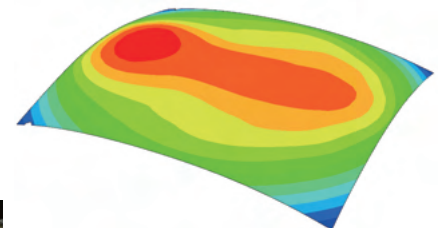
Substrates for Large Dies

Substrate Size :  $\geq 72\text{mm} \times 60\text{mm}$   
Structure :  $\geq 16$  Layers

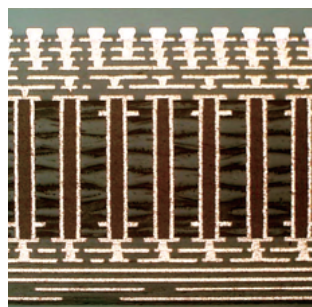
## Suitable for GHz bandwidth high frequency operation

- Any Layer IVH structure provides Ultra-Thin and High-density wiring, applying VIA layout free, full build-up, and full stacked-via technology.
- Low inductance property enables low voltage operation at high frequency.
- Provide optimal substrate solutions for high-speed transmission and high heat dissipation.

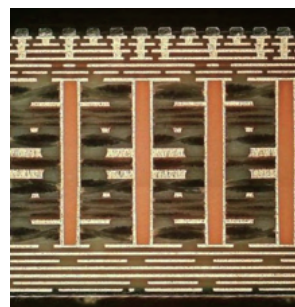
Dynamic thermal warpage simulation



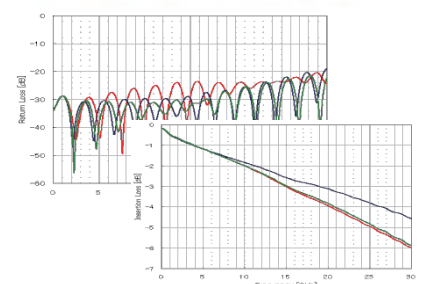
Any Layer IVH Structure



High Density IVH



Thick Copper Pattern



Transmission characteristics

