



DESCRIPTION

The P400-VHF-H-16 is an integrated linear amplifier designed for the television integrator. Providing a minimum of 350W Pk linear power, this is the perfect amplifier for any high band VHF transmitter. Featuring quadrature input and output combining, this unit is isolated from most external circuit problems. This amplifier uses gold-metallized MOSFETs.

- No RF assembly or circuit tuning.
- 400 watts of linear output power
- Combined video and aural at full rated power
- 16dB typical gain at channel 13
- Modular construction for ease of integration
- Operating unit at 32.0V DC will provide an approximate 10% improvement in linear power and P1dB

TECHNICAL SUMMARY

Frequency Range:	170 to 230 MHz
P1dB:	400 Watts CW
Class:	AB
Supply Voltage:	28 V
Gain:	16 dB
Efficiency:	45 %
Temperature Range:	0 to +70 °C
Max VSWR:	5 : 1

ELECTRICAL SPECIFICATIONS

Parameter	Min	Typ	Max	Units	Notes
Frequency	170		230	MHz	
P1dB	55	56		W, CW	+56dBm minimum at 32V, DC operation
Linear Power Out	350			W, Pk	
IMD3	-40			dBc	For 2 tones, 1MHz spacing, 350W PEP
Power Input		6	11	W, CW	
Gain	15	16		dB	
Vsupply		28		V, DC	
Drain Current		17		A, DC	
Input VSWR		1.2:1	1.5:1		
Insertion Phase Variation		±5		°	Unit to unit
Gain Variation		±1		dB	Unit to unit
F2 Second Harmonic		-40		dBc	
F3 Third Harmonic		-23		dBc	
Operating Temperature	0		+70	°C	
Physical Dimensions					6.5" x 4.0" x 1.5"

All specifications valid for 50 Ω output load, $V_{sup} = +28VDC$, $I_{dq} = 1.6A$

ABSOLUTE MAXIMUM RATINGS

Parameter	Value	Units	Notes
Maximum Operating Voltage	34	V, DC	
Stable Operating Voltage	26 to 32	V, DC	
Maximum Bias Current	3.0	A, DC	
Maximum Drain Current	24	A, DC	
Load Mismatch Survival	5:1		
Storage Temperature	-40 to +105	°C	
Max Operating Baseplate Temperature	+70	°C	

FEATURES

- Temperature compensated bias
- Temperature controller - analog temperature output
- High temperature alarm with automatic PA disable
- High temperature alarm output
- Amplifier disable
- Current sense, each transistor
- Connectorized power and I/O