



DESCRIPTION

The PA5-UHF-16 is a two stage ultra linear Class A integrated amplifier designed for the television integrator. Providing a minimum of 3W pk ultra linear power and as much as 15W of peak power, this pallet is the perfect pre-amplifier for any broadband UHF transmitter. Featuring quadrature input and output combining, the amplifier is isolated from most external circuit problems.

- No RF assembly or circuit tuning
- 15 watts of peak output power
- 16dB typical gain at channel 78
- Combined video and aural at full rated power
- Modular construction for ease of integration
- Proper heatsinking required for operation

TECHNICAL SUMMARY

Frequency Range:	470 to 860 MHz
P1dB:	20 Watts CW
Class:	A
Supply Voltage:	28 V
Gain:	16 dB
Efficiency:	10 %
Temperature Range:	-20 to +60 °C
Max VSWR:	10 : 1

ELECTRICAL SPECIFICATIONS

Parameter	Min	Typ	Max	Units	Notes
Frequency	470		860	MHz	
P1dB	20			W, CW	
Linear Power Out		5		W	
IMD3		-45		dBc	For 2 tones, 4.5MHz spacing, 5W PEP
Power Input		125		mW, CW	For 5W output
Gain	16			dB	For 5W output, ± 1.5 dB
Vsupply	24		32	V, DC	
Drain Current		1.8		A, DC	
Input VSWR			1.5:1		
Insertion Phase Variation		± 5		$^{\circ}$	Unit to unit
Gain Variation		± 1		dB	Unit to unit
F2 Second Harmonic		-50	-25	dBc	
F3 Third Harmonic		-50	-25	dBc	
Operating Temperature	-20		+60	$^{\circ}$ C	
Physical Dimensions					2.5" x 3.8" x 1.0"

All specifications valid for 50 Ω output load, $V_{sup} = +28$ VDC, $I_{dq} = 1.75$ A

ABSOLUTE MAXIMUM RATINGS

Parameter	Value	Units	Notes
Maximum Operating Voltage	32	V, DC	
Stable Operating Voltage	24 to 32	V, DC	
Maximum Bias Current, Q101	2.5	A, DC	Factory set to 1.75A
Maximum Drain Current	2.5	A, DC	
Load Mismatch Survival	10:1		
Storage Temperature	-40 to +105	$^{\circ}$ C	
Max Operating Baseplate Temperature	+60	$^{\circ}$ C	

FEATURES

- Amplifier disable
- Current sense
- Connectorized power