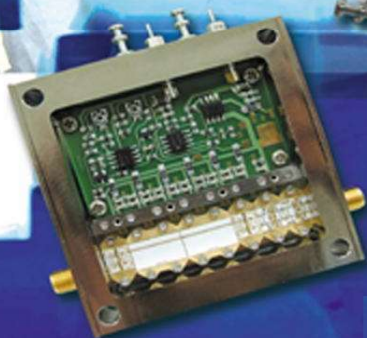
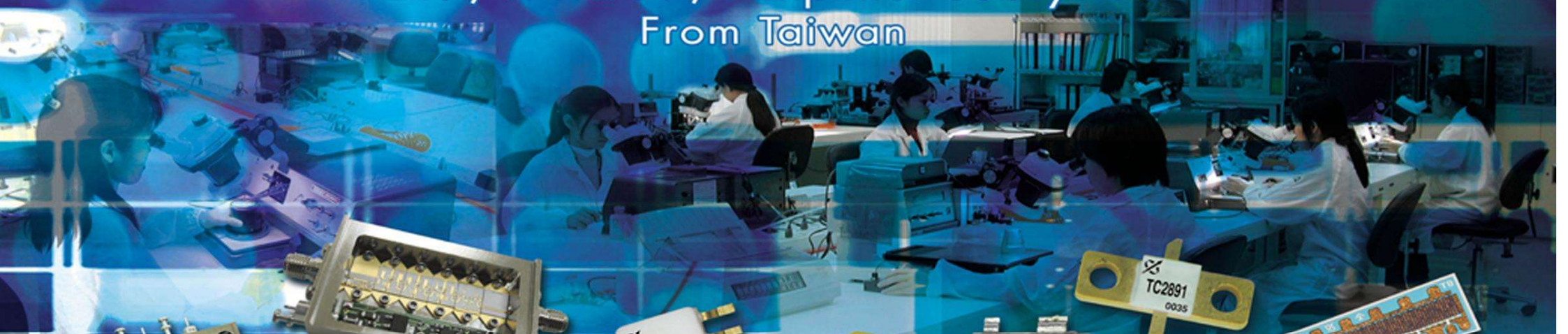




# TRANSKOM



FETs / MMICs / Amplifier Subsystems  
From Taiwan



## Amplifier Subsystems

0.8-5.5 GHz  
1-18 GHz  
S-Band, 8W  
C-Band, 8W  
6-18 GHz, 1W  
Ku-Band, 2W



## MMICs

DC-20 GHz  
2.4-2.5 GHz, 1W / 2W  
3.5 GHz, 1W  
5.8 GHz, 1W  
Ku-Band, 1W  
Ka-Band, 2W



## FETs

Low Noise  
High Power  
High Linearity  
Extra Low Cost



ISO 9001: 2000



FM 66726

# Disclaimer

**This presentation and release contain “forward-looking statements” which may include projections of future result of operations, financial condition or business prospects based on our own information and other sources. Transcom overtakes no obligation to update these forward-looking statements for events or circumstances that occur subsequent to such date.**

**Our actual results of operations, financial condition or business prospects may differ from those expressed or implied in these forward-looking statements for a variety of reasons, including but not limited to market demand, price fluctuations, competition, international economic conditions, supply chain issues, exchange rate fluctuations and other risks and factors beyond our control.**



# Introduction

- **Established : JUNE 17, 1998.**
- **CEO : CHIAN-SERN CHANG**  
**EMPLOYEES: 240. Oct.,2022.**
- **TRANS-COM**  
全 訊  
**Trans-ceiver Communication**  
**Transmitter-Receiver**  
**Market Focus: Military Microwave Products.**  
**MTTF: > 1M hours.**

# Technology

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- **MMIC Design.**
- **Fab (Processes).**
- **MMIC and Device Products.**
- **Amplifiers.**
- **Transceivers and Subsystems.**

# Philosophy

**Q: QUALITY**

- PERFORMANCE
- RELIABILITY
- SERVICES

**P: COMPETITIVE PRICE**

**D: ON TIME DELIVERY**

\*\*\*\*\*INTEGRITY\*\*\*\*\*

正直 誠信



# Facility

- **Factory 1 : 1100 坪**
- **Factory 2 : 1350 坪**
- **Clean Room (Class 100):**
  - \* 140 坪
  - \* GaAs PHEMT
  - GaN HEMT
  - \*10,000 wafers / year

# PRODCUT

- **Semiconductors: PA; LNA**
  - a) **Discrete Devices.**
  - b) **MMICs.**
  
- **Subsystems:**
  - a) **Amplifiers: up to 10,000 W.**
  - b) **LNAs.**
  - c) **Transmitters.**
  - d) **Receivers.**
  - e) **Transceivers.**
  - f) **Synthesizers.**

