

Linear RF Amplifier



- **Frequency Response: 112-137 MHz**
- **Linear Power: 80 watt**
- **Saturated Power: 100 watts**
- **Gain: 55 dB**

Description:
 Designed for linear application in the 112 to 137 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: multi-carrier, pulse, AM & FM modulation. (AM distortion < 2% @ 25 Watt Carrier, 90% Modulation.)

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

Parameter	Symbol	Min	Typ	Max	Unit
Operating Frequency	BW	112		137	MHz
Power Output Saturated	P _{sat}		100		Watt
Power Output P-1dB	P _{-1dB}	80	100		Watt
Gain	G	50	55		dB
Small Signal Gain Flatness	ΔG			±0.3	dB
Input VSWR	S11		1.2:1	1.3:1	-
Harmonics	H		-24	-20	dBc
Inter-modulation Point 2 Tones, 12.52W per tone @ 118 & 119 MHz	IP ₃		+60		dBm
Spurious Signals	dBc		-70	-60	dBc
Operating Voltage	Vdc	24	28	30	Volt
Operating Current	Amps		5.4	6.5	Amp
Enable / Disable (shut down pin: gnd=off, open=on)	ms	Typical 25ms OFF, 450ms ON.			ms

MECHANICAL SPECIFICATION

Parameter	Description	Limits	Units
Dimensions	5 x 3.35 x 1.40	Max	Inch
RF Connectors IN/OUT	SMA	-	-
DC Connectors	Filtered feed-through	-	-
Cooling	Heat-sink integrated. Fan required	-	-
Weight		Max	lb

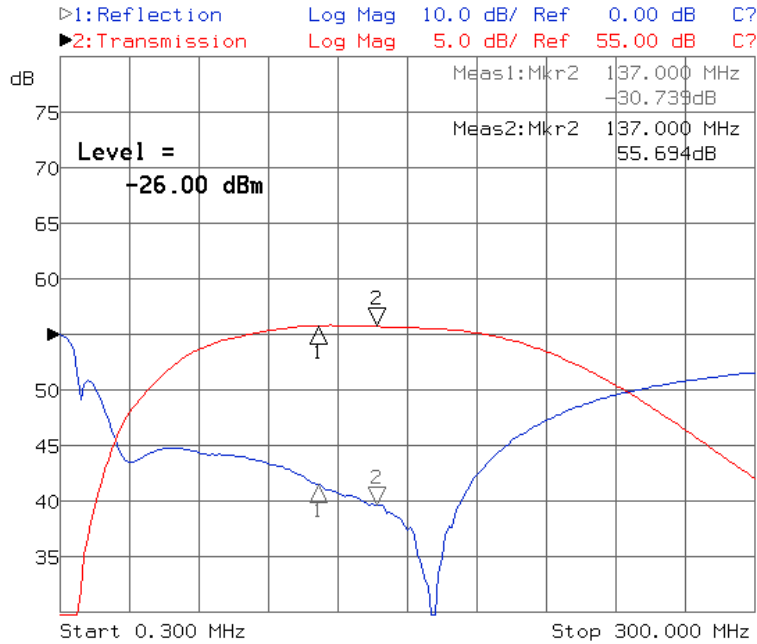
PROTECTIONS

Thermal Shutdown	Bi-metal switch set at 70°C with self reset.	Typ
Input Overdrive	-3dBm Max	Max
Load VSWR	4.0:1 up to 80 watts	Max
Reverse Polarity Protection	None	-

