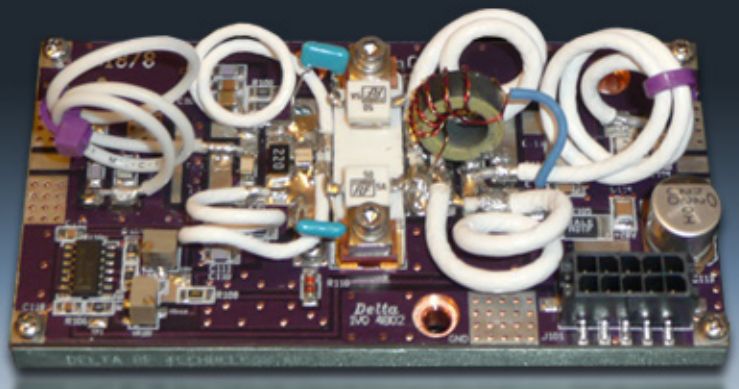
PowerVision

PA40-VHF-H-18

40W VHF bIII TV Pallet Amplifier / Driver



DESCRIPTION

The PA40-VHF-H-18 is a true Class A amplifier designed specifically for analog and digital television applications where a high power driver or IPA is required to drive a tube or high power solid state PA stages. Utilizing gold-metallized MOSFET technology, this PA offers unmatched performance and reliability. Capable of delivering in excess of 150W ultra linear VHF band III, this amplifier delivers optimum performance from microwatts to just under 50W Pk Sync power, or 25W average power for digital applications before any pre-correction is applied.

- No RF assembly or circuit tuning
- 150 watts Pk Sync analog / 25W CW digital
- 17.5dB typical gain at channel 13
- Modular construction for ease of integration
- Proper heatsinking is required

TECHNICAL SUMMARY	
Frequency Range:	160 to 240 MHz
P1dB:	150 Watts CW
Class:	A
Supply Voltage:	24 V
Gain:	18 dB
Efficiency:	15 %
Temperature Range:	-20 to +70 °C
Max VSWR:	5 : 1

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Technical Specifications

ELECTRICAL SPECIFICATIONS

Parameter	Min	Typ	Max	Units	Notes
Frequency	160		240	MHz	
P1dB	125	150		W, CW	
Analog Power Out		40		W, Pk	
Digital Power Out		50		W, CW	
IMD3	-45			dBc	For 2 tones, 1MHz spacing, 40W PEP
Power Input		600		mW, CW	
Gain	17	18		dB	
Vsupply	22	24	26	V, DC	
Gain Compression		0.1	0.2	dB	40W CW
Drain Current		8	12	A, DC	
Input VSWR		1.2:1	1.5:1		
Insertion Phase Variation		±5		°	Unit to unit
F2, F3 Second Harmonic		-46	-40	dBc	40W
Sync Compression			5	%	40W Pk Sync
Differential Gain			3	%	40W Pk Sync
Operating Temperature	-20		+70	°C	
Physical Dimensions				2.0” x 4.0” x 1.0”	

All specifications valid for 50 Ω output load, V_{sup} = +24VDC, I_{dq} = 8.0A

ABSOLUTE MAXIMUM RATINGS

Parameter	Value	Units	Notes
Maximum Operating Voltage	28	V, DC	
Stable Operating Voltage	22 to 26	V, DC	
Maximum Bias Current	8.0	A, DC	
Maximum Drain Current	12	A, DC	
Load Mismatch Survival	10:1		
Storage Temperature	-65 to +150	°C	
Max Operating Baseplate Temperature	+65	°C	

FEATURES

- Temperature compensated bias
- Amplifier disable
- Current sense
- Connectorized power and I/O

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