

TTL CMOS IC 端子接続早見表

この冊子は、昭和61年1月(1986、1)発行のトランジスタ技術
の付録冊子(下記)をスキャナーで取り込んだものです。

「'86年度版 主要IC端子接続早見表」

74シリーズTTL&HC-MOS

▶ここに示した端子配置図は、標準TTLシリーズの74××(ノーマル), 74LS××(ローパワー・ショットキー), 74S××(ショットキー), 74ALS××(アドバンスト・ローパワー・ショットキー), 74AS××(アドバンスト・ショットキー), 74F××(ファースト)の6品種と高速汎用CMOSシリーズの74HC××, 40HC××が2品種の合わせて八つのファミリについて示してあります。

▶端子配置図を示したワケ内

の左肩に示す数字が、××に相当する数字です。そして、端子配置図の下に示した型番がその番号で存在する品種です。

例えば、7400についてはすべての品種が揃っていますが、7401についてみると7401, 74LS01, 74ALS01, 74HC01の4品種しか存在しません。

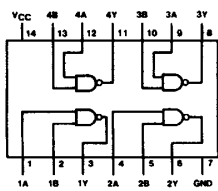
その他、1品種しか存在しない型番もありますので、注意してください。ただし、このデータは最新の資料をもとに作成しましたが、次々と新しいデバイスが登場していますので、記載

されていない型番もあると思いますが、その点についてはご容赦ください。

▶TTLについては、テキサス・インスツルメンツ(TI)社の製品が最も品種が揃っていますが、TI社が製造していない品種もあります。特にセカンド・ソース・メーカの品種は数が限られていますので注意してください。

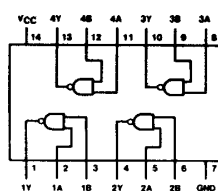
▶機能表記の中でOCとあるのは、オープン・コレクタ・タイプです。

00 Quad 2 Input NAND



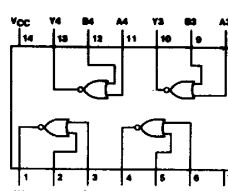
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74LS00 74ALS1000 74HCT00
74S00 74AS1000 40H000
74ALS00
74F00

01 Quad 2 Input NAND with OC



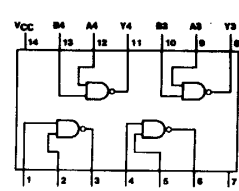
7401 74HC01
74LS01
74ALS01

02 Quad 2 Input NOR



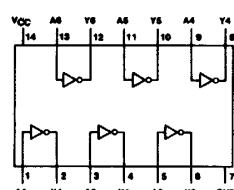
7402 74AS02 74HC02
74LS02 74ALS1002 40H002
74ALS02 74AS1002
74F02
74S02

03 Quad 2 Input NAND with OC



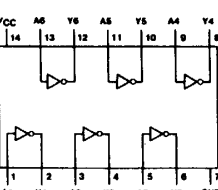
7403 74ALS1003 74HC03
74LS03
74S03
74ALS03

04 Hex Inverter



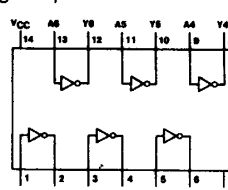
7404 74AS04 74HCU04
74LS04 74ALS1004 74HCT04
74S04 74AS1004 74HCT04
74ALS04
74F04

05 Hex Inverter with OC



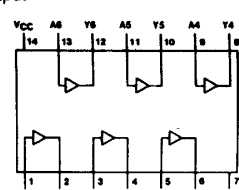
7405 74HCT05
74LS05
74ALS05
74S05
74ALS1005

06 Hex Inverter Buffer with OC High Voltage Output



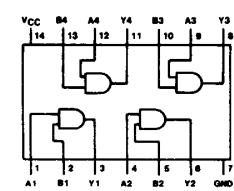
7406
74LS06

07 Hex Buffer with OC High Voltage Output



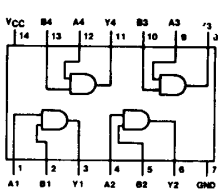
7407 74HC07
74LS07

08 Quad 2 Input AND



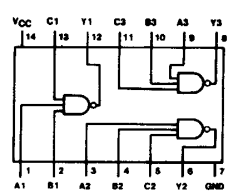
7408 74AS08 74HC08
74LS08 74ALS1008 74HCT08
74S08 74AS1008 40H008
74ALS08
74F08

09 Quad 2 Input AND with OC



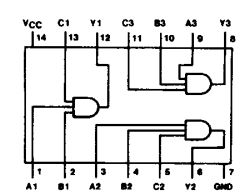
7409
74LS09
74S09
74ALS09

10 Triple 3 Input NAND

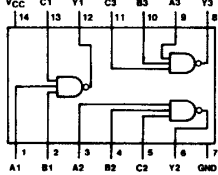
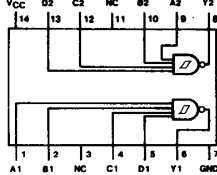
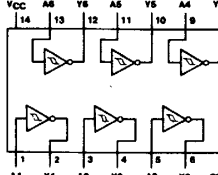
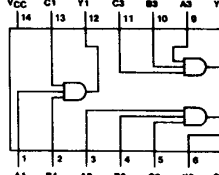
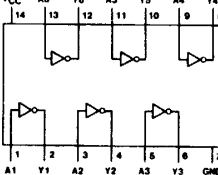
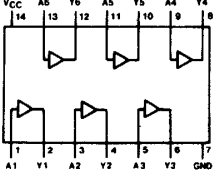
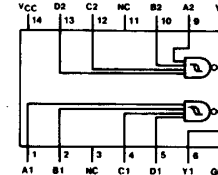
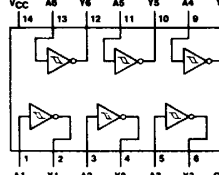
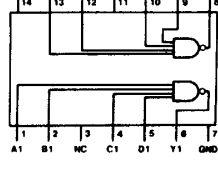
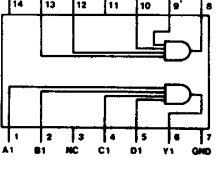
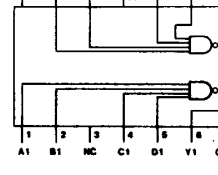
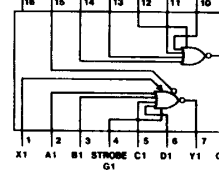
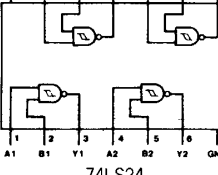
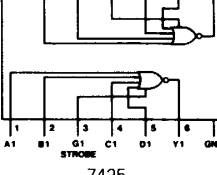
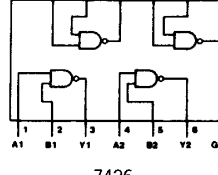
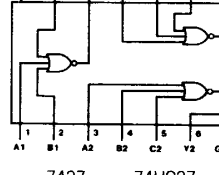
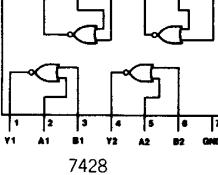
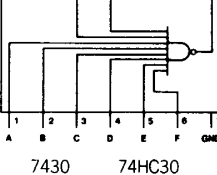
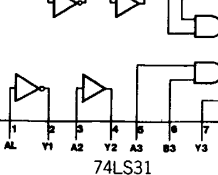
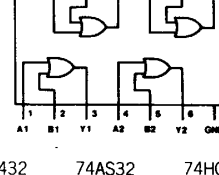


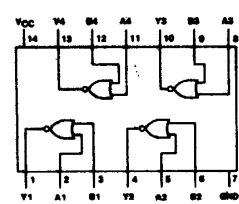
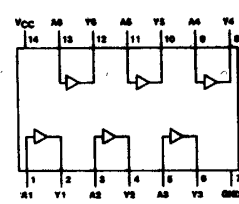
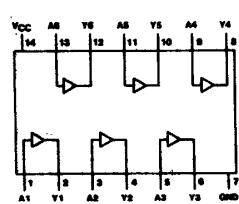
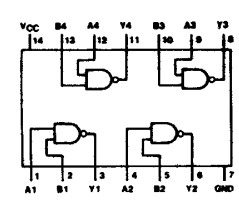
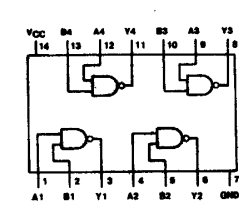
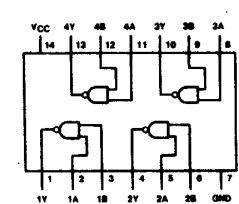
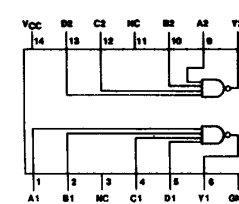
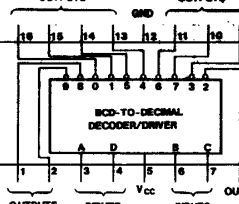
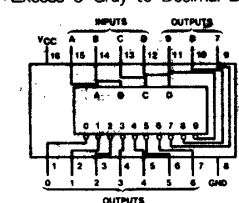
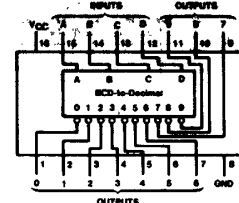
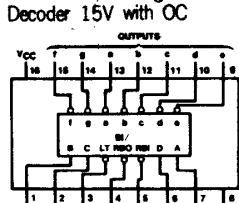
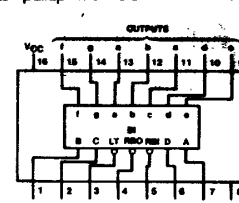
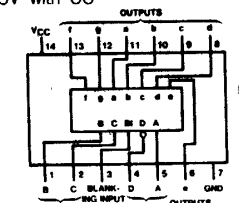
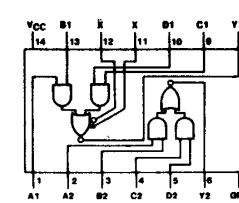
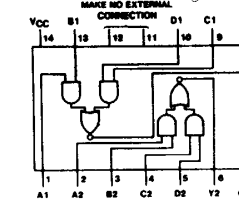
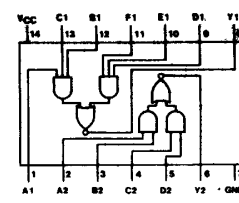
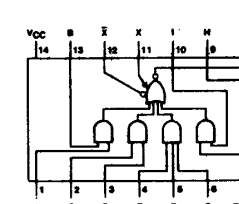
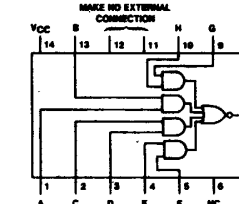
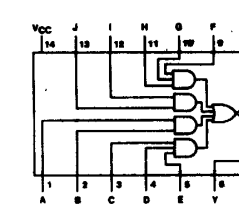
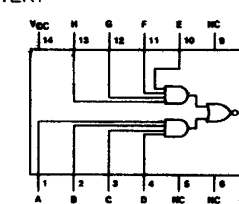
7410 74AS10 74HC10
74LS10 74ALS1010 74HCT10
74S10 40H010
74ALS10
74F10

11 Triple 3 Input AND



7411 74F11 74HC11
74LS11 74ALS1011 74HCT11
74S11 40H011
74ALS11
74AS11

12 Triple 3 Input NAND with OC  7412 74LS12 74S12 74ALS12	13 Dual 4 Input NAND Schmitt Trigger  7413 74LS13 74HC13 74F13	14 Hex Inverter Schmitt Trigger  7414 74LS14 74F14 74HC14 74HCT14	15 Triple 3 Input AND with OC  74LS15 74S15 74ALS15
16 Hex Inverter Buffer 15V with OC  7416 74LS16	17 Hex Buffer 15V with OC  7417 74LS17	18 Dual 4 Input NAND Schmitt Trigger  74LS18	19 Hex Inverter Schmitt Trigger  74LS19
20 Dual 4 Input NAND  7420 74LS20 74S20 74ALS20 74F20 74AS20 74ALS1020 74HC20 74HCT20 40H020	21 Dual 4 Input AND with OC  7421 74LS21 74ALS21 74AS21 74HC21 40H021	22 Dual 4 Input NAND with OC  7422 74LS22 74S22 74ALS22	23 Expandable Dual 4 Input NOR with Strobe  7423
24 Quad 2 Input NAND Schmitt Trigger  74LS24	25 Dual 4 Input NOR with Strobe  7425	26 Quad 2 Input NAND 15V with OC  7426 74LS26	27 Triple 3 Input NOR  7427 74LS27 74ALS27 74AS27 74HC27 74HCT27 40H027
28 Quad 2 Input NOR Buffer  7428 74LS28 74ALS28 74ALS1028	30 8 Input NAND  74HC30	31 Delay Element  74LS31	32 Quad 2 Input OR  7432 74LS32 74S32 74ALS32 74F32 74AS32 74ALS1032 74HC32 74HCT32 40H032

33 Quad 2 Input NOR Buffer with OC  7433 74LS33 74ALS33	34 Hex Buffer  74ALS34 74AS34 74HCT34 74ALS1034 74AS1034	35 Hex Buffer with OC  74ALS35 74ALS1035	37 Quad 2 Input NAND Buffer  7437 74ALS37 74LS37 74ALS1037 74S37 74F37
38 Quad 2 Input NAND Buffer with OC  7438 74ALS38 74LS38 74S38 74F38	39 Quad 2 Input NAND Buffer with OC  7439	40 Dual 4 Input NAND Buffer  7440 74ALS1040 74LS40 74S40 74ALS40	41 BCD to Decimal Decoder/Driver  7441
42:BCD to Decimal Decoder 43:Excess 3 to Decimal Decoder 44:Excess 3 Gray to Decimal Decoder  7442~44 74HC42 74LS42~44 74HCT42 40H042	45 BCD to Decimal Decoder 30V with OC  7445	46:BCD to Seven Segment Decoder 30V with OC 47:BCD to Seven Segment Decoder 15V with OC  7446 7447 74LS47	48 BCD to Seven Segment Decoder 2kΩ pullup with OC  7448 74LS48
49 BCD to Seven Segment Decoder 5.5V with OC  7449 74LS49	50 Dual 2 wide 2 Input AND OR INVERT  7450	51 Dual 2 wide 2 Input AND OR INVERT  7451 74S51 74ALS51	51 Dual 2 wide 2 Input AND OR INVERT  74LS51 74HC51 74ALS51 40H051
53 4 wide 2 Input AND OR INVERT  7453	54 4 wide 2 Input AND OR INVERT  7454	54 4 wide 2 Input AND OR INVERT  74LS54 74ALS54	55 Expandable 2 wide 4 Input AND OR INVERT  74LS55 74ALS55

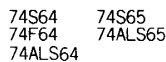
Dual 4 Input Expander



Hex Current Sense Interface GATE



64:4-2-3-2 Input AND OR INVERT
65:4-2-3-2 Input AND OR INVERT
with OC



Dual Decade Counter



Dual 4 Bit Binary Counter



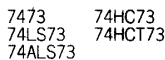
AND rated IK FF with Bracket and Clear



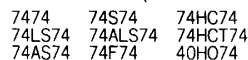
AND-gated JK-FF with Preset and Clear



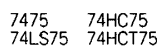
Dual JK Flip-Flop

747374LS7

Dual D-Type Flip-Flop

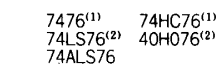


4. Bit Latch

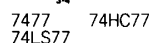


FUNCTION TABLE
(Each Latch)

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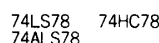


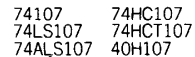
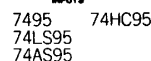
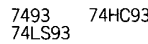
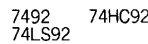
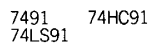
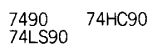
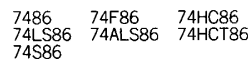
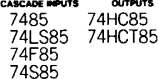
4 Bit Bistable Latch (Flat Pack Only)



FUNCTION TABLE
(Each Latch)

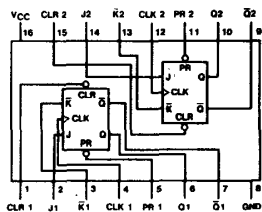
Dual IK Flip Flop





109

Dual JK Flip Flop



74109 74F109
74LS109 74S109
74ALS109 74AS109

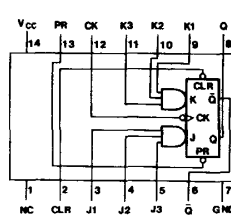
FUNCTION TABLE

Inputs						Outputs	
PR	CLR	CLK	J	K	Q	Q	Q
L	H	X	X	X	H	L	L
L	L	X	X	X	L	H	H
L	L	X	X	X	H*	H*	H*
H	H	L	L	L	L	H	H
H	H	L	L	L	H	L	L
H	H	L	L	L	TOGGLE	TOGGLE	TOGGLE
H	H	L	L	L	H	L	L
H	H	L	L	L	Q0	Q0	Q0

74HC109
74HCT109

110

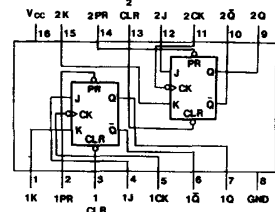
AND-gated JK-FF with Preset and Clear



74110

111

Dual JK-FF with Preset and Clear

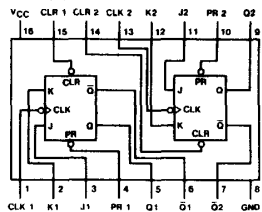


74111

112

Dual JK Flip Flop

(真理値表は73と同じ)

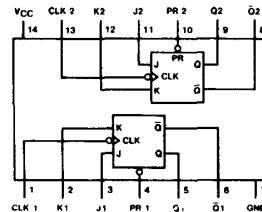


74LS112 74HC112
74ALS112 74HCT112
74S112 74F112
74AS112

113

Dual JK Flip Flop

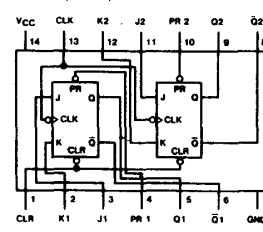
(真理値表は73と同じ)



74LS113 74HC113
74ALS113 74HCT113
74S113 74F113
74AS113

114

Dual JK Flip Flop



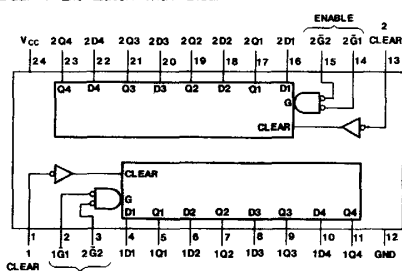
74LS114 74AS114 74HC114
74ALS114 74S114 74F114

FUNCTION TABLE

Inputs						Outputs	
PR	CLR	CLK	J	K	Q	Q	Q
L	H	X	X	X	H	L	L
L	L	X	X	X	L	H	H
L	L	X	X	X	H*	H*	H*
H	H	L	L	L	L	H	H
H	H	L	L	L	H	L	L
H	H	L	L	L	TOGGLE	TOGGLE	TOGGLE
H	H	L	L	L	Q0	Q0	Q0

116

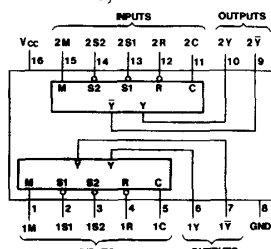
Dual 4 Bit Latch with Clear



74116

120

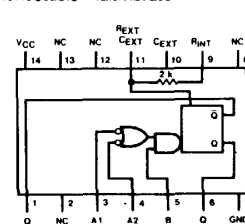
Dual Pulse Synchronizer



74120

121

Monostable Multivibrator



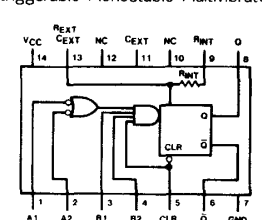
74121

FUNCTION TABLE

Inputs				Outputs	
A1	A2	B	Q	Q	Q
L	X	H	L	H	L
L	X	L	L	H	L
X	X	L	L	H	L
H	H	X	L	H	L
L	X	H	L	H	L
L	X	L	L	H	L
L	X	L	L	H	L
L	X	L	L	H	L

122

Retriggerable Monostable Multivibrator



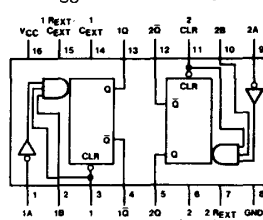
74122
74LS122

FUNCTION TABLE

Inputs						Outputs	
Clear	A1	A2	B1	B2	Q	Q	Q
L	X	X	X	X	L	H	L
X	H	H	X	X	L	H	L
X	X	X	L	L	L	H	L
X	X	X	L	L	L	H	L
H	L	X	L	H	L	H	L
H	L	X	L	H	L	H	L
H	X	L	L	H	L	H	L
H	X	L	L	H	L	H	L
H	H	L	L	H	L	H	L
H	H	L	L	H	L	H	L
H	H	L	L	H	L	H	L
H	H	L	L	H	L	H	L
H	H	L	L	H	L	H	L
H	H	L	L	H	L	H	L

123

Dual Retriggerable Monostable Multivibrator



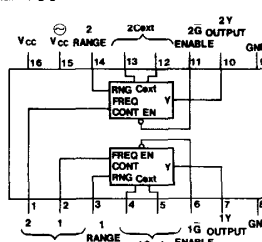
74123 74HC123
74LS123 74HCT123

FUNCTION TABLE

Inputs				Outputs	
Clear	A	B	Q	Q	Q
L	X	X	L	H	L
X	H	X	L	H	L
X	X	L	L	H	L
H	L	H	L	H	L
L	L	H	L	H	L
L	L	H	L	H	L
L	L	H	L	H	L
L	L	H	L	H	L

