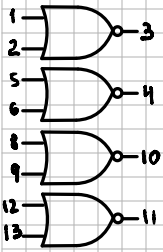
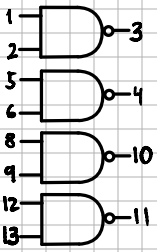
CD4001



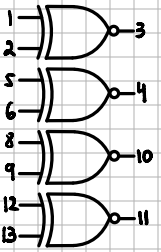
125, 60, 45ns

CD4011



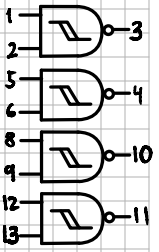
100, 50, 40ns

CD4077



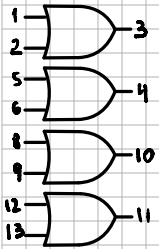
140, 65, 50ns

CD4093



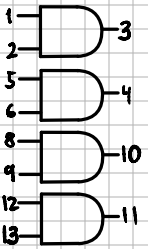
190, 90, 65ns

CD4071



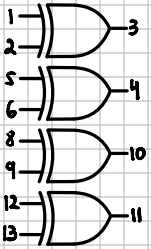
125, 60, 45ns

CD4081



125, 60, 45ns

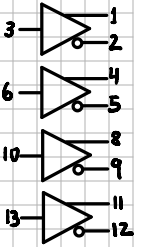
~~CD4030~~ CD4070



140, 65, 50ns

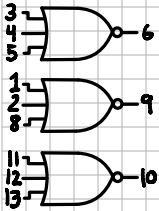
CD4041

+/- 10mA



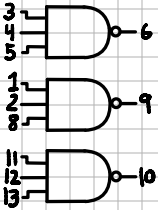
60, 35, 25ns

CD4025



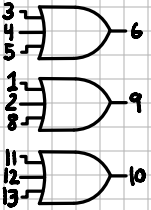
125, 60, 45ns

CD4023



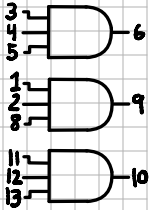
125, 60, 45ns

CD4075



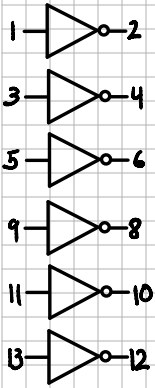
125, 60, 45ns

CD4073



125, 60, 45ns

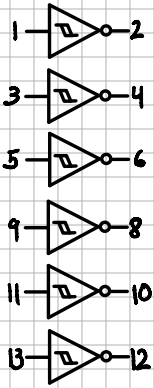
CD4069



55, 30, 25ns

CD40106

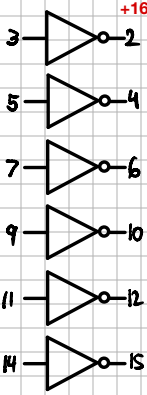
MC14584



140, 70, 60ns

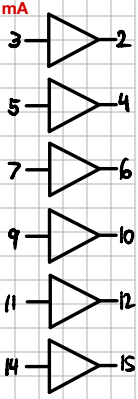
~~CD4009~~ CD4049U

+16/-3 mA



60, 32, 25ns

~~CD4010~~ CD4050

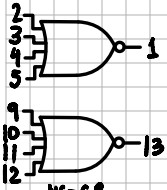


70, 40, 30ns

4009, 4010: $V_1=1$, $V_2=16$, $\perp=8$, NC=13

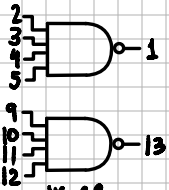
4049, 4050: $V_{cc}=1$, $\perp=8$, NC=13,16

