

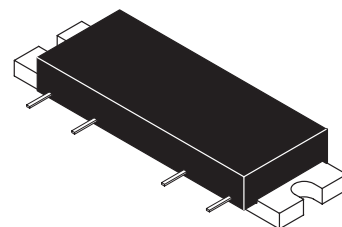
The RF Line PCS Band RF Linear LDMOS Amplifier

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 (@ $f = 1960$ MHz)
- Excellent Phase Linearity and Group Delay Characteristics
- Ideal for Feedforward Base Station Applications

MHL19338

**1900–2000 MHz
4.0 W, 30 dB
RF LINEAR LDMOS AMPLIFIER**



CASE 301AP-02, STYLE 1

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

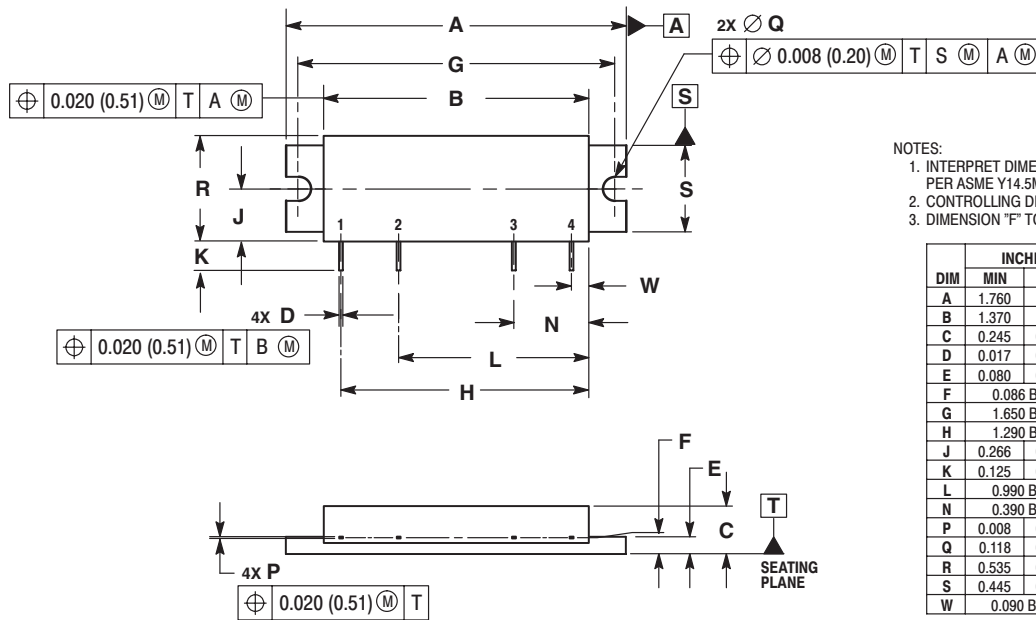
Rating	Symbol	Value	Unit
DC Supply Voltage	V_{DD}	30	Vdc
RF Input Power	P_{in}	+10	dBm
Storage Temperature Range	T_{stg}	–40 to +100	$^\circ\text{C}$
Operating Case Temperature Range	T_C	–20 to +100	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS ($V_{DD} = 28$ 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 ($f = 1960$ MHz)	G_p	29	30	31	dB
Gain Flatness ($f = 1900$ – 2000 MHz)	G_F	—	0.1	0.4	dB
Power Output @ 1 dB Comp. ($f = 1950$ MHz)	$P_{out\ 1\ dB}$	35	36	—	dBm
Input VSWR ($f = 1900$ – 2000 MHz)	$VSWR_{in}$	—	1.2:1	1.5:1	
Third Order Intercept ($f_1 = 1950$ MHz, $f_2 = 1955$ MHz)	ITO	45	46	—	dBm
Noise Figure ($f = 2000$ MHz)	NF	—	4.2	4.5	dB



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

CASE 301AP-02 ISSUE C

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