

Chipmonk File:

- Word: Code 123751B uniquely identifies this to be a Chipmonk file.
- Word: Version number of file format (Currently 4).
- Word: Count N of how many cell definitions follow
- CellDef. 1 |
- CellDef. 2 | *N cell definitions (see structure below)*
Ordering constraint: cells must be defined before they are called (no forward references).
- CellDef. N |
- List | *Master list (top-level items not in cells) (see structure below)*

Cell Definition:

- Word: Cell number, sequential in [1..N]
- String: Cell name (see structure below)
- Word: Size X of bounding box (units of half-lambda)
- Word: Size Y of bounding box
- Word: Spare, set to 0
- List: Items in the cell (see structure below)

List:

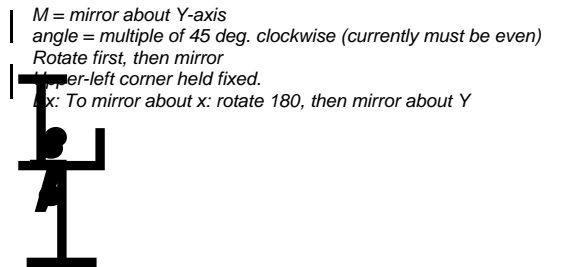
- Word: Count M of how many items follow.
- Item 1 |
- Item 2 | *M items (see structure below)*
- Item M |

Item:

- Word: X-position* of top-left corner of item
- Word: Y-position (Y increases downward)



- Word: *details of object (see next page)*
- Object: *details of object (see next page)*
- Word: Count J of properties.
- Prop. 1 |
- Prop. 2 | *J properties (see structure below)*
- Prop. J |



Property: Text

No other property types yet implemented

- Word: 1 = Code for Text property
- String: Text string (see structure below)

Note: Node names are text properties of items with wire objects with same layer as specified for CIF text.

String:

Note: High-order bytes come first.

- Word: String length in bytes, & first byte.
- Word: second & third byte
- Word: Last byte & zero, or last two bytes.

**all dimensions are in units of half-lambda*

XEROX PARC	Project VLSI	Title Chipmonk File Format	File ChipFileFormat1.sil	Designer Pasco	Rev C	Date 1/12/82	Page 1
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Object: General

Word Code identifies type of object
 Additional information depending on type of object (see below)

Object: Unknown

Word 0 = code for Unknown
 Word 0

Object: Cell Instance

Word 1 = code for Cell Instance.
 Word Number in [1..n] specifying which cell this is an instance of.

Object: Transistor

Word 2 = code for Transistor
 Word Width of channel*
 Word Length of channel*

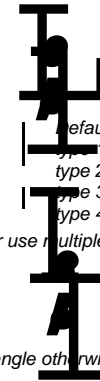


i = implant
 p = pullup
 a = angled

width (poly) extension = gate overhang*
 length extension = source, drain beyond gate*

angled only: optional
 Word

Angle extension



Object: Contact

Word 3 = code for Contact



optional
 Word
 buried only: Word

Width* For types 1,2,3, width is assumed to be 4*; rotate or use multiple contacts for wider ones.



default orientation is length vertical.
 type 1 = dif-met
 type 2 = pol-met
 type 3 = butting
 type 4 = buried

Object: Wire & Rectangle

Note: Use Wire if layer = dif, met, or pol; use Rectangle otherwise.

Word 4 = code for Wire, or 5 = code for Rectangle

Word Width*

Note: Default orientation of wires is length vertical.
 In order that Widen command works right, horizontal wires are represented by items whose angle = 90 degrees.

Word Length*

Word Layer

0 = cut 4 = imp
 1 = dif 5 = ovg
 2 = poly 6 = bur
 3 = metal 7 = undef

Object: Bus

Word 7 = code for Bus
 Word Width*
 Word FirstLength
 Word Layer
 Word Wire Count
 Word Wire Spacing*
 Word Top Incr
 Word Len Incr + Top Incr



*all dimensions are in units of half-lambda.