CD4002



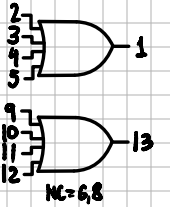
125, 60, 45ns

CD4012



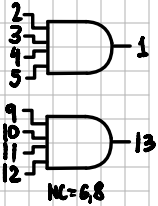
125, 60, 45ns

CD4072



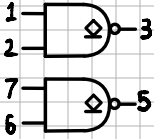
125, 60, 45ns

CD4082



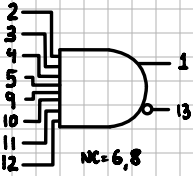
125, 60, 45ns

CD40107



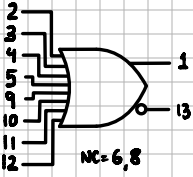
100, 60, 50ns

CD4068



150, 75, 55ns

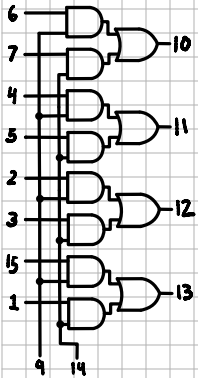
CD4078



150, 75, 55ns

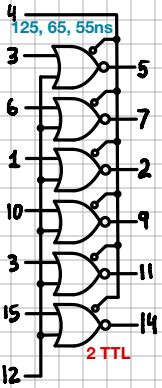
CD4519

CD4019



150, 60, 50ns

CD4502

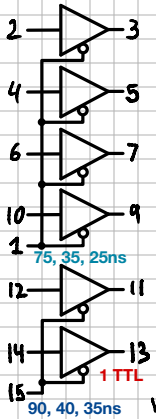


125, 65, 55ns

2 TTL

190, 90, 65ns

CD4503

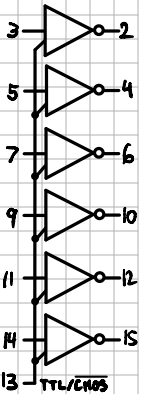


75, 35, 25ns

1 TTL

90, 40, 35ns

CD4504



$V_1 = 1$, $V_2 = 16$, $\perp = 8$

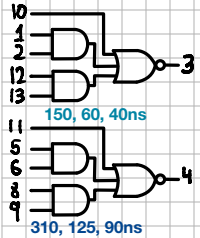
5-10, 5-15, 10-15

TH: 140, 140ns

LH: 120, 120, 70ns

HL: 275, 275, 70ns

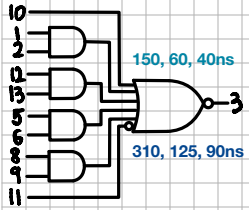
CD4085



150, 60, 40ns

310, 125, 90ns

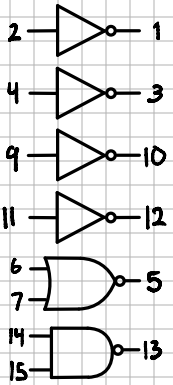
CD4086



150, 60, 40ns

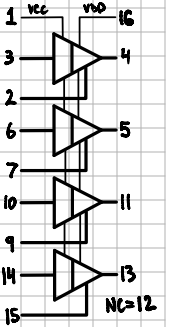
310, 125, 90ns

CD4572U



100, 55, 40ns

CD40109

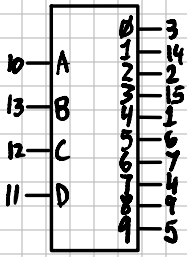


5-10, 5-15, 10-15

LH: 300, 220, 180ns

HL: 250, 250, 120ns

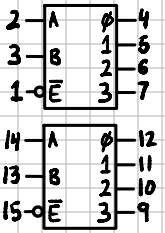
CD4028



175, 80, 60ns

CD4555

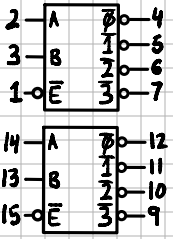
200, 85, 65ns



220, 95, 70ns

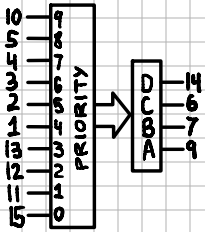
CD4556

200, 85, 65ns



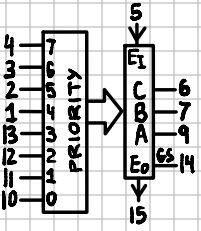
220, 95, 70ns

CD40147



450, 200, 150ns

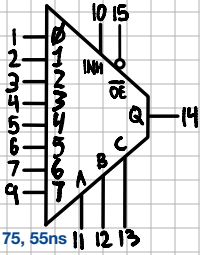
CD4532



220, 110, 85ns

CD4512

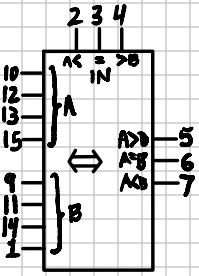
INH: 140, 70, 50ns
ABC: 200, 85, 60ns
OE: 60, 30, 20ns



