

RCSL : 52-AA194

p.p. 1 : 46

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RC STANDARD
FOR SYMBOLS USED IN
PCBA CIRCUIT DIAGRAMS

Abstract : This standard presents the symbols used in PCBA Circuit
Diagrams.

A/S REGNECENTRALEN
1, Falkoneralle
2000Copenhagen F

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SN72709L	A20722	
SN72710N	A20691	
SN72711N	A20241	
SN7400N	A20072	
SN7401N	A20167	
SN7402N	A20073	
SN7404N	A21002	
SN7405N	A20775	
SN7410N	A20168	
SN7420N	A20074	
SN7430N	A20075	
SN7440N	A20076	
SN7442N	A20176	
SN7451N	A20077	

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SN7454N	Dwg.No. A20078
SN7470N	A20079
SN7473N	A20936
SN7474N	A20080
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SN7483N	A20177
SN7490N	A20714
SN7491AN	A20082
SN7492N	A20713
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SN7495N	A20996
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SN74121N	A20692
SN7525N	A20921
TMS7B3001 LA	A20923
TMS7C3003 LA	A20922
DM8220	A21089
DM8520	A20715

This standard replaces :RCSL : 52-AA46

1. REMARKS

In symbols for Integrated Circuits the position of the identification reference is shown with ICx. In the PCBA Circuit Diagrams the x will be replaced by the number of the Integrated Circuit package on the PCBA.

SUPPLEMENT TIL :

RC STANDARD

Symbols for integrated Circuits

RCSL : 52-AA194

LM 305	Dwg. No. A20998
SN7482N.....	A21067
SN75451P.....	A21088
MC1488L.....	A21064
MC1489L.....	A21065

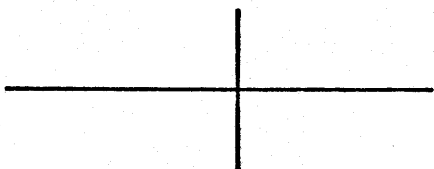
130968LLM
AAGR

1.1



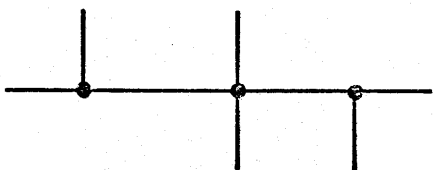
WIRE

1.2



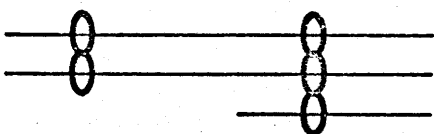
CROSSED WIRE
WITHOUT CONNECTION

1.3



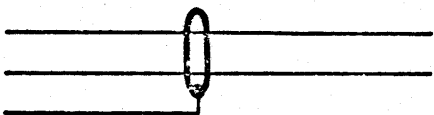
WIRES WITH ELECTRICAL
CONNECTION

1.4



TWISTED WIRES

1.5



SCREENED WIRES

1.6



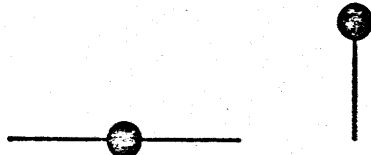
VOLTAGE SUPPLY LEVEL

1.7



GROUND POINT

1.8



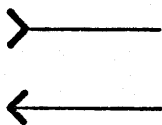
TEST POINT

1.9



CONNECTOR PIN

1.10



JACK (SOCKET)
FEMALE PART
PLUG
MALE PART

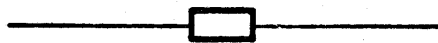
130968LLM
AAGR

1.11



CHASSIS (NOT NECESSARILY
GROUND)

2.1



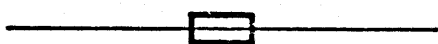
RESISTOR

2.2



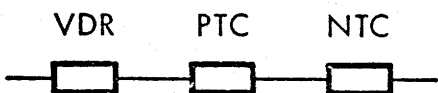
POTENTIOMETER

2.3



FUSE

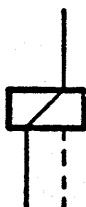
2.4



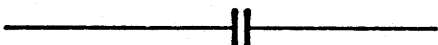
VOLTAGE DEPENDENT RESISTOR

POSITIVE TEMPERATURE COEF -
FICIENT RESISTORNEGATIVE TEMPERATURE COEF -
FICIENT RESISTOR

2.5

RELAY- OR
CONTACTOR COIL

2.6



CAPACITOR

130968LLM

AAGR

2.7



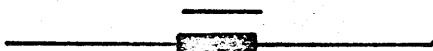
ELECTROLYTIC CAPACITOR

2.8



COIL

2.9



COIL WITH AN IRON CORE

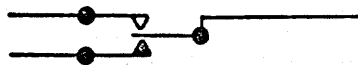
2.10



CONTACT NORMALLY OPEN

CONTACT NORMALLY CLOSED

2.11

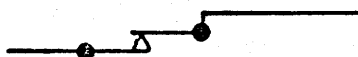


CHANGE OVER CONTACT

130268LLM

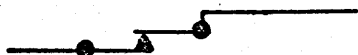
AAGR

2.12



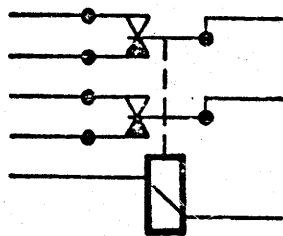
MAKE CONTACT (NO)

2.13



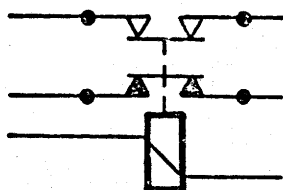
BREAK CONTACT (NC)

