SONY CXB0026AM

CCD Driver

Description

CXB0026AM is a special version of CXB0026M with the following improvements:

1) High frequency operation ability.
2) Improved output voltage amplitude (voltage usage ratio).

Other specifications match those of CXB0026M.

Features

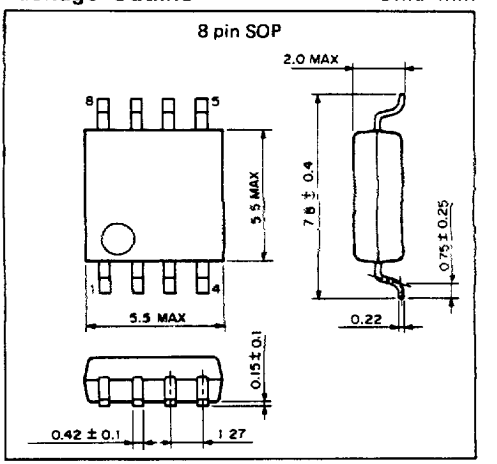
- High frequency operation ability.
- Improved output voltage amplitude.
- TTL compatible input.
- High output current drive.
- 2.0 mW low consumption when input at low level.

Structure

Bipolar silicon monolithic IC

Package Outline

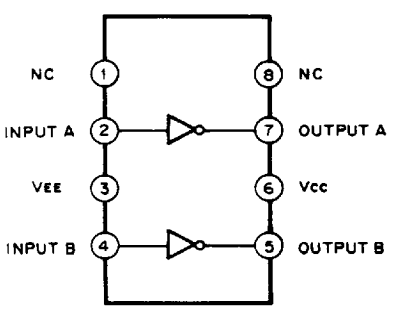
Unit: mm



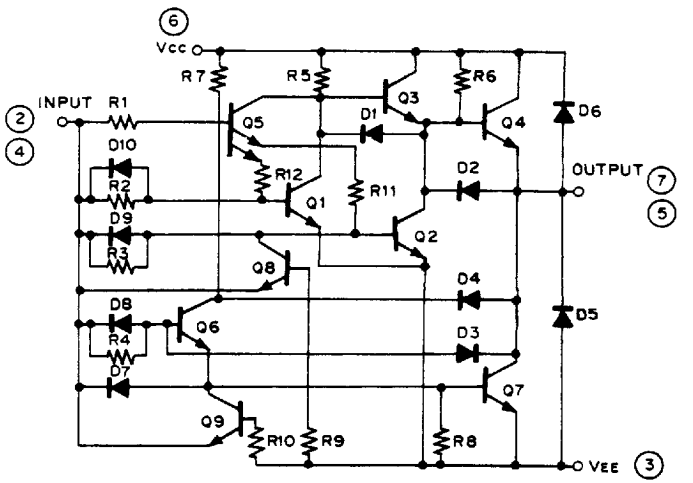
Absolute Maximum Ratings (Ta=25°C)

• Supply voltage	V_{CC-EE}	22	V
• Input current	I_I	100	mA
• Input voltage	V_I	V_{EE}+5.5	V
• Instant output current	Iopk	±1.5	A
• Junction temperature	T_J	+150	°C
• Operating temperature	Ta	0 to 70	°C
• Storage temperature	Tstg	−65 to 150	°C
• Allowable power dissipation (Ta=70°C, PC Board Mount)	P_D	400	mW

Pin Configuration



Equivalent Circuit



Electrical Characteristics

Ta=0 to 70°C, $V_{CC}-V_{EE}$=10 to 20V, C_L=1000 pF, Ta=25°C (Typ.)

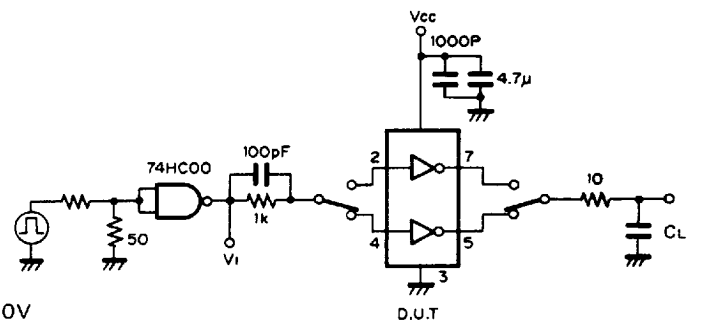
Item	Symbol	Min.	Typ.	Max.	Unit
H level input voltage $V_O=V_{EE}+1.0$ Vdc	V_{IH}	$V_{EE}+2.0$	$V_{EE}+1.5$	–	V
H level input current $V_I-V_{EE}=2.4$ Vdc, $V_O=V_{EE}+1.0$ Vdc	I_{IH}	–	10	15	mA
L level input $V_O=V_{CC}-1.0$ Vdc	V_{IL}	–	$V_{EE}+0.6$	$V_{EE}+0.4$	V
L level input current $V_I-V_{EE}=0$ Vdc, $V_O=V_{CC}-1.0$ Vdc	I_{IL}	–	−0.005	−10	mA
Output voltage at L level input $V_I-V_{EE}=0.4$ Vdc	V_{OH}	$V_{CC}-1.0$	$V_{CC}-0.7$	–	V
Output voltage at H level input $V_I-V_{EE}=2.4$ Vdc	V_{OL}	–	$V_{EE}+0.5$	$V_{EE}+1.0$	V
Supply current at ON (1 circuit) $V_{CC}-V_{EE}=20$ Vdc, $V_I-V_{EE}=2.4$ Vdc	I_{CCL}	–	30	40	mA
Supply current at OFF (1 circuit) $V_{CC}-V_{EE}=20$ Vdc, $V_I-V_{EE}=0$ Vdc	I_{CCH}	–	10	100	μA

Switching Characteristics

V_{CC}=7V, V_{EE}=0V, Ta=25°C, C_L=270P

Item	Symbol	Min.	Typ.	Max.	Unit
Clock level	$V_{OH}-V_{OL}$	$V_{CC}-0.5$	–	V_{CC}	V
Propagation time (H→L)	t_{PHL}	4.75	–	6.75	ns
Propagation time (L→H)	t_{PLH}	–	–	14	ns
Transition time (H→L)	t_{THL}	–	–	11	ns
Transition time (L→H)	t_{TLH}	–	–	17	ns

Characteristics Test Circuit



* V_I=5.0V
f=14 MHz
$t_{TLH}=t_{THL}\leqq 8$ns
Duty 50%

I/O Waveforms