Extended Multi-Modulus Divider for Open Loop Fractional Dividers and Fractional Multiplying Delay Locked Loops

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Abstract : Solutions for the wrong division problem of the Extended Multi-Modulus Divider (EMMD) that occurs during modulus extension (i.e. switching the modulus value between two different ranges of division ratios), in open loop fractional dividers and fractional multiplying delay locked loop, is proposed. A detailed study for the MMD with Sigma-Delta is also presented. Moreover, extensive simulations for the divider are presented to ensure and verify its functionality and compared with the conventional dividers.
Keywords : extended multi-modulus divider (EMMD), fractional multiplying delay locked loop, open loop fractional divider, sigma delta modulator

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