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SonnetLab Method Guide

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Interface Method Guide

This document contains a list of all the methods available in the SonnetLab toolbox for Matlab (from here on called SonnetLab). The methods below are organized by function. Users may retrieve the help information for individual methods by typing 'help SonnetProject.<FunctionName>' into the Matlab command window.

Core Methods

SonnetProject

initialize

initializeGeometry

initializeNetList

clone

quickClone

compare

isGeometryProject

isNetlistProject

save

saveAs

stringSignature

displayPolygons

drawCircuit

draw3d

drawLayer

draw2d

openInGui

Sonnet Tools Methods

simulate

openInSonnet

viewResponseData

viewCurrents

exportCurrents

exportPattern

estimateMemoryUsage
cleanProject
cleanOutputFiles

Analysis Settings Modification Methods

addFrequencySweep
addSweepFrequencySweep
addAbsFrequencySweep
addAbsEntryFrequencySweep
addAbsFmaxFrequencySweep
addAbsFminFrequencySweep
addDcFrequencySweep
addEsweepFrequencySweep
addLsweepFrequencySweep
addSimpleFrequencySweep
addStepFrequencySweep
changeSelectedFrequencySweep
returnSelectedFrequencySweep
addVariableSweepSimple
detectAllOptimizationVariables
editOptimizationVariable
addOptimizationParameter
enableCurrentCalculations
disableCurrentCalculations

Add Polygon Methods

addPolygon
addMetalPolygon
addMetalPolygonEasy
addDielectricBrick
addDielectricBrickEasy
addViaPolygon
addViaPolygonEasy

copyMetalPolygon
copyPolygon
copyPolygonUsingId
copyPolygonUsingIndex
duplicatePolygon
duplicatePolygonUsingId
duplicatePolygonUsingIndex

Polygon Search Methods

getPolygon
findPolygonUsingFunction
findPolygonUsingCentroidX
findPolygonUsingCentroidY
findPolygonUsingCentroidXY
findPolygonUsingMeanX
findPolygonUsingMeanY
findPolygonUsingMeanXY
findPolygonUsingPoint
findPolygonIndex
findPolygonUsingId
getAllPolygonIds
getAllPolygonCentroids
getAllPolygonMeans
getAllPolygonPoints

Polygon Modification Methods

movePolygon
movePolygonUsingId
movePolygonUsingIndex
movePolygonExact
movePolygonExactUsingId
movePolygonExactUsingIndex
movePolygonRelative

movePolygonRelativeUsingId
movePolygonRelativeUsingIndex
scalePolygon
scalePolygonUsingId
scalePolygonUsingIndex
scalePolygonFromPoint
scalePolygonFromPointUsingId
scalePolygonFromPointUsingIndex
flipPolygonX
flipPolygonY
flipPolygonXUsingId
flipPolygonYUsingId
flipPolygonXUsingIndex
flipPolygonYUsingIndex
snapPolygonsToGrid
changePolygonType
changePolygonTypeUsingIndex
changePolygonTypeUsingId
assignUniqueDebugId
assignAllPolygonssequentialIds
generateUniqueId
polygonCount

Polygon Removal Methods

findDuplicatePolygons
deleteDuplicatePolygons
deletePolygon
deletePolygonUsingIndex
deletePolygonUsingId

Polygon Type Definition Methods

defineNewMetalType
defineNewRoughMetalType

defineNewNormalMetalType
defineNewResistorMetalType
defineNewNativeMetalType
defineNewGeneralMetalType
defineNewSenseMetalType
defineNewThickMetalType
defineNewViaMetalType
defineNewSurfaceMetalType
defineNewVolumeMetalType
defineNewArrayMetalType
defineNewBrickType

Port Methods

addPort
addPortToPolygon
addPortAtLocation
addPortStandard
addPortAutoGrounded
addPortCocalibrated
addCoCalibratedGroup
deletePort
deletePortUsingIndex
findPort
findPortUsingPoint
findPortsInGroup

File Output Methods

addFileOutput
addFileOutputForNetlist
addFileOutputForGeometry
addTouchstoneOutput

Unit Modification Methods

changeFrequencyUnit
changeInductanceUnit
changeLengthUnit
changeAngleUnit
changeConductivityUnit
changeResistanceUnit
changeCapacitanceUnit

Sonnet Box Methods

getLayer
xCellSize
yCellSize
xBoxSize
yBoxSize
copyDielectricLayer
replaceDielectricLayer
changeDielectricLayerThickness
changeBoxSize
changeBoxSizeXY
changeBoxSizeX
changeBoxSizeY
changeNumberOfCells
changeNumberOfCellsX
changeNumberOfCellsY
changeNumberOfCellsXY
changeCellSizeUsingNumberOfCells
changeCellSizeUsingNumberOfCellsX
changeCellSizeUsingNumberOfCellsY
changeCellSizeUsingNumberOfCellsXY
changeCellSizeUsingBoxSize
changeCellSizeUsingBoxSizeX

changeCellSizeUsingBoxSizeY

changeCellSizeUsingBoxSizeXY

addDielectricLayer

addAnisotropicDielectricLayer

deleteLayer

Netlist Methods

addResistorElement

addInductorElement

addCapacitorElement

addTransmissionLineElement

addPhysicalTransmissionLineElement

addDataResponseFileElement

addProjectFileElement

addNetworkElement

getNetworkElements

Component Methods

addResistorComponent

addCapacitorComponent

addInductorComponent

addDataFileComponent

getResistorComponents

getCapacitorComponents

getInductorComponents

getDataFileComponents

findComponent

getComponent

deleteComponent

deleteComponentUsingIndex

deleteComponentUsingId

Other Methods

removeAllDielectricBricks

addParallelSubsection

addReferencePlane

addEdgeVia

findParameterIndex

getVariableValue

defineVariable

modifyVariableValue

addAnchoredDimensionParameter

addSymmetricDimensionParameter

findVariableIndex

getLayerIndexes

addTechLayer

addViaTechLayer

addMetalTechLayer

addBrickTechLayer

Contact

Your feedback is important to us. If you have any questions or comments about SonnetLab, please contact Sonnet Support by email at support@sonnetsoftware.com.

Please make sure you are using the most up to date version of SonnetLab before submitting a bug report. When submitting a bug report please include the Sonnet project file that generated the error (Sonnet project files have the extension .son) and the output from the command "SonnetMatlabVersion". The more information that that we receive the faster it will be for us to resolve the issue and contact you back.