
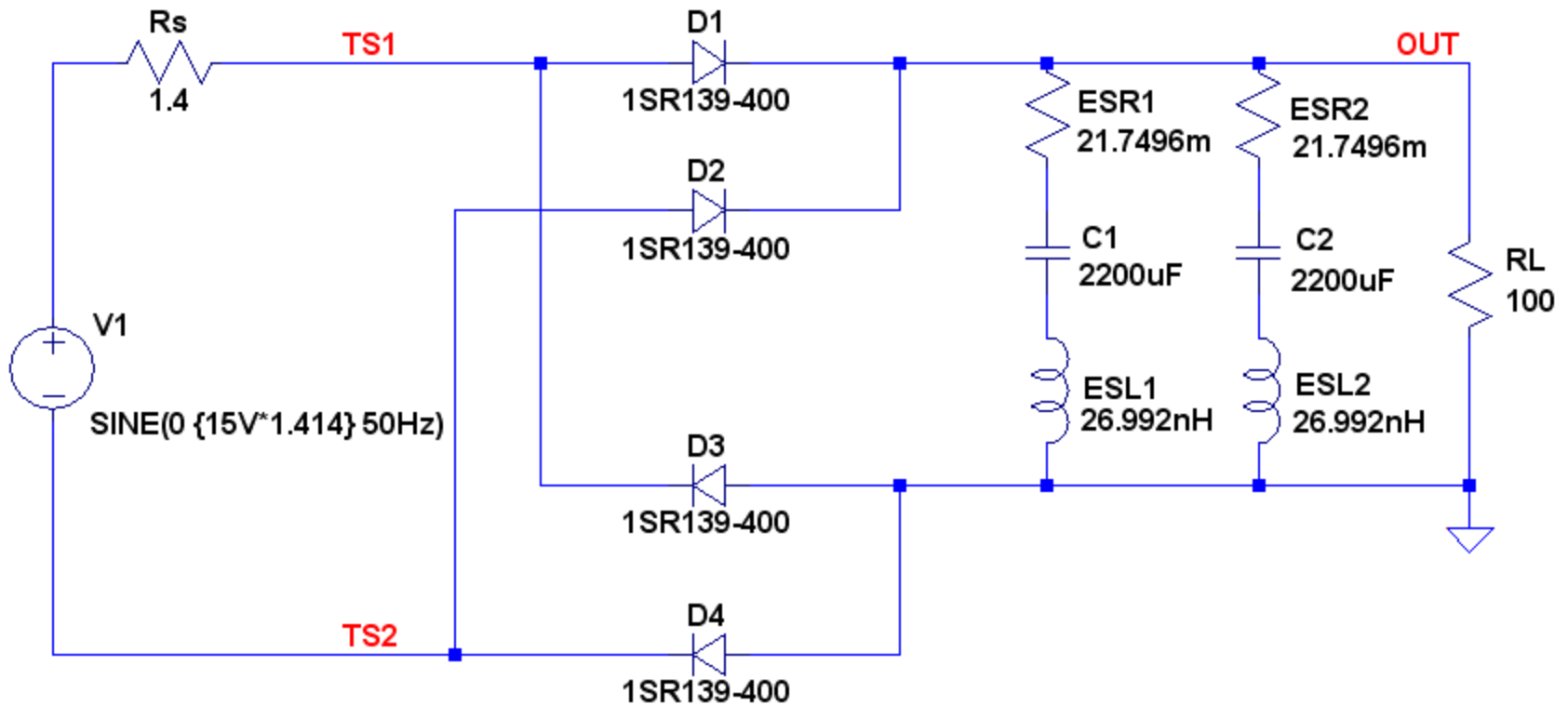


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1. AC Input Voltage

 LTspice IV

