
MyDRC Commands

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Contents

Description Block

DISPLAY-FLAG-ERROR	3
FLAG-ACUTEANGLE	3
FLAG-NON45	3
FLAG-OFFGRID	3
WINDOW	4
WINDEL	4
WINDOW-CUT	4

Operation Block

AND	5
AREA	5
ENC	6
ERROR	6
EXT	6
INT	7
LENGTH	7
NOT	7
OR	8
PLENGTH	8
SELECT	8
SIZE	9
WIDTH	9

Appendix	10
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Description Block

DISPLAY-FLAG-ERROR

Flags the reported coordinates by FLAG-ACUTEANGLE, FLAG-NON45 and FLAG-OFFGRID.

Syntax

DISPLAY-FLAG-ERROR = [Yes|No]

Examples

DISPLAY-FLAG-ERROR = YES

FLAG-ACUTEANGLE

Reports the coordinates of acute-angle polygons.

Syntax

FLAG-ACUTEANGLE = [Yes|No]

Examples

FLAG-ACUTEANGLE = Yes

FLAG-NON45

Reports the coordinates of non45-angle polygons.

Syntax

FLAG-NON45 = [Yes|No]

Examples

FLAG-NON45 = Yes

FLAG-OFFGRID

Reports the coordinates of cell placements and polygons that have vertices off the grid.

Syntax

FLAG-OFFGRID = [Yes|No] {grid-value}

Examples

FLAG-OFFGRID = Yes 0.1

WINDOW (MyDRC & LayNet)

Specifies a window to process.

Syntax

WINDOW = xmin ymin xmax ymax

xmin : the minimum x coordinate of window to process

ymin : the minimum y coordinate of window to process

xmax : the maximum x coordinate of window to process

ymax : the maximum y coordinate of window to process

Examples

*DESCRIPTION

WINDOW = 0.0 0.0 3.0 3.0

WINDEL

Deletes an area within a window from processing.

Syntax

WINDEL = xmin ymin xmax ymax

Examples

*DESCRIPTION

WINDEL = 0.0 0.0 -3.0 -3.0

WINDOW-CUT

Keeps or cuts the portion of a trapezoid that falls across the coordinates specified in a WINDOW or WINDEL command.

Syntax

WINDOW-CUT = [TRAPEZOID|EDGE]

TRAPEZOID : Keeps the polygon if it lies across the window boundary.

EDGE : Cuts the polygon along the window edge and keeps the portion outside if a user specified WINDEL command or inside the window if WINDOW command.

Operation Block

AND

Create a new layer from two other layers. The new layer consists of the region shared by the two defined layers.

Syntax

```
AND layer1 layer2 output_layer
```

Example

```
AND nplus pplus overlapselect
```

AREA

Checks polygons to determine if their areas are within an area range.

Syntax

```
AREA layer Range {output-layer} {"message"}
```

EQ n: Flags the polygons of the layer whose areas are equal to n microns.

LT n: Flags the polygons of the layer whose areas are less than n microns.

LE n: Flags the polygons of the layer whose areas are less than or equal to n microns.

GT n: Flags the polygons of the layer whose areas are greater than n microns.

GE n: Flags the polygons of the layer whose areas are greater than or equal to n microns.

NE n: Flags the polygons of the layer whose areas are not equal to n microns

RANGE n1 n2: Flag the polygons of the layer whose areas are greater than n1 microns and less than n2 microns.

Example

```
AREA contact NE 0.04 "Exact contact size != 0.2"
```

ENC

Determines the degree that layer1 polygons partially or fully enclose layer2 polygons.

Syntax

ENC{[Options]} layer1 layer2 Range {output_layer} {"message"}

Options:

C : Flags the edge-pair when they are parallel.

C' : Flags the edge-pair when they are not parallel(Inverse of C option).

E : Flags layer1's polygons which are polygons completely outside of layer2.

O : Flags layer1 and layer2 polygons that cut/overlap each other.

T : Flags the outer segments of the layer1 polygons that touch the outer segments of the layer2

Polygons

Example

ENC contact poly LT 0.2 "min poly overlap of contact < 0.2"

ERROR

Generates the error message for the specified layer. It is useful to locate the specified layers.

Syntax

ERROR layer {"message"}

Example

AND nplus pplus overlapselect

ERROR overlapselect "overlapselect layer"

EXT

Checks the distance between the outside edges of polygons.

Syntax

EXT{[Option]} layer1 {layer2} Range {output_layer} {"message"}

C : Flags the parallel edge-pairs.

C' : Flags the non-parallel edge-pairs.

E : Flags the polygons of layer1 that are fully enclosed by a polygon in layer2 and the polygons of layer2 that are fully enclosed by a polygon in layer1.

H : Flags the outside edges of notched layer-a polygons that fail the spacing check. A notch is a set of non-adjacent facing edges, or adjacent facing edges that create an external angle of less

than 90 degrees. Use this option only with a single input layer.

