THIRD DOMAIN
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<<< Preliminary Engineering Data >>>

VLC-931
VIDEO LEVEL COMPARATOR

DESCRIPTION: The VLC-931 is a fast analog comparator designed for use in video systems. Sub-pixel response time and complementary TTL-level outputs make the -931 easy to use. Video level measurement, level outputs make the -931 easy to use. Video level measurement, chroma key switching and other special effects systems are key application areas.

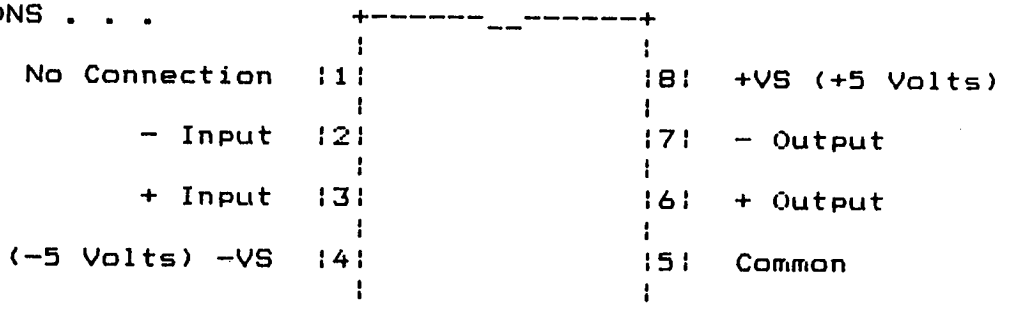
FEATURES:

- <> Sub-Pixel Response Time
- <> + and - 5 Volt Operation
- <> Complementary TTL Outputs
- <> 8-Pin DIP
- <> High Input Impedance

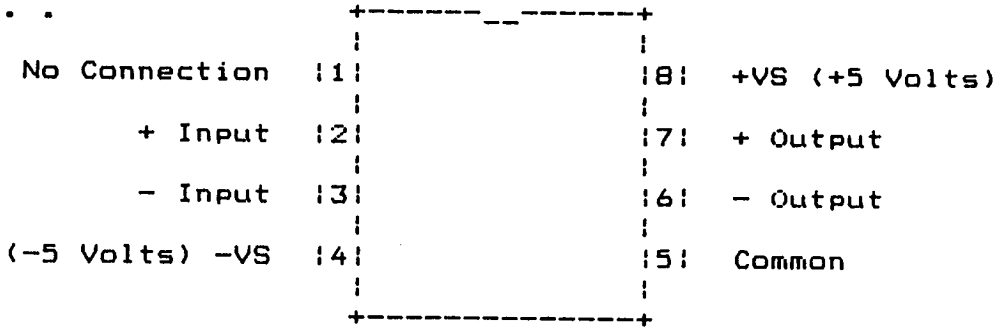
SPECIFICATIONS: +/-VS=+/-5V TA=+25C

Response time (15mV Signal) =	13	nS
Response time (1 V Signal) =	10	nS
Voltage Gain (at DC) =	70	dB
Voltage Gain (at 10 MHz) =	60	dB
Input Bias Current =	5	uA
Input Offset Current =	500	nA
Input Offset Voltage =	2	mV
Offset Voltage Drift =	8	uV/C
Input Resistance =	15	kOhm
Input Capacitance =	3	pF
Common Mode Voltage Range =	4.5	V
Common Mode Rejection Ratio =	60	dB
Differential Input V Range =	5	V
Output Voltage Level - High =	3	V
Output Voltage Level - LOW =	250	mV
Power Supply Current (+5V) =	14	mA
Power Supply Current (-5V) =	7	mA

VLC-931 PACKAGE CONNECTIONS . . .



or inputs and outputs can be used as follows . . .



DISCUSSION OF PIN CONNECTIONS and THEIR FUNCTIONS

PIN [1] - No Connection

PIN [2] - This is an input to the base of a bipolar differential input pair of NPN transistors. The polarity of the input is dependent on the polarity assignment of the complimentary outputs as discussed on the last page.

PIN [3] - This is the other differential input. See above.

PIN [4] - The negative power supply connection for the analog portion of the circuit and the substrate bias. Normally this is -5 Volts. Pin 4 MUST be bypassed to Pin 5 by a low inductance, 0.1-1.0 uF capacitor within 1 inch of the IC pins.

PIN [5] - This is the Common or ground connection and should be a low impedance path from the signal and power system common.

PIN [6] - This is a LSTTL-type output with a polarity assignment as shown on the previous page.

PIN [7] - This is a LSTTL-type output with complimentary polarity.

PIN [8] - The positive power supply connection from the system logic +5 Volt bus. It MUST be bypassed to Pin 5 as was pin 4.