124

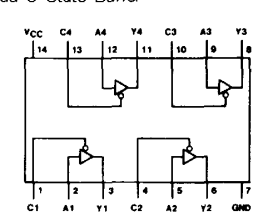
Dual VCO



74LS124
74S124

125

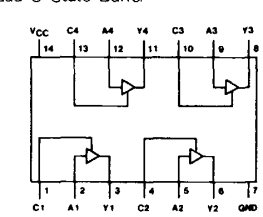
Quad 3 State Buffer



74125 74HC125
74LS125

126

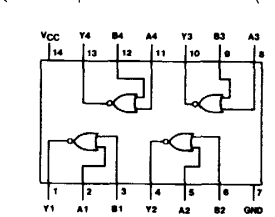
Quad 3 State Buffer



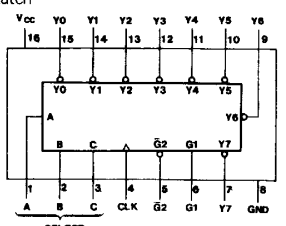
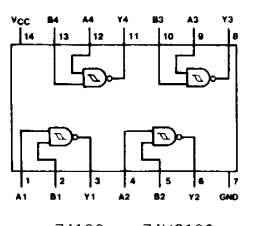
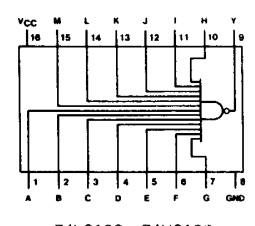
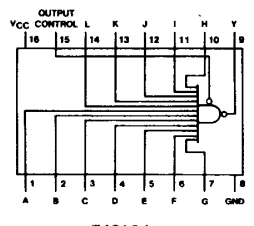
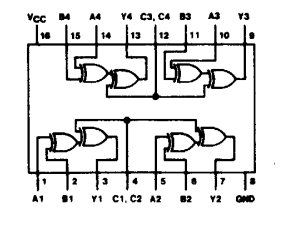
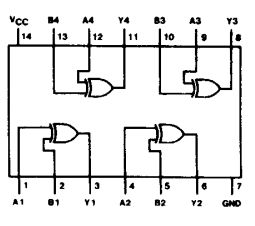
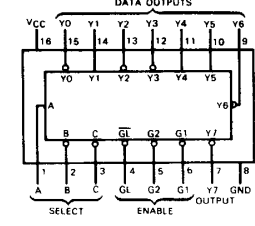
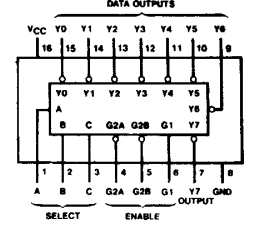
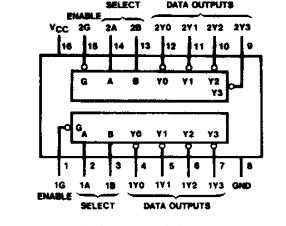
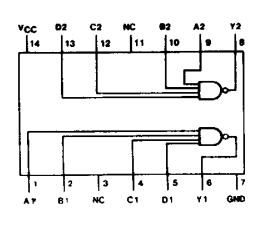
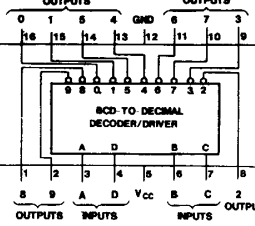
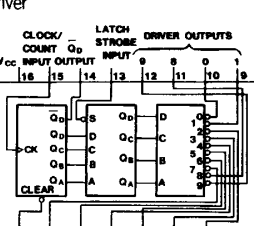
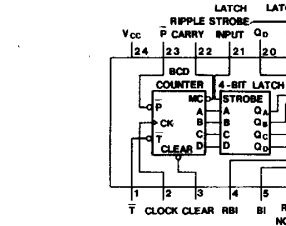
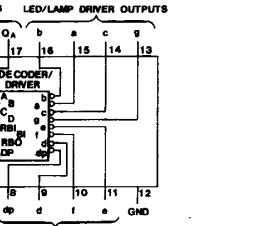
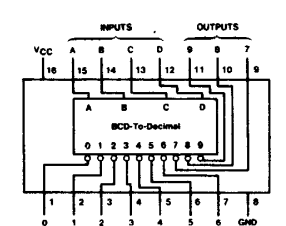
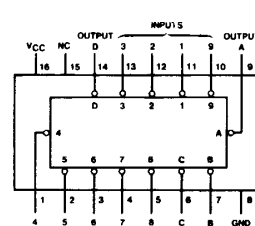
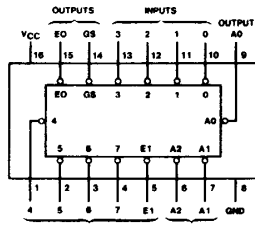
74126 74HC126
74LS126

128

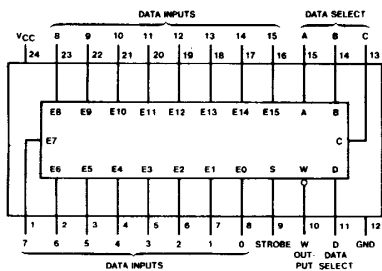
Quad 2 Input NOR Line Driver (50 Ω)



74128

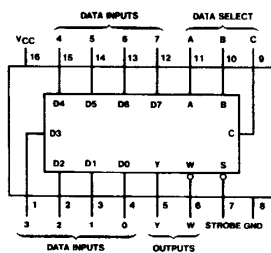
131 3 to 8 Line Decoder with Address Latch  74ALS131 74HC131 74ALS131	132 Quad 2 Input NAND Schmitt Trigger  74132 74HC132 74LS132 74HCT132 74F132	133 13 Input NAND  74LS133 74HC133 74ALS133 74S133	134 12 Input 3 State NAND  74S134
135 Quad Exclusive OR/NOR  74S135	136 Quad Exclusive OR with OC  74136 74HC136 74LS136 74HCT136 74ALS136 74S136	137 3 to 8 Line Decoder/Latch  74LS137 74HC137 74S137 74HCT137 74ALS137 74S137 74AS137	138 3 to 8 Line Decoder  74LS138 74F138 74HC138 74S138 74AS138 74HCT138 74ALS138 40H138
139 Dual 2 to 4 Line Decoder  74LS139 74HC139 74S139 74HCT139 74ALS139 40H139 74AS139 74F139	140 Dual 4 Input NAND Line Driver (50Ω)  74S140	141 BCD to Decimal Decoder/Driver  74141	142 BCD Counter/Latch/Decimal Decoder /Driver  74142
143 BCD Counter/Latch/7 Segment Decoder/Driver  74143	144 BCD Counter/Latch/7 Segment Decoder/Driver  74144		
145 BCD to Decimal Decoder 15V with OC  74145 74LS145	147 10 to 4 Line Priority Encoder  74147 74HC147 74LS147 74HCT147 40H147	148 8 to 3 Line Priority Encoder  74148 74HC148 74LS148 40H148 74F148 TIM9907	

150
16 to 1 Line Data Selector



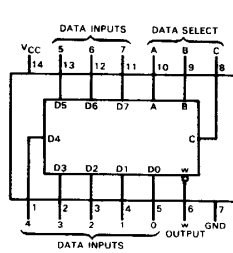
74150

151
8 to 1 Line Data Selector



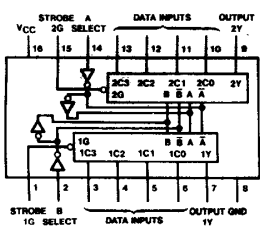
74151 74F151 74HC151
74LS151 74ALS151 74HCT151
74S151 74AS151 40H151

152
8 to 1 Line Data Selector



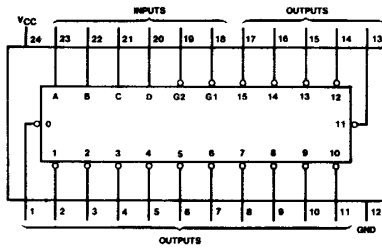
74152 74HC152
74LS152

153
Dual 4 to 1 Line Data Selector



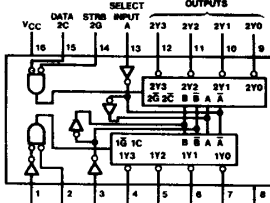
74153 74F153 74HC153
74LS153 74ALS153 74HCT153
74S153 74AS153 40H153

154
4 to 16 Line Decoder



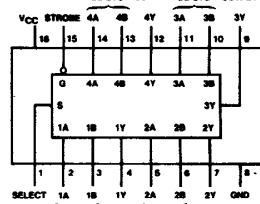
74154 74HC154
74LS154 74HCT154

155: Dual 2 to 4 Line Decoder
156: Dual 2 to 4 Line Decoder with OC



74155~156 40H155
74LS155~156 74HC155
74S155~156 74HCT155

157: Quad 2 to 1 Line Data Selector
158: Quad 2 to 1 Line Data Selector Inverting



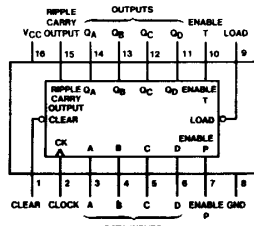
74157~158 74F157~158 74HC157~158
74LS157~158 74ALS157~158 74HCT157~158
74S157~158 74AS157~158 74HCT157~158

159
4 to 16 Line Decoder with OC

74154のオープン・コレクタ型
(ピン配置は74154と同じ)

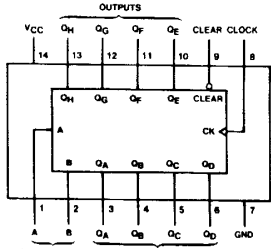
74159

160, 162: Synchronous Decoder Counter
161, 163: Synchronous Binary Counter



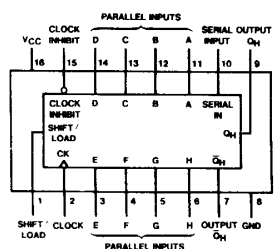
74160~163 74S162~163
74LS160~163 74HC160~163
74ALS160~163 40H160~163
74F160~163 74HCT160~163

164
8 Bit Shift Register



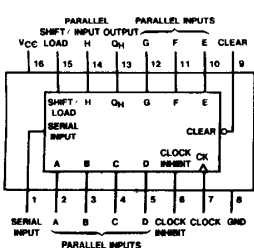
74164 74F164 74HC164
74LS164 74ALS164 74HCT164
40H164

165
8 Bit Shift Register PISO



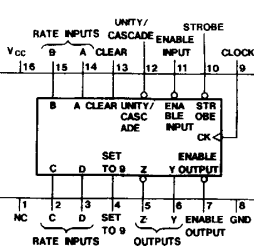
74165 74HC165
74LS165 74HCT165
74ALS165

166
8 Bit Shift Register PISO



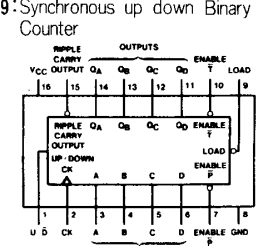
74166 40H166
74LS166 74HC166
74ALS166 74HCT166

167
BCD Synchronous Rate Multiplier



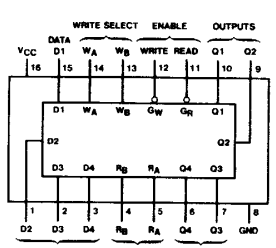
74167

168: Synchronous up down Decade Counter
169: Synchronous up down Binary Counter



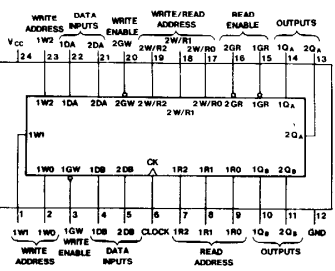
74LS168~169 74S168~169
74F168~169 74ALS168~169
74AS168~169

170
4 Word x 4 Bit Register File with OC



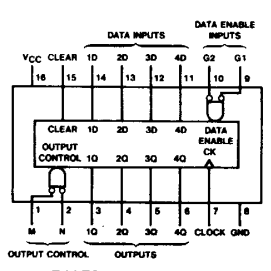
74170
74LS170

172
16 Bit Multiple-port Register File (3 state)



