

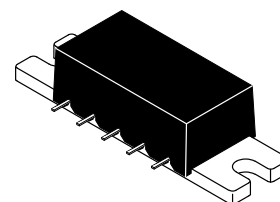
## The RF Line UHF Linear Amplifier

Designed specifically for linear amplifier applications in the cellular frequency band. Internal DC blocking on RF ports reduces external component count and related circuit area. These devices can be easily combined for higher power applications.

- Supply Voltage: 15 Vdc (MHL9125)  
28 Vdc (MHL9128)
- Third Order Intercept: 43 dBm Typ
- Power Gain: 20 dB Typ (@ f = 900 MHz)
- Excellent Phase Linearity and Group Delay Characteristics
- 50 Ohm Input/Output Impedances

**MHL9125**  
**MHL9128**

**1.3 W, 20 dB**  
**800–960 MHz**  
**LINEAR AMPLIFIERS**



**CASE 448-02**  
**MHL9125, Style 2**  
**MHL9128, Style 1**

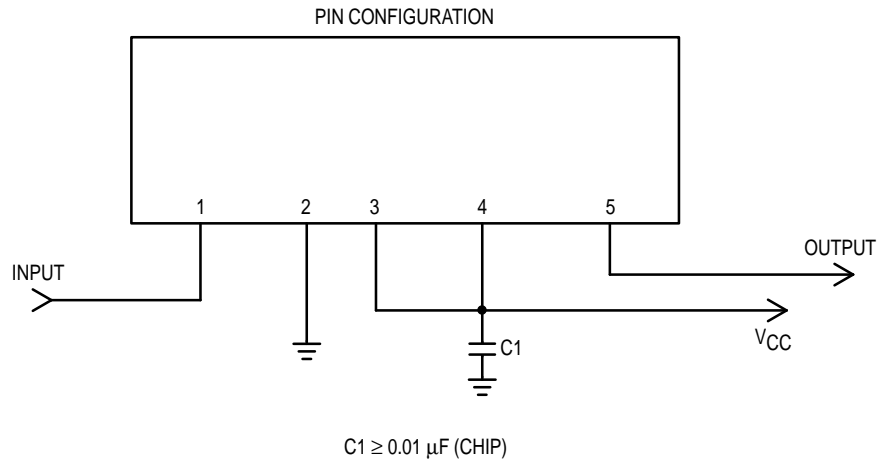
### ABSOLUTE MAXIMUM RATINGS (T<sub>C</sub> = 25°C unless otherwise stated)

Rating	Symbol	Value	Unit
DC Supply Voltage	V <sub>CC</sub>	18 32	Vdc
RF Input Power	P <sub>in</sub>	+20	dBm
Operating Case Temperature Range	T <sub>C</sub>	-20 to +100	°C
Storage Temperature Range	T <sub>stg</sub>	-40 to +100	°C

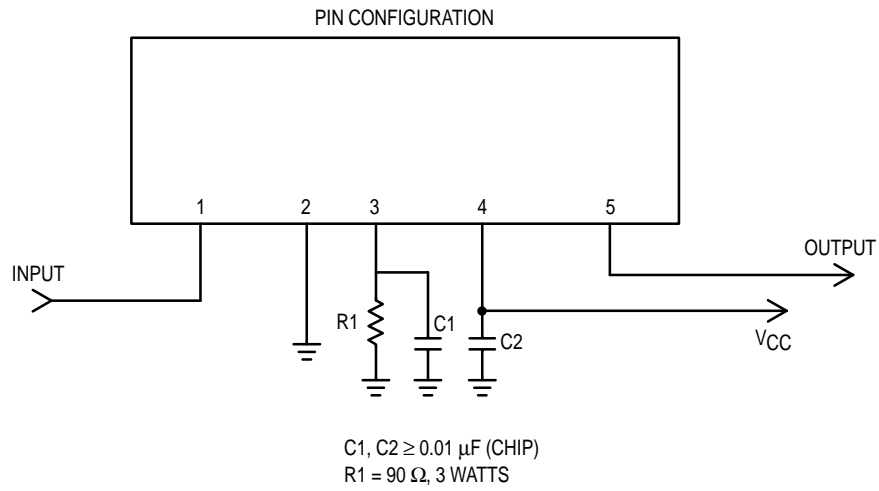
### ELECTRICAL CHARACTERISTICS (V<sub>CC</sub> = 15 Vdc (MHL9125), 28 Vdc (MHL9128); T<sub>C</sub> = 25°C; 50 Ω System, unless otherwise noted)

