

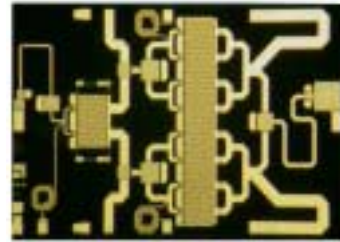
Preliminary

3.1 - 3.5 GHz 16W HPA MMIC

FEATURES

- Pout: 41.5 dBm
- Small Signal Gain: 22 dB
- Bias Condition: 4500 mA @ 7 V

PHOTO ENLARGEMENT

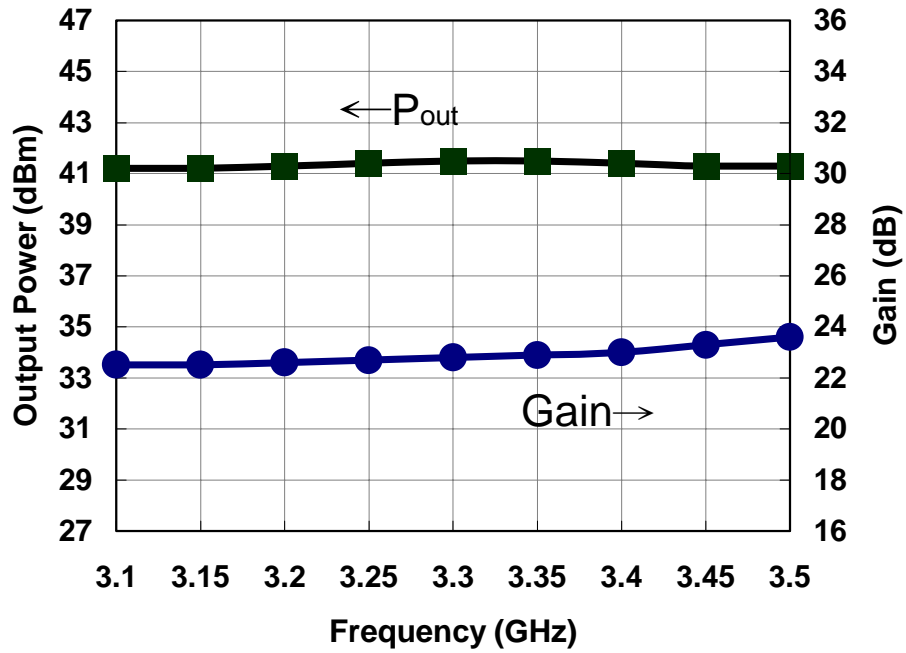


DESCRIPTION

The TC1037 is a two stages PHEMT high power amplifier MMIC that operates from 3.1 to 3.5 GHz. The amplifier provides a typical 22 dB of gain and delivers 41.5 dBm of Pout. 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)

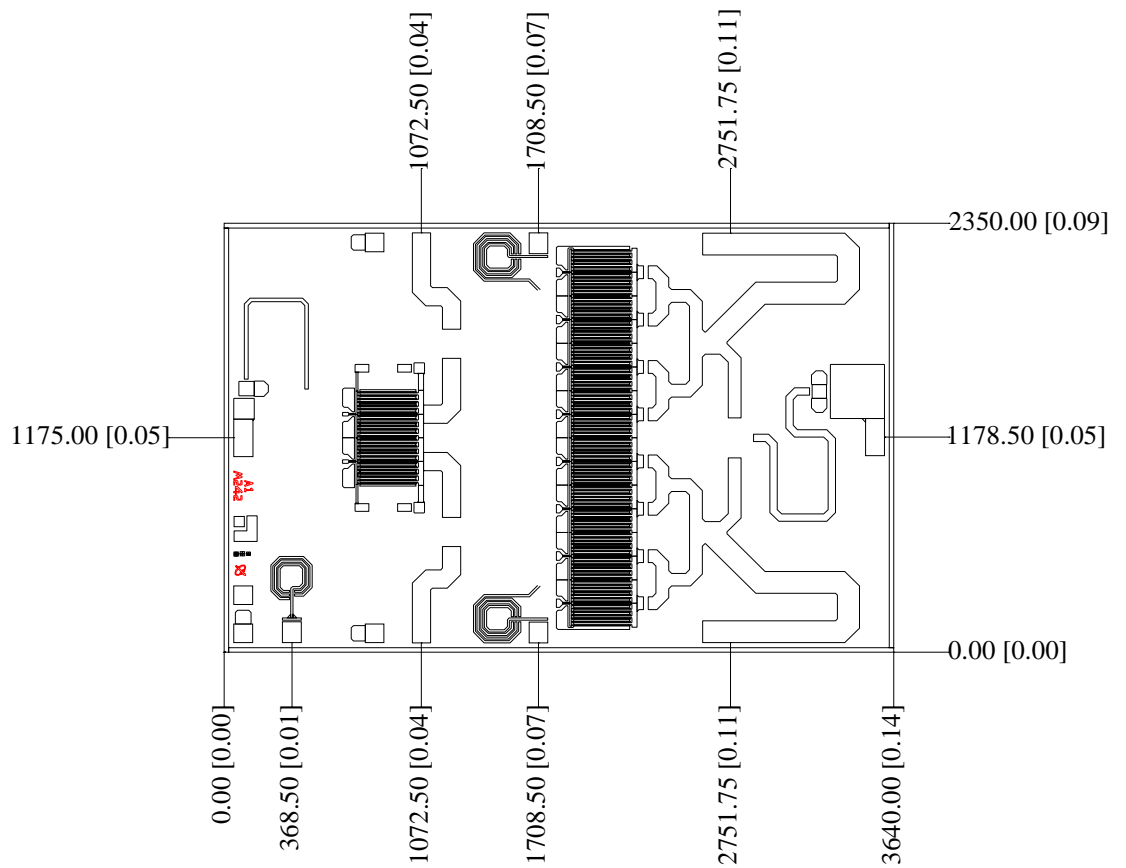
SYMBOL	DESCRIPTION	MIN	TYP	MAX	UNITS
FREQ	Frequency Range	3.1		3.5	GHz
SSG	Small Signal Gain		22		dB
Pout	Output Power		41.5		dBm
VSWR, In	Input VSWR		2:1		-----
VSWR, Out	Output VSWR		2:1		-----
VDD	Supply Voltage		7		Volt
Vg	Gate Voltage	-0.5	-1.0	-1.5	Volt
IDD	Current Supply Without RF		4500		mA
IDRF	Current Supply @ Pout = 41.5dBm		5500		mA
η_a	Power Added Efficiency		28		%

TYPICAL CHARACTERISTICS
P_{out} VS Freq. & Gain VS Freq.


MECHANICAL OUTLINE

Units: Micrometer [Inch]

Thickness: 76.2 [0.003]



ASSEMBLY DIAGRAM
