

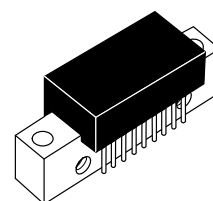
The RF Line VHF/UHF CATV Amplifiers

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 μV 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 ₂	— —	— —	-63 -67	dB dB
DIN45004B (See Figure 1)	DIN	124 123	— —	— —	dB μV
Noise Figure	NF	— —	7.0 8.0	8.5 9.5	dB

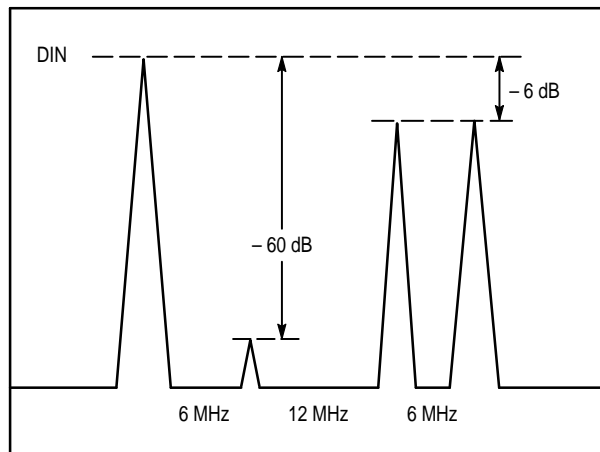
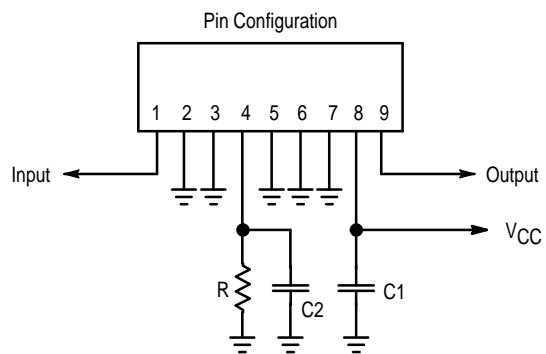


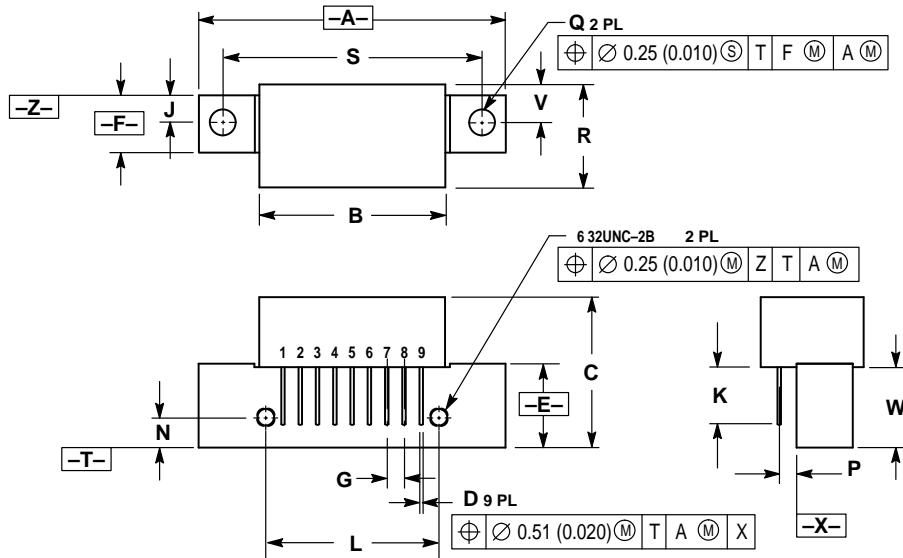
Figure 1. DIN45004B Test



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

