The RF Line

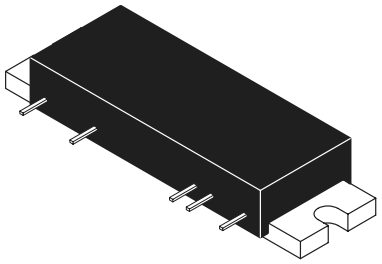
PCS Band RF Linear LDMOS Amplifier

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, GSM EDGE and CDMA.

- Third Order Intercept Point: 50 dBm Typ
- Power Gain: 28.6 dB Typ (@ f = 1842 MHz)
- Excellent Phase Linearity and Group Delay Characteristics
- Ideal for Feedforward Base Station Application

MHL18926

1805–1880 MHz, 10 W, 28.6 dB
RF LINEAR LDMOS AMPLIFIER



CASE 301AY–01, STYLE 1

ABSOLUTE MAXIMUM RATINGS (T_C = 25°C unless otherwise noted)

Rating	Symbol	Value	Unit
DC Supply Voltage	V_{DD}	30	Vdc
RF Input Power	P_{in}	+18	dBm
Storage Temperature Range	T_{stg}	–40 to +100	°C
Operating Case Temperature Range	T_C	–20 to +100	°C

ELECTRICAL CHARACTERISTICS (T_C = +25°C; V_{DD} = 26 Vdc; 50 Ω System)

Characteristic		Symbol	Min	Typ	Max	Unit
Supply Current		I_{DD}	—	1.1	1.15	A
Power Gain	(f = 1842 MHz)	G_p	27.6	28.6	29.6	dB
Gain Flatness	(f = 1805–1880 MHz)	G_F	—	0.3	0.5	dB
Power Output @ 1 dB Compression	(f = 1842 MHz)	P1 dB	39	40	—	dBm
Input VSWR	(f = 1805–1880 MHz)	$VSWR_{in}$	—	1.2:1	1.5:1	
Third Order Intercept	(f1 =1839 MHz, f2=1844 MHz)	ITO	49.5	50	—	dBm
Noise Figure	(f = 1880 MHz)	NF	—	4.2	5	dB

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

Freescale Semiconductor, Inc.

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MOTOROLA intelligence everywhere™ digital dna™

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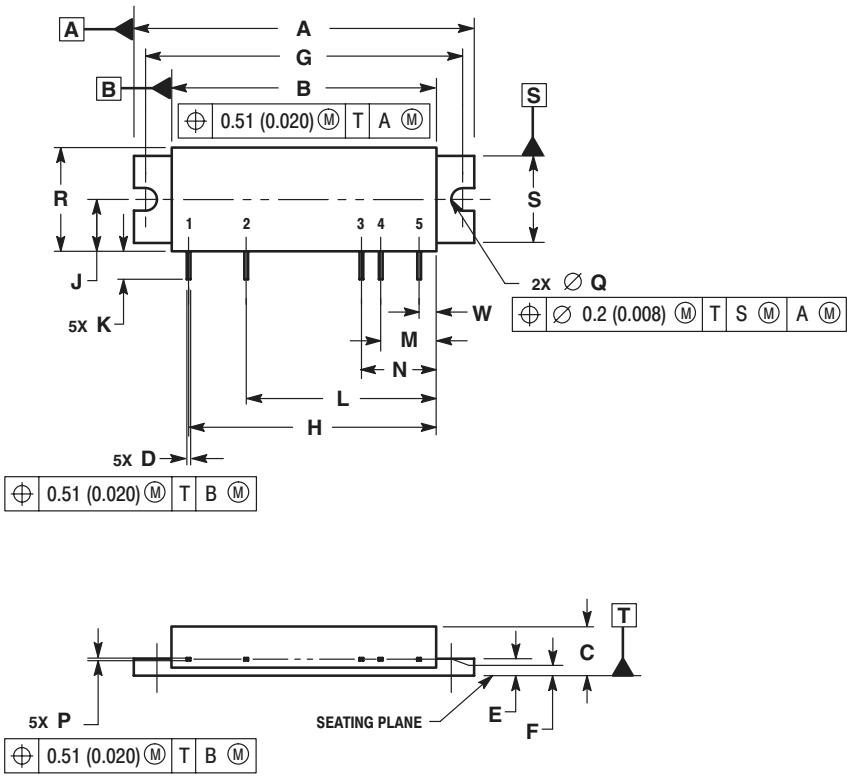
PACKAGE DIMENSIONS



NOTES:
1. CONTROLLING DIMENSION: MILLIMETER.
2. INTERPRET DIMENSIONS AND TOLERANCES PER ANSI Y14.5M, 1982.
3. DIMENSION F TO CENTER LINE OF LEADS.

	MILLIMETERS		INCHES	
DIM	MIN	MAX	MIN	MAX
A	44.7	45.21	1.760	1.780
B	34.8	35.31	1.370	1.390
C	6.22	6.73	0.245	0.265
D	0.43	0.58	0.017	0.023
E	2.03	2.54	0.080	0.100
F	2.18 BSC		0.086 BSC	
G	41.91 BSC		1.650 BSC	
H	32.77 BSC		1.290 BSC	
J	6.76	7.11	0.266	0.280
K	3.18	4.19	0.125	0.165
L	25.15 BSC		0.990 BSC	
M	7.37 BSC		0.290 BSC	
N	9.91 BSC		0.390 BSC	
P	0.2	0.33	0.008	0.013
Q	3	3.35	0.118	0.132
R	13.59	14.1	0.535	0.555
S	11.3	11.81	0.445	0.465
W	2.29 BSC		0.090 BSC	

STYLE 1:
PIN 1. RF INPUT
2. VDD1
3. VDD2
4. VDD3
5. RF OUTPUT
CASE: GROUND

CASE 301AY–01
ISSUE O

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