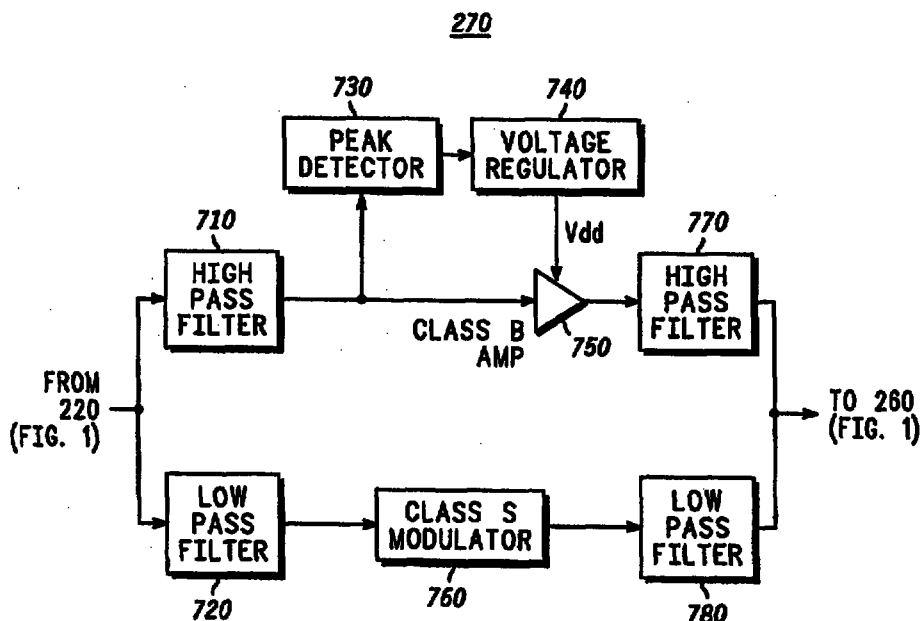




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(54) Title: **HIGH EFFICIENCY WIDEBAND POWER AMPLIFIER**

(57) Abstract

A method and apparatus for efficient power amplification of a wideband signal with a correspondingly wide modulation bandwidth includes an envelope detector (220), an adaptive split band modulator (270), and a power amplifier (260). The adaptive split band modulator (270) amplifies the low frequency components using a class S modulator (760), and amplifies the high frequency components using a class B amplifier (750). The power supply of the class B amplifier (750) is adaptively modified as a function of the amplitude of the signal that it amplifies. In this manner, the class B amplifier (750) operates at a higher efficiency.