

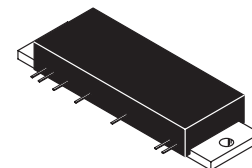
The RF Line

Microwave Bipolar Power Amplifier

- Specified 26 Volt Characteristics:
 - RF Output Power: 15 Watts
 - RF Power Gain: 32 dB Typ
 - Efficiency: 25% Min
- 50 Ohm Input/Output System

MHW1815

15 W
1805–1880 MHz
RF POWER AMPLIFIER



CASE 301AK-01, STYLE 1

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 ($T_C = 25^\circ\text{C}$; $V_S = 26\text{ Vdc}$; $V_{BIAS} = 5\text{ Vdc}$; 50 Ω system)

Characteristic	Symbol	Min	Typ	Max	Unit
Frequency Range	BW	1805	—	1880	MHz
Total Quiescent Current ($P_{in} = 0\text{ mW}$)	I_q	—	300	—	mA
Power Gain ($P_{out} = 15\text{ W}$) (1)	G_p	30	32	—	dB
Output Power at 1 dB Compression	P_{1dB}	15	—	—	Watts
Efficiency (1 dB Compression Power)	η	25	—	—	%
Input VSWR ($P_{out} = 15\text{ W}$)	$VSWR_{IN}$	—	—	2:1	—
Ripple ($P_{out} = 15\text{ W}$)	R_p	—	1	—	dB
Load Mismatch Stress ($P_{out} = 15\text{ W}$; Load VSWR = 3:1; at All Phase Angles)	ψ	No Degradation in Output Power			
Stability ($P_{out} = 1\text{ mW} - 15\text{ W}$; Load VSWR = 2:1; at All Phase Angles except Harmonics)	—	All Spurious Outputs More than 60 dB Below Desired Signal			
Stability ($P_{out} = 1\text{ mW} - 15\text{ W}$; Load VSWR = 2:1; $f = 1805 - 1880\text{ MHz}$; at All Phase Angles)	—	All Spurious Typically Lower than -36 dBm			

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

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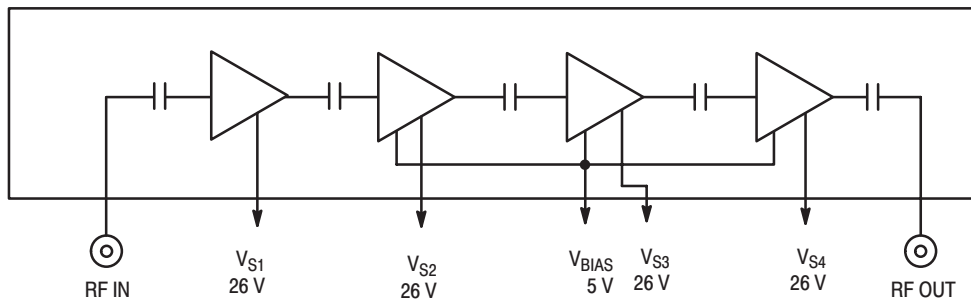
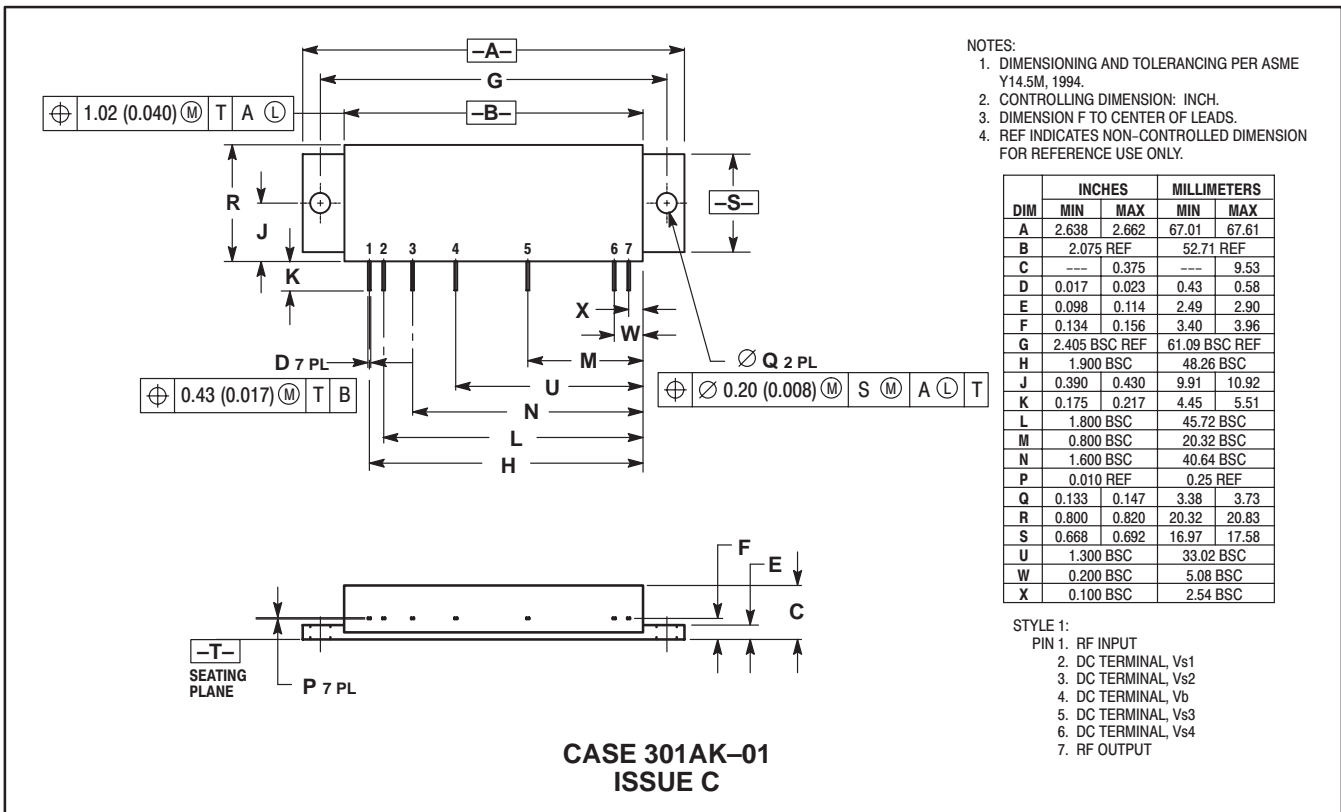


Figure 1. Internal Diagram

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PACKAGE DIMENSIONS



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