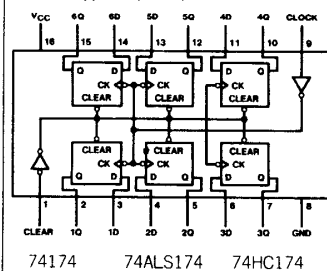
74172
74S172

173
Quad D Type Register (3 state)

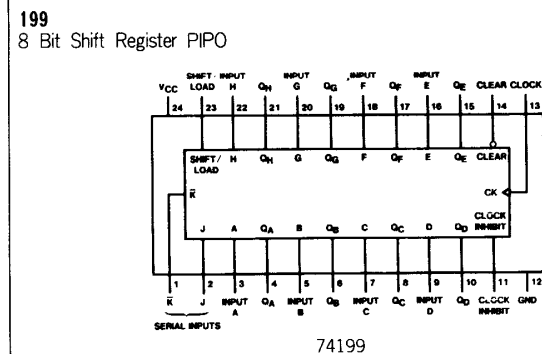
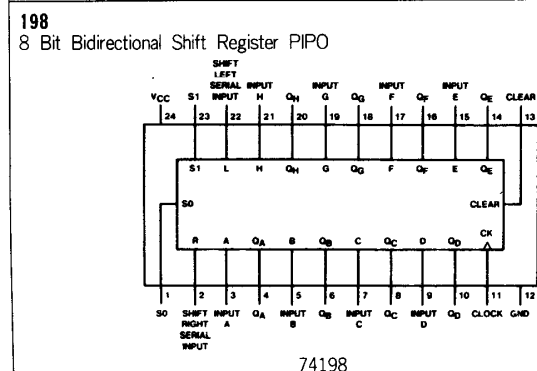
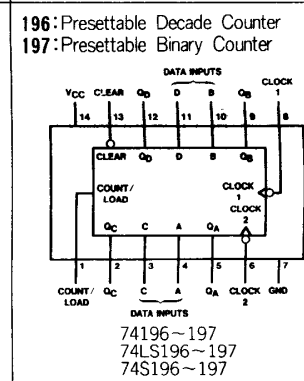
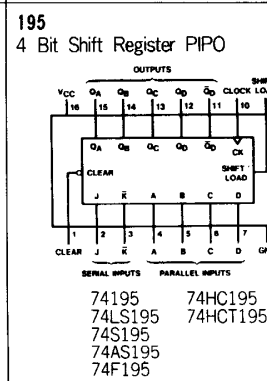
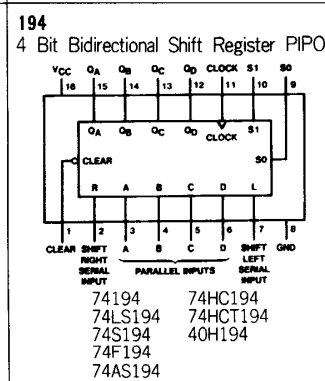
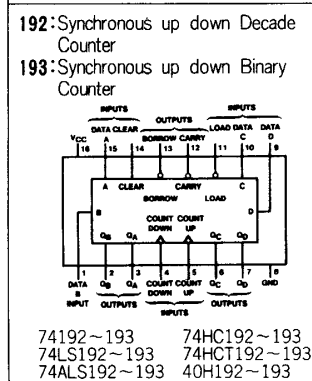
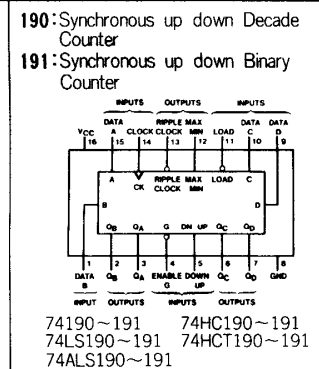
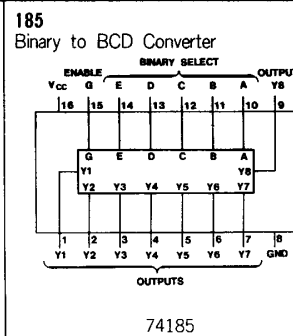
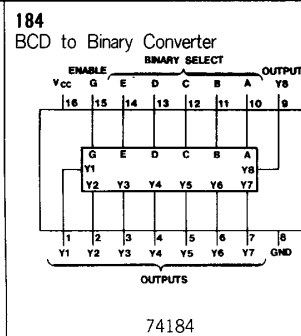
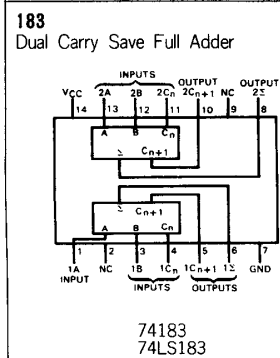
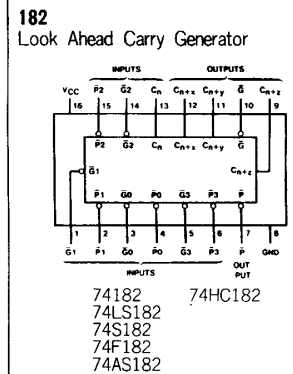
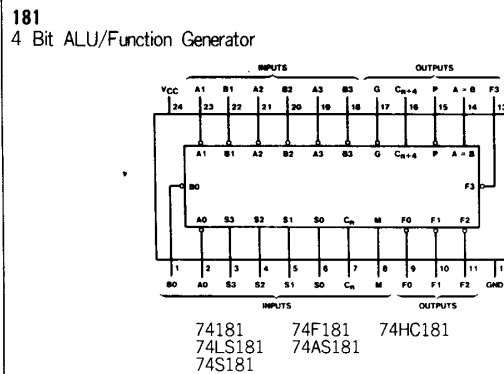
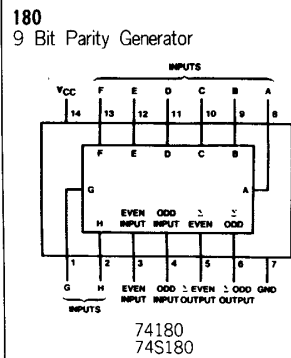
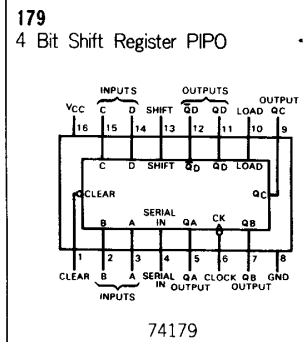
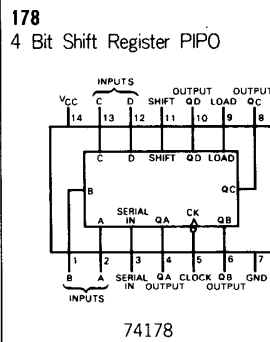
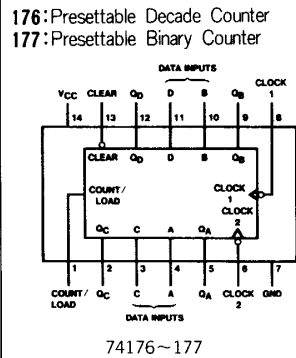
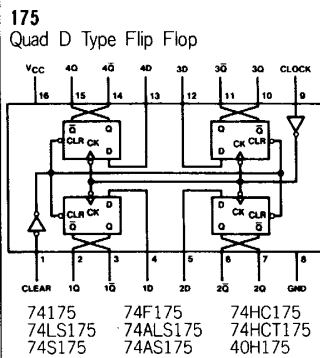


74173 74HC173
74LS173 74HCT173

174
Hex D Type Flip Flop

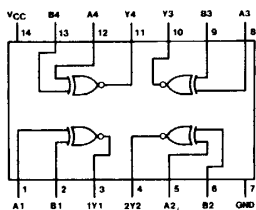


74174 74ALS174 74HC174
74LS174 74AS174 74HCT174
74F174 40H174



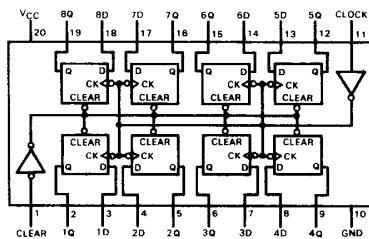
221 Dual Monostable Multivibrator 74221 74LS221 74HC221	230 Octal 3 state Bus Driver 74AS230	231 Octal 3 state Bus Inverter 74AS231 67306	240 Octal 3 state Bus Inverter 74LS240 74HC240 74ALS240 74HCT240 74S240 40H240 74F240 74ALS1240
241 Octal 3 state Bus Driver 74LS241 74AS241 74ALS241 74HC241 74S241 74HCT241 74F241 40H241 74ALS1241	242 Quad 3 state Bus Transceiver 74LS242 74HC242 74ALS242 74HCT242 74F242 40H242 74S242 74AS242 74ALS1242	243 Quad 3 state Bus Transceiver 74LS243 74HC243 74ALS243 74HCT243 74F243 40H243 74S243 74AS243 74ALS1243	244 Octal 3 state Bus Driver 74LS244 74HC244 74ALS244 74HCT244 74S244 40H244 74F244 74AS244 74ALS1244
245 Octal 3 state Bus Transceiver 74LS245 74AS245 74HC245 74ALS245 74ALS1245 74HCT245 74F245 40H245	246:BCD to Seven Segment Decoder 30V with OC 247:BCD to Seven Segment Decoder 15V with OC 74246~247 74LS247	248:BCD to Seven Segment Decoder 2kΩ pullup with OC 249:BCD to Seven Segment Decoder 5.5V with OC 74248~249 74LS248~249	251 8 to 1 Line Data Selector 3 State 74241 74ALS251 74LS251 74AS251 74S251 74HC251 74F251 74HCT251
253 Dual 4 to 1 Line Data Selector 3 State 74253 74ALS253 74HC253 74LS253 74AS253 74HCT253 74S253 74F253	256 Dual 4 Bit Addressable Latch 74LS256 74F256	257 Quad 2 to 1 Data Selector 3 State 74257 74ALS257 74HC257 74LS257 74AS257 74HCT257 74S257 74F257	258 Quad 2 to 1 Data Selector 3 State 74LS258 74HC258 74S258 74F258 74ALS258 74AS258
259 8 Bit Addressable Latch 74259 74HC259 74LS259 74HCT259 74ALS259 40H259 74F259	260 Dual 5 Input NOR 74LS260 74S260	261 2x4 Binary Multiplier 74LS261	265 Quad Complementary Output 74265

266
Quad 2 Input Exclusive NOR with OC



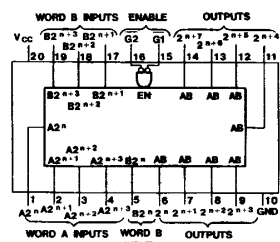
74LS266 74HC266

273
Octal D Type Flip Flop with Clear



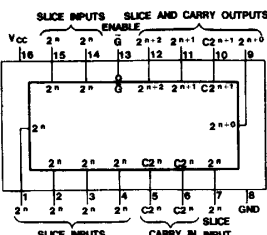
74273 74ALS273 74HC273
74ALS273 74HCT273
74F273 40H273
74S273

274
4x4 Binary Multiplier



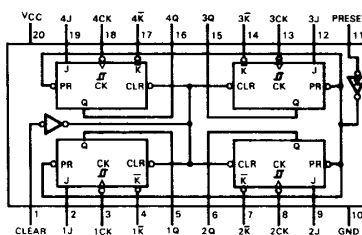
74S274

275
7 Bit Wallace Tree



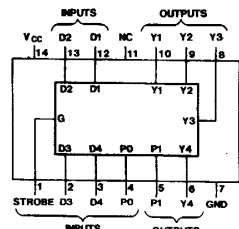
74LS275
74S275

276
Quad JK Flip Flop



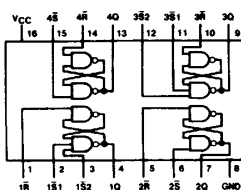
74276

278
4 Bit Cascadable Priority Register



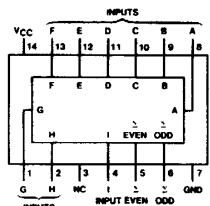
74278

279
Quad RS Latch



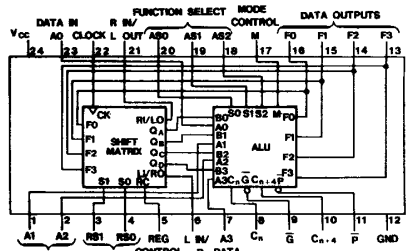
74279 74HC279
74LS279

280
9 Bit Parity Generator/Checker



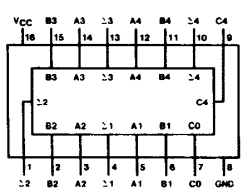
74LS280 74HC280
74S280 74HCT280
74F280
74ALS280
74AS280

281
4 Bit Binary Accumulator



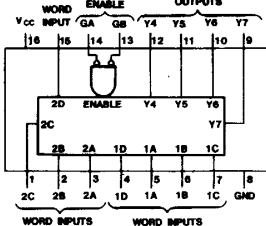
74LS281
74S281

283
4 Bit Binary Full Adder



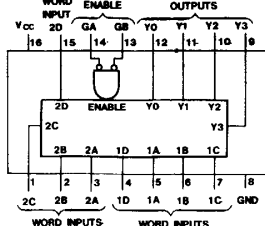
74283 74F283 74HC283
74LS283

284
4x4 Binary Multiplier



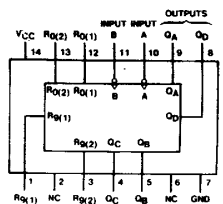
74284

285
4x4 Binary Multiplier



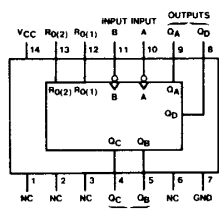
74285

290
Decade Counter



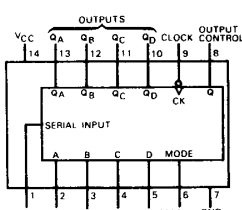
74290
74LS290

293
4 Bit Binary Counter



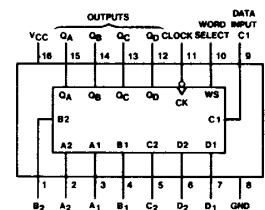
74293
74LS293

295
4 Bit Shift Register PIPO 3 State



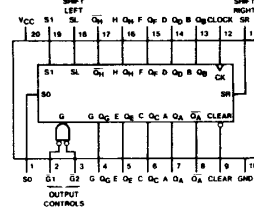
74LS295

298
Quad 2 Input Multiplexer with Storage



74298 74F298 74HC298
74LS298 74AS298

299
8 Bit Universal Shift/Storage Register



74LS299 74HC299
74S299 74HCT299
74ALS299
74F299 74S299

320 Crystal-Controlled Oscillator



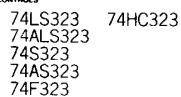
321
Crystal-Controlled Oscillator (with $F/2$,
 $F/4$ Output)



