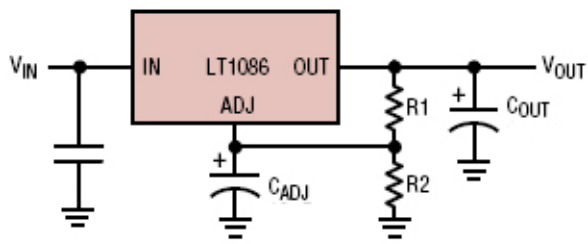


LT1086 Adj.



V_{in} 12V (unless otherwise noted)

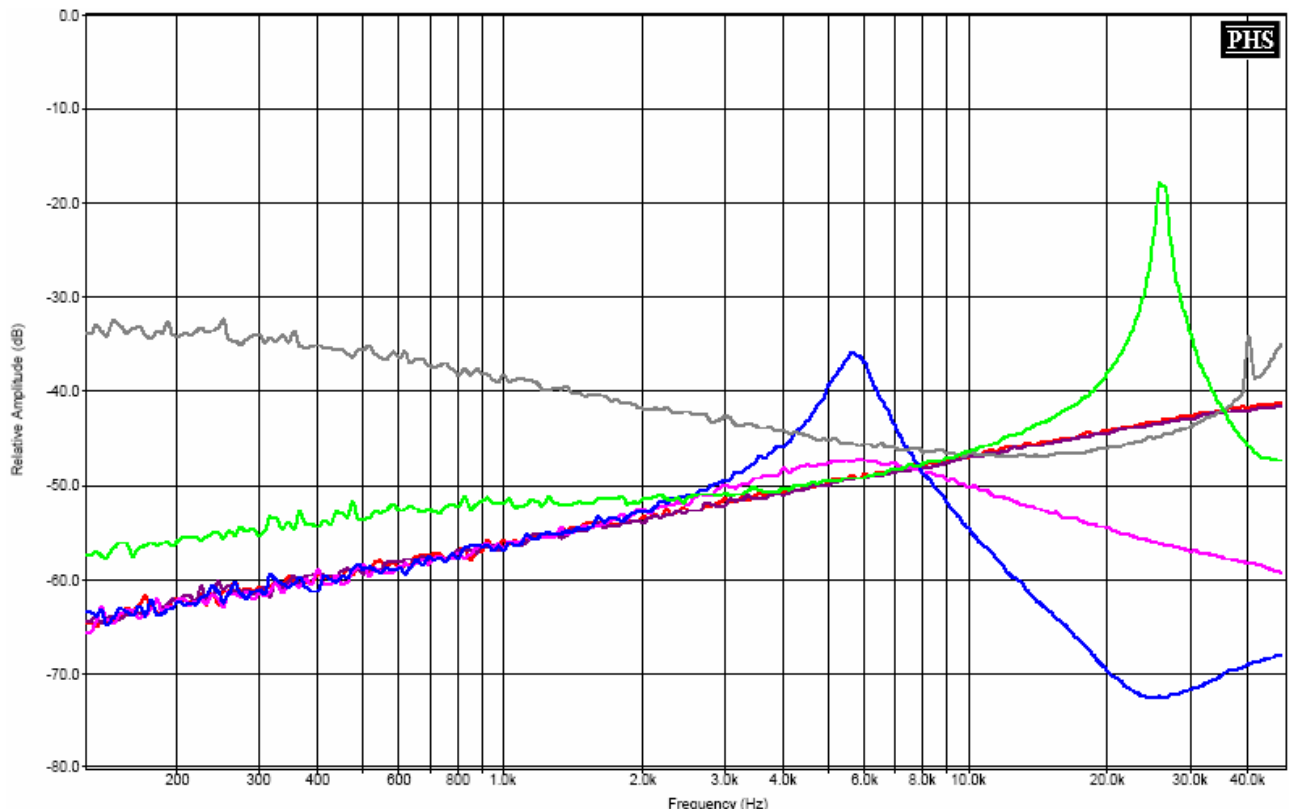
V_{out} 5V

R1 = 150 ohm (unless otherwise noted)

R2 = 470 ohm (unless otherwise noted)

