

### LM111 Series – Voltage Comparator CONNECTION DIAGRAM

#### GENERAL DESCRIPTION

The LM111 series are voltage comparators that have input currents approximately a hundred times lower than devices like the  $\mu A710$ . They are designed to operate over a wider range of supply voltages; from standard  $\pm 15V$  op amp supplies down to the single 5V supply used for IC logic. Their output is compatible with RTL, DTL, and TTL as well as MOS circuits. Further, they can drive lamps or relays, switching voltages up to 50V at currents as high as 50mA.

Both the inputs and the outputs of the LM111 series can be isolated from system ground, and the output can drive loads referred to ground, the positive supply or the negative supply. Offset balancing and strobe capability are provided and outputs can be wired OR'ed. Although slower than the  $\mu A710$  (200ns response time vs 40ns) the devices are also much less prone to spurious oscillations. The LM111 series has the same pin configuration as the  $\mu A710$  series.

#### FEATURES

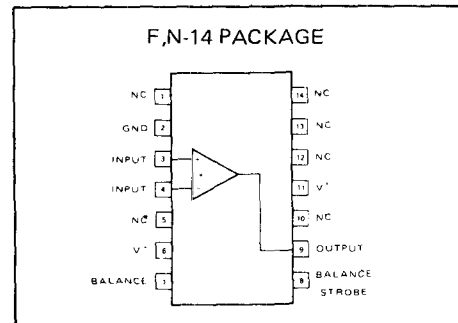
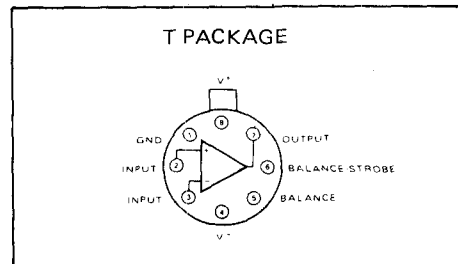
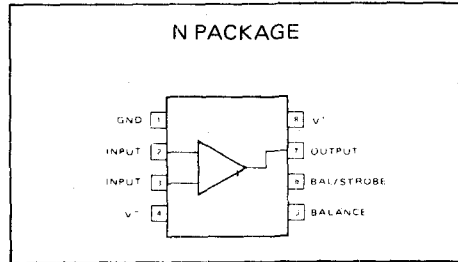
- Operates from single 5V supply
- Maximum input bias current: 150nA (LM311-250nA)
- Maximum offset current: 20nA (LM311 - 50nA)
- Differential input voltage range:  $\pm 30V$
- Power consumption: 135mW at  $\pm 15V$
- High sensitivity – 200V/mV
- Military qualification pending

#### MAXIMUM RATINGS

PARAMETER	RATING	UNIT
Total supply voltage	36	V
Output to negative supply voltage: LM111/LM211, LM311	50 40	V V
Ground to negative supply voltage	30	V
Differential input voltage	$\pm 30$	V
Input voltage	$\pm 15$	V
Power dissipation	500	mW
Output short circuit duration	10	sec
Operating temperature range		$^{\circ}C$
LM111,	-55 to +125	$^{\circ}C$
LM211,	-25 to +85	$^{\circ}C$
LM311,	0 to +70	$^{\circ}C$
Storage temperature range	-65 to +150	$^{\circ}C$
Lead temperature (soldering, 10sec)	300	$^{\circ}C$