2.14



RELAY

2.15



CONTACTOR

2.16



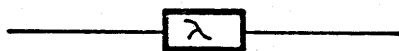
BULB

2.17



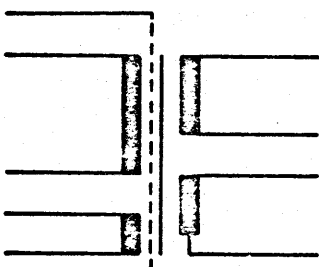
NEON LAMP

2.18



PHOTORESISTOR

2.19

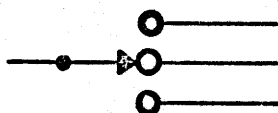


TRANSFORMER WITH SHIELD

130968LLM

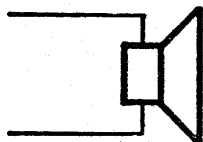
AA GR

2.20



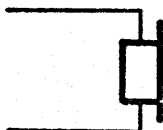
SWITCH

2.21



LOUDSPEAKER

2.22



TELEPHONE

2.23



CRYSTAL

130968LLM

AAGR

3.1



DIODE

3.2



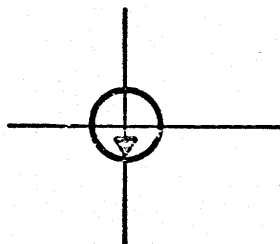
ZENERDIODE

3.3



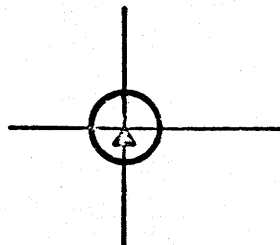
SILICON CONTROLLED RECTIFIER
(THYRISTOR)

3.4



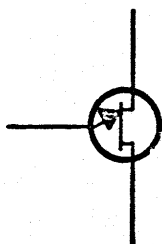
TRANSISTOR NPN

3.5



TRANSISTOR PNP

3.6

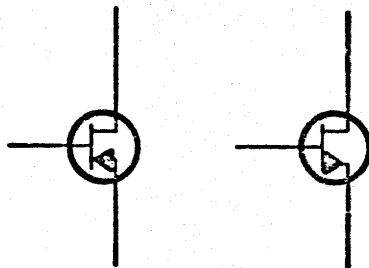


UNIJUNCTION TRANSISTOR

130968LLM

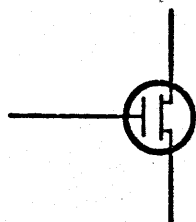
AAGR

3.7



FIELD EFFECT TRANSISTOR
JUNCTION

3.8



FIELD EFFECT TRANSISTOR
ISOLATED GATE

3.9

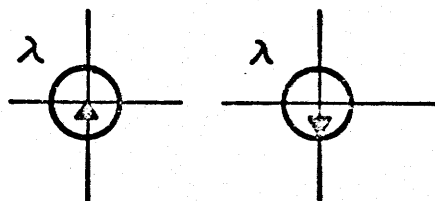
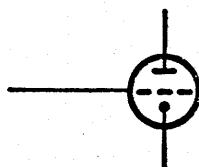


