



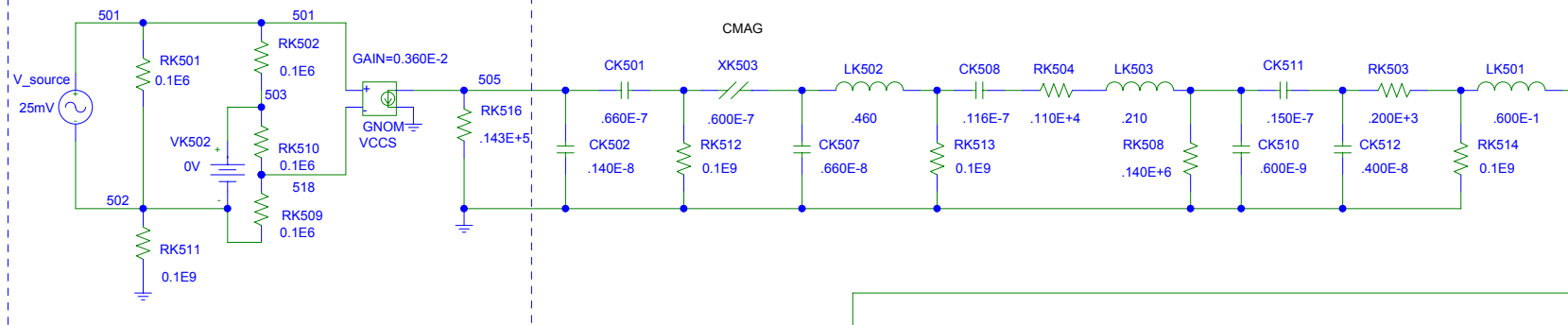
Knowles ES Analog Standard Response

Low Power ES

Module File: keeES1

Module File: kerES1

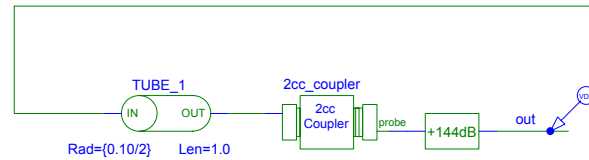
CMAG



*CMAG models a capacitive impedance in series with a
*resistor to create a 45 degree phase angle at all
*frequencies. The net impedance varies as 1 over the
*square root of frequency.

*CMAG is the capacitor's value at 1 kHz.
*Also called VRMAG, VCMAG in older models

```
.SUBCKT CMAG-X 1 2 PARAMS:CMAG = 1
R1 1 2 1E+12
G1 1 2 FREQ {(.707*V(1,2)/(CMAG*6282)) =
+ (20,-17,45)
+ (20000,13,45)
.ENDS
```



Add 144dB to convert output to dB SPL

Tubing and coupler specified in Knowles Sheet 2.1
[10mm x 1.0mm ID]

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