



# How to use Würth Elektronik LT-Spice library

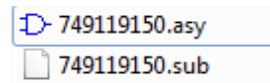
## Chapter 1: Installation of library

**Step 1:** Download zip file you need from Würth Elektronik homepage

<http://www.we-online.com/ltspace>

**Step 2:** Unzip file and find the two files: #name#.sub (sometime it will be #name#.lib) and #name#.asy

#name# represents corresponding product series or order code. See e.g. order code 749119150



**Step3:** Install library

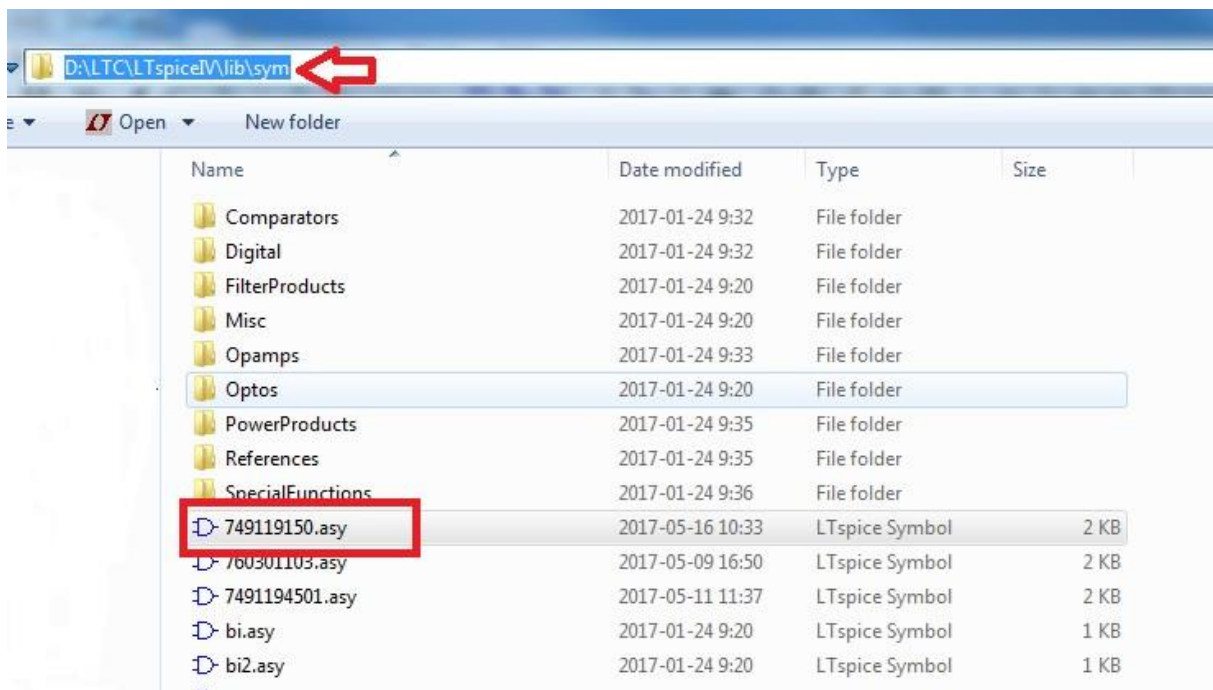
The library installation is a little bit different between LT spice IV and LT spice XVII

### LT spice IV

Find your LT-Spice software installation directory and copy above two files into the directory respectively.

