GENERAL DESCRIPTION

Standard "Gold Doped" TTL is the industry's longest selling digital logic family still in high volume production. Signetics manufacture the following ranges.

54/7400 Series SSI and MSI types
8200 Series MSI
8T Series Interface

6/49 and BS9400 release procedures are available on special request. Please contact ITT Gemini for price and availability information.

7400 SERIES TTL

MAXIMUM RATINGS

Supply Voltage V_{CC}:	7V
Input Voltage V_{IN}:	5.5V
Interemitter Voltage:	5.5V

OPERATING FREE AIR TEMPERATURE RANGE:

54 Series:	−55°C to 125°C
74 Series:	0°C to 70°C
Storage Temperature:	−65°C to 150°C

7400 Series TTL — Dual-In-Line Package

REFERENCE TABLE

TYPE NO.	DESCRIPTION	STOCK NO.	OUTLINE DRWG. NO.	CONNECTION DIAG. NO.
N7400N	Quad 2-input NAND Gate	**55181D**	1	B1
N7401N	Quad 2-input NAND Gate with o/c	**55182B**	1	B2
N7402N	Quad 2-input NOR Gate	**55184R**	1	B3
N7403N	Quad 2-input NAND Gate with o/c	**55185G**	1	B4
N7404N	Hex inverter	**55187C**	1	B5
N7405N	Hex Inverter with o/c	**55188A**	1	B6
N7406N	Hex Inverter w/Buffer/Driver with o/c	**55190B**	1	B7
N7407N	Hex Buffer/Driver with o/c	**55191X**	1	B8
N7408N	Quad 2-input AND Gate	**55192R**	1	B9
N7409N	Quad 2-input AND Gate with o/c	**55193G**	1	B10
N7410N	Triple 3-input NAND Gate	**55195C**	1	B11
N7411N	Triple 3-input NAND Gate	**55196A**	1	B12
N7412N	Triple 3-input NAND Gate with o/c	**55197X**	1	B13
N7413N	Dual NAND Schmitt Trigger	**55198H**	1	B14
N7414N	Hex Schmitt Trigger	**55199F**	1	B15
N7416N	Hex Inverter Buffer/Driver with o/c	**55200H**	1	B17
N7417N	Hex Buffer/Driver with o/c	**55201F**	1	B18
N7420N	Dual 4-Input NAND Gate	**55202D**	1	B19
N7421N	Dual 4-Input AND Gate	**55203B**	1	B20
N7426N	Quad 2-Input NAND Gate with o/c	**55205R**	1	B22
N7427N	Triple 3-Input NOR Gate	**55206G**	1	B23
N7428N	Quad 2-input NOR Buffer	**55207E**	1	B24
N7430N	8-input NAND Gate	**55208C**	1	B25
N7432N	Quad 2-input OR Gate	**55209A**	1	B26
N7433N	Quad 2-input NOR Buffer	**55210D**	1	B27
N7437N	Quad 2-input NAND Buffer	**55212X**	1	B28
N7438N	Quad 2-input NAND Buffer with o/c	**55213R**	1	B29
N7440N	Dual 4-input NAND Buffer	**55216C**	1	B30
N7442N	BCD-to Decimal Decoder	**55217A**	2	B31
N7443N	Excess 3-to-Decimal Decoder	**55218X**	2	B31
N7444N	Excess 3-gray-to-Decimal Decoder	**55219H**	2	B31
N7445N	BCD-to-Decimal Decoder/Driver with o/c	**55220X**	2	B34
N7446AN	BCD-to-7 Segment Decoder/Driver	**55221R**	2	B35
N7447AN	BCD-to-7 Segment Decoder/Driver	**55222G**	2	B35
N7448N	BCD-to-7 Segment Decoder/Driver	**55223E**	2	B37
N7450N	Expandable Dual 2-Wide 2-Input AOI	**55224C**	1	B38
N7451N	Dual 2-Wide 2-Input AOI Gate	**55225A**	1	B39
N7453N	4-Wide 2-Input AOI Gate (Expandable)	**55226X**	1	B41
N7454N	4-Wide 2-Input AOI Gate	**55227H**	1	B42
N7460N	Dual 4-Input Expander	**55228F**	1	B44
N7470N	J-K F/F	**55229D**	1	B49
N7472N	J-K Master-Slave F/F	**55230G**	1	B51
N7473N	Dual J-K Master-Slave F/F	**55231E**	1	B52
N7474N	Dual D-Type Edge-Triggered F/F	**55232C**	1	B53
N7475N	Quad Bistable-Latch	**55233A**	2	B54

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FOR CURRENT PRICES PHONE
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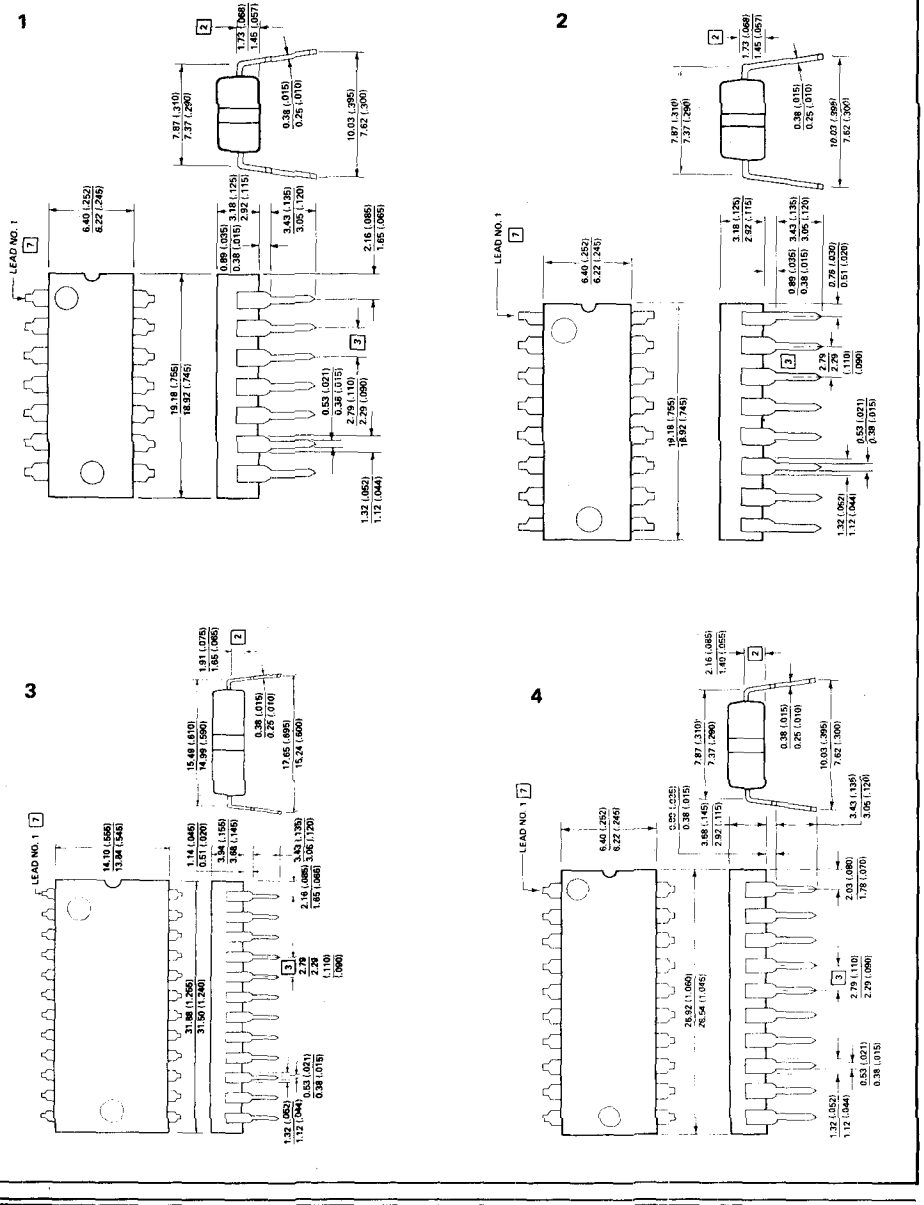

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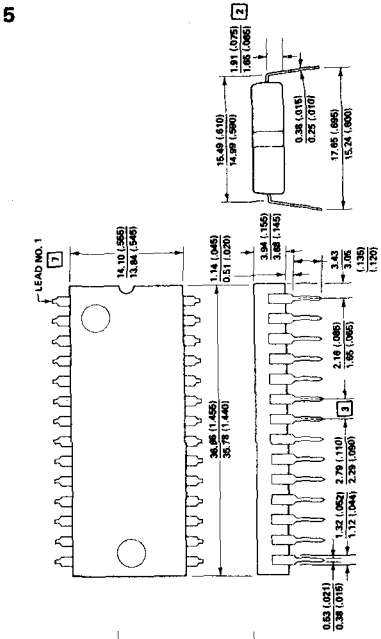
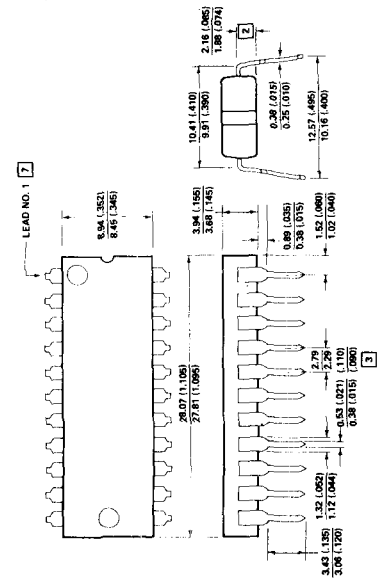
5


LEAD NO. 1
15.49 (.610)
14.99 (.590)
1.91 (.075)
1.65 (.065)
0.38 (.015)
0.25 (.010)
17.65 (.695)
15.24 (.600)
14.10 (.555)
13.84 (.545)
1.14 (.045)
0.51 (.020)
3.94 (.155)
3.68 (.145)
3.43
3.05
(.135)
(.120)
2.16 (.085)
1.65 (.065)
36.85 (1.450)
35.79 (1.440)
2.79 (.110)
2.29 (.090)
1.32 (.052)
1.12 (.044)
0.53 (.021)
0.38 (.015)