180, 75, 55ns

CD4063

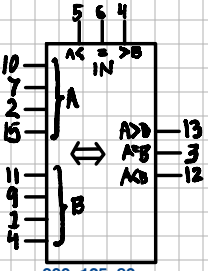
500, 200, 140ns



625, 250, 175ns

CD4585

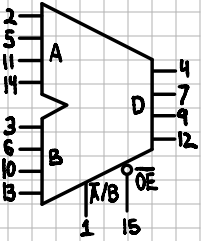
200, 80, 60ns



300, 125, 80ns

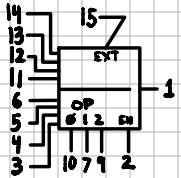
CD40257

A/B: 290, 85, 65ns
OE: 95, 50, 40ns



150, 70, 50ns

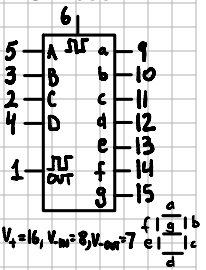
CD4048



X,0: 300, 150, 120ns
1: 225, 85, 55ns
2: 140, 50, 40ns
EXT: 190, 90, 65ns

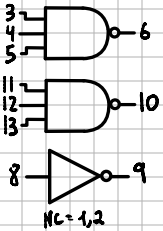
OP	EXT GATE
0-NOR	xOR
1-OR	xOR
2-AND	xNAND
3-NAND	xNAND
4-OR/AND	xNOR
5-OR/NAND	xNOR
6-AND/NOR	xAND
7-AND/OR	xAND

CD4055



600, 575, 375ns

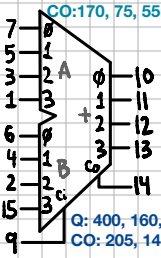
MC14000U



115, 55, 40ns

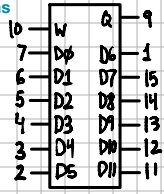
CD4008

Q: 375, 155, 115ns
CO:170, 75, 55ns

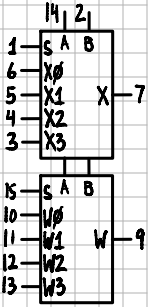


Q: 400, 160, 115ns
CO: 205, 145, 110ns

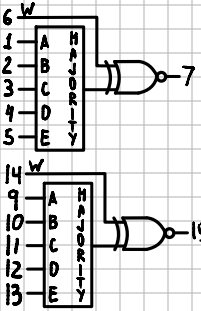
MC14531



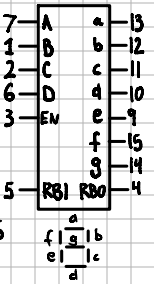
MC14539



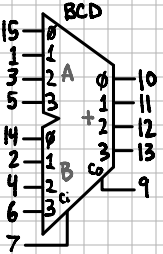
MC14530



MC14558

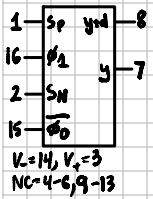


MC14560



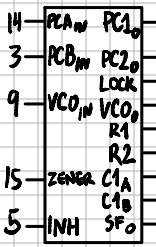
Q: 750, 330, 220ns
CO: 650, 230, 170ns
CO: 550, 220, 160ns

