

极致PCB设计全流程技巧一：参数设置 (如何定制最佳视窗)

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演示工具：Allegro® PCB Designer

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- 从事PCB行业17年；加入Cadence之前，先后受聘于Mitac、华为
- 熟悉PCB全流程设计，拥有丰富的PCB设计经验
- 设计产品包括电脑主板、服务器、路由器等，擅长于PCB精细化设计及质量管控



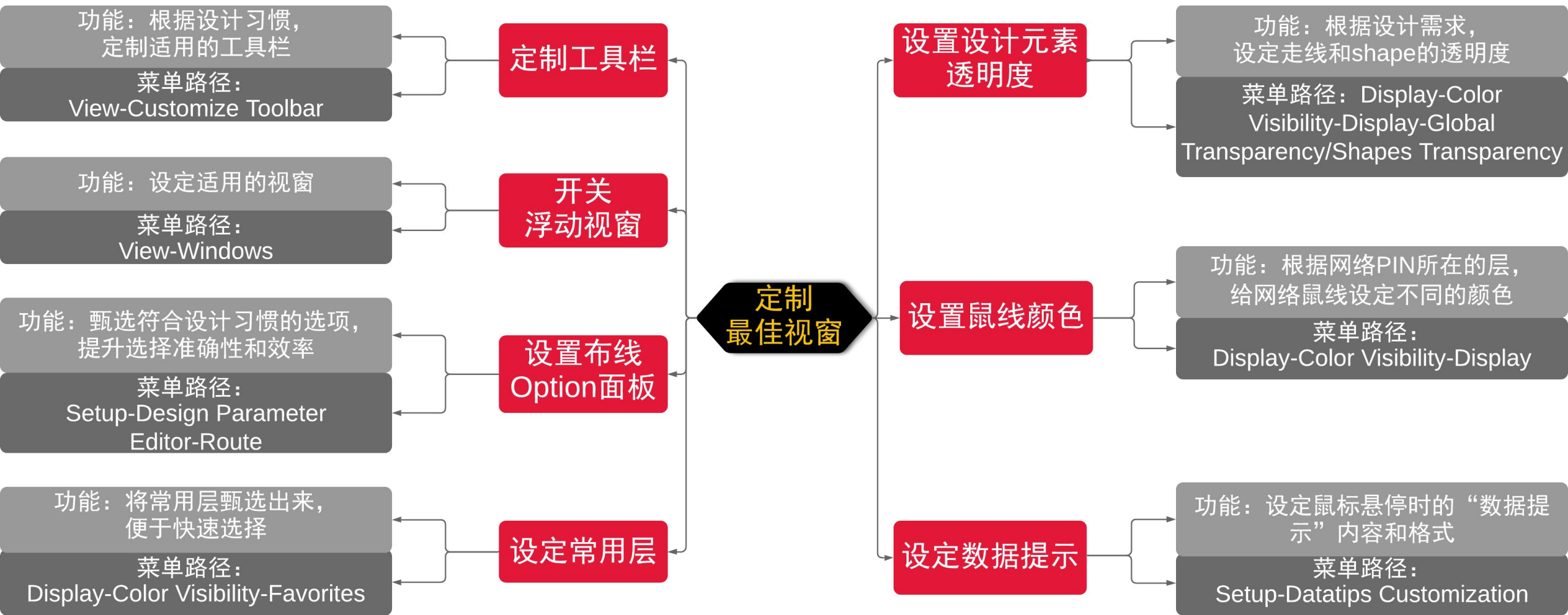
目录

- 总览：定制最佳视窗
- 定制工具栏
- 开关浮动视窗
- 设置布线时option面板显示内容
- 设定常用层
- 设置设计元素透明度
- 设置鼠线颜色
- 设定“数据提示”



