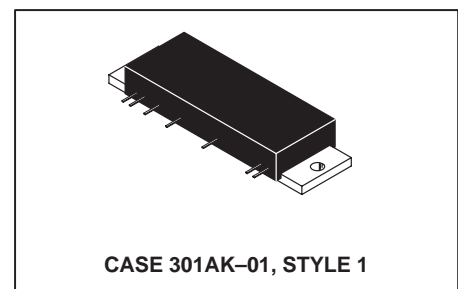


# The RF Line Microwave Bipolar Power Amplifier

**MHW1915**

**15 W  
 1930–1990 MHz  
 RF POWER AMPLIFIER**

- Specified 26 Volt Characteristics:  
 RF Output Power: 15 Watts  
 RF Power Gain: 31 dB Typ  
 Efficiency: 25% Min
- 50 Ohm Input/Output System



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## MAXIMUM RATINGS

Rating	Symbol	Value	Unit
DC Supply Voltage	$V_S$	28	Vdc
DC Bias Voltage	$V_B$	5.5	Vdc
RF Input Power	$P_{in}$	17	dBm
RF Output Power	$P_{out}$	23	W
Operating Case Temperature Range	$T_C$	-30 to +85	°C
Storage Temperature Range	$T_{stg}$	-30 to +100	°C

## ELECTRICAL CHARACTERISTICS ( $V_S = 26$ Vdc; $V_{BIAS} = 5$ Vdc; $T_C = +25^\circ\text{C}$ ; 50 $\Omega$ system)

Characteristic	Symbol	Min	Typ	Max	Unit
Frequency Range	BW	1930	—	1990	MHz
Total Quiescent Current ( $P_{in} = 0$ mW)	$I_q$	—	300	—	mA
Power Gain ( $P_{out} = 15$ W) (1)	$G_p$	29	31	—	dB
Output Power at 1 dB Compression	P1dB	15	—	—	Watts
Efficiency (1 dB Compression Power)	$\eta$	25	—	—	%
Input VSWR ( $P_{out} = 15$ W)	VSWR <sub>IN</sub>	—	—	2:1	—
Ripple ( $P_{out} = 15$ W)	Rp	—	1	—	dB
Load Mismatch Stress ( $P_{out} = 15$ W; Load VSWR = 2:1; at All Phase Angles)	$\psi$	No Degradation in Output Power			
Stability ( $P_{out} = 1$ mW – 15 W; Load VSWR = 2:1; at All Phase Angles except Harmonics)	—	All Spurious Outputs More than 60 dB Below Desired Signal			
Stability ( $P_{out} = 1$ mW – 15 W; Load VSWR = 2:1; $f = 1930 - 1990$ MHz; at All Phase Angles)	—	All Spurious Outputs Typically Lower than -36 dBm			

(1) Adjust  $P_{in}$  for specified  $P_{out}$ .

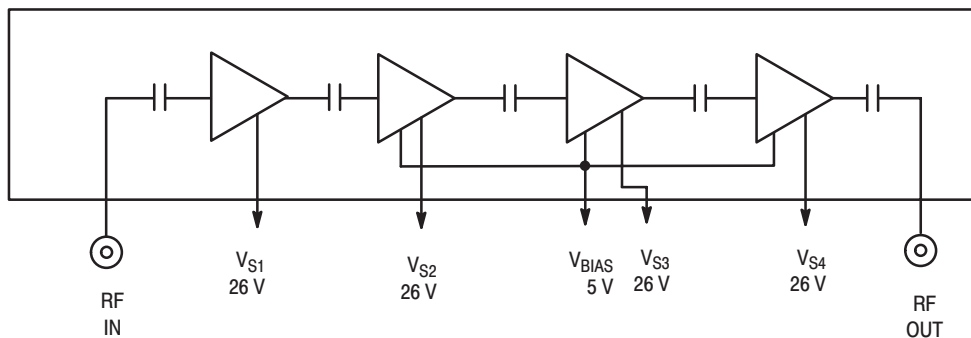
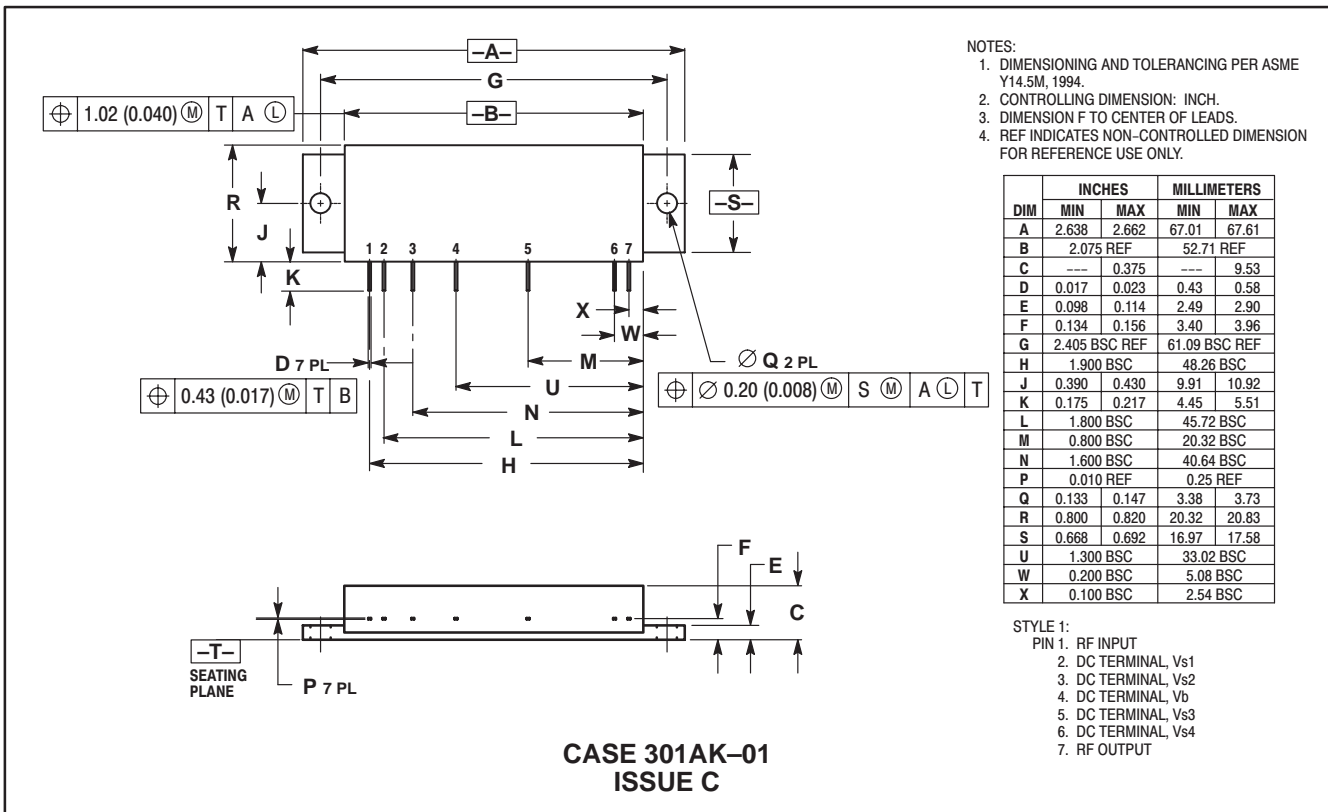


Figure 1. Internal Diagram

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### PACKAGE DIMENSIONS




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