For #name#.asy:...\\LTC\\LTspiceIV\\lib\\sym

For #name#.lib:...\\LTC\\LTspiceIV\\lib\\sub





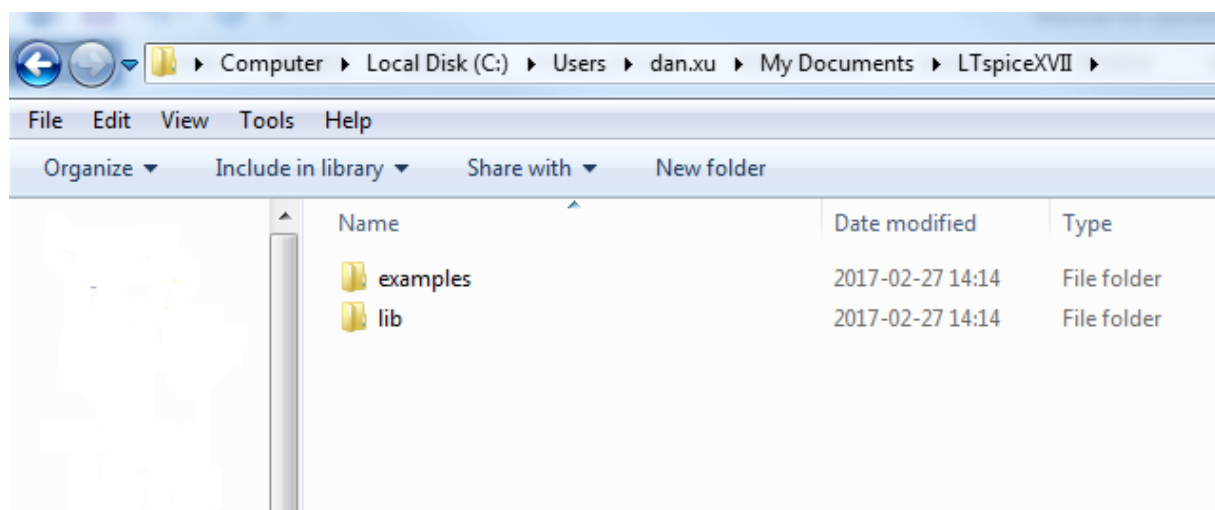
## LT spice XVII

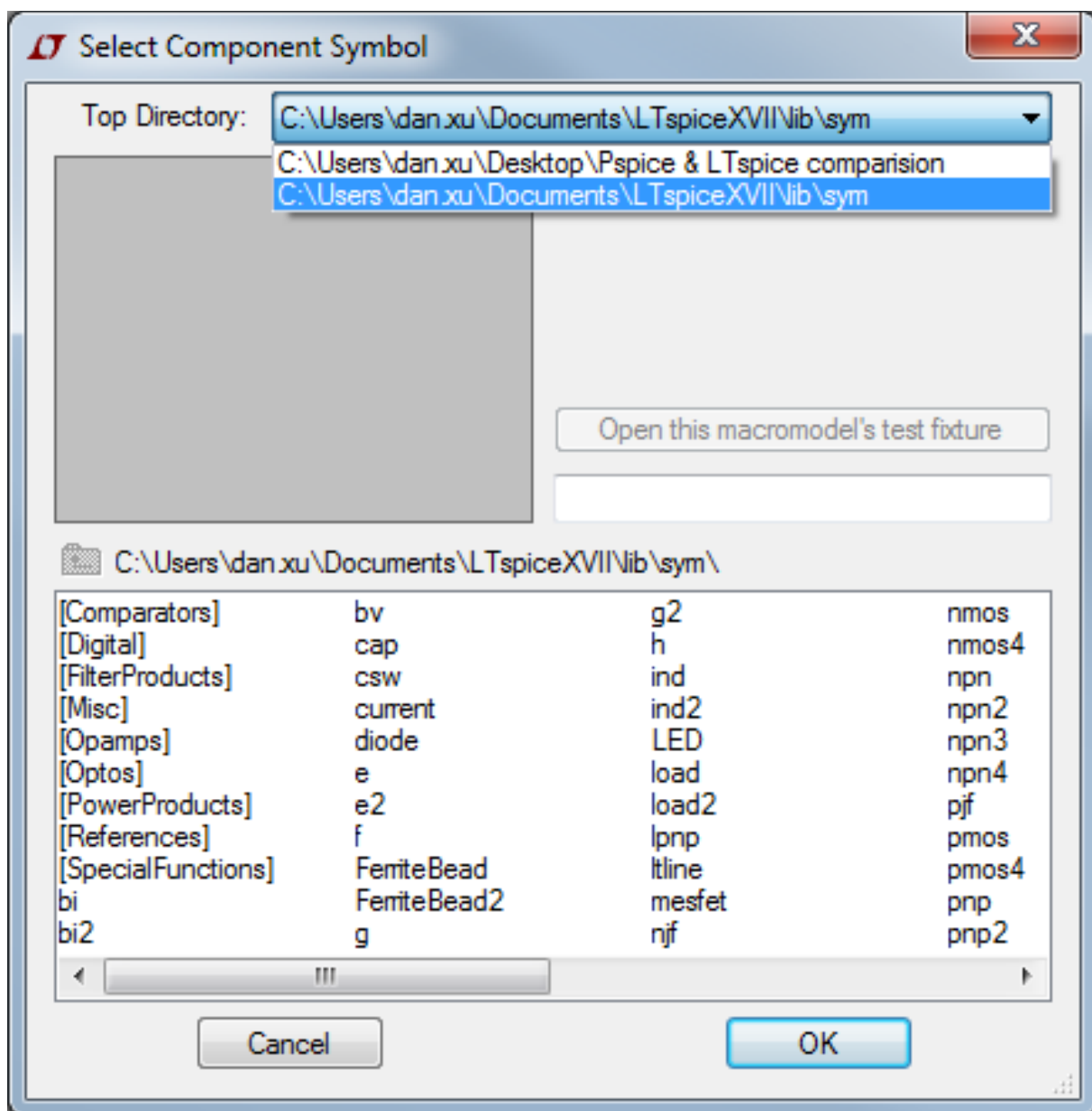
There are two options for library installation.

One is to find LT-Spice software installing directory and copy .sub (.lib) file and .sym file to the directory respectively as LT spice IV.

The other way is to copy above two file into C:\ drive in users folder

[C:\Users\#user#\Documents\LTspiceXVII\lib](#) shown as below screen shot and all default build in library was installed in this directory.





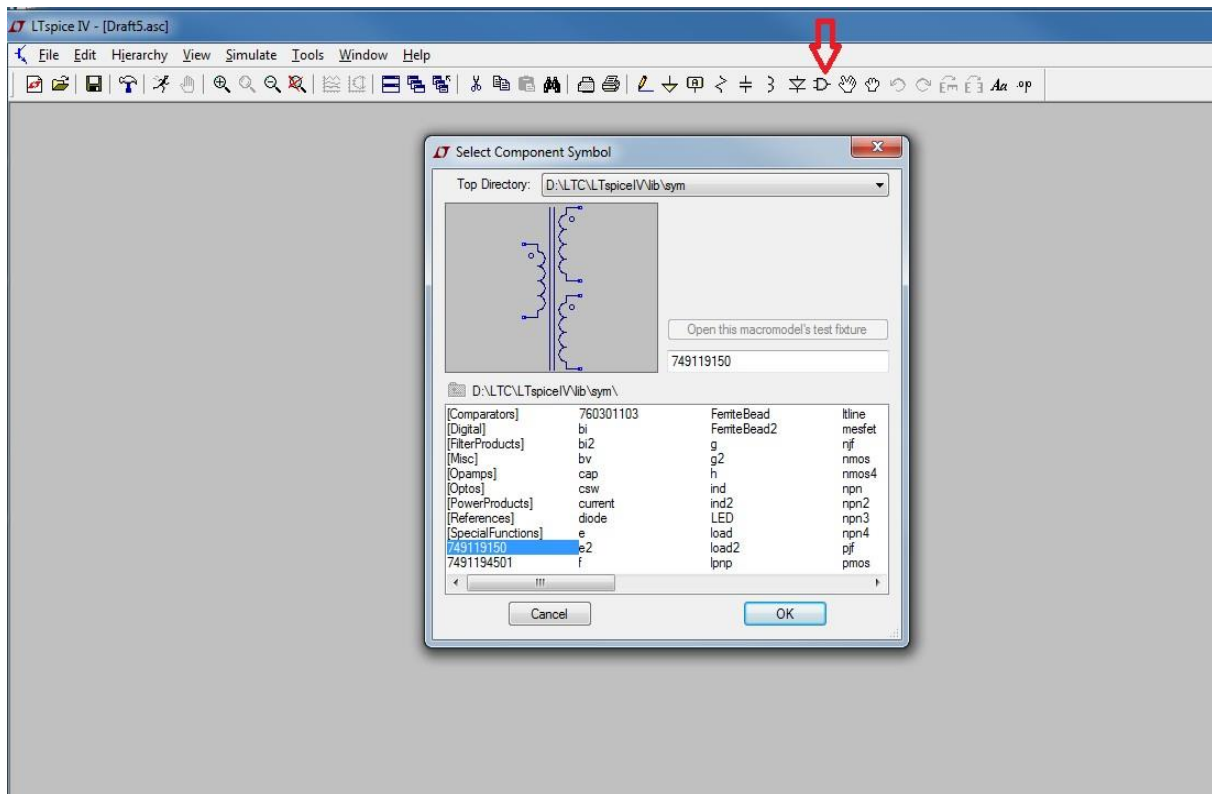
**Note:** You should at least archive your schematic together with the symbol-(file(s) and model-file(s) used in your schematic in one folder. Then you can run it on any PC without adding any library to the LTspice folders.