总览：定制最佳视窗

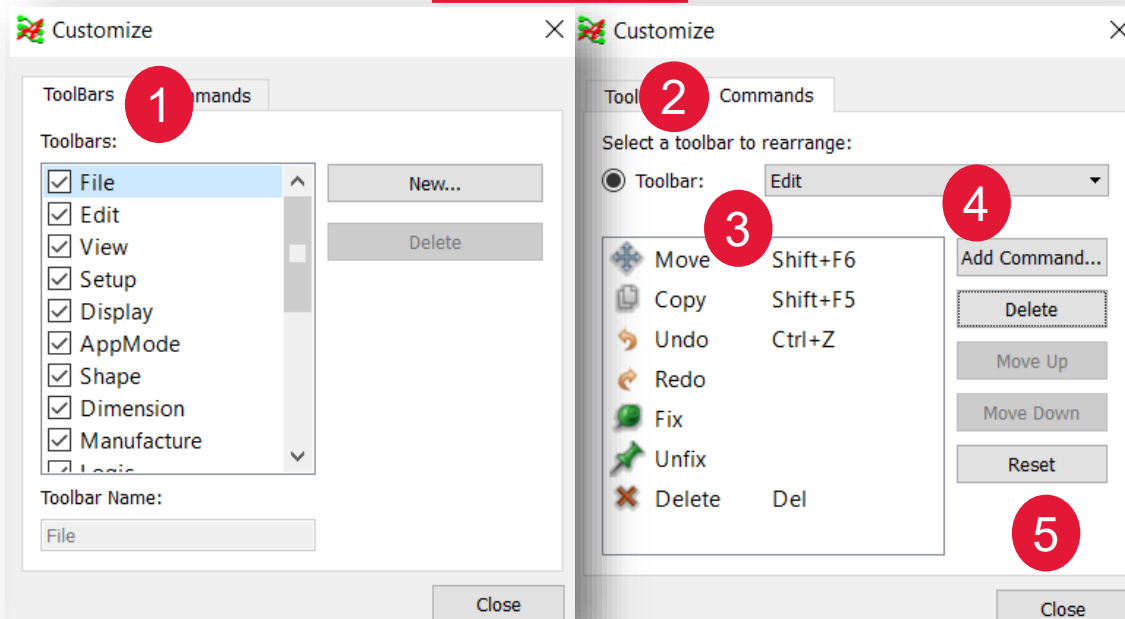
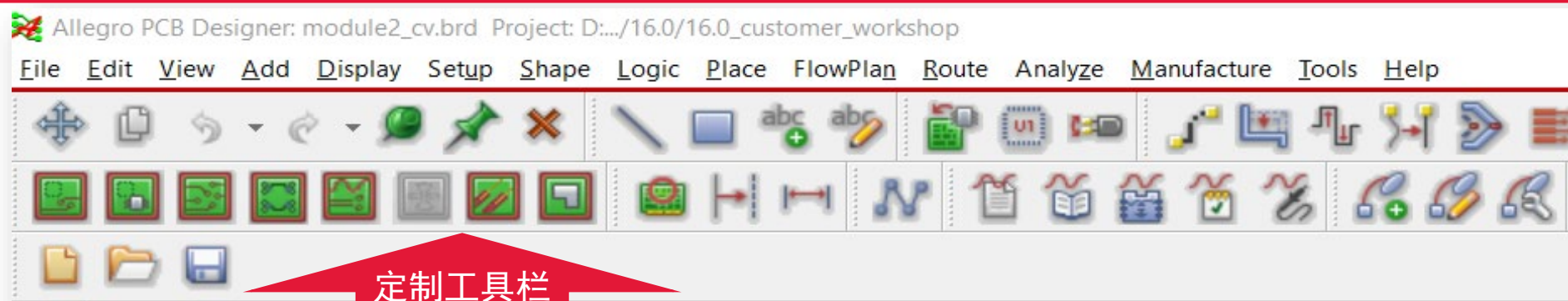
演示工具：Allegro PCB Designer