PHOTO TRANSISTOR

3.10



PHOTO DIODE

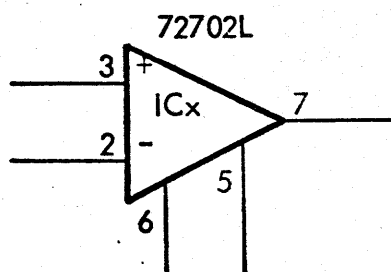


TRIODE, GAS FILLED

130968LLM

AA GR

190369 AAGR 091269 JN 091269 JA 091269 AAGR

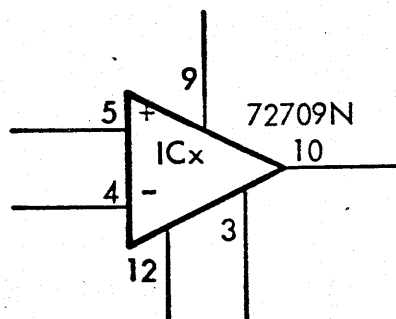


TO 5 Package
TO 5-8
+Vcc pin 8
0V pin 1
-Vcc pin 4

091269 AAGR

091269 JA

190369 AAGR 091269 JN



Dual - in - line Package
DIP 14
+Vcc pin 11
-Vcc pin 6

Operational Amplifier

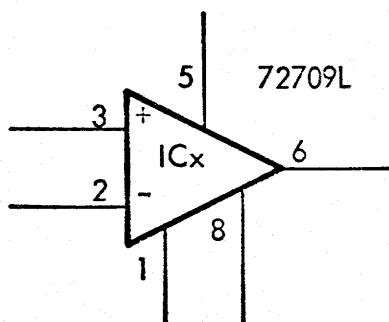
SN72709N

210170 IBP

210170 JA

130170 LLM

130170 IBP



TO 5 Package

TO 5-8

+Vcc pin 7

-Vcc pin 4

Operational Amplifier

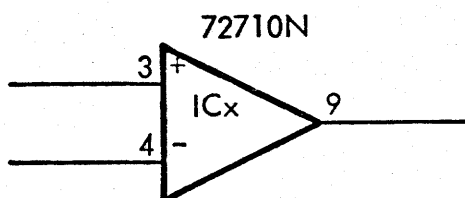
SN72709L

151269 AAGR

151269 JA

151269 JN

180369 AAJ



Dual - in - line Package

DIP 14

+Vcc pin 11

0V pin 2

-Vcc pin 6

Differential Comperator

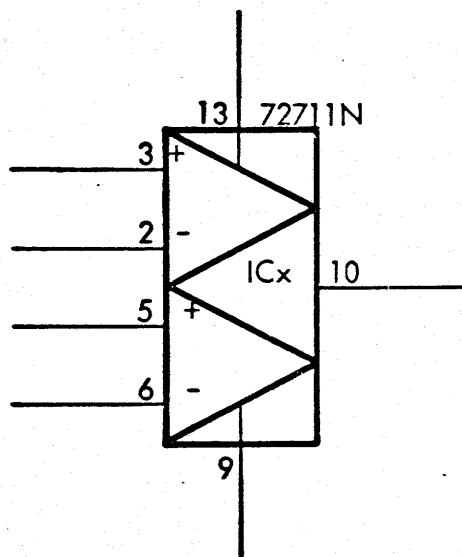
SN72710N

140869AAGR

140869JA

160769HM

160769AAGR



Dual-in-line Package

DIP 14

+Vcc pin 11

-Vcc pin 4

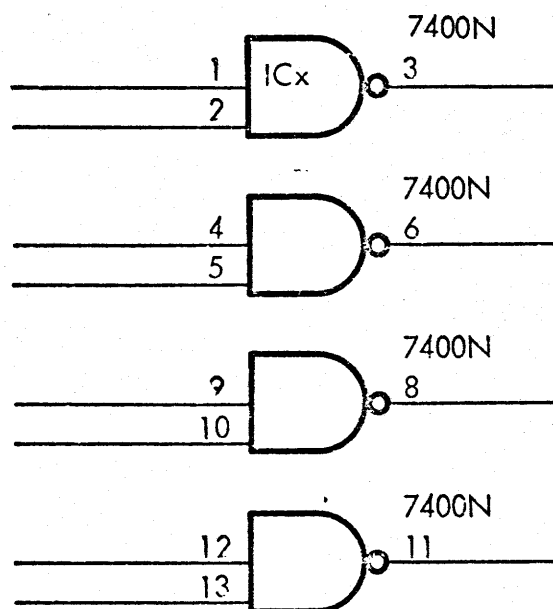
0V pin 12

Dual Differential Comparators

SN72711N

I30968LLM

AAGR



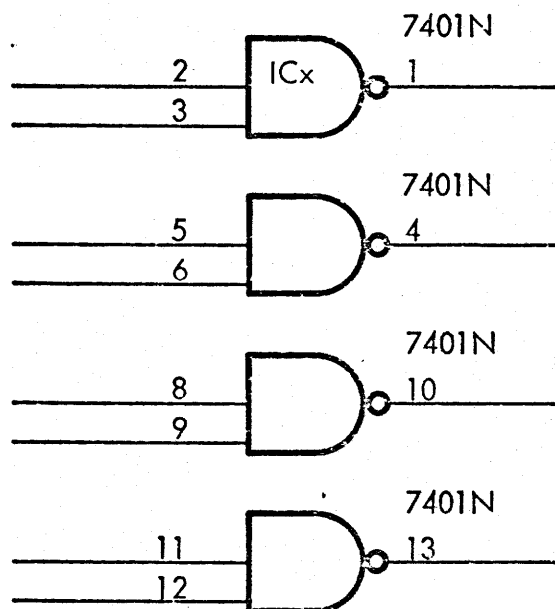
Dual - in - line package
DIP 14
+Vcc pin 14
0V pin 7

Quadruple 2 - input NAND gate

SN7400N

A200072

Symbols for Integrated Circuits



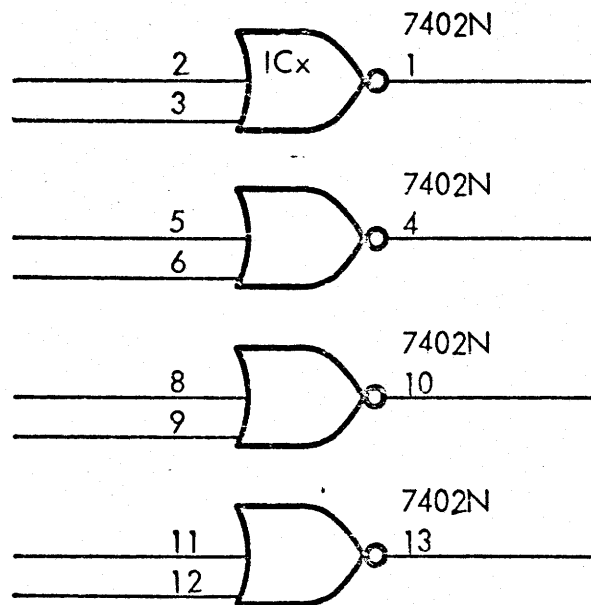
Dual - in - line package
 DIP 14
 +Vcc pin 14
 0V pin 7

