



**Power RF Amplifiers**

Power = 20.0 Watts

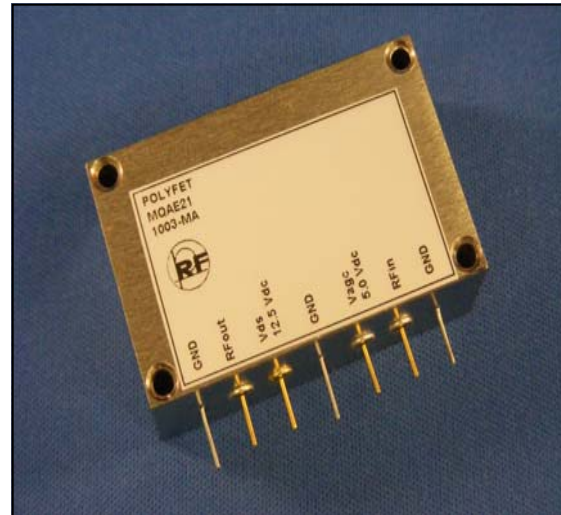
Bandwidth = 2 to 37 Mhz

Gain = 13.0 dB Vdd =12.5 Volts

50 ohms Input/Output Impedance

**Description**

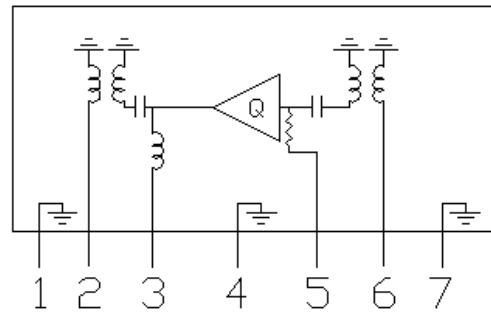
The MQAE21 is a 20 Watt, HF amplifier module. This compact module design is suitable for military applications in a rugged environment. An ALC pin is provided to control the output power and gain.



**Absolute Maximum Ratings (T=25 °C)**

Parameter	Symbol	Value	Unit
DC supply Voltage 1	VDD1	16.0	V
DC supply Voltage 2	VDD2		V
AGC Voltage	VAGC	6.0	V
AGC Current	VAGCI	1.00	mA
Input Power	Pin	1.500	W
Output Power	Pout	30.0	W
Operating Case Temp.	Tc	-40 to +85	°C
Storage Temperature	Tstg	-55 to +100	°C