Noise

Capacitors influence



NO Caps

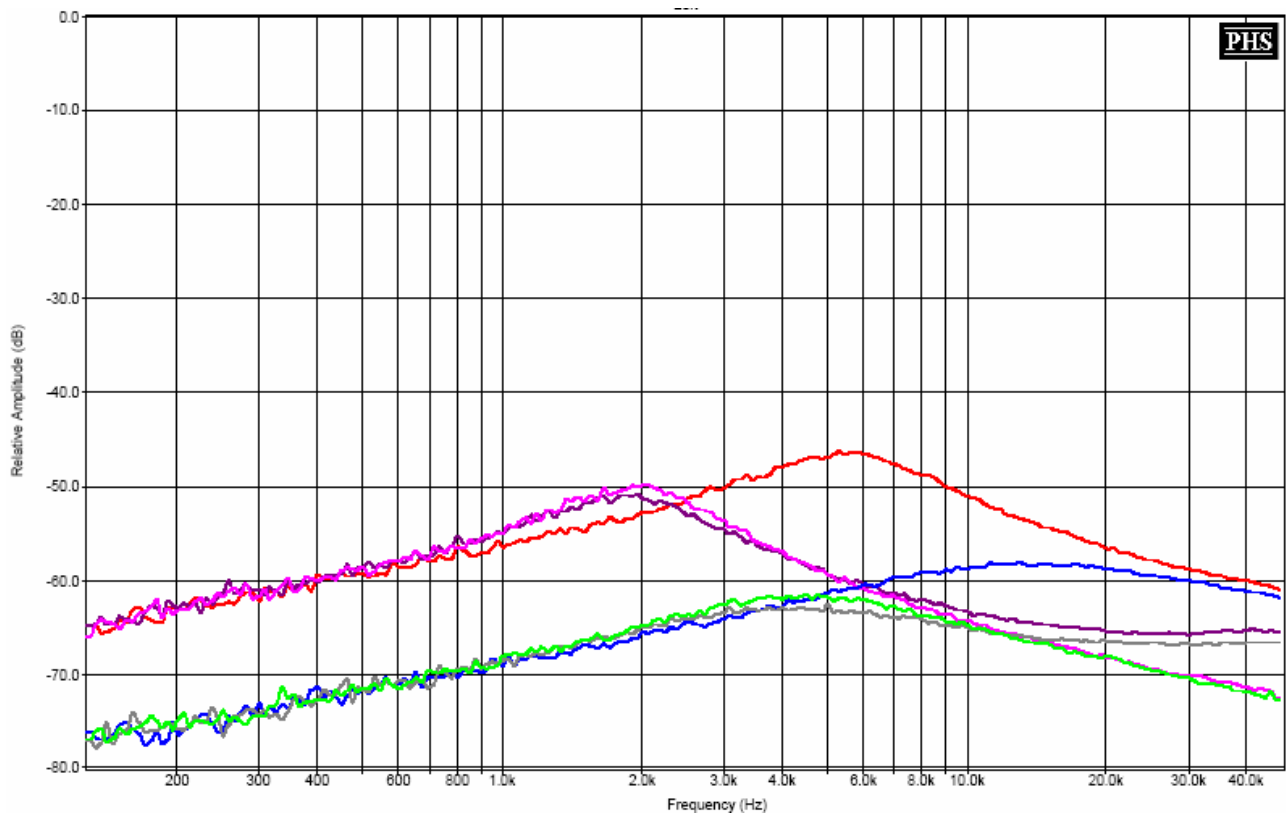
C_{in} 2200uF Panasonic FC

C_{out} 100uF Philips 135

C_{out} 100uF low ESR Oscon

C_{out} 1uF low ESR film

C_{out} 4.7uF low ESR film



Cout 100uF Philips 135

Cout 1000uF high ESR Jamicon

Cout 1000uF high ESR Jamicon – Cin 330uF Panasonic FM

Cout 100uF Philips 135 – Cadj 47uF Oscon

Cout 1000uF high ESR Jamicon - Cadj 47uF Oscon

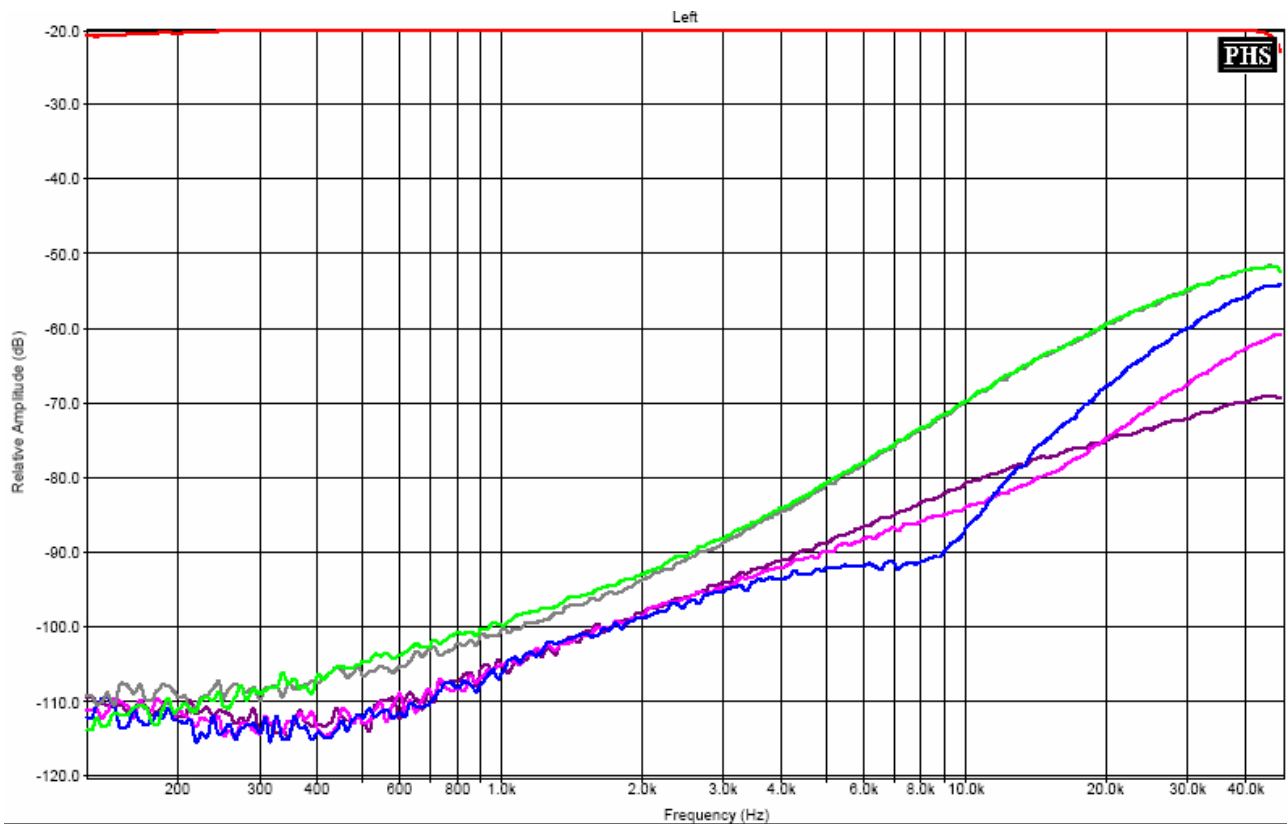
Cout 1000uF high ESR Jamicon – Cin 330uF Panasonic FM - Cadj 47uF Oscon

