

DRC (SSC-EAGLE-6Lyr_v1.0.0.3)

File Layers Clearance Distance Sizes Restrिंग Shapes Supply Masks Misc

EAGLE Design Rules for *6* Layer Designs (MLB)

This Sunstone Circuits 6 Layer .DRU has been set to cover our minimum requirements for our 6 layer MLB products. For questions, con-
 tact Sunstone Customer Support:

Email: mailto:support@sunstone.com
Phone: 800-228-8198

v1.1Mod10/16/07~Layers-core reversal.Distance C/D.Restricting%.Supply G%.

v1.2Mod12/06/07~Distance C/D to 20mils.

v1.3Mod12/12/07~Supply/Annulus Value to 12.5mils

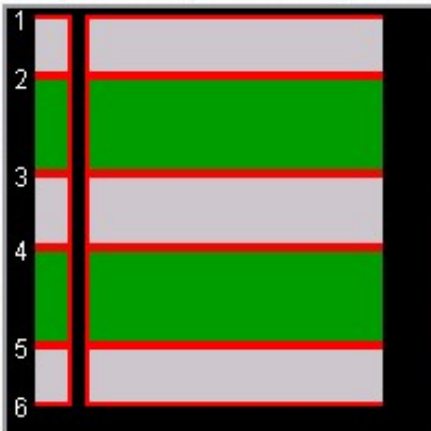
1/15/08 SSC-EAGLE-6Lyr_v1.0.0.3~For Release

10/03/08 Description Edit.

*Attention: Upon running the design check and making modifications, please remember to save any changes before closing the applicat-
 board file to Sunstone Circuits for conversion.*

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Nr	Copper	Is
1	0.0178mm	8mil
2	0.0356mm	14mil
3	0.0356mm	10mil
14	0.0356mm	14mil
15	0.0356mm	8mil
16	0.0178mm	

Setup [1+2*3+14*15+16]

Layers are combined through either *core* or *prepreg* material. **a*b** combines layers *a* and *b* with a *core*, while a *prepreg*.

Buried and **through** vias are defined by writing (. . .).

Blind vias are defined by writing [t : . . . :b], which defines a blind via from top to layer *t* and from bottom to

Example: [2: 1+ ((2*3) + (4*16))] is a multilayer setup with two cores, combining layers 2/3 and 4/16, vias going through both cores. The cores are combined through a prepreg and buried vias are produced throu-

Finally layer 1 is added, with blind vias going from layer 1 to 2.