CD4045



> 5, 12, 15MHz

CD4046

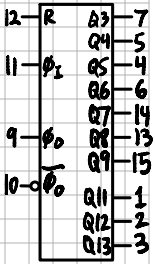


> 0.5, 1, 1.4MHz@R1=5k

CD4047

< 0.8MHz

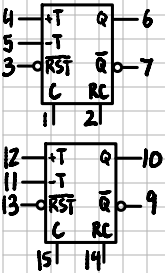
CD4060



> 3.5, 8, 12MHz

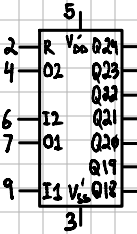
CD4098

CD14538



T 140, 60, 40ns

CD4521



< 2, 5, 6.5MHz

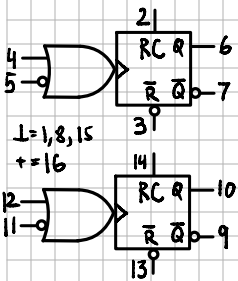
CD4536

> 0.5, 1.5, 2.5MHz

CD4541

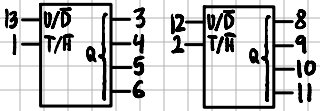
1.5, 4, 6MHz

CD4528



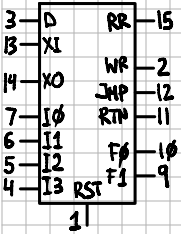
CD40117

TERMINATOR/ BUS HOLD



>10ns Q PULSE WIDTH
U/D 1600, 700, 500ns

MC14500

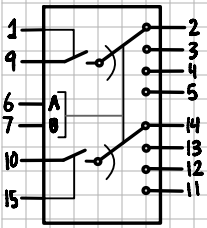


DC-1MHz @ 5V

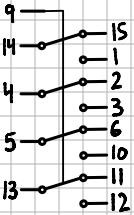
MC14549 MC14559

> 0.8, 1.5, 2.0MHz

MC14529



MC14551



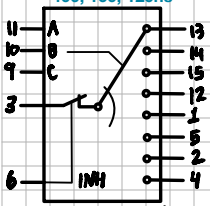
Special

Analog

rev 2

CD4051

400, 160, 120ns

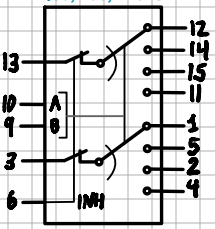


$V_- = 7, \perp = 8, V^+ = 16$

450, 160, 120ns

CD4052

400, 160, 120ns

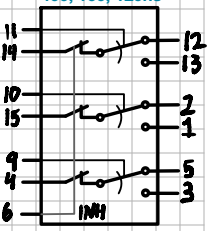


$V_- = 7, \perp = 8, V^+ = 16$

450, 160, 120ns

CD4053

400, 160, 120ns



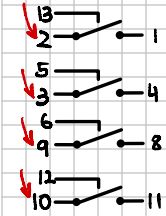
$V_- = 7, \perp = 8, V^+ = 16$

450, 160, 120ns

CD4016 - 100pA

CD4066 - 470,180,125Ω

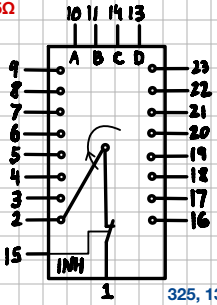
4066: Use as inputs when output is heavily loaded.



