

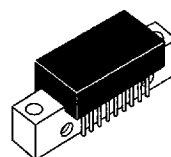
The RF Line VHF/UHF CATV Amplifier

... 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 $T_C = 25^\circ\text{C}$; $V_{CC} = 15\text{ V}$
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 Metallization for Improved Reliability
- Superior Gain, Return Loss and DC Current Stability with Temperature

CA912
CA912A

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



CASE 714P-03, STYLES 2, 3

MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Rating	Symbol	Value	Unit
Supply Voltage	V_{CC}	18	V
RF Input Power Per Tone	P_{in}	+17	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 ($T_C = 25^\circ\text{C}$, $V_{CC} = 15\text{ V}$, 75 Ohm System)

Characteristic	Symbol	Min	Typ	Max	Unit
Supply Current	I_{DC}	640	700	760	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 $f = 40 - 100\text{ MHz}$ $f = 100 - 800\text{ MHz}$ $f = 800 - 860\text{ MHz}$	IRL/ORL	20 15 10	— 17 12	— — —	dB
Second Order Intermodulation Distortion ($V_O = +50\text{ dBmV/ch.}$)	IMD ₂	— —	— —	-63 -67	dB
DIN45004B (See Figure 1) $f = 40 - 400\text{ MHz}$ $f = 400 - 860\text{ MHz}$	DIN	124 123	— —	— —	dB μV
Noise Figure $f = 500\text{ MHz}$ $f = 860\text{ MHz}$	NF	— —	7.0 8.0	8.5 9.5	dB

REV 6

MOTOROLA RF DEVICE DATA

CA912 CA912A
3-9

6367254 0104965 898

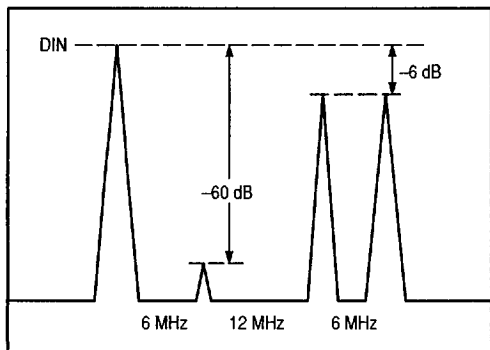
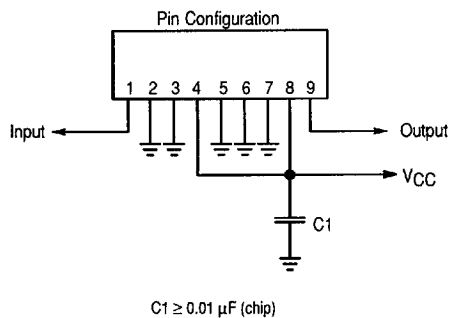


Figure 1. DIN45004B Test



**Figure 2. External Connections
Case 714P-03, Style 3**