

**SONY.****CXB1505Q-Y**Triple Fan-Out Buffer with Common Enable and  
Differential Output

T-43-22

**Description**

The CXB1505Q-Y is an ultra high speed monolithic ECL IC, which contains three Line Drivers. Each driver has two pairs of differential output pins ( $Q_{nA}$ ,  $Q_{nB}$ ,  $\overline{Q}_{nA}$ ,  $\overline{Q}_{nB}$ ).

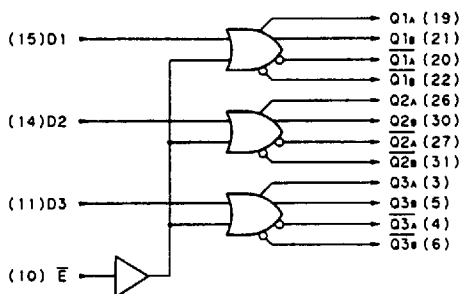
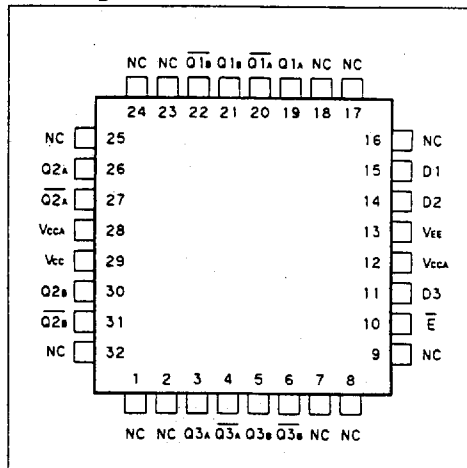
Enable ( $\overline{E}$ ) input enables data (D1-D3) input. With D1-D3 maintained LOW,  $\overline{E}$  acts as a fan-out buffer with six differential outputs.

**Features**

- Typical propagation delay time:  
 $T_{pd}=670ps$  ( $D_n$  to  $Q_{nA}$ ,  $Q_{nB}$  Typ.)
- Small time skew: 100ps ( $\overline{E}$  to  $Q_{nA}$ ,  $Q_{nB}$ )
- Enable input
- Six differential fan-out capability
- Internal pull down resistors on input pins to maintain logic LOW level with the pins left open
- ECL 100K compatible I/O levels
- Differential output.

**Pin Names**

$D_n$	Data inputs
$Q_{nA}$ , $\overline{Q}_{nA}$ , $Q_{nB}$ , $\overline{Q}_{nB}$	Data outputs
$\overline{E}$	Data enable (active LOW)
$V_{cc}$	Circuit ground
$V_{CCA}$	Circuit ground for outputs
$V_{EE}$	Negative power supply

**Logic Symbol****Pin Assignment****Truth Table**

Input		Output	
$\overline{E}$	$D_n$	$Q_n$	$\overline{Q}_n$
L	L	L	H
L	H	H	L
H	X	H	L

Note: H; HIGH voltage level  
L; LOW voltage level  
X; Don't care

SONY

CXBI505Q-Y

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## DC Characteristics

 $V_{EE} = -4.5 \pm 0.3V$ ,  $V_{CC} = V_{CCA} = GND$ ,  $V_{TT} = -2.0V$ ,  $T_c = 0^\circ C$  to  $+85^\circ C$ 

Item	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Power supply current	$I_{EE}$		-164	-120	-84	mA

## AC Characteristics

 $V_{EE} = -4.5 \pm 0.3V$ ,  $V_{CC} = V_{CCA} = GND$ ,  $V_{TT} = -2.0V$ ,  $T_c = 0^\circ C$  to  $+85^\circ C$ ,  $R_T = 50\Omega$  to  $V_{TT}$ 