050269CEM

AAGR

130968LLM

AAGR

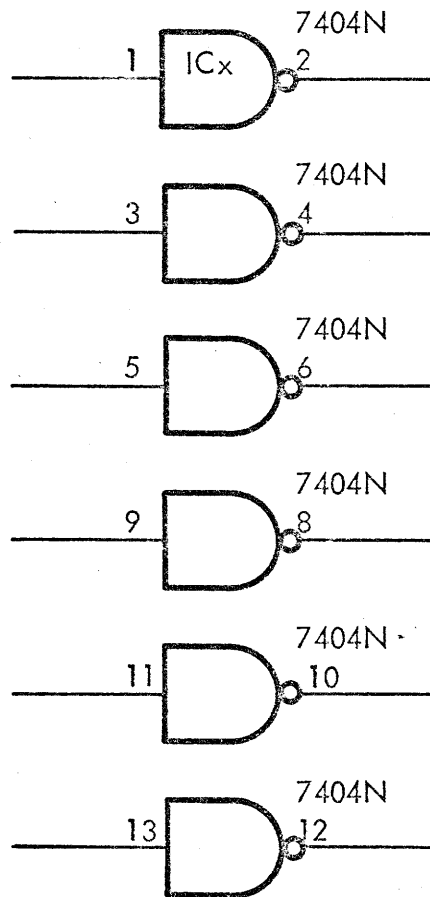


Dual - in - line package
DIP 14
+Vcc pin 14
0V pin 7

Quadruple 2 - input NOR gate

SN7402N

100270 JCJ 160270 THN 160470 JA 160470 BN A20774

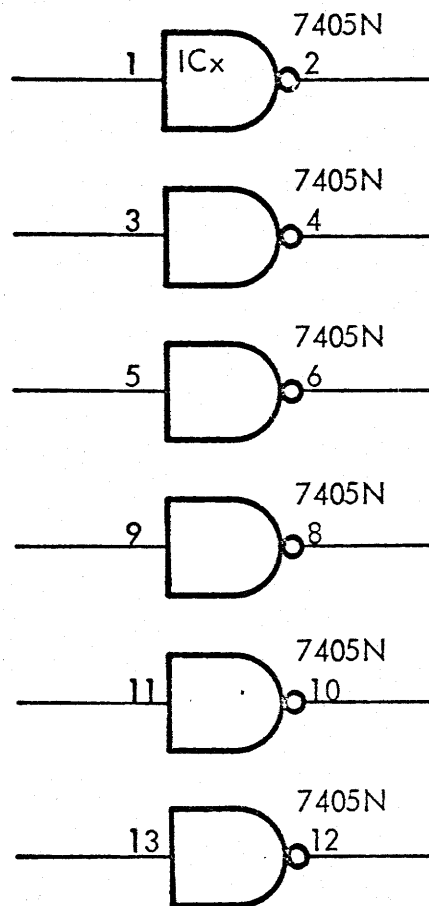


Dual-in-line Package
DIP 14
+V_{cc} pin 14
0V pin 8

Hex Inverter

SN 7404N

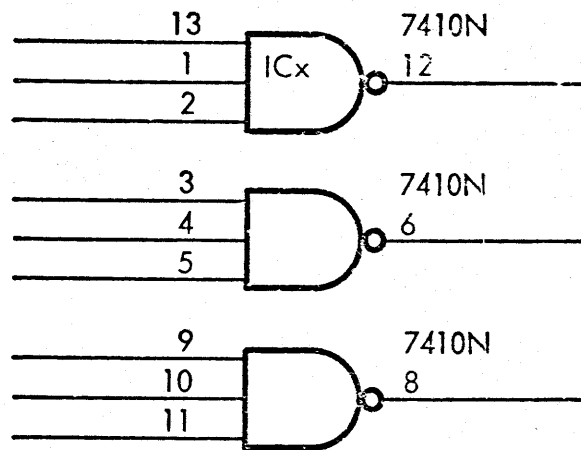
100270 JCJ 160270 THN 160470 JA 160470 BN



Dual-in-line Package
DIP 14
+V_{cc} pin 14
0V pin 8

Hex Inverter with open Collector output

SN 7405N



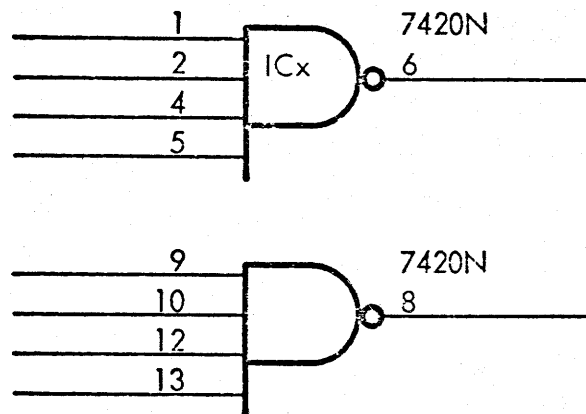
Dual - in - line package
 DIP 14
 +Vcc pin 14
 0V pin 7

050269CEM

AAGR

Triple 3 - input NAND gate

SN7410N

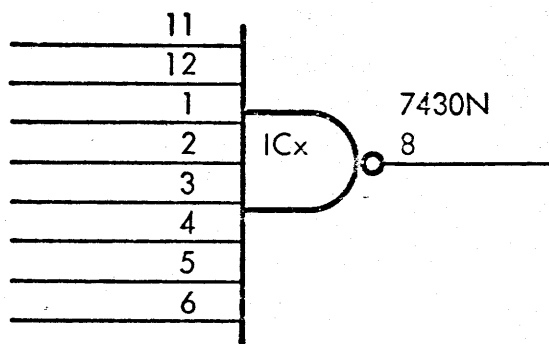


Dual - in - line package
 DIP 14
 +Vcc pin 14
 0V pin 7

AA GR 130968LLM

Dual 4 - input NAND gate

SN7420N

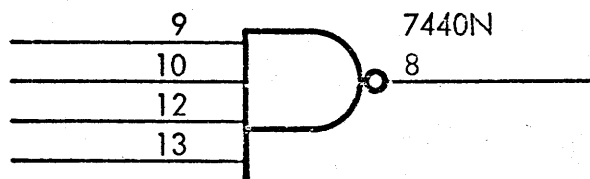
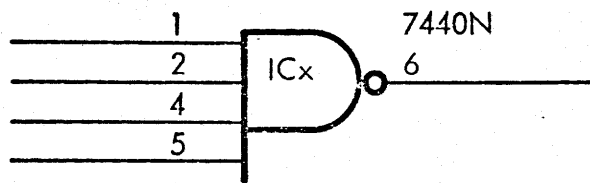


Dual - in - line package
 DIP 14
 +Vcc pin 14
 0V pin 7

AAGR . 130968LLM

8 - input NAND gate

SN7430N



Dual - in - line package
 DIP 14
 +Vcc pin 14
 0V pin 7

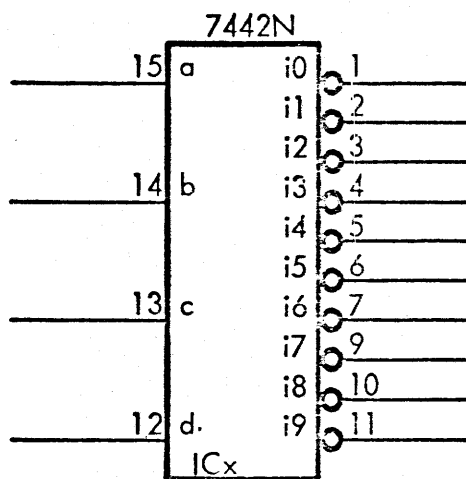
AAGR · 130968LLM

140369AAGR

140369JA

140369CEM

140269AAGR



Dual-in-line Package

DIP 16

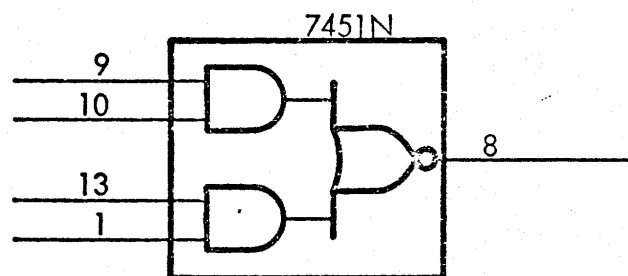
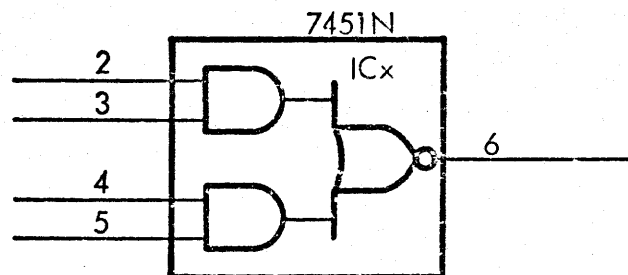
+Vcc pin 16

