

2

1

Gain and resistance values specified in module file.
GK501-504 = GK
RK501-502 = FK

PARAMETERS:

GK .440E-3
RK .262E+5



Knowles FC Analog Standard Response

PARAMETERS:

RK503 .200E+3
RK508 .180E+6

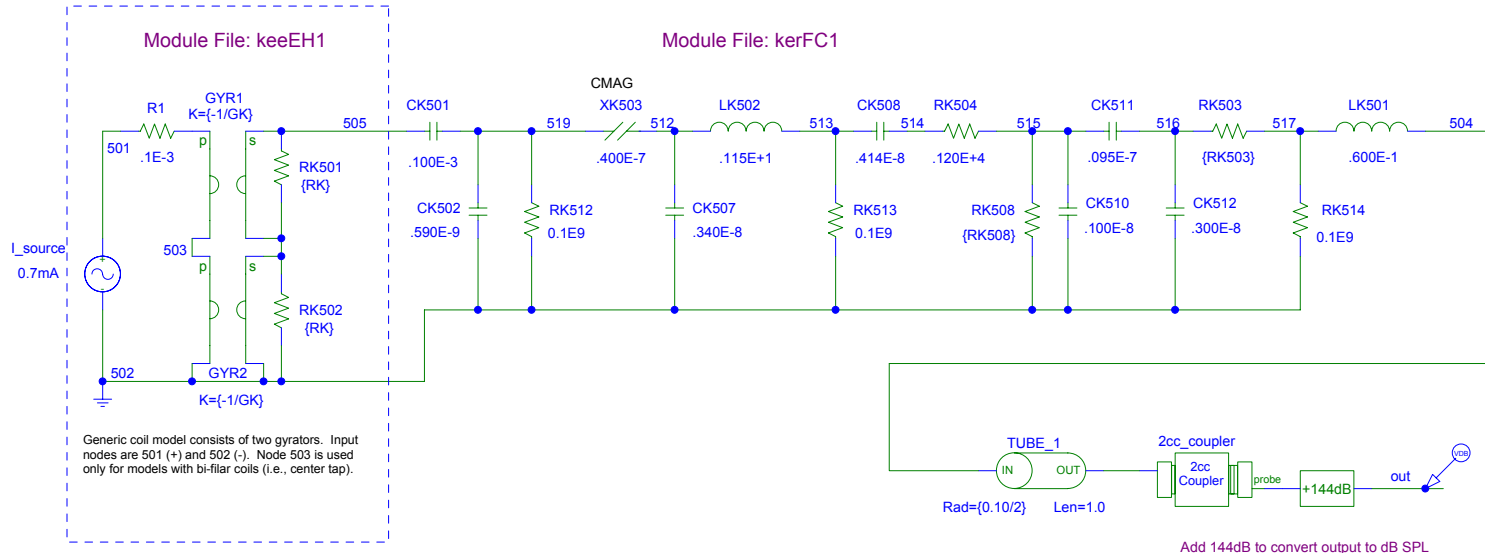
VARY RESISTORS FOR DAMPING:
Units: CGS ohms

Undamped:
RK503 = .200E+3
RK508 = .180E+6

Type 1:
RK503 = .100E+4
RK508 = .180E+6

B

B



Generic coil model consists of two gyrators. Input nodes are 501 (+) and 502 (-). Node 503 is used only for models with bi-filar coils (i.e., center tap).

GYRATOR MODEL
Gyrator between node pairs (1,2) and (3,4) having a gyrator constant K

```
.SUBCKT GYR-X 1 2 3 4 PARAMS:K=1
R1 1 2 9E+12
R2 3 4 9E+12
R3 2 3 9E+12
G1 1 2 VALUE = {V(3,4)/K}
G2 3 4 VALUE = {-V(1,2)/K}
.ENDS
```

*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
```

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

Add 144dB to convert output to dB SPL

A

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