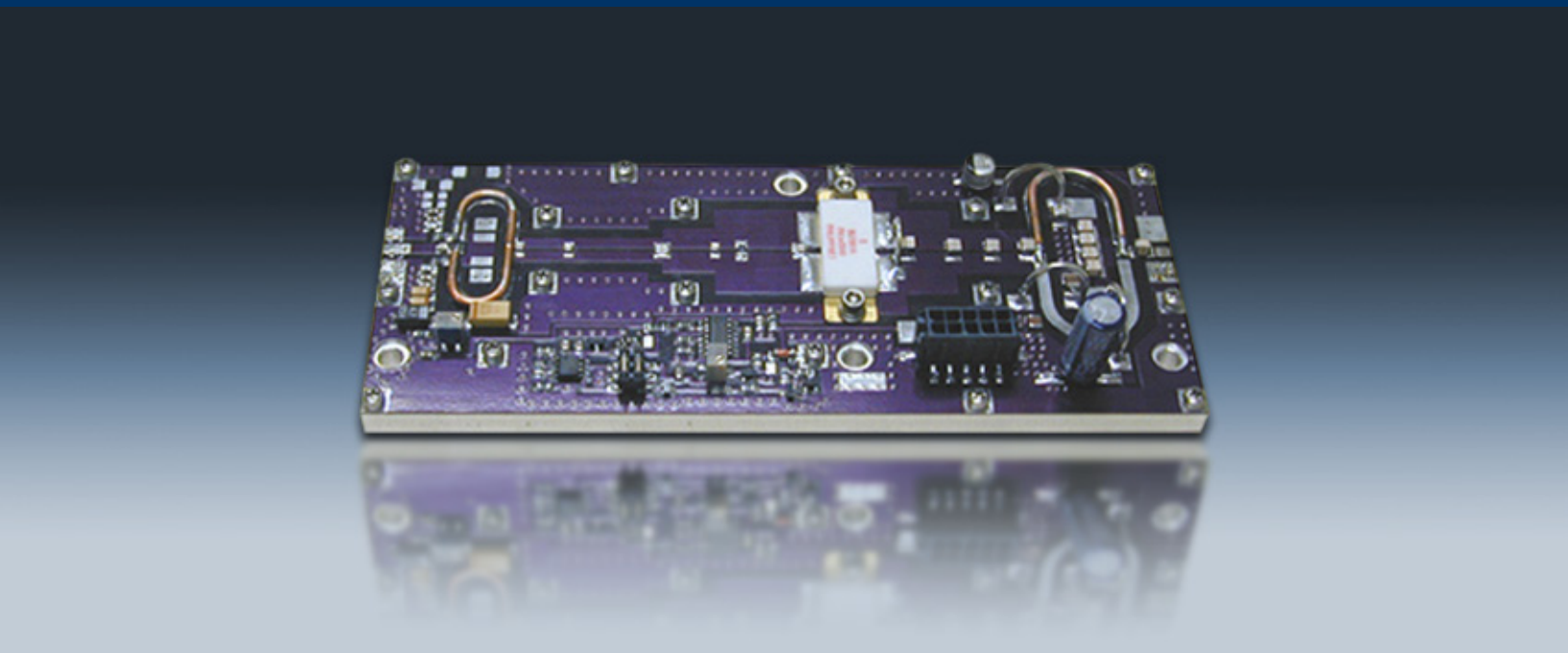
PowerVision

P50-UHF-12

50W UHF TV Pallet Amplifier



DESCRIPTION

The P50-UHF-12 is a linear amplifier designed for the television integrator. Providing a minimum of 50W Pk Sync linear power, this is the perfect IPA or output stage for any broadband UHF transmitter. Featuring gold-metallized LDMOS technology and multistage input and output match, this amplifier offers unparalleled performance.

- No RF assembly or circuit tuning
- 100 watts of pk sync output power
- Combined video and aural at full rated power
- 12dB typical gain at channel 69
- Modular construction for ease of integration

TECHNICAL SUMMARY	
Frequency Range:	470 to 860 MHz
P1dB:	150 Watts CW
Class:	AB
Supply Voltage:	32 V
Gain:	12 dB
Efficiency:	25 %
Temperature Range:	0 to +70 °C
Max VSWR:	3 : 1

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Technical Specifications

ELECTRICAL SPECIFICATIONS

Parameter	Min	Typ	Max	Units	Notes
Frequency	470		860	MHz	
P1dB	49	52		dBm	
Linear Power Out	50			W, Pk	
IMD3	-40			dBc	For 2 tones, 4.5MHz spacing, 50W PEP
Power Input		5.0	10.0	W, CW	
Gain	11	12		dB	
Vsupply	28	32	34	V, DC	
Drain Current		4:1		A, DC	50W Pk Sync
Input VSWR		3:1			
Insertion Phase Variation		±5		°	Unit to unit
Gain Variation		±1		dB	Unit to unit
F2 Second Harmonic		-20		dBc	
F3 Third Harmonic		-35		dBc	
Operating Temperature	0		+70	°C	
Physical Dimensions				6.0” x 2.4” x 1.0”	

All specifications valid for 50 Ω output load, V_{sup} = +32VDC, I_{dq} = 1.0A

ABSOLUTE MAXIMUM RATINGS

Parameter	Value	Units	Notes
Maximum Operating Voltage	34	V, DC	
Stable Operating Voltage	28 to 32	V, DC	
Maximum Bias Current, Q100	3.0	A, DC	
Maximum Input Power	41.0	dBm	
Maximum Drain Current	10.0	A, DC	
Load Mismatch Survival	3:1		
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 selectable automatic PA disable
- Amplifier disable
- Current sense
- Connectorized power and I/O

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