TRANSCOM

TC1900

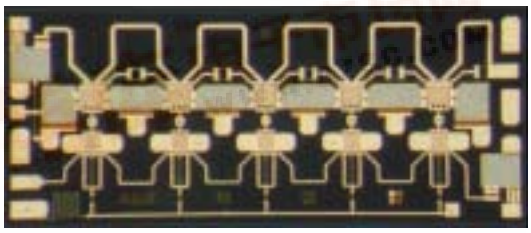
REV.2_04/12/2004

30 KHz - 12 GHz MMIC

FEATURES

- P_{-1} dB: 17 dBm
- Small Signal Gain: 8.5 dB
- IP3: 25 dBm
- Bias Condition: 250 mA @ 8 V

PHOTO ENLARGEMENT



DESCRIPTION

The TC1900 is a broadband general-purpose medium power MMIC amplifier that operates in the 30 KHz to 12 GHz frequency range. The amplifier provides a minimum 7 dB of gain and delivers 17 dBm of output power. The MMIC is fabricated using a mature GaAs PHEMT process. The process features all 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	0.00003		12	GHz
SSG	Small Signal Gain	7	8.5		dB
GOF	Small Signal Gain Flatness		± 0.5	± 0.7	dB
P_{-1} dB	Output Power at 1 dB Gain Compression	17	18		dBm
P_{-3} dB	Output Power at 3 dB Gain Compression	21	22		dBm
IP3	Third Order Intercept Point	24	25		dBm
VSWR, IN	Input VSWR		1.8:1		-
VSWR, OUT	Output VSWR		1.8:1		-
VDD	Supply Voltage		8		Volt
Vg	Gate Voltage	-0.5	-1.0	-1.5	Volt
IDD	Current Supply Without RF	225	250	275	mA
IDP_{-1}	Current Supply @ Pout = P_{-1} dB		250	275	mA
η_a	Power Added Efficiency		7		%

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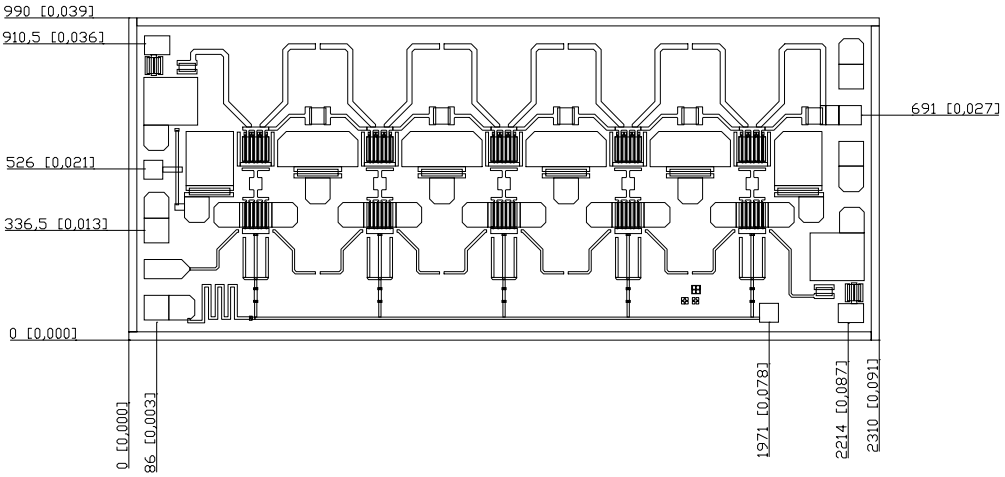
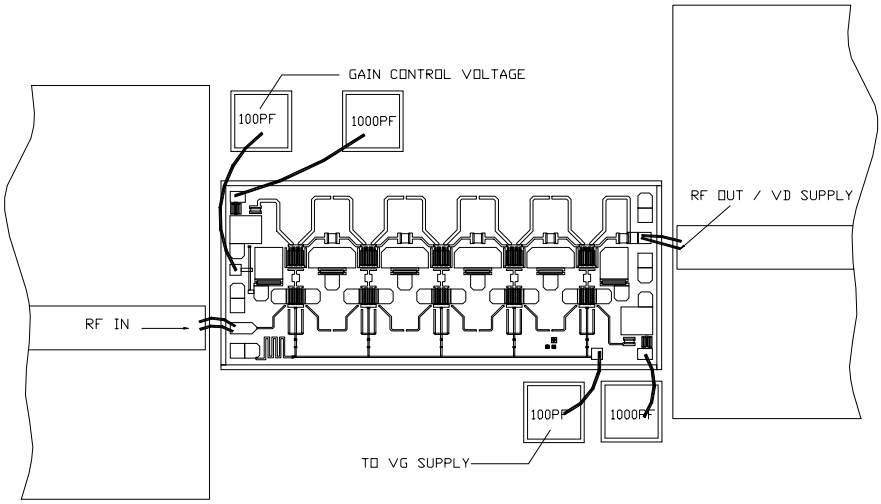
MECHANICAL OUTLINE

Units: micrometer (inch)



ASSEMBLY DIAGRAM



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