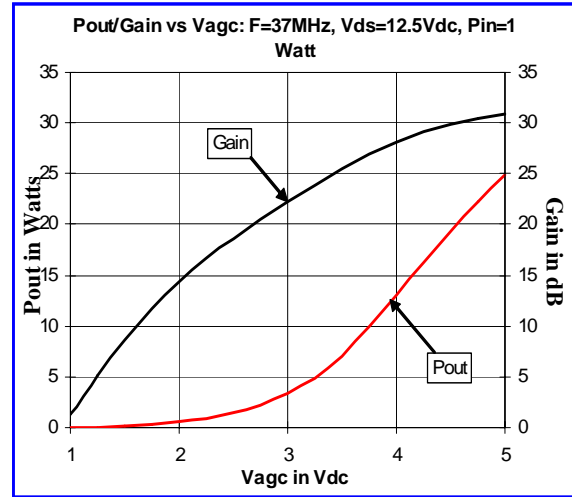
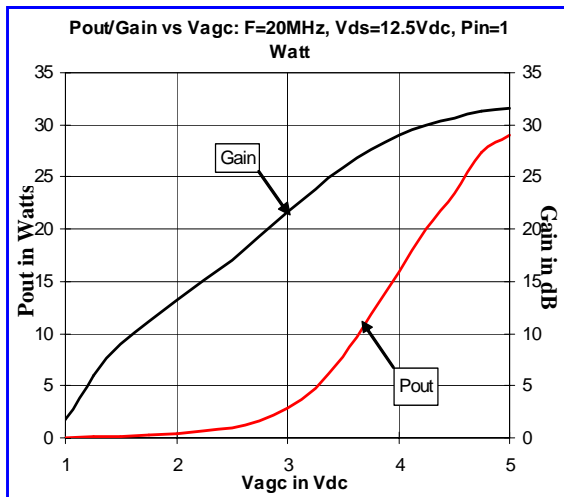
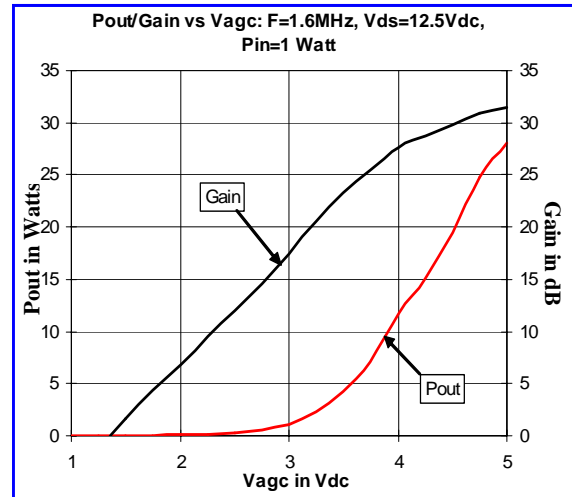
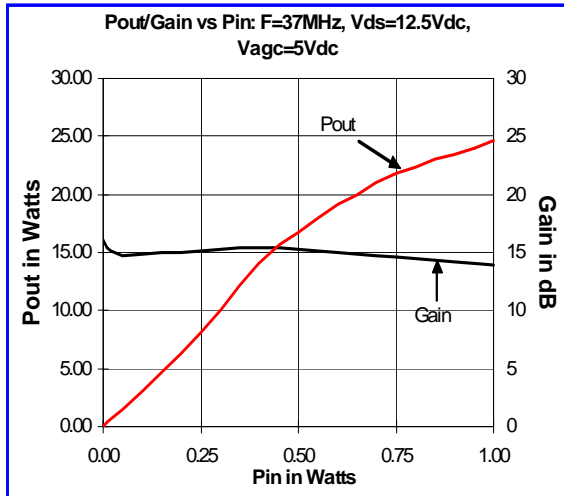
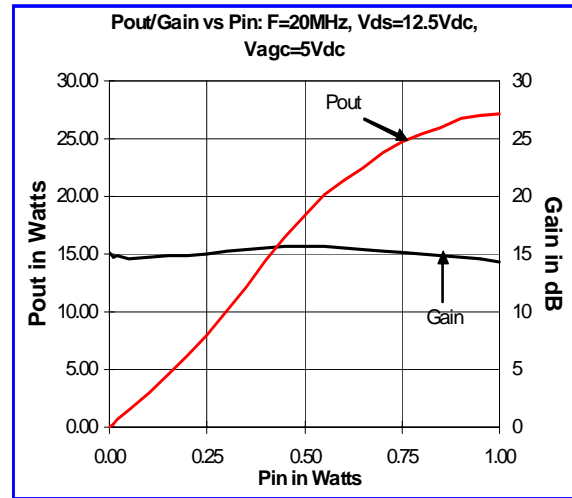
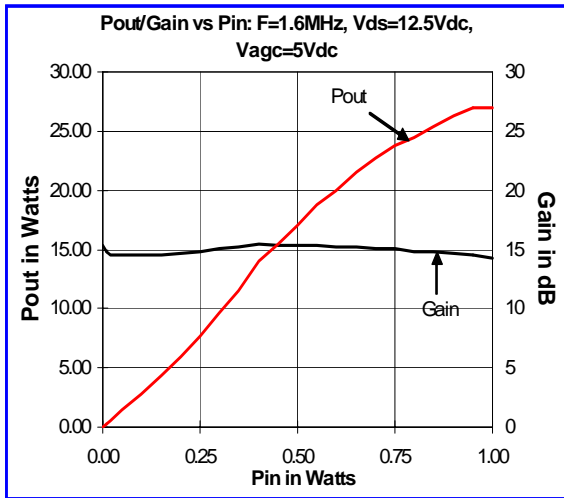
Pin 2= RF OUT Pin 5=Vagc  
 Pin 3= Vds Pin 6= RF IN  
 Pin/s 1, 4, 7= Gnd



