

## Adding a model to LTspice.

### 1. NJM4556A

Download from the class website the **NJM4556A.sub** model file to the sub circuit directory for LTspice.

Your sub circuit folder: \Documents\LTspiceXVII\lib\sub

In the schematic select Edit – spice directive – enter in text box .include NJM4556A.sub - place on schematic – OK

Place an OPamp on the schematic select Edit – Component – [Opamps] – OK - opamp2 – OK – place on drawing.

Change name **opamp2** to NJM4556A on schematic. The NJM4556A is a dual OPamp but you will place each OPamp individually.

### 2. Nmos 2N7000 , Pmos TP0606 , diode 1N4002

To place the Nmos 2N7000 , Pmos TP0606 , diode 1N4002 on the schematic select Edit – spice directive – enter in separate text boxes .include 2N7000.sub , .include TP0606.sub , and .include 1N4002.sub - place them on schematic – OK

Place the Nmos, Pmos, or Diode on the schematic select Edit – Component – OK – Nmos, Pmos, or Diode – OK – place on drawing. Change name **NMOS**, **PMOS**, or **D** to 2N7000, TP0606. or 1N4002 on drawing

Down load the sub circuit files from class website to your PC and put in the LTspice lib folder.

2N7000.sub, TP0606.sub. and 1N4002.sub

\Documents\LTspiceXVII\lib\sub

### 3. TL494A

The TL494.sub place in the same \Documents\LTspiceXVII\lib\sub as the other sub circuits.

Place the TL494.asy in \Documents\LTspiceXVII\lib\sym\Misc this is the outline of the chip to be placed on the schematic

Place the TL494A on the schematic select Edit – Component – [Misc] – OK – TL494A – OK – place on drawing.

2N7000.sub      Nmos

TP0606.sub      Pmos

1N4002.sub      Rectifier diode

NJM4556A.sub   Hi current OPamp

TL494.sub      PWM controller

TL494.asy      drawing outline put in Documents\LTspiceXVII\lib\sym