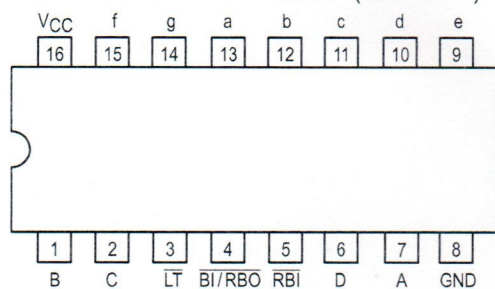The SN... ...BCD to 7-Segment Decoder consisting of NAND gates, input buffers and seven AND-OR-INVERT gates. Seven NAND gates and one driver are connected in pairs to make BCD data and its complement available to the seven decoding AND-OR-INVERT gates. The remaining NAND gate and three ... buffers provide lamp test, blanking input/ripple-blanking input for the ...

The circuit accepts ... binary-coded-decimal (BCD) and, depending on the state of the auxiliary inputs, decodes this data to drive other components. The relative positive logic output levels, as well as conditions required at the auxiliary ...s, are shown in the truth tables.

The ... circuit incorporates automatic leading and/or trailing edge zero-b... control (RBI and RBO). Lamp Test (LT) may be activated any time when the BI/RBO node is HIGH. Both devices contain an overriding blanking input (BI) which can be used to control the lamp intensity by varying the frequency and duty cycle of the BI input signal or to inhibit the outputs.

∞ Lamp Intensity Modulation Capability (BI/RBO)
∞ Internal Pull-Ups Eliminate Need for External Resistors
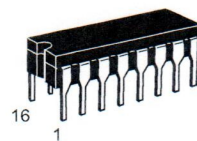∞ Input Clamp Diodes Eliminate High-Speed Termination Effects
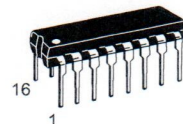
CONNECTION DIAGRAM DIP (TOP VIEW)

V_{CC}	f	g	a	b	c	d	e
16	15	14	13	12	11	10	9

1	2	3	4	5	6	7	8
B	C	$\overline{LT}$	BI/RBO	$\overline{RBI}$	D	A	GND

LOGIC DIAGRAM

a

b

...TPUT

BLANKING INPUT O...
RIPPLE-BLANKING
OUTPUT

RIPPLE-BLANKING
INPUT

LAMP-TEST
INPUT

LOW POWE...

J SUFFIX
CERAMIC
CASE 620-09

16   1

N SUFFIX
PLASTIC
CASE 648...

16   1

16

LOGIC SYMBOL

| 7 | 1 | 2 | 6 | 3 | 5 |

A B C ...

...
BI/
a b c d e f g RBO

13 12 11 10 9 15 14 4
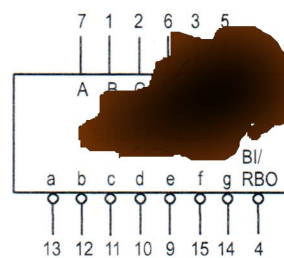
V_{CC} = PIN 16
GND = PIN 8

0.25 U.L.
3.75 (1.25) U.L. (48)

...5 U.L. for Military (54), 3.75 U.L. for Commercial (74).

NUMERICAL DESIGNATIONS — RESULTANT DISPLAYS

| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |

DECIMAL OR FUNCTION	LT	RBI	D	C	B	A	BI/RBO	a	b	c	d	e	f	g	NOTE
0	H	H	L	L	L	L	H	H	H	H	H	H	H	L	1
1	H	X	L	L	L	H	H	L	H	H	L	L	L	L	1
2	H	X	L	L	H	L	H	H	H	L	H	H	L	H	
3	H	X	L	L	H	H	H	H	H	H	H	L	L	H	
4	H	X	L	H	L	L	H	L	H	H	L	L	H	H	
5	H	X	L	H	L	H	H	H	L	H	H	L	H	H	
6	H	X	L	H	H	L	H	H	L	H	H	H	H	H	
7	H	X	L	H	H	H	H	H	H	H	L	L	L	L	
8	H	X	H	L	L	L	H	H	H	H	H	H	H	H	
9	H	X	H	L	L	H	H	H	H	H	L	L	H	H	
10	H	X	H	L	H	L	H	H	H	H	L	H	H	H	
11	H	X	H	L	H	H	H	L	L	H	H	H	H	H	
12	H	X	H	H	L	L	H	H	L	L	H	H	H	L	
13	H	X	H	H	L	H	H	L	H	H	H	H	L	H	
14	H	X	H	H	H	L	H	H	L	L	H	H	H	H	
15	H	X	H	H	H	H	H	H	L	L	L	H	H	H	
BI	X	X	X	X	X	X	L	L	L	L	L	L	L	L	2
RBI	H	L	L	L	L	L	L	L	L	L	L	L	L	L	3
LT	L	X	X	X	X	X	H	H	H	H	H	H	H	H	4

NOTES:
(1) BI/RBO is wired-AND logic serving as blanking input (BI) and/or ripple-blanking output (RBO). The blanking out (BI) must be open or held at a HIGH level when output functions 0 through 15 are desired, and ripple-blanking input (RBI) must be open or at a HIGH level if blanking of a decimal 0 is not desired. X=input may be HIGH or LOW.
(2) When a LOW level is applied to the blanking input (forced condition) all segment outputs go to a LOW level, regardless of the state of any other input condition.
(3) When ripple-blanking input (RBI) and inputs A, B, C, and D are at LOW level, with the lamp test input at HIGH level, all segment outputs go to a HIGH level and the ripple-blanking output (RBO) goes to a LOW level (response condition).
(4) When the blanking input/ripple-blanking output (BI/RBO) is open or held at a HIGH level, and a LOW level is applied to lamp-test input, all segment outputs go to a LOW level.