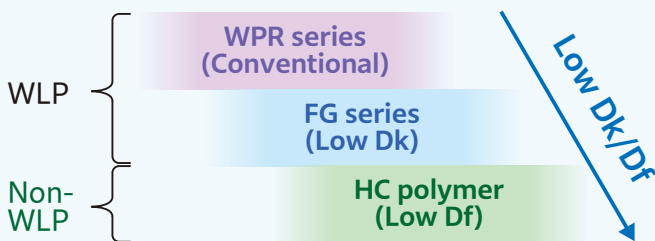
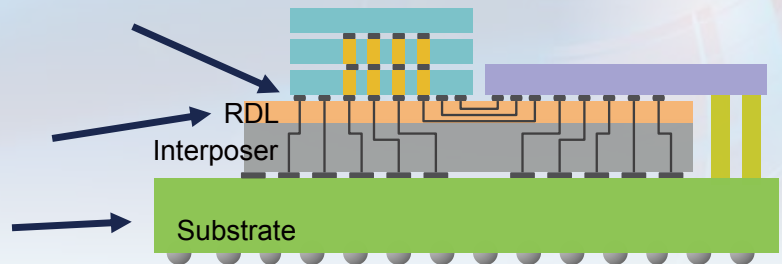


JSR Dielectric Materials

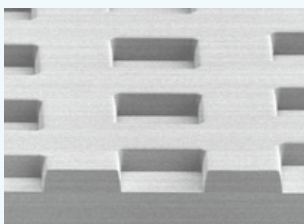
- Buffer coat, RDL dielectrics
- ✓ **WPR series**
- RDL in high density wiring
- ✓ **FG series**
- Low Df polymer for Substrate
- ✓ **HC polymer**



Electrical properties	Photo-imageability	Developer
Dk : >3.0	Yes	Alkaline
Dk : 2.9~2.7	Yes	Alkaline
Df : <0.002	No	N/A

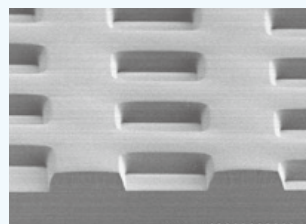
WPR series

After Dev.



Positive-tone
FT=6 μm, 20 μm SQ

After Cure

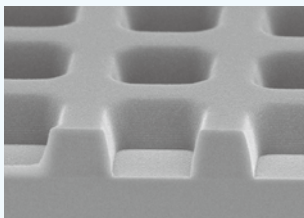


◆ Key Features

- ▶ Low cure temperature (200 °C)
- ▶ Low Shrinkage through cure (< 10 %)
- ▶ Low residual stress (< 20 MPa)
- ▶ High resolution
- ▶ Excellent adhesion to SiN, SiO₂ and Cu
- ▶ Excellent heat resistance
- ▶ Long history for global customers

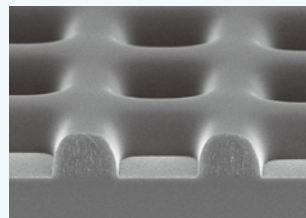
FG series

After Dev.



Positive-tone
FT=2 μm, 3 μm SQ

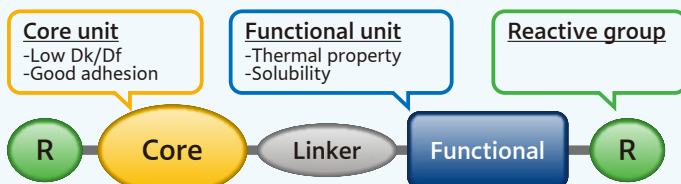
After Cure



◆ Key Features +

- ▶ Lower Dk (2.9@10 GHz)
- ▶ Lower water absorption
- ▶ Higher resolution (2 μm-SQ)

HC polymer



◆ Key Features

- ▶ Low Df (< 0.002)
- ▶ High heat-resistance
- ▶ Good compatibility with chemicals
- ▶ Good adhesion