PSRR

Input capacitor influence

Cout 100uF Philips 135

No Cadj

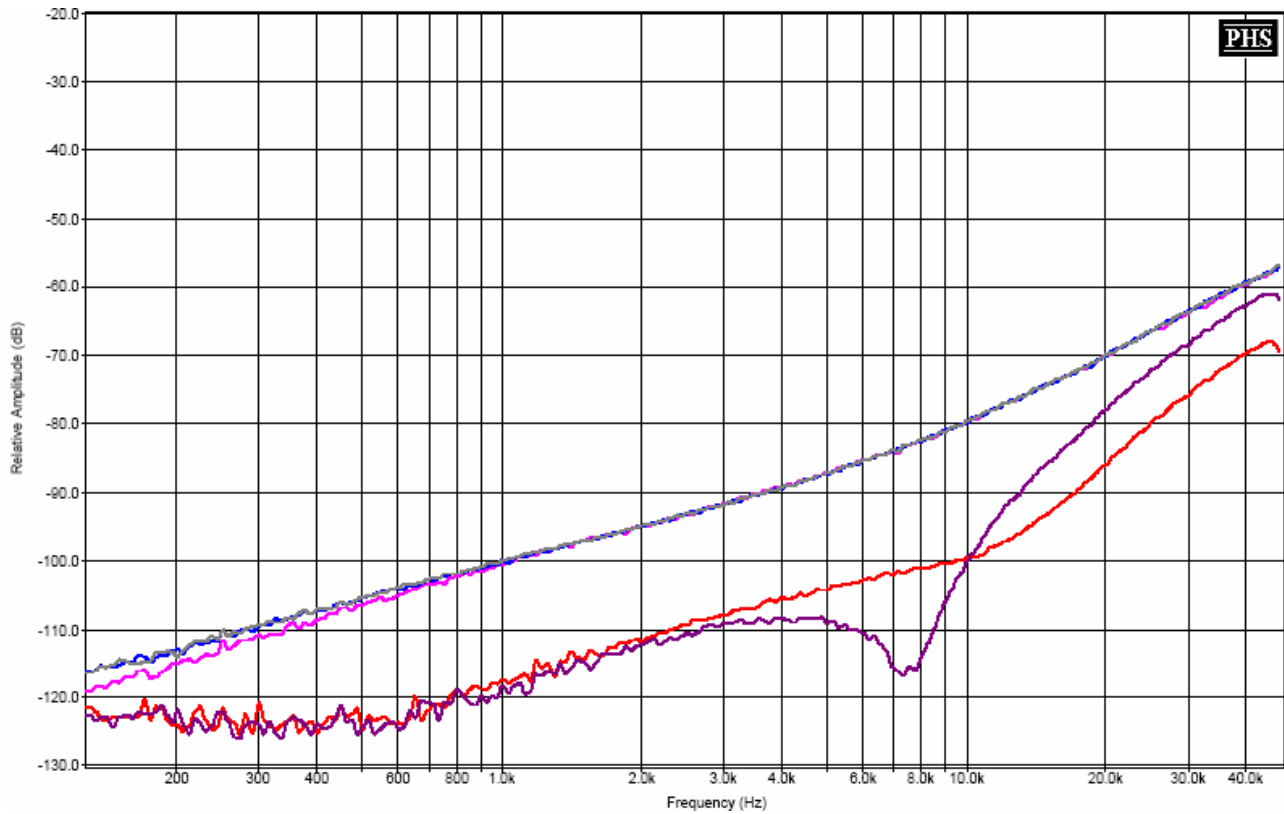


- Reference Line
- NO Cin
- Cin 330nF film
- Cin 1uF film
- Cin 100uF Oscon
- Cin 1000uF Panasonic FM

