

FEATURES

- Slew Rate 11000V/ μ s
- Wide Bandwidth..... 400MHz
- Output Current..... 100mA
- Wide Supply Voltage..... $\pm 3V$ to $\pm 13V$
- Supply Current..... 5mA
- Level Shift..... $V_{IN} - 3V$
- Low Bias Current

APPLICATIONS

- CRT Amplifier Drivers
- Coaxial Cable Driver

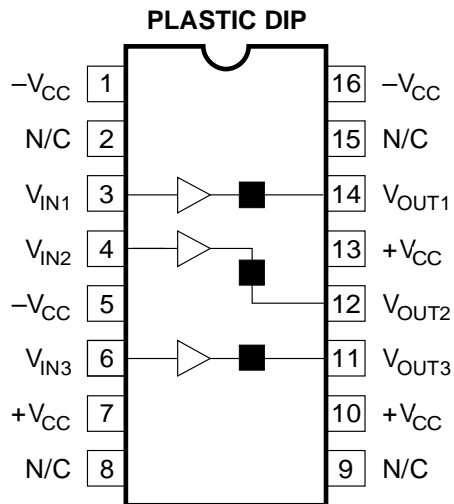
GENERAL DESCRIPTION

The CVA4403N is specifically designed to interface a pre-amplifier and an active load high speed CRT driver. It features a unique capability of level shifting the pre-amplifier output lower by 3V without degrading the frequency response of the pre-amplifier. The CVA4403N delivers -3dB Bandwidth of 400MHz and 11000V/ μ s while drawing less than 5ma of supply current.

ORDERING INFORMATION

Part	Package	Temperature Range
CVA4403N	Plastic Dip 16 Lead	-20°C to +100°C

PIN CONFIGURATION



TOP VIEW

1Q-12

ABSOLUTE MAXIMUM RATINGS (Note 1)

Supply Voltage	±13V	ESD Tolerance (Note 3)	±2000V
Input Voltage	±V _{supply}	Thermal Resistance (θ _{JA})	
Storage Temperature Range	-65°C to +150°C	N Package	95°C/W
Lead Temperature		Thermal Resistance (θ _{JC})	
(Soldering 10 seconds)	260°C	N Package	50°C/W
Power Dissipation (Note 4)		Maximum Junction Temperature	150°C

DC ELECTRICAL CHARACTERISTICS

The following specifications apply for Supply Voltage = ±12V, V_{CM} = 0, R_L ≥ 100KΩ and R_S = 50Ω unless otherwise noted.

SYMBOL	CHARACTERISTICS	TYP	Limit (Note 5)	UNITS	CONDITIONS
A _{V1}	Voltage Gain 1	0.99	0.96	V/V Min	R _L = ∞, V _{IN} = ±3V
A _{V2}	Voltage Gain 2	0.80	0.78		(V _{MIN} = 0V, V _{MAX} = 7V) V _{PP} = 7V, R _L = 680Ω, C _L = 39pF
V _{OS}	Offset Voltage	10	50	mV Max	R _L = ∞
I _B	Input Bias Current	1	25	μA Max	R _L = ∞
R _{IN}	Input Resistance	0.5		MΩ	R _L = 100Ω
C _{IN}	Input Capacitance	3.5		pF	
R _O	Output Resistance	3	10	Ω Max	R _L = 100Ω, V _{IN} = ±2V
I _S	Supply Current	5	7.5	mA Max	R _L = ∞
V _O	Output Swing	5	5	V Min	R _L = 100Ω, V _{IN} = 8V (V _{OUT} = V _{IN} -3V)
I _{OUT}	Output Current	150	100	mA	V _{IN} = 10V

AC ELECTRICAL CHARACTERISTICS

The following specifications apply for Supply Voltage = ±12V, V_{CM} = 0, R_L ≥ 100KΩ and R_S = 50Ω unless otherwise noted.

SYMBOL	CHARACTERISTICS	TYP	Limit (Note 5)	UNITS	CONDITIONS
SR ₁	Slew Rate 1	11000	8000	V/μs	V _{IN} = ±5V, R _L = 100Ω (Note 2)
SS _{BW}	Small Signal Bandwidth	400	200	MHz	V _{IN} = ±100mV _{PP} , R _L = 100Ω C _L ≤ 10pF
P _{BW}	Power Bandwidth	100			V _{IN} = ±4V, R _L = 100Ω C _L ≤ 10pF
t _r , t _f	Rise Time Fall Time	1.2	1.7	ns	R _L = 100Ω, C _L ≤ 10pF V _{IN} = 0.5V
t _{pd}	Propagation Delay Time	2.0		ns	R _L = 100Ω, C _L ≤ 10pF V _{IN} = 0.5V

Note 1: Absolute Maximum Ratings indicate limits beyond which damage to the device may occur. DC and AC electrical specifications do not apply when operating the device beyond its rated operating conditions.

Note 2: Slew rate is measured with 50Ω source impedance at 25°C. Slew rate is measured between V_O = +5V and -5V.

Note 3: The test circuit consists of the human body model of 120pF in series with 1500Ω.

Note 4: The maximum power dissipation is a function of T_{J(max)}, θ_{JA} and T_A. The maximum allowable power dissipation at any ambient temperature is P_D = (T_{J(max)} - T_A)/θ_{JA}.

Note 5: Limits are guaranteed by testing, correlation or periodic characterization.



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