0V pin 8

BCD-to-Decimal Decoder

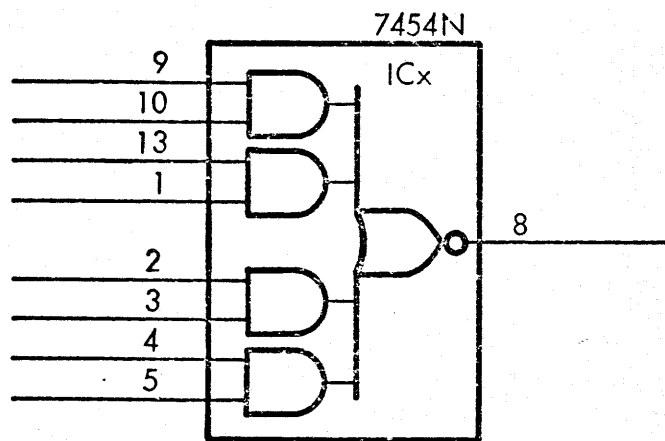
SN7442N

AAGR · 130968LLM



Dual - in - line package
DIP 14
+Vcc pin 14
0V pin 7

Dual 2-wide 2-input AND-OR-INVERT gates
(Dual EXCLUSIVE OR-INVERT gates)
Symbols for Integrated Circuits



Dual - in - line package
 DIP 14
 $+V_{cc}$ pin 14
 0V pin 7

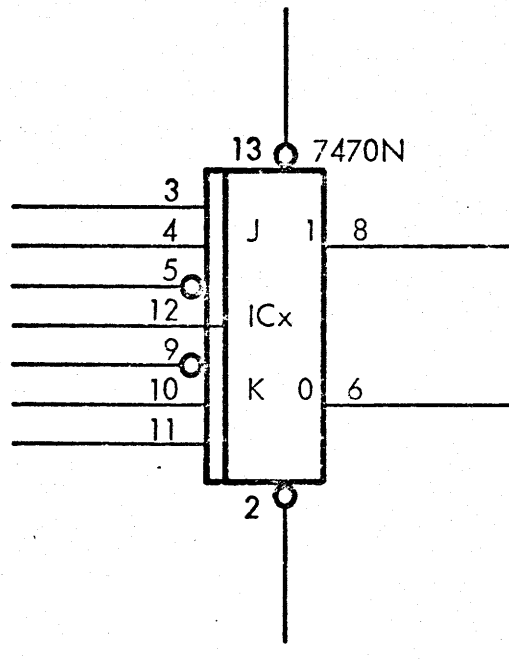
AA GR. 130968LLM

4 - wide 2 - input AND - OR - INVERT gate

SN7454N

A20078

Symbols for Integrated Circuits



Dual - in - line package
 DIP 14
 +Vcc pin 14
 0V pin 7

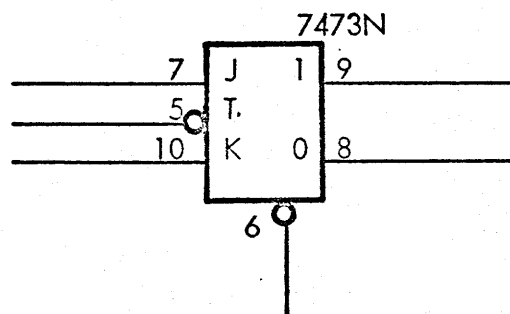
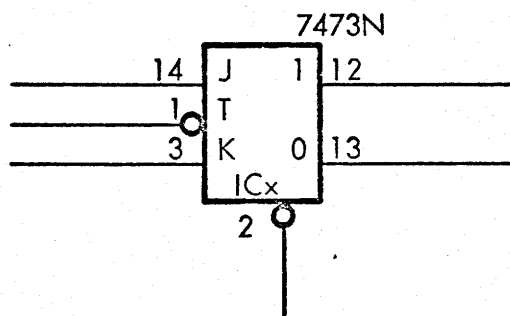
130968LLM

AAGR

Single - phase J - K Flip-flop

SN7470N

AAGR · 050269CEM · 160470 JA · 160470 BN · A20169

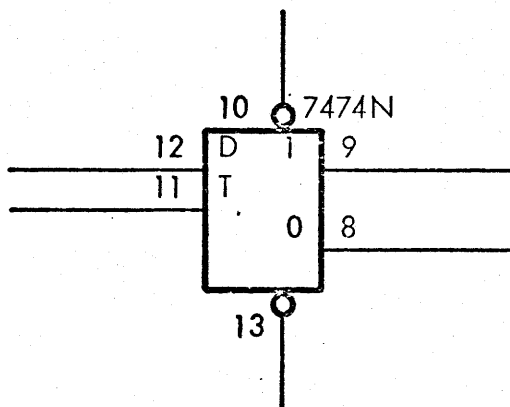
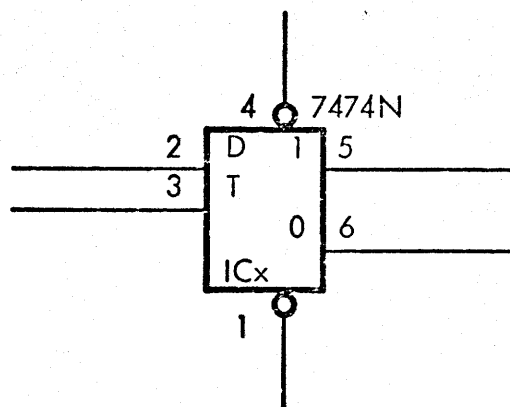


