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(54) **PROCESSOR WITH DUAL-DEADTIME PULSE WIDTH MODULATION GENERATOR**

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(57) **ABSTRACT**

A processor that has pulse width modulation generation circuitry that provides an improved ability to deal with the less than perfect switching characteristics of external switching devices that are connected to PWM hardware included in a processor. Complementary PWM output signals have dual deadtime delay in which the delay between the inactivation of the first signal and the activation of the second signal may be different than the delay between the inactivation of the second signal and the activation of the first signal. This provides an improved capability to deal with non-symmetric switching characteristics of the external switching devices, and the circuitry to which they are connected. The dual deadtime pulse width modulation generator for a processor includes deadtime generation circuitry operable to generate a first pulse width modulated signal and a second pulse width modulated signal complementary to the first pulse width modulated signal, wherein there is a first delay between inactivation of the first pulse width modulated signal and activation of the second pulse width modulated signal, a second delay between inactivation of the second pulse width modulated signal and activation of the first pulse width modulated signal, and the first and second delays are not equal. The first delay and the second delay may be independently settable.

16 Claims, 6 Drawing Sheets