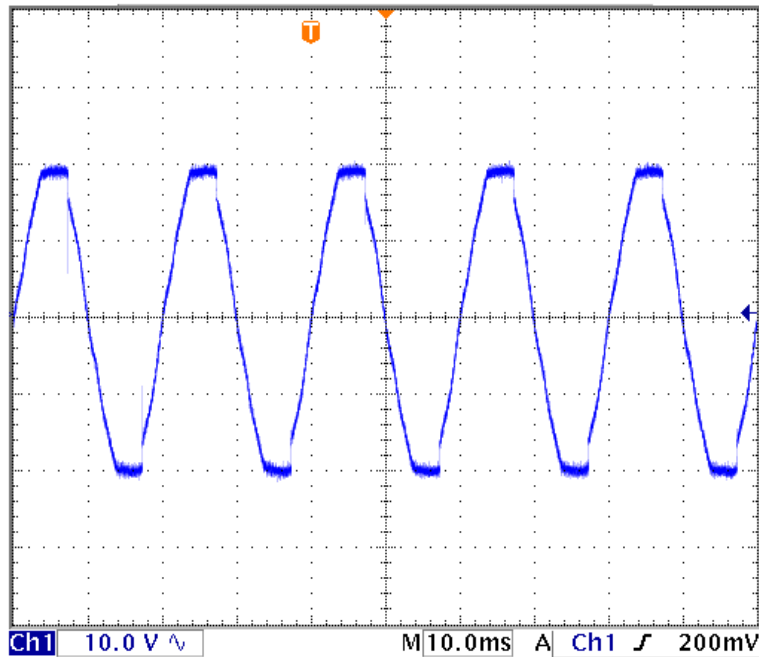


`.lib 1sr139-400.sub`

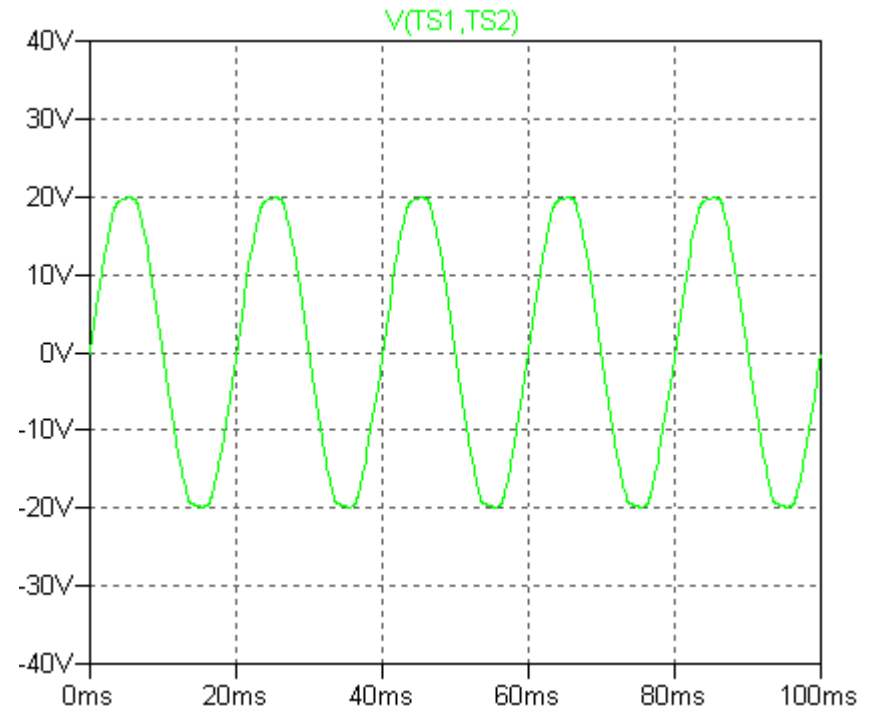
`.tran 0 1000ms 900m 100us`

1. AC Input Voltage


Measurement

