

SONY

CXB1580Q - Y

Pin Description

T-45-17

Pin No.	Symbol	Description
19 6	IN1 IN2	Data inputs
18 7	IN1T IN2T	Data input termination
20 5	REF1 REF2	Reference inputs
13 12	CK CK	Clock inputs
22 3	HYS1 HYS2	Hysteresis control inputs
23 2	SW1 SW2	Mode switchover inputs (L : Clocking mode H : Pass-through mode)
26 27 31 30	OUT1 OUT1 OUT2 OUT2	Data outputs
14	Vcc	Positive power supply
4, 21, 28	VEE	Negative power supplies
10, 15	GND1	Power supply GND
29	GND2	Output transistor power GND
11	Vss	Reference voltage output

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Electrical Characteristics

Absolute Maximum Ratings

Item	Symbol	Pins	Range	Unit
Power supply	V _{CC}	14	-0.3 to +7.0	V
	V _{EE}	4, 21, 28	-7.0 to +0.3	
Data input voltage	V _{ID}	5, 6, 7, 18, 19, 20	-3.0 to +2.5	
Hysteresis control input voltage	V _{IHS}	3, 22	V _{EE} to +0.3	
ECL input voltage	V _I	2, 12, 13, 23	V _{EE} to +0.3	
Comparator differential input voltage	V _{SI}		0 to 2.5	
Operating case temperature	T _C		-55 to +125	°C
Storage temperature	T _{stg}		-65 to +150	

Recommended Operating Conditions

Item	Symbol	Rated value	Unit
Supply voltage	V _{CC}	5.0 ± 5%	V
	V _{EE}	-5.2 ± 5%	
Operating case temperature	T _C	0 to 85	°C

DC Characteristics

(V_{CC}=5.0V ± 5%, V_{EE}=-5.2 ± 5%, T_C=0 to 85°C, R_T=50Ω to V_{TT})

Item	Symbol	Input pins	Output pins	Measurement conditions	Min.	Typ.	Max.	Unit
Supply current	I _{CC}	14			18.0	25.2	35.0	mA
	I _{EE}	4, 21, 28			-135.0	-96.9	-70.0	
Input offset voltage	V _{OS}	6, 19			-10		+10	mV
Data input current	I _D	6, 19					55	μA
Variable range for input conversion hysteresis	V _{IHS}				0		80	mV
Data input voltage range	V _{ID}	6, 19			-2		+2	V
ECL input "H" level	V _{IH}	2, 12, 13, 23			-1130		-810	mV
ECL input "L" level	V _{IL}	2, 12, 13, 23			-1950		-1480	
Output voltage "H" level	V _{OH}		26, 27, 30, 31		-1020		-700	
Output voltage "L" level	V _{OL}		26, 27, 30, 31		-1980		-1680	
Reference voltage	V _{BB}		11		-1450	-1350	-1200	

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AC Characteristics

(V_{CC}=5.0V ± 5%, V_{EE}=−5.2 ± 5%, T_C=25 °C, R_T=50Ω to V_{TT})

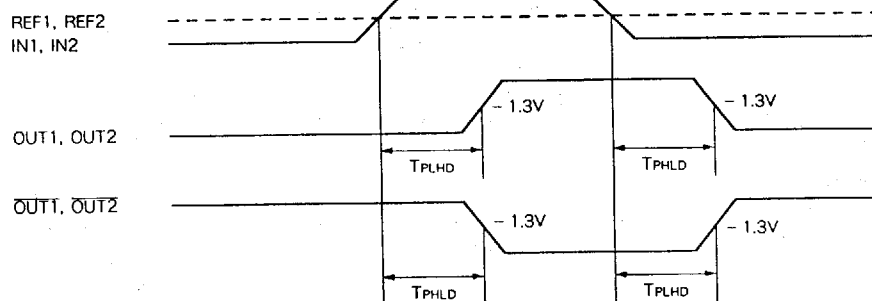
Item	Symbol	Input pins	Output pins	Measurement conditions	Min.	Typ.	Max.	Unit
Propagation delay time	T _{PLHD}	6, 19	26, 27, 30, 31	No load for pass-through mode	620	840	1130	ps
	T _{PHLD}				610	825	1110	
	T _{PLHC}	12, 13	26, 27, 30, 31	No load for clocking mode	520	705	890	
	T _{PHLC}				500	645	880	
Mode switchover time	T _{MOD}	2, 23			460	675	950	
Rise time	T _{TLH}		26, 27, 30, 31	20 to 80%		250		
Fall time	T _{THL}					250		
Set-up time	T _S				350			
Hold time	T _H				−100			
Max. operating frequency	f _C MAX	12, 13	26, 27, 30, 31	Clocking mode	1.5			GHz
	f _D MAX	6, 19		For pass-through mode At −3dB output	0.8			