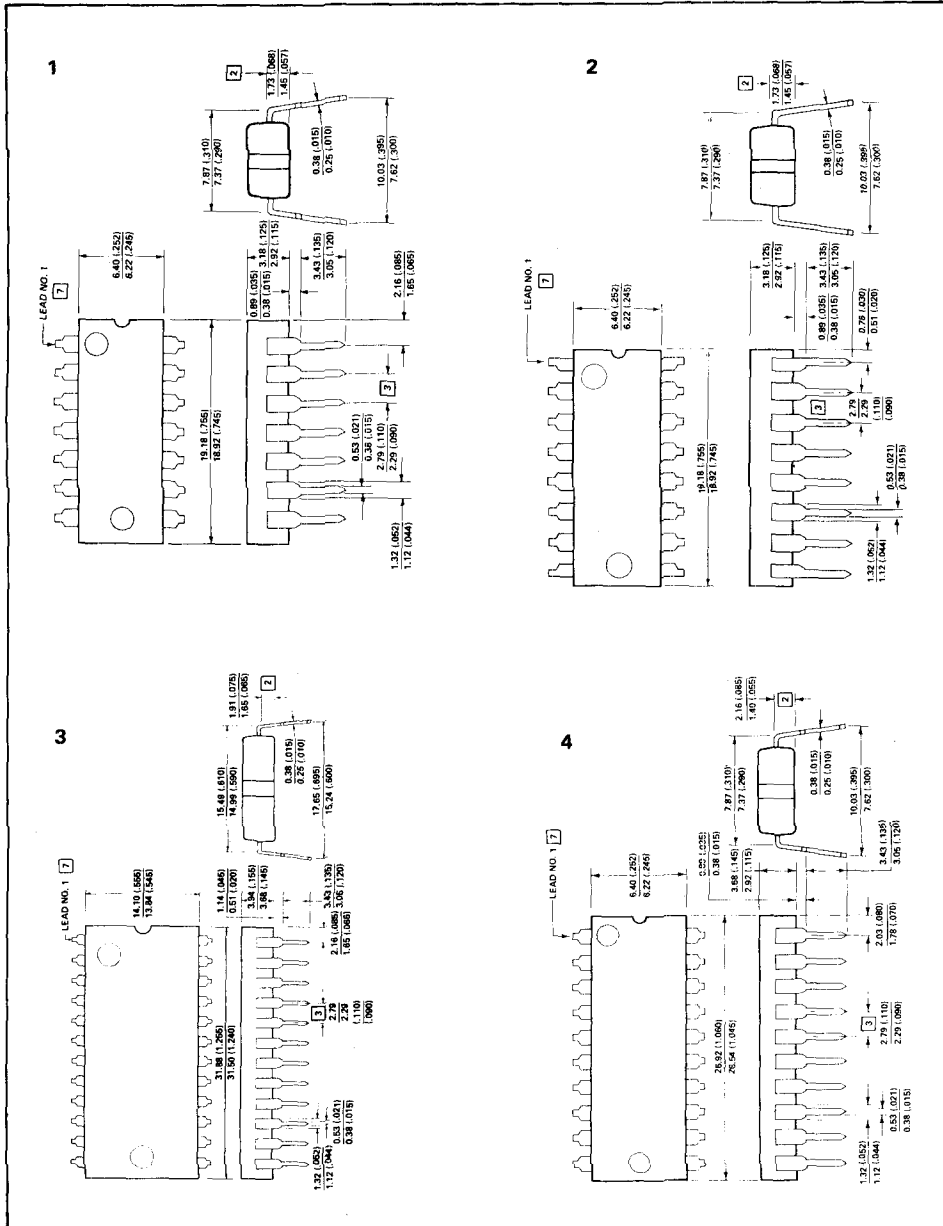
#### REFERENCE TABLE

TYPE NO	STOCK NO.	CONNECTION DRAWG NO.
LM111F	55988C	1
LM111T	55989A	7
LM311T	55990D	7
LM311N	55991B	8
LM311N-14	55992X	1



