METHOD AND APPARATUS FOR FAILSAFING AND EXTENDING RANGE FOR WRITE

ABSTRACT OF DISCLOSURE

The present invention prevents catastrophic failures of a write precompensation circuit from occurring without limiting the precompensation range to a small value and also extends the range of precompensation beyond limits imposed by the duty cycle of the clock signal. The present invention prevents catastrophic failure of the write precompensation circuit by ORing either the input or the output of the comparator and the opposite phase of the clock. The 180 degree delayed clock forces any transitions that would otherwise have been missed. The present invention extends the range of a write precompensation circuit by ORing the clock and the clock delayed by a time td. The extended duty cycle that results is used to generate a longer precompensation delay. A technique is also provided to maintain constant duty cycle over a broad range of data rates.

Figure 3a