Calculation of the current-limiting resistor of the optocoupler

If the driver has a 0.4V output, the actual current might be more like 1.1mA. The CTR gives you (reliably) maybe 200uA from that, so it"s okay. I would not go much lower.

This document describes how to calculate the values of resistors R1 and R2 to correctly interconnect two integrated circuits through an optocoupler. It explains ...

In the same way, the optocoupler can interface with other logic circuits, such as LSTTL, HCMOS, or HCTMOS components. All that needs to be done is to work the corresponding limit values VIH, VOH, ...

The phototransistor is modelled as a dependent current-source with a value set by the optocoupler AC-CTR and LED current. For AC analysis, Copto is in parallel with RC.

Once you know what a CTR is and learn how to use it, then Optocoupler circuit design is that easy. Current transfer ratio or just CTR is the ratio of the collector to the forward current which is expressed ...

Optocoupler Circuit Design Example: This calculator helps determine the appropriate resistor value (R1) for an optocoupler circuit. It"s crucial to limit the current through the LED to ...

The simplest method of achieving the current drive is to provide a series current-limiting resistor, as shown in Figure 4, such that the difference between VAPP and VF is dropped across the ...

This document describes how to calculate the values of resistors R1 and R2 to correctly interconnect two integrated circuits through an optocoupler. It explains that R1 must be greater than 507 ohms to ...

By providing resistor R2, the cathode of the TL431 is able to raise to a high-enough voltage, eliminating current flow in the optocoupler"s LED. Thus, the circuit design guarantees the minimum R6 current, ...

In choosing appropriate values for R1, the value for the current limiting resistor is set to produce the correct forward current (I F) through the infrared LED in the optocoupler. R2 is the load resistor for ...

Subtract the led voltage from the supply voltage, this gives the Voltage across the resistor, and divide it by the led current, that will give you the resistance to use.

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