## Chapter 2: Using Würth Elektronik library (transformer and common mode chokes)

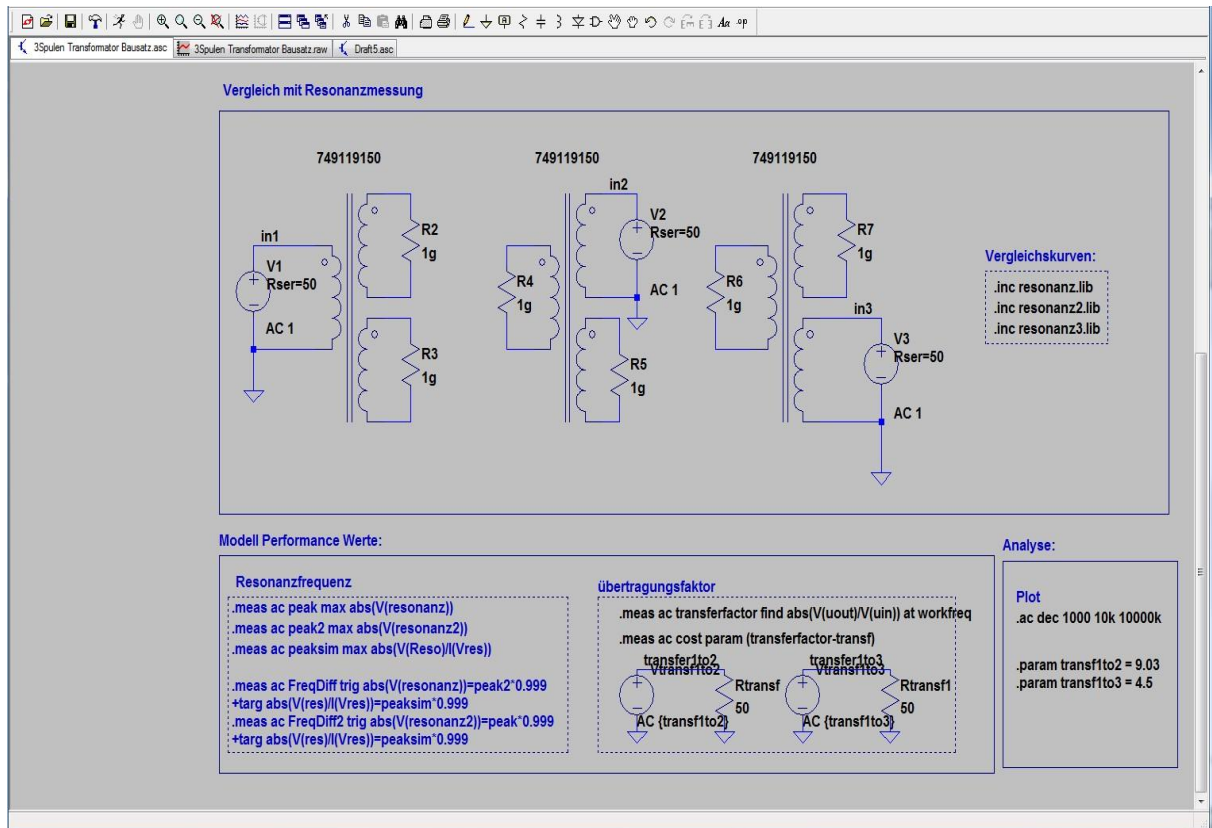
### Transformer model:

Step 1: Install Würth Elektronik Transformer library following the steps mentioned above

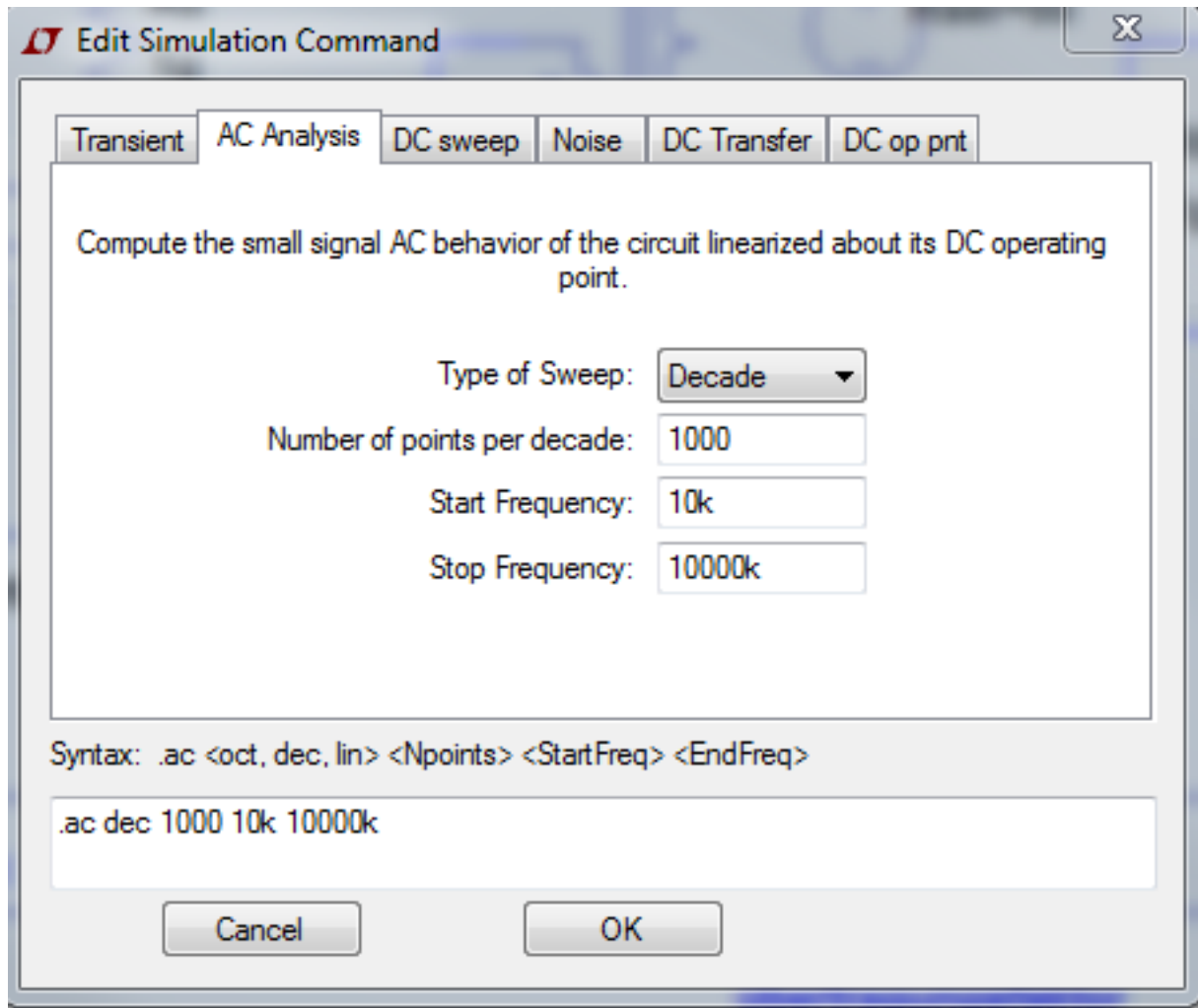
Step 2: Run LT-spice software, create new schematic page, click component icon, find and place component you need.




