



**Power RF Amplifiers**

**Power = 30.0 Watts**

**Bandwidth = 20 to 512 Mhz**

**Gain = 35.0 dB Vdd =28.0 Volts**

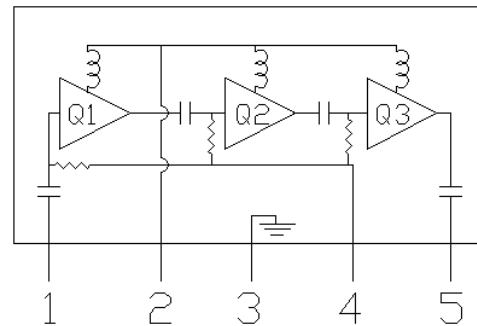
**50 ohms Input/Output Impedance**

**Description**

The MLCQ01 is a 30 Watt, high gain amplifier module covering a bandwidth of 20-512 Mhz. This compact module design is suitable for military applications in a rugged environment. An ALC pin is provided to control the output power, gain and blanking of the module.



Pin 1= RF in    Pin 4=Vagc  
 Pin 2= Vds    Pin 5= RF out  
 Pin 3= Gnd



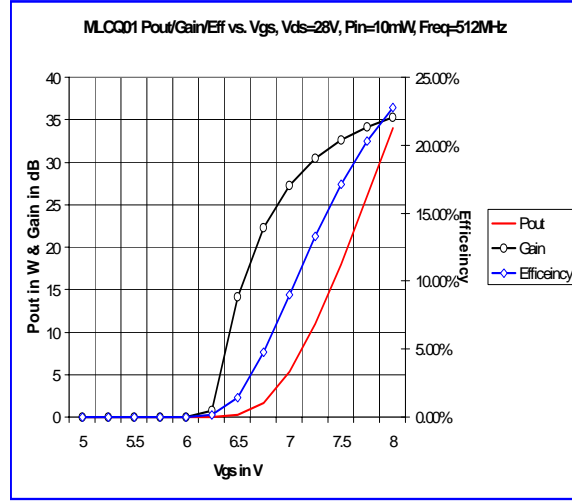
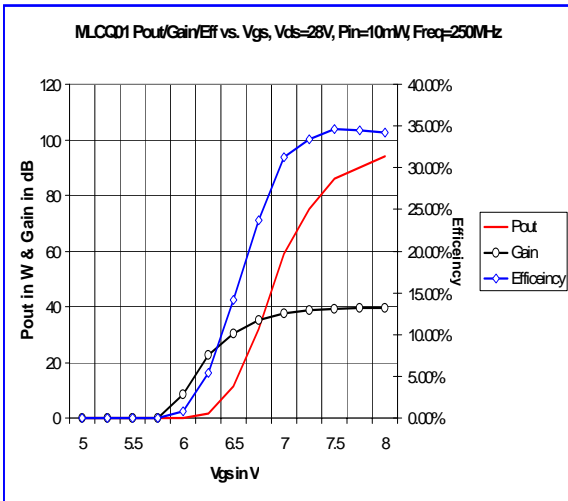
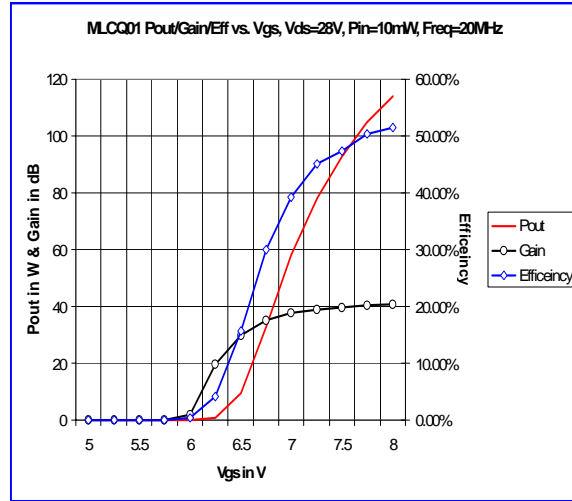
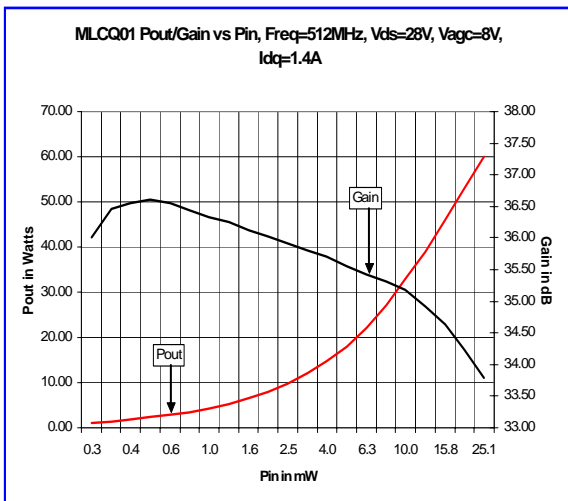
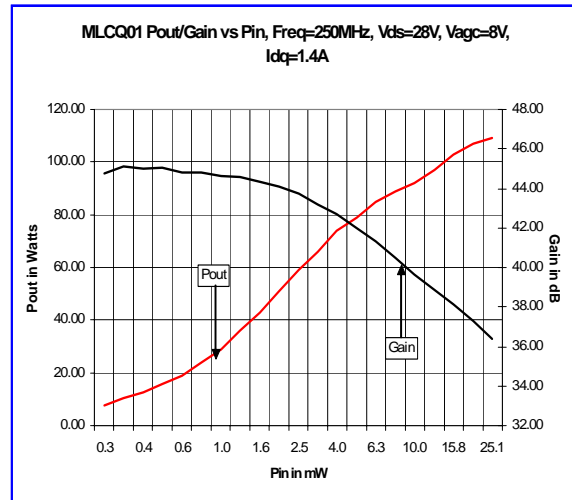
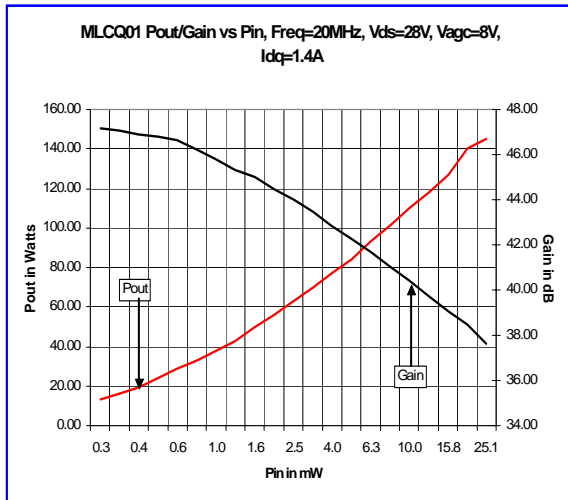
**Absolute Maximum Ratings (T=25 °C)**

