



ABSTRACT

HIGH EFFICIENCY AMPLIFIER WITH REDUCED SWITCHING DISTORTION

An amplifier switchably operative in a plurality of voltage modes depending upon the level of the input signal is disclosed. A circuit for each voltage mode includes a common driver for each level and a plurality of output devices arranged in parallel. Each output device is operative at a selected voltage level and is coupled to the common driver for the corresponding voltage mode. One output device of each level is coupled in series to an output device of the next lower level. A switching diode circuit is coupled between series connected outputs of each output device. In one embodiment, paired diodes are coupled to each level in a common terminal of the diodes are coupled to the input. A regulator is provided for causing the driver and the output devices of each next higher level to turn on prior to the input signal achieving a selected voltage level. The circuit thus provides smooth switching between levels with reduced distortion.