定制工具栏

演示工具: Allegro PCB Designer

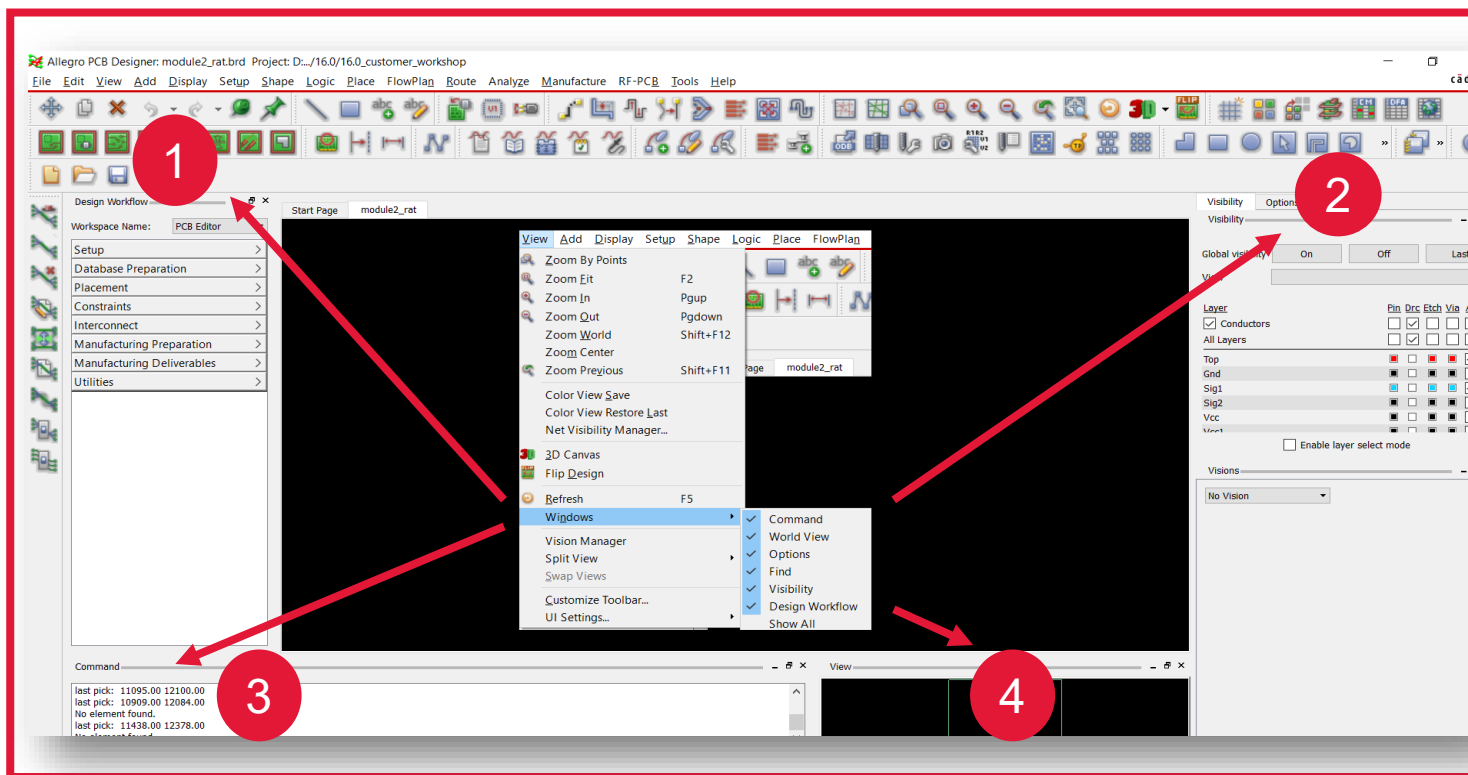
- 菜单路径: View – Customize Toolbars



1. 选择需放到工具栏的菜单
2. 选择菜单下的指令
3. 选择指令
4. 对指令进行增删/排序
5. reset把工具栏恢复默认状态

开关折叠“浮动视窗”

