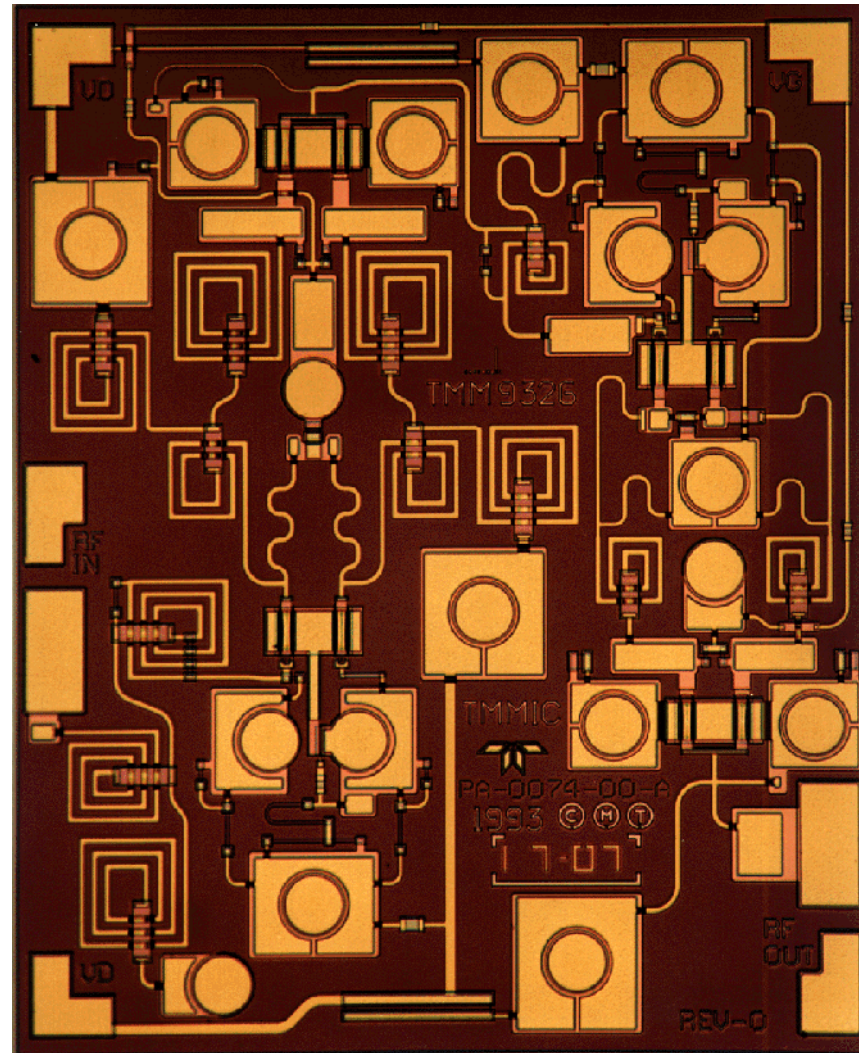


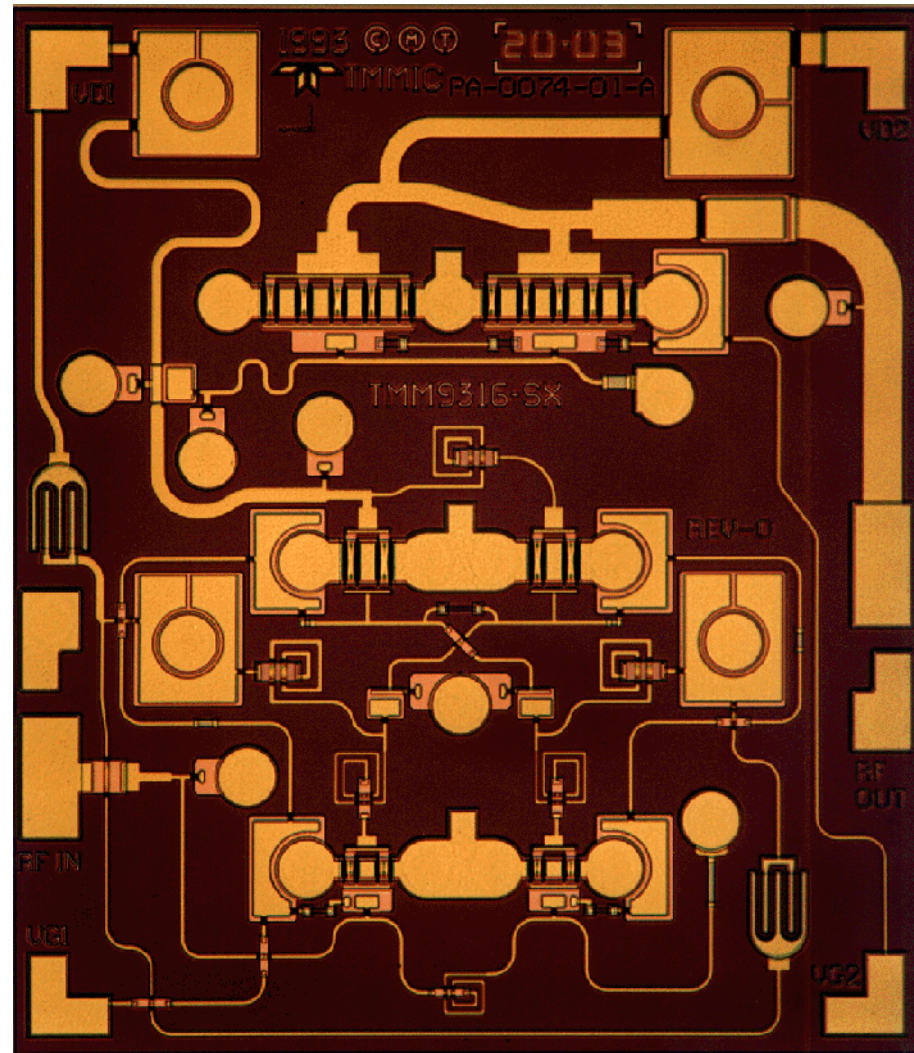
VSAT Transmit Chips - Frequency Quadrupler

- Input Frequency
3.5 – 3.625 GHz
- Output Frequency
14.0 – 14.5 GHz
- pHEMT Technology
- Circuit:
 1. Differential pair (3.5 GHz)
 2. Push-push doubler
 3. Differential pair (7 GHz)
 4. Push-push doubler
- Designed in 1993 - T.Apel



VSAT Transmit Chips - Low Power PA

- Operating Frequency
14.0 – 14.5 GHz
- Output Power
1 Watt
- pHEMT Technology
- Circuit:
 1. Two-stage matrix preamp with singly terminated output
 2. Two section distributed final with singly terminated output
- Designed in 1993 - T.Apel



VSAT Transmit Chips - High Power PA

- Operating Frequency
14.0 – 14.5 GHz
- Output Power
3 Watt
- pHEMT Technology
- Circuit:
 1. Two-stage matrix preamp with singly terminated output
 2. Two section distributed driver with singly terminated output
 3. Combined two section distributed final with singly terminated output
- Designed in 1993 - T.Apel

