



DESCRIPTION

The P50-FM-16 is an LDMOS-based integrated amplifier building block which requires only power, input and output connections. This highly cost-effective amplifier has been designed for FM radio transmitter integrators and offers a great deal of flexibility. Utilizing new plastic-based LDMOS transistor technology, high performance at a reasonable cost is achieved. This amplifier is suitable for use as a driver or output stage for LPFM applications.

- No RF assembly or circuit tuning
- 60 watts typical output power
- 16dB typical gain at 88-108MHz
- Amplifier disable

TECHNICAL SUMMARY

Frequency Range:	88 to 108 MHz
P1dB:	60 Watts CW
Class:	C
Supply Voltage:	12.5 V
Gain:	16 dB
Efficiency:	70 %
Temperature Range:	0 to +60 °C
Max VSWR:	3 : 1

ELECTRICAL SPECIFICATIONS

Parameter	Min	Typ	Max	Units	Notes
Frequency	88		108	MHz	
P1dB	60			W, CW	
Power Input		1.5	2.5	W, CW	
Gain	15	16		dB	
Vsupply	12	12.5	15	V, DC	
Drain Current		5.7		A, DC	
Input VSWR		1.3:1	1.5:1		
Insertion Phase Variation		±5		°	Unit to unit
Gain Variation		±1		dB	Unit to unit
F2 Second Harmonic		-55		dBc	
F3 Third Harmonic		-55		dBc	
Operating Temperature	0		+60	°C	
Physical Dimensions				2.0" x 4.0" x 0.8"	

All specifications valid for 50 Ω output load, $V_{sup} = +12.5VDC$, $I_{dq} = 0.1A$

ABSOLUTE MAXIMUM RATINGS

Parameter	Value	Units	Notes
Maximum Operating Voltage	15.6	V, DC	
Stable Operating Voltage	12 to 15	V, DC	
Maximum Bias Current, Q100	0.5	A, DC	Factory set to 0.1A
Maximum Drain Current	8	A, DC	
Load Mismatch Survival	5:1		
Storage Temperature	-40 to +105	°C	
Max Operating Baseplate Temperature	+65	°C	

FEATURES

- Amplifier disable
- Current sense, each transistor
- Connectorized power