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File

Layers

Clearance

Distance

Sizes

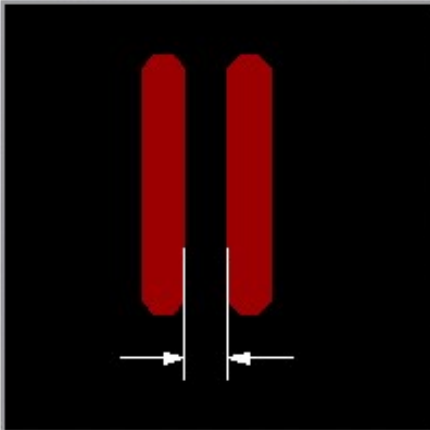
Restring

Shapes

Supply

Masks

Misc



Different Signals

Wire

Wire

6mil

Pad

Pad

6mil

6mil

Via

Via

6mil

6mil

6mil

Same Signals

Smd

Smd

6mil

Pad

Pad

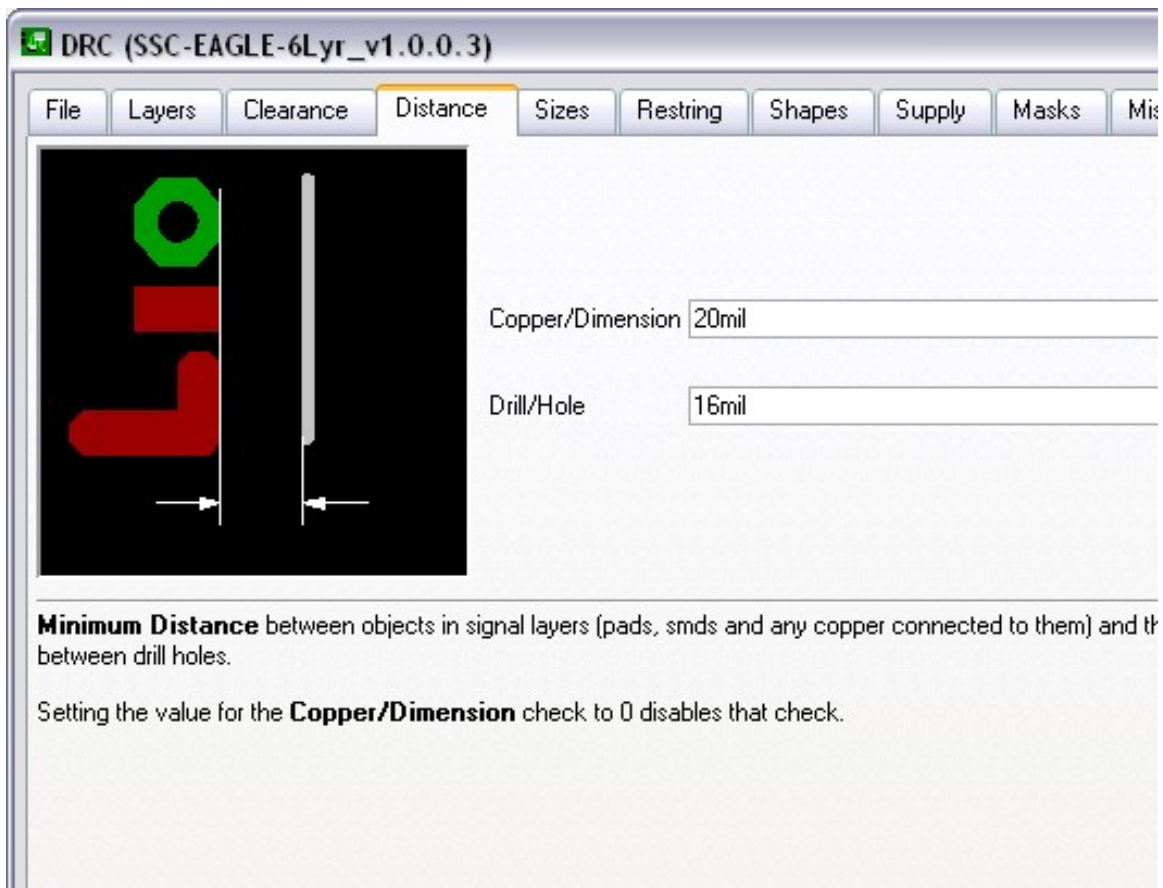
6mil

6mil

Minimum Clearance between objects in signal layers.

The **Same Signals** check between *Smd* and *Via* does not apply to *Micro Vias*.

Setting the values for the **Same Signals** checks to 0 disables the respective check.



File

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Mis

Minimum Width

6mil

Minimum Drill

8mil

Min. Micro Via

9.9898mm

Min. Blind Via Ratio

0.5

Minimum Sizes of objects in signal layers and of drill holes.

Minimum Width and **Minimum Drill** may be overwritten by larger values in the *Net classes* for specific sign

Min. Micro Via applies to *blind* vias that are exactly one layer deep. Typical values are in the range 50..100 than **Minimum Drill** (e.g. the default value of 9.99mm) means there are no micro vias.

Min. Blind Via Ratio defines the minimum drill diameter d a blind via must have if it goes through a layer of t
manufacturers usually give this "aspect ratio" in the form **1 : 0 . 5**, where 0 . 5 would be the value that has to b

File

Layers

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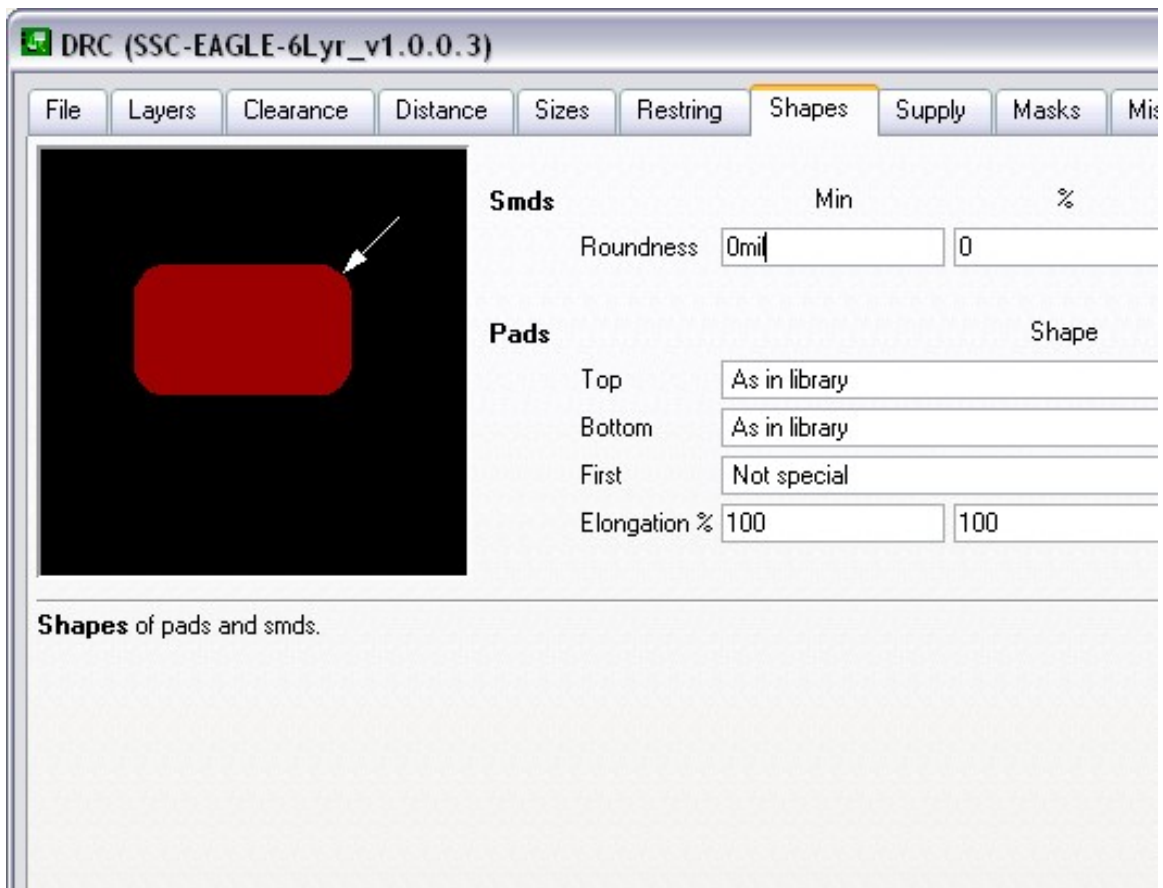
Misc

		Min	%	
Pads	Top	8mil	25	99%
	Inner	8mil	25	99%
	Bottom	8mil	25	99%
Vias	Outer	8mil	25	99%
	Inner	8mil	25	99%
Micro Vias	Outer	8mil	25	99%
	Inner	8mil	25	99%

Restrings for pads and vias are defined in percent of the drill diameter (limited by **Min** and **Max**). If the diameter via would result in a larger restring, that value will be used in the outer layers.

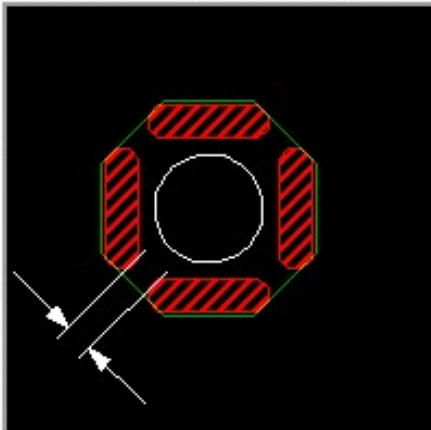
If the **Diameter** option is checked the actual pad or via diameter will be taken into account in the inner layers

Micro Vias are *blind* vias that are exactly one layer deep and have a drill diameter that is smaller than the **Min** defined under *Sizes* (which may be overwritten by a larger **Drill** value in the *Net classes*).



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Min %

Gap 8mil 50 1

Isolate

Thermal 10mil

Annulus 12.5mil

Restring

☒

☐

☐ Generate thermals for vias

Supply symbols are generated for pads and vias in supply layers.

If a **Restring** is deactivated for **Annulus**, the resulting supply symbol will be a fully filled circle instead of a ring.

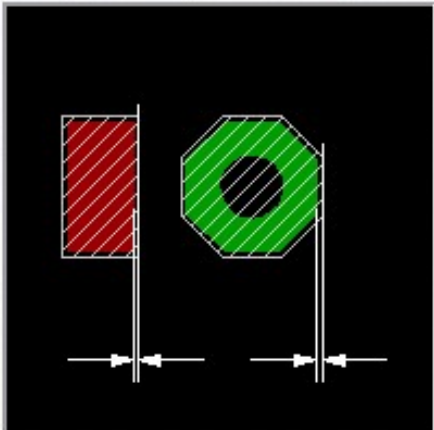
The **Gap** is defined in percent of the drill diameter (limited by **Min** and **Max**).

The **Thermal Isolate** parameter will also be used for signal polygons.

NOTE: The actual shape of supply symbols may be different when generating output for photoplotters that use thermal/annulus apertures!

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File Layers Clearance Distance Sizes Restring Shapes Supply **Masks** Mis



	Min	%	
Stop	3mil	100	3r
Cream	0mil	0	0r
Limit	0mil		

Mask values are defined in percent of the smaller dimension of smds, pads and vias (limited by **Min** and **Max**).

Stop masks are generated for smds, pads and those vias that have a drill diameter that exceeds **Limit**.

Cream masks are generated for smds only.