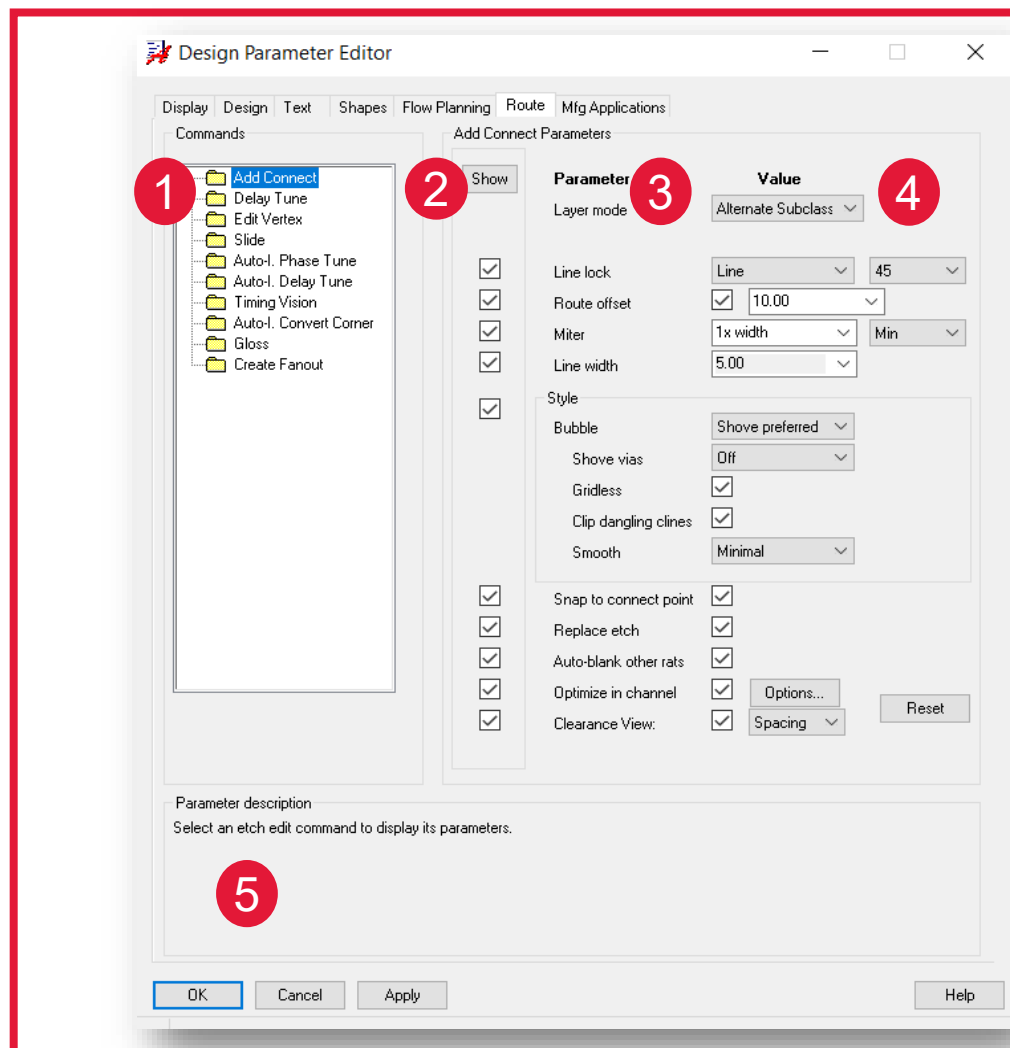
- 菜单路径: **View – Windows**
- 该指令控制Workflow/Find/Option/Visibility/Command/World View等浮动窗口的开关, 可根据需求保留常用选项, 以扩大设计窗口
- 点击各个浮动视窗的最小化按钮, 可将其折叠



1. 设计流程窗口
2. Find/Option/Visibility窗口
3. 命令窗口
4. 全局视图窗口

设置布线时 Option 面板显示内容

- 菜单路径: Set up – Design Parameter Editor-Route



指令中各选项释义:

1. 选定想要设置的命令
2. 设定哪些选项需要在option面板显示: 建议只选择经常用的设置, 这样可以提升应用中选择的准确度和效率
3. 参数名称
4. 参数数值设定
5. 各参数的详细说明

设定常用层

- 菜单路径: **Display– Color/Visibility-Favorites**
- Color Dialog中包含非常多的层数, 但是PCB设计中并不会全部用到, 这与PCB类型及设计复杂度有关
- 为了快速定位和选择所需层面, 可定制常用层面, 便于选择

