# SONY CXB1515Q-Y

## Clock Distributor with Enable and 10 Differential Outputs

T-52-19

### Description

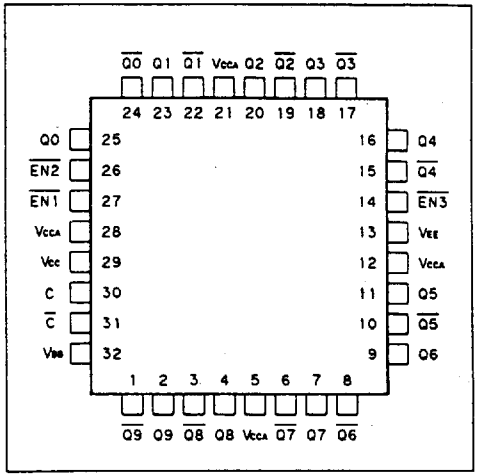
The CXB1515Q-Y is an ultra high speed monolithic clock distributor, with low skew (80ps typ.). Clock input has differential input pins C and $\overline{C}$. The input signal is fanned out to 10 differential outputs.

Enable inputs ($\overline{EN1}$-$\overline{EN3}$) control clock inputs. Built-in reference voltage is provided at $V_{BB}$ pin to facilitate the use of single input operation.

### Features

- Small gate-to-gate skew: 80ps (typ.)
- Differential clock input and output
- Built-in reference voltage for single ended input operation
- Internal pull down resistors on input pins to maintain logic LOW level with the pins left open
- ECL 100K compatible I/O levels

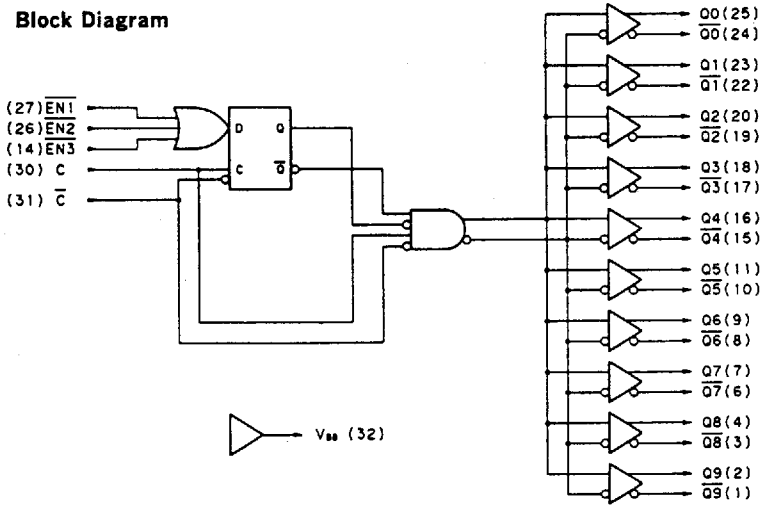
### Pin Assignment




### Pin Names

| | |
|---|---|
| C, $\overline{C}$ | Clock inputs |
| Qn, $\overline{Qn}$ | Clock outputs |
| $\overline{ENn}$ | Clock enables (active LOW) |
| $V_{BB}$ | Reference voltage output |
| $V_{CC}$ | Circuit ground |
| $V_{CCA}$ | Circuit ground for outputs |
| $V_{EE}$ | Negative power supply |

### Block Diagram



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## DC Characteristics

$V_{EE}$=−4.5V±0.3V, $V_{CC}$=$V_{CCA}$=GND, $V_{TT}$=−2.0V, $T_C$=0°C to +85°C

| Item | Symbol | Test Condition | Min. | Typ. | Max. | Unit |
|---|---|---|---|---|---|---|
| Power supply current | $I_{EE}$ | | −244 | −178 | −124 | mA |