Item	Symbol	Input	Output	Test Condition	Min.	Typ.	Max.	Unit
Propagation delay time	$T_{PLH}$	Dn	Qna, Qnb		470	670	890	ps
	$T_{PHL}$				440	640	850	
	$T_{PLH}$	$\bar{E}$			500	710	940	
	$T_{PHL}$				500	680	900	
Gate-to-Gate time skew	$T_{SGG}$	$\bar{E}$				100		
Rise time	$T_{TLH}$	Dn, $\bar{E}$		20% to 80%		300	420	
Fall time	$T_{THL}$					270	380	

# Package Data

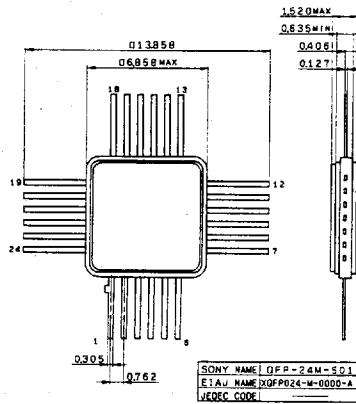
T-90-20

Package Outline

Unit: mm

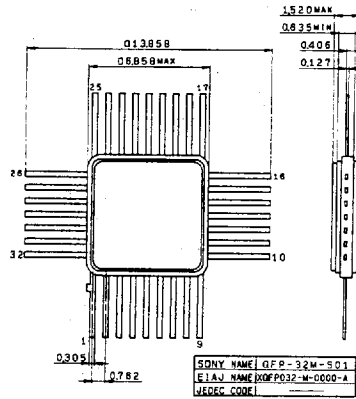
24pin QFP (QFP-24M-S01)

24pin QFP (Metal) 0.3g



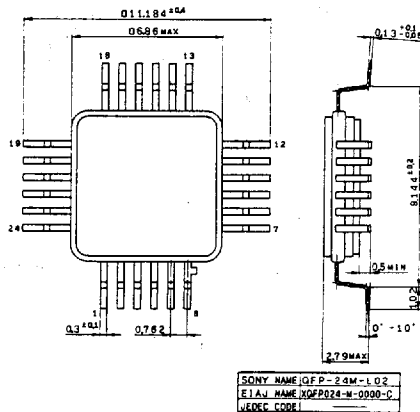
32pin QFP (QFP-32M-S01)

32pin QFP (Metal) 0.2g



24pin QFP (QFP-24M-L02)

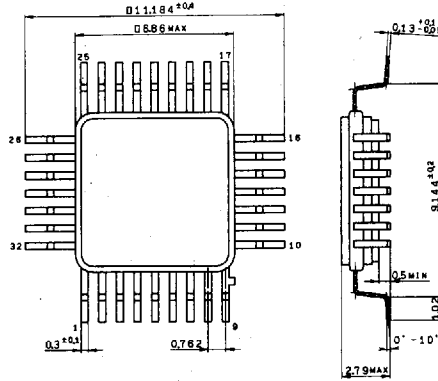
24pin QFP (Metal) 0.3g



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32pin QFP (QFP-32M-L02)

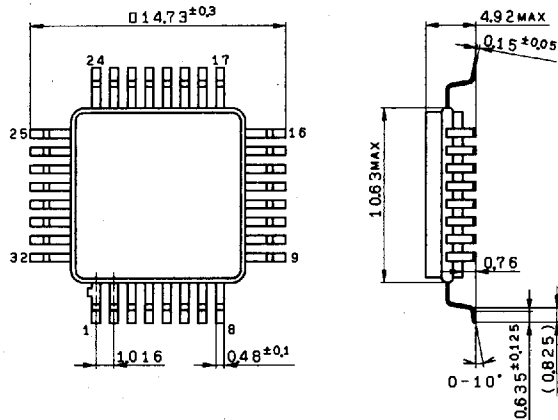
32pin QFP (Metal) 0.2g



SONY NAME	QFP-32M-L02
EIAJ NAME	XQFP032-M-0000-C
JEDEC CODE	

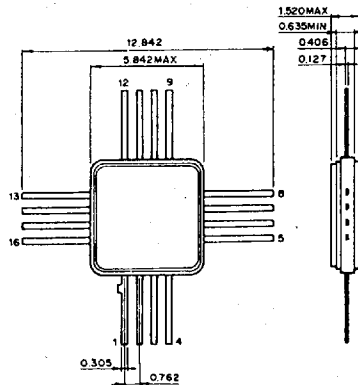
32pin QFP (QFP-32C-L01)

