Current Monitor Terms: *Droop Rate*

The droop rate is the downward slope of the top of the output voltage pulse resulting from a flat-top current input pulse. Because the current monitor cannot pass DC, whenever the output voltage is non-zero and the current is constant, as during the flat top of the pulse, the voltage decays toward zero exponentially. This is illustrated in the upper trace of the figure below. The lower trace represents the applied current pulse.

The droop rate is the first term (linear) of the power series representing that exponential decay. The time constant of the decay is the reciprocal of the droop rate, or the time interval for 100 % decay predicted by the linear term.

The droop rate (D) is also mathematically connected to the low frequency cut-off point (f):

$$D = 2\pi f$$