35, 20, 15ns

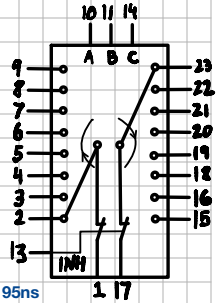
6, 9, 9.5 MHz

CD4067

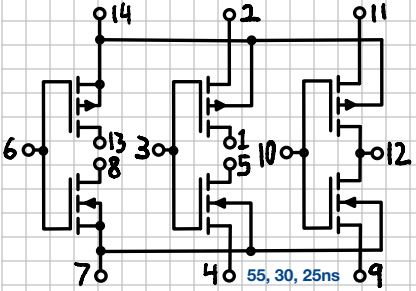


325, 135, 95ns

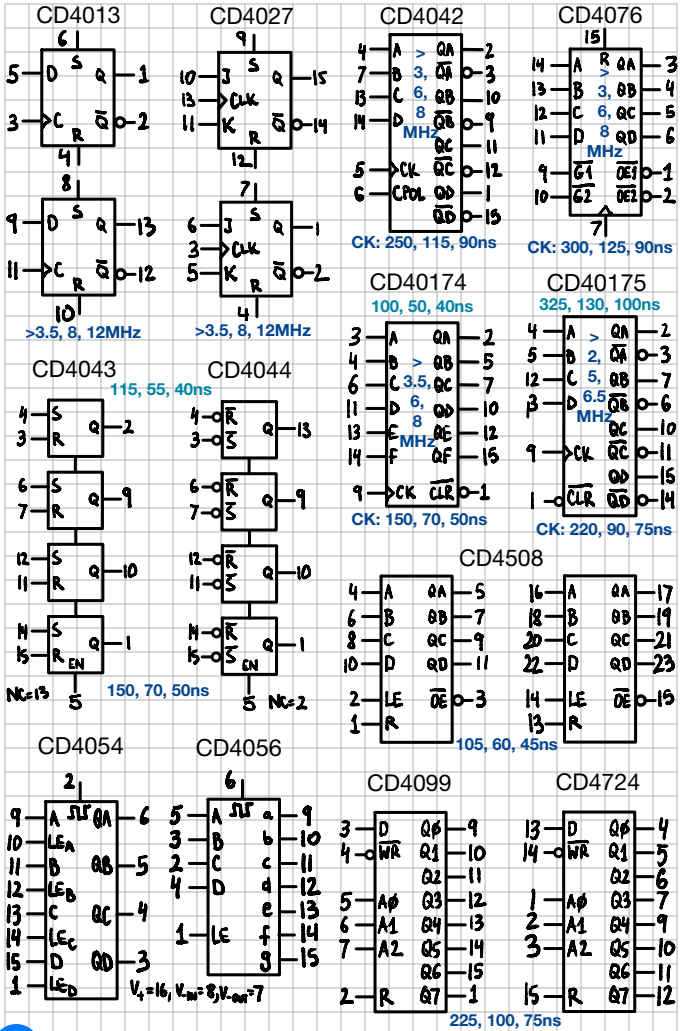
CD4097



CD4007U

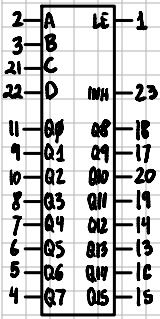


55, 30, 25ns


CD4013
>3.5, 8, 12MHz
CD4027
>3.5, 8, 12MHz
CD4042
3, 6, 8 MHz
CK: 250, 115, 90ns
CD4076
3, 6, 8 MHz
CK: 300, 125, 90ns
CD40174
100, 50, 40ns
3.5, 6, 8 MHz
CK: 150, 70, 50ns
CD40175
325, 130, 100ns
2, 5, 6.5 MHz
CK: 220, 90, 75ns
CD4043
115, 55, 40ns
150, 70, 50ns
NC=13
CD4044
NC=2
CD4508
105, 60, 45ns
CD4054
CD4056
$V_+=16, V_{IN}=8, V_{-OUT}=7$
CD4099
CD4724
225, 100, 75ns

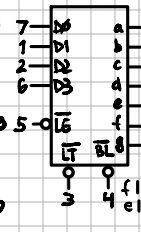
CD4514
CD4515

INH 250, 110, 85ns

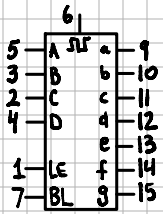


485, 185, 135ns

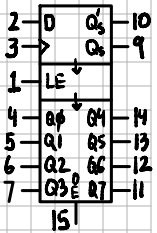
CD4511



CD4543



CD4094



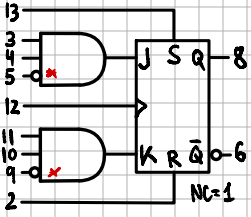
1.25, 2.5, 3MHz
CK: 420, 195, 135ns
LE: 290, 145, 100ns

CD40105

> 1.5, 3, 4MHz

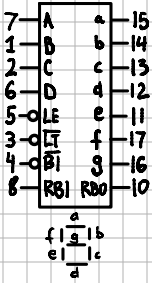
LATCH	ENABLE
LOAD	RETAIN
$\overline{LE}$=0	$\overline{LE}$=1
LE=1	LE=0

