

The RF Line

PCS Band

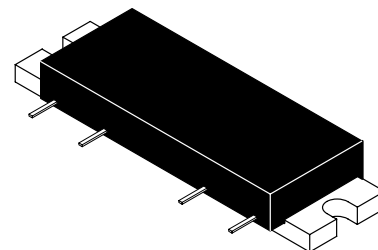
RF Linear LDMOS Amplifier

Designed for Class AB amplifier applications in 50 ohm systems operating in the PCS frequency band. A silicon FET design provides outstanding linearity and gain. In addition, the excellent group delay and phase linearity characteristics are ideal for digital modulation systems, such as TDMA and CDMA.

- Typical CDMA Performance: 1960 MHz, 28 Volts IS-95 CDMA Pilot, Sync, Paging, Traffic Codes 8 Through 13
- Adjacent Channel Power: -51 dBc @ 30 dBm, 885 kHz Channel Spacing
- Power Gain: 24 dB Min (@ f = 1960 MHz)
- Excellent Phase Linearity and Group Delay Characteristics
- Ideal for Feedforward Base Station Applications

MHPA19010

1930–1990 MHz
10 W, 24 dB
RF HIGH POWER LDMOS AMPLIFIER



CASE 301AP-02, STYLE 3

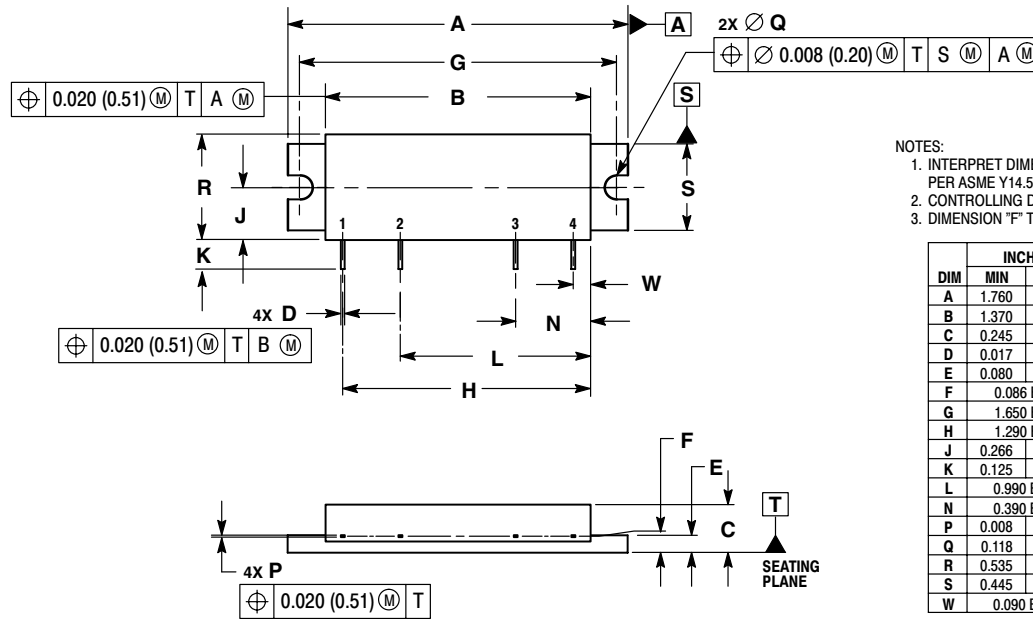
ABSOLUTE MAXIMUM RATINGS (T_C = 25°C unless otherwise noted)

Rating	Symbol	Value	Unit
DC Supply Voltage	V _{DD}	30	Vdc
RF Input Power (Single Carrier CW)	P _{in}	+20	dBm
Storage Temperature Range	T _{stg}	-40 to +100	°C
Operating Case Temperature Range	T _C	-20 to +100	°C

ELECTRICAL CHARACTERISTICS (V_{DD} = 28 Vdc, V_{BIAS} ≅ 8 V Set for Supply Current of 590 mA, T_C = 25°C, 50 Ω System)

Characteristic	Symbol	Min	Typ	Max	Unit
Supply Current	I _{DD}	—	590	—	mA
Power Gain (f = 1960 MHz)	G _p	24	25	—	dB
Gain Flatness (f = 1930–1990 MHz)	G _F	—	0.2	0.6	dB
Power Output @ 1 dB Comp. (f = 1960 MHz)	P _{1dB}	—	41.5	—	dBm
Input VSWR (f = 1930–1990 MHz)	VSWR _{in}	—	1.5:1	2:1	
Noise Figure (f = 1960 MHz)	NF	—	8	10	dB
Adjacent Channel Power Rejection @ 30 dBm, 1.23 MHz BW, 885 kHz Channel Spacing	ACPR	—	-58	-51	dBc

PACKAGE DIMENSIONS



- NOTES:
1. INTERPRET DIMENSIONS AND TOLERANCES PER ASME Y14.5M, 1994.
 2. CONTROLLING DIMENSION: INCH.
 3. DIMENSION "F" TO CENTER OF LEADS.

DIM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	1.760	1.780	44.70	45.21
B	1.370	1.390	34.80	35.31
C	0.245	0.265	6.22	6.73
D	0.017	0.023	0.43	0.58
E	0.080	0.100	2.03	2.54
F	0.086 BSC		2.18 BSC	
G	1.650 BSC		41.91 BSC	
H	1.290 BSC		32.77 BSC	
J	0.266	0.280	6.76	7.11
K	0.125	0.165	3.18	4.19
L	0.990 BSC		25.15 BSC	
N	0.390 BSC		9.91 BSC	
P	0.008	0.013	0.20	0.33
Q	0.118	0.132	3.00	3.35
R	0.535	0.555	13.59	14.10
S	0.445	0.465	11.30	11.81
W	0.090 BSC		2.29 BSC	

STYLE 3:
 PIN 1. RF INPUT
 2. VBIAS
 3. VDD
 4. RF OUTPUT
 CASE: GROUND

CASE 301AP-02 ISSUE C

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