How To: BOM_Example Example

Where To Find This Script

Select **Help > Examples** from the Menus Type either the example Name listed above or one of the keywords below.

Description

Bill of Materials Script

This project is an example of how to create a Bill of Materials (BOM) using the scripting capabilities of the AWR Design Environment. Twos are loaded in this project. There are two different ways to create the BOM from a design. Each script will write all of the BOM information to an Excel spreadsheet. The first script, "BOMtoExcel_flat" will write all the part information from a user specified schematic to one Excel page. This script will process all of the part numbers down through the design hierarchy. The second script, "BOMtoExcel_hierarchy" will make a new workbook sheet for each schematic and enter the parts for that schematic. This script will them sum the total costs for sub-circuits for the top level schematics.

Running the Bill of Materials Scripts

To see these scripts run, please find the scripts in the project. Please see the Microwave Office User's Guide chapter called Microwave Office API for more information on how to use scripts in the AWR Design Environment. When you run these scripts, they will prompt you for a Parts Database file by opening a file browser window. An Excel spread sheet that has been created with the necessary parts data has been saved in the same directory as this project. Below we have an example set of data for one part.

Part Number Manufacturer Description Cost Per Unit

ATC100B470JW500XB ATC 47pF Chip Capacitors, B Case $1.25

The script matches the part number set for a model in the Parts Database to get the remaining information about the part.

To properly run this example, please choose the Excel file that came with this project. If you hit cancel at this dialog, then the parts database file won't be used.

In this project there are two top-level schematics. The schematic total circuit is the entire circuit without hierarchy. The schematic total with hierarchy is identical to the total circuit except it is built with hierarchy to demonstrate how the script handles these situations. Please see the simulation results to see that they are identical circuits.

If you run the script "BOMtoExcel_flat" you will get a dialog to choose a schematic.
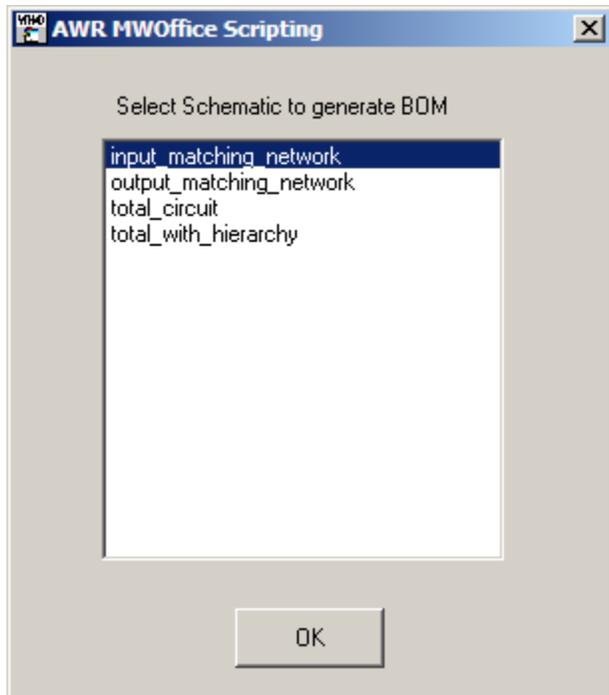
Choose the **total_circuit** as the top level schematic.

