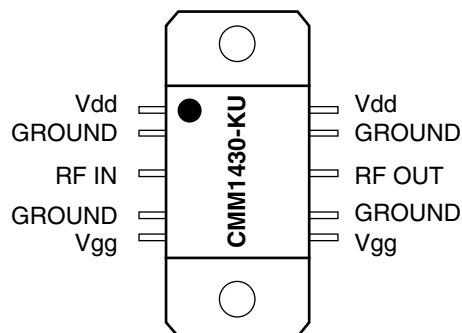


**Preliminary Product Information**  
**April 2002** (1 of 2)**13.75 to 14.5 GHz**  
**1 Watt Power Amplifier****Features**

- ❑ **32 dBm (Typ.) Saturated Output Power**
- ❑ **34.5 dB (Typ.) Linear Gain**
- ❑ **Fully Matched**
- ❑ **Unconditionally Stable**
- ❑ **Copper/Molybdenum Flange Package for Optimum Thermal dissipation**

**Applications**

- ❑ **Ku-Band VSAT Transmit Subsystems**

**Pin Functional Diagram****Description**

The CMM1430-KU is a four-stage pHEMT GaAs MMIC power amplifier that is ideally suited for transmit subsystems designed for Ku-Band VSAT applications. The CMM1430-KU provides 34.5 dB linear gain and delivers 1.5 watts of output power at saturation operating from 13.75 to 14.5 GHz frequency.

The unconditional stability and internal matching provides for reduction of external components making this product a simple and low-cost solution. The package is designed with a base material of gold-plated copper/molybdenum composite that offers excellent thermal properties and minimum mechanical stress.

**Electrical Characteristics** (T = +25°C, Vd = 7V, Idq = 570mA)

Parameter	Condition	Min	Typ	Max	Units
Frequency Range		13.75		14.5	GHz
Saturated Output Power	Pin = 3.0 dBm	31.0	32.3	33.5	dBm
Saturated Output Power Variation	Over operating frequency			1.2	dB
Linear Gain		32.0	34.5	37.0	dB
Linear Gain Variation	Over operating frequency			2.0	dB
Input Reflection Coefficient			-10.0		dB
Output Reflection Coefficient			-6.0		dB
Gate Supply Voltage	Idq = 570 mA	-0.7		-0.2	dBm
Drain Current	At Saturation	830	960	1140	mA
Power Added Efficiency			25		%

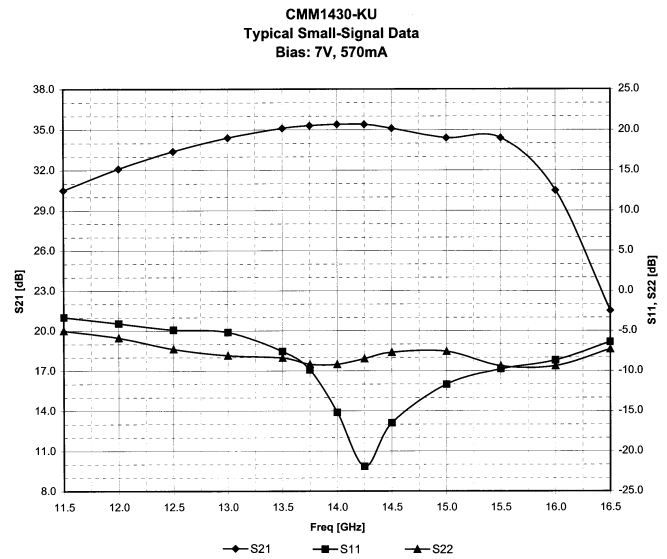
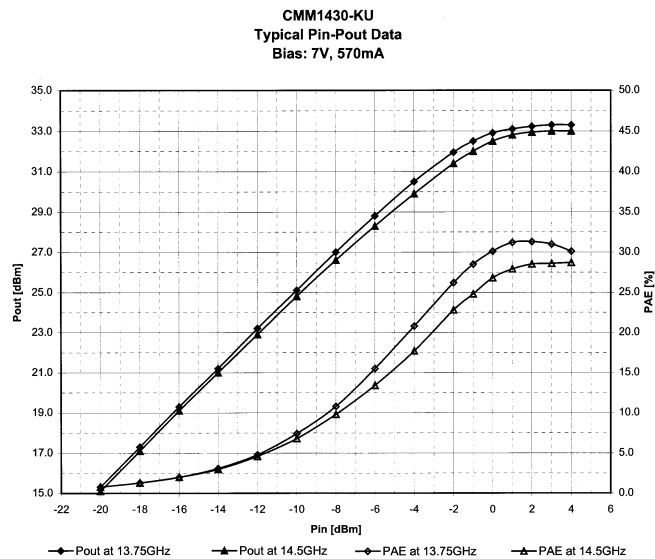
**Electrical Characteristics** (T = -40°C to +70°C, Vd = 7V, Idq = 570mA)

Parameter	Condition	Min	Typ	Max	Units
Saturated Power Output	Variation from room temperature value	-1.0		1.0	dBm
Linear Gain Variation	Variation from room temperature value	-2.0		2.0	dB
Stability		Unconditionally Stable			—

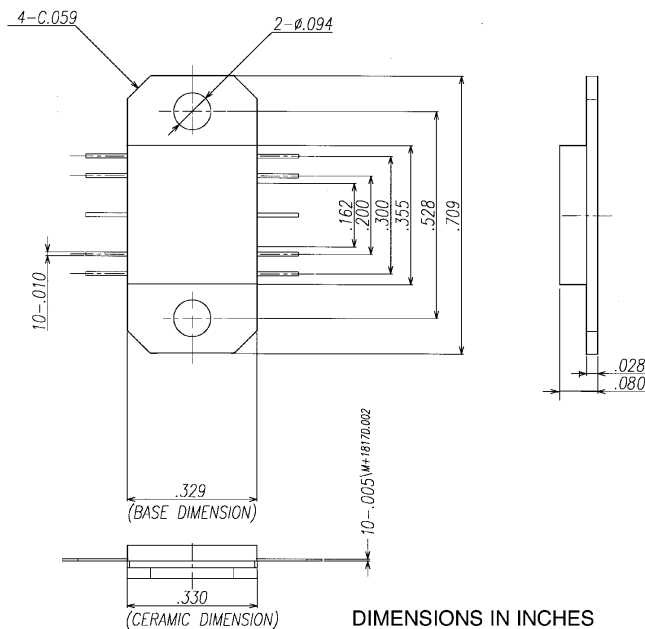
**Maximum Ratings** (TA = -40°C to +70°C) Operation outside these limits can cause permanent damage.

Parameter	Typ	Units	Parameter	Typ	Units
Drain Voltage (+V <sub>dd</sub> )	10.0	Volts	RF Input Power (P <sub>in</sub> )	10.0	dBm
Gate Voltage (V <sub>gg</sub> )	-3.0	Volts	Storage Temperature	-50 to +150	°C
Drain Current (I <sub>d</sub> )	1500	mA	Operating Backside Temperature	-40 to +70	°C
Gate Current (I <sub>g</sub> )	10	mA			

## Typical Performance



## Physical Dimensions



## Ordering Information

The CMM1430-KU is available in plastic trays.

Part Number for Ordering

**CMM1430-KU**

Package

**Leaded flange package in plastic trays**

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