CD4095
CD4096

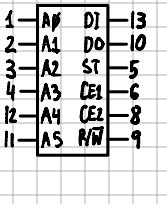


* 4095: TRUE
4096: INVERTING

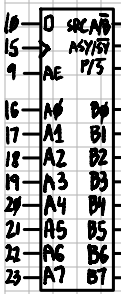
MC14513



HEF4505

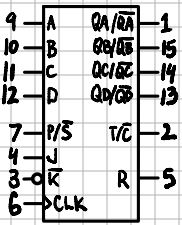


CD4034



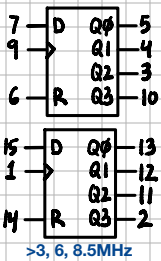
>2, 5, 7MHz

CD4035



>2, 6, 8MHz

CD4015

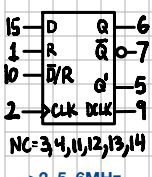


>3, 6, 8.5MHz

CD4517

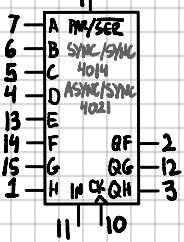
>3, 6, 8MHz

CD4031



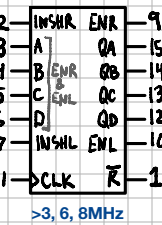
>2, 5, 6MHz

CD4014
CD4021



>3, 6, 8.5MHz

CD40194

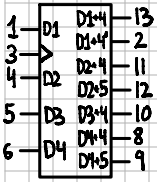


>3, 6, 8MHz

MC14557

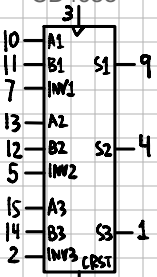
>1.7, 5, 6.7MHz

CD4006
CD4006B-MIL



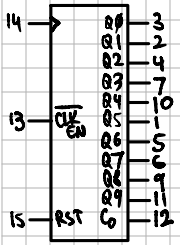
>2.5, 5, 7MHz

CD4032
CD4038



>2.5, 5, 7.5MHz

CD4017

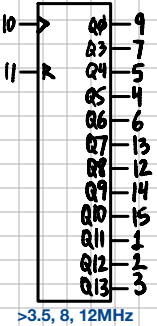


>2.5, 5, 5.5MHz

CD4018

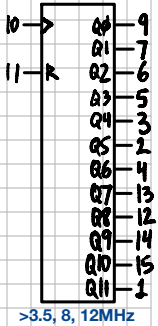
>3, 7, 8.5MHz

CD4020



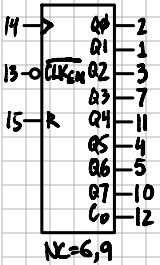
>3.5, 8, 12MHz

CD4040



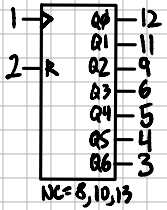
>3.5, 8, 12MHz

CD4022



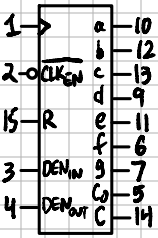
>2.5, 5, 5.5MHz

CD4024



>3.5, 8, 12MHz

CD4026

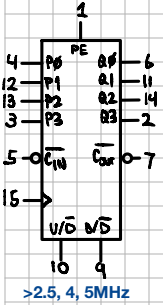


>2.5, 5.5, 8MHz

CD4033

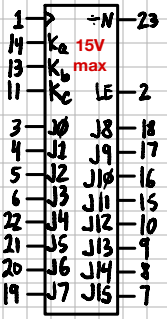
>2.5, 5.5, 8MHz

CD4029



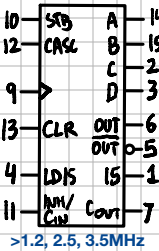
>2.5, 4, 5MHz

CD4059A



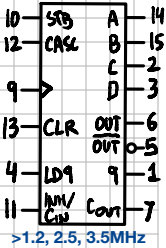
>1.5, 3MHz

CD4089



>1.2, 2.5, 3.5MHz

CD4527

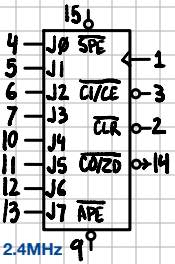


>1.2, 2.5, 3.5MHz

CD40102

>0.7, 1.8, 2.4MHz

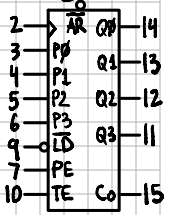
CD40103



CD40110

>1, 3, 5MHz

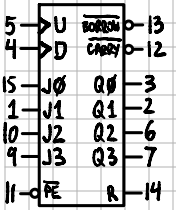
CD40160
CD40161



160: DECADE
161: BINARY

>2, 5.5, 8MHz

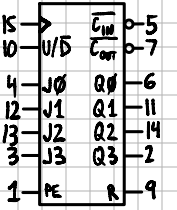
CD40192
CD40193



192: BCD
193: BINARY

>2, 4, 5.5MHz

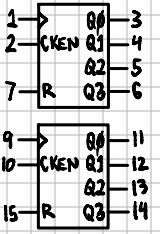
CD4510
CD4516



510: BCD
516: BINARY

