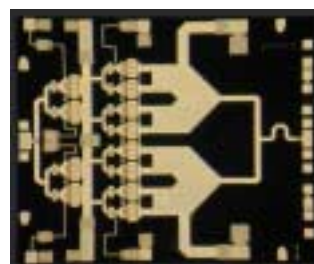


**Preliminary**
**30 – 36 GHz 29dBm MMIC**
**FEATURES**

- P<sub>-1</sub> dB: 29 dBm
- Small Signal Gain: 9 dB @ 35 GHz
- IP3: 38 dBm
- Bias Condition: 1A @ 5.5V

**PHOTO ENLARGEMENT**

**DESCRIPTION**

The TC4830 is a two stages PHEMT amplifier MMIC that operates from 30 to 36 GHz. The amplifier provides a typical of 9 dB gain and delivers 29 dBm of P<sub>1dB</sub>. 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
<b>FREQ</b>	Frequency Range	30		36	GHz
<b>SSG</b>	Small Signal Gain		9		dB
<b>P1 dB</b>	Output Power at 1 dB Gain Compression		29		dBm
<b>VSWR, IN</b>	Input VSWR		2:1		
<b>VDD</b>	Supply Voltage		5.5		Volt
<b>Vg</b>	Gate Voltage	-1.0		-0.1	Volt
<b>IDD</b>	Bias Current		1000		mA

**ABSOLUTE MAXIMUM RATINGS at 25 °C**

<b>Symbol</b>	<b>Parameter</b>	<b>Rating</b>
V <sub>DS</sub>	Drain-Source Voltage	7 V
I <sub>D</sub>	Drain Current	2000 mA
P <sub>T</sub>	Continuous Dissipation	7 W
P <sub>in</sub>	Input Power, CW	20 dBm
T <sub>CH</sub>	Channel Temperature	175 °C
T <sub>STG</sub>	Storage Temperature	- 65 °C to -175 °C