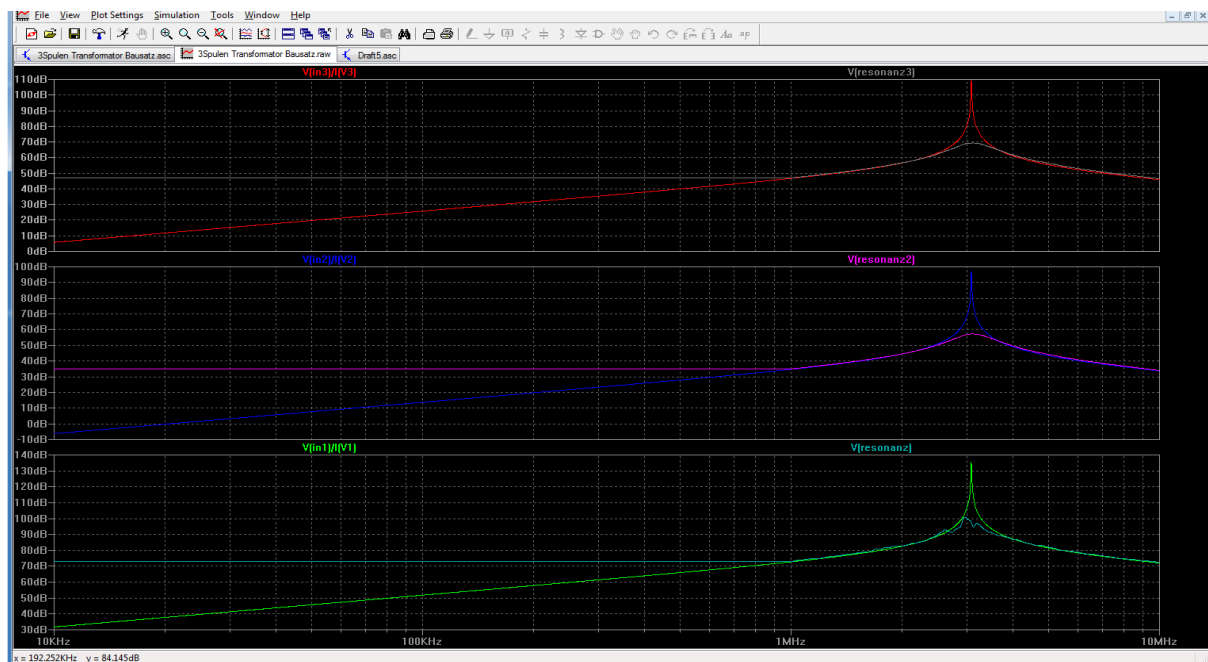
Step 3: Design your circuit, set up output parameters and simulate it as below:



Step 4: Enter simulation command























Step 5: Click  run spice, the result shown as below:





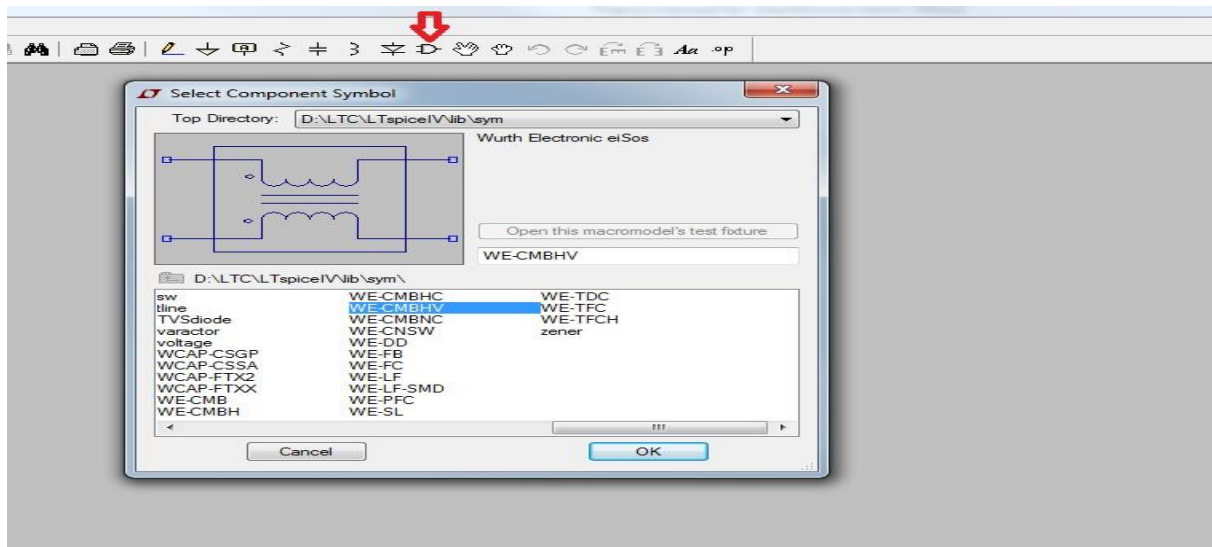
**Note:** The example for Würth Elektronik transformer sample circuit can be found in the examples folder.

Würth_Elektronik_Passive_Components_rev17b(LTspice IV) ▾ examples ▾ Würth_Elektronik				
				
Name ▲	Date modified	Type	Size	
 WE-CBF.asc	7/29/2016 12:01 PM	ASC File	1 KB	
 WE-CBF	2/20/2017 2:27 PM	Text Document	1 KB	
 WE-CBF.op.raw	2/20/2017 2:27 PM	RAW File	1 KB	
 WE-CBF.plt	7/29/2016 12:01 PM	PLT File	1 KB	
 WE-CBF.raw	2/20/2017 2:27 PM	RAW File	496 KB	
 WE-CMB.asc	8/25/2016 3:56 PM	ASC File	3 KB	
 WE-CMB.plt	8/25/2016 3:56 PM	PLT File	1 KB	
 WE-CNSW.asc	7/29/2016 12:06 PM	ASC File	2 KB	
 WE-CNSW.plt	7/29/2016 12:06 PM	PLT File	1 KB	
 WE-FC.asc	9/19/2016 11:08 AM	ASC File	3 KB	
 WE-FC.plt	9/16/2016 5:32 PM	PLT File	1 KB	
 WE-FCL.asc	9/19/2016 2:19 PM	ASC File	3 KB	
 WE-FCL.plt	9/19/2016 2:04 PM	PLT File	1 KB	
 WE-SLM.asc	7/29/2016 12:06 PM	ASC File	2 KB	
 WE-SLM.plt	7/29/2016 12:06 PM	PLT File	1 KB	
 WE-SLx.asc	7/29/2016 12:07 PM	ASC File	2 KB	
 WE-SLx.plt	7/29/2016 12:07 PM	PLT File	1 KB	
 WE-PoE.plt	10/10/2008 7:17 PM	PLT File	1 KB	
 WE-PoE.asc	5/17/2017 9:59 AM	ASC File	3 KB	

## Common Mode Choke

Step 1: Install Würth Elektronik Transformer library following the steps mentioned above

Step 2: Run LT-spice software, create new schematic page, click component icon, find and place component you need.



