

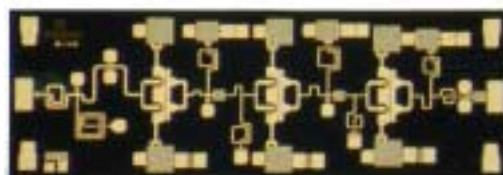
Preliminary

14 – 18 GHz LNA MMIC

FEATURES

- P_{1dB} : 15 dBm
- Noise Figure: 3 dB
- Small Signal Gain: 19 dB
- Bias Condition: 80 mA @ 5 V

PHOTO ENLARGEMENT

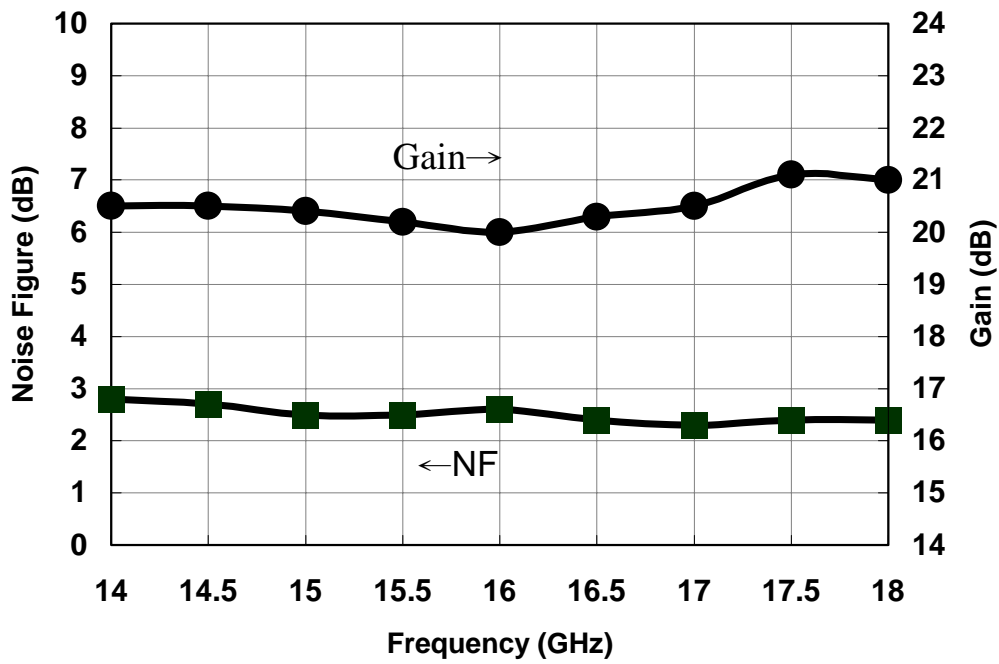


DESCRIPTION

The TC1950 is a three stages PHEMT low noise amplifier MMIC that operates from 14 to 18 GHz. The amplifier provides a typical 19 dB of gain with 3 dB of noise figure and delivers 15 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)

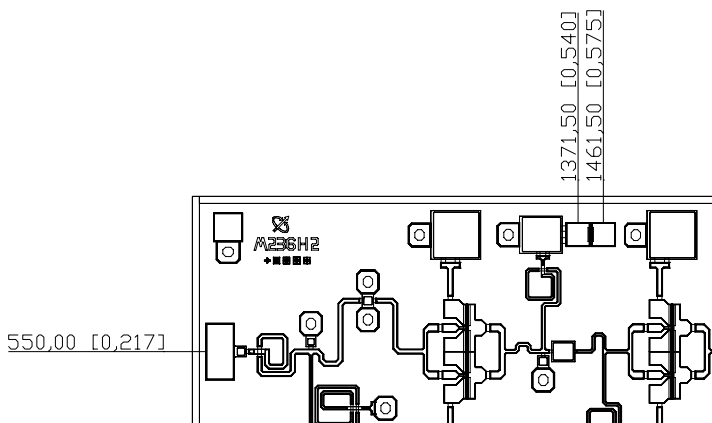
SYMBOL	DESCRIPTION	MIN	TYP	MAX	UNITS
FREQ	Frequency Range	14		18	GHz
SSG	Small Signal Gain		19		dB
P1dB	Output Power at 1 dB Gain Compression		15		dBm
NF	Noise Figure		3		dB
VSWR, IN	Input VSWR		2:1		-
VSWR, OUT	Output VSWR		3:1		-
VDD	Supply Voltage		5		Volt
IDD	Current Supply without RF		80		mA

TYPICAL CHARACTERISTICS
NF VS Freq. & Gain VS Freq.


MECHANICAL OUTLINE

Units: micrometer (inch)

Thickness: 76.2 (0.003)

Chip Size: ± 50.8 (0.002)

ASSEMBLY DIAGRAM