

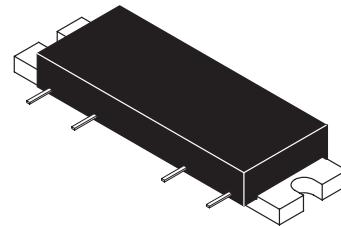
The RF Line PCS Band Linear Amplifier

Designed for ultra-linear amplifier applications in 50 ohm systems operating in the PCS frequency band. A silicon FET Class A 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.

- Third Order Intercept: 46 dBm Typ
- Power Gain: 30 dB Typ (@ $f = 1850$ MHz)
- Excellent Phase Linearity and Group Delay Characteristics
- Ideal for Feedforward Base Station Applications

MHL18336

**1800–1900 MHz
4 W, 30 dB
LINEAR AMPLIFIER**



CASE 301AP-01, STYLE 1

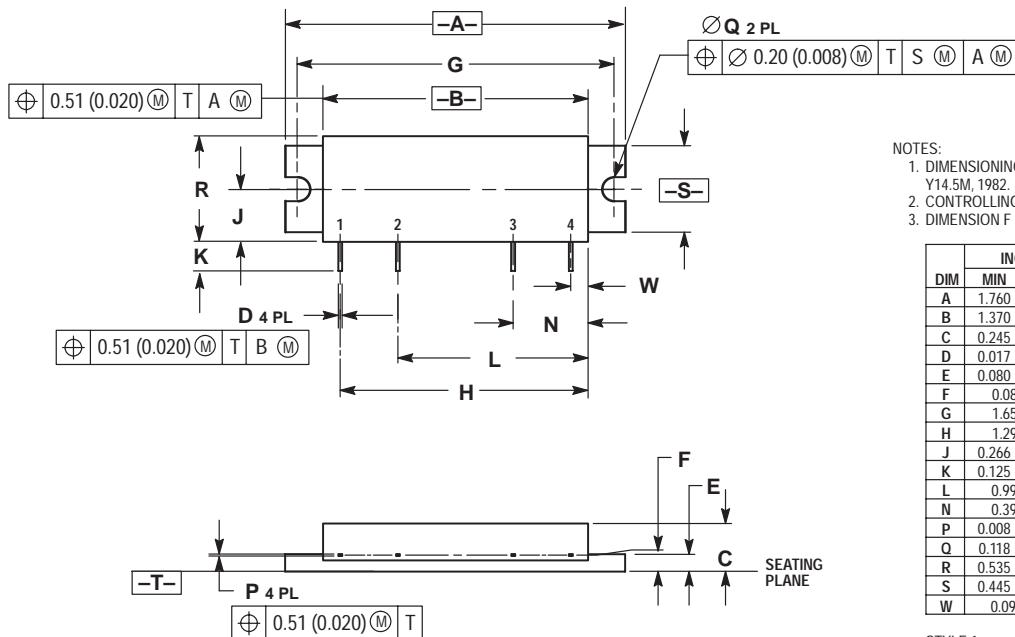
ABSOLUTE MAXIMUM RATINGS ($T_C = 25^\circ\text{C}$ unless otherwise noted)

Rating	Symbol	Value	Unit
DC Supply Voltage	V_{DD}	30	Vdc
RF Input Power	P_{in}	+10	dBm
Storage Temperature Range	T_{stg}	−40 to +100	°C
Operating Case Temperature Range	T_C	−20 to +100	°C

ELECTRICAL CHARACTERISTICS ($V_{DD} = 26$ Vdc, $T_C = 25^\circ\text{C}$; 50 Ω System)

Characteristic	Symbol	Min	Typ	Max	Unit
Supply Current	I_{DD}	—	500	525	mA
Power Gain ($f = 1850$ MHz)	P_G	29	30	31	dB
Gain Flatness ($f = 1800$ –1900 MHz)	G_F	—	0.2	0.4	dB
Power Output @ 1 dB Comp. ($f = 1850$ MHz)	P_{out} 1 dB	35	36	—	dBm
Input VSWR ($f = 1800$ –1900 MHz)	$VSWR_{in}$	—	1.2:1	1.5:1	
Third Order Intercept ($f_1 = 1847$ MHz, $f_2 = 1852$ MHz)	ITO	45	46	—	dBm
Noise Figure ($f = 1850$ MHz)	NF	—	4.2	4.5	dB

PACKAGE DIMENSIONS



NOTES:

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
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	RSC	2.29	RSC

STYLE 1:
PIN 1. RF INPUT
2. VDD1
3. VDD2
4. RF OUTPUT
CASE: GROUND

**CASE 301AP-01
ISSUE B**

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