322
8 Bit Shift Register with Sign Extend



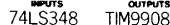
323
8 Bit Shift Register 3 state



347 BCD to 7 Segment Decoder/Driver



348
8 to 3 Line Priority Encoder 3 state



350
4 Bit Shifter 3 state



351
Dual 8 to 1 Line Data Selector 3 state



352



353
Dual 4 to 1 Line Data Selector
3 state



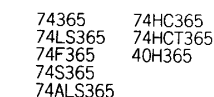
363
Octal Transparent Latch 3 state



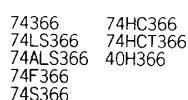
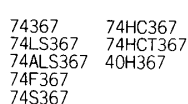
364
Octal D Type Flip Flop 3 state



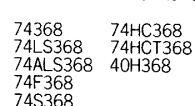
365
Hex Bus Driver 3 State



366
Hex Bus Driver 3 State

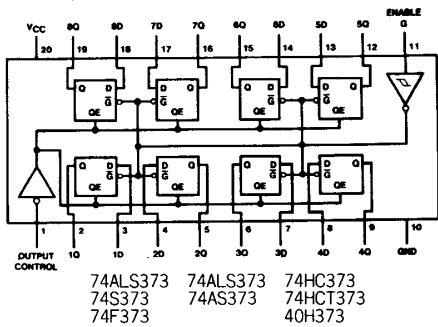
367
Hex Bus Driver 3 State

368 Hex Bus Driver 3 State



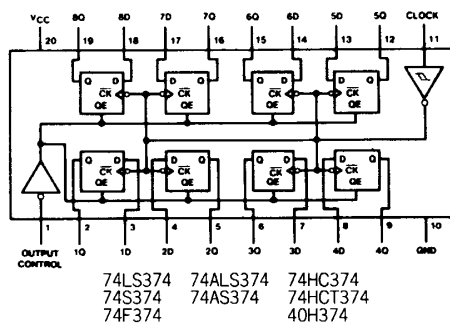
373

Octal Transparent Latch 3 state



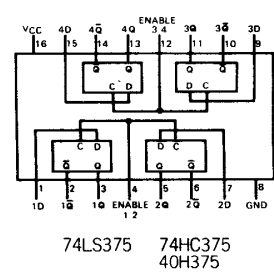
374

Octal D Type Flip Flop 3 state



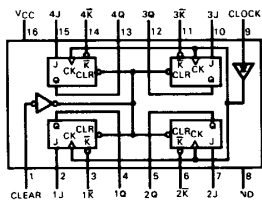
375

4 Bit Latch



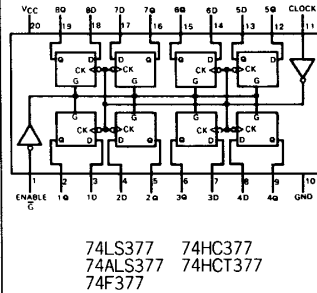
376

Quad JK Flip Flop



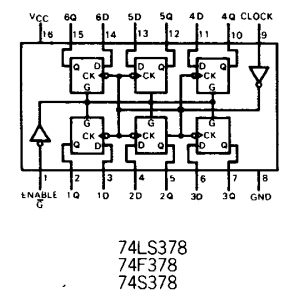
377

Octal D Type Flip Flop with Enable



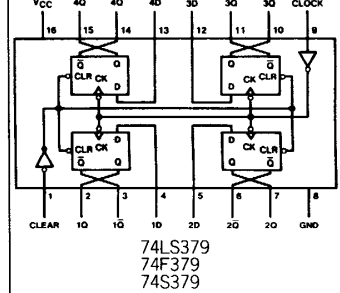
378

Hex D Type Flip Flop with Enable



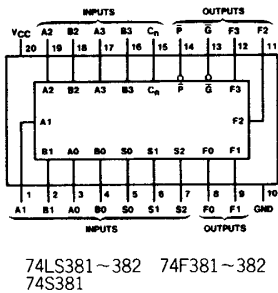
379

4 Bit D Type Flip Flop with Enable



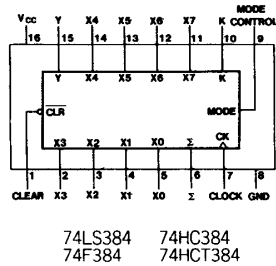
381, 382

ALU/Function Generator



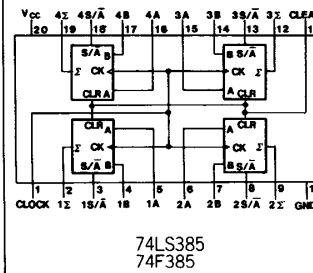
384

8 Bit by 1 Bit 2's Complement Multiplier



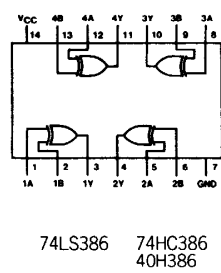
385

Quad Serial Adder/Subtractor



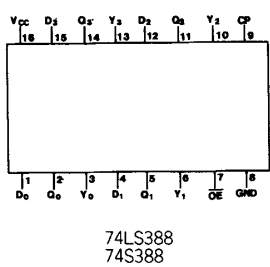
386

Quad Exclusive OR



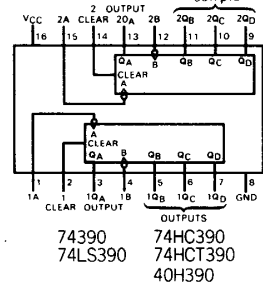
388

Quad D Type Flip Flop 3 state



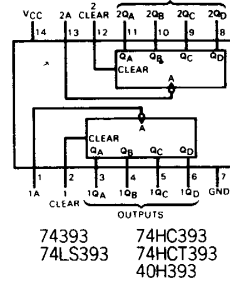
390

Dual Decade Counter



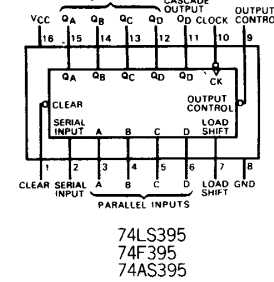
393

Dual 4 Bit Binary Counter



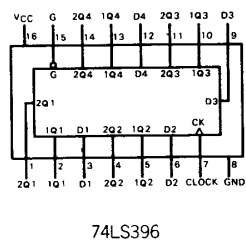
395

4 Bit Shift Register PIPO



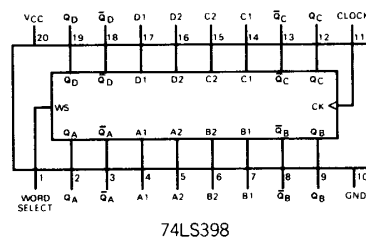
396

Octal Storage Register



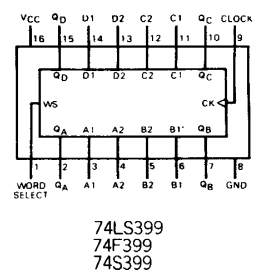
398

4 Bit 2 Input Multiplexer with Storage

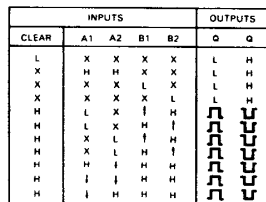


399

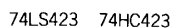
4 Bit 2 Input Multiplexer with Storage



422 Monostable Multivibrator



74LS422

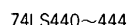
423
Dual Monostable Multivibrator425
Quad 3 state Bus Buffer

426

Quad 3 State Bus Buffer



440~444
Quad Tridirectional Bus Transceiver



445
BCD to Decimal Decoder/Driver
with OC



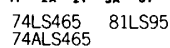
447
BCD to 7 segment Decoder/Driver



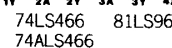
448
Quad Tridirectional Bus Transceiver with OC



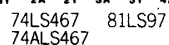
465
Octal 3 state Bus Buffer



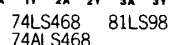
466
Octal 3 state Bus Buffer Inverter



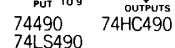
467
Octal 3 state Bus Buffer



468
Octal 3 state Bus Buffer Inverter



490
Dual Decade Counter



502



503 8 Bit Successive Approximation Register



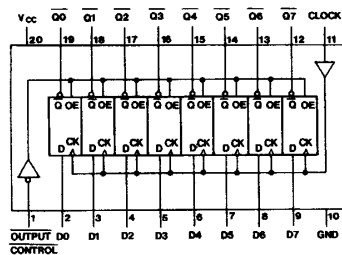
504 12 Bit Successive Approximation Register



518 8 Bit Equal to Comparator with OC 74ALS518	519 8 Bit Equal to Comparator with OC 74ALS519	520 8 Bit Equal to Comparator 74ALS520
521 8 Bit Equal to Comparator 74LS521 25LS2521 74ALS521 74F521	522 8 Bit Equal to Comparator with OC 74ALS522	533 Octal 3 state Transparent Latch (Inverted) 74LS533 74HC533 74ALS533 74HCT533 74S533 74F533
534 Octal 3 state D Type Flip Flop (Inverted) 74LS534 74HC534 74ALS534 74HCT534 74S534 74AS534 74F534	537 BCD to Decimal Decoder (3 state) 74LS537 25LS2537 74ALS537 74F537	538 3 to 8 Line Decoder (3 state) 74LS538 25LS2538 74ALS538 74F538
539 Dual 2 to 4 Line Decoder (3 state) 74LS539 25LS2539 74ALS539 74F539	540 Octal 3 state Bus Buffer (Inverted) 74LS540 74HC540 74ALS540 74HCT540	541 Octal 3 state Bus Buffer 74LS541 74HC541 74ALS541 74HCT541
560 Synchronous Presettable Decade Counter (3 state) 74ALS560	561 Synchronous Presettable Decade Counter (3 state) 74ALS561	563 Octal 3 state Transparent Latch (Inverted) 74LS563 74HC563 74ALS563 74HCT563 74S563

564

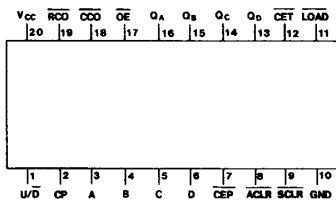
Octal 3 state D Type Flip Flop (Inverted)



74LS564 74HC564
74ALS564 74HCT564

568

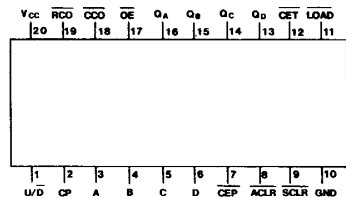
Synchronous Presettable Up/Down Counter (3 state)



74LS568 74F568
74ALS568

569

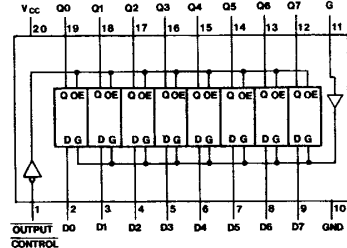
Synchronous Presettable Up/Down Binary Counter (3 state)



74LS569
74ALS569
74F569

573

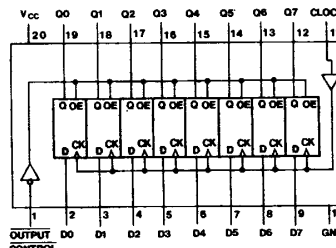
Octal 3 state Transparent Latch



74LS573 74HC573
74ALS573 74HCT573
74S573
74AS573

574

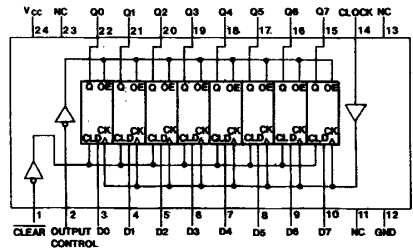
Octal 3 state D Type Flip Flop



74LS574 74HC574
74ALS574 74HCT574
74AS574

575

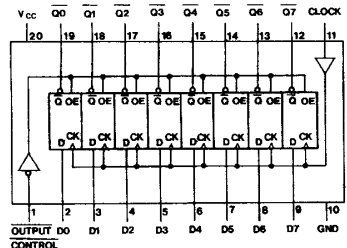
Octal 3 state D Type Flip Flop with Clear



