Reichenbach Engineering

CM-13113

Microphone Output Transformer
9.5:1 Step-down

- **High-nickel core**
- **Very wide bandwidth & low phase shift**
- **Low profile package**

The CM-13113 microphone output transformer delivers excellent bandwidth along with very good distortion characteristics. It works very well with high-impedance vacuum circuits including triode output stages. Its hum-bucking construction gives it very good immunity from stray magnetic interference and contributes to its excellent CMRR. While not needed in almost all applications, it can be provided encased in a mu-metal can.

CM-13113

Parameter	Conditions	Typ
Turns Ratio		9.5:1
Voltage Gain	1 kHz Rs=600 RL=1.5K 1kHz Rs=600 RL=150 1kHz Rs=10K RL=1.5K 1kHz Rs=10K RL=150	-19.8dBu -22.2dBu -20.5dBu -26.0dBu
Distortion (THD+N%)	1 kHz, +4.0 dBu Rs=10K Test Circuit 1 20 Hz, -20 dBu Test Circuit 1	0.008% 0.2%
Max 20 Hz input level	1.0% THD+N% Rs=10K RL=1.5K Test Circuit 1	+14 dBu
Response, ref 1 kHz Rs=10K RL=1.5K	20 Hz -20 dBu Test Circuit 1 20 kHz -20 dBu Test Circuit 1 -3 dB	-0.3 dB +0.05 dB >200 kHz
Phase Shift at 20 Hz Phase Shift at 20 kHz	Referenced to source generator Rs=10K RL=1.5K Test Circuit 1	+3° -8°
CMRR	60 Hz Test Circuit 2 per IEE Std 389-1996 ¶19 1 kHz Test Circuit 2 per IEE Std 389-1996 ¶19	>115 dB >115 dB
Operating Temp Range	Operation and storage	0° C Min 70° C Max

