

## **88. SPREAD SPECTRUM CLOCK GENERATION FOR SUPPRESSION OF ELECTROMAGNETIC INTERFERENCE IN DIGITAL DEVICES**

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In synchronous digital circuits, a clock is a specific type of signal that oscillates between a high and a low state. The Clock oscillation increases due to increase in the operating frequency and data rate. This high-speed oscillation of clock signal makes the digital circuits to emit radiation that may interfere with nearby circuits thereby causing electromagnetic interference, which will appear as sharp spectral peaks with high intensities. With the intention of reducing the amount of radiation from synchronous digital circuits, all digital spread spectrum clock generator method is proposed, where the system clock is modulated using delta-sigma modulation techniques. This method is more effective since most of the problems faced while designing digital circuit is related to the clock signals, which is a major contributor of electromagnetic interference.

Keywords—All digital spread spectrum clock generator; electromagnetic interference; delta-sigma modulation

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