Dual - in - line package
DIP 14
+Vcc pin 4
0V pin 11

Dual Master-Slave J-K Flip-flop

SN7473N

AA GR • 130968LLM



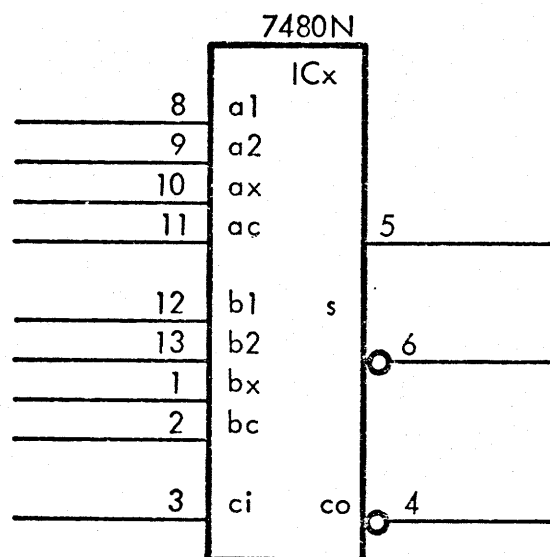
Dual - in - line package
DIP 14

+Vcc pin 14
0V pin 7

Dual Type D Flip-flop

SN7474N

AA GR. 130968LLM



Dual - in - line package
DIP 14
+Vcc pin 14
0V pin 7

Gated Full Adder

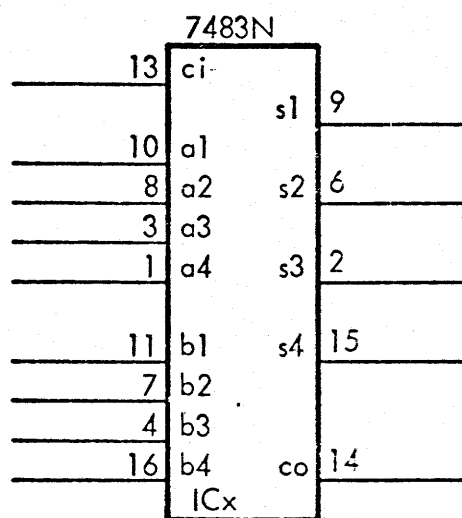
SN7480N

140369AAGR

140369JA

140369CEM

140269AAGR



Dual - in - line Package

DIP 16

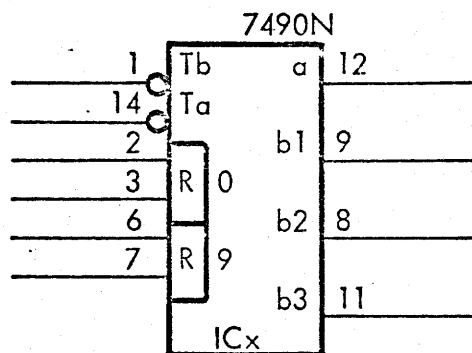
+Vcc pin 5

0V pin 12

4 - Bit Binary Full Adder

SN7483N

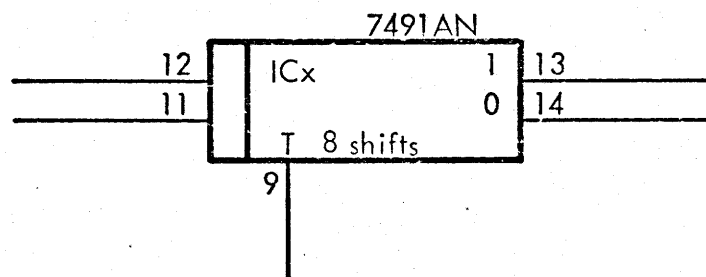
280869 AA'GR 090170 JN 090170 JA 090170 AAGR



Dual - in - line Package
 DIP 14
 +Vcc pin 5
 0V pin 10

Decade Counter

SN7490N



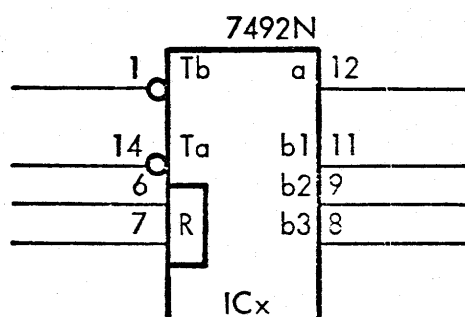
Dual - in - line package
 DIP14
 +Vcc pin 5
 0V pin 10

AA GR • 130968LLM

8 bit Shift Register

• SN7491AN

291269 JCJ 301269 JN 301269 JA 301269 JCJ



Dual - in - line Package
 DIP 14
 +Vcc pin 5
 0V pin 10

Divide - by - 12 counter

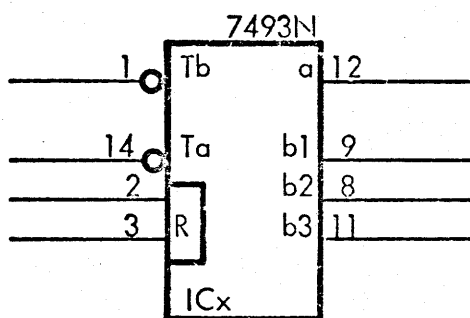
SN7492N

140369AAGR

140369JA

140369CEM

140269AAGR



Dual - in - line Package

DIP 14

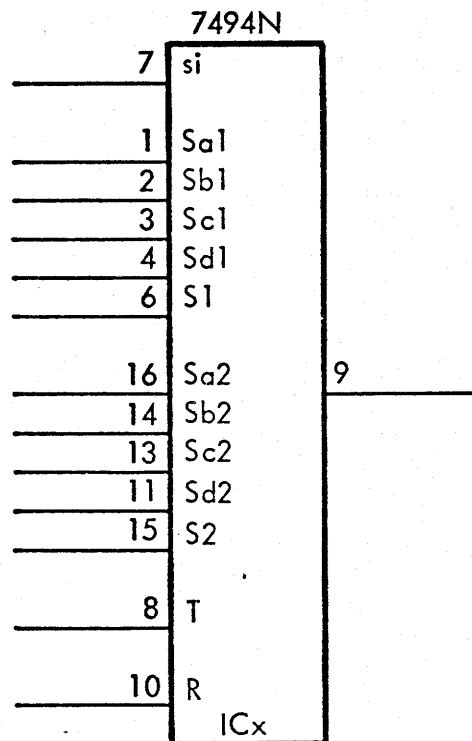
+Vcc pin 5

0V pin 10

(1+3) - Bit Binary Counter

SN7493N

140369 AAGR 091269 JN 091269 JA 091269 AAGR

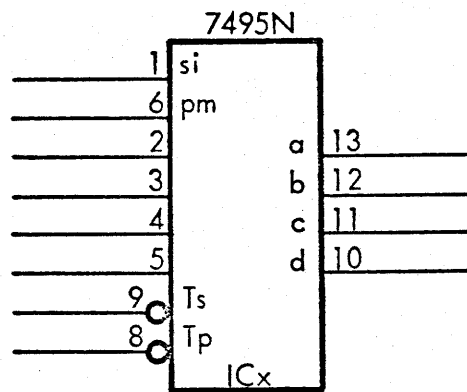


Dual - in - line Package
 DIP 16
 +Vcc pin 5
 0V pin 12

Parallel - in Serial - Out Register
 Parallel - to Serial, Serial - in Serial - Out Register
 Symbols for Integrated Circuits