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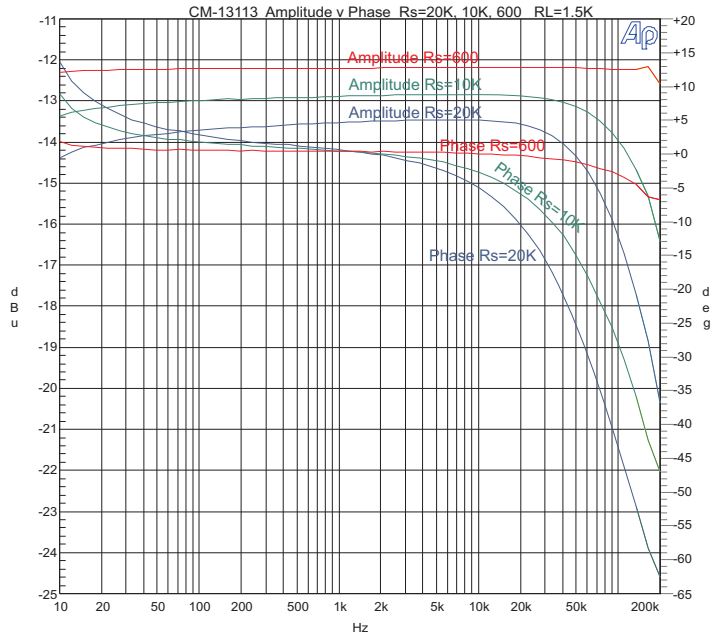
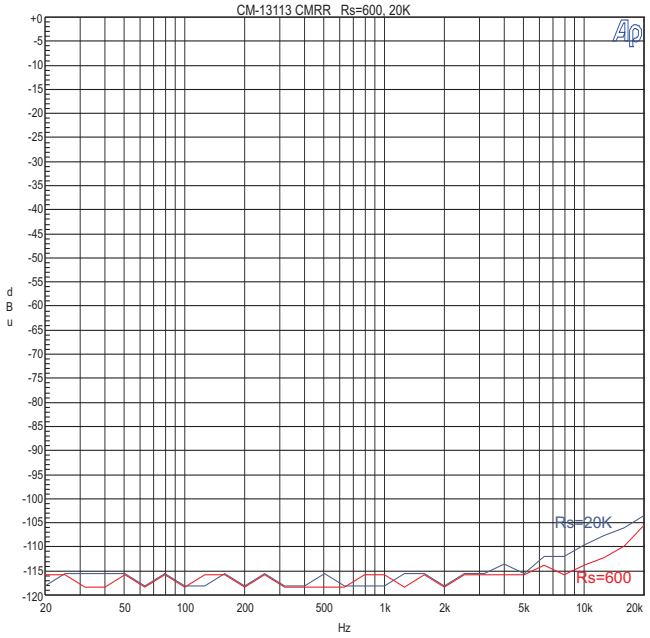
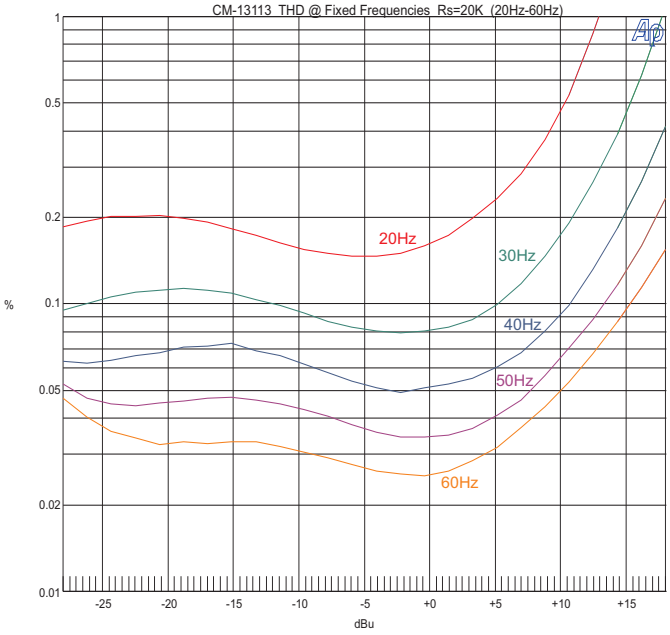
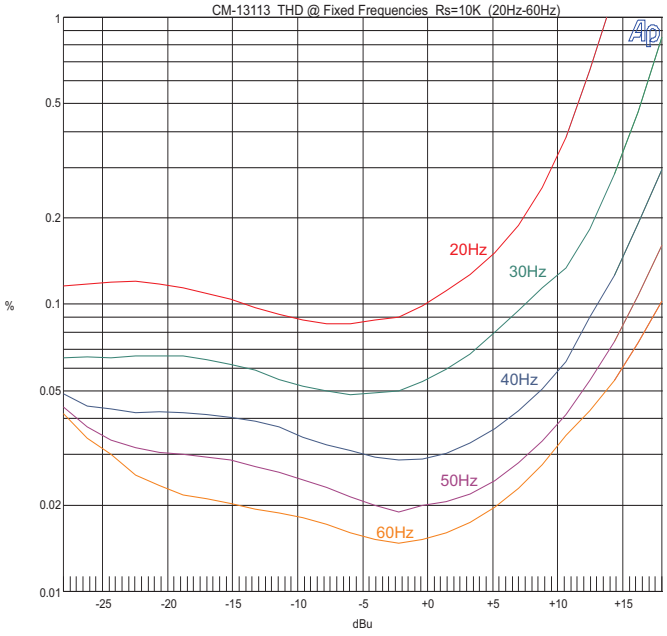
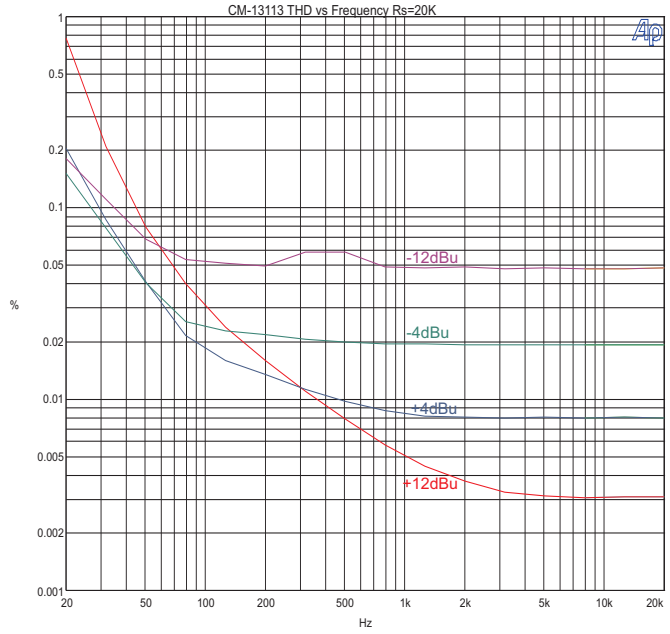
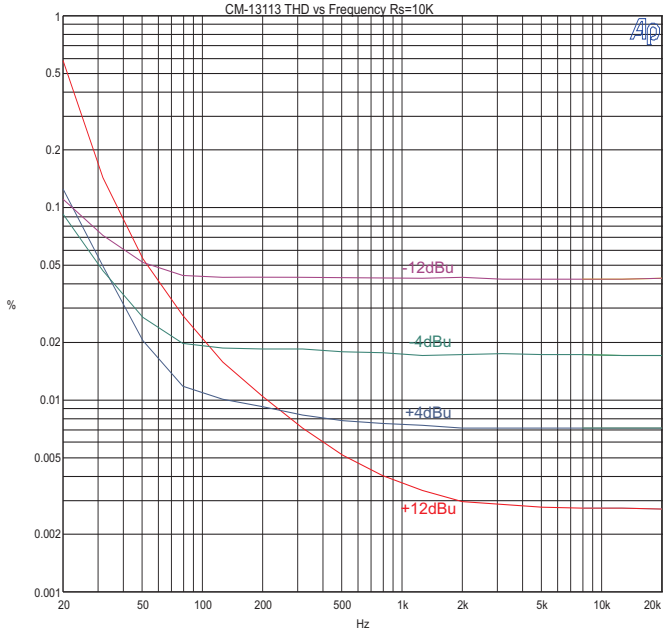

