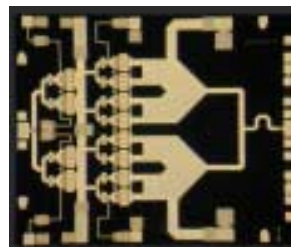


Preliminary
30 – 36 GHz 29dBm MMIC
FEATURES

- P₁ 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 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
FREQ	Frequency Range	30		36	GHz
SSG	Small Signal Gain		9		dB
P1 dB	Output Power at 1 dB Gain Compression		29		dBm
VSWR, IN	Input VSWR		2:1		
VDD	Supply Voltage		5.5		Volt
Vg	Gate Voltage	-1.0		-0.1	Volt
IDD	Bias Current		1000		mA

ABSOLUTE MAXIMUM RATINGS at 25 °C

Symbol	Parameter	Rating
V _{DS}	Drain-Source Voltage	7 V
I _D	Drain Current	2000 mA
P _T	Continuous Dissipation	7 W
P _{in}	Input Power, CW	20 dBm
T _{CH}	Channel Temperature	175 °C
T _{STG}	Storage Temperature	- 65 °C to -175 °C