SN7494N

140369AAGR 140369CEM 050570 JA 050570 AAGR A20219

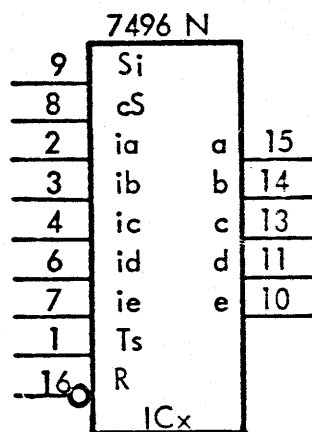


Dual-in-line Package
DIP 14
+Vcc pin 14
0V pin 7

Parallel-in Parallel-out Register
Serial-to-Parallel, Parallel-to-Serial, Storage Register
Symbols for Integrated Circuits

SN7495N

300170 JCJ 160270 THN 050570 JA 050570 BN A20789



Dual-in-line Package

DIP 16

+V cc pin 5

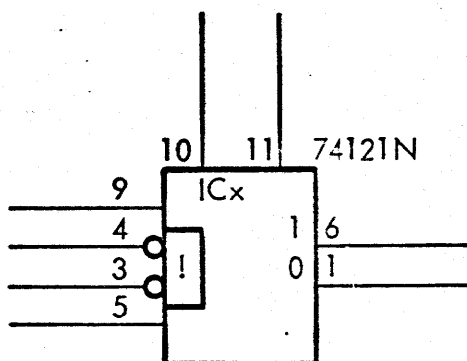
0V pin 12

5 bits Parallel -in , Parallel -out Register
 Serial -to -Parallel , Parallel -to -Serial, Storage Register
 Symbols for integrated Circuits

SN 7496 N

A20995

030369 AAJ 151269 JN 151269 JA 151269 AAGR



Dual - in - line Package
DIP 14
+Vcc pin 14
0V pin 7

Monostable Multivibrator

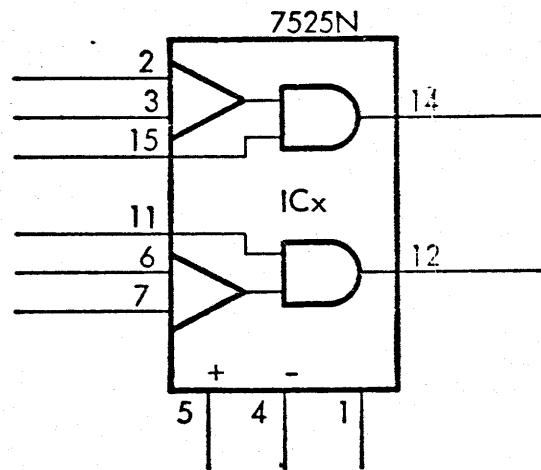
SN74121N

140869AAGR A20430

140869JA

160769HM

160769AAGR



Dual-in-line Package

DIP 16

+Vcc pin 16

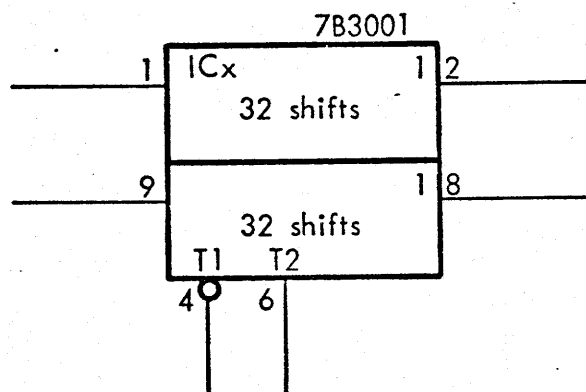
0V pin 9, 13

-Vcc pin 8

Dual Sense Amplifier

SN7525N

140369 AAGR 091269 JN 091269 JA 091269 AAGR A20220



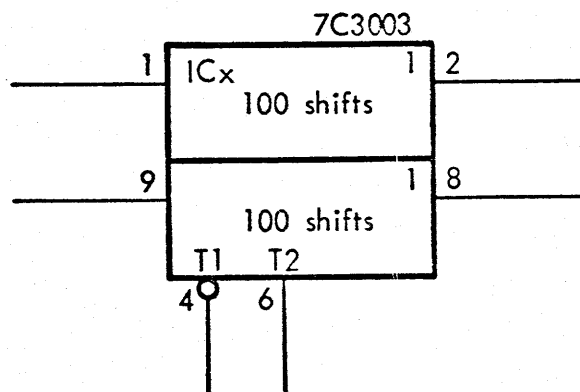
TO 5 Package
 TO 5-10
 -Vcc1 pin 3
 -Vcc2 pin 7
 0V pin 5

Double 32-bit Static Shift Register

Symbols for Integrated Circuits

TMS
 7B3001
 LA

140369 AAGR 091269 JN 091269 JA 091269 AAGR A20221



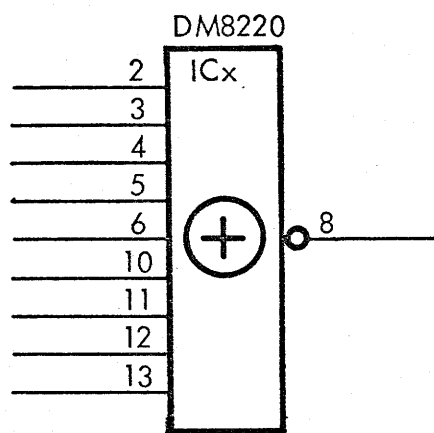
TO 5 Package
TO 5-10
-Vcc1 pin 3
-Vcc2 pin 7
0V pin 5

