

Fig. 5. The active balun amplifier, microstrip line structure (not to scale) and small signal NPN HBT model which includes an inductance, L_p , to account for parasitic layout inductance for this work.

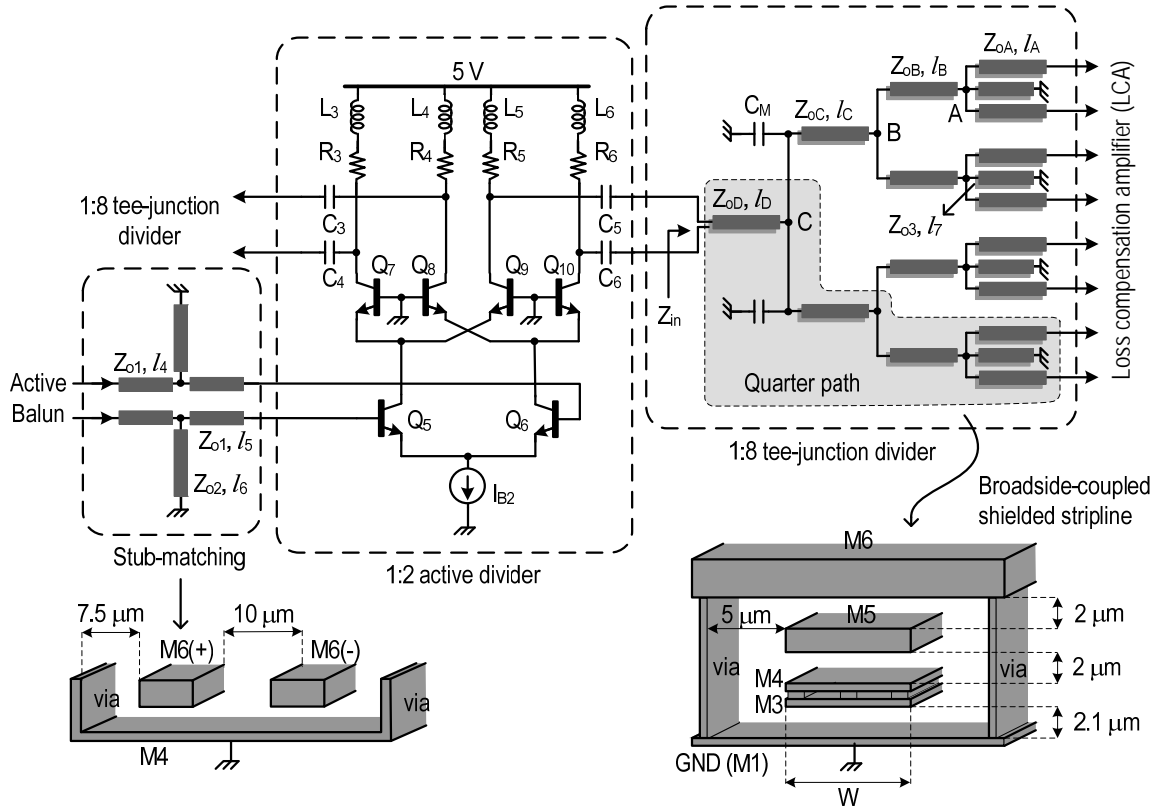


Fig. 6. The 1:2 active divider, differential microstrip line structure (not to scale), 1:8 passive tee-junction dividers (only one is shown) and broadside-coupled stripline structure (scaled, M5 thickness: $1.6\ \mu\text{m}$, thickness of M4 and M3 with vias: $1.9\ \mu\text{m}$).