



Power RF Amplifiers

Power = 15.0 Watts

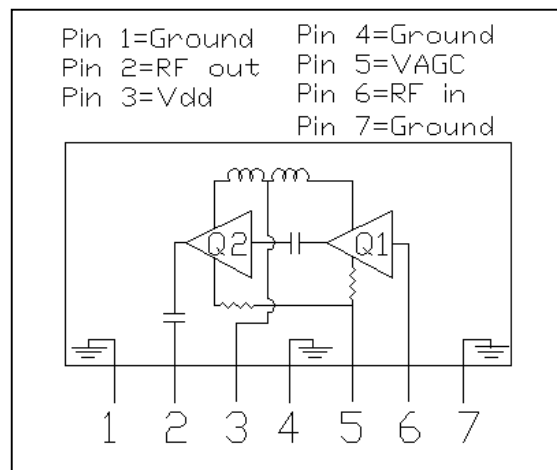
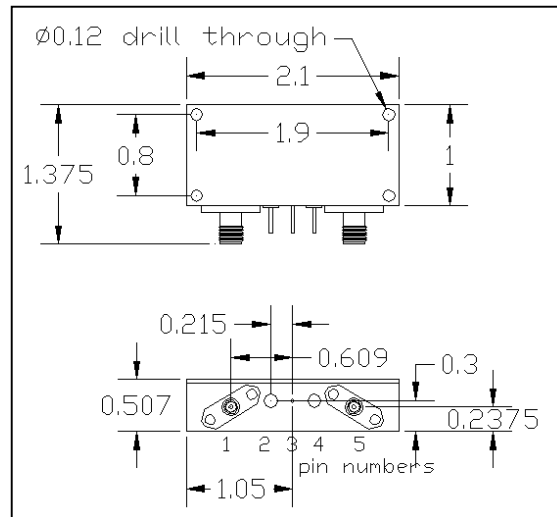
Bandwidth = 30 to 512 Mhz

Gain = 25.0 dB Vdd =28.0 Volts

50 ohms Input/Output Impedance

Description

The MGDQ01 is a 15 Watt, 2 stage high gain amplifier covering a bandwidth of 30-512 Mhz using SMA connectors for RF in and out. This module is suitable for military applications in a rugged environment. An ALC pin is provided to control the output power of the module. The MGDQ01 may be used as the driver stage for the MBDQ01 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	9.0	V
AGC Current	VAGCI	5.00	mA
Input Power	Pin	0.05	W
Output Power	Pout	20.0	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 = 28.0 Volts, Idq = 2.0 Amps)

Parameter	Symbol	Min	Typical	Max	Unit	Test Conditions
Frequency Range	BW	30		512	Mhz	50 ohm load
Output Power	Po	15.0			Watts	Pin = 13.0 dbm Vagc = 8.0 V
Power Gain	PG	25.0			dB	Pout = 15.0 Watts Vagc = 8.0 V
Total Efficiency	η	15			%	Pout = 15.0 Watts
2nd Harmonics	dso		-20.00		dBc	Pout = 15.0 Watts
Intermod - 2 tone	Im3				dBc	AvePwr= Watts
Load Mismatch Tolerance	VSWR	10:1			Relative	All Phase Angles
Vagc Voltage	VAGC			8.0	V	Pin = 13.0 dBm, Pout =15.0 W
Pulse Response Time	Pr				uS	DC Blank on Vagc pin

MGDQ01