Input capacitor influence

Cout 100uF Philips 135

Cadj 47uF Oscon



Cin 330nF film

Cin 1uF film

Cin 100uF Oscon

Cin 330uF Panasonic FM

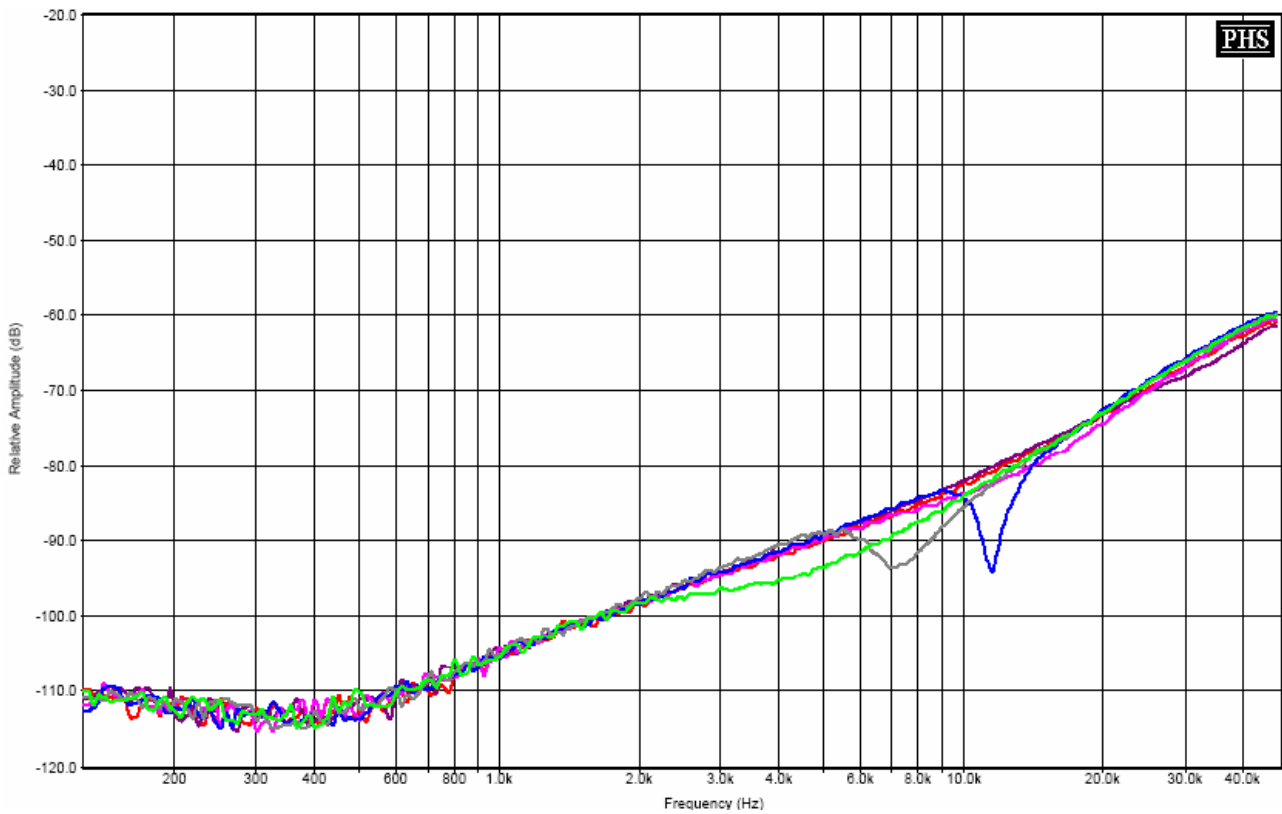
Cin 1000uF Panasonic FM

Note – Y axis min. -130 dB

Output capacitor influence

Cin 330nF film

No Cadj



NO Cout

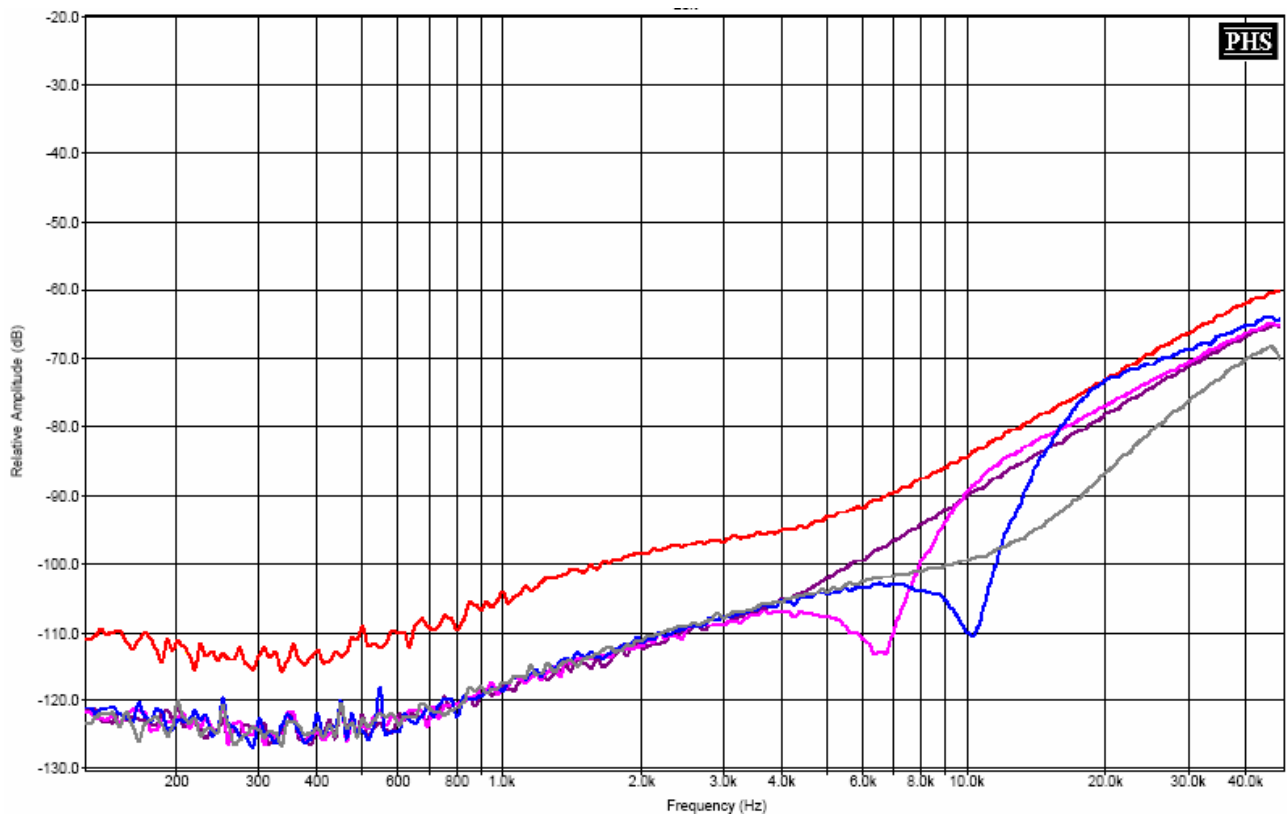
Cout 10uF tantalum

Cout 100uF Philips 135

Cout 100uF low ESR Oscon

Cout 330uF low ESR Panasonic FM

Cout 220uF Panasonic FC



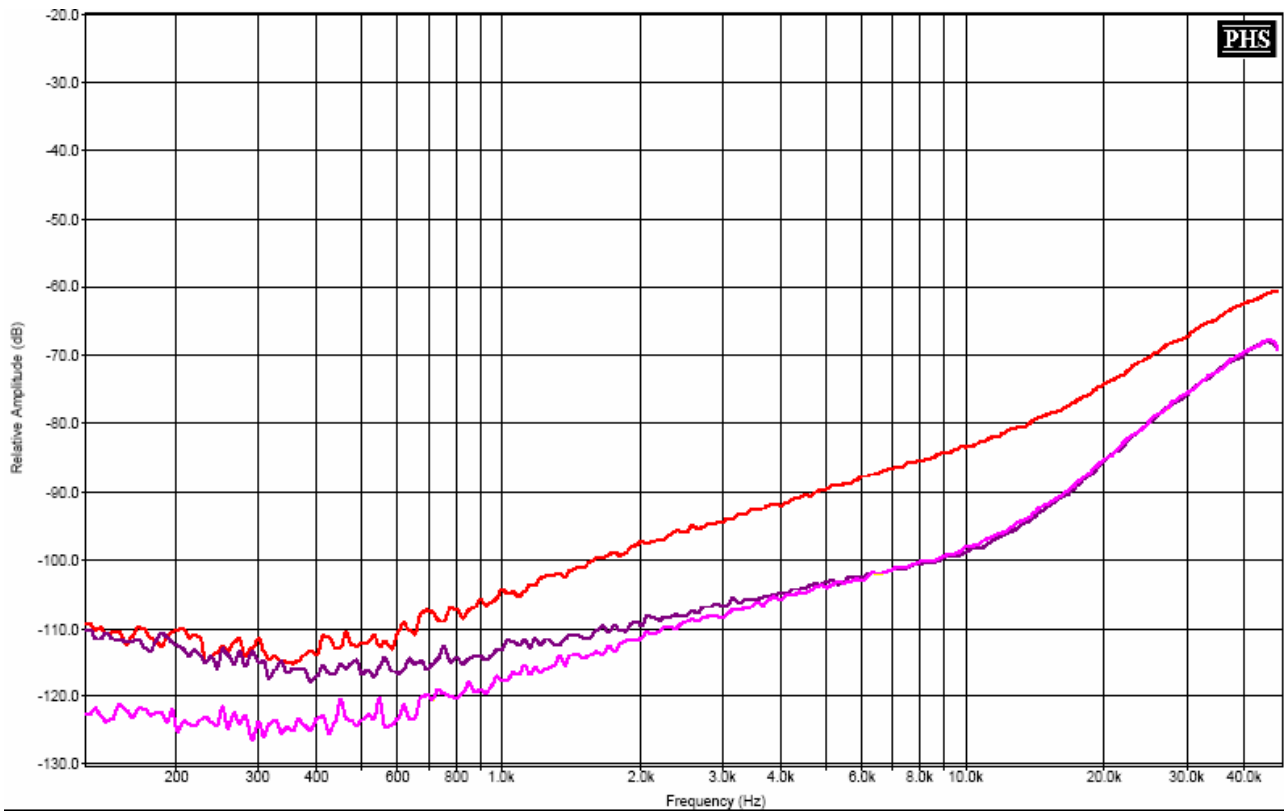
NO Cadj - Cout 2200uF Panasonic FC
 Cadj 47uF Oscon - Cout 2200uF Panasonic FC
 Cadj 47uF Oscon - Cout 100uF low ESR Oscon
 Cadj 47uF Oscon - Cout 330uF low ESR Panasonic FM
 Cadj 47uF Oscon - Cout 100uF Philips 135