Step 3: Design your circuit, set up output parameters and simulate it as below:

Below are two simple example circuit in common model and in differential model.

### Common model

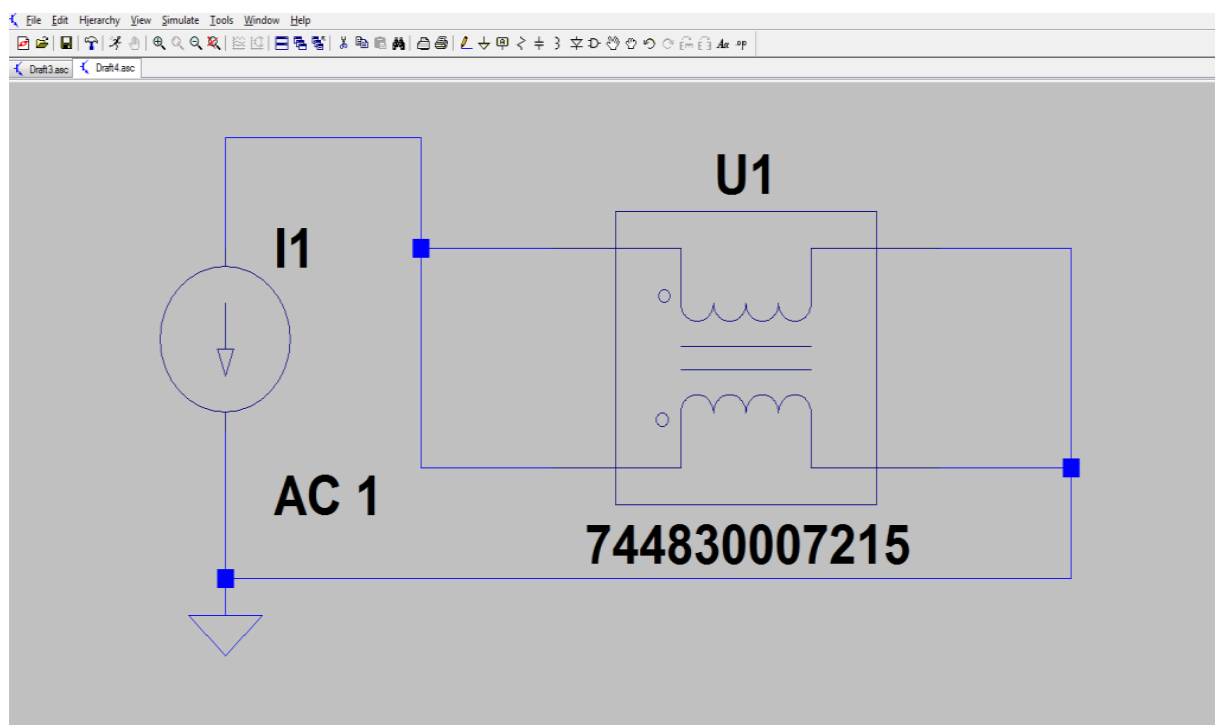
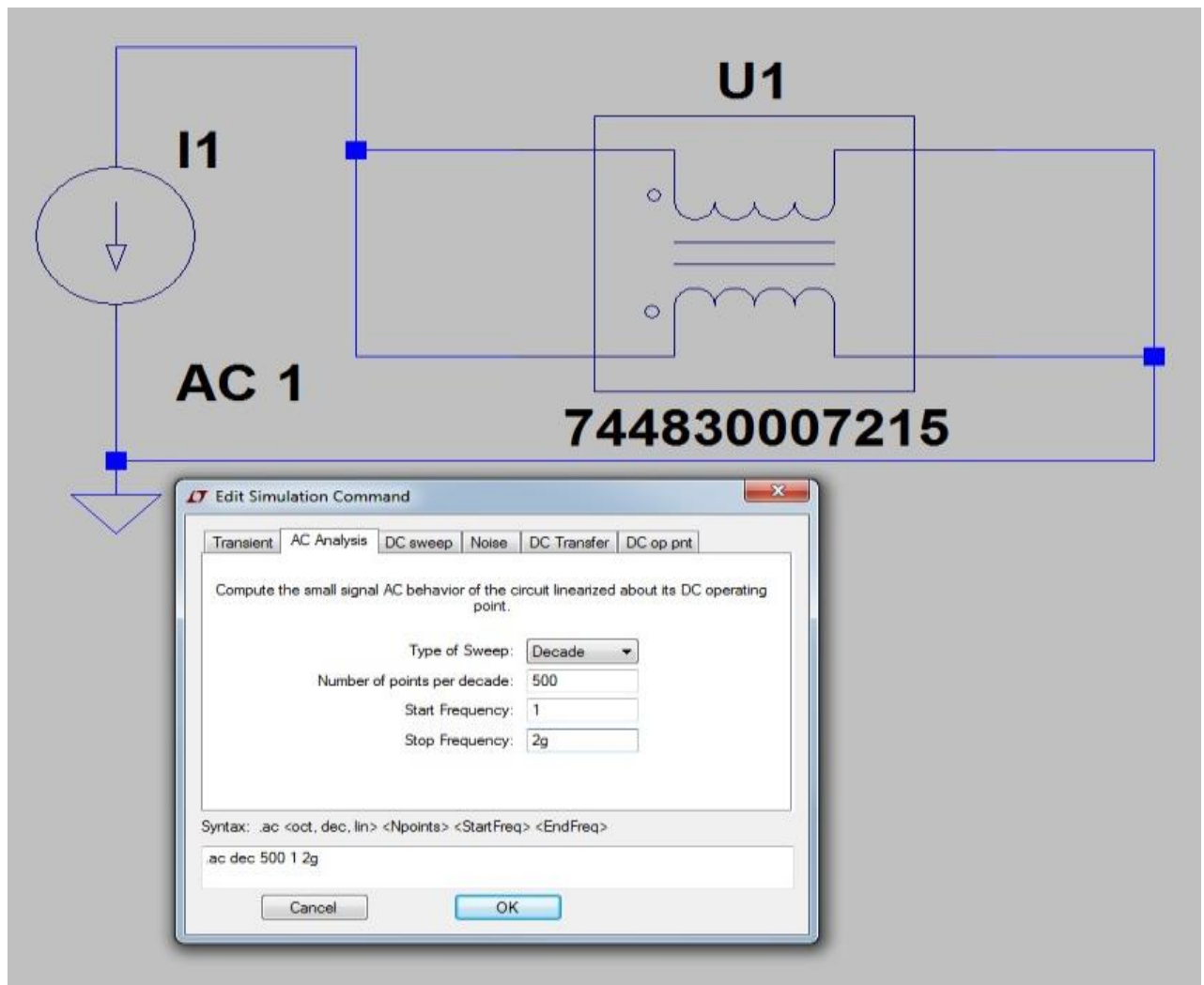



