replacement.

Rev. 7, 12/2006

# **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.

Replaced by MHL19338NN. There are no form, fit or function changes with this part

- · Third Order Intercept: 46 dBm Typ
- Power Gain: 30 dB Typ (@ f = 1960 MHz)
- Input VSWR ≤ 1.5:1

#### **Features**

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

## MHL19338N

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

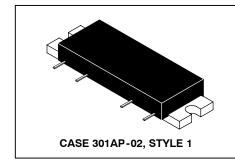


Table 1. Absolute Maximum Ratings (T<sub>C</sub> = 25°C unless otherwise noted)

Rating	Symbol	Value	Unit
DC Supply Voltage	$V_{DD}$	30	Vdc
RF Input Power	P <sub>in</sub>	+10	dBm
Storage Temperature Range	T <sub>stg</sub>	- 40 to +100	°C
Operating Case Temperature Range	T <sub>C</sub>	- 20 to +100	°C

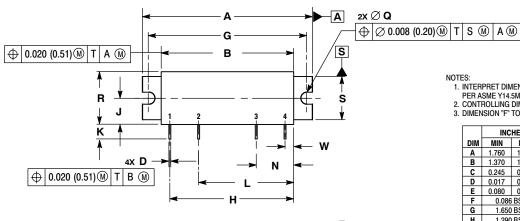
**Table 2. Electrical Characteristics** ( $V_{DD}$  = 28 Vdc,  $T_{C}$  = 25°C; 50  $\Omega$  System)

Characteristic	Symbol	Min	Тур	Max	Unit	
Supply Current		I <sub>DD</sub>	_	500	525	mA
Power Gain	(f = 1960 MHz)	G <sub>p</sub>	29	30	32	dB
Gain Flatness	(f = 1900 - 2000 MHz)	G <sub>F</sub>	_	0.1	0.4	dB
Power Output @ 1 dB Compression	(f = 1950 MHz)	P1dB	35	36	_	dBm
Third Order Intercept (f1 = 1950 MHz, f2 = 1955 MHz)		ITO	45	46	_	dBm
Noise Figure	(f = 2000 MHz)	NF	_	4.2	4.5	dB

NOTE - CAUTION - MOS devices are susceptible to damage from electrostatic charge. Reasonable precautions in handling and packaging MOS devices should be observed.



### **PACKAGE DIMENSIONS**





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

	INCHES		MILLIMETERS		
DIM	MIN	MAX	MIN	MAX	
Α	1.760	1.780	44.70	45.21	
В	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	
Е	0.080	0.100	2.03	2.54	
F	0.086 BSC		2.18 BSC		
G	1.650 BSC		41.91 BSC		
Н	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	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 E

### **REVISION HISTORY**

The following table summarizes revisions to this document.

Revision	Date	Description
7	Dec. 2006	Added replacement part information, p. 1

#### How to Reach Us:

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#### **USA/Europe or Locations Not Listed:**

Freescale Semiconductor, Inc.
Technical Information Center, EL516
2100 East Elliot Road
Tempe, Arizona 85284
+1-800-521-6274 or +1-480-768-2130
www.freescale.com/support

#### Europe, Middle East, and Africa:

Freescale Halbleiter Deutschland GmbH Technical Information Center Schatzbogen 7 81829 Muenchen, Germany +44 1296 380 456 (English) +46 8 52200080 (English) +49 89 92103 559 (German) +33 1 69 35 48 48 (French) www.freescale.com/support

#### Japan:

Freescale Semiconductor Japan Ltd. Headquarters
ARCO Tower 15F
1-8-1, Shimo-Meguro, Meguro-ku, Tokyo 153-0064
Japan
0120 191014 or +81 3 5437 9125
support.japan@freescale.com

#### Asia/Pacific:

Freescale Semiconductor Hong Kong Ltd. Technical Information Center 2 Dai King Street Tai Po Industrial Estate Tai Po, N.T., Hong Kong +800 2666 8080 support.asia@freescale.com

#### For Literature Requests Only:

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