

CS1501 & CS1601: Frequently Asked Questions

Question 1: What is the variance in the link voltage due to the reference current?

The reference current is specified as 129 μ A at 25°C.

The reference current is defined by the internal DAC current (I_{dac}). Production calibration is carried out, and the reference can be considered accurate for design purposes.

Matrix lot variation testing showed the following part-to-part variation at room temperature:

$$\text{Max} = +0.51\%; \text{Min} = -0.61\%$$

Question 2: What is the reference current variation over temperature?

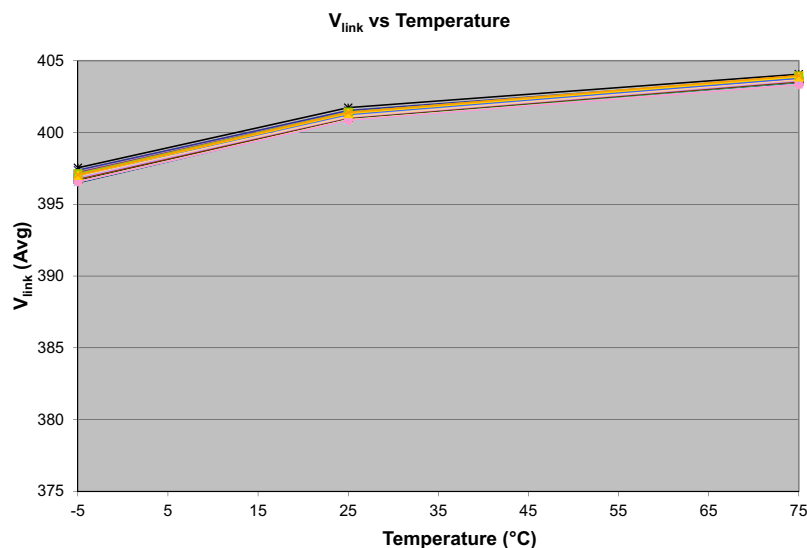
Over the entire temperature range of -40°C to 125°C, the total variation of I_{ref} is 120 μ A to 136 μ A, with the major swings occurring at the extremes of temperature.

Over the more normal temperature range of 0°C to +70°C, the variation is limited to -1.0% to +1.5%.

I_{ref} (I_{dac}) Variation over Temperature

| Temperature (°C) | Max (%) | Mean (%) | Min (%) |
|------------------|---------|----------|---------|
| 5 | -0.17 | -0.50 | -1.00 |
| 25 | +0.00 | +0.00 | +0.00 |
| 55 | +1.25 | +0.35 | -0.07 |
| 85 | +1.50 | +0.24 | -0.56 |

Typical variations for V_{link} are shown below:



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