

sml 8/15/2021

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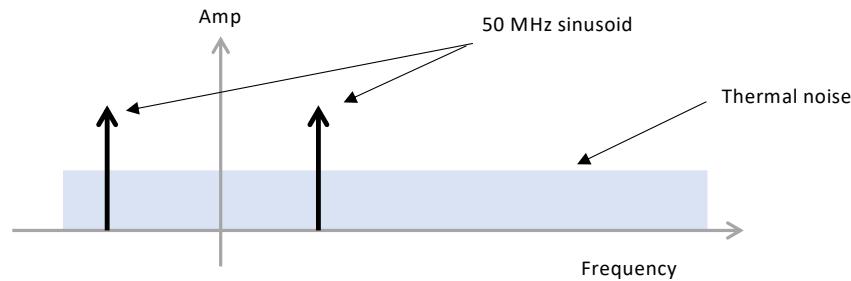
```

// Generated for: spectre
// Generated on: Aug 14 21:28:57 2021
// Design library name: PHD22
// Design cell name: switching
// Design view name: schematic
simulator lang=spectre
global 0
parameters r=50 frf=50M f=50000k c=1000n DC=0 Amp=1 Ac_mag=0 =>  $2\pi RC = 2\pi * 50 * 1000e-09 = 314.159 \mu s$  or  $3.183 \text{ kHz}$ 

// Library name: PHD22
// Cell name: switching
// View name: schematic
W0 (Prt net02 clk 0) relay vt1=1m vt2=500.0m ropen=1T rclosed=1.0
C1 (net02 0) capacitor c=c
V1 (clk 0) vsource type=pulse val0=0 val1=500.0m period=1/f width=1/(2*f) \
    fundname="CLK"
PORT1 (Prt 0) port r=r dc=DC/2 type=sine freq=frf ampl=Amp/2 mag=Ac_mag/2 \
    isnoisy=yes
simulatorOptions options rltol=1e-3 vabstol=1e-6 iabstol=1e-12 temp=27 \
    tnom=27 scalem=1.0 scale=1.0 gmin=1e-12 rforce=1 maxnotes=5 maxwarns=5 \
    digits=5 cols=80 pivrel=1e-3 sensfile="../psf/sens.output" \
    checklimitdest=psf
pss pss fund=50M harms=20 errpreset=liberal autotstab=yes
+ saveinit=yes method=gear2only tstabmethod=gear2only maxacfreq=50G
+ annotate=status
pnoise ( net02 0 ) pnoise start=1 stop=25M
+ maxsideband=1000 iprobe=PORT1 refsideband=0
+ noisetype=timeaverage noiseout=[usb] annotate=status
modelParameter info what=models where=rawfile
element info what=inst where=rawfile
outputParameter info what=output where=rawfile
designParamVals info what=parameters where=rawfile
primitives info what=primitives where=rawfile
subckts info what=subckts where=rawfile
saveOptions options save=all

```

Input Spectrum Prior to Sampling



Simplified Diagram of Spectrum After Sampling using 50 MHz Clock

