

Linear RF Amplifier

- Frequency Response: 3- 90 MHz
- Useable Frequency Response 1-100 MHz
- Linear Power: 50 watts
- Saturated Power: 100 watts
- Gain: 45 dB



Description:

Designed for linear application in the 1 MHz to 100 MHz range. This amplifier utilizes RF Power MOSFET devices that provide high gain, wide dynamic range and an excellent 3rd order intercept point. Suggested applications: CW, multi-carrier, pulse, PM, AM & FM modulation.

Updated: 0609

ELECTRICAL SPECIFICATION @ VDD= +28VDC: Temp.=25°C, 50Ω System

Parameter	Symbol	Min	Typ	Max	Unit
Operating Frequency	BW	3		90	MHz
Power Output Saturated	P _{sat}		100		Watt
Power Output P-1dB	P _{-1dB}		50		Watt
Gain	G	43	45		dB
Small Signal Gain Flatness	ΔG		±1		dB
Input VSWR	S11			1.3:1	-
Harmonics @ 50watts 2 nd /3 rd	H		-40/-24	-35/-20	dBc
Inter-modulation Point 2 Tones, 5W per tone @ 50 & 51MHz	IP ₃		57		dBm
Spurious Signals	dBc		-70	-60	dBc
Operating Voltage	Vdc	24	28	30	Volt
Operating Current @ 50watts	Amps		7		Amp
Enable / Disable (shut down pin: gnd=off, open=on)	ms	Typical 1ms OFF, 10ms ON.			ms

MECHANICAL SPECIFICATION

Parameter	Description	Limits	Units
Dimensions	3.0" x 8.0" x 1.25"	Max	Inch
RF Connectors IN/OUT	SMA	-	-
DC Connectors	Filtered feed-through	-	-
Cooling	Heat-sink not included	-	-
Weight	1.25	Typ	lb

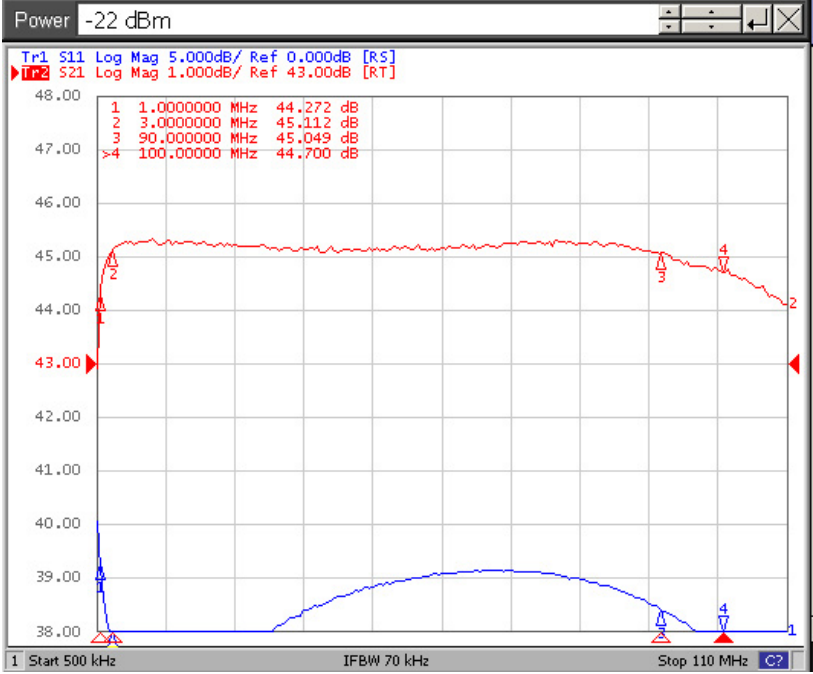
PROTECTIONS

Thermal Shutdown	Bi-metal switch set at 70°C with self reset.	Typ
Input Overdrive	Fold-back overdrive protection to 20dBm	Max
Load VSWR	4:1 up to 50 watts	Max
Reverse Polarity Protection	Included	-