6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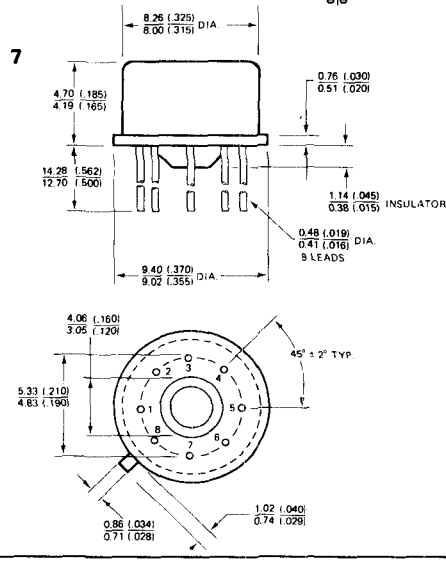
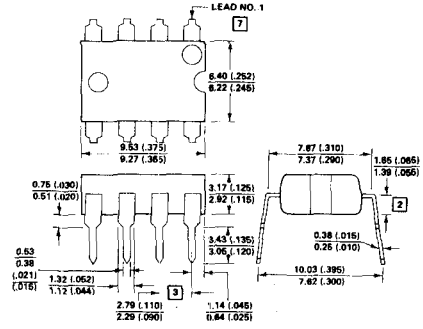
1.80 (.071)
10.41 (.410)
9.91 (.390)
0.38 (.015)
0.25 (.010)
12.57 (.495)
10.16 (.400)
8.64 (.3521)
8.45 (.345)
3.94 (.155)
3.68 (.145)
0.89 (.035)
0.38 (.015)
1.52 (.060)
1.02 (.040)
2.79
2.29
(.110)
(.090)
0.53 (.021)
0.38 (.015)
25.07 (1.105)
27.81 (1.095)
1.32 (.052)
1.12 (.044)
3.43 (.135)
3.06 (.120)

7


8.26 (.325)
8.00 (.315) DIA.
4.70 (.185)
4.19 (.165)
0.76 (.030)
0.51 (.020)
14.28 (.562)
12.70 (.500)
1.14 (.045)
0.38 (.015) INSULATOR
0.48 (.019)
0.41 (.016) DIA.
8 LEADS
9.40 (.370)
9.02 (.355) DIA.
4.06 (.160)
3.05 (.120)
45° ± 2° TYP.
5.33 (.210)
4.83 (.190)
0.86 (.034)
0.71 (.028)
1.02 (.040)
0.74 (.029)

8


LEAD NO. 1
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6.22 (.245)
9.53 (.375)
9.27 (.365)
7.87 (.310)
7.37 (.290)
1.85 (.065)
1.39 (.055)
0.75 (.030)
0.51 (.020)
3.17 (.125)
2.92 (.115)
0.38 (.015)
0.25 (.010)
3.43 (.135)
3.06 (.120)
0.53
0.38
(.021)
(.015)
1.32 (.052)
1.12 (.044)
10.03 (.395)
7.62 (.300)
2.79 (.110)
2.29 (.090)
1.14 (.045)
0.64 (.025)

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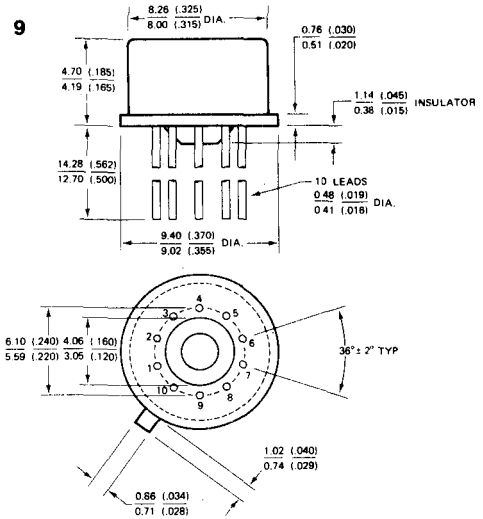

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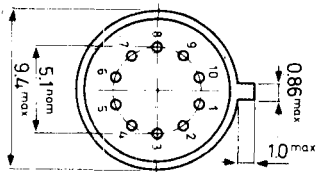

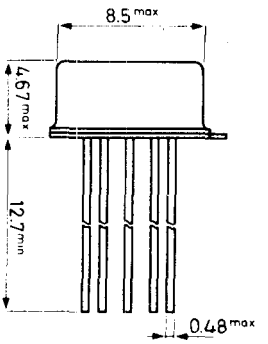

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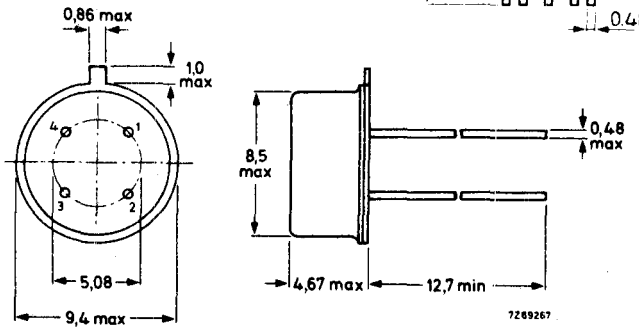

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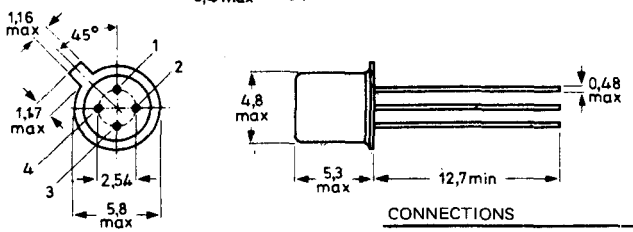
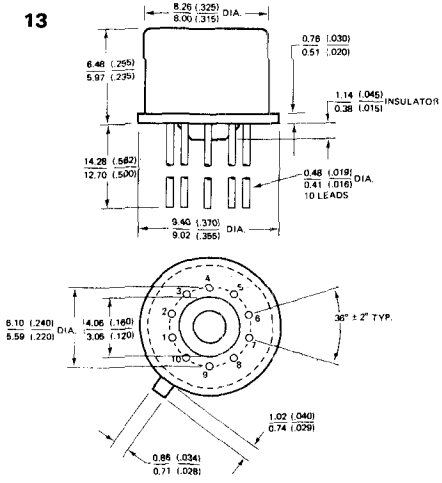


pin 4 connected to case

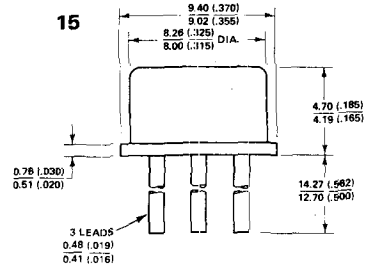
CONNECTIONS

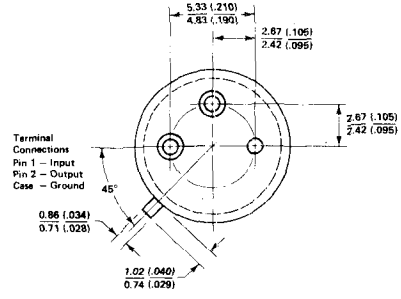
DRWG NO.	1	2	3	4	
12.1	V_O	V_P	V_i	V_N	Substrate connected to envelope
12.2	d	g_2	g_1	S	
12.3	s	d	g	*	

13

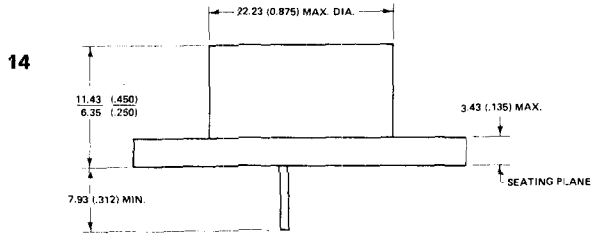

8.26 (.325)
8.00 (.315) DIA.
0.76 (.030)
0.51 (.020)
6.48 (.255)
5.97 (.235)
1.14 (.045)
0.38 (.015) INSULATOR
14.28 (.562)
12.70 (.500)
0.48 (.019)
0.41 (.016) DIA.
10 LEADS
9.40 (.370)
9.02 (.355) DIA.
6.10 (.240)
5.59 (.220) DIA.
4.06 (.160)
3.06 (.120)
36° ± 2° TYP.
1.02 (.040)
0.74 (.029)
0.86 (.034)
0.71 (.028)

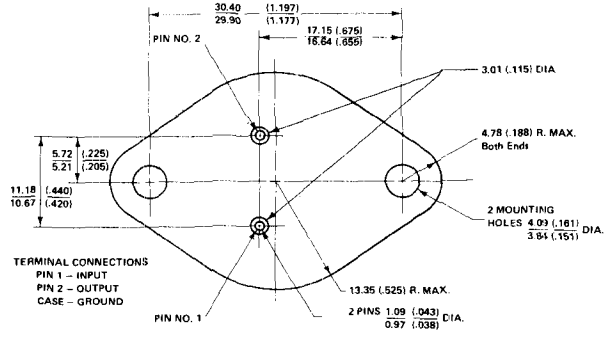
15


9.40 (.370)
9.02 (.355)
8.26 (.325)
8.00 (.315) DIA.
4.70 (.185)
4.19 (.165)
0.76 (.030)
0.51 (.020)
14.27 (.562)
12.70 (.500)
3 LEADS
0.48 (.019)
0.41 (.016)

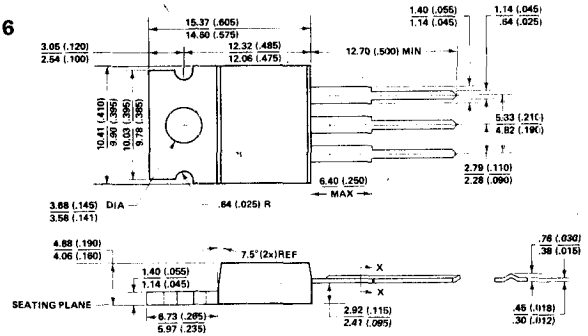

5.33 (.210)
4.83 (.190)
2.67 (.105)
2.42 (.095)
2.67 (.105)
2.42 (.095)
Terminal
Connections
Pin 1 – Input
Pin 2 – Output
Case – Ground
45°
0.86 (.034)
0.71 (.028)
1.02 (.040)
0.74 (.029)

14


22.23 (0.875) MAX. DIA.
11.43 (.450)
6.35 (.250)
3.43 (.135) MAX.
SEATING PLANE
7.93 (.312) MIN.


