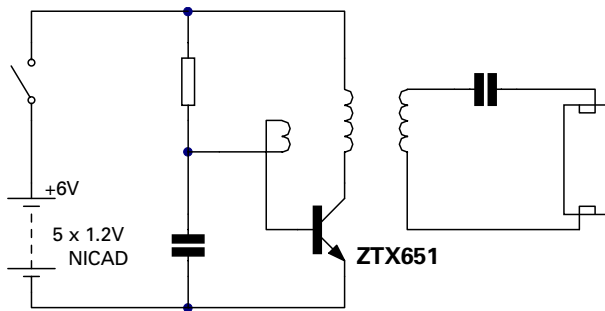


6V Battery Operated Fluorescent Lamp



To handle tube striking and normal operating characteristics, the converter transistor used in this simple fluorescent lamp ballast requires a high current capability and a high breakdown voltage. The ZTX651, possessing a B_{VCBO} rating of 80V, and a current rating of 2A continuous and 6A peak, performs more efficiently than the expensive TO220 transistor normally used. Due to the lower on-state losses of the Zetex transistor, the circuit is capable of 75% efficiency, with a resulting 12% increase in battery life. With a saturation voltage

of only 0.2V at 2A, power dissipation in the E-Line (TO92 style) transistor is kept well within its 1W rating. The small size of the ZTX651 and the converter's 25kHz oscillation frequency allows the circuit to be constructed in a compact form, small enough to fit in a torch handle, etc.

Higher gain variants (Super- β devices such as the ZTX688B and ZTX788B series) are now available to help reduce base drive requirements and thereby improve efficiency still further.