



DESCRIPTION

The P1000-FM-18 pallet amplifier uses the latest generation gold-metallized LDMOS transistors to offer an incredible balance of power density, efficiency and value. Offering over 1100W of power capability, this pallet will allow the system integrator to build an inexpensive, compact 1kW FM transmitter by adding only a directional coupler and output filter.

The amplifier must be mounted to a heatsink with adequate airflow for proper operation.

A standard heatsink version is available along with a module which adds a directional coupler, input power protection, lowpass filter, and thermal trip.

TECHNICAL SUMMARY

Frequency Range:	86 to 108 MHz
Pout:	1100 Watts CW
Class:	C
Supply Voltage:	28 V
Gain:	18 dB
Efficiency:	75 %
Temperature Range:	-20 to +60 °C
Max VSWR:	3 : 1

ELECTRICAL SPECIFICATIONS

Parameter	Min	Typ	Max	Units	Notes
Frequency	86		108	MHz	
Pout	1000	1100		W, CW	
Psat			1250	W, CW	Amplifier is rated for this power into 1:1 load only
Power Input		18		W, CW	1100W CW output
Gain	17	18		dB	1100W CW
Vsupply	26	28	30	V, DC	
Drain Current		50		A, DC	1100W CW
Efficiency	72	78		%	1100W CW
Input VSWR			1.5:1		
Insertion Phase Variation		±5		°	Unit to unit
Gain Variation		±1.5		dB	Unit to unit
F2 Second Harmonic		-20		dBc	
F3 Third Harmonic		-15		dBc	
Operating Temperature	-20		+60	°C	1000W CW
Physical Dimensions					5.0" x 7.9" 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	30	V, DC	
Stable Operating Voltage	26 to 30	V, DC	
Maximum Bias Current, Q100, Q101	0.5	A, DC	
Maximum Drain Current	60	A, DC	
Load Mismatch Survival	3:1		Current limited to 60A, DC
Storage Temperature	-20 to +85	°C	
Max Operating Baseplate Temperature	+60	°C	

FEATURES

- Temperature controller - analog temperature output
- High temperature PA power reduction
- Current sense, each transistor
- Connectorized power and I/O