30.40 (1.197)
29.90 (1.177)
17.15 (.675)
16.64 (.655)
PIN NO. 2
3.01 (.115) DIA.
4.78 (.188) R. MAX.
Both Ends
5.72 (.225)
5.21 (.205)
11.18 (.440)
10.67 (.420)
2 MOUNTING
HOLES 4.03 (.161)
3.84 (.151) DIA.
TERMINAL CONNECTIONS
PIN 1 – INPUT
PIN 2 – OUTPUT
CASE – GROUND
13.35 (.525) R. MAX.
PIN NO. 1
2 PINS 1.09 (.043)
0.97 (.038) DIA.

16



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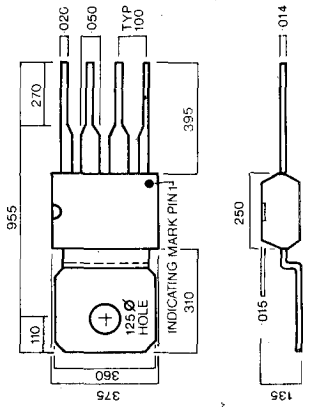

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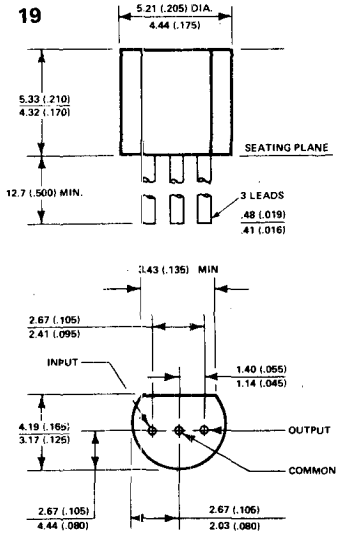

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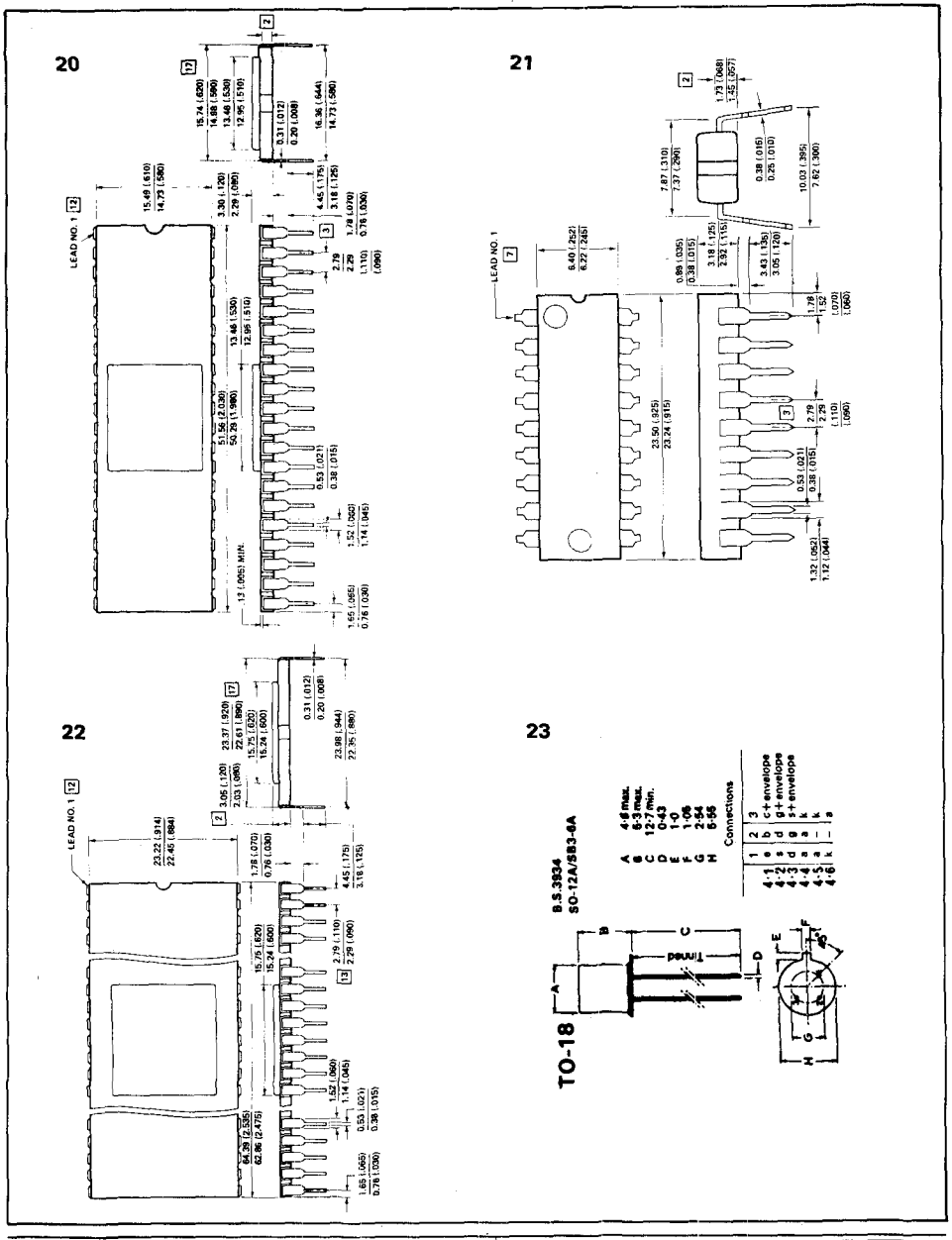
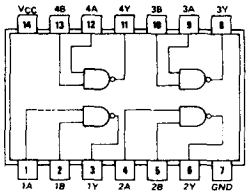

20
21
22
23
LEAD NO. 1
TO-18
BS.3934
SO-12A/SB3-6A
Connections
A 4·6 max.
B 5·3 max.
C 12·7 min.
D 0·43
E 1·0
F 1·06
G 2·54
H 5·55
4-1 e b c+ envelope
4-2 s d g+ envelope
4-3 d g s+ envelope
4-4 a a k
4-5 a — k
4-6 k — a

B1



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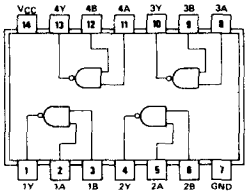

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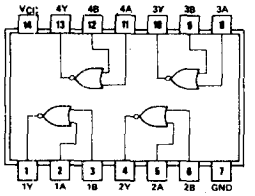

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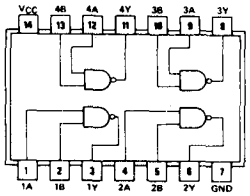

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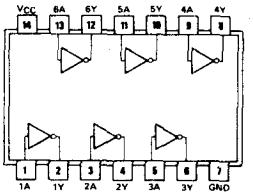

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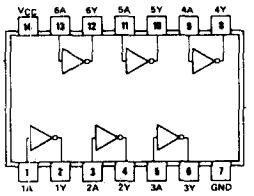

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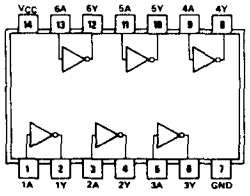

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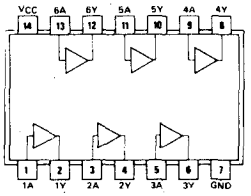

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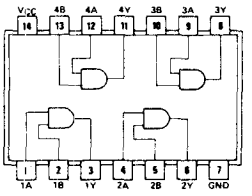

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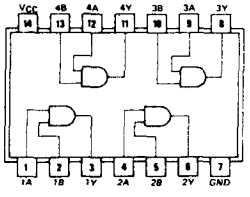

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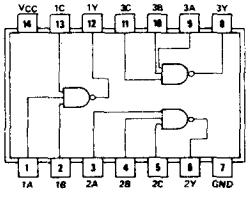

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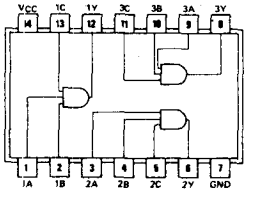

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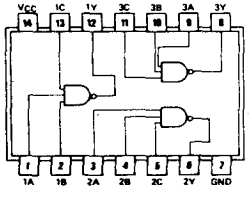

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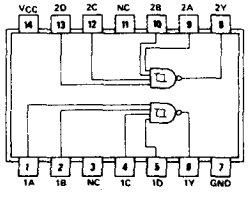

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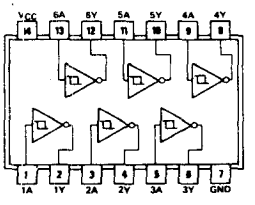

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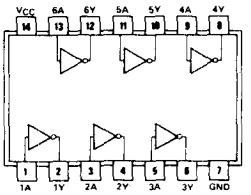

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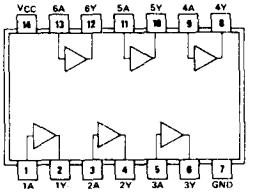

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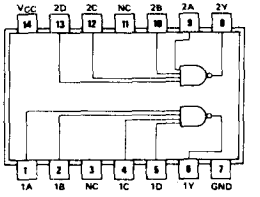

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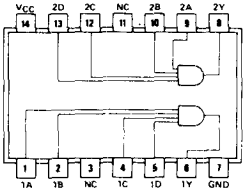

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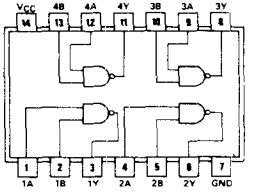

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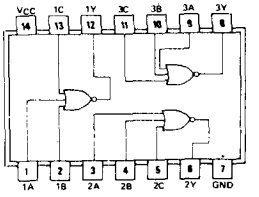

