

There are numerous application notes on terminating and interfacing LVPECL, LVDS, CML etc. As such, there is no need to rewrite these well written documents. However, reducing power consumption has been a driving issue and this application note shows a simple way to save power consumption, along with measured results.

A very common LVPECL termination method is a pull up/pull down method as shown in Figure 1 (optional AC caps are shown).

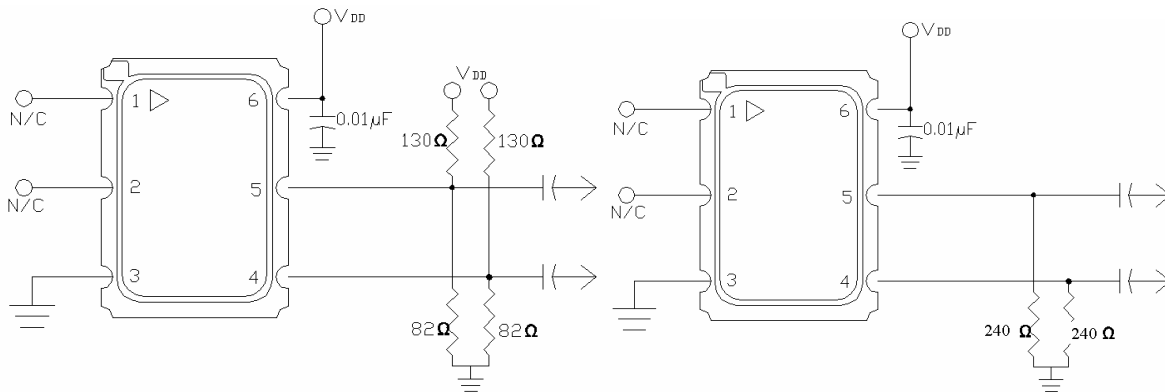


Figure 1.

Figure 2.

If a single resistor from the emitter to ground can be utilized, as shown in Figure 2, then current will be reduced. Typical results for the VCC6, with a 156.250MHz output, series are shown in Table 1 and highlight a considerable power savings.

Table 1.				
Termination Scheme	130 pull-up / 82pull down	240 ohms to ground	330 ohms to ground	470 ohms to ground
Typical Power Consumption	77mA	49mA	45mA	41mA

It should be noted that values greater than 240 ohms will cause a reduction in the p/p output. As an example, a 470 ohm resistor results in a 420 mv p/p output with some ringing/overshoot which will need to be evaluated in the system to verify the application. The 240 ohm termination scheme is commonly used at Vectron and should be acceptable for short distance applications, 2-3 inches of FR4 trace - even longer may be possible but has not been evaluated.

For Additional Information Please Contact: