The new MRR1Plus 77GHz automotive radar from Bosch integrates receiver and transmitter components from Infineon. These components use the latest SiGe:C HBT technology from Infineon and an effective eWLB / Fan-Out package.

The two RF dies are packaged in the last version of the eWLB, the Fan-Out Wafer level Package developed and manufactured by Infineon. This package has no wire bonding to reduce the inductance and a specific design to increase the heat management using solder balls close to the power RF transistors.

The eWLB package is robust enough to be installed in front automotive module only protected by a plastic lid without underfill. Only a specific pad structure in gold is added on the die.

The RF transistors are the newest generation SiGe:C HBT dies from Infineon. The circuits use advanced insulation structure and modern copper metal layers.

The report includes a complete physical analysis of the packaging process, with details on all technical choices regarding process, equipment and materials. The SiGe HBT are equally analyzed.

The report also features a short comparison with the first eWLB process in order to understand the evolution of technology choices.
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Sylvain is in charge of costing analyses for IC, Power and MEMS. He has more than 10 years of experience in the Power Device manufacturing costs analysis and has studied a wide range of technologies.

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