74ALS575
74AS575

576

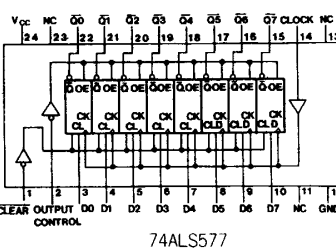
Octal 3 state D Type Flip Flop (Inverted)



74576 74HC576
74ALS576 74HCT576
74AS576

577

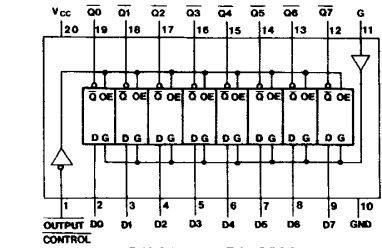
Octal 3 state D Type Flip Flop with Clear (Inverted)



74ALS577
74AS577

580

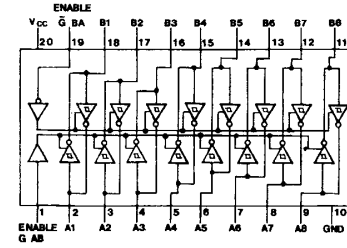
Octal 3 state Transparent Latch (Inverted)



74580 74HC580
74ALS580 74HCT580
74S580
74AS580

620

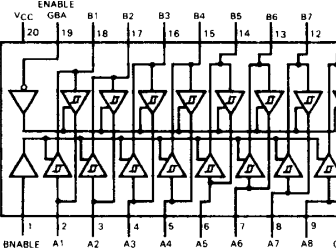
Octal 3 state Bus Transceiver (Inverted)



74LS620
74ALS620
74F620
74AS620

621

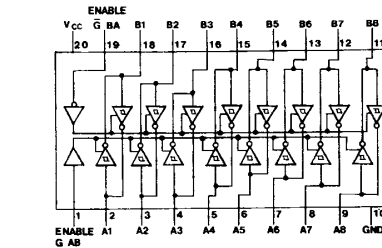
Octal Bus Transceiver with OC



74LS621
74ALS621
74F621
74AS621

622

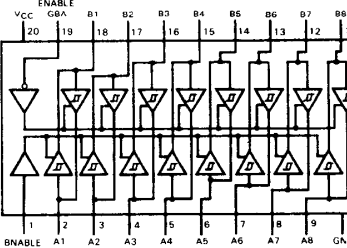
Octal Bus Transceiver with OC (Inverted)



74LS622
74ALS622
74F622
74AS622

623

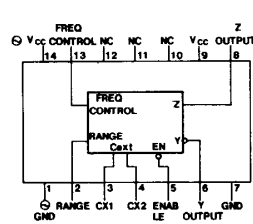
Octal 3 state Bus Transceiver



74LS623
74ALS623
74F623
74AS623

624

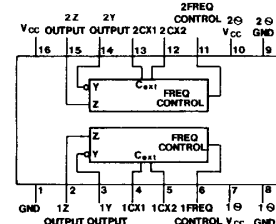
VCO



74LS624

625

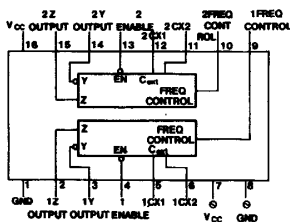
Dual VCO



74LS625

626

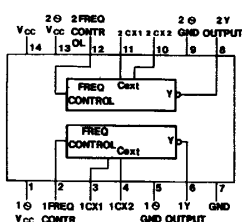
Dual VCO



74LS626

627

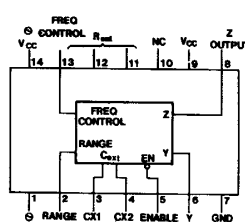
Dual VCO



74LS627

628

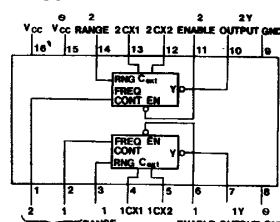
VCO



74LS628

629

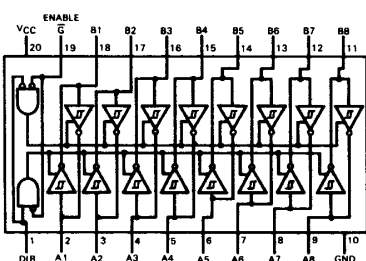
Dual VCO



74LS629

638

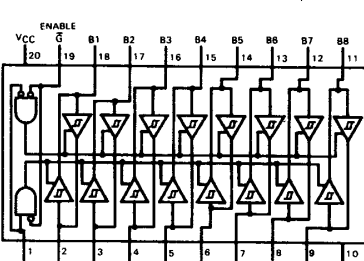
Octal Bus Transceiver with OC (3 state)



74LS638 74F638
74ALS638 74AS638
74ALS1638

639

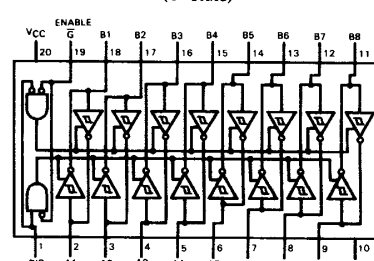
Octal Bus Transceiver with OC (3 state)



74LS639 74F639 74ALS1639
74ALS639 74AS639

640

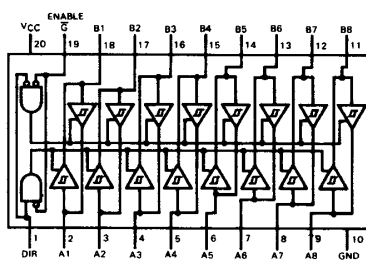
Octal Bus Transceiver (3 state)



74LS640 74ALS640 74HC640
74AS640 74S640 74HCT640
74F640

641

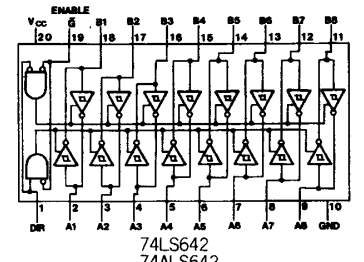
Octal Bus Transceiver with OC



74LS641 74AS641
74ALS641 74ALS1641

642

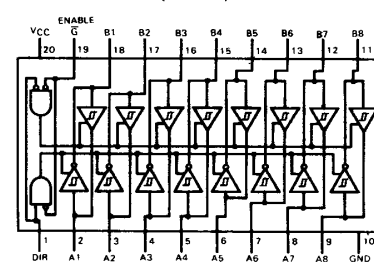
Octal Bus Transceiver with OC



74LS642
74ALS642
74ALS1642
74AS642

643

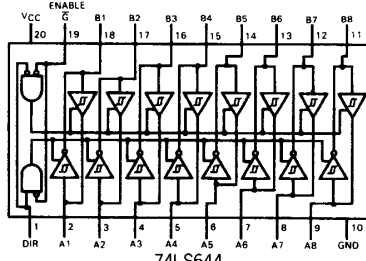
Octal Bus Transceiver (3 state)



74LS643 74S643 74HC643
74ALS643 74F643 74HCT643
74ALS1643

644

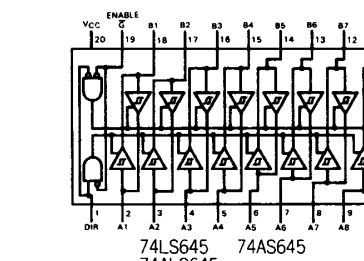
Octal Bus Transceiver with OC



74LS644
74ALS644
74ALS1644
74AS644

645

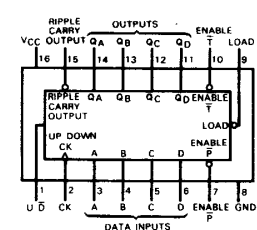
Octal 3 state Bus Transceiver



74LS645 74AS645
74ALS645
74ALS1645
74F645
74S645

668

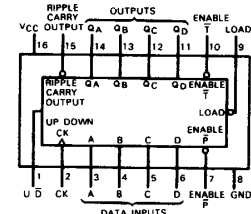
Synchronous Presettable up down
Decade Counter



74LS668

669

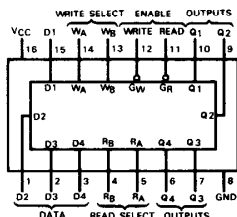
Synchronous Presettable up down
Binary Counter



74LS669

670

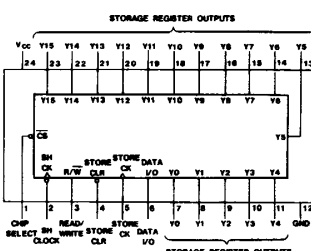
4Word x 4Bit Register File 3 state



74LS670 74HC670
74HCT670

673

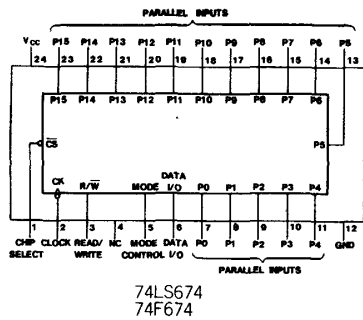
16 Bit Shift Register



74LS673
74F673

674

16 Bit Shift Register



4000/4500シリーズC-MOS

▶ここでは、C-MOS汎用ロジックである4000/4500シリーズの端子配置図を示します。4000シリーズはRCA社がオリジナル・メーカで、4500シリーズはモトローラ社がオリジナル・メーカです。ただし、モトローラ社の正式名はMC14500シリーズという呼び名ですが、ここでは略して4500シリーズと称してあります。

▶C-MOSは低消費電力と

いう特徴のために、TTLに代わる汎用ロジックとして、急速に普及しましたが、スピードがTTLに比べて遅いという欠点があります。そこで、高速C-MOSとして40Hシリーズと74HCシリーズが開発されました。しかし、このシリーズは4000/4500シリーズの端子配置とは異なり、TTLの74シリーズに合わせた端子配置となっています。

この結果、4000/4500シリーズ

には新たな品種が追加されることが少なくなり、74HCシリーズに置き換えられる傾向にあります。

しかしながら、4000/4500シリーズは電圧が18Vあるいは15Vで使用できるため、アナログ回路との兼ね合いで使われるので、いまずぐに使用されなくなるようなことはないと思われます。

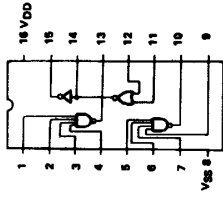
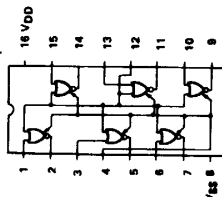
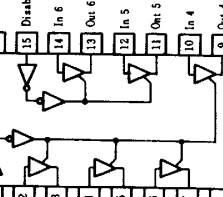
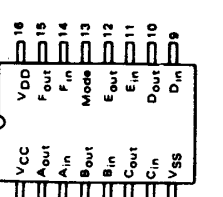
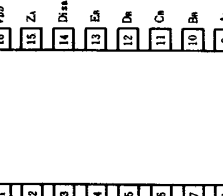
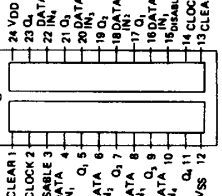
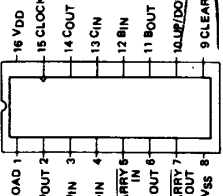
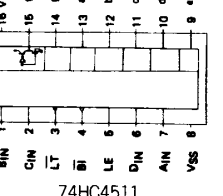
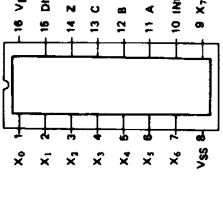
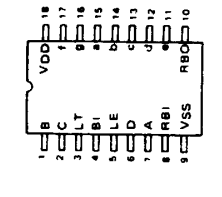
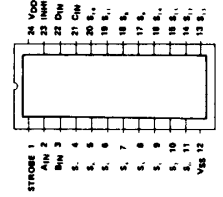
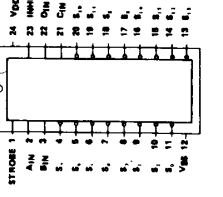
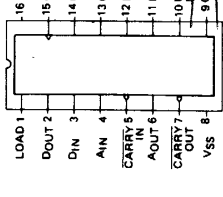
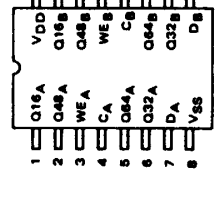
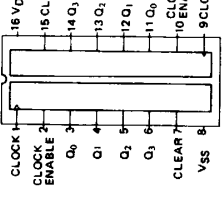
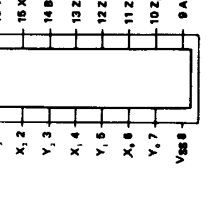
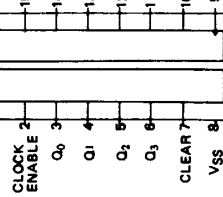
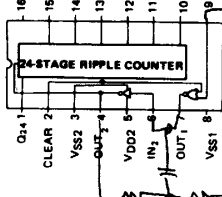
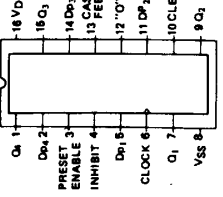
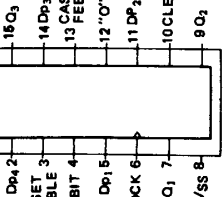
4000 Dual 3 Input Positive NOR Gate + Inverter 	4001 Quad 2 Input Positive NOR 	4002 Dual 4 Input Positive NOR 74HC4002	4006 18 Stage Static Shift Register
4007 Dual Complementary Pair + Inverter 	4008 4 Bit Full Adder 	4009 Hex Inverting Buffer/Converter 	4010 Hex Non-Inverting Buffer/Converter
4011 Quad 2 Input Positive NAND 	4012 Dual 4 Input Positive NAND 	4013 Dual D Type Flip Flop 	4014 8 Stage Static Shift Register