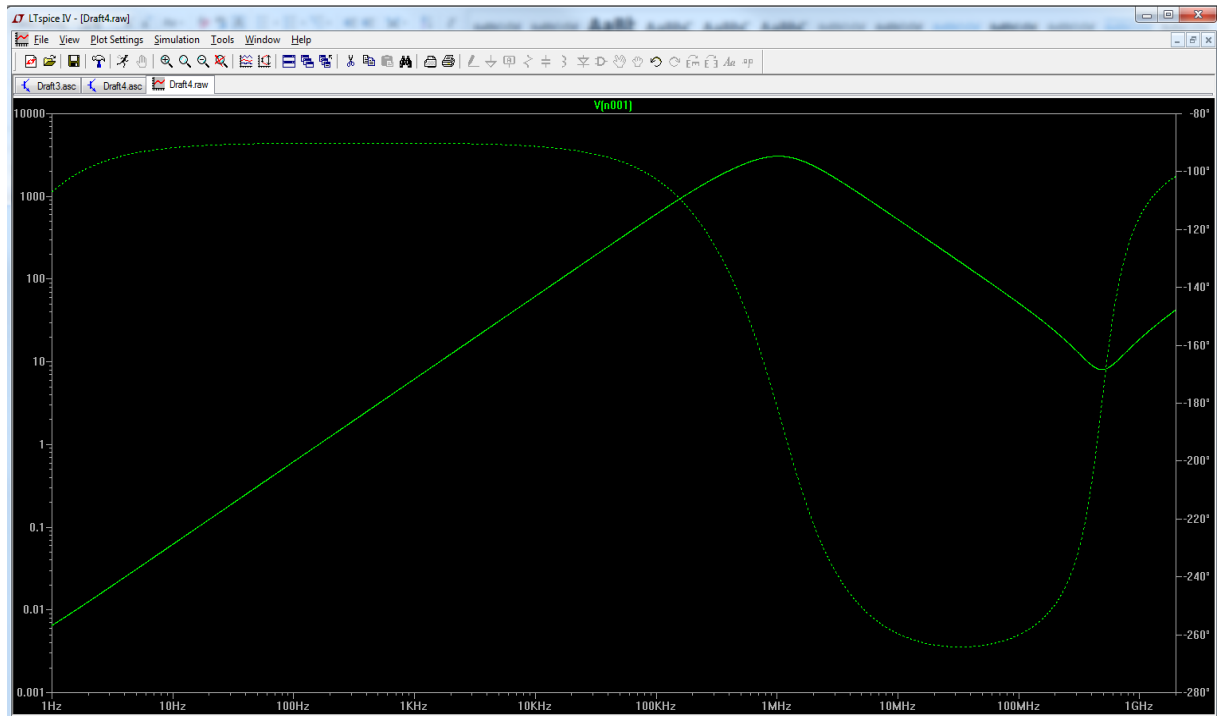
Figure 1: Common model



Enter simulation command



Click icon  and the results shown as below.