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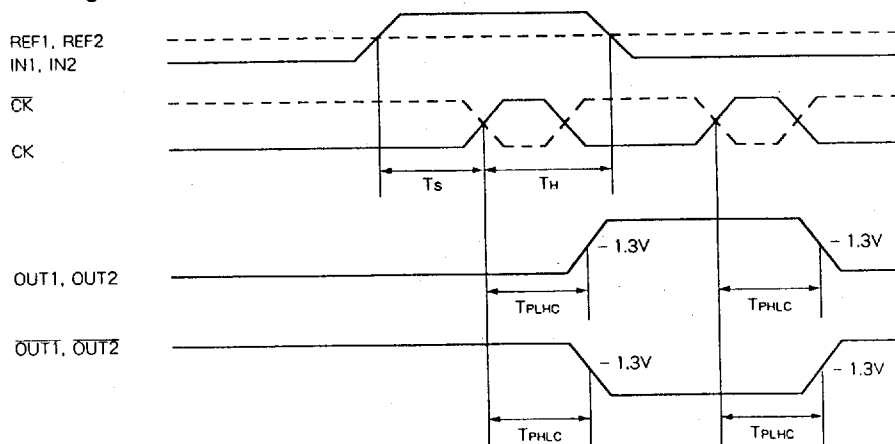
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<Pass-through mode> (SW1=SW2=HIGH)



<Clocking mode> (SW1=SW2=LOW)



Package Data

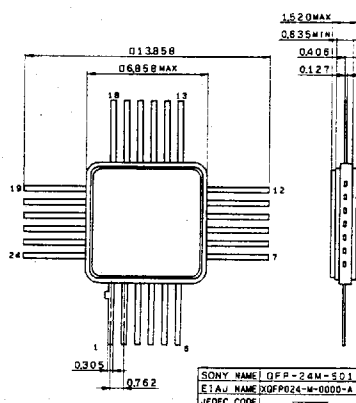
T-90-20

Package Outline

Unit: mm

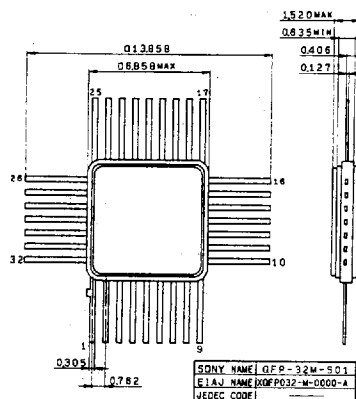
24pin QFP (QFP-24M-S01)

24pin QFP (Metal) 0.3g



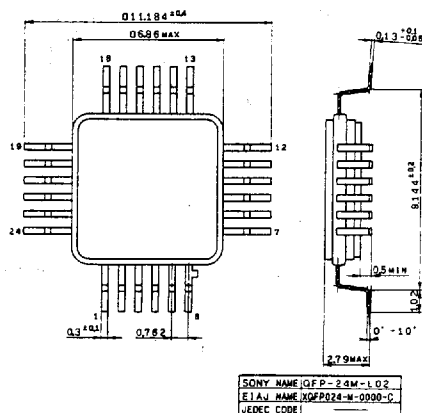
32pin QFP (QFP-32M-S01)

32pin QFP (Metal) 0.2g



24pin QFP (QFP-24M-L02)

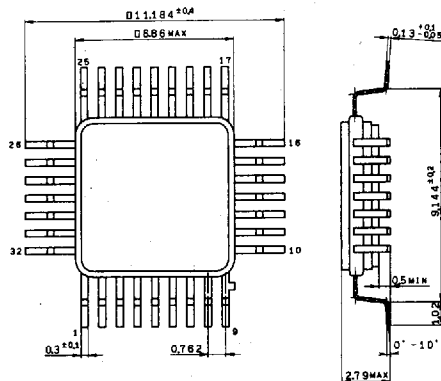
24pin QFP (Metal) 0.3g



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32pin QFP (QFP-32M-L02)

