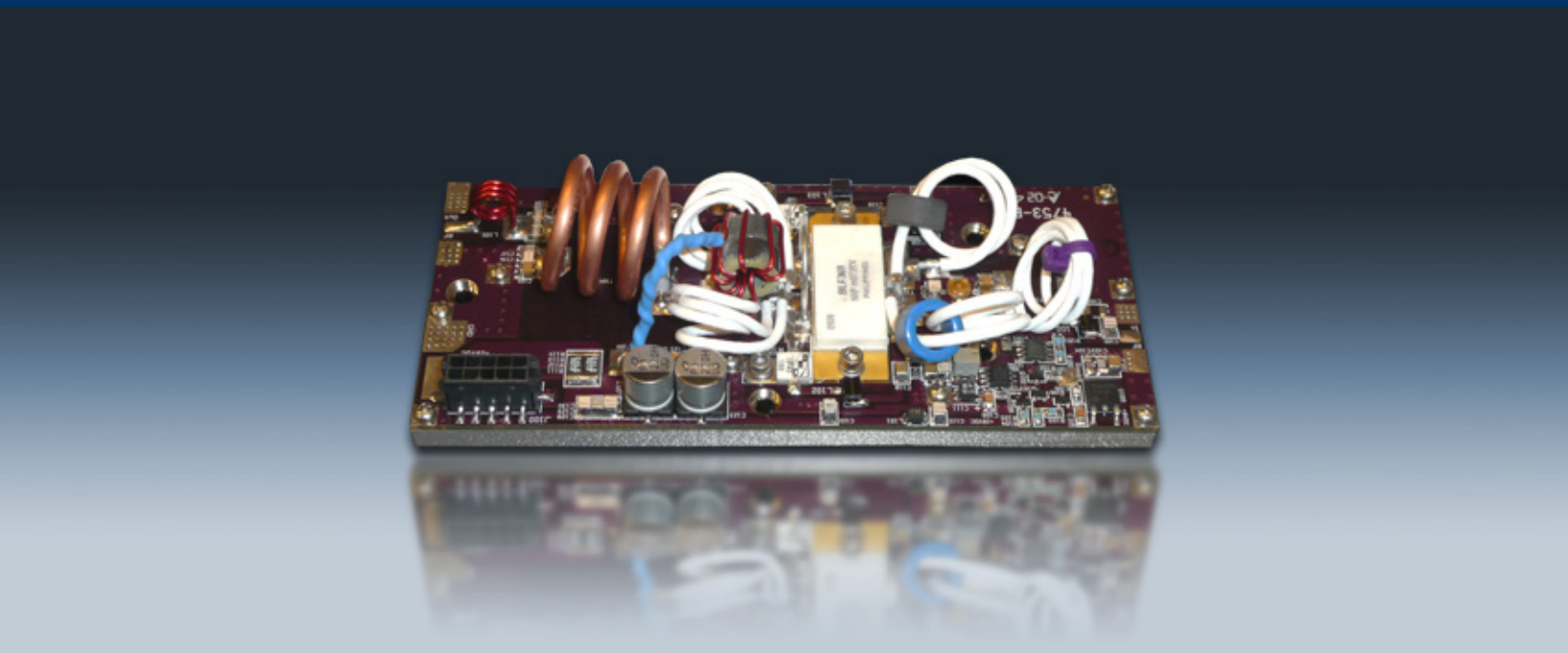
PowerVision

P500-FM-18

500W FM Broadcast Amplifier



DESCRIPTION

The P500-FM-18 is a next generation pallet amplifier designed specifically for FM commercial radio. Using a single gold-metallized LDMOS transistor, this Class C amplifier offers excellent efficiency, reliability and value. Due to the high power density of this amplifier, a copper baseplate is used to allow extended temperature operation. An on-board thermostat protects the amplifier against thermal faults.

TECHNICAL SUMMARY	
Frequency Range:	86 to 108 MHz
P1dB:	500 Watts CW
Class:	C
Supply Voltage:	32 V
Gain:	18 dB
Efficiency:	80 %
Temperature Range:	-20 to +65 °C
Max VSWR:	3 : 1

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Technical Specifications

ELECTRICAL SPECIFICATIONS

Parameter	Min	Typ	Max	Units	Notes
Frequency	87		108	MHz	
P1dB		500		W, CW	
Power Input		7		W, CW	
Gain	17	18.5		dB	
Vsupply		28		V, DC	
Drain Current		22		A, DC	
Input VSWR			1.5:1		
Insertion Phase Variation		±5		°	Unit to unit
Gain Variation		±1		dB	Unit to unit
F2 Second Harmonic		-30		dBc	
F3 Third Harmonic		-15		dBc	
Operating Temperature	-20		+65	°C	
Physical Dimensions				5.8” x 2.5” x 1.5”	

All specifications valid for 50 Ω output load, V_{sup} = +28VDC, I_{dq} = 0A

ABSOLUTE MAXIMUM RATINGS

Parameter	Value	Units	Notes
Maximum Operating Voltage	32	V, DC	
Maximum Bias Current, Q100	1	A, DC	
Maximum Drain Current	30	A, DC	
Load Mismatch Survival	3:1		
Storage Temperature	-20 to +85	°C	
Max Operating Baseplate Temperature	+65	°C	

FEATURES

- Temperature controller - analog temperature output
- High temperature alarm with automatic PA disable
- Amplifier disable
- Current sense
- Connectorized power

+1.778.371.4580 info@powervision.ca www.powervision.ca