

# 5G Test Methodology Challenges

## Packaging/Board Assembly

### Motivation:

- 5G requires development and advancement of new testing methods
- Antenna in package (AiP) devices require a radical change to the existing contact test solutions
- Over-the-air (OTA) solutions need to evolve to cost-effective hardware and protocols
- RF Front end modules require new SLT (system level test) concepts due to multitude of bands and carrier aggregation

### Objective:

- Need to determine best cost-effective approaches for testing at package/module, board and system levels
- Test strategies may be market driven (mobile vs network)

### Strategy/Approach:

- Understand and benchmark current status
- Define key gaps and work toward solution

### Status:

- Forming small team for project scope development
- Contact [urmi.ray@inemi.org](mailto:urmi.ray@inemi.org)

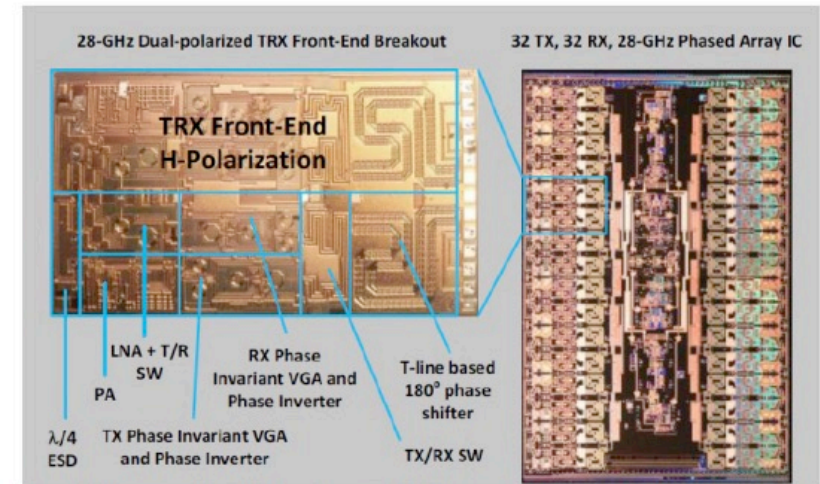
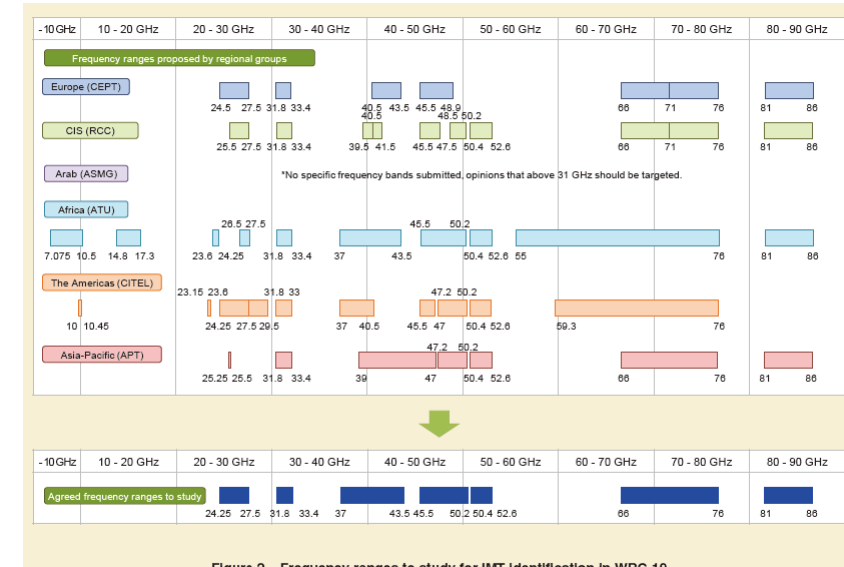


Fig. 7. Photograph of dual-polarized RF front-end breakout IC (left) and full 32-element phased array IC (right)