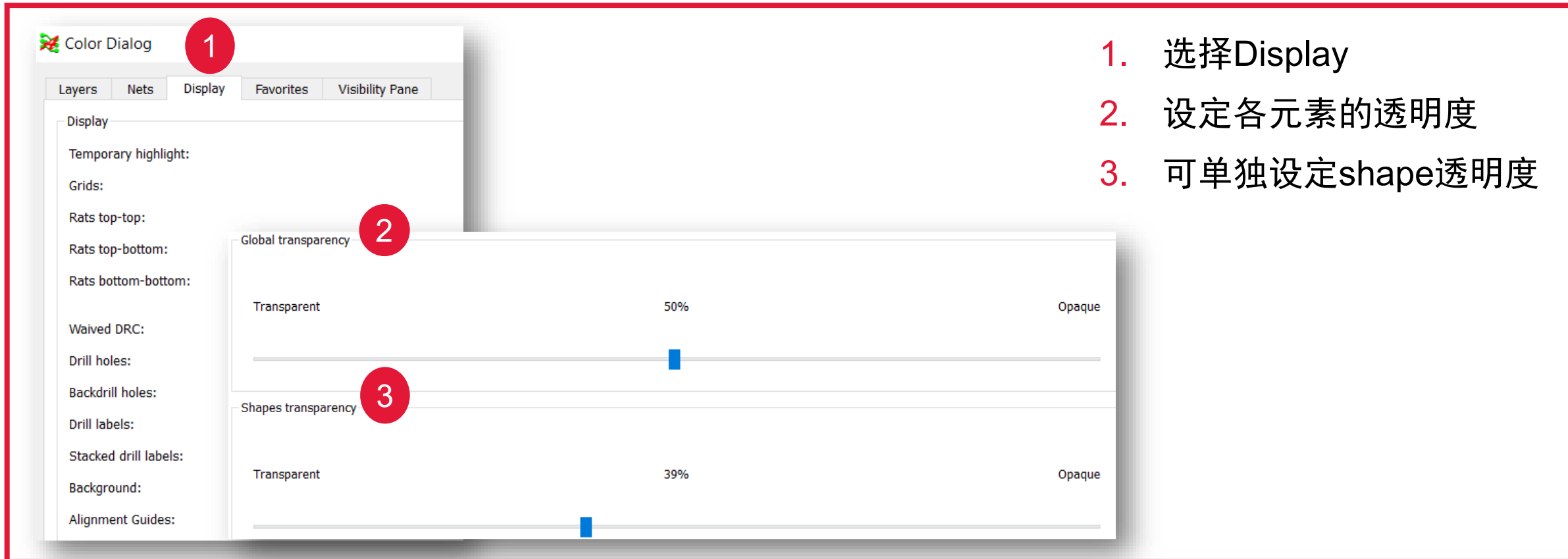
The screenshot shows the 'Color Dialog' with the 'Layers' tab selected. The 'Filter layers:' field is empty. The 'Layers' list on the left includes 'Stack-Up', 'Areas', 'Constraints region', 'Route keepout', 'Via keepout', 'Package keepout', 'Package keepin', 'Route keepin', 'Geometry', 'Board geometry', 'Package geome...', 'Embedded geo...', and 'Components'. The 'Areas' section is expanded, showing 'Route keepout' selected. A red circle '1' is next to 'Route keepout'. A context menu is open over 'Route keepout', showing options: 'Select color', 'Select pattern', 'Add to visibility' (highlighted), and 'Remove from favorites'. A red circle '2' is next to the 'Add to visibility' option. The 'Favorites' tab is selected, showing a table of layers and their visibility status. A red circle '3' is next to the 'Favorites' tab. The table has columns: 'All', 'Rte KO', and 'Rte KI'. The rows are: 'All', 'Top', 'Bottom', and 'Through All'. The 'Top' row has 'Rte KO' checked (red square). The 'Bottom' row has 'Rte KI' checked (purple square). The 'Through All' row has 'Rte KI' checked (yellow square).