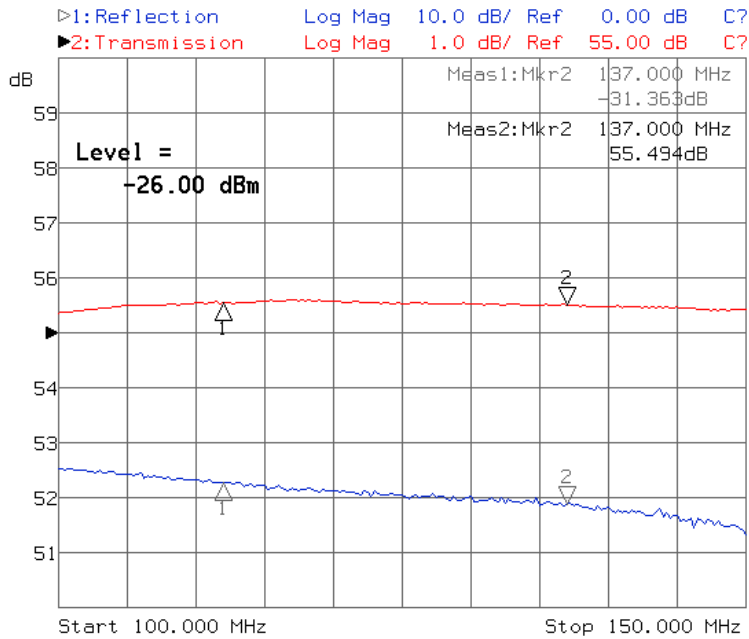
ENVIRONMENTAL CHARACTERISTICS

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 Curve

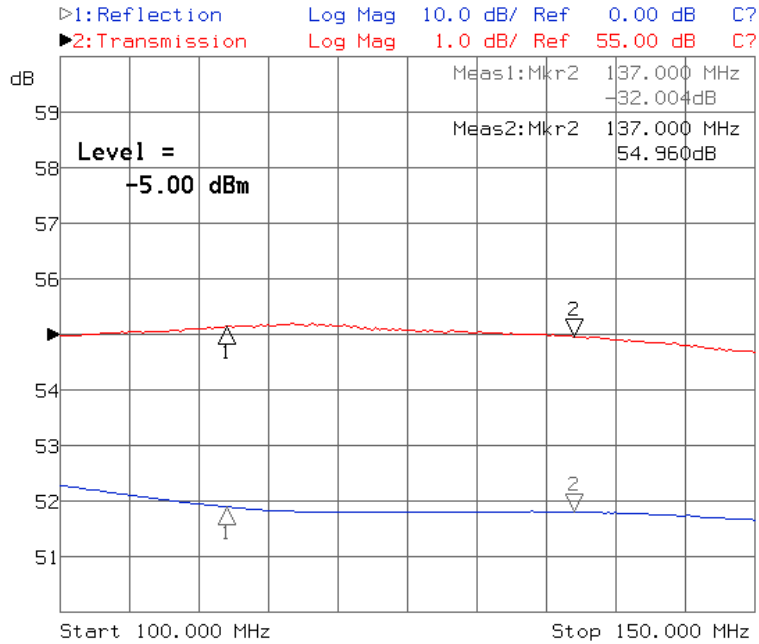


Small Signal Frequency Response Curve Broadband

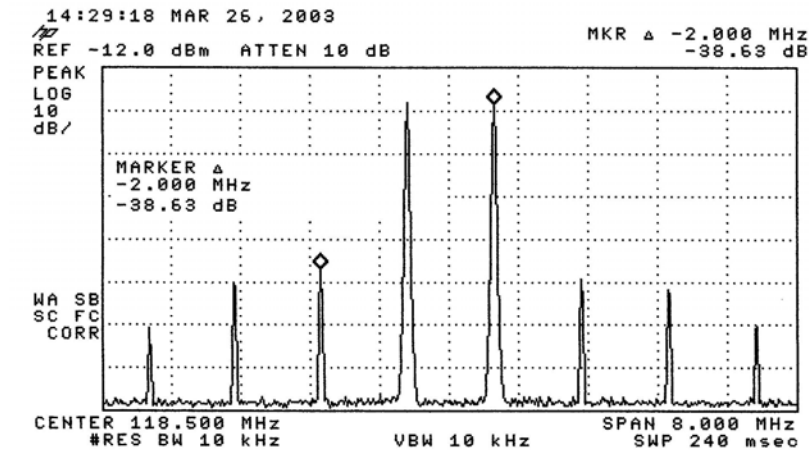


Small Signal Frequency Response Curve

Response Curve



Frequency Response Curve @ 100 Watts



Two Tones 12.5 Watts Avg. Per Tone @ 118 & 119MHz
IP3 = +60dBm

Outline Drawing