Note – Y axis min. -130 dB

Adjust pin bypass capacitor

Cin 330nF film

Cout 100nF Philips 135



NO Cadj

Cadj 1uF film

Cadj 47uF Oscon = 47uF Panasonic FC = 100uF Oscon

Note – Y axis min. -130 dB

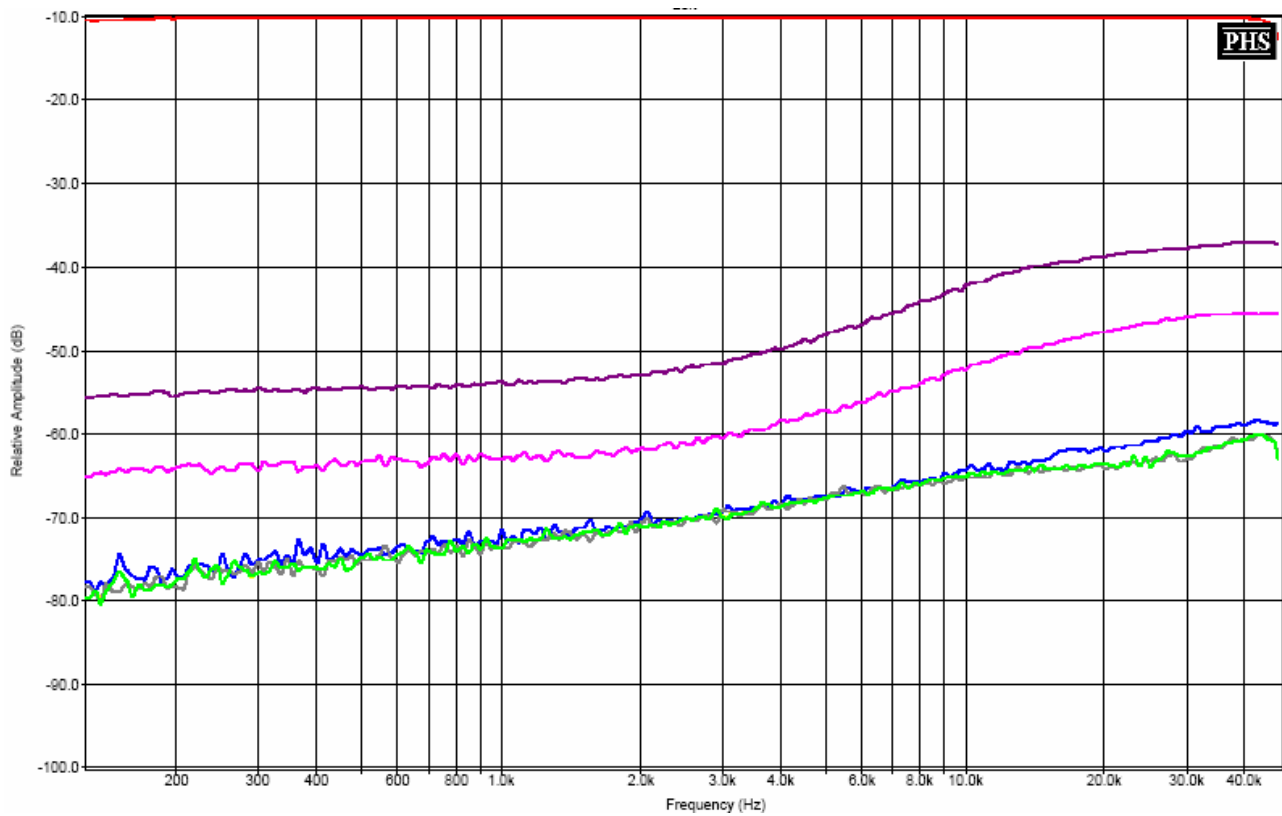
Load regulation

Input voltage influence

Cin 330uF Panasonic FM

Cout 100uF Philips 135

No Cadj



