

CDMA Band RF Linear LDMOS Amplifier

Designed for Class AB amplifier applications in 50 ohm systems operating in the 1800 to 1900 MHz 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 CDMA and GSM modulation systems.

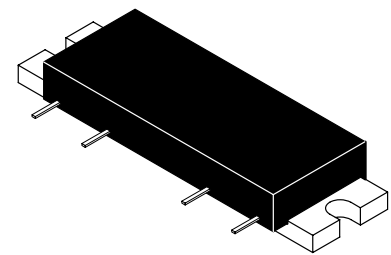
- Typical CDMA Performance: 1840 MHz, 28 Volts
IS-95 CDMA Pilot, Sync, Paging, Traffic Codes 8 Through 13
- Adjacent Channel Power: -51 dBc @ 30 dBm Average Power,
885 kHz Channel Spacing
- Power Gain: 24.5 dB Min (@ f = 1840 MHz)

Features

- Excellent Phase Linearity and Group Delay Characteristics
- Ideal for Feedforward Base Station Applications
- N Suffix Indicates Lead-Free Terminations

MHPA18010N

**1805 - 1880 MHz
10 W, 24.5 dB
RF HIGH POWER LDMOS AMPLIFIER**



CASE 301AP-02, STYLE 3

Table 1. Maximum Ratings ($T_C = 25^\circ\text{C}$ unless otherwise noted)

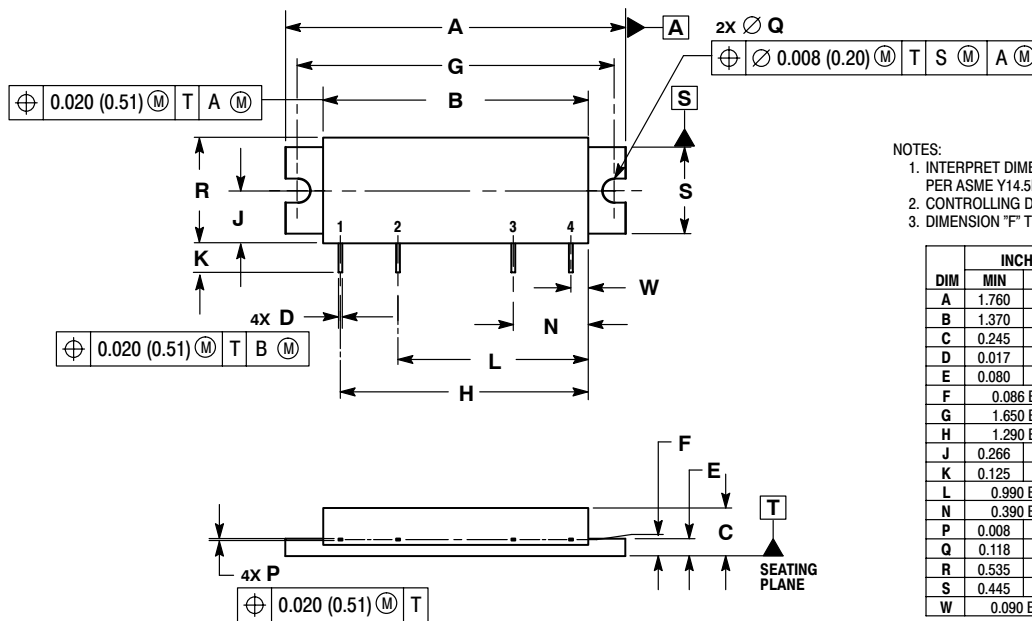
Rating	Symbol	Value	Unit
DC Supply Voltage	V_{DD}	30	Vdc
RF Input Power (Single Carrier CW)	P_{in}	+20	dBm
Storage Temperature Range	T_{stg}	- 40 to +100	$^\circ\text{C}$
Operating Case Temperature Range	T_C	- 20 to +100	$^\circ\text{C}$

Table 2. Electrical Characteristics ($V_{DD} = 28 \text{ Vdc}$, $V_{BIAS} \equiv 8 \text{ V}$ Set for Supply Current of 600 mA, $T_C = 25^\circ\text{C}$, 50 Ω System)

Characteristic	Symbol	Min	Typ	Max	Unit
Supply Current	I_{DD}	—	600	—	mA
Power Gain (f = 1840 MHz)	G_p	24.5	25.5	—	dB
Gain Flatness (f = 1805 - 1880 MHz)	G_F	—	0.2	0.5	dB
Power Output @ 1 dB Comp. (f = 1840 MHz)	P_{1dB}	—	41.5	—	dBm
Input VSWR (f = 1805 - 1880 MHz)	$VSWR_{in}$	—	1.5:1	2:1	
Noise Figure (f = 1840 MHz)	NF	—	8	10	dB
Adjacent Channel Power Rejection @ 30 dBm Average Power, 1.23 MHz BW, 885 kHz Channel Spacing	ACPR	—	-58	- 51	dBc

NOTES

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 E**

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