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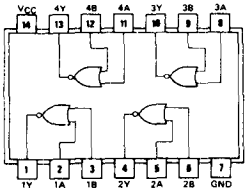

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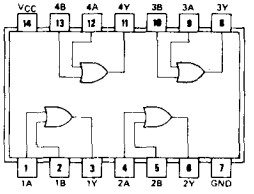

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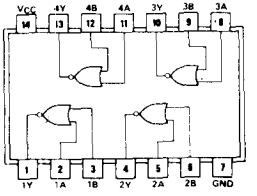

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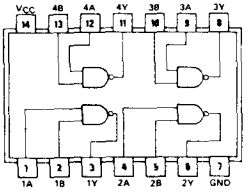

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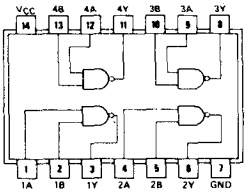

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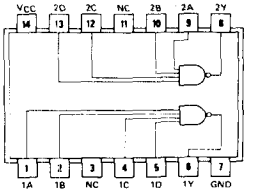

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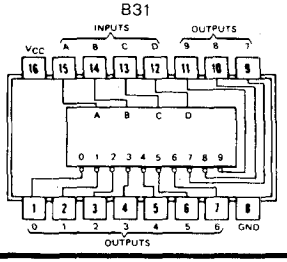

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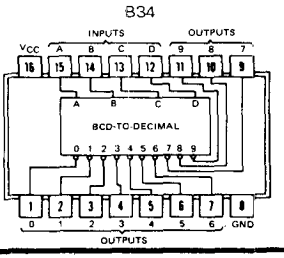

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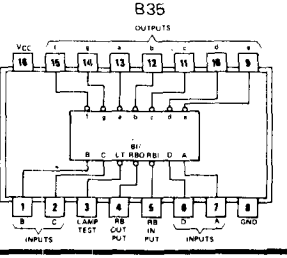

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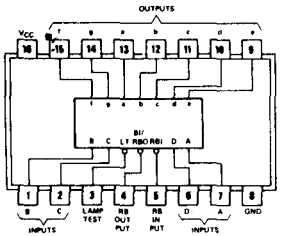
B37



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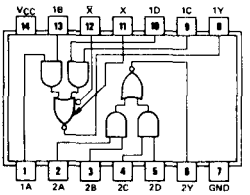

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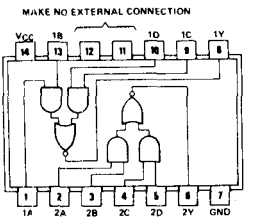

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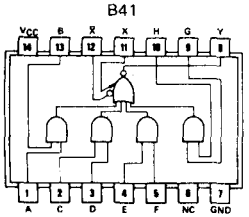

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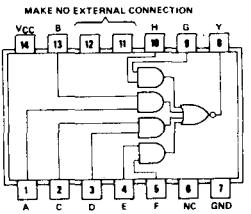

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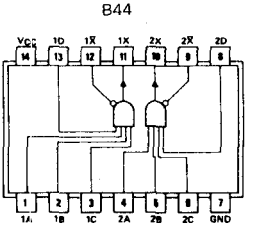

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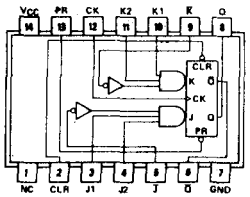

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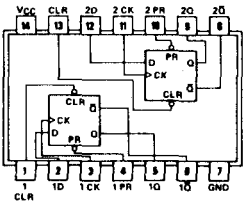

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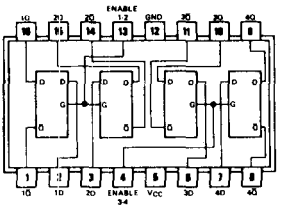

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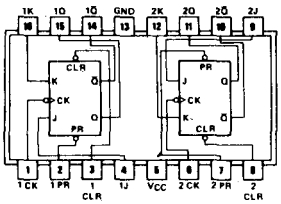

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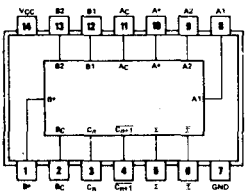

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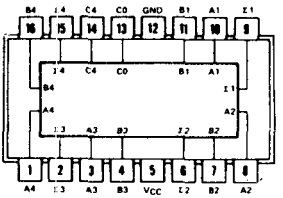

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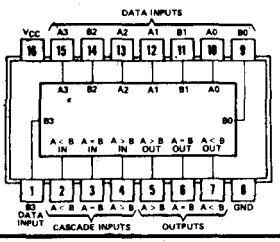

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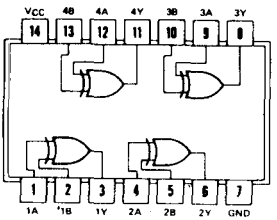

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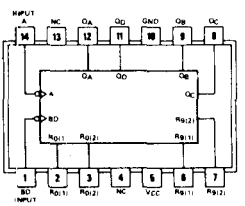

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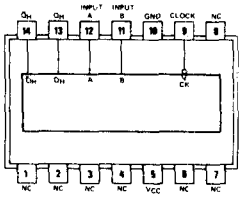

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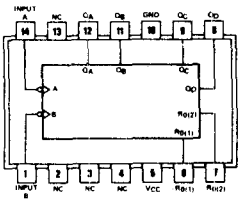

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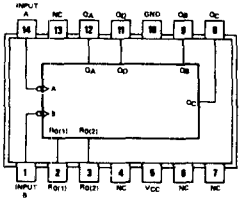

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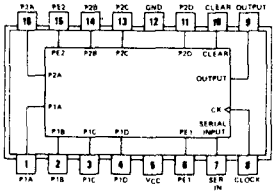

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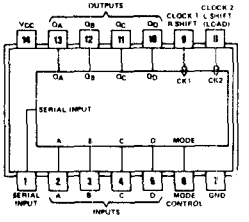

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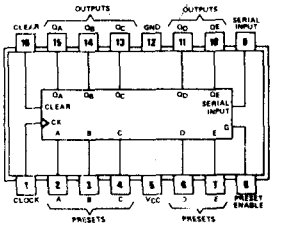

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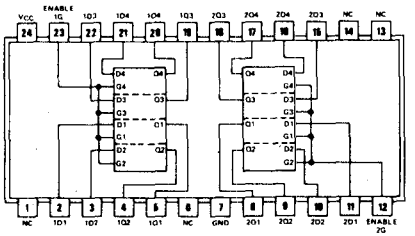

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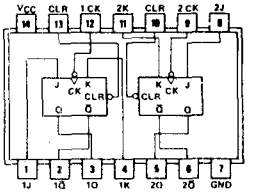

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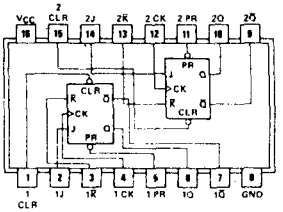

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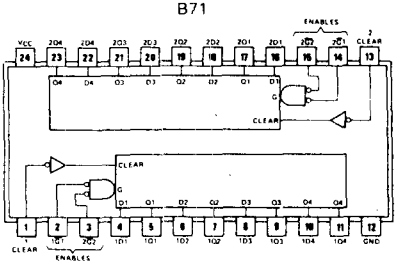

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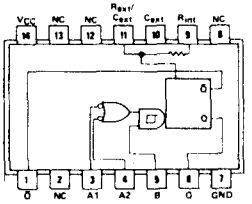

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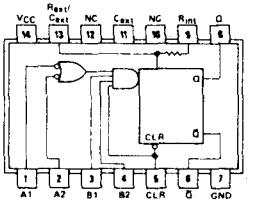

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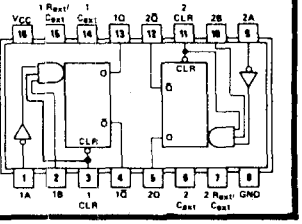

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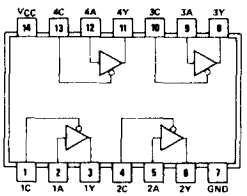

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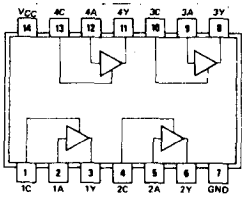

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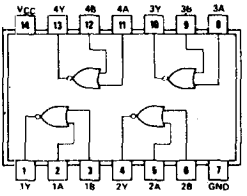

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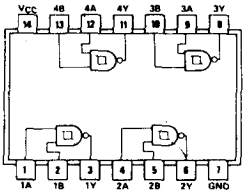

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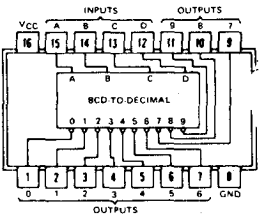

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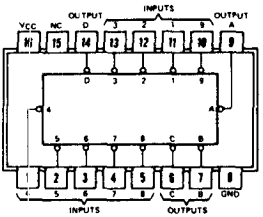

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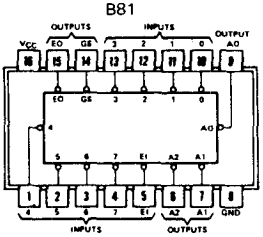

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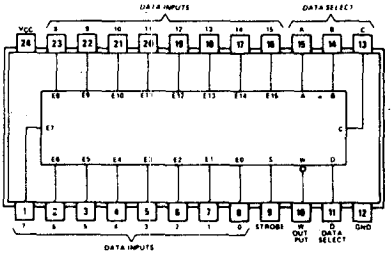

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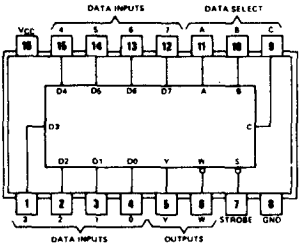

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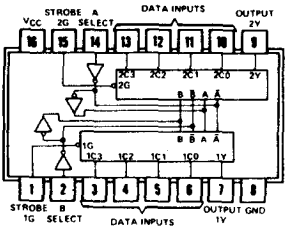