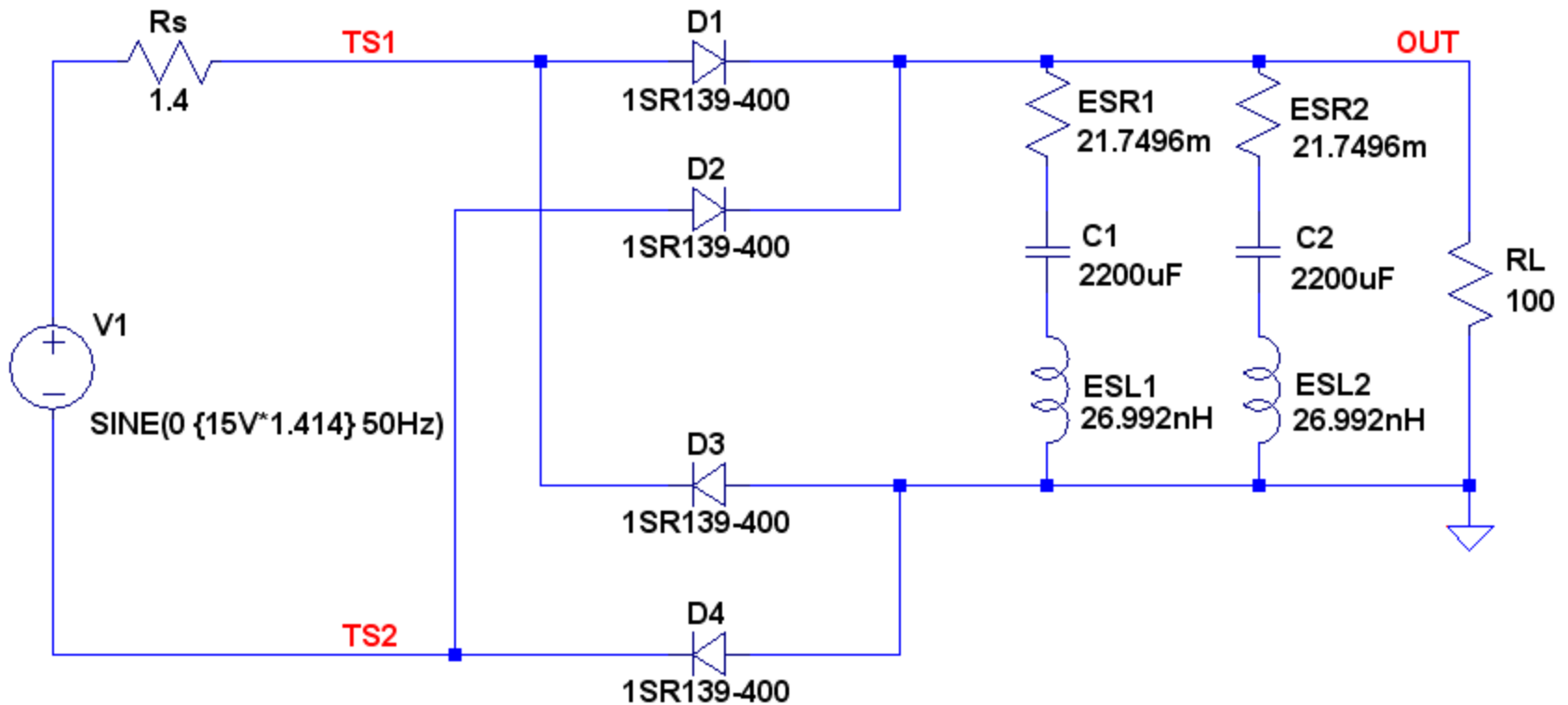


Simulation



2. Case1: Ripple Output Voltage with Small ESR

 LTspice IV

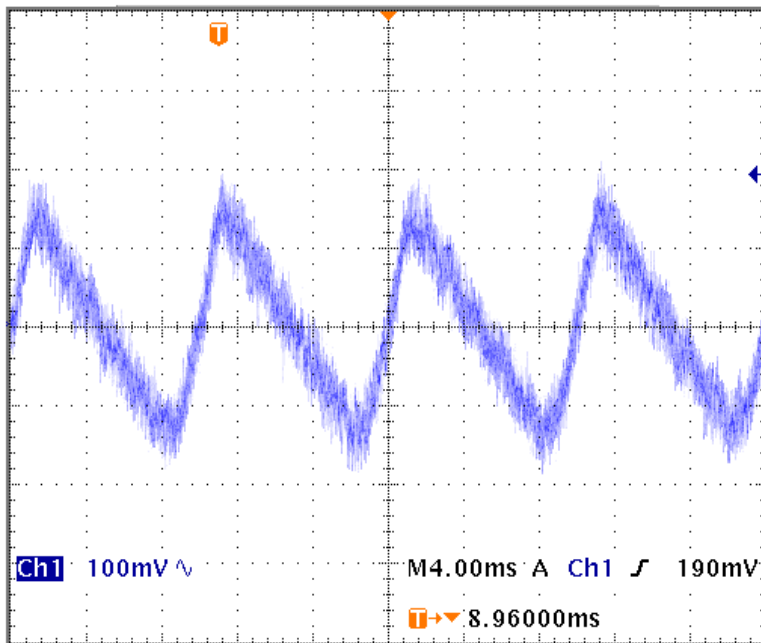