PLEASE QUOTE STOCK NO. AND MANUFACTURERS PART NO. WHEN ORDERING

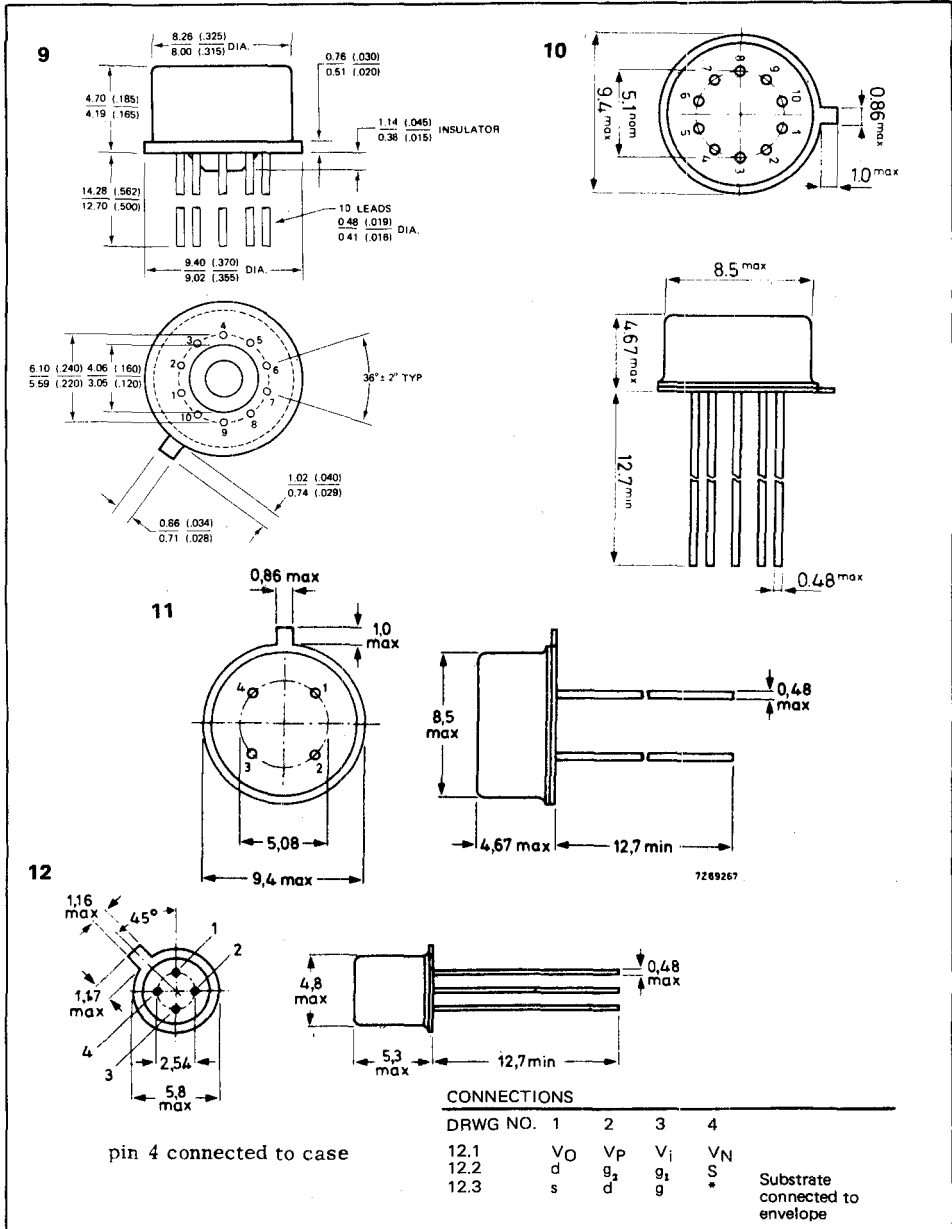




PLEASE QUOTE STOCK NO.  
AND MANUFACTURERS PART NO. WHEN ORDERING





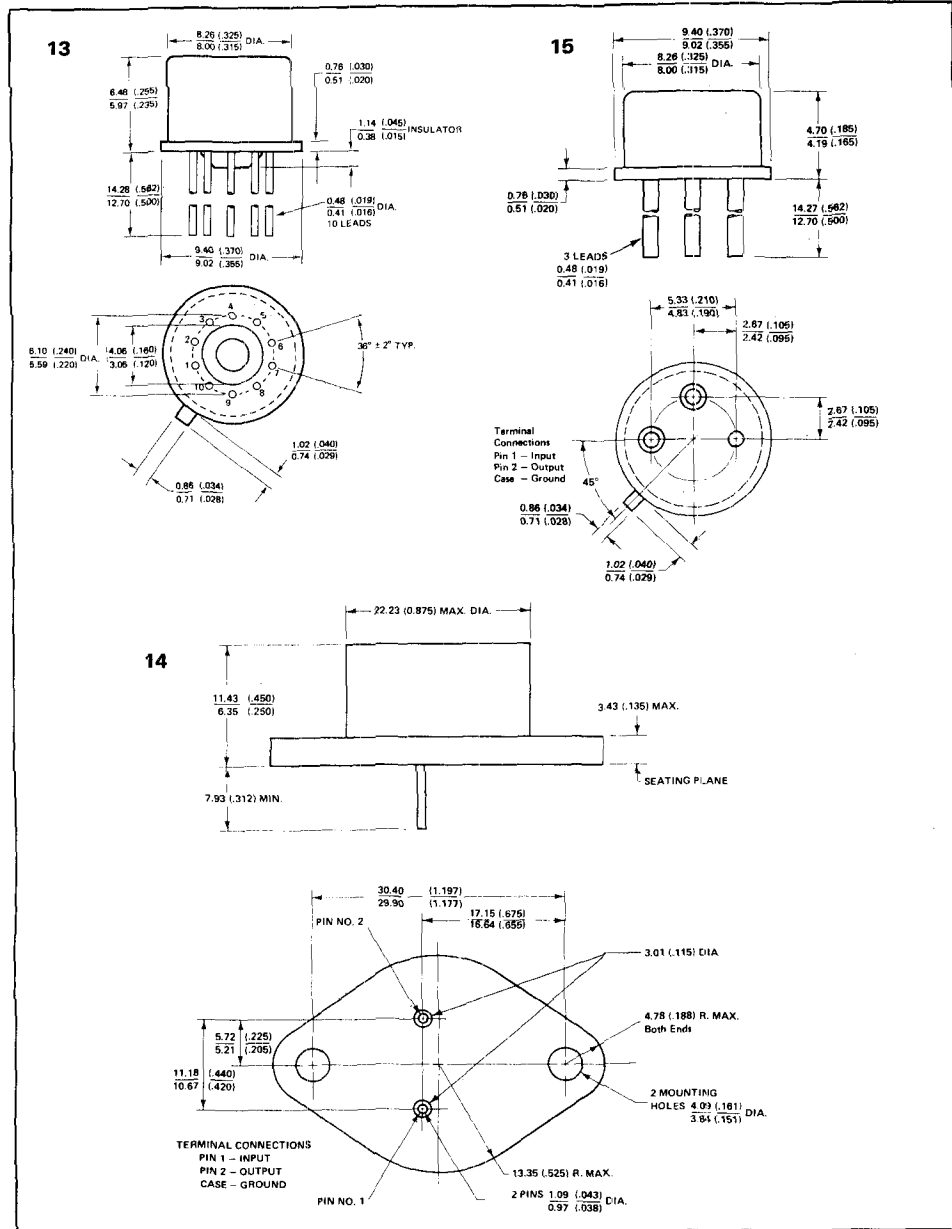


PLEASE QUOTE STOCK NO.  
AND MANUFACTURERS PART NO. WHEN ORDERING

