

WP2: Advanced packaging (IFAT)

- Decision on target package:
 - ThinPak 8x8 high voltage SMD package
 - Final agreement on Chip design optimized for ThinPak assembly
 - Bonding diagrams available
 - First FBH normally-on samples in production (not final design)

- Sample builds with FBH normally-off devices, Intermediate design:
 - Intermediate design with n-doped SiC substrate
 - Assembly in TO220-7 standard power package
 - Chip backside isolated from lead frame by ceramic DCB
 - Conventional wedge bonding on non active area
 - Electrical characterization
 - Devices handed over to Emerson for first board evaluations

- Pre-evaluations for diffusion solder die attach
 - GaN on Si dummy chips (IFx)
 - AuSn based diffusion solder
 - Different leadframe – chip thickness ratios
 - Scanning acoustic microscope investigations on void rate
 - Mechanical FEM simulation on stress distribution