

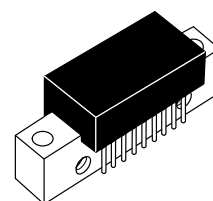
## The RF Line VHF/UHF CATV Amplifiers

Designed for broadband applications requiring low-distortion and high output capability. Specifically intended for CATV/MATV market requirements. These amplifiers feature ion-implanted arsenic emitter transistors and an all gold metal system.

- Specified Characteristics at  $V_{CC} = 24\text{ V}$ ,  $T_C = 25^\circ\text{C}$ 
  - Frequency Range — 40 to 860 MHz
  - Power Gain — 17 dB Typ @  $f = 40\text{ MHz}$
  - Noise Figure — 7.0 dB Typ @  $f = 500\text{ MHz}$
  - 123 dB $\mu\text{V}$  DIN45004B @ 860 MHz
- All Gold Metalization for Improved Reliability
- Superior Gain, Return Loss and DC Current Stability with Temperature
- Improved 2nd Order IMD Available (CA922A)

**CA922**  
**CA922A**

17 dB  
40–860 MHz  
VHF/UHF  
CATV/MATV  
AMPLIFIERS



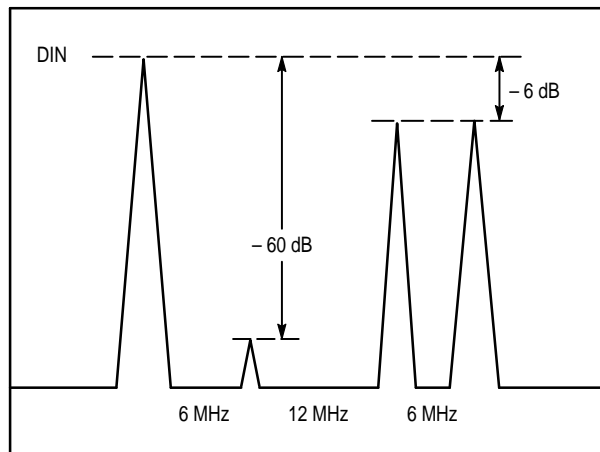
CASE 714P-03, STYLE 2

### MAXIMUM RATINGS

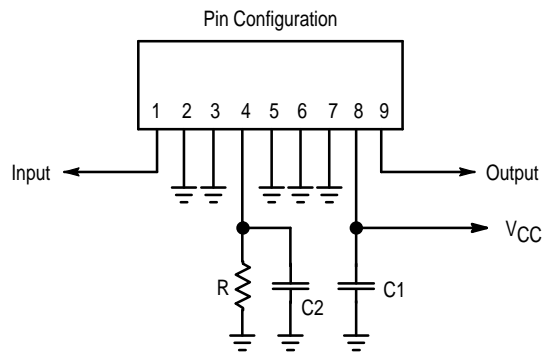
Rating	Symbol	Value	Unit
Supply Voltage	$V_{CC}$	26	V
RF Input Power Per Tone	$P_{in}$	+16	dBm
Storage Temperature	$T_{stg}$	-40 to +100	$^\circ\text{C}$
Operating Case Temperature Range	$T_C$	-20 to +100	$^\circ\text{C}$

### ELECTRICAL CHARACTERISTICS ( $T_C = 25^\circ\text{C}$ , $V_{CC} = 24\text{ V}$ , 75 Ohm System)

Characteristic	Symbol	Min	Typ	Max	Unit
Supply Current	$I_{dc}$	—	400	440	mA
Power Gain ( $f = 40\text{ MHz}$ )	PG	16.5	17	17.5	dB
Bandwidth	BW	40	—	860	MHz
Slope (40 – 860 MHz)	S	0.2	0.8	1.5	dB
Gain Flatness	FL	—	—	1.0	dB
Input/Output Return Loss	IRL/ORL	20 15 10/13	— 17 12/15	— — —	dB
Second Order Intermodulation Distortion ( $V_o = +50\text{ dBmV/ch.}$ )	CA922 CA922A IMD <sub>2</sub>	— —	— —	-63 -67	dB dB
DIN45004B (See Figure 1)	DIN	124 123	— —	— —	dB $\mu\text{V}$
Noise Figure	NF	— —	7.0 8.0	8.5 9.5	dB



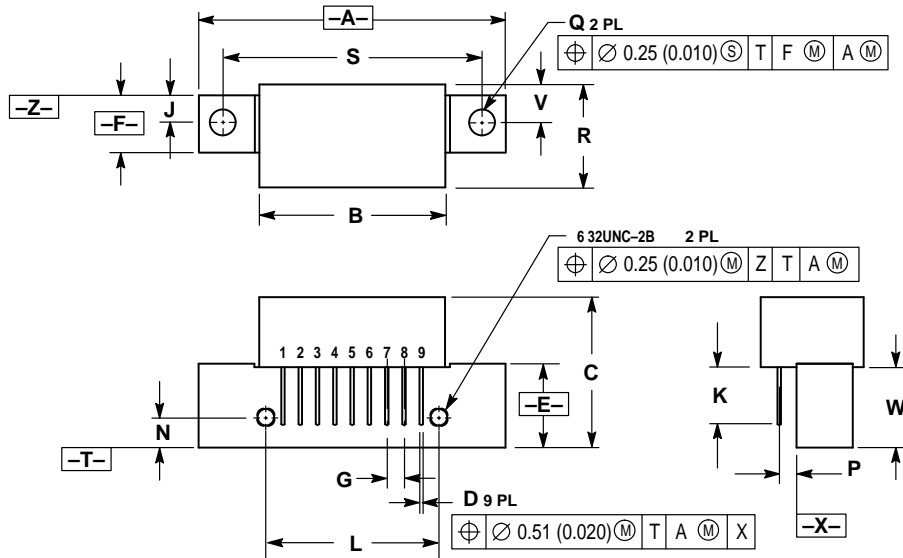
**Figure 1. DIN45004B Test**



C1, 2 ≥ 0.01 μF (chip)  
R = 65 Ohms, 2 Watts

**Figure 2. External Connections**

# PACKAGE DIMENSIONS




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

DIM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	—	1.775	—	45.08
B	—	1.085	—	27.56
C	—	0.870	—	22.10
D	0.018	0.022	0.46	0.56
E	0.465	0.510	11.81	12.95
F	0.300	0.325	7.62	8.25
G	0.100 BSC	—	2.54 BSC	—
J	0.156 BSC	—	3.96 BSC	—
K	0.330	0.370	8.38	9.40
L	1.000 BSC	—	25.40 BSC	—
N	0.165 BSC	—	4.19 BSC	—
P	0.100 BSC	—	2.54 BSC	—
Q	0.148	0.168	3.76	4.27
R	—	0.595	—	15.11
S	1.500 BSC	—	38.10 BSC	—
V	0.209	0.239	5.31	6.07
W	0.425	—	10.80	—

STYLE 2:  
 PIN 1. RF INPUT  
 2. GROUND  
 3. GROUND  
 4. RESISTOR-GROUND  
 5. GROUND  
 6. GROUND  
 7. GROUND  
 8.  $V_{CC} 1$   
 9. RF OUTPUT

CASE 714P-03  
 ISSUE B

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CA922/D