**III GEMINI**

# Signetics

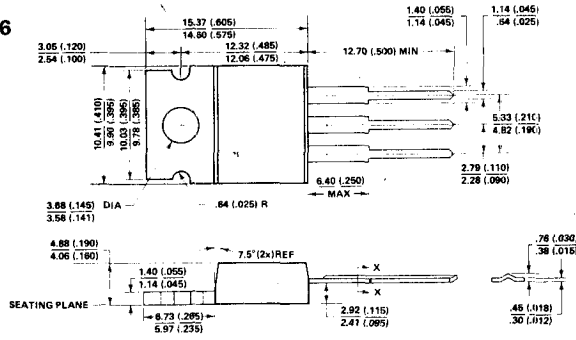
## Outline Drawings



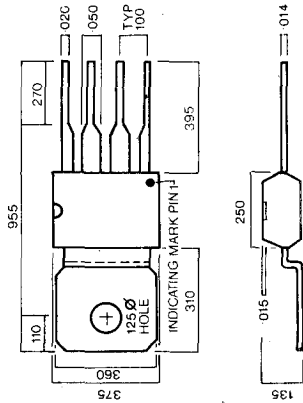
**ITT GEMINI**

FOR CURRENT PRICES PHONE  
HARLOW (0279) 29644

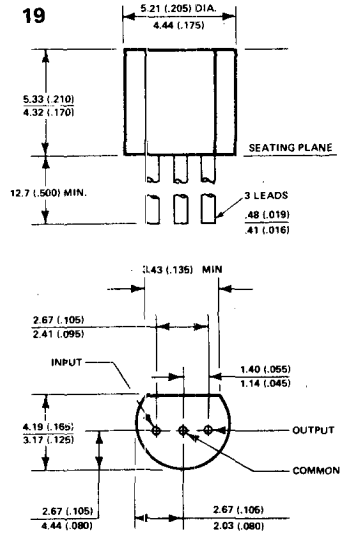
16



17



19



PLEASE QUOTE STOCK NO.  
AND MANUFACTURER'S PART NO. WHEN ORDERING

**TTT GEMINI**

