polyfet rf devices

MADL01

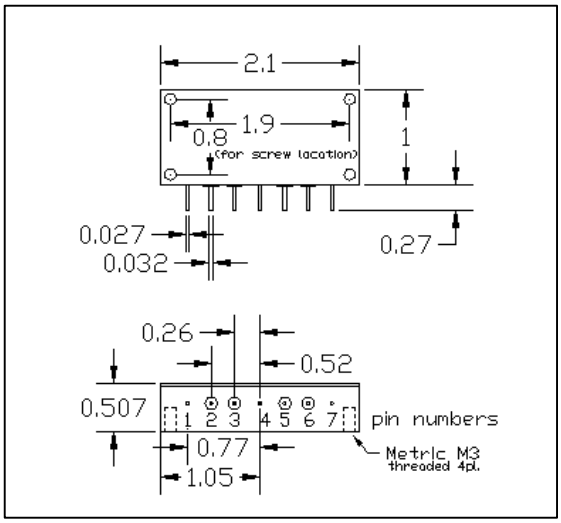
Power RF Amplifiers

Power = 10.0 Watts

Bandwidth = 20 to 110 Mhz

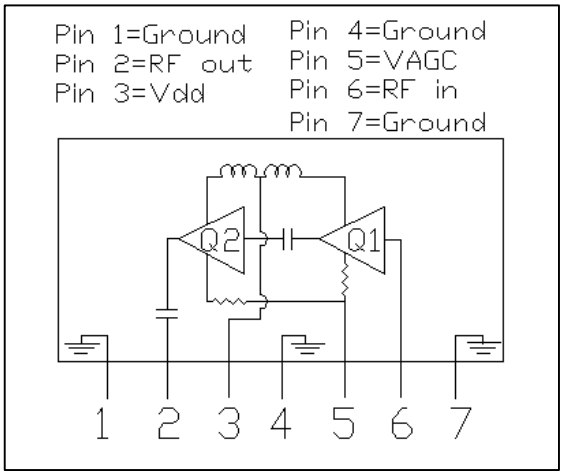
Gain = 25.0 dB Vdd = 28.0 Volts

50 ohms Input/Output Impedance



Description

The MADL01 is a 10 Watt, 2 stage high gain amplifier module covering a bandwidth of 20-110 Mhz. This compact module design is suitable for military applications in a rugged environment. A VAGC pin is provided to control the output power of the module.



Absolute Maximum Ratings (T=25 °C)

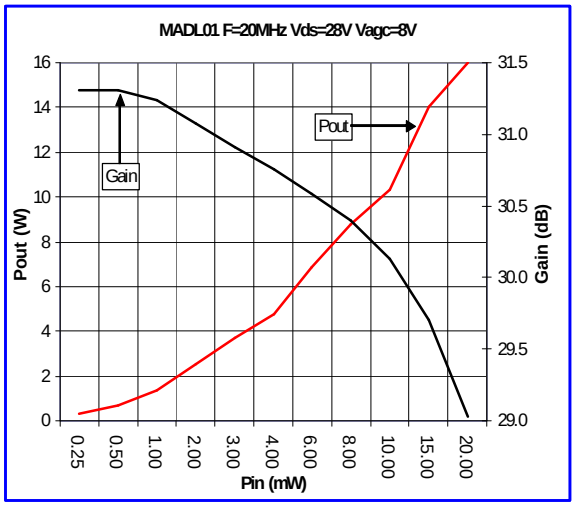
Parameter	*Symbol*	*Value*	*Unit*
DC supply Voltage 1	*VDD1*	32.0	*V*
DC supply Voltage 2	*VDD2*		*V*
AGC Voltage	*VAGC*	8.00	*V*
Input Power	*Pin*	0.02	*W*
Output Power	*Pout*	15.0	*W*
Operating Case Temp.	*Tc*	-20 to +85	*°C*
Storage Temperature	*Tstg*	-30 to +100	*°C*

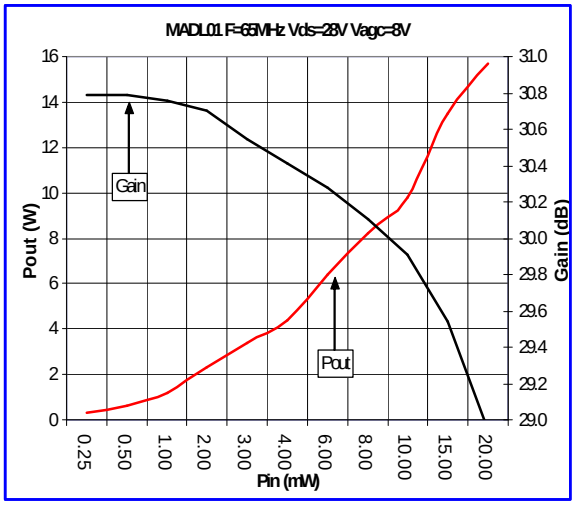
Electrical Characteristics: (T=25 °C Zs=Zl=50 ohms. Vdd= 28.0 Volts)