Characteristic	Symbol	Min	Typ	Max	Unit
Supply Current	I <sub>DC</sub>	400 700	—	440 760	mA
Power Gain (1)	P <sub>G</sub>	19	20	21	dB
Absolute Phase Variation (1)	Δφ		±8	±18	Deg.
Gain Flatness	G <sub>F</sub>	—	0.5	0.75	dB
Power Output @ 1 dB Comp.	P <sub>out</sub> 1 dB	30	31	—	dBm
Input VSWR	VSWR <sub>in</sub>	—	1.25:1 1.50:1	1.5:1 1.9:1	
Output VSWR	VSWR <sub>out</sub>	—	1.2:1	1.5:1	
Third Order Intercept (f <sub>1</sub> = 879 MHz, f <sub>2</sub> = 884 MHz)	ITO	42	43	—	dBm
Noise Figure	NF	—	7.5	9.5	dB

(1) Consult factory for tighter gain and/or phase windows.

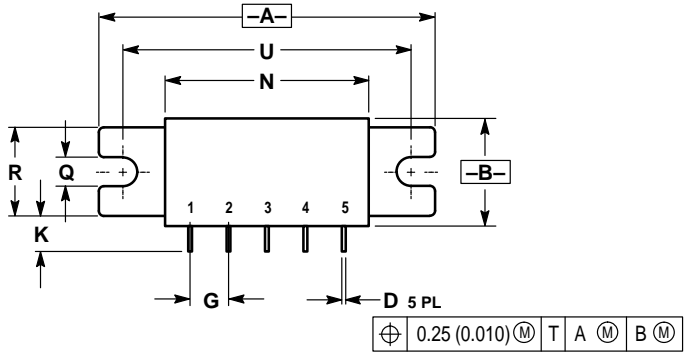


**Figure 1. MHL9125 External Connections  
(Case 448-02, Style 2)**



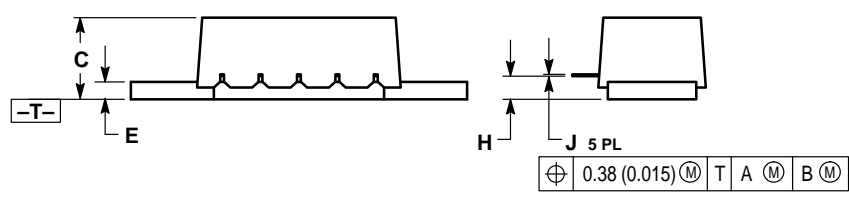
**Figure 2. MHL9128 External Connections  
(Case 448-02, Style 1)**

# PACKAGE DIMENSIONS



NOTES:  
 1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.  
 2. CONTROLLING DIMENSION: INCH.


DIM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	1.740	1.760	44.20	44.70
B	0.550	0.570	13.97	14.49
C	0.405	0.445	10.29	11.30
D	0.018	0.022	0.46	0.55
E	0.085	0.095	2.16	2.41
G	0.200 BSC		5.08 BSC	
H	0.120 BSC		3.05 BSC	
J	0.009	0.011	0.23	0.28
K	0.180	0.220	4.57	5.59
N	1.045	1.075	26.54	27.30
Q	0.145	0.155	3.68	3.94
R	0.455	0.465	11.56	11.81
U	1.490	1.510	37.85	38.35



STYLE 1:  
 PIN 1. RF INPUT  
 2. GROUND  
 3. RESISTOR-GROUND  
 4. VCC  
 5. RF OUTPUT

STYLE 2:  
 PIN 1. RF INPUT  
 2. GROUND  
 3. VCC1  
 4. VCC2  
 5. RF OUTPUT

**CASE 448-02**  
**ISSUE A**

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**MHL9125/D**