

## MAGIC Tool Shortcut Keys

### Short keys (Layout window)

G:	To invoke grid in layout widow
Left mouse click	To change the location of layout design box/pointer
Right mouse click	To draw the rectangular structure for various requirements in layout
Centre mouse click	To fill up the rectangle with required material such as – poly, metal
U:	undo
Shift + U:	redo
I:	To select top most cell in window
F:	For mirroring
Z:	Zoom in
Shift + Z:	Zoom out
A:	To Select everything under the rectangular
Shift + A	To add in already selected area
C:	Copy after selection (using A)
E:	Edit
O:	Open
4,8,6,2	To move the selected are in either direction

### Important Commands (command window)

%drc find	To find out DRC info
%label <name>	To label the terminals
%extract all	To extract netlist in .exe format
%ext2spice	Conversion from .ext to .spice
%getcell <file.mag>	To call a cell/design in another layout design
%load <file.mag>	To open layout
x	To see inside the called cell/design box

### Frequently used DRC Rule (in Lambda):

Minimum size of contact:	4x4
Metal M1 and M2 minimum width:	3
Metal M3 minimum width	6
n-well/p-well minimum design	10
polysilicon minimum width	2
p-diffusion/n-diffusion minimum length	3
Minimum Separation between n-diff and p-diff	10
Minimum Separation between n-diff and n-well	5

### VLSI Vocab:

DRC:	Design Rule Check
PDK:	Process Design Kit
Tapeout:	Layout design is sent to foundry for fabrication
Foundry:	Fab labs, where fabrication is done at broad level
Technology:	Generally Channel length of MOS (not always)/ Tech node/ feature size
GDS II:	Graphic Data System II