## AC Characteristics

$V_{EE}$=−4.5V±0.3V, $V_{CC}$=$V_{CCA}$=GND, $V_{TT}$=−2.0V, $T_C$=0°C to +85°C, $R_T$=50Ω to $V_{TT}$

| Item | Symbol | Input | Output | Test Condition | Min. | Typ. | Max. | Unit |
|---|---|---|---|---|---|---|---|---|
| Propagation Delay time | $T_{PLH}$ | C | Qn | | 570 | 810 | 1070 | ps |
| | $T_{PHL}$ | | | | 570 | 810 | 1070 | |
| Gate-to-Gate Skew | $T_{SG-G}$ | | | | | 80 | 150 | |
| Set up time | Ts | | | | 150 | | | |
| Hold time | Th | | | | 260 | | | |
| Rise time | $T_{TLH}$ | | | 20% to 80% | | 230 | 330 | |
| Fall time | $T_{THL}$ | | | | | 230 | 330 | |

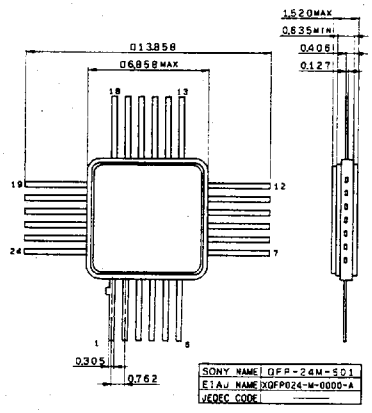
# Package Data

T-90-20

**Package Outline** Uuit: mm

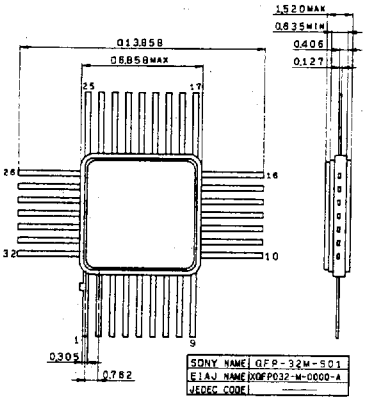
24pin QFP (QFP-24M-S01)

24pin QFP (Metal) 0.3g



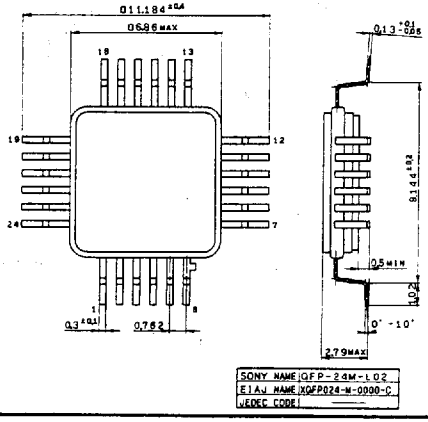

32pin QFP (QFP-32M-S01)

32pin QFP (Metal) 0.2g



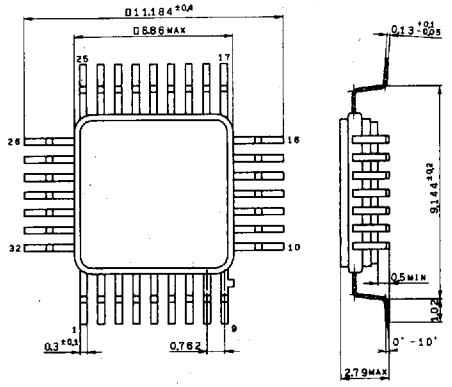

24pin QFP (QFP-24M-L02)

24pin QFP (Metal) 0.3g



32pin QFP (QFP-32M-L02)

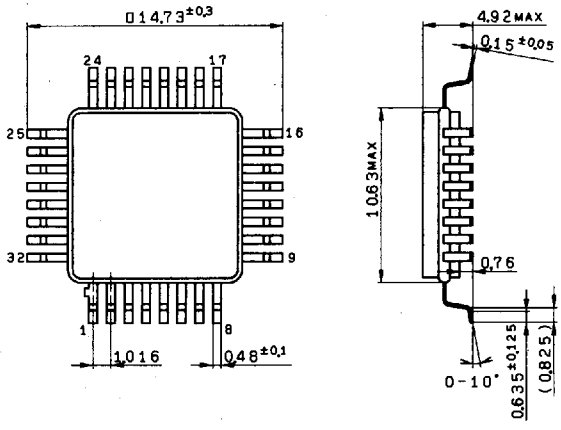
32pin QFP (Metal) 0.2g




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

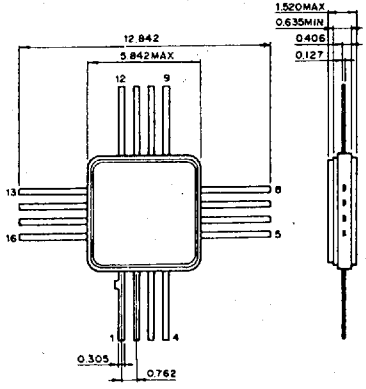
32pin QFP (QFP-32C-L01)

