

RT-Control Simulation data

On the 16-pin chip (microcontroller?) three pins: 2, 3, and 5, seem to be configured as a simple summing DAC that becomes an input to the opto-coupler that eventually drives a shunt for a portion of the RT resistor on the switcher chip

To get a more detailed understanding I used LTSpice to simulate the circuit ending with a LED that I used in place of the input side of the opto-coupler.

The circuit used is shown in the image file:
07 RT-control input sim.png

To simulate the 8 possible combinations of 5V outputs from the three micro pins, I ran the simulation 8 times and manually connected from zero to all three of the labeled lines to 5V. From the resulting Op point values I recorded key voltages and the current through the LED. For each step of inputs the LED current increased by a few mA from zero to a max of 25 mA.

Table of results

Pin	5	3	2	Vsum	Vbase	Vled	Iled
	A	B	C	V	V	V	mA
	0	0	0	0	0	0	0
	0	0	5	1.90	1.51	0.70	5
	0	5	0	2.30	1.54	0.71	9
	0	5	5	2.76	1.57	0.72	15
	5	0	0	3.29	1.59	0.74	21
	5	0	5	3.44	1.59	0.74	23
	5	5	0	3.52	1.59	0.74	24
	5	5	5	3.62	1.60	0.74	25