4015 Dual 4 Stage Static Shift Register 74HC4015	4016 Quad Bilateral Switch 74HC4016	4017 Decade Counter/Divider 74HC4017	4018 Presettable Divide by N Counter
4019 Quad AND OR Select Gate 74HC4019	4020 14 Stage Binary Counter 74HC4020	4021 8 Bit Parallel In/Serial Out Shift Register 74HC4021	4022 Divide by 8 Counter/Divider 74HC4022
4023 Triple 3 Input Positive NAND 74HC4023	4024 7 Stage Binary Counter 74HC4024	4025 Triple 3 Input Positive NOR 74HC4025	4026 Decade Counter/Driver with 7 Segment Display
4027 Dual JK Master Flip Flop 74HC4027	4028 BCD to Decimal Decoder 74HC4028	4029 Presettable Up/Down Counter 74HC4029	4030 Quad Exclusive OR
4031 64 Stage Shift Register	4032 Triple Positive Serial Adder	4033 Decade Counter/Driver with 7 Segment Display	4034 8 Bit Bidirectional Shift Register

4035 4 Bit Parallel In/Parallel Out Shift Register	4036 4 Word by 8 Bit Static RAM	4038 Triple Serial Adder	4039 4 Word by 8 Bit Static RAM
4040 12 Stage Binary Counter 74HC4040	4041 Quad True/Complement Buffer VSS	4042 Quad D Latch VSS	4043 Quad Positive NOR R/S Latch VSS
4044 Quad Positive NAND R/S Latch VSS	4045 21 Stage Counter VSS	4047 Astable/Monostable Multivibrator VSS	4048 Multi-Function Expandable 8 Input Gate VSS
4049 Hex Inverting Buffer/Converter VSS 74HC4049 50H000	4050 Hex Non-Inverting Buffer/Converter VSS 74HC4050 50H001	4051 Single 8 Channel Analog Multiplexer/Demultiplexer VSS 74HC4051	4052 Differential 4 Channel Analog Multiplexer/Demultiplexer VSS 74HC4052
4053 Triple 2 Channel Analog Multiplexer VSS 74HC4053	4054 4 Line LCD Driver VSS	4055 BCD to 7 Segment LCD Driver VSS	4056 BCD to 7 Segment LCD Driver VSS

4060 14 Stage Ripple Carry Binary Counter 74HC4060	4063 4 Bit Magnitude Comparator	4066 Quad Bilateral Switch 74HC4066	4067 Analog Multiplexer/Demultiplexer 74HC4067
4068 8 Input Positive NAND/AND 74HC4068	4069 Hex Inverter 74HC4069	4070 Quad 2 Input Exclusive OR 74HC4070	4071 Quad 2 Input Positive OR 74HC4071
4072 Dual 4 Input Positive OR 74HC4072	4073 Triple 3 Input Positive AND 74HC4073	4075 Triple 3 Input Positive OR 74HC4075	4076 Quad D Type Register 74HC4076
4077 Quad 2 Input Exclusive NOR 74HC4077	4078 8 Input Positive NOR/OR 74HC4078	4081 Quad 2 Input Positive AND 74HC4081	4082 Dual 4 Input Positive AND 74HC4082
4085 Dual 2 Wide 2 Input AND OR Invert 74HC4085	4086 4 Wide 2 Input AND OR Invert 74HC4086	4089 Binary Rate Multiplier 74HC4089	4093 Quad 2 Input NAND Schmitt Trigger 74HC4093

4094 8 Stage Shift And Store Bus Register 74HC4094	4095 Gated JK Flip Flop	4096 Gated JK Flip Flop	4097 Analog Multiplexer/Demultiplexer
4098 Dual Monostable Multivibrator	4099 8 Bit Addressable Latch	40100 32 Stage Static Left/Right Shift Register	40101 9 Bit Parity Generator/Checker
40102 :Dual BCD Presettable Down Counter 40103 :8 Bit Binary Presettable Down Counter 74HC40102 74HC40103	40104 4 Bit Universal Shift Register 74HC40104	40105 First-In First-Out Register 74HC40105	40106 Hex Schmitt Trigger
40107 Dual 2 Input NAND Buffer/Driver	40108 4 X 4 Multiport Register	40109 Quad Low-to-High Voltage Level Shifter	40160:Decade Counter with Asynchronous Clear 40161:4 Bit Binary Counter with Asynchronous Clear 40162:Decade Counter with Synchronous Clear 40163:4 Bit Binary Counter with Synchronous Clear
40174 Hex D Type Flip Flop	40175 Quad D Type Flip Flop	40192:Presettable BCD Up/Down Counter 40193:Presettable Binary Up/Down Counter	40194 4 Bit Universal Shift Register

4501 Dual 4 Input NAND+2 Input NOR/OR 	4502 Hex Strobed Buffer 	4503 Hex Non-Inverting 3 state Buffer 	4504 Hex Level Shifter (TTL→C-MOS, C-MOS→C-MOS) 
4506 Dual 2-Wide 2 Input Expandable AND-OR-Invert 	4508 Dual 4 Bit Latch 	4510 BCD Up/Down Counter 	4511 BCD to 7 Segment Latch/Decoder/Driver  74HC4511
4512 8 Channel Data Selector 	4513 BCD to 7 Segment Latch/Decoder/Driver 	4514 4 Bit Latch/4 to 16 Line Decoder 	4515 4 Bit Latch/4 to 16 Line Decoder  74HC4515
4516 Binary Up/Down Counter 	4517 Dual 64 Bit Static Shift Register 	4518 Dual BCD Up Counter 	4519 4 Bit AND/OR Selector 
4520 Dual Binary Up Counter 	4521 24 Stage Frequency Divider 	4522 Programmable Divide by N 4 Bit BCD Counter 	4526 Programmable Divide by N 4 Bit Binary Counter 

4527 BCD Rate Multiplier	4528 Dual Monostable Multivibrator	4529 Dual 4 Channel Analog Data Selector	4530 Dual 5 Input Majority Logic
4531 12 Bit Parity Tree	4532 8 Bit Priority Encoder	4534 Real Time 5 Decade Counter	4536 Programmable Timer
4538 Dual Precision Retriggerable/ Resettable Monostable Multivibrator	4539 Dual 4 Channel Multiplexer	4541 Programmable Timer	4543 BCD to 7 Segment Latch/Decoder/ Driver (for Liquid Crystal) 74HC4543
4544 BCD to 7 Segment Latch/Decoder/ Driver (for Liquid Crystal)	4547 BCD to 7 Segment Decoder/Driver	4549 Successive Approximation Registers	4551 Quad 2 Input Analog Multiplexer/Demultiplexer
4553 3 Digit BCD Counter	4554 2 Bit by 2 Bit Parallel Binary Multiplier	4555 Dual 1 of 4 Decoder (Positive)	4556 Dual 1 of 4 Decoder (Negative)

4557 1 to 64 Bit Variable Length Shift Register	4558 BCD to 7 Segment Decoder	4559 Successive Approximation Register	4560 NBCD Adder 74HC4560
4561 9's Complementer	4562 128 Bit Static Shift Register	4566 Industrial Time Base Generator	4568 Phase Comparator and Programmable Counter
4569 Programmable Divide by N Dual 4 Bit BCD/Binary Counter	4572 Hex Gate (4 Inverter + 2 Input NOR Gate + 2 Input NAND Gate)	4580 4x4 Multiport Register	4581 4 Bit Arithmetic Logic Unit
4582 Look Ahead Carry Block	4583 Dual Schmitt Trigger	4584 Hex Schmitt Trigger	4585 4 Bit Magnitude Comparator
4597 8 Bit Bus Compatible Latch (3 state)	4598 8 Bit Bus Compatible Latch (3 state)	4599 8 Bit Addressable Latch	

OPアンプ,レギュレータ,コンパレータ,その他

▶モノリシックOPアンプは、特殊なものを除けば1回路タイプ、2回路タイプ、4回路タイプがあります。

▶1回路タイプは、オフセット調整端子の違いにより3種類に大別できます。さらに、ここではオフセット調整用抵抗でも分類してあります。

▶三端子レギュレータは、78/79シリーズがよく使用されていますが、電流容量の100mAタイプ

は78L××,79L××,500mAタイプは78M××,79M××の型名がついています。××のところに出力電圧が入ります。

■ 1回路入りOPアンプ

主なOPアンプ	8ピン DIP (Top View)	Metal Can (Top View)
汎用: μ A741 BI-FET: LF351 TL071 J-FET入力: OPA100		
(オフセット調整端子は1-5で $-V_{CC}$ より)		
④ 汎用($R: 10k\Omega$)	⑤ BI-FET($R: 10k\Omega$)	⑥ BI-FET($R: 100k\Omega$)
8ピン DIP	Metal Can	8ピン DIP
μ A741TC LM741CN MC1741CPI μ A741CP μ PC151C μ PC741C TA7504P HA17741PS MB3609	μ A741HC LM741CH MC1741CG μ PC151A	LF351N LF441CN LF411CN LF13741N TL091P CA081E CA3420AE
		LF351H LF441CH LF411CH LF13741H CA081CS CA3420AS AD547H
		⑦ BI-FET($R: 250k\Omega$)
		8ピン DIP
		TL061P
⑧ 高速($R: 10k\Omega$)	⑨ 高速($R: 100k\Omega$)	⑩ J-FET入力($R: 10k\Omega \sim 100k\Omega$)
8ピン DIP	Metal Can	8ピン DIP
NE530N NE531N	NE538N	OPA100G
		OPA100M OPA103M OPA104M
		⑪ Low Power($R: 100k\Omega$)
		8ピン DIP
		LM4250CN μ PC802C/4250C NJM4250D
		Metal Can
		LM4250CH
主なOPアンプ	8ピン DIP (Top View)	Metal Can (Top View)
BI-FET: LF356 高速: LM318 C-MOS: ICL7611		
		(オフセット調整は端子1-5で $+V_{CC}$ より)
⑫ BI-FET($R: 25k\Omega$)	⑬ 高速($R: 200k\Omega$)	⑭ BI-FET($R: 10k\Omega$)
8ピン DIP	Metal Can	8ピン DIP
LF356N LF357N μ PC806C μ PC365C μ PC807C μ PC357C	LF356H LF357H	LM318N LM318P AD518H
		μ PC159D
		⑮ C-MOS
		8ピン DIP
		ICL7611CPA ICL7612CPA ICL7613CPA TLC271
		Metal Can
		ICL7611CTY ICL7612CTY ICL7613CTY

