TRANSCOM

TC1902

PRE.1_06/21/2006

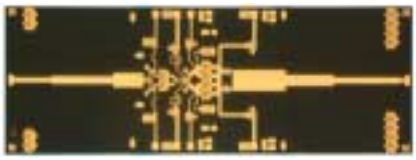
-Preliminary-

6 – 18 GHz 28dBm PA MMIC

FEATURES

- P_{1dB}: 28 dBm
- Small Signal Gain: 12 dB
- Bias Condition: 450 mA @ 7 V

PHOTO ENLARGEMENT



DESCRIPTION

The TC1902 is a two stages PHEMT high power amplifier MMIC that operates from 6 to 18 GHz. The amplifier provides a typical 12 dB of gain and delivers 28 dBm of P_{1dB}. The MMIC is fabricated using Transcom's proprietary matured GaAs PHEMT process. The process features full passivation for increased performance and reliability. All devices are 100 % DC tested to assure consistent quality. Bond pads are gold plated for either thermocompression or thermosonic wire bonding. Backside gold plating is compatible with standard AuSn die-attach.

ELECTRICAL SPECIFICATIONS (Ta = 25 °C)

SYMBOL	DESCRIPTION	MIN	TYP	MAX	UNITS
FREQ	Frequency Range	6		18	GHz
SSG	Small Signal Gain		12		dB
P1dB	Output Power at 1 dB Gain Compression		28		dBm
VSWR, IN	Input VSWR		2.5:1		-
VSWR, OUT	Output VSWR		3:1		-
VDD	Supply Voltage		7		Volt
Vg	Gate Voltage		-0.7		Volt
IDD	Current Supply without RF		450		mA
IDRF	Current Supply @ Pout = P_{1dB}		470		mA

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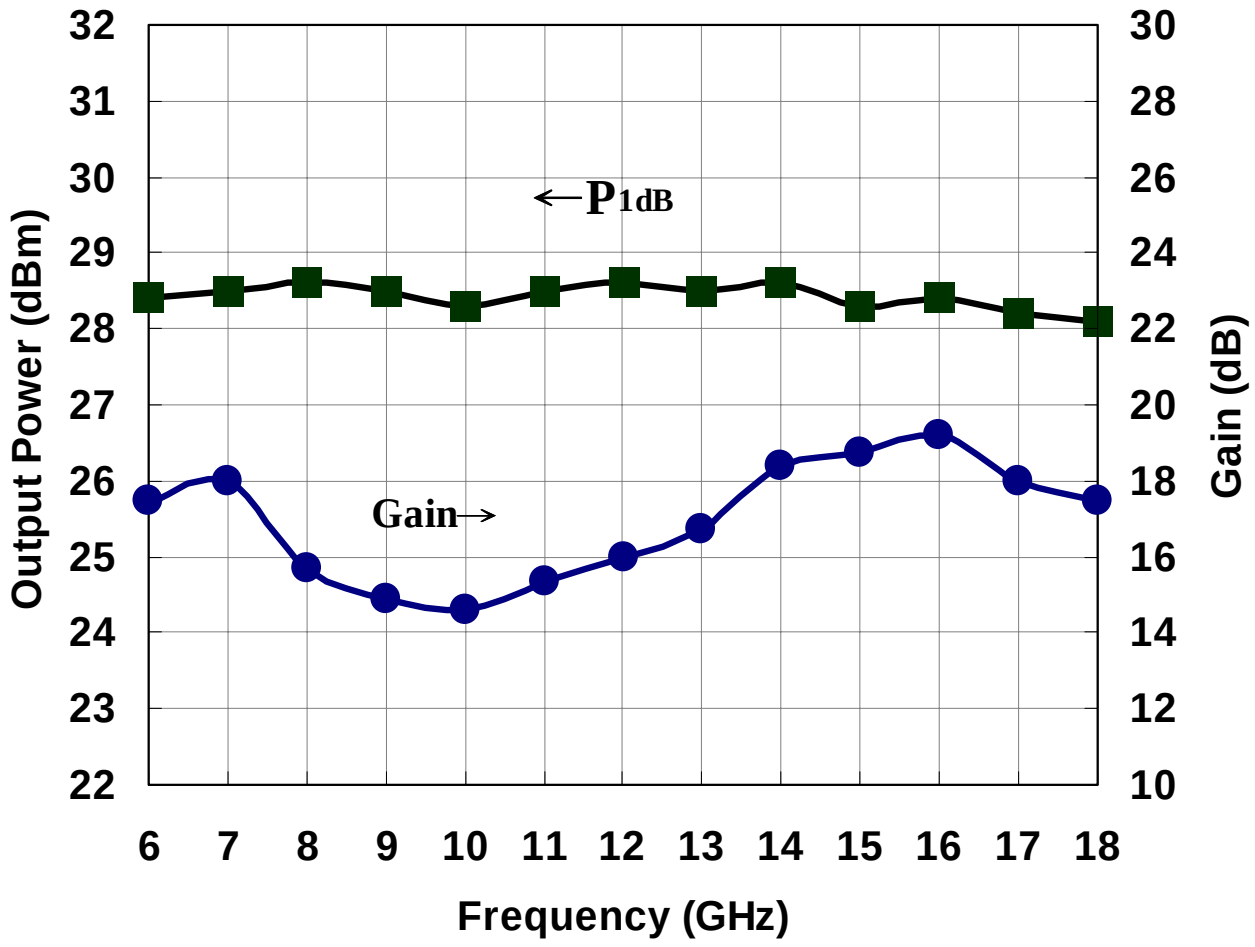
TYPICAL CHARACTERISTICS