1 ohm reference line

Vin 7V

Vin 7.5V

Vin 8V

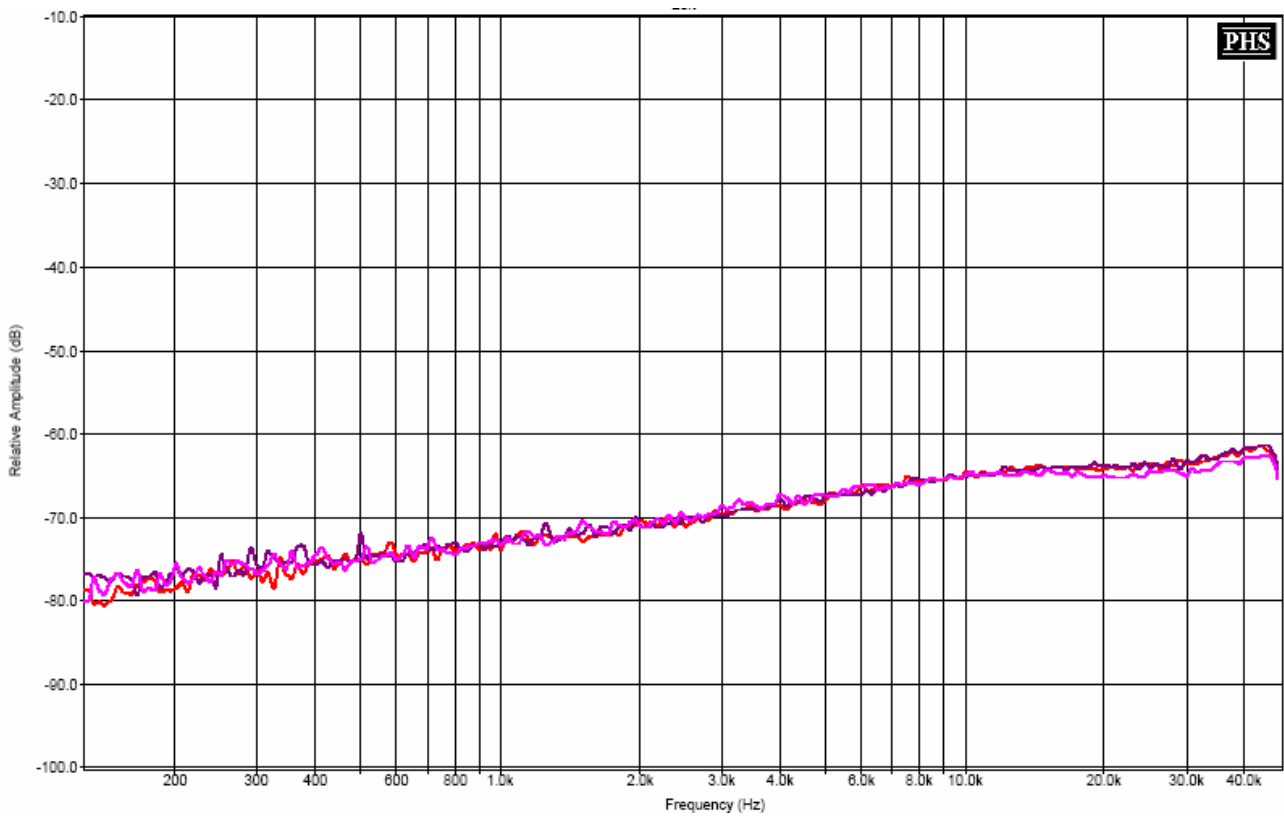
Vin 9V

Vin 12V

Input capacitor influence

Cout 100uF Philips 135

No Cadj



Cin 330uF Panasonic FM

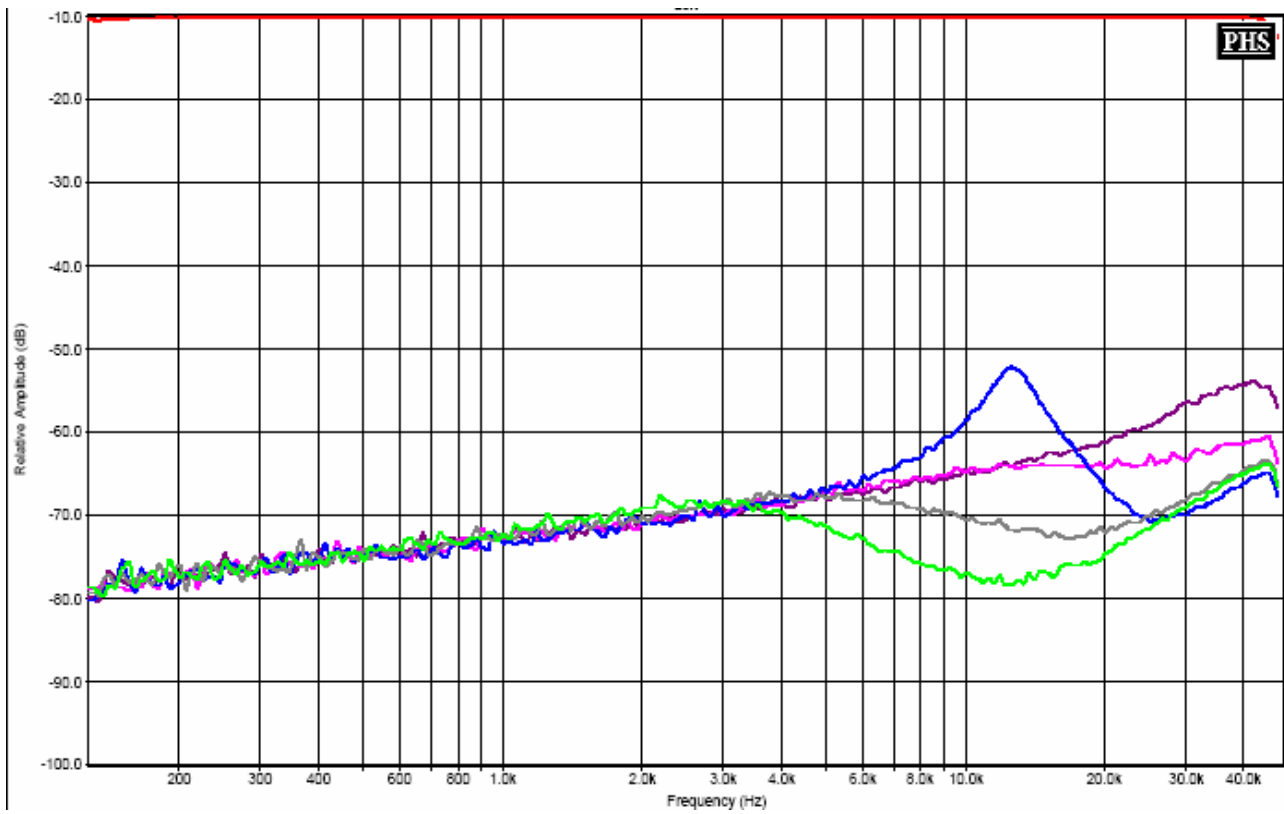
Cin 2200uF Panasonic FC

Cin 330nF film

Output capacitor influence

Cin 330uF Panasonic FM

No Cadj



1 Ohm reference line

