



Power RF Amplifiers

Power = 10.0 Watts

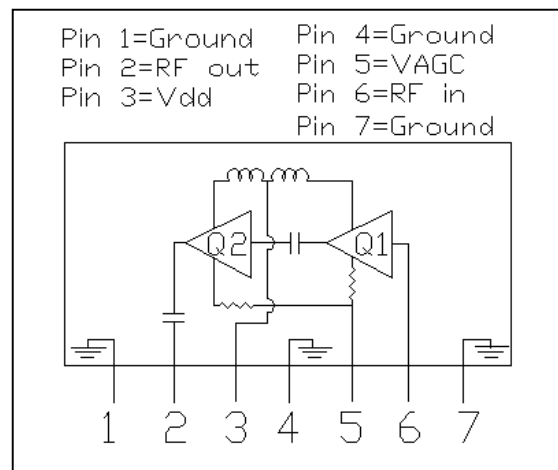
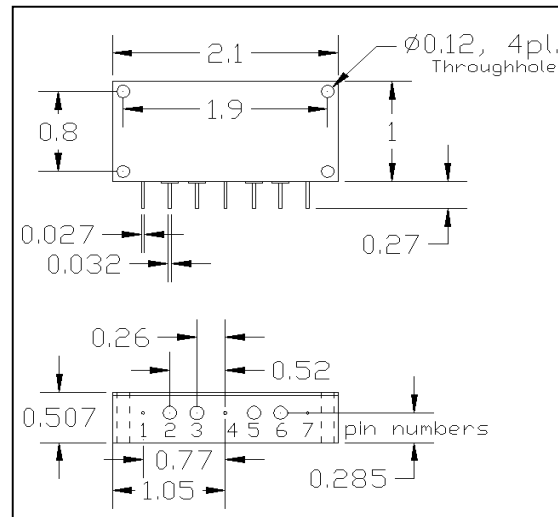
Bandwidth = 30 to 88 Mhz

Gain = 27.0 dB Vdd =12.0 Volts

50 ohms Input/Output Impedance

Description

The MCDK23 is a 10 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	0.050	W
Output Power	Pout	15.0	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 = 12.0 Volts, Idq = 1.2 Amps)

Parameter	Symbol	Min	Typical	Max	Unit	Test Conditions
Frequency Range	BW	30		88	Mhz	50 ohm load
Output Power	Po	10.0			Watts	Pin = 13.0 dbm Vagc = 4.7 V
Power Gain	PG	27.0			dB	Pout = 10.0 Watts Vagc = 4.7 V
Total Efficiency	η	38			%	Pout = 10.0 Watts
2nd Harmonics	dso		-35.00		dBc	Pout = 10.0 Watts @ Mhz
Intermod - 2 tone	Im3				dBc	AvePwr= Watts
Load Mismatch Tolerance	VSWR	10:1			Relative	All Phase Angles
Vagc Voltage	VAGC	2.0		4.7	V	Pin = 13.0 dBm, Pout =10.0 W
Pulse Response Time	Pr			100.0	uS	Pulse source: RF

MCDK23