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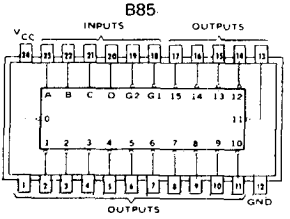

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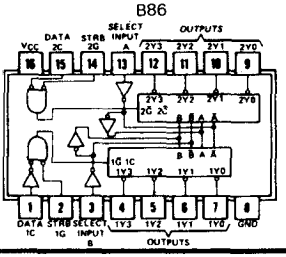

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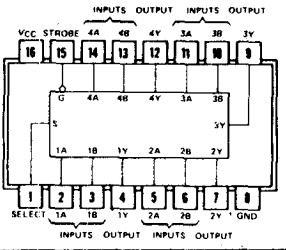

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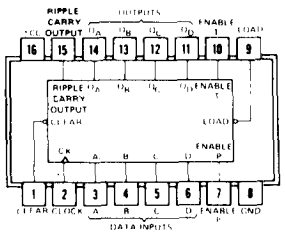

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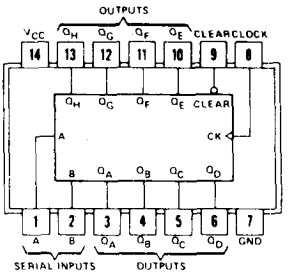

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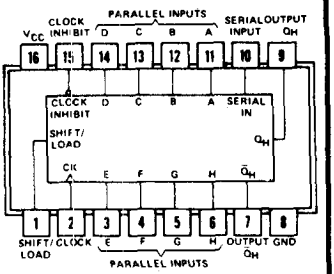

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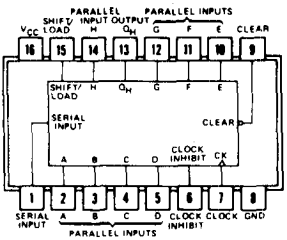

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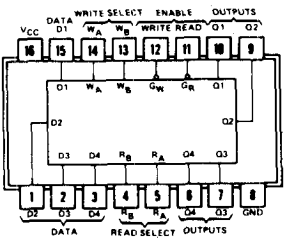

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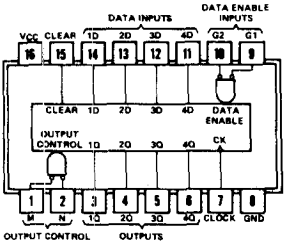

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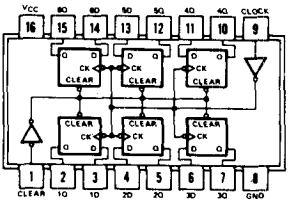

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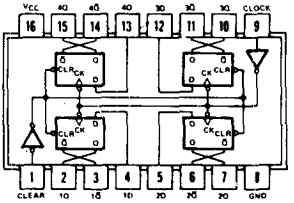

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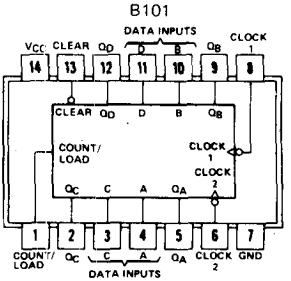

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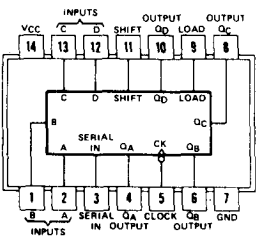

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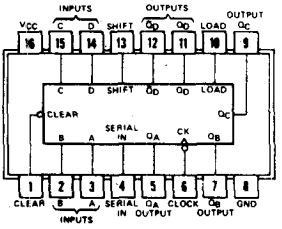

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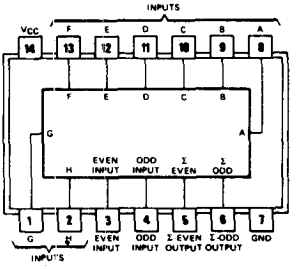

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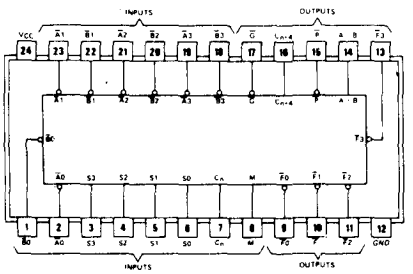

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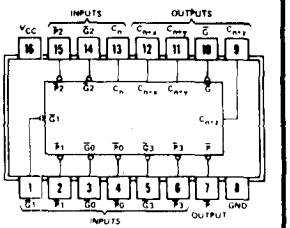

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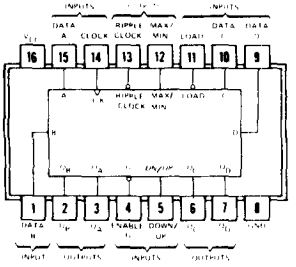

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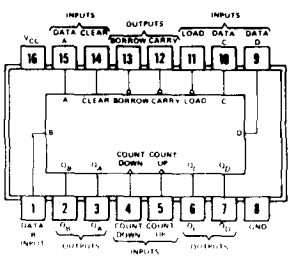

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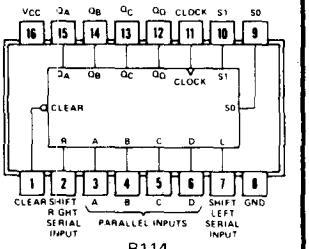

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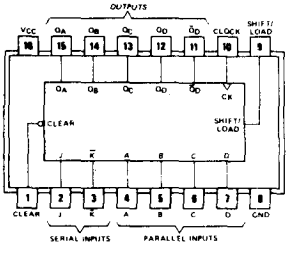

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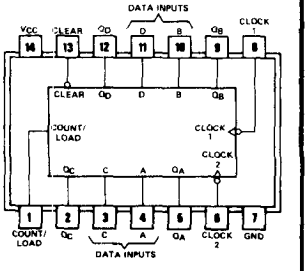

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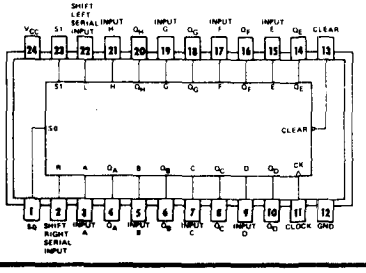

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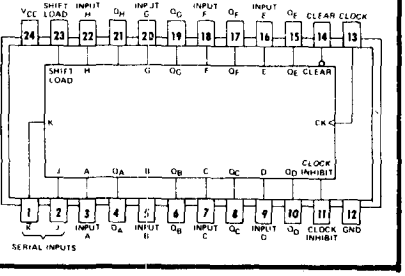

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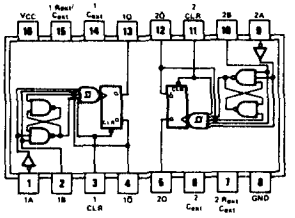
B118



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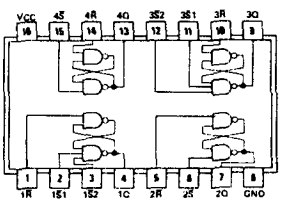

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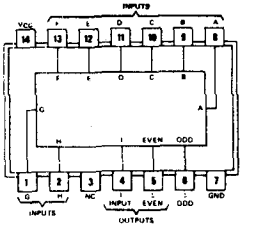

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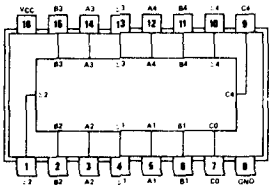

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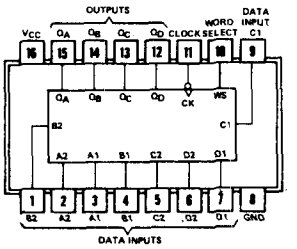

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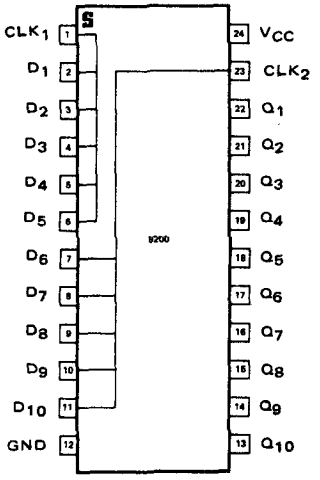

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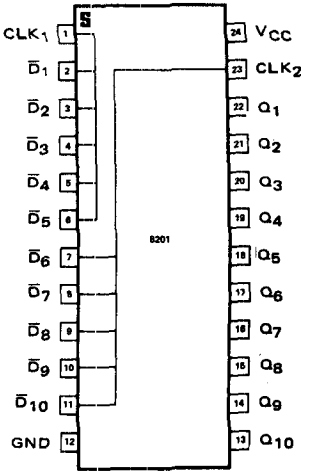

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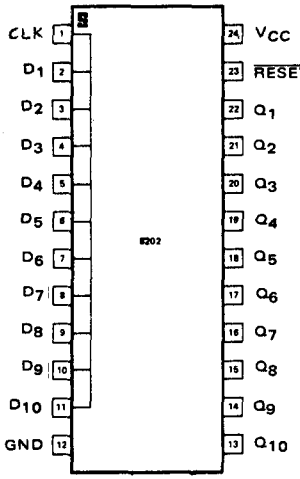
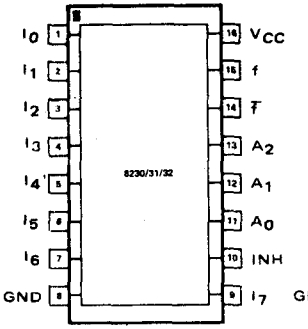


B127/8/9



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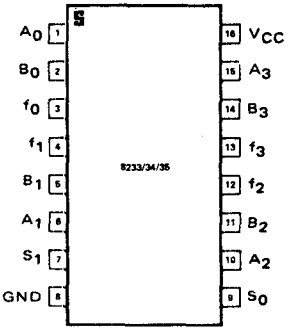
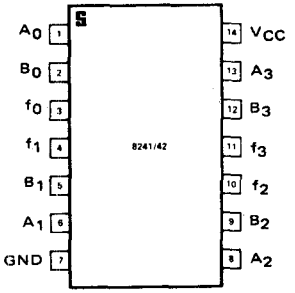