>2, 4, 5.5MHz

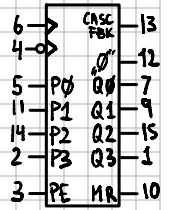
CD4518
CD4520



518: BCD
520: BINARY

>1.5, 3, 4MHz

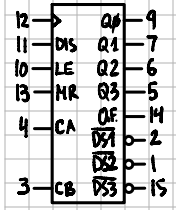
CD4522
HEF4526



522: BCD
526: BINARY

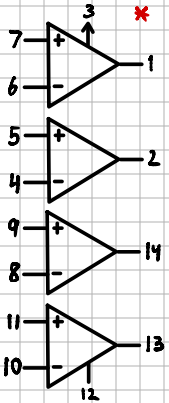
>1.5, 3, 4MHz

MC14553

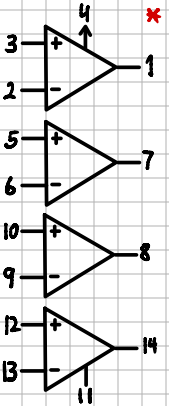


>0.9, 2.5, 3.5MHz

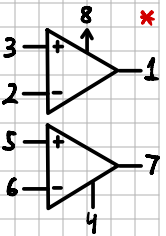
LM139,239,339,2901
comparators



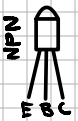
LM124,224,324,2902
op-amps



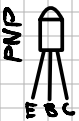
LM158,258,358,
LM2904, TLC272
op-amps
LM193,293,393,
LM2903
comparators



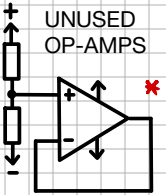
PN2222
ZTX455



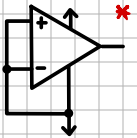
PN2907
ZTX555



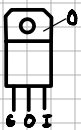
UNUSED
OP-AMPS



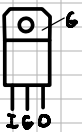
UNUSED
COMPARATORS



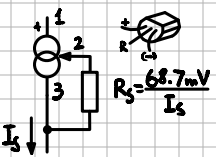
LD1117
LDnnV



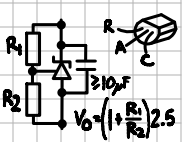
78nn



LM334



TL431A



Analog

rev 0

4001BE	4x2NOR	2
4002BE	2x4NOR	2
4007UBE	2x MOS PAIR, INV	1
14008BCBE	FULL ADDER	e
4009UBE	6x INV	2
4010BE	6x BUF	
4011BE	4x2NAND	
4012BE	2x4NAND	2
4013BE	2x DFF	1
4014BE	8STG SHR	
4015BE	2x4STG SHR	
4016BE	4x ASW 100pA	
4017BE	DEC CTR + LD OUT	
4018BE	÷N CTR	
4019BE	4x AND/OR SEL	
4020BE	14STG RPL CTR	
4021BE	8BIT SHR	
4022BE	OCTAL CTR	
4023BE	3x3NAND	
4024BE	7STG RPL CTR	
4025BE	3x3NOR	1

i

4026BE		• CTR+7SEG	1
4027BE		• 2×JK MS FF	|
4028BE		• BCD-10/8 DEC	|
4029BE		• U/D PR CTR	|
4030BE		• 4×2XOR	1
4031BE		• 4STG 64B SHR	2
4033BE		• CTR+7SEG	2
4034BM	AE	• 8BIT BUS SHR+REG	e
4035BE		• 4STG PAR/SER REG	2
4040BE		• 12STG RPL CTR	|
4041UBE		• 4×BUF w/CPL	|
4042BE		• 4×D LATCH	|
4043BE		• 4×NOR SR LATCH	|
4044BE		• 4×NAND SR LATCH	|
4045BE		• 21 STG CTR	|
4046BE		• 2×PHS DET, VCO=PLL	|
4047BE		• ASTABLE MVBR	|
4048BE		• EXP CFG SUPERGATE	|
4049UBE		• 6×INV XLTR	|
4050BE		• 6×BUF XLTR	2