# X-band GaN 500W SSPA

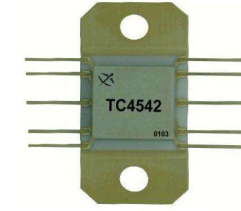
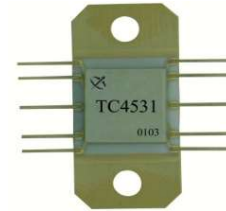
- Freq.: 9~10 GHz  
(600MHz BW)
- $P_{out}$  (10% duty):  
~+57.5 ~ +58.0 dBm
- Pin: +20 dBm
- DC Consumption:  
+28V / 33A





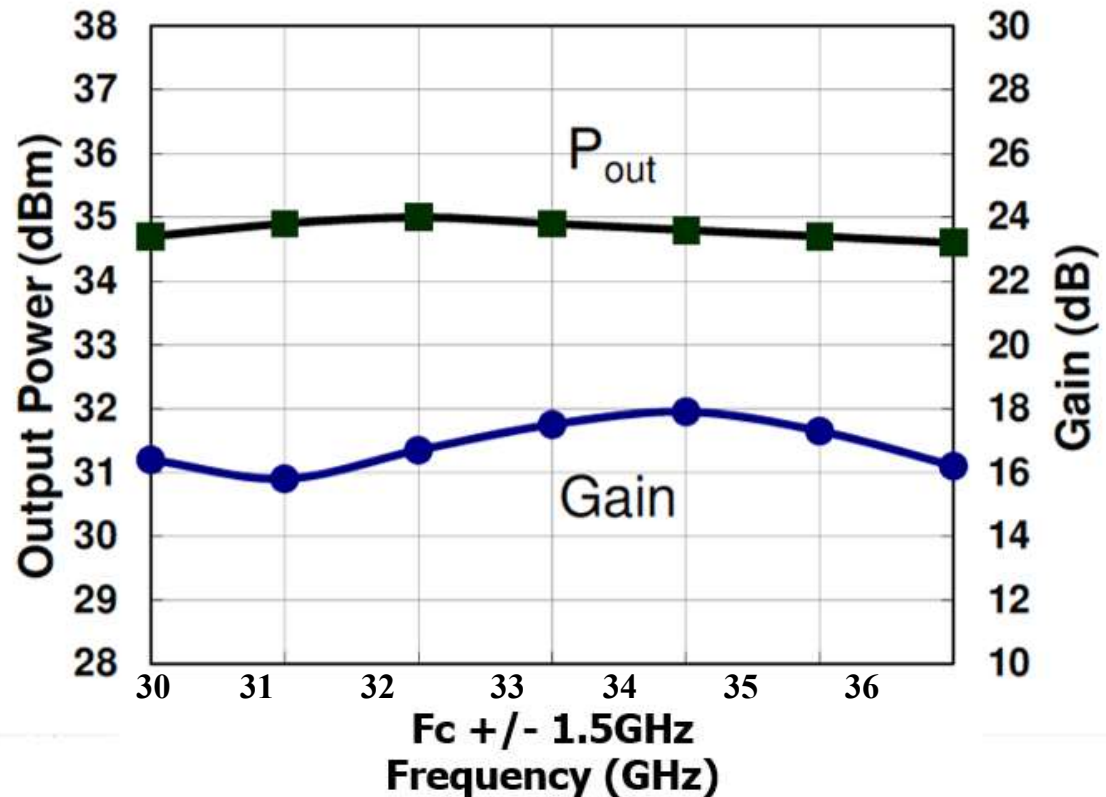
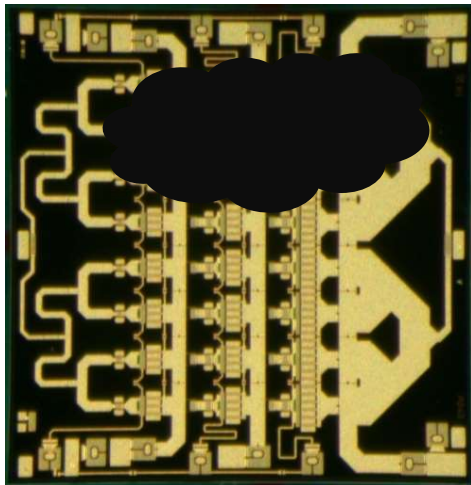
# MMICS