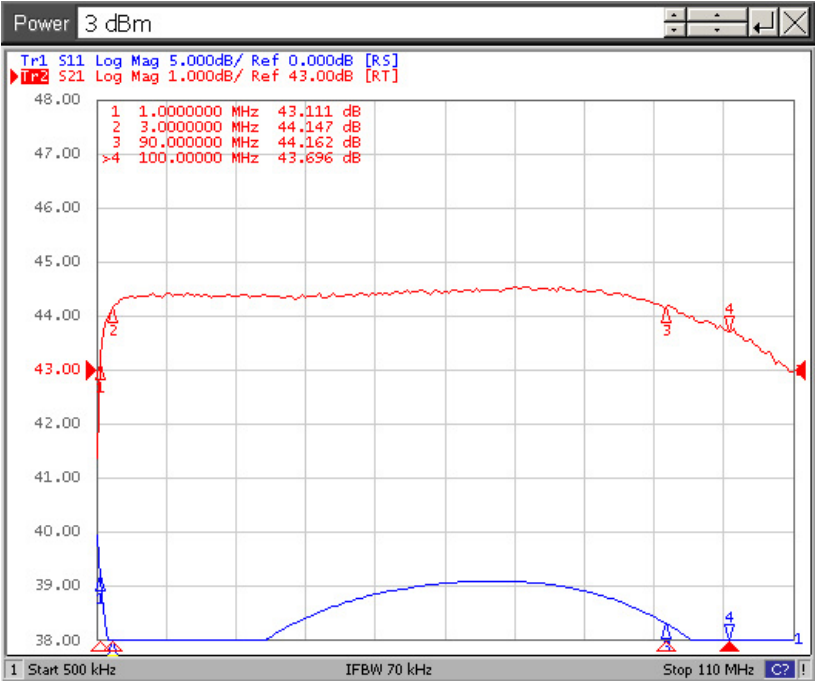
ENVIRONMENTAL CHARACTERISTICS

Parameter	Symbol	Min	Typ	Max	Units
Operating Case Temperature	T _c	0°C		+50°C	°C
Storage Temperature	T _{stg}	-30°C		+100°C	°C
Relative humidity non-condensation	RH	95			%