CM-13113 Amplitude v Phase Rs=20K, 10K, 600 RL=1.5K
Amplitude Rs=600
Amplitude Rs=10K
Amplitude Rs=20K
Phase Rs=600
Phase Rs=10K
Phase Rs=20K
dBu
deg
Hz

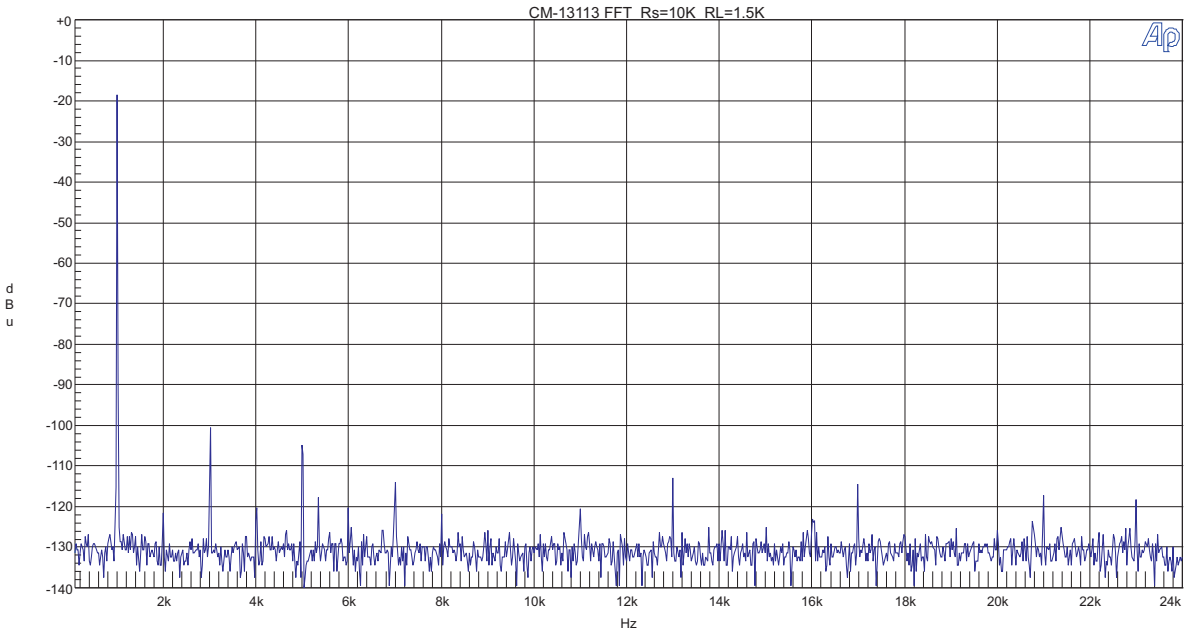

CM-13113 CMRR Rs=600, 20K
Rs=20K
Rs=600
dBu
Hz


CM-13113 THD @ Fixed Frequencies Rs=20K (20Hz-60Hz)
20Hz
30Hz
40Hz
50Hz
60Hz
%
dBu