B133/4



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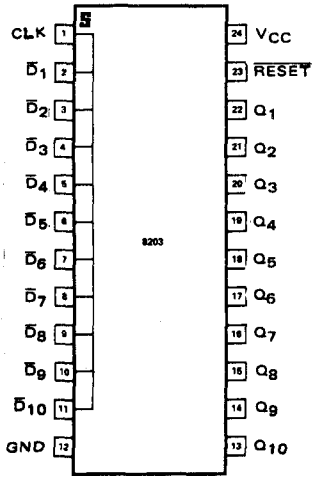

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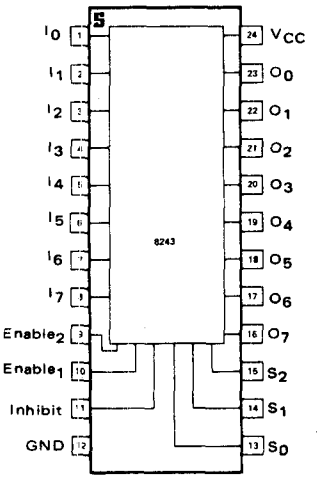

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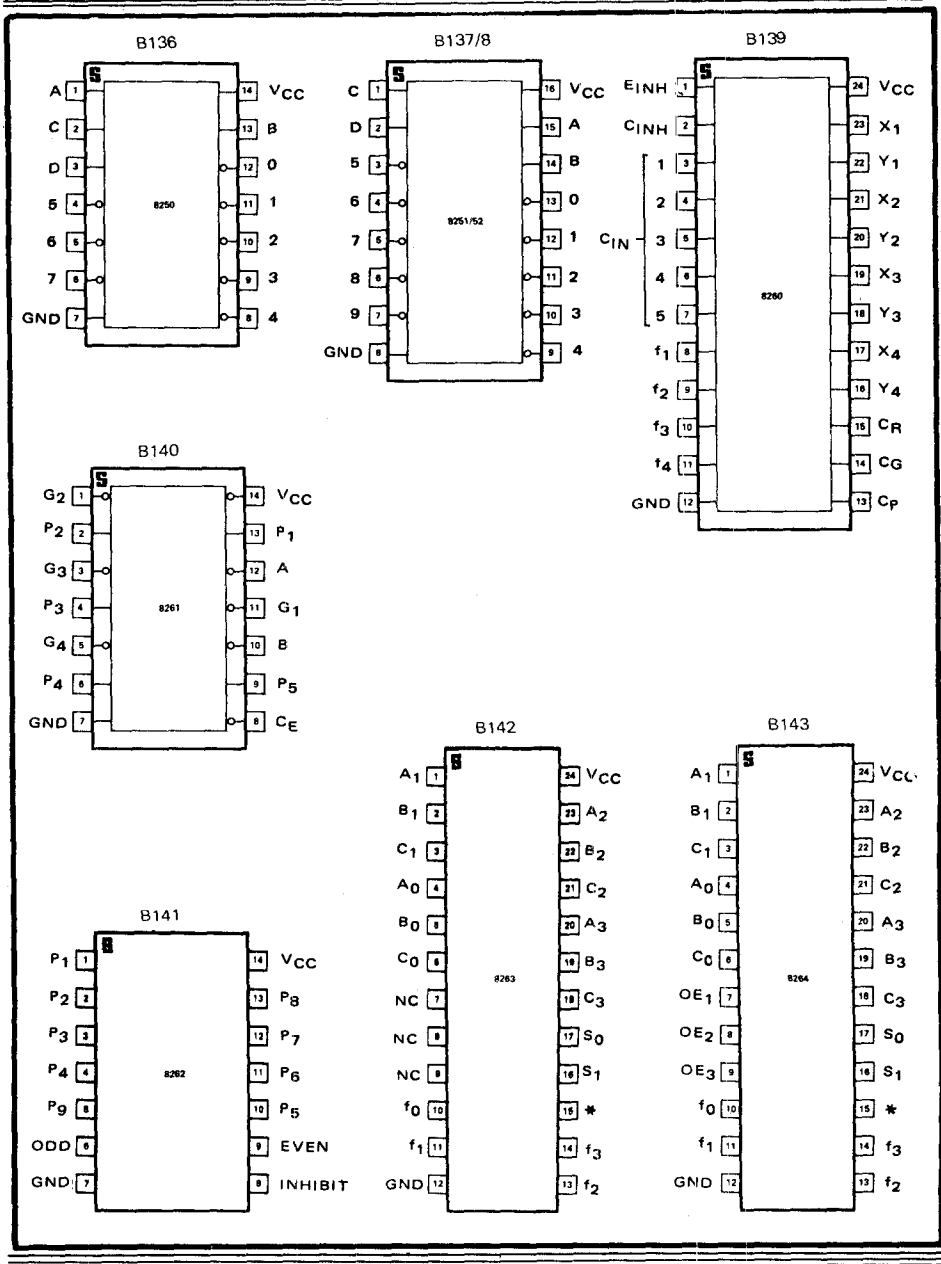

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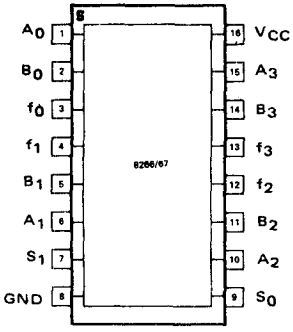
B144/5



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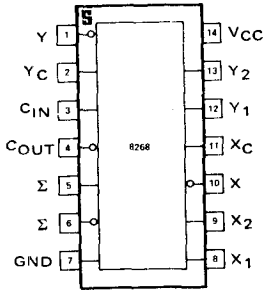

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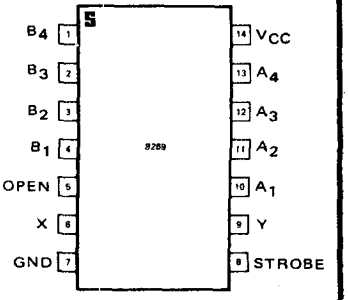

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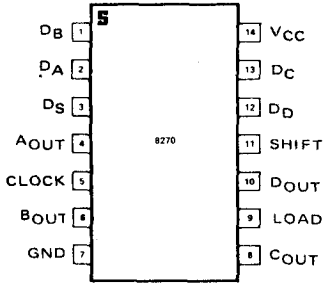

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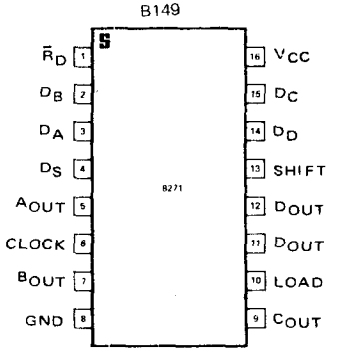

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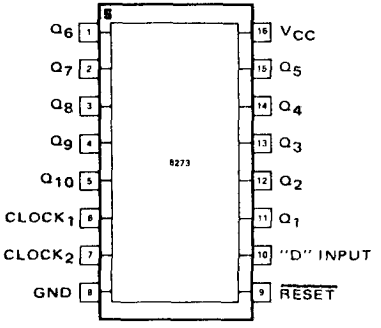

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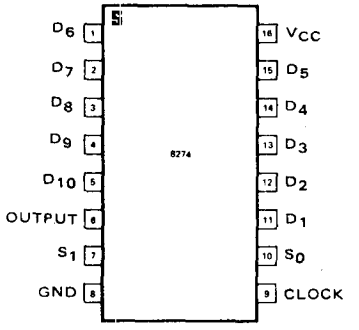

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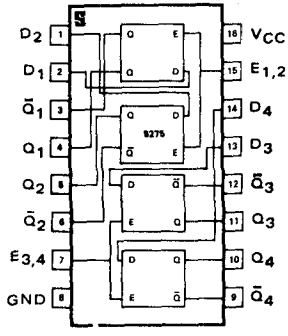
Connection Diagram

B152



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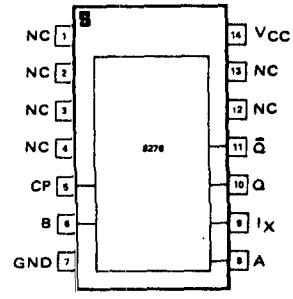

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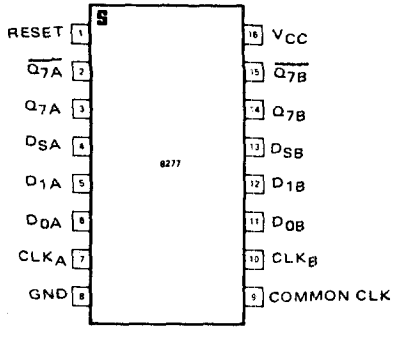

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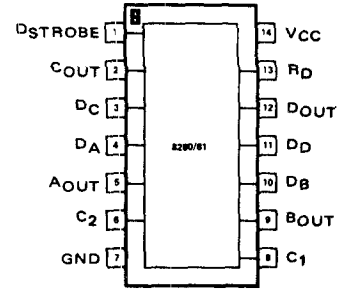

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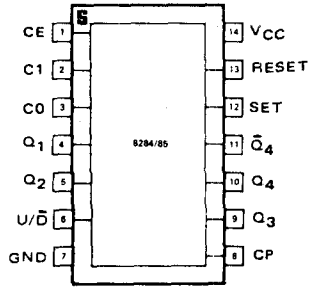

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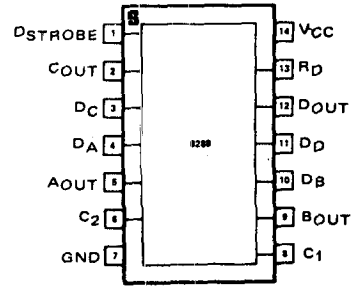

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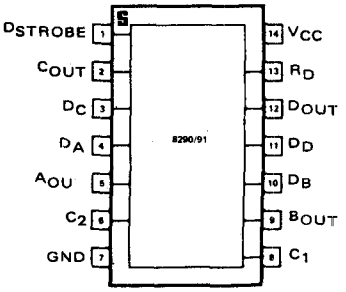
B160/1



