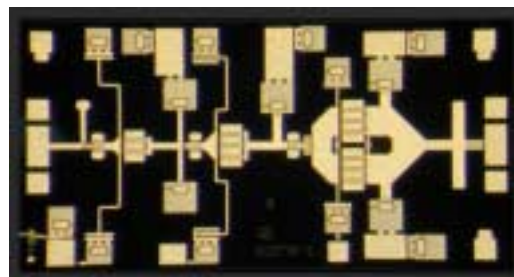


Preliminary
30 – 36 GHz 24dBm MMIC
FEATURES

- P₋₁ 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 P_{1dB}. 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 (T_a = 25 °C)

SYMBOL	DESCRIPTION	MIN	TYP	MAX	UNITS
FREQ	Frequency Range	30		36	GHz
SSG	Small Signal Gain		15		dB
P1 dB	Output Power at 1 dB Gain Compression		24		dBm
VSWR, IN	Input VSWR		2:1		
VDD	Supply Voltage		5		Volt
Vg	Gate Voltage	-1.0		-0.1	Volt
IDD	Bias Current		400		mA

ABSOLUTE MAXIMUM RATINGS at 25 °C

Symbol	Parameter	Rating
V _{DS}	Drain-Source Voltage	7 V
I _D	Drain Current	800 mA
P _T	Continuous Dissipation	2.8 W
P _{in}	Input Power, CW	10 dBm
T _{CH}	Channel Temperature	175 °C
T _{STG}	Storage Temperature	- 65 °C to 175 °C