

TWO ONE-SHOT CIRCUITS

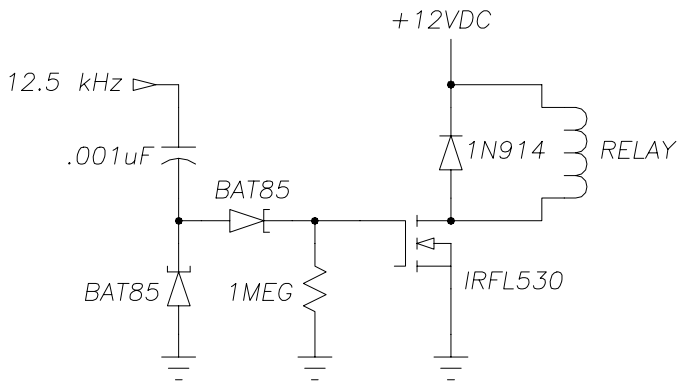


FIG. 1

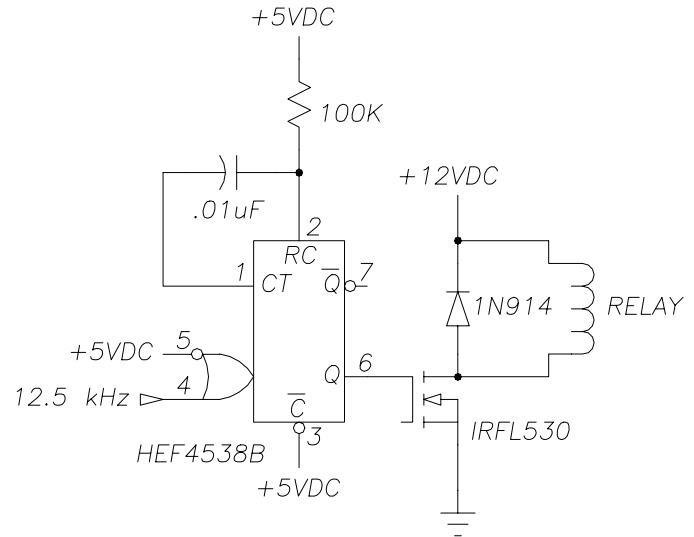


FIG. 2

Figure 1 does not require a power supply except for the relay coil. Schottky diodes are used to preserve as much of the 12.5kHz pumping voltage as possible. This voltage can be as low as 3.5VDC from the parallel port. The charge pump voltage is stored in the MOSFET's gate to source capacitance and is bled off by the 1 meg resistor should the 12.5kHz pump source stop. The circuit responds in 1 millisecond. A "logic level" MOSFET should be used because as little as 3VDC may be available at the gate.

Figure 2 uses a conventional retriggerable multivibrator (one-shot) whose timing period is set to 1 millisecond. Its advantage is it can provide 5VDC to the MOSFET gate and is clean in turning the MOSFET on and off. Its disadvantage is it needs a +5VDC supply for the one-shot CMOS IC, (HEF4538B). Otherwise its performance is slightly better than Figure 1.

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