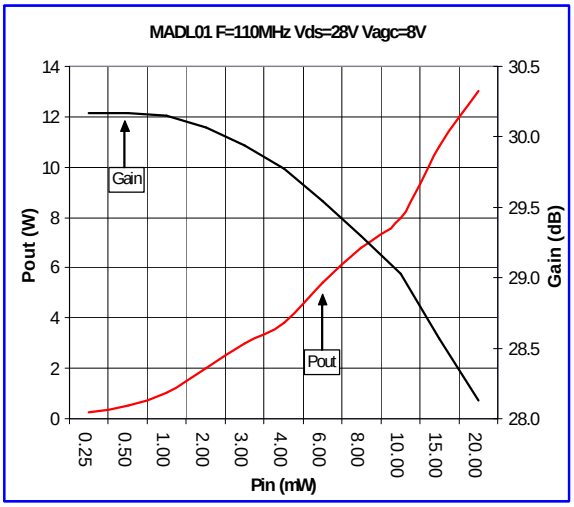
Parameter	*Symbol*	*Min*	*Typical*	*Max*	*Unit*	*Test Conditions*
Frequency Range	*BW*	20		110	*Mhz*	*50 ohm load*
Outut Power	*Po*	10.0			*Watts*	*Idq =* 1.20 *Amps*
Power Gain	*PG*	25.0			*dB*	*@ Pout =* 10.0 *Watts*
Total Efficiency	η	40			*%*	*@ Pout =* 10.0 *Watts*
2nd Harmonics	*dso*		-45.00		*dBc*	*@ Pout =* 10.0 *W. Freq =* 65 *Mhz*
Intermod - 2 tone	*Ip3*				*dBm*	*Freq =* 65 *Mhz; AvePwr=* *W*
Load Mismatch Tolerance	*VSWR*	10:1			*Relative*	*All Phase Angles*

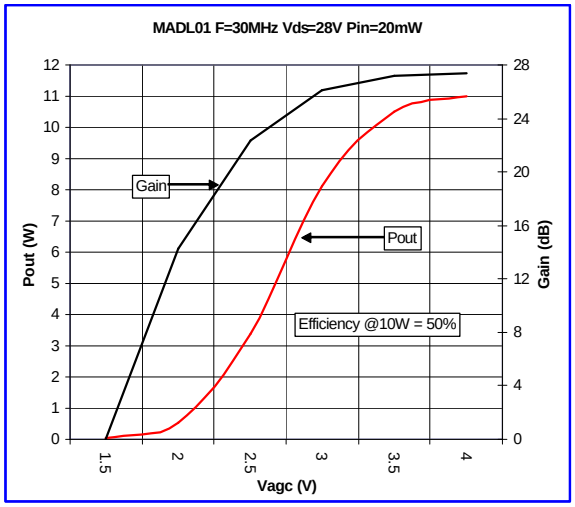
1110 Avenida Acaso, Camarillo, Ca 93012 Tel:(805) 484-4210 FAX: (805) 484-3393 URL:www.polyfet.com

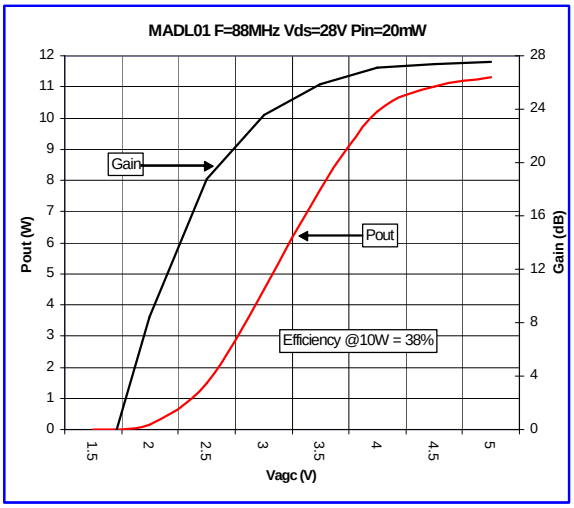
MADL01

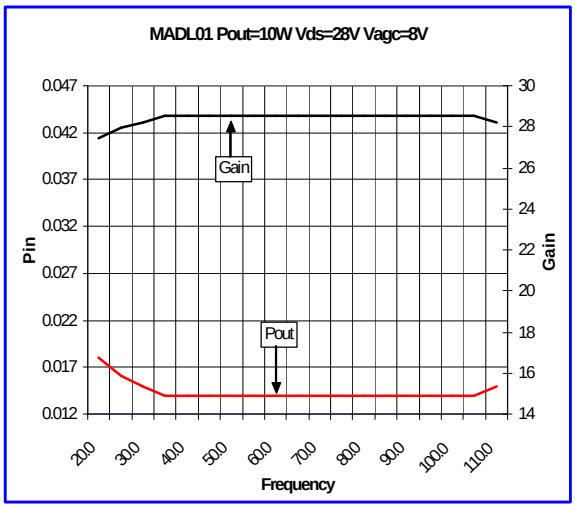

MADL01 F=20MHz Vds=28V Vagc=8V
Pout (W)
Gain (dB)
Pin (mW)
Gain
Pout
0.25
0.50
1.00
2.00
3.00
4.00
6.00
8.00
10.00
15.00
20.00


MADL01 F=65MHz Vds=28V Vagc=8V
Pout (W)
Gain (dB)
Pin (mW)
Gain
Pout
0.25
0.50
1.00
2.00
3.00
4.00
6.00
8.00
10.00
15.00
20.00


MADL01 F=110MHz Vds=28V Vagc=8V
Pout (W)
Gain (dB)
Pin (mW)
Gain
Pout
0.25
0.50
1.00
2.00
3.00
4.00
6.00
8.00
10.00
15.00
20.00


MADL01 F=30MHz Vds=28V Pin=20mW
Pout (W)
Gain (dB)
Vagc (V)
Gain
Pout
Efficiency @10W = 50%
1.5
2
2.5
3
3.5
4


MADL01 F=88MHz Vds=28V Pin=20mW
Pout (W)
Gain (dB)
Vagc (V)
Gain
Pout
Efficiency @10W = 38%
1.5
2
2.5
3
3.5
4
4.5
5


MADL01 Pout=10W Vds=28V Vagc=8V
Pin
Gain
Frequency
Gain
Pout
20.0
30.0
40.0
50.0
60.0
70.0
80.0
90.0
100.0
110.0