

Geometry:

```
.param R=.45 ; loop radius in m
.param W=.010 ; diameter of coax cable in m
.param A=pi *R* R ; loop area in m*m
.param LOOPLength=pi*R ; half loop length in m
```

Operations:

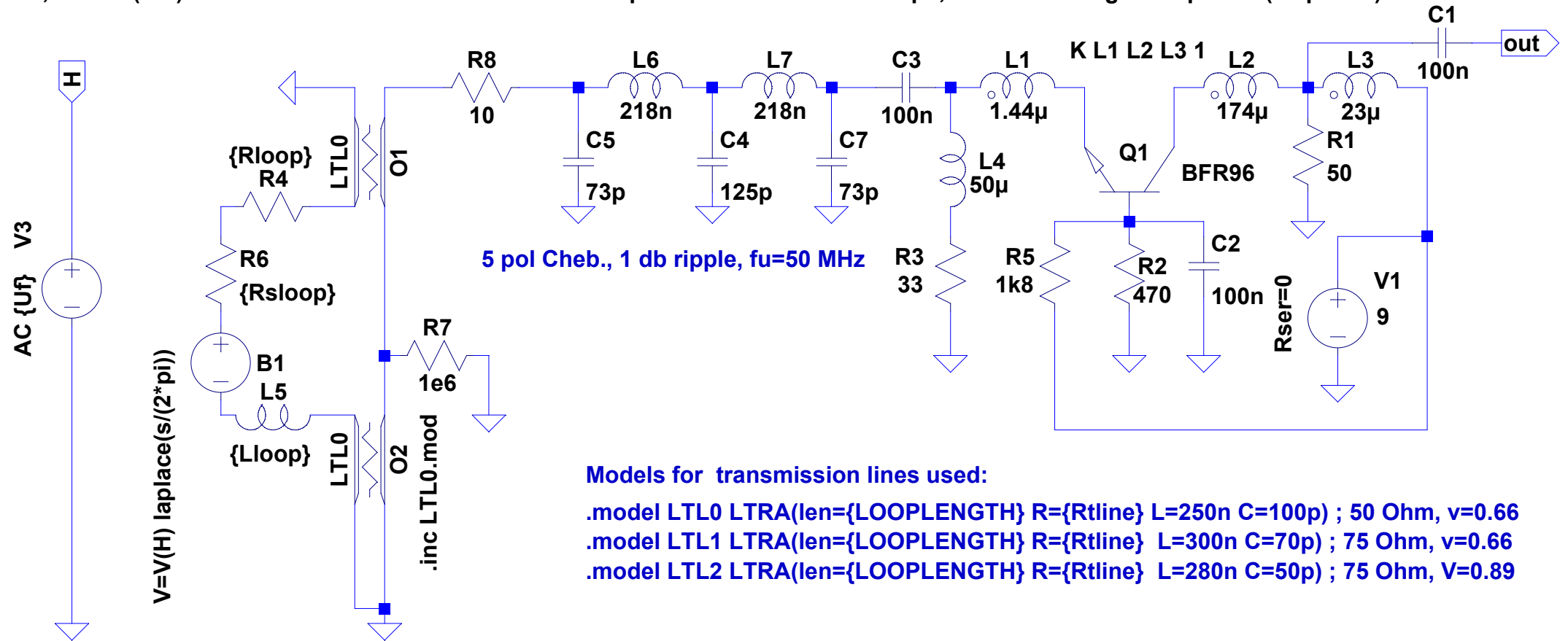
```
.op
.ac oct 300 .1e6 300e6
;noise V(out) V3 oct 100 1.e6 300e8
```

Transmission line:

```
.param Rtline=.1 ; transmission line resistance in Ohm/m
.param Lloop=1.266e-06*R *(log(16*R/W)-2.) ; inductance of total loop sheath in uH
.param Rloop=.1 ; loop loss resistance in Ohm
.param Rsloop=.1 ; loop radiation resistance in Ohm
```

Fields and Voltages:

```
.param Ehf=1. ; electrical hf-field in V/m
.param H=Ehf/376.7 ; magnetic hf-field
.param Uf=1.26e-6*A *H*2*pi ; induced Voltage in V per Hz (empirical)
```



Models for transmission lines used:

```
.model LTL0 LTRA(len={LOOPLength} R={Rtline} L=250n C=100p) ; 50 Ohm, v=0.66
.model LTL1 LTRA(len={LOOPLength} R={Rtline} L=300n C=70p) ; 75 Ohm, v=0.66
.model LTL2 LTRA(len={LOOPLength} R={Rtline} L=280n C=50p) ; 75 Ohm, V=0.89
```