



Power RF Amplifiers

Power = 5.0 Watts

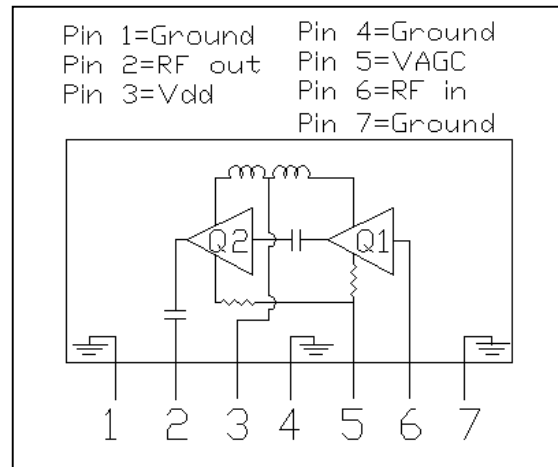
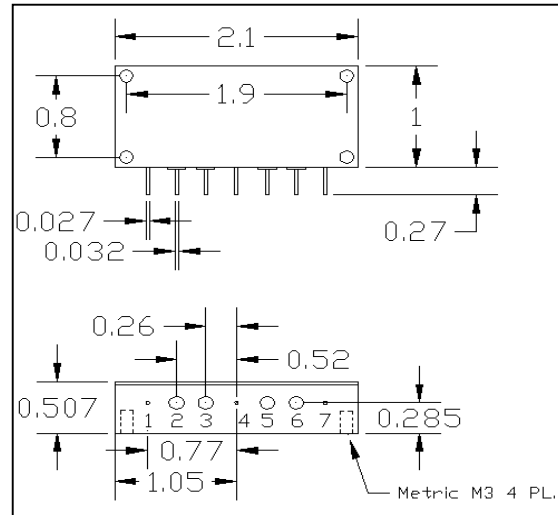
Bandwidth = 30 to 88 Mhz

Gain = 25.0 dB Vdd =12.5 Volts

50 ohms Input/Output Impedance

Description

The MADK21 is a 5 Watt, 2 stage high gain amplifier module covering a bandwidth of 30-88 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	17.0	V
DC supply Voltage 2	VDD2		V
AGC Voltage	VAGC	7.0	V
AGC Current	VAGCI	5.00	mA
Input Power	Pin	0.02	W
Output Power	Pout	10.0	W
Operating Case Temp.	Tc	-40 to +85	°C
Storage Temperature	Tstg	-45 to +100	°C

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	30		88	Mhz	50 ohm load
Output Power	Po	5.0			Watts	Pin = 13.0 dbm Vagc = 5.0 V
Power Gain	PG	25.0			dB	Pout = 5.0 Watts Vagc = 5.0 V
Total Efficiency	η	35			%	Pout = 5.0 Watts
2nd Harmonics	dso		-29.00		dBc	Pout = 5.0 Watts
Intermod - 2 tone	Im3				dBc	AvePwr= Watts
Load Mismatch Tolerance	VSWR	10:1			Relative	All Phase Angles
Vagc Voltage	VAGC			5.0	V	Pin = 13.0 dBm, Pout = 5.0 W
Pulse Response Time	Pr				uS	DC Blank on Vagc pin

MADK21