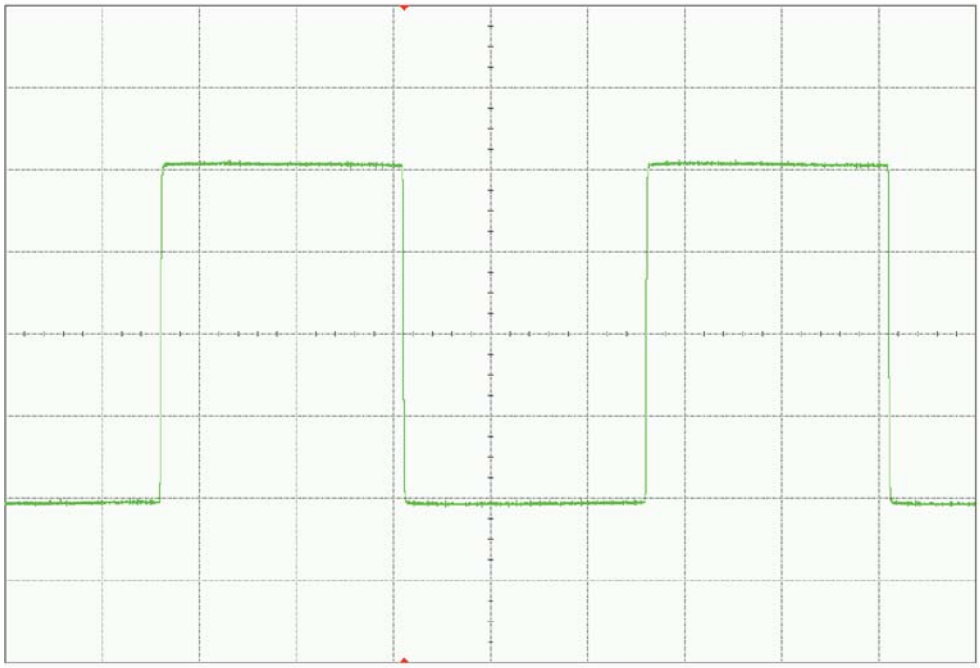

CM-13113 THD @ Fixed Frequencies Rs=10K (20Hz-60Hz)
20Hz
30Hz
40Hz
50Hz
60Hz
%
dBu


CM-13113 THD vs Frequency Rs=20K
-12dBu
-4dBu
+4dBu
+12dBu
%
Hz

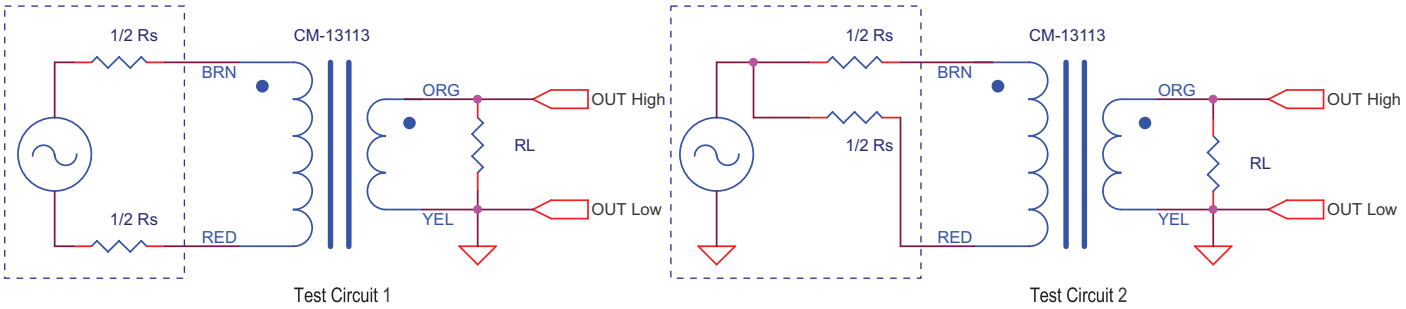

CM-13113 THD vs Frequency Rs=10K
-12dBu
4dBu
+4dBu
+12dBu
%
Hz

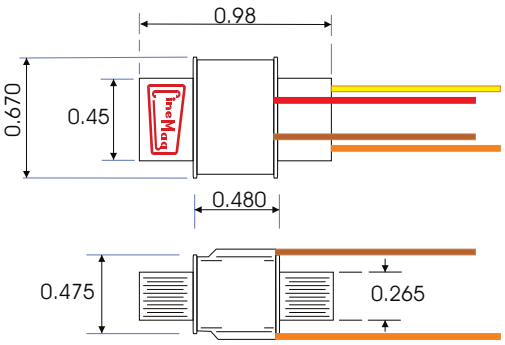


CM-13113 Square Wave Response Rs=10K RL=1.5K



Acquisition Sampling mode real time Hi resolution
Memory depth automatic 50003 pts
Sampling rate automatic Sampling rate 25.0 MSa/s
Averaging on # of averages 16 Interpolation off


1/2 Rs
CM-13113
BRN
ORG
OUT High
RL
1/2 Rs
RED
YEL
OUT Low
Test Circuit 1
1/2 Rs
CM-13113
BRN
1/2 Rs
ORG
OUT High
RL
RED
YEL
OUT Low
Test Circuit 2


0.98
0.670
0.45
0.480
0.475
0.265