

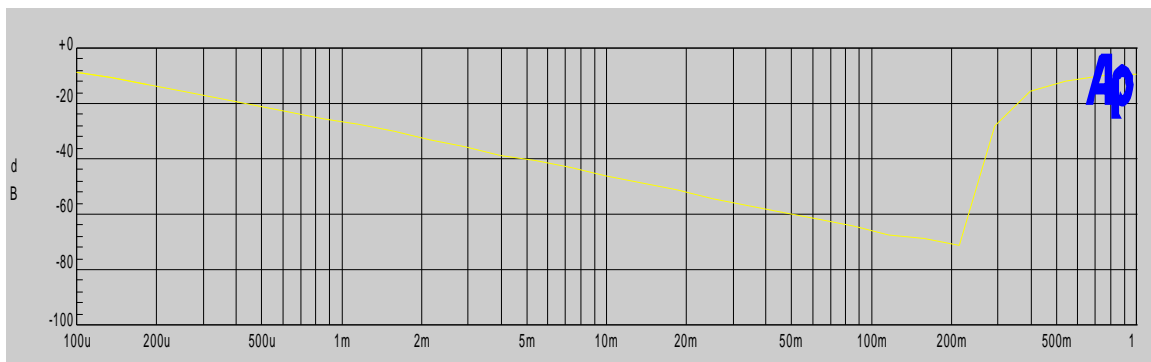
Performance of VS1002DB (or VS1002D) microphone interface

Measurement setup:

- VS10XX Measurement Board V2.0
- Analog Signal Generator of Audio Precision connected differentially to MIC inputs of VS1002DB
- DSP Audio Analyzer of Audio Precision connected differentially to LEFT and GBUF
- AVDD=2.7V, DVDD=2.5V
- Crystal 14.31818 Mhz + clock doubling
- Digital gain of microphone amplifier 200 (hex)
- CLKF divider B000 (hex)
- DIV register of ADC 6 (hex)
- Software code downloaded for measurement which feeds the ADC DATA register back to DAC of LEFT/RIGHT outputs. Note that AGC is off!

Signal to noise+distortion

Below measured $S/(N+THD)$ A-weighted as a function of differential amplitude (Vp) of a 1 kHz input sine. The maximum performance of 72 dB is achieved when signal level is about 200 mVp. The actual sample rate is $2*CLKF/(DIV*128)=37.287$ kHz.



Amplitude response

Below measured amplitude measured at 150 mVp level

