INFLUENCE OF Chr



EXPERIMENTAL RESULTS

Performance of the fabricated InGaP/GaAs HBT class-F amplifier



The device under test (DUT) was fabricated using the single-emitter InGaP/GaAs HBT and the fabricated class-F load circuit on the low-loss resin. (Emitter size = $2.6 \text{ um} \times 30 \text{ um}$)



CONCLUSION

The class-F InGaP/GaAs HBT amplifier considering up to 7th-order higher harmonic frequencies, operating at 1.9 GHz, has been demonstrated.

• More than 80 % of PAE is obtained by decreasing the base-collector junction capacitance and by increasing the order of treated higher harmonic frequencies, in the simulation.

- 78.7 % and 81.2 % of PAE and collector efficiency, respectively, are achieved at V_{cc} = 4.0 V and f₀ = 1.91 GHz in case circuit losses are deembedded.
- They were brought near the simulated results deriving the best ability of the transistor.