32pin QFP (Ceramic)



SONY NAME	QFP-32C-L01
EIAJ NAME	XQFP032-G-0000-A
JEDEC CODE	

16pin QFP



**Package Data**

<b>Package Data</b>	<b>Page</b>
1. 16 pin QFP	6-3
2. 24 pin QFP	6-3
3. 32 pin QFP	6-3
4. 24 pin QFP with formed lead	6-4
5. 32 pin QFP with formed lead	6-4

# Package Data

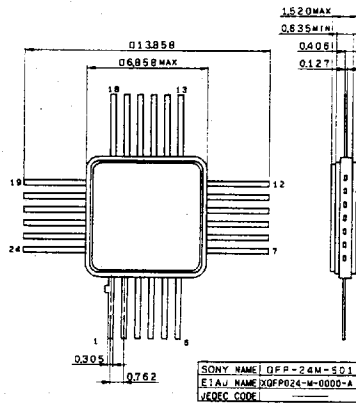
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Package Outline

Unit: mm

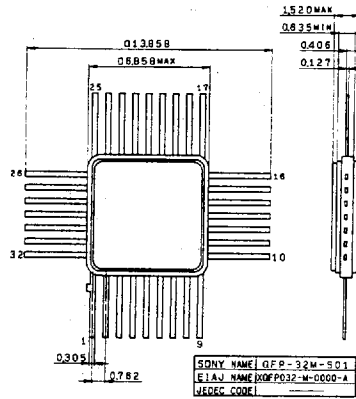
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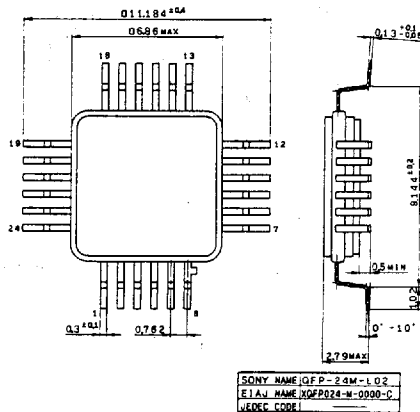
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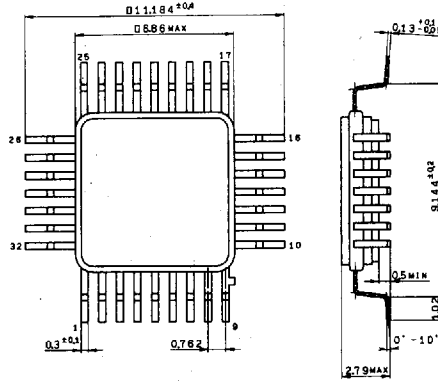
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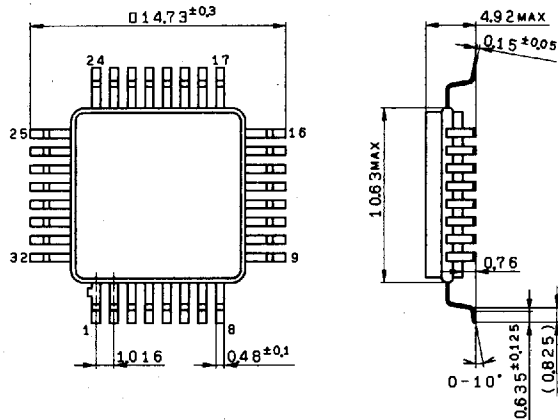
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32pin QFP (QFP-32C-L01)

32pin QFP (Ceramic)



SONY NAME	QFP-32C-L01
EIAJ NAME	XQFP032-G-0000-A
JEDEC CODE	

16pin QFP

