800-900 MHz
+36 dBm Power GaAs FET

August 2006 - Rev 03-Aug-06

CFH2162-P1

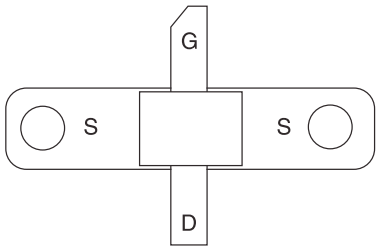
Features

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

Applications

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

Package Diagram



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 Celeritek's proprietary 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 Celeritek 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

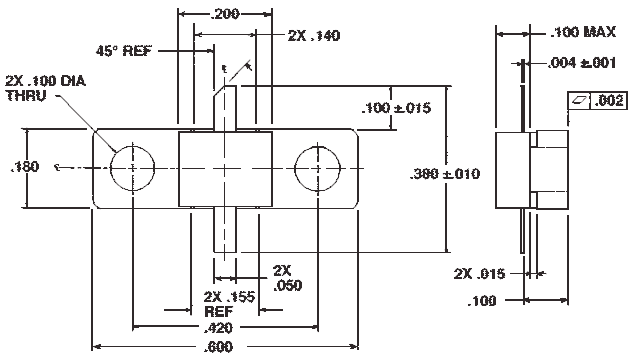
Parameters	Conditions	Min	Typ	Max	Units
g_m	Vds = 2.0V, Vgs = 0V	—	1700	—	mS
I_{dss}	Vds = 2.0V, Vgs = 0V	—	2.8	—	A
V_p	Vds = 3.0V, Ids = 65 mA	—	-1.8		Volts
BV_{GD}	Igd = 6.5 mA	20	24	—	Volts
Θ_{JL} (2)	@150°C TCH	—	8	—	°C/W

Absolute Maximum Ratings

Parameter	Symbol	Rating
Drain-Source Voltage	V_{DS}	15V (3)
Gate-Source Voltage	V_{GS}	-5V
Drain Current	I_{DS}	Idss
Continuous Dissipation	P_T	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 (Vd + Vg) cannot exceed 18V.

Power Flange Package Physical Dimensions



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**