AD353X/R Data Sheet Revision

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Data Sheet Specification Comparison

Previous RevB

Table 2. Electrical Characteristics

Parameter	Min	Typ	Max	Unit	Test Conditions/Comments
STATIC PERFORMANCE[1]					
Resolution	16			Bits	
Integral Nonlinearity Error (INL)		±3	±10	LSB	Range = 0 to VREF
		±3	±10	LSB	Range = 0 to 2 × VREF
Differential Nonlinearity Error (DNL)			±1	LSB	Range = 0 to VREF and guaranteed monotonic
			±1	LSB	Range = 0 to 2 × VREF and guaranteed monotonic
Zero-Code Error		+0.22	±1	mV	Range = 0 to VREF or range = 0 to 2 × VREF
Offset Error		−0.16	±1.5	mV	Range = 0 to VREF
		−0.23	±1.6	mV	Range = 0 to 2 × VREF
Full-Scale Error		−0.05	±0.26	% of FSR	Range = 0 to VREF
		−0.06	±0.18	% of FSR	Range = 0 to 2 × VREF
Gain Error		−0.05	±0.26	% of FSR	Range = 0 to VREF
		−0.06	±0.18	% of FSR	Range = 0 to 2 × VREF
Total Unadjusted Error (TUE)		−0.04	±0.22	% of FSR	Range = 0 to VREF
		−0.04	±0.16	% of FSR	Range = 0 to 2 × VREF
Zero-Code Error Drift			±1.3	µV/°C	Range = 0 to VREF or range = 0 to 2 × VREF
Offset Error Drift			±1.3	µV/°C	Range = 0 to VREF or range = 0 to 2 × VREF
Full-Scale Error Drift			±200	ppm/°C	Range = 0 to VREF or range = 0 to 2 × VREF
Gain Error Drift			±40	ppm/°C	Range = 0 to VREF or range = 0 to 2 × VREF
DC Power Supply Rejection Ratio (PSRR)		0.03		mV/V	DAC code = midscale and supply voltage (V_{DD}) = 5V ± 10%
DC Crosstalk		±3		µV	Due to single channel, full-scale output change, internal reference, and range = 0 to VREF
		±0.6		µV/mA	Due to load current change, external reference, and range = 0 to 2 × VREF
		±6		µV	Due to powering down (per channel), internal reference, and range = 0 to VREF

New RevC

Table 2. Electrical Characteristics

Parameter	Min	Typ	Max	Unit	Test Conditions/Comments
STATIC PERFORMANCE[1]					
Resolution	16			Bits	
Integral Nonlinearity Error (INL)		±3	±10	LSB	Range = 0 to VREF
		±3	±10	LSB	Range = 0 to 2 × VREF
Differential Nonlinearity Error (DNL)			±1	LSB	Range = 0 to VREF and guaranteed monotonic
			±1	LSB	Range = 0 to 2 × VREF and guaranteed monotonic
Zero-Code Error		+0.22	±1	mV	Range = 0 to VREF or range = 0 to 2 × VREF
Offset Error		−0.16	±1.5	mV	Range = 0 to VREF
		−0.23	±1.6	mV	Range = 0 to 2 × VREF
Full-Scale Error		−0.05	±0.26	% of FSR	Range = 0 to VREF
		−0.06	±0.18	% of FSR	Range = 0 to 2 × VREF
Gain Error		−0.05	±0.26	% of FSR	Range = 0 to VREF
		−0.06	±0.18	% of FSR	Range = 0 to 2 × VREF
Total Unadjusted Error (TUE)		−0.04	±0.22	% of FSR	Range = 0 to VREF
		−0.04	±0.16	% of FSR	Range = 0 to 2 × VREF
Zero-Code Error Drift		±1.3		µV/°C	Range = 0 to VREF or range = 0 to 2 × VREF
Offset Error Drift		±1.3		µV/°C	Range = 0 to VREF or range = 0 to 2 × VREF
Full-Scale Error Drift		±200		ppm/°C	Range = 0 to VREF or range = 0 to 2 × VREF
Gain Error Drift		±40		ppm/°C	Range = 0 to VREF or range = 0 to 2 × VREF
DC Power Supply Rejection Ratio (PSRR)		0.03		mV/V	DAC code = midscale and supply voltage (V_{DD}) = 5V ± 10%
DC Crosstalk		±3		µV	Due to single channel, full-scale output change, internal reference, and range = 0 to VREF
		±0.6		µV/mA	Due to load current change, external reference, and range = 0 to 2 × VREF
		±6		µV	Due to powering down (per channel), internal reference, and range = 0 to VREF