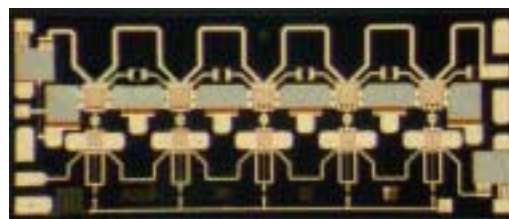


## 30 KHz - 12 GHz MMIC

### FEATURES

- P<sub>1</sub> dB: 17 dBm
- Small Signal Gain: 8.5 dB
- IP3: 25 dBm
- Bias Condition: 250 mA @ 8 V

### PHOTO ENLARGEMENT



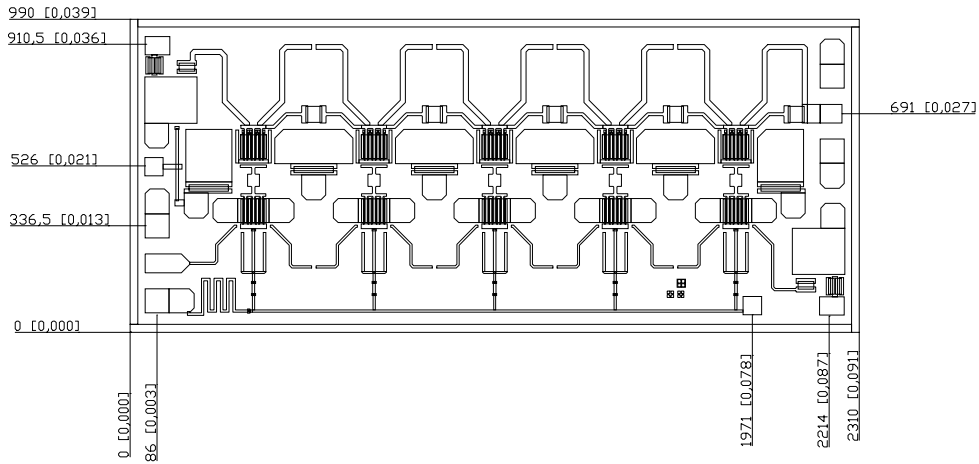
### DESCRIPTION

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
<b>FREQ</b>	Frequency Range	0.00003		12	GHz
<b>SSG</b>	Small Signal Gain	7	8.5		dB
<b>GOF</b>	Small Signal Gain Flatness		± 0.5	± 0.7	dB
<b>P<sub>1</sub> dB</b>	Output Power at 1 dB Gain Compression	17	18		dBm
<b>P<sub>3</sub> dB</b>	Output Power at 3 dB Gain Compression	21	22		dBm
<b>IP3</b>	Third Order Intercept Point	24	25		dBm
<b>VSWR, IN</b>	Input VSWR		1.8:1		-
<b>VSWR, OUT</b>	Output VSWR		1.8:1		-
<b>VDD</b>	Supply Voltage		8		Volt
<b>Vg</b>	Gate Voltage	-0.5	-1.0	-1.5	Volt
<b>IDD</b>	Current Supply Without RF	225	250	275	mA
<b>IDP<sub>1</sub></b>	Current Supply @ Pout = P <sub>1</sub> dB		250	275	mA

**MECHANICAL OUTLINE**



Units: micrometer (inch)

**ASSEMBLY DIAGRAM**

