

ABSTRACT

BINARY WEIGHTED THERMOMETER CODE FOR PVT CONTROLLED OUTPUT DRIVERS

A binary weighted thermometer code is employed to adjust the output impedance of a variable impedance output driver circuit. The driver circuit includes an impedance network (100, 200) comprising a plurality of resistive devices (111-120, 211-219, 221-229) each programmably electrically connectable in parallel between a first voltage source (VDD, ground) and the signal pad (104, 209). The resistive devices are partitioned into a plurality of sets (121, 122, 123). A first set (121) of the resistive devices may be programmed in a binary incremental manner to electrically connect one or more of the resistive devices in the first set between the first voltage source and the signal pad. Only if all of the resistive devices in the first set are activated may a second set (122) of the resistive devices be programmed in a binary incremental manner. Additional sets (123) of the resistive devices may be likewise programmed only after all of the resistive devices in the previously programmed sets are activated.

FIGURE 2