Double 100-bit Static Shift Register

Symbols for Integrated Circuits

TMS
7C3003
LA

010970 BN 010970 LP 010970 JA 010970 BN R20029

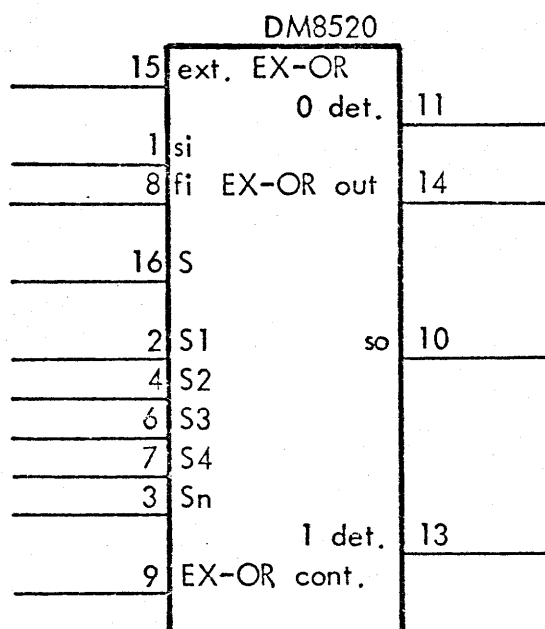


Dual-in-line Package
DIP 14
+Vcc pin 14
0V pin 7

090170 AA'GR 090170 JA

090170 JN

090170 AA'GR 090170 JN



Dual - in - line Package

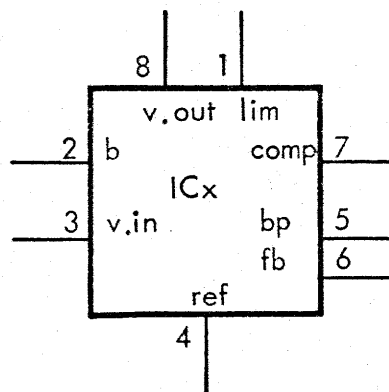
DIP 16

+Vcc pin 5

0V pin 12

Modulo - n - divider

DM8520



TO - 5 package

8 pins

PROVISIONAL

110570 BN

Voltage regulator

LM 305

A20998

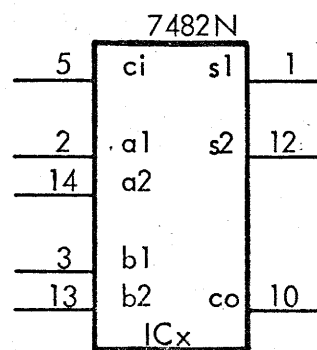
Symbols for integrated Circuits

010770 BN

010770 JA

120670 LP

120670 KHA



Dual - in - line Package

DIP 14

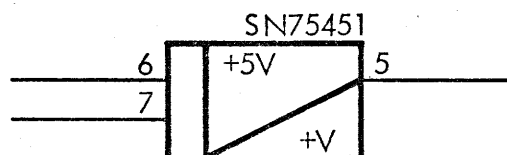
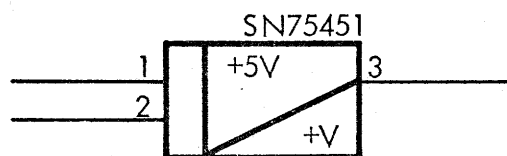
+Vcc pin 4

0V pin 11

2 - Bit Binary Full - Adder

SN 7482N

10070 KNEH 310870 LP 010970 JA 010970 BN



Dual-in-line Package
DIP 8
+Vcc pin 8
0V pin 4

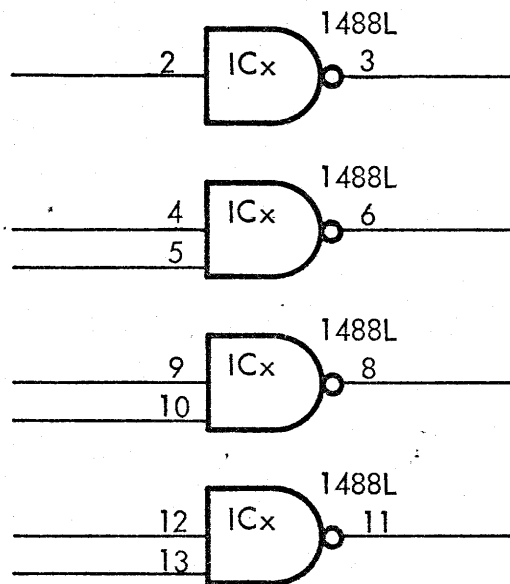
Dual Peripheral Driver

SN75451P

010770 BN

010770 JA

260670 KNEH 290670 JN

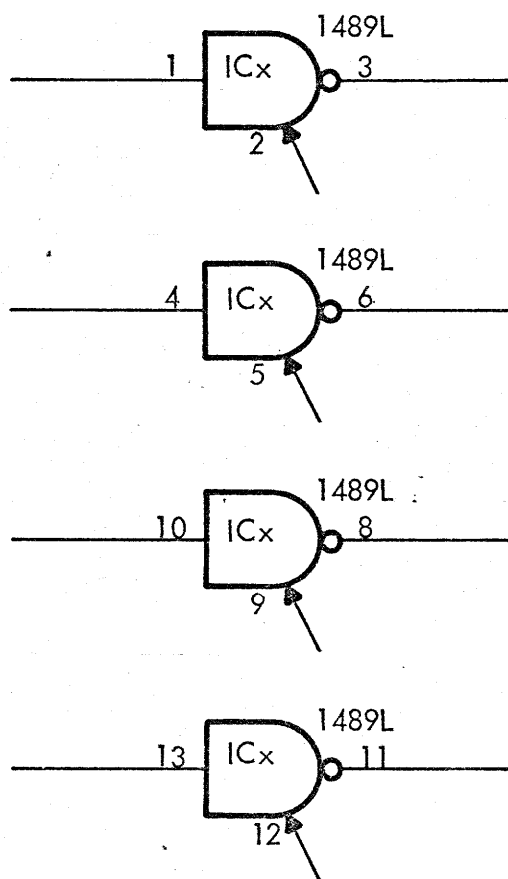


Dual-in-line Package
 DIP 14
 +Vcc pin 14
 0V pin 7
 -Vcc pin 1

Quadruple Line Driver

MC1488L

260670 KNEH 290670 JN 010770 JA 010770 BN



Dual-in-line Package
DIP 14
+Vcc pin 14
0V pin 7

Quadruple Line Receiver

MC1489L