TRANSCOM

TC1952

PRE.1_06/21/2006

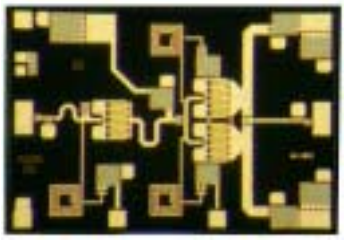
Preliminary

14 – 18 GHz 26dBm Driver MMIC

FEATURES

- P_{1dB}: 26 dBm
- Small Signal Gain: 12 dB
- Bias Condition: 350 mA @ 8 V

PHOTO ENLARGEMENT



DESCRIPTION

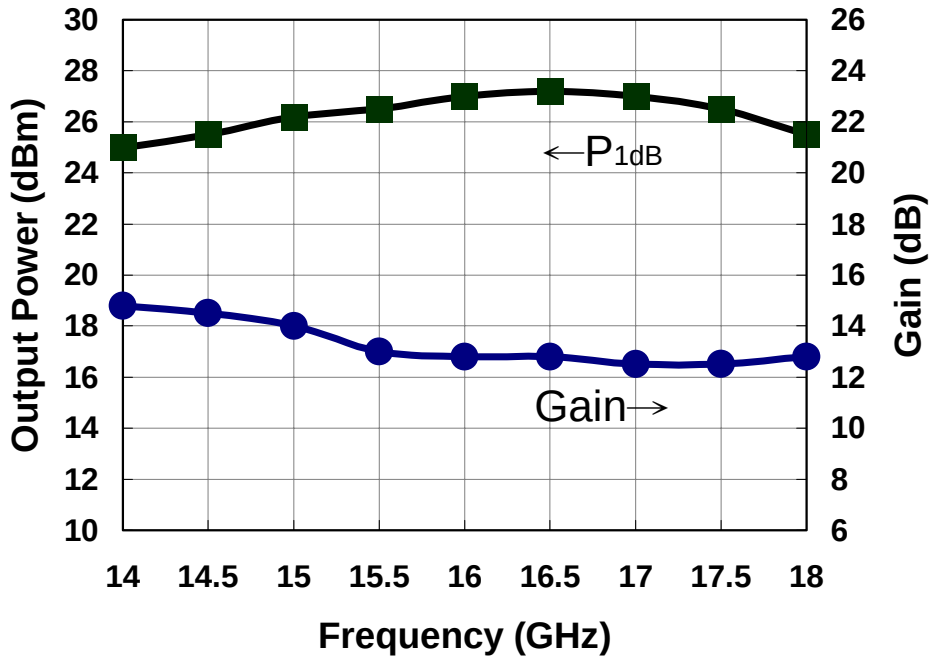
The TC1952 is a two stages PHEMT high power amplifier MMIC that operates from 14 to 18 GHz. The amplifier provides a typical 12 dB of gain and delivers 26 dBm of P_{1dB}. The MMIC is fabricated using Transcom's proprietary matured GaAs PHEMT process. The process features full passivation for increased 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	14		18	GHz
SSG	Small Signal Gain		12		dB
P1dB	Output Power at 1dB Gain Compression		26		dBm
VSWR, IN	Input VSWR		2.5:1		-
VSWR, OUT	Output VSWR		2.5:1		-
VDD	Supply Voltage		8		Volt
Vg	Gate Voltage		-0.8		Volt
IDD	Bias Current Without RF		350		mA
IDRF	Current Supply @ P_{1dB}		380		mA

TYPICAL CHARACTERISTICS

Pout VS Freq. & Gain VS Freq.

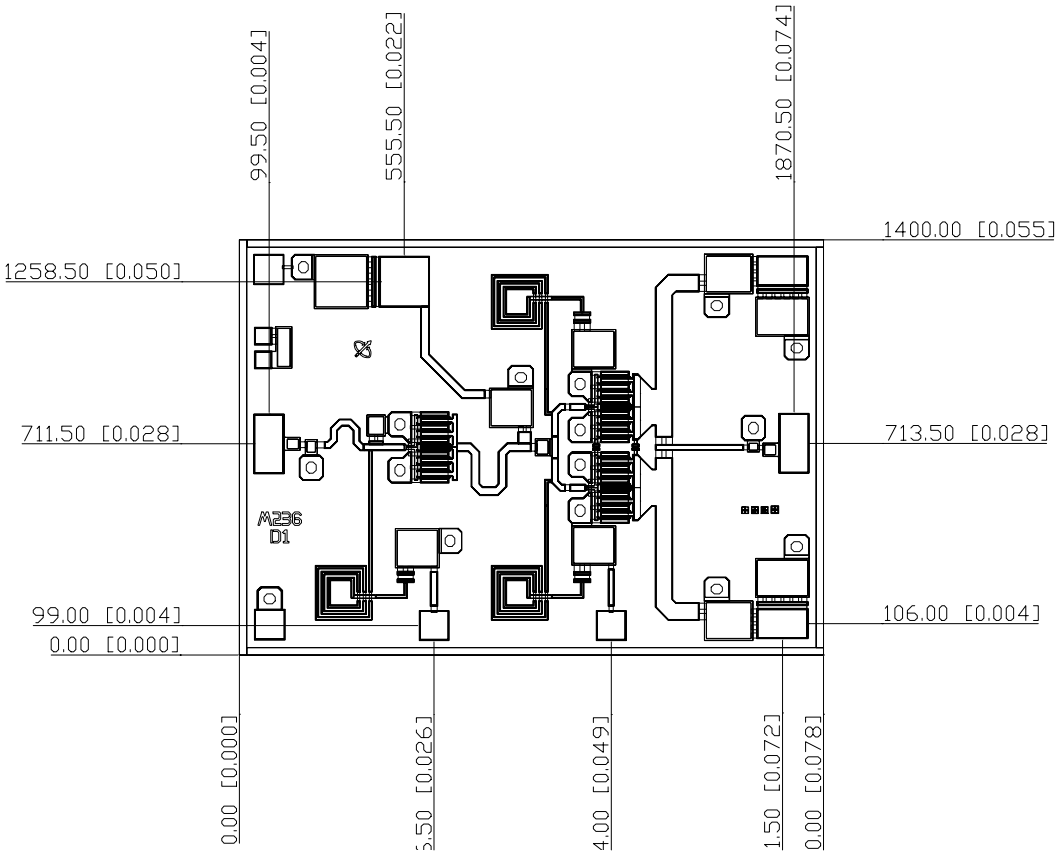


MECHANICAL OUTLINE

Units: micrometer (inch)

Thickness: 76.2 (0.003)

Chip Size: ± 50.8 (0.002)



ASSEMBLY DIAGRAM