Pout VS Freq. & Gain VS Freq.

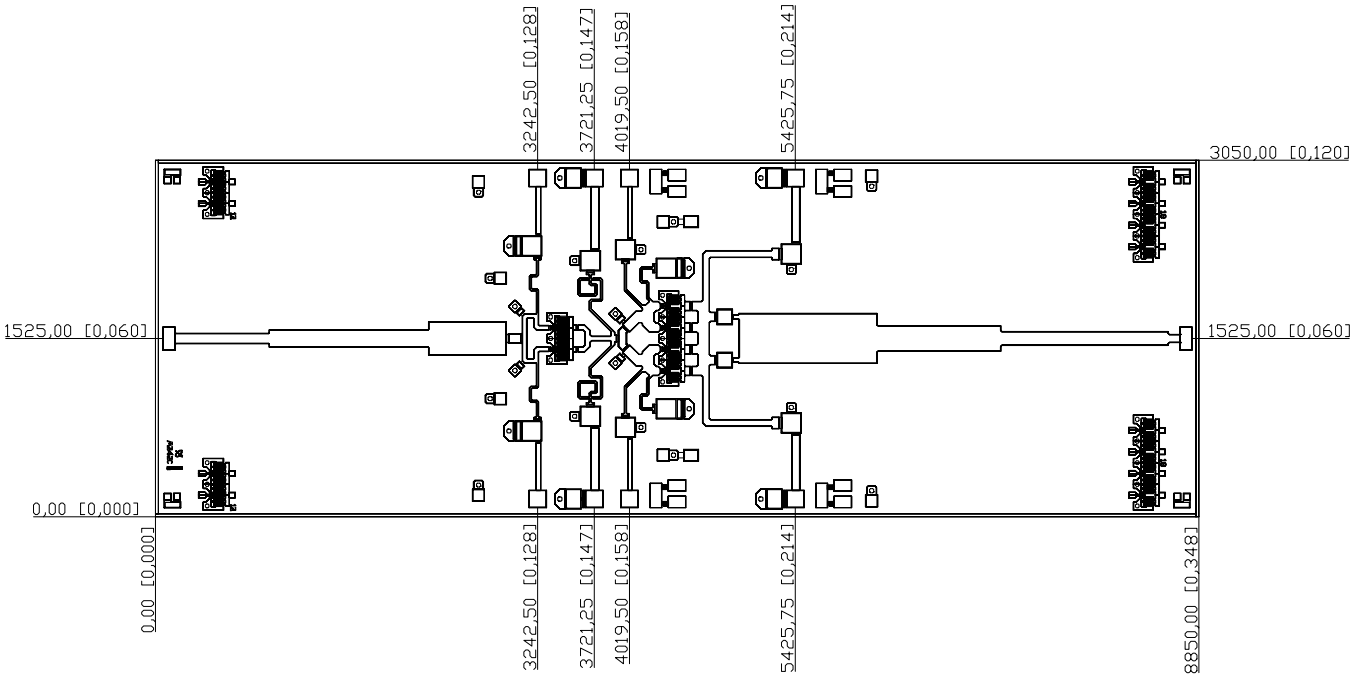


MECHANICAL OUTLINE

Units: micrometer (inch)

Thickness: 76.2 (0.003)

Chip Size: ± 50.8 (0.002)



ASSEMBLY DIAGRAM