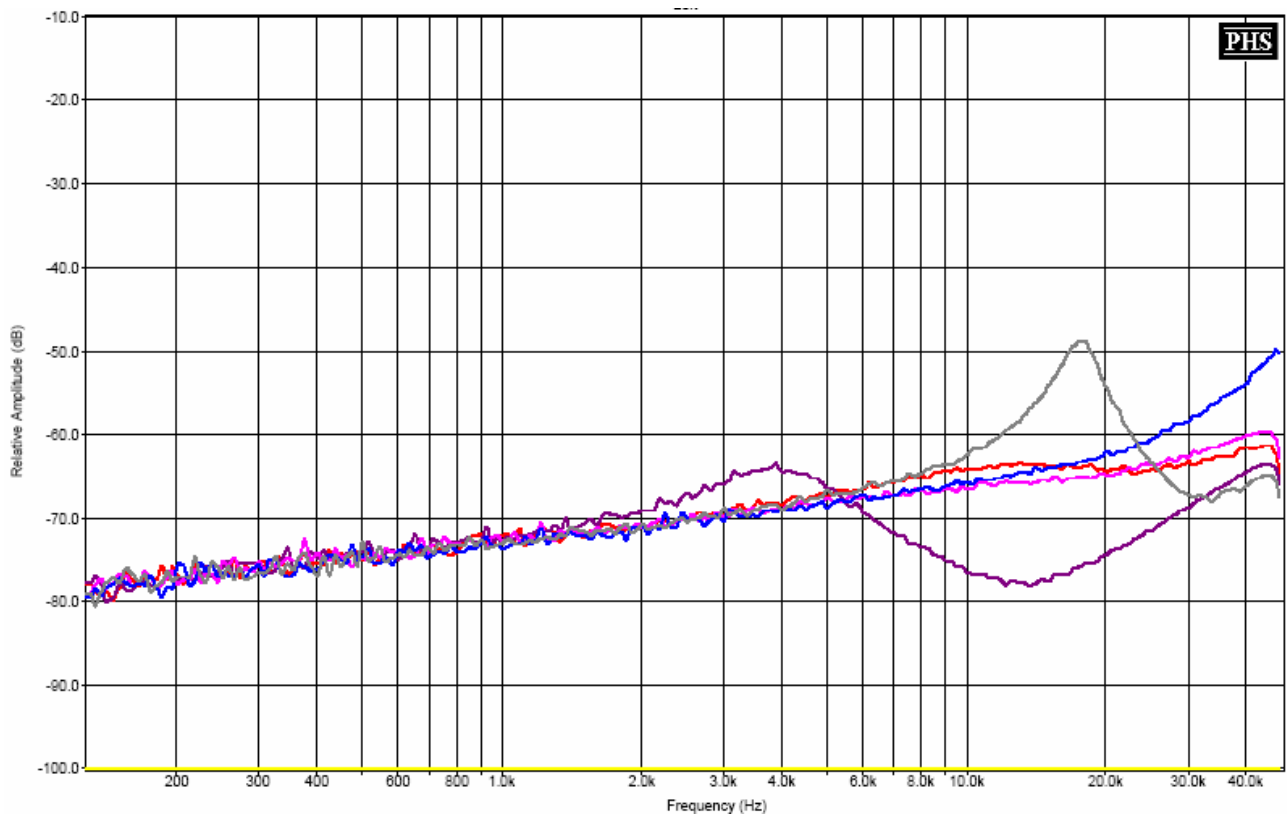
Cout 10uF tantalum

Cout 100uF mid ESR Philips 135

Cout 100uF low ESR Oscon

Cout 1000uF high ESR Jamicon

Cout 2200uF mid ESR Panasonic FC



Cout 100uF mid ESR Philips 135

Cout 1000uF low ESR Panasonic FM

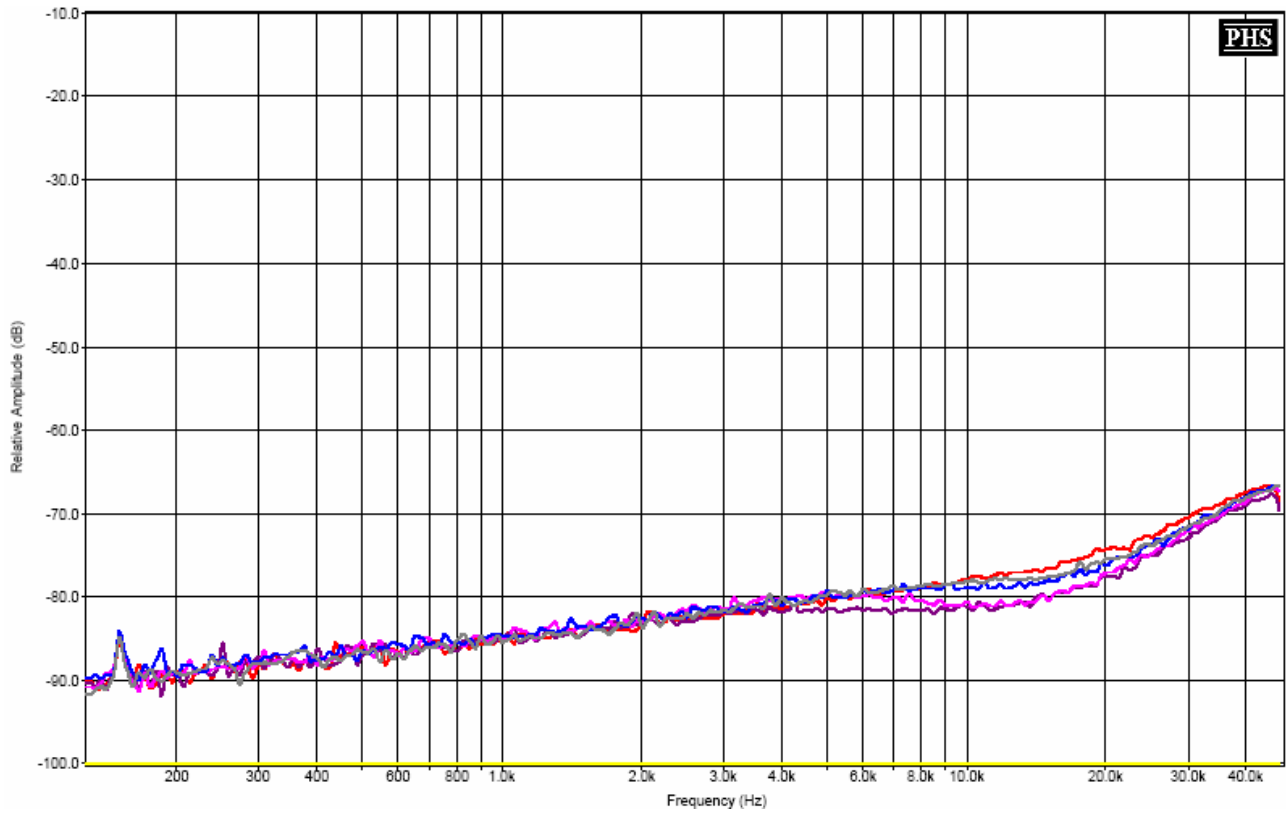
Cout 1000uF low ESR Panasonic FM + series OR27 0805