`.lib 1sr139-400.sub`

`.tran 0 400ms 300m 100us`

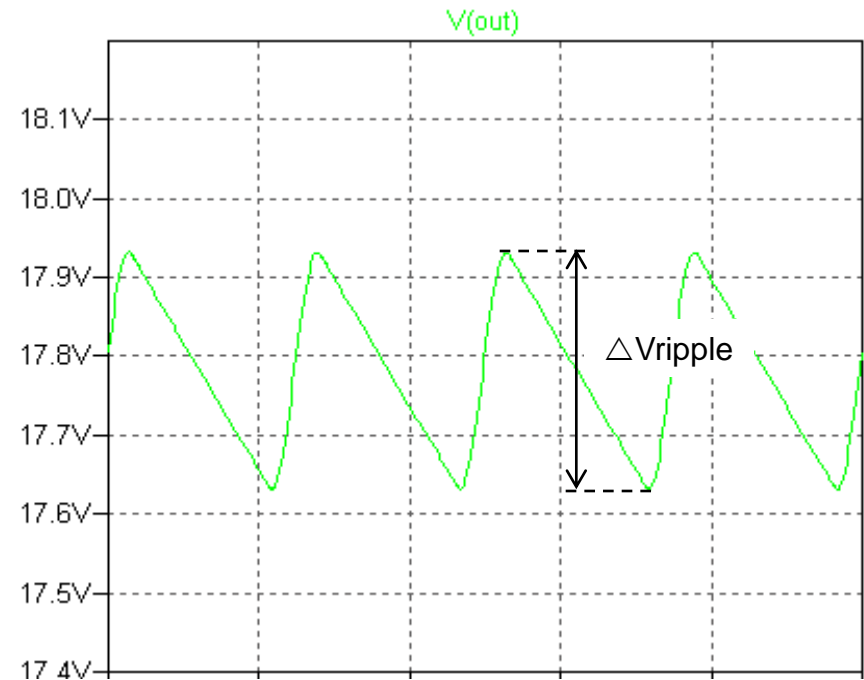
2. Case1: Ripple Output Voltage with Small ESR

