

# 0.8-1.0 GHz +36 dBm Power GaAs FET

## Features

- ✕ High Gain
- ✕ +36 dBm Power Output
- ✕ Proprietary Power FET Process
- ✕ >45% Linear Power Added Efficiency
- ✕ +33 dBm with 30 dBc Third Order Products

## Description

The CFH2162-P1 is a high-gain, linear FET intended for driver amplifier applications in high-power systems, and output stage usage in medium power applications at power levels up to +36 dBm. The device is easily matched and provides excellent linearity at 4 Watts. Manufactured in Mimix's power FET process, this device is assembled in a power flange package.

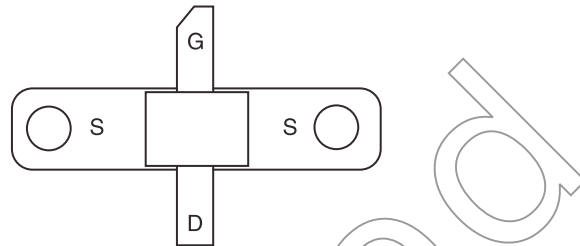
## Specifications (TA = 25 °C)

The following specifications are guaranteed at room temperature in Mimix test fixture at 850 MHz.

Parameters	Conditions	Min	Typ	Max	Units
<b>V<sub>d</sub> = 10V, I<sub>d</sub> = 1100 mA (Quiescent)</b>					
P <sub>-1dB</sub>		36.0	37.0	—	dBm
G <sub>-1 dB</sub>		19.0	20.0	—	dB
3rd Order Products <sup>(1)</sup>		30	35	—	dBc
Efficiency	@ P1dB	—	45	—	%
<b>V<sub>d</sub> = 8V, I<sub>d</sub> = 1300 mA (Quiescent)</b>					
P <sub>-1dB</sub>		—	36.0	—	dBm
G <sub>-1 dB</sub>		—	19.0	—	dB

Parameters	Conditions	Min	Typ	Max	Units
g <sub>m</sub>	V <sub>ds</sub> = 2.0V, V <sub>gs</sub> = 0V	—	1700	—	mS
I <sub>dss</sub>	V <sub>ds</sub> = 2.0V, V <sub>gs</sub> = 0V	—	2.8	—	A
V <sub>p</sub>	V <sub>ds</sub> = 3.0V, I <sub>ds</sub> = 65 mA	—	-1.8	—	Volts
BV <sub>GD</sub>	I <sub>gd</sub> = 6.5 mA	20	24	—	Volts
θ <sub>JL</sub> <sup>(2)</sup>	@ 150°C TCH	—	8	—	°C/W

## Package Diagram



## Absolute Maximum Ratings

Drain-Source Voltage (V <sub>ds</sub> )	15V <sup>(3)</sup>
Gate-Source Voltage (V <sub>gs</sub> )	-5V
Drain Current (I <sub>ds</sub> )	I <sub>dss</sub>
Continuous Dissipation (Pt)	10W
Channel Temperature (T <sub>ch</sub> )	175 °C
Storage Temperature (T <sub>stg</sub> )	-65 °C to +175 °C

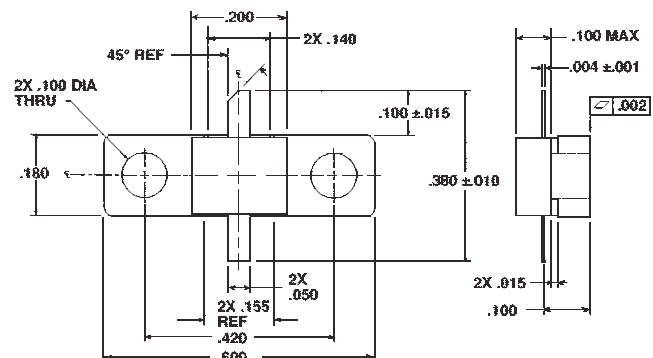
### Notes:

1. Sum to two tones with 1 MHz spacing = 33 dBm.
2. See thermal considerations information.
3. Maximum potential difference across the device (V<sub>d</sub> + V<sub>g</sub>) cannot exceed 18V.

## Applications

- ✕ ISM Band Base Stations
- ✕ Cellular Base Stations
- ✕ Wireless Local Loop

## Power Flange Package Physical Dimensions



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## Ordering Information

The CFH2162-P1 power stage is available in a SOIC-8 surface mount package. Devices are available in tape and reel. Ordering part numbers are listed.

Part Number for Ordering	Function	Package
CFH2162-P1	800 - 900 MHz Power Stage	Power flange package

Discontinued