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Low Power, 400MHz High Speed Triple Buffer

CVA4401

FEATURES

- **Slew Rate 11000V/µs**
- **Wide Bandwidth. 400MHz**
- **Output Current. 150mA**
- **Wide Supply Voltage . . . . . ±3V to ±18V**
- **Supply Current. 5mA**
- **Short Circuit Product**
- **Low Bias Current**

APPLICATIONS

- **CRT Amplifier Drivers**
- **Coaxial Cable Driver**

GENERAL DESCRIPTION

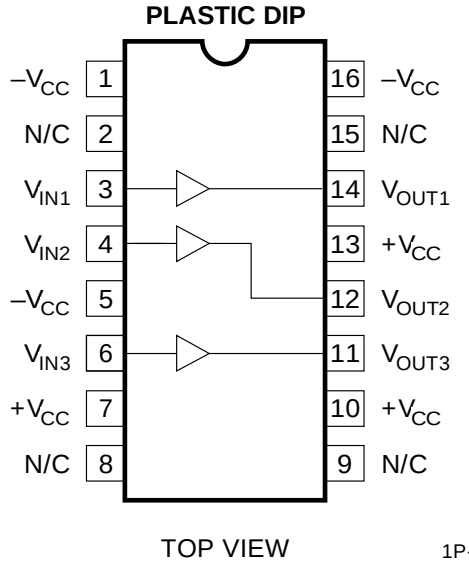
The CVA4401 is a low power, wide bandwidth triple buffer amplifier. The CVA4401 delivers a -3dB bandwidth of 400MHz, 150mA, and 11000V/µs while only drawing 5mA of supply current. The CVA4401 operates over a wide supply voltage range of ±5V to ±18V.

This product is an excellent choice for driving the video signal from Pre-Amp active load CRT driver.

ORDERING INFORMATION

Part	Package	Temperature Range
CVA4401	Plastic Dip 16 Lead	-20°C to +100°C

PIN CONFIGURATION



TOP VIEW 1P-05

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ABSOLUTE MAXIMUM RATINGS (Note 1)

Supply Voltage . . . . . ±20V
Input Voltage . . . . . ±Vsupply
Storage Temperature Range . . . . . -65°C to +150°C
Lead Temperature
(Soldering 10 seconds) . . . . . 260°C
Power Dissipation . . . . . (Note 4)

ESD Tolerance (Note 3) . . . . . ±2000V
Thermal Resistance (θ_{JA})
N Package . . . . . 95°C/W
Thermal Resistance (θ_{JC})
N Package . . . . . 50°C/W
Maximum Junction Temperature . . . . . 150°C

DC ELECTRICAL CHARACTERISTICS
The following specifications apply for Supply Voltage = ±12V, V_{CM} = 0, $R_L \geq 100K\Omega$ and $R_S = 50\Omega$ unless otherwise noted.

SYMBOL	CHARACTERISTICS	TYP	Limit (Note 5)	UNITS	CONDITIONS
A_{V1}	Voltage Gain 1	0.99	0.96	V/V Min	$R_L = \infty$, $V_{IN} = \pm 10V$
A_{V2}	Voltage Gain 2	0.95	0.90		$R_L = 100\Omega$, $V_{IN} = \pm 10V$
V_{OS}	Offset Voltage	10	50	mV Max	$R_L = \infty$
I_B	Input Bias Current	1	25	µA Max	$R_L = \infty$
R_{IN}	Input Resistance	0.5		MΩ	$R_L = 100\Omega$
C_{IN}	Input Capacitance	3.5		pF	
R_O	Output Resistance	3	10	Ω Max	$R_L = 100\Omega$, $V_{IN} = \pm 2V$
I_S	Supply Current	5	7.5	mA Max	$R_L = \infty$
V_O	Output Swing	8	8	±V Min	$R_L = 100\Omega$, $V_{IN} = \pm 10V$
I_{OUT}	Output Current	150	100	mA	$V_{IN} = 10V$

AC ELECTRICAL CHARACTERISTICS
The following specifications apply for Supply Voltage = ±12V, V_{CM} = 0, $R_L \geq 100K\Omega$ and $R_S = 50\Omega$ unless otherwise noted.

SYMBOL	CHARACTERISTICS	TYP	Limit (Note 5)	UNITS	CONDITIONS
SR_1	Slew Rate 1	11000	8000	V/µs	$V_{IN} = \pm 10V$, $R_L = 100\Omega$ (Note 2)
SS_{BW}	Small Signal Bandwidth	400	200	MHz	$V_{IN} = \pm 100mV_{PP}$, $R_L = 100\Omega$ $C_L \leq 10pF$
P_{BW}	Power Bandwidth	100			$V_{IN} = \pm 4V$, $R_L = 100\Omega$ $C_L \leq 10pF$
t_r, t_f	Rise Time Fall Time	1.2	1.7	ns	$R_L = 100\Omega$, $C_L \leq 10pF$ $V_{IN} = 0.5V$
t_{pd}	Propagation Delay Time	2.0		ns	$R_L = 100\Omega$, $C_L \leq 10pF$ $V_{IN} = 0.5V$

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 $P_D = (T_{J(max)} - T_A)/\theta_{JA}$.

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

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