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- (54) Title:** A QUANTIZER DEVICE

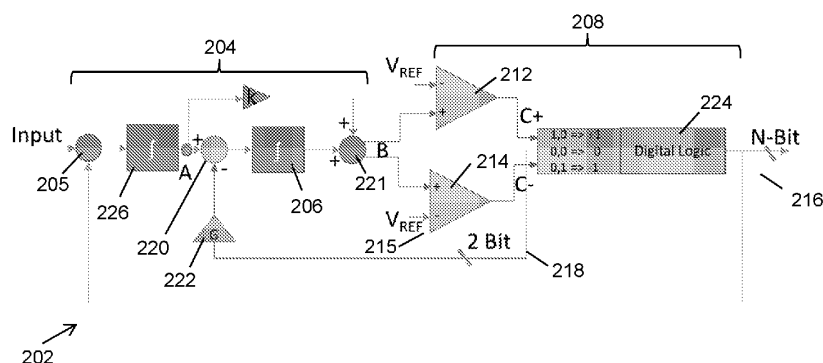


FIG. 2

- (57) **Abstract:** A quantizer device and a method of quantizing a signal may be provided, the quantizer device comprising, a plurality of comparators for coupling to an integrator output of an integrator stage of a signal modulator, the plurality of comparators to perform multi-bit quantization of the integrator output; a feedback loop connection coupled to outputs of the plurality of comparators and coupled to an input of the integrator stage, the feedback loop connection for transmitting quantized outputs of the plurality of comparators as a comparator feedback signal to the input of the integrator stage; a digital-to-analog converter disposed within the feedback loop connection to perform digital-to-analog conversion of the quantized outputs of the plurality of comparators to generate the comparator feedback signal; and a gain stage disposed within the feedback loop connection to provide a gain to the comparator feedback signal.