You will then get a dialog asking you to find the parts database file, this is in the same folder as the example.
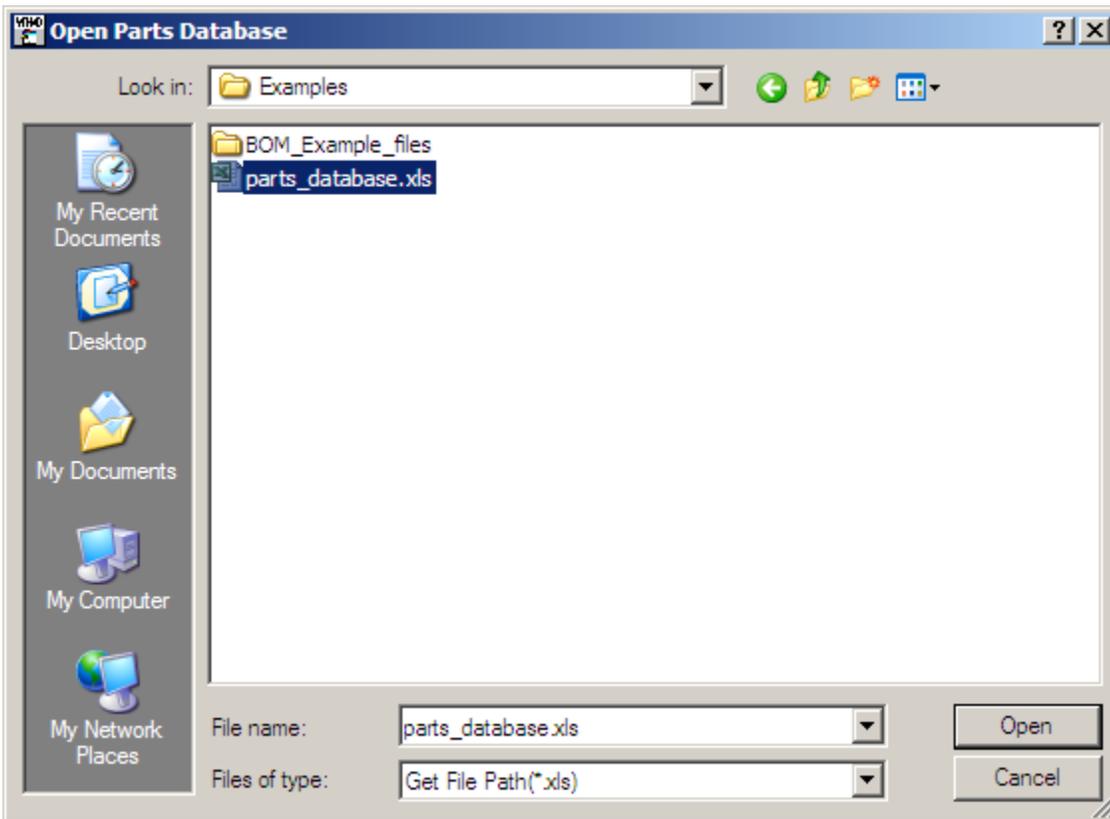
After you click **Open** , you will see a new spreadsheet open with your Bill of Materials.

	A	B	C	D	E	F	G	H	I	J
1	Quantity	Schematic ID	Component Type	Value	Part Number	Manufacturer	Package Type	Description	Cost Per Part	Total Cost
2	3	1 total_circuit C2,1 total_circuit C3,1 total_circuit C11	CHIPCAP	7.67128860065736 pF,12 pF,2.5354	44F3360	Newark	44F3360	0.8 - 8.0 Gigatrim Variable C	$4.00	$12.00
3	1	1 total_circuit LD1	MET_LDMOS_TOP11	"MRF9060"	MRF9060	Motorola	360B_04 IS_E	RF Power Field Effect Transi	$20.35	$20.35
4	4	1 total_circuit C1,1 total_circuit C14,1 total_circuit C7,1 total_circuit C13	CHIPCAP	47 pF,47 pF,47 pF,47 pF	ATC100B470JW500XB	ATC	B	47 pF Chip Capacitors, B Ca	$1.25	$5.00
5	4	1 total_circuit C5,1 total_circuit C4,1 total_circuit C8,1 total_circuit C9	CHIPCAP	10 pF,10 pF,10 pF,10 pF	ATC100B100JW500XB	ATC	B	10 pF Chip Capacitors, B Ca	$0.50	$2.00
6	2	1 total_circuit L1,1 total_circuit L2	CCIND	8 Ohm,8 Ohm	A04T-5	CoilCraft	A_coil	12.5 nH Inductors	$2.25	$4.50
7	1	1 total_circuit C10	CHIPCAP	3 pF	ATC100B3R0CW500XB	ATC	B	3.0 pF Chip Capacitor, B Ca:	$1.25	$1.25
8	1	1 total_circuit C12	CHIPCAP	0.5 pF	ATC100B0R5CW500XB	ATC	B	0.5 pF Chip Capacitor, B Ca:	$1.25	$1.25
9	1	1 total_circuit LB1	IND	470 nH	95F786	Newark	short bead	Short Ferrite Bead	$1.50	$1.50
10	3	1 total_circuit C6,1 total_circuit C15,1 total_circuit C16	CAP	10000 pF,10000 pF,10000 pF	93F2975	Newark	10uF_cap	10 uF 35 V Tantalum Chip C	$2.25	$6.75
11	1	1 total_circuit LB2	IND	940 nH	95F787	Newark	long bead	Long Ferrite Bead	$1.75	$1.75
12	1	1 total_circuit C17	CAP	220 pF	14F185	Newark	surface_mount_220	220 uF Electrolytic Chip Cap	$0.24	$0.24
13	Total									$56.59

You will see a total cost of $56.59.