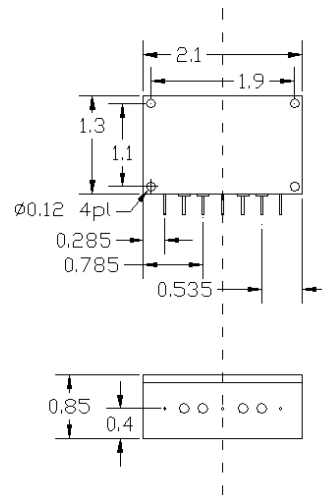
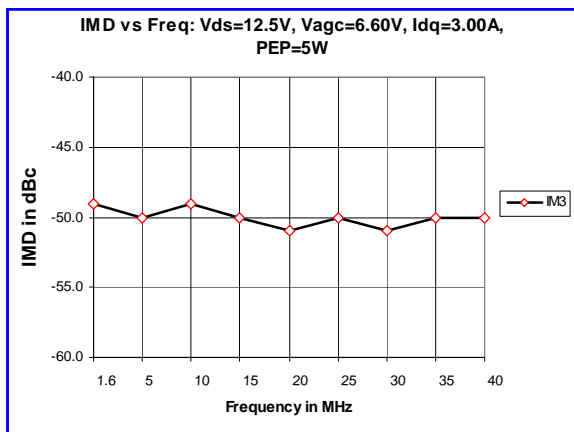
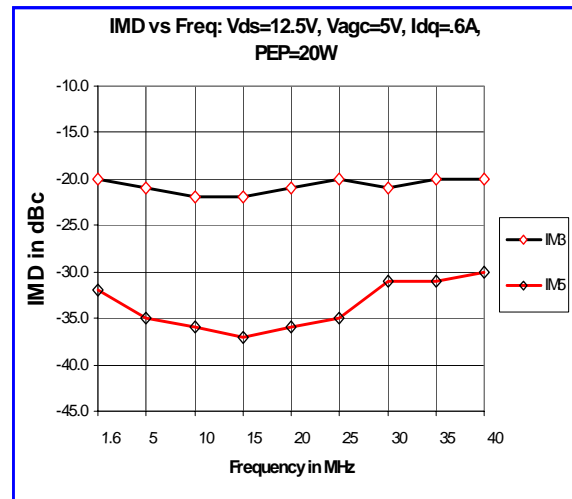
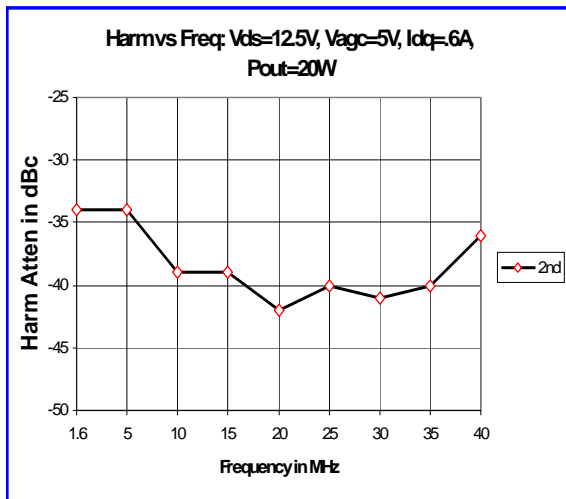
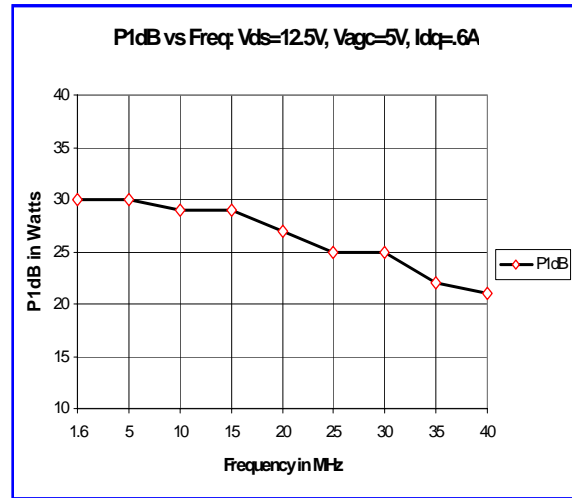
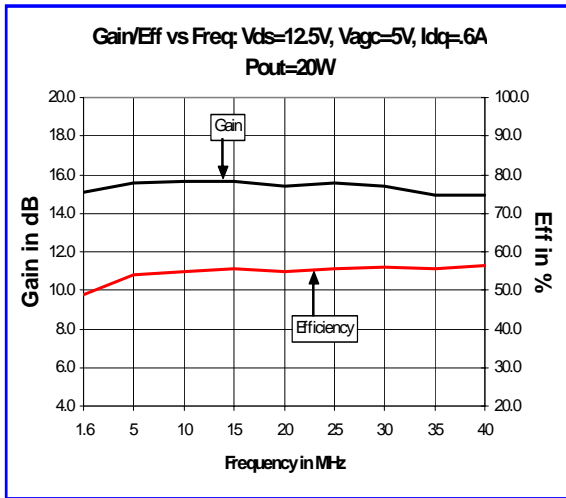
**Electrical Characteristics: ( T=25 °C Zs=Zl=50 ohms, Vdd = 12.5 Volts, Idq = 0.6 Amps )**

Parameter	Symbol	Min	Typical	Max	Unit	Test Conditions
Frequency Range	BW	2		37	Mhz	50 ohm load
Output Power	Po	20.0			Watts	Pin = 30.0 dbm Vagc = 5.0 V
Power Gain	PG	13.0			dB	Pout = 20.0 Watts Vagc = 5.0 V
Total Efficiency	η		50		%	Pout = 20.0 Watts
2nd Harmonics	ds0		-35.00		dBc	Pout = 20.0 Watts @ Mhz
Intermod - 2 tone	Im3	-15.00			dBc	AvePwr= 10.0 Watts
Load Mismatch Tolerance	VSWR	10:1			Relative	All Phase Angles Pout = 20.0Watts
Vagc Voltage	VAGC			5.0	V	Pin = 30.0 dBm, Pout = 20.0 W
Pulse Response Time	Pr				uS	Pulse source:

# MQAE21



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POLYFET RF DEVICES

REVISION 02/25/2010

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