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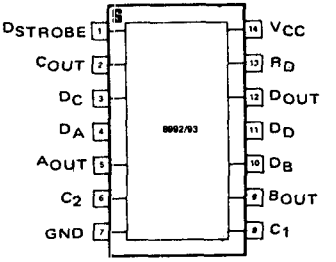

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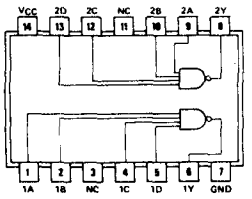

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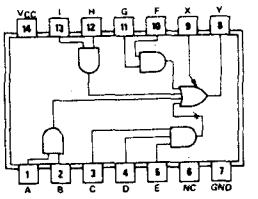

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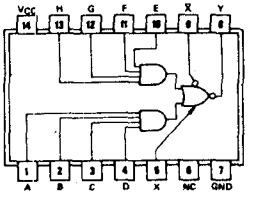

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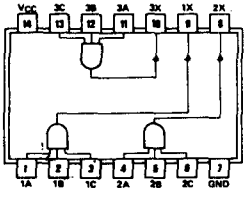

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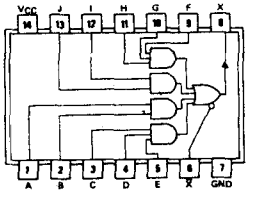

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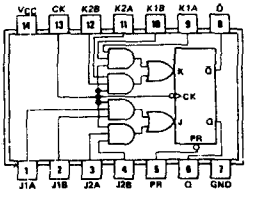

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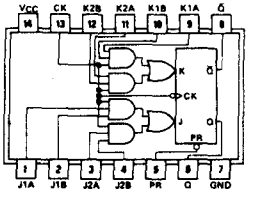

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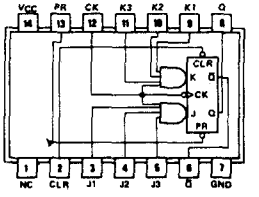

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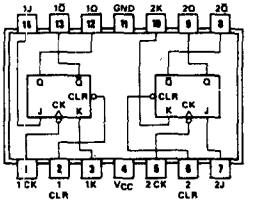

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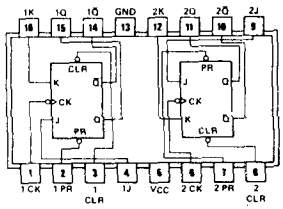
Connection Diagram

B173



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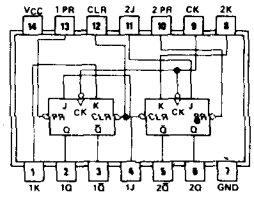

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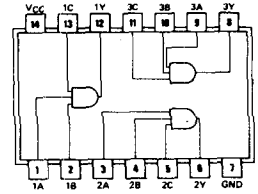

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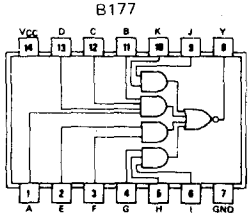

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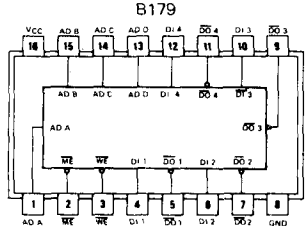

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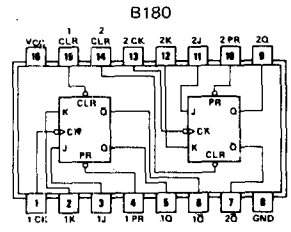

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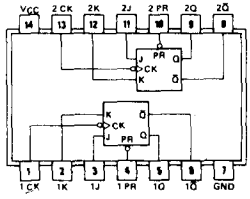

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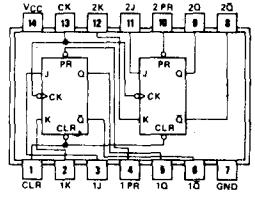

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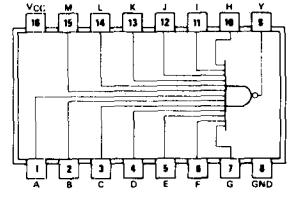

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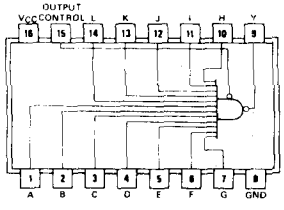

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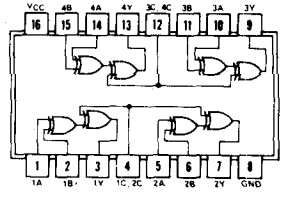

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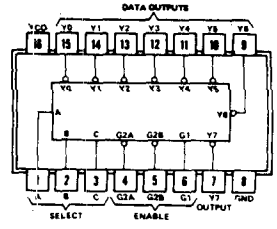

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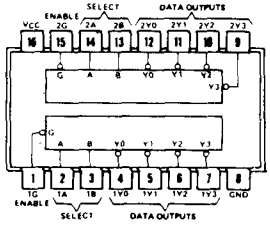

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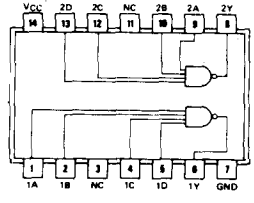

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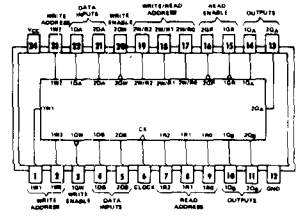

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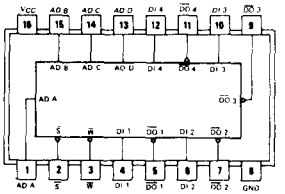
B190



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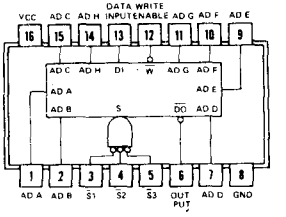

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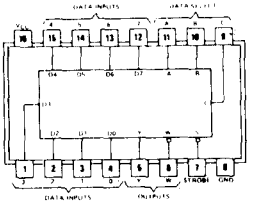

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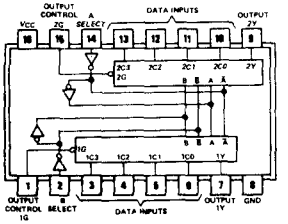

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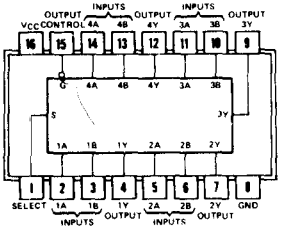

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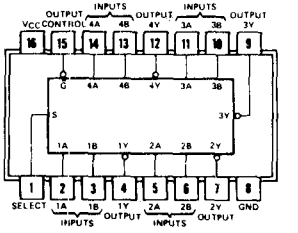

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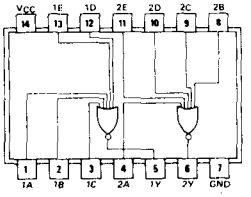

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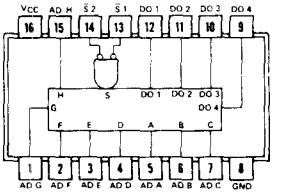

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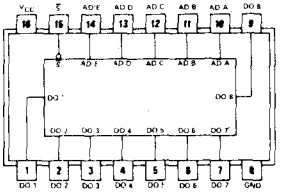

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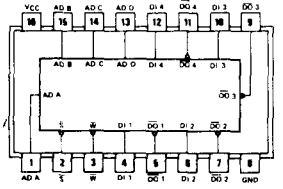

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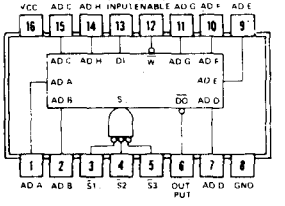

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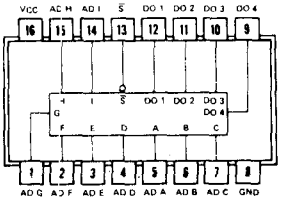

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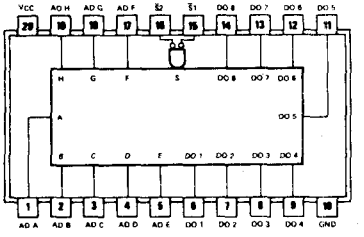

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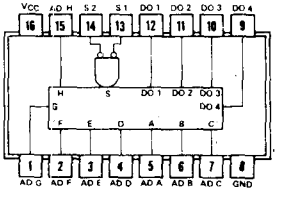

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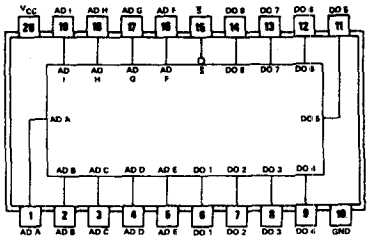

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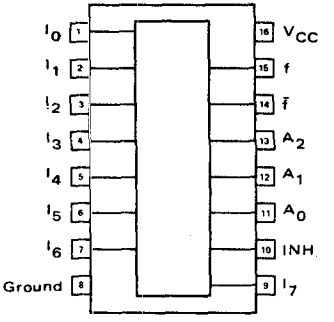

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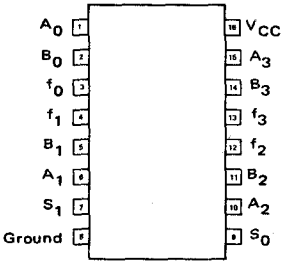

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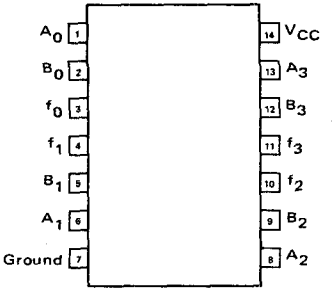

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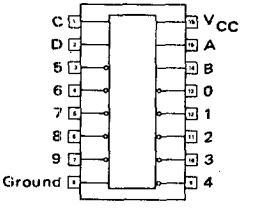

