

0.8-1.0 GHz +36 dBm Power GaAs FET

October 2009 - Rev 20-Oct-09

Mimix
BROADBAND™

CFH2162-P1

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.

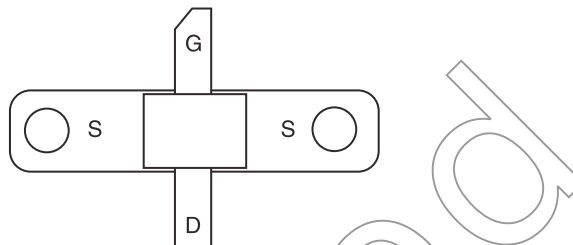
Specifications (TA = 25 °C)

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

Parameters	Conditions	Min	Typ	Max	Units
V_d = 10V, I_d = 1100 mA (Quiescent)					
P _{-1dB}		36.0	37.0	—	dBm
G _{-1 dB}		19.0	20.0	—	dB
3rd Order Products ⁽¹⁾		30	35	—	dBc
Efficiency	@ P1dB	—	45	—	%
V_d = 8V, I_d = 1300 mA (Quiescent)					
P _{-1dB}		—	36.0	—	dBm
G _{-1 dB}		—	19.0	—	dB

Parameters	Conditions	Min	Typ	Max	Units
g _m	V _{ds} = 2.0V, V _{gs} = 0V	—	1700	—	mS
I _{dss}	V _{ds} = 2.0V, V _{gs} = 0V	—	2.8	—	A
V _p	V _{ds} = 3.0V, I _{ds} = 65 mA	—	-1.8	—	Volts
BV _{GD}	I _{gd} = 6.5 mA	20	24	—	Volts
Θ _{JL} ⁽²⁾	@ 150°C TCH	—	8	—	°C/W

Package Diagram



Absolute Maximum Ratings

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

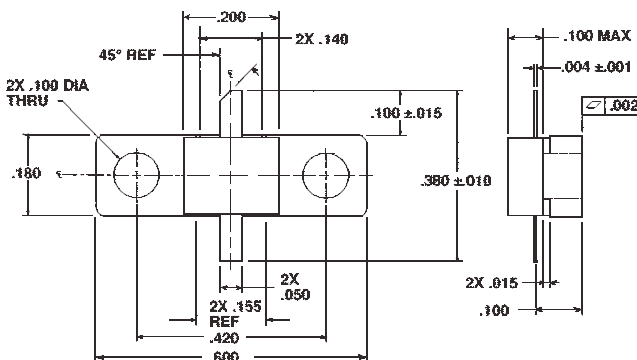
Notes:

1. Sum to two tones with 1 MHz spacing = 33 dBm.
2. See thermal considerations information.
3. Maximum potential difference across the device (V_d + V_g) cannot exceed 18V.

Applications

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

Power Flange Package Physical Dimensions



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Page 1 of 2

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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