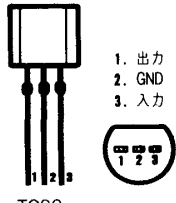
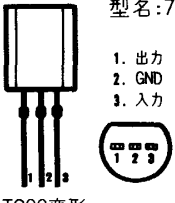
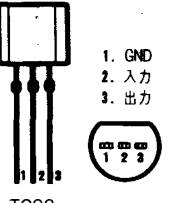
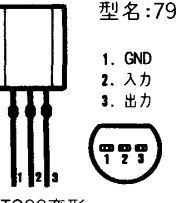
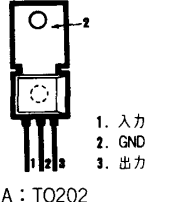
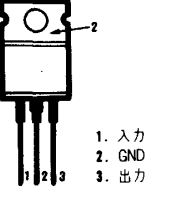
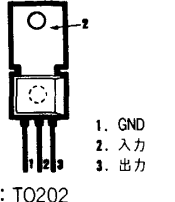
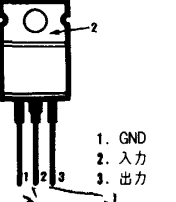
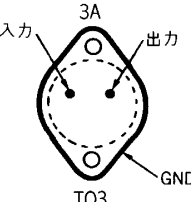
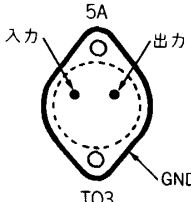
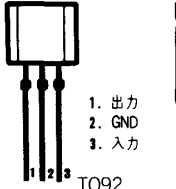
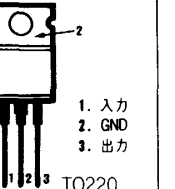
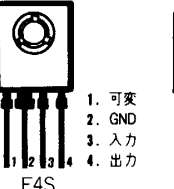
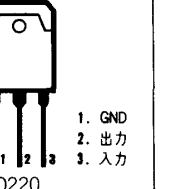
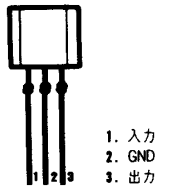
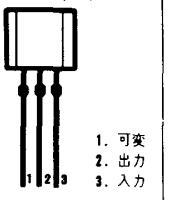
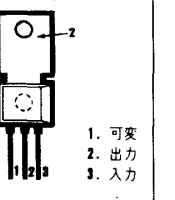
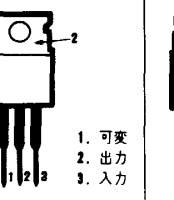
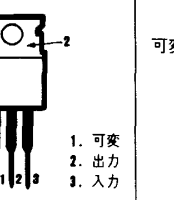
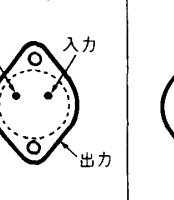
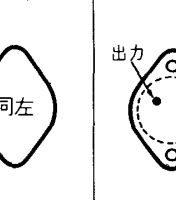
主なOPアンプ	8ピン DIP (Top View)	Metal Can (Top View)	
高精度： μ A725 OP05 OP27 LM11			
(オフセット調整端子 1-8 で +Vcc より)			
⑧(R: 100k Ω)		⑨(R: 10k Ω)	
8ピン DIP	Metal Can	8ピン DIP	Metal Can
μ A725RC LM725CN μ PC154D NE5534D NE5534D	μ A725HC LM725CH μ PC154A	OP05P OP07P μ PC254D OP27Z OP37Z OPA27Z OPA27Z	OP05J OP07J ADOP07H μ PC254A OP27J OP37J OPA27J OPA27J
⑩(R: 10k Ω)			
	AD504H		
⑪(R: 1k Ω ~ 100k Ω)			
LM11CN	LM11CH		

■ 2 回路入り OPアンプ

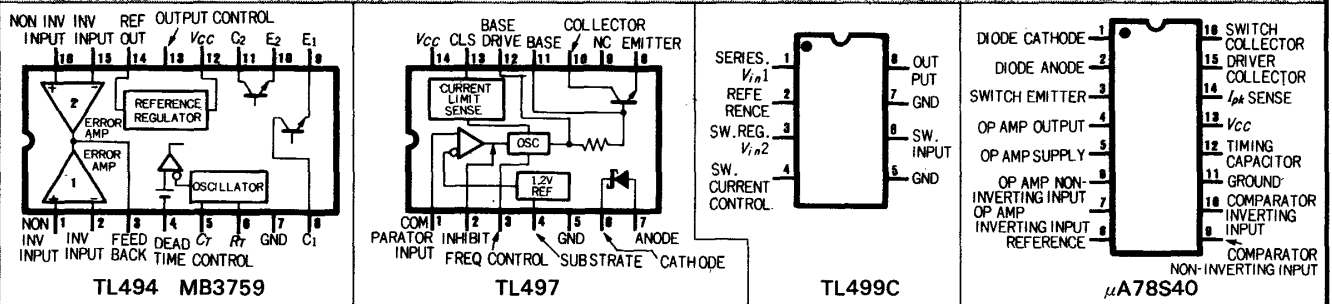
主なOPアンプ		8ピンDIP (Top View)		TO99Metal Can (Top View)	
RC4558 TL072 LM358 NE5532					
汎用, 単一電源		汎用		BI-FET	
8ピンDIP	Metal Can	8ピン DIP	Metal Can	8ピン DIP	Metal Can
LM358N LM2904N LM358N <u>LM2904P</u> NE532N μ PC1257C μ PC358C TA75358P HA17904PS LA6358 AN6561 AN6562 NJM2904D	LM358H LM2904H	RC4558 TL4558P μ PC258C μ PC4558C TA75558P LA6458D AN6552 AN6553 NJM4558D	—	LF353N LF412CN LF442CN TL062P TL072P TL082P μ PC803C μ PC4082C HA17082PS NJM082D CA082E	LF353H LF412CH LF442CH
C-MOS		ローノイズ, ハイスピード			
ICL7621CPA TLC272 TLC27M2 TLC27L2	ICL7621CTY	NE5532N NE5532P LM833N μ PC4556C NJM4556M	—		

■ 4 回路入り OPアンプ

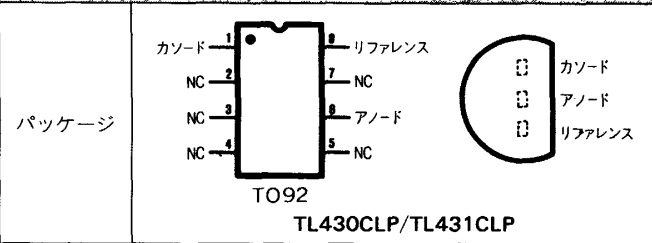
主なOPアンプ	14ピン DIP (Top View)	汎用 (単一電源)	BI-FET	C-MOS
LM324 TL084		LM324N LM2902N LM324P LM2902P μ PC451C μ PC324C TA75902P HA17902P MB3614 NJM2902 NJM2060D	LF347N LF444CN TL064P TL074P TL084P μ PC804C μ PC4084 HA17084P NJM064D	TLC274 TLC27M4 TLC27L4

三端子固定型 (100mAタイプ) 正出力		三端子固定型 (100mAタイプ) 負出力					
 TO92	東芝のみ 型名: 78L × × 1. 出力 2. GND 3. 入力  TO92変形	 TO92	東芝のみ 型名: 79L × × 1. GND 2. 入力 3. 出力  TO92変形				
三端子固定型 (500mA, 1Aタイプ) 正出力		三端子固定型 (500mA, 1Aタイプ) 負出力					
 A: TO202 NSのみ	 B: TO220 型名: 78M × × ↓ 500mA 型名: 78 × × ↓ 1A	 A: TO202 NSのみ	 B: TO220 型名: 79M × × ↓ 500mA 型名: 79 × × ↓ 1A				
三端子固定型 (3A以上 正出力のみ) (Bottom View)							
パッケージ	 TO3		 TO3				
NS	LM323						
FC			μA78H05 (5V) 78H12 (12V) 78H15 (15V)				
サンケン	SI3554M (5V)						
三、四端子固定型 (低ドロップアウト・タイプ (入出力間の電位が少なくてすむ)。標準で約0.2Vで動作する)							
パッケージ	正出力のみ 150mA  TO92		 TO220	 F4S	 TO220	100mA  TO92	
NS	LM2931AZ-5.0 (5V)		LM2931T-5.0 (5V) * LM2931-8.0 (8V) LM330T-5.0 (5V) LM2930T-5.0 (5V) LM2930T-8.0 (8V)				
TI	LM330-5KC (5V), LM330-8KC (8V)						
ミツミ					LVC516 (3V), LVC517 (5V), LVC520 (2.6V)		
サンケン			SI3052V, SI3122V, SI3152V (5V) (12V) (15V)				
松下			AN6531				
三端子可変型 (正出力)							
パッケージ	100mAタイプ  TO92	500mAタイプ  TO220	700mAタイプ  TO202	1.5Aタイプ  TO220	3Aタイプ  TO3	5Aタイプ  TO3	10Aタイプ  TO3
出力電圧	1.2V~37V	1.2V~37V	1.2V~125V	1.2V~37V	1.2V~37V	1.2V~37V	1.2V~15V
NS	LM317LZ	LM317MP		LM317T	LM350K	LM338K	LM396K
TI	TL317LP (1.2V~32V)	LM317KD	TL783C	LM317KC			

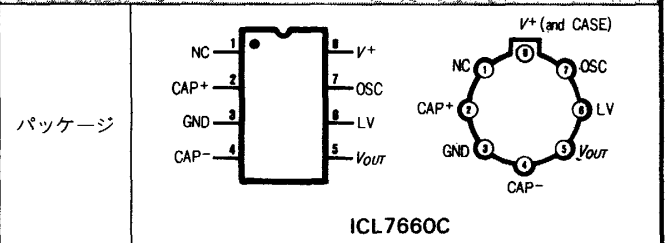
スイッチングレギュレータおよびコントローラ



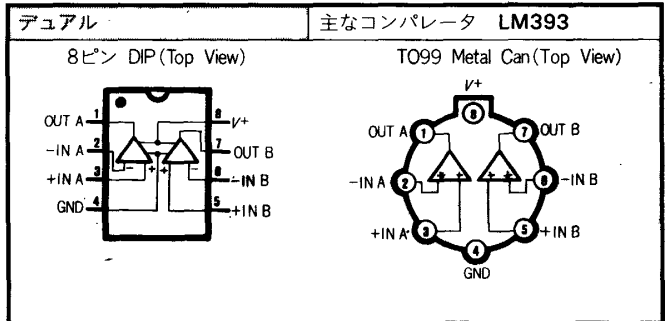
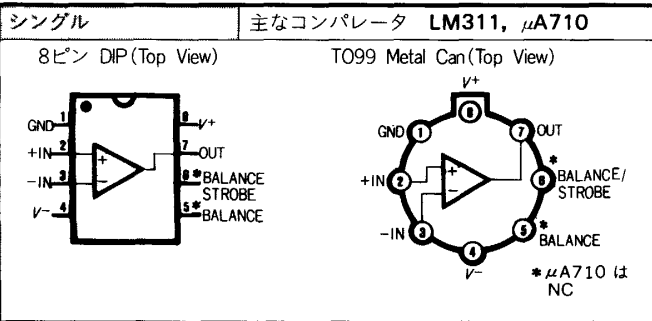
シャントレギュレータ (Top View)



ボルテージコンバータ (Top View)



コンパレータ



基準電源

1.2V	2.5V	5V	6.9V
ICL8069 : INTERSIL LM385-1.2 : NS AD589 : AD	LM385-2.5 : NS (外形はLM385-1.2と同じ) LM336 : NS AD580 : AD	LM336-5.0 : NS (外形はLM336と同じ)	LM399/AH : NS LM3999Z : NS
温度ドリフト ICL8069 (4種類) : 10ppm~100ppm LM385-1.2 : 20ppm (typ) AD589 (7種類) : 10ppm~100ppm	温度ドリフト LM385-2.5 : 20ppm (typ) LM336 : 6mV AD580 (7種類) : 10ppm~85ppm	温度ドリフト LM336-5.0 : 12mV	温度ドリフト LM399/AH : 1ppm~2ppm LM3999Z : 5ppm
TO92 Metal Can (Bottom View)	LM336 Metal Can (Bottom View)	AD580 (Bottom View)	LM399/AH Metal Can (Top View) LM3999Z (Bottom View)
ICL8069 LM385-1.2) のみ			

電源電圧監視用 I C