O : Flags the layer1 and layer2 polygons that cut/overlap each others. The violation flag covers the edge segments within layer1 and layer2 that outline the overlapping area of the two polygons. 'O' option cannot used in the command with conjunctive OUTPUT

T : Flags the outer segments of the polygons of layer1 that touch the outer segments of the polygons of layer2.

Example

```
EXT          contact          LT 0.2  "min contact spacing < 0.2um"  
EXT[TO]     contact          via    LT 0.2  "min spacing contact to via < 0.2um"
```

INT

Determines the depth to which polygons of two layers overlap. This command measures between the inside edges of polygons.

Syntax

INT{[Options]} layer1 layer2 Range {output_layer} {"message"}

C : Flags the parallel edge-pairs.

C' : Flags the non-parallel edge-pairs.

T : Flags the outer segments of the polygons of layer1 that touch the outer segments of the polygons of layer2

Example

```
INT[T]       active          poly    LT 0.2  "min overlap(active, poly) < 0.2um"
```

LENGTH

Checks length dimensions.

Syntax

LENGTH layer Range {"message"}

Example

```
LENGTH      metal1          LT 0.2  "min metal1 length < 0.2um"
```

NOT

Create a new layer from two other layers. The new layer consists of the portion of the first input layer minus the region shared by both input layers.

Syntax

NOT layer1 layer2 output_layer

Example

AND	active	nplus	nactive
AND	poly	nactive	ngate
NOT	nactive	ngate	ndiff

OR

Create a new layer from two other layers. The new layer consists of the total region of both input layers.

Syntax

OR layer1 layer2 output_layer

Example

OR	poly	active	poly_act
EXT[H]	poly_act	LT 0.2	"min space between active and routing poly < 0.1"

PLENGTH

Checks the length of a series of connected edges.

Syntax

PLENGTH layer Range {output-layer} {"message"}

Example

LENGTH	via	NE 0.2	"Exact via size != 0.2um"
PLENGTH	via	NE 0.8	"Exact via size != 0.2um"

SELECT

Selects a group of polygons out of a layer under certain conditions and creates a new layer. The SELECT command is an area which meets the relational condition imposed on layer1 and layer2.

Syntax

SELECT {[Options]} layer1 Relation layer2 output-layer

Example

SELECT	nplus	INSIDE	pplus	inside_npsel
SELECT	nplus	OUTSIDE	pplus	outside_npsel
SELECT	nplus	TOUCH	pplus	touch_npsel
SELECT	nplus	CUT	pplus	cut_npsel
SELECT	nplus	ENCLOSE	pplus	enc_npsel
SELECT	nplus	HOLE	pplus	hole_npsel
SELECT	nplus	OVERLAP	pplus	overlap_npsel

SIZE

Create a new layer from another layer. The new layer is oversized or undersized by a specified number of micron units.

Syntax

SIZE layer BY n output_layer {OUTPUT cell_name layer-number {data_type_number}}

n : This data item indicates the number of micron units by which the input layer will be oversized (positive), undersized (negative), or copied(zero).

Example

SIZE	metal3	BY -0.45	ulsmt3
SIZE	ulsmt3	BY 0.45	olsmt3
NOT	metal3	olsmt3	smt3
EXT	metal3		LT 0.2 "min metal3 spacing < 0.2um"
EXT	olsmt3	smt3	LT 0.5 "min large scale metal3 spacing < 0.5"
EXT	olsmt3		LT 0.5 "min large scale metal3 spacing < 0.5"

WIDTH

Checks the dimensions between inside edges of polygons on the input layer.

Syntax

WIDTH{[Options]} layer1 Range {output_layer} {"message"}

D : Disable Acute angle check.

Example

WIDTH	metal1		LT 0.3 "min metal1 width < 0.3"
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Appendix

MyDRC Range variables and Options

Range	ENC	EXT	INT	LENGTH	PLENGTH	WIDTH
EQ	X	X	X	O	O	X
LT	O	O	O	O	O	O
LE	O	O	O	O	O	O
GT	X	X	X	O	O	X
GE	X	X	X	O	O	X
NE	X	X	X	O	O	X
RANGE	O	O	O	O	O	O
SELGT	O	O	O	X	X	O
SELGE	O	O	O	X	X	O
SELLT	O	O	O	X	X	O
SELLE	O	O	O	X	X	O
SELRA	O	O	O	X	X	O

Option	ENC	EXT	INT	LENGTH	PLENGTH	WIDTH
C	O	O	O	X	X	O
C'	O	O	O	X	X	O
D	X	X	X	X	X	O
E	O	O	X	X	X	X
H	X	O	X	X	X	X
N	O	O	O	X	X	X
N'	O	O	O	X	X	X
O	O	O	X	X	X	X
P	O	O	O	X	X	O
P'	O	O	O	X	X	O
R	O	O	O	X	X	O
R'	O	O	O	X	X	O
S	O	O	O	X	X	O
T	O	O	O	X	X	X

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