	All	Rte KO	Rte KI
All	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Top	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Bottom	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Through All	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

1. 选定所需层面
2. 选定子层面并将其加入到常用类
3. 在常用类中即可快捷定位到所选层

设置设计元素的透明度

- 菜单路径: **Display– Color/Visibility-Display**
- 在某些设计场景下, 需要提高整个设计的可视性, 将设计元素透明化显示, 便于实时调整设计

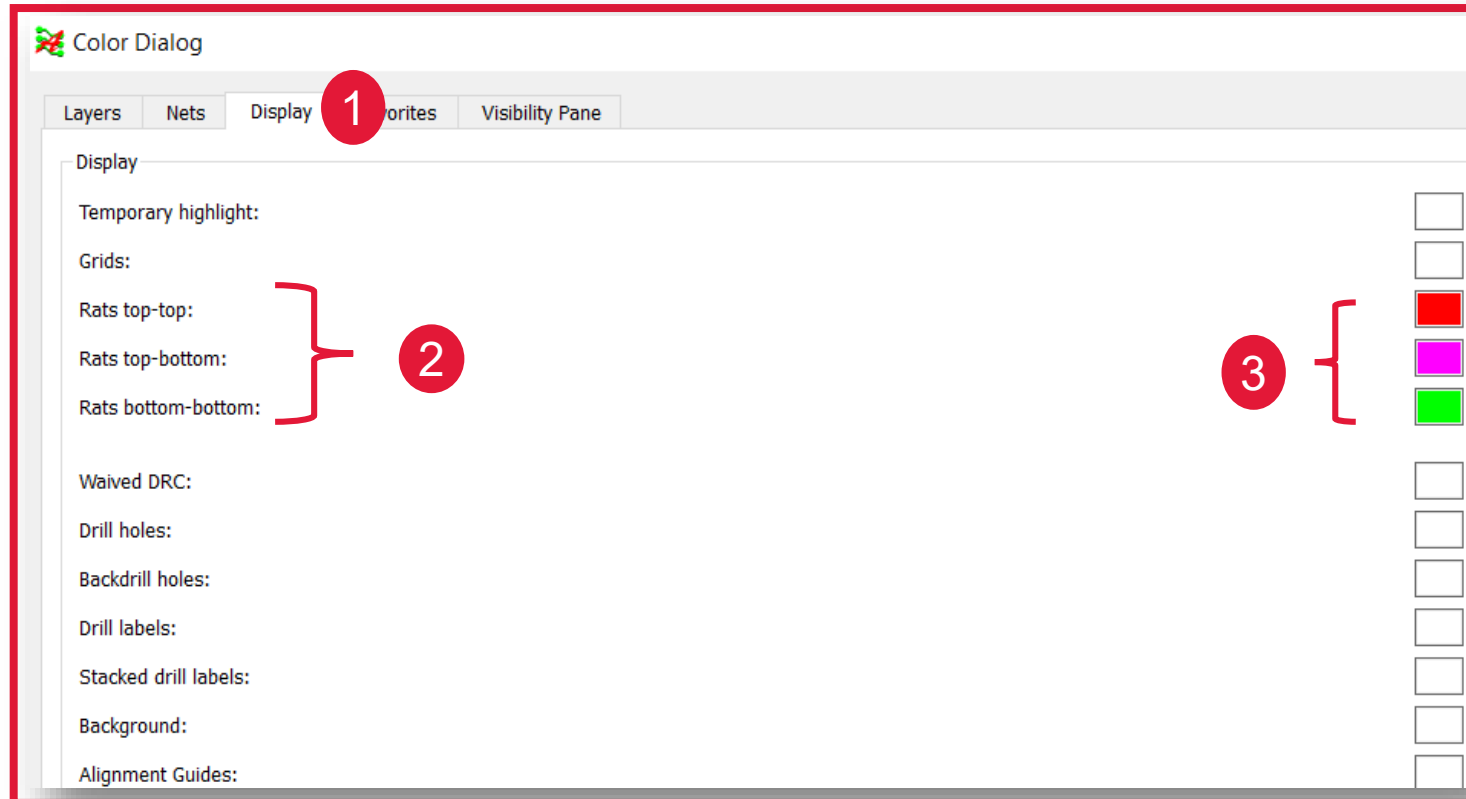


The screenshot shows the 'Color Dialog' window with the 'Display' tab selected. The dialog is divided into two main sections: 'Global transparency' and 'Shapes transparency'. Each section has a horizontal slider with a blue marker indicating the current transparency level. The 'Global transparency' slider is set to 50%, and the 'Shapes transparency' slider is set to 39%. The dialog also lists various design elements on the left, such as 'Temporary highlight:', 'Grids:', 'Rats top-top:', 'Rats top-bottom:', 'Rats bottom-bottom:', 'Waived DRC:', 'Drill holes:', 'Backdrill holes:', 'Drill labels:', 'Stacked drill labels:', 'Background:', and 'Alignment Guides:'.