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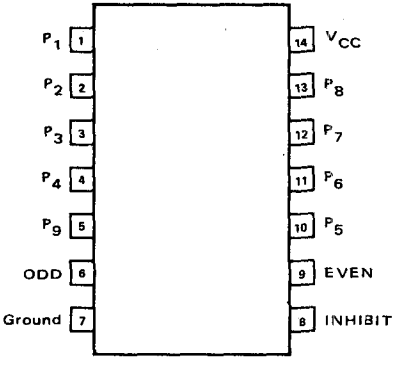

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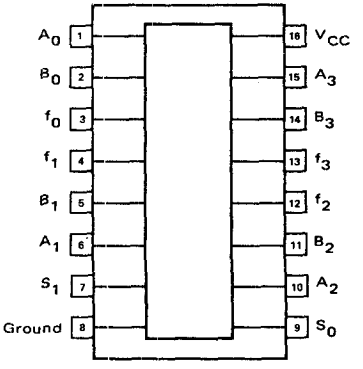

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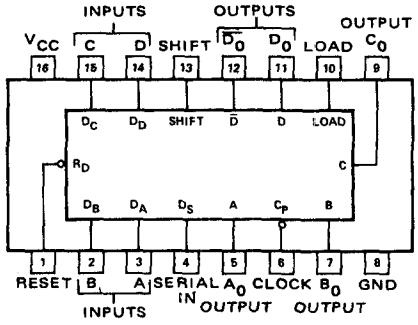

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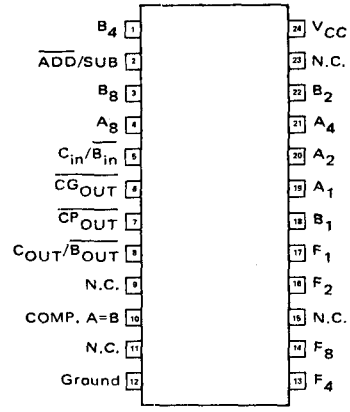

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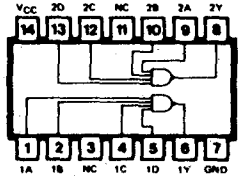

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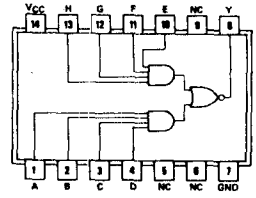

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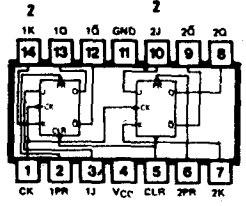

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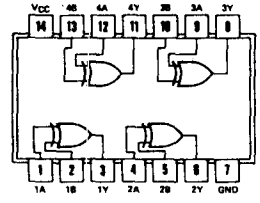

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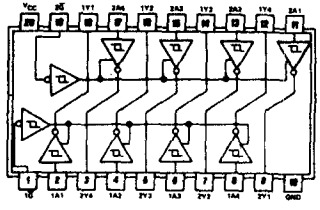

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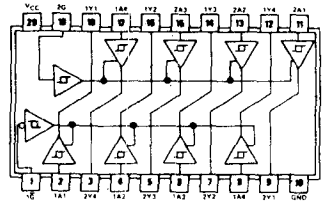

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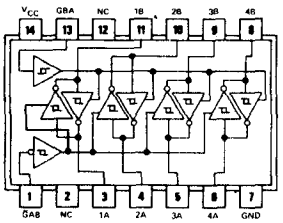

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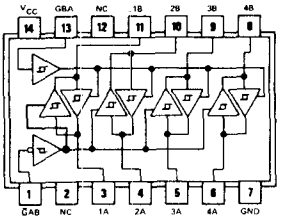

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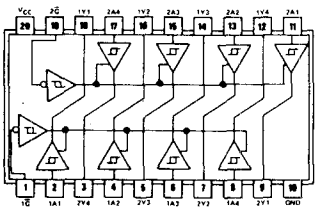

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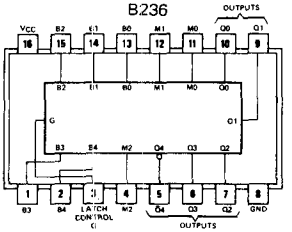

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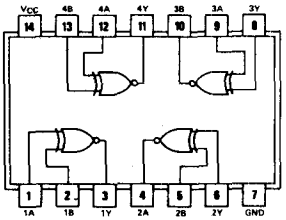

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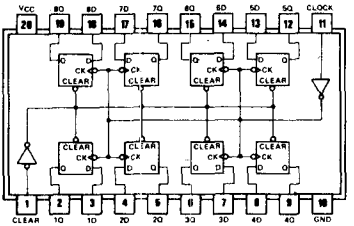

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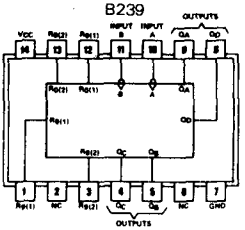

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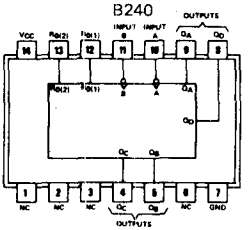

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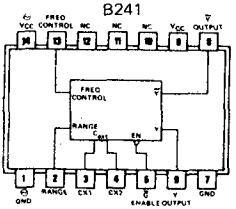

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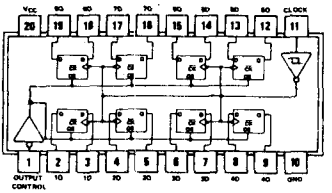
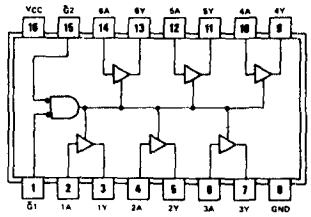


ITT GEMINI

FOR CURRENT PRICES PHONE
HARLOW (0279) 29644

B243



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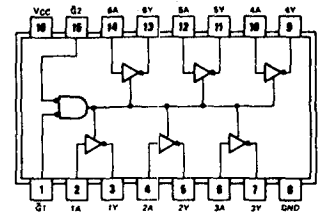

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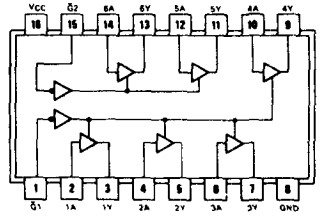

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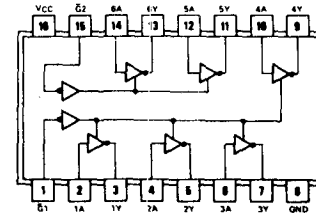

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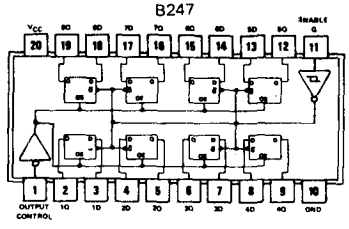

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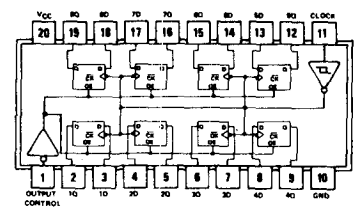

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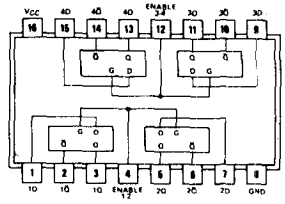

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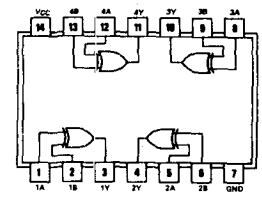

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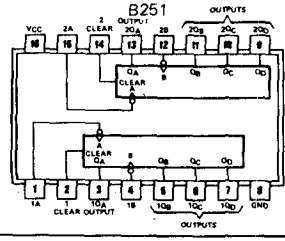

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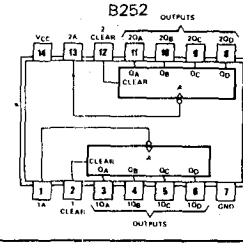
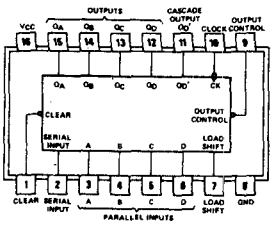


PLEASE QUOTE STOCK NO.
AND MANUFACTURERS PART NO. WHEN ORDERING

ITT GEMINI

B253



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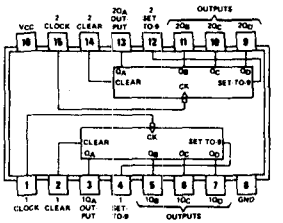

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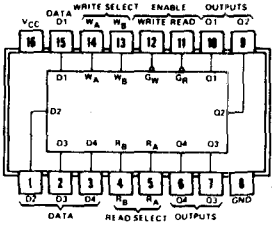

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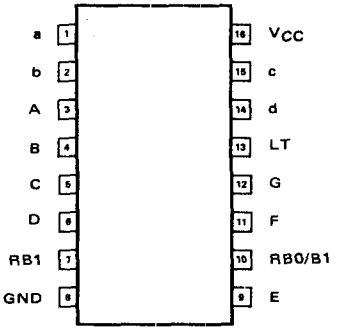

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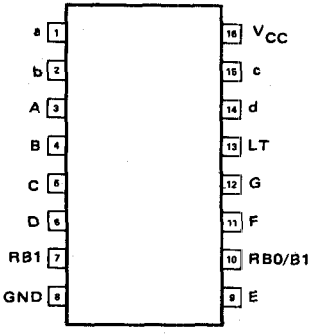

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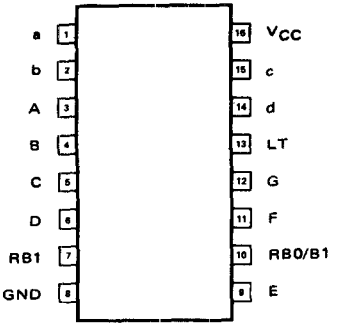
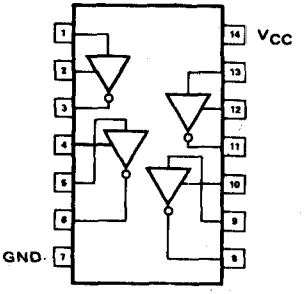
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