	Frequency Range (GHz)	G <sub>-1</sub> (dB)	P <sub>-1</sub> (dBm)
TC3131	2.4~ 2.5	28	30
TC3133	2.4~ 2.5	24	31
TC3139	2.3 ~ 2.5	26	30
TC3141	2.4~ 2.5	29	33
TC3331	3.3~ 3.8	30	30
TC3339	2.9 ~ 3.7	26	30
TC3341	3.3 ~ 3.8	27	32.5
TC3531	5.7 ~ 5.9	24	30
TC3535	4.8 ~ 6	21	29
TC3538	5 ~ 6	21	30
TC3539	4.8 ~ 6	19	29
TC4521	13.75 ~14.5	26	27
TC4531	13.75 ~14.5	30	30.5
TC4542	13.75 ~14.5	26	33

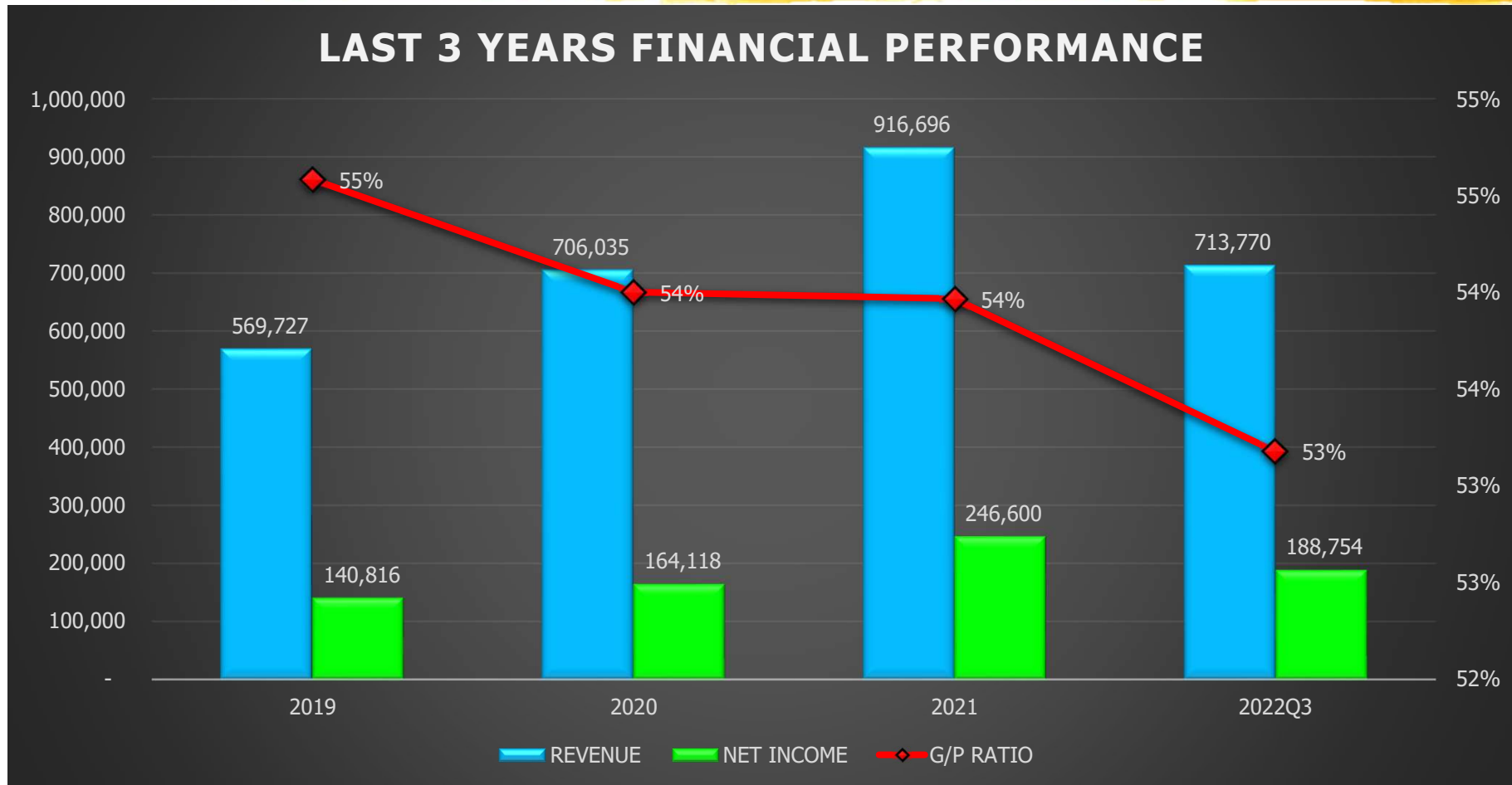


# Ka-Band 3W MMIC

- Freq.: 30~36 GHz
- $P_{out}$  (CW): +35 dBm
- Gain: 17 dB
- Bias Condition:  
6V / 2.0A ; w/o RF  
6V / 3.2A ; w/ RF



