



DESCRIPTION

The PA25-UHF-40 is a three stage ultra-linear class A integrated amplifier designed for the television integrator. This fourth generation LDMOS-powered amplifier is designed to satisfy both digital and analog applications. Whether your application requires up to 50W of output for use in LPTV or 1 to 2 W CW for DVB or ATSC driver applications, this family of driver amplifiers is the perfect fit. This pallet is also available in 25 and 12 dB gain versions.

- No RF assembly or circuit tuning
- 25 watts of linear output power
- 40dB typical gain at channel 69
- Combined video and aural at full rated power
- Proper heatsinking required

TECHNICAL SUMMARY

Frequency Range:	470 to 860 MHz
P1dB:	70 Watts CW
Class:	A
Supply Voltage:	32 V
Gain:	40 dB
Efficiency:	10 %
Temperature Range:	-18 to +65 °C
Max VSWR:	10 : 1

ELECTRICAL SPECIFICATIONS

Parameter	Min	Typ	Max	Units	Notes
Frequency	470		860	MHz	
P1dB	60	71	85	W, CW	
Linear Power Out	16	30		W	
IMD3		-45		dBc	For 2 tones, 1MHz spacing, 10W PEP
Power Input		1		W, CW	
Gain	39	40.5		dB	
Vsupply		32		V, DC	
Drain Current		4.5		A, DC	
Input VSWR		1.2:1	1.5:1		
Output VSWR			1.5:1		
Gain Variation		±1.5		dB	Unit to unit
F2 Second Harmonic		-30		dBc	
F3 Third Harmonic		-20		dBc	
Operating Temperature	-18		+65	°C	
Physical Dimensions					2.5" x 6.0" x 0.7"

All specifications valid for 50 Ω output load, $V_{sup} = +32VDC$, $I_{dq} = 4.5A$

ABSOLUTE MAXIMUM RATINGS

Parameter	Value	Units	Notes
Maximum Operating Voltage	34	V, DC	
Stable Operating Voltage	28 to 32	V, DC	
Maximum Bias Current, Q1	0.5	A, DC	Factory set to 0.25A
Maximum Bias Current, Q2	0.5	A, DC	Factory set to 0.50A
Maximum Bias Current, Q3, Q4	2.0	A, DC	Factory set to 2.0A
Maximum Drain Current	5.0	A, DC	
Load Mismatch Survival	10:1		
Storage Temperature	-40 to +105	°C	
Max Operating Baseplate Temperature	+70	°C	

FEATURES

- Current sense, each transistor
- Connectorized power and I/O
- TTL compatible disable