Schematic - total_circuit
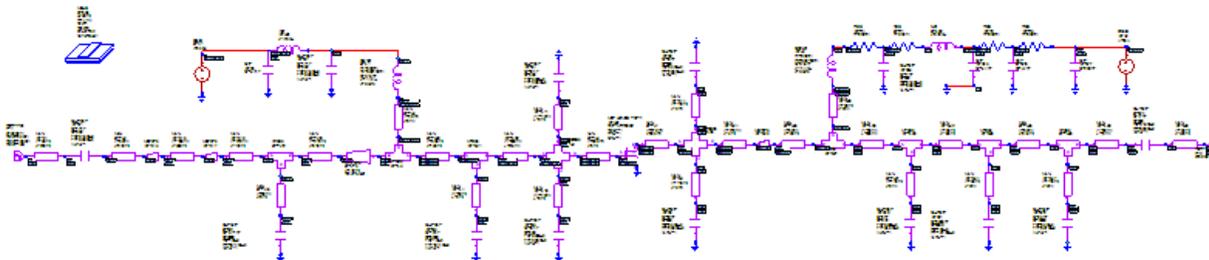
Schematic Layout - total_with_hierarchy
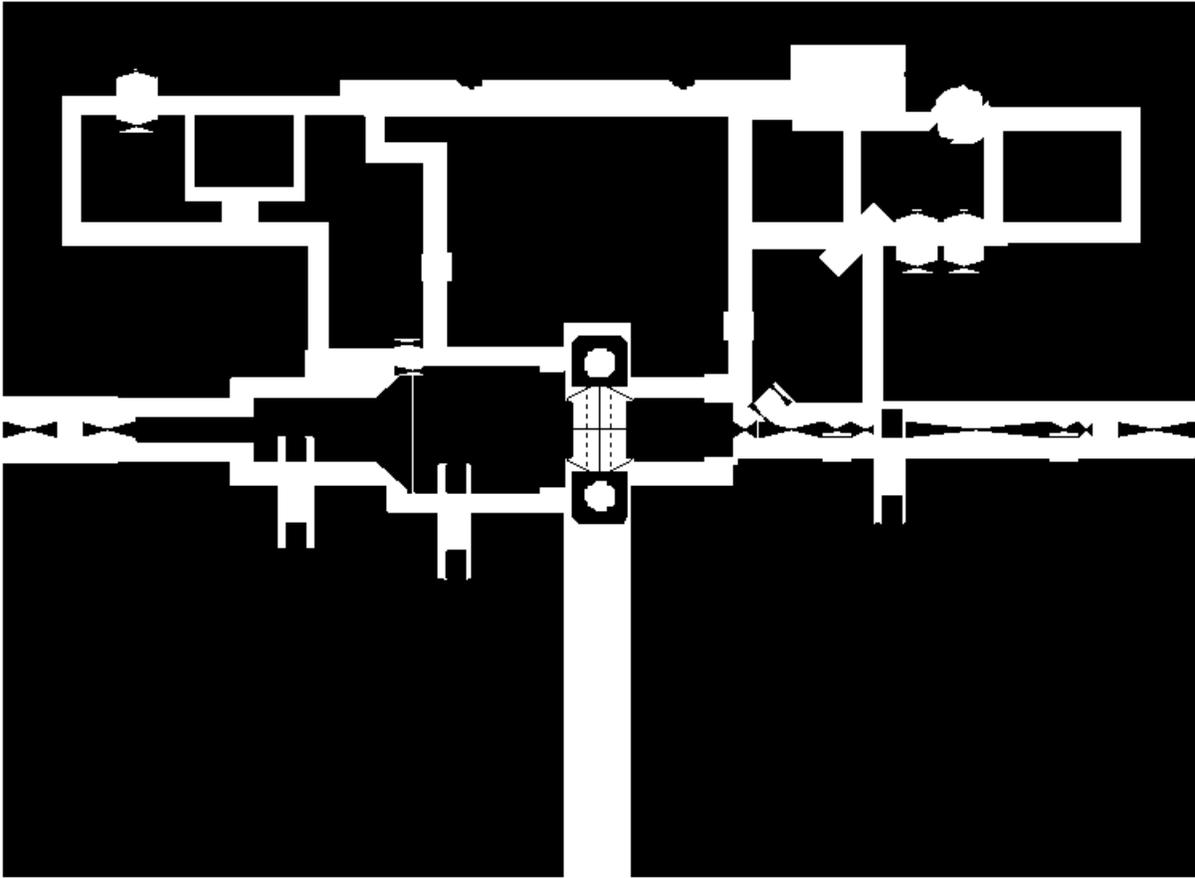
Scripting Information

Scripts included in the install are configured to run directly from the AWR Design Environment from the Scripts menu.

Scripts that you download must be imported into a project or placed in your global scripts folder to use them. See Working with VB Scripts for information on how to use these scripts.

You can also customize the AWRDE to run scripts from hotkeys, menus, or toolbar buttons. See Working with VB Scripts for more information.

For complete information about the AWRDE API, see the **AWRDE API Programming Guide** Help in the AWRDE installation. You can also view our Scripting Website for more scripting examples.