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 |

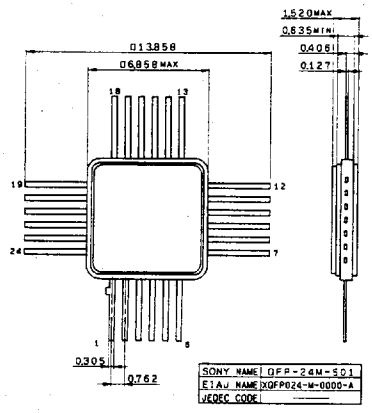
# Package Data

T-90-20

**Package Outline** Uuit: mm

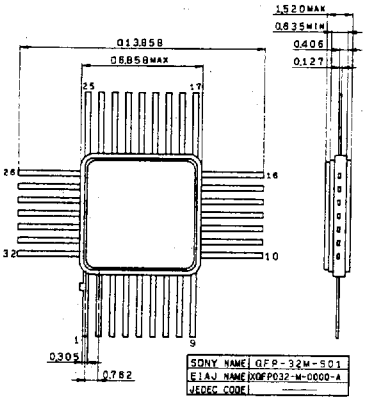
24pin QFP (QFP-24M-S01)

24pin QFP (Metal) 0.3g



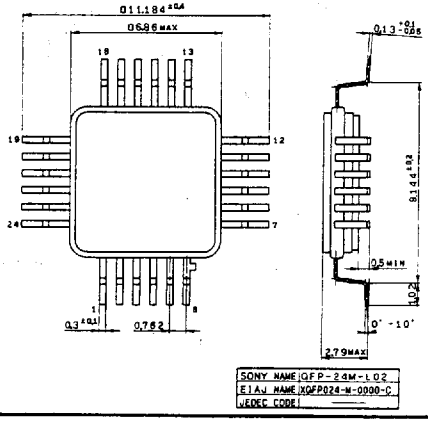

32pin QFP (QFP-32M-S01)

32pin QFP (Metal) 0.2g



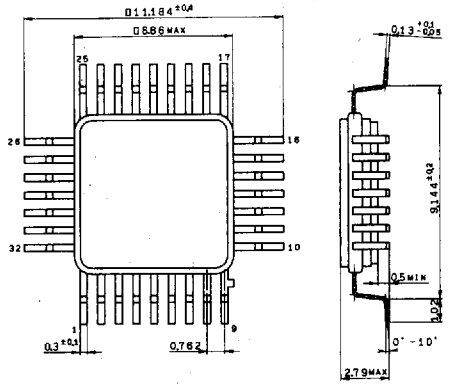

24pin QFP (QFP-24M-L02)

24pin QFP (Metal) 0.3g



32pin QFP (QFP-32M-L02)

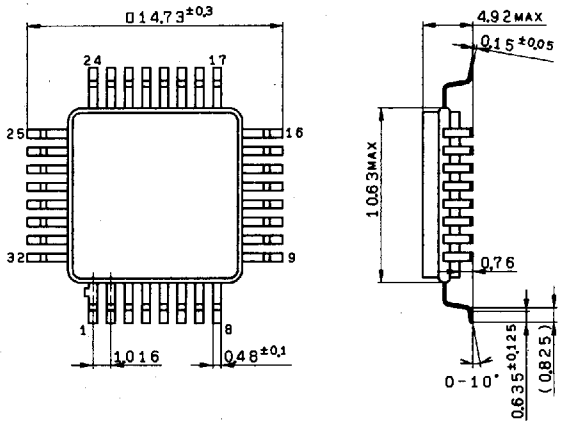
32pin QFP (Metal) 0.2g




| | |
|---|---|
| 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