gloss param fillet

Run `gloss param fillet` command on analog and high-speed circuits, or areas of a design where shock and vibration to the design might disrupt connections. This command defines the parameters for the fillet and tapered traces glossing application to place fillets of etch/conductor at junctions to reinforce connections.

Fillets are also added at the point of cline width transition to reduce stress. The tool tapers the clines by adding fillets to prevent abrupt changes in line width which is very common in RF and Rigid Flex applications.The fillet capability is an automatic glossing function that helps establish and maintain strong connections by adding extra copper. Fillets are checked by automatic DRC.

Note: Pad fillets are suppressed when the pad to be filleted is covered by another pad or by a static/dynamic shape.

For more details, see the *Routing the Design* user guide in your documentation set.

Menu Path

Route – Teardrop/Tapered Trace – Parameters

Fillet an Tapered Trace Dialog Box

Use this dialog box to access parameters for creating fillets and tapered traces with additional etch/conductor.

Global Options

Dynamic	Updates the entire board with shape-based fillets. During subsequent interactive route editing, fillets are deleted and then regenerated on modified pins or vias, based on the specified parameters (unless an element has the NO_FILLET property assigned). If disabled, shape-based fillets are added in a batch update. Whenever you modify a pin, via, or cline, the tool deletes the fillets and does not regenerate them.
Curved	Creates shape-based fillets or tapered traces using an arc instead of a line as part of the shape outline from the cline to the pad intersection.

Allow DRC	Creates fillets and taper traces even if DRCs result.
Unused Nets	Allows tapering and filleting on unused nets.

Objects Parameters

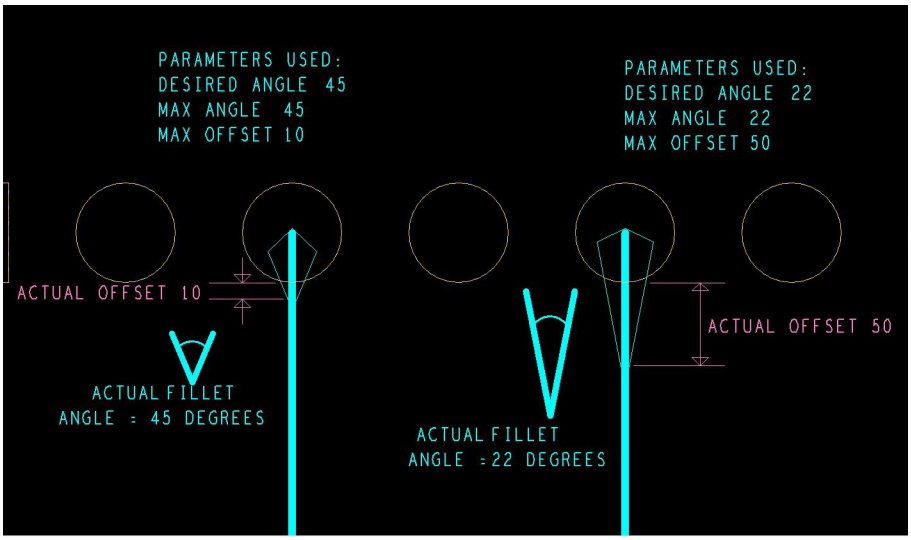
Objects	Choose options for the pad shapes: circular pads, square pads, rectangular pads, oblong pads, octagon pads, pads as shapes, pins, vias, bond fingers, pads without drills, and t connections. For circular, square, rectangular, octagon and oblong pads, you can indicate the maximum size for the fillet. The default size is *100 mils* (in drawing units).

