

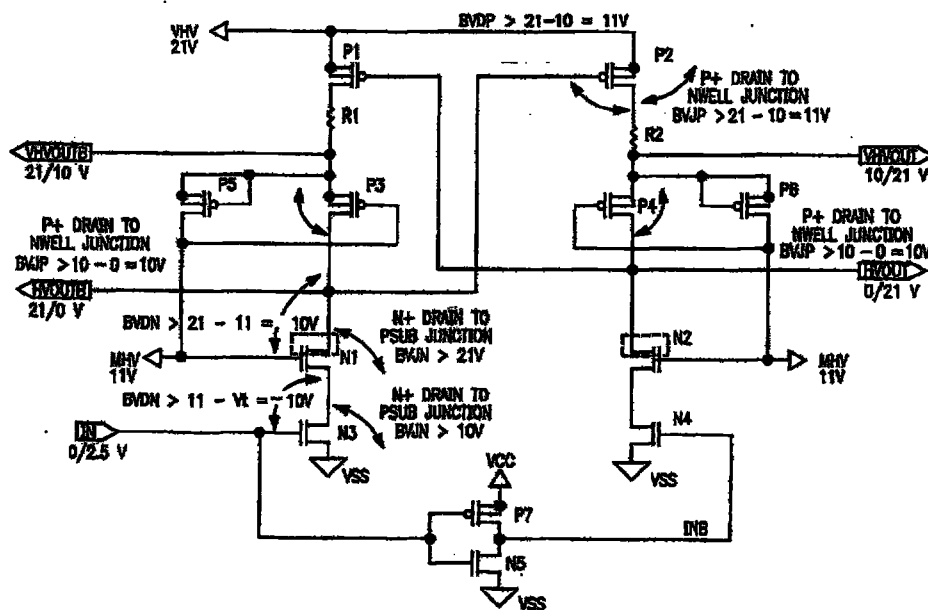
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**With international search report.
With amended claims.**

(54) Title: HIGH VOLTAGE LEVEL SHIFTER FOR SWITCHING HIGH VOLTAGE IN NON-VOLATILE MEMORY INTEGRATED CIRCUITS



A high voltage level shifter utilizing only low voltage PMOS and low voltage NMOS devices. The high voltage level shifter is used to distribute the high voltage almost equally among the PMOS devices (P1-P4) and almost equally among the NMOS devices (N1-N4) to meet the device electrical specification of low voltage MOS devices for various breakdown mechanisms. A layout technique is also used to achieve a much higher junction breakdown of N+ drain to P-substrate and a better gated diode breakdown of NMOS devices (N1 and N2).