

SONY

CXB1109Q/QY

DC Characteristics

T-46-07-09

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

Item	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Power supply current	I_{EE}		-204	-150	-105	mA

Note: Other DC characteristics; See pages 3-3 and 3-4.

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}	C _A , C _B	Q _n		560	710	890	ps
	T _{PHL}				560	710	890	
	T _{PLH}	MR			510	790	990	
	T _{PHL}				520	800	1000	
Set up time	T _S	D _n → C _A , C _B			150			
Hold time	T _H	C _A , C _B → D _n			250			
Min. Pulse width	T _{PW}	MR			430			
Release time	T _R	MR → C _A , C _B			500			
Max. Clock frequency	f _{MAX}	C _A , C _B		20% to 80%	2.5	3.1		GHz
Rise time	T _{TLH}					210	260	ps
Fall time	T _{THL}					180	230	

Note: AC test circuit; See pages 4-3, 4-4 and 4-5.

Truth Table

Input			Output			
MR	C_A	C_B	Q_1	Q_2	Q_3	Q_4
H	X	X	L	L	L	L
L	$\uparrow$	L	D_1	D_2	D_3	D_4
L	L	$\uparrow$	D_1	D_2	D_3	D_4
L	$\uparrow$	$\uparrow$	D_1	D_2	D_3	D_4

Note: H; HIGH voltage level

L; LOW voltage level

X; Don't care

 $\uparrow$; Positive transition edge

Package Data

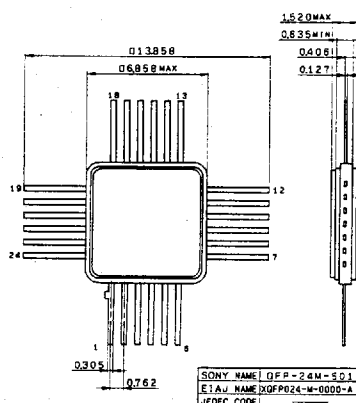
T-90-20

Package Outline

Unit: mm

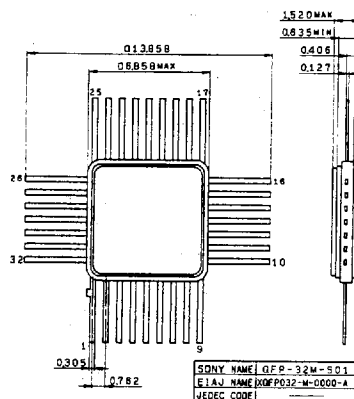
24pin QFP (QFP-24M-S01)

24pin QFP (Metal) 0.3g



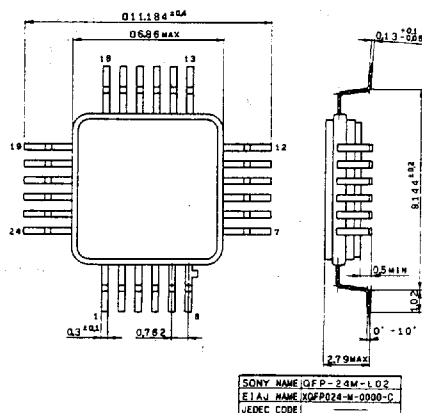
32pin QFP (QFP-32M-S01)

32pin QFP (Metal) 0.2g



24pin QFP (QFP-24M-L02)

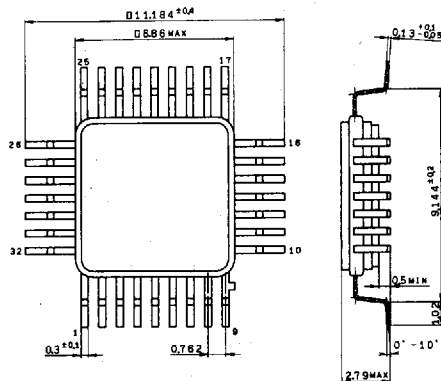
24pin QFP (Metal) 0.3g



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32pin QFP (QFP-32M-L02)

