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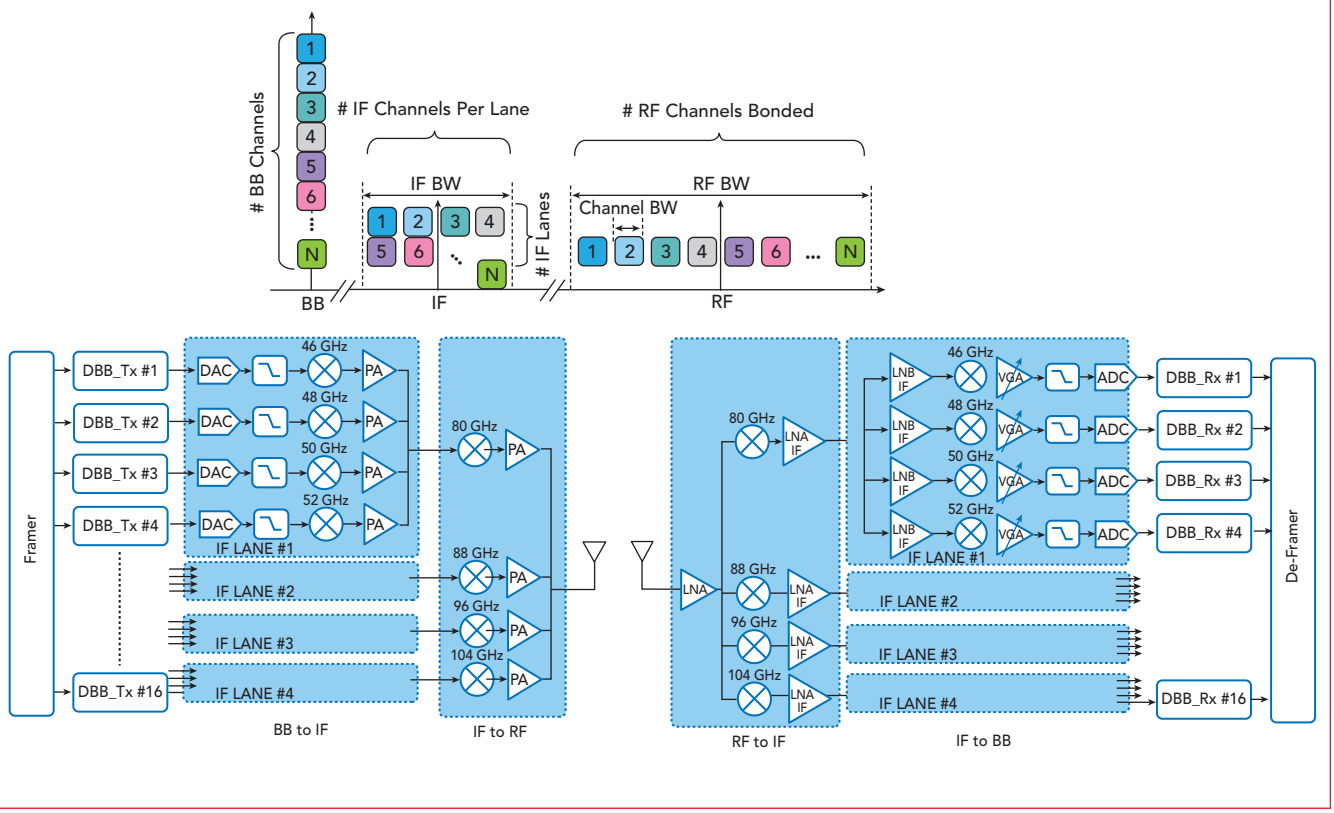

▲ Fig. 5 **Example of channel bonding transceiver architecture and frequency plan.**

the-art SiGe HBT exceeds 700 GHz Fmax.

BiCMOS 370 GHz/55nm process covers applicative frequencies up to 120 GHz, while the BiCMOS 500 GHz/130nm process covers applicative frequencies up to 160 GHz, their output power remaining under 28 dBm. The 55nm process has higher capability for digital integration, while it is within the average for the other RF properties. The InGaAs MOSHEMT from Fraunhofer IAF presents a very attractive Fmax with 640 GHz, allowing it to cover up to 210 GHz applications with power output under 24 dBm. In addition, pretty good RF characteristics are demonstrated. The weakness is the integration of digital, which is not yet possible. Equivalent conclusions are for INP HBT and exceed 1 THz Fmax[5] and open all the doors for applications