

Linear RF Amplifier

- **Frequency Response: 225-400 MHz**
- **Linear Power: 15 watt**
- **Saturated Power: 20 watts**
- **Gain: 15 dB**



Description:

Designed for linear application in the 225 to 400 MHz range. This amplifier utilizes class AB 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.

ELECTRICAL SPECIFICATION @ VDD= +24VDC: Temp.=25°C, 50Ω System

0613

Parameter	Symbol	Min	Typ	Max	Unit
Operating Frequency	BW	225		400	MHz
Power Output Saturated	P _{sat}		20		Watt
Power Output P-1dB	P _{-1dB}	13	15		Watt
Gain	G	13	15		dB
Small Signal Gain Flatness	ΔG			±0.5	dB
Input VSWR	S11		1.4:1	1.5:1	-
Harmonics @ 10 Watts: 2 nd / 3 rd	H		-30	-20 / -23	dBc
Inter-modulation Point 2 Tones, 2W per tone @ 350 & 351MHz	IP ₃	+52	+54		dBm
Spurious Signals	dBc		-70	-60	dBc
Operating Voltage	Vdc	22	24	28	Volt
Operating Current @ 10Watts	Amps		1.6	2	Amp
Enable / Disable (shut down pin: gnd=off, open=on)	ms	Not Included			ms

MECHANICAL SPECIFICATION

Parameter	Description	Limits	Units
Dimensions	2.2 x 4 x 0.86	Max	Inch
RF Connectors IN/OUT	SMA	-	-
DC Connectors	Filtered feed-through	-	-
Cooling	Heat-sink not included	-	-
Weight	1	Max	lb

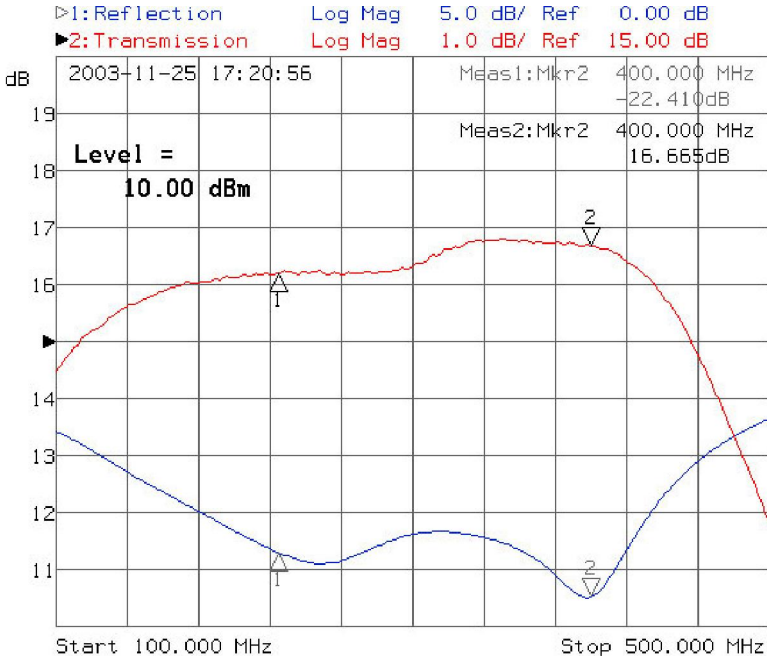
PROTECTIONS

Thermal Shutdown	Bi-metal switch set at 80°C with self reset.	Typ
Input Overdrive	+28 dBm Max	Max
Load VSWR	6.0:1 up to 10 Watts	Max
Reverse Polarity Protection	None	-

ENVIRONMENTAL CHARACTERISTICS

Parameter	Symbol	Min	Typ	Max	Units
Operating Case Temperature	T _c	0°C		+70°C	°C
Storage Temperature	T _{stg}	-30°C		+100°C	°C
Relative humidity non-condensation	RH	95			%

Response Curve



Small Signal Frequency Response Curve

VDS = 24vdc, IDQ = 1.0A

Frequency MHz	Pin dBm	Pout Watts	Current Amps	Harmonics		P-1dB Watts
				2nd	3rd	
225	+24.3	10	1.6	-23	-35	16.0
250	+24.4	10	1.6	-23	-35	20.0
275	+24.3	10	1.6	-26	-35	19.0
300	+24.0	10	1.6	-30	-29	16.0
325	+23.9	10	1.6	-32	-26	15.7
350	+23.9	10	1.6	-36	-25	19.8
375	+24.0	10	1.6	-41	-32	16.0
400	+24.7	10	1.6	-43	-36	14.0
Two Tone Test, 2 watts each tone @ 350 & 351MHz				3rd = -38dbc		
				IP3 = +52		

Outline Drawing