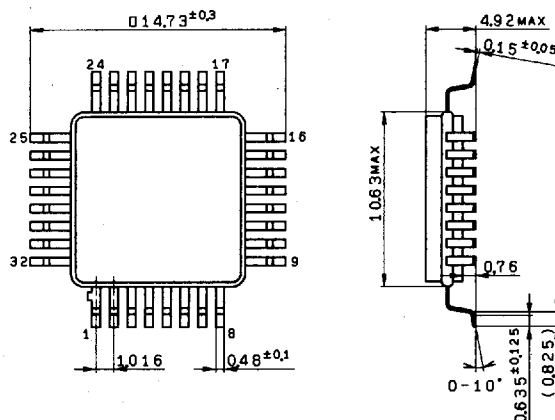
32pin QFP (Metal) 0.2g



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

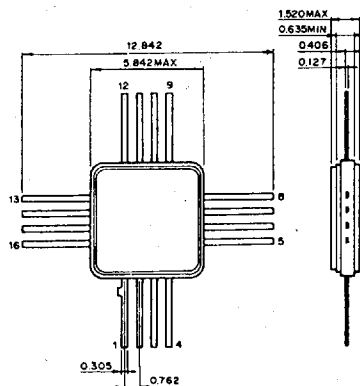
32pin QFP (QFP-32C-L01)

32pin QFP (Ceramic)



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

16pin QFP



Package Data

Package Data	Page
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

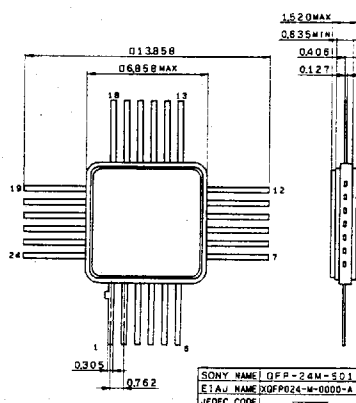
T-90-20

Package Outline

Unit: mm

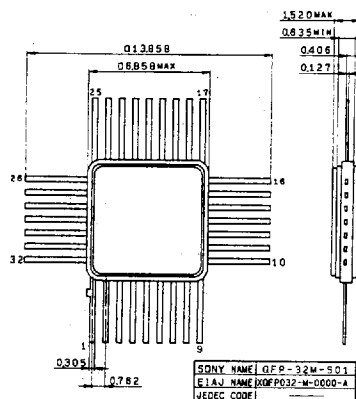
24pin QFP (QFP-24M-S01)

24pin QFP (Metal) 0.3g



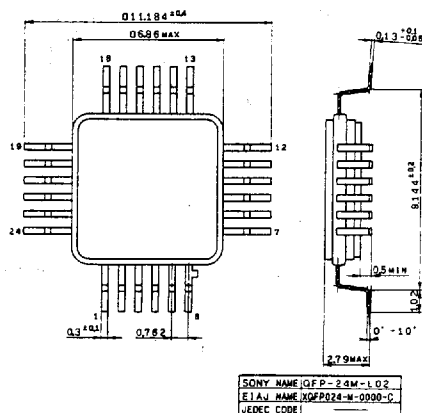
32pin QFP (QFP-32M-S01)

32pin QFP (Metal) 0.2g



24pin QFP (QFP-24M-L02)

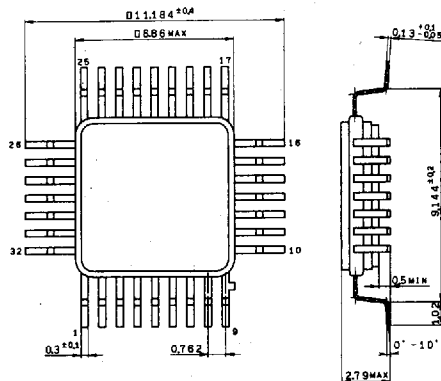
24pin QFP (Metal) 0.3g



T-90-20

32pin QFP (QFP-32M-L02)

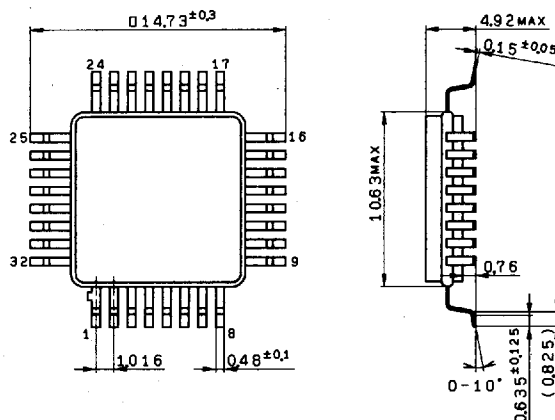
32pin QFP (Metal) 0.2g



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