4051 BE	8CH AMUX	3
4052 BE	2×4CH AMUX	—
4053 BE	3×2CH AMUX	3
4054 BE	4BIT LATCH+LCD DRV	5
4055 BE	BCD→7SEG LCD DRV	—
4056 BE	BCD→7SEG LTCH LCD DRV	5
4059 AM	PROG ÷N	3
4060 BE	14STG RPL CTR+OSC	—
4063 BE	4BIT MAGN CMP	3
4066 BE	4×ANALOG SW	5
4067 BM	16CH AMUX	3
4068 BE	8 AND/NAND	—
4069 UBE	6×INV	—
4070 BE	4×2XOR	—
4071 BE	4×2OR	—
4072 BE	2×4OR	—
4073 BE	3×3AND	—
4075 BE	3×3OR	—
4076 BE	4×DFF TRIS+2×IN DIS	—
4077 BE	4×2XNOR	3

4078BE	8OR/NOR	3
4081BE	4×2AND	
4082BE	2×4AND	
4085BE	2×2AND+NOR w/INH	
4086BE	4×2AND+NOR w/EXP+INH	
4089BE	RATE MULT	
4093BE	4×2NAND	
4094BE	8STG SHR+STORE	3
4097BM	DIFF 8CH ANUX	4
4098BE	2×1SHOT	3
4099BE	8BIT ADDR LATCH	3
40102BE	8STG 2DEC BCD CTR	4
40103BE	8STG 8BIT SYNC DCTR	
40105BE	4×16W FIFO	
40106BE	6×INV	
40107BE	2×2NAND	
40109BE	4×BUF XLTR	
40110BE	U/D CTR+LED DRVR	
40117BE	PROG 2×4BIT TERM	
40147BE	10→4 PRIORITY DEC	4

40160BFBE	• 4BIT PRG SYNC 10 CTR	e"
40161BE	• 4BIT PRG SYNC CTR	4
40174BE	• 4×D FF	|
40175BE	• 4×D FF'	4
40192BE	• BCD U/D PRS CTR	2
40193BE	• BIN U/D PRS CTR	4
40194BE	• 4BIT BIDIR SHR	|
40257BE	• 4×2:1 SEL	4
4502BE	• 6×INV TRIS	3
4503BE	• 6×BUF TRIS	|
4504BE	• 6×BUF XLTR	3
4508BNS	• 2×4BIT LATCH	4
4510BE	• PRS U/D CTR	3
4511BE	• BCD-7SEG DEC+...	3
4512BE	• 8MUX TRIS	5
4514BM	• 4BIT LATCH+DEC Q	3
4515BM	• 4BIT LATCH+DEC $\overline{Q}$	3
4516BE	• PRS U/D CTR	5
4517BE	• 64BIT SHR	3
4518BE	• BCD UP CTR	3

v

4520BE	2x 4BIT UP CTR	4
4521BE	24SIG FREQ DIV	
4522BE	PROG BCD ÷N	
4527BE	BCD RATE MULT	
4532BE	8BIT PRIORITY	
4536BE	PROG TMR	
14538BE	2x RETRG MONO	
4541BE	PROG TIMER	4
4543BE	BCD→7SEG LCD	
4555BE	2x 1:4 DECODER Q	4_{M}
4556BE	2x 1:4 DECODER $\overline{Q}$	4
4572UBE	4x INV, NAND, NOR	
4585BE	4 BIT MAGN CMP	
4724BE	8 BIT ADDR LTCH	4

4000		2×3NOR, NOT	≈4025	
4006		18 ST SHR		
4032	BE	3× SERIAL ADDER CY⌋		e
4038		3× SERIAL ADDER CY⌊		
4095		GATED JK FF	≈4027+	
4096		GATED JK FF Q,Q̄	≈4073	
14500		1-BIT PLC		
4505		64 BIT RAM		
14513		7SEG DEC+...		
4519	BCN	4× AND/OR SEL	=4019	e
4526		PROG 4BIT DN CTR		
4528		2× RETRIG MONO		
4529		2× 4AMUX	≈4052	
4530		2× 5MAJORITY		
4531		12 BIT PARITY		
4539		2× 4IN MUX	≈4052+	
4549		SAR		
4551		2CH AMUX		
4553		3-DIGIT BCD CTR		

≈ SAME FN, DIFF PINOUT = DIRECT SUBST

4557	1÷64 STAGE SHR
4558	BCD→7SEG
4559	SAR
14584	6x SCHMITT INV
14560	BCD ADDER
14561	9s COMPLEMENTER
14566	INDUSTRIAL TB GEN