Differential model

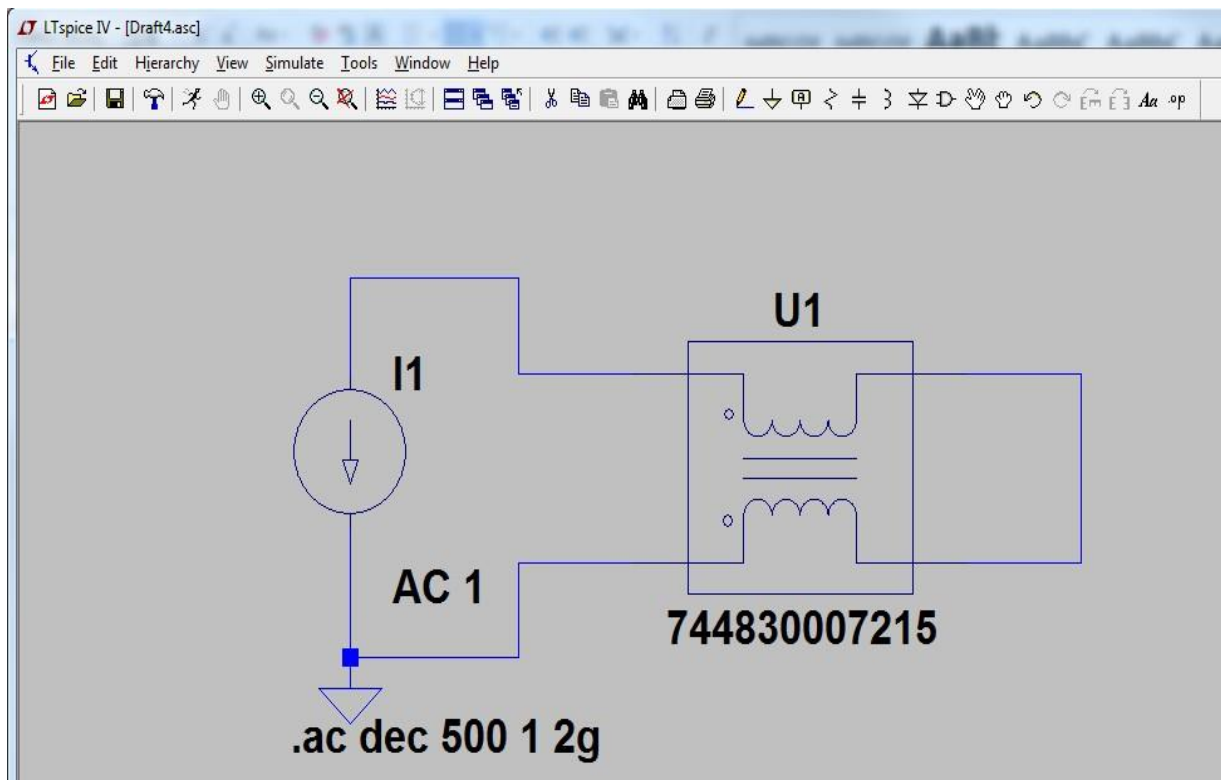
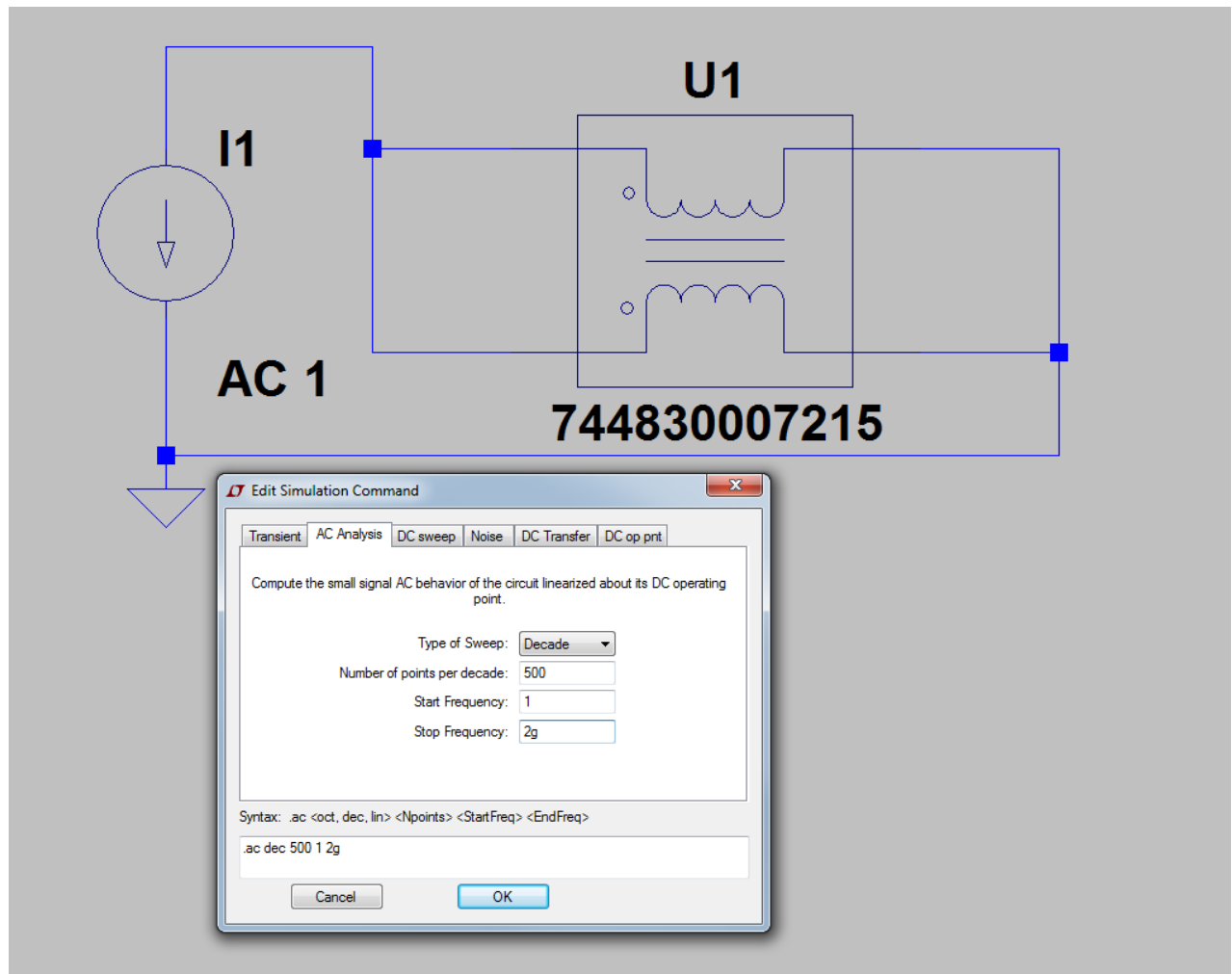

