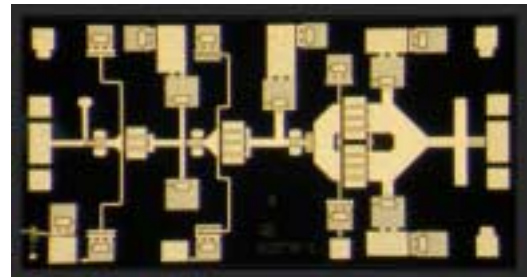


**Preliminary**
**30 – 36 GHz 24dBm MMIC**
**FEATURES**

- P<sub>1</sub> dB: 24 dBm
- Small Signal Gain: 15 dB
- IP3: 32 dBm
- Bias Condition: 400 mA @ 5V


**DESCRIPTION**

The TC4820 is a three stages PHEMT amplifier MMIC that operates from 30 to 36 GHz. The amplifier provides a typical of 15 dB gain and delivers 24 dBm of P1dB. 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		15		dB
<b>P1 dB</b>	Output Power at 1 dB Gain Compression		24		dBm
<b>VSWR, IN</b>	Input VSWR		2:1		
<b>VDD</b>	Supply Voltage		5		Volt
<b>Vg</b>	Gate Voltage	-1.0		-0.1	Volt
<b>IDD</b>	Bias Current		400		mA

**ABSOLUTE MAXIMUM RATINGS at 25 °C**

Symbol	Parameter	Rating
V <sub>DS</sub>	Drain-Source Voltage	7 V
I <sub>D</sub>	Drain Current	800 mA
P <sub>T</sub>	Continuous Dissipation	2.8 W
P <sub>in</sub>	Input Power, CW	10 dBm
T <sub>CH</sub>	Channel Temperature	175 °C
T <sub>STG</sub>	Storage Temperature	- 65 °C to 175 °C