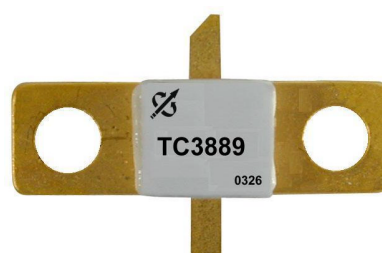


Preliminary

5W Packaged Self-Bias PHEMT GaAs Power FETs
FEATURES

- 5W Typical Output Power
- 12dB Typical Linear Power Gain at 2.0GHz
- High Linearity:
IP3 = 47 dBm Typical
- High Power Added Efficiency:
Nominal PAE of 35%
- Breakdown Voltage: $BV_{DGO} \geq 18V$
- $Wg = 12 \text{ mm}$
- 100 % DC Tested
- Suitable for High Reliability Application

PHOTO ENLARGEMENT

DESCRIPTION

The TC3889 is a self-bias flange ceramic packaged device with TC1806N PHEMT GaAs FETs, which is designed to provide the single power supply application. The flange ceramic package provides excellent thermal conductivity for the GaAs FET. The devices only need to provide the positive voltage to drain and ground the source, which is suitable for oscillator, power amplifier application in a wide range of commercial application. All devices are 100% DC tested to assure consistent quality.

ELECTRICAL SPECIFICATIONS (@ 2.0 GHz)

Symbol	CONDITIONS	MIN	TYP	MAX	UNIT
P_{1dB}	Output Power at 1dB Gain Compression Point $V_{DS} = 10 \text{ V}$	36	37		dBm
G_L	Linear Power Gain $V_{DS} = 10 \text{ V}$		12		dB
IP3	Intercept Point of the 3 rd -order Intermodulation $V_{DS} = 10 \text{ V}$, $*P_{SCL} = 26 \text{ dBm}$		47		dBm
PAE	Power Added Efficiency at 1dB Compression Power		35		%
I_{DS}	Drain-Source Current at $V_{DS} = 10 \text{ V}$		1300		mA
BV_{DGO}	Drain-Gate Breakdown Voltage at $I_{DGO} = 6 \text{ mA}$	18	22		Volts
R_{th}	Thermal Resistance		2.7		°C/W

Note: $*P_{SCL}$: Output Power of Single Carrier Level.