Measurement



$\Delta V_{\text{ripple}}(\text{Measurement}) = 258\text{mV}$

Simulation

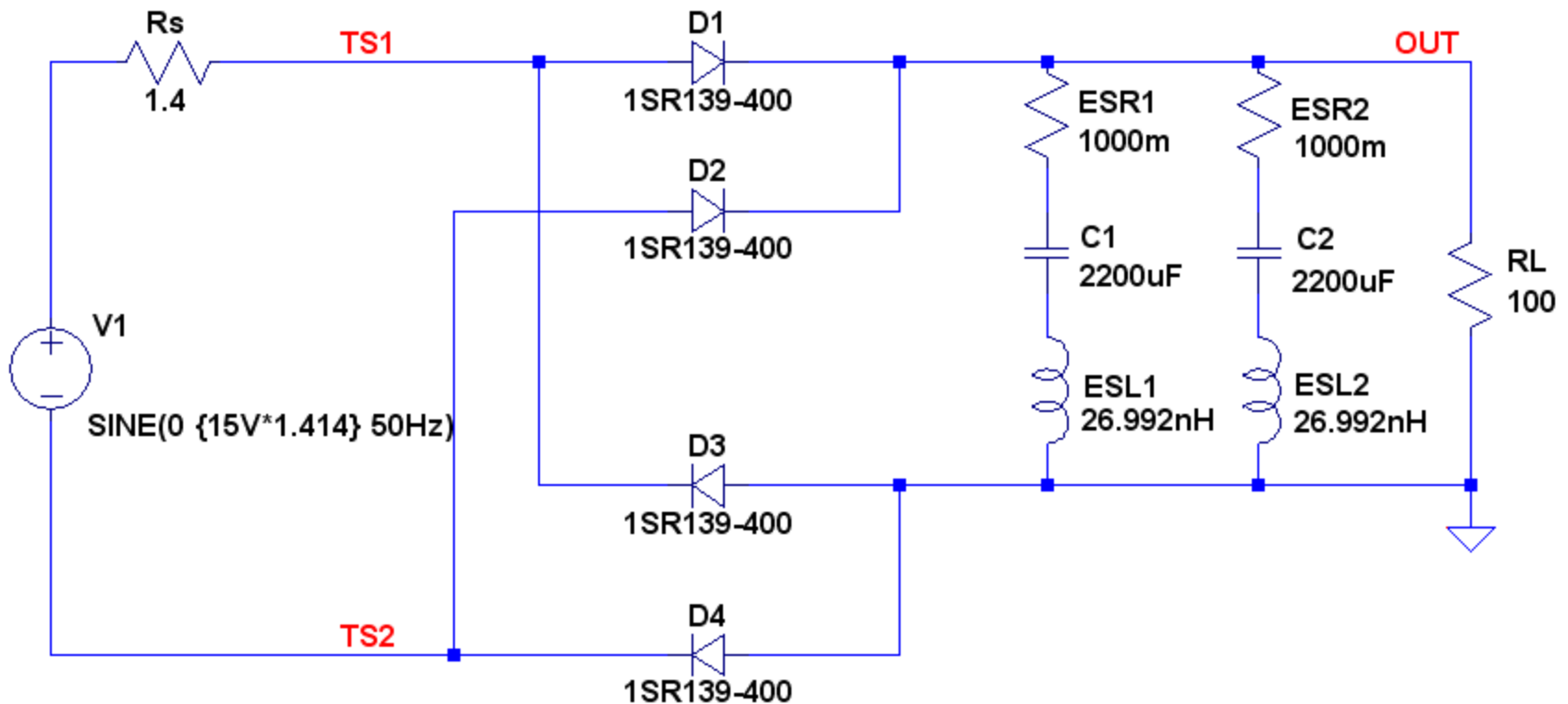


@ESR=21.7496m

$\Delta V_{\text{ripple}}(\text{Simulation}) = 297.97\text{mV}$

3. Case2: Ripple Output Voltage with Large ESR

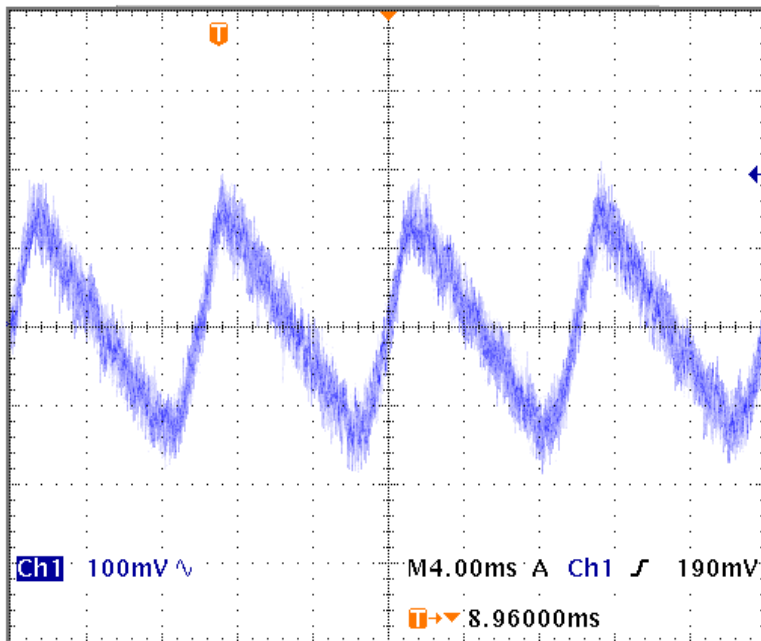
LTspice IV



```
.lib 1sr139-400.sub  
.tran 0 400ms 300m 100us
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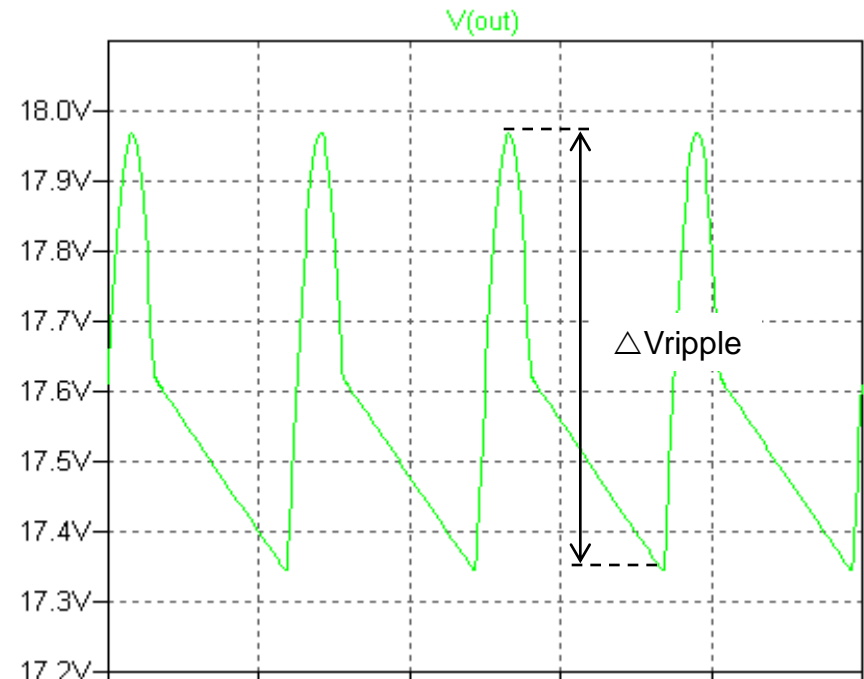
3. Case2: Ripple Output Voltage with Large ESR

Measurement



$\Delta V_{\text{ripple}}(\text{Measurement}) = 258\text{mV}$

Simulation



@ESR=1000m

$\Delta V_{\text{ripple}}(\text{Simulation}) = 617.53\text{mV}$

4. Comparison Result

ΔV_{ripple}	Measurement	Simulation
Case1: @ESR=1000m	258 (mV)	297.97 (mV)
Case2: @ESR=21.7496m	258 (mV)	617.53 (mV)

Simulation Folder

Topic	Folder
1. AC Input Voltage	AC Input
2. Case1: Ripple Output Voltage with Small ESR	Case1
3. Case2: Ripple Output Voltage with Large ESR	Case2