

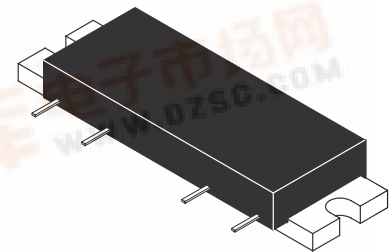
## The RF Line CDMA Band RF Linear LDMOS Amplifier

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)
- Excellent Phase Linearity and Group Delay Characteristics
- Ideal for Feedforward Base Station Applications

# MHPA18010

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



CASE 301AP-02, STYLE 3

### MAXIMUM RATINGS (T<sub>C</sub> = 25°C unless otherwise noted)

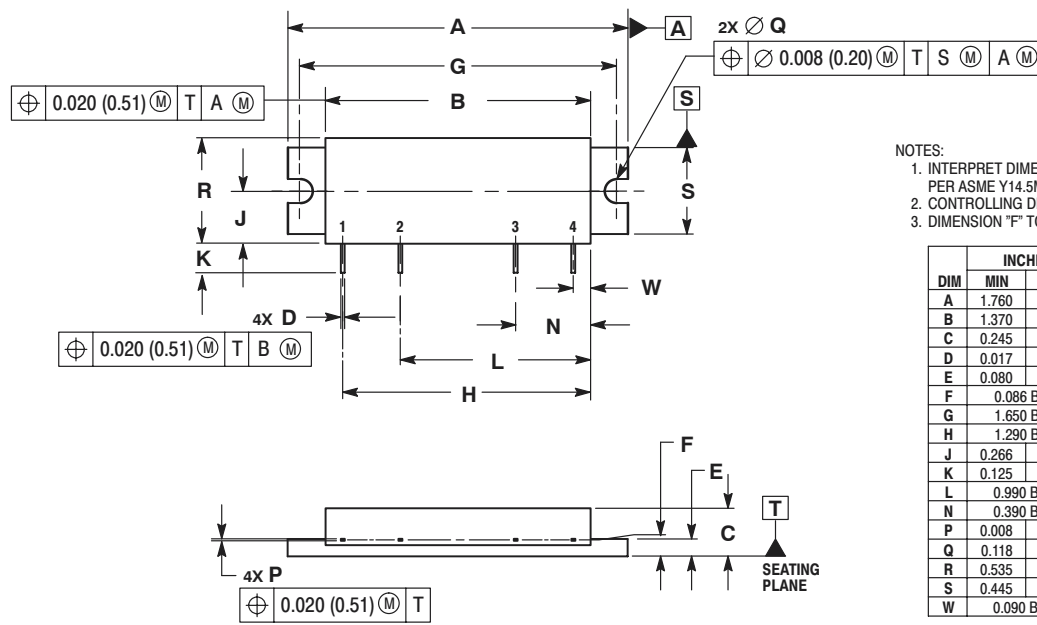
Rating	Symbol	Value	Unit
DC Supply Voltage	V <sub>DD</sub>	30	Vdc
RF Input Power (Single Carrier CW)	P <sub>in</sub>	+20	dBm
Storage Temperature Range	T <sub>stg</sub>	-40 to +100	°C
Operating Case Temperature Range	T <sub>C</sub>	-20 to +100	°C

### ELECTRICAL CHARACTERISTICS (V<sub>DD</sub> = 28 Vdc, V<sub>BIAS</sub> ≅ 8 V Set for Supply Current of 600 mA, T<sub>C</sub> = 25°C, 50 Ω System)

Characteristic	Symbol	Min	Typ	Max	Unit
Supply Current	I <sub>DD</sub>	—	600	—	mA
Power Gain (f = 1840 MHz)	G <sub>p</sub>	24.5	25.5	—	dB
Gain Flatness (f = 1805–1880 MHz)	G <sub>F</sub>	—	0.2	0.5	dB
Power Output @ 1 dB Comp. (f = 1840 MHz)	P <sub>1dB</sub>	—	41.5	—	dBm
Input VSWR (f = 1805–1880 MHz)	VSWR <sub>in</sub>	—	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

# Freescale Semiconductor, Inc.

## 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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