Parameter	Symbol	Value	Unit
DC supply Voltage 1	VDD1	32.0	V
DC supply Voltage 2	VDD2		V
AGC Voltage	VAGC	8.5	V
AGC Current	VAGCI	1.00	mA
Input Power	Pin	0.015	W
Output Power	Pout	75.0	W
Operating Case Temp.	Tc	-40 to +85	°C
Storage Temperature	Tstg	-45 to +100	°C

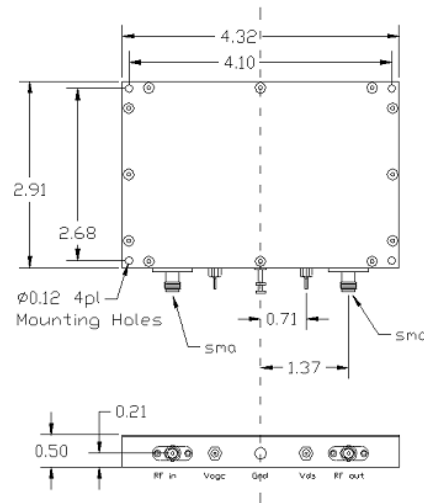
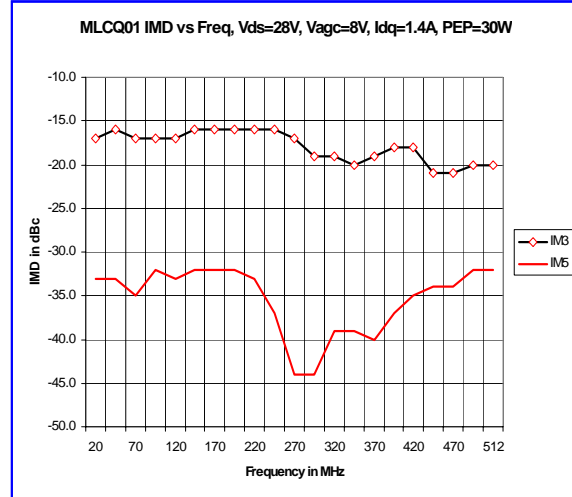
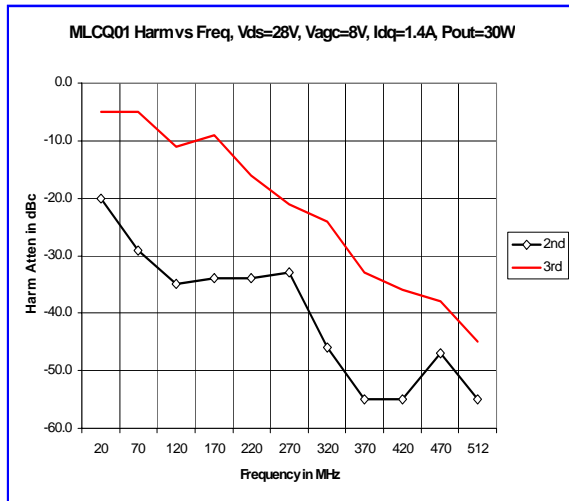
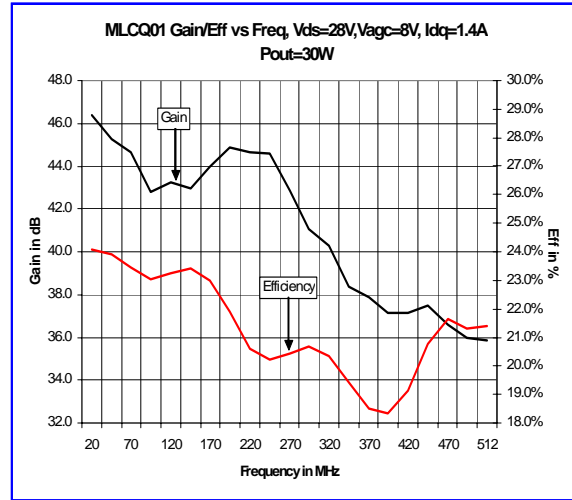
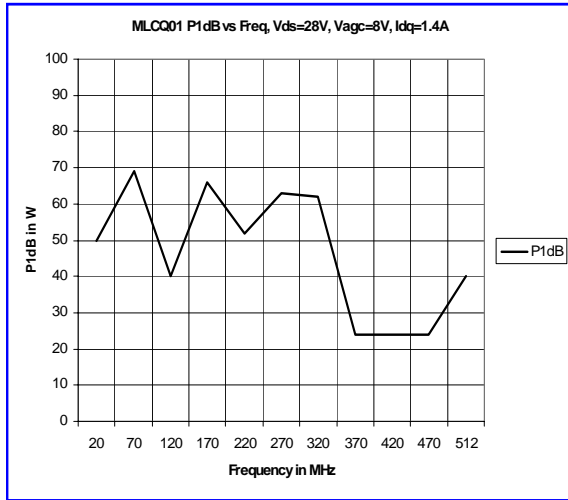
**Electrical Characteristics: ( T=25 °C Zs=Zl=50 ohms, Vdd = 28.0 Volts, Idq = 1.4 Amps )**

Parameter	Symbol	Min	Typical	Max	Unit	Test Conditions
Frequency Range	BW	20		512	Mhz	50 ohm load
Output Power	Po	30.0			Watts	Pin = 10.0 dbm Vagc = 8.0 V
Power Gain	PG	35.0			dB	Pout = 30.0 Watts Vagc = 8.0 V
Total Efficiency	$\eta$		20		%	Pout = 30.0 Watts
2nd Harmonics	dso		-30.00		dBc	Pout = 30.0 Watts @ Mhz
Intermod - 2 tone	Im3	-15.00			dBc	AvePwr= 15.0 Watts
Load Mismatch Tolerance	VSWR	10:1			Relative	All Phase Angles Pout = 30.0Watts
Vagc Voltage	VAGC			8.0	V	Pin = 10.0 dBm, Pout =30.0 W
Pulse Response Time	Pr			300.0	uS	Pulse source: Vagc

# MLCQ01



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POLYFET RF DEVICES

REVISION 10/22/2009

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