Cout 4.7uF film

Cout 47uF low ESR Panasonic SPCap

Cin 330nF film

Cadj 47uF Oscon



Cout 100uF mid ESR Philips 135

Cout 220uF mid ESR Panasonic FC

Cout 1000uF low ESR Panasonic FM

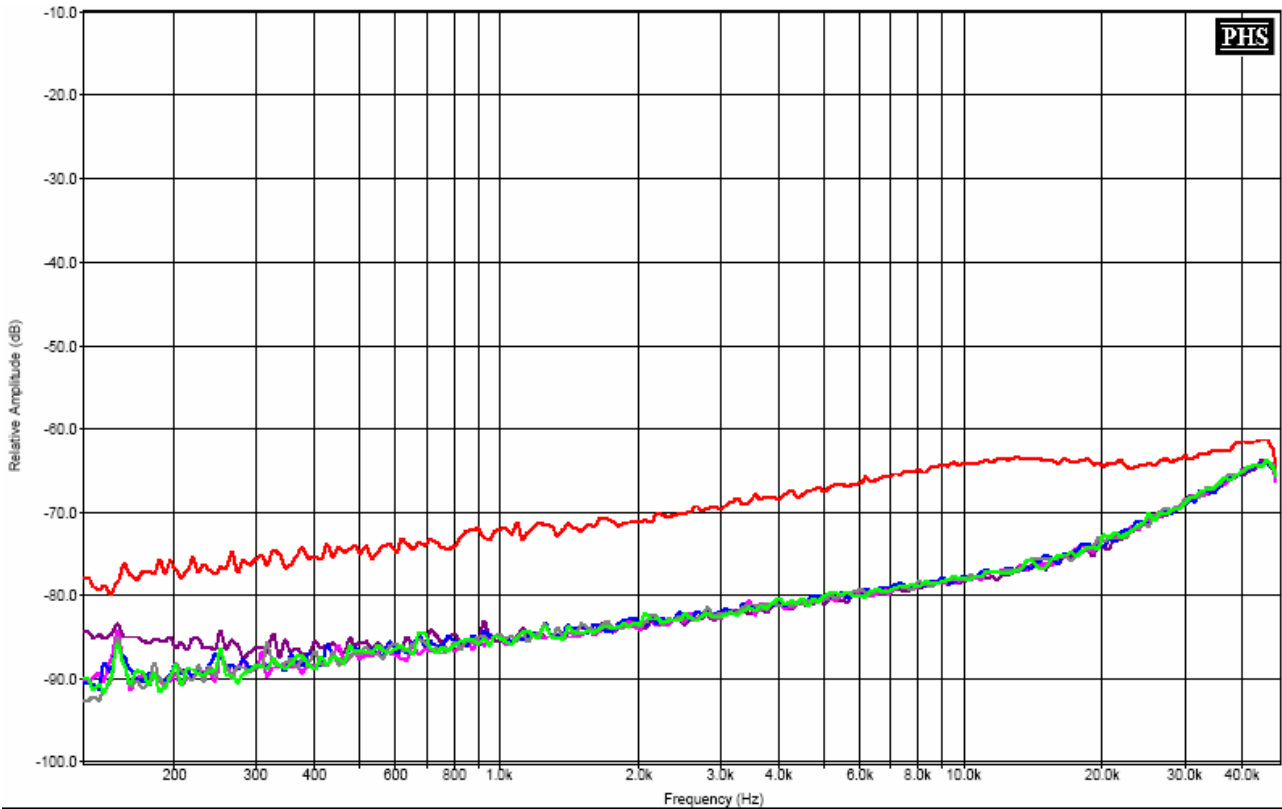
Cout 1000uF high ESR Jamicon

Cout 470uF mid ESR Panasonic FC

Adjust pin bypass capacitor influence

Cin 330uF Panasonic FM

Cout 100uF Philips 135



NO Cadj

Cadj 4.7uF film

Cadj 47uF Panasonic FC

Cadj 47uF Oscon

Cadj 100uF Oscon

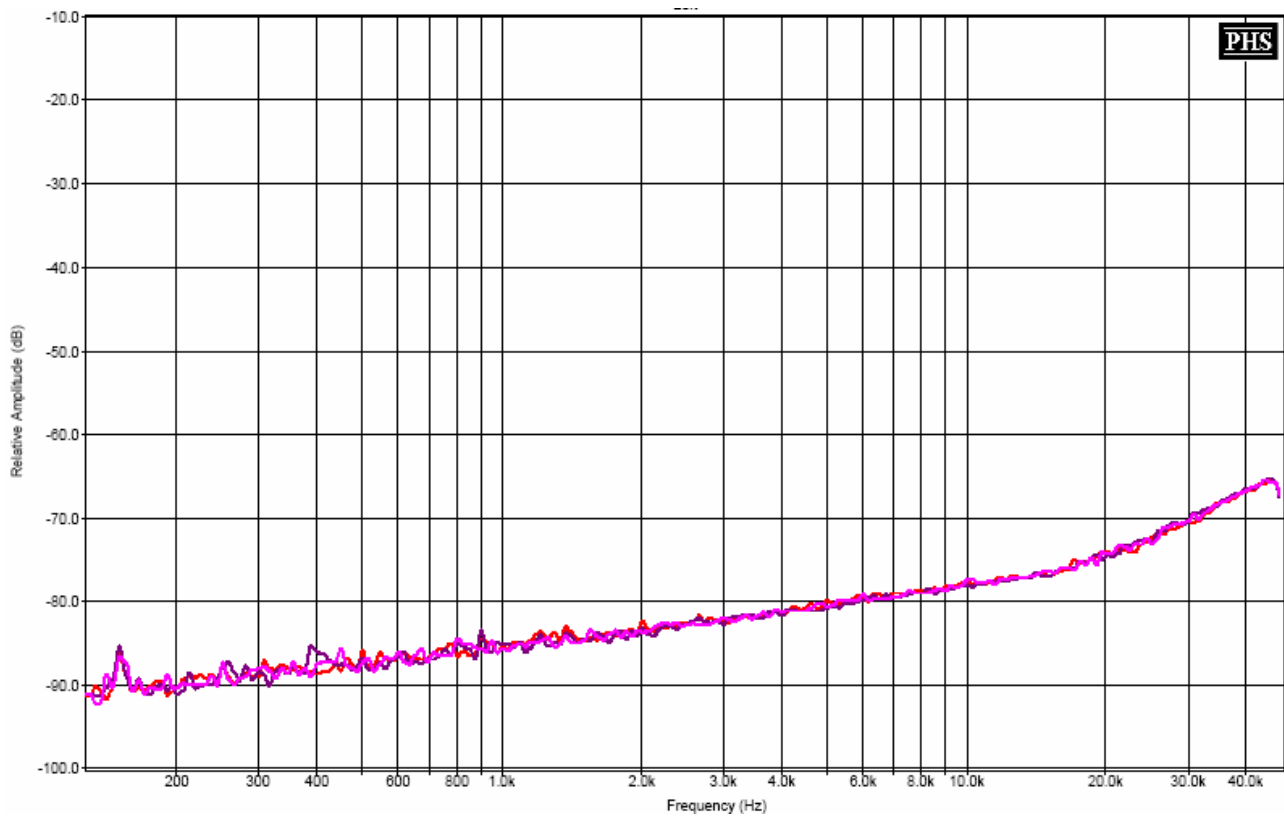
Cadj 1000uF Panasonic FM

Programming resistors influence

Cin 330uF Panasonic FM

Cout 100uF Philips 135

Cadj 47uF Oscon



R1 = 150 ohm – R2 = 470 ohm

R1 = 499 ohm – R2 = 1.5 kohm

R1 = 2.2 kohm – R2 = 6.8 kohm