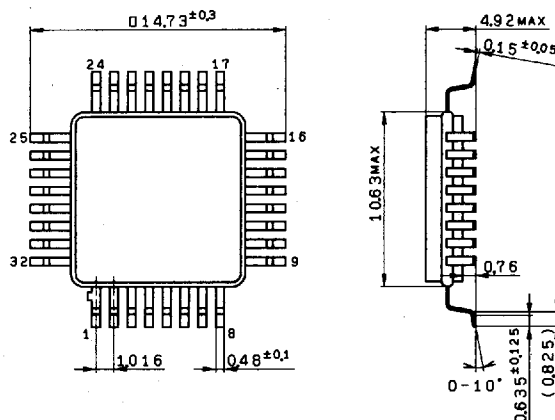
32pin QFP (Metal) 0.2g



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

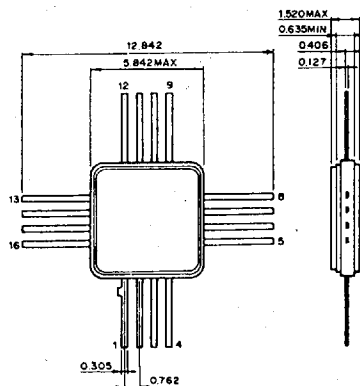
32pin QFP (QFP-32C-L01)

32pin QFP (Ceramic)



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

16pin QFP



Package Data

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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

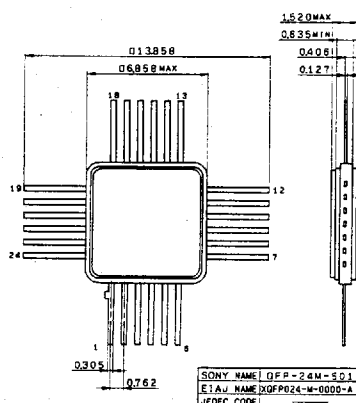
T-90-20

Package Outline

Unit: mm

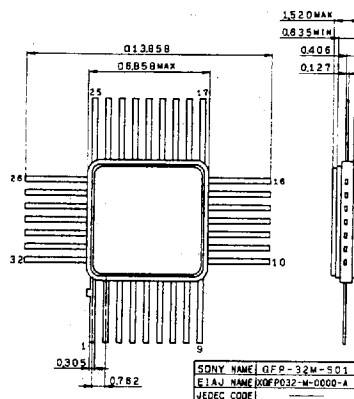
24pin QFP (QFP-24M-S01)

24pin QFP (Metal) 0.3g



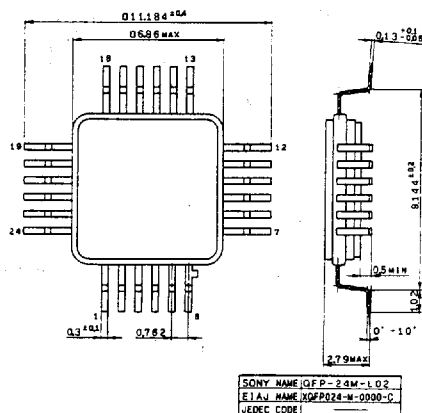
32pin QFP (QFP-32M-S01)

32pin QFP (Metal) 0.2g



24pin QFP (QFP-24M-L02)

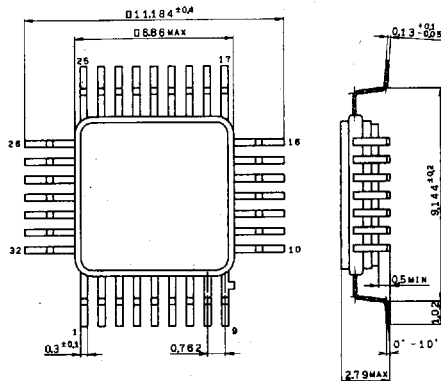
24pin QFP (Metal) 0.3g



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32pin QFP (QFP-32M-L02)

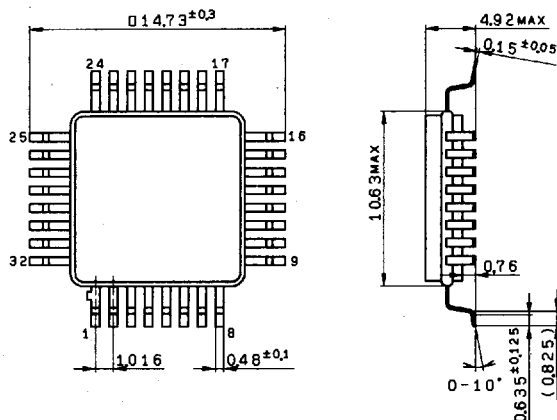
32pin GFP (Metal) 0.2g



SONY NAME	QFP-32M-L02
EIAJ NAME	XGFP032-M-0000-C
JEDEC CODE	

32pin QFP (QFP-32C-L01)

32pin GFP (Ceramic)



SONY NAME	QFP-32C-L01
EIAJ NAME	XGFP032-G-0000-A
JEDEC CODE	

16pin QFP