# FINANCIAL STATUS



# STATUS

- **Revenue: 2021: 0.916 bn. GP ratio: 53.9%.**  
**2022: M1 – M11: 0.912 bn.**  
**M11 : 0.104 bn.**
- **FOCUS: DOMESTIC**
  - \* **T.G.:** 陸基; 海弓; 強弓
  - \* **T.J.:** 陸基; 海劍二; 戰機
  - \* **S.F.**
  - \* **RADAR.**
  - \* **AESA – PHASE ARRAY RADARS.**

# R&D

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## A) GaN

- **HIGH POWER PA; INSTEAD OF TWTA.**

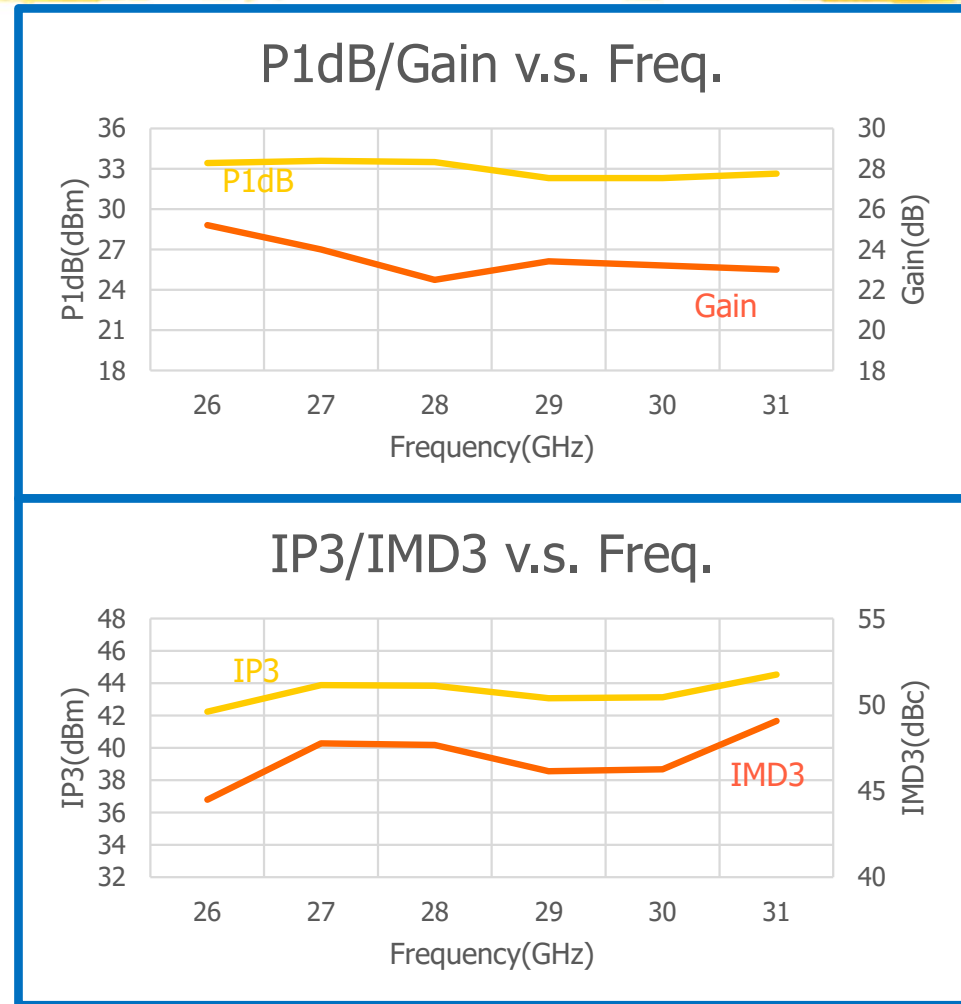
## B) 5G

- **3W & 0.5W MMIC PA.**
- **28 GHz ; 39 GHz.**
- **SMALL CELL STATION.**

# 5G / 28GHz 3W 3-stages PA MMIC

5G<sub>mmWAVE</sub>

- Freq : 26~30 GHz
- Psat : ~ +35.0 dBm
- P1dB : ~ +34 dBm
- Gain : ~ 23 dB
- IP3 : ~ +43.0 dBm
- IMD3 : (Psc1 = +20 dBm)  
46dBc@6V/1400mA(IDQ)
- Size : 3.1 x 3.4 mm



# CONCLUSION

- \* **MICROWAVE DEVICES, ICs,  
AMPLIFIERS, AND TRANSCEIVERS.**
- \* **IDM.**
- \* **MILITARY.**
- \* **R&D: GaN. 5G/mmWave PAs.**