
Errata: CS5371/72 Rev D Errata

(Reference CS5371/CS5372 data sheet revision DS255PP2 dated APR '01)

Erratum #1: THD for $\pm 5\%$ tolerance unipolar power supplies.

Description:

Characterization testing shows degraded total harmonic distortion performance for certain unipolar power supply conditions. Modulator does not meet -112 dB maximum THD performance for the following power supply configurations:

Test Conditions	VA+	VA-	VD	Max THD
-5% Unipolar Analog / -5% Digital	+4.75 V	0 V	+3.135 V	-100 dB
-5% Unipolar Analog / +5% Digital	+4.75 V	0 V	+5.25 V	-100 dB
+5% Unipolar Analog / -5% Digital	+5.25 V	0 V	+3.135 V	-100 dB
+5% Unipolar Analog / +5% Digital	+5.25 V	0 V	+5.25 V	-100 dB

Work Around:

Use a nominal +5.00 V analog power supply in unipolar configuration to achieve data sheet performance.

Erratum #2: Anti-alias filter components.

Description:

The data sheet specifies a single pole anti-alias filter in front of the modulator differential inputs using 1 k Ω series resistors and differential 10 nF capacitors. Characterization testing shows better performance using 20 nF differential capacitors.

Work Around:

Discrete - use external 500 Ω series resistors and 20 nF differential capacitors.

CS3301/02 - use the internal 750 Ω series resistors, plus external 0 Ω series resistors and 20 nF differential capacitors. External resistors can be populated when using CS3301A, which removes the internal 750 Ω series resistors.

CONTACTING CIRRUS LOGIC SUPPORT

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Erratum #3: OFST specification.

Description:

When set high, the OFST pin adds differential offset to the modulator inputs to move any $\Delta\Sigma$ idle tones out of the measurement bandwidth. The data sheet specifies +100 mV offset will be added, but actually -50 mV offset is added.

Work Around:

None. CS5371/72 rev E will increase the differential offset added by the OFST pin to -100 mV.

Erratum #4: Voltage reference RC filters.

Description:

In multi-channel systems it is common to share a single precision voltage reference between multiple modulators and DACs. To avoid interactions between devices through their voltage reference inputs, independent low-pass RC filters should be placed between the voltage reference and the $VREF_{\pm}$ inputs of each device.

Work Around:

Use a separate RC low-pass filter (as recommended by the voltage reference manufacturer) in front of each voltage reference input.
