

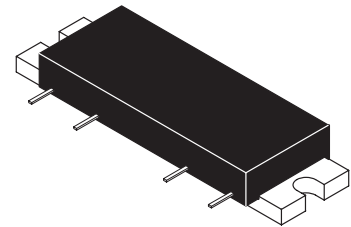
The RF Line
PCS Band
RF Linear LDMOS Amplifier

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

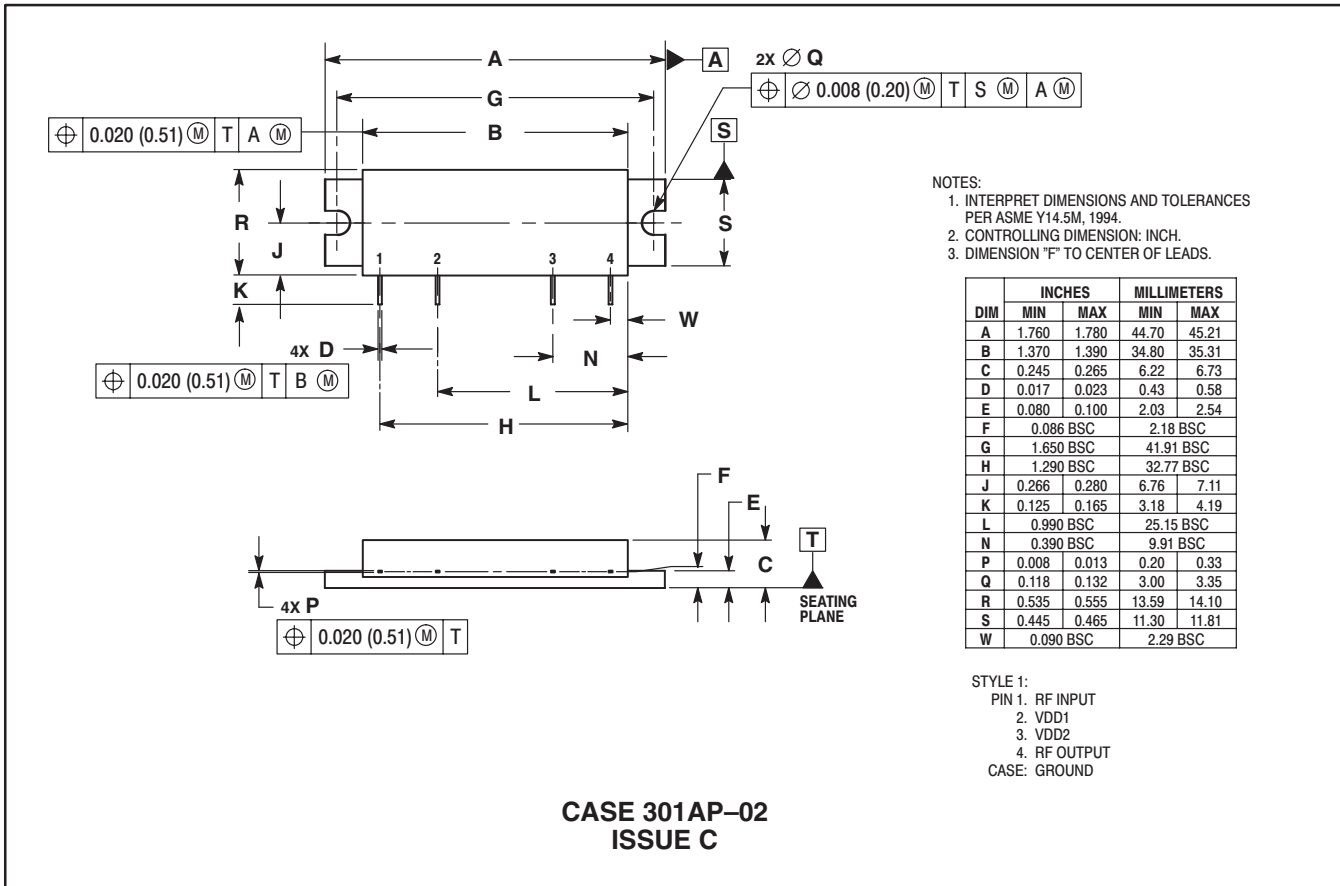
ABSOLUTE MAXIMUM RATINGS ($T_C = 25^\circ\text{C}$ unless otherwise noted)

| 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 ($V_{DD} = 28 \text{ Vdc}$, $T_C = 25^\circ\text{C}$; 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) | $P_{out \ 1 \text{ dB}}$ | 35 | 36 | — | dBm |
| Input VSWR (f = 1900–2000 MHz) | $VSWR_{in}$ | — | 1.2:1 | 1.5:1 | |
| Third Order Intercept (f1 = 1950 MHz, f2 = 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

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