



TC3989A

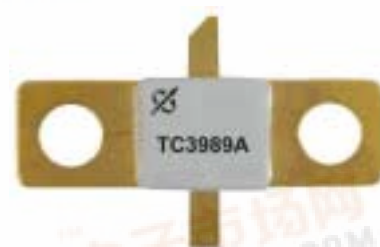
PRE1_20070503

5.0 GHz 37 dBm Prematched FETs

FEATURES

- 37dBm Typical Power at 5.0 GHz
- High Associated Gain: $G_a = 9$ dB Typical at 5.0 GHz
- High Efficiency: Efficiency ≥ 40 % for Class AB Operation
- Suitable for High Reliability Application
- $W_g = 12$ mm
- 100 % DC and RF Tested
- Flange Ceramic Package

PHOTO ENLARGEMENT



DESCRIPTION

The TC3989A is a 37dBm partially prematched power FET assembled in a flange ceramic package. It requires simple matching networks to achieve high gain and high linearity for 5.0 GHz applications. All devices are 100 % DC and RF tested to assure consistent quality.

ELECTRICAL SPECIFICATIONS

 $V_D = 12$ V, $I_{DQ} = 180$ mA, $f = 5.0$ GHz

Parameter	Conditions	MIN	TYP	MAX	UNIT
Freq		4.9	5.1		GHz
P_{-1} *		37	37.5		dBm
G_a *		8	9		dB
Efficiency	@ P_{-1}		40		%
I_{DSS}	$V_{DS} = 2$ V, $V_{GS} = 0$ V		3		A
g_m	$V_{DS} = 2$ V, $V_{GS} = 0$ V		2000		mS
V_P	$V_{DS} = 2$ V, $I_D = 24$ mA		-1.7		Volts
BV_{DGO}	$I_{DGO} = 6$ mA	18	22		Volts
R_{th}			2.5		°C/W

ABSOLUTE MAXIMUM RATINGS($T_A = 25$ °C)

Symbol	Parameter	Rating
V_{DS}	Drain-Source Voltage	14 V
V_{GS}	Gate-Source Voltage	-5 V
I_D	Drain Current	3 A
P_T	Continuous Dissipation	12 W
P_{in}	Input Power, CW	33 dBm
T_{CH}	Channel Temperature	175 °C
T_{STG}	Storage Temperature	- 65 °C to +175 °C

* FET TO BE TESTED IN TRANSCOM FIXTURE.