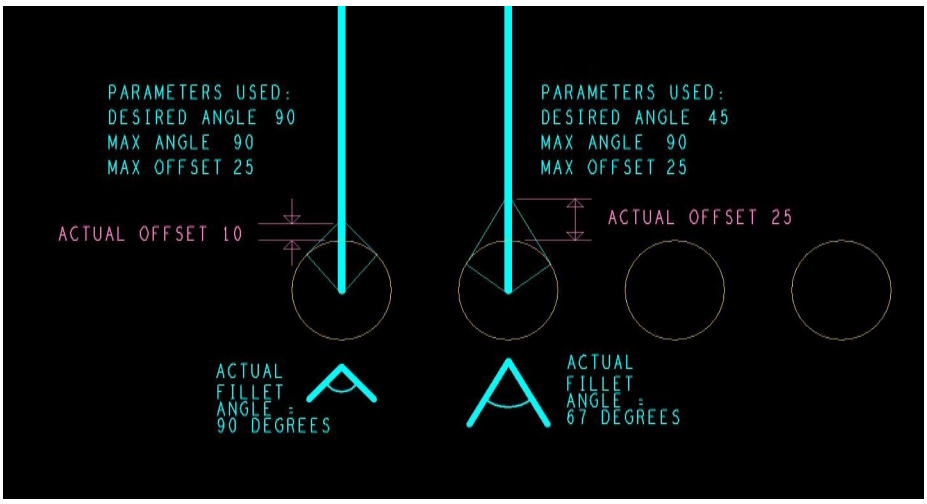
Fillet Options

Fillet Objects	Specifies the object for fillet. Valid objects are Pins, Vias and Ts.
Desired angle	Specifies the angle created by the generated fillet shapes. The default value is *90 degrees*. A larger *Desired Angle* and a smaller *Max Offset* create a short fillet. A smaller *Desired Angle* and larger *Max Offset* create a long fillet. This option is not applicable for creating arc fillets.
Max angle	Specifies the maximum angle for the fillet. The default value is *90 degrees*. The maximum possible value is 99 degrees. This value must always be equal to or greater than the *Desired Angle*. A larger *Desired Angle* and a smaller *Max Offset* create a short fillet. A smaller *Desired Angle* and larger *Max Offset* create a long fillet. This option is not applicable for creating arc fillets.

Max offset	Specifies the maximum distance between the intersection of the pad edge and the connecting line, forming the fillet length. The default value is *25 mil* (in drawing units). This option is not applicable for creating arc fillets.
Max arc offset	Specifies the maximum distance between the pad edge and the point along the curved trace, forming the fillet length. The default value is *5 mil* (in drawing units).
Min arc offset	Specifies the minimum distance between the pad edge and the point along the curved trace, forming the fillet length. The default value is *1 mil* (in drawing units). Must always be lesser than the *Max arc offset.* You can fillet arc segments for only pins and vias. The fillets generated for arc segments always have curved lines.
Min line width	Specifies the minimum line width of the cline entering the pad. If the line width of the cline is less than the value specified here, the fillet is not created. The default value is *3 mil* (in drawing units).
Max line width	Specifies the maximum line width of the cline entering the pad. If the line width of the cline is greater than the value specified here, the fillet is not created. The default value is *25 mil* (in drawing units).

Examples





Tapered Trace Options

Tapered traces	Set to enable tapering of traces. Not on by default.
Min segment angle	Specifies the minimum segment angle. The deafault is 135 degrees. The smaller included angle should be greater than or equal to 90 degrees.

Desired Angle	Specifies the angle of taper created by the fillet. A larger *Desired Angle* and a smaller *Max Offset* create a short fillet. A smaller *Desired Angle* and larger *Max Offset* create a long fillet. The default value is *60 degrees*.
Max Offset	Specifies the maximum distance the fillet may extend from vertex to the point of cline width transition. The default value is *635 mil* (in drawing units).

Procedure

1. Choose *Route – Teardrop/Tapered Trace – Parameters* (`gloss param fillet command`).

   The *Fillet and Tapered Trace* dialog box appears.

2. Complete the parameters and choose to generate fillets and tapers in static or dynamic mode.

3. Click *OK*.