Response Curves



Small Signal Frequency Response Curve

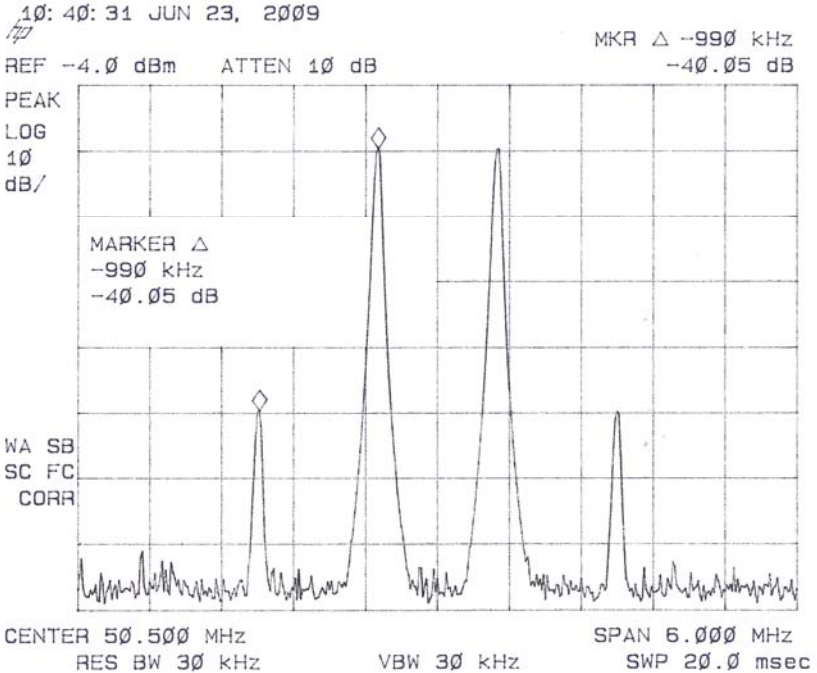


Frequency Response Curve @ 50 Watt Output

Response Curves

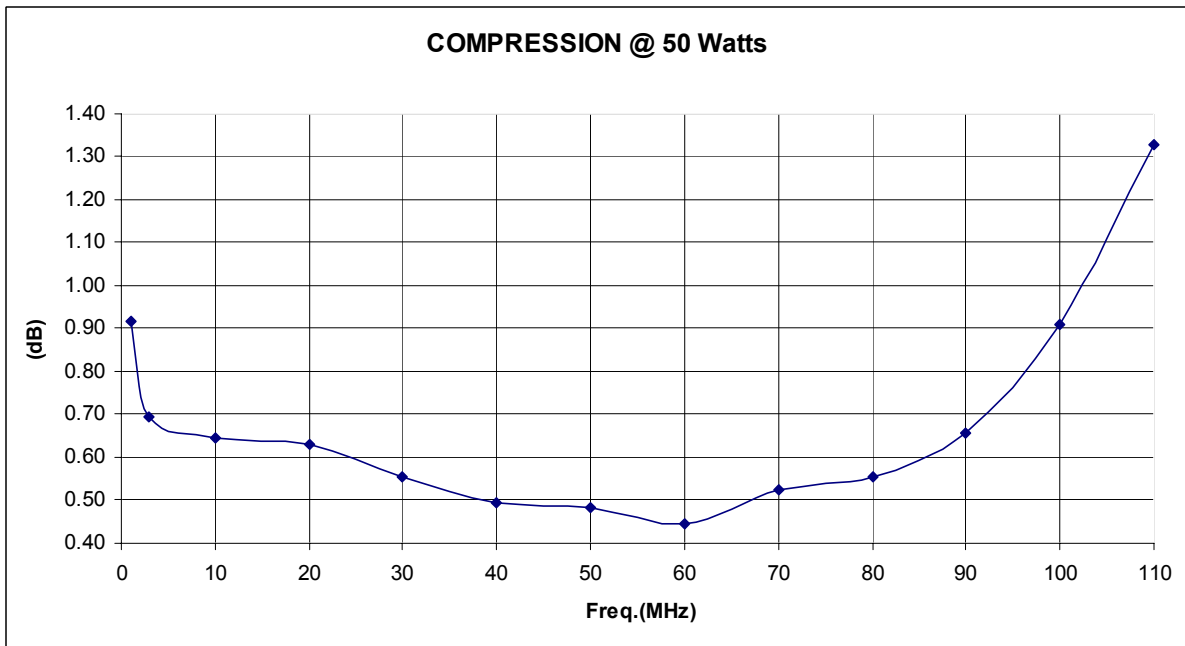
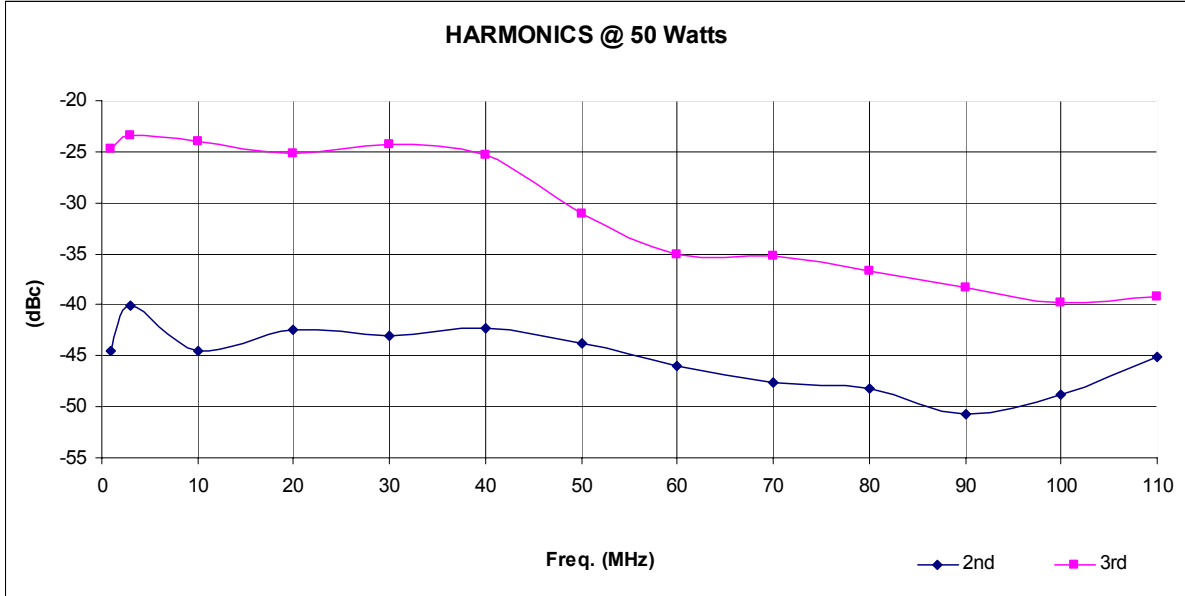


Frequency Response Curve @ 100 Watt Output



Two Tones 5 Watts Avg. Per Tone @ 50 & 51MHz IP3 = 57dBm

Response Curves



Outline Drawing

