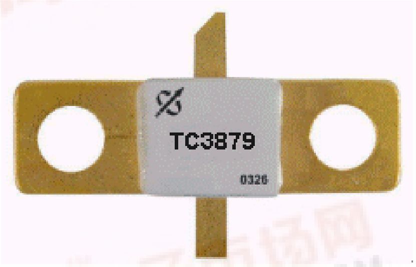
Preliminary

7 W Packaged Single-Bias PHEMT GaAs Power FETs

FEATURES

- 7W Typical Output Power
- 10.5dB Typical Linear Power Gain at 2.45 GHz
- High Linearity: IP3 = 48.5 dBm Typical
- High Power Added Efficiency: Nominal PAE of 35%
- Breakdown Voltage: $BV_{DGO} \geq 18V$
- 100 % DC Tested
- Suitable for High Reliability Application

PHOTO ENLARGEMENT



DESCRIPTION

The TC3879 is a self-bias flange ceramic packaged device with PHEMT GaAs FETs, which is designed to provide the single power supply. The flange ceramic package provides excellent thermal conductivity for the GaAs FET. The device is suitable for oscillators and power amplifiers in a wide range of commercial application. All devices are 100% DC tested to assure consistent quality.

ELECTRICAL SPECIFICATIONS (@ 2.45 GHz)

Symbol	CONDITIONS	MIN	TYP	MAX	UNIT
P_{1dB}	Output Power at 1dB Gain Compression Point V_{DS} = 10 V		38.5		dBm
G_L	Linear Power Gain V_{DS} = 10 V		10.5		dB
IP3	Intercept Point of the 3rd-order Intermodulation V_{DS} = 10 V, *P_{SCL} = 27 dBm		48.5		dBm
PAE	Power Added Efficiency at 1dB Compression Power		35		%
I_{DS}	Drain-Source Current at V_{DS} = 10 V		1750		mA
BV_{DGO}	Drain-Gate Breakdown Voltage at I_{DGO} = 7.5mA	18	22		Volts
R_{th}	Thermal Resistance		1.8		°C/W

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

FLANGE PACKAGE OUTLINE (Unit: mm)