

# TRANSMIT/RECEIVE MODULES

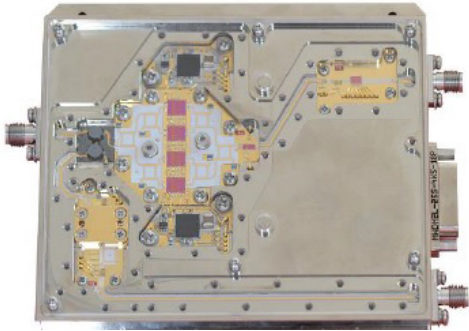
GaAs OR GaN BASED, T AND T/R MODULES FROM S-BAND TO Ka-BAND  
3-D OR PLANAR POWER COMBINING TECHNIQUES FOR HIGH OUTPUT POWERS



## **X-BAND T/R MODULE**

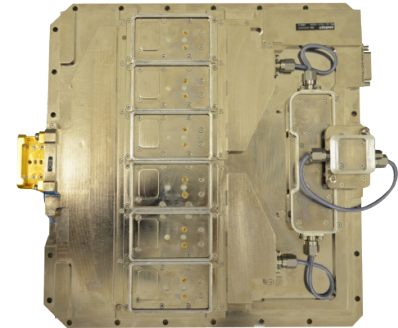
- $P_{sat} > 12W$  (CW,  $T_{base} = 75^{\circ}C$ )
- Dual channel
- 6-bit attenuator
- 7-bit phase shifter

# TRANSMIT/RECEIVE MODULES



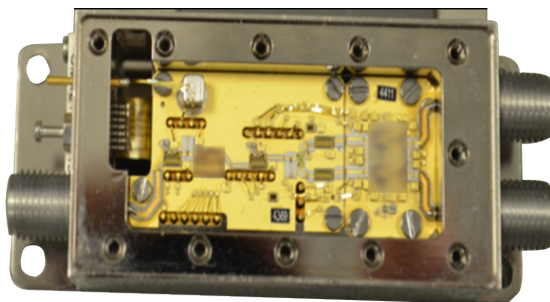
## X-BAND T/R MODULE

- $P_{sat} > 30W$  (15% duty cycle,  $T_{base}=75^{\circ}C$ )
- Drain switching embedded
- Receive NF < 4 dB
- 6-bit phase shifter



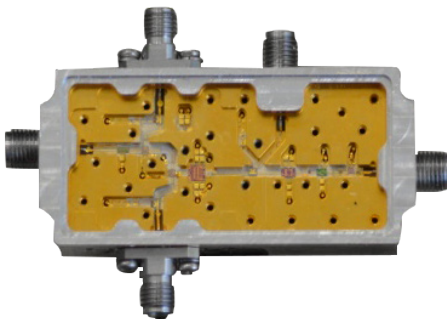
## KU-BAND T-MODULE

- $P_{sat} > 43W$  (10% duty cycle,  $T_{base}=75^{\circ}C$ )



## 6-18 GHZ T-MODULE

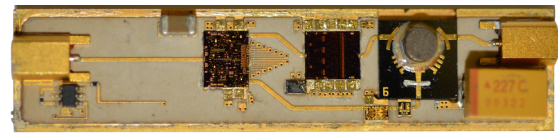
- $P_{sat} > 3W$  (CW,  $T_{base}=75^{\circ}C$ )
- Switchable 2 outputs
- 6-bit phase shifter



## Ka-BAND T-MODULE

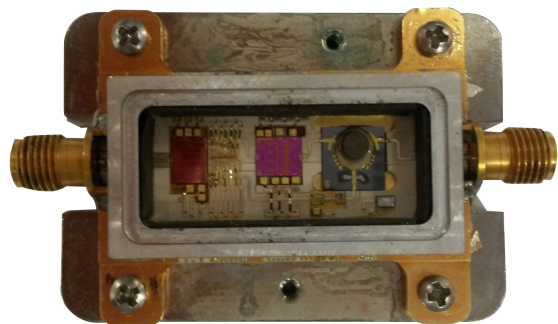
- $P_{sat} > 0.5W$  (CW,  $T_{base}=75^{\circ}C$ )

## DESIGN IN VARIOUS PACKAGE ALTERNATIVES



## X-BAND 7W T-MODULE

- Metal-Backed



## X-BAND 8W T-MODULE

- LCP