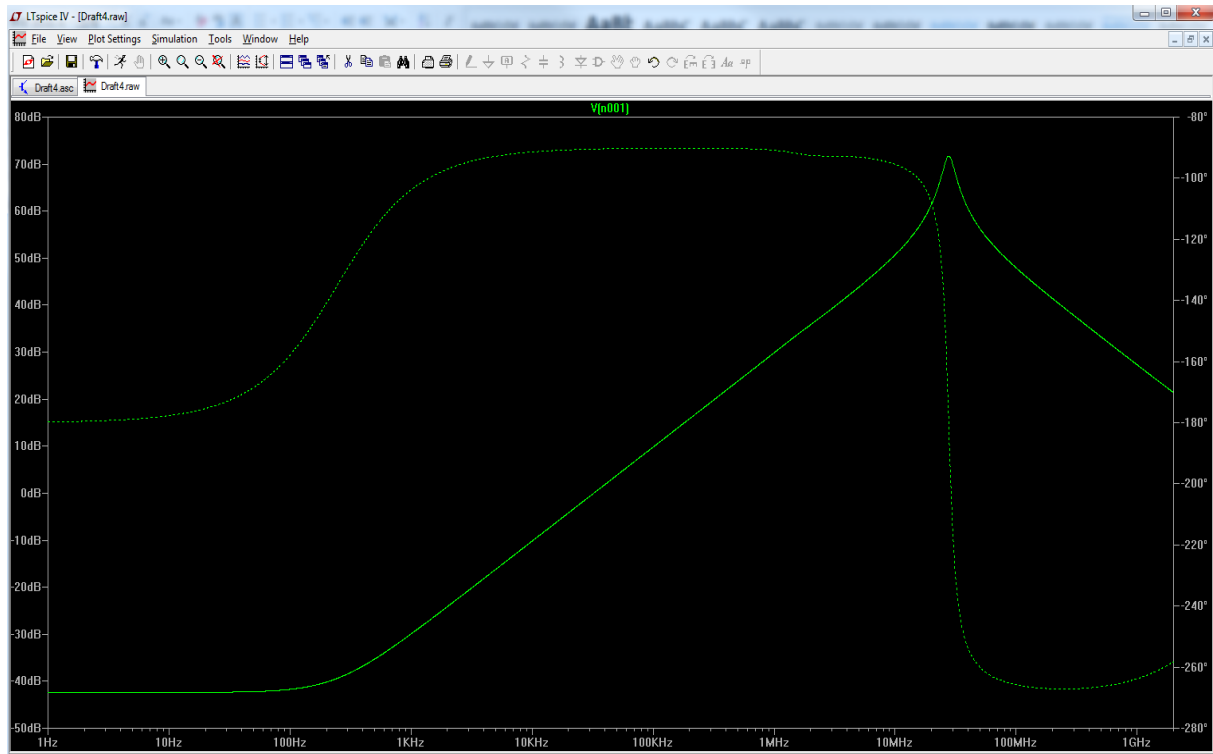


Figure 2: Different model

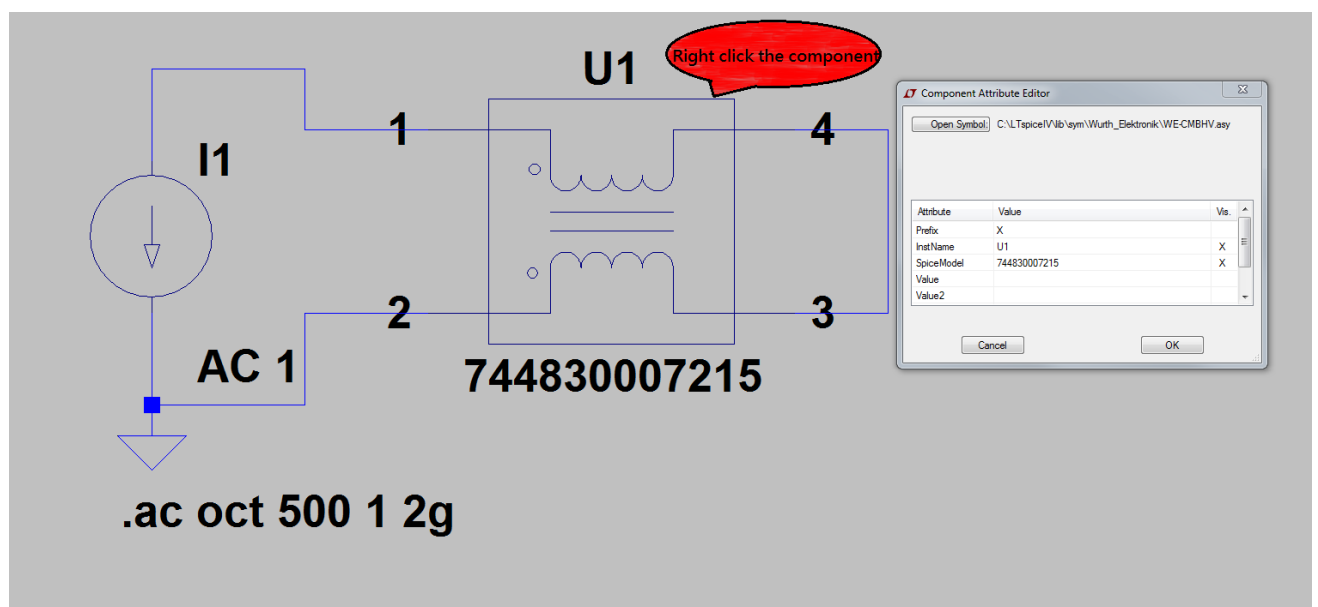
Enter simulation command



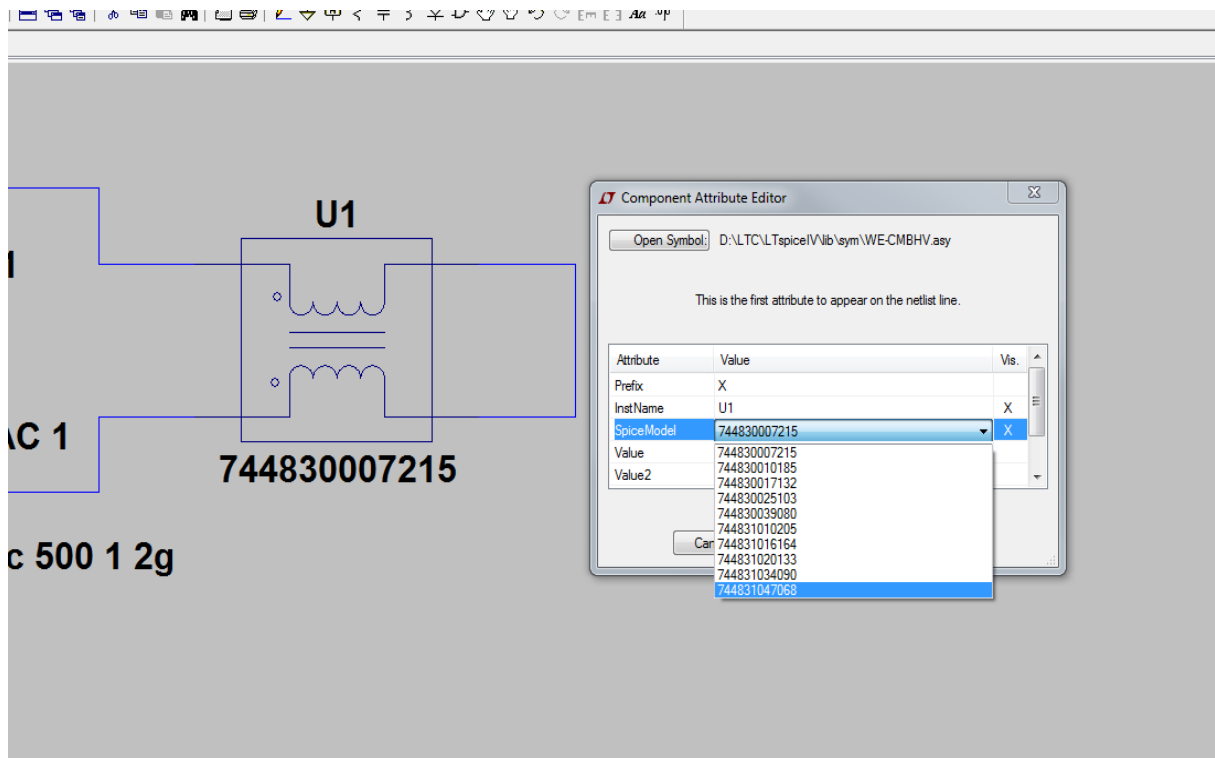
Click icon  and the results shown as below.























In addition, if you want to change article number in this match code, right click symbol, there will be a pop-up window



Double click article number in pop-up window, there will be a drop down list and make your choice.



**Note:** The example circuit of Würth Elektronik common mode choke can be found in the examples folder.

Würth_Elektronik_Passive_Components_rev17b(LTspice IV) ▾ examples ▾ Würth_Elektronik				
				
Name ^	Date modified	Type	Size	
 WE-CBF.asc	7/29/2016 12:01 PM	ASC File	1 KB	
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