1. 选择Display
2. 设定各元素的透明度
3. 可单独设定shape透明度

设置鼠线颜色

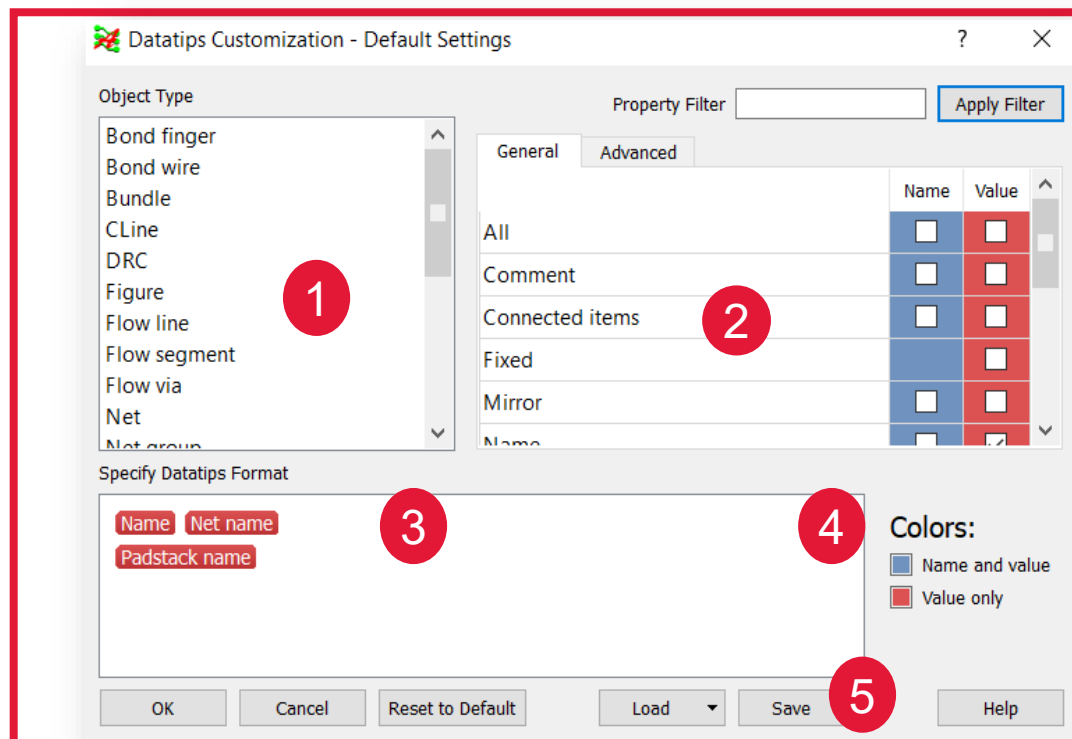
- 菜单路径: **Display– Color/Visibility-Display**
- 调整布局、规划布线方案、考虑走线顺序时, 如果鼠线都是一个颜色, 完全没法区分器件层面, 设计者整体感知不理想。这时, 可以考虑将鼠线根据器件所在层面进行区分



1. 选择Display
2. 选择鼠线类型
3. 设置鼠线颜色

设置“数据提示”

- 菜单路径: **Set up – Datatips Customization**
- custdatatips.cdt文件是调用文件, 默认文件存储路径为:
<installation_directory>/share/pcb/text
- 用户自定义的文件, 文件名与默认的相同, 保存于pcbenv路径



设置步骤及说明:

1. 选定想要设置的对象
2. 设定该对象所包含的元素
3. 确定“数据提示”的格式
4. 设定名称和数值的颜色
5. 保存所选择的设置并点击ok

The logo features the word "cadence" in a bold, lowercase, sans-serif font. A small red horizontal bar is positioned above the letter 'a'. A registered trademark symbol (®) is located at the top right of the letter 'e'.

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