



**Power RF Amplifiers**

**Power = 100.0 Watts**

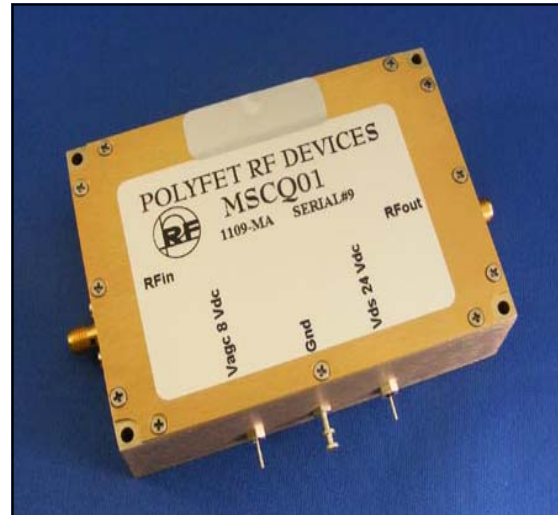
**Bandwidth = 30 to 512 Mhz**

**Gain = 8.0 dB Vdd = 26.0 Volts**

**50 ohms Input/Output Impedance**

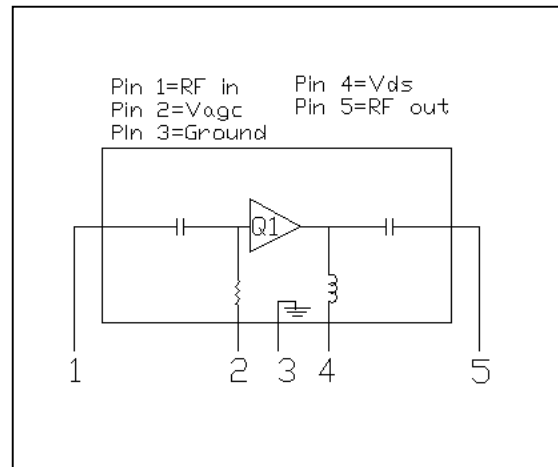
**Description**

The MSCQ01 is a 100 Watt, single stage amplifier module covering a bandwidth of 30-512 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.



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

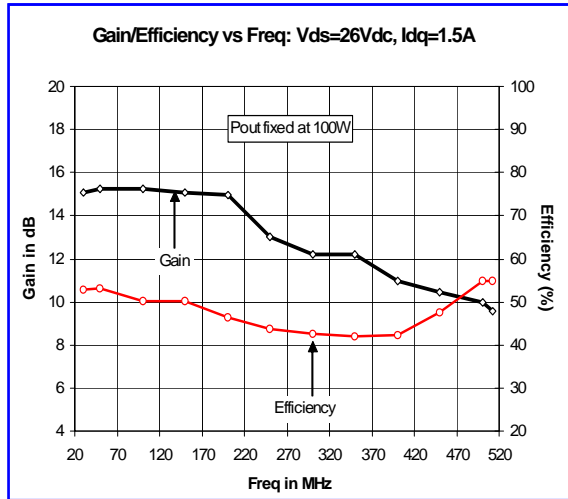
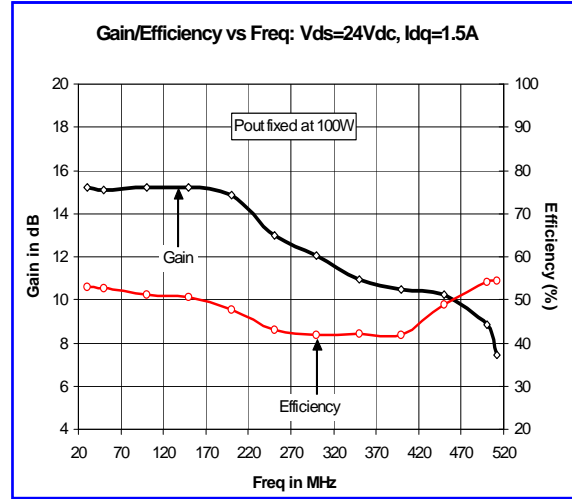
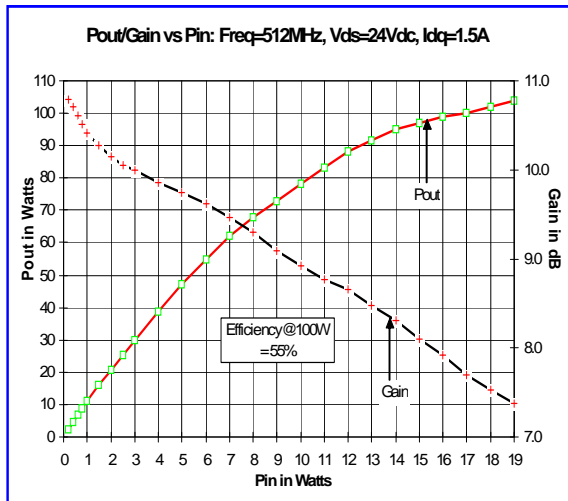
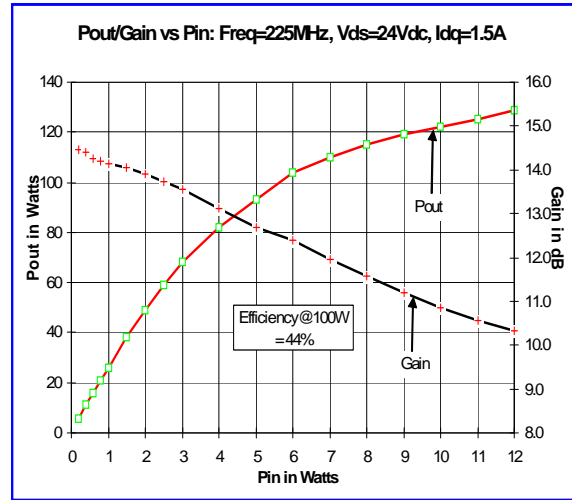
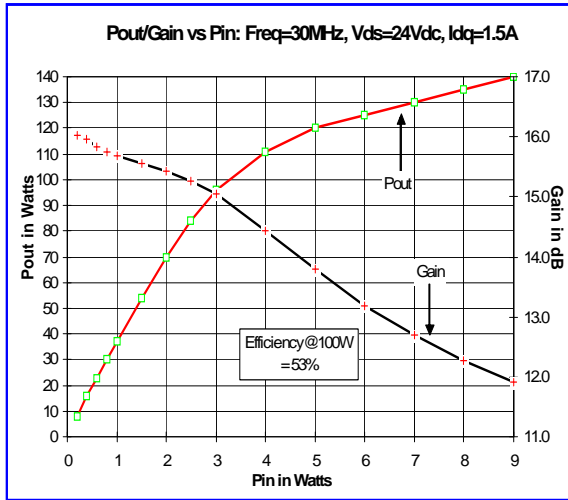
Parameter	Symbol	Value	Unit
DC supply Voltage 1	VDD1	32.0	V
DC supply Voltage 2	VDD2		V
AGC Voltage	VAGC	8.5	V
AGC Current	VAGCI	2.50	mA
Input Power	Pin	20.000	W
Output Power	Pout	150.0	W
Operating Case Temp.	Tc	-40 to +85	°C
Storage Temperature	Tstg	-55 to +100	°C



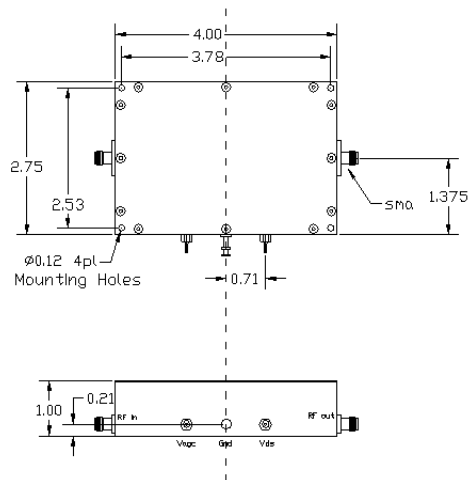
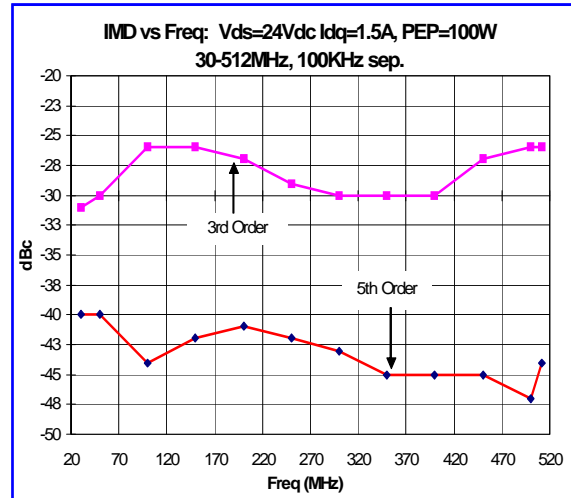
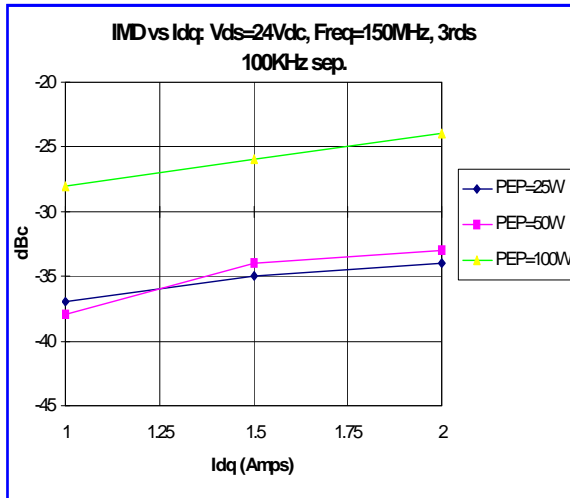
**Electrical Characteristics: ( T=25 °C Zs=Zl=50 ohms, Vdd = 26.0 Volts, Idq = 1.5 Amps )**

Parameter	Symbol	Min	Typical	Max	Unit	Test Conditions
Frequency Range	BW	30		512	Mhz	50 ohm load
Output Power	Po	100.0			Watts	Pin = 42.0 dbm Vagc = 8.0 V
Power Gain	PG	8.0			dB	Pout =100.0 Watts Vagc = 8.0 V
Total Efficiency	$\eta$		45		%	Pout =100.0 Watts
2nd Harmonics	dso				dBc	Pout = 0.0 Watts @ Mhz
Intermod - 2 tone	Im3	-25.00			dBc	AvePwr= 50.0 Watts
Load Mismatch Tolerance	VSWR	5:1			Relative	All Phase Angles Pout =100.0 Watts
Vagc Voltage	VAGC			8.0	V	Pin = 42.0 dBm, Pout = 100.0 W
Pulse Response Time	Pr